



Index

1

89 Series

Metallic Push-to-Connect Fittings for Inch Tube



2

57 Series

Metallic Push-to-Connect Fittings for Metric Tube



3

87-88 Series

Push-to-Connect Fittings for Inch Tube



4

50N Series

Push-to-Connect Fittings for Metric Tube



5

85 Series

Nylon Push-to-Connect Fittings for Inch Tube



6

55-56 Series

Nylon Push-to-Connect Fittings for Metric Tube



7

Mist Fit Series

Push - In Fittings for Mistings Systems



8

Stainless Series

Stainless Steel Push-to-Connect Fittings and Adapters



9

Functional Series

Functional Fittings



10

Ball Valves

Chrome Plated Brass Ball Valves



11

Adapters

Nickel Plated Brass Adapters



12

Quick-Disconnect Couplers

Quick Disconnect Couplers



13

Valves

Manual, Mechanical, Air Pilot
And Solenoid Pilot Valves



14

Actuators

Pneumatic Actuators



15

Frl

Air Treatment Unit



 **AIGNEP**

www.aignep.com

www.aignepusa.com



Aignep SPA

EXCELLENT SOLUTIONS IN FLUIDTECHNOLOGY

For over 40 years, Aignep is leading manufacturer of compressed air and industrial fluid fittings. Our company is driven by a constantly innovative spirit which has brought us to great results in various sectors of industrial automation. Our products are widely known for their high quality and Italian design: pneumatic cylinders and solenoid valves, fluid process control valves "FLUIDITY", compressed air pipeline "INFINITY", fittings and quick couplings for every fluid media. All the products are engineered by a dedicated professional team and manufactured in Italy in the production site of Bione, 22.000 m².

More than 13.000 standard items in the catalogue and numerous special versions on demand. Every year Aignep invests in automation, innovation and services to satisfy the requests of a worldwide customer base. Precisely to be closer to our customers our company has 5 regional branches: USA, Spain, France, Switzerland and Brazil, becoming a multinational Group.

"Move the Fluid Power!"

"Listening to our customers, understanding their needs is the power that drives us to develop everyday new solutions for fluid and compressed air".





Aignep USA



In the mid-1990's, Aignep partnered with Alpha Technologies to expand into North America. The North American headquarters relocated in 2015 to a new, state-of-the-art facility in Fairview, TN, which also serves as a cylinder production site.

Over the past 20 years both Aignep and Alpha Technologies have experienced extensive growth and has resulted in the establishment of 7 locations throughout the world.

As Aignep's global footprint continues to expand it was strategically important to change the name from Alpha Technologies to Aignep USA.

GRAZIANO BUGATTI



AIGNEP *around the world*



AIGNEP SPA

Via Don G. Bazzoli - 34
25070 Bione (BS)
ITALY

T: +39 0365 896626

F: +39 0365 896561

aignep.it@aignep.com



AIGNEP USA LLC

7121 Loblolly Pine Blvd
Fairview, TN 37062
U.S.A.

T: +1 615 771 6650

F: +1 615 771 0926

aignep.usa@aignep.com



AIGNEP IBERICA SA

Pol. Ind. el Tortuguer "Can Prat"
Naves 23 y 24 08691

Monistrol de Montserrat - Barcelona
SPAIN

T: +34 93 828 47 36

F: +34 93 828 44 32

aignep.es@aignep.com



AIGNEP FRANCE SARL

2, Avenue des Améthystes
44338 Nantes Cedex 3
FRANCE

T: +33 27 22 42 650

F: +33 27 22 42 651

aignep.fr@aignep.com



AIGNEP (Wuxi) FLUID TECHNOLOGY CO., LT D.

NO. 8, Yanggong Road, Nanhu
Main Road, Wuxi Jiangsu.
CHINA

T: +86 0510 8544 1923

F: +86 0510 8540 0223

aignep.cn@aignep.com

ALBANIA ALGERIA ARGENTINE AUSTRALIA AUSTRIA AZERBAIGIAN BELARUS BELGIUM BOLIVIA BOSNIA HERZEGO
VINA BRASIL BULGARIA CAMEROON CANADA CHILE CHINA COLOMBIA COSTA RICA CROATIA CYPRUS CZECH
REPUBLIC DEM. REP. CONGO DENMARK ECUADOR EGYPT EIRE ESTONIA ETHIOPIA FINLAND FRANCE GERMA
NY GHANA GREAT BRITAIN GREECE GUATEMALA HONG KONG HUNGARY ICELAND INDIA INDONESIA IRAN
IRAQ ISRAEL ITALY IVORY COAST JAPAN JORDAN KAZAKISTAN KUWAIT LATVIA LEBANON LITHUANIA LUXE

Find your local distributor at: service@aignepusa.com



AIGNEP AG

Industriestrasse 22A
CH-2545 Selzach
SWITZERLAND

T: +41 32 342 09 09
F: +41 32 342 09 11

aignep.ch@aignep.com



AIGNEP DO BRASIL COMERCIO DE COMPONENTES PARA AUTOMAÇÃO LTDA

Rua Batista Pereira, 99 - Macuco
Vila Mathias - 11015-011 - Santos/SP
BRASIL

T: +55 13 2138 4049
F: +55 13 2138 4052

aignep.br@aignep.com



AIGNEP LATAM SAS

Sede:

Calle 15, N 27-78, Local 7
Sec. Paloquemao - 111411

Bogotá
COLOMBIA

T: +57 1 37 52 50 1
T: +1 37 52 52 50 8

Sucursal:

Carrera 50 FF, N 8 Sur - 27
Ofi 404 Edificio 8908 - 050023
Medellin
COLOMBIA

T: +57 46 04 25 34
T: +57 46 04 21 87

aignep.latam@aignep.com
www.aignep.com.co

www.sumy.ir

MBOURG MALAYSIA MAROCCO MEXICO MOLDOVA NEW ZELAND NICARAGUA NIGERIA NORTH MAC
EDONIA NORWAY OMAN PAKISTAN PERU PHILIPPINES POLAND PORTUGAL QATAR REPUBLIC OF
DOMINICANA REPUBLIC OF MACEDONIA ROMANIA RUSSIA SAUDI ARABIA SENEGAL SERBIA SINGAPORE
SLOVAKIA SLOVENIA SOUTH AFRICA SOUTH KOREA SPAIN SWEDEN SWITZERLAND TAIWAN TANZANIA
THAILAND THE NETHERLANDS TUNISIA TURKEY UKRAINE UAE URUGUAY USA VIETNAM YEMEN

Infinity Series

Distribution system for compressed air, inert gases and vacuum



Request Catalogue



Fluidity Series

Fluid Solenoid valves



Request Catalogue





ICIM



IQNet

CERTIFICATO n. 005518
CERTIFICATE No. 005518

IN CONFORMITÀ DEL SISTEMA DI GESTIONE PER LA QUALITÀ
 EN ISO 9001:2015

AIGNEP S.P.A.
Sede e Unità Operativa
 Via Don Bazzoli, 34 - 25070 Bione (BS) - Italia
 Direzione e uffici amministrativi, progettazione,
 produzione e montaggio, magazzino.

Unità Operativa
 Via Industriale, 1 - 25070 Bione (BS) - Italia
 Montaggio e magazzino.

IL SISTEMA È IN ADESIONE A I REQUISITI DELLO STANDARD

UNI EN ISO 9001:2015

System of Quality Management System
 FOR THE FOLLOWING ACTIVITIES

EA: 17

Progettazione e fabbricazione di: raccordi; valvole a sfera per l'impiego pneumatico, idraulico ed idraulico; componenti per il trattamento dell'aria compressa (FRL); cilindri pneumatici; elettrovalvole pneumatiche e per fluidi; sistemi di distribuzione dell'aria compressa.

Design and production of: fittings; ball valves for pneumatic, hydraulic and plumbing applications; components for compressed-air treatment (FRL); pneumatic cylinders; pneumatic and fluid electromagnetic valves; distribution systems for compressed-air.

Il sistema di gestione per la qualità è conforme ai requisiti dello standard.

The quality management system complies with the requirements of the standard.

Data emissione Issue date	11/12/1992	Ultimo rinnovo Current issue	11/09/2018	Data di validità Expiry date	11/09/2020
------------------------------	------------	---------------------------------	------------	---------------------------------	------------






THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

CISQ/ICIM SPA has issued an IQNet recognized certificate that the organization:

AIGNEP S.P.A.
Head Office and Operative Unit
 Via Don Bazzoli, 34 - I-25070 Bione (BS)
Operative Unit
 Via Industriale, 1 - I-25070 Bione (BS)

has implemented and maintains a
Quality Management System
 for the following scope:

Design and production of: fittings; ball valves for pneumatic, hydraulic and plumbing applications; components for compressed-air treatment (FRL); pneumatic cylinders; pneumatic and fluid electromagnetic valves; distribution systems for compressed-air.
 which fulfils the requirements of the following standard

ISO 9001:2015

Issued on: 2018-09-11
 First issued on: 1992-12-11
 Expires on: 2020-09-17

This allocation is already listed in the IQNet Partner's original certificate and shall not be used as a stand-alone document.

Registration Number: IT-3755




Alex Strachan
President of IQNET

Ing. Claudio Perini
Presidente di CISQ

AIGNEP S.p.A. is a member of the IQNet network. For more information, visit www.iqnet-certification.com



ICIM

Certificazione di Prodotto

Product Certification

Certificato N. **ICIM-MOC-009637-00**
 Certificate No.

IN ADESIONE AL SISTEMA
AIGNEP S.P.A.
 Via Don Bazzoli, 34 - 25070 Bione (BS)
 Italia

UNITÀ OPERATIVA - OPERATIVE UNIT
 Via Don Bazzoli, 34 - 25070 Bione (BS)
 Italia

PER I SEGUENTI PRODOTTI PER LE SEGUENTI ATTIVITÀ

Raccordi in ottone CW 510L, Raccordi in acciaio inox AISI 316L, Adattatori in ottone CW 510L, Adattatori in acciaio inox AISI 316L, Bracci CW 510L fittings, Stainless steel AISI 316L fittings, Bracci CW 510L adapters, Stainless steel AISI 316L adapters.

CON DENOMINAZIONE COMMERCIALE - WITH TRADE NAMES

- Serie 50000
- Serie 60000
- Serie 1000CW
- Serie 51000
- Serie 13000CW
- Serie 90000
- Serie Accessori CW
- Serie 62000

CONFORMITÀ AL DOCUMENTO NOMINATIVO CON LA CONFORMITÀ AL DOCUMENTO NOMINATIVO

D445CS

PRODOTTI E COMPONENTI A CONTATTO CON ALIMENTI SECONDO DISPOSIZIONI NORA

Products certified in accordance with the appropriate standards. The Certificate is valid with the stated scope.



ICIM S.p.A.

PRIMA EMISSIONE FIRST ISSUE	12/08/2018	RENOVAZIONE CURRENT ISSUE	12/09/2018	DATA DI SCADENZA EXPIRY DATE	11/09/2024
--------------------------------	------------	------------------------------	------------	---------------------------------	------------

ICIM S.p.A. - Via Don Bazzoli, 34 - 25070 Bione (BS) - Italia

NSF International

700 N. Lincoln Road, Ann Arbor, MI 48106 USA

RECOGNIZES
Aignep S.P.A.
 Facility: Bione (BS), Italy


AS COMPLYING WITH/ENNEANSI AND ALL APPLICABLE REQUIREMENTS,
 PRODUCTS APPEARING IN THE NSF OFFICIAL LISTING ARE
 AUTHORIZED TO BEAR THE NSF MARK.






The NSF Mark is a mark of NSF International and is not to be used on products not listed in the NSF Official Listing. The NSF Official Listing is available at www.nsf.org


NSF International is a 501(c)(3) non-profit organization. For more information, visit www.nsf.org




REACH
RoHS
Compliance




PED




CE
EN 331



Ex



EAC



DM174 / 2004

Services



MY AIGNEP

Your documents online



AIGNEP SCAN

Your orders in one click



Catalogues

Our catalogues at your disposal



89 Series

 89000 Pg. 1.5	 89000 Pg. 1.5	 89010 Pg. 1.5	 89110 Pg. 1.5	 89110 Pg. 1.5	 89210 Pg. 1.6	 89210 Pg. 1.6	 89222 Pg. 1.6	 89222 Pg. 1.6
 89030 Pg. 1.7	 89055 Pg. 1.7	 89105 Pg. 1.7	 89040 Pg. 1.7	 89050 Pg. 1.7	 89130 Pg. 1.8	 89230 Pg. 1.8	 89310 Pg. 1.8	 89500 Pg. 1.8
 88610B Pg. 1.9	 89700 Pg. 1.9	 50980 Pg. 1.9	 50991 Pg. 1.9	 50006 Pg. 1.9				

www.sumy.ir

METALLIC PUSH-TO-CONNECT FITTINGS FOR INCH TUBE

89 Series





TECHNICAL CHARACTERISTICS



Reference Standard

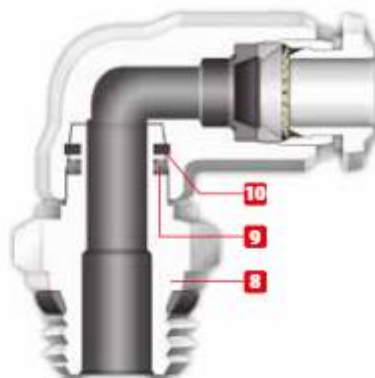
1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/EU

ISO
14743:2004

SILICON
FREE



Pressure Rating

Vacuum ~ 290 PSI
-0.99 bar ~ 20 bar
-0.099 MPa ~ 2.0 MPa



Temperatures Rating

NBR	EPDM <i>on request</i>	FKM <i>on request</i>
-4° F ~ 176° F	-40° F ~ 266° F	5° F ~ 266° F
-20° C ~ 80° C	-40° C ~ 130° C	-15° C ~ 130° C



Component Parts and Materials

- 1 Metallic Release Collet
- 2 Nickel Plated Brass Body
- 3 NBR Thread Seal
- 4 Nickel Plated Brass Sleeve
- 5 303 Stainless Steel Gripper
- 6 Technopolymer Safety Ring
- 7 NBR Molded Seal
- 8 Nickel Plated Thread Brass Body
- 9 NBR Seal
- 10 Safety Ring



Media

- Compressed Air
- Vacuum
- Water
- Steam (FKM required)



Tubing Compatibility

- Nylon 6 - 11 -12
- Polyethylene
- Polyurethane (*98 Shore A for best result)
- PTEE
- FEP



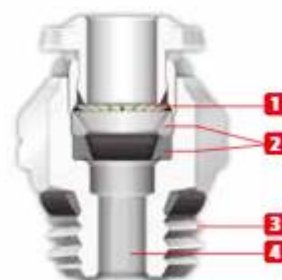
Applications

- Pneumatic Automation
- Automotive
- Textile, Packaging
- Compressed Air Circuit
- Vacuum



Advantages:

- 1 The 303 Stainless Steel gripper ensures a tight clamp for tubes of any material without damaging the tube's surface. The secure connection between the tube and the fitting will hold up to severe conditions such as impact and vibrations.
- 2 The shape of the safety ring and the molded seal perfectly seal off the tube, creating a vacuum.
- 3 Series with several types of threads:
SWIFTFIT
NPTF
UNF
- 4 All straight fittings can be tightened with an Allen wrench because of our internal hex design. This enables the end user to tighten the fitting in spaces too small for an openend wrench.
- 5 Our rotating Swivel Elbow fittings are equipped with a safety ring that enables the fitting to rotate without losing a tight seal.



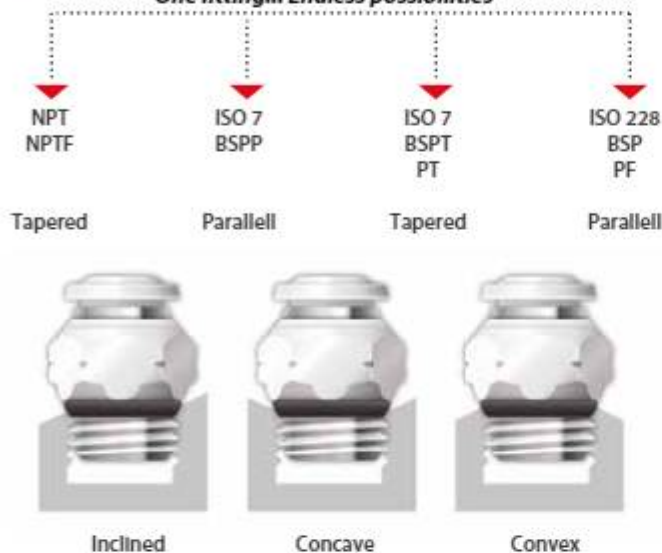


THREADS & ADVANTAGES



SWIFFFIT
Universal thread

One fitting... Endless possibilities



Our **SWIFFFIT** universal fittings also work on non-flat surfaces without compromising an air-tight seal.

The **SWIFFFIT** Universal Thread has been designed to offer the following advantages to the end users:

- Reduced overall length
- Smaller hex dimensions compared to parallel threads
- Fits with various parallel and tapered threads
- All **SWIFFFIT** fittings have been equipped with threads and an NBR thread seal that will universally connect to all thread types.

Torque Specifications

Recommended Torque		
head Size	Min.	Max.
1/8	5 Nm	7 Nm
1/4	5 Nm	7 Nm
3/8	5 Nm	7 Nm
1/2	5 Nm	7 Nm



UNF Threads



The **UNF** Thread has been designed to offer the following advantages to the end users:

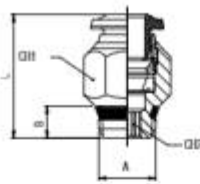
- Standard USA design
- Designed for use in UNF connections with an integrated NBR o-ring that provides a perfect seal
- Completely reusable

Torque Specifications

Recommended Torque		
Thread Size	Min.	Breaking torque
10/32	0.8 Nm	3.2 Nm

89000

STRAIGHT MALE



* For part numbers with 10-32 threads

UNF



Part No.	Tube	A	B	C	L	CH1	CH2
*89000-02-32	1/8	10/32	.197 (5)	.310 (8)	.748 (19)	.315 (8)	.079 (2)
89000-02-02	1/8	1/8	.217 (5,5)	-	.650 (16,5)	.433 (11)	.079 (2)
89000-02-04	1/8	1/4	.276 (7)	-	.728 (18,5)	.551 (14)	.079 (2)
*89000-53-32	5/32 (4)	10/32	.197 (5)	.310 (8)	.827 (21)	.394 (10)	.079 (2)
89000-53-02	5/32 (4)	1/8	.217 (5,5)	-	.709 (18)	.433 (11)	.118 (3)
89000-53-04	5/32 (4)	1/4	.276 (7)	-	.748 (19)	.551 (14)	.118 (3)
*89000-04-32	1/4	10/32	.197 (5)	.390 (10)	.966 (24,5)	.512 (13)	.079 (2)
89000-04-02	1/4	1/8	.217 (5,5)	-	.846 (21,5)	.512 (13)	.157 (4)
89000-04-04	1/4	1/4	.276 (7)	-	.807 (20,5)	.551 (14)	.157 (4)
89000-04-06	1/4	3/8	.295 (7,5)	-	.905 (23)	.669 (17)	.157 (4)
89000-05-02	5/16 (8)	1/8	.217 (5,5)	-	.965 (24,5)	.551 (14)	.397 (5)
89000-05-04	5/16 (8)	1/4	.276 (7)	-	.866 (22)	.551 (14)	.236 (6)
89000-05-06	5/16 (8)	3/8	.295 (7,5)	-	.906 (23)	.669 (17)	.236 (6)
89000-05-08	5/16 (8)	1/2	.354 (9)	-	.925 (23,5)	.827 (21)	.236 (6)
89000-06-02	3/8	1/8	.217 (5,5)	-	1.082 (27,5)	.669 (17)	.397 (5)
89000-06-04	3/8	1/4	.276 (7)	-	1.082 (27,5)	.669 (17)	.276 (7)
89000-06-06	3/8	3/8	.295 (7,5)	-	1.023 (25,5)	.669 (17)	.276 (7)
89000-06-08	3/8	1/2	.354 (9)	-	1.023 (25,5)	.827 (21)	.276 (7)
89000-08-02	1/2	1/8	.217 (5,5)	-	1.260 (32)	.787 (20)	.397 (5)
89000-08-04	1/2	1/4	.276 (7)	-	1.222 (31)	.787 (20)	.276 (7)
89000-08-06	1/2	3/8	.295 (7,5)	-	1.222 (31)	.787 (20)	.354 (9)
89000-08-08	1/2	1/2	.354 (9)	-	1.222 (31)	.827 (21)	.394 (10)

89010

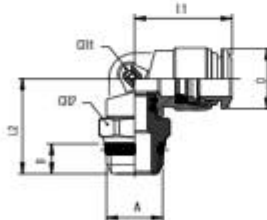
STRAIGHT MALE WITH INTERNAL HEX



Part No.	Tube	A	B	C	L	CH
89010-53-02	5/32 (4)	1/8	.295 (7,5)	.394 (10)	.748 (19)	.118 (3)
89010-05-02	5/16 (8)	1/8	.295 (7,5)	.551 (14)	1.004 (25,5)	.397 (5)
89010-15-04	5/16 (8)	1/4	.433 (11)	.551 (14)	.984 (25)	.236 (6)

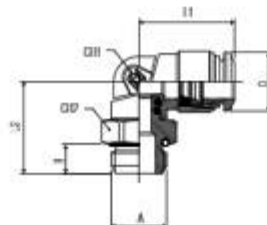
89110

SWIVEL ELBOW



* For part numbers with 10-32 threads

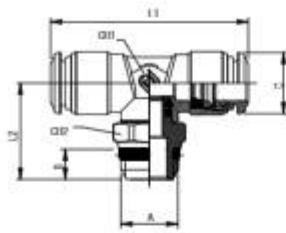
UNF



Part No.	Tube	A	B	L1	L2	CH1	CH2	D
*89110-02-32	1/8	10/32	.177 (4,5)	.630 (16)	.689 (17,5)	.354 (9)	.315 (8)	.394 (10)
89110-02-02	1/8	1/8	.217 (5,5)	.650 (16,5)	.768 (19,5)	.354 (9)	.511 (13)	.394 (10)
89110-02-04	1/8	1/4	.276 (7)	.650 (16,5)	.827 (21)	.354 (9)	.591 (15)	.394 (10)
*89110-53-32	5/32 (4)	10/32	.177 (4,5)	.689 (17,5)	.689 (17,5)	.354 (9)	.315 (8)	.394 (10)
89110-53-02	5/32 (4)	1/8	.217 (5,5)	.708 (18)	.768 (19,5)	.354 (9)	.511 (13)	.394 (10)
89110-53-04	5/32 (4)	1/4	.276 (7)	.708 (18)	.827 (21)	.354 (9)	.591 (15)	.394 (10)
*89110-04-32	1/4	10/32	.177 (4,5)	.827 (21)	.768 (19,5)	.433 (11)	.433 (11)	.492 (12,5)
89110-04-02	1/4	1/8	.217 (5,5)	.827 (21)	.846 (21,5)	.433 (11)	.511 (13)	.493 (12,5)
89110-04-04	1/4	1/4	.276 (7)	.827 (21)	.906 (23)	.433 (11)	.591 (15)	.493 (12,5)
89110-04-06	1/4	3/8	.295 (7,5)	.827 (21)	.926 (23,5)	.433 (11)	.669 (17)	.493 (12,5)
89110-05-02	5/16 (8)	1/8	.217 (5,5)	.886 (22,5)	.886 (22,5)	.472 (12)	.511 (13)	.571 (14,5)
89110-05-04	5/16 (8)	1/4	.276 (7)	.886 (22,5)	.886 (22,5)	.472 (12)	.591 (15)	.571 (14,5)
89110-05-06	5/16 (8)	3/8	.295 (7,5)	.886 (22,5)	.906 (23)	.472 (12)	.669 (17)	.571 (14,5)
89100-05-08	5/16 (8)	1/2	.354 (9)	.886 (22,5)	1.004 (25,5)	.472 (12)	.511 (13)	.571 (14,5)
89110-06-02	3/8	1/8	.217 (5,5)	1.043 (26,5)	.945 (24)	.551 (14)	.551 (14)	.669 (17,5)
89110-06-04	3/8	1/4	.276 (7)	1.043 (26,5)	1.043 (26,5)	.551 (14)	.630 (16)	.669 (17,5)
89110-06-06	3/8	3/8	.295 (7,5)	1.043 (26,5)	.965 (24,5)	.551 (14)	.669 (17)	.669 (17,5)
89110-06-08	3/8	1/2	.354 (9)	1.043 (26,5)	1.063 (27)	.551 (14)	.827 (21)	.669 (17,5)
89110-08-04	1/2	1/4	.276 (7)	1.240 (31,5)	1.130 (28,7)	.630 (16)	.630 (16)	.846 (21,5)
89110-08-06	1/2	3/8	.295 (7,5)	1.240 (31,5)	1.043 (26,5)	.630 (16)	.669 (17)	.846 (21,5)
89110-08-08	1/2	1/2	.354 (9)	1.240 (31,5)	1.147 (29)	.630 (16)	.827 (21)	.846 (21,5)

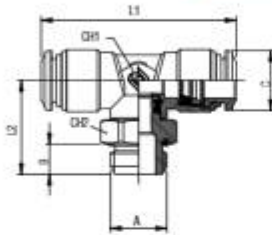
89210

SWIVEL BRANCH TEE



* For part numbers with 10-32 threads

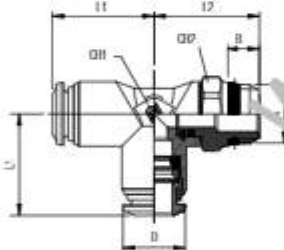
UNF



Part No.	Tube	A	B	L1	L2	CH1	CH2	D
*89210-02-32	1/8	10/32	.177 (4,5)	1.300 (33)	.670 (17)	.354 (9)	.315 (8)	.394 (10)
89210-02-02	1/8	1/8	.216 (5,5)	1.338 (34)	.669 (17)	.354 (9)	.511 (13)	.394 (10)
89210-02-04	1/8	1/4	.275 (7)	1.338 (34)	.787 (20)	.354 (9)	.591 (15)	.394 (10)
*89210-02-32	1/8	10/32	.177 (4,5)	1.300 (33)	.670 (17)	.354 (9)	.315 (8)	.394 (10)
89210-53-02	5/32 (4)	1/8	.216 (5,5)	1.338 (34)	.787 (20)	.354 (9)	.511 (13)	.394 (10)
89210-53-04	5/32 (4)	1/4	.275 (7)	1.338 (34)	.846 (21,5)	.354 (9)	.591 (15)	.394 (10)
*89210-04-32	1/4	10/32	.177 (4,5)	1.654 (42)	.807 (20,5)	.433 (11)	.433 (11)	.492 (12,5)
89210-04-02	1/4	1/8	.216 (5,5)	1.574 (40)	.787 (20)	.433 (11)	.511 (13)	.493 (12,5)
89210-04-04	1/4	1/4	.275 (7)	1.574 (40)	.846 (21,5)	.433 (11)	.629 (16)	.493 (12,5)
89210-04-06	1/4	3/8	.295 (7,5)	1.574 (40)	.866 (22)	.433 (11)	.669 (17)	.493 (12,5)
89210-05-02	5/16 (8)	1/8	.216 (5,5)	1.772 (45)	1.004 (25,5)	.512 (13)	.511 (13)	.571 (14,5)
89210-05-04	5/16 (8)	1/4	.275 (7)	1.772 (45)	1.004 (25,5)	.512 (13)	.591 (15)	.571 (14,5)
89210-05-06	5/16 (8)	3/8	.295 (7,5)	1.772 (45)	1.024 (26)	.512 (13)	.669 (17)	.571 (14,5)
89210-06-02	3/8	1/8	.216 (5,5)	2.047 (52)	1.043 (26,5)	.551 (14)	.551 (14)	.669 (17,5)
89210-06-04	3/8	1/4	.275 (7)	2.047 (52)	1.141 (29)	.551 (14)	.630 (16)	.669 (17,5)
89210-06-06	3/8	3/8	.295 (7,5)	2.047 (52)	1.062 (27)	.551 (14)	.669 (17)	.669 (17,5)
89210-06-08	3/8	1/2	.354 (9)	2.047 (52)	1.220 (31)	.551 (14)	.827 (21)	.669 (17,5)
89210-08-04	1/2	1/4	.275 (7)	2.402 (61)	1.240 (31,5)	.630 (16)	.630 (16)	.846 (21,5)
89210-08-06	1/2	3/8	.295 (7,5)	2.402 (61)	1.161 (29,5)	.630 (16)	.669 (17)	.846 (21,5)
89210-08-08	1/2	1/2	.354 (9)	2.402 (61)	1.259 (32)	.630 (16)	.827 (21)	.846 (21,5)

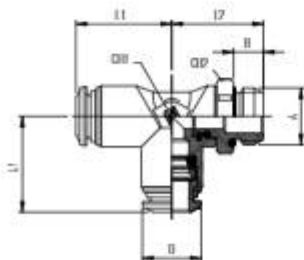
89222

SWIVEL RUN TEE



* For part numbers with 10-32 threads

UNF

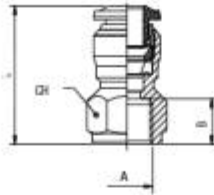


Part No.	Tube	A	B	L1	L2	CH1	CH2	D
*89222-02-32	1/8	10/32	.177 (4,5)	.650 (16,5)	.670 (17)	.354 (9)	.315 (8)	.394 (10)
89222-02-02	1/8	1/8	.216 (5,5)	.650 (16,5)	.728 (18,5)	.354 (9)	.511 (13)	.394 (10)
89222-02-04	1/8	1/4	.334 (7)	.650 (16,5)	.807 (20,5)	.354 (9)	.591 (15)	.394 (10)
*89222-02-32	5/32 (4)	10/32	.177 (4,5)	.670 (17)	.709 (18)	.354 (9)	.315 (8)	.394 (10)
89222-53-02	5/32 (4)	1/8	.216 (5,5)	.649 (17)	.787 (20)	.354 (9)	.511 (13)	.394 (10)
89222-53-04	5/32 (4)	1/4	.275 (7)	.649 (17)	.846 (21,5)	.354 (9)	.591 (15)	.394 (10)
*89222-04-32	1/4	10/32	.177 (4,5)	.827 (21)	.807 (20,5)	.433 (11)	.433 (11)	.492 (12,5)
89222-04-02	1/4	1/8	.216 (5,5)	.846 (21,5)	.787 (20)	.433 (11)	.511 (13)	.493 (12,5)
89222-04-04	1/4	1/4	.275 (7)	.846 (21,5)	.846 (21,5)	.433 (11)	.591 (15)	.493 (12,5)
89222-04-06	1/4	3/8	.295 (7,5)	.846 (21,5)	.866 (22)	.433 (11)	.669 (17)	.493 (12,5)
89222-05-02	5/16 (8)	1/8	.216 (5,5)	.886 (22,5)	.945 (24)	.512 (13)	.511 (13)	.571 (14,5)
89222-05-04	5/16 (8)	1/4	.275 (7)	.886 (22,5)	.945 (24)	.512 (13)	.591 (15)	.571 (14,5)
89222-05-06	5/16 (8)	3/8	.295 (7,5)	.886 (22,5)	1.062 (27)	.512 (13)	.669 (17)	.571 (14,5)
89222-06-02	3/8	1/8	.216 (5,5)	1.062 (27)	1.023 (26)	.551 (14)	.551 (14)	.669 (17,5)
89222-06-04	3/8	1/4	.275 (7)	1.062 (27)	1.043 (26,5)	.551 (14)	.630 (16)	.669 (17,5)
89222-06-06	3/8	3/8	.295 (7,5)	1.062 (27)	1.062 (27)	.551 (14)	.669 (17)	.669 (17,5)
89222-06-08	3/8	1/2	.354 (9)	1.062 (27)	1.141 (29)	.551 (14)	.827 (21)	.669 (17,5)
89222-08-04	1/2	1/4	.275 (7)	1.240 (31,5)	1.240 (31,5)	.630 (16)	.630 (16)	.846 (21,5)
89222-08-06	1/2	3/8	.295 (7,5)	1.240 (31,5)	1.240 (31,5)	.630 (16)	.787 (20)	.846 (21,5)
89222-08-08	1/2	1/2	.354 (9)	1.240 (31,5)	1.279 (32,5)	.630 (16)	.827 (21)	.846 (21,5)

89030

STRAIGHT FEMALE

NPTF

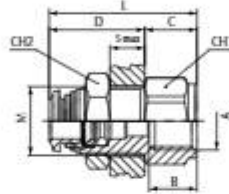


Part No.	Tube	A	B	L	CH
89030-02-02	1/8	1/8	.374 (9,5)	.945 (24)	.512 (13)
89030-02-04	1/8	1/4	.531 (13,5)	1.142 (29)	.630 (16)
89030-53-02	5/32 (4)	1/8	.374 (9,5)	.965 (24,5)	.512 (13)
89030-53-04	5/32 (4)	1/4	.531 (13,5)	1.161 (29,5)	.630 (16)
89030-04-02	1/4	1/8	.374 (9,5)	1.024 (26)	.512 (13)
89030-04-04	1/4	1/4	.531 (13,5)	1.220 (31)	.630 (16)
89030-06-04	3/8	1/4	.531 (13,5)	1.358 (34,5)	.709 (18)
89030-06-06	3/8	3/8	.531 (13,5)	1.358 (34,5)	.787 (20)

89055

FEMALE BULKHEAD CONNECTOR

NPTF

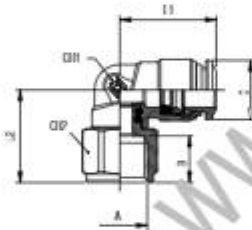


Part No.	Tube	A	B	M	S max	CH1	CH2	C	D	L
89055-53-02	5/32 (4)	1/8	.374 (9,5)	M12x1	.275 (7)	.591 (15)	.669 (17)	.394 (10)	.748 (19)	1.141 (29)
89055-53-04	5/32 (4)	1/4	.531 (13,5)	M12x1	.275 (7)	.630 (16)	.669 (17)	.591 (15)	.748 (19)	1.339 (34)
89055-04-02	1/4	1/8	.374 (9,5)	M14x1	.315 (8)	.630 (16)	.669 (17)	.394 (10)	.826 (21)	1.221 (31)
89055-04-04	1/4	1/4	.531 (13,5)	M14x1	.315 (8)	.630 (16)	.669 (17)	.591 (15)	.826 (21)	1.417 (36)
89055-04-06	1/4	3/8	.531 (13,5)	M14x1	.315 (8)	.787 (20)	.669 (17)	.591 (15)	.826 (21)	1.417 (36)
89055-05-02	5/16 (8)	1/8	.374 (9,5)	M16x1	.315 (8)	.709 (18)	.748 (19)	.394 (10)	.866 (22)	1.260 (32)
89055-05-04	5/16 (8)	1/4	.531 (13,5)	M16x1	.315 (8)	.709 (18)	.748 (19)	.472 (12)	.866 (22)	1.339 (34)
89055-05-06	5/16 (8)	3/8	.531 (13,5)	M16x1	.315 (8)	.787 (20)	.748 (19)	.591 (15)	.866 (22)	1.457 (37)
89055-06-06	3/8	3/8	.531 (13,5)	M20x1	.374 (9,5)	.945 (24)	.945 (24)	.551 (14)	1.003 (25,5)	1.557 (39,5)
89055-08-06	1/2	3/8	.531 (13,5)	M22x1	.413 (10,5)	.945 (24)	1.024 (26)	.591 (15)	1.083 (27,5)	1.673 (42,5)
89055-08-08	1/2	1/2	.690 (17,5)	M22x1	.413 (10,5)	.945 (24)	1.024 (26)	.787 (20)	1.083 (27,5)	1.870 (47,5)

89105

FEMALE ELBOW

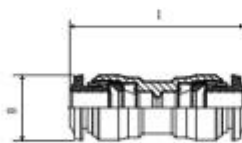
NPTF



Part No.	Tube	A	B	L1	L2	CH1	CH2	D
89105-53-02	5/32 (4)	1/8	.374 (9,5)	.688 (17,5)	.688 (17,5)	.354 (9)	.511 (13)	.394 (10)
89105-53-04	5/32 (4)	1/4	.531 (13,5)	.688 (17,5)	.787 (20)	.354 (9)	.629 (16)	.394 (10)
89105-04-02	1/4	1/8	.374 (9,5)	.846 (21,5)	.748 (19)	.433 (11)	.511 (13)	.492 (12,5)
89105-04-04	1/4	1/4	.531 (13,5)	.846 (21,5)	.846 (21,5)	.433 (11)	.629 (16)	.492 (12,5)
89105-06-02	3/8	1/8	.374 (9,5)	1.062 (27)	.905 (23)	.511 (13)	.511 (13)	.689 (17,5)
89105-06-04	3/8	1/4	.531 (13,5)	1.062 (27)	.944 (24)	.629 (16)	.629 (16)	.689 (17,5)

89040

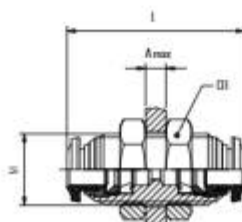
UNION



Part No.	Tube	Tube	L	B
89040-02	1/8		.334 (8,5)	1.023 (26)
89040-53	5/32 (4)		.413 (10,5)	1.200 (30,5)
89040-04-53	1/4	5/32 (4)	.492 (12,5)	1.299 (33)
89040-04	1/4		.492 (12,5)	1.339 (34)
89040-05	5/16 (8)		.571 (14,5)	1.417 (36)
89040-04-06	3/8	1/4	.688 (17,5)	1.614 (41)
89040-06-08	3/8	1/2	.807 (20,5)	1.850 (47)
89040-06	3/8		.688 (17,5)	1.614 (41)
89040-08	1/2		.807 (20,5)	1.850 (47)

89050

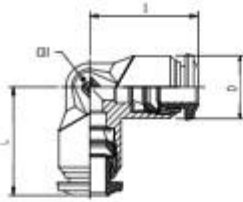
BULKHEAD UNION



Part No.	Tube	M	L	CH	A max
89050-02	1/8	M10x1	1.023 (26)	.551 (14)	.197 (5)
89050-53	5/32 (4)	M12x1	1.240 (31,5)	.669 (17)	.276 (7)
89050-04	1/4	M14x1	1.378 (35)	.669 (17)	.374 (9,5)
89050-05	5/16 (8)	M16x1	1.457 (37)	.748 (19)	.413 (10,5)
89050-06	3/8	M20x1	1.693 (42)	.945 (24)	.492 (12,5)
89050-08	1/2	M22x1	1.890 (48)	1.024 (26)	.650 (16,5)

89130

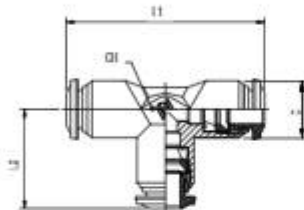
ELBOW UNION



Part No.	Tube	L	CH	D
89130-02	1/8	.649 (16,5)	.354 (9)	.394 (10)
89130-53	5/32 (4)	.669 (17)	.354 (9)	.394 (10)
89130-04	1/4	.826 (21)	.433 (11)	.492 (12,5)
89130-05	5/16 (8)	.886 (22,5)	.512 (13)	.551 (14)
89130-06	3/8	1.074 (26)	.630 (16)	.689 (17,5)
89130-08	1/2	1.200 (30,5)	.748 (19)	.846 (21,5)

89230

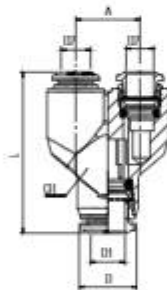
UNION TEE



Part No.	Tube	L1	L2	CH	D
89230-02	1/8	1.229 (33)	.669 (17)	.354 (9)	.394 (10)
89230-53	5/32 (4)	1.339 (34)	.669 (17)	.354 (9)	.394 (10)
89230-04	1/4	1.654 (42)	.827 (21)	.433 (11)	.492 (12,5)
89230-05	5/16 (8)	1.772 (45)	.866 (22,5)	.512 (13)	.551 (14)
89230-06	3/8	2.087 (53)	1.043 (26,5)	.630 (16)	.689 (17,5)
89230-08	1/2	2.402 (61)	1.201 (30,5)	.748 (19)	.846 (21,5)

89310

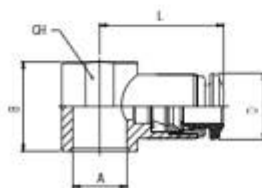
UNION Y



Part No.	Tube	A	L	CH	D
89310-02	1/8	.394 (10)	1.142 (29)	.433 (11)	.394 (10)
89310-53	5/32 (4)	.433 (11)	1.260 (32)	.433 (11)	.394 (10)
89310-04	1/4	.531 (13,5)	1.437 (36,5)	.511 (13)	.492 (12,5)
89310-05	5/16 (8)	.610 (15,5)	1.514 (41)	.511 (13)	.551 (14)
89310-06	3/8	.778 (19,5)	1.890 (48)	.708 (18)	.689 (17,5)

89500

SINGLE BANJO BODY

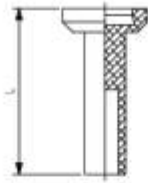


Part No.	Tube	A	B	L	CH	D
89500-02-02	1/8	1/8	.591 (15)	.748 (19)	.551 (14)	.394 (10)
89500-53-32	5/32 (4)	10/32	.492 (12,5)	.748 (19)	-	.394 (10)
89500-53-02	5/32 (4)	1/8	.591 (15)	.827 (21)	.551 (14)	.394 (10)
89500-04-02	1/4	1/8	.591 (15)	.886 (22,5)	.551 (14)	.492 (12,5)
89500-04-04	1/4	1/4	.669 (17)	.984 (25)	.709 (18)	.492 (12,5)
89500-05-02	5/16 (8)	1/8	.591 (15)	.945 (24)	.551 (14)	.551 (14)
89500-05-04	5/16 (8)	1/4	.669 (17)	1.074 (26)	.709 (18)	.551 (14)
89500-05-06	5/16 (8)	3/8	.787 (20)	1.102 (28)	.827 (21)	.551 (14)
89500-06-04	3/8	1/4	.669 (17)	1.142 (29)	.709 (18)	.689 (17,5)
89500-06-06	3/8	3/8	.787 (20)	1.201 (30,5)	.827 (21)	.689 (17,5)
89500-08-06	1/2	3/8	.787 (20)	1.260 (32)	.827 (21)	.846 (21,5)
89500-08-08	1/2	1/2	.945 (24)	1.378 (35)	.984 (25)	.846 (21,5)

For BANJO STEM assemblies see 10.7/10.8/10.9

88610B

NYLON PLUG



Part No.	Tube	L
88610B-02	1/8	.708 (18)
88610B-53	5/32 (4)	.925 (23,5)
88610B-04	1/4	.964 (24,5)
88610B-05	5/16 (8)	1.023 (26)
88610B-06	3/8	1.122 (28,5)
88610B-08	1/2	1.122 (28,5)

89700

TUBE REDUCER



Part No.	A	B	L	D
89700-04-02	1/4	1/8	1.181 (30)	.394 (10)
89700-04-53	1/4	5/32 (4)	1.181 (30)	.394 (10)
89700-05-53	5/16 (8)	5/32 (4)	1.299 (33)	.394 (10)
89700-06-04	3/8	1/4	1.397 (35,5)	.492 (12,5)
89700-06-05	3/8	5/16 (8)	1.397 (35,5)	.551 (14)
89700-08-04	1/2	1/4	1.693 (43)	.492 (12,5)
89700-08-06	1/2	3/8	1.693 (43)	.689 (17,5)

50980

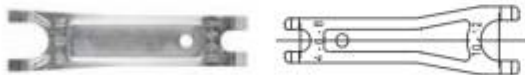
SECURITY CLIP



Part No.	Tube
50980-53	5/32 (4)
50980-04	1/4 (6)
50980-05	5/16 (8)
50980-06	3/8 (10)
50980-08	1/2 (12)

50991

TOOL FOR DISASSEMBLING



Part No.
50991

50006

THREAD PACKING FOR SWIFFIT TAPER THREADS


































Part No.	Thread
50006-02	1/8
50006-04	1/4
50006-06	3/8
50006-08	1/2

NOTES

www.sumy.ir

57 Series

 57000 Pg. 25	 57010 Pg. 25	 57110 Pg. 25	 57210 Pg. 25	 57222 Pg. 26	 57020 Pg. 26	 57010 Pg. 26	 57030 Pg. 26	 57055 Pg. 27
 57105 Pg. 27	 57115 Pg. 27	 57125 Pg. 27	 57215 Pg. 28	 57225 Pg. 28	 57326 Pg. 28	 57100 Pg. 29	 57200 Pg. 29	 57040 Pg. 29
 57050 Pg. 29	 57465 Pg. 29	 57060 Pg. 210	 57130 Pg. 210	 57230 Pg. 210	 57310 Pg. 210	 57500 Pg. 210	 57510 Pg. 211	 50600 Pg. 211
 57610 Pg. 211	 50625 Pg. 211	 57700 Pg. 211	 50980 Pg. 212	 50991 Pg. 212	 50006 Pg. 212			

www.sumitomo.com

METALLIC PUSH-TO-CONNECT FITTINGS
FOR METRIC TUBE

57 Series



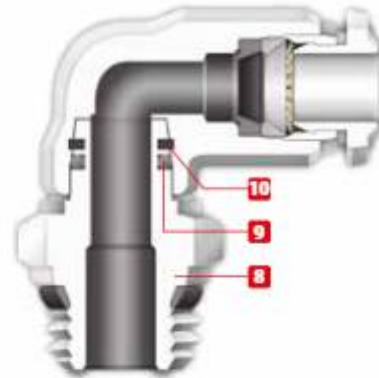
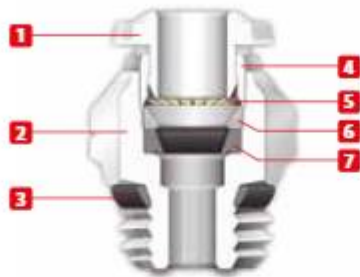


TECHNICAL CHARACTERISTICS



Reference Standard

1907/2006 REACH ✓	2011/65/CE RoHS ✓	PED 2014/68/EU	ISO 14743:2004	SILICON FREE
----------------------	----------------------	-------------------	-------------------	-----------------



Pressure Rating

Vacuum ~ 290 PSI
-0.99 bar ~ 20 bar
-0.099 MPa ~ 2.0 MPa



Temperatures Rating

NBR
-4° F ~ 176° F
-20° C ~ 80° C



Media

- Pneumatic Automation
- Automotive
- Textile, Packaging
- Compressed Air Circuit
- Vacuum



Applications

- Pneumatic Automation
- Automotive
- Textile, Packaging
- Compressed Air Circuit
- Vacuum



Advantages

- 1 The 303 Stainless Steel gripper ensures a tight clamp for tubes of any material without damaging the tube's surface. The secure connection between the tube and the fitting will hold up to severe conditions such as impact and vibrations.
- 2 The shape of the safety ring and the molded seal perfectly seal off the tube, creating a vacuum.
- 3 Series with several types of threads:
 ⚙️ SWIFFFIT
 BSPP
 BSPT
- 4 All straight fittings can be tightened with an Allen wrench because of our internal hex design. This enables the end user to tighten the fitting in spaces too small for an open-end wrench.
- 5 Our rotating Swivel Elbow fittings are equipped with a safety ring that enables the fitting to rotate without losing a tight seal.



Component Parts and Materials

- 1 Metallic Release Collet
- 2 Nickel Plated Brass Body
- 3 NBR Thread Seal
- 4 Nickel Plated Brass Sleeve
- 5 303 Stainless Steel Gripper
- 6 Technopolymer Safety Ring
- 7 NBR Molded Seal
- 8 Nickel Plated Thread Brass Body
- 9 NBR Seal
- 10 Safety Ring



Tubing Compatibility

- Nylon 6 - 11 -12
- Polyethylene
- Polyurethane (*98 Shore A for best result)
- PTFE
- FEP



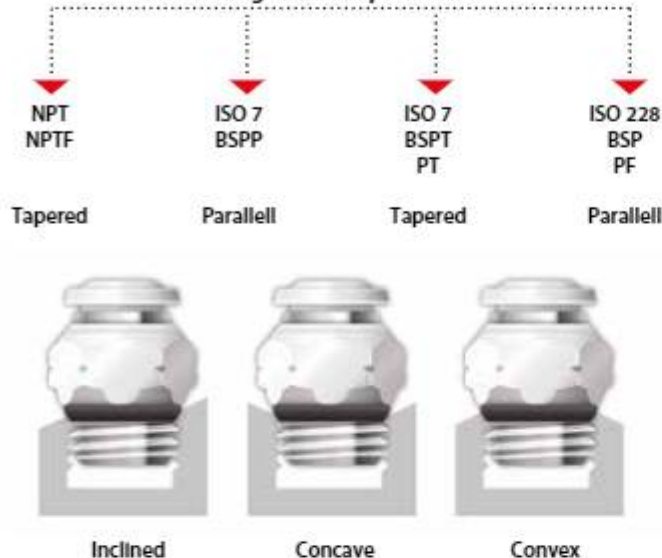


THREADS & ADVANTAGES



SWIFFIT
Universal thread

One fitting... Endless possibilities



Our **SWIFFIT** universal fittings also work on non-flat surfaces without compromising an air-tight seal.

The **SWIFFIT** Universal Thread has been designed to offer the following advantages to the end users:

- Reduced overall length
- Smaller hex dimensions compared to parallel threads
- Fits with various parallel and tapered threads
- All **SWIFFIT** fittings have been equipped with threads and an NBR thread seal that will universally connect to all thread types.

Torque Specifications

Recommended Torque		
Thread Size	Min.	Max.
1/8	5 Nm	7 Nm
1/4	5 Nm	7 Nm
3/8	5 Nm	7 Nm
1/2	5 Nm	7 Nm



BSPP Threads



The **BSPP** Thread has been designed to offer the following advantages to the end users:

- Standard ISO 228 and ISO R/262
- Designed for use in BSPP connections with an integrated NBR o-ring that provides a perfect seal
- Completely reusable

Torque Specifications

Recommended Torque		
Thread Size	Min.	Breaking torque
M5	0.8 Nm	0.3 Nm
M8	3 Nm	8 Nm
1/8	5 Nm	7 Nm
1/4	5 Nm	7 Nm
3/8	5 Nm	7 Nm
1/2	5 Nm	7 Nm



BSPT Thread with seal



The **BSPT** Thread has been designed to offer the following advantages to the end users:

- Standard ISO 7.1, BS 21, DN 2999
- Designed for use in BSPT and BSPP connections with an integrated NBR thread seal that provides an additional seal

Torque Specifications

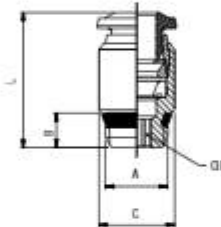
Recommended Torque		
Thread Size	Min.	Breaking torque
1/8	5 Nm	7 Nm
1/4	5 Nm	7 Nm
3/8	5 Nm	7 Nm
1/2	5 Nm	7 Nm

57000
STRAIGHT MALE



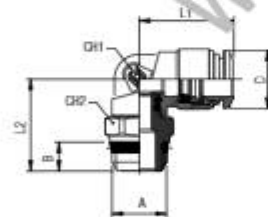
Part No.	Tube	A	B	L	CH1	CH2
89000-53-02	4 (5/32)	1/8	.216 (5,5)	.708 (18)	.433 (11)	.118 (3)
89000-53-04	4 (5/32)	1/4	.275 (7)	.748 (19)	.551 (14)	.118 (3)
57000-6-1/8	6	1/8	.216 (5,5)	.846 (21,5)	.511 (13)	.157 (4)
57000-6-1/4	6	1/4	.275 (7)	.826 (21)	.551 (14)	.157 (4)
57000-6-3/8	6	3/8	.295 (7,5)	.905 (23)	.669 (17)	.157 (4)
57000-6-1/2	6	1/2	.354 (9)	.925 (23,5)	.826 (21)	.157 (4)
89000-05-02	8 (5/16)	1/8	.216 (5,5)	.964 (24,5)	.551 (14)	.197 (5)
89000-05-04	8 (5/16)	1/4	.275 (7)	.866 (22)	.551 (14)	.236 (6)
89000-05-06	8 (5/16)	3/8	.295 (7,5)	.905 (23)	.669 (17)	.236 (6)
89000-05-08	8 (5/16)	1/2	.354 (9)	.925 (23,5)	.826 (21)	.236 (6)
57000-10-1/4	10	1/4	.275 (7)	1.102 (28)	.669 (17)	.275 (7)
57000-10-3/8	10	3/8	.295 (7,5)	1.003 (25,5)	.669 (17)	.314 (8)
57000-10-1/2	10	1/2	.354 (9)	1.023 (25,5)	.826 (21)	.314 (8)
57000-12-1/4	12	1/4	.275 (7)	1.240 (31,5)	.787 (20)	.275 (7)
57000-12-3/8	12	3/8	.295 (7,5)	1.161 (29,5)	.787 (20)	.354 (9)
57000-12-1/2	12	1/2	.354 (9)	1.240 (31,5)	.826 (21)	.393 (10)
57000-14-3/8	14	3/8	.295 (7,5)	1.279 (32,5)	.826 (21)	.354 (9)
57000-14-1/2	14	1/2	.354 (9)	1.240 (31,5)	.826 (21)	.393 (10)

57010
STRAIGHT MALE WITH INTERNAL HEX



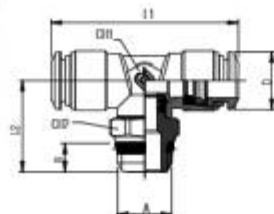
Part No.	Tube	A	B	C	L	CH
89010-53-02	5/32 (4)	1/8	.217 (5,5)	.433 (11)	.709 (18)	.118 (3)
57010-6-1/8	6	1/8	.217 (5,5)	.472 (12)	.867 (21,5)	.157 (4)
57010-6-1/4	6	1/4	.276 (7)	.551 (14)	.827 (21)	.157 (4)
89010-05-02	5/16 (8)	1/8	.217 (5,5)	.551 (14)	.984 (25)	.196 (5)
89010-05-04	5/16 (8)	1/4	.276 (7)	.551 (14)	.886 (22,5)	.236 (6)

57110
SWIVEL ELBOW



Part No.	Tube	A	B	L1	L2	CH1	CH2	D
89110-53-02	5/32 (4)	1/8	.216 (5,5)	.708 (18)	.767 (19,5)	.354 (9)	.512 (13)	.394 (10)
89110-53-04	5/32 (4)	1/4	.275 (7)	.748 (19)	.826 (21)	.354 (9)	.590 (15)	.394 (10)
57110-6-1/8	6	1/8	.216 (5,5)	.826 (21)	.846 (21,5)	.433 (11)	.512 (13)	.492 (12,5)
57110-6-1/4	6	1/4	.275 (7)	.826 (21)	.905 (23)	.433 (11)	.590 (15)	.492 (12,5)
89110-05-02	5/16 (8)	1/8	.216 (5,5)	.885 (22,5)	.885 (22,5)	.472 (12)	.512 (13)	.571 (14,5)
89110-05-04	5/16 (8)	1/4	.275 (7)	.885 (22,5)	.885 (22,5)	.472 (12)	.590 (15)	.571 (14,5)
89110-05-06	5/16 (8)	3/8	.295 (7,5)	.885 (22,5)	.905 (23)	.472 (12)	.669 (17)	.571 (14,5)
89110-05-08	5/16 (8)	1/2	.354 (9)	.885 (22,5)	1.003 (25,5)	.472 (12)	.826 (21)	.571 (14,5)
57110-10-1/4	10	1/4	.275 (7)	1.043 (26,5)	1.043 (26,5)	.551 (14)	.629 (16)	.689 (17,5)
57110-10-3/8	10	3/8	.295 (7,5)	1.043 (26,5)	.946 (24,5)	.551 (14)	.669 (17)	.689 (17,5)
57110-10-1/2	10	1/2	.354 (9)	1.043 (26,5)	1.067 (27)	.551 (14)	.826 (21)	.689 (17,5)
57110-12-3/8	12	3/8	.295 (7,5)	1.240 (31,5)	1.043 (26,5)	.629 (16)	.787 (20)	.846 (21,5)
57110-12-1/2	12	1/2	.354 (9)	1.240 (31,5)	1.141 (29)	.629 (16)	.826 (21)	.846 (21,5)
57110-14-3/8	14	3/8	.295 (7,5)	1.240 (31,5)	1.067 (27)	.629 (16)	.787 (20)	.846 (21,5)
57110-14-1/2	14	1/2	.354 (9)	1.240 (31,5)	1.161 (29,5)	.629 (16)	.826 (21)	.846 (21,5)

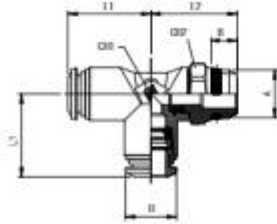
57210
SWIVEL BRANCH TEE



Part No.	Tube	A	B	L1	L2	CH1	CH2	D
89210-53-02	5/32 (4)	1/8	.216 (5,5)	1.338 (34)	.787 (20)	.354 (9)	.511 (13)	.394 (10)
89210-53-04	5/32 (4)	1/4	.275 (7)	1.338 (34)	.846 (21,5)	.354 (9)	.590 (15)	.394 (10)
57210-6-1/8	6	1/8	.216 (5,5)	1.653 (42)	.866 (22)	.433 (11)	.511 (13)	.492 (12,5)
57210-6-1/4	6	1/4	.275 (7)	1.653 (42)	.925 (23,5)	.433 (11)	.590 (15)	.492 (12,5)
89210-05-02	5/16 (8)	1/8	.216 (5,5)	1.771 (45)	1.003 (25,5)	.511 (13)	.511 (13)	.571 (14,5)
89210-05-04	5/16 (8)	1/4	.275 (7)	1.771 (45)	1.003 (25,5)	.511 (13)	.590 (15)	.571 (14,5)
89210-05-06	5/16 (8)	3/8	.295 (7,5)	1.771 (45)	1.023 (26)	.511 (13)	.669 (17)	.571 (14,5)
57210-10-1/4	10	1/4	.275 (7)	2.086 (53)	1.141 (29)	.551 (14)	.629 (16)	.689 (17,5)
57210-10-3/8	10	3/8	.295 (7,5)	2.086 (53)	1.067 (27)	.551 (14)	.669 (17)	.689 (17,5)
57210-10-1/2	10	1/2	.354 (9)	2.086 (53)	1.161 (29,5)	.551 (14)	.826 (21)	.689 (17,5)
57210-12-3/8	12	3/8	.295 (7,5)	2.460 (62,5)	1.161 (29,5)	.629 (16)	.787 (20)	.846 (21,5)
57210-12-1/2	12	1/2	.354 (9)	2.460 (62,5)	1.259 (32)	.629 (16)	.826 (21)	.846 (21,5)

57222

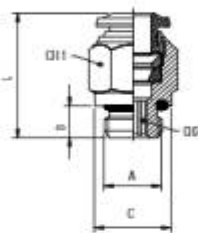
SWIVEL RUN TEE



Part No.	Tube	A	B	L1	L2	CH1	CH2	D
89222-53-02	5/32 (4)	1/8	.216 (5,5)	.669 (17)	.787 (20)	.354 (9)	.511 (13)	.394 (10)
89222-53-04	5/32 (4)	1/4	.275 (7)	.669 (17)	.846 (21,5)	.354 (9)	.590 (15)	.394 (10)
57222-6-1/8	6	1/8	.216 (5,5)	.816 (21)	.866 (22)	.433 (11)	.511 (13)	.492 (12,5)
57222-6-1/4	6	1/4	.275 (7)	.816 (21)	.925 (23,5)	.433 (11)	.590 (15)	.492 (12,5)
89222-05-02	5/16 (8)	1/8	.216 (5,5)	.885 (22,5)	.944 (24)	.511 (13)	.511 (13)	.571 (14,5)
89222-05-04	5/16 (8)	1/4	.275 (7)	.885 (22,5)	.944 (24)	.511 (13)	.590 (15)	.571 (14,5)
89222-05-06	5/16 (8)	3/8	.295 (7,5)	.885 (22,5)	1.062 (27)	.511 (13)	.669 (17)	.571 (14,5)
57222-10-1/4	10	1/4	.275 (7)	1.043 (26,5)	1.023 (26)	.551 (14)	.629 (16)	.689 (17,5)
57222-10-3/8	10	3/8	.295 (7,5)	1.043 (26,5)	1.023 (26)	.551 (14)	.669 (17)	.689 (17,5)
57222-10-1/2	10	1/2	.354 (9)	1.043 (26,5)	1.122 (28,5)	.551 (14)	.816 (21)	.689 (17,5)
57222-12-3/8	12	3/8	.295 (7,5)	1.240 (31,5)	1.161 (29,5)	.629 (16)	.787 (20)	.847 (21,5)
57222-12-1/2	12	1/2	.354 (9)	1.240 (31,5)	1.259 (32)	.629 (16)	.816 (21)	.847 (21,5)

57020

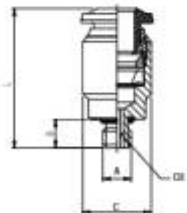
STRAIGHT MALE



Part No.	Tube	A	B	C	L	CH1	CH2
57020-4-M5	5/32 (4)	M5	.157 (4)	.315 (8)	.827 (21)	.394 (10)	.079 (2)
57020-4-1/8	5/32 (4)	1/8	.236 (6)	.512 (13)	.787 (20)	.394 (10)	.118 (3)
57020-4-1/4	5/32 (4)	1/4	.315 (8)	.630 (16)	.768 (19,5)	.630 (16)	.118 (3)
57020-4-3/8	5/32 (4)	3/8	.315 (8)	.787 (20)	.708 (18)	.787 (20)	.118 (3)
57020-5-M5	5	M5	.157 (4)	.315 (8)	.925 (23,5)	.472 (12)	.079 (2)
57020-5-1/8	5	1/8	.236 (6)	.512 (13)	.866 (22)	.472 (12)	.157 (4)
57020-6-M5	6	M5	.157 (4)	.394 (10)	.965 (24,5)	.512 (13)	.079 (2)
57020-6-1/8	6	1/8	.236 (6)	.512 (13)	.925 (23,5)	.512 (13)	.157 (4)
57020-6-1/4	6	1/4	.315 (8)	.630 (16)	.925 (23,5)	.512 (13)	.157 (4)
57020-6-3/8	6	3/8	.354 (9)	.787 (20)	.984 (25)	.512 (13)	.157 (4)
57020-6-1/2	6	1/2	.394 (10)	.984 (25)	1.063 (27)	.512 (13)	.157 (4)
57020-8-1/8	5/16 (8)	1/8	.236 (6)	.512 (13)	.984 (25)	.551 (14)	.197 (5)
57020-8-1/4	5/16 (8)	1/4	.315 (8)	.630 (16)	.906 (23)	.551 (14)	.236 (6)
57020-8-3/8	5/16 (8)	3/8	.354 (9)	.787 (20)	.945 (24)	.551 (14)	.236 (6)
57020-8-1/2	5/16 (8)	1/2	.394 (10)	.984 (25)	1.043 (26,5)	.551 (14)	.236 (6)
57020-10-1/4	10	1/4	.315 (8)	.630 (16)	1.201 (30,5)	.669 (17)	.236 (6)
57020-10-3/8	10	3/8	.354 (9)	.787 (20)	1.083 (27,5)	.669 (17)	.315 (8)
57020-10-1/2	10	1/2	.394 (10)	.984 (25)	1.063 (27)	.669 (17)	.315 (8)
57020-12-3/8	12	3/8	.315 (8)	.630 (16)	1.358 (34,5)	.787 (20)	.236 (6)
57020-12-1/2	12	1/2	.354 (9)	.787 (20)	1.339 (34)	.787 (20)	.315 (8)
57020-14-3/8	14	3/8	.354 (9)	.787 (20)	1.378 (35)	.827 (21)	.394 (10)
57020-14-1/2	14	1/2	.394 (10)	.984 (25)	1.260 (32)	.866 (22)	.394 (10)
57020-6-M8X1	6	M8X1	.216 (5,5)	.472 (12)	.965 (24,5)	.512 (13)	.118 (3)
57020-6-M10X1	6	M10X1	.216 (5,5)	.512 (13)	.905 (23)	.512 (13)	.157 (4)
57020-6-M12x1	6	M12X1	.315 (8)	.591 (15)	.925 (23,5)	.512 (13)	.157 (4)
57020-6-M12x1.25	6	M12X1,25	.315 (8)	.591 (15)	.925 (23,5)	.512 (13)	.157 (4)
57020-6-M12x1.5	6	M12X1,5	.315 (8)	.591 (15)	.925 (23,5)	.512 (13)	.157 (4)
57020-8-M8x1	8	M8X1	.216 (5,5)	.472 (12)	1.003 (25,5)	.551 (14)	.157 (4)
57020-8-M10x1	8	M10X1	.216 (5,5)	.512 (13)	1.003 (25,5)	.551 (14)	.157 (4)
57020-8-M12x1.5	8	M12X1,5	.315 (8)	.591 (15)	1.083 (27,5)	.551 (14)	.236 (6)

57010

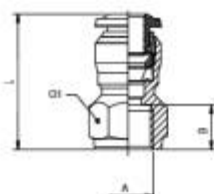
STRAIGHT MALE WITH INTERNAL HEX



Part No.	Tube	A	B	C	L	CH
57010-4-M5	5/32 (4)	M5	.157 (4)	.394 (10)	.827 (21)	.098 (2,5)
57010-4-M7x1	5/32 (4)	M7x1	.196 (5)	.394 (10)	.826 (21)	.098 (2,5)
57010-6-M5	6	M5	.157 (4)	.472 (12)	.965 (24,5)	.098 (2,5)

57030

STRAIGHT FEMALE

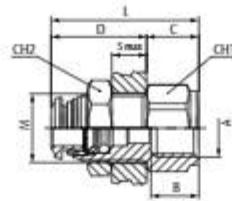


Part No.	Tube	A	B	L	CH
57030-4-M5	5/32 (4)	M5	.216 (5,5)	.826 (21)	.433 (11)
57030-4-1/8	5/32 (4)	1/8	.334 (8,5)	.944 (24)	.511 (13)
57030-4-1/4	5/32 (4)	1/4	.433 (11)	1.082 (27,5)	.629 (16)
57030-5-1/8	5	1/8	.334 (8,5)	1.043 (26,5)	.511 (13)
57030-6-1/8	6	1/8	.334 (8,5)	1.023 (26)	.511 (13)
57030-6-1/4	6	1/4	.433 (11)	1.161 (29,5)	.629 (16)
57030-8-1/8	5/16 (8)	1/8	.334 (8,5)	1.062 (27)	.590 (15)
57030-8-1/4	5/16 (8)	1/4	.433 (11)	1.161 (29,5)	.669 (17)
57030-8-3/8	5/16 (8)	3/8	.472 (12)	1.259 (32)	.748 (19)
57030-10-1/4	10	1/4	.433 (11)	1.259 (32)	.708 (18)
57030-10-3/8	10	3/8	.472 (12)	1.318 (33,5)	.748 (19)
57030-10-1/2	10	1/2	.590 (15)	1.535 (39)	.944 (24)
57030-12-3/8	12	3/8	.472 (12)	1.417 (36)	.826 (21)
57030-12-1/2	12	1/2	.590 (15)	1.614 (41)	.944 (24)

57055

FEMALE BULKHEAD CONNECTOR

BSPP

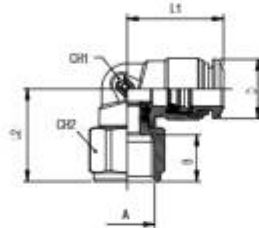


Part No.	Tube	A	B	M	Smax	CH1	CH2	C	D	L
57055-4-1/8	4	1/8	.334 (8,5)	M12x1	.275 (7)	.591 (15)	.669 (17)	.394 (10)	.748 (19)	1.141 (29)
57055-6-1/8	6	1/8	.334 (8,5)	M14x1	.315 (8)	.630 (16)	.669 (17)	.394 (10)	.826 (21)	1.221 (31)
57055-6-1/4	6	1/4	.433 (11)	M14x1	.315 (8)	.630 (16)	.669 (17)	.472 (12)	.826 (21)	1.300 (33)
57055-8-1/8	8	1/8	.334 (8,5)	M16x1	.315 (8)	.709 (18)	.748 (19)	.394 (10)	.866 (22)	1.260 (32)
57055-8-1/4	8	1/4	.433 (11)	M16x1	.315 (8)	.709 (18)	.748 (19)	.472 (12)	.866 (22)	1.339 (34)
57055-10-3/8	10	3/8	.472 (12)	M20x1	.374 (9,5)	.945 (24)	.945 (24)	.551 (14)	1.003 (25,5)	1.556 (38,5)
57055-12-3/8	12	3/8	.472 (12)	M22x1	.413 (10,5)	.945 (24)	1.024 (26)	.591 (15)	1.083 (27,5)	1.673 (42,5)
57055-12-1/2	12	1/2	.591 (15)	M22x1	.413 (10,5)	.945 (24)	1.024 (26)	.669 (17)	1.083 (27,5)	1.752 (44,5)

57105

FEMALE ELBOW

BSPP

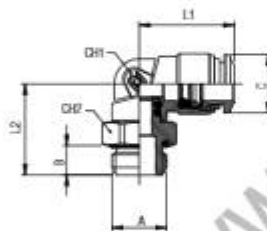


Part No.	Tube	A	B	L1	L2	CH1	CH2	D
57105-4-1/8	5/32 (4)	1/8	.334 (8,5)	.708 (18)	.787 (20)	.354 (9)	.511 (13)	.394 (10)
57105-4-1/4	5/32 (4)	1/4	.433 (11)	.708 (18)	.846 (21,5)	.354 (9)	.629 (16)	.394 (10)
57105-6-1/8	6	1/8	.334 (8,5)	.826 (21)	.807 (20,5)	.433 (11)	.511 (13)	.492 (12,5)
57105-6-1/4	6	1/4	.433 (11)	.826 (21)	.905 (23)	.433 (11)	.629 (16)	.492 (12,5)
57105-8-1/8	5/16 (8)	1/8	.334 (8,5)	.885 (22,5)	.807 (20,5)	.472 (12)	.511 (13)	.571 (14,5)
57105-8-1/4	5/16 (8)	1/4	.433 (11)	.885 (22,5)	.905 (23)	.472 (12)	.629 (16)	.571 (14,5)
57105-10-1/4	10	1/4	.433 (11)	1.043 (26,5)	.984 (25)	.551 (14)	.748 (19)	.669 (17)
57105-10-3/8	10	3/8	.472 (12)	1.043 (26,5)	1.201 (28)	.551 (14)	.748 (19)	.669 (17)
57105-12-1/2	12	1/2	.591 (15)	1.240 (31,5)	1.358 (34)	.630 (16)	.945 (24)	.787 (20)

57115

SWIVEL ELBOW

BSPP

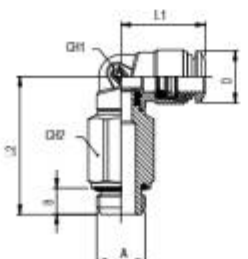


Part No.	Tube	A	B	L1	L2	CH1	CH2	D
57115-4-M5	5/32 (4)	M5	.138 (3,5)	.709 (18)	.689 (17,5)	.354 (9)	.315 (8)	.394 (10)
57115-4-1/8	5/32 (4)	1/8	.217 (5,5)	.709 (18)	.709 (18)	.354 (9)	.512 (13)	.394 (10)
57115-4-1/4	5/32 (4)	1/4	.276 (7)	.709 (18)	.709 (18)	.354 (9)	.63 (16)	.394 (10)
57115-5-M5	5	M5	.138 (3,5)	.787 (20)	.787 (20)	.433 (11)	.433 (11)	.492 (12,5)
57115-5-1/8	5	1/8	.217 (5,5)	.787 (20)	.787 (20)	.433 (11)	.512 (13)	.492 (12,5)
57115-6-M5	6	M5	.138 (3,5)	.827 (21)	.787 (20)	.433 (11)	.433 (11)	.492 (12,5)
57115-6-1/8	6	1/8	.217 (5,5)	.827 (21)	.787 (20)	.433 (11)	.512 (13)	.492 (12,5)
57115-6-1/4	6	1/4	.276 (7)	.827 (21)	.846 (21,5)	.433 (11)	.630 (16)	.492 (12,5)
57115-6-3/8	6	3/8	.276 (7)	.827 (21)	.846 (21,5)	.433 (11)	.630 (16)	.492 (12,5)
57115-8-1/8	5/16 (8)	1/8	.217 (5,5)	.886 (22,5)	.827 (21)	.472 (12)	.512 (13)	.571 (14,5)
57115-8-1/4	5/16 (8)	1/4	.276 (7)	.886 (22,5)	.846 (21,5)	.472 (12)	.63 (16)	.571 (14,5)
57115-8-3/8	5/16 (8)	3/8	.315 (8)	.886 (22,5)	.925 (23,5)	.472 (12)	.787 (20)	.571 (14,5)
57115-8-1/2	5/16 (8)	1/2	.374 (9,5)	.886 (22,5)	.984 (25)	.472 (12)	.984 (25)	.571 (14,5)
57115-10-1/4	10	1/4	.276 (7)	1.043 (26,5)	1.004 (25,5)	.551 (14)	.630 (16)	.689 (17,5)
57115-10-3/8	10	3/8	.315 (8)	1.043 (26,5)	.984 (25)	.551 (14)	.787 (20)	.689 (17,5)
57115-10-1/2	10	1/2	.374 (9,5)	1.043 (26,5)	1.043 (26,5)	.551 (14)	.984 (25)	.689 (17,5)
57115-12-1/4	12	1/4	.315 (8)	1.240 (31,5)	1.083 (27,5)	.63 (16)	.787 (20)	.846 (21,5)
57115-12-3/8	12	3/8	.315 (8)	1.240 (31,5)	1.063 (27)	.63 (16)	.787 (20)	.846 (21,5)
57115-12-1/2	12	1/2	.374 (9,5)	1.240 (31,5)	1.122 (28,5)	.63 (16)	.984 (25)	.846 (21,5)
57115-14-3/8	14	3/8	.315 (8)	1.240 (31,5)	1.083 (27,5)	.63 (16)	.787 (20)	.846 (21,5)
57115-14-1/2	14	1/2	.374 (9,5)	1.240 (31,5)	1.142 (29)	.63 (16)	.984 (25)	.846 (21,5)
57115-6-M12x1	6	M12x1	.295 (7,5)	.787 (20)	.866 (22)	.433 (11)	.630 (16)	.492 (12,5)
57115-6-M12x1.25	6	M12x1,25	.295 (7,5)	.787 (20)	.866 (22)	.433 (11)	.630 (16)	.492 (12,5)
57115-6-M12x1.5	6	M12x1,5	.295 (7,5)	.787 (20)	.866 (22)	.433 (11)	.630 (16)	.492 (12,5)
57115-8-M12x1.5	8	M12x1,5	.295 (7,5)	.886 (22,5)	.866 (22)	.472 (12)	.630 (16)	.571 (14,5)

57125

SWIVEL ELBOW

BSPP

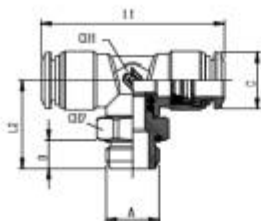


Part No.	Tube	A	B	L1	L2	CH1	CH2	D
57125-4-1/8	5/32 (4)	1/8	.217 (5,5)	.709 (18)	1.181 (30)	.354 (9)	.472 (12)	.394 (10)
57125-4-1/4	5/32 (4)	1/4	.276 (7)	.709 (18)	1.260 (32)	.354 (9)	.591 (15)	.394 (10)
57125-5-1/8	5	1/8	.217 (5,5)	.787 (20)	1.358 (34,5)	.433 (11)	.472 (12)	.492 (12,5)
57125-6-1/8	6	1/8	.217 (5,5)	.827 (21)	1.358 (34,5)	.433 (11)	.472 (12)	.492 (12,5)
57125-6-1/4	6	1/4	.276 (7)	.827 (21)	1.417 (36)	.433 (11)	.591 (15)	.492 (12,5)
57125-8-1/8	5/16 (8)	1/8	.197 (5)	.808 (22,8)	1.476 (37,5)	.472 (12)	.472 (12)	.571 (14,5)
57125-8-1/4	5/16 (8)	1/4	.276 (7)	.886 (22,5)	1.496 (38)	.472 (12)	.591 (15)	.571 (14,5)
57125-8-3/8	5/16 (8)	3/8	.315 (8)	.886 (22,5)	1.575 (40)	.472 (12)	.709 (18)	.571 (14,5)
57125-10-1/4	10	1/4	.276 (7)	1.043 (26,5)	1.772 (45)	.551 (14)	.630 (16)	.689 (17,5)
57125-10-3/8	10	3/8	.315 (8)	1.043 (26,5)	1.752 (44,5)	.551 (14)	.709 (18)	.689 (17,5)

57215

SWIVEL BRANCH TEE

BSPP

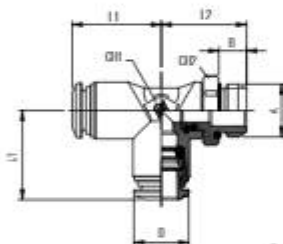


Part No.	Tube	A	B	L1	L2	CH1	CH2	D
57215-4-M5	5/32 (4)	M5	.138 (3,5)	1.339 (34)	.709 (18)	.354 (9)	.315 (8)	.394 (10)
57215-4-1/8	5/32 (4)	1/8	.217 (5,5)	1.339 (34)	.718 (18,5)	.354 (9)	.512 (13)	.394 (10)
57215-4-1/4	5/32 (4)	1/4	.276 (7)	1.339 (34)	.787 (20)	.354 (9)	.610 (16)	.394 (10)
57215-5-M5	5	M5	.138 (3,5)	1.575 (40)	.807 (20,5)	.433 (11)	.433 (11)	.492 (12,5)
57215-5-1/8	5	1/8	.217 (5,5)	1.575 (40)	.807 (20,5)	.433 (11)	.512 (13)	.492 (12,5)
57215-6-M5	6	M5	.138 (3,5)	1.654 (42)	.807 (20,5)	.433 (11)	.433 (11)	.492 (12,5)
57215-6-1/8	6	1/8	.217 (5,5)	1.654 (42)	.807 (20,5)	.433 (11)	.512 (13)	.492 (12,5)
57215-6-1/4	6	1/4	.276 (7)	1.654 (42)	.866 (22)	.433 (11)	.610 (16)	.492 (12,5)
57215-8-1/8	5/16 (8)	1/8	.217 (5,5)	1.772 (45)	.925 (23,5)	.512 (13)	.512 (13)	.571 (14,5)
57215-8-1/4	5/16 (8)	1/4	.276 (7)	1.772 (45)	.945 (24)	.512 (13)	.610 (16)	.571 (14,5)
57215-8-3/8	5/16 (8)	3/8	.315 (8)	1.772 (45)	1.024 (26)	.512 (13)	.787 (20)	.571 (14,5)
57215-8-1/2	5/16 (8)	1/2	.374 (9,5)	1.772 (45)	1.083 (27,5)	.512 (13)	.984 (25)	.571 (14,5)
57215-10-1/4	10	1/4	.276 (7)	2.087 (53)	1.083 (27,5)	.551 (14)	.610 (16)	.689 (17,5)
57215-10-3/8	10	3/8	.315 (8)	2.087 (53)	1.063 (27)	.551 (14)	.787 (20)	.689 (17,5)
57215-10-1/2	10	1/2	.374 (9,5)	2.087 (53)	1.122 (28,5)	.551 (14)	.984 (25)	.689 (17,5)
57215-12-3/8	12	3/8	.315 (8)	2.461 (62,5)	1.161 (29,5)	.610 (16)	.787 (20)	.846 (21,5)
57215-12-1/2	12	1/2	.374 (9,5)	2.461 (62,5)	1.220 (31)	.610 (16)	.984 (25)	.846 (21,5)
57215-14-3/8	14	3/8	.315 (8)	2.461 (62,5)	1.161 (29,5)	.610 (16)	.787 (20)	.846 (21,5)
57215-14-1/2	14	1/2	.374 (9,5)	2.461 (62,5)	1.220 (31)	.610 (16)	.984 (25)	.846 (21,5)
57215-6-M12x1	6	M12x1	.295 (7,5)	1.654 (42)	.866 (22)	.433 (11)	.610 (16)	.492 (12,5)
57215-6-M12x1.25	6	M12x1,25	.295 (7,5)	1.654 (42)	.866 (22)	.433 (11)	.610 (16)	.492 (12,5)
57215-6-M12x1.5	6	M12x1,5	.295 (7,5)	1.654 (42)	.866 (22)	.433 (11)	.610 (16)	.492 (12,5)

57225

SWIVEL RUN TEE

BSPP

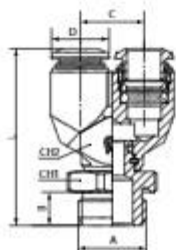


Part No.	Tube	A	B	L1	L2	CH1	CH2	D
57225-4-M5	5/32 (4)	M5	.138 (3,5)	.669 (17)	.709 (18)	.354 (9)	.315 (8)	.394 (10)
57225-4-1/8	5/32 (4)	1/8	.217 (5,5)	.669 (17)	.718 (18,5)	.354 (9)	.512 (13)	.394 (10)
57225-4-1/4	5/32 (4)	1/4	.276 (7)	.669 (17)	.787 (20)	.354 (9)	.61 (16)	.394 (10)
57225-5-M5	5	M5	.138 (3,5)	.787 (20)	.807 (20,5)	.433 (11)	.433 (11)	.492 (12,5)
57225-5-1/8	5	1/8	.217 (5,5)	.787 (20)	.807 (20,5)	.433 (11)	.512 (13)	.492 (12,5)
57225-6-M5	6	M5	.138 (3,5)	.827 (21)	.807 (20,5)	.433 (11)	.433 (11)	.492 (12,5)
57225-6-1/8	6	1/8	.217 (5,5)	.827 (21)	.807 (20,5)	.433 (11)	.512 (13)	.492 (12,5)
57225-6-1/4	6	1/4	.276 (7)	.827 (21)	.866 (22)	.433 (11)	.61 (16)	.492 (12,5)
57225-8-1/8	5/16 (8)	1/8	.217 (5,5)	.886 (22,5)	.886 (22,5)	.512 (13)	.512 (13)	.571 (14,5)
57225-8-1/4	5/16 (8)	1/4	.276 (7)	.886 (22,5)	.906 (23)	.512 (13)	.61 (16)	.571 (14,5)
57225-8-3/8	5/16 (8)	3/8	.315 (8)	.886 (22,5)	.984 (25)	.512 (13)	.787 (20)	.571 (14,5)
57225-8-1/2	5/16 (8)	1/2	.374 (9,5)	.886 (22,5)	1.043 (26,5)	.512 (13)	.984 (25)	.571 (14,5)
57225-10-1/4	10	1/4	.276 (7)	1.043 (26,5)	1.063 (27)	.551 (14)	.61 (16)	.689 (17,5)
57225-10-3/8	10	3/8	.315 (8)	1.043 (26,5)	1.043 (26,5)	.551 (14)	.787 (20)	.689 (17,5)
57225-10-1/2	10	1/2	.374 (9,5)	1.043 (26,5)	1.102 (28)	.551 (14)	.984 (25)	.689 (17,5)
57225-12-3/8	12	3/8	.315 (8)	1.240 (31,5)	1.161 (29,5)	.61 (16)	.787 (20)	.846 (21,5)
57225-12-1/2	12	1/2	.374 (9,5)	1.240 (31,5)	1.220 (31)	.61 (16)	.984 (25)	.846 (21,5)
57225-6-M12x1	6	M12x1	.295 (7,5)	.827 (21)	.866 (22)	.433 (11)	.61 (16)	.492 (12,5)
57225-6-M12x1.25	6	M12x1,25	.295 (7,5)	.827 (21)	.866 (22)	.433 (11)	.61 (16)	.492 (12,5)
57225-6-M12x1.5	6	M12x1,5	.295 (7,5)	.827 (21)	.866 (22)	.433 (11)	.61 (16)	.492 (12,5)

57326

Y-CONNECTOR MALE ADAPTOR (PARALLEL)

BSPP

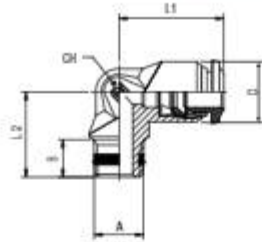


Part No.	Tube	A	B	C	CH1	CH2	D
57326-4-1/8	5/32 (4)	1/8	.217 (5,5)	1.280 (32,5)	.511 (13)	.433 (11)	.394 (10)
57326-6-1/8	6	1/8	.217 (5,5)	1.456 (37)	.511 (13)	.511 (13)	.492 (12,5)
57326-6-1/4	6	1/4	.275 (7)	1.516 (38,5)	.629 (16)	.511 (13)	.492 (12,5)
57326-8-1/8	5/16 (8)	1/8	.217 (5,5)	1.594 (40,5)	.511 (13)	.590 (15)	.551 (14)
57326-8-1/4	5/16 (8)	1/4	.275 (7)	1.614 (41)	.629 (16)	.590 (15)	.551 (14)
57326-8-3/8	5/16 (8)	3/8	.314 (8)	1.693 (43)	.787 (20)	.590 (15)	.551 (14)

57100

FIXED ELBOW

BSPT

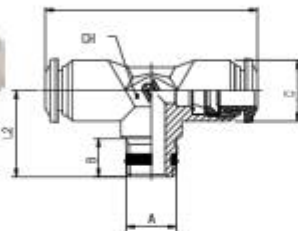


Part No.	Tube	A	B	L1	L2	CH	D
57100-4-M5	5/32 (4)	M5	.197 (5)	.669 (17)	.591 (15)	.354 (9)	.394 (10)
57100-4-1/8	5/32 (4)	1/8	.295 (7,5)	.669 (17)	.61 (15,5)	.354 (9)	.394 (10)
57100-5-M5	5	M5	.197 (5)	.787 (20)	.669 (17)	.433 (11)	.492 (12,5)
57100-5-1/8	5	1/8	.295 (7,5)	.787 (20)	.689 (17,5)	.433 (11)	.492 (12,5)
57100-6-1/8	6	1/8	.295 (7,5)	.827 (21)	.689 (17,5)	.433 (11)	.492 (12,5)
57100-6-1/4	6	1/4	.433 (11)	.827 (21)	.846 (21,5)	.433 (11)	.492 (12,5)
57100-8-1/8	5/16 (8)	1/8	.295 (7,5)	.886 (22,5)	.748 (19)	.512 (13)	.551 (14)
57100-8-1/4	5/16 (8)	1/4	.433 (11)	.886 (22,5)	.846 (21,5)	.512 (13)	.551 (14)
57100-10-1/4	10	1/4	.433 (11)	1.043 (26,5)	.965 (24,5)	.63 (16)	.669 (17)
57100-10-3/8	10	3/8	.453 (11,5)	1.043 (26,5)	.945 (24)	.63 (16)	.669 (17)
57100-12-1/4	12	1/4	.433 (11)	1.201 (30,5)	1.201 (28)	.748 (19)	.846 (21,5)
57100-12-3/8	12	3/8	.453 (11,5)	1.201 (30,5)	1.201 (28)	.748 (19)	.846 (21,5)

57200

FIXED BRANCH TEE

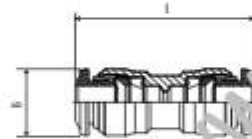
BSPT



Part No.	Tube	A	B	L1	L2	CH	D
57200-4-M5	5/32 (4)	M5	.197 (5)	1.339 (34)	.591 (15)	.354 (9)	.394 (10)
57200-4-1/8	5/32 (4)	1/8	.295 (7,5)	1.339 (34)	.61 (15,5)	.354 (9)	.394 (10)
57200-5-1/8	5	1/8	.295 (7,5)	1.575 (40)	.689 (17,5)	.433 (11)	.492 (12,5)
57200-6-1/8	6	1/8	.295 (7,5)	1.654 (42)	.689 (17,5)	.433 (11)	.492 (12,5)
57200-8-1/8	5/16 (8)	1/8	.295 (7,5)	1.772 (45)	.748 (19)	.512 (13)	.551 (14)
57200-8-1/4	5/16 (8)	1/4	.433 (11)	1.772 (45)	.846 (21,5)	.512 (13)	.551 (14)
57200-10-1/4	10	1/4	.433 (11)	2.087 (53)	.965 (24,5)	.63 (16)	.669 (17)
57200-10-3/8	10	3/8	.453 (11,5)	2.087 (53)	.945 (24)	.63 (16)	.669 (17)
57200-12-1/4	12	1/4	.433 (11)	2.402 (61)	1.102 (28)	.748 (19)	.846 (21,5)
57200-12-3/8	12	3/8	.453 (11,5)	2.402 (61)	1.102 (28)	.748 (19)	.846 (21,5)

57040

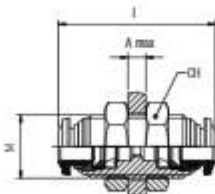
UNION



Part No.	Tube	Tube	L	B
89040-53	5/32 (4)		1.200 (30,5)	.413 (10,5)
57040-5	5		1.299 (33)	.453 (11,5)
57040-6	6	5/32 (4)	1.259 (32)	.492 (12,5)
57040-6	6		1.338 (34)	.492 (12,5)
57040-8-6	5/16 (8)	6	1.377 (35)	.571 (14,5)
89040-05	5/16 (8)		1.417 (36)	.571 (14,5)
57040-10-8	10	5/16 (8)	1.594 (40,5)	.689 (17,5)
57040-10	10		1.653 (42)	.689 (17,5)
57040-12-10	12	10	1.791 (45,5)	.807 (20,5)
57040-12	12		1.850 (47)	.807 (20,5)
57040-14	14		1.929 (49)	.846 (21,5)

57050

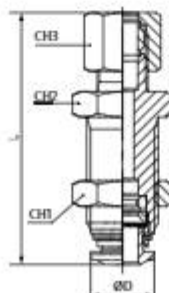
BULKHEAD UNION



Part No.	Tube	M	L	CH	A max
89050-53	5/32 (4)	M12x1	1.240 (31,5)	.669 (17)	.275 (7)
57050-5	5	M14x1	1.299 (33)	.669 (17)	.275 (7)
57050-6	6	M14x1	1.377 (35)	.669 (17)	.374 (9,5)
57050-8-6	5/16 (8)-6	M16x1	1.456 (37)	.748 (19)	.413 (10,5)
89050-05	5/16 (8)	M16x1	1.456 (37)	.748 (19)	.413 (10,5)
57050-10-6	10-6	M20x1	1.693 (43)	.945 (24)	.453 (11,5)
57050-10-8	10-5/16 (8)	M20x1	1.693 (43)	.945 (24)	.492 (12,5)
57050-10	10	M20x1	1.692 (42)	.944 (24)	.492 (12,5)
57050-12	12	M22x1	1.889 (48)	1.023 (26)	.649 (16,5)

57465

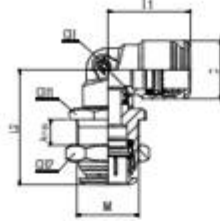
BULKHEAD CONNECTOR



Part No.	Tube	L	D	CH1	CH2	CH3
57465-6	6	1.949 (49,5)	.492 (12,5)	.511 (13)	.669 (17)	.669 (17)
57465-8	5/16 (8)	2.047 (52)	.551 (14)	.551 (14)	.748 (19)	.748 (19)
57465-10	10	2.282 (59)	.669 (17)	.748 (19)	.945 (24)	.945 (24)

57060

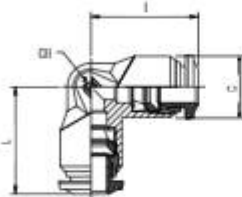
SWIVEL ELBOW BULKHEAD



Part No.	Tube	M	L1	L2	CH	CH1	CH2	A max	D
57060-4	5/32 (4)	M12x1	.689 (17,5)	1.024 (26)	.354 (9)	.551 (14)	.669 (17)	.236 (6)	.394 (10)
57060-6	6	M14x1	.846 (21,5)	1.220 (31)	.433 (11)	.669 (17)	.669 (17)	.256 (6,5)	.492 (12,5)
57060-8	5/16 (8)	M16x1	.866 (22)	1.339 (34)	.472 (12)	.709 (18)	.748 (19)	.256 (6,5)	.571 (14,5)
57060-10	10	M20x1	1.043 (26,5)	1.417 (36)	.551 (14)	.866 (22)	.945 (24)	.295 (7,5)	.689 (17,5)
57060-12	12	M22x1	1.201 (30,5)	1.693 (43)	.63 (16)	.945 (24)	1.024 (26)	.354 (9)	.846 (21,5)
57060-14	14	M23x1	1.201 (30,5)	1.693 (43)	.63 (16)	.984 (25)	1.063 (27)	.374 (9,5)	.846 (21,5)

57130

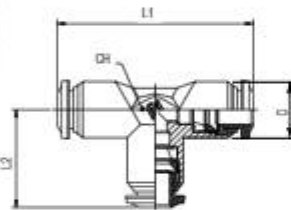
UNION ELBOW



Part No.	Tube	L	CH	D
89130-53	5/32 (4)	.669 (17)	.354 (9)	.394 (10)
57130-5	5	.787 (20)	.433 (11)	.492 (12,5)
57130-6	6	.826 (21)	.433 (11)	.492 (12,5)
89130-05	5/16 (8)	.885 (22,5)	.511 (13)	.571 (14,5)
57130-10	10	1.043 (26,5)	.629 (16)	.689 (17,5)
57130-12	12	1.200 (30,5)	.748 (19)	.846 (21,5)
57130-14	14	1.279 (32,5)	.748 (19)	.846 (21,5)

57230

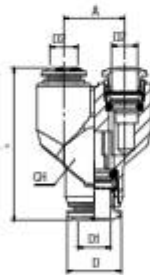
UNION TEE



Part No.	Tube	L1	L2	CH	D
89230-53	5/32 (4)	1.338 (34)	.669 (17)	.354 (9)	.394 (10)
57230-5	5	1.511 (40)	.787 (20)	.433 (11)	.492 (12,5)
57230-6	6	1.653 (42)	.826 (21)	.433 (11)	.492 (12,5)
89230-05	5/16 (8)	.771 (20)	.885 (22,5)	.511 (13)	.551 (14)
57230-10	10	2.161 (53)	1.043 (26,5)	.629 (16)	.669 (17)
57230-12	12	2.401 (61)	1.200 (30,5)	.748 (19)	.847 (21,5)
57230-14	14	2.578 (65,5)	1.279 (32,5)	.748 (19)	.847 (21,5)

57310

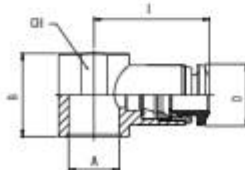
UNION Y



Part No.	Tube	A	L	CH	D
89310-53	5/32 (4)	.433 (11)	1.259 (32)	.433 (11)	.394 (10)
57310-5	5	.531 (13,5)	1.377 (35)	.511 (13)	.492 (12,5)
57310-6	6	.531 (13,5)	1.437 (36,5)	.511 (13)	.492 (12,5)
89310-05	5/16 (8)	.610 (15,5)	1.614 (41)	.590 (15)	.551 (14)
57310-10	10	.728 (18,5)	1.889 (48)	.708 (18)	.669 (17)

57500

SINGLE BANJO BODY

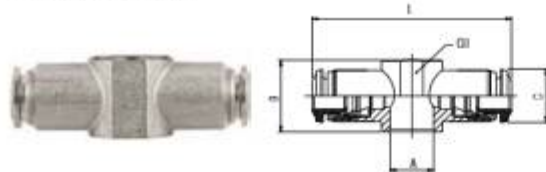


Part No.	Tube	A	B	L	CH	D
89500-53-32	5/32 (4)	M5	.492 (12,5)	.748 (19)	-	.394 (10)
57500-4-M6	5/32 (4)	M6	.492 (12,5)	.748 (19)	-	.394 (10)
89500-53-02	5/32 (4)	1/8	.591 (15)	.827 (21)	.551 (14)	.394 (10)
57500-5-M5	5	M5	.492 (12,5)	.787 (20)	-	.492 (12,5)
57500-5-M6	5	M6	.492 (12,5)	.787 (20)	-	.492 (12,5)
57500-5-1/8	5	1/8	.591 (15)	.846 (21,5)	.551 (14)	.492 (12,5)
57500-5-1/4	5	1/4	.669 (17)	.965 (24,5)	.709 (18)	.492 (12,5)
57500-6-M5	6	M5	.492 (12,5)	.807 (20,5)	-	.492 (12,5)
57500-6-M6	6	M6	.492 (12,5)	.807 (20,5)	-	.492 (12,5)
57500-6-1/8	6	1/8	.591 (15)	.866 (22)	.551 (14)	.492 (12,5)
57500-6-1/4	6	1/4	.669 (17)	.984 (25)	.709 (18)	.492 (12,5)
57500-8-1/8	5/16 (8)	1/8	.591 (15)	.945 (24)	.551 (14)	.551 (14)
57500-8-1/4	5/16 (8)	1/4	.669 (17)	1.024 (26)	.709 (18)	.551 (14)
57500-8-3/8	5/16 (8)	3/8	.787 (20)	1.102 (28)	.827 (21)	.551 (14)
57500-10-1/4	10	1/4	.669 (17)	1.142 (29)	.709 (18)	.669 (17)
57500-10-3/8	10	3/8	.787 (20)	1.201 (30,5)	.827 (21)	.669 (17)
57500-12-3/8	12	3/8	.787 (20)	1.280 (32,5)	.827 (21)	.846 (21,5)
57500-12-1/2	12	1/2	.945 (24)	1.378 (35)	.984 (25)	.846 (21,5)
57500-14-1/2	14	1/2	.945 (24)	1.398 (35,5)	.984 (25)	.846 (21,5)

For BANJO STEM assemblies see 10.7/10.8/10.9

57510

DOUBLE BANJO BODY



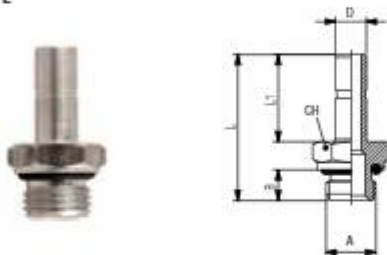
Part No.	Tube	A	B	L	CH	D
57510-4-M5	5/32 (4)	M5	.892 (12,5)	1.496 (38)	-	.394 (10)
57510-4-M6	5/32 (4)	M6	.892 (12,5)	1.496 (38)	-	.394 (10)
57510-4-1/8	5/32 (4)	1/8	.591 (15)	1.654 (42)	.551 (14)	.394 (10)
57510-5-1/8	5	1/8	.591 (15)	1.693 (43)	.551 (14)	.892 (12,5)
57510-5-1/4	5	1/4	.669 (17)	1.929 (49)	.709 (18)	.892 (12,5)
57510-6-1/8	6	1/8	.591 (15)	1.732 (44)	.551 (14)	.892 (12,5)
57510-6-1/4	6	1/4	.669 (17)	1.969 (50)	.709 (18)	.892 (12,5)
57510-8-1/8	5/16 (8)	1/8	.591 (15)	1.890 (48)	.551 (14)	.551 (14)
57510-8-1/4	5/16 (8)	1/4	.669 (17)	2.047 (52)	.709 (18)	.551 (14)

For BANJO STEM assemblies see 10.7/10.8/10.9

50600

STANDPIPE

BSPP



Part No.	D	A	B	L	L1	CH
50600-4-M5	5/32 (4)	M5	.157 (4)	.945 (24)	.591 (15)	.315 (8)
50600-4-1/8	5/32 (4)	1/8	.236 (6)	1.043 (26,5)	.591 (15)	.512 (13)
50600-5-M5	5	M5	.157 (4)	1.024 (26)	.669 (17)	.315 (8)
50600-5-1/8	5	1/8	.236 (6)	1.122 (28,5)	.669 (17)	.512 (13)
50600-5-1/4	5	1/4	.315 (8)	1.220 (31)	.669 (17)	.630 (16)
50600-6-M5	6	M5	.157 (4)	1.024 (26)	.669 (17)	.315 (8)
50600-6-1/8	6	1/8	.236 (6)	1.122 (28,5)	.669 (17)	.512 (13)
50600-6-1/4	6	1/4	.315 (8)	1.220 (31)	.669 (17)	.630 (16)
50600-8-1/8	5/16 (8)	1/8	.236 (6)	1.161 (29,5)	.709 (18)	.512 (13)
50600-8-1/4	5/16 (8)	1/4	.315 (8)	1.260 (32)	.709 (18)	.630 (16)
50600-8-3/8	5/16 (8)	3/8	.354 (9)	1.319 (33,5)	.709 (18)	.787 (20)
50600-10-1/8	10	1/8	.236 (6)	1.319 (33,5)	.866 (22)	.512 (13)
50600-10-1/4	10	1/4	.315 (8)	1.417 (36)	.866 (22)	.630 (16)
50600-10-3/8	10	3/8	.354 (9)	1.476 (37,5)	.866 (22)	.787 (20)
50600-12-1/4	12	1/4	.315 (8)	1.516 (38,5)	.965 (24,5)	.630 (16)
50600-12-3/8	12	3/8	.354 (9)	1.575 (40)	.965 (24,5)	.787 (20)
50600-14-1/2	14	1/2	.394 (10)	1.732 (44)	1.043 (26,5)	.945 (24)

57610

PLUG



Part No.	D	G	L	L1
57610-4	5/32 (4)	.315 (8)	1.004 (25,5)	.728 (18,5)
57610-5	5	.315 (8)	1.063 (27)	.787 (20)
57610-6	6	.315 (8)	1.083 (27,5)	.807 (20,5)
57610-8	5/16 (8)	.472 (12)	1.161 (29,5)	.846 (21,5)
57610-10	10	.472 (12)	1.280 (32,5)	.964 (24,5)
57610-12	12	.630 (16)	1.437 (36,5)	1.083 (27,5)
57610-14	14	.630 (16)	1.437 (36,5)	1.043 (26,5)

50625

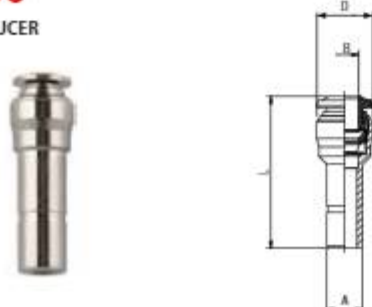
DOUBLE JOINT



Part No.	Tube	L
50625-4	5/32 (4)	1.220 (31)
50625-5	5	1.299 (33)
50625-6	6	1.339 (34)
50625-8	5/16 (8)	1.417 (36)
50625-10	10	1.772 (45)
50625-12	12	1.969 (50)

57700

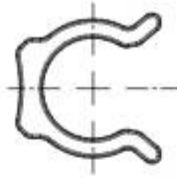
TUBE REDUCER



Part No.	A	B	L	D
57700-5-4	5	5/32 (4)	1.142 (29)	.413 (10,5)
57700-6-4	6	5/32 (4)	1.181 (30)	.413 (10,5)
57700-6-5	6	5	1.260 (32)	.435 (11,05)
89700-05-53	5/16 (8)	5/32 (4)	1.300 (33)	.413 (10,5)
57700-8-6	5/16 (8)	6	1.339 (34)	.551 (14)
57700-10-4	10	5/32 (4)	1.260 (32)	.394 (10)
57700-10-8	10	5/16 (8)	1.496 (38)	.571 (14,5)
57700-12-8	12	5/16 (8)	1.535 (39)	.571 (14,5)
57700-12-10	12	10	1.693 (43)	.690 (17,5)

50980

SECURITY CLIP



Part No.	Tube
50980-53	5/32 (4)
50980-04	1/4 (6)
50980-05	5/16 (8)
50980-06	3/8 (10)
50980-08	1/2 (12)

50991

TOOL FOR DISASSEMBLING

Part No.

50991



50006

THREAD PACKING FOR THE SWIFTFIT TAPER THREADS

Part No.

50006-03

50006-04

50006-06

50006-08

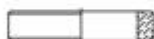
Thread

1/8

1/4

3/8

1/2



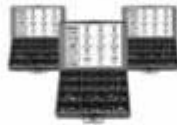




www.sumy.ir

87 - 88 Series

 87000 Pg. 3.5	 87010 Pg. 3.5	 87110 Pg. 3.5	 87210 Pg. 3.6	 87222 Pg. 3.6	 88020 Pg. 3.6	 87010 Pg. 3.6	 88115 Pg. 3.7	 88215 Pg. 3.7
 88225 Pg. 3.7	 88007 Pg. 3.7	 88117 Pg. 3.7	 88000 Pg. 3.8	 88030 Pg. 3.8	 88055 Pg. 3.8	 88100 Pg. 3.8	 88105 Pg. 3.9	 88110 Pg. 3.9
 88210 Pg. 3.9	 88222 Pg. 3.9	 88040 Pg. 3.10	 88050 Pg. 3.10	 88130 Pg. 3.10	 88230 Pg. 3.10	 88310 Pg. 3.10	 88500 Pg. 3.11	 88510 Pg. 3.11
 88610 Pg. 3.11	 88700 Pg. 3.11	 50980 Pg. 3.11	 87800 Pg. 3.12	 55801 Pg. 3.12	 55802 Pg. 3.12			

Fitting Kits

 87861-02 Pg. 3.13	 87861-04 Pg. 3.13	 87861-06 Pg. 3.13	 87861-08 Pg. 3.14
 87861-90 Pg. 3.14			

PUSH-TO-CONNECT FITTINGS
FOR INCH TUBE



87 - 88 Series

87000
88000



TECHNICAL CHARACTERISTICS



Reference Standard

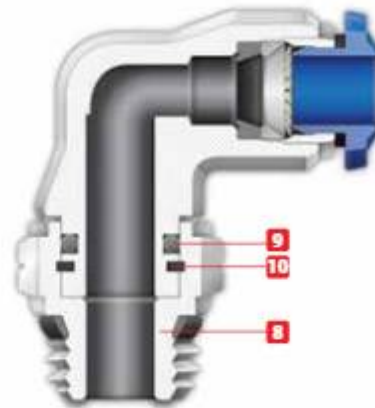
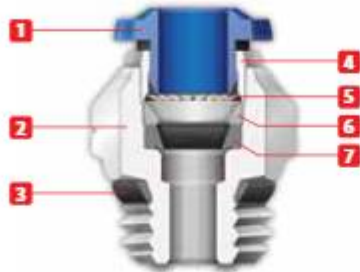
1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

ISO
14743:2004

SILICON
FREE



Pressure Rating

Vacuum ~ 290 PSI
-0.99 bar ~ 20 bar
-0.099 MPa ~ 2.0 MPa



Temperatures Rating

NBR
-4° F ~ 176° F
-20° C ~ 80° C



Media

- Compressed air
- Vacuum
- Water
- Steam (FKM required)



Applications

- Pneumatic Automation
- Automotive
- Textile, Packaging
- Compressed Air Circuit
- Vacuum



Advantages

- 1 The 303 Stainless Steel gripper ensures a tight clamp for tubes of any material without damaging the tube's surface. The secure connection between the tube and the fitting will hold up to severe conditions such as impact and vibrations.
- 2 The shape of the safety ring and the molded seal perfectly seal off the tube, creating a vacuum.
- 3 Series with several types of threads:
SWIFFIT
UNF
PTF
NPTF
- 4 All straight fittings can be tightened with an Allen wrench because of our internal hex design. This enables the end user to tighten the fitting in spaces too small for an openend wrench.
- 5 Our rotating Swivel Elbow fittings are equipped with a safety ring that enables the fitting to rotate without losing a tight seal.



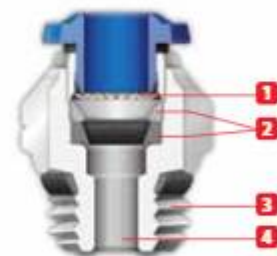
Component Parts and Materials

- 1 Composite Release Collet
- 2 Nickel Plated Brass Body
- 3 NBR Thread Seal
- 4 Nickel Plated Brass Sleeve
- 5 303 Stainless Steel Gripper
- 6 Technopolymer Safety Ring
- 7 NBR Molded Seal
- 8 Nickel Plated Thread Brass Body
- 9 NBR Seal
- 10 Safety Ring



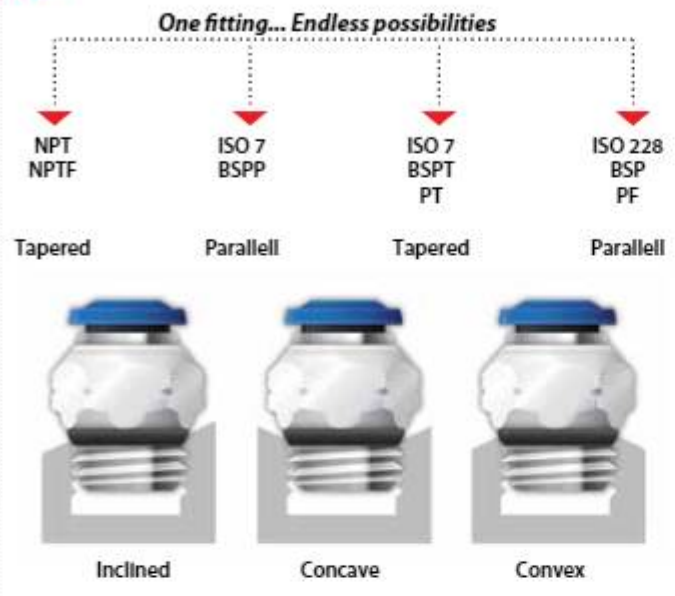
Tubing Compatibility

Nylon 6 - 11 -12
Polyethylene
Polyurethane (*98 Shore A for best result)
PTFE
FEP



THREADS & ADVANTAGES

SWIFFFIT
Universal Thread



Our **SWIFFFIT** universal fittings also work on non-flat surfaces without compromising an air-tight seal.

The **SWIFFFIT** Universal Thread has been designed to offer the following advantages to the end users:

- Reduced overall length
- Smaller hex dimensions compared to parallel threads
- Fits with various parallel and tapered threads
- All **SWIFFFIT** fittings have been equipped with threads and an NBR thread seal that will universally connect to all thread types.

Torque Specifications

Recommended Torque		
Thread Size	Min.	Max.
1/8	5 Nm	7 Nm
1/4	5 Nm	7 Nm
3/8	5 Nm	7 Nm
1/2	5 Nm	7 Nm

UNF Thread



The **UNF** Thread has been designed to offer the following advantages to the end users:

- Standard USA design
- Designed for use in UNF connections with an integrated NBR o-ring that provides a perfect seal
- Completely reusable

Torque Specifications

Recommended Torque		
Thread Size	Min.	Breaking torque
10/32	0.8 Nm	3.2 Nm

PTF Thread



The **PTF** Thread has been designed to offer the following advantages to the end users:

- Standard USA design. PTF/SAE short thread
- Designed for connections with an NPTF thread
- Dryseal pipe threads are designed for applications where clearance is not sufficient for the full thread length of NPTF threads.

Torque Specifications

Recommended Torque		
Thread Size	Min.	Breaking torque
1/8	5 Nm	8 Nm
1/4	9 Nm	30 Nm



NPTF Thread with seal



The **NPTF** Thread has been designed to offer the following advantages to the end users:

- Standard USA design
- Designed for use in NPT connections with an integrated NBR thread seal that provides an additional seal

Torque Specifications

Recommended Torque		
Thread Size	Min.	Max.
1/8	5 Nm	7 Nm
1/4	5 Nm	7 Nm
3/8	5 Nm	7 Nm
1/2	5 Nm	7 Nm

87000

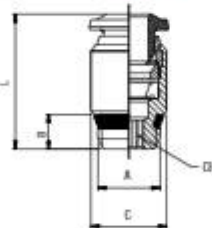
STRAIGHT MALE



Part No.	Tube	A	B	L	CH1	CH2
87000-02-02	1/8	1/8	.217 (5,5)	.650 (16,5)	.433 (11)	.079 (2)
87000-02-04	1/8	1/4	.276 (7)	.728 (18,5)	.551 (14)	.079 (2)
87000-53-02	5/32 (4)	1/8	.217 (5)	.708 (18)	.433 (11)	.118 (3)
87000-53-04	5/32 (4)	1/4	.276 (7)	.767 (19,5)	.551 (14)	.118 (3)
87000-04-02	1/4	1/8	.217 (5)	.866 (22)	.512 (13)	.157 (4)
87000-04-04	1/4	1/4	.276 (7)	.826 (21)	.551 (14)	.157 (4)
87000-04-06	1/4	3/8	.295 (7,5)	.826 (21)	.669 (17)	.157 (4)
87000-05-02	5/16 (8)	1/8	.217 (5)	.964 (24,5)	.551 (14)	.197 (5)
87000-05-04	5/16 (8)	1/4	.276 (7)	.866 (22)	.551 (14)	.236 (6)
87000-05-06	5/16 (8)	3/8	.295 (7,5)	.905 (23)	.669 (17)	.236 (6)
87000-06-02	3/8	1/8	.217 (5)	1.122 (28,5)	.669 (17)	.197 (5)
87000-06-04	3/8	1/4	.276 (7)	1.122 (28,5)	.669 (17)	.276 (6)
87000-06-06	3/8	3/8	.295 (7,5)	1.043 (26,5)	.669 (17)	.276 (6)
87000-06-08	3/8	1/2	.354 (9)	1.043 (26,5)	.827 (21)	.276 (6)
87000-07-02	1/2	1/8	.217 (5)	1.299 (33)	.787 (20)	.197 (5)
87000-08-04	1/2	1/4	.276 (7)	1.299 (33)	.787 (20)	.197 (5)
87000-08-06	1/2	3/8	.295 (7,5)	1.259 (32)	.787 (20)	.354 (9)
87000-08-08	1/2	1/2	.354 (9)	1.259 (32)	.827 (21)	.394 (10)

87010

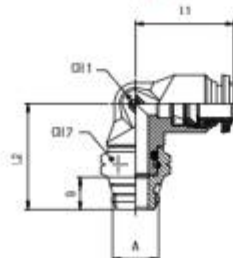
STRAIGHT MALE WITH INTERNAL HEX



Part Number	Tube	A	B	C	L	CH
87010-53-02	5/32 (4)	1/8	.217 (5)	.374 (9,5)	.709 (18)	.118 (3)
87010-04-02	1/4	1/8	.217 (5)	.473 (12)	.846 (21,5)	.157 (4)
87010-04-04	1/4	1/4	.276 (7)	.551 (14)	.846 (21,5)	.157 (4)

87110

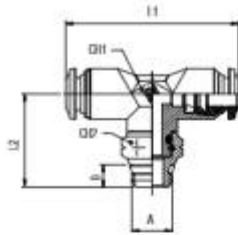
SWIVEL ELBOW



Part No.	Tube	A	B	L1	L2	CH1	CH2
87110-02-02	1/8	1/8	.217 (5,5)	.650 (16,5)	.846 (21,5)	.354 (9)	.512 (13)
87110-02-04	1/8	1/4	.276 (7)	.669 (17)	1.003 (25,5)	.354 (9)	.591 (15)
87110-53-02	5/32 (4)	1/8	.217 (5,5)	.709 (18)	.846 (21,5)	.354 (9)	.512 (13)
87110-53-04	5/32 (4)	1/4	.276 (7)	.709 (18)	1.003 (25,5)	.354 (9)	.591 (15)
87110-04-02	1/4	1/8	.217 (5,5)	.846 (21,5)	.925 (23,5)	.433 (11)	.512 (13)
87110-04-04	1/4	1/4	.276 (7)	.846 (21,5)	.925 (23,5)	.433 (11)	.591 (15)
87110-04-06	1/4	3/8	.295 (7,5)	.846 (21,5)	1.082 (27,5)	.433 (11)	.669 (17)
87110-05-02	5/16 (8)	1/8	.217 (5,5)	.905 (23)	.984 (25)	.512 (13)	.512 (13)
87110-05-04	5/16 (8)	1/4	.276 (7)	.905 (23)	1.082 (27,5)	.512 (13)	.591 (15)
87110-05-06	5/16 (8)	3/8	.295 (7,5)	.886 (22,5)	1.102 (28)	.512 (13)	.669 (17)
87110-06-02	3/8	1/8	.217 (5,5)	1.062 (27)	1.082 (27,5)	.630 (16)	.512 (13)
87110-06-04	3/8	1/4	.276 (7)	1.062 (27)	1.161 (29,5)	.630 (16)	.591 (15)
87110-06-06	3/8	3/8	.295 (7,5)	1.062 (27)	1.181 (30)	.630 (16)	.669 (17)
87110-06-08	3/8	1/2	.354 (9)	1.062 (27)	1.299 (33)	.630 (16)	.827 (21)
87110-08-04	1/2	1/4	.276 (7)	1.240 (31,5)	1.299 (33)	.748 (19)	.591 (15)
87110-08-06	1/2	3/8	.295 (7,5)	1.240 (31,5)	1.299 (33)	.748 (19)	.669 (17)
87110-08-08	1/2	1/2	.354 (9)	1.240 (31,5)	1.417 (36)	.748 (19)	.827 (21)

87210

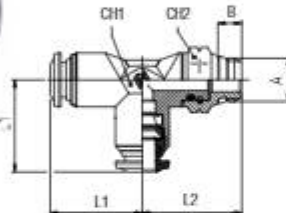
SWIVEL BRANCH TEE



Part No.	Tube	A	B	L1	L2	CH1	CH2
87210-02-02	1/8	1/8	.217 (5,5)	1.299 (33)	.787 (20)	.354 (9)	.512 (13)
87210-02-04	1/8	1/4	.276 (7)	1.299 (33)	1.003 (25,5)	.354 (9)	.591 (15)
87210-53-02	5/32 (4)	1/8	.217 (5,5)	1.339 (34)	.787 (20)	.354 (9)	.512 (13)
87210-53-04	5/32 (4)	1/4	.276 (7)	1.299 (33)	1.003 (25,5)	.354 (9)	.591 (15)
87210-04-02	1/4	1/8	.217 (5,5)	1.692 (43)	.925 (23,5)	.433 (11)	.512 (13)
87210-04-04	1/4	1/4	.276 (7)	1.692 (43)	1.062 (27)	.433 (11)	.591 (15)
87210-04-06	1/4	3/8	.295 (7,5)	2.087 (53)	1.102 (28)	.630 (16)	.669 (17)
87210-06-02	3/8	1/8	.217 (5,5)	2.047 (52)	1.082 (27,5)	.630 (16)	.590 (15)
87210-06-04	3/8	1/4	.275 (7)	2.087 (53)	1.181 (30)	.630 (16)	.511 (13)
87210-06-06	3/8	3/8	.295 (7,5)	2.087 (53)	1.181 (30)	.630 (16)	.669 (17)
87210-06-08	3/8	1/2	.354 (9)	2.087 (53)	1.299 (33)	.630 (16)	.827 (21)
87210-08-04	1/2	1/4	.276 (7)	2.402 (61)	1.240 (31,5)	.748 (19)	.591 (15)
87210-08-06	1/2	3/8	.295 (7,5)	2.402 (61)	1.299 (33)	.748 (19)	.669 (17)
87210-08-08	1/2	1/2	.354 (9)	2.402 (61)	1.417 (36)	.748 (19)	.827 (21)

87222

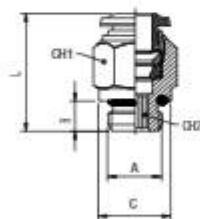
SWIVEL RUN TEE



Part No.	Tube	A	B	L1	L2	CH1	CH2
87222-02-02	1/8	1/8	.269 (6,5)	.669 (17)	.807 (20,5)	.354 (9)	.512 (13)
87222-02-04	1/8	1/4	.511 (13)	.669 (17)	.945 (24)	.354 (9)	.591 (15)
87222-53-02	5/32 (4)	1/8	.269 (6,5)	.669 (17)	.787 (20)	.354 (9)	.512 (13)
87222-53-04	5/32 (4)	1/4	.511 (13)	.669 (17)	.945 (24)	.354 (9)	.591 (15)
87222-04-02	1/4	1/8	.269 (6,5)	.827 (21)	.866 (22)	.433 (11)	.512 (13)
87222-04-04	1/4	1/4	.511 (13)	.827 (21)	.984 (25)	.433 (11)	.591 (15)
87222-04-06	1/4	3/8	.511 (13)	.827 (21)	1.102 (28)	.433 (11)	.591 (15)
87222-06-02	3/8	1/8	.269 (6,5)	1.043 (26,5)	1.102 (28)	.433 (11)	.512 (13)
87222-06-04	3/8	1/4	.511 (13)	1.043 (26,5)	1.102 (28)	.630 (16)	.591 (15)
87222-06-06	3/8	3/8	.511 (13)	1.043 (26,5)	1.181 (30)	.630 (16)	.669 (17)
87222-06-08	3/8	1/2	.669 (17)	1.043 (26,5)	1.299 (33)	.630 (16)	.827 (21)
87222-08-04	1/2	1/4	.511 (13)	1.201 (30,5)	1.240 (31,5)	.748 (19)	.591 (15)
87222-08-06	1/2	3/8	.511 (13)	1.201 (30,5)	1.299 (33)	.748 (19)	.669 (17)
87222-08-08	1/2	1/2	.669 (17)	1.201 (30,5)	1.417 (36)	.748 (19)	.827 (21)

88020

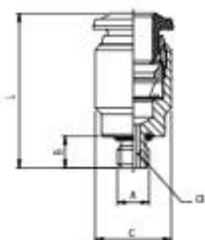
STRAIGHT MALE



Part No.	Tube	A	B	C	L	CH1	CH2
88020-02-32	1/8	10/32	.157 (4)	.310 (8)	.787 (18)	.315 (8)	.079 (2)
88020-53-32	5/32 (4)	10/32	.157 (4)	.310 (8)	.827 (21)	.394 (10)	.079 (2)
88020-04-32	1/4	10/32	.157 (4)	.390 (10)	.925 (23,5)	.512 (13)	.079 (2)

87010

STRAIGHT MALE WITH INTERNAL HEX

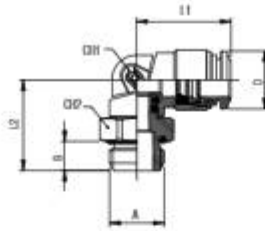


Part Number	Tube	A	B	C	L	CH
87010-02-32	1/8	10/32	.157 (4)	.315 (8)	.709 (18)	.098 (2,5)
87010-53-32	5/32 (4)	10/32	.157 (4)	.394 (10)	.787 (20)	.098 (2,5)
87010-04-32	1/4	10/32	.157 (4)	.473 (12)	.925 (23,5)	.098 (2,5)

88115

SWIVEL ELBOW

UNF

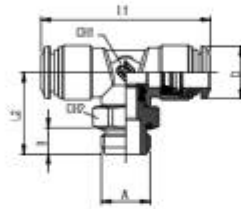


Part No.	Tube	A	B	L1	L2	CH1	CH2	D
88115-02-32	1/8	10/32	.157 (4)	.650 (16,5)	.689 (17,5)	.354 (9)	.315 (8)	.393 (10)
88115-53-32	5/32 (4)	10/32	.157 (4)	.709 (18)	.689 (17,5)	.354 (9)	.315 (8)	.393 (10)
88115-04-32	1/4	10/32	.157 (4)	.846 (21,5)	.768 (19,5)	.433 (11)	.433 (11)	.492 (12,5)

88215

SWIVEL BRANCH TEE

UNF

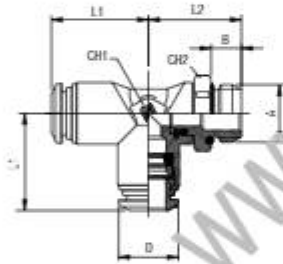


Part No.	Tube	A	B	L1	L2	CH1	CH2	D
88215-02-32	1/8	10/32	.157 (4)	1.299 (33)	.689 (17,5)	.354 (9)	.315 (8)	.393 (10)
88215-53-32	5/32 (4)	10/32	.157 (4)	1.299 (33)	.708 (18)	.354 (9)	.315 (8)	.393 (10)
88215-04-32	1/4	10/32	.157 (4)	1.692 (43)	.768 (19,5)	.433 (11)	.433 (11)	.492 (12,5)

88225

SWIVEL RUN TEE

UNF



Part No.	Tube	A	B	L1	L2	CH1	CH2	D
88225-02-32	1/8	10/32	.157 (4)	.649 (16,5)	.689 (17,5)	.354 (9)	.315 (8)	.393 (10)
88225-53-32	5/32 (4)	10/32	.157 (4)	.699 (17)	.708 (18)	.354 (9)	.315 (8)	.393 (10)
88225-04-32	1/4	10/32	.157 (4)	.827 (21)	.787 (20)	.433 (11)	.433 (11)	.492 (12,5)

88007

STRAIGHT MALE

PTF

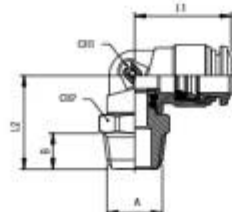


Part No.	Tube	A	B	L	CH1	CH2
88007-53-02	5/32(4)	1/8	.276(7)	.768(19,5)	.433(11)	.118(3)
88007-53-04	5/32(4)	1/4	.413(10,5)	.886(22,5)	.551(14)	.118(3)
88007-04-02	1/4	1/8	.276(7)	.886(22,5)	.512(13)	.157(4)
88007-04-04	1/4	1/4	.413(10,5)	.965(24,5)	.551(14)	.157(4)

88117

SWIVEL ELBOW

PTF

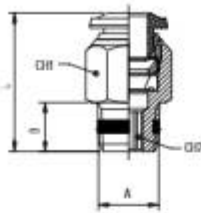


Part No.	Tube	A	B	L1	L2	CH1	CH2
88117-53-02	5/32(4)	1/8	.276(7)	.708(18)	.768(19,5)	.354(9)	.512(13)
88117-53-04	5/32(4)	1/4	.413(10,5)	.708(18)	.905(23)	.354(9)	.591(15)
88117-04-02	1/4	1/8	.276(7)	.827(21)	.846(21,5)	.433(11)	.512(13)
88117-04-04	1/4	1/4	.413(10,5)	.827(21)	.984(25)	.433(11)	.591(15)

88000

STRAIGHT MALE

NPTF



Part No.	Tube	A	B	L	CH1	CH2
88000-02-02	1/8	1/8	.355 (9)	.768 (19,5)	.433 (11)	.079 (2)
88000-02-04	1/8	1/4	.512 (13)	.965 (24,5)	.551 (14)	.079 (2)
88000-03-02	5/32 (4)	1/8	.355 (9)	.876 (21)	.433 (11)	.118 (3)
88000-03-04	5/32 (4)	1/4	.512 (13)	.984 (25)	.551 (14)	.118 (3)
88000-04-02	1/4	1/8	.355 (9)	1.023 (25,5)	.512 (13)	.157 (4)
88000-04-04	1/4	1/4	.512 (13)	1.062 (27)	.551 (14)	.157 (4)
88000-04-06	1/4	3/8	.512 (13)	1.141 (29)	.709 (18)	.157 (4)
88000-05-02	5/16 (8)	1/8	.355 (9)	1.062 (27)	.551 (14)	.197 (5)
88000-05-04	5/16 (8)	1/4	.512 (13)	1.082 (27,5)	.551 (14)	.236 (6)
88000-05-06	5/16 (8)	3/8	.512 (13)	1.082 (27,5)	.709 (18)	.236 (6)
88000-06-02	3/8	1/8	.355 (9)	1.259 (32)	.669 (17)	.197 (5)
88000-06-04	3/8	1/4	.512 (13)	1.319 (33,5)	.669 (17)	.276 (7)
88000-06-06	3/8	3/8	.512 (13)	1.319 (33,5)	.709 (18)	.276 (7)
88000-06-08	3/8	1/2	.669 (17)	1.319 (33,5)	.866 (22)	.276 (7)
88000-08-04	1/2	1/4	.512 (13)	1.535 (39)	.787 (20)	.197 (5)
88000-08-06	1/2	3/8	.512 (13)	1.417 (36)	.787 (20)	.354 (9)
88000-08-08	1/2	1/2	.669 (17)	1.575 (40)	.866 (22)	.394 (10)

88030

STRAIGHT FEMALE

NPTF

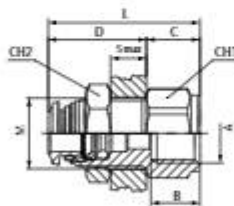


Part No.	Tube	A	B	L	CH
88030-02-02	1/8	1/8	.374 (9,5)	.945 (21)	.512 (13)
88030-02-04	1/8	1/4	.531 (13,5)	1.142 (29)	.630 (16)
88030-03-02	5/32 (4)	1/8	.374 (9,5)	.984 (25)	.512 (13)
88030-03-04	5/32 (4)	1/4	.531 (13,5)	1.181 (30)	.630 (16)
88030-04-02	1/4	1/8	.374 (9,5)	1.024 (26)	.512 (13)
88030-04-04	1/4	1/4	.512 (13)	1.161 (29,5)	.630 (16)
88030-06-04	3/8	1/4	.531 (13,5)	1.279 (32,5)	.709 (18)
88030-06-06	3/8	3/8	.531 (13,5)	1.279 (32,5)	.787 (20)

88055

FEMALE BULKHEAD CONNECTOR

NPTF

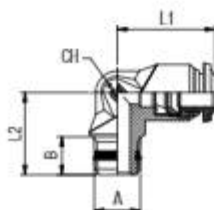


Part No.	Tube	A	B	M	S max	CH1	CH2	C	D	L
88055-03-02	5/32 (4)	1/8	.374 (9,5)	M12X1	.275 (7)	.591 (15)	.669 (17)	.394 (10)	.748 (19)	1.141 (29)
88055-03-04	5/32 (4)	1/4	.531 (13,5)	M12X1	.275 (7)	.630 (16)	.669 (17)	.591 (15)	.748 (19)	1.339 (34)
88055-04-02	1/4	1/8	.374 (9,5)	M14X1	.315 (8)	.630 (16)	.669 (17)	.394 (10)	.826 (21)	1.221 (31)
88055-04-04	1/4	1/4	.531 (13,5)	M14X1	.315 (8)	.630 (16)	.669 (17)	.591 (15)	.826 (21)	1.417 (36)
88055-04-06	1/4	3/8	.531 (13,5)	M14X1	.315 (8)	.787 (20)	.669 (17)	.591 (15)	.826 (21)	1.417 (36)
88055-05-02	5/16 (8)	1/8	.374 (9,5)	M16X1	.315 (8)	.709 (18)	.748 (19)	.394 (10)	.866 (22)	1.260 (32)
88055-05-04	5/16 (8)	1/4	.531 (13,5)	M16X1	.315 (8)	.709 (18)	.748 (19)	.472 (12)	.866 (22)	1.339 (34)
88055-05-06	5/16 (8)	3/8	.531 (13,5)	M16X1	.315 (8)	.787 (20)	.748 (19)	.591 (15)	.866 (22)	1.457 (37)
88055-06-06	3/8	3/8	.531 (13,5)	M20X1	.374 (9,5)	.945 (24)	.945 (24)	.551 (14)	1.003 (25,5)	1.557 (39,5)
88055-08-06	1/2	3/8	.531 (13,5)	M22X1	.413 (10,5)	.945 (24)	1.024 (26)	.591 (15)	1.083 (27,5)	1.673 (42,5)
88055-08-08	1/2	1/2	.690 (17,5)	M22X1	.413 (10,5)	.945 (24)	1.024 (26)	.787 (20)	1.083 (27,5)	1.870 (47,5)

88100

FIXED ELBOW

NPTF

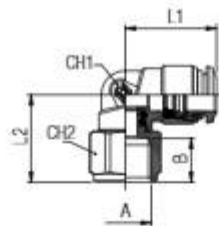


Part No.	Tube	A	B	L1	L2	CH1
88100-04-02	1/4	1/8	.335 (8,5)	.846 (21,5)	.728 (18,5)	.433 (11)
88100-04-04	1/4	1/4	.512 (13)	.846 (21,5)	.905 (23)	.433 (11)
88100-06-04	3/8	1/4	.512 (13)	1.062 (27)	1.043 (26,5)	.630 (16)
88100-06-06	3/8	3/8	.512 (13)	1.062 (27)	1.004 (25,5)	.688 (17)

88105

FEMALE ELBOW

NPTF

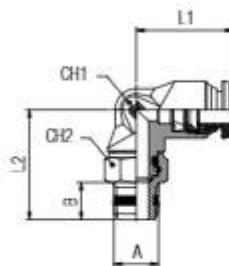


Part No.	Tube	A	B	L1	L2	CH1	CH2
88105-53-02	5/32 (4)	1/8	.374 (9,5)	.669 (17)	.984 (25)	.354 (9)	.511 (13)
88105-53-04	5/32 (4)	1/4	.531 (13,5)	.669 (17)	1.240 (31,5)	.354 (9)	.629 (16)
88105-04-02	1/4	1/8	.374 (9,5)	.846 (21,5)	1.062 (27)	.433 (11)	.511 (13)
88105-04-04	1/4	1/4	.531 (13,5)	.826 (21)	1.279 (32,5)	.433 (11)	.629 (16)
88105-06-02	3/8	1/8	.374 (9,5)	1.062 (27)	1.220 (31)	.511 (13)	.511 (13)
88105-06-02	3/8	1/4	.531 (13,5)	1.062 (27)	1.397 (35,5)	.629 (16)	.629 (16)

88110

SWIVEL ELBOW

NPTF

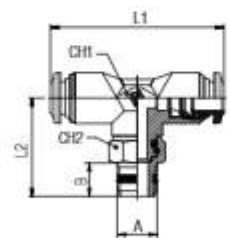


Part No.	Tube	A	B	L1	L2	CH1	CH2
88110-02-02	1/8	1/8	.335 (8,5)	.669 (17)	.906 (23)	.354 (9)	.512 (13)
88110-02-04	1/8	1/4	.512 (13)	.669 (17)	1.122 (28,5)	.354 (9)	.591 (15)
88110-53-02	5/32 (4)	1/8	.335 (8,5)	.669 (17)	.906 (23)	.354 (9)	.512 (13)
88110-53-04	5/32 (4)	1/4	.512 (13)	.669 (17)	1.181 (30)	.354 (9)	.591 (15)
88110-04-02	1/4	1/8	.335 (8,5)	.827 (21)	1.023 (26)	.433 (11)	.512 (13)
88110-04-04	1/4	1/4	.512 (13)	.827 (21)	1.220 (31)	.433 (11)	.591 (15)
88110-04-06	1/4	3/8	.512 (13)	.827 (21)	1.280 (32,5)	.433 (11)	.709 (18)
88110-05-02	5/16 (8)	1/8	.335 (8,5)	.886 (22,5)	1.043 (26,5)	.512 (13)	.512 (13)
88110-05-04	5/16 (8)	1/4	.512 (13)	.886 (22,5)	1.260 (32)	.512 (13)	.591 (15)
88110-05-06	5/16 (8)	3/8	.512 (13)	.886 (22,5)	1.280 (32,5)	.512 (13)	.709 (18)
88110-06-02	3/8	1/8	.335 (8,5)	1.043 (26,5)	1.181 (30)	.630 (16)	.512 (13)
88110-06-04	3/8	1/4	.512 (13)	1.102 (28)	1.337 (35)	.630 (16)	.591 (15)
88110-06-06	3/8	3/8	.512 (13)	1.023 (26)	1.358 (34,5)	.630 (16)	.709 (18)
88110-06-08	3/8	1/2	.669 (17)	1.043 (26,5)	1.614 (41)	.630 (16)	.866 (22)
88110-08-04	1/2	1/4	.512 (13)	1.201 (30,5)	1.555 (39,5)	.748 (19)	.591 (15)
88110-08-06	1/2	3/8	.512 (13)	1.201 (30,5)	1.476 (37,5)	.748 (19)	.709 (18)
88110-08-08	1/2	1/2	.669 (17)	1.201 (30,5)	1.732 (44)	.748 (19)	.866 (22)

88210

SWIVEL BRANCH TEE

NPTF

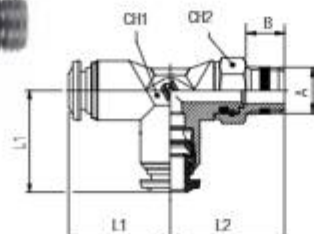


Part No.	Tube	A	B	L1	L2	CH1	CH2
88210-02-02	1/8	1/8	.295 (7,5)	1.299 (33)	.906 (23)	.354 (9)	.512 (13)
88210-02-04	1/8	1/4	.512 (13)	1.299 (33)	1.122 (27)	.354 (9)	.591 (15)
88210-53-02	5/32 (4)	1/8	.295 (7,5)	1.299 (33)	.906 (23)	.354 (9)	.512 (13)
88210-53-04	5/32 (4)	1/4	.512 (13)	1.299 (33)	1.181 (30)	.354 (9)	.591 (15)
88210-04-02	1/4	1/8	.295 (7,5)	1.654 (42)	1.023 (26)	.433 (11)	.512 (13)
88210-04-04	1/4	1/4	.512 (13)	1.654 (42)	1.220 (31)	.433 (11)	.591 (15)
88210-06-04	3/8	1/4	.512 (13)	2.087 (53)	1.337 (35)	.630 (16)	.591 (15)
88210-06-06	3/8	3/8	.512 (13)	2.087 (53)	1.358 (34,5)	.630 (16)	.709 (18)
88210-06-08	3/8	1/2	.669 (17)	2.087 (53)	1.614 (41)	.630 (16)	.866 (22)
88210-08-04	1/2	1/4	.512 (13)	2.402 (61)	1.555 (39,5)	.748 (19)	.591 (15)
88210-08-06	1/2	3/8	.512 (13)	2.402 (61)	1.476 (37,5)	.748 (19)	.709 (18)
88210-08-08	1/2	1/2	.669 (17)	2.402 (61)	1.732 (44)	.748 (19)	.866 (22)

88222

SWIVEL RUN TEE

NPTF



Part No.	Tube	A	B	L1	L2	CH1	CH2
88222-02-02	1/8	1/8	.295 (7,5)	.669 (17)	.906 (23)	.354 (9)	.512 (13)
88222-02-04	1/8	1/4	.511 (13)	.669 (17)	1.181 (30)	.354 (9)	.591 (15)
88222-53-02	5/32 (4)	1/8	.295 (7,5)	.669 (17)	.906 (23)	.354 (9)	.512 (13)
88222-04-02	1/4	1/8	.295 (7,5)	.827 (21)	.984 (25)	.433 (11)	.512 (13)
88222-04-04	1/4	1/4	.511 (13)	.827 (21)	1.220 (31)	.433 (11)	.591 (15)
88222-06-04	3/8	1/4	.511 (13)	1.043 (26,5)	1.339 (34)	.630 (16)	.591 (15)
88222-06-06	3/8	3/8	.511 (13)	1.043 (26,5)	1.358 (34,5)	.630 (16)	.709 (18)
88222-06-08	3/8	1/2	.669 (17)	1.043 (26,5)	1.614 (41)	.630 (16)	.866 (22)
88222-08-04	1/2	1/4	.512 (13)	1.201 (30,5)	1.476 (37,5)	.748 (19)	.591 (15)
88222-08-06	1/2	3/8	.511 (13)	1.201 (30,5)	1.476 (37,5)	.748 (19)	.709 (18)
88222-08-08	1/2	1/2	.669 (17)	1.201 (30,5)	1.732 (44)	.748 (19)	.866 (22)

88040

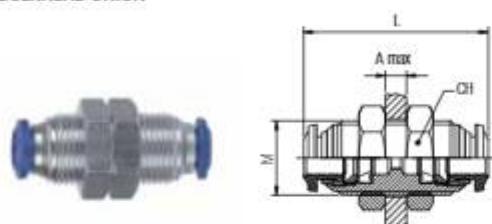
UNION



Part No.	Tube	Tube	B	L
88040-02	1/8		.335 (8,5)	1.024 (26)
88040-53	5/32 (4)		.413 (10,5)	1.181 (30)
88040-04-53	1/4	5/32 (4)	.492 (12,5)	1.279 (32,5)
88040-04	1/4		.492 (12,5)	1.378 (35)
88040-05	5/16 (8)		.571 (14,5)	1.465 (37)
88040-06-04	3/8	1/4	.688 (17,5)	1.555 (39,5)
88040-06	3/8		.688 (17,5)	1.693 (43)
88040-06-08	3/8	1/2	.807 (20,5)	1.850 (47)
88040-08	1/2		.807 (20,5)	1.909 (48,5)

88050

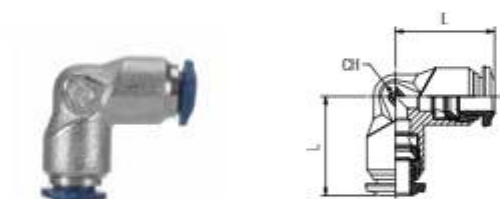
BULKHEAD UNION



Part No.	Tube	M	L	CH	A max
88050-02	1/8	M10X1	1.024 (26)	.551 (14)	.197 (5)
88050-53	5/32 (4)	M12X1	1.220 (32)	.669 (17)	.276 (7)
88050-04	1/4	M14X1	1.378 (35)	.669 (17)	.374 (9,5)
88050-05	5/16 (8)	M16X1	1.476 (37,5)	.748 (19)	.413 (10,5)
88050-06	3/8	M20X1	1.732 (44)	.945 (24)	.492 (12,5)
88050-08	1/2	M22X1	1.929 (49)	1.024 (26)	.650 (16,5)

88130

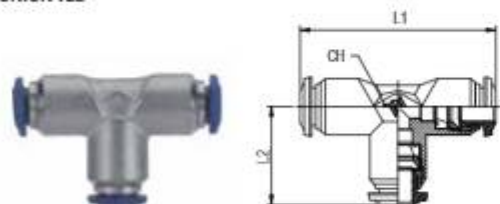
UNION ELBOW



Part No.	Tube	L	CH
88130-02	1/8	.669 (17)	.354 (9)
88130-53	5/32 (4)	.669 (17)	.354 (9)
88130-04	1/4	.827 (21)	.433 (11)
88130-05	5/16 (8)	.905 (23)	.512 (13)
88130-06	3/8	1.043 (26,5)	.630 (16)
88130-08	1/2	1.201 (30,5)	.748 (19)

88230

UNION TEE



Part No.	Tube	L1	L2	CH
88230-02	1/8	1.299 (33)	.669 (17)	.354 (9)
88230-53	5/32 (4)	1.339 (34)	.669 (17)	.354 (9)
88230-04	1/4	1.654 (42)	.827 (21)	.433 (11)
88230-05	5/16 (8)	1.772 (45)	.886 (22,5)	.512 (13)
88230-06	3/8	2.087 (53)	1.043 (26,5)	.630 (16)
88230-08	1/2	2.402 (61)	1.201 (30,5)	.748 (19)

88310

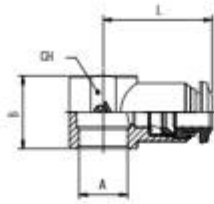
UNION Y



Part No.	Tube	A	L	CH
88310-02	1/8	.394 (10)	1.142 (29)	.433 (11)
88310-53	5/32 (4)	.433 (11)	1.260 (32)	.433 (11)
88310-04	1/4	.531 (13,5)	1.437 (36,5)	.511 (13)
88310-05	5/16 (8)	.610 (15,5)	1.514 (41)	.511 (13)
88310-06	3/8	.728 (18,5)	1.890 (48)	.708 (18)

88500

SINGLE BANJO BODY

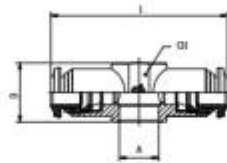


Part No.	Tube	A	B	L	CH
88500-02-02	1/8	1/8	.591 (15)	.767 (19,5)	.551 (14)
88500-53-32	5/32 (4)	10/32	.492 (12,5)	.748 (19)	-
88500-53-02	5/32 (4)	1/8	.591 (15)	.877 (21)	.551 (14)
88500-04-02	1/4	1/8	.669 (17)	.885 (22,5)	.551 (14)
88500-04-04	1/4	1/4	.669 (17)	.984 (25)	.709 (18)
88500-06-04	3/8	1/4	.787 (20)	1.142 (29)	.709 (18)
88500-06-06	3/8	3/8	.787 (20)	1.201 (30,5)	.827 (21)
88500-08-06	1/2	3/8	.787 (20)	1.259 (32)	.827 (21)
88500-08-08	1/2	1/2	.944 (24)	1.377 (35)	.984 (25)

For BANJO STEM assemblies see 10.7/10.8/10.9

88510

DOUBLE BANJO BODY

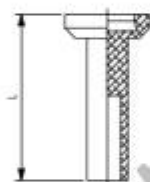


Part No.	Tube	A	B	L	CH
88510-53-32	5/32 (4)	10/32	.492 (12,5)	1.496 (38)	-
88510-04-02	1/4	1/8	.591 (15)	1.732 (44)	.551 (14)
88510-04-04	1/4	1/4	.669 (17)	1.968 (50)	.709 (18)

For BANJO STEM assemblies see 10.7/10.8/10.9

88610B

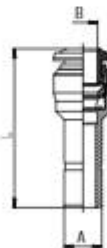
NYLON PLUG



Part No.	Tube	L
88610B-02	1/8	.708 (18)
88610B-53	5/32 (4)	.925 (23,5)
88610B-04	1/4	.964 (24,5)
88610B-05	5/16 (8)	1.073 (26)
88610B-06	3/8	1.122 (28,5)
88610B-08	1/2	1.122 (28,5)

88700

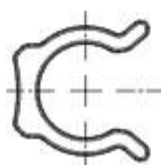
TUBE REDUCER



Part No.	A	B	L
88700-04-02	1/4	1/8	1.181 (30)
88700-04-53	1/4	5/32 (4)	1.181 (30)
88700-06-04	3/8	1/4	1.377 (35)
88700-08-04	1/2	1/4	1.693 (43)
88700-08-06	1/2	3/8	1.693 (43)

50980

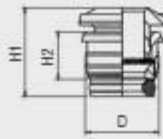
SECURITY CLIP



Part No.	Tube
50980-53	5/32 (4)
50980-04	1/4 (6)
50980-05	5/16 (8)
50980-06	3/8 (10)
50980-08	1/2 (12)

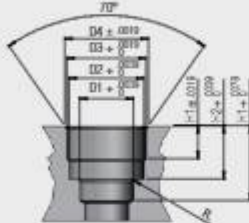
87800

PUSH-FIT CARTRIDGES



Part No.	Tube	H1	H2	D
87800-02	1/8	.386 (10)	.280 (7)	.280 (7)
87800-53	5/32 (4)	.445 (11.5)	.323 (8)	.338 (8.5)
87800-04	1/4	.520 (13)	.374 (9.5)	.413 (10.5)
87800-05	5/16 (8)	.508 (13)	.374 (9.5)	.492 (12.5)
87800-06	3/8	.625 (16)	.472 (12)	.642 (16)
87800-08	1/2	.713 (18)	.543 (14)	.740 (19)

SEAT



Seats dimensions push-fit cartridges.

Tube	D1	D2	D3	D4	H1	H2	H3	R
1/8 (3)	.134 (3,4)	.238 (6,05)	.252 (6,4)	.274 (6,95)	.146 (3,7)	.240 (6,1)	.339 (8,6)	.020 (0,5)
5/32 (4)	.165 (4,2)	.293 (7,45)	.331 (8,4)	.354 (9)	.148 (3,75)	.256 (6,5)	.374 (9,5)	.020 (0,5)
1/4 (6.6)	.259 (6,6)	.368 (9,35)	.411 (10,45)	.447 (11,35)	.197 (5)	.335 (8,5)	.453 (11,5)	.020 (0,5)
5/16 (8)	.323 (8,2)	.449 (11,4)	.488 (12,4)	.508 (12,9)	.205 (5,2)	.335 (8,5)	.492 (12,5)	.030 (0,75)
3/8 (9.7)	.381 (9,7)	.571 (14,5)	.606 (15,4)	.630 (16)	.264 (6,7)	.413 (10,5)	.591 (15)	.030 (0,75)
1/2 (13)	.511 (13)	.669 (17)	.709 (18)	.748 (19)	.295 (7,5)	.476 (12,1)	.669 (17)	.039 (1)

55801

TOOL FOR PUSH-FIT CARTRIDGES SEAT



Part No.	Tube	ø Body
55801-3	1/8 (3)	.394 (10)
55801-4	5/32 (4)	.394 (10)
87801-04	1/4	.417 (11)
55801-8	5/16 (8)	.472 (12)
87801-06	3/8	.630 (16)
87801-08	1/2	.710 (16)

55802

TOOL FOR PUSH-FIT CARTRIDGES SEAT



Part No.	Tube
55802-02	1/8
55802-4	5/32 (4)
55802-6	1/4 (6)
55802-8	5/16 (8)
55802-10	3/8 (10)
55802-12	1/2 (12)

PUSH-FIT CARTRIDGE ASSEMBLING INSTRUCTIONS ART. 87800

1 Use tool to drill into material to create the seat for the Push-Fit Cartridge.

2 Insert lip seal.

3 Insert cartridge into the assembling tool.

4 Press cartridge into the seat until it stops.

FITTING KITS

87861-02

FITTING KIT - 4MM TUBE



Part No.	Description	Qty
87000-02-02	Straight Male - 1/8 Tube x 1/8 Male	5
87000-02-04	Straight Male - 1/8 Tube x 1/4 Male	5
87000-04-02	Straight Male - 1/4 Tube x 1/8 Male	5
87110-02-02	Swivel Elbow - 1/8 Tube x 1/8 Male	5
87110-02-04	Swivel Elbow - 1/8 Tube x 1/4 Male	5
87110-04-02	Swivel Elbow - 1/4 Tube x 1/8 Male	5
87210-02-02	Swivel Branch Tee - 1/8 Tube x 1/8 Male	5
87210-02-04	Swivel Branch Tee - 1/8 Tube x 1/4 Male	5
87210-04-02	Swivel Branch Tee - 1/4 Tube x 1/8 Male	5
88040-02	Union - 1/8 tube	5
88130-02	Union Elbow - 1/8 tube	5
88230-02	Union Tee - 1/8 tube	5

87861-04

FITTING KIT - 4MM TUBE



Part No.	Description	Qty
87000-04-02	Straight Male - 1/4 Tube x 1/8 Male	5
87000-04-04	Straight Male - 1/4 Tube x 1/4 Male	5
87000-04-06	Straight Male - 1/4 Tube x 3/8 Male	5
87110-04-02	Swivel Elbow - 1/4 Tube x 1/8 Male	5
87110-04-04	Swivel Elbow - 1/4 Tube x 1/4 Male	5
87110-04-06	Swivel Elbow - 1/4 Tube x 3/8 Male	5
87210-04-02	Swivel Branch Tee - 1/4 Tube x 1/8 Male	5
87210-04-04	Swivel Branch Tee - 1/4 Tube x 1/4 Male	5
87210-04-06	Swivel Branch Tee - 1/4 Tube x 3/8 Male	5
88040-04	Union - 1/4 tube	5
88130-04	Union Elbow - 1/4 tube	5
88230-04	Union Tee - 1/4 tube	5

87861-06

FITTING KIT - 4MM TUBE



Part No.	Description	Qty
87000-06-04	Straight Male - 3/8 Tube x 1/4 Male	5
87000-06-06	Straight Male - 3/8 Tube x 3/8 Male	5
87000-06-08	Straight Male - 3/8 Tube x 1/2 Male	5
87110-06-04	Swivel Elbow - 3/8 Tube x 1/4 Male	5
87110-06-06	Swivel Elbow - 3/8 Tube x 3/8 Male	5
87110-06-08	Swivel Elbow - 3/8 Tube x 1/2 Male	5
87210-06-04	Swivel Branch Tee - 3/8 Tube x 1/4 Male	5
87210-06-06	Swivel Branch Tee - 3/8 Tube x 3/8 Male	5
87210-06-08	Swivel Branch Tee - 3/8 Tube x 1/2 Male	5
88040-06	Union - 3/8 tube	5
88130-06	Union Elbow - 3/8 tube	5
88230-06	Union Tee - 3/8 tube	5

87861-08

FITTING KIT - 4MM TUBE



Part No.	Description	Qty
87000-08-04	Straight Male - 1/2 Tube x 1/4 Male	5
87000-08-06	Straight Male - 1/2 Tube x 3/8 Male	5
87000-08-08	Straight Male - 1/2 Tube x 1/2 Male	5
87110-08-04	Swivel Elbow - 1/2 Tube x 1/4 Male	5
87110-08-06	Swivel Elbow - 1/2 Tube x 3/8 Male	5
87110-08-08	Swivel Elbow - 1/2 Tube x 1/2 Male	5
87210-08-04	Swivel Branch Tee - 1/2 Tube x 1/4 Male	5
87210-08-06	Swivel Branch Tee - 1/2 Tube x 3/8 Male	5
87210-08-08	Swivel Branch Tee - 1/2 Tube x 1/2 Male	5
88040-08	Union - 1/2 Tube	5
88130-08	Union Elbow - 1/2 Tube	5
88230-08	Union Tee - 1/2 Tube	5

87861-90

FITTING KIT - 4MM TUBE



Part No.	Description	Qty
87000-04-04	Straight Male - 1/4 Tube x 1/4 Male	5
87000-06-06	Straight Male - 3/8 Tube x 3/8 Male	5
87000-08-08	Straight Male - 1/2 Tube x 1/2 Male	5
87110-04-04	Swivel Elbow - 1/4 Tube x 1/4 Male	5
87110-06-06	Swivel Elbow - 3/8 Tube x 3/8 Male	5
87110-08-08	Swivel Elbow - 1/2 Tube x 1/2 Male	5
87210-04-04	Swivel Branch Tee - 1/4 Tube x 1/4 Male	5
87210-06-06	Swivel Branch Tee - 3/8 Tube x 3/8 Male	5
87210-08-08	Swivel Branch Tee - 1/2 Tube x 1/2 Male	5
88040-04	Union - 1/4 Tube	5
88040-06	Union - 3/8 Tube	5
88040-08	Union - 1/2 Tube	5
88130-04	Union Elbow - 1/4 Tube	5
88130-06	Union Elbow - 3/8 Tube	5
88130-08	Union Elbow - 1/2 Tube	5
88230-04	Union Tee - 1/4 Tube	5
88230-06	Union Tee - 3/8 Tube	5
88230-08	Union Tee - 1/2 Tube	5

50N Series

 50000N Pg. 4.5	 50010N Pg. 4.5	 50110N Pg. 4.5	 50120N Pg. 4.5	 50210N Pg. 4.6	 50222N Pg. 4.6	 50010N Pg. 4.6	 50020N Pg. 4.7	 50030N Pg. 4.7
 50105N Pg. 4.7	 50115N Pg. 4.8	 50125N Pg. 4.8	 50215N Pg. 4.8	 50225N Pg. 4.9	 50326N Pg. 4.9	 50100N Pg. 4.9	 50200N Pg. 4.9	 50040N Pg. 4.10
 50050N Pg. 4.10	 50055N Pg. 4.10	 50465N Pg. 4.10	 50130N Pg. 4.10	 50310N Pg. 4.11	 50230N Pg. 4.11	 50500N Pg. 4.11	 50510N Pg. 4.11	 50600 Pg. 4.12
 50610 Pg. 4.12	 50625 Pg. 4.12	 50700N Pg. 4.12	 50900N Pg. 4.13	 55800N Pg. 4.13	 5801 Pg. 4.13	 55802 Pg. 4.13	 50980 Pg. 4.14	 50991 Pg. 4.14
 50006 Pg. 4.14								

Fitting Kits

 50861N-4 Pg. 4.15	 50861N-6 Pg. 4.15	 50861N-8 Pg. 4.15	 50861N-10 Pg. 4.16
 50861N-12 Pg. 4.16			

PUSH-TO-CONNECT FITTINGS
FOR METRIC TUBE



50N Series

50000M



TECHNICAL CHARACTERISTICS



Reference Standard

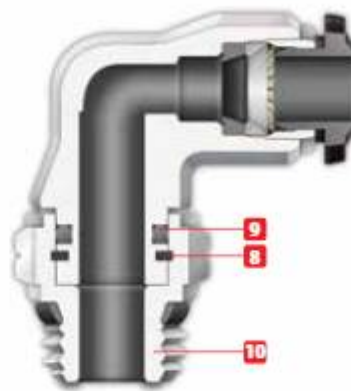
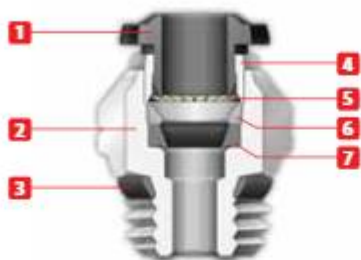
1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/EU

ISO
14743-2004

SILICON
FREE



Pressure Rating

Vacuum ~ 290 PSI
-0.99 bar ~ 20 bar
-0.099 MPa ~ 2.0 MPa



Temperatures Rating

NBR
-4° F ~ 176° F
-20° C ~ 80° C



Media

- Compressed Air
- Vacuum
- Water
- Steam (FKM required)



Component Parts and Materials

- 1 Composite Release Collet
- 2 Nickel Plated Brass Body
- 3 NBR Thread Seal
- 4 Nickel Plated Brass Sleeve
- 5 303 Stainless Steel Gripper
- 6 Technopolymer Safety Ring
- 7 NBR Molded Seal
- 8 Safety Ring
- 9 NBR Seal
- 10 Nickel Plated Thread Brass Body



Tubing Compatibility

- Nylon 6 - 11 -12
- Polyethylene
- Polyurethane (*98 Shore A for best result)
- PTFE
- FEP



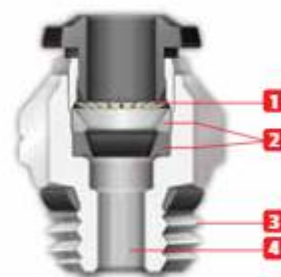
Applications

- Pneumatic Automation
- Automotive
- Textile, Packaging
- Compressed Air Circuit
- Vacuum



Advantages

- 1 The 303 Stainless Steel gripper ensures a tight clamp for tubes of any material without damaging the tube's surface. The secure connection between the tube and the fitting will hold up to severe conditions such as impact and vibrations.
- 2 The shape of the safety ring and the molded seal perfectly seal off the tube, creating a vacuum.
- 3 Series with several types of threads:
SWIFFFIT
BSPP
BSPT
- 4 All straight fittings can be tightened with an Allen wrench because of our internal hex design. This enables the end user to tighten the fitting in spaces too small for an open end wrench.
- 5 Our rotating Swivel Elbow fittings are equipped with a safety ring that enables the fitting to rotate without losing a tight seal.



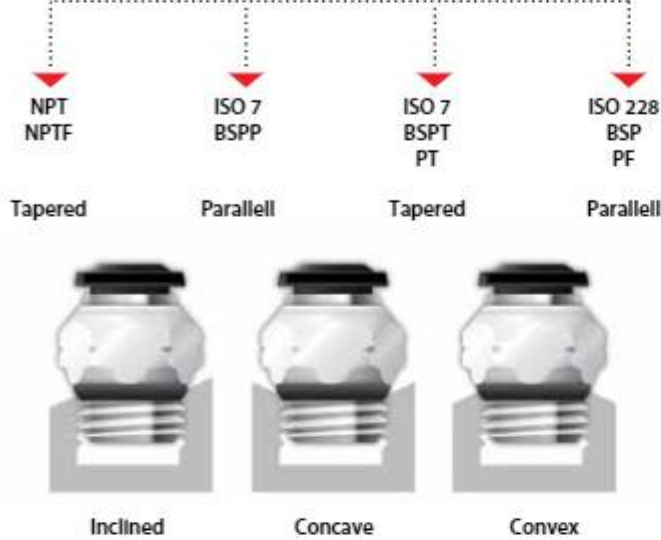


THREADS & ADVANTAGES



SWIFFIT
Universal thread

One fitting... Endless possibilities



Our **SWIFFIT** universal fittings also work on non-flat surfaces without compromising an air-tight seal.

The **SWIFFIT** Universal Thread has been designed to offer the following advantages to the end users:

- Reduced overall length
- Smaller hex dimensions compared to parallel threads
- Fits with various parallel and tapered threads
- All **SWIFFIT** fittings have been equipped with threads and an NBR thread seal that will universally connect to all thread types.

Torque Specifications

Recommended Torque		
Thread Size	Min.	Max.
1/8	5 Nm	7 Nm
1/4	5 Nm	7 Nm
3/8	5 Nm	7 Nm
1/2	5 Nm	7 Nm



BSPP Threads



The **BSPP** Thread has been designed to offer the following advantages to the end users:

- Standard ISO 228 and ISO R/262
- Designed for use in BSPP connections with an integrated NBR o-ring that provides a perfect seal
- Completely reusable

Torque Specifications

Recommended Torque		
Thread Size	Min.	Breaking torque
M5	0.8 Nm	3.2 Nm
M8	3 Nm	8 Nm
1/2	3 Nm	8 Nm
1/4	9 Nm	30 Nm
3/8	10 Nm	60 Nm
1/2	12 Nm	50 Nm



BSPT Thread with seal



The **BSPT** Thread has been designed to offer the following advantages to the end users:

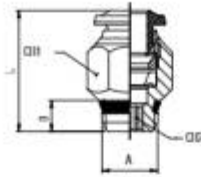
- Standard ISO 7.1, BS 21, DN 2999
- Designed for use in BSPT and BSPP connections with an integrated NBR thread seal that provides an additional seal

Torque Specifications

Recommended Torque		
Thread Size	Min.	Max.
1/8	5 Nm	7 Nm
1/4	5 Nm	7 Nm
3/8	5 Nm	7 Nm
1/2	5 Nm	7 Nm

50000N

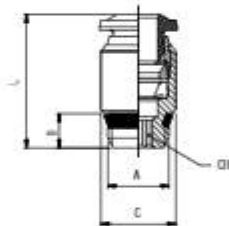
STRAIGHT MALE



Part No.	Tube	A	B	L	CH1	CH2
50000N-4-1/8	5/32 (4)	1/8	.217 (5,5)	.709 (18)	.433 (11)	.118 (3)
50000N-4-1/4	5/32 (4)	1/4	.276 (7)	.748 (19)	.551 (14)	.118 (3)
50000N-5-1/8	5	1/8	.217 (5,5)	.787 (20)	.433 (11)	.157 (4)
50000N-5-1/4	5	1/4	.276 (7)	.787 (20)	.551 (14)	.157 (4)
50000N-6-1/8	6	1/8	.217 (5,5)	.846 (21,5)	.512 (13)	.157 (4)
50000N-6-1/4	6	1/4	.276 (7)	.827 (21)	.551 (14)	.157 (4)
50000N-6-3/8	6	3/8	.295 (7,5)	.906 (23)	.669 (17)	.157 (4)
50000N-6-1/2	6	1/2	.354 (9)	.925 (23,5)	.827 (21)	.157 (4)
50000N-8-1/8	5/16 (8)	1/8	.217 (5,5)	.965 (24,5)	.551 (14)	.197 (5)
50000N-8-1/4	5/16 (8)	1/4	.276 (7)	.866 (22)	.551 (14)	.236 (6)
50000N-8-3/8	5/16 (8)	3/8	.295 (7,5)	.906 (23)	.669 (17)	.236 (6)
50000N-8-1/2	5/16 (8)	1/2	.354 (9)	.925 (23,5)	.827 (21)	.236 (6)
50000N-10-1/4	10	1/4	.276 (7)	1.102 (28)	.669 (17)	.276 (7)
50000N-10-3/8	10	3/8	.295 (7,5)	1.004 (25,5)	.669 (17)	.315 (8)
50000N-10-1/2	10	1/2	.354 (9)	1.074 (26)	.827 (21)	.315 (8)
50000N-12-1/4	12	1/4	.276 (7)	1.240 (31,5)	.787 (20)	.276 (7)
50000N-12-3/8	12	3/8	.295 (7,5)	1.161 (29,5)	.787 (20)	.354 (9)
50000N-12-1/2	12	1/2	.354 (9)	1.240 (31,5)	.827 (21)	.394 (10)
50000N-14-3/8	14	3/8	.295 (7,5)	1.280 (32,5)	.827 (21)	.354 (9)
50000N-14-1/2	14	1/2	.354 (9)	1.240 (31,5)	.827 (21)	.394 (10)

50010N

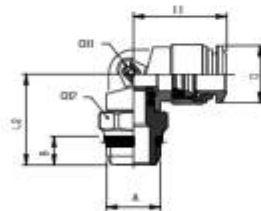
STRAIGHT MALE WITH INTERNAL HEX



Part No.	Tube	A	B	C	L	CH
50010N-4-1/8	5/32 (4)	1/8	.217 (5,5)	.433 (11)	.709 (18)	.118 (3)
50010N-6-1/8	6	1/8	.217 (5,5)	.472 (12)	.867 (21,5)	.157 (4)
50010N-6-1/4	6	1/4	.276 (7)	.551 (14)	.827 (21)	.157 (4)
50010N-8-1/8	5/16 (8)	1/8	.217 (5,5)	.551 (14)	.984 (25)	.196 (5)
50010N-8-1/4	5/16 (8)	1/4	.276 (7)	.551 (14)	.886 (22,5)	.236 (6)

50110N

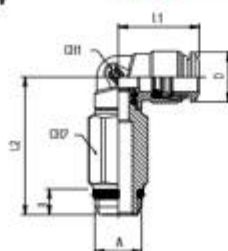
SWIVEL ELBOW



Part No.	Tube	A	B	L1	L2	CH1	CH2	D
50110N-4-1/8	5/32 (4)	1/8	.216 (5,5)	.708 (18)	.767 (19,5)	.354 (9)	.512 (13)	.394 (10)
50110N-4-1/4	5/32 (4)	1/4	.275 (7)	.748 (19)	.826 (21)	.354 (9)	.590 (15)	.394 (10)
50110N-5-1/8	5	1/8	.216 (5,5)	.788 (20)	.846 (21,5)	.433 (11)	.512 (13)	.492 (12,5)
50110N-6-1/8	6	1/8	.216 (5,5)	.826 (21)	.846 (21,5)	.433 (11)	.512 (13)	.492 (12,5)
50110N-6-1/4	6	1/4	.275 (7)	.826 (21)	.905 (23)	.433 (11)	.590 (15)	.492 (12,5)
50110N-8-1/8	5/16 (8)	1/8	.216 (5,5)	.885 (22,5)	.885 (22,5)	.472 (12)	.512 (13)	.571 (14,5)
50110N-8-1/4	5/16 (8)	1/4	.275 (7)	.885 (22,5)	.885 (22,5)	.472 (12)	.590 (15)	.571 (14,5)
50110N-8-3/8	5/16 (8)	3/8	.295 (7,5)	.885 (22,5)	.905 (23)	.472 (12)	.669 (17)	.571 (14,5)
50110N-8-1/2	5/16 (8)	1/2	.354 (9)	.885 (22,5)	1.003 (25,5)	.472 (12)	.826 (21)	.571 (14,5)
50110N-10-1/4	10	1/4	.275 (7)	1.043 (26,5)	1.043 (26,5)	.551 (14)	.629 (16)	.689 (17,5)
50110N-10-3/8	10	3/8	.295 (7,5)	1.043 (26,5)	.946 (24,5)	.551 (14)	.669 (17)	.689 (17,5)
50110N-10-1/2	10	1/2	.354 (9)	1.043 (26,5)	1.062 (27)	.551 (14)	.826 (21)	.689 (17,5)
50110N-12-3/8	12	3/8	.295 (7,5)	1.240 (31,5)	1.043 (26,5)	.629 (16)	.787 (20)	.846 (21,5)
50110N-12-1/2	12	1/2	.354 (9)	1.240 (31,5)	1.141 (29)	.629 (16)	.826 (21)	.846 (21,5)
50110N-14-3/8	14	3/8	.295 (7,5)	1.240 (31,5)	1.062 (27)	.629 (16)	.787 (20)	.846 (21,5)
50110N-14-1/2	14	1/2	.354 (9)	1.240 (31,5)	1.161 (29,5)	.629 (16)	.826 (21)	.846 (21,5)

50120N

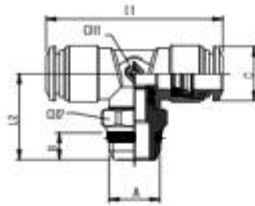
SWIVEL MALE EXTENDED ELBOW



Part No.	Tube	A	B	L1	L2	CH1	CH2	D
50120N-4-1/8	5/32 (4)	1/8	.217 (5,5)	.709 (18)	1.240 (31,5)	.354 (9)	.472 (12)	.394 (10)
50120N-4-1/4	5/32 (4)	1/4	.276 (7)	.709 (18)	1.299 (33)	.354 (9)	.591 (15)	.394 (10)
50120N-5-1/8	5	1/8	.217 (5,5)	.787 (20)	1.417 (36)	.433 (11)	.472 (12)	.492 (12,5)
50120N-6-1/8	6	1/8	.217 (5,5)	.827 (21)	1.417 (36)	.433 (11)	.472 (12)	.492 (12,5)
50120N-6-1/4	6	1/4	.276 (7)	.827 (21)	1.476 (37,5)	.433 (11)	.591 (15)	.492 (12,5)
50120N-8-1/8	5/16 (8)	1/8	.197 (5)	.898 (22,5)	1.595 (40,5)	.472 (12)	.472 (12)	.571 (14,5)
50120N-8-1/4	5/16 (8)	1/4	.276 (7)	.886 (22,5)	1.595 (40,5)	.472 (12)	.591 (15)	.571 (14,5)
50120N-8-3/8	5/16 (8)	3/8	.296 (7,5)	.886 (22,5)	1.614 (41)	.472 (12)	.630 (16)	.571 (14,5)
50120N-10-1/4	10	1/4	.276 (7)	1.043 (26,5)	1.811 (46)	.551 (14)	.591 (15)	.689 (17,5)
50120N-10-3/8	10	3/8	.296 (7,5)	1.043 (26,5)	1.733 (44)	.551 (14)	.670 (17)	.689 (17,5)

50210N

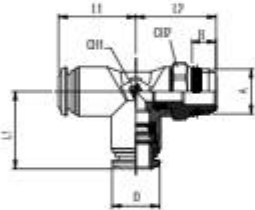
SWIVEL BRANCH TEE



Part No.	Tube	A	B	L1	L2	CH1	CH2	D
50210N-4-1/8	5/32 (4)	1/8	.216 (5,5)	1.338 (34)	.787 (20)	.354 (9)	.511 (13)	.394 (10)
50210N-4-1/4	5/32 (4)	1/4	.275 (7)	1.338 (34)	.846 (21,5)	.354 (9)	.590 (15)	.394 (10)
50210N-5-1/8	5	1/8	.216 (5,5)	1.575 (40)	.866 (22)	.433 (11)	.511 (13)	.492 (12,5)
50210N-6-1/8	6	1/8	.216 (5,5)	1.653 (42)	.866 (22)	.433 (11)	.511 (13)	.492 (12,5)
50210N-6-1/4	6	1/4	.275 (7)	1.653 (42)	.925 (23,5)	.433 (11)	.590 (15)	.492 (12,5)
50210N-8-1/8	5/16 (8)	1/8	.216 (5,5)	1.771 (45)	1.003 (25,5)	.511 (13)	.511 (13)	.571 (14,5)
50210N-8-1/4	5/16 (8)	1/4	.275 (7)	1.771 (45)	1.003 (25,5)	.511 (13)	.590 (15)	.571 (14,5)
50210N-8-3/8	5/16 (8)	3/8	.295 (7,5)	1.771 (45)	1.023 (26)	.511 (13)	.669 (17)	.571 (14,5)
50210N-8-1/2	5/16 (8)	1/2	.354 (9)	1.771 (45)	1.122 (28,5)	.511 (13)	.826 (21)	.571 (14,5)
50210N-10-1/4	10	1/4	.275 (7)	2.086 (53)	1.141 (29)	.551 (14)	.629 (16)	.689 (17,5)
50210N-10-3/8	10	3/8	.295 (7,5)	2.086 (53)	1.062 (27)	.551 (14)	.669 (17)	.689 (17,5)
50210N-10-1/2	10	1/2	.354 (9)	2.086 (53)	1.161 (29,5)	.551 (14)	.826 (21)	.689 (17,5)
50210N-12-3/8	12	3/8	.295 (7,5)	2.460 (62,5)	1.161 (29,5)	.629 (16)	.787 (20)	.846 (21,5)
50210N-12-1/2	12	1/2	.354 (9)	2.460 (62,5)	1.259 (32)	.629 (16)	.826 (21)	.846 (21,5)
50210N-14-3/8	14	3/8	.295 (7,5)	2.460 (62,5)	1.161 (29,5)	.629 (16)	.787 (20)	.846 (21,5)
50210N-14-1/2	14	1/2	.354 (9)	2.460 (62,5)	1.259 (32)	.629 (16)	.826 (21)	.846 (21,5)

50222N

SWIVEL RUN TEE



Part No.	Tube	A	B	L1	L2	CH1	CH2	D
50222N-4-1/8	5/32 (4)	1/8	.216 (5,5)	.669 (17)	.787 (20)	.354 (9)	.511 (13)	.394 (10)
50222N-4-1/4	5/32 (4)	1/4	.275 (7)	.669 (17)	.846 (21,5)	.354 (9)	.590 (15)	.394 (10)
50222N-5-1/8	5	1/8	.216 (5,5)	.788 (20)	.866 (22)	.433 (11)	.511 (13)	.492 (12,5)
50222N-6-1/8	6	1/8	.216 (5,5)	.826 (21)	.866 (22)	.433 (11)	.511 (13)	.492 (12,5)
50222N-6-1/4	6	1/4	.275 (7)	.826 (21)	.925 (23,5)	.433 (11)	.590 (15)	.492 (12,5)
50222N-8-1/8	5/16 (8)	1/8	.216 (5,5)	.885 (22,5)	.944 (24)	.511 (13)	.511 (13)	.571 (14,5)
50222N-8-1/4	5/16 (8)	1/4	.275 (7)	.885 (22,5)	.944 (24)	.511 (13)	.590 (15)	.571 (14,5)
50222N-8-3/8	5/16 (8)	3/8	.295 (7,5)	.885 (22,5)	1.062 (27)	.511 (13)	.669 (17)	.571 (14,5)
50222N-8-1/2	5/16 (8)	1/2	.354 (9)	.885 (22,5)	1.062 (27)	.511 (13)	.826 (21)	.571 (14,5)
50222N-10-1/4	10	1/4	.275 (7)	1.043 (26,5)	1.023 (26)	.551 (14)	.629 (16)	.689 (17,5)
50222N-10-3/8	10	3/8	.295 (7,5)	1.043 (26,5)	1.023 (26)	.551 (14)	.669 (17)	.689 (17,5)
50222N-10-1/2	10	1/2	.354 (9)	1.043 (26,5)	1.122 (28,5)	.551 (14)	.826 (21)	.689 (17,5)
50222N-12-3/8	12	3/8	.295 (7,5)	1.240 (31,5)	1.161 (29,5)	.629 (16)	.787 (20)	.847 (21,5)
50222N-12-1/2	12	1/2	.354 (9)	1.240 (31,5)	1.259 (32)	.629 (16)	.826 (21)	.847 (21,5)

50010N

STRAIGHT MALE WITH INTERNAL HEX

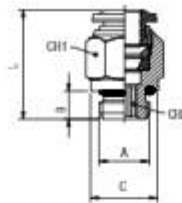


Part No.	Tube	A	B	C	L	CH
50010N-3-M5	3	M5	.157 (4)	.315 (8)	.748 (19)	.098 (2,5)
50010N-4-M5	5/32 (4)	M5	.157 (4)	.394 (10)	.768 (19,5)	.098 (2,5)
50010N-4-M7x1	5/32 (4)	M7x1	.197 (5)	.394 (10)	.827 (21)	.098 (2,5)
50010N-6-M5	6	M5	.157 (4)	.472 (12)	.965 (24,5)	.098 (2,5)
50010N-6-M6x1	6	M6x1	.197 (5)	.472 (12)	.944 (24)	.098 (2,5)

50020N

STRAIGHT MALE

BSPP



Part No.	Tube	A	B	C	L	CH1	CH2
50020N-3-M5	3	M5	.141 (3,6)	.315 (8)	.748 (19)	.315 (8)	.079 (2)
50020N-4-M3	5/32 (4)	M3	.118 (3)	.394 (10)	.827 (21)	-	.315 (8)
50020N-4-M5	5/32 (4)	M5	.141 (3,6)	.315 (8)	.827 (21)	.394 (10)	.079 (2)
50020N-4-1/8	5/32 (4)	1/8	.212 (5,4)	.512 (13)	.787 (20)	.394 (10)	.118 (3)
50020N-4-1/4	5/32 (4)	1/4	.279 (7,1)	.630 (16)	.768 (19,5)	.630 (16)	.118 (3)
50020N-4-3/8	5/32 (4)	3/8	.318 (8,1)	.787 (20)	.708 (18)	.787 (20)	.118 (3)
50020N-5-M5	5	M5	.141 (3,6)	.315 (8)	.925 (23,5)	.472 (12)	.079 (2)
50020N-5-1/8	5	1/8	.212 (5,4)	.512 (13)	.866 (22)	.472 (12)	.157 (4)
50020N-5-1/4	5	1/4	.279 (7,1)	.630 (16)	.866 (22)	.472 (12)	.157 (4)
50020N-6-M5	6	M5	.141 (3,6)	.394 (10)	.965 (24,5)	.512 (13)	.079 (2)
50020N-6-1/8	6	1/8	.212 (5,4)	.512 (13)	.925 (23,5)	.512 (13)	.157 (4)
50020N-6-1/4	6	1/4	.279 (7,1)	.630 (16)	.925 (23,5)	.512 (13)	.157 (4)
50020N-6-3/8	6	3/8	.318 (8,1)	.787 (20)	.984 (25)	.512 (13)	.157 (4)
50020N-6-1/2	6	1/2	.377 (9,6)	.984 (25)	1.063 (27)	.512 (13)	.157 (4)
50020N-8-1/8	5/16 (8)	1/8	.279 (7,1)	.512 (13)	.984 (25)	.551 (14)	.197 (5)
50020N-8-1/4	5/16 (8)	1/4	.318 (8,1)	.630 (16)	.906 (23)	.551 (14)	.236 (6)
50020N-8-3/8	5/16 (8)	3/8	.318 (8,1)	.787 (20)	.945 (24)	.551 (14)	.236 (6)
50020N-8-1/2	5/16 (8)	1/2	.377 (9,6)	.984 (25)	1.043 (26,5)	.551 (14)	.236 (6)
50020N-10-1/4	10	1/4	.279 (7,1)	.630 (16)	1.201 (30,5)	.669 (17)	.236 (6)
50020N-10-3/8	10	3/8	.318 (8,1)	.787 (20)	1.083 (27,5)	.669 (17)	.315 (8)
50020N-10-1/2	10	1/2	.377 (9,6)	.984 (25)	1.063 (27)	.669 (17)	.315 (8)
50020N-12-1/4	12	1/4	.279 (7,1)	.630 (16)	1.358 (34,5)	.787 (20)	.236 (6)
50020N-12-3/8	12	3/8	.318 (8,1)	.787 (20)	1.339 (34)	.787 (20)	.315 (8)
50020N-12-1/2	12	1/2	.377 (9,6)	.984 (25)	1.220 (31)	.866 (22)	.394 (10)
50020N-14-3/8	14	3/8	.318 (8,1)	.787 (20)	1.378 (35)	.827 (21)	.394 (10)
50020N-14-1/2	14	1/2	.377 (9,6)	.984 (25)	1.260 (32)	.866 (22)	.394 (10)
50020N-6-M8X1	6	M8x1	.212 (5,4)	.472 (12)	.965 (24,5)	.512 (13)	.118 (3)
50020N-6-M10X1	6	M10x1	.212 (5,4)	.512 (13)	.905 (23)	.512 (13)	.157 (4)
50020N-6-M12X1,25	6	M12X1,25	.287 (7,3)	.591 (15)	.925 (23,5)	.512 (13)	.157 (4)
50020N-6-M12X1,5	6	M12X1,5	.287 (7,3)	.591 (15)	.925 (23,5)	.512 (13)	.157 (4)
50020N-8-M8x1	8	M8x1	.212 (5,4)	.472 (12)	1.004 (25,5)	.551 (14)	.157 (4)
50020N-8-M10x1	8	M10x1	.212 (5,4)	.512 (13)	1.004 (25,5)	.551 (14)	.157 (4)
50020N-8-M12X1,5	8	M12X1,5	.287 (7,3)	.591 (15)	1.083 (27,5)	.551 (14)	.236 (6)

50030N

STRAIGHT FEMALE

BSPP

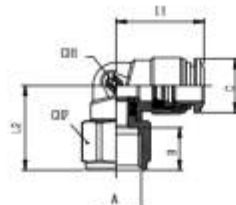


Part No.	Tube	A	B	L	CH
50030N-3-M5	3	M5	.216 (5,5)	.728 (18,5)	.355 (9)
50030N-4-M5	5/32 (4)	M5	.216 (5,5)	.826 (21)	.433 (11)
50030N-4-1/8	5/32 (4)	1/8	.334 (8,5)	.944 (24)	.511 (13)
50030N-4-1/4	5/32 (4)	1/4	.433 (11)	1.082 (27,5)	.629 (16)
50030N-5-1/8	5	1/8	.334 (8,5)	1.043 (26,5)	.511 (13)
50030N-6-1/8	6	1/8	.334 (8,5)	1.023 (26)	.511 (13)
50030N-6-1/4	6	1/4	.433 (11)	1.161 (29,5)	.629 (16)
50030N-8-1/8	5/16 (8)	1/8	.334 (8,5)	1.062 (27)	.590 (15)
50030N-8-1/4	5/16 (8)	1/4	.433 (11)	1.161 (29,5)	.669 (17)
50030N-8-3/8	5/16 (8)	3/8	.472 (12)	1.259 (32)	.748 (19)
50030N-10-1/4	10	1/4	.433 (11)	1.259 (32)	.708 (18)
50030N-10-3/8	10	3/8	.472 (12)	1.318 (33,5)	.748 (19)
50030N-10-1/2	10	1/2	.590 (15)	1.535 (39)	.944 (24)
50030N-12-3/8	12	3/8	.472 (12)	1.417 (36)	.826 (21)
50030N-12-1/2	12	1/2	.590 (15)	1.614 (41)	.944 (24)

50105N

FEMALE ELBOW

BSPP

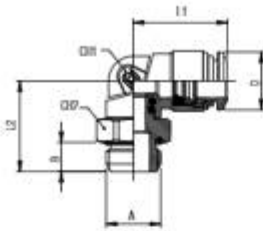


Part No.	Tube	A	B	L1	L2	CH1	CH2	D
50105N-4-1/8	5/32 (4)	1/8	.334 (8,5)	.708 (18)	.787 (20)	.354 (9)	.511 (13)	.394 (10)
50105N-4-1/4	5/32 (4)	1/4	.433 (11)	.708 (18)	.846 (21,5)	.354 (9)	.629 (16)	.394 (10)
50105N-6-1/8	6	1/8	.334 (8,5)	.826 (21)	.807 (20,5)	.433 (11)	.511 (13)	.492 (12,5)
50105N-6-1/4	6	1/4	.433 (11)	.826 (21)	.905 (23)	.433 (11)	.629 (16)	.492 (12,5)
50105N-8-1/8	5/16 (8)	1/8	.334 (8,5)	.885 (22,5)	.807 (20,5)	.472 (12)	.511 (13)	.571 (14,5)
50105N-8-1/4	5/16 (8)	1/4	.433 (11)	.885 (22,5)	.905 (23)	.472 (12)	.629 (16)	.571 (14,5)
50105N-8-3/8	5/16 (8)	3/8	.472 (12)	.885 (22,5)	.905 (23)	.472 (12)	.512 (13)	.571 (14,5)
50105N-10-1/4	10	1/4	.433 (11)	1.043 (26,5)	.984 (25)	.551 (14)	.748 (19)	.669 (17)
50105N-10-3/8	10	3/8	.472 (12)	1.043 (26,5)	1.102 (28)	.551 (14)	.748 (19)	.669 (17)
50105N-12-1/2	12	1/2	.590 (15)	1.240 (31,5)	1.358 (34,5)	.630 (16)	.944 (24)	.787 (20)

50115N

SWIVEL ELBOW

BSPP

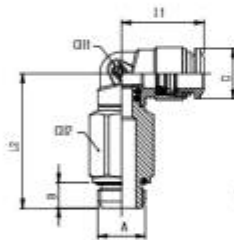


Part No.	Tube	A	B	L1	L2	CH1	CH2	D
50115N-3-M5	3	M5	.138 (3,5)	.650 (16,5)	.689 (17,5)	.354 (9)	.315 (8)	.394 (10)
50115N-4-M5	5/32 (4)	M5	.138 (3,5)	.709 (18)	.689 (17,5)	.354 (9)	.315 (8)	.394 (10)
50115N-4-1/8	5/32 (4)	1/8	.217 (5,5)	.709 (18)	.709 (18)	.354 (9)	.512 (13)	.394 (10)
50115N-4-1/4	5/32 (4)	1/4	.276 (7)	.709 (18)	.709 (18)	.354 (9)	.63 (16)	.394 (10)
50115N-5-M5	5	M5	.138 (3,5)	.787 (20)	.787 (20)	.433 (11)	.433 (11)	.492 (12,5)
50115N-5-1/8	5	1/8	.217 (5,5)	.787 (20)	.787 (20)	.433 (11)	.512 (13)	.492 (12,5)
50115N-6-M5	6	M5	.138 (3,5)	.827 (21)	.787 (20)	.433 (11)	.433 (11)	.492 (12,5)
50115N-6-1/8	6	1/8	.217 (5,5)	.827 (21)	.787 (20)	.433 (11)	.512 (13)	.492 (12,5)
50115N-6-1/4	6	1/4	.276 (7)	.827 (21)	.846 (21,5)	.433 (11)	.63 (16)	.492 (12,5)
50115N-8-1/8	5/16 (8)	1/8	.217 (5,5)	.886 (22,5)	.827 (21)	.472 (12)	.512 (13)	.571 (14,5)
50115N-8-1/4	5/16 (8)	1/4	.276 (7)	.886 (22,5)	.846 (21,5)	.472 (12)	.63 (16)	.571 (14,5)
50115N-8-3/8	5/16 (8)	3/8	.315 (8)	.886 (22,5)	.925 (23,5)	.472 (12)	.787 (20)	.571 (14,5)
50115N-8-1/2	5/16 (8)	1/2	.374 (9,5)	.886 (22,5)	.984 (25)	.472 (12)	.984 (25)	.571 (14,5)
50115N-10-1/4	10	1/4	.276 (7)	1.043 (26,5)	1.004 (25,5)	.551 (14)	.63 (16)	.689 (17,5)
50115N-10-3/8	10	3/8	.315 (8)	1.043 (26,5)	.984 (25)	.551 (14)	.787 (20)	.689 (17,5)
50115N-10-1/2	10	1/2	.374 (9,5)	1.043 (26,5)	1.043 (26,5)	.551 (14)	.984 (25)	.689 (17,5)
50115N-12-1/4	12	1/4	.315 (8)	1.240 (31,5)	1.083 (27,5)	.630 (16)	.787 (20)	.846 (21,5)
50115N-12-3/8	12	3/8	.315 (8)	1.240 (31,5)	1.063 (27)	.630 (16)	.787 (20)	.846 (21,5)
50115N-12-1/2	12	1/2	.374 (9,5)	1.240 (31,5)	1.122 (28,5)	.630 (16)	.984 (25)	.846 (21,5)
50115N-14-3/8	14	3/8	.315 (8)	1.240 (31,5)	1.083 (27,5)	.630 (16)	.787 (20)	.846 (21,5)
50115N-14-1/2	14	1/2	.374 (9,5)	1.240 (31,5)	1.142 (29)	.630 (16)	.984 (25)	.846 (21,5)
50115N-6-M12x1	6	M12x1	.295 (7,5)	.787 (20)	.866 (22)	.433 (11)	.63 (16)	.492 (12,5)
50115N-6-M12x1,25	6	M12x1,25	.295 (7,5)	.787 (20)	.866 (22)	.433 (11)	.63 (16)	.492 (12,5)
50115N-6-M12x1,5	6	M12x1,5	.295 (7,5)	.787 (20)	.866 (22)	.433 (11)	.63 (16)	.492 (12,5)
50115N-8-M12x1,5	8	M12x1,5	.295 (7,5)	.886 (22,5)	.866 (22)	.472 (12)	.63 (16)	.571 (14,5)

50125N

SWIVEL EXTENDED ELBOW

BSPP

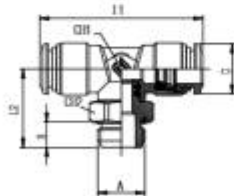


Part No.	Tube	A	B	L1	L2	CH1	CH2	D
50125N-4-1/8	5/32 (4)	1/8	.217 (5,5)	.709 (18)	1.181 (30)	.354 (9)	.472 (12)	.394 (10)
50125N-4-1/4	5/32 (4)	1/4	.276 (7)	.709 (18)	1.260 (32)	.354 (9)	.591 (15)	.394 (10)
50125N-5-1/8	5	1/8	.217 (5,5)	.787 (20)	1.358 (34,5)	.433 (11)	.472 (12)	.492 (12,5)
50125N-6-1/8	6	1/8	.217 (5,5)	.827 (21)	1.358 (34,5)	.433 (11)	.472 (12)	.492 (12,5)
50125N-6-1/4	6	1/4	.276 (7)	.827 (21)	1.417 (36)	.433 (11)	.591 (15)	.492 (12,5)
50125N-8-1/8	5/16 (8)	1/8	.217 (5,5)	.886 (22,5)	1.476 (37,5)	.472 (12)	.472 (12)	.571 (14,5)
50125N-8-1/4	5/16 (8)	1/4	.276 (7)	.886 (22,5)	1.496 (38)	.472 (12)	.591 (15)	.571 (14,5)
50125N-8-3/8	5/16 (8)	3/8	.315 (8)	.886 (22,5)	1.575 (40)	.472 (12)	.709 (18)	.571 (14,5)
50125N-10-1/4	10	1/4	.276 (7)	1.043 (26,5)	1.772 (45)	.551 (14)	.630 (16)	.689 (17,5)
50125N-10-3/8	10	3/8	.315 (8)	1.043 (26,5)	1.752 (44,5)	.551 (14)	.709 (18)	.689 (17,5)

50215N

SWIVEL BRANCH TEE

BSPP

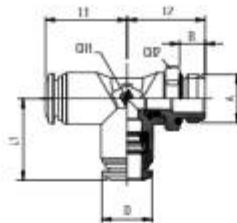


Part No.	Tube	A	B	L1	L2	CH1	CH2	D
50215N-3-M5	3	M5	.138 (3,5)	1.299 (33)	.669 (17)	.354 (9)	.315 (8)	.394 (10)
50215N-4-M5	5/32 (4)	M5	.138 (3,5)	1.339 (34)	.709 (18)	.354 (9)	.315 (8)	.394 (10)
50215N-4-1/8	5/32 (4)	1/8	.217 (5,5)	1.339 (34)	.728 (18,5)	.354 (9)	.512 (13)	.394 (10)
50215N-4-1/4	5/32 (4)	1/4	.276 (7)	1.339 (34)	.787 (20)	.354 (9)	.630 (16)	.394 (10)
50215N-5-M5	5	M5	.138 (3,5)	1.575 (40)	.807 (20,5)	.433 (11)	.433 (11)	.492 (12,5)
50215N-5-1/8	5	1/8	.217 (5,5)	1.575 (40)	.807 (20,5)	.433 (11)	.512 (13)	.492 (12,5)
50215N-6-M5	6	M5	.138 (3,5)	1.654 (42)	.807 (20,5)	.433 (11)	.433 (11)	.492 (12,5)
50215N-6-1/8	6	1/8	.217 (5,5)	1.654 (42)	.807 (20,5)	.433 (11)	.512 (13)	.492 (12,5)
50215N-6-1/4	6	1/4	.276 (7)	1.654 (42)	.866 (22)	.433 (11)	.630 (16)	.492 (12,5)
50215N-8-1/8	5/16 (8)	1/8	.217 (5,5)	1.772 (45)	.925 (23,5)	.512 (13)	.512 (13)	.571 (14,5)
50215N-8-1/4	5/16 (8)	1/4	.276 (7)	1.772 (45)	.945 (24)	.512 (13)	.630 (16)	.571 (14,5)
50215N-8-3/8	5/16 (8)	3/8	.315 (8)	1.772 (45)	1.024 (26)	.512 (13)	.787 (20)	.571 (14,5)
50215N-8-1/2	5/16 (8)	1/2	.374 (9,5)	1.772 (45)	1.083 (27,5)	.512 (13)	.984 (25)	.571 (14,5)
50215N-10-1/4	10	1/4	.276 (7)	2.087 (53)	1.083 (27,5)	.551 (14)	.630 (16)	.689 (17,5)
50215N-10-3/8	10	3/8	.315 (8)	2.087 (53)	1.063 (27)	.551 (14)	.787 (20)	.689 (17,5)
50215N-10-1/2	10	1/2	.374 (9,5)	2.087 (53)	1.122 (28,5)	.551 (14)	.984 (25)	.689 (17,5)
50215N-12-3/8	12	3/8	.315 (8)	2.461 (62,5)	1.161 (29,5)	.630 (16)	.787 (20)	.846 (21,5)
50215N-12-1/2	12	1/2	.374 (9,5)	2.461 (62,5)	1.220 (31)	.630 (16)	.984 (25)	.846 (21,5)
50215N-14-3/8	14	3/8	.315 (8)	2.461 (62,5)	1.161 (29,5)	.630 (16)	.787 (20)	.846 (21,5)
50215N-14-1/2	14	1/2	.374 (9,5)	2.461 (62,5)	1.220 (31)	.630 (16)	.984 (25)	.846 (21,5)
50215N-6-M12x1	6	M12x1	.295 (7,5)	1.654 (42)	.866 (22)	.433 (11)	.630 (16)	.492 (12,5)
50215N-6-M12x1,25	6	M12x1,25	.295 (7,5)	1.654 (42)	.866 (22)	.433 (11)	.630 (16)	.492 (12,5)
50215N-6-M12x1,5	6	M12x1,5	.295 (7,5)	1.654 (42)	.866 (22)	.433 (11)	.630 (16)	.492 (12,5)

50225N

SWIVEL RUN TEE

BSPP

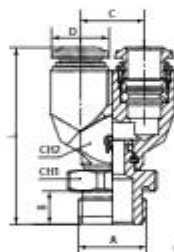


Part No.	Tube	A	B	L1	L2	CH1	CH2	D
50225N-3-M5	3	M5	.138 (3,5)	.650 (16,5)	.669 (17)	.354 (9)	.315 (8)	.394 (10)
50225N-4-M5	5/32 (4)	M5	.138 (3,5)	.669 (17)	.709 (18)	.354 (9)	.315 (8)	.394 (10)
50225N-4-1/8	5/32 (4)	1/8	.217 (5,5)	.669 (17)	.728 (18,5)	.354 (9)	.512 (13)	.394 (10)
50225N-4-1/4	5/32 (4)	1/4	.276 (7)	.669 (17)	.787 (20)	.354 (9)	.63 (16)	.394 (10)
50225N-5-M5	5	M5	.138 (3,5)	.787 (20)	.807 (20,5)	.433 (11)	.433 (11)	.492 (12,5)
50225N-5-1/8	5	1/8	.217 (5,5)	.787 (20)	.807 (20,5)	.433 (11)	.512 (13)	.492 (12,5)
50225N-6-M5	6	M5	.138 (3,5)	.827 (21)	.807 (20,5)	.433 (11)	.433 (11)	.492 (12,5)
50225N-6-1/8	6	1/8	.217 (5,5)	.827 (21)	.807 (20,5)	.433 (11)	.512 (13)	.492 (12,5)
50225N-6-1/4	6	1/4	.276 (7)	.827 (21)	.866 (22)	.433 (11)	.63 (16)	.492 (12,5)
50225N-8-1/8	5/16 (8)	1/8	.217 (5,5)	.886 (22,5)	.886 (22,5)	.512 (13)	.512 (13)	.571 (14,5)
50225N-8-1/4	5/16 (8)	1/4	.276 (7)	.886 (22,5)	.906 (23)	.512 (13)	.63 (16)	.571 (14,5)
50225N-8-3/8	5/16 (8)	3/8	.315 (8)	.886 (22,5)	.984 (25)	.512 (13)	.787 (20)	.571 (14,5)
50225N-8-1/2	5/16 (8)	1/2	.374 (9,5)	.886 (22,5)	1.043 (26,5)	.512 (13)	.984 (25)	.571 (14,5)
50225N-10-1/4	10	1/4	.276 (7)	1.043 (26,5)	1.063 (27)	.551 (14)	.63 (16)	.689 (17,5)
50225N-10-3/8	10	3/8	.315 (8)	1.043 (26,5)	1.043 (26,5)	.551 (14)	.787 (20)	.689 (17,5)
50225N-10-1/2	10	1/2	.374 (9,5)	1.043 (26,5)	1.102 (28)	.551 (14)	.984 (25)	.689 (17,5)
50225N-12-3/8	12	3/8	.315 (8)	1.240 (31,5)	1.161 (29,5)	.63 (16)	.787 (20)	.846 (21,5)
50225N-12-1/2	12	1/2	.374 (9,5)	1.240 (31,5)	1.220 (31)	.63 (16)	.984 (25)	.846 (21,5)
50225N-6-M12x1	6	M12x1	.295 (7,5)	.827 (21)	.866 (22)	.433 (11)	.63 (16)	.492 (12,5)
50225N-6-M12x1,25	6	M12x1,25	.295 (7,5)	.827 (21)	.866 (22)	.433 (11)	.63 (16)	.492 (12,5)
50225N-6-M12x1,5	6	M12x1,5	.295 (7,5)	.827 (21)	.866 (22)	.433 (11)	.63 (16)	.492 (12,5)

50326N

Y-CONNECTOR MALE ADAPTOR (PARALLEL)

BSPP

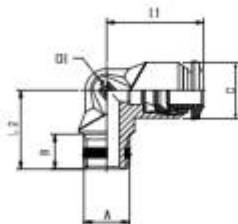


Part No.	Tube	A	B	C	CH1	CH2	D
50326N-4-1/8	5/32 (4)	1/8	.217 (5,5)	1.280 (32,5)	.511 (13)	.433 (11)	.394 (10)
50326N-6-1/8	6	1/8	.217 (5,5)	1.456 (37)	.511 (13)	.511 (13)	.492 (12,5)
50326N-6-1/4	6	1/4	.275 (7)	1.516 (38,5)	.629 (16)	.511 (13)	.492 (12,5)
50326N-8-1/4	5/16 (8)	1/8	.217 (5,5)	1.594 (40,5)	.511 (13)	.590 (15)	.551 (14)
50326N-8-1/4	5/16 (8)	1/4	.275 (7)	1.614 (41)	.629 (16)	.590 (15)	.551 (14)
50326N-10-3/8	5/16 (8)	3/8	.314 (8)	1.693 (43)	.787 (20)	.590 (15)	.551 (14)

50100N

FIXED ELBOW

BSPT

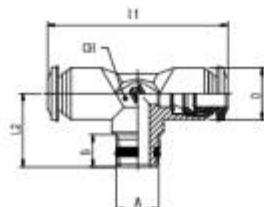


Part No.	Tube	A	B	L1	L2	CH	D
50100N-4-M5	5/32 (4)	M5	.197 (5)	.669 (17)	.591 (15)	.354 (9)	.394 (10)
50100N-4-1/8	5/32 (4)	1/8	.295 (7,5)	.669 (17)	.61 (15,5)	.354 (9)	.394 (10)
50100N-5-M5	5	M5	.197 (5)	.787 (20)	.669 (17)	.433 (11)	.492 (12,5)
50100N-5-1/8	5	1/8	.295 (7,5)	.787 (20)	.689 (17,5)	.433 (11)	.492 (12,5)
50100N-6-1/8	6	1/8	.295 (7,5)	.827 (21)	.689 (17,5)	.433 (11)	.492 (12,5)
50100N-6-1/4	6	1/4	.433 (11)	.827 (21)	.846 (21,5)	.433 (11)	.492 (12,5)
50100N-8-1/8	5/16 (8)	1/8	.295 (7,5)	.886 (22,5)	.748 (19)	.512 (13)	.551 (14)
50100N-8-1/4	5/16 (8)	1/4	.433 (11)	.886 (22,5)	.846 (21,5)	.512 (13)	.551 (14)
50100N-10-1/4	10	1/4	.433 (11)	1.043 (26,5)	.965 (24,5)	.63 (16)	.669 (17)
50100N-10-3/8	10	3/8	.453 (11,5)	1.043 (26,5)	.945 (24)	.63 (16)	.669 (17)
50100N-12-1/4	12	1/4	.433 (11)	1.201 (30,5)	1.201 (28)	.748 (19)	.846 (21,5)
50100N-12-3/8	12	3/8	.453 (11,5)	1.201 (30,5)	1.201 (28)	.748 (19)	.846 (21,5)

50200N

FIXED BRANCH TEE

BSPT



Part No.	Tube	A	B	L1	L2	CH	D
50200N-4-M5	5/32 (4)	M5	.197 (5)	1.339 (34)	.591 (15)	.354 (9)	.394 (10)
50200N-4-1/8	5/32 (4)	1/8	.295 (7,5)	1.339 (34)	.61 (15,5)	.354 (9)	.394 (10)
50200N-5-1/8	5	1/8	.295 (7,5)	1.575 (40)	.689 (17,5)	.433 (11)	.492 (12,5)
50200N-6-1/8	6	1/8	.295 (7,5)	1.654 (42)	.689 (17,5)	.433 (11)	.492 (12,5)
50200N-8-1/8	5/16 (8)	1/8	.295 (7,5)	1.772 (45)	.748 (19)	.512 (13)	.551 (14)
50200N-8-1/4	5/16 (8)	1/4	.433 (11)	1.772 (45)	.846 (21,5)	.512 (13)	.551 (14)
50200N-10-1/4	10	1/4	.433 (11)	2.087 (53)	.965 (24,5)	.63 (16)	.669 (17)
50200N-10-3/8	10	3/8	.453 (11,5)	2.087 (53)	.945 (24)	.63 (16)	.669 (17)
50200N-12-1/4	12	1/4	.433 (11)	2.402 (61)	1.102 (28)	.748 (19)	.846 (21,5)
50200N-12-3/8	12	3/8	.453 (11,5)	2.402 (61)	1.102 (28)	.748 (19)	.846 (21,5)

50040N

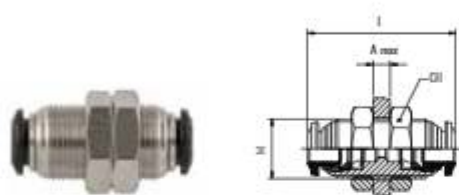
UNION



Part No.	Tube	Tube	L	B
50040N-3	3		1.024 (26)	.335 (8,5)
50040N-4	5/32 (4)		1.200 (30,5)	.413 (10,5)
50040N-5	5		1.299 (33)	.453 (11,5)
50040N-6-4	6	5/32 (4)	1.259 (32)	.492 (12,5)
50040N-6	6		1.338 (34)	.492 (12,5)
50040N-8-6	5/16 (8)	6	1.377 (35)	.571 (14,5)
50040N-8	5/16 (8)		1.417 (36)	.571 (14,5)
50040N-10-8	10	5/16 (8)	1.594 (40,5)	.689 (17,5)
50040N-10	10		1.653 (42)	.689 (17,5)
50040N-12-10	12	10	1.791 (45,5)	.807 (20,5)
50040N-12	12		1.850 (47)	.807 (20,5)
50040N-14	14		1.929 (49)	.846 (21,5)

50050N

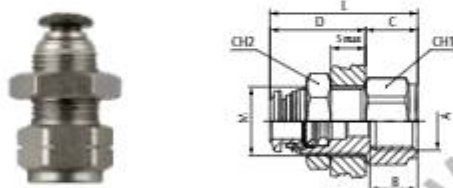
BULKHEAD UNION



Part No.	Tube	M	L	CH	A max
50050N-3	3	M10x1	1.024 (26)	.551 (14)	.197 (5)
50050N-4	5/32 (4)	M12x1	1.240 (31,5)	.669 (17)	.275 (7)
50050N-5	5	M14x1	1.299 (33)	.669 (17)	.275 (7)
50050N-6	6	M14x1	1.377 (35)	.669 (17)	.374 (9,5)
50050N-8-6	5/16 (8)-6	M16x1	1.456 (37)	.748 (19)	.413 (10,5)
50050N-8	5/16 (8)	M16x1	1.456 (37)	.748 (19)	.413 (10,5)
50050N-10-6	10-6	M20x1	1.693 (43)	.944 (24)	.453 (11,5)
50050N-10-8	10-5/16 (8)	M20x1	1.693 (43)	.944 (24)	.492 (12,5)
50050N-10	10	M20x1	1.692 (42)	.944 (24)	.492 (12,5)
50050N-12	12	M22x1	1.889 (48)	1.023 (26)	.649 (16,5)
50050N-14	14	M23x1	1.929 (49)	1.063 (26)	.649 (16,5)

50055N

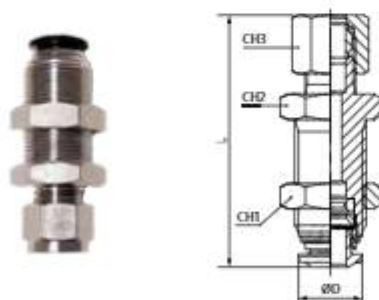
FEMALE BULKHEAD CONNECTOR



Part No.	Tube	A	B	M	S max	CH1	CH2	C	D	L
50055N-4-1/8	5/32 (4)	1/8	.334 (8,5)	M12x1	.275 (7)	.591 (15)	.669 (17)	.394 (10)	.748 (19)	1.141 (29)
50055N-6-1/8	6	1/8	.334 (8,5)	M14x1	.315 (8)	.630 (16)	.669 (17)	.394 (10)	.826 (21)	1.221 (31)
50055N-6-1/4	6	1/4	.433 (11)	M14x1	.315 (8)	.630 (16)	.669 (17)	.472 (12)	.826 (21)	1.300 (33)
50055N-8-1/8	5/16 (8)	1/8	.334 (8,5)	M16x1	.315 (8)	.709 (18)	.748 (19)	.394 (10)	.866 (22)	1.260 (32)
50055N-8-1/4	5/16 (8)	1/4	.433 (11)	M16x1	.315 (8)	.709 (18)	.748 (19)	.472 (12)	.866 (22)	1.339 (34)
50055N-10-3/8	10	3/8	.472 (12)	M20x1	.374 (9,5)	.945 (24)	.945 (24)	.551 (14)	1.003 (25,5)	1.556 (38,5)
50055N-12-3/8	12	3/8	.472 (12)	M22x1	.413 (10,5)	.945 (24)	1.024 (26)	.591 (15)	1.083 (27,5)	1.673 (42,5)
50055N-12-1/2	12	1/2	.591 (15)	M22x1	.413 (10,5)	.945 (24)	1.024 (26)	.669 (17)	1.083 (27,5)	1.752 (44,5)

50465N

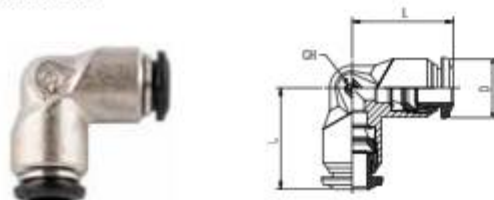
BULKHEAD CONNECTOR



Part No.	Tube	L	D	CH1	CH2	CH3
50465N-6	6	1.949 (49,5)	.492 (12,5)	.511 (13)	.669 (17)	.669 (17)
50465N-8	5/16 (8)	2.047 (52)	.551 (14)	.551 (14)	.748 (19)	.748 (19)
50465N-10	10	2.282 (59)	.669 (17)	.748 (19)	.945 (24)	.945 (24)

50130N

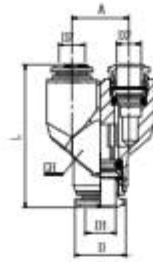
UNION ELBOW



Part No.	Tube	L	CH	D
50130N-3	3	.669 (17)	.354 (9)	.394 (10)
50130N-4	5/32 (4)	.669 (17)	.354 (9)	.394 (10)
50130N-5	5	.787 (20)	.433 (11)	.492 (12,5)
50130N-6	6	.826 (21)	.433 (11)	.492 (12,5)
50130N-8	5/16 (8)	.885 (22,5)	.511 (13)	.571 (14,5)
50130N-10	10	1.043 (26,5)	.629 (16)	.689 (17,5)
50130N-12	12	1.200 (30,5)	.748 (19)	.846 (21,5)
50130N-14	14	1.279 (32,5)	.748 (19)	.846 (21,5)

50310N

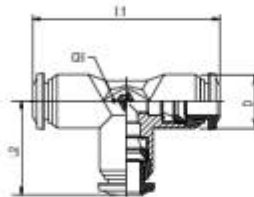
UNION Y



Part No.	Tube	A	L	CH	D
50310N-3	3	.394 (10)	1.142 (29)	.433 (11)	.394 (10)
50310N-4	5/32 (4)	.433 (11)	1.259 (32)	.433 (11)	.394 (10)
50310N-5	5	.531 (13.5)	1.377 (35)	.511 (13)	.492 (12.5)
50310N-6	6	.531 (13.5)	1.437 (36.5)	.511 (13)	.492 (12.5)
50310N-8	5/16 (8)	.670 (15.5)	1.614 (41)	.590 (15)	.551 (14)
50310N-10	10	.728 (18.5)	1.889 (48)	.708 (18)	.669 (17)

50230N

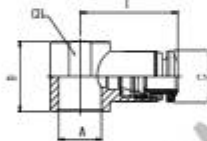
UNION TEE



Part No.	Tube	L1	L2	CH	D
50230N-3	3	1.338 (34)	.669 (17)	.354 (9)	.394 (10)
50230N-4	5/32 (4)	1.338 (34)	.669 (17)	.354 (9)	.394 (10)
50230N-5	5	1.574 (40)	.787 (20)	.433 (11)	.492 (12.5)
50230N-6	6	1.653 (42)	.826 (21)	.433 (11)	.492 (12.5)
50230N-8	5/16 (8)	1.771 (45)	.885 (22.5)	.511 (13)	.551 (14)
50230N-10	10	2.086 (53)	1.043 (26.5)	.629 (16)	.669 (17)
50230N-12	12	2.401 (61)	1.200 (30.5)	.748 (19)	.847 (21.5)
50230N-14	14	2.578 (65.5)	1.279 (32.5)	.748 (19)	.847 (21.5)

50500N

SINGLE BANJO BODY

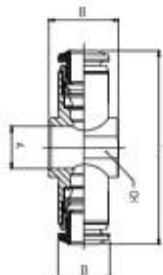


Part No.	Tube	A	B	L	CH	D
50500N-3-M5	3	M5	.492 (12.5)	.748 (19)	-	.394 (10)
50500N-3-M6	3	M6	.492 (12.5)	.748 (19)	-	.394 (10)
50500N-4-M5	5/32 (4)	M5	.492 (12.5)	.748 (19)	-	.394 (10)
50500N-4-M6	5/32 (4)	M6	.492 (12.5)	.748 (19)	-	.394 (10)
50500N-4-1/8	5/32 (4)	1/8	.591 (15)	.827 (21)	.551 (14)	.394 (10)
50500N-5-M5	5	M5	.492 (12.5)	.787 (20)	-	.492 (12.5)
50500N-5-M6	5	M6	.492 (12.5)	.787 (20)	-	.492 (12.5)
50500N-5-1/8	5	1/8	.591 (15)	.846 (21.5)	.551 (14)	.492 (12.5)
50500N-5-1/4	5	1/4	.669 (17)	.965 (24.5)	.709 (18)	.492 (12.5)
50500N-6-M5	6	M5	.492 (12.5)	.807 (20.5)	-	.492 (12.5)
50500N-6-M6	6	M6	.492 (12.5)	.807 (20.5)	-	.492 (12.5)
50500N-6-1/8	6	1/8	.591 (15)	.866 (22)	.551 (14)	.492 (12.5)
50500N-6-1/4	6	1/4	.669 (17)	.984 (25)	.709 (18)	.492 (12.5)
50500N-8-1/8	5/16 (8)	1/8	.591 (15)	.945 (24)	.551 (14)	.551 (14)
50500N-8-1/4	5/16 (8)	1/4	.669 (17)	1.024 (26)	.709 (18)	.551 (14)
50500N-8-3/8	5/16 (8)	3/8	.787 (20)	1.102 (28)	.827 (21)	.551 (14)
50500N-10-1/4	10	1/4	.669 (17)	1.142 (29)	.709 (18)	.669 (17)
50500N-10-3/8	10	3/8	.787 (20)	1.201 (30.5)	.827 (21)	.669 (17)
50500N-12-3/8	12	3/8	.787 (20)	1.280 (32.5)	.827 (21)	.846 (21.5)
50500N-12-1/2	12	1/2	.945 (24)	1.378 (35)	.984 (25)	.846 (21.5)
50500N-14-1/2	14	1/2	.945 (24)	1.308 (35.5)	.984 (25)	.846 (21.5)

For BANJO STEM assemblies see 10.7/10.8/10.9

50510N

DOUBLE BANJO BODY



Part No.	Tube	A	B	L	CH	D
50510N-4-M5	5/32 (4)	M5	.492 (12.5)	1.496 (38)	-	.394 (10)
50510N-4-M6	5/32 (4)	M6	.492 (12.5)	1.496 (38)	-	.394 (10)
50510N-4-1/8	5/32 (4)	1/8	.591 (15)	1.654 (42)	.551 (14)	.394 (10)
50510N-5-1/8	5	1/8	.591 (15)	1.693 (43)	.551 (14)	.492 (12.5)
50510N-5-1/4	5	1/4	.669 (17)	1.929 (49)	.709 (18)	.492 (12.5)
50510N-6-1/8	6	1/8	.591 (15)	1.732 (44)	.551 (14)	.492 (12.5)
50510N-6-1/4	6	1/4	.669 (17)	1.969 (50)	.709 (18)	.492 (12.5)
50510N-8-1/8	5/16 (8)	1/8	.591 (15)	1.890 (48)	.551 (14)	.551 (14)
50510N-8-1/4	5/16 (8)	1/4	.669 (17)	2.047 (52)	.709 (18)	.551 (14)

For BANJO STEM assemblies see 10.7/10.8/10.9

50600

STANDPIPE

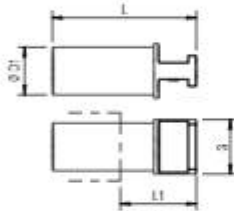
BSPP



Part No.	D	A	B	L	L1	CH
50600-4-M5	5/32 (4)	M5	.157 (4)	.945 (24)	.591 (15)	.315 (8)
50600-4-1/8	5/32 (4)	1/8	.236 (6)	1.043 (26,5)	.591 (15)	.512 (13)
50600-5-M5	5	M5	.157 (4)	1.074 (26)	.669 (17)	.315 (8)
50600-5-1/8	5	1/8	.236 (6)	1.122 (28,5)	.669 (17)	.512 (13)
50600-5-1/4	5	1/4	.315 (8)	1.220 (31)	.669 (17)	.630 (16)
50600-6-M5	6	M5	.157 (4)	1.074 (26)	.669 (17)	.315 (8)
50600-6-1/8	6	1/8	.236 (6)	1.122 (28,5)	.669 (17)	.512 (13)
50600-6-1/4	6	1/4	.315 (8)	1.220 (31)	.669 (17)	.630 (16)
50600-8-1/8	5/16 (8)	1/8	.236 (6)	1.161 (29,5)	.709 (18)	.512 (13)
50600-8-1/4	5/16 (8)	1/4	.315 (8)	1.260 (32)	.709 (18)	.630 (16)
50600-8-3/8	5/16 (8)	3/8	.354 (9)	1.319 (33,5)	.709 (18)	.787 (20)
50600-10-1/8	10	1/8	.236 (6)	1.319 (33,5)	.866 (22)	.512 (13)
50600-10-1/4	10	1/4	.315 (8)	1.417 (36)	.866 (22)	.630 (16)
50600-10-3/8	10	3/8	.354 (9)	1.476 (37,5)	.866 (22)	.787 (20)
50600-12-1/4	12	1/4	.315 (8)	1.516 (38,5)	.965 (24,5)	.630 (16)
50600-12-3/8	12	3/8	.354 (9)	1.575 (40)	.965 (24,5)	.787 (20)
50600-14-1/2	14	1/2	.394 (10)	1.732 (44)	1.043 (26,5)	.945 (24)

50610

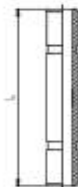
POLYAMIDE PLUG



Part No.	ØD1	G	L	L1
50610-3	3	.197 (5)	1.201 (30,5)	.709 (18)
50610-4	5/32 (4)	.236 (6)	1.162 (29,5)	.611 (15,5)
50610-5	5	.276 (7)	1.319 (33,5)	.709 (18)
50610-6	6	.315 (8)	1.260 (32)	.611 (15,5)
50610-8	5/16 (8)	.394 (10)	1.398 (35,5)	.768 (19,5)
50610-10	10	.472 (12)	1.575 (40)	.768 (19,5)
50610-12	12	.551 (14)	1.634 (41,5)	.787 (20)
50610-14	14	.630 (16)	1.654 (42)	.768 (19,5)

50625

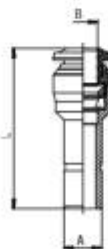
DOUBLE JOINT



Part No.	Tube	L
50625-4	5/32 (4)	1.220 (31)
50625-5	5	1.299 (33)
50625-6	6	1.339 (34)
50625-8	5/16 (8)	1.417 (36)
50625-10	10	1.772 (45)
50625-12	12	1.969 (50)

50700N

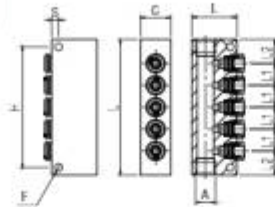
TUBE REDUCER



Part No.	A	B	L	D
50700N-4-3	5/32 (4)	3	1.181 (30)	.335 (8,5)
50700N-5-4	5	5/32 (4)	1.260 (32)	.453 (11,5)
50700N-6-4	6	5/32 (4)	1.181 (30)	.413 (10,5)
50700N-6-5	6	5	1.358 (34,5)	.453 (11,5)
50700N-8-4	5/16 (8)	5/32 (4)	1.280 (32,5)	.413 (10,5)
50700N-8-6	5/16 (8)	6	1.358 (34,5)	.492 (12,5)
50700N-10-4	10	5/32 (4)	1.240 (31,5)	.413 (10,5)
50700N-10-6	10	6	1.476 (37,5)	.492 (12,5)
50700N-10-8	10	5/16 (8)	1.516 (38,5)	.571 (14,5)
50700N-12-8	12	5/16 (8)	1.555 (39,5)	.571 (14,5)
50700N-12-10	12	10	1.693 (43)	.689 (17,5)

50900N

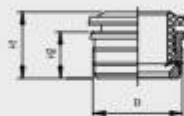
5 WAY ALUMINUM MANIFOLD



Part No.	Tube	A	H	F	S	C	D	L	LI	L2
50900N-4-1/8	5/32 (4)	1/8	2.224 (66)	.197 (5)	.177 (4,5)	.591 (15)	.984 (25)	2.953 (75)	.472 (12)	.531 (13,5)
50900N-6-1/8	6	1/8	3.150 (80)	.197 (5)	.177 (4,5)	.591 (15)	.984 (25)	3.543 (90)	.571 (14,5)	.630 (16)
50900N-6-1/4	6	1/4	3.150 (80)	.197 (5)	.177 (4,5)	.787 (20)	1.181 (30)	3.543 (90)	.571 (14,5)	.630 (16)
50900N-8-1/4	5/16 (8)	1/4	3.543 (90)	.197 (5)	.177 (4,5)	.787 (20)	1.181 (30)	3.937 (100)	.630 (16)	.709 (18)

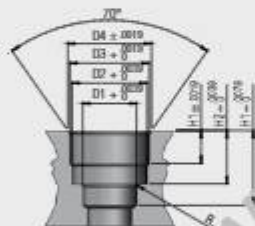
55800N

PUSH-FIT CARTRIDGES



Part No.	Tube	D	H1	H2
55800N-3	3	.264 (6,7)	.354 (9)	.197 (5)
55800N-4	5/32 (4)	.343 (8,7)	.410 (10,4)	.271 (5,6)
55800N-5	5	.384 (9,75)	.465 (11,8)	.248 (6,3)
55800N-6	6	.423 (10,75)	.488 (12,4)	.272 (6,9)
55800N-8	5/16 (8)	.500 (12,7)	.488 (12,4)	.272 (6,9)
55800N-10	10	.618 (15,7)	.618 (15,7)	.335 (8,5)
55800N-12	12	.771 (19,3)	.701 (17,8)	.374 (9,5)

SEAT



Seats dimension is push-fit cartridges.

Tube	L1	D2	D3	D4	H1	H2	H3	R
1/8 (3)	.134 (3,4)	.238 (6,05)	.252 (6,4)	.274 (6,96)	.146 (3,7)	.240 (6,1)	.339 (8,6)	.020 (0,5)
5/32 (4)	.165 (4,2)	.293 (7,45)	.331 (8,4)	.354 (9)	.148 (3,76)	.256 (6,5)	.374 (9,5)	.020 (0,5)
5 (5)	.205 (5,2)	.329 (8,36)	.370 (9,4)	.400 (10,16)	.175 (4,45)	.311 (7,9)	.413 (10,5)	.020 (0,5)
1/4 (6)	.244 (6,2)	.368 (9,35)	.411 (10,44)	.447 (11,35)	.197 (5)	.335 (8,5)	.453 (11,5)	.020 (0,5)
5/16 (8)	.323 (8,2)	.449 (11,4)	.488 (12,4)	.508 (12,9)	.205 (5,2)	.335 (8,5)	.492 (12,5)	.030 (0,76)
3/8 (10)	.402 (10,2)	.571 (14,5)	.606 (15,4)	.630 (16)	.264 (6,7)	.413 (10,5)	.591 (15)	.030 (0,76)
1/2 (12)	.480 (12,2)	.669 (17)	.709 (18)	.748 (19)	.295 (7,5)	.476 (12,1)	.669 (17)	.039 (1)

55801

TOOL FOR PUSH-FIT CARTRIDGES SEAT



Part No.	Tube	ø Body
55801-3	3	.394 (10)
55801-4	4 (5/32)	.394 (10)
55801-6	6 (1/4)	.472 (12)
55801-8	8 (5/16)	.472 (12)
55801-10	10 (3/8)	.630 (16)
55801-12	12 (1/2)	.630 (16)

55802

ASSEMBLING TOOL FOR PUSH-FIT CARTRIDGES



Part No.	Tube
55802-3	3
55802-4	4 (5/32)
55802-6	6 (1/4)
55802-8	8 (5/16)
55802-10	10 (3/8)
55802-12	12 (1/2)

PUSH-FIT CARTRIDGES ASSEMBLING INSTRUCTIONS ART. 55800N

1 Make the seat for the cartridge utilizing the suitable tool Art. 55801.



2 Insert the lip seal inside of the seat.



3 Insert the cartridge into the assembling tool Art. 55802.

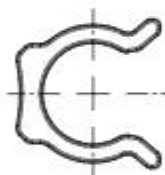


4 Press the cartridge inside of the seat until it will be reached the abutment surface with the assembling tool.



50980

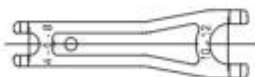
SECURITY CLIPS



Part No.	Tube
50980-53	5/32 (4)
50980-5	3/16 (5)
50980-04	1/4 (6)
50980-05	5/16 (8)
50980-06	3/8 (10)
50980-08	1/2 (12)
50980-14	(14)

50991

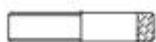
TOOL FOR DISASSEMBLING



Part No.
50991

50006

THREAD PACKING FOR THE SWIFFIT TAPER THREADS



Part No.	Thread
50006-02	1/8
50006-04	1/4
50006-06	3/8
50006-08	1/2

FITTING KITS

50861N-4

FITTING KIT - 4MM TUBE



Part No.	Description	Qty
50000N-4-1/8	Straight 4mm Tube x 1/8 Male	5
50000N-4-1/4	Straight 4mm Tube x 1/4 Male	5
50110N-4-1/8	Swivel Elbow 4mm Tube x 1/8 Male	5
50110N-4-1/4	Swivel Elbow 4mm Tube x 1/4 Male	5
50210N-4-1/8	Branch Tee 4mm Tube x 1/8 Male	5
50210N-4-1/4	Branch Tee 4mm Tube x 1/4 Male	5
50222N-4-1/8	Run Tee 4mm Tube x 1/8 Male	5
50222N-4-1/4	Run Tee 4mm Tube x 1/4 Male	5
50040N-4	Union 4mm Tube	5
50050N-4	Bulkhead Union 4mm Tube	5
50130N-4	Union Elbow 4mm Tube	5
50230N-4	Union Tee 4mm Tube	5

50861N-6

FITTING KIT - 6MM TUBE



Part No.	Description	Qty
50000N-6-1/8	Straight 6mm Tube x 1/8 Male	5
50000N-6-1/4	Straight 6mm Tube x 1/4 Male	5
50110N-6-1/8	Swivel Elbow 6mm Tube x 1/8 Male	5
50110N-6-1/4	Swivel Elbow 6mm Tube x 1/4 Male	5
50210N-6-1/8	Branch Tee 6mm Tube x 1/8 Male	5
50210N-6-1/4	Branch Tee 6mm Tube x 1/4 Male	5
50222N-6-1/8	Run Tee 6mm Tube x 1/8 Male	5
50222N-6-1/4	Run Tee 6mm Tube x 1/4 Male	5
50040N-6	Union 6mm Tube	5
50050N-6	Bulkhead Union 6mm Tube	5
50130N-6	Union Elbow 6mm Tube	5
50230N-6	Union Tee 6mm Tube	5

50861N-8

FITTING KIT - 8MM TUBE



Part No.	Description	Qty
50000N-8-1/8	Straight 8mm Tube x 1/8 Male	5
50000N-8-1/4	Straight 8mm Tube x 1/4 Male	5
50000N-8-3/8	Straight 8mm Tube x 3/8 Male	5
50110N-8-1/8	Swivel Elbow 8mm Tube x 1/8 Male	5
50110N-8-1/4	Swivel Elbow 8mm Tube x 1/4 Male	5
50110N-8-3/8	Swivel Elbow 8mm Tube x 3/8 Male	5
50210N-8-1/8	Branch Tee 8mm Tube x 1/8 Male	5
50210N-8-1/4	Branch Tee 8mm Tube x 1/4 Male	5
50040N-8	Union 8mm Tube	5
50050N-8	Bulkhead Union 8mm Tube	5
50130N-8	Union Elbow 8mm Tube	5
50230N-8	Union Tee 8mm Tube	5

50861N-10

FITTING KIT - 10MM TUBE



Part No.	Description	Qty
50000N-10-1/4	Straight 10mm tube x 1/4 Male	3
50000N-10-3/8	Straight 10mm tube x 3/8 Male	3
50110N-10-1/4	Swivel Elbow 10mm tube x 1/4 Male	3
50110N-10-3/8	Swivel Elbow 10mm tube x 3/8 Male	3
50210N-10-1/4	Branch Tee 10mm tube x 1/4 Male	3
50210N-10-3/8	Branch Tee 10mm tube x 3/8 Male	3
50222N-10-1/4	Run Tee 10mm tube x 1/4 Male	3
50222N-10-3/8	Run Tee 10mm tube x 3/8 Male	3
50040N-10	Union 10mm tube	3
50050N-10	Bulkhead Union 10mm tube	3
50130N-10	Union Elbow 10mm tube	3
50230N-10	Union Tee 10mm tube	3

50861N-12

FITTING KIT - 12MM TUBE



Part No.	Description	Qty
50000N-12-3/8	Straight 12mm tube x 3/8 Male	3
50000N-12-1/2	Straight 12mm tube x 1/2 Male	3
50110N-12-3/8	Swivel Elbow 12mm tube x 3/8 Male	3
50110N-12-1/2	Swivel Elbow 12mm tube x 1/2 Male	3
50210N-12-3/8	Branch Tee 12mm tube x 3/8 Male	3
50210N-12-1/2	Branch Tee 12mm tube x 1/2 Male	3
50222N-12-3/8	Run Tee 12mm tube x 3/8 Male	3
50222N-12-1/2	Run Tee 12mm tube x 1/2 Male	3
50040N-12	Union 12mm tube	3
50050N-12	Bulkhead Union 12mm tube	3
50130N-12	Union Elbow 12mm tube	3
50230N-12	Union Tee 12mm tube	3

www.sumy.ir

85 Series

 85110 Pg. 5.5	 85110 Pg. 5.5	 85170 Pg. 5.5	 85210 Pg. 5.5	 85210 Pg. 5.5	 85222 Pg. 5.6	 85222 Pg. 5.6	 85320 Pg. 5.6	 85320 Pg. 5.6	
 85340 Pg. 5.7	 85360 Pg. 5.7	 85040 Pg. 5.7	 85130 Pg. 5.7	 85140 Pg. 5.8	 85150 Pg. 5.8	 85160 Pg. 5.8	 85180 Pg. 5.8	 85230 Pg. 5.8	
 85240 Pg. 5.9	 85310 Pg. 5.9	 85330 Pg. 5.9	 85350 Pg. 5.9	 85500 Pg. 5.10	 85510 Pg. 5.10	 85520 Pg. 5.10	 85620 Pg. 5.10	 85700 Pg. 5.11	
 85705 Pg. 5.11	 88610B Pg. 5.11	 50980 Pg. 5.12	 55625 Pg. 5.12	www.sumy.ir					

For STRAIGHT FITTINGS see 87-88 series

 87000 Pg. 3.5	 87010 Pg. 3.5	 88007 Pg. 3.7
--	--	--

NYLON PUSH-TO-CONNECT FITTINGS FOR INCH TUBE

85 Series

85000





TECHNICAL CHARACTERISTICS



Reference Standard

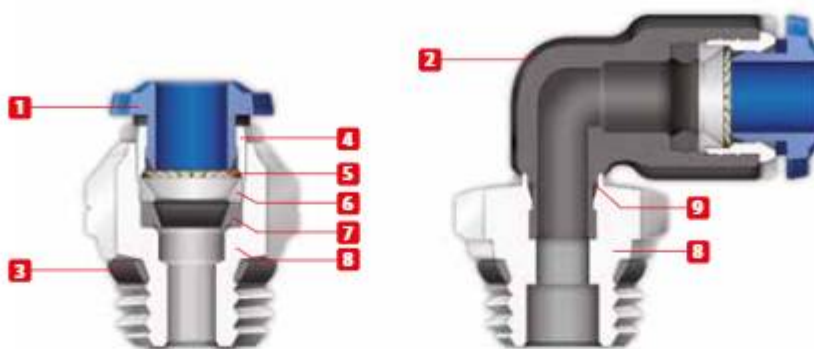
1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

ISO
14743:2004

SILICON
FREE



Pressure Rating

Vacuum ~ 290 PSI
-0.99 bar ~ 20 bar
-0.099 MPa ~ 2.0 MPa



Temperatures Rating

NBR
-4° F ~ 176° F
-20° C ~ 80° C



Media

- Compressed air
- Vacuum
- Water



Applications

- Pneumatic Automation
- Automotive
- Textile, Packaging
- Compressed Air Circuit
- Vacuum



Advantages

- 1 The 303 Stainless Steel gripper ensures a tight clamp for tubes of any material without damaging the tube's surface. The secure connection between the tube and the fitting will hold up to severe conditions such as impact and vibrations.
- 2 The shape of the safety ring and the molded seal perfectly seal off the tube, creating a vacuum.
- 3 Series with several types of threads:
SWIFIT
UNF
- 4 All straight fittings can be tightened with an Allen wrench because of our internal hex design. This enables the end user to tighten the fitting in spaces too small for an openend wrench.



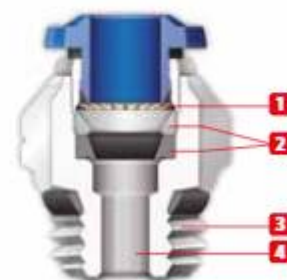
Component Parts and Materials

- 1 Composite Release Collet
- 2 Nylon Body
- 3 NBR Thread Seal
- 4 Nickel Plated Brass Sleeve
- 5 303 Stainless Steel Gripper
- 6 Technopolymer Safety Ring
- 7 NBR Molded Seal
- 8 Nickel Plated Thread Brass Body
- 9 NBR Seal



Tubing Compatibility

Nylon 6 - 11 -12
Polyethylene
Polyurethane (*98 Shore A for best result)
PTFE
FEP



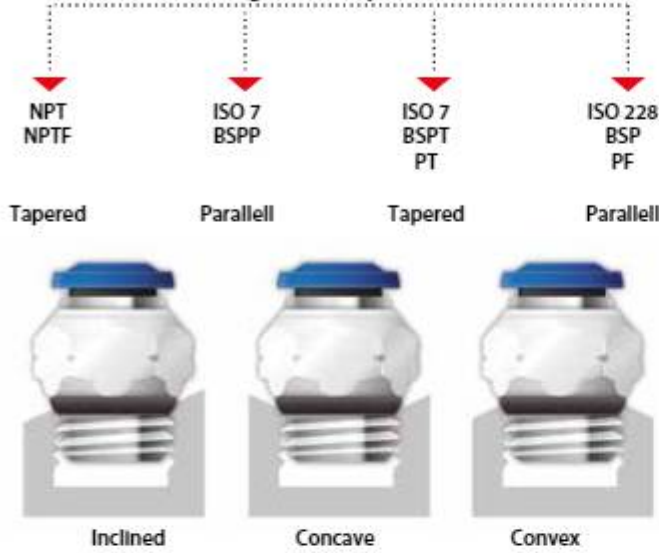


THREADS & ADVANTAGES



SWIFFFIT
Universal Thread

One fitting... Endless possibilities



Our **SWIFFFIT** universal fittings also work on non-flat surfaces without compromising an air-tight seal.

The **SWIFFFIT** Universal Thread has been designed to offer the following advantages to the end users:

- Reduced overall length
- Smaller hex dimensions compared to parallel threads
- Fits with various parallel and tapered threads
- All **SWIFFFIT** fittings have been equipped with threads and an NBR thread seal that will universally connect to all thread types.

Torque Specifications

Recommended Torque		
Thread Size	Min.	Max.
1/8	5 Nm	7 Nm
1/4	5 Nm	7 Nm
3/8	5 Nm	7 Nm
1/2	5 Nm	7 Nm



UNF Threads



The **UNF** Thread has been designed to offer the following advantages to the end users:

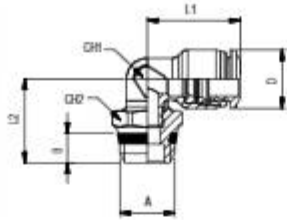
- Standard USA design
- Designed for use in UNF connections with an integrated NBR o-ring that provides a perfect seal

Torque Specifications

Recommended Torque		
Thread Size	Min.	Breaking Torque
10/32	0.8 Nm	3.2 Nm

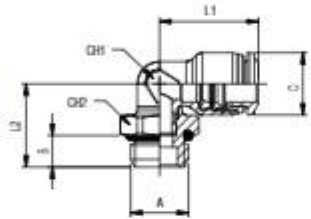
85110

SWIVEL ELBOW



* For part numbers with 10-32 threads

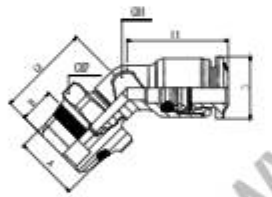
UNF



Part No.	Tube	A	B	L1	L2	CH1	CH2	D
85110-02-02	1/8	1/8	.216 (5.5)	.610 (15)	.649 (16.5)	.275 (7)	.511 (13)	.393 (10)
85110-02-04	1/8	1/4	.275 (7)	.610 (15)	.708 (18)	.275 (7)	.591 (15)	.393 (10)
*85110-53-32	5/32 (4)	10/32	.157 (4)	.649 (16.5)	.567 (14.5)	.275 (7)	.354 (9)	.393 (10)
85110-53-02	5/32 (4)	1/8	.216 (5.5)	.649 (16.5)	.649 (16.5)	.275 (7)	.511 (13)	.393 (10)
85110-53-04	5/32 (4)	1/4	.275 (7)	.649 (16.5)	.708 (18)	.275 (7)	.591 (15)	.393 (10)
*85110-04-32	1/4	10/32	.157 (4)	.807 (20.5)	.610 (15.5)	.354 (9)	.354 (9)	.492 (12.5)
85110-04-02	1/4	1/8	.216 (5.5)	.807 (20.5)	.688 (17.5)	.354 (9)	.511 (13)	.492 (12.5)
85110-04-04	1/4	1/4	.275 (7)	.807 (20.5)	.748 (19)	.354 (9)	.591 (15)	.492 (12.5)
85110-04-06	1/4	3/8	.295 (7.5)	.807 (20.5)	.787 (20)	.354 (9)	.669 (17)	.492 (12.5)
85110-04-08	1/4	1/2	.354 (9)	.807 (20.5)	.866 (22)	.354 (9)	.826 (21)	.492 (12.5)
85110-05-02	5/16 (8)	1/8	.216 (5.5)	.866 (22)	.778 (19.5)	.394 (10)	.511 (13)	.551 (14)
85110-05-04	5/16 (8)	1/4	.275 (7)	.866 (22)	.787 (20)	.394 (10)	.591 (15)	.551 (14)
85110-05-06	5/16 (8)	3/8	.295 (7.5)	.866 (22)	.807 (20.5)	.394 (10)	.669 (17)	.551 (14)
85110-05-08	5/16 (8)	1/2	.354 (9)	.866 (22)	.905 (23)	.394 (10)	.826 (21)	.551 (14)
85110-06-04	3/8	1/4	.275 (7)	1.043 (26.5)	.866 (22)	.551 (13)	.629 (16)	.669 (17)
85110-06-06	3/8	3/8	.295 (7.5)	1.043 (26.5)	.866 (22)	.551 (13)	.669 (17)	.669 (17)
85110-06-08	3/8	1/2	.354 (9)	1.043 (26.5)	.964 (24.5)	.551 (13)	.826 (21)	.669 (17)
85110-08-04	1/2	1/4	.275 (7)	1.200 (30.5)	.905 (23)	.629 (16)	.629 (16)	.787 (20)
85110-08-06	1/2	3/8	.295 (7.5)	1.200 (30.5)	.905 (23)	.629 (16)	.669 (17)	.787 (20)
85110-08-08	1/2	1/2	.354 (9)	1.200 (30.5)	1.003 (25.5)	.629 (16)	.826 (21)	.787 (20)

85170

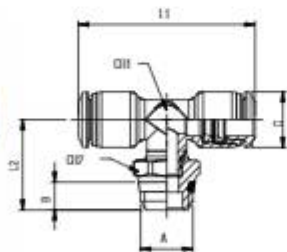
45° SWIVEL ELBOW



Part No.	Tube	B	L1	L2	CH1	CH2	D	
85170-53-02	5/32 (4)	1/8	.217 (5.5)	.492 (12.5)	.650 (16.5)	.276 (7)	.512 (13)	.394 (10)
85170-04-02	1/4	1/8	.217 (5.5)	.807 (20.5)	.689 (17.5)	.354 (9)	.512 (13)	.472 (12)
85170-04-04	1/4	1/4	.276 (7)	.807 (20.5)	.744 (18.9)	.354 (9)	.591 (15)	.472 (12)
85170-05-02	5/16 (8)	1/8	.217 (5.5)	.866 (22)	.778 (19.5)	.394 (10)	.512 (13)	.551 (14)
85170-05-04	5/16 (8)	1/4	.276 (7)	.866 (22)	.787 (20)	.394 (10)	.591 (15)	.551 (14)
85170-05-06	5/16 (8)	3/8	.295 (7.5)	.866 (22)	.807 (20.5)	.394 (10)	.669 (17)	.551 (14)
85170-05-08	5/16 (8)	1/2	.354 (9)	.866 (22)	.905 (23)	.394 (10)	.826 (21)	.551 (14)
85170-06-06	3/8	3/8	.295 (7.5)	1.043 (26.5)	.858 (21.8)	.512 (13)	.630 (16)	.669 (17)
85170-06-08	3/8	1/2	.354 (9)	1.043 (26.5)	.964 (24.5)	.512 (13)	.827 (21)	.669 (17)
85170-08-04	1/2	1/4	.276 (7)	1.181 (30)	.909 (23.1)	.630 (16)	.630 (16)	.787 (20)
85170-08-06	1/2	3/8	.295 (7.5)	1.181 (30)	.909 (23.1)	.630 (16)	.669 (17)	.787 (20)
85170-08-08	1/2	1/2	.354 (9)	1.181 (30)	1.003 (25.5)	.630 (16)	.827 (21)	.787 (20)

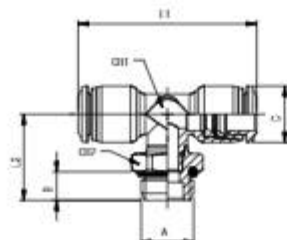
85210

SWIVEL BRANCH TEE



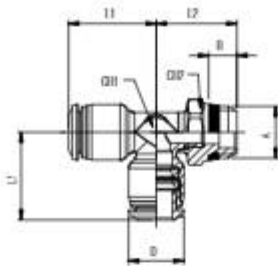
* For part numbers with 10-32 threads

UNF



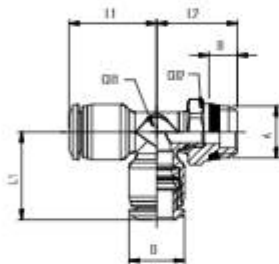
Part No.	Tube	A	B	L1	L2	CH1	CH2	D
85210-02-02	1/8	1/8	.216 (5.5)	1.200 (30.5)	.778 (19.5)	.275 (7)	.511 (13)	.393 (10)
85210-02-04	1/8	1/4	.275 (7)	1.200 (30.5)	.787 (20)	.275 (7)	.590 (15)	.393 (10)
*85210-53-32	5/32 (4)	10/32	.157 (4)	1.200 (30.5)	.629 (16)	.275 (7)	.354 (9)	.393 (10)
85210-53-02	5/32 (4)	1/8	.216 (5.5)	1.299 (33)	.778 (19.5)	.275 (7)	.511 (13)	.393 (10)
85210-53-04	5/32 (4)	1/4	.275 (7)	1.299 (33)	.787 (20)	.275 (7)	.590 (15)	.393 (10)
*85210-04-32	1/4	10/32	.157 (4)	1.594 (40.5)	.610 (15.5)	.354 (9)	.354 (9)	.492 (12.5)
85210-04-02	1/4	1/8	.216 (5.5)	1.594 (40.5)	.787 (20)	.354 (9)	.511 (13)	.492 (12.5)
85210-04-04	1/4	1/4	.275 (7)	1.594 (40.5)	.846 (21.5)	.354 (9)	.590 (15)	.492 (12.5)
85210-05-02	5/16 (8)	1/8	.216 (5.5)	1.732 (44)	.826 (21)	.394 (10)	.511 (13)	.551 (14)
85210-05-04	5/16 (8)	1/4	.275 (7)	1.732 (44)	.885 (22.5)	.394 (10)	.590 (15)	.551 (14)
85210-05-06	5/16 (8)	3/8	.295 (7.5)	1.732 (44)	.905 (23)	.394 (10)	.669 (17)	.551 (14)
85210-06-04	3/8	1/4	.275 (7)	2.086 (53)	1.023 (26)	.551 (13)	.629 (16)	.669 (17)
85210-06-06	3/8	3/8	.295 (7.5)	2.086 (53)	1.023 (26)	.551 (13)	.669 (17)	.669 (17)
85210-06-08	3/8	1/2	.354 (9)	2.086 (53)	1.023 (26)	.551 (13)	.826 (21)	.669 (17)
85210-08-04	1/2	1/4	.275 (7)	2.362 (60)	1.062 (27)	.629 (16)	.629 (16)	.787 (20)
85210-08-06	1/2	3/8	.295 (7.5)	2.362 (60)	1.062 (27)	.629 (16)	.669 (17)	.787 (20)
85210-08-08	1/2	1/2	.354 (9)	2.362 (60)	1.161 (29.5)	.629 (16)	.826 (21)	.787 (20)

85222
SWIVEL RUN TEE



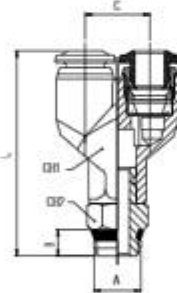
* For part numbers with 10-32 threads

UNF



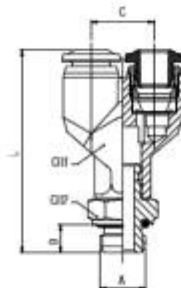
Part No.	Tube	A	B	L1	L2	CH1	CH2	D
85222-02-02	1/8	1/8	.216 (5,5)	.610 (15)	.708 (18)	.275 (7)	.511 (13)	.393 (10)
85222-02-04	1/8	1/4	.275 (7)	.610 (15)	.767 (19,5)	.275 (7)	.590 (15)	.393 (10)
*85222-53-32	5/32 (4)	10/32	.157 (4)	.649 (16,5)	.629 (16)	.275 (7)	.354 (9)	.393 (10)
85222-53-02	5/32 (4)	1/8	.216 (5,5)	.649 (16,5)	.708 (18)	.275 (7)	.511 (13)	.393 (10)
85222-53-04	5/32 (4)	1/4	.275 (7)	.649 (16,5)	.767 (19,5)	.275 (7)	.590 (15)	.393 (10)
*85222-04-32	1/4	10/32	.157 (4)	.807 (20,5)	.570 (14,5)	.354 (9)	.354 (9)	.492 (12,5)
85222-04-02	1/4	1/8	.216 (5,5)	.807 (20,5)	.688 (17,5)	.354 (9)	.511 (13)	.492 (12,5)
85222-04-04	1/4	1/4	.275 (7)	.807 (20,5)	.748 (19)	.354 (9)	.590 (15)	.492 (12,5)
85222-05-02	5/16 (8)	1/8	.216 (5,5)	.866 (22)	.748 (19)	.394 (10)	.511 (13)	.551 (14)
85222-05-04	5/16 (8)	1/4	.275 (7)	.866 (22)	.807 (20,5)	.394 (10)	.590 (15)	.551 (14)
85222-05-06	5/16 (8)	3/8	.295 (7,5)	.866 (22)	.826 (21)	.394 (10)	.669 (17)	.551 (14)
85222-06-04	3/8	1/4	.275 (7)	1.043 (26,5)	.866 (22)	.551 (13)	.629 (16)	.669 (17)
85222-06-06	3/8	3/8	.295 (7,5)	1.043 (26,5)	.866 (22)	.551 (13)	.669 (17)	.669 (17)
85222-06-08	3/8	1/2	.354 (9)	1.043 (26,5)	.964 (24,5)	.551 (13)	.826 (21)	.669 (17)
85222-08-04	1/2	1/4	.275 (7)	1.200 (30,5)	.905 (23)	.629 (16)	.629 (16)	.787 (20)
85222-08-06	1/2	3/8	.295 (7,5)	1.200 (30,5)	.905 (23)	.629 (16)	.669 (17)	.787 (20)
85222-08-08	1/2	1/2	.354 (9)	1.200 (30,5)	1.003 (25,5)	.629 (16)	.826 (21)	.787 (20)

85320
UNION Y



* For part numbers with 10-32 threads

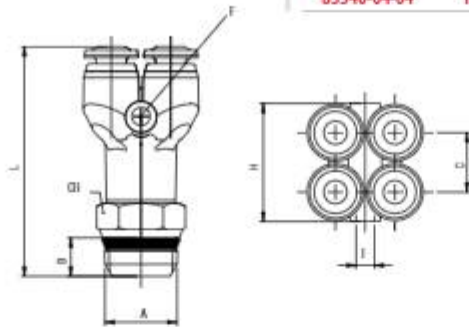
UNF



Part No.	Tube	A	B	C	L	CH1	CH2
*85320-53-32	5/32 (4)	10/32	.157 (4)	.433 (11)	1.437 (36,5)	.393 (10)	.393 (10)
85320-53-02	5/32 (4)	1/8	.216 (5,5)	.433 (11)	1.406 (38)	.393 (10)	.433 (11)
85320-53-04	5/32 (4)	1/4	.275 (7)	.433 (11)	1.594 (40,5)	.393 (10)	.551 (14)
*85320-04-32	1/4	10/32	.157 (4)	.531 (13,5)	1.633 (41,5)	.472 (12)	.393 (10)
85320-04-02	1/4	1/8	.216 (5,5)	.511 (13)	1.692 (43)	.472 (12)	.433 (11)
85320-04-04	1/4	1/4	.275 (7)	.531 (13,5)	1.791 (45,5)	.472 (12)	.551 (14)
85320-05-02	5/16 (8)	1/8	.216 (5,5)	.610 (15,5)	1.850 (47)	.551 (14)	.433 (11)
85320-05-04	5/16 (8)	1/4	.275 (7)	.610 (15,5)	1.929 (49)	.551 (14)	.551 (14)
85320-05-06	5/16 (8)	3/8	.295 (7,5)	.610 (15,5)	1.948 (49,5)	.551 (14)	.669 (17)
85320-06-04	3/8	1/4	.275 (7)	.748 (19)	2.224 (56,5)	.669 (17)	.551 (14)
85320-06-06	3/8	3/8	.295 (7,5)	.748 (19)	2.263 (57,5)	.669 (17)	.669 (17)
85320-06-08	3/8	1/2	.354 (9)	.748 (19)	2.362 (60)	.669 (17)	.826 (21)
85320-08-06	1/2	3/8	.295 (7,5)	.866 (22)	2.618 (66,5)	.787 (20)	.669 (17)
85320-08-08	1/2	1/2	.354 (9)	.866 (22)	2.677 (68)	.787 (20)	.826 (21)

85340

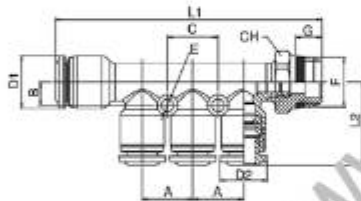
4 POSITION Y



Part No.	Tube	A	B	C	L	H	CH	F
85340-53-02	5/32 (4)	1/8	.217 (5,5)	.425 (10,8)	1.555 (39,5)	.846 (21,5)	.433 (11)	.130 (3,3)
85340-53-04	5/32 (4)	1/4	.276 (7)	.425 (10,8)	1.654 (42)	.846 (21,5)	.551 (14)	.130 (3,3)
85340-04-02	1/4	1/8	.217 (5,5)	.531 (13,5)	1.831 (46,5)	1.064 (27)	.433 (11)	.130 (3,3)
85340-04-04	1/4	1/4	.276 (7)	.531 (13,5)	1.889 (48)	1.064 (27)	.551 (14)	.130 (3,3)

85360

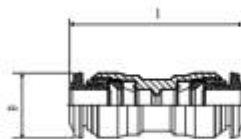
REDUCTION MANIFOLD



Part No.	Tube	F	A	B	L1	L2	C	E	G	H	D1	D2
85360-04-53	1/4-5/32	1/8	.531 (13,5)	.236 (6)	2.757 (70)	.866 (22)	.531 (13,5)	.551 (14)	.471 (12)	.130 (3,3)	.217 (5,5)	.511 (13)
85360-04-53	1/4-5/32	1/4	.531 (13,5)	.236 (6)	2.817 (71,5)	.866 (22)	.531 (13,5)	.551 (14)	.471 (12)	.130 (3,3)	.276 (7)	.591 (15)
85360-05-53	5/16-5/32	1/8	.531 (13,5)	.236 (6)	2.757 (70)	.866 (22)	.531 (13,5)	.551 (14)	.471 (12)	.130 (3,3)	.217 (5,5)	.511 (13)
85360-05-53	5/16-5/32	1/4	.531 (13,5)	.236 (6)	2.817 (71,5)	.866 (22)	.531 (13,5)	.551 (14)	.471 (12)	.130 (3,3)	.276 (7)	.591 (15)
85360-05-04	5/16-1/4	1/8	.531 (13,5)	.236 (6)	2.757 (70)	.866 (22)	.531 (13,5)	.551 (14)	.491 (12,5)	.130 (3,3)	.217 (5,5)	.511 (13)
85360-05-04	5/16-1/4	1/4	.531 (13,5)	.236 (6)	2.817 (71,5)	.866 (22)	.531 (13,5)	.551 (14)	.491 (12,5)	.130 (3,3)	.276 (7)	.591 (15)
85360-04-04	3/8-1/4	1/4	.906 (23)	.276 (7)	3.208 (81,5)	.946 (24)	.590 (15)	.669 (17)	.551 (14)	.130 (3,3)	.276 (7)	.629 (16)
85360-04-04	3/8-1/4	3/8	.906 (23)	.276 (7)	3.208 (81,5)	.946 (24)	.590 (15)	.669 (17)	.551 (14)	.130 (3,3)	.296 (7,5)	.669 (17)
85360-06-05	3/8-5/16	1/4	.906 (23)	.276 (7)	3.208 (81,5)	.906 (23)	.590 (15)	.669 (17)	.551 (14)	.130 (3,3)	.276 (7)	.629 (16)
85360-06-05	3/8-5/16	3/8	.906 (23)	.276 (7)	3.208 (81,5)	.906 (23)	.590 (15)	.669 (17)	.551 (14)	.130 (3,3)	.296 (7,5)	.669 (17)

85040

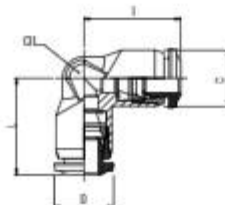
UNION



Part No.	Tube	Tube	B	L
85040-02-02	1/8	1/8	.394 (10)	1.102 (28)
85040-53-53	5/32 (4)	5/32 (4)	.394 (10)	1.220 (31)
85040-04-53	1/4	5/32 (4)	.492 (12,5)	1.358 (34,5)
85040-04-04	1/4	1/4	.492 (12,5)	1.377 (35)
85040-05-53	5/16 (8)	5/32 (4)	1.456 (37)	.551 (14)
85040-05-04	5/16 (8)	1/4	.551 (14)	1.496 (38)
85040-05-05	5/16 (8)	5/16 (8)	.551 (14)	1.456 (37)
85040-06-04	3/8	1/4	.669 (17)	1.751 (44,5)
85040-06-05	3/8	5/16 (8)	.669 (17)	1.751 (44,5)
85040-06-06	3/8	3/8	.669 (17)	1.771 (45)
85040-08-05	1/2	5/16 (8)	1.968 (50)	.787 (20)
85040-08-06	1/2	3/8	.787 (20)	1.968 (50)
85040-08-08	1/2	1/2	.787 (20)	1.929 (49)

85130

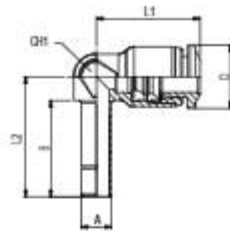
UNION ELBOW



Part No.	Tube	Tube	L	CH	D
85130-02-02	1/8	1/8	.610 (15,5)	.354 (9)	.393 (10)
85130-53-53	5/32 (4)	5/32 (4)	.649 (16,5)	.354 (9)	.393 (10)
85130-04-04	1/4	1/4	.807 (20,5)	.433 (11)	.492 (12,5)
85130-05-04	5/16 (8)	1/4	.886 (22,5)	.551 (14)	.511 (13)
85130-05-05	5/16 (8)	5/16 (8)	.866 (22)	.511 (13)	.551 (14)
85130-06-04	3/8	1/4	1.023 (26)	.669 (17)	.629 (16)
85130-04-05	3/8	5/16 (8)	1.023 (26)	.669 (17)	.629 (16)
85130-06-06	3/8	3/8	1.043 (26,5)	.629 (16)	.669 (17)
85130-04-06	1/2	3/8	1.200 (30,5)	.787 (20)	.748 (19)
85130-08-08	1/2	1/2	1.200 (30,5)	.748 (19)	.787 (20)

85140

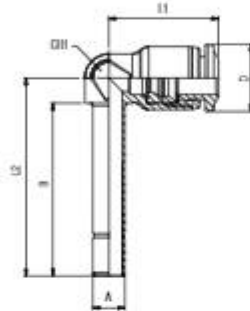
ELBOW PLUG IN



Part No.	Tube	A	B	L1	L2	CH1	D
85140-53-53	5/32 (4)	5/32 (4)	.669 (17)	.650 (16,5)	.819 (20,8)	.276 (7)	.394 (10)
85140-53-04	5/32 (4)	1/4	.748 (19)	.650 (16,5)	.913 (23)	.276 (7)	.394 (10)
85140-04-53	1/4	5/32 (4)	.669 (17)	.807 (20,5)	.846 (21,5)	.354 (9)	.492 (12,5)
85140-04-04	1/4	1/4	.748 (19)	.807 (20,5)	.933 (23,5)	.354 (9)	.492 (12,5)
85140-04-05	1/4	5/16 (8)	.787 (20)	.886 (22,5)	1.024 (26)	.394 (10)	.551 (14)
85140-05-05	5/16 (8)	5/16 (8)	.787 (20)	.866 (22)	1.024 (26)	.394 (10)	.551 (14)
85140-05-06	5/16 (8)	3/8	.866 (22)	.866 (22)	1.083 (27,5)	.394 (10)	.551 (14)
85140-06-06	3/8	3/8	.886 (22,5)	1.043 (26,5)	1.181 (30)	.512 (13)	.669 (17)
85140-06-08	3/8	1/2	.964 (24,5)	1.043 (26,5)	1.260 (32)	.512 (13)	.669 (17)
85140-08-08	1/2	1/2	1.004 (25,5)	1.181 (30)	1.319 (33,5)	.630 (16)	.787 (20)

85150

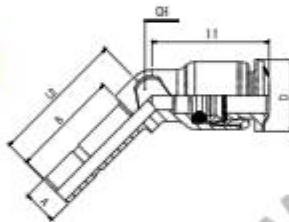
ELBOW PLUG IN



Part No.	Tube	A	B	L1	L2	CH1	D
85150-53-53	5/32 (4)	5/32 (4)	1.102 (28)	.650 (16,5)	1.252 (31,8)	.276 (7)	.394 (10)
85150-53-04	5/32 (4)	1/4	1.200 (30,5)	.650 (16,5)	1.359 (34,5)	.276 (7)	.394 (10)
85150-04-53	1/4	5/32 (4)	1.181 (30)	.807 (20,5)	1.359 (34,5)	.354 (9)	.492 (12,5)
85150-04-04	1/4	1/4	1.272 (32,3)	.807 (20,5)	1.457 (37)	.354 (9)	.492 (12,5)
85150-05-05	5/16 (8)	5/16 (8)	1.417 (36)	.866 (22)	1.654 (42)	.394 (10)	.551 (14)
85150-05-06	5/16 (8)	3/8	1.477 (37,5)	.866 (22)	1.694 (43)	.394 (10)	.551 (14)
85150-06-06	3/8	3/8	1.606 (40,8)	1.043 (26,5)	1.902 (48,3)	.512 (13)	.669 (17)
85150-06-08	3/8	1/2	1.692 (43)	1.043 (26,5)	1.988 (50,5)	.512 (13)	.669 (17)
85150-08-08	1/2	1/2	1.850 (47)	1.220 (31)	2.165 (55)	.630 (16)	.787 (20)

85160

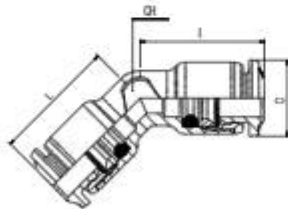
45° ELBOW PLUG IN



Part No.	Tube	A	B	L1	L2	CH	D
85160-53	5/32 (4)	5/32 (4)	.669 (17)	.492 (12,5)	.827 (21)	.276 (7)	.394 (10)
85160-04	1/4	1/4	.748 (19)	.807 (20,5)	.925 (23,5)	.354 (9)	.472 (12)
85160-05	5/16 (8)	5/16 (8)	.787 (20)	.866 (22)	.984 (25)	.394 (10)	.551 (14)
85160-06	3/8	3/8	.886 (22,5)	1.043 (26,5)	1.181 (30)	.512 (13)	.669 (17)
85160-08	1/2	1/2	1.004 (25,5)	1.181 (30)	1.319 (33,5)	.630 (16)	.787 (20)

85180

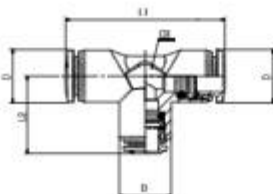
45° UNION



Part No.	Tube	L	CH	D
85180-53	5/32 (4)	.650 (16,5)	.276 (7)	.394 (10)
85180-04	1/4	.807 (20,5)	.354 (9)	.472 (12)
85180-05	5/16 (8)	.866 (22)	.394 (10)	.551 (14)
85180-06	3/8	1.043 (26,5)	.512 (13)	.669 (17)
85180-08	1/2	1.181 (30)	.630 (16)	.787 (20)

85230

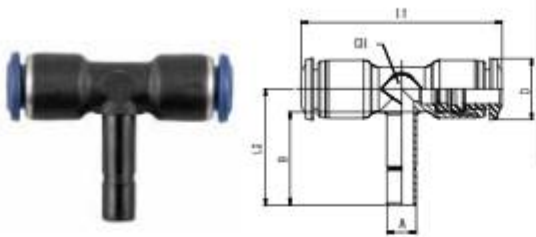
UNION TEE



Part No.	Tube	L1	L2	CH	D
85230-02	1/8	1.220 (31)	.610 (15,5)	.354 (9)	.394 (10)
85230-53	5/32 (4)	1.300 (33)	.650 (16,5)	.354 (9)	.394 (10)
85230-53-04-53	5/32 (4)-1/4-5/32 (4)	1.574 (40)	.807 (20,5)	.433 (11)	.492 (12,5)
85230-04-53-04	1/4-5/32 (4)-1/4	1.614 (41)	.787 (20)	.433 (11)	.492 (12,5)
85230-04	1/4	1.614 (41)	.807 (20,5)	.433 (11)	.492 (12,5)
85230-05-04-05	5/16 (8)-1/4-5/16 (8)	1.763 (45)	.886 (22,5)	.512 (13)	.551 (14)
85230-05	5/16 (8)	1.723 (44)	.866 (22)	.512 (13)	.551 (14)
85230-05-06-05	5/16 (8)-3/8-5/16 (8)	2.047 (52)	1.043 (26,5)	.630 (16)	.669 (17)
85230-06-05-06	3/8-5/16 (8)-3/8	2.087 (53)	1.024 (26)	.630 (16)	.669 (17)
85230-06	3/8	2.087 (53)	1.044 (26,5)	.630 (16)	.669 (17)
85230-06-08-06	3/8-1/2-3/8	2.343 (59,5)	1.200 (30,5)	.748 (19)	.787 (20)
85230-08-06-08	1/2-3/8-1/2	2.422 (61,5)	1.181 (30)	.748 (19)	.787 (20)
85230-08	1/2	2.422 (61,5)	1.181 (30)	.748 (19)	.787 (20)

85240

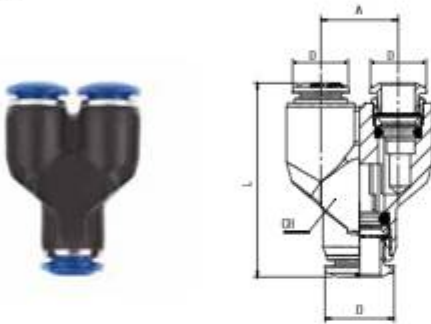
TEE PLUG IN



Part No.	Tube	A	B	L1	L2	CH	D
85240-53-53	5/32 (4)	5/32 (4)	.669 (17)	1.299 (33)	.815 (20,7)	.276 (7)	.394 (10)
85240-53-04	5/32 (4)	1/4	.748 (19)	1.299 (33)	.886 (22,5)	.276 (7)	.394 (10)
85240-04-53	1/4	5/32 (4)	.669 (17)	1.614 (41)	.846 (21,5)	.354 (9)	.492 (12,5)
85240-04-04	1/4	1/4	.748 (19)	1.614 (41)	.933 (23,7)	.354 (9)	.492 (12,5)
85240-05-05	5/16 (8)	5/16 (8)	.787 (20)	1.732 (44)	1.024 (26)	.394 (10)	.551 (14)
85240-05-06	5/16 (8)	3/8	.886 (22,5)	1.732 (44)	1.102 (28)	.394 (10)	.551 (14)
85240-06	3/8	3/8	.886 (22,5)	2.087 (53)	1.181 (30)	.512 (13)	.669 (17)
85240-53-08	3/8	1/2	.983 (25)	2.087 (53)	1.259 (32)	.512 (13)	.669 (17)
85240-08-08	1/2	1/2	1.003 (25,5)	2.422 (61,5)	1.319 (33,5)	.629 (16)	.787 (20)

85310

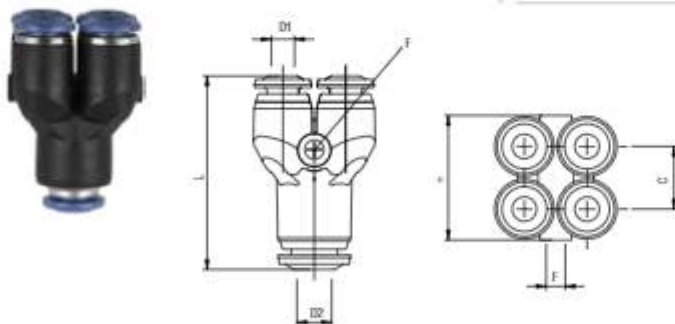
UNION Y



Part No.	Tube	Tube	L1	A	CH	D
85310-53-53	5/32 (4)	5/32 (4)	1.240 (31,5)	.433 (11)	.393 (10)	.393 (10)
85310-04-53	1/4	5/32 (4)	.532 (13,5)	1.437 (36,5)	.472 (12)	.492 (12,5)
85310-04-04	1/4	1/4	1.456 (37)	.531 (13,5)	.472 (12)	.492 (12,5)
85310-05-04	5/16 (8)	1/4	.610 (15,5)	1.614 (41)	.551 (14)	.551 (14)
85310-05-05	5/16 (8)	5/16 (8)	1.574 (40)	.610 (15,5)	.551 (14)	.551 (14)
85310-06-06	3/8	3/8	1.909 (48,5)	.748 (19)	.669 (17)	.708 (18)
85310-08-05	1/2	5/16 (8)	.866 (22)	2.263 (57,5)	.787 (20)	.787 (20)
85310-08-08	1/2	1/2	2.322 (59)	.866 (22)	.787 (20)	.787 (20)

85330

4 POSITION Y



Part No.	D1	D2	C	L	F	H
85330-53-53	5/32 (4)	5/32 (4)	.425 (10,8)	1.319 (33,5)	.130 (3,3)	.846 (21,5)
85330-53-04	5/32 (4)	1/4	.433 (11)	1.359 (34,5)	.130 (3,3)	.846 (21,5)
85330-04-04	1/4	1/4	.531 (13,5)	1.555 (39,5)	.130 (3,3)	1.064 (27)
85330-04-05	1/4	5/16 (8)	.531 (13,5)	1.575 (40)	.130 (3,3)	1.064 (27)

85350

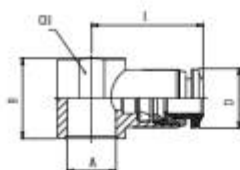
REDUCTION MANIFOLD



Part No.	Tube	A	B	L1	L2	C	D1	D2	E
85350-05-53	1/4-5/32(4)	.531 (13,5)	.236 (6)	2.913 (74)	.866 (22)	.531 (13,5)	.551 (14)	.472 (12)	.130 (3,3)
85350-05-53	5/16(8)-5/32(4)	.531 (13,5)	.236 (6)	2.873 (73)	.866 (22)	.531 (13,5)	.551 (14)	.472 (12)	.130 (3,3)
85350-05-53	5/16(8)-1/4	.531 (13,5)	.236 (6)	2.873 (73)	.886 (22,5)	.531 (13,5)	.551 (14)	.492 (12,5)	.130 (3,3)
85350-05-53	3/8-1/4	.591 (15)	.276 (7)	3.267 (83)	.946 (24)	.590 (15)	.669 (17)	.551 (14)	.130 (3,3)
85350-05-53	3/8-5/16(8)	.591 (15)	.276 (7)	3.267 (83)	.906 (23)	.590 (15)	.669 (17)	.551 (14)	.130 (3,3)

85500

SINGLE BANJO BODY

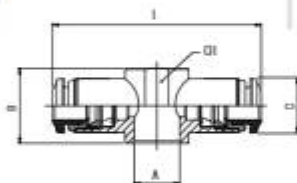


Part No.	Tube	A	B	L	CH	D
85500-02-M6	1/8	M6	.551 (14)	.807 (20,5)	.354 (9)	.394 (10)
85500-02-02	1/8	1/8	.649 (16,5)	.807 (20,5)	.551 (14)	.394 (10)
85500-53-M5	5/32 (4)	M5	.551 (14)	.767 (19,5)	.354 (9)	.394 (10)
85500-53-M6	5/32 (4)	M6	.551 (14)	.767 (19,5)	.354 (9)	.394 (10)
85500-53-02	5/32 (4)	1/8	.649 (16,5)	.846 (21,5)	.551 (14)	.394 (10)
85500-53-04	5/32 (4)	1/4	.728 (18,5)	.925 (23,5)	.708 (18)	.394 (10)
85500-04-M5	1/4	M5	.551 (14)	.826 (21)	.354 (9)	.472 (12)
85500-04-M6	1/4	M6	.551 (14)	.826 (21)	.354 (9)	.472 (12)
85500-04-02	1/4	1/8	.649 (16,5)	.905 (23)	.551 (14)	.472 (12)
85500-04-04	1/4	1/4	.728 (18,5)	1.003 (25,5)	.708 (18)	.472 (12)
85500-05-02	5/16 (8)	1/8	.649 (16,5)	.925 (23,5)	.551 (14)	.551 (14)
85500-05-04	5/16 (8)	1/4	.728 (18,5)	1.023 (26)	.708 (18)	.551 (14)
85500-05-3/8	5/16 (8)	3/8	.866 (22)	1.082 (27,5)	.826 (21)	.551 (14)
85500-06-04	3/8	1/4	.728 (18,5)	1.221 (31)	.708 (18)	.669 (17)
85500-06-06	3/8	3/8	.866 (22)	1.200 (30,5)	.826 (21)	.669 (17)
85500-08-06	1/2	3/8	.866 (22)	1.279 (32,5)	.826 (21)	.787 (20)
85500-08-08	1/2	1/2	1.023 (26)	1.377 (35)	1.023 (26)	.787 (20)

For BANJO STEM assemblies see 10.7/10.8/10.9

85510

DOUBLE BANJO BODY

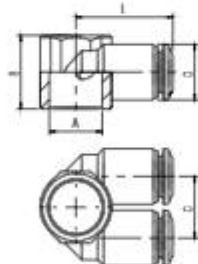


Part No.	Tube	A	B	L	CH	D
85510-53-M5	5/32 (4)	M5	.551 (14)	1.535 (39)	.354 (9)	.394 (10)
85510-53-02	5/32 (4)	1/8	.649 (16,5)	1.692 (43)	.551 (14)	.394 (10)
85510-04-02	1/4	1/8	.649 (16,5)	1.811 (46)	.551 (14)	.472 (12)
85510-04-04	1/4	1/4	.728 (18,5)	2.007 (51)	.708 (18)	.472 (12)
85510-05-02	5/16 (8)	1/8	.649 (16,5)	1.850 (47)	.551 (14)	.551 (14)
85510-05-04	5/16 (8)	1/4	.728 (18,5)	2.047 (52)	.708 (18)	.551 (14)

For BANJO STEM assemblies see 10.7/10.8/10.9

85520

DOUBLE BANJO BODY

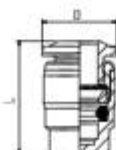


Part No.	Tube	A	B	C	L	D
85520-4-1/8	5/32 (4)	1/8	.650 (16,5)	.512 (13)	.827 (21)	.472 (12)
85520-4-1/4	5/32 (4)	1/4	.728 (18,5)	.610 (15,5)	.945 (24)	.551 (14)
85520-1/4-1/8	1/4	1/8	.650 (16,5)	.512 (13)	.846 (21,5)	.492 (12,5)
85520-1/4-1/4	1/4	1/4	.728 (18,5)	.610 (15,5)	.965 (24,5)	.551 (14)
85520-1/4-3/8	1/4	3/8	.866 (22)	.531 (13,5)	.984 (25)	.492 (12,5)
85520-8-1/4	5/16 (8)	1/4	.728 (18,5)	.610 (15,5)	.965 (24,5)	.551 (14)
85520-8-3/8	5/16 (8)	3/8	.866 (22)	.748 (19)	1.102 (28)	.669 (17)
85520-3/8-3/8	3/8	3/8	.866 (22)	.748 (19)	1.102 (28)	.669 (17)

For BANJO STEM assemblies see 10.7/10.8/10.9

85620

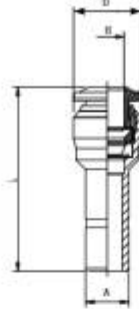
TERMINAL PLUG



Part No.	Tube	D	L
85620-4	5/32 (4)	.393 (10)	.708 (18)
85620-1/4	1/4	.492 (12,5)	.787 (20)
85620-8	5/16 (8)	.551 (14)	.846 (21,5)
85620-3/8	3/8	.669 (17)	.984 (25)
85620-08	1/2	.787 (20)	1.082 (27,5)

85700

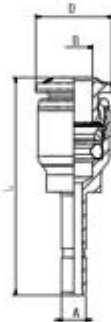
TUBE REDUCER



Part No.	A	B	L	D
85700-04-53	1/4	5/32 (4)	1.339 (34)	.394 (10)
85700-05-53	5/16 (8)	5/32 (4)	1.496 (38)	.472 (12)
85700-05-04	5/16 (8)	1/4	1.535 (39)	.492 (12,5)
85700-06-04	3/8	1/4	1.673 (42,5)	.492 (12,5)
85700-06-05	3/8	5/16 (8)	1.654 (42)	.551 (14)
85700-08-04	1/2	1/4	1.516 (38,5)	.492 (12,5)
85700-08-05	1/2	5/16 (8)	1.634 (41,5)	.551 (14)
85700-08-06	1/2	3/8	1.909 (48,5)	.669 (17)

85705

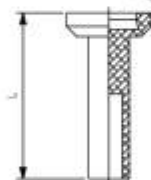
TUBE EXPANDER



Part No.	A	B	L	D
85705-53-04	5/32 (4)	1/4	1.417 (36)	.472 (12)
85705-04-05	1/4	5/16 (8)	1.516 (38,5)	.551 (14)
85705-04-06	1/4	3/8	1.654 (42)	.669 (17)
85705-05-06	5/16 (8)	3/8	1.693 (43)	.669 (17)
85705-06-08	3/8	1/2	1.89 (48)	.787 (20)

88610B

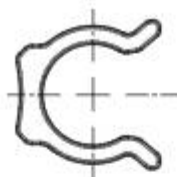
NYLON PLUG



Part No.	Tube	L
88610B-02	1/8	.708 (18)
88610B-53	5/32 (4)	.925 (23,5)
88610B-04	1/4	.964 (24,5)
88610B-05	5/16 (8)	1.023 (26)
88610B-06	3/8	1.122 (28,5)
88610B-08	1/2	1.122 (28,5)

50980

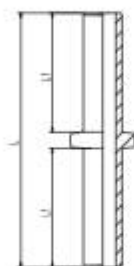
SECURITY CLIP



Part No.	Tube
50980-4-5/32	5/32 (4)
50980-6-1/4	1/4 (6)
50980-8-5/16	5/16 (8)
50980-10-3/8	3/8 (10)
50980-12-1/2	1/2 (12)

55625

DOUBLE JOINT



Part No.	Tube	L	L1
55625-4	5/32 (4)	1.358 (34,5)	.630 (16)
55625-6	1/4 (6)	1.555 (39,5)	.728 (18,5)
55625-8	5/16 (8)	1.654 (42)	.768 (19,5)
55625-10	3/8 (10)	2.028 (51,5)	.945 (24)
55625-12	1/2 (12)	2.362 (60)	1.102 (28)

www.sumy.ir

55 Series

 55110 Pg. 6.5	 55170 Pg. 6.5	 55210 Pg. 6.5	 55222 Pg. 6.6	 55320 Pg. 6.6	 55340 Pg. 6.6	 55360 Pg. 6.6	 55115 Pg. 6.7	 55106 Pg. 6.7
 55125 Pg. 6.7	 55175 Pg. 6.8	 55215 Pg. 6.8	 55225 Pg. 6.8	 55325 Pg. 6.9	 55345 Pg. 6.9	 55365 Pg. 6.9	 55040 Pg. 6.9	 55050 Pg. 6.10
 55060 Pg. 6.10	 55130 Pg. 6.10	 55140 Pg. 6.10	 55150 Pg. 6.10	 55160 Pg. 6.11	 55180 Pg. 6.11	 55230 Pg. 6.11	 55235 Pg. 6.11	 55237 Pg. 6.12
 55240 Pg. 6.12	 55310 Pg. 6.12	 55315 Pg. 6.12	 55330 Pg. 6.13	 55350 Pg. 6.13	 55500 Pg. 6.13	 55510 Pg. 6.13	 55520 Pg. 6.14	 55620 Pg. 6.14
 55625 Pg. 6.14	 55700 Pg. 6.14	 55705 Pg. 6.14	 50980 Pg. 6.15	 50610 Pg. 6.15	 50615 Pg. 6.15	 55991 Pg. 6.15	 55006 Pg. 6.15	

For STRAIGHT FITTINGS see 50N series

 50000N Pg. 4.5	 50010N Pg. 4.5	 50010N Pg. 4.6	 50020N Pg. 4.7
---	---	---	---

56 Series - Mini

 56010 Pg. 6.16	 56020 Pg. 6.16	 56115 Pg. 6.16	 56215 Pg. 6.16	 56225 Pg. 6.16	 56550 Pg. 6.17	 56040 Pg. 6.17	 56050 Pg. 6.17	 56130 Pg. 6.17
 56230 Pg. 6.17								

NYLON PUSH-TO-CONNECT FITTINGS
FOR METRIC TUBE



55-56 Series

55000
56000

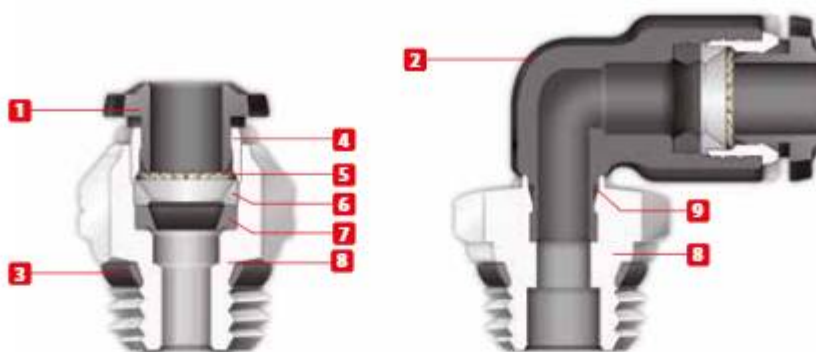


TECHNICAL CHARACTERISTICS



Reference Standard

- 1907/2006
REACH ✓
- 2011/65/CE
RoHS ✓
- PED
2014/68/UE
- ISO
14743:2004
- SILICON
FREE



Pressure Rating

Vacuum ~ 290 PSI
-0.99 bar ~ 20 bar
-0.099 MPa ~ 2.0 MPa



Temperatures Rating

NBR
-4° F ~ 176° F
-20° C ~ 80° C



Media

- Compressed air
- Vacuum
- Water



Applications

- Pneumatic Automation
- Automotive
- Textile, Packaging
- Compressed Air Circuit
- Vacuum



Advantages

- 1 The 303 Stainless Steel gripper ensures a tight clamp for tubes of any material without damaging the tube's surface. The secure connection between the tube and the fitting will hold up to severe conditions such as impact and vibrations.
- 2 The shape of the safety ring and the molded seal perfectly seal off the tube, creating a vacuum.
- 3 Series with several types of threads:
SWIFIT
BSPP
- 4 All straight fittings can be tightened with an Allen wrench because of our internal hex design. This enables the end user to tighten the fitting in spaces too small for an openend wrench.



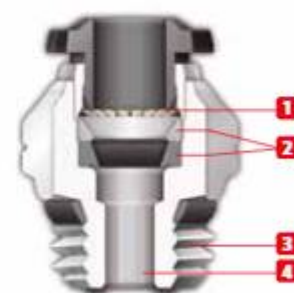
Component Parts and Materials

- 1 Composite Release Collet
- 2 Nylon Body
- 3 NBR Thread Seal
- 4 Nickel Plated Brass Sleeve
- 5 303 Stainless Steel Gripper
- 6 Technopolymer Safety Ring
- 7 NBR Molded Seal
- 8 Nickel Plated Thread Brass Body
- 9 NBR Seal



Tubing Compatibility

Nylon 6 - 11 -12
Polyethylene
Polyurethane (*98 Shore A for best result)
PTFE
FEP

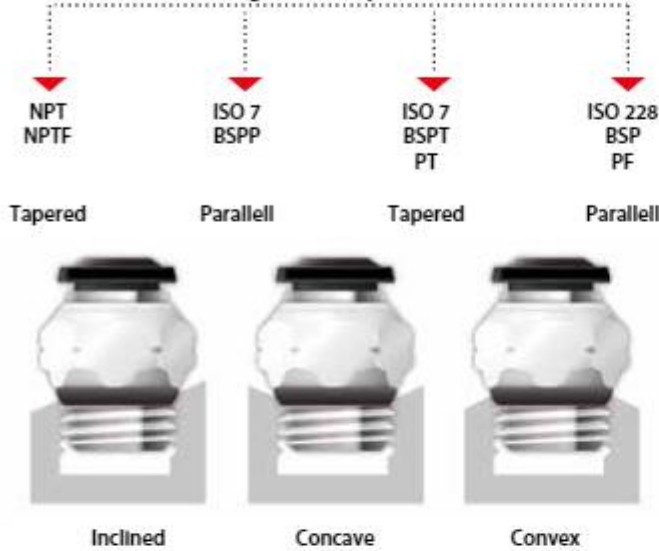




THREADS & ADVANTAGES



One fitting... Endless possibilities



Our **SWIFFFIT** universal fittings also work on non-flat surfaces without compromising an air-tight seal.

The **SWIFFFIT** Universal Thread has been designed to offer the following advantages to the end users:

- Reduced overall length
- Smaller hex dimensions compared to parallel threads
- Fits with various parallel and tapered threads
- All **SWIFFFIT** fittings have been equipped with threads and an NBR thread seal that will universally connect to all thread types.

Torque Specifications

Recommended Torque		
Thread Size	Min.	Max.
1/8	5 Nm	7 Nm
1/4	5 Nm	7 Nm
3/8	5 Nm	7 Nm
1/2	5 Nm	7 Nm



BSPP Threads



The **BSPP** Thread has been designed to offer the following advantages to the end users:

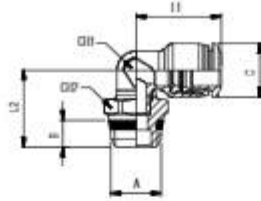
- Standard ISO 228 and ISO R/262
- Designed for use in BSPP connections with an integrated NBR o-ring that provides a perfect seal
- Completely reusable

Torque Specifications

Recommended Torque		
Thread Size	Min.	Breaking Torque
M5	0.8 Nm	3.2 Nm
M8	3 Nm	8 Nm
1/2	3 Nm	8 Nm
1/4	9 Nm	30 Nm
3/8	10 Nm	60 Nm
1/2	12 Nm	50 Nm

55110

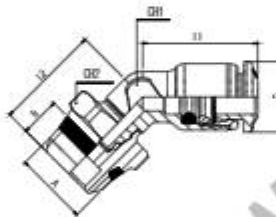
SWIVEL ELBOW



Part No.	Tube	A	B	L1	L2	CH1	CH2	D
55110-4-1/8	5/32 (4)	1/8	.217 (5,5)	.650 (16,5)	.650 (16,5)	.276 (7)	.512 (13)	.394 (10)
55110-4-1/4	5/32 (4)	1/4	.276 (7)	.650 (16,5)	.709 (18)	.276 (7)	.591 (15)	.394 (10)
55110-5-1/8	5	1/8	.217 (5,5)	.787 (20)	.685 (17,4)	.354 (9)	.512 (13)	.472 (12)
55110-6-1/8	6	1/8	.217 (5,5)	.807 (20,5)	.685 (17,4)	.354 (9)	.512 (13)	.472 (12)
55110-6-1/4	6	1/4	.276 (7)	.807 (20,5)	.744 (18,9)	.354 (9)	.591 (15)	.472 (12)
55110-6-3/8	6	3/8	.295 (7,5)	.807 (20,5)	.787 (20)	.354 (9)	.669 (17)	.472 (12)
55110-6-1/2	6	1/2	.354 (9)	.807 (20,5)	.866 (22)	.354 (9)	.827 (21)	.472 (12)
55110-8-1/8	5/16 (8)	1/8	.217 (5,5)	.866 (22)	.778 (18,5)	.394 (10)	.512 (13)	.551 (14)
55110-8-1/4	5/16 (8)	1/4	.276 (7)	.866 (22)	.787 (20)	.394 (10)	.591 (15)	.551 (14)
55110-8-3/8	5/16 (8)	3/8	.295 (7,5)	.866 (22)	.807 (20,5)	.394 (10)	.669 (17)	.551 (14)
55110-8-1/2	5/16 (8)	1/2	.354 (9)	.866 (22)	.906 (23)	.394 (10)	.827 (21)	.551 (14)
55110-10-1/4	10	1/4	.276 (7)	1.043 (26,5)	.858 (21,8)	.512 (13)	.630 (16)	.669 (17)
55110-10-3/8	10	3/8	.295 (7,5)	1.043 (26,5)	.858 (21,8)	.512 (13)	.669 (17)	.669 (17)
55110-10-1/2	10	1/2	.354 (9)	1.043 (26,5)	.957 (24,3)	.512 (13)	.827 (21)	.669 (17)
55110-12-1/4	12	1/4	.276 (7)	1.181 (30)	.909 (23,1)	.630 (16)	.630 (16)	.787 (20)
55110-12-3/8	12	3/8	.295 (7,5)	1.181 (30)	.909 (23,1)	.630 (16)	.669 (17)	.787 (20)
55110-12-1/2	12	1/2	.354 (9)	1.181 (30)	1.008 (25,6)	.630 (16)	.827 (21)	.787 (20)
55110-14-3/8	14	3/8	.295 (7,5)	1.220 (31)	1.043 (26,5)	.709 (18)	.787 (20)	.827 (21)
55110-14-1/2	14	1/2	.354 (9)	1.220 (31)	1.063 (27)	.709 (18)	.827 (21)	.827 (21)

55170

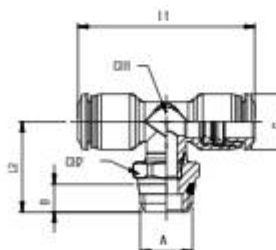
45° SWIVEL ELBOW



Part No.	Tube	A	B	L1	L2	CH1	CH2	D
55170-4-1/8	5/32 (4)	1/8	.217 (5,5)	.492 (12,5)	.650 (16,5)	.276 (7)	.512 (13)	.394 (10)
55170-6-1/8	6	1/8	.217 (5,5)	.807 (20,5)	.689 (17,5)	.354 (9)	.512 (13)	.472 (12)
55170-6-1/4	6	1/4	.276 (7)	.807 (20,5)	.744 (18,9)	.354 (9)	.591 (15)	.472 (12)
55170-8-1/8	5/16 (8)	1/8	.217 (5,5)	.866 (22)	.778 (18,5)	.394 (10)	.512 (13)	.551 (14)
55170-8-1/4	5/16 (8)	1/4	.276 (7)	.866 (22)	.787 (20)	.394 (10)	.591 (15)	.551 (14)
55170-8-3/8	5/16 (8)	3/8	.295 (7,5)	.866 (22)	.807 (20,5)	.394 (10)	.669 (17)	.551 (14)
55170-10-1/4	10	1/4	.276 (7)	1.043 (26,5)	.858 (21,8)	.512 (13)	.630 (16)	.669 (17)
55170-10-3/8	10	3/8	.295 (7,5)	1.043 (26,5)	.957 (24,3)	.512 (13)	.669 (17)	.669 (17)
55170-10-1/2	10	1/2	.354 (9)	1.043 (26,5)	.909 (23,1)	.512 (13)	.827 (21)	.669 (17)
55170-12-1/4	12	1/4	.276 (7)	1.181 (30)	.909 (23,1)	.630 (16)	.630 (16)	.787 (20)
55170-12-3/8	12	3/8	.295 (7,5)	1.181 (30)	1.008 (25,6)	.630 (16)	.669 (17)	.787 (20)
55170-12-1/2	12	1/2	.354 (9)	1.181 (30)	.858 (21,8)	.630 (16)	.827 (21)	.787 (20)

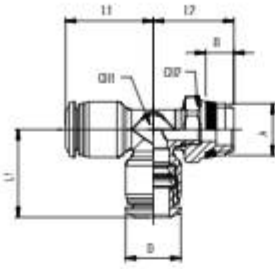
55210

SWIVEL BRANCH TEE



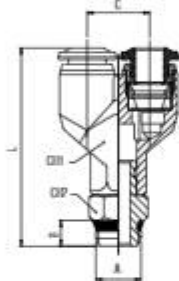
Part No.	Tube	A	B	L1	L2	CH1	CH2	D
55210-4-1/8	5/32 (4)	1/8	.217 (5,5)	1.299 (33)	.736 (18,7)	.276 (7)	.512 (13)	.394 (10)
55210-4-1/4	5/32 (4)	1/4	.276 (7)	1.299 (33)	.795 (20,2)	.276 (7)	.591 (15)	.394 (10)
55210-5-1/8	5	1/8	.217 (5,5)	1.525 (40)	.787 (20)	.354 (9)	.512 (13)	.472 (12)
55210-6-1/8	6	1/8	.217 (5,5)	1.614 (41)	.787 (20)	.354 (9)	.512 (13)	.492 (12,5)
55210-6-1/4	6	1/4	.276 (7)	1.614 (41)	.846 (21,5)	.354 (9)	.591 (15)	.492 (12,5)
55210-8-1/8	5/32 (8)	1/8	.217 (5,5)	1.732 (44)	.835 (21,2)	.394 (10)	.512 (13)	.551 (14)
55210-8-1/4	5/32 (8)	1/4	.276 (7)	1.732 (44)	.894 (22,7)	.394 (10)	.591 (15)	.551 (14)
55210-8-3/8	5/32 (8)	3/8	.295 (7,5)	1.732 (44)	.913 (23,2)	.394 (10)	.669 (17)	.551 (14)
55210-10-1/4	10	1/4	.276 (7)	2.087 (53)	1.012 (25,7)	.512 (13)	.630 (16)	.669 (17)
55210-10-3/8	10	3/8	.295 (7,5)	2.087 (53)	1.012 (25,7)	.512 (13)	.669 (17)	.669 (17)
55210-10-1/2	10	1/2	.354 (9)	2.087 (53)	1.11 (28,2)	.512 (13)	.827 (21)	.669 (17)
55210-12-1/4	12	1/4	.276 (7)	2.362 (60)	1.067 (27,1)	.630 (16)	.630 (16)	.787 (20)
55210-12-3/8	12	3/8	.295 (7,5)	2.362 (60)	1.067 (27,1)	.630 (16)	.669 (17)	.787 (20)
55210-12-1/2	12	1/2	.354 (9)	2.362 (60)	1.165 (29,6)	.630 (16)	.827 (21)	.787 (20)
55210-14-3/8	14	3/8	.295 (7,5)	2.402 (61)	1.189 (30,2)	.709 (18)	.787 (20)	.827 (21)
55210-14-1/2	14	1/2	.354 (9)	2.402 (61)	1.209 (30,7)	.709 (18)	.827 (21)	.827 (21)

55222
SWIVEL RUN TEE



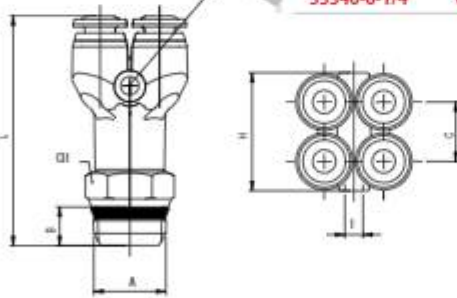
Part No.	Tube	A	B	L1	L2	CH1	CH2	D
55222-4-1/8	5/32 (4)	1/8	.217 (5,5)	.650 (16,5)	.717 (18,2)	.276 (7)	.512 (13)	.394 (10)
55222-4-1/4	5/32 (4)	1/4	.276 (7)	.650 (16,5)	.776 (19,7)	.276 (7)	.591 (15)	.394 (10)
55222-5-1/8	5	1/8	.217 (5,5)	.787 (20)	.685 (17,4)	.354 (9)	.512 (13)	.472 (12)
55222-6-1/8	6	1/8	.217 (5,5)	.807 (20,5)	.685 (17,4)	.354 (9)	.512 (13)	.492 (12,5)
55222-6-1/4	6	1/4	.276 (7)	.807 (20,5)	.744 (18,9)	.354 (9)	.591 (15)	.492 (12,5)
55222-8-1/8	5/16 (8)	1/8	.217 (5,5)	.866 (22)	.744 (18,9)	.394 (10)	.512 (13)	.551 (14)
55222-8-1/4	5/16 (8)	1/4	.276 (7)	.866 (22)	.803 (20,4)	.394 (10)	.591 (15)	.551 (14)
55222-8-3/8	5/16 (8)	3/8	.295 (7,5)	.866 (22)	.823 (20,9)	.394 (10)	.669 (17)	.551 (14)
55222-10-1/4	10	1/4	.276 (7)	1.043 (26,5)	.858 (21,8)	.512 (13)	.630 (16)	.669 (17)
55222-10-3/8	10	3/8	.295 (7,5)	1.043 (26,5)	.858 (21,8)	.512 (13)	.669 (17)	.669 (17)
55222-10-1/2	10	1/2	.354 (9)	1.043 (26,5)	.957 (24,3)	.512 (13)	.827 (21)	.669 (17)
55222-12-1/4	12	1/4	.276 (7)	1.220 (31)	.909 (23,1)	.630 (16)	.630 (16)	.787 (20)
55222-12-3/8	12	3/8	.295 (7,5)	1.220 (31)	.909 (23,1)	.630 (16)	.669 (17)	.787 (20)
55222-12-1/2	12	1/2	.354 (9)	1.220 (31)	1.008 (25,6)	.630 (16)	.827 (21)	.787 (20)
55222-14-3/8	14	3/8	.295 (7,5)	1.201 (30,5)	1.043 (26,5)	.709 (18)	.787 (20)	.827 (21)
55222-14-1/2	14	1/2	.354 (9)	1.201 (30,5)	1.063 (27)	.709 (18)	.827 (21)	.827 (21)

55320
UNION Y



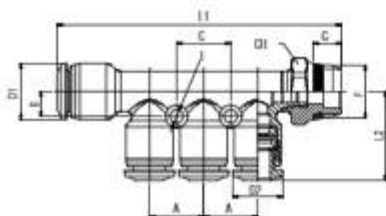
Part No.	Tube	A	B	C	L	CH1	CH2
55320-4-1/8	5/32 (4)	1/8	.217 (5,5)	.433 (11)	1.496 (38)	.394 (10)	.433 (11)
55320-4-1/4	5/32 (4)	1/4	.276 (7)	.433 (11)	1.594 (40,5)	.394 (10)	.551 (14)
55320-6-1/8	6	1/8	.217 (5,5)	.531 (13,5)	1.693 (43)	.472 (12)	.433 (11)
55320-6-1/4	6	1/4	.276 (7)	.531 (13,5)	1.791 (45,5)	.472 (12)	.551 (14)
55320-8-1/8	5/16 (8)	1/8	.217 (5,5)	.630 (15,5)	1.831 (46,5)	.551 (14)	.433 (11)
55320-8-1/4	5/16 (8)	1/4	.276 (7)	.630 (15,5)	1.929 (49)	.551 (14)	.551 (14)
55320-8-3/8	5/16 (8)	3/8	.295 (7,5)	.630 (15,5)	1.949 (49,5)	.551 (14)	.669 (17)
55320-10-1/4	10	1/4	.276 (7)	.748 (19)	2.224 (56,5)	.669 (17)	.551 (14)
55320-10-3/8	10	3/8	.295 (7,5)	.748 (19)	2.264 (57,5)	.669 (17)	.669 (17)
55320-10-1/2	10	1/2	.354 (9)	.748 (19)	2.362 (60)	.669 (17)	.827 (21)
55320-12-3/8	12	3/8	.295 (7,5)	.866 (22)	2.618 (66,5)	.787 (20)	.669 (17)
55320-12-1/2	12	1/2	.354 (9)	.866 (22)	2.677 (68)	.787 (20)	.827 (21)

55340
4 POSITION Y



Part No.	Tube	A	B	C	L	H	CH	F
55340-4-1/8	5/32 (4)	1/8	.217 (5,5)	.425 (10,8)	1.555 (39,5)	.846 (21,5)	.433 (11)	.130 (3,3)
55340-4-1/4	5/32 (4)	1/4	.276 (7)	.425 (10,8)	1.654 (42)	.846 (21,5)	.551 (14)	.130 (3,3)
55340-6-1/8	6	1/8	.217 (5,5)	.524 (13,3)	1.831 (46,5)	1.055 (26,8)	.433 (11)	.130 (3,3)
55340-6-1/4	6	1/4	.276 (7)	.524 (13,3)	1.890 (48)	1.055 (26,8)	.551 (14)	.130 (3,3)

55360
REDUCTION MANIFOLD

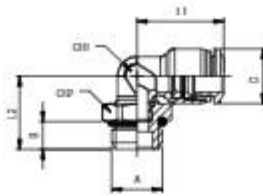


Part No.	Tube	F	A	B	L1	L2	C	E	G	H	D1	D2
55360-6-4-1/8	6-5/32(4)	1/8	.531 (13,5)	.296 (6)	2.756 (70)	.858 (21,8)	.531 (13,5)	.130 (3,3)	.276 (7)	.512 (13)	.551 (14)	.472 (12)
55360-6-4-1/4	6-5/32(4)	1/4	.531 (13,5)	.296 (6)	2.811 (71,8)	.858 (21,8)	.531 (13,5)	.130 (3,3)	.276 (7)	.591 (15)	.551 (14)	.472 (12)
55360-8-4-1/8	5/16(8)-5/32(4)	1/8	.531 (13,5)	.296 (6)	2.756 (70)	.858 (21,8)	.531 (13,5)	.130 (3,3)	.276 (7)	.512 (13)	.551 (14)	.472 (12)
55360-8-4-1/4	5/16(8)-5/32(4)	1/4	.531 (13,5)	.296 (6)	2.811 (71,8)	.858 (21,8)	.531 (13,5)	.130 (3,3)	.276 (7)	.591 (15)	.551 (14)	.472 (12)
55360-8-6-1/8	5/16(8)-6	1/8	.531 (13,5)	.296 (6)	2.756 (70)	.878 (22,3)	.531 (13,5)	.130 (3,3)	.276 (7)	.512 (13)	.551 (14)	.492 (12,5)
55360-8-6-1/4	5/16(8)-6	1/4	.531 (13,5)	.296 (6)	2.811 (71,8)	.878 (22,3)	.531 (13,5)	.130 (3,3)	.276 (7)	.591 (15)	.551 (14)	.492 (12,5)
55360-10-6-1/4	10-6	1/4	.591 (15)	.276 (7)	3.209 (81,5)	.933 (23,7)	.591 (15)	.130 (3,3)	.276 (7)	.630 (16)	.669 (17)	.551 (14)
55360-10-6-3/8	10-6	3/8	.591 (15)	.276 (7)	3.209 (81,5)	.933 (23,7)	.591 (15)	.130 (3,3)	.295 (7,5)	.669 (17)	.669 (17)	.551 (14)
55360-10-8-1/4	10-5/16(8)	1/4	.591 (15)	.276 (7)	3.209 (81,5)	.933 (23,7)	.591 (15)	.130 (3,3)	.276 (7)	.630 (16)	.669 (17)	.551 (14)
55360-10-8-3/8	10-5/16(8)	3/8	.591 (15)	.276 (7)	3.209 (81,5)	.933 (23,7)	.591 (15)	.130 (3,3)	.295 (7,5)	.669 (17)	.669 (17)	.551 (14)

55115

SWIVEL ELBOW

BSPP

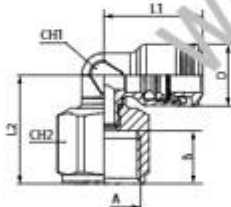


Part No.	Tube	A	B	L1	L2	CH1	CH2	D
55115-4-M5	5/32 (4)	M5	.142 (3,6)	.650 (16,5)	.543 (13,8)	.276 (7)	.354 (9)	.394 (10)
55115-4-M7X1	5/32 (4)	M7X1	.189 (4,8)	.650 (16,5)	.567 (14,4)	.276 (7)	.354 (9)	.394 (10)
55115-4-1/8	5/32 (4)	1/8	.213 (5,4)	.650 (16,5)	.591 (15)	.276 (7)	.512 (13)	.394 (10)
55115-4-1/4	5/32 (4)	1/4	.280 (7,1)	.650 (16,5)	.654 (16,6)	.354 (9)	.630 (16)	.394 (10)
55115-4-3/8	5/32 (4)	3/8	.276 (5,5)	.650 (16,5)	.709 (18)	.287 (20)	.280 (7)	.394 (10)
55115-5-M5	5	M5	.142 (3,6)	.787 (20)	.579 (14,7)	.354 (9)	.354 (9)	.472 (12)
55115-5-1/8	5	1/8	.213 (5,4)	.787 (20)	.622 (15,8)	.354 (9)	.512 (13)	.472 (12)
55115-6-M5	6	M5	.142 (3,6)	.807 (20,5)	.579 (14,7)	.354 (9)	.354 (9)	.472 (12)
55115-6-M7	6	M7	.196 (5)	.807 (20,5)	.610 (15,5)	.354 (9)	.354 (9)	.492 (12,5)
55115-6-M10x1	6	M10x1	.276 (5,5)	.807 (20,5)	.610 (15,5)	.512 (13)	.354 (9)	.492 (12,5)
55115-6-M12x1	6	M12x1	.276 (7)	.807 (20,5)	.689 (18)	.630 (16)	.354 (9)	.492 (12,5)
55115-6-1/8	6	1/8	.213 (5,4)	.807 (20,5)	.622 (15,8)	.354 (9)	.512 (13)	.472 (12)
55115-6-1/4	6	1/4	.280 (7,1)	.807 (20,5)	.689 (17,5)	.354 (9)	.630 (16)	.472 (12)
55115-6-3/8	6	3/8	.319 (8,1)	.807 (20,5)	.748 (19)	.354 (9)	.787 (20)	.472 (12)
55115-6-1/2	6	1/2	.378 (9,6)	.807 (20,5)	.827 (21)	.354 (9)	.984 (25)	.472 (12)
55115-8-M10x1	8	M10x1	.276 (5,5)	.886 (22,5)	.768 (19,5)	.512 (13)	.394 (10)	.551 (14)
55115-M12x1	8	M12x1	.296 (7,5)	.886 (22,5)	.748 (19)	.630 (16)	.394 (10)	.551 (14)
55115-8-1/8	5/16 (8)	1/8	.213 (5,4)	.866 (22)	.764 (19,4)	.394 (10)	.512 (13)	.551 (14)
55115-8-1/4	5/16 (8)	1/4	.280 (7,1)	.866 (22)	.736 (18,7)	.394 (10)	.630 (16)	.551 (14)
55115-8-3/8	5/16 (8)	3/8	.319 (8,1)	.866 (22)	.791 (20,1)	.394 (10)	.787 (20)	.551 (14)
55115-8-1/2	5/16 (8)	1/2	.378 (9,6)	.866 (22)	.870 (22,1)	.394 (10)	.984 (25)	.551 (14)
55115-10-1/8	10	1/8	.276 (5,5)	1.043 (26,5)	.827 (21)	.630 (16)	.512 (13)	.669 (17)
55115-10-1/4	10	1/4	.280 (7,1)	1.043 (26,5)	.898 (22,8)	.512 (13)	.630 (16)	.669 (17)
55115-10-3/8	10	3/8	.319 (8,1)	1.043 (26,5)	.878 (22,3)	.512 (13)	.787 (20)	.669 (17)
55115-10-1/2	10	1/2	.378 (9,6)	1.043 (26,5)	.937 (23,8)	.512 (13)	.984 (25)	.669 (17)
55115-12-1/4	12	1/4	.280 (7,1)	1.181 (30)	.949 (24,1)	.630 (16)	.630 (16)	.787 (20)
55115-12-3/8	12	3/8	.319 (8,1)	1.181 (30)	.929 (23,6)	.630 (16)	.787 (20)	.787 (20)
55115-12-1/2	12	1/2	.378 (9,6)	1.181 (30)	.988 (25,1)	.630 (16)	.984 (25)	.787 (20)
55115-14-3/8	14	3/8	.319 (8,1)	1.220 (31)	1.106 (28,1)	.709 (18)	.787 (20)	.827 (21)
55115-14-1/2	14	1/2	.378 (9,6)	1.220 (31)	1.028 (26,1)	.709 (18)	.984 (25)	.827 (21)

55106

ORIENTING ELBOW FEMALE ADAPTOR

BSPP

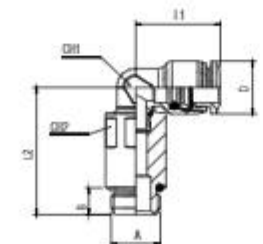


Part No.	Tube	A	B	L1	L2	CH1	CH2	D
55106-4-1/8	5/32 (4)	1/8	.335 (8,5)	.650 (16,5)	.748 (19)	.276 (7)	.492 (12,5)	.394 (10)
55106-4-1/4	5/32 (4)	1/4	.433 (11)	.650 (16,5)	.886 (22,5)	.276 (7)	.630 (16)	.394 (10)
55106-6-1/8	6	1/8	.335 (8,5)	.807 (20,5)	.787 (20)	.354 (9)	.512 (13)	.492 (12,5)
55106-6-1/4	6	1/4	.433 (11)	.807 (20,5)	.925 (23,5)	.354 (9)	.630 (16)	.492 (12,5)
55106-8-1/8	5/16 (8)	1/8	.335 (8,5)	.886 (22,5)	.827 (21)	.394 (10)	.512 (13)	.552 (14)
55106-8-1/4	5/16 (8)	1/4	.433 (11)	.886 (22,5)	.925 (23,5)	.394 (10)	.630 (16)	.552 (14)
55106-8-3/8	5/16 (8)	3/8	.472 (12)	.886 (22,5)	.965 (24,5)	.394 (10)	.748 (19)	.552 (14)
55106-10-1/4	10	1/4	.433 (11)	1.043 (26,5)	1.063 (27)	.512 (13)	.630 (16)	.669 (17)
55106-10-3/8	10	3/8	.472 (12)	1.043 (26,5)	1.063 (27)	.512 (13)	.748 (19)	.669 (17)

55125

EXTENDED SWIVEL ELBOW

BSPP

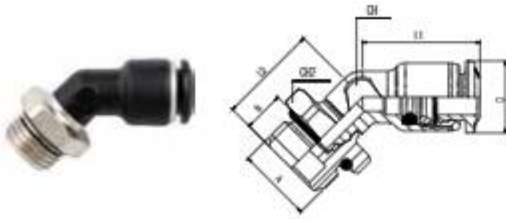


Part No.	Tube	A	B	L1	L2	CH1	CH2	D
55125-4-M5	5/32 (4)	M5	.142 (3,6)	.650 (16,5)	1.083 (27,5)	.276 (7)	.315 (8)	.394 (10)
55125-4-1/8	5/32 (4)	1/8	.213 (5,4)	.650 (16,5)	1.122 (28,5)	.276 (7)	.472 (12)	.394 (10)
55125-6-M5	6	M5	.142 (3,6)	.807 (20,5)	1.161 (29,5)	.354 (9)	.315 (8)	.492 (12,5)
55125-6-1/8	6	1/8	.213 (5,4)	.807 (20,5)	1.161 (29,5)	.354 (9)	.472 (12)	.492 (12,5)
55125-8-1/8	5/16 (8)	1/8	.213 (5,4)	.886 (22,5)	1.358 (34,5)	.394 (10)	.472 (12)	.551 (14)
55125-8-1/4	5/16 (8)	1/4	.280 (7,1)	.886 (22,5)	1.319 (33,5)	.394 (10)	.591 (15)	.551 (14)
55125-8-3/8	5/16 (8)	3/8	.312 (8,1)	.886 (22,5)	1.358 (34,5)	.393 (10)	.472 (12)	.551 (14)
55125-10-1/4	10	1/4	.279 (7,1)	1.043 (26,5)	1.693 (43)	.512 (13)	.590 (15)	.669 (17)
55125-10-3/8	10	3/8	.312 (8,1)	1.043 (26,5)	1.693 (43)	.512 (13)	.590 (15)	.669 (17)
55125-10-1/2	10	1/2	.378 (9,6)	1.043 (26,5)	1.771 (45)	.512 (13)	.590 (15)	.669 (17)
55125-12-1/4	12	1/4	.279 (7,1)	1.220 (31)	1.771 (45)	.630 (16)	.590 (15)	.787 (20)
55125-12-3/8	12	3/8	.312 (8,1)	1.200 (30,5)	1.752 (44,5)	.630 (16)	.590 (15)	.787 (20)
55125-12-1/2	12	1/2	.378 (9,6)	1.220 (31)	1.811 (46)	.630 (16)	.590 (15)	.787 (20)

55175

45° SWIVEL ELBOW

BSPP

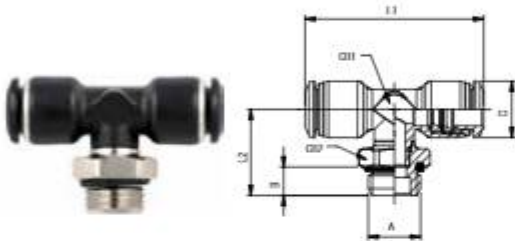


Part No.	Tube	A	B	L1	L2	CH1	CH2	D
55175-4-M5	5/32 (4)	M5	.142 (3,6)	.492 (12,5)	.543 (13,8)	.276 (7)	.354 (9)	.394 (10)
55175-4-1/8	5/32 (4)	1/8	.213 (5,4)	.492 (12,5)	.591 (15)	.276 (7)	.512 (13)	.394 (10)
55175-6-M5	6	M5	.142 (3,6)	.807 (20,5)	.579 (14,7)	.354 (9)	.354 (9)	.472 (12)
55175-6-1/8	6	1/8	.213 (5,4)	.807 (20,5)	.622 (15,8)	.354 (9)	.512 (13)	.472 (12)
55175-6-1/4	6	1/4	.280 (7,1)	.807 (20,5)	.689 (17,5)	.354 (9)	.630 (16)	.472 (12)
55175-8-1/8	5/16 (8)	1/8	.213 (5,4)	.866 (22)	.764 (19,4)	.394 (10)	.512 (13)	.551 (14)
55175-8-1/4	5/16 (8)	1/4	.280 (7,1)	.866 (22)	.736 (18,7)	.394 (10)	.630 (16)	.551 (14)
55175-8-3/8	5/16 (8)	3/8	.319 (8,1)	.866 (22)	.791 (20,1)	.394 (10)	.787 (20)	.551 (14)
55175-10-1/4	10	1/4	.280 (7,1)	1.043 (26,5)	.808 (22,8)	.512 (13)	.630 (16)	.669 (17)
55175-10-3/8	10	3/8	.319 (8,1)	1.043 (26,5)	.878 (22,3)	.512 (13)	.787 (20)	.669 (17)
55175-10-1/2	10	1/2	.378 (9,6)	1.043 (26,5)	.937 (23,8)	.512 (13)	.984 (25)	.669 (17)
55175-12-1/4	12	1/4	.280 (7,1)	1.181 (30)	.949 (24,1)	.630 (16)	.630 (16)	.787 (20)
55175-12-3/8	12	3/8	.319 (8,1)	1.181 (30)	.929 (23,6)	.630 (16)	.787 (20)	.787 (20)
55175-12-1/2	12	1/2	.378 (9,6)	1.181 (30)	.988 (25,1)	.630 (16)	.984 (25)	.787 (20)

55215

SWIVEL BRANCH TEE

BSPP

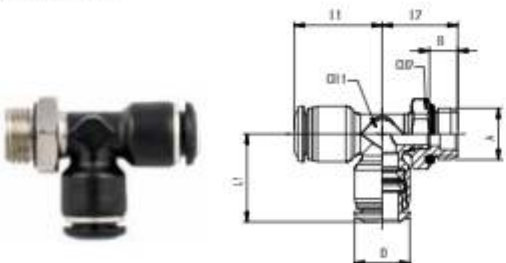


Part No.	Tube	A	B	L1	L2	CH1	CH2	D
55215-4-M5	5/32 (4)	M5	.142 (3,6)	1.299 (33)	.610 (15,5)	.276 (7)	.354 (9)	.394 (10)
55215-4-1/8	5/32 (4)	1/8	.213 (5,4)	1.299 (33)	.673 (17,1)	.276 (7)	.512 (13)	.394 (10)
55215-4-1/4	5/32 (4)	1/4	.280 (7,1)	1.299 (33)	.740 (18,8)	.276 (7)	.630 (16)	.394 (10)
55215-5-M5	5	M5	.142 (3,6)	1.575 (40)	.579 (14,7)	.354 (9)	.354 (9)	.472 (12)
55215-5-1/8	5	1/8	.213 (5,4)	1.575 (40)	.724 (18,4)	.354 (9)	.512 (13)	.472 (12)
55215-6-M5	6	M5	.142 (3,6)	1.614 (41)	.579 (14,7)	.354 (9)	.354 (9)	.492 (12,5)
55215-6-1/8	6	1/8	.213 (5,4)	1.614 (41)	.724 (18,4)	.354 (9)	.512 (13)	.492 (12,5)
55215-6-1/4	6	1/4	.280 (7,1)	1.614 (41)	.787 (20)	.354 (9)	.630 (16)	.492 (12,5)
55215-8-1/8	5/16 (8)	1/8	.213 (5,4)	1.732 (44)	.870 (22,1)	.394 (10)	.512 (13)	.551 (14)
55215-8-1/4	5/16 (8)	1/4	.280 (7,1)	1.732 (44)	.843 (21,4)	.394 (10)	.630 (16)	.551 (14)
55215-8-3/8	5/16 (8)	3/8	.319 (8,1)	1.732 (44)	.808 (22,8)	.394 (10)	.787 (20)	.551 (14)
55215-10-1/4	10	1/4	.280 (7,1)	2.087 (53)	1.051 (26,7)	.512 (13)	.630 (16)	.669 (17)
55215-10-3/8	10	3/8	.319 (8,1)	2.087 (53)	1.031 (26,2)	.512 (13)	.787 (20)	.669 (17)
55215-10-1/2	10	1/2	.378 (9,6)	2.087 (53)	1.091 (27,7)	.512 (13)	.984 (25)	.669 (17)
55215-12-1/4	12	1/4	.280 (7,1)	2.421 (61,5)	1.106 (28,1)	.630 (16)	.630 (16)	.787 (20)
55215-12-3/8	12	3/8	.319 (8,1)	2.421 (61,5)	1.087 (27,6)	.630 (16)	.787 (20)	.787 (20)
55215-12-1/2	12	1/2	.378 (9,6)	2.421 (61,5)	1.146 (29,1)	.630 (16)	.984 (25)	.787 (20)
55215-14-3/8	14	3/8	.319 (8,1)	2.402 (61)	1.252 (31,8)	.709 (18)	.787 (20)	.827 (21)
55215-14-1/2	14	1/2	.378 (9,6)	2.402 (61)	1.173 (29,8)	.709 (18)	.984 (25)	.827 (21)

55225

SWIVEL RUN TEE

BSPP

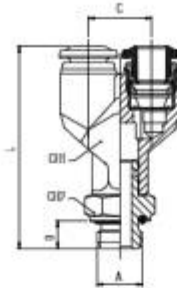


Part No.	Tube	A	B	L1	L2	CH1	CH2	D
55225-4-M5	5/32 (4)	M5	.142 (3,6)	16,5	15,5	7	.354 (9)	10
55225-4-1/8	5/32 (4)	1/8	.217 (5,5)	.650 (16,5)	.717 (18,2)	.276 (7)	.512 (13)	.394 (10)
55225-4-1/4	5/32 (4)	1/4	.276 (7)	.650 (16,5)	.776 (19,7)	.276 (7)	.591 (15)	.394 (10)
55225-5-M5	5	M5	.142 (3,6)	.787 (20)	.571 (14,5)	.354 (9)	.354 (9)	.472 (12)
55225-5-1/8	5	1/8	.217 (5,5)	.787 (20)	.685 (17,4)	.354 (9)	.512 (13)	.472 (12)
55225-6-M5	6	M5	.142 (3,6)	.807 (20,5)	.571 (14,5)	.354 (9)	.354 (9)	.492 (12,5)
55225-6-1/8	6	1/8	.217 (5,5)	.807 (20,5)	.685 (17,4)	.354 (9)	.512 (13)	.492 (12,5)
55225-6-1/4	6	1/4	.276 (7)	.807 (20,5)	.744 (18,9)	.354 (9)	.591 (15)	.492 (12,5)
55225-8-1/8	5/16 (8)	1/8	.217 (5,5)	.866 (22)	.744 (18,9)	.394 (10)	.512 (13)	.551 (14)
55225-8-1/4	5/16 (8)	1/4	.276 (7)	.866 (22)	.803 (20,4)	.394 (10)	.591 (15)	.551 (14)
55225-8-3/8	5/16 (8)	3/8	.295 (7,5)	.866 (22)	.823 (20,9)	.394 (10)	.669 (17)	.551 (14)
55225-10-1/4	10	1/4	.276 (7)	1.043 (26,5)	.858 (21,8)	.512 (13)	.630 (16)	.669 (17)
55225-10-3/8	10	3/8	.295 (7,5)	1.043 (26,5)	.858 (21,8)	.512 (13)	.669 (17)	.669 (17)
55225-10-1/2	10	1/2	.354 (9)	1.043 (26,5)	.957 (24,3)	.512 (13)	.827 (21)	.669 (17)
55225-12-1/4	12	1/4	.276 (7)	1.220 (31)	.909 (23,1)	.630 (16)	.630 (16)	.787 (20)
55225-12-3/8	12	3/8	.296 (7,5)	1.220 (31)	.909 (23,1)	.630 (16)	.669 (17)	.787 (20)
55225-12-1/2	12	1/2	.354 (9)	1.220 (31)	1.008 (25,6)	.630 (16)	.827 (21)	.787 (20)
55225-14-3/8	14	3/8	.295 (7,5)	1.201 (30,5)	1.043 (26,5)	.709 (18)	.787 (20)	.827 (21)
55225-14-1/2	14	1/2	.354 (9)	1.201 (30,5)	1.063 (27)	.709 (18)	.827 (21)	.827 (21)

55325

UNION Y

BSPP

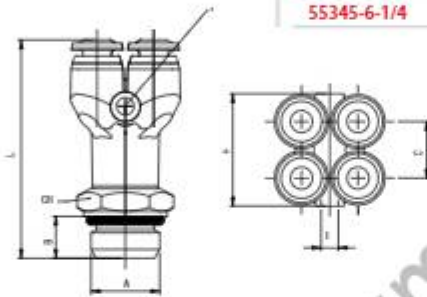


Part No.	Tube	A	B	C	L	CH1	CH2
55325-4-M5	5/32 (4)	M5	.157 (4)	.433 (11)	1.437 (36,5)	.394 (10)	.394 (10)
55325-4-1/8	5/32 (4)	1/8	.236 (6)	.433 (11)	1.516 (38,5)	.394 (10)	.512 (13)
55325-4-1/4	5/32 (4)	1/4	.315 (8)	.433 (11)	1.594 (40,5)	.394 (10)	.630 (16)
55325-6-M5	6	M5	.157 (4)	.531 (13,5)	1.634 (41,5)	.472 (12)	.394 (10)
55325-6-1/8	6	1/8	.236 (6)	.531 (13,5)	1.713 (43,5)	.472 (12)	.512 (13)
55325-6-1/4	6	1/4	.315 (8)	.531 (13,5)	1.831 (46,5)	.472 (12)	.630 (16)
55325-8-1/8	5/16 (8)	1/8	.236 (6)	.610 (15,5)	1.850 (47)	.551 (14)	.512 (13)
55325-8-1/4	5/16 (8)	1/4	.315 (8)	.610 (15,5)	1.969 (50)	.551 (14)	.630 (16)
55325-8-3/8	5/16 (8)	3/8	.354 (9)	.610 (15,5)	2.047 (52)	.551 (14)	.787 (20)
55325-10-1/4	10	1/4	.315 (8)	.748 (19)	2.343 (59,5)	.669 (17)	.630 (16)
55325-10-3/8	10	3/8	.354 (9)	.748 (19)	2.343 (59,5)	.669 (17)	.787 (20)
55325-10-1/2	10	1/2	.394 (10)	.748 (19)	2.441 (62)	.669 (17)	.945 (24)
55325-12-3/8	12	3/8	.354 (9)	.866 (22)	2.697 (68,5)	.787 (20)	.787 (20)
55325-12-1/2	12	1/2	.394 (10)	.866 (22)	2.795 (71)	.787 (20)	.945 (24)

55345

4 POSITION Y

BSPP

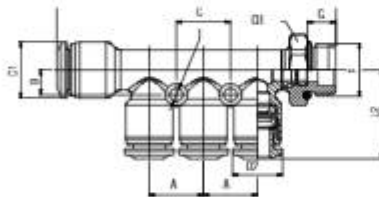


Part No.	Tube	A	B	C	L	H	CH	F
55345-4-1/8	5/32 (4)	1/8	.236 (6)	.425 (10,8)	1.575 (40)	.846 (21,5)	.512 (13)	.130 (3,3)
55345-4-1/4	5/32 (4)	1/4	.315 (8)	.425 (10,8)	1.654 (42)	.846 (21,5)	.630 (16)	.130 (3,3)
55345-6-1/8	6	1/8	.236 (6)	.524 (13,3)	1.850 (47)	1.055 (26,8)	.512 (13)	.130 (3,3)
55345-6-1/4	6	1/4	.315 (8)	.524 (13,3)	1.929 (49)	1.055 (26,8)	.630 (16)	.130 (3,3)

55365

REDUCTION MANIFOLD

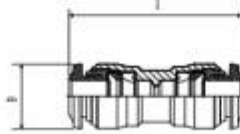
BSPP



Part No.	Tube	F	A	B	L1	L2	C	E	G	H	D1	D2
55365-6-4-1/8	6-5/32(4)	1/8	.531 (13,5)	.236 (6)	2.783 (70,7)	.858 (21,8)	.531 (13,5)	.130 (3,3)	.213 (5,4)	.512 (13)	.551 (14)	.472 (12)
55365-6-4-1/4	6-5/32(4)	1/4	.531 (13,5)	.236 (6)	2.756 (70)	.858 (21,8)	.531 (13,5)	.130 (3,3)	.280 (7,1)	.630 (16)	.551 (14)	.472 (12)
55365-8-4-1/8	5/16(8)-5/32(4)	1/8	.531 (13,5)	.236 (6)	2.783 (70,7)	.858 (21,8)	.531 (13,5)	.130 (3,3)	.213 (5,4)	.512 (13)	.551 (14)	.472 (12)
55365-8-4-1/4	5/16(8)-5/32(4)	1/4	.531 (13,5)	.236 (6)	2.756 (70)	.858 (21,8)	.531 (13,5)	.130 (3,3)	.280 (7,1)	.630 (16)	.551 (14)	.472 (12)
55365-8-6-1/8	5/16(8)-6	1/8	.531 (13,5)	.236 (6)	2.783 (70,7)	.878 (22,3)	.531 (13,5)	.130 (3,3)	.213 (5,4)	.512 (13)	.551 (14)	.402 (10,2)
55365-8-6-1/4	5/16(8)-6	1/4	.531 (13,5)	.236 (6)	2.756 (70)	.878 (22,3)	.531 (13,5)	.130 (3,3)	.280 (7,1)	.630 (16)	.551 (14)	.402 (10,2)
55365-10-6-1/4	10-6	1/4	.591 (15)	.276 (7)	3.284 (82,4)	.913 (23,2)	.591 (15)	.130 (3,3)	.280 (7,1)	.630 (16)	.669 (17)	.551 (14)
55365-10-6-3/8	10-6	3/8	.591 (15)	.276 (7)	3.228 (82)	.913 (23,2)	.591 (15)	.130 (3,3)	.319 (8,1)	.787 (20)	.669 (17)	.551 (14)
55365-10-8-1/4	10-5/16(8)	1/4	.591 (15)	.276 (7)	3.284 (82,4)	.913 (23,2)	.591 (15)	.130 (3,3)	.280 (7,1)	.630 (16)	.669 (17)	.551 (14)
55365-10-8-3/8	10-5/16(8)	3/8	.591 (15)	.276 (7)	3.228 (82)	.913 (23,2)	.591 (15)	.130 (3,3)	.319 (8,1)	.787 (20)	.669 (17)	.551 (14)

55040

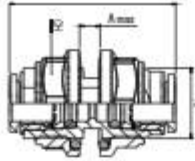
UNION



Part No.	Tube	Tube	L	B
55040-4	5/32 (4)		1.220 (31)	.394 (10)
55040-5	5		1339 (34)	.472 (12)
55040-6	6		1378 (35)	.492 (12,5)
55040-6-4	6	5/32 (4)	1339 (34)	.492 (12,5)
55040-8	5/16 (8)		1457 (37)	.551 (14)
55040-8-4	5/16 (8)	5/32 (4)	1476 (37,5)	.551 (14)
55040-8-6	5/16 (8)	6	1476 (37,5)	.551 (14)
55040-10	10		1772 (45)	.669 (17)
55040-10-6	10	6	1732 (44)	.669 (17)
55040-10-8	10	5/16 (8)	1732 (44)	.669 (17)
55040-12	12		1929 (49)	.787 (20)
55040-12-8	12	5/16 (8)	1929 (49)	.787 (20)
55040-12-10	12	10	1929 (49)	.787 (20)
55040-14	14		1890 (48)	.827 (21)
55040-14-12	14	12	1909 (48,5)	.827 (21)

55050

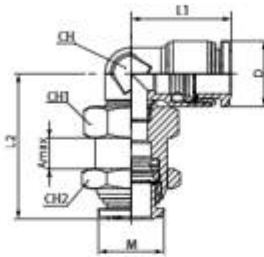
BULKHEAD UNION



Part No.	Tube	M	L	CH	A max
55050-8	5/16 (8)	M16x1	1.527 (38,8)	.708 (18)	.571 (14,5)

55060

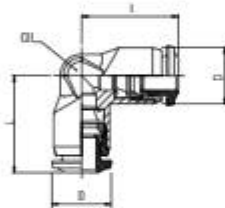
BULKHEAD ORIENTING ELBOW



Part No.	Tube	M	L1	L2	CH	CH1	CH2	A max	D
55060-4-M12x1	5/32 (4)	M12x1	.650 (16,5)	1.181 (30)	.776 (7)	.551 (14)	.669 (17)	.256 (6,5)	.394 (10)
55060-6-M14x1	6	M14x1	.807 (20,5)	1.220 (31)	.354 (9)	.630 (16)	.669 (17)	.256 (6,5)	.472 (12)
55060-8-M16x1	5/16 (8)	M16x1	.886 (22,5)	1.339 (34)	.394 (10)	.709 (18)	.748 (19)	.276 (7)	.551 (14)
55060-10-M20x1	10	M20x1	1.043 (26,5)	1.535 (39)	.512 (13)	.709 (18)	.945 (24)	.296 (7,5)	.669 (17)
55060-12-M22x1	12	M22x1	1.181 (30)	1.732 (44)	.630 (16)	.985 (25)	1.024 (26)	.394 (9,5)	.787 (20)

55130

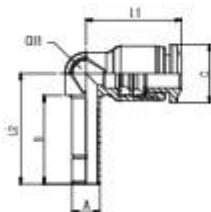
UNION ELBOW



Part No.	D1	D2	L	CH	D
55130-4	5/32 (4)		.650 (16,5)	.354 (9)	.394 (10)
55130-5	5		.787 (20)	.433 (11)	.472 (12)
55130-6	6		.807 (20,5)	.433 (11)	.472 (12)
55130-8-6	5/16 (8)	6	.886 (22,5)	.512 (13)	.551 (14)
55130-8	5/16 (8)		.866 (22)	.512 (13)	.551 (14)
55130-10-6	10	6	1.024 (26)	.630 (16)	.669 (17)
55130-10-8	10	5/16 (8)	1.024 (26)	.630 (16)	.669 (17)
55130-10	10		1.043 (26,5)	.630 (16)	.669 (17)
55130-12-10	12	10	1.201 (30,5)	.748 (19)	.787 (20)
55130-12	12		1.181 (30)	.748 (19)	.787 (20)
55130-14	14		1.201 (30,5)	.787 (20)	.827 (21)

55140

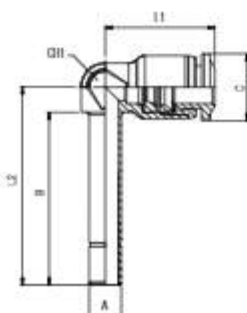
ELBOW PLUG IN



Part No.	Tube	A	B	L1	L2	CH1	D
55140-4	5/32 (4)	5/32 (4)	.669 (17)	.650 (16,5)	.819 (20,8)	.276 (7)	.394 (10)
55140-4-6	5/32 (4)	6	.748 (19)	.650 (16,5)	.898 (22,8)	.276 (7)	.394 (10)
55140-6	6	6	.748 (19)	.807 (20,5)	.933 (23,7)	.354 (9)	.492 (12,5)
55140-6-4	6	5/32 (4)	.669 (17)	.807 (20,5)	.854 (21,7)	.354 (9)	.492 (12,5)
55140-6-8	6	5/16 (8)	.787 (20)	.886 (22,5)	1.024 (26)	.394 (10)	.551 (14)
55140-8	5/16 (8)	5/16 (8)	.787 (20)	.866 (22)	1.024 (26)	.394 (10)	.551 (14)
55140-8-10	5/16 (8)	10	.858 (21,8)	.866 (22)	1.087 (27,6)	.394 (10)	.551 (14)
55140-10	10	10	.886 (22,5)	1.043 (26,5)	1.181 (30)	.512 (13)	.669 (17)
55140-10-12	10	12	.972 (24,7)	1.043 (26,5)	1.268 (32,7)	.512 (13)	.669 (17)
55140-12	12	12	1.004 (25,5)	1.181 (30)	1.319 (33,5)	.630 (16)	.787 (20)

55150

ELBOW PLUG IN



Part No.	Tube	A	B	L1	L2	CH1	D
55150-4	5/32 (4)	5/32 (4)	1.102 (28)	.650 (16,5)	1.252 (31,8)	.276 (7)	.394 (10)
55150-4-6	5/32 (4)	6	1.201 (30,5)	.650 (16,5)	1.350 (34,3)	.276 (7)	.394 (10)
55150-6	6	6	1.272 (32,3)	.807 (20,5)	1.457 (37)	.354 (9)	.492 (12,5)
55150-6-4	6	5/32 (4)	1.181 (30)	.807 (20,5)	1.366 (34,7)	.354 (9)	.492 (12,5)
55150-8	5/16 (8)	5/16 (8)	1.417 (36)	.866 (22)	1.654 (42)	.394 (10)	.551 (14)
55150-8-10	5/16 (8)	10	1.476 (37,5)	.866 (22)	1.697 (43,1)	.394 (10)	.551 (14)
55150-10	10	10	1.606 (40,8)	1.043 (26,5)	1.902 (48,3)	.512 (13)	.669 (17)
55150-10-12	10	12	1.701 (43,2)	1.043 (26,5)	1.996 (50,7)	.512 (13)	.669 (17)
55150-12	12	12	1.850 (47)	1.220 (31)	2.165 (55)	.630 (16)	.787 (20)

55160

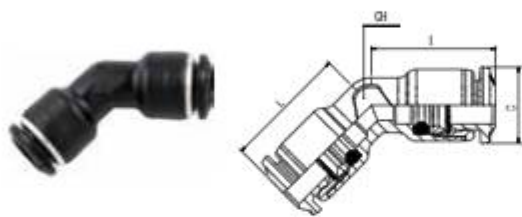
45° ELBOW PLUG IN



Part No.	Tube	A	B	L1	L2	CH1	D
55160-4	5/32 (4)	5/32 (4)	.669 (17)	.892 (22,5)	.827 (21)	.276 (7)	.394 (10)
55160-6	6	6	.748 (19)	.807 (20,5)	.925 (23,5)	.354 (9)	.472 (12)
55160-8	5/16 (8)	5/16 (8)	.787 (20)	.866 (22)	.984 (25)	.394 (10)	.551 (14)
55160-10	10	10	.886 (22,5)	1.043 (26,5)	1.181 (30)	.512 (13)	.669 (17)
55160-12	12	12	1.004 (25,5)	1.181 (30)	1.319 (33,5)	.630 (16)	.787 (20)

55180

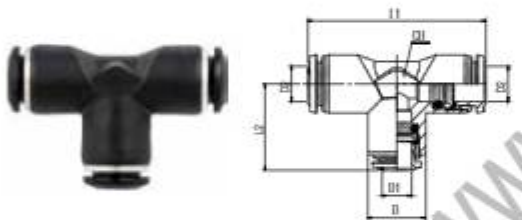
45° UNION ELBOW



Part No.	Tube	L	CH	D
55180-4	5/32 (4)	.650 (16,5)	.276 (7)	.394 (10)
55180-6	6	.807 (20,5)	.354 (9)	.472 (12)
55180-8	5/16 (8)	.866 (22)	.394 (10)	.551 (14)
55180-10	10	1.043 (26,5)	.512 (13)	.669 (17)
55180-12	12	1.181 (30)	.630 (16)	.787 (20)

55230

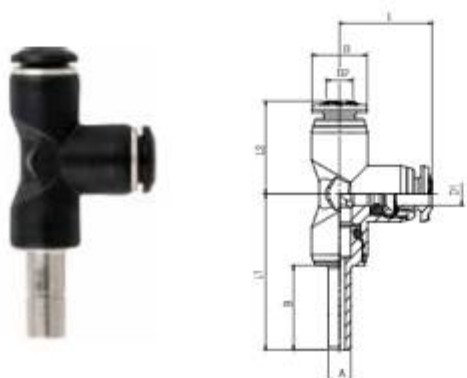
UNION TEE



Part No.	D1	D2	L1	L2	CH	D
55230-4	5/32(4)	5/32(4)	1.299 (33)	.650 (16,5)	.354 (9)	.394 (10)
55230-5	5	5	1.575 (40)	.787 (20)	.433 (11)	.472 (12)
55230-6-4	6	5/32(4)	1.575 (40)	.807 (20,5)	.433 (11)	.892 (22,5)
55230-6-6	6	6	1.614 (41)	.807 (20,5)	.433 (11)	.472 (12)
55230-6-8	5/32(4)	6	1.614 (41)	.787 (20)	.433 (11)	.492 (12,5)
55230-8-6	5/16(8)	6	1.772 (45)	.886 (22,5)	.512 (13)	.551 (14)
55230-8	5/16(8)	5/16(8)	1.732 (44)	.866 (22)	.512 (13)	.551 (14)
55230-6-8	6	5/16(8)	1.772 (45)	.886 (22,5)	.512 (13)	.551 (14)
55230-10-8	10	5/16(8)	2.047 (52)	1.043 (26,5)	.630 (16)	.669 (17)
55230-10	10	10	2.087 (53)	1.043 (26,5)	.630 (16)	.669 (17)
55230-8-10	5/16(8)	10	2.087 (53)	1.024 (26)	.630 (16)	.669 (17)
55230-12-10	12	10	2.343 (59,5)	1.201 (30,5)	.748 (19)	.787 (20)
55230-12	12	12	2.421 (61,5)	1.181 (30)	.748 (19)	.787 (20)
55230-10-12	10	12	2.421 (61,5)	1.181 (30)	.748 (19)	.787 (20)
55230-14	14	14	2.402 (61)	1.201 (30,5)	.787 (20)	.827 (21)
55230-8-14	5/16(8)	14	2.421 (61,5)	1.161 (29,5)	.787 (20)	.827 (21)
55230-10-14	10	14	2.402 (61)	1.181 (30)	.787 (20)	.827 (21)
55230-12-14	12	14	2.402 (61)	1.201 (30,5)	.787 (20)	.827 (21)

55235

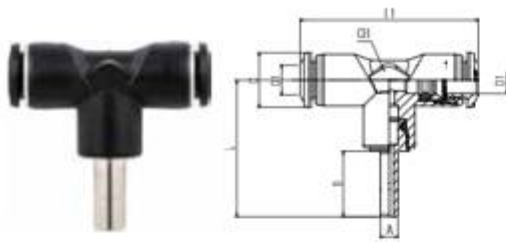
RUN TEE PLUG IN



Part No.	D1	D2	A	B	L	L1	L2	CH	D
55235-4-4-4	5/32(4)	5/32(4)	5/32(4)	.591 (15)	1.102 (28)	.650 (16,5)	.650 (16,5)	.354 (9)	.394 (10)
55235-6-6-6	6	6	6	.669 (17)	1.319 (33,5)	.807 (20,5)	.807 (20,5)	.433 (11)	.492 (12,5)
55235-8-8-8	5/16(8)	5/16(8)	5/16(8)	.709 (18)	1.437 (36,5)	.886 (22,5)	.886 (22,5)	.512 (13)	.551 (14)
55235-10-10-10	10	10	10	.866 (22)	1.732 (44)	1.043 (26,5)	1.043 (26,5)	.630 (16)	.669 (17)
55235-12-12-12	12	12	12	.965 (24,5)	1.270 (31)	1.969 (50)	1.22 (31)	.748 (19)	.787 (20)
55235-4-6-6	5/32(4)	6	6	.669 (17)	.787 (20)	1.319 (33,5)	.807 (20,5)	.433 (11)	.492 (12,5)
55235-6-8-8	6	5/16(8)	5/16(8)	.886 (22,5)	.886 (22,5)	1.437 (36,5)	.886 (22,5)	.512 (13)	.551 (14)
55235-8-10-10	5/16(8)	10	10	.866 (22)	1.024 (26)	1.732 (44)	1.043 (26,5)	.630 (16)	.669 (17)
55235-10-12-12	10	12	12	.965 (24,5)	1.181 (30)	1.969 (50)	1.22 (31)	.748 (19)	.787 (20)

55237

BRANCH TEE PLUG IN



Part No.	D1	A	B	L	L1	CH	D
55237-6-4	6	5/32 (4)	.591 (15)	1.240 (31,5)	1.614 (41)	.433 (11)	.492 (12,5)
55237-8-6	5/16 (8)	6	.669 (17)	1.398 (35,5)	1.772 (45)	.512 (13)	.551 (14)
55237-10-8	10	5/16 (8)	.709 (18)	1.575 (40)	2.087 (53)	.630 (16)	.669 (17)
55237-12-10	12	10	.866 (22)	1.870 (47,5)	2.402 (61)	.748 (19)	.787 (20)

55240

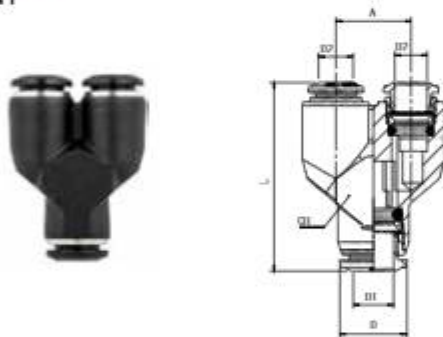
TEE PLUG IN



Part No.	Tube	A	B	L1	L2	CH	D
55240-4	5/32 (4)	5/32 (4)	.669 (17)	1.299 (33)	.815 (20,7)	.276 (7)	.394 (10)
55240-4-6	5/32 (4)	6	.748 (19)	1.299 (33)	.894 (22,7)	.276 (7)	.394 (10)
55240-6	6	6	.748 (19)	1.614 (41)	.933 (23,7)	.354 (9)	.492 (12,5)
55240-6-4	6	5/32 (4)	.669 (17)	1.614 (41)	.854 (21,7)	.354 (9)	.492 (12,5)
55240-8	5/16 (8)	5/16 (8)	.787 (20)	1.732 (44)	1.024 (26)	.394 (10)	.551 (14)
55240-8-10	5/16 (8)	10	.874 (22,2)	1.732 (44)	1.102 (28)	.394 (10)	.551 (14)
55240-10	10	10	.886 (22,5)	2.087 (53)	1.181 (30)	.512 (13)	.669 (17)
55240-10-12	10	12	.984 (25)	2.087 (53)	1.268 (32,2)	.512 (13)	.669 (17)
55240-12	12	12	1.004 (25,5)	2.421 (61,5)	1.319 (33,5)	.630 (16)	.787 (20)

55310

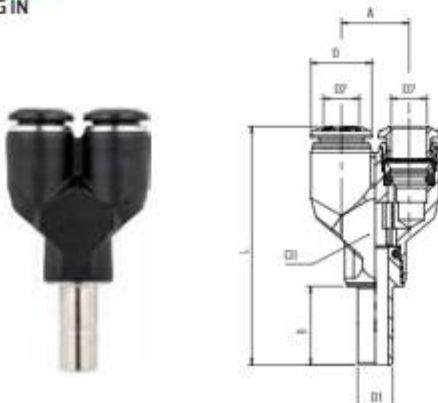
UNION Y



Part No.	D1	D2	A	L	CH	D
55310-4	5/32 (4)	5/32 (4)	.433 (11)	1.24 (31,5)	.394 (10)	.394 (10)
55310-4-6	6	5/32 (4)	.531 (13,5)	1.398 (35,5)	.472 (12)	.492 (12,5)
55310-6	6	6	.531 (13,5)	1.457 (37)	.472 (12)	.472 (12)
55310-6-6	5/16 (8)	6	.610 (15,5)	1.614 (41)	.551 (14)	.551 (14)
55310-8	5/16 (8)	5/16 (8)	.610 (15,5)	1.575 (40)	.551 (14)	.551 (14)
55310-8-10	10	5/16 (8)	.748 (19)	1.870 (47,5)	.669 (17)	.709 (18)
55310-10	10	10	.748 (19)	1.909 (48,5)	.669 (17)	.709 (18)
55310-12-8	12	5/16 (8)	.866 (22)	2.264 (57,5)	.787 (20)	.787 (20)
55310-12	12	12	.866 (22)	2.264 (57,5)	.787 (20)	.787 (20)

55315

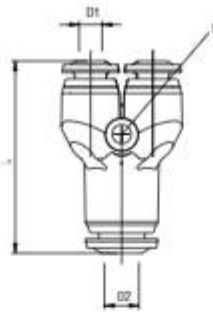
Y PLUG IN



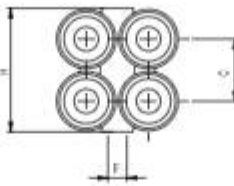
Part No.	D1	D2	A	L	CH	B	D
55315-4	5/32 (4)	5/32 (4)	.433 (11)	1.693 (43)	.394 (10)	.591 (15)	.394 (10)
55315-6-4	6	5/32 (4)	.531 (13,5)	1.949 (49,5)	.472 (12)	.669 (17)	.492 (12,5)
55315-6	6	6	.531 (13,5)	1.969 (50)	.472 (12)	.669 (17)	.492 (12,5)
55315-8-6	5/16 (8)	6	.610 (15,5)	2.365 (55)	.551 (14)	.709 (18)	.492 (12,5)
55315-8	5/16 (8)	5/16 (8)	.610 (15,5)	2.365 (55)	.551 (14)	.709 (18)	.551 (14)
55315-10-8	10	5/16 (8)	.748 (19)	2.559 (65)	.669 (17)	.866 (22)	.669 (17)
55315-10	10	10	.748 (19)	2.579 (65,5)	.669 (17)	.866 (22)	.669 (17)
55315-12	12	12	.866 (22)	3.071 (78)	.787 (20)	.965 (24,5)	.787 (20)

55330

4 POSITION Y

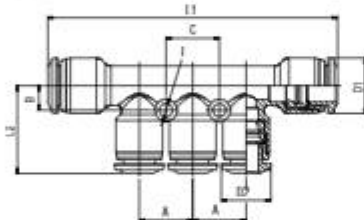


Part No.	D1	D2	C	L	F	H
55330-4-4	5/32 (4)	5/32 (4)	.425 (10,8)	1.319 (33,5)	.130 (3,3)	.846 (21,5)
55330-4-6	5/32 (4)	6	.425 (10,8)	1.358 (34,5)	.130 (3,3)	.846 (21,5)
55330-6-6	6	6	.524 (13,3)	1.555 (39,5)	.130 (3,3)	1.055 (26,8)
55330-6-8	6	5/16 (8)	.524 (13,3)	1.575 (40)	.130 (3,3)	1.055 (26,8)



55350

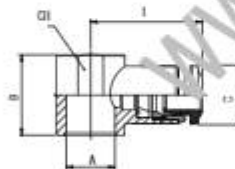
REDUCTION MANIFOLD



Part No.	Tube	A	B	L1	L2	C	E	D1	D2
55350-6-4	6 - 5/32(4)	.531 (13,5)	.236 (6)	2.913 (74)	.858 (21,8)	.531 (13,5)	.130 (3,3)	.551 (14)	.472 (12)
55350-8-4	5/16(8) - 5/32(4)	.531 (13,5)	.236 (6)	2.874 (73)	.858 (21,8)	.531 (13,5)	.130 (3,3)	.551 (14)	.472 (12)
55350-8-6	5/16(8) - 6	.531 (13,5)	.236 (6)	2.874 (73)	.878 (22,3)	.531 (13,5)	.130 (3,3)	.551 (14)	.492 (12,5)
55350-10-6	10 - 6	.591 (15)	.276 (7)	3.268 (83)	.913 (23,2)	.591 (15)	.130 (3,3)	.669 (17)	.551 (14)
55350-10-8	10 - 5/16(8)	.591 (15)	.276 (7)	3.268 (83)	.913 (23,2)	.591 (15)	.130 (3,3)	.669 (17)	.551 (14)

55500

SINGLE BANJO BODY

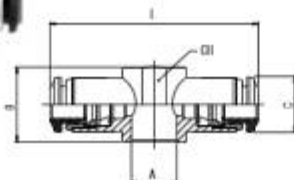


Part No.	Tube	A	B	L	CH	D
55500-4-M5	5/32 (4)	M5	.551 (14)	.768 (19,5)	.354 (9)	.394 (10)
55500-4-M6	5/32 (4)	M6	.551 (14)	.768 (19,5)	.354 (9)	.394 (10)
55500-4-1/8	5/32 (4)	1/8	.65 (16,5)	.846 (21,5)	.551 (14)	.394 (10)
55500-4-1/4	5/32 (4)	1/4	.728 (18,5)	.925 (23,5)	.708 (18)	.472 (12)
55500-5-M5	5	M5	.551 (14)	.807 (20,5)	.354 (9)	.472 (12)
55500-5-M6	5	M6	.551 (14)	.807 (20,5)	.354 (9)	.472 (12)
55500-5-1/8	5	1/8	.650 (16,5)	.886 (22,5)	.551 (14)	.472 (12)
55500-5-1/4	5	1/4	.728 (18,5)	.984 (25)	.709 (18)	.472 (12)
55500-6-M5	6	M5	.551 (14)	.827 (21)	.354 (9)	.472 (12)
55500-6-M6	6	M6	.551 (14)	.827 (21)	.354 (9)	.472 (12)
55500-6-1/8	6	1/8	.650 (16,5)	.906 (23)	.551 (14)	.472 (12)
55500-6-1/4	6	1/4	.728 (18,5)	1.004 (25,5)	.709 (18)	.472 (12)
55500-8-1/8	5/16 (8)	1/8	.650 (16,5)	.925 (23,5)	.551 (14)	.551 (14)
55500-8-1/4	5/16 (8)	1/4	.728 (18,5)	1.024 (26)	.709 (18)	.551 (14)
55500-8-3/8	5/16 (8)	3/8	.866 (22)	1.083 (27,5)	.827 (21)	.551 (14)
55500-10-1/4	10	1/4	.728 (18,5)	1.220 (31)	.708 (18)	.669 (17)
55500-10-3/8	10	3/8	.866 (22)	1.201 (30,5)	.827 (21)	.669 (17)
55500-12-3/8	12	3/8	.866 (22)	1.280 (32,5)	.827 (21)	.787 (20)
55500-12-1/2	12	1/2	1.024 (26)	1.378 (35)	1.024 (26)	.787 (20)

For BANJO STEM assemblies see 10.7/10.8/10.9

55510

DOUBLE BANJO BODY

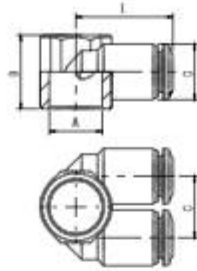


Part No.	Tube	A	B	L	CH	D
55510-4-M5	5/32 (4)	M5	.551 (14)	1.535 (39)	.354 (9)	.394 (10)
55510-4-1/8	5/32 (4)	1/8	.650 (16,5)	1.693 (43)	.551 (14)	.394 (10)
55510-5-1/8	5	1/8	.650 (16,5)	1.772 (45)	.551 (14)	.472 (12)
55510-5-1/4	5	1/4	.728 (18,5)	1.969 (50)	.709 (18)	.472 (12)
55510-6-1/8	6	1/8	.650 (16,5)	1.811 (46)	.551 (14)	.472 (12)
55510-6-1/4	6	1/4	.728 (18,5)	2.008 (51)	.709 (18)	.472 (12)
55510-8-1/8	5/16 (8)	1/8	.650 (16,5)	1.850 (47)	.551 (14)	.551 (14)
55510-8-1/4	5/16 (8)	1/4	.728 (18,5)	2.047 (52)	.709 (18)	.551 (14)

For BANJO STEM assemblies see 10.7/10.8/10.9

55520

DOUBLE BANJO BODY

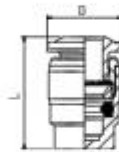


Part No.	Tube	A	B	C	L	D
55520-4-1/8	5/32 (4)	1/8	.650 (16,5)	.512 (13)	.827 (21)	.472 (12)
55520-4-1/4	5/32 (4)	1/4	.728 (18,5)	.610 (15,5)	.945 (24)	.551 (14)
55520-6-1/8	6	1/8	.650 (16,5)	.512 (13)	.846 (21,5)	.472 (12)
55520-6-1/4	6	1/4	.728 (18,5)	.610 (15,5)	.965 (24,5)	.551 (14)
55520-6-3/8	6	3/8	.866 (22)	.531 (13,5)	.984 (25)	.472 (12)
55520-8-1/4	5/16 (8)	1/4	.728 (18,5)	.610 (15,5)	.965 (24,5)	.551 (14)
55520-8-3/8	5/16 (8)	3/8	.866 (22)	.748 (19)	1.102 (28)	.669 (17)
55520-10-3/8	10	3/8	.866 (22)	.748 (19)	1.102 (28)	.669 (17)

For BANJO STEM assemblies see 10.7/10.8/10.9

55620

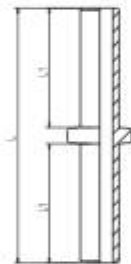
TERMINAL PLUG



Part No.	Tube	D	L
55620-4	5/32 (4)	.393 (10)	.708 (18)
55620-6	6	.492 (12,5)	.787 (20)
55620-8	5/16 (8)	.551 (14)	.846 (21,5)
55620-10	10	.669 (17)	.984 (25)
55620-12	12	.787 (20)	1.082 (27,5)

55625

DOUBLE JOINT



Part No.	Tube	L	L1
55625-4	5/32 (4)	1.358 (34,5)	.630 (16)
55625-6	6	1.555 (39,5)	.728 (18,5)
55625-8	5/16 (8)	1.654 (42)	.768 (19,5)
55625-10	10	2.028 (51,5)	.945 (24)
55625-12	12	2.362 (60)	1.102 (28)
55625-14	14	2.736 (69,5)	1.299 (33)

55700

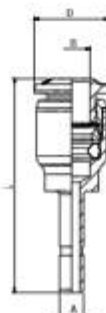
TUBE REDUCER



Part No.	A	B	L	D
55700-6-4	6	5/32 (4)	1.339 (34)	.394 (10)
55700-8-4	5/16 (8)	5/32 (4)	1.496 (38)	.472 (12)
55700-8-6	5/16 (8)	6	1.535 (39)	.492 (12,5)
55700-10-6	10	6	1.673 (42,5)	.492 (12,5)
55700-10-8	10	5/16 (8)	1.654 (42)	.551 (14)
55700-12-6	12	6	1.516 (38,5)	.492 (12,5)
55700-12-8	12	5/16 (8)	1.634 (41,5)	.551 (14)
55700-12-10	12	10	1.909 (48,5)	.669 (17)
55700-14-8	14	5/16 (8)	1.476 (37,5)	.551 (14)
55700-14-10	14	10	1.969 (50)	.787 (20)
55700-14-12	14	12	1.969 (50)	.787 (20)

55705

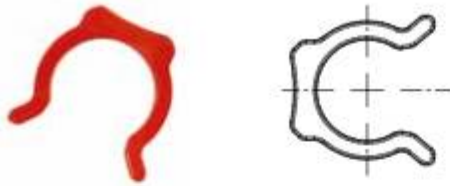
TUBE EXPANDER



Part No.	A	B	L	D
55705-4-6	5/32 (4)	6	1.417 (36)	.472 (12)
55705-6-8	6	5/16 (8)	1.516 (38,5)	.551 (14)
55705-8-10	8	10	1.693 (43)	.669 (17)
55705-10-12	10	12	1.89 (48)	.787 (20)

50980

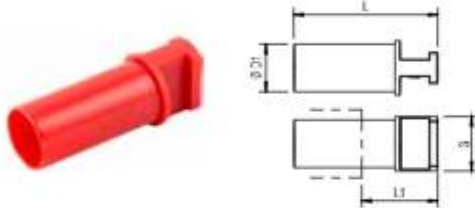
SECURITY CLIPS



Part No.	Tube
50980-53	5/32 (4)
50980-5	3/16 (5)
50980-04	1/4 (6)
50980-05	5/16 (8)
50980-06	3/8 (10)
50980-08	1/2 (12)
50980-14	(14)

50610

POLYAMIDE PLUG



Part No.	ØD1	G	L	L1
50610-3	3	.297 (5)	1.201 (30,5)	.209 (18)
50610-4	5/32 (4)	.236 (6)	1.162 (29,5)	.611 (15,5)
50610-5	5	.276 (7)	1.319 (33,5)	.709 (18)
50610-6	6	.315 (8)	1.260 (32)	.611 (15,5)
50610-8	5/16 (8)	.394 (10)	1.398 (35,5)	.768 (19,5)
50610-10	10	.472 (12)	1.575 (40)	.768 (19,5)
50610-12	12	.551 (14)	1.634 (41,5)	.787 (20)
50610-14	14	.630 (16)	1.654 (42)	.768 (19,5)

50615

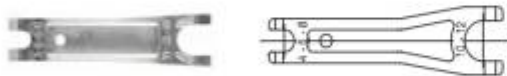
COLORED RELEASE BOTTOM COVERS



Part No	Color					Tube
50615-4	BN	BL	GI	RO	VE	4
50615-6	BN	BL	GI	RO	VE	6
50615-8	BN	BL	GI	RO	VE	8
50615-10	BN	BL	GI	RO	VE	10
50615-12	BN	BL	GI	RO	VE	12
50615-14	BN	BL	GI	RO	VE	14

50991

TOOL FOR DISASSEMBLING



Part No.
50991

50006

THREAD PACKING FOR THE SWIFFIT TAPER THREADS



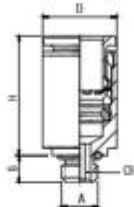
Part No.	Thread
50006-02	1/8
50006-04	1/4
50006-06	3/8
50006-08	1/2

56 SERIES - MINI

56010

STRAIGHT MALE WITH INTERNAL HEX

BSPP



Part No.	Tube	A	B	H	CH	D
56010-4-M3	5/32 (4)	M3	.118 (3)	.591 (15)	.059 (1,5)	.315 (8)
56010-4-M5	5/32 (4)	M5	.142 (3,6)	.551 (14)	.098 (2,5)	.335 (8,5)
56010-4-M7	5/32 (4)	M7	.197 (5)	.551 (14)	.118 (3)	.394 (10)
56010-6-M5	6	M5	.142 (3,6)	.630 (16)	.098 (2,5)	.394 (10)
56010-6-M7	6	M7	.197 (5)	.630 (16)	.157 (4)	.394 (10)

56020

STRAIGHT MALE

BSPP

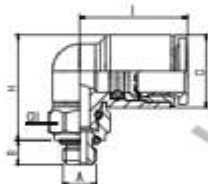


Part No.	Tube	A	B	H	CH1	CH2
56020-2-M3	2	M3	.118 (3)	.433 (11)	.236 (6)	.059 (1,5)
56020-2-M5	2	M5	.157 (4)	.354 (9)	.276 (7)	.059 (1,5)
56020-3-M3	3	M3	.118 (3)	.433 (11)	.236 (6)	.059 (1,5)
56020-3-M5	3	M5	.157 (4)	.394 (10)	.276 (7)	.079 (2)
56020-4-M3	5/32 (4)	M3	.118 (3)	.571 (14,5)	.315 (8)	-
56020-4-M5	5/32 (4)	M5	.142 (3,6)	.551 (14)	.354 (9)	.098 (2,5)
56020-4-M7	5/32 (4)	M7	.197 (5)	.551 (14)	.394 (10)	.118 (3)
56020-4-1/8	5/32 (4)	1/8	.197 (5)	.453 (11,5)	.512 (13)	.118 (3)
56020-6-M5	6	M5	.142 (3,6)	.630 (16)	.433 (11)	.098 (2,5)
56020-6-M7	6	M7	.197 (5)	.630 (16)	.394 (10)	.118 (3)
56020-6-1/8	6	1/8	.197 (5)	.531 (13,5)	.512 (13)	.157 (4)
56020-6-1/4	6	1/4	.280 (7,1)	.472 (12)	.630 (16)	.157 (4)

56115

SWIVEL ELBOW

BSPP

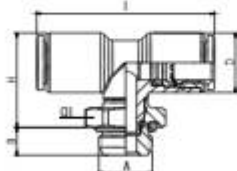


Part No.	Tube	A	B	H	L	D	CH
56115-2-M3	2	M3	.118 (3)	.512 (13)	.433 (11)	.256 (6,5)	.315 (8)
56115-2-M5	2	M5	.157 (4)	.492 (12,5)	.433 (11)	.256 (6,5)	.315 (8)
56115-3-M3	3	M3	.118 (3)	.512 (13)	.433 (11)	.256 (6,5)	.315 (8)
56115-3-M5	3	M5	.157 (4)	.492 (12,5)	.433 (11)	.256 (6,5)	.315 (8)
56115-4-M3	5/32 (4)	M3	.118 (3)	.394 (10)	.551 (14)	.335 (8,5)	.315 (8)
56115-4-M5	5/32 (4)	M5	.142 (3,6)	.531 (13,5)	.551 (14)	.335 (8,5)	.315 (8)
56115-4-1/8	5/32 (4)	1/8	.197 (5)	.512 (13)	.551 (14)	.335 (8,5)	.512 (13)
56115-4-1/4	5/32 (4)	1/4	.280 (7,1)	.512 (13)	.551 (14)	.335 (8,5)	.630 (16)
56115-6-M5	6	M5	.142 (3,6)	.610 (15,5)	.630 (16)	.413 (10,5)	.315 (8)
56115-6-M7	6	M7	.197 (5)	.623 (16)	.623 (16)	.413 (10,5)	.354 (9)
56115-6-1/8	6	1/8	.197 (5)	.591 (15)	.630 (16)	.413 (10,5)	.512 (13)
56115-6-1/4	6	1/4	.280 (7,1)	.591 (15)	.630 (16)	.413 (10,5)	.630 (16)

56215

SWIVEL BRANCH TEE

BSPP

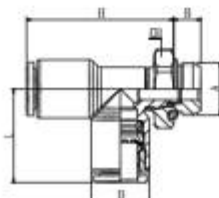


Part No.	Tube	A	B	H	L	CH	D
56215-2-M3	2	M3	.118 (3)	.512 (13)	.866 (22)	.315 (8)	.256 (6,5)
56215-2-M5	2	M5	.157 (4)	.492 (12,5)	.866 (22)	.315 (8)	.256 (6,5)
56215-3-M3	3	M3	.118 (3)	.512 (13)	.866 (22)	.315 (8)	.256 (6,5)
56215-3-M5	3	M5	.157 (4)	.492 (12,5)	.866 (22)	.315 (8)	.256 (6,5)

56225

SWIVEL RUN TEE

BSPP

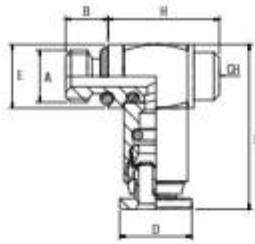


Part No.	Tube	A	B	H	L	CH	D
56225-2-M3	2	M3	.118 (3)	.827 (21)	.433 (11)	.315 (8)	.256 (6,5)
56225-2-M5	2	M5	.157 (4)	.827 (21)	.433 (11)	.315 (8)	.256 (6,5)
56225-3-M3	3	M3	.118 (3)	.827 (21)	.433 (11)	.315 (8)	.256 (6,5)
56225-3-M5	3	M5	.157 (4)	.827 (21)	.433 (11)	.315 (8)	.256 (6,5)

56550

SWIVEL SINGLE BANJO BODY

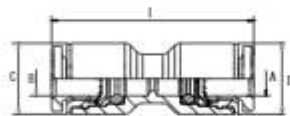
BSPP



Part No.	Tube	A	B	H	L	E	CH	D
56550-3-M3	3	M3	.118 (3)	.113 (10,5)	.610 (15,5)	.236 (6)	.079 (2)	.276 (7)
56550-3-M5	3	M5	.157 (4)	.113 (10,5)	.610 (15,5)	.236 (6)	.079 (2)	.276 (7)

56040

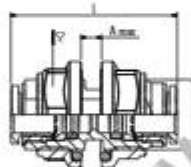
UNION



Part No.	A	B	C	L	D
56040-4-4	5/32 (4)	5/32 (4)	.335 (8,5)	.984 (25)	.335 (8,5)
56040-6-6	6	6	.113 (10,5)	1.102 (28)	.113 (10,5)
56040-8-6	5/16 (8)	6	.113 (10,5)	1.358 (34,5)	.551 (14)

56050

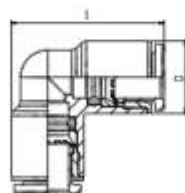
BULKHEAD UNION



Part No.	Tube	M	L	CH	A max
56050-4	5/32 (4)	M10x1	.984 (25)	.512 (13)	.217 (5,5)
56050-6	6	M12x1	1.102 (28)	.591 (15)	.335 (8,5)

56130

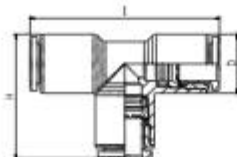
UNION ELBOW



Part No.	Tube	L	D
56130-2	2	.571 (14,5)	.256 (6,5)
56130-3	3	.571 (14,5)	.256 (6,5)
56130-4	5/32 (4)	.748 (19)	.335 (8,5)
56130-6	6	.886 (22,5)	.113 (10,5)

56230

UNION TEE



Part No.	Tube	H	L	D
56230-2	2	.571 (14,5)	.866 (22)	.256 (6,5)
56230-3	3	.571 (14,5)	.866 (22)	.256 (6,5)
56230-4	5/32 (4)	.748 (19)	1.142 (29)	.335 (8,5)
56230-6	6	.886 (22,5)	1.358 (34,5)	.113 (10,5)

NOTES

www.sumy.ir

MIST FIT Series



84000H

Pag. 7.6



84111H

Pag. 7.6



84211H

Pag. 7.6



84040H

Pag. 7.7



84041H
84042H

Pag. 7.7



84130H

Pag. 7.7



84131H

Pag. 7.8



84202H

Pag. 7.8



84230H

Pag. 7.8



84320H

Pag. 7.9



84610H

Pag. 7.9



84620H

Pag. 7.9



84700H

Pag. 7.10



84707H

Pag. 7.10



84708H

Pag. 7.10

www.sumy.ir

PUSH - IN FITTINGS FOR MISTINGS SYSTEMS



MIST FIT Series

MIST
FIT





TECHNICAL CHARACTERISTICS



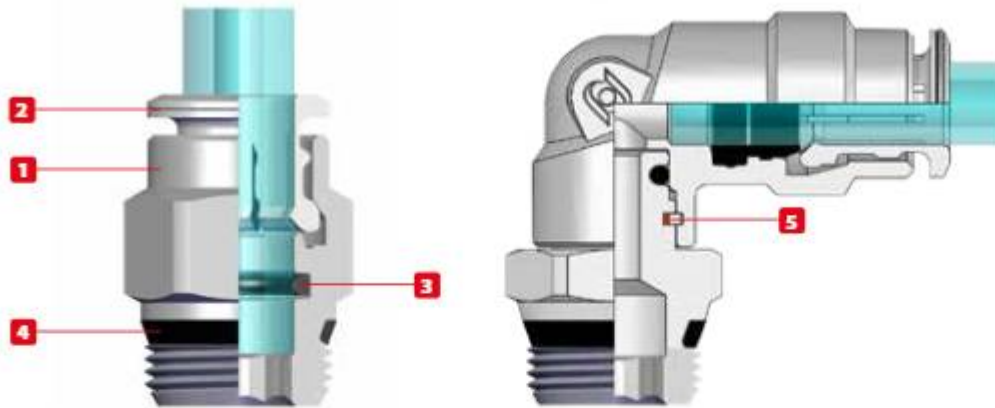
Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

SILICON
FREE

PED
2014/68/UE



Pressure Rating

0 bar ~ 85 bar
0 MPa ~ 8.5 MPa



Component Parts and Materials

- 1 Nickel-plated brass Body
- 2 Nickel-plated brass Clamping washer
- 3 NBR O-Ring
- 4 Nbr Thread packing
- 5 Seeger



Temperatures Rating

NBR
0° F ~ 176° F
0° C ~ 80° C



Applications

- Centralized nebulization
- Dust destruction
- Temperatures destruction
- Humidification
- Greenhouses Irrigation
- Aromas diffusion
- Insects disinfection



Media

• Water



Tubing Compatibility

PLASTIC TUBES:
PA12, Metallic tubes.
* Copper or Steel tube, must be grooved.



Advantages

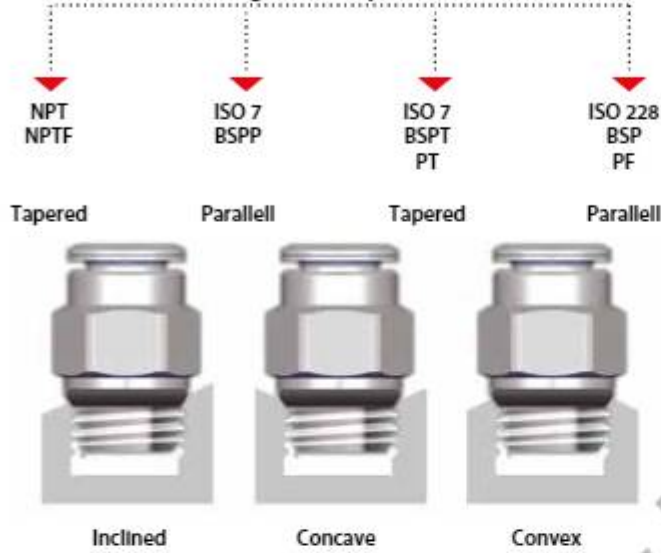
- 1 Immediate connection and disconnection, absolute endurance
- 2 Two available threads
- 3 Protective chemical nickel plating
- 4 Strength because of the entire realization in metal
- 5 Large range in order to satisfy the most demanding applications



THREADS & ADVANTAGES



One fitting... Endless possibilities



Our **SWIFFIT** universal fittings also work on non-flat surfaces without compromising an air-tight seal.

The **SWIFFIT** Universal Thread has been designed to offer the following advantages to the end users:

- Reduced overall length
- Smaller hex dimensions compared to parallel threads
- Fits with various parallel and tapered threads
- All **SWIFFIT** fittings have been equipped with threads and an NBR thread seal that will universally connect to all thread types.

Torque Specifications

Recommended Torque		
Thread Size	Min.	Max.
1/8	5 Nm	7 Nm
1/4	5 Nm	7 Nm
3/8	5 Nm	7 Nm
1/2	5 Nm	7 Nm

www.sumy.ir

84000H

STRAIGHT MALE



Part No.	Tube	A	B	L	CH1	CH2
84000H-1/4-1/4	1/4	1/4	.276 (7)	1003(25.5)	.551 (14)	-
84000H-1/4-3/8	1/4	3/8	.295 (7.5)	1023 (26)	.669 (17)	-
84000H-3/8-1/4	3/8	1/4	.276 (7)	1181 (30)	.709 (18)	.276 (7)
84000H-3/8-3/8	3/8	3/8	.295 (7.5)	1063 (27)	.709 (18)	.315 (8)

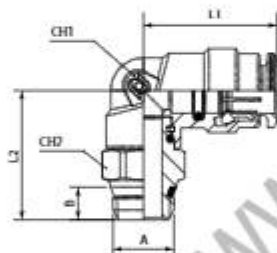


84111H

SWIVEL ELBOW



Part No.	Tube	A	B	L1	L2	CH1	CH2
84111H-1/4-1/4	1/4	1/4	.276 (7)	1.063 (27)	.926 (23.5)	.433 (11)	.591 (15)
84111H-1/4-3/8	1/4	3/8	.295 (7.5)	1.063 (27)	.945 (24)	.433 (11)	.669 (17)
84111H-3/8-1/4	3/8	1/4	.276 (7)	1.303 (28)	1.083 (27.5)	.551 (14)	.630 (16)
84111H-3/8-3/8	3/8	3/8	.295 (7.5)	1.303 (28)	1.083 (27.5)	.551 (14)	.669 (17)

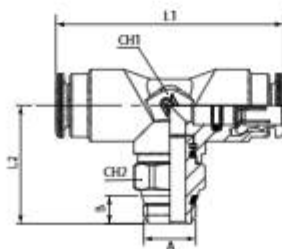


84211H

SWIVEL BRANCH TEE



Part No.	Tube	A	B	L1	L2	CH1	CH2
84211H-1/4-1/4	1/4	1/4	.276 (7)	2049 (52)	1003(25.5)	.433 (11)	.591 (15)
84211H-1/4-3/8	1/4	3/8	.295 (7.5)	2049 (52)	.946 (24)	.433 (11)	.669 (17)
84211H-3/8-1/4	3/8	1/4	.276 (7)	2.244 (57)	1.163 (29.5)	.630 (16)	.630 (16)
84211H-3/8-3/8	3/8	3/8	.295 (7.5)	2.244 (57)	1.083 (27.5)	.630 (16)	.669 (17)



84040H

UNION

Part No.	Tube	A	L
84040H-1/4	1/4	1/8	1.712 (43.5)
84040H-1/4	3/8	1/8	1.850 (47)

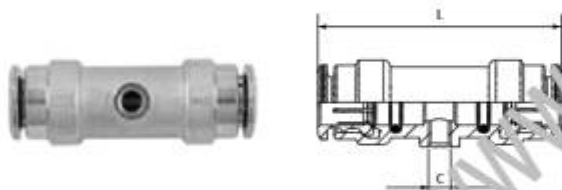


84041H - 84042H

UNION FOR NOZZLE ADAPTER

UNC

Part No.	Tube	C	L
84041H-1/4	1/4	10-24 UNC	1.929 (49)
84041H-3/8	3/8	10-24 UNC	2.049 (52)
84042H-3/8	3/8	10-24 UNC	2.049 (52)

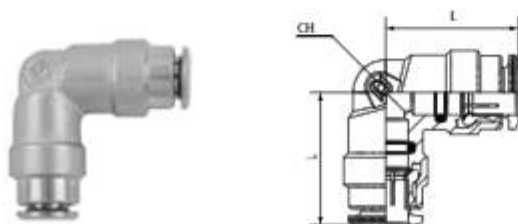


84130H

UNION ELBOW

UNC

Part No.	Tube	L	CH
84130H-1/4	1/4	1.023 (26)	.433 (11)
84130H-3/8	3/8	1.103 (28)	.551 (14)

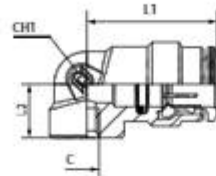


84131H

ELBOW FOR NOZZLE ADAPTER

UNC

Part No.	Tube	C	L1	L2	CH
84131H-1/4	1/4	10-24 UNC	.984 (25)	.394 (10)	.433 (11)
84131H-3/8	3/8	10-24 UNC	1.103 (28)	.433 (11,5)	.551 (14)

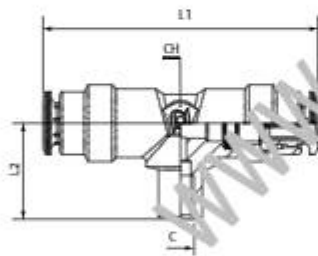


84202H

TEE PLUG IN

UNC

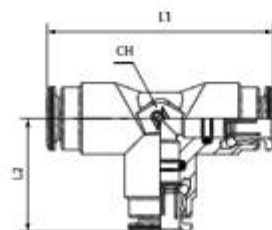
Part No.	Tube	C	L1	L2	CH
84202H-1/4	1/4	10-24 UNC	2.049 (52)	.689 (17,5)	.433 (11)



84230H

UNION TEE

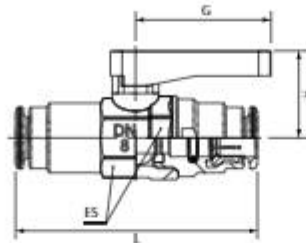
Part No.	Tube	L1	L2	CH	CH2
84230H-1/4	1/4	2.049 (52)	1.023 (26)	.433 (11)	.591 (15)
84230H-3/8	3/8	2.244 (57)	1.103 (28)	.630 (16)	.669 (17)



84320H

BALL VALVE - TUBE X TUBE

Part No.	Tube	L	H	G	ES
84320H-1/4	1/4	2.303 (58.5)	.878 (22.5)	1.378 (35)	.709 (18) - .748 (19)
84320H-3/8	3/8	2.461 (62.5)	.878 (22.5)	1.378 (35)	.709 (18) - .748 (19)



84610H

PLUG

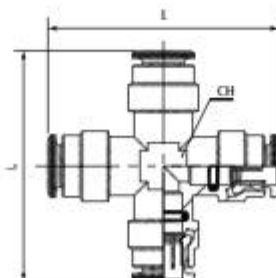
Part No.	Tube	L	H
84610H-1/4	1/4	1.201 (30.5)	.925 (23.5)
84610H-3/8	3/8	1.181 (30)	.867 (22)



84620H

UNION CROSS

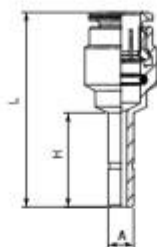
Part No.	Tube	L	CH
84620H-1/4	1/4	2.049 (52)	.512 (13)
84620H-3/8	3/8	2.244 (57)	.669 (17)



84700H

REDUCER

Part No.	Tube	A	L	H
84700H-1/4-3/8	1/4	3/8	1.634 (41.5)	.866 (22)
84700H-3/8-1/4	3/8	1/4	1.909 (48.5)	.925 (23.5)

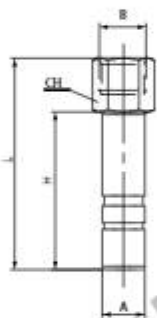


84707H

REDUCER FOR NOZZLE ADAPTER

UNC

Part No.	A	B	L	H	CH
84707H-1/4	1/4	10-24 UNC	1.240 (31.5)	.925 (23.5)	.315 (8)



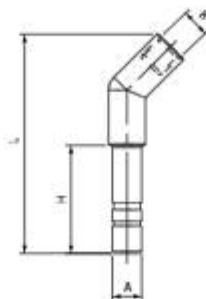
www.sumy.ir

84708H

45° REDUCER FOR NOZZLE ADAPTER

UNC

Part No.	A	B	L	H
84708H-1/4	1/4	10-24 UNC	1.870 (47.5)	.925 (23.5)



60 Series - Metric Swifffit Stainless Fittings

Inch Tube

 60000 Pg. 8.5	 60000 Pg. 8.5	 60110 Pg. 8.5	 60110 Pg. 8.5	 60111X Pg. 8.6	 60111X Pg. 8.6	 60210 Pg. 8.6	 60210 Pg. 8.6	 60211X Pg. 8.7
 60211X Pg. 8.7	 60040 Pg. 8.7	 60050 Pg. 8.7	 60130 Pg. 8.7	 60130X Pg. 8.8	 60230 Pg. 8.8	 60230X Pg. 8.8	 60310X Pg. 8.8	

Metric Tube

 60020 Pg. 8.9	 60115 Pg. 8.9	 60115X Pg. 8.9	 60215 Pg. 8.10	 60215X Pg. 8.10	 60005 Pg. 8.10	 60110 Pg. 8.10	 60111X Pg. 8.11	 60210 Pg. 8.11
 60211X Pg. 8.11	 60040 Pg. 8.11	 60050 Pg. 8.12	 60130 Pg. 8.12	 60130X Pg. 8.12	 60230 Pg. 8.13	 60230X Pg. 8.13	 60310X Pg. 8.13	 60600 Pg. 8.13

62 Series

 62000 Pg. 8.14	 62020 Pg. 8.14	 62040 Pg. 8.14	 62080 Pg. 8.14	 62300 Pg. 8.15	 62310 Pg. 8.15	 62315 Pg. 8.15	 62320 Pg. 8.15	 62325 Pg. 8.15
 62340 Pg. 8.16	 62355 Pg. 8.16	 62360 Pg. 8.16	 62400 Pg. 8.16	 62420 Pg. 8.17	 62430 Pg. 8.17	 62440 Pg. 8.17	 62450 Pg. 8.17	 62500 Pg. 8.17
 62510 Pg. 8.18	 62520 Pg. 8.18	 62540 Pg. 8.18	 62600 Pg. 8.18	 62610 Pg. 8.18				

STAINLESS STEEL PUSH-TO-CONNECT FITTINGS AND ADAPTERS



60-62 Series

60000
62000



TECHNICAL CHARACTERISTICS



Reference Standard

1907/2006
REACH ✓

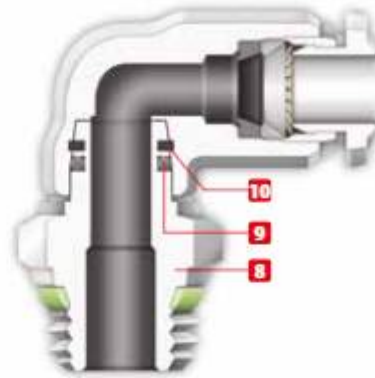
2011/65/CE
RoHS ✓

PED
2014/68/UE

ISO
14743:2004

SILICON
FREE

NSF/ANSI 169
NSF



Pressure Rating

Vacuum ~ 290 PSI
-0.99 bar ~ 20 bar
-0.099 MPa ~ 2.0 MPa



Temperatures Rating

FKM
5° F ~ 392° F
-15° C ~ 200° C



Media

- Compressed Air
- Vacuum
- Water
- Steam



Applications

- Pneumatic Automation
- Automotive
- Textile, Packaging
- Compressed Air Circuit
- Vacuum



Advantages

- 1 The 316L Stainless Steel gripper ensures a tight clamp for tubes of any material without damaging the tube's surface. The secure connection between the tube and the fitting will hold up to severe conditions such as impact and vibrations.
- 2 The shape of the safety ring and the molded seal perfectly seal off the tube, creating a vacuum.
- 3 Series with several types of threads:
SWIFTFIT
 UNF
 BSPP
 BSPT
- 4 All straight fittings can be tightened with an Allen wrench because of our internal hex design. This enables the end user to tighten the fitting in spaces too small for an openend wrench.
- 5 Our rotating Swivel Elbow fittings are equipped with a safety ring that enables the fitting to rotate without losing a tight seal.



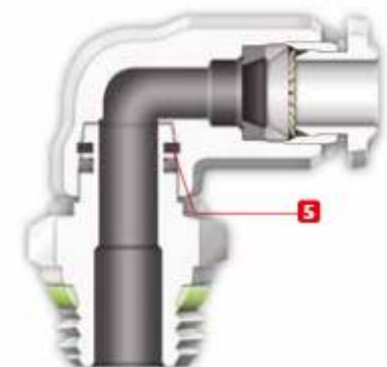
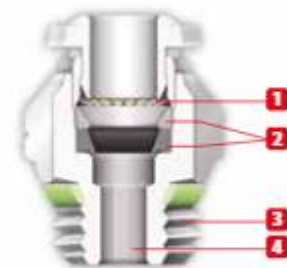
Component Parts and Materials

- 1 Stainless Steel Release Collet
- 2 Stainless Steel Body
- 3 FKM Thread Seal
- 4 Stainless Steel Sleeve
- 5 Stainless Steel Gripper
- 6 Technopolymer Safety Ring
- 7 FKM Molded Seal
- 8 Stainless Steel Thread Body
- 9 FKM Seal
- 10 Safety Ring



Tubing Compatibility

- Nylon 6 - 11 -12
- Polyethylene
- Polyurethane (*98 Shore A for best result)
- PTFE
- FEP



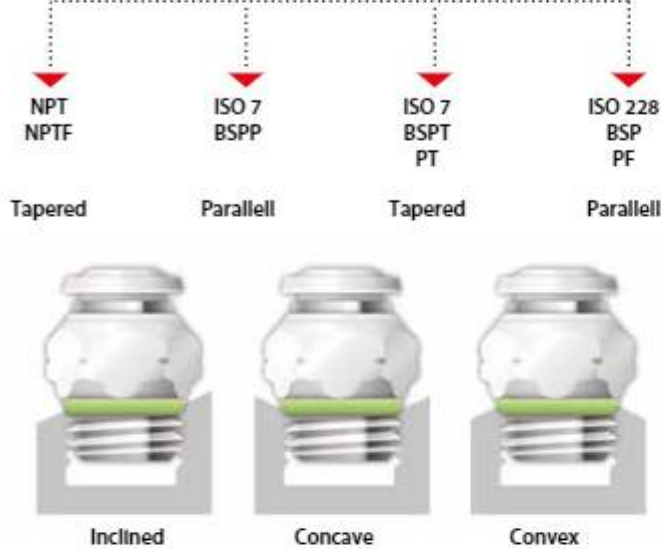


THREADS & ADVANTAGES



SWIFTFIT
Universal thread

One fitting... Endless possibilities



Our **SWIFTFIT** universal fittings also work on non-flat surfaces without compromising an air-tight seal.

The **SWIFTFIT** Universal Thread has been designed to offer the following advantages to the end users:

- Reduced overall length
- Smaller hex dimensions compared to parallel threads
- Fits with various parallel and tapered threads
- All **SWIFTFIT** fittings have been equipped with threads and an NBR thread seal that will universally connect to all thread types.

Torque Specifications

Recommended Torque		
Thread Size	Min.	Max.
1/8	5 Nm	7 Nm
1/4	5 Nm	7 Nm
3/8	5 Nm	7 Nm
1/2	5 Nm	7 Nm



UNF Threads



The **UNF** Thread has been designed to offer the following advantages to the end users:

- Standard USA design
- Designed for use in UNF connections with an Integrated NBR o-ring that provides a perfect seal

Torque Specifications

Recommended Torque		
Thread Size	Min.	Breaking Torque
10/32	0.8 Nm	3.2 Nm



BSPP Threads



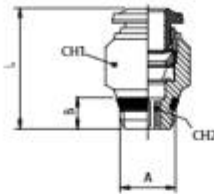
The **BSPP** Thread has been designed to offer the following advantages to the end users:

- Standard ISO 228 and ISO R/262
- Designed for use in BSPP connections with an Integrated NBR o-ring that provides a perfect seal
- Completely reusable

Torque Specifications

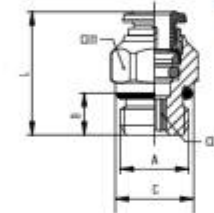
Recommended Torque		
Thread Size	Min.	Breaking torque
M5	0.8 Nm	3.2 Nm
1/2	3 Nm	8 Nm
1/4	9 Nm	30 Nm
3/8	10 Nm	60 Nm
1/2	12 Nm	50 Nm

60000
STRAIGHT MALE



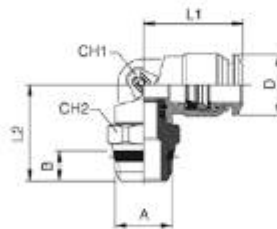
* For part numbers with 10-32 threads

UNF



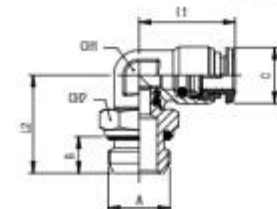
Part No.	Tube	A	B	L	CH1	CH2	C
*60000-53-32	5/32 (4)	10/32	.157 (4)	.826 (21)	.393 (10)	.078 (2)	.314 (8)
60000-53-02	5/32 (4)	1/8	.216 (5,5)	.708 (17,5)	.433 (11)	.118 (3)	-
60000-53-04	5/32 (4)	1/4	.275 (7)	.767 (19,5)	.551 (14)	.118 (3)	-
*60000-04-32	1/4	10/32	.157 (4)	.906 (23)	.472 (12)	.078 (2)	.472 (12)
60000-04-02	1/4	1/8	.334 (8,5)	.925 (23,5)	.511 (13)	.157 (4)	-
60000-04-04	1/4	1/4	.275 (7)	.807 (20,5)	.551 (14)	.157 (4)	-
60000-05-02	5/16 (8)	1/8	.216 (5,5)	.944 (24)	.551 (14)	.196 (5)	-
60000-05-04	5/16 (8)	1/4	.275 (7)	.846 (21,5)	.551 (14)	.236 (6)	-
60000-06-04	3/8	1/4	.275 (7)	1.279 (32,5)	.669 (17)	.275 (7)	-
60000-06-06	3/8	3/8	.295 (7,5)	1.161 (29,5)	.708 (18)	.275 (7)	-
60000-06-08	3/8	1/2	.354 (9)	1.003 (25,5)	.669 (17)	.314 (8)	-
60000-08-06	1/2	3/8	.295 (7,5)	1.220 (31)	.826 (21)	.354 (9)	-
60000-08-08	1/2	1/2	.354 (9)	1.220 (31)	.826 (21)	.393 (10)	-

60110
SWIVEL ELBOW



* For part numbers with 10-32 threads

UNF

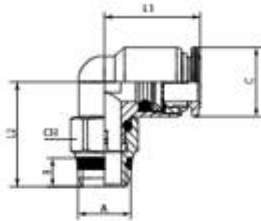


Part No.	Tube	A	B	L1	L2	CH1	CH2	D
*60110-53-32	5/32 (4)	10/32	.157 (4)	.708 (18)	.629 (16)	.354 (9)	.314 (8)	.394 (10)
60110-53-02	5/32 (4)	1/8	.216 (5,5)	.708 (18)	.688 (17,5)	.354 (9)	.511 (13)	.394 (10)
60110-53-04	5/32 (4)	1/4	.275 (7)	.708 (18)	.688 (17,5)	.354 (9)	.551 (14)	.394 (10)
60110-04-02	1/4	1/8	.216 (5,5)	.826 (21)	.748 (19)	.433 (11)	.511 (13)	.492 (12,5)
60110-04-04	1/4	1/4	.275 (7)	.826 (21)	.748 (19)	.433 (11)	.590 (15)	.492 (12,5)
60110-05-02	5/16 (8)	1/8	.216 (5,5)	.885 (22,5)	.826 (21)	.472 (12)	.511 (13)	.571 (14,5)
60110-05-04	5/16 (8)	1/4	.275 (7)	.885 (22,5)	.826 (21)	.472 (12)	.590 (15)	.571 (14,5)
60110-06-04	3/8	1/4	.275 (7)	1.023 (26)	.984 (25)	.629 (16)	.629 (16)	.689 (17,5)
60110-06-06	3/8	3/8	.295 (7,5)	1.023 (26)	.925 (23,5)	.629 (16)	.669 (17)	.689 (17,5)
60110-06-08	3/8	1/2	.354 (9)	1.023 (26)	1.023 (26)	.629 (16)	.826 (21)	.689 (17,5)
60110-08-06	1/2	3/8	.295 (7,5)	1.200 (30,5)	1.003 (25,5)	.748 (19)	.787 (20)	.807 (20,5)
60110-08-08	1/2	1/2	.354 (9)	1.200 (30,5)	1.102 (28)	.748 (19)	.826 (21)	.807 (20,5)

UNTIL THE END STOCK

60111X

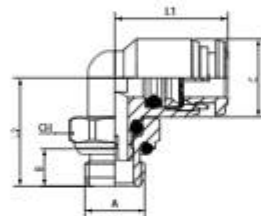
SWIVEL ELBOW



Part No.	Tube	A	B	C	L1	L2	CH
*60111X-53-32	5/32 (4)	10/32	0,157 (4)	0,394 (10)	0,61 (15,5)	0,63 (16)	0,315 (8)
60111X-53-02	5/32 (4)	1/8	0,217 (5,5)	0,394 (10)	0,61 (15,5)	0,61 (15,5)	0,433 (11)
60111X-53-04	5/32 (4)	1/4	0,276 (7)	0,394 (10)	0,61 (15,5)	0,689 (17,5)	0,591 (15)
60111X-04-02	1/4	1/8	0,217 (5,5)	0,492 (12,5)	0,709 (18)	0,669 (17)	0,433 (11)
60111X-04-04	1/4	1/4	0,276 (7)	0,492 (12,5)	0,709 (18)	0,748 (19)	0,591 (15)
60111X-05-02	5/16 (8)	1/8	0,217 (5,5)	0,571 (14,5)	0,787 (20)	0,846 (21,5)	0,472 (12)
60111X-05-04	5/16 (8)	1/4	0,276 (7)	0,571 (14,5)	0,787 (20)	0,846 (21,5)	0,591 (15)
60111X-06-04	3/8	1/4	0,276 (7)	0,669 (17)	0,925 (23,5)	1,004 (25,5)	0,591 (15)
60111X-06-06	3/8	3/8	0,295 (7,5)	0,669 (17)	0,925 (23,5)	0,925 (23,5)	0,669 (17)
60111X-06-08	3/8	1/2	0,354 (9)	0,669 (17)	0,925 (23,5)	1,063 (27)	0,827 (21)
60111X-08-06	1/2	3/8	0,295 (7,5)	0,807 (20,5)	1,083 (27,5)	1,024 (26)	0,669 (17)
60111X-08-08	1/2	1/2	0,354 (9)	0,807 (20,5)	1,083 (27,5)	1,063 (27)	0,827 (21)

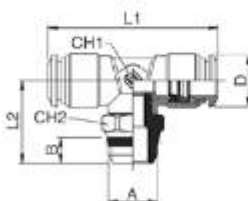
* For part numbers with 10-32 threads

UNF



60210

SWIVEL BRANCH TEE

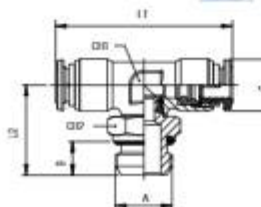


Part No.	Tube	A	B	L1	L2	CH1	CH2	D
*60210-53-32	5/32 (4)	10/32	.157 (4)	1.417 (36)	.629 (16)	.354 (9)	.314 (8)	.394 (10)
60210-53-02	5/32 (4)	1/8	.216 (5,5)	1.417 (36)	.688 (17,5)	.354 (9)	.511 (13)	.394 (10)
60210-53-04	5/32 (4)	1/4	.275 (7)	1.417 (36)	.688 (17,5)	.354 (9)	.590 (15)	.394 (10)
60210-04-02	1/4	1/8	.216 (5,5)	1.653 (42)	.748 (19)	.433 (11)	.511 (13)	.492 (12,5)
60210-04-04	1/4	1/4	.275 (7)	1.653 (42)	.748 (19)	.433 (11)	.590 (15)	.492 (12,5)
60210-05-02	5/16 (8)	1/8	.216 (5,5)	1.771 (45)	.826 (21)	.472 (12)	.511 (13)	.571 (14,5)
60210-05-04	5/16 (8)	1/4	.275 (7)	1.771 (45)	.826 (21)	.472 (12)	.590 (15)	.571 (14,5)
60210-06-04	3/8	1/4	.275 (7)	2.047 (52)	.984 (25)	.629 (16)	.629 (16)	.689 (17,5)
60210-06-06	3/8	3/8	.295 (7,5)	2.047 (52)	.925 (23,5)	.629 (16)	.669 (17)	.689 (17,5)
60210-06-08	3/8	1/2	.354 (9)	2.047 (52)	1.023 (26)	.629 (16)	.826 (21)	.689 (17,5)
60210-08-06	1/2	3/8	.295 (7,5)	2.381 (60,5)	1.003 (25,5)	.748 (19)	.787 (20)	.807 (20,5)
60210-08-08	1/2	1/2	.354 (9)	2.381 (60,5)	1.102 (28)	.748 (19)	.826 (21)	.807 (20,5)

UNTIL THE END STOCK

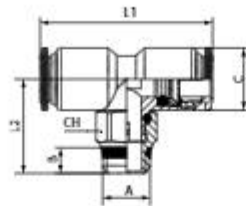
* For part numbers with 10-32 threads

UNF



60211X

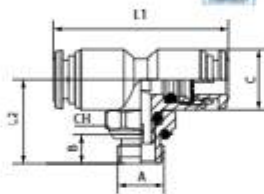
SWIVEL BRANCH TEE



Part No.	Tube	A	B	C	L1	L2	CH
*60211X-53-32	5/32 (4)	10/32	0,157 (4)	0,394 (10)	1,201 (30,5)	0,63 (16)	0,315 (8)
60211X-53-02	5/32 (4)	1/8	0,217 (5,5)	0,394 (10)	1,201 (30,5)	0,61 (15,5)	0,433 (11)
60211X-53-04	5/32 (4)	1/4	0,276 (7)	0,394 (10)	1,201 (30,5)	0,689 (17,5)	0,591 (15)
60211X-04-02	1/4	1/8	0,217 (5,5)	0,492 (12,5)	1,417 (36)	0,669 (17)	0,433 (11)
60211X-04-04	1/4	1/4	0,276 (7)	0,492 (12,5)	1,417 (36)	0,748 (19)	0,591 (15)
60211X-05-02	5/16 (8)	1/8	0,217 (5,5)	0,571 (14,5)	1,575 (40)	0,846 (21,5)	0,472 (12)
60211X-05-04	5/16 (8)	1/4	0,276 (7)	0,571 (14,5)	1,575 (40)	0,846 (21,5)	0,591 (15)
60211X-06-04	3/8	1/4	0,276 (7)	0,669 (17)	1,85 (47)	1,004 (25,5)	0,591 (15)
60211X-06-06	3/8	3/8	0,295 (7,5)	0,669 (17)	1,85 (47)	0,925 (23,5)	0,669 (17)
60211X-06-08	3/8	1/2	0,354 (9)	0,669 (17)	1,85 (47)	1,063 (27)	0,827 (21)
60211X-08-06	1/2	3/8	0,295 (7,5)	0,807 (20,5)	2,165 (55)	1,024 (26)	0,669 (17)
60211X-08-08	1/2	1/2	0,354 (9)	0,807 (20,5)	2,165 (55)	1,063 (27)	0,827 (21)

* For part numbers with 10-32 threads

UNF



60040

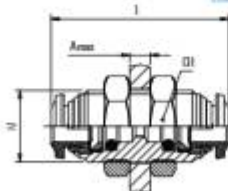
UNION



Part No.	Tube	L	B
60040-53	5/32 (4)	1,220 (31)	,393 (10)
60040-04	1/4	1,377 (35)	,492 (12,5)
60040-05	5/16 (8)	1,437 (36,5)	,570 (14,5)
60040-06	3/8	1,653 (42)	,688 (17,5)
60040-08	1/2	1,889 (48)	,807 (20,5)

60050

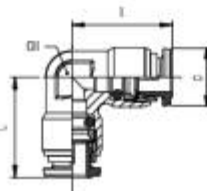
BULKHEAD UNION



Part No.	Tube	M	L	CH	A max
60050-53	5/32 (4)	M12x1	1,220 (31)	,669 (17)	,275 (7)
60050-04	1/4	M14x1	1,377 (35)	,669 (17)	,354 (9)
60050-05	5/16 (8)	M16x1	1,456 (37)	,748 (19)	,413 (10,5)
60050-06	3/8	M20x1	1,653 (42)	1,023 (26)	,492 (12,5)
60050-08	1/2	M22x1	1,889 (48)	1,023 (26)	,649 (16,5)

60130

UNION ELBOW

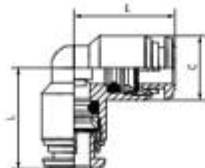


Part No.	Tube	L	CH	C
60130-53	5/32 (4)	,708 (18)	,354 (9)	,394 (10)
60130-04	1/4	,826 (21)	,433 (11)	,492 (12,5)
60130-05	5/16 (8)	,885 (22,5)	,472 (12)	,571 (14,5)
60130-06	3/8	1,023 (26)	,629 (16)	,688 (17,5)
60130-08	1/2	1,200 (30,5)	,748 (19)	,807 (20,5)

UNTIL THE END STOCK

60130X

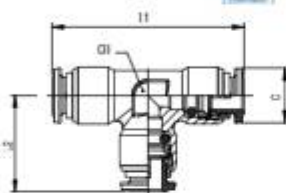
UNION ELBOW



Part No.	Tube	C	L
60130X-53	5/32 (4)	0,394 (10)	0,63 (16)
60130X-04	1/4	0,492 (12,5)	0,768 (19,5)
60130X-05	5/16 (8)	0,571 (14,5)	0,827 (21)
60130X-06	3/8	0,669 (17)	0,998 (25)
60130X-08	1/2	0,807 (20,5)	1,142 (29)

60230

UNION TEE

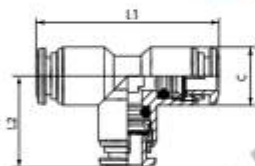


Part No.	Tube	L1	L2	CH	C
60230-53	5/32 (4)	1,417 (36)	,708 (18)	,354 (9)	,394 (10)
60230-04	1/4	1,653 (42)	,826 (21)	,433 (11)	,492 (12,5)
60230-05	5/16 (8)	1,771 (45)	,885 (22,5)	,472 (12)	,571 (14,5)
60230-06	3/8	2,047 (52)	1,023 (26)	,629 (16)	,689 (17,5)
60230-08	1/2	2,381 (60,5)	1,200 (30,5)	,748 (19)	,807 (20,5)

UNTIL THE END STOCK

60230X

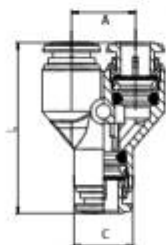
UNION TEE



Part No.	Tube	C	L1	L2
60230X-53	5/32 (4)	0,394 (10)	1,26 (32)	0,63 (16)
60230X-04	1/4	0,492 (12,5)	1,535 (39)	0,768 (19,5)
60230X-05	5/16 (8)	0,571 (14,5)	1,654 (42)	0,827 (21)
60230X-06	3/8	0,669 (17)	1,929 (49)	0,965 (24,5)
60230X-08	1/2	0,807 (20,5)	2,264 (57,5)	1,142 (29)

60310X

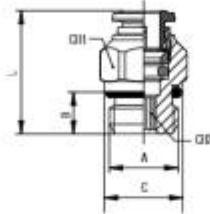
UNION TEE



Part No.	Tube	L	A	C
60310X-53	5/32 (4)	,433 (11)	,394 (10)	1,22 (31)
60310X-05	5/16 (8)	,61 (15,5)	,571 (14,5)	1,575 (40)

316 STAINLESS STEEL PUSH-TO-CONNECT FOR METRIC TUBE

60020
STRAIGHT MALE

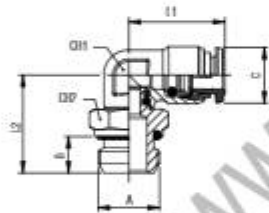


BSPP



Part No.	Tube	A	B	C	L	CH1	CH2
60020-4-M5	5/32 (4)	M5	.157 (4)	.315 (8)	.787 (20)	.394 (10)	.079 (2)
60020-4-1/8	5/32 (4)	1/8	.236 (6)	.512 (13)	.768 (19.5)	.394 (10)	.118 (3)
60020-4-1/4	5/32 (4)	1/4	.315 (8)	.591 (15)	.768 (19.5)	.591 (15)	.118 (3)
60020-6-M5	6	M5	.157 (4)	.394 (10)	.906 (23)	.472 (12)	.079 (2)
60020-6-1/8	6	1/8	.236 (6)	.512 (13)	.925 (23.5)	.512 (13)	.157 (4)
60020-6-1/4	6	1/4	.315 (8)	.591 (15)	.925 (23.5)	.591 (15)	.157 (4)
60020-8-1/8	5/16 (8)	1/8	.236 (6)	.512 (13)	1.004 (25.5)	.551 (14)	.197 (5)
60020-8-1/4	5/16 (8)	1/4	.315 (8)	.591 (15)	.925 (23.5)	.591 (15)	.236 (6)
60020-10-1/4	10	1/4	.315 (8)	.630 (16)	1.181 (30)	.669 (17)	.315 (8)
60020-10-3/8	10	3/8	.354 (9)	.787 (20)	1.063 (27)	.669 (17)	.315 (8)
60020-10-1/2	10	1/2	.394 (10)	.669 (17)	1.181 (30)	.866 (22)	.315 (8)
60020-12-3/8	12	3/8	.354 (9)	.827 (21)	1.339 (34)	.827 (21)	.315 (8)
60020-12-1/2	12	1/2	.394 (10)	.984 (25)	1.27 (31)	.866 (22)	.394 (10)
60020-14-1/2	14	1/2	.394 (10)	.984 (25)	1.26 (32)	.866 (22)	.433 (11)

60115
SWIVEL ELBOW



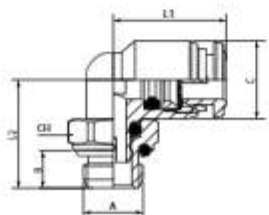
BSPP



Part No.	Tube	A	B	C	L1	L2	CH1	CH2
60115-4-M5	5/32 (4)	M5	.157 (4)	.394 (10)	.709 (18)	.591 (15)	.354 (9)	.315 (8)
60115-4-1/8	5/32 (4)	1/8	.236 (6)	.394 (10)	.709 (18)	.669 (17)	.354 (9)	.512 (13)
60115-4-1/4	5/32 (4)	1/4	.315 (8)	.394 (10)	.709 (18)	.768 (19.5)	.354 (9)	.591 (15)
60115-6-M5	6	M5	.157 (4)	.492 (12.5)	.827 (21)	.709 (18)	.433 (11)	.394 (10)
60115-6-1/8	6	1/8	.236 (6)	.492 (12.5)	.827 (21)	.748 (19)	.433 (11)	.512 (13)
60115-6-1/4	6	1/4	.315 (8)	.492 (12.5)	.827 (21)	.846 (21.5)	.433 (11)	.591 (15)
60115-8-1/8	5/16 (8)	1/8	.236 (6)	.571 (14.5)	.886 (22.5)	.768 (19.5)	.472 (12)	.512 (13)
60115-8-1/4	5/16 (8)	1/4	.315 (8)	.571 (14.5)	.886 (22.5)	.846 (21.5)	.472 (12)	.591 (15)
60115-10-1/4	10	1/4	.315 (8)	.689 (17.5)	1.024 (26)	.906 (23)	.630 (16)	.591 (15)
60115-10-3/8	10	3/8	.354 (9)	.689 (17.5)	1.024 (26)	1.043 (26.5)	.630 (16)	.827 (21)
60115-10-1/2	10	1/2	.394 (10)	.689 (17.5)	1.024 (26)	1.142 (29)	.630 (16)	.866 (22)
60115-12-3/8	12	3/8	.354 (9)	.807 (20.5)	1.201 (30.5)	1.142 (29)	.748 (19)	.827 (21)
60115-12-1/2	12	1/2	.394 (10)	.807 (20.5)	1.201 (30.5)	1.240 (31.5)	.748 (19)	.866 (22)

UNTIL THE END STOCK

60115X
SWIVEL ELBOW



BSPP

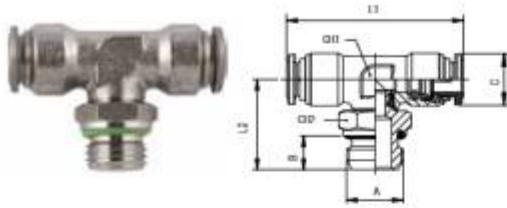


Part No.	Tube	A	B	C	L1	L2	CH
60115X-4-M5	5/32 (4)	M5	.157 (4)	.394 (10)	.61 (15.5)	.63 (16)	.315 (8)
60115X-4-1/8	5/32 (4)	1/8	.236 (6)	.394 (10)	.61 (15.5)	.63 (16)	.512 (13)
60115X-4-1/4	5/32 (4)	1/4	.315 (8)	.394 (10)	.61 (15.5)	.728 (18.5)	.591 (15)
60115X-6-M5	6	M5	.157 (4)	.492 (12.5)	.709 (18)	.689 (17.5)	.315 (8)
60115X-6-1/8	6	1/8	.236 (6)	.492 (12.5)	.709 (18)	.689 (17.5)	.512 (13)
60115X-6-1/4	6	1/4	.315 (8)	.492 (12.5)	.709 (18)	.787 (20)	.591 (15)
60115X-6-3/8	6	3/8	.354 (9)	.492 (12.5)	.709 (18)	.906 (23)	.787 (20)
60115X-8-1/8	5/16 (8)	1/8	.236 (6)	.571 (14.5)	.787 (20)	.906 (23)	.512 (13)
60115X-8-1/4	5/16 (8)	1/4	.315 (8)	.571 (14.5)	.787 (20)	.827 (21)	.591 (15)
60115X-8-3/8	5/16 (8)	3/8	.354 (9)	.571 (14.5)	.787 (20)	.945 (24)	.787 (20)
60115X-10-1/4	10	1/4	.315 (8)	.669 (17)	.925 (23.5)	1.083 (27.5)	.591 (15)
60115X-10-3/8	10	3/8	.354 (9)	.669 (17)	.925 (23.5)	.984 (25)	.787 (20)
60115X-10-1/2	10	1/2	.394 (10)	.669 (17)	.925 (23.5)	1.043 (26.5)	.984 (25)
60115X-12-3/8	12	3/8	.354 (9)	.807 (20.5)	1.083 (27.5)	1.201 (30.5)	.787 (20)
60115X-12-1/2	12	1/2	.394 (10)	.807 (20.5)	1.083 (27.5)	1.122 (28.5)	.984 (25)
60115X-14-1/2	14	1/2	.394 (10)	.846 (21.5)	1.083 (27.5)	1.299 (33)	.984 (25)

60215

SWIVEL BRANCH TEE

BSPP



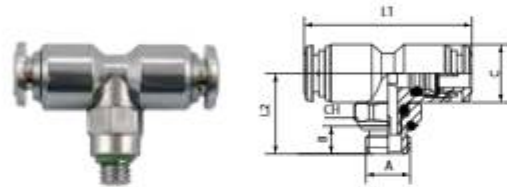
Part No.	Tube	A	B	C	L1	L2	CH1	CH2
60215-4-M5	5/32 (4)	M5	.157 (4)	.394 (10)	1.417 (36)	.591 (15)	.354 (9)	.315 (8)
60215-4-1/8	5/32 (4)	1/8	.236 (6)	.394 (10)	1.417 (36)	.709 (18)	.354 (9)	.512 (13)
60215-4-1/4	5/32 (4)	1/4	.315 (8)	.394 (10)	1.417 (36)	.807 (20,5)	.354 (9)	.591 (15)
60215-6-1/8	6	1/8	.236 (6)	.492 (12,5)	1.654 (42)	.748 (19)	.433 (11)	.512 (13)
60215-6-1/4	6	1/4	.315 (8)	.492 (12,5)	1.654 (42)	.846 (21,5)	.433 (11)	.591 (15)
60215-8-1/8	5/16 (8)	1/8	.236 (6)	.571 (14,5)	1.772 (45)	.787 (20)	.472 (12)	.512 (13)
60215-8-1/4	5/16 (8)	1/4	.315 (8)	.571 (14,5)	1.772 (45)	.866 (22)	.472 (12)	.591 (15)
60215-10-1/4	10	1/4	.315 (8)	.689 (17,5)	2.047 (52)	.925 (23,5)	.630 (16)	.591 (15)
60215-10-3/8	10	3/8	.354 (9)	.689 (17,5)	2.047 (52)	1.063 (27)	.630 (16)	.827 (21)
60215-10-1/2	10	1/2	.394 (10)	.689 (17,5)	2.047 (52)	1.161 (29,5)	.630 (16)	.866 (22)
60215-12-3/8	12	3/8	.354 (9)	.807 (20,5)	2.402 (61)	1.142 (29)	.748 (19)	.827 (21)
60215-12-1/2	12	1/2	.394 (10)	.807 (20,5)	2.402 (61)	1.240 (31,5)	.748 (19)	.866 (22)

UNTIL THE END STOCK

60215X

SWIVEL BRANCH TEE

BSPP

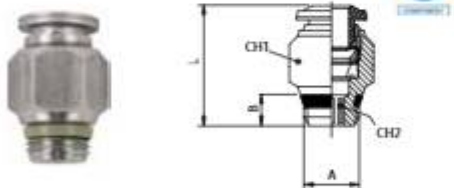


Part No.	Tube	A	B	C	L1	L2	CH
60215X-4-M5	5/32 (4)	M5	.157 (4)	.394 (10)	1.201 (30,5)	.63 (16)	.315 (8)
60215X-4-1/8	5/32 (4)	1/8	.236 (6)	.394 (10)	1.201 (30,5)	.63 (16)	.512 (13)
60215X-4-1/4	5/32 (4)	1/4	.315 (8)	.394 (10)	1.201 (30,5)	.778 (18,5)	.591 (15)
60215X-6-M5	6	M5	.157 (4)	.492 (12,5)	1.417 (36)	.689 (17,5)	.315 (8)
60215X-6-1/8	6	1/8	.236 (6)	.492 (12,5)	1.417 (36)	.689 (17,5)	.512 (13)
60215X-6-1/4	6	1/4	.315 (8)	.492 (12,5)	1.417 (36)	.787 (20)	.591 (15)
60215X-8-1/8	5/16 (8)	1/8	.236 (6)	.571 (14,5)	1.575 (40)	.906 (23)	.512 (13)
60215X-8-1/4	5/16 (8)	1/4	.315 (8)	.571 (14,5)	1.575 (40)	.827 (21)	.591 (15)
60215X-10-1/4	10	1/4	.315 (8)	.669 (17)	1.85 (47)	1.083 (27,5)	.591 (15)
60215X-10-3/8	10	3/8	.354 (9)	.669 (17)	1.85 (47)	.984 (25)	.787 (20)
60215X-10-1/2	10	1/2	.394 (10)	.669 (17)	1.85 (47)	1.043 (26,5)	.984 (25)
60215X-12-3/8	12	3/8	.354 (9)	.807 (20,5)	2.165 (55)	1.201 (30,5)	.787 (20)
60215X-12-1/2	12	1/2	.394 (10)	.807 (20,5)	2.165 (55)	1.122 (28,5)	.984 (25)
60215X-14-1/2	14	1/2	.394 (10)	.846 (21,5)	2.185 (55,5)	1.299 (33)	.984 (25)

60005

STRAIGHT MALE

SWIFTFIT

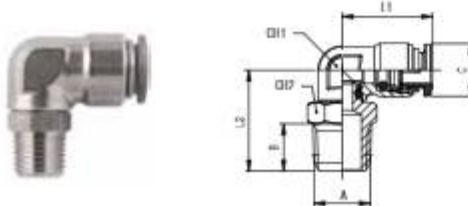


Part No.	Tube	A	B	L	CH1	CH2
60005-53-02	5/32 (4)	1/8	.216 (5,5)	.708 (17,5)	.433 (11)	.118 (3)
60005-53-04	5/32 (4)	1/4	.275 (7)	.767 (19,5)	.551 (14)	.118 (3)
60005-6-1/8	6	1/8	.334 (8,5)	.925 (23,5)	.511 (13)	.157 (4)
60005-6-1/4	6	1/4	.275 (7)	.807 (20,5)	.551 (14)	.157 (4)
60005-05-02	5/16 (8)	1/8	.216 (5,5)	.944 (24)	.551 (14)	.196 (5)
60005-05-04	5/16 (8)	1/4	.275 (7)	.846 (21,5)	.551 (14)	.236 (6)
60005-10-1/4	10	1/4	.275 (7)	1.279 (32,5)	.669 (17)	.275 (7)
60005-10-3/8	10	3/8	.295 (7,5)	1.161 (29,5)	.708 (18)	.275 (7)
60005-10-1/2	10	1/2	.354 (9)	1.024 (26)	.826 (21)	.815 (8)
60005-12-3/8	12	3/8	.295 (7,5)	1.220 (31)	.826 (21)	.354 (9)
60005-12-1/2	12	1/2	.354 (9)	1.220 (31)	.826 (21)	.393 (10)

60110

SWIVEL ELBOW

BSPT

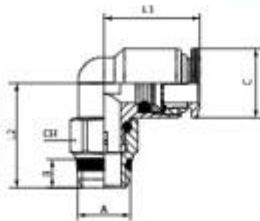


Part No.	Tube	A	B	C	L1	L2	CH1	CH2
60110-4-1/8	5/32 (4)	1/8	.394 (10)	.295 (7,5)	.709 (18)	.689 (17,5)	.354 (9)	.433 (11)
60110-4-1/4	5/32 (4)	1/4	.394 (10)	.433 (11)	.709 (18)	.846 (21,5)	.354 (9)	.551 (14)
60110-6-1/8	6	1/8	.492 (12,5)	.295 (7,5)	.827 (21)	.768 (19,5)	.433 (11)	.433 (11)
60110-6-1/4	6	1/4	.492 (12,5)	.433 (11)	.827 (21)	.925 (23,5)	.433 (11)	.551 (14)
60110-8-1/8	5/16 (8)	1/8	.571 (14,5)	.295 (7,5)	.886 (22,5)	.787 (20)	.472 (12)	.433 (11)
60110-8-1/4	5/16 (8)	1/4	.571 (14,5)	.433 (11)	.886 (22,5)	.945 (24)	.472 (12)	.551 (14)
60110-10-1/4	10	1/4	.689 (17,5)	.433 (11)	1.024 (26)	1.004 (25,5)	.630 (16)	.669 (17)
60110-10-3/8	10	3/8	.689 (17,5)	.453 (11,5)	1.024 (26)	1.063 (27)	.630 (16)	.669 (17)
60110-10-1/2	10	1/2	.689 (17,5)	.551 (14)	1.024 (26)	1.201 (30,5)	.630 (16)	.866 (22)
60110-12-3/8	12	3/8	.807 (20,5)	.453 (11,5)	1.201 (30,5)	1.201 (30,5)	.748 (19)	.709 (18)
60110-12-1/2	12	1/2	.807 (20,5)	.551 (14)	1.201 (30,5)	1.299 (33)	.748 (19)	.866 (22)

UNTIL THE END STOCK

60111X

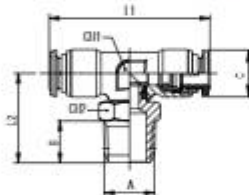
SWIVEL ELBOW



Part No.	Tube	A	B	C	L1	L2	CH
60111X-53-02	5/32 (4)	1/8	0,217 (5,5)	0,394 (10)	0,61 (15,5)	0,61 (15,5)	0,433 (11)
60111X-53-04	5/32 (4)	1/4	0,276 (7)	0,394 (10)	0,61 (15,5)	0,689 (17,5)	0,591 (15)
60111X-6-1/8	6	1/8	0,217 (5,5)	0,492 (12,5)	0,709 (18)	0,669 (17)	0,433 (11)
60111X-6-1/4	6	1/4	0,276 (7)	0,492 (12,5)	0,709 (18)	0,748 (19)	0,591 (15)
60111X-05-02	5/16 (8)	1/8	0,217 (5,5)	0,571 (14,5)	0,787 (20)	0,846 (21,5)	0,472 (12)
60111X-05-04	5/16 (8)	1/4	0,276 (7)	0,571 (14,5)	0,787 (20)	0,846 (21,5)	0,591 (15)
60111X-10-1/4	10	1/4	0,276 (7)	0,669 (17)	0,925 (23,5)	1,004 (25,5)	0,591 (15)
60111X-10-3/8	10	3/8	0,295 (7,5)	0,669 (17)	0,925 (23,5)	0,925 (23,5)	0,669 (17)
60111X-10-1/2	10	1/2	0,354 (9)	0,669 (17)	0,925 (23,5)	1,063 (27)	0,827 (21)
60111X-12-3/8	12	3/8	0,295 (7,5)	0,807 (20,5)	1,083 (27,5)	1,024 (26)	0,669 (17)
60111X-12-1/2	12	1/2	0,354 (9)	0,807 (20,5)	1,083 (27,5)	1,063 (27)	0,827 (21)

60210

SWIVEL BRANCH TEE

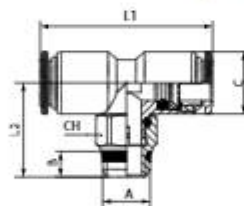


Part No.	Tube	A	B	C	L1	L2	CH1	CH2
60210-4-1/8	5/32 (4)	1/8	,295 (7,5)	,394 (10)	1,417 (36)	,728 (18,5)	,354 (9)	,433 (11)
60210-4-1/4	5/32 (4)	1/4	,433 (11)	,394 (10)	1,417 (36)	,886 (22,5)	,354 (9)	,551 (14)
60210-6-1/8	6	1/8	,295 (7,5)	,492 (12,5)	1,654 (42)	,768 (19,5)	,433 (11)	,433 (11)
60210-6-1/4	6	1/4	,433 (11)	,492 (12,5)	1,654 (42)	,925 (23,5)	,433 (11)	,551 (14)
60210-8-1/8	5/16 (8)	1/8	,295 (7,5)	,571 (14,5)	1,772 (45)	,807 (20,5)	,472 (12)	,433 (11)
60210-8-1/4	5/16 (8)	1/4	,433 (11)	,571 (14,5)	1,772 (45)	,965 (24,5)	,472 (12)	,551 (14)
60210-10-1/4	10	1/4	,433 (11)	,689 (17,5)	2,047 (52)	1,024 (26)	,630 (16)	,551 (14)
60210-10-3/8	10	3/8	,453 (11,5)	,689 (17,5)	2,047 (52)	1,083 (27,5)	,630 (16)	,669 (17)
60210-10-1/2	10	1/2	,551 (14)	,689 (17,5)	2,047 (52)	1,220 (31)	,630 (16)	,866 (22)
60210-12-3/8	12	3/8	,453 (11,5)	,807 (20,5)	2,402 (61)	1,201 (30,5)	,748 (19)	,709 (18)
60210-12-1/2	12	1/2	,551 (14)	,807 (20,5)	2,402 (61)	1,299 (33)	,748 (19)	,866 (22)

UNTIL THE END STOCK

60211X

SWIVEL BRANCH TEE



Part No.	Tube	A	B	C	L1	L2	CH
60211X-53-02	5/32 (4)	1/8	0,217 (5,5)	0,394 (10)	1,201 (30,5)	0,61 (15,5)	0,433 (11)
60211X-53-04	5/32 (4)	1/4	0,276 (7)	0,394 (10)	1,201 (30,5)	0,689 (17,5)	0,591 (15)
60211X-6-1/8	6	1/8	0,217 (5,5)	0,492 (12,5)	1,417 (36)	0,669 (17)	0,433 (11)
60211X-6-1/4	6	1/4	0,276 (7)	0,492 (12,5)	1,417 (36)	0,748 (19)	0,591 (15)
60211X-05-02	5/16 (8)	1/8	0,217 (5,5)	0,571 (14,5)	1,575 (40)	0,846 (21,5)	0,472 (12)
60211X-05-04	5/16 (8)	1/4	0,276 (7)	0,571 (14,5)	1,575 (40)	0,846 (21,5)	0,591 (15)
60211X-10-1/4	10	1/4	0,276 (7)	0,669 (17)	1,85 (47)	1,004 (25,5)	0,591 (15)
60211X-10-3/8	10	3/8	0,295 (7,5)	0,669 (17)	1,85 (47)	0,925 (23,5)	0,669 (17)
60211X-10-1/2	10	1/2	0,354 (9)	0,669 (17)	1,85 (47)	1,063 (27)	0,827 (21)
60211X-12-3/8	12	3/8	0,295 (7,5)	0,807 (20,5)	2,165 (55)	1,024 (26)	0,669 (17)
60211X-12-1/2	12	1/2	0,354 (9)	0,807 (20,5)	2,165 (55)	1,063 (27)	0,827 (21)

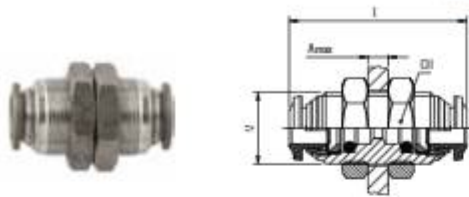
60040

UNION



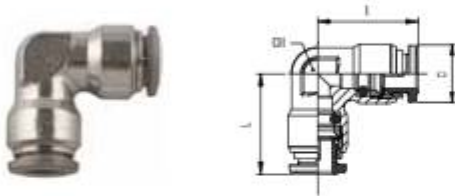
Part No.	Tube	L	B
60040-53	5/32(4)	1,22 (31)	,413 (10,5)
60040-6-53	6-5/32(4)	1,22 (31)	,492 (12,5)
60040-6	6	1,378 (35)	,492 (12,5)
60040-05-6	5/16(8)-6	1,358 (34,5)	,571 (14,5)
60040-05	5/16(8)	1,437 (36,5)	,571 (14,5)
60040-10-05	10-5/16(8)	1,496 (38)	,689 (17,5)
60040-10	10	1,654 (42)	,689 (17,5)
60040-12-10	12-10	1,732 (44)	,807 (20,5)
60040-12	12	1,89 (48)	,807 (20,5)
60040-14	14	1,752 (44,5)	,846 (21,5)

60050
BULKHEAD UNION



Part No.	Tube	M	L	CH	A max
60050-53	5/32 (4)	M12x1	1.220 (31)	.669 (17)	.275 (7)
60050-6	6	M14x1	1.377 (35)	.669 (17)	.374 (9,5)
60050-05	5/16 (8)	M16x1	1.456 (37)	.748 (19)	.413 (10,5)
60050-10	10	M20x1	1.653 (42)	1.023 (26)	.492 (12,5)
60050-12	12	M22x1	1.889 (48)	1.023 (26)	.649 (16,5)

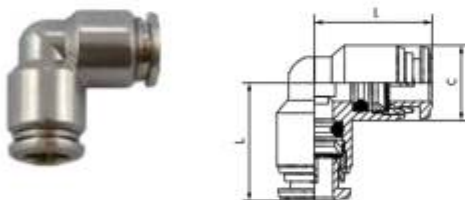
60130
UNION ELBOW



Part No.	Tube	L	CH	C
60130-53	5/32 (4)	.708 (18)	.354 (9)	.394 (10)
60130-6	6	.826 (21)	.433 (11)	.492 (12,5)
60130-05	5/16 (8)	.885 (22,5)	.472 (12)	.571 (14,5)
60130-10	10	1.023 (26)	.629 (16)	.688 (17,5)
60130-12	12	1.200 (30,5)	.748 (19)	.807 (20,5)

UNTIL THE END STOCK

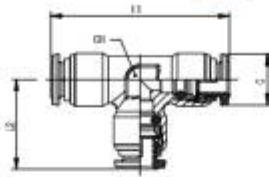
60130X
UNION ELBOW



Part No.	Tube	CH	C
60130X-53	5/32 (4)	.394 (10)	.63 (16)
60130X-6	6	.492 (12,5)	.768 (19,5)
60130X-05	5/16 (8)	.571 (14,5)	.827 (21)
60130X-10	10	.669 (17)	.965 (24,5)
60130X-12	12	.807 (20,5)	1.142 (29)
60130X-14	14	.846 (21,5)	1.122 (28,5)

60230

UNION TEE

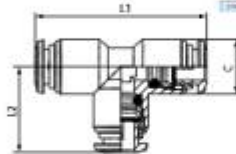


Part No.	Tube	L1	L2	CH	C
60230-53	5/32 (4)	1.417 (36)	.708 (18)	.354 (9)	.394 (10)
60230-6	6	1.653 (42)	.826 (21)	.433 (11)	.492 (12,5)
60230-05	5/16 (8)	1.771 (45)	.885 (22,5)	.472 (12)	.571 (14,5)
60230-10	10	2.047 (52)	1.023 (26)	.630 (16)	.689 (17,5)
60230-12	12	2.381 (60,5)	1.200 (30,5)	.748 (19)	.807 (20,5)

UNTIL THE END STOCK

60230X

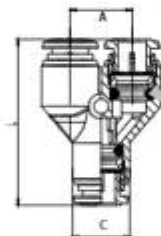
UNION TEE



Part No.	Tube	L1	L2	C
60230X-53	5/32 (4)	.394 (10)	1.26 (32)	.630 (16)
60230X-6	6	.492 (12,5)	1.535 (39)	.768 (19,5)
60230X-05	5/16 (8)	.571 (14,5)	1.654 (42)	.827 (21)
60230X-10	10	.669 (17)	1.929 (49)	.965 (24,5)
60230X-12	12	.807 (20,5)	2.264 (57,5)	1.142 (29)
60230X-14	14	.846 (21,5)	2.264 (57,5)	1.122 (28,5)

60310X

UNION TEE



Part No.	Tube	L	A	C
60310X-53	5/32(4)	.433 (11)	.394 (10)	1.22 (31)
60310X-6	6	.531 (13,5)	.492 (12,5)	1.417 (36)
60310X-05	5/16(8)	.61 (15,5)	.571 (14,5)	1.575 (40)
60310X-10	10	1.870 (47,5)	.729 (18,5)	.669 (17)
60310X-12	12	2.224 (56,5)	.846 (21,5)	.807 (20,5)

60600

STANDPIPE



Part No.	D	A	B	L	L1	CH
60600-6-1/8	6	1/8	.236 (6)	1.122 (28,5)	.669 (17)	.512 (13)
60600-8-1/4	5/16 (8)	1/4	.315 (8)	1.240 (31,5)	.709 (18)	.630 (16)
60600-10-1/4	10	1/4	.315 (8)	1.398 (35,5)	.866 (22)	.630 (16)
60600-10-3/8	10	3/8	.354 (9)	1.476 (37,5)	.866 (22)	.787 (20)
60600-12-3/8	12	3/8	.354 (9)	1.575 (40)	.965 (24,5)	.787 (20)
60600-12-1/2	12	1/2	.394 (10)	1.673 (42,5)	.965 (24,5)	.945 (24)



TECHNICAL CHARACTERISTICS



Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/EU

SILICON
FREE

NSF/ANSI 169
NSF



Media

- Compressed Air
- Fluids for food and chemical industry compatible with component specifications



Threads

- BSPT
- BSPP
- Metric screw thread conforming with ISO R/262



Pressure Rating

- 14 ~ 290 PSI
- 0.99 bar ~ 20 bar
- 0.099 MPa ~ 2.0 MPa

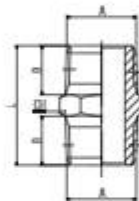


Temperatures Rating

- FKM
- 166° F ~ 572° F
- 110° C ~ 300° C

62000

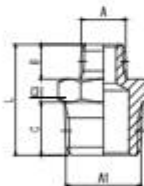
HEX NIPPLE



Part No.	A BSPT	B BSPT	L	CH
62000-1/8	1/8	.295 (7,5)	.768 (19,5)	.433 (11)
62000-1/4	1/4	.433 (11)	1.063 (27)	.551 (14)
62000-3/8	3/8	.453 (11,5)	1.102 (28)	.669 (17)
62000-1/2	1/2	.551 (14)	1.319 (33,5)	.866 (22)
62000-3/4	3/4	.650 (16,5)	1.575 (40)	1.063 (27)

62020

REDUCER NIPPLE



Part No.	A BSPT	A1 BSPT	B	C	L	CH
62020-1/8-1/4	1/8	1/4	.295 (7,5)	.433 (11)	.925 (23,5)	.551 (14)
62020-1/8-3/8	1/8	3/8	.295 (7,5)	.453 (11,5)	.945 (24)	.669 (17)
62020-1/4-3/8	1/4	3/8	.433 (11)	.453 (11,5)	1.083 (27,5)	.669 (17)
62020-1/4-1/2	1/4	1/2	.433 (11)	.551 (14)	1.201 (30,5)	.866 (22)
62020-3/8-1/2	3/8	1/2	.453 (11,5)	.551 (14)	1.220 (31)	.866 (22)
62020-1/2-3/4	1/2	3/4	.551 (14)	.650 (16,5)	1.476 (37,5)	1.063 (27)

62040

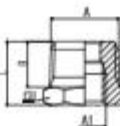
REDUCER (TAPER)



Part No.	A BSPT	A1 BSPP	B	L	CH
62040-1/8-1/4	1/8	1/4	.295 (7,5)	.866 (22)	.669 (17)
62040-1/4-3/8	1/4	3/8	.433 (11)	1.063 (27)	.866 (22)
62040-1/4-1/2	1/4	1/2	.433 (11)	1.181 (30)	.945 (24)
62040-3/8-1/2	3/8	1/2	.453 (11,5)	1.201 (30,5)	.945 (24)
62040-1/2-3/4	1/2	3/4	.551 (14)	1.378 (35)	1.260 (32)

62080

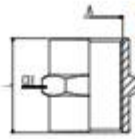
REDUCER (TAPER)



Part No.	A BSPP	A1 BSPP	B	L	CH
62080-1/4-1/8	1/4	1/8	.433 (11)	.630 (16)	.551 (14)
62080-3/8-1/8	3/8	1/8	.453 (11,5)	.650 (16,5)	.669 (17)
62080-3/8-1/4	3/8	1/4	.453 (11,5)	.650 (16,5)	.669 (17)
62080-1/2-1/4	1/2	1/4	.551 (14)	.768 (19,5)	.866 (22)
62080-1/2-3/8	1/2	3/8	.551 (14)	.768 (19,5)	.866 (22)
62080-3/4-1/2	3/4	1/2	.650 (16,5)	.925 (23,5)	1.063 (27)

62300

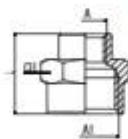
FEMALE COUPLER



Part No.	A BSPP	L	CH
62300-1/8	1/8	.591 (15)	.551 (14)
62300-1/4	1/4	.866 (22)	.669 (17)
62300-3/8	3/8	.945 (24)	.866 (22)
62300-1/2	1/2	1.181 (30)	1.063 (27)
62300-3/4	3/4	1.260 (32)	1.260 (32)

62310

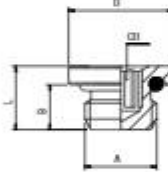
REDUCER COUPLER



Part No.	A BSPP	A1	L	CH
62310-1/8-1/4	1/8	1/4	.748 (19)	.669 (17)
62310-1/4-3/8	1/4	3/8	.906 (23)	.866 (22)
62310-3/8-1/2	3/8	1/2	1.083 (27,5)	.945 (24)
62310-1/2-3/4	1/2	3/4	1.381 (30)	1.381 (30)

62315

MALE PLUG WITH INTERNAL HEX

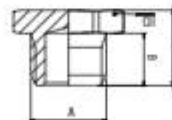


Part No.	A BSPP	B	L	D	CH
62315-M5	M5	.157 (4)	.236 (6)	.315 (8)	.079 (2)
62315-M7	M7	.197 (5)	.295 (7,5)	.374 (9,5)	.118 (3)
62315-1/8	1/8	.236 (6)	.335 (8,5)	.551 (14)	.197 (5)
62315-1/4	1/4	.315 (8)	.433 (11)	.709 (18)	.236 (6)
62315-3/8	3/8	.354 (9)	.492 (12,5)	.787 (20)	.315 (8)
62315-1/2	1/2	.394 (10)	.531 (13,5)	.984 (25)	.394 (10)

Temperature	min	max
	- 15 °C	+ 190 °C
	5 °F	374 °F

62320

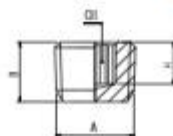
MALE PLUG



Part No.	A BSPP	B	L	CH
62320-1/8	1/8	.256 (6,5)	.394 (10)	.551 (14)
62320-1/4	1/4	.354 (9)	.512 (13)	.669 (17)
62320-3/8	3/8	.374 (9,5)	.531 (13,5)	.748 (19)
62320-1/2	1/2	.394 (10)	.571 (14,5)	.945 (24)
62320-3/4	3/4	.433 (11)	.630 (16)	1.181 (30)

62325

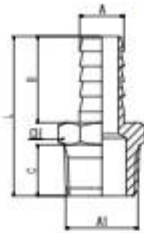
MALE PLUG DIN 906



Part No.	A BSPT	B	H	CH
62325-1/8	1/8	.295 (7,5)	.197 (5)	.197 (5)
62325-1/4	1/4	.394 (10)	.276 (7)	.236 (6)
62325-3/8	3/8	.433 (11)	.276 (7)	.315 (8)
62325-1/2	1/2	.512 (13)	.315 (8)	.394 (10)

62340

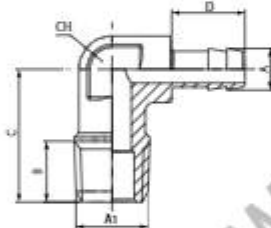
MALE HOSE ADAPTER



Part No.	A	A1 BSPT	B	C	L	CH
62340-6-1/8	6	1/8	.768 (19,5)	.295 (7,5)	1.260 (32)	.433 (11)
62340-7-1/8	7	1/8	.768 (19,5)	.295 (7,5)	1.260 (32)	.433 (11)
62340-7-1/4	7	1/4	.768 (19,5)	.433 (11)	1.398 (35,5)	.551 (14)
62340-8-1/4	8	1/4	.768 (19,5)	.433 (11)	1.398 (35,5)	.551 (14)
62340-9-1/4	9	1/4	.768 (19,5)	.433 (11)	1.398 (35,5)	.551 (14)
62340-9-3/8	9	3/8	.768 (19,5)	.453 (11,5)	1.417 (36)	.669 (17)
62340-10-1/4	10	1/4	.768 (19,5)	.433 (11)	1.398 (35,5)	.551 (14)
62340-10-3/8	10	3/8	.768 (19,5)	.453 (11,5)	1.417 (36)	.669 (17)
62340-10-1/2	10	1/2	.768 (19,5)	.551 (14)	1.535 (39)	.866 (22)
62340-12-1/4	12	1/4	.768 (19,5)	.433 (11)	1.398 (35,5)	.551 (14)
62340-12-3/8	12	3/8	.768 (19,5)	.453 (11,5)	1.417 (36)	.669 (17)
62340-12-1/2	12	1/2	.768 (19,5)	.551 (14)	1.535 (39)	.866 (22)
62340-14-3/8	14	3/8	.768 (19,5)	.453 (11,5)	1.417 (36)	.669 (17)
62340-14-1/2	14	1/2	.768 (19,5)	.551 (14)	1.535 (39)	.866 (22)
62340-16-1/2	16	1/2	.768 (19,5)	.551 (14)	1.535 (39)	.866 (22)
62340-18-1/2	18	1/2	.768 (19,5)	.551 (14)	1.535 (39)	.866 (22)
62340-18-3/4	18	3/4	.768 (19,5)	.650 (16,5)	1.713 (43,5)	1.063 (27)
62340-20-1/2	20	1/2	.768 (19,5)	.551 (14)	1.535 (39)	.866 (22)
62340-20-3/4	20	3/4	.768 (19,5)	.531 (13,5)	1.575 (40)	1.063 (27)

62355

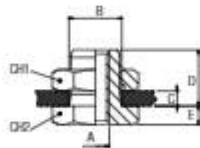
MALE HOSE ADAPTER ELBOW



Part No.	A	A1 BSPT	B	C	D	CH
623550044BS00	6	1/8	.295 (7,5)	.709 (18)	.519 (13,2)	.394 (10)
623550044BT00	6	1/4	.433 (11)	.945 (24)	.519 (13,2)	.472 (12)
623550044BZ00	7	1/8	.295 (7,5)	.709 (18)	.519 (13,2)	.394 (10)
623550044BX00	7	1/4	.433 (11)	.945 (24)	.519 (13,2)	.472 (12)
623550044CB00	9	1/4	.433 (11)	.945 (24)	.519 (13,2)	.472 (12)

62360

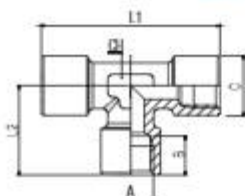
BULKHEAD CONNECTOR



Part No.	A BSPP	B	C	D	E	CH1	CH2
62360-1/8	1/8	.649 (16,5)	.354 (9)	.551 (14)	.157 (4)	0.866 (22)	.748 (19)
62360-1/4	1/4	.807 (20,5)	.590 (15)	.826 (21)	.157 (4)	1.063 (27)	.945 (24)
62360-3/8	3/8	1.043 (26,5)	.551 (14)	.826 (21)	.197 (5)	1.260 (32)	1.181 (30)
62360-1/2	1/2	1.122 (28,5)	.787 (20)	1.063 (27)	.236 (6)	1.417 (36)	1.260 (32)
62360-3/4	3/4	1.358 (34,5)	.886 (22,5)	1.181 (30)	.236 (6)	1.614 (41)	1.614 (41)
62360-1	1"	1.673 (42,5)	.964 (24,5)	1.338 (34)	.315 (8)	1.968 (50)	1.811 (46)

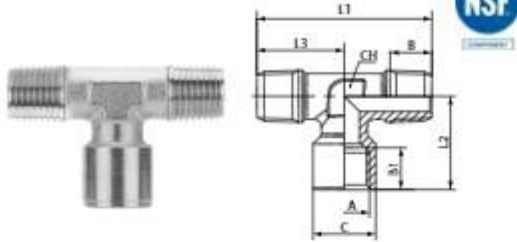
62400

FEMALE TEE



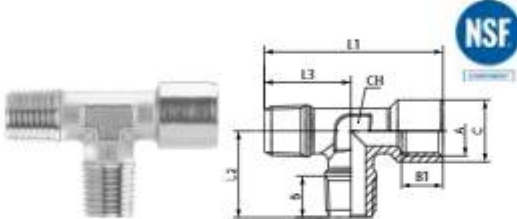
Part No.	A BSPP	B	C	L1	L2	CH
62400-1/8	1/8	.335 (8,5)	.512 (13)	1.457 (37)	.728 (18,5)	.472 (12)
62400-1/4	1/4	.433 (11)	.650 (16,5)	1.929 (49)	.965 (24,5)	.472 (12)
62400-3/8	3/8	.472 (12)	.807 (20,5)	2.126 (54)	1.063 (27)	.591 (15)
62400-1/2	1/2	.591 (15)	1.004 (25,5)	2.520 (64)	1.260 (32)	.787 (20)

62420
CENTRE LEG FEMALE TEE



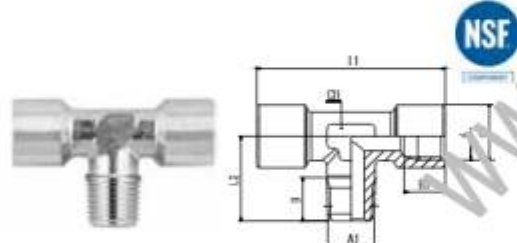
Part No.	A BSPP	B	B1	C	L1	L2	L3	CH
62420-1/8	1/8	.295 (7,5)	.335 (8,5)	.512 (13)	1.417 (36)	.728 (18,5)	.708 (18)	.472 (12)
62420-1/4	1/4	.433 (11)	.433 (11)	.650 (16,5)	1.811 (46)	.965 (24,5)	.906 (23)	.472 (12)
62420-3/8	3/8	.453 (11,5)	.472 (12)	.807 (20,5)	2.007 (51)	1.141 (29)	1.004 (25,5)	.591 (15)
62420-1/2	1/2	.551 (14)	.591 (15)	1.004 (25,5)	2.322 (59)	1.340 (34)	1.161 (29,5)	.787 (20)

62430
OFF SET MALE TEE



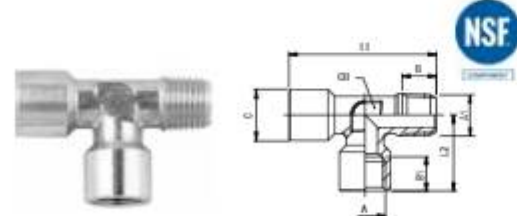
Part No.	A BSPP	B	B1	C	L1	L2	L3	CH
62430-1/8	1/8	.295 (7,5)	.335 (8,5)	.512 (13)	1.437 (36,5)	.708 (18)	.708 (18)	.472 (12)
62430-1/4	1/4	.433 (11)	.433 (11)	.650 (16,5)	1.869 (47,5)	.906 (23)	.906 (23)	.472 (12)
62430-3/8	3/8	.453 (11,5)	.472 (12)	.807 (20,5)	2.067 (52,5)	1.083 (27,5)	1.004 (25,5)	.591 (15)
62430-1/2	1/2	.551 (14)	.591 (15)	1.004 (25,5)	2.422 (61,5)	1.220 (31,5)	1.161 (29,5)	.787 (20)

62440
MALE TEE



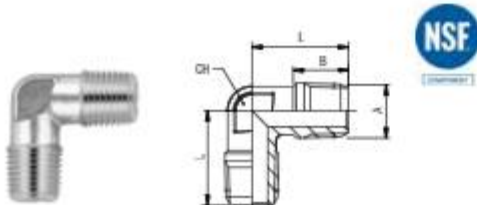
Part No.	A BSPP	A1 BSPT	B	B1	C	L1	L2	CH
62440-1/8	1/8	1/8	.295 (7,5)	.335 (8,5)	.689 (17,5)	1.457 (37)	.689 (17,5)	.472 (12)
62440-1/4	1/4	1/4	.433 (11)	.433 (11)	.906 (23)	1.929 (49)	.906 (23)	.472 (12)
62440-3/8	3/8	3/8	.453 (11,5)	.472 (12)	1.004 (25,5)	2.126 (54)	1.004 (25,5)	.591 (15)
62440-1/2	1/2	1/2	.551 (14)	.591 (15)	1.161 (29,5)	2.52 (64)	1.161 (29,5)	.787 (20)

62450
MALE RUN TEE



Part No.	A BSPP	A1 BSPT	B	B1	C	L1	L2	CH
62450-1/8	1/8	1/8	.295 (7,5)	.335 (8,5)	.728 (18,5)	1.417 (36)	.728 (18,5)	.472 (12)
62450-1/4	1/4	1/4	.433 (11)	.433 (11)	.965 (24,5)	1.87 (47,5)	.965 (24,5)	.472 (12)
62450-3/8	3/8	3/8	.453 (11,5)	.472 (12)	1.063 (27)	2.067 (52,5)	1.063 (27)	.591 (15)
62450-1/2	1/2	1/2	.551 (14)	.591 (15)	1.26 (32)	2.421 (61,5)	1.260 (32)	.787 (20)

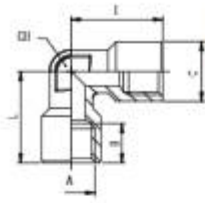
62500
ELBOW M X M



Part No.	A BSPP	B	L	CH
62500-1/8	1/8	.295 (7,5)	.709 (18)	.394 (10)
62500-1/4	1/4	.433 (11)	.945 (24)	.472 (12)
62500-3/8	3/8	.453 (11,5)	1.063 (27)	.591 (15)
62500-1/2	1/2	.551 (14)	1.161 (29,5)	.787 (20)

62510

ELBOW FM X FM



Part No.	A BSPP	C	B	L	CH
62510-1/8	1/8	.512 (13)	.335 (8,5)	.827 (21)	.394 (10)
62510-1/4	1/4	.65 (16,5)	.433 (11)	1.004 (25,5)	.472 (12)
62510-3/8	3/8	.807 (20,5)	.472 (12)	1.102 (28)	.591 (15)
62510-1/2	1/2	1.004 (25,5)	.591 (15)	1.260 (32)	.787 (20)

62520

ELBOW ML X FM



Part No.	A BSPP	A1 BSPT	B	B1	C	L1	L2	CH
62520-1/8	1/8	1/8	.295 (7,5)	.335 (8,5)	.827 (21)	.709 (18)	.827 (21)	.394 (10)
62520-1/4	1/4	1/4	.433 (11)	.433 (11)	1.004 (25,5)	.945 (24)	1.004 (25,5)	.472 (12)
62520-3/8	3/8	3/8	.453 (11,5)	.472 (12)	1.102 (28)	1.063 (27)	1.102 (28)	.591 (15)
62520-1/2	1/2	1/2	.551 (14)	.591 (15)	1.260 (32)	1.161 (29,5)	1.260 (32)	.787 (20)

62540

BREATHER VENT



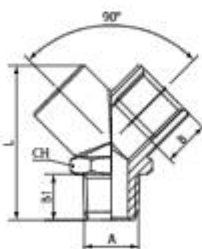
Part No.	A BSPP	H	CH	dB*
62540-1/8	1/8	.591 (15)	.551 (14)	73
62540-1/4	1/4	.591 (15)	.669 (17)	74
62540-3/8	3/8	.709 (18)	.866 (22)	86
62540-1/2	1/2	.866 (22)	1.063 (27)	80

	min	max
Temperature	-20 °C -4 °F	+300 °C 572 °F
Pressure		10 bar
Filtration threshold		70 µm

dB* Acoustic fading at 6 bar

62600

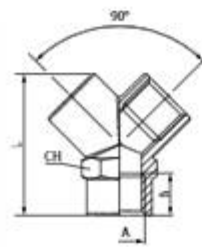
CENTRAL MALE Y 90°



Part No.	A BSPP	B	B1	L	CH
62600-1/4	1/4	.433 (11)	.433 (11)	1.457 (37)	.669 (17)
62600-3/8	3/8	.453 (11,5)	.492 (12,5)	1.811 (46)	.866 (22)
62600-1/2	1/2	.551 (14)	.65 (16,5)	2.285 (58)	1.023 (26)

62610

FEMALE Y 90°



Part No.	A BSPP	B	L	CH
62610-1/4	1/4	.433 (11)	1.457 (37)	.669 (17)
62610-3/8	3/8	.433 (11)	1.811 (46)	.866 (22)
62610-1/2	1/2	.551 (14)	2.285 (58)	1.023 (26)

Functional Series



Functional Series

PTF-SAE- EXTRA SHORT



Flow Regulators - Quick Exhaust Valves - Slide Valves - Unidirectional Valves Or Non Return Valves Block Valves



FUNCTIONAL FITTINGS



Functional Series

FLOW CONTROL VALVES



TECHNICAL CHARACTERISTICS



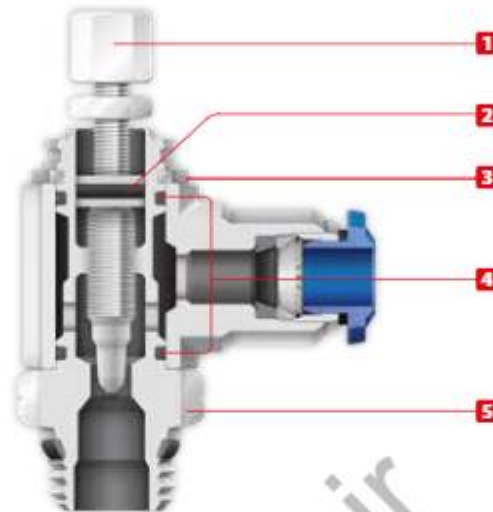
Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

ISO
14743:2004



Pressure Rating

Vacuum ~ 250 PSI
-0.99 bar ~ 20 bar
-0.099 MPa ~ 2.0 MPa



Temperatures Rating

NBR
-4° F ~ 176° F
-20° C ~ 80° C



Media

• Compressed Air



Component Parts and Materials

- 1 Nickel Plated Brass Adjustment Screw
- 2 NBR 70 O-Ring
- 3 303 Stainless Steel Shaft Clip
- 4 NBR 70 O-Ring
- 5 Nickel Plated Brass Body

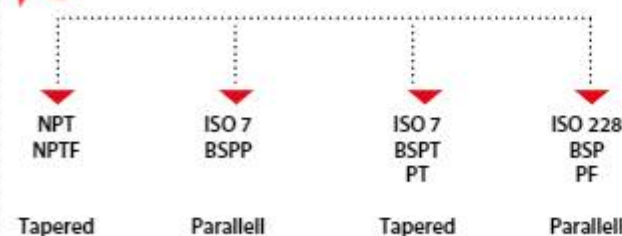


Tubing Compatibility

Nylon 11
Nylon 12
Polyethylene
Polyurethane



Threads & Advantages



Advantages

The **SWIFFFIT** Universal Thread has been designed to offer the following advantages to the end users:

- Reduced overall length
- Smaller hex dimensions compared to parallel threads
- Fits with various parallel and tapered threads

Our **SWIFFFIT** universal fittings also work on non-flat surfaces without compromising an air-tight seal.



PTF Thread



The PTF Thread has been designed to offer the following advantages to the end users:

- Standard USA design. PTF/SAE extra short thread
- Designed for connections with an NPTF thread
- Dryseal pipe threads are designed for applications where clearance is not sufficient for the full thread length of NPTF threads.

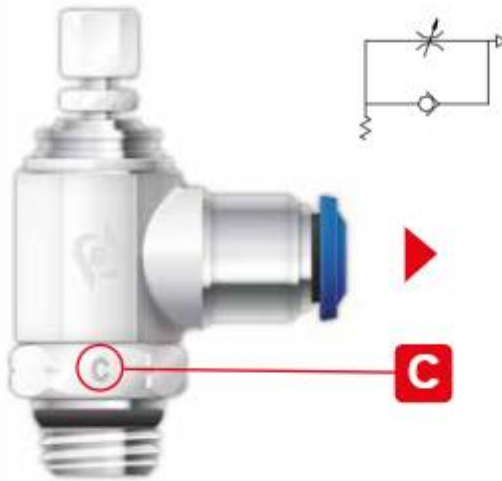
Torque Specifications

Thread Size	Recommended Torque	
	Min.	Breaking torque
1/8	5 Nm	8 Nm
1/4	9 Nm	30 Nm

www.sumy.ir



CONTROLLED FLOW OUT



Part Number:

89953 - 89958 - 89903 - 89907
 88953 - 88958 - 87903 - 87907
 50901N - 50905N - 50903N - 50907N
 85953 - 85958 - 85903 - 85907
 55900 - 55905 - 55903 - 55907
 88952 - 88957 - 82903 - 82907



CONTROLLED FLOW IN

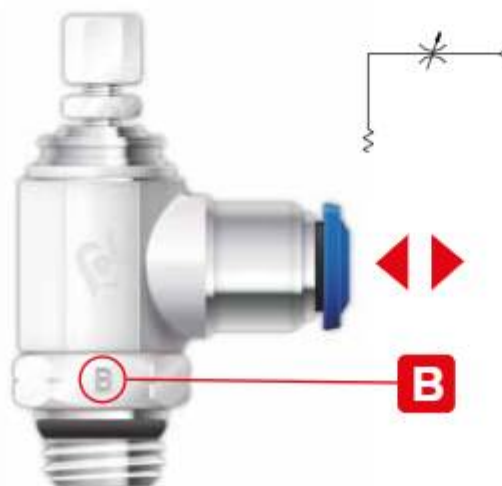


Part Number:

89963 - 89968 - 89913 - 89917
 88963 - 88968 - 87913 - 87917
 50910N - 50915N - 50913N - 50917N
 85963 - 85968 - 85913 - 85917
 55910 - 55915 - 55913 - 55917
 88962 - 88967 - 82913 - 82917



BI-DIRECTIONAL FLOW



Part Number:

89973 - 89978 - 89923 - 89927
 88973 - 88978 - 87923 - 87927
 50920N - 50925N - 50923N - 50927N
 85973 - 85978 - 85923 - 85927
 55920 - 55925 - 55923 - 55927
 88972 - 88977 - 82923 - 82927

KEY



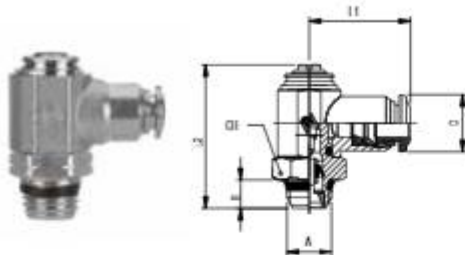
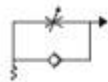
Screw Adjust



Knob Adjust

89953

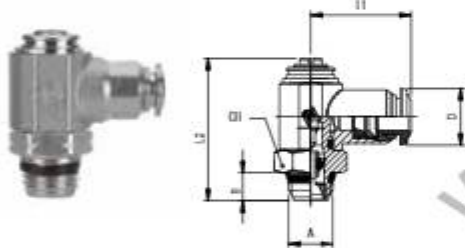
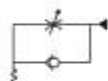
INCH TUBE FLOW CONTROL (OUT)



Part No.	Tube	A	B	L1	L2	CH	D
89953-02-32	1/8	10/32	.157 (4)	.748 (19)	.945 (21)	.315 (8)	.394 (10)
89953-02-02	1/8	1/8	.217 (5,5)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
89953-53-32	5/32	10/32	.157 (4)	.748 (19)	.945 (21)	.315 (8)	.394 (10)
89953-53-02	5/32	1/8	.217 (5,5)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
89953-04-02	1/4	1/8	.217 (5,5)	.866 (22)	1.181 (30,5)	.551 (14)	.492 (12,5)
89953-04-04	1/4	1/4	.276 (7)	.984 (25)	1.417 (36)	.669 (17)	.492 (12,5)
89953-06-04	3/8	1/4	.295 (7,5)	1.181 (30,5)	1.614 (41)	.787 (20)	.689 (17,5)
89953-06-06	3/8	3/8	.295 (7,5)	1.181 (30,5)	1.614 (41)	.787 (20)	.689 (17,5)
89953-08-06	1/2	3/8	.295 (7,5)	1.280 (32,5)	1.614 (41)	.787 (20)	.846 (21,5)
89953-08-08	1/2	1/2	.354 (9)	1.378 (35)	1.850 (47)	.945 (24)	.846 (21,5)

89963

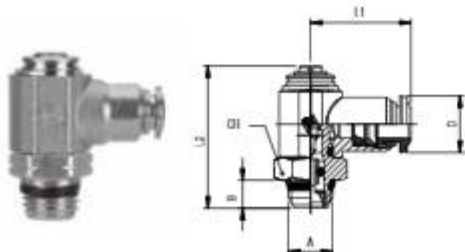
INCH TUBE FLOW CONTROL (IN)



Part No.	Tube	A	B	L1	L2	CH	D
89963-02-32	1/8	10/32	.157 (4)	.748 (19)	.945 (21)	.315 (8)	.394 (10)
89963-02-02	1/8	1/8	.217 (5,5)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
89963-53-32	5/32	10/32	.157 (4)	.748 (19)	.945 (21)	.315 (8)	.394 (10)
89963-53-02	5/32	1/8	.217 (5,5)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
89963-04-02	1/4	1/8	.217 (5,5)	.866 (22)	1.181 (30,5)	.551 (14)	.492 (12,5)
89963-04-04	1/4	1/4	.276 (7)	.984 (25)	1.417 (36)	.669 (17)	.492 (12,5)
89963-06-04	3/8	1/4	.295 (7,5)	1.181 (30,5)	1.614 (41)	.787 (20)	.689 (17,5)
89963-06-06	3/8	3/8	.295 (7,5)	1.181 (30,5)	1.614 (41)	.787 (20)	.689 (17,5)
89963-08-06	1/2	3/8	.295 (7,5)	1.280 (32,5)	1.614 (41)	.787 (20)	.846 (21,5)
89963-08-08	1/2	1/2	.354 (9)	1.378 (35)	1.850 (47)	.945 (24)	.846 (21,5)

89973

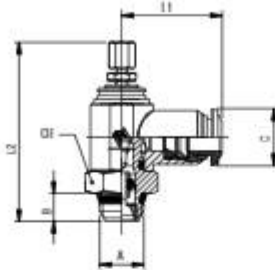
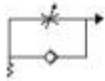
INCH TUBE NEEDLE VALVE



Part No.	Tube	A	B	L1	L2	CH	D
89973-02-32	1/8	10/32	.157 (4)	.748 (19)	.945 (21)	.315 (8)	.394 (10)
89973-02-02	1/8	1/8	.217 (5,5)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
89973-53-32	5/32	10/32	.157 (4)	.748 (19)	.945 (21)	.315 (8)	.394 (10)
89973-53-02	5/32	1/8	.217 (5,5)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
89973-04-02	1/4	1/8	.217 (5,5)	.866 (22)	1.181 (30,5)	.551 (14)	.492 (12,5)
89973-04-04	1/4	1/4	.276 (7)	.984 (25)	1.417 (36)	.669 (17)	.492 (12,5)
89973-06-04	3/8	1/4	.217 (5,5)	1.181 (30,5)	1.614 (41)	.787 (20)	.689 (17,5)
89973-06-06	3/8	3/8	.217 (5,5)	1.181 (30,5)	1.614 (41)	.787 (20)	.689 (17,5)
89973-08-06	1/2	3/8	.217 (5,5)	1.280 (32,5)	1.614 (41)	.787 (20)	.846 (21,5)
89973-08-08	1/2	1/2	.354 (9)	1.378 (35)	1.850 (47)	.945 (24)	.846 (21,5)

89958

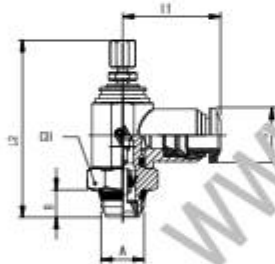
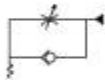
INCH TUBE FLOW CONTROL (OUT)



Part No.	Tube	A	B	L1	L2 min	L2 max	CH	D
89958-02-32	1/8	10/32	.157 (4)	.748 (19)	1.299 (33)	1.476 (37,5)	.315 (8)	.394 (10)
89958-02-02	1/8	1/8	.217 (5,5)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
89958-53-32	5/32	10/32	.157 (4)	.748 (19)	1.299 (33)	1.472 (37,5)	.315 (8)	.394 (10)
89958-53-02	5/32	1/8	.217 (5,5)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
89958-04-02	1/4	1/8	.217 (5,5)	.866 (22)	1.614 (41)	1.830 (46,5)	.551 (14)	.492 (12,5)
89958-04-04	1/4	1/4	.276 (7)	.984 (25)	1.850 (47)	2.086 (53)	.669 (17)	.492 (12,5)
89958-06-04	3/8	1/4	.295 (7,5)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.689 (17,5)
89958-06-06	3/8	3/8	.295 (7,5)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.689 (17,5)
89958-08-06	1/2	3/8	.295 (7,5)	1.280 (32,5)	2.205 (56)	2.480 (63)	.787 (20)	.846 (21,5)
89958-08-08	1/2	1/2	.354 (9)	1.378 (35)	2.402 (61)	2.717 (69)	.945 (24)	.846 (21,5)

89968

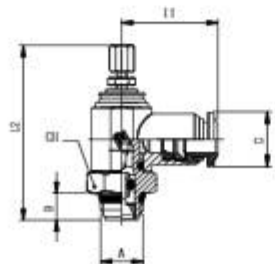
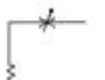
INCH TUBE FLOW CONTROL (IN)



Part No.	Tube	A	B	L1	L2 min	L2 max	CH	D
89968-02-32	1/8	10/32	.157 (4)	.748 (19)	1.299 (33)	1.476 (37,5)	.315 (8)	.394 (10)
89968-02-02	1/8	1/8	.217 (5,5)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
89968-53-32	5/32	10/32	.157 (4)	.748 (19)	1.299 (33)	1.472 (37,5)	.315 (8)	.394 (10)
89968-53-02	5/32	1/8	.217 (5,5)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
89968-04-02	1/4	1/8	.217 (5,5)	.866 (22)	1.614 (41)	1.830 (46,5)	.551 (14)	.492 (12,5)
89968-04-04	1/4	1/4	.276 (7)	.984 (25)	1.850 (47)	2.086 (53)	.669 (17)	.492 (12,5)
89968-06-04	3/8	1/4	.295 (7,5)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.689 (17,5)
89968-06-06	3/8	3/8	.295 (7,5)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.689 (17,5)
89968-08-06	1/2	3/8	.295 (7,5)	1.280 (32,5)	2.205 (56)	2.480 (63)	.787 (20)	.846 (21,5)
89968-08-08	1/2	1/2	.354 (9)	1.378 (35)	2.402 (61)	2.717 (69)	.945 (24)	.846 (21,5)

89978

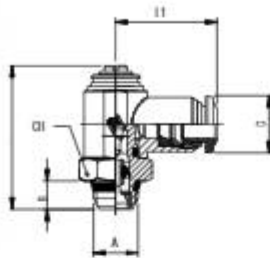
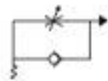
INCH TUBE NEEDLE VALVE



Part No.	Tube	A	B	L1	L2 min	L2 max	CH	D
89978-02-32	1/8	10/32	.157 (4)	.748 (19)	1.299 (33)	1.476 (37,5)	.315 (8)	.394 (10)
89978-02-02	1/8	1/8	.217 (5,5)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
89978-53-32	5/32	10/32	.157 (4)	.748 (19)	1.299 (33)	1.472 (37,5)	.315 (8)	.394 (10)
89978-53-02	5/32	1/8	.217 (5,5)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
89978-04-02	1/4	1/8	.217 (5,5)	.866 (22)	1.614 (41)	1.830 (46,5)	.551 (14)	.492 (12,5)
89978-04-04	1/4	1/4	.276 (7)	.984 (25)	1.850 (47)	2.086 (53)	.669 (17)	.492 (12,5)
89978-06-04	3/8	1/4	.295 (7,5)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.689 (17,5)
89978-06-06	3/8	3/8	.295 (7,5)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.689 (17,5)
89978-08-06	1/2	3/8	.295 (7,5)	1.280 (32,5)	2.205 (56)	2.480 (63)	.787 (20)	.846 (21,5)
89978-08-08	1/2	1/2	.354 (9)	1.378 (35)	2.402 (61)	2.717 (69)	.945 (24)	.846 (21,5)

88953

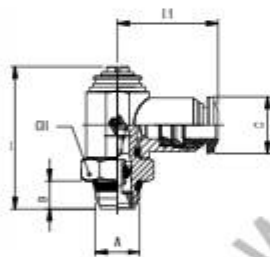
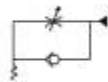
INCH TUBE FLOW CONTROL (OUT)



Part No.	Tube	A	B	L1	L2	CH	D
88953-02-32	1/8	10/32	.157 (4)	.748 (19)	.945 (21)	.315 (8)	.394 (10)
88953-02-02	1/8	1/8	.217 (5,5)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
88953-53-32	5/32	10/32	.157 (4)	.748 (19)	.945 (21)	.315 (8)	.394 (10)
88953-53-02	5/32	1/8	.217 (5,5)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
88953-04-02	1/4	1/8	.217 (5,5)	.866 (22)	1.181 (30,5)	.551 (14)	.492 (12,5)
88953-04-04	1/4	1/4	.276 (7)	.984 (25)	1.417 (36)	.669 (17)	.492 (12,5)
88953-06-04	3/8	1/4	.295 (7,5)	1.181 (30,5)	1.614 (41)	.787 (20)	.689 (17,5)
88953-06-06	3/8	3/8	.295 (7,5)	1.181 (30,5)	1.614 (41)	.787 (20)	.689 (17,5)
88953-08-06	1/2	3/8	.295 (7,5)	1.280 (32,5)	1.614 (41)	.787 (20)	.846 (21,5)
88953-08-08	1/2	1/2	.354 (9)	1.378 (35)	1.850 (47)	.945 (24)	.846 (21,5)

88963

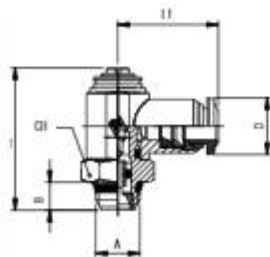
INCH TUBE FLOW CONTROL (IN)



Part No.	Tube	A	B	L1	L2	CH	D
88963-02-32	1/8	10/32	.157 (4)	.748 (19)	.945 (21)	.315 (8)	.394 (10)
88963-02-02	1/8	1/8	.217 (5,5)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
88963-53-32	5/32	10/32	.157 (4)	.748 (19)	.945 (21)	.315 (8)	.394 (10)
88963-53-02	5/32	1/8	.217 (5,5)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
88963-04-02	1/4	1/8	.217 (5,5)	.866 (22)	1.181 (30,5)	.551 (14)	.492 (12,5)
88963-04-04	1/4	1/4	.276 (7)	.984 (25)	1.417 (36)	.669 (17)	.492 (12,5)
88963-06-04	3/8	1/4	.295 (7,5)	1.181 (30,5)	1.614 (41)	.787 (20)	.689 (17,5)
88963-06-06	3/8	3/8	.295 (7,5)	1.181 (30,5)	1.614 (41)	.787 (20)	.689 (17,5)
88963-08-06	1/2	3/8	.295 (7,5)	1.280 (32,5)	1.614 (41)	.787 (20)	.846 (21,5)
88963-08-08	1/2	1/2	.354 (9)	1.378 (35)	1.850 (47)	.945 (24)	.846 (21,5)

88973

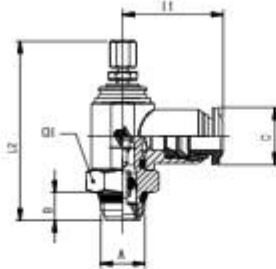
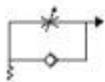
INCH TUBE NEEDLE VALVE



Part No.	Tube	A	B	L1	L2	CH	D
88973-02-32	1/8	10/32	.157 (4)	.748 (19)	.945 (21)	.315 (8)	.394 (10)
88973-02-02	1/8	1/8	.217 (5,5)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
88973-53-32	5/32	10/32	.157 (4)	.748 (19)	.945 (21)	.315 (8)	.394 (10)
88973-53-02	5/32	1/8	.217 (5,5)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
88973-04-02	1/4	1/8	.217 (5,5)	.866 (22)	1.181 (30,5)	.551 (14)	.492 (12,5)
88973-04-04	1/4	1/4	.276 (7)	.984 (25)	1.417 (36)	.669 (17)	.492 (12,5)
88973-06-04	3/8	1/4	.295 (7,5)	1.181 (30,5)	1.614 (41)	.787 (20)	.689 (17,5)
88973-06-06	3/8	3/8	.295 (7,5)	1.181 (30,5)	1.614 (41)	.787 (20)	.689 (17,5)
88973-08-06	1/2	3/8	.295 (7,5)	1.280 (32,5)	1.614 (41)	.787 (20)	.846 (21,5)
88973-08-08	1/2	1/2	.354 (9)	1.378 (35)	1.850 (47)	.945 (24)	.846 (21,5)

88958

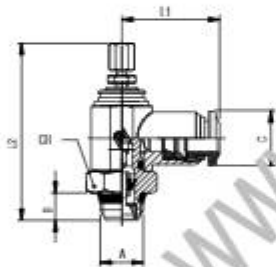
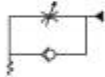
INCH TUBE FLOW CONTROL (OUT)



Part No.	Tube	A	B	L1	L2 min	L2 max	CH	D
88958-02-32	1/8	10/32	.157 (4)	.748 (19)	1.299 (33)	1.476 (37,5)	.315 (8)	.394 (10)
88958-02-02	1/8	1/8	.217 (5,5)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
88958-53-32	5/32	10/32	.157 (4)	.748 (19)	1.299 (33)	1.472 (37,5)	.315 (8)	.394 (10)
88958-53-02	5/32	1/8	.217 (5,5)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
88958-04-02	1/4	1/8	.217 (5,5)	.866 (22)	1.614 (41)	1.830 (46,5)	.551 (14)	.492 (12,5)
88958-04-04	1/4	1/4	.276 (7)	.984 (25)	1.850 (47)	2.086 (53)	.669 (17)	.492 (12,5)
88958-06-04	3/8	1/4	.295 (7,5)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.689 (17,5)
88958-06-06	3/8	3/8	.295 (7,5)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.689 (17,5)
88958-08-06	1/2	3/8	.295 (7,5)	1.280 (32,5)	2.205 (56)	2.480 (63)	.787 (20)	.846 (21,5)
88958-08-08	1/2	1/2	.354 (9)	1.378 (35)	2.402 (61)	2.717 (69)	.945 (24)	.846 (21,5)

88968

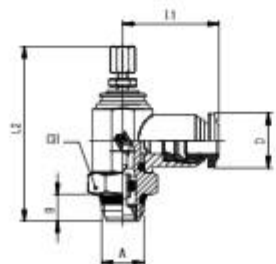
INCH TUBE FLOW CONTROL (IN)



Part No.	Tube	A	B	L1	L2 min	L2 max	CH	D
88968-02-32	1/8	10/32	.157 (4)	.748 (19)	1.299 (33)	1.476 (37,5)	.315 (8)	.394 (10)
88968-02-02	1/8	1/8	.217 (5,5)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
88968-53-32	5/32	10/32	.157 (4)	.748 (19)	1.299 (33)	1.476 (37,5)	.315 (8)	.394 (10)
88968-53-02	5/32	1/8	.217 (5,5)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
88968-04-02	1/4	1/8	.217 (5,5)	.866 (22)	1.614 (41)	1.830 (46,5)	.551 (14)	.492 (12,5)
88968-04-04	1/4	1/4	.276 (7)	.984 (25)	1.850 (47)	2.086 (53)	.669 (17)	.492 (12,5)
88968-06-04	3/8	1/4	.295 (7,5)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.689 (17,5)
88968-06-06	3/8	3/8	.295 (7,5)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.689 (17,5)
88968-08-06	1/2	3/8	.295 (7,5)	1.280 (32,5)	2.205 (56)	2.480 (63)	.787 (20)	.846 (21,5)
88968-08-08	1/2	1/2	.354 (9)	1.378 (35)	2.205 (56)	2.717 (69)	.945 (24)	.846 (21,5)

88978

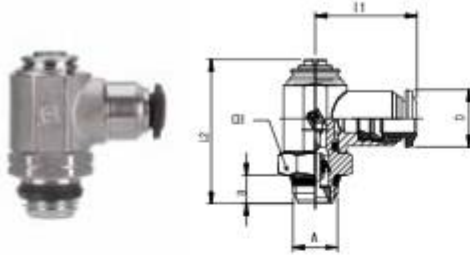
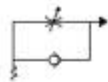
INCH TUBE NEEDLE VALVE



Part No.	Tube	A	B	L1	L2 min	L2 max	CH	D
88978-02-32	1/8	10/32	.157 (4)	.748 (19)	1.299 (33)	1.476 (37,5)	.315 (8)	.394 (10)
88978-02-02	1/8	1/8	.217 (5,5)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
88978-53-32	5/32	10/32	.157 (4)	.748 (19)	1.299 (33)	1.472 (37,5)	.315 (8)	.394 (10)
88978-53-02	5/32	1/8	.217 (5,5)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
88978-04-02	1/4	1/8	.217 (5,5)	.866 (22)	1.614 (41)	1.830 (46,5)	.551 (14)	.492 (12,5)
88978-04-04	1/4	1/4	.276 (7)	.984 (25)	1.850 (47)	2.086 (53)	.669 (17)	.492 (12,5)
88978-06-04	3/8	1/4	.295 (7,5)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.689 (17,5)
88978-06-06	3/8	3/8	.295 (7,5)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.689 (17,5)
88978-08-06	1/2	3/8	.295 (7,5)	1.280 (32,5)	2.205 (56)	2.480 (63)	.787 (20)	.846 (21,5)
88978-08-08	1/2	1/2	.354 (9)	1.378 (35)	2.402 (61)	2.717 (69)	.945 (24)	.846 (21,5)

50901N

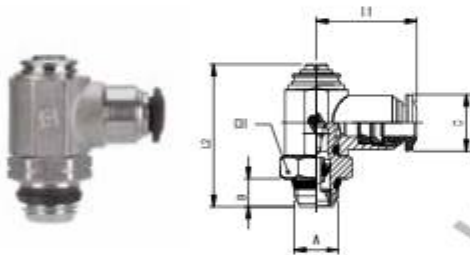
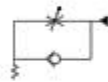
METRIC TUBE FLOW CONTROL (OUT)



Part No.	Tube	A	B	L1	L2	CH	D
50901N-3-M5	3	M5	.157 (4)	.748 (19)	1.161 (29,5)	.315 (8)	.394 (10)
50901N-4-M5	5/32 (4)	M5	.157 (4)	.748 (19)	1.161 (29,5)	.315 (8)	.394 (10)
50901N-4-1/8	5/32 (4)	1/8	.217 (5,5)	.827 (21)	1.220 (31)	.551 (14)	.394 (10)
50901N-5-M5	5	M5	.157 (4)	.787 (20)	1.161 (29,5)	.315 (8)	.492 (12,5)
50901N-5-1/8	5	1/8	.217 (5,5)	.846 (21,5)	1.220 (31)	.551 (14)	.492 (12,5)
50901N-5-1/4	5	1/4	.276 (7)	.965 (24,5)	1.437 (36,5)	.669 (17)	.492 (12,5)
50901N-6-M5	6	M5	.157 (4)	.807 (20,5)	1.161 (29,5)	.315 (8)	.492 (12,5)
50901N-6-1/8	6	1/8	.217 (5,5)	.886 (22,5)	1.220 (31)	.551 (14)	.492 (12,5)
50901N-6-1/4	6	1/4	.276 (7)	.984 (25)	1.437 (36,5)	.669 (17)	.492 (12,5)
50901N-8-1/8	5/16 (8)	1/8	.217 (5,5)	.945 (24)	1.220 (31)	.551 (14)	.551 (14)
50901N-8-1/4	5/16 (8)	1/4	.276 (7)	1.024 (26)	1.437 (36,5)	.669 (17)	.551 (14)
50901N-8-3/8	5/16 (8)	3/8	.295 (7,5)	1.122 (28,5)	1.673 (42,5)	.787 (20)	.551 (14)
50901N-10-1/4	10	1/4	.276 (7)	1.122 (28,5)	1.437 (36,5)	.669 (17)	.669 (17)
50901N-10-3/8	10	3/8	.295 (7,5)	1.201 (30,5)	1.673 (42,5)	.787 (20)	.669 (17)
50901N-12-3/8	12	3/8	.295 (7,5)	1.280 (32,5)	1.673 (42,5)	.787 (20)	.846 (21,5)
50901N-12-1/2	12	1/2	.354 (9)	1.378 (35)	1.850 (47)	.945 (24)	.846 (21,5)
50901N-14-1/2	14	1/2	.354 (9)	1.398 (35,5)	1.850 (47)	.945 (24)	.846 (21,5)

50910N

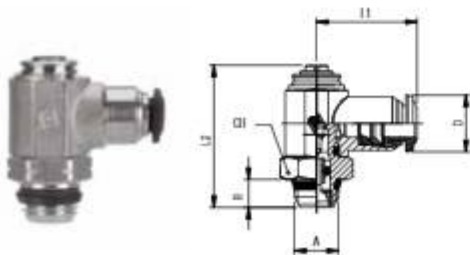
METRIC TUBE FLOW CONTROL (IN)



Part No.	Tube	A	B	L1	L2	CH	D
50910N-3-M5	3	M5	.157 (4)	.748 (19)	1.161 (29,5)	.315 (8)	.394 (10)
50910N-4-M5	5/32 (4)	M5	.157 (4)	.748 (19)	1.161 (29,5)	.315 (8)	.394 (10)
50910N-4-1/8	5/32 (4)	1/8	.217 (5,5)	.827 (21)	1.220 (31)	.551 (14)	.394 (10)
50910N-5-M5	5	M5	.157 (4)	.787 (20)	1.161 (29,5)	.315 (8)	.492 (12,5)
50910N-5-1/8	5	1/8	.217 (5,5)	.846 (21,5)	1.220 (31)	.551 (14)	.492 (12,5)
50910N-5-1/4	5	1/4	.276 (7)	.965 (24,5)	1.437 (36,5)	.669 (17)	.492 (12,5)
50910N-6-M5	6	M5	.157 (4)	.807 (20,5)	1.161 (29,5)	.315 (8)	.492 (12,5)
50910N-6-1/8	6	1/8	.217 (5,5)	.886 (22,5)	1.220 (31)	.551 (14)	.492 (12,5)
50910N-6-1/4	6	1/4	.276 (7)	.984 (25)	1.437 (36,5)	.669 (17)	.492 (12,5)
50910N-8-1/8	5/16 (8)	1/8	.217 (5,5)	.945 (24)	1.220 (31)	.551 (14)	.551 (14)
50910N-8-1/4	5/16 (8)	1/4	.276 (7)	1.024 (26)	1.437 (36,5)	.669 (17)	.551 (14)
50910N-8-3/8	5/16 (8)	3/8	.295 (7,5)	1.122 (28,5)	1.673 (42,5)	.787 (20)	.551 (14)
50910N-10-1/4	10	1/4	.276 (7)	1.122 (28,5)	1.437 (36,5)	.669 (17)	.669 (17)
50910N-10-3/8	10	3/8	.295 (7,5)	1.201 (30,5)	1.673 (42,5)	.787 (20)	.669 (17)
50910N-12-3/8	12	3/8	.295 (7,5)	1.280 (32,5)	1.673 (42,5)	.787 (20)	.846 (21,5)
50910N-12-1/2	12	1/2	.354 (9)	1.378 (35)	1.850 (47)	.945 (24)	.846 (21,5)
50910N-14-1/2	14	1/2	.354 (9)	1.398 (35,5)	1.850 (47)	.945 (24)	.846 (21,5)

50920N

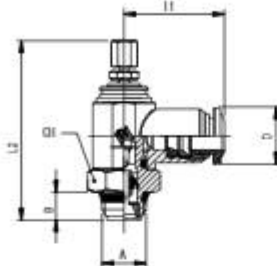
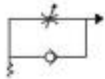
METRIC TUBE NEEDLE VALVE



Part No.	Tube	A	B	L1	L2	CH	D
50920N-3-M5	3	M5	.157 (4)	.748 (19)	1.161 (29,5)	.315 (8)	.394 (10)
50920N-4-M5	5/32 (4)	M5	.157 (4)	.748 (19)	1.161 (29,5)	.315 (8)	.394 (10)
50920N-4-1/8	5/32 (4)	1/8	.217 (5,5)	.827 (21)	1.220 (31)	.551 (14)	.394 (10)
50920N-5-M5	5	M5	.157 (4)	.787 (20)	1.161 (29,5)	.315 (8)	.492 (12,5)
50920N-5-1/8	5	1/8	.217 (5,5)	.846 (21,5)	1.220 (31)	.551 (14)	.492 (12,5)
50920N-5-1/4	5	1/4	.276 (7)	.965 (24,5)	1.437 (36,5)	.669 (17)	.492 (12,5)
50920N-6-M5	6	M5	.157 (4)	.807 (20,5)	1.161 (29,5)	.315 (8)	.492 (12,5)
50920N-6-1/8	6	1/8	.217 (5,5)	.886 (22,5)	1.220 (31)	.551 (14)	.492 (12,5)
50920N-6-1/4	6	1/4	.276 (7)	.984 (25)	1.437 (36,5)	.669 (17)	.492 (12,5)
50920N-8-1/8	5/16 (8)	1/8	.217 (5,5)	.945 (24)	1.220 (31)	.551 (14)	.551 (14)
50920N-8-1/4	5/16 (8)	1/4	.276 (7)	1.024 (26)	1.437 (36,5)	.669 (17)	.551 (14)
50920N-8-3/8	5/16 (8)	3/8	.295 (7,5)	1.122 (28,5)	1.673 (42,5)	.787 (20)	.551 (14)
50920N-10-1/4	10	1/4	.276 (7)	1.122 (28,5)	1.437 (36,5)	.669 (17)	.669 (17)
50920N-10-3/8	10	3/8	.295 (7,5)	1.201 (30,5)	1.673 (42,5)	.787 (20)	.669 (17)
50920N-12-3/8	12	3/8	.295 (7,5)	1.280 (32,5)	1.673 (42,5)	.787 (20)	.846 (21,5)
50920N-12-1/2	12	1/2	.354 (9)	1.378 (35)	1.850 (47)	.945 (24)	.846 (21,5)
50920N-14-1/2	14	1/2	.354 (9)	1.398 (35,5)	1.850 (47)	.945 (24)	.846 (21,5)

50905N

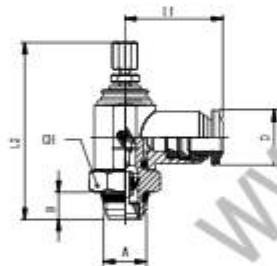
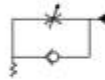
METRIC TUBE FLOW CONTROL (OUT)



Part No.	Tube	A	B	L1	L2 min	L2 max	CH	D
50905N-3-M5	3	M5	.157 (4)	.748 (19)	1.516 (38,5)	1.673 (42,5)	.315 (8)	.394 (10)
50905N-4-M5	5/32 (4)	M5	.157 (4)	.748 (19)	1.516 (38,5)	1.673 (42,5)	.315 (8)	.394 (10)
50905N-4-1/8	5/32 (4)	1/8	.217 (5,5)	.827 (21)	1.732 (44)	1.929 (49)	.551 (14)	.394 (10)
50905N-5-M5	5	M5	.157 (4)	.787 (20)	1.516 (38,5)	1.673 (42,5)	.315 (8)	.492 (12,5)
50905N-5-1/8	5	1/8	.217 (5,5)	.846 (21,5)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
50905N-5-1/4	5	1/4	.276 (7)	.965 (24,5)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
50905N-6-M5	6	M5	.157 (4)	.807 (20,5)	1.516 (38,5)	1.673 (42,5)	.315 (8)	.492 (12,5)
50905N-6-1/8	6	1/8	.217 (5,5)	.886 (22,5)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
50905N-6-1/4	6	1/4	.276 (7)	.984 (25)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
50905N-8-1/8	5/16 (8)	1/8	.217 (5,5)	.945 (24)	1.732 (44)	1.929 (49)	.551 (14)	.551 (14)
50905N-8-1/4	5/16 (8)	1/4	.276 (7)	1.024 (26)	1.909 (48,5)	2.165 (55)	.669 (17)	.551 (14)
50905N-8-3/8	5/16 (8)	3/8	.295 (7,5)	1.122 (28,5)	2.205 (56)	2.559 (65)	.787 (20)	.551 (14)
50905N-10-1/4	10	1/4	.276 (7)	1.122 (28,5)	1.909 (48,5)	2.165 (55)	.669 (17)	.669 (17)
50905N-10-3/8	10	3/8	.295 (7,5)	1.201 (30,5)	2.205 (56)	2.559 (65)	.787 (20)	.669 (17)
50905N-12-3/8	12	3/8	.295 (7,5)	1.280 (32,5)	2.205 (56)	2.559 (65)	.787 (20)	.846 (21,5)
50905N-12-1/2	12	1/2	.354 (9)	1.378 (35)	2.441 (62)	2.717 (69)	.945 (24)	.846 (21,5)
50905N-14-1/2	14	1/2	.354 (9)	1.398 (35,5)	2.441 (62)	2.717 (69)	.945 (24)	.846 (21,5)

50915N

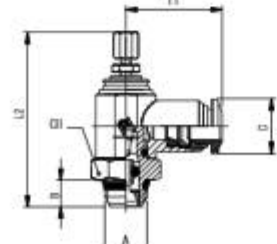
METRIC TUBE FLOW CONTROL (IN)



Part No.	Tube	A	B	L1	L2 min	L2 max	CH	D
50915N-3-M5	3	M5	.157 (4)	.748 (19)	1.516 (38,5)	1.673 (42,5)	.315 (8)	.394 (10)
50915N-4-M5	5/32 (4)	M5	.157 (4)	.748 (19)	1.516 (38,5)	1.673 (42,5)	.315 (8)	.394 (10)
50915N-4-1/8	5/32 (4)	1/8	.217 (5,5)	.827 (21)	1.732 (44)	1.929 (49)	.551 (14)	.394 (10)
50915N-5-M5	5	M5	.157 (4)	.787 (20)	1.516 (38,5)	1.673 (42,5)	.315 (8)	.492 (12,5)
50915N-5-1/8	5	1/8	.217 (5,5)	.846 (21,5)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
50915N-5-1/4	5	1/4	.276 (7)	.965 (24,5)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
50915N-6-M5	6	M5	.157 (4)	.807 (20,5)	1.516 (38,5)	1.673 (42,5)	.315 (8)	.492 (12,5)
50915N-6-1/8	6	1/8	.217 (5,5)	.886 (22,5)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
50915N-6-1/4	6	1/4	.276 (7)	.984 (25)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
50915N-8-1/8	5/16 (8)	1/8	.217 (5,5)	.945 (24)	1.732 (44)	1.929 (49)	.551 (14)	.551 (14)
50915N-8-1/4	5/16 (8)	1/4	.276 (7)	1.024 (26)	1.909 (48,5)	2.165 (55)	.669 (17)	.551 (14)
50915N-8-3/8	5/16 (8)	3/8	.295 (7,5)	1.122 (28,5)	2.205 (56)	2.559 (65)	.787 (20)	.551 (14)
50915N-10-1/4	10	1/4	.276 (7)	1.122 (28,5)	1.909 (48,5)	2.165 (55)	.669 (17)	.669 (17)
50915N-10-3/8	10	3/8	.295 (7,5)	1.201 (30,5)	2.205 (56)	2.559 (65)	.787 (20)	.669 (17)
50915N-12-3/8	12	3/8	.295 (7,5)	1.280 (32,5)	2.205 (56)	2.559 (65)	.787 (20)	.846 (21,5)
50915N-12-1/2	12	1/2	.354 (9)	1.378 (35)	2.441 (62)	2.717 (69)	.945 (24)	.846 (21,5)
50915N-14-1/2	14	1/2	.354 (9)	1.398 (35,5)	2.441 (62)	2.717 (69)	.945 (24)	.846 (21,5)

50925N

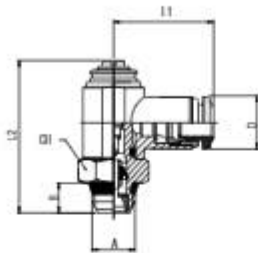
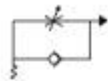
METRIC TUBE NEEDLE VALVE



Part No.	Tube	A	B	L1	L2 min	L2 max	CH	D
50925N-3-M5	3	M5	.157 (4)	.748 (19)	1.516 (38,5)	1.673 (42,5)	.315 (8)	.394 (10)
50925N-4-M5	5/32 (4)	M5	.157 (4)	.748 (19)	1.516 (38,5)	1.673 (42,5)	.315 (8)	.394 (10)
50925N-4-1/8	5/32 (4)	1/8	.217 (5,5)	.827 (21)	1.732 (44)	1.929 (49)	.551 (14)	.394 (10)
50925N-5-M5	5	M5	.157 (4)	.787 (20)	1.516 (38,5)	1.673 (42,5)	.315 (8)	.492 (12,5)
50925N-5-1/8	5	1/8	.217 (5,5)	.846 (21,5)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
50925N-5-1/4	5	1/4	.276 (7)	.965 (24,5)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
50925N-6-M5	6	M5	.157 (4)	.807 (20,5)	1.516 (38,5)	1.673 (42,5)	.315 (8)	.492 (12,5)
50925N-6-1/8	6	1/8	.217 (5,5)	.886 (22,5)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
50925N-6-1/4	6	1/4	.276 (7)	.984 (25)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
50925N-8-1/8	5/16 (8)	1/8	.217 (5,5)	.945 (24)	1.732 (44)	1.929 (49)	.551 (14)	.551 (14)
50925N-8-1/4	5/16 (8)	1/4	.276 (7)	1.024 (26)	1.909 (48,5)	2.165 (55)	.669 (17)	.551 (14)
50925N-8-3/8	5/16 (8)	3/8	.295 (7,5)	1.122 (28,5)	2.205 (56)	2.559 (65)	.787 (20)	.551 (14)
50925N-10-1/4	10	1/4	.276 (7)	1.122 (28,5)	1.909 (48,5)	2.165 (55)	.669 (17)	.669 (17)
50925N-10-3/8	10	3/8	.295 (7,5)	1.201 (30,5)	2.205 (56)	2.559 (65)	.787 (20)	.669 (17)
50925N-12-3/8	12	3/8	.295 (7,5)	1.280 (32,5)	2.205 (56)	2.559 (65)	.787 (20)	.846 (21,5)
50925N-12-1/2	12	1/2	.354 (9)	1.378 (35)	2.441 (62)	2.717 (69)	.945 (24)	.846 (21,5)
50925N-14-1/2	14	1/2	.354 (9)	1.398 (35,5)	2.441 (62)	2.717 (69)	.945 (24)	.846 (21,5)

85953

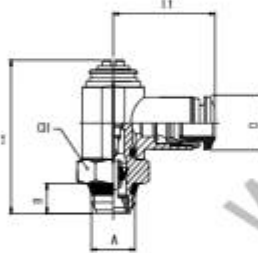
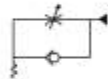
INCH TUBE FLOW CONTROL (OUT)



Part No.	Tube	A	B	L1	L2	CH	D
85953-02-32	1/8	10/32	.157 (4)	.748 (19)	.945 (21)	.315 (8)	.394 (10)
85953-02-02	1/8	1/8	.217 (5,5)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
85953-53-32	5/32	10/32	.157 (4)	.748 (19)	.945 (21)	.315 (8)	.394 (10)
85953-53-02	5/32	1/8	.217 (5,5)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
85953-04-02	1/4	1/8	.217 (5,5)	.866 (22)	1.181 (30,5)	.551 (14)	.472 (12)
85953-04-04	1/4	1/4	.276 (7)	.984 (25)	1.417 (36)	.669 (17)	.472 (12)
85953-06-04	3/8	1/4	.295 (7,5)	1.181 (30,5)	1.614 (41)	.787 (20)	.669 (17)
85953-06-06	3/8	3/8	.295 (7,5)	1.181 (30,5)	1.614 (41)	.787 (20)	.669 (17)
85953-08-06	1/2	3/8	.295 (7,5)	1.280 (32,5)	1.614 (41)	.787 (20)	.787 (20)
85953-08-08	1/2	1/2	.354 (9)	1.378 (35)	1.850 (47)	.945 (24)	.787 (20)

85963

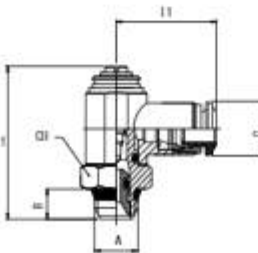
INCH TUBE FLOW CONTROL (IN)



Part No.	Tube	A	B	L1	L2	CH	D
85963-02-32	1/8	10/32	.157 (4)	.748 (19)	.945 (21)	.315 (8)	.394 (10)
85963-02-02	1/8	1/8	.217 (5,5)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
85963-53-32	5/32	10/32	.157 (4)	.748 (19)	.945 (21)	.315 (8)	.394 (10)
85963-53-02	5/32	1/8	.217 (5,5)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
85963-04-02	1/4	1/8	.217 (5,5)	.866 (22)	1.181 (30,5)	.551 (14)	.472 (12)
85963-04-04	1/4	1/4	.276 (7)	.984 (25)	1.417 (36)	.669 (17)	.472 (12)
85963-06-04	3/8	1/4	.295 (7,5)	1.181 (30,5)	1.614 (41)	.787 (20)	.669 (17)
85963-06-06	3/8	3/8	.295 (7,5)	1.181 (30,5)	1.614 (41)	.787 (20)	.669 (17)
85963-08-06	1/2	3/8	.295 (7,5)	1.280 (32,5)	1.614 (41)	.787 (20)	.787 (20)
85963-08-08	1/2	1/2	.354 (9)	1.378 (35)	1.850 (47)	.945 (24)	.787 (20)

85973

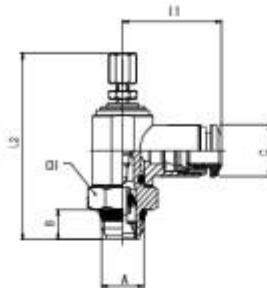
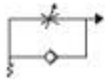
INCH TUBE NEEDLE VALVE



Part No.	Tube	A	B	L1	L2	CH	D
85973-02-32	1/8	10/32	.157 (4)	.748 (19)	.945 (21)	.315 (8)	.394 (10)
85973-02-02	1/8	1/8	.217 (5,5)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
85973-53-32	5/32	10/32	.157 (4)	.748 (19)	.945 (21)	.315 (8)	.394 (10)
85973-53-02	5/32	1/8	.217 (5,5)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
85973-04-02	1/4	1/8	.217 (5,5)	.866 (22)	1.181 (30,5)	.551 (14)	.472 (12)
85973-04-04	1/4	1/4	.276 (7)	.984 (25)	1.417 (36)	.669 (17)	.472 (12)
85973-06-04	3/8	1/4	.295 (7,5)	1.181 (30,5)	1.614 (41)	.787 (20)	.669 (17)
85973-06-06	3/8	3/8	.295 (7,5)	1.181 (30,5)	1.614 (41)	.787 (20)	.669 (17)
85973-08-06	1/2	3/8	.295 (7,5)	1.280 (32,5)	1.614 (41)	.787 (20)	.787 (20)
85973-08-08	1/2	1/2	.354 (9)	1.378 (35)	1.850 (47)	.945 (24)	.787 (20)

85958

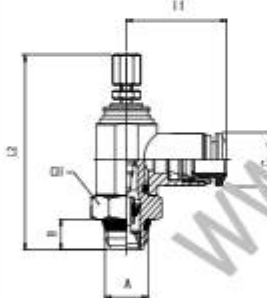
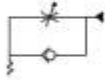
INCH TUBE FLOW CONTROL (OUT)



Part No.	Tube	A	B	L1	L2 min	L2 max	CH	D
85958-02-32	1/8	10/32	.157 (4)	.748 (19)	1.299 (33)	1.476 (37,5)	.315 (8)	.394 (10)
85958-02-02	1/8	1/8	.217 (5,5)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
85958-53-32	5/32	10/32	.157 (4)	.748 (19)	1.299 (33)	1.472 (37,5)	.315 (8)	.394 (10)
85958-53-02	5/32	1/8	.217 (5,5)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
85958-04-02	1/4	1/8	.217 (5,5)	.866 (22)	1.614 (41)	1.830 (46,5)	.551 (14)	.472 (12)
85958-04-04	1/4	1/4	.276 (7)	.984 (25)	1.850 (47)	2.086 (53)	.669 (17)	.472 (12)
85958-06-04	3/8	1/4	.295 (7,5)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.669 (17)
85958-06-06	3/8	3/8	.295 (7,5)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.669 (17)
85958-08-06	1/2	3/8	.295 (7,5)	1.280 (32,5)	2.205 (56)	2.480 (63)	.787 (20)	.787 (20)
85958-08-08	1/2	1/2	.354 (9)	1.378 (35)	2.402 (61)	2.717 (69)	.945 (24)	.787 (20)

85968

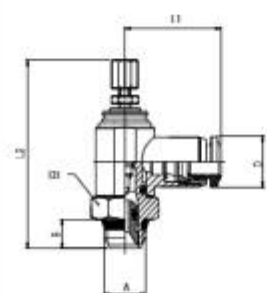
INCH TUBE FLOW CONTROL (IN)



Part No.	Tube	A	B	L1	L2 min	L2 max	CH	D
85968-02-32	1/8	10/32	.157 (4)	.748 (19)	1.299 (33)	1.476 (37,5)	.315 (8)	.394 (10)
85968-02-02	1/8	1/8	.217 (5,5)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
85968-53-32	5/32	10/32	.157 (4)	.748 (19)	1.299 (33)	1.476 (37,5)	.315 (8)	.394 (10)
85968-53-02	5/32	1/8	.217 (5,5)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
85968-04-02	1/4	1/8	.217 (5,5)	.866 (22)	1.614 (41)	1.830 (46,5)	.551 (14)	.472 (12)
85968-04-04	1/4	1/4	.276 (7)	.984 (25)	1.850 (47)	2.086 (53)	.669 (17)	.472 (12)
85968-06-04	3/8	1/4	.295 (7,5)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.669 (17)
85968-06-06	3/8	3/8	.295 (7,5)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.669 (17)
85968-08-06	1/2	3/8	.295 (7,5)	1.280 (32,5)	2.205 (56)	2.480 (63)	.787 (20)	.787 (20)
85968-08-08	1/2	1/2	.354 (9)	1.378 (35)	2.205 (56)	2.717 (69)	.945 (24)	.787 (20)

85978

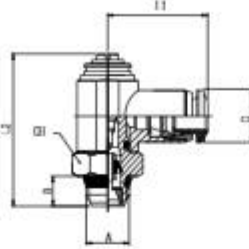
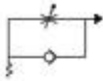
INCH TUBE NEEDLE VALVE



Part No.	Tube	A	B	L1	L2 min	L2 max	CH	D
85978-02-32	1/8	10/32	.157 (4)	.748 (19)	1.299 (33)	1.476 (37,5)	.315 (8)	.394 (10)
85978-02-02	1/8	1/8	.217 (5,5)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
85978-53-32	5/32	10/32	.157 (4)	.748 (19)	1.299 (33)	1.472 (37,5)	.315 (8)	.394 (10)
85978-53-02	5/32	1/8	.217 (5,5)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
85978-04-02	1/4	1/8	.217 (5,5)	.866 (22)	1.614 (41)	1.830 (46,5)	.551 (14)	.472 (12)
85978-04-04	1/4	1/4	.276 (7)	.984 (25)	1.850 (47)	2.086 (53)	.669 (17)	.472 (12)
85978-06-04	3/8	1/4	.295 (7,5)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.669 (17)
85978-06-06	3/8	3/8	.295 (7,5)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.669 (17)
85978-08-06	1/2	3/8	.295 (7,5)	1.280 (32,5)	2.205 (56)	2.480 (63)	.787 (20)	.787 (20)
85978-08-08	1/2	1/2	.354 (9)	1.378 (35)	2.402 (61)	2.717 (69)	.945 (24)	.787 (20)

55901

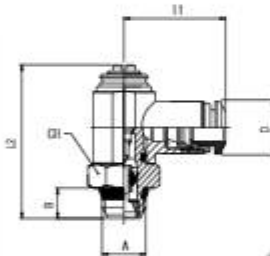
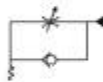
METRIC TUBE FLOW CONTROL (OUT)



Part No.	Tube	A	B	L1	L2	CH	D
55901-4-M5	5/32 (4)	M5	217 (5,5)	768 (19,5)	1.161 (29,5)	315 (8)	394 (10)
55901-4-1/8	5/32 (4)	1/8	217 (5,5)	846 (21,5)	1.220 (31)	551 (14)	394 (10)
55901-5-M5	5	M5	217 (5,5)	807 (20,5)	1.161 (29,5)	315 (8)	492 (12,5)
55901-5-1/8	5	1/8	217 (5,5)	886 (22,5)	1.220 (31)	551 (14)	492 (12,5)
55901-5-1/4	5	1/4	276 (7)	984 (25)	1.437 (36,5)	669 (17)	492 (12,5)
55901-6-M5	6	M5	217 (5,5)	827 (21)	1.161 (29,5)	315 (8)	492 (12,5)
55901-6-1/8	6	1/8	217 (5,5)	906 (23)	1.220 (31)	551 (14)	492 (12,5)
55901-6-1/4	6	1/4	276 (7)	1.004 (25,5)	1.437 (36,5)	669 (17)	492 (12,5)
55901-8-1/8	5/16 (8)	1/8	217 (5,5)	925 (23,5)	1.220 (31)	551 (14)	551 (14)
55901-8-1/4	5/16 (8)	1/4	276 (7)	1.024 (26)	1.437 (36,5)	669 (17)	551 (14)
55901-8-3/8	5/16 (8)	3/8	335 (8,5)	1.083 (27,5)	1.673 (42,5)	787 (20)	551 (14)
55901-10-3/8	10	3/8	335 (8,5)	1.201 (30,5)	1.673 (42,5)	787 (20)	669 (17)
55901-12-3/8	12	3/8	335 (8,5)	1.280 (32,5)	1.673 (42,5)	787 (20)	846 (21,5)
55901-12-1/2	12	1/2	394 (10)	1.378 (35)	1.850 (47)	945 (24)	846 (21,5)

55910

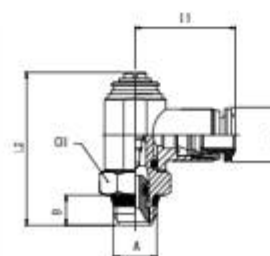
METRIC TUBE FLOW CONTROL (IN)



Part No.	Tube	A	B	L1	L2	CH	D
55910-4-M5	5/32 (4)	M5	217 (5,5)	768 (19,5)	1.161 (29,5)	315 (8)	394 (10)
55910-4-1/8	5/32 (4)	1/8	217 (5,5)	846 (21,5)	1.220 (31)	551 (14)	394 (10)
55910-5-M5	5	M5	217 (5,5)	807 (20,5)	1.161 (29,5)	315 (8)	492 (12,5)
55910-5-1/8	5	1/8	217 (5,5)	886 (22,5)	1.220 (31)	551 (14)	492 (12,5)
55910-5-1/4	5	1/4	276 (7)	984 (25)	1.437 (36,5)	669 (17)	492 (12,5)
55910-6-M5	6	M5	217 (5,5)	827 (21)	1.161 (29,5)	315 (8)	492 (12,5)
55910-6-1/8	6	1/8	217 (5,5)	906 (23)	1.220 (31)	551 (14)	492 (12,5)
55910-6-1/4	6	1/4	276 (7)	1.004 (25,5)	1.437 (36,5)	669 (17)	492 (12,5)
55910-8-1/8	5/16 (8)	1/8	217 (5,5)	925 (23,5)	1.220 (31)	551 (14)	551 (14)
55910-8-1/4	5/16 (8)	1/4	276 (7)	1.024 (26)	1.437 (36,5)	669 (17)	551 (14)
55910-8-3/8	5/16 (8)	3/8	335 (8,5)	1.083 (27,5)	1.673 (42,5)	787 (20)	551 (14)
55910-10-3/8	10	3/8	335 (8,5)	1.201 (30,5)	1.673 (42,5)	787 (20)	669 (17)
55910-12-3/8	12	3/8	335 (8,5)	1.280 (32,5)	1.673 (42,5)	787 (20)	846 (21,5)
55910-12-1/2	12	1/2	394 (10)	1.378 (35)	1.850 (47)	945 (24)	846 (21,5)

55920

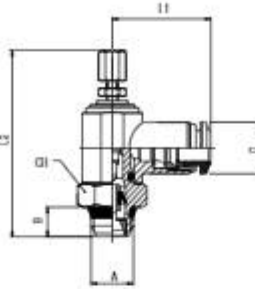
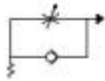
METRIC TUBE NEEDLE VALVE



Part No.	Tube	A	B	L1	L2	CH	D
55920-4-M5	5/32 (4)	M5	217 (5,5)	768 (19,5)	1.161 (29,5)	315 (8)	394 (10)
55920-4-1/8	5/32 (4)	1/8	217 (5,5)	846 (21,5)	1.220 (31)	551 (14)	394 (10)
55920-5-M5	5	M5	217 (5,5)	807 (20,5)	1.161 (29,5)	315 (8)	492 (12,5)
55920-5-1/8	5	1/8	217 (5,5)	886 (22,5)	1.220 (31)	551 (14)	492 (12,5)
55920-5-1/4	5	1/4	276 (7)	984 (25)	1.437 (36,5)	669 (17)	492 (12,5)
55920-6-M5	6	M5	217 (5,5)	827 (21)	1.161 (29,5)	315 (8)	492 (12,5)
55920-6-1/8	6	1/8	217 (5,5)	906 (23)	1.220 (31)	551 (14)	492 (12,5)
55920-6-1/4	6	1/4	276 (7)	1.004 (25,5)	1.437 (36,5)	669 (17)	492 (12,5)
55920-8-1/8	5/16 (8)	1/8	217 (5,5)	925 (23,5)	1.220 (31)	551 (14)	551 (14)
55920-8-1/4	5/16 (8)	1/4	276 (7)	1.024 (26)	1.437 (36,5)	669 (17)	551 (14)
55920-8-3/8	5/16 (8)	3/8	335 (8,5)	1.083 (27,5)	1.673 (42,5)	787 (20)	551 (14)
55920-10-3/8	10	3/8	335 (8,5)	1.201 (30,5)	1.673 (42,5)	787 (20)	669 (17)
55920-12-3/8	12	3/8	335 (8,5)	1.280 (32,5)	1.673 (42,5)	787 (20)	846 (21,5)
55920-12-1/2	12	1/2	394 (10)	1.378 (35)	1.850 (47)	945 (24)	846 (21,5)

55905

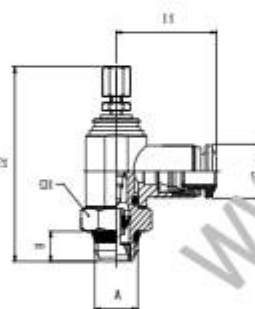
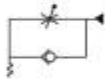
METRIC TUBE FLOW CONTROL (OUT)



Part No.	Tube	A	B	L1	L2 min	L2 max	CH	D
55905-4-M5	5/32 (4)	M5	.217 (5,5)	.768 (19,5)	1.516 (38,5)	1.673 (42,5)	.315 (8)	.394 (10)
55905-4-1/8	5/32 (4)	1/8	.217 (5,5)	.846 (21,5)	1.732 (44)	1.929 (49)	.551 (14)	.394 (10)
55905-5-M5	5	M5	.217 (5,5)	.807 (20,5)	1.516 (38,5)	1.673 (42,5)	.315 (8)	.492 (12,5)
55905-5-1/8	5	1/8	.217 (5,5)	.886 (22,5)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
55905-5-1/4	5	1/4	.276 (7)	.984 (25)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
55905-6-M5	6	M5	.217 (5,5)	.827 (21)	1.516 (38,5)	1.673 (42,5)	.315 (8)	.492 (12,5)
55905-6-1/8	6	1/8	.217 (5,5)	.906 (23)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
55905-6-1/4	6	1/4	.276 (7)	1.004 (25,5)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
55905-8-1/8	5/16 (8)	1/8	.217 (5,5)	.925 (23,5)	1.732 (44)	1.929 (49)	.551 (14)	.551 (14)
55905-8-1/4	5/16 (8)	1/4	.276 (7)	1.024 (26)	1.909 (48,5)	2.165 (55)	.669 (17)	.551 (14)
55905-8-3/8	5/16 (8)	3/8	.335 (8,5)	1.083 (27,5)	2.205 (56)	2.559 (65)	.787 (20)	.551 (14)
55905-10-3/8	10	3/8	.335 (8,5)	1.201 (30,5)	2.205 (56)	2.559 (65)	.787 (20)	.669 (17)
55905-12-3/8	12	3/8	.335 (8,5)	1.280 (32,5)	2.205 (56)	2.559 (65)	.787 (20)	.846 (21,5)
55905-12-1/2	12	1/2	.394 (10)	1.378 (35)	2.441 (62)	2.717 (69)	.945 (24)	.846 (21,5)

55915

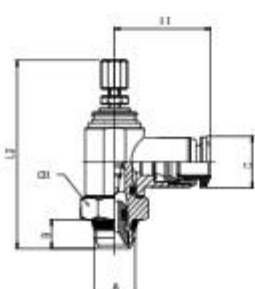
METRIC TUBE FLOW CONTROL (IN)



Part No.	Tube	A	B	L1	L2 min	L2 max	CH	D
55915-4-M5	5/32 (4)	M5	.217 (5,5)	.768 (19,5)	1.516 (38,5)	1.673 (42,5)	.315 (8)	.394 (10)
55915-4-1/8	5/32 (4)	1/8	.217 (5,5)	.846 (21,5)	1.732 (44)	1.929 (49)	.551 (14)	.394 (10)
55915-5-M5	5	M5	.217 (5,5)	.807 (20,5)	1.516 (38,5)	1.673 (42,5)	.315 (8)	.492 (12,5)
55915-5-1/8	5	1/8	.217 (5,5)	.886 (22,5)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
55915-5-1/4	5	1/4	.276 (7)	.984 (25)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
55915-6-M5	6	M5	.217 (5,5)	.827 (21)	1.516 (38,5)	1.673 (42,5)	.315 (8)	.492 (12,5)
55915-6-1/8	6	1/8	.217 (5,5)	.906 (23)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
55915-6-1/4	6	1/4	.276 (7)	1.004 (25,5)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
55915-8-1/8	5/16 (8)	1/8	.217 (5,5)	.925 (23,5)	1.732 (44)	1.929 (49)	.551 (14)	.551 (14)
55915-8-1/4	5/16 (8)	1/4	.276 (7)	1.024 (26)	1.909 (48,5)	2.165 (55)	.669 (17)	.551 (14)
55915-8-3/8	5/16 (8)	3/8	.335 (8,5)	1.083 (27,5)	2.205 (56)	2.559 (65)	.787 (20)	.551 (14)
55915-10-3/8	10	3/8	.335 (8,5)	1.201 (30,5)	2.205 (56)	2.559 (65)	.787 (20)	.669 (17)
55915-12-3/8	12	3/8	.335 (8,5)	1.280 (32,5)	2.205 (56)	2.559 (65)	.787 (20)	.846 (21,5)
55915-12-1/2	12	1/2	.394 (10)	1.378 (35)	2.441 (62)	2.717 (69)	.945 (24)	.846 (21,5)

55925

METRIC TUBE NEEDLE VALVE



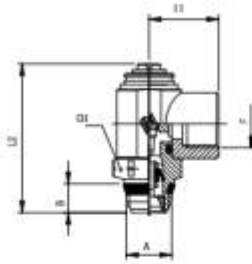
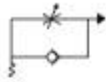
Part No.	Tube	A	B	L1	L2 min	L2 max	CH	D
55925-4-M5	5/32 (4)	M5	.217 (5,5)	.768 (19,5)	1.516 (38,5)	1.673 (42,5)	.315 (8)	.394 (10)
55925-4-1/8	5/32 (4)	1/8	.217 (5,5)	.846 (21,5)	1.732 (44)	1.929 (49)	.551 (14)	.394 (10)
55925-5-M5	5	M5	.217 (5,5)	.807 (20,5)	1.516 (38,5)	1.673 (42,5)	.315 (8)	.492 (12,5)
55925-5-1/8	5	1/8	.217 (5,5)	.886 (22,5)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
55925-5-1/4	5	1/4	.276 (7)	.984 (25)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
55925-6-M5	6	M5	.217 (5,5)	.827 (21)	1.516 (38,5)	1.673 (42,5)	.315 (8)	.492 (12,5)
55925-6-1/8	6	1/8	.217 (5,5)	.906 (23)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
55925-6-1/4	6	1/4	.276 (7)	1.004 (25,5)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
55925-8-1/8	5/16 (8)	1/8	.217 (5,5)	.925 (23,5)	1.732 (44)	1.929 (49)	.551 (14)	.551 (14)
55925-8-1/4	5/16 (8)	1/4	.276 (7)	1.024 (26)	1.909 (48,5)	2.165 (55)	.669 (17)	.551 (14)
55925-8-3/8	5/16 (8)	3/8	.335 (8,5)	1.083 (27,5)	2.205 (56)	2.559 (65)	.787 (20)	.551 (14)
55925-10-3/8	10	3/8	.335 (8,5)	1.201 (30,5)	2.205 (56)	2.559 (65)	.787 (20)	.669 (17)
55925-12-3/8	12	3/8	.335 (8,5)	1.280 (32,5)	2.205 (56)	2.559 (65)	.787 (20)	.846 (21,5)
55925-12-1/2	12	1/2	.394 (10)	1.378 (35)	2.441 (62)	2.717 (69)	.945 (24)	.846 (21,5)

88952

FEMALE NPTF FLOW CONTROL (OUT)



Part No.	F NPTF	A	B	L1	L2	CH
88952-32-32	10/32 UNF	10/32	.157 (4)	.394 (10)	.945 (24)	.315 (8)
88952-02-02	1/8	1/8	.217 (5,5)	.650 (16,5)	1.181 (30,5)	.551 (14)
88952-04-04	1/4	1/4	.276 (7)	.866 (22)	1.417 (36)	.669 (17)
88952-06-06	3/8	3/8	.295 (7,5)	1.043 (26,5)	1.614 (26,5)	.787 (20)

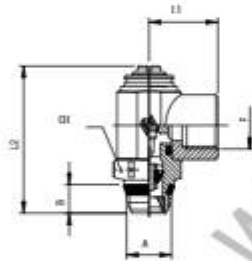
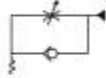


88962

FEMALE NPTF FLOW CONTROL (IN)



Part No.	F NPTF	A	B	L1	L2	CH
88962-32-32	10/32 UNF	10/32	.157 (4)	.394 (10)	.945 (24)	.315 (8)
88962-02-02	1/8	1/8	.217 (5,5)	.650 (16,5)	1.181 (30,5)	.551 (14)
88962-04-04	1/4	1/4	.276 (7)	.866 (22)	1.417 (36)	.669 (17)
88962-06-06	3/8	3/8	.295 (7,5)	1.043 (26,5)	1.614 (26,5)	.787 (20)

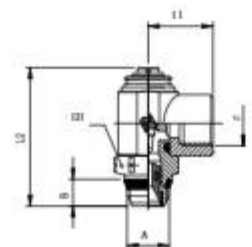
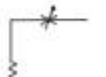


88972

FEMALE NPTF NEEDLE VALVE

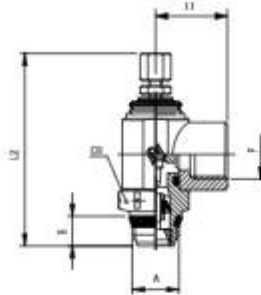
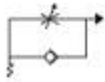


Part No.	F NPTF	A	B	L1	L2	CH
88972-32-32	10/32 UNF	10/32	.157 (4)	.394 (10)	.945 (24)	.315 (8)
88972-02-02	1/8	1/8	.217 (5,5)	.650 (16,5)	1.181 (30,5)	.551 (14)
88972-04-04	1/4	1/4	.276 (7)	.866 (22)	1.417 (36)	.669 (17)
88972-06-06	3/8	3/8	.295 (7,5)	1.043 (26,5)	1.614 (26,5)	.787 (20)



88957

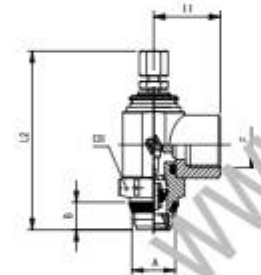
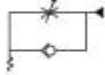
FEMALE NPTF FLOW CONTROL (OUT)



Part No.	F NPTF	A	B	L1	L2 min	L2 max	CH
88957-32-32	10/32 UNF	10/32	.157 (4)	.394 (10)	1.299 (33)	1.477 (37,5)	.315 (8)
88957-02-02	1/8	1/8	.217 (5,5)	.650 (16,5)	1.614 (41)	1.830 (46,5)	.551 (14)
88957-04-04	1/4	1/4	.276 (7)	.866 (22)	1.850 (47)	2.086 (53)	.669 (17)
88957-06-06	3/8	3/8	.295 (7,5)	1.043 (26,5)	2.480 (63)	2.480 (63)	.787 (20)

88967

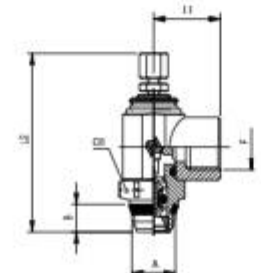
FEMALE NPTF FLOW CONTROL (IN)



Part No.	F NPTF	A	B	L1	L2 min	L2 max	CH
88967-32-32	10/32 UNF	10/32	.157 (4)	.394 (10)	1.299 (33)	1.477 (37,5)	.315 (8)
88967-02-02	1/8	1/8	.217 (5,5)	.650 (16,5)	1.614 (41)	1.830 (46,5)	.551 (14)
88967-04-04	1/4	1/4	.276 (7)	.866 (22)	1.850 (47)	2.086 (53)	.669 (17)
88967-06-06	3/8	3/8	.295 (7,5)	1.043 (26,5)	2.205 (56)	2.480 (63)	.787 (20)

88977

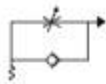
FEMALE NPTF NEEDLE VALVE



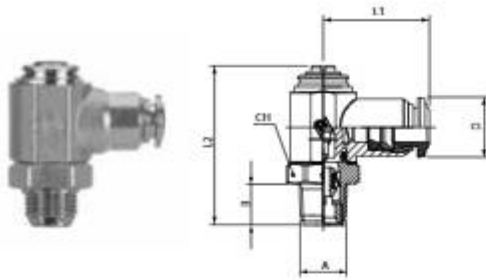
Part No.	F NPTF	A	B	L1	L2 min	L2 max	CH
88977-32-32	10/32 UNF	10/32	.157 (4)	.394 (10)	1.299 (33)	1.477 (37,5)	.315 (8)
88977-02-02	1/8	1/8	.217 (5,5)	.650 (16,5)	1.614 (41)	1.830 (46,5)	.551 (14)
88977-04-04	1/4	1/4	.276 (7)	.866 (22)	1.850 (47)	2.086 (53)	.669 (17)
88977-06-06	3/8	3/8	.295 (7,5)	1.043 (26,5)	2.480 (63)	2.480 (63)	.787 (20)

89903

INCH TUBE FLOW CONTROL (OUT)

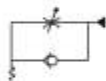


Part No.	Tube	A (PTF)	B	L1	L2	CH	D
89903-02-02	1/8	1/8	.240 (6,1)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
89903-53-02	5/32	1/8	.240 (6,1)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
89903-04-02	1/4	1/8	.240 (6,1)	.866 (22)	1.181 (30,5)	.551 (14)	.492 (12,5)
89903-04-04	1/4	1/4	.358 (9,1)	.984 (25)	1.417 (36)	.669 (17)	.492 (12,5)
89903-06-04	3/8	1/4	.358 (9,1)	1.181 (30,5)	1.614 (41)	.787 (20)	.689 (17,5)

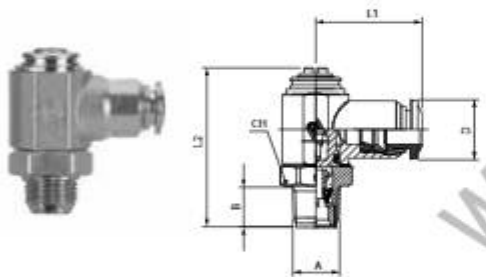


89913

INCH TUBE FLOW CONTROL (IN)



Part No.	Tube	A (PTF)	B	L1	L2	CH	D
89913-02-02	1/8	1/8	.240 (6,1)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
89913-53-02	5/32	1/8	.240 (6,1)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
89913-04-02	1/4	1/8	.240 (6,1)	.866 (22)	1.181 (30,5)	.551 (14)	.492 (12,5)
89913-04-04	1/4	1/4	.358 (9,1)	.984 (25)	1.417 (36)	.669 (17)	.492 (12,5)
89913-06-04	3/8	1/4	.358 (9,1)	1.181 (30,5)	1.614 (41)	.787 (20)	.689 (17,5)

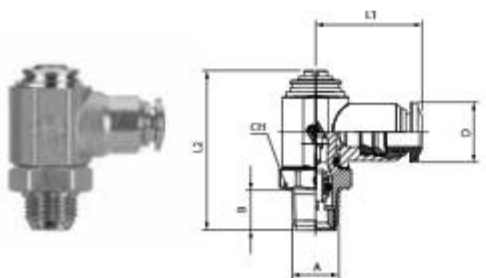


89923

INCH TUBE NEEDLE VALVE

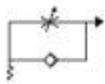


Part No.	Tube	A (PTF)	B	L1	L2	CH	D
89923-02-02	1/8	1/8	.240 (6,1)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
89923-53-02	5/32	1/8	.240 (6,1)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
89923-04-02	1/4	1/8	.240 (6,1)	.866 (22)	1.181 (30,5)	.551 (14)	.492 (12,5)
89923-04-04	1/4	1/4	.358 (9,1)	.984 (25)	1.417 (36)	.669 (17)	.492 (12,5)
89923-06-04	3/8	1/4	.358 (9,1)	1.181 (30,5)	1.614 (41)	.787 (20)	.689 (17,5)

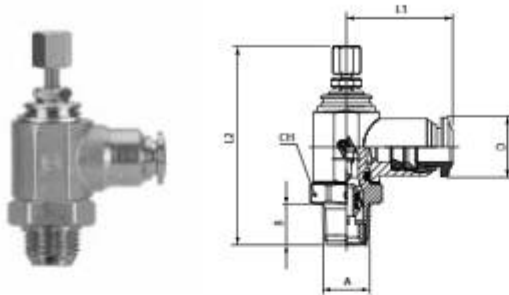


89907

INCH TUBE FLOW CONTROL (OUT)

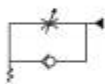


Part No.	Tube	A (PTF)	B	L1	L2 min	L2 max	CH	D
89907-02-02	1/8	1/8	.240 (6,1)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
89907-53-02	5/32	1/8	.240 (6,1)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
89907-04-02	1/4	1/8	.240 (6,1)	.866 (22)	1.614 (41)	1.830 (46,5)	.551 (14)	.492 (12,5)
89907-04-04	1/4	1/4	.358 (9,1)	.984 (25)	1.850 (47)	2.086 (53)	.669 (17)	.492 (12,5)
89907-06-04	3/8	1/4	.358 (9,1)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.689 (17,5)

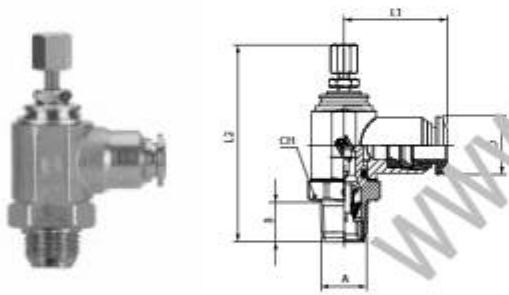


89917

INCH TUBE FLOW CONTROL (IN)

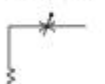


Part No.	Tube	A (PTF)	B	L1	L2 min	L2 max	CH	D
89917-02-02	1/8	1/8	.240 (6,1)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
89917-53-02	5/32	1/8	.240 (6,1)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
89917-04-02	1/4	1/8	.240 (6,1)	.866 (22)	1.614 (41)	1.830 (46,5)	.551 (14)	.492 (12,5)
89917-04-04	1/4	1/4	.358 (9,1)	.984 (25)	1.850 (47)	2.086 (53)	.669 (17)	.492 (12,5)
89917-06-04	3/8	1/4	.358 (9,1)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.689 (17,5)

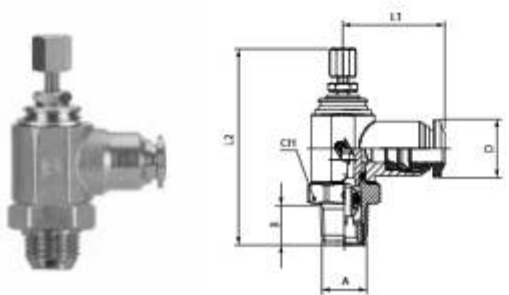


89927

INCH TUBE NEEDLE VALVE

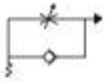


Part No.	Tube	A (PTF)	B	L1	L2 min	L2 max	CH	D
89927-02-02	1/8	1/8	.240 (6,1)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
89927-53-02	5/32	1/8	.240 (6,1)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
89927-04-02	1/4	1/8	.240 (6,1)	.866 (22)	1.614 (41)	1.830 (46,5)	.551 (14)	.492 (12,5)
89927-04-04	1/4	1/4	.358 (9,1)	.984 (25)	1.850 (47)	2.086 (53)	.669 (17)	.492 (12,5)
89927-06-04	3/8	1/4	.358 (9,1)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.689 (17,5)

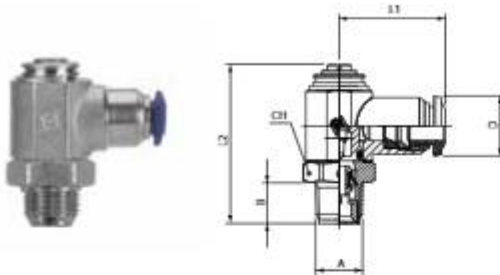


87903

INCH TUBE FLOW CONTROL (OUT)

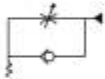


Part No.	Tube	A (PTF)	B	L1	L2	CH	D
87903-02-02	1/8	1/8	.240 (6,1)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
87903-53-02	5/32	1/8	.240 (6,1)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
87903-04-02	1/4	1/8	.240 (6,1)	.866 (22)	1.181 (30,5)	.551 (14)	.492 (12,5)
87903-04-04	1/4	1/4	.358 (9,1)	.984 (25)	1.417 (36)	.669 (17)	.492 (12,5)
87903-06-04	3/8	1/4	.358 (9,1)	1.181 (30,5)	1.614 (41)	.787 (20)	.689 (17,5)

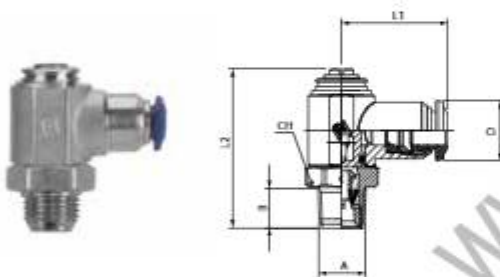


87913

INCH TUBE FLOW CONTROL (IN)



Part No.	Tube	A (PTF)	B	L1	L2	CH	D
87913-02-02	1/8	1/8	.240 (6,1)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
87913-53-02	5/32	1/8	.240 (6,1)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
87913-04-02	1/4	1/8	.240 (6,1)	.866 (22)	1.181 (30,5)	.551 (14)	.492 (12,5)
87913-04-04	1/4	1/4	.358 (9,1)	.984 (25)	1.417 (36)	.669 (17)	.492 (12,5)
87913-06-04	3/8	1/4	.358 (9,1)	1.181 (30,5)	1.614 (41)	.787 (20)	.689 (17,5)

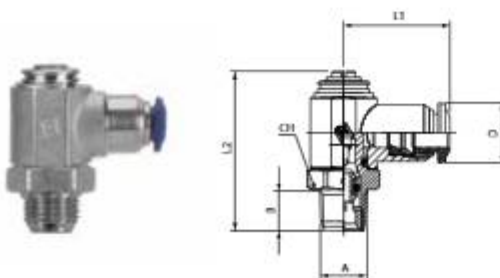


87923

INCH TUBE NEEDLE VALVE

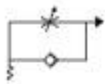


Part No.	Tube	A (PTF)	B	L1	L2	CH	D
87923-02-02	1/8	1/8	.240 (6,1)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
87923-53-02	5/32	1/8	.240 (6,1)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
87923-04-02	1/4	1/8	.240 (6,1)	.866 (22)	1.181 (30,5)	.551 (14)	.492 (12,5)
87923-04-04	1/4	1/4	.358 (9,1)	.984 (25)	1.417 (36)	.669 (17)	.492 (12,5)
87923-06-04	3/8	1/4	.358 (9,1)	1.181 (30,5)	1.614 (41)	.787 (20)	.689 (17,5)



87907

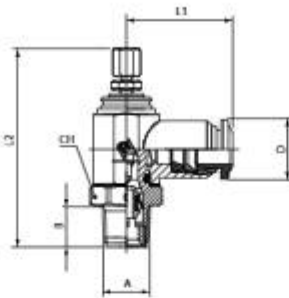
INCH TUBE FLOW CONTROL (OUT)



PTF

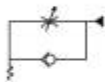
C

Part No.	Tube	A (PTF)	B	L1	L2 min	L2 max	CH	D
87907-02-02	1/8	1/8	.240 (6,1)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
87907-53-02	5/32	1/8	.240 (6,1)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
87907-04-02	1/4	1/8	.240 (6,1)	.866 (22)	1.614 (41)	1.830 (46,5)	.551 (14)	.492 (12,5)
87907-04-04	1/4	1/4	.358 (9,1)	.984 (25)	1.850 (47)	2.086 (53)	.669 (17)	.492 (12,5)
87907-06-04	3/8	1/4	.358 (9,1)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.689 (17,5)



87917

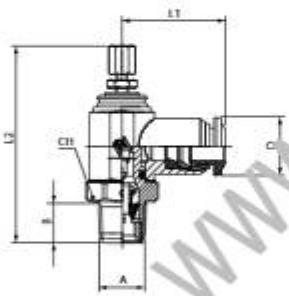
INCH TUBE FLOW CONTROL (IN)



PTF

V

Part No.	Tube	A (PTF)	B	L1	L2 min	L2 max	CH	D
87917-02-02	1/8	1/8	.240 (6,1)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
87917-53-02	5/32	1/8	.240 (6,1)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
87917-04-02	1/4	1/8	.240 (6,1)	.866 (22)	1.614 (41)	1.830 (46,5)	.551 (14)	.492 (12,5)
87917-04-04	1/4	1/4	.358 (9,1)	.984 (25)	1.850 (47)	2.086 (53)	.669 (17)	.492 (12,5)
87917-06-04	3/8	1/4	.358 (9,1)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.689 (17,5)



87927

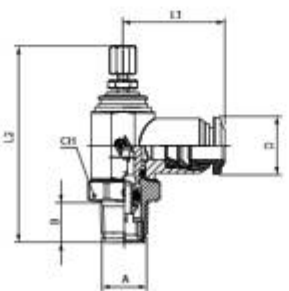
INCH TUBE NEEDLE VALVE



PTF

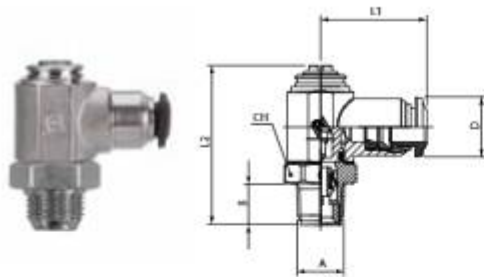
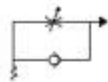
B

Part No.	Tube	A (PTF)	B	L1	L2 min	L2 max	CH	D
87927-02-02	1/8	1/8	.240 (6,1)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
87927-53-02	5/32	1/8	.240 (6,1)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
87927-04-02	1/4	1/8	.240 (6,1)	.866 (22)	1.614 (41)	1.830 (46,5)	.551 (14)	.492 (12,5)
87927-04-04	1/4	1/4	.358 (9,1)	.984 (25)	1.850 (47)	2.086 (53)	.669 (17)	.492 (12,5)
87927-06-04	3/8	1/4	.358 (9,1)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.689 (17,5)



50903N

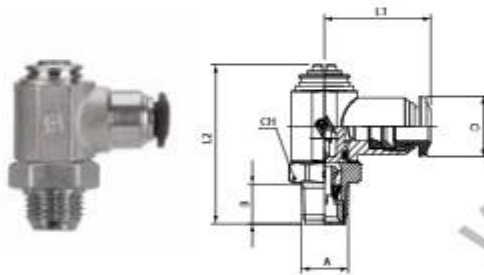
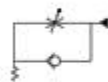
METRIC TUBE FLOW CONTROL (OUT)



Part No.	Tube	A (PTF)	B	L1	L2	CH	D
50903N-4-1/8	5/32 (4)	1/8	.240 (6,1)	.827 (21)	1.220 (31)	.551 (14)	.394 (10)
50903N-5-1/8	5	1/8	.240 (6,1)	.846 (21,5)	1.220 (31)	.551 (14)	.492 (12,5)
50903N-5-1/4	5	1/4	.358 (9,1)	.965 (24,5)	1.437 (36,5)	.669 (17)	.492 (12,5)
50903N-6-1/8	6	1/8	.240 (6,1)	.886 (22,5)	1.220 (31)	.551 (14)	.492 (12,5)
50903N-6-1/4	6	1/4	.358 (9,1)	.984 (25)	1.437 (36,5)	.669 (17)	.492 (12,5)
50903N-8-1/8	5/16 (8)	1/8	.240 (6,1)	.945 (24)	1.220 (31)	.551 (14)	.551 (14)
50903N-8-1/4	5/16 (8)	1/4	.358 (9,1)	1.024 (26)	1.437 (36,5)	.669 (17)	.551 (14)

50913N

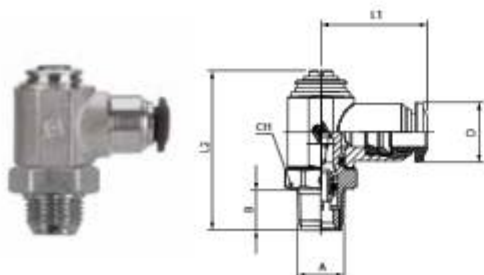
METRIC TUBE FLOW CONTROL (IN)



Part No.	Tube	A (PTF)	B	L1	L2	CH	D
50913N-4-1/8	5/32 (4)	1/8	.240 (6,1)	.827 (21)	1.220 (31)	.551 (14)	.394 (10)
50913N-5-1/8	5	1/8	.240 (6,1)	.846 (21,5)	1.220 (31)	.551 (14)	.492 (12,5)
50913N-5-1/4	5	1/4	.358 (9,1)	.965 (24,5)	1.437 (36,5)	.669 (17)	.492 (12,5)
50913N-6-1/8	6	1/8	.240 (6,1)	.886 (22,5)	1.220 (31)	.551 (14)	.492 (12,5)
50913N-6-1/4	6	1/4	.358 (9,1)	.984 (25)	1.437 (36,5)	.669 (17)	.492 (12,5)
50913N-8-1/8	5/16 (8)	1/8	.240 (6,1)	.945 (24)	1.220 (31)	.551 (14)	.551 (14)
50913N-8-1/4	5/16 (8)	1/4	.358 (9,1)	1.024 (26)	1.437 (36,5)	.669 (17)	.551 (14)

50923N

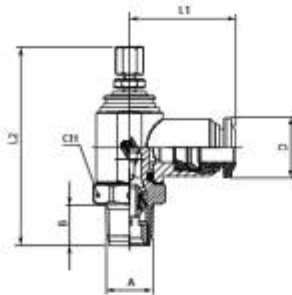
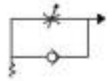
METRIC TUBE NEEDLE VALVE



Part No.	Tube	A (PTF)	B	L1	L2	CH	D
50923N-4-1/8	5/32 (4)	1/8	.240 (6,1)	.827 (21)	1.220 (31)	.551 (14)	.394 (10)
50923N-5-1/8	5	1/8	.240 (6,1)	.846 (21,5)	1.220 (31)	.551 (14)	.492 (12,5)
50923N-5-1/4	5	1/4	.358 (9,1)	.965 (24,5)	1.437 (36,5)	.669 (17)	.492 (12,5)
50923N-6-1/8	6	1/8	.240 (6,1)	.886 (22,5)	1.220 (31)	.551 (14)	.492 (12,5)
50923N-6-1/4	6	1/4	.358 (9,1)	.984 (25)	1.437 (36,5)	.669 (17)	.492 (12,5)
50923N-8-1/8	5/16 (8)	1/8	.240 (6,1)	.945 (24)	1.220 (31)	.551 (14)	.551 (14)
50923N-8-1/4	5/16 (8)	1/4	.358 (9,1)	1.024 (26)	1.437 (36,5)	.669 (17)	.551 (14)

50907N

METRIC TUBE FLOW CONTROL (OUT)



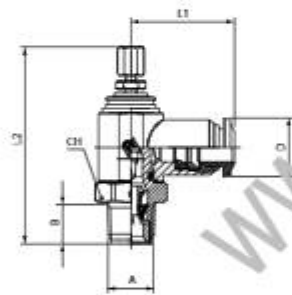
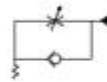
PTF

C

Part No.	Tube	A (PTF)	B	L1	L2 min	L2 max	CH	D
50907N-4-1/8	5/32 (4)	1/8	.240 (6,1)	.827 (21)	1.732 (44)	1.929 (49)	.551 (14)	.394 (10)
50907N-5-1/8	5	1/8	.240 (6,1)	.846 (21,5)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
50907N-5-1/4	5	1/4	.358 (9,1)	.965 (24,5)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
50907N-6-1/8	6	1/8	.240 (6,1)	.886 (22,5)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
50907N-6-1/4	6	1/4	.358 (9,1)	.984 (25)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
50907N-8-1/8	5/16 (8)	1/8	.240 (6,1)	.945 (24)	1.732 (44)	1.929 (49)	.551 (14)	.551 (14)
50907N-8-1/4	5/16 (8)	1/4	.358 (9,1)	1.024 (26)	1.909 (48,5)	2.165 (55)	.669 (17)	.551 (14)

50917N

METRIC TUBE FLOW CONTROL (IN)



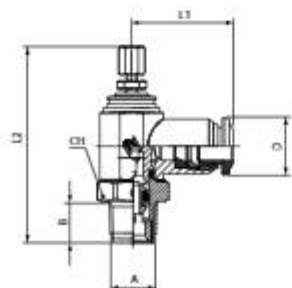
PTF

V

Part No.	Tube	A (PTF)	B	L1	L2 min	L2 max	CH	D
50917N-4-1/8	5/32 (4)	1/8	.240 (6,1)	.827 (21)	1.732 (44)	1.929 (49)	.551 (14)	.394 (10)
50917N-5-1/8	5	1/8	.240 (6,1)	.846 (21,5)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
50917N-5-1/4	5	1/4	.358 (9,1)	.965 (24,5)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
50917N-6-1/8	6	1/8	.240 (6,1)	.886 (22,5)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
50917N-6-1/4	6	1/4	.358 (9,1)	.984 (25)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
50917N-8-1/8	5/16 (8)	1/8	.240 (6,1)	.945 (24)	1.732 (44)	1.929 (49)	.551 (14)	.551 (14)
50917N-8-1/4	5/16 (8)	1/4	.358 (9,1)	1.024 (26)	1.909 (48,5)	2.165 (55)	.669 (17)	.551 (14)

50927N

METRIC TUBE NEEDLE VALVE



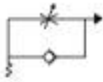
PTF

B

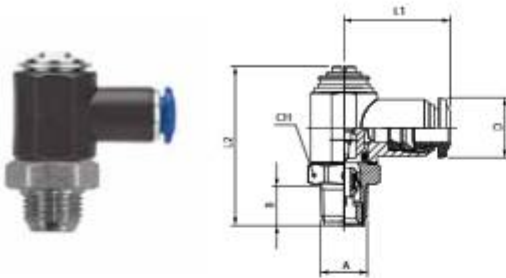
Part No.	Tube	A (PTF)	B	L1	L2 min	L2 max	CH	D
50927N-4-1/8	5/32 (4)	1/8	.240 (6,1)	.827 (21)	1.732 (44)	1.929 (49)	.551 (14)	.394 (10)
50927N-5-1/8	5	1/8	.240 (6,1)	.846 (21,5)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
50927N-5-1/4	5	1/4	.358 (9,1)	.965 (24,5)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
50927N-6-1/8	6	1/8	.240 (6,1)	.886 (22,5)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
50927N-6-1/4	6	1/4	.358 (9,1)	.984 (25)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
50927N-8-1/8	5/16 (8)	1/8	.240 (6,1)	.945 (24)	1.732 (44)	1.929 (49)	.551 (14)	.551 (14)
50927N-8-1/4	5/16 (8)	1/4	.358 (9,1)	1.024 (26)	1.909 (48,5)	2.165 (55)	.669 (17)	.551 (14)

85903

INCH TUBE FLOW CONTROL (OUT)

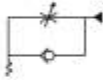


Part No.	Tube	A (PTF)	B	L1	L2	CH	D
85903-02-02	1/8	1/8	.240 (6,1)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
85903-53-02	5/32	1/8	.240 (6,1)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
85903-04-02	1/4	1/8	.240 (6,1)	.866 (22)	1.181 (30,5)	.551 (14)	.472 (12)
85903-04-04	1/4	1/4	.358 (9,1)	.984 (25)	1.417 (36)	.669 (17)	.472 (12)
85903-06-04	3/8	1/4	.358 (9,1)	1.181 (30,5)	1.614 (41)	.787 (20)	.669 (17)

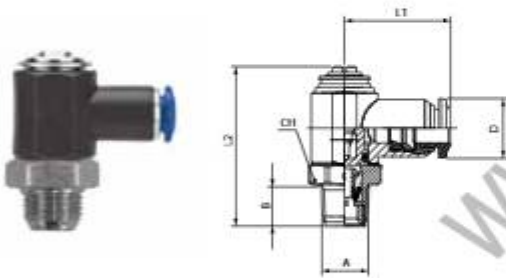


85913

INCH TUBE FLOW CONTROL (IN)



Part No.	Tube	A (PTF)	B	L1	L2	CH	D
85913-02-02	1/8	1/8	.240 (6,1)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
85913-53-02	5/32	1/8	.240 (6,1)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
85913-04-02	1/4	1/8	.240 (6,1)	.866 (22)	1.181 (30,5)	.551 (14)	.472 (12)
85913-04-04	1/4	1/4	.358 (9,1)	.984 (25)	1.417 (36)	.669 (17)	.472 (12)
85913-06-04	3/8	1/4	.358 (9,1)	1.181 (30,5)	1.614 (41)	.787 (20)	.669 (17)

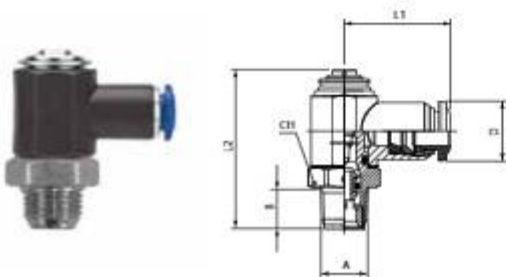


85923

INCH TUBE NEEDLE VALVE

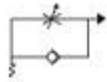


Part No.	Tube	A (PTF)	B	L1	L2	CH	D
85923-02-02	1/8	1/8	.240 (6,1)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
85923-53-02	5/32	1/8	.240 (6,1)	.827 (21)	1.181 (30,5)	.551 (14)	.394 (10)
85923-04-02	1/4	1/8	.240 (6,1)	.866 (22)	1.181 (30,5)	.551 (14)	.472 (12)
85923-04-04	1/4	1/4	.358 (9,1)	.984 (25)	1.417 (36)	.669 (17)	.472 (12)
85923-06-04	3/8	1/4	.358 (9,1)	1.181 (30,5)	1.614 (41)	.787 (20)	.669 (17)

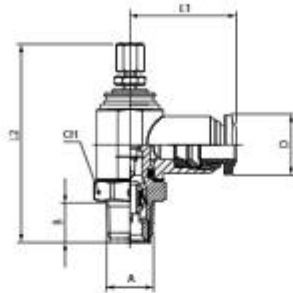


85907

INCH TUBE FLOW CONTROL (OUT)

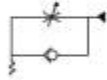


Part No.	Tube	A (PTF)	B	L1	L2 min	L2 max	CH	D
85907-02-02	1/8	1/8	.240 (6,1)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
85907-53-02	5/32	1/8	.240 (6,1)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
85907-04-02	1/4	1/8	.240 (6,1)	.866 (22)	1.614 (41)	1.830 (46,5)	.551 (14)	.472 (12)
85907-04-04	1/4	1/4	.358 (9,1)	.984 (25)	1.850 (47)	2.086 (53)	.669 (17)	.472 (12)
85907-06-04	3/8	1/4	.358 (9,1)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.669 (17)

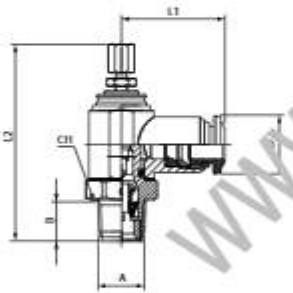


85917

INCH TUBE FLOW CONTROL (IN)



Part No.	Tube	A (PTF)	B	L1	L2 min	L2 max	CH	D
85917-02-02	1/8	1/8	.240 (6,1)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
85917-53-02	5/32	1/8	.240 (6,1)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
85917-04-02	1/4	1/8	.240 (6,1)	.866 (22)	1.614 (41)	1.830 (46,5)	.551 (14)	.472 (12)
85917-04-04	1/4	1/4	.358 (9,1)	.984 (25)	1.850 (47)	2.086 (53)	.669 (17)	.472 (12)
85917-06-04	3/8	1/4	.358 (9,1)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.669 (17)

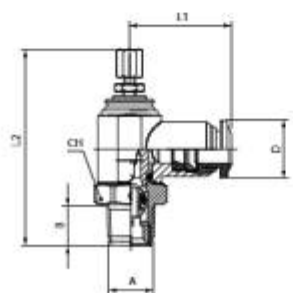


85927

INCH TUBE NEEDLE VALVE

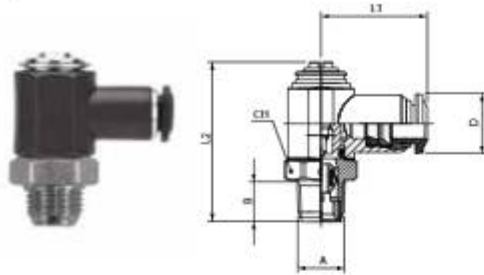
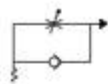


Part No.	Tube	A (PTF)	B	L1	L2 min	L2 max	CH	D
85927-02-02	1/8	1/8	.240 (6,1)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
85927-53-02	5/32	1/8	.240 (6,1)	.827 (21)	1.614 (41)	1.830 (46,5)	.551 (14)	.394 (10)
85927-04-02	1/4	1/8	.240 (6,1)	.866 (22)	1.614 (41)	1.830 (46,5)	.551 (14)	.472 (12)
85927-04-04	1/4	1/4	.358 (9,1)	.984 (25)	1.850 (47)	2.086 (53)	.669 (17)	.472 (12)
85927-06-04	3/8	1/4	.358 (9,1)	1.181 (30,5)	2.205 (56)	2.480 (63)	.787 (20)	.669 (17)



55903

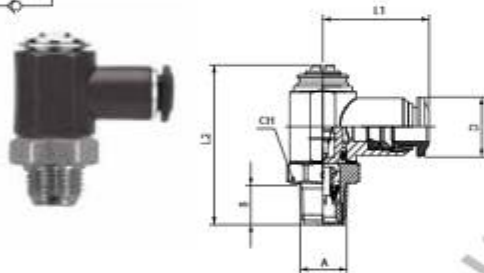
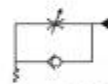
METRIC TUBE FLOW CONTROL (OUT)



Part No.	Tube	A (PTF)	B	L1	L2	CH	D
55903-4-1/8	5/32 (4)	1/8	.240 (6,1)	.846 (21,5)	1.220 (31)	.551 (14)	.394 (10)
55903-5-1/8	5	1/8	.240 (6,1)	.886 (22,5)	1.220 (31)	.551 (14)	.492 (12,5)
55903-5-1/4	5	1/4	.358 (9,1)	.984 (25)	1.437 (36,5)	.669 (17)	.492 (12,5)
55903-6-1/8	6	1/8	.240 (6,1)	.906 (23)	1.220 (31)	.551 (14)	.492 (12,5)
55903-6-1/4	6	1/4	.358 (9,1)	1.004 (25,5)	1.437 (36,5)	.669 (17)	.492 (12,5)
55903-8-1/8	5/16 (8)	1/8	.240 (6,1)	.925 (23,5)	1.220 (31)	.551 (14)	.551 (14)
55903-8-1/4	5/16 (8)	1/4	.358 (9,1)	1.024 (26)	1.437 (36,5)	.669 (17)	.551 (14)

55913

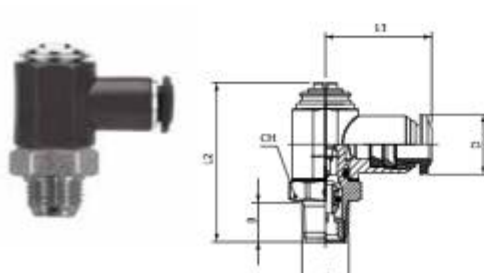
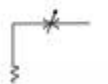
METRIC TUBE FLOW CONTROL (IN)



Part No.	Tube	A (PTF)	B	L1	L2	CH	D
55913-4-1/8	5/32 (4)	1/8	.240 (6,1)	.846 (21,5)	1.220 (31)	.551 (14)	.394 (10)
55913-5-1/8	5	1/8	.240 (6,1)	.886 (22,5)	1.220 (31)	.551 (14)	.492 (12,5)
55913-5-1/4	5	1/4	.358 (9,1)	.984 (25)	1.437 (36,5)	.669 (17)	.492 (12,5)
55913-6-1/8	6	1/8	.240 (6,1)	.906 (23)	1.220 (31)	.551 (14)	.492 (12,5)
55913-6-1/4	6	1/4	.358 (9,1)	1.004 (25,5)	1.437 (36,5)	.669 (17)	.492 (12,5)
55913-8-1/8	5/16 (8)	1/8	.240 (6,1)	.925 (23,5)	1.220 (31)	.551 (14)	.551 (14)
55913-8-1/4	5/16 (8)	1/4	.358 (9,1)	1.024 (26)	1.437 (36,5)	.669 (17)	.551 (14)

55923

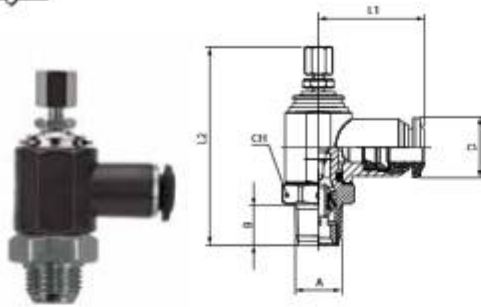
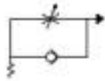
METRIC TUBE NEEDLE VALVE



Part No.	Tube	A (PTF)	B	L1	L2	CH	D
55923-4-1/8	5/32 (4)	1/8	.240 (6,1)	.846 (21,5)	1.220 (31)	.551 (14)	.394 (10)
55923-5-1/8	5	1/8	.240 (6,1)	.886 (22,5)	1.220 (31)	.551 (14)	.492 (12,5)
55923-5-1/4	5	1/4	.358 (9,1)	.984 (25)	1.437 (36,5)	.669 (17)	.492 (12,5)
55923-6-1/8	6	1/8	.240 (6,1)	.906 (23)	1.220 (31)	.551 (14)	.492 (12,5)
55923-6-1/4	6	1/4	.358 (9,1)	1.004 (25,5)	1.437 (36,5)	.669 (17)	.492 (12,5)
55923-8-1/8	5/16 (8)	1/8	.240 (6,1)	.925 (23,5)	1.220 (31)	.551 (14)	.551 (14)
55923-8-1/4	5/16 (8)	1/4	.358 (9,1)	1.024 (26)	1.437 (36,5)	.669 (17)	.551 (14)

55907

METRIC TUBE FLOW CONTROL (OUT)

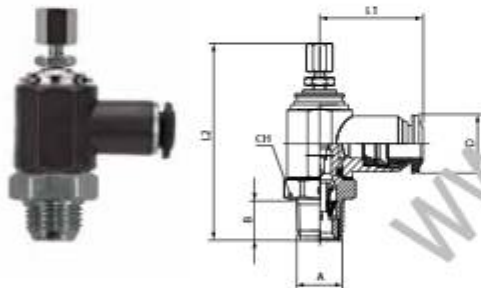
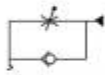


PTF

Part No.	Tube	A (PTF)	B	L1	L2 min	L2 max	CH	D
55907-4-1/8	5/32 (4)	1/8	.240 (6,1)	.846 (21,5)	1.732 (44)	1.929 (49)	.551 (14)	.394 (10)
55907-5-1/8	5	1/8	.240 (6,1)	.886 (22,5)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
55907-5-1/4	5	1/4	.358 (9,1)	.984 (25)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
55907-6-1/8	6	1/8	.240 (6,1)	.906 (23)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
55907-6-1/4	6	1/4	.358 (9,1)	1.004 (25,5)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
55907-8-1/8	5/16 (8)	1/8	.240 (6,1)	.925 (23,5)	1.732 (44)	1.929 (49)	.551 (14)	.551 (14)
55907-8-1/4	5/16 (8)	1/4	.358 (9,1)	1.024 (26)	1.909 (48,5)	2.165 (55)	.669 (17)	.551 (14)

55917

METRIC TUBE FLOW CONTROL (IN)

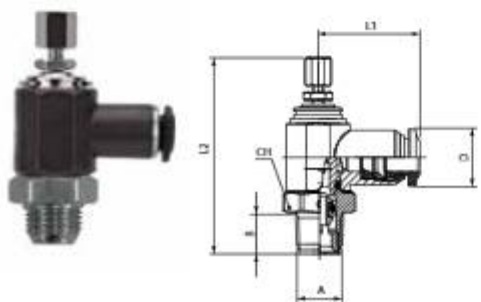


PTF

Part No.	Tube	A (PTF)	B	L1	L2 min	L2 max	CH	D
55917-4-1/8	5/32 (4)	1/8	.240 (6,1)	.846 (21,5)	1.732 (44)	1.929 (49)	.551 (14)	.394 (10)
55917-5-1/8	5	1/8	.240 (6,1)	.886 (22,5)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
55917-5-1/4	5	1/4	.358 (9,1)	.984 (25)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
55917-6-1/8	6	1/8	.240 (6,1)	.906 (23)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
55917-6-1/4	6	1/4	.358 (9,1)	1.004 (25,5)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
55917-8-1/8	5/16 (8)	1/8	.240 (6,1)	.925 (23,5)	1.732 (44)	1.929 (49)	.551 (14)	.551 (14)
55917-8-1/4	5/16 (8)	1/4	.358 (9,1)	1.024 (26)	1.909 (48,5)	2.165 (55)	.669 (17)	.551 (14)

55927

METRIC TUBE NEEDLE VALVE

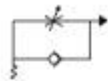


PTF

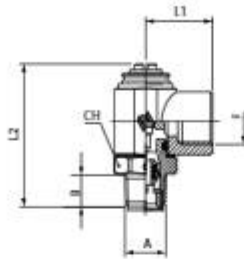
Part No.	Tube	A (PTF)	B	L1	L2 min	L2 max	CH	D
55927-4-1/8	5/32 (4)	1/8	.240 (6,1)	.846 (21,5)	1.732 (44)	1.929 (49)	.551 (14)	.394 (10)
55927-5-1/8	5	1/8	.240 (6,1)	.886 (22,5)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
55927-5-1/4	5	1/4	.358 (9,1)	.984 (25)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
55927-6-1/8	6	1/8	.240 (6,1)	.906 (23)	1.732 (44)	1.929 (49)	.551 (14)	.492 (12,5)
55927-6-1/4	6	1/4	.358 (9,1)	1.004 (25,5)	1.909 (48,5)	2.165 (55)	.669 (17)	.492 (12,5)
55927-8-1/8	5/16 (8)	1/8	.240 (6,1)	.925 (23,5)	1.732 (44)	1.929 (49)	.551 (14)	.551 (14)
55927-8-1/4	5/16 (8)	1/4	.358 (9,1)	1.024 (26)	1.909 (48,5)	2.165 (55)	.669 (17)	.551 (14)

82903

FEMALE NPTF FLOW CONTROL (OUT)

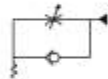


Part No.	F NPTF	A (PTF)	B	L1	L2	CH
82903-02-02	1/8	1/8	.240 (6,1)	.650 (16,5)	1.181 (30,5)	.551 (14)
82903-04-04	1/4	1/4	.358 (9,1)	.866 (22)	1.417 (36)	.669 (17)

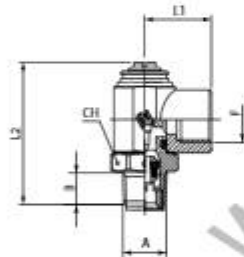


82913

FEMALE NPTF FLOW CONTROL (IN)



Part No.	F NPTF	A (PTF)	B	L1	L2	CH
82913-02-02	1/8	1/8	.240 (6,1)	.650 (16,5)	1.181 (30,5)	.551 (14)
82913-04-04	1/4	1/4	.358 (9,1)	.866 (22)	1.417 (36)	.669 (17)

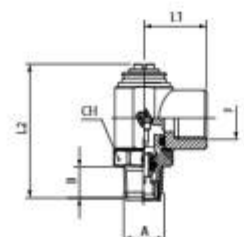


82923

FEMALE NPTF NEEDLE VALVE

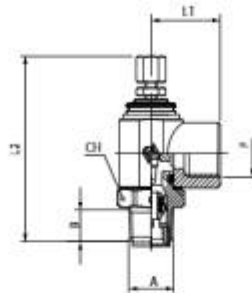
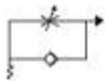


Part No.	F NPTF	A (PTF)	B	L1	L2	CH
82923-02-02	1/8	1/8	.240 (6,1)	.650 (16,5)	1.181 (30,5)	.551 (14)
82923-04-04	1/4	1/4	.358 (9,1)	.866 (22)	1.417 (36)	.669 (17)



82907

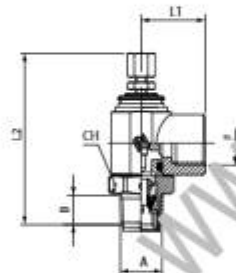
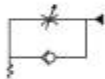
FEMALE NPTF FLOW CONTROL (OUT)



Part No.	F NPTF	A (PTF)	B	L1	L2 min	L2 max	CH
82907-02-02	1/8	1/8	.240 (6,1)	.650 (16,5)	1.614 (41)	1.830 (46,5)	.551 (14)
82907-04-04	1/4	1/4	.358 (9,1)	.866 (22)	1.850 (47)	2.086 (53)	.669 (17)

82917

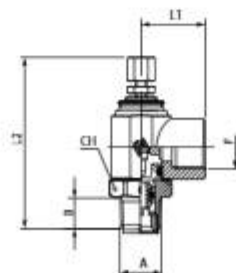
FEMALE NPTF FLOW CONTROL (IN)



Part No.	F NPTF	A (PTF)	B	L1	L2 min	L2 max	CH
82917-02-02	1/8	1/8	.240 (6,1)	.650 (16,5)	1.614 (41)	1.830 (46,5)	.551 (14)
82917-04-04	1/4	1/4	.358 (9,1)	.866 (22)	1.850 (47)	2.086 (53)	.669 (17)

82927

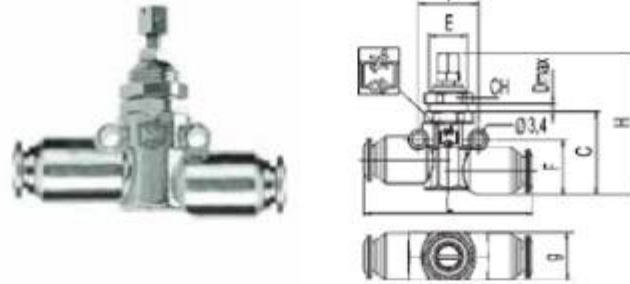
FEMALE NPTF NEEDLE VALVE



Part No.	F NPTF	A (PTF)	B	L1	L2 min	L2 max	CH
82927-02-02	1/8	1/8	.240 (6,1)	.650 (16,5)	1.614 (41)	1.830 (46,5)	.551 (14)
82927-04-04	1/4	1/4	.358 (9,1)	.866 (22)	1.850 (47)	2.086 (53)	.669 (17)

82815

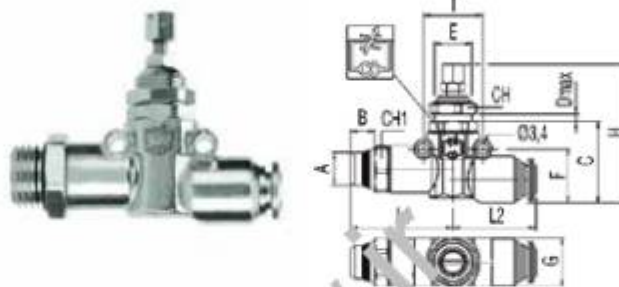
INLINE FLOW CONTROL



Part No.	Tube	C	D	E	F	G	H min	H max	I	L	CH
82815-04	1/4	.928 (23,5)	.157 (4)	M11X1	.618 (15,5)	.551 (14)	1.578 (40,5)	1.827 (46,5)	.677 (17)	1.890 (48)	.512 (13)
82815-06	3/8	.996 (25,5)	.177 (4,5)	M16X1	.807 (20,5)	.807 (20,5)	1.929 (49)	2.161 (55)	.787 (20)	2.272 (57,5)	.709 (18)

82820

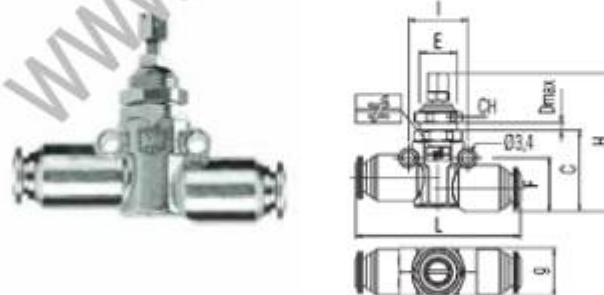
INLINE FLOW CONTROL MALE X TUBE



Part No.	A	Tube	B	C	D	E	F	G	H min	H max	I	L1	L2	CH	CH1
82820-04-04	1/4	1/4	.276 (7)	.928 (23,5)	.157 (4)	M11X1	.618 (15,5)	.551 (14)	1.578 (40,5)	1.827 (46,5)	.677 (17)	1.169 (29,5)	.945 (24)	.512 (13)	.512 (13)
82820-06-04	1/4	3/8	.276 (7)	.996 (25,5)	.177 (4,5)	M16X1	.807 (20,5)	.807 (20,5)	1.929 (49)	2.161 (55)	.787 (20)	1.378 (35)	1.134 (29)	.709 (18)	.630 (13)
82820-06-06	3/8	3/8	.295 (7,5)	.996 (25,5)	.177 (4,5)	M16X1	.807 (20,5)	.807 (20,5)	1.929 (49)	2.161 (55)	.787 (20)	1.299 (33)	1.134 (29)	.709 (18)	.669 (17)

82830

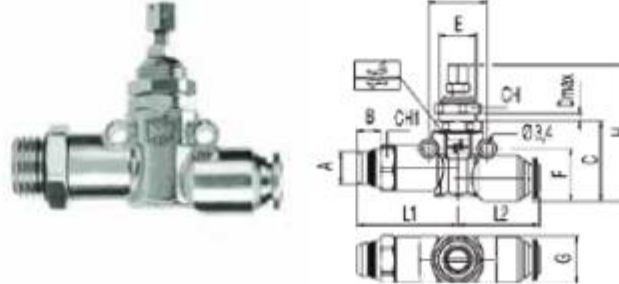
INLINE TUBE NEEDLE VALVE



Part No.	Tube	C	D	E	F	G	H min	H max	I	L	CH
82830-04	1/4	.928 (23,5)	.157 (4)	M11X1	.618 (15,5)	.551 (14)	1.578 (40,5)	1.827 (46,5)	.677 (17)	1.890 (48)	.512 (13)
82830-06	3/8	.996 (25,5)	.177 (4,5)	M16X1	.807 (20,5)	.807 (20,5)	1.929 (49)	2.161 (55)	.787 (20)	2.272 (57,5)	.709 (18)

82835

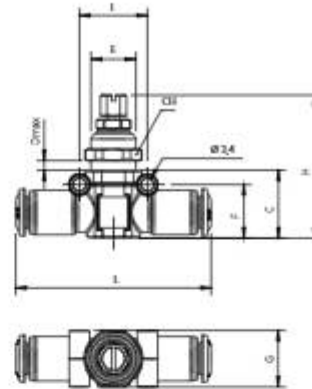
INLINE NEEDLE VALVE MALE X TUBE



Part No.	A	Tube	B	C	D	E	F	G	H min	H max	I	L1	L2	CH	CH1
82835-04-04	1/4	1/4	.276 (7)	.928 (23,5)	.157 (4)	M11X1	.618 (15,5)	.551 (14)	1.578 (40,5)	1.827 (46,5)	.677 (17)	1.169 (29,5)	.945 (24)	.512 (13)	.512 (13)
82835-06-06	3/8	3/8	.295 (7,5)	.996 (25,5)	.177 (4,5)	M16X1	.807 (20,5)	.807 (20,5)	1.929 (49)	2.161 (55)	.787 (20)	1.299 (33)	1.134 (29)	.709 (18)	.669 (17)

85940

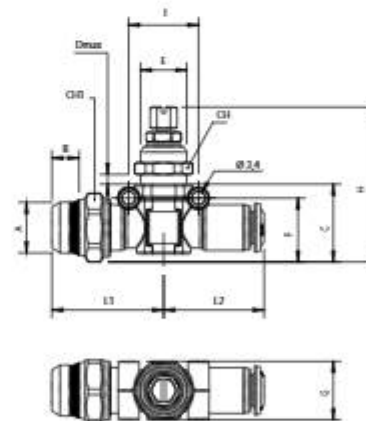
TUBE IN-LINE NEEDLE VALVE (UNIDIRECTIONAL FLOW)



Part No.	Tube	C	D	E	F	G	H	I	L	CH
85940-53	5/32 (4)	.709 (18)	.157 (4)	M12x1	.571 (14,5)	.598 (15)	1.476 (37,5)÷1.712 (43,5)	.709 (18)	2.046 (52)	.551 (14)
85940-04	1/4	.709 (18)	.236 (6)	M12x1	.571 (14,5)	.598 (15)	1.476 (37,5)÷1.712 (43,5)	.709 (18)	2.046 (52)	.551 (14)
85940-05	5/16 (8)	.787 (20)	.256 (6,5)	M14x1	.658 (16,5)	.677 (17)	1.555 (39,5)÷1.791 (45,5)	.787 (20)	2.292 (58)	.630 (16)
85940-06	3/8	.928 (23,5)	.315 (8)	M16x1	.767 (19,5)	.749 (19)	1.870 (47,5)÷2.106 (53,5)	.887 (22,5)	2.637 (67)	.709 (18)

85945

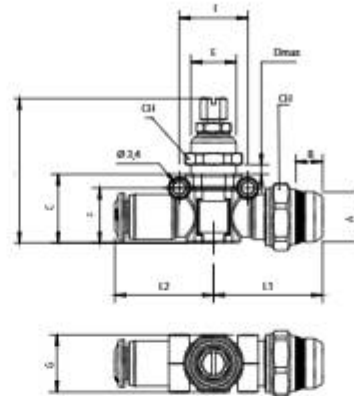
MALE "UNIVERSAL SHORT"-TUBE IN-LINE FLOW CONTROL (CONTROLLED FLOW OUT)



Part No.	Tube	A	B	C	D	E	F	G	H	I	L1	L2	CH	CH1
85945-53-02	5/32 (4)	1/8	.217 (5,5)	.787 (20)	.236 (6)	M12x1	.658 (16,5)	.598 (15)	1.555 (39,5)÷1.791 (45,5)	.709 (18)	1.129 (28,5)	1.016 (26)	.551 (14)	.630 (16)
85945-04-02	1/4	1/8	.217 (5,5)	.787 (20)	.236 (6)	M12x1	.658 (16,5)	.598 (15)	1.555 (39,5)÷1.791 (45,5)	.709 (18)	1.129 (28,5)	1.016 (26)	.551 (14)	.630 (16)
85945-04-04	1/4	1/4	.276 (7)	.787 (20)	.236 (6)	M12x1	.658 (16,5)	.598 (15)	1.555 (39,5)÷1.791 (45,5)	.709 (18)	1.129 (28,5)	1.016 (26)	.551 (14)	.630 (16)
85945-05-04	5/16 (8)	1/4	.276 (7)	.908 (23)	.256 (6,5)	M14x1	.658 (16,5)	.677 (17)	1.673 (42,5)÷1.909 (48,5)	.787 (20)	1.319 (33,5)	1.134 (29)	.630 (16)	.787 (20)
85945-05-06	5/16 (8)	3/8	.295 (7,5)	.908 (23)	.256 (6,5)	M14x1	.658 (16,5)	.677 (17)	1.673 (42,5)÷1.909 (48,5)	.787 (20)	1.319 (33,5)	1.134 (29)	.630 (16)	.787 (20)
85945-06-06	3/8	3/8	.295 (7,5)	.968 (24,5)	.315 (8)	M16x1	.807 (20,5)	.749 (19)	1.673 (42,5)÷2.125 (54)	.887 (22,5)	1.359 (34,5)	1.319 (33,5)	.709 (18)	.787 (20)
85945-06-08	3/8	1/2	.355 (9)	.976 (25)	.315 (8)	M16x1	.877 (22)	.749 (19)	1.673 (42,5)÷2.145 (54,5)	.887 (22,5)	1.359 (34,5)	1.319 (33,5)	.709 (18)	.877 (22)

85950

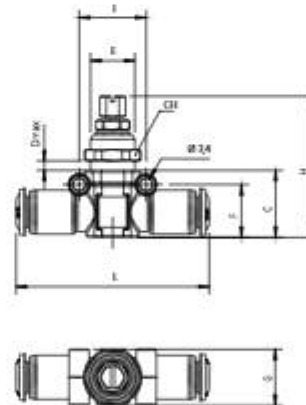
MALE "UNIVERSAL SHORT"- TUBE IN-LINE FLOW CONTROL (CONTROLLED FLOW IN)



Part No.	Tube	A	B	C	D	E	F	G	H	I	L1	L2	CH	CH1
85950-53-02	5/32 (4)	1/8	.217 (5,5)	.787 (20)	.236 (6)	M12x1	.658 (16,5)	.598 (15)	1.555 (39,5)±1,791 (45,5)	.709 (18)	1.134 (29)	1.016 (26)	.551 (14)	.630 (16)
85950-04-02	1/4	1/8	.217 (5,5)	.787 (20)	.236 (6)	M12x1	.658 (16,5)	.598 (15)	1.555 (39,5)±1,791 (45,5)	.709 (18)	1.134 (29)	1.016 (26)	.551 (14)	.630 (16)
85950-04-04	1/4	1/4	.276 (7)	.787 (20)	.236 (6)	M12x1	.658 (16,5)	.598 (15)	1.555 (39,5)±1,791 (45,5)	.709 (18)	1.134 (29)	1.016 (26)	.551 (14)	.630 (16)
85950-05-04	5/16 (8)	1/4	.276 (7)	.908 (23)	.256 (6,5)	M14x1	.658 (16,5)	.677 (17)	1.673 (42,5)±1,909 (48,5)	.787 (20)	1.319 (33,5)	1.134 (29)	.630 (16)	.787 (20)
85950-05-06	5/16 (8)	3/8	.295 (7,5)	.908 (23)	.256 (6,5)	M14x1	.658 (16,5)	.677 (17)	1.673 (42,5)±1,909 (48,5)	.787 (20)	1.319 (33,5)	1.134 (29)	.630 (16)	.787 (20)
85950-06-06	3/8	3/8	.295 (7,5)	.968 (24,5)	.315 (8)	M16x1	.807 (20,5)	.749 (19)	1.673 (42,5)±2,106 (54)	.887 (22,5)	1.359 (34,5)	1.319 (33,5)	.709 (18)	.787 (20)
85950-06-08	3/8	1/2	.355 (9)	.976 (25)	.315 (8)	M16x1	.827 (21)	.749 (19)	1.673 (42,5)±2,106 (54,5)	.887 (22,5)	1.359 (34,5)	1.319 (33,5)	.709 (18)	.827 (21)

85955

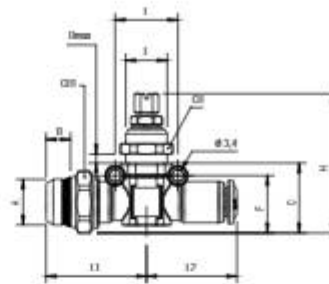
TUBE IN-LINE NEEDLE VALVE (BIDIRECTIONAL FLOW)



Part No.	Tube	C	D	E	F	G	H	I	L	CH
85955-53	5/32 (4)	.709 (18)	.236 (6)	M12x1	.571 (14,5)	.598 (15)	1.476 (37,5)±1,712 (43,5)	.709 (18)	2.046 (52)	.551 (14)
85955-04	1/4	.709 (18)	.236 (6)	M12x1	.571 (14,5)	.598 (15)	1.476 (37,5)±1,712 (43,5)	.709 (18)	2.046 (52)	.551 (14)
85955-05	5/16 (8)	.787 (20)	.256 (6,5)	M14x1	.658 (16,5)	.677 (17)	1.555 (39,5)±1,791 (45,5)	.787 (20)	2.292 (58)	.630 (16)
85955-06	3/8	.928 (23,5)	.315 (8)	M16x1	.767 (19,5)	.749 (19)	1.870 (47,5)±2,106 (53,5)	.887 (22,5)	2.637 (67)	.709 (18)

85960

MALE "UNIVERSAL SHORT" - TUBE IN-LINE FLOW CONTROL (BIDIRECTIONAL FLOW)



Code	Tube	A	B	C	D	E	F	G	H	I	L1	L2	CH	CH1
85960-53-02	5/32 (4)	1/8	.217 (5,5)	.787 (20)	.236 (6)	M12x1	.658 (16,5)	.598 (15)	1.555 (39,5)÷1,791 (45,5)	.709 (18)	1.129 (28,5)	1.016 (26)	.551 (14)	.630 (16)
85960-04-02	1/4	1/8	.217 (5,5)	.787 (20)	.236 (6)	M12x1	.658 (16,5)	.598 (15)	1.555 (39,5)÷1,791 (45,5)	.709 (18)	1.129 (28,5)	1.016 (26)	.551 (14)	.630 (16)
85960-04-04	1/4	1/4	.276 (7)	.787 (20)	.236 (6)	M12x1	.658 (16,5)	.598 (15)	1.555 (39,5)÷1,791 (45,5)	.709 (18)	1.129 (28,5)	1.016 (26)	.551 (14)	.630 (16)
85960-05-04	5/16 (8)	1/4	.276 (7)	.908 (23)	.256 (6,5)	M14x1	.658 (16,5)	.677 (17)	1.673 (42,5)÷1,909 (48,5)	.787 (20)	1.319 (33,5)	1.134 (29)	.630 (16)	.787 (20)
85960-05-06	5/16 (8)	3/8	.295 (7,5)	.908 (23)	.256 (6,5)	M14x1	.658 (16,5)	.677 (17)	1.673 (42,5)÷1,909 (48,5)	.787 (20)	1.319 (33,5)	1.134 (29)	.630 (16)	.787 (20)
85960-06-06	3/8	3/8	.295 (7,5)	.968 (24,5)	.315 (8)	M16x1	.807 (20,5)	.749 (19)	1.673 (42,5)÷2,125 (54)	.887 (22,5)	1.359 (34,5)	1.319 (33,5)	.709 (18)	.787 (20)
85960-06-08	3/8	1/2	.355 (9)	.976 (25)	.315 (8)	M16x1	.827 (21)	.749 (19)	1.673 (42,5)÷2,145 (54,5)	.887 (22,5)	1.359 (34,5)	1.319 (33,5)	.709 (18)	.827 (21)

www.sumy.it

FLOW REGULATORS



TECHNICAL CHARACTERISTICS



Reference Standard

1907/2006
REACH ✓

2011/65/CE
ROHS ✓

PED
2014/68/UE

SILICON
FREE



Temperature Rating:

NBR
-4° F ~ 176° F
-20° C ~ 80° C

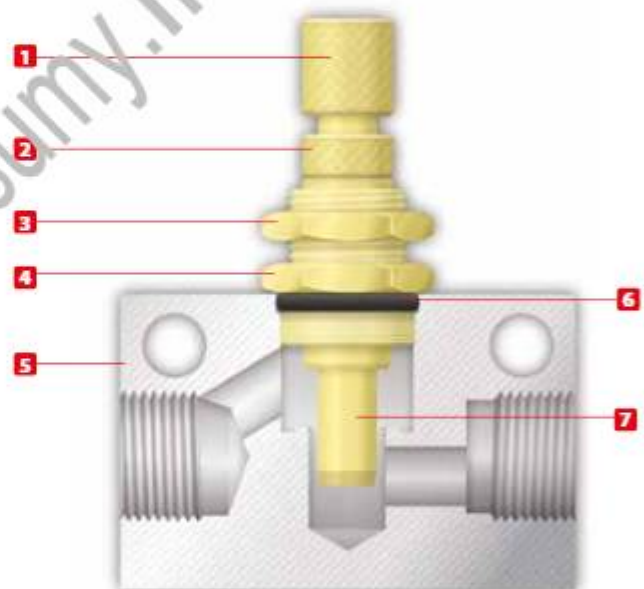
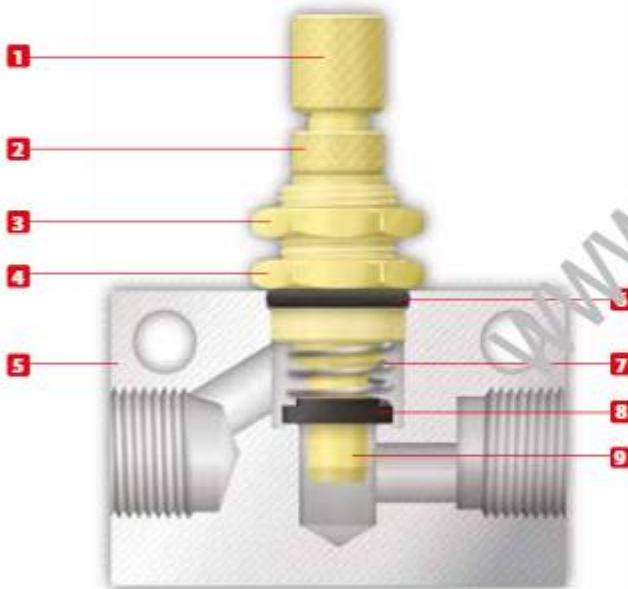


Pressure Rating

Vacuum ~ 250 PSI
-0.99 bar ~ 20 bar
-0.099 MPa ~ 2.0 MPa

UNI-DIRECTIONAL

BI-DIRECTIONAL



Component Parts and Materials

- 1 Brass Adjusting Knob
- 2 Brass Nut
- 3 Brass Locking Nut
- 4 Brass Nipple
- 5 Anodized Aluminium Body
- 6 NBR O-Ring
- 7 Steel Spring
- 8 Seal floating washer
- 9 Brass Adjusting Needle



Component Parts and Materials

- 1 Brass Adjusting Knob
- 2 Brass Nut
- 3 Brass Locking Nut
- 4 Brass Nipple
- 5 Anodized Aluminium Body
- 6 NBR O-Ring
- 7 Brass Adjusting Needle

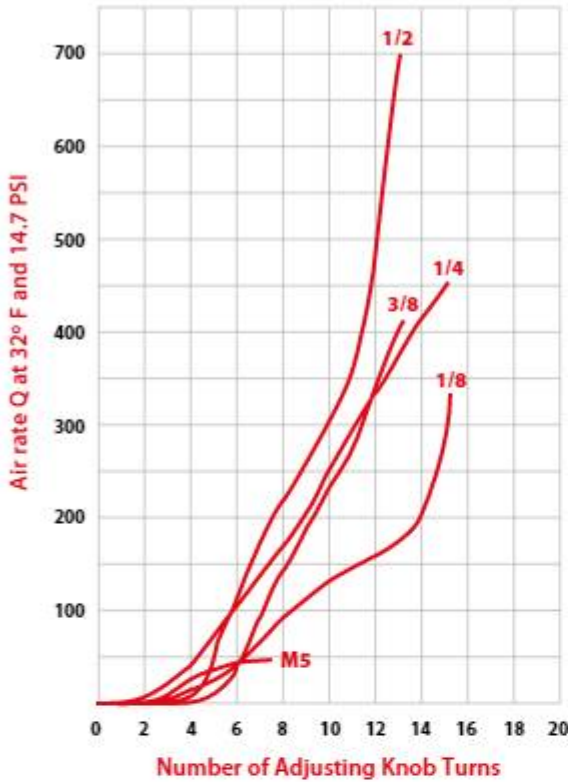


Flow Characteristics of Inline Flow Control Valves

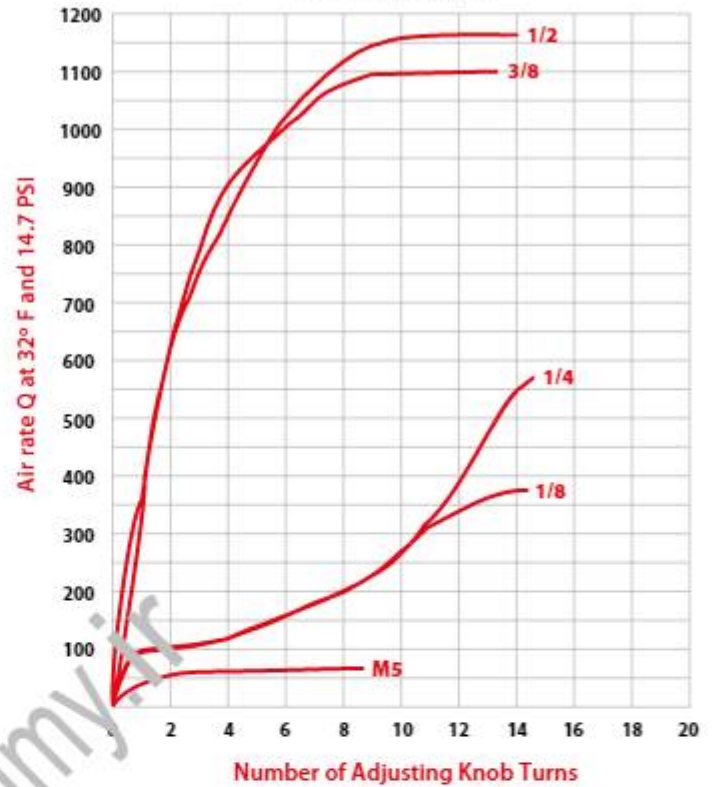
Inlet Pressure
101 PSI

Outlet Pressure: Atmospheric Pressure
14.7 PSI

UNI-DIRECTIONAL

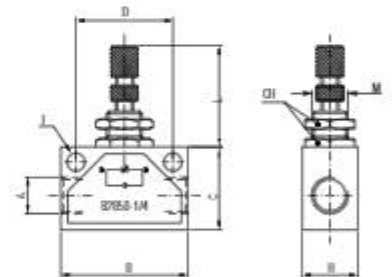


BI-DIRECTIONAL



82850

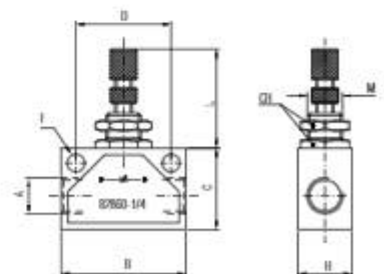
UNI-DIRECTIONAL INLINE VALVE



Part No.	A NPTF	B	C	H	D	F	L min	L max	M	CH
82850-02	1/8	1.378 (35)	.866 (22)	.709 (18)	.984 (25)	.177 (4.5)	1.023 (26)	1.417 (36)	M12x0.75	.590 (15)
82850-04	1/4	1.811 (46)	1.181 (30)	.787 (20)	1.378 (35)	.256 (6.5)	1.023 (26)	1.417 (36)	M12x0.75	.590 (15)
82850-06	3/8	1.968 (50)	1.181 (30)	.984 (25)	1.378 (35)	.256 (6.5)	1.259 (32)	1.653 (42)	M18x1.5	.866 (22)
82850-08	1/2	2.362 (60)	1.575 (40)	.984 (25)	1.732 (44)	.256 (6.5)	1.259 (32)	1.734 (44)	M18x1.5	.866 (22)

82860

BI-DIRECTIONAL INLINE NEEDLE VALVE

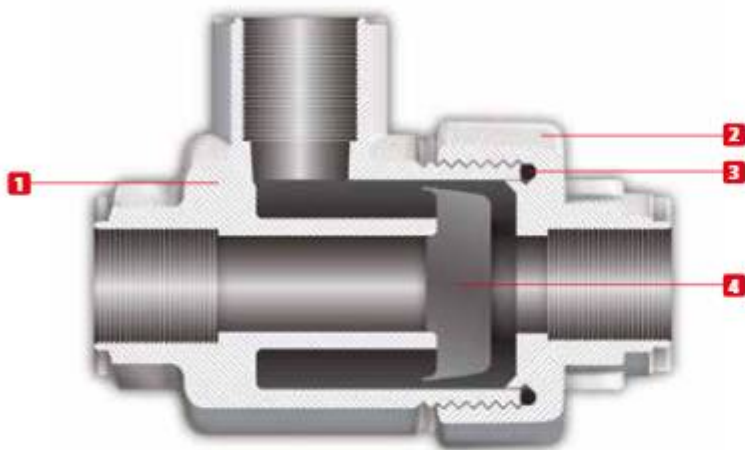


Part No.	A NPTF	B	C	H	D	F	L min	L max	M	CH
82860-02	1/8	1.378 (35)	.866 (22)	.709 (18)	.984 (25)	.177 (4.5)	1.023 (26)	1.417 (36)	M12x0.75	.590 (15)
82860-04	1/4	1.811 (46)	1.181 (30)	.787 (20)	1.378 (35)	.256 (6.5)	1.023 (26)	1.417 (36)	M12x0.75	.590 (15)
82860-06	3/8	1.968 (50)	1.181 (30)	.984 (25)	1.378 (35)	.256 (6.5)	1.259 (32)	1.653 (42)	M18x1.5	.866 (22)
82860-08	1/2	2.362 (60)	1.575 (40)	.984 (25)	1.732 (44)	.256 (6.5)	1.259 (32)	1.734 (44)	M18x1.5	.866 (22)

QUICK EXHAUST VALVES

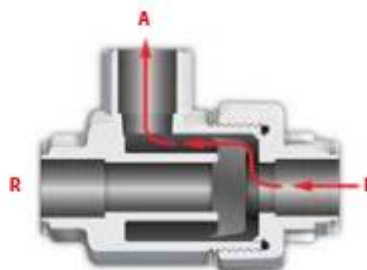
TECHNICAL CHARACTERISTICS

Reference Standard

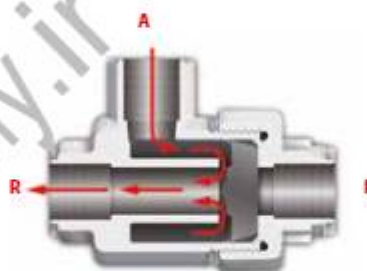


- 1907/2006
REACH ✓
- 2011/65/CE
RoHS ✓
- PED
2014/68/UE
- SILICON
FREE

According to the UNI standards ref. UNI-ISO 5598, this valve is considered: "Valve which immediately opens its outlet to exhaust, whenever the pressure of the air decreases at the inlet."



System pressure is applied to the Inlet port (P), flow is directed to cylinder port (A).



When system pressure (P) is dropped, exhaust air in the cylinder (A) is discharged directly from the exhaust port (R).

Component Parts and Materials

- 1 Nickel Plated Brass Body
- 2 Nylon Cap Seal
- 3 Nickel Plated Brass Cap
- 4 NBR Piston

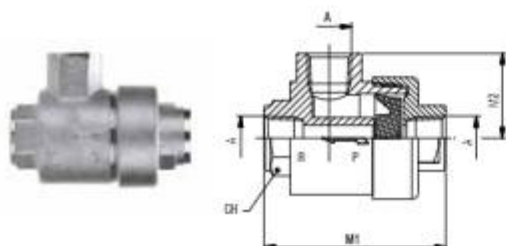
Pressure Rating
 4.35 PSI ~ 145 PSI
 0.3 bar ~ 10 bar
 0.003 MPa ~ 1.0 MPa

Threads
 NPTF

Temperature Rating
 -4° F ~ 176° F
 -20° C ~ 80° C

Media
 • Compressed air
WARNING!
 This valve exhausts to atmosphere.
DO NOT use toxic, corrosive or flammable media.

82650
 QUICK EXHAUST VALVE

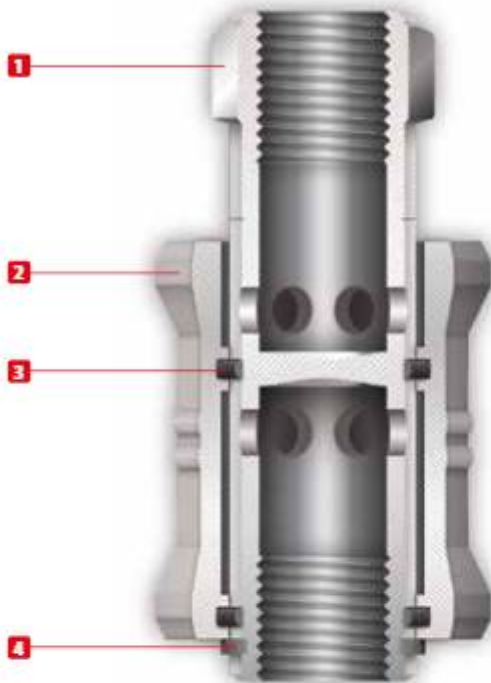


Part No.	A NPTF	M1	M2	CH
82650-02	1/8	1.653 (42)	.768 (19.5)	.591 (15)
82650-04	1/4	2.125 (54)	.984 (25)	.748 (19)
82650-06	3/8	2.381 (60.5)	1.043 (26.5)	.866 (22)
82650-08	1/2	2.834 (72)	1.260 (32)	1.024 (26)
82650-12	3/4	3.664 (93)	1.457 (37)	1.260 (32)
82650-16	1	4.291 (109)	1.890 (48)	1.811 (46)

SLIDE VALVES



TECHNICAL CHARACTERISTICS



Reference Standard

1907/2006
REACH ✓

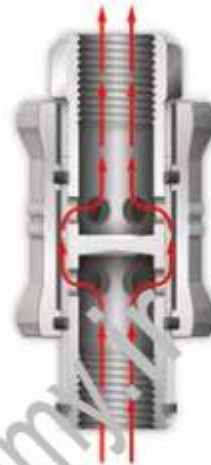
2011/65/CE
RoHS ✓

PED
2014/68/UE

SILICON
FREE

This Slide Valve can be considered a reversing ON-OFF valve. When in the closed position, it allows the used air to exit to the atmosphere.

ON



OFF



In the On position, the air coming from the air source passes through the holes on the stem of the valve.

In the OFF position, the air in the circuit passes through the holes on the stem and automatically exits to the atmosphere.



Pressure Rating
4.35 PSI ~ 145 PSI
0.3 bar ~ 10 bar
0.003 MPa ~ 1.0 MPa



Component Parts and Materials

- 1 Aluminium Sleeve
- 2 Nickel Plated Brass Stem
- 3 NBR O-Ring
- 4 Steel Shaft Clip



Temperature Rating
-4° F ~ 176° F
-20° C ~ 80° C



Media

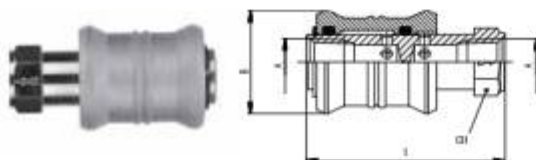
- Compressed air



Threads
NPTF

82660

SLIDE VALVE



Part No.	A NPTF	B	L	CH
82660-02	1/8	.984 (25)	1.890 (48)	.551 (14)
82660-04	1/4	1.181 (30)	2.283 (58)	.669 (17)
82660-06	3/8	1.378 (35)	2.756 (70)	.866 (22)
82660-08	1/2	1.575 (40)	3.150 (80)	1.074 (26)

UNIDIRECTIONAL VALVES OR NON RETURN VALVES



TECHNICAL CHARACTERISTICS



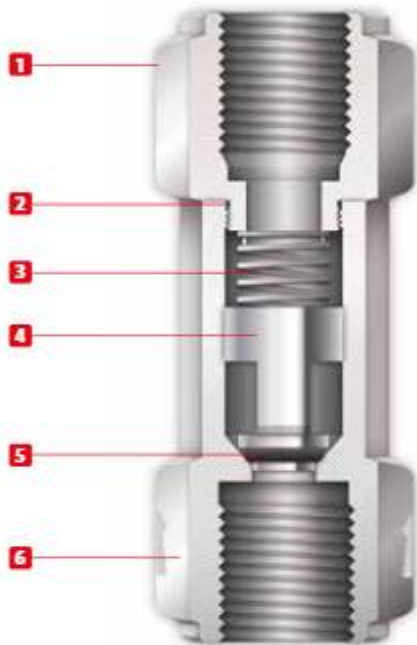
Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

SILICON
FREE



Check Valves allow air to flow in only one direction. They do not allow air flow the opposite direction.

They operate directly with the air that passes through. Check Valves are normally used as safety device, permitting air pressure in a part of the circuit. The internal spring keeps the valve closed.



Pressure Rating

29 PSI ~ 116 PSI
2 bar ~ 8 bar
0.2 MPa ~ 0.8 MPa

Approximate Opening Pressure

29 PSI
2 bar
0.02 MPa



Component Parts and Materials

- 1 Nickel Plated Brass Body
- 2 NBR O-Ring
- 3 Steel Spring
- 4 Nickel Plated Brass Shutter
- 5 NBR O-Ring
- 6 Nickel Plated Brass Body



Temperatures Rating

NBR	FKM on request (only for 82662 - 82663)
-4° F ~ 176° F	5° F ~ 392° F
-20° C ~ 80° C	-15° C ~ 200° C



Media

- Compressed air



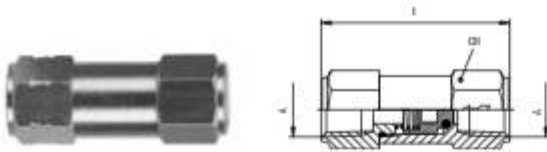
Threads

NPTF

82662

FEMALE X FEMALE

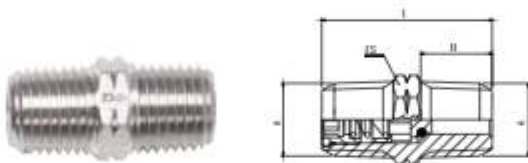
Part No.	A NPTF	L	CH
82662-02	1/8	1.437 (36,5)	.512 (13)
82662-04	1/4	1.850 (47)	.669 (17)



82663

MALE X MALE

Part No.	A NPTF	L	ES	H
82663-04	1/4	1.220 (31)	.551 (14)	.512 (13)
82663-06	3/8	1.220 (31)	.748 (19)	.512 (13)



82664

INCH TUBE X TUBE

Part No.	Tube	L	B
82664VM-04-04	1/4	2.047 (52)	.512 (13)
82664VM-06-06	3/8	2.244 (57)	.669 (17)



82670VM

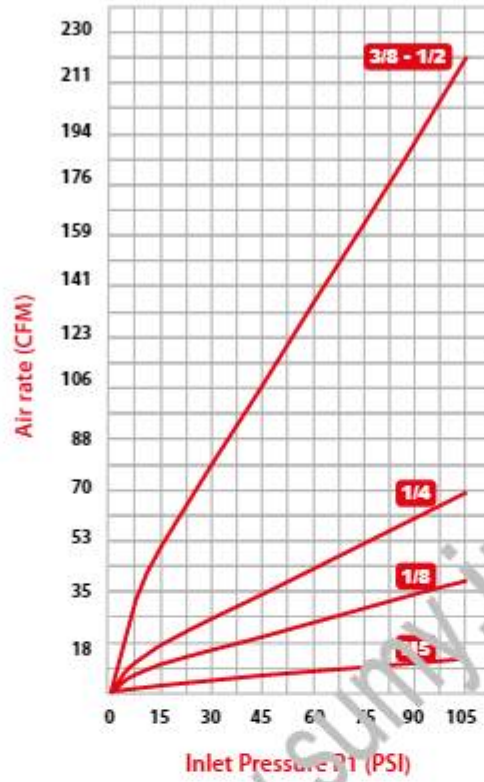
INLINE FILTER

Part No.	Tube	L	CH1	CH2
82670VM-04	1/4	2.579 (65,5)	.748 (19)	.512 (13)
82670VM-06	3/8	2.834 (72)	.748 (19)	.669 (17)

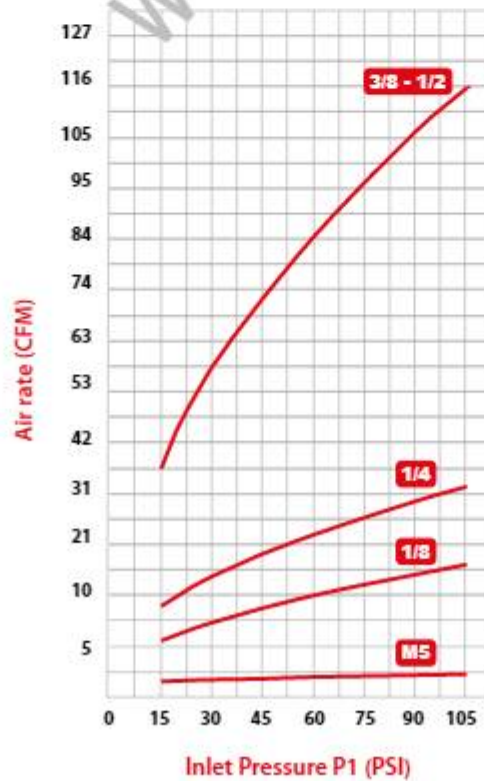




Flow Rates of Exhaust



Flow Rates of Exhaust with a drop of 14.5 PSI



BLOCK VALVES



TECHNICAL CHARACTERISTICS

Aignep Block Valves are pneumatic devices used to control the movement of the cylinder. They install directly on the inlet and outlet ports of the cylinder and lock the piston in case of a drop in air pressure. Block Valves are used as safety devices in case of emergency stops, the bursting of an air tube, or anything that would stop the flow of air to the cylinder. Block Valves also enable the cylinder to be stopped in intermediate positions whenever the application would require such a solution.



Advantages

- 1 Aignep Block Valves are available in Uni-Directional and Bi-Directional versions.
- 2 The bore of these valves do not reduce in size so airflow is never restricted.
- 3 These valves are compact, and the threaded connection and tube connection can rotate for maximum versatility.
- 4 The threaded port can also receive a flow control valve to adjust the speed of the cylinder.

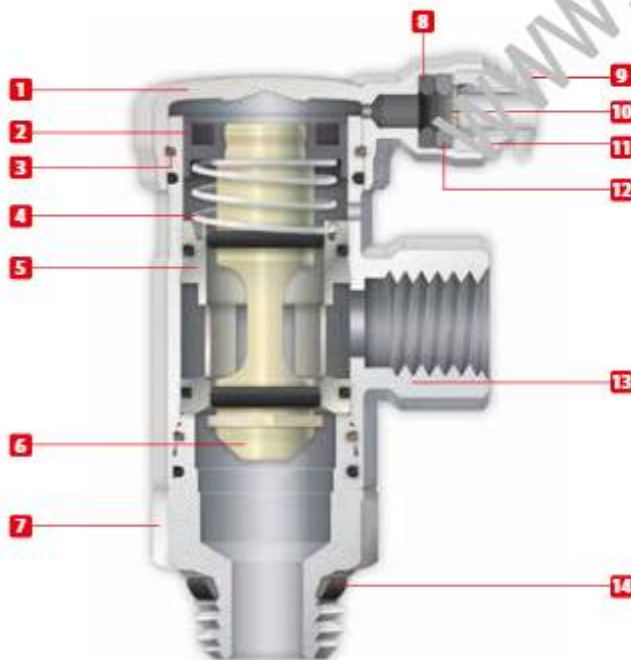
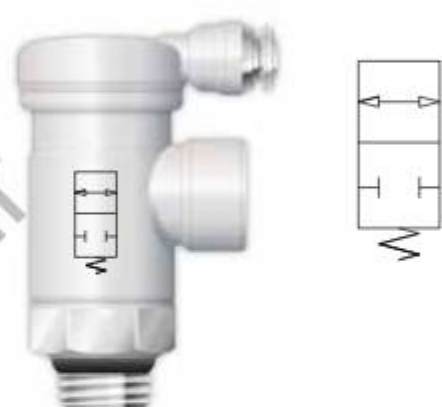
UNI-DIRECTIONAL

82880



BI-DIRECTIONAL

82890



Reference Standard

1907/2006 REACH ✓	2011/65/CE RoHS ✓	PED 2014/68/UE	SILICON FREE
-----------------------------	-----------------------------	-------------------	-----------------



Component Parts and Materials

- 1 Nickel Plated Brass Cover Cap
- 2 Nylon Lip Seal
- 3 Brass Retaining Ring
- 4 Steel Spring
- 5 Brass Shutter Support
- 6 Brass Shutter
- 7 Nickel Plated Brass Base
- 8 NBR Lip Seal
- 9 Nickel Plated Collet
- 10 303 Stainless Steel Gripper
- 11 Nickel Plated Brass Sleeve
- 12 Technopolymer Safety Ring
- 13 Nickel Plated Brass Body
- 14 NBR Thread Seal



Size

1/8"
1/4"



Orifice

1/8"	1/4"
Ø 5.5 mm	Ø 8 mm



Flow rate (87 PSI)

1/8"	1/4"
26.5 CFM	50.1 CFM



Pressure Rating

4.35 PSI ~ 145 PSI
0.3 bar ~ 10 bar
0.03 MPa ~ 1.0 MPa



Temperature Rating

-4° F ~ 176° F
-20° C ~ 80° C

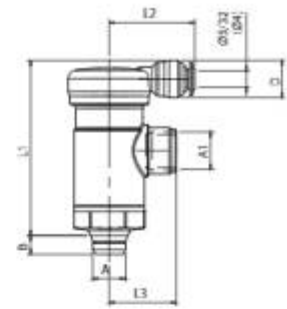


Media

• Compressed Air
(lubricated and non lubricated)

82880

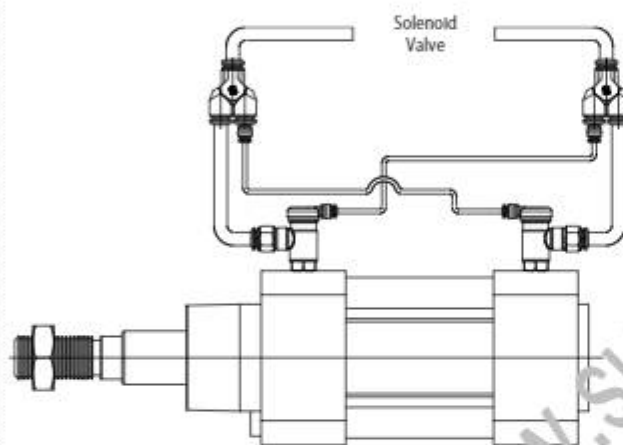
UNI-DIRECTIONAL CHECK VALVE



Part No.	A	A1 NPTF	B	L1	L2	L3	CH	D
82880-02	1/8	1/8	.217 (5,5)	1.969 (50)	.984 (25)	.728 (18,5)	.709 (18)	.433 (11)
82880-04	1/4	1/4	.276 (7)	1.988 (50,5)	.984 (25)	.807 (20,5)	.709 (18)	.433 (11)

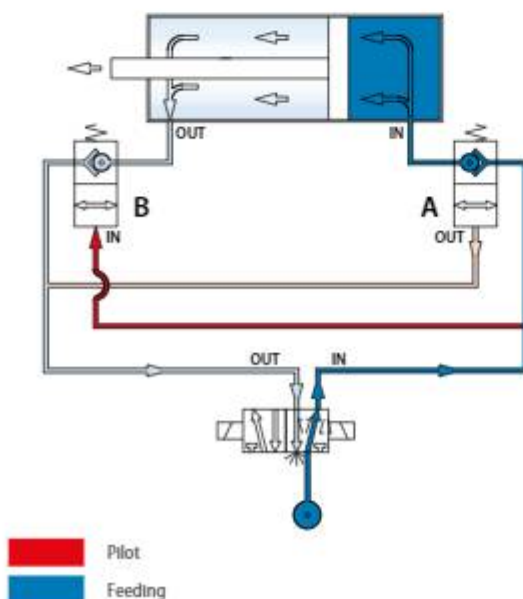


Installation



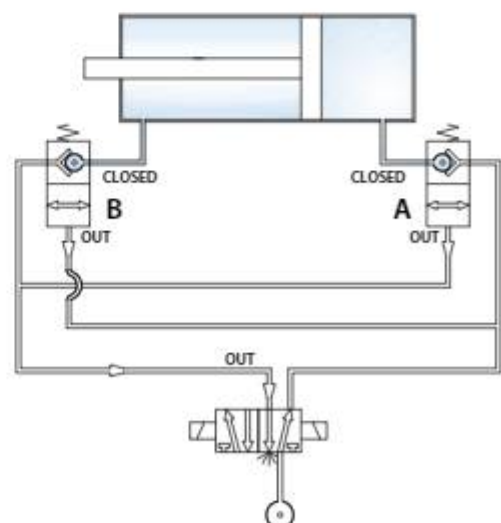
Pneumatic circuit - Cylinder in Action

The PO check circuit is connected to the cylinder circuit. When P1 pressure is applied to the directional control valve, pressure is applied simultaneously to PO check valve A and a pilot signal to PO check valve B. The cylinder will extend. When the directional control valve shifts, pressure is applied to PO check valve B with a pilot signal sent to PO check valve A. The cylinder will retract.



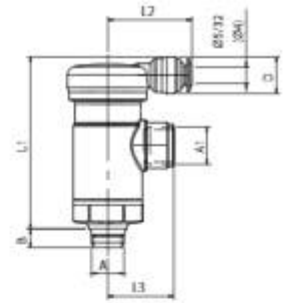
Pneumatic circuit - Cylinder at Rest

Remove P1 pressure from the directional control valve to lock the cylinder in place even under load conditions.



82890

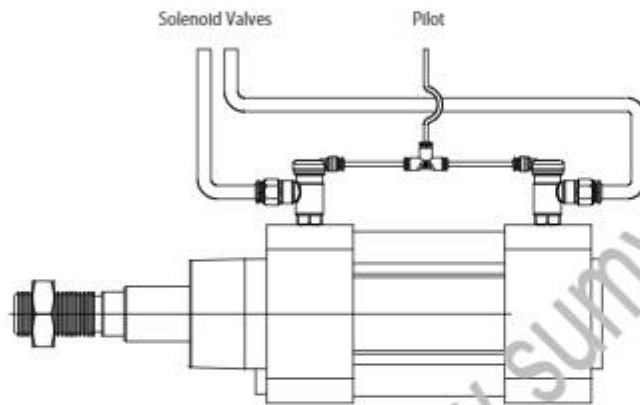
BI-DIRECTIONAL BLOCK VALVE



Part No.	A	A1 NPTF	B	L1	L2	L3	CH	D
82890-02	1/8	1/8	.217 (5,5)	1.969 (50)	.984 (25)	.728 (18,5)	.709 (18)	.433 (11)
82890-04	1/4	1/4	.276 (7)	1.988 (50,5)	.984 (25)	.807 (20,5)	.709 (18)	.433 (11)

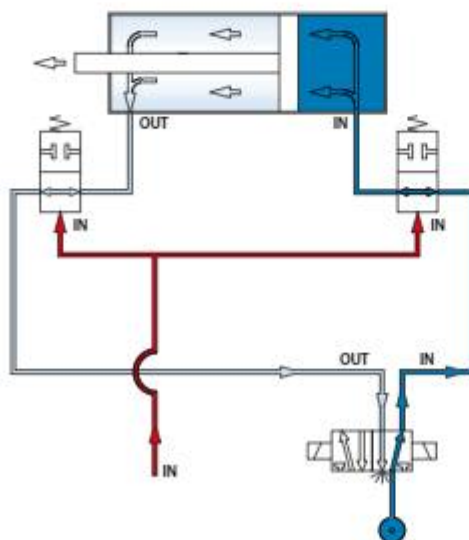


Installation



Pneumatic circuit - Cylinder in Action

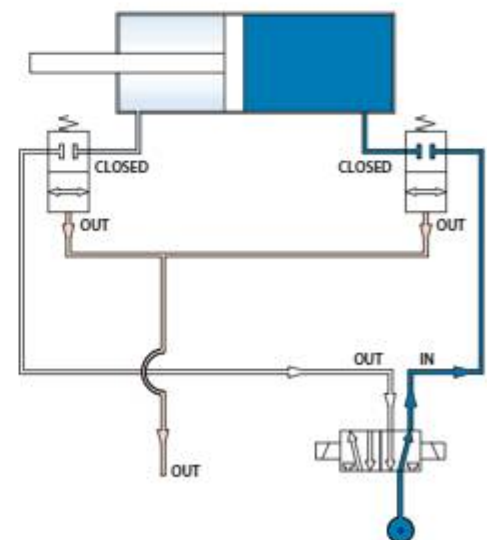
Note, the cylinder circuit and the pilot valve circuit are independent. With a pilot signal applied to the PO block valves and P1 pressure to the directional control valve the cylinder will extend and retract normally.



■ Pilot
■ Feeding

Pneumatic circuit - Cylinder at Rest

Remove the pilot signal pressure from the PO block valves to lock the cylinder in place even under load conditions.



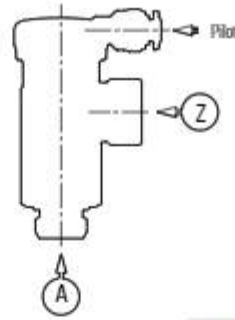


BLOCK VALVE SPECIFICATIONS



Pilot Pressure

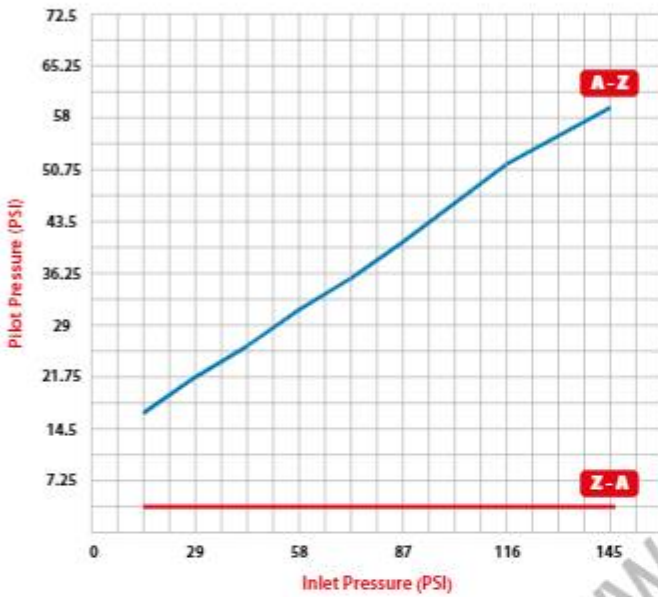
Minimum pilot pressure is required to ensure proper valve function and is based on inlet pressure.



Pilot Pressure
Inlet Pressure

UNI-DIRECTIONAL
82880
1/8" - 1/4"

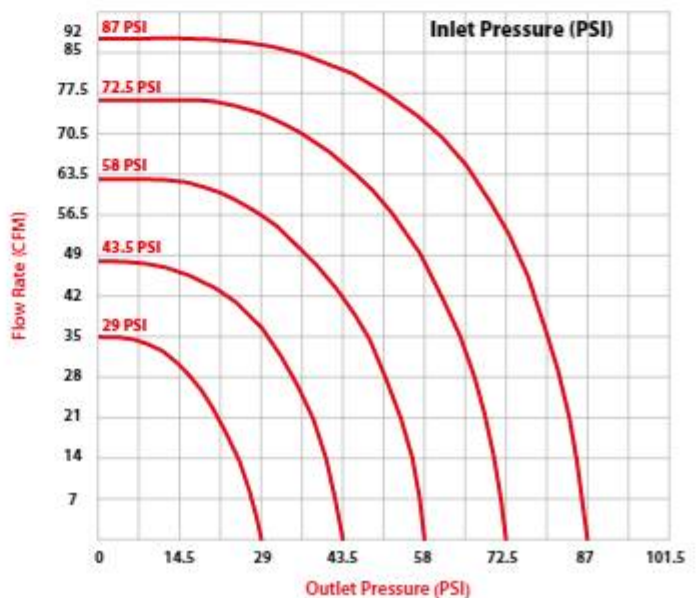
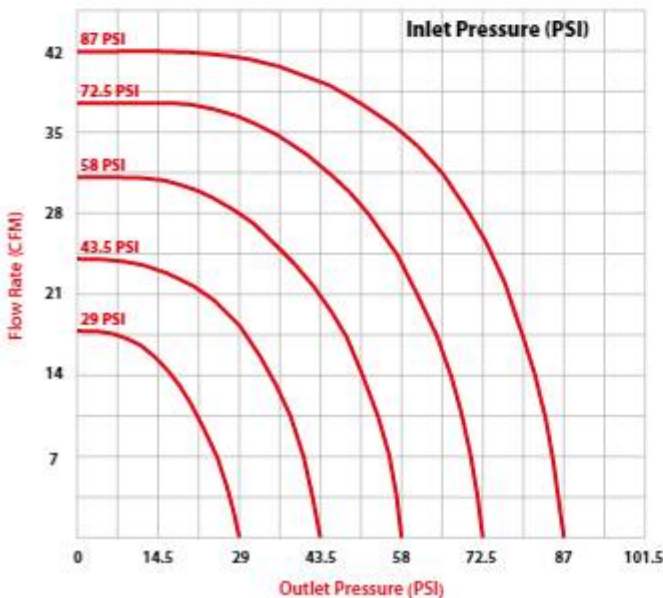
BI-DIRECTIONAL
82890
1/8" - 1/4"



Flow Rates

82880 - 82890
1/8"

82880 - 82890
1/4"



Ball Valves

 86300 Pg. 10.6	 86310 Pg. 10.6	 86320 Pg. 10.6	 86330 Pg. 10.6	 86700 Pg. 10.6	 86710 Pg. 10.7	 86720 Pg. 10.7	 6300 Pg. 10.7	 6310 Pg. 10.7
 6400 Pg. 10.8	 6410 Pg. 10.8	 6560 Pg. 10.8	 6570 Pg. 10.8	 86900 Pg. 10.9	 86910 Pg. 10.9	 86915 Pg. 10.9	 86920 Pg. 10.9	

Stainless Steel Ball Valves

 66300 Pg. 10.10	 66310 Pg. 10.10	 66560 Pg. 10.11	 66570 Pg. 10.11
--	--	--	--

www.sumy.ir

CHROME PLATED BRASS BALL VALVES



Ball Valves



TECHNICAL CHARACTERISTICS



Reference Standard

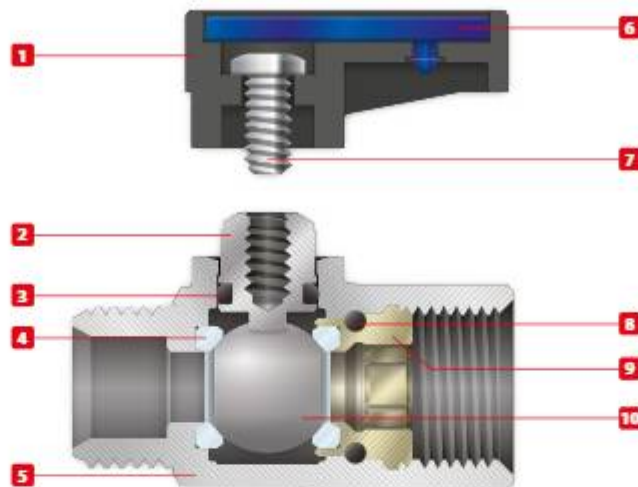
1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/EU

BS EN
331:2015

SILICON
FREE



Pressure Rating

Vacuum ~ 250 PSI
-0.99 bar ~ 20 bar
-0.099 MPa ~ 2.0 MPa



Temperatures

NBR -4° F ~ 176° F -20° C ~ 80° C	EPDM <i>on request</i> -40° F ~ 266° F -40° C ~ 130° C	FKM <i>on request</i> 5° F ~ 66° C 15° C ~ 130° C
--	---	--



Component Parts and Materials

- 1 PA66 Glass Reinforced Handle
- 2 Chrome Nickel Plated Brass Spindle
- 3 NBR O-Ring Seal
- 4 PTFE Seats
- 5 Chrome Nickel Plated Brass Body
- 6 Acetalic Resin Plate
- 7 Steel Screw
- 8 NBR O-Ring Seal
- 9 Brass Fitting
- 10 Chrome Nickel Plated Brass Ball



Media

- Compressed air
- Water
- Oils
- Rated for gases, consult factory for details



Threads

Gas in conformity with ISO 7:1, BS 21, DIN 2999.
Parallel gas in conformity with ISO 228 Class A.



PRESSURE - TEMPERATURE RATINGS DIAGRAM

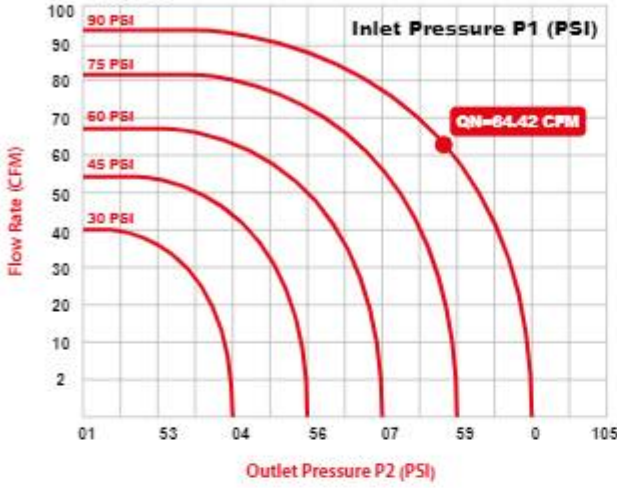
PTFE + FKM

PTFE + NBR

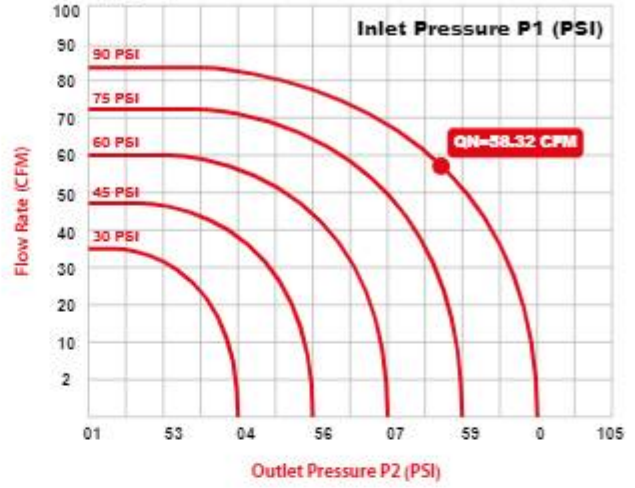


BALL VALVES SPECIFICATIONS

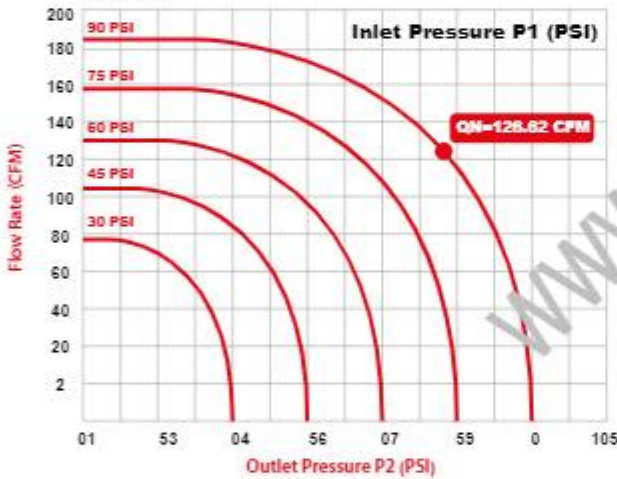
1/8"



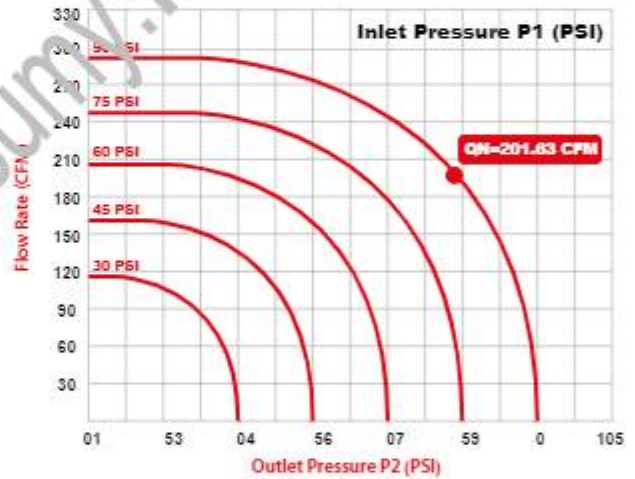
1/4"



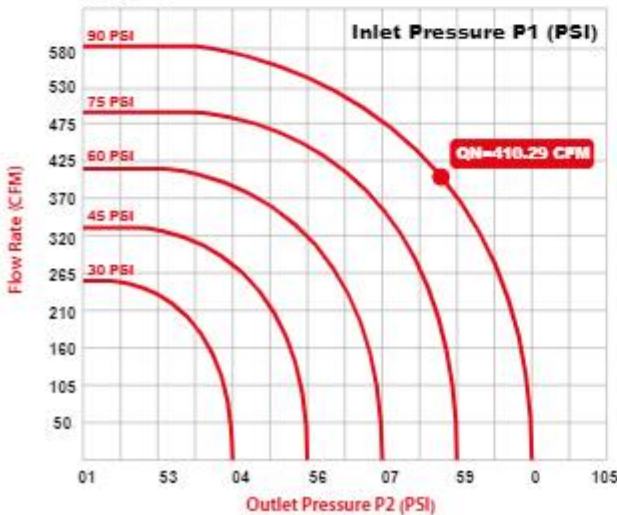
3/8"



1/2"



3/4"





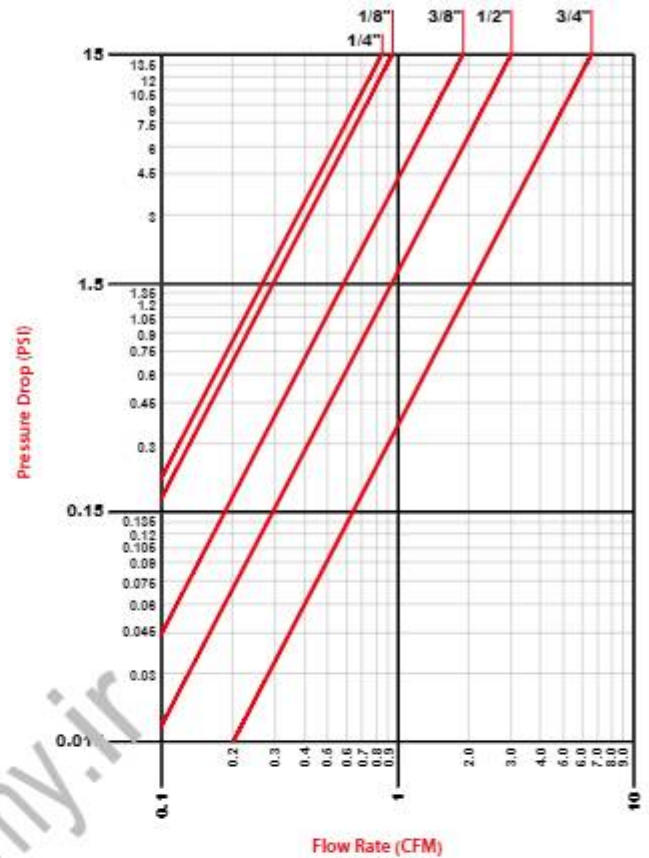
BALL VALVES SPECIFICATIONS



Flow Rate & Pressure Drop

In the table below, we specify the flow rate factors of our ball valves. These factors represent the amount of air and water that flows through the valve. They are measured by Cubic Feet per Minute at 60° F.

Thread Size	Factors of flow rate	
	CFM	m ³ /h
1/8"	0.95	1.6
1/4"	0.86	1.4
3/8"	1.86	3.1
1/2"	2.97	5
3/4"	6.05	10.2



Option

PART NUMBER	SIZE	COLOR	TYPE OF THE SEAL	TYPE OF HANDLE
-------------	------	-------	------------------	----------------

86300

3/8-3/8

BLUE PLATE

NBR



NBR



If required



**FKM
HNBR
EPDM**



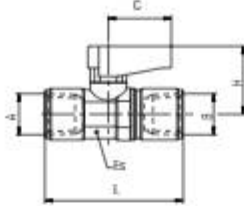
GAS:



86300

FEMALE X FEMALE

NPTF

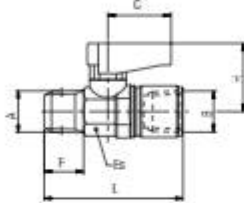


Part No.	A NPTF	B NPTF	DN	ES	L	C	H
86300-02-02	1/8	1/8	217 (5,5)	.551 (14) - .591 (15)	1.476 (37,5)	.748 (19)	.827 (21)
86300-04-04	1/4	1/4	217 (5,5)	.551 (14) - .591 (15)	1.811 (46)	.748 (19)	.827 (21)
86300-06-06	3/8	3/8	.315 (8)	.709 (18) - .748 (19)	1.909 (48,5)	.748 (19)	.866 (22)
86300-08-08	1/2	1/2	.394 (10)	.866 (22) - .906 (23)	2.441 (62)	1.024 (26)	1.201 (30,5)

86310

MALE X FEMALE

NPTF

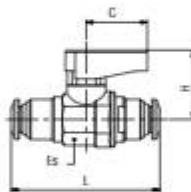


Part No.	A NPTF	B NPTF	DN	ES	F	L	C	H
86310-02-02	1/8	1/8	217 (5,5)	.551 (14) - .591 (15)	.335 (8,5)	1.476 (37,5)	.748 (19)	.827 (21)
86310-04-04	1/4	1/4	217 (5,5)	.551 (14) - .591 (15)	.512 (13)	1.811 (46)	.748 (19)	.827 (21)
86310-06-06	3/8	3/8	.315 (8)	.709 (18) - .748 (19)	.512 (13)	1.909 (48,5)	.748 (19)	.866 (22)
86310-08-08	1/2	1/2	.394 (10)	.866 (22) - .906 (23)	.669 (17)	2.441 (62)	1.024 (26)	1.201 (30,5)
86310-12-12	3/4	3/4	.551 (14)	1.102 (28) - 1.181 (30)	.689 (17,5)	2.500 (63,5)	1.953 (49,5)	1.319 (33,5)

86320

INCH TUBE X INCH TUBE

Inch tube

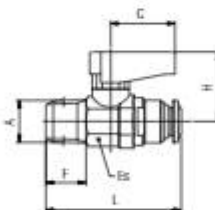


Part No.	Tube	Tube	S	L	C	H
86320-02-02	1/8	1/8	.551 (14) - .591 (15)	1.673 (42,5)	.748 (19)	.828 (21)
86320-04-04	1/4	1/4	.551 (14) - .591 (15)	1.831 (46,5)	.748 (19)	.828 (21)
86320-06-06	3/8	3/8	.709 (18) - .748 (19)	2.382 (60,5)	.748 (19)	.866 (22)

86330

INCH TUBE X MALE

Inch tube

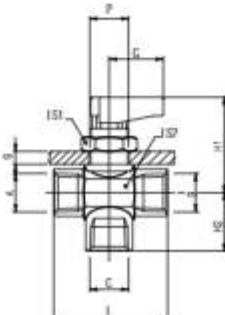


Part No.	Tube	A NPTF	F NPTF	ES	L	C	H
86330-53-02	5/32 (4)	1/8	.332 (8,5)	.551 (14) - .591 (15)	1.365 (35)	.741 (19)	.819 (21)
86330-04-02	1/4	1/8	.332 (8,5)	.551 (14) - .591 (15)	1.574 (40)	.741 (19)	.819 (21)
86330-04-04	1/4	1/4	.488 (12,5)	.551 (14) - .591 (15)	1.502 (38,5)	.741 (19)	.819 (21)
86330-06-06	3/8	3/8	.507 (13)	.709 (18) - .748 (19)	1.755 (45)	.741 (19)	.858 (22)

86700

THREE POSITION (CLOSED CENTER)

NPTF



Part No.	A/B/C	DN	ES1	ES2	L	G	H1	H2	S max
86700-02	1/8	.217 (5,5)	.669 (17)	.669 (17)	1.476 (37,5)	.748 (19)	1.319 (33,5)	.650 (16,5)	.177 (4,5)
86700-04	1/4	.217 (5,5)	.669 (17)	.669 (17)	1.476 (37,5)	.748 (19)	1.319 (33,5)	.650 (16,5)	.177 (4,5)
86700-06	3/8	.276 (7)	.669 (17)	.827 (21)	1.909 (48,5)	.748 (19)	1.378 (35)	.866 (22)	.177 (4,5)

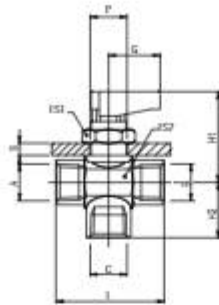
NO GAS



86710

THREE POSITION (OPEN CENTER)

NPTF



NO GAS

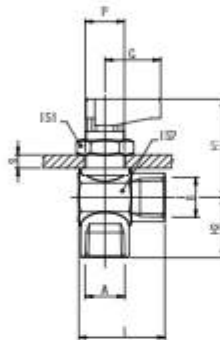


Part No.	A/B/C	DN	ES1	ES2	L	G	H1	H2	S max
86710-02	1/8	217 (5,5)	669 (17)	669 (17)	1.476 (37,5)	748 (19)	1.319 (33,5)	650 (16,5)	.177 (4,5)
86710-04	1/4	217 (5,5)	669 (17)	669 (17)	1.476 (37,5)	748 (19)	1.319 (33,5)	650 (16,5)	.177 (4,5)
86710-06	3/8	276 (7)	827 (21)	827 (21)	1.909 (48,5)	748 (19)	1.378 (35)	.866 (22)	.177 (4,5)

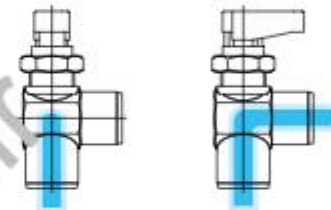
86720

RIGHT ANGLE

NPTF



NO GAS



Part No.	A/B	DN	ES1	ES2	L	G	H1	H2	S max
86720-02	1/8	217 (5,5)	669 (17)	669 (17)	1.476 (37,5)	748 (19)	1.319 (33,5)	650 (16,5)	.177 (4,5)
86720-04	1/4	217 (5,5)	669 (17)	669 (17)	1.476 (37,5)	748 (19)	1.319 (33,5)	650 (16,5)	.177 (4,5)
86720-06	3/8	276 (7)	669 (17)	827 (21)	1.535 (39)	748 (19)	1.378 (35)	.866 (22)	.177 (4,5)

6300

FEMALE X FEMALE

NPTF



Part No.	A	B	DN	ES	F	M	L	G	H
6300-1/8	1/8	1/8	217 (5,5)	551(14) - 591(15)	.291 (7,4)	.291 (7,4)	1.417 (36)	748 (19)	.827 (21)
6300-1/4	1/4	1/4	217 (5,5)	551(14) - 591(15)	.433 (11)	.433 (11)	1.693 (43)	748 (19)	.827 (21)
6300-3/8	3/8	3/8	315 (8)	.709(18) - 748(19)	.449 (11,4)	.449 (11,4)	1.850 (47)	748 (19)	.866 (22)
6300-1/2	1/2	1/2	394 (10)	866(22) - 906(23)	.591 (15)	.591 (15)	2.323 (59)	1.024 (26)	1.201 (30,5)
6300-3/4	3/4	3/4	551 (14)	1.102(28) - 1.181(30)	.642 (16,3)	.642 (16,3)	2.638 (67)	1.969 (50)	1.299 (33)

6310

MALE X FEMALE

BSPT



Part No.	A	B	DN	ES	F	M	L	G	H
6310-1/8-1/8	1/8	1/8	217 (5,5)	551(14) - 591(15)	.291 (7,4)	.291 (7,4)	1.417 (36)	748 (19)	.827 (21)
6310-1/4-1/8	1/4	1/8	217 (5,5)	551(14) - 591(15)	.433 (11)	.291 (7,4)	1.594 (40,5)	748 (19)	.827 (21)
6310-1/4-1/4	1/4	1/4	217 (5,5)	551(14) - 591(15)	.433 (11)	.433 (11)	1.693 (43)	748 (19)	.827 (21)
6310-3/8-3/8	3/8	3/8	315 (8)	.709(18) - 748(19)	.449 (11,4)	.449 (11,4)	1.811 (46)	748 (19)	.866 (22)
6310-1/2-1/2	1/2	1/2	394 (10)	866(22) - 906(23)	.591 (15)	.591 (15)	2.244 (57)	1.024 (26)	1.201 (30,5)
6310-3/4-3/4	3/4	3/4	551 (14)	1.102(28) - 1.181(30)	.642 (16,3)	.642 (16,3)	2.480 (63)	1.969 (50)	1.299 (33)

6400

FEMALE X FEMALE

BSPP



Part No.	A	B	DN	ES	F	M	L	G	H
6400-1/8-1/8	1/8	1/8	.217 (5,5)	.551(14) - .591(15)	.276 (7)	.276 (7)	1.378 (35)	.748 (19)	.827 (21)
6400-1/4-1/4	1/4	1/4	.217 (5,5)	.551(14) - .591(15)	.315 (8)	.315 (8)	1.457 (37)	.748 (19)	.827 (21)
6400-3/8-3/8	3/8	3/8	.315 (8)	.709(18) - .748(19)	.354 (9)	.354 (9)	1.654 (42)	.748 (19)	.866 (22)
6400-1/2-1/2	1/2	1/2	.394 (10)	.866(22) - .906(23)	.394 (10)	.394 (10)	1.929 (49)	1.024 (26)	1.201 (30,5)
6400-3/4-3/4	3/4	3/4	.551 (14)	1.102(28) - 1.181(30)	.472 (12)	.472 (12)	2.283 (58)	1.969 (50)	1.299 (33)

6410

MALE X FEMALE

BSPP

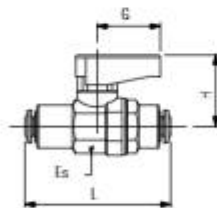


Part No.	A	B	DN	ES	F	M	L	G	H
6410-1/8-1/8	1/8	1/8	.217 (5,5)	.551(14) - .591(15)	.276 (7)	.276 (7)	1.339 (34)	.748 (19)	.827 (21)
6410-1/4-1/8	1/4	1/8	.217 (5,5)	.551(14) - .591(15)	.315 (8)	.276 (7)	1.378 (35)	.748 (19)	.827 (21)
6410-1/4-1/4	1/4	1/4	.217 (5,5)	.551(14) - .591(15)	.315 (8)	.315 (8)	1.378 (35)	.748 (19)	.827 (21)
6410-3/8-3/8	3/8	3/8	.315 (8)	.709(18) - .748(19)	.354 (9)	.354 (9)	1.535 (39)	.748 (19)	.866 (22)
6410-1/2-1/2	1/2	1/2	.394 (10)	.866(22) - .906(23)	.394 (10)	.394 (10)	1.772 (45)	1.024 (26)	1.201 (30,5)
6410-3/4-3/4	3/4	3/4	.551 (14)	1.102(28) - 1.181(30)	.472 (12)	.472 (12)	2.047 (52)	1.969 (50)	1.299 (33)

6560

TUBE X TUBE

Metric tube



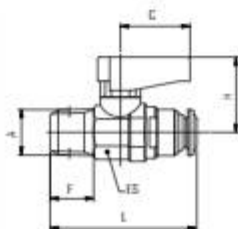
Part No.	Tube	Tube	DN	ES	L	G	H
6560-4-4	5/32 (4)	5/32 (4)	.118 (3)	.551(14) - .591(15)	1.732 (44)	.748 (19)	.827 (21)
6560-6-6	6	6	.197 (5)	.551(14) - .591(15)	1.890 (48)	.748 (19)	.827 (21)
6560-8-8	5/16 (8)	5/16 (8)	.217 (5,5)	.551(14) - .591(15)	1.890 (48)	.748 (19)	.827 (21)
6560-10-10	10	10	.315 (8)	.709(18) - .748(19)	2.303 (58,5)	.748 (19)	.866 (22)
6560-12-12	12	12	.394 (10)	.866(22) - .906(23)	2.598 (66)	1.024 (26)	1.201 (30,5)

NO GAS

6570

TUBE X MALE

Metric tube - BSPT



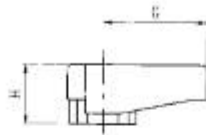
Part No.	A	Tube	DN	F	ES	L	C	H
6570-4-1/8	1/8	5/32 (4)	.118 (3)	.335 (8,5)	.551(14) - .591(15)	1.378 (35)	.748 (19)	.827 (21)
6570-6-1/8	1/8	6	.197 (5)	.335 (8,5)	.551(14) - .591(15)	1.575 (40)	.748 (19)	.827 (21)
6570-8-1/8	1/8	5/16 (8)	.217 (5,5)	.335 (8,5)	.551(14) - .591(15)	1.634 (41,5)	.748 (19)	.827 (21)
6570-6-1/4	1/4	6	.315 (8)	.492 (12,5)	.551(14) - .591(15)	1.516 (38,5)	.748 (19)	.827 (21)
6570-8-1/4	1/4	8	.394 (10)	.492 (12,5)	.551(14) - .591(15)	1.791 (45,5)	.748 (19)	.866 (22)

NO GAS

BALL VALVE ACCESSORIES

86900

SHORT HANDLE

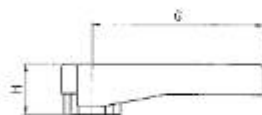


Part No.	C	H	Size Valve
* 86900-02	.748 (19)	.433 (11)	1/8 - 1/4 - 3/8
86900-08	1.074 (26)	.590 (15)	1/2 - 3/4

* Standard

86910

LONG HANDLE

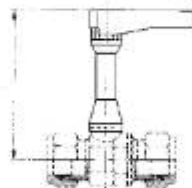


Part No.	C	H	Size Valve
86910-02	1.378 (35)	.433 (11)	1/8 - 1/4 - 3/8
* 86910-08	1.968 (50)	.590 (15)	1/2 - 3/4

* Standard

86915

STEM EXTENSION KIT



Part No.	Size	L
86915-02	1/8	2.283 (58)
	1/4	2.283 (58)
	3/8	2.323 (59)
86915-08	1/2	2.677 (68)
	3/4	2.756 (70)

86920

COLOR PLATE



Part No.	Color	Size
86920-01	Blue (Standard Color)	1/8 - 1/4 - 3/8
86920-02	Red	1/8 - 1/4 - 3/8
86920-03	Green	1/8 - 1/4 - 3/8
86920-04	Yellow	1/8 - 1/4 - 3/8
86920-05	White	1/8 - 1/4 - 3/8
86921-01	Blue (Standard Color)	1/2 - 3/4
86921-02	Red	1/2 - 3/4
86921-03	Green	1/2 - 3/4
86921-04	Yellow	1/2 - 3/4
86921-05	White	1/2 - 3/4

GHINOX SERIES: BALLVALVE IN STAINLESS STEEL AISI 316 L

TECHNICAL CHARACTERISTICS

Reference Standard

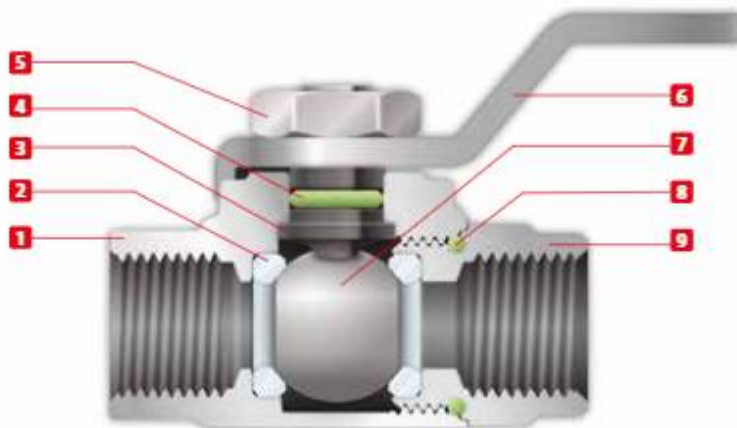
1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

SILICON
FREE

NSF/ANSI 169
NSF



Pressure Rating
Vacuum ~ 580 PSI
-0.99 bar ~ 40 bar
-0.099 MPa ~ 4 MPa

Temperatures

Minimum temperature	5 °F - 15 °C
Maximum temperature in continuous	302 °F + 150 °C
Maximum temperature for short term	356 °F + 170 °C

Media

- Compressed air
- Vacuum
- Water
- Oils

Component Parts and Materials

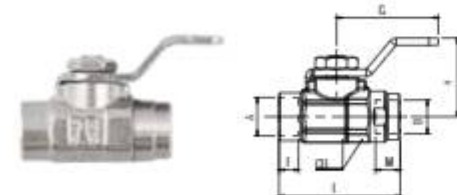
- 1 Stainless steel AISI 316L Body
- 2 PTFE Seats
- 3 Stainless steel AISI316L Spindle
- 4 FKM Seal O-RING
- 5 Stainless steel AISI316L Hex Nut
- 6 Stainless steel AISI316L Spindle
- 7 Stainless steel AISI316L Ball
- 8 FKM Seal O-RING
- 9 Stainless steel AISI316L Fitting

Threads
Gas In conformity with ISO7.1, BS 21, DIN 2999.

66300
FEMALE x FEMALE



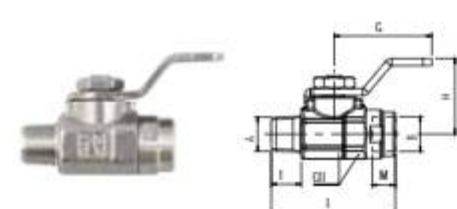
Part No.	A	B	DN	CH	F	M	L	G	H
66300-02-02	1/8	1/8	0.217 (5,5)	0.551-0.591 (14-15)	0.335 (8,5)	0.335 (8,5)	1.300 (33)	1.102 (28)	0.846 (21,5)
66300-04-04	1/4	1/4	0.217 (5,5)	0.630-0.669 (16-17)	0.492 (12,5)	0.492 (12,5)	1.693 (43)	1.102 (28)	0.846 (21,5)



66310
MALE x FEMALE



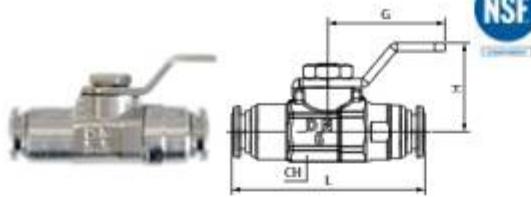
Part No.	A	B	BSPT	DN	CH	F	M	L	G	H
66310-02-02	1/8	1/8		0.217 (5,5)	0.551-0.591 (14-15)	0.335 (8,5)	0.335 (8,5)	1.378 (35)	1.102 (28)	0.846 (21,5)
66310-04-04	1/4	1/4		0.217 (5,5)	0.630-0.669 (16-17)	0.492 (12,5)	0.492 (12,5)	1.752 (44,5)	1.102 (28)	0.846 (21,5)



66560

TUBE X TUBE

Metric tube

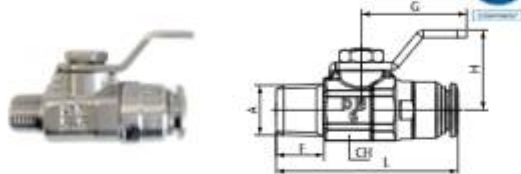


Code	Tube	Tube	DN	CH	L	G	H
66560-6-8	6	6	0.197 (5)	0.551-0.591 (14-15)	1.772 (45)	1.102 (28)	0.846 (21,5)
66560-8-8	8	8	0.217 (5,5)	0.630-0.669 (16-17)	2.0048 (52)	1.102 (28)	0.846 (21,5)

66570

TUBE X MALE

BSPT



Code	Tube	A	DN	F	CH	L	G	H
66570-6-1/8	6	1/8	0.197 (5)	0.335 (8,5)	0.551-0.591 (14-15)	1.613 (41)	1.102 (28)	0.846 (21,5)
66570-6-1/4	6	1/4	0.197 (5)	0.492 (12,5)	0.630-0.669 (16-17)	1.772 (45)	1.102 (28)	0.846 (21,5)
66570-8-1/8	8	1/8	0.217 (5,5)	0.335 (8,5)	0.551-0.591 (14-15)	1.693 (43)	1.102 (28)	0.846 (21,5)
66570-8-1/4	8	1/4	0.217 (5,5)	0.492 (12,5)	0.630-0.669 (16-17)	1.890 (48)	1.102 (28)	0.846 (21,5)

www.sumy.ir

NOTES

www.sumy.ir

Adapters



NPTF Banjo Stem Assemblies



Tubing



NICKEL-PLATED BRASS ADAPTERS

Adapters





TECHNICAL CHARACTERISTICS



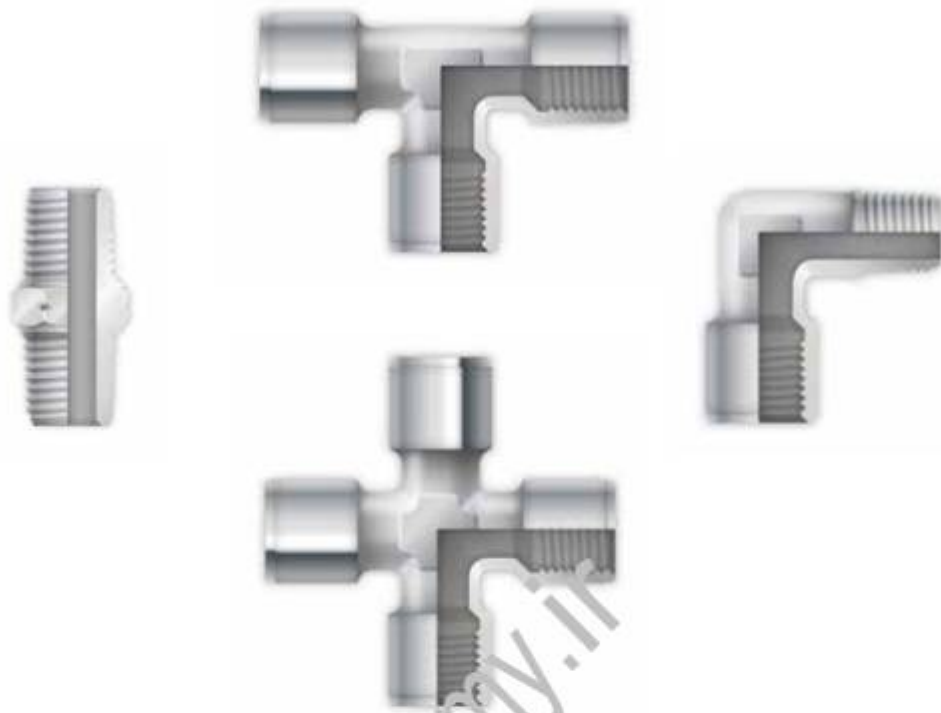
Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

SILICON
FREE



Maximum temperature

572 °F
300 °C



Component Parts and Materials

These fittings are made in OT UNI EN 12164/5 CW 614/7N and undergo a nickel-plating process. All other materials will be specified in catalog.



Pressure Rating

Vacuum ~ see data chart
-0.99 bar ~ see data chart
-0.099 MPa ~ see data chart



Size	Maximum pressure advised
1/8"	2175 PSI / 150 bar / 15 MPa
1/4"	1450 PSI / 100 bar / 10 MPa
3/8"	1080 PSI / 74 bar / 7.4 MPa
1/2"	725 PSI / 50 bar / 5 MPa



Connection Tubes

Tubes and general fittings.



Threads

Tapered gas in conformity with ISO 7.1, BS 21, DIN 2999.
Parallel gas in conformity with ISO 228 Class A.
Metric in conformity with ISO R/262.
NPTF in conformity with ANSI B1.20.5

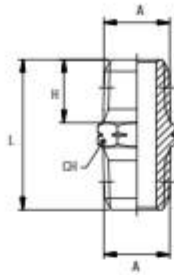


Media

- Compressed air
- Water
- Oils
- General fluids for pneumatic, hydraulic and oildynamic facilities.

82200N

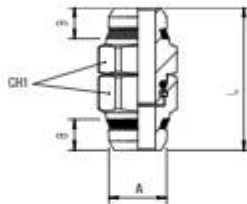
HEX NIPPLE



Part No.	A NPTF	H	L	CH
82200N-02	1/8	.335 (8,5)	.846 (21,5)	.472 (12)
82200N-04	1/4	.512 (13)	1.220 (31)	.551 (14)
82200N-06	3/8	.512 (13)	1.220 (31)	.748 (19)
82200N-08	1/2	.669 (17)	1.575 (40)	.866 (22)

82201N

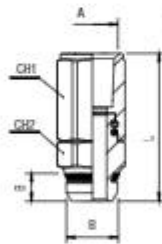
NIPPLE - MALE X MALE



Part No.	A NPTF	B	L	CH1
82201N-04-04	1/4	.275 (7)	1.279 (32,5)	.630 (16)
82201N-06-06	3/8	.295 (7,5)	1.240 (31,5)	.787 (20)

82203N

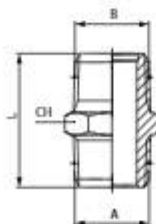
NIPPLE - MALE X FEMALE



Part No.	A NPTF	B	H	L	CH1	CH2
82203N-04-04	1/4	1/4	.275 (7)	1.476 (37,5)	.630 (16)	.630 (16)
82203N-06-06	3/8	3/8	.295 (7,5)	1.417 (36)	.787 (20)	.787 (20)
82203N-06-04	3/8	1/4	.275 (7)	1.496 (38)	.787 (20)	.630 (16)

82205

NIPPLE TAPER



Part No.	A BSPT	B NPTF	L	CH
82205-1/8-1/8	1/8	1/8	.807 (20,5)	.472 (12)
82205-1/4-1/4	1/4	1/4	1.342 (29)	.551 (14)
82205-3/8-3/8	3/8	3/8	1.161 (29,5)	.708 (18)
82205-1/2-1/2	1/2	1/2	1.437 (36,5)	.866 (22)
82205-3/4-3/4	3/4	3/4	1.594 (40,5)	1.063 (27)

82241N

ADAPTER FEMALE G THREAD - MALE NPTF



Part No.	A NPTF	B BSPP	H	L	CH
82241N-32-M5	10/32 UNF	M5	.177 (4,5)	.472 (12)	.315 (8)
82241N-02-02	1/8	1/8	.335 (8,5)	.768 (19,5)	.551 (14)
82241N-04-04	1/4	1/4	.512 (13)	1.063 (27)	.669 (17)
82241N-06-06	3/8	3/8	.512 (13)	1.102 (28)	.866 (22)

82242N

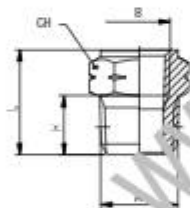
ADAPTER - FEMALE NPTF - MALE G THREAD



Part No.	A BSPP	B NPTF	H	L	CH
82242N-02	1/8	1/8	.236 (6)	.669 (17)	.551 (14)
82242N-04	1/4	1/4	.315 (8)	.906 (23)	.669 (17)
82242N-06	3/8	3/8	.354 (9)	.945 (24)	.866 (22)
82242N-08	1/2	1/2	.472 (12)	1.240 (31,5)	1.063 (27)

82280N

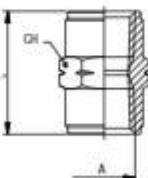
REDUCER FEMALE - MALE NPTF



Part No.	A NPTF	B NPTF	H	L	CH
82280N-02-32	1/8	10/32 UNF	.335 (8,5)	.571 (14,5)	.472 (12)
82280N-04-02	1/4	1/8	.512 (13)	.748 (19)	.551 (14)
82280N-06-02	3/8	1/8	.512 (13)	.768 (19,5)	.748 (19)
82280N-06-04	3/8	1/4	.512 (13)	.906 (23)	.748 (19)
82280N-08-04	1/2	1/4	.669 (17)	.965 (24,5)	.866 (22)
82280N-08-06	1/2	3/8	.669 (17)	.571 (14,5)	.472 (12)

82300N

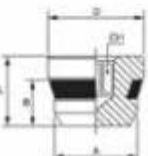
COUPLING FEMALE NPTF



Part No.	A NPTF	L	CH
82300N-02	1/8	.748 (19)	.551 (14)
82300N-04	1/4	1.063 (27)	.669 (17)
82300N-06	3/8	1.063 (27)	.866 (22)
82300N-08	1/2	1.378 (35)	1.063 (27)

82320

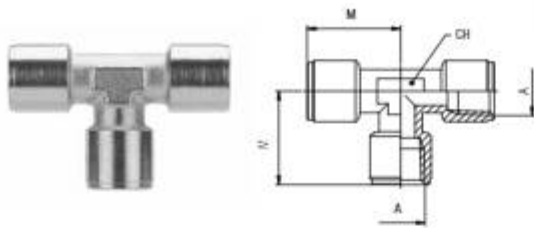
COUPLING FEMALE NPTF



Part No.	A	B	D	L	CH
82320-02	1/8	.217 (5,5)	.394 (10)	.315 (8)	.397 (5)
82320-04	1/4	.275 (7)	.551 (14)	.394 (10)	.236 (6)
82320-06	3/8	.295 (7,5)	.669 (17)	.433 (11)	.315 (8)
82320-08	1/2	.354 (9)	.787 (20)	.512 (13)	.433 (11)

82400N

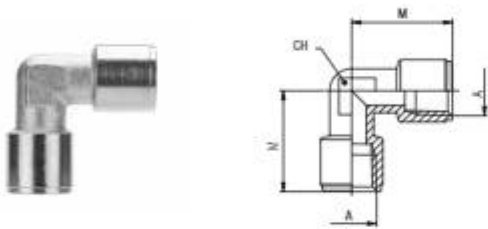
TEE FEMALE NPTF



Part No.	A NPTF	M	CH
82400N-02	1/8	.669 (19,5)	.472 (12)
82400N-04	1/4	.906 (26)	.512 (13)
82400N-06	3/8	.945 (28,5)	.630 (16)
82400N-08	1/2	1.240 (33,5)	.787 (20)

82510N

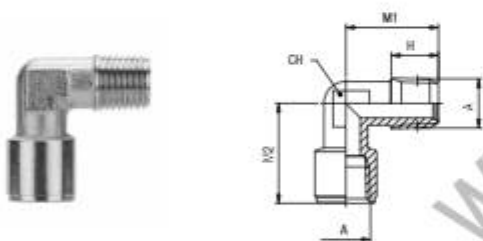
ELBOW - FEMALE NPTF



Part No.	A NPTF	M	CH
82510N-02	1/8	.846 (21,5)	.433 (11)
82510N-04	1/4	1.083 (27,5)	.512 (13)
82510N-06	3/8	1.161 (29,5)	.669 (17)
82510N-08	1/2	1.339 (34)	.787 (20)

82520N

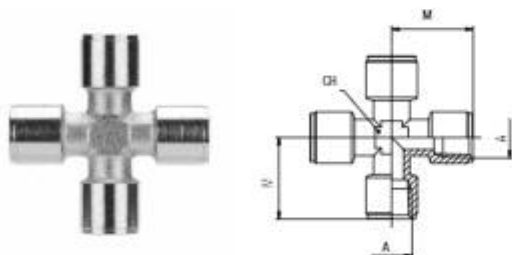
ELBOW - FEMALE - MALE NPTF



Part No.	A NPTF	H	M1	M2	CH
82520N-02	1/8	.735 (8,5)	.827 (21)	.748 (19)	.433 (11)
82520N-04	1/4	.512 (13)	1.083 (27,5)	1.004 (25,5)	.512 (13)
82520N-06	3/8	.512 (13)	1.161 (29,5)	1.083 (27,5)	.669 (17)
82520N-08	1/2	.669 (17)	1.339 (34)	1.260 (32)	.787 (20)

82620N

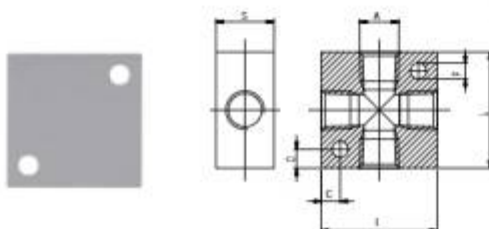
CROSS - FEMALE NPTF



Part No.	A NPTF	M	CH
82620N-02	1/8	.787 (20)	.433 (11)
82620N-04	1/4	1.063 (27)	.512 (13)
82620N-06	3/8	1.142 (29)	.669 (17)

82640N

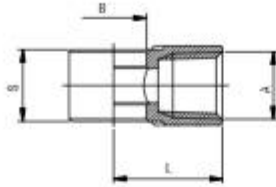
ALUMINUM DISTRIBUTION BLOCK - FEMALE



Part No.	A NPTF	L	S	F	C
82640N-02	1/8	.984 (25)	.630 (16)	.177 (4,5)	.169 (4,5)
82640N-04	1/4	1.575 (40)	.787 (20)	.217 (5,5)	.256 (6,5)
82640N-06	3/8	1.969 (50)	.984 (25)	.217 (5,5)	.295 (7,5)
82640N-08	1/2	1.969 (50)	1.181 (30)	.217 (5,5)	.295 (7,5)

82690

SINGLE BANJO BODY FEMALE



Part No.	A NPTF	B	L	S	CH
82690-32	10/32	.240 (6.1)	.570 (14.5)	.484 (12.3)	N/A
82690-02	1/8	.394 (10)	.649 (16.5)	.590 (15)	.551 (14)
82690-04	1/4	.531 (13.5)	.866 (22)	.669 (17)	.708 (18)
82690-06	3/8	.688 (17.5)	1.043 (26.5)	.787 (20)	.827 (21)

NPTF BANJO STEM ASSEMBLIES

BANJO STEM

- Part No.
- 81410
- 81420
- 81430



Examples of various banjo stems with single and double banjo bodies

NYLON WASHER



**BANJO BODY
INCH
OR METRIC**



NYLON WASHER



ADAPTER



Single banjo stem

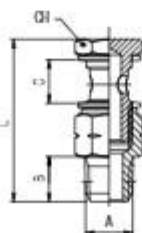
Double banjo stem

Triple banjo stem

With nylon banjo body remove the washer.

81410

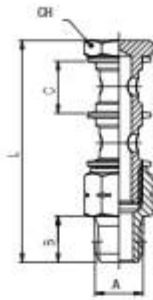
SINGLE BANJO STEM



Part No.	A NPTF	B	C	L	CH
81410-32	10/32	.177 (4.5)	.492 (12.5)	1.200 (30.5)	.315 (8)
81410-02	1/8	.334 (8.5)	.591 (15)	1.653 (42)	.551 (14)
81410-04	1/4	.511 (13)	.669 (17)	2.047 (52)	.669 (17)
81410-06	3/8	.511 (13)	.787 (20)	2.106 (53.5)	.748 (19)

81420

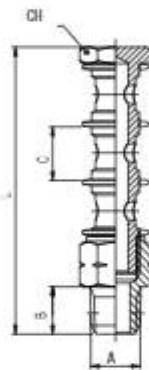
DOUBLE BANJO STEM



Part No.	A NPTF	B	C	L	CH
81420-02	1/8	.334 (8,5)	.591 (15)	2.283 (58)	.551 (14)
81420-04	1/4	.511 (13)	.669 (17)	2.755 (70)	.669 (17)
81420-06	3/8	.511 (13)	.787 (20)	3.031 (77)	.748 (19)

81430

TRIPLE BANJO STEM



Part No.	A NPTF	B	C	L	CH
81430-02	1/8	.334 (8,5)	.591 (15)	2.913 (74)	.551 (14)
81430-04	1/4	.511 (13)	.669 (17)	3.464 (88)	.669 (17)
81430-06	3/8	.511 (13)	.787 (20)	3.897 (99)	.748 (19)

BSPP BANJO STEM ASSEMBLIES

Examples of various banjo stems with single and double banjo bodies

BANJO STEM

Part No.
51410
51420
51430



NYLON WASHER



BANJO BODY
INCH
OR METRIC



NYLON WASHER



Single
banjo stem

Double
banjo stem

Triple
banjo stem

With nylon banjo body remove the washer.

51410

SINGLE BANJO STEM



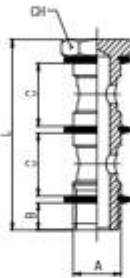
Part No.	A BSPP	B	C	L	CH
51410-M5	M5	.157 (4)	.02 (12.5)	.866 (22)	.315 (8)
51410-M6	M6	.197 (5)	.02 (12.5)	.906 (23)	.315 (8)
51410-1/8	1/8	.236 (6)	.591 (15)	1.102 (28)	.551 (14)
51410-1/4	1/4	.315 (8)	.669 (17)	1.26 (32)	.669 (17)
51410-3/8	3/8	.354 (9)	.787 (20)	1.417 (36)	.748 (19)
51410-1/2	1/2	.394 (10)	.945 (24)	1.654 (42)	.945 (24)
51410-M12x1.5 *M12X1.5		.315 (8)	.669 (17)	1.26 (32)	.669 (17)

This item will be supplied with the PA66 washers (ART. 1610).

* With this banjo stem using 1/4 orienting banjo body.

51420

DOUBLE BANJO STEM



Part No.	A BSPP	B	C	L	CH
51420-1/8	1/8	.236 (6)	.591 (15)	.072 (44,5)	.551 (14)
51420-1/4	1/4	.315 (8)	.669 (17)	.082 (50,5)	.669 (17)
51420-3/8	3/8	.354 (9)	.787 (20)	2.283 (58)	.748 (19)
51420-1/2	1/2	.394 (10)	.945 (24)	2.677 (68)	.945 (24)
51420-M12x1.5 *M12X1.5		.315 (8)	.669 (17)	.082 (50,5)	.669 (17)

This item will be supplied with the PA66 washers (ART. 1610).

* With this banjo stem using 1/4 orienting banjo body.

51430

TRIPLE BANJO STEM



Part No.	A BSPP	B	C	L	CH
51430-1/8	1/8	.236 (6)	.591 (15)	2.402 (61)	.551 (14)
51430-1/4	1/4	.315 (8)	.669 (17)	2.717 (69)	.669 (17)
51430-3/8	3/8	.354 (9)	.787 (20)	3.15 (80)	.748 (19)
51430-1/2	1/2	.394 (10)	.945 (24)	3.701 (94)	.945 (24)

This item will be supplied with the PA66 washers (ART. 1610).

PA TUBING

Tubing



N11

PA 11 TUBING



Advantages

- | | | |
|---|--------------------|----------------|
| 1 | COMPOUND: | PA12 |
| 2 | TEMPERATURE RANGE | -60° / +200° |
| 3 | DIAMETER TOLERANCE | -.004 / +.002 |
| 4 | VACUUM RATING | |
| 5 | HARDNESS | 78 Rockwell R |
| 6 | COLOR: | Black, Natural |

Part No.	OD	ID	Wall	Color	Working Pressure 75°F	Working Pressure 150°F	Bend Radius	Standard Pack
N11-021-100	1/8	.93	.016	Black	225 PSI	123 PSI	.375	100' Bag
N11-022-100	1/8	.93	.016	Natural	225 PSI	123 PSI	.375	100' Bag
N11-531-100	5/32 (4)	.108	.016	Black	225 PSI	123 PSI	.375	100' Bag
N11-532-100	5/32 (4)	.108	.016	Natural	225 PSI	123 PSI	.375	100' Bag
N11-041-100	1/4	.205	.035	Black	225 PSI	123 PSI	.375	100' Bag
N11-042-100	1/4	.205	.016	Natural	225 PSI	123 PSI	.375	100' Bag
N11-051-100	5/16 (8)	.232	.016	Black	225 PSI	123 PSI	.375	100' Bag
N11-052-100	5/16 (8)	.232	.016	Natural	225 PSI	123 PSI	.375	100' Bag
N11-061-100	3/8	.275	.016	Black	225 PSI	123 PSI	.375	100' Bag
N11-062-100	3/8	.275	.016	Natural	225 PSI	123 PSI	.375	100' Bag
N11-081-100	1/2	.375	.016	Black	225 PSI	123 PSI	.375	100' Bag
N11-082-100	1/2	.375	.016	Natural	225 PSI	123 PSI	.375	100' Bag

PU

POLYURETHANE TUBING - INCH SIZES



Advantages

- | | | |
|---|--------------------|---------------------------|
| 1 | COMPOUND: | PU |
| 2 | TEMPERATURE RANGE | -40° / -165° |
| 3 | DIAMETER TOLERANCE | +/- .003 - .004 |
| 4 | VACUUM RATING | 125 psi - 200 psi |
| 5 | HARDNESS | 98 Shore A |
| 6 | COLOR: | Black, Natural, Red, Blue |

Part Number	OD	ID	Wall	Color	Working Pressure at 68°F	Best Pressure at 68°F	Bend Radius	Standard Pack
PU157-0-100	5/32"	3/32"	0.32"	Natural	130 psi	400 psi	0.47"	100' Bag
PU157-1-100	5/32"	3/32"	0.32"	Red	130 psi	400 psi	0.47"	100' Bag
PU157-2-100	5/32"	3/32"	0.32"	Black	130 psi	400 psi	0.47"	100' Bag
PU157-3-100	5/32"	3/32"	0.32"	Blue	130 psi	400 psi	0.47"	100' Bag
PU340-0-100	3/16"	1/8"	0.32"	Natural	130 psi	330 psi	0.55"	100' Bag
PU340-1-100	3/16"	1/8"	0.32"	Red	130 psi	330 psi	0.55"	100' Bag
PU340-2-100	3/16"	1/8"	0.32"	Black	130 psi	330 psi	0.55"	100' Bag
PU340-3-100	3/16"	1/8"	0.32"	Blue	130 psi	330 psi	0.55"	100' Bag
PU445-0-100	1/4"	5/32"	0.45"	Natural	130 psi	370 psi	0.75"	100' Bag
PU445-1-100	1/4"	5/32"	0.45"	Red	130 psi	370 psi	0.75"	100' Bag
PU445-2-100	1/4"	5/32"	0.45"	Black	130 psi	370 psi	0.75"	100' Bag
PU445-3-100	1/4"	5/32"	0.45"	Blue	130 psi	370 psi	0.75"	100' Bag
PU562-0-100	5/16"	3/16"	0.62"	Natural	130 psi	330 psi	0.95"	100' Bag
PU562-1-100	5/16"	3/16"	0.62"	Red	130 psi	330 psi	0.95"	100' Bag
PU562-2-100	5/16"	3/16"	0.62"	Black	130 psi	330 psi	0.95"	100' Bag
PU562-3-100	5/16"	3/16"	0.62"	Blue	130 psi	330 psi	0.95"	100' Bag
PU662-0-100	3/8"	1/4"	0.62"	Natural	130 psi	330 psi	1.5"	100' Bag
PU662-1-100	3/8"	1/4"	0.62"	Red	130 psi	330 psi	1.5"	100' Bag
PU662-2-100	3/8"	1/4"	0.62"	Black	130 psi	330 psi	1.5"	100' Bag
PU662-3-100	3/8"	1/4"	0.62"	Blue	130 psi	330 psi	1.5"	100' Bag
PU890-0-100	1/2"	3/8"	0.62"	Natural	130 psi	330 psi	1.97"	100' Bag
PU890-1-100	1/2"	3/8"	0.62"	Red	130 psi	330 psi	1.97"	100' Bag
PU890-2-100	1/2"	3/8"	0.62"	Black	130 psi	330 psi	1.97"	100' Bag
PU890-3-100	1/2"	3/8"	0.62"	Blue	130 psi	330 psi	1.97"	100' Bag

PU

POLYURETHANE TUBING - METRIC SIZES


Advantages

- | | | |
|---|--------------------|---------------------------|
| 1 | COMPOUND: | PU |
| 2 | TEMPERATURE RANGE | -40° / -165° |
| 3 | DIAMETER TOLERANCE | +/- .003 - .004 |
| 4 | VACUUM RATING | 125 psi - 200 psi |
| 5 | HARDNESS | 98 Shore A |
| 6 | COLOR: | Black, Natural, Red, Blue |

Part Number	OD	ID	Wall	Color	Working Pressure at 68°F	Best Pressure at 68°F	Bend Radius	Standard Pack
PU4MM-0-100	4 mm	2.5 mm	0.75 mm	Natural	174 psi	536 psi	20 mm	100' Bag
PU4MM-1-100	4 mm	2.5 mm	0.75 mm	Red	174 psi	536 psi	20 mm	100' Bag
PU4MM-2-100	4 mm	2.5 mm	0.75 mm	Black	174 psi	536 psi	20 mm	100' Bag
PU4MM-3-100	4 mm	2.5 mm	0.75 mm	Blue	174 psi	536 psi	20 mm	100' Bag
PU6MM-0-100	6 mm	4 mm	1 mm	Natural	159 psi	464 psi	30 mm	100' Bag
PU6MM-1-100	6 mm	4 mm	1 mm	Red	159 psi	464 psi	30 mm	100' Bag
PU6MM-2-100	6 mm	4 mm	1 mm	Black	159 psi	464 psi	30 mm	100' Bag
PU6MM-3-100	6 mm	4 mm	1 mm	Blue	159 psi	464 psi	30 mm	100' Bag
PU8MM-0-100	8 mm	5.5 mm	1.25 mm	Natural	145 psi	435 psi	45 mm	100' Bag
PU8MM-1-100	8 mm	5.5 mm	1.25 mm	Red	145 psi	435 psi	45 mm	100' Bag
PU8MM-2-100	8 mm	5.5 mm	1.25 mm	Black	145 psi	435 psi	45 mm	100' Bag
PU8MM-3-100	8 mm	5.5 mm	1.25 mm	Blue	145 psi	435 psi	45 mm	100' Bag
PU10MM-0-100	10 mm	7 mm	1.5 mm	Natural	130 psi	406 psi	35 mm	100' Bag
PU10MM-1-100	10 mm	7 mm	1.5 mm	Red	130 psi	406 psi	35 mm	100' Bag
PU10MM-2-100	10 mm	7 mm	1.5 mm	Black	130 psi	406 psi	35 mm	100' Bag
PU10MM-3-100	10 mm	7 mm	1.5 mm	Blue	130 psi	406 psi	35 mm	100' Bag
PU12MM-0-100	12 mm	8 mm	2 mm	Natural	159 psi	464 psi	30 mm	100' Bag
PU12MM-1-100	12 mm	8 mm	2 mm	Red	159 psi	464 psi	30 mm	100' Bag
PU12MM-2-100	12 mm	8 mm	2 mm	Black	159 psi	464 psi	30 mm	100' Bag
PU12MM-3-100	12 mm	8 mm	2 mm	Blue	159 psi	464 psi	30 mm	100' Bag
PU14MM-0-100	14 mm	10 mm	2 mm	Natural	130 psi	391 psi	120 mm	100' Bag
PU14MM-1-100	14 mm	10 mm	2 mm	Red	130 psi	391 psi	120 mm	100' Bag

R811

RECOIL ASSEMBLIES

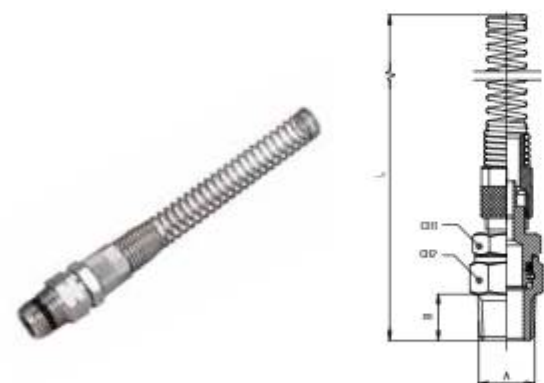


Part No.	Fitting Male NPTF	ID	OD	Lenght Straight	Lenght Working	Lenght Retracted	Coil Diameter	Working Pressure 75°F	Working Pressure 150°F
R811-043-012	1/4	1/4	.309	12	10 1/2	5 1/4	3 1/2	185 PSI	100 PSI
R811-043-025	1/4	1/4	.309	25	22	10 1/2	3 1/2	185 PSI	100 PSI
R811-043-050	1/4	1/4	.309	50	44	21	3 1/2	185 PSI	100 PSI
R811-043-100	1/4	1/4	.309	100	88	42	3 1/2	185 PSI	100 PSI
R811-053-012	3/8	3/8	.470	12	10	5	5 5/8	185 PSI	100 PSI
R811-053-025	3/8	3/8	.470	25	10	10 1/4	5 5/8	185 PSI	100 PSI
R811-053-050	3/8	3/8	.470	50	10	20 1/4	5 5/8	185 PSI	100 PSI
R811-053-100	3/8	3/8	.470	100	10	41	5 5/8	185 PSI	100 PSI
R811-083-012	1/2	1/2	.625	12	8.5	4 1/4	9	185 PSI	100 PSI
R811-083-025	1/2	1/2	.625	25	18	9	9	185 PSI	100 PSI
R811-083-050	1/2	1/2	.625	50	36	18	9	185 PSI	100 PSI
R811-083-100	1/2	1/2	.625	100	72	36	9	185 PSI	100 PSI

ACCESSORIES

81026

RECOIL FITTING



Part No.	A NPTF	B	C	L	CH
81026-04	1/4	.236 (6)	.591 (15)	2.402 (61)	.551 (14)
81026-06	3/8	.315 (8)	.669 (17)	2.717 (69)	.669 (17)
81026-08	1/2	.354 (9)	.787 (20)	3.150 (80)	.748 (19)

1750

TUBE CUTTER

Part No.
1750



1/4 Multisocket

p. 12.4



3/8 Multisocket

p. 12.8



1/4 Multisocket - Stainless Steel

p. 12.11



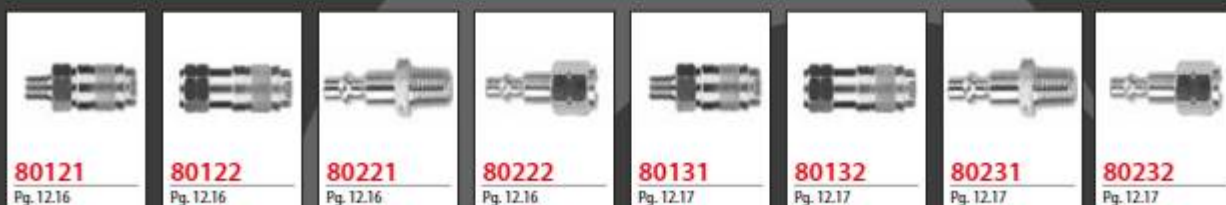
AC Mini

p. 12.14



Industrial

p. 12.16



Safety Couplers - Blow Guns

p. 12.21



QUICK DISCONNECT COUPLERS



Quick Couplers



TECHNICAL CHARACTERISTICS



Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

SILICON
FREE



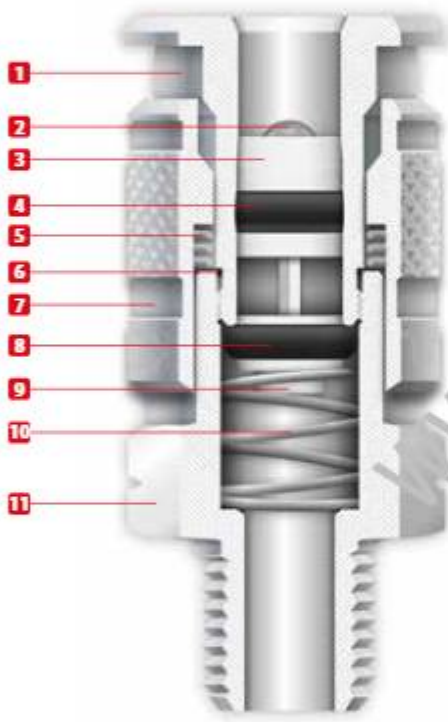
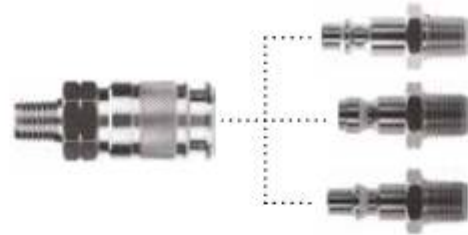
MULTISOCKET
Universal quick disconnect

One socket for 3 different plugs

It's a fact that there are various Quick-Disconnect plugs available on the market today. In most cases, each plug needs a specific coupler that is not interchangeable.

To get around this issue, Aignep is proud to offer to its customers a practical and cost-effective solution.

MULTISOCKET is a universal coupler that works with the 3 main types of QD plugs.



1/4 INDUSTRIAL



DN
5.5 mm

ARO



DN
5.5 mm

TRU-FLATE



DN
5 mm



Component Parts and Materials

- 1 Nickel Plated Brass Body
- 2 420 Stainless Steel Ball
- 3 Nickel Plated Brass Guide Ring
- 4 NBR O-Ring Seal
- 5 302 Stainless Steel Ring Nut Spring
- 6 NBR O-Ring Seal
- 7 Nickel Plated Brass Sleeve
- 8 NBR O-Ring Seal
- 9 Nickel Plated Brass Shutter
- 10 302 Stainless Steel Shutter Spring
- 11 Nickel Plated Brass Coupler



Pressure Rating

0 ~ 232 PSI
0 bar ~ 16 bar
0 MPa ~ 1.6 MPa

Maximum static pressure

507 PSI
35 bar
3.5 MPa



Temperatures

NBR
-4° F ~ 176° F
-20° C ~ 80° C

FKM on request
14° F ~ 392° F
-10° C ~ 200° C



Threads

NPTF



Media

• Compressed air
For other fluids, consult the technical department Aignep.



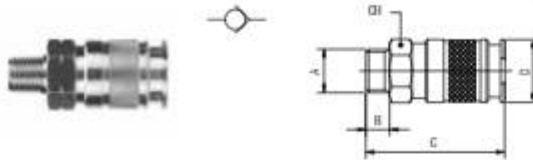
Flow Rate

CFM (NI/min)

Plug	87 psi		
	Δ 14.5	Δ 7.2	Δ 0 (Exhaust Free)
80220	38.8 (1100)	28.25 (800)	52.97 (1500)
80270	45.9 (1300)	35.31 (1000)	58.27 (1650)
80290	22.95 (650)	16.95 (480)	38.8 (1100)

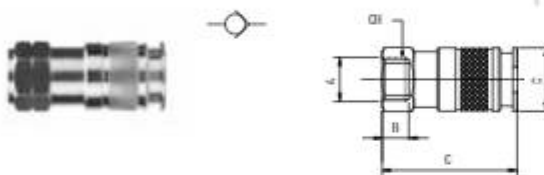
1/4" MULTISOCKET

80191
1/4" MALE NPTF



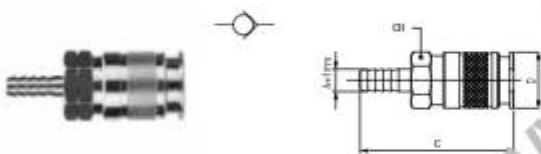
Part No.	A NPTF	B	C	D	CH
80191-04	1/4	.512 (13)	2.126 (54)	.945 (24)	.827 (21)
80191-06	3/8	.512 (13)	2.126 (54)	.945 (24)	.827 (21)
80191-08	1/2	.669 (17)	2.303 (58,5)	.945 (24)	.945 (24)

80192
1/4" FEMALE NPTF



Part No.	A NPTF	B	C	D	CH
80192-04	1/4	.533 (13,5)	2.126 (54)	.945 (24)	.827 (21)
80192-06	3/8	.533 (13,5)	2.126 (54)	.945 (24)	.827 (21)
80192-08	1/2	.689 (17,5)	2.323 (59)	.945 (24)	.945 (24)

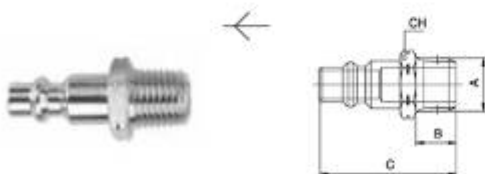
80193
1/4" BARB



Part No.	A	C	D	CH
80193-04	1/4	2.382 (60,5)	.945 (24)	.827 (21)
80193-06	3/8	2.402 (61)	.945 (24)	.827 (21)
80193-08	1/2	2.402 (61)	.945 (24)	.866 (22)

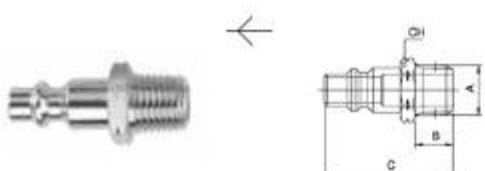
1/4" INDUSTRIAL

80221
1/4" INDUSTRIAL MALE



Part No.	A NPTF	B	C	CH
80221-04	1/4	.512 (13)	1.634 (41,5)	.669 (17)
80221-06	3/8	.512 (13)	1.634 (41,5)	.748 (19)
80221-08	1/2	.669 (17)	1.811 (46)	.866 (22)

80221AC
1/4" INDUSTRIAL MALE (STEEL)



Part No.	A NPTF	B	C	CH
80221AC-04	1/4	.512 (13)	1.634 (41,5)	.669 (17)
80221AC-06	3/8	.512 (13)	1.634 (41,5)	.748 (19)
80221AC-08	1/2	.669 (17)	1.811 (46)	.866 (22)

HARDENED STEEL

80222

1/4" INDUSTRIAL FEMALE



Part No.	A NPTF	B	C	CH
80222-04	1/4	.531 (13,5)	1.535 (39)	.669 (17)
80222-06	3/8	.531 (13,5)	1.535 (39)	.787 (20)
80222-08	1/2	.689 (17,5)	1.693 (43)	.944 (24)

80222AC

1/4" INDUSTRIAL FEMALE (STEEL)

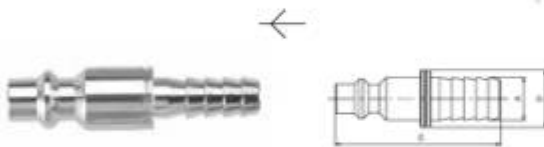


Part No.	A NPTF	B	C	CH
80222AC-04	1/4	.531 (13,5)	1.535 (39)	.669 (17)
80222AC-06	3/8	.531 (13,5)	1.535 (39)	.866 (22)
80222AC-08	1/2	.689 (17,5)	1.693 (43)	.944 (24)

HARDENED STEEL

80223

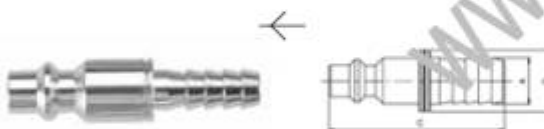
1/4" INDUSTRIAL BARB



Part No.	A	C	D
80223-04	1/4	1.713 (43,5)	.472 (12)
80223-08	1/2	1.811 (46)	.629 (16)

80223AC

1/4" INDUSTRIAL BARB (STEEL)



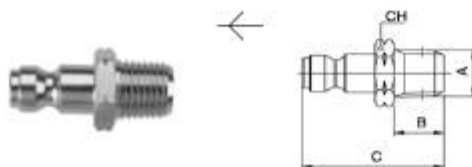
Part No.	A	C	D
80223AC-04	1/4	1.713 (43,5)	.472 (12)

HARDENED STEEL

TRU FLATE

80291

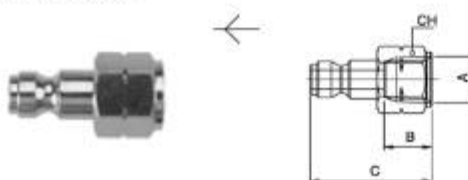
1/4" TRU-FLATE MALE



Part No.	A NPTF	B	C	CH
80291-04	1/4	.512 (13)	1.457 (37)	.669 (17)
80291-06	3/8	.512 (13)	1.457 (37)	.748 (19)
80291-08	1/2	.669 (17)	1.634 (41,5)	.866 (22)

80292

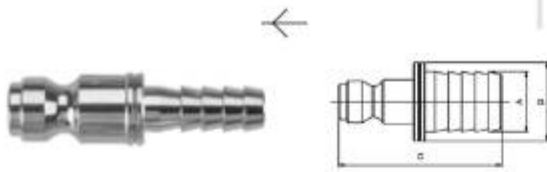
1/4" TRU-FLATE FEMALE



Part No.	A NPTF	B	C	CH
80292-04	1/4	.531 (13,5)	1.358 (34,5)	.669 (17)
80292-06	3/8	.531 (13,5)	1.358 (34,5)	.787 (17)
80292-08	1/2	.689 (17,5)	1.516 (38,5)	.945 (24)

80293

1/4" TRU-FLATE BARB

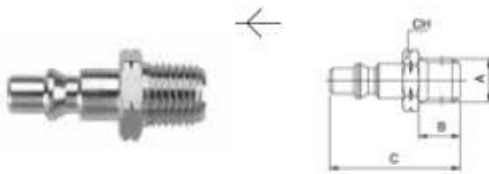


Part No.	A	B	D
80293-04	1/4	1.634 (41,5)	.472 (12)
80293-06	3/8	1.634 (41,5)	.551 (14)
80293-08	1/2	1.634 (41,5)	.787 (20)

ARO

80271

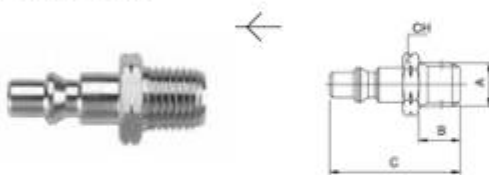
1/4" ARO MALE



Part No.	A NPTF	B	C	CH
80271-04	1/4	.511 (13)	1.574 (40)	.669 (17)
80271-06	3/8	.511 (13)	1.574 (40)	.748 (19)
80271-08	1/2	.669 (17)	1.771 (45)	.866 (22)

80271AC

1/4" ARO MALE (STEEL)

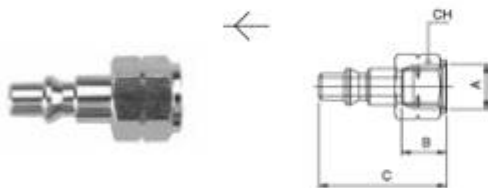


Part No.	A NPTF	B	C	CH
80271AC-04	1/4	.511 (13)	1.574 (40)	.669 (17)

HARDENED STEEL

80272

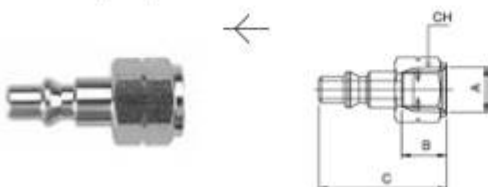
1/4" ARO FEMALE



Part No.	A NPTF	B	C	CH
80272-04	1/4	.531 (13,5)	1.496 (38)	.669 (17)
80272-06	3/8	.531 (13,5)	1.496 (38)	.787 (20)
80272-08	1/2	.689 (17,5)	1.653 (42)	.945 (24)

80272AC

1/4" ARO FEMALE (STEEL)

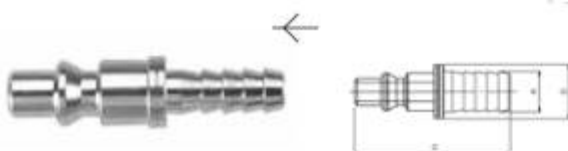


Part No.	A NPTF	C	D	CH
80272AC-04	1/4	.531 (13,5)	1.496 (38)	.669 (17)

HARDENED STEEL

80273

1/4" ARO BARB



Part No.	A	B	D
80273-04	1/4	1.673 (42,5)	.472 (12)
80273-08	1/2	1.791 (45,5)	.787 (20)



TECHNICAL CHARACTERISTICS



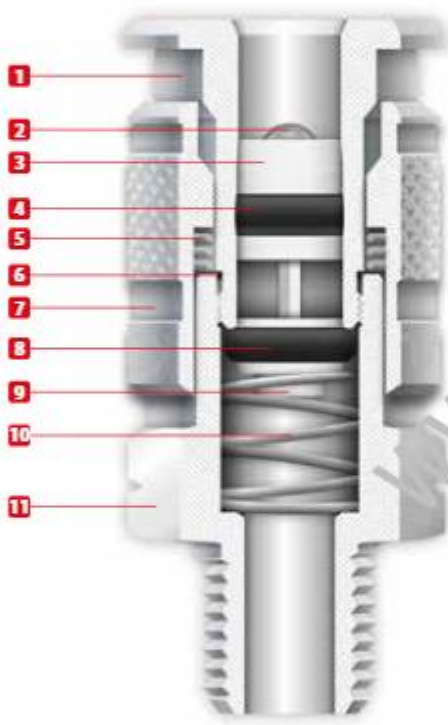
MULTISOCKET
Universal quick disconnect

One socket for 2 different plugs

It's a fact that there are various Quick Disconnect plugs available on the market today. In most cases, each plug needs a specific of coupler that is not interchangeable.

To get around this issue, Aignep is proud to offer to its customers a practical and cost-effective solution.

MULTISOCKET is a universal coupler that works with the 2 main types of QD plugs.



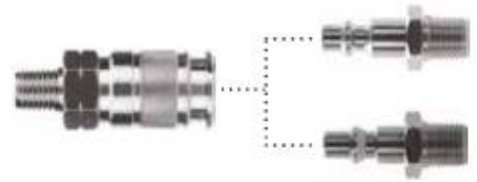
Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

SILICON
FREE



3/8 INDUSTRIAL



1:1

DN

9 mm

3/8 TRU-FLATE



1:1

DN

9 mm



Component Parts and Materials

- 1 Nickel Plated Brass Body
- 2 420 Stainless Steel Ball
- 3 Nickel Plated Brass Guide Ring
- 4 NBR O-Ring Seal
- 5 302 Stainless Steel Ring Nut Spring
- 6 NBR O-Ring Seal
- 7 Nickel Plated Brass Sleeve
- 8 NBR O-Ring Seal
- 9 Nickel Plated Brass Shutter
- 10 302 Stainless Steel Shutter Spring
- 11 Nickel Plated Brass Coupler



Pressure Rating

0 ~ 232 PSI
0 bar ~ 16 bar
0 MPa ~ 1.6 MPa

Maximum static pressure

507 PSI
35 bar
3.5 MPa



Temperatures

NBR	FKM on request
-4° F ~ 176° F	14° F ~ 392° F
-20° C ~ 80° C	-10° C ~ 200° C



Threads

NPTF



Media

• Compressed air
For other fluids, consult the technical department Aignep.



Flow Rate

CFM (NI/min)

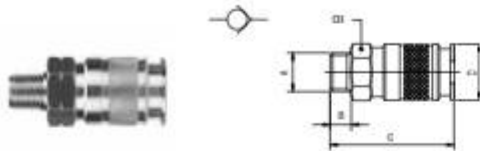
Plug	87 psi Δ 14.5	87 psi Δ 7.2	87 psi Δ 0 (Exhaust Free)
80230	88.2 (2500)	72.3 (2050)	116.5 (3300)
80297	88.2 (2500)	72.3 (2050)	116.5 (3300)

3/8" MULTISOCKET

80194
3/8" MALE NPTF



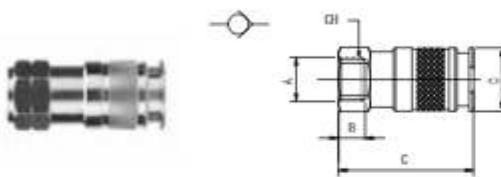
Part No.	A NPTF	B	C	D	CH
80194-06	3/8	.512 (13)	2.342 (59,5)	1.102 (28)	.945 (24)
80194-08	1/2	.669 (17)	2.500 (63,5)	1.102 (28)	.945 (24)



80195
3/8" FEMALE NPTF



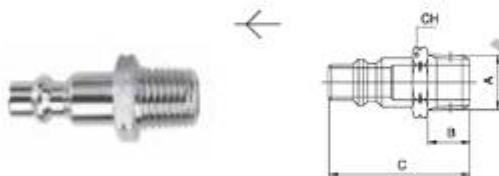
Part No.	A NPTF	B	C	D	CH
80195-06	3/8	.531 (13,5)	2.362 (60)	1.102 (28)	.945 (24)
80195-08	1/2	.689 (17,5)	2.520 (64)	1.102 (28)	.945 (24)



3/8" INDUSTRIAL

80231
3/8" INDUSTRIAL MALE

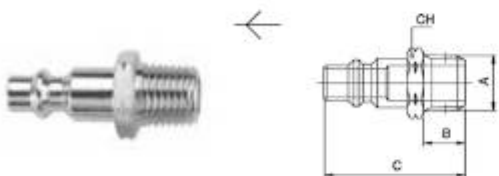
Part No.	A NPTF	B	C	CH
80231-06	3/8	.512 (13)	1.732 (44)	.748 (19)
80231-08	1/2	.669 (17)	1.909 (48,5)	.866 (22)



80231AC
3/8" INDUSTRIAL MALE (STEEL)

Part No.	A NPTF	B	C	CH
80231AC-06	3/8	.512 (13)	1.732 (44)	.748 (19)
80231AC-08	1/2	.669 (17)	1.909 (48,5)	.866 (22)

HARDENED STEEL



80232
3/8" INDUSTRIAL FEMALE

Part No.	A NPTF	B	C	CH
80232-06	3/8	.531 (13,5)	1.634 (41,5)	.787 (20)
80232-08	1/2	.669 (17)	1.791 (45,5)	.866 (22)

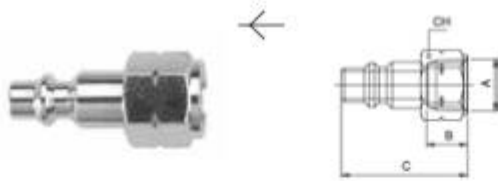


80232AC

3/8" INDUSTRIAL FEMALE (STEEL)

Part No.	A NPTF	B	C	CH
80232AC-06	3/8	.531 (13,5)	1.634 (41,5)	.787 (20)
80232AC-08	1/2	.689 (17,5)	1.791 (45,5)	.945 (24)

HARDENED STEEL

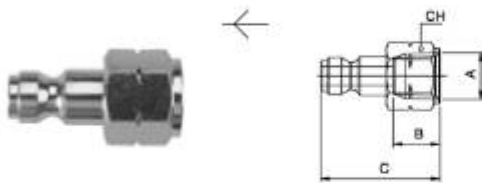


3/8" TRU FLATE

80298

3/8" TRU-FLATE FEMALE

Part No.	A NPTF	B	C	CH
80298-06	3/8	.531 (13,5)	1.654 (42)	.787 (20)
80298-08	1/2	.689 (17,5)	1.811 (46)	.866 (24)



www.sumy.ir



TECHNICAL CHARACTERISTICS



MULTISOCKET
Universal quick disconnect



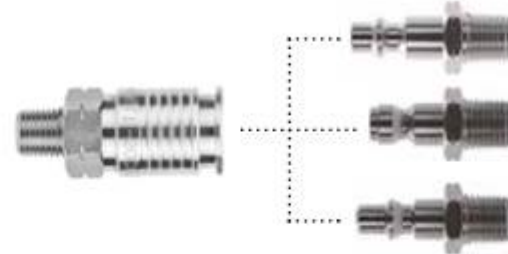
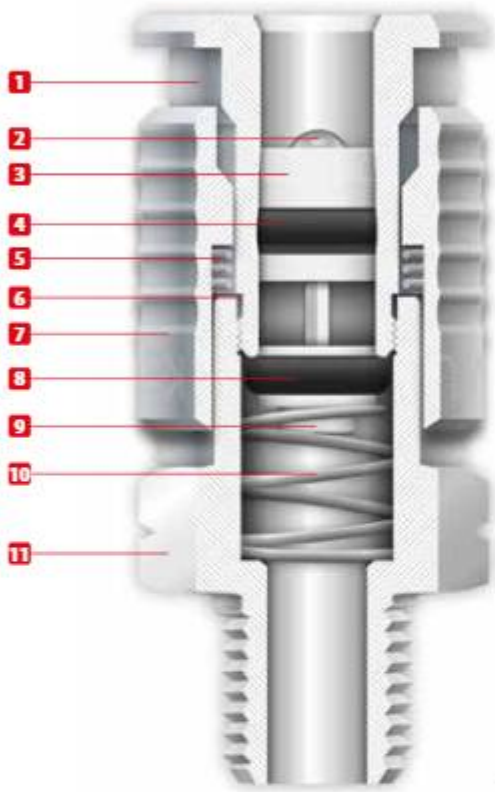
Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

SILICON
FREE



1/4 INDUSTRIAL



1:1

DN
5.5 mm

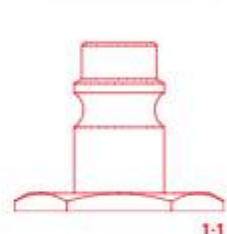
ARO



1:1

DN
5.5 mm

EUROPEAN



1:1

DN
7.8 mm



Pressure Rating

0 PSI ~ 232 PSI
0 bar ~ 16 bar
0 MPa ~ 1.6 MPa

Maximum static pressure

507 PSI
35 bar
3.5 MPa



Component Parts and Materials

- 1 316 Stainless Steel Body
- 2 420 Stainless Steel Ball
- 3 316 Stainless Steel Guide Ring
- 4 FKM O-Ring Seal
- 5 302 Stainless Steel Ring Nut Spring
- 6 FKM O-Ring Seal
- 7 316 Stainless Steel Sleeve
- 8 FKM O-Ring Seal
- 9 316 Stainless Steel Shutter
- 10 302 Stainless Steel Shutter Spring
- 11 316 Stainless Steel Coupler



Temperature Rating

FKM
5° F ~ 392° F
-15° C ~ 200° C



Threads

SWIFFFIT
Universal thread
NPTF
BSP



Media

- Compressed air
- Fluid for food and chemical industry compatible with all components.



Flow Rate

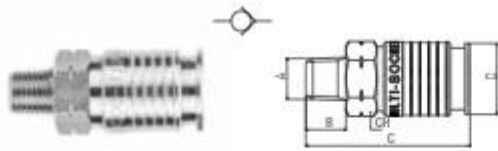
CFM (NI/min)

Plug	87 psi		
	Δ 14.5	Δ 7.2	Δ 0 (Exhaust Free)
1/4 INDUSTRIAL	88.2 (2500)	72.3 (2050)	116.5 (3300)
EUROPEAN	53.32 (1510)	42.38 (1200)	79.45 (2250)

1/4" MULTISOCKET STAINLESS STEEL

60191

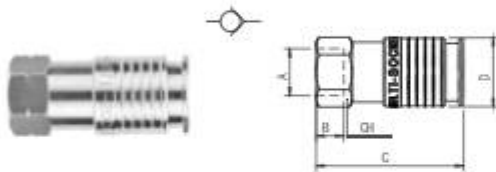
1/4" MALE NPTF 316L (STAINLESS)



Part No.	A NPTF	B	C	D	CH
60191-04	1/4	.511 (13)	2.086 (53)	.945 (24)	.827 (21)

60192

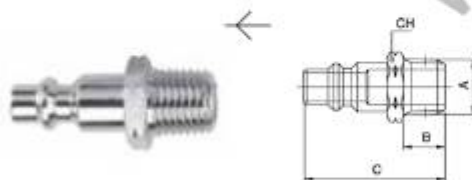
1/4" FEMALE NPTF 316L (STAINLESS)



Part No.	A NPTF	B	C	D	CH
60192-04	1/4	.533 (13,5)	2.066 (52,5)	.945 (24)	.827 (21)

60221

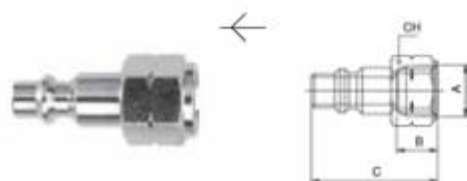
1/4 INDUSTRIAL MALE 316L (STAINLESS)



Part No.	A NPTF	B	C	CH
60221-04	1/4	.512 (13)	1.633 (41)	.669 (17)

60222

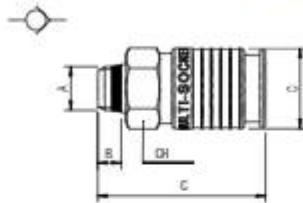
1/4 INDUSTRIAL FEMALE 316L (STAINLESS)



Part No.	A NPTF	B	C	CH
60222-04	1/4	.533 (13,5)	1.535 (39)	.669 (17)

63190

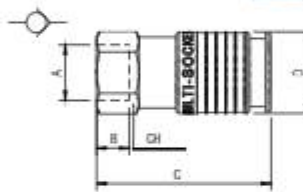
1/4" MALE 316L
(STAINLESS)



Part No.	A	B	C	D	CH
63190-04	1/4	.276 (7)	1.969 (50)	.945 (24)	.827 (21)
63190-06	3/8	.295 (7,5)	1.988 (50,5)	.945 (24)	.827 (21)
63190-08	1/2	.354 (9)	2.047 (52)	.945 (24)	.827 (21)

63192

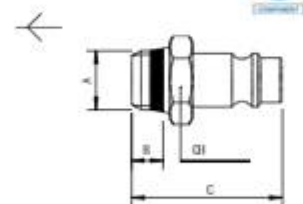
1/4" FEMALE 316L
(STAINLESS)



Part No.	A BSPP	B	C	D	CH
63192-04	1/4	.433 (11)	2.028 (51,5)	.945 (24)	.827 (21)
63192-06	3/8	.453 (11,5)	2.047 (52)	.945 (24)	.827 (21)
63192-08	1/2	.591 (15)	2.224 (56,5)	.945 (24)	.945 (24)

63260 DN 7.8

MALE PLUG
EUROPEAN PROFILE



Part No.	A	B	C	CH
63260-04	1/4	.276 (7)	1.319 (33,5)	.669 (17)
63260-06	3/8	.295 (7,5)	1.339 (34)	.748 (19)
63260-08	1/2	.354 (9)	1.417 (36)	.945 (24)

63262 DN 7.8

FEMALE PLUG
EUROPEAN PROFILE



Part No.	A BSPP	B	C	CH
63262-04	1/4	.433 (11)	1.299 (33)	.669 (17)
63262-06	3/8	.453 (11,5)	1.319 (33,5)	.748 (19)
63262-08	1/2	.591 (15)	1.457 (37)	.945 (24)



TECHNICAL CHARACTERISTICS



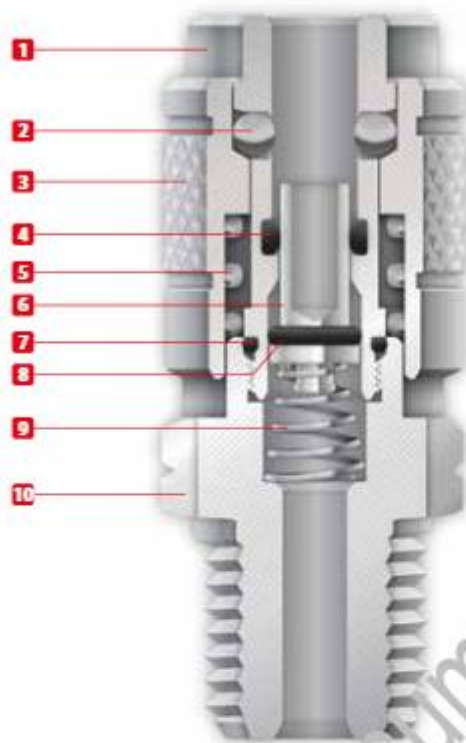
Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

SILICON
FREE



www.sumy.ir



Pressures

0 PSI ~ 232 PSI
0 bar ~ 16 bar
0 MPa ~ 1.6 MPa

Maximum static pressure

507 PSI
35 bar
3.5 MPa



Component Parts and Materials

- 1 Nickel Plated Brass Body
- 2 420 Stainless Steel Ball
- 3 Nickel Plated Brass Sleeve
- 4 NBR O-Ring Seal
- 5 302 Stainless Steel Ring Nut Spring
- 6 Nickel Plated Brass Shutter
- 7 NBR O-Ring Seal
- 8 NBR O-Ring Seal
- 9 302 Stainless Steel Shutter Spring
- 10 Nickel Plated Brass Coupler



Temperature Rating

NBR	<i>FKM on request</i>
-4° F ~ 176° F	14° F ~ 392° F
-20° C ~ 80° C	-10° C ~ 200° C



Threads

NPTF



Media

• Compressed air
For other fluids, consult the technical department Aignep.



Flow Rate

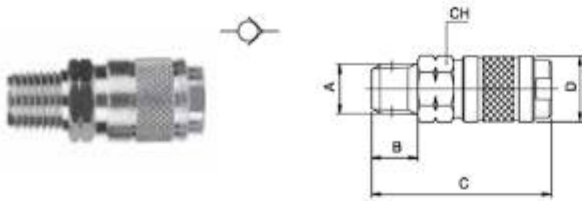
CFM (NI/min)

87 psi Δ 14.5	87 psi Δ 7.2	87 psi Δ 0 (Exhaust Free)
8.48 (240)	6.71 (190)	11.3 (320)

80111

AC MINI MALE

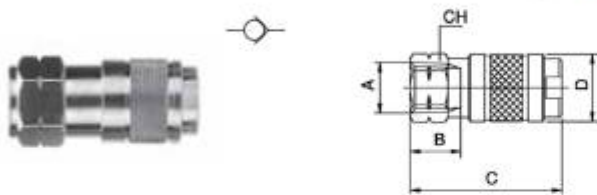
Part No.	A NPTF	B	C	D	CH
80111-02	1/8	.335 (8,5)	1.496 (38)	.709 (18)	.630 (16)
80111-04	1/4	.512 (13)	1.673 (42,5)	.709 (18)	.630 (16)
80111-06	3/8	.512 (13)	1.673 (42,5)	.709 (18)	.751 (19)



80112

AC MINI FEMALE

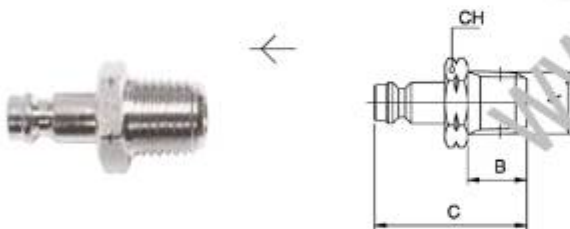
Part No.	A NPTF	B	C	D	CH
80112-02	1/8	.335 (8,5)	1.457 (37)	.709 (18)	.630 (16)
80112-04	1/4	.531 (13,5)	1.614 (41)	.709 (18)	.669 (17)
80112-06	3/8	.531 (13,5)	1.614 (41)	.709 (18)	.787 (20)



80211

AC MINI MALE PLUG

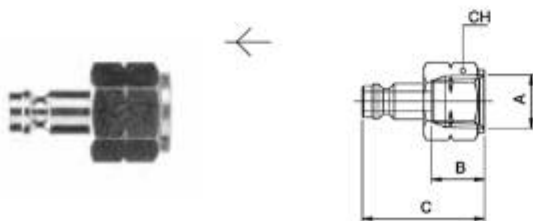
Part No.	A NPTF	B	C	CH
80211-02	1/8	.335 (8,5)	1.122 (28,5)	.551 (14)
80211-04	1/4	.512 (13)	1.319 (33,5)	.669 (17)
80211-06	3/8	.512 (13)	1.319 (33,5)	.748 (19)



80212

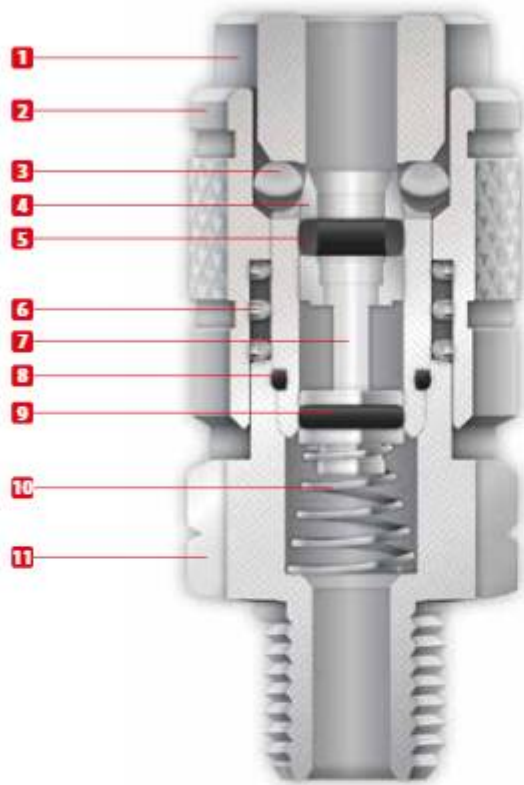
AC MINI FEMALE PLUG

Part No.	A NPTF	B	C	CH
80212-02	1/8	.374 (9,5)	1.063 (27)	.551 (14)
80212-04	1/4	.531 (13,5)	1.220 (31)	.669 (17)
80212-06	3/8	.531 (13,5)	1.220 (31)	.787 (20)





TECHNICAL CHARACTERISTICS



Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

SILICON
FREE

1/4 INDUSTRIAL



1:1

DN
5.5 mm



3/8 INDUSTRIAL



1:1

DN
9 mm



Pressure Rating

0 PSI ~ 232 PSI
0 bar ~ 16 bar
0 MPa ~ 1.6 MPa

Maximum static pressure

507 PSI
35 bar
3.5 MPa



Component Parts and Materials

- 1 Nickel Plated Brass Body
- 2 Nickel Plated Brass Sleeve
- 3 420 Stainless Steel Ball
- 4 Nickel Plated Brass Guide Ring
- 5 NBR O-Ring Seal
- 6 302 Stainless Steel Ring Nut Spring
- 7 Nickel Plated Brass Shutter
- 8 NBR O-Ring Seal
- 9 NBR O-Ring Seal
- 10 302 Stainless Steel Shutter Spring
- 11 Nickel Plated Brass Coupler



Temperature Rating

NBR	FKM on request
-4° F ~ 176° F	14° F ~ 392° F
-20° C ~ 80° C	-10° C ~ 200° C



Threads

NPTF



Media

• Compressed air
For other fluids, consult the technical department Aignep.



Flow Rate

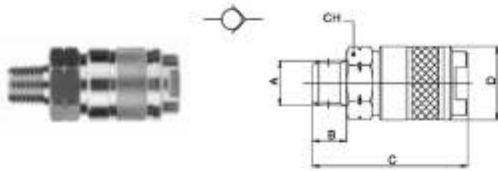
CFM (NI/min)

Plug	87 psi Δ 14.5	87 psi Δ 7.2	87 psi Δ 0 (Exhaust Free)
1/4 IND.	38.8 (1100)	28.25 (800)	52.97 (1500)
3/8 IND.	88.28 (2500)	72.39 (2050)	116.53 (3300)

1/4" INDUSTRIAL INTERCHANGE

80121

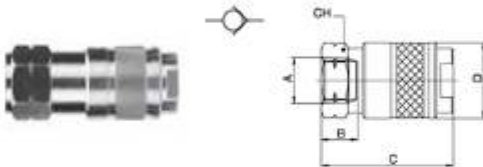
1/4" INDUSTRIAL MALE



Part No.	A NPTF	B	C	D	CH
80121-04	1/4	.512 (13)	2.224 (56,5)	.945 (24)	.827 (21)
80121-06	3/8	.512 (13)	2.224 (56,5)	.945 (24)	.827 (21)
80121-08	1/2	.689 (17)	2.402 (61)	.945 (24)	.945 (24)

80122

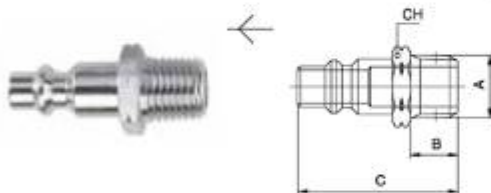
1/4" INDUSTRIAL FEMALE



Part No.	A NPTF	B	C	D	CH
80122-04	1/4	.531 (13,5)	2.205 (56)	.945 (24)	.827 (21)
80122-06	3/8	.531 (13,5)	2.205 (56)	.945 (24)	.827 (21)
80122-08	1/2	.689 (17,5)	2.421 (61,5)	.945 (24)	.945 (24)

80221

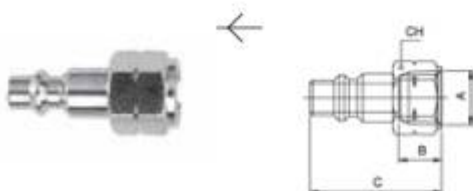
1/4" INDUSTRIAL MALE PLUG



Part No.	A NPTF	B	C	CH
80221-04	1/4	.512 (13)	1.634 (41,5)	.669 (17)
80221-06	3/8	.512 (13)	1.634 (41,5)	.748 (19)
80221-08	1/2	.689 (17)	1.811 (46)	.866 (22)

80222

1/4" INDUSTRIAL FEMALE PLUG



Part No.	A NPTF	B	C	CH
80222-04	1/4	.531 (13,5)	1.535 (39)	.669 (17)
80222-06	3/8	.531 (13,5)	1.535 (39)	.787 (20)
80222-08	1/2	.689 (17,5)	1.693 (43)	.944 (24)

3/8" INDUSTRIAL INTERCHANGE

80131

3/8" INDUSTRIAL MALE



Part No.	A NPTF	B	C	D	CH
80131-06	3/8	.512 (13)	2.362 (60)	1.102 (28)	.945 (24)
80131-08	1/2	.669 (17)	2.4802 (63)	1.102 (28)	.945 (24)

80132

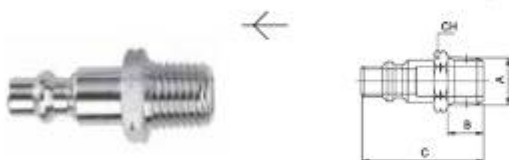
3/8" INDUSTRIAL FEMALE



Part No.	A NPTF	B	C	D	CH
80132-06	3/8	.531 (13,5)	2.343 (59,5)	1.102 (28)	.945 (24)
80132-08	1/2	.689 (17,5)	2.500 (63,5)	1.102 (28)	.945 (24)

80231

3/8" INDUSTRIAL MALE PLUG



Part No.	A NPTF	B	C	CH
80231-06	3/8	.512 (13)	1.732 (44)	.748 (19)
80231-08	1/2	.669 (17)	1.909 (48,5)	.866 (22)

80232

3/8" INDUSTRIAL FEMALE PLUG



Part No.	A NPTF	B	C	CH
80232-06	3/8	.531 (13,5)	1.634 (41,5)	.787 (20)
80232-08	1/2	.689 (17,5)	1.791 (45,5)	.945 (24)

1/4" Basic size: Industrial

AIGNEP	MILTON	AMFLO	ARO	COIL HOSE	DIXON	NAPA	PARKER	FOSTER	TOMCO
80192-04	715	C20-AU	MSCF22-000	150	DC20	90-670	B23	2803	M184
80191-04	716	C21	MSCM22-000	152	DC21	90-672	B22	2903	M181
80193-04	717	C20-42	MSCH22-000	153	DC2042	90-671	B20-3B	3603	M186
80193-06	717-6	C20-44	MSCH23-000		DC2044			3703	M187
80192-06	718	C20-23	MSCF23-000	151	DC2023	90-667	B23E	3203	M185
80191-06	719	C21-03	MSCM23-000	155	DC2103	90-657	B22E	3303	M182
80221-04	727	CP21	23902-210	1501	DCP21	90-674	H2C	10-3	1804
80222-04	728	CP20	23902-200	1502	DCP2021	90-676	H3C	11-3	1805
80222-06	732	CP20-23	23902-300	1505	DCP2023	90-659	H3C-E	15-3	1807
80221-06	733	CP21-03	23902-310	1503	DCP2103	90-677	H2C-E	14-3	1806
80223-04	736	CP21-42	23902-220	1506	DCP2142	90-673	H8C	16-3	1824
80223-06	736-6	CP21-44	23902-420	1508	DCP2144		H9C	17-3	1826
80192-04	745								UC2-16
80191-04	746								UC2-15
80192-04	755	C40B	MSCF22-X00		DCB20	90-615	B33		
80191-04	756	C41B	MSCM22-X00		DCB21	90-617	B32		
80193-04	1717-4	C20-42L	MSCP22-000				B20-3BP		
80193-06	1717-6	C20-44L	MSCP23-000				B20-5BP		

1/4" Basic size: ARO

AIGNEP	MILTON	AMFLO	ARO	COIL HOSE	DIXON	NAPA	PARKER	FOSTER	TOMCO
80192-04	775	C38,C46	210	140	DC38	90-613	B53	210-3303	A100
80191-04	776	C37,C45	210-212		DC37		B50	210-3103	A101
80193-04	776-4	C38-42	210-022		DC3842	90-679	B50-3BP	210-3603	A104
80193-06	776-6	C38-44	210-215		DC3844		B50-5BP	210-3703	A105
80271-04	777	CP37	2608	1401	DC37	90-618	A2C	210-10	200
80273-04	777-4	CP37-42	3946	1406	DC3742		A8C	210-16	400
80273-06	777-6	CP37-44	22238		DC3744			210-17	500
80272-04	778	CP38	2609	1402	DCP38	90-620	A3C	210-11	300

1/4" Basic size: TRU-FLATE

AIGNEP	MILTON	AMFLO	ARO	COIL HOSE	DIXON	NAPA	PARKER	FOSTER	TOMCO
80291-04	783	CP1	TTPM22-000	1601	DCP1	90-628	2C	TF10	2154
80293-04	783-4	CP1-42	TTPH22-000	1606	DCP142	90-630	8C	TF16	2164
80293-06	783-6	CP1-44	TTPH23-000	1608	DCP143	90-626	9C	TF17	2166
80292-04	784	CP2	TTPH22-000	1602	DCP2	90-600	3C	TF11	2155
80192-04	785	C2	TFCF22-000	160	DC2	90-610	B13	TF3003	A2184
80191-04	786	C1	TFCM22-000	162	DC1	90-607	B12	TF3103	A2181
80193-04	786-4	C2-42	TFCH22-000	163	DC242	90-611	B10-3B	TF3603	A2186
80193-06	786-6	C2-44	TFCH23-000	166	DC244	90-609	B10-5B	TF3703	A2188
80192-06	788	C2-23	TFCF23-000					TF3203	A2185
80191-06	789	C1-03	TFCM23-000		DC103			TF3303	A2182

3/8" Basic size: Industrial

AIGNEP	MILTON	AMFLO	ARO	COIL HOSE	DIXON	NAPA	PARKER	FOSTER	TOMCO
80195-06	1835	C26	MSCF33-000	580	DC26	90-680	25	4204	T420
80194-06	1836	C25	MSCM33-000	581	DC25	90-682	24	4304	T430
80195-08									T440
80194-08									T450
80231-06	1837	CP25	23903-310	5801	DCP25	90-683	H2E	42-4	T42
80232-06	1838	CP26	23903-300	5802	DCP26	90-681	H3E	43-4	T43
80231-08									T44
80232-08									T45

3/8" Basic size: TRU-FLATE

AIGNEP	MILTON	AMFLO	ARO	COIL HOSE	DIXON	NAPA	PARKER	FOSTER	TOMCO
80195-06	1805	C6	TFCF33-000	590	DC6	90-654	15	5005	PT420
80194-06	1806	C5	TFCM33-000	591	DC5	90-656	14	5105	PT430
80281-06	1807	CP5	TTPM33-000	5901	DCP5	90-658	2E	TF42	PT42
80282-06	1808	CP6	TTPH33-000	5902	DCP6	90-660	3E	TF43	PT43

Safety Couplers

QUICK DISCONNECT SAFETY COUPLERS



Connect the plug



Quick coupling is working



Push the sleeve ahead and leave the hand



Air is exhausting completely



Remove the plug



TECHNICAL CHARACTERISTICS



Reference Standard

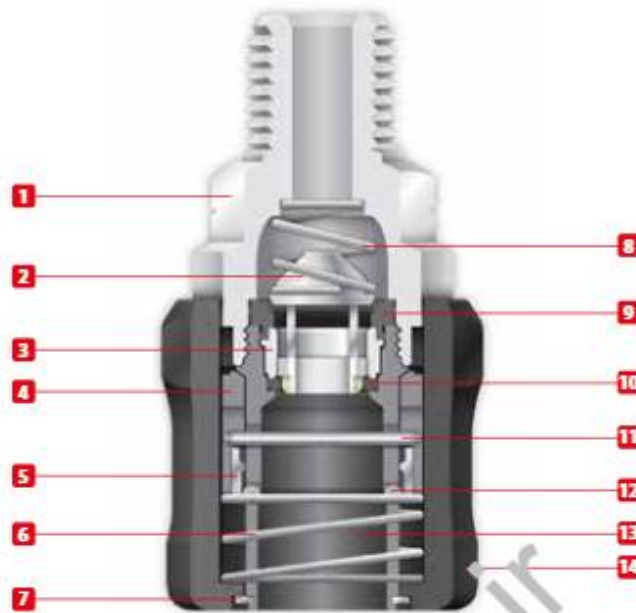
1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/EU

SILICON
FREE

ISO
4414



Pressure Rating

Vacuum ~ 217 PSI
-0.99 bar ~ 15 bar
-0.099 MPa ~ 1.5 MPa



Component Parts and Materials

- 1 Nickel Plated Brass Coupler
- 2 Nickel Plated Brass Shutter
- 3 Nickel Plated Brass Ring
- 4 Nylon Trailing Pin Ring
- 5 Stainless Steel Restraining Ball Ring
- 6 Stainless Steel Spring
- 7 Stainless Steel Shaft Clip
- 8 Stainless Steel Shutter Spring
- 9 NBR O-Ring Seal
- 10 NBR O-Ring Seal
- 11 Stainless Steel Pin
- 12 Stainless Steel Ball
- 13 Nylon Body
- 14 Nylon Sleeve



Temperature Rating

-4° F ~ 176° F
-20° C ~ 80° C



Media

• Compressed air



Flow Rate

CFM (NI/min)

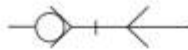
Part No.	87 psi		87 psi
	Δ 14.5	Δ 7.2	Δ 0 (Exhaust Free)
80220AC	33.55 (950)	24.72 (700)	49.44 (1400)



Threads

Parallel gas in conformity with ISO 228 Class A

SAFETY COUPLERS



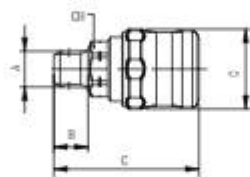
1/4 INDUSTRIAL



80621

MALE SAFETY COUPLER

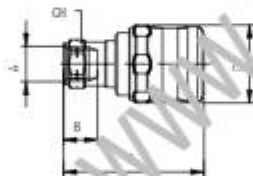
Part No.	A NPTF	B	C	D	CH
80621-04	1/4	.512 (13)	2.173 (55)	1.200 (30,5)	.748 (19)
80621-06	3/8	.512 (13)	2.173 (55)	1.200 (30,5)	.748 (19)
80621-08	1/2	.669 (17)	2.323 (59)	1.200 (30,5)	.866 (22)



80622

FEMALE SAFETY COUPLER

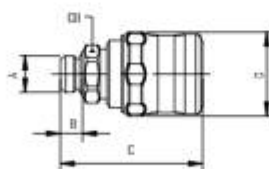
Part No.	A NPTF	B	C	D	CH
80622-04	1/4	.531 (13,5)	2.165 (55)	1.200 (30,5)	.669 (17)
80622-06	3/8	.531 (13,5)	2.146 (54,5)	1.200 (30,5)	.787 (20)
80622-08	1/2	.689 (17,5)	2.323 (59)	1.200 (30,5)	.945 (24)



621

MALE SAFETY COUPLER

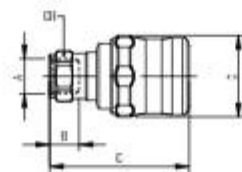
Part No.	A BSPP	B	C	L	CH
621-04	1/4	.512 (13)	2.173 (55)	1.200 (30,5)	.748 (19)
621-06	3/8	.512 (13)	2.173 (55)	1.200 (30,5)	.787 (20)
621-08	1/2	.512 (13)	2.173 (55)	1.200 (30,5)	.984 (25)



622

FEMALE SAFETY COUPLER

Part No.	A BSPP	B	C	L	CH
622-04	1/4	.531 (13,5)	2.165 (55)	1.200 (30,5)	.669 (17)
622-06	3/8	.531 (13,5)	2.146 (54,5)	1.200 (30,5)	.787 (20)
622-08	1/2	.689 (17,5)	2.323 (59)	1.200 (30,5)	.945 (24)



80221AC

1/4 INDUSTRIAL MALE (STEEL)



Part No.	A NPTF	B	C	CH
80221AC-04	1/4	.512 (13)	1.634 (41,5)	.669 (17)
80221AC-06	3/8	.512 (13)	1.634 (41,5)	.748 (19)
80221AC-08	1/2	.669 (17)	1.811 (46)	.866 (22)

HARDENED STEEL

80222AC

1/4 INDUSTRIAL FEMALE (STEEL)

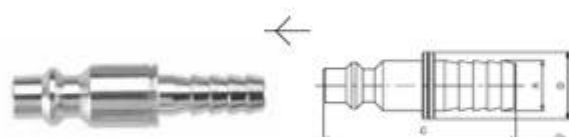


Part No.	A NPTF	B	C	CH
80222AC-04	1/4	.531 (13,5)	1.535 (39)	.669 (17)
80222AC-06	3/8	.531 (13,5)	1.535 (39)	.866 (22)
80222AC-08	1/2	.689 (17,5)	1.693 (43)	.944 (24)

HARDENED STEEL

80223AC

1/4" INDUSTRIAL BARB (STEEL)



Part No.	A	C	D
80223AC-04	1/4	1.713 (43,5)	.172 (12)

HARDENED STEEL

8B121

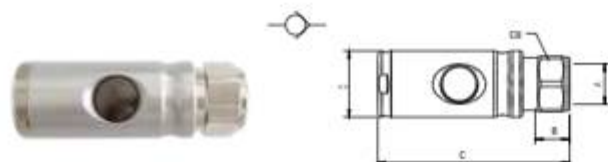
SAFETY INDUSTRIAL MALE SWIFTFIT



Part No.	A NPTF	B	C	D	CH
8B121-04	1/4 - 18	.512 (13)	3.011 (76,5)	.984 (25)	.827 (21)
8B121-06	3/8 - 18	.512 (13)	3.011 (76,5)	.984 (25)	.827 (21)
8B121-08	1/2 - 14	.669 (17)	3.290 (82,5)	.984 (25)	.984 (25)

8B122

SAFETY INDUSTRIAL FEMALE SWIFTFIT



Part No.	A NPTF	B	C	D	CH
8B122-04	1/4 - 18	.531 (13,5)	2.930 (74,5)	.984 (25)	.827 (21)
8B122-06	3/8 - 18	.531 (13,5)	2.910 (74)	.984 (25)	.827 (21)
8B122-08	1/2 - 14	.689 (17,5)	3.110 (79)	.984 (25)	.944 (24)





TECHNICAL CHARACTERISTICS



Media

- Compressed Air
- Water

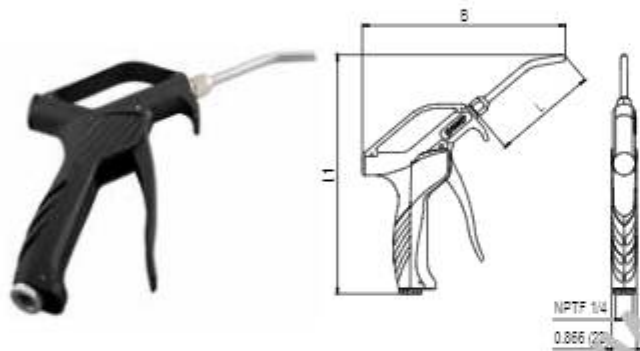


Component Parts and Materials

- 1 Technopolymer Body
- 2 Nickel-plated Brass Back Connection
- 3 Nickel-plated Brass Locking Nut
- 4 Stainless Steel AISI 304 Nozzle

361

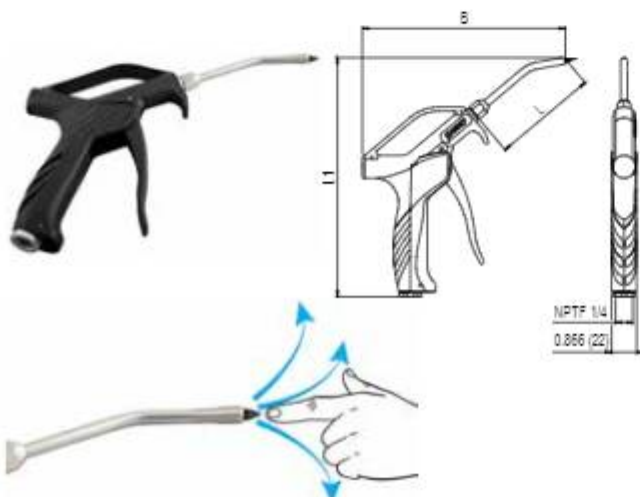
BLOW GUN WITH STAINLESS STEEL PIPE



Code	L	LI	B
WB361 00 001	90	8.287 (210,5)	7.047 (179)
		min	max
Temperature		- 10 °C (14 F)	+ 80 °C (176 F)
Pressure		12 bar (174 Psl) (1.2 MPa)	
433 NI/min @ 6 bar (87 Psl) - 533 NI/min @ 8 bar (116 Psl)			
LAeq 90 dBA @ 6 bar (87 Psl)			
LAeq 90 dBA @ 8 bar (116 Psl)			
Force on handle		19,8 N @ 6 bar (87 Psl)	
Blowing force		3,7 N @ 6 bar (87 Psl)	
2003/10/CE		Max 85 dBA	3 hr @ 6 bar (87 Psl) 3 hr @ 8 bar (116 Psl)
OSHA 1910.95 (b)		Max 90 dB 8 hr (116 Psl)	

362

BLOW GUN WITH STAINLESS STEEL PIPE



Code	L	LI	B
WB362 00 001	90	8.287 (210,5)	7.303 (185,5)
		min	max
Temperature		- 10 °C (14 F)	+ 80 °C (176 F)
Pressure		12 bar (174 Psl) (1.2 MPa)	
383 NI/min @ 6 bar (87 Psl) - 500 NI/min @ 8 bar (116 Psl)			
LAeq 78 dBA @ 6 bar (87 Psl)			
LAeq 84 dBA @ 8 bar (116 Psl)			
Force on handle		19,8 N @ 6 bar (87 Psl)	
Blowing force		3,4 N @ 6 bar (87 Psl)	
2003/10/CE		Max 85 dBA	8 hr @ 6 bar (87 Psl) 6 hr @ 8 bar (116 Psl)
OSHA 1910.95 (b)		Max 90 dB 8 hr	
OSHA 1910.242 (b)		Max 2,1 bar (30 Psl) when blocked	

Valves

Solenoid Pilot Valves



01V
Pg. 13.4

Externally Piloted Solenoid Valves



01V - X1V
Pg. 13.10

Air Pilot Valves



01V
Pg. 13.24

Manual Valves



01V - X1V
Pg. 13.30

Mechanically Actuated Valves



01V
Pg. 13.40

Din Rail Mounted, Fixed Length and Modular Manifold Bases



01V
Pg. 13.43

Micro Valves



02V
Pg. 13.49

16 mm Valves



03V
Pg. 13.52

Micro Valves, Panel Mounted



04V
Pg. 13.56

Individual and Manifold Base Mounted Valves



05V
Pg. 13.59

Pedal Valves



06V
Pg. 13.67

Solenoid Valves



07V
Pg. 13.69

Miniature Solenoid Valves 10 mm



07V
Pg. 13.71

Miniature Solenoid Valves 15 mm



07V
Pg. 13.73

NAMUR Standard Valves



08V
Pg. 13.77

Valves ISO 5599 - Size 1



10V
Pg. 13.84

Valves ISO 5599 - Size 2



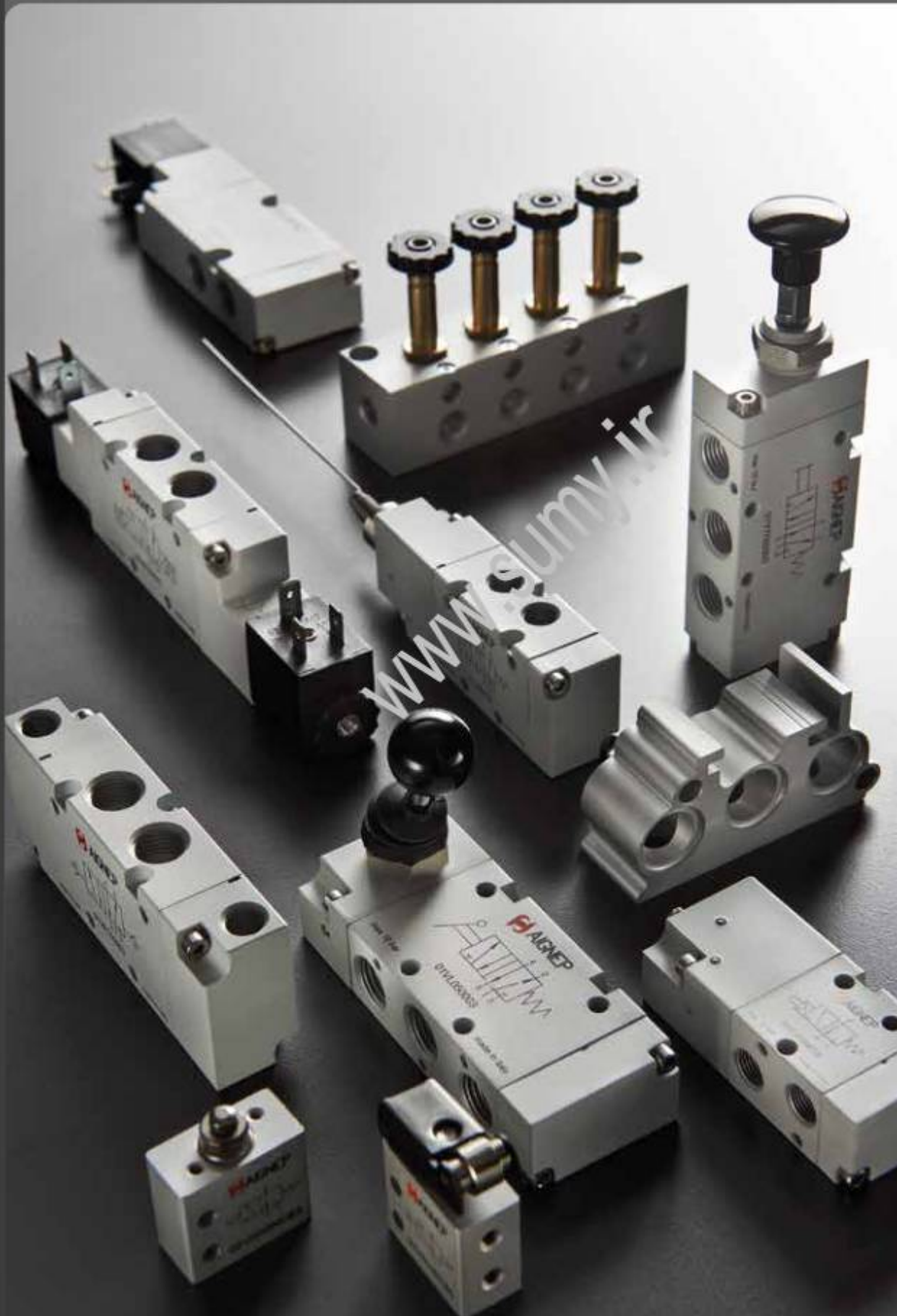
11V
Pg. 13.88

Solenoids and Connectors



Pg. 13.20 - Pg. 13.23

MANUAL, MECHANICAL, AIR PILOT AND SOLENOID PILOT VALVES



Valves

INLINE VALVES



SOLENOID PILOT VALVES

TECHNICAL CHARACTERISTICS



Reference Standard

- 1907/2006 REACH ✓
- 2011/65/CE RoHS ✓
- PED 2014/68/UE
- ATEX 2014/34/UE

- Component Parts and Materials**
- Anodised and painted aluminium body
 - Chemical nickel-plated spool
 - NBR seals

		1/8	1/4	3/8	1/2
	TYPE/THREAD	G 1/8 NPTF 1/8	G 1/4 NPTF 1/4	G 3/8 NPTF 3/8	G 1/2 NPTF 1/2
	6 bar FLOW RATE with Ap 1 bar	740 NI/min	1200 NI/min	2000 NI/min	5000 NI/min
	OPERATING PRESSURE	Monostable	2 ÷ 10 bar 29 ÷ 145 psi		
		Bistable	1 ÷ 10 bar 14.5 ÷ 145 psi		
	TEMPERATURE	min	-10 °C 14 °F		
		max	+60 °C 140 °F		
	SOLENOID VOLTAGE	24V DC - 12V DC - 24V AC - 110V AC - 220V AC			
	MINIMUM POWER	2W - 3VA			
	MANUAL CONTROL	BISTABLE			
	TORQUE OF TIGHTENING THE NUT SOLENOID	0.6 Nm			

Series	Actuation	Reaction	Function	Size	Thread
0 1 V	S S = Solenoid	0 0 = Monostable spring return 1 = Bistable	3 3 = 3/2 5 = 5/2 7 = 5/3	0 2 02 = 1/8 03 = 1/4 04 = 3/8 05 = 1/2	□ = G N = NPTF
			NO = Normally open NC = Normally closed CC = All Ports Blocked OC = Cylinder Ports Open to Exhaust PC = Cylinder Ports Pressurized 00 = Function not provided		

3/2

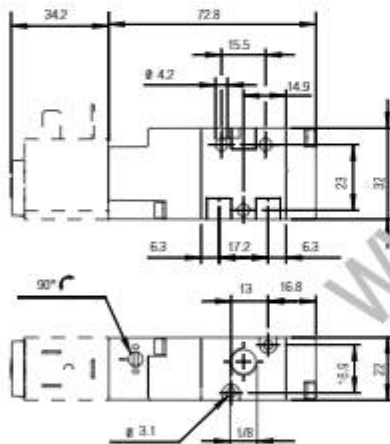
SINGLE SOLENOID PILOT - SPRING RETURN



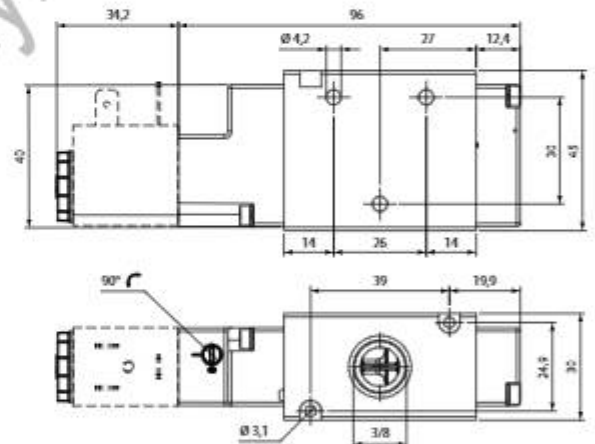
Part No.	Function	Size	Pack.
01V S0 3 NC 02	3/2 NC	G 1/8	1
01V S0 3 NC 03	3/2 NC	G 1/4	1
01V S0 3 NC 05	3/2 NC	G 1/2	1
01V S0 3 NO 02	3/2 NO	G 1/8	1
01V S0 3 NO 03	3/2 NO	G 1/4	1
01V S0 3 NO 05	3/2 NO	G 1/2	1

Part No.	Function	Size	Pack.
01V S0 3 NC 02 N	3/2 NC	NPTF 1/8	1
01V S0 3 NC 03 N	3/2 NC	NPTF 1/4	1
01V S0 3 NC 04 N	3/2 NC	NPTF 3/8	1
01V S0 3 NC 05 N	3/2 NC	NPTF 1/2	1
01V S0 3 NO 02 N	3/2 NO	NPTF 1/8	1
01V S0 3 NO 03 N	3/2 NO	NPTF 1/4	1
01V S0 3 NO 04 N	3/2 NO	NPTF 3/8	1
01V S0 3 NO 05 N	3/2 NO	NPTF 1/2	1

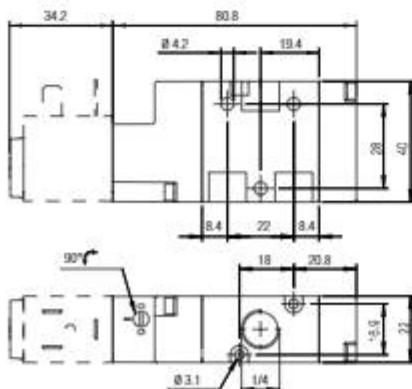
G 1/8 - NPTF 1/8



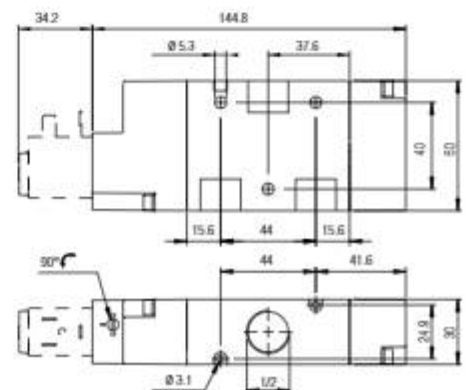
NPTF 3/8



G 1/4 - NPTF 1/4

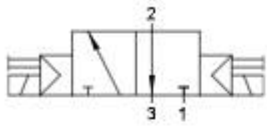


G 1/2 - NPTF 1/2



3/2

DOUBLE SOLENOID PILOT

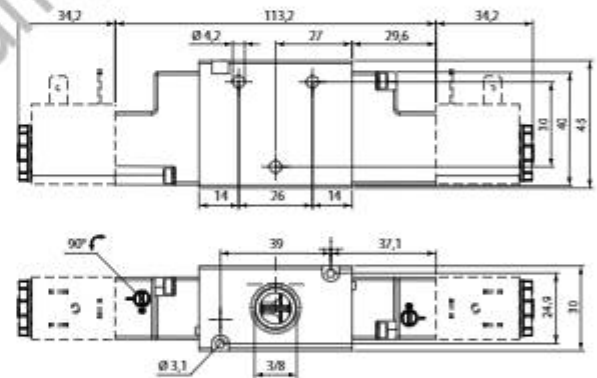
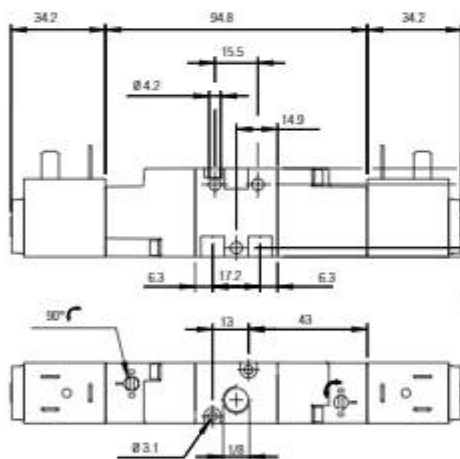


Part No.	Function	Size	Pack.
01V S1 3 00 02	3/2	G 1/8	1
01V S1 3 00 03	3/2	G 1/4	1
01V S1 3 00 05	3/2	G 1/2	1

Part No.	Function	Size	Pack.
01V S1 3 00 02 N	3/2	NPTF 1/8	1
01V S1 3 00 03 N	3/2	NPTF 1/4	1
01V S1 3 00 04 N	3/2	NPTF 3/8	1
01V S1 3 00 05 N	3/2	NPTF 1/2	1

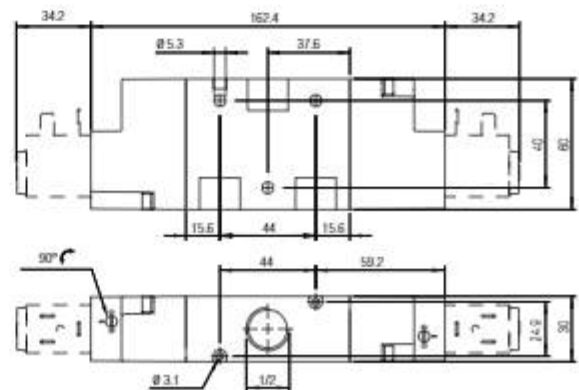
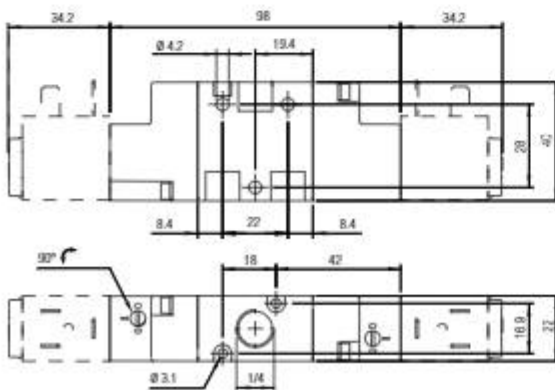
G 1/8 - NPTF 1/8

NPTF 3/8



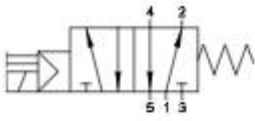
G 1/4 - NPTF 1/4

G 1/2 - NPTF 1/2



5/2

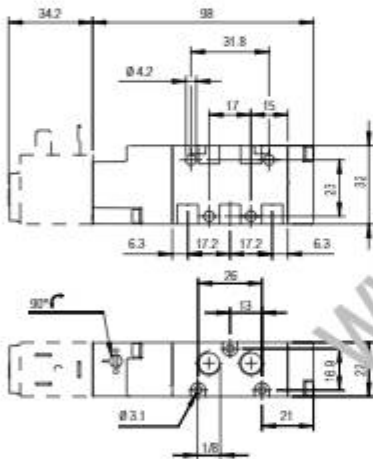
SINGLE SOLENOID PILOT - SPRING RETURN



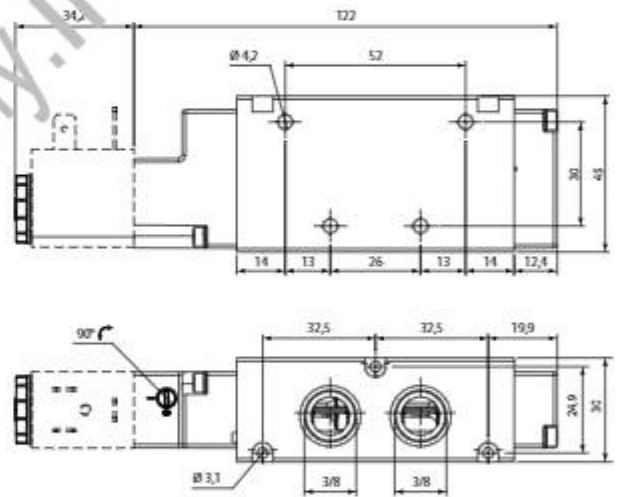
Part No.	Function	Size	Pack.
01V SO 5 00 02	5/2	G 1/8	1
01V SO 5 00 03	5/2	G 1/4	1
01V SO 5 00 05	5/2	G 1/2	1

Part No.	Function	Size	Pack.
01V SO 5 00 02 N	5/2	NPTF 1/8	1
01V SO 5 00 03 N	5/2	NPTF 1/4	1
01V SO 5 00 04 N	5/2	NPTF 3/8	1
01V SO 5 00 05 N	5/2	NPTF 1/2	1

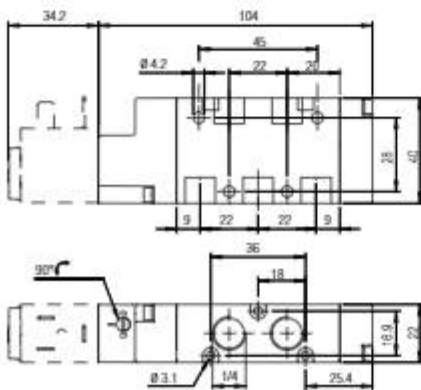
G 1/8 - NPTF 1/8



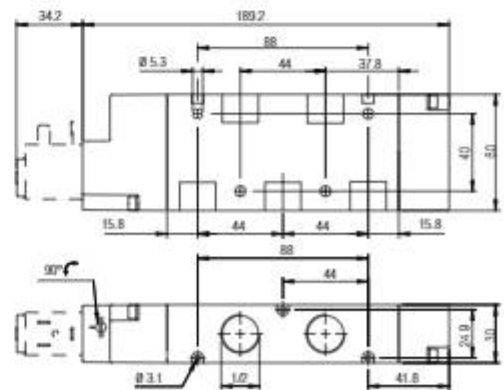
NPTF 3/8



G 1/4 - NPTF 1/4

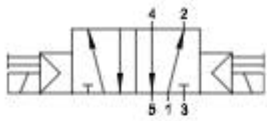


G 1/2 - NPTF 1/2



5/2

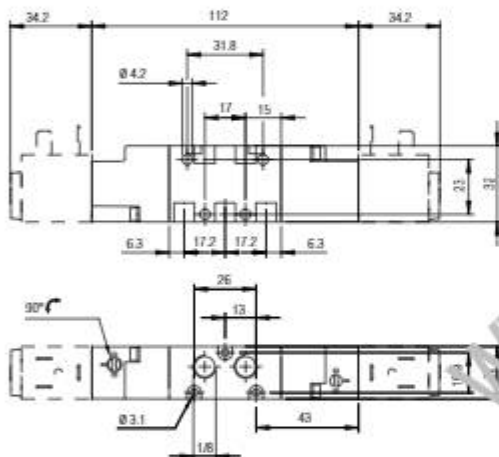
DOUBLE SOLENOID PILOT



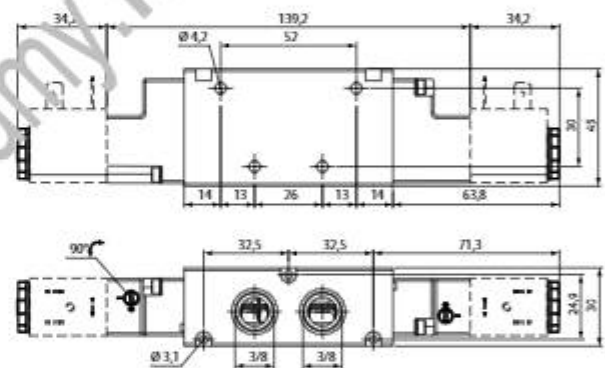
Part No.	Function	Size	Pack.
01V S1 5 00 02	5/2	G 1/8	1
01V S1 5 00 03	5/2	G 1/4	1
01V S1 5 00 05	5/2	G 1/2	1

Part No.	Function	Size	Pack.
01V S1 5 00 02 N	5/2	NPTF 1/8	1
01V S1 5 00 03 N	5/2	NPTF 1/4	1
01V S1 5 00 04 N	5/2	NPTF 1/2	1
01V S1 5 00 05 N	5/2	NPTF 1/2	1

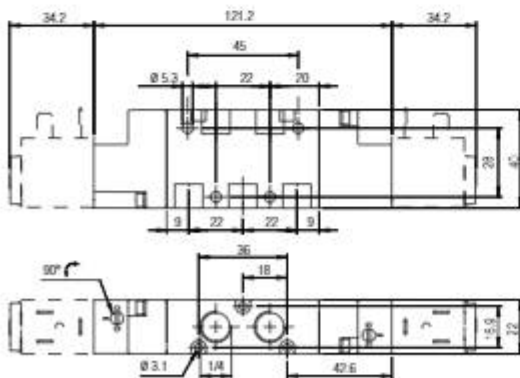
G 1/8 - NPTF 1/8



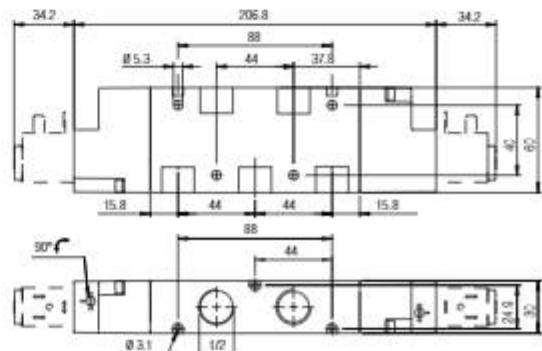
NPTF 3/8



G 1/4 - NPTF 1/4



G 1/2 - NPTF 1/2



5/3

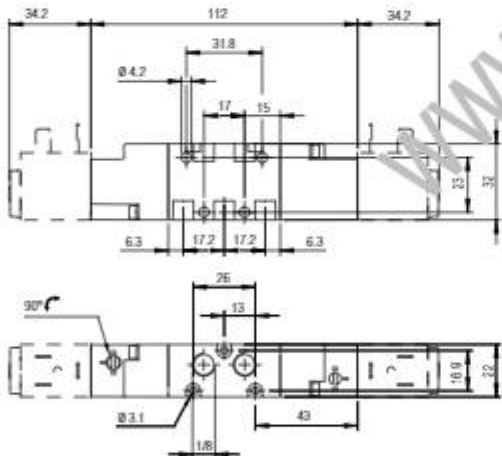
DOUBLE SOLENOID PILOT - SPRING CENTERED



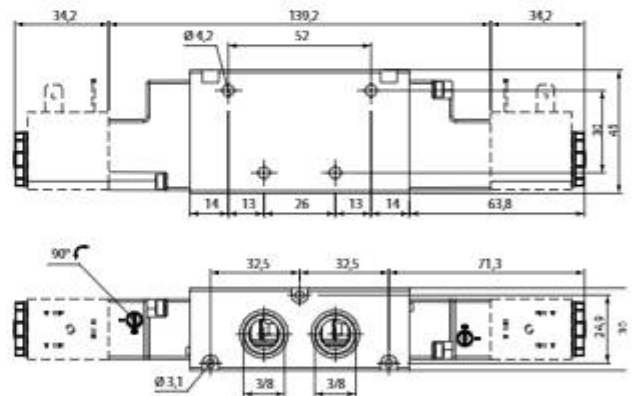
Part No.	Function	Size	Pack.
01V S0 7 CC 02	5/3 CC	G 1/8	1
01V S0 7 CC 03	5/3 CC	G 1/4	1
01V S0 7 CC 05	5/3 CC	G 1/2	1
01V S0 7 OC 02	5/3 OC	G 1/8	1
01V S0 7 OC 03	5/3 OC	G 1/4	1
01V S0 7 OC 05	5/3 OC	G 1/2	1
01V S0 7 PC 02	5/3 PC	G 1/8	1
01V S0 7 PC 03	5/3 PC	G 1/4	1
01V S0 7 PC 05	5/3 PC	G 1/2	1

Part No.	Function	Size	Pack.
01V S0 7 CC 02 N	5/3 CC	NPTF 1/8	1
01V S0 7 CC 03 N	5/3 CC	NPTF 1/4	1
01V S0 7 CC 04 N	5/3 CC	NPTF 3/8	1
01V S0 7 CC 05 N	5/3 CC	NPTF 1/2	1
01V S0 7 OC 02 N	5/3 OC	NPTF 1/8	1
01V S0 7 OC 03 N	5/3 OC	NPTF 1/4	1
01V S0 7 OC 04 N	5/3 OC	NPTF 3/8	1
01V S0 7 OC 05 N	5/3 OC	NPTF 1/2	1
01V S0 7 PC 02 N	5/3 PC	NPTF 1/8	1
01V S0 7 PC 03 N	5/3 PC	NPTF 1/4	1
01V S0 7 PC 04 N	5/3 PC	NPTF 3/8	1
01V S0 7 PC 05 N	5/3 PC	NPTF 1/2	1

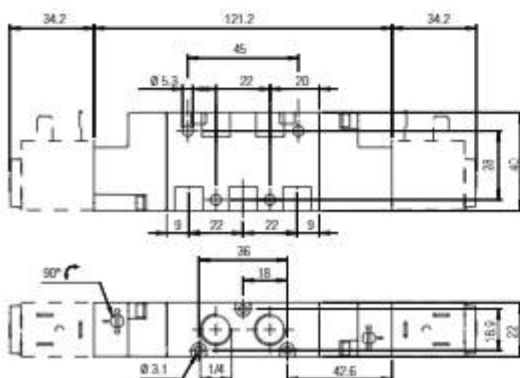
G 1/8 - NPTF 1/8



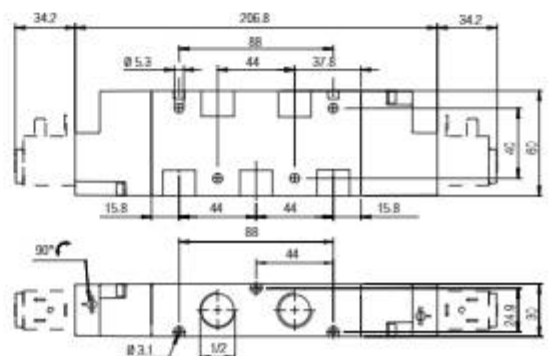
NPTF 3/8



G 1/4 - NPTF 1/4



G 1/2 - NPTF 1/2



EXTERNALLY PILOTED SOLENOID VALVES

TECHNICAL CHARACTERISTICS



Reference Standard

- 1907/2006 REACH ✓
- 2011/65/CE RoHS ✓
- PED 2014/68/UE
- ATEX 2014/34/UE

Component Parts and Materials

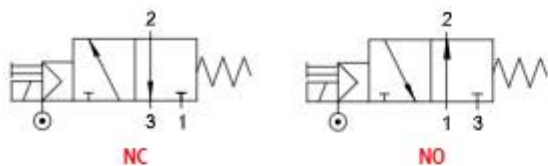
- Anodised and painted aluminium body
- Chemical nickel-plated spool
- NBR seals

	1/8	1/4
THREAD	G 1/8 NPTF 1/8	G 1/4 NPTF 1/4
6 bar FLOW RATE with Δp 1 bar	740 NI/min	1200 NI/min
OPERATING PRESSURE	Vacuum - 10 bar Vacuum + 145 psi	
PRESSURE DRIVE	Monostable	2 - 10 bar 29 - 145 psi
	Bistable	1 - 10 bar 14.5 - 145 psi
TEMPERATURE	min	-10 °C 14 °F
	max	+60 °C 140 °F
SOLENOID VOLTAGE	24V DC - 12V DC - 24V AC 110V AC - 220V AC	
MINIMUM POWER	2W - 3VA	
MANUAL CONTROL	BISTABLE	
TORQUE OF TIGHTENING THE NUT SOLENOID	0.6 Nm	

Series	Actuation	Reactivation	Function	Size	Thread
0 1 V	A A = Solenoid Assisted	0 0 = Monostable spring return 1 = Bistable	3 3 = 3/2 5 = 5/2 7 = 5/3	0 2 02 = 1/8 03 = 1/4	G N = NPTF
			NO = Normally open NC = Normally closed CC = All Ports Blocked OC = Cylinder Ports Open to Exhaust PC = Cylinder Ports Pressurized 00 = Function not provided		

3/2

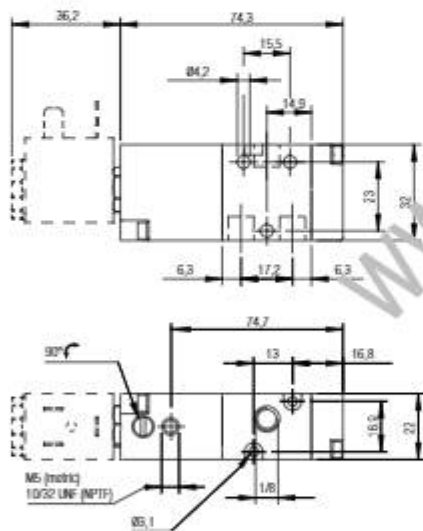
SINGLE SOLENOID EXTERNAL PILOT - SPRING RETURN



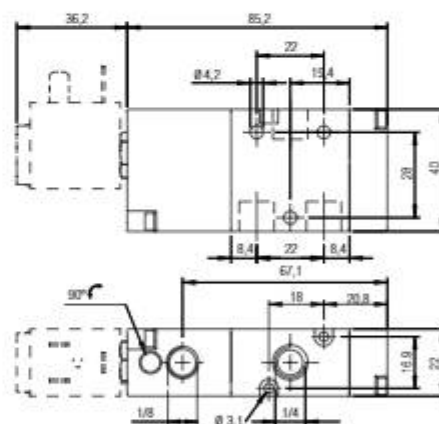
Part No.	Function	Size	Pack.
01V A0 3 NC 02	3/2 NC	G 1/8	1
01V A0 3 NC 03	3/2 NC	G 1/4	1
01V A0 3 NO 02	3/2 NO	G 1/8	1
01V A0 3 NO 03	3/2 NO	G 1/4	1

Part No.	Function	Size	Pack.
01V A0 3 NC 02 N	3/2 NC	NPTF 1/8	1
01V A0 3 NC 03 N	3/2 NC	NPTF 1/4	1
01V A0 3 NO 02 N	3/2 NO	NPTF 1/8	1
01V A0 3 NO 03 N	3/2 NO	NPTF 1/4	1

G 1/8 - NPTF 1/8

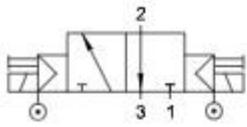


G 1/4 - NPTF 1/4



3/2

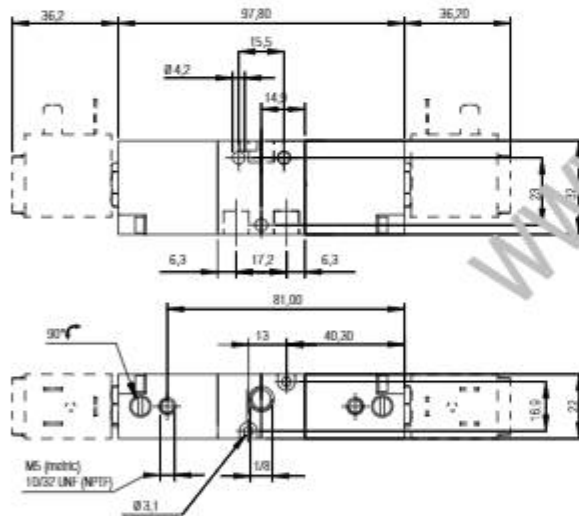
DOUBLE SOLENOID EXTERNAL PILOT



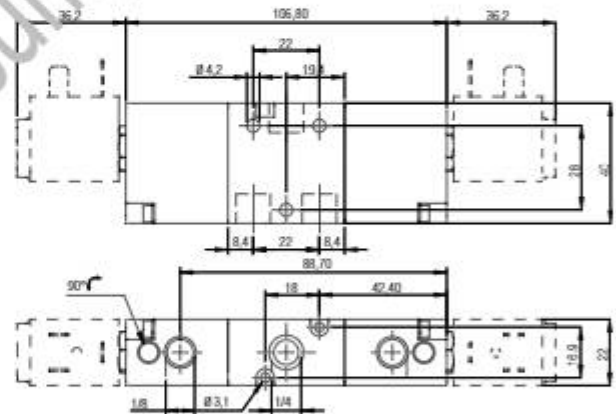
Part No.	Function	Size	Pack.
01V A1 3 00 02	3/2	G 1/8	1
01V A1 3 00 03	3/2	G 1/4	1

Part No.	Function	Size	Pack.
01V A1 3 00 02 N	3/2	NPTF 1/8	1
01V A1 3 00 03 N	3/2	NPTF 1/4	1

G 1/8 - NPTF 1/8

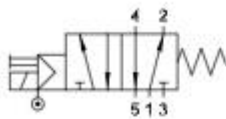


G 1/4 - NPTF 1/4



5/2

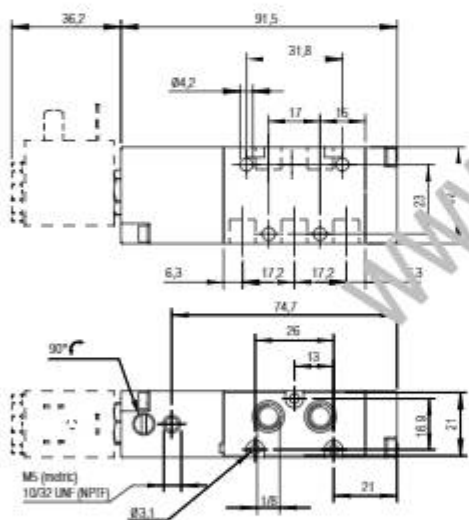
SINGLE SOLENOID EXTERNAL PILOT - SPRING RETURN



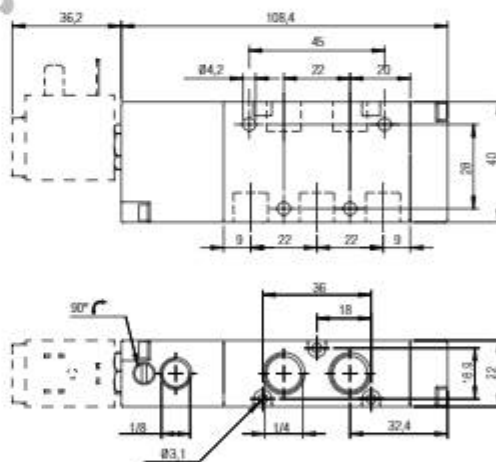
Part No.	Function	Size	Pack.
01V A0 5 00 02	5/2	G 1/8	1
01V A0 5 00 03	5/2	G 1/4	1

Part No.	Function	Size	Pack.
01V A0 5 00 02 N	5/2	NPTF 1/8	1
01V A0 5 00 03 N	5/2	NPTF 1/4	1

G 1/8 - NPTF 1/8

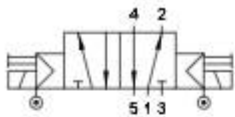


G 1/4 - NPTF 1/4



5/2

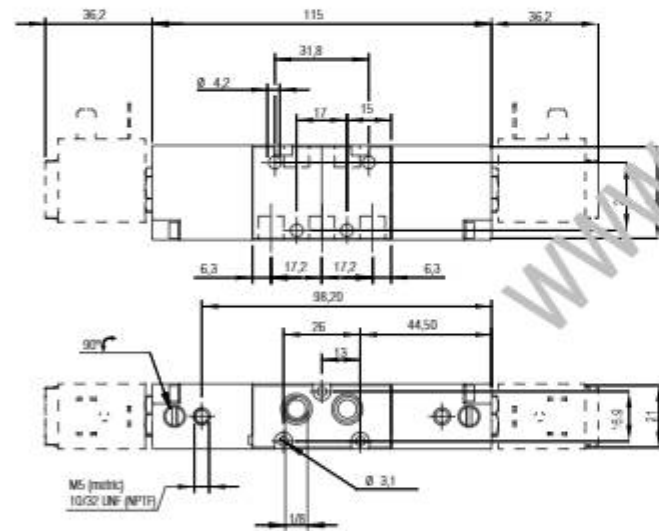
DOUBLE SOLENOID EXTERNAL PILOT



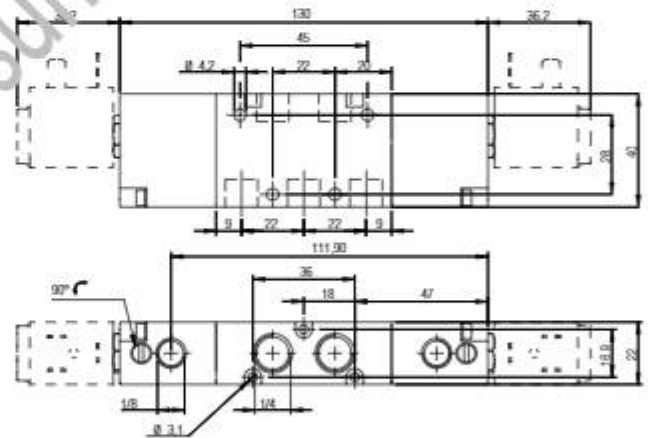
Part No.	Function	Size	Pack.
01V A1 5 00 02	5/2	G 1/8	1
01V A1 5 00 03	5/2	G 1/4	1

Part No.	Function	Size	Pack.
01V A1 5 00 02 N	5/2	NPTF 1/8	1
01V A1 5 00 03 N	5/2	NPTF 1/4	1

G 1/8 - NPTF 1/8

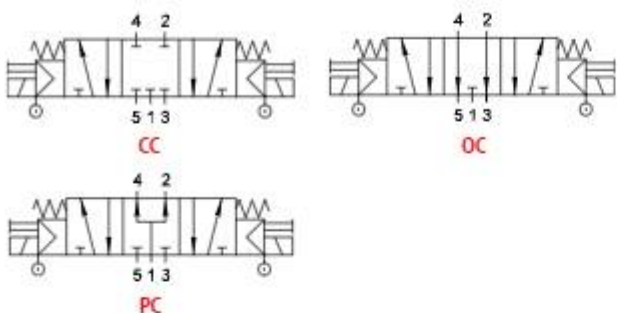


G 1/4 - NPTF 1/4



5/3

DOUBLE SOLENOID EXTERNAL PILOT - SPRING CENTERED

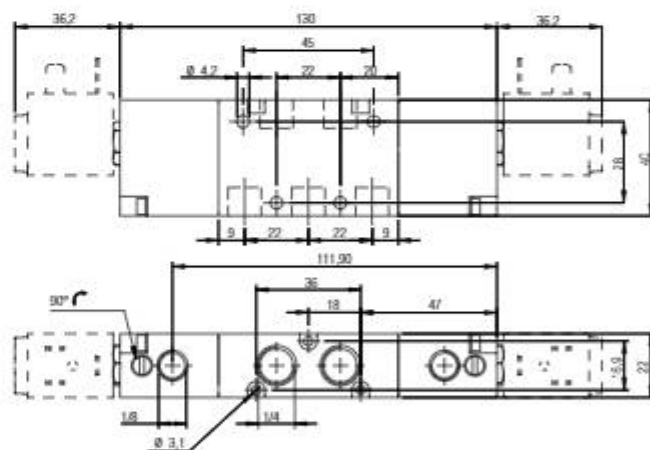
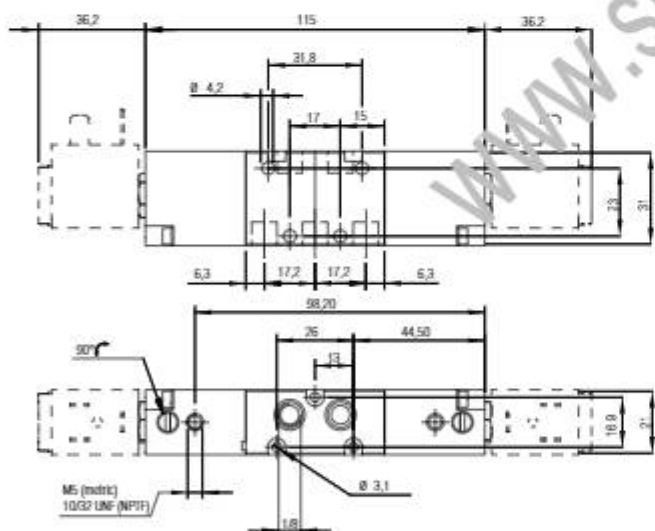


Part No.	Function	Size	Pack.
01V A0 7 CC 02	5/3 CC	G 1/8	1
01V A0 7 CC 03	5/3 CC	G 1/4	1
01V A0 7 OC 02	5/3 OC	G 1/8	1
01V A0 7 OC 03	5/3 OC	G 1/4	1
01V A0 7 PC 02	5/3 PC	G 1/8	1
01V A0 7 PC 03	5/3 PC	G 1/4	1

Part No.	Function	Size	Pack.
01V A0 7 CC 02 N	5/3 CC	NPTF 1/8	1
01V A0 7 CC 03 N	5/3 CC	NPTF 1/4	1
01V A0 7 OC 02 N	5/3 OC	NPTF 1/8	1
01V A0 7 OC 03 N	5/3 OC	NPTF 1/4	1
01V A0 7 PC 02 N	5/3 PC	NPTF 1/8	1
01V A0 7 PC 03 N	5/3 PC	NPTF 1/4	1

G 1/8 - NPTF 1/8

G 1/4 - NPTF 1/4



EXTERNALLY PILOTED SOLENOID VALVES

AI S I 316 L



TECHNICAL CHARACTERISTICS



Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE



Component Parts and Materials

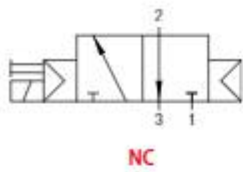
- Stainless Steel 316 L (1.4404) body
- Stainless Steel 316 L (1.4404) spool
- PUR seals and FKM O-Ring

	1/4	1/2
THREAD	G 1/4 NPTF 1/4	G 1/2 NPTF 1/2
6 bar FLOW RATE with Δp 1 bar	1250 NI/min	3000 NI/min
TEMPERATURE	min	-50 °C -58 °F
	max	+50 °C 122 °F
SOLENOID VOLTAGE	24V DC - 12V DC - 24V AC 110V AC - 220V AC	
MINIMUM POWER	3W - 5VA	
MANUAL CONTROL	BISTABLE	
TORQUE OF TIGHTENING THE NUT SOLENOID	0.6 Nm	

Series	Actuation	Reactivation	Ways	Function	Size	Thread
X 1 V	S S = Solenoid	0 0 = Monostable spring return 1 = Bistable 4 = Monostable pneumatic return	3 3 = 3/2 5 = 5/2	N C NC = Normally closed 00 = Function not provided	0 3 02 = 1/8 03 = 1/4	G N = NPTF

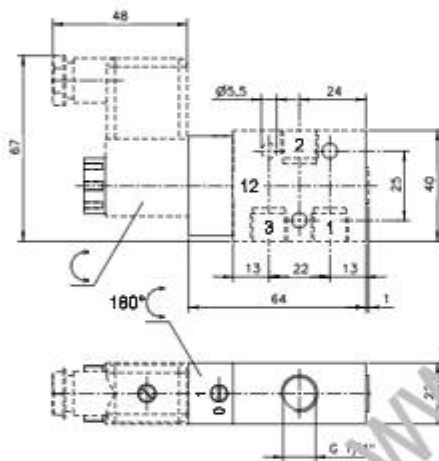
3/2 Vie - Ways - Wege - Voies - Vías - Vias

MONOSTABLE PNEUMATIC RETURN

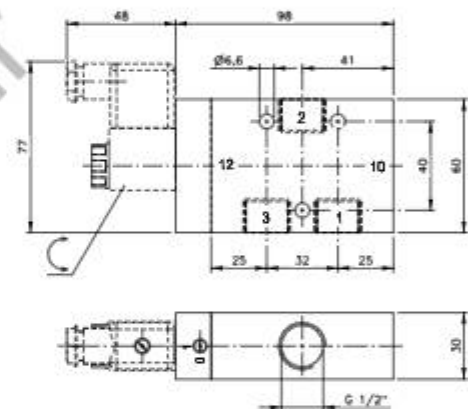


Part No.	Function	Working pressure	Size	Pack.
X1V S4 3 NC 03	3/2 NC	2÷10 bar	1/4	1
X1V S4 3 NC 05	3/2 NC	1÷10 bar	1/2	1

X1V S4 3 NC 03

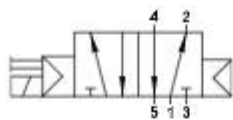


X1V S4 3 NC 05



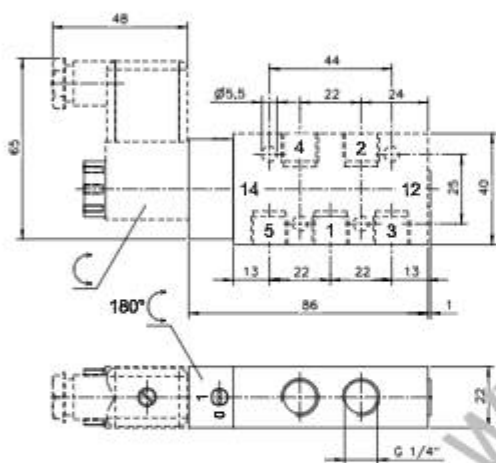
5/2 Vie - Ways - Wege - Voies - Vias - Vias

MONOSTABLE PNEUMATIC RETURN

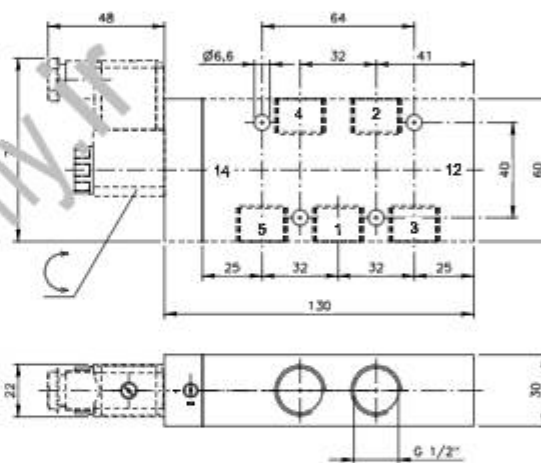


Part No.	Function	Working pressure	Size	Pack.
X1V S4 5 00 03	5/2	2÷10 bar	1/4	1
X1V S4 5 00 05	5/2	2÷10 bar	1/2	1

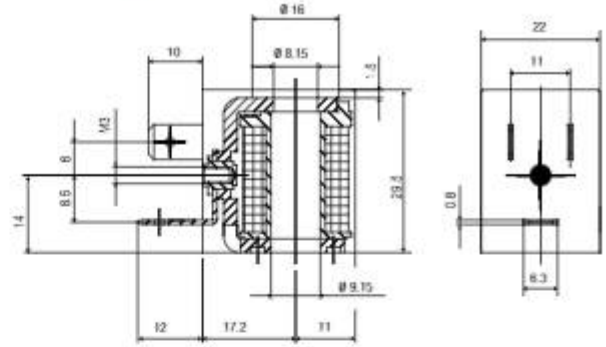
X1V S4 5 00 03



X1V S4 5 00 05



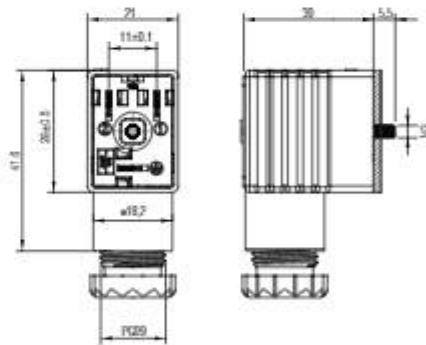
Solenoid 22 mm ATEX - II 3G Ex nA IIC T5 Gc | II 3D Ex tc IIIC 95°C Dc



Part No.	Voltage	Power	Size	Pack.
SOLX1 012 C 1 000	12V DC	3W	22	1
SOLX1 024 C 1 000	24V DC	3W	22	1
SOLX1 024 A 2 000	24V AC	5VA	22	1

VOLTAGE TOLERANCE	±10 %	DEGREE OF PROTECTION	IP65 IEC 60529 with connector	DUTY RATE (ED)	100 %
TERMINALS	INDUSTRIAL AMP				

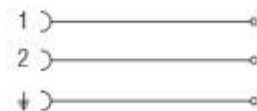
Connectors 22 mm ATEX - II 2G Ex e IIC T6 Gb | II 2D Ex tb IIIC T85°C Db



Part No.	Color	Characteristics	Pack.
CONX1 000 01	■	2 POLI - Pins - Pins - Broches - Pins - Pinos	1



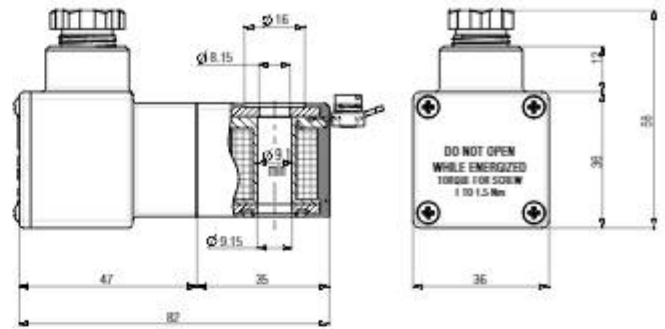
Wiring



CONX1 000 01

DEGREE OF PROTECTION	IP65 IEC 60529	CABLE DIAMETER	6 ÷ 8 mm	TERMINALS	INDUSTRIAL AMP
----------------------	----------------	----------------	----------	-----------	----------------

Solenoid 30 mm ATEX II2G EX DMD IIC T5 GB



Part No.	Voltage	Power	Size	Pack.
SOLX2 012 C 1 000	12V DC	3W	30	5
SOLX2 024 C 1 000	24V DC	3W	30	5
SOLX2 024 A 2 000	24V AC	4.8VA	30	5
SOLX2 110 A 2 000	110V AC	4.8VA	30	5
SOLX2 220 A 2 000	220V AC	4.8VA	30	5

VOLTAGE TOLERANCE

±10 %

DEGREE OF PROTECTION

IP66 IEC 60529
with connector

DUTY RATE (ED)

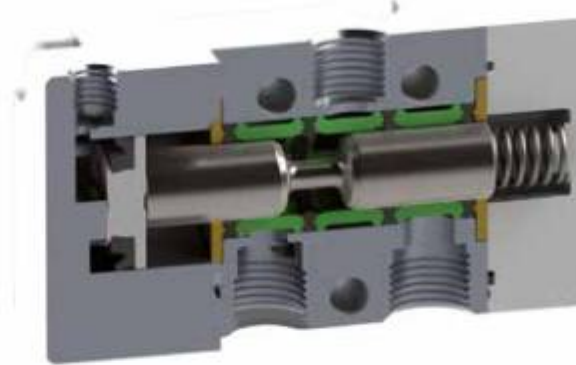
100 %

www.sumy.ir

AIR PILOT VALVES



TECHNICAL CHARACTERISTICS



Reference Standard

- 1907/2006
REACH ✓
- 2011/65/CE
RoHS ✓
- PED
2014/68/UE
- ATEX
2014/34/UE



Component Parts and Materials

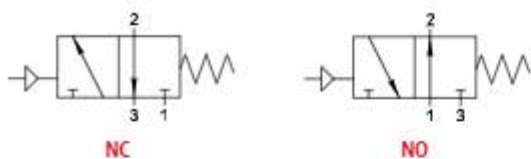
- Anodised and painted aluminium body
- Chemical nickel-plated spool
- NBR seals

		1/8	1/4	3/8	1/2
	THREADED	G 1/8 NPTF 1/8	G 1/4 NPTF 1/4	G 3/8 NPTF 3/8	G 1/2 NPTF 1/2
	6 bar FLOW RATE with Δp 1 bar	740 NI/min	1200 NI/min	2000 NI/min	5000 NI/min
	OPERATING PRESSURE	0 ÷ 10 bar 0 ÷ 145 psi			
	PRESSURE DRIVE	Monostable: 2 ÷ 10 bar 29 ÷ 145 psi Bistable: 1 ÷ 10 bar 14.5 ÷ 145 psi			
	TEMPERATURE	min: -10 °C 14 °F max: +60 °C 140 °F			

Series	Actuation	Reactuation	Function	Size	Thread	
0 1 V	P P = Pneumatic	0 0 = Monostable spring return 1 = Bistable	3 3 = 3/2 5 = 5/2 7 = 5/3	N C NO = Normally open NC = Normally closed CC = All Ports Blocked OC = Cylinder Ports Open to Exhaust PC = Cylinder Ports Pressurized 00 = Function not provided	0 2 02 = 1/8 03 = 1/4 04 = 3/8 05 = 1/2	G N = NPTF

3/2

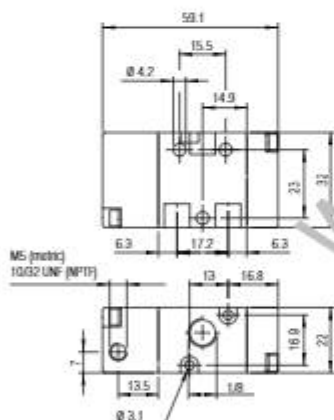
SINGLE AIR PILOT - SPRING RETURN



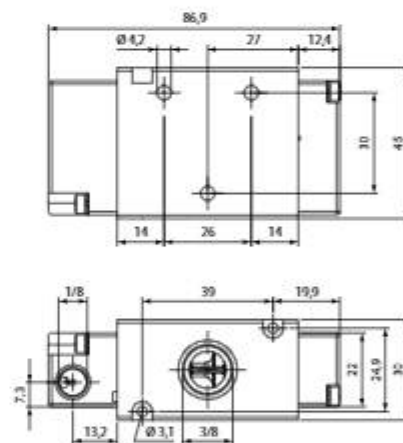
Part No.	Function	Size	Pack.
01V P0 3 NC 02	3/2 NC	G 1/8	1
01V P0 3 NC 03	3/2 NC	G 1/4	1
01V P0 3 NC 05	3/2 NC	G 1/2	1
01V P0 3 NO 02	3/2 NO	G 1/8	1
01V P0 3 NO 03	3/2 NO	G 1/4	1
01V P0 3 NO 05	3/2 NO	G 1/2	1

Part No.	Function	Size	Pack.
01V P0 3 NC 02 N	3/2 NC	NPTF 1/8	1
01V P0 3 NC 03 N	3/2 NC	NPTF 1/4	1
01V P0 3 NC 04 N	3/2 NC	NPTF 3/8	1
01V P0 3 NC 05 N	3/2 NC	NPTF 1/2	1
01V P0 3 NO 02 N	3/2 NO	NPTF 1/8	1
01V P0 3 NO 03 N	3/2 NO	NPTF 1/4	1
01V P0 3 NO 04 N	3/2 NO	NPTF 3/8	1
01V P0 3 NO 05 N	3/2 NO	NPTF 1/2	1

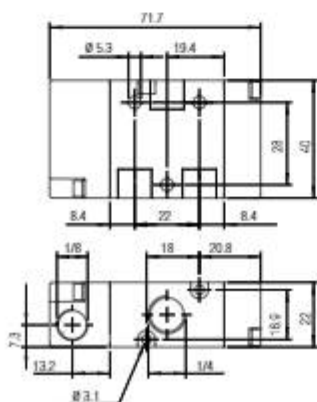
G 1/8 - NPTF 1/8



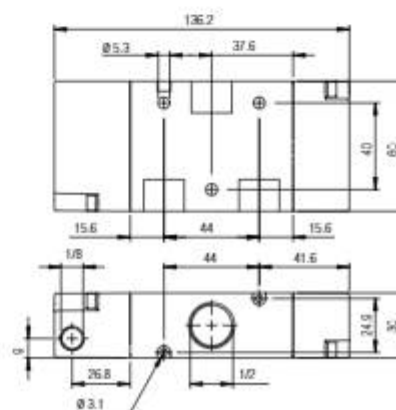
NPTF 3/8



G 1/4 - NPTF 1/4

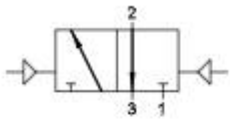


G 1/2 - NPTF 1/2



3/2

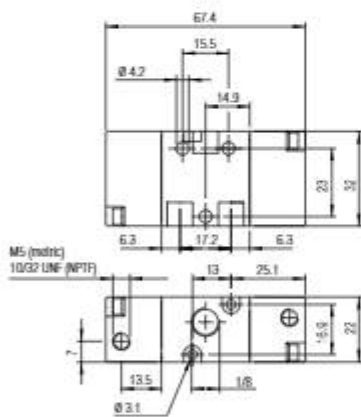
DOUBLE AIR PILOT



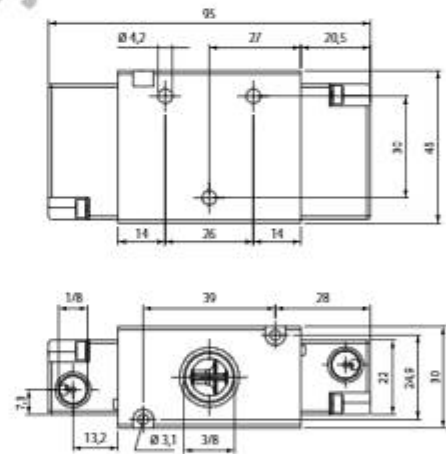
Part No.	Function	Size	Pack.
01V P1 3 00 02	3/2	G 1/8	1
01V P1 3 00 03	3/2	G 1/4	1
01V P1 3 00 05	3/2	G 1/2	1

Part No.	Function	Size	Pack.
01V P1 3 00 02 N	3/2	NPTF 1/8	1
01V P1 3 00 03 N	3/2	NPTF 1/4	1
01V P1 3 00 04 N	3/2	NPTF 3/8	1
01V P1 3 00 05 N	3/2	NPTF 1/2	1

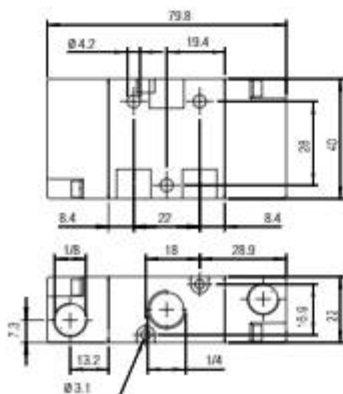
G 1/8 - NPTF 1/8



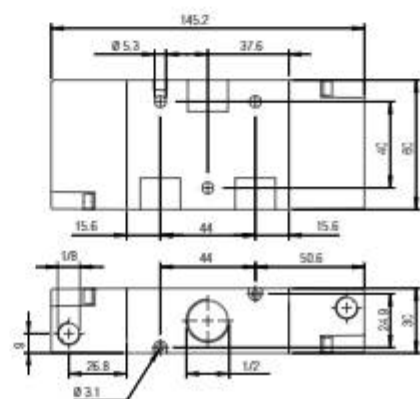
NPTF 3/8



G 1/4 - NPTF 1/4

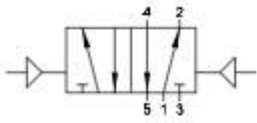


G 1/2 - NPTF 1/2



5/2

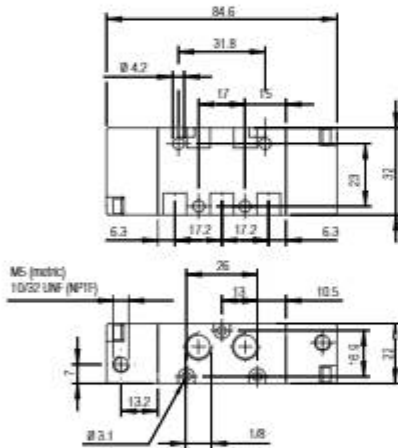
DOUBLE AIR PILOT



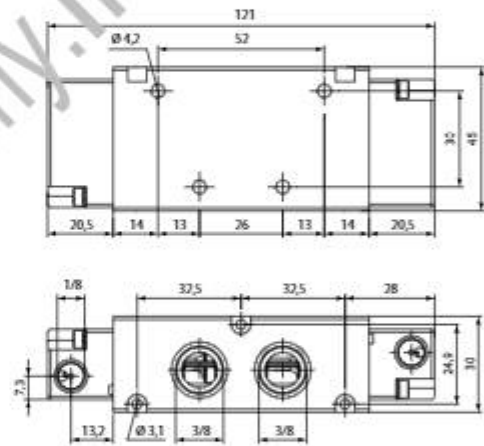
Part No.	Function	Size	Pack.
01V P1 5 00 02	5/2	G 1/8	1
01V P1 5 00 03	5/2	G 1/4	1
01V P1 5 00 05	5/2	G 1/2	1

Part No.	Function	Size	Pack.
01V P1 5 00 02 N	5/2	NPTF 1/8	1
01V P1 5 00 03 N	5/2	NPTF 1/4	1
01V P1 5 00 04 N	5/2	NPTF 3/8	1
01V P1 5 00 05 N	5/2	NPTF 1/2	1

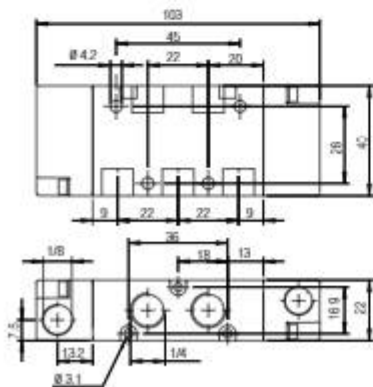
G 1/8 - NPTF 1/8



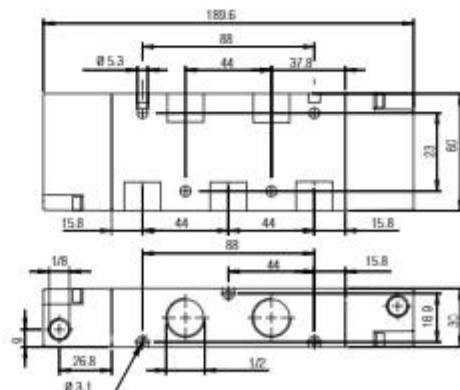
NPTF 3/8



G 1/4 - NPTF 1/4

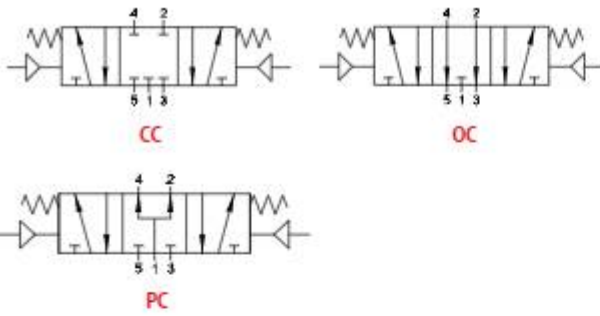


G 1/2 - NPTF 1/2



5/3

DOUBLE AIR PILOT - SPRING RETURN

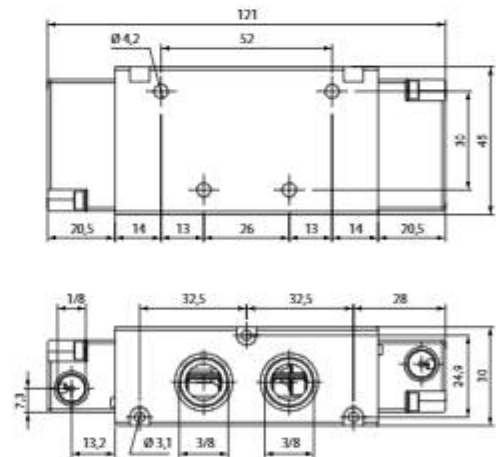
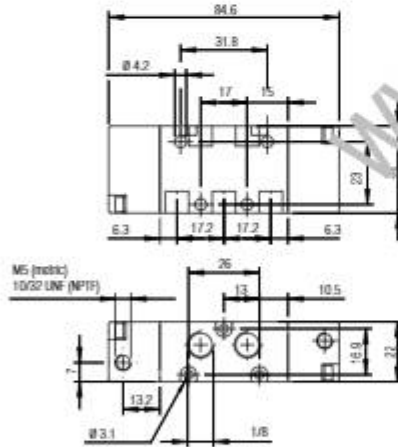


Part No.	Function	Size	Pack.
01V P0 7 CC 02	5/3 CC	G 1/8	1
01V P0 7 CC 03	5/3 CC	G 1/4	1
01V P0 7 CC 05	5/3 CC	G 1/2	1
01V P0 7 OC 02	5/3 OC	G 1/8	1
01V P0 7 OC 03	5/3 OC	G 1/4	1
01V P0 7 OC 05	5/3 OC	G 1/2	1
01V P0 7 PC 02	5/3 PC	G 1/8	1
01V P0 7 PC 03	5/3 PC	G 1/4	1
01V P0 7 PC 05	5/3 PC	G 1/2	1

Part No.	Function	Size	Pack.
01V P0 7 CC 02 N	5/3 CC	NPTF 1/8	1
01V P0 7 CC 03 N	5/3 CC	NPTF 1/4	1
01V P0 7 CC 04 N	5/3 CC	NPTF 3/8	1
01V P0 7 CC 05 N	5/3 CC	NPTF 1/2	1
01V P0 7 OC 02 N	5/3 OC	NPTF 1/8	1
01V P0 7 OC 03 N	5/3 OC	NPTF 1/4	1
01V P0 7 OC 04 N	5/3 OC	NPTF 3/8	1
01V P0 7 OC 05 N	5/3 OC	NPTF 1/2	1
01V P0 7 PC 02 N	5/3 PC	NPTF 1/8	1
01V P0 7 PC 03 N	5/3 PC	NPTF 1/4	1
01V P0 7 PC 04 N	5/3 PC	NPTF 3/8	1
01V P0 7 PC 05 N	5/3 PC	NPTF 1/2	1

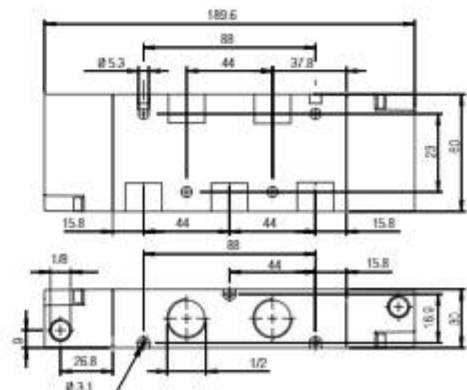
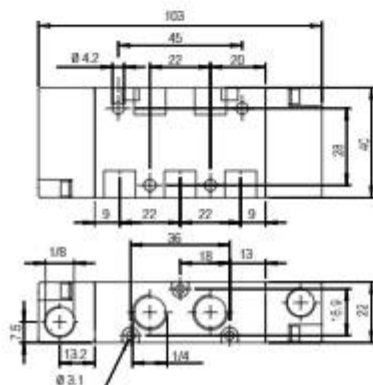
G 1/8 - NPTF 1/8

NPTF 3/8



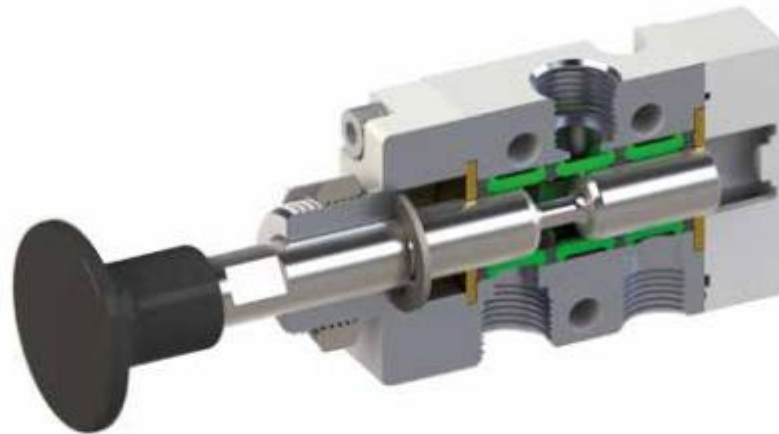
G 1/4 - NPTF 1/4

G 1/2 - NPTF 1/2





TECHNICAL CHARACTERISTICS



Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

ATEX
2014/34/UE



Component Parts and Materials

- Anodised and painted aluminium body
- Chemical nickel-plated spool
- NBR seals

	1/8	1/4
THREADED	G 1/8 NPTF 1/8	G 1/4 NPTF 1/4
6 bar FLOW RATE with Δp 1 bar	740 NI/min	1200 NI/min
OPERATING PRESSURE	Vacuum ÷ 10 bar Vacuum ÷ 145 psi	
TEMPERATURE	min	-10 °C 14 °F
	max	+60 °C 140 °F
PANEL MOUNT	M 16x1	

Series Actuation Reaction Function Size Thread

0 1 V

T

T = Button
L = 90° Lever

0

0 = Monostable spring return
1 = Bistable
2 = Stable in 3 positions

3

3 = 3/2
5 = 5/2
7 = 5/3

N C

NO = Normally open
NC = Normally closed
CC = All Ports Blocked
OC = Cylinder Ports Open to Exhaust
PC = Cylinder Ports Pressurized
00 = Function not provided

0 2

02 = 1/8
03 = 1/4

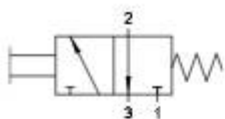
□

□ = G
N = NPTF

3/2

BUTTON OPERATED - SPRING RETURN

BUTTON OPERATED VALVES



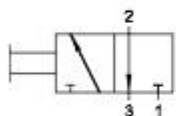
Part No.	Function	Size	Pack.
01V T0 3 NC 02	3/2 NC	G 1/8	1
01V T0 3 NC 03	3/2 NC	G 1/4	1

Part No.	Function	Size	Pack.
01V T0 3 NC 02 N	3/2 NC	NPTF 1/8	1
01V T0 3 NC 03 N	3/2 NC	NPTF 1/4	1



3/2

BUTTON OPERATED - PUSH / PULL



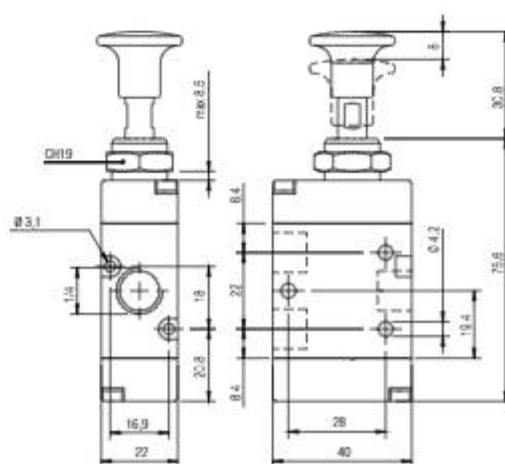
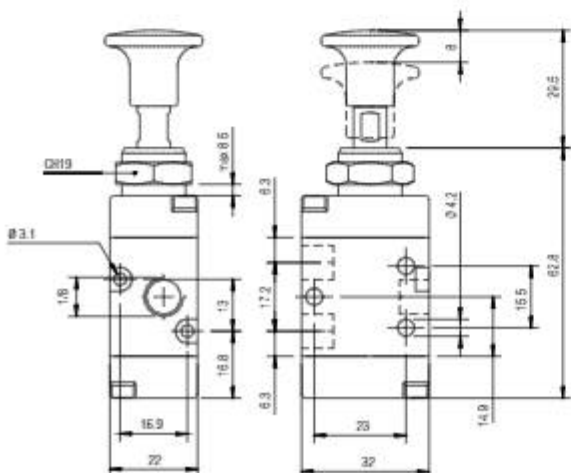
Part No.	Function	Size	Pack.
01V T1 3 00 02	3/2	G 1/8	1
01V T1 3 00 03	3/2	G 1/4	1

Part No.	Function	Size	Pack.
01V T1 3 00 02 N	3/2	NPTF 1/8	1
01V T1 3 00 03 N	3/2	NPTF 1/4	1

www.sumy.ir

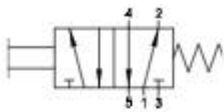
G 1/8 - NPTF 1/8

G 1/4 - NPTF 1/4



5/2

BUTTON OPERATED - SPRING RETURN

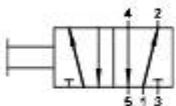


Part No.	Function	Size	Pack.
01V T0 5 00 02	5/2	G 1/8	1
01V T0 5 00 03	5/2	G 1/4	1

Part No.	Function	Size	Pack.
01V T0 5 00 02 N	5/2	NPTF 1/8	1
01V T0 5 00 03 N	5/2	NPTF 1/4	1

5/2

BUTTON OPERATED - PUSH / PULL



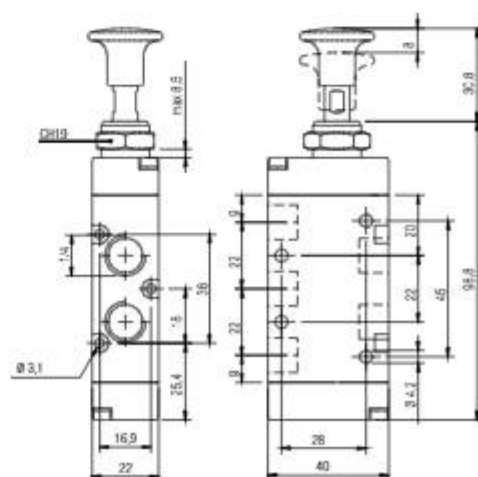
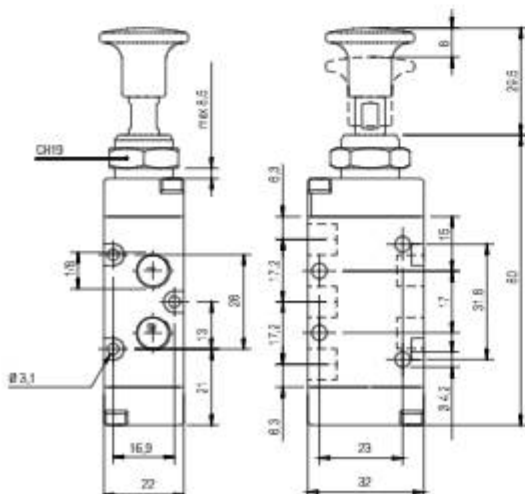
Part No.	Function	Size	Pack.
01V T1 5 00 02	5/2	G 1/8	1
01V T1 5 00 03	5/2	G 1/4	1

Part No.	Function	Size	Pack.
01V T1 5 00 02 N	5/2	NPTF 1/8	1
01V T1 5 00 03 N	5/2	NPTF 1/4	1



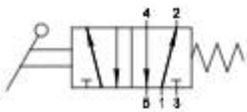
G 1/8 - NPTF 1/8

G 1/4 - NPTF 1/4



5/2

LEVER OPERATED - SPRING RETURN



Part No.	Function	Size	Pack.
01V L0 5 00 02	5/2	G 1/8	1
01V L0 5 00 03	5/2	G 1/4	1

Part No.	Function	Size	Pack.
01V L0 5 00 02 N	5/2	NPTF 1/8	1
01V L0 5 00 03 N	5/2	NPTF 1/4	1

5/2

LEVER OPERATED - PUSH / PULL



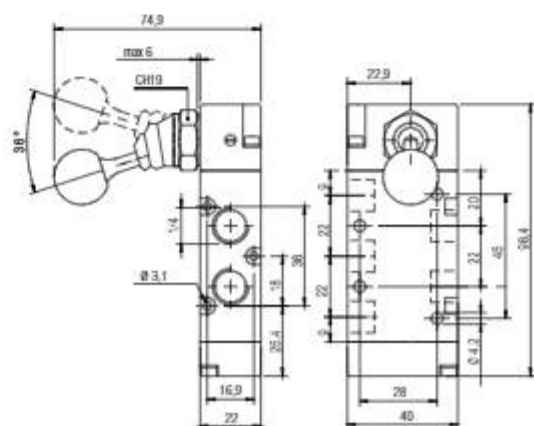
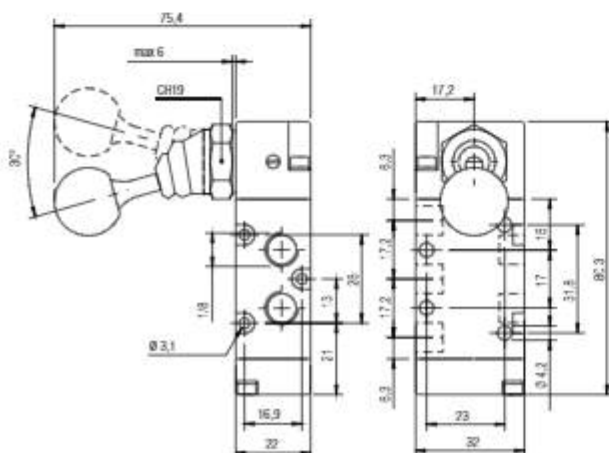
Part No.	Function	Size	Pack.
01V L1 5 00 02	5/2	G 1/8	1
01V L1 5 00 03	5/2	G 1/4	1

Part No.	Function	Size	Pack.
01V L1 5 00 02 N	5/2	NPTF 1/8	1
01V L1 5 00 03 N	5/2	NPTF 1/4	1



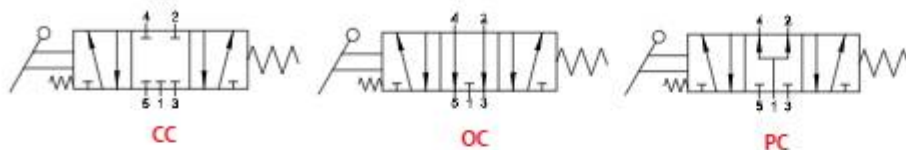
G 1/8 - NPTF 1/8

G 1/4 - NPTF 1/4



5/3

LEVER OPERATED - SPRING CENTERED

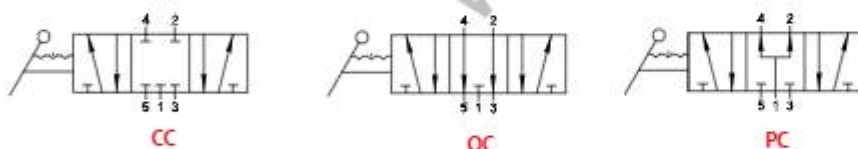


Part No.	Function	Size	Pack.
01V L0 7 CC 02	5/3 CC	G 1/8	1
01V L0 7 CC 03	5/3 CC	G 1/4	1
01V L0 7 OC 02	5/3 OC	G 1/8	1
01V L0 7 OC 03	5/3 OC	G 1/4	1
01V L0 7 PC 02	5/3 PC	G 1/8	1
01V L0 7 PC 03	5/3 PC	G 1/4	1
Part No.	Function	Size	Pack.
01V L0 7 CC 02 N	5/3 CC	NPTF 1/8	1
01V L0 7 CC 03 N	5/3 CC	NPTF 1/4	1
01V L0 7 OC 02 N	5/3 OC	NPTF 1/8	1
01V L0 7 OC 03 N	5/3 OC	NPTF 1/4	1
01V L0 7 PC 02 N	5/3 PC	NPTF 1/8	1
01V L0 7 PC 03 N	5/3 PC	NPTF 1/4	1



5/3

LEVER OPERATED - PUSH / PULL



01V L2 7 CC 02	5/3 CC	G 1/8	1
01V L2 7 CC 03	5/3 CC	G 1/4	1
01V L2 7 OC 02	5/3 OC	G 1/8	1
01V L2 7 OC 03	5/3 OC	G 1/4	1
01V L2 7 PC 02	5/3 PC	G 1/8	1
01V L2 7 PC 03	5/3 PC	G 1/4	1
Part No.	Function	Size	Pack.
01V L2 7 CC 02 N	5/3 CC	NPTF 1/8	1
01V L2 7 CC 03 N	5/3 CC	NPTF 1/4	1
01V L2 7 OC 02 N	5/3 OC	NPTF 1/8	1
01V L2 7 OC 03 N	5/3 OC	NPTF 1/4	1
01V L2 7 PC 02 N	5/3 PC	NPTF 1/8	1
01V L2 7 PC 03 N	5/3 PC	NPTF 1/4	1

STAINLESS STEEL AISI 316 L 90° LEVER VALVE

AISI 316L



TECHNICAL CHARACTERISTICS



Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE



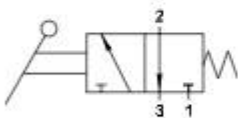
Component Parts and Materials

- Stainless Steel 316 L (1.4404) body
- Stainless Steel 316 L (1.4404) spool
- PUR seals and FKM O-Ring

	THREADED	1/4 G 1/4 NPTF 1/4
	OPERATING PRESSURE	1 ÷ 10 bar
	ACTIVATION FORCE	20 N

3/2 Ways

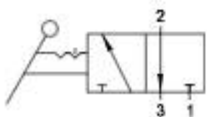
MONOSTABLE SPRING RETURN



Part No.	Function	Size	Pack.
X1V L0 3 NC 03	3/2 NC	G 1/4	1

3/2 Ways

TWO STABLE POSITIONS

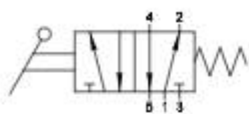


Part No.	Function	Size	Pack.
X1V L1 3 NC 03	3/2 NC	G 1/4	1



5/2 Ways

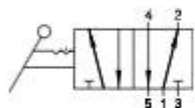
MONOSTABLE SPRING RETURN



Part No.	Function	Size	Pack.
X1V L0 5 00 03	5/2	G 1/4	1

5/2 Ways

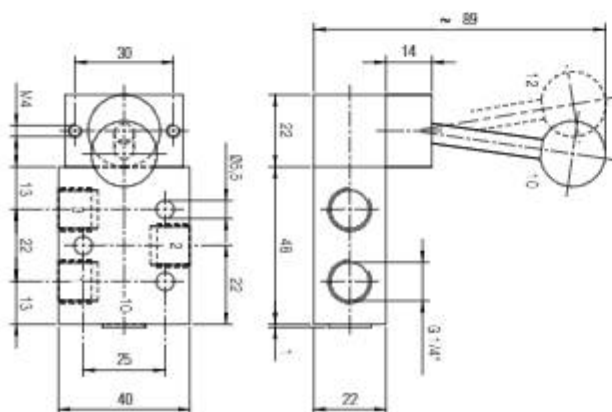
TWO STABLE POSITIONS



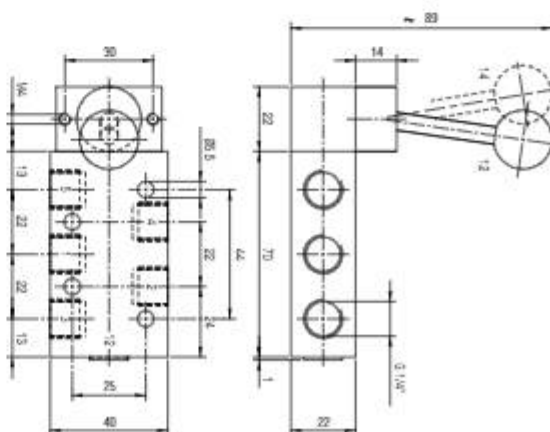
Part No.	Function	Size	Pack.
X1V L1 5 00 03	5/2	G 1/4	1



X1V L0 3 NC 03 X1V L1 3 00 03

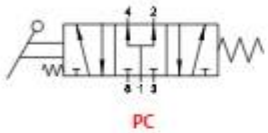
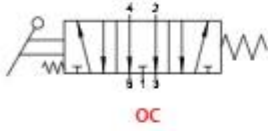
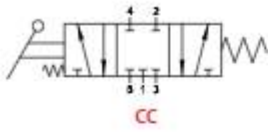


X1V L0 5 00 03 X1V L1 5 00 03



5/3 Ways

MONOSTABLE SPRING RETURN

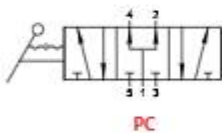
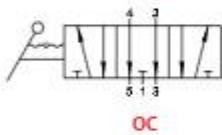
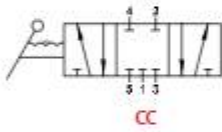


Part No.	Function	Size	Pack.
X1V L0 7 CC 03	5/3 CC	G 1/4	1
X1V L0 7 OC 03	5/3 OC	G 1/4	1
X1V L0 7 PC 03	5/3 PC	G 1/4	1



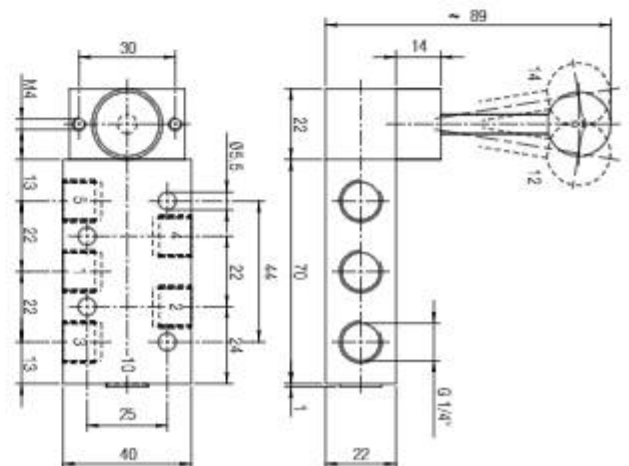
5/3 Ways

3 STABLE POSITIONS



Part No.	Function	Size	Pack.
X1V L2 7 CC 03	5/3 CC	G 1/4	1
X1V L2 7 OC 03	5/3 OC	G 1/4	1
X1V L2 7 PC 03	5/3 PC	G 1/4	1

- X1V L0 7 CC 03
- X1V L0 7 OC 03
- X1V L0 7 PC 03
- X1V L2 7 CC 03
- X1V L2 7 OC 03
- X1V L2 7 PC 03



MECHANICALLY ACTUATED / SPRING RETURN VALVES



TECHNICAL CHARACTERISTICS



Reference Standard

- 1907/2006
REACH ✓
- 2011/65/CE
RoHS ✓
- PED
2014/68/UE
- ATEX
2014/34/UE



Component Parts and Materials

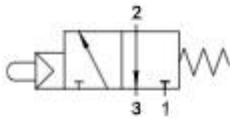
- Anodised and painted aluminium body
- Chemical nickel-plated spool
- NBR seals

		1/8
	THREADED	G 1/8 NPTF 1/8
	1 bar FLOW RATE with Δp 1 bar	740 Nl/min
	OPERATING PRESSURE	2 - 10 bar 29 - 145 psi
	DRIVING FORCE	5.8 N
	TEMPERATURE	min: -10 °C 14 °F max: +60 °C 14 °F

Series	Actuation	Reactuation	Function	Size	Thread
0 1 V	V V = Servo-piloted tappet N = Servo-piloted Whisker	0 0 = Monostable spring return	3 3 = 3/2 5 = 5/2	0 2 02 = 1/8	 = G N = NPTF
			NC 00 = Function not provided		

3/2

SERVO-PILOTED TAPPET - SPRING RETURN



Part No.	Function	Size	Pack.
01V V0 3 NC 02	3/2 NC	G 1/8	1

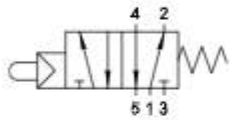
Part No.	Function	Size	Pack.
01V V0 3 NC 02 N	3/2 NC	NPTF 1/8	1

SERVO-PILOTED TAPPET VALVES - SPRING RETURN



5/2

SERVO-PILOTED TAPPET - SPRING RETURN



Part No.	Function	Size	Pack.
01V V0 5 00 02	5/2	G 1/8	1

Part No.	Function	Size	Pack.
01V V0 5 00 02 N	5/2	NPTF 1/8	1



04V 01 0 00 01

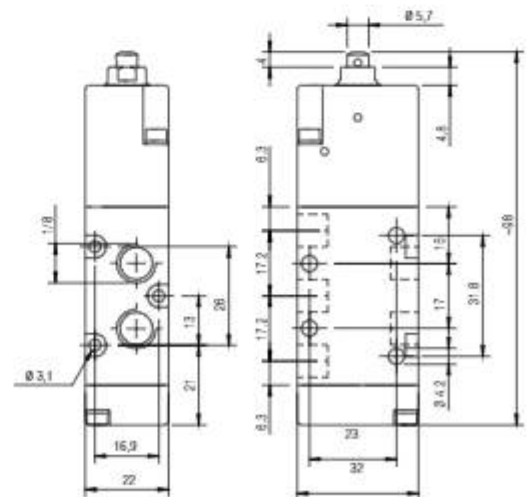
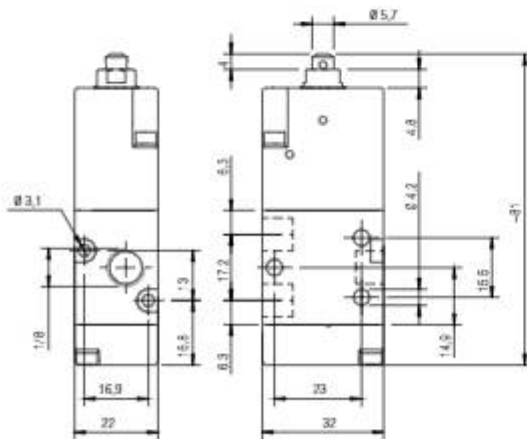


04V 06 0 00 01

The servo-piloted valve actuators are designed for panel mounting. For interfaces, refer to the buttons and switches in Series 04V Pg. 45.

01V V0 3 NC 02 01V V0 3 NC 02 N

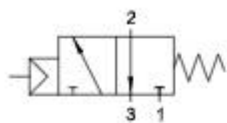
01V V0 5 00 02 01V V0 5 00 02 N



3/2

SERVO-PILOTED WHISKER - SPRING RETURN

SERVO-PILOTED WHISKER - SPRING RETURN VALVES



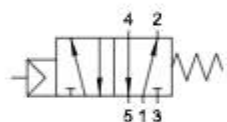
Part No.	Function	Size	Pack.
01V N0 3 NC 02	3/2 NC	G 1/8	1

Part No.	Function	Size	Pack.
01V N0 3 NC 02 N	3/2 NC	NPTF 1/8	1



5/2

SERVO-PILOTED WHISKER - SPRING RETURN



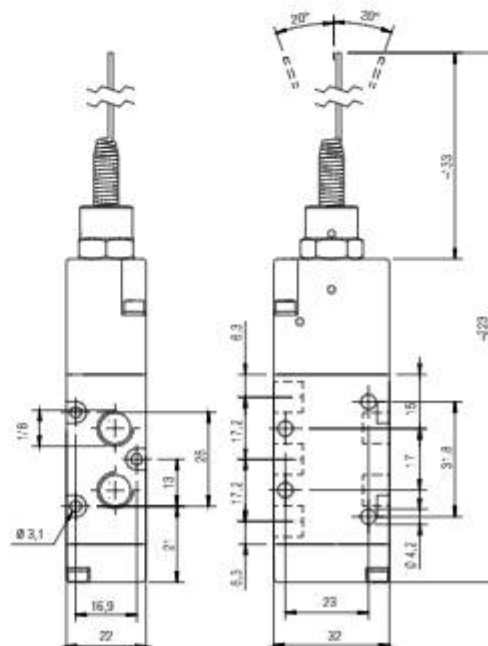
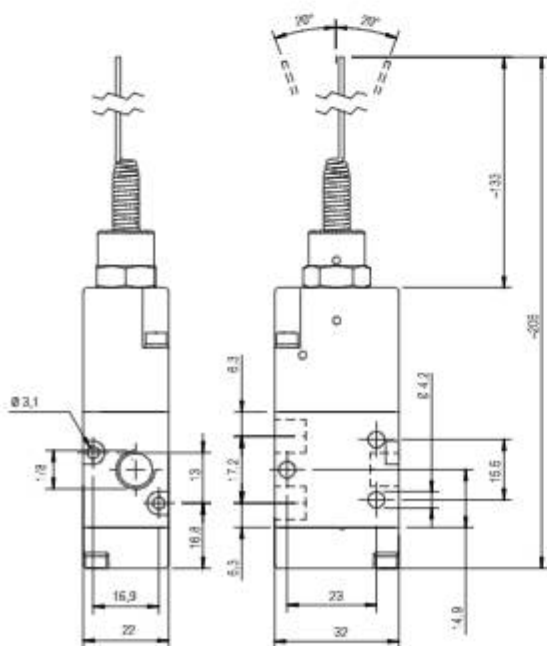
Part No.	Function	Size	Pack.
01V N0 5 00 02	5/2	G 1/8	1

Part No.	Function	Size	Pack.
01V N0 5 00 02 N	5/2	NPTF 1/8	1

www.sumy.ir

01V N0 3 NC 02 01V N0 3 NC 02 N

01V N0 5 00 02 01V N0 5 00 02 N



DIN RAIL MOUNTED FIXED LENGTH MANIFOLD BASES - NPTF



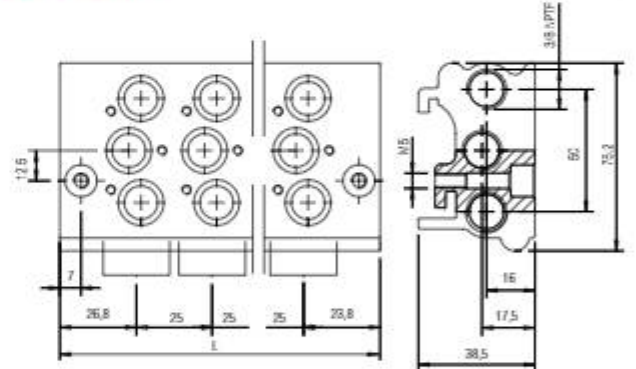
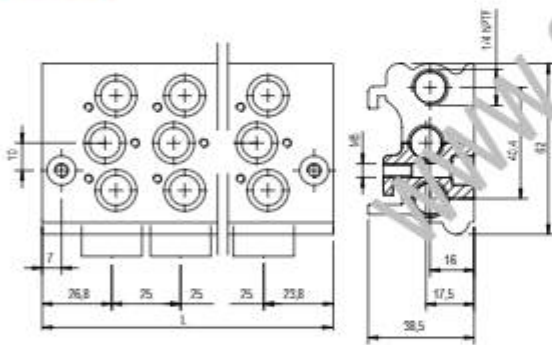
The bases are supplied with screws and O-Ring for attachment of the valves.

MANIFOLD BASE FOR VALVES 01V - 1/8 NPTF

Part Number	Stations	L	Pack.
01V B0 0 00 02 N	2	76	1
01V B0 0 00 03 N	3	101	1
01V B0 0 00 04 N	4	126	1
01V B0 0 00 05 N	5	151	1
01V B0 0 00 06 N	6	176	1
01V B0 0 00 07 N	7	201	1
01V B0 0 00 08 N	8	226	1
01V B0 0 00 09 N	9	251	1
01V B0 0 00 10 N	10	276	1

MANIFOLD BASE FOR VALVES 01V - 1/4 NPTF

Part Number	Stations	L	Pack.
01V B0 1 00 02 N	2	76	1
01V B0 1 00 03 N	3	101	1
01V B0 1 00 04 N	4	126	1
01V B0 1 00 05 N	5	151	1
01V B0 1 00 06 N	6	176	1
01V B0 1 00 07 N	7	201	1
01V B0 1 00 08 N	8	226	1
01V B0 1 00 09 N	9	251	1
01V B0 1 00 10 N	10	276	1



DIN RAIL MOUNTED MODULAR BASES



All the bases are supplied with screws and seals to secure the correct assembly.

FRONT MANIFOLD END PLATE



Part Number	Size	Pack.
01V B1 0 00 00 N	1/8 NPTF	1
01V B1 0 00 01 N	1/4 NPTF	1

REAR MANIFOLD END PLATE



Part Number	Size	Pack.
01V B2 0 00 00 N	1/8 NPTF	1
01V B2 0 00 01 N	1/4 NPTF	1

MODULAR BASE



Part Number	Size	Pack.
01V B3 0 00 00 N	1/8 NPTF	1
01V B3 0 00 01 N	1/4 NPTF	1

INTERMEDIATE PRESSURE BASE



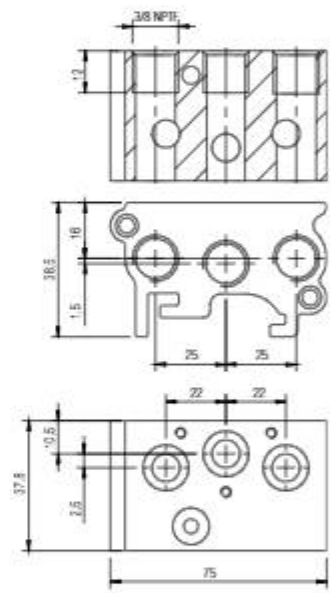
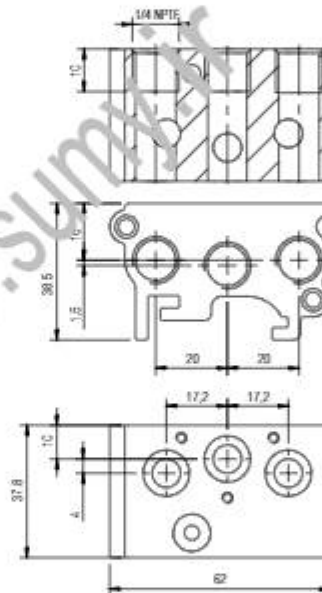
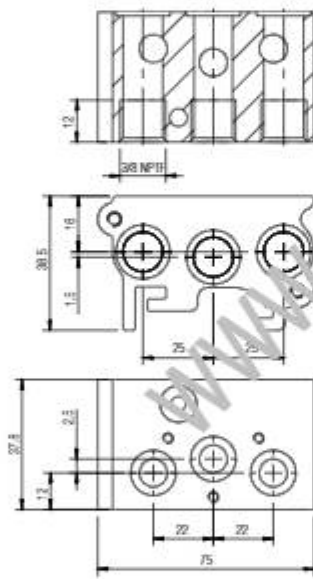
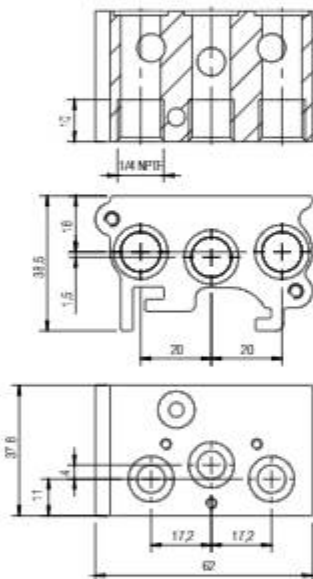
Part Number	Size	Pack.
01V B4 0 00 00 N	1/8 NPTF	1
01V B4 0 00 01 N	1/4 NPTF	1

01V B1 0 00 00 N

01V B1 0 00 01 N

01V B2 0 00 00 N

01V B2 0 00 01 N

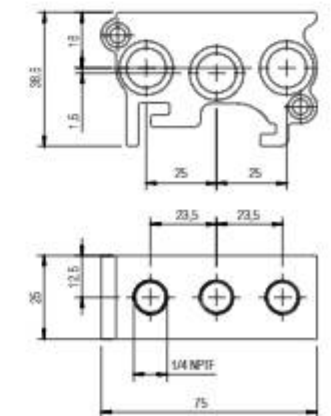
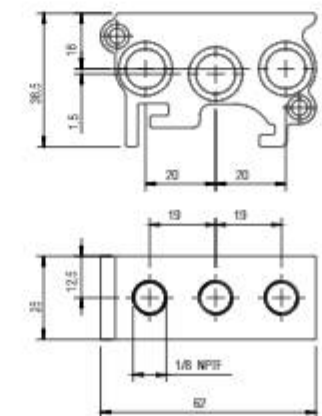
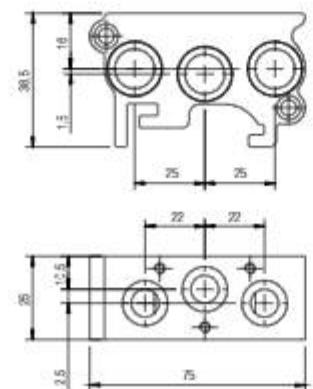
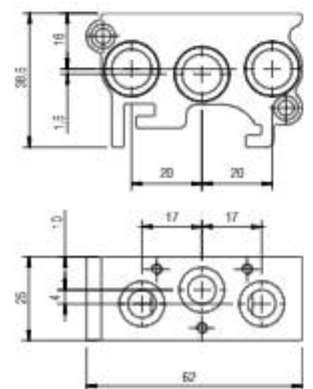


01V B3 0 00 00 N

01V B3 0 00 01 N

01V B4 0 00 00 N

01V B4 0 00 01 N



DIN RAIL MOUNTED FIXED LENGTH MANIFOLD BASES



The bases are supplied with screws and O-Ring for attachment of the valves.

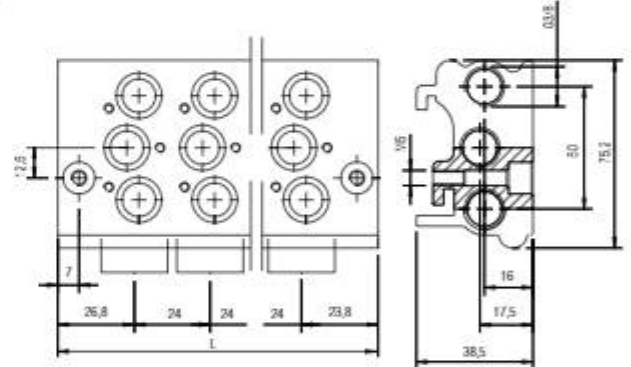
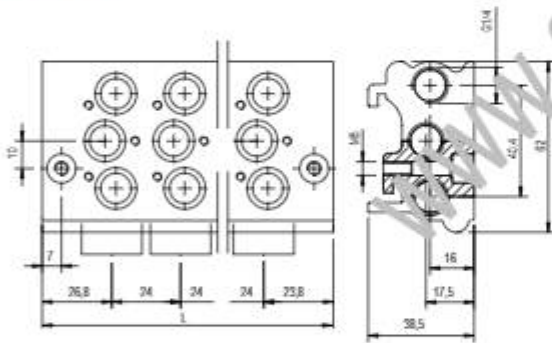


MANIFOLD BASE FOR VALVES 01V - G1/8

Part Number	Stations	L	Pack.
01V B0 0 00 02	2	75	1
01V B0 0 00 03	3	99	1
01V B0 0 00 04	4	123	1
01V B0 0 00 05	5	147	1
01V B0 0 00 06	6	171	1
01V B0 0 00 07	7	195	1
01V B0 0 00 08	8	219	1
01V B0 0 00 09	9	243	1
01V B0 0 00 10	10	267	1

MANIFOLD BASE FOR VALVES 01V - G1/4

Part Number	Stations	L	Pack.
01V B0 1 00 02	2	75	1
01V B0 1 00 03	3	99	1
01V B0 1 00 04	4	123	1
01V B0 1 00 05	5	147	1
01V B0 1 00 06	6	171	1
01V B0 1 00 07	7	195	1
01V B0 1 00 08	8	219	1
01V B0 1 00 09	9	243	1
01V B0 1 00 10	10	267	1



DIN RAIL MOUNTED MODULAR BASES



All the bases are supplied with screws and seals to secure the correct assembly.



FRONT MANIFOLD END PLATE



Part Number	Size	Pack.
01V B1 0 00 00	G 1/8	1
01V B1 0 00 01	G 1/4	1

REAR MANIFOLD END PLATE



Part Number	Size	Pack.
01V B2 0 00 00	G 1/8	1
01V B2 0 00 01	G 1/4	1

MODULAR BASE



Part Number	Size	Pack.
01V B3 0 00 00	G 1/8	1
01V B3 0 00 01	G 1/4	1

INTERMEDIATE PRESSURE BASE



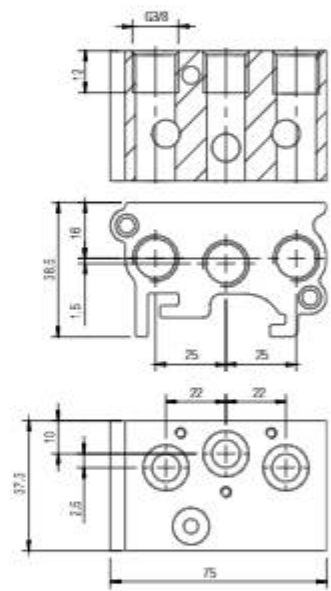
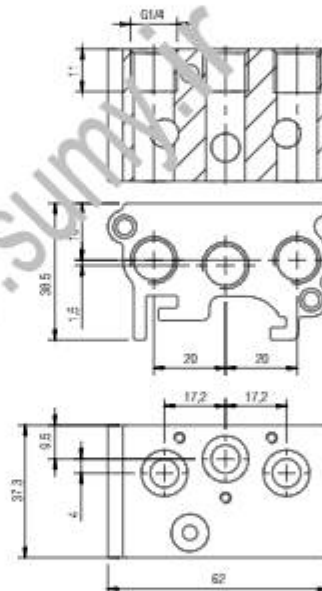
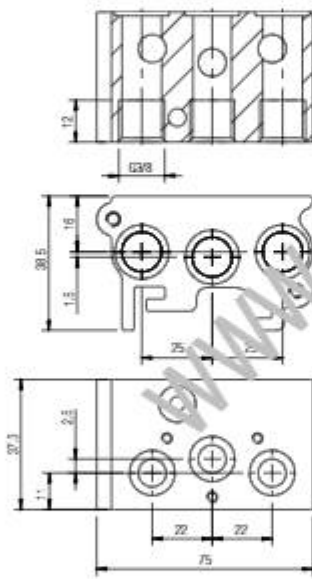
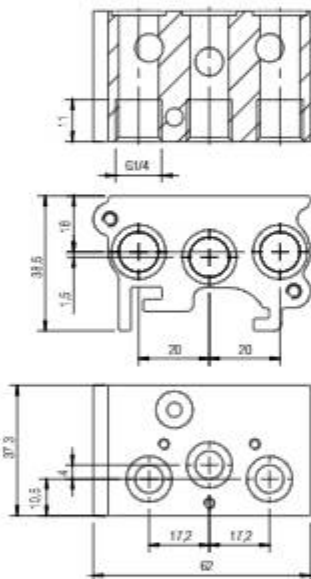
Part Number	Size	Pack.
01V B4 0 00 00	G 1/8	1
01V B4 0 00 01	G 1/4	1

01V B1 0 00 00

01V B1 0 00 01

01V B2 0 00 00

01V B2 0 00 01

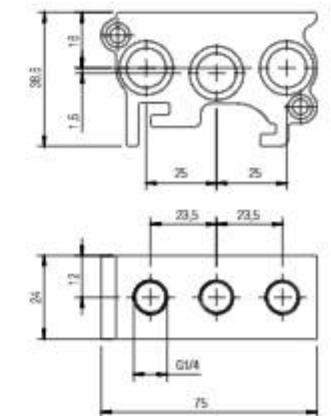
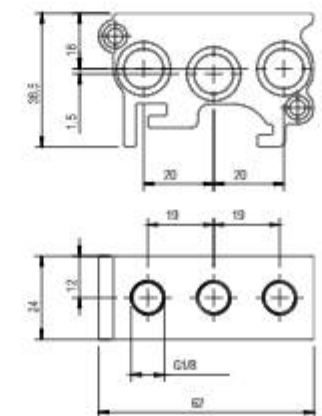
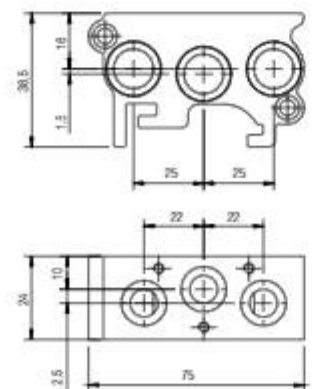
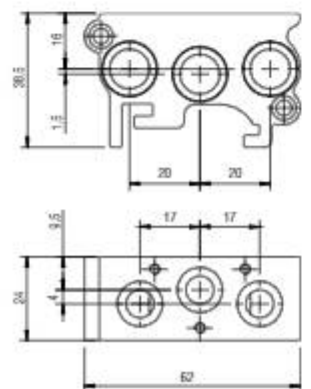


01V B3 0 00 00

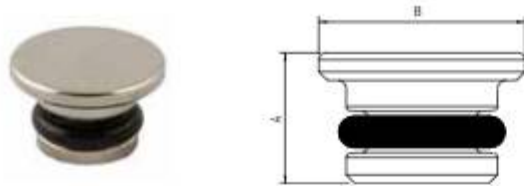
01V B3 0 00 01

01V B4 0 00 00

01V B4 0 00 01

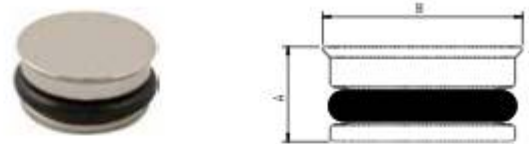


PLUG FOR 3 WAY VALVE CONNECTION



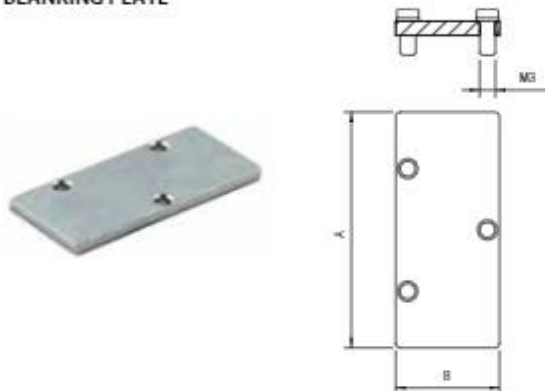
Part No.	Size	A	B	Pack.
01V B6 0 00 00	1/8	7,5	12	1
01V B6 0 00 01	1/4	7,5	14	1

INTERMEDIATE PLUG FOR MODULAR BASE



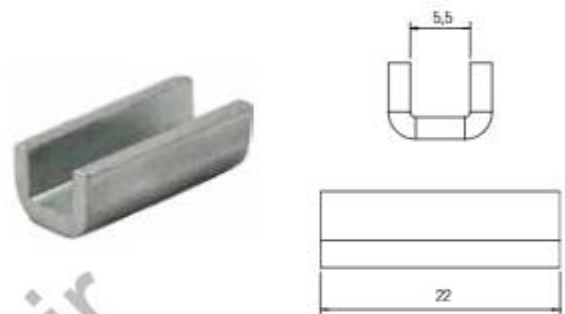
Part No.	Size	A	B	Pack.
01V B8 0 00 00	1/8	7,5	12	1
01V B8 0 00 01	1/4	7,5	14	1

BLANKING PLATE

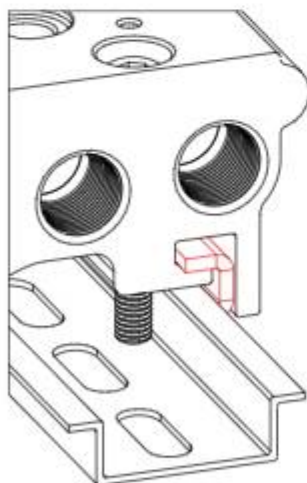


Part No.	Size	A	B	Pack.
01V B9 0 00 00	1/8	50	22	1
01V B9 0 00 01	1/4	62	22	1

OMEGA BAR BRACKET



Part No.	Size	Pack.
01V B7 0 00 00	1/8 - 1/4	2



TECHNICAL CHARACTERISTICS	
TYPE OF MOUNTING	SCREW
WITH EN 50222 OMEGA BAR THICKNESS - 15 mm	M5 x 40
WITH EN 50222 OMEGA BAR THICKNESS - 7,5 mm	M5 x 35
DIRECT ON BASE	M4 x 40

MICRO VALVES

02V



www.sumy.ir

MECHANICALLY ACTUATED MICRO VALVES



TECHNICAL CHARACTERISTICS



Reference Standard

- 1907/2006
REACH ✓
- 2011/65/CE
RoHS ✓
- PED
2014/68/UE



Component Parts and Materials

- Anodised aluminium body
- Stainless Steel Spring
- NBR seals

		M5
	THREADED	M5
	5 bar FLOW RATE with Δp 1 bar	100 Nl/min
	OPERATING PRESSURE	2 - 10 bar 29 - 145 psi
	DRIVING FORCE	6 N
	TEMPERATURE	min -10 °C 14 °F
		max +60 °C 140 °F

Series	Actuation	Reactivation	Function	Size
--------	-----------	--------------	----------	------

0 2 V

G

0

3

N C

B 5

- G = Tappet
- R = Short Roller
- U = Uni-directional Roller
- E = Panel Mounting Taper Microvalve

0 = Monostable spring return

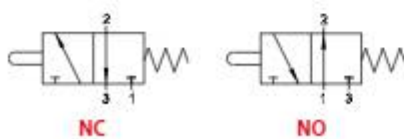
3 = 3/2

NO = Normally open
NC = Normally closed

B5 = M5 (metric)

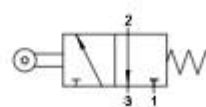
3/2

TAPPET - SPRING RETURN



3/2

SHORT ROLLER - SPRING RETURN

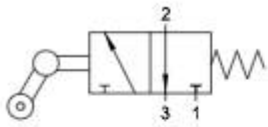


Part No.	Function	Size	Pack.
02V G0 3 NC B5	3/2 NC	M5 (metric)	1
02V G0 3 NO B5	3/2 NO	M5 (metric)	1

Part No.	Function	Size	Pack.
02V R0 3 NC B5	3/2 NC	M5 (metric)	1

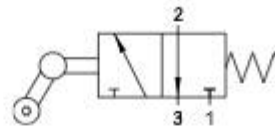
3/2

UNI-DIRECTIONAL ROLLER - SPRING RETURN



3/2

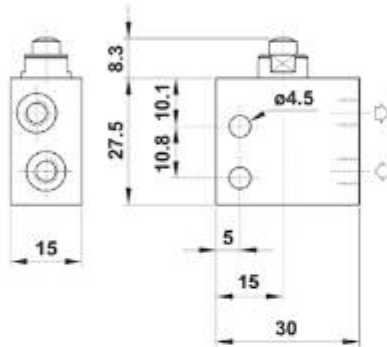
PANEL MOUNTED TAPPET - SPRING RETURN



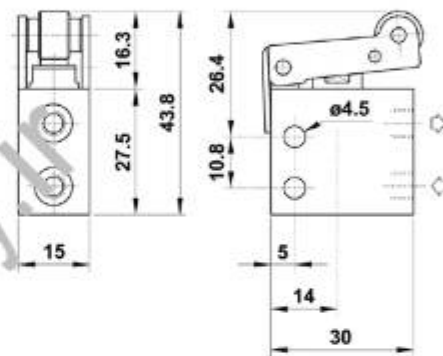
Part No.	Function	Size	Pack.
02V U0 3 NC B5	3/2 NC	M5 (metric)	1

Part No.	Function	Size	Pack.
02V E0 3 NC B5	3/2 NC	M5 (metric)	1

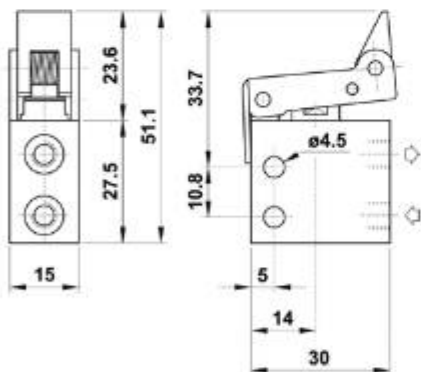
02V G0 3 NC B5



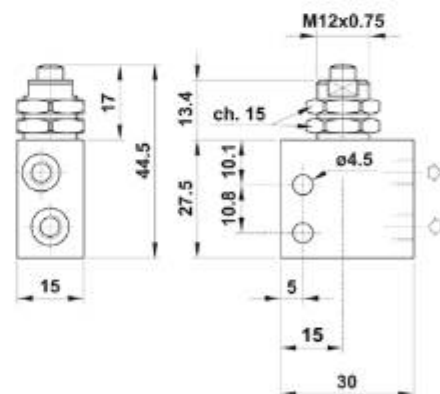
02V R0 3 NC B5



02V U0 3 NC B5



02V E0 3 NC B5



16 MM VALVES - MECHANICAL AND MANUAL OPERATORS



16 MM VALVES



TECHNICAL CHARACTERISTICS



Reference Standard

- 1907/2006
REACH ✓
- 2011/65/CE
RoHS ✓
- PED
2014/68/UE



Component Parts and Materials

- Anodised aluminium body
- Stainless Steel Spring
- NBR seals

	THREADED		1/8
	6 bar / LOW RATE with Δp 1 bar		350 Nl/min
	OPERATING PRESSURE		2 ÷ 10 bar 29 ÷ 145 psi
	TEMPERATURE	min	-10 °C 14 °F
		max	+60 °C 140 °F

Series	Actuation	Resetuation	Function	Size
--------	-----------	-------------	----------	------

0 3 V

G

0

3

NC

0 2

- G = Tappet
- R = Short Roller
- H = Lever
- Z = Long Roller

0 = Monostable spring return

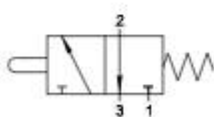
3 = 3/2
5 = 5/2

NC = Normally closed
00 = Function not provided

02 = 1/8

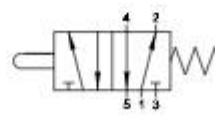
3/2

TAPPET - SPRING RETURN



5/2

TAPPET - SPRING RETURN

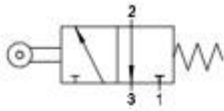


Part No.	Function	Size	Driving Force	Pack.
03V G0 3 NC 02	3/2 NC	G 1/8	19.6 N	1

Part No.	Function	Size	Driving Force	Pack.
03V G0 5 00 02	5/2	G 1/8	39.2 N	1

3/2

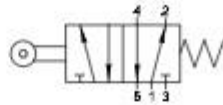
SHORT ROLLER - SPRING RETURN



Part No.	Function	Size	Driving Force	Pack.
03V R0 3 NC 02	3/2 NC	G 1/8	9.8 N	1

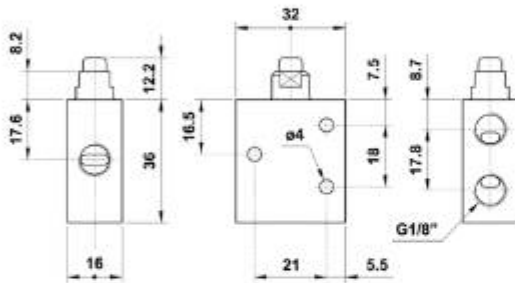
5/2

SHORT ROLLER - SPRING RETURN

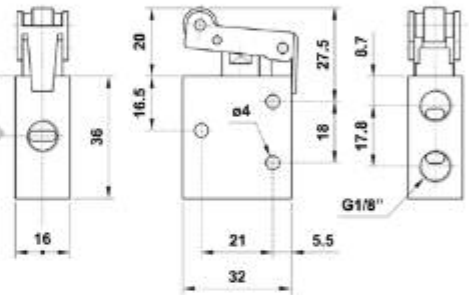


Part No.	Function	Size	Driving Force	Pack.
03V R0 5 00 02	5/2	G 1/8	21.5 N	1

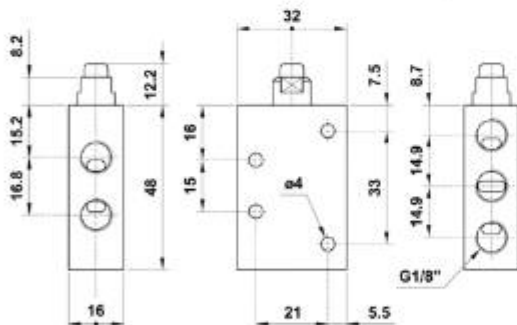
03V G0 3 NC 02



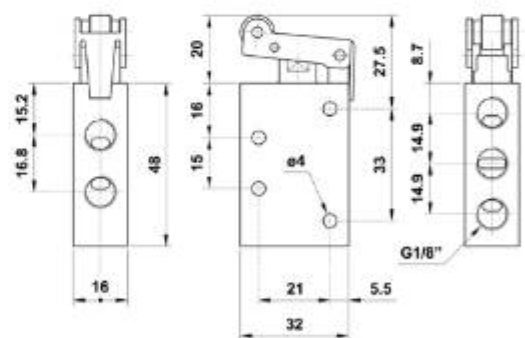
03V R0 3 NC 02



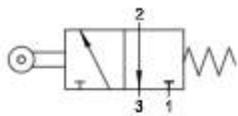
03V G0 5 00 02



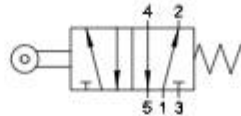
03V R0 5 00 02



3/2
LONG ROLLER - SPRING RETURN



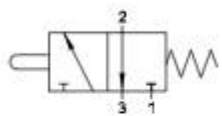
5/2
LONG ROLLER - SPRING RETURN



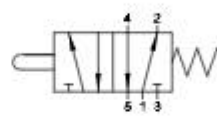
Part No.	Function	Size	Driving Force	Pack.
03V Z0 3 NC 02	3/2 NC	G 1/8	8.3 N	1

Part No.	Function	Size	Driving Force	Pack.
03V Z0 5 00 02	5/2	G 1/8	14.2 N	1

3/2
LEVER OPERATED - SPRING RETURN



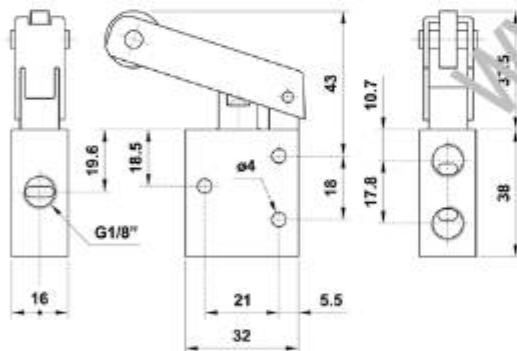
5/2
LEVER OPERATED - SPRING RETURN



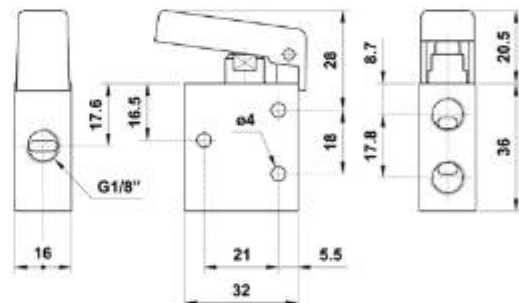
Part No.	Function	Size	Driving Force	Pack.
03V H0 3 NC 02	3/2 NC	G 1/8	7.8 N	1

Part No.	Function	Size	Driving Force	Pack.
03V H0 5 00 02	5/2	G 1/8	13.7 N	1

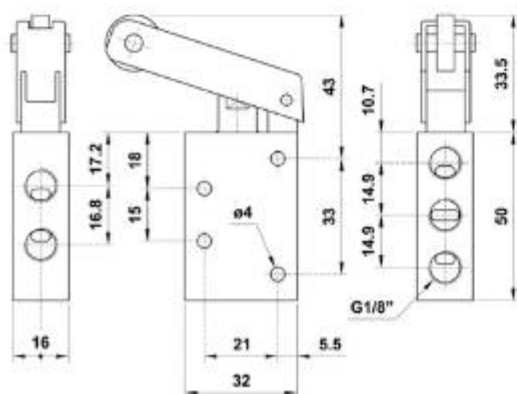
03V Z0 3 NC 02



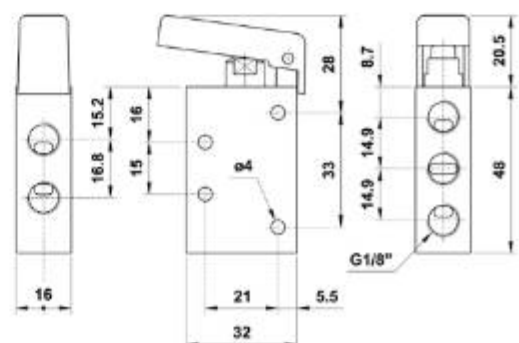
03V H0 3 NC 02



03V Z0 5 00 02



03V H0 5 00 02



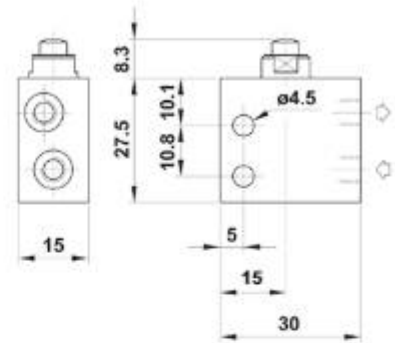
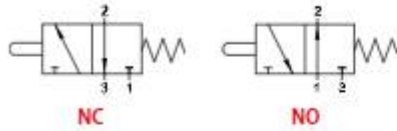
PANEL, PUSH BUTTON AND SELECTOR VALVES



MICRO VALVES

3/2

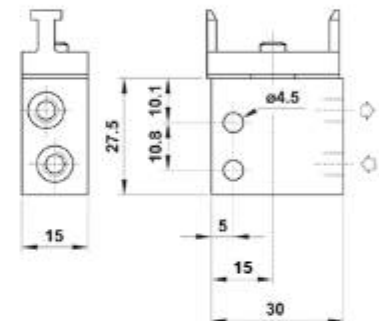
TAPPET - SPRING RETURN



Part No.	Function	Size	Pack.
02V G0 3 NC B5	3/2 NC	M5 (metric)	1
02V G0 3 NO B5	3/2 NO	M5 (metric)	1

3/2

PANEL MOUNTED ACTUATOR - SPRING RETURN



Part No.	Function	Size	Pack.
02V D0 3 NC B5	3/2 NC	M5 (metric)	1
02V D0 3 NO B5	3/2 NO	M5 (metric)	1

INTERFACE FOR CONNECTION BUTTON

Part No.	Function	Pack.
04V 06 0 00 01	SINGLE	1
04V 06 0 00 02	DOUBLE	1



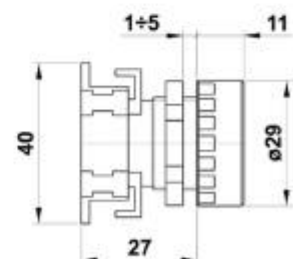
04V 06 0 00 02

04V 06 0 00 01

PUSH BUTTON AND SELECTOR

PROTECTED PUSH BUTTON

Part No.	Standard Color	Pack.
04V 01 0 00 01		1



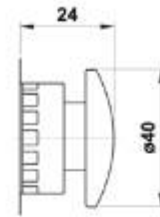
Part No.	Color	Pack.
04V 01 P 00 VE		1
04V 01 P 00 GI		1
04V 01 P 00 AZ		1



The following colors can be ordered separately.

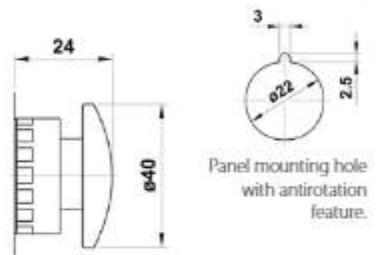
AXIAL MONO-STABLE MUSHROOM

Part No.	Color	Pack.
04V 02 0 0N 01	Black	1
04V 02 0 0R 01	Red	1



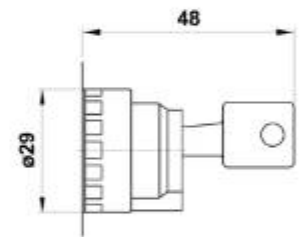
TURN TO UNLOCK MUSHROOM

Part No.	Color	Pack.
04V 02 0 0R 02	Red	1



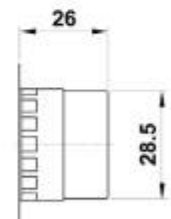
KEY SELECTOR

Part No.	Color	Function	Position to pull the key out	Pack.
04V 03 0 00 01	Black	0 - 1	Only in central position	1
04V 03 0 00 02	Black	0 - 1	Both position	1
04V 03 0 00 03	Black	2 - 0 - 1	Only in central position	1



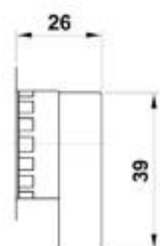
SHORT LEVER SELECTOR

Part No.	Color	Function	Pack.
04V 04 0 0N 01	Black	0 1	1
04V 04 0 0N 02	Black	0 ← 1	1
04V 04 0 0N 03	Black	2 0	1
04V 04 0 0N 04	Black	2 → 0 ← 1	1



LONG LEVER SELECTOR

Part No.	Color	Function	Pack.
04V 05 0 0N 01	Black	0 1	1
04V 05 0 0N 02	Black	0 ← 1	1
04V 05 0 0N 03	Black	2 0	1
04V 05 0 0N 04	Black	2 → 0 ← 1	1



18 MM VDMA VALVES

05V



18 MM SOLENOID PILOT VALVES - VDMA



TECHNICAL CHARACTERISTICS



Reference Standard

- 1907/2006
REACH ✓
- 2011/65/CE
RoHS ✓
- PED
2014/68/UE
- ISO 15407-1**
VDMA 24563 SIZE 02 (18 mm)



Component Parts and Materials

- Anodised aluminium body
- Nickel-plated spool
- NBR seals

	6 bar FLOW RATE with Δp 1 bar	550 NI/min
	OPERATING PRESSURE	Monostable 2.5 ÷ 10 bar 36.5 ÷ 145 pst
		Bistable 1 ÷ 10 bar 14.5 ÷ 145 pst
	TEMPERATURE	min -10 °C 14 °F
		max +60 °C 140 °F
	SOLENOID VOLTAGE	24V DC ÷ 24V AC
	MINIMUM POWER	2W - 3VA
	MANUAL CONTROL	MONOSTABLE
	Response time	Monostable TRA = 13 ms TRR = 26 ms
		Bistable TRA-TRR = 24 ms

TRA – Response time with energised coil

TRR – Response time with deenergised coil

Series	Actuation	Reactuation	Function	Size
0 5 V	S S = Solenoid	0 0 = Monostable spring return 1 = Bistable	7 3 = 3/2 5 = 5/2 7 = 5/3	CC CC = All Ports Blocked OC = Normally exhausted 00 = Function not provided
				0 0 00 = 24V DC 01 = 24V AC

5/2

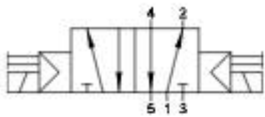
SINGLE SOLENOID PILOT - SPRING RETURN



Part No.	Function	Solenoid	Pack.
05V S0 5 00 00	5/2	24V DC	1
05V S0 5 00 01	5/2	24V 50/60Hz	1

5/2

DOUBLE SOLENOID PILOT



Part No.	Function	Solenoid	Pack.
05V S1 5 00 00	5/2	24V DC	1
05V S1 5 00 01	5/2	24V 50/60Hz	1



5/3

DOUBLE SOLENOID PILOT - SPRING CENTERED

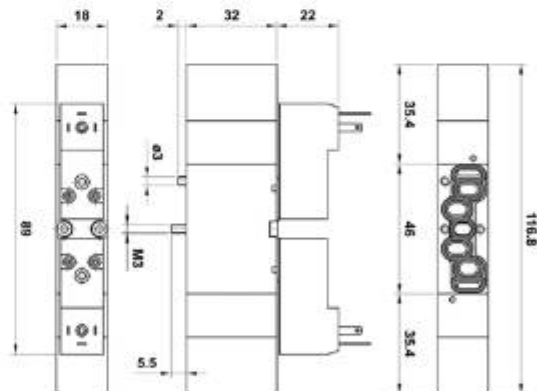
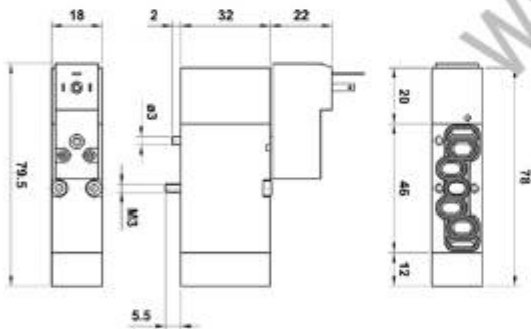


Part No.	Function	Solenoid	Pack.
05V S0 7 CC 00	5/3 CC	24V DC	1
05V S0 7 OC 00	5/3 OC	24V DC	1
05V S0 7 CC 01	5/3 CC	24V 50/60Hz	1
05V S0 7 OC 01	5/3 OC	24V 50/60Hz	1

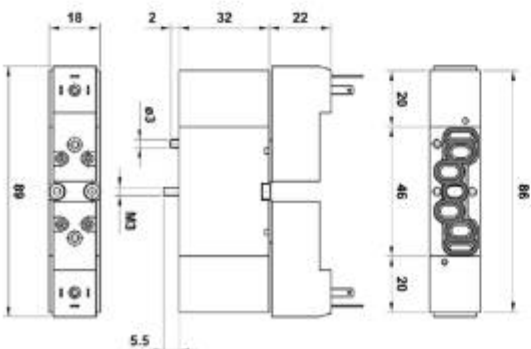


05V S0 5 00 00 05V S0 5 00 01

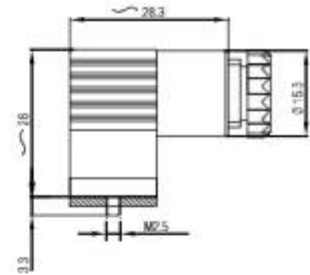
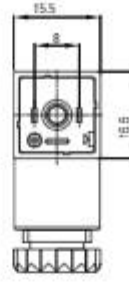
05V S0 7 CC 00 05V S0 7 OC 00 05V S0 7 CC 01 05V S0 7 OC 01



05V S1 5 00 00 05V S1 5 00 01



Connectors 15 mm



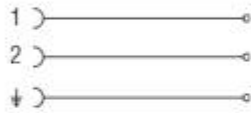
Part No.	Color	Characteristics	Pack.
CON11 000 01	■	STANDARD 2 PIN	1
CON12 024 00	□	LED + VDR 0 - 24V	1

Black
 Transparent

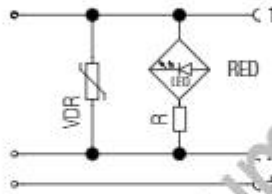
VDR: Fitted with varistors as surge protection device.



Wiring



CON11 000 01



CON12 024 00

DEGREE OF PROTECTION

IP65 IEC 60529

CABLE DIAMETER

4 ÷ 6 mm

TERMINALS

DIN 4365 C

18 MM AIR PILOT VALVES



TECHNICAL CHARACTERISTICS



Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

ISO 15407-1
VDMA 24563 SIZE 02 (18 mm)



Component Parts and Materials

- Anodised aluminium body
- Nickel-plated spool
- NBR seals

	6 bar FLOW RATE with Δp 1 bar	550 NI/min
	PRESSURE DRIVE	0 ÷ 10 bar 0 ÷ 145 psi
	OPTIMIZING PRESSURE	Monostable 2 ÷ 10 bar 29 ÷ 145 psi
		Bistable 1 ÷ 10 bar 14.5 ÷ 145 psi
	TEMPERATURE	min -10 °C 14 °F
		max +60 °C 140 °F
	RESPONSE TIME	Monostable TRA = 12 ms
		TRR = 24 ms
		Bistable TRA-TRR = 21 ms

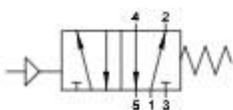
TRA = Response time with energised coil

TRR = Response time with deenergised coil

Series	Actuation	Reactuation	Function	Size
0 5 V	P P = Pneumatic	0 0 = Monostable spring return 1 = Bistable	5 5 = 5/2 7 = 5/3	0 0 CC = All Ports Blocked OC = Normally exhausted 00 = Function not provided

5/2

SINGLE AIR PILOT - SPRING RETURN



Part No.	Function	Pack.
05V P0 5 00 00	5/2	1

5/2

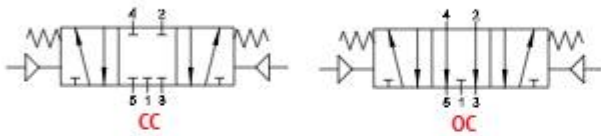
DOUBLE AIR PILOT



Part No.	Function	Pack.
05V P1 5 00 00	5/2	1

5/3

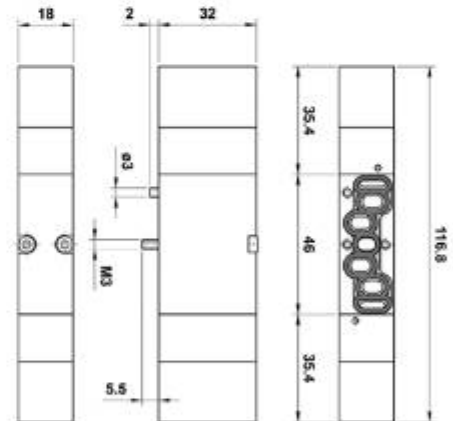
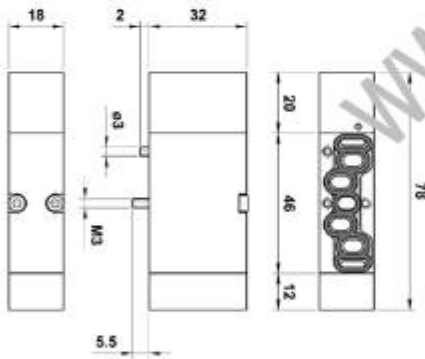
DOUBLE AIR PILOT - SPRING CENTERED



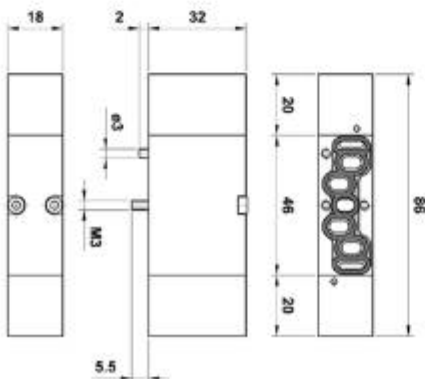
Part No.	Function	Pack.
05V P0 7 CC 00	5/3 CC	1
05V P0 7 OC 00	5/3 OC	1

05V P0 5 00 00

05V P0 7 CC 00 05V P0 7 OC 00



05V P1 5 00 00



MODULAR BASES AND ACCESSORIES

All the bases are supplied with screws and seals to secure the correct assembly.

FRONT MANIFOLD END PLATE



REAR MANIFOLD END PLATE



Part No.	Pack.
05V B1 0 00 00	1

Part No.	Pack.
05V B2 0 00 00	1

MODULAR BASE



INTERMEDIATE PRESSURE BASE

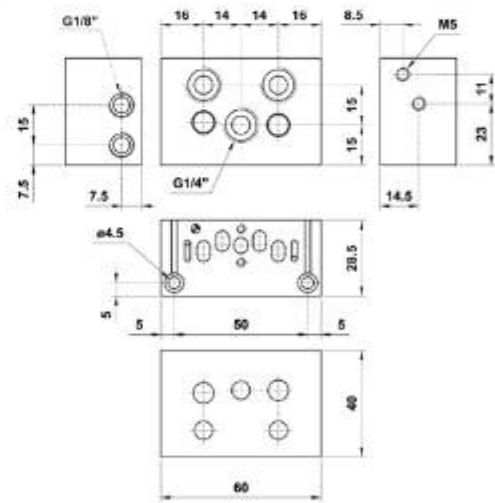
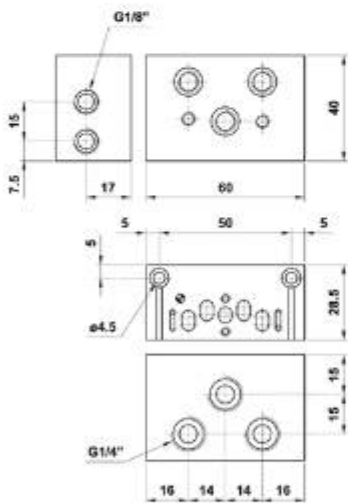


Part No.	Pack.
05V B3 0 00 00	1

Part No.	Pack.
05V B4 0 00 00	1

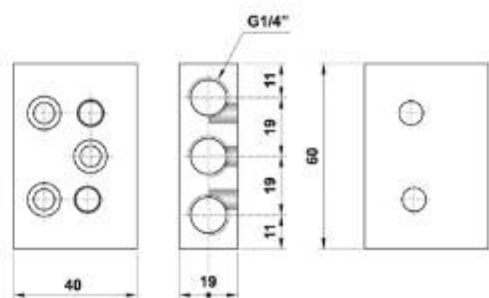
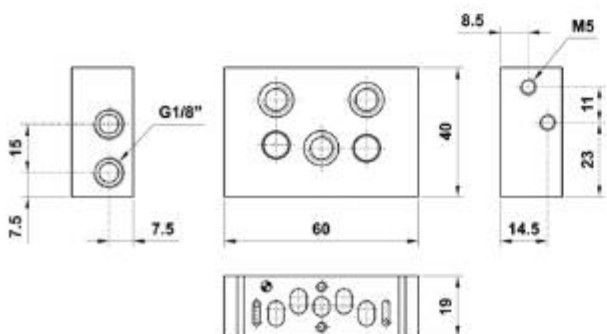
05V B1 0 00 00

05V B2 0 00 00



05V B3 0 00 00

05V B4 0 00 00



INTERMEDIATE PLUG



Part No.	Pack.
05V B8 0 00 00	1

GASKET FOR INTERMEDIATE PLUG



The gasket is supplied with M8 dowel.

Part No.	Pack.
05V B7 0 00 00	1

BLANKING PLATE



Part No.	Pack.
05V B9 0 00 00	1

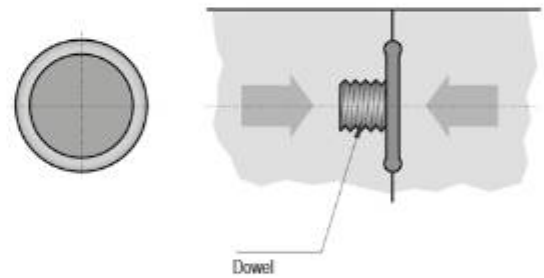
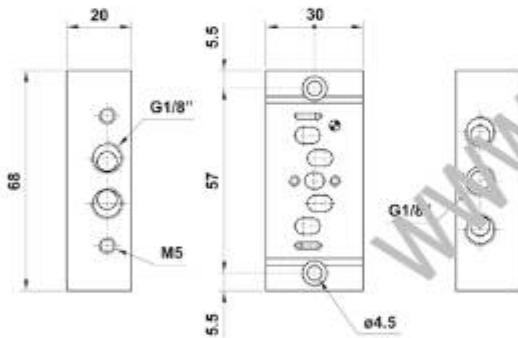
INDIVIDUAL BASE



Part No.	Pack.
05V B5 0 00 00	1

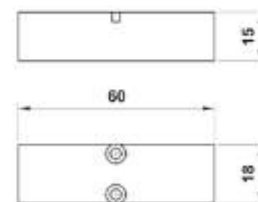
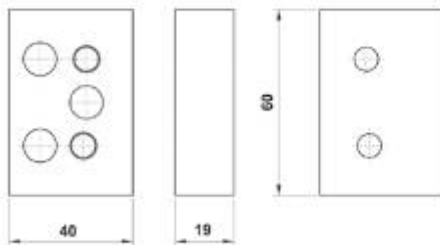
05V B5 0 00 00

05V B7 0 00 00



05V B8 0 00 00

05V B9 0 00 00



Example of assembling



PEDAL VALVES

A90



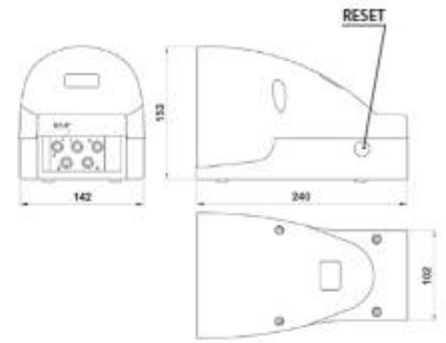


Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

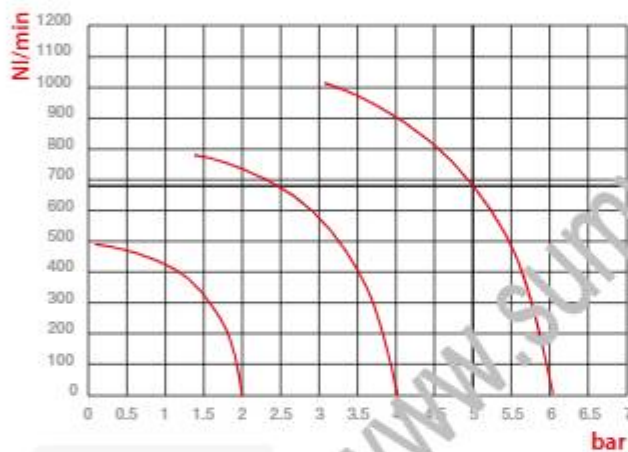


Functions

5/2	SUPPLY = (1)	3/2	SUPPLY = (1)
	OUTPUT = (2) (4)		OUTPUT = (2) (X)
	EXHAUST = (3) (5)		EXHAUST = (3) (5)



Flow Rates

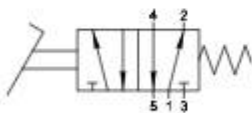


NI/min bar
Flow Pressures

		1/4
	THREADED	G 1/4
	OPERATING PRESSURE	2 - 10 bar 29 - 145 psi
	TEMPERATURE	max +60 °C 140 °F
	PROTECTION	TECHNOPOLYMER

5/2

PEDAL WITH PROTECTION COVER - SPRING RETURN



Part No.	Function	Size	Pack.
06V 00 0 00 01	5/2	G 1/4	1

5/2

PEDAL WITH PROTECTION COVER AND SAFETY FEATURE - SPRING RETURN



Part No.	Function	Size	Pack.
06V 00 0 00 02	5/2	G 1/4	1

5/2

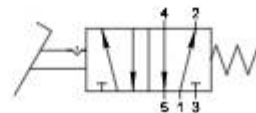
PEDAL WITH PROTECTION COVER DETENT - SPRING RETURN



Part No.	Function	Size	Pack.
06V 00 0 00 03	5/2	G 1/4	1

5/2

PEDAL WITH DETENT AND SAFETY LOCK - SPRING RETURN



Part No.	Function	Size	Pack.
06V 00 0 00 04	5/2	G 1/4	1

SOLENOID VALVES

A70





TECHNICAL CHARACTERISTICS



Reference Standard

- 1907/2006
REACH ✓
- 2011/65/CE
RoHS ✓
- PED
2014/68/UE
- ATEX
2014/34/UE



Component Parts and Materials

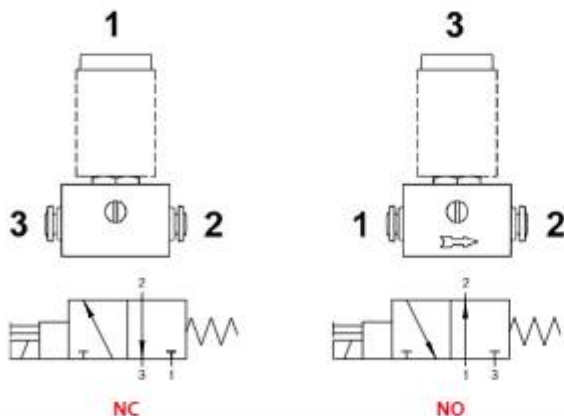
- Anodised aluminium body
- NBR seals

	THREADED	G 1/8 - automatic: Ø 5/32 - (4)
	6 bar FLOW RATE with Δp 1 bar	30 Nl/min
	OPERATING PRESSURE	0 - 10 bar 0 - 145 psi
	TEMPERATURE	min: -10 °C 14 °F max: +60 °C 140 °F
	SOLENOID VOLTAGE	24V DC - 12V DC - 24V AC 110V AC - 220V AC
	MINIMUM POWER	3W - 5VA
	MANUAL CONTROL	BISTABLE
	TORQUE OF TIGHTENING THE NUT SOLENOID	0.6 Nm

Series	Actuation	Reactuation	Function	Size
0 7 V	S	0	N C	0 2
	S = Solenoid with manual override	0 = Monostable spring return	NO = Normally open NC = Normally closed	02 = 1/8 X1 = Ø 5/32 (4)

3/2

SOLENOID WITH MANUAL OVERRIDE



SOLENOID WITH MANUAL OVERRIDE



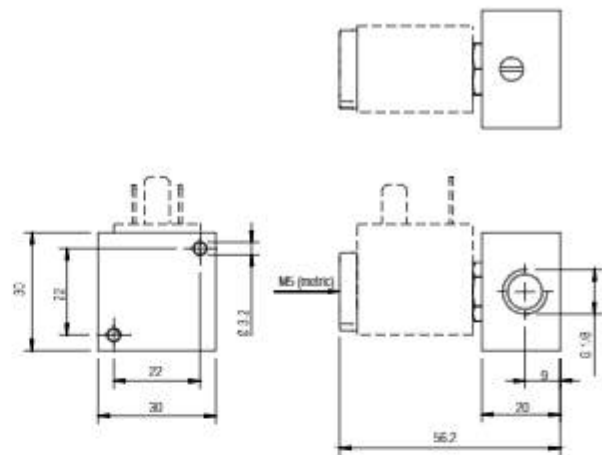
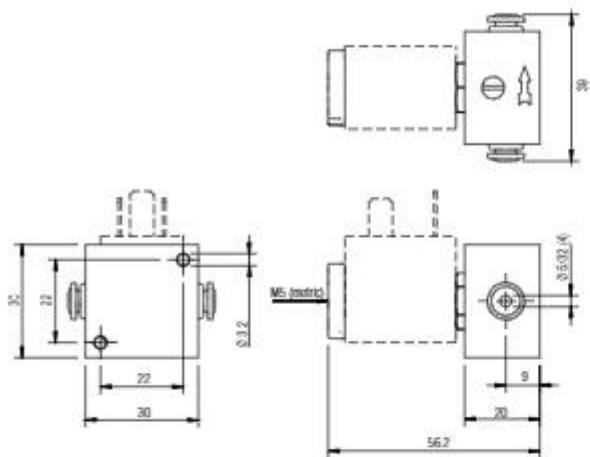
Part No.	Function	Size	Pack.
07V S0 3 NC 02	3/2 NC	G 1/8	1
07V S0 3 NC X1	3/2 NC	Ø 5/32 (4)	1
07V S0 3 NO 02	3/2 NO	G 1/8	1
07V S0 3 NO X1	3/2 NO	Ø 5/32 (4)	1

* 07V Y0 3 NC 02	3/2 NC	G 1/8	1
------------------	--------	-------	---

* Vacuum

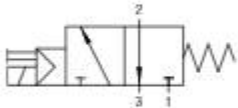
5/32 - (4)

G1/8

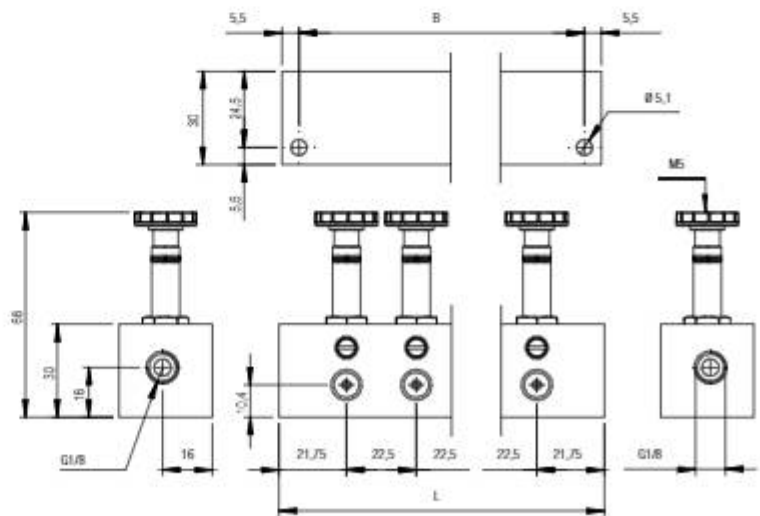


FIXED LENGTH MANIFOLD WITH MANUAL OVERRIDE

SOLENOID VALVES ON FIXED LENGTH MANIFOLD



Part No.	Function	B	L	Size	Pack.
07V B0 0 00 02	2	55	66	G 1/8	1
07V B0 0 00 03	3	77.5	88.5	G 1/8	1
07V B0 0 00 04	4	100	111	G 1/8	1
07V B0 0 00 05	5	122.5	133.5	G 1/8	1
07V B0 0 00 06	6	145	156	G 1/8	1
07V B0 0 00 07	7	167.5	178.5	G 1/8	1
07V B0 0 00 08	8	190	201	G 1/8	1
07V B0 0 00 09	9	212.5	223.5	G 1/8	1
07V B0 0 00 10	10	235	246	G 1/8	1

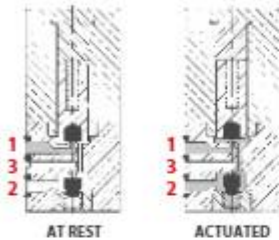


10 MM MINIATURE SOLENOID VALVES

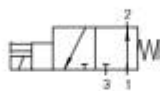
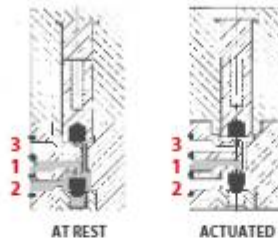


TECHNICAL CHARACTERISTICS

NORMALLY CLOSED (NC) 3/2



NORMALLY OPEN (NO) 3/2



Vacuum: 1 EXH
2 OUT
3 IN



Reference Standard

1907/2006
REACH

2011/65/CE
RoHS

PED
2014/68/UE

	MAX PRESSURE	Vacuum ± 7 bar Vacuum ± 101.5 psi
	TEMPERATURE	-5 ÷ 50 °C 23 ÷ 122 °F
	6 bar FLOW RATE with Δp 1 bar	14 NI/min
	EXHAUST FLOW	22 NI/min
	ORIFICE SIZE	0.7 mm
	MAX NUMBER OF CYCLES PER MINUTE	2700
	LIFE EXPECTANCY	50 MILLION CYCLES

	VOLTAGE	12 V DC ÷ 24V DC
	POWER	1.3 W
	VOLTAGE TOLERANCE	-5% +10%
	RESPONSE TIME WHEN ENERGIZED	8 ms
	RESPONSE TIME WHEN DE-ENERGIZED	10 ms
	CLASS OF PROTECTION	F (155 °C) F (311 °F)

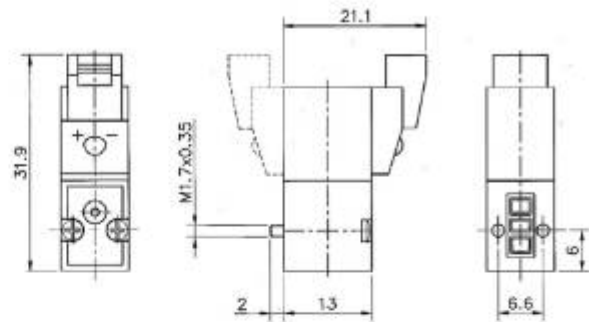
Series	Actuation	Reactuation	Function	Orifice size	Voltage
0 7 V	1 1 = 10 mm	1 1 = line connector + led 2 = 90° connector + led 3 = Cable (300 mm)	3 3 = 3/2	0 0 = 0.7 mm	0 0 = 12 V DC 1 = 24 V DC

3/2

10 MM SOLENOID VALVE WITH LINE CONNECTOR + LED

IP50

07V 11 3 NC 01 07V 11 3 NC 00 07V 11 3 NO 01 07V 11 3 NO 00



Part No.	Function	Vacuum	Solenoid	Pack.
07V 11 3 NC 01	3/2 NC	NO	24V DC	1
07V 11 3 NC 00	3/2 NC	NO	12V DC	1
07V 11 3 NO 01	3/2 NO	NC	24V DC	1
07V 11 3 NO 00	3/2 NO	NC	12V DC	1

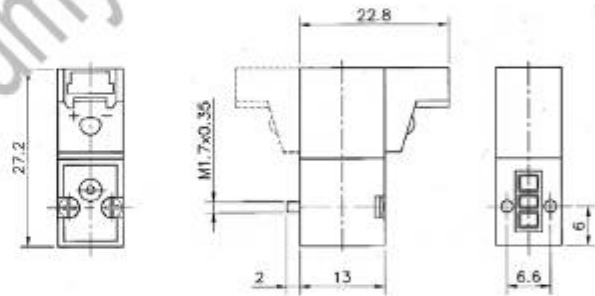
Item integrated with surge protector.

3/2

10 MM SOLENOID VALVE WITH 90° CONNECTOR + LED

IP50

07V 12 3 NC 01 07V 12 3 NC 00 07V 12 3 NO 01 07V 12 3 NO 00



Part No.	Function	Vacuum	Solenoid	Pack.
07V 12 3 NC 01	3/2 NC	NO	24V DC	1
07V 12 3 NC 00	3/2 NC	NO	12V DC	1
07V 12 3 NO 01	3/2 NO	NC	24V DC	1
07V 12 3 NO 00	3/2 NO	NC	12V DC	1

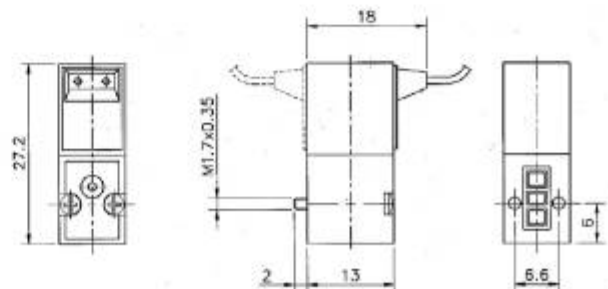
Item integrated with surge protector.

3/2

10 MM SOLENOID VALVE WITH CABLE (300 MM)

IP65

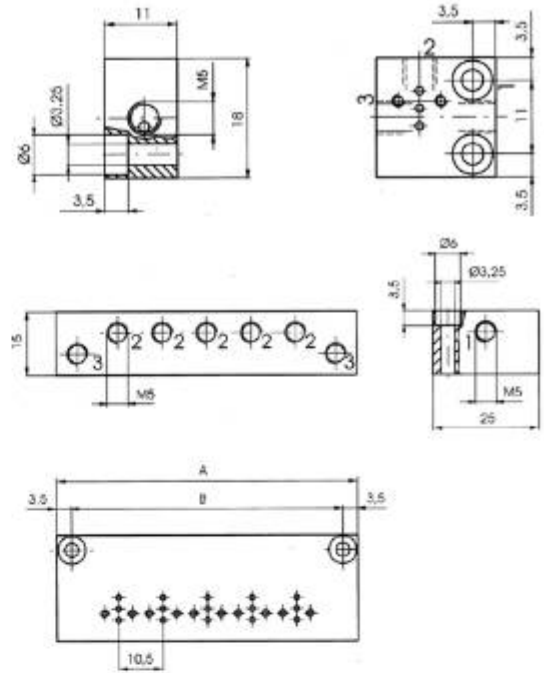
07V 13 3 NC 01 07V 13 3 NC 00 07V 13 3 NO 01 07V 13 3 NO 00



Part No.	Function	Vacuum	Solenoid	Pack.
07V 13 3 NC 01	3/2 NC	NO	24V DC	1
07V 13 3 NC 00	3/2 NC	NO	12V DC	1
07V 13 3 NO 01	3/2 NO	NC	24V DC	1
07V 13 3 NO 00	3/2 NO	NC	12V DC	1

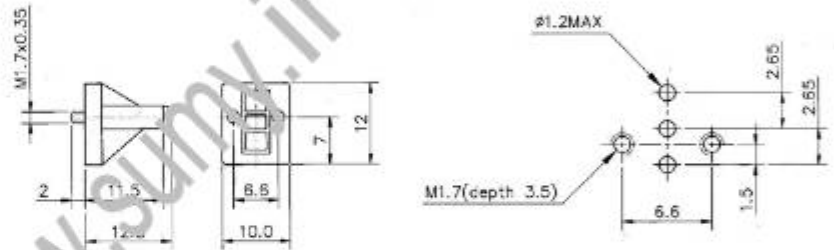
Item integrated with surge protector.

INDIVIDUAL AND FIXED LENGTH MANIFOLD BASES



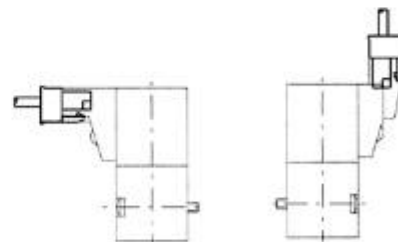
Part No.	Stations	A	B	Pack.
07V 1B 0 00 01	1	-	-	1
07V 1B 0 00 02	2	39.5	32.5	1
07V 1B 0 00 06	6	81.5	74.5	1
07V 1B 0 00 08	8	102.5	95.5	1

BLANKING PLATE



Part No.	Pack.
07V B1 9 00 00	1

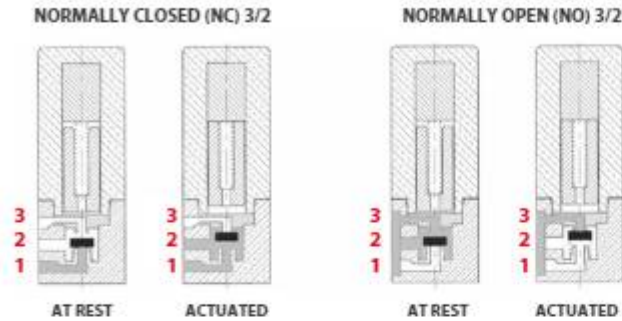
CONNECTOR WITH PVC CABLE



Part No.	Cable Length	Characteristics	Pack.
CON 21 0 24 00	500 mm	0÷24v	1
CON 21 0 24 01	1000 mm	0÷24v	1

15 MM MINIATURE SOLENOID VALVES

TECHNICAL CHARACTERISTICS



Vacuum: 1 EXH
2 OUT
3 IN



Reference Standard

1907/2006 REACH ✓
2011/65/CE RoHS ✓
PED 2014/68/UE
ISO 15218

	OPERATING PRESSURE	NO NC	0 ÷ 7 bar 0 ÷ 101.5 psi 0 ÷ 10 bar 0 ÷ 145 psi
	TEMPERATURE		- 5 ÷ 50 °C 23 °F ÷ 122 °F
	6 bar FLOW RATE with Δp 1 bar		30 Nl/min
	ORIFICE SIZE		1.1 mm
	LIFE EXPECTANCY		50 MILLION CYCLES
	VOLTAGE		12 VDC ÷ 24VDC

	POWER	2.3 W
	VOLTAGE TOLLERANCE	-5% +10%
	RESPONSE TIME WHEN ENERGIZED	10 ÷ 12 ms
	PROTECTION DEGREE	IP50 WITH CONNECTOR
	CLASS OF PROTECTION	F (155 °C) F (311 °F)

Series	Actuation	Reactuation	Function	Orifice size	Voltage	
0 7 V	2 2 = 15 mm	0 0 = For terminals DIN 43650C	3 3 = 3/2	NC NO = Normally open NC = Normally closed	1 1 = 1.1 mm	0 0 = 12 VDC 1 = 24 VDC



SOLENOID PILOT VALVES



TECHNICAL CHARACTERISTICS



Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

ATEX
2014/34/UE

VDI/VDE 3845



Component Parts and Materials

- Anodised and painted aluminium body
- Chemical nickel-plated spool
- NBR seals

		1/4
	THREADED	G 1/4 - NPTF 1/4
	6 bar FLOW RATE with Δp 1 bar	1200 Nl/min
	OPERATING PRESSURE	Monostable 2 - 10 bar 29 - 145 psi
		Bistable 1 - 10 bar 14.5 - 145 psi
	TEMPERATURE	min -10 °C 14 °F
		max +60 °C 140 °F
	SOLENOID VOLTAGE	24V DC - 12V DC - 24V AC 110V AC - 220V AC
	MINIMUM POWER	2W - 3VA
	MANUAL CONTROL	BISTABLE
	TORQUE OF TIGHTENING THE NUT SOLENOID	0.6 Nm

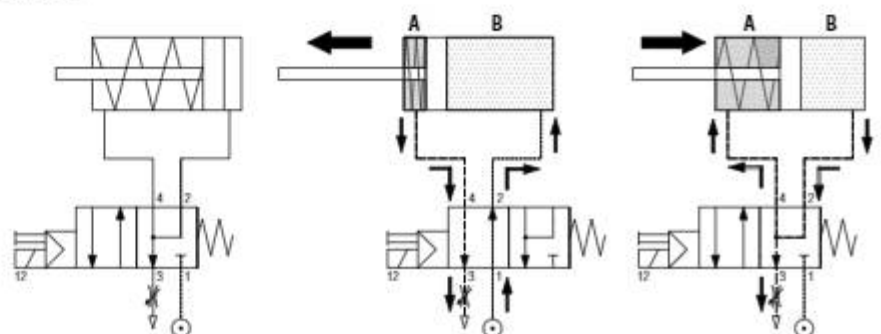
www.sumy.fr

Series	Actuation	Reaction	Function	Size	Thread	
0 8 V	S S = Solenoid	0 0 = Monostable spring return 1 = Bistable	4 4 = 4/2 5 = 5/2	NC NC = Normally closed 00 = Function not provided	0 3 03 = 1/4	G N = NPTF



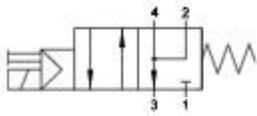
Schematic diagram of the valve NAMUR 4/2

To prevent the return phase of the external dirty air enters the chamber in the cylinder, the air escaping from the chamber B is routed to the same room.



4/2

SINGLE SOLENOID PILOT - SPRING RETURN

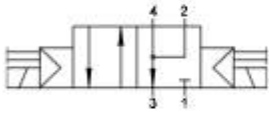


Part No.	Function	Size	Pack.
08V S0 4 NC 03	4/2 NC	G 1/4	1

Part No.	Function	Size	Pack.
08V S0 4 NC 03 N	4/2 NC	NPTF 1/4	1

4/2

DOUBLE SOLENOID PILOT

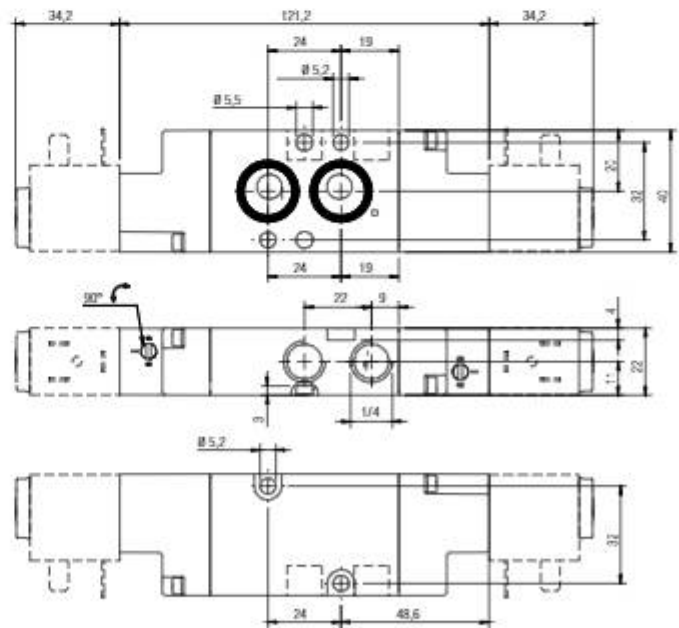
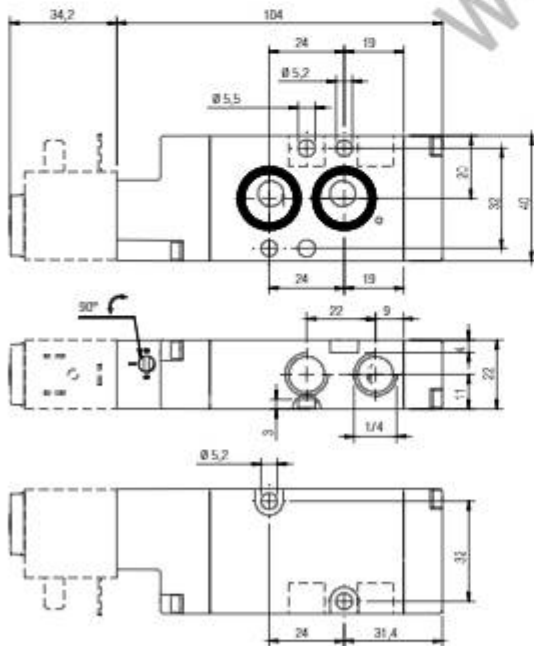


Part No.	Function	Size	Pack.
08V S1 4 00 03	4/2	G 1/4	1

Part No.	Function	Size	Pack.
08V S1 4 00 03 N	4/2	NPTF 1/4	1

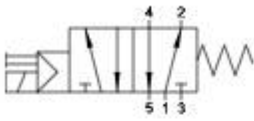
08V S0 4 NC 03 08V S0 4 NC 03 N

08V S1 4 00 03 08V S1 4 00 03 N



5/2

SINGLE SOLENOID PILOT - SPRING RETURN

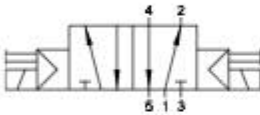


Part No.	Function	Size	Pack.
08V S0 5 00 03	5/2	G 1/4	1

Part No.	Function	Size	Pack.
08V S0 5 00 03 N	5/2	NPTF 1/4	1

5/2

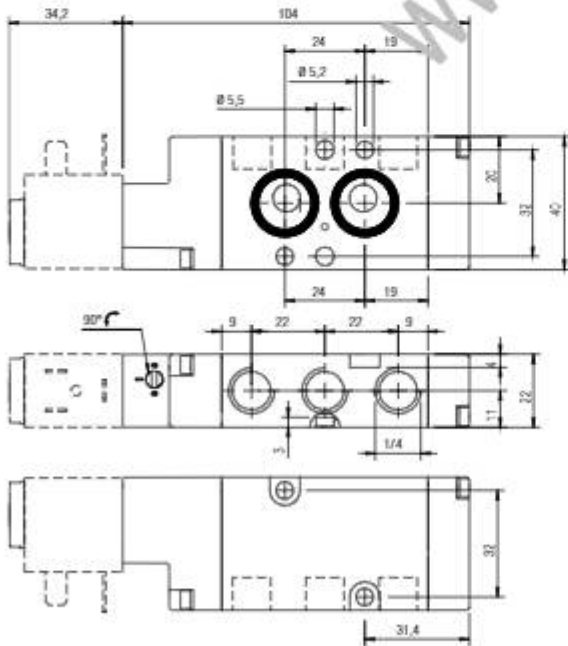
DOUBLE SOLENOID PILOT



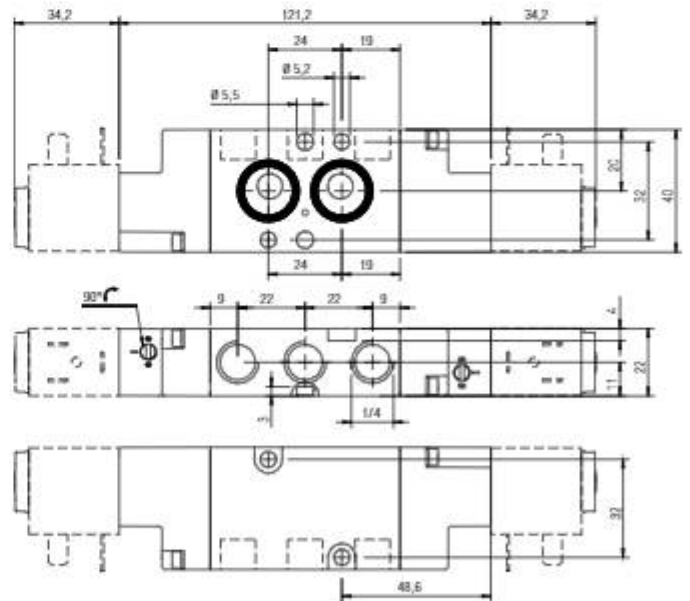
Part No.	Function	Size	Pack.
08V S1 5 00 03	5/2	G 1/4	1

Part No.	Function	Size	Pack.
08V S1 5 00 03 N	5/2	NPTF 1/4	1

08V S0 5 00 03 08V S0 5 00 03 N

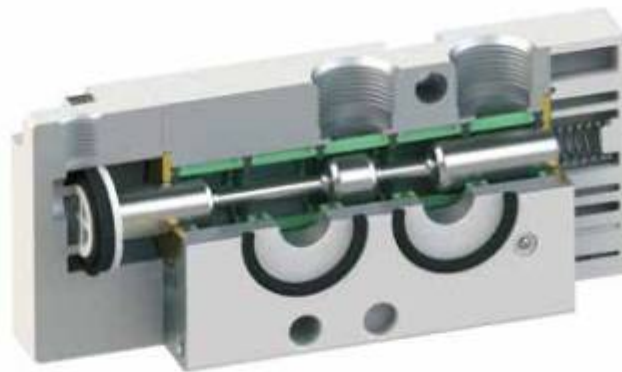


08V S1 5 00 03 08V S1 5 00 03 N



AIR PILOT VALVES

TECHNICAL CHARACTERISTICS



Reference Standard

1907/2006 REACH ✓
 2011/65/CE RoHS ✓
 PED 2014/68/UE
 ATEX 2014/34/UE

VDI/VDE 3845

Component Parts and Materials

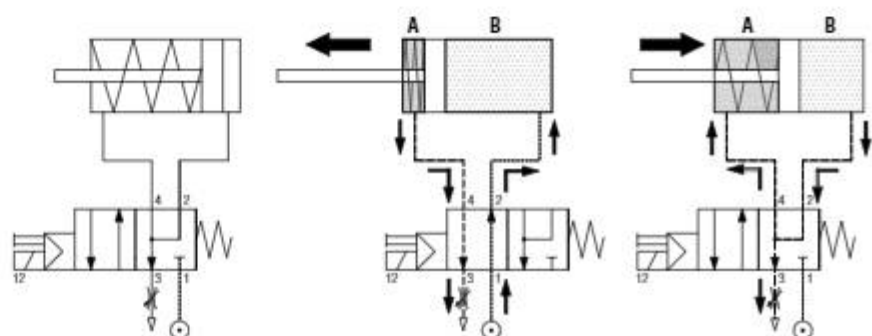
- Anodised and painted aluminium body
- Chemical nickel-plated spool
- NBR seals

		1/4	
	THREADED	G 1/4 - NPTF 1/4	
	Flow RATE with Δp 1 bar	1200 Nl/min	
	OPERATING PRESSURE	0 - 10 bar 0 - 145 psi	
	PRESSURE DRIVE	Monostable	2 - 10 bar 29 - 145 psi
		Bistable	1 - 10 bar 14.5 - 145 psi
	TEMPERATURE	min	-10 °C 14 °F
		max	+60 °C 140 °F

Series	Actuation	Reactuation	Function	Size	Thread	
0 8 V	P P = Pneumatic	0 0 = Monostable spring return 1 = Bistable	4 4 = 4/2 5 = 5/2	NC NC = Normally closed 00 = Function not provided	0 3 03 = 1/4	 = G N = NPTF

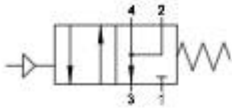
Schematic diagram of the valve NAMUR 4 / 2

To prevent the return phase of the external dirty air enters the chamber in the cylinder, the air escaping from the chamber B is routed to the same room.



4/2

SINGLE AIR PILOT - SPRING RETURN

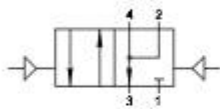


Part No.	Function	Size	Pack.
08V P0 4 NC 03	4/2 NC	G 1/4	1

Part No.	Function	Size	Pack.
08V P0 4 NC 03 N	4/2 NC	NPTF 1/4	1

4/2

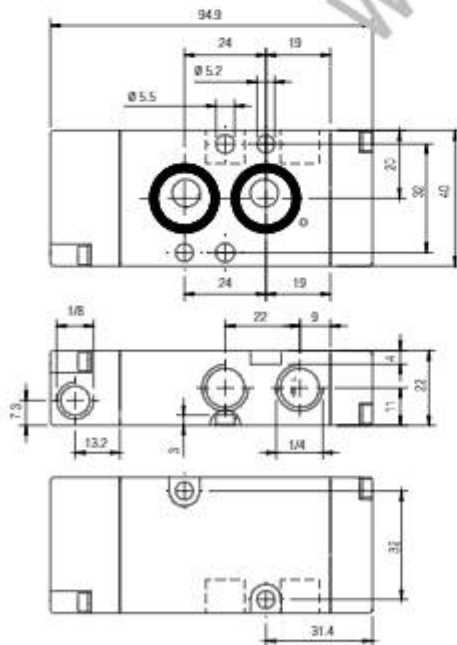
DOUBLE AIR PILOT



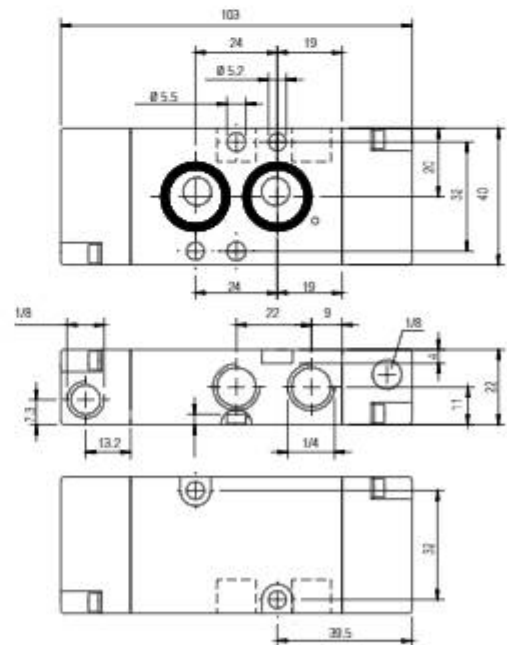
Part No.	Function	Size	Pack.
08V P1 4 00 03	4/2	G 1/4	1

Part No.	Function	Size	Pack.
08V P1 4 00 03 N	4/2	NPTF 1/4	1

08V P0 4 NC 03 08V P0 4 NC 03



08V P1 4 00 03 08V P1 4 00 03 N



5/2

SINGLE AIR PILOT - SPRING RETURN

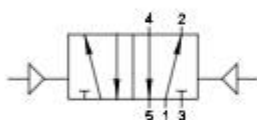


Part No.	Function	Size	Pack.
08V P0 5 00 03	5/2	G 1/4	1

Part No.	Function	Size	Pack.
08V P0 5 00 03 N	5/2	NPTF 1/4	1

5/2

DOUBLE AIR PILOT

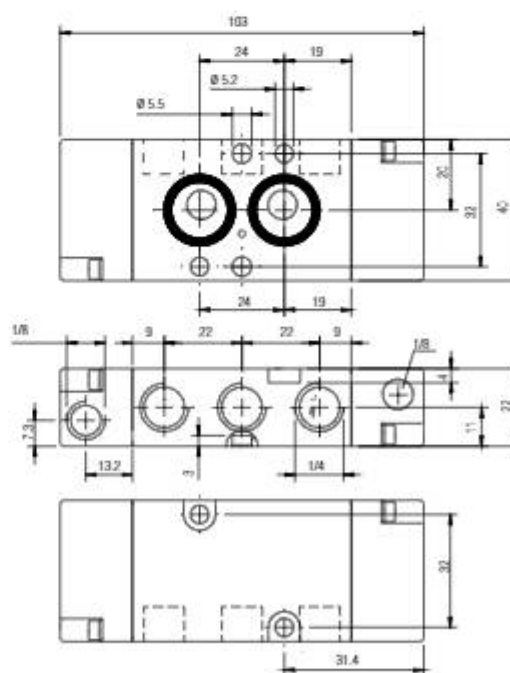
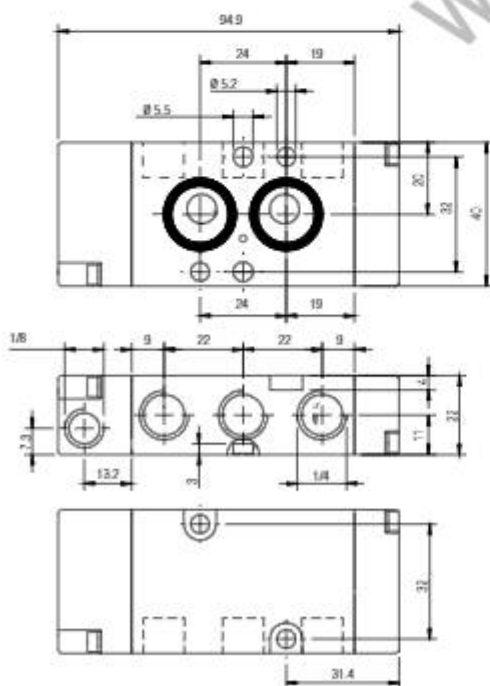


Part No.	Function	Size	Pack.
08V P1 5 00 03	5/2	G 1/4	1

Part No.	Function	Size	Pack.
08V P1 5 00 03 I	5/2	NPTF 1/4	1

08V P0 5 00 03 08V P0 5 00 03 N

08V P1 5 00 03 08V P1 5 00 03 N







TECHNICAL CHARACTERISTICS



Reference Standard

1907/2006

REACH ✓

2011/65/CE

RoHS ✓

PED

2014/68/UE

ISO 5599
SIZE 1



Component Parts and Materials

- Anodised aluminium body
- Nickel-plated spool
- NBR seals

	6 bar FLOW RATE with Δp 1 bar		1100 NI/min
	OPERATING PRESSURE	Monostable	2.5 ÷ 10 bar 36.2 ÷ 145 psi
		Bistable	1 ÷ 10 bar 14.5 ÷ 145 psi
	TEMPERATURE	min	-10 °C 14 °F
		max	+60 °C 140 °F
	MINIMUM POWER		3W - 5VA
	MANUAL CONTROL		Two stable positions
	RESPONSE TIME	Monostable	TRA – 24 ms
			TRR – 50 ms
		Bistable	TRA-TRR – 80 ms

TRA – Response time with energised coil

TRR – Response time with deenergised coil

Series	Actuation	Reactuation	Ways	Function
1 0 V	S	0	7	CC CC 0 0
	S = Solenoid	0 = Monostable spring return 1 = Bistable	5 = 5/2 7 = 5/3	CC = Normally closed OC = Normally exhausted PC = Normally pressurized 00 = Function not provided

5/2

MONOSTABLE SPRING RETURN



Part No.	Ways	Pack.
10V S0 5 00 00	5/2	1

5/2

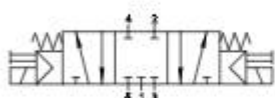
TWO STABLE POSITIONS



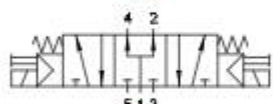
Part No.	Ways	Pack.
10V S1 5 00 00	5/2	1

5/3

MONOSTABLE SPRING RETURN



CC



PC



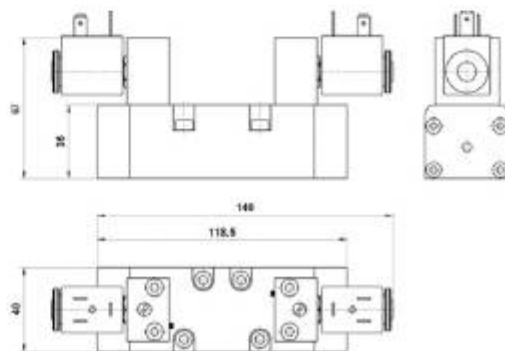
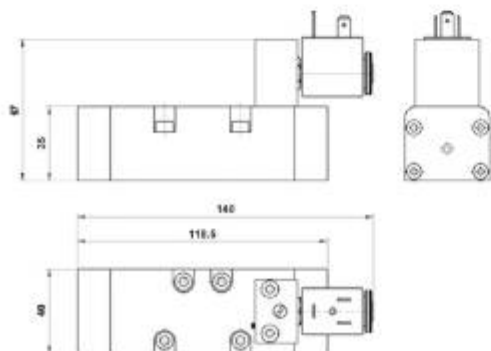
OC



Part No.	Ways	Function	Pack.
10V S0 7 CC 00	5/3	CC	1
10V S0 7 OC 00	5/3	OC	1
10V S0 7 PC 00	5/3	PC	1

10V S0 5 00 00

10V S1 5 00 00 10V S0 7 OC 00
10V S0 7 CC 00 10V S0 7 PC 00



All the bases are supplied with screws and seals to secure the correct assembly.

FRONT TERMINAL



Part No.	Pack.
10V B1 0 00 00	2

MODULAR BASE



Part No.	Pack.
10V B3 0 00 00	1

INDIVIDUAL BASE



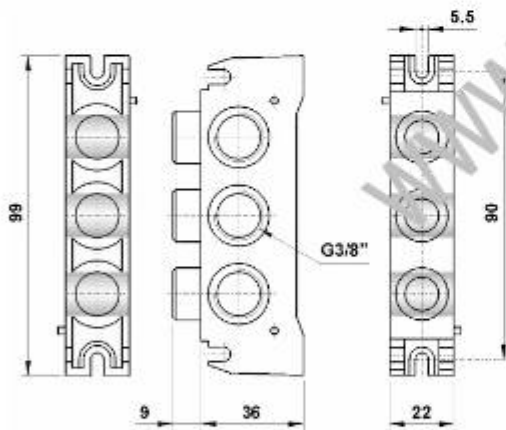
Part No.	Pack.
10V B5 0 00 00	1

CLOSING PLATE

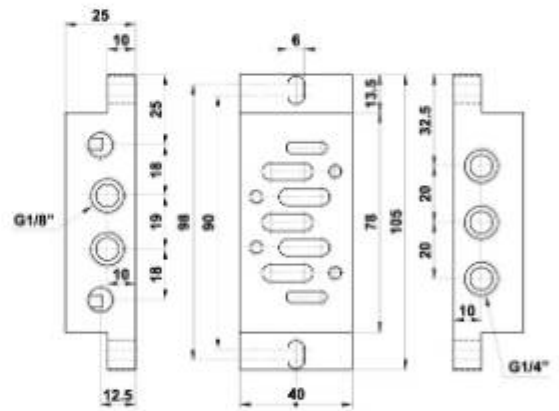


Part No.	Pack.
10V B9 0 00 00	1

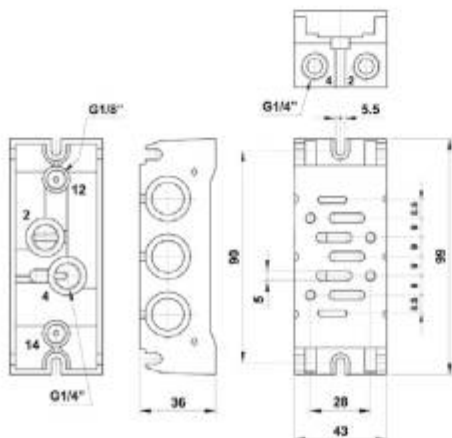
10V B1 0 00 00



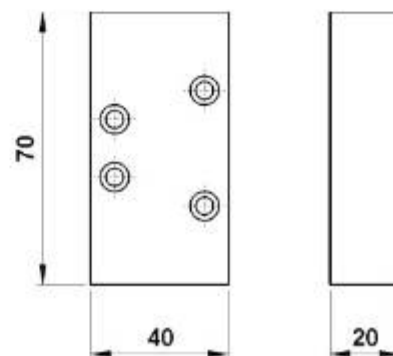
10V B5 0 00 00



10V B3 0 00 00



10V B9 0 00 00







TECHNICAL CHARACTERISTICS



Reference Standard

1907/2006

REACH ✓

2011/65/CE

RoHS ✓

PED

2014/68/UE

ISO 5599

SIZE 2



Component Parts and Materials

- Anodised aluminium body
- Nickel-plated spool
- NBR seals

	6 bar FLOW RATE with Δp 1 bar	2500 NI/min
	OPERATING PRESSURE	Monostable 2.5 ÷ 10 bar 36.2 ÷ 145 psi
		Bistable 1 ÷ 10 bar 14.5 ÷ 145 psi
	TEMPERATURE	min -10 °C 14 °F
		max +60 °C 140 °F
	MINIMUM POWER	3W - 5VA
	MANUAL CONTROL	Two stable positions
	RESPONSE TIME	Monostable TRA = 35 ms TRR = 60 ms
		Bistable TRA-TRR = 90 ms

TRA – Response time with energised coil

TRR – Response time with deenergised coil

Series	Actuation	Reaction	Ways	Function
1 1 V	S	0	7	C C 0 0
	S = Solenoid	0 = Monostable spring return 1 = Bistable	5 = 5/2 7 = 5/3	CC = Normally closed OC = Normally exhausted PC = Normally pressurized 00 = Function not provided

5/2

MONOSTABLE SPRING RETURN



Part No.	Ways	Pack.
11V S0 5 00 00	5/2	1

5/2

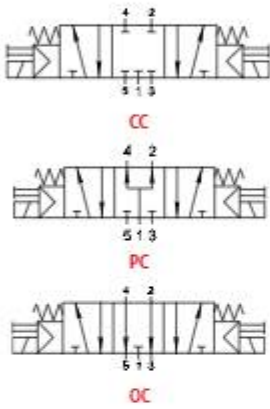
TWO STABLE POSITIONS



Part No.	Ways	Pack.
11V S1 5 00 00	5/2	1

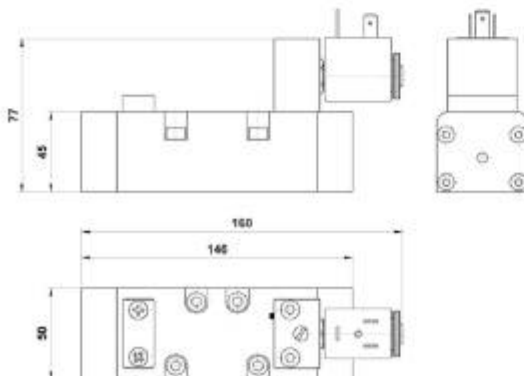
5/3

MONOSTABLE SPRING RETURN

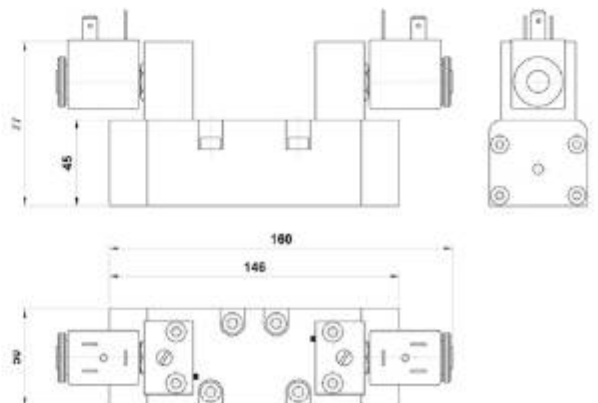


Part No.	Ways	Function	Pack.
11V S0 7 CC 00	5/3	CC	1
11V S0 7 OC 00	5/3	OC	1
11V S0 7 PC 00	5/3	PC	1

11V S0 5 00 00



11V S1 5 00 00 11V S0 7 OC 00
11V S0 7 CC 00 11V S0 7 PC 00



All the bases are supplied with screws and seals to secure the correct assembly.

FRONT TERMINAL



Part No.	Pack.
11V B1 0 00 00	2

MODULAR BASE



Part No.	Pack.
11V B3 0 00 00	1

INDIVIDUAL BASE



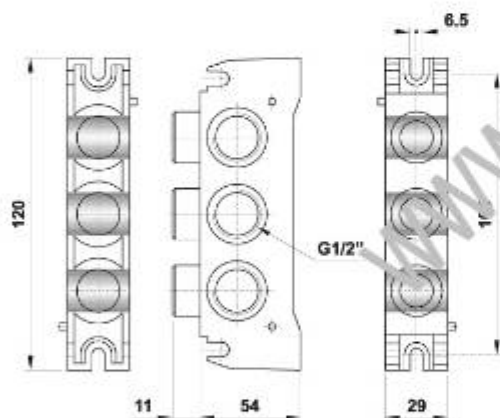
Part No.	Pack.
11V B5 0 00 00	1

CLOSING PLATE

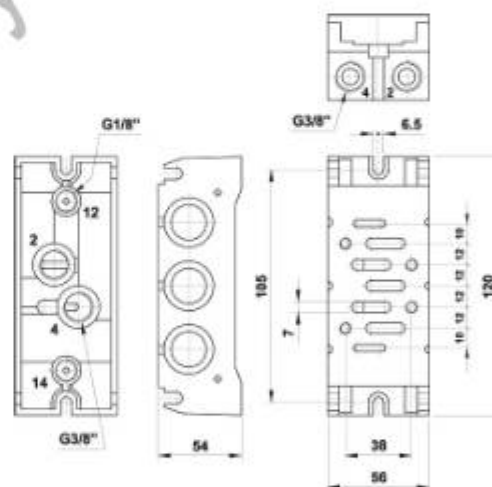


Part No.	Pack.
11V B9 0 00 00	1

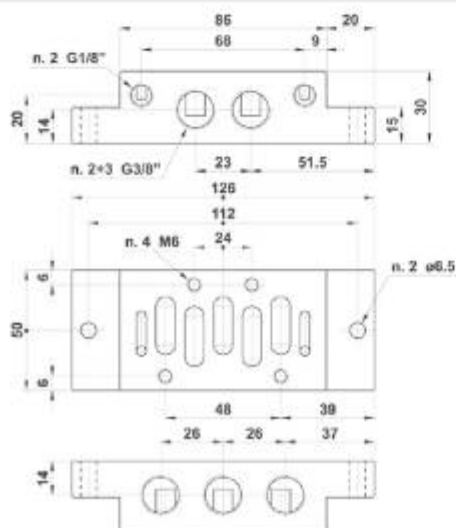
11V B1 0 00 00



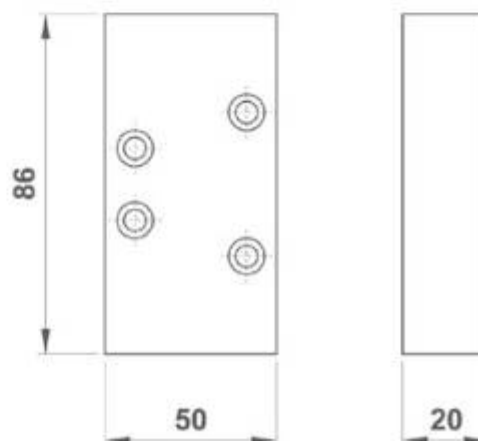
11V B3 0 00 00



11V B5 0 00 00



11V B9 0 00 00



Directive 2014/34/UE (ATEX)

The valves and accessories of the Series 01VP - 01VT - 01VL - 01VV - 01VN - 01VBxx - 08VP - 01VA - 01VS - 07VS - 07VB - 08VS show the following features:


II 2 GD c T6 -10°C<Tamb<60°C

II 2 GD: Device for surface installations (II – do not use device in mining) with presence of gas, vapors of powders of category 2 (equipment with high safety factor since it excludes danger of explosion, even in case of damage, it can be used in areas with possible explosive environments).

c: Devices are constructively safe


T6 – 10°C<Tamb<60°C: Surface temperature class and additional marking for T usage environment.





TECHNICKÁ INŠPEKCIA, a.s.

SLOVENSÁ REPUBLIKA



ACKNOWLEDGEMENT OF RECEIPT

no. 1175/5/2015

Technická inšpekcia, a. s.,
 Trnavská cesta 56, 821 01 Bratislava
 Notified body: 1354,

confirms, that Technical File Documentation


prepared by

Aignep S.p.A.
Via Don G. Bazzoli 44, 25010 Bione (BS), Italy

has been received and stored according to the Directive 94/9/EC (ATEX) on equipment and protective systems intended for use in potentially explosive atmospheres

scope of Ex Equipment:

Pneumatic, manual pilot-levor and servo-piloted valves, with related accessories
Models 01VP, 01VT, 01VL, 01VV, 01VN, 01VBxx, 08VP.
Solenoid assisted and pilot valves, single or multiple solenoid valves on manifold with manual override and individual or multiple bases for miniature ones
Models 01VA, 01VS, 07VS, 07VB, 08VS


Classification:  **II 2 GD c T6 -10°C<Tamb<60°C**

Technical File Documentation


Doc. no.	Issue
Technical Book according to 94/9/EC	20/3/2015 Rev.0

Technical documentation will be stored for 10 years until July 22nd, 2025.

Bratislava, July 22nd, 2015



On behalf of Technická inšpekcia, a.s.


Ing. Dušan Konický
 General Director

301018
 PDOKA1-41

See Instructions and Certificate at:
WWW.AIGNEP.COM

Actuators

NFPA Cylinders

Ø 1 1/2"- 5"



NFPA Series

Pg. 14.3

NFPA Cylinder Accessory section

Ø 1 1/2"- 5"



NFPA Series

Pg. 14.5

Cartridge Cylinders

Ø 6-16 mm



CA - CAF Series

Pg. 14.11

Mini Cylinders ISO 6432

Ø 8-25 mm



Mini Series

Pg. 14.13

Mini Stainless Steel ISO 6432

Ø 16-25 mm



Mini Stainless Steel Series

Pg. 14.21

Limited Space

Ø 32-63 mm



A95 Series

Pg. 14.24

Compact Cylinders

Ø 12-100 mm



Q Series

Pg. 14.31

ISO 15552 Cylinders

Ø 32-125 mm



X Series

Pg. 14.44

ISO 6431 Cylinders

Ø 32-320 mm



E Series

Pg. 14.49

Stainless Steel ISO 15552

Ø 32-100 mm



V Series

Pg. 14.51

Twin Rod Cylinders

Ø 32-100 mm



NHA Series

Pg. 14.54

Compact Cylinders

Ø 20-100 mm



W Series

Pg. 14.58

Cylinder Accessories

ISO 6431 - ISO 15552 - ISO 21287



Pg. 14.66

Guided Units

ISO 15552 - Ø 12-25 mm
ISO 6431 VDMA - Ø 32-100 mm



Pg. 14.75

Rodless Cylinders

Ø 32-100 mm



R Series

Pg. 14.84

Rotary Actuators

Ø 32-100 mm



XR Series

Pg. 14.95

Magnetic Position Sensing Switches



Switches

Pg. 14.98

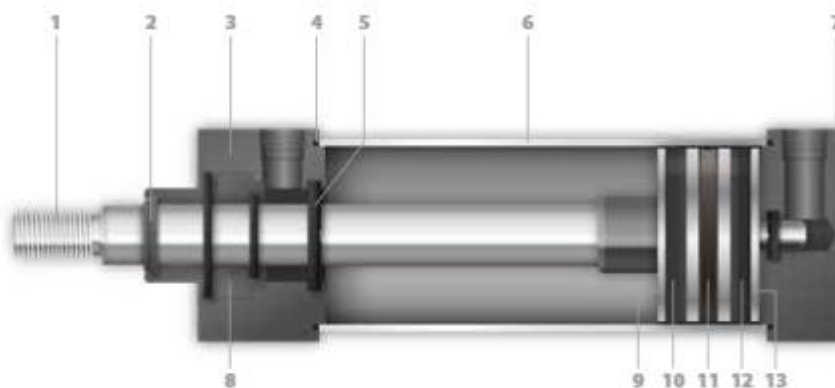
PNEUMATIC ACTUATORS



Actuators



TECHNICAL CHARACTERISTICS



Component Parts and Materials

- 1 Chrome Steel Piston Rod
- 2 Polyurethane Rod Seal
- 3 Aluminium Cap
- 4 O-Ring Seal
- 5 Polyurethane cushion seals
- 6 Anodized Aluminium Extrusion
- 7 Aluminium Cap
- 8 Cast Iron Bearing
- 9 Aluminium Piston
- 10 Nitrile Piston Seal
- 11 Magnet
- 12 Nitrile Piston Seal
- 13 Aluminium Piston

Bore	Stroke							
	1"	2"	3"	4"	5"	6"	8"	10"
1.5"	•	•	•	•	•	•	•	•
2"	•	•	•	•	•	•	•	•
2.5"	•	•	•	•	•	•	•	•
3.25"	•	•	•	•	•	•	•	•
4"	•	•	•	•	•	•	•	•
5"	•	•	•	•	•	•	•	•
6"	•	•	•	•	•	•	•	•
8"	•	•	•	•	•	•	•	•



Pressures

- 1 bar (0.1 MPa) / 14.5 psi
- 10 bar (0.7 MPa) / 145 psi



Temperatures

- 0 °C / 32 °F (-20 °C / -4 °F with dry air)
- + 80 °C / 176 °F



Media

Filtered and lubricated or non-lubricated compressed air.



Functions

Double acting single or double end rod, magnetic or non-magnetic, cushioned or non-cushioned



Bores

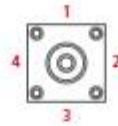
1.5" - 6"



Standard Strokes

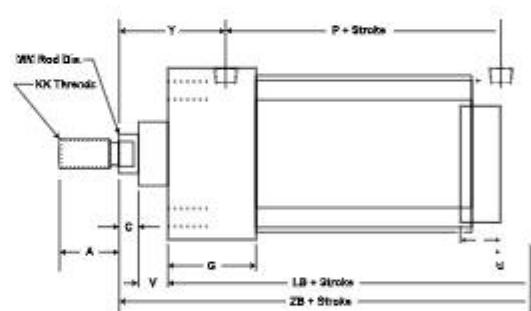
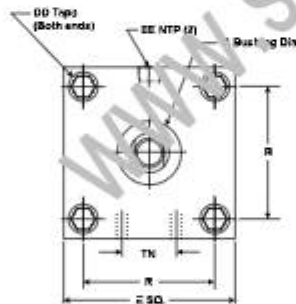
from 0.5" to 10"

Description	Mount	Bore Size (in)	Stroke Length (in)	Port Position	Port Size	Cushion Position	Rod End
A	S N	0 1 5	0 1 0 0	1	C	A	1
A NFPA B Stainless C Double Rod End D Air Oil Tank	E3 Head Square E4 Cap Square F1 Front Flange F2 Rear Flange P1 Fixed Clevis P2 Detachable Clevis P3 Fixed Eye P4 Detachable Eye S1 Angle S2 Side Lug S4 Bottom Tapped T1 Head Trunlon T2 Cap Trunlon T4 Mid Trunlon Fixed SN Sleeve Nut with MS4 X0 No Mount X1 Head & Cap Ext Tie Rod X2 Cap Ext Tie Rod X3 Head Ext Tie Rod XX Special	015 1" 002 2" 025 2.5" 325 3.25" 004 4" 005 5" 006 6" 008 8" 0 Non Standard	0050 0.5" 0100 1" 0150 1.5" 0200 2" 0250 2.5" 0300 3" 0350 3.5" 0400 4" 0450 4.5" 0500 5" 1000 10" 1050 10.5" XX Other	A 1/16" B 1/8" C 3/16" D 1/4" E 5/16" F 3/8" G 7/16" H 9/16" I 5/8" J 11/16" K 3/4" L 13/16" M 7/8" N 15/16"	A 1/8" B 1/4" C 3/8" D 1/2" E 3/4"	A None B Position 1 - Head & Cap C Position 2 - Head & Cap D Position 3 - Head & Cap E Position 4 - Head & Cap F Position 1 - Head G Position 2 - Head H Position 3 - Head J Position 4 - Head K Position 1 - Cap L Position 2 - Cap M Position 3 - Cap N Position 4 - Cap X Other	1 Standard - KK 2 Standard - CC 3 Standard - XX 6 Overized - KK 7 Overized - CC 8 Overized - XX



NFPA

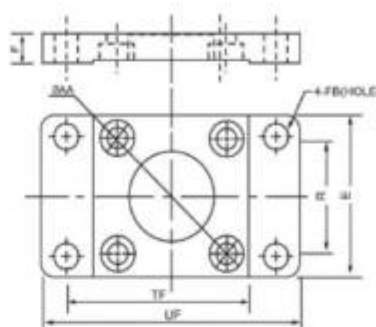
DOUBLE ACTING - MAGNETIC - CUSHIONED & NON-CUSHIONED



+ = Add Stroke

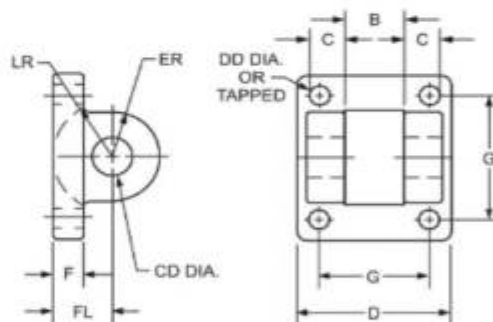
Bore	A	B	C	DD	E	EE	G	J	KK	LB	MM	P	R	TN	V	Y	ZB
1.5"	.75"	1.125"	0.375"	1/4" - 28	2"	.25"	1.5"	1"	7/16" - 20	3.625"	0.625"	2.375"	1.438"	0.625"	0.625"	1.875"	4.625"
2"	.75"	1.125"	0.375"	1/4" - 28	2.5"	.25"	1.5"	1"	7/16" - 20	3.625"	0.625"	2.375"	1.843"	0.875"	0.625"	1.875"	4.625"
2.5"	.75"	1.125"	0.375"	15/16" - 24	3"	.25"	1.5"	1"	7/16" - 20	3.75"	0.625"	2.5"	2.188"	1.25"	0.625"	1.875"	4.75"
3.25"	1.125"	1.5"	0.5"	3/8" - 24	3.75"	.375"	1.75"	1.25"	3/4" - 16	4.25"	1"	2.75"	2.760"	1.5"	0.875"	2.375"	5.625"
4"	1.125"	1.5"	0.5"	3/8" - 24	4.5"	.375"	1.75"	1.25"	3/4" - 16	4.25"	1"	2.75"	3.32"	2.063"	0.875"	2.375"	5.625"
5"	1.125"	1.5"	0.5"	1/2" - 20	5.5"	.375"	1.75"	1.25"	3/4" - 16	4.5"	1"	3"	4.1"	2.688"	0.875"	2.375"	5.875"
6"	1.625"	2"	0.625"	1/2" - 20	6.5"	.5"	2"	1.5"	1" - 14	5"	1.375"	3.25"	4.875"	3.25"	1"	2.75"	6.625"
8"	1.625"	2"	0.625"	5/8" - 18	8.5"	.75"	2"	1.5"	1" - 14	5.125"	1.375"	3.375"	6.438"	4.5	1"	2.75"	7.313"

MF1 - MF2



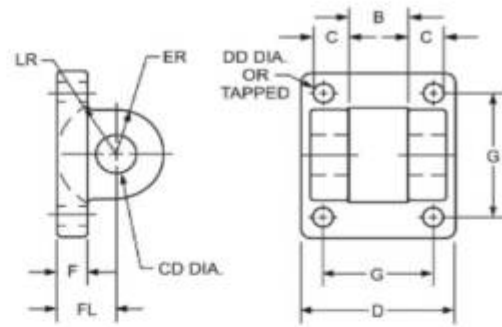
Part No.	Bore Ø	UF	TF	FB	E	R	F	AA	Tapped
MF12150	1.5"	3 3/8"	2 3/4"	5/16"	2"	1.43"	3/8"	2.02"	1/4" - 28
MF12220	2"	4 1/8"	3 3/8"	3/8"	2 1/2"	1.84"	3/8"	2.60"	5/16" - 24
MF12250	2.5"	4 5/8"	3 7/8"	3/8"	3"	2.19"	3/8"	3.10"	5/16" - 24
MF12325	3.25"	5 1/2"	4 11/16"	7/16"	3 3/4"	2.76"	5/8"	3.90"	3/8" - 24
MF12400	4"	6 1/4"	5 7/16"	7/16"	4 1/2"	3.32"	5/8"	4.70"	3/8" - 24
MF12600	6"	8 5/8"	7 5/8"	9/16"	6 1/2"	4.88"	3/4"	6.90"	1/2" - 20

MP1



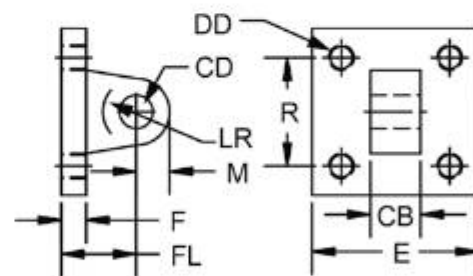
Part No.	Bore Ø	CD	FL	F	B	C	D	ER	G	LR	Tapped	D-DØ
MP1150	1.5"	.502"	.75"	.38"	.76"	.50"	2.00"	.62"	1.43"	.62"	1/4" - 28	.28"
MP1200	2"	.502"	.75"	.38"	.76"	.50"	2.50"	.62"	1.84"	.62"	5/16" - 24	.34"
MP1250	2.5"	.502"	.75"	.38"	.76"	.50"	3.00"	.62"	2.19"	.62"	5/16" - 24	.34"
MP1325	3.25"	.752"	1.25"	.63"	1.26"	.62"	3.75"	.87"	2.77"	.87"	3/8" - 24	.41"
MP1400	4"	.752"	1.25"	.63"	1.26"	.62"	4.50"	.87"	3.32"	.87"	3/8" - 24	.41"
MP1600	6"	1.002"	1.50"	.75"	1.51"	.75"	6.50"	1.25"	4.88"	1.13"	1/2" - 20	.53"

MP2



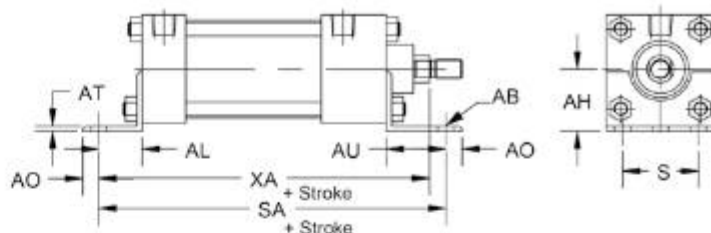
Part No.	Bore Ø	CD	FL	F	B	C	D	ER	G	Tapped	D-DØ
MP2150	1.5"	.502"	1.13"	.38"	.76"	.50"	2.00"	.62"	1.43"	1/4" - 28	.28"
MP2200	2"	.502"	1.13"	.38"	.76"	.50"	2.50"	.62"	1.84"	5/16" - 24	.34"
MP2250	2.5"	.502"	1.13"	.38"	.76"	.50"	3.00"	.62"	2.19"	5/16" - 24	.34"
MP2325	3.25"	.752"	1.88"	.63"	1.26"	.62"	3.75"	.87"	2.77"	3/8" - 24	.41"
MP2400	4"	.752"	1.88"	.63"	1.26"	.62"	4.50"	.87"	3.32"	3/8" - 24	.41"
MP2600	6"	1.002"	2.25"	.75"	1.51"	.75"	6.50"	1.25"	4.88"	1/2" - 20	.53"

MP4



Part No.	Bore Ø	CD	FL	F	CB	D	ER	G	KK	D-DØ
MP4150	1.5"	.502"	1.13"	.38"	.75"	2.00"	.62"	1.43"	1/4" - 28	.28"
MP4200	2"	.502"	1.13"	.38"	.75"	2.50"	.62"	1.84"	5/16" - 24	.34"
MP4250	2.5"	.502"	1.13"	.38"	.75"	3.00"	.62"	2.19"	5/16" - 24	.34"
MP4325	3.25"	.752"	1.88"	.63"	1.25"	3.75"	.87"	2.77"	3/8" - 24	.41"
MP4400	4"	.752"	1.88"	.63"	1.25"	4.50"	.87"	3.32"	3/8" - 24	.41"
MP4600	6"	1.00"	2.25"	-	1.50"	6.50"	-	4.88"	1" - 14	-

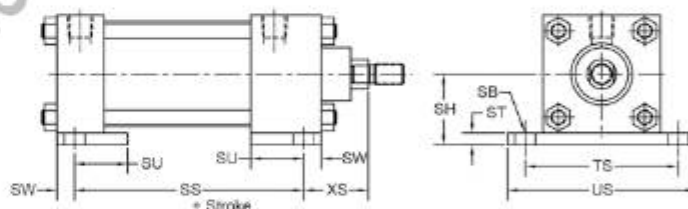
MS1



Part No.	Bore Ø	AB	AH	AL	AO	AT	AU	S	SA	XA
MS1150	1.5"	.44"	1.19"	1.00"	.50"	.13"	1.38"	1.25"	6.00"	5.63"
MS1200	2"	.44"	1.44"	1.00"	.50"	.13"	1.38"	1.75"	6.00"	5.63"
MS1250	2.5"	.44"	1.63"	1.00"	.50"	.13"	1.38"	2.25"	6.13"	5.75"
MS1325	3.25"	.56"	1.94"	1.25"	.50"	.13"	1.88"	2.75"	7.38"	6.88"
MS1400	4"	.56"	2.25"	1.25"	.50"	.13"	1.88"	3.50"	7.38"	6.88"
MS1600	6"	.81"	3.25"	1.38"	.63"	.19"	2.13"	5.25"	8.50"	8.00"

BB

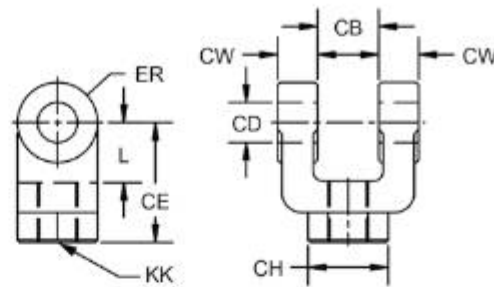
DOUBLE ACTING - MAGNETIC



Part No.	Bore Ø	SB	SH	SS	ST	SU	SW	TS	US	XS
BB150	1.5"	.44"	1.25"	2.88"	.25"	1.13"	.38"	2.75"	3.50"	1.38"
BB200	2"	.44"	1.50"	2.88"	.25"	1.13"	.38"	3.25"	4.00"	1.38"
BB250	2.5"	.44"	1.88"	3.00"	.38"	1.13"	.38"	3.75"	4.50"	1.38"
BB325	3.25"	.56"	2.38"	3.25"	.50"	1.25"	.50"	4.75"	5.75"	1.88"
BB400	4"	.56"	2.75"	3.25"	.50"	1.25"	.50"	5.50"	6.50"	1.88"
BB600	6"	.81"	4.00"	3.63"	.75"	1.31"	.69"	7.88"	9.25"	2.31"

RC

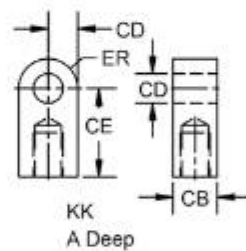
ROD CLEVIS



Part No.	Rod Thread	L	CB	CD	CE	CH	CW	ER	KK
RC71620	7/16 - 20	.75"	.75"	.50"	1.50"	1.00"	.50"	.50"	7/16" - 20
RC3416	3/4 - 16	1.25"	1.25"	.75"	2.38"	1.25"	.63"	.75"	3/4" - 16
RC114	1 - 14	1.50"	1.50"	1.00"	3.13"	1.50"	.75"	1.00"	1" - 14

RE

ROD EYE

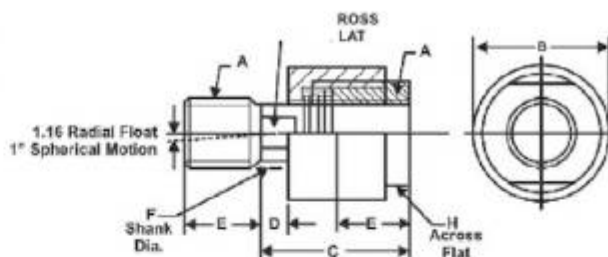


Part No.	Rod Thread	A	L	CB	CD	CE	ER	KK
RE71620	7/16 - 20	.75"	.75"	.75"	.50"	1.50"	.56"	7/16" - 20
RE3416	3/4 - 16	1.13"	1.25"	1.25"	.75"	2.06"	.94"	3/4" - 16
RE114	1 - 14	1.63"	1.50"	1.50"	1.00"	2.81"	1.13"	1" - 14

www.sumy.ir

AC

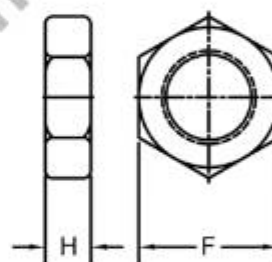
ROD ALIGNMENT COUPLER



Part No.	Rod Thread	A	B	C	D	E	F	G	H	Max Pull @ Yield
AC71620	7/16 - 20	7/16" - 20	1 1/4"	2"	1/2"	3/4"	5/8"	9/16"	1 1/8"	10,000
AC3416	3/4 - 16	3/4" - 16	1 3/4"	2 5/16"	5/16"	1 1/8"	31/32"	7/8"	1 1/2"	34,000
AC114	1 - 14	1" - 14	2 1/2"	2 15/16"	1/2"	1 5/8"	1 3/8"	1 1/4"	2 1/4"	64,000

NUT

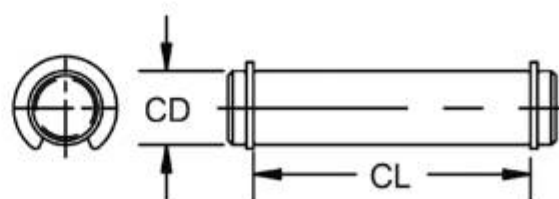
ROD JAM NUT



Part No.	Rod Thread	H	F
NUT71620	7/16 - 20	.25"	.69"
NUT3416	3/4 - 16	.42"	1.13"
NUT114	1 - 14	.55"	1.50"

PP

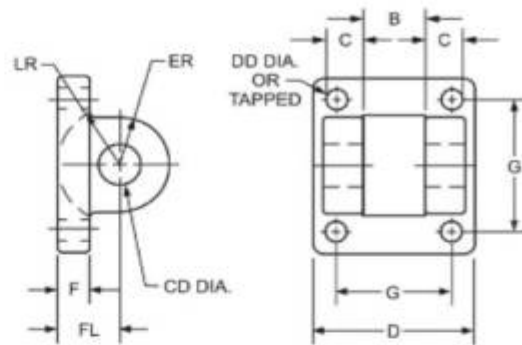
PIVOT PIN



Part No.	Rod Thread	CD	CL
PP50	.50"	.50"	1.88"
PP75	.75"	.75"	2.75"
PP100	1.00"	1.00"	3.25"

CB

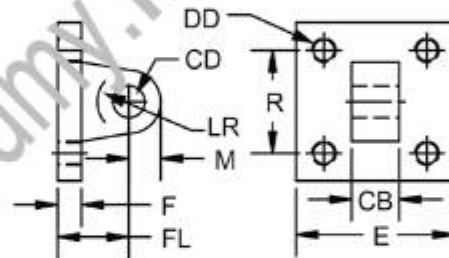
CLEVIS BRACKET



Part No.	Pin Ø	Fits Bore Sizes	CB	CD	CW	DD	E	F	FL	LR	M	R
CB71620	1/2"	1-1/2" - 2" - 2-1/2"	.75"	.50"	.50"	3/8" - 24	2.50"	.38"	1.13"	.50"	.50"	1.63"
CB3416	3/4"	3-1/4" - 4"	1.25"	.75"	.63"	1/2" - 20	3.50"	.63"	1.88"	1.06"	.75"	2.56"
CB114	1"	6"	1.50"	1.00"	.75"	5/8" - 18	4.50"	.75"	2.25"	1.25"	1.00"	3.25"

EB

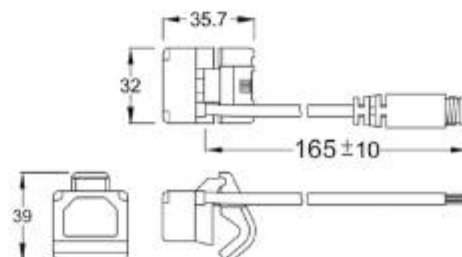
EYE BRACKET



Part No.	Pin Ø	Fits Bore Sizes	CB	CD	DD	E	F	FL	LR	M	R
EB50	1/2"	1-1/2" - 2" - 2-1/2"	.75"	.50"	.41"	2.50"	.38"	1.13"	.75"	.50"	1.63"
EB75	3/4"	3-1/4" - 4"	1.25"	.75"	.53"	3.50"	.63"	1.88"	1.25"	.75"	2.56"
EB100	1"	6"	1.50"	1.00"	.66"	4.50"	.75"	2.25"	1.50"	1.00"	3.25"

PS

POSITION SENSING SWITCH



Part No.	Type	Switching Logic	Output	Operating Voltage	Switching Current	Power Rating	Voltage Drop	Shock
PSRS	Reed	Normally Open	-	5-240V DC/AC - 50/60 Hz	1 Amp Max.	30 Watts	3.5V Max.	30G/9G
PSSOURCE	PNP Source	Normally Open	PNP Sourcing	5-30V DC	1 Amp Max.	30 Watts	1.5V @ 0.5A Max	50G/9G
PSSINK	NPN Sink	Normally Open	PNP Sinking	5-30V DC	1 Amp Max.	30 Watts	1.5V @ 0.5A Max	50G/9G

CARTRIDGE CYLINDERS



TECHNICAL CHARACTERISTICS



Component Parts and Materials

- 1 Steel plated rod jam nut
- 2 Brass rod bushing
- 3 Steel spring
- 4 303 Stainless steel piston rod
- 5 Polyurethane rod seal
- 6 Nickel plated brass body
- 7 Zinc plated steel locking screw



Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

SILICON
FREE

ATEX
2014/34/UE



Pressures

2 bar (0.2 MPa) / 29 psi
7 bar (0.7 MPa) / 101.5 psi



Temperatures

0 °C / 32 °F (-20 °C / -4 °F with dry air)
+ 80 °C / 176 °F



Media

Filtered and lubricated or non-lubricated compressed air



Functions

Single acting threaded and non-threaded piston rod.



Bores

6 - 10 - 16 mm



Standard Strokes

5 - 10 - 15 mm



Weight

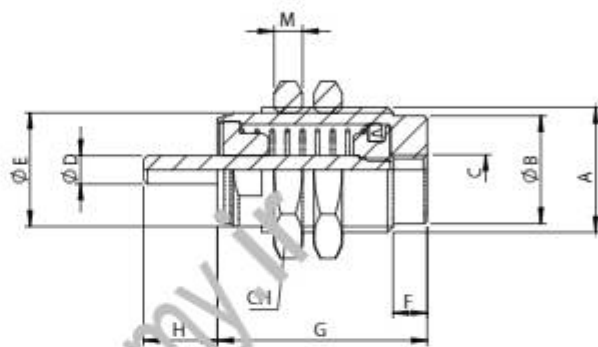
Ø mm	Stroke (mm)		
	5	10	15
6	10 g	12.5 g	15 g
10	27 g	32 g	36 g
16	71 g	78 g	87 g

Series	Ø (mm)	Stroke (mm)
C A F	0 6	0 0 1 0
▲ CA Single acting no-threaded piston rod	06 10 16	0005 0010 0015

Ø (mm)	Stroke (mm)		
	5	10	15
6	▲	▲	▲
10	▲	▲	▲
16	▲	▲	▲

CA

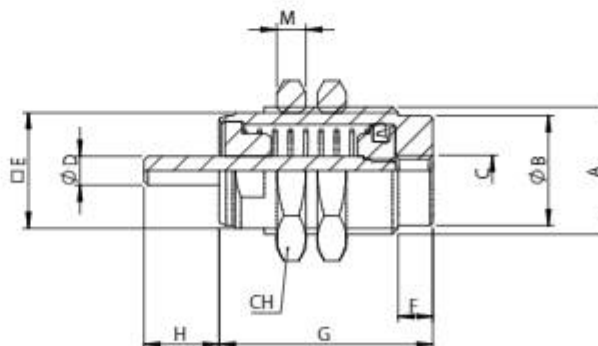
SINGLE ACTING - NON-THREADED PISTON ROD



Ø	A	B	C	D	ØE	F	G Stroke			H	M	CH
							5	10	15			
6	M10x1	8.5	M5	3	9	5	19.5	26.5	33.5	8	3	14
10	M15x1.5	13	M5	5	14	5	21.5	28	35	10.5	4	19
16	M22x1.5	19	M5	5	20	6	24.5	30.5	37	13	5	27

CAF

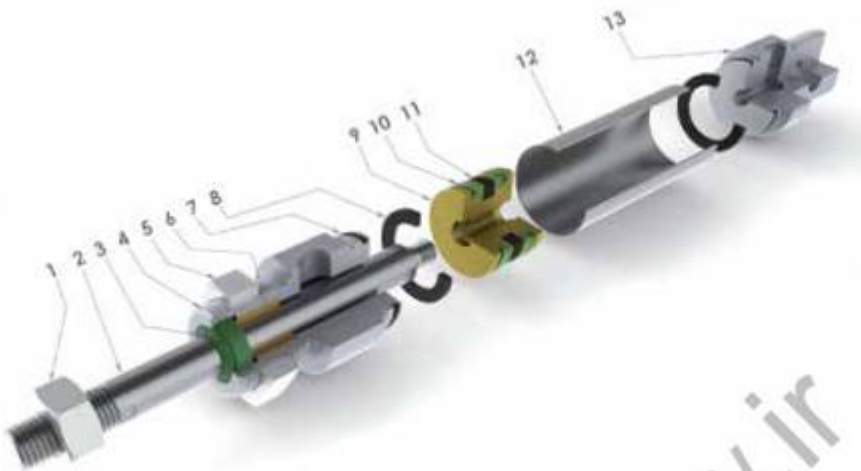
SINGLE-ACTING - THREADED PISTON ROD



Ø	A	B	C	D	ØE	F	G Stroke			H	M	CH	L
							5	10	15				
6	M10x1	8.5	M5	M3	9	5	19.5	26.5	33.5	8	3	14	7
10	M15x1.5	13	M5	M4	14	5	21.5	28	35	10.5	4	19	10
16	M22x1.5	19	M5	M5	20	6	24.5	30.5	37	13	5	27	12



TECHNICAL CHARACTERISTICS



Component Parts and Materials

- 1 Zinc plated steel rod jam nut
- 2 303 Stainless steel piston rod
- 3 Polyurethane rod seal
- 4 Anodized aluminum end cap
- 5 Zinc plated mounting nut
- 6 Sintered bronze rod bearing
- 7 NBR o-ring seals
- 8 Neoprene bumper
- 9 Brass piston
- 10 Polyurethane piston seal
- 11 Bonded ferrite magnet
- 12 304 Stainless steel body
- 13 Anodized aluminum end cap



Reference Standard

1907/2006 REACH ✓	2011/65/CE RoHS ✓	PED 2014/68/UE	SILICON FREE	ATEX 2014/34/UE
----------------------	----------------------	-------------------	-----------------	--------------------



Pressures

1 bar (0.1 MPa) / 14.5 psi
10 bar (1 MPa) / 145 psi



Temperatures

0 °C / 32 °F (-20 °C / -4 °F with dry air)
+ 80 °C / 176 °F



Media

Filtered and lubricated or non-lubricated compressed air



Functions

Single acting magnetic or non-magnetic.
Double acting single or double end rod, magnetic or non-magnetic, cushioned or non-cushioned.



Bores

8 - 10 - 12 - 16 - 20 - 25 mm



Standard Strokes

from 10 to 320 mm


FORCES, SPRING LOADS AND AIR CONSUMPTION

Extend and Retract Forces

Cylinder Ø	Piston rod Ø	Piston Area mm ²	Operating pressure bar									
			1	2	3	4	5	6	7	8	9	10
			Output force N									
8	4	Extend = 50.2	5	10	15	20	25	30	35	40	45	50
		Retract = 37.7	3	6	9	12	15	18	21	24	27	30
10	4	Extend = 78.5	7	14	21	28	35	42	49	56	63	70
		Retract = 66	6	12	18	24	30	36	42	48	54	60
12	6	Extend = 113	10	20	30	40	50	60	70	80	90	100
		Retract = 85	7.5	15	22	30	37	45	52	60	68	75
16	6	Extend = 200	18	36	54	72	90	108	126	144	162	180
		Retract = 173	16	32	48	64	80	96	112	128	144	160
20	8	Extend = 314	28	56	84	112	140	168	196	224	252	280
		Retract = 264	24	48	72	96	120	144	168	192	216	240
25	10	Extend = 490	44	88	132	176	220	264	308	352	396	440
		Retract = 412	36	72	108	144	180	216	252	288	324	360

Spring Loads

Cylinder Ø	Load spring	Stroke (mm)		
		10	25	50
		Output force N		
8	Load of spring at rest	4.1	3.5	2.6
	Load of compressed spring	4.5	4.5	4.5
10	Load of spring at rest	4.1	3.5	2.6
	Load of compressed spring	4.5	4.5	4.5
12	Load of spring at rest	5.2	4.8	3.5
	Load of compressed spring	6	6	6
16	Load of spring at rest	16.5	13.7	9
	Load of compressed spring	18.3	18.3	18.3
20	Load of spring at rest	19	15.5	9.5
	Load of compressed spring	21.5	21.5	21.5
25	Load of spring at rest	27	24	13.5
	Load of compressed spring	29	29	29

Air Consumption

Cylinder Ø	Piston Rod Ø	Piston Area mm ²	Operating pressure bar									
			1	2	3	4	5	6	7	8	9	10
			Air consumption for each 10 mm of stroke NI									
8	4	Extend = 50.2	0.001	0.002	0.002	0.003	0.003	0.004	0.004	0.005	0.005	0.006
		Retract = 37.7	0.001	0.001	0.002	0.002	0.002	0.003	0.003	0.003	0.004	0.004
10	4	Extend = 78.5	0.002	0.002	0.003	0.004	0.005	0.005	0.006	0.007	0.008	0.009
		Retract = 66	0.001	0.002	0.003	0.003	0.004	0.005	0.005	0.006	0.007	0.007
12	6	Extend = 113	0.002	0.003	0.005	0.006	0.007	0.008	0.009	0.010	0.011	0.012
		Retract = 85	0.002	0.003	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.009
16	6	Extend = 200	0.004	0.006	0.008	0.010	0.012	0.014	0.016	0.018	0.020	0.022
		Retract = 173	0.003	0.005	0.007	0.009	0.010	0.012	0.014	0.016	0.017	0.019
20	8	Extend = 314	0.006	0.009	0.013	0.016	0.019	0.022	0.025	0.028	0.031	0.035
		Retract = 264	0.005	0.008	0.011	0.013	0.016	0.018	0.021	0.024	0.026	0.029
25	10	Extend = 490	0.010	0.015	0.020	0.025	0.029	0.034	0.039	0.044	0.049	0.054
		Retract = 412	0.008	0.012	0.016	0.021	0.025	0.029	0.033	0.037	0.041	0.045

Series	Ø (mm)	Stroke (mm)	Special version
--------	--------	-------------	-----------------

M F

0 0 8

0 0 2 5

V S

- ▲ **MB** Single acting - magnetic
- **MD** Single acting - magnetic
Spring extend
- **MF** Double acting - magnetic
- **MFN** Double acting - magnetic - head cut
port at 90°
- ↳ **MFX** Double acting - magnetic - head cut
port on axis
- ◆ **MH** Double acting - cushioned - magnetic
- **MJ** Double acting - magnetic
with double rod end
- ◆ **ML** Double acting - cushioned - magnetic
with double rod end

008
010
012
016
020
025

0010 0150
0025 0160
0050 0200
0080 0250
0100 0320
0125

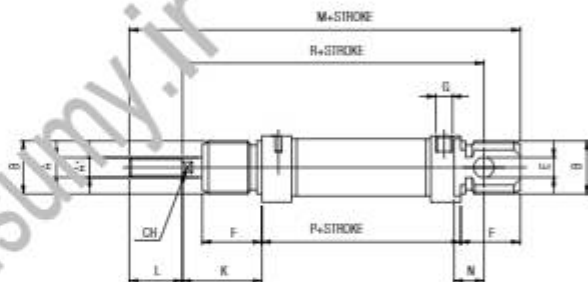
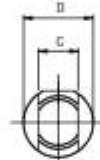
VS Rod Seals In FKM
V Seals In FKM

Intermediate or longer strokes
are available upon request.

Ø (mm)	Stroke (mm)										
	10	25	50	80	100	125	160	200	250	320	
8	▲●	▲●	▲●	●	●	●					
10	▲●	▲●	▲●	●	●	●					
12	▲●	▲●	▲●	●	●	●	●	●	●	●	
16	▲■○●	▲■○●	▲■○●	●○	●○	●○	●○	●○	●○	●○	
20	▲■○●	▲■○●	▲■○●	●○	●○	●○	●○	●○	●○	●○	
25	▲■○●	▲■○●	▲■○●	●○	●○	●○	●○	●○	●○	●○	

MB

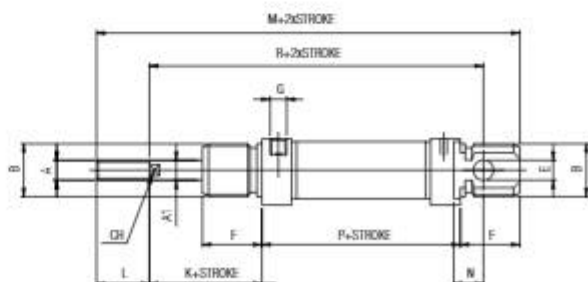
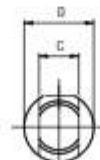
SINGLE ACTING - MAGNETIC



Ø	A	A1	B	C	L	E	F	G	K	L	M	N	P	R	CH
8	M4	4	M12x1.25	8	16	4	12	M5	16	12	86	6	46	64	-
10	M4	4	M12x1.25	8	16	4	12	M5	16	12	86	6	46	64	-
12	M6	6	M16x1.5	12	19	6	18	M5	22	16	104	9	48	75	5
16	M6	6	M16x1.5	12	19	6	18	M5	22	16	109	9	53	82	5
20	M8	8	M22x1.5	16	27	8	20	1/8G	24	20	131	12	67	95	7
25	M10x1.25	10	M22x1.5	16	30	8	22	1/8G	28	22	140	12	68	104	9

MD

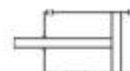
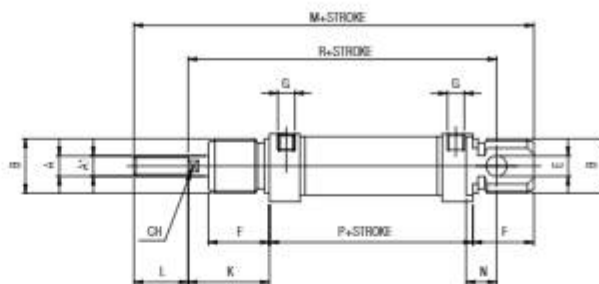
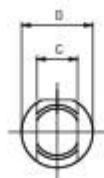
SINGLE ACTING - MAGNETIC - SPRING EXTEND



Ø	A	A1	B	C	D	E	F	G	K	L	M	N	P	R	CH
16	M6	6	M16x1.5	12	19	6	18	M5	22	16	134.5	9	78.5	107.5	5
20	M8	8	M22x1.5	16	27	8	20	1/8G	24	20	154	12	90	118	7
25	M10x1.25	10	M22x1.5	16	30	8	22	1/8G	28	22	166	12	94	130	9

MF

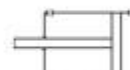
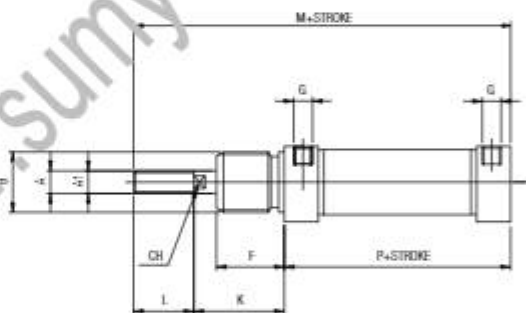
DOUBLE ACTING - MAGNETIC



Ø	A	A1	B	C	D	E	F	G	K	L	M	N	P	R	CH
8	M4	4	M12x1.25	8	16	4	12	M5	16	12	86	6	46	64	-
10	M4	4	M12x1.25	8	16	4	12	M5	16	12	86	6	46	64	-
12	M6	6	M16x1.5	12	19	6	18	M5	22	16	104	9	48	75	5
16	M6	6	M16x1.5	12	19	6	18	M5	22	16	109	9	53	82	5
20	M8	8	M22x1.5	16	27	8	20	1/8G	24	20	131	12	67	95	7
25	M10x1.25	10	M22x1.5	16	30	8	22	1/8G	28	22	140	12	68	104	9

MFN

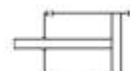
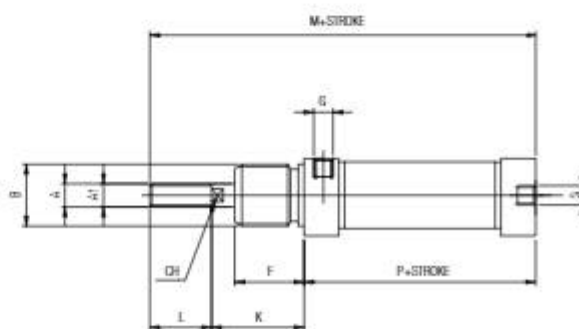
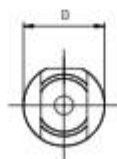
DOUBLE ACTING - MAGNETIC - HEAD CUT, PORT AT 90°



Ø	A	A1	B	D	G	K	L	M	P	CH	F
16	M6	6	M16x1.5	21	M5	22	16	91.5	53	5	18
20	M8	8	M22x1.5	27	1/8G	24	20	111.5	67	7	2
25	M10x1.25	10	M22x1.5	30	1/8G	28	22	118.5	68	9	22

MFX

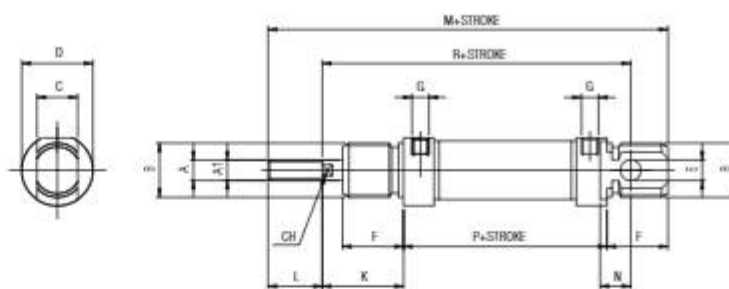
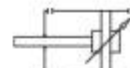
DOUBLE ACTING - MAGNETIC - HEAD CUT, PORT ON AXIS



Ø	A	A1	B	D	G	K	L	M	P	CH	F
16	M6	6	M16x1.5	21	M5	22	16	91.5	53	5	18
20	M8	8	M22x1.5	27	1/8G	24	20	111.5	67	7	2
25	M10x1.25	10	M22x1.5	30	1/8G	28	22	118.5	68	9	22

MH

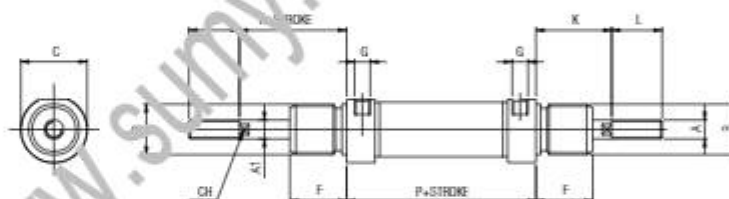
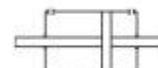
DOUBLE ACTING - CUSHIONED - MAGNETIC



Ø	A	A1	B	C	D	E	F	G	K	L	M	N	P	R	CH
16	M6	6	M16x1.5	12	21	6	18	M5	22	16	109	9	53	82	25
20	M8	8	M22x1.5	16	27	8	20	1/8G	24	20	131	12	67	95	7
25	M10x1.25	10	M22x1.5	16	30	8	22	1/8G	28	22	140	12	68	104	9

MJ

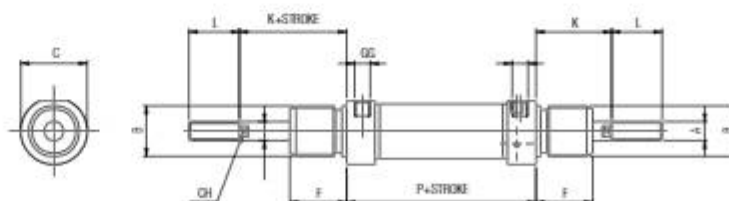
DOUBLE ACTING - MAGNETIC WITH DOUBLE ROD END



Ø	A	A1	B	C	F	G	K	L	P	CH
16	M6	6	M16x1.5	19	18	M5	22	16	53	5
20	M8	8	M22x1.5	27	20	1/8G	24	20	67	7
25	M10x1.25	10	M22x1.5	30	22	1/8G	28	22	68	9

ML

DOUBLE ACTING - CUSHIONED - MAGNETIC WITH DOUBLE ROD END



Ø	A	A1	B	C	F	G	K	L	P	CH
16	M6	6	M16x1.5	21	18	M5	22	16	53	5
20	M8	8	M22x1.5	27	20	1/8G	24	20	67	7
25	M10x1.25	10	M22x1.5	30	22	1/8G	28	22	68	9

PISTON ROD LOCK FOR MINI CYLINDERS - ISO 6432



TECHNICAL CHARACTERISTICS



How to Order

The piston rod lock can be assembled only with cylinders ISO 6432 Ø 20 or 25 mm produced with an extended piston rod.
To identify the cylinder with extended piston rod and piston rod lock assembled, it is necessary to mention after the article code of the cylinder the letter "B".



Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

SILICON
FREE



Pressures

Without Pressures: LOCKED

Cylinder supply pressure	Minimum release pressure
0 ÷ 7 bar (0 ÷ 0.7 Mpa)	2.5 bar (0.25 Mpa)
7 ÷ 10 bar (0.7 ÷ 1 Mpa)	3 bar (0.3 Mpa)



Temperatures

0 °C / 32 °F (-20 °C / -4 °F with dry air)
+ 80 °C / 176 °F



Media

Filtered and lubricated or non-lubricated compressed air

Series

M F

Ø (mm)

0 2 0

Stroke (mm)

0 0 2 5

B = Piston Rod Lock Assembled

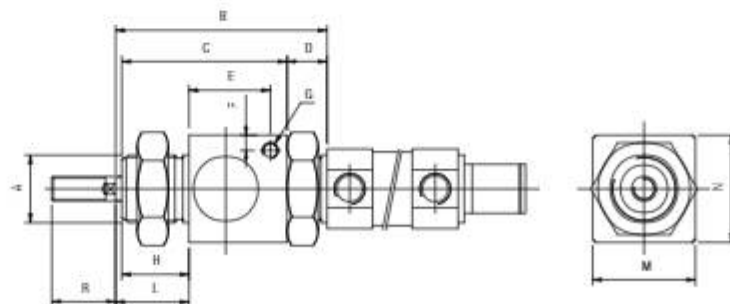
020
025

0010 0150
0025 0160
0050 0200
0080 0250
0100 0320
0125

Intermediate or longer strokes are available upon request.

MRL

PISTON ROD LOCK

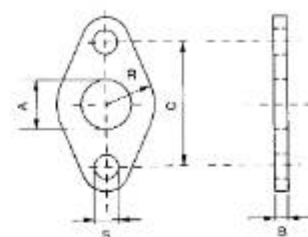


Part No.	Ø	A	B	C	D	E	F	G	H	L	M	N	R
MRL 020	20	M22x1.5	68.5	54	13	27	5	M5	22	23.5	34	35	23
MRL 025	25	M22x1.5	69.5	54	13	27	5	M5	22	24.5	34	35	26

ISO 6432 Mounting Accessories

MFL

FLANGE

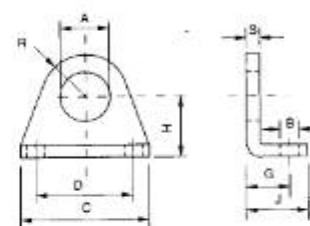


MATERIAL: Steel

Part No.	Ø	A	B	C	R	S
MFL 008	8-10	12	3	30	9	4.5
MFL 012	12-16	16	4	40	13	5.5
MFL 020	20-25	22	5	50	19	6.6

MPD

FOOT

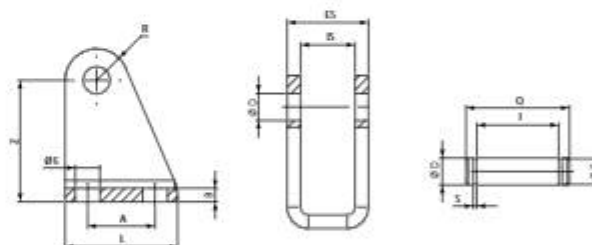


MATERIAL: Steel

Part No.	Ø	A	B	C	D	G	H	J	R	S
MPD 008	8-10	12	4.5	35	25	11	16	16	10	3
MPD 012	12-16	16	5.5	42	32	14	20	20	13.5	4
MPD 020	20-25	22	6.6	54	40	17	25	25	18	5

MCC

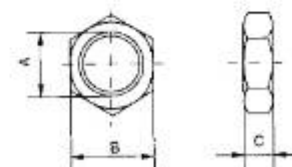
CLEVIS BRACKET WITH PIN



MATERIAL: Steel

Code	Ø	A	B	R	L	Z	IS	ES	S	I	Q	ØE	ØD	ØG
MCC 008	8-10	12.5	2.5	5	22	24	8.1	13	0.8	14	18	4.5	4	2.3
MCC 012	12-16	15	3	7	25	27	12	18	0.8	19	24	5.5	6	4
MCC 020	20-25	20	4	10	32	30	16	24	0.9	25	30	6.5	8	7

DA



MOUNTING NUT

Part No.	A	B	C
oDA00 00 51 D5 ZI	M12x1.25	19	7
oDA00 00 51 E3 ZI	M16x1.5	22	6
oDA00 00 51 F6 ZI	M22x1.5	27	8

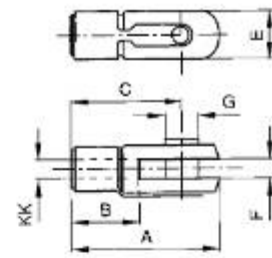
MATERIAL: Steel

ROD JAM NUT

Part No.	A	B	C
oDA00 00 51 B1 ZI	M4	7	3.2
oDA00 00 51 B8 ZI	M6	10	5
oDA00 00 51 C3 ZI	M8x1.25	13	6.5
oDA00 00 51 C9 ZI	M10x1.25	17	8

FC

ROD CLEVIS WITH LOCKABLE PIN

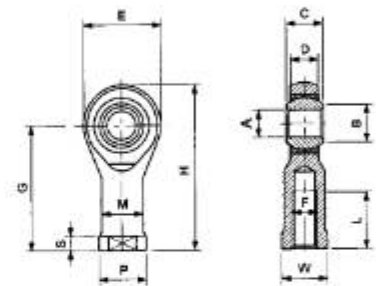


MATERIAL: Steel

Part No.	KK	A	B	C	E	F	G
FC 008	M4	21	8	16	8	4	4
FC 012	M6	31	12	24	12	6	6
FC 020	M8	42	16	32	16	8	8
FC 025	M10x1.25	52	20	40	20	10	10

TF

SELF-LUBRICATING SPHERICAL ROD EYE



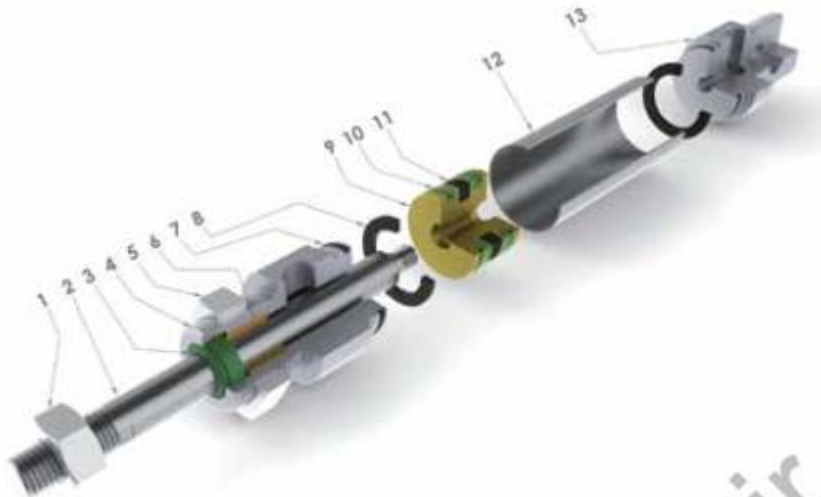
MATERIAL: Steel

Part No.	F	A	B	C	Ø Sphere	D	E	G	H	L	M	P	S	W	Radial load		Weight
															Dynamic	Static	
		H7	0	$\begin{matrix} 0 \\ -0.13 \end{matrix}$		+0.13	+0.5	+0.5		+0.7	+0.7	+0.5	$\begin{matrix} +0.2 \\ -0.7 \end{matrix}$	+0.25	kg	kg	g
TF 008	M4x0.7	5	7.7	8	11.11	6	7	27	36	10	9	11	4	9	-	-	-
TF 012	M6x1	6	8.9	9	12.7	6.75	20	30	40	9	10	13	5	11	470	1.100	19
TF 020	M8x1.25	8	10.4	12	15.88	9	24	36	48	12	12.5	16	5	14	780	1.900	36
TF 025	M10x1.25	10	12.9	14	19.05	10.5	28	43	57	15	15	19	6.5	17	1.200	3.100	88

STAINLESS STEEL MINI CYLINDERS - ISO 6432



TECHNICAL CHARACTERISTICS



Component Parts and Materials

- 1 304 Stainless steel rod jam nut
- 2 316 Stainless steel piston rod
- 3 Polyurethane rod seal
- 4 304 Stainless steel end cap
- 5 304 Stainless steel mounting nut
- 6 Sintered bronze rod bearing
- 7 NBR o-ring seals
- 8 Neoprene bumper
- 9 Brass piston
- 10 Polyurethane piston seal
- 11 Plastroferrite magnet
- 12 304 Stainless steel body
- 13 304 Stainless steel end cap



Reference Standard

- 1907/2006 REACH ✓
- 2011/65/CE RoHS ✓
- PED 2014/68/UE
- SILICON FREE
- ATEX 2014/34/UE



Pressures

- 2 bar (0.2 MPa) / 29 psi
- 10 bar (0.7 MPa) / 145 psi



Temperatures

- 0 °C / 32 °F (-20 °C / -4 °F with dry air)
- + 80 °C / 176 °F



Media

Filtered and lubricated or non-lubricated compressed air.



Functions

- Double-acting magnetic.
- Double-acting without magnet.



Bores

- 16 - 20 - 25 mm



Standard Strokes

- from 10 to 320 mm

Series	Ø (mm)	Stroke (mm)	Special version
--------	--------	-------------	-----------------

M F I

• **MFI** Double acting - magnetic

0 1 6

016
020
025

0 0 2 5

0010 0150
0025 0160
0050 0200
0080 0250
0100 0320
0125

V S

VS Rod Seals in FKM
V Seals in FKM

Intermediate or longer strokes are available upon request.

Ø (mm)	Stroke (mm)									
	10	25	50	80	100	125	160	200	250	320
16	•	•	•	•	•	•	•	•	•	•
20	•	•	•	•	•	•	•	•	•	•
25	•	•	•	•	•	•	•	•	•	•

Extend and Retract Forces

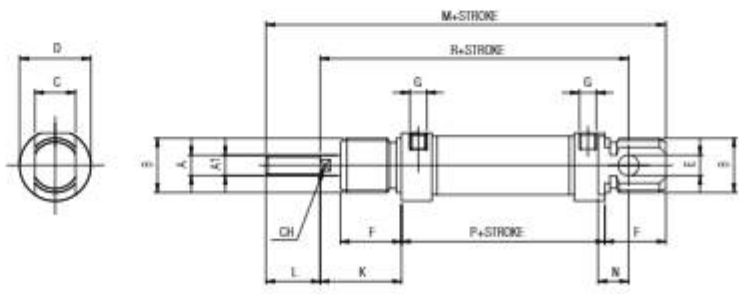
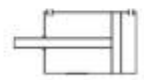
Cylinder Ø	Piston Rod Ø	Piston Area mm ²	Operating pressure bar									
			1	2	3	4	5	6	7	8	9	10
16	6	Extend = 200	18	36	54	72	90	108	126	144	162	180
		Retract = 173	16	32	48	64	80	96	112	128	144	160
20	8	Extend = 314	28	56	84	112	140	168	196	224	252	280
		Retract = 264	24	48	72	96	120	144	168	192	216	240
25	10	Extend = 490	44	88	132	176	220	264	308	352	396	440
		Retract = 412	36	72	108	144	180	216	252	288	324	360

Air Consumption

Cylinder Ø	Piston Rod Ø	Piston Area mm ²	Operating pressure bar									
			1	2	3	4	5	6	7	8	9	10
16	6	Extend = 200	0.004	0.006	0.008	0.010	0.012	0.014	0.016	0.018	0.020	0.022
		Retract = 173	0.003	0.005	0.007	0.009	0.010	0.012	0.014	0.016	0.017	0.019
20	8	Extend = 314	0.006	0.009	0.013	0.016	0.019	0.022	0.025	0.028	0.031	0.035
		Retract = 264	0.005	0.008	0.011	0.013	0.016	0.018	0.021	0.024	0.026	0.029
25	10	Extend = 490	0.010	0.015	0.020	0.025	0.029	0.034	0.039	0.044	0.049	0.054
		Retract = 412	0.008	0.012	0.016	0.021	0.025	0.029	0.033	0.037	0.041	0.045

MFI

DOUBLE ACTING - MAGNETIC

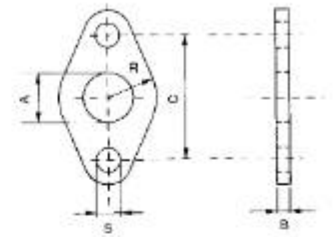


Ø	A	A1	B	C	D	E	F	G	K	L	M	N	P	R	CH
16	M6	6	M16x1.5	12	19	6	18	M5	22	16	109	9	53	82	5
20	M8	8	M22x1.5	16	27	8	20	1/8G	24	20	131	12	67	95	7
25	M10x1.25	10	M22x1.5	16	30	8	22	1/8G	28	22	140	12	68	104	9

ISO 6432 Stainless Steel Mounting Accessories

MFLI

FLANGE

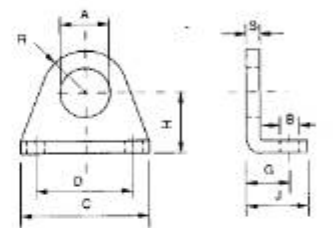


MATERIAL: Stainless Steel

Part No.	Ø	A	B	C	R	S
MFLI 016	16	16	4	40	13	5.5
MFLI 020	20-25	22	5	50	19	6.6

MPDI

FOOT

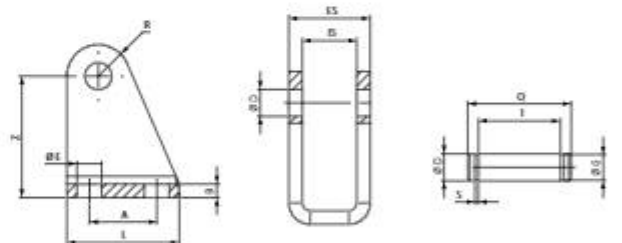


MATERIAL: Stainless Steel

Part No.	Ø	A	B	C	D	E	G	H	J	R	S
MPDI 016	16	16	5.5	42	20	14	20	20	13.5	4	
MPDI 020	20-25	22	6.6	54	25	17	25	25	18	5	

MCCI

CLEVIS BRACKET WITH PIN



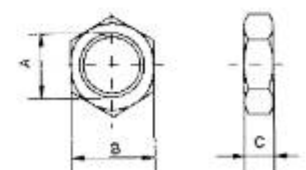
MATERIAL: Stainless Steel

Code	Ø	A	B	R	L	Z	IS	ES	S	I	Q	ØE	ØD	ØG
MCCI 012	16	15	3	7	25	27	12	18	0.8	19	24	5.5	6	4
MCCI 020	20-25	20	4	10	32	30	16	24	0.9	25	30	6.5	8	7

DA

MOUNTING NUTS

ROD JAM NUT



MATERIAL: Stainless Steel

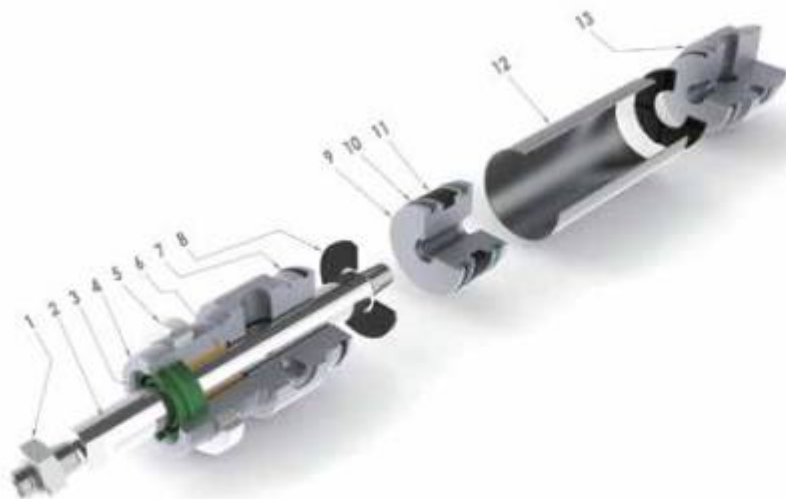
Part No.	A	B	C
oDA00 00 43 E3 00	M16x1.5	22	6
oDA00 00 43 F6 00	M22x1.5	27	8

Part No.	A	B	C
oDA00 00 43 B8 00	M6	10	5
oDA00 00 43 C3 00	M8x1.25	13	6.5
oDA00 00 43 C9 00	M10x1.25	17	8

SERIES A95 - LIMITED SPACE CYLINDERS



TECHNICAL CHARACTERISTICS



Component Parts and Materials

- 1 Zinc plated steel rod jam nut
- 2 Chrome plated steel piston rod
- 3 Polyurethane rod seal
- 4 Anodized aluminum end cap
- 5 Zinc plated mounting nut
- 6 Sintered bronze rod bearing
- 7 NBR o-ring seals
- 8 Neoprene bumper
- 9 Anodized aluminum piston
- 10 Polyurethane piston seal
- 11 Bonded ferrite magnet
- 12 304 Stainless steel body
- 13 Anodized aluminum end cap



Reference Standard

1907/2006 REACH ✓	2011/65/CE ✓	PED 2014/68/UE	SILICON FREE	ATEX 2014/34/UE
----------------------	-----------------	-------------------	-----------------	--------------------



Pressures

- 1 bar (0.1 MPa) / 14.5 psi
- 10 bar (1 MPa) / 145 psi



Temperatures

- 0 °C / 32 °F (-20 °C / -4 °F with dry air)
- + 80 °C / 176 °F



Media

Filtered and lubricated or non-lubricated compressed air.



Functions

Single acting magnetic or non-magnetic. Double acting single or double rod end, magnetic or non-magnetic, cushioned or non-cushioned.



Bores

- 32 - 40 - 50 - 63 mm



Standard Strokes

- from 10 to 500 mm


FORCES, SPRING LOADS AND AIR CONSUMPTION
Extend and Retract Forces

Cylinder Ø	Piston Rod Ø	Piston Area mm ²	Operating pressure									
			bar									
			1	2	3	4	5	6	7	8	9	10
			Output force N									
32	12	Extend = 804	72	144	216	288	360	432	504	576	648	720
		Retract = 691	62	124	186	248	310	372	434	496	558	620
40	16	Extend = 1257	110	220	330	440	550	660	770	880	990	1100
		Retract = 1056	95	190	285	380	475	570	665	760	855	950
50	20	Extend = 1963	175	350	525	700	875	1050	1225	1400	1575	1750
		Retract = 1649	148	296	444	592	740	888	1036	1184	1332	1480
63	20	Extend = 3117	280	560	840	1120	1400	1680	1960	2240	2520	2800
		Retract = 2803	250	500	750	1000	1250	1500	1750	2000	2250	2500

Spring Loads

Cylinder Ø	Load spring	Stroke (mm)		
		10	25	50
		Output force N		
32	Load of spring at rest	56	51	42
	Load of compressed spring	60	60	60
40	Load of spring at rest	60	55	44
	Load of compressed spring	65	65	65
50	Load of spring at rest	64	57	46
	Load of compressed spring	68	68	68
63	Load of spring at rest	65	58	47
	Load of compressed spring	70	70	70

Air Consumption

Cylinder Ø	Piston Rod Ø	Piston Area mm ²	Operating pressure									
			bar									
			1	2	3	4	5	6	7	8	9	10
			Air consumption for each 10 mm of stroke NI									
32	12	Extend = 804	0.016	0.024	0.032	0.040	0.048	0.056	0.064	0.072	0.080	0.088
		Retract = 691	0.014	0.021	0.028	0.035	0.041	0.048	0.055	0.062	0.069	0.076
40	16	Extend = 1257	0.025	0.038	0.050	0.063	0.075	0.088	0.101	0.113	0.126	0.138
		Retract = 1056	0.021	0.032	0.042	0.053	0.063	0.074	0.084	0.095	0.106	0.116
50	20	Extend = 1963	0.039	0.059	0.079	0.098	0.118	0.137	0.157	0.177	0.196	0.216
		Retract = 1649	0.033	0.049	0.066	0.082	0.099	0.115	0.132	0.148	0.165	0.181
63	20	Extend = 3117	0.062	0.094	0.125	0.156	0.187	0.218	0.249	0.281	0.312	0.343
		Retract = 2803	0.056	0.084	0.112	0.140	0.168	0.196	0.224	0.252	0.280	0.308

Series	Ø (mm)	Stroke (mm)
--------	--------	-------------

A B

0 3 2

0 0 2 5

- ▲ **AB** Single acting - magnetic
- ▲ **AD** Single acting - magnetic - spring extend
- **AF** Double acting - magnetic
- ◆ **AH** Double acting - cushioned - magnetic
- **AJ** Double acting - magnetic with double rod end
- ◆ **AL** Double acting - cushioned - magnetic with double rod end

032
040
050
063

0010 0160
0025 0200
0050 0250
0080 0320
0100 0400
0125 0500
0150

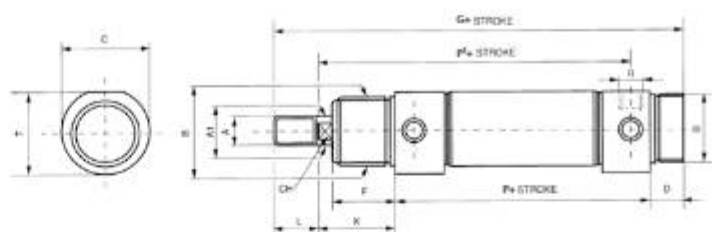
Intermediate or longer strokes are available upon request.

Ø (mm)	Stroke (mm)											
	10	25	50	80	100	125	160	200	250	320	400	500
32	▲●	▲◆	▲◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
40	▲●	▲◆	▲◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
50	▲●	▲◆	▲◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
63	▲●	▲◆	▲◆	◆	◆	◆	◆	◆	◆	◆	◆	◆

www.sumy.ir

AB

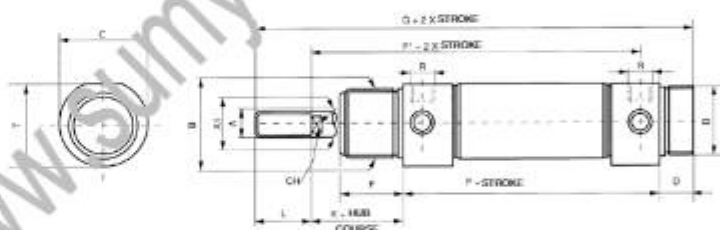
SINGLE ACTING - MAGNETIC



Ø	A	A1	B	T	C	D	F	G	K	L	P	P1	CH	R
32	M10x1.25	12	M30x1.5	36.5	38	14	30	168	38	20	96	125	10	1/8" GAS
40	M12x1.25	16	M38x1.5	44	46	16	35	196	45	24	111	144	12	1/4" GAS
50	M16x1.5	20	M45x1.5	55	57	18	38	220	50	32	120	158	16	1/4" GAS
63	M16x1.5	20	M45x1.5	67.5	70	18	38	224	50	32	124	161	16	3/8" GAS

AD

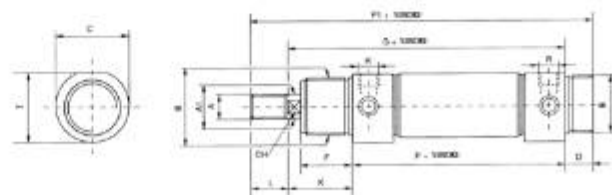
SINGLE ACTING - MAGNETIC - SPRING EXTEND



Ø	A	A1	B	T	C	D	F	G	K	L	P	P1	CH	R
32	M10x1.25	12	M30x1.5	36.5	38	14	30	168	38	20	96	125	10	1/8" GAS
40	M12x1.25	16	M38x1.5	44	46	16	35	196	45	24	111	144	12	1/4" GAS
50	M16x1.5	20	M45x1.5	55	57	18	38	220	50	32	120	158	16	1/4" GAS
63	M16x1.5	20	M45x1.5	67.5	70	18	38	224	50	32	124	161	16	3/8" GAS

AF

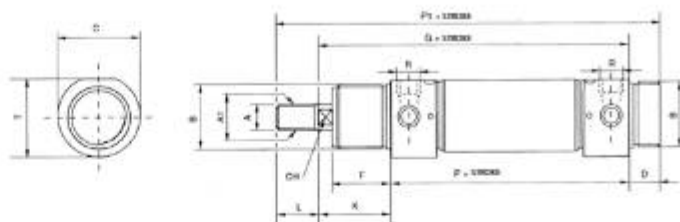
DOUBLE ACTING - MAGNETIC



Ø	A	A1	B	T	C	D	F	G	K	L	P	P1	CH	R
32	M10x1.25	12	M30x1.5	36.5	38	14	30	134	38	20	96	168	10	1/8" GAS
40	M12x1.25	16	M38x1.5	44	46	16	35	156	45	24	111	196	12	1/4" GAS
50	M16x1.5	20	M45x1.5	55	57	18	38	170	50	32	120	220	16	1/4" GAS
63	M16x1.5	20	M45x1.5	67.5	70	18	38	174	50	32	124	224	16	3/8" GAS

AH

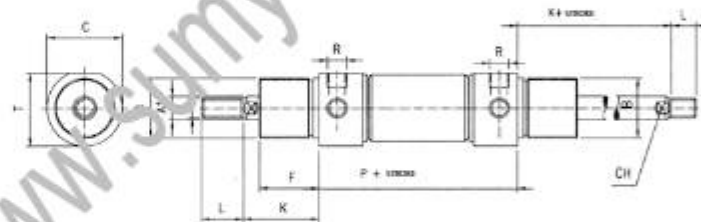
DOUBLE ACTING - CUSHIONED - MAGNETIC



Ø	A	A1	B	T	C	D	F	G	K	L	P	P1	P2	CH	R
32	M10x1.25	12	M30x1.5	36.5	38	14	30	134	38	20	96	168	10	1/8"GAS	
40	M12x1.25	16	M38x1.5	44	46	16	35	156	45	24	111	196	12	1/4"GAS	
50	M16x1.5	20	M45x1.5	55	57	18	38	170	50	32	120	220	16	1/4"GAS	
63	M16x1.5	20	M45x1.5	67.5	70	18	38	174	50	32	124	224	16	3/8"GAS	

AJ

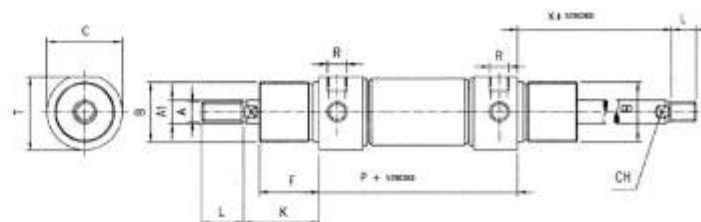
DOUBLE ACTING - MAGNETIC WITH DOUBLE ROD END



Ø	A	A1	B	T	C	F	K	L	P	CH	R
32	M10x1.25	12	M30x1.5	36.5	38	30	38	20	96	10	1/8"GAS
40	M12x1.25	16	M38x1.5	44	46	35	45	24	111	12	1/4"GAS
50	M16x1.5	20	M45x1.5	55	57	38	50	32	120	16	1/4"GAS
63	M16x1.5	20	M45x1.5	67.5	70	38	50	32	124	16	3/8"GAS

AL

DOUBLE ACTING - CUSHIONED - MAGNETIC WITH DOUBLE ROD END

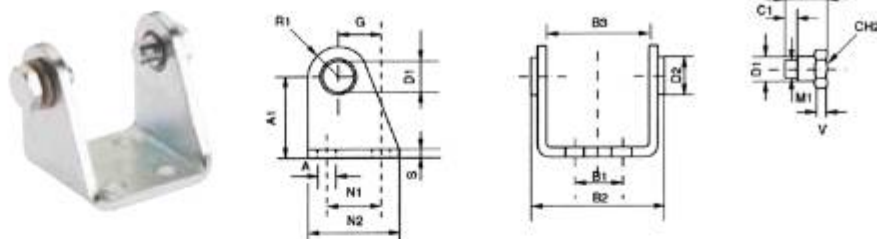


Ø	A	A1	B	T	C	F	K	L	P	CH	R
32	M10x1.25	12	M30x1.5	36.5	38	30	38	20	96	10	1/8"GAS
40	M12x1.25	16	M38x1.5	44	46	35	45	24	111	12	1/4"GAS
50	M16x1.5	20	M45x1.5	55	57	38	50	32	120	16	1/4"GAS
63	M16x1.5	20	M45x1.5	67.5	70	38	50	32	124	16	3/8"GAS

A95 Cylinder Mounting Accessories

ACC

CLEVIS BRACKET WITH PINS

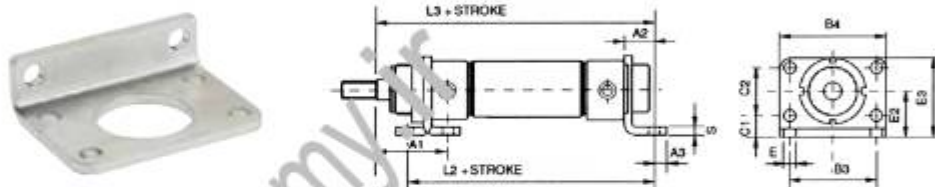


MATERIAL: Steel

Part No.	Ø	D1	D2	A	A1	G	M1	N1	N2	R1	S	CH2	B1	B2	B3	V	C1	C2
ACC 032	32	10	16	7	35	20	M8x1	24	40	12	4	13	20	50.1	38.1	4	6	18
ACC 040	40	12	18	9	40	27	M10x1	30	50	13	5	17	28	60.1	46.1	5	7	21.6
ACC 050	50	14	23	9	45	30	M12x1.5	34	54	14	6	19	36	74.1	57.1	6	9	26.4
ACC 063	63	16	24	9	50	34	M14x1.5	35	65	16	6	19	42	88.1	70.1	6	15	34

APD

FOOT FLANGE



MATERIAL: Steel

Part No.	Ø	E	E2	E3	C1	C2	L2	L3	B3	B4	S	A1	A2	A3
APD 032	32	7	28	49	14	28	124	148	52	66	4	48	14	7
APD 040	40	9	33	58	18	40	151	176	60	80	5	60	20	10
APD 050	50	9	40	70	20	50	160	190	70	90	6	64	20	10
APD 063	63	9	45	80	20	50	164	194	76	96	6	65	20	10

AGT

MOUNTING NUT

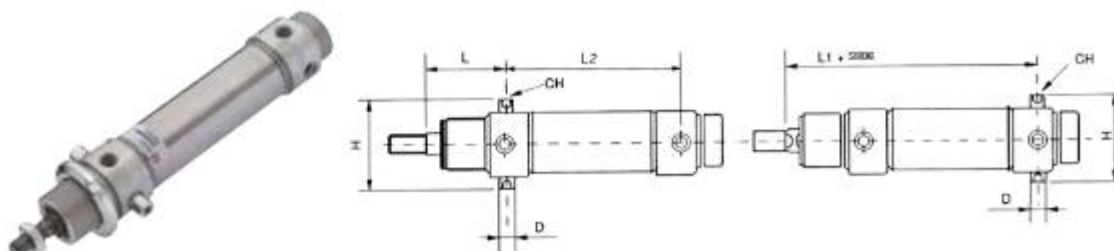


MATERIAL: Steel

Part No.	B	D	H
AGT 032	M30x1.5	45	7
AGT 040	M38x1.5	50	8
AGT 050	M45x1.5	58	9

APE

HEAD TRUNNION



MATERIAL: Steel

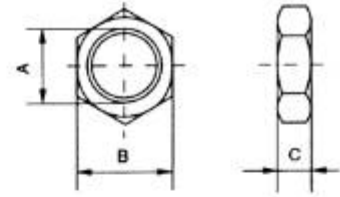
Part No.	Ø	D	H	L1	L2	L	CH
APE 032	32	10	51	125	78	47	5
APE 040	40	12	61	144	87	57	6
APE 050	50	14	75	158	96	62	6
APE 063	63	16	90	161	98	63	8

DA

ROD JAM NUT

MATERIAL: Steel

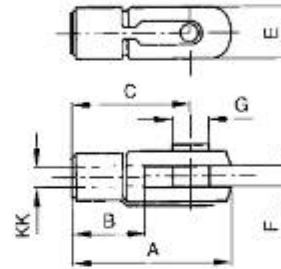
Part No.	A	B	C
0DA00 00 51 C9 ZI	M10x1.25	17	8
0DA00 00 51 D5 ZI	M12x1.25	19	7
0DA00 00 51 E3 ZI	M16x1.5	22	6



FC

ROD CLEVIS WITH LOCKABLE PIN

MATERIAL: Steel

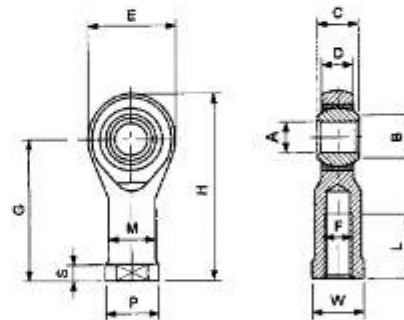


Part No.	KK	A	B	C	E	F	G
FC 025	M10x1.25	52	20	40	20	10	10
FC 040	M12x1.25	62	24	48	24	12	12
FC 050	M16x1.5	83	32	64	32	16	16

TF

SELF-LUBRICATING SPHERICAL ROD EYE

MATERIAL: Steel



Part No.	F	A	B	C	Ø Sphere	D	E	G	H	L	M	P	S	W	Radial load		Weight
															Dynamic	Static	
		H7	0	0 -0.13		± 0.13	± 0.5	± 0.5		± 0.7	± 0.7	± 0.5	+0.2 -0.7	± 0.25	kg	kg	g
TF 025	M10x1.25	10	12.9	14	19.05	11.5	30	43	58	15	15	19	6.5	16	1.200	3.100	88
TF 040	M12x1.25	12	15.4	16	22.23	12.5	34	50	67	18	17.5	22	6.5	18	1.400	3.700	120
TF 050	M16x1.5	16	19.3	21	28.58	15.5	42	64	85	24	22	27	8	24	2.500	6.300	240

SERIES Q - COMPACT CYLINDERS



TECHNICAL CHARACTERISTICS



Component Parts and Materials

- 1 303 Stainless steel piston rod (ø12-25)
Chrome plated steel piston rod (ø32-100)
- 2 Anodized aluminum end cap
- 3 Zinc plated steel screw
- 4 Polyurethane rod seal
- 5 Sintered bronze rod bearing
- 6 NBR o-ring seals
- 7 Polyurethane piston seal
- 8 Bonded ferrite magnet
- 9 Aluminum piston
- 10 NBR o-ring seals
- 11 Zinc plated steel piston nut
- 12 Anodized aluminum body
- 13 Anodized aluminum end cap



Reference Standard

- 1907/2006
REACH ✓
- 2011/65/CE
RoHS ✓
- PED
2014/68/UE
- SILICON
FREE
- ATEX
2014/34/UE



Pressures

- 1 bar (0.1 MPa) / 14.5 psi
- 10 bar (0.7 MPa) / 145 psi



Temperatures

- 0 °C / 32 °F (-20 °C / -4 °F with dry air)
- + 80 °C / 176 °F



Media

Filtered and lubricated or non-lubricated compressed air.



Functions

- Single acting magnetic.
- Double-acting magnetic.
- Single or through piston rod magnetic.
- Antirotation magnetic.




Bores

from 12 to 100 mm



Standard Strokes

from 5 to 200 mm

Series	Version	Ø (mm)	Stroke (mm)
Q F		0 1 2	0 0 2 5
<ul style="list-style-type: none"> ▲ QB Single acting - magnetic ▲ QD Single acting - magnetic - spring extend ● QF Double acting - magnetic ● QJ Double acting - magnetic with double rod end ◆ QFA Double acting - magnetic - anti rotation 	<ul style="list-style-type: none"> = Standard female rod M = Male rod (NO QFA) 	012 016 020 025 032 040 050 063 080 100	0005 0050 0010 0060 0015 0080 0020 0100 0025 0125 0030 0150 0040 0200 Intermediate or longer strokes are available upon request.

Ø (mm)	Stroke (mm)													
	5	10	15	20	25	30	40	50	60	80	100	125	150	200
12	▲▲▲	▲▲▲	▲▲	▲▲	▲▲	▲▲	▲▲							
16	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲	▲▲							
20	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲	▲▲	▲▲						
25	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲	▲▲	▲▲	▲▲					
32	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲	▲▲	▲▲	▲▲	▲▲	●	●	●	
40	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲	▲▲	▲▲	▲▲	▲▲	●	●	●	●
50	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲	▲▲	▲▲	▲▲	▲▲	●	●	●	●
63	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲	▲▲	▲▲	▲▲	▲▲	●	●	●	●
80	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲	▲▲	▲▲	▲▲	▲▲	●	●	●	●
100	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲	▲▲	▲▲	▲▲	▲▲	●	●	●	●

 **FORCES, SPRING LOADS AND AIR CONSUMPTION**

Extend and Retract Forces

Cylinder Ø	Piston Rod Ø	Piston Area mm ²	Operating pressure bar																				
			1	2	3	4	5	6	7	8	9	10											
			Output force N																				
12	6	Extend = 113	10	20	30	40	50	60	70	80	90	100	Retract = 85	7.5	15	22	30	37	45	52	60	68	75
		16	8	Extend = 200	18	35	53	70	90	105	125	145	160	180	Retract = 150	13	26	40	53	65	80	95	105
20	10			Extend = 314	28	55	85	110	140	170	195	220	250	280	Retract = 235	21	42	60	85	105	125	150	170
		25	10	Extend = 490	44	88	132	176	220	264	308	352	396	440	Retract = 412	36	72	108	144	180	216	252	288
32	12			Extend = 804	72	144	216	288	360	432	504	576	648	720	Retract = 691	62	124	186	248	310	372	434	496
		40	12	Extend = 1257	110	220	330	440	550	660	770	880	990	1100	Retract = 1144	100	200	300	400	500	600	700	800
50	16			Extend = 1963	175	350	525	700	875	1050	1225	1400	1575	1750	Retract = 1762	155	310	465	620	775	930	1085	1240
		63	16	Extend = 3117	280	560	840	1120	1400	1680	1960	2240	2520	2800	Retract = 2916	260	520	780	1040	1300	1560	1820	2080
80	20			Extend = 5027	450	900	1350	1800	2250	2700	3150	3600	4050	4500	Retract = 4712	420	840	1260	1680	2100	2520	2940	3360
		100	25	Extend = 7854	700	1400	2100	2800	3500	4200	4900	5650	6360	7000	Retract = 7363	660	1320	1980	2640	3300	3960	4620	5280

Spring Loads

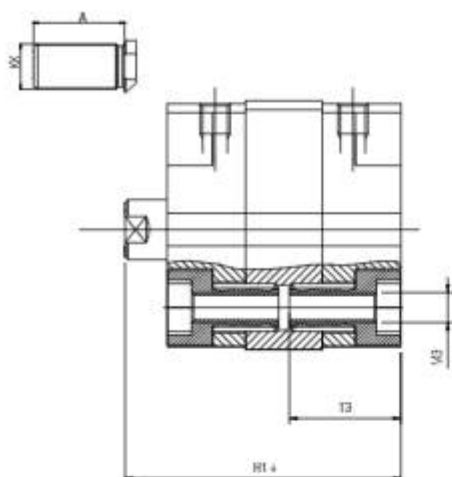
Cylinder Ø	Load spring	Stroke (mm)				
		5	10	15	20	25
		Output force N				
12	Load of spring at rest	7.5	6.8			
	Load of compressed spring	8	8			
16	Load of spring at rest	12.3	10.8	9.5	7.8	6.5
	Load of compressed spring	13.3	13.3	13.3	13.3	13.3
20	Load of spring at rest	15.7	14	12.2	10.4	8.7
	Load of compressed spring	17.4	17.4	17.4	17.4	17.4
25	Load of spring at rest	19.5	18.5	17.3	16	15
	Load of compressed spring	22	22	22	22	22
32	Load of spring at rest	27.8	25.3	22.8	20.2	17.7
	Load of compressed spring	30	30	30	30	30
40	Load of spring at rest	36.4	34	31.7	29.5	27
	Load of compressed spring	36	36	36	36	36
50	Load of spring at rest	32	30.5	29	27.8	26.5
	Load of compressed spring	35	35	35	35	35
63	Load of spring at rest	61	58.5	56.3	53.5	51.5
	Load of compressed spring	64.8	64.8	64.8	64.8	64.8
80	Load of spring at rest	91.3	88	85	82	78.7
	Load of compressed spring	94	94	94	94	94
100	Load of spring at rest	150	145	140	134	129
	Load of compressed spring	156	156	156	156	156

Air Consumption

Cylinder Ø	Piston Rod Ø	Piston Area mm ²	Operating pressure bar									
			1	2	3	4	5	6	7	8	9	10
			Air consumption for each 10 mm of stroke NI									
12	6	Extend = 113	0.002	0.003	0.005	0.006	0.007	0.008	0.009	0.010	0.011	0.012
		Retract = 85	0.002	0.003	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.009
16	8	Extend = 200	0.004	0.006	0.008	0.010	0.012	0.014	0.016	0.018	0.020	0.022
		Retract = 150	0.003	0.005	0.006	0.008	0.009	0.011	0.012	0.014	0.015	0.017
20	10	Extend = 314	0.006	0.009	0.013	0.016	0.019	0.022	0.025	0.028	0.031	0.035
		Retract = 235	0.005	0.007	0.009	0.012	0.014	0.016	0.019	0.021	0.024	0.026
25	10	Extend = 490	0.010	0.015	0.020	0.025	0.029	0.034	0.039	0.044	0.049	0.054
		Retract = 412	0.008	0.012	0.016	0.021	0.025	0.029	0.033	0.037	0.041	0.045
32	12	Extend = 804	0.016	0.024	0.032	0.040	0.048	0.056	0.064	0.072	0.080	0.088
		Retract = 691	0.014	0.021	0.028	0.035	0.041	0.048	0.055	0.062	0.069	0.076
40	12	Extend = 1257	0.025	0.038	0.050	0.063	0.075	0.088	0.101	0.113	0.126	0.138
		Retract = 1144	0.023	0.034	0.046	0.057	0.069	0.080	0.092	0.103	0.114	0.126
50	16	Extend = 1963	0.039	0.059	0.079	0.098	0.118	0.137	0.157	0.177	0.196	0.216
		Retract = 1762	0.035	0.053	0.070	0.088	0.106	0.123	0.141	0.159	0.176	0.194
63	16	Extend = 3117	0.062	0.094	0.125	0.156	0.187	0.218	0.249	0.281	0.312	0.343
		Retract = 2916	0.058	0.087	0.117	0.146	0.175	0.204	0.233	0.262	0.292	0.321
80	20	Extend = 5027	0.101	0.151	0.201	0.251	0.302	0.352	0.402	0.452	0.503	0.553
		Retract = 4712	0.094	0.141	0.188	0.236	0.283	0.330	0.377	0.424	0.471	0.518
100	25	Extend = 7854	0.157	0.236	0.314	0.393	0.471	0.550	0.628	0.707	0.785	0.864
		Retract = 7363	0.147	0.221	0.295	0.368	0.442	0.515	0.589	0.663	0.736	0.810

QB

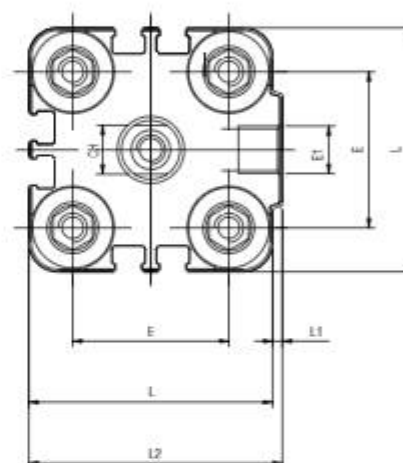
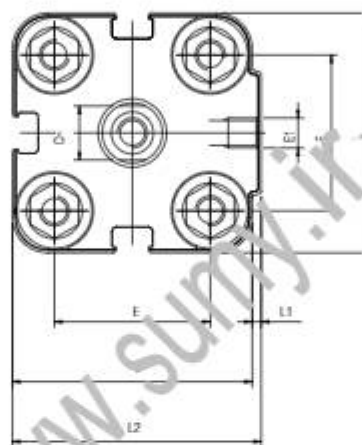
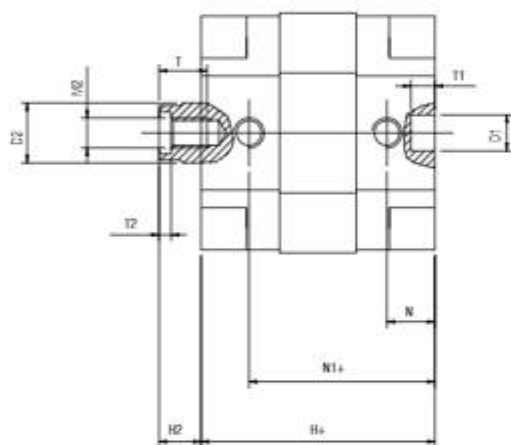
SINGLE ACTING - MAGNETIC



Ø 12-16-20-25



Ø 32-40-50-63-80-100



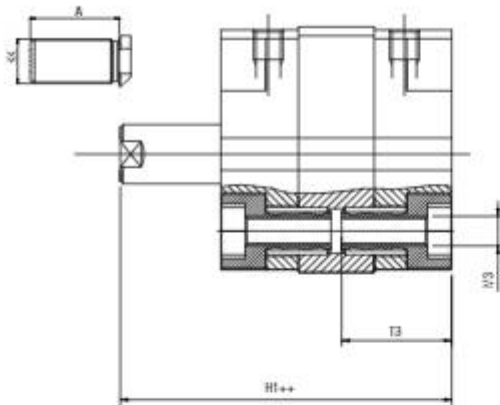
+ = Add Stroke

www.sunhy.ir

Ø	KK	A	T	T1	T2	D1	L	E1	M3	T3	M2	H	H2	D2	N	N1	L2	E	L1	H1	CH
12	M6	16	6	4	1.5	6	29	M5	M4	16	M3	35	7.5	6	6.5	28.5	30	18	1	42.5	5
16	M8	20	8	4	2	6	29	M5	M4	16	M4	35	8.5	8	6.5	28.5	30	18	1	43.5	7
20	M10X1,25	22	8	4	2	6	36	M5	M5	18.5	M5	39	7	10	8	31	37.5	22	1.5	46	9
25	M10X1,25	22	8	4	2	6	40	M5	M5	18.5	M5	39	7	10	8	31	41.5	26	1.5	46	9
32	M10X1,25	22	10	4	2.8	6	50	G1/8	M6	21.5	M6	42	7	12	6.5	35.5	52	32	2	49	10
40	M10X1,25	22	10	4	2.8	6	60	G1/8	M6	21.5	M6	45.5	8.5	12	7.5	38	62.5	42	2.5	54	10
50	M12X1,25	24	12	4	3.5	6	68	G1/8	M8	23.5	M8	45.5	10	16	7.5	38	71	50	3	55.5	13
63	M12X1,25	24	12	4	3.5	8	87	G1/8	M10	28.5	M8	51	10.5	16	7.5	43.5	91	62	4	61.5	13
80	M16X1,5	32	16	4	4.5	8	107	G1/8	M10	28.5	M10	62	12	20	9.5	52.5	111	82	4	75	17
100	M20X1,5	40	20	4	6	8	128	G1/4	M10	28.5	M12	68	15.5	25	10.5	57.5	133	103	5	83.5	22

QD

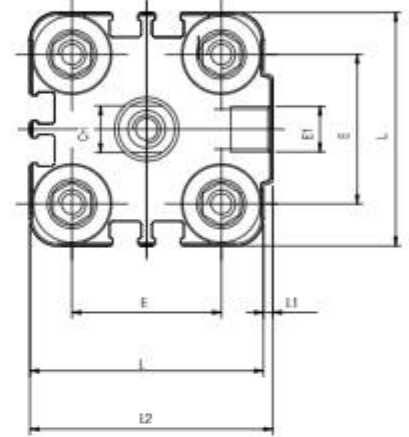
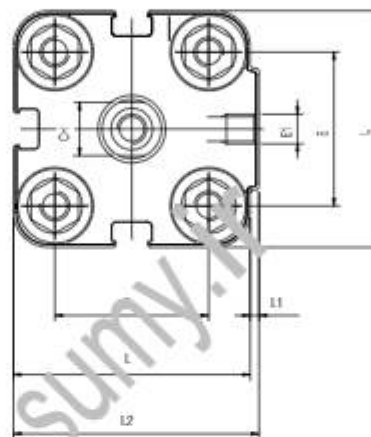
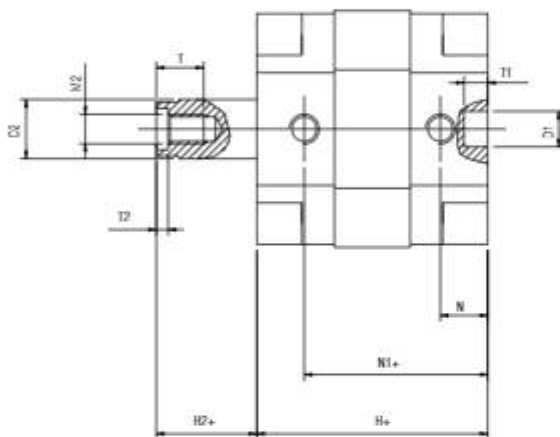
SINGLE ACTING - MAGNETIC - SPRING EXTEND



Ø 12-16-20-25



Ø 32-40-50-63-80-100



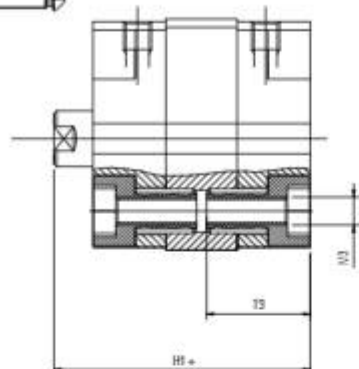
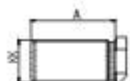
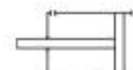
+ = Add Stroke

++ = Double stroke dimension and add it

Ø	KK	A	T	T1	T2	D2	L	E1	M3	T3	M2	H	H2	D2	N	N1	L2	E	L1	H1	CH
12	M6	16	6	4	1.5	6	29	M5	M4	16	M3	35	7.5	6	6.5	28.5	30	18	1	42.5	5
16	M8	20	8	4	2	6	29	M5	M4	16	M4	35	8.5	8	6.5	28.5	30	18	1	43.5	7
20	M10X1,25	22	8	4	2	6	36	M5	M5	18.5	M5	39	7	10	8	31	37.5	22	1.5	46	9
25	M10X1,25	22	8	4	2	6	40	M5	M5	18.5	M5	39	7	10	8	31	41.5	26	1.5	46	9
32	M10X1,25	22	10	4	2.8	6	50	G1/8	M6	21.5	M6	42	7	12	6.5	35.5	52	32	2	49	10
40	M10X1,25	22	10	4	2.8	6	60	G1/8	M6	21.5	M6	45.5	8.5	12	7.5	38	62.5	42	2.5	54	10
50	M12X1,25	24	12	4	3.5	6	68	G1/8	M8	23.5	M8	45.5	10	16	7.5	38	71	50	3	55.5	13
63	M12X1,25	24	12	4	3.5	8	87	G1/8	M10	28.5	M8	51	10.5	16	7.5	43.5	91	62	4	61.5	13
80	M16X1,5	32	16	4	4.5	8	107	G1/8	M10	28.5	M10	62	12	20	9.5	52.5	111	82	4	75	17
100	M20X1,5	40	20	4	6	8	128	G1/4	M10	28.5	M12	68	15.5	25	10.5	57.5	133	103	5	83.5	22

QF

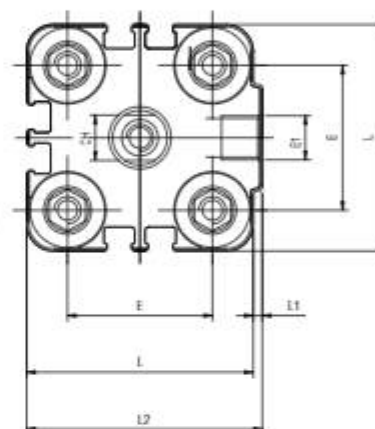
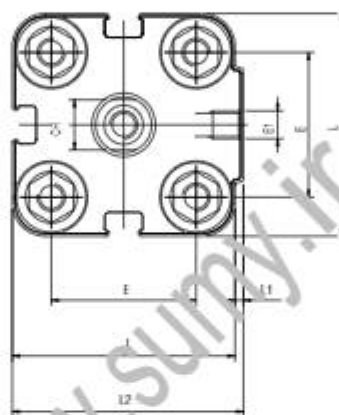
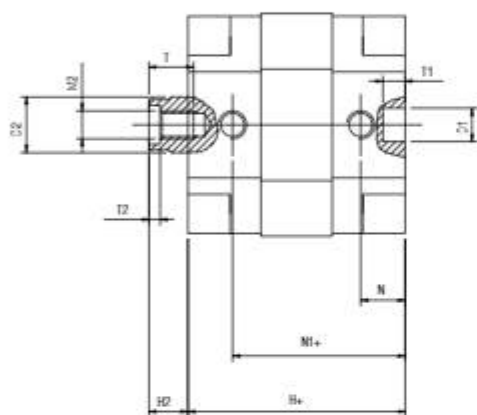
DOUBLE ACTING - MAGNETIC



Ø 12-16-20-25



Ø 32-40-50-63-80-100

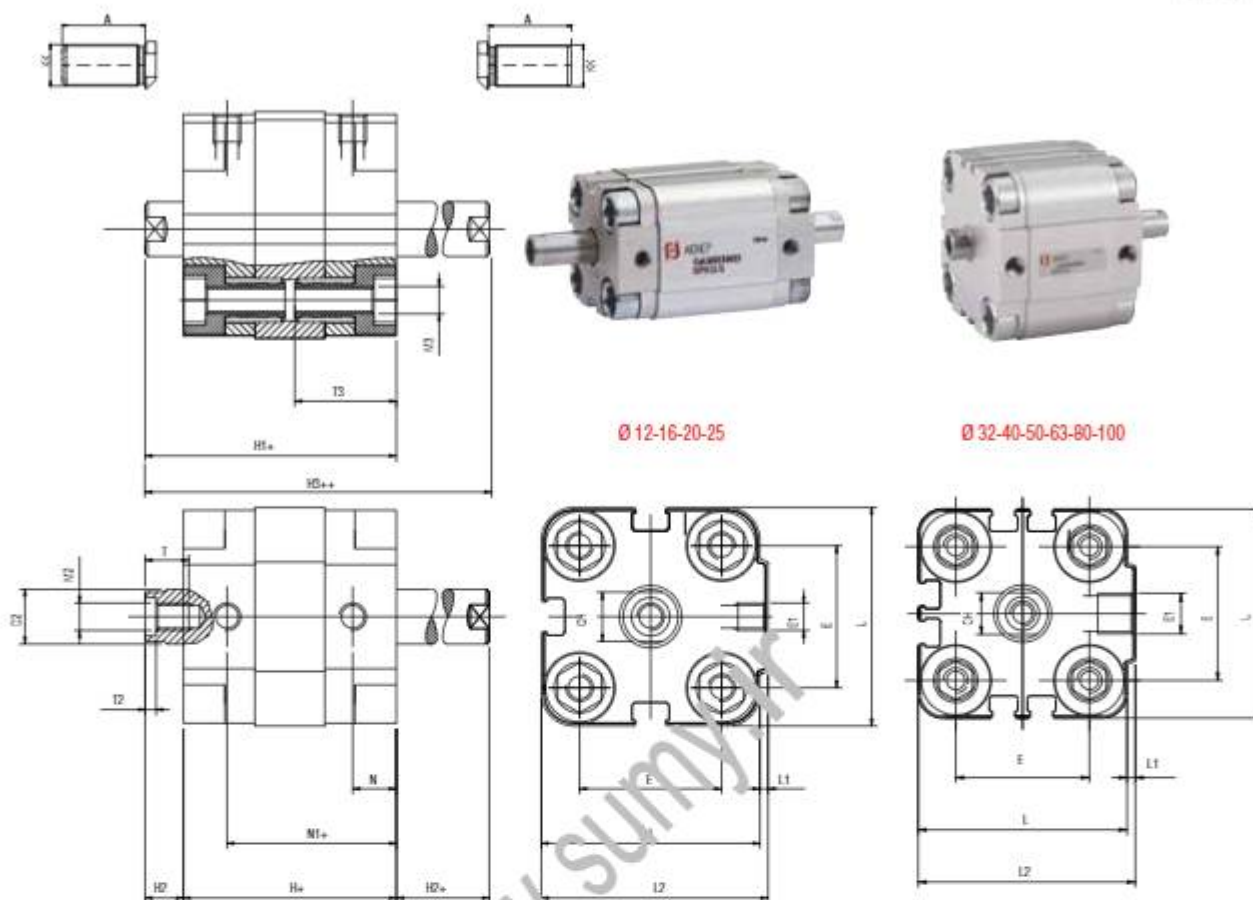
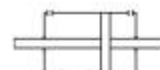


+ = Add Stroke

Ø	KK	A	T	T1	T2	D1	L	E1	M3	T3	M2	H	H2	D2	N	N1	L2	E	L1	H1	CH
12	M6	16	6	4	1.5	6	29	M5	M4	16	M3	35	7.5	6	6.5	28.5	30	18	1	42.5	5
16	M8	20	8	4	2	6	29	M5	M4	16	M4	35	8.5	8	6.5	28.5	30	18	1	43.5	7
20	M10X1,25	22	8	4	2	6	36	M5	M5	18.5	M5	39	7	10	8	31	37.5	22	1.5	46	9
25	M10X1,25	22	8	4	2	6	40	M5	M5	18.5	M5	39	7	10	8	31	41.5	26	1.5	46	9
32	M10X1,25	22	10	4	2.8	6	50	G1/8	M6	21.5	M6	42	7	12	6.5	35.5	52	32	2	49	10
40	M10X1,25	22	10	4	2.8	6	60	G1/8	M6	21.5	M6	45.5	8.5	12	7.5	38	62.5	42	2.5	54	10
50	M12X1,25	24	12	4	3.5	6	68	G1/8	M8	23.5	M8	45.5	10	16	7.5	38	71	50	3	55.5	13
63	M12X1,25	24	12	4	3.5	8	87	G1/8	M10	28.5	M8	51	10.5	16	7.5	43.5	91	62	4	61.5	13
80	M16X1,5	32	16	4	4.5	8	107	G1/8	M10	28.5	M10	62	12	20	9.5	52.5	111	82	4	75	17
100	M20X1,5	40	20	4	6	8	128	G1/4	M10	28.5	M12	68	15.5	25	10.5	57.5	133	103	5	83.5	22

QJ

SINGLE ACTING - MAGNETIC WITH DOUBLE ROD END



Ø 12-16-20-25

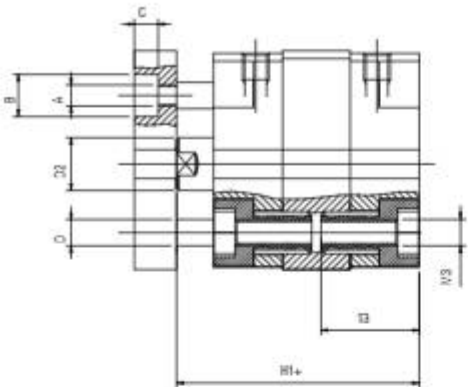
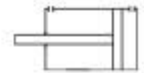
Ø 32-40-50-63-80-100

+ = Add Stroke ++ = Double stroke dimension and add it

Ø	KK	A	T	M2	T2	D2	L	E1	M3	T3	CH	H	H2	H3	N	N1	L2	E	L1	H1
12	M6	16	6	M3	1.5	6	29	M5	M4	16	5	35	7.5	50	6.5	28.5	30	18	1	42.5
16	M8	20	8	M4	2	8	29	M5	M4	16	7	35	8.5	52	6.5	28.5	30	18	1	43.5
20	M10X1,25	22	8	M5	2	10	36	M5	M5	18.5	9	39	7	53	8	31	37.5	22	1.5	46
25	M10X1,25	22	8	M5	2	10	40	M5	M5	18.5	9	39	7	53	8	31	41.5	26	1.5	46
32	M10X1,25	22	10	M6	2.8	12	50	G1/8	M6	21.5	10	42	7	56	6.5	35.5	52	32	2	49
40	M10X1,25	22	10	M6	2.8	12	60	G1/8	M6	21.5	10	45.5	8.5	62.5	7.5	38	62.5	42	2.5	54
50	M12X1,25	24	12	M8	3.5	16	68	G1/8	M8	23.5	13	45.5	10	65.5	7.5	38	71	50	3	55.5
63	M12X1,25	24	12	M8	3.5	16	87	G1/8	M10	28.5	13	51	10.5	72	7.5	43.5	91	62	4	61.5
80	M16X1,5	32	16	M10	4.5	20	107	G1/8	M10	28.5	17	62	12	86	9.5	52.5	111	82	4	75
100	M20X1,5	40	20	M12	6	25	128	G1/4	M10	28.5	22	68	15.5	99	10.5	57.5	133	103	5	83.5

QFA

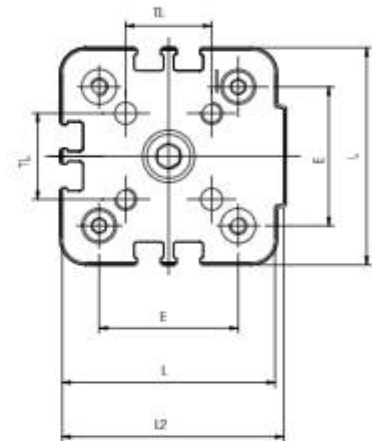
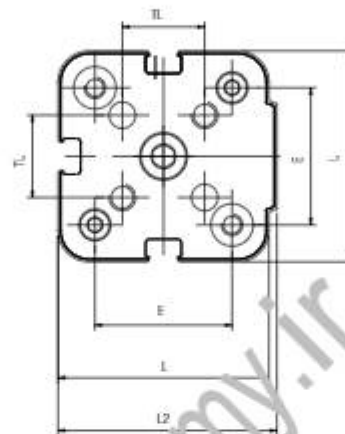
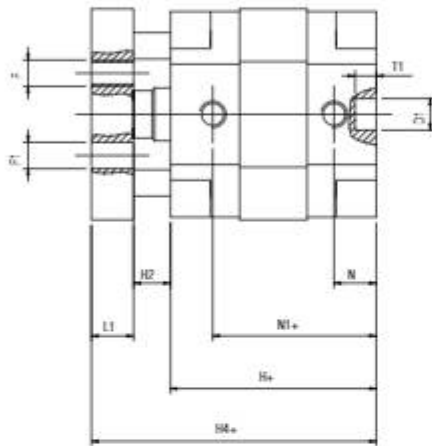
DOUBLE ACTING - MAGNETIC - ANTI ROTATION



Ø 12-16-20-25



Ø 32-40-50-63-80-100



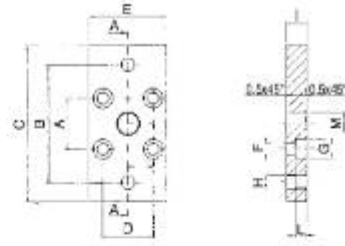
+ = Add Stroke

Ø	A	B	C	D	D1	D2	E	F	F1	F2	H	H1	H2	H4	L	L1	L2	M3	N	N1	T1	T3	TL
12	M3	6	3.5	4	6	6	18	M3	3	35	42.5	7.5	47.5	29	5	30	M4	6.5	28.5	4	16	9.9	
16	M3	6	3.5	4	6	8	18	M3	3	35	43.5	8.5	48.5	29	5	30	M4	6.5	28.5	4	16	9.9	
20	M3	6	3.5	6	6	10	22	M4	4	39	46	7	54	36	8	37.5	M5	8	31	4	18.5	12	
25	M4	8	4.5	6	6	10	26	M5	5	39	46	7	54	40	8	41.5	M5	8	31	4	18.5	15.6	
32	M4	8	5.5	6	6	12	32	M5	5	42	49	7	59	50	10	52	M6	6.5	35.5	4	21.5	19.8	
40	M4	8	5.5	6	6	12	42	M5	5	45.5	54	8.7	64	60	10	62.5	M6	7.5	38	4	23.5	23.3	
50	M6	11	7	8	6	16	50	M6	6	45.5	55.5	10.2	67.5	68	12	71	M8	7.5	38	4	23.5	29.7	
63	M6	11	7	8	8	16	62	M6	6	51	61.5	10.5	73.5	87	12	91	M10	7.5	43.5	4	28.5	35.4	
80	M8	14	9	12	8	20	82	M8	8	62	75	12	89	107	14	111	M10	9.5	52.5	4	28.5	46	
100	M8	14	9	12	8	25	103	M10	10	68	83.5	15.5	97.5	128	14	133	M10	10.5	57.5	4	28.5	56.6	

SERIES Q Mounting Accessories

QFL

FLANGE
Ø 12-25

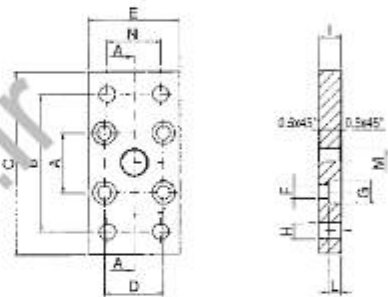


MATERIAL: Steel

Part No.	Ø	A	B	C	D	E	F	G	H	I	L	M
QFL 012	12 - 16	18	43	55	18	29	4.5	9	5.5	10	5.4	10
QFL 020	20	22	55	70	22	36	5.5	10	6.6	10	5.4	12
QFL 025	25	26	60	76	26	40	5.5	10	6.6	10	5.4	12

QFL

FLANGE
Ø 32-100

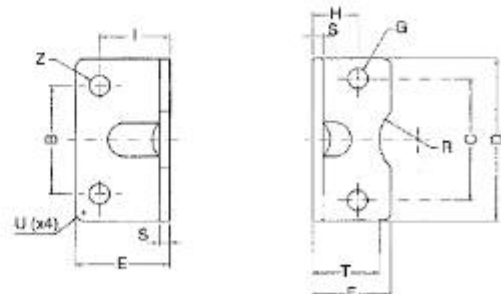


MATERIAL: Steel

Part No.	Ø	A	B	C	L	E	F	G	H	I	L	M	N
QFL 032	32	32	65	80	32	50	6.6	11	7	10	6.4	14	32
QFL 040	40	42	82	100	42	60	6.6	11	9	10	6.4	14	36
QFL 050	50	50	90	110	50	68	9	15	9	12	8.6	18	45
QFL 063	63	62	110	130	62	87	11	15	9	15	10.6	18	50
QFL 080	80	82	135	160	82	107	11	18	12	15	10.6	23	63
QFL 100	100	103	163	190	103	128	11	18	14	15	10.6	28	75

QCP

LOW-RISE PEDESTAL
Ø 12-32

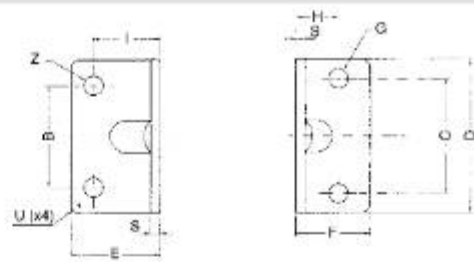


MATERIAL: Steel

Part No.	Ø	C	B	D	E	F	G	H	I	S	T	R	U	Z
QCP 012	12 - 16	18	18	30	17.5	17.5	4.4	13	13	3	15	9	2	5.5
QCP 020	20	22	22	36	22	22	5.4	16	16	4	17	10	2	6.6
QCP 025	25	26	26	40	22	23	5.4	17	16	4	19	11	2	6.6
QCP 032	32	32	32	50	26	24	6.6	16	18	5	20	12	2	6.6

QPC

LOW-RISE PEDESTAL
Ø 40-100

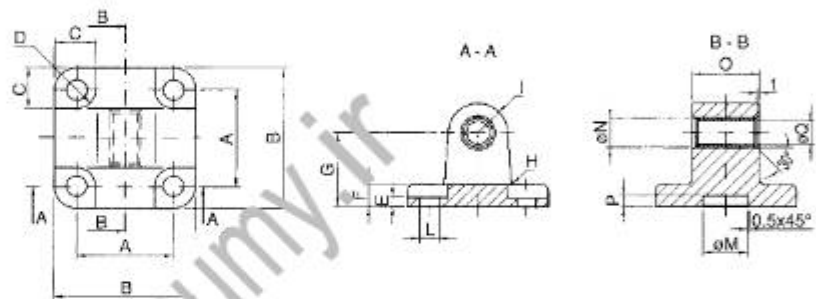


MATERIAL: Steel

Part No.	Ø	C	B	D	E	F	G	H	I	S	U	Z
QCP 040	40	42	42	60	28	29.5	6.6	21.5	20	5	5	9
QCP 050	50	50	50	68	32	30	9	22	24	6	5	9
QCP 063	63	62	62	84	39	39	9	28.5	27	6	5	11
QCP 080	80	82	82	102	36.5	36.5	11	24.5	30	8	5	11
QCP 100	100	103	103	123	38.5	38.5	11	26.5	33	8	5	13.5

QCM

EYE BRACKET WITH SELF-LUBRICATING BUSHINGS

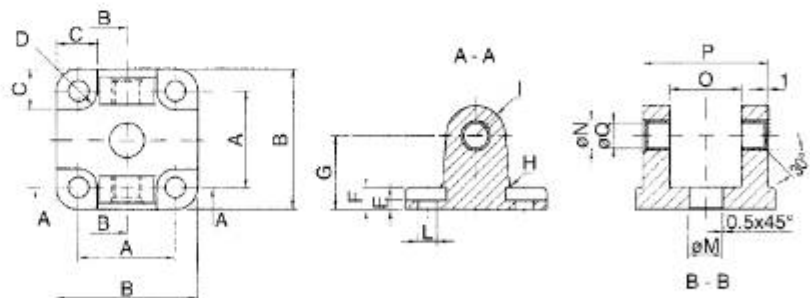


MATERIAL: Aluminium

Part No.	Ø	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q
QCM 012	12 - 16	18	27	10	4.5	2.6	7	16	2	6	4.5	10	8	12	3	6
QCM 020	20	22	34	11	5	2.6	6	20	2	8	5.5	12	10	16	3	8
QCM 025	25	26	38	11	5	2.6	6	20	2	8	5.5	12	10	16	3	8

QCF

CLEVIS BRACKET WITH SELF-LUBRICATING BUSHINGS

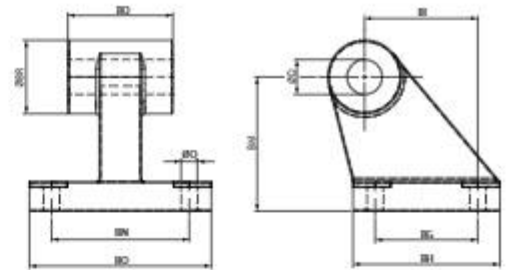


MATERIAL: Aluminium

Part No.	Ø	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q
QCF 032	32	32	48	13.5	5.5	5.5	9	22	2.5	10	6.6	14	12	26	45	10
QCF 040	40	42	58	13.5	5.5	5.5	9	25	2.5	12.5	6.6	14	14	28	52	12
QCF 050	50	50	66	15.5	7.5	6.5	11	27	2.5	12.5	9	18	14	32	60	12
QCF 063	63	62	83	18	7.5	6.5	11	32	4	15	11	18	18	40	70	16
QCF 080	80	82	102	19	9	10	13	36	4	15	11	23	18	50	90	16
QCF 100	100	103	123	19	9	10	15	41	4	20	11	28	23	60	110	20

VAS

EYE BRACKET

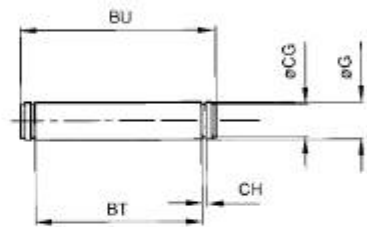


- MATERIAL: Aluminium
- MATERIAL: Stainless Steel

Part No. ●	Part No. ■	Ø	Q	BG	BH	BI	BM	BN	BO	BQ	BR
VAS 032	VASI 032	32	6.6	18	31	21	32	38	51	26	20
VAS 040	VASI 040	40	6.6	22	35	24	36	41	54	28	22
VAS 050	VASI 050	50	9	30	45	33	45	50	65	32	26
VAS 063	VASI 063	63	9	35	50	37	50	52	67	40	30
VAS 080	VASI 080	80	11	40	60	47	63	66	86	50	30
VAS 100	VASI 100	100	11	50	70	55	71	76	96	60	38

VPE

PIN WITH RETAINER CLIPS

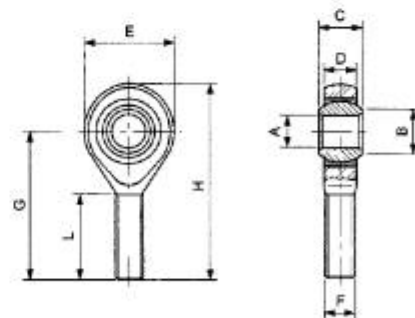


- MATERIAL: Steel
- MATERIAL: Stainless Steel

Part No. ●	Part No. ■	Ø	G	BT	BU	CG	CH
VPE 032	VPEI 032	32	10	46	53	9.6	1.1
VPE 040	VPEI 040	40	12	53	60	11.5	1.1
VPE 050	VPEI 050	50	12	61	68	11.5	1.1
VPE 063	VPEI 063	63	16	71	78	15.2	1.1
VPE 080	VPEI 080	80	16	91	98	15.2	1.1
VPE 100	VPEI 100	100	20	111	118	19	1.3

TM

SPHERICAL ROD EYE WITH MALE THREAD



MATERIAL: Steel

Part No.	F	A	B	C	Ø Sphere	D	E	G	H	L	Radial load		Weight
											Dynamic	Static	
TM 020	M5x0.8	5	7.5	8	11.11	7.5	18	33	42	19	430	1000	13
TM 032	M6x1	6	8.9	9	12.7	7.5	20	36	46	21	470	1100	15
TM 050	M8x1.25	8	10.4	12	15.88	9.5	24	42	54	25	780	1900	34
TM 080	M10x1.5	10	12.9	14	19.05	11.5	30	48	63	28	1200	3100	70
TM 100	M12x1.75	12	15.4	16	22.23	12.5	34	54	71	32	1400	3700	110


Extend and Retract Forces

Cylinder Ø	Piston Rod Ø	Piston Area mm ²	Operating pressure bar									
			1	2	3	4	5	6	7	8	9	10
			Output force N									
32	12	Extend = 804	72	144	216	288	360	432	504	576	648	720
		Retract = 691	62	124	186	248	310	372	434	496	558	620
40	16	Extend = 1257	110	220	330	440	550	660	770	880	990	1100
		Retract = 1056	95	190	285	380	475	570	665	760	855	950
50	20	Extend = 1963	175	350	525	700	875	1050	1225	1400	1575	1750
		Retract = 1649	148	296	444	592	740	888	1036	1184	1332	1480
63	20	Extend = 3117	280	560	840	1120	1400	1680	1960	2240	2520	2800
		Retract = 2803	250	500	750	1000	1250	1500	1750	2000	2250	2500
80	25	Extend = 5027	450	900	1350	1800	2250	2700	3150	3600	4050	4500
		Retract = 4536	405	810	1215	1620	2025	2430	2835	3240	3645	4050
100	25	Extend = 7854	700	1400	2100	2800	3500	4200	4900	5650	6360	7000
		Retract = 7363	660	1320	1980	2640	3300	3960	4620	5280	5940	6600
125	32	Extend = 12270	1104	2208	3312	4416	5520	6624	7728	8832	9936	11040
		Retract = 11468	1032	2064	3096	4128	5160	6192	7224	8256	9288	10320
160	40	Extend = 20096	1774	3548	5322	7097	8871	10645	12419	14194	15968	17742
		Retract = 18840	1663	3326	4990	6653	8316	9980	11643	13307	14970	16633
200	40	Extend = 31440	2772	5544	8316	11089	13861	16633	19406	22178	24950	27723
		Retract = 30144	2661	5322	7984	10745	13507	16268	19029	21791	24552	26614
250	50	Extend = 48750	4331	8663	12995	17326	21658	25990	30322	34653	38985	43317
		Retract = 46800	4158	8316	12475	16663	20792	24950	29109	33267	37426	41584
320	63	Extend = 78872	7097	14194	21291	28388	35485	42582	49679	56776	63873	70971
		Retract = 76776	6822	13644	20466	27288	34110	40932	47754	54576	61398	68220

Spring Loads

Cylinder Ø	Load spring	Stroke (mm)				
		25	50	75	80	100
		Output force N				
32	Load of spring at rest	50	41	33	31.5	24.5
	Load of compressed spring	58	58	58	58	58
40	Load of spring at rest	52	43	34	32	25
	Load of compressed spring	61	61	61	61	61
50	Load of spring at rest	92	77	64	60	49
	Load of compressed spring	110	110	110	110	110
63	Load of spring at rest	92	77	64	60	49
	Load of compressed spring	110	110	110	110	110
80	Load of spring at rest	117	98	79	75	59
	Load of compressed spring	138	138	138	138	138
100	Load of spring at rest	117	98	79	75	59
	Load of compressed spring	138	138	138	138	138

Air Consumption

Cylinder Ø	Piston Rod Ø	Piston Area mm ²	Operating pressure									
			bar									
			1	2	3	4	5	6	7	8	9	10
Air consumption for each 10 mm of stroke NI												
32	12	Extend = 804	0.016	0.024	0.032	0.040	0.048	0.056	0.064	0.072	0.080	0.088
		Retract = 691	0.014	0.021	0.028	0.035	0.041	0.048	0.055	0.062	0.069	0.076
40	16	Extend = 1257	0.025	0.038	0.050	0.063	0.075	0.088	0.101	0.113	0.126	0.138
		Retract = 1056	0.021	0.032	0.042	0.053	0.063	0.074	0.084	0.095	0.106	0.116
50	20	Extend = 1963	0.039	0.059	0.079	0.098	0.118	0.137	0.157	0.177	0.196	0.216
		Retract = 1649	0.033	0.049	0.066	0.082	0.099	0.115	0.132	0.148	0.165	0.181
63	20	Extend = 3117	0.062	0.094	0.125	0.156	0.187	0.218	0.249	0.281	0.312	0.343
		Retract = 2803	0.056	0.084	0.112	0.140	0.168	0.196	0.224	0.252	0.280	0.308
80	25	Extend = 5027	0.101	0.151	0.201	0.251	0.302	0.352	0.402	0.452	0.503	0.553
		Retract = 4536	0.091	0.136	0.181	0.227	0.272	0.318	0.363	0.408	0.454	0.499
100	25	Extend = 7854	0.157	0.236	0.314	0.393	0.471	0.550	0.628	0.707	0.785	0.864
		Retract = 7363	0.147	0.221	0.295	0.368	0.442	0.515	0.589	0.663	0.736	0.810
125	32	Extend = 12270	0.245	0.368	0.491	0.614	0.736	0.859	0.982	1.104	1.227	1.350
		Retract = 11468	0.229	0.344	0.459	0.573	0.688	0.803	0.917	1.032	1.147	1.261
160	40	Extend = 20096	0.402	0.603	0.804	1.005	1.206	1.407	1.608	1.809	2.010	2.211
		Retract = 18840	0.377	0.565	0.754	0.942	1.130	1.319	1.507	1.696	1.884	2.072
200	40	Extend = 31440	0.628	0.942	1.256	1.570	1.884	2.198	2.512	2.826	3.140	3.454
		Retract = 30144	0.603	0.904	1.206	1.507	1.809	2.110	2.412	2.713	3.014	3.316
250	50	Extend = 48750	0.981	1.472	1.963	2.453	2.948	3.434	3.925	4.415	4.906	5.400
		Retract = 46800	0.942	1.413	1.884	2.355	2.826	3.297	3.768	4.239	4.710	5.181
320	63	Extend = 78872	1.610	2.411	3.215	4.020	4.820	5.626	6.430	7.234	8.038	8.843
		Retract = 76776	1.545	2.320	3.100	3.863	4.630	5.408	6.181	6.954	7.726	8.450

www.sumy.fr



TECHNICAL CHARACTERISTICS



Component Parts and Materials

- 1 Chrome plated C40 steel piston rod
- 2 Zinc plated steel jam nut
- 3 Polyurethane rod seal or FKM
- 4 Aluminum end cap
- 5 Polyurethane cushion seals or FKM
- 6 Zinc plated steel cushion adjustment screw
- 7 Aluminum end cap
- 8 Anodized aluminum body
- 9 Zinc plated steel screws
- 10 Sintered bronze rod bearing
- 11 Polyurethane piston seals or FKM
- 12 Plastolerrite magnet
- 13 Aluminum piston
- 14 Support magnet
- 15 Aluminum piston
- 16 NBR o-ring seals or FKM
- 17 NBR o-ring seals or FKM



Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

SILICON
FREE

ATEX
2014/34/UE



Pressures

- 1 bar (0.1 MPa) / 14.5 psi
- 10 bar (0.7 MPa) / 145 psi



Temperatures

- 0 °C / 32 °F (-20 °C / -4 °F with dry air)
- + 80 °C / 176 °F



Media

Filtered and lubricated or non-lubricated compressed air.



Functions

Single acting magnetic or non-magnetic. Double acting single or double end rod, magnetic or non-magnetic, cushioned or non-cushioned and tandem.



Bores

from 32 to 125 mm



Standard Strokes

from 25 to 1000 mm
Strokes on demand: up to 2700 mm

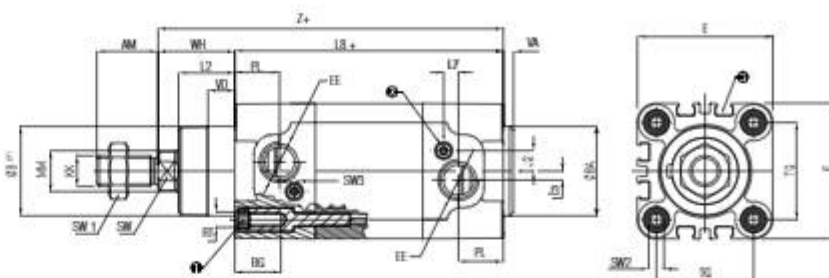
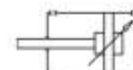
Series	Ø (mm)	Stroke (mm)		Special version
X H	0 3 2	0 0 2 5	V S	
<ul style="list-style-type: none"> ▲ XB Single acting - magnetic ● XH Double acting - cushioned - magnetic ● XL Double acting - cushioned - magnetic with double rod end 	032 040 050 063 080 100 125	0025 0320 0050 0350 0075 0400 0080 0450 0100 0500 0125 0600 0150 0700 0160 0800 0200 0900 0250 1000 0300	VS Only Rod Seals in FKM IS Stainless steel rod V All FKM seals R Metal Scraper	
Intermediate or longer strokes are available upon request. Maximum stroke 2700 mm.				

Ø (mm)	Stroke (mm)																				
	25	50	75	80	100	125	150	160	200	250	300	320	350	400	450	500	600	700	800	900	1000
32	▲●	▲●	▲●	▲●	▲●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
40	▲●	▲●	▲●	▲●	▲●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
50	▲●	▲●	▲●	▲●	▲●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
63	▲●	▲●	▲●	▲●	▲●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
80	▲●	▲●	▲●	▲●	▲●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
100	▲●	▲●	▲●	▲●	▲●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
125	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

www.sumy.ir

XH

DOUBLE ACTING - CUSHIONED - MAGNETIC

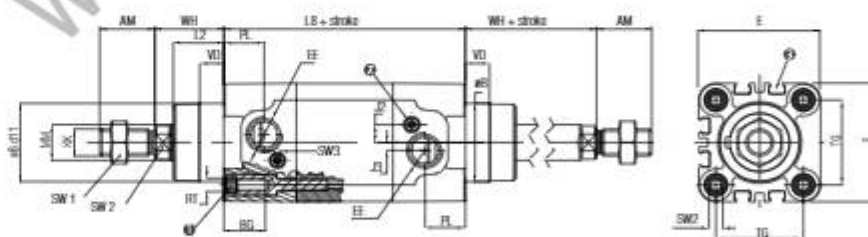
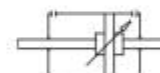


+ = Add Stroke

Ø	ØB ^{d11}	VD	VA	L2	WH	Ømm	SW	KK	AM	SW1	ZJ	L8	BG	RT	SW2	E	TG	EE	PL	J3	J2	L7	SW3
32	30	10	4	20	26	12	10	M10X1.25	22	17	120	94	18	M6	6	46	32.5	G1/8	18	4	6.5	2	2.5
40	35	10.5	4	22	30	16	13	M12X1.25	24	19	135	105	18	M6	6	54	38	G1/4	17.5	3.5	8	5.8	2.5
50	40	11.5	4	28	37	20	17	M16X1.5	32	22	143	106	20	M8	8	64	46.5	G1/4	20.5	7	10	2	4
63	45	15	4	29	37	20	17	M16X1.5	32	22	158	121	20	M8	8	74	56.5	G3/8	22	11	8.5	4	4
80	45	15.7	4	35	46	25	22	M20X1.5	40	30	174	128	19	M10	6	94	72	G3/8	22	11	8.5	4	4
100	55	19.2	4	38	51.5	25	22	M20X1.5	40	30	189.5	138	19	M10	6	111	89	G1/2	26	9	12.5	5	4
125	60	20	6	50	65	32	27	M27X2	54	41	225	160	21	M12	8	135	110	G1/2	30	9	12.5	2.5	4

XL

DOUBLE ACTING - CUSHIONED - MAGNETIC WITH DOUBLE ROD END



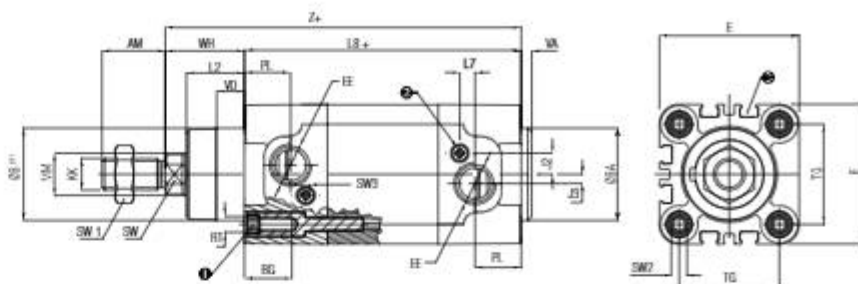
+ = Add Stroke

Ø	ØB ^{d11}	VD	VA	L2	WH	Ømm	SW	KK	AM	SW1	ZJ	L8	BG	RT	SW2	E	TG	EE	PL	J3	J2	L7	SW3
32	30	10	4	20	26	12	10	M10X1.25	22	17	120	94	18	M6	6	46	32.5	G1/8	18	4	6.5	2	2.5
40	35	10.5	4	22	30	16	13	M12X1.25	24	19	135	105	18	M6	6	54	38	G1/4	17.5	3.5	8	5.8	2.5
50	40	11.5	4	28	37	20	17	M16X1.5	32	22	143	106	20	M8	8	64	46.5	G1/4	20.5	7	10	2	4
63	45	15	4	29	37	20	17	M16X1.5	32	22	158	121	20	M8	8	74	56.5	G3/8	22	11	8.5	4	4
80	45	15.7	4	35	46	25	22	M20X1.5	40	30	174	128	19	M10	6	94	72	G3/8	22	11	8.5	4	4
100	55	19.2	4	38	51.5	25	22	M20X1.5	40	30	189.5	138	19	M10	6	111	89	G1/2	26	9	12.5	5	4
125	60	20	6	50	65	32	27	M27X2	54	41	225	160	21	M12	8	135	110	G1/2	30	9	12.5	2.5	4

KEY
 ① = Socket head screw with female thread for mounting attachments.
 ② = Adjustment screw for adjustable end-position cushioning.
 ③ = Slot for proximity sensor.

XB

SINGLE ACTING - MAGNETIC



+ = Add Stroke

Ø	ØB ¹¹	VD	VA	L2	WH	Ømm	SW	KK	AM	SW1	ZJ	L8	BG	RT	SW2	E	TG	EE	PL	J3
32	30	10	4	20	26	12	10	M10X1.25	22	17	145	119	18	M6	6	46	32.5	G1/8	18	4
40	35	10.5	4	22	30	16	13	M12X1.25	24	19	160	130	18	M6	6	54	38	G1/4	17.5	3.5
50	40	11.5	4	28	37	20	17	M16X1.5	32	22	168	131	20	M8	8	64	46.5	G1/4	20.5	7
63	45	15	4	29	37	20	17	M16X1.5	32	22	183	146	20	M8	8	74	56.5	G3/8	22	8
80	45	15.7	4	35	46	25	22	M20X1.5	40	30	199	153	19	M10	6	94	72	G3/8	22	11
100	55	19.2	4	38	51.5	25	22	M20X1.5	40	30	214.5	163	19	M10	6	111	89	G1/2	26	9

KEY

⊖ = Socket head screw with female thread for mounting attachments.

⊕ = Adjustment screw for adjustable end-position cushioning.

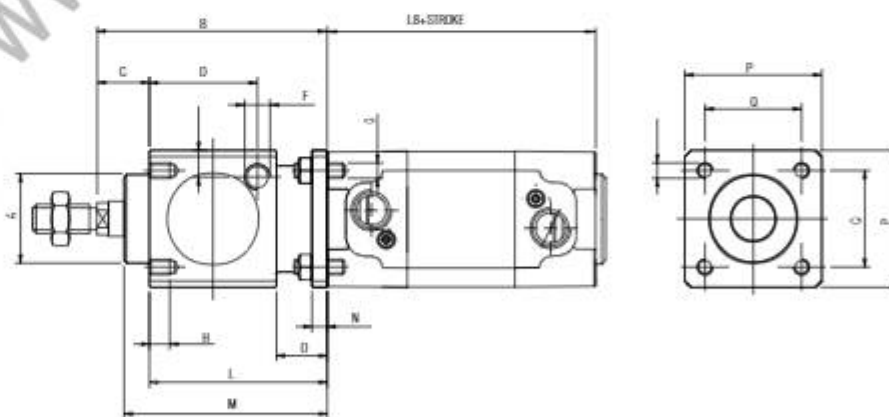
⊖ = Slot for proximity sensor.

SERIES X - WITH PISTON LOCK ISO 15552

XHB

DOUBLE ACTING - CUSHIONED - MAGNETIC WITH PISTON ROD LOCK

XLB: AVAILABLE DOUBLE ROD END



Ø	A	B	C	D	E	F	G	H	L	M	N	O	P	Q	L8
32	30	86	26	33.25	9	1/8"G	M6	8	60	67.5	6	20	47	32.5	94
40	34.5	100	30	42.5	9	1/8"G	M6	8	70	80	6	20	54	38	105
50	40	127	37	58	12.5	1/8"G	M8	12	90	100	8	24	65	46.5	106
63	45	127	37	59	17.5	1/8"G	M8	12	90	100	8	24	75	56.5	121
80	45	156	46	69	17.5	1/4"G	M10	16	110	120	12	32	95	72	128
100	55	161	51	69	20	1/4"G	M10	16	110	120	12	32	114	89	138
125	60	205	65	84.5	19	1/4"G	M12	20	140	156	20	45	138	110	160



Pressures

Without Pressures:
LOCKED

Cylinder Supply Pressure

Minimum release pressure

0 ÷ 7 bar (0 ÷ 0.7 Mpa)

2.5 bar (0.25 Mpa)

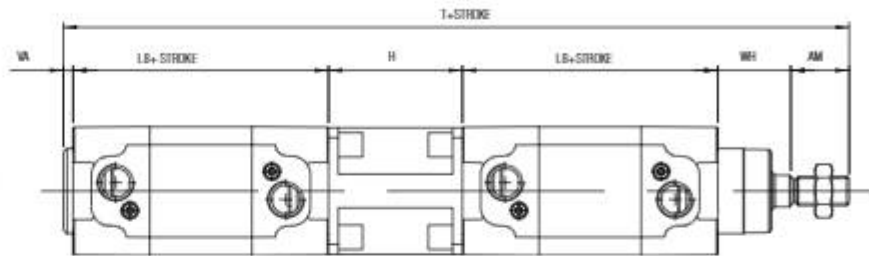
7 ÷ 10 bar (0.7 ÷ 1 Mpa)

3 bar (0.3 Mpa)

SERIES X - TANDEM ISO 15552

XHT

TANDEM DOUBLE ACTING - MAGNETIC



Ø	VA	WH	AM	LB	H	T
32	4	26	22	94	55	295
40	4	30	24	105	55	323
50	4	37	32	106	68	353
63	4	37	32	12	68	383
80	4	46	40	128	92	438
100	4	51.5	40	38	92	463.5
125	6	65	54	103	120	565

For further information please contact our technical department.

www.sumy.ir

SERIES E - CYLINDER ISO 6431



TECHNICAL CHARACTERISTICS



Ø 32 - 125



Ø 160 - 320



Functions

Double acting single or double end rod, magnetic or non-magnetic.



Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

SILICON
FREE

ATEX
2014/34/UE



Pressures

1 bar (0.1 MPa) / 14.5 psi
10 bar (0.7 MPa) / 145 psi



Temperatures

0 °C / 32 °F (-20 °C / -4 °F) with dry air
+ 80 °C / 176 °F



Media

Filtered and lubricated or non-lubricated compressed air.

FORCES, SPRING LOADS AND AIR CONSUMPTION

See Pg. 14.42-14.43

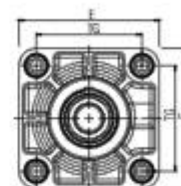
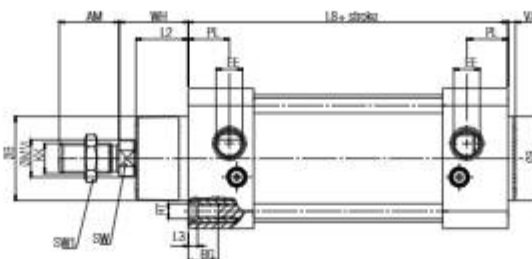
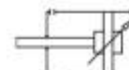
Serie	Stroke (mm)	Stroke (mm)	Mounting type	Special version
E H	0 3 2	0 0 2 5	T	V S
<p>▲EH Double acting - cushioned - magnetic</p> <p>▲EL Double Acting - cushioned - magnetic with double rod end</p>	032 040 050 063 080 100 125 160 200 250 320	0025 0050 0075 0080 0100 0125 0150 0160 0200 0250 0300	0320 0350 0400 0450 0500 0600 0700 0800 0900 1000	<p>T Anodized aluminium tube round profile with tie rods</p> <p>VS Only Rod Seals in FKM</p> <p>IS Stainless steel rod</p> <p>V All FKM seals</p> <p>R Metal Scraper (160-200-250)</p>

Intermediate or longer strokes are available upon request.
Maximum stroke 2700 mm.

Ø (mm)	Stroke (mm)																				
	25	50	75	80	100	125	150	160	200	250	300	320	350	400	450	500	600	700	800	900	1000
32	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
40	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
50	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
63	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
80	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
100	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
125	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
160	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
200	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
250	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
320	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲

EH T

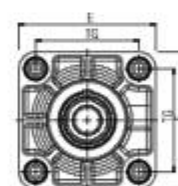
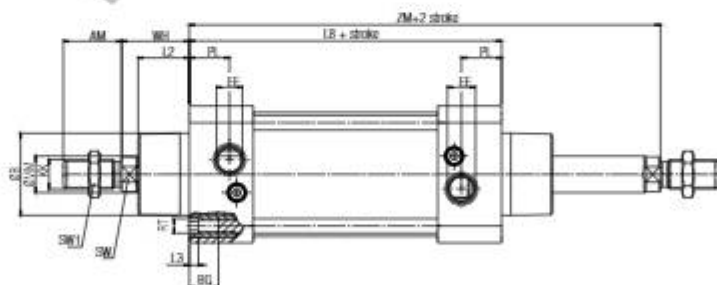
DOUBLE ACTING - CUSHIONED - MAGNETIC



Ø	ØB	VA	L2	WH	Ø mm	SW	KK	A	L8	BG	RT	E	TG	EE	PL	L3	ZM	SW1
32	30	4	20	26	12	10	M10X1.25	22	94	16	M6	47	32.5	G1/8	14	5	146	17
40	35	4	22	30	16	13	M12X1.25	24	105	16	M6	53	38	G1/4	16	5	165	19
50	40	4	28	37	20	17	M16X1.5	32	106	16	M8	65	46.5	G1/4	21	5	180	22
63	45	4	28	37	20	17	M16X1.5	32	121	16	M8	75	56.5	G3/8	22	5	195	22
80	45	4	34	46	25	22	M20X1.5	40	128	18	M10	95	72	G3/8	23	6	220	30
100	55	4	38	51.5	25	22	M20X1.5	40	138	18	M10	115	89	G1/2	26	6	240	30
125	60	5	50	65	32	27	M27X2	54	160	19	M12	140	110	G1/2	30	6	290	41
160	65	6	55	80	40	36	M36X2	72	180	24	M16	180	140	G3/4	29	0	340	55
200	75	6	60	95	40	36	M36X2	72	180	24	M16	220	175	G3/4	29	0	370	55
250	90	10	75	105	50	46	M42X2	84	200	25	M20	275	220	G1"	31	0	410	65
320	110	10	90	120	63	55	M48X2	96	220	30	M24	350	270	G1"	30	0	460	75

EL T

DOUBLE ACTING - CUSHIONED - MAGNETIC WITH DOUBLE ROD END

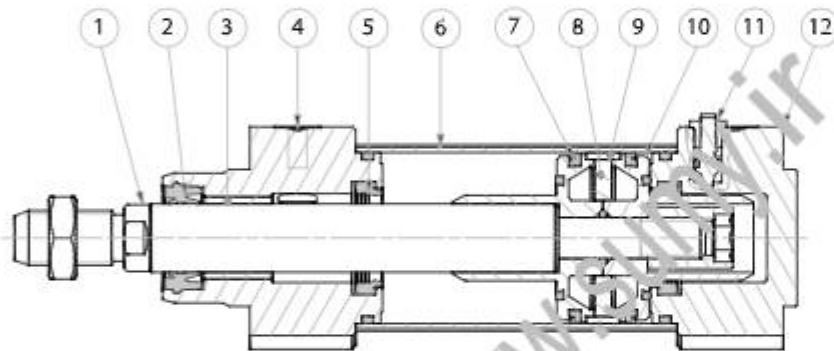


Ø	ØB	VA	L2	WH	Ø mm	SW	KK	A	L8	BG	RT	E	TG	EE	PL	L3	ZM	SW1
32	30	20	20	26	12	10	M10X1.25	22	94	16	M6	47	32.5	G1/8	14	5	146	17
40	35	22	22	30	16	13	M12X1.25	24	105	16	M6	53	38	G1/4	16	5	165	19
50	40	28	28	37	20	17	M16X1.5	32	106	16	M8	65	46.5	G1/4	21	5	180	22
63	45	28	28	37	20	17	M16X1.5	32	121	16	M8	75	56.5	G3/8	22	5	195	22
80	45	34	34	46	25	22	M20X1.5	40	128	18	M10	95	72	G3/8	23	6	220	30
100	55	38	38	51.5	25	22	M20X1.5	40	138	18	M10	115	89	G1/2	26	6	240	30
125	60	50	50	65	32	27	M27X2	54	160	19	M12	140	110	G1/2	30	6	290	41
160	65	55	55	80	40	36	M36X2	72	180	24	M16	180	140	G3/4	29	0	340	55
200	75	60	60	95	40	36	M36X2	72	180	24	M16	220	175	G3/4	29	0	370	55
250	90	75	75	105	50	46	M42X2	84	200	25	M20	275	220	G1"	31	0	410	65
320	110	90	90	120	63	55	M48X2	96	220	30	M24	350	270	G1"	30	0	460	75

SERIES V - STAINLESS STEEL - ISO 1552



TECHNICAL CHARACTERISTICS



Component Parts and Materials

- 1 316 stainless steel piston rod
- 2 Rod seal
- 3 Sinterized bronze bushing
- 4 304 Stainless steel end cap
- 5 PU seal
- 6 304 stainless steel tube
- 7 Piston seal
- 8 Bonded ferrite magnet
- 9 Piston wear band
- 10 Aluminium piston
- 11 316 stainless steel cushion adjustment screw
- 12 304 stainless steel end cap



Reference Standard

- 1907/2006 REACH ✓
- 2011/65/CE RoHS ✓
- PED 2014/68/UE
- SILICON FREE



Pressures

- 1 bar (0.1 MPa) / 14.5 psi
- 10 bar (0.7 MPa) / 145 psi



Temperatures

- 0 °C / 32 °F (-20 °C / -4 °F with dry air)
- + 80 °C / 176 °F



Media

Filtered and lubricated or non-lubricated compressed air.



Functions

Double-acting cushioned magnetic. Single or through piston rod.



Bores

from 32 to 125 mm



Standard Strokes

from 25 to 1000 mm

Series	Ø (mm)	Stroke (mm)	Special version
--------	--------	-------------	-----------------

V H I

0 3 2

0 0 2 5

V S

- ▲ **VHI** Double acting - cushioned - magnetic
- ▲ **VLI** Double acting - cushioned - magnetic with double rod end

- 032
- 040
- 050
- 063
- 080
- 100
- 125

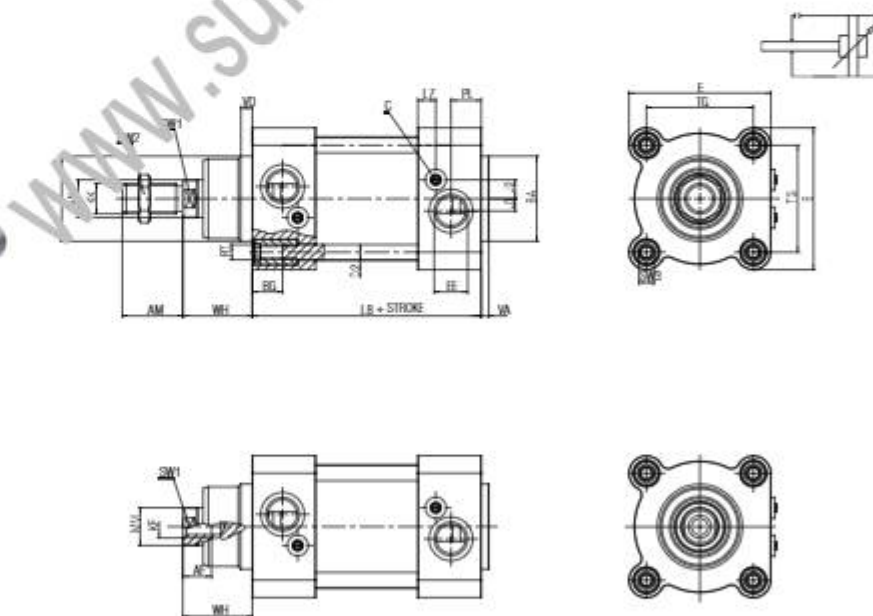
- 0025
- 0050
- 0075
- 0080
- 0100
- 0125
- 0150
- 0160
- 0200
- 0250
- 0300
- 0320
- 0350
- 0400
- 0450
- 0500
- 0600
- 0700
- 0800
- 0900
- 1000

- VS** Only Rod Seals in FKM
- V** All FKM seals

Intermediate or longer strokes are available upon request. Maximum stroke 2700 mm.

Ø (mm)	Stroke (mm)																				
	25	50	75	80	100	125	150	160	200	250	300	320	350	400	450	500	600	700	800	900	1000
32	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
40	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
50	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
63	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
80	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
100	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
125	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲

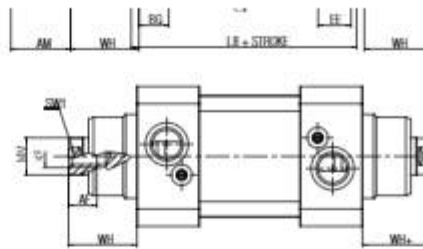
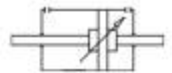
VHI
DOUBLE ACTING - CUSHIONED - MAGNETIC



Ø	AM	AF	ØB(d11)	ØBA(d11)	BG	ØD2	E	EE	J2	J3	KF	KK	L2	L7	L8+	Ømm	PL	RT	SW1	SW2	SW3	TG	VA	VD	WH
32	22	12	30	30	16	6	48	G1/8"	6.6	5.3	M6	M10x1.25	18	7.2	94	12	13	M6	10	17	6	32.5	4	5	26
40	24	12	35	35	16	6	52	G1/4"	8.5	5	M8	M12x1.25	22	9.2	105	16	14	M6	13	19	6	38	4	5	30
50	32	16	40	40	16	8	65	G1/4"	8	6	M8	M16x1.5	25.5	9	106	20	14	M8	17	24	8	46.5	4	6	37
63	32	16	45	45	16	8	75	G3/8"	10	6.5	M10	M16x1.5	26	9.5	121	20	16	M8	17	24	8	56.5	4	6	37
80	40	20	45	45	18	10	95	G3/8"	8	8	M10	M20x1.5	32	11	128	25	16	M10	22	30	10	72	4	7	46
100	40	20	55	55	18	10	115	G1/2"	15	7	M12	M20x1.5	38	12	138	25	18	M10	22	30	10	89	4	7	51
125	54	32	60	60	20	12	140	G1/2"	13	7	M16	M27x2	46	12	160	32	18	M12	27	41	-	110	6	10	65

VLI

DOUBLE ACTING - CUSHIONED - MAGNETIC WITH DOUBLE ROD END



ØB*



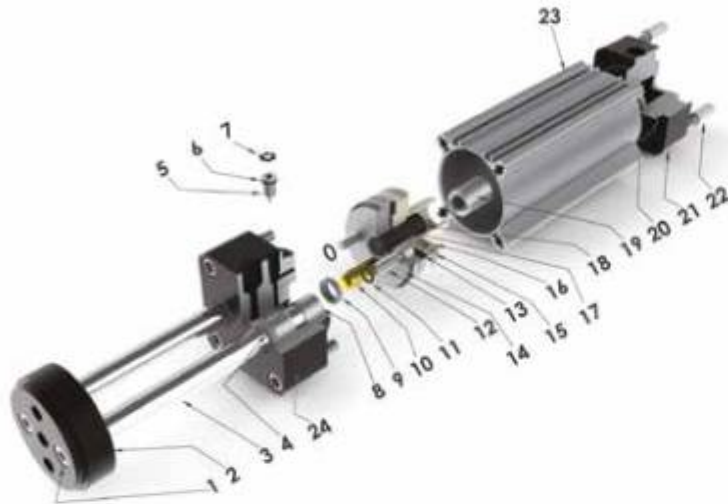
Ø	AM	AF	ØB (d11)	BG	ØD2	E	EE	J2	J3	KF	KK	L2	L7	L8+	Ømm	PL	RT	SW1	SW2	SW3	TG	VA	VD	WH	WH
32	22	12	30	16	6	48	G1/8"	6.6	5.3	M6	M10x1.25	18	7.2	94	12	13	M6	10	17	6	32.5	4	5	26	26
40	24	12	35	16	6	52	G1/4"	8.5	5	M8	M12x1.25	22	9.2	105	16	14	M6	13	19	6	38	4	5	30	30
50	32	16	40	16	8	65	G1/4"	8	6	M8	M16x1.5	25.5	9	106	20	14	M8	17	24	8	46.5	4	6	37	37
63	32	16	45	16	8	75	G3/8"	10	6.5	M10	M16x1.5	26	9.5	121	20	16	M8	17	24	8	56.5	4	6	37	37
80	40	20	45	18	10	95	G3/8"	8	8	M10	M20x1.5	33	11	128	25	16	M10	22	30	10	72	4	7	46	46
100	40	20	55	18	10	115	G1/2"	15	7	M12	M20x1.5	38	12	138	25	18	M10	22	30	10	89	4	7	51	51
125	54	32	60	20	12	140	G1/2"	13	7	M16	M27x2	46	12	160	32	18	M12	27	41	-	110	6	10	65	65

www.sumitomo.com

SERIES NHA - TWIN ROD CYLINDER - ISO 15552



TECHNICAL CHARACTERISTICS



Component Parts and Materials

- 1 Galvanized steel fixing screw
- 2 Anodized aluminium tooling plate
- 3 Chromium plated steel or stainless steel piston rods
- 4 Polyurethane rod seal
- 5 Galvanized steel cushion adjustment screw
- 6 NBR o-ring
- 7 Steel elastic ring
- 8 Steel bearing
- 9 Polyurethane cushion seal
- 10 Brass cushion spear
- 11 NBR o-ring
- 12 Galvanized steel fixing screw
- 13 Bonded ferrite magnet
- 14 Aluminium front piston
- 15 Polyurethane piston seal
- 16 Acetal resin piston
- 17 NBR o-ring
- 18 Steel grub screw
- 19 Galvanized steel nut
- 20 Polyurethane cushion seal
- 21 Die-cast aluminium end cap
- 22 Galvanized steel fixing screw
- 23 Anodized aluminium tube
- 24 Die-cast aluminium end cap



Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

SILICON
FREE

ATEX
2014/34/UE



Pressures

1 bar (0.1 MPa) / 14.5 psi
10 bar (0.7 MPa) / 145 psi



Temperatures

0 °C / 32 °F (-20 °C / -4 °F with dry air)
+ 80 °C / 176 °F



Media

Filtered and lubricated or non-lubricated compressed air.



Functions

Double-acting cushioned magnetic.
Single or through piston rod magnetic.



Bores

from 32 to 100 mm



Standard Strokes

from 25 to 500 mm
Strokes on demand.

Series	Ø (mm)	Stroke (mm)	Mounting type	Special version
N H A	0 3 2	0 0 2 5	G	I S
<p>▲ NHA Double acting - cushioned - magnetic</p> <p>▲ NLA Double acting - double rod cushioned magnetic</p> <p>▲ NQA Double acting - cushioned - magnetic with double rod end</p>	032 040 050 063 080 100	0025 0200 0050 0250 0080 0320 0100 0350 0125 0400 0160	G Anodized aluminium tube lobed profile with slots	IS Stainless steel rod
Intermediate or longer strokes are available upon request.				

Ø (mm)	Stroke (mm)												
	25	50	80	100	125	160	200	250	320	350	400	500	
32	▲	▲	▲	▲	▲	▲	▲	▲	▲				
40	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲			
50	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲			
63	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲			
80	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲		
100	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲

FORCES AND AIR CONSUMPTION
Extend and Retract Forces

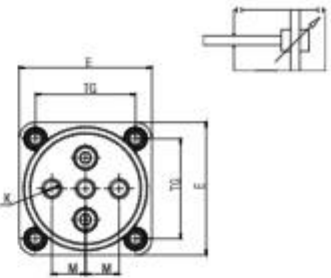
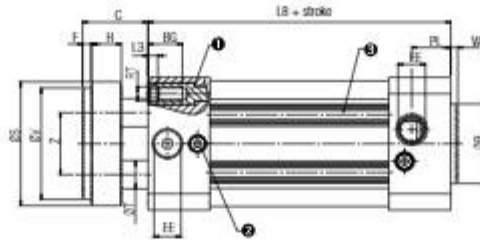
Cylinder Ø	Piston Rod Ø	Piston Area mm ²		Operating pressure			
				bar			
				1	2	3	4
				Output force N			
32	8	100.48	Extend = 804	72	144	215	287
			Retract = 703.52	54	108	161	215
40	10	157	Extend = 1257	110	220	330	440
			Retract = 1100	84	168	252	336
50	12	226.08	Extend = 1963	175	350	526	701
			Retract = 1736.92	135	270	404	539
63	16	401.92	Extend = 3117	280	560	840	1120
			Retract = 2715.08	206	413	619	826
80	20	628	Extend = 5027	450	900	1350	1800
			Retract = 4399	336	673	1009	1345
100	20	628	Extend = 7854	700	1400	2100	2800
			Retract = 7226	589	1177	1766	2355

Air Consumption

Cylinder Ø	Piston Rod Ø	Piston Area mm ²		Operating pressure			
				bar			
				1	2	3	4
				Air consumption for each 10 mm of stroke NI			
32	8	100.48	Extend = 804	0.016	0.032	0.048	0.064
			Retract = 703.52	0.012	0.024	0.036	0.048
40	10	157	Extend = 1257	0.025	0.050	0.075	0.100
			Retract = 1100	0.019	0.038	0.057	0.075
50	12	226.08	Extend = 1963	0.039	0.079	0.118	0.157
			Retract = 1736.92	0.030	0.060	0.091	0.121
63	16	401.92	Extend = 3117	0.062	0.125	0.187	0.249
			Retract = 2715.08	0.046	0.092	0.139	0.185
80	20	628	Extend = 5027	0.100	0.201	0.301	0.402
			Retract = 4399	0.075	0.151	0.226	0.301
100	20	628	Extend = 7854	0.157	0.314	0.471	0.628
			Retract = 7226	0.132	0.264	0.396	0.528

NHA

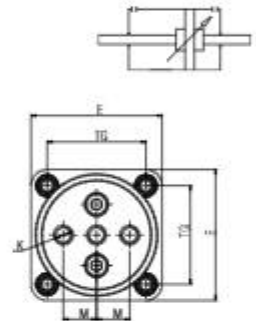
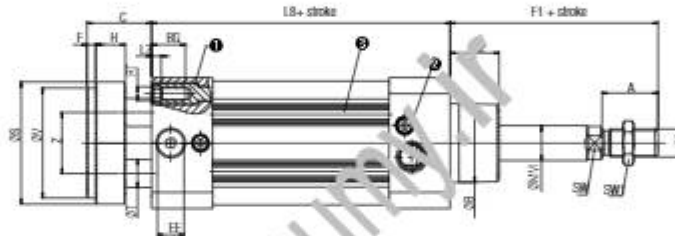
DOUBLE ACTING - CUSHIONED - MAGNETIC



Ø	ØB d11	C	E	F	H	K	M	S	T	V	Z	F1	VA	L2	WH	Ømm	SW	KK	L8	BG	RT	E	TG	EE	PL	L3	ZM
32	30	26	47	4	15	M6	9.5	35	8	32	18	48	4	20	26	12	10	M10X1.25	94	16	M6	47	32.5	G1/8	14	5	146
40	35	30	53	4	15	M8	11.25	45	10	40	22	54	4	22	30	16	13	M12X1.25	105	16	M6	53	38	G1/4	16	5	165
50	40	37	65	5	18	M8	15	55	12	50	26	69	4	28	37	20	17	M16X1.5	106	16	M8	65	46.5	G1/4	21	5	180
63	45	37	75	5	22	M10	19	70	16	63	35	69	4	28	37	20	17	M16X1.5	121	16	M8	75	56.5	G3/8	22	5	195
80	45	46	95	5	22	M12	25	85	20	80	40	86	4	34	46	25	22	M20X1.5	128	18	M10	95	72	G3/8	23	6	220
100	55	51	115	5	22	M12	35	105	20	100	50	91	4	38	51.5	25	22	M20X1.5	138	18	M10	115	89	G1/2	26	6	240

NLA

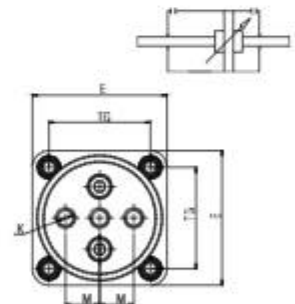
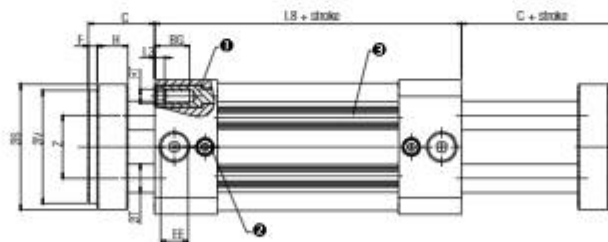
DOUBLE ACTING - DOUBLE ROD - CUSHIONED - MAGNETIC



Ø	A	ØB d11	C	E	F	H	K	M	S	T	V	Z	F1	VA	L2	WH	Ømm	SW	KK	L8	BG	RT	E	TG	EE	PL	L3	ZM
32	22	30	26	47	4	15	M6	9.5	35	8	32	18	48	4	20	26	12	10	M10X1.25	94	16	M6	47	32.5	G1/8	14	5	146
40	24	35	30	53	4	15	M8	11.25	45	10	40	22	54	4	22	30	16	13	M12X1.25	105	16	M6	53	38	G1/4	16	5	165
50	32	40	37	65	5	18	M8	15	55	12	50	26	69	4	28	37	20	17	M16X1.5	106	16	M8	65	46.5	G1/4	21	5	180
63	32	45	37	75	5	22	M10	19	70	16	63	35	69	4	28	37	20	17	M16X1.5	121	16	M8	75	56.5	G3/8	22	5	195
80	40	45	46	95	5	22	M12	25	85	20	80	40	86	4	34	46	25	22	M20X1.5	128	18	M10	95	72	G3/8	23	6	220
100	40	55	51	115	5	22	M12	35	105	20	100	50	91	4	38	51.5	25	22	M20X1.5	138	18	M10	115	89	G1/2	26	6	240

NQA

DOUBLE ACTING - CUSHIONED - MAGNETIC WITH DOUBLE ROD ENDS



Ø	ØB d11	C	E	F	H	K	M	S	T	V	Z	F1	VA	L2	WH	Ømm	SW	KK	L8	BG	RT	E	TG	EE	PL	L3	ZM
32	30	26	47	4	15	M6	9.5	35	8	32	18	48	4	20	26	12	10	M10X1.25	94	16	M6	47	32.5	G1/8	14	5	146
40	35	30	53	4	15	M8	11.25	45	10	40	22	54	4	22	30	16	13	M12X1.25	105	16	M6	53	38	G1/4	16	5	165
50	40	37	65	5	18	M8	15	55	12	50	26	69	4	28	37	20	17	M16X1.5	106	16	M8	65	46.5	G1/4	21	5	180
63	45	37	75	5	22	M10	19	70	16	63	35	69	4	28	37	20	17	M16X1.5	121	16	M8	75	56.5	G3/8	22	5	195
80	45	46	95	5	22	M12	25	85	20	80	40	86	4	34	46	25	22	M20X1.5	128	18	M10	95	72	G3/8	23	6	220
100	55	51	115	5	22	M12	35	105	20	100	50	91	4	38	51.5	25	22	M20X1.5	138	18	M10	115	89	G1/2	26	6	240

KEY

① = Socket head screw with female thread for mounting attachments.

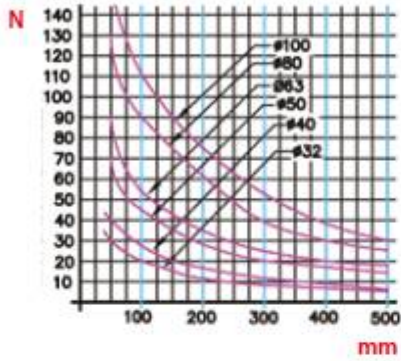
② = Adjustment screw for adjustable end-position cushioning.

③ = Slot for proximity sensor.

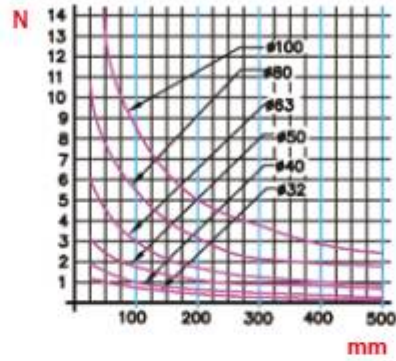
NHA CYLINDER LOAD CHARTS



Transverse Moment



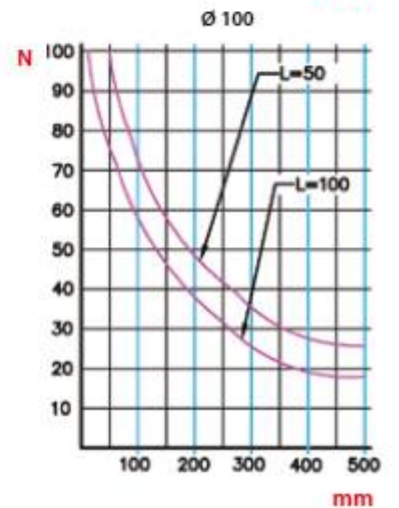
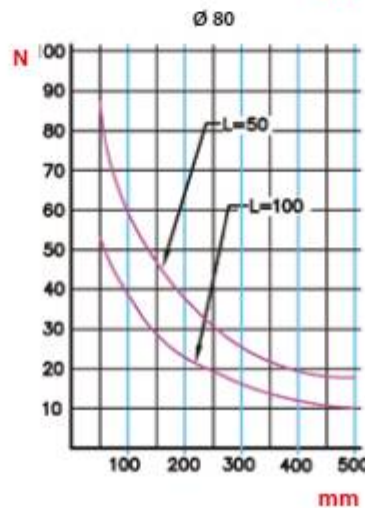
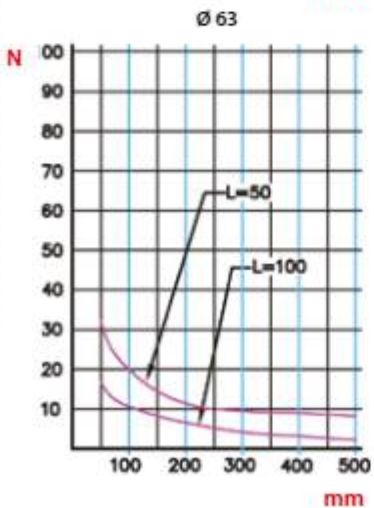
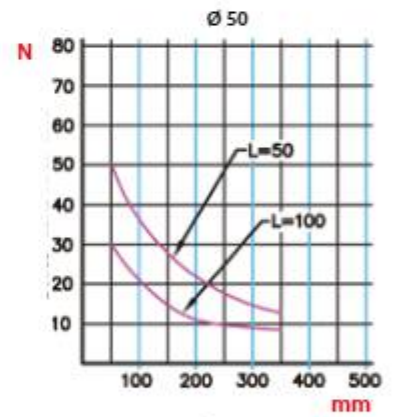
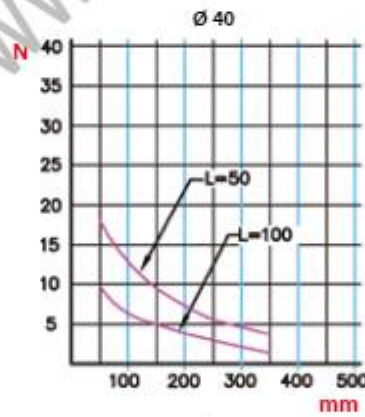
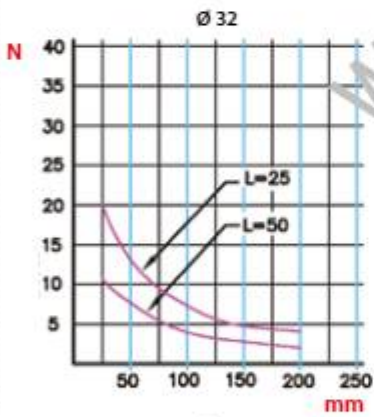
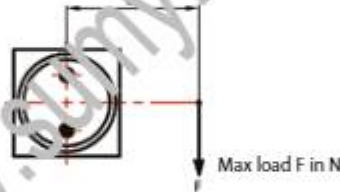
Torsional Moment



N
Max admitted load
mm
Stroke



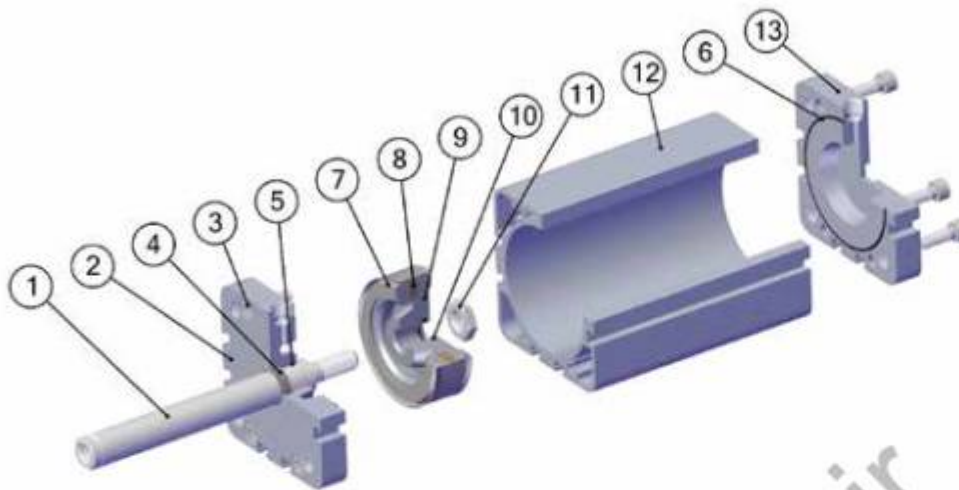
Maximum Transverse and Torsional Loads by bore



SERIES W - COMPACT CYLINDERS - ISO 21287



TECHNICAL CHARACTERISTICS



Component Parts and Materials

- 1 (ø12-25) 303 Stainless steel piston rod
- 2 (ø32-100) chrome plated steel piston rod
- 3 Anodized aluminum end cap
- 4 Zinc plated steel screw
- 5 Polyurethane rod seal
- 6 Sintered bronze rod bearing
- 7 NBR o-ring seals
- 8 Polyurethane piston seal
- 9 Bonded ferrite magnet
- 10 Aluminum piston
- 11 NBR o-ring seals
- 12 Zinc plated steel piston nut
- 13 Anodized aluminum body
- 14 Anodized aluminum end cap



Reference Standard

1907/2006 REACH ✓	2011/65/CE RoHS ✓	PED 2014/68/UE	SILICON FREE	ATEX 2014/34/UE
----------------------	----------------------	-------------------	-----------------	--------------------



Pressures

1 bar (0.1 MPa) / 14.5 psi
10 bar (0.7 MPa) / 145 psi



Temperatures

0 °C / 32 °F (-20 °C / -4 °F with dry air)
+80 °C / 176 °F



Media

Filtered and lubricated or non-lubricated compressed air.



Functions

Single and double-acting magnetic.
Single, through piston rod and anti rotation.



Bores

from 20 to 100 mm



Standard Strokes

from 5 to 200 mm


FORCES, SPRING LOADS AND AIR CONSUMPTION
Extend and Retract Forces

Cylinder Ø	Piston Rod Ø	Piston Area mm ²	Operating pressure bar									
			1	2	3	4	5	6	7	8	9	10
			Output force (N)									
20	10	Extend = 314	28	55	85	110	140	170	195	220	250	28
		Retract = 235	21	42	60	85	105	125	150	170	190	210
25	10	Extend = 490	44	88	132	176	220	264	308	352	396	440
		Retract = 412	36	72	108	144	180	216	252	288	324	360
32	12	Extend = 804	72	144	216	288	360	432	504	576	648	720
		Retract = 691	62	124	186	248	310	372	434	496	558	620
40	12	Extend = 1257	110	220	330	440	550	660	770	880	990	1100
		Retract = 1144	100	200	300	400	500	600	700	800	900	1000
50	16	Extend = 1963	175	350	525	700	875	1050	1225	1400	1575	1750
		Retract = 1762	155	310	465	620	775	930	1085	1240	1395	1550
63	16	Extend = 3117	280	560	840	1120	1400	1680	1960	2240	2520	2800
		Retract = 2916	260	520	780	1040	1300	1560	1820	2080	2340	2600
80	20	Extend = 5027	450	900	1350	1800	2250	2700	3150	3600	4050	4500
		Retract = 4712	420	840	1260	1680	2100	2520	2940	3360	3780	4200
100	25	Extend = 7854	700	1400	2100	2800	3500	4200	4900	5650	6360	7000
		Retract = 7363	660	1320	1980	2640	3300	3960	4620	5280	5940	6600

Spring Loads

Cylinder Ø	Load spring	Stroke (mm)				
		5	10	15	20	25
		Output force (N)				
20	Load of spring at rest	15.7	17.4	19.1	20.8	22.5
	Load of compressed spring	17.4	19.1	20.8	22.5	24.2
25	Load of spring at rest	19.5	22	24.5	27	29.5
	Load of compressed spring	22	24.5	27	29.5	32
32	Load of spring at rest	27.8	25.3	22.8	20.2	17.7
	Load of compressed spring	30	30	30	30	30
40	Load of spring at rest	36.4	34	31.7	29.5	27
	Load of compressed spring	36	36	36	36	36
50	Load of spring at rest	37	30.5	29	27.8	26.5
	Load of compressed spring	35	35	35	35	35
63	Load of spring at rest	61	58.5	56.3	53.5	51.5
	Load of compressed spring	64.8	64.8	64.8	64.8	64.8
80	Load of spring at rest	91.3	88	85	82	78.7
	Load of compressed spring	94	94	94	94	94
100	Load of spring at rest	150	145	140	134	129
	Load of compressed spring	156	156	156	156	156

Air consumption

Cylinder Ø	Piston Rod Ø	Piston Area mm ²	Operating pressure bar									
			1	2	3	4	5	6	7	8	9	10
			Air consumption for each 10 mm of stroke (NI)									
20	10	Extend = 314	0.006	0.009	0.013	0.016	0.019	0.022	0.025	0.028	0.031	0.035
		Retract = 235	0.005	0.007	0.009	0.012	0.014	0.016	0.019	0.021	0.024	0.026
25	10	Extend = 490	0.010	0.015	0.020	0.025	0.029	0.034	0.039	0.044	0.049	0.054
		Retract = 412	0.008	0.012	0.016	0.021	0.025	0.029	0.033	0.037	0.041	0.045
32	12	Extend = 804	0.016	0.024	0.032	0.040	0.048	0.056	0.064	0.072	0.080	0.088
		Retract = 691	0.014	0.021	0.028	0.035	0.041	0.048	0.055	0.062	0.069	0.076
40	12	Extend = 1257	0.025	0.038	0.050	0.063	0.075	0.088	0.101	0.113	0.126	0.138
		Retract = 1144	0.023	0.034	0.046	0.057	0.069	0.080	0.092	0.103	0.114	0.126
50	16	Extend = 1963	0.039	0.059	0.079	0.098	0.118	0.137	0.157	0.177	0.196	0.216
		Retract = 1762	0.035	0.053	0.070	0.088	0.106	0.123	0.141	0.159	0.176	0.194
63	16	Extend = 3117	0.062	0.094	0.125	0.156	0.187	0.218	0.249	0.281	0.312	0.343
		Retract = 2916	0.058	0.087	0.117	0.146	0.175	0.204	0.233	0.262	0.292	0.321
80	20	Extend = 5027	0.101	0.151	0.201	0.251	0.302	0.352	0.402	0.452	0.503	0.553
		Retract = 4712	0.094	0.141	0.188	0.236	0.283	0.330	0.377	0.424	0.471	0.518
100	25	Extend = 7854	0.157	0.236	0.314	0.393	0.471	0.550	0.628	0.707	0.785	0.864
		Retract = 7363	0.147	0.221	0.295	0.368	0.442	0.515	0.589	0.663	0.736	0.810

Series	Version	Ø (mm)	Stroke (mm)	
--------	---------	--------	-------------	--

W B



0 2 0

0 0 2 5

- ▲ **WB - WBM** Single acting - magnetic
- ▲ **WD - WDM** Single acting - magnetic - spring extend
- **WF - WFM** Double acting - magnetic
- **WJ - WJM** Double acting - cushioned - magnetic with double rod end
- # **WFA** Double acting - magnetic - anti rotation

= Standard female rod
M = Male rod (NO WFA)

- 020
- 025
- 032
- 040
- 050
- 063
- 080
- 100

- | | |
|------|------|
| 0005 | 0060 |
| 0010 | 0080 |
| 0015 | 0100 |
| 0020 | 0125 |
| 0025 | 0150 |
| 0030 | 0160 |
| 0040 | 0200 |
| 0050 | |

Intermediate or longer strokes are available upon request.

Ø (mm)	Stroke (mm)														
	5	10	15	20	25	30	40	50	60	80	100	125	150	200	
20	▲●#	▲●#	▲●#	▲●#	▲●#	●#	●#	●#							
25	▲●#	▲●#	▲●#	▲●#	▲●#	●#	●#	●#							
32	▲●#	▲●#	▲●#	▲●#	▲●#	●#	●#	●#	●#	●#	●	●	●		
40	▲●#	▲●#	▲●#	▲●#	▲●#	●#	●#	●#	●#	●#	●	●	●		
50	▲●#	▲●#	▲●#	▲●#	▲●#	●#	●#	●#	●#	●#	●	●	●	●	
63	▲●#	▲●#	▲●#	▲●#	▲●#	●#	●#	●#	●#	●#	●	●	●	●	
80	▲●#	▲●#	▲●#	▲●#	▲●#	●#	●#	●#	●#	●#	●	●	●	●	
100	▲●#	▲●#	▲●#	▲●#	▲●#	●#	●#	●#	●#	●#	●	●	●	●	

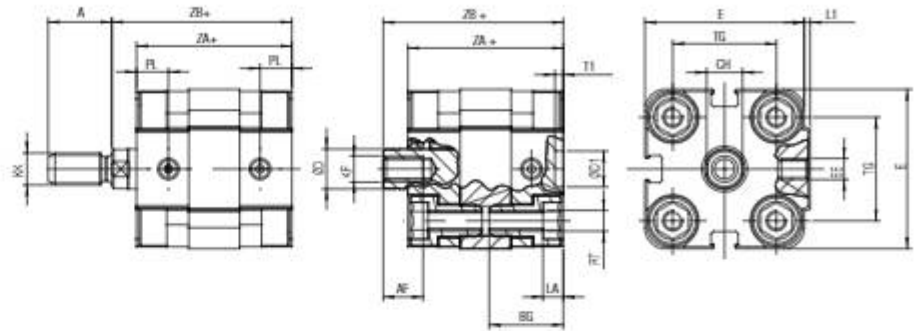
www.sumy.ir

WB - WBM

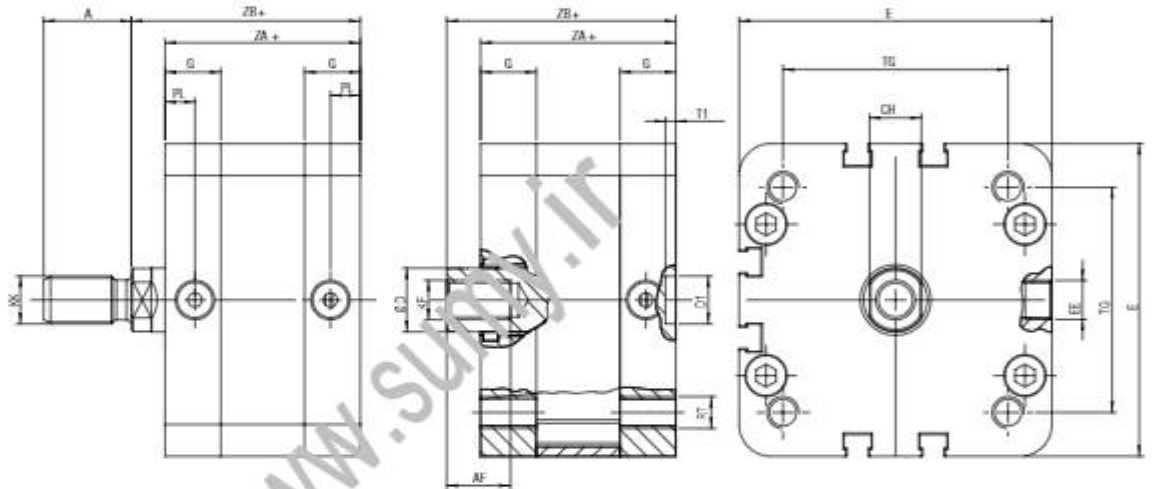
SINGLE ACTING - MAGNETIC



Ø 20-25



Ø 32-40-50-63-80-100



* Like UNITOP

+ = Add Stroke

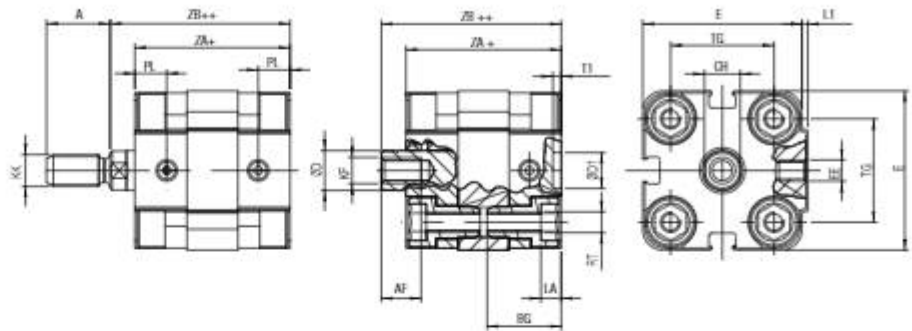
Ø	Ø D	E	L1	A	KK	CH	AF	KF	BG	LA	RT	G	TG	EE	PL	Ø D1	T1	ZA+	ZB+
*20	10	36	1.5	16	M8x1.25	9	10	M6	18.5	5	M5	-	22	M5	8	*6	*4	*39	*45
*25	10	40	1.5	16	M8x1.25	9	10	M6	18.5	5	M5	-	26	M5	8	*6	*4	39	45.5
32	12	49	-	19	M10x1.25	10	12	M8	-	-	M6	14.5	32.5	G1/8	7.5	9	2.1	44	51
40	12	55	-	19	M10x1.25	10	12	M8	-	-	M6	15	38	G1/8	7.5	9	2.1	45	52
50	16	68	-	22	M12x1.25	13	16	M10	-	-	M8	14.5	46.5	G1/8	7.5	12	2.6	45	53
63	16	78.5	-	22	M12x1.25	13	16	M10	-	-	M8	14	56.5	G1/8	7.5	12	2.6	49	57.5
80	20	98	-	28	M16x1.5	17	20	M12	-	-	M10	15.5	72	G1/8	7.5	12	2.6	54	64
100	25	120	-	28	M16x1.5	22	20	M12	-	-	M10	20	89	G1/8	7.5	12	2.6	67	77

WD - WDM

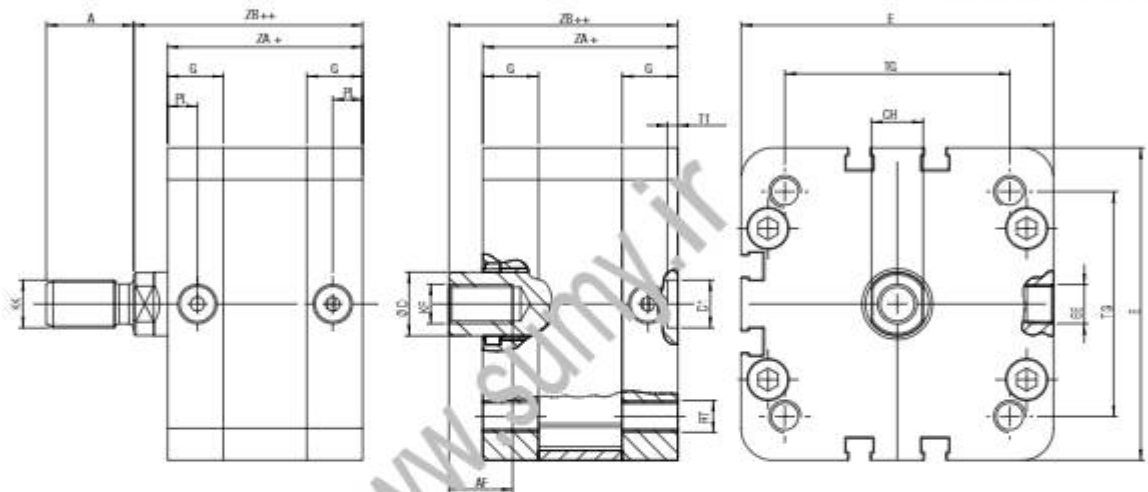
SINGLE ACTING - MAGNETIC - SPRING EXTEND



Ø 20-25



Ø 32-40-50-63-80-100



* Like UNITOP

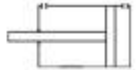
+ = Add Stroke

++ = Double stroke dimension and add it.

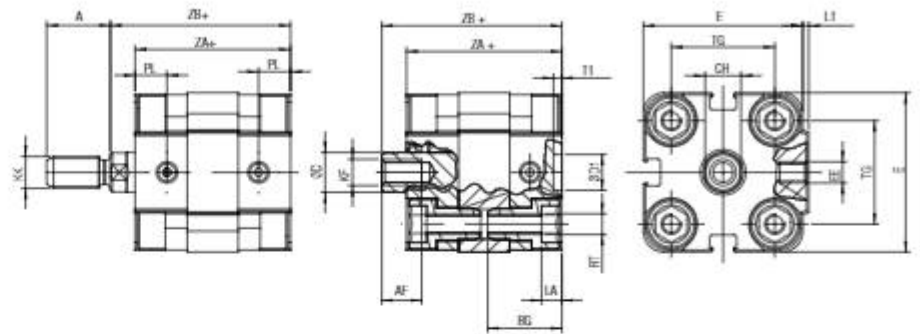
Ø	Ø D	E	L1	A	KK	CH	AF	KF	BG	LA	RT	G	TG	EE	PL	Ø D1	T1	ZA+	ZB++
*20	10	36	1.5	16	M8x1.25	9	10	M6	18.5	5	M5	-	22	M5	8	∅6	∅4	*39	*45
*25	10	40	1.5	16	M8x1.25	9	10	M6	18.5	5	M5	-	26	M5	8	∅6	∅4	39	45.5
32	12	49	-	19	M10x1.25	10	12	M8	-	-	M6	14.5	32.5	G1/8	7.5	9	2.1	44	51
40	12	55	-	19	M10x1.25	10	12	M8	-	-	M6	15	38	G1/8	7.5	9	2.1	45	52
50	16	68	-	22	M12x1.25	13	16	M10	-	-	M8	14.5	46.5	G1/8	7.5	12	2.6	45	53
63	16	78.5	-	22	M12x1.25	13	16	M10	-	-	M8	14	56.5	G1/8	7.5	12	2.6	49	57.5
80	20	98	-	28	M16x1.5	17	20	M12	-	-	M10	15.5	72	G1/8	7.5	12	2.6	54	64
100	25	120	-	28	M16x1.5	22	20	M12	-	-	M10	20	89	G1/8	7.5	12	2.6	67	77

WF - WFM

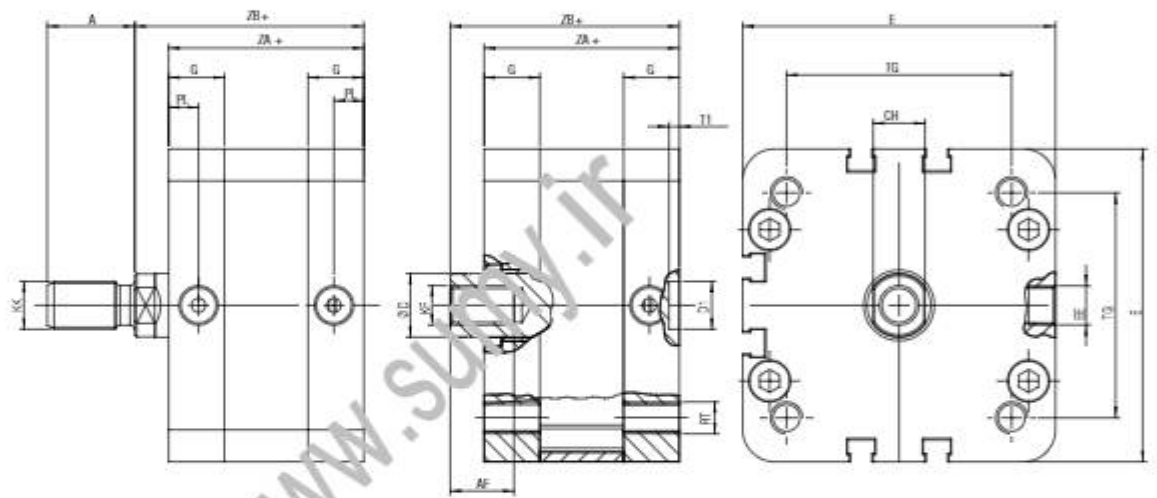
DOUBLE ACTING - MAGNETIC



Ø 20-25



Ø 32-40-50-63-80-100



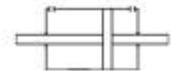
* Like UNITOP

+ = Add Stroke

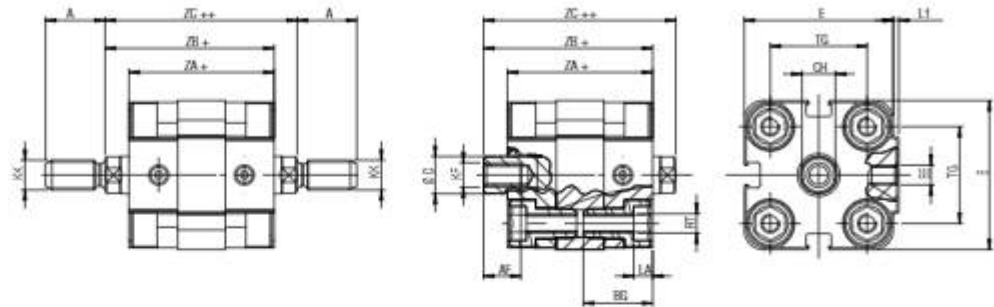
Ø	ØD	E	L1	A	KK	CH	AF	KF	BG	LA	RT	G	TG	EE	PL	Ø D1	T1	ZA+	ZB+
*20	10	36	1.5	16	M8x1.25	9	10	M6	18.5	5	M5	-	22	M5	8	*6	*4	*39	*45
*25	10	40	1.5	16	M8x1.25	9	10	M6	18.5	5	M5	-	26	M5	8	*6	*4	39	45.5
32	12	49	-	19	M10x1.25	10	12	M8	-	-	M6	14.5	32.5	G1/8	7.5	9	2.1	44	51
40	12	55	-	19	M10x1.25	10	12	M8	-	-	M6	15	38	G1/8	7.5	9	2.1	45	52
50	16	68	-	22	M12x1.25	13	16	M10	-	-	M8	14.5	46.5	G1/8	7.5	12	2.6	45	53
63	16	78.5	-	22	M12x1.25	13	16	M10	-	-	M8	14	56.5	G1/8	7.5	12	2.6	49	57.5
80	20	98	-	28	M16x1.5	17	20	M12	-	-	M10	15.5	72	G1/8	7.5	12	2.6	54	64
100	25	120	-	28	M16x1.5	22	20	M12	-	-	M10	20	89	G1/8	7.5	12	2.6	67	77

WJ - WJM

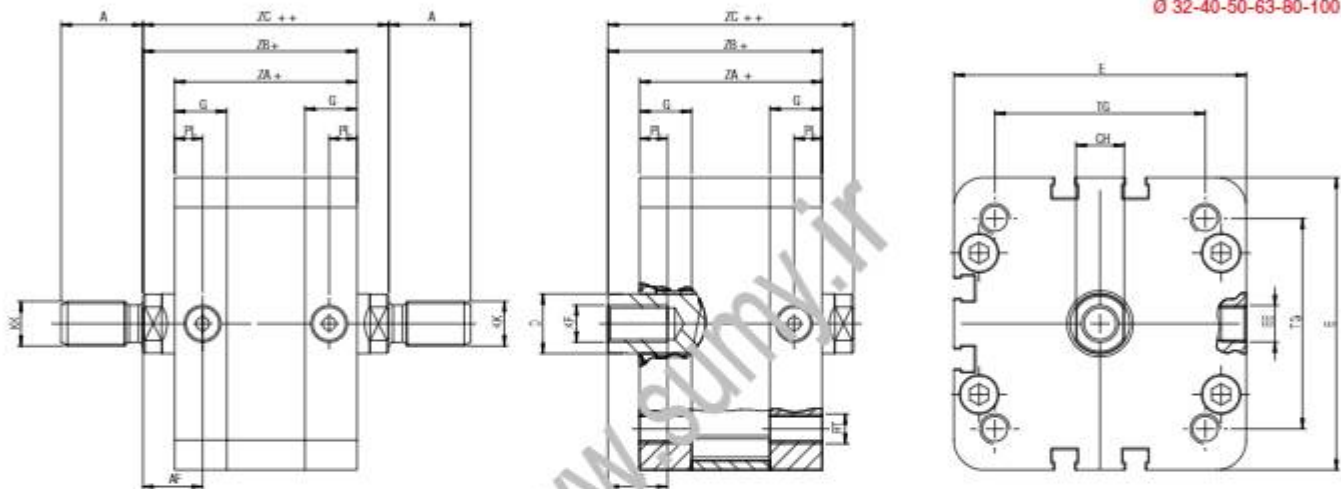
DOUBLE ACTING - MAGNETIC WITH DOUBLE ROD END



Ø 20-25



Ø 32-40-50-63-80-100



* Like UNITOP

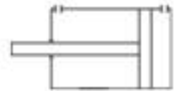
+= 1 Stroke

++ = Double stroke dimension and add it

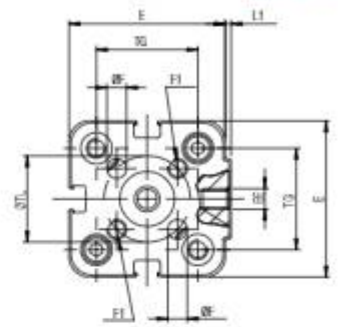
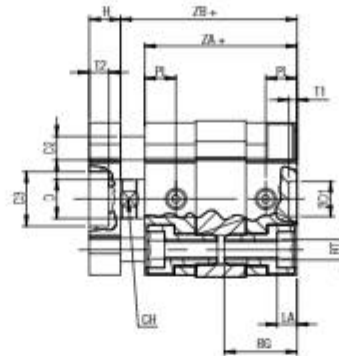
Ø	Ø D	E	L1	A	KK	CH	AF	KF	BG	LA	RT	G	TG	EE	PL	ZA+	ZB+	ZC++
*20	10	36	1.5	16	M8x1.25	9	10	M6	18.5	5	M5	-	22	M5	8	*39	*45	*51
25	10	40	1.5	16	M8x1.25	9	10	M6	18.5	5	M5	-	26	M5	8	39	45.5	51.5
32	12	49	-	19	M10x1.25	10	12	M8	-	-	M6	14.5	32.5	G1/8	7.5	44	51	58
40	12	55	-	19	M10x1.25	10	12	M8	-	-	M6	15	38	G1/8	7.5	45	52	59
50	16	68	-	22	M12x1.25	13	16	M10	-	-	M8	14.5	46.5	G1/8	7.5	45	53	61
63	16	78.5	-	22	M12x1.25	13	16	M10	-	-	M8	14	56.5	G1/8	7.5	49	57.5	66
80	20	98	-	28	M16x1.5	17	20	M12	-	-	M10	15.5	72	G1/8	7.5	54	64	74
100	25	120	-	28	M16x1.5	22	20	M12	-	-	M10	20	89	G1/8	7.5	67	77	87

WFA

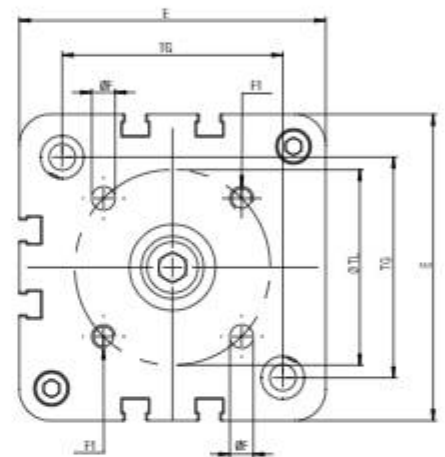
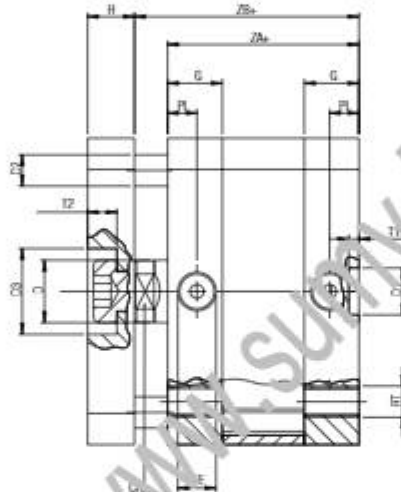
DOUBLE ACTING - MAGNETIC - ANTI ROTATION



Ø 20-25



Ø 32-40-50-63-80-100



* Like UNITOP

+ = Add Stroke

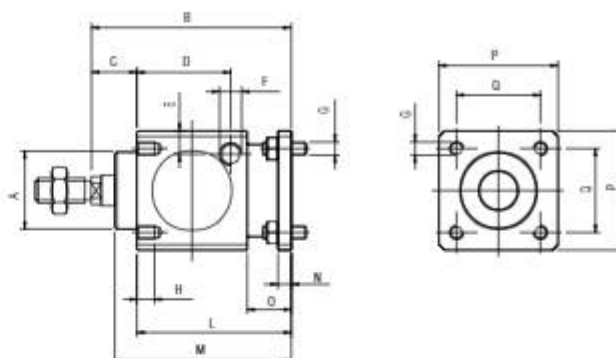
Ø	ØD	E	L1	CH	AF	KF	BG	LA	RT	G	TG	EE	PL	ØD1	T1	ØTL	H	ØF	F1	D2	D3	T2	ZA+	ZB+
*20	10	36	1.5	9	10	M6	18.5	5	M5	-	22	M5	8	*6	*4	17	8	4	M4	6	10.5	5	*39	*45
*25	10	40	1.5	9	10	M6	18.5	5	M5	-	26	M5	8	*6	*4	22	8	5	M5	6	14	5	39	45.5
32	12	49	-	10	12	M8	-	-	M6	14.5	32.5	G1/8	7.5	9	2.1	28	10	5	M5	6	17	6	44	51
40	12	55	-	10	12	M8	-	-	M6	15	38	G1/8	7.5	9	2.1	33	10	5	M5	6	17	6	45	52
50	16	68	-	13	16	M10	-	-	M8	14.5	46.5	G1/8	7.5	12	2.6	42	12	6	M6	8	22	7.5	45	53
63	16	78.5	-	13	16	M10	-	-	M8	14	56.5	G1/8	7.5	12	2.6	50	12	6	M6	8	22	7.5	49	57.5
80	20	98	-	17	20	M12	-	-	M10	15.5	72	G1/8	7.5	12	2.6	65	14	8	M8	12	24	10.5	54	64
100	25	120	-	22	20	M12	-	-	M10	20	89	G1/8	7.5	12	2.6	80	14	10	M10	12	24	10.5	67	77

CYLINDER ACCESSORIES FOR ISO 6431 - ISO 15552 - ISO 21287

Screw Included.

VRL

PISTON ROD LOCK

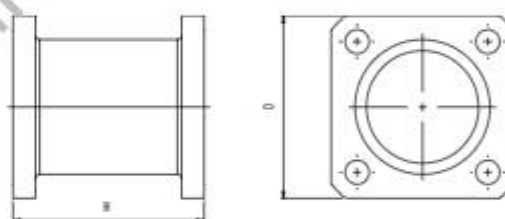


MATERIAL: Aluminium

Part No.	Ø	A	B	C	D	E	F	G	H	L	M	N	O	P	Q
VRL 032	32	30	86	26	33.25	9	1/8"G	M6	8	60	67.5	6	20	47	32.5
VRL 040	40	34.5	100	30	42.5	9	1/8"G	M6	8	70	80	6	20	54	38
VRL 050	50	40	127	37	58	12.5	1/8"G	M8	12	90	100	8	24	65	46.5
VRL 063	63	45	127	37	59	17.5	1/8"G	M8	12	90	100	8	24	75	56.5
VRL 080	80	45	156	46	69	17.5	1/4"G	M10	16	110	120	12	32	95	72
VRL 100	100	55	161	51	69	20	1/4"G	M10	16	110	120	12	32	114	89
VRL 125	125	60	205	65	84.5	19	1/4"G	M12	20	140	156	20	45	138	110

VFT

JOINING FLANGE

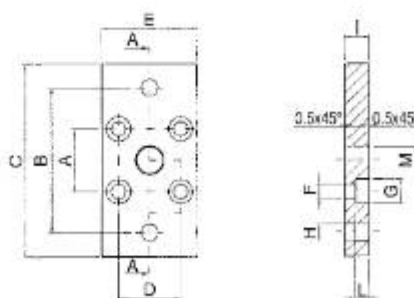


MATERIAL: Aluminium

Part No.	Ø	H	D
VFT 032	32	55	45
VFT 040	40	55	52
VFT 050	50	68	65
VFT 063	63	68	75
VFT 080	80	92	95
VFT 100	100	92	115
VFT 125	125	120	140

QFL

FLANGE

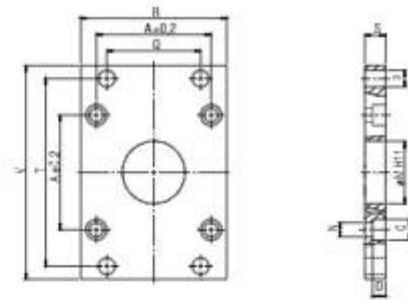


MATERIAL: Steel

Part No.	Ø	A	B	C	D	E	F	G	H	I	L	M
QFL 012	12-16	18	43	55	18	29	4.5	9	5.5	10	5.4	10
QFL 020	20	22	55	70	22	36	5.5	10	6.6	10	5.4	12
QFL 025	25	26	60	76	26	40	5.5	10	6.6	10	5.4	12

VFL

FLANGE

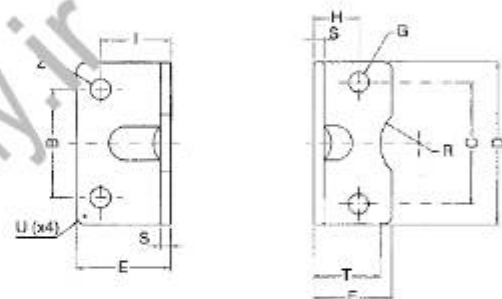


- MATERIAL: Steel
- MATERIAL: Stainless Steel

Part No.●	Part No.■	Ø	ØM	P	S	D	C	N	A	Q	R	T	V
VFL 032	VFLI 032	32	30	7	10	6.5	10.5	6.5	32.5	32	45	64	80
VFL 040	VFLI 040	40	35	9	10	6.5	10.5	6.5	38	36	52	72	90
VFL 050	VFLI 050	50	40	9	12	8.5	13.5	8.5	46.5	45	65	90	110
VFL 063	VFLI 063	63	45	9	12	8.5	13.5	8.5	56.5	50	75	100	120
VFL 080	VFLI 080	80	45	12	16	10.5	16.5	10.5	72	63	95	126	150
VFL 100	VFLI 100	100	55	14	16	10.5	16.5	10.5	89	75	115	150	170
VFL 125	-	125	60	16	20	12.5	20	13.5	110	90	140	180	205
VFL 160	-	160	65	18	20	16.5	25	17	140	115	180	230	260
VFL 200	-	200	75	22	25	16.5	25	17	175	135	220	270	300
VFL 250	-	250	90	26	25	14.5	33	22	220	165	285	330	400
VFL 320	-	320	110	33	30	15	39	26	270	200	350	400	470

QCP

LOW-RISE PEDESTAL
Ø 12-25



MATERIAL: Steel

Part No.	Ø	C	B	D	E	F	G	H	I	S	T	R	U	Z
QCP 012	12 - 16	18	18	30	17.5	17.5	4.4	13	13	3	15	9	2	5.5
QCP 020	20	22	22	36	22	22	5.4	16	16	4	17	10	2	6.6
QCP 025	25	26	26	40	22	23	5.4	17	16	4	19	11	2	6.6

VCP

LOW RISE PEDESTAL

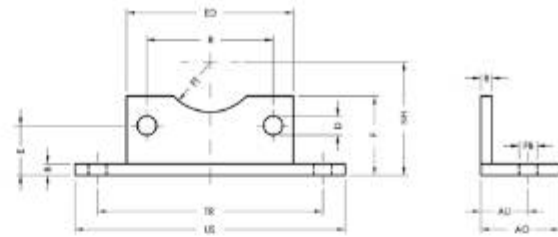


- MATERIAL: Steel
- MATERIAL: Stainless Steel

Part No.●	Part No.■	Ø	B	C	E	F	O	U	V	R	Z	X	Y	H
VCP 032	VCPI 032	32	4	32	45	30	7	24	35	15	7	32.5	15.75	32
VCP 040	VCPI 040	40	4	36	52	30	10	28	36	17.5	7	38	17	36
VCP 050	VCPI 050	50	5	45	65	36	10	32	47	20	9	46.5	21.75	45
VCP 063	VCPI 063	63	5	50	75	35	10	32	45	22.5	9	56.5	21.75	50
VCP 080	VCPI 080	80	6	63	95	47	12	41	55	22.5	11	72	27	63
VCP 100	VCPI 100	100	6	75	115	53	14.5	41	57	27.5	11	89	26.5	71
VCP 125	VCPI 125	125	8	90	140	70	16.5	45	70	30	14	110	35	90
VCP 160	-	160	9	115	180	115	18	60	75	32.5	18	140	45	115
VCP 200	-	200	12	135	220	135	21	70	100	37.5	18	175	47.5	135
VCP 250	-	250	14	165	270	165	26	75	100	45	22	220	55	165

VCB

LARGE LOW RISE PEDISTAL
Ø 32-100

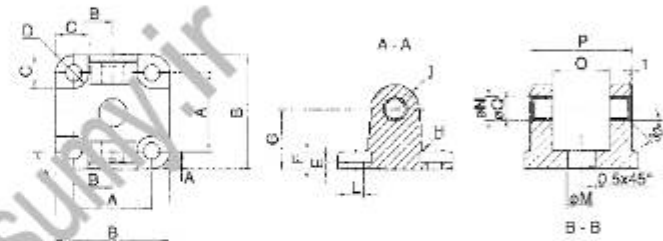


MATERIAL: Steel

Part No.	Ø	US	ED	F	AO	B	TR	E	D	FT	NH	R	AU	FB
VCB 032 NE	32	79	45	30	30	5	65	15.75	6.5	15	32	32.5	18	6.5
VCB 040 NE	40	90	55	30	30	5	75	17	6.5	17.5	36	38	18	6.5
VCB 050 NE	50	110	65	35	35	5	90	21.75	8.5	22.5	50	56.5	21	8.5
VCB 063 NE	63	120	75	35	35	5	100	21.75	8.5	22.5	50	56.5	21	8.5
VCB 080 NE	80	153	95	45	45	6	128	26.5	10.5	22.5	63	72	27	10.5
VCB 100 NE	100	178	115	45	45	6	148	27	10.5	27.5	71	89	27	10.5

VCF

CLEVIS BRACKET WITH
SELF-LUBRICATING BUSHINGS

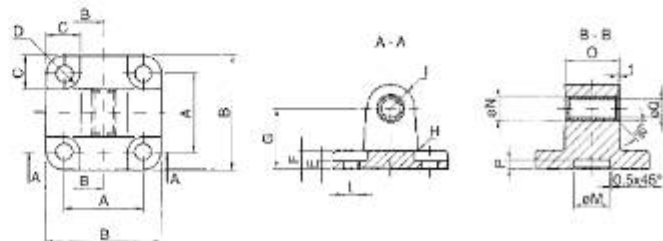


- MATERIAL: Aluminium
- MATERIAL: Stainless Steel

Part No. ■	Part No. ■	Ø	B	E	G	T	Z	CM	MR
VCF 032	VCFI 032	32	9	45	10	45	22	26	10
VCF 040	VCFI 040	40	9	52	12	52	25	28	12
VCF 050	VCFI 050	50	11	60	12	60	27	32	12
VCF 063	VCFI 063	63	11	75	16	70	32	40	16
VCF 080	VCFI 080	80	14	95	16	90	36	50	16
VCF 100	VCFI 100	100	14	115	20	110	41	60	20
VCF 125	VCFI 125	125	20	140	25	130	50	70	25
VCF 160	VCFI 160	160	20	180	30	170	55	90	25
VCF 200	VCFI 200	200	25	220	30	170	60	90	25

QCM

EYE BRACKET WITH
SELF-LUBRICATING BUSHINGS

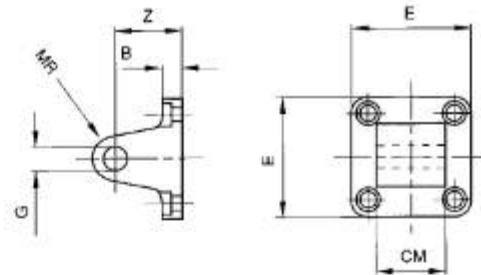


MATERIAL: Aluminium

Part No.	Ø	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q
QCM 012	12 - 16	18	27	10	4.5	2.6	6	16	2	6	4.5	10	8	12	3	6
QCM 020	20	22	34	11	5	2.6	6	20	2	8	5.5	12	10	16	3	8
QCM 025	25	26	38	11	5	2.6	6	20	2	8	5.5	12	10	16	3	8

VCM

EYE BRACKET

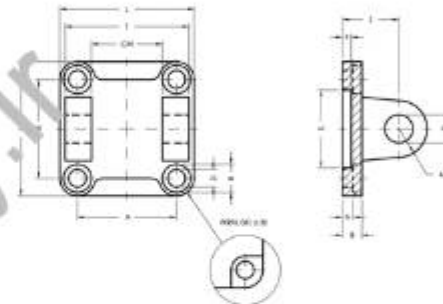


- MATERIAL: Aluminium
- MATERIAL: Stainless Steel
- ◆ MATERIAL: Iron

Part No.●	Part No.■	Part No.◆	Ø	B	E	G	Z	CM	MR
VCM 032	VCMI 032	VCMZ 032 NE	32	9	45	10	22	26	10
VCM 040	VCMI 040	VCMZ 040 NE	40	9	52	12	25	28	12
VCM 050	VCMI 050	VCMZ 050 NE	50	11	65	12	27	32	12
VCM 063	VCMI 063	VCMZ 063 NE	63	11	75	16	32	40	16
VCM 080	VCMI 080	VCMZ 080 NE	80	14	95	16	36	50	16
VCM 100	VCMI 100	VCMZ 100 NE	100	14	115	20	41	60	20
VCM 125	VCMI 125	VCMZ 125 NE	125	20	140	25	50	70	25
VCM 160	VCMI 160	VCMZ 160 NE	160	20	180	30	55	90	25
VCM 200	VCMI 200	VCMZ 200 NE	200	25	220	30	60	90	25
VCM 250	-	VCMZ 250 NE	250	25	270	40	70	110	40

VCH

CLEVIS BRACKET

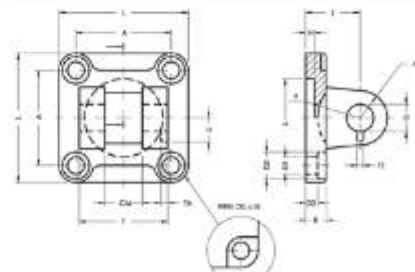


- MATERIAL: Aluminium
- ◆ MATERIAL: Iron

Part No.●	Part No.◆	Ø	A	L	R	N	B	S	F	Z	G	M	CM	T	
VCH 032	VCHZ 032 NE	32	32.5	45	6.6	11	5.5	9	30	5	22	10	10	26	45
VCH 040	VCHZ 040 NE	40	38	52	6.6	11	5.5	9	35	5	25	12	12	28	52
VCH 050	VCHZ 050 NE	50	46.5	65	6.6	15	6.5	11	40	5	27	12	12	32	60
VCH 063	VCHZ 063 NE	63	56.5	75	9	15	6.5	11	45	5	32	16	16	40	70
VCH 080	VCHZ 080 NE	80	72	95	11	18	10	14	45	5	36	16	16	50	90
VCH 100	VCHZ 100 NE	100	89	115	11	18	10	14	55	5	41	20	20	60	110
VCH 125	VCHZ 125 NE	125	110	140	14	20	10	20	60	7	50	25	25	70	130
VCH 160	VCHZ 160 NE	160	140	180	18	26	10	20	65	7	55	30	25	90	170
VCH 200	VCHZ 200 NE	200	175	220	18	26	11	25	75	7	60	30	25	90	170
VCH 250	VCHZ 250 NE	250	220	270	22	33	11	25	90	-	70	40	40	110	200

VCD

NARROW CLEVIS BRACKET

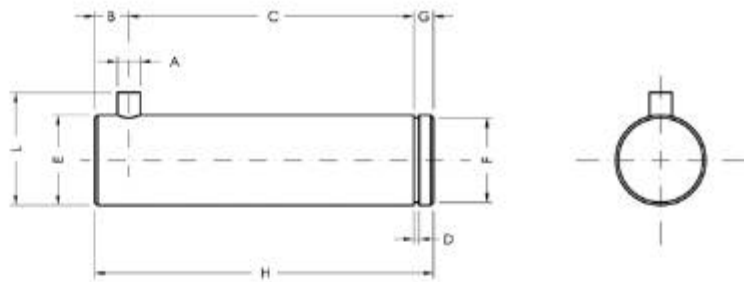


- MATERIAL: Aluminium
- ◆ MATERIAL: Iron

Part No.●	Part No.◆	Ø	L	T	CM	A	Z	H	B	D3	S	G	MR	D1	D2	TA	TZ	LI	F
VCD 032	VCDZ 032 NE	32	45	34	14	32.5	22	5	9	5.5	30	10	10	6.6	11	3	3.3	11.5	17
VCD 040	VCDZ 040 NE	40	52	40	16	38	25	5	9	5.5	35	12	12	6.6	11	4	4.3	12	20
VCD 050	VCDZ 050 NE	50	65	45	21	46.5	27	5	11	6.5	40	16	14	9	15	4	4.3	14	22
VCD 063	VCDZ 063 NE	63	75	51	21	56.5	32	5	11	6.5	45	16	18	9	15	4	4.3	14	25
VCD 080	VCDZ 080 NE	80	95	65	25	72	36	5	14	10	45	20	20	11	18	4	4.3	16	30
VCD 100	VCDZ 100 NE	100	115	75	25	89	41	5	14	10	55	20	22	11	18	4	6.3	16	32
VCD 125	VCDZ 125 NE	125	140	97	37	110	50	7	20	10	60	30	25	14	20	6	6.3	24	42
VCD 160	-	160	180	122	43	140	55	7	20	10	65	35	30	18	26	6	6.3	26.5	46
VCD 200	-	200	220	122	43	175	60	7	25	11	75	35	30	18	26	6	6.3	26.5	49

VPS

PIN WITH ANTI-ROTATION AND RETAINER CLIP FOR VCD CLEVIS BRACKET

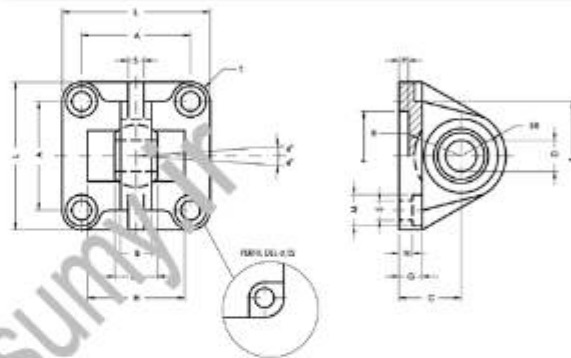


- MATERIAL: Steel
- MATERIAL: Stainless Steel

Part No. ●	Part No. ■	Ø	A	C	D	E	F	G	H	L	B
VPS 032	VPSI 032	32	3	32.5	1.1	10	9.6	4	41	14	4.5
VPS 040	VPSI 040	40	4	38	1.1	12	11.5	4	48	16	6
VPS 050	VPSI 050	50	4	43	1.1	16	15.2	5	60	20	6
VPS 063	VPSI 063	63	4	49	1.1	16	15.2	5	60	20	6
VPS 080	VPSI 080	80	4	63	1.3	20	19	6	75	24	6
VPS 100	VPSI 100	100	4	73	1.3	20	19	6	85	24	6
VPS 125	VPSI 125	125	6	94	1.6	30	28.6	7	110	36	9
VPS 160	-	160 - 200	6	119	1.6	35	33	7	135	41	9

VCS

EYE BRACKET WITH SPHERICLE ROD EYE

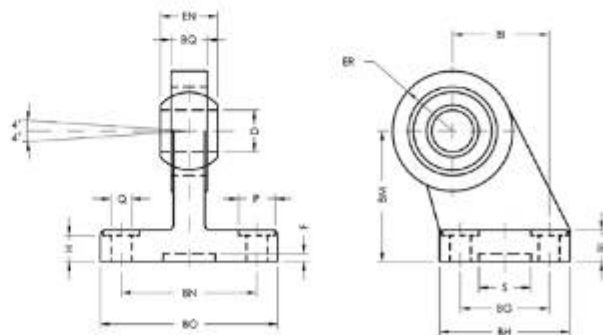


- MATERIAL: Aluminium
- MATERIAL: Stainless Steel
- ◆ MATERIAL: Iron

Part No. ●	Part No. ■	Part No. ◆	Ø	A	B	C	D	N	ER	F	G	E	L	M	N	P	H	R	S	Z	T
VCS 032	VCSI 032	VCSZ 032 NE	32	32.5	10.5	22	10	14	16	30	9	6.6	45	11	5.5	5	-	-	4	32.5	6.25
VCS 040	VCSI 040	VCSZ 040 NE	40	38	12	25	11	16	19	35	9	6.6	52	11	5.5	5	-	-	6	39	7
VCS 050	VCSI 050	VCSZ 050 NE	50	46.5	15	27	16	21	21	40	11	9	65	15	6.5	5	51	18	8	47	9.25
VCS 063	VCSI 063	VCSZ 063 NE	63	56.5	15	32	16	21	24	45	11	9	75	15	6.5	5	-	-	8	52	9.25
VCS 080	VCSI 080	VCSZ 080 NE	80	72	18	36	20	25	28.5	45	14	11	95	18	10	5	72	24	10	67	11.5
VCS 100	VCSI 100	VCSZ 100 NE	100	89	18	41	20	25	30	55	14	11	115	18	10	8	-	-	10	77	13
VCS 125	VCSI 125	VCSZ 125 NE	125	110	25	50	30	37	40	60	20	13.5	140	20	10	7	-	-	13	98	15
VCS 160	-	-	160	140	28	55	35	43	45	65	20	18	180	26	10	7	-	-	14	130	20
VCS 200	-	-	200	175	28	60	35	43	48	75	25	18	220	26	11	7	-	-	14	155	22.5

VADZ

EYE BRACKET WITH SPHERICLE ROD EYE

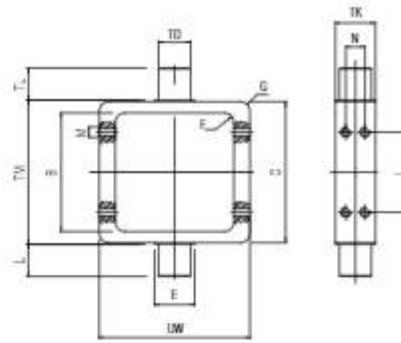


- MATERIAL: Steel
- TREATMENT: Black Cataphoresis

Part No.	Ø	Q	P	BG	BH	BI	BL	BM	BN	BO	EN	ER	BQ	D	H	S	F
VADZ 032 NE	32	6.6	11	18	31	21	10	32	38	51	14	15	10.5	10	8.5	20	3
VADZ 040 NE	40	6.6	11	22	35	24	10	36	41	54	16	18	12	12	8.5	20	3
VADZ 050 NE	50	9	15	30	45	33	12	45	50	65	21	20	15	16	10.5	20	3
VADZ 063 NE	63	9	15	35	50	37	12	50	52	67	21	23	15	16	10.5	20	3
VADZ 080 NE	80	11	18	40	60	47	14	63	66	86	25	27	18	20	11.5	20	3
VADZ 100 NE	100	11	18	50	70	55	15	71	76	96	25	30	18	20	12.5	20	3
VADZ 125 NE	125	13.5	20	60	90	70	20	90	94	124	37	40	25	30	17	20	3

XCN

INTERMEDIATE
ADJUSTABLE TRUNNION
MOUNT

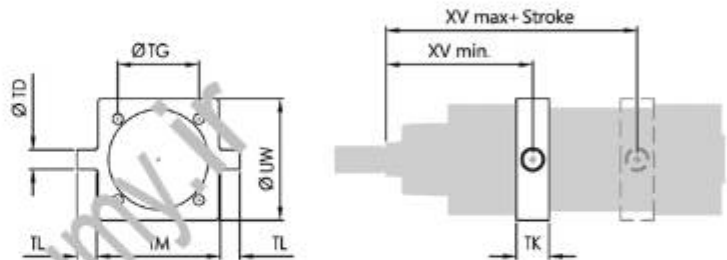


MATERIAL: Steel

Part No.	Ø	UW	B	C	TD	E	F	G	TK	I	TL	M	N	TM
XCN 032	32	65	45	50	12	-	5	4	20	28	12	M5	7	50
XCN 040	40	75	53	62	16	20	5	5	20	32	16	M5	8	63
XCN 050	50	90	64	74	16	20	6	6	20	40	16	M6	8	75
XCN 063	63	100	74	88	20	25	6	6	25	50	20	M6	12	90
XCN 080	80	130	93	109	20	25	7	7	25	64	20	M8	12	110
XCN 100	100	140	110	130	25	30	8	8	30	80	25	M8	15	132
XCN 125	125	150	134	155	25	30	8	8	30	100	25	M10	15	160

VCNT

INTERMEDIATE FIXED
TRUNNION MOUNT

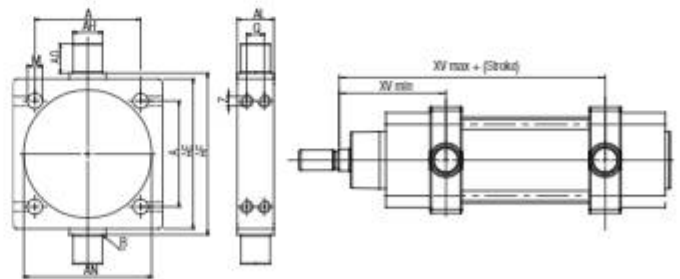


MATERIAL: Steel

Part No.	Ø	TD	TG	TK	TL	TM	UW	XV min	XV max	RT
VCNT 032	32	12	32.5	15	12	50	46	61.5	84.5	M6
VCNT 040	40	16	38	20	16	63	59	71.5	93.5	M6
VCNT 050	50	16	46.5	20	16	75	69	78.5	101.5	M8
VCNT 063	63	20	56.5	25	20	90	84	84.5	110.5	M8
VCNT 080	80	20	72	25	20	110	102	94.5	125.5	M10
VCNT 100	100	25	89	30	25	132	125	107	133	M10
VCNT 125	125	25	110	32	25	160	155	126	163	M12
VCNT 160	160	32	140	40	32	200	190	149	191	M16
VCNT 200	200	32	175	40	32	250	240	164	206	M16
VCNT 250	250	40	220	50	40	320	296	187	223	M20

VCNL

INTERMEDIATE TRUNNION
FOR SMOOTH TIE-RODS

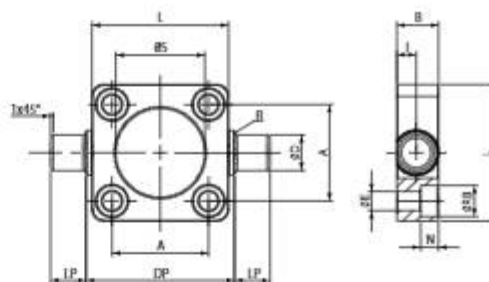


MATERIAL: Steel

Part No.	Ø	TD	TG	TK	TL	TM	UW	XV min	XV max
VCNL 032	32	12	32.5	15	12	50	46	61.5	84.5
VCNL 040	40	16	38	20	16	63	59	71.5	93.5
VCNL 050	50	16	46.5	20	16	75	69	78.5	101.5
VCNL 063	63	20	56.5	25	20	90	84	84.5	110.5
VCNL 080	80	20	72	25	20	110	102	94.5	125.5
VCNL 100	100	25	89	30	25	132	125	107	133
VCNL 125	125	25	110	32	25	160	155	126	163
VCNL 160	160	32	140	40	32	200	190	149	191
VCNL 200	200	32	175	40	32	250	240	164	206

VCNF

FRONT - REAR HINGE

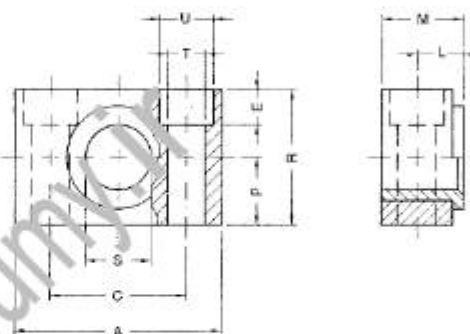


MATERIAL: Steel

Part No.	Ø	A	L	DP	LP	D	S	B	R	I	E	RB	N
VCNF 032	32	32,5	46	50	12	12	30	14	1	6,5	6,5	10,5	6
VCNF 040	40	38	59	63	16	16	35	19	1,5	9	6,5	10,5	6
VCNF 050	50	46,5	69	75	16	16	40	19	1,6	9	8,5	13,5	8
VCNF 063	63	56,5	84	90	20	20	45	24	1,6	11,5	8,5	13,5	8
VCNF 080	80	72	102	110	20	20	45	24	1,6	11,5	10,5	16,5	10
VCNF 100	100	89	125	132	25	25	55	29	2	14	10,5	16,5	10
VCNF 125	125	110	150	160	25	25	60	30	2	15	13,5	20	12

VSI

SUPPORT BLOCK FOR INTERMEDIATE TRUNNION

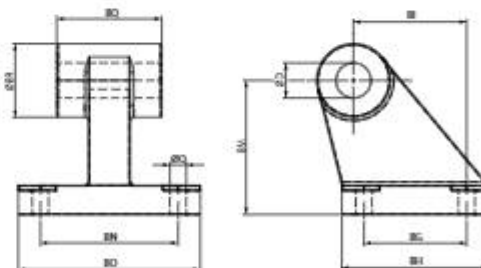


MATERIAL: Steel

Part No.	Ø	A	M	R	S	C	S	L	U	T	E
VSI 032	32	46	18	30	5	32	12	10,5	11	6,6	7
VSI 040	40 - 50	55	21	36	18	36	16	12	15	9	9
VSI 063	63 - 80	65	23	40	20	42	20	13	18	11	11
VSI 100	100 - 125	75	28,5	50	25	50	25	16	20	14	13
VSI 160	160 - 200	92	40	60	30	60	32	22,5	26	18	17
VSI 250	250	140	56	70	35	90	40	31	33	22	20

VAS

EYE BRACKET

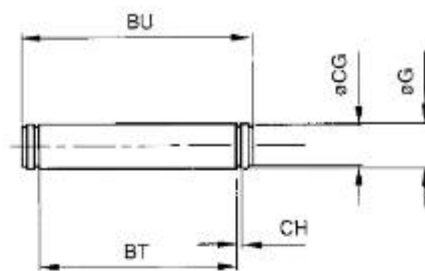


- MATERIAL: Aluminium
- MATERIAL: Stainless Steel

Part No. #	Part No. #	Ø	BQ	BH	BI	BM	BN	BO	BQ	BR	Ø	
VAS 032	VASI 032	32	6,6	18	31	21	32	38	51	26	20	10
VAS 040	VASI 040	40	6,6	22	35	24	36	41	54	28	22	12
VAS 050	VASI 050	50	9	30	45	33	45	50	65	32	26	12
VAS 063	VASI 063	63	9	35	50	37	50	52	67	40	30	16
VAS 080	VASI 080	80	11	40	60	47	63	66	86	50	30	16
VAS 100	VASI 100	100	11	50	70	55	71	76	96	60	38	20
VAS 125	VASI 125	125	14	60	90	70	90	94	124	70	45	25
VAS 160	-	160	14	88	126	97	115	118	156	90	63	30
VAS 200	-	200	18	90	130	105	135	122	162	90	63	30

VPE

PIN WITH
RETAINER CLIPS

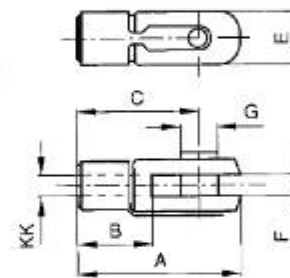


- MATERIAL: Steel
- MATERIAL: Stainless Steel

Part No. ●	Part No. ■	Ø	G	BT	BU	CG	CH
VPE 032	VPEI 032	32	10	46	53	9.6	1.1
VPE 040	VPEI 040	40	12	53	60	11.5	1.1
VPE 050	VPEI 050	50	12	61	68	11.5	1.1
VPE 063	VPEI 063	63	16	71	78	15.2	1.1
VPE 080	VPEI 080	80	16	91	98	15.2	1.1
VPE 100	VPEI 100	100	20	111	118	19	1.3
VPE 125	VPEI 125	125	25	132	139	23.9	1.3
VPE 160	VPEI 160	160 - 200	30	171.5	178	28.6	1.6
VPE 250	-	250	40	202	211	37.5	1.85
VPE 320	-	320	45	222	236	42.5	1.85

FC

ROD CLEVIS WITH LOCKABLE PIN



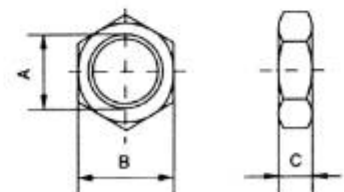
- MATERIAL: Steel
- MATERIAL: Stainless Steel

Part No. ●	Part No. ■	KK	A	B	C	E	F	G
FC 020	*FCI 020	M8x1.25	42	16	32	16	8	8
FC 025	*FCI 025	M10x1.25	52	20	40	20	10	10
FC 040	*FCI 040	M12x1.25	62	24	48	24	12	12
FC 050	*FCI 050	M16x1.5	83	32	64	32	16	16
FC 080	*FCI 080	M20x1.5	105	40	80	40	20	20
*FC 125	*FCI 125	M27x2	148	56	110	55	30	30
*FC 160	*FCI 160	M36x2	188	72	144	70	35	35
*FC 250	-	M42x2	232	84	168	85	42	42
*FC 320	-	M48x2	265	96	192	96	50	50

* With pin and seeger.

DA

ROD JAM NUT

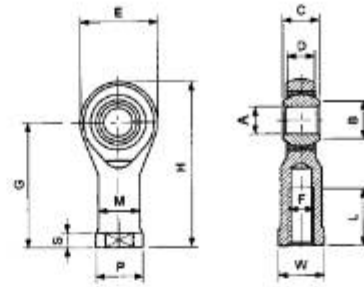


MATERIAL: Steel

Part No.	A	B	C
ODA00 00 51 C3 ZI	M8x1.25	13	6.5
ODA00 00 51 C9 ZI	M10x1.25	17	8
ODA00 00 51 D5 ZI	M12x1.25	19	7
ODA00 00 51 E3 ZI	M16x1.5	22	6
ODA00 00 51 F2 ZI	M20x1.5	30	9
ODA00 00 51 G8 ZI	M27x2	41	12
EDA00 00 51 I6 ZI	M36x2	55	14
EDA00 00 51 L0 ZI	M42x2	65	20
EDA00 00 51 DG ZI	M48x2	75	24

TF

SELF-LUBRICATING
SPHERICAL ROD EYE

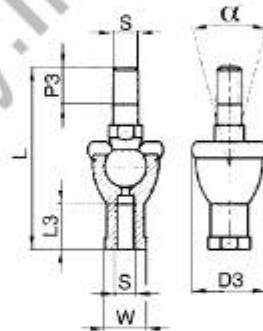


MATERIAL: Steel

Part No.	F	A	B	C	Ø Sphere	D	E	G	H	L	M	P	S	W	Radial load		Weight
															Dynamic	Static	
		$\begin{smallmatrix} 0 \\ H7 \end{smallmatrix}$	0	$\begin{smallmatrix} 0 \\ -0.13 \end{smallmatrix}$		± 0.13	± 0.5	± 0.5		± 0.7	± 0.7	± 0.5	± 0.7	± 0.25	kg	kg	g
TF 020	M8x1.25	8	10.4	12	15.88	9	24	36	48	12	12.5	16	5	14	780	1.900	36
TF 025	M10x1.25	10	12.9	14	19.05	11.5	30	43	58	15	15	19	6.5	16	1.200	3.100	88
TF 040	M12x1.25	12	15.4	16	22.23	12.5	34	50	67	18	17.5	22	6.5	18	1.400	3.700	120
TF 050	M16x1.5	16	19.3	21	28.58	15.5	42	64	85	24	22	27	8	24	2.500	6.300	240
TF 080	M20x1.5	20	24.4	25	34.93	18.5	50	77	102	30	27.5	34	10	30	3.700	8.300	430
TF 125	M27x2	28	32.3	35	47.59	26	66	103	136	41	37	46	14	41	7.100	14.200	1.120
TF 160	M36x2	35	-	43	-	-	-	125	-	56	-	58	-	-	-	-	1.600
TF 250	M42x2	40	-	49	-	-	-	142	-	60	-	65	-	-	-	-	2.800
TF 320	M48x2	50	-	60	-	-	-	162	-	65	-	75	-	-	-	-	5.000

TS

SELF-ALIGNING ROD END
COUPLER

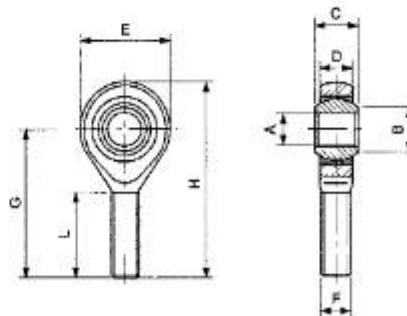


MATERIAL: Steel

Part No.	S	L	L3	W	P3	D3	α°	(kN)
TS 020	M8x1.25	65	16	14	12	20	30°	3.5
TS 025	M10x1.25	74.5	18	17	15	28	30°	5
TS 040	M12x1.25	84	20	19	17	32	30°	6.7
TS 050	M16x1.5	112	27	22	23	40	22°	7.8
TS 080	M20x1.5	133	38	30	25	45	15°	10

TM

SPHERICAL ROD EYE WITH MALE
THREAD



MATERIAL: Steel

Part No.	F	A	B	C	Ø	D	E	G	H	L	Radial load		Weight
											Dynamic	Static	
TM 020	M5x0.8	5	7.5	8	11.11	7.5	18	33	42	19	430	1000	13
TM 032	M6x1	6	8.9	9	12.7	7.5	20	36	46	21	470	1100	15
TM 050	M8x1.25	8	10.4	12	15.88	9.5	24	42	54	25	780	1900	34
TM 080	M10x1.5	10	12.9	14	19.05	11.5	30	48	63	28	1200	3100	70
TM 100	M12x1.75	12	15.4	16	22.23	12.5	34	54	71	32	1400	3700	110



TECHNICAL CHARACTERISTICS



Reference Standard

- 1907/2006
REACH ✓
- 2011/65/CE
RoHS ✓
- PED
2014/68/UE
- SILICON
FREE

- ISO 6431 VDMA
(from 32 to 100)
- ISO 6432
(from 20 to 25)
- ISO 15552
(from 32 to 100)



Bores
from 12 to 100 mm



Standard Strokes
from 50 to 500 mm

www.sumy.ir

Series

Ø (mm)

Stroke (mm)

M L C U B

0 1 2

0 0 5 0

- ◆ **MLCUB** Guide unit "U" with self lubricating sintered bronze bushings
- **MLCHB** Guide unit "H" with self lubricating sintered bronze bushings
- **MLCHC** Guide unit "H" with recirculating ball sleeves
- **VL CUB** Guide unit "U" with self lubricating sintered bronze bushings
- **VLCHB** Guide unit "H" with self lubricating sintered bronze bushings
- **VLCHC** Guide unit "H" with recirculating ball sleeves

- 012
- 020
- 025
- 032
- 040
- 050
- 063
- 080
- 100

- 0050
- 0100
- 0160
- 0200
- 0250
- 0320
- 0400
- 0500

Intermediate or longer strokes are available upon request.

Ø (mm)	Stroke (mm)							
	50	100	160	200	250	320	400	500
12 - 16	◆○	◆○	◆○	◆○	○			
20	◆○	◆○	◆○	◆○	○			
25	◆○	◆○	◆○	◆○	○			
32	●■	●■	●■	●■	●■	●■	●■	●■
40	●■	●■	●■	●■	●■	●■	●■	●■
50	●■	●■	●■	●■	●■	●■	●■	●■
63	●■	●■	●■	●■	●■	●■	●■	●■
80	●	●	●	●	●	●	●	●
100	●	●	●	●	●	●	●	●

MAXIMUM LOADS

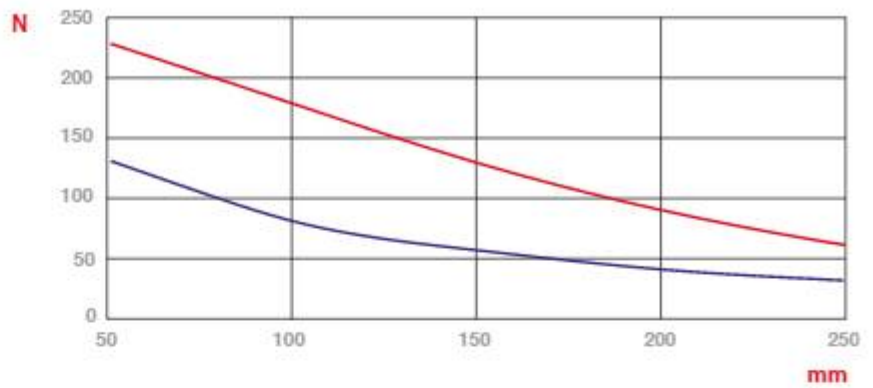
N
Max load

mm
Stroke

Art. MLCHB

Guide units with self lubricating sintered bronze bushings

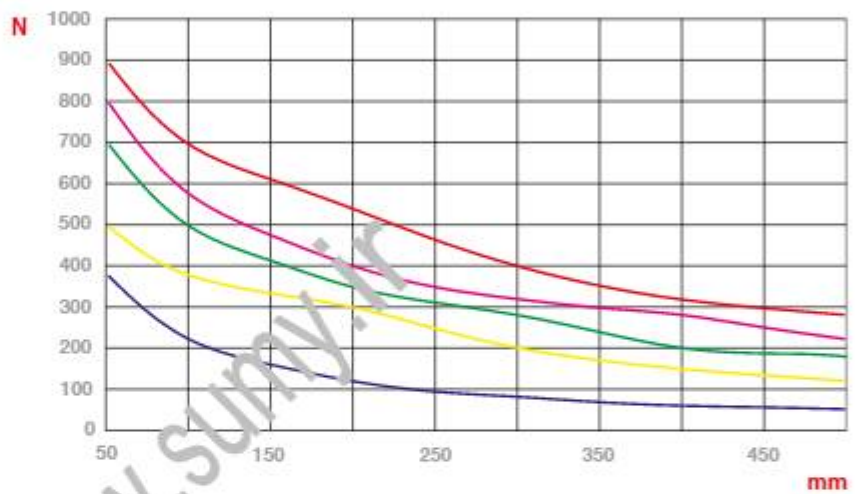
- Ø20 - Ø25
- Ø12 - Ø16



Art. VLCHB

Guide units with self lubricating sintered bronze bushings

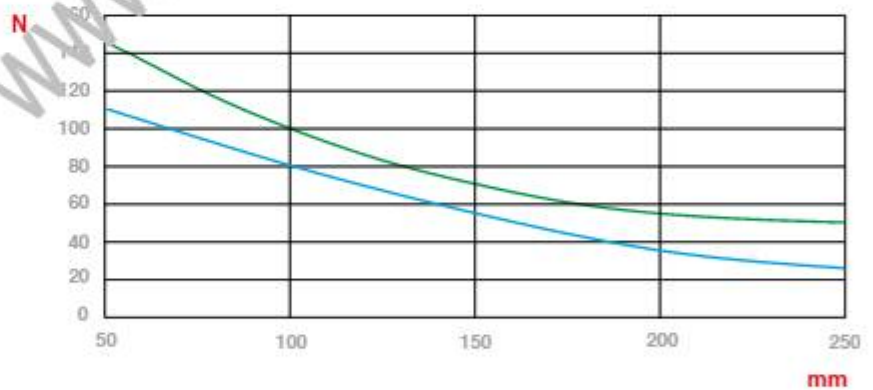
- Ø80 - Ø100
- Ø63
- Ø50
- Ø40
- Ø32



Art. MLCHC

Guide units with recirculating ball bearing

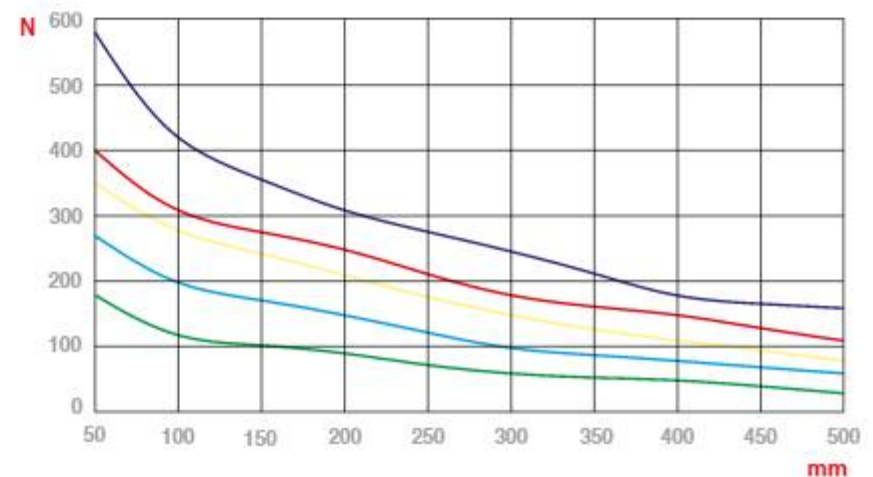
- Ø20 - Ø25
- Ø12 - Ø16



Art. VLCHC

Guide units with recirculating ball bearing

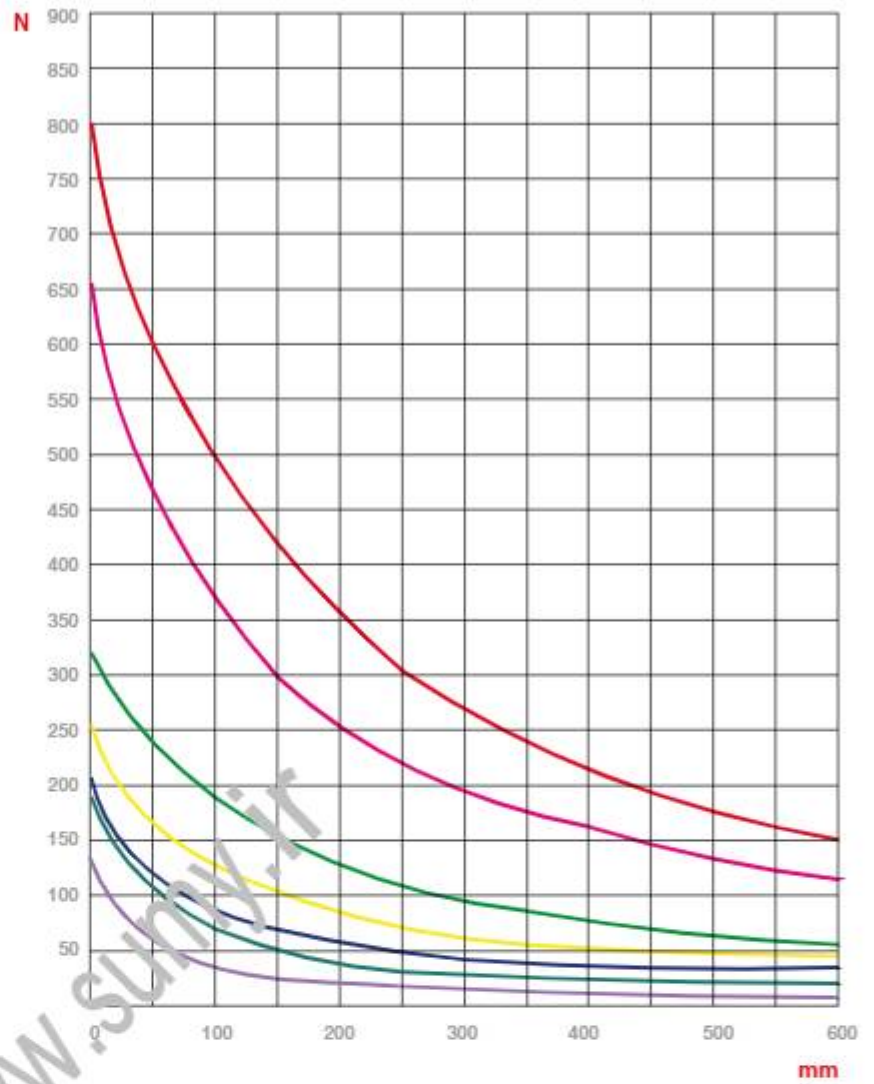
- Ø80 - Ø100
- Ø63
- Ø50
- Ø40
- Ø32



Art. VLCUB

Guide units with self lubricating sintered bronze bushings

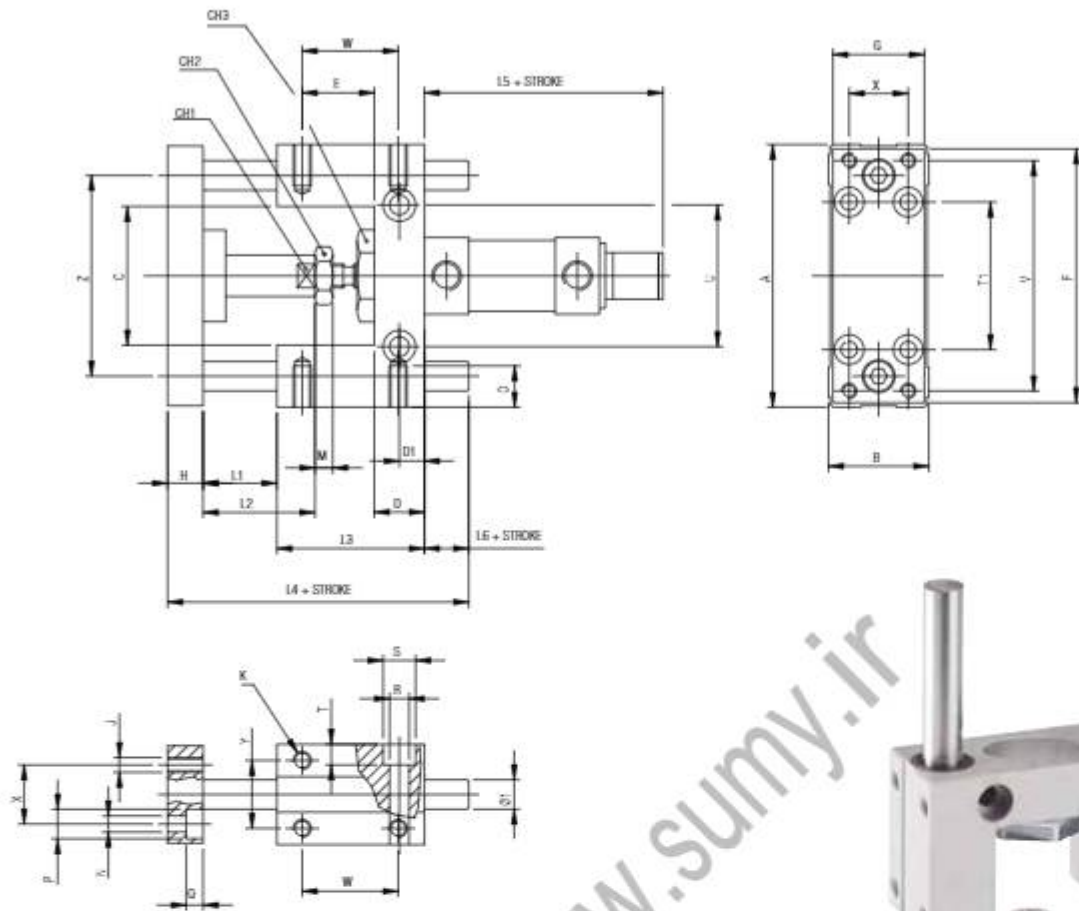
- Ø100
- Ø80
- Ø63
- Ø50
- Ø40
- Ø20-25-32
- Ø16



MLCUB

GUIDE UNIT "U" WITH SELF-LUBRICATING SINTERED BRONZE BUSHINGS

ISO 6432



Ø	A	B	C	CH1	CH2	CH3	D	D1	E	F	G	H	Ø1	J	K	L1	L2	L3	L4	L5	L6
12 - 16	69	30	30	8	10	24	12	5.5	19.5	66	29	10	10	M4	M4	3	15	38	66.5	73	15.5
20	79	34	37	12	13	27	17	8.75	24.25	78	32	12	12	M5	M6	5	18	48	83	87	18
25	79	34	37	12	17	27	17	8.75	24.25	78	32	12	12	M5	M6	5	18	48	83	91	18

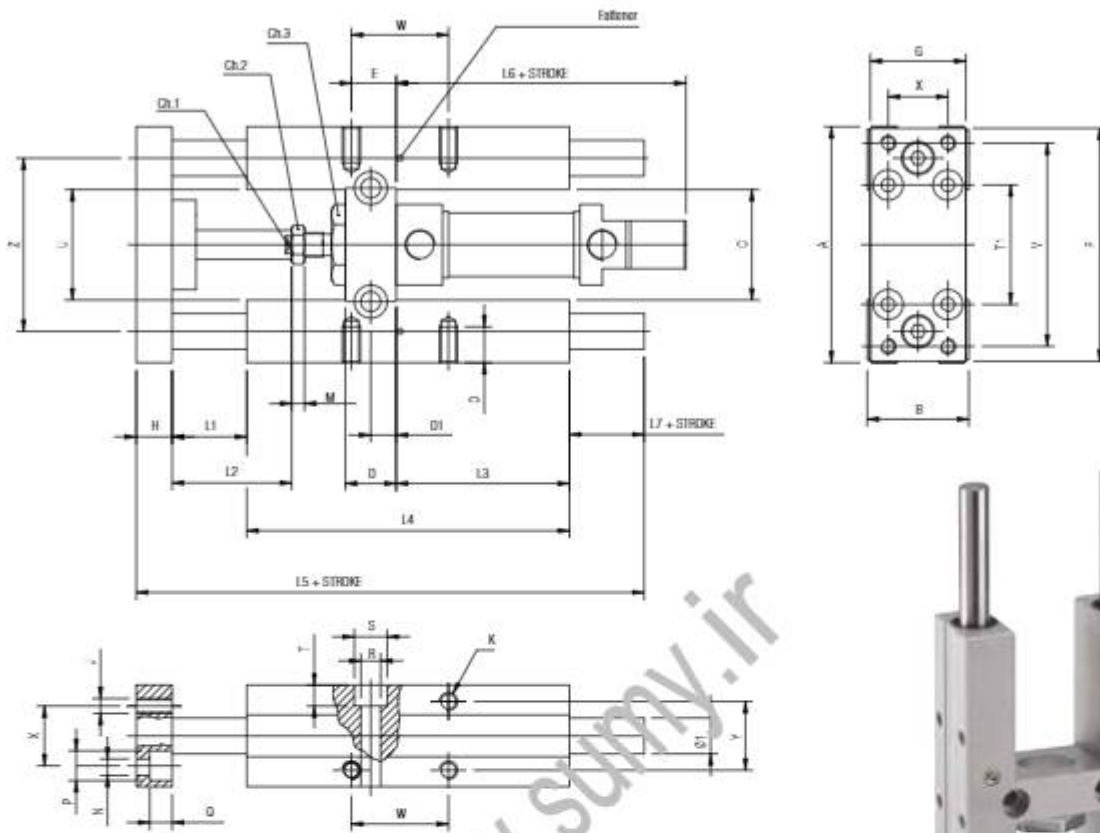
Ø	M	N	O	P	Q	R	S	T	T1	U	V	W	X	Y	Z
12 - 16	6	4.5	6	7.5	4.5	5.5	9	5.5	32	24	58	25	18	22	49.5
20	8	5.5	9	10	7.5	6.5	11	6.5	38	38	68	32.5	20	23	58
25	8	5.5	9	10	7.5	6.5	11	6.5	38	38	68	32.5	20	23	58

Ø (mm)	Stroke (mm)			
	50	100	160	200
12 - 16	▲	▲	▲	▲
20	▲	▲	▲	▲
25	▲	▲	▲	▲

MLCHB

GUIDE UNIT "H" WITH SELF-LUBRICATING SINTERED BRONZE BUSHINGS

ISO 6432



Ø	A	B	C	CH1	CH2	CH3	D	D1	E	F	G	H	Ø1	J	K	L1	L2	L3	L4	L5	L6
12 - 16	69	30	30	8	10	24	12	6	8	66	29	10	10	M4	M4	25	18	46	68	123.5	73
20	79	34	37	12	13	27	17	8.5	15	78	32	12	12	M5	M6	25	40	58	108	166	87
25	79	34	37	12	17	27	17	8.5	15	78	32	12	12	M5	M6	25	40	58	108	166	91

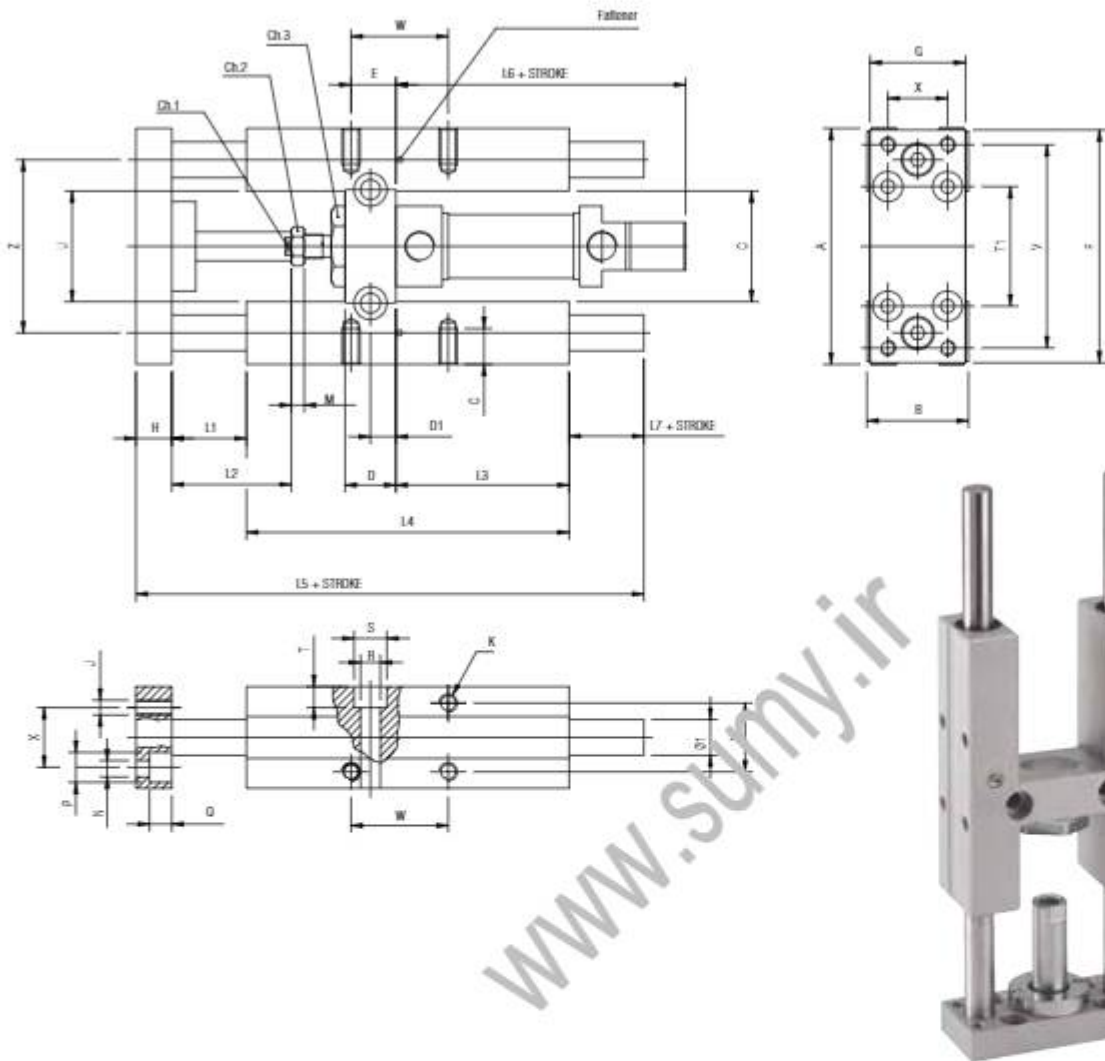
Ø	L7	M	N	O	P	Q	R	S	T	T1	U	V	W	X	Y	Z
12 - 16	12	6	4.5	6	8	4.5	5.5	9	5.5	32	24	58	18	18	22	49.5
20	10	8	5.5	9	10	7.5	6.5	11	6.5	38	38	68	32.5	20	23	58
25	10	8	5.5	9	10	7.5	6.5	11	6.5	38	38	68	32.5	20	23	58

Ø (mm)	Stroke (mm)				
	50	100	160	200	250
12 - 16	▲	▲	▲	▲	▲
20	▲	▲	▲	▲	▲
25	▲	▲	▲	▲	▲

MLCHC

GUIDE UNIT "H" WITH RECIRCULATING BALL SLEEVES

ISO 6432



Ø	A	B	C	CH1	CH2	CH3	D	D1	E	F	G	H	Ø1	J	K	L1	L2	L3	L4	L5	L6
12 - 16	69	30	30	8	10	24	12	6	8	66	29	10	10	M4	M4	25	18	46	68	123.5	73
20	79	34	37	12	13	27	17	8.5	15	78	32	12	12	M5	M6	25	40	58	108	166	87
25	79	34	37	12	17	27	17	8.5	15	78	32	12	12	M5	M6	25	40	58	108	166	91

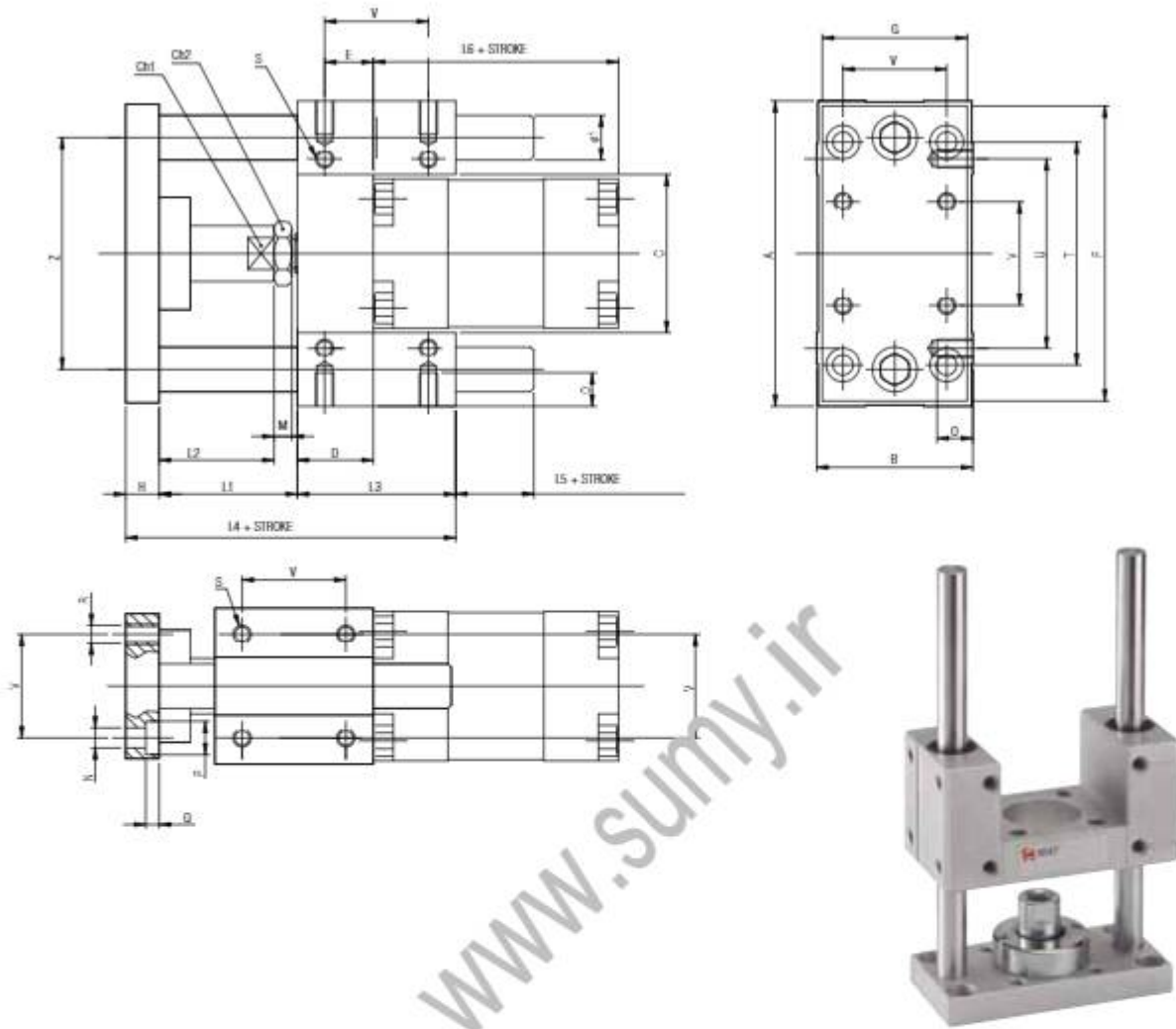
Ø	L7	M	N	O	P	Q	R	S	T	T1	U	V	W	X	Y	Z
12 - 16	12	6	4.5	6	8	4.5	5.5	9	5.5	32	24	58	18	18	22	49.5
20	10	8	5.5	9	10	7.5	6.5	11	6.5	38	38	68	32.5	20	23	58
25	10	8	5.5	9	10	7.5	6.5	11	6.5	38	38	68	32.5	20	23	58

Ø (mm)	Stroke (mm)				
	50	100	160	200	250
12 - 16	▲	▲	▲	▲	▲
20	▲	▲	▲	▲	▲
25	▲	▲	▲	▲	▲

VLCUB

GUIDE UNIT "U" WITH SELF-LUBRICATING SINTERED BRONZE BUSHINGS

ISO 15552



Ø	A	B	C	CH1	CH2	D	E	F	G	H	Ø1	L1	L2	L3	L4	L5	L6	M	N	O
32	97	49	51	15	17	17	9.25	93	45	12	12	42	25	48	102	18	97	8	6.6	12
40	115	58	58.5	15	19	21	11	112	55	12	16	43	24	58	113	17	109	7	6.6	12
50	137	70	70.2	20	24	25	18.8	134	65	15	20	49	30	59	123	20	110	6	9	16
63	152	85	85.2	20	24	25	15.3	147	80	15	20	49	30	76	140	21	125	6	9	16

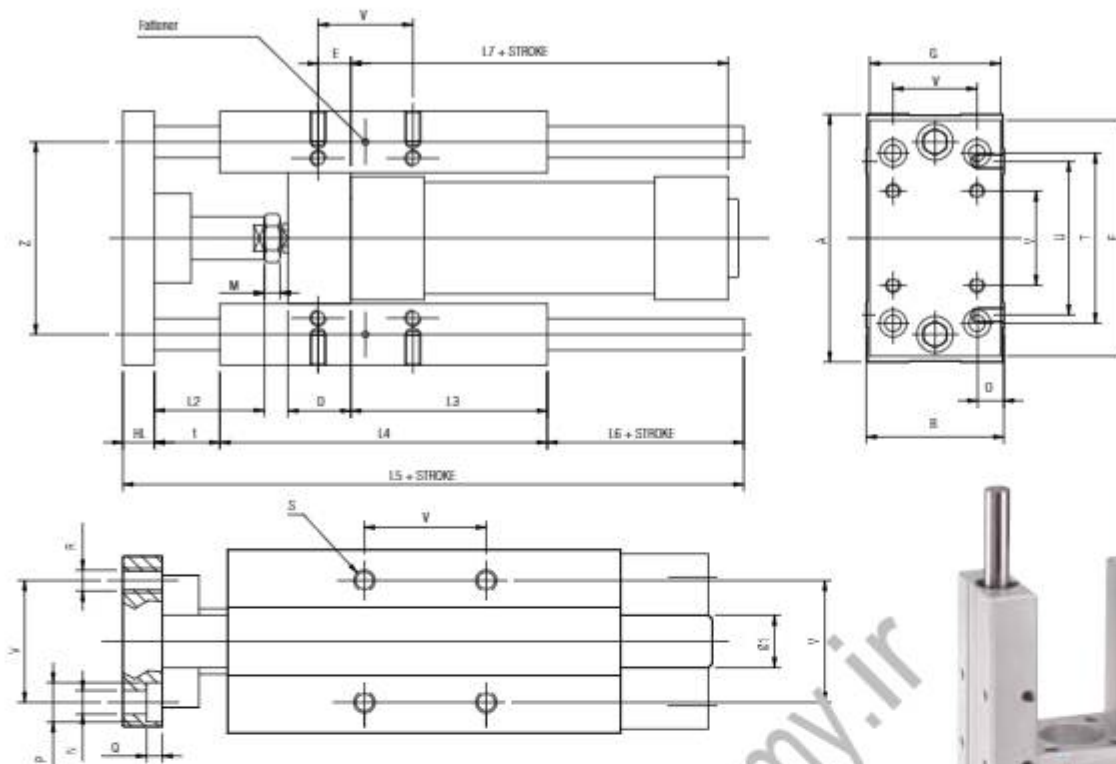
Ø	P	Q	R	S	T	U	V	Z
32	11	6.5	M6	M6	78	61	32.5	74
40	11	6.5	M6	M6	84	69	38	87
50	15	8.5	M8	M8	100	85	46.5	104
63	15	9	M8	M8	105	100	56.5	119

Ø (mm)	Stroke (mm)							
	50	100	160	200	250	320	400	500
32	▲	▲	▲	▲	▲	▲	▲	▲
40	▲	▲	▲	▲	▲	▲	▲	▲
50	▲	▲	▲	▲	▲	▲	▲	▲
63	▲	▲	▲	▲	▲	▲	▲	▲

VLCHB

GUIDE UNIT "H" WITH SELF-LUBRICATING SINTERED BRONZE BUSHINGS

ISO 15552



www.sumy.ir

Ø	A	B	C	CH1	CH2	D	E	F	G	H	Ø1	L1	L2	L3	L4	L5	L6	L7	M	N	O
32	97	49	51	15	17	24	4.3	93	45	12	12	25	42	75	125	187	25	97	8	6.6	12
40	115	58	58.2	15	19	28	11	112	55	12	16	25	42	80	140	207	30	109	7	6.6	12
50	137	70	70.2	20	24	34	18.8	134	65	15	20	25	50	78	148	223	35	110	6	9	16
63	152	85	85.2	20	24	34	15.3	147	80	15	20	25	50	106	178	243	25	125	6	9	16
80	189	105	105.5	26	30	50	25	180	100	20	25	25	50	111	195	267	27	133	9	11	20
100	213	130	130.5	26	30	55	30	206	120	20	25	25	50	128	218	290	27	144	9	11	20

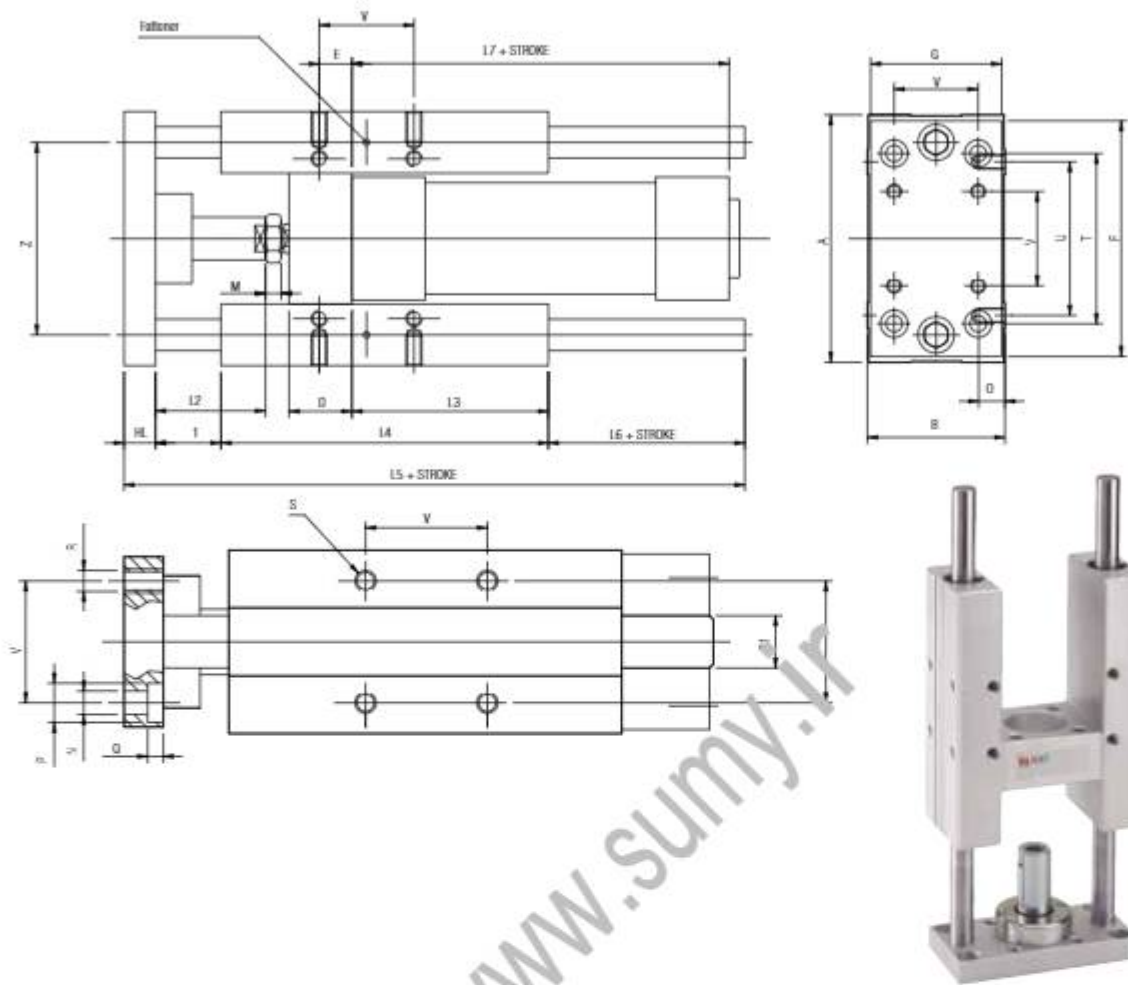
Ø	P	Q	R	S	T	U	V	Z
32	11	6.5	M6	M6	78	61	32.5	74
40	11	6.5	M6	M6	84	69	38	87
50	15	8.5	M8	M8	100	85	46.5	104
63	15	9	M8	M8	105	100	56.5	116
80	18	11	M10	M10	130	130	72	148
100	16.5	11	M10	M10	150	150	89	173

Ø (mm)	Stroke (mm)							
	50	100	160	200	250	320	400	500
32	▲	▲	▲	▲	▲	▲	▲	▲
40	▲	▲	▲	▲	▲	▲	▲	▲
50	▲	▲	▲	▲	▲	▲	▲	▲
63	▲	▲	▲	▲	▲	▲	▲	▲
80	▲	▲	▲	▲	▲	▲	▲	▲
100	▲	▲	▲	▲	▲	▲	▲	▲

VLCHC

GUIDE UNIT "H" WITH RECIRCULATING BALL SLEEVES

ISO 15552



www.sumy.it

Ø	A	B	C	CH1	CH2	D	E	F	G	H	Ø1	L1	L2	L3	L4	L5	L6	L7	M	N	O
32	97	49	51	15	17	24	4.3	93	45	12	12	25	42	75	125	187	25	97	8	6.6	12
40	115	58	58.2	15	19	28	11	112	55	12	16	25	42	80	140	207	30	109	7	6.6	12
50	137	70	70.2	20	24	34	18.8	134	65	15	20	25	50	78	148	223	35	110	6	9	16
63	152	85	85.2	20	24	34	15.3	147	80	15	20	25	50	106	178	243	25	125	6	9	16
80	189	105	105.5	26	30	50	25	180	100	20	25	25	50	111	195	267	27	133	9	11	20
100	213	130	130.5	26	30	55	30	206	120	20	25	25	50	128	218	290	27	144	9	11	20

Ø	P	Q	R	S	T	U	V	Z
32	11	6.5	M6	M6	78	61	32.5	74
40	11	6.5	M6	M6	84	69	38	87
50	15	8.5	M8	M8	100	85	46.5	104
63	15	9	M8	M8	105	100	56.5	116
80	18	11	M10	M10	130	130	72	148
100	16.5	11	M10	M10	150	150	89	173

Ø (mm)	Strokes (mm)							
	50	100	160	200	250	320	400	500
32	▲	▲	▲	▲	▲	▲	▲	▲
40	▲	▲	▲	▲	▲	▲	▲	▲
50	▲	▲	▲	▲	▲	▲	▲	▲
63	▲	▲	▲	▲	▲	▲	▲	▲
80	▲	▲	▲	▲	▲	▲	▲	▲
100	▲	▲	▲	▲	▲	▲	▲	▲

SERIES R - RODLESS CYLINDERS WITH INTERNAL GUIDING



TECHNICAL CHARACTERISTICS



Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

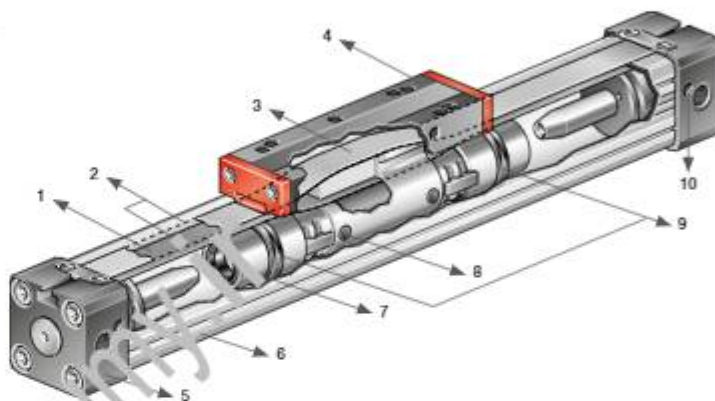
PED
2014/68/UE

SILICON FREE



Component Parts and Materials

- 1 Inner sealing band
- 2 Magnet strip
- 3 Outer sealing band
- 4 Internally guided carriage (anodized aluminum)
- 5 End cap anodized aluminum
- 6 Profile tube with slots for position sensing switches (anodized aluminum)
- 7 Piston (anodized aluminum)
- 8 Plastroferrite magnets
- 9 NBR piston seals
- 10 Cushion adjustment screw



Pressures

0.5 bar (0.05 MPa) / 7.3 psi
8 bar (0.8 MPa) / 116 psi



Temperatures

10 °C / 54 °F
-20 °C / 176 °F



Media

Filtered and lubricated or non-lubricated compressed air.



Functions

Rodless cylinder - double acting cushioned magnetic.



Bores

from 16 to 63 mm



Strokes

Ø 16 From 100 to 4400 mm.
Ø 25-63 From 100 to 5700 mm.



Advantages

- Requires 50% less space than a traditional cylinder
- Forces are generated equally on both pistons
- Strokes up to > 5700 mm
- Cushions are standard with 3 ports in each end cap
- Fast acceleration and high piston velocity
- Offers design flexibility
- Lubricated or non-lubricated air supply

* Note: Before changing operation from lubricated to non lubricated air the cylinder has to be disassembled, cleaned, newly greased and reassembled.



Sensors recommended

DT



Sensor adapter - 016 / 25

DSTR025

Series	Ø (mm)	Stroke (mm)						
RH	016	0100						
RH Rodless cylinder cushioned - magnetic	016 025 032 040 050 063	<table border="1"> <thead> <tr> <th>Ø (mm)</th> <th>Stroke (mm)</th> </tr> </thead> <tbody> <tr> <td>16</td> <td>100 to 4400</td> </tr> <tr> <td>25 - 63</td> <td>100 to 5700</td> </tr> </tbody> </table>	Ø (mm)	Stroke (mm)	16	100 to 4400	25 - 63	100 to 5700
Ø (mm)	Stroke (mm)							
16	100 to 4400							
25 - 63	100 to 5700							



Forces and Moments

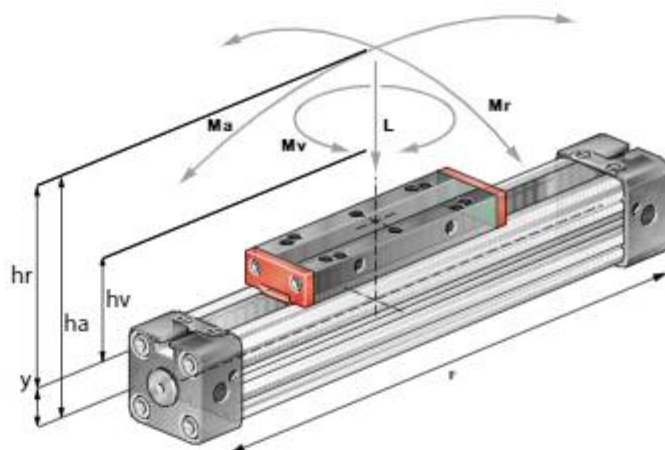
The figures below are maximum values based on light, shock-free duty and a speed of $v < 0.45$ m/sec. Maximum pressure 6 bar. Avoid exceeding the values in dynamic operations, even for short moments.

Note: Resulting forces could lead to exceeding the values. In case of undefinable situations the above maximum values should be reduced by 10–20 %.

$$\frac{Ma}{Ma_{max}} + \frac{Mr}{Mr_{max}} + \frac{Mv}{Mv_{max}} + \frac{L}{L_{max}} \leq 1$$

Formulas

$$\begin{aligned} Ma &= F \times ha \\ Mr &= F \times hr \\ Mv &= F \times hv \end{aligned}$$



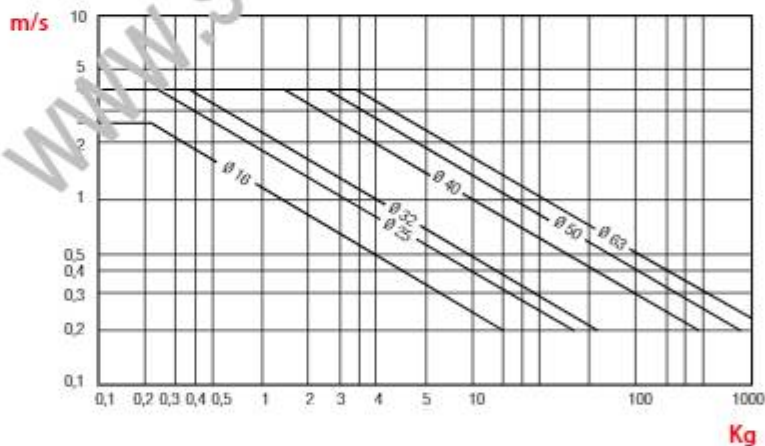
Forces and Torque

Cylinder		Force	Cushioning	Allowable load	Maximum allowable bending moments		Maximum allowable torque
Ø	Y	N - 6 bar	mm	N	Nm		Nm
		F	S	RH	Ma axial	Mr radial	Mv central
16	9	110	15	120	4	0.3	0.5
25	14	250	21	300	15	1	3.0
32	18	420	26	450	30	2	4.5
40	22	640	32	750	60	4	8.0
50	28	1000	32	1000	115	7	15.0
63	36	1550	40	1650	200	8	24.0



Note:

- If the limits above are exceeded shock absorbers are necessary.
- For piston speeds of more than < 1 m/s viton seals are recommended.
- For piston speeds < 0.1 m/s (NBR), < 0.2 m/s (FKM) slow speed lubrication is required.
- Maximum life will be achieved when piston speeds do not exceed 1 m/s.a

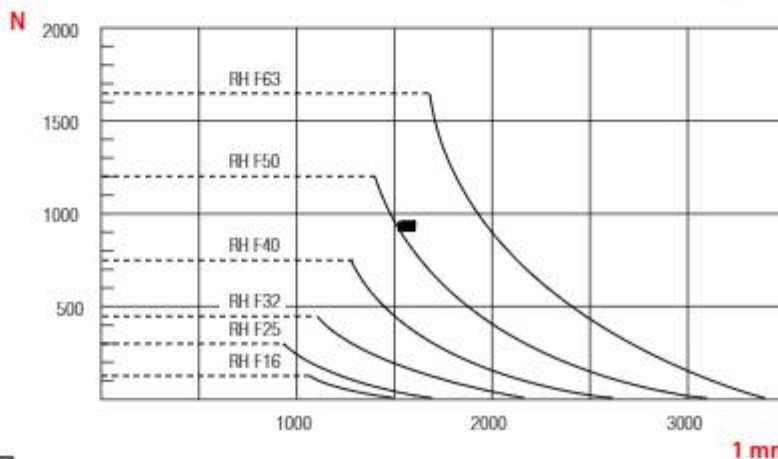
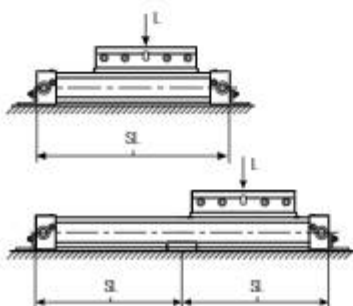


m/s
Piston
Kg
Mass



Deflection Graph

- Calculated deflections without support of 0.5 – 1 mm allow exceeding of supporting distance.
- Calculated deflections without support of 1mm – maximum 1.5 mm require reduction of the supporting distance.

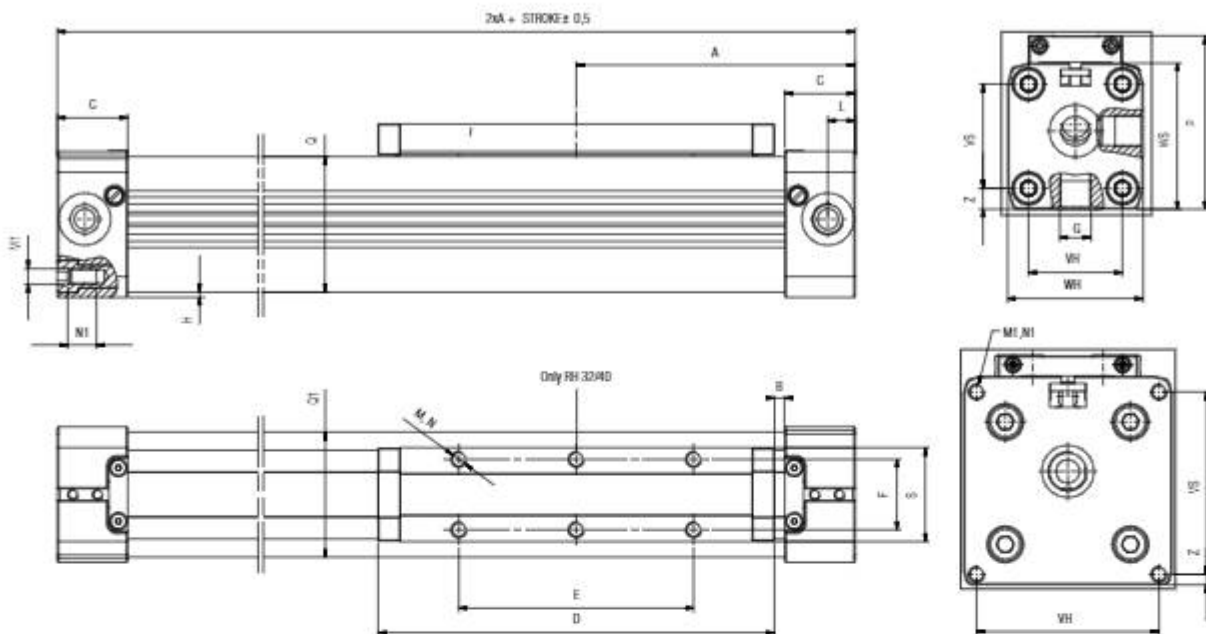


N
Load
1 mm
Deflection

Distances S_L of mounting with deflection 1 mm.

RH

RODLESS CYLINDER - CUSHIONED - MAGNETIC



Ø	A	B	C	D	E	F	G	H	L	M	M1	N	N1	S	QxQ1	S	VS	VH	WS	WH	Z
16	65	15.5	15	69	36	16.5	M5	1.0	5.5	M4	M3	7	10	30.5	24.5x25	22.0	18	18	27	27	4.5
25	100	21.0	23	111	65	25.0	G1/8	2.0	8.5	M5	M5	10	14	52.5	36x36	33.0	27	27	40	40	6.5
32	125	22.0	27	152	90	27.0	G1/4	2.0	10.5	M6	M6	14	17	66.5	52x51	36.0	40	36	56	52	8.0
40	150	44.0	30	152	90	27.0	G1/4	6.75	15.0	M6	M6	10	17	80.0	58.5x59	36.4	54	54	69	72	9.0
50	175	42.0	33.0	200	110	27.0	G1/4	0.5	11.7	M6	M6	16	18	88.0	77x78	56.0	70	70	80	80	4.0
63	215	47.5	50	235	155	36.0	G3/8	1.5	25.0	M8	M8	15	18	123.0	102x102	50.0	78	78	106	106	14.5

www.sunhy.ir

SERIES RHV - RODLESS CYLINDERS WITH "V" EDGE SLIDE SYSTEM



TECHNICAL CHARACTERISTICS



Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

SILICON
FREE



Pressures

0.5 bar (0.05 MPa) / 7.3 psi
8 bar (0.8 MPa) / 116 psi



Temperatures

- 10 °C / 14 °F
+ 80 °C / 176 °F



Media

Filtered and lubricated or non-lubricated compressed air.



Functions

Rodless cylinder - double acting cushioned magnetic.



Bores

from 25 to 50 mm



Standard Strokes

From 100 to 5700 mm



Advantages

- High load carrying characteristics
- Heavy duty bearing housing
- Ground and hardened guide rail
- Low friction bearings
- Quiet and smooth running



Sensors recommended

DT



Sensor adapter - 016 / 25

DSTR025

www.summy.ir

Series	Ø (mm)	Stroke (mm)
R H V	0 2 5	0 1 0 0
RHV Rodless cylinder cushioned - magnetic	025 032 040 050	From 100 to 5700 mm

Forces and Torque

Cylinder	A	B	C/D/E/F	G	H	I	Load forces max		Axial moments max	Radial moments max
							Moment forces max		Ma	Mr
							La. Lr. Lv	N	Torston moments max	Nm
	mm	mm	mm	mm	mm	mm		Nm	Nm	
25	53.0	20.5	*	38.0	40.0	40.0	1400	50	14	
32	64.0	26.0	*	55.5	58.0	58.0	3100	165	65	
40	72.5	28.0	*	54.5	67.5	67.5	3100	250	90	
50	88.5	28.0	*	58.5	67.5	67.5	3100	250	90	

* Dimensions according design.



Forces and Moments

- 1 The moments in the chart on the previous page (M_a max, M_r max, M_v max) relate to the guide rail center. The load force L is the total of all single forces related to the common center of the mass. The center of the mass can be placed inside or outside the surface area of the carriage.
- 2 Normally the carriage would experience a dynamic load which has to be considered with the needed piston force (F) and capacity of the ballguided system. Use the following formula when calculating:

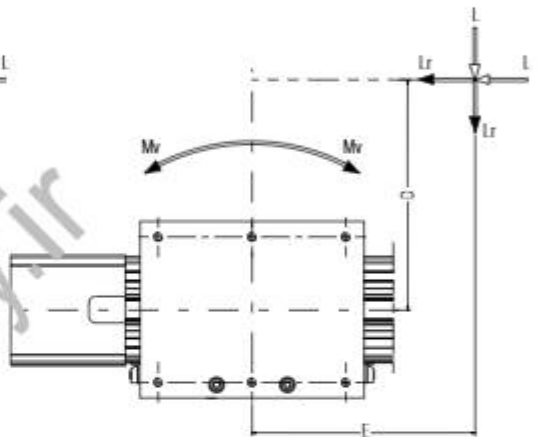
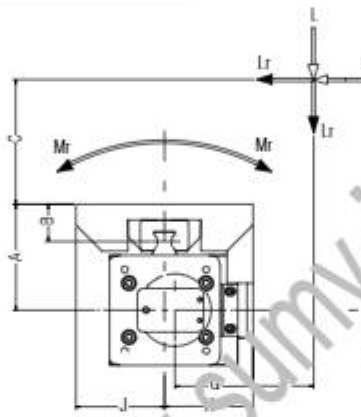
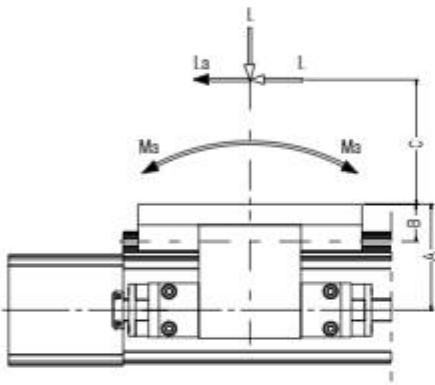
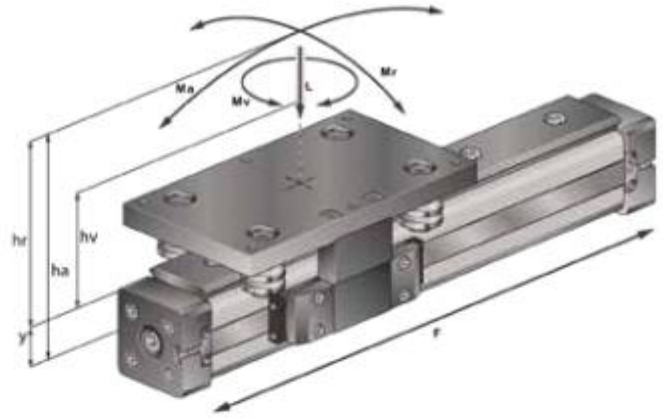
$$\frac{M_a}{M_{a_{max}}} + \frac{M_r}{M_{r_{max}}} + \frac{M_v}{M_{v_{max}}} + \frac{L}{L_{max}} \leq 1$$

Formulas

$$M_a = F \times h_a$$

$$M_r = F \times h_r$$

$$M_v = F \times h_v$$

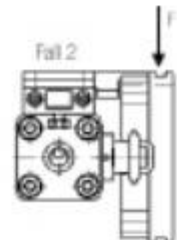
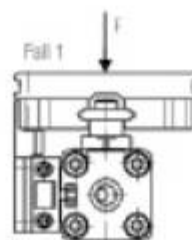
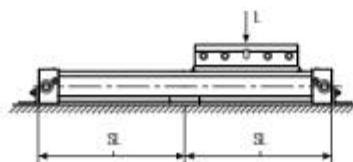
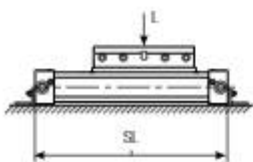
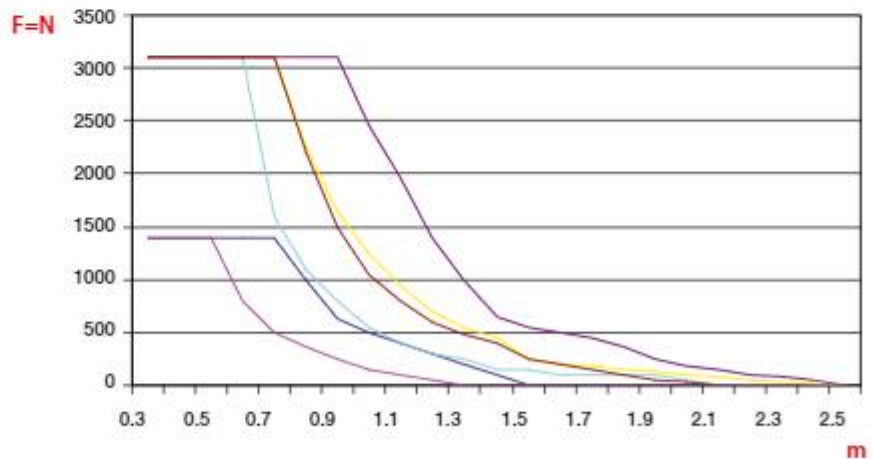


Deflection Graph

- Calculated deflections without support of 0.5 – 1 mm allow exceeding of supporting distance.
- Calculated deflections without support of 1mm – maximum 1.5 mm require reduction of the supporting distance.

F=N **m**
Load Distance SL

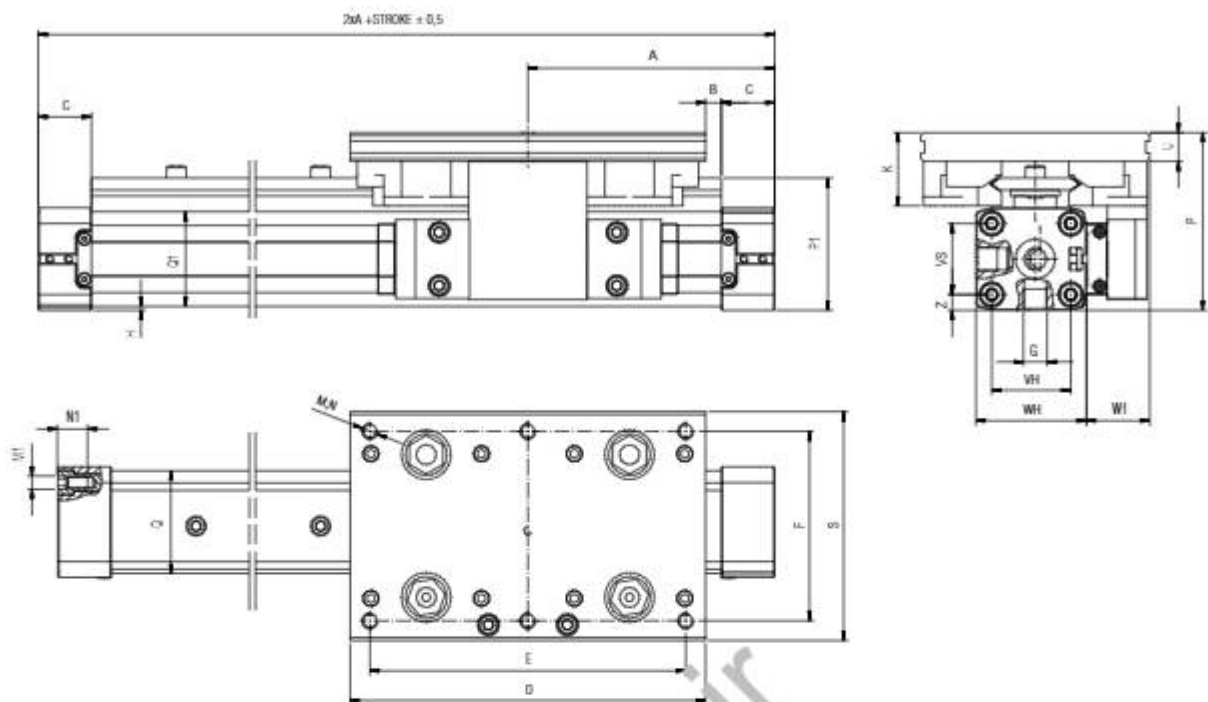
- RIN25/25 Fall 1
- RIN25/25 Fall 2
- RIN32/44 Fall 1
- RIN32/44 Fall 2
- RIN40/60 Fall 1
- RIN40/60 Fall 2



Distances SL of mounting with deflection 1 mm.

RHV

RODLESS CYLINDER - CUSHIONED - MAGNETIC



Ø	A	B	C	D	E	F	G	H	K	M	N	M1	I1	P	P1	QxQ1	S	U	VH	VS	WS	W1	Z
25	100	9.5	23	135	120	65	1/8	2.0	29.5	M6	11	10.5	10	71.0	56.8	36 x 36	80	11	27	27	40	22	6.5
32	125	8.0	27	180	160	96	1/4	2.0	37	M8	14.5	11.6	14	90.0	64.5	52 x 48	116	14.5	40	36	56	32	8.0
40	150	0	30	240	216	115	1/4	6.75	39	M8	16.5	11.3	17	108.5	84.0	58.5 x 59	135	16.5	54	54	69	34.5	9.0
50	175	22	33	240	216	115	1/4	1.0	39	M8	16.5	11.3	18	122.0	97.5	77 x 78	135	16.5	70	70	80	31	5.0

www.sunny.ir

SERIES RHL - RODLESS CYLINDERS - EXTERNALLY GUIDED



TECHNICAL CHARACTERISTICS



Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

SILICON
FREE



Pressures

0.5 bar (0.05 MPa) / 7.3 psi
8 bar (0.8 MPa) / 116 psi



Temperatures

- 10 °C / 14 °F
+ 80 °C / 176 °F



Media

Filtered and lubricated or non-lubricated compressed air.



Functions

Rodless cylinder - double acting cushioned magnetic.



Bores

from Ø 32 to Ø 63 mm



Standard Strokes

From 100 to 5700 mm



Advantages

- Ability to accept high loads and moments in all directions.
- High tolerance to shock loads and vibrations.
- Highly resistant to wear and corrosion.
- Quiet running.
- Guiding elements are interchangeable.



Sensors recommended

DT



Sensor adapter - 016 / 25

DSTR025

Series	Ø (mm)	Stroke (mm)
R H L	0 3 2	0 1 0 0
RHL Rodless cylinder cushioned - magnetic	032 040 050 063	From 100 to 5700 mm

Forces and Torque

Cylinder	Max. zul. Last L	Max. L a, L r, L v	Max. Ma	Max. Mr	Max. Mv
	N	N	Nm	Nm	Nm
32	760	760	39	15	39
40	1330	1330	99	35	99
50	1600	1600	170	58	170
63	2770	2770	315	105	317



Forces and Moments

- The moments in the chart on the previous page (M_a max, M_r max, M_v max) relate to the guide rail center. The load force L is the total of all single forces related to the common center of the mass. The center of the mass can be placed inside or outside the surface area of the carriage.
- Normally the carriage would experience a dynamic load which has to be considered with the needed piston force (F) and capacity of the ballguided system. Use the following formula for calculations:

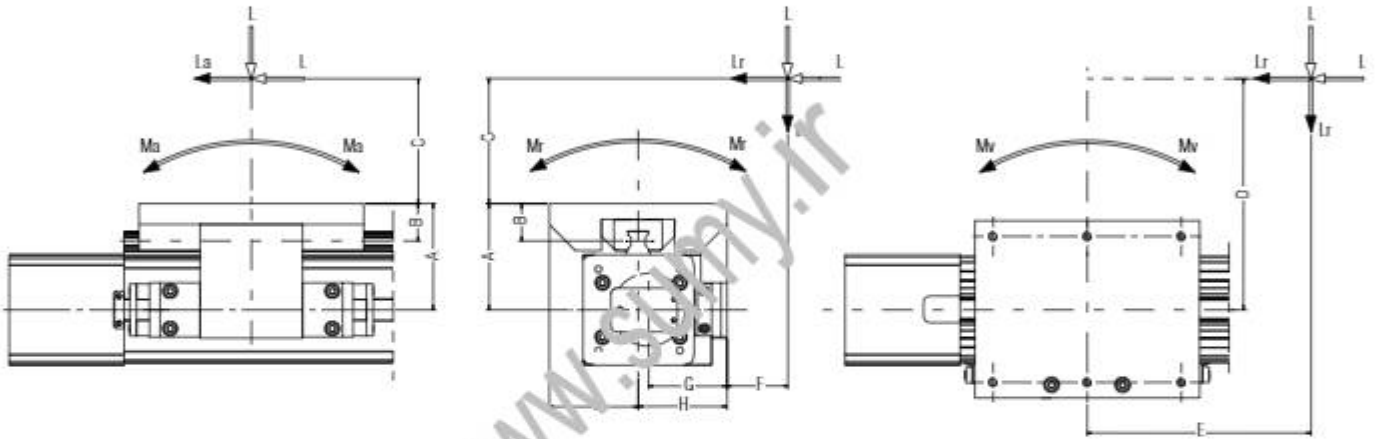
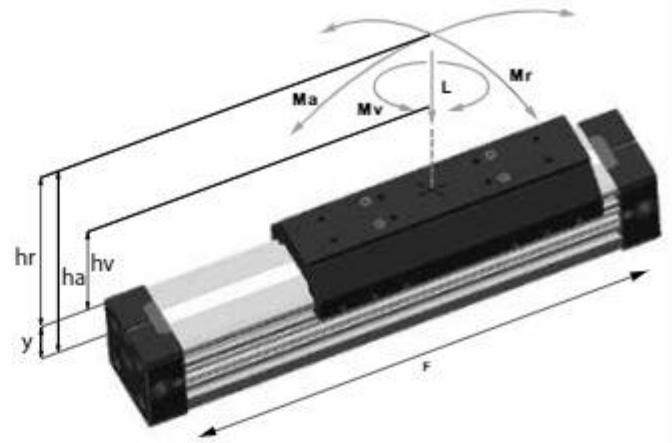
$$\frac{M_a}{M_{a_{max}}} + \frac{M_r}{M_{r_{max}}} + \frac{M_v}{M_{v_{max}}} + \frac{L}{L_{max}} \leq 1$$

Formulas

$$M_a = F \times h_a$$

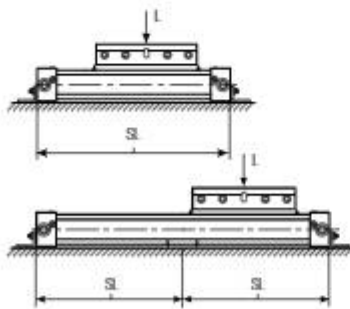
$$M_r = F \times h_r$$

$$M_v = F \times h_v$$



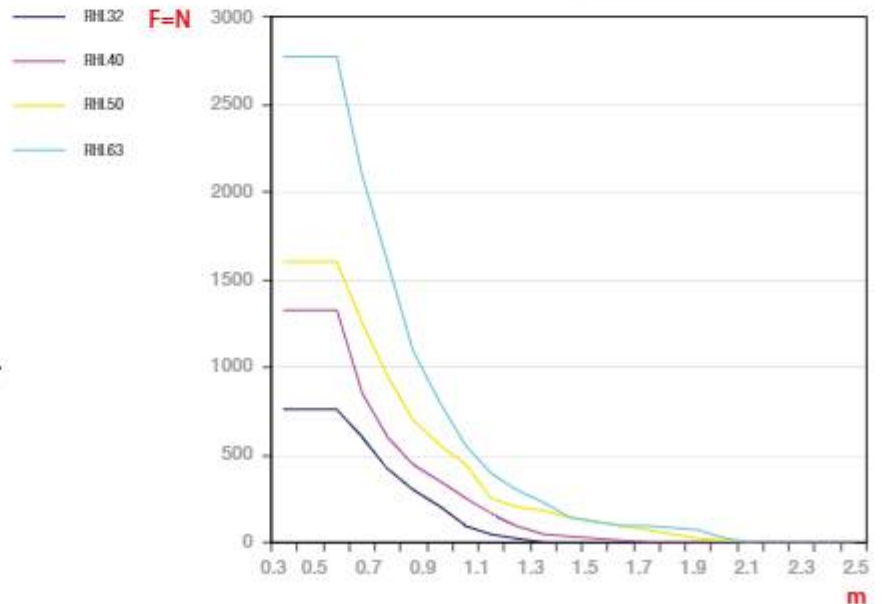
Deflection Graph

- Calculated deflections without support of 0.5 – 1 mm allow exceeding of supporting distance.
- Calculated deflections without support of 1mm – maximum 1.5 mm require reduction of the supporting distance.



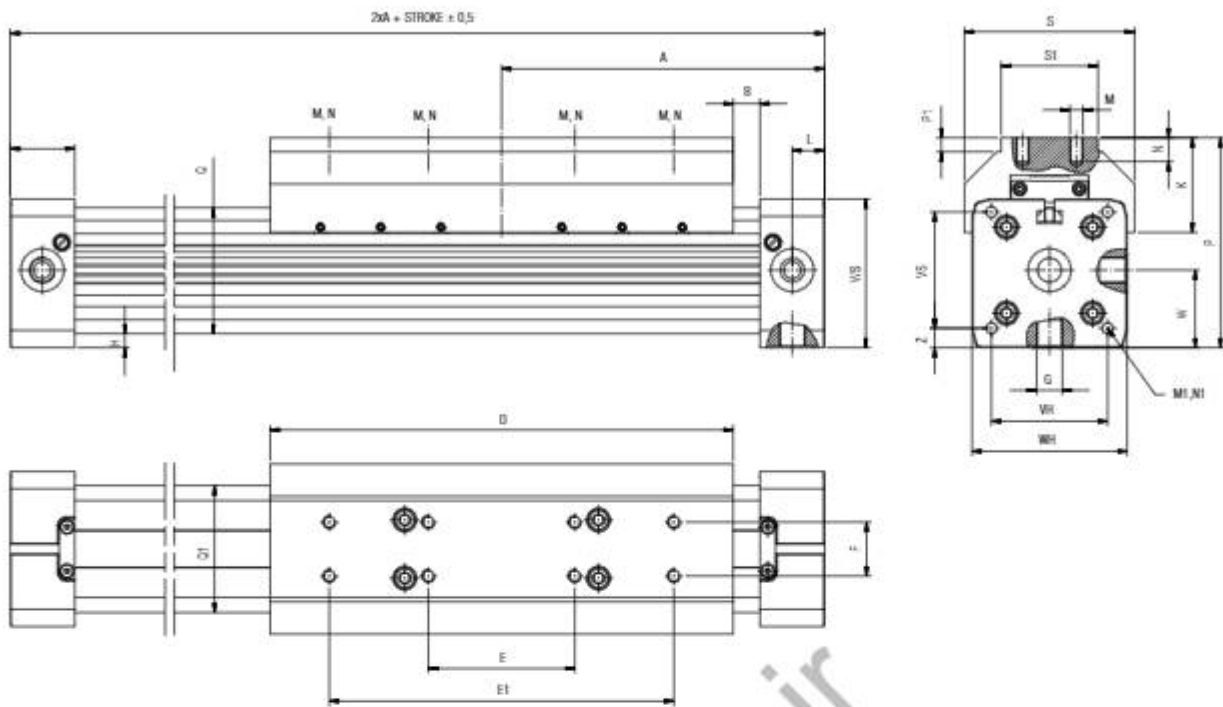
Distances S_L of mounting with deflection 1 mm.

F=N	m
Load	Distance S_L



RHL

RODLESS CYLINDER - CUSHIONED - MAGNETIC



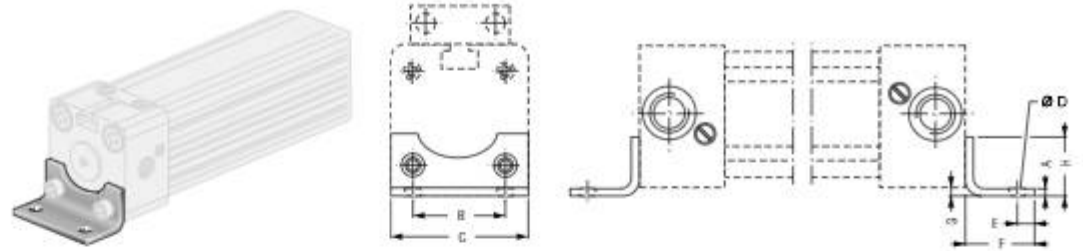
\varnothing	A	B	C	D	E	E1	F	G	H	K	L	M	N	M1	N1	P1	QxQ1	S	S1	VH	VS	W	WH	WS	Z	
32	125	22	27	152	60	120	25	1/4	2.0	42.5	10.5	M5	10	M4	14	81.5	6.5	52x51	66	40	36	40	30	52	56	8
40	150	12.5	30	215	68	160	25	1/4	7.0	44	15	M8	10	M6	17	97.5	6.5	58.5x59	79	45	54	54	36	72	69	9
50	175	17.5	33	250	84	190	25	1/4	0.5	48.5	11.7	M8	10	M6	18	110	6.5	77x78	92	50	70	70	43.5	80	80	4
63	215	6.5	55	320	120	240	25	3/8	1.5	56	25	M8	14	M8	18	137	5.0	102x102	116	50	78	78	62.5	106	106	14.5

www.sunny.ir

SERIES R ACCESSORIES

RCP

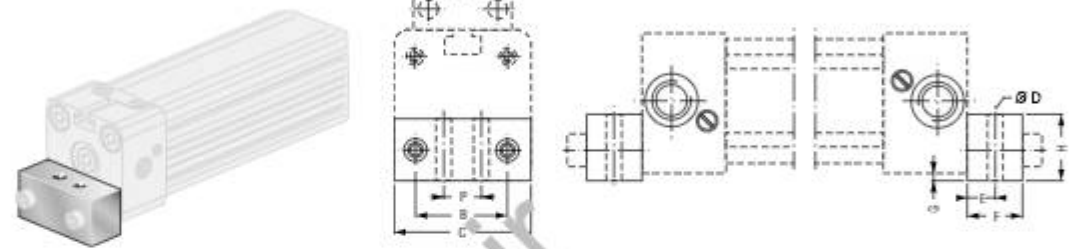
FOOT MOUNT
Ø 16-25 mm



Part No.	Ø	A	B	C	D	E	F	G	H
RCP 016	16	1.5	18	26	3.6	4.0	14	1.5	12.5
RCP 025	25	2.5	27	40	5.5	6.0	22	2	18

RCP

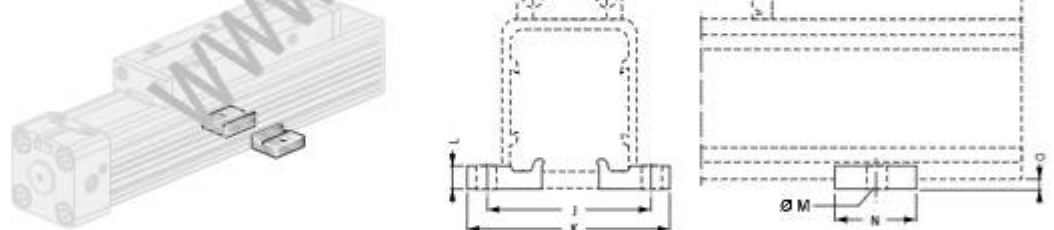
FOOT MOUNT
Ø 32-63 mm



Code	Ø	B	C	D	E	F	G	H	P
RCP 032	32	36	51	6,5	11,5	24	4	20	20
RCP 040	40	54	71	9	17,5	24	2	20	30
RCP 050	50	70	80	9	22,5	25	1	25	45
RCP 063	63	78	105	11	25	30	2	40	48

RCN

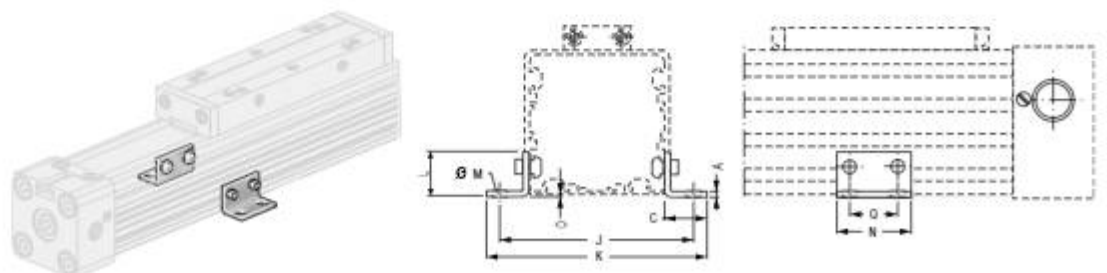
INTERMEDIATE SUPPORT
BRACKET
Ø 16-25 mm



Part No.	Ø	J	K	L	M	N	O
RCN 016	16	41.5	53.5	5	Ø 5.5	20	3
RCN 025	25	48.5	60	6	Ø 5.5	20	4

RCN

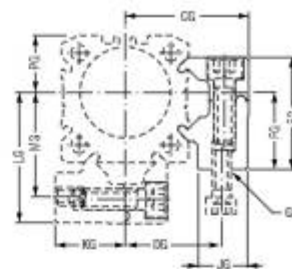
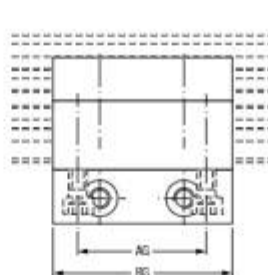
INTERMEDIATE SUPPORT
BRACKET
Ø 32-63 mm



Part No.	Ø	A	C	J	K	L	M	N	O	Q
RCN 032	32	5	20	82	91	30	4.5	45	6	30
RCN 040	40	5	20	90	99	25	4.5	45	8.5	30
RCN 050	50	5	35	123	148	35	6.5	45	1	30
RCN 063	63	5	35	147	172	35	6.5	45	3.5	30

RCNG

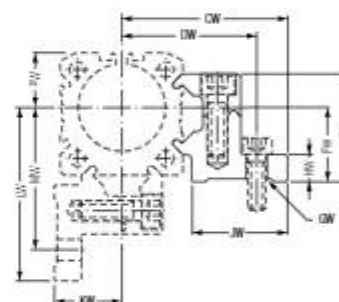
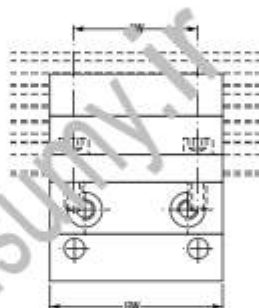
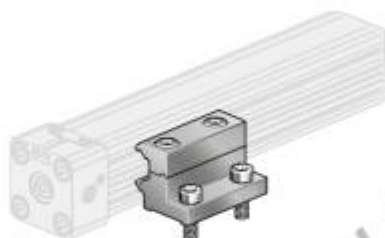
INTERMEDIATE SUPPORT BRACKET



Part No.	Ø	AG	BG	CG	DG	EG	FG	GG	JG	KG	LG	MG	PG
RCNG 016	16	18.0	30.0	27.5	18.4	21.0	15.0	M4	11.5	13.9	29.0	19.7	10.8
RCNG 025	25	36.0	50.0	34.5	27.0	31.3	22.0	M5	14.0	20.0	36.5	29.0	16.0
RCNG 032	32	36.0	50.0	41.8	34.2	39.0	30.0	M6	14.0	27.6	47.0	39.5	21.5

RCNN

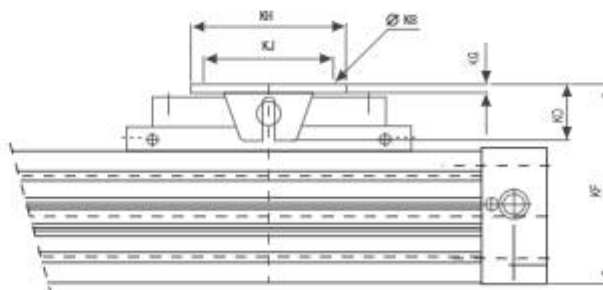
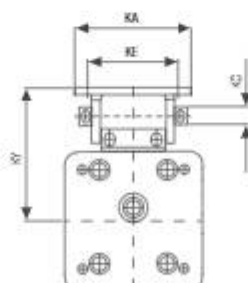
INTERMEDIATE SUPPORT BRACKET



Part No.	Ø	AW	BW	CW	DW	EW	FW	GW	HW	JW	KW	LW	MW	PW
RCNN 016	16	18.0	30.0	37.0	32.5	21.0	15.0	Ø4.5	6.0	22.4	13.9	38.0	32.9	10.8
RCNN 025	25	36.0	50.0	47.5	40.0	31.3	22.0	Ø5.5	10.0	26.0	20.0	49.5	42.0	16.0
RCNN 032	32	36.0	50.0	56.0	47.5	39.0	30.0	Ø6.5	10.0	28.5	27.6	61.0	52.5	21.5

RCOL

ARTICULATED CARRIAGE



Part No.	Ø	KA	KB	KD	KE	KF	KG	KH	KJ	KY
RCOL 016	16	26	M4	10	10	46.5-47.5	3.0	28	20	33
RCOL 025	25	38	M5	19	16	71.5-73.5	3.5	40	30	51.5
RCOL 032	32	62	M6	28	25	94.5-96.5	6.0	60	46	66.5
RCOL 040	40	62	M6	28	25	108-110	6.0	60	46	73.5
RCOL 050	50	90	9	43.7	70	135-150	6.4	120	100	95-110
RCOL 063	63	90	9	43.7	70	155-170	6.4	120	100	102-117

SERIES XR - ROTARY ACTUATORS - ISO 15552



TECHNICAL CHARACTERISTICS



Male output shaft



Female output shaft



Reference Standard

- 1907/2006
REACH ✓
- 2011/65/CE
RoHS ✓
- PED
2014/68/UE
- SILICON
FREE
- ATEX
2014/34/UE



Pressures

1 bar (0.1 MPa) / 14.5 psi
10 bar (0.7 MPa) / 145 psi



Temperature

0 °C / 32 °F (-20 °C / -4 °F with dry air)
+ 80 °C / 176 °F



Media

Filtered and lubricated or non-lubricated compressed air.



Functions

Double acting - cushioned - magnetic with male output shaft.
Double acting - cushioned - magnetic with female output shaft.



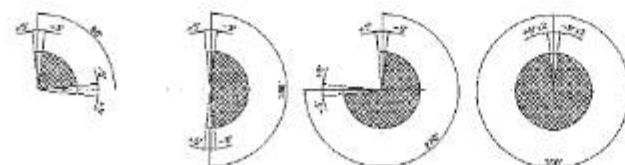
Bores

from 32 to 100 mm

Series	Ø (mm)	Rotation
X R M	0 3 2	0 9 0
XRM Rotary Actuator with Male Output Shaft and Angle Adjustment +/- 5°	032 040 050	90° 180° 270°
XRF Rotary Actuator with Female Output Shaft and Angle Adjustment +/- 5°	063 080 100	360°



Adjustable angle



Ø mm	Standard Rotation			
32 - 40 - 50 - 63 - 80 - 100	90°	180°	270°	360°

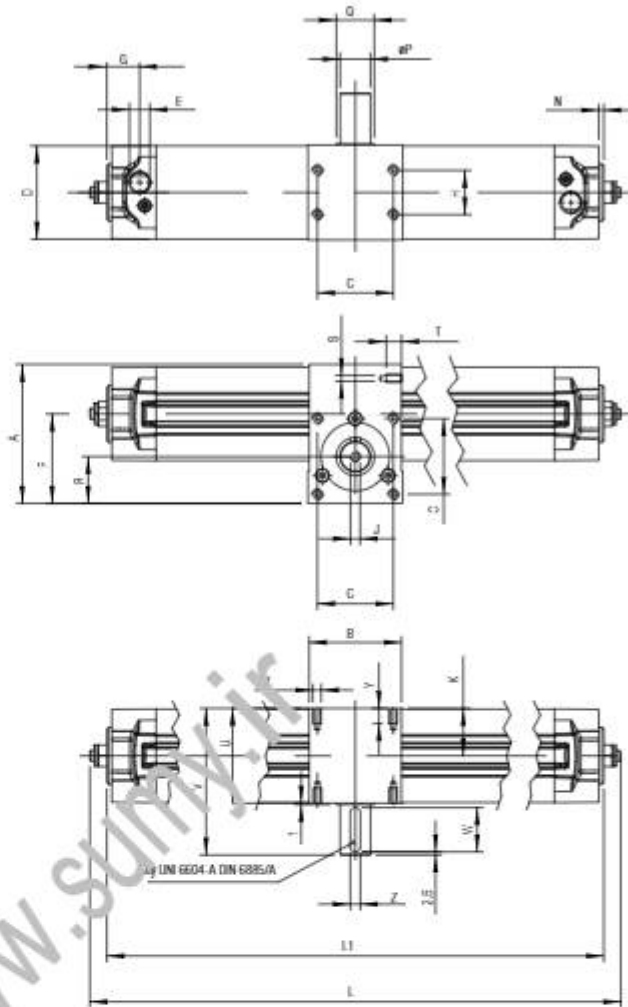


Torque at 1 bar

Ø mm	Nm
32	1.2
40	2.25
50	3.9
63	7.3
80	15.7
100	26.35

XRM

ROTARY ACTUATOR WITH MALE OUTPUT SHAFT AND ANGLE ADJUSTMENT $\pm 5^\circ$



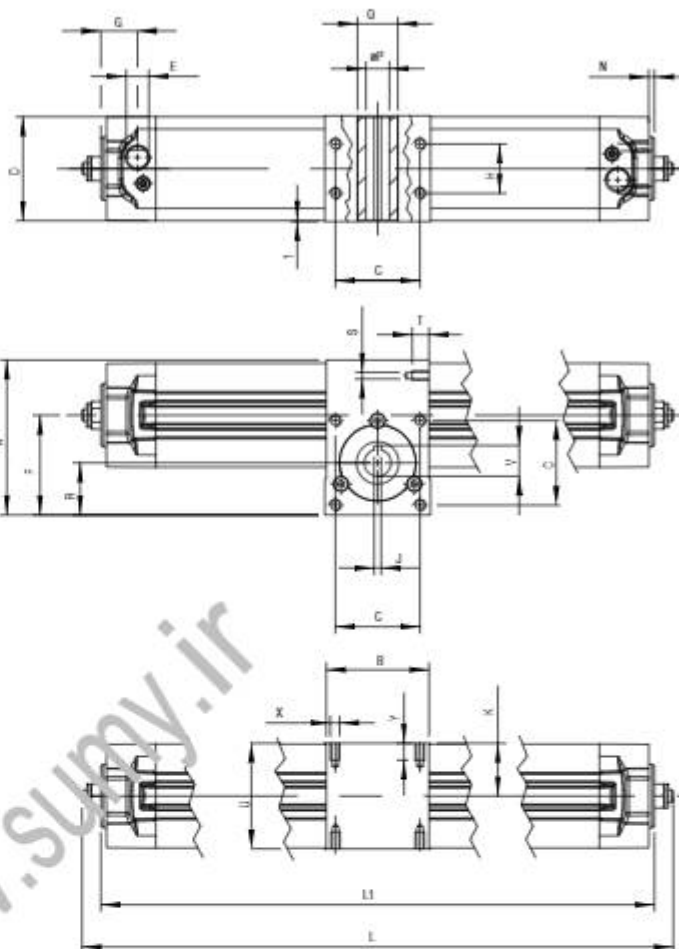
Ø mm	Rotation							
	90°		180°		270°		360°	
	L	L1	L	L1	L	L1	L	L1
32	232	213	279	260	326	307	373	354
40	274	254	330	310	387	367	464	424
50	301	276	364	339	427	402	489	464
63	343	320	418	395	493	470	567	544
80	416	386	515	485	614	584	713	683
100	449	418	556	525	662	631	769	738

Dimensions L and L1 for rotations.

Ø	A	B	C	D	E	F	G	H	J	K	N	P	Q	R	S	T	U	V	W	X	Y	Z
32	71.5	50	33	46	1/8 G	46.5	22	18	M5	25	4	14	25	25	M5	9	50	81	25	M6	10	5
40	82	60	40	54	1/4G	54.5	21.5	22	M5	30	4	14	25	30	M5	10	60	91	25	M6	10	5
50	94	70	50	64	1/4G	60.5	24.5	25	M6	32.5	4	19	30	32.5	M6	8	65	106	35	M8	13	6
63	110	75	60	74	3/8G	70.8	26	35	M8	37.5	4	24	30	37	M8	10	75	116	35	M8	13	8
80	142	99	80	94	3/8 G	93.5	26	50	M8	49.5	4	28	45	50	M9	12	99	150	45	M10	16	8
100	156.5	115	80	111	1/2 G	99	30	60	M10	57.5	4	38	50	54	M9	17	115	166	45	M10	16	10

XRF

ROTARY ACTUATOR WITH FEMALE OUTPUT SHAFT AND ANGLE ADJUSTMENT $\pm 5^\circ$



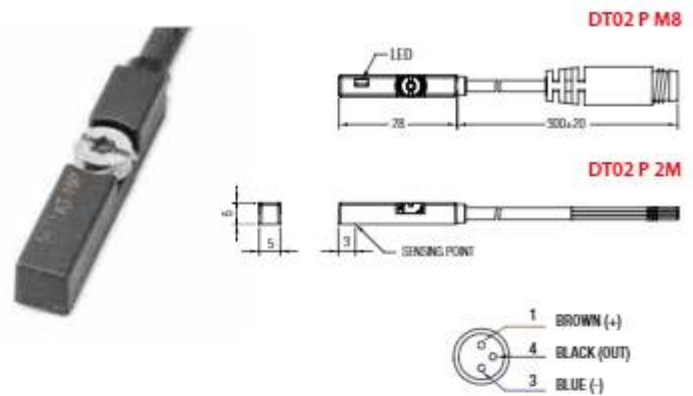
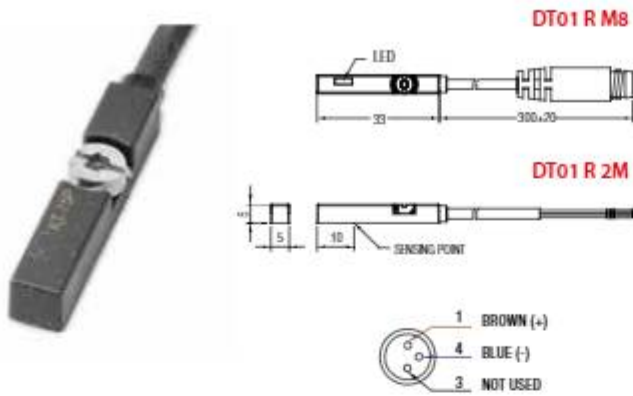
WWW.SUPPLY.IR

Ø mm	Rotation							
	90°		180°		270°		360°	
	L	L1	L	L1	L	L1	L	L1
32	232	213	279	260	326	307	373	354
40	274	254	330	310	387	367	464	424
50	301	276	364	339	427	402	489	464
63	343	320	418	395	493	470	567	544
80	416	386	515	485	614	584	713	683
100	449	418	556	525	662	631	769	738

Dimensions L and L1 for rotations.

Ø	A	B	C	D	E	F	G	H	J	K	N	ØP	Q	R	S	T	U	V	X	Y
32	71.5	50	33	46	1/8 G	46.5	22	18	5	25	4	14	25	25	M5	9	50	16.3	M6	10
40	82	60	40	54	1/4 G	54.5	21.5	22	5	30	4	14	25	30	M5	10	60	16.3	M6	10
50	94	70	50	64	1/4 G	60.5	24.5	25	6	32.5	4	19	30	32.5	M6	8	65	21.8	M8	13
63	110	75	60	74	3/8 G	70.8	26	35	6	37.5	4	19	30	37	M8	10	75	21.8	M8	13
80	142	99	80	94	3/8 G	93.5	26	50	8	49.5	4	24	45	50	M9	12	99	27.3	M10	16
100	156.5	115	80	111	1/2 G	99	30	60	8	57.5	4	28	50	54	M9	17	115	31.3	M10	16

SERIES DT - MAGNETIC SWITCHES

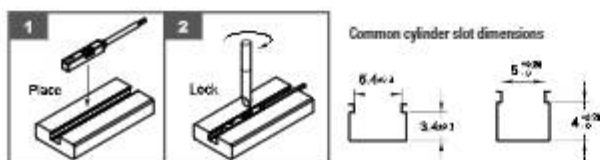


	Part No. DT01 R 2M	Part No. DT01 R M8
Connection	∅ 2.8 - 2 WIRE PU - 2MT	∅ 2.8 - 2 WIRE PU - M8 CONNECTOR
Switching logic	SPST, Normally open	
Sensor type	Reed Switch	
Voltage Range	5÷240V DC/AC	
Switching current	100 mA max	
Contact rating	10W max	
Max voltage drop	0.3V	
Output status indicator	RED LED	
Operating frequency	200 Hz	
Working temperature	-10 / + 70 °C 14 / 158 °F	
Shock	30 G	
Vibration	9 G	
Protection degree	IEC 60529 IP67	
Protection Circuit	NO	

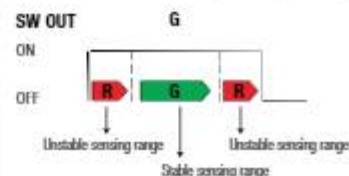
	Part No. DT02 P 2M	Part No. DT02 P M8
Connection	∅ 2.8 - 3 WIRE PU - 2MT	∅ 2.8 - 3 WIRE PU - M8 CONNECTOR
Switching logic	Solid State Output, Normally open	
Sensor type	PNP Current Sourcing	
Voltage range	10÷28V DC	
Switching current	80 mA max	
Contact rating	2W max	
Max voltage drop	10mA @ 24 V DC max	
Max voltage drop	1.5V max	
Leakage current	0.05mA max	
Output status indicator	RED/GREEN LED	
Operating frequency	1000 Hz	
Magnetic requirement	50 Gauss	
Working temperature	-10 / + 60 °C 14 / 140 °F	
Shock	50 G	
Vibration	9 G	
Protection degree	IEC 60529 IP67	



Quick Installation



Dual color LED allows more precise positioning.



SERIES DTEX - ATEX SWITCHES



CE ATEX APPROVAL
(Baseefa14ATEX0118)

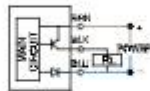


II 3GDEx ic IIB T4 Gc (-10°C ≤ Ta ≤ +70°C)
Ex ic IIB T135 °C Dc (-10°C ≤ Ta ≤ +70°C)



DTEX03 P 2M

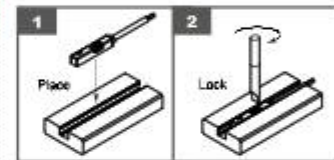
Part No.
DTEX03 P 2M



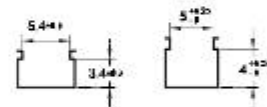
Connection	∅ 2.8 - 3WIRE PU - 2 MT
Switching logic	Solid State Output. Normally open
Sensor type	PNP Current Source
Voltage Range	10÷28 V DC
Switching current	200 mA max
Contact rating	5.5 W max
Max voltage drop	10 mA @ 24 V DC max
Max voltage drop	1.5 V @ 50mA max
Leakage current	0.05 mA max
Output status indicator	RED YELLOW
Operating frequency	1000 Hz
Magnetic requirement	50 Gauss
Working temperature	-10 / + 70 °C 14 / 158 °F
Shock	50 G
Vibration	9 G
Protection degree	IEC 60529 IP67



Quick Installation

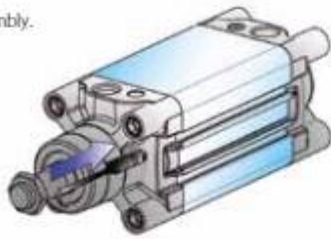


Common cylinder slot dimensions

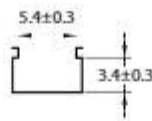


SERIES DSL - MAGNETIC SWITCHES

DSL sensor lengthwise assembly.



Common cylinder slot dimensions



	Part No. DSL1 C 225	Part No. DSL1 M8	Part No. DSL4 N 225	Part No. DSL4 M8
Image				
Circuit diagram				
Connection	2 WIRE PVC - 2.5 MT	2 WIRE PVC - 0.3 MT - M8 CONNECTOR	3 WIRE PVC - 2.5 MT	3 WIRE PVC - 0.3 MT - M8 CONNECTOR
Switching logic	N.O.			
Sensor type	REED	REED	PNP - HALL	PNP - HALL
Voltage Range	3-130 V AC/DC	3-130 V AC/DC	10-30 V DC	10-30 V DC
Max current at 25°C (77 °F)	50 mA	50 mA	200 mA	200 mA
Max power/Resistive load	10 W	10 W	6 W	6 W
Max voltage drop	3.2 V	3.2 V	0.8 V	0.8 V
Output status indicator	YELLOW LED			
Response time	0.5 ms max	0.5 ms max	0.2 ms max	0.2 ms max
Decay time	0.1 ms max			
Electric life (resistive load)	4x10 ⁷			
Working temperature	-20 / + 70 °C -4 / 158 °F			
Protection degree	IP 68			
Short circuit	NO			
Type of mounting to the cylinder	Longitudinal only			

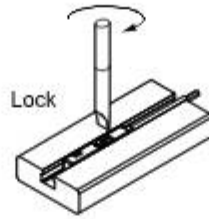
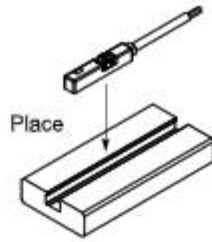
BRACKET FOR DSL TO USE WITH MINI CYLINDERS ISO 6432 AND A95 SERIES CYLINDERS

Part No.	Ø	F-Ø	A	B	Part No.	Ø	F-Ø	A	B
MFX 008	8	9.4 mm	14	8	AFX 032	32	33.5 mm	14	8
MFX 010	10	11.3 mm	14	8	AFX 040	40	41.5 mm	14	8
MFX 012	12	13.3 mm	14	8	AFX 050	50	52 mm	14	8
MFX 016	16	17.3 mm	14	8	AFX 063	63	65 mm	14	8
MFX 020	20	21.3 mm	14	8					
MFX 025	25	26.3 mm	14	8					

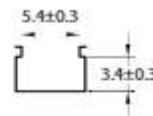


SERIES DSH - MAGNETIC SWITCHES

DSH sensors with axial or long inserting slot.



Common cylinder slot dimensions



Part No. DSH2 R 2F 20	Part No. DSH2 R 2F M8	Part No. DSH4 H 3F 20	Part No. DSH4 H 3F M8
---------------------------------	---------------------------------	---------------------------------	---------------------------------



Circuit diagram				
Connection	2 WIRE PVC - 2 MT	2 WIRE PVC - 0.3 MT - M8 CONNECTOR	3 WIRE PUR - 2 MT	3 WIRE PUR - 0.3 MT - M8 CONNECTOR
Switching logic	N.C.			
Sensor type	REED	REED	PNP - HALL	PNP - HALL
Voltage Range	5-120 V AC/DC	5-120 V AC/DC	10-30 V DC	10-30 V DC
Max current at 25°C (77 °F)	100 mA			
Max power/Resistive load	10 W	10 W	-	-
Max voltage drop	< 5 V	< 5 V	< 2.5 V	< 2.5 V
Output status indicator	YELLOW LED			
Response time	0.5 ms max	0.5 ms max	-	-
Decay time	0.1 ms max	0.1 ms max	< 30 ms	< 30 ms
Electric life (resistive load)	10 ⁷	10 ⁷	INFINITE	INFINITE
Working temperature	-20 / + 70 °C -4 / 158 °F		-25 / + 85 °C -13 / 185 °F	
Protection degree	IP 67			
Short circuit	NO			
Type of mounting to the cylinder	Axial and longitudinal			

BRACKET FOR DSH TO USE WITH MINI CYLINDERS ISO 6432

Part No.	Ø	F - Ø
MFH 012	12	13.3 mm
MFH 016	16	17.3 mm
MFH 020	20	21.3 mm
MFH 025	25	26.3 mm



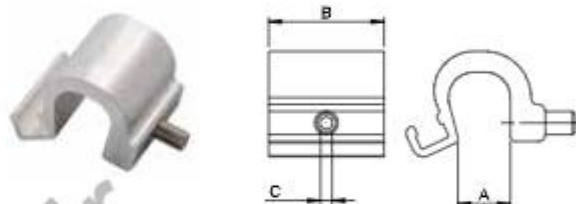
BRACKET FOR CYLINDERS WITH TIE RODS



EXF

BRACKET FOR DSL - DSH - DT SENSORS

Part No.	Ø	A	B	C
EXF032	32 - 40	7,5	25	2
EXF050	50 - 63	11,3	25	2,5
EXF080	80 - 100 - 125	15,3	25	2,5
EXF160	160 - 200 - 250	20	25	2,5



EXTENSION MAGNETIC FOR SWITCHES

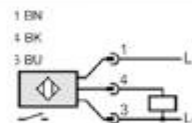
EXF

BRACKET FOR DSL - DSH - DT SENSORS

Part No.	Lunghezza	Length	Länge	Longueur	Longitud	Comprimento
PX 2000 PUR			2 MT			
PX 5000 PUR			5 MT			



Circuit diagram



SENSOR DC ADAPTER

DC

SENSOR DC ADAPTER



DC 00 001



DC 10 001

Directive 2014/34/UE (ATEX)

The Pneumatic Cylinders: Cartridge, Mini Cylinders ISO 6432, Stainless steel Mini Cylinders, A95, Compact (Q - W), Short Stroke (B), Series X ISO 15552, Series E ISO 6431, Twin-piston rod Series NHA ISO 15552 and Series P ISO 15552 show the following features:


II 2 GD c T6 -20°C<Tamb<80°C

II 2 GD: Device for surface installations (II = do not use device in mining) with presence of gas, vapors of powders of category 2 (equipment with high safety factor since it excludes danger of explosion, even in case of damage; it can be used in areas with possible explosive environments).

c: Devices are constructively safe

T6 - 10°C<Tamb<60°C: Surface temperature class and additional marking for T usage environment.





TECHNICKÁ INŠPEKCIA, a.s.

CEOC
INTERNATIONAL

SLOVENSKÁ REPUBLIKA

ACKNOWLEDGEMENT OF RECEIPT
no. 564/5/2015


Technická inšpekcia, a. s.,
Trnavská cesta 56, 821 01 Bratislava
Notified body: 1354,

confirms, that Technical File Documentation
prepared by
Aignep s.p.A.
Via Don G. Bazzoli 34, 25070 Bione (BS), Italy

has been received and stored according to the Directive 94/9/EC (ATEX) on equipment and protective systems intended for use in potentially explosive atmospheres

Copy of Ex Equipment:

Cylinders
Types: Cartridge Cylinders, Mini Cylinders ISO 6432, Mini Cylinders inox, A95 Cylinders, Compact Cylinders, Short Stroke Cylinders, Cylinders X ISO 15552, Cylinders E ISO 6431, Twin Piston Rod Cylinders NHA ISO 15552, Cylinders P ISO 15552


Classification:  **II 2 GD c T6 - 20°C<Tamb<80°C**

Technical File Documentation

Doc. no.	Issue
Technical Book According to 94/9/EC	10/3/15 Rev.0

Technical documentation will be stored for 10 years until March 25th, 2025.

Bratislava, March 25th, 2015



On behalf of Technická inšpekcia, a.s.

[Signature]
Ing. Dušan Konický
General Director

271018
PDOKA1-41

See Instructions and Certificate at:

WWW.AIGNEP.COM

Mini FRL Series

 N010 Mini Pag. 15.4	 N015 Mini Pag. 15.6	 N020 Mini Pag. 15.8	 N070 Mini Pag. 15.10	 N080 Mini Pag. 15.12	 N030 Mini Pag. 15.14	 N040 Mini Pag. 15.16	 N100 Mini Pag. 15.18	 N400 Mini Pag. 15.20
 Accessories Pag. 15.22								

FRL Evo Series

 N010 Pag. 15.29	 N015 Pag. 15.31	 N020 Pag. 15.33	 N025 Pag. 15.35	 N030 Pag. 20.37	 N040 Pag. 15.39	 N050 Pag. 15.41	 N051 Pag. 15.43	 N052 Pag. 15.45
 N060 Pag. 15.47	 N090 Pag. 15.49	 N100 Pag. 15.51	 N400 Pag. 15.53	 Accessories Pag. 15.55				

www.supply.ir

AIR TREATMENT UNIT



FRL Series



Mini technical instruction

The FRL components must be assembled in the following order: Filter, Regulator, Lubricator.
While connecting the components, be sure that the air flows towards the direction of the arrows located on the upper surface of the components



Assembling and Setting pressure

- 1 To set up each component, follow these steps:
 - Line the plates up with the bodies.
 - Assemble parts together, making sure that the o-ring seals are in their proper seats.
 - Tighten the screws on the plates.
- 2 To regulate the pressure, follow these instructions:
 - Turn the knob to the desired pressure.
 - Rotate the knob to increase or decrease the pressure.
 - Press the knob to the block position.

The pressure gauge has to be assembled manually with the addition of liquid sealant.

The mini quick exhaust regulator allows the circuit downstream to exhaust rapidly when upstream pressure is interrupted.



Mini technical instruction

- 1 The manual/semiautomatic condensation exhaust is normally in the open position; i.e. it automatically exhausts the condensation when there is no pressure inside the bowl. Pressing the knob will exhaust the condensation even if there is pressure. Turning the knob counter-clockwise will close off the exhaust.
 - 2 To add oil to the lubricator, unscrew the plug located on the upper surface or disassemble the bowl. Make sure that there is no pressure in the system before adding oil or disassembling the bowl.
 - 3 To remove the bowl, use CH3 caliper face spanners.
- The transparent bowl shows the condensation level in the filter and the oil level in the lubricator.



N010 MINI

FILTER



TECHNICAL CHARACTERISTICS



Reference standard

1907/2006
REACH ✓

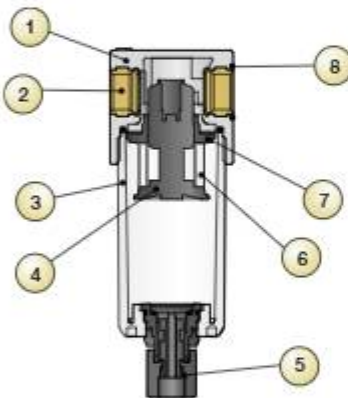
2011/65/CE
RoHS ✓

PED
2014/68/UE



Component Parts and Materials

- 1 Technopolymeric Body
- 2 Brass Threaded insert
- 3 Technopolymeric Bowl
- 4 Technopolymeric Filter ring
- 5 Technopolymeric Condensate exhaust
- 6 PE Filtering cartridge
- 7 Technopolymeric Slinger
- 8 NBR O-ring



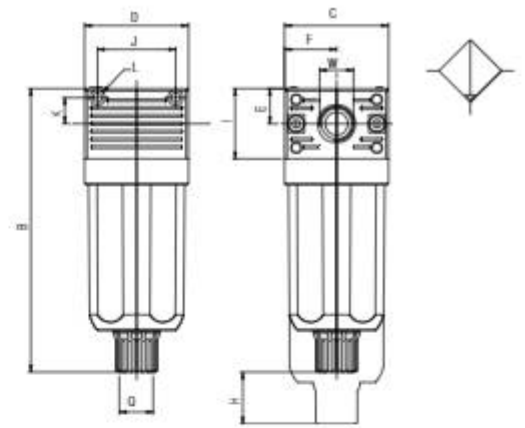
	FLUID	Compressed Air
	THREAD	1/8" NPTF 1/4" NPTF
	FILTRATION GRADE	5 µm 20 µm STANDARD 50 µm
	6 L FLOW RATE with Δp 1 bar	800 Nl/min
	MAX PRESSURE	15 bar (217 psi)
	TEMPERATURE	-10 °C (14 F) + 50 °C (122 F)
	ASSEMBLY POSITION	Vertical
	BOWL CAPACITY	17.5 cm ³
	CONDENSATE EXHAUST	Manual Semi Automatic



Part Numbering System



N010



Dimensions

B	C	D	E	F	H	I	J	K	L	W	Q
109	40	40	13.5	20	11	27	30	10	Ø X M3	1/8 - 1/4	1/8

Part Number	Size	Thread (NPTF)	Filtration	Flow Rate (NPTF)
N010 002 201 000	FIL 0	1/8	20 µm	800 NI/min
N010 003 201 000	FIL 0	1/4	20 µm	800 NI/min

www.sumy.ir

N015 MINI

COALESCER FILTER



TECHNICAL CHARACTERISTICS



Reference standard

1907/2006
REACH ✓

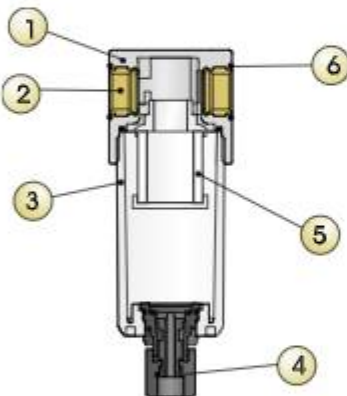
2011/65/CE
RoHS ✓

PED
2014/68/UE



Component Parts and Materials

- 1 Technopolymeric Body
- 2 Brass Threaded insert
- 3 Technopolymeric Bowl
- 4 Technopolymeric Condensate exhaust
- 5 Coalescer cartridge
- 6 NBR O-ring



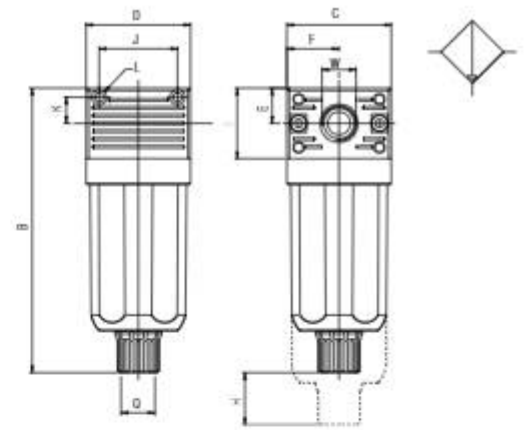
	FLUID	5 µm Filtered Compressed Air
	THREAD	1/8" NPTF 1/4" NPTF
	FILTRATION GRADE	0.01 µm
	6 L FLOW RATE with Ap 1 bar	450 NI/min
	MAX PRESSURE	15 bar (217 psi)
	TEMPERATURE	-10 °C (14 F) + 50 °C (122 F)
	ASSEMBLY POSITION	Vertical
	BOWL CAPACITY	17.5 cm ³
	CONDENSATE EXHAUST	Manual Semi Automatic



Part Numbering System



N015 Mini



Dimensions

B	C	D	E	F	H	I	J	K	L	W	Q
109	40	40	13.5	20	11	27	30	10	Ø X M3	1/8 - 1/4	1/8

NB: With Coalescer filter T015 we recommend to install a 5 µm Filter upstream.

Part Number	Size	Thread (NPTF)	Filtration	Flow Rate (NPTF)
N015 002 401 000	FC 0	1/8	0.01 µm	450 NI/min
N015 003 401 000	FC 0	1/4	0.01 µm	450 NI/min

www.sumy.ir

N020 MINI

REGULATOR



TECHNICAL CHARACTERISTICS



Reference standard

1907/2006
REACH ✓

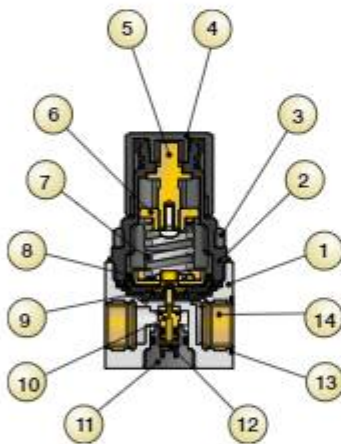
2011/65/CE
RoHS ✓

PED
2014/68/UE



Component Parts and Materials

- 1 Technopolymeric Boby
- 2 Technopolymeric Bell
- 3 Technopolymeric Fixing nut
- 4 Technopolymeric Knob
- 5 Brass Register screw
- 6 Brass Female screw
- 7 Steel Register spring
- 8 Membrane Rolling
- 9 NBR Relieving diaphragm
- 10 Shutter with NBR vulcanized seal
- 11 Technopolymeric Plug
- 12 Stainless steel Push-shutter spring
- 13 NBR O-ring
- 14 Brass Threaded insert



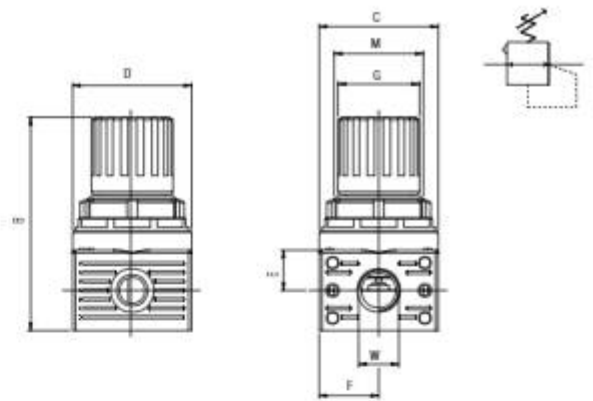
	FLUID	Compressed Air
	THREAD	1/8" NPTF 1/4" NPTF
	FILTRATION GRADE	0-29 psi 0-58 psi 0-116 psi (standard) 0-174 psi
	6 L FLOW RATE with Δp 1 bar	600 NL/min
	MAX PRESSURE	15 bar (217 psi)
	TEMPERATURE	-10 °C (14 F) + 50 °C (122 F)
	ASSEMBLY POSITION	Vertical
	GAUGE THREAD	G 1/8



Part Numbering System



N020 Mini



Dimensions

B	C	D	E	F	G	I	M	W
74	40	40	13.5	20	27.5	27	M30X1.5	1/8 - 1/4

Part Number	Size	Thread (NPTF)	Regulation	Flow Rate (NPTF)
N020 002 030 000	REG 0	1/8	0-116 psl	600 NI/min
N020 003 030 000	REG 0	1/4	0-116 psl	600 NI/min

www.sumy.ir

N070 MINI

QUICK EXHAUST REGULATOR



TECHNICAL CHARACTERISTICS



Reference standard

1907/2006
REACH ✓

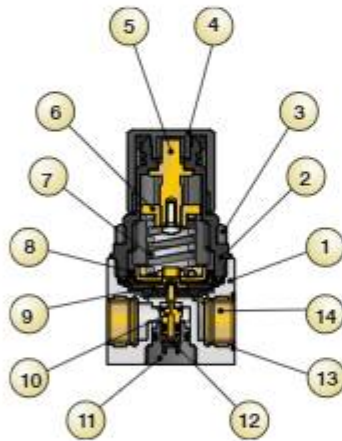
2011/65/CE
RoHS ✓

PED
2014/68/UE



Component Parts and Materials

- 1 Technopolymeric Boby
- 2 Technopolymeric Bell
- 3 Technopolymeric Fixing nut
- 4 Technopolymeric Knob
- 5 Brass Register screw
- 6 Brass Female screw
- 7 Steel Register spring
- 8 Membrane Rolling
- 9 NBR Relieving diaphragm
- 10 Shutter with NBR vulcanized seal
- 11 Technopolymeric Plug
- 12 Stainless steel Push-shutter spring
- 13 NBR O-Ring
- 14 Brass Threaded insert



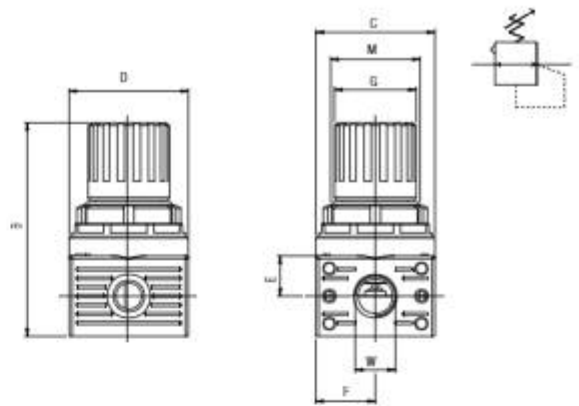
	FLUID	Compressed Air
	THREAD	1/8" NPTF 1/4" NPTF
	FILTRATION GRADE	0-29 psi 0-58 psi 0-116 psi (standard) 0-174 psi
	6 L FLOW RATE with Δp 1 bar	600 NI/min
	MAX PRESSURE	15 bar (217 psi)
	TEMPERATURE	-10 °C (14 F) + 50 °C (122 F)
	ASSEMBLY POSITION	Vertical
	GAUGE THREAD	G 1/8



Part Numbering System



N070 Mini



Dimensions

B	C	D	E	F	G	I	M	W
74	40	40	13.5	20	27.5	27	M30X1.5	1/8 - 1/4

Part Number	Size	Thread (NPTF)	Regulation	Flow Rate (NPTF)
N070 002 030 000	REG. 0	1/8	0-116 psi	600 NI/min
N070 003 030 000	REG. 0	1/4	0-116 psi	600 NI/min

www.sumy.ir

N080 MINI

WATER REGULATOR



TECHNICAL CHARACTERISTICS



Reference standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

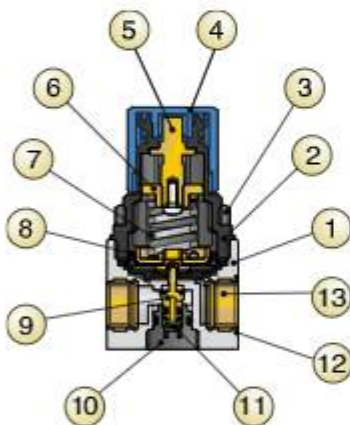


Food grade approved version also available.



Component Parts and Materials

- 1 Technopolymeric Boby
- 2 Technopolymeric Bell
- 3 Technopolymeric Fixing nut
- 4 Technopolymeric Knob
- 5 Brass Register screw
- 6 Brass Female screw
- 7 Steel Register spring
- 8 Membrane Rolling
- 9 Shutter with NBR vulcanized seal
- 10 Technopolymeric Plug
- 11 Stainless steel Push-shutter spring
- 12 NBR O-Ring
- 13 Brass Threaded insert



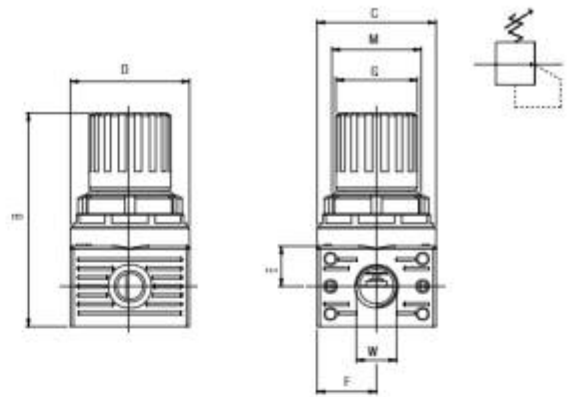
	FLUID	Water
	THREAD	1/8" NPTF 1/4" NPTF
	FILTRATION GRADE	0-29 psi 0-58 psi 0-116 psi (standard) 0-174 psi
	MAX. PRESSURE	15 bar (217 psi)
	TEMPERATURE	+ 5 °C (41 F) + 50 °C (122 F)
	ASSEMBLY POSITION	Vertical
	GAUGE THREAD	G 1/8



Part Numbering System



N080 Mini



Dimensions

B	C	D	E	F	G	I	M	W
74	40	40	13.5	20	27.5	27	M30X1.5	1/8 - 1/4

Part Number	Size	Thread (NPTF)	Regulation
N080 002 030 000	WATER REG. 0	1/8	0-116 psi
N080 003 030 000	WATER REG. 0	1/4	0-116 psi

www.sumy.ir

N030 MINI

FILTER REGULATOR



TECHNICAL CHARACTERISTICS



Reference standard

1907/2006
REACH ✓

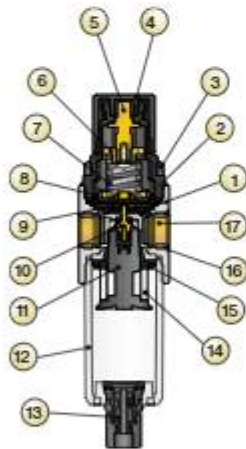
2011/65/CE
RoHS ✓

PED
2014/68/UE



Component Parts and Materials

- 1 Technopolymeric Body
- 2 Technopolymeric Bell
- 3 Technopolymeric Fixing nut
- 4 Technopolymeric Knob
- 5 Brass Register screw
- 6 Brass Female screw
- 7 Register spring made in steel
- 8 Rolling membrane
- 9 NBR Relieving diaphragm
- 10 Shutter with NBR vulcanized seal
- 11 Technopolymeric Filter ring
- 12 Technopolymeric Bowl
- 13 Technopolymeric Condensate exhaust
- 14 PE Filtering cartridge
- 15 Technopolymeric Slinger
- 16 NBR O-Ring
- 17 Brass Threaded insert



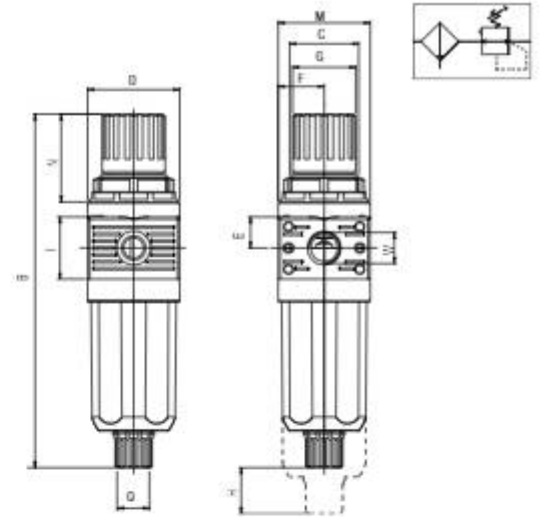
	FLUID	Compressed Air
	THREAD	1/8" NPTF 1/4" NPTF
	REGULATION RANGE	0-29 psi 0-58 psi 0-116 psi (standard) 0-174 psi
	FILTRATION GRADE	5 µm 20 µm STANDARD 50 µm
	6 bar FLOW RATE with Δp 1 bar	600 NI/min
	MAX PRESSURE	15 bar (217 psi)
	TEMPERATURE	+ 5 °C (41 F) + 50 °C (122 F)
	ASSEMBLY POSITION	Vertical
	BOWL CAPACITY	17.5 cm ³
	CONDENSATION EXHAUST	Manual Semi Automatic
	GAUGE THREAD	G 1/8



Part Numbering System



N030 Mini



Dimensions

B	C	D	E	F	G	H	I	M	N	W
156	M30X1.5	40	13.5	20	27.5	11	27	40	40	1/8 - 1/4

Part Number	Size	Thread (NPTF)	Filtration	Regulation	Flow Rate (NPTF)
N030 002 231 000	FR 0	1/8	20µm	0-116 psi	600 NI/min
N030 003 231 000	FR 0	1/4	20µm	0-116 psi	600 NI/min

www.sumy.fr

N040 MINI

LUBRICATOR



TECHNICAL CHARACTERISTICS



Reference standard

1907/2006
REACH ✓

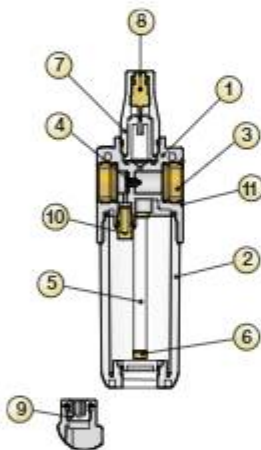
2011/65/CE
RoHS ✓

PED
2014/68/UE



Component Parts and Materials

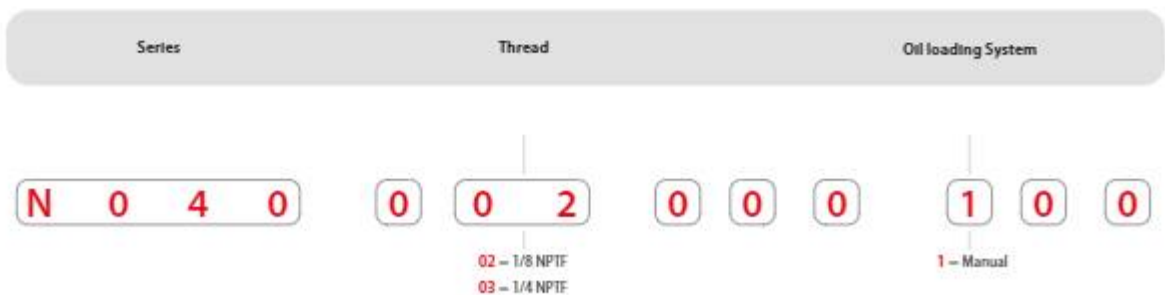
- 1 Technopolymeric Body
- 2 Technopolymeric Bowl
- 3 Brass Threaded insert
- 4 Membrane Venturi device
- 5 Oil aspiration tube made in PA11
- 6 Small filter
- 7 Transparent technopolymeric Visual dome
- 8 Brass Oil regulating capacity pin
- 9 Brass Oil loading plug
- 10 Brass Air diffuser
- 11 NBR O-Ring



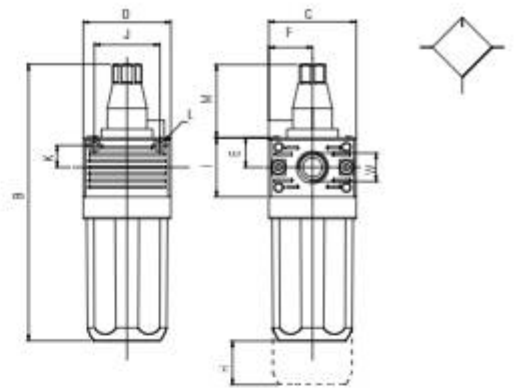
	FLUID	Compressed Air
	THREAD	1/8" NPTF 1/4" NPTF
	6 bar FLOW RATE with Ap 1 bar	700 NI/min
	MAX. PRESSURE	15 bar (217 psi)
	TEMPERATURE	-10 °C (14 F) + 50 °C (122 F)
	WALL CLAMPING SCREWS	M3
	ASSEMBLY POSITION	Vertical
	BOWL CAPACITY	28 cm ³
	RECOMMENDED OILS	ISO VG 22A CLASS ISO 3448 NORMA



Part Numbering System



N040 Mini



Dimensions

B	C	D	E	F	H	I	J	K	L	M	W
130	40	40	13.5	20	11	27	30	10	Ø X M3	33.5	1/8 - 1/4

Part Number	Size	Thread (NPTF)	Flow Rate (NPTF)
N040 002 000 100	LUB 0	1/8	700 NI/min
N040 003 000 100	LUB 0	1/4	700 NI/min

www.sumy.ir

N100 MINI

FILTER REGULATOR + LUBRICATOR



TECHNICAL CHARACTERISTICS



Reference standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

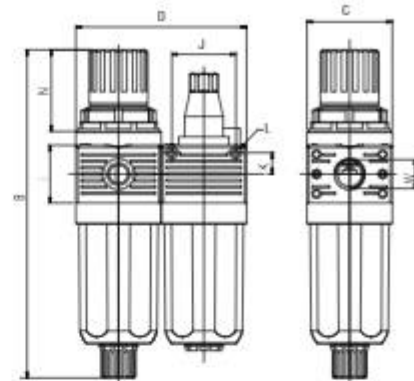
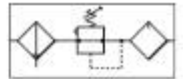
	FLUID	Compressed Air
	THREAD	1/8" NPTF 1/4" NPTF
	FILTRATION GRADE	5 µm 20 µm STANDARD 50 µm
	REGULATION RANGE	0-29 psi 0-58 psi 0-116 psi (standard) 0-174 psi
	6 bar FLOW RATE with Δp 1 bar	260 Nl/min
	MAX PRESSURE	15 bar (217 psi)
	TEMPERATURE	-10 °C (14 F) + 50 °C (122 F)
	WALL CLAMPING SCREWS	M3
	ASSEMBLY POSITION	Vertical
	BOWL CAPACITY	28 cm ³
	RECOMMENDED OILS	ISO VG 22A CLASS ISO 3448 NORMA



Part Numbering System



N100 Mini



Dimensions

B	C	D	I	J	K	L	N	W
156	40	80	27	30	10	Ø X M3	40	1/8 - 1/4

Part Number	Size	Thread (NPTF)	Filtration	Regulation	Flow Rate (NPTF)
N100 002 231 100	FR+L 0	1/8	20µm	0-116 psi	260 NI/min
N100 003 231 100	FR+L 0	1/4	20µm	0-116 psi	260 NI/min

www.sumy.fr

N400 MINI

FILTER + FILTER COALESSER



TECHNICAL CHARACTERISTICS



Reference standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

	FLUID	Compressed Air
	THREAD	1/8" NPTF 1/4" NPTF
	FILTRATION GRADE	5 µm + 0.01 µm
	6 L FLOW RATE with Δp 1 bar	370 NI/min
	MAX PRESSURE	15 bar (217 psi)
	TEMPERATURE	-10 °C (14 F) + 50 °C (122 F)
	WALL CLAMPING SCREWS	M3
	ASSEMBLY POSITION	Vertical



Part Numbering System





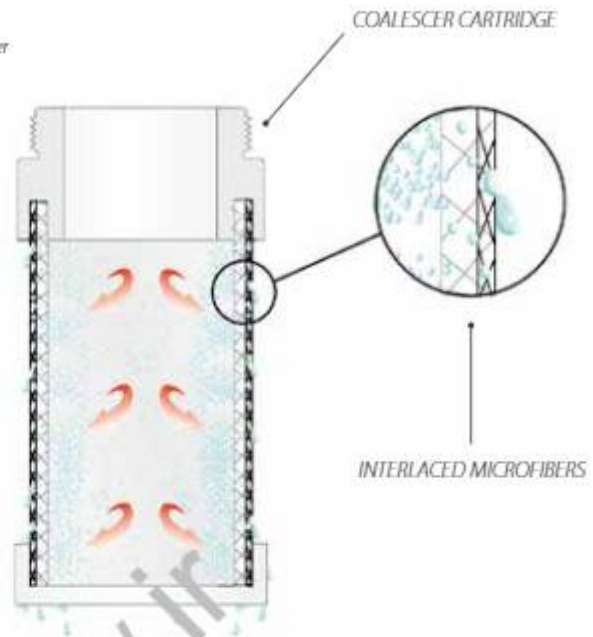
Information

Coalescer cartridge is made of a microfiber inner layer with an external stainless steel structure.

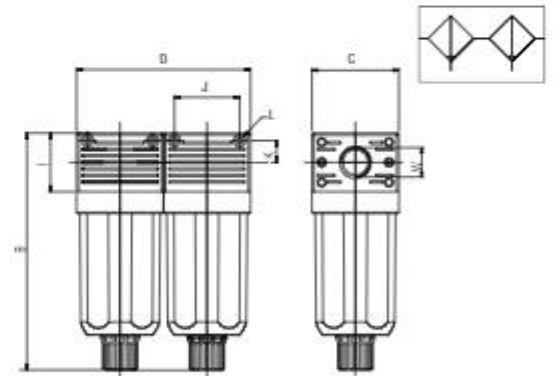
The coalescing cartridge uses inertial impact, interception and coalescence to collect excess liquid. This liquid will then drain into the bottom of the bowl.

The coalescing filter is used as oil separator which removes oil-vapours from the air output.

We recommend installing a 5 µm filter upstream to protect coalescing filter from choking the cartridge.



N400 Mini



Dimensions

B	C	D	I	J	K	L	W
109	40	80	27	30	10	Ø X M3	1/8 - 1/4

Part Number	Size	Thread (NPTF)	Filtration	Flow Rate (NPTF)
N400 002 401 000	FIL+FC 0	1/8	5µm + 0.01µm	370 NI/min
N400 003 401 000	FIL+FC 0	1/4	5µm + 0.01µm	370 NI/min

FRL ACCESSORIES

T500

CONNECTION PLATE



Part Number

T500 000 000 000

FRL 0

T520

BOWL FOR FILTER UNIT



Part Number

T520 000 001 000

FRL 0

T530

BOWL FOR LUBRICATOR UNIT



Part Number

T530 000 000 100

FRL 0

T545

COALESCER FILTER



Part Number

T545 000 000 000

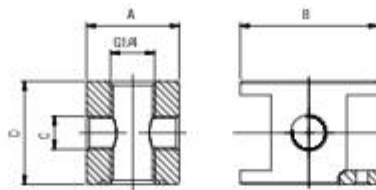
FRL 0

www.sumy.ir

DIS00

AIR DISTRIBUTOR

Part Number	A	B	C	D
DIS00 001 100 NE	FRL 0	27	40	1/8 30



FIL04

SINTERED FILTER

Part Number	FRL 0	
FIL04 003 805 SC		5 µm
FIL04 003 820 SC		20 µm
FIL04 003 850 SC		50 µm



www.sumy.ir

REG06

REGISTER SPRING

Part Number	FRL 0	
REG06 005 401 SC		0-29 psi
REG06 005 402 SC		0-58 psi
REG06 005 403 SC		0-116 psi (standard)
REG06 005 404 SC		0-174 psi



REG09

MEMBRANE

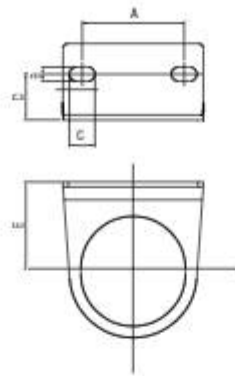
Part Number	FRL 0
REG09 001 700 SC	



REG16

CLAMP BRACKET

Part Number	A	B	C	D	F	
REG16 005 000 NE	FRL 0	21.5	5.5	12	15	31



SOL01

SOLENOID COIL

See Cap. Valves 13 - page 13.20



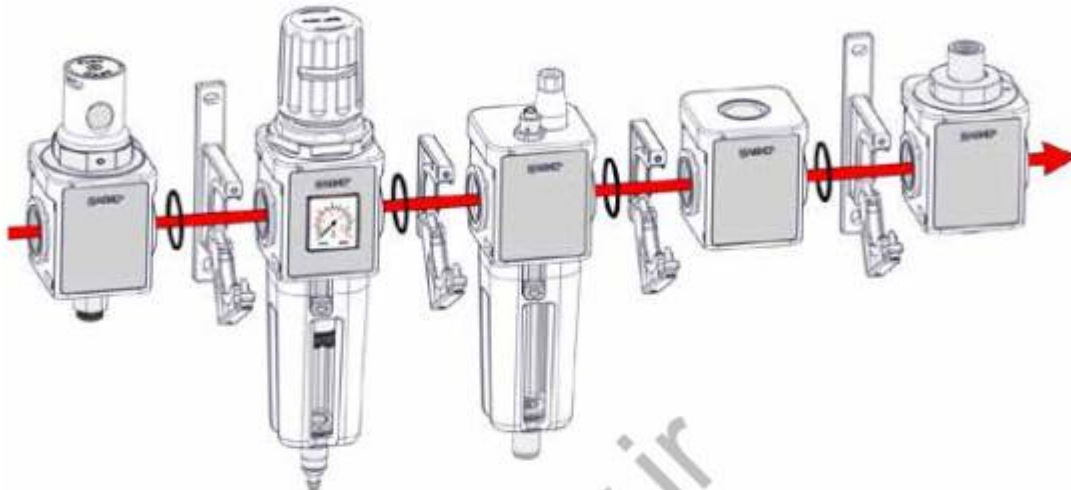
www.sumy.ir

TECHNICAL CHARACTERISTICS FRL 1-2



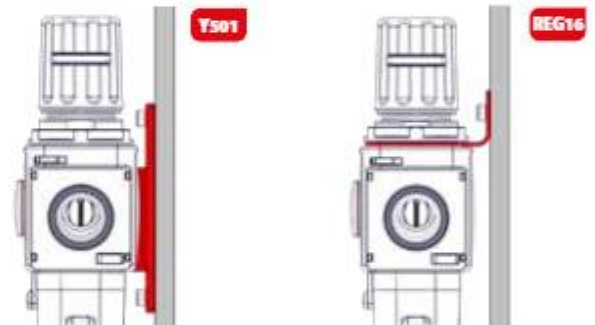
Basic Assembly

The "FRL Evo" line is modular and the connection between each unit is simplified thanks to the connection brackets. The assembly of the modules may change according to individual use. To operate, make sure the shut off valve is in the first position and the soft start valve is in the last. There is an arrow on every unit to indicate the correct direction of air flow.



Mounting Instructions

Two mounting brackets are available for the FRL Evo Series to give the end user 2 different mounting options.



Removing the Bowl

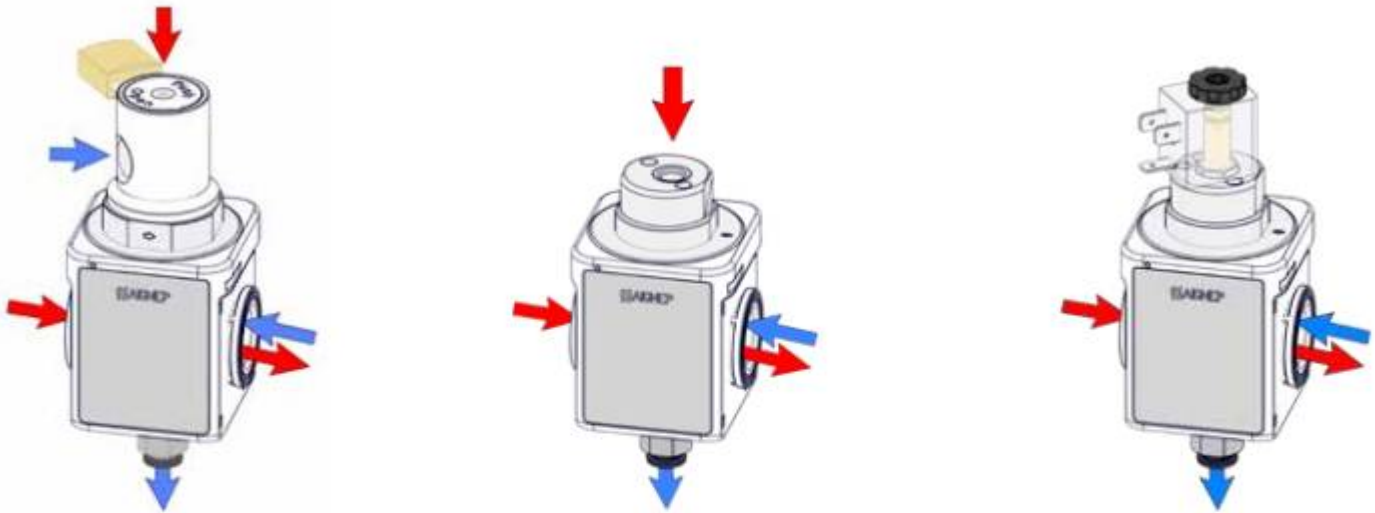
To release the bowl, press down the button with the arrow and rotate the bowl clockwise as shown in the drawing, then pull downward. The windows in the bowl allow you to view the level of condensation in the filter, or the amount of oil in the lubricator.





Shut Off Valves

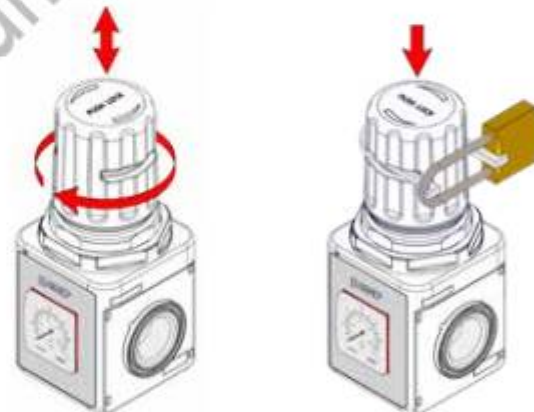
3 versios of the Shut Off Valves are available: Manual with lock and anti-tampering system, pneumatic and electro-pneumatic.



Regulators

Regulators are available with a built-in manometer or without. The adjustor knobs can lock into place and come with an anti-tampering system. Assembly kits for 1/8" manometer are available upon request.

www.sumy.ir



Regulators

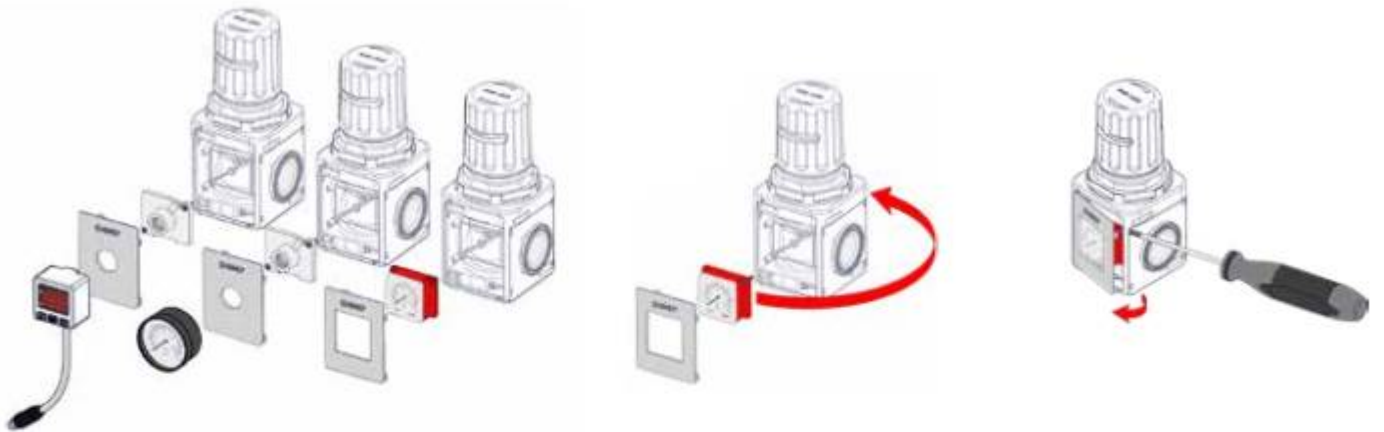
Regulators can be assebled together. Whether they have the built-in manometer or not, they all can be connected.





Regulators

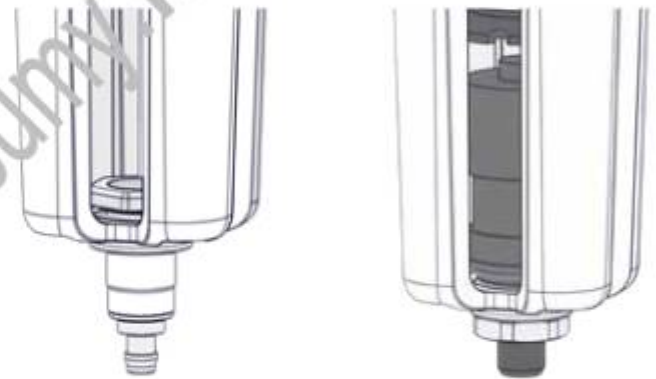
Several options of manometers and pressure switches are available. Manometers and pressure switches can be inverted if desired.



Condensation Drains

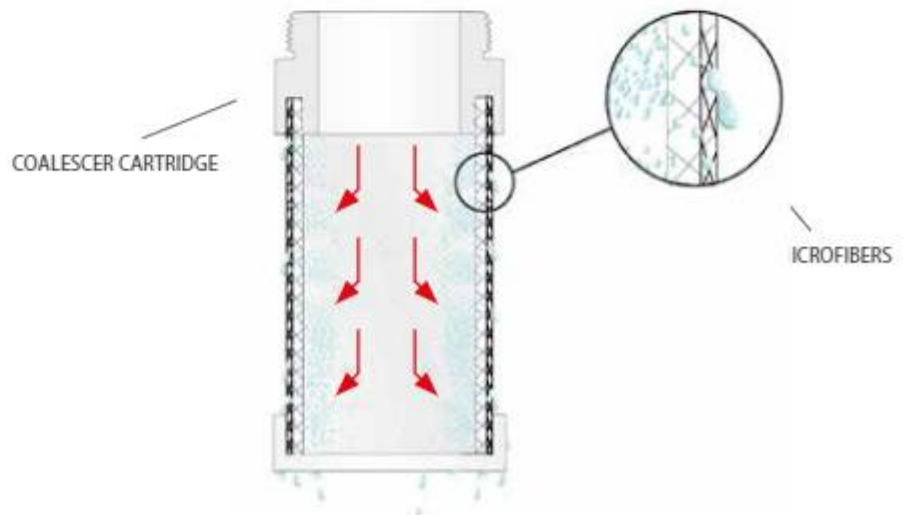
The condensation drain is available in 2 options, with vacuum or automatic with float.

www.summir



Coalescer Filter

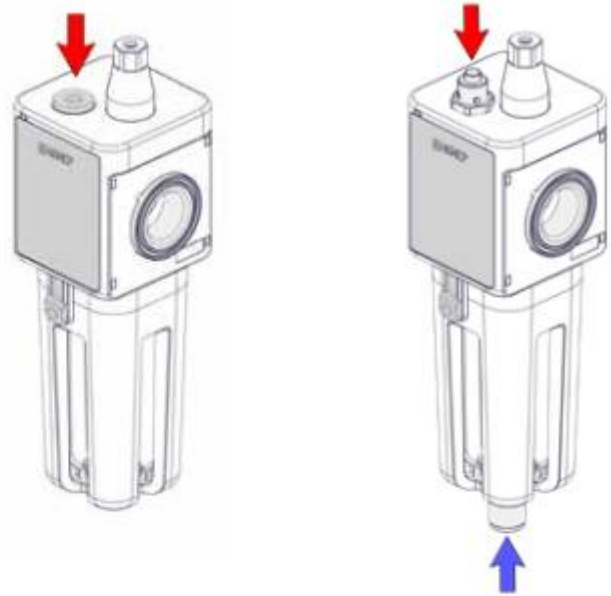
20 µm, 5 µm filters and 0.01 µm coalescer filter.





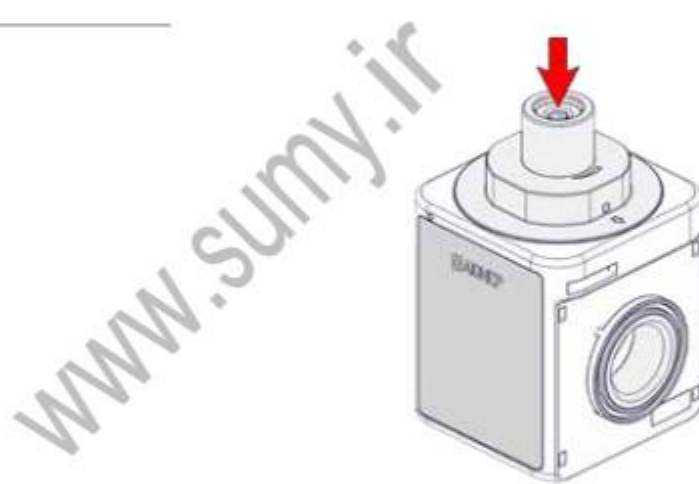
Lubricators

The lubricator unit is available in 2 options, with manual loading or with automatic vacuum-operated loading.



Soft Start Valve

Soft start valve with adjustment screw.





TECHNICAL CHARACTERISTICS



Reference standard



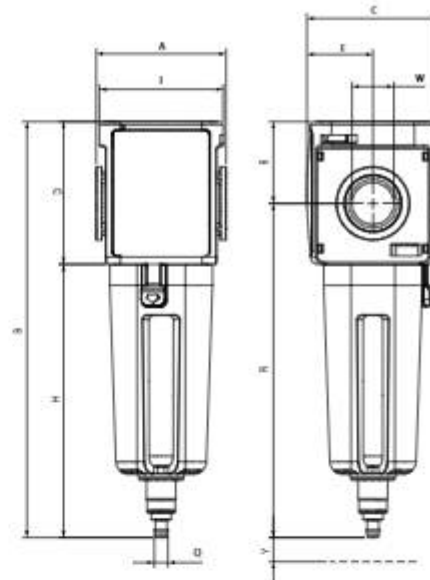
	FRL 1	FRL 2
METALLIC THREAD	1/4" NPTF 3/8" NPTF	3/8" NPTF 1/2" NPTF
TORQUE SPECIFICATIONS	Max 15 Nm	Max 20 Nm
6 bar FLOW RATE with Δp 1 bar	2500 NI/min	4100 NI/min
MOUNTING SCREWS	M5 x 15	
BOWL CAPACITY	28 cm ³	37 cm ³
FILTRATION GRADE	5 μm 20 μm STANDARD	
FLUID	Compressed Air	
MAX PRESSURE	18 bar (260 PSI)	
TEMPERATURE	-10 °C (14 F) + 50 °C (122 F)	
MOUNTING POSITION	Vertical	



Part Numbering System



N010



Dimensions - FRL 1

A	B	C	D	W	E	F	H	I	Q	R	T
51	176	51	57	1/4 - 3/8	32.5	25.5	119	47.5	E.D.256 (6.5)	144	7

Dimensions - FRL 2

A	B	C	D	W	E	F	H	I	Q	R	T
62	197.5	63	68	3/8 - 1/2	39	31.5	129	59	E.D.256 (6.5)	158.5	9.5

DEP = Vacuum-operated

A = Automatic

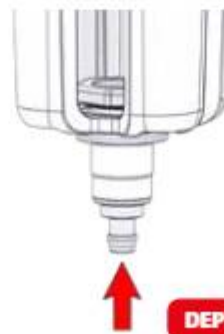
Part Number	Size	Thread (NPTF)	Filtration	Flow Rate	Exhaust
N010 103 201 000	FIL 1	1/4	20 µm	2500 NI/min	DEP
N010 104 201 000	FIL 1	3/8	20 µm	2500 NI/min	DEP
N010 104 202 000	FIL 1	3/8	20 µm	2500 NI/min	A
N010 204 201 000	FIL 2	3/8	20 µm	4100 NI/min	DEP
N010 205 201 000	FIL 2	1/2	20 µm	4100 NI/min	DEP
N010 205 202 000	FIL 2	1/2	20 µm	4100 NI/min	A



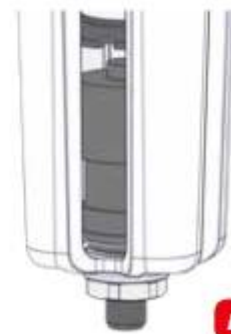
Condensation Drain

DEP: The vacuum-operated condensation drain is normally in the open position. It automatically drains the condensation when there is no pressure in the bowl. By pressing the hose connector, the condensation will be pressurized and will drain.

A: The automatic condensation drain with float drains the condensation when the maximum level is reached independently from the air pressure.



DEP



A



TECHNICAL CHARACTERISTICS



Reference standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

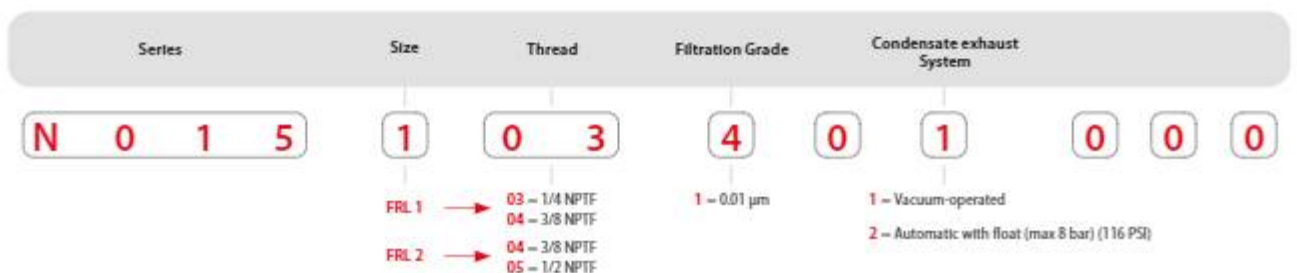
PED
2014/68/UE

II 2GD Ex h TX
Ex

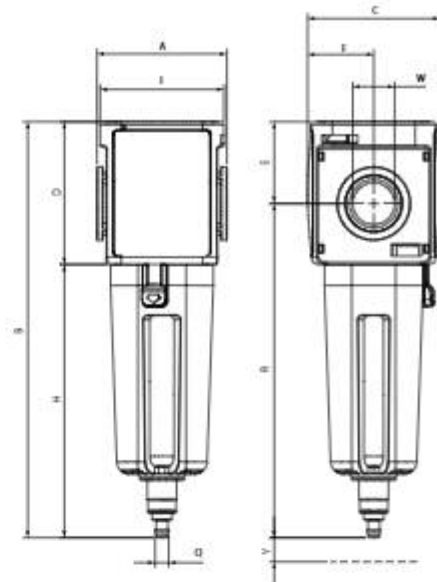
	FRL 1	FRL 2
METALLIC THREAD	1/4" NPTF 3/8" NPTF	3/8" NPTF 1/2" NPTF
TORQUE SPECIFICATIONS	Max 15 Nm	Max 20 Nm
6 bar FLOW RATE with Δp 1 bar	800 NI/min	850 NI/min
MOUNTING SCREWS	M5 x 15	
BOWL CAPACITY	28 cm ³	37 cm ³
FILTRATION GRADE	0.01 μm	
FLUID	5 μm filtered Compressed Air	
MAX PRESSURE	18 bar (260 PSI)	
TEMPERATURE	-10 °C (14 F) + 50 °C (122 F)	
MOUNTING POSITION	Vertical	



Part Numbering System



N015



Dimensions - FRL 1

A	B	C	D	W	E	F	H	I	Q	R	Y
51	176	51	57	1/4 - 3/8	32.5	25.5	119	47.5	E.D.256 (6.5)	144	7

Dimensions - FRL 2

A	B	C	D	W	E	F	H	I	Q	R	Y
62	197.5	63	68	3/8 - 1/2	39	31.5	129	59	E.D.256 (6.5)	158.5	9.5

DEP = Vacuum-operated

NB: With Coalescer Filter Series N015, we recommend installing a 5 µm Filter upstream.

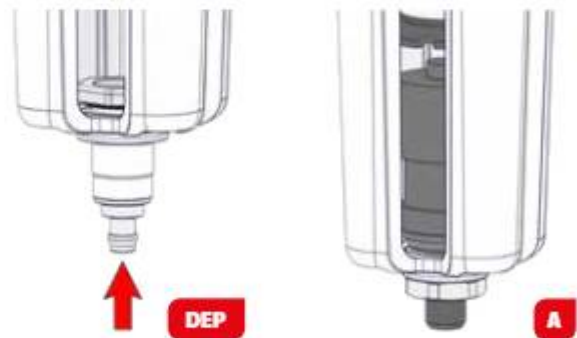
Part Number	Size	Thread (NPTF)	Filtration	Flow Rate	Exhaust
N015 103 401 000	FC 1	1/4	0.01 µm	800 NI/min	DEP
N015 104 401 000	FC 1	3/8	0.01 µm	800 NI/min	DEP
N015 104 402 000	FC 1	3/8	0.01 µm	800 NI/min	A
N015 204 401 000	FC 2	3/8	0.01 µm	850 NI/min	DEP
N015 205 401 000	FC 2	1/2	0.01 µm	850 NI/min	DEP
N015 205 402 000	FC 2	1/2	0.01 µm	850 NI/min	A



Condensation Drain

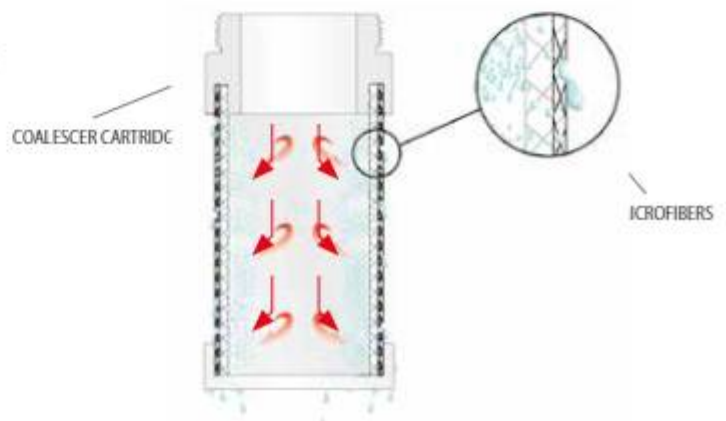
DEP: The vacuum-operated condensation drain is normally in the open position. It automatically drains the condensation when there is no pressure in the bowl. By pressing the hose connector, the condensation will be pressurize and will drain.

A: The automatic condensation drain with float drains the condensation when the maximum level is reached independently from the air pressure.



Coalescer Cartridge

The coalescer cartridge is made of a microfiber layer with an external stainless steel structure. The coalescer cartridge uses inertial impact, interception and coalescence to form liquid particles into drops. These drops will fall into the bottom of the bowl. The coalescer filter is used as an oil separator which removes oil-vapours from the air output. We recommend installing a 5 µm filter upstream to protect the coalescing filter from choking the cartridge.





TECHNICAL CHARACTERISTICS



Reference standard



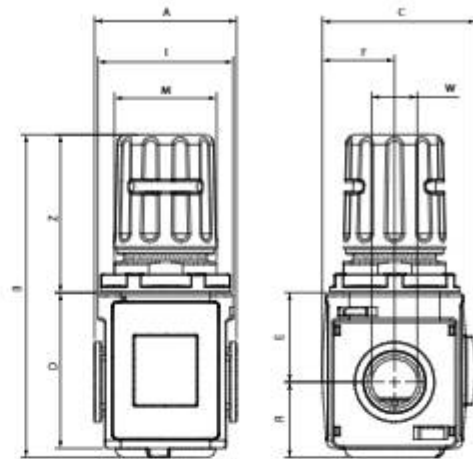
	FRL 1	FRL 2
METALLIC THREAD	1/4" NPTF 3/8" NPTF	3/8" NPTF 1/2" NPTF
TORQUE SPECIFICATIONS	Max 15 Nm	Max 20 Nm
6 bar FLOW RATE with Δp 1 bar	2700 NI/min	3500 NI/min
MOUNTING SCREWS	M5 x 15	
REGULATION RANGE	0 - 2 bar (29 PSI) 0 - 4 bar (58 PSI) 0 - 8 bar STANDARD (116 PSI) 0 - 12 bar (174 PSI)	
FLUID	Compressed Air	
MAX PRESSURE	16 bar (232 PSI)	
TEMPERATURE	-10 °C (14 F) +50 °C (122 F)	
MOUNTING POSITION	Vertical	



Part Numbering System



N020



Dimensions - FRL 1

A	B	C	D	W	E	F	I	R	M	Z
51	117	57	57	1/4 - 3/8	32.5	25.5	47.5	28	M37 x 1.5	57

Dimensions - FRL 2

A	B	C	D	W	E	F	I	R	M	Z
62	141.5	67	68	3/8 - 1/2	39	31.5	59	33	M37 x 1.5	72.5

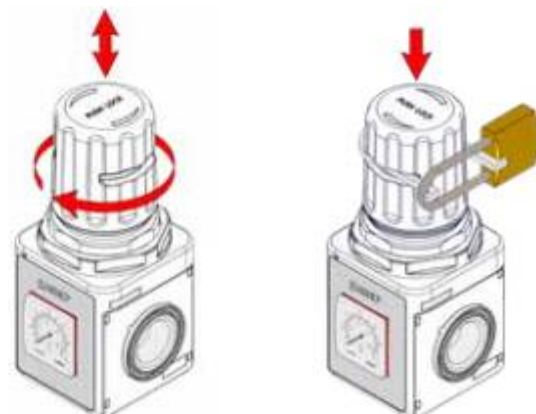
Part Number	Size	Thread (NPT)	Regulation	Flow Rate
N020 103 030 000	REG 1	1/4	0 ÷ 8 bar (116 PSI)	2700 NI/min
N020 104 030 000	REG 1	3/8	0 ÷ 8 bar (116 PSI)	2700 NI/min
N020 204 030 000	REG 2	3/8	0 ÷ 8 bar (116 PSI)	3500 NI/min
N020 205 030 000	REG 2	1/2	0 ÷ 8 bar (116 PSI)	3500 NI/min



Regulating the Air Pressure

Follow the instructions below to set the air pressure:

- 1 Raise the knob to the regulating position.
- 2 Rotate to set the desired pressure, always in ascending order.
- 3 Press the knob down to lock into position.
The knob can be padlocked to prevent tampering.





TECHNICAL CHARACTERISTICS



Reference standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

II 2GD Ex h TX
Ex

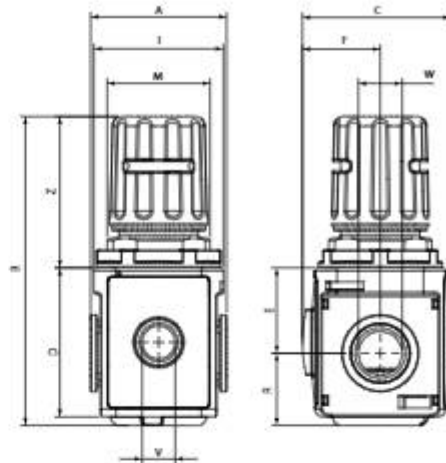
	FRL 1	FRL 2
METALLIC THREAD	1/4" NPTF 3/8" NPTF	3/8" NPTF 1/2" NPTF
TORQUE SPECIFICATIONS	Max 15 Nm	Max 20 Nm
6 bar FLOW RATE with Δp 1 bar	2700 NI/min	3500 NI/min
MOUNTING SCREWS	M5 x 15	
REGULATION RANGE	0 - 2 bar (29 PSI) 0 - 4 bar (58 PSI) 0 - 8 bar STANDARD (116 PSI) 0 - 12 bar (174 PSI)	
FLUID	Compressed Air	
MAX PRESSURE	16 bar (232 PSI)	
TEMPERATURE	-10 °C (14 F) +50 °C (122 F)	
MOUNTING POSITION	Vertical	
FRONT THREADED	1/8" NPTF	3/8" NPTF



Part Numbering System



N025



Dimensions - FRL 1

A	B	C	D	W	E	F	I	R	M	Z	V
51	117	57	57	1/4 - 3/8	32.5	31	47.5	28	M37 x 1.5	57	1/8

Dimensions - FRL 2

A	B	C	D	W	E	F	I	R	M	Z	V
62	114.5	67	68	3/8 - 1/2	39	35.5	59	33	M37 x 1.5	72.5	3/8

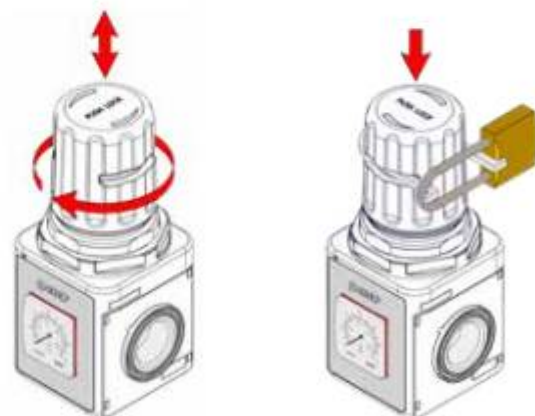
Part Number	Size	Thread (NPT)	Regulation	Flow Rate
N025 103 030 000	REG F 1	1/4	0 ÷ 8 bar (116 PSI)	2700 NI/min
N025 104 030 000	REG F 1	3/8	0 ÷ 8 bar (116 PSI)	2700 NI/min
N025 204 030 000	REG F 2	3/8	0 ÷ 8 bar (116 PSI)	3500 NI/min
N025 205 030 000	REG F 2	1/2	0 ÷ 8 bar (116 PSI)	3500 NI/min



Regulating the Air Pressure

Follow the instructions below to set the air pressure:

- 1 Raise the knob to the regulating position.
- 2 Rotate to set the desired pressure, always in ascending order.
- 3 Press the knob down to lock into position.
The knob can be padlocked to prevent tampering.



Regulators

Regulators can be assembled together. Whether they have the built-in manometer or not, they all can be connected.





TECHNICAL CHARACTERISTICS



Reference standard



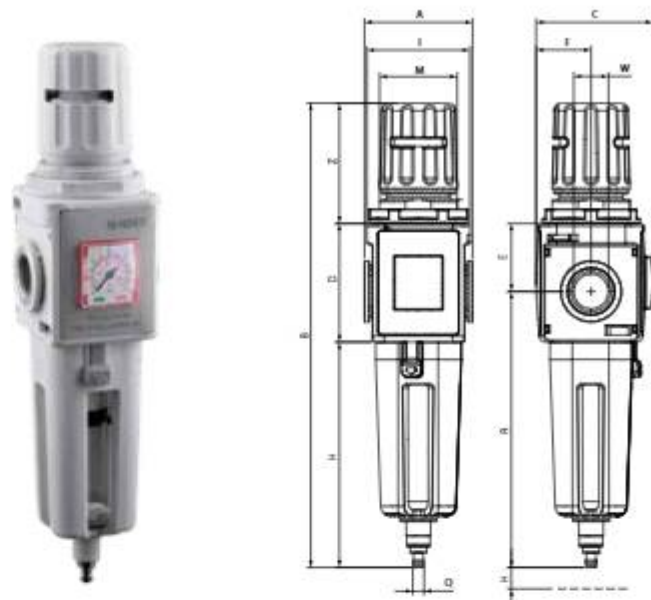
	FRL 1	FRL 2
METALLIC THREAD	1/4" NPTF 3/8" NPTF	3/8" NPTF 1/2" NPTF
TORQUE SPECIFICATIONS	Max 15 Nm	Max 20 Nm
6 bar FLOW RATE with Δp 1 bar	2200 NI/min	3300 NI/min
MOUNTING SCREWS	M5 x 15	
BLOW CAPACITY	28 cm ³	37 cm ³
FILTRATION GRADE	5 μm 20 μm STANDARD	
REGULATION RANGE	0 ÷ 2 bar (29 PSI) 0 ÷ 4 bar (58 PSI) 0 ÷ 8 bar (116 PSI) 0 ÷ 12 bar (174 PSI)	
FLUID	Compressed Air	
MAX PRESSURE	18 bar (260 PSI)	
TEMPERATURE	-10 °C (14 F) + 50 °C (122 F)	
MOUNTING POSITION	Vertical	



Part Numbering System



N030



Dimensions - FRL 1

A	B	C	D	W	E	F	H	I	M	R	Q	Z	Y
51	233	57	57	1/4 - 3/8	32.5	25.5	119	47.5	M37 x 1.5	144	ED.256 (6.5)	57	7

Dimensions - FRL 2

A	B	C	D	W	E	F	H	I	M	R	Q	Z	Y
62	270	67	68	3/8 - 1/2	39	31.5	129.5	59	M-7 x 1.5	158.5	ED.256 (6.5)	72.5	9.5

DEP – Vacuum-operated

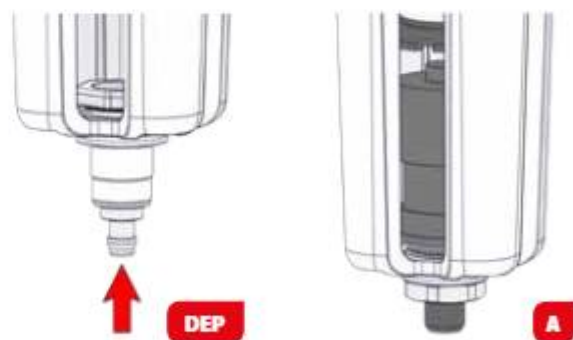
A – Automatic

Part Number	Size	Thread (NPTF)	Filter (µm)	Regulation	Flow Rate	Exhaust
N030 103 231 000	FR 1	1/4	20 µm	0 ÷ 8 bar (116 PSI)	2200 NI/min	DEP
N030 104 231 000	FR 1	3/8	20 µm	0 ÷ 8 bar (116 PSI)	2200 NI/min	DEP
N030 104 232 000	FR 1	3/8	20 µm	0 ÷ 8 bar (116 PSI)	2200 NI/min	A
N030 204 231 000	FR 2	3/8	20 µm	0 ÷ 8 bar (116 PSI)	3300 NI/min	DEP
N030 205 231 000	FR 2	1/2	20 µm	0 ÷ 8 bar (116 PSI)	3300 NI/min	DEP
N030 205 232 000	FR 2	1/2	20 µm	0 ÷ 8 bar (116 PSI)	3300 NI/min	A

i **Condensation Drain**

DEP: The vacuum-operated condensation drain is normally in the open position. It automatically drains the condensation when there is no pressure in the bowl. By pressing the hose connector, the condensation will be pressurized and will drain.

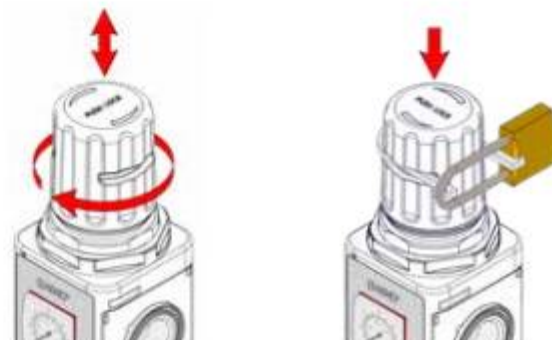
A: The automatic condensation drain with float drains the condensation when the maximum level is reached independently from the air pressure.



i **Regulating the Air Pressure**

Follow the instructions below to set the air pressure:

- 1 Raise the knob to the regulating position.
- 2 Rotate to set the desired pressure, always in ascending order.
- 3 Press the knob down to lock into position.
The knob can be padlocked to prevent tampering.





TECHNICAL CHARACTERISTICS



Reference standard



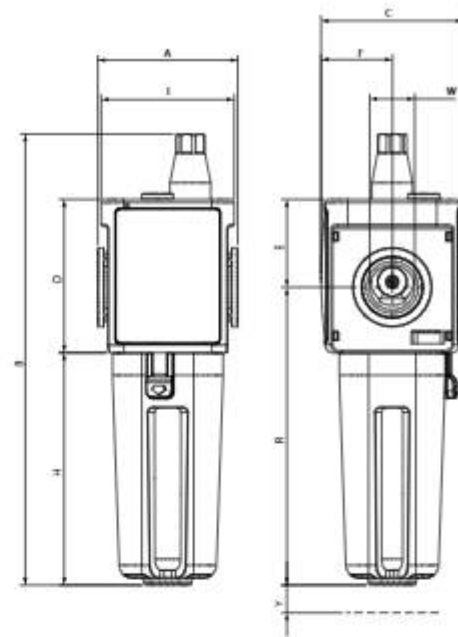
	FRL 1	FRL 2
METALLIC THREAD	1/4" NPTF 3/8" NPTF	3/8" NPTF 1/2" NPTF
TORQUE SPECIFICATIONS	Max 15 Nm	Max 20 Nm
6 bar FLOW RATE with Δp 1 bar	3400 NI/min	6100 NI/min
MOUNTING SCREWS	M5 x 15	
BLOW CAPACITY	28 cm ³	37 cm ³
FLUID	Compressed Air	
MAX PRESSURE	18 bar (260 PSI)	
TEMPERATURE	-10°C (14 F) 50°C (122 F)	
MOUNTING POSITION	Vertical	
RECOMMENDED OILS	CLASS ISO 22 ISO 3448 NORMA	



Part Numbering System



N040



Dimensions - FRL 1

A	B	C	D	W	E	F	H	I	R	Y
51	178.5	51	57	1/4 - 3/8	32.5	25.5	92.5	47.5	117.5	7

Dimensions - FRL 2

A	B	C	D	W	E	F	H	I	R	Y
62	200	63	68	3/8 - 1/2	39	31.5	103	59	132	9.5

DEP – Manual

A – Automatic vacuum-operated

Part Number	Size	Thread (PTF)	Flow Rate	Oil loading System
N040 103 000 100	LUB 1	1/4	3400 NI/min	M
N040 104 000 100	LUB 1	3/8	3400 NI/min	M
N040 104 000 200	LUB 1	3/8	3400 NI/min	A
N040 204 000 100	LUB 2	3/8	6100 NI/min	M
N040 205 000 100	LUB 2	1/2	6100 NI/min	M
N040 205 000 200	LUB 2	1/2	6100 NI/min	A



Lubricators



The oil is added to the lubricator unit by unscrewing the cap on the top or by removing the bowl. Make sure that there is no pressure running to the unit. You can adjust the oil by using screwdriver. We recommend adding one drop of oil every 300-600 NI/min.



Lubricators



The vacuum-operated oil loading enables the bowl to be filled with oil automatically. The system is activated by a button on top. The newly added oil, also positioned at a lower height with respect to the lubricator unit, flows into the bowl thanks to a G1/8" attachment positioned on the bottom side of the unit. Stop adding oil once the oil reaches the maximum level, shown by the windows in the side of the bowl.





TECHNICAL CHARACTERISTICS



Reference standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

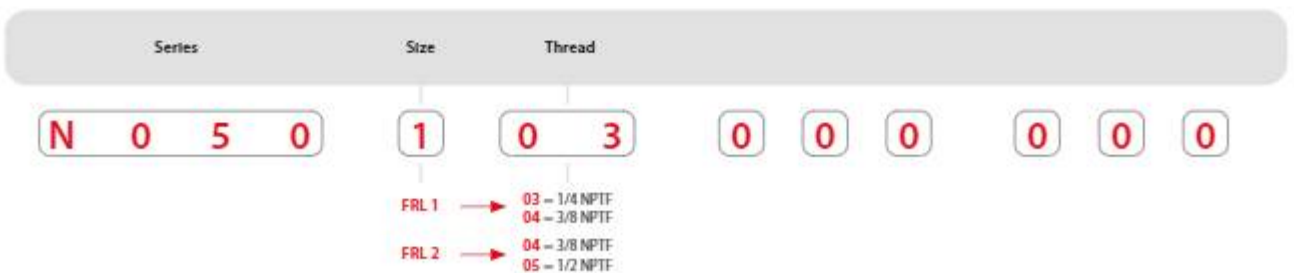
II 2GD Ex h TX
Ex

	FRL 1	FRL 2
METALLIC THREAD	1/4" NPTF 3/8" NPTF	3/8" NPTF 1/2" NPTF
TORQUE SPECIFICATIONS	Max 15 Nm	Max 20 Nm
6 bar FLOW RATE with Δp 1 bar	2700 NI/min	3500 NI/min
MOUNTING SCREWS	M5 x 15	
FLUID	Compressed Air	
MAX PRESSURE	18 bar (260 PSI)	
TEMPERATURE	-10 °C (14 °F) + 50 °C (122 °F)	
MOUNTING POSITION	Vertical	

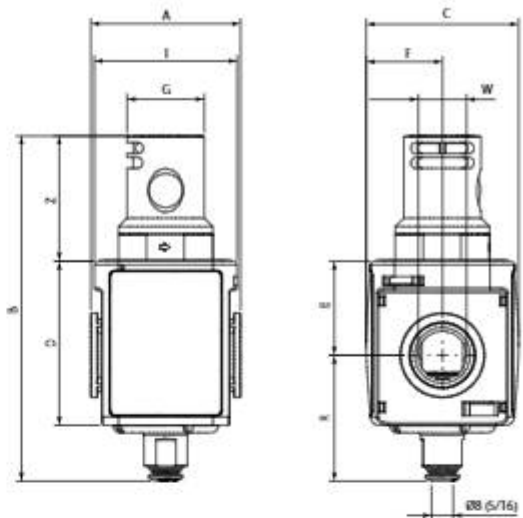
www.sumy.ir



Part Numbering System



N050



Dimensions - FRL 1

A	B	C	D	W	E	F	G	I	R	Y
51	134	51	57	1/4 - 3/8	32.5	25.5	32	47.5	46	56

Dimensions - FRL 2

A	B	C	D	W	E	F	G	I	R	Y
62	143	63	68	3/8 - 1/2	39	31.5	32	59	52	51

Part Number	Size	Thread (NPTF)	Flow Rate	Function	Oil loading System
N050 103 000 000	V3V 1	1/4	2700 NI/min	NC	M
N050 104 000 000	V3V 1	3/8	2700 NI/min	NC	M
N050 204 000 000	V3V 2	3/8	3500 NI/min	NC	M
N050 205 000 000	V3V 2	1/2	3500 NI/min	NC	M



Shut Off Valves

The shut off valve is activated in the following phases:

1. By pressing the trigger switch 1, the primary circuit opens.
2. By pressing button 2, the primary circuit closes and the secondary circuit drains.
This latter position can be padlocked.



N051

PNEUMATIC SHUT OFF VALVE



TECHNICAL CHARACTERISTICS



Reference standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

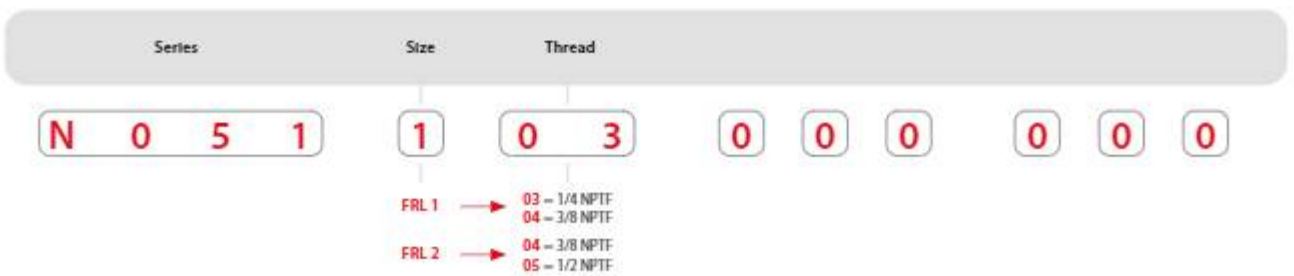
II 2GD Ex h TX
Ex

	FRL 1	FRL 2
METALLIC THREAD	1/4" NPTF 3/8" NPTF	3/8" NPTF 1/2" NPTF
TORQUE SPECIFICATIONS	Max 15 Nm	Max 20 Nm
6 bar FLOW RATE with Δp 1 bar	2700 NI/min	3500 NI/min
MOUNTING SCREWS	M5 x 15	
FLUID	Compressed Air	
MAX PRESSURE	from 2.5 bar (36 PSI) to 10 bar (145 PSI)	
TEMPERATURE	-10 °C (14 °F) + 50 °C (122 °F)	
MOUNTING POSITION	Vertical	

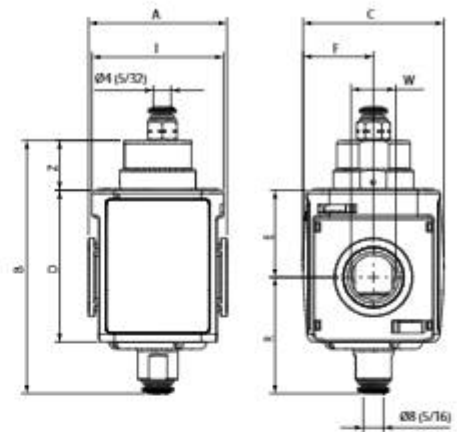
www.sunny.ir



Part Numbering System



N051



Dimensions - FRL 1

A	B	C	D	W	E	F	I	R	Z
51	98	51	57	1/4 - 3/8	32.5	25.5	47.5	46	19.5

Dimensions - FRL 2

A	B	C	D	W	E	F	I	R	Z
62	113.5	63	68	3/8 - 1/2	39	31.5	59	52	22

P – Pneumatic

Part Number	Size	Thread (NPTF)	Flow Rate	Function	Oil loading System
N051 104 000 000	V3V 1	3/8	2700 NI/min	NC	P
N051 205 000 000	V3V 2	1/2	3500 NI/min	NC	P

i Shut Off Valves

The pneumatic shut off valve functions in the following phases:

1. By pressurising the pilot "P", the primary circuit opens.
2. By removing pressure from the operator "P", the primary circuit closes and the secondary circuit drains.



N052

MANUAL/ELECTRO-PNEUMATIC SHUT OFF VALVE



TECHNICAL CHARACTERISTICS



Reference standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

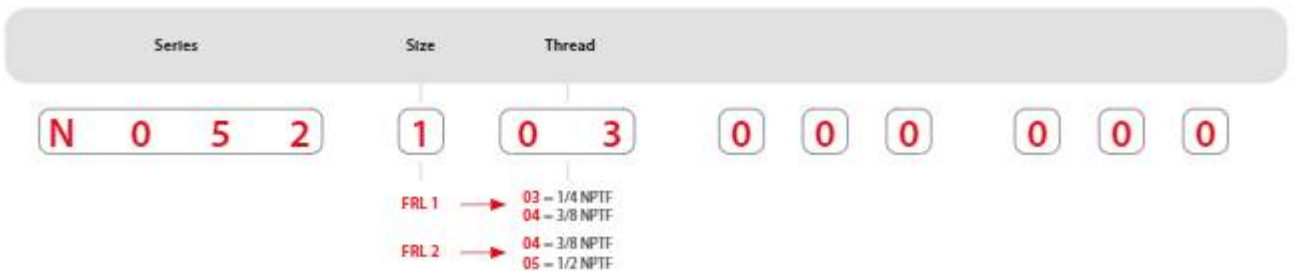
PED
2014/68/UE

II 2GD Ex h TX
Ex

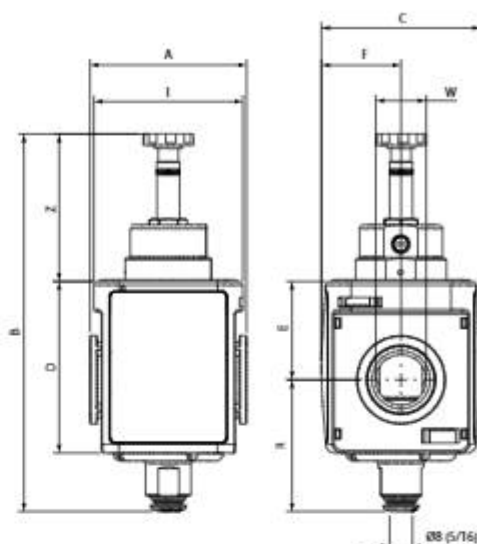
	FRL 1	FRL 2
METALLIC THREAD	1/4" NPTF 3/8" NPTF	3/8" NPTF 1/2" NPTF
TORQUE SPECIFICATIONS	Max 15 Nm	Max 20 Nm
6 bar FLOW RATE with Δp 1 bar	2700 NI/min	3500 NI/min
MOUNTING SCREWS	M5 x 15	
FLUID	Compressed Air	
MAX PRESSURE	from 2.5 bar (36 PSI) to 10 bar (145 PSI)	
TEMPERATURE	-10 °C (14 °F) + 50 °C (122 °F)	
MOUNTING POSITION	Vertical	
SOLENOID	See Chapter 18 - page 18.24 - 18.25	



Part Numbering System



N052



Dimensions - FRL 1

A	B	C	D	W	E	F	I	R	Z
51	98	51	57	1/4 - 3/8	32.5	25.5	47.5	46	19.5

Dimensions - FRL 2

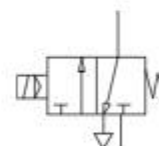
A	B	C	D	W	E	F	I	R	Z
62	113.5	63	68	3/8 - 1/2	39	31.5	59	52	22

*NB: Standard without solenoid

EP = Electro-pneumatic

NB: MTEX 2, 7, 12 Ex h TX category can be reclassified in accordance to the kind of solenoid applied.

Part Number	Size	Thread (NPTF)	Flow Rate	Function	Oil loading System
N052 104 000 000	V3V 1	3/8	2700 NI/min	NC	EP
N052 205 000 000	V3V 2	1/2	3500 NI/min	NC	EP



i Shut Off Valves

The electro-pneumatic shut off valve functions in the following phases:

1. By activating the electric impulse, the primary circuit opens.
2. By removing the electric impulse, the primary circuit closes and the secondary circuit drains.



N060

SOFT START VALVE



TECHNICAL CHARACTERISTICS



Reference standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

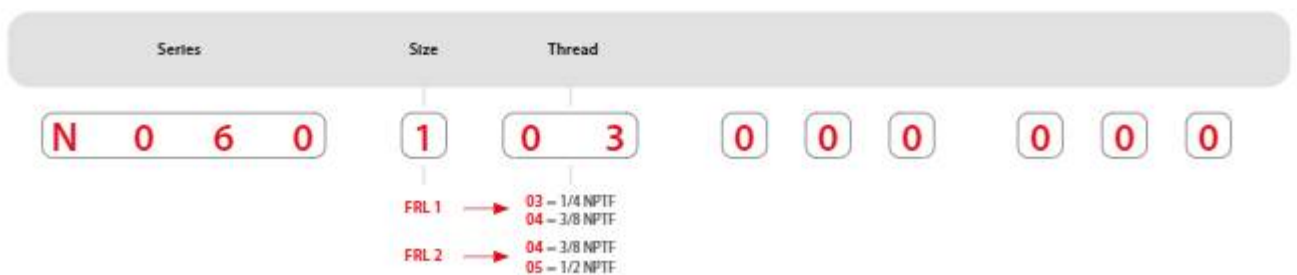
PED
2014/68/UE

II 2GD Ex h TX
Ex

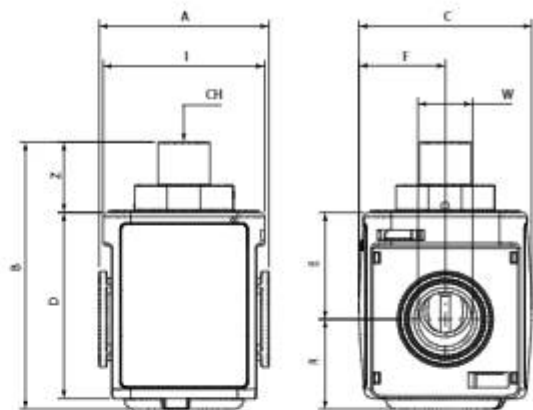
	FRL 1	FRL 2
METALLIC THREAD	1/4" NPTF 3/8" NPTF	3/8" NPTF 1/2" NPTF
TORQUE SPECIFICATIONS	Max 15 Nm	Max 20 Nm
6 bar FLOW RATE with Δp 1 bar	2700 NI/min	3500 NI/min
MOUNTING SCREWS	M5 x 15	
MAXIMUM INLET PRESSURE	10 bar (145 PSI)	
FLUID	Compressed Air	
TEMPERATURE	-10 °C (14 °F) + 50 °C (122 °F)	
ASSEMBLY POSITION	Vertical	
MOUNTING POSITION	End of all FRL components	



Part Numbering System



N060



Dimensions - FRL 1

A	B	C	D	W	E	F	I	R	Z	CH
51	84.5	51	57	1/4 - 3/8	32.5	25.5	47.5	28	23.5	5

Dimensions - FRL 2

A	B	C	D	W	E	F	I	R	Z	CH
62	97.5	63	68	3/8 - 1/2	39	31.5	59	33	25	5

Part Number	Size	Thread (NPTF)	Flow Rate
N060 103 000 000	APE 1	1/4	2700 NI/min
N060 104 000 000	APE 1	3/8	2700 NI/min
N060 204 000 000	APE 2	3/8	3500 NI/min
N060 205 000 000	APE 2	1/2	3500 NI/min



Soft Start Valve

Our soft start valve is a pneumatic device that allows a pneumatic circuit to be pressurised gradually. With the adjustment screw shown in the drawing to the right, you can progressively increase or decrease the air flow introduced to your pneumatic circuit. This valve is designed to completely open the air flow of your circuit at 50% of the inlet pressure.





TECHNICAL CHARACTERISTICS



Reference standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

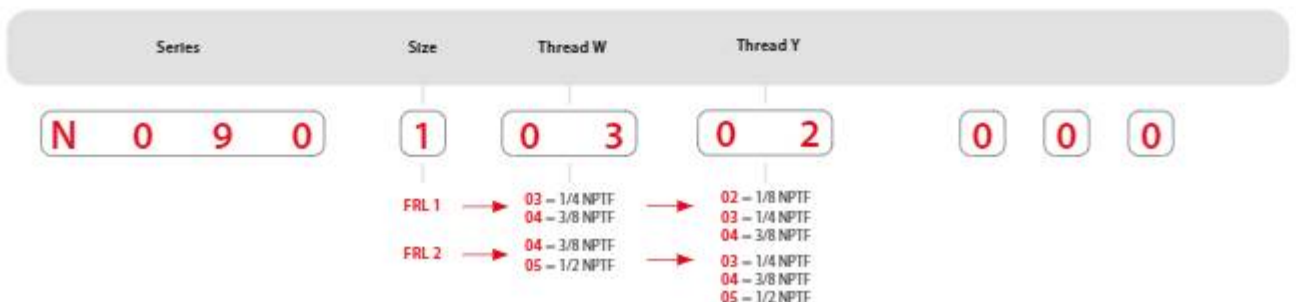
II 2GD Ex h TX
Ex

	FRL 1	FRL 2
METALLIC THREAD	1/4" NPTF 3/8" NPTF	3/8" NPTF 1/2" NPTF
TORQUE SPECIFICATIONS	Max 15 Nm	Max 20 Nm
6 bar FLOW RATE with Δp 1 bar	3400 NI/min	6100 NI/min
MOUNTING SCREWS	M5 x 15	
FLUID	Compressed Air	
MAX PRESSURE	18 bar (260 PSI)	
TEMPERATURE	-10 °C (14 °F) + 50 °C (122 °F)	
MOUNTING POSITION	Vertical	

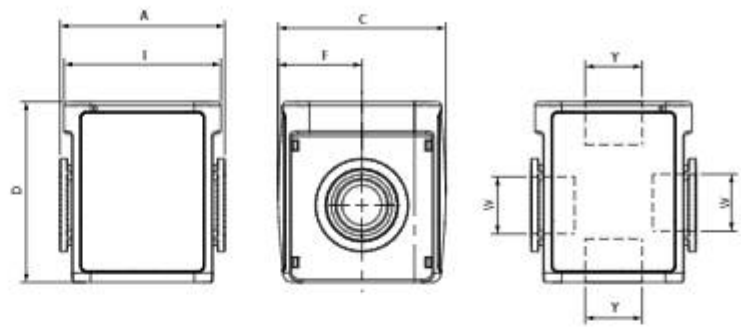
www.sumy.ir



Part Numbering System



N090



Dimensions - FRL 1

A	C	D	W	F	I	Y
51	51	57	1/4 - 3/8	25.5	47.5	1/4 - 3/8

Dimensions - FRL 2

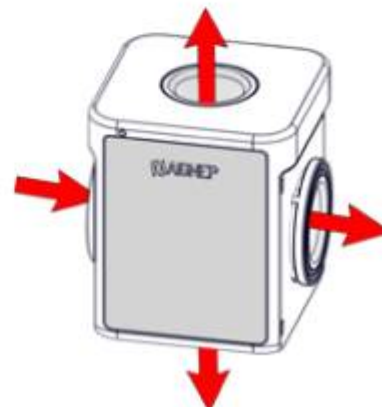
A	C	D	W	F	I	Y
62	63	68	3/8 - 1/2	31.5	59	1/4 - 3/8 - 1/2

Part Number	Size	Thread (NPTF)	Flow Rate
N090 103 030 000	DIS 1	1/4 - 1/4	3400 NI/min
N090 104 030 000	DIS 1	3/8 - 1/4	3400 NI/min
N090 104 040 000	DIS 1	3/8 - 3/8	3400 NI/min
N090 204 030 000	DIS 2	3/8 - 1/4	6100 NI/min
N090 204 040 000	DIS 2	3/8 - 3/8	6100 NI/min
N090 205 030 000	DIS 2	1/2 - 1/4	6100 NI/min
N090 205 050 000	DIS 2	1/2 - 1/2	6100 NI/min



Air Distributor

The air distributor allows you to branch off your air flow to several components such as pressure switches and other units. The air distributor can be placed anywhere in your air treatment unit.





TECHNICAL CHARACTERISTICS



Reference standard



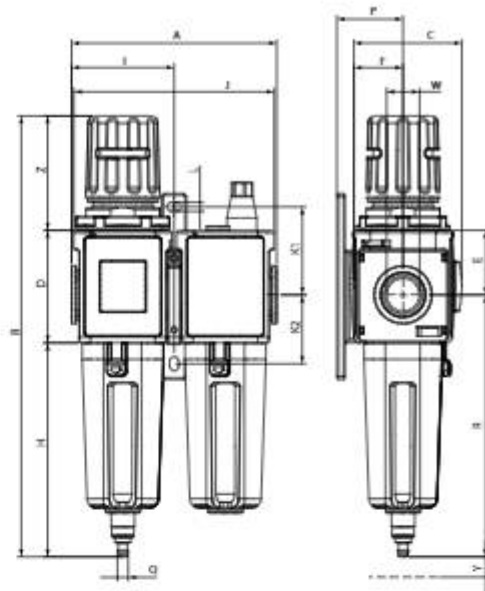
	FRL 1	FRL 2
METALLIC THREAD	1/4" NPTF 3/8" NPTF	3/8" NPTF 1/2" NPTF
TORQUE SPECIFICATIONS	Max 15 Nm	Max 20 Nm
6 bar FLOW RATE with Δp 1 bar	1500 NI/min	2700 NI/min
MOUNTING SCREWS	M5 x 15	
BLOW CAPACITY	28 cm ³	37 cm ³
FILTRATION GRADE	5 μm 20 μm STANDARD	
REGULATION RANGE	0 - 2 bar (29 PSI) 0 - 4 bar (58 PSI) 0 - 8 bar (116 PSI) 0 - 12 bar (174 PSI)	
FLUID	Compressed Air	
MAX PRESSURE	18 bar (260 PSI)	
TEMPERATURE	-10 °C (14 F) + 50 °C (122 F)	
MOUNTING POSITION	Vertical	



Part Numbering System

Series	Size	Thread	Filtration Grade	Regulation Range	Condensate exhaust System	Oil loading System	Manometer system
N 1 0 0	1	0 3	1	1	1	1	0 0
	FRL 1 →	03 - 1/4 NPTF 04 - 3/8 NPTF	1 - 5 μm 2 - 20 μm	1 - 0-2 bar (29 PSI) 2 - 0-4 bar (58 PSI) 3 - 0-8 bar (116 PSI) 4 - 0-12 bar (174 PSI)	1 - Vacuum-operated 2 - Automatic with float (max 8 bar) (max 116 bar)	1 - Manual 2 - Automatic vacuum-operated	1 - Manometer incorporated 2 - Adapter for manometer 1/8 NPTF (Manometer not included)

N100



Dimensions - FRL 1

A	B	C	D	E	F	H	I	J	K1	K2	L	P	Q	R	W	Y	Z
102	233	57	57	32.5	25.5	119	47.5	98.5	45	35.5	5.5	34.5	ED.256 (6.5)	144	1/4-3/8	7	57

Dimensions - FRL 2

A	B	C	D	E	F	H	I	J	K1	K2	L	P	Q	R	W	Y	Z
124	270	67	68	39	31.5	129.5	59	121	53	41.5	5.5	40	ED.256 (6.5)	158.5	3/8-1/2	9.5	72.5

DEP – Vacuum-operated

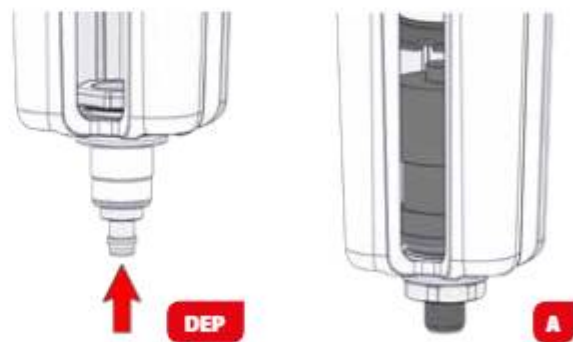
A – Automatic

Part Number	Size	Thread (NPTF)	Filter (µm)	Regulation	Flow Rate	Exhaust
N100 103 231 100	FR+L1	1/4	20 µm	0 ÷ 8 bar (116 PSI)	1500 NI/min	DEP
N100 104 231 100	FR+L1	3/8	20 µm	0 ÷ 8 bar (116 PSI)	1500 NI/min	DEP
N100 104 232 100	FR+L1	3/8	20 µm	0 ÷ 8 bar (116 PSI)	1500 NI/min	A
N100 204 231 100	FR+L2	3/8	20 µm	0 ÷ 8 bar (116 PSI)	2700 NI/min	DEP
N100 205 231 100	FR+L2	1/2	20 µm	0 ÷ 8 bar (116 PSI)	2700 NI/min	DEP
N100 205 232 100	FR+L2	1/2	20 µm	0 ÷ 8 bar (116 PSI)	2700 NI/min	A

i **Condensation Drain**

DEP: The vacuum-operated condensation drain is normally in the open position. It automatically drains the condensation when there is no pressure in the bowl. By pressing the hose connector, the condensation will be pressurized and will drain.

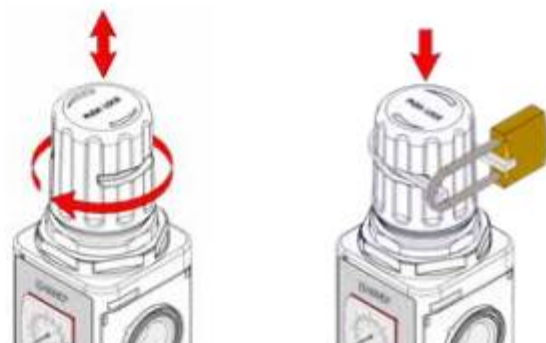
A: The automatic condensation drain with float drains the condensation when the maximum level is reached independently from the air pressure.



i **Regulating the Air Pressure**

Follow the instructions below to set the air pressure:

- 1 Raise the knob to the regulating position.
- 2 Rotate to set the desired pressure, always in ascending order.
- 3 Press the knob down to lock into position.
The knob can be padlocked to prevent tampering.



N400

FIL + FC



TECHNICAL CHARACTERISTICS



Reference standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

PED
2014/68/UE

II 2GD Ex h TX
Ex

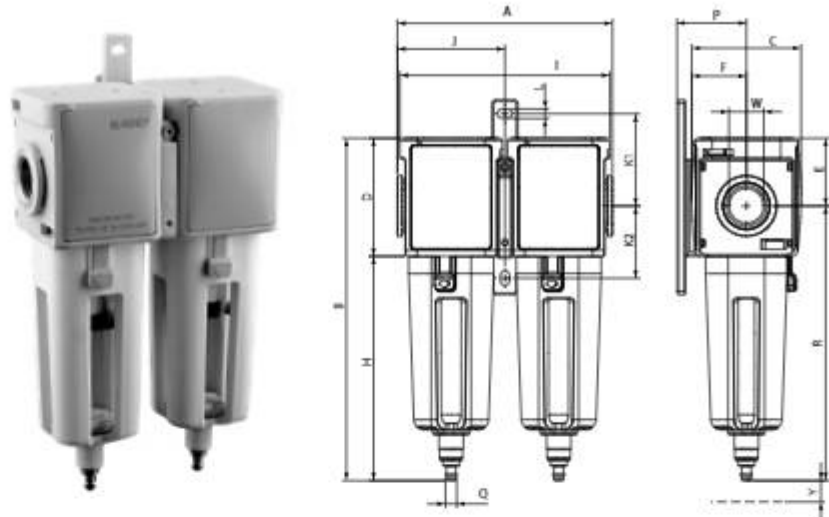
	FRL 1	FRL 2
METALLIC THREAD	1/4" NPTF 3/8" NPTF	3/8" NPTF 1/2" NPTF
TORQUE SPECIFICATIONS	Max 15 Nm	Max 20 Nm
6 bar FLOW RATE with Δp 1 bar	1800 NI/min	3500 NI/min
MOUNTING SCREWS	M5 x 15	
BLOW CAPACITY	28 cm ³	37 cm ³
FILTRATION GRADE	5 μm + 0.01 μm	
FLUID	Compressed Air	
MAX PRESSURE	16 bar (260 PSI)	
TEMPERATURE	-10 °C (14 F) + 50 °C (122 F)	
CONDENSATION EXHAUST	Vacuum-operated	
MOUNTING POSITION	Vertical	



Part Numbering System



N400



Dimensions - FRL 1

A	B	C	D	E	F	H	I	J	K1	K2	L	P	Q	R	W	Y	Z
102	176	57	57	32.5	25.5	119	47.5	98.5	45	35.5	5.5	34.5	ED.256 (6.5)	144	1/4-3/8	7	57

Dimensions - FRL 2

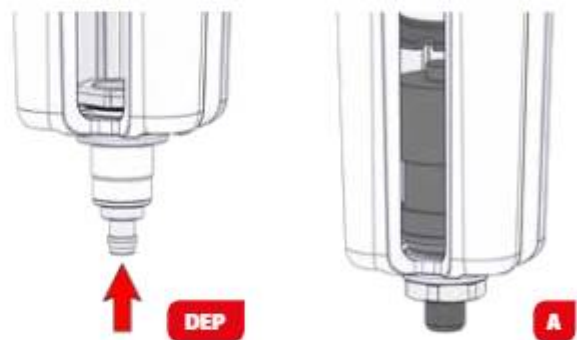
A	B	C	D	E	F	H	I	J	K1	K2	L	P	Q	R	W	Y	Z
124	197.5	67	68	39	31.5	129.5	59	121	53	41.5	5.5	40	ED.256 (6.5)	158.5	3/8-1/2	9.5	72.5

Part Number	Size	Thread (NPTF)	Filtration	Flow Rate
N400 103 401 000	FIL+FC 1	1/4	5 µm + 0.01 µm	1800 NI/min
N400 104 401 000	FIL+FC 1	3/8	5 µm + 0.01 µm	1800 NI/min
N400 204 401 000	FIL+FC 2	3/8	5 µm + 0.01 µm	3500 NI/min
N400 205 401 000	FIL+FC 2	1/2	5 µm + 0.01 µm	3500 NI/min

i **Condensation Drain**

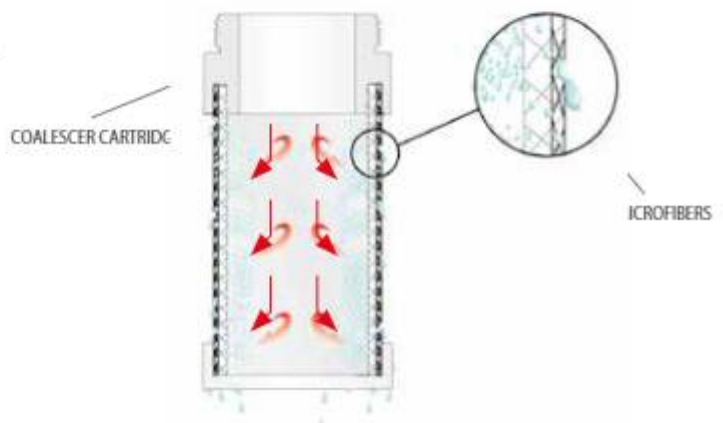
DEP: The vacuum-operated condensation drain is normally in the open position. It automatically drains the condensation when there is no pressure in the bowl. By pressing the hose connector, the condensation will be pressurize and will drain.

A: The automatic condensation drain with float drains the condensation when the maximum level is reached independently from the air pressure.



i **Coalescer Cartridge**

The coalescer cartridge is made of a microfiber layer with an external stainless steel structure. The coalescer cartridge uses inertial impact, interception and coalesce to form liquid particles into drops. These drops will fall into the bottom of the bowl. The coalescer filter is used as an oil separator which removes oil-vapours from the air output. We recommend installing a 5 µm filter upstream to protect the coalescing filter from choking the cartridge.



REG16

CLAMP BRACKET



Part Number

REG16 1Y 50 00 ZI	FRL 1
REG16 2Y 50 00 ZI	FRL 2

Y501

WALL MOUNT BRACKET



Part Number

Y501 100 000 000	FRL 1
Y501 200 000 000	FRL 2

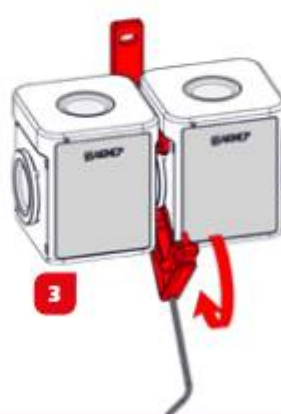
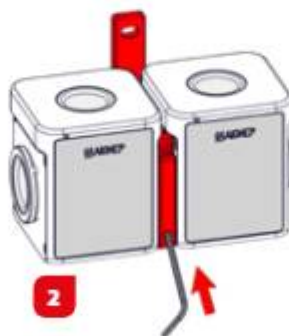
Y502

CONNECTION BRACKET



Part Number

Y502 100 000 000	FRL 1
Y502 200 000 000	FRL 2



T545

COALESCER FILTER



Part Number

T545 10Y 000 000	FRL 1
T545 20Y 000 000	FRL 2

FIL04

SINTERED FILTER



Part Number		
FIL04 1Y3 805 SC	FRL 1	5 µm
FIL04 1Y3 820 SC	FRL 2	5 µm
FIL04 2Y3 805 SC	FRL 1	20 µm
FIL04 2Y3 820 SC	FRL 2	20 µm

Y520

BOWL FOR FILTER UNIT



Part Number		
Y520 100 001 000	FRL 1	DEP
Y520 100 002 000	FRL 1	A
Y520 200 001 000	FRL 2	DEP
Y520 200 002 000	FRL 2	A

*DEP: Vacuum-operated

*A: Automatic with float

Y530

BOWL FOR LUBRICATOR UNIT



Part Number		
Y530 100 000 100	FRL 1	MAN
Y530 100 000 200	FRL 1	A
Y530 200 000 100	FRL 2	MAN
Y530 200 000 200	FRL 2	A

*MAN: Manual oil loading system

*A: Automatic oil loading system

MAS1

MANOMETER



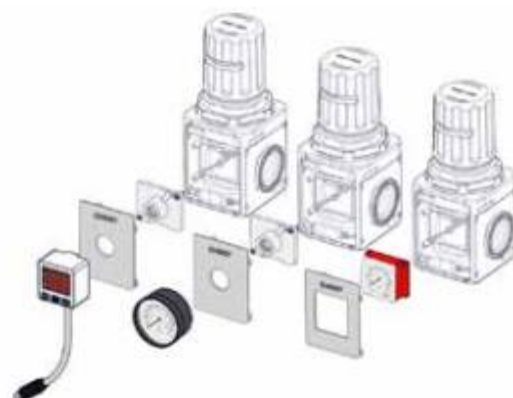
Part Number		Bar
MAS1 1No 020 000	FRL 1	0 - 4
MAS1 1No 040 000	FRL 1	0 - 12
MAS1 2No 020 000	FRL 2	0 - 4
MAS1 2No 040 000	FRL 2	0 - 12

MAS0

MANOMETER ADAPTER NPTF 1/8 NPT



Part Number		NPTF
MAS0 112 000 000	FRL 1	1/8
MAS0 212 000 000	FRL 2	1/8



Y503

PADLOCK FOR ADJUSTER AND ADJUSTER FILTER KIT

Part Number

Y503 100 000 000	FRL 1
Y503 200 000 000	FRL 2



MANOMETERS



Reference Standard

EN 837-1

IP31
EN 60 529



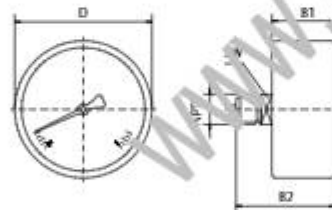
Media

- Compressed Air
- Inert gases
- Steam
- Non-highly viscose and non-crystallizing liquids

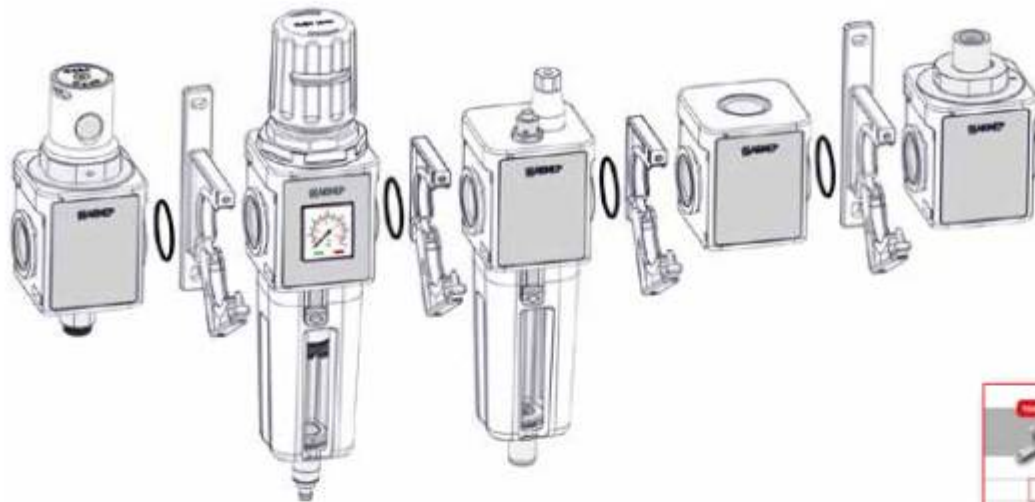
MAN09

MANOMETER BACK CONNECTION

Code	bar	D	B1	B2	SW	G (NPTF)
MAN09 N2 040 000	0 ÷ 12	40	25	41.5	12	1/8
			<i>min</i>			<i>max</i>
			Temperature		- 20 °C	+ 60 °C



SET YOUR FRL EVO



	Y501	Y502
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Enter your part number and accessory part number in the table below to configure your FRL Evo system

	Part Numbers	Y501	Y502
1 st POS		
	+	<input type="checkbox"/>	<input type="checkbox"/>
2 nd POS		
	+	<input type="checkbox"/>	<input type="checkbox"/>
3 rd POS		
	+	<input type="checkbox"/>	<input type="checkbox"/>
4 th POS		
	+	<input type="checkbox"/>	<input type="checkbox"/>
5 th POS		
	+	<input type="checkbox"/>	<input type="checkbox"/>
6 th POS		
	+	<input type="checkbox"/>	<input type="checkbox"/>
7 th POS		
	+	<input type="checkbox"/>	<input type="checkbox"/>
8 th POS		
	+	<input type="checkbox"/>	<input type="checkbox"/>
9 th POS		
	+	<input type="checkbox"/>	<input type="checkbox"/>
10 th POS		

www.sumy.ir

www.sumy.ir

www.sumy.ir