



DIPLOMATIC  
HYDRAULICS

31 210/107 ED



# 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

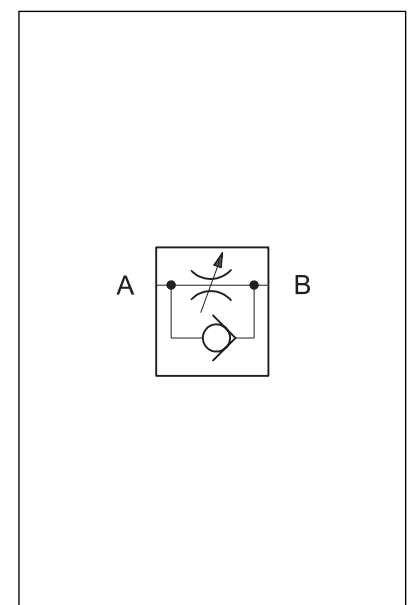
- The RSN\* and RSN\*-I valves are single-acting throttle flow control valves for in-line mounting, directly in the line or as a cartridge complete with threading for in-block mounting.
- Adjustment is obtained with a conical throttle that operates in a cylindrical seat and allows a good linearity of the adjusted flow.
- They are also used as single 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	1.1/4"	200	400	3,75	
RSN8	1.1/2"	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**

	<b>R</b>	<b>S</b>	<b>N</b>	<b>-</b>		<b>/</b>	<b>30</b>	<b>/</b>	
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Single-acting throttle flow control valve

Nominal dimension:  
 2 = 1/4"    5 = 3/4"  
 3 = 3/8"    6 = 1"  
 4 = 1/2"    7 = 1 1/4"  
 8 = 1 1/2"

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

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

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

**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	∅ F
<b>RSN2</b>	1/4"	12,5	66	20	78	50
<b>RSN3</b>	3/8"	12,5	79	25	93	70
<b>RSN4</b>	1/2"	15,5	94,5	30	107	80
<b>RSN5</b>	3/4"	17	115	40	132,5	100
<b>RSN6</b>	1"	20	138,5	50	167,5	120
<b>RSN7</b>	1 1/4"	22	157	55	172,5	120
<b>RSN8</b>	1 1/2"	24	190	65	181	120

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

dimensions in mm

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

\*"BONDED SEAL" seal excluded from the supply

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