

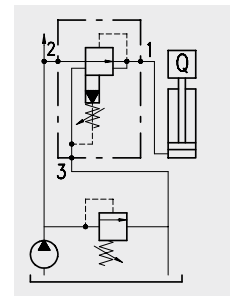
Pressure reducing valves

Hydraulic diagram	Type	Description	Maximum flow up to		Maximum pressure		Page
			l/min	psi	bar	psi	
	RP..A	Proportional pressure control valve, reducing/relieving, pilot-operated, spool-type	150	40	350	5100	37

Operation

This valve permits free oil flow from 2 to 1 till pressure in 1 reaches the valve set pressure. Then the spool restricts the passage between 2 and 1 so that pressure in 1 remains constant while port 3 is always connected to tank.

When the inlet pressure in 1 exceeds the setting of the valve, the valve act as a pressure limiter between port 1 and 3.



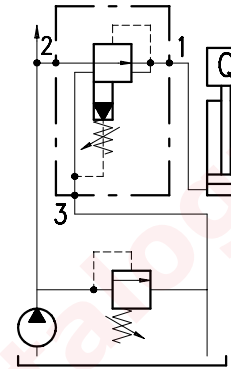
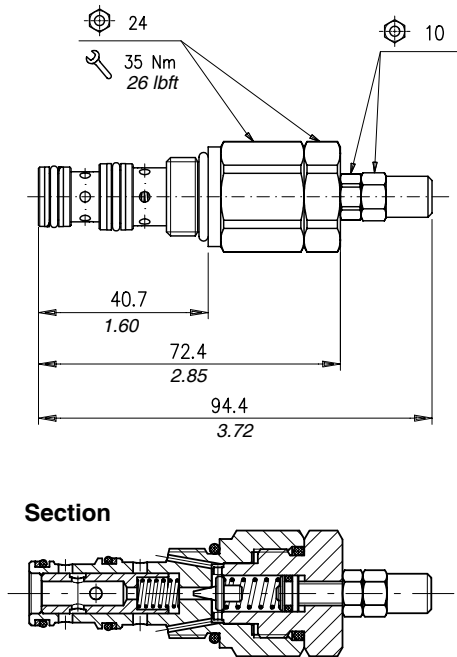
Performance

Cartridges

Type RP..A	Maximum flow		Maximum pressure		Application range with standard springs*	Cavities and tools	Weight	
	l/min	US gpm	bar	psi			bar	lb
RP08A	15	3.9	line 1=350 line 2=350	line 1=5100 line 2=5100	5÷80 bar (72.5÷1160 psi) test pressure setting: 50 bar (725 psi) at 5 l/min. (1.32 US gpm) pressure increase 10 bar (145 psi) per screw turn 50÷220 bar (725 ÷ 3200 psi) test pressure setting: 150 bar (2200 psi) at 5 l/min. (1.32 US gpm) pressure increase 42 bar (600 psi) per screw turn 100÷350 bar (1450÷5100 psi) test pressure setting: 200 bar (2900 psi) at 5 l/min. (1.32 US gpm) pressure increase 104 bar (1500 psi) per screw turn	see cavity SAE 8-3 page 66	0,16	0.35
RP10A	30	7.9			5÷80 bar (72.5÷1160 psi) test pressure setting: 50 bar (725 psi) at 5 l/min. (1.32 US gpm) pressure increase 12 bar (174 psi) per screw turn 50 ÷220 bar (725÷3200 psi) test pressure setting: 150 bar (2200 psi) at 5 l/min. (1.32 US gpm) pressure increase 45 bar (650 psi) per screw turn 100÷350 bar (1450÷5100 psi) test pressure: 200 bar (2900 psi) at 5 l/min. (1.32 US gpm) pressure increase 112 bar (1600 psi) per screw turn			
RP12A	100	26	line 1=350 line 2=350	line 1=5100 line 2=5100	5÷80 bar (72.5÷1160 psi) test pressure setting: 50 bar (725 psi) at 5 l/min. (1.32 US gpm) pressure increase 10 bar (145 psi) per screw turn 50÷220 bar (725÷3200 psi) test pressure setting: 150 bar (2200 psi) at 5 l/min. (1.32 US gpm) pressure increase 42 bar (600 psi) per screw turn 100÷350 bar (1450÷5100 psi) test pressure: 200 bar (2900 psi) at 5 l/min. (1.32 US gpm) pressure increase 104 bar (1500 psi) per screw turn	see cavity SAE 12-3 page 66	0,33	0.72
RP16A	150	40			5÷80 bar (72.5÷1160 psi) test pressure setting: 50 bar (725 psi) at 5 l/min. (1.32 US gpm) pressure increase 10 bar (145 psi) per screw turn 50÷220 bar (725 ÷ 3200 psi) test pressure setting: 150 bar (2175 psi) at 5 l/min. (1.32 US gpm) pressure increase 42 bar (600 psi) per screw turn 100÷350 bar (1450÷5100 psi) test pressure setting: 200 bar (2900 psi) at 5 l/min. (1.32 US gpm) pressure increase 104 bar (1500 psi) per screw turn			

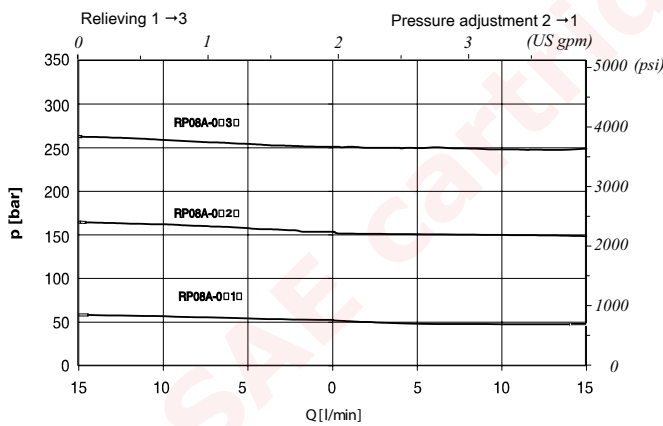
*To perform setting of the valve, see the pressure drop/flow diagram.

Dimensions and hydraulic circuit

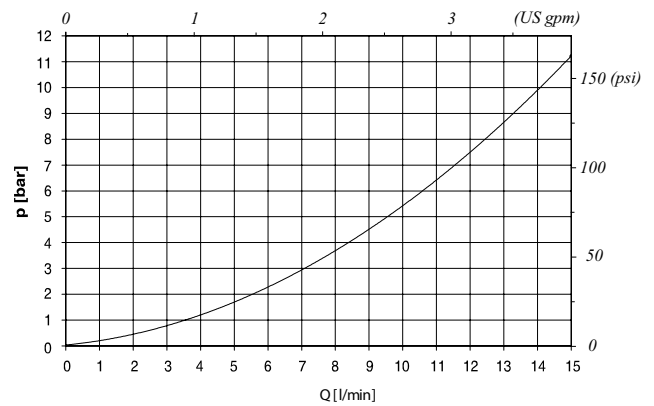


Rating diagrams

Pressure adjustments diagram



Pressure drops 2 > 1



Order code

RP08A / 0 - □ - □ - □

Adjustments
(see page 59)

S
V
W

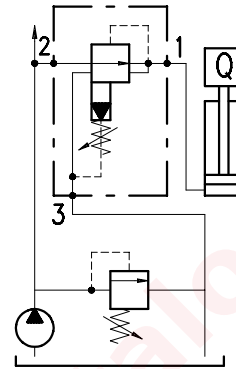
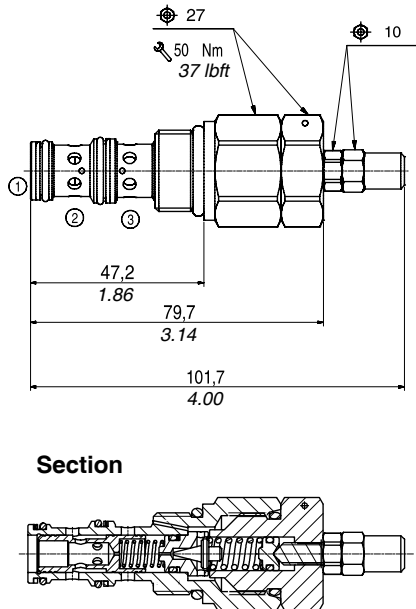
Pressure settings

- 1) 5÷80 bar (72.5÷1150 psi)
- 2) 50÷220 bar (725÷3200 psi)
- 3) 100÷350 bar (1450÷5100 psi)

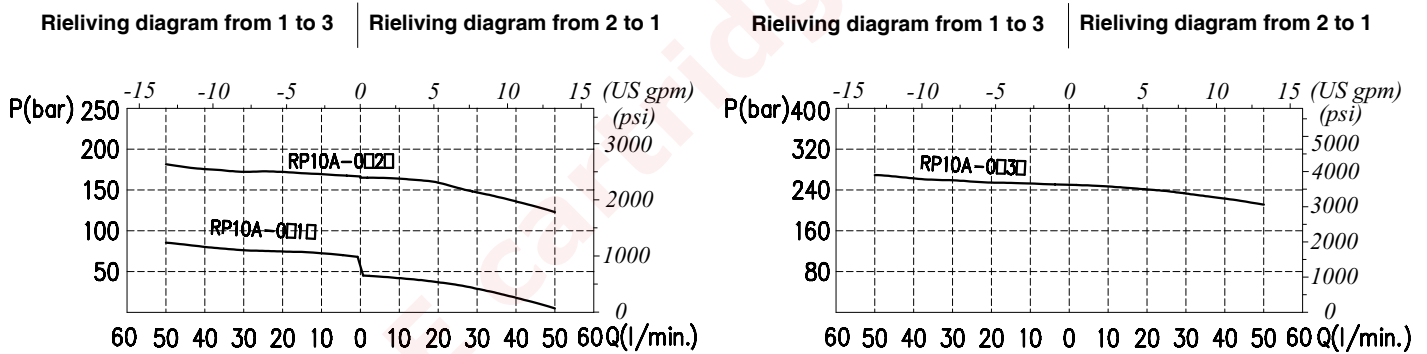
Seals

B) Buna
V) Viton

Dimensions and hydraulic circuit



Rating diagrams



Order code

RP10A / 1 - □ - □ - □

Adjustments
(see page 59)
S
V
W

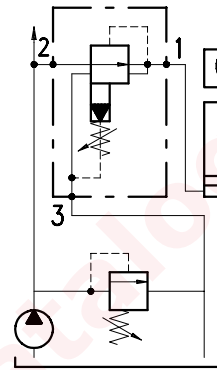
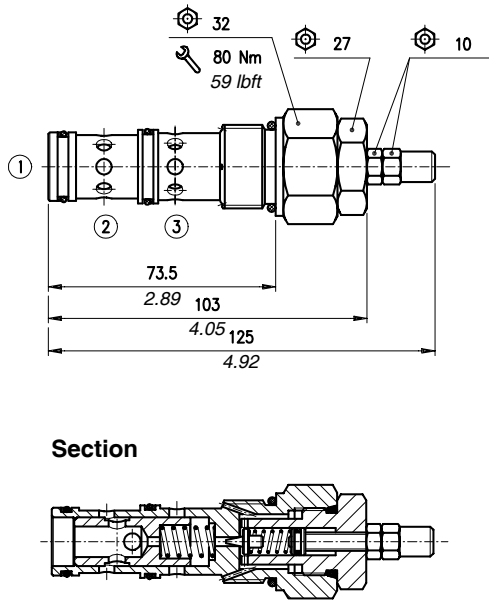
Pressure settings

- 1) 5÷80 bar (72.5÷1150 psi)
- 2) 50÷220 bar (725÷3200 psi)
- 3) 100÷350 bar (1450÷5100 psi)

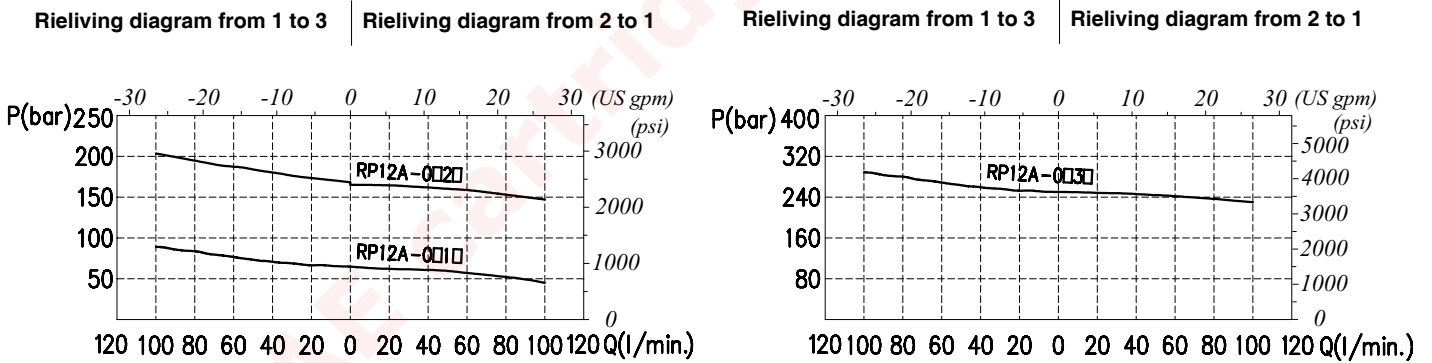
Seals

- B) Buna
- V) Viton

Dimensions and hydraulic circuit



Rating diagrams



Order code

RP12A / 0 - □ - □ - □

Adjustments
(see page 59)

S
V
W

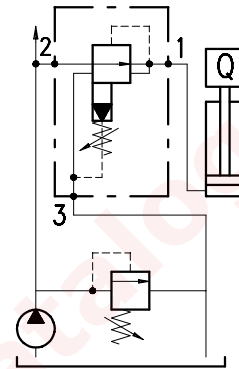
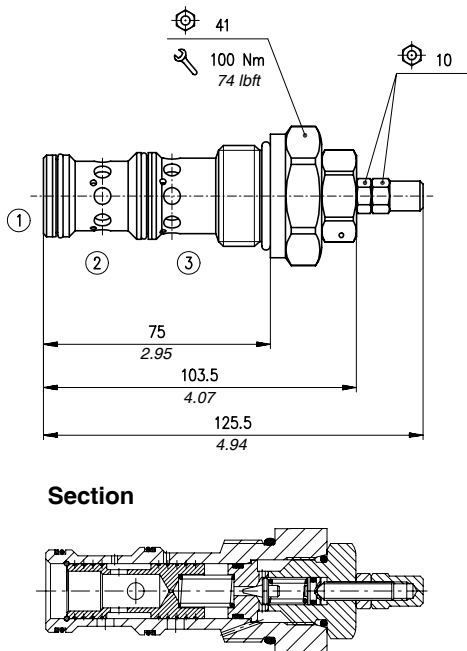
Pressure settings

- 1) 5÷80 bar (72.5÷1150 psi)
- 2) 50÷220 bar (725÷3200 psi)
- 3) 100÷350 bar (1450÷5100 psi)

Seals

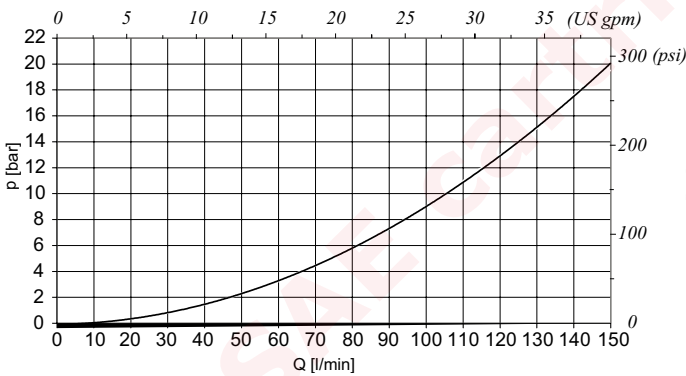
B) Buna
V) Viton

Dimensions and hydraulic circuit

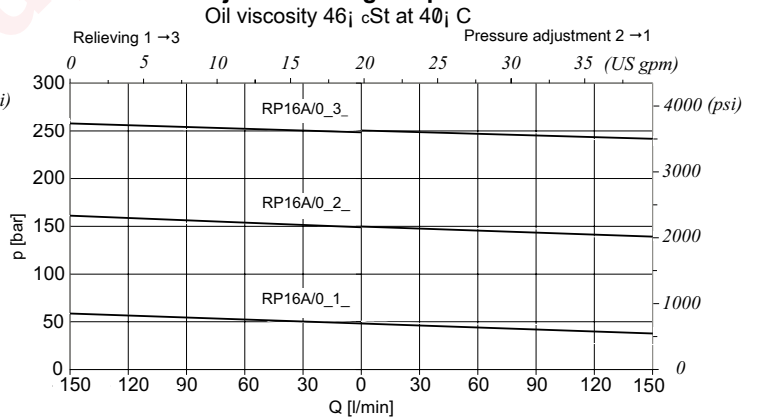


Rating diagrams

Typical Pressure drop vs. flow characteristic 2 → 1
Oil viscosity 46_i cSt at 40_i C



Pressure adjustment diagram pressure/flow



Order code

RP16A / 0 - □ - □ - □

Adjustments
(see page 59)

S
V
W

Pressure settings

- 1) 5÷80 bar (72.5÷1150 psi)
- 2) 50÷220 bar (725÷3200 psi)
- 3) 100÷350 bar (1450÷5100 psi)

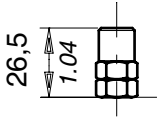
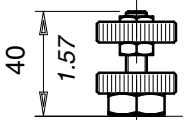
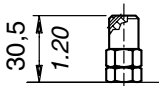
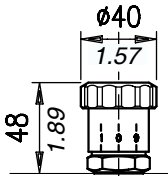
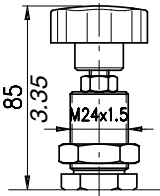
Seals

- B)** Buna
- V)** Viton

Description and operation

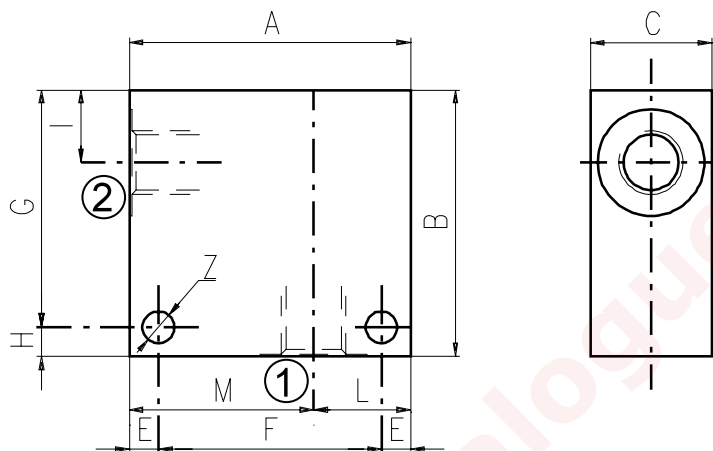
This chapter show main adjusting devices for the valves listed in this catalog.
These regulations are used to adjust flow rate between inlet and working ports.

Performance

	<p>Screw "S"</p>		<p>Handknob "V"</p>
	<p>Copped adjustment "W"</p>		<p>Handknob "MG"</p>
	<p>Handknob "PV"</p>		

Dimensions

Material	Max. pressure	
	bar	psi
Aluminium	210	3050
Steel	350	5100

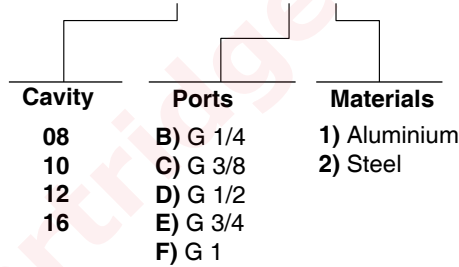


Cavità	Attacchi		A	B	C	E	F	G	H	I	L	M	Z	
SAE 8/2	G 1/2	mm	70	65	35	7	56	53	12	14,5	35	35	6,5	
		in	2.75	2.56	1.38	0.27	2.20	2.09	0.47	0.57	1.38	1.38	0.25	
	G 1/4	mm	50	50	30	6	38	44	44	6	14,8	20	30	6,5
		in	1.97	1.97	1.18	0.24	1.50	1.73	1.73	0.24	0.58	0.79	1.18	0.25
	G 3/8	mm	50	50	30	6	38	44	44	6	14,8	20	30	6,5
		in	1.97	1.97	1.18	0.24	1.50	1.73	1.73	0.24	0.58	0.79	1.18	0.25
SAE6	mm	50	50	30	6	38	44	44	6	14,8	20	30	6,5	
	in	1.97	1.97	1.18	0.24	1.50	1.73	1.73	0.24	0.58	0.79	1.18	0.25	
SAE 10/2	G 1/4	mm	60	60	35	6	48	54	6	18,8	25	35	6,5	
		in	2.36	2.36	1.38	0.24	1.89	2.12	0.24	0.74	0.98	1.38	0.25	
	G 3/8	mm	60	60	35	6	48	54	6	18,8	25	35	6,5	
		in	2.36	2.36	1.38	0.24	1.89	2.12	0.24	0.74	0.98	1.38	0.25	
	G 1/2	mm	60	60	35	6	48	54	6	18,8	25	35	6,5	
		in	2.36	2.36	1.38	0.24	1.89	2.12	0.24	0.74	0.98	1.38	0.25	
	SAE8	mm	60	70	35	6	48	64	6	18,8	25	35	6,5	
		in	2.36	2.75	1.38	0.24	1.89	2.52	0.24	0.74	0.98	1.38	0.25	
	SAE10	mm	70	70	35	6	58	64	6	18,5	35	35	6,5	
		in	2.75	2.75	1.38	0.24	2.28	2.52	0.24	0.73	1.38	1.38	0.25	
SAE12	mm	70	70	40	8	54	62	8	22	30	40	8,5		
	in	2.75	2.75	1.57	0.31	2.12	2.44	0.31	0.87	1.18	1.57	0.33		
SAE 12/2	G 1/2	mm	70	80	40	8	54	72	8	25	30	40	8,5	
		in	2.75	3.15	1.57	0.31	2.12	2.83	0.31	0.98	1.18	1.57	0.33	
	G 3/4	mm	70	90	40	8	54	82	8	25	30	40	8,5	
		in	2.75	3.54	1.57	0.31	2.12	3.23	0.31	0.98	1.18	1.57	0.33	
	SAE10	mm	70	85	40	8	54	77	8	25	30	40	8,5	
		in	2.75	3.35	1.57	0.31	2.12	3.03	0.31	0.98	1.18	1.57	0.33	
	SAE12	mm	70	85	40	8	54	77	8	25	30	40	8,5	
		in	2.75	3.35	1.57	0.31	2.12	3.03	0.31	0.98	1.18	1.57	0.33	

Cavità	Attacchi	A	B	C	E	F	G	H	I	L	M	Z	
SAE 16/2	G 1/2	mm	80	90	50	10	60	80	10	25	35	45	10,5
		in	3.15	3.54	1.97	0.39	2.36	3.15	0.39	0.98	1.38	1.77	0.41
	G 3/4	mm	80	90	50	10	60	80	10	25	35	45	10,5
		in	3.15	3.54	1.97	0.39	2.36	3.15	0.39	0.98	1.38	1.77	0.41
	G 1	mm	85	100	60	10	65	90	10	23,5	40	45	10,5
		in	3.35	3.94	2.36	0.39	2.56	3.54	0.39	0.92	1.57	1.77	0.41
	SAE12	mm	80	90	50	10	60	80	10	25	35	45	10,5
		in	3.15	3.54	1.97	0.39	2.36	3.15	0.39	0.98	1.38	1.77	0.41
	SAE16	mm	80	100	50	10	60	90	10	25	35	45	10,5
		in	3.15	3.94	1.97	0.39	2.36	3.54	0.39	0.98	1.38	1.77	0.41

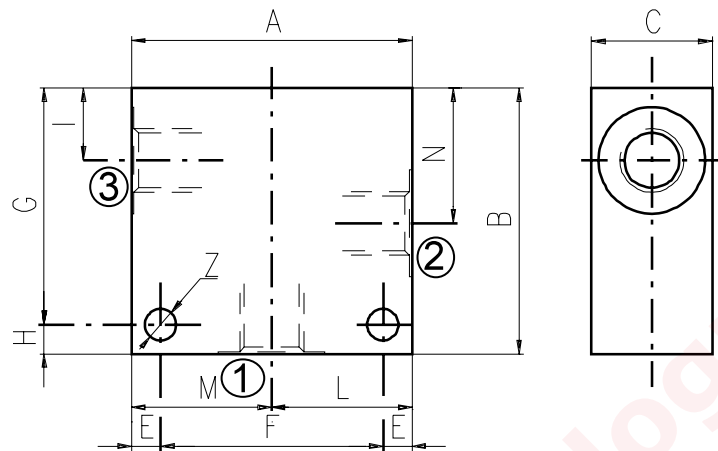
Order code

3/CC /- □ □ /20/□- □-1

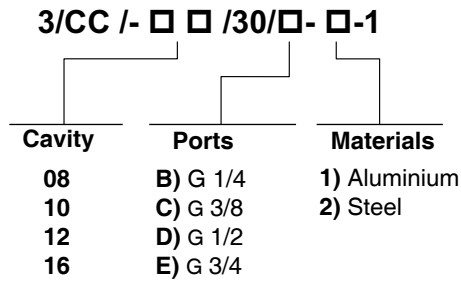


Dimensions

Material	Max. pressure bar	
	bar	psi
Alluminium	210	3050
Steel	350	5100



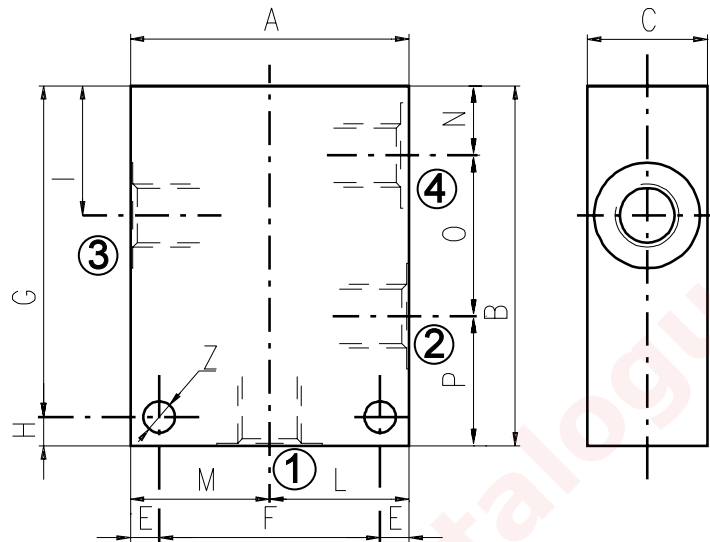
Cavity	Ports		A	B	C	E	F	G	H	I	L	M	N	Z
SAE 8/3	G 1/4	mm	60	60	30	7	46	48	12	14,8	30	30	29,1	6,5
		in	2.36	2.36	1.18	0.27	1.81	1.89	0.47	0.58	1.18	1.18	1.14	0.25
	G 3/8	mm	60	60	30	7	46	48	12	14,5	30	30	29,1	6,5
		in	2.36	2.36	1.18	0.27	1.81	1.89	0.47	0.57	1.18	1.18	1.14	0.25
	G 1/2	mm	70	65	35	7	56	53	12	14,5	35	35	29,1	6,5
		in	2.75	2.56	1.38	0.27	2.20	2.09	0.47	0.57	1.38	1.38	1.14	0.25
	SAE6	mm	60	60	30	7	46	48	12	14,5	30	30	29,1	6,5
		in	2.36	2.36	1.18	0.27	1.81	1.89	0.47	0.57	1.18	1.18	1.14	0.25
SAE 10/3	G 1/4	mm	60	65	35	6	48	59	6	18	30	30	34,5	7
		in	2.36	2.56	1.38	0.24	1.89	2.32	0.24	0.70	1.18	1.18	1.36	0.27
	G 3/8	mm	60	65	35	6	48	59	6	18,8	30	30	34,5	7
		in	2.36	2.56	1.38	0.24	1.89	2.32	0.24	0.74	1.18	1.18	1.36	0.27
	G 1/2	mm	65	70	35	6	53	64	6	18,8	32,5	32,5	34,5	7
		in	2.56	2.75	1.38	0.24	2.09	2.52	0.24	0.74	1.28	1.28	1.36	0.27
	SAE6	mm	65	70	35	6	53	64	6	18,8	32,5	32,5	34,5	7
		in	2.56	2.75	1.38	0.24	2.09	2.52	0.24	0.74	1.28	1.28	1.36	0.27
	SAE8	mm	65	70	35	6	53	64	6	18,8	32,5	32,5	34,5	7
		in	2.56	2.75	1.38	0.24	2.09	2.52	0.24	0.74	1.28	1.28	1.36	0.27
SAE 12/3	G 1/2	mm	70	100	40	8	54	92	8	25	35	35	53,5	8,5
		in	2.75	3.94	1.57	0.31	2.12	3.6	0.31	0.98	1.38	1.38	2.10	0.33
	G 3/4	mm	90	100	50	10	70	90	10	25,1	45	45	53,5	10,5
		in	3.54	3.94	1.97	0.39	2.75	3.54	0.39	0.99	1.77	1.77	2.11	0.41
	SAE10	mm	80	100	40	8	64	92	8	25	40	40	53,5	8,5
		in	3.15	3.94	1.57	0.31	2.52	3.6	0.31	0.98	1.57	1.57	2.11	0.33
	SAE12	mm	80	100	45	8	64	92	8	25	40	40	53,5	8,5
		in	3.15	3.94	1.57	0.31	2.52	3.6	0.31	0.98	1.57	1.57	2.11	0.33
SAE 16/3	G 3/4	mm	90	100	50	10	70	90	10	25,1	45	45	53,5	10,5
		in	3.54	3.94	1.97	0.39	2.75	3.54	0.39	0.99	1.77	1.77	2.11	0.41
	SAE12	mm	90	105	50	10	70	95	10	25,1	45	45	53,5	10,5
		in	3.54	4.13	1.97	0.39	2.75	3.74	0.39	0.99	1.77	1.77	2.11	0.41
	SAE16	mm	90	105	50	10	70	95	10	25,1	45	45	53,5	10,5
		in	3.54	4.13	1.97	0.39	2.75	3.74	0.39	0.99	1.77	1.77	2.11	0.41



see SAE cartridges catalogue

Dimensions

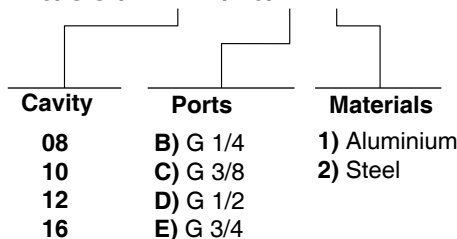
Material	Max. pressure bar	
	bar	psi
Aluminium	210	3050
Steel	350	5100



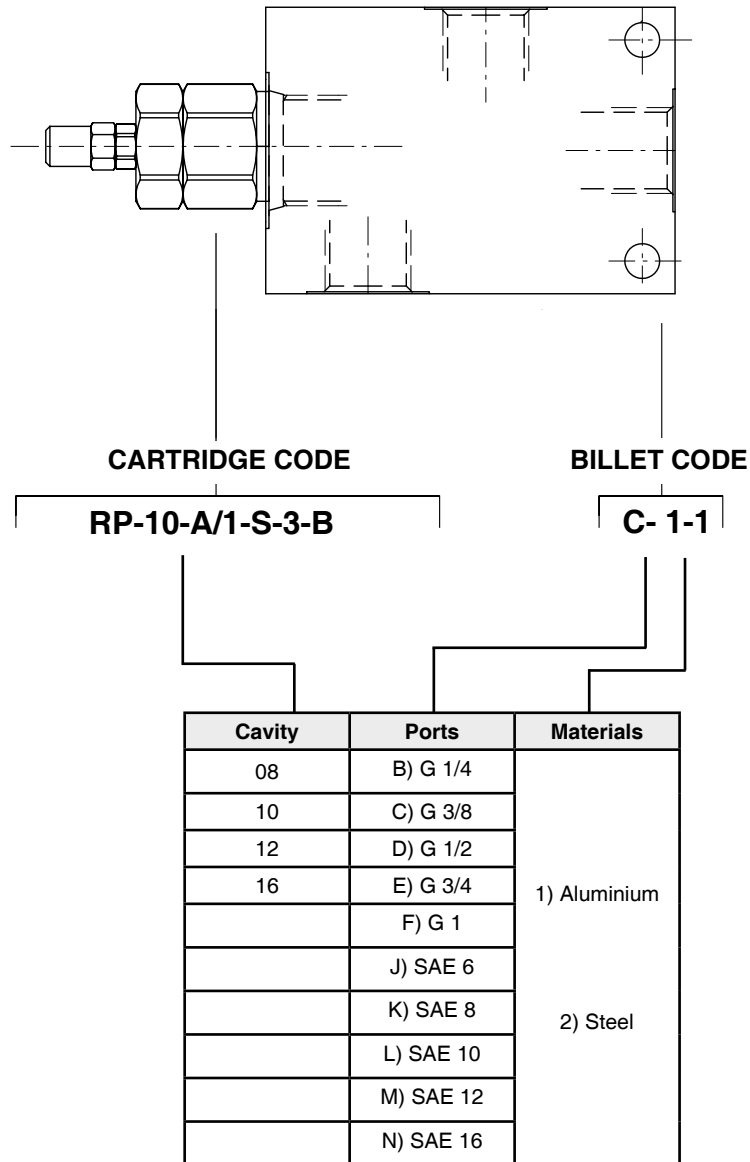
Cavity	Ports	A	B	C	E	F	G	H	I	L	M	N	O	P	Z	
SAE 8/4	G 1/4	mm	60	75	30	7	46	63	12	29,1	30	30	14,8	29,1	31,1	6,5
		in	2.36	2.95	1.18	0.27	1.81	2.48	0.47	1.14	1.18	1.18	0.58	1.14	1.22	0.25
	SAE6	mm	60	75	30	7	46	63	12	29,1	30	30	14,8	29,1	31,1	6,5
		in	2.36	2.95	1.18	0.27	1.81	2.48	0.47	1.14	1.18	1.18	0.58	1.14	1.22	0.25
SAE 10/4	G 3/8	mm	60	85	35	6	48	79	6	34,5	30	30	18,8	31,7	34,5	7
		in	2.36	3.35	1.38	0.24	1.89	3.11	0.24	1.36	1.18	1.18	0.74	1.25	1.36	0.27
	G 1/2	mm	70	85	35	6	58	79	6	34,5	35	35	18,8	31,7	34,5	7
		in	2.75	3.35	1.38	0.24	2.28	3.11	0.24	1.36	1.38	1.38	0.74	1.25	1.36	0.27
	SAE6	mm	60	85	35	6	48	79	6	34,5	30	30	18,8	31,7	34,5	7
		in	2.45	3.35	1.38	0.24	1.89	3.11	0.24	1.36	1.18	1.18	0.74	1.25	1.36	0.27
	SAE8	mm	70	85	35	6	58	79	6	34,5	35	35	18,8	31,7	34,5	7
		in	2.75	3.35	1.38	0.24	2.28	3.11	0.24	1.36	1.38	1.38	0.74	1.25	1.36	0.27
SAE 12/4	G 1/2	mm	80	115	40	8	64	107	8	44	40	40	22	44,5	48,5	8,5
		in	3.15	4.53	1.57	0.31	2.52	4.21	0.31	1.73	1.57	1.57	0.87	1.75	1.9	0.33
	SAE10	mm	80	115	40	8	64	107	8	44	40	40	22	44,5	48,5	8,5
		in	3.15	4.53	1.57	0.31	2.52	4.21	0.31	1.73	1.57	1.57	0.87	1.75	1.9	0.33
SAE 16/4	G 3/4	mm	100	130	50	10	80	120	10	53,5	50	50	25,1	56,9	48	10,5
		in	3.94	5.12	1.97	0.39	3.15	4.72	0.39	2.11	1.97	1.97	0.99	2.24	1.89	0.41

Order code

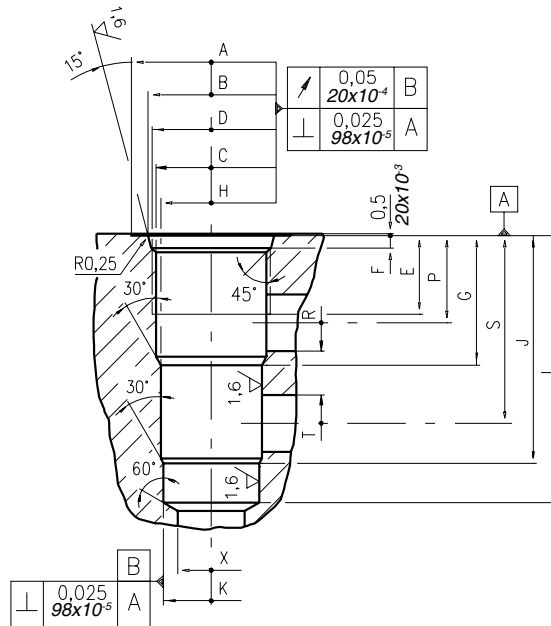
3/CC /- □ □ /40/□- □-1



How to order valves with body

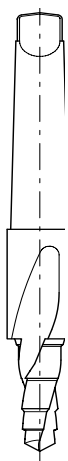


Dimensions



\	A	B ±0,05	C ±0,05	D	E	F	G	H ±0,02	J	K ±0,02	L	M ±0,02	N	P	R øMAX	S	T øMAX	U	V øMAX	X øMAX	Z øMIN	Prof. Z MIN	
08/3	mm	27	20,66	17,42	3/4-16 UNF	12,50	2,5	19,10	15,90	33,30	14,30	43,30	-	-	14,30	5,50	28,60	5,50	-	-	12,50	-	-
	in	1.06	0.81	0.68		0.49	0.10	0.75	0.62	1.31	0.56	1.70			0.56	0.22	1.12	0.22			0.49		
10/3	mm	30	24,00	20,62	7/8-14 UNF	16,00	2,80	23,10	17,50	39,60	15,90	47,60	-	-	18,30	6,50	34,00	6,50	-	-	14,00	-	-
	in	1.18	0.94	0.81		0.63	0.11	0.94	0.69	1.56	0.62	1.87			0.72	0.25	1.34	0.25			0.55		
12/3	mm	38	29,23	24,73	1 1/16-12 UNF	19,00	3,56	36,60	23,82	63,50	22,25	75,40	-	-	24,50	16,00	53,00	16,00	-	-	19,00	-	-
	in	1.50	1.15	0.97		0.75	0.14	1.44	0.94	2.5	0.88	2.97			0.96	0.63	2.09	0.63			0.75		
16/3	mm	45	35,6	31,34	1 5/16-12 UNF	22,00	3,5	36,50	28,62	64,30	27,02	75,38	-	-	24,60	16,00	53,00	16,00	-	-	19,00	-	-
	in	1.77	1.40	1.23		0.87	0.14	1.44	1.13	2.53	1.06	2.97			0.97	0.63	2.09	0.63			0.75		

Rougher tool



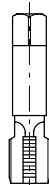
Cavity	Code number
08/3	3UT00052190
10/3	3UT00054170
12/3	3UT00054290
16/3	3UT00054470

Finisher tool



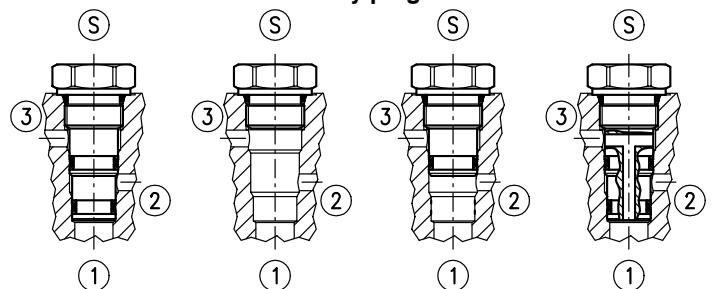
Cavity	Code number
08/3	3UT00052740
10/3	3UT00054180
12/3	3UT00054300
16/3	3UT00054480

Tap



Cavity	Code number
08/3	3UT03416UNF
10/3	3UT07814UNF
12/3	3UT0111612UN
16/3	3UT0151612UN

Cavity plugs



Cavity	Code number	①	②	③	Ⓢ
08/3	3XTP3535100	X	X	X	X
	4TP5531500	0	0	0	X
	3XTP3534000	0	0	X	X
	3XTP3534800	0	X	0	X
10/3	3XTP3545700	X	X	X	X
	3XTP1542300	0	0	0	X
	3XTP3545701	0	X	0	X
12/3	3XTP3558200	X	X	X	X
	3XTP1552900	0	0	0	X
	3XTP35558201	0	X	0	X
16/3	3XTP3578400	X	X	X	X
	3XTP1572900	0	0	0	X

X=Closed 0=Open