

General Description

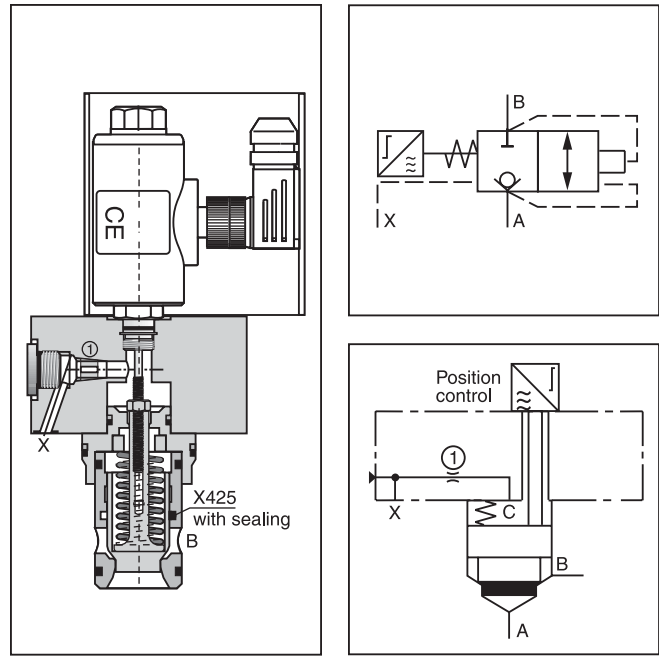
Series C10D*C 2/2 way seat valves are equipped with an inductive switch to monitor the closed position. After the poppet is lifted from the seat, the design of the poppet ensures that only a minimum amount of oil can pass the seat before the inductive switch changes the signal.

The poppet has a 60/40 area ratio (AA = 0.6 AC, AB = 0.4 Ac) and is capable for flow from A to B and B to A.

For sizes NG80 and NG100 a proximity switch 90° to the poppet is used.

Features

- German trade association certificate, No. 00 077.
- Cavity and mounting pattern according to ISO 7368.
- Monitored closed position.
- Inductive switch CE conform.
- Optional poppet sealing.
- 8 sizes NG16 up to NG100.



Ordering Information

□	C	10	D	□	C	101	E	□	/	0	□	99	00	□
Seals	2/2 Way Valve	Poppet Shape	Hydraulically Operated	Design Series	Inductive Monitoring German Trade Association Certificate 00 077 1)	Cover	Slip-in Cartridge	Valve Size		Cavity and Mounting Pattern ISO 7368	Spring	① Orifice		Poppet Seal

Code	Description
Omit	Nitrile
V	Fluorocarbon

Code	Description
E	NG16-NG63
F	NG80 - NG100

Code	Description
16	NG16
25	NG25
32	NG32
40	NG40
50	NG50
63	NG63
80	NG80
100	NG100

Code	Description
L	0.1 Bar (1.5 PSI)
N	0.5 Bar (7.3 PSI)
S	1.6 Bar (23.2 PSI)
U	4.0 Bar (58.0 PSI)

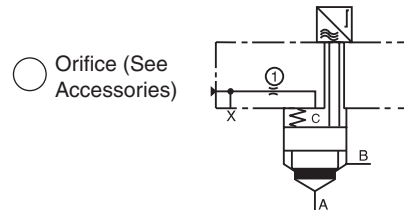
Code	Description
Omit	None
X425	Only with Spring Codes S and U

Code	Description
99	Without Orifice, Open Orifice Options

Weight:

C10DEC*16	1.5 kg (3.3 lbs.)
C10DEC*25	2.7 kg (6.0 lbs.)
C10DEC*32	4.3 kg (9.5 lbs.)
C10DEC*40	7.4 kg (16.3 lbs.)
C10DEC*50	12.0 kg (26.5 lbs.)
C10DEC*63	23.0 kg (50.7 lbs.)
C10DFC*80	53.0 kg (116.9 lbs.)
C10DFC*100	89.0 kg (196.2 lbs.)

1) Certificate only for NG16-NG63



Orifice Recommendation and Thread

Orifice	NG16	NG25	NG32	NG40	NG50	NG63	NG80	NG100
No.: 1	1/16 Ø0.8	1/16 Ø1.2	1/16 Ø1.5	1/8 Ø2.0	1/8 Ø2.5	1/8 Ø3.0	1/8 Ø3.0	1/8 Ø3.0

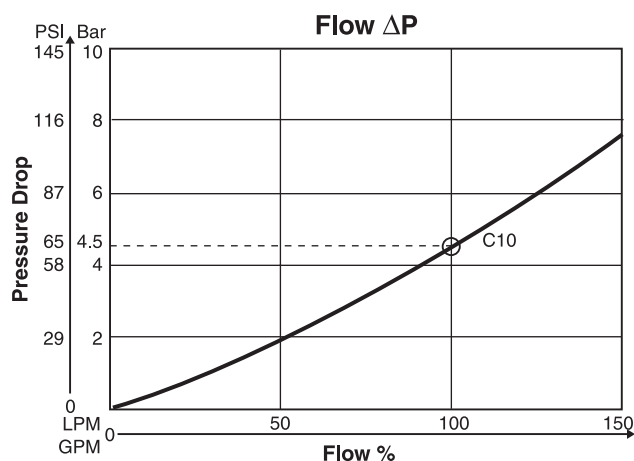
Orifices Ø in mm, thread in NPT

Seal and Bolt Kits

Nominal Size	16	25	32	40	50	63	80	100
Seal Kit								
Fluorocarbon	SK-CBE160V	SK-CBE250V	SK-CBE320V	SK-CBE400V	SK-CBE500V	SK-CBE630V	SK-CBE800V	SK-CBE100V
Nitrile	SK-CBE160	SK-CBE250	SK-CBE320	SK-CBE400	SK-CBE500	SK-CBE630	SK-CBE800	SK-CBE100
Bolt Kit	BK414 (BK84)	BK391 (BK77)	BK415 (BK85)	BK416 (BK86)	BK417 (BK87)	BK418 (BK88)	BK419	BK420
Recommended Torque	27 Nm (19.9 lb.ft.)	94 Nm (69.3 lb.ft.)	234 Nm (172.6 lb.ft.)	460 Nm (339.3 lb.ft.)	460 Nm (339.3 lb.ft.)	1570 Nm (1157.9 lb.ft.)	935 Nm (689.6 lb.-ft.)	1910 Nm (1408.6 lb.-ft.)

Attention! The switch may only be adjusted by the valve manufacturer. The exchange of individual modules is not permitted.

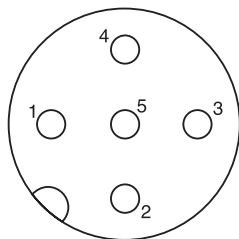
Performance Curve



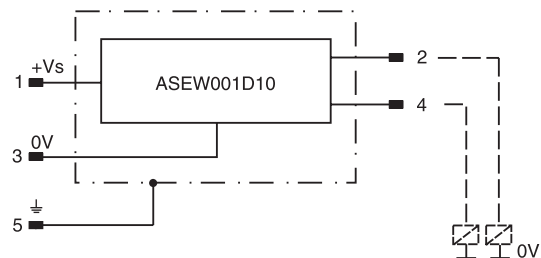
Specifications

General									
Size		NG16	NG25	NG32	NG40	NG50	NG63	NG80	NG100
Interface	2-way slip-in cartridge valve according to ISO 7368								
Mounting Position	Unrestricted								
Operation	Hydraulic								
Ambient Temperature	-40°C to +60°C (-40°F to +140°F)								
Hydraulic									
Maximum Operating Pressure	350 Bar (5075 PSI)								
Nominal Flow $\Delta p = 5 \text{ Bar (73 PSI)}$	LPM	220	450	900	1300	1800	3600	5000	7500
	GPM	(58)	(119)	(238)	(344)	(476)	(952)	(1322)	(1984)
Fluid	Hydraulic oil according to DIN 51524 ... 525								
Viscosity Recommended	30 to 80 cSt (mm ² /s)								
Viscosity Permitted	20 to 380 cSt (mm ² /s)								
Fluid Temperature Recommended	+30°C to +50°C (+86°F to +122°F)								
Fluid Temperature Permitted	-20°C to +60°C (-4°F to +140°F)								
Filtration	NAS 1638 class 9, to be achieved by $\beta_{10} > 75$ ISO 18/16/13								
Control Volume at Maximum Stroke	cm³	2.03	6.45	12.21	20.32	39.40	94.56	950	1300
Control Surface (Surface C = 100%) A/B	Approximately 60% / 40% related on surface C								
Opening Pressure Flow Direction B to A	L = 0.25 Bar (3.6 PSI), N 1.25 Bar (18.1 PSI), S = 4.0 Bar (58.0 PSI), U = 10.0 Bar (58.0 PSI)								
Opening Pressure Flow Direction A to B	L = 0.16 Bar (2.3 PSI), N 0.85 Bar (12.3 PSI), S = 2.7 Bar (39.2 PSI), U = 6.6 Bar (95.7 PSI)								
Electrical (Position Control per IEC 61076-2-101 (M12x1) NG16 to NG63)									
Protection Class	IP65 in accordance with EN60529 (plugged and mounted)								
Ambient Temperature	0°C to +50°C (+32°F to +122°F)								
Supply Voltage / Ripple	18V to 42V / 10%								
Current Consumption without Load	≤30mA								
Output Current per Channel, Ohmic	400mA, maximum								
Output Load per Channel, Ohmic	100k Ohm, minimum								
Output Drop at 0.2A	≤1.1 VDC, maximum								
Output Drop at 0.4A	≤1.6 VDC, maximum								
EMC	EN50081-1 / EN50082-2								
Ambient Field Strength	<1200A/m, maximum tolerance								
Distance to Next AC Solenoid	>0.1 m (3.9 in.), minimum								
Interface	Mx12x1								
Wiring	5 x 0.25 mm ² , minimum, braid shield recommended								
Wiring Length	50 m (164 ft.), maximum recommended								

M12 Pin Assignment



- 1 + Supply 18...42V
- 2 Normally open
- 3 0V
- 4 Normally closed
- 5 Earth ground



Extract from the German Trade Association Certificate (Applies to NG16 to NG63 only)



Fachausschuss Maschinenbau,
 Hebezeuge, Hütten- und
 Walzwerksanlagen
Prüf- und Zertifizierungsstelle
 im BG-PRÜFZERT

Hauptverband der gewerblichen
 Berufsgenossenschaften

00 077

Bescheinigungs-Nummer

Name und Anschrift
 des Bescheinigungsinhabers:
 (Auftraggeber) **Parker Hannifin GmbH**
 Hydraulic Controls Division
 Gutenbergstr. 38 - 40, D- 41564 Kaarst

Name und Anschrift
 des Herstellers: **Parker Hannifin GmbH**
 Hydraulic Controls Division
 Gutenbergstr. 38 - 40, D- 41564 Kaarst

Zeichen des Auftraggebers: Zeichen der Prüf- und Zertifizierungsstelle:
 MHHW 612.1:612.28-UB Gb/bt

Produktbezeichnung: **2/2- Wegesitzventil mit Überwachung
 Einbauventil nach DIN 24342 (entspricht DIN ISO 7368)**

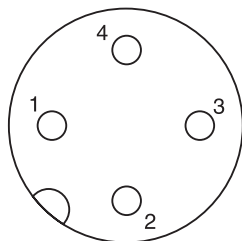
Typ: C10 DEC 101.....

Das geprüfte Baumuster entspricht den einschlägigen Bestimmungen der EG-Maschinenrichtlinie 2006/42/EG.

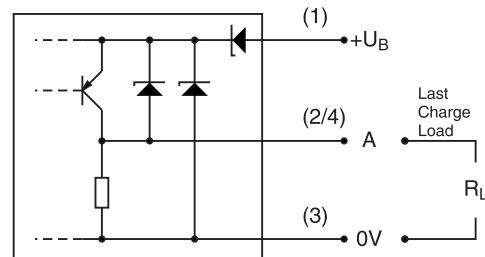
Electrical Specifications

Electrical (Position Control per IEC 61076-2-101 (M12x1) NG80 to NG100)	
Protection Class	IP65 in accordance with EN60529 (plugged and mounted)
Ambient Temperature	0°C to +50°C (+32°F to +122°F)
Supply Voltage U_S / Ripple	10V to 30V / 10%
Current Consumption without Load	≤10mA
Output Current per Channel, Ohmic	200mA, maximum
Output Load per Channel, Ohmic	100k Ohm, minimum
Output Drop at 0.2A	≤2 VDC, maximum
EMC	EN61000-6-4 / EN61000-6-2
Distance to Next AC Solenoid	>0.1 m (3.9 in.), minimum
Interface	Mx12x1
Wiring	3 x 0.14 mm ² minimum, brad shield recommended
Wiring Length	50 m (164 ft.), maximum recommended

M12 Pin Assignment



- 1 + U_S 10...30V
- 2 Out A: not connected
- 3 0V
- 4 Out A: normally closed



Definition

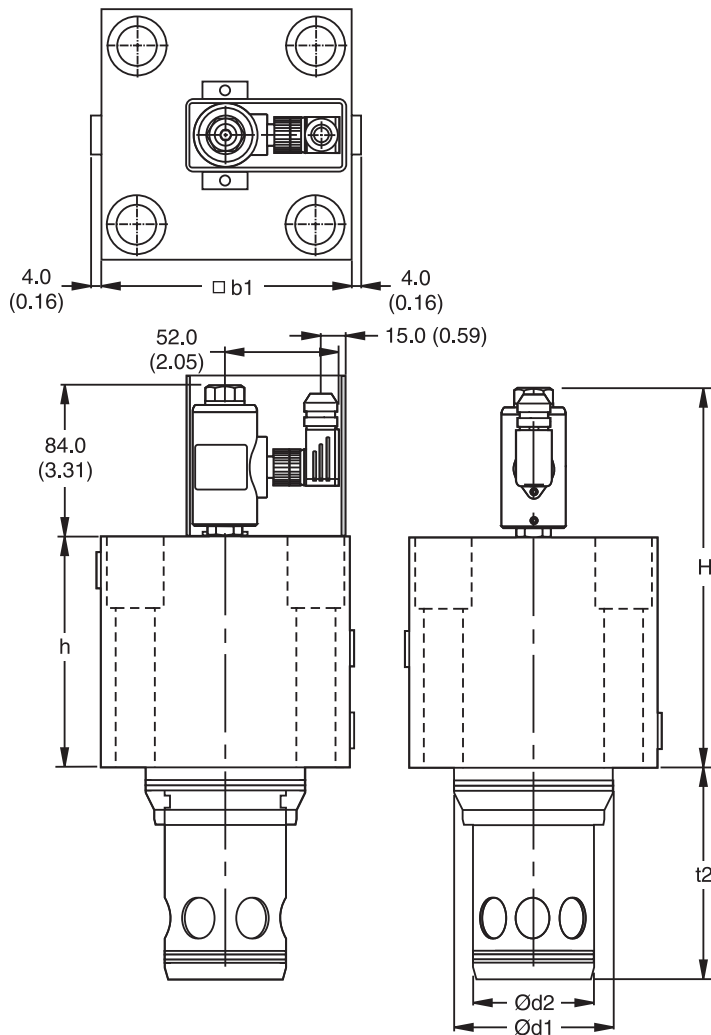
Start position monitored:

The switching point of the inductive switch is within the closed position of the poppet.

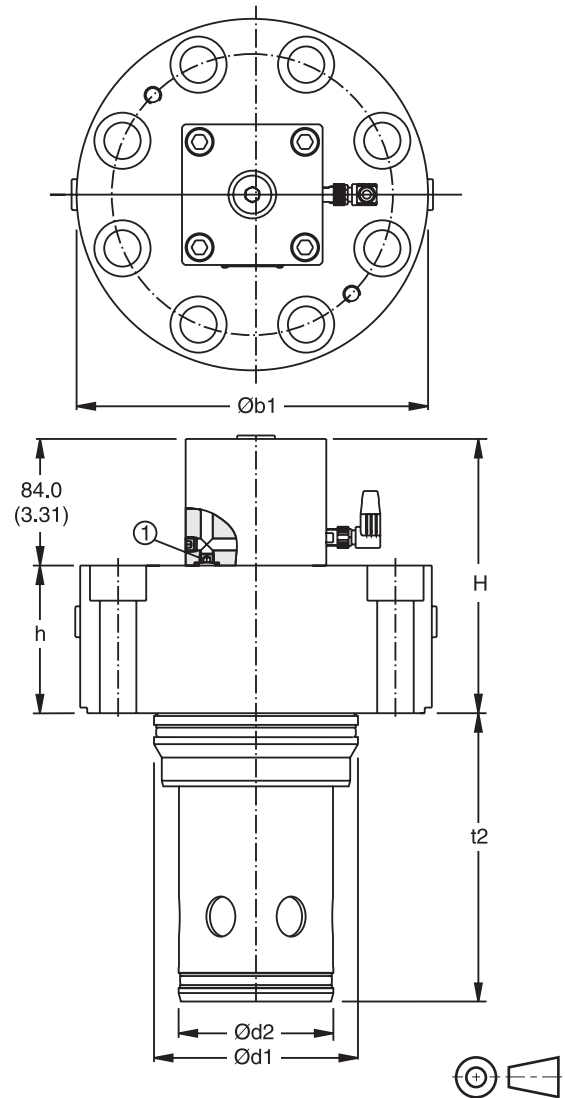
After the inductive switch changes the signal the valve opens.

Inch equivalents for millimeter dimensions are shown in (**)

NG16 to NG63



NG80 to NG100



Cavity and mounting pattern according to ISO7368

Nominal Size	H	h	b1	d1	d2	t2 ^{+0.1}
16	130.0 (5.12)	40.0 (1.57)	79.0 ¹⁾ (3.11)	32.0 (1.26)	25.0 (0.98)	56.0 (2.20)
25	135.0 (5.31)	45.0 (1.77)	85.0 (3.35)	45.0 (1.77)	34.0 (1.34)	72.0 (2.87)
32	140.0 (5.51)	50.0 (1.97)	102.0 (4.02)	60.0 (2.36)	45.0 (1.77)	85.0 (3.35)
40	150.0 (5.91)	60.0 (2.36)	125.0 (4.92)	75.0 (2.95)	55.0 (2.17)	105.0 (4.13)
50	160.0 (6.30)	70.0 (2.76)	140.0 (5.51)	90.0 (3.54)	68.0 (2.68)	122.0 (4.80)
63	175.0 (6.89)	85.0 (3.35)	180.0 (7.09)	120.0 (4.72)	90.0 (3.54)	155.0 (6.10)
80	195.0 (7.68)	105.0 (4.13)	250.0 (9.84)	145.0 (5.71)	110.0 (4.33)	205.0 (8.07)
100	210.0 (8.27)	120.0 (4.72)	300.0 (11.81)	180.0 (7.09)	135.0 (5.31)	245.0 (9.65)

¹⁾ Width 65mm (2.56 in.)