



**Sequence
valves**

**Automatic
reversing
valves**

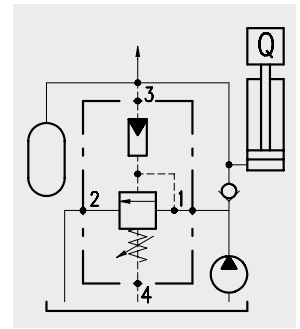
SEQUENCE VALVES

Index

Hydraulic diagram	Type	Description	Maximum flow up to		Maximum pressure		Page
			<i>l/min</i>	<i>US gpm</i>	<i>bar</i>	<i>psi</i>	
	SG..A	Direct acting, external pilot, spool type	50	13	300	4350	67

Operation

Oil flow is permitted from 1 to 2 when the pressure value in 1 is same as the spring set value. The passing between 1 and 2 is shut upon reaching a set percentage value of the setting pressure (valve differential control). These valves are mainly designed as pilot valves to control charging of accumulators. When the accumulator is charged, the flow can be changed from 1 to 2 for other applications.



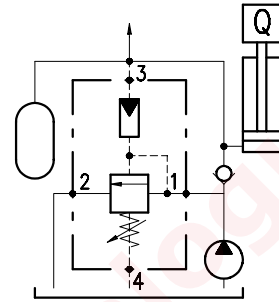
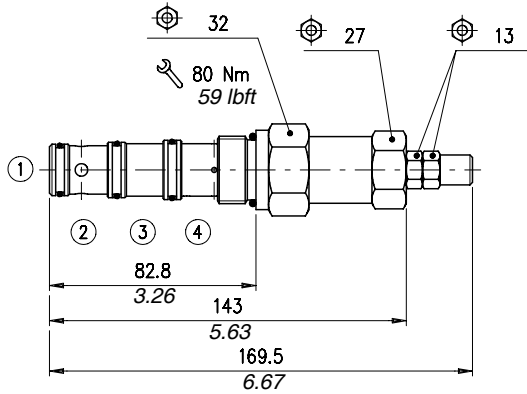
Performance

Cartridges

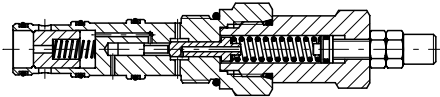
Type	Maximum flow		Maximum pressure		Application range with standard springs	Working pressure restore value	Oil leak from 1 to 2	Oil leak from 1 to 4	Cavities and tools	Weight	
	l/min	US gpm	bar	psi						kg	lb
SG12A	50	13	300	4350	20÷100 bar - 290÷1450 psi (test setting 50 bar - 725 psi at 1 l/min. - 0.26 US gpm) 50÷200 bar - 725÷2900 psi (test setting 150 bar - 2200 psi at 1 l/min. - 0.26 US gpm) 100÷300 bar - 1450÷4350 psi (test setting 100 bar - 290 psi at 1 l/min. - 0.26 US gpm) 100÷250 bar - 1450÷3600 psi (test setting 180 bar - 2600 psi at 1 l/min. - 0.26 US gpm)	***% of the valve setting value	***cc ³ /min in ³ /min	***cc ³ /min in ³ /min	see cavity SAE 12-4 page 89	0,52	1.15

*** for information contact Sales Department.

Dimensions and hydraulic circuit

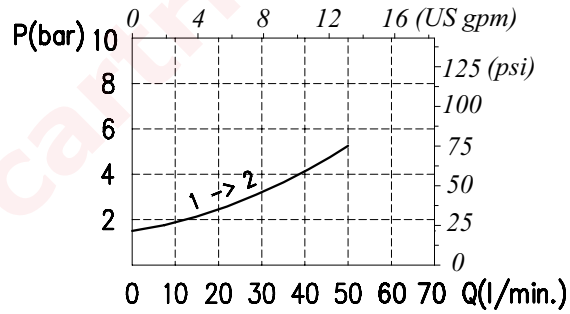


Section



Rating diagrams

Pressure drop diagram



Order code

SG12A / 0 - □ - □ - □

Adjustments
(see page 80)

- S (screw)
- V (handknob)
- W (copped adjustment)

Pressure settings

- 1) 20÷100 bar (72.5÷725 psi)
- 2) 50÷200 bar (725÷2900 psi)
- 3) 100÷300 bar (1450÷4350 psi)

Seals

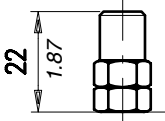
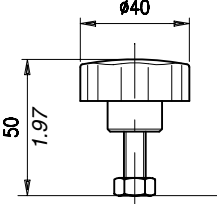
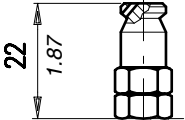
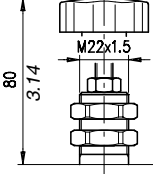
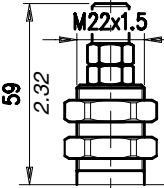
- B) Buna
- V) Viton

Adjustments

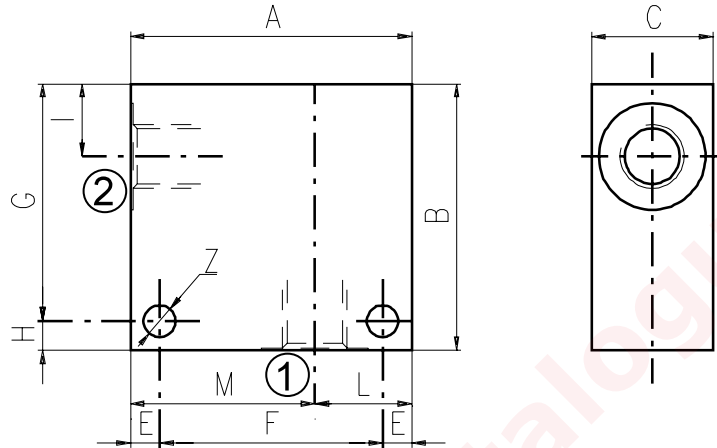
Description and operation

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>Panel mount+handknob "PV"</p>
	<p>Panel mount "P"</p>		

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

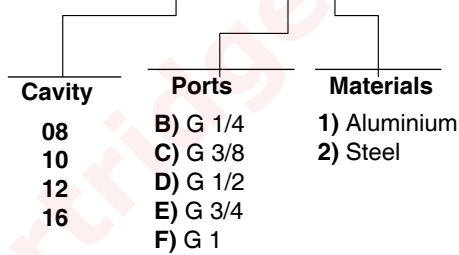


Cavità	Attacchi		A	B	C	E	F	G	H	I	L	M	Z
SAE 8/2	G 1/2	mm	70	65	35	7	56	53	12	14,5	35	35	6,5
		in	2.75	2.56	1.38	0.27	2.20	2.09	0.47	0.57	1.38	1.38	0.25
	G 1/4	mm	50	50	30	6	38	44	6	14,8	20	30	6,5
		in	1.97	1.97	1.18	0.24	1.50	1.73	0.24	0.58	0.79	1.18	0.25
	G 3/8	mm	50	50	30	6	38	44	6	14,8	20	30	6,5
		in	1.97	1.97	1.18	0.24	1.50	1.73	0.24	0.58	0.79	1.18	0.25
SAE6	mm	50	50	30	6	38	44	6	14,8	20	30	6,5	
	in	1.97	1.97	1.18	0.24	1.50	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

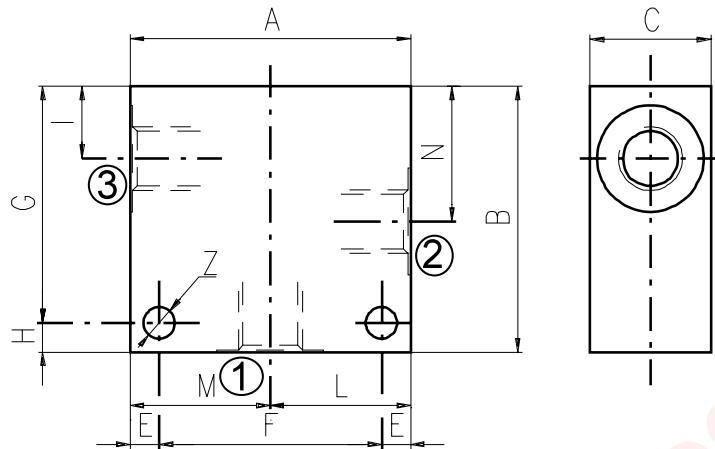
Cavity	Ports	A	B	C	E	F	G	H	I	L	M	Z	
SAE 16/2	G 1/2	mm	80	90	50	10	60	80	10	25	35	45	10,5
		in	3.15	3.54	1.97	0.39	2.36	3.15	0.39	0.98	1.38	1.77	0.41
	G 3/4	mm	80	90	50	10	60	80	10	25	35	45	10,5
		in	3.15	3.54	1.97	0.39	2.36	3.15	0.39	0.98	1.38	1.77	0.41
	G 1	mm	85	100	60	10	65	90	10	23,5	40	45	10,5
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

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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	1.77	0.31	2.52	3.6	0.31	0.98	1.57	1.57	2.11	0.33

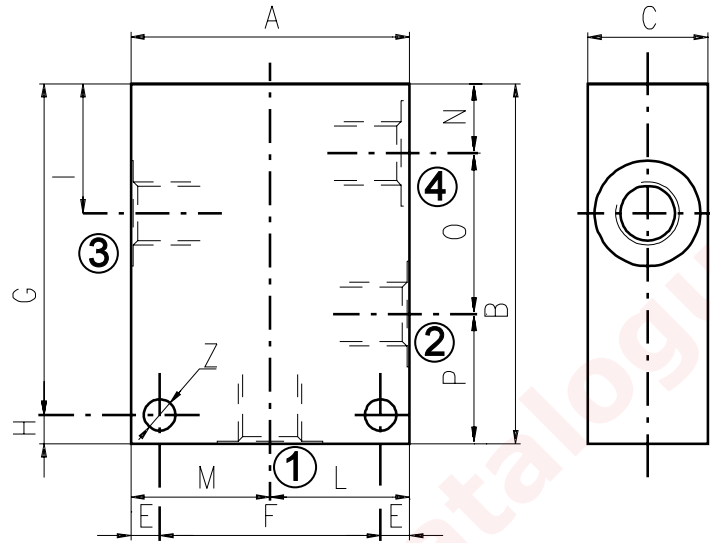
Cavity	Ports	A	B	C	E	F	G	H	I	L	M	N	Z	
SAE 16/3	G 3/4	mm	90	100	50	10	70	90	10	25,1	45	45	53,5	10,5
		in	3.54	3.94	1.97	0.39	2.75	3.54	0.39	0.99	1.77	1.77	2.11	0.41
	SAE12	mm	90	105	50	10	70	95	10	25,1	45	45	53,5	10,5
		in	3.54	4.13	1.97	0.39	2.75	3.74	0.39	0.99	1.77	1.77	2.11	0.41
	SAE16	mm	90	105	50	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

Order code _____

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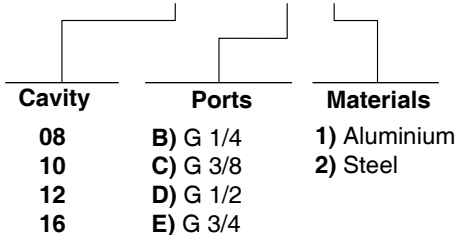
Cavity	Ports	Materials
08	B) G 1/4	1) Aluminium
10	C) G 3/8	2) Steel
12	D) G 1/2	
16	E) G 3/4	

Material	Max pressure	
	bar	psi
Alluminium	210	3050
Steel	350	5100



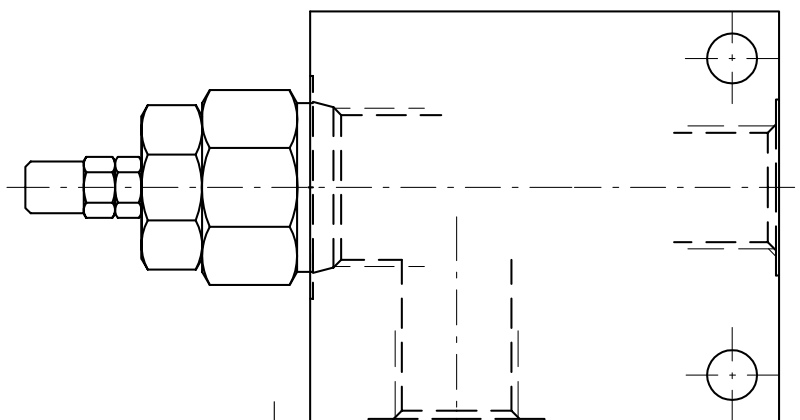
Cavity	Ports		A	B	C	E	F	G	H	I	L	M	N	O	P	Z
SAE 8/4	G 1/4	mm	60	75	30	7	46	63	12	29,1	30	30	14,8	29,1	31,1	6,5
		in	2.36	2.95	1.18	0.27	1.81	2.48	0.47	1.14	1.18	1.18	0.58	1.14	1.22	0.25
	SAE6	mm	60	75	30	7	46	63	12	29,1	30	30	14,8	29,1	31,1	6,5
		in	2.36	2.95	1.18	0.27	1.81	2.48	0.47	1.14	1.18	1.18	0.58	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	2.36	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
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

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Informations

How to order valves with body



CARTRIDGE CODE

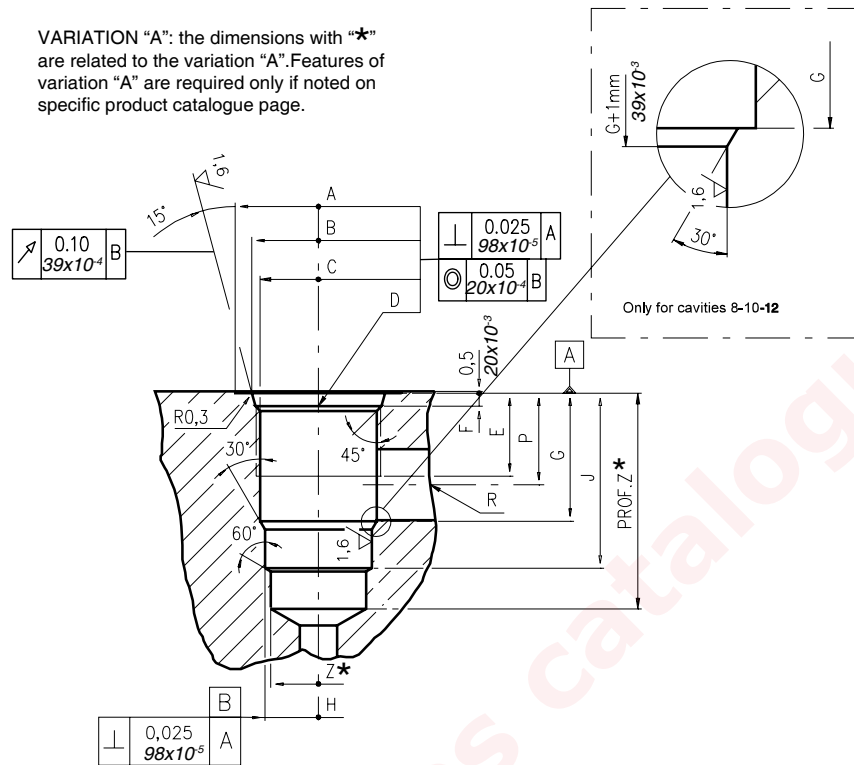
BILLET CODE

SW-12-A/O-S-2V/

D- 1-1

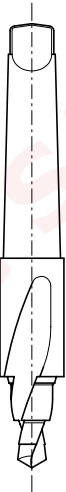
Cavity	Ports	Materials
08	B) G 1/4	1) Aluminium 2) Steel
10	C) G 3/8	
12	D) G 1/2	
16	E) G 3/4	
	F) G 1	
	J) SAE 6	
	K) SAE 8	
	L) SAE 10	
	M) SAE 12	
	N) SAE 16	

VARIATION "A": the dimensions with "*" are related to the variation "A". Features of variation "A" are required only if noted on specific product catalogue page.



\		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*
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
08/2	mm	27	20,66	17,42	3/4-16 UNF	12,50	2,50	18,20	12,72	29,50	-	-	-	-	14,00	8,00	-	-	-	-	-	12,00	39
	in	1,06	0,81	0,68		0,49	0,10	0,72	0,50	1,16	-	-	-	-	0,55	0,31	-	-	-	-	-	0,47	1,53
10/2	mm	30	24,00	20,62	7/8-14 UNF	16,00	2,80	24,00	15,90	33,50	-	-	-	-	18,30	11,00	-	-	-	-	-	14,50	40
	in	1,18	0,94	0,81		0,63	0,11	0,94	0,62	1,32	-	-	-	-	0,72	0,43	-	-	-	-	-	0,57	1,57
12/2	mm	38	29,23	24,73	1 1/16-12 UNF	19,00	3,50	34,15	22,25	46,80	-	-	-	-	24,50	19,00	-	-	-	-	-	21,50	60
	in	1,50	1,15	0,97		0,75	0,14	1,34	0,87	1,84	-	-	-	-	0,96	0,75	-	-	-	-	-	0,85	2,36
16/2	mm	45	35,58	31,34	1 5/16-12 UNF	22,00	3,50	34,00	28,62	47,00	-	-	-	-	24,50	19,00	-	-	-	-	-	25,50	70
	in	1,77	1,40	1,23		0,87	0,14	1,34	1,13	1,85	-	-	-	-	0,96	0,75	-	-	-	-	-	1,00	2,75

Rougher tool



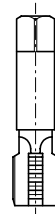
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10/2	3UT00056610
12/2	3UT00054090
16/2	3UT00054510

Finisher tool



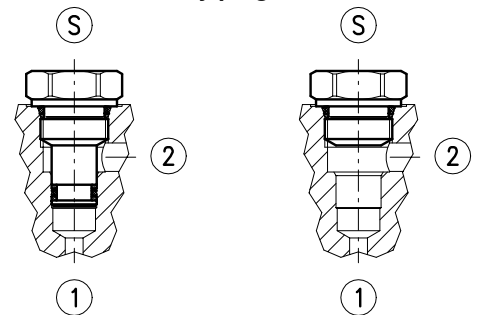
Cavity	Code number
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10/2	3UT00054580
12/2	3UT00054670
16/2	3UT00054520

Tap



Cavity	Code number
08/2	3UT03416UNF
10/2	3UT07814UNF
12/2	3UT0111612UN
16/2	3UT0151612UN

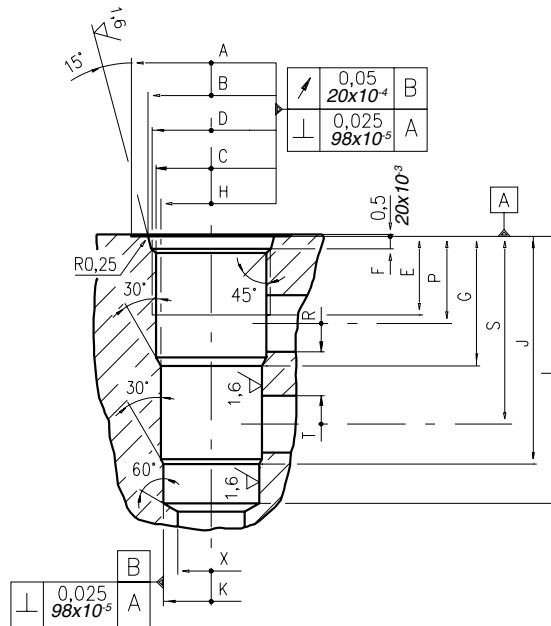
Cavity plugs



Cavity	Code number	①	②	Ⓢ
08/2	3XTP3533700	X	X	X
	4TP5531500	0	0	X
10/2	3XTP3544200	X	X	X
	3XTP1542300	0	0	X
12/2	3XTP3555400	X	X	X
	3XTP1552900	0	0	X
16/2	3XTP3575500	X	X	X
	3XTP1572900	0	0	X

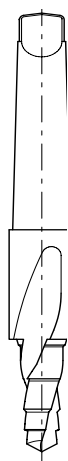
X=Closed 0=Open

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



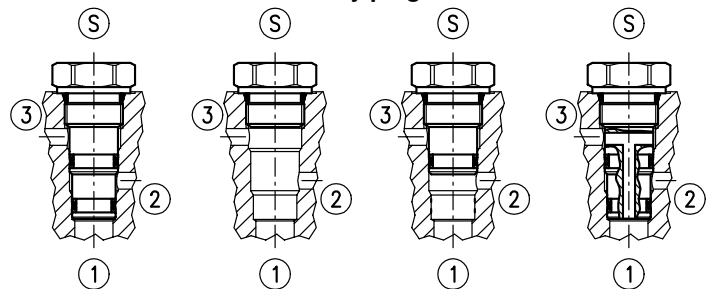
Cavity	Code number
08/3	3UT00052740
10/3	3UT00054180
12/3	3UT00054300
16/3	3UT00054480

Tap



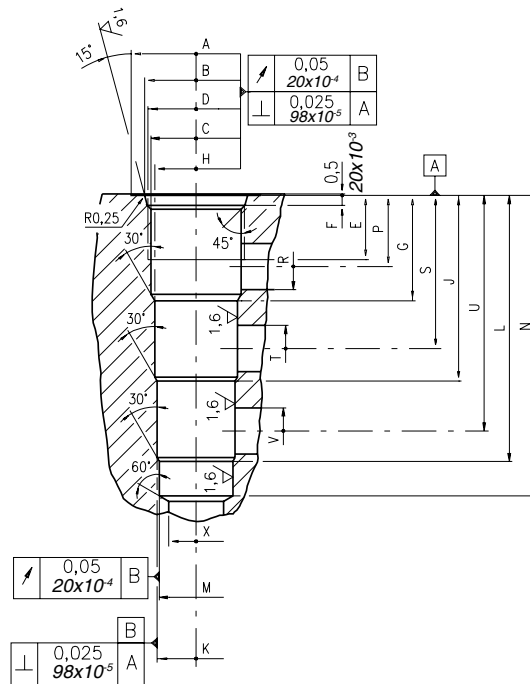
Cavity	Code number
08/3	3UT03416UNF
10/3	3UT07814UNF
12/3	3UT0111612UN
16/3	3UT0151612UN

Cavity plugs



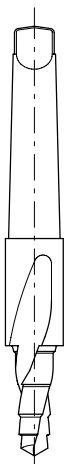
Cavity	Code number	①	②	③	Ⓢ
08/3	3XTP3535100	X	X	X	X
	4TP5531500	0	0	0	X
	3XTP3534000	0	0	X	X
	3XTP3534800	0	X	0	X
10/3	3XTP3545700	X	X	X	X
	3XTP1542300	0	0	0	X
	3XTP3545701	0	X	0	X
12/3	3XTP3558200	X	X	X	X
	3XTP1552900	0	0	0	X
	3XTP3558201	0	X	0	X
16/3	3XTP3578400	X	X	X	X
	3XTP1572900	0	0	0	X

X=Closed 0=Open



\	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 ø MIN	Prof. Z MIN	
08/4	mm	28,00	20,66	17,42	3/4-16 UNF	12,50	2,50	19,10	15,90	33,30	14,30	47,60	12,72	57,60	14,30	5,50	28,60	5,50	42,90	5,50	11,00	-	-
	in	1.10	0.81	0.68		0.49	0.10	0.75	0.62	1.31	0.56	1.87	0.50	2.27	0.56	0.22	1.12	0.22	1.69	0.22	0.43	-	-
10/4	mm	30	24,00	20,62	7/8-14 UNF	16,00	2,80	23,60	19,08	39,60	17,50	55,40	15,90	63,50	18,30	6,50	34,00	6,50	50,00	6,50	14,00	-	-
	in	1.18	0.94	0.81		0.63	0.11	0.93	0.75	1.56	0.69	2.18	0.62	2.50	0.72	0.26	1.34	0.25	1.97	0.25	0.55	-	-
12/4	mm	38	29,23	24,73	1 1/16-12 UNF	19,00	3,56	29,50	23,82	51,50	22,25	73,60	20,65	83,33	21,50	11,00	43,50	11,00	66,00	11,00	19,00	-	-
	in	1.50	1.15	0.97		0.75	0.14	1.16	0.94	2.03	0.87	2.90	0.81	3.28	0.85	0.43	1.71	0.43	2.60	0.43	0.75	-	-
16/4	mm	45	35,60	31,34	1 5/16-12 UNF	22,00	3,50	36,50	28,62	64,30	27,02	92,07	25,45	104,00	24,60	16,00	53,00	16,00	81,50	16,00	19,00	-	-
	in	1.77	1.40	1.23		0.87	0.14	1.44	1.13	2.53	1.06	3.62	1.00	4.09	0.97	0.63	2.09	0.63	3.21	0.63	0.75	-	-

Rougher tool



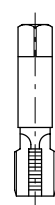
Cavity	Code number
08/4	3UT00052040
10/4	3UT00054250
12/4	3UT00054410
16/4	3UT00054820

Finisher



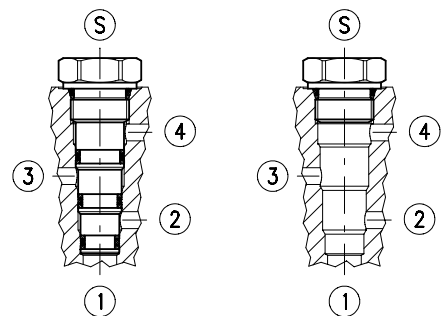
Cavity	Code number
08/4	3UT00052020
10/4	3UT00054260
12/4	3UT00054420
16/4	3UT00054830

Tap



Cavity	Code number
08/4	3UT03416UNF
10/4	3UT07814UNF
12/4	3UT111612UN
16/4	3UT0151612UN

Cavity plugs



Cavity	Code number	①	②	③	④	Ⓢ
08/4	3XTP3536500	X	X	X	X	X
	4TP5531500	0	0	0	0	X
10/4	3XTP3548301	X	X	X	X	X
	3XTP1542300	0	0	0	0	X
12/4	3XTP3559300	X	X	X	X	X
	3XTP1552900	0	0	0	0	X
16/4	3XTP357B300	X	X	X	X	X
	3XTP1572900	0	0	0	0	X

X=Closed 0=Open