# RSN*

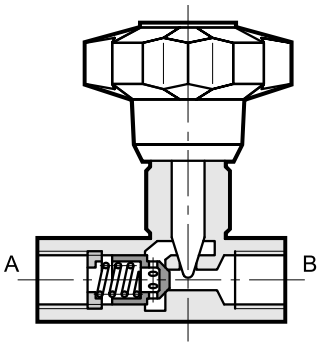
## SINGLE-ACTING THROTTLE FLOW CONTROL VALVE

### SERIES 30

### THREADED PORTS CARTRIDGE TYPE

**p** max (see table of performances)
**Q** max (see table of performances)

### OPERATING PRINCIPLE




— The RSN* and RSN*-I valves are single-acting throttle flow control valves for in-line mounting, directly in the line or as a cartridge complete with threading for in-block mounting.

— Adjustment is obtained with a conical throttle that operates in a cylindrical seat and allows a good linearity of the adjusted flow.

— They are also used as signle direction flow shut-off valves since they guarantee good sealing when completely closed. They also allow a free return in the opposite direction.

— The valves are always supplied with an adjustment knob that can be locked in any position with a transverse positioned grub screw, as may be required.

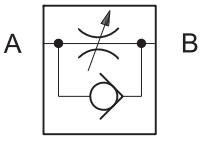


### PERFORMANCES (obtained with mineral oil with viscosity of 36 cSt at 50°C)

| Valve Code | Port dimensions BSP | Nominal flow rate [l/min] | Max. flow with open flow [l/min] | Mass [kg] | Max. operating pressure [bar] |
|---|---|---|---|---|---|
| RSN2 | 1/4” | 15 | 35 | 0,25 | 400 |
| RSN3 | 3/8” | 30 | 80 | 0,5 | |
| RSN4 | 1/2” | 50 | 150 | 0,75 | |
| RSN5 | 3/4” | 80 | 200 | 1,6 | |
| RSN6 | 1” | 150 | 300 | 3,05 | 320 |
| RSN7 | 1 ¼” | 200 | 400 | 3,75 | |
| RSN8 | 1 ½” | 220 | 500 | 5,75 | |
| RSN2-I | _ | 15 | 35 | 0,13 | 320 |
| RSN3-I | _ | 30 | 80 | 0,25 | |
| RSN4-I | _ | 50 | 150 | 0,34 | |
| RSN5-I | _ | 80 | 200 | 0,62 | |

| | | |
|---|---|---|
| Direct check valve opening pressure | bar | 0,35 |
| Ambient temperature range | °C | -20 / +50 |
| Fluid temperature range | °C | -20 / +80 |
| Fluid viscosity range | cSt | 10 ÷ 400 |
| Fluid contamination degree | According to ISO 4406:1999 class 20/18/15 | |
| Recommended viscosity | cSt | 25 |

### HYDRAULIC SYMBOL



## 1 - IDENTIFICATION CODE

| R | S | N | | - | | / | 30 | / | |
|---|---|---|---|---|---|---|---|---|---|

Single-acting throttle flow control valve

Nominal dimension:
**2** = 1/4” **5** = 3/4”
**3** = 3/8” **6** = 1”
**4** = 1/2” **7** = 1¼”
**8** = 1½”

**I** = in-block cartidge version, available only in dimensions 2-3-4-5
Omit for version with threaded ports

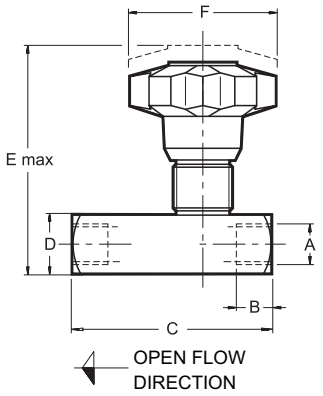
Series No. (the overall and mounting dimensions remain unchanged from 30 to 39)

Seals:
omit for mineral oils
**V** = viton for special fluids

## 2 - HYDRAULIC FLUIDS

Use mineral oil-based hydraulic fluids HL or HM type, according to ISO 6743-4. For these fluids, use NBR seals. For fluids HFDR type (phosphate esters) use FPM seals (code V). For the use of other kinds of fluid such as HFA, HFB, HFC, please consult our technical department. Using fluids at temperatures higher than 80 °C causes a faster degradation of the fluid and of the seals characteristics.
The fluid must be preserved in its physical and chemical characteristics.

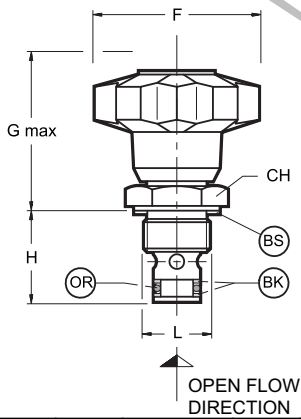
## 3 - OVERALL AND MOUNTING DIMENSIONS RSN*

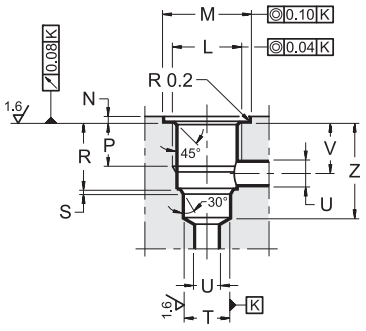



dimensions in mm

| Valve | A BSP | B | C | ⌀ D | E max | Ø F |
|---|---|---|---|---|---|---|
| **RSN2** | 1/4” | 12,5 | 66 | 20 | 78 | 50 |
| **RSN3** | 3/8” | 12,5 | 79 | 25 | 93 | 70 |
| **RSN4** | 1/2” | 15,5 | 94,5 | 30 | 107 | 80 |
| **RSN5** | 3/4” | 17 | 115 | 40 | 132,5 | 100 |
| **RSN6** | 1” | 20 | 138,5 | 50 | 167,5 | 120 |
| **RSN7** | 1¼” | 22 | 157 | 55 | 172,5 | 120 |
| **RSN8** | 1½” | 24 | 190 | 65 | 181 | 120 |

## 4 - OVERALL AND MOUNTING DIMENSIONS RSN*-I




dimensions in mm

*“BONDED SEAL” seal excluded from the supply

| Valve | ØF | G max | H | L 6H | ØM +0.2 0 | N | P min | R ±0.2 | S +0.2 0 | ØT H8 | ØU max | V ±0.2 | Z min | CH | OR type | BK type | BS* type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **RSN2-I** | 50 | 49 | 30.5 | M20x1.5 | 27 | 1 | 12 | 20 | 1.2 | 16 | 8 | 15.2 | 32 | 27 | 2050 | 2050 | 400-513 |
| **RSN3-I** | 70 | 56 | 40 | M27x2 | 33 | 1.3 | 18 | 28 | 1.2 | 19 | 10 | 22 | 41 | 32 | 2062 | 2062 | 400-520 |
| **RSN4-I** | 80 | 70 | 44.5 | M33x2 | 40 | 1.3 | 18 | 30.5 | 1.2 | 27 | 12 | 23 | 45.5 | 41 | 130 | 130 | 400-515 |
| **RSN5-I** | 100 | 80 | 52.5 | M42x2 | 50 | 1.3 | 21.5 | 36.5 | 1.5 | 35 | 16 | 28.5 | 55 | 50 | 3118 | 3118 | 400-516 |



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