

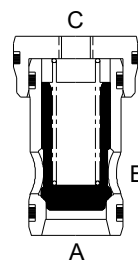
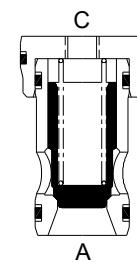
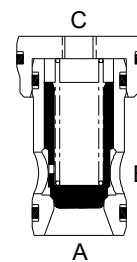
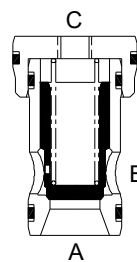
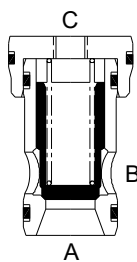
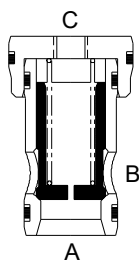
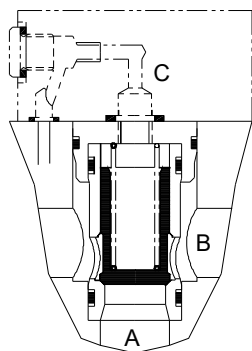
Description

These cartridge valves are used to control oil pressure flow rate or direction and are designed for insertion into cavities machined as per ISO 7368. These cartridges are available in two area ratios, four cracking pressures and seven poppet styles. The covers are available for different functions like directional control, pressure control, unloading, flow control etc.

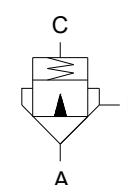
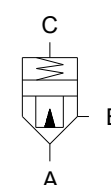
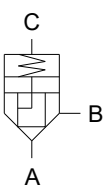
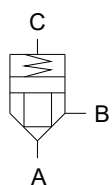
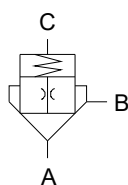
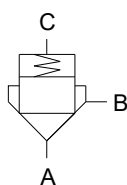


Section

AA = Area of poppet exposed to port 'A'
 CA = Area of poppet exposed to control pressure
 AA : CA = Area Ratio



Hydraulic Symbol



Standard cartridge
Area ratio
1:1

Relief cartridge
(with orifice)
Area ratio
1:1

Standard cartridge
Area ratio
1:1.5

Check cartridge
Area ratio
1:1.5

Check Cartridge
with Cushion nose
Area ratio
1:1.5

Cartridge with
Cushion nose
Area ratio
1:1.5

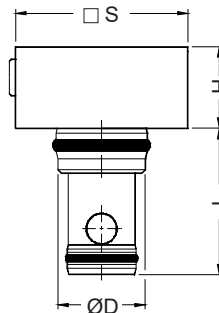
Cartridge with
Cushion nose
Area ratio
1:1

Relief Cartridge orifice		
Size	Tap	Orifice Size (mm)
NG 16	1/16" NPT	0.8
NG 25	1/16" NPT	0.8
NG 32	1/16" NPT	0.8
NG 40	1/8" NPT	0.8

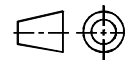
Unit Dimensions

Cartridge and cover

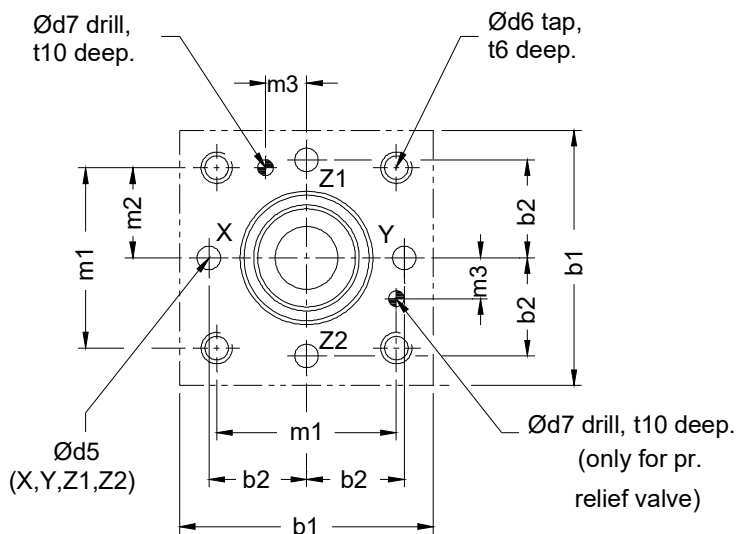
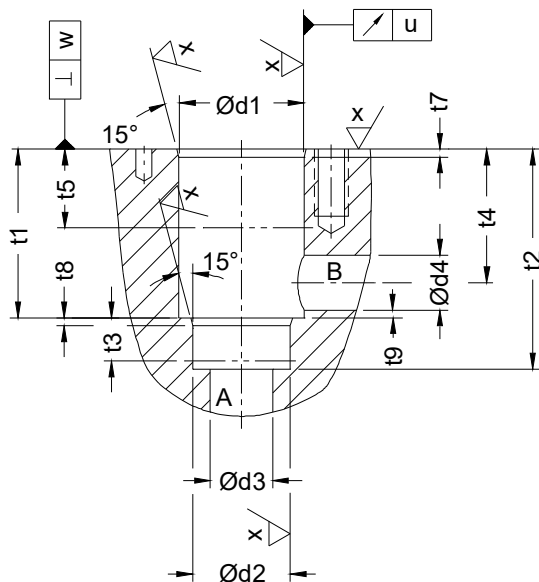
Size	16	25	32	40
H	35	40	50	60
L	56	72	85	105
ØD	32	45	60	75
□S	65	85	102	125



Dimensions in mm.



Cavity machining details



Designation	Size 16	Size 25	Size 32	Size 40
b1	65	85	102	125
b2 ±0.2	25	33	41	50
Ød1 H8	32	45	60	75
Ød2 H8	25	34	45	55
Ød3	16	25	32	40
Ød4 { min.	16	25	32	40
max.	25	32	40	50
Ød5 max.	4	6	8	10
Ød6	M8	M12	M16	M20
Ød7 H13	4	6	6	6
m1 ±0.2	46	58	70	85
m2 ±0.2	23	29	35	42.5
m3 ±0.2	10.5	16	17	23
t1 ± 0.1	43	58	70	87
0.0				
t2 ± 0.1	56	72	85	105
0.0				
t3	11	12	13	15
t4 (for min.	34	44	52	64
Ød4) max.	29.5	40.5	48	59
t5	20	30	30	30
t6	20	25	35	45
t7	2	2.5	2.5	3
t8	2	2.5	2.5	3
t9 min.	0.5	1	1.5	2.5
t10	10	10	10	10
u	0.03	0.03	0.03	0.05
w	0.05	0.05	0.1	0.1
x Ra	1.6	1.6	1.6	1.6

2 PORT SLIP-IN CARTRIDGE VALVES (ISO 7368) (CV)

Technical Specifications

Construction Seat type
 Mounting type Insert in cavity conforming to DIN 24342, ISO 7368
 Mounting position Optional
 Direction of flow Cartridge type

1 : 1 ratio -- A to B
 1 : 1.5 ratio -- A to B or B to A
 Check valve -- A to B
 Relief valve -- A to B

Operating pressure at port A, B, X, Y, Z1, Z2 350 bar

Area ratio 1 : 1 -- P type
 1 : 1.5 -- K type
 1 : 1 -- R type
 1 : 1.5 -- C type

Cracking pressure	Spring Type	1 : 1		1 : 1.5	
		A to B	A to B	B to A	B to A
		Cracking pressure in bar			
	X	0	0	0	0
	A	0.3	0.45	0.9	0.9
	B	0.6	0.9	1.8	1.8
	C	1.2	1.8	3.6	3.6
	D	2.3	3.5	7.1	7.1

Hydraulic medium Mineral oil
 Viscosity range 10 cSt to 380 cSt.
 Fluid temperature range -10 °C to +80 °C.
 Fluid cleanliness requirement As per ISO 16/13.
 Pilot volume (cm³)

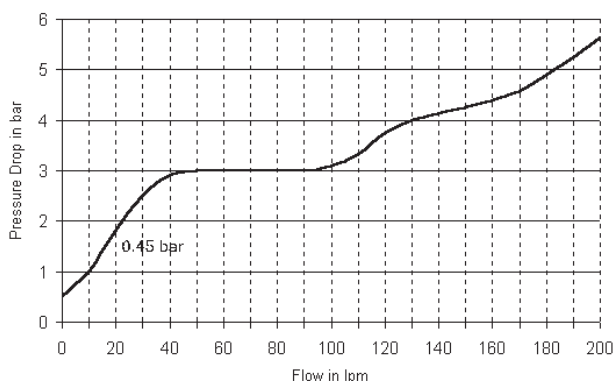
Size	16	25	32	40
With Cushion nose	1.6	4.9	9.8	22.2
Without cushion nose	1.6	3.8	7.4	16.6

Flow handling capacity Refer performance curve

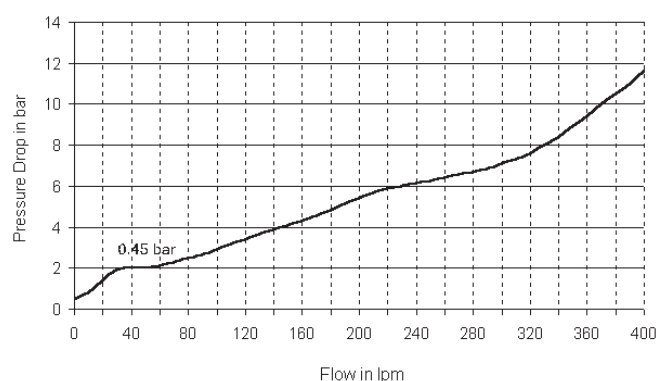
Oil Used : VG 46, Temp. : 28° C, Test Date :14-10-2003

Note: The graph is applicable for Flow from A – B and B – A, with a variation of +/- 1 bar.

Model: CV16*AO-*



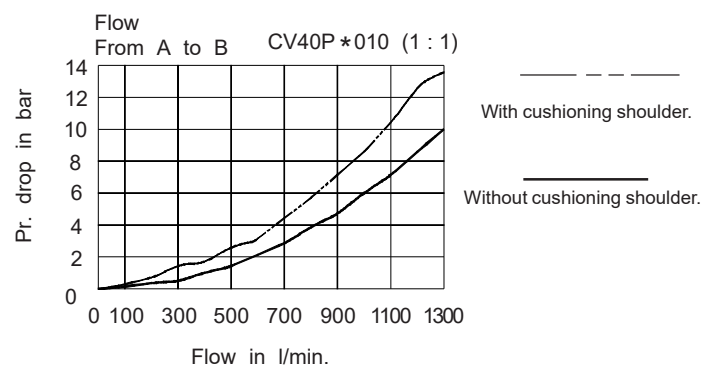
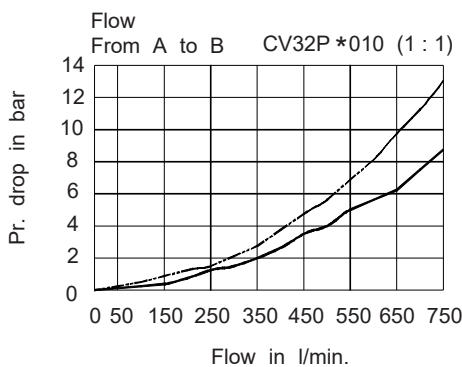
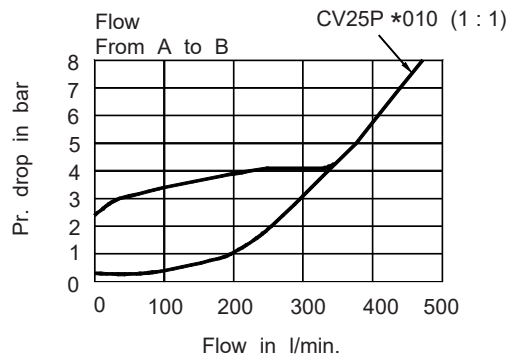
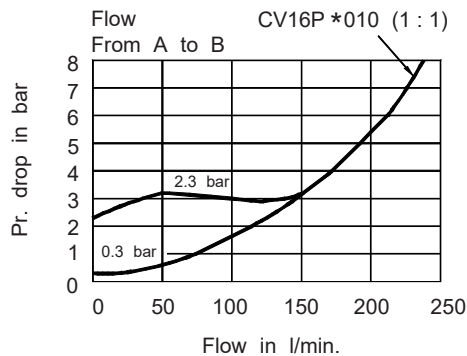
Model : CV25K*O-*



2 PORT SLIP-IN CARTRIDGE VALVES (ISO 7368) (CV)

Performance Curve

Oil used : ISO VG 68, Viscosity : 68 cSt @ 40 °C, temp @ test : 50 °C.



Ordering Code

CV 16 P B C 01

Cartridge valve

Size 16, 25, 32 & 40.

Area ratio and special function		
1 : 1	Standard function	P
	Relief function	R
1 : 1.5	Standard function	K
	Check valve function	C

Design code subject to change. Installation dimensions remain same. for design code 01 thru 09.

Poppet construction

O	Without cushion shoulder
C	With cushion shoulder

Spring type	1:1		1:1.5	
	A to B	A to B	A to B	B to A
Cracking pressure in bar				
X	0	0	0	0
A	0.3	0.45	0.9	0.9
B	0.6	0.9	1.8	1.8
C	1.2	1.8	3.6	3.6
D	2.3	3.5	7.1	7.1

Note : Cover to be ordered separately.
Cushion shoulder construction poppet is available only for 1 : 1.5 area ratio for all the sizes.