



MADE IN ITALY

**catalogue
2026**

BSPP IN-LINE VALVES
page 36

CARTRIDGE VALVES
page 186

SOLENOID VALVES
page 232

SAE/NPTF IN-LINE VALVES
page 270

CAVITY
page 348



About US

Fluid-app is a player in the hydraulic valves and components market.

A Company with long experience in the field.

Its founders have been working for almost twenty years in the production of hydraulic components **made in Italy** to always offer the best in terms of **quality, reliability and on-time delivery**.

Years and years of consolidated technical and production experience at the service of the customer, also to study and customise products in synergy.

In its plant in Reggio Emilia, in the heart of the Italian hydraulics territory, Fluid-app designs and manufactures a wide range of hydraulic valves and components for many applications: from the agricultural to the earth-moving sector, from building to ecology, from transport to industrial vehicles.

**Fluid-App,
the value of experience!**

Technical INFORMATION

Please read these instructions carefully before installation. All operations must be carried out by specialised and competent personnel.
The user must periodically check the condition and correct functioning of the valves, the corrosion and the condition of the hydraulic installation.

Always respect the technical prescriptions of the valve.

OIL

Use only mineral oil (HL, HLP) according to DIN 51524. The use of other fluids may cause bad working of the valve.

VISCOSITY

The viscosity of the oil should be in the range of 15 mm²/s to 250mm²/s.
Recommended viscosity ISO VG 46 (for cartridge valves ISO VG 32).

CONTAMINATION AND FILTRATION

Excessive fluid contamination is the main cause of bad-working in hydraulic installations.
Max. contamination with filter ISO 4406:1999 - class 19/17/14
The use of filters is necessary to protect the system from bad-working, in order to avoid serious consequences for the hydraulic installation and people.
Fluid-app recommends a filtration of 15 microns for its valves.

OPERATING TEMPERATURES

Environment temperature: -25°C to +60°C
Oil temperature (with NBR seals): from -25°C to +75°C

POWER SUPPLY

The solenoid valve coils must be supplied with voltages between +/- 10% of the nominal voltage at a maximum environment temperature of 60°C.

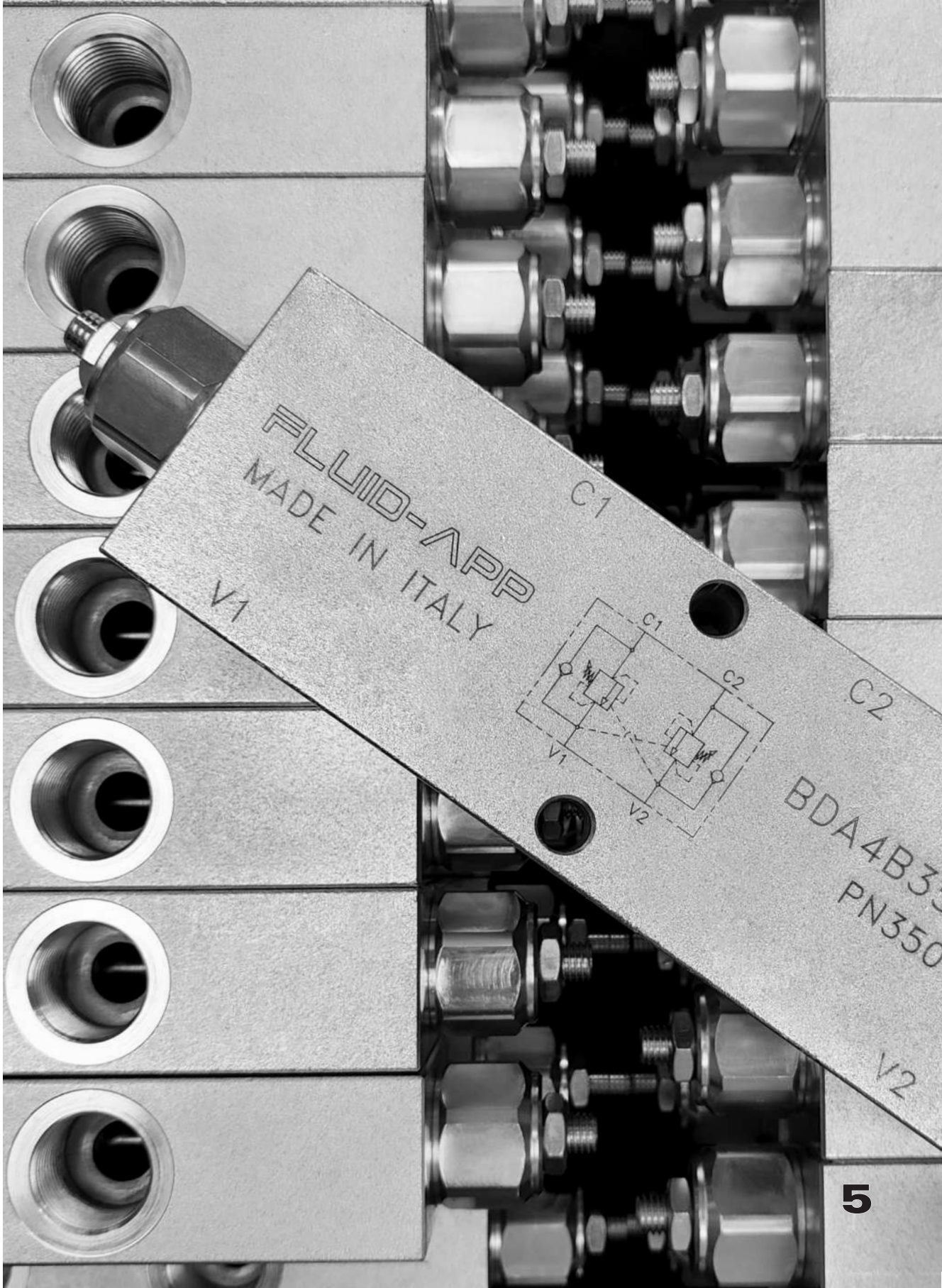
SEALING

O-rings mounted on the valves are in NBR
The anti-extrusion rings used to protect the o-rings are made of PTFE or NBR.

TESTING CONDITIONS

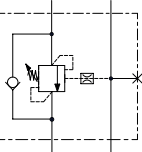
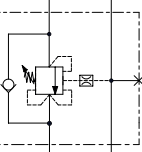
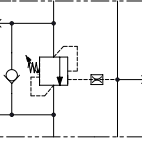
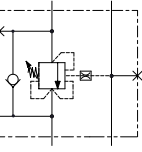
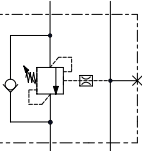
All the tests shown in the catalogue were carried out with mineral oil ISO VG 46 at a temperature of 40°C and an absolute filtration degree of 15 microns.

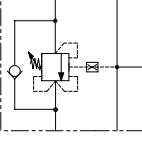
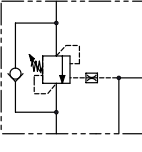
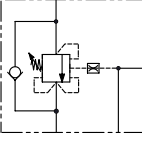
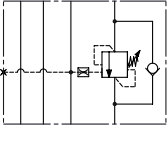
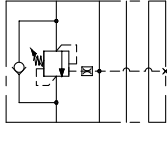
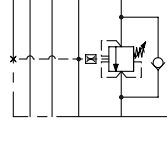
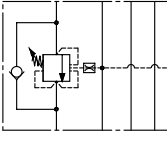
MARKING CODE		
YEAR	LETTER ASSOCIATED WITH THE YEAR	MANUFACT. WEEK
2021	V	Number of the week. The first week of the year starts with the first Monday
2022	X	
2023	Y	
2024	Z	
2025	A	
2026	B	
2027	C	
2028	D	
2029	E	
2030	F	
2031	G	



Products GUIDE

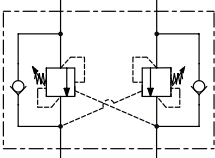
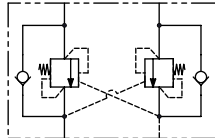
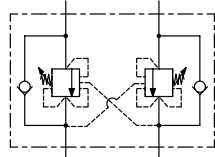
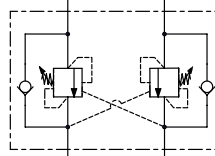
Single counterbalance valves

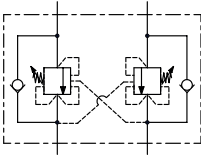
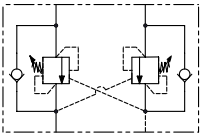
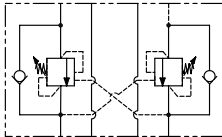
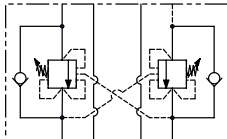
CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE
	BSA		160 [42,1]	350 [5075]	BSPP (GAS)	38
	BSAY					40
	BSC					42
	BSCY					44
	BSI		60 [15,9]			46
	BSL					48
	BSD					50

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE
	BSE		60 [15,9]	350 [5075]	BSPP (GAS)	52
	BSB					54
	BSP					56
	BCG				CETOP3	58
	BCE					60
	BCH					62
	BCF					64

Products GUIDE

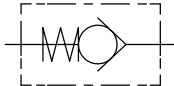
Double counterbalance valves

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE		
	BDA		160 [42,1]	350 [5075]	BSPP (GAS)	66		
	BDAY		60 [15,9]			68		
	BDD		30 [7,9]			70		
	BDE					72		
		BDC				60 [15,9]		
BDCY			76					
	BFA					78		

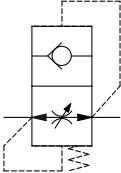
CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE
	BFC		60 [15,9]	350 [5075]	BSPP (GAS)	80
	BDB		40 [10,6]			82
	BCA		60 [15,9]		CETOP3	84
	BCC					86

Products GUIDE

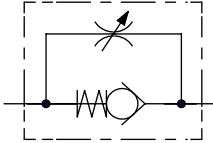
check valves

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	CAVITY	PAGE
	UFC		350 [92,5]	400 [5800]	BSPP (GAS)	/	88
	UFS		70 [18,5]				
	UTC		45 [12]	400 [5800]			90
	UMC		70 [18,4]	500 [7250]			92
	UMS		50 [13,2]				
	VUC		120 [31,66]	350 [5075]		FC119 FC111 FC112 FC113 FC114	94
	VUD					FC120 FC107 FC108 FC109 FC110	96
	VUS		80 [21]			FC107 FC108 FC109 FC110	98

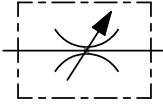
Hose burst

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	CAVITY	PAGE
	VBA		180 [47,5]	350 [5075]	BSPP (GAS)	FC100 FC101 FC102 FC103 FC104	100
	VBAT		80 [21,1]	320 [4641]		/	102

Unidirectional flow control valves

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE
	SUA		300 [79,2]	400 [5800]	BSPP (GAS)	104
	SUD		50 [13,2]			106
	VCU		110 [29,3]	350 [5075]		112

Bidirectional flow control valves

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE
	SBA		300 [79,2]	400 [5800]	BSPP (GAS)	108
	SBD		50 [13,2]			110
	VCB		45 [12]	350 [5075]		114

Flow control valves pressure compensated

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	CAVITY	PAGE
	CFR		45 [121]	250 [3625]	BSPP (GAS)	/	116
	RCT		240 [63,4]	210 [3050]		/	118
	RCP		150 [39,6]			/	120
	F1T		15 [3,96]	250 [3625]			122
	F1E						124
	F1C					/	126
	F2B					FC106	128

Relief valves with manifold

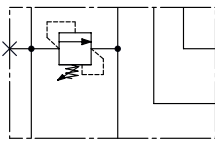
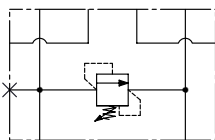
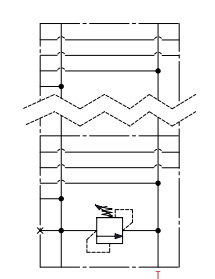
CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE		
	M20B		30 [8]	350 [5075]	BSPP (GAS)	130		
	M40B		50 [13,2]			132		
	M80B		80 [21,1]			134		
	VAA		50 [13,2]					136
	VAD							138

Sequence valves

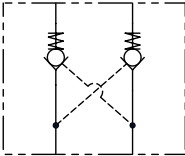
CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE
	VSD		50 [13,2]	350 [5075]	BSPP (GAS)	140

Products GUIDE

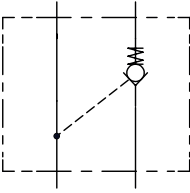
Cetop valves

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE
	MC3		50 [13,2]	350 [5075]	BSPP (GAS)	142
	MC5		80 [21,1]	210 [3050]		144
	MM		50 [13,2]			146

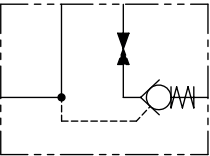
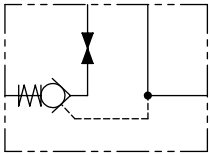
Double pilot check valves

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE
	VBD		50 [13,2]	350 [5075]	BSPP (GAS)	148
	VBDT					150
	VBDG		35 [9,2]			152
	VBR		20 [5,3]			154
	VPD		60 [15,83]			156
	VPF					158

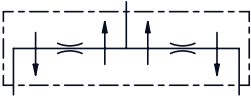
Single pilot check valves

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE
	VBS		50 [13,2]	350 [5075]	BSPP (GAS)	160
	VBST					162

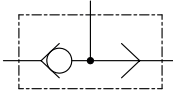
Products GUIDE

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE
	VSP DX		40 [10,52]	350 [5075]	BSPP (GAS)	164
	VSP SX					166
	VPL					168

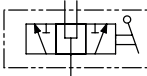
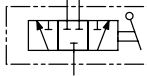
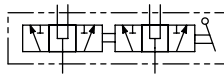
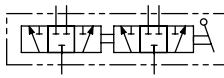
Flow dividers

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE
	VDF		40 [10,6]	210 [3050]	BSPP (GAS)	170

Shuttle valves

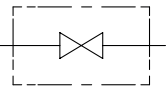
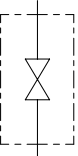
CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE
	VSS		45 [12]	350 [5075]	BSPP (GAS)	172
	VSSY		170 [45]	500 [7250]		174

High pressure flow diverters

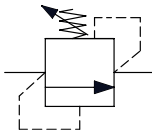
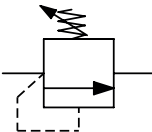
CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE			
	D3HA		120 [31,7]	500 [7250]	BSPP (GAS)	176			
	D3HC								
	D6HA					178			
	D6HC								

Products GUIDE

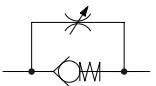
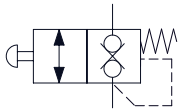
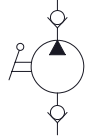
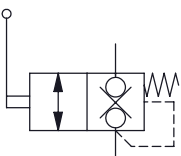
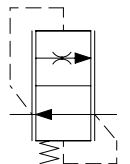
Shut-off valves, test couplings and tap valves

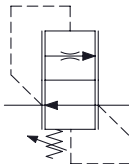
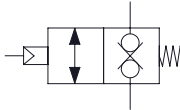
CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	CAVITY	PAGE
	SBR		50 [13,2]	400 [5800]	BSPP (GAS)	180
	RL			400 [5800]		182
	RT					183
	MPP		/	630 [9140]	/	184

Cartridge valves

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	CAVITY	PAGE
	M20		30 [8]	350 [5075]	SAE8/2	188
	M22					190
	M30		50 [13,5]		FC002	192
	M40				FC003	194
	M42				SAE10/2	196
	M80		80 [21,1]		FC005	198
	M161		120 [32]		FC010	200
	UC2		35 [9,2]	350 [5075]	SAE8/2	202
	US2					
	UC3		80 [21,13]		SAE10/2	204
	UC3M		40 [10,5]		FC011	206
	UC4M		110 [29]		FC012	208
	UC5S		160 [42]		FC013	210

Products GUIDE

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	CAVITY	PAGE
	CU2		40 [10,6]	350 [5075]	SAE8/2	212
	CB2					214
	VM2		30 [7,92]	350 [5075]	SAE8/2 FC003	216
	PM2		2 cm ³ [0,12 in ³]	200 [2900]	SAE8/2	218
	VC2		30 [7,9]	350 [5075]		220
	DC2		12 [3,17]	250 [3625]		222

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	CAVITY	PAGE
	DR2		35 [9,25]	350 [5075]	SAE8/2	224
	VP2		30 [7,92]			226
	VBC		60 [15,8]	350 [5075]	FC004	228
	VDF3		40 [10,6]		SAE10/4	230

Solenoid valves

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	CAVITY	PAGE	
	E2F28		22 [5,8]	250 [3625]	SAE8/2	234	
	E2S20C		40 [10,6]	350 [5075]		236	
	E2S20E						
	E2S20A						
	E2L20C						30 [7,92]
	E2L20E						
	E2L20A						

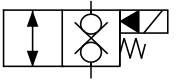
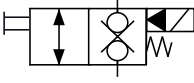
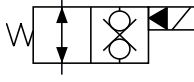
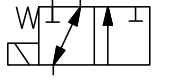
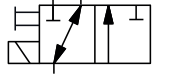
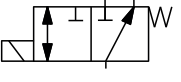
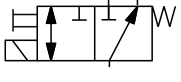
CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	CAVITY	PAGE
	E2S22C		40 [10,6]	350 [5076]	SAE8/2	240
	E2S22E					
	E2S22A					
	E2S24C					242
	E2S24E					
	E2S24E					
	E2S26C					244
	E2S26E					
	E2S26A					

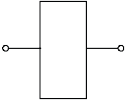
Products
GUIDE

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	CAVITY	PAGE
	E2S28C		40 [10,6]	350 [5076]	SAE8/2	246
	E2S28E					
	E2S28A					
	E3S20C		70 [18,7]	350 [5076]	SAE10/2	248
	E3S20E					
	E3S20A					

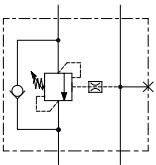
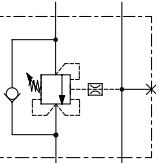
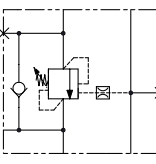
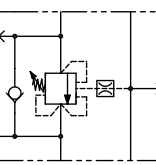
CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	CAVITY	PAGE
	E3S22C		70 [18,7]	350 [5076]	SAE10/2	250
	E3S22E					
	E3S22A					
	E3S24C					252
	E3S24E					
	E3S24A					
	E3S26C					254
	E3S26E					
	E3S26A					

Products GUIDE

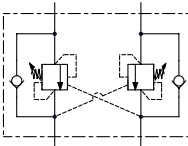
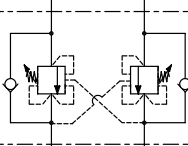
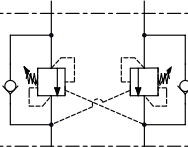
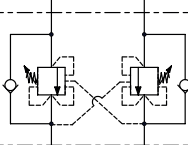
CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	CAVITY	PAGE
	E3S28C		70 [18,7]	350 [5076]	SAE10/2	256
	E3S28E					
	E3S28A					
	E6S30A		12 [3,2]	210 [2045]	SAE8/3	258
	E6S30E					260
	E6S31A					
	E6S31E					

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	CAVITY	PAGE
	C22		/	/	/	262
	CNS					264
	MANIFOLDS SAE8/2			350 [5076]	SAE8/2	266
	MANIFOLDS SAE10/2			350 [5076]	SAE10/2	268

SAE/NPTF Single counterbalance valves

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE
	BSA		160 [42,1]	350 [5075]	SAE	272
					NPTF	274
	BSC		60 [15,9]		SAE	276
					NPTF	278
	BSI				SAE	280
	BSL					282

SAE Double counterbalance valves

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE		
	BDA		160 [42,1]	350 [5075]	SAE	284		
					NPTF	286		
	BDC		60 [15,9]		SAE	288		
					NPTF	290		
	BFA				SAE	292		
	BFC						294	

Products GUIDE

SAE/NPTF Check valves

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE
	UFC		300 [79,2]	400 [5800]	SAE	296
			350 [92,5]		NPTF	298

SAE/NPTF Unidirectional flow control valves

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE
	SUA		300 [79,2]	400 [5800]	SAE	300
	SUD		35 [9,3]			302
	SUA		300 [79,2]		NPTF	304
	SUD		50 [13,2]			306

SAE/NPTF Bidirectional flow control valves

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE
	SBA		300 [79,2]	400 [5800]	SAE	308
	SBD		35 [9,3]			310
	SBA		300 [79,2]		NPTF	312
	SBD		50 [13,2]			314

SAE/NPTF Flow control valves pressure compensated

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE
	CFR		30 [7,9]	250 [3625]	SAE	316
			45 [12]		NPTF	318

SAE Relief valves with manifold

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE
	M20S		40 [10,5]	350 [5075]	SAE	320
	M40S		60 [15,8]			322
	M80S		80 [21,1]			324
	M161S		120 [32]			326
	VAA		50 [13,2]			328
	VAAH		80 [21,1]			330

SAE Double pilot check valves

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE
	VBD		50 [13,2]	350 [5075]	SAE	332
	VBTD		35 [9,2]			334
	VPD		60 [15,83]			336

SAE Single pilot check valves

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE
	VBS		50 [13,2]	350 [5075]	SAE	338
	VBST		35 [9,2]			340
	VPL		40 [10,6]			342
	VPS		35 [9,2]			344

SAE Shuttle valves

CIRCUIT	TYPE	3D	FLOW l/min [USgpm]	PRESSURE bar [PSI]	PORTS	PAGE
	VSS		45 [12]	350 [5075]	SAE	346

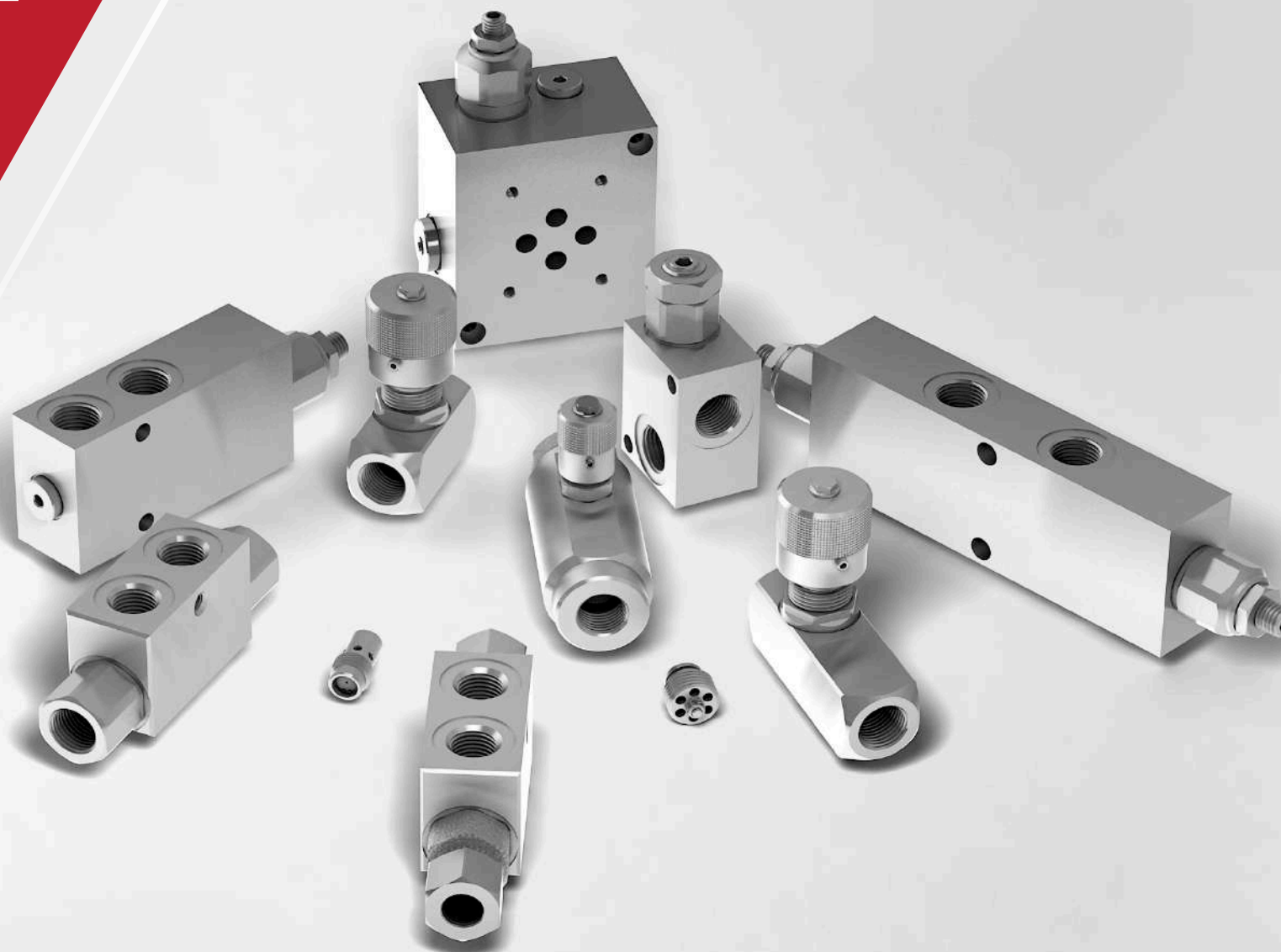
Cavity

	3D		PAGE
			350 - 362

BSPP IN-LINE valves

In-line valves are mounted inline on hydraulic circuit applications.

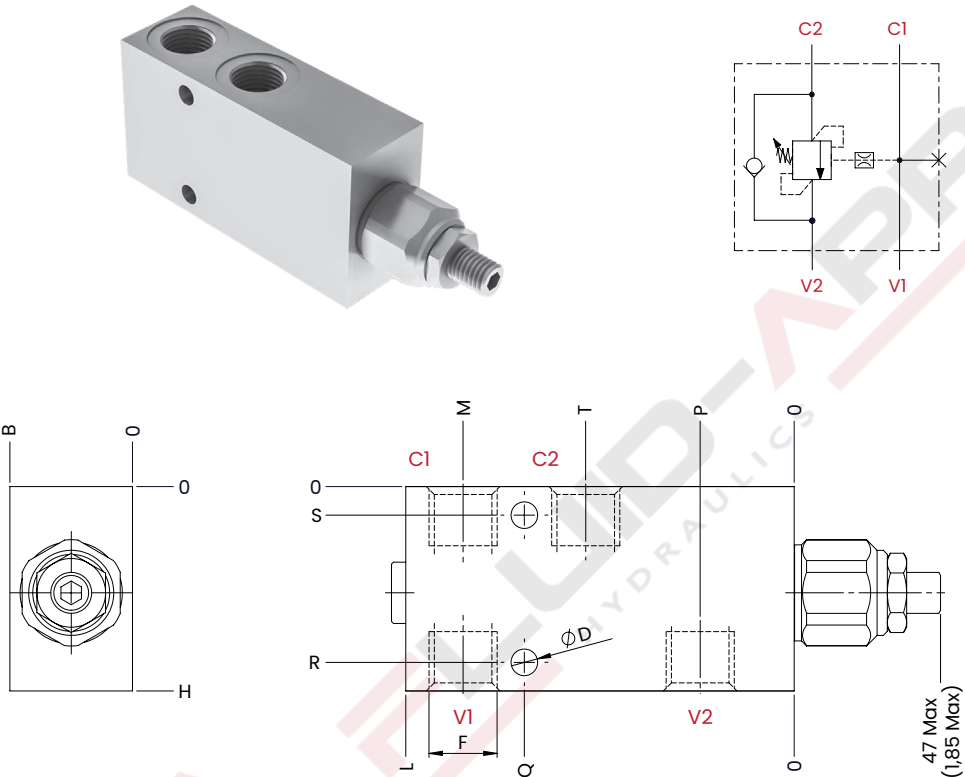
Within this category are available: counterbalance valves, check valves, flow control valves pressure compensated, shuttle valves, flow divider/combiner valves, sequence valves, pilot check valves, direct acting relief valves and single stages Cetop manifolds.



SINGLE COUNTERBALANCE VALVES FOR OPEN CENTER

BSA counterbalance valves (Gas thread) are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.

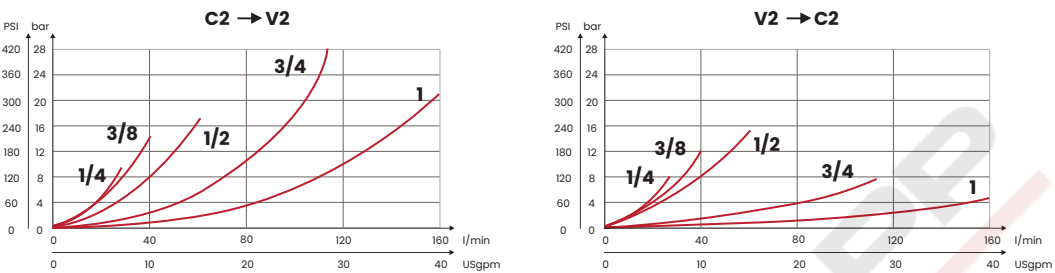
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS

F	H	B	ØD	L	M	P	Q	R	S	T
1/4 BSPP	50 [1,97]	30 [1,18]	8,5 [0,33]	95 [3,74]	82 [3,22]	23 [0,91]	66 [2,60]	43 [1,70]	7 [0,28]	50 [1,97]
3/8 BSPP										
1/2 BSPP	60 [2,36]			100 [3,94]	85 [3,34]	21 [0,83]	67,5 [2,66]	50 [1,97]		49 [1,93]
3/4 BSPP	70 [2,75]	40 [1,57]	10,5 [0,41]	140 [5,51]	120 [4,72]	26 [1,02]	95,5 [3,75]	60 [2,36]	10 [0,39]	71 [2,79]
1 BSPP	80 [3,15]	50 [1,97]		145 [5,71]	121 [4,76]		96 [3,78]	70 [2,75]		
Steel body (on request aluminium body - stainless steel AISI 316L body)										

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



ORDERING CODE

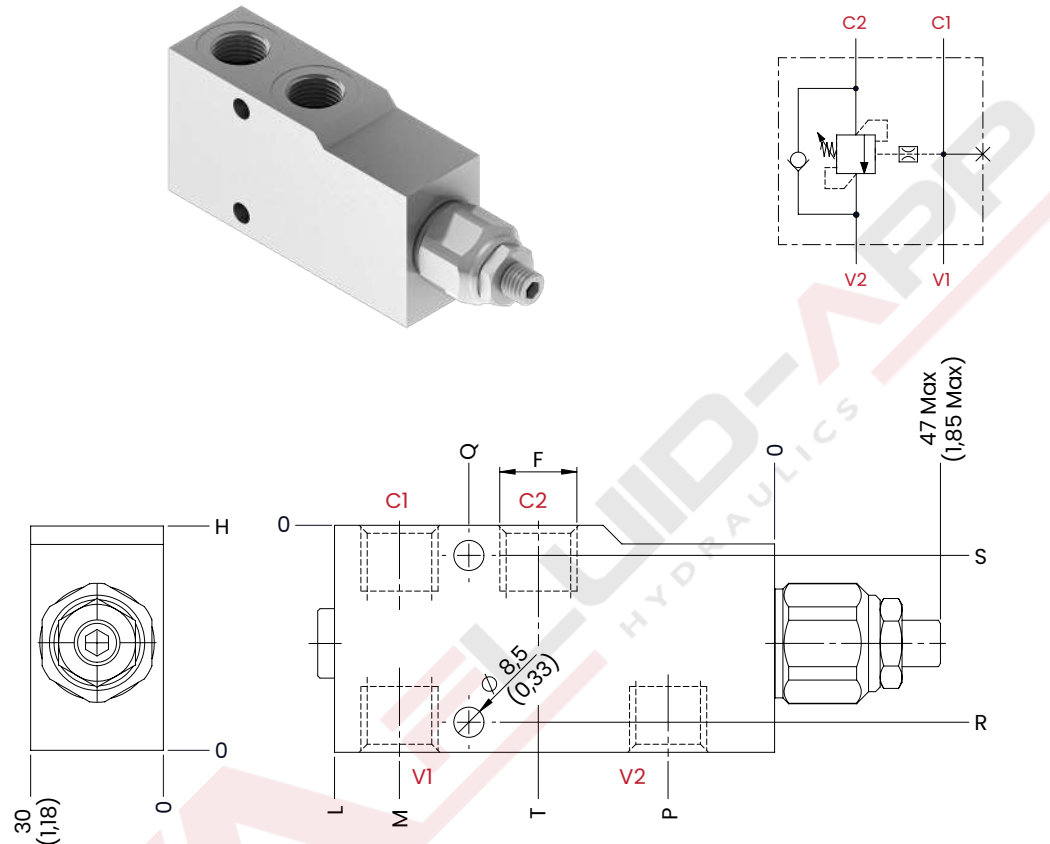
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA1001	BSA1B21	1/4 BSPP	30 [7,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25 On request 1:8,1	1,10 [2,42]
FA1002	BSA1B35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA1003	BSA2B21	3/8 BSPP	40 [10,6]		210 [3045]	30/210 [435/3045]	80 [1160]		1,05 [2,31]
FA1004	BSA2B35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA1005	BSA3B21	1/2 BSPP	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]		1,25 [2,76]
FA1006	BSA3B35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA1007	BSA4B21	3/4 BSPP	110 [4,33]		210 [3045]	30/210 [435/3045]	70 [966]	1:6,2	2,7 [6]
FA1008	BSA4B35				350 [5075]	60/350 [870/5075]	145 [2100]		
FA1009	BSA5B21	1 BSPP	160 [6,29]		210 [3045]	30/210 [435/3045]	70 [966]	On request 1:10,6	4,7 [10,3]
FA1010	BSA5B35				350 [5075]	60/350 [870/5075]	145 [2100]		
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]				

BSAY COUNTERBALANCE BSPP

SINGLE COUNTERBALANCE VALVES FOR OPEN CENTER

BSAY counterbalance valves (Gas thread) are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.

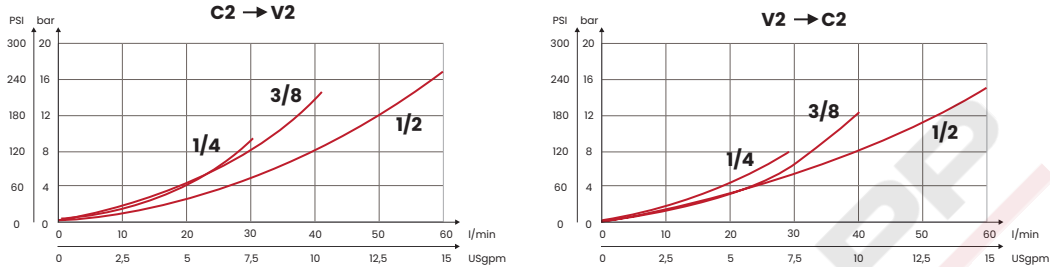
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS

F	H	L	M	P	Q	R	S	T
1/4 BSPP	50 [1,97]	95 [3,74]	82 [3,22]	23 [0,90]	66 [2,28]	43 [1,69]	7 [0,27]	50 [1,97]
3/8 BSPP								
1/2 BSPP	60 [2,36]	100 [3,93]	85 [3,34]	21 [0,82]	67,5 [2,65]	50 [1,96]	10 [0,39]	49 [1,93]
Steel body (on request stainless steel AISI 316L body)								

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



ORDERING CODE

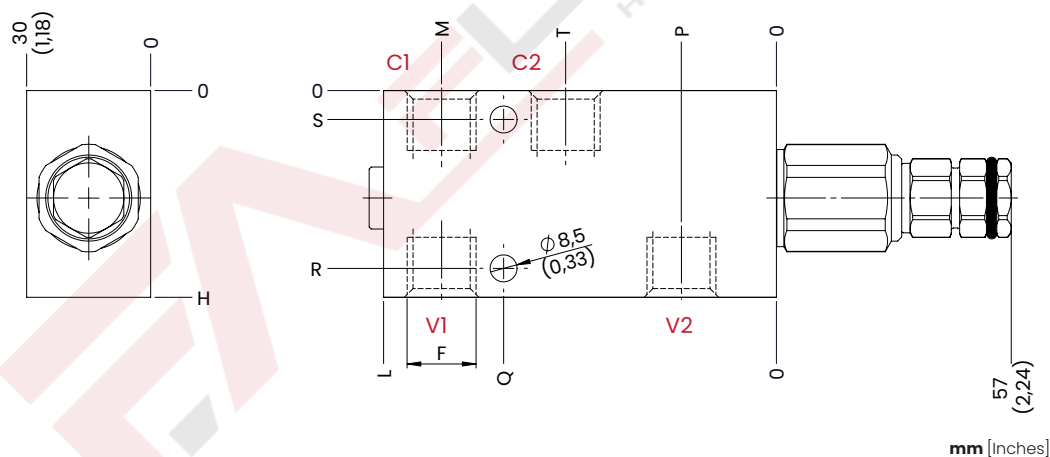
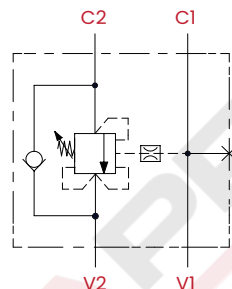
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]	
FA1013	BSA1B21YA	1/4 BSPP	30 [7,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25 On request 1:8,1	1,05 [2,3]	
FA1014	BSA1B35YA				350 [5075]	60/350 [870/5075]	135 [1960]			
FA1015	BSA2B21YA	3/8 BSPP	40 [10,6]		210 [3045]	30/210 [435/3045]	80 [1160]		1 [2,2]	
FA1016	BSA2B35YA				350 [5075]	60/350 [870/5075]	135 [1960]			
FA1017	BSA3B21YA	1/2 BSPP	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]		1,2 [2,65]	
FA1018	BSA3B35YA				350 [5075]	60/350 [870/5075]	135 [1960]			
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]					

SINGLE COUNTERBALANCE VALVES FOR CLOSED CENTER

BSC counterbalance valves (Gas thread) are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.



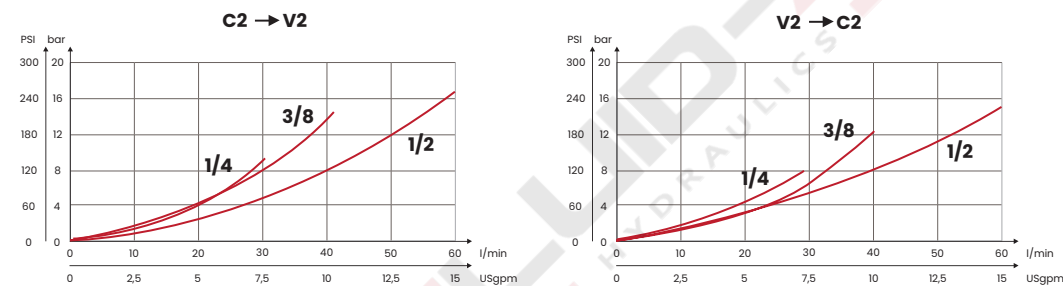
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS

[illegible]

PERFORMANCES

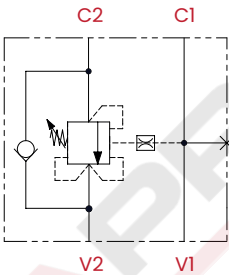
**ORDERING CODE**

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]		
FA1019	BSC1B21	1/4 BSPP	30 [7,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25 On request 1:8,1	1,15 [2,53]		
FA1020	BSC1B35				350 [5075]	60/350 [870/5075]	135 [1960]				
FA1021	BSC2B21	3/8 BSPP	40 [10,6]		210 [3045]	30/210 [435/3045]	80 [1160]		1,10 [2,42]		
FA1022	BSC2B35				350 [5075]	60/350 [870/5075]	135 [1960]				
FA1023	BSC3B21	1/2 BSPP	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]		1,28 [2,84]		
FA1024	BSC3B35				350 [5075]	60/350 [870/5075]	135 [1960]				
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]						

SINGLE COUNTERBALANCE VALVES FOR CLOSED CENTER

BSCY counterbalance valves (Gas thread) are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.

HYDRAULIC CIRCUIT

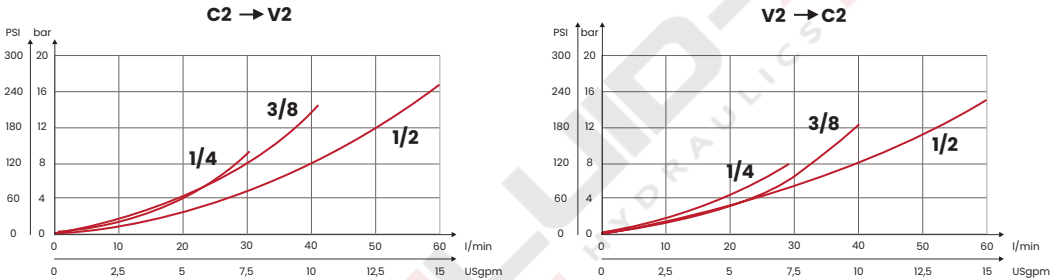


TECHNICAL CHARACTERISTICS

mm [Inches]

M	H	L	M	P	Q	R	S	T
82 [3,22]	50 [1,97]	95 [3,74]	82 [3,22]	23 [0,90]	66 [2,28]	43 [1,69]	7 [0,27]	50 [1,97]
85 [3,34]	60 [2,36]	100 [3,93]	85 [3,34]	21 [0,82]	67,5 [2,65]	50 [1,96]	10 [0,39]	49 [1,93]
Steel body (on request stainless steel AISI 316L body)								

PERFORMANCES



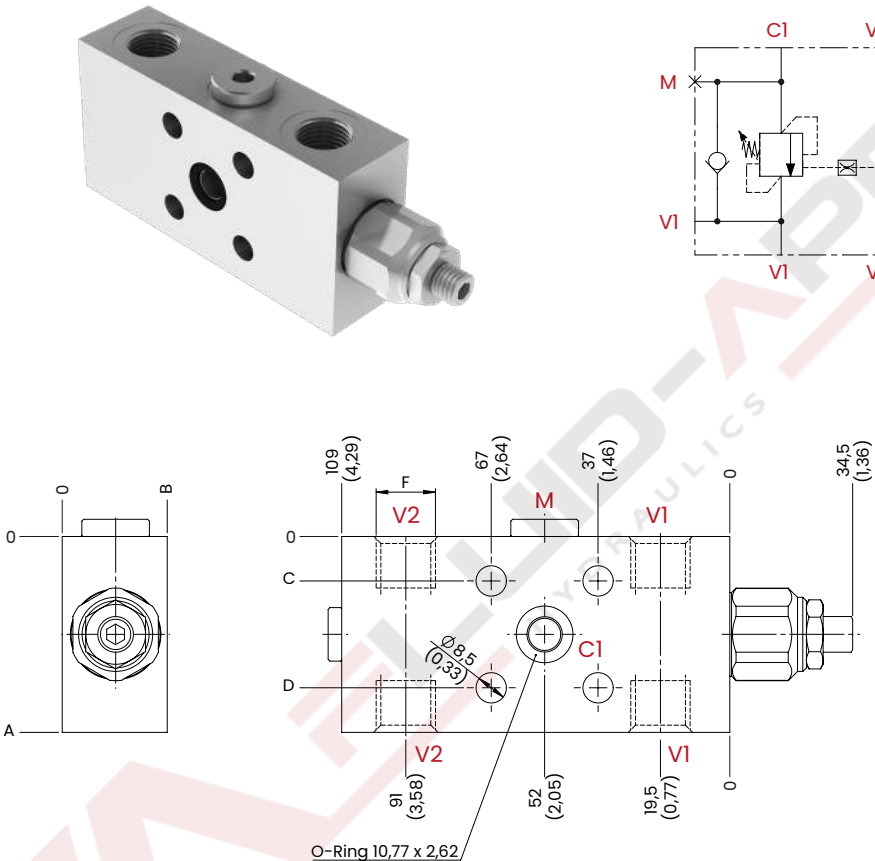
ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [usgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]	
FA1118	BSC1B21YA	1/4 BSPP	30 [7,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25 On request 1:8,1	1,05 [2,3]	
FA1119	BSC1B35YA				350 [5075]	60/350 [870/5075]	135 [1960]			
FA1120	BSC2B21YA	3/8 BSPP	40 [10,6]		210 [3045]	30/210 [435/3045]	80 [1160]		1 [2,2]	
FA1121	BSC2B35YA				350 [5075]	60/350 [870/5075]	135 [1960]			
FA1122	BSC3B21YA	1/2 BSPP	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]		1,2 [2,65]	
FA1123	BSC3B35YA				350 [5075]	60/350 [870/5075]	135 [1960]			
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]					

SINGLE COUNTERBALANCE VALVES FOR OPEN CENTER, SINGLE FLANGED VERSION

The BSI counterbalance valves (Gas thread) allow you to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by sending the oil to drain.

HYDRAULIC CIRCUIT

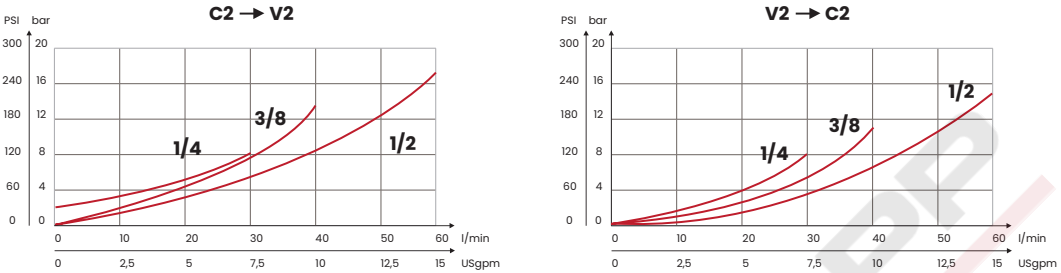


TECHNICAL CHARACTERISTICS

F	A	B	C	D
1/4 BSPP	55 [2,16]	29,5 [1,16]	12,5 [0,49]	42,5 [1,67]
3/8 BSPP				
1/2 BSPP	65 [2,56]	34,5 [1,36]	17,5 [0,68]	47,5 [1,87]

Steel body (on request stainless steel AISI 316L body)

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



CODE
62200021

ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA1027	BSI1B21	1/4 BSPP	30 [7,9]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25 On request 1:8,1	350 [5075]	0,85 [1,87]
FA1028	BSI1B35			350 [5075]	60/350 [870/5075]	135 [1960]			
FA1029	BSI2B21	3/8 BSPP	40 [10,6]	210 [3045]	30/210 [435/3045]	80 [1160]			0,80 [1,76]
FA1030	BSI2B35			350 [5075]	60/350 [870/5075]	135 [1960]			
FA1031	BSI3B21	1/2 BSPP	60 [15,9]	210 [3045]	30/210 [435/3045]	80 [1160]		350 [5075]	0,75 [1,65]
FA1032	BSI3B35			350 [5075]	60/350 [870/5075]	135 [1960]			

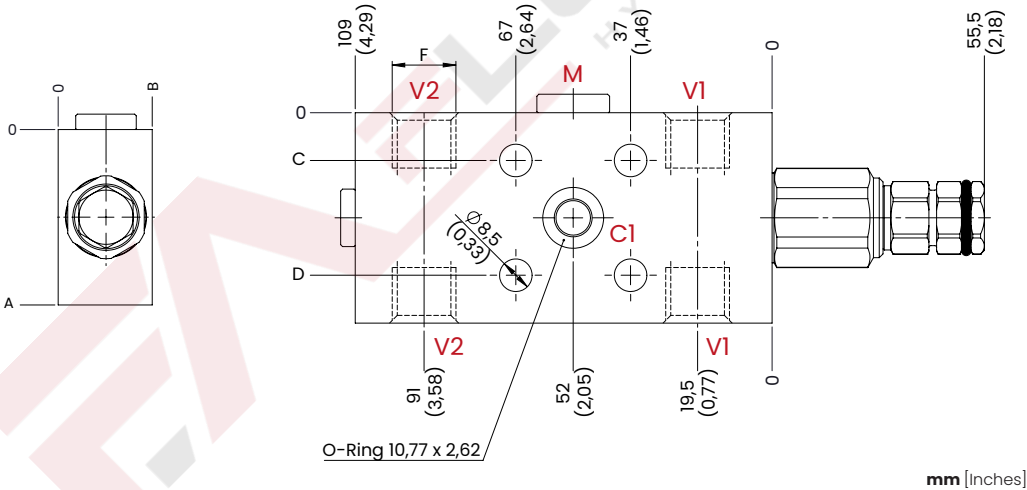
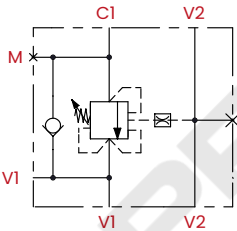
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm] Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]

BSL COUNTERBALANCE BSPP

SINGLE COUNTERBALANCE VALVES FOR CLOSED CENTER, SINGLE FLANGED VERSION

The BSL counterbalance valves (Gas thread) allow you to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by sending the oil to drain.

HYDRAULIC CIRCUIT

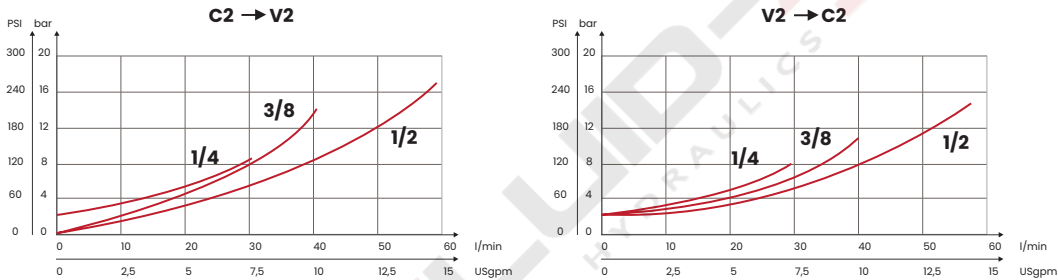


TECHNICAL CHARACTERISTICS

mm [Inches]

F	A	B	C	D
1/4 BSPP	55 [2,16]	29,5 [1,16]	12,5 [0,49]	42,5 [1,67]
3/8 BSPP				
1/2 BSPP	65 [2,56]	34,5 [1,36]	17,5 [0,68]	47,5 [1,87]
Steel body (on request stainless steel AISI 316L body)				

PERFORMANCES



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [usgpm]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA1033	BSL1B21	1/4 BSPP	30 [7,9]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25 On request 1:8,1	350 [5075]	0,9 [1,98]
FA1034	BSL1B35			350 [5075]	60/350 [870/5075]	135 [1960]			
FA1035	BSL2B21	3/8 BSPP	40 [10,6]	210 [3045]	30/210 [435/3045]	80 [1160]			0,85 [1,87]
FA1036	BSL2B35			350 [5075]	60/350 [870/5075]	135 [1960]			
FA1037	BSL3B21	1/2 BSPP	60 [15,9]	210 [3045]	30/210 [435/3045]	80 [1160]			0,75 [1,65]
FA1038	BSL3B35			350 [5075]	60/350 [870/5075]	135 [1960]			
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]				

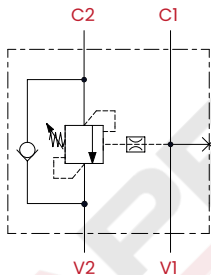
UPDATE Jan. 2025 (v.03)

BSD COUNTERBALANCE BSPP

SINGLE COUNTERBALANCE VALVES IN LINE, FOR OPEN CENTER

BSD counterbalance valves (Gas thread) are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.

HYDRAULIC CIRCUIT

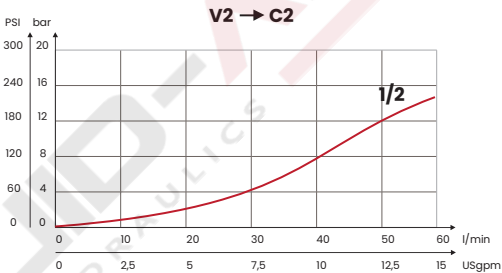
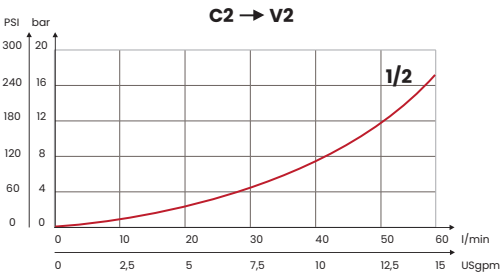


TECHNICAL CHARACTERISTICS

mm [Inches]

F	B	H	M	I
1/2 BSPP	35 [1,38]	60 [2,36]	1/4 BSPP	54 [2,13]
Steel body (on request aluminium body)				

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



ORDERING CODE

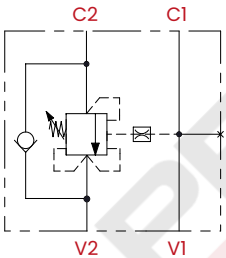
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA1089	BSD3B21	1/2 BSPP	60 [15,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25	1,6 [3,53]
FA1090	BSD3B35				350 [5075]	60/350 [870/5075]	135 [1960]		
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]				

UPDATE Aug. 2025 (v.05)

SINGLE COUNTERBALANCE VALVES FOR CLOSED CENTER

BSE counterbalance valves (Gas thread) are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.

HYDRAULIC CIRCUIT

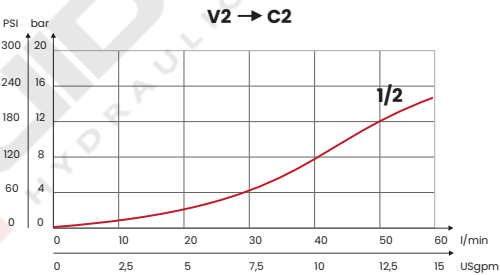
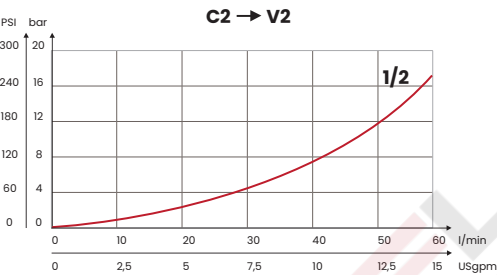


TECHNICAL CHARACTERISTICS

mm [Inches]

F	B	H	M	I
1/2 BSPP	35 [1,38]	60 [2,36]	1/4 BSPP	54 [2,13]
Steel body (on request aluminium body)				

PERFORMANCES



ORDERING CODE

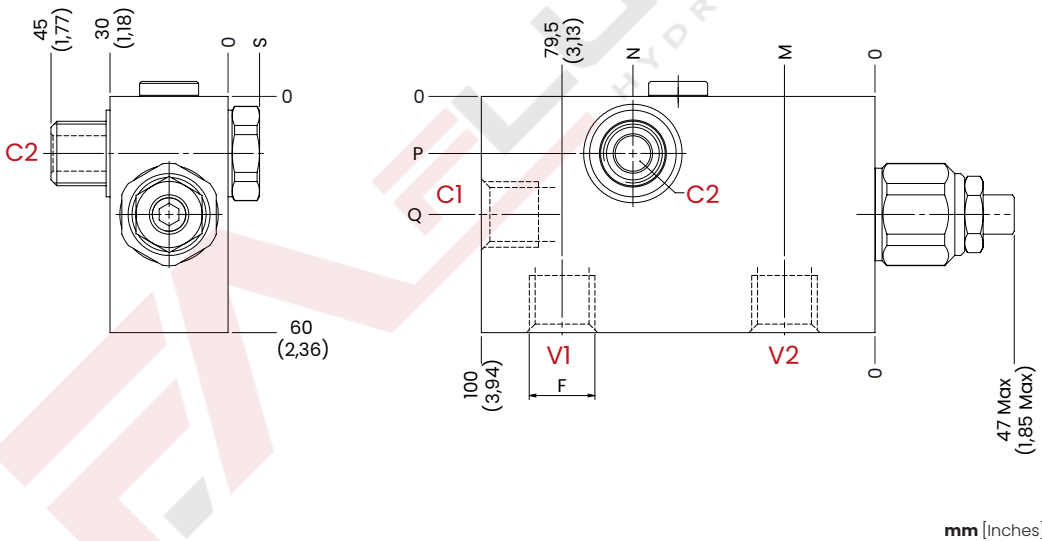
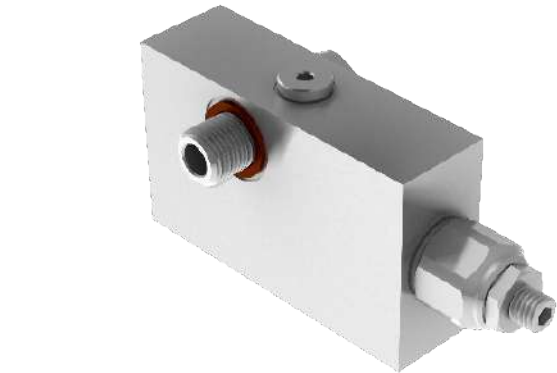
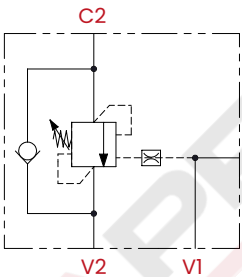
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA1085	BSE3B21	1/2 BSPP	60 [15,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25	1,6 [3,53]
FA1086	BSE3B35				350 [5075]	60/350 [870/5075]	135 [1960]		
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]				

BSB COUNTERBALANCE BSPP

BOLT FITTING SINGLE COUNTERBALANCE VALVES FOR OPEN CENTER

BSB counterbalance valves (Gas thread) are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil, bolt fitting version.

HYDRAULIC CIRCUIT

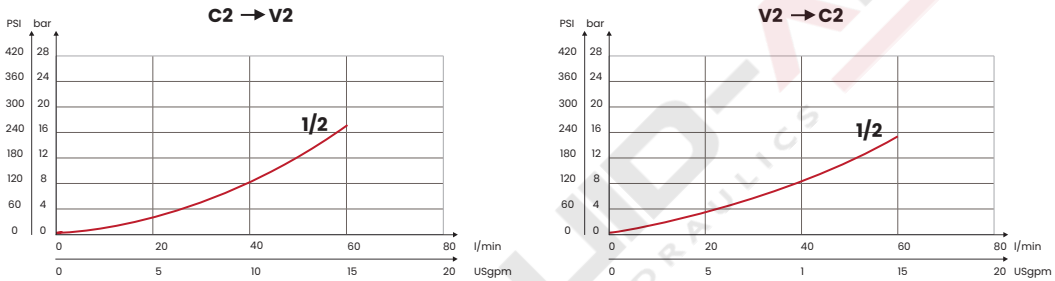


TECHNICAL CHARACTERISTICS

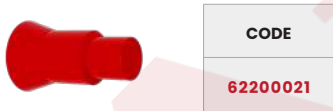
mm [Inches]

F	N	M	P	Q	S
1/2 BSPP	63,5 [2,5]	21 [0,82]	15 [0,59]	32 [1,26]	10,5 [0,41]
Steel body (on request aluminium body)					

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA1073	BSB3B21	1/2 BSPP	60 [15,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25	1,36 [3]
FA1074	BSB3B35				350 [5075]	60/350 [870/5075]	135 [1960]	On request 1:8,1	
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]				

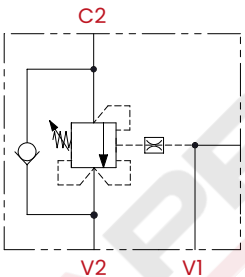
UPDATE May 2025 (v.02)

BSP COUNTERBALANCE BSPP

BOLT FITTING SINGLE COUNTERBALANCE VALVES FOR CLOSED CENTER

BSP counterbalance valves (Gas thread) are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil, bolt fitting version.

HYDRAULIC CIRCUIT

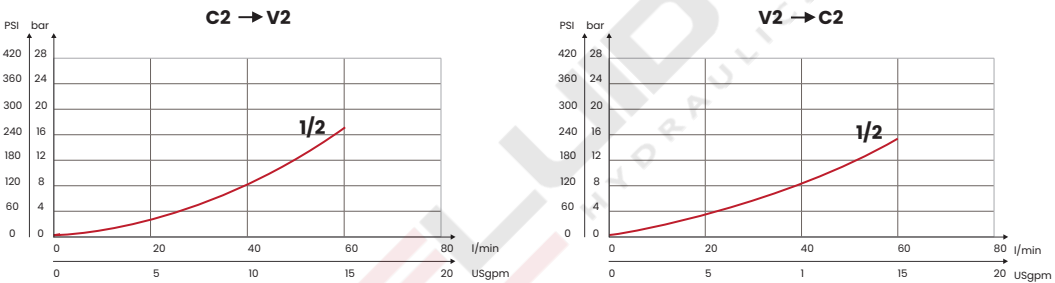


TECHNICAL CHARACTERISTICS

mm [Inches]

F	N	M	P	Q	S
1/2 BSPP	63,5 [2,5]	21 [0,82]	15 [0,59]	32 [1,26]	10,5 [0,41]
Steel body (on request aluminium body)					

PERFORMANCES



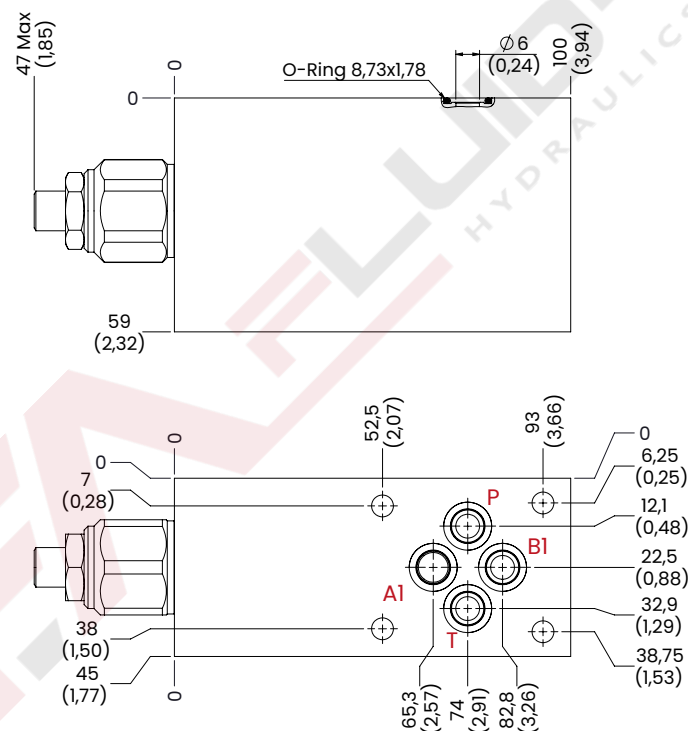
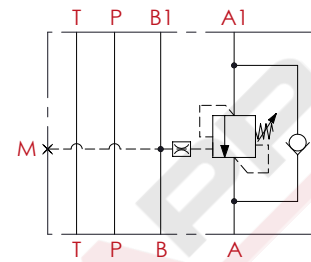
ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA1077	BSP3B21	1/2 BSPP	60 [15,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25	1,36 [3]
FA1078	BSP3B35				350 [5075]	60/350 [870/5075]	135 [1960]	On request 1:8,1	
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]				

SINGLE COUNTERBALANCE VALVES - CETOP 3 (A) FOR OPEN CENTER

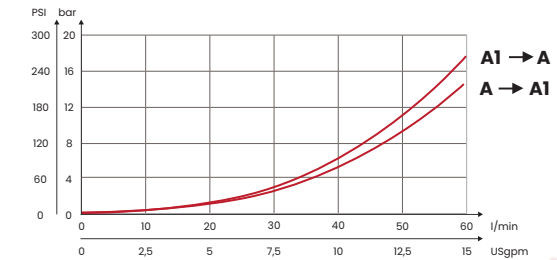
Counterbalance valves are used to keep a load locked, the built-in relief valve protects the system from over-pressure in the cylinder by draining the oil.

HYDRAULIC CIRCUIT



mm [Inches]

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



CODE
62200021

ORDERING CODE

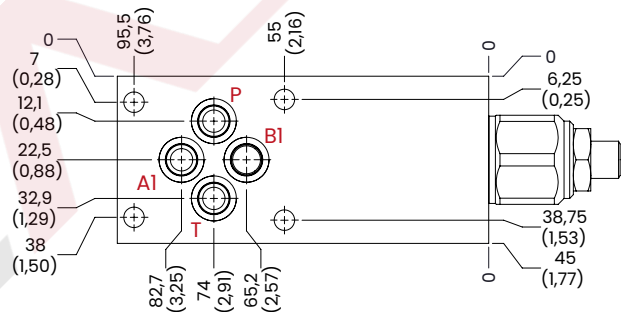
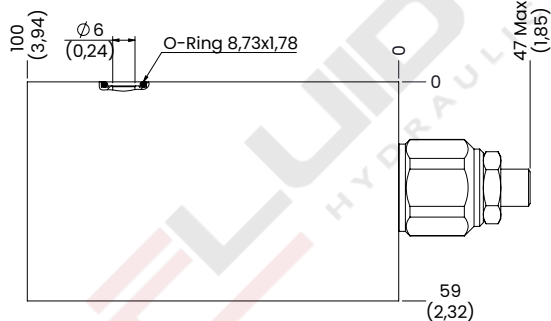
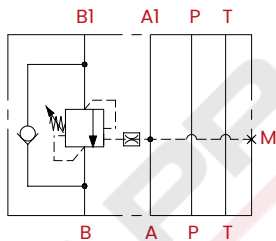
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA1106	BCG3C21	CETOP 3	60 [15,99]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25	2,03 [4,46]
FA1107	BCG3C35		350 [5075]	60/350 [870/5075]	135 [1960]	On request 1:8,1			
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm] Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]									
Steel body (on request aluminium body - stainless steel AISI 316L body)									

BCE COUNTERBALANCE CETOP3 "B"

SINGLE COUNTERBALANCE VALVES - CETOP 3 (B) FOR OPEN CENTER

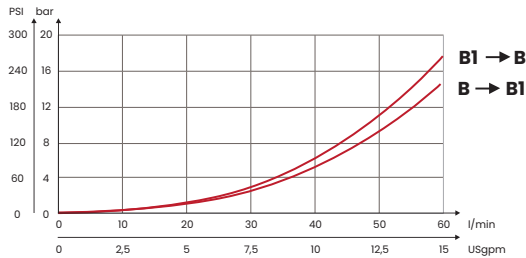
Counterbalance valves are used to keep a load locked, the built-in relief valve protects the system from over-pressure in the cylinder by draining the oil.

HYDRAULIC CIRCUIT



mm [Inches]

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



CODE
62200021

ORDERING CODE

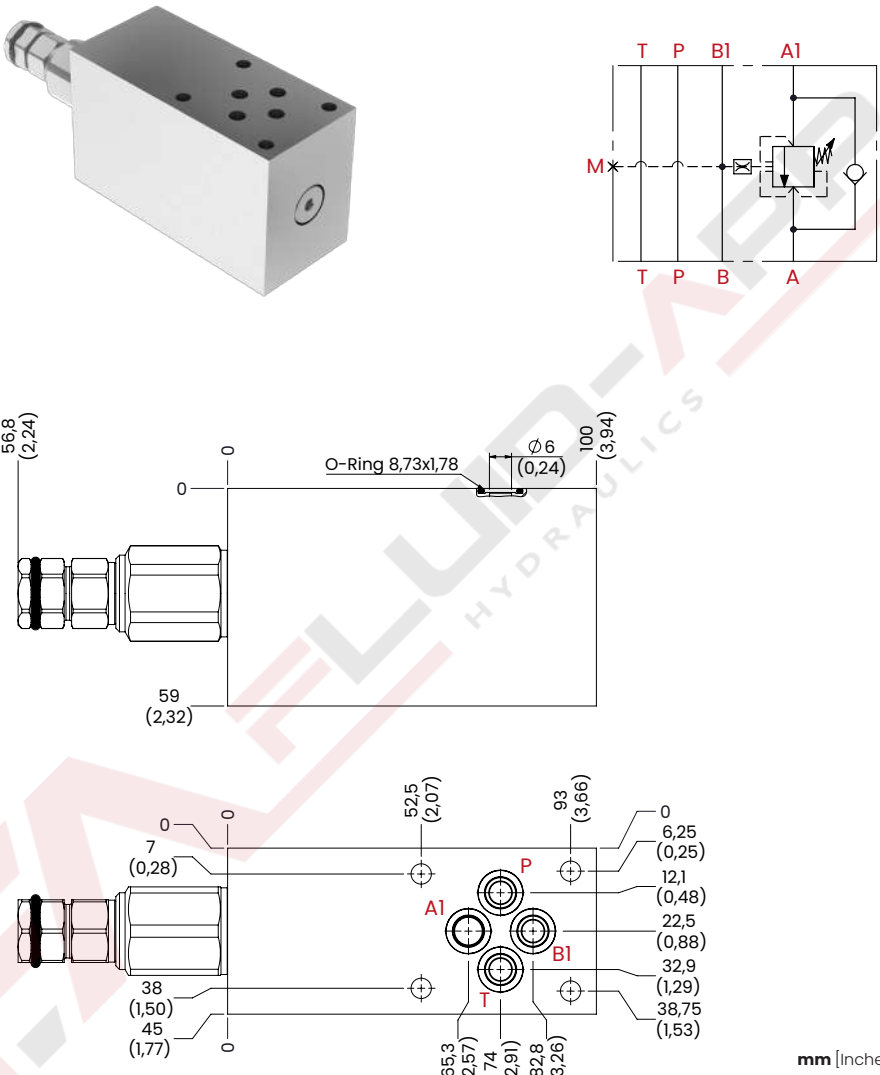
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA1100	BCE3C21	CETOP 3	60 [15,99]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25	2,03 [4,46]
FA1101	BCE3C35				350 [5075]	60/350 [870/5075]	135 [1960]	On request 1:8,1	
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]									
Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]									
Steel body (on request aluminium body – stainless steel AISI 316L body)									

BCH COUNTERBALANCE CETOP3 "A"

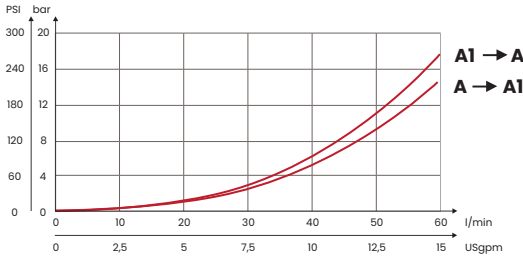
SINGLE COUNTERBALANCE VALVES - CETOP 3 (A) FOR CLOSED CENTER

Counterbalance valves are used to keep a load locked, the built-in relief valve protects the system from over-pressure in the cylinder by draining the oil.

HYDRAULIC CIRCUIT



PERFORMANCES



ORDERING CODE

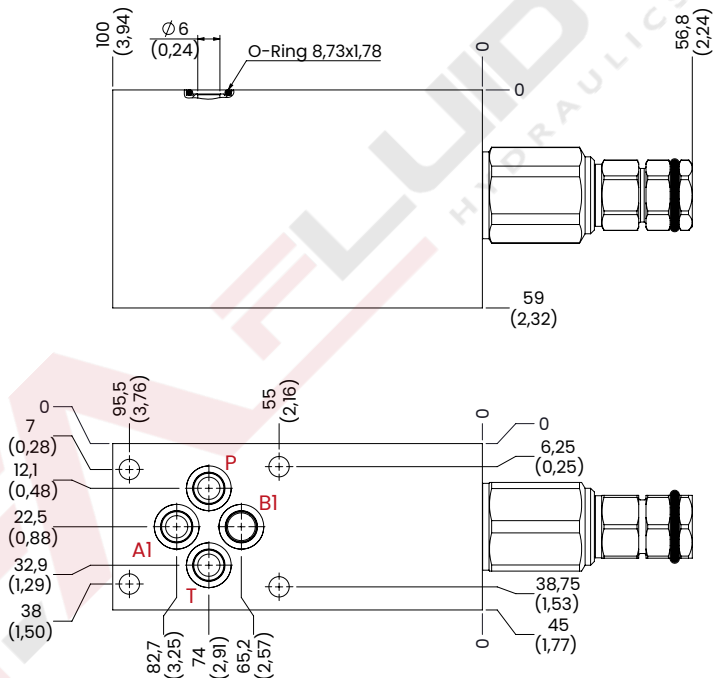
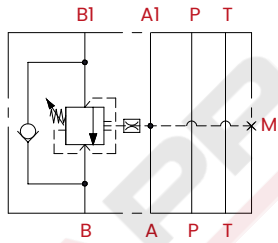
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA1104	BCH3C21	CETOP 3	60 [15,99]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25	2,09 [4,60]
FA1105	BCH3C35				350 [5075]	60/350 [870/5075]	135 [1960]	On request 1:8,1	
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]									
Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]									
Steel body (on request aluminium body - stainless steel AISI 316L body)									

BCF COUNTERBALANCE CETOP3 "B"

SINGLE COUNTERBALANCE VALVES - CETOP 3 (B) FOR CLOSED CENTER

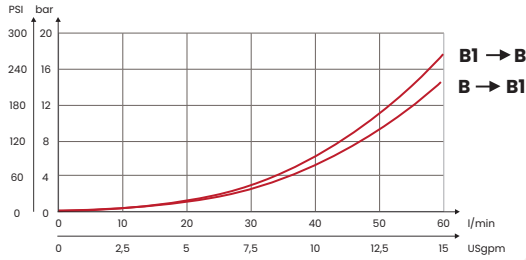
Counterbalance valves are used to keep a load locked, the built-in relief valve protects the system from over-pressure in the cylinder by draining the oil.

HYDRAULIC CIRCUIT



mm [Inches]

PERFORMANCES



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA1102	BCF3C21	CETOP 3	60 [15,99]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25	2,09 [4,60]
FA1103	BCF3C35				350 [5075]	60/350 [870/5075]	135 [1960]	On request 1:8,1	
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]									
Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]									
Steel body (on request aluminium body - stainless steel AISI 316L body)									

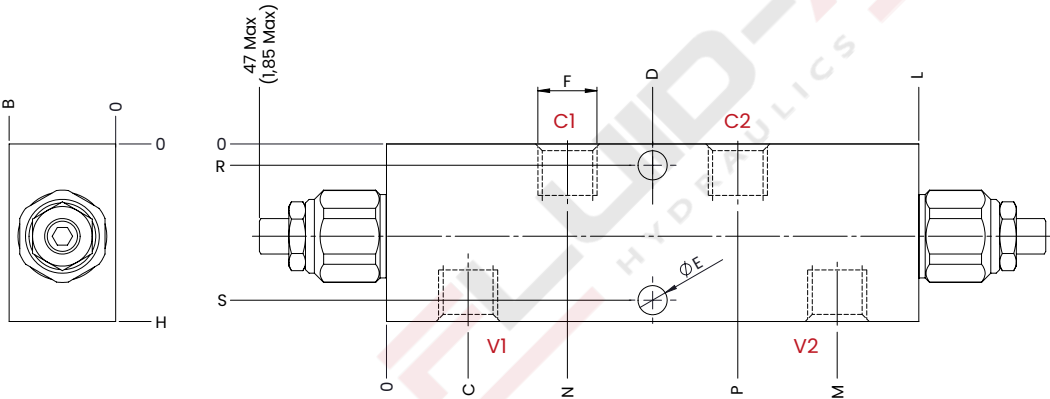
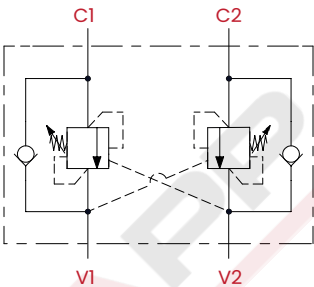
BDA COUNTERBALANCE BSPP

DOUBLE COUNTERBALANCE VALVES FOR OPEN CENTER

BDA counterbalance valves (Gas thread) are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.



HYDRAULIC CIRCUIT

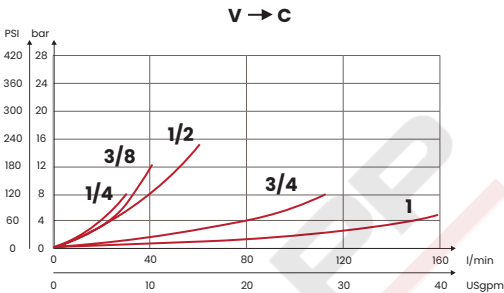
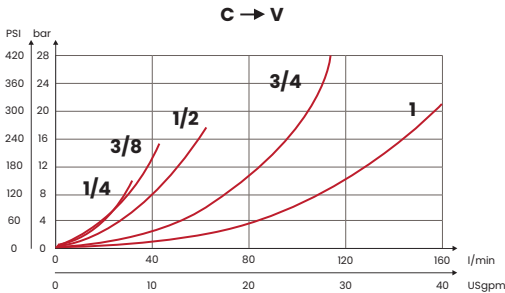


TECHNICAL CHARACTERISTICS

F	H	B	C	D	Ø E	L	M	N	P	R	S
1/4 BSPP	50 [1,97]	30 [1,18]	23 [0,91]	75 [2,95]	8,5 [0,33]	150 [5,90]	127 [5]	51 [2,01]	99 [3,9]	6 [0,24]	44 [1,75]
3/8 BSPP											
1/2 BSPP	60 [2,36]		21 [0,83]				129 [5,08]			8,5 [0,33]	51,5 [2,03]
3/4 BSPP	70 [2,75]	40 [1,57]	26 [1,02]	105 [4,13]	10,5 [0,41]	210 [8,27]	184 [7,24]	71 [2,78]	139 [5,47]	9 [0,35]	61 [2,4]
1 BSPP	80 [3,15]	50 [1,97]								10 [0,39]	70 [2,75]

Steel body (on request aluminium body - stainless steel AISI 316L body)

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



CODE
62200021

ORDERING CODE

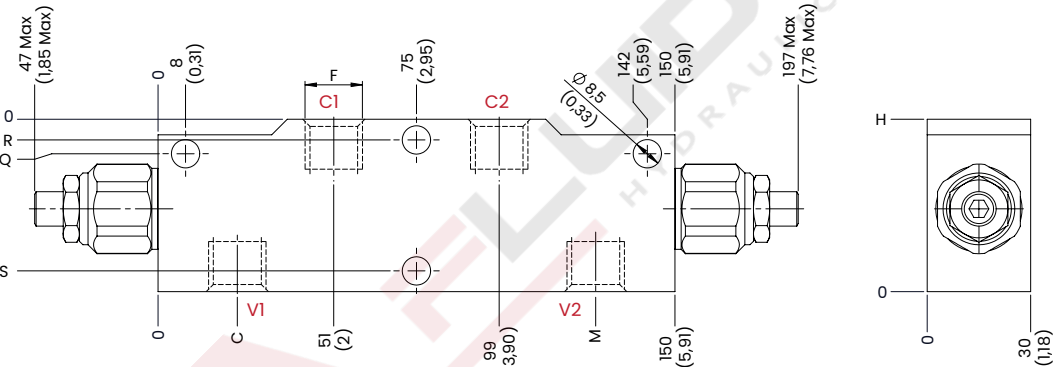
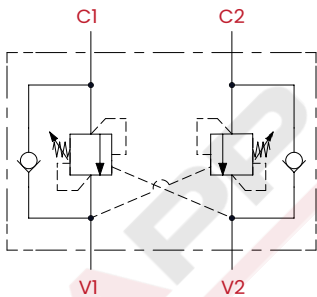
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA2001	BDA1B21	1/4 BSPP	30 [7,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25 On request 1:8,1	1,80 [4]
FA2002	BDA1B35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA2003	BDA2B21	3/8 BSPP	40 [10,6]		210 [3045]	30/210 [435/3045]	80 [1160]		1,72 [3,8]
FA2004	BDA2B35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA2005	BDA3B21	1/2 BSPP	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]		2 [4,4]
FA2006	BDA3B35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA2007	BDA4B21	3/4 BSPP	110 [28,9]		210 [3045]	30/210 [435/3045]	70 [966]	1:6,2 On request 1:10,6	4,30 [9,46]
FA2008	BDA4B35				350 [5075]	60/350 [870/5075]	145 [2100]		
FA2009	BDA5B21	1 BSPP	160 [42,1]		210 [3045]	30/210 [435/3045]	70 [966]		6,8 [15]
FA2010	BDA5B35				350 [5075]	60/350 [870/5075]	145 [2100]		
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm] Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]									

BDAY COUNTERBALANCE BSPP

DOUBLE COUNTERBALANCE VALVES FOR OPEN CENTER

BDAY counterbalance valves (Gas thread) are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.

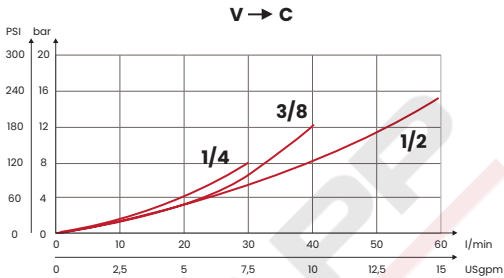
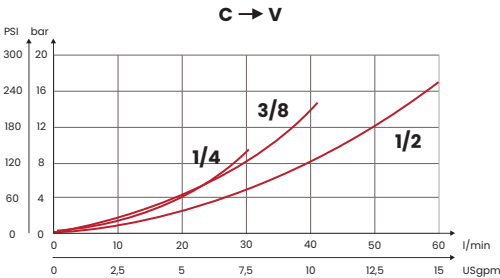
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS

F	H	C	M	Q	R	S
1/4 BSPP	50 [1,97]	23 [0,91]	127 [5]	10 [0,39]	6 [0,24]	44 [1,75]
3/8 BSPP						
1/2 BSPP	60 [2,36]	21 [0,83]	129 [5,08]	12,5 [0,49]	8,5 [0,33]	51,5 [2,03]
Steel body (on request stainless steel AISI 316L body)						

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



CODE
62200021

ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [usgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]	
FA2011	BDA1B21YA	1/4 BSPP	30 [7,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25	1,8 [4]	
FA2012	BDA1B35YA				350 [5075]	60/350 [870/5075]	135 [1960]			
FA2013	BDA2B21YA	3/8 BSPP	40 [10,6]		210 [3045]	30/210 [435/3045]	80 [1160]		1,72 [3,8]	
FA2014	BDA2B35YA				350 [5075]	60/350 [870/5075]	135 [1960]			
FA2015	BDA3B21YA	1/2 BSPP	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]		2 [4,4]	
FA2016	BDA3B35YA				350 [5075]	60/350 [870/5075]	135 [1960]			
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]					

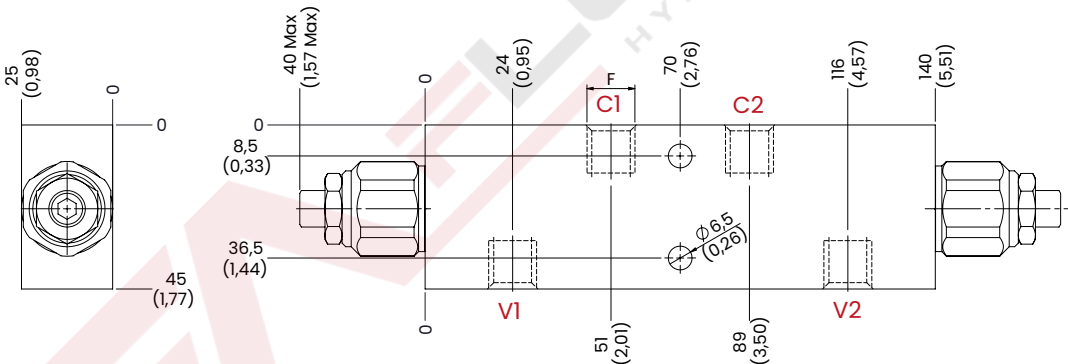
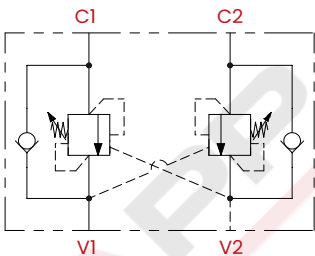
UPDATE: Jan. 2025 (v.07)

BDD COUNTERBALANCE BSPP

DOUBLE COUNTERBALANCE VALVES FOR OPEN CENTER

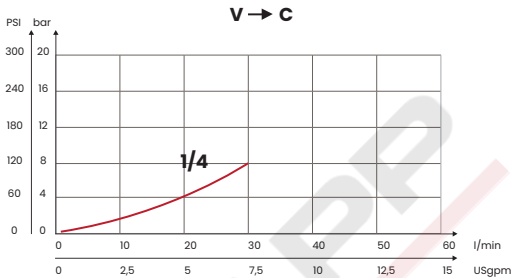
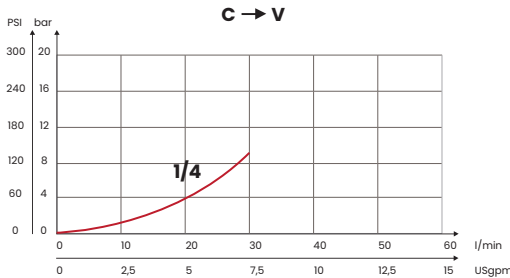
BDD counterbalance valves (Gas thread) are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.

HYDRAULIC CIRCUIT



mm [Inches]

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



CODE
62200021

ORDERING CODE

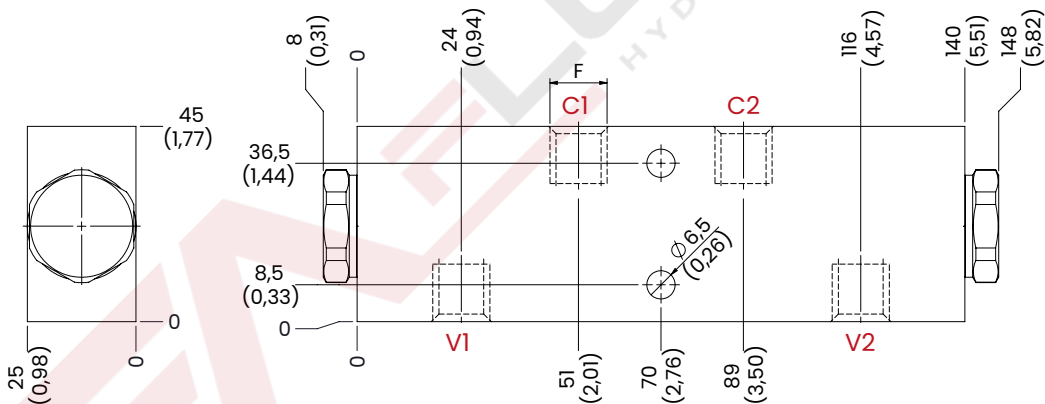
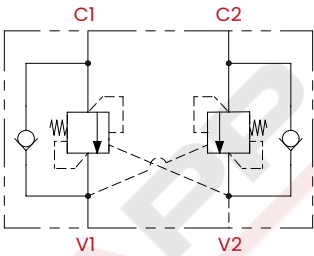
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA2087	BDD1B21	1/4 BSPP	30 [7,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25	1,25 [2,75]
FA2088	BDD1B35				350 [5075]	60/350 [870/5075]	135 [1960]	On request 1:8,1	
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]									
Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]									
Steel body (on request aluminium body - stainless steel AISI 316L body)									

BDE COUNTERBALANCE BSPP

DOUBLE COUNTERBALANCE VALVES FIXED SETTING FOR OPEN CENTER

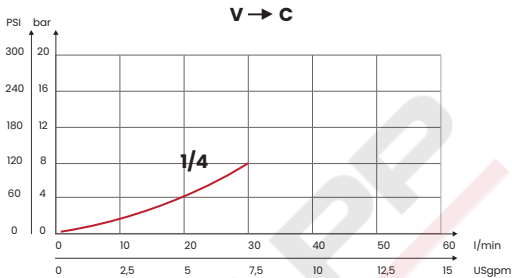
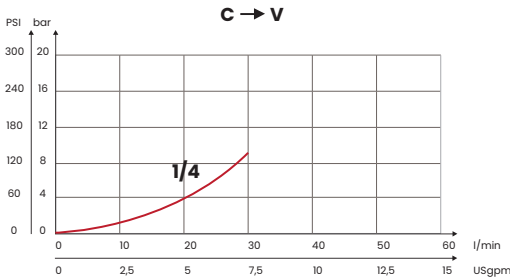
BDE counterbalance valves (Gas thread) are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.

HYDRAULIC CIRCUIT



mm [Inches]

PERFORMANCES



ORDERING CODE

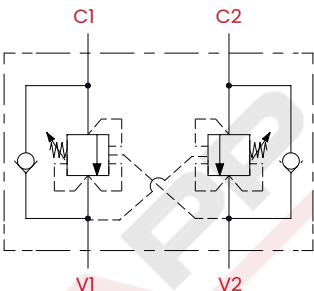
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	SETTING bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA2085	BDE1B21	1/4 BSPP	30 [7,9]	350 [5075]	210 [3045]	1:4,25	1,25 [2,75]
FA2086	BDE1B35				350 [5075]	On request 1:8,1	
Steel body (on request aluminium body - stainless steel AISI 316L body)							

BDC COUNTERBALANCE BSPP

DOUBLE COUNTERBALANCE VALVES FOR CLOSED CENTER

BDC counterbalance valves (Gas thread) are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.

HYDRAULIC CIRCUIT

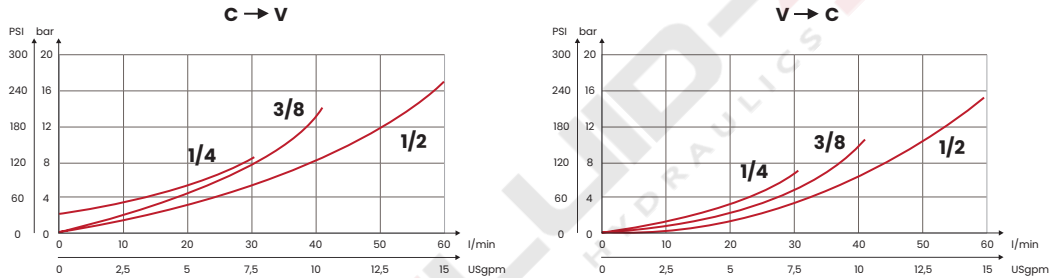


TECHNICAL CHARACTERISTICS

mm [Inches]

F	H	R	S	C	M
1/4 BSPP	50 [1,97]	6 [0,24]	44 [1,73]	23 [0,91]	127 [5]
3/8 BSPP					
1/2 BSPP	60 [2,36]	8,5 [0,33]	51,5 [2,03]	21 [0,83]	129 [5,08]
Steel body (on request aluminium body - stainless steel AISI 316L body)					

PERFORMANCES



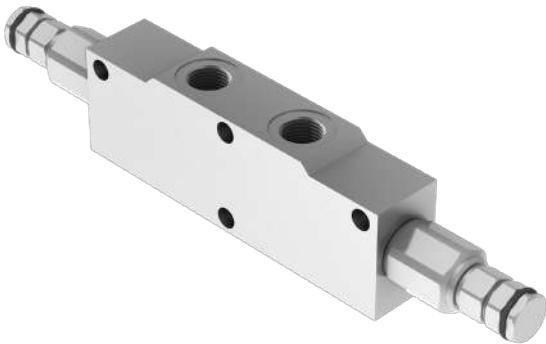
ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA2017	BDC1B21	1/4 BSPP	30 [7,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25 On request 1:8,1	1,9 [4,2]
FA2018	BDC1B35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA2019	BDC2B21	3/8 BSPP	40 [10,6]		210 [3045]	30/210 [435/3045]	80 [1160]		1,83 [4]
FA2020	BDC2B35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA2021	BDC3B21	1/2 BSPP	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]		2,10 [4,6]
FA2022	BDC3B35				350 [5075]	60/350 [870/5075]	135 [1960]		
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]				

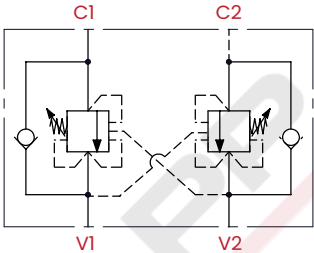
BDCY COUNTERBALANCE BSPP

DOUBLE COUNTERBALANCE VALVES FOR CLOSED CENTER

BDCY counterbalance valves (Gas thread) are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.



HYDRAULIC CIRCUIT



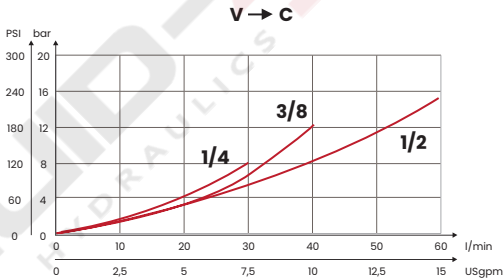
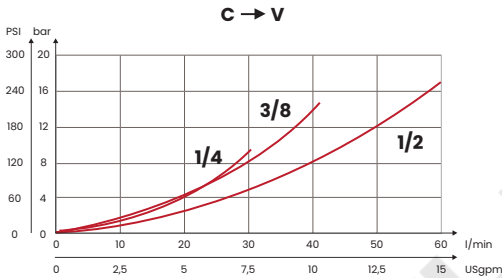
TECHNICAL CHARACTERISTICS

mm [Inches]

F	H	P	Q	R
1/4 BSPP	50 [1,97]	5,5 [0,22]	40,5 [1,59]	44,5 [1,75]
3/8 BSPP				
1/2 BSPP	60 [2,36]	8,5 [0,33]	46,5 [1,83]	51,5 [1,03]

Steel body (on request stainless steel AISI 316L body)

PERFORMANCES



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA2112	BDC1B21YA	1/4 BSPP	30 [7,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25 On request 1:8,1	1,8 [4]
FA2113	BDC1B35YA				350 [5075]	60/350 [870/5075]	135 [1960]		
FA2114	BDC2B21YA	3/8 BSPP	40 [10,6]		210 [3045]	30/210 [435/3045]	80 [1160]		1,72 [3,8]
FA2115	BDC2B35YA				350 [5075]	60/350 [870/5075]	135 [1960]		
FA2116	BDC3B21YA	1/2 BSPP	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]		2 [4,4]
FA2117	BDC3B35YA				350 [5075]	60/350 [870/5075]	135 [1960]		

Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]

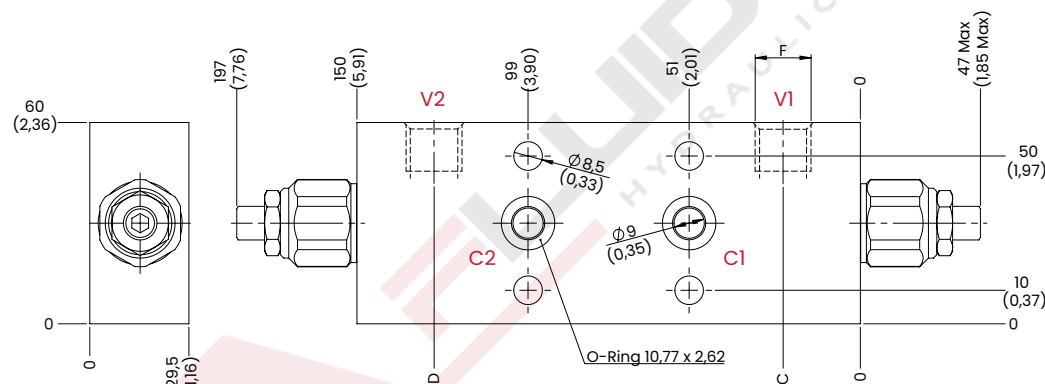
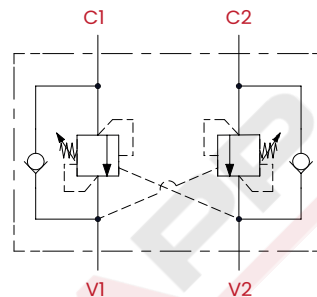
Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]

DOUBLE COUNTERBALANCE VALVES FOR OPEN CENTER – FLANGED VERSION

BFA counterbalance valves (Gas thread) are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.



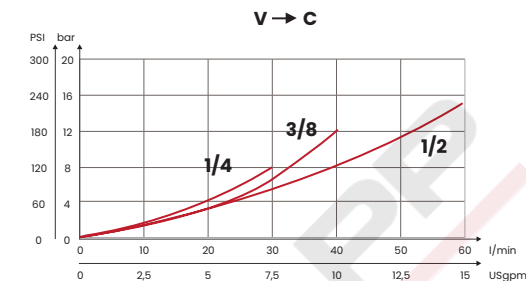
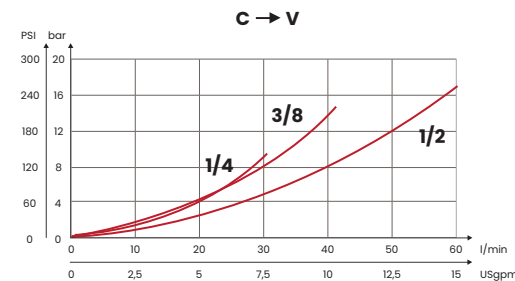
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS

F	C	D
1/4 BSPP	23 [0,91]	127 [5]
3/8 BSPP		
1/2 BSPP	21 [0,83]	129 [5,07]
Steel body (on request aluminium body - stainless steel AISI 316L body)		

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



CODE
62200021

ORDERING CODE

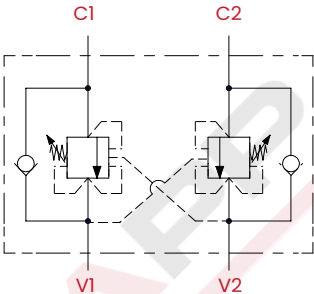
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]		
FA2023	BFA1B21	1/4 BSPP	30 [7,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25 On request 1:8,1	2,05 [4,52]		
FA2024	BFA1B35				350 [5075]	60/350 [870/5075]	135 [1960]				
FA2025	BFA2B21	3/8 BSPP	40 [10,6]		210 [3045]	30/210 [435/3045]	80 [1160]		2 [4,41]		
FA2026	BFA2B35				350 [5075]	60/350 [870/5075]	135 [1960]				
FA2027	BFA3B21	1/2 BSPP	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]		1,96 [4,32]		
FA2028	BFA3B35				350 [5075]	60/350 [870/5075]	135 [1960]				
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]						

BFC COUNTERBALANCE BSPP

DOUBLE COUNTERBALANCE VALVES FOR CLOSED CENTER - FLANGED VERSION

BFC counterbalance valves (Gas thread) are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.

HYDRAULIC CIRCUIT

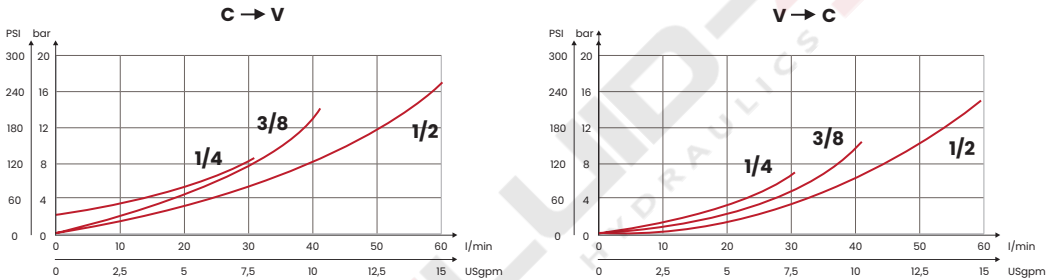


TECHNICAL CHARACTERISTICS

mm [Inches]

F	C	D
1/4 BSPP	23 [0,91]	127 [5]
3/8 BSPP		
1/2 BSPP	21 [0,83]	129 [5,07]
Steel body (on request aluminium body - stainless steel AISI 316L body)		

PERFORMANCES



ORDERING CODE

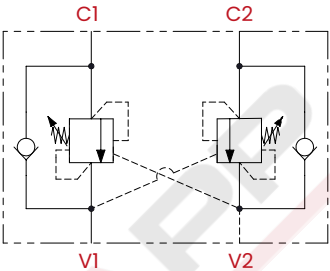
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA2029	BFC1B21	1/4 BSPP	30 [7,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25 On request 1:8,1	2,15 [4,74]
FA2030	BFC1B35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA2031	BFC2B21	3/8 BSPP	40 [10,6]		210 [3045]	30/210 [435/3045]	80 [1160]		2,1 [4,63]
FA2032	BFC2B35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA2033	BFC3B21	1/2 BSPP	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]		2,05 [4,52]
FA2034	BFC3B35				350 [5075]	60/350 [870/5075]	135 [1960]		
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]				

BDB COUNTERBALANCE BSPP

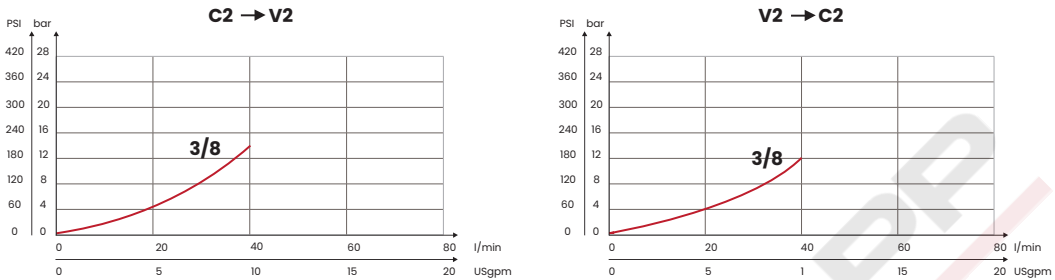
DOUBLE ACTING COUNTERBALANCE VALVES FOR OPEN CENTER - BOLT FITTING

BDB counterbalance valves (Gas thread) are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil, bolt fitting version.

HYDRAULIC CIRCUIT



PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



CODE
62200021

ORDERING CODE

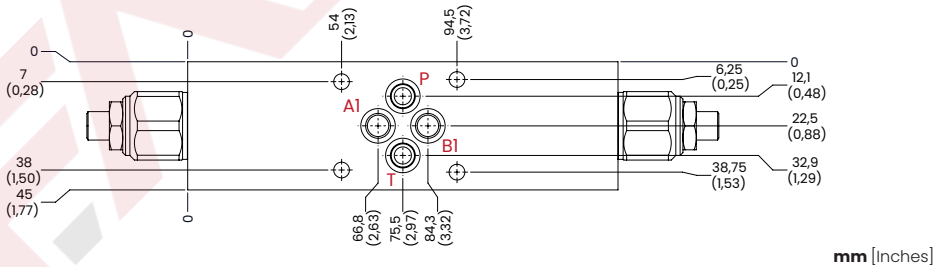
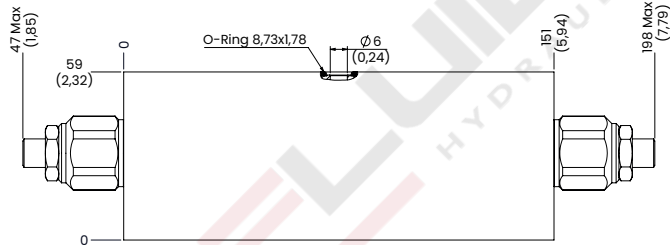
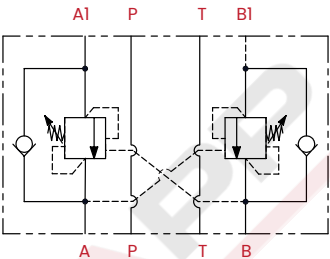
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA2089	BDB2B21	3/8 BSPP	40 [10,6]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25	1,39 [3,06]
FA2090	BDB2B35				350 [5075]	60/350 [870/5075]	135 [1960]	On request 1:8,1	
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]									
Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]									
Steel body (on request aluminium body - stainless steel AISI 316L body)									

DOUBLE COUNTERBALANCE VALVES - CETOP 3 FOR OPEN CENTER

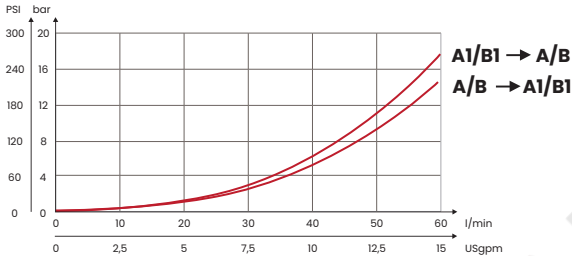
Counterbalance valves are used to keep a load locked, the built-in relief valve protects the system from over-pressure in the cylinder by draining the oil.



HYDRAULIC CIRCUIT



PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



CODE
62200021

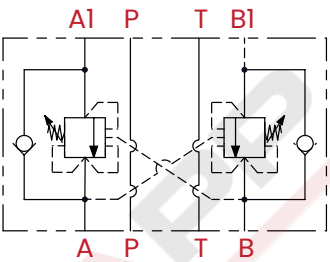
ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA2081	BCA3C21	CETOP 3	60 [15,99]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25	3,15 [6,93]
FA2082	BCA3C35				350 [5075]	60/350 [870/5075]	135 [1960]	On request 1:8,1	
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]									
Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]									
Steel body (on request aluminium body - stainless steel AISI 316L body)									

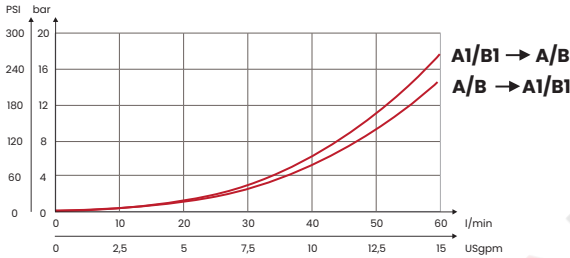
DOUBLE COUNTERBALANCE VALVES - CETOP 3 FOR CLOSED CENTER

Counterbalance valves are used to keep a load locked, the built-in relief valve protects the system from over-pressure in the cylinder by draining the oil.

HYDRAULIC CIRCUIT

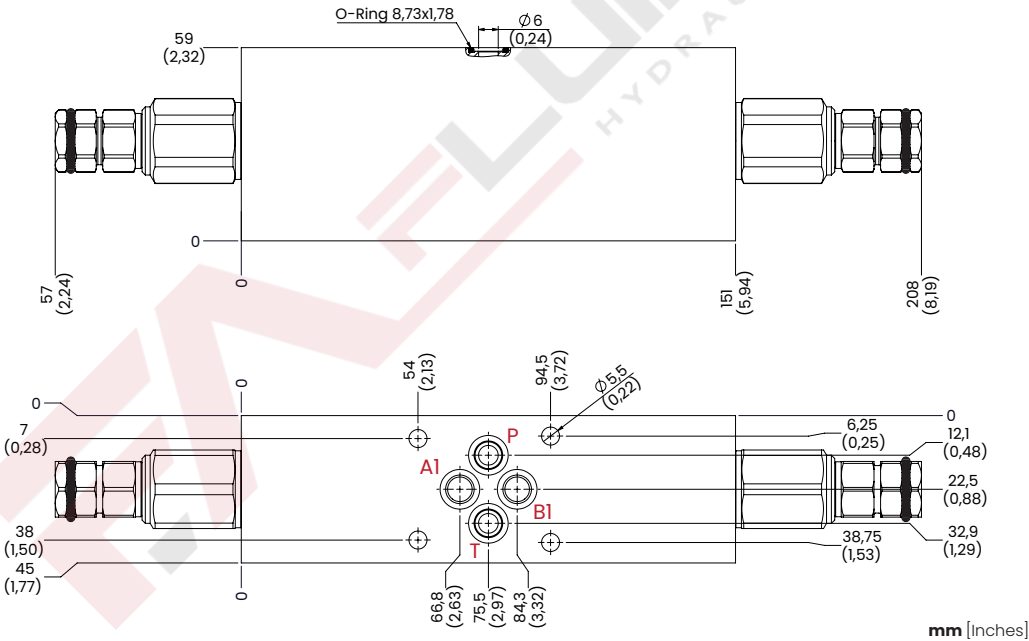


PERFORMANCES



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA2083	BCC3C21	CETOP 3	60 [15,99]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25	3,3 [7,26]
FA2084	BCC3C35				350 [5075]	60/350 [870/5075]	135 [1960]	On request 1:8,1	
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]									
Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]									
Steel body (on request aluminium body - stainless steel AISI 316L body)									

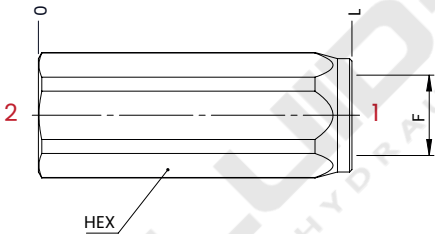
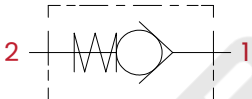


UFC CHECK VALVES BSPP

CHECK VALVES

The UFC (Gas thread) check valves allow the full flow of oil in one direction and stop the flow in the opposite direction. The applications where these valves can be used are many, agricultural machinery or industrial installations.

HYDRAULIC CIRCUIT

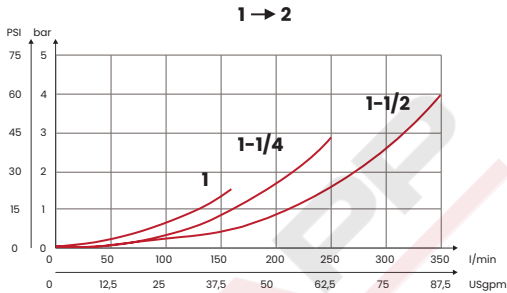
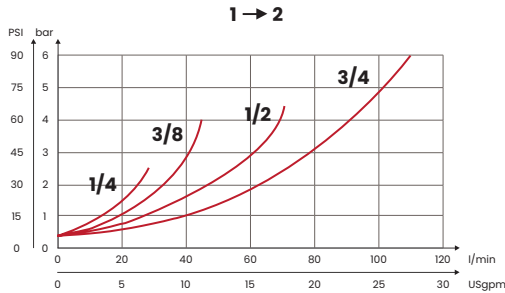


TECHNICAL CHARACTERISTICS

F	L	HEX
1/4 BSPP	55 [2,17]	19
3/8 BSPP	65 [2,56]	24
1/2 BSPP	75 [2,95]	27
3/4 BSPP	86,5 [3,41]	35
1 BSPP	110 [4,33]	41
1-1/4 BSPP	123 [4,84]	55
1-1/2 BSPP	138 [5,43]	60
Steel body		

On request (only for poppet type)
• Calibration hole

PERFORMANCES



ORDERING CODE

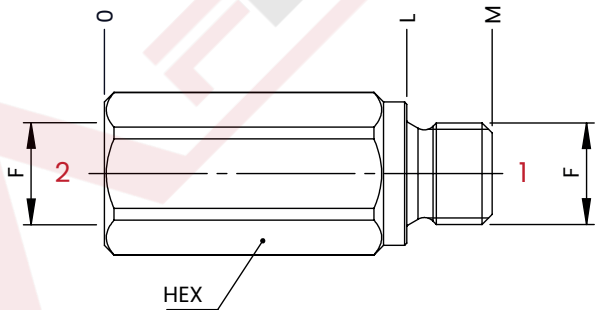
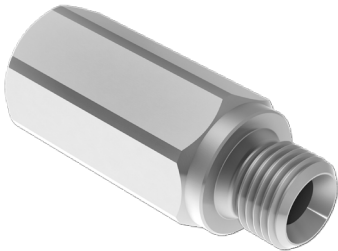
CODE	TYPE	F ports	MAX FLOW l/min [usgpm]	MAX PRESSURE bar [PSI]	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA3001	UFC1B05	1/4 BSPP	30 [7,92]	400 [5800]	Poppet type 0,5 Standard [7,3] On request 3 [43,5] 4,5 [65] 6 [87]	0,10 [0,22]
FA3004	UFC2B05	3/8 BSPP	45 [12]			0,18 [0,40]
FA3007	UFC3B05	1/2 BSPP	70 [18,5]			0,23 [0,50]
FA3010	UFC4B05	3/4 BSPP	110 [28,9]			0,45 [1]
FA3013	UFC5B05	1 BSPP	160 [42,1]	350 [5075]		0,73 [1,6]
FA3016	UFC6B05	1-1/4 BSPP	250 [66]			1,5 [3,3]
FA3019	UFC7B05	1-1/2 BSPP	350 [92,5]			1,85 [4,07]
FA3022	UFS1B05	1/4 BSPP	30 [7,92]	400 [5800]	Ball type 0,5 [7,3]	0,10 [0,22]
FA3023	UFS2B05	3/8 BSPP	45 [12]			0,18 [0,40]
FA3024	UFS3B05	1/2 BSPP	70 [18,5]			0,23 [0,50]

UTC CHECK VALVES BSPP

CHECK VALVES

The UTC (Gas thread) check valves allow the full flow of oil in one direction and stop the flow in the opposite direction. The applications where these valves can be used are many, agricultural machinery or industrial installations.

HYDRAULIC CIRCUIT



mm [Inches]

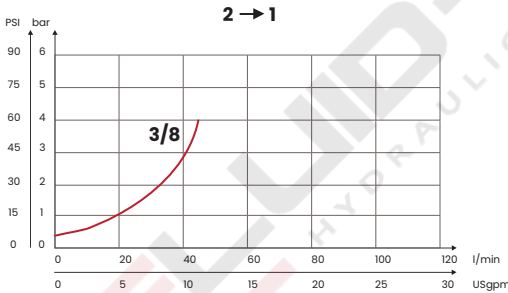
TECHNICAL CHARACTERISTICS

mm [Inches]

F	L	M	HEX
3/8 BSPP	50 [1,97]	63 [2,48]	24

On request
• Calibration hole

PERFORMANCES



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA3125	UTC2B05	3/8 BSPP	45 [12]	400 [5800]	Poppet type 0,5 Standard [7,3] On request 3 [43,5] 4,5 [65] 6 [87]	0,18 [0,40]

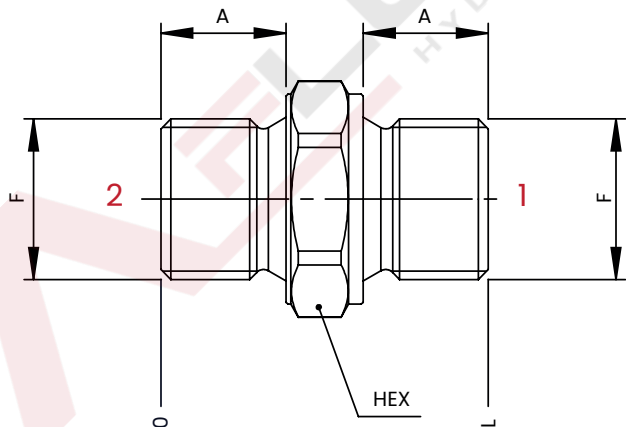
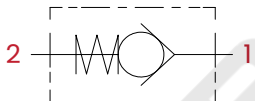
UPDATE: Aug. 2025 (v.04)

UMC CHECK VALVES BSPP

CHECK VALVES

The UMC (Gas thread) check valves allow the full flow of oil in one direction and stop the flow in the opposite direction. The applications where these valves can be used are many, agricultural machinery or industrial installations.

HYDRAULIC CIRCUIT



mm [Inches]

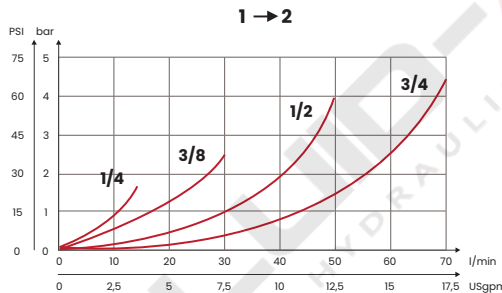
TECHNICAL CHARACTERISTICS

mm [Inches]

F	L	A	HEX
1/4 BSPP	29 [1,14]	11 [0,43]	19
3/8 BSPP	34 [1,34]	13 [0,51]	22
1/2 BSPP	44 [1,73]	14 [0,55]	27
3/4 BSPP	50 [1,97]	17 [0,67]	32

On request (only for poppet type)
• Calibration hole

PERFORMANCES



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	TIGHTENING TORQUE Nm [lbt ft]	MAX TIGHTENING TORQUE FOR HOSE Nm [lbt ft]	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA3025	UMC1B05	1/4 BSPP	10 [2,64]	500 [7250]	30 [22,2]	20 [14,75]	Poppet type	0,03 [0,07]
FA3026	UMC2B05	3/8 BSPP	30 [7,92]		45 [33,2]	35 [25,8]	0,5 Standard [7,3]	0,05 [0,1]
FA3029	UMC3B05	1/2 BSPP	50 [13,2]		60 [44,3]	50 [36,8]	On request 3 [43,5] 4,5 [65] 6 [87]	0,11 [0,24]
FA3137	UMC4B05	3/4 BSPP	70 [18,4]		100 [74]	80 [59]		0,18 [0,40]
FA3032	UMS1B05	1/4 BSPP	10 [2,64]	500 [7250]	30 [22,2]	20 [14,75]	Ball type 0,5 [7,3]	0,03 [0,07]
FA3033	UMS2B05	3/8 BSPP	30 [7,92]		45 [33,2]	35 [25,8]		0,18 [0,40]
FA3034	UMS3B05	1/2 BSPP	50 [13,2]		60 [44,3]	50 [36,8]		0,23 [0,50]

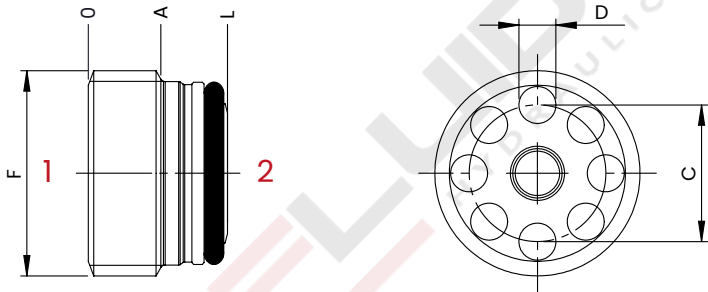
UPDATE: Dec. 2025 (v.2)

VUC CHECK VALVES BSPP

CHECK VALVES POPPET TYPE

The VUC check valve allow the free flow through in a direction while the flow is blocked in the opposite one. It is suitable for integrated circuits mounted on hydraulic blocks. The unidirectional check valve is useful where the design requires small size valve. The external seal is ensured by an o-ring.

HYDRAULIC CIRCUIT

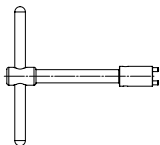


TECHNICAL CHARACTERISTICS

mm [Inches]

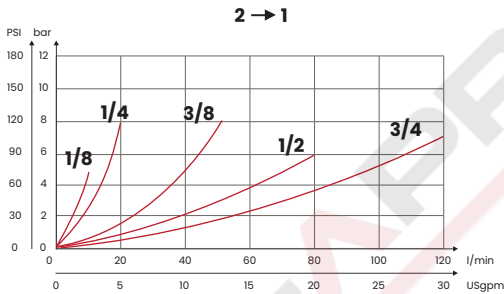
F	L	A	C	D
1/8 BSPP	7,5 [0,29]	3,5 [0,13]	5,6 [0,22]	1,6 [0,06]
1/4 BSPP	8,5 [0,33]	4,4 [0,17]	8,4 [0,33]	2,2 [0,08]
3/8 BSPP	11,3 [0,44]	6 [0,23]	11,1 [0,43]	3 [0,12]
1/2 BSPP	12,7 [0,5]	6,5 [0,25]	13,5 [0,53]	3,8 [0,15]
3/4 BSPP	14,8 [0,58]	7,6 [0,3]	16,5 [0,65]	5 [0,19]

OPTIONAL TOOL



CODE	TYPE
CHI08	VUC0B
CHI09	VUC1B
CHI10	VUC2B
CHI11	VUC3B
CHI12	VUC4B

PERFORMANCES



ORDERING CODE

CODE	TYPE	CAVITY CODE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	TIGHTENING TORQUE Nm [lbf ft]	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA3035	VUC0B	FC119	1/8 BSPP	10 [2,65]	350 [5075]	6 [4,4]	0,5 [7,3]	0,002 [0,004]
FA3036	VUC1B	FC111	1/4 BSPP	20 [5,3]		15 [11]		0,005 [0,011]
FA3037	VUC2B	FC112	3/8 BSPP	50 [13,19]		30 [22]		0,011 [0,024]
FA3038	VUC3B	FC113	1/2 BSPP	80 [21,1]		50 [37]		0,019 [0,042]
FA3039	VUC4B	FC114	3/4 BSPP	120 [31,66]				0,040 [0,088]

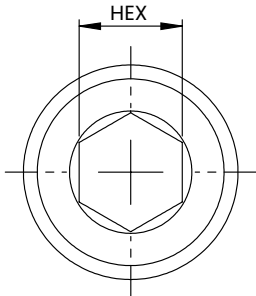
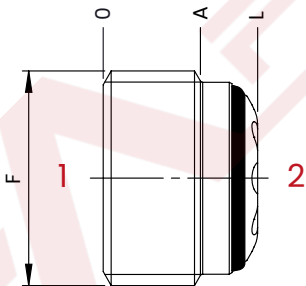
See cavity paragraph p. 362

VUD CHECK VALVES BSPP

CHECK VALVES POPPET TYPE

The VUD check valve allow the free flow through in a direction while the flow is blocked in the opposite one. It is suitable for integrated circuits mounted on hydraulic blocks. The unidirectional check valve is useful where the design requires small size valve. The external seal is ensured by an o-ring.

HYDRAULIC CIRCUIT



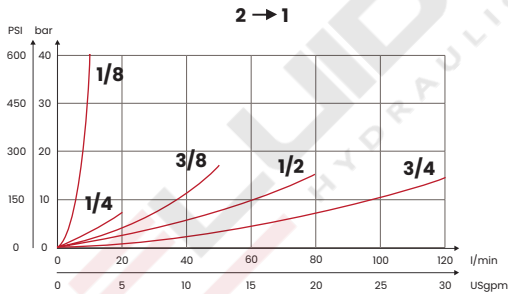
mm [Inches]

TECHNICAL CHARACTERISTICS

mm [Inches]

F	L	A	HEX
1/8 BSPP	8 [0,31]	3,9 [0,15]	4
1/4 BSPP	10,2 [0,4]	5,5 [0,21]	6
3/8 BSPP	11,7 [0,46]	7,5 [0,29]	8
1/2 BSPP	13,5 [0,53]	7,9 [0,31]	10
3/4 BSPP	17,5 [0,45]	11,5 [0,45]	

PERFORMANCES



ORDERING CODE

CODE	TYPE	CAVITY	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	TIGHTENING TORQUE Nm [lbt ft]	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA3040	VUD0B	FC120	1/8 BSPP	10 [2,65]	350 [5075]	9 [6,6]	0,5 [7,3]	0,003 [0,007]
FA3041	VUD1B	FC107	1/4 BSPP	20 [5,3]		15 [11]		0,007 [0,015]
FA3042	VUD2B	FC108	3/8 BSPP	50 [13,19]		25 [18,4]		0,015 [0,033]
FA3043	VUD3B	FC109	1/2 BSPP	80 [21,11]		40 [29,5]		0,023 [0,05]
FA3044	VUD4B	FC110	3/4 BSPP	120 [31,66]		50 [37]		0,050 [0,11]

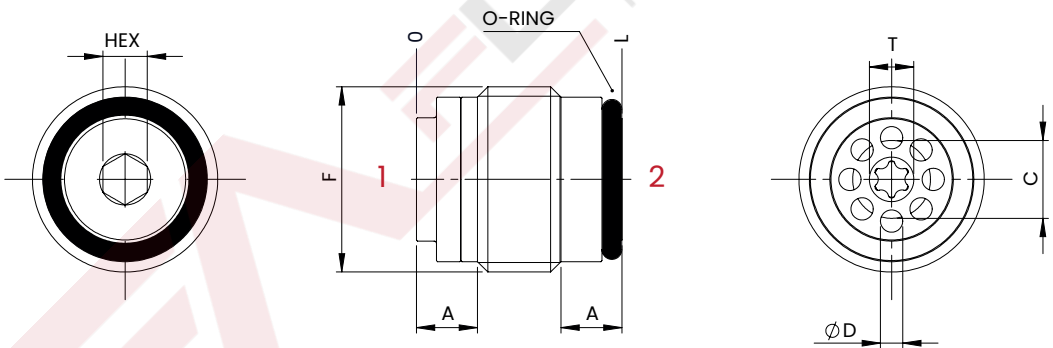
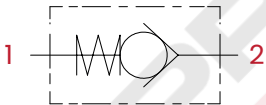
See cavity paragraph p. 362

UPDATE: Nov. 2024 (v.06)

CHECK VALVES BALL TYPE

The VUS check valve allow the free flow through in a direction while the flow is blocked in the opposite one. It is suitable for integrated circuits mounted on hydraulic blocks. The check valve is useful where the design requires small size valve. The external seal is ensured by an o-ring. They are protected externally by a manganese phosphating treatment.

HYDRAULIC CIRCUIT



It's possible to install the valve in both directions

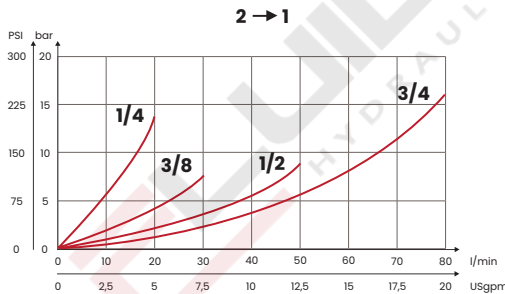
mm [Inches]

TECHNICAL CHARACTERISTICS

mm [Inches]

F	L	A	C	D	HEX	T	O-RING
1/4 BSPP	17 [0,67]	5,5 [0,22]	6 [0,24]	1,3 [0,05]	3	Torx T15	9 x 1
3/8 BSPP	18,5 [0,73]		7,5 [0,30]	2 [0,08]	4	Torx T15	10,82 x 1,78
1/2 BSPP	22,5 [0,88]	7[0,28]	10 [0,39]	2,5 [0,1]	6	HEX 5	14 x 1,78
3/4 BSPP	28 [1,20]	8 [0,31]	14 [0,55]	3 [0,12]	8	HEX 8	18,72 x 2,62

PERFORMANCES



ORDERING CODE

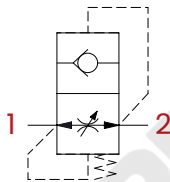
CODE	TYPE	CAVITY	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	TIGHTENING TORQUE Nm [lbt ft]	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA3045	VUS1B	FC107	1/4 BSPP	20 [5,3]	350 [5075]	4 [3]	0,5 [7,3]	0,01 [0,022]
FA3046	VUS2B	FC108	3/8 BSPP	30 [7,9]		6 [4,4]		0,018 [0,040]
FA3047	VUS3B	FC109	1/2 BSPP	50 [13,2]		10 [7,4]		0,033 [0,073]
FA3048	VUS4B	FC110	3/4 BSPP	80 [21]		20 [14,8]		0,082 [0,18]

See cavity paragraph p. 362

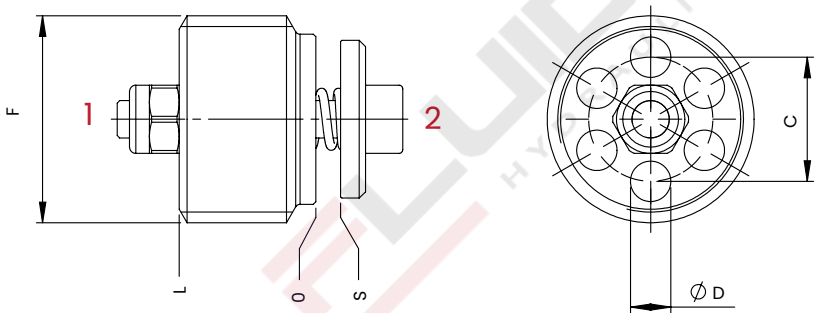
HOSE BURST VALVES

The VBA hose burst are mounted directly on the cylinder to avoid an uncontrolled descent of the load in the event of a hose break. They are protected externally by a manganese phosphating treatment

HYDRAULIC CIRCUIT



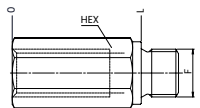
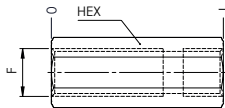
The VBA valves are supplied without any setting and the nut is not tightened.
To ensure the correct functioning of the valve, it is mandatory to perform the setting (S) by the final installer.
On request, it is possible to request the valve already calibrated (S) and possibly the hole on the plate (H).



TECHNICAL CHARACTERISTICS

F	C	D	L
1/4 BSPP	8 [0,31]	2,5 [0,10]	8,2 [0,32]
3/8 BSPP	10 [0,39]	3,25 [0,13]	11 [0,43]
1/2 BSPP	11,5 [0,45]	4 [0,16]	13 [0,51]
3/4 BSPP	14,5 [0,57]	5,2 [0,20]	18 [0,70]
1 BSPP	19 [0,75]	7 [0,28]	20 [0,79]

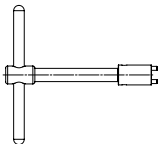
HOUSING



CODE	F ports	L	HEX
33300026	1/4 BSPP	61 [2,40]	19 [0,75]
33300028	3/8 BSPP	63 [2,48]	22 [0,87]
33300015	1/2 BSPP	62 [2,44]	27 [1,06]
33300025	3/4 BSPP	75 [2,95]	32 [1,26]

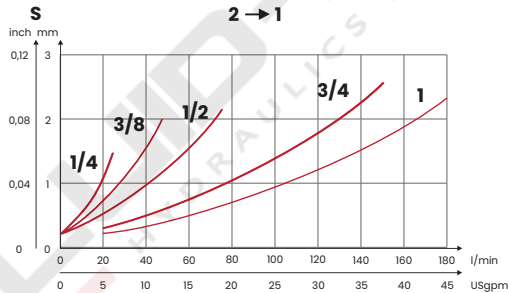
CODE	F ports	L	HEX
33300018	1/4 BSPP	39 [1,53]	19 [0,75]
33300029	3/8 BSPP	45 [1,77]	22 [0,87]
33300021	1/2 BSPP	52 [2,04]	27 [1,06]
33300024	3/4 BSPP	59 [2,32]	32 [1,26]

OPTIONAL TOOL



CODE	TYPE	WEIGHT kg [lbt]
CHI01	VBA1B	0,12 [0,27]
CHI02	VBA2B	0,13 [0,29]
CHI03	VBA3B	0,15 [0,33]
CHI04	VBA4B	0,20 [0,44]

PERFORMANCES



ORDERING CODE

CODE	TYPE	CAVITY	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	VALVE TIGHTENING TORQUE Nm [lbt ft]	NUT TIGHTENING TORQUE FOR ADJUSTMENT Nm [lbt ft]	WEIGHT kg [lb]
FA6001	VBA1B	FC100	1/4 BSPP	25 [6,6]	350 [5075]	4 [3]	1 [0,7]	0,008 [0,017]
FA6002	VBA2B	FC101	3/8 BSPP	50 [13,2]		6 [4,5]		0,014 [0,030]
FA6003	VBA3B	FC102	1/2 BSPP	80 [21,1]		10 [7,5]	2 [1,5]	0,025 [0,055]
FA6004	VBA4B	FC103	3/4 BSPP	150 [39,6]		15 [11]		0,05 [0,11]
FA6005	VBA5B	FC104	1 BSPP	180 [47,5]		20 [15]		0,10 [0,22]
(s) setting on request - (h) hole on the plate on request								
See cavity paragraph p.361								

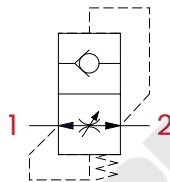
VBAT HOSE BURST BSPP

HOSE BURST VALVES

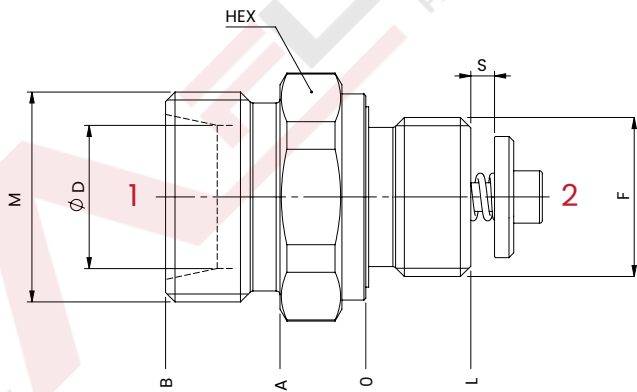
The VBAT hose burst are mounted directly on the cylinder to avoid an uncontrolled descent of the load in the event of a hose break.



HYDRAULIC CIRCUIT



The VBAT valves are supplied without any setting and the nut is not tightened.
To ensure the correct functioning of the valve, it is mandatory to perform the setting (S) by the final installer.
On request, it is possible to request the valve already calibrated (S) and possibly the hole on the plate (H).



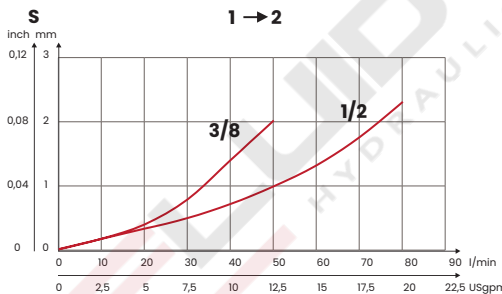
mm [Inches]

TECHNICAL CHARACTERISTICS

mm [Inches]

F	M	D	L	HEX	A	B
3/8 BSPP	M16 x 1,5	10 [0,39]	11 [0,43]	22	9 [0,35]	20 [0,78]
	M18 x 1,5	12 [0,47]		24		21 [0,82]
1/2 BSPP	M22x 1,5	15 [0,59]	13 [0,51]	27	9,5 [0,37]	21,5 [0,84]

PERFORMANCES



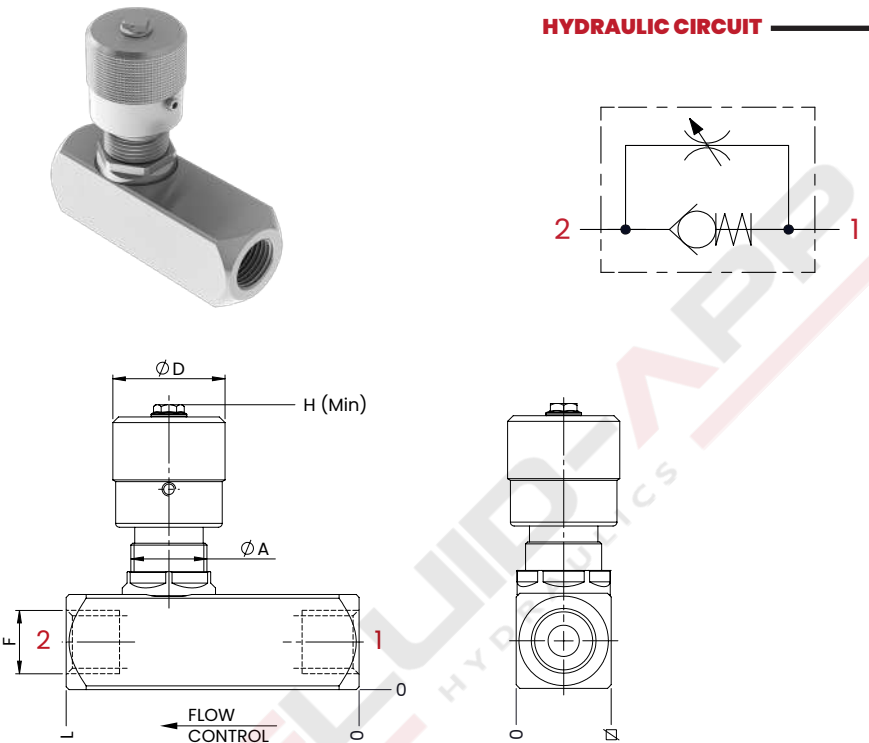
ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	TORQUE OF TIGHTENING Nm [lbt ft]	TORQUE OF TIGHTENING TUBE Nm [lbt ft]	TORQUE OF ADJUSTMENT SCREW TIGHTENING Nm [lbt ft]	WEIGHT kg [lb]
FA6006	VBA2BT10	3/8 BSPP	50 [13.2]	320 [4641]	30 [22]	20 [15]	1 [0,7]	0,044 [0,097]
FA6007	VBA2BT12					40 [30]		
FA6008	VBA2BT15					60 [45]		0,060 [0,13]
FA6009	VBA3BT15	1/2 BSPP	80 [21.1]		50 [37]		2 [1,5]	0,077 [0,17]

(S) setting on request - (H) hole on the plate on request

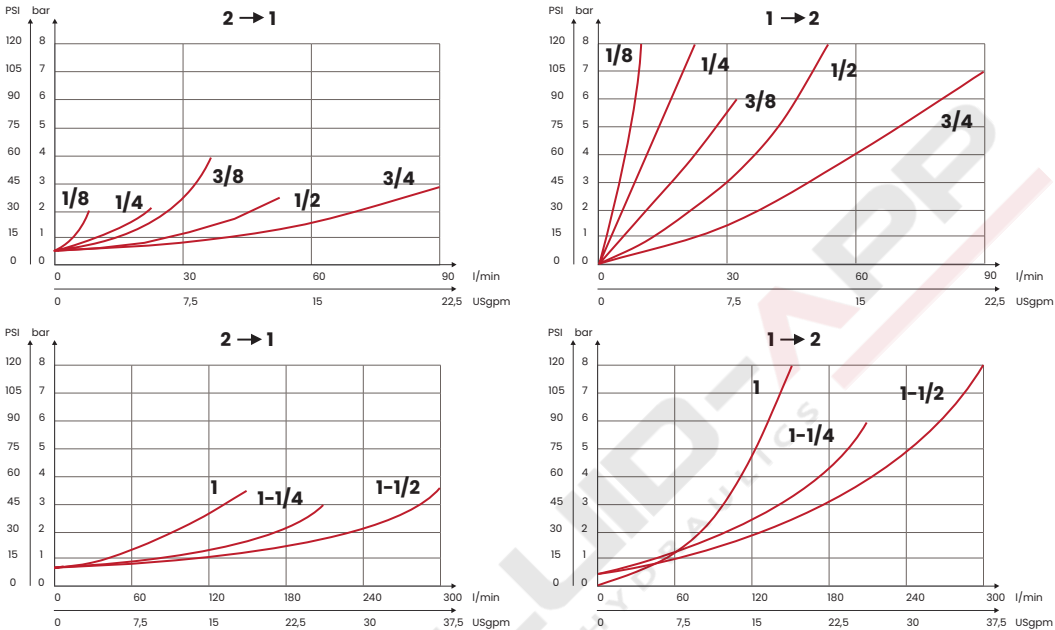
UNIDIRECTIONAL FLOW CONTROL VALVES

The unidirectional flow control valves SUA (Gas thread) allow the free passage of the oil in one direction and regulate it in the opposite direction.



HYDRAULIC CIRCUIT

PERFORMANCES



ORDERING CODE

TECHNICAL CHARACTERISTICS

F	L	H	Ø	Ø D	A
1/8 BSPP	62 [2,44]	76 [2,99]	25 [0,98]	30 [1,18]	M20 x 1
1/4 BSPP	66 [2,60]				
3/8 BSPP	77 [3,03]				
1/2 BSPP	86 [3,38]	81 [3,19]	30 [1,18]	38 [1,5]	M35 x 1,5
3/4 BSPP	112,5 [4,43]	110 [4,33]	40 [1,57]		
1 BSPP	141 [5,55]	114 [4,49]	45 [1,77]		
1-1/4 BSPP	155 [6,10]	137 [5,39]	55 [2,16]	50 [1,96]	M45 x 1,5
1-1/2 BSPP	168 [6,61]	147 [5,78]	65 [2,56]		
Steel body (on request stainless steel AISI 316L body)					

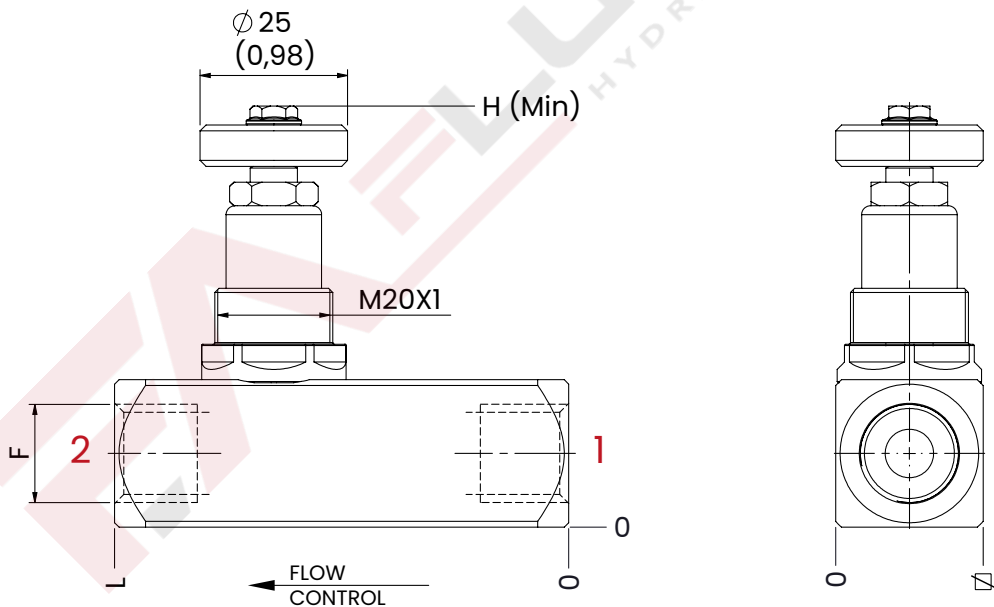
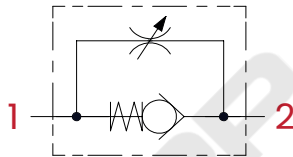
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA4206	SUA0BYA	1/8 BSPP	10 [6,6]	400 [5800]	0,2 [0,44]
FA4031	SUA1B	1/4 BSPP	25 [6,6]		0,4 [0,88]
FA4032	SUA2B	3/8 BSPP	35 [9,3]		0,6 [1,32]
FA4033	SUA3B	1/2 BSPP	50 [13,2]		1,45 [3,2]
FA4034	SUA4B	3/4 BSPP	90 [23,8]		2 [4,4]
FA4035	SUA5B	1 BSPP	150 [39,6]	350 [5075]	3 [6,6]
FA4170	SUA6B	1-1/4 BSPP	200 [52,8]		4,5 [10]
FA4171	SUA7B	1-1/2 BSPP	300 [79,2]		

SUD FLOW CONTROL - LOCK NUT BSPP

UNIDIRECTIONAL FLOW CONTROL VALVES

The unidirectional flow control valves SUD (Gas thread) allow the free passage of the oil in one direction and regulate it in the opposite direction.

HYDRAULIC CIRCUIT

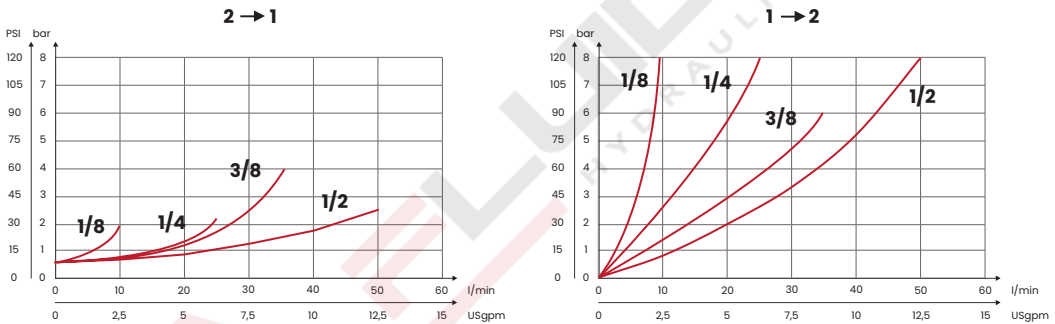


TECHNICAL CHARACTERISTICS

mm [Inches]

F	L	H	∅
1/8 BSPP	62 [2,44]	74 [2,91]	25 [0,98]
1/4 BSPP	66 [2,60]		
3/8 BSPP	77 [3,03]		
1/2 BSPP	86 [3,39]	79 [3,11]	30 [1,18]
Steel body			

PERFORMANCES

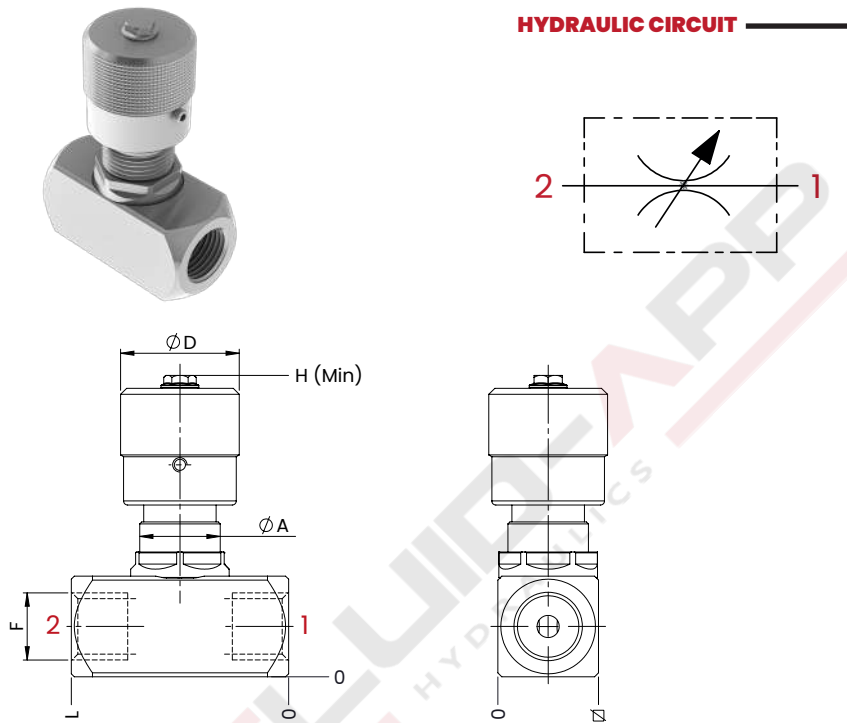


ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA4211	SUD0BYA	1/8 BSPP	10 [2,6]	400 [5800]	0,37 [0,82]
FA4036	SUD1B	1/4 BSPP	25 [6,6]		
FA4037	SUD2B	3/8 BSPP	35 [9,3]		
FA4038	SUD3B	1/2 BSPP	50 [13,2]		0,55 [1,21]

SBA NEEDLE VALVES BSPP

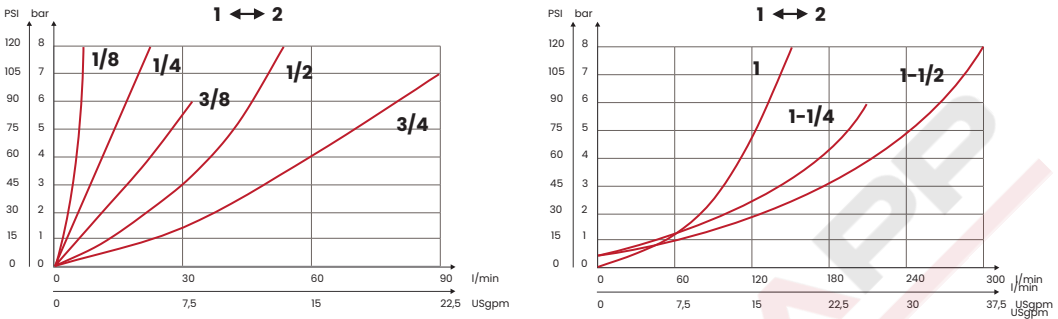
BIDIRECTIONAL FLOW CONTROL VALVES
Needle valves SBA (Gas thread) regulate the speed of an actuator in both directions.



TECHNICAL CHARACTERISTICS

F	L	H	Ø	Ø D	A
1/8 BSPP	54 [2,13]	76 [2,99]	25 [0,98]	30 [1,18]	M20 x 1
1/4 BSPP					
3/8 BSPP					
1/2 BSPP	58 [2,28]	81 [3,19]	30 [1,18]	38 [1,5]	M35 x 1,5
3/4 BSPP	81 [3,19]	110 [4,33]	40 [1,57]		
1 BSPP	102 [4,01]	114 [4,49]	45 [1,77]		
1-1/4 BSPP		137 [5,39]	55 [2,16]	50 [1,96]	M45 x 1,5
1-1/2 BSPP		147 [5,78]	65 [2,56]		
Steel body (on request stainless steel AISI 316L body)					

PERFORMANCES



ORDERING CODE

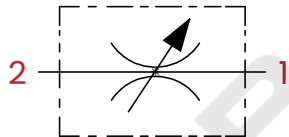
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA4205	SBA0BYA	1/8 BSPP	10 [2,6]	400 [5800]	0,15 [0,33]
FA4039	SBA1B	1/4 BSPP	25 [6,6]		0,3 [0,66]
FA4040	SBA2B	3/8 BSPP	35 [9,3]		0,31 [0,68]
FA4041	SBA3B	1/2 BSPP	50 [13,2]		0,5 [1,1]
FA4042	SBA4B	3/4 BSPP	90 [23,8]		1,1 [2,43]
FA4043	SBA5B	1 BSPP	150 [39,6]		1,5 [3,3]
FA4172	SBA6B	1-1/4 BSPP	200 [52,8]	350 [5075]	2,4 [5,29]
FA4173	SBA7B	1-1/2 BSPP	300 [79,2]		3 [6,6]

SBD NEEDLE VALVES - LOCK NUT BSPP

BIDIRECTIONAL FLOW CONTROL VALVES
Needle valves SBD (Gas thread) regulate the speed of an actuator in both directions.



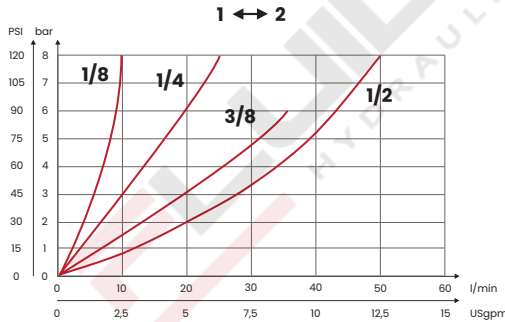
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS

F	L	H	Ø
1/8 BSPP	54 [2,13]	74 [2,91]	25 [0,98]
1/4 BSPP			
3/8 BSPP			
1/2 BSPP	58 [2,28]	79 [3,11]	30 [1,18]
Steel body			

PERFORMANCES



ORDERING CODE

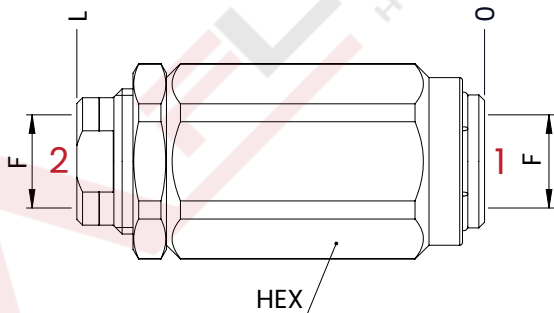
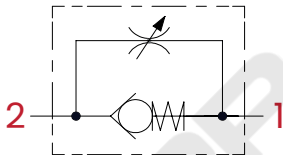
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA4210	SBD0BYA	1/8 BSPP	10 [2,6]	400 [5800]	0,3 [0,66]
FA4044	SBD1B	1/4 BSPP	25 [6,6]		
FA4045	SBD2B	3/8 BSPP	35 [9,3]		0,28 [0,6]
FA4046	SBD3B	1/2 BSPP	50 [13,2]		0,45 [1]

UPDATE: Aug. 2025 (v.06)

UNIDIRECTIONAL FLOW CONTROL VALVES

The unidirectional flow control valves VCU (Gas thread) allow the free passage of the oil in one direction and regulate it in the opposite direction.

HYDRAULIC CIRCUIT



FLOW
CONTROL →

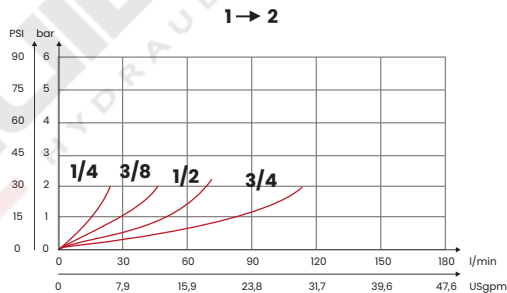
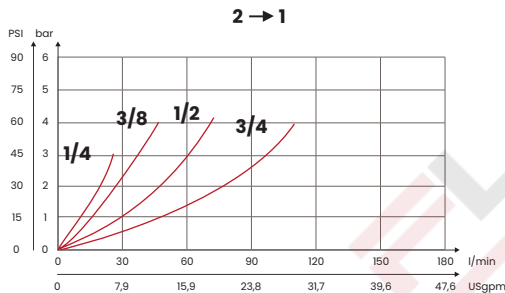
mm [Inches]

TECHNICAL CHARACTERISTICS

mm [Inches]

F	HEX	L
1/4 BSPP	28 [1,10]	64 [2,52]
3/8 BSPP	32 [1,26]	73 [2,87]
1/2 BSPP	38 [1,5]	83 [3,27]
3/4 BSPP	46 [1,8]	102 [4,01]
Steel body		

PERFORMANCES



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA4047	VCU1B	1/4 BSPP	25 [6,7]	350 [5075]	0,23 [0,5]
FA4048	VCU2B	3/8 BSPP	45 [12]		0,34 [0,75]
FA4049	VCU3B	1/2 BSPP	70 [18,7]		0,51 [1,12]
FA4155	VCU4B	3/4 BSPP	110 [29,3]	250 [3625]	0,89 [1,90]

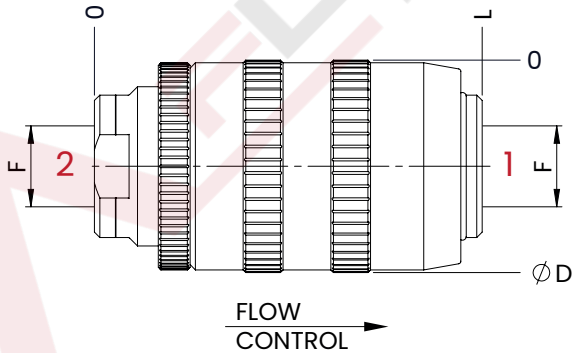
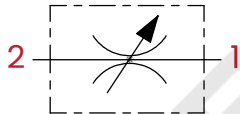
UPDATE: Sept. 2024 (v.04)

VCB **FLOW CONTROL** BSPP

BIDIRECTIONAL FLOW CONTROL VALVES

The bidirectional flow control valves VCB (Gas thread) regulate the speed of an actuator in both directions

HYDRAULIC CIRCUIT



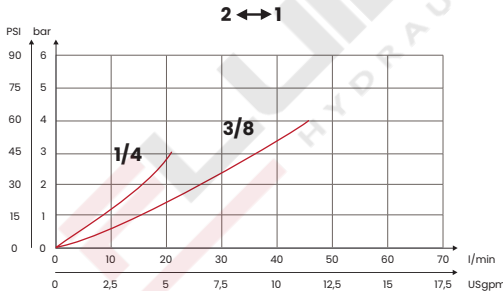
mm [Inches]

TECHNICAL CHARACTERISTICS

mm [Inches]

F	Ø D	L
1/4 BSPP	34 [1,34]	62 [2,44]
3/8 BSPP	40 [1,57]	73 [2,87]
Steel body		

PERFORMANCES



ORDERING CODE

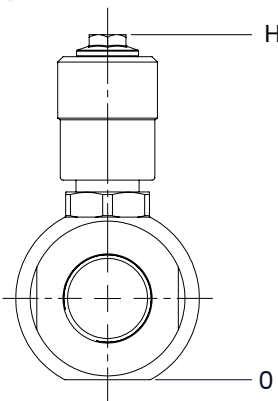
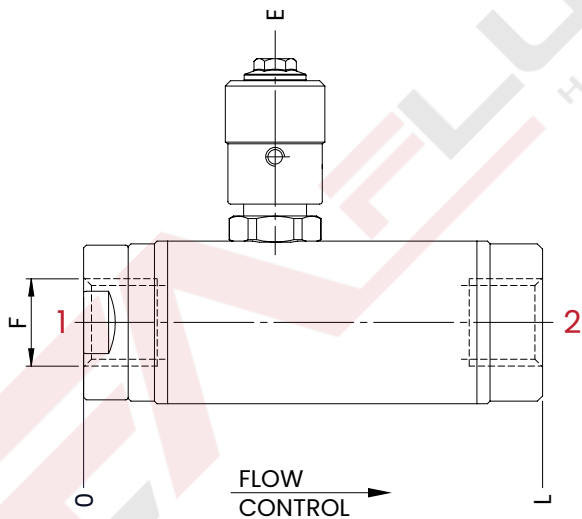
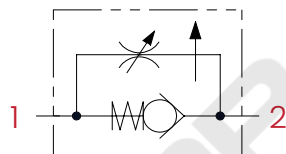
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA4050	VCB1B	1/4 BSPP	25 [6,7]	350 [5075]	0,30 [0,66]
FA4051	VCB2B	3/8 BSPP	45 [12]		0,48 [1,06]

UPDATE: June 2025 (v.06)

FLOW CONTROL VALVES - PRESSURE COMPENSATED

Compensated flow control valve, allows the free passage of oil in one direction and regulates the flow in the opposite direction. The internal compensation system keeps the actuator speed constant, regardless of the load, and guarantees high adjustment sensitivity.

HYDRAULIC CIRCUIT



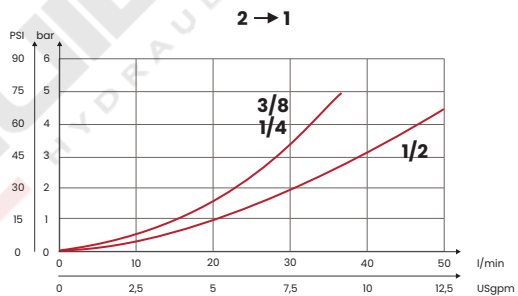
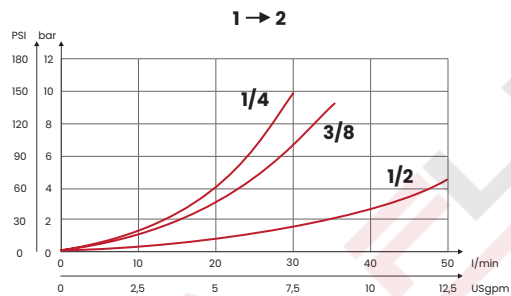
mm [Inches]

TECHNICAL CHARACTERISTICS

mm [Inches]

F	L	H	E
1/4 BSPP	87,5 [3,44]	66 [2,60]	36,5 [1,44]
3/8 BSPP			
1/2 BSPP	109 [4,31]	73 [2,87]	46 [1,81]
Steel body			

PERFORMANCES



ORDERING CODE

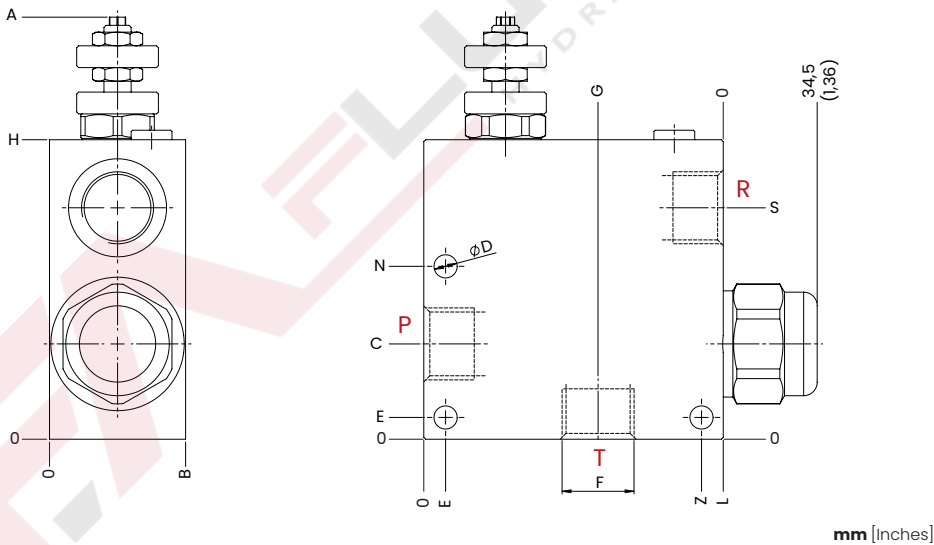
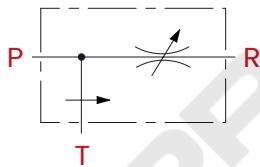
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA4028	CFR1B	1/4 BSPP	25 [6,6]	250 [3625]	0,5 [1,10]
FA4029	CFR2B	3/8 BSPP	30 [7,9]		0,8 [1,76]
FA4030	CFR3B	1/2 BSPP	45 [12]		

UPDATE: March 2023 (v.05)

3 WAYS FLOW CONTROL VALVES - PRESSURE COMPENSATED WITH EXCEEDING FLOW TO TANK
The 3-way flow control valves allow the regulation and constant maintenance of the flow regardless of the load, by means of an internal compensation system, in the RCT version the excess flow goes to the drain.



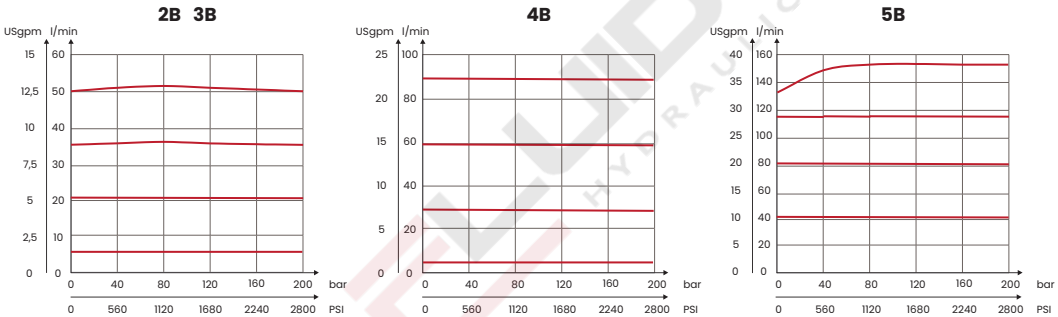
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS mm [Inches]

F	B	H	L	Ø D	N	C	E	S	G	Z	A
3/8 BSPP	40 [1,57]	90 [3,54]	90 [3,54]	6,5 [0,26]	54 [2,13]	31 [1,22]	6 [0,24]	73 [2,87]	40 [1,57]	70 [2,76]	134 [5,28]
1/2 BSPP											
3/4 BSPP	50 [1,97]	110 [4,33]	110 [4,33]	8,5 [0,33]	63,5 [2,50]	35 [1,38]	8 [0,31]	85 [3,35]	44 [1,73]	96 [3,78]	155 [6,10]
1 BSPP					/	46 [1,81]	10 [0,39]	86 [3,39]	45 [1,77]	98 [3,86]	
Aluminium body											

PERFORMANCES



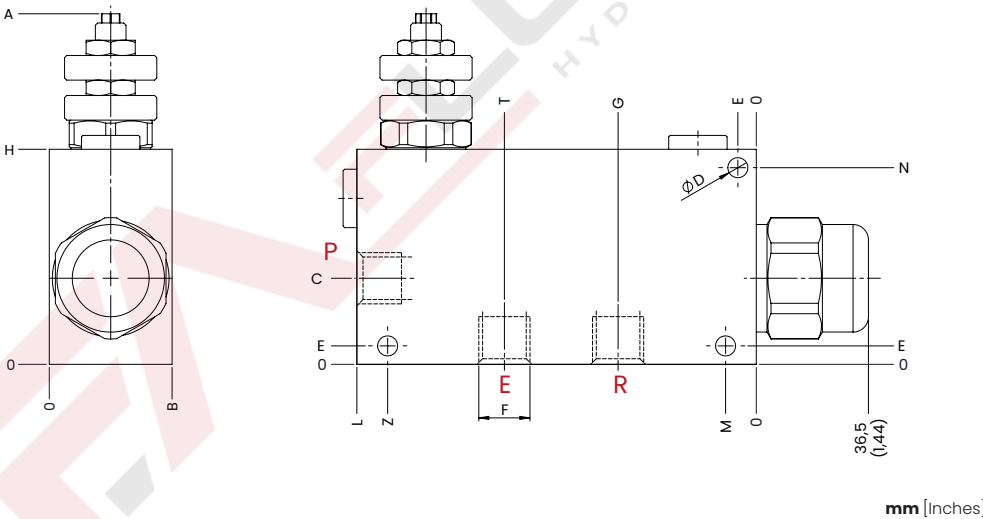
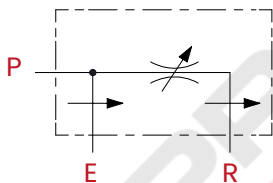
ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA4053	RCT2B	3/8 BSPP	50 [13,3] with 30 [7,9] in R	210 [3050]	1,15 [2,54]
FA4054	RCT3B	1/2 BSPP	90 [23,8] with 50 [13,3] in R		1,1 [2,43]
FA4055	RCT4B	3/4 BSPP	150 [39,6] with 90 [23,8] in R		1,9 [4,19]
FA4056	RCT5B	1 BSPP	240 [63,4] with 150 [39,6] in R		2 [4,41]

UPDATE: March 2023 (v.05)

3 WAYS FLOW CONTROL VALVES - PRESSURE COMPENSATED WITH EXCEEDING FLOW TO PRESSURE
The 3-way flow control valves allow the regulation and constant maintenance of the flow regardless of the load, by means of an internal compensation system, in the RCP version the excess flow it is under pressure available for a second use.

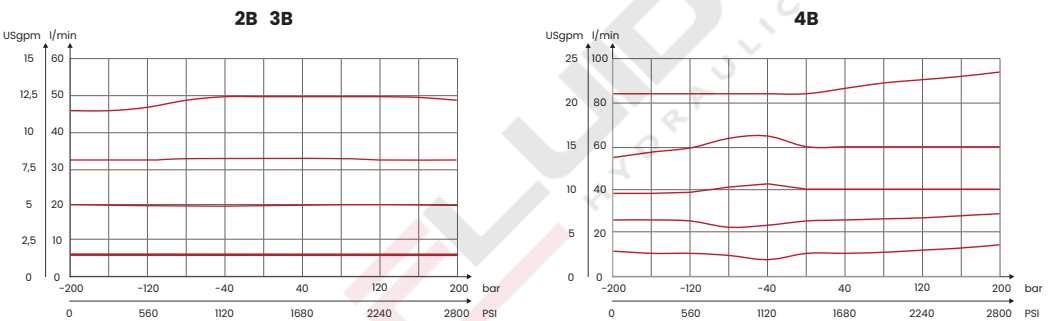
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS

F	B	H	L	Ø D	N	C	E	T	G	Z	A	M
3/8 BSPP	40 [1,57]	70 [2,76]	130 [5,11]	6,5 [0,26]	64 [2,52]	28 [1,10]	6 [0,24]	82 [3,23]	45 [1,77]	120 [4,72]	114 [4,49]	10 [0,39]
1/2 BSPP												
3/4 BSPP	50 [1,97]	90 [3,54]	155 [6,10]	9,5 [0,37]	80 [3,15]	35 [1,38]	10 [0,39]	98 [3,86]	54 [2,13]	145 [5,71]	135 [5,32]	/
Aluminium body												

PERFORMANCES



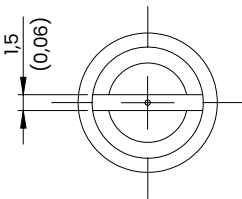
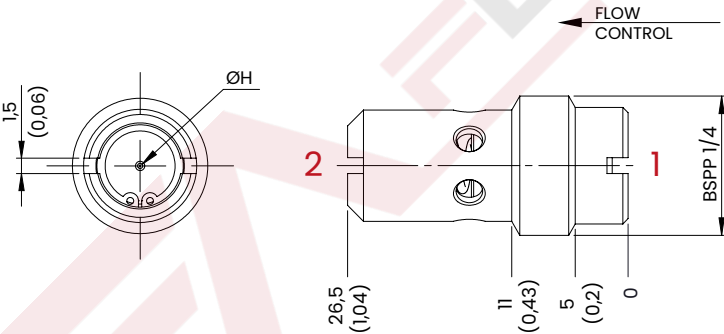
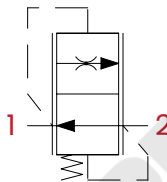
ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA4057	RCP2B	3/8 BSPP	50 [13,3] with 30 [7,9] in R	210 [3050]	1,3 [2,87]
FA4058	RCP3B	1/2 BSPP	90 [23,8] with 50 [13,3] in R		1,25 [2,76]
FA4059	RCP4B	3/4 BSPP	150 [39,6] with 90 [23,8] in R		2,5 [5,51]

1/4 BSPP FLOW CONTROL VALVES - PRESSURE COMPENSATED - DOUBLE CUT

The fixed compensated flow control valve FIT (1/4 G) is used to keep the descent speed of a load constant, regardless of the operating pressure and the value of the load. Typical use is related to tail lifts and hydraulic platforms. They are protected externally by a manganese phosphating treatment.

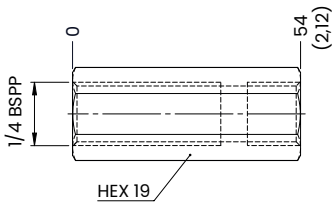
HYDRAULIC CIRCUIT



mm [Inches]

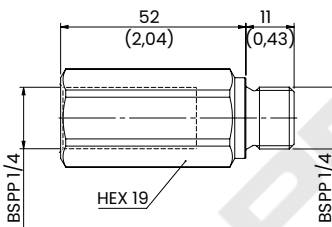
CODE

33300011



CODE

33300027



ORDERING CODE

CODE	TYPE	CAVITY	CONTROLLED FLOW AT 100 bar ± 10% l/min [USgpm]	Ø H mm [Inches]	MAX PRESSURE bar [PSI]	TIGHTENING TORQUE Nm [lbt ft]	WEIGHT kg [lb]
FA4067	FIT01	FC105 1/4 BSPP See cavity paragraph p.359	1 [0,26]	1 [0,04]	250 [3625]	4 [3]	0,014 [0,031]
FA4068	FIT02		2 [0,53]	1,2 [0,05]			
FA4069	FIT03		3 [0,79]	1,5 [0,06]			
FA4070	FIT04		4 [1,06]	1,7 [0,07]			
FA4071	FIT05		5 [1,32]	1,9 [0,07]			
FA4072	FIT06		6 [1,58]	2,1 [0,08]			
FA4073	FIT07		7 [1,85]	2,3 [0,09]			
FA4074	FIT08		8 [2,11]	2,4 [0,09]			
FA4075	FIT09		9 [2,38]	2,7 [0,11]			
FA4076	FIT10		10 [2,64]	2,8 [0,11]			
FA4077	FIT11		11 [2,90]	3,1 [0,12]			
FA4078	FIT12		12 [3,17]	3,3 [0,13]			
FA4079	FIT15		15 [3,96]	5 [0,20]			

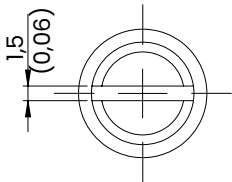
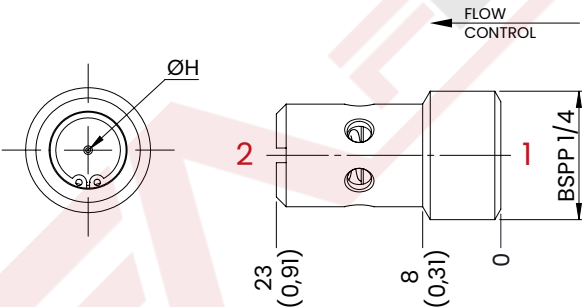
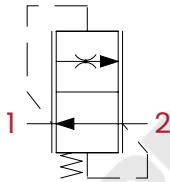
UPDATE Jan. 2025 (v.02)

F1E FLOW CONTROL 1/4 BSPP

1/4 BSPP FLOW CONTROL VALVES - PRESSURE COMPENSATED

The fixed compensated flow control valve F1E (1/4 G) is used to keep the descent speed of a load constant, regardless of the operating pressure and the value of the load. Typical use is related to tail lifts and hydraulic platforms. They are protected externally by a manganese phosphating treatment.

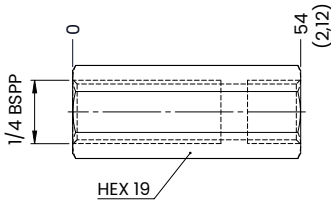
HYDRAULIC CIRCUIT



mm [Inches]

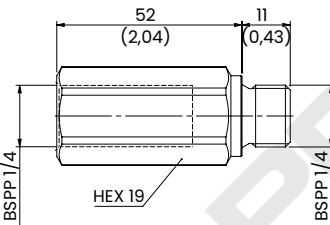
CODE

33300011



CODE

33300027



ORDERING CODE

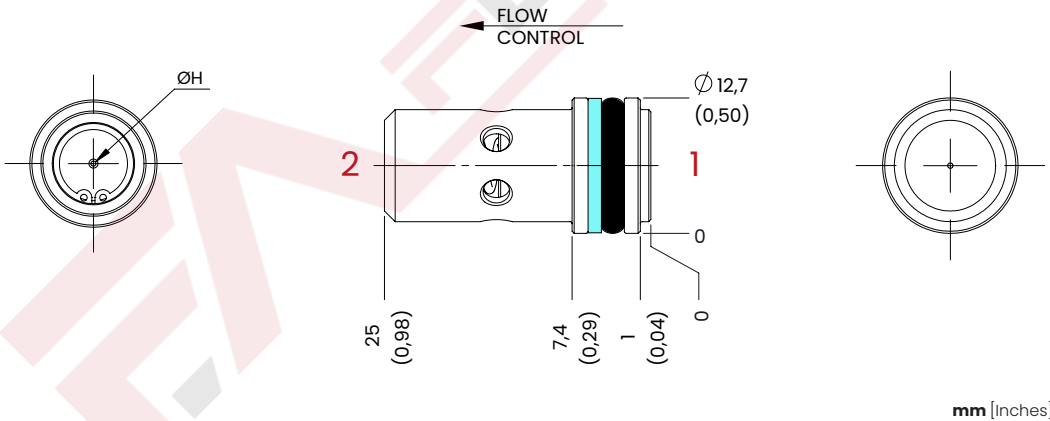
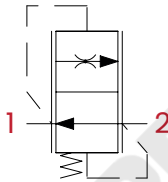
CODE	TYPE	CAVITY	CONTROLLED FLOW AT 100 bar ± 10% l/min [USgpm]	Ø H mm [Inches]	MAX PRESSURE bar [PSI]	TIGHTENING TORQUE Nm [lbt ft]	WEIGHT kg [lb]
FA4192	F1E01	FC105 1/4 BSPP See cavity paragraph p.361	1 [0,26]	1 [0,04]	250 [3625]	4 [3]	0,014 [0,031]
FA4193	F1E02		2 [0,53]	1,2 [0,05]			
FA4194	F1E03		3 [0,79]	1,5 [0,06]			
FA4195	F1E04		4 [1,06]	1,7 [0,07]			
FA4196	F1E05		5 [1,32]	1,9 [0,07]			
FA4197	F1E06		6 [1,58]	2,1 [0,08]			
FA4198	F1E07		7 [1,85]	2,3 [0,09]			
FA4199	F1E08		8 [2,1]	2,4 [0,09]			
FA4200	F1E09		9 [2,38]	2,7 [0,11]			
FA4201	F1E10		10 [2,64]	2,8 [0,11]			
FA4202	F1E11		11 [2,90]	3,1 [0,12]			
FA4203	F1E12		12 [3,17]	3,3 [0,13]			
FA4204	F1E15		15 [3,96]	5 [0,20]			

UPDATE Jan. 2025 (v.02)

D. 12.7 FLOW CONTROL VALVES-PRESSURE COMPENSATED

The fixed compensated flow control valve FIC (d. 12.7) is used to keep the descent speed of a load constant, regardless of the operating pressure and the value of the load. They are protected externally by a manganese phosphating treatment

HYDRAULIC CIRCUIT



ORDERING CODE

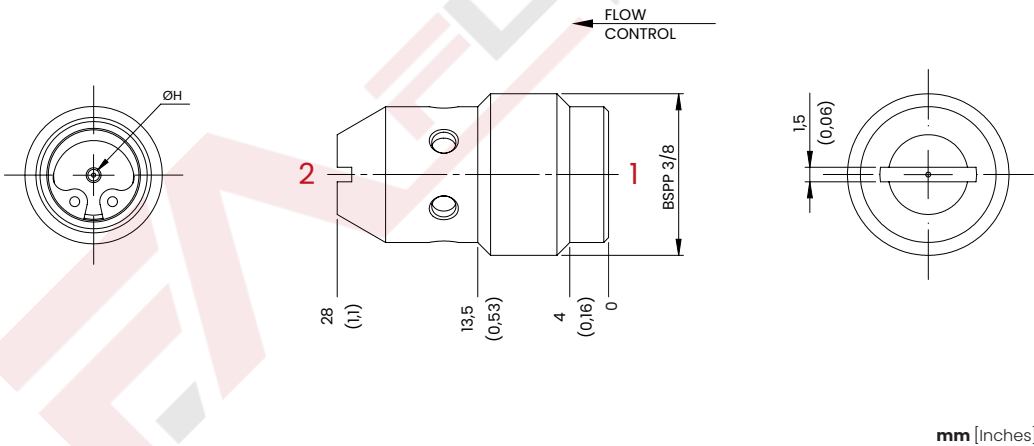
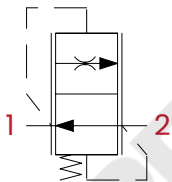
CODE	TYPE	CONTROLLED FLOW AT 100 bar ± 10% l/min [USgpm]	Ø H mm [Inches]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA4080	FIC01	1 [0,26]	1 [0,04]	250 [3625]	0,014 [0,031]
FA4081	FIC02	2 [0,53]	1,2 [0,05]		
FA4082	FIC03	3 [0,79]	1,5 [0,06]		
FA4083	FIC04	4 [1,06]	1,7 [0,07]		
FA4084	FIC05	5 [1,32]	1,9 [0,07]		
FA4085	FIC06	6 [1,58]	2,1 [0,08]		
FA4086	FIC07	7 [1,85]	2,3 [0,09]		
FA4087	FIC08	8 [2,11]	2,4 [0,09]		
FA4088	FIC09	9 [2,38]	2,7 [0,11]		
FA4089	FIC10	10 [2,64]	2,8 [0,11]		
FA4090	FIC11	11 [2,90]	3,1 [0,12]		
FA4091	FIC12	12 [3,17]	3,3 [0,13]		
FA4092	FIC15	15 [3,96]	5 [0,20]		

F2B FLOW CONTROL 3/8 BSPP

3/8 BSPP FLOW CONTROL VALVES - PRESSURE COMPENSATED

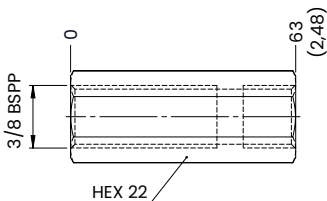
The fixed compensated flow control valve F2B (3/8 G) is used to keep the descent speed of a load constant, regardless of the operating pressure and the value of the load. Typical use is related to tail lifts and hydraulic platforms. They are protected externally by a manganese phosphating treatment

HYDRAULIC CIRCUIT



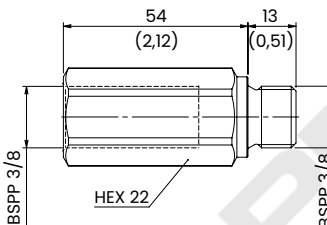
CODE

33300028



CODE

33300029



ORDERING CODE

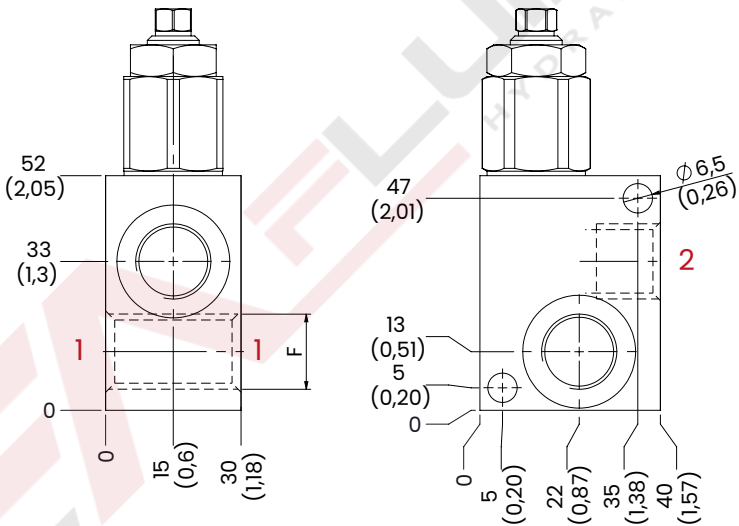
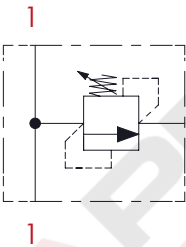
CODE	TYPE	CAVITY	CONTROLLED FLOW AT 100 bar ± 10% l/min [USgpm]	Ø H mm [Inches]	MAX PRESSURE bar [PSI]	TIGHTENING TORQUE Nm [lbt ft]	WEIGHT kg [lb]
FA4014	F2B01	FC106 3/8 BSPP See cavity paragraph p.359	1 [0,26]	0,6 [0,02]	250 [3625]	5 [4]	0,024 [0,053]
FA4015	F2B02		2 [0,53]	1,4 [0,06]			
FA4016	F2B03		3 [0,79]	1,7 [0,07]			
FA4017	F2B04		4 [1,06]	2,1 [0,08]			
FA4018	F2B05		5 [1,32]	2,3 [0,09]			
FA4019	F2B06		6 [1,58]	2,6 [0,10]			
FA4020	F2B07		7 [1,89]	2,8 [0,11]			
FA4021	F2B08		8 [2,11]	3,1 [0,12]			
FA4022	F2B09		9 [2,38]	3,3 [0,13]			
FA4023	F2B10		10 [2,64]	3,5 [0,14]			
FA4024	F2B11		11 [2,90]	3,7 [0,15]			
FA4025	F2B12		12 [3,17]	4 [0,16]			
FA4026	F2B16		16 [4,22]	5,2 [0,2]			
FA4027	F2B18		18 [4,75]	5,8 [0,23]			

M20B RELIEF VALVES - 30 l/min BSPP

RELIEF VALVES 30 l/min

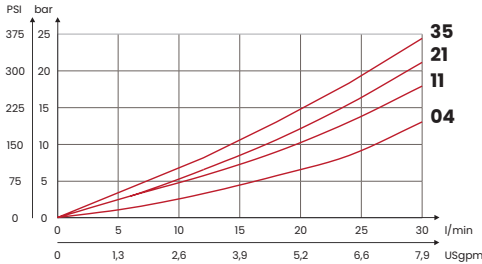
The purpose of the M20B pressure relief valve is to protect the hydraulic system from malfunctions or failures caused by excessively high pressures in the circuit.

HYDRAULIC CIRCUIT



mm [Inches]

PERFORMANCES



OPTIONAL TAMPER PROOF CAP



CODE
KIT137

OPTIONAL HANDKNOB



CODE
KIT132

ORDERING CODE

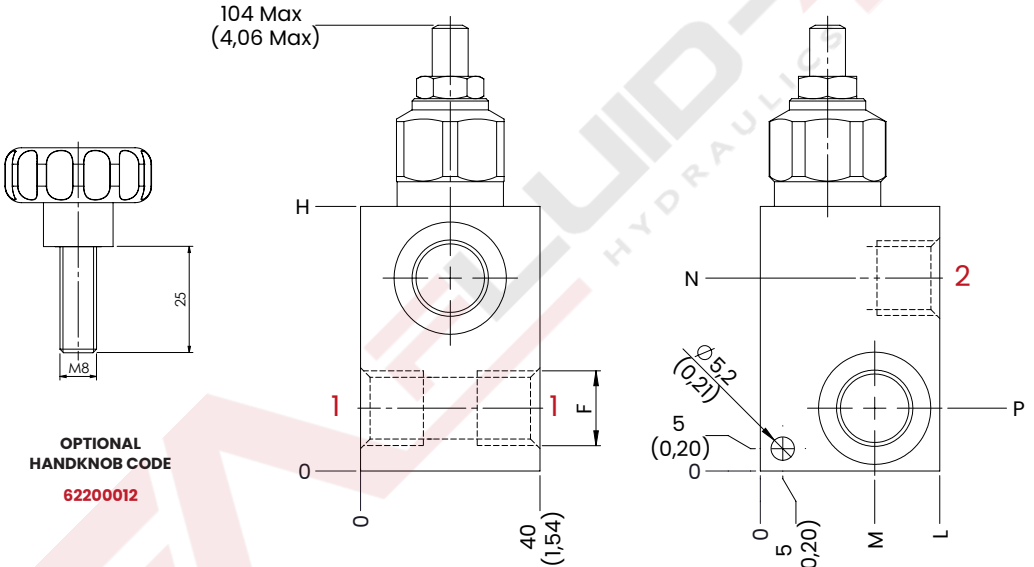
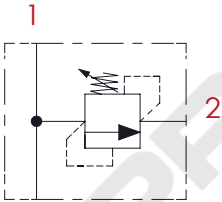
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	WEIGHT kg [lb]
FA6018	M201BC04	1/4 BSPP	20 [5,3]	350 [5075]	10/60 [145/870]	12 [174]	0,47 [1,03]
FA6019	M201BC11				40/110 [580/1595]	40 [580]	
FA6020	M201BC21				80/250 [1160/3625]	70 [1015]	
FA6021	M201BC35				120/350 [1740/5075]	130 [1885]	
FA6022	M202BC04	3/8 BSPP	30 [8]		10/60 [145/870]	12 [174]	
FA6023	M202BC11				40/110 [580/1595]	40 [580]	
FA6024	M202BC21				80/250 [1160/3625]	70 [1015]	
FA6025	M202BC35				120/350 [1740/5075]	130 [1885]	
Steel body							

M40B RELIEF VALVES - 50 l/min BSPP

RELIEF VALVES 50 l/min

The purpose of the M40B pressure relief valve is to protect the hydraulic system from malfunctions or failures caused by excessively high pressures in the circuit.

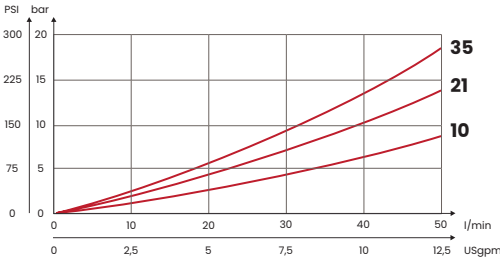
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS

F	L	M	N	P	H
3/8 BSPP	40 [1,57]	27 [1,06]	43 [1,69]	14 [0,55]	59 [2,32]
1/2 BSPP	45 [1,77]	29,5 [1,16]	44 [1,73]	15 [0,59]	60 [2,36]
Steel body					

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M8



CODE
62200020

ORDERING CODE

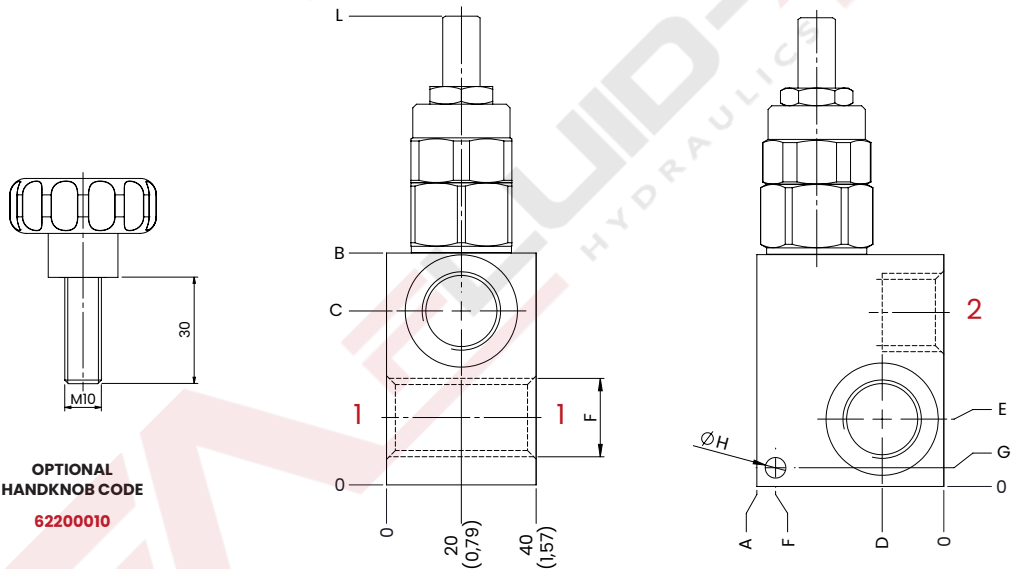
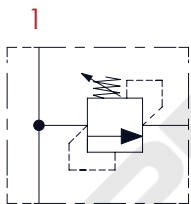
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	WEIGHT kg [lb]
FA6026	M402BC10	3/8 BSPP	40 [10,6]	350 [5075]	10/70 [145/1015]	13 [189]	0,6 [1,32]
FA6027	M402BC21				30/210 [435/3045]	50 [725]	
FA6028	M402BC35				70/350 [1015/5075]	90 [1305]	
FA6029	M403BC10	1/2 BSPP	50 [13,2]		10/70 [145/1015]	13 [189]	0,7 [1,54]
FA6030	M403BC21				30/210 [435/3045]	50 [725]	
FA6031	M403BC35				70/350 [1015/5075]	90 [1305]	

M80B RELIEF VALVES - 80 l/min BSPP

RELIEF VALVES 80 l/min

The purpose of the M80 pressure relief valve is to protect the hydraulic system from malfunctions or failures caused by excessively high pressures in the circuit.

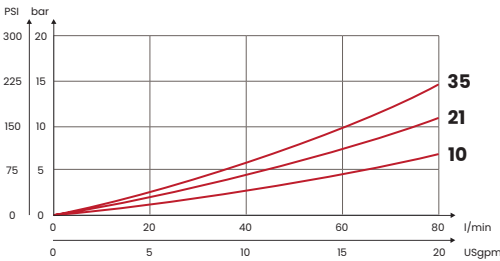
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS

F	A	B	C	D	E	F	G	H	L
1/2 BSPP	50 [1,97]	62 [2,44]	46,5 [1,83]	16,5 [0,65]	18 [0,17]	45 [1,77]	5 [0,20]	5,5 [0,22]	119 [4,7]
3/4 BSPP	55 [2,16]	70 [2,75]	50,5 [1,99]	18,5 [0,72]	19,5 [0,76]	48 [1,89]	7 [0,27]	6,5 [0,25]	127 [5]
Steel body									

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M8



CODE
62200021

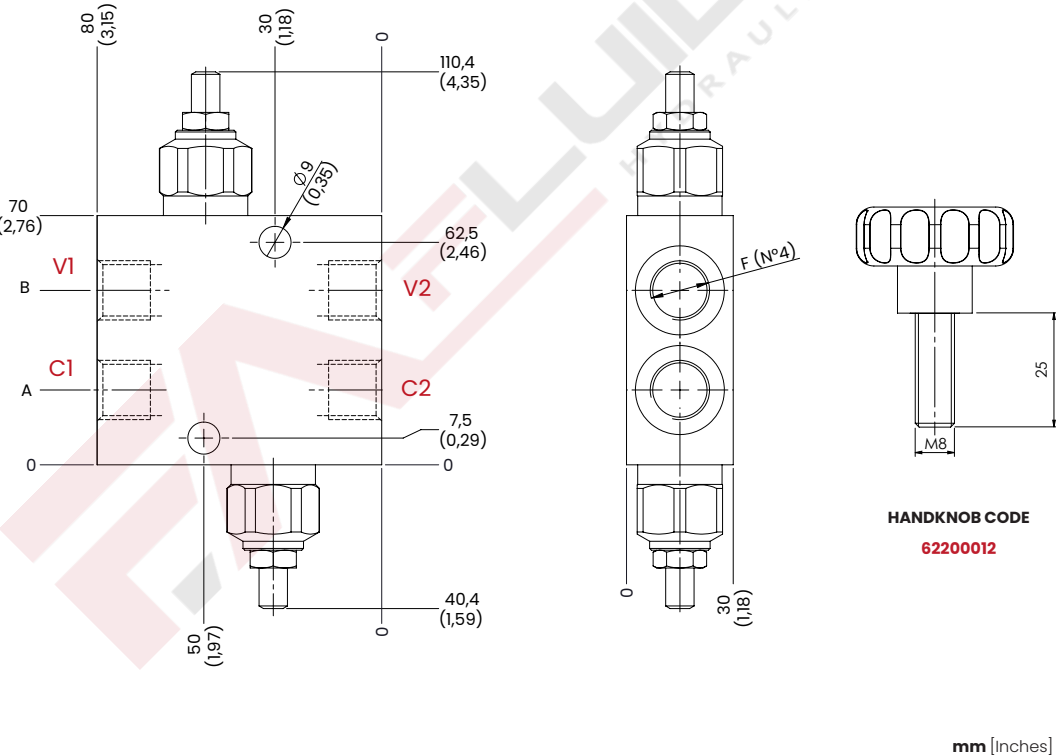
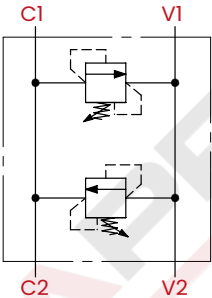
ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	WEIGHT kg [lb]
FA6116	M803BC10	1/2 BSPP	80 [21,1]	350 [5075]	10/100 [145/1450]	25 [362]	1 [2,2]
FA6117	M803BC25				20/250 [290/3625]	85 [1247]	
FA6118	M803BC35				50/350 [725/5075]	90 [1305]	
FA6032	M804BC10	3/4 BSPP			10/100 [145/1450]	25 [362]	
FA6033	M804BC25				20/250 [290/3625]	85 [1247]	
FA6034	M804BC35				50/350 [725/5075]	90 [1305]	
Steel body							

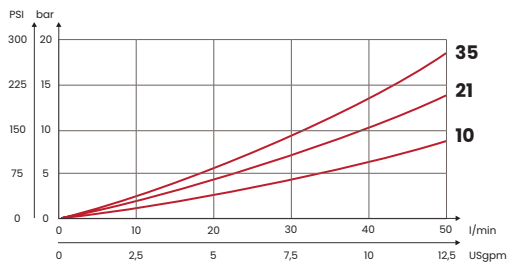
DOUBLE CROSS RELIEF VALVES

VAA valves with steel manifold and two pressure relief valves, they control the pressure on both connection lines.

HYDRAULIC CIRCUIT



PERFORMANCES



OPTIONAL TAMPER PROOF CAP M8



CODE
62200020

ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	A	B	WEIGHT kg [lb]
FA6039	VAA2BC10	3/8 BSPP	40 [10,6]	350 [5075]	10/70 [145/1015]	13 [189]	21 [0,82]	49 [1,93]	1,22 [2,68]
FA6040	VAA2BC21				30/210 [435/3045]	50 [725]			
FA6041	VAA2BC35				70/350 [1015/5075]	90 [1305]			
FA6042	VAA3BC10	1/2 BSPP	50 [13,2]		10/70 [145/1015]	13 [189]	18,5 [0,73]	51,5 [2,03]	1,16 [2,55]
FA6043	VAA3BC21				30/210 [435/3045]	50 [725]			
FA6044	VAA3BC35				70/350 [1015/5075]	90 [1305]			
Steel body									

Steel body

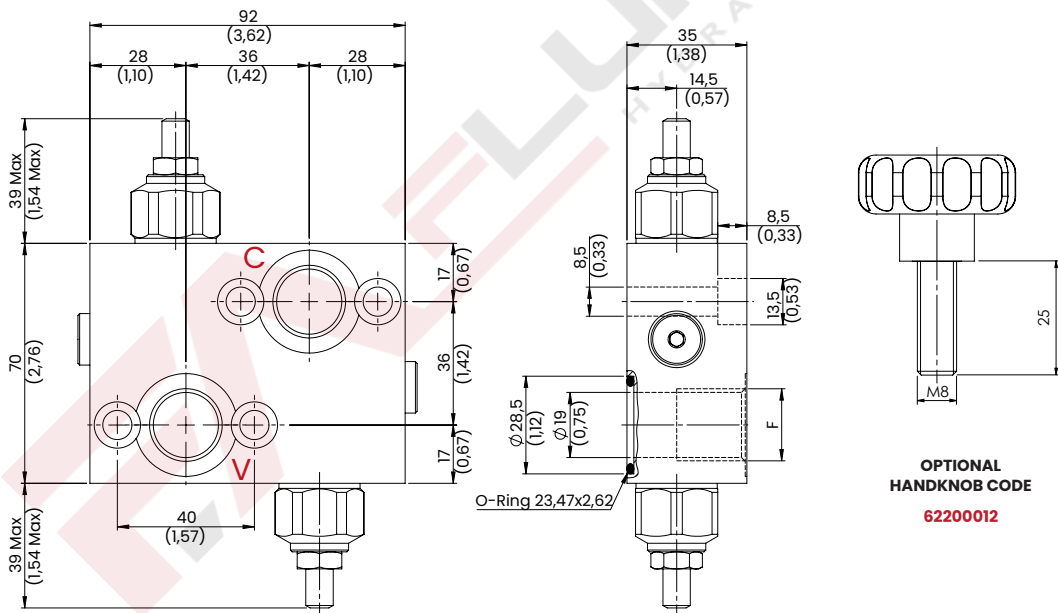
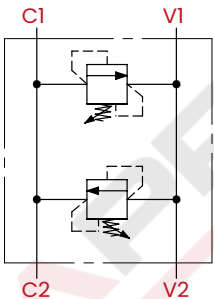
VAD DOUBLE CROSS BSPP (OMR-OMP)

DOUBLE CROSS RELIEF VALVES FOR ENGINES OMR-OMP

VAD valves with steel manifold and two pressure relief valves, they control the pressure on both connection lines.



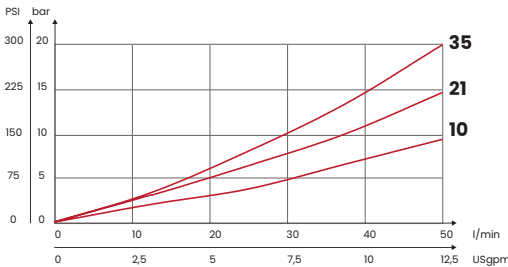
HYDRAULIC CIRCUIT



OPTIONAL
HANDKNOB CODE
62200012

mm [inches]

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M8



CODE
62200020

ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	WEIGHT kg [lb]
FA6073	VAD3BC10	1/2 BSPP	50 [13,2]	350 [5075]	10/70 [145/1015]	13 [189]	1,5 [3,3]
FA6074	VAD3BC21				30/210 [435/3045]	50 [725]	
FA6075	VAD3BC35				70/350 [1015/5075]	90 [1305]	
Steel body							

UPDATE Jan. 2025 (v.06)

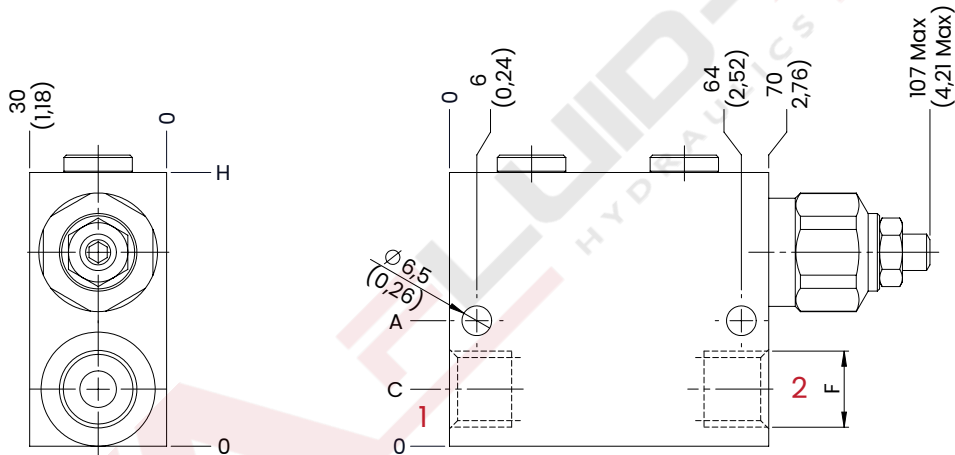
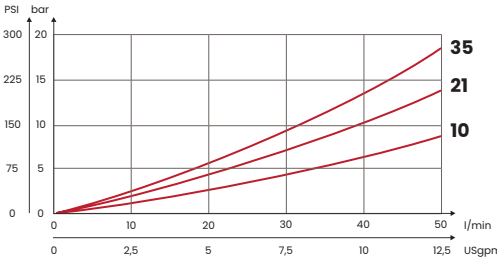
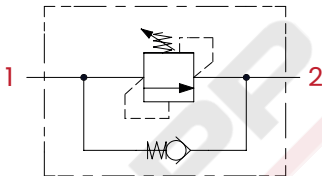
VSD SEQUENCE BSPP

SEQUENCE VALVES

VSD sequence valves are used with two cylinders; the end of the work of the first one coincides with the beginning of the second one, at a given setting pressure.

HYDRAULIC CIRCUIT

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M8



CODE
62200020

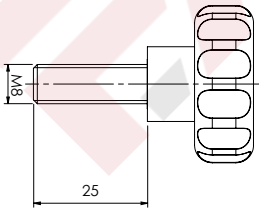
ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	WEIGHT kg [lb]
FA6012	VSD2BC10	3/8 BSPP	40 [10,6]	350 [5075]	10/70 [145/1015]	13 [189]	0,9 [1,98]
FA6013	VSD2BC21				30/210 [435/3045]	50 [725]	
FA6014	VSD2BC35				70/350 [1015/5075]	90 [1305]	
FA6015	VSD3BC10	1/2 BSPP	50 [13,2]	350 [5075]	10/70 [145/1015]	13 [189]	1 [2,2]
FA6016	VSD3BC21				30/210 [435/3045]	50 [725]	
FA6017	VSD3BC35				70/350 [1015/5075]	90 [1305]	

TECHNICAL CHARACTERISTICS

mm [Inches]

F	H	C	A
3/8 BSPP	60 [2,36]	13 [0,51]	33 [1,3]
1/2 BSPP	70 [2,76]	17 [0,67]	35 [1,38]
Steel body			



HANDKNOB CODE
62200012

Mineral oil: DIN 51524 ISO 6743/4 | Oil viscosity: 15 to 250 cSt 15-250 mm²/s | Oil temperature: -4°F + 176°F -20°C +80°C | Ambient temperature: -4°F + 122°F -20°C +50°C | Max contamination index with filter: 5 to 250 cSt 15-250 mm²/s | It is necessary a filter use to protect the valve (advised filtration 15 µm) | Max leakage: 0,25 cm³/min - 5 drops/min at 80% of the calibration pressure

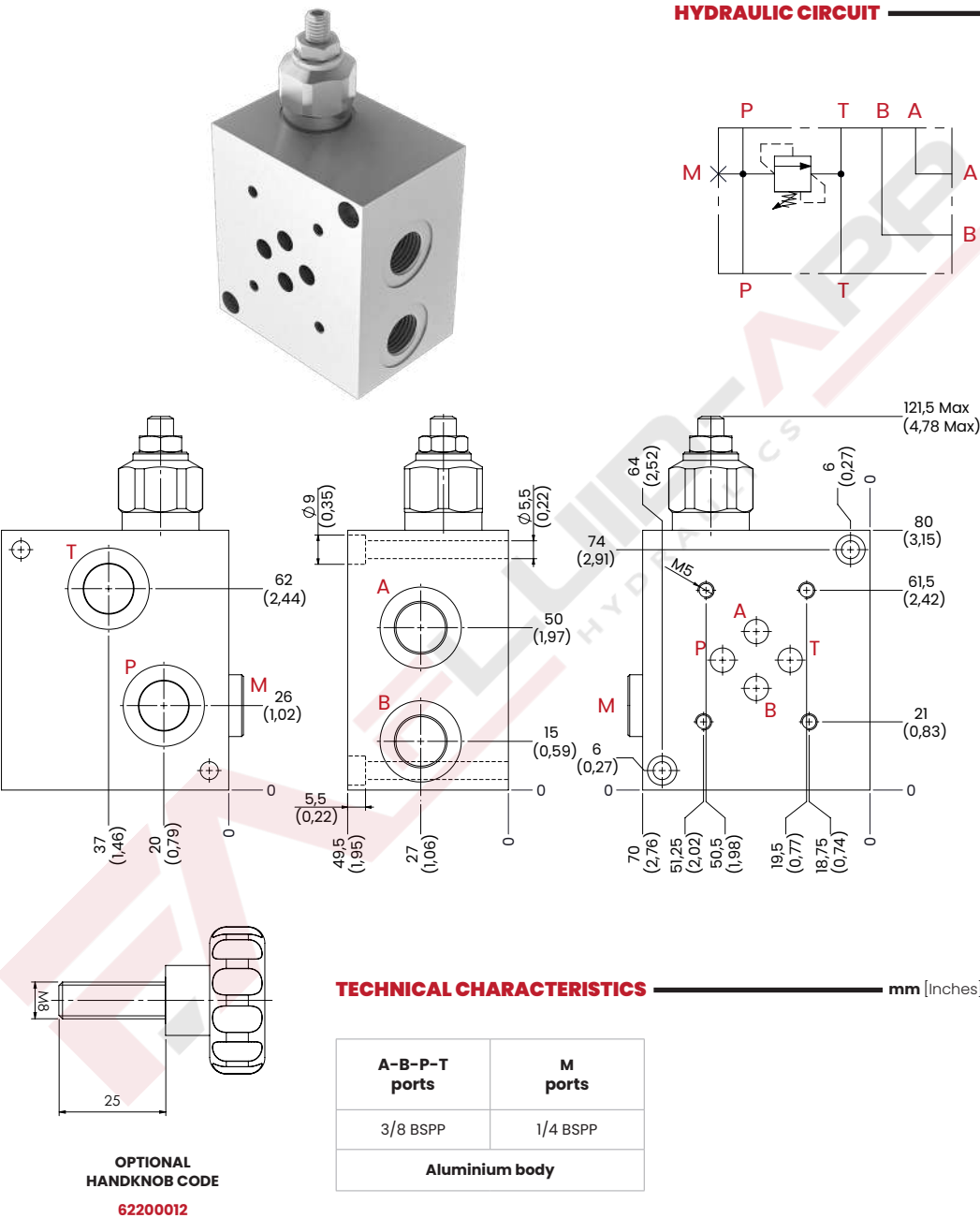
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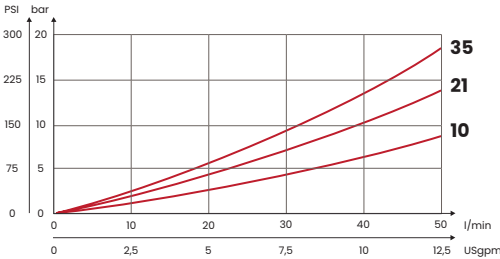
MC3 CETOP 3

CETOP 3 SINGLE MANIFOLDS

The MC3 bases allow the assembly of a single CETOP 3 solenoid valve, they are supplied with a relief valve.



PERFORMANCES



OPTIONAL TAMPER PROOF CAP M8



CODE
62200020

ORDERING CODE

CODE	TYPE	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	WEIGHT kg [lb]
FA6035	MC3C10	50 [13,3]	210 [3045]	10/70 [145/1015]	13 [189]	0,8 [1,76]
FA6036	MC3C21			30/210 [435/3045]	50 [725]	
FA6159	MC3C35		350 [5075]	70/350 [1015/5075]	90 [1305]	

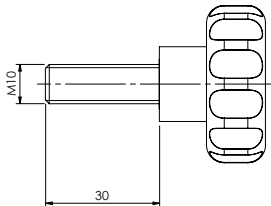
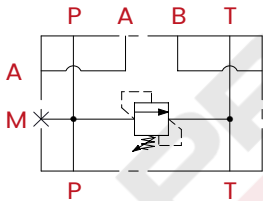
MC5 CETOP 5

CETOP 5 SINGLE MANIFOLDS

The MC5 bases allow the assembly of a single CETOP 5 solenoid valve, they are supplied with a relief valve.



HYDRAULIC CIRCUIT



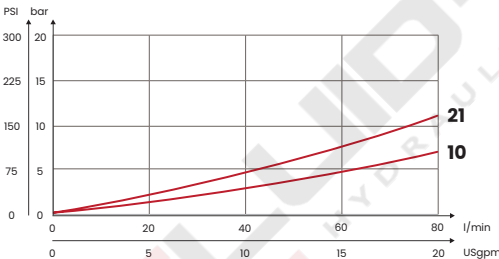
OPTIONAL
HANDKNOB CODE
62200010

TECHNICAL CHARACTERISTICS

mm [Inches]

A-B-P-T ports	M ports
1/2 BSPP	1/4 BSPP
Aluminium body	

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M8



CODE
62200021

ORDERING CODE

CODE	TYPE	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	WEIGHT kg [lb]
FA6037	MC5C10	80 [21,1]	210 [3045]	10/100 [145/1450]	25 [362]	1,20 [2,64]
FA6038	MC5C21			20/210 [290/3045]	85 [1247]	

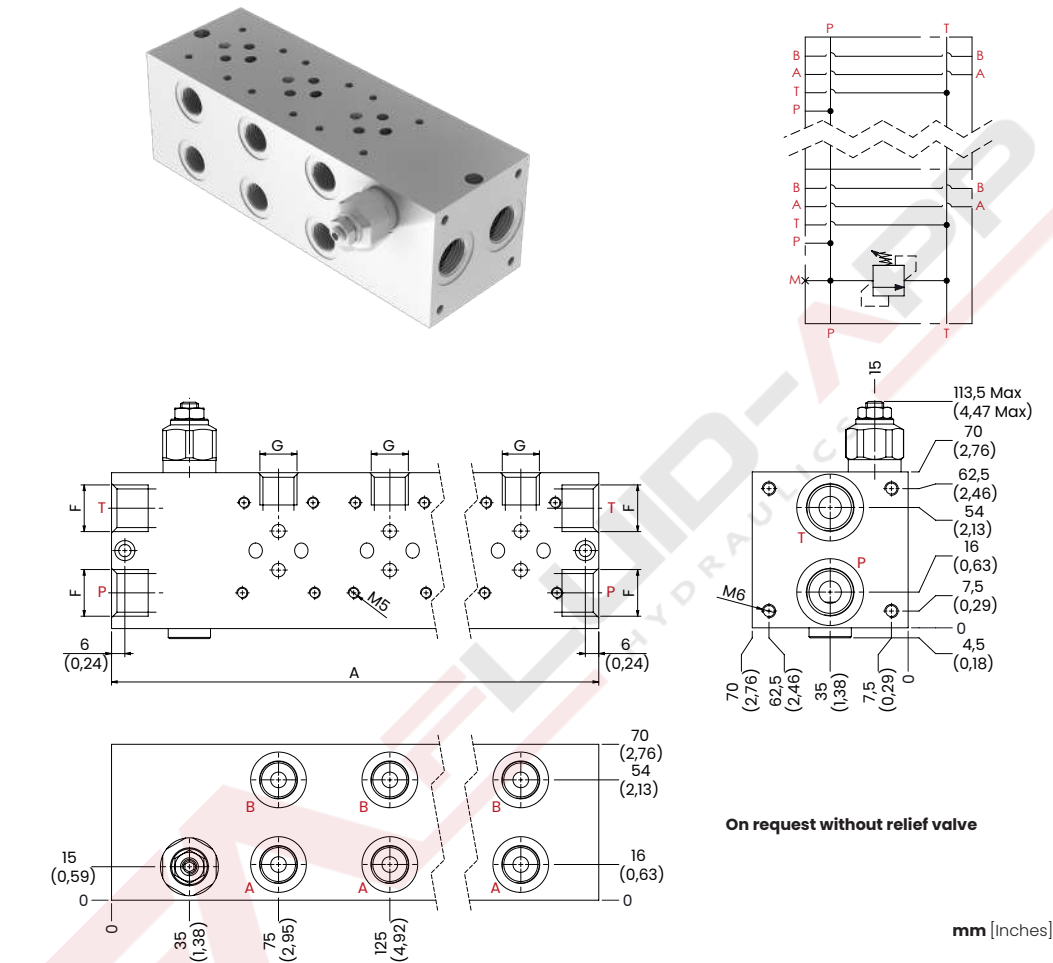
MM CETOP 3 - WITH RELIEF VALVE

CETOP 3 MULTISTATION MANIFOLDS

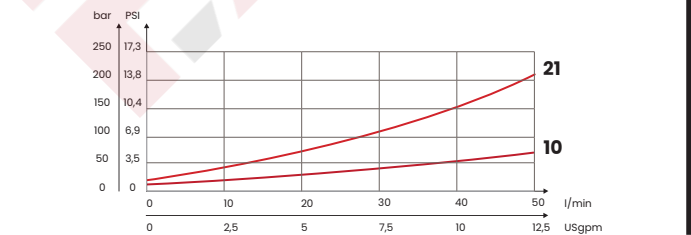
The MM aluminum manifolds allow the assembly of 2 or more CETOP 3 solenoid valves, they are supplied with a relief valve.

HYDRAULIC CIRCUIT

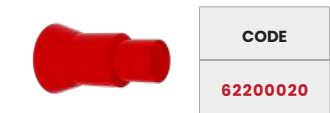
ORDERING CODE



PERFORMANCES



OPTIONAL TAMPER PROOF CAP M8



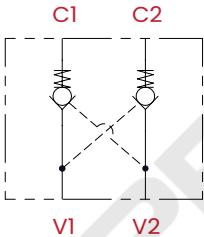
CODE	TYPE	F PORTS	G	A	MAX FLOW l/min [USgpm]	MAX PRES- SURE bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	WEIGHT kg [lb]		
FA6119	MM2C10	1/2 BSPP	3/8 BSPP	160 [6,29]	50 [13,3]	210 [3045]	10/70 [145/1015]	16,5 [239]	2,4 [5,3]		
FA6120	MM3C10			210 [8,27]					3 [6,6]		
FA6121	MM4C10			260 [10,24]					3,6 [8]		
FA6122	MM5C10			310 [12,20]					4,3 [9,5]		
FA6123	MM6C10			360 [14,17]					4,9 [10,8]		
FA6144	MM7C10			410 [16,2]					5,5 [12,1]		
FA6146	MM8C10			460 [18,1]					6 [13,2]		
FA6148	MM9C10			510 [20]					6,7 [14,8]		
FA6150	MM10C10			560 [22,1]					7,4 [16,3]		
FA6172	MM11C10			610 [24]			10/70 [145/1015]	16,5 [239]	8,1 [17,9]		
FA6174	MM12C10			660 [26]					8,7 [19,2]		
FA6176	MM13C10			710 [28]					9,3 [20,5]		
FA6178	MM14C10			760 [30]					10 [22]		
FA6180	MM15C10			810 [32]					10,6 [23,4]		
FA6182	MM16C10			860 [34]					11,2 [24,7]		
FA6101	MM2C21			160 [6,29]			30/210 [435/3045]	30 [435]	2,4 [5,3]		
FA6102	MM3C21			210 [8,27]					3 [6,6]		
FA6103	MM4C21			260 [10,24]					3,6 [8]		
FA6104	MM5C21			310 [12,20]					4,3 [9,5]		
FA6105	MM6C21			360 [14,17]					4,9 [10,8]		
FA6145	MM7C21			410 [16,2]					5,5 [12,1]		
FA6147	MM8C21			460 [18,1]					6 [13,2]		
FA6149	MM9C21			510 [20]					6,7 [14,8]		
FA6151	MM10C21			560 [22,1]					7,4 [16,3]		
FA6173	MM11C21			610 [24]					30/210 [435/3045]	33 [479]	8,1 [17,9]
FA6175	MM12C21			660 [26]							8,7 [19,2]
FA6177	MM13C21			710 [28]							9,3 [20,5]
FA6179	MM15C21			760 [30]							10 [22]
FA6181	MM15C21			810 [32]							10,6 [23,4]
FA6183	MM16C21			860 [34]							11,2 [24,7]
Aluminium body											

VBD CHECK VALVES BSPP

DOUBLE ACTING PILOT CHECK VALVES

VBD pilot check valves are used to lock a double acting actuator in place in both directions, ensuring the load is locked

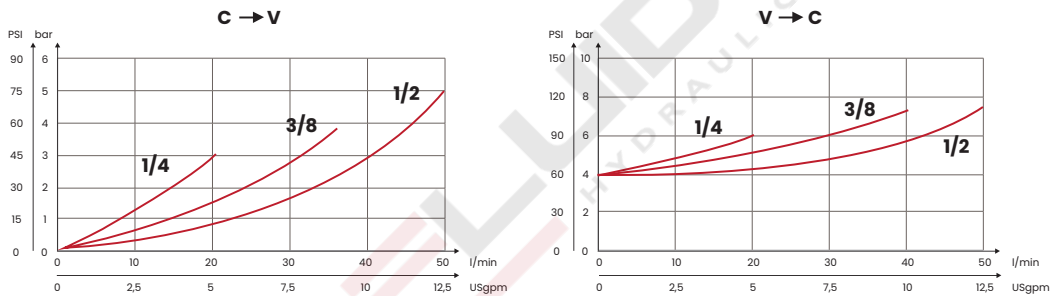
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS

F	B	H	L	M	N	P	A	C	D
1/4 BSPP	30 [1,18]	40 [1,57]	63 [2,5]	13,5 [0,53]	49,5 [1,95]	7 [0,28]	22,5 [0,65]	85,5 [3,4]	31,5 [0,24]
3/8 BSPP				14,5 [0,57]	48,5 [1,90]				
1/2 BSPP	35 [1,38]	50 [2,0]	82 [3,23]	23 [0,90]	59 [2,32]	15 [0,59]	31,5 [1,24]	113,5 [4,5]	41 [1,61]
Steel body									

PERFORMANCES



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	PILOT RATIO	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA5001	VBD1B	1/4 BSPP	20 [5,3]	350 [5075]	1:5,5	4,5 [65]	0,65 [1,43]
FA5002	VBD2B	3/8 BSPP	35 [9,2]				0,6 [1,32]
FA5003	VBD3B	1/2 BSPP	50 [13,2]		1:5		1,1 [2,43]
Available with spring 3 bar, 6 bar							

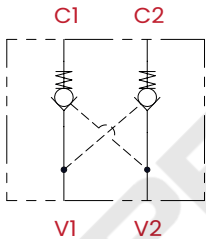
VBDT CHECK VALVES BSPP

DIN2353 DOUBLE ACTING PILOT CHECK VALVES

VBDT pilot check valves are used to lock a double acting actuator in position, ensuring that the load is locked. This version was made for valve mounting with steel pipe.



HYDRAULIC CIRCUIT



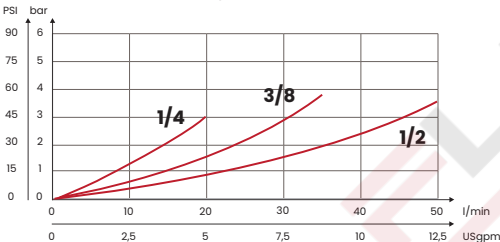
TECHNICAL CHARACTERISTICS

mm [Inches]

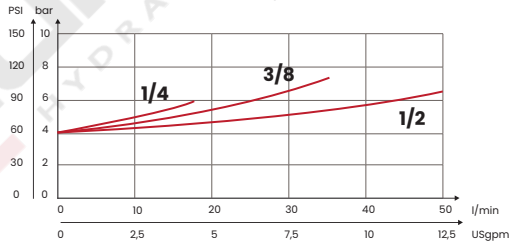
F	A	B	C	D	E	L	M	N	H	R	S
1/4 BSPP	35 [1,38]	30 [1,18]	98 [3,85]	31,5 [1,24]	12 [0,47]	63 [2,48]	13,5 [0,53]	49,5 [1,95]	40 [1,57]	8,5 [0,33]	71,5 [2,81]
3/8 BSPP							14,5 [0,57]	48,5 [1,90]			
1/2 BSPP	33,5 [1,32]	35 [1,38]	115 [4,52]	41 [1,61]	15 [0,59]	82 [3,22]	18,5 [0,72]	63,5 [2,5]	45 [1,77]	14 [0,55]	96 [3,78]
Steel body											

PERFORMANCES

C → V



V → C



ORDERING CODE

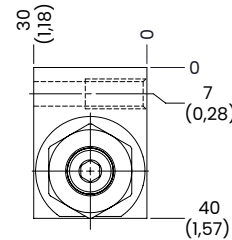
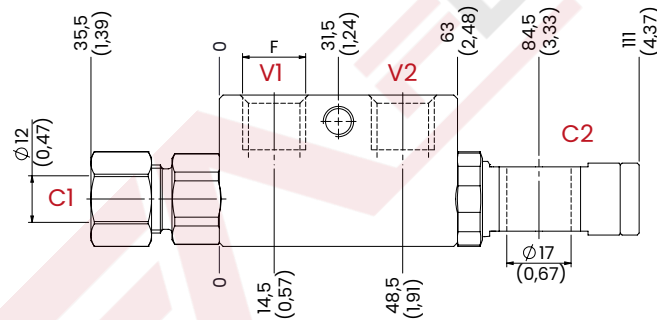
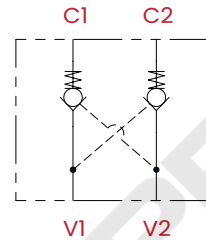
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	PILOT RATIO	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA5007	VBD1BT	1/4 BSPP	20 [5,3]	350 [5075]	1:5,5	4,5 [65]	0,67 [1,47]
FA5008	VBD2BT	3/8 BSPP	35 [9,2]				
FA5057	VBD3BT	1/2 BSPP	50 [13,2]		1:5		1,06 [2,33]

DIN2353 DOUBLE ACTING PILOT CHECK VALVES, WITH ADJUSTABLE BANJO

VBDG are used to keep a double acting cylinder in its position, granting the load stop. This version has been manufactured for mounting of the valve with the pipe and adjustable banjo.

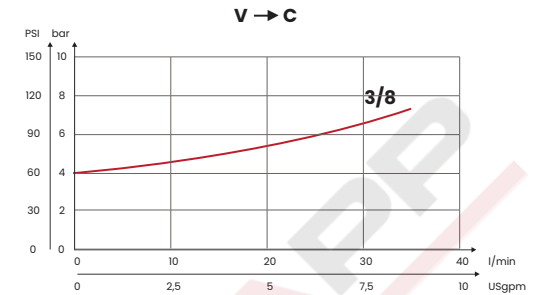
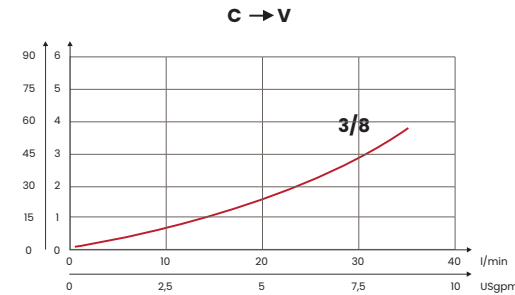


HYDRAULIC CIRCUIT



mm [Inches]

PERFORMANCES

**ORDERING CODE**

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	PILOT RATIO	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA5055	VBD2BG	3/8 BSPP	35 [9,2]	350 [5075]	1:5,5	4,5 [65]	0,67 [1,47]
Steel body							

Steel body

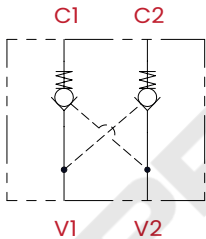
VBR CHECK VALVES BSPP

DOUBLE ACTING PILOT OPERATED CHECK VALVES, BOLT FITTING

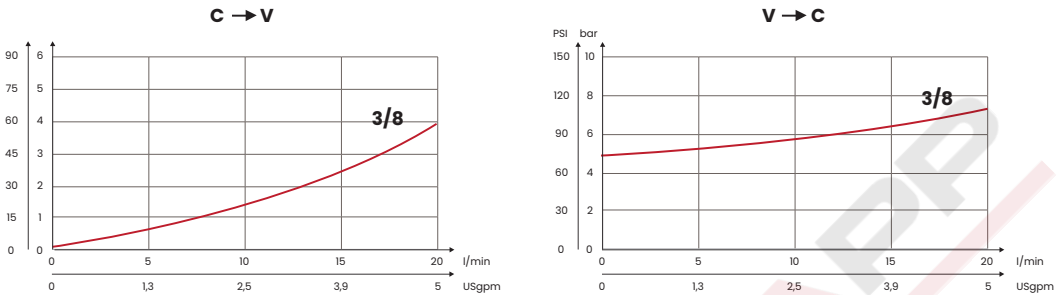
VBR pilot operated check valves are used to lock a double acting actuator in position in both directions, ensuring the load is locked, bolt fitting version.



HYDRAULIC CIRCUIT

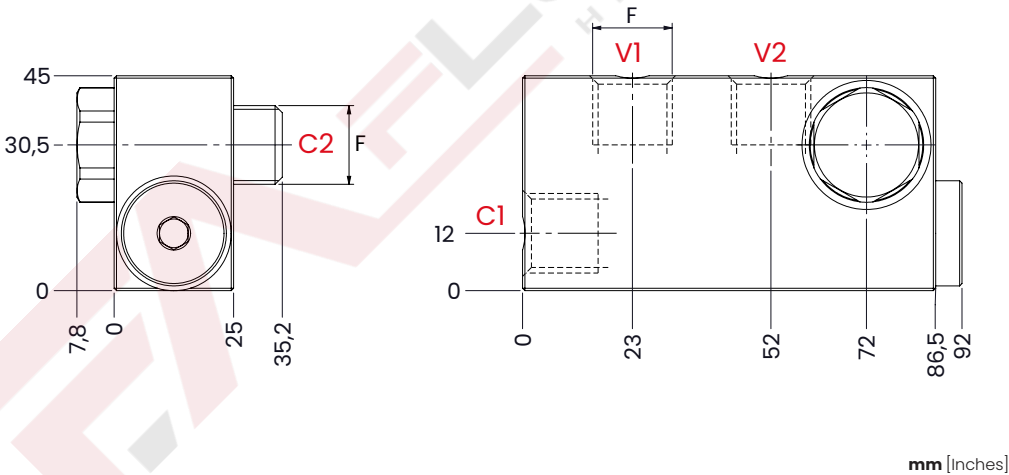


PERFORMANCES



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	PILOT RATIO	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA5061	VBR2B	3/8 BSPP	20 [5,3]	350 [5075]	1:5	4,5 [65]	0,6 [1,32]
Steel body							

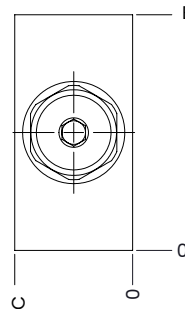
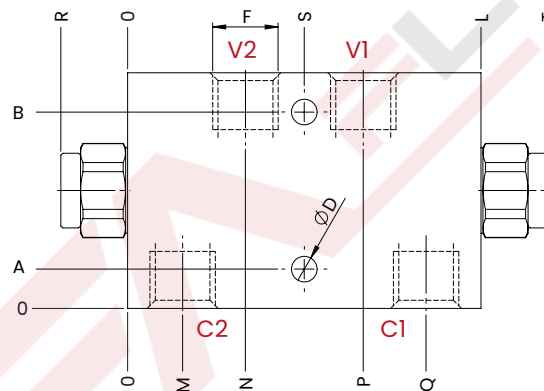
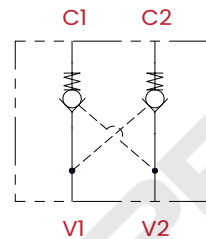


DOUBLE ACTING PILOT CHECK VALVES

VPD pilot check valves are used to lock a double acting actuator in place in both directions, ensuring the load is locked.



HYDRAULIC CIRCUIT

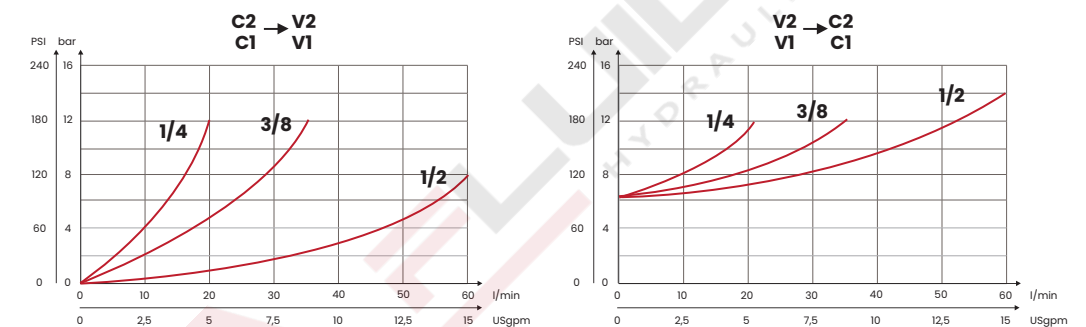


mm [Inches]

TECHNICAL CHARACTERISTICS

F	A	B	C	E	L	M	N	P	Ø D	Q	R	S	T
1/4 BSPP	10 [0,39]	50 [1,97]	30 [1,18]	60 [2,36]	90 [3,54]	14 [0,55]	30 [1,18]	60 [2,36]	6,5 [0,25]	76 [3]	17 [0,67]	45 [1,77]	107 [4,21]
3/8 BSPP					110 [4,33]	20 [0,78]	37 [1,45]	73 [2,87]	8,5 [0,33]	90 [3,54]	22 [0,86]	55 [2,16]	132 [5,19]
1/2 BSPP					Steel body (on request aluminium body)								

PERFORMANCES

**ORDERING CODE**

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	PILOT RATIO	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA5039	VPD1B	1/4 BSPP	20 [5,3]	350 [5075]	1:3,3	4,5 [65]	1,23 [2,70]
FA5011	VPD2B	3/8 BSPP	35 [9,2]				1,2 [2,64]
FA5013	VPD3B	1/2 BSPP	60 [15,83]		1:4		1,45 [3,20]

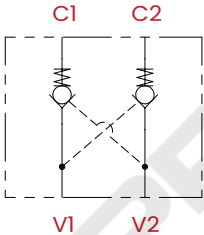
VPF CHECK VALVES BSPP

DOUBLE ACTING PILOT CHECK VALVES - FLANGED VERSION

VPF pilot check valves are used to lock a double acting actuator in place in both directions, ensuring the load is locked.



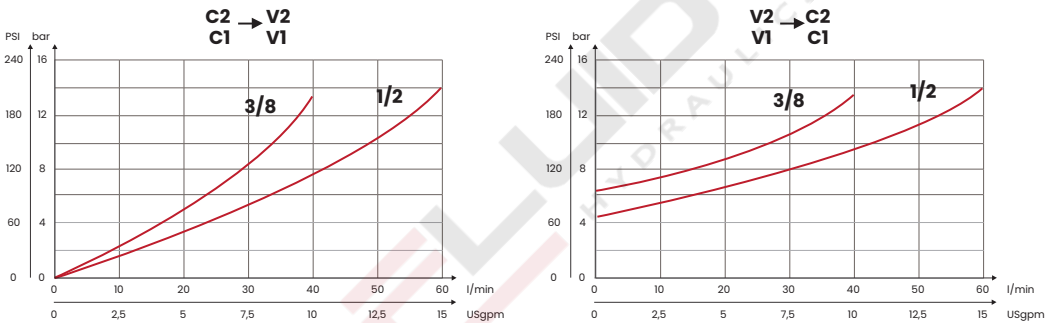
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS

F	C	ØD	E	G	H	I	L	M	N	P	Q	R	S	T	U
3/8 BSPP	10 [0,39]	6,5 [0,25]	45 [1,77]	107 [4,21]	80 [3,15]	17 [0,67]	90 [3,54]	14 [0,55]	30 [1,18]	60 [2,36]	76 [2,99]	10 [0,39]	50 [1,97]	29,5 [1,16]	60 [2,36]
1/2 BSPP	15 [0,59]	8,5 [0,33]	55 [2,16]	132 [5,19]	95 [3,74]	22 [0,86]	110 [4,33]	22,5 [0,89]	37 [1,45]	73 [2,87]	87,5 [3,44]				
Steel body (on request aluminium body)															

PERFORMANCES



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	PILOT RATIO	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA5012	VPF2B	3/8 BSPP	35 [9,2]	350 [5075]	1:3,3	4,5 [65]	1,2 [2,64]
FA5014	VPF3B	1/2 BSPP	60 [15,83]		1:4		1,45 [3,20]

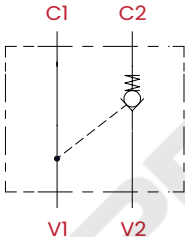
VBS CHECK VALVES BSPP

SINGLE ACTING PILOT CHECK VALVES

The VBS pilot check valves are used to lock a single acting actuator in position, ensuring that the load is locked.



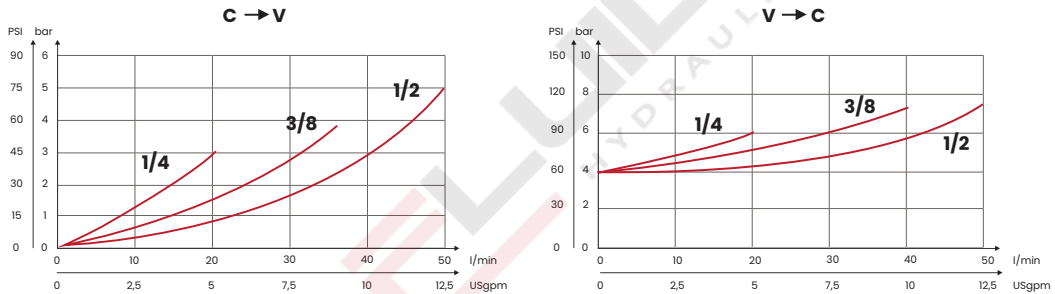
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS

F	B	H	L	M	N	P	A	C	D
1/4 BSPP	30 [1,18]	40 [1,57]	63 [2,5]	13,5 [0,53]	49,5 [1,95]	7 [0,28]	22,5 [0,65]	85,5 [3,4]	31,5 [0,24]
3/8 BSPP				14,5 [0,57]	48,5 [1,90]				
1/2 BSPP	35 [1,38]	50 [2,0]	82 [3,23]	23 [0,90]	59 [2,32]	15 [0,59]	31,5 [1,24]	113,5 [4,5]	41 [1,61]
Steel body									

PERFORMANCES



ORDERING CODE

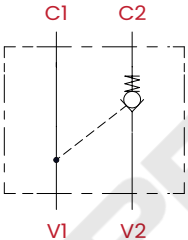
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	PILOT RATIO	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA5004	VBS1B	1/4 BSPP	20 [5,3]	350 [5075]	1:5,5	4,5 [65]	0,61 [1,34]
FA5005	VBS2B	3/8 BSPP	35 [9,2]				0,58 [1,28]
FA5006	VBS3B	1/2 BSPP	50 [13,2]		1:5		1,04 [2,29]
Available with spring 3 bar, 6 bar							

VBST CHECK VALVES BSPP

DIN2353 SINGLE ACTING PILOT CHECK VALVES

VBST pilot check valves are used to lock a single acting actuator in position, ensuring that the load is locked. This version was made for valve mounting with steel pipe.

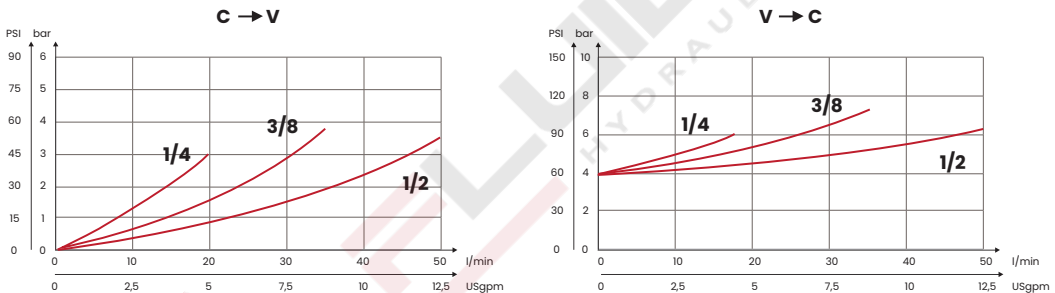
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS

F	A	B	C	D	E	L	M	N	H	R	S
1/4 BSPP	35 [1,38]	30 [1,18]	98 [3,85]	31,5 [1,24]	12 [0,47]	63 [2,48]	13,5 [0,53]	49,5 [1,95]	40 [1,57]	8,5 [0,33]	71,5 [2,81]
3/8 BSPP							14,5 [0,57]	48,5 [1,90]			
1/2 BSPP	33,5 [1,32]	35 [1,38]	115 [4,52]	41 [1,61]	15 [0,59]	82 [3,22]	18,5 [0,72]	63,5 [2,5]	45 [1,77]	14 [0,55]	96 [3,78]
Steel body											

PERFORMANCES



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	PILOT RATIO	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA5009	VBS1BT	1/4 BSPP	20 [5,3]	350 [5075]	1:5,5	4,5 [65]	0,62 [1,37]
FA5010	VBS2BT	3/8 BSPP	35 [9,2]				0,59 [1,3]
FA5058	VBS3BT	1/2 BSPP	50 [13,2]		1:5		1 [2,2]

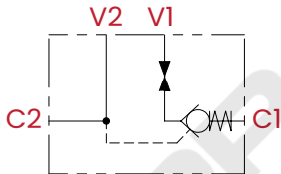
VSP MANUAL CHECK VALVES BSPP - RIGHT

SINGLE ACTING PILOT CHECK VALVES WITH MANUAL SHUT-OFF

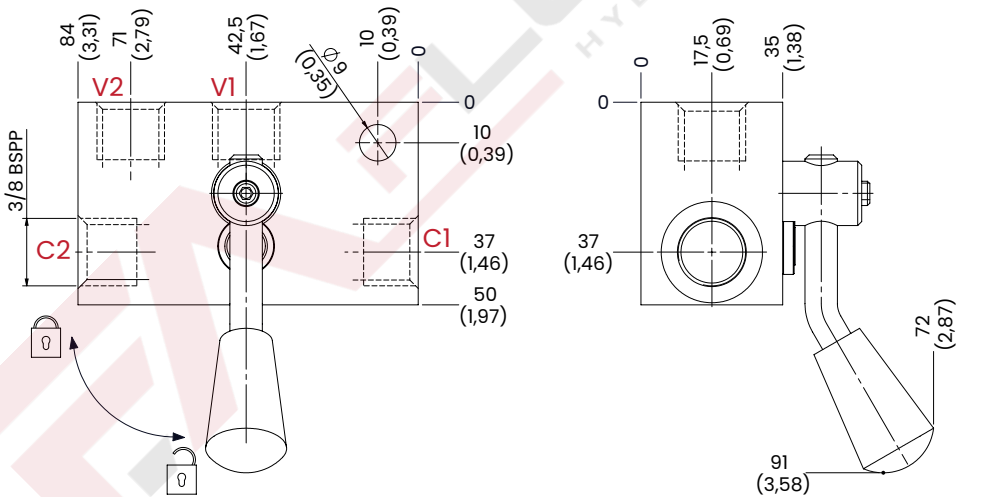
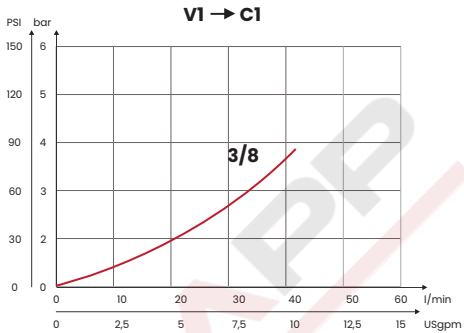
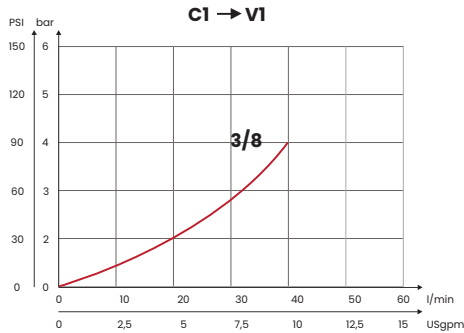
VSP pilot check valves are mainly used to lock a single acting cylinder in position, they are made in left and right hand versions.



HYDRAULIC CIRCUIT



PERFORMANCES



mm [Inches]

ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	PILOT RATIO	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA5015	VSP2BDX	3/8 BSPP	40 [10,52]	350 [5075]	1:4,20	4,5 [65]	1,08 [2,38]
Steel body (on request aluminium body)							

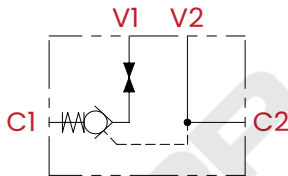
VSP MANUAL CHECK VALVES BSPP - LEFT

SINGLE ACTING PILOT CHECK VALVES WITH MANUAL SHUT-OFF

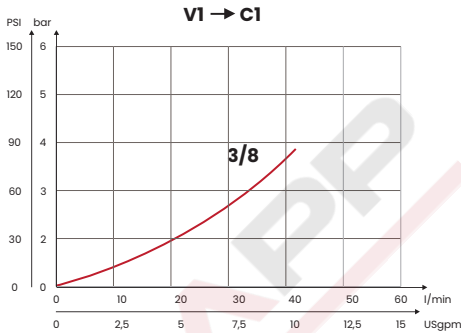
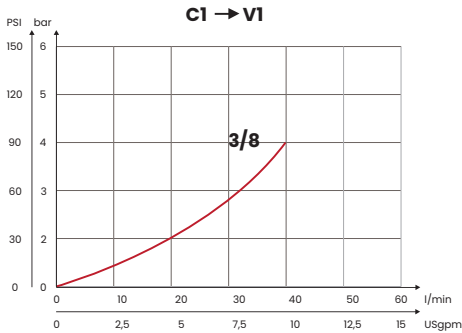
VSP pilot check valves are mainly used to lock a single acting cylinder in position, they are made in left and right hand versions.



HYDRAULIC CIRCUIT

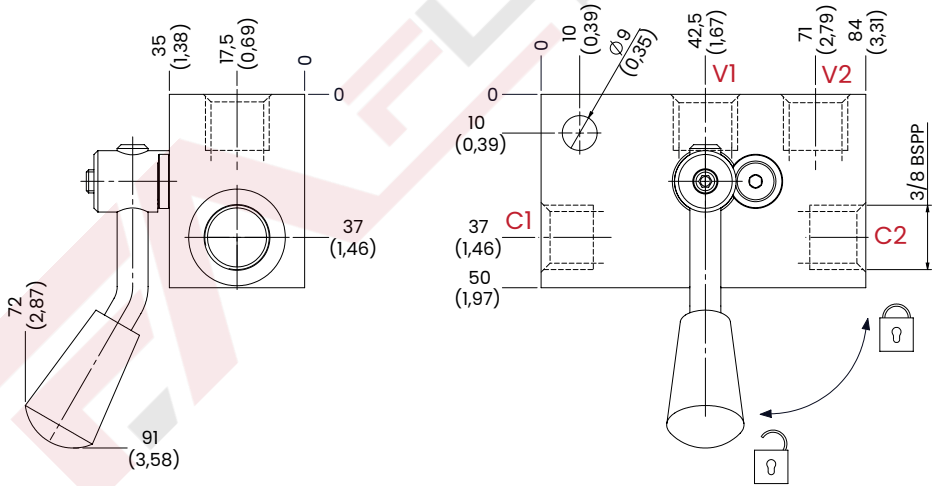


PERFORMANCES



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	PILOT RATIO	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA5016	VSP2BSX	3/8 BSPP	40 [10,52]	350 [5075]	1:4,20	4,5 [65]	1,08 [2,38]
Steel body (on request aluminium body)							



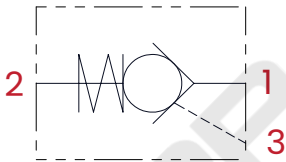
mm [Inches]

VPL CHECK VALVES BSPP

SINGLE ACTING PILOT CHECK VALVES

VPL check valves are used to hold a single acting cylinder in position, granting the load stop.

HYDRAULIC CIRCUIT

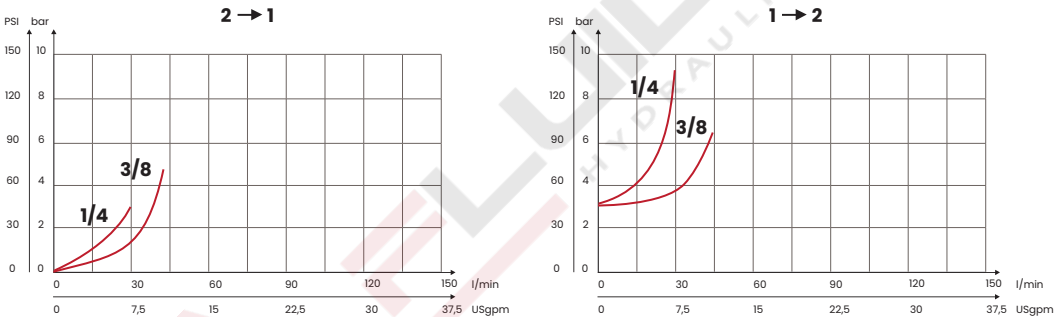


TECHNICAL CHARACTERISTICS

mm [Inches]

F	L	HEX
1/4 BSPP	96 [3,78]	36
3/8 BSPP	119 [4,68]	41

PERFORMANCES



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	PILOT RATIO	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA5019	VPL1B	1/4 BSPP	25 [6,6]	350 [5075]	1:6	4,5 [65]	0,68 [1,5]
FA5020	VPL2B	3/8 BSPP	40 [10,6]		1:5		1,06 [2,33]

UPDATE: May 2026 (v.06)

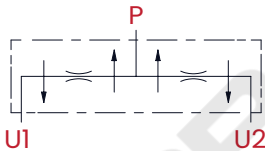
VDF DIVIDER BSPP

FLOW DIVIDERS

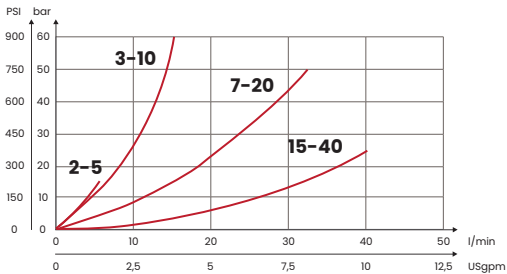
Flow dividers/unifiers allow the inlet flow to be divided into two equal parts, while in the opposite direction they unify it.



HYDRAULIC CIRCUIT



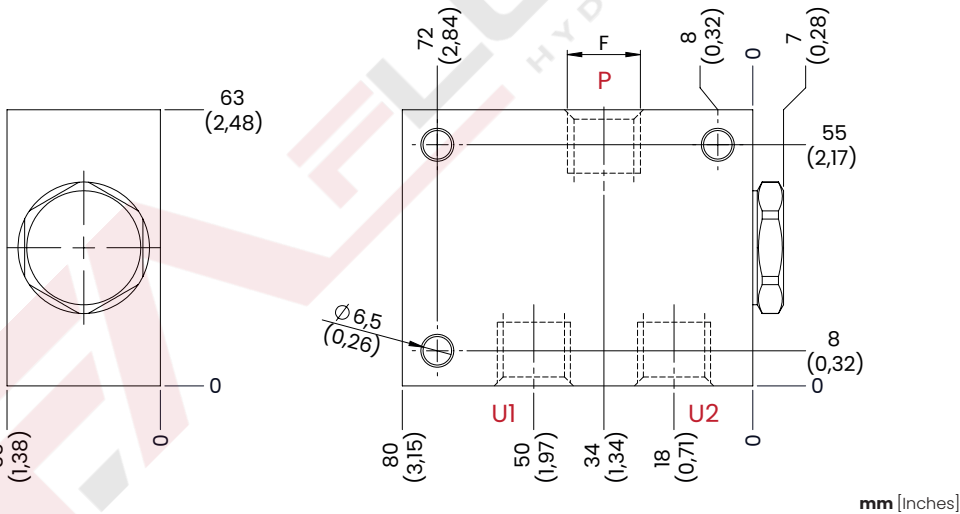
PERFORMANCES



Specifications
Maximum division error: ±10% of the oil flow in U1 or U2 and 120 bar [1750 PSI] pressure difference between U1 and U2. (Division rate 50%÷50%)

ORDERING CODE

CODE	TYPE	P ports	U1/U2 ports	INLET FLOW RANGE l/min [USgpm]	MAX FLOW l/min [USgpm]	MAX PRES- SURE bar [PSI]	WEIGHT kg [lb]
FA4060	VDF2B2B1	3/8 BSPP	3/8 BSPP	2-5 [0,5-1,3]	40 [10,6]	210 [3050]	0,5 [1,1]
FA4061	VDF2B2B2			3-10 [0,8-2,6]			
FA4062	VDF2B2B3			7-20 [1,8-5,2]			
FA4063	VDF2B2B4			15-40 [3,9-10,4]			
FA4064	VDF3B2B4	1/2 BSPP	1/2 BSPP	7-20 [1,8-5,2]	40 [10,6]	210 [3050]	0,5 [1,1]
FA4065	VDF3B3B3			15-40 [3,9-10,4]			
FA4066	VDF3B3B4						
Aluminium body							

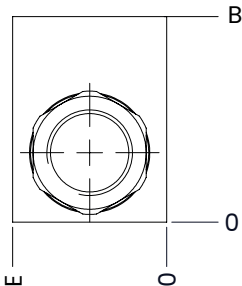
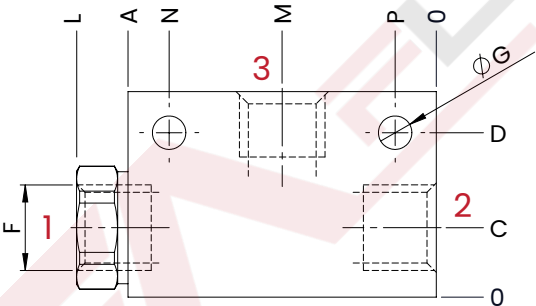
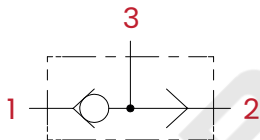


VSS SHUTTLE VALVES BSPP

SHUTTLE VALVES

VSS shuttle valves are used when two pressure lines converge in the valve at the same time (the lower pressure line locks).

HYDRAULIC CIRCUIT



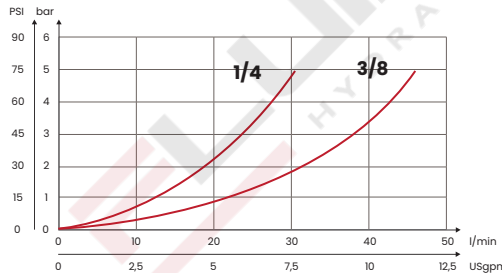
mm [Inches]

TECHNICAL CHARACTERISTICS

mm [Inches]

F	L	A	C	D	P	M	N	E	B	G
1/4 BSPP	57 [2,24]	52 [2,04]	12 [0,47]	27 [1,06]	9 [0,35]	27,5 [1,08]	43 [1,69]	25 [0,98]	35 [1,37]	6,5 [0,25]
3/8 BSPP	70 [2,76]	60 [2,36]	13,5 [0,53]	32 [1,26]	8 [0,31]	30 [1,18]	52 [2,05]	30 [1,18]	40 [1,57]	8,5 [0,33]
Steel body										

PERFORMANCES



ORDERING CODE

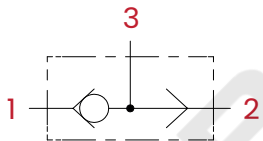
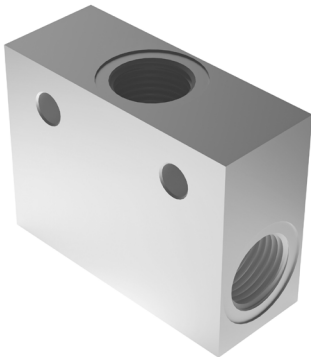
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA6010	VSS1B	1/4 BSPP	30 [7,9]	350 [5075]	0,29 [0,65]
FA6011	VSS2B	3/8 BSPP	45 [12]		0,37 [0,81]

UPDATE: Oct. 2023 (v.06)

SHUTTLE VALVES

VSSY shuttle valves are used when two pressure lines converge in the valve at the same time (the lower pressure line locks,

HYDRAULIC CIRCUIT

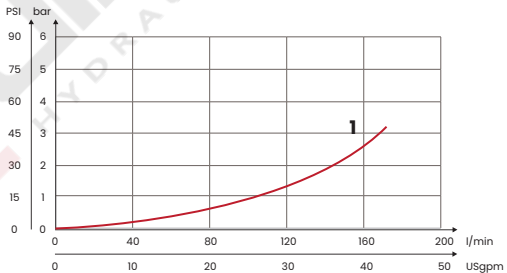
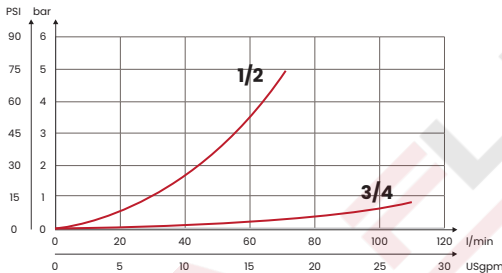


TECHNICAL CHARACTERISTICS

mm [Inches]

F	B	C	E	A	D	N	M	G	P
1/2 BSPP	57 [2,25]	18 [0,71]	30 [1,18]	76 [3]	12 [0,47]	60 [2,36]	38 [1,51]	8,5 [0,33]	16 [0,63]
3/4 BSPP	65 [2,56]	22 [0,86]	40 [1,57]	85 [3,35]		64,5 [2,54]	42,5 [2,13]		20,5 [0,80]
1 BSPP				95 [3,74]		11 [0,43]	77,5 [3,05]	47,5 [2,38]	10,5 [0,41]
Steel body									

PERFORMANCES



ORDERING CODE

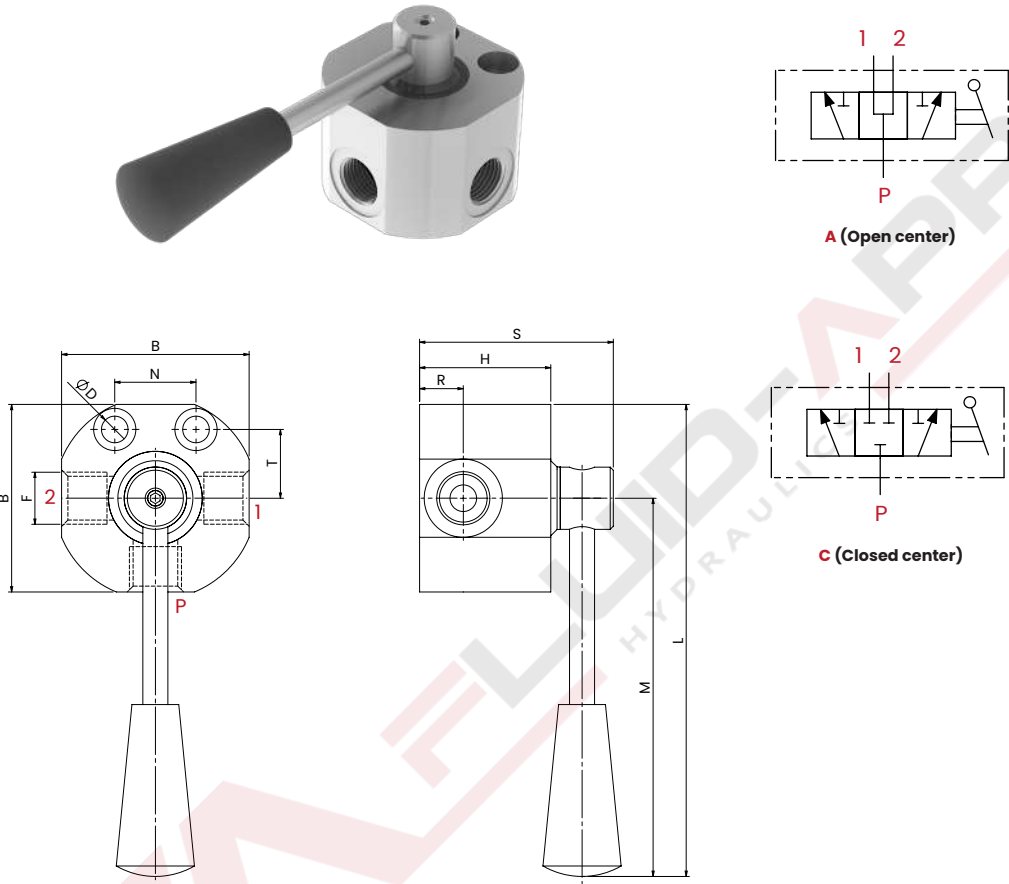
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA6166	VSS3BYA	1/2 BSPP	70 [19]	500 [7250]	0,82 [1,81]
FA6167	VSS4BYA	3/4 BSPP	110 [29]		1,38 [3,04]
FA6168	VSS5BYA	1 BSPP	170 [45]		1,30 [2,87]

D3H HIGH PRESSURE FLOW DIVERTERS

3 WAYS FLOW DIVERTERS

The 3 ways steel flow diverters are used when it is necessary to divert the oil flow.

HYDRAULIC CIRCUIT

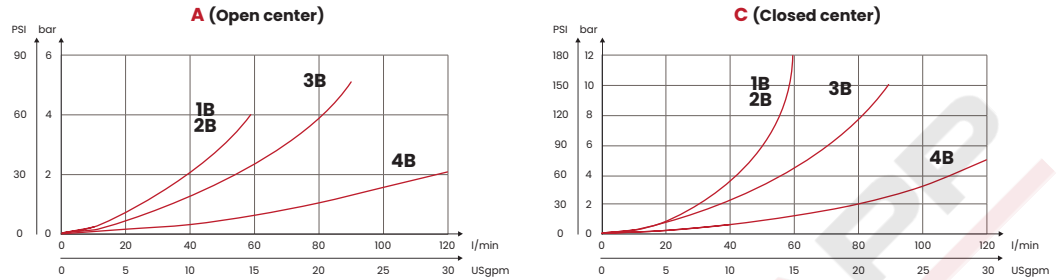


TECHNICAL CHARACTERISTICS

mm [Inches]

F	B	H	L	Ø D	M	N	R	S	T
1/4 BSPP	60 [2,36]	42 [1,65]	150 [5,90]	8,5 [0,33]	120 [4,72]	26 [1,02]	14 [0,55]	62 [2,44]	22 [0,86]
3/8 BSPP									
1/2 BSPP	65 [2,56]	45 [1,77]	152,5 [6]			32 [1,26]	16 [0,63]	65 [2,56]	
3/4 BSPP	80 [3,15]	54 [2,12]	160 [6,30]				23 [0,90]	75 [2,95]	26 [1,02]

PERFORMANCES



ORDERING CODE

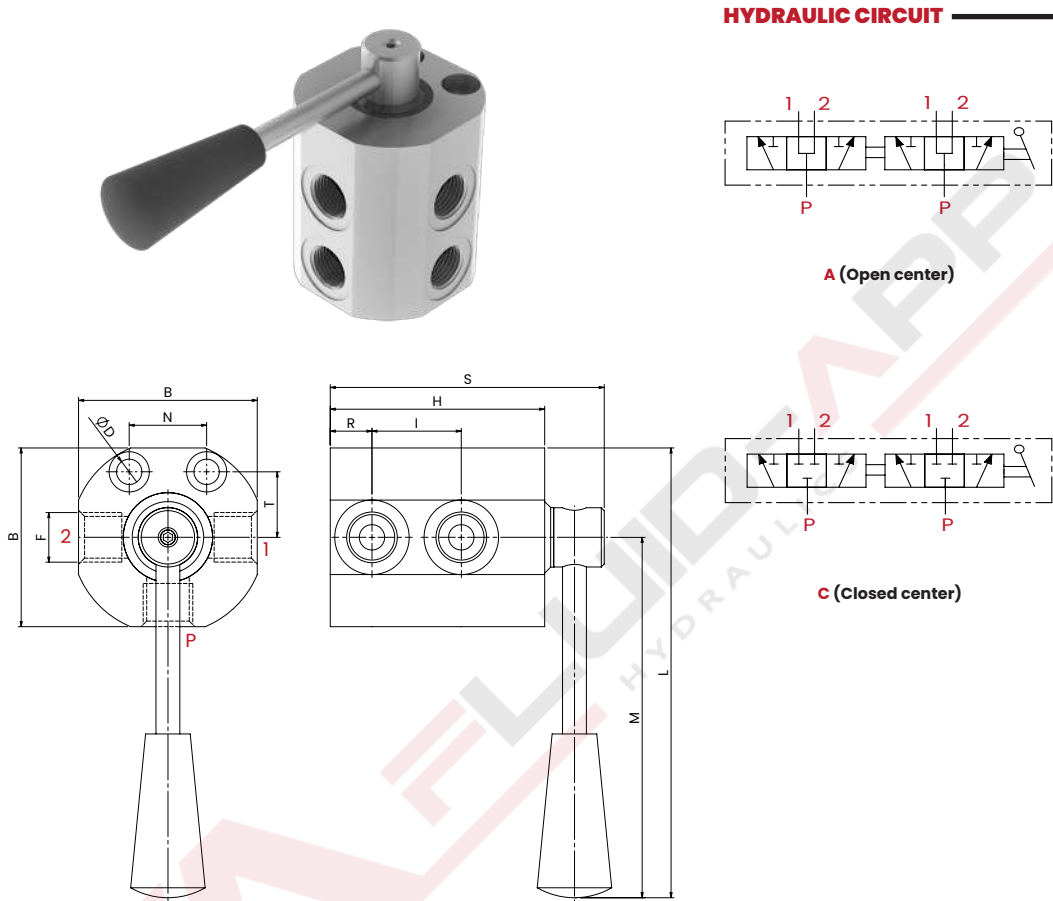
CODE	TYPE	F	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lbt]
FA9103	D3HA1B	1/4 BSPP	60 [15,8]	500 [7250]	0,95 [2,09]
FA9104	D3HA2B	3/8 BSPP			
FA9105	D3HA3B	1/2 BSPP	90 [23,8]		1,25 [2,75]
FA9106	D3HA4B	3/4 BSPP	120 [31,7]		2,14 [4,71]
FA9107	D3HC1B	1/4 BSPP	60 [15,8]		0,95 [2,09]
FA9108	D3HC2B	3/8 BSPP			
FA9109	D3HC3B	1/2 BSPP	90 [23,8]		1,25 [2,75]
FA9110	D3HC4B	3/4 BSPP	120 [31,7]		2,14 [4,71]

UPDATE: May 2024 (v.01)

D6H HIGH PRESSURE FLOW DIVERTERS

6 WAYS FLOW DIVERTERS

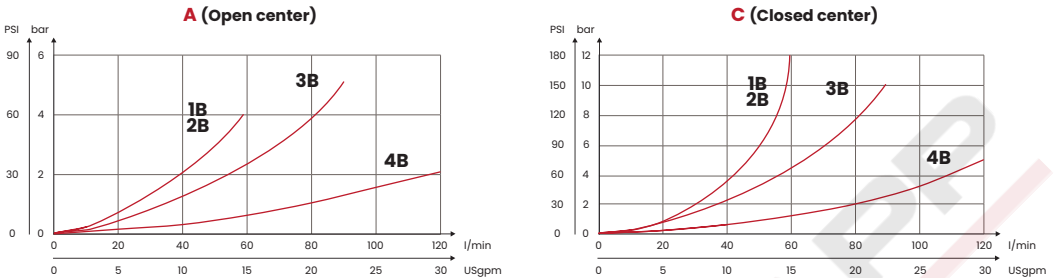
The 6 ways steel flow diverters are used when it is necessary to divert the oil flow.



TECHNICAL CHARACTERISTICS

F	B	H	L	Ø D	I	M	N	S	R	T
1/4 BSPP	60 [2,36]	72 [2,83]	150 [5,90]	8,5 [0,33]	30 [1,18]	120 [4,72]	26 [1,02]	92 [3,62]	14 [0,55]	22 [0,86]
3/8 BSPP					38 [1,49]					
1/2 BSPP	65 [2,56]	83 [3,26]	152,5 [6]		44 [1,73]		32 [1,26]	103 [4,05]	16 [0,63]	
3/4 BSPP	80 [3,15]	94 [3,70]	160 [6,30]	10,5 [0,41]	44 [1,73]		32 [1,26]	119 [4,68]	22 [0,86]	26 [1,02]

PERFORMANCES



ORDERING CODE

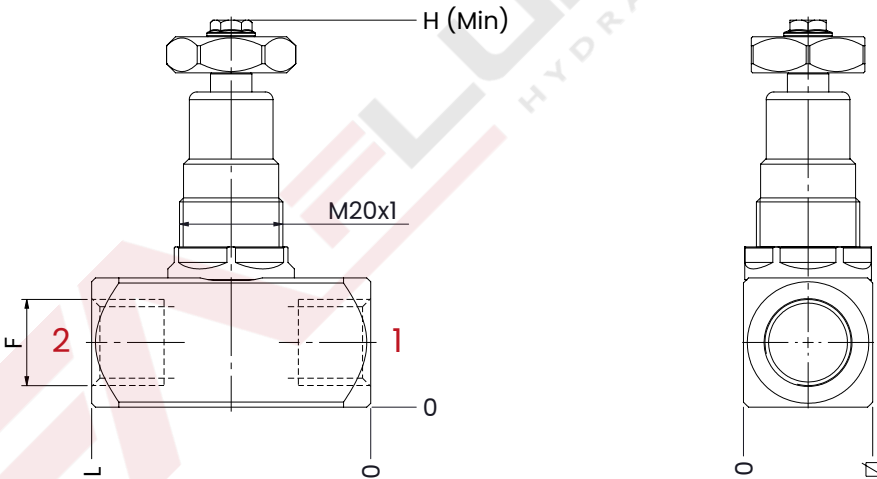
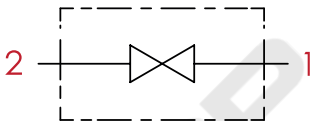
CODE	TYPE	F	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lbt]
FA9111	D6HA1B	1/4 BSPP	60+60 [15,8+15,8]	500 [7250]	1,71 [3,76]
FA9112	D6HA2B	3/8 BSPP			
FA9113	D6HA3B	1/2 BSPP	90+90 [23,8+23,8]		2,25 [4,95]
FA9114	D6HA4B	3/4 BSPP	120+120 [31,7+31,7]		3,84 [8,45]
FA9115	D6HC1B	1/4 BSPP	60+60 [15,8+15,8]		1,71 [3,76]
FA9116	D6HC2B	3/8 BSPP			
FA9117	D6HC3B	1/2 BSPP	90+90 [23,8+23,8]		2,25 [4,95]
FA9118	D6HC4B	3/4 BSPP	120+120 [31,7+31,7]		3,84 [8,45]

SBR NEEDLE VALVES BSPP

FAST OPENING VALVES
Open-close valves with perfect seal.



HYDRAULIC CIRCUIT

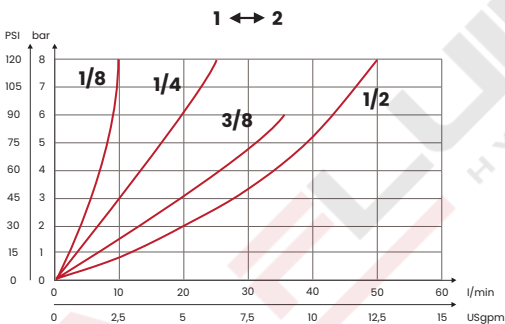


mm [Inches]

TECHNICAL CHARACTERISTICS mm [Inches]

F	L	H	Ø	OPTIONAL RING NUT
1/8 BSPP	54 [2,13]	74 [2,91]	25 [0,98]	63500014 M20 x 1
1/4 BSPP				
3/8 BSPP				
1/2 BSPP	58 [2,28]	79 [3,11]	30 [1,18]	
Steel body				

PERFORMANCES OPTIONAL RING NUT



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA4228	SBR0B	1/8 BSPP	10 [2,6]	400 [5800]	0,3 [0,66]
FA4229	SBR1B	1/4 BSPP	25 [6,6]		0,28 [0,6]
FA4230	SBR2B	3/8 BSPP	35 [9,3]		0,45 [1]
FA4231	SBR3B	1/2 BSPP	50 [13,2]		

UPDATE: Nov. 2025 (v.01)

RL SHUT-OFF

IN LINE SHUT-OFF VALVES

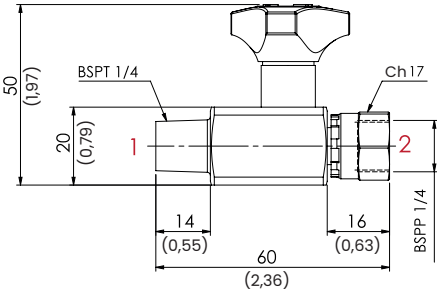
Shut-off in line valves are normally used to protect the pressure gauge.

ORDERING CODE

FA9080

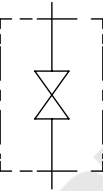


RLM



50 (1,97)
20 (0,79)
14 (0,55)
60 (2,36)
16 (0,63)
BSPT 1/4
Ch 17
BSPT 1/4

mm [Inches]

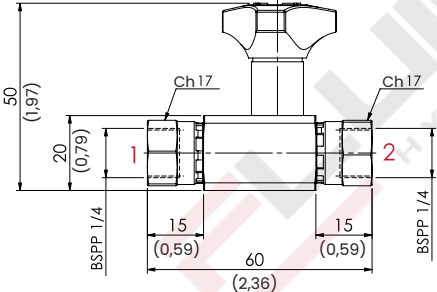


ORDERING CODE

FA9081

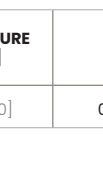


RLG



50 (1,97)
20 (0,79)
15 (0,59)
60 (2,36)
15 (0,59)
BSPT 1/4
Ch 17
Ch 17
BSPT 1/4

mm [Inches]

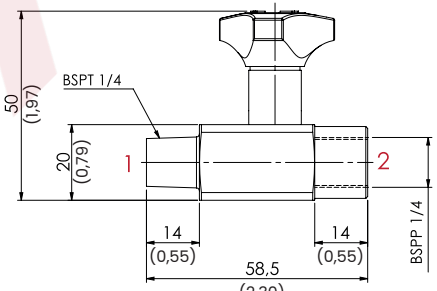


ORDERING CODE

FA9082



RLF



50 (1,97)
20 (0,79)
14 (0,55)
58,5 (2,30)
14 (0,55)
BSPT 1/4
BSPT 1/4

mm [Inches]



HYDRAULIC CIRCUIT

TECHNICAL CHARACTERISTICS

MAX PRESSURE bar [Psi]	WEIGHT kg [lbt]
400 [5800]	0,15 [0,33]

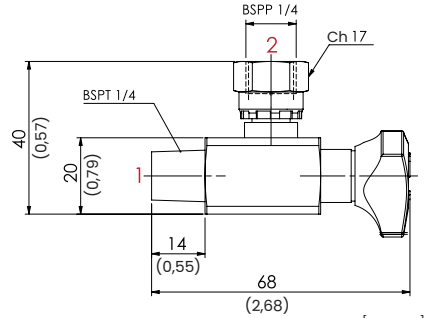
RT

ORDERING CODE

FA9083



RTM



40 (1,57)
20 (0,79)
14 (0,55)
68 (2,68)
BSPT 1/4
Ch 17
BSPT 1/4

mm [Inches]



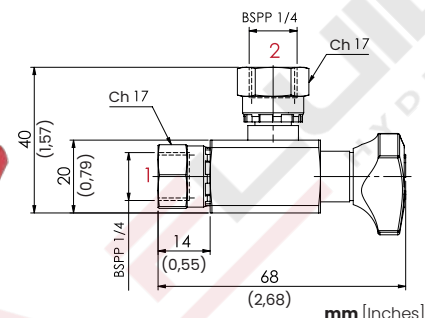
HYDRAULIC CIRCUIT

ORDERING CODE

FA9084

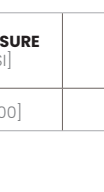


RTG



40 (1,57)
20 (0,79)
14 (0,55)
68 (2,68)
BSPT 1/4
Ch 17
Ch 17
BSPT 1/4

mm [Inches]



TECHNICAL CHARACTERISTICS

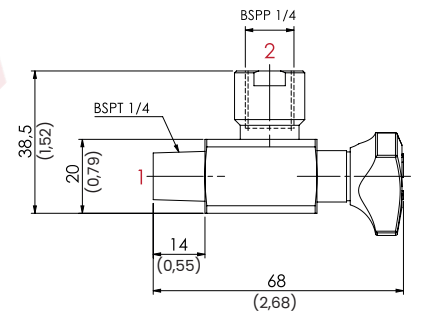
MAX PRESSURE bar [Psi]	WEIGHT kg [lbt]
400 [5800]	0,15 [0,33]

ORDERING CODE

FA9085



RTF



38,5 (1,52)
20 (0,79)
14 (0,55)
68 (2,68)
BSPT 1/4
BSPT 1/4

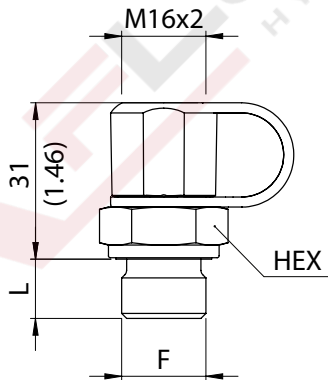
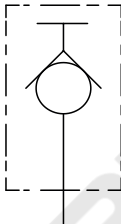
mm [Inches]



MPP TEST COUPLINGS BSPP

TEST COUPLINGS FOR PRESSURE CHECKING
Test couplings are used to manually check the pressure inside a system.

HYDRAULIC CIRCUIT



mm [Inches]

TECHNICAL CHARACTERISTICS

mm [Inches]

F	HEX	L
1/8 BSPP	17	8 [0,31]
1/4 BSPP	19	12 [0,47]
3/8 BSPP	22	
1/2 BSPP	27	14 [0,55]
1 BSPP	98 [3,86]	110 [4,33]

ORDERING CODE

CODE	TYPE	F	MAX PRESSURE bar [PSI]	TORQUE OF TIGHTENING Nm [lbt ft]	WEIGHT kg [lbt]
FA9086	MPP0B	1/8 BSPP	400 [5800]	20 [14,6]	0,07 [0,16]
FA9087	MPP1B	1/4 BSPP	630 [9140]	30 [22]	0,08 [0,18]
FA9088	MPP2B	3/8 BSPP		60 [44]	0,10 [0,22]
FA9089	MPP3B	1/2 BSPP		80 [58,6]	0,13 [0,29]

CARTRIDGE

valves

Cartridge valves need to be screwed into a manifold, in which the female cavity (SAE or METRIC) suitable for the valve is obtained.

They perform various functions, including sealing, flow, pressure and direction. They can be controlled manually or electrically.

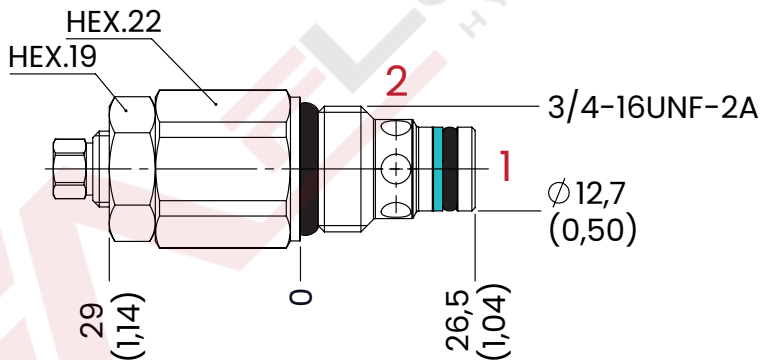
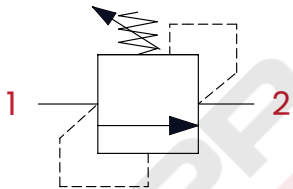


M20 SAE8/2 - 30 l/min - 350 bar

DIRECT ACTING RELIEF VALVES - NON GUIDED VERSION

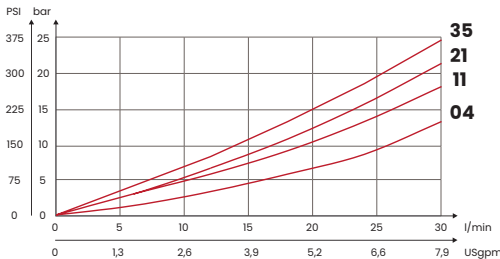
The purpose of the M20 relief valves is to protect the hydraulic system from malfunctions or failures caused by excessive pressure in the circuit.
Non-guided version, with mechanical stop under pressure.

HYDRAULIC CIRCUIT

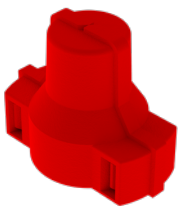


mm [Inches]

PERFORMANCES



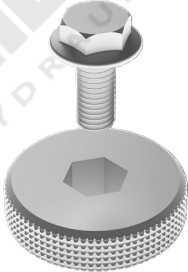
OPTIONAL TAMPER PROOF CAP



CODE

KIT137

OPTIONAL HANDKNOB



CODE

KIT132

ORDERING CODE

CODE	TYPE	CAVITY	MAX FLOW l/min [USgpm]	MAX PRES- SURE bar [PSI]	RAGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	TIGHTENING TORQUE Nm [lbt ft]	WEIGHT kg [lb]
FA7001	M20C04	SAE8/2 3/4-16UNF- 2B See cavity paragraph p. 348	30 [8]	350 [5075]	10/60 [145/870]	12 [174]	30 [22]	0,11 [0,24]
FA7002	M20C11				40/110 [580/1595]	40 [580]		
FA7003	M20C21				80/250 [1160/3625]	70 [1015]		
FA7004	M20C35				120/350 [1740/5075]	130 [1885]		

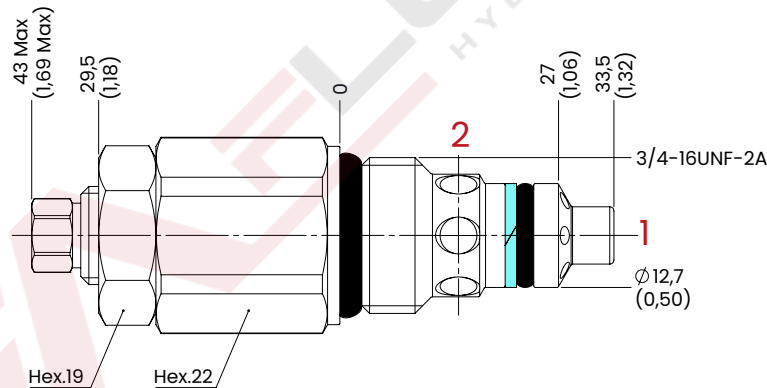
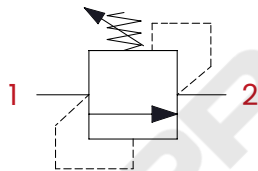
UPDATE: May 2025 (v.06)

M22 SAE 8/2 - 30 l/min - 350 bar

DIRECT ACTING RELIEF VALVES - GUIDED VERSION

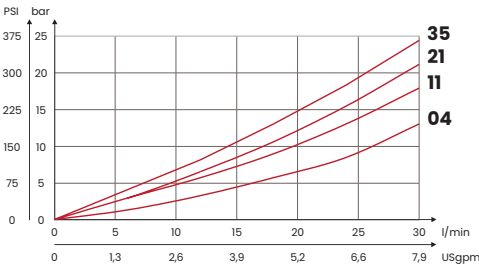
The purpose of the M22 relief valves is to protect the hydraulic system from malfunctions or failures caused by excessive pressure in the circuit. Guided version, with mechanical stop under pressure.

HYDRAULIC CIRCUIT

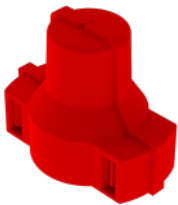


mm [Inches]

PERFORMANCES



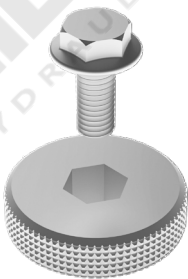
OPTIONAL TAMPER PROOF CAP



CODE

KIT137

OPTIONAL HANDKNOB



CODE

KIT132

ORDERING CODE

CODE	TYPE	CAVITY	MAX FLOW l/min [USgpm]	MAX PRES- SURE bar [PSI]	RAGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	TIGHTENING TORQUE Nm [lbt ft]	WEIGHT kg [lbt]
FA6045	M22C04	SAE8/2 3/4-16UNF- 2B See cavity paragraph p. 348	30 [8]	350 [5075]	10/60 [145/870]	12 [174]	30 [22]	0,15 [0,32]
FA6046	M22C11				40/110 [580/1595]	40 [580]		
FA6047	M22C21				80/250 [1160/3625]	70 [1015]		
FA6048	M22C35				120/350 [1740/5075]	130 [1885]		

UPDATE: Aug. 2025 (v.05)

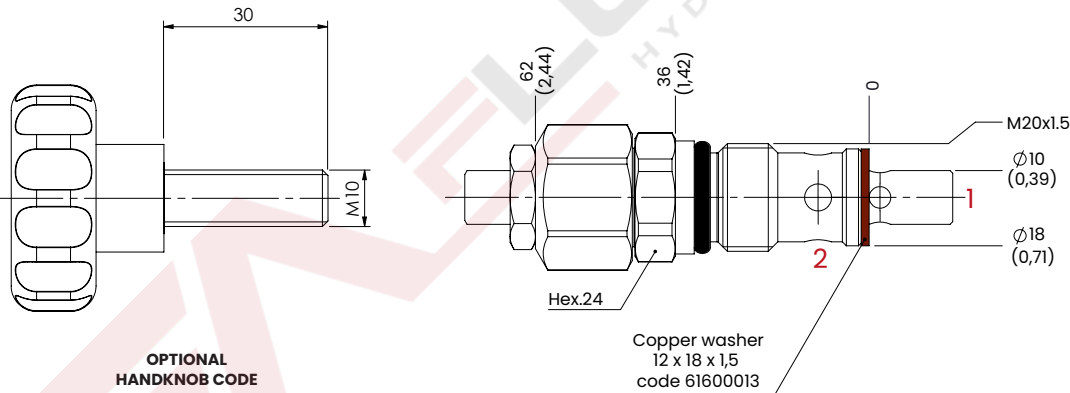
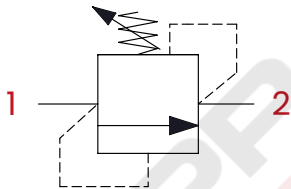
M30

M20 X 1,5 - 50 l/min - 350 bar

DIRECT ACTING RELIEF VALVES - GUIDED VERSION

The purpose of the M30 pressure relief valves is to protect the hydraulic system from malfunctions or failures caused by excessively high pressures in the circuit.

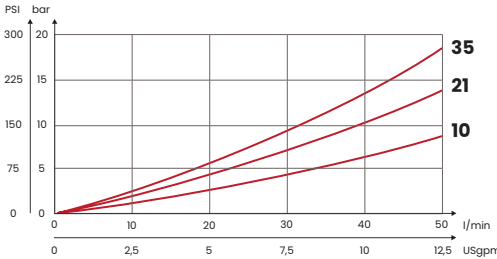
HYDRAULIC CIRCUIT



OPTIONAL
HANDKNOB CODE
62200010

mm [Inches]

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



CODE
62200021

ORDERING CODE

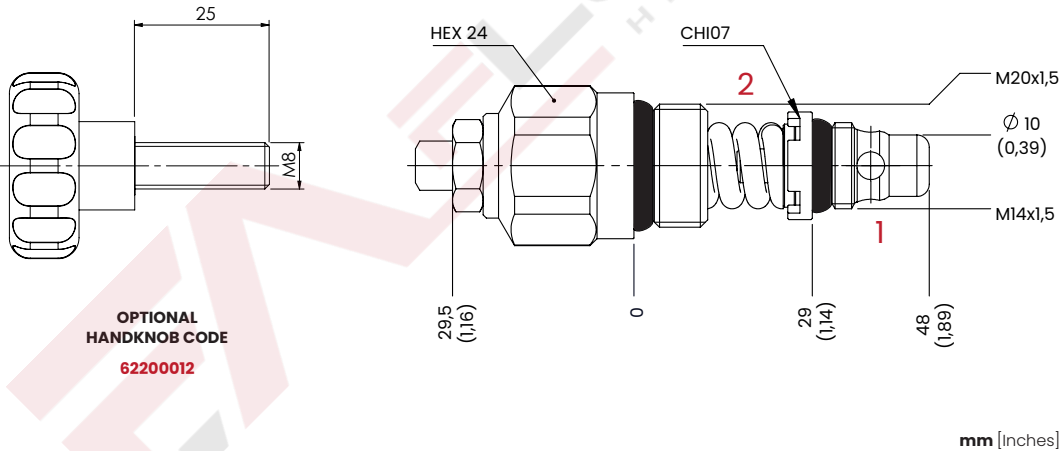
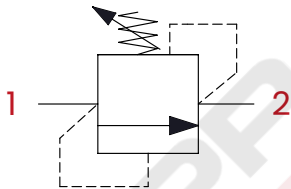
CODE	TYPE	CAVITY	MAX FLOW l/min [USgpm]	MAX PRES- SURE bar [PSI]	RAGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	M20X1,5 TIGHTENING TORQUE Nm [lbt ft]	WEIGHT kg [lb]
FA7041	M30C10	FC002 M20X1,5	50 [13,3]	350 [5075]	10/50 [145/725]	15 [220]	30 [22]	0,16 [0,35]
FA7042	M30C21	See cavity paragraph p. 352			30/210 [210/3045]	70 [1015]		
FA7043	M30C35				70/350 [1015/5075]	100 [1450]		

M40 M20 X 1,5 - 50 l/min - 350 bar

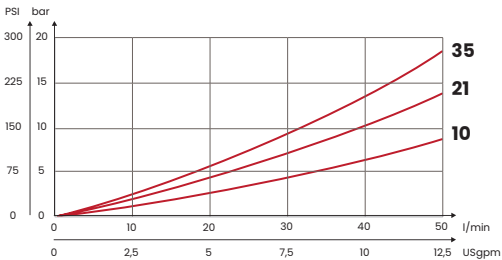
DIRECT ACTING RELIEF VALVES - GUIDED VERSION

The purpose of the M40 pressure relief valves is to protect the hydraulic system from malfunctions or failures caused by excessively high pressures in the circuit.

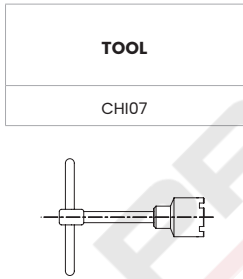
HYDRAULIC CIRCUIT



PERFORMANCES



OPTIONAL TOOL



OPTIONAL TAMPER PROOF CAP M8



CODE
62200020

ORDERING CODE

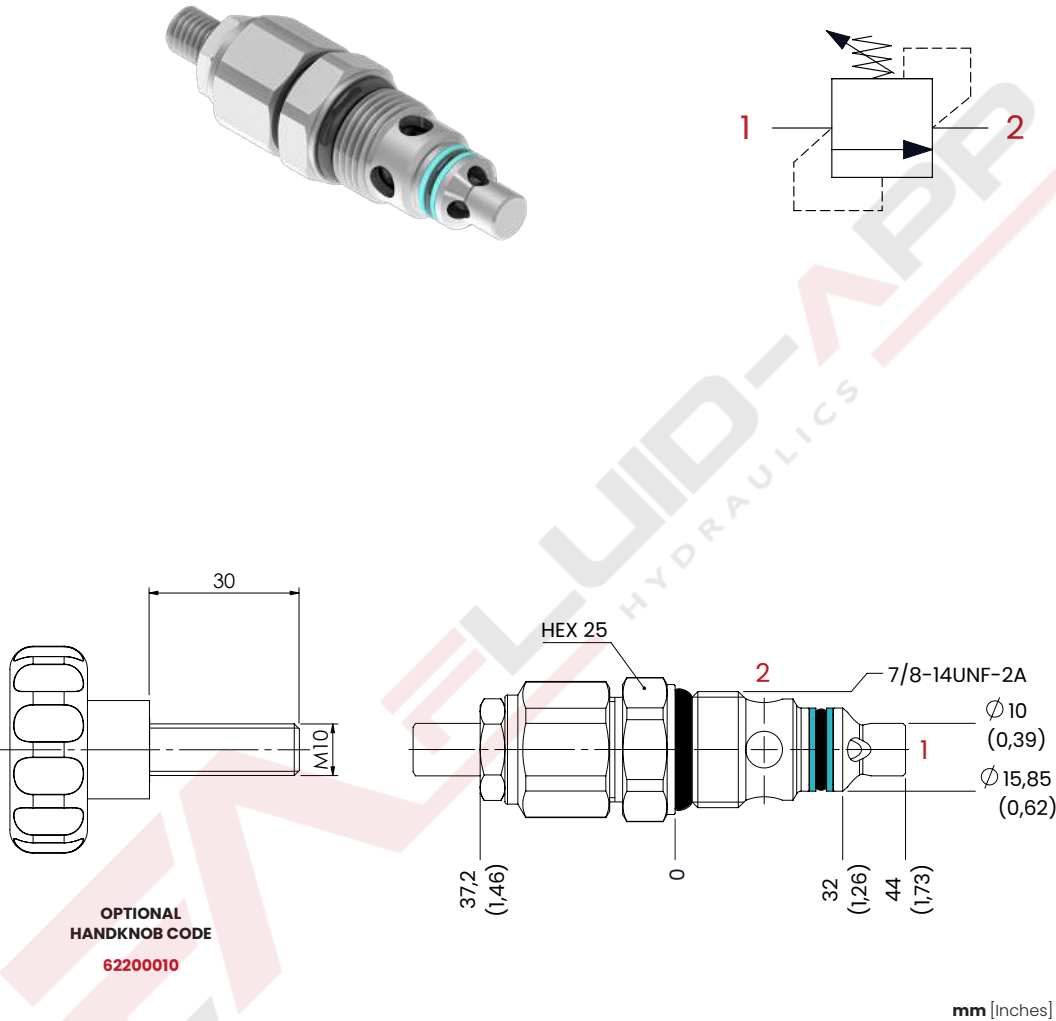
CODE	TYPE	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	RAGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	M14X1,5 TIGHTENING TORQUE Nm [lbt ft]	M20X1,5 TIGHTENING TORQUE Nm [lbt ft]	WEIGHT kg [lb]
FA7009	M40C10	FC003 M20X1,5	50 [13,3]	350 [5075]	10/70 [145/1015]	13 [189]	10 [7]	40 [30]	0,13 [0,29]
FA7010	M40C21	See cavity paragraph p. 352			30/210 [435/3045]	50 [725]			
FA7011	M40C35				70/350 [1015/5075]	90 [1305]			

M42 SAE 10/2 - 50 l/min - 350 bar

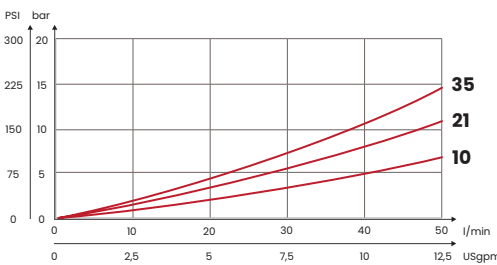
DIRECT ACTING RELIEF VALVES - GUIDED VERSION

The purpose of the M42 pressure relief valves is to protect the hydraulic system from malfunctions or failures caused by excessively high pressures in the circuit.

HYDRAULIC CIRCUIT



PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



CODE
62200021

ORDERING CODE

CODE	TYPE	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	RAGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	TIGHTENING TORQUE Nm [lbf ft]	WEIGHT kg [lb]
FA7012	M42C10	SAE10/2 7/8-14UN- F-2B See cavity poragraph p. 348	50 [13,5]	350 [5075]	10/70 [145/1015]	15 [220]	40 [30]	0,18 [0,37]
FA7013	M42C21				30/210 [435/3045]	70 [1015]		
FA7014	M42C35				70/350 [1015/5075]	100 [1450]		

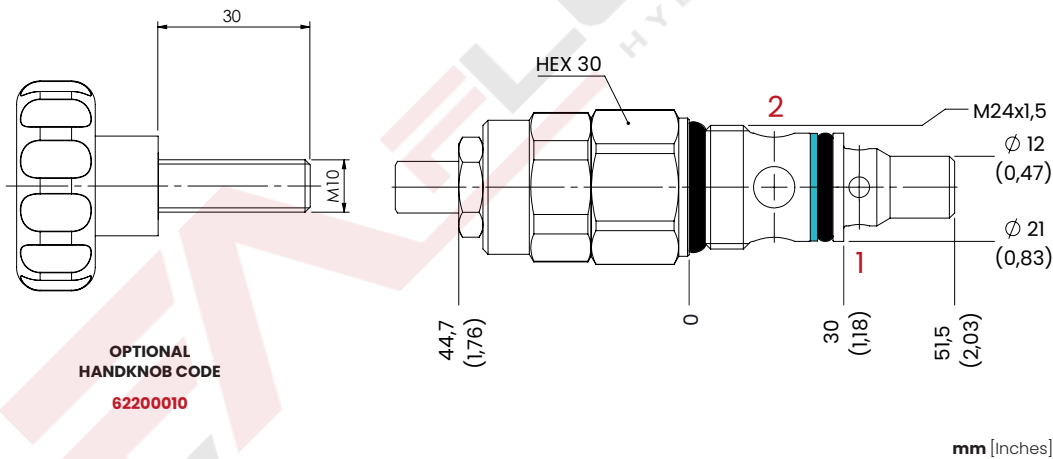
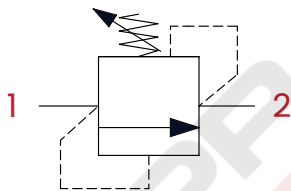
UPDATE Jan. 2025 (v.08)

M80 M24 X 1,5 - 80 l/min - 350 bar

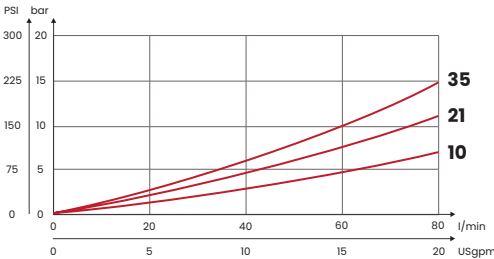
DIRECT ACTING RELIEF VALVES - GUIDED VERSION

The purpose of the M80 pressure relief valves is to protect the hydraulic system from malfunctions or failures caused by excessively high pressures in the circuit.

HYDRAULIC CIRCUIT



PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



CODE
62200021

ORDERING CODE

CODE	TYPE	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	RAGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	TIGHTENING TORQUE Nm [lbf ft]	WEIGHT kg [lb]
FA7015	M80C10	FC005 M24X1,5 See cavity paragraph p. 354	80 [21,1]	350 [5075]	10/100 [145/1450]	25 [362]	60 [44]	0,25 [0,55]
FA7016	M80C25				20/250 [290/3625]	85 [1247]		
FA7017	M80C35				50/350 [725/5075]	90 [1305]		

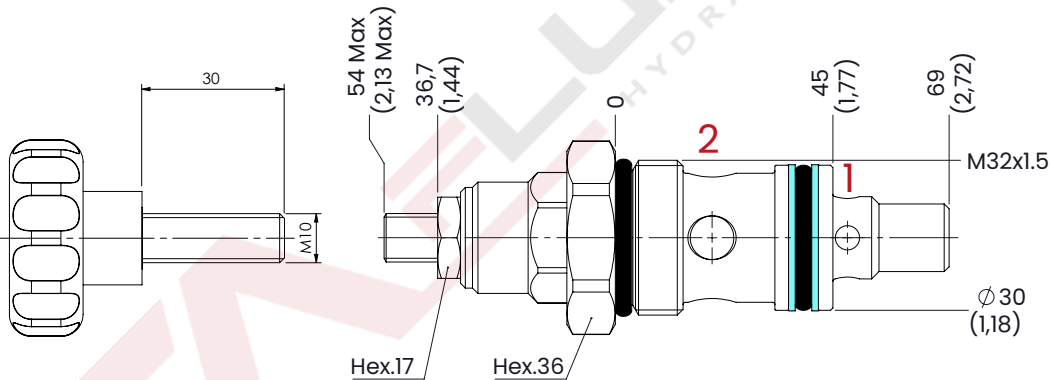
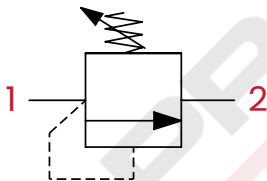
M161

M32 X 1,5 - 120 l/min - 350 bar

RELIEF VALVES 120 l/min

The purpose of the M161 differentiated pressure relief valve is to protect the hydraulic system from malfunctions or failures caused by excessively high pressures in the circuit.

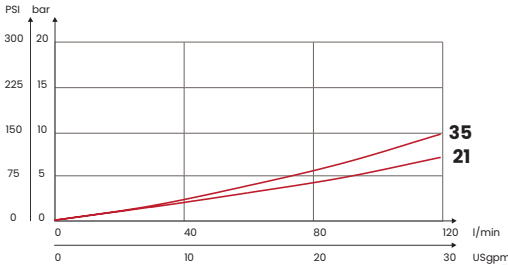
HYDRAULIC CIRCUIT



OPTIONAL
HANDKNOB CODE
62200010

mm [Inches]

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



CODE
62200021

ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	TIGHTENING TORQUE Nm [lbt ft]	WEIGHT kg [lb]
FA7068	M161C21	FC010 M32X1,5	120 [32]	350 [5075]	20/210 [290/3045]	35 [507]	60 [44]	0,35 [0,80]
FA7069	M161C35	See cavity paragraph p. 355			50/350 [725/5075]	130 [1885]		
Steel body								

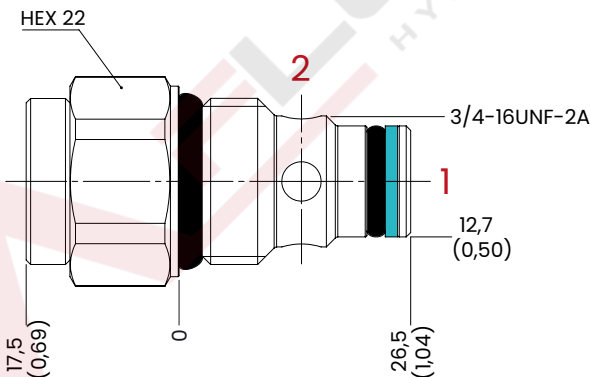
UPDATE: May 2025 (v.02)

UC2 SAE8/2 - 35 l/min - 350 bar

CHECK VALVES POPPET TYPE

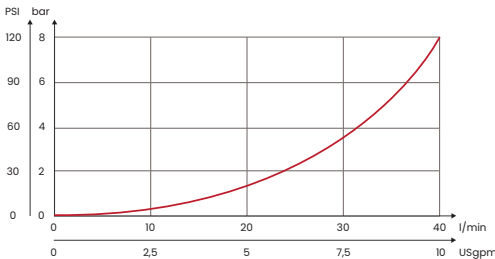
The UC2 cartridge check valve allows free oil flow in one direction and blocks it in the opposite direction.

HYDRAULIC CIRCUIT



mm [Inches]

PERFORMANCES



ORDERING CODE

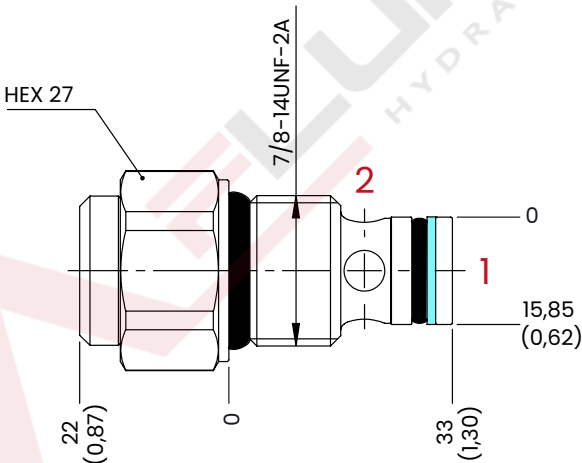
CODE	TYPE	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	SPRING bar [PSI]	TIGHTENING TORQUE Nm [lbt ft]	WEIGHT kg [lb]
FA7018	UC205	SAE8/2 3/4-16UNF-2B See cavity paragraph p. 348 Poppet type	35 [9,2]	350 [5075]	0,5 [7,3]	30 [22]	0,08 [0,17]
FA7019	UC230				3 [43,5]		
FA7020	UC245				4,5 [65]		
FA7021	UC260				6 [87]		
FA7044	US205	SAE8/2 3/4-16UNF-2B Ball type	35 [9,2]	350 [5075]	0,5 [7,3]	30 [22]	0,08 [0,17]

UC3 SAE10/2 - 80 l/min - 350 bar

CHECK VALVES POPPET TYPE

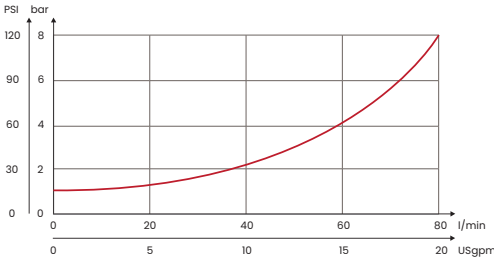
The UC3 cartridge check valve allows free oil flow in one direction and blocks it in the opposite direction.

HYDRAULIC CIRCUIT



mm [Inches]

PERFORMANCES



ORDERING CODE

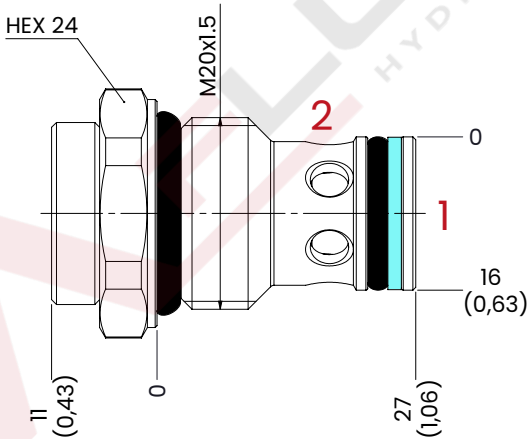
CODE	TYPE	CAVITY	SPRING bar [PSI]	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	TIGHTENING TORQUE Nm [lbf ft]	WEIGHT kg [lb]
FA7060	UC305	SAE10/2 7/8-14UNF-2B See cavity paragraph p.348	0,5 [7,3] Standard	80 [21,13]	350 [5075]	40 [29,5]	0,14 [0,31]
FA7061	UC345		4,5 [65]				
FA7105	UC360		6 [87]				

UC3M M20 X 1,5 - 40 l/min - 350 bar

CHECK VALVES POPPET TYPE

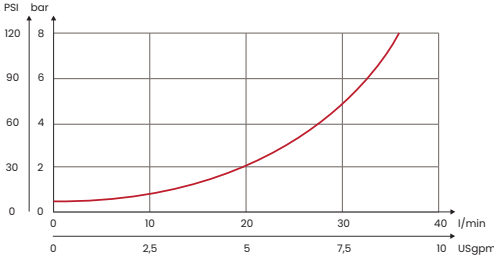
The UC3M cartridge check valve allows free oil flow in one direction and blocks it in the opposite direction.

HYDRAULIC CIRCUIT



mm [Inches]

PERFORMANCES



ORDERING CODE

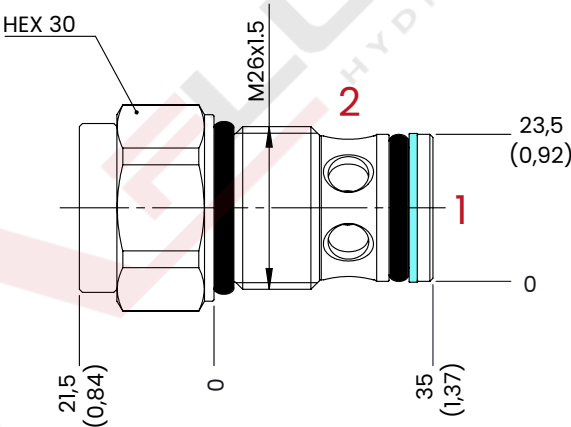
CODE	TYPE	CAVITY	SPRING bar [PSI]	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	TIGHTENING TORQUE Nm [lbt ft]	WEIGHT kg [lb]
FA7088	UC3M05	FC011 M20X1,5 See cavity paragraph p.356	0,5 [7,3] Standard	40 [10,5]	350 [5075]	60 [44]	0,07 [0,16]
FA7089	UC3M30		3 [43,5]				
FA7102	UC3M45		4,5 [65]				
FA7090	UC3M60		6 [87]				

UC4M M26 X 1,5 - 110 l/min - 350 bar

CHECK VALVES POPPET TYPE

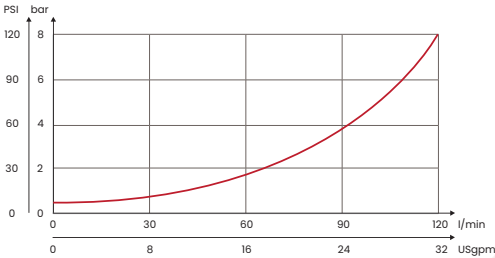
The UC4M cartridge check valve allows free oil flow in one direction and blocks it in the opposite direction.

HYDRAULIC CIRCUIT



mm [Inches]

PERFORMANCES



ORDERING CODE

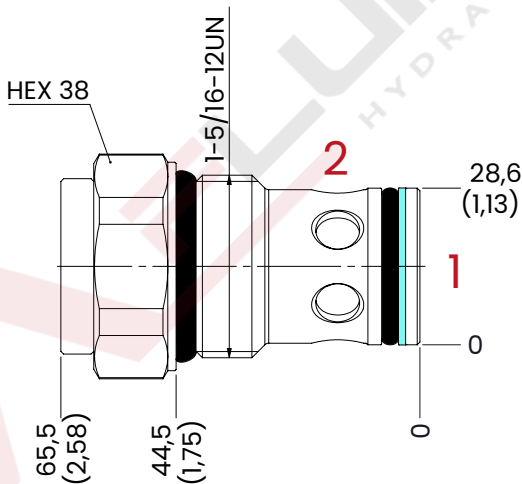
CODE	TYPE	CAVITY	SPRING bar [PSI]	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	TIGHTENING TORQUE Nm [lbt ft]	WEIGHT kg [lb]
FA7091	UC4M05	FC012 M26X1,5 See cavity paragraph p.357	0,5 [7,3] Standard	110 [29]	350 [5075]	60 [44]	0,19 [0,42]
FA7092	UC4M30		3 [43,5]				
FA7103	UC4M45		4,5 [65]				
FA7093	UC4M60		6 [87]				

UC5S SAE16 - 160 l/min - 350 bar

CHECK VALVES POPPET TYPE

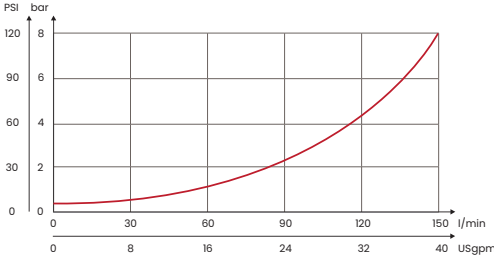
The UC5S cartridge check valve allows free oil flow in one direction and blocks it in the opposite direction.

HYDRAULIC CIRCUIT



mm [Inches]

PERFORMANCES



ORDERING CODE

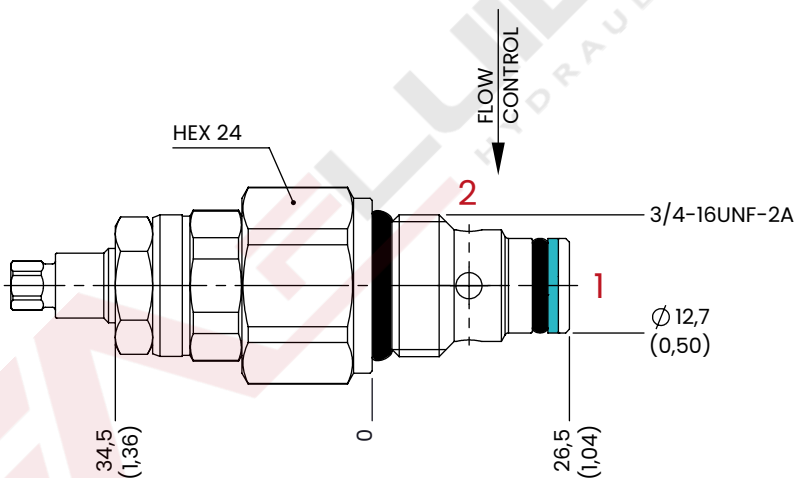
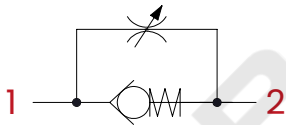
CODE	TYPE	CAVITY	SPRING bar [PSI]	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	TIGHTENING TORQUE Nm [lbt ft]	WEIGHT kg [lb]
FA7094	UC5S05	FC013 SAE16 1-5/16-12UN See cavity paragraph p. 358	0,5 [7,3] Standard	160 [42]	350 [5075]	80 [59]	0,31 [0,68]
FA7095	UC5S30		3 [43,5]				
FA7104	UC5S45		4,5 [65]				
FA7096	UC5S60		6 [87]				

CU2 SAE 8/2 - 40 l/min - 350 bar

UNIDIRECTIONAL FLOW CONTROL VALVES

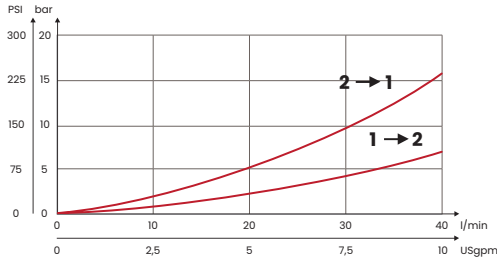
The one-way flow control valves allow regulation in one direction and free passage in the opposite direction.

HYDRAULIC CIRCUIT

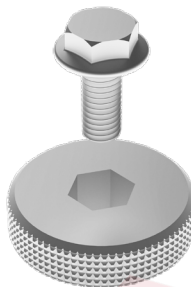


mm [Inches]

PERFORMANCES



OPTIONAL HANDKNOB



CODE
KIT123

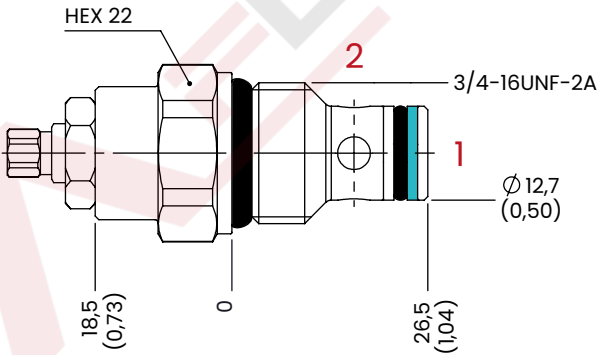
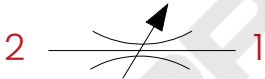
ORDERING CODE

CODE	TYPE	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	TIGHTENING TORQUE Nm [lbf ft]	WEIGHT kg [lb]
FA7022	CU2C	SAE8/2 3/4-16UNF-2B See cavity paragraph p.348	40 [10,6]	350 [5075]	30 [22]	0,13 [0,30]

CB2 SAE8/2 - 40 l/min - 350 bar

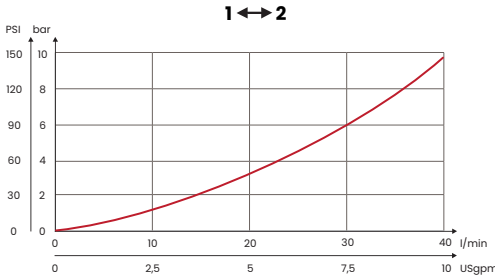
BIDIRECTIONAL FLOW CONTROL VALVES
Bidirectional flow control valves, allow flow regulation in both directions.

HYDRAULIC CIRCUIT

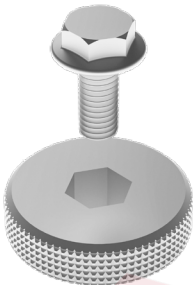


mm [Inches]

PERFORMANCES



OPTIONAL HANDKNOB



CODE
KIT123

ORDERING CODE

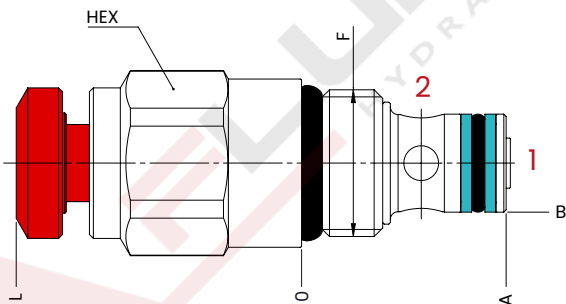
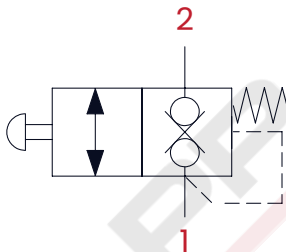
CODE	TYPE	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	TIGHTENING TORQUE Nm [lbt ft]	WEIGHT kg [lb]
FA7024	CB2C	SAE8/2 3/4-16UNF-2B See cavity paragraph p.348	40 [10,6]	350 [5075]	30 [22]	0,1 [0,22]

VM2 SAE 8/2 - 30 l/min - 350 bar

EMERGENCY VALVES

The bidirectional valves, with direct action VM2 normally closed 2 ways 2 positions, allow manual intervention, the opening is obtained by manually pushing the rear button, removing the hand automatically the valve closes.

HYDRAULIC CIRCUIT

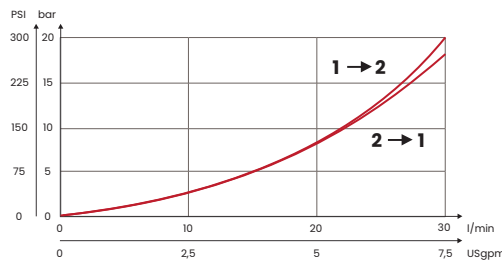


TECHNICAL CHARACTERISTICS

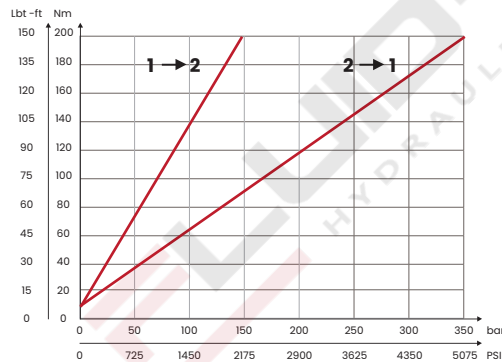
mm [Inches]

F	L	A	B	HEX
SAE 8/2	37 [1,48]	26,5 [1,04]	12,7 [0,50]	22
M20X1,5	34 [1,34]	25 [0,98]	15 [0,59]	24

PERFORMANCES



EFFORT OPERATING AT THE END OF THE KNOB



ORDERING CODE

CODE	TYPE	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	TIGHTENING TORQUE Nm [lbt ft]	WEIGHT kg [lb]
FA7026	VM2	SAE 8/2 3/4-16UNF See cavity paragraph p. 348	30 [7,9]	350 [5075]	30 [22]	0,12 [0,26]
FA7067	VM20M	FC003 M20X1,5 See cavity paragraph p. 352				

UPDATE: Dec. 2025 (v.07)

PM2 SAE 8/2 - 2 cm³ - 200 bar

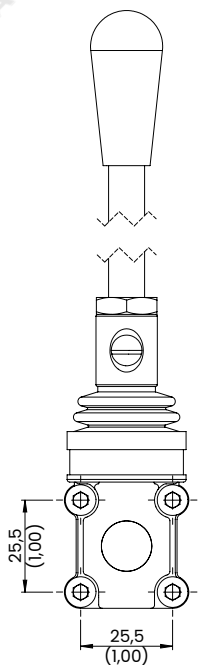
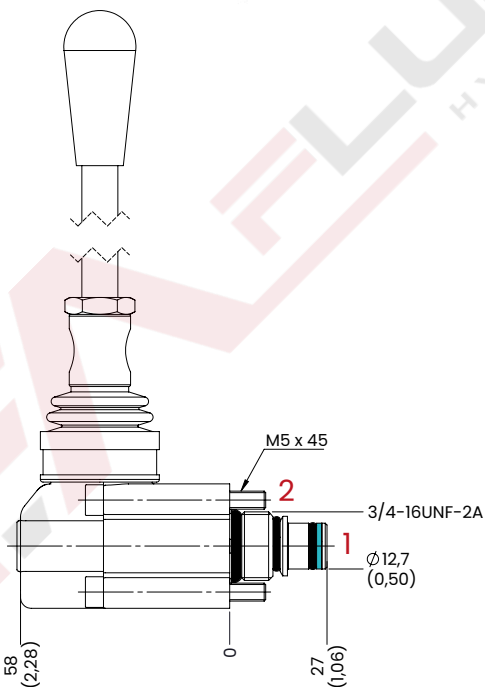
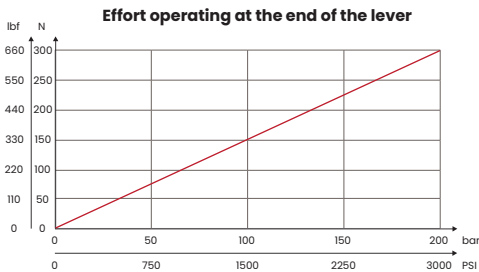
HAND PUMPS

PM2 hand pumps are made in SAE8/2 cavities, often mounted as emergency on mini power packs or mounted on integrated blocks.

HYDRAULIC CIRCUIT



PERFORMANCES



mm [Inches]

ORDERING CODE

CODE	TYPE	CAVITY	MAX PRESSURE bar [PSI]	DISPLACEMENT cm³ [in³]	TIGHTENING TORQUE Nm [lbt ft]	WEIGHT kg [lb]
FA7027	PM2	SAE8/2 3/4-16UNF-2B See cavity paragraph p. 348	200 [2900]	2 [0,12]	30 [22]	0,46 [1,01]

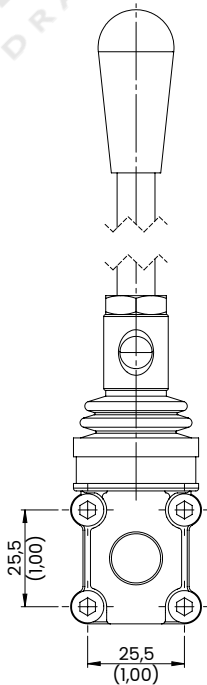
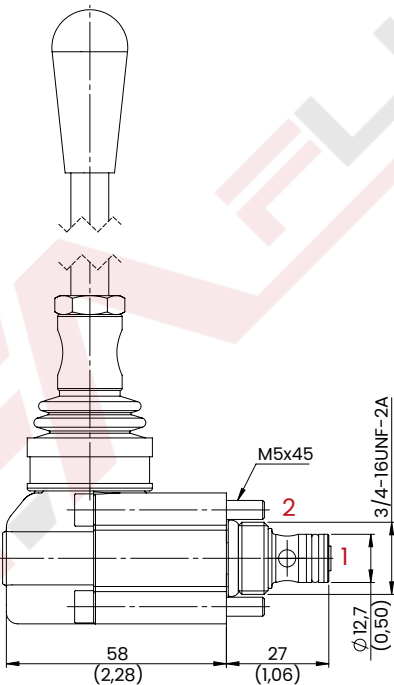
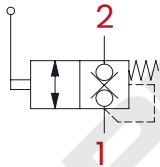
VC2 SAE 8/2 - 30 l/min - 350 bar

MANUALLY OPERATED 2-WAY 2-POSITION VALVES - POPPET DIRECT OPERATED

The VC2 manually operated valves are made in SAE8/2 cavities and operated manually by means of a lever.

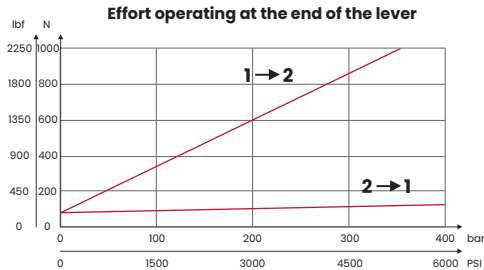


HYDRAULIC CIRCUIT



mm [Inches]

PERFORMANCES



ORDERING CODE

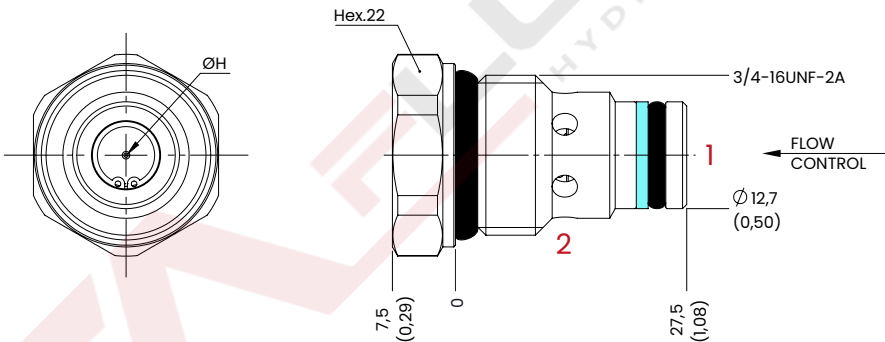
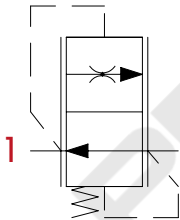
CODE	TYPE	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	TIGHTENING TORQUE Nm [lbf ft]	WEIGHT kg [lb]
FA7062	VC2	SAE8/2 3/4-16UNF-2B See cavity paragraph p. 348	30 [7,9]	350 [5075]	30 [22]	0,45 [1]

DC2 SAE 8/2 - 12 l/min - 250 bar

FIXED FLOW CONTROL VALVES - PRESSURE COMPENSATED

The DC2 compensated fixed flow control valves are used to keep the descent speed of a load constant, regardless of the operating pressure and the value of the load.

HYDRAULIC CIRCUIT



mm [Inches]

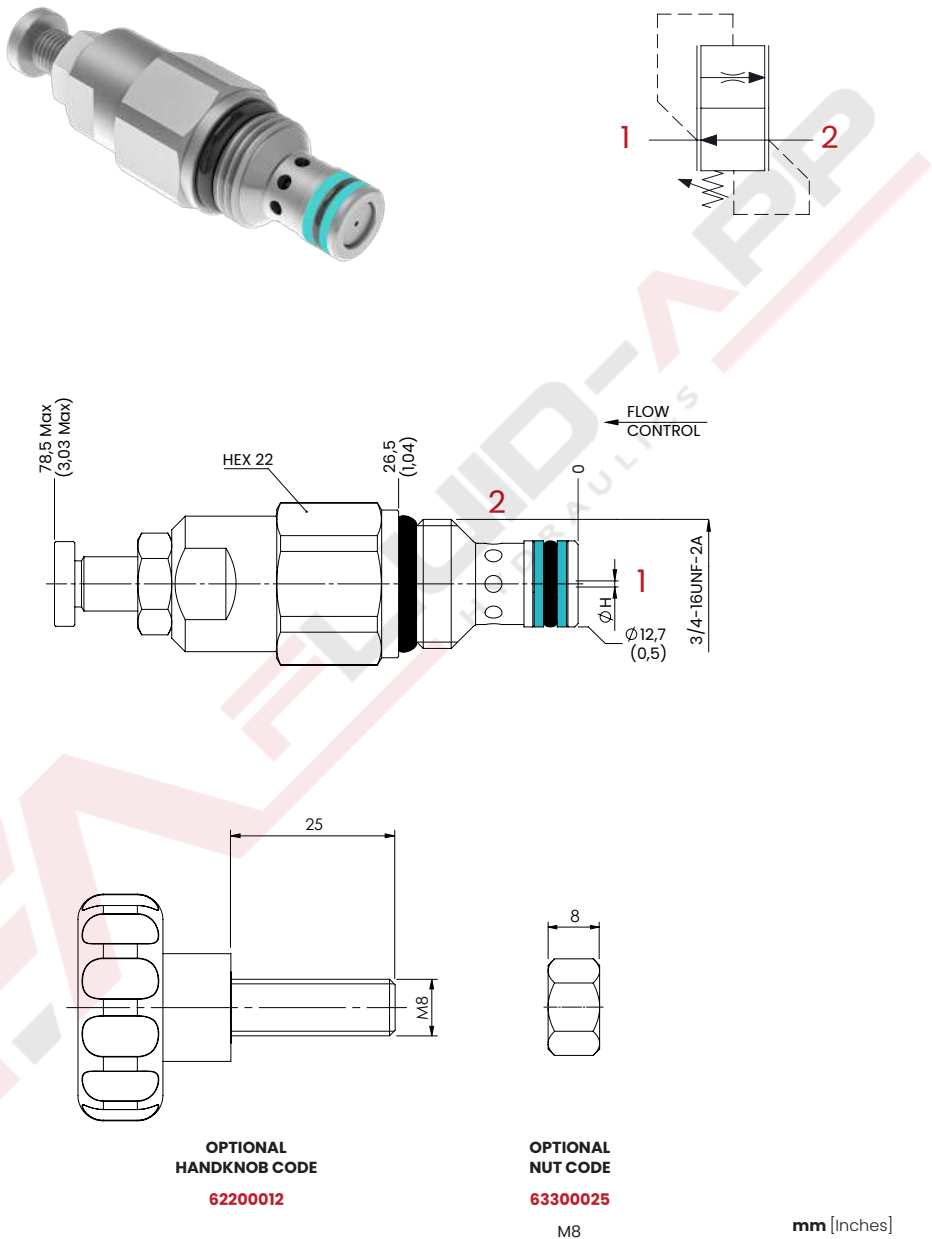
ORDERING CODE

CODE	TYPE	CAVITY	CONTROLLED FLOW AT 100 bar ± 10% l/min [USgpm]	Ø H mm [Inches]	MAX PRESSURE bar [PSI]	TIGHTENING TORQUE Nm [lbt ft]	WEIGHT kg [lb]
FA7046	DC201	SAE 8/2 3/4-16UNF-2B See cavity paragraph p. 348	1 [0,26]	1 [0,04]	250 [3625]	30 [22]	0,06 [0,13]
FA7047	DC202		2 [0,53]	1,2 [0,05]			
FA7048	DC203		3 [0,79]	1,5 [0,06]			
FA7049	DC204		4 [1,06]	1,7 [0,07]			
FA7050	DC205		5 [1,32]	1,9 [0,07]			
FA7051	DC206		6 [1,58]	2,1 [0,08]			
FA7052	DC207		7 [1,85]	2,3 [0,09]			
FA7053	DC208		8 [2,11]	2,4 [0,09]			
FA7054	DC209		9 [2,38]	2,7 [0,11]			
FA7055	DC210		10 [2,64]	2,8 [0,11]			
FA7056	DC211		11 [2,90]	3,1 [0,12]			
FA7057	DC212		12 [3,17]	3,3 [0,13]			

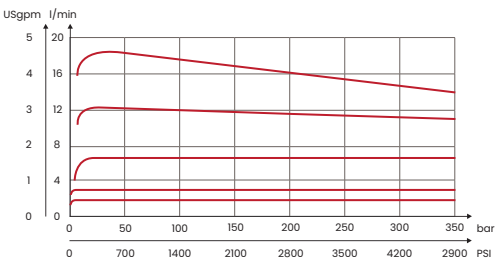
DR2 SAE 8/2 - 35 l/min - 350 bar

ADJUSTABLE FLOW CONTROL VALVES - PRESSURE COMPENSATED
Adjustable compensated flow control valve, used to keep the speed constant, regardless of the working pressure.

HYDRAULIC CIRCUIT



PERFORMANCES



ORDERING CODE

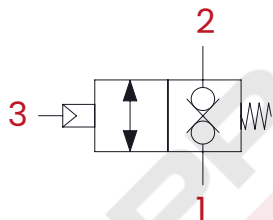
CODE	TYPE	CAVITY	MAX FLOW CONTROLLED FLOW AT 100 bar ± 10% l/min [USgpm]	Ø H mm [Inches]	MAX PRESSURE bar [PSI]	TIGHTENING TORQUE Nm [lbt ft]	WEIGHT kg [lb]
FA7028	DR2C1	SAE 8/2 3/4- 16UNF-2B See cavity paragraph p. 348	0,6-2,2 [0,16-0,58]	0,9 [0,03]	350 [5075]	30 [22]	0,12 [0,26]
FA7029	DR2C2		0,8-3 [0,21-0,79]	1 [0,04]			
FA7030	DR2C3		1,3-5,1 [0,34-1,35]	1,3 [0,05]			
FA7031	DR2C4		1,9-6,8 [0,5-1,8]	1,5 [0,06]			
FA7032	DR2C5		2,6-9,1 [0,69-2,4]	1,7 [0,07]			
FA7033	DR2C6		4-14,4 [1,06-3,08]	2,2 [0,09]			
FA7034	DR2C7		7,2-24 [1,9-6,34]	2,8 [0,11]			
FA7066	DR2C8		10-35 [2,64-9,25]	3,5 [0,14]			

VP2 SAE 8/2 - 30 l/min - 350 bar

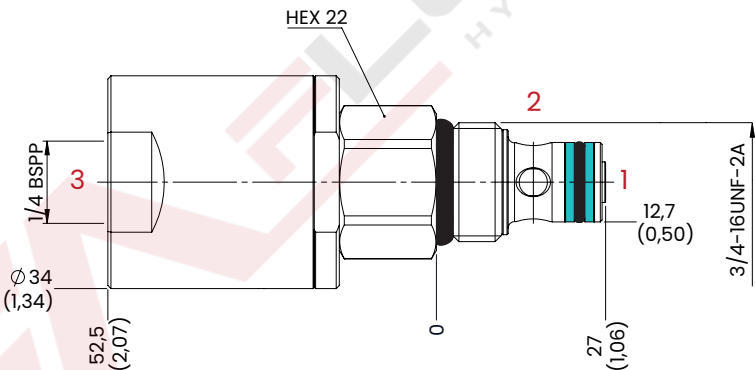
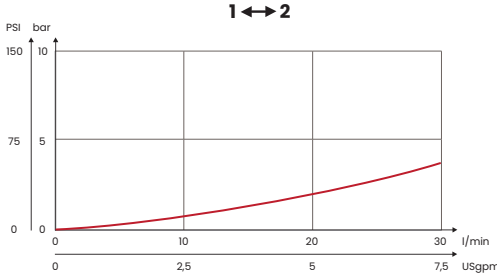
PNEUMATIC OPERATED VALVES

2-way/2-position pneumatic control valve, made in SAE8/2 cavity with pilot pressure 4/15 bar.

HYDRAULIC CIRCUIT



PERFORMANCES



mm [Inches]

ORDERING CODE

CODE	TYPE	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	TIGHTENING TORQUE Nm [lbt ft]	PILOT PRESSURE bar [PSI]	WEIGHT kg [lb]
FA7035	VP2	SAE8/2 3/4-16UN- F-2B See cavity paragraph p.348	30 [7,9]	350 [5075]	30 [22]	4/15 [58/218]	0,16 [0,35]

VBC M22X1,5 - 60 l/min - 350 bar

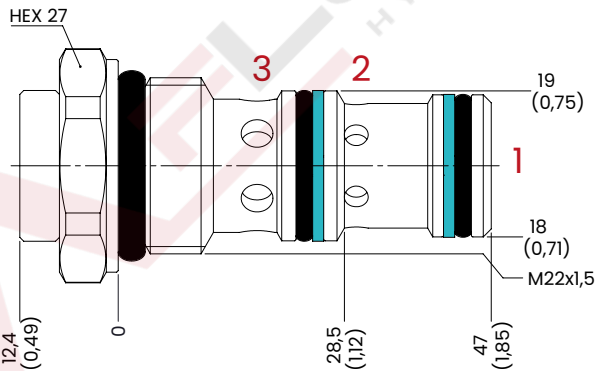
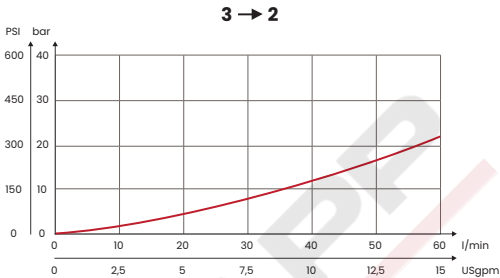
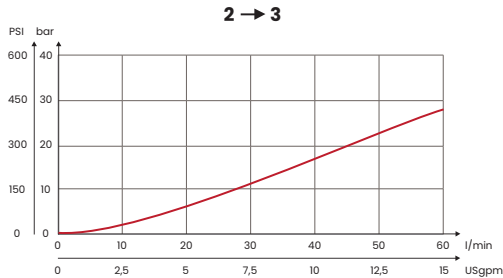
SINGLE ACTING PILOT CHECK VALVES

VBC check valves are used to lock a single acting actuator in position, ensuring the blocking of the load.

HYDRAULIC CIRCUIT



PERFORMANCES



mm [Inches]

ORDERING CODE

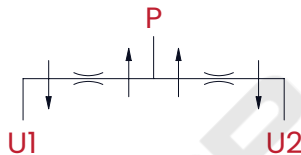
CODE	TYPE	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	CRACKING PRESSURE STANDARD bar [PSI]	TIGHTENING TORQUE Nm [lbt ft]	PILOT RATIO	WEIGHT kg [lb]
FA7036	VBC2250	FC004 M22X1,5 See cavity paragraph p.348	60 [15,8]	350 [5075]	5 [72]	40 [30]	1:2,5	0,12 [0,26]

VDF3 SAE10/4 - 40 l/min - 350 bar

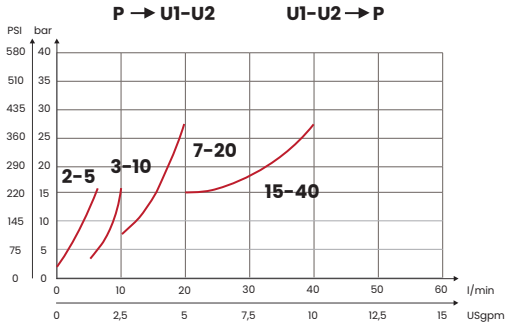
FLOW DIVIDERS

The flow divider/combiner valves guarantee the division of the flow into two equal parts or the reunification in the opposite direction.

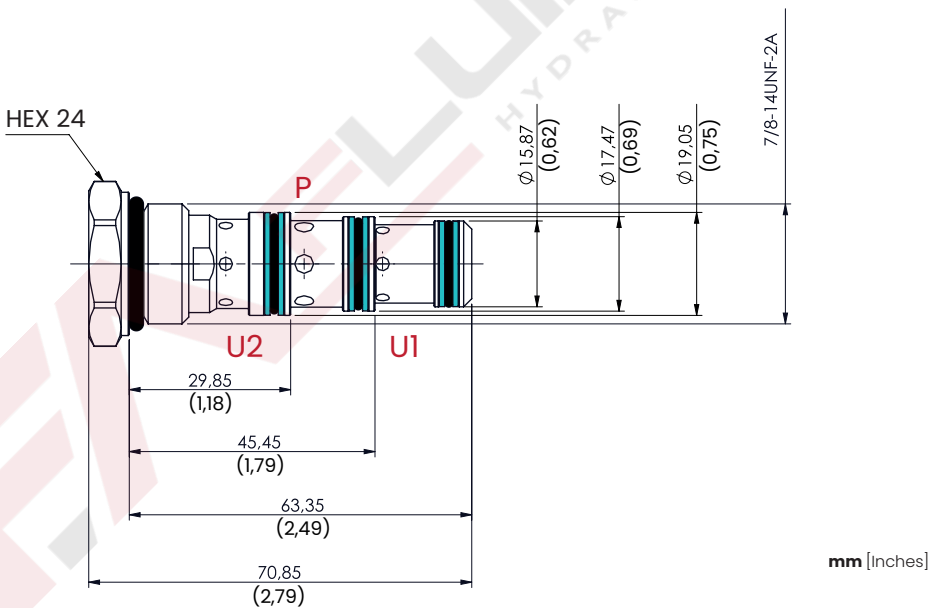
HYDRAULIC CIRCUIT



PERFORMANCES



Specifications
Maximum division error: $\pm 10\%$ of the oil flow in U1 or U2 and 120 bar [1750 PSI]
pressure difference between U1 and U2.
(Division rate 50%÷50%)



ORDERING CODE

CODE	TYPE	CAVITY	INLET FLOW RANGE l/min [usgpm]	MAX FLOW l/min [usgpm]	MAX PRESSURE bar [PSI]	TIGHTENING TORQUE Nm [lbt ft]	WEIGHT kg [lb]
FA7037	VDF3S1	SAE10/4 7/8-14UNF-2B See cavity paragraph p.350	2-5 [0,5-1,3]	40 [10,6]	350 [5075]	35 [26]	0,12 [0,26]
FA7038	VDF3S2		3-10 [0,8-2,6]				
FA7039	VDF3S3		7-20 [1,8-5,2]				
FA7040	VDF3S4		15-40 [3,9-10,4]				

SOLENOID valves

Cartridge valves need to be screwed into a manifold, in which the female cavity (SAE or METRIC) suitable for the valve is obtained.

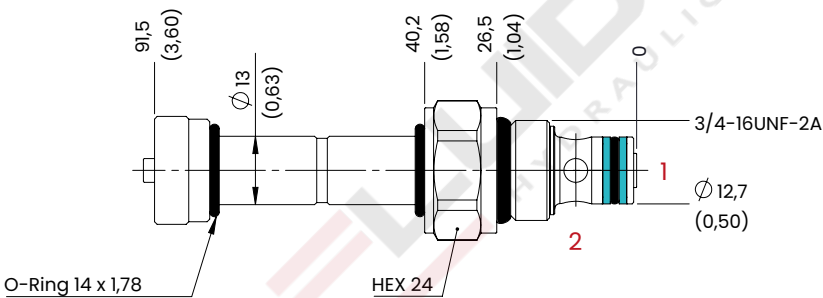
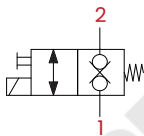
They perform various functions, including sealing, flow, pressure and direction. They can be controlled manually or electrically.



E2F28 SAE8/2 - 22 l/min - 250 bar

SOLENOID VALVE 2 WAYS 2 POSITIONS - POPPET DIRECT OPERATED

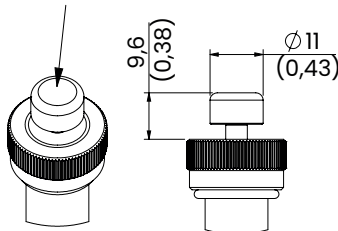
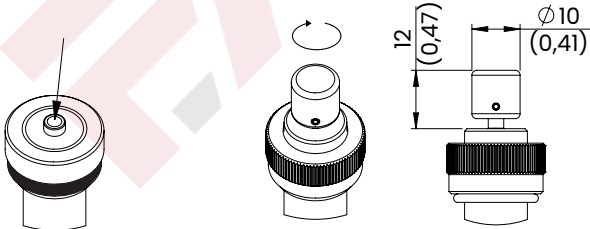
HYDRAULIC CIRCUIT



Emergency E
Push in

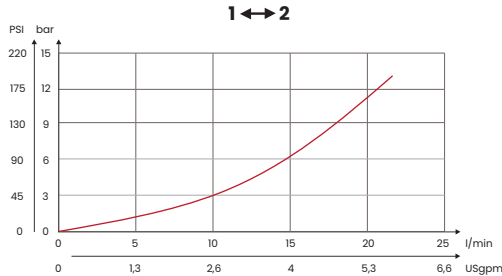
Emergency S
Screw in

Emergency P
Push in



mm [Inches]

PERFORMANCES



Tests carried out with solenoids at their working temperature, with a supply voltage 10% below the nominal value.

ELECTRIC

TYPE VOLTAGE	INSULATION INDEX	NOMINAL VOLTAGE	POWER AT 20C°	POWER AT 20C°	COIL CODE
DC	H	+/- 10%	22W	100% with temperature -20 C° + 40 C°	C22

*For temperature or special conditions contact our sales department

ORDERING CODE

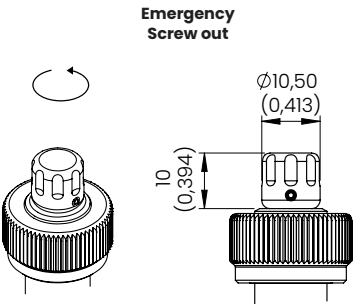
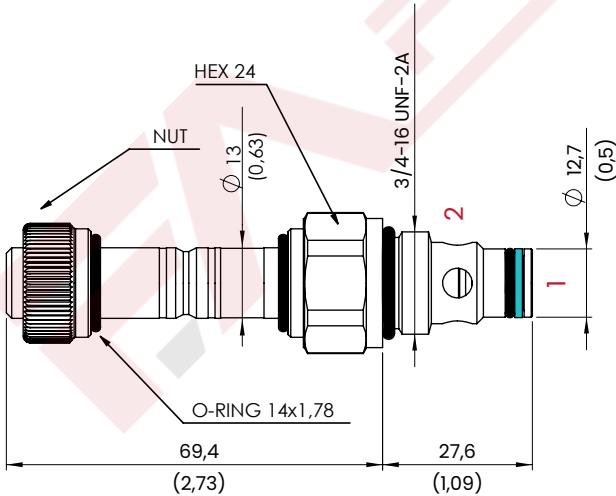
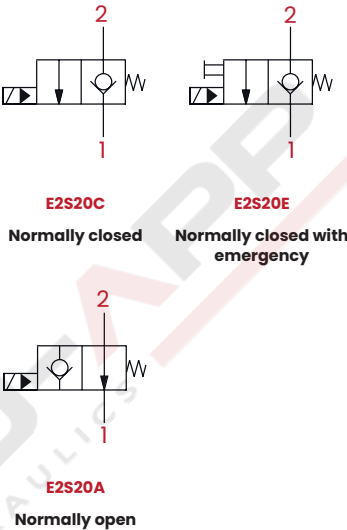
CODE	TYPE	VERSIONS	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	CH 24 TIGHTENING TORQUE Nm [lbt ft]	TIGHTENING TORQUE NUT Nm [lbt ft]	WEIGHT kg [lb]
FA8001	E2F28E	Normally closed Push in "E"	SAE8/2 3/4- 16UNF-2B See cavity paragraph p. 348	22 [5,8]	250 [3625]	30 [22]	2 [1,5]	0,12 [0,26]
FA8040	E2F28S	Normally closed Screw in "S"						
FA8039	E2F28P	Normally closed Push "P"						

Optional, coils C22 and connectors CNS

E2S20SAE8/2 - 40 l/min - 350 bar

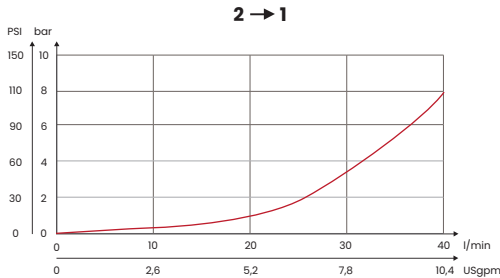
SOLENOID VALVE 2 WAYS 2 POSITIONS - POPPET PILOT OPERATED

HYDRAULIC CIRCUIT



mm [Inches]

PERFORMANCES



Tests carried out with solenoids at their working temperature, with a supply voltage 10% below the nominal value.

ELECTRIC

mm [Inches]

TYPE VOLTAGE	INSULATION INDEX	NOMINAL VOLTAGE	POWER AT 20C°	POWER AT 20C°	COIL CODE
DC	H	+/- 10%	22W	100% with temperature -20 C° + 40 C°	C22
*For temperature or special conditions contact our sales department					

ORDERING CODE

CODE	TYPE	VERSIONS	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	CH 24 TIGHTENING TORQUE Nm [lbt ft]	TIGHTENING TORQUE NUT Nm [lbt ft]	WEIGHT kg [lb]
FA8002	E2S20C	Normally closed	SAE8/2 3/4- 16UNF-2B See cavity paragraph p. 348	40 [10,6]	350 [5076]	30 [22]	2 [1,5]	0,16 [0,36]
FA8003	E2S20E	Normally closed + emergency						
FA8004	E2S20A	Normally open						
Optional, coils C22 and connectors CNS								

E2L20

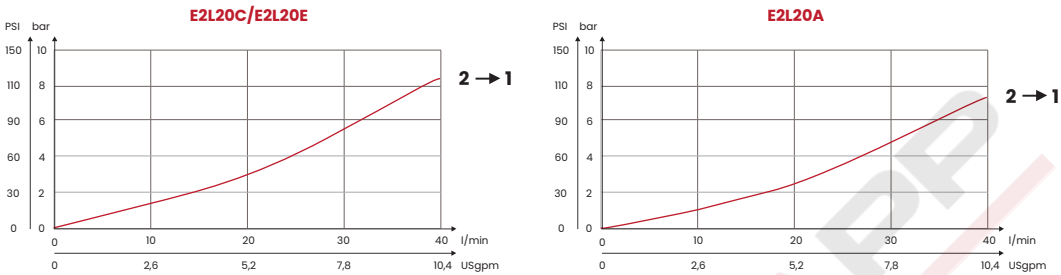
SAE8/2 - 30 l/min - 300 bar

SOLENOID VALVE 2 WAYS 2 POSITIONS - POPPET PILOT OPERATED

HYDRAULIC CIRCUIT



PERFORMANCES



Tests carried out with solenoids at their working temperature, with a supply voltage 10% below the nominal value.

ELECTRIC

TYPE VOLTAGE	INSULATION INDEX	NOMINAL VOLTAGE	POWER AT 20C°	POWER AT 20C°	COIL CODE
DC	H	+/- 10%	22W	100% with temperature -20 C° + 40 C°	C22
*For temperature or special conditions contact our sales department					

ORDERING CODE

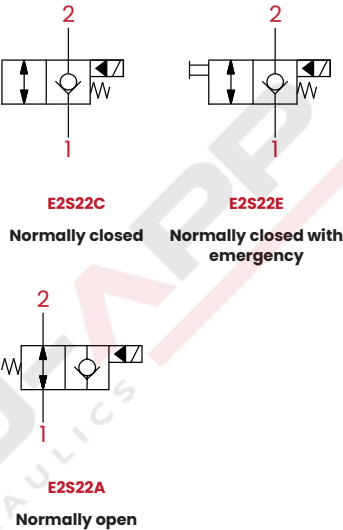
CODE	TYPE	VERSIONS	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	CH 24 TIGHTENING TORQUE Nm [lbt ft]	TIGHTENING TORQUE NUT Nm [lbt ft]	WEIGHT kg [lb]
FA8005	E2L20C	Normally closed	SAE8/2 3/4- 16UNF-2B See cavity paragraph p. 348	30 [7,9]	300 [4350]	30 [22]	2 [1,5]	0,12 [0,27]
FA8006	E2L20E	Normally closed + emergency						
FA8007	E2L20A	Normally open						
Optional, coils C22 and connectors CNS								

E2S22

SAE8/2 - 40 l/min - 300 bar

SOLENOID VALVE 2 WAYS 2 POSITIONS - POPPET PILOT OPERATED

HYDRAULIC CIRCUIT



2

1

E2S22E

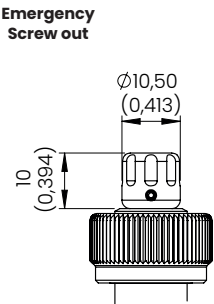
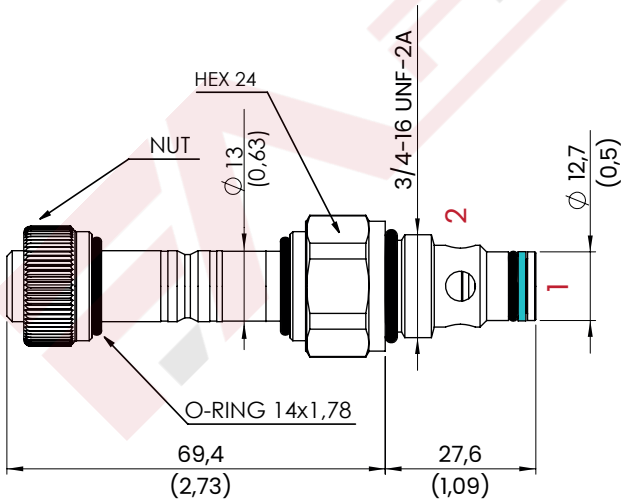
Normally closed with emergency

2

1

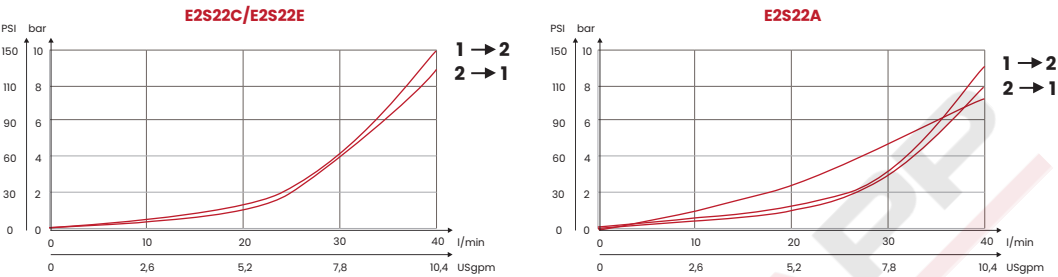
E2S22A

Normally open



mm [Inches]

PERFORMANCES



Tests carried out with solenoids at their working temperature, with a supply voltage 10% below the nominal value.

ELECTRIC

TYPE VOLTAGE	INSULATION INDEX	NOMINAL VOLTAGE	POWER AT 20C°	POWER AT 20C°	COIL CODE
DC	H	+/- 10%	22W	100% with temperature -20 C° + 40 C°	C22
*For temperature or special conditions contact our sales department					

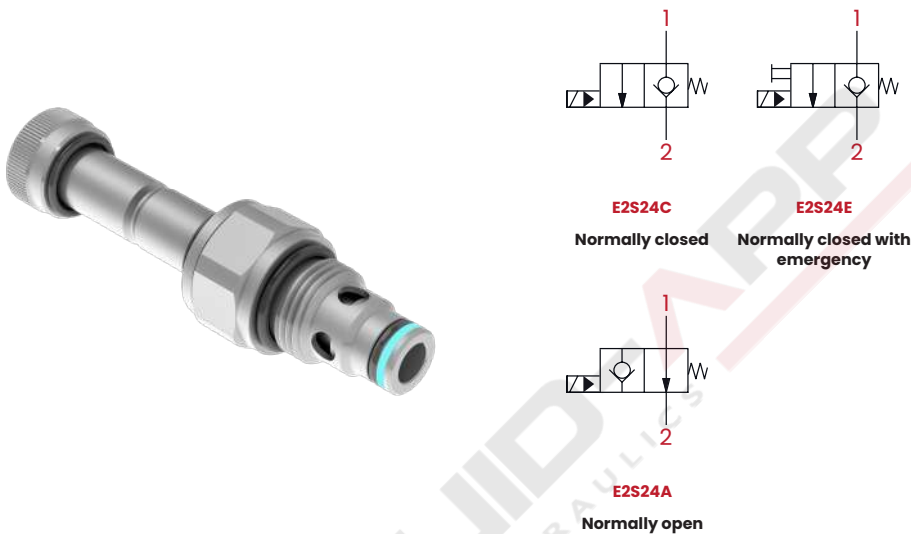
ORDERING CODE

CODE	TYPE	VERSIONS	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	CH 24 TIGHTENING TORQUE Nm [lbt ft]	TIGHTENING TORQUE NUT Nm [lbt ft]	WEIGHT kg [lb]
FA8008	E2S22C	Normally closed	SAE8/2 3/4- 16UNF-2B See cavity paragraph p. 348	40 [10,6]	350 [5076]	30 [22]	2 [1,5]	0,16 [0,36]
FA8009	E2S22E	Normally closed + emergency						
FA8010	E2S22A	Normally open						
Optional, coils C22 and connectors CNS								

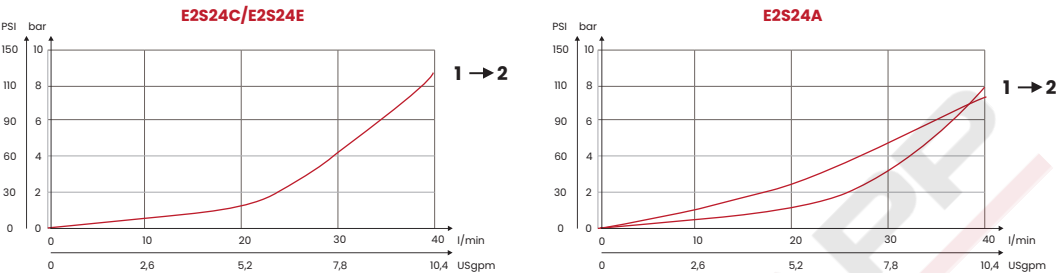
E2S24 SAE8/2 - 40 l/min - 350 bar

SOLENOID VALVE 2 WAYS 2 POSITIONS - POPPET PILOT OPERATED

HYDRAULIC CIRCUIT



PERFORMANCES



Tests carried out with solenoids at their working temperature, with a supply voltage 10% below the nominal value.

ELECTRIC

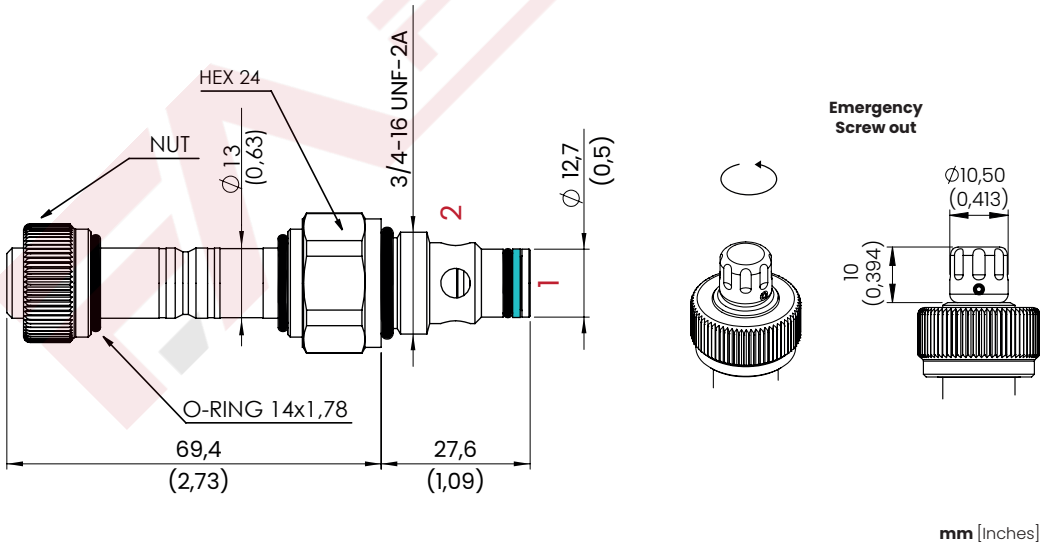
TYPE VOLTAGE	INSULATION INDEX	NOMINAL VOLTAGE	POWER AT 20C°	POWER AT 20C°	COIL CODE
DC	H	+/- 10%	22W	100% with temperature -20 C° + 40 C°	C22

*For temperature or special conditions contact our sales department

ORDERING CODE

CODE	TYPE	VERSIONS	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	CH 24 TIGHTENING TORQUE Nm [lbt ft]	TIGHTENING TORQUE NUT Nm [lbt ft]	WEIGHT kg [lb]
FA8011	E2S24C	Normally closed	SAE8/2 3/4- 16UNF-2B See cavity paragraph p. 348	40 [10,6]	350 [5076]	30 [22]	2 [1,5]	0,16 [0,36]
FA8012	E2S24E	Normally closed + emergency						
FA8013	E2S24A	Normally open						

Optional, coils C22 and connectors CNS

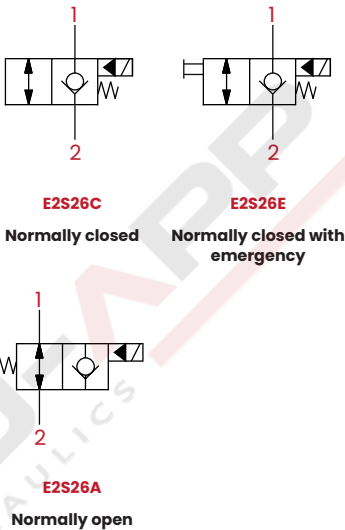


E2S26

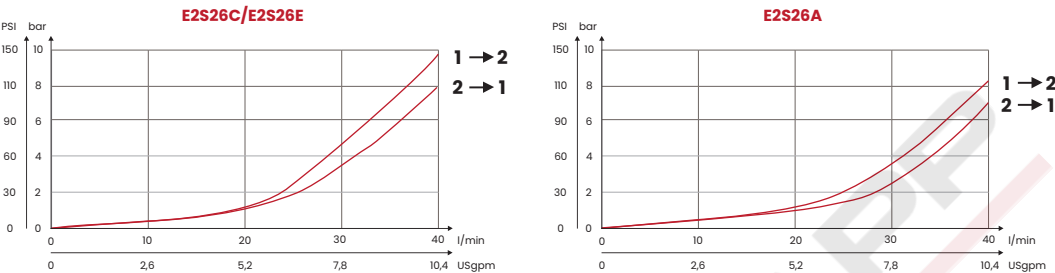
SAE8/2 - 40 l/min - 350 bar

SOLENOID VALVE 2 WAYS 2 POSITIONS - POPPET PILOT OPERATED

HYDRAULIC CIRCUIT



PERFORMANCES



Tests carried out with solenoids at their working temperature, with a supply voltage 10% below the nominal value.

ELECTRIC

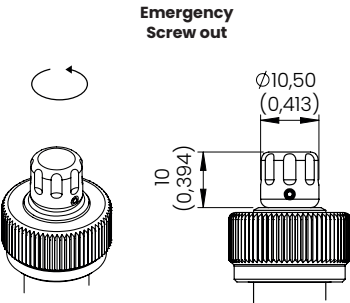
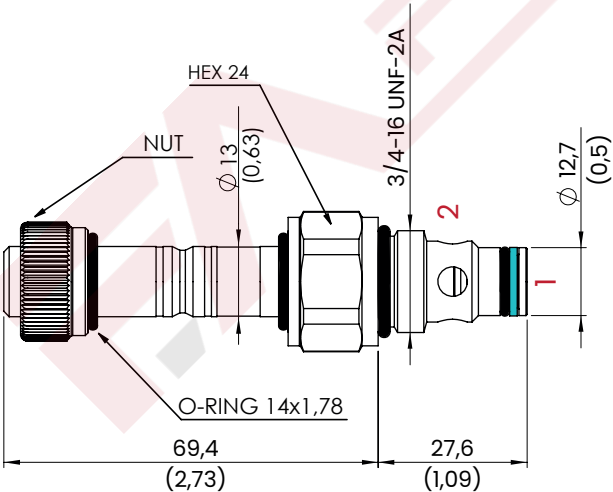
TYPE VOLTAGE	INSULATION INDEX	NOMINAL VOLTAGE	POWER AT 20C°	POWER AT 20C°	COIL CODE
DC	H	+/- 10%	22W	100% with temperature -20 C° + 40 C°	C22

*For temperature or special conditions contact our sales department

ORDERING CODE

CODE	TYPE	VERSIONS	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [Psi]	CH 24 TIGHTENING TORQUE Nm [lbt ft]	TIGHTENING TORQUE NUT Nm [lbt ft]	WEIGHT kg [lb]
FA8014	E2S26C	Normally closed	SAE8/2 3/4- 16UNF-2B See cavity paragraph p. 348	40 [10,6]	350 [5076]	30 [22]	2 [1,5]	0,16 [0,36]
FA8015	E2S26E	Normally closed + emergency						
FA8016	E2S26A	Normally open						

Optional, coils C22 and connectors CNS



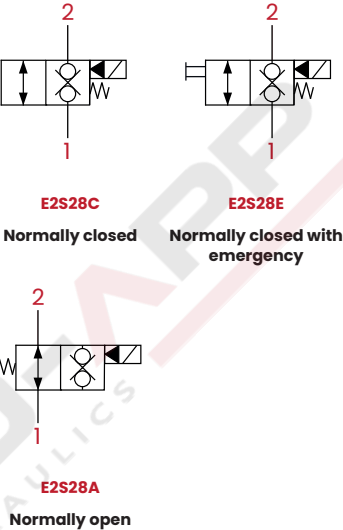
mm [Inches]

E2S28

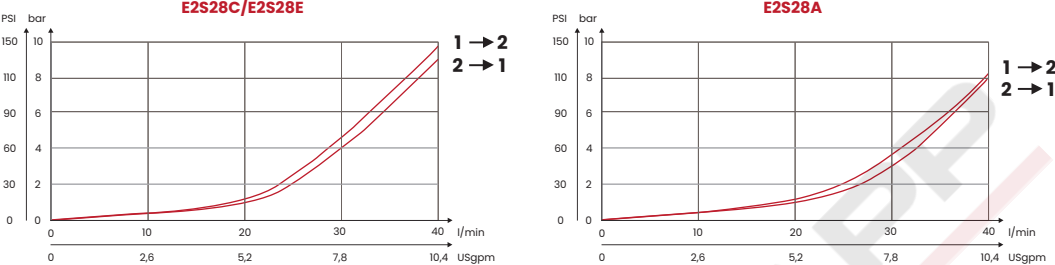
SAE8/2 - 40 l/min - 350 bar

SOLENOID VALVE 2 WAYS 2 POSITIONS - POPPET DIRECT OPERATED

HYDRAULIC CIRCUIT



PERFORMANCES



Tests carried out with solenoids at their working temperature, with a supply voltage 10% below the nominal value.

ELECTRIC

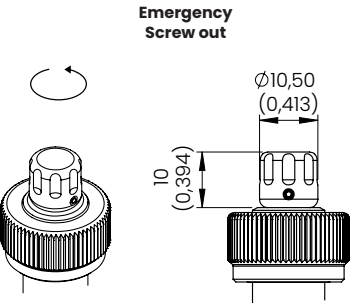
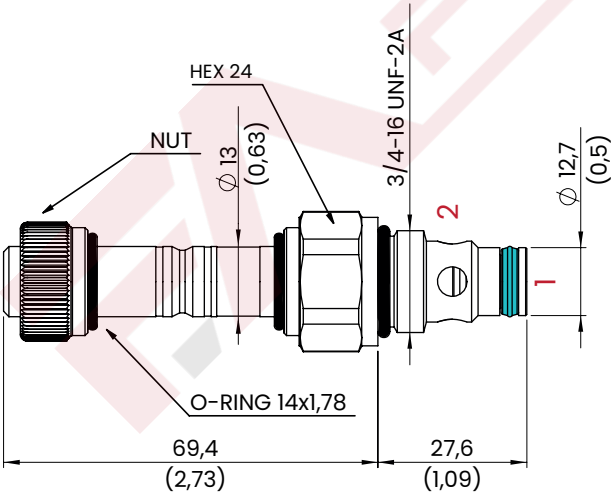
TYPE VOLTAGE	INSULATION INDEX	NOMINAL VOLTAGE	POWER AT 20C°	POWER AT 20C°	COIL CODE
DC	H	+/- 10%	22W	100% with temperature -20 C° + 40 C°	C22

*For temperature or special conditions contact our sales department

ORDERING CODE

CODE	TYPE	VERSIONS	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	CH 24 TIGHTENING TORQUE Nm [lbt ft]	TIGHTENING TORQUE NUT Nm [lbt ft]	WEIGHT kg [lb]
FA8017	E2S28C	Normally closed	SAE8/2 3/4- 16UNF-2B See cavity paragraph p. 348	40 [10,6]	350 [5076]	30 [22]	2 [1,5]	0,16 [0,36]
FA8018	E2S28E	Normally closed + emergency						
FA8019	E2S28A	Normally open						

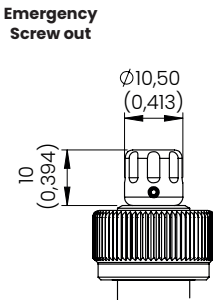
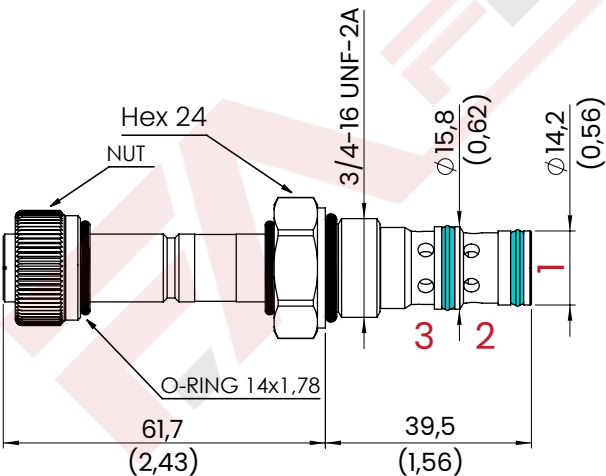
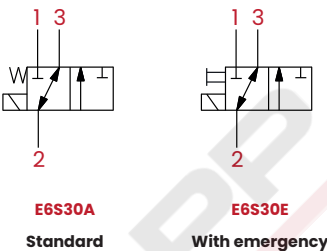
Optional, coils C22 and connectors CNS



E6S30 SAE8/3 - 12 l/min - 210 bar

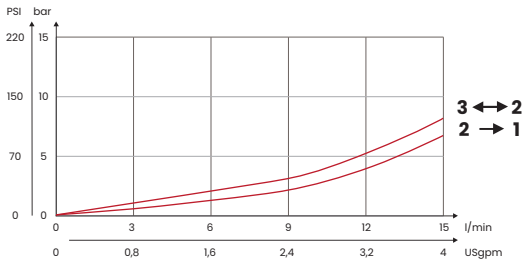
SOLENOID VALVE 3 WAYS 2 POSITIONS - DIRECT ACTING POOL TYPE

HYDRAULIC CIRCUIT



mm [Inches]

PERFORMANCES



Tests carried out with solenoids at their working temperature, with a supply voltage 10% below the nominal value.

ELECTRIC

mm [Inches]

TYPE VOLTAGE	INSULATION INDEX	NOMINAL VOLTAGE	POWER AT 20C°	POWER AT 20C°	COIL CODE
DC	H	+/- 10%	22W	100% with temperature -20 C° + 40 C°	C22

*For temperature or special conditions contact our sales department

ORDERING CODE

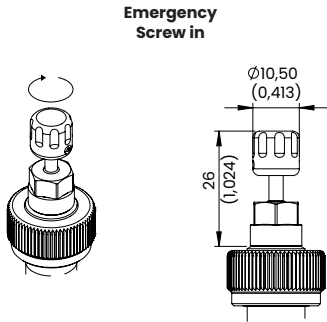
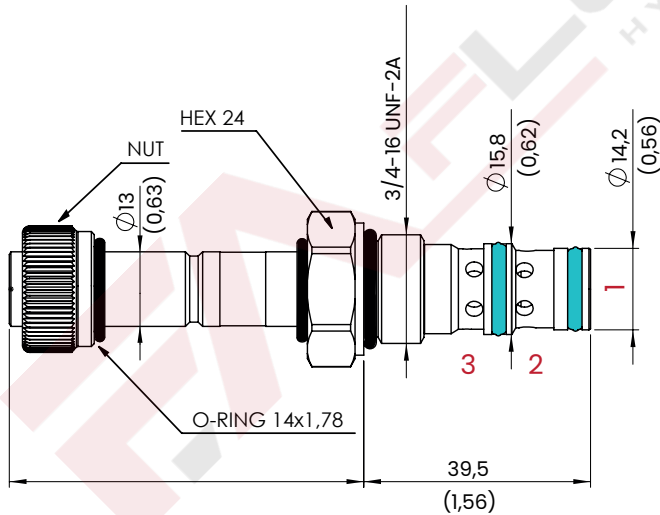
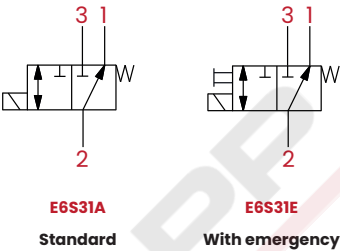
CODE	TYPE	VERSIONS	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	CH 24 TIGHTENING TORQUE Nm [lbt ft]	TIGHTENING TORQUE NUT Nm [lbt ft]	WEIGHT kg [lb]
FA8020	E6S30A	Standard	SAE8/3 3/4- 16UNF-2B	12 [3,2]	210 [3045]	30 [22]	2 [1,5]	0,15 [0,33]
FA8021	E6S30E	With emergency	See cavity paragraph p. 349					

Optional, coils C22 and connectors CNS

E6S31 SAE8/3 - 12 l/min - 210 bar

SOLENOID VALVE 3 WAYS 2 POSITIONS - DIRECT ACTING POOL TYPE

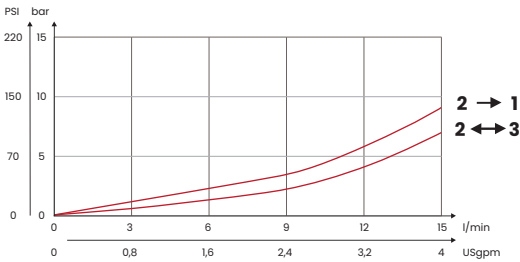
HYDRAULIC CIRCUIT



Rotating the knob clockwise the valve switches position.

mm [Inches]

PERFORMANCES



Tests carried out with solenoids at their working temperature, with a supply voltage 10% below the nominal value.

ELECTRIC

TYPE VOLTAGE	INSULATION INDEX	NOMINAL VOLTAGE	POWER AT 20C°	POWER AT 20C°	COIL CODE
DC	H	+/- 10%	22W	100% with temperature -20 C° + 40 C°	C22

*For temperature or special conditions contact our sales department

ORDERING CODE

CODE	TYPE	VERSIONS	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	CH 24 TIGHTENING TORQUE Nm [lbt ft]	TIGHTENING TORQUE NUT Nm [lbt ft]	WEIGHT kg [lb]
FA8022	E6S31A	Standard	SAE8/3 3/4- 16UNF-2B	12 [3,2]	210 [3045]	30 [22]	2 [1,5]	0,15 [0,33]
FA8023	E6S31E	With emergency	See cavity paragraph p.349					

Optional, coils C22 and connectors CNS

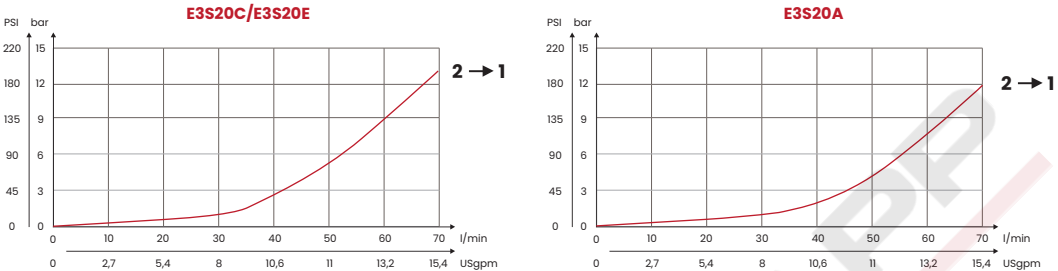
E3S20 SAE10/2 - 70 l/min - 350 bar

SOLENOID VALVE 2 WAYS 2 POSITIONS - POPPET PILOT OPERATED

HYDRAULIC CIRCUIT



PERFORMANCES



Tests carried out with solenoids at their working temperature, with a supply voltage 10% below the nominal value.

ELECTRIC

TYPE VOLTAGE	INSULATION INDEX	NOMINAL VOLTAGE	POWER AT 20C°	POWER AT 20C°	COIL CODE
DC	H	+/- 10%	22W	100% with temperature -20 C° + 40 C°	C22
*For temperature or special conditions contact our sales department					

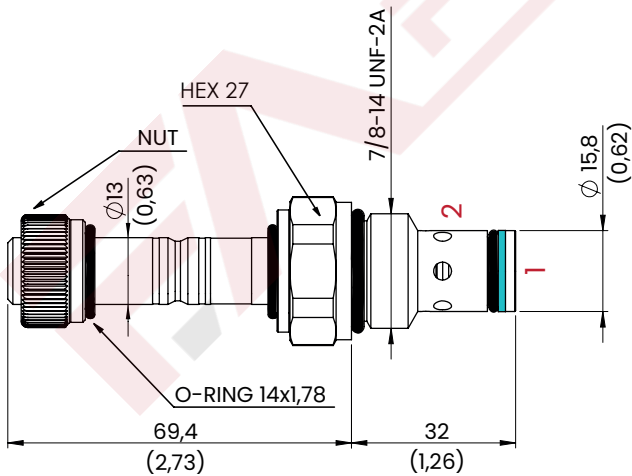
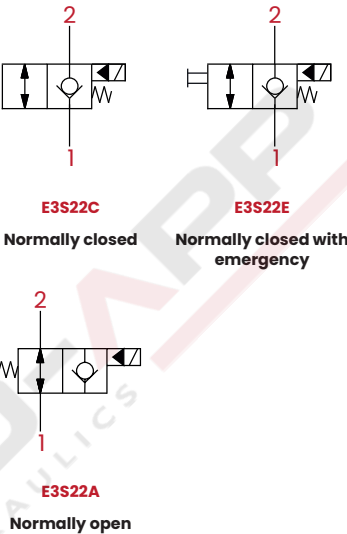
ORDERING CODE

CODE	TYPE	VERSIONS	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	CH 24 TIGHTENING TORQUE Nm [lbt ft]	TIGHTENING TORQUE NUT Nm [lbt ft]	WEIGHT kg [lb]
FA8024	E3S20C	Normally closed	SAE10/2 7/8- 14UNF-2B See cavity paragraph p. 348	70 [18,7]	350 [5076]	40 [29,5]	2 [1,5]	0,19 [0,42]
FA8025	E3S20E	Normally closed + emergency						
FA8026	E3S20A	Normally open						
Optional, coils C22 and connectors CNS								

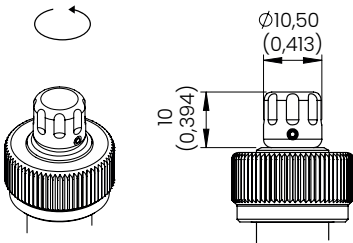
E3S22 SAE10/2 - 70 l/min - 350 bar

SOLENOID VALVE 2 WAYS 2 POSITIONS - POPPET PILOT OPERATED

HYDRAULIC CIRCUIT

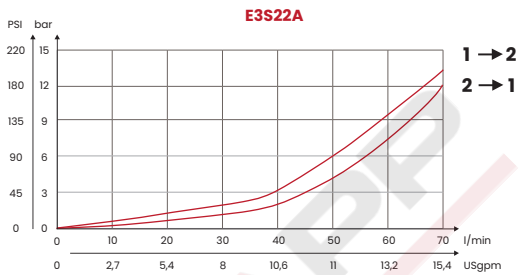
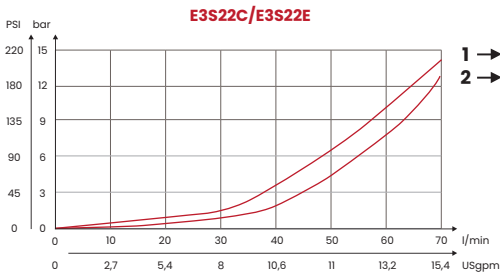


Emergency
Screw out



mm [Inches]

PERFORMANCES



Tests carried out with solenoids at their working temperature, with a supply voltage 10% below the nominal value.

ELECTRIC

mm [Inches]

TYPE VOLTAGE	INSULATION INDEX	NOMINAL VOLTAGE	POWER AT 20C°	POWER AT 20C°	COIL CODE
DC	H	+/- 10%	22W	100% with temperature -20 C° + 40 C°	C22
*For temperature or special conditions contact our sales department					

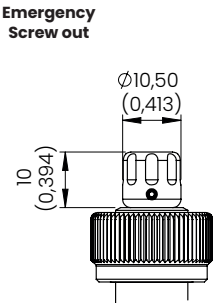
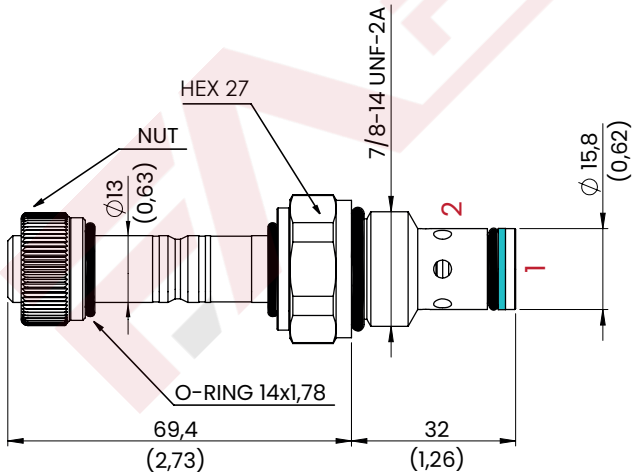
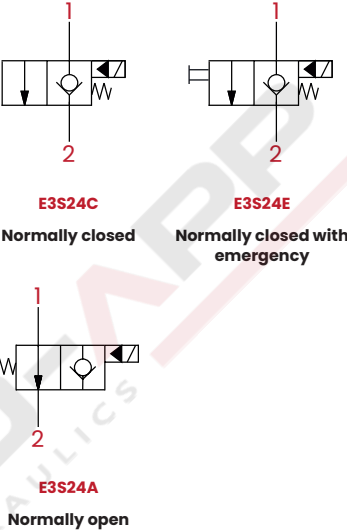
ORDERING CODE

CODE	TYPE	VERSIONS	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	CH 24 TIGHTENING TORQUE Nm [lbt ft]	TIGHTENING TORQUE NUT Nm [lbt ft]	WEIGHT kg [lb]
FA8027	E3S22C	Normally closed	SAE10/2 7/8- 14UNF-2B See cavity paragraph p. 348	70 [18,7]	350 [5076]	40 [29,5]	2 [1,5]	0,19 [0,42]
FA8028	E3S22E	Normally closed + emergency						
FA8029	E3S22A	Normally open						
Optional, coils C22 and connectors CNS								

E3S24 SAE10/2 - 70 l/min - 350 bar

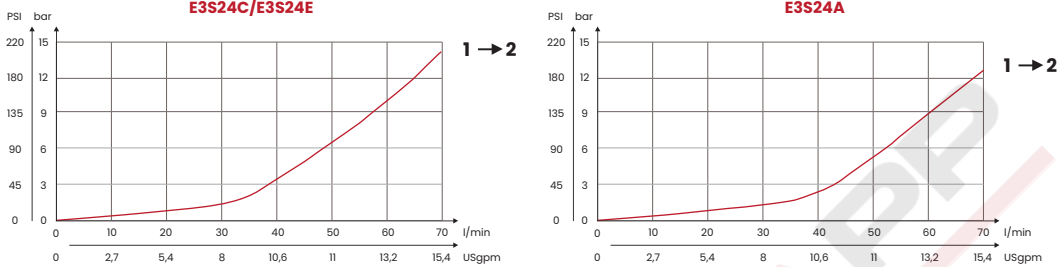
SOLENOID VALVE 2 WAYS 2 POSITIONS - POPPET PILOT OPERATED

HYDRAULIC CIRCUIT



mm [Inches]

PERFORMANCES



Tests carried out with solenoids at their working temperature, with a supply voltage 10% below the nominal value.

ELECTRIC

mm [Inches]

TYPE VOLTAGE	INSULATION INDEX	NOMINAL VOLTAGE	POWER AT 20C°	POWER AT 20C°	COIL CODE
DC	H	+/- 10%	22W	100% with temperature -20 C° + 40 C°	C22

*For temperature or special conditions contact our sales department

ORDERING CODE

CODE	TYPE	VERSIONS	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	CH 24 TIGHTENING TORQUE Nm [lbt ft]	TIGHTENING TORQUE NUT Nm [lbt ft]	WEIGHT kg [lb]
FA8030	E3S24C	Normally closed	SAE10/2 7/8- 14UNF-2B See cavity paragraph p. 348	70 [18,7]	350 [5076]	40 [29,5]	2 [1,5]	0,19 [0,42]
FA8031	E3S24E	Normally closed + emergency						
FA8032	E3S24A	Normally open						

Optional, coils C22 and connectors CNS

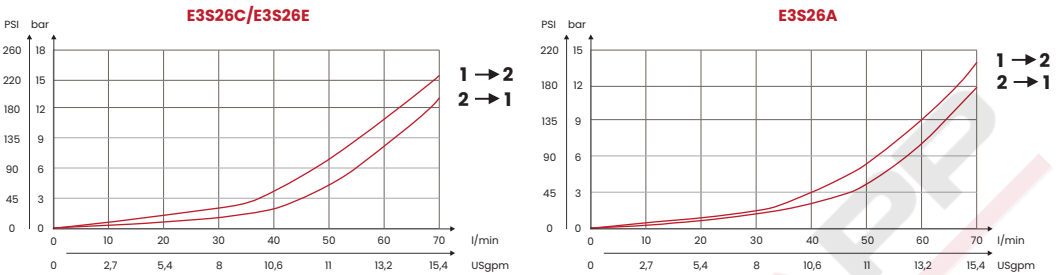
E3S26 SAE10/2 - 70 l/min - 350 bar

SOLENOID VALVE 2 WAYS 2 POSITIONS - POPPET PILOT OPERATED

HYDRAULIC CIRCUIT



PERFORMANCES



Tests carried out with solenoids at their working temperature, with a supply voltage 10% below the nominal value.

ELECTRIC

TYPE VOLTAGE	INSULATION INDEX	NOMINAL VOLTAGE	POWER AT 20C°	POWER AT 20C°	COIL CODE
DC	H	+/- 10%	22W	100% with temperature -20 C° + 40 C°	C22

*For temperature or special conditions contact our sales department

ORDERING CODE

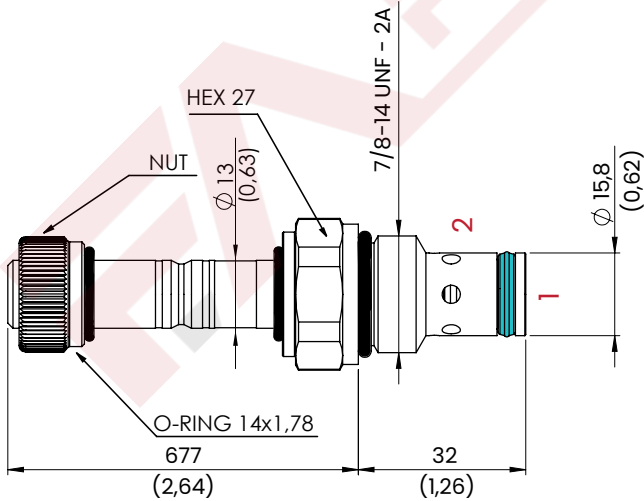
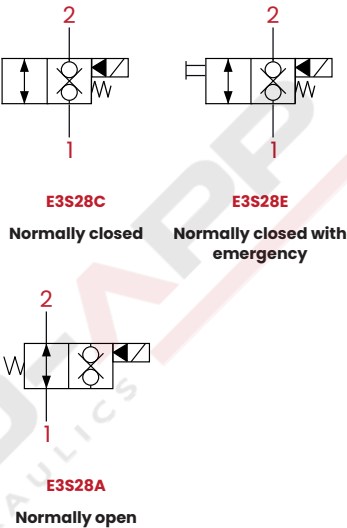
CODE	TYPE	VERSIONS	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	CH 24 TIGHTENING TORQUE Nm [lbt ft]	TIGHTENING TORQUE NUT Nm [lbt ft]	WEIGHT kg [lb]
FA8033	E3S26C	Normally closed	SAE10/2 7/8-14UN- F-2B See cavity paragraph p. 348	70 [18,7]	350 [5076]	40 [29,5]	2 [1,5]	0,19 [0,42]
FA8034	E3S26E	Normally closed + emergency						
FA8035	E3S26A	Normally open						

Optional, coils C22 and connectors CNS

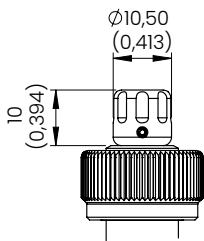
E3S28 SAE10/2 - 70 l/min - 350 bar

SOLENOID VALVE 2 WAYS 2 POSITIONS - POPPET PILOT OPERATED

HYDRAULIC CIRCUIT

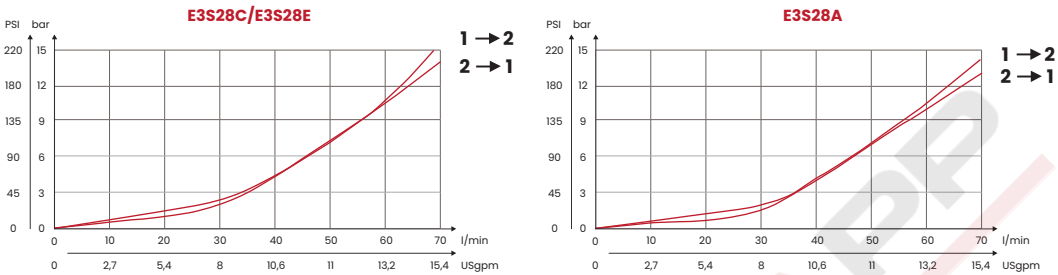


Emergency
Screw out



mm [Inches]

PERFORMANCES



Tests carried out with solenoids at their working temperature, with a supply voltage 10% below the nominal value.

ELECTRIC

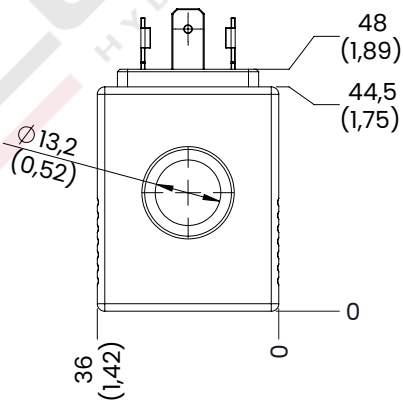
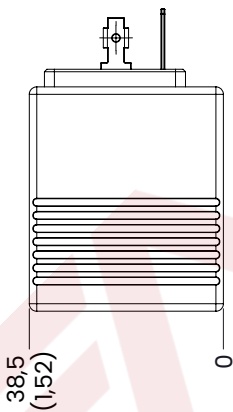
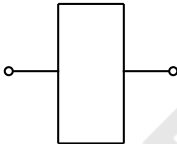
mm [Inches]

TYPE VOLTAGE	INSULATION INDEX	NOMINAL VOLTAGE	POWER AT 20C°	POWER AT 20C°	COIL CODE
DC	H	+/- 10%	22W	100% with temperature -20 C° + 40 C°	C22
*For temperature or special conditions contact our sales department					

ORDERING CODE

CODE	TYPE	VERSIONS	CAVITY	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	CH 24 TIGHTENING TORQUE Nm [lbt ft]	TIGHTENING TORQUE NUT Nm [lbt ft]	WEIGHT kg [lb]
FA8036	E3S28C	Normally closed	SAE10/2 7/8-14UN- F-2B See cavity paragraph p. 348	70 [18,7]	350 [5076]	40 [29,5]	2 [1,5]	0,19 [0,42]
FA8037	E3S28E	Normally closed + emergency						
FA8038	E3S28A	Normally open						
Optional, coils C22 and connectors CNS								

HYDRAULIC CIRCUIT



mm [Inches]

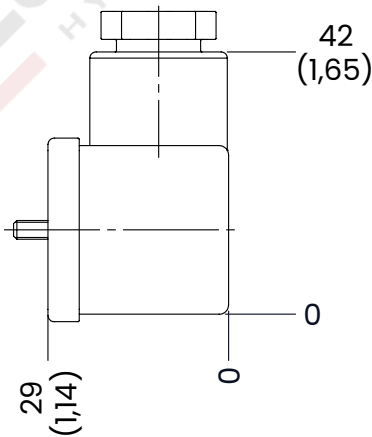
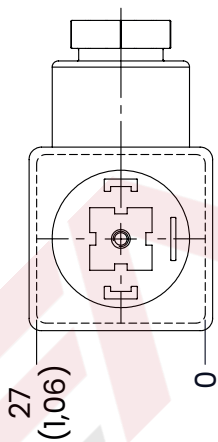
ELECTRIC

mm [Inches]

Protection class with std.connector DIN	INSULATION INDEX	Wire insulation class	NOMINAL VOLTAGE	POWER AT 20C°	ED*
IP 65	H	H	+/- 10%	22W	100% with temperature -20 C° + 40 C°
*For temperature or special conditions contact our sales department					

ORDERING CODE

CODE	TYPE	VOLTAGE	RESISTANCE	MATCHING CONNECTOR	ABSORBED POWER	TIGHTENING TORQUE Nm lbt ft	WEIGHT kg lbt
C2212	C2212	12Vdc	6,5 Ω	CNS [DIN 43650]	22 W	2 [1,5]	0,21 [0,46]
C2224	C2224	24Vdc	26,5 Ω				



mm [Inches]

ORDERING CODE

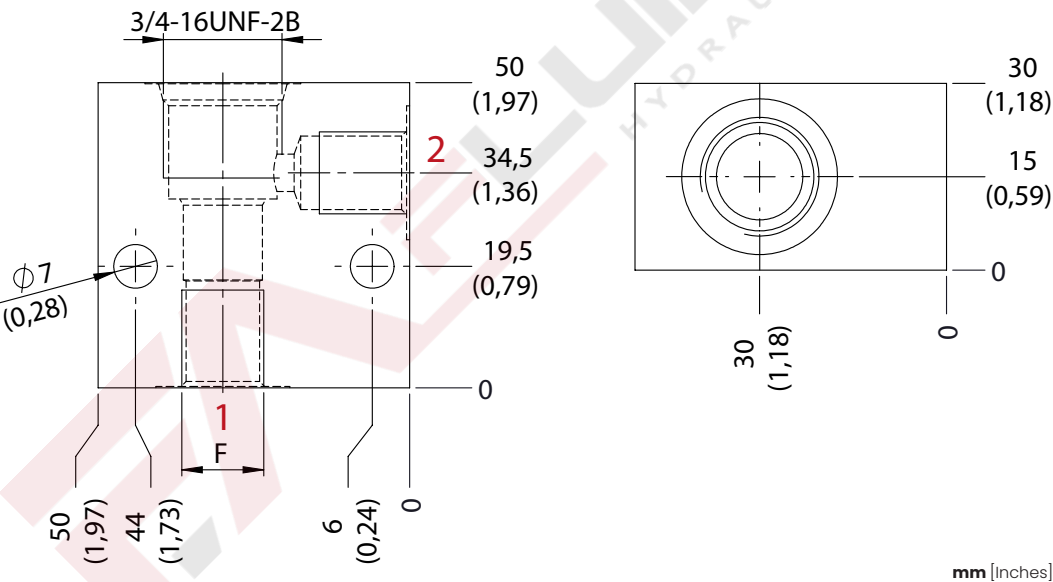
CODE	TYPE	NOMINAL CURRENT	MAX OPERATING CURRENT	CONTACT RESISTANCE	MAX CONDUCTORS CROSS-SECTION	CONTACT HOLDER	GAND SIZE OPTIONS
CNS	CNS	10 A	16 A	≤ 4m Ohm	1,5 mm²	PA (+G)	PgII

CABLE DIAMETER	PROTECTION CLASS	ISULATION CLASS	SEALING MATERIAL	OPERATING TEMPERATURE	WEIGHT kg lb
6-8 mm	IP 65 EN 60529	VDE 0110-1/89	NBR	-40° +90°	0,020 [0,044]



ORDERING CODE

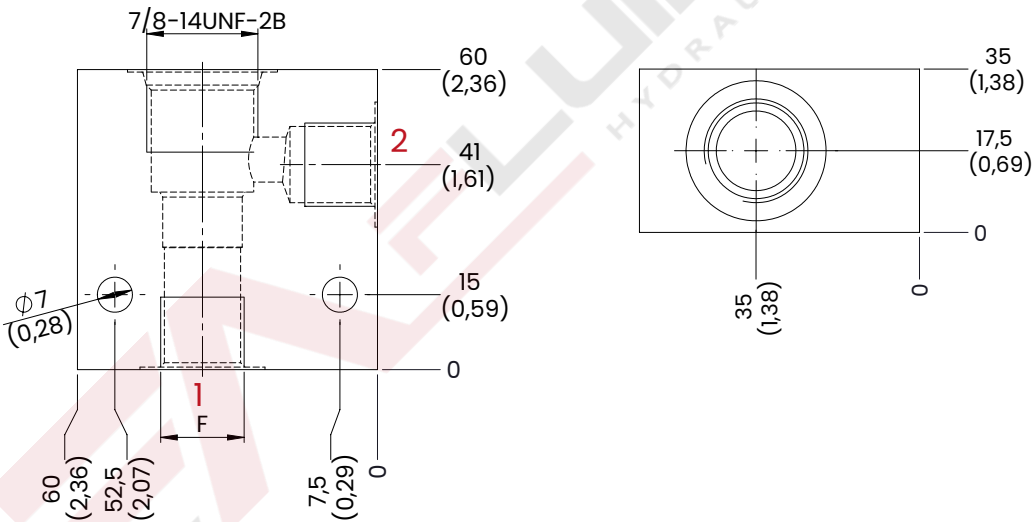
CODE	F	CAVITY	MAX WORKING PRESSURE bar PSI	WEIGHT kg lb
31100042	1/4 BSPP	SAE8/2 3/4-16UNF-2B	350 [5076]	0,48 [1,06]
31100043	3/8 BSPP	See cavity paragraph p.348		0,45 [1,99]
Steel body (on request aluminium body)				





ORDERING CODE

CODE	F	CAVITY	MAX WORKING PRESSURE bar PSI	WEIGHT kg lb
31100286	3/8 BSPP	SAE10/2 7/8-14UNF-2B	350 [5076]	0,82 [1,80]
31100044	1/2 BSPP	See cavity paragraph p.348		0,79 [1,74]
Steel body (on request aluminium body)				

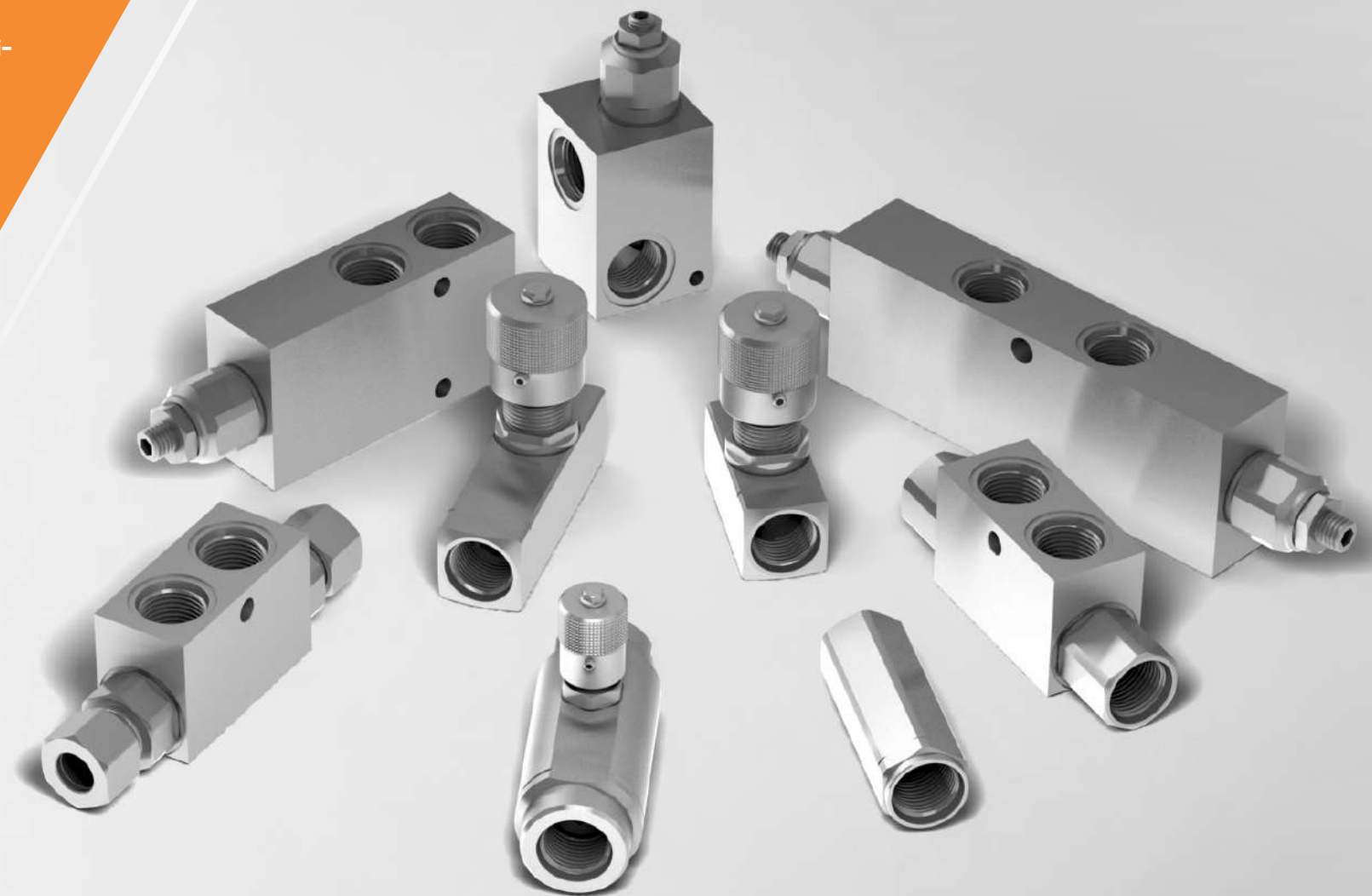


mm [Inches]

SAE/NPTF IN-LINE valves

In-line valves are mounted inline on hydraulic circuit applications.

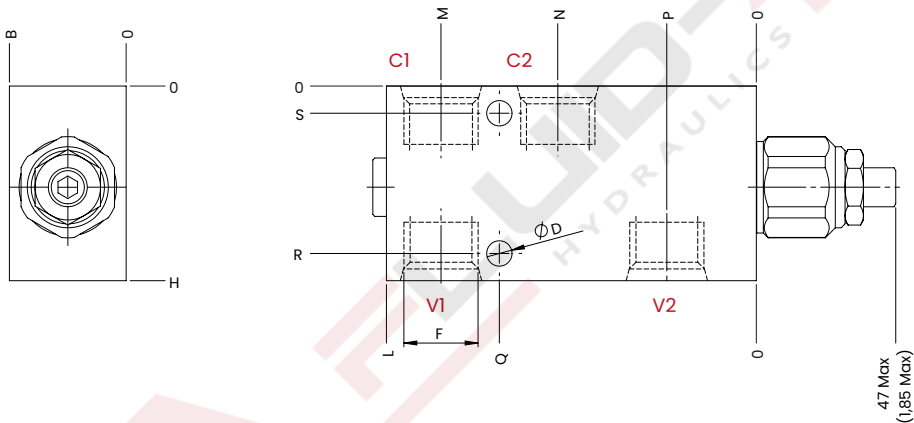
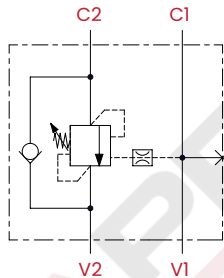
Within this category are available: counterbalance valves, check valves, flow control valves pressure compensated, shuttle valves, pilot check valves, direct acting relief valves.



SINGLE COUNTERBALANCE VALVES FOR OPEN CENTER

BSA counterbalance valves are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.

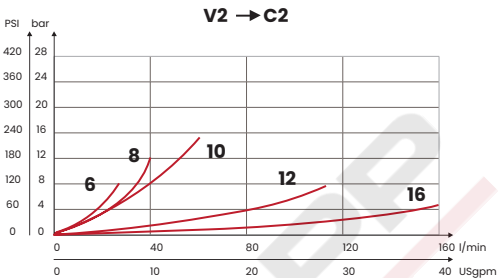
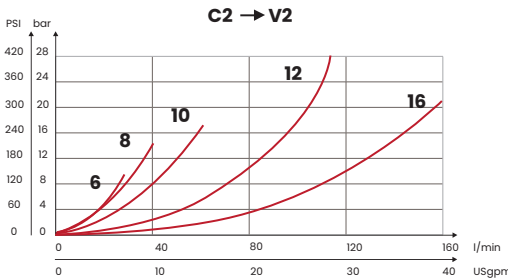
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS

F	H	B	D	L	M	P	Q	S	R	N
SAE6 [9/16-18 UNF]	50 [1,97]	30 [1,18]	6,5 [0,26]	95 [3,74]	81 [3,19]	23 [0,91]	66 [2,60]	43 [1,70]	7 [0,28]	51 [2,01]
SAE8 [3/4-16 UNF]										
SAE10 [7/8-16 UNF]	60 [2,36]			100 [3,94]	84 [3,31]	21 [0,83]	67,5 [2,66]	50 [1,97]		
SAE12 [1-1/16-12 UN]	70 [2,75]	40 [1,57]	10,5 [0,41]	140 [5,51]	120 [4,72]	26 [1,02]	95,5 [3,75]	60 [2,36]	10 [0,39]	71 [2,79]
SAE16 [1-5/16-12 UN]	80 [3,15]	50 [1,97]		145 [5,71]	121 [4,76]		96 [3,78]	70 [2,75]		
Steel body (on request aluminum body)										

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



CODE
62200021

ORDERING CODE

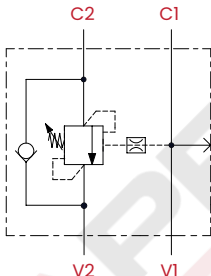
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA1039	BSA1S21	SAE6	30 [7,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25 On request 1:8,1	1,10 [2,42]
FA1040	BSA1S35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA1041	BSA2S21	SAE8	40 [10,6]		210 [3045]	30/210 [435/3045]	80 [1160]		1,05 [2,31]
FA1042	BSA2S35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA1043	BSA3S21	SAE10	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]	1:6,2	1,25 [2,76]
FA1044	BSA3S35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA1045	BSA4S21	SAE12	110 [4,33]		210 [3045]	30/210 [435/3045]	70 [966]		2,5 [5,5]
FA1046	BSA4S35				350 [5075]	60/350 [870/5075]	145 [2100]		
FA1047	BSA5S21	SAE16	160 [6,29]		210 [3045]	30/210 [435/3045]	70 [966]	4 [8,9]	
FA1048	BSA5S35				350 [5075]	60/350 [870/5075]	145 [2100]		
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]				

UPDATE March 2023 (v.03)

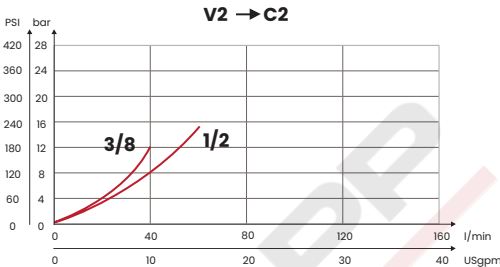
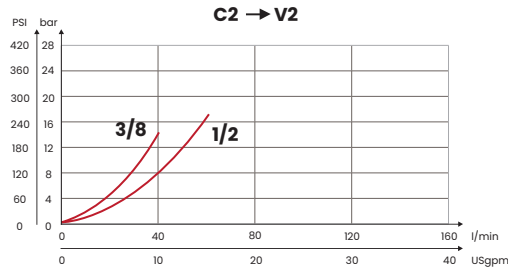
SINGLE COUNTERBALANCE VALVES FOR OPEN CENTER

BSA counterbalance valves (NPTF thread) are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.

HYDRAULIC CIRCUIT



PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



CODE
62200021

ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA1134	BSA2N21	3/8 NPTF	40 [10,6]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25	1,05 [2,31]
FA1135	BSA2N35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA1136	BSA3N21	1/2 NPTF	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]	On request 1:8,1	1,25 [2,76]
FA1137	BSA3N35				350 [5075]	60/350 [870/5075]	135 [1960]		
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]				

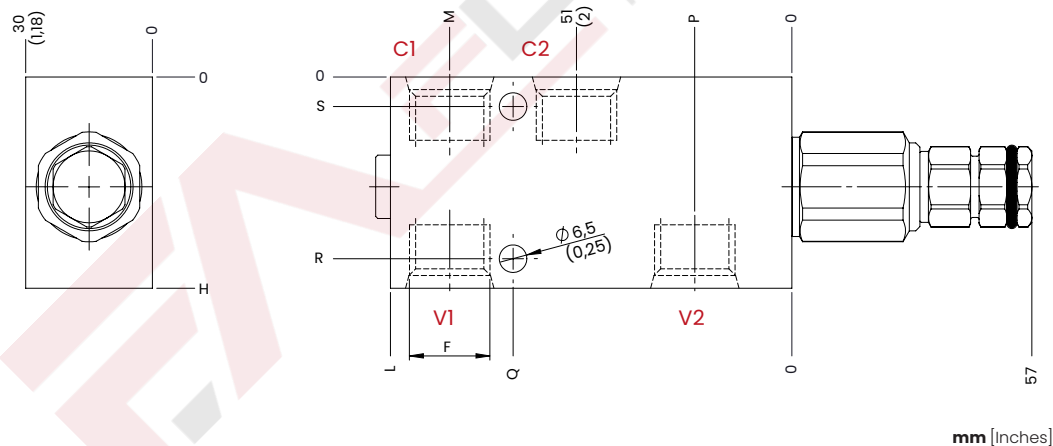
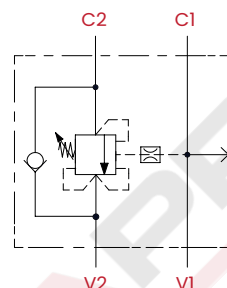
TECHNICAL CHARACTERISTICS

F	H	B	Ø	L	M	P	Q	R	S	T
3/8 NPTF	50 [1,97]	30 [1,18]	8,5 [0,33]	95 [3,74]	82 [3,22]	23 [0,91]	66 [2,60]	43 [1,70]	7 [0,28]	50 [1,97]
1/2 NPTF	60 [2,36]			100 [3,94]	85 [3,34]	21 [0,83]	67,5 [2,66]	50 [1,97]	10 [0,39]	49 [1,93]
Steel body (on request aluminium body – stainless steel AISI 316L body)										

SINGLE COUNTERBALANCE VALVES FOR CLOSED CENTER

BSC counterbalance valves are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.

HYDRAULIC CIRCUIT

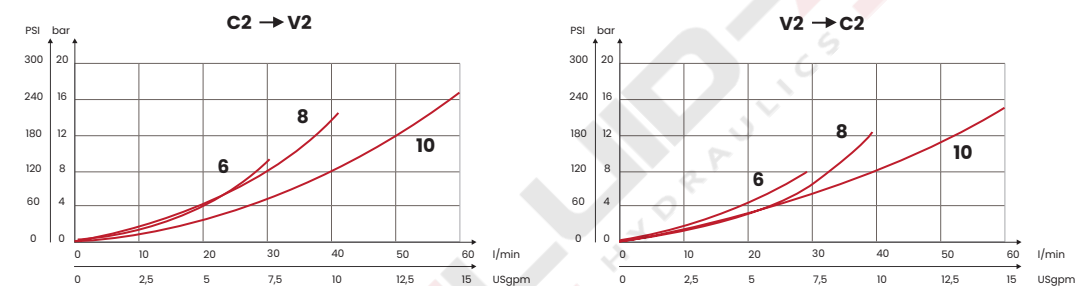


mm [Inches]

TECHNICAL CHARACTERISTICS

[illegible]

PERFORMANCES

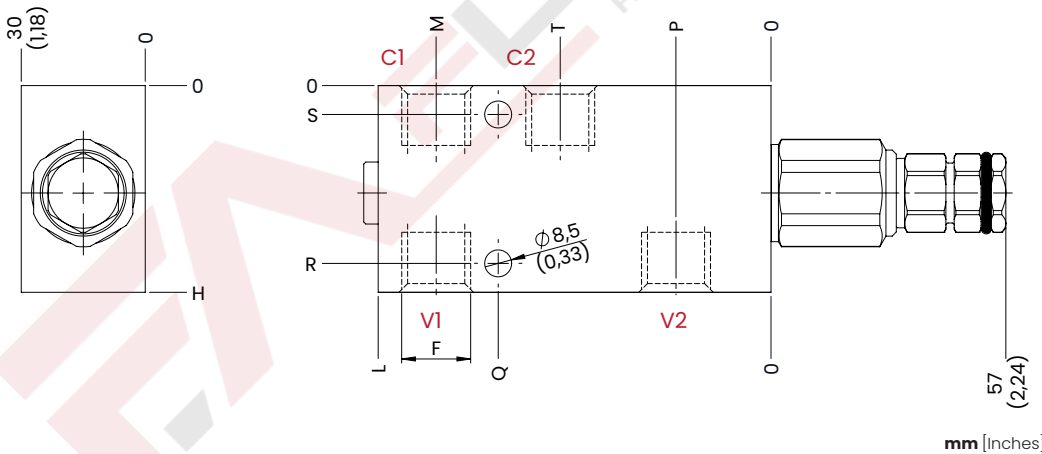
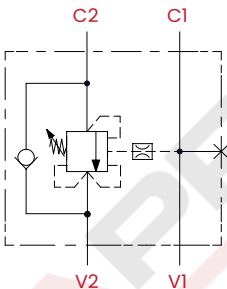
**ORDERING CODE**

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]		
FA1049	BSC1S21	SAE6	30 [7,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25 On request 1:8,1	1,15 [2,53]		
FA1050	BSC1S35				350 [5075]	60/350 [870/5075]	135 [1960]				
FA1051	BSC2S21	SAE8	40 [10,6]		210 [3045]	30/210 [435/3045]	80 [1160]		1,20 [2,42]		
FA1052	BSC2S35				350 [5075]	60/350 [870/5075]	135 [1960]				
FA1053	BSC3S21	SAE10	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]			1,28 [2,84]	
FA1054	BSC3S35				350 [5075]	60/350 [870/5075]	135 [1960]				
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]						

SINGLE COUNTERBALANCE VALVES FOR CLOSED CENTER

BSC counterbalance valves (NPTF thread) are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.

HYDRAULIC CIRCUIT

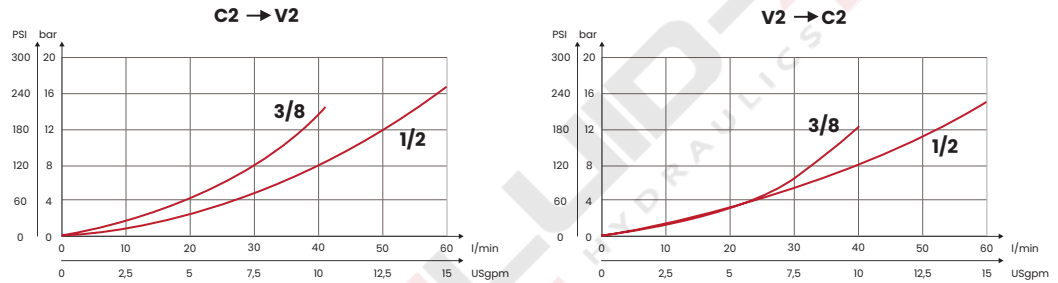


TECHNICAL CHARACTERISTICS

mm [Inches]

F	H	L	M	P	Q	R	S	T
3/8 NPTF	50 [1,97]	95 [3,74]	82 [3,22]	23 [0,91]	66 [2,60]	43 [1,70]	7 [0,28]	50 [1,97]
1/2 NPTF	60 [2,36]	100 [3,94]	85 [3,34]	21 [0,83]	67,5 [2,66]	50 [1,97]	10 [0,39]	49 [1,93]
Steel body (on request aluminium body - stainless steel AISI 316L body)								

PERFORMANCES



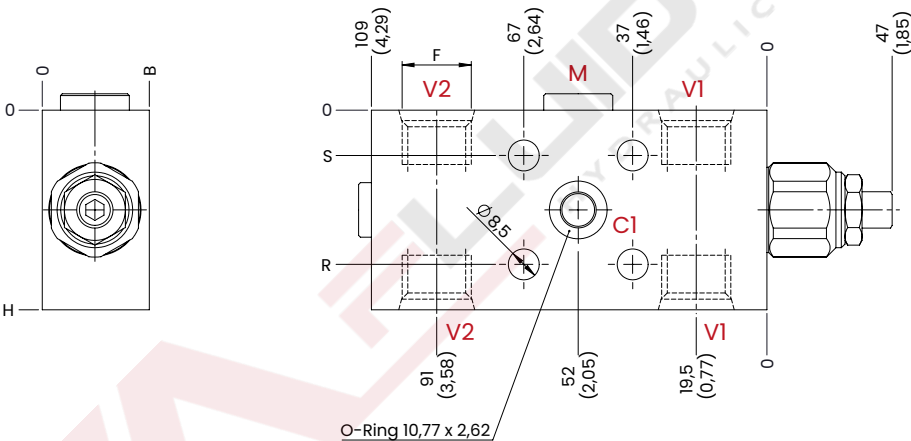
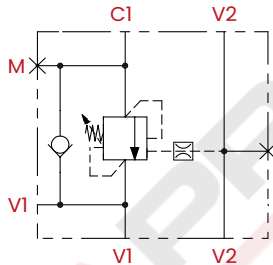
ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA1138	BSC2N21	3/8 NPTF	40 [10,6]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25	1,10 [2,42]
FA1139	BSC2N35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA1140	BSC3N21	1/2 NPTF	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]	On request 1:8,1	1,28 [2,84]
FA1141	BSC3N35				350 [5075]	60/350 [870/5075]	135 [1960]		
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]				

SINGLE COUNTERBALANCE VALVES FOR OPEN CENTER - SINGLE FLANGED VERSION

The BSI counterbalance valves allow you to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by sending the oil to drain.

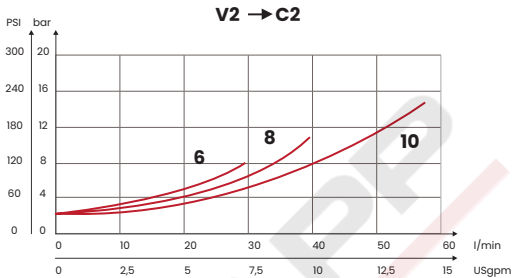
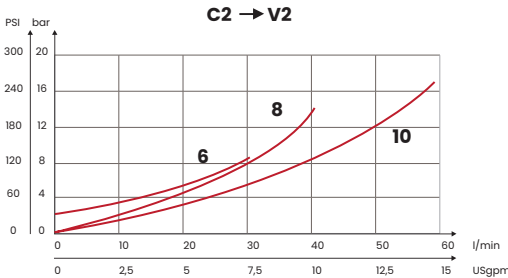
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS

F	H	B	R	S
SAE6 [9/16-18 UNF]	55 [2,16]	29,5 [1,16]	12,5 [0,49]	42,5 [1,67]
SAE8 [3/4-16 UNF]				
SAE10 [7/8-16 UNF]	65 [2,56]	34,5 [1,36]	17,5 [0,69]	47,5 [1,87]
Steel body (on request aluminium body)				

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



CODE
62200021

ORDERING CODE

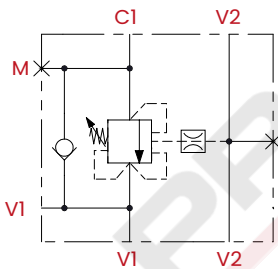
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA1055	BSI1S21	SAE6	30 [7,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25 On request 1:8,1	1,30 [2,86]
FA1056	BSI1S35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA1057	BSI2S21	SAE8	40 [10,6]		210 [3045]	30/210 [435/3045]	80 [1160]		1,19 [2,62]
FA1058	BSI2S35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA1059	BSI3S21	SAE10	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]		1,65 [3,63]
FA1060	BSI3S35				350 [5075]	60/350 [870/5075]	135 [1960]		
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]				

UPDATE: March 2023 (v.01)

SINGLE COUNTERBALANCE VALVES FOR CLOSED CENTER - SINGLE FLANGED VERSION

The BSL counterbalance valves allow you to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by sending the oil to drain.

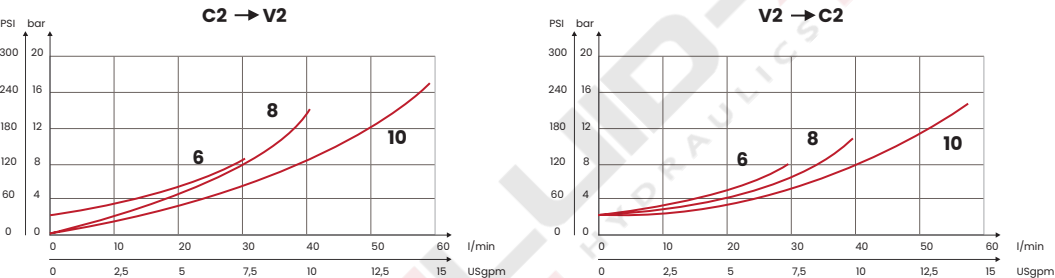
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS

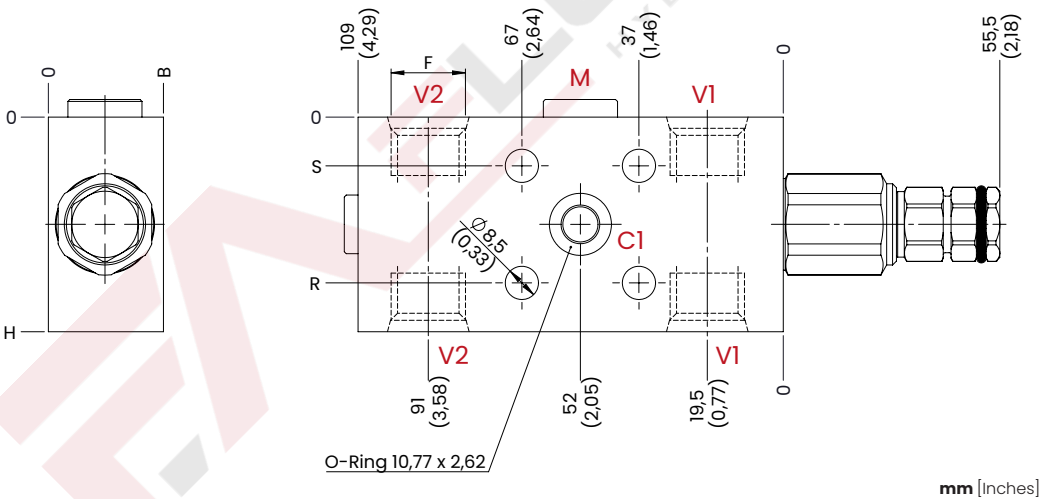
F	H	B	R	S
SAE6 [9/16-18 UNF]	55 [2,16]	29,5 [1,16]	12,5 [0,49]	42,5 [1,67]
SAE8 [3/4-16 UNF]				
SAE10 [7/8-16 UNF]	65 [2,56]	34,5 [1,36]	17,5 [0,69]	47,5 [1,87]
Steel body (on request aluminium body)				

PERFORMANCES



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA1061	BSL1S21	SAE6	30 [7,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25 On request 1:8,1	1,13 [2,48]
FA1062	BSL1S35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA1063	BSL2S21	SAE8	40 [10,6]		210 [3045]	30/210 [435/3045]	80 [1160]		1,07 [2,35]
FA1064	BSL2S35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA1065	BSL3S21	SAE10	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]		1,65 [3,63]
FA1066	BSL3S35				350 [5075]	60/350 [870/5075]	135 [1960]		
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]				

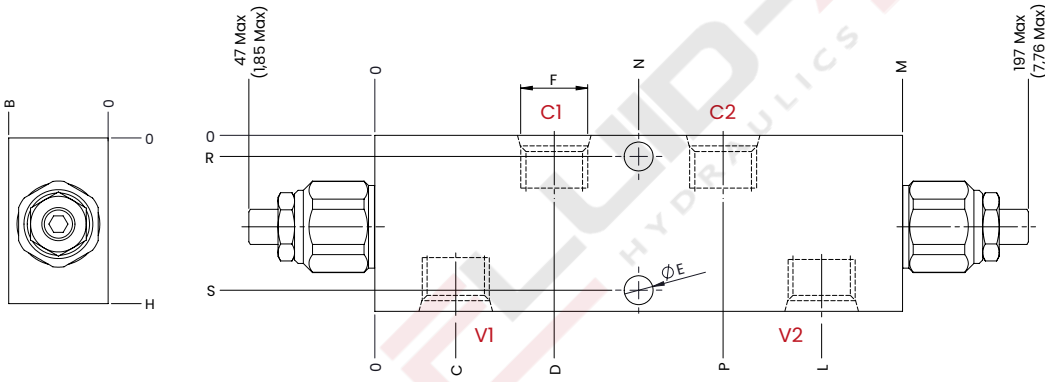
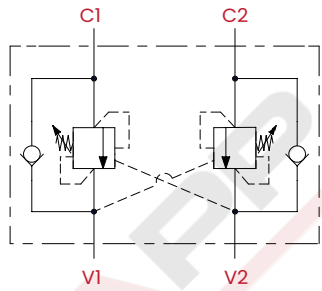


BDA COUNTERBALANCE SAE

DOUBLE COUNTERBALANCE VALVES FOR OPEN CENTER

BDA counterbalance valves are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.

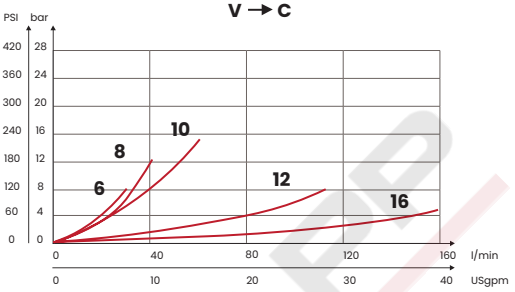
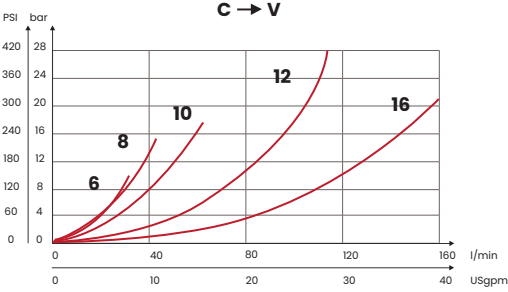
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS

F	H	B	C	N	M	L	D	P	S	R	ØE
SAE6 [9/16-18 UNF]	50 [1,97]	30 [1,18]	23 [0,91]	75 [2,95]	150 [5,90]	127 [5]	51 [2,01]	99 [3,9]	6 [0,24]	44 [1,75]	8,2 [0,32]
SAE8 [3/4-16 UNF]			21 [0,83]			129 [5,08]			8,5 [0,33]	51,5 [2,03]	8,5 [0,33]
SAE10 [7/8-16 UNF]	60 [2,36]										
SAE12 [1-1/16-12 UN]	70 [2,75]	40 [1,57]	26 [1,02]	105 [4,13]	210 [8,27]	184 [7,24]	71 [2,78]	139 [5,47]	9 [0,35]	61 [2,4]	10,5 [0,41]
SAE16 [1-5/16-12 UN]	80 [3,15]	50 [1,97]							10 [0,39]	70 [2,75]	
Steel body (on request aluminium body)											

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



CODE
62200021

ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA2037	BDA1S21	SAE6	30 [7,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25 On request 1:8,1	1,8 [4]
FA2038	BDA1S35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA2039	BDA2S21	SAE8	40 [10,6]		210 [3045]	30/210 [435/3045]	80 [1160]		1,72 [3,80]
FA2040	BDA2S35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA2041	BDA3S21	SAE10	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]	2 [4,4]	
FA2042	BDA3S35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA2043	BDA4S21	SAE12	110 [28,9]		210 [3045]	30/210 [435/3045]	70 [966]		4,3 [9,46]
FA2044	BDA4S35				350 [5075]	60/350 [870/5075]	145 [2100]		
FA2045	BDA5S21	SAE16	160 [42,1]		210 [3045]	30/210 [435/3045]	70 [966]	1:6,2	6,8 [15]
FA2046	BDA5S35				350 [5075]	60/350 [870/5075]	145 [2100]		
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]				

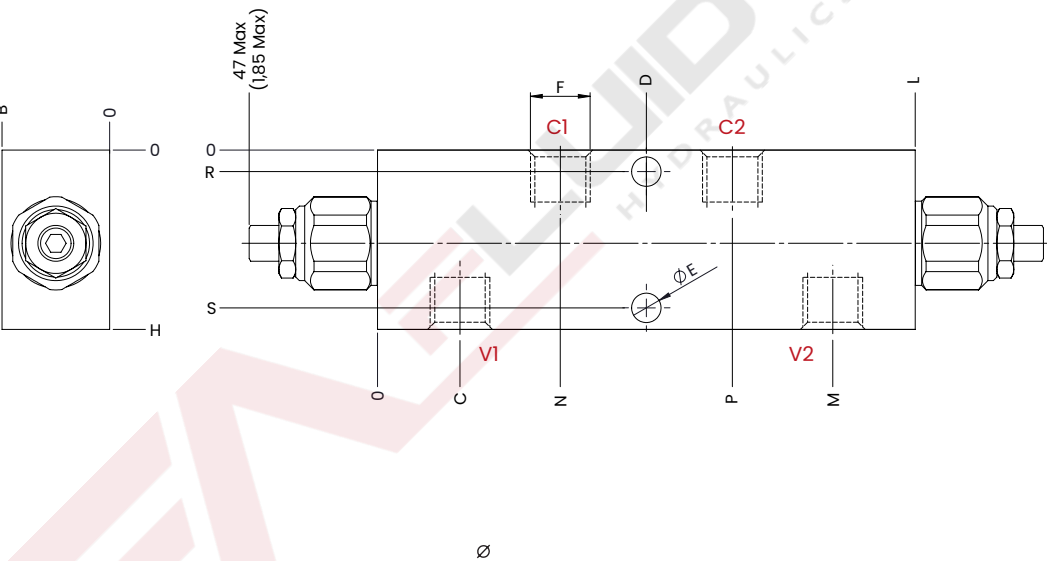
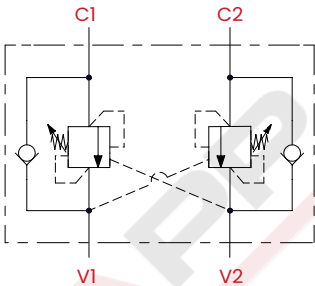
BDA COUNTERBALANCE NPTF

DOUBLE COUNTERBALANCE VALVES FOR OPEN CENTER

BDA counterbalance valves (NPTF thread) are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.



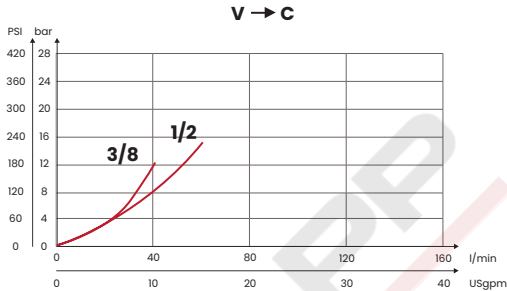
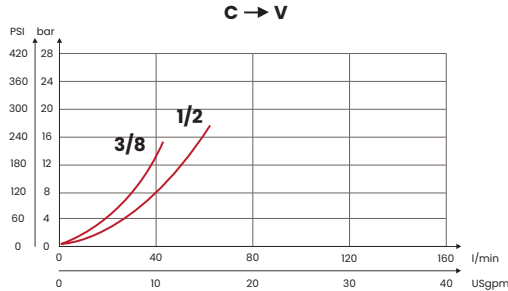
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS

F	H	B	C	D	E	L	M	N	P	R	S
3/8 NPTF	50 [1,97]	30 [1,18]	23 [0,91]	75 [2,95]	8,5 [0,33]	150 [5,90]	127 [5]	51 [2,01]	99 [3,9]	6 [0,24]	44 [1,75]
1/2 NPTF	60 [2,36]		21 [0,83]				129 [5,08]			8,5 [0,33]	51,5 [2,03]
Steel body (on request aluminium body - stainless steel AISI 316L body)											

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



CODE
62200021

ORDERING CODE

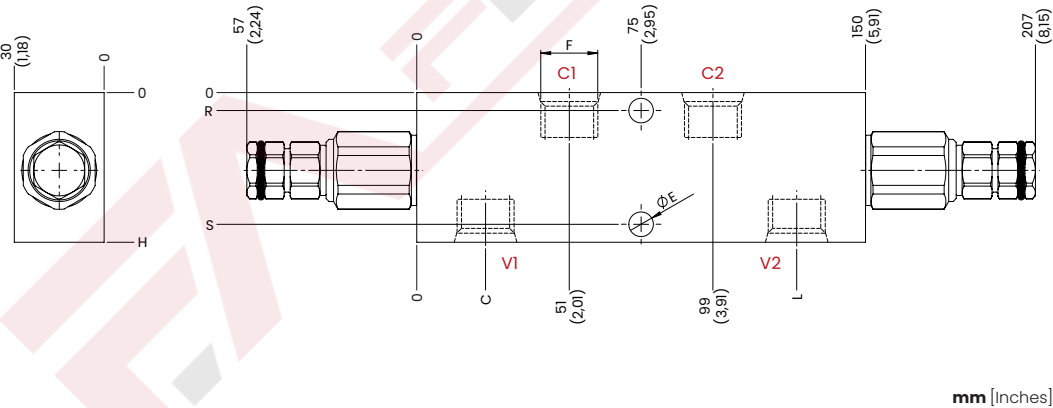
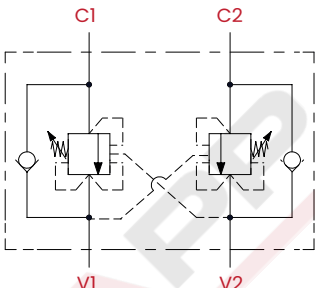
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA2118	BDA2N21	3/8 NPTF	40 [10,6]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25	1,72 [3,8]
FA2119	BDA2N35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA2120	BDA3N21	1/2 NPTF	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]	On request 1:8,1	2 [4,4]
FA2121	BDA3N35				350 [5075]	60/350 [870/5075]	135 [1960]		
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]				

BDC COUNTERBALANCE SAE

DOUBLE COUNTERBALANCE VALVES FOR CLOSED CENTER

BDC counterbalance valves are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.

HYDRAULIC CIRCUIT



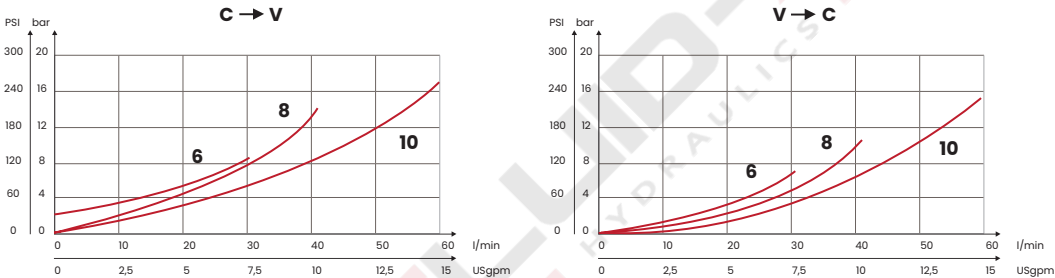
mm [Inches]

TECHNICAL CHARACTERISTICS

mm [Inches]

F	H	C	L	S	R	Ø E
SAE6 [9/16-18 UNF]	50 [1.97]	23 [0.91]	127 [5]	6 [0.24]	44 [1.75]	8,2 [0.32]
SAE8 [3/4-16 UNF]						
SAE10 [7/8-16 UNF]	60 [2.36]	21 [0.83]	129 [5.08]	8,5 [0.33]	51,5 [2.03]	8,5 [0.33]
Steel body (on request aluminium body)						

PERFORMANCES



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA2047	BDC1S21	SAE6	30 [7,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25 On request 1:8,1	1,9 [4,2]
FA2048	BDC1S35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA2049	BDC2S21	SAE8	40 [10,6]		210 [3045]	30/210 [435/3045]	80 [1160]		1,83 [4]
FA2050	BDC2S35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA2051	BDC3S21	SAE10	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]		2,1 [4,6]
FA2052	BDC3S35				350 [5075]	60/350 [870/5075]	135 [1960]		
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]				

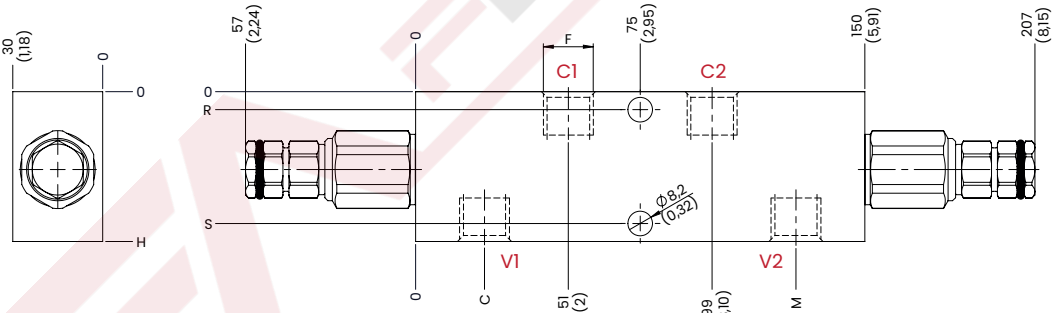
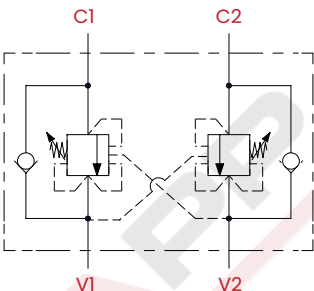
UPDATE: March 2023 (v.03)

BDC COUNTERBALANCE NPTF

DOUBLE COUNTERBALANCE VALVES FOR CLOSED CENTER

BDC counterbalance valves (NPTF thread) are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.

HYDRAULIC CIRCUIT



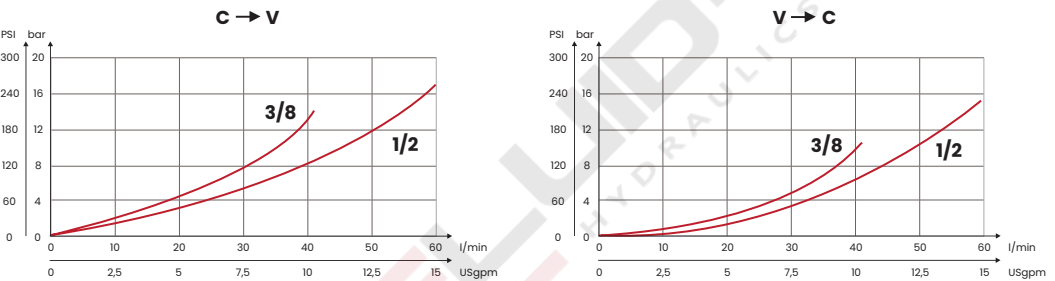
mm [Inches]

TECHNICAL CHARACTERISTICS

mm [Inches]

F	H	R	S	C	M
3/8 NPTF	50 [1,97]	6 [0,24]	44 [1,73]	23 [0,91]	127 [5]
1/2 NPTF	60 [2,36]	8,5 [0,33]	51,5 [2,03]	21 [0,83]	129 [5,08]
Steel body (on request aluminium body - stainless steel AISI 316L body)					

PERFORMANCES



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA2101	BDC2N21	3/8 NPTF	40 [10,6]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25	1,83 [4]
FA2102	BDC2N35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA2103	BDC3N21	1/2 NPTF	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]	On request 1:8,1	2,10 [4,6]
FA2104	BDC3N35				350 [5075]	60/350 [870/5075]	135 [1960]		
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]				

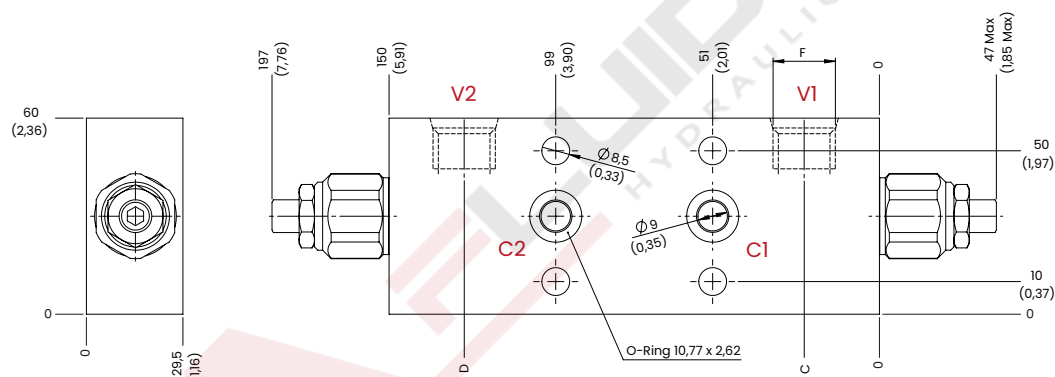
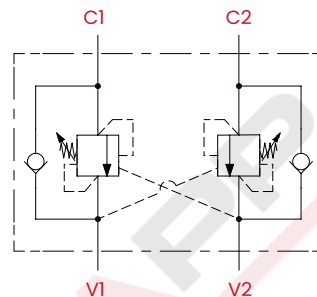
UPDATE: June 2025 (v.01)

DOUBLE COUNTERBALANCE VALVES FOR OPEN CENTER – FLANGED VERSION

BFA counterbalance valves are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.



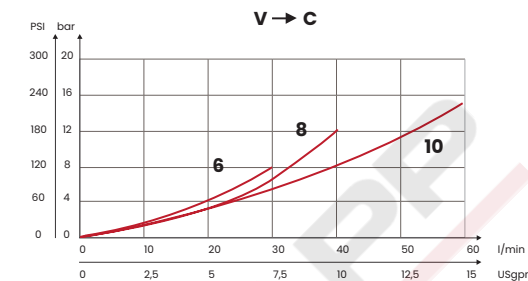
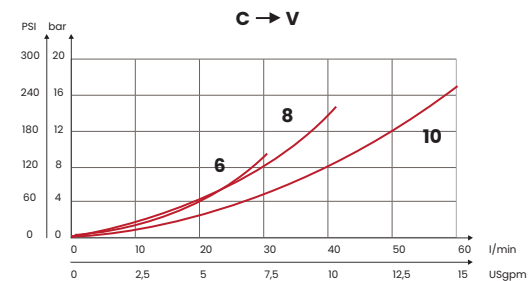
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS

F	C	D
SAE6 [9/16-18 UNF]	23 [0,91]	127 [5]
SAE8 [3/4-16 UNF]		
SAE10 [7/8-16 UNF]	21 [0,83]	129 [5,07]
Steel body (on request aluminium body)		

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



CODE
62200021

ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]		
FA2053	BFA1S21	SAE6	30 [7,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25 On request 1:8,1	2,05 [4,52]		
FA2054	BFA1S35				350 [5075]	60/350 [870/5075]	135 [1960]				
FA2055	BFA2S21	SAE8	40 [10,6]		210 [3045]	30/210 [435/3045]	80 [1160]		2 [4,41]		
FA2056	BFA2S35				350 [5075]	60/350 [870/5075]	135 [1960]				
FA2057	BFA3S21	SAE10	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]			1,96 [4,32]	
FA2058	BFA3S35				350 [5075]	60/350 [870/5075]	135 [1960]				
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]						

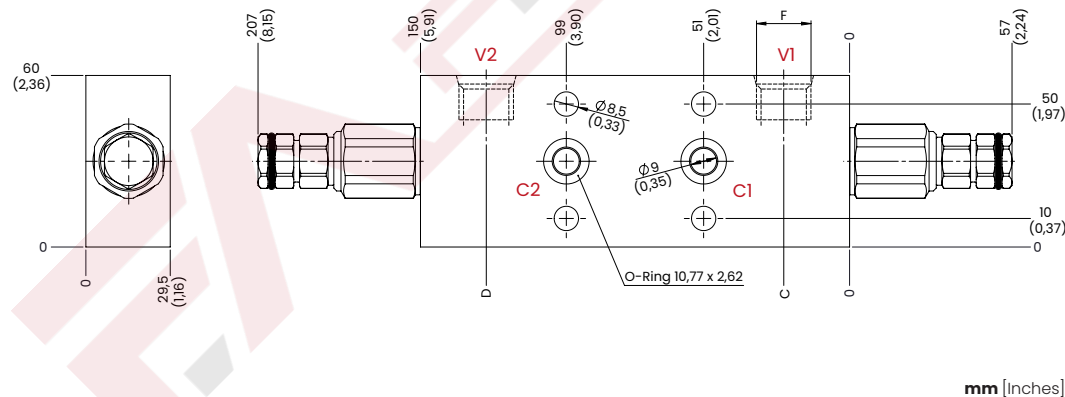
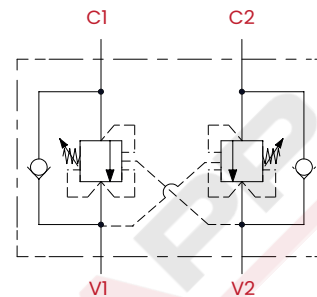
UPDATE: March 2023 (v.03)

DOUBLE COUNTERBALANCE VALVES FOR CLOSED CENTER – FLANGED VERSION

BFC counterbalance valves are used to keep a load locked, the built-in relief valve protects the system from overpressure in the cylinder by draining the oil.



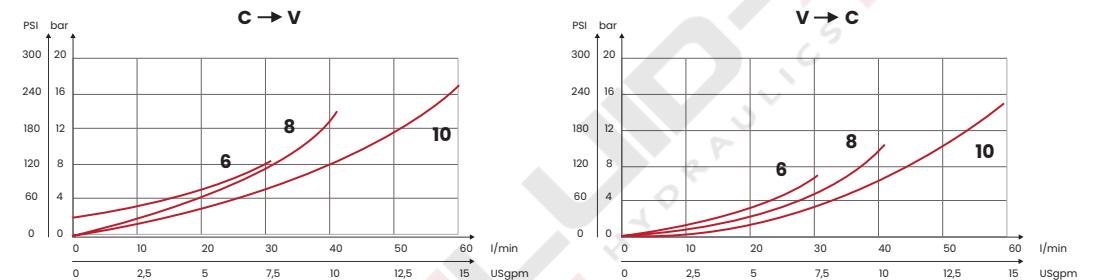
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS

F	C	D
SAE6 [9/16-18 UNF]	23 [0,91]	127 [5]
SAE8 [3/4-16 UNF]		
SAE10 [7/8-16 UNF]	21 [0,83]	129 [5,07]
Steel body (on request aluminium body)		

PERFORMANCES

**ORDERING CODE**

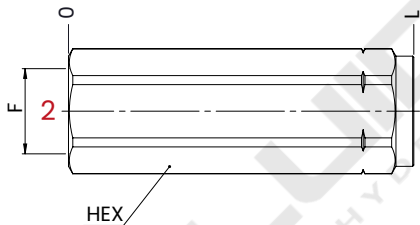
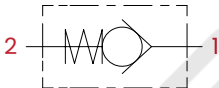
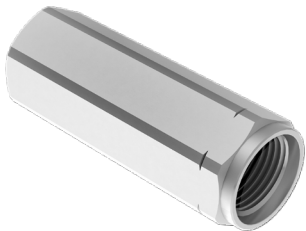
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	STANDARD SETTING bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	PILOT RATIO	WEIGHT kg [lb]
FA2059	BFC1S21	SAE6	30 [7,9]	350 [5075]	210 [3045]	30/210 [435/3045]	80 [1160]	1:4,25 On request 1:8,1	2,15 [4,74]
FA2060	BFC1S35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA2061	BFC2S21	SAE8	40 [10,6]		210 [3045]	30/210 [435/3045]	80 [1160]		2,1 [4,63]
FA2062	BFC2S35				350 [5075]	60/350 [870/5075]	135 [1960]		
FA2063	BFC3S21	SAE10	60 [15,9]		210 [3045]	30/210 [435/3045]	80 [1160]		2,05 [4,52]
FA2064	BFC3S35				350 [5075]	60/350 [870/5075]	135 [1960]		
Standard setting 350 bar [5075 PSI] to 5 l/m [1,32 USgpm]					Standard setting 210 bar [3045 PSI] to 5 l/m [1,32 USgpm]				

UFC CHECK VALVES SAE

CHECK VALVES

The UFC poppet check valves allow the full flow of oil in one direction and stop the flow in the opposite direction. The applications where these valves can be used are many, agricultural machinery or industrial installations.

HYDRAULIC CIRCUIT

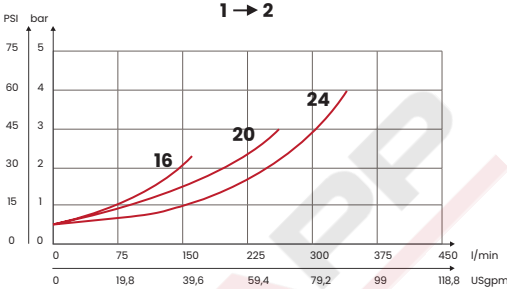
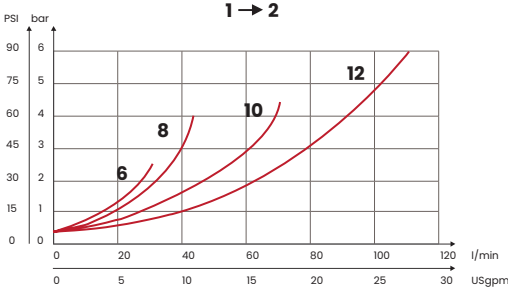


TECHNICAL CHARACTERISTICS

F	L	HEX
SAE6 [9/16-18 UNF]	58 [2,28]	19
SAE8 [3/4-16 UNF]	69 [2,71]	24
SAE10 [7/8-14 UNF]	77 [3,03]	27
SAE12 [1-1/16-12 UN]	88,5 [3,48]	35
SAE16 [1-5/16-12 UN]	110 [4,33]	41
SAE20 [1-5/8-12 UN]	120 [4,72]	55
SAE24 [1-7/8-12 UN]	138 [5,43]	60
Steel body		

On request
• Calibration hole

PERFORMANCES



ORDERING CODE

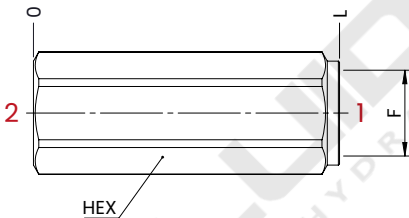
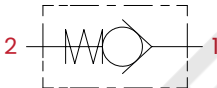
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	SPRING bar [PSI]	WEIGHT kg [lb]
FA3057	UFC1S05	SAE6	30 [7,92]	400 [5800]	0,5 Standard [7,3] On request 3 [43,5] 4,5 [65] 6 [87]	0,09 [0,19]
FA3058	UFC2S05	SAE8	50 [13,2]			0,18 [0,39]
FA3059	UFC3S05	SAE10	70 [18,5]			0,23 [0,50]
FA3060	UFC4S05	SAE12	90 [23,7]			0,45 [1]
FA3061	UFC5S05	SAE16	150 [39,6]	350 [5075]		0,73 [1,6]
FA3062	UFC6S05	SAE20	200 [52,9]			1,5 [3,3]
FA3063	UFC7S05	SAE24	300 [79,2]			1,85 [4,07]

UFC CHECK VALVES NPTF

CHECK VALVES

The UFC poppet check valves allow the full flow of oil in one direction and stop the flow in the opposite direction. The applications where these valves can be used are many, agricultural machinery or industrial installations.

HYDRAULIC CIRCUIT



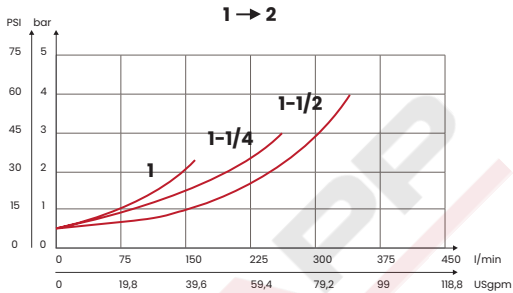
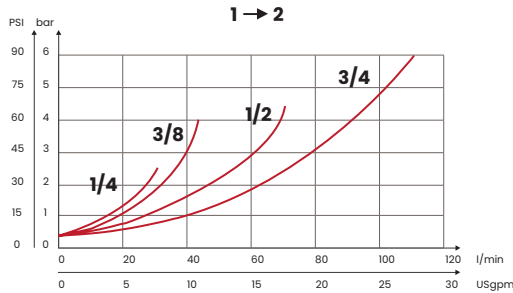
TECHNICAL CHARACTERISTICS

mm [Inches]

F	L	HEX
1/4 NPTF	58 [2,28]	19
3/8 NPTF	69 [2,71]	22
1/2 NPTF	75 [2,95]	27
3/4 NPTF	88,5 [3,48]	35
1 NPTF	110 [4,33]	41
1-1/4 NPTF	120 [4,72]	55
1-1/2 NPTF	138 [5,43]	60
Steel body		

On request
• Calibration hole

PERFORMANCES



ORDERING CODE

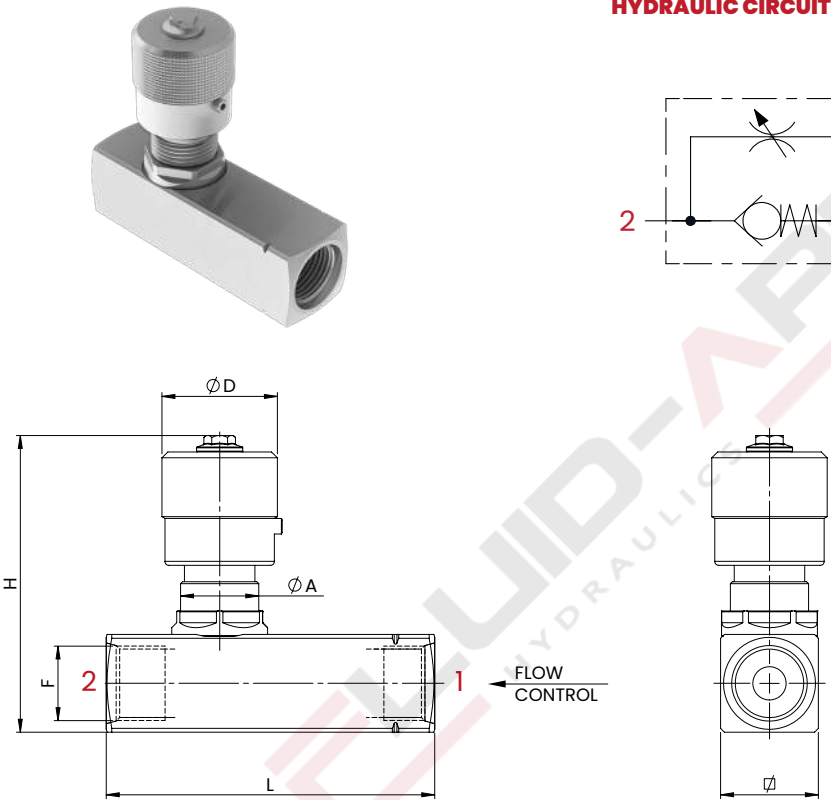
CODE	TYPE	F ports	MAX FLOW l/min [usgpm]	MAX PRESSURE bar [PSI]	SPRING bar [PSI]	WEIGHT kg [lb]
FA3049	UFC1N05	1/4 NPTF	30 [7,92]	400 [5800]	0,5 Standard [7,3] On request 3 [43,5] 4,5 [65] 6 [87]	0,10 [0,22]
FA3050	UFC2N05	3/8 NPTF	45 [12]			0,18 [0,40]
FA3051	UFC3N05	1/2 NPTF	70 [18,5]			0,23 [0,50]
FA3052	UFC4N05	3/4 NPTF	110 [28,9]			0,45 [1]
FA3053	UFC5N05	1 NPTF	160 [42,1]	350 [5075]		0,73 [1,6]
FA3054	UFC6N05	1-1/4 NPTF	250 [66]			1,5 [3,3]
FA3055	UFC7N05	1-1/2 NPTF	350 [92,5]			1,85 [4,07]

UPDATE: May 2025 (v.05)

UNIDIRECTIONAL FLOW CONTROL VALVES

The unidirectional flow control valves SUA allow the free passage of the oil in one direction and regulate it in the opposite direction.

HYDRAULIC CIRCUIT

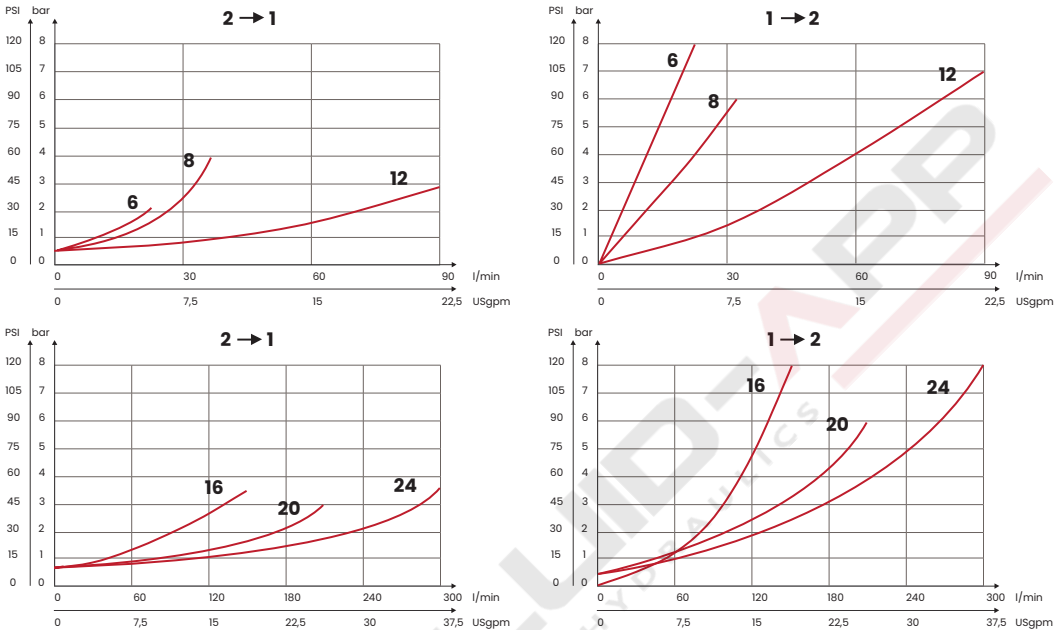


TECHNICAL CHARACTERISTICS

mm [Inches]

F	L	H	Ø	Ø D	A	OPTIONAL RING NUT
SAE6 [9/16-18 UNF]	70,5 [2,77]	76 [2,99]	25 [0,98]	30 [1,18]	M20 x 1	63500014
SAE8 [3/4-16 UNF]	86 [3,38]					
SAE12 [1-1/16-12 UN]	112,5 [4,43]	110 [4,33]	40 [1,57]	38 [1,5]	M35 x 1,5	63500012
SAE16 [1-5/16-12 UN]	141 [5,55]	114 [4,49]	45 [1,77]			
SAE20 [1-5/8-12 UN]	155 [6,10]	137 [5,39]	55 [2,16]	50 [1,96]	M45 x 1,5	63500013
SAE24 [1-7/8-12 UN]	168 [6,61]	147 [5,78]	65 [2,55]			
Steel body (on request stainless steel AISI 316L body)						

PERFORMANCES



OPTIONAL RING NUT



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA4100	SUA1S	SAE6	25 [6,6]	400 [5800]	0,4 [0,88]
FA4101	SUA2S	SAE8	35 [9,3]		
FA4103	SUA4S	SAE12	90 [23,8]		1,45 [3,2]
FA4104	SUA5S	SAE16	150 [39,6]		2 [4,4]
FA4105	SUA6S	SAE20	200 [52,8]	350 [5075]	3 [6,6]
FA4106	SUA7S	SAE24	300 [79,2]		4,5 [10]

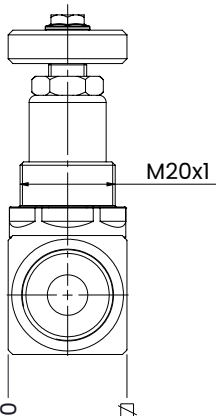
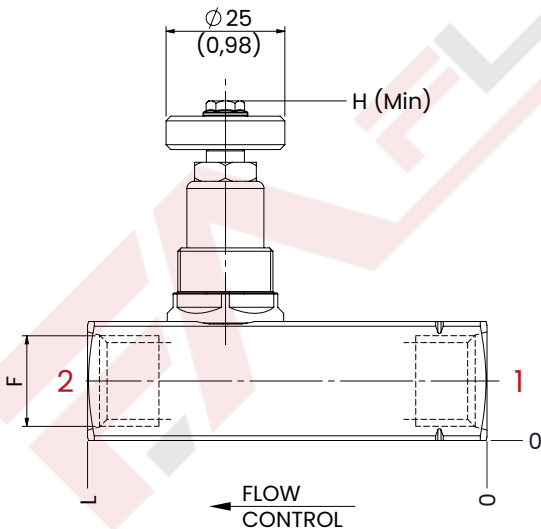
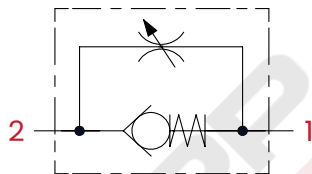
UPDATE: Dec. 2025 (v.06)

SUD **FLOW CONTROL - LOCK NUT** SAE

UNIDIRECTIONAL FLOW CONTROL VALVES

The unidirectional flow control valves SUD allow the free passage of the oil in one direction and regulate it in the opposite direction.

HYDRAULIC CIRCUIT



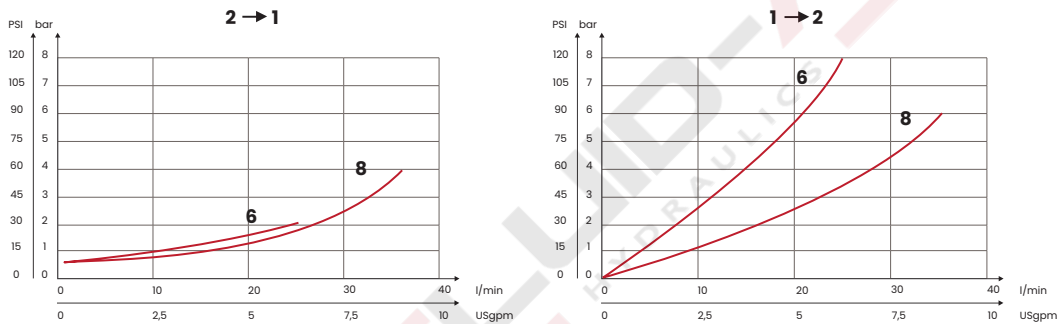
mm [Inches]

TECHNICAL CHARACTERISTICS

mm [Inches]

F	L	H	Ø	OPTIONAL RING NUT
SAE 6 [9/16-18 UNF]	70,5 [2,77]	72 [2,83]	25 [0,98]	63500014 M20 x1
SAE 8 [3/4-16 UNF]	84 [3,3]			
Steel body				

PERFORMANCES



OPTIONAL RING NUT



ORDERING CODE

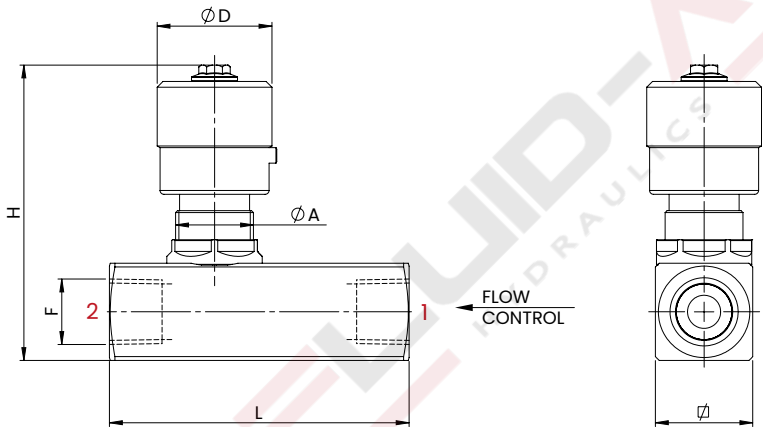
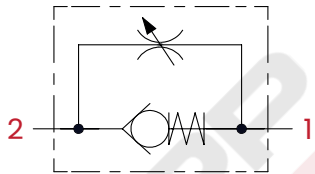
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA4138	SUD1S	SAE 6 [9/16-18 UNF]	25 [6,6]	400 [5800]	0,37 [0,44]
FA4139	SUD2S	SAE 8 [3/4-16 UNF]	35 [9,3]		

UNIDIRECTIONAL FLOW CONTROL VALVES

The unidirectional flow control valves SUA allow the free passage of the oil in one direction and regulate it in the opposite direction.



HYDRAULIC CIRCUIT

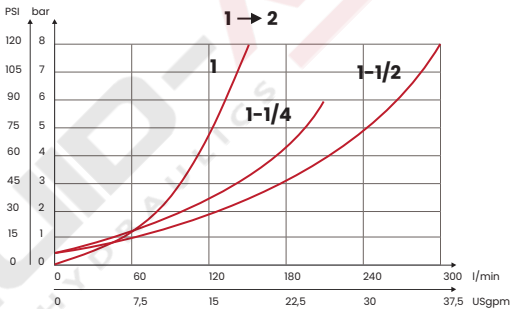
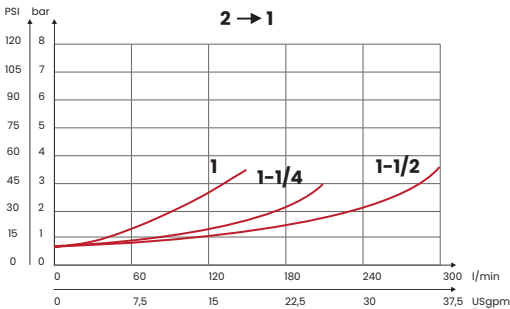
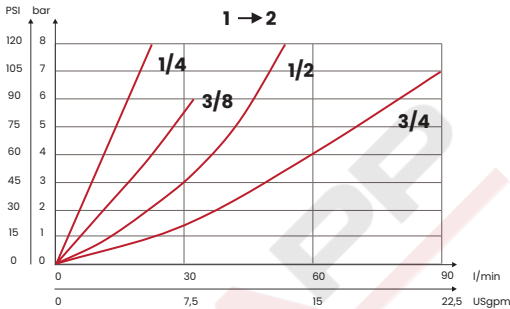
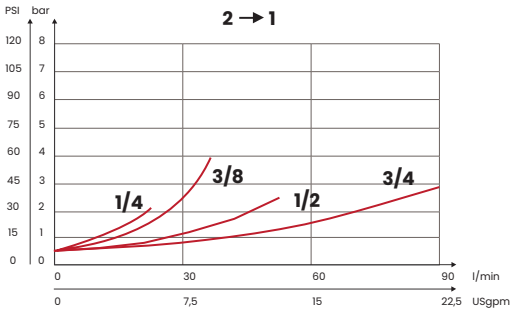


TECHNICAL CHARACTERISTICS

mm [Inches]

F	L	H	Ø	Ø D	A	OPTIONAL RING NUT
1/4 NPTF	67 [2,63]	76 [2,99]	25 [0,98]	30 [1,18]	M20 x 1	63500014
3/8 NPTF	77 [3,03]					
1/2 NPTF	86 [3,38]	81 [3,19]	30 [1,18]	38 [1,5]	M35 x 1,5	63500012
3/4 NPTF	112,5 [4,43]	110 [4,33]	40 [1,57]			
1 NPTF	141 [5,55]	114 [4,49]	45 [1,77]			
1-1/4 NPTF	155 [6,10]	137 [5,39]	55 [2,16]	50 [1,96]	M45 x 1,5	63500013
1-1/2 NPTF	168 [6,61]	147 [5,78]	65 [2,56]			
Steel body (on request stainless steel AISI 316L body)						

PERFORMANCES



OPTIONAL RING NUT



ORDERING CODE

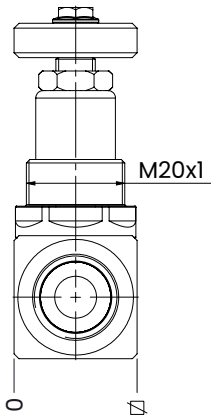
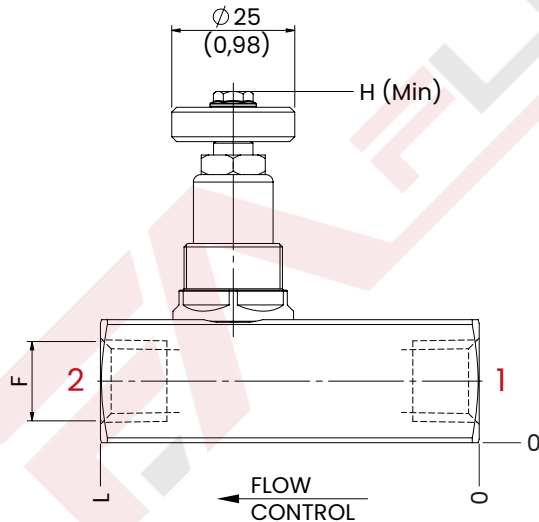
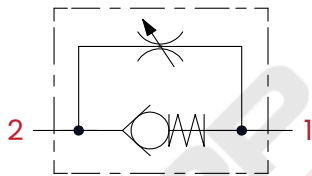
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA4154	SUA1NYA	1/4 NPTF	25 [6,6]	400 [5800]	0,4 [0,88]
FA4094	SUA2N	3/8 NPTF	35 [9,3]		0,6 [1,32]
FA4095	SUA3N	1/2 NPTF	50 [13,2]		
FA4096	SUA4N	3/4 NPTF	90 [23,8]		1,45 [3,2]
FA4097	SUA5N	1 NPTF	150 [39,6]	350 [5075]	2 [4,4]
FA4098	SUA6N	1-1/4 NPTF	200 [52,8]		3 [6,6]
FA4099	SUA7N	1-1/2 NPTF	300 [79,2]		4,5 [10]

SUD **FLOW CONTROL - LOCK NUT NPTF**

UNIDIRECTIONAL FLOW CONTROL VALVES

The unidirectional flow control valves SUD allow the free passage of the oil in one direction and regulate it in the opposite direction.

HYDRAULIC CIRCUIT



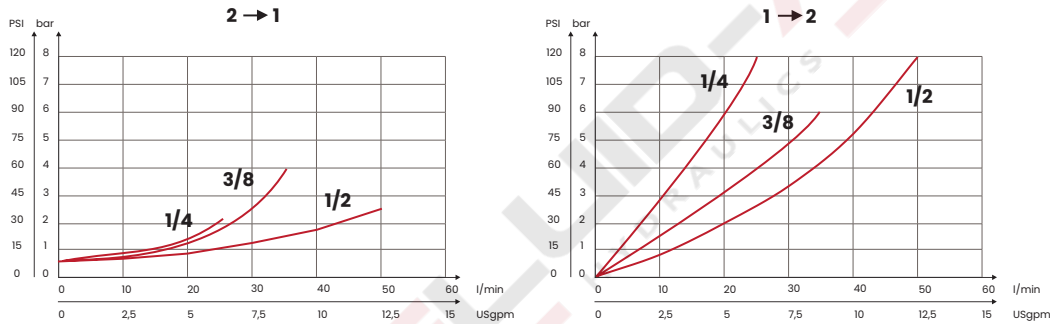
mm [Inches]

TECHNICAL CHARACTERISTICS

mm [Inches]

F	L	H	Ø	OPTIONAL RING NUT
1/4 NPTF	67 [2,63]	72 [2,83]	25 [0,98]	63500014 M20 x 1
3/8 NPTF	77 [3,03]			
1/2 NPTF	86 [3,38]	77 [3,03]	30 [1,18]	
Steel body				

PERFORMANCES



OPTIONAL RING NUT



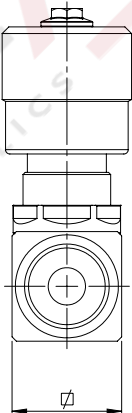
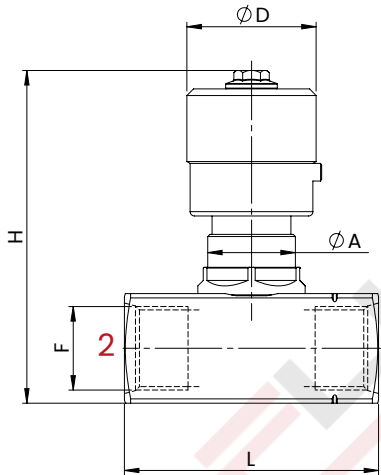
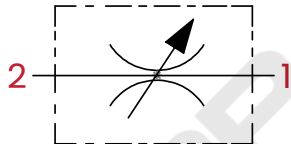
ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA4134	SUD1N	1/4 NPTF	25 [6,6]	400 [5800]	0,37 [0,44]
FA4135	SUD2N	3/8 NPTF	35 [9,3]		
FA4136	SUD3N	1/2 NPTF	50 [13,2]		0,55 [1,21]

BIDIRECTIONAL FLOW CONTROL VALVES
Needle valves SBA regulate the speed of an actuator in both directions.



HYDRAULIC CIRCUIT

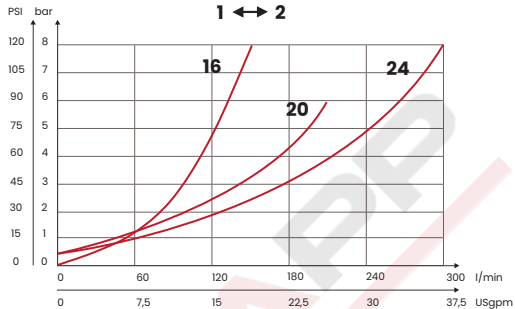
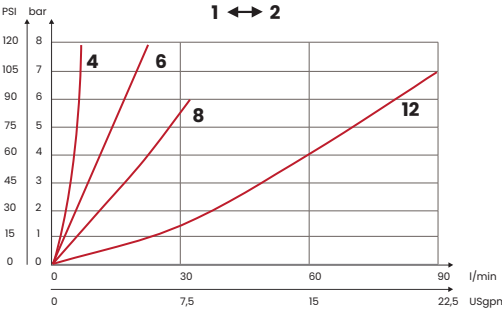


TECHNICAL CHARACTERISTICS

mm [Inches]

F	L	H	Ø	Ø D	A	OPTIONAL RING NUT
SAE4 [7/16-20 UNF]	54 [2,13]	76 [2,99]	25 [0,98]	30 [1,18]	M20 x 1	63500014
SAE6 [9/16-18 UNF]						
SAE8 [3/4-16 UNF]	58 [2,28]					
SAE12 [1-1/16-12 UN]	81 [3,19]	110 [4,33]	40 [1,57]	38 [1,5]	M35 x 1,5	63500012
SAE16 [1-5/16-12 UN]	102 [4,01]	114 [4,49]	45 [1,77]			
SAE20 [1-5/8-12 UN]		137 [5,39]	55 [2,16]	50 [1,96]	M45 x 1,5	
SAE24 [1-7/8-12 UN]		147 [5,78]	65 [2,55]			
Steel body (on request stainless steel AISI 316L body)						

PERFORMANCES



OPTIONAL RING NUT



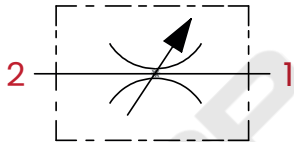
ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA4152	SBA0SYA	SAE4	10 [2,6]	400 [5800]	0,3 [0,66]
FA4114	SBA1S	SAE6	25 [6,6]		
FA4115	SBA2S	SAE8	35 [9,3]		0,28 [0,62]
FA4117	SBA4S	SAE12	90 [23,8]		1,1 [2,43]
FA4118	SBA5S	SAE16	150 [39,6]		1,5 [3,3]
FA4119	SBA6S	SAE20	200 [52,8]		2,4 [5,29]
FA4120	SBA7S	SAE24	300 [79,2]	350 [5075]	3 [6,6]

SBD NEEDLE VALVES - LOCK NUT SAE

BIDIRECTIONAL FLOW CONTROL VALVES
Needle valves SBD regulate the speed of an actuator in both directions.

HYDRAULIC CIRCUIT



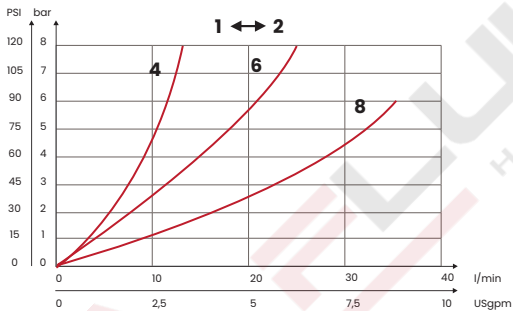
TECHNICAL CHARACTERISTICS

mm [Inches]

F	L	H	Ø	OPTIONAL RING NUT
SAE 4 [7/16-20 UNF]	54 [2,13]	72 [2,83]	25 [0,98]	63500014 M20 x 1
SAE 6 [9/16-18 UNF]				
SAE 8 [3/4-16 UNF]	58 [2,28]			
Steel body				

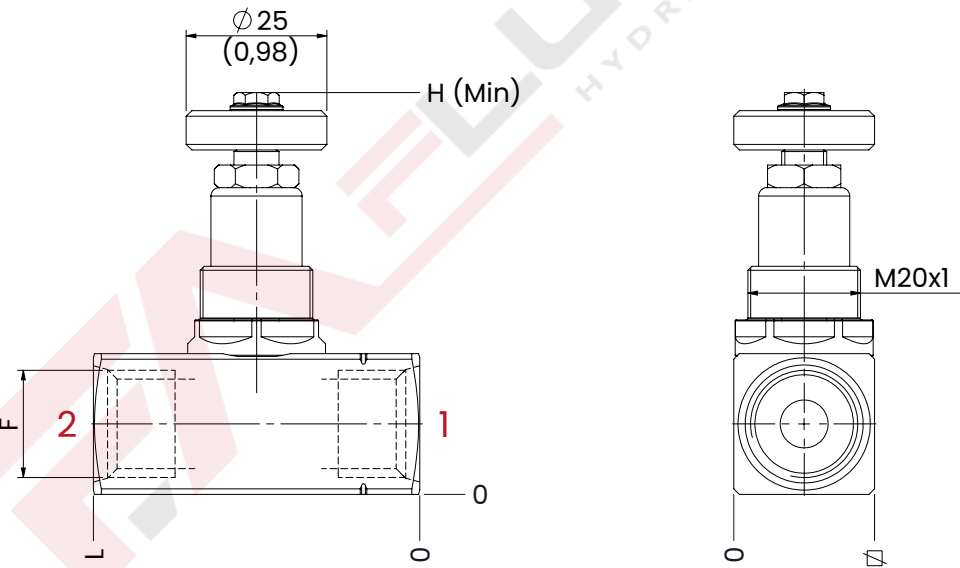
PERFORMANCES

OPTIONAL RING NUT



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [usgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA4153	SBD0SYA	SAE 4 [7/16-20 UNF]	15 [4]	400 [5800]	0,30 [0,66]
FA4144	SBD1S	SAE 6 [9/16-18 UNF]	25 [6,6]		0,28 [0,61]
FA4145	SBD2S	SAE 8 [3/4-16 UNF]	35 [9,3]		0,45 [0,1]

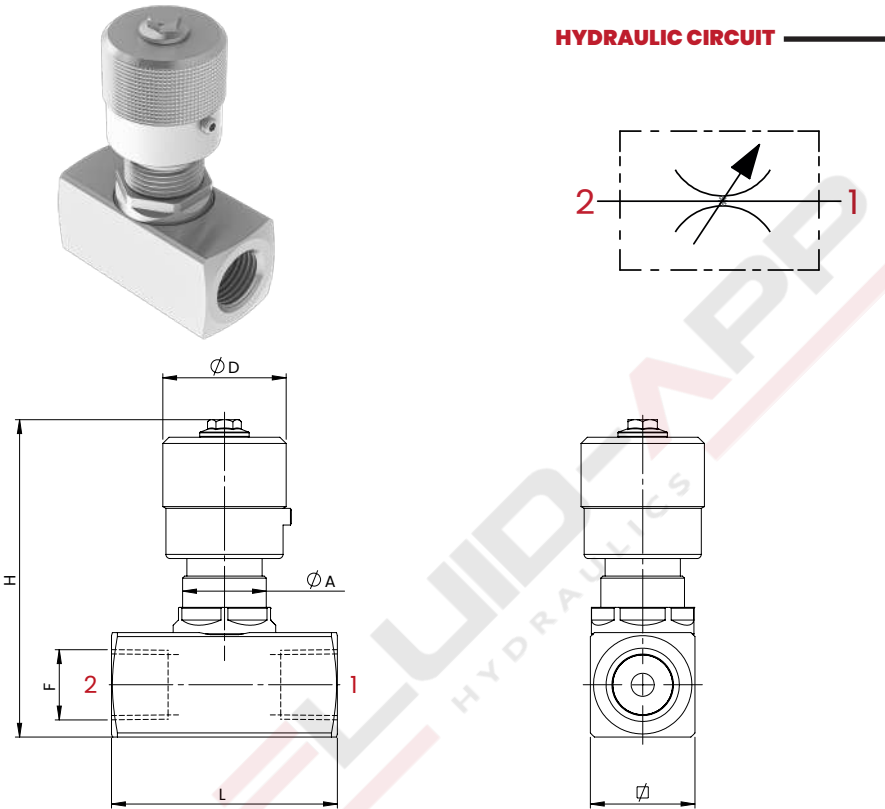


mm [Inches]

SBA NEEDLE VALVES NPTF

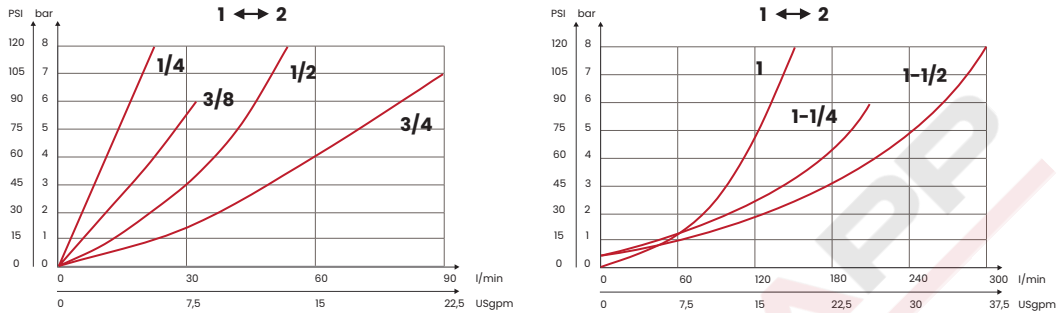
BIDIRECTIONAL FLOW CONTROL VALVES

Needle valves SBA regulate the speed of an actuator in both directions.



HYDRAULIC CIRCUIT

PERFORMANCES



OPTIONAL RING NUT



ORDERING CODE

TECHNICAL CHARACTERISTICS

mm [inches]

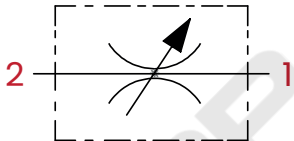
F	L	H	Ø	Ø D	A	OPTIONAL RING NUT
1/4 NPTF	54 [2,13]	76 [2,99]	25 [0,98]	30 [1,18]	M20 x 1	63500014
3/8 NPTF		81 [3,19]	30 [1,18]			
1/2 NPTF		110 [4,33]	40 [1,57]			
3/4 NPTF	81 [3,19]	114 [4,49]	45 [1,77]	38 [1,5]	M35 x 1,5	63500012
1 NPTF		137 [5,39]	55 [2,16]			
1-1/4 NPTF		147 [5,78]	65 [2,56]			
1-1/2 NPTF	102 [4,01]			50 [1,96]	M45 x 1,5	63500013
Steel body (on request stainless steel AISI 316L body)						

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA4209	SBA1NYA	1/4 NPTF	25 [6,6]	400 [5800]	0,3 [0,66]
FA4108	SBA2N	3/8 NPTF	35 [9,3]		0,28 [0,62]
FA4109	SBA3N	1/2 NPTF	50 [13,2]		0,5 [1,1]
FA4110	SBA4N	3/4 NPTF	90 [23,8]		1,1 [2,43]
FA4111	SBA5N	1 NPTF	150 [39,6]		1,5 [3,3]
FA4112	SBA6N	1-1/4 NPTF	200 [52,8]	350 [5075]	2,3 [5,07]
FA4113	SBA7N	1-1/2 NPTF	300 [79,2]		3 [6,6]

SBD NEEDLE VALVES - LOCK NUT NPTF

BIDIRECTIONAL FLOW CONTROL VALVES
Needle valves SBD regulate the speed of an actuator in both directions.

HYDRAULIC CIRCUIT



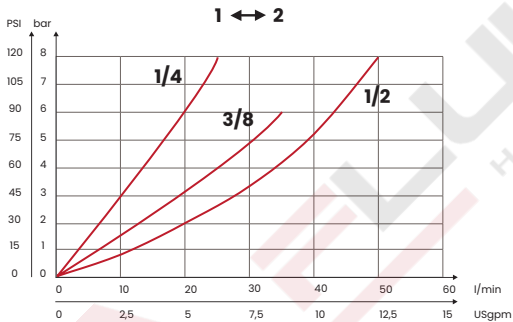
TECHNICAL CHARACTERISTICS

mm [Inches]

F	L	H	Ø	OPTIONAL RING NUT
1/4 NPFT	54 [2,13]	72 [2,93]	25 [0,98]	63500014 M20 x 1
3/8 NPFT				
1/2 NPFT	58 [2,28]	77 [3,03]	30 [1,18]	
Steel body				

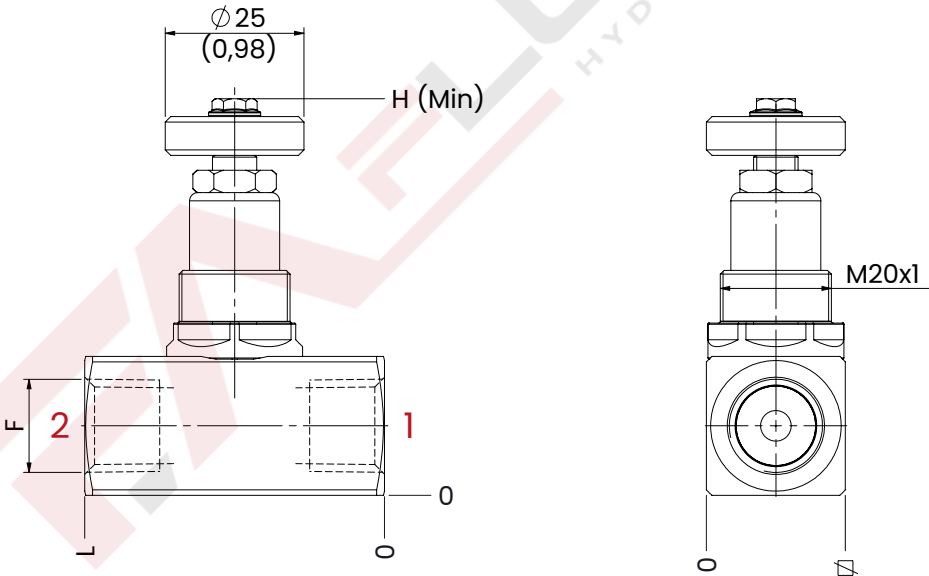
PERFORMANCES

OPTIONAL RING NUT



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA4140	SBD1N	1/4 NPFT	25 [6,6]	400 [5800]	0,30 [0,66]
FA4141	SBD2N	3/8 NPFT	35 [9,3]		0,28 [0,61]
FA4142	SBD3N	1/2 NPFT	50 [13,2]		0,45 [0,1]

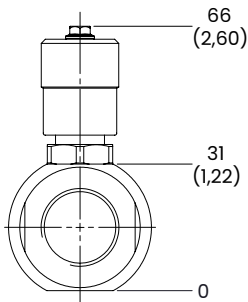
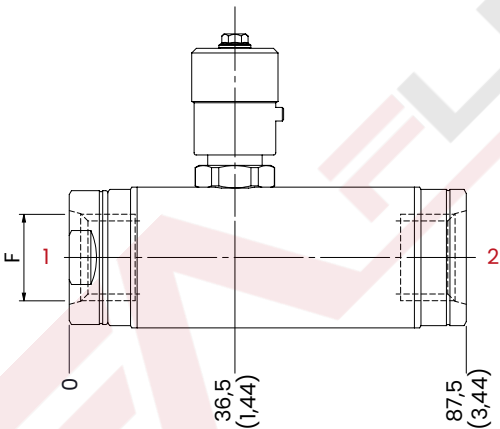
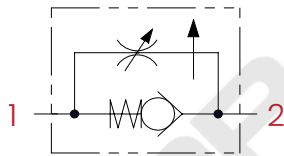


mm [Inches]

FLOW CONTROL VALVES-PRESSURE COMPENSATED

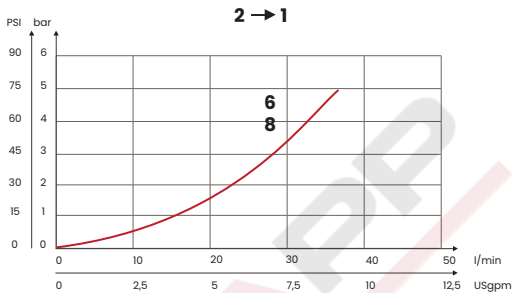
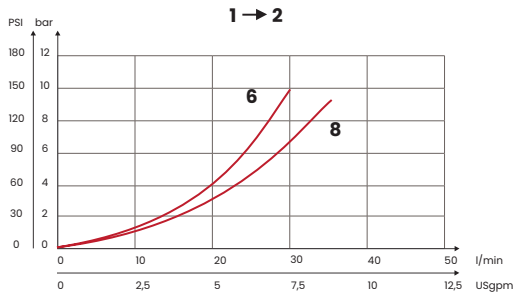
Compensated flow control valve, allows the free passage of oil in one direction and regulates the flow in the opposite direction. The internal compensation system keeps the actuator speed constant, regardless of the load, and guarantees high adjustment sensitivity.

HYDRAULIC CIRCUIT



mm [Inches]

PERFORMANCES



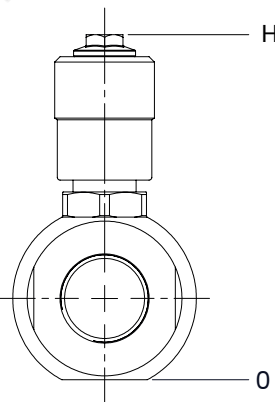
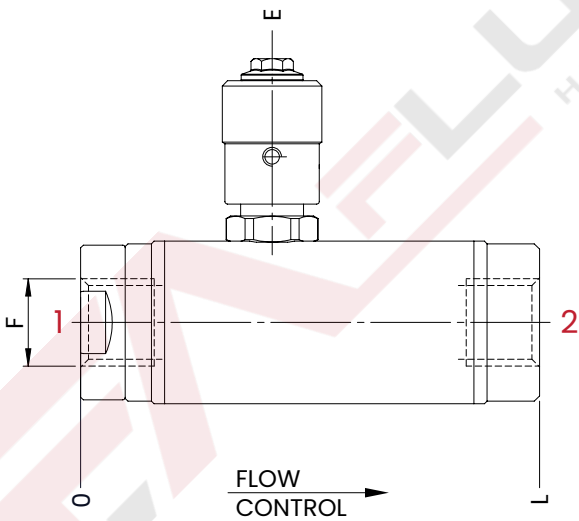
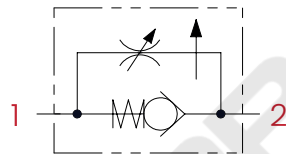
ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA4185	CFR1S	SAE6 [9/16-18 UNF]	25 [6,6]	250 [3625]	0,5 [1,10]
FA4186	CFR2S	SAE8 [3/4-16 UNF]	30 [7,9]		
Steel body					

FLOW CONTROL VALVES-PRESSURE COMPENSATED

Compensated flow control valve, allows the free passage of oil in one direction and regulates the flow in the opposite direction. The internal compensation system keeps the actuator speed constant, regardless of the load, and guarantees high adjustment sensitivity.

HYDRAULIC CIRCUIT



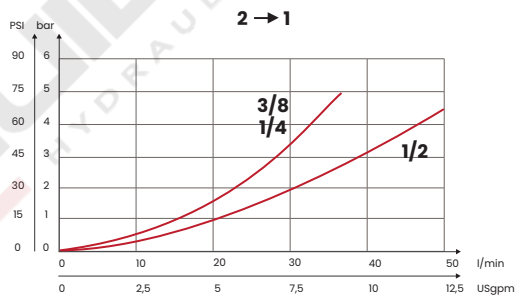
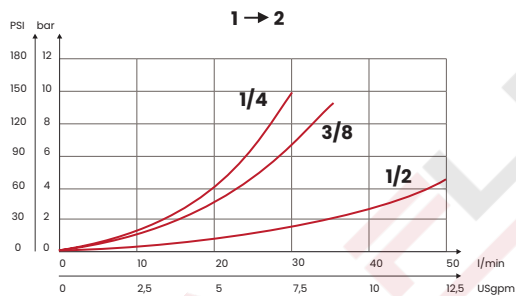
mm [Inches]

TECHNICAL CHARACTERISTICS

mm [Inches]

F	L	H	E
1/4 NPTF	87,5 [3,44]	66 [2,60]	36,5 [1,44]
3/8 NPTF			
1/2 NPTF	109 [4,31]	73 [2,87]	46 [1,81]
Steel body			

PERFORMANCES



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA4182	CFR1N	1/4 NPTF	25 [6,6]	250 [3625]	0,5 [1,10]
FA4183	CFR2N	3/8 NPTF	30 [7,9]		
FA4184	CFR3N	1/2 NPTF	45 [12]		0,8 [1,76]

UPDATE: July 2023 (v.03)

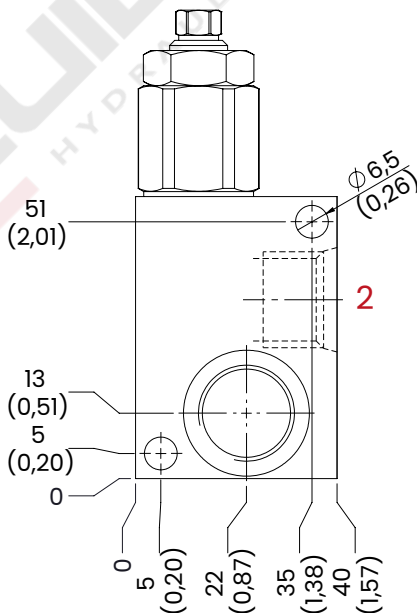
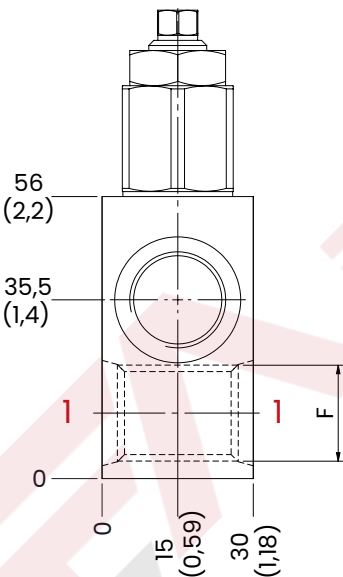
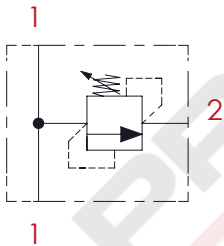
M20S RELIEF VALVES - 40 l/min SAE

RELIEF VALVES 40 l/min

The purpose of the M20S pressure relief valve is to protect the hydraulic system from malfunctions or failures caused by excessively high pressures in the circuit.

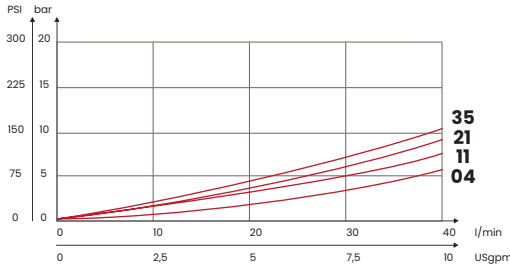


HYDRAULIC CIRCUIT



mm [Inches]

PERFORMANCES



OPTIONAL TAMPER PROOF CAP



CODE
KIT137

OPTIONAL HANDKNOB



CODE
KIT132

ORDERING CODE

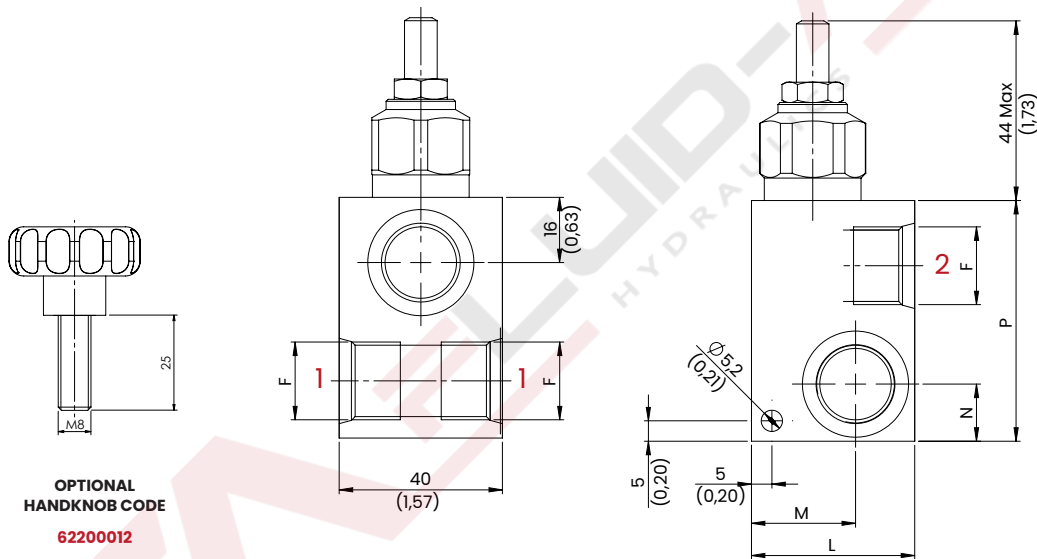
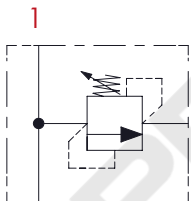
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	WEIGHT kg [lb]
FA6088	M201SC04	SAE6 [9/16-18 UNF]	40 [10,5]	350 [5075]	10/60 [145/870]	12 [174]	0,47 [1,03]
FA6089	M201SC11				40/110 [580/1595]	40 [580]	
FA6090	M201SC21				80/250 [1160/3625]	70 [1015]	
FA6091	M201SC35				120/350 [1740/5075]	130 [1885]	
FA6092	M202SC04	SAE8 [3/4-16 UNF]			10/60 [145/870]	12 [174]	
FA6093	M202SC11				40/110 [580/1595]	40 [580]	
FA6094	M202SC21				80/250 [1160/3625]	70 [1015]	
FA6095	M202SC35				120/350 [1740/5075]	130 [1885]	
Steel body (on request aluminium body)							

M40S RELIEF VALVES - 60 l/min SAE

RELIEF VALVES 60 l/min

The purpose of the M40S pressure relief valve is to protect the hydraulic system from malfunctions or failures caused by excessively high pressures in the circuit.

HYDRAULIC CIRCUIT



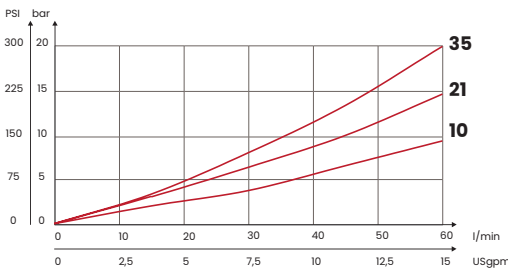
OPTIONAL
HANDKNOB CODE
62200012

TECHNICAL CHARACTERISTICS

mm [Inches]

F	L	M	N	P
SAE8 [3/4-16 UNF]	40 [1,57]	25,5 [1]	14 [0,55]	59 [2,32]
SAE10 [7/8-16 UNF]	45 [1,77]	29,5 [1,16]	15 [0,59]	60 [2,36]
Steel body (on request aluminum body)				

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M8



CODE
62200020

ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	WEIGHT kg [lb]
FA6082	M402SC10	SAE8 [3/4-16 UNF]	60 [15,8]	350 [5075]	10/70 [145/1015]	13 [189]	0,6 [1,32]
FA6083	M402SC21				30/210 [295/3045]	50 [725]	
FA6084	M402SC35				70/350 [1015/5075]	90 [1305]	
FA6085	M403SC10	SAE10 [7/8-16 UNF]			10/70 [145/1015]	13 [189]	0,70 [1,54]
FA6086	M403SC21				30/210 [295/3045]	50 [725]	
FA6087	M403SC35				70/350 [1015/5075]	90 [1305]	

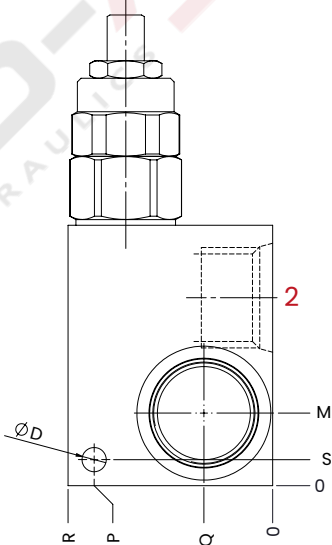
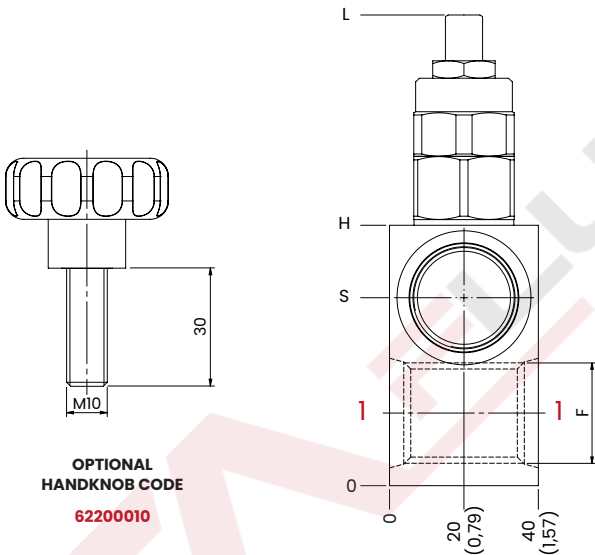
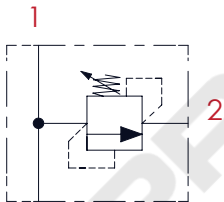
UPDATE: April 2026 (v.07)

M80S RELIEF VALVES - 80 l/min SAE

RELIEF VALVES 80 l/min

The purpose of the M80S pressure relief valve is to protect the hydraulic system from malfunctions or failures caused by excessively high pressures in the circuit.

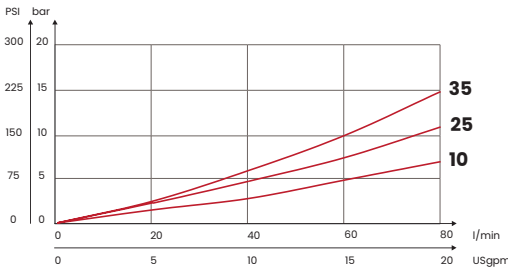
HYDRAULIC CIRCUIT



TECHNICAL CHARACTERISTICS

F	L	H	S	M	P	R	D	S	Q
SAE10 [7/8-16 UNF]	119 [4,68]	70 [2,75]	47,5 [1,87]	18 [0,70]	45 [1,77]	50 [1,96]	5,5 [0,21]	5 [0,19]	18,5 [0,72]
SAE12 [1-1/16-12 UN]	127 [5]	62 [2,44]	50,5 [1,98]	19,5 [0,76]	48 [1,88]	55 [2,16]	6,5 [0,25]	7 [0,27]	16,5 [0,64]
Steel body (on request aluminium body)									

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M8



CODE
62200021

ORDERING CODE

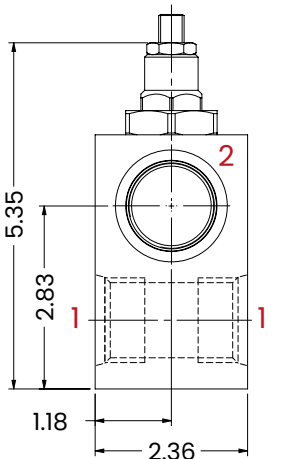
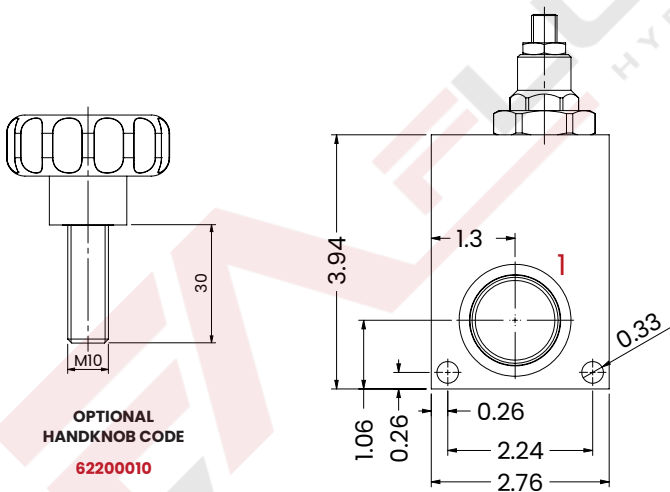
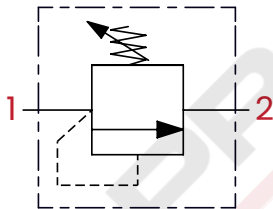
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	WEIGHT kg [lb]
FA6111	M803SC10	SAE10 [7/8-16 UNF]	80 [21,1]	350 [5075]	10/100 [145/1450]	25 [362]	0,91 [2]
FA6112	M803SC25				20/250 [290/3625]	85 [1247]	
FA6113	M803SC35				50/350 [725/5075]	90 [1305]	
FA6096	M804SC10	SAE12 [1-1/16-12 UN]			10/100 [145/1450]	25 [362]	1,04 [2,28]
FA6097	M804SC25				20/250 [290/3625]	85 [1247]	
FA6098	M804SC35				50/350 [725/5075]	90 [1305]	
Steel body (on request aluminum body)							

M161S RELIEF VALVES - 120 l/min SAE

RELIEF VALVES 120 l/min

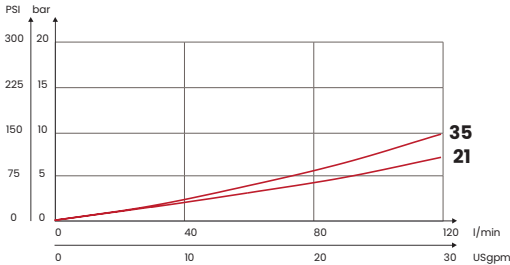
The purpose of the M161 differentiated pressure relief valve is to protect the hydraulic system from malfunctions or failures caused by excessively high pressures in the circuit.

HYDRAULIC CIRCUIT



Inches

PERFORMANCES



OPTIONAL TAMPER PROOF CAP M10



CODE
62200021

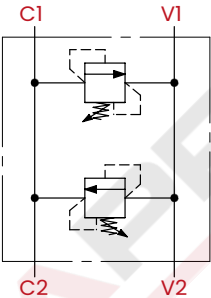
ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	RANGE SPRING bar [PSI]	WEIGHT kg [lb]
FA6140	M1615SC21	SAE16 [1-5/16-12UN]	120 [32]	350 [5075]	20/210 [290/3045]	2,7 [6]
FA6141	M1615SC35				50/350 [725/5075]	
Steel body						

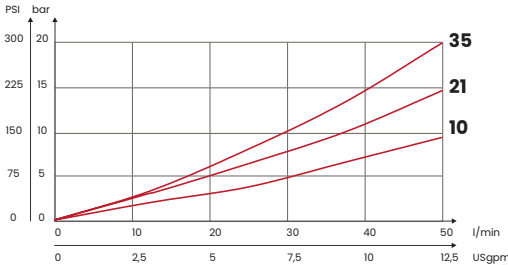
DOUBLE CROSS RELIEF VALVES 50 L

VAA valves with steel manifold and two pressure relief valves, they control the pressure on both connection lines.

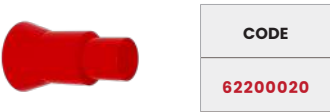
HYDRAULIC CIRCUIT



PERFORMANCES



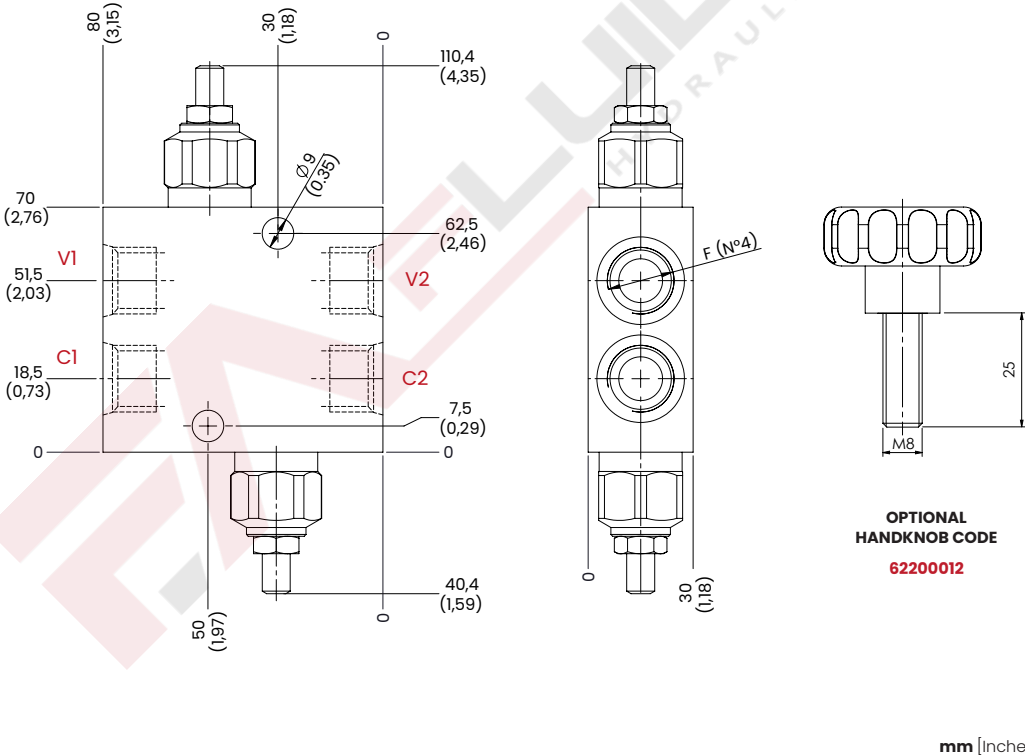
OPTIONAL TAMPER PROOF CAP M8



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [usgpm]	MAX PRESSURE bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	WEIGHT kg [lb]
FA6128	VAA2SC10	SAE8 [3/4-16 UNF]	40 [10,6]	350 [5075]	10/70 [145/1015]	13 [189]	1,22 [2,68]
FA6129	VAA2SC21				30/210 [435/3045]	50 [725]	
FA6130	VAA2SC35				70/350 [1015/5075]	90 [1305]	
FA6131	VAA3SC10	SAE 10 [7/8-14 UNF]	50 [13,2]		10/70 [145/1015]	13 [189]	1,16 [2,55]
FA6132	VAA3SC21				30/210 [435/3045]	50 [725]	
FA6133	VAA3SC35				70/350 [1015/5075]	90 [1305]	
Steel body (on request aluminum body)							

Steel body (on request aluminum body)

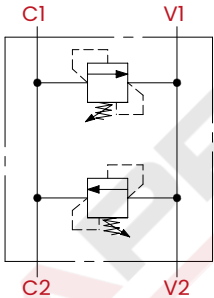


mm [Inches]

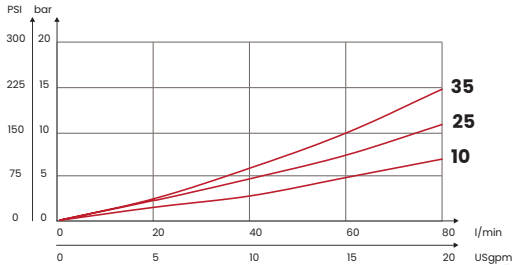
DOUBLE CROSS RELIEF VALVES 80 L

VAA valves with steel manifold and two pressure relief valves, they control the pressure on both connection lines.

HYDRAULIC CIRCUIT



PERFORMANCES



OPTIONAL TAMPER PROOF CAP M8



CODE
62200021

ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	RANGE SPRING bar [PSI]	INCREASE TO TURN bar [PSI]	WEIGHT kg [lb]
FA6134	VAA3SC10H	SAE 10 [7/8-14 UNF]	80 [21,1]	350 [5075]	10/100 [145/1450]	25 [362]	1,70 [3,8]
FA6135	VAA3SC25H				20/250 [290/3625]	85 [1247]	
FA6136	VAA3SC35H				50/350 [725/5075]	90 [1305]	
Steel body (on request aluminum body)							

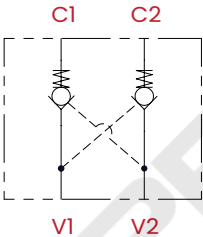
mm [Inches]

DOUBLE ACTING PILOT CHECK VALVES

VBD pilot check valves are used to lock a double acting actuator in place in both directions, ensuring the load is locked



HYDRAULIC CIRCUIT

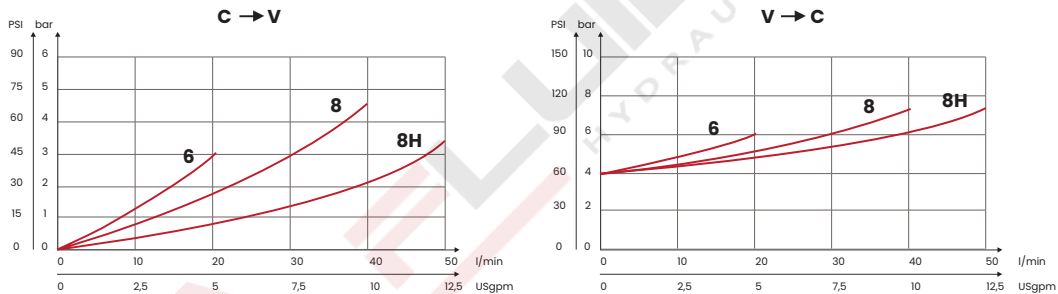


TECHNICAL CHARACTERISTICS

mm [Inches]

F	B	H	L	M	N	P	A	C	D	E
SAE 6 [9/16-18 UNF]	30 [1,18]	40 [1,57]	63 [2,5]	16,5 [0,65]	46,5 [1,83]	7 [0,27]	24,5 [0,96]	87,5 [3,44]	31,5 [1,24]	M8
SAE 8 [3/4-16 UNF]		45 [1,77]	66 [2,6]	15 [0,59]	51 [2]	6 [0,23]	28 [1,10]	94 [3,70]	33 [1,3]	d.7 [0,27]
		50 [1,97]	80 [3,15]	20 [0,79]	60 [2,36]	15 [0,59]	31,5 [1,24]	111,5 [4,39]	40 [1,57]	8,5 [0,33]
Steel body										

PERFORMANCES



ORDERING CODE

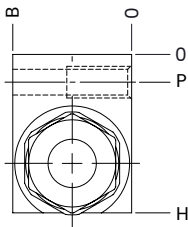
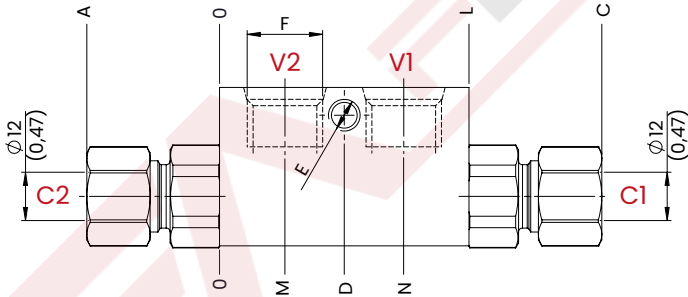
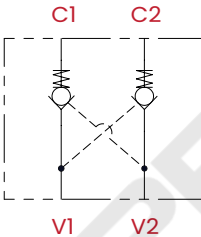
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	PILOT RATIO	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA5029	VBD1S	SAE 6	20 [5,3]	350 [5075]	1:5,5	4,5 [65]	0,63 [1,39]
FA5030	VBD2S	SAE 8	35 [9,2]				0,6 [1,32]
FA5059	VBD2SH		50 [13,2]		1:5		1 [2,20]

VBDT CHECK VALVES SAE

DIN2353 DOUBLE ACTING PILOT CHECK VALVES

VBDT pilot check valves are used to lock a double acting actuator in position, ensuring that the load is locked. This version was made for valve mounting with steel pipe.

HYDRAULIC CIRCUIT



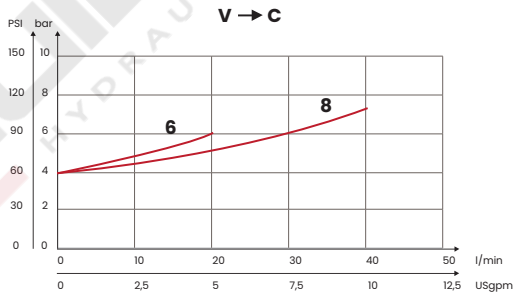
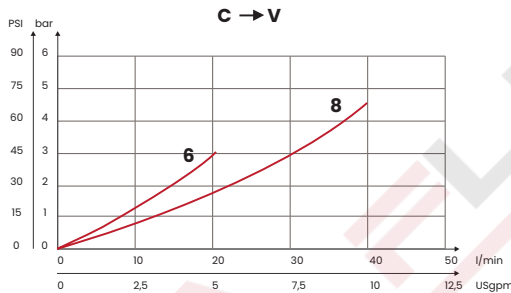
mm [Inches]

TECHNICAL CHARACTERISTICS

mm [Inches]

F	B	H	L	M	N	P	A	C	D	E
SAE 6 [9/16-18 UNF]	30 [1,18]	40 [1,57]	63 [2,5]	16,5 [0,65]	46,5 [1,83]	7 [0,27]	33,5 [1,31]	96,5 [3,8]	31,5 [1,24]	M8
SAE 8 [3/4-16 UNF]		45 [1,77]	66 [2,6]	15 [0,59]	51 [2]	6 [0,23]			33 [1,3]	d.7 [0,27]
Steel body										

PERFORMANCES



ORDERING CODE

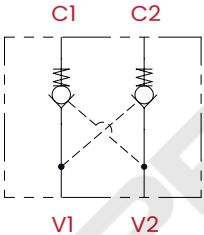
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	PILOT RATIO	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA5035	VBD1ST	SAE 6 [9/16-18 UNF]	20 [5,3]	350 [5075]	1:5,5	4,5 [65]	0,61 [1,34]
FA5036	VBD2ST	SAE 8 [3/4-16 UNF]	35 [9,2]				0,58 [1,28]

UPDATE: Feb. 2024 (v.04)

DOUBLE ACTING PILOT CHECK VALVES

VPD pilot check valves are used to lock a double acting actuator in place in both directions, ensuring the load is locked.

HYDRAULIC CIRCUIT

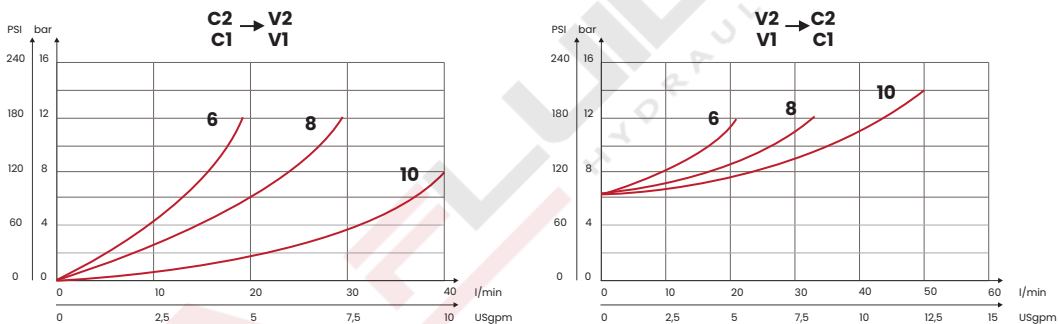


TECHNICAL CHARACTERISTICS

mm [Inches]

F	B	H	L	M	N	P	ØG	C	D	E	F	R
SAE 6 [9/16-18 UNF]	30 [1,18]	60 [2,36]	90 [3,54]	45 [1,77]	50 [1,97]	17 [0,67]	6,5 [0,26]	14 [0,55]	29 [1,14]	61 [2,40]	76 [2,99]	107 [4,21]
SAE 8 [3/4-16 UNF]												
SAE 10 [7/8-14 UNF]		70 [2,76]	110 [4,33]	55 [2,16]	60 [2,36]	21,5 [0,85]	8,5 [0,33]	20 [0,78]	37 [1,45]	73 [2,87]	90 [3,54]	131,5 [5,17]
Steel body (on request aluminum body)												

PERFORMANCES



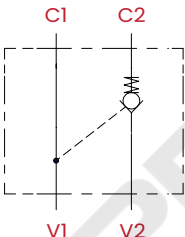
ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	PILOT RATIO	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA5052	VPD1S	SAE 6	20 [5,3]	350 [5075]	1:3,3	4,5 [65]	1,30 [2,86]
FA5031	VPD2S	SAE 8	35 [9,2]				1,20 [2,64]
FA5032	VPD3S	SAE 10	60 [15,83]		1:4		1,45 [3,20]

SINGLE ACTING PILOT CHECK VALVES

The VBS pilot check valves are used to lock a single acting actuator in position, ensuring that the load is locked.

HYDRAULIC CIRCUIT

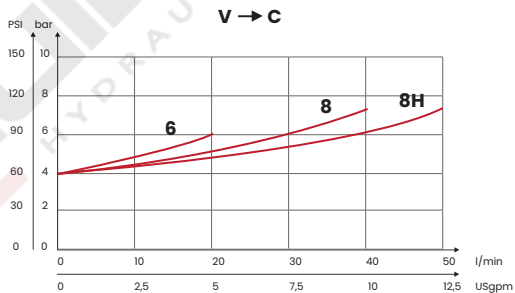
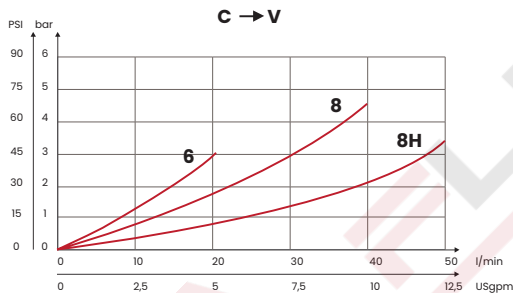


TECHNICAL CHARACTERISTICS

mm [Inches]

F	B	H	L	M	N	P	A	C	D	Ø E
SAE 6 [9/16-18 UNF]	30 [1,18]	40 [1,57]	63 [2,5]	16,5 [0,65]	46,5 [1,83]	7 [0,27]	24,5 [0,96]	87,5 [3,44]	31,5 [1,24]	7 [0,27]
SAE 8 [3/4-16 UNF]		45 [1,77]	66 [2,6]	15 [0,59]	51 [2]	6 [0,23]	28 [1,10]	94 [3,70]	33 [1,3]	
		50 [1,97]	80 [3,15]	20 [0,79]	60 [2,36]	15 [0,59]	31,5 [1,24]	111,5 [4,39]	40 [1,57]	
Steel body										

PERFORMANCES



ORDERING CODE

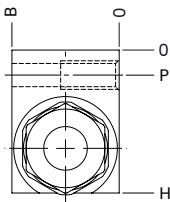
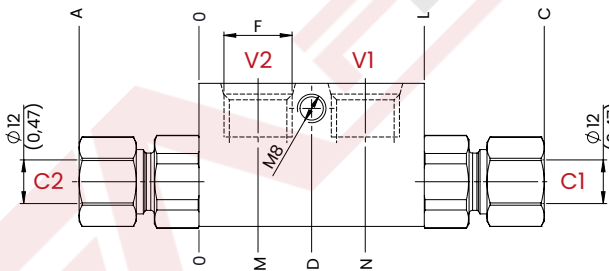
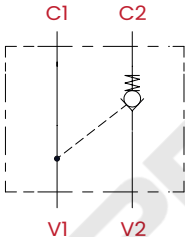
CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	PILOT RATIO	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA5033	VBS1S	SAE 6	20 [5,3]	350 [5075]	1:5,5	4,5 [65]	0,61 [1,34]
FA5034	VBS2S	SAE 8	35 [9,2]				0,58 [1,28]
FA5060	VBS2SH		50 [13,2]		1:5		1 [2,20]

VBST CHECK VALVES SAE

DIN2353 SINGLE ACTING PILOT CHECK VALVES

VBST pilot check valves are used to lock a single acting actuator in position, ensuring that the load is locked. This version was made for valve mounting with steel pipe.

HYDRAULIC CIRCUIT



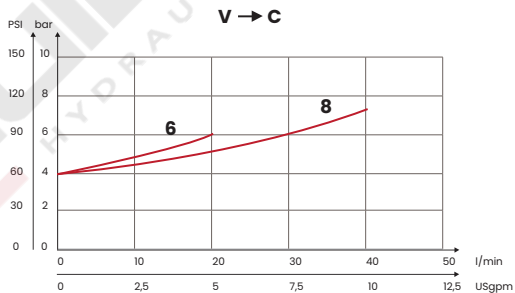
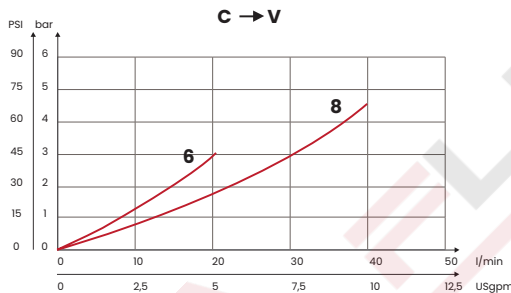
mm [Inches]

TECHNICAL CHARACTERISTICS

mm [Inches]

F	B	H	L	M	N	P	A	C	D	E
SAE 6 [9/16-18 UNF]	30 [1,18]	40 [1,57]	63 [2,5]	16,5 [0,65]	46,5 [1,83]	7 [0,27]	33,5 [1,31]	96,5 [3,8]	31,5 [1,24]	M8
SAE 8 [3/4-16 UNF]		45 [1,77]	66 [2,6]	15 [0,59]	51 [2]	6 [0,23]			33 [1,3]	d.7 [0,27]
Steel body										

PERFORMANCES



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	PILOT RATIO	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA5037	VBS1ST	SAE 6 [9/16-18 UNF]	20 [5,3]	350 [5075]	1:5,5	4,5 [65]	0,62 [1,37]
FA5038	VBS2ST	SAE 8 [3/4-16 UNF]	35 [9,2]				0,59 [1,3]

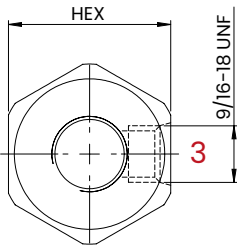
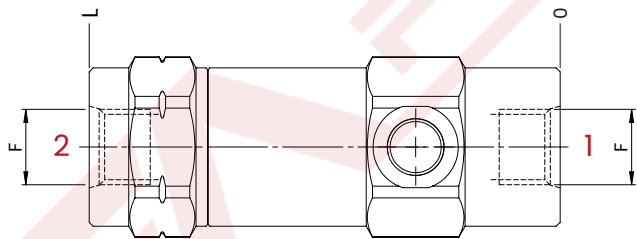
UPDATE: Feb. 2024 (v.04)

VPL CHECK VALVES SAE

SINGLE ACTING PILOT CHECK VALVES

VPL check valves are used to hold a single acting cylinder in position, granting the load stop.

HYDRAULIC CIRCUIT



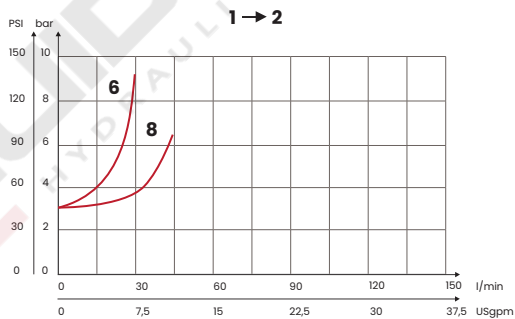
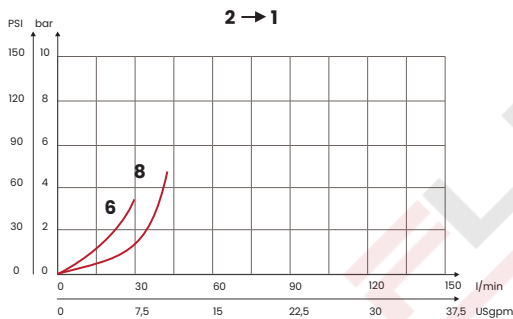
mm [Inches]

TECHNICAL CHARACTERISTICS

mm [Inches]

F	L	HEX
SAE 6 [9/16-18 UNF]	101,5 [4]	36
SAE 8 [3/4-16 UNF]	119 [4,68]	41

PERFORMANCES



ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	PILOT RATIO	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA5024	VPL1S	SAE6	25 [6,6]	350 [5075]	1:6	4,5 [65]	0,71 [1,56]
FA5025	VPL2S	SAE8	40 [10,6]		1:5		1,04 [2,28]

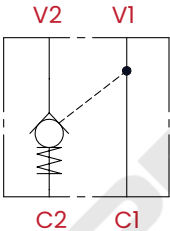
UPDATE: May, 2026 (v.06)

SINGLE ACTING PILOT CHECK VALVES

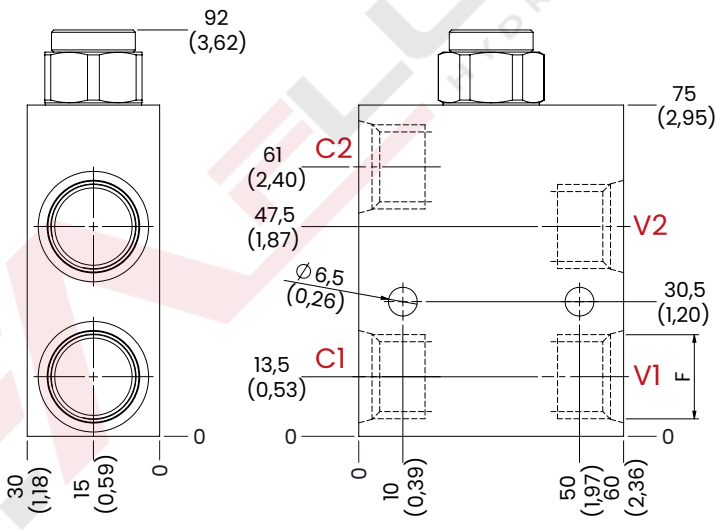
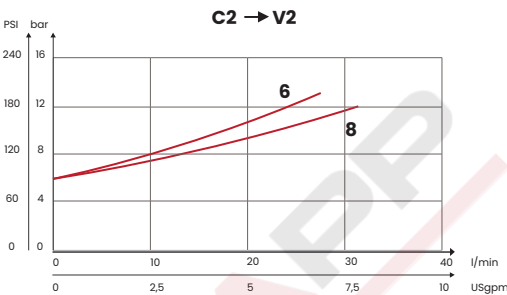
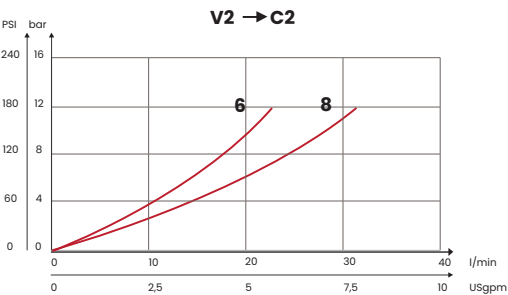
The VPS pilot check valves are used to lock a single acting actuator in position, ensuring that the load is locked.



HYDRAULIC CIRCUIT



PERFORMANCES



mm [Inches]

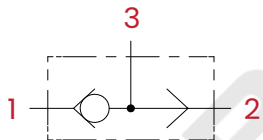
ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRES- SURE bar [PSI]	PILOT RATIO	CRACKING PRESSURE bar [PSI]	WEIGHT kg [lb]
FA5054	VPS1S	SAE 6 [9/16-18 UNF]	25 [6,5]	350 [5075]	1:3,3	4,5 [65]	0,75 [1,65]
FA5040	VPS2S	SAE 8 [3/4-16 UNF]	35 [9,2]				0,9 [2]

SHUTTLE VALVES

VSS shuttle valves are used when two pressure lines converge in the valve at the same time (the lower pressure line locks).

HYDRAULIC CIRCUIT

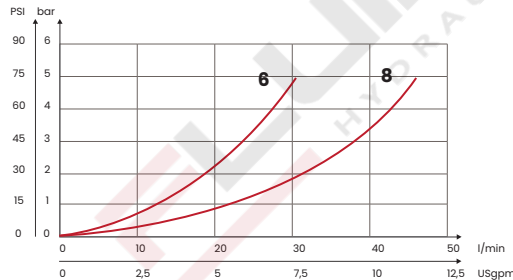


TECHNICAL CHARACTERISTICS

mm [Inches]

F	L	A	C	D	P	M	N	E	B	G
SAE 6 [9/16-18 UNF]	57 [2,24]	52 [2,04]	12 [0,47]	27 [1,06]	9 [0,35]	27,5 [1,08]	43 [1,69]	25 [0,98]	35 [1,37]	6,5 [0,25]
SAE 8 [3/4-16 UNF]	70 [2,76]	60 [2,36]	13,5 [0,53]	32 [1,26]	8 [0,31]	30 [1,18]	52 [2,05]	30 [1,18]	40 [1,57]	8,5 [0,33]
Steel body										

PERFORMANCES

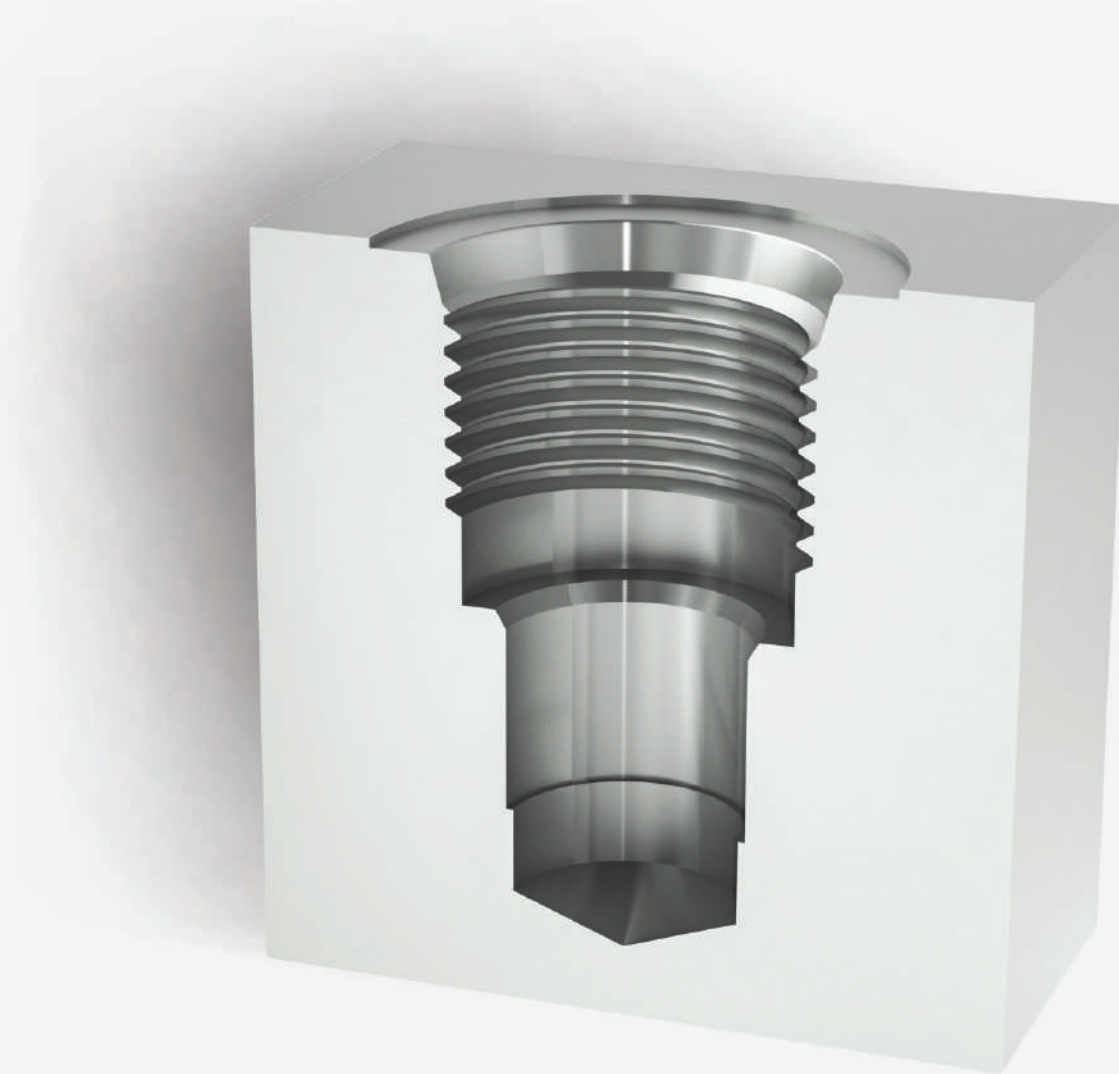


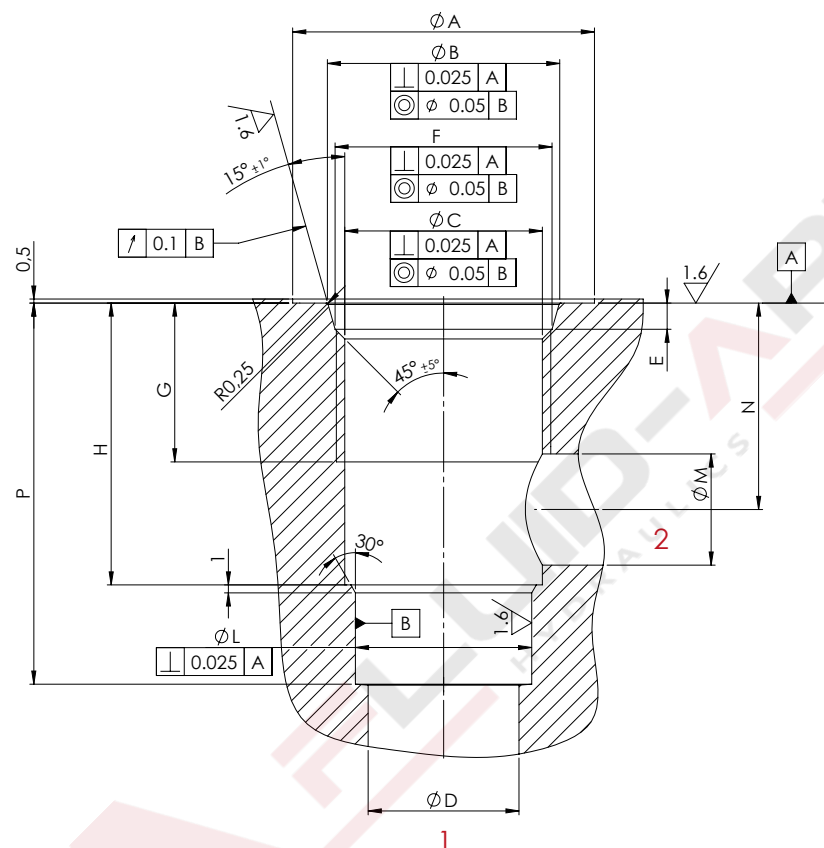
ORDERING CODE

CODE	TYPE	F ports	MAX FLOW l/min [USgpm]	MAX PRESSURE bar [PSI]	WEIGHT kg [lb]
FA6099	VSS1S	SAE 6	30 [7,9]	350 [5075]	0,29 [0,65]
FA6100	VSS2S	SAE 8	45 [12]		0,37 [0,81]

UPDATE: Oct. 2023 (v.06)

CAVITY



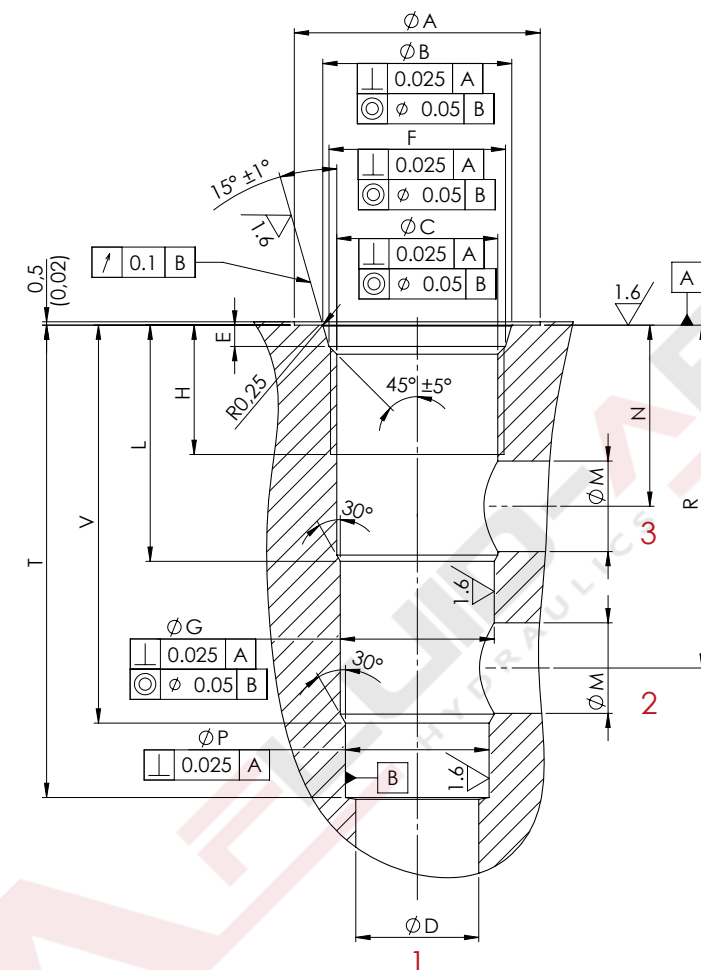


TECHNICAL CHARACTERISTICS

- mm [Inches]

CAVITY CODE	F ports	Ø A + 0,5 0	Ø B ± 0,05	Ø C ± 0,05	Ø D MAX	E + 0,3 0	G	H + 0,1 0	L + 0,05 0	Ø M	N	P + 0,5 0
SAE08/2	3/4-16UNF-2B	27 [1,06]	20,66 [0,81]	17,42 [0,69]	12 [0,47]	2,5 [0,1]	13 [0,51]	18,2 [0,72]	12,7 [0,5]	8 [0,31]	14 [0,55]	29,5 [1,16]
SAE10/2	7/8-14UNF-2B	30 [1,18]	24 [0,94]	20,62 [0,81]	15 [0,59]	2,8 [0,11]	16 [0,63]	24 [0,94]	15,9 [0,6]	11 [0,43]	18 [0,71]	33,5 [1,32]
SAE12/2	1-1/16-12UN-2B	38 [1,50]	29,23 [1,15]	24,73 [0,97]	19 [0,75]	3,5 [0,14]	20 [0,79]	35 [1,38]	22,2 [0,87]	18 [0,71]	24,5 [0,96]	47 [1,85]

UPDATE, March 2023 (v.05)

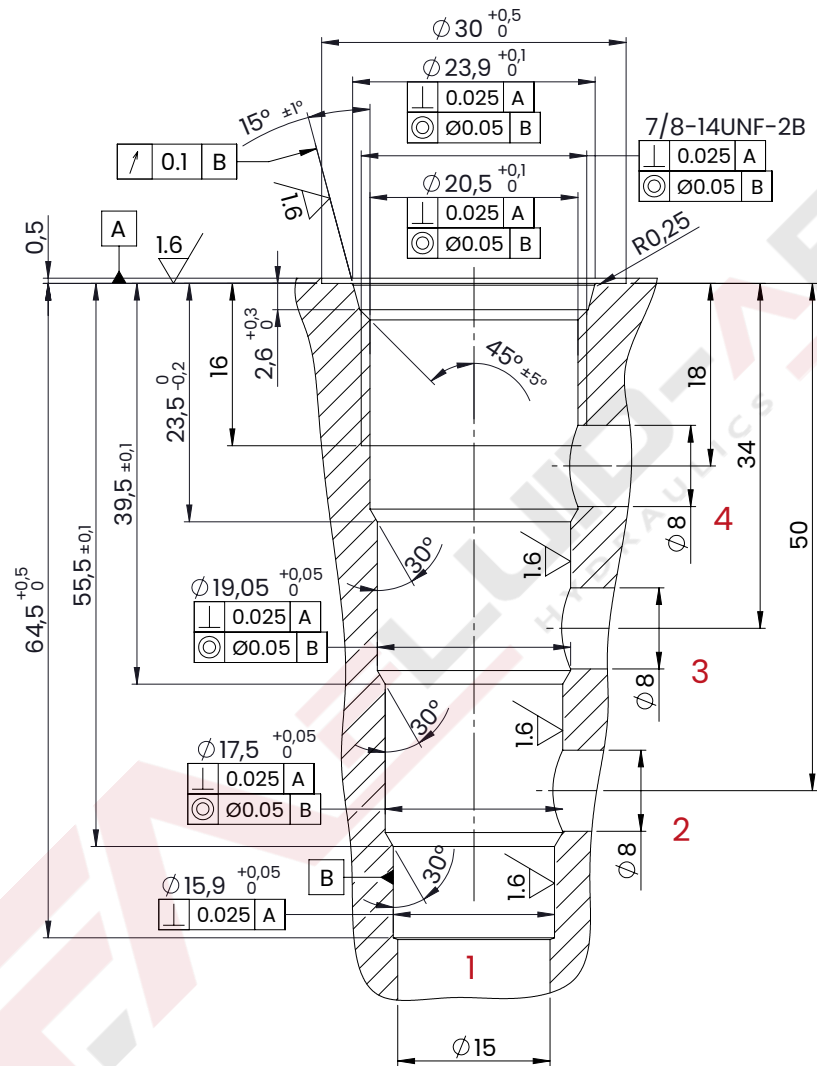


TECHNICAL CHARACTERISTICS

— mm [Inches]

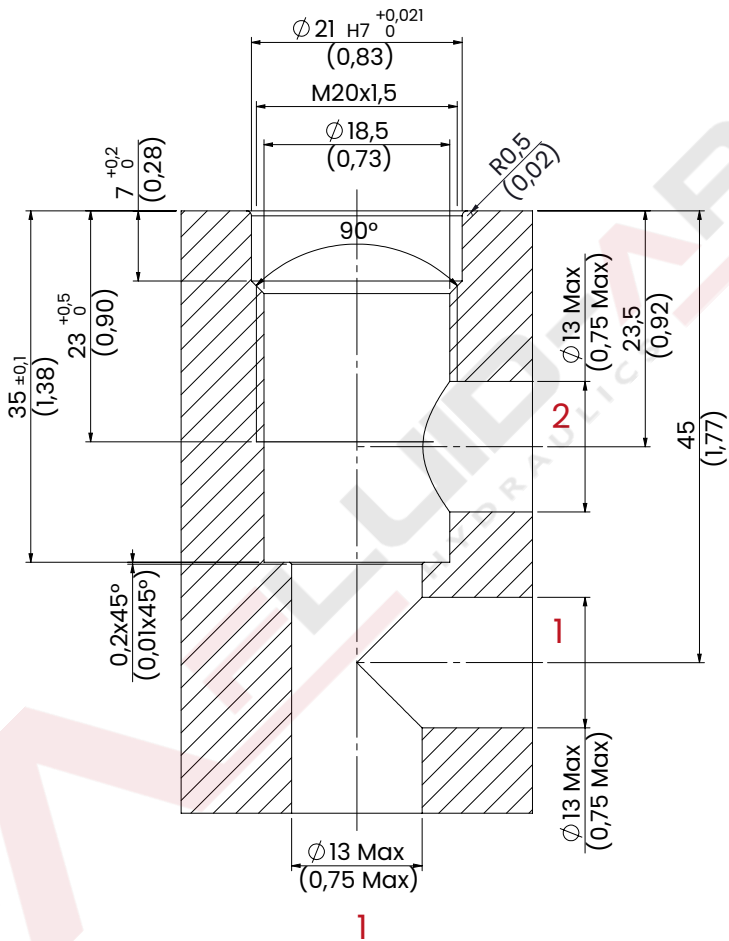
CAVITY CODE	F ports	Ø A + 0,5 0	Ø B ± 0,05	Ø C ± 0,05	Ø D MAX	E + 0,3 0	Ø G + 0,05 0	H	L	Ø M	N	Ø P + 0,05 0	R	T	V
SAE08/3	3/4-16UNF-2B	27 [1,06]	20,66 [0,81]	17,42 [0,69]	12,5 [0,49]	2,5 [0,1]	15,9 [0,63]	12,5 [0,49]	19,1 [0,75]	5,5 [0,22]	14,3 [0,56]	14,3 [0,56]	28,6 [1,13]	43,3 [1,7]	33,3 [1,31]
SAE10/3	7/8-14UNF-2B	30 [1,18]	24 [0,94]	20,62 [0,81]	14 [0,55]	2,8 [0,11]	17,5 [0,69]	16 [0,63]	23,1 [0,91]	6,5 [0,26]	18,3 [0,72]	15,9 [0,63]	34 [1,34]	47,6 [1,87]	39,6 [1,56]
SAE12/3	1-1/16-12UN-2B	38 [1,50]	29,23 [1,15]	24,73 [0,97]	19 [0,75]	3,5 [0,14]	23,8 [0,94]	19 [0,75]	36,6 [1,44]	16 [0,63]	24,5 [0,96]	22,2 [0,87]	53 [2,09]	75,4 [2,97]	63,5 [2,5]

UPDATE, August 2022 (v.03)



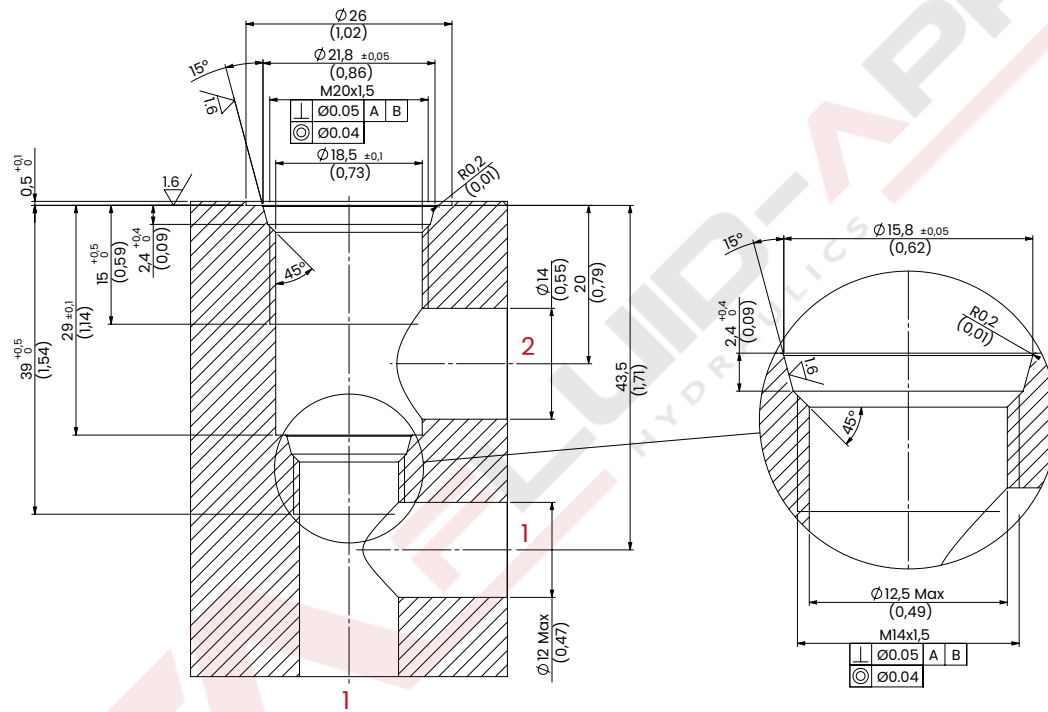
mm [Inches]

UPDATE: March 2023 (v.03)



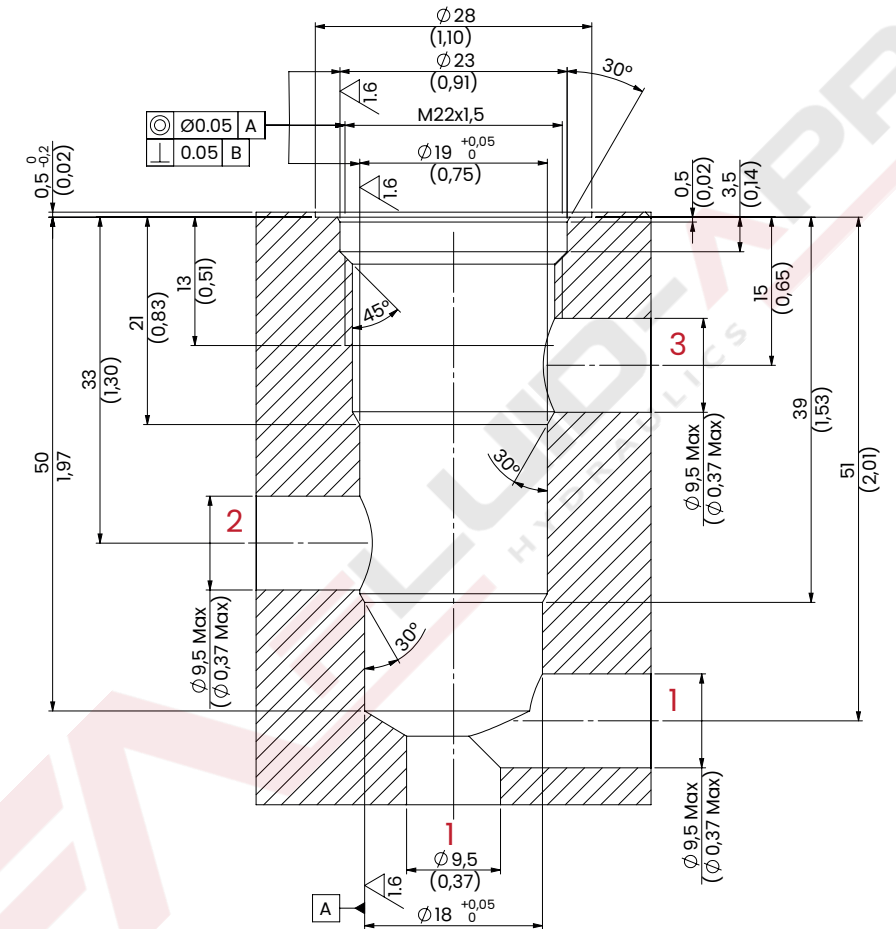
mm [Inches]

UPDATE: February 2023 (v.01)



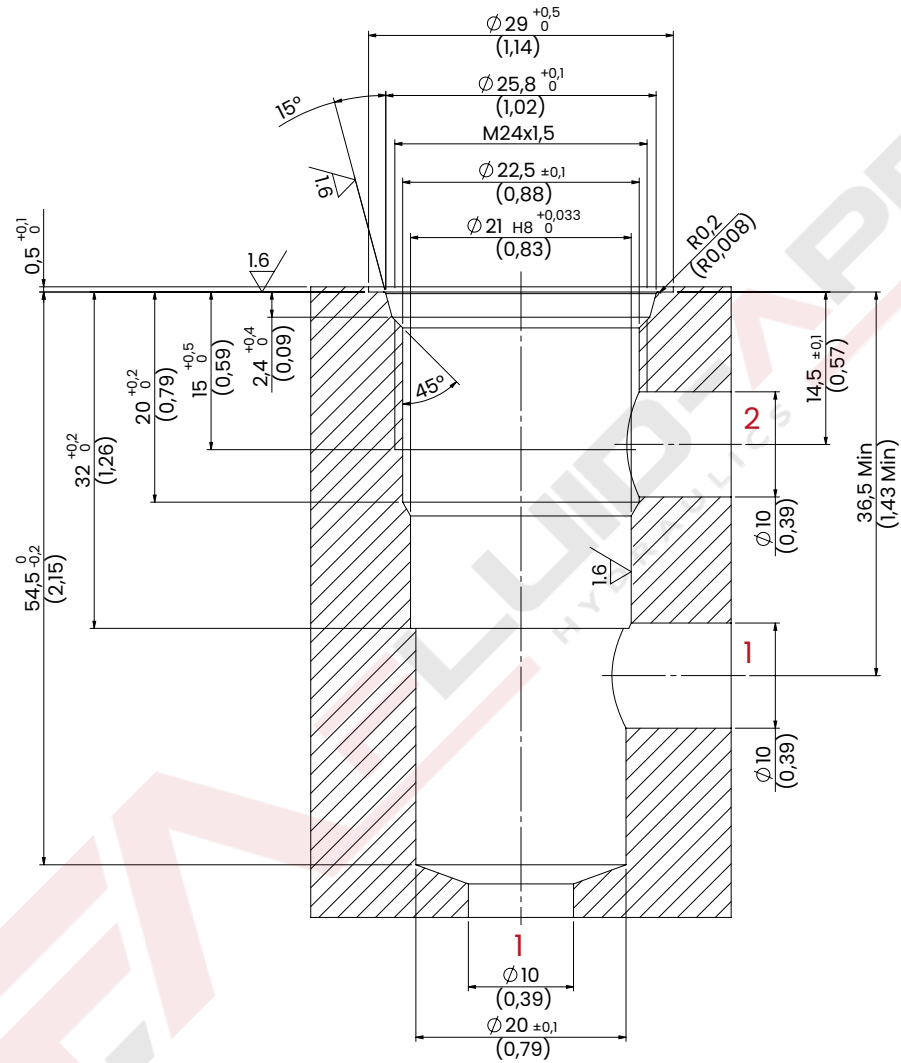
mm [Inches]

UPDATE. February 2023 (v.03)



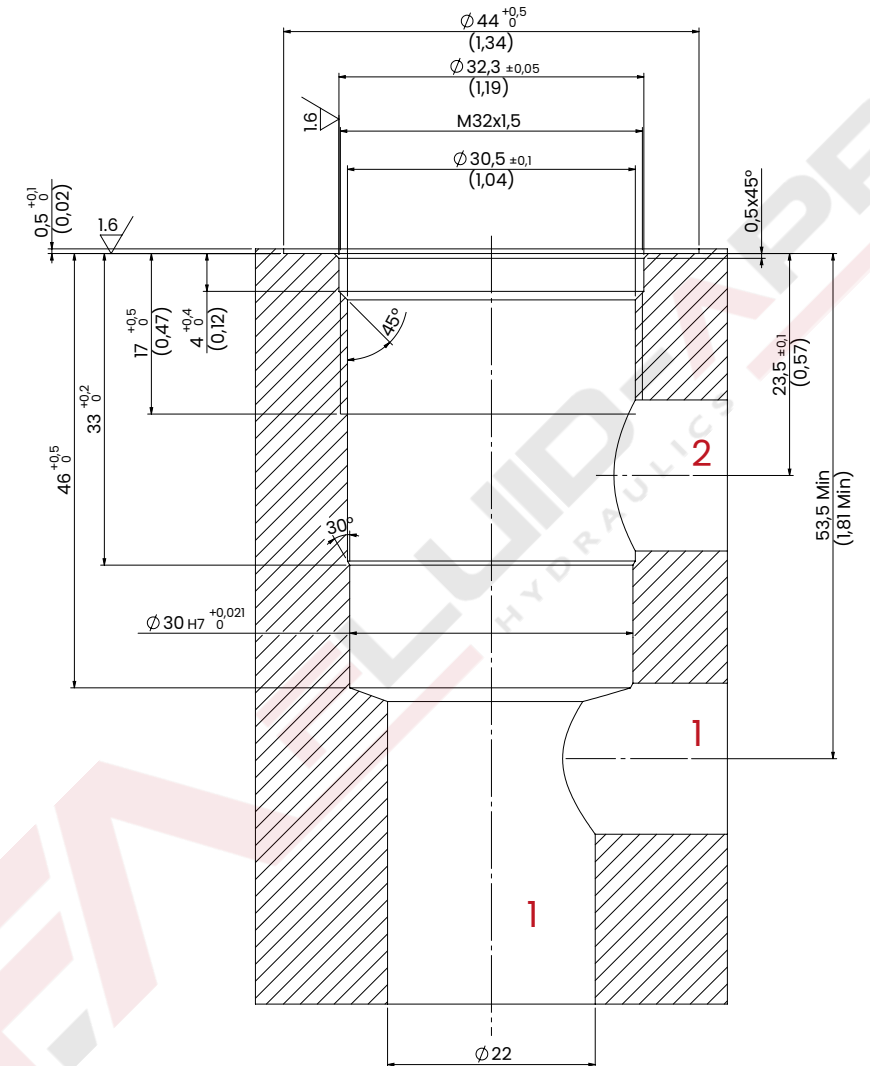
mm [Inches]

UPDATE: September 2022 (v.04)



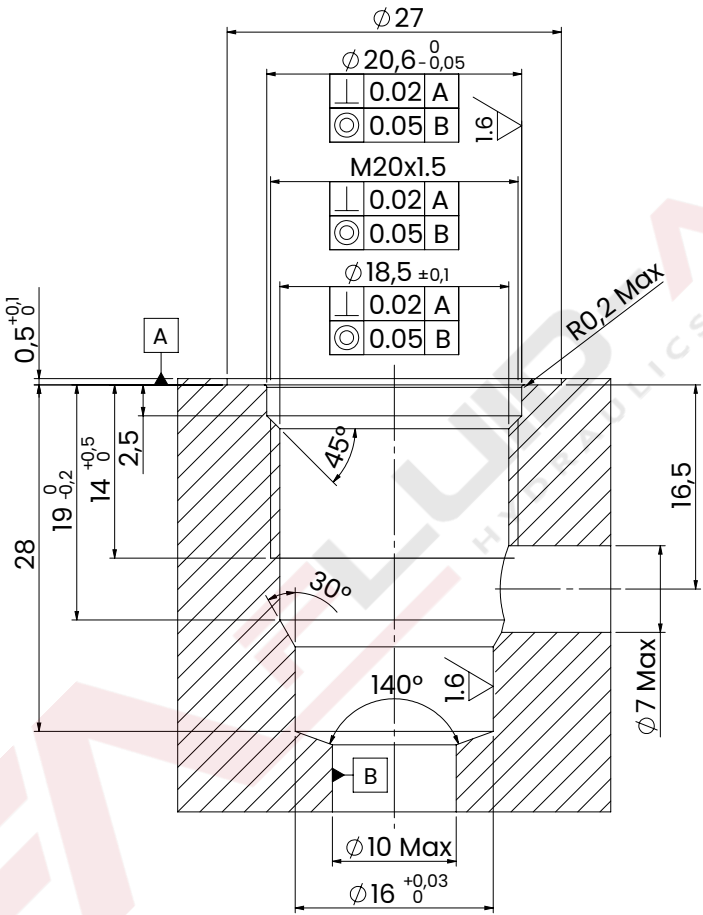
mm [Inches]

UPDATE: September 2022 (v.04)



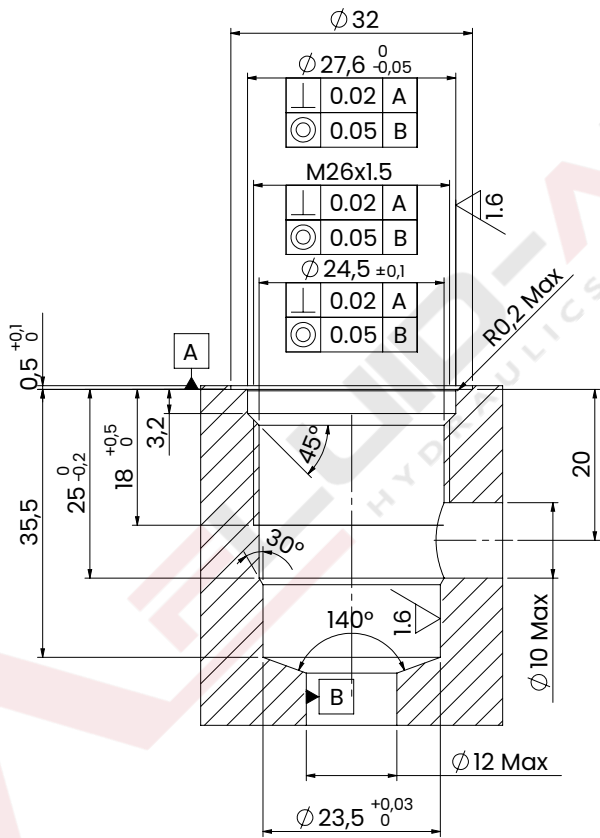
mm [Inches]

UPDATE: Jan. 2025 (v.01)



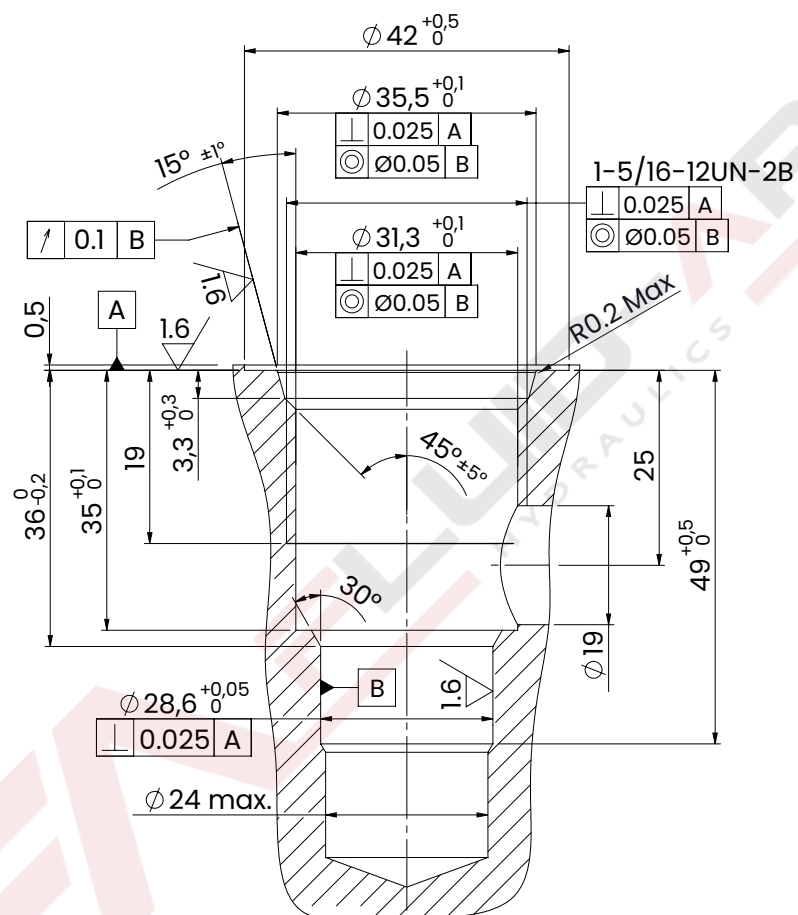
mm [Inches]

UPDATE: Aug. 2025 (v.01)



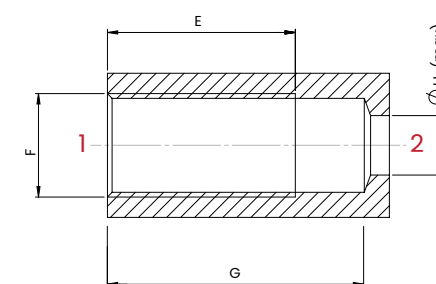
mm [Inches]

UPDATE: Aug. 2025 (v.01)



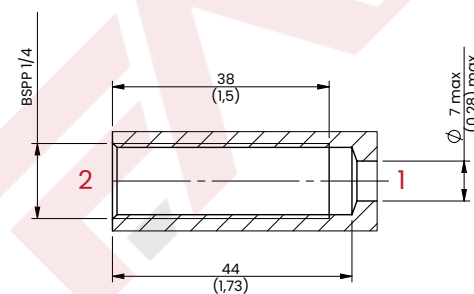
mm [Inches]

UPDATE: Aug. 2025 (v.01)

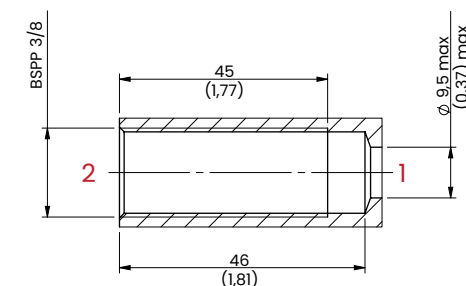


TECHNICAL CHARACTERISTICS

CAVITY CODE	VALVE CODE	TYPE	F ports	E	G	H
FC100	FA6001	VBA1B	1/4 BSPP	25[0,98]	35 [1,38]	7 [0,28]
FC101	FA6002	VBA2B	3/8 BSPP	30[1,18]	41 [1,61]	9,5 [0,37]
FC102	FA6003	VBA3B	1/2 BSPP	33[1,30]	46 [1,81]	12 [0,47]
FC103	FA6004	VBA4B	3/4 BSPP	42 [1,65]	55 [2,17]	16 [0,63]
FC104	FA6005	VBA5B	1 BSPP	48 [1,89]	63 [2,48]	22 [0,86]

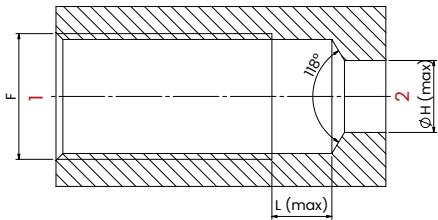
F1B / F1T / F1E

FC105

F2B

FC106

mm [Inches]



TECHNICAL CHARACTERISTICSmm [Inches]

VUS

CAVITY CODE	VALVE CODE	TYPE	F ports	L (max)	H
FC107	FA3045	VUS1B	1/4 BSPP	3 [0,12]	7 [0,27]
FC108	FA3046	VUS2B	3/8 BSPP		9 [0,35]
FC109	FA3047	VUS3B	1/2 BSPP		12 [0,47]
FC110	FA3048	VUS4B	3/4 BSPP	4 [0,16]	16 [0,63]

VUC

FC119	FA3035	VUC0B	1/8 BSPP	3 [0,12]	5 [0,19]
FC111	FA3036	VUC1B	1/4 BSPP		7 [0,27]
FC112	FA3037	VUC2B	3/8 BSPP		9 [0,35]
FC113	FA3038	VUC3B	1/2 BSPP		12 [0,47]
FC114	FA3039	VUC4B	3/4 BSPP		18 [0,70]

VUD

FC120	FA3040	VUD0B	1/8 BSPP	3 [0,12]	5 [0,19]
FC107	FA3041	VUD1B	1/4 BSPP		7 [0,27]
FC108	FA3042	VUD2B	3/8 BSPP		9 [0,35]
FC109	FA3043	VUD3B	1/2 BSPP		12 [0,47]
FC110	FA3044	VUD4B	3/4 BSPP		18 [0,70]



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