

RS*

**DOUBLE-ACTING THROTTLE
FLOW CONTROL VALVE
SERIES 30**

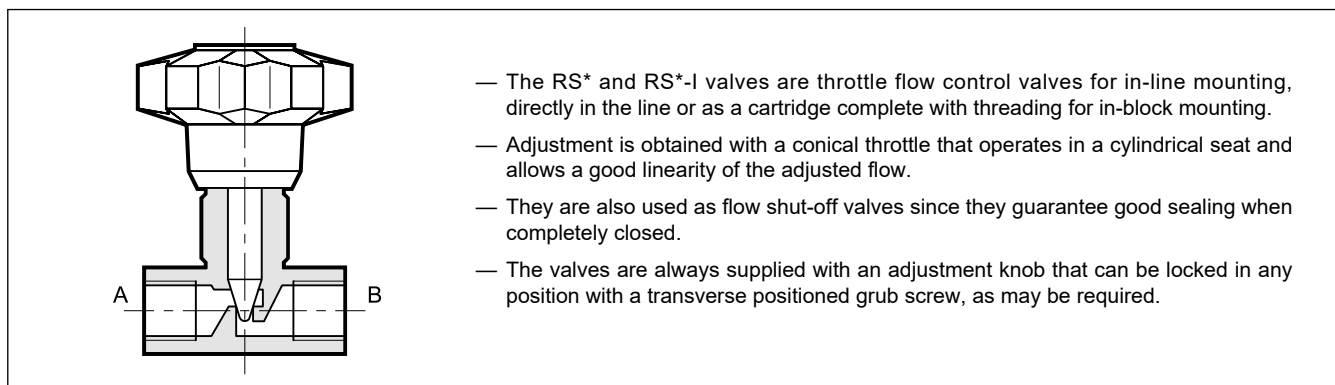


**THREADED PORTS
CARTRIDGE TYPE**

p max (see table of performances)

Q max (see table of performances)

OPERATING PRINCIPLE

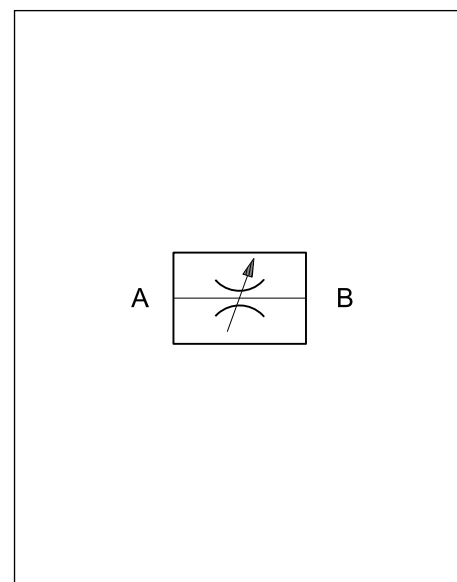


PERFORMANCES (obtained with mineral oil with viscosity of 36 cSt at 50°C)

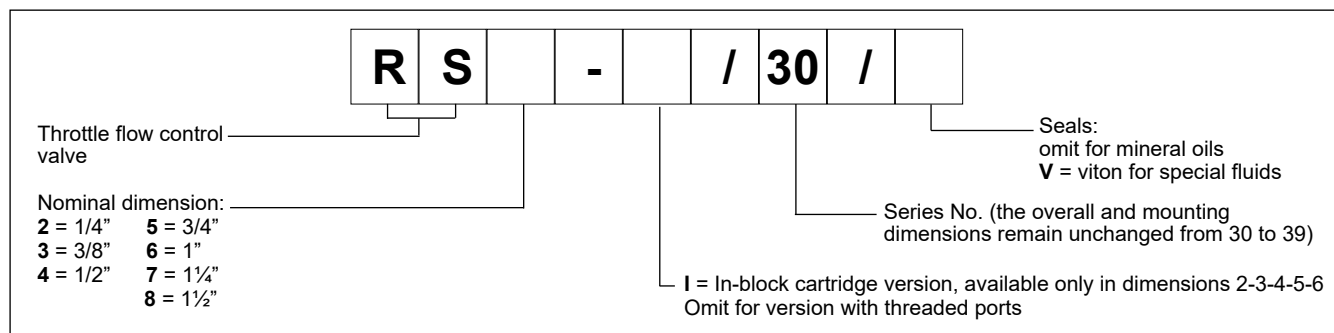
Valve code	Port dimensions BSP	Nominal flow rate [l/min]	Mass [kg]	Max. operating pressure [bar]
RS2	1/4"	15	0,2	400
RS3	3/8"	30	0,4	
RS4	1/2"	50	0,6	
RS5	3/4"	80	1,3	
RS6	1"	150	2,6	320
RS7	1 1/4"	200	3,0	
RS8	1 1/2"	220	4,2	
RS2-I	—	15	0,15	320
RS3-I	—	30	0,2	
RS4-I	—	50	0,3	
RS5-I	—	80	0,6	
RS6-I	—	150	1,2	

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



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 RS*

dimensions in mm

Valve	A BSP	B	C	Ø D	E max	Ø F
RS2	1/4"	12,5	49	20	78	50
RS3	3/8"	12,5	59	25	93	70
RS4	1/2"	15,5	68	30	107	80
RS5	3/4"	17	86	40	132,5	100
RS6	1"	20	105	50	167,5	120
RS7	1 1/4"	22	120	55	172,5	120
RS8	1 1/2"	24	134	65	181	120

4 - OVERALL AND MOUNTING DIMENSIONS RS*-I

Figure 1: Dimensions of the RS2-I valve

* "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
RS2-I	50	49.5	26.5	M20x1.5	27	1	12	16.5	1	14	5	13.3	27	27	2043	2043	400-513
RS3-I	70	57.5	30.5	M20x1.5	27	1	12	20	1.2	16	8	15.2	32	27	2050	2050	400-513
RS4-I	80	66.5	40	M27x2	33	1.3	18	28	1.2	19	10	22	41	32	2062	2062	400-520
RS5-I	100	76.5	44	M33x2	40	1.3	18	30.5	1.2	27	12	23	45.5	41	130	130	400-515
RS6-I	120	102	52.5	M42x2	50	1.3	21.5	36.5	1.5	35	16	28.5	55	50	3118	3118	400-516



RSN*

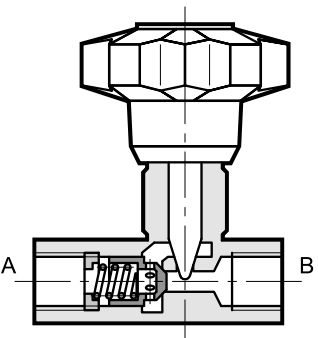
SINGLE-ACTING THROTTLE FLOW CONTROL VALVE

SERIES 30

THREADED PORTS CARTRIDGE TYPE

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

OPERATING PRINCIPLE



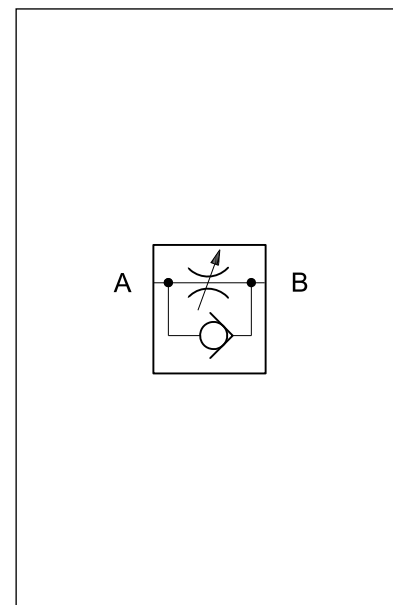
- The RSN* and RSN*-I valves are single-acting throttle flow control valves for in-line mounting, directly in the line or as a cartridge complete with threading for in-block mounting.
- Adjustment is obtained with a conical throttle that operates in a cylindrical seat and allows a good linearity of the 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

R S N - / 30 /									
Single-acting throttle flow control valve					Seals: omit for mineral oils V = viton for special fluids				
Nominal dimension:					Series No. (the overall and mounting dimensions remain unchanged from 30 to 39)				
2 = 1/4" 5 = 3/4" 3 = 3/8" 6 = 1" 4 = 1/2" 7 = 1 1/4" 8 = 1 1/2"					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		
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	1 1/4"	22	157	55	172,5	120		
RSN8	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
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



K4WA/C

DECELERATION VALVE

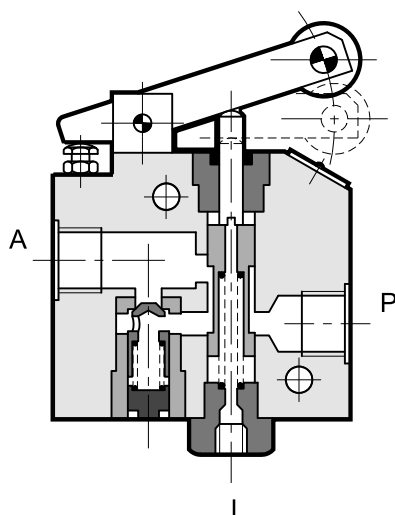
SERIES 10

THREADED PORTS

p max **150** bar

Q max **40** l/min

OPERATING PRINCIPLE

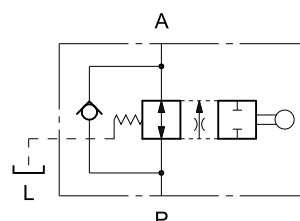


- The K4WA/C valve is a mechanically operated decelerating valve with BSPP threaded ports for in-line mounting on hydraulic lines.
 - It is normally used to change the movement speed of the hydraulic axis, such as changing from fast to slow, or for slow stops.
 - The valve is normally open in the free condition and allows free flow passage from port P to port A.
- The flow is partially or completely shut off by operating the mechanical drive of the valve.
- It is always supplied with a built in check valve that allows reverse free flow from port A to port P.

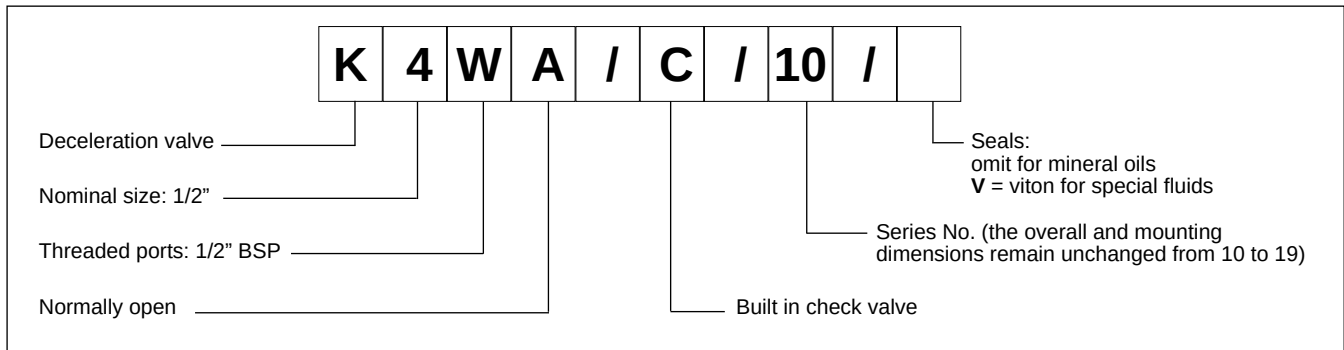
PERFORMANCES (measured with mineral oil of viscosity 36 cSt at 50°C)

Maximum operating pressure	bar	150
Cracking pressure of the check valve	bar	0,5
Maximum flow rate	l/min	40
Needed force on the lever to operate:		
- at beginning	kg	6,8
- at end stroke		12,0
Maximum leakage with closed valve (Δp 100 bar)	l/min	0,05
Stroke (from all open to completely closed)	mm	20
Ambient temperature range	°C	-20 / +60
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
Mass	kg	2,5

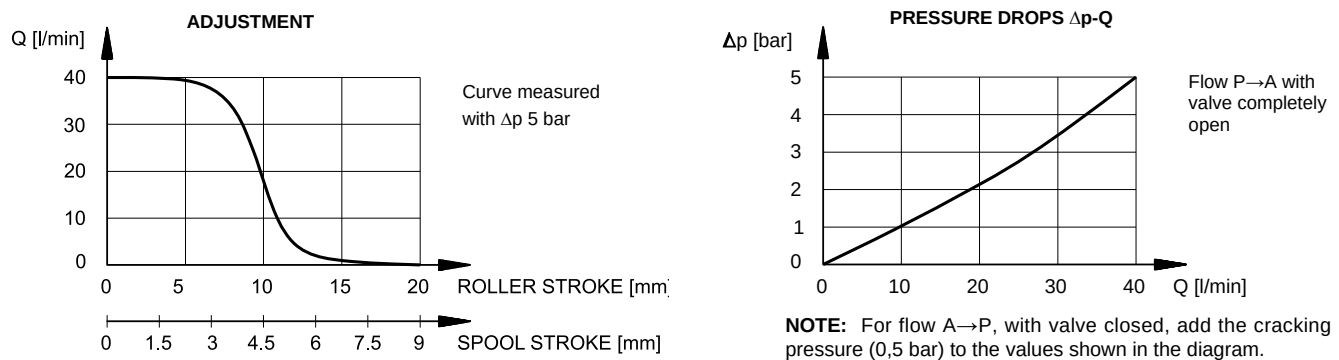
HYDRAULIC SYMBOL



1 - IDENTIFICATION CODE



2 - CHARACTERISTIC CURVES (values obtained with viscosity of 36 cSt at 50°C)



3 - 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.

4 - OVERALL AND MOUNTING DIMENSIONS

