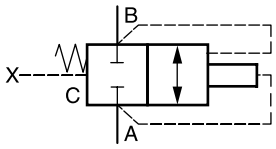
8

Port identifications - graphics



Description

Depending on valve function and design, power ports A and B can be used for inlet or outlet.

The control port C is the connection between cover and cartridge unit.

Further control ports

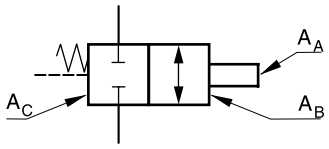
X control oil connection, inlet

Y control oil connection, outlet

Z_1 control oil connection, preferred inlet

Z_2 control oil connection, preferred outlet

Control surfaces - graphics



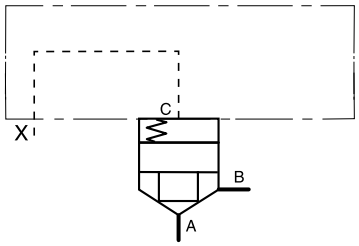
Description

A_A Area, which is subjected to the pressure at port A

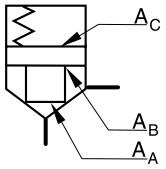
A_B Area, which is subjected to the pressure at port B

A_C Area, which is subjected to the pressure at port C

Port identifications - schematics

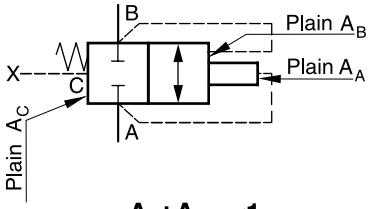


Control surfaces - schematics

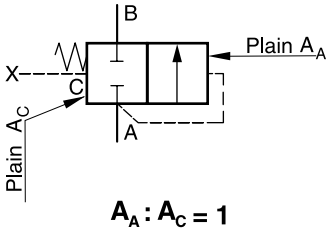


8

Area representation

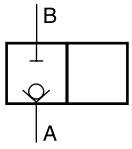


$A_A : A_C = <1$

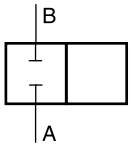


$A_A : A_C = 1$

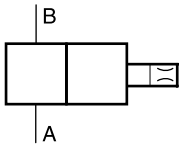
Design representation



Seat design



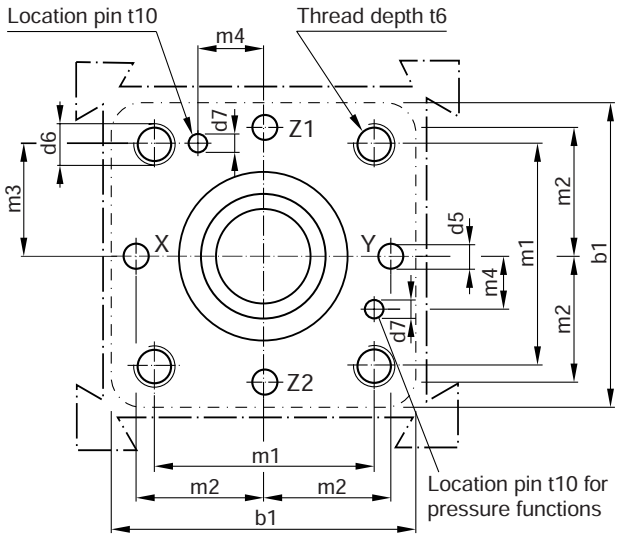
Spool design

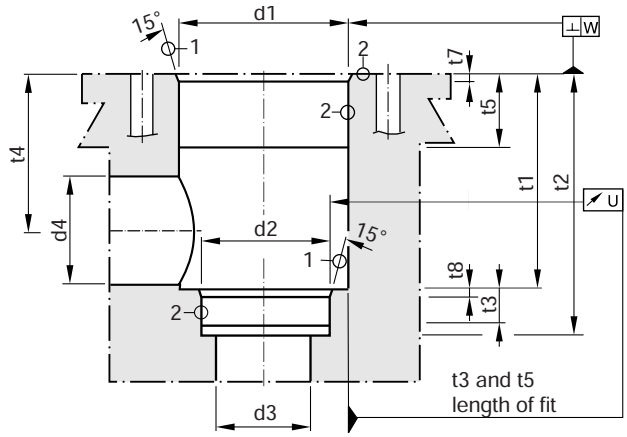


Dampening poppet

Code: ISO 7368-B*-*-2-A/B

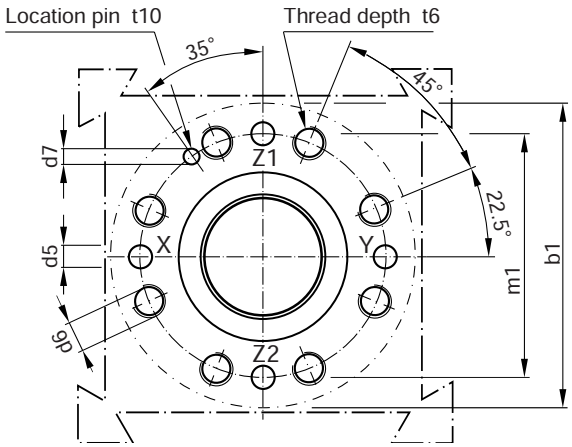
NG 16 to NG 63





Code: ISO 7368-B*-*-2-A

NG 80 to NG 100



Required surface finish:

$\textcircled{1} = \sqrt{R_{max}}16, \textcircled{2} = \sqrt{R_{max}}8$

Cartridge manifold block series CB see chapter 12.

8

Nom. size	b1	d1 H7	d2 H7	d3	d3 max	d4	d4 max[1)]	d5 max	d6	d7 H13	m1±0.2	m2±0.2	m3±0.2
16	65	32	25	16	18	16	25	4	M 8	4	46	25	23
25	85	45	34	25	25.5	25	32	6	M 12	6	58	33	29
32	102	60	45	32	36	32	40	8	M 16	6	70	41	35
40	125	75	55	40	43	40	50	10	M 20	6	85	50	42.5
50	140	90	68	50	56	50	63	10	M 20	8	100	58	50
63	180	120	90	63	74	63	80	12	M 30	8	125	75	62.5
80	250	145	110	80	93	80	100	16	M 24	10	200	–	–
100	300	180	135	100	115	100	125	20	M 30	10	245	–	–

Nom. size	m4±0.2	t1+0.1	t2+0.1	t3	t4	t4 max[1)]	t5	t6	t7	t8	t10	U	W
16	10.5	43	56	11	34	29.5	20	20	2	2	10	0.03	0.05
25	16	58	72	12	44	40.5	30	25	2.5	2.5	10	0.03	0.05
32	17	70	85	13	52	48.0	30	35	2.5	2.5	10	0.03	0.1
40	23	87	105	15	64	59.0	30	45	3	3	10	0.05	0.1
50	30	100	122	17	72	65.5	35	45	4	3	10	0.05	0.1
63	38	130	155	20	95	86.5	40	65	4	4	10	0.05	0.2
80	–	175	205	25	130	120	40	50	5	5	10	0.05	0.2
100	–	210	245	29	155	142	50	53	5	5	10	0.05	0.2

[1)] Only together with $d4_{max}$ and $t4_{max}$

2 way slip-in cartridge valves are hydraulically controlled seat valves that are designed for compact block installation. Slip-in cartridge, cover, and pilot system are valve elements that permit single and combined functions.

Series CE offers poppet and sleeve combinations for directional functions. Series CP offers a cartridge for pressure functions and has to be combined with corresponding covers.

Features

- Installation cavity and mounting pattern according to ISO 7368
- 5 poppet shapes
- 5 poppet springs
- Optional seal between ports B and C
- Cover with adjustable stroke limitation
- Cover with mounting pattern for pilot valve assembly
- Combinations for complex functions
- Normally open cartridge (CE*F04)

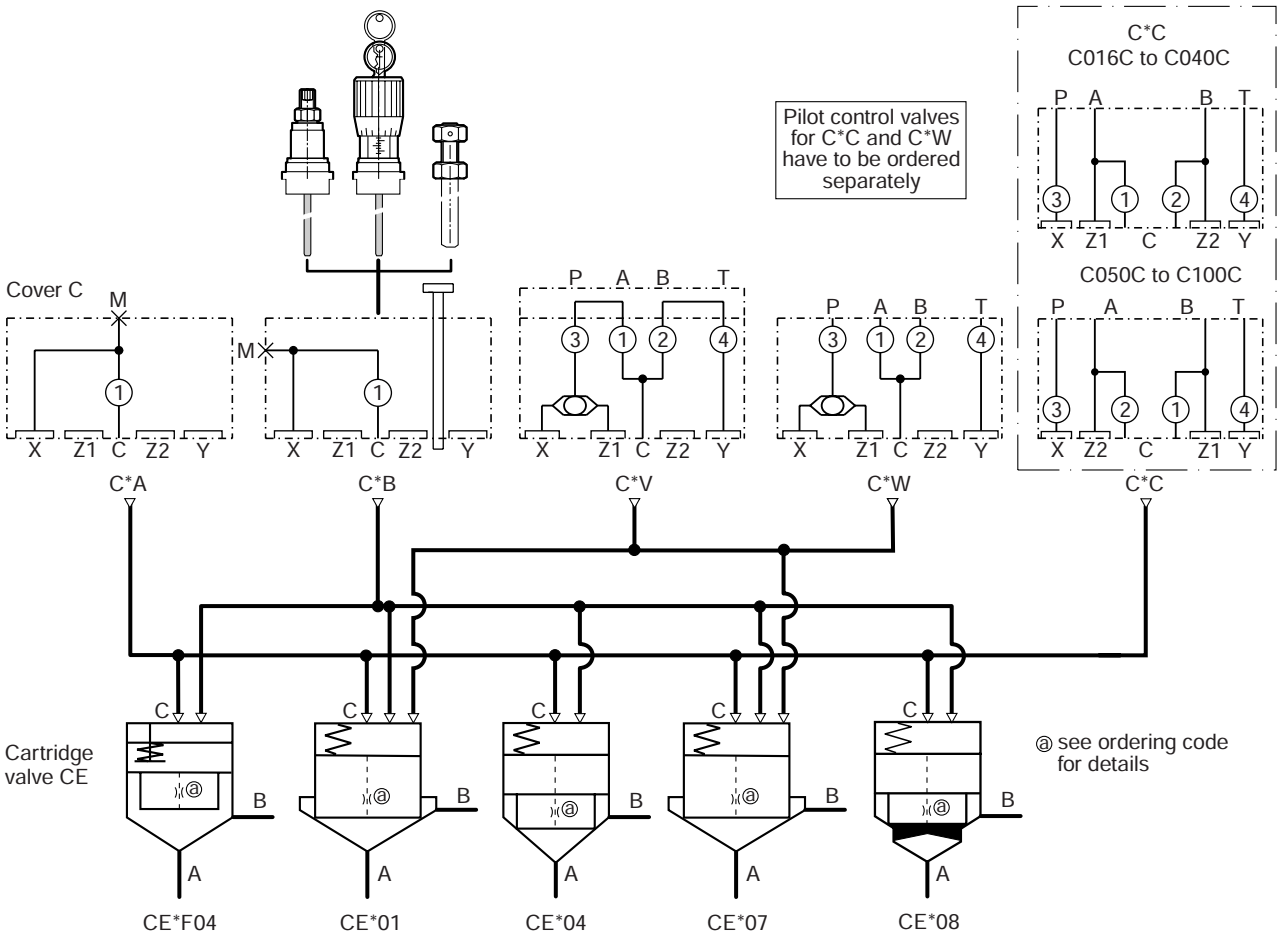

CE


C*B


C*A


C*C

Pilot control for directional functions



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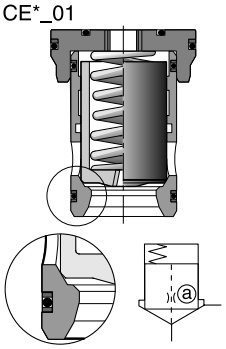
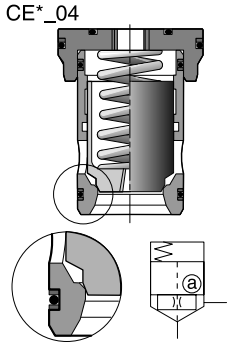
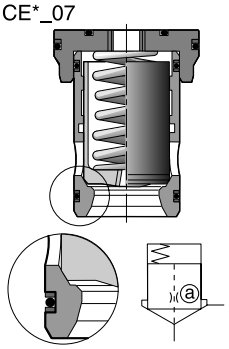
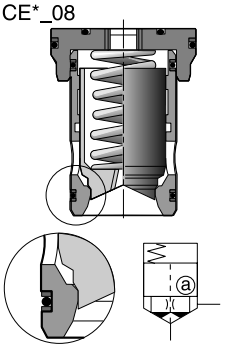
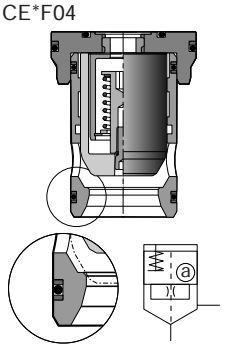
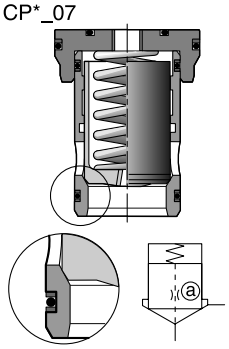
Cartridge valve for directional function

CE*_01	CE*_04	CE*_07	CE*_08	CE*F04
				
1 : 1 $A_A = A_C$	1 : 1.67 $A_A = 0.6\ A_C$ $A_B = 0.4\ A_C$	1 : 1.04 $A_A = 0.96\ A_C$	1 : 1.67 $A_A = 0.6\ A_C$ $A_B = 0.4\ A_C$ dampening poppet	1 : 1.67 $A_A = 0.6\ A_C$ $A_B = 0.4\ A_C$ normally open

Cartridge valve for pressure function

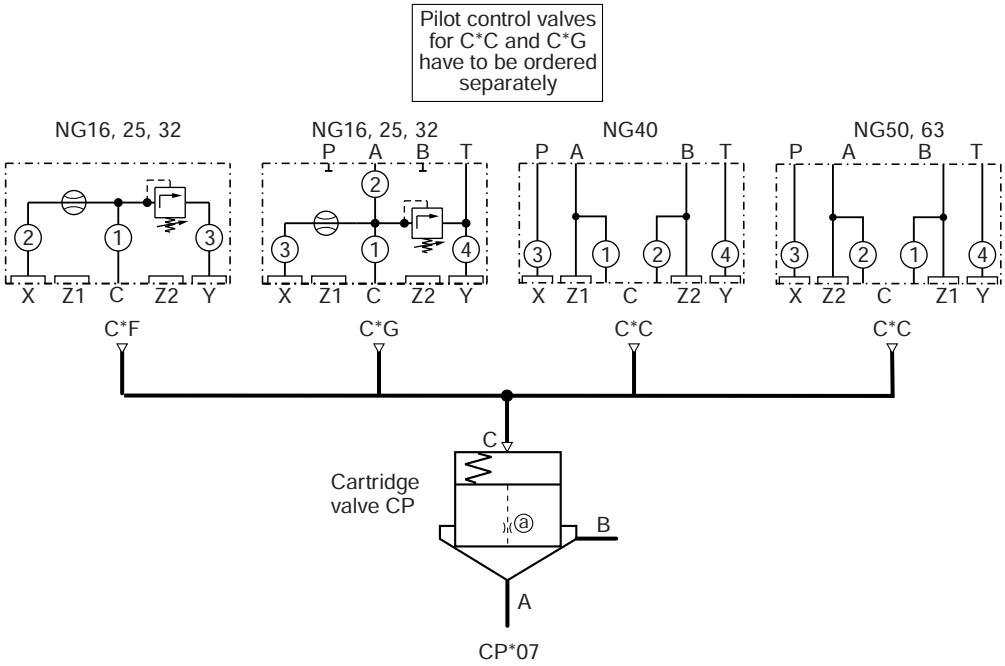
CP*_07



1 : 1.04
$A_A = 0.96\ A_C$

Characteristic curves see complete valves pressure function.

Pilot control for pressure function



CE — **Cartridge** | **Nominal size** | **Design** | **Poppet area ratio** | **Spring** | **Orifice** | **Seal** | **Design series** (not required for ordering)

Code	Size
016	**NG16**
025	**NG25**
032	**NG32**
040	**NG40**
050	**NG50**
063	**NG63**
080	**NG80**
100	**NG100**

Code	Normal position	Description
C	**Closed**	**No poppet sealing**
S [1]	Closed	With poppet sealing
F [2]	Open	No poppet sealing

Code	Poppet area ratio
01	**$A_A = A_C$**
04	**$A_A = 0.6A_C$, $A_B = 0.4A_C$**
07 [3]	$A_A = 0.96A_C$
08	**$A_A = 0.6A_C$, $A_B = 0.4A_C$ with dampening**

Code	Seal
N	**NBR**
V	FPM

Code	Size	Poppet	Orifice [4]
99	all	all	without orifice, open
00	NG16-NG50	01, 04	closed bottom
00	NG16-NG50	07, 08	plug
00	NG63-NG100	all	plug

Code	Spring
L	Opening pressure 0.1 bar
N	Opening pressure 0.5 bar
S	**Opening pressure 1.6 bar**
T	Opening pressure 2.5 bar
U	Opening pressure 4.0 bar

[1] Only for spring S, T and U. Not for poppet code 01 (NG16 to NG63).
[2] Only with spring code L, only with closed bottom.
[3] Not for NG80 and NG100.
[4] Orifice size in 1/10 mm, eg. 1.2 mm orifice - code 12. Thread size 1/16 NPTF.

CP — **Cartridge** | **Nominal size** | **Design** | **Poppet area ratio $A_A = 0.96A_C$** | **Spring** | **Orifice** | **Seal** | **Design series** (not required for ordering)

Code	Size
016	**NG16**
025	**NG25**
032	**NG32**
040	**NG40**
050	**NG50**
063	**NG63**

Code	Normal position	Description
C	**Closed**	**No poppet sealing**
S	Closed	With poppet sealing

Code	Spring
S	**Opening pressure 1.6 bar**
T	Opening pressure 2.5 bar
U	Opening pressure 4.0 bar

Code	Seal
N	**NBR**
V	FPM

Code	Orifice [1]
00	**Plug**
09	0.9 mm for NG16
11	1.1 mm for NG25
12	1.2 mm for NG32
13	1.3 mm for NG40
14	1.4 mm for NG50
15	1.5 mm for NG63

[1] Recommended diameter.

Bold letters =
Short-term availability

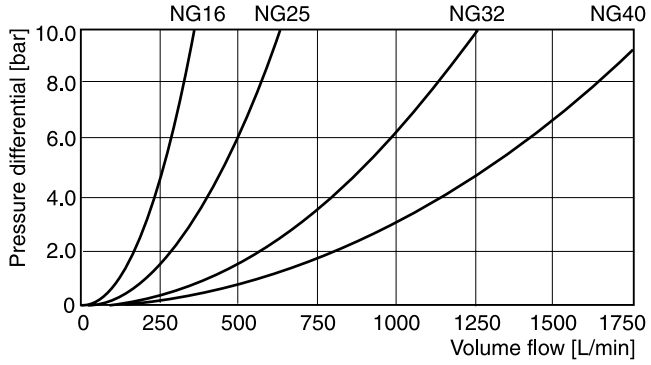
For spare parts see "Accessories" in this chapter.
For orifice recommendations see "Combination Examples" in this chapter.

Technical data

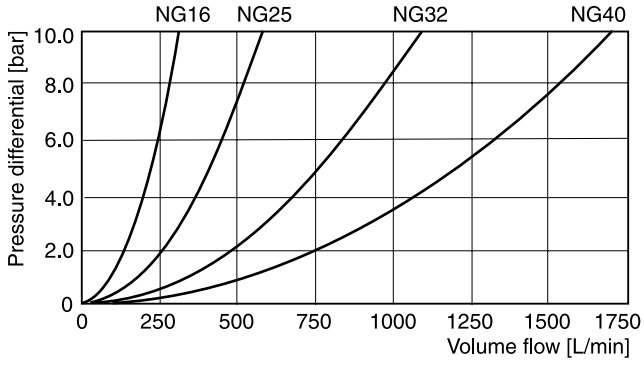
General									
Design type			2 way slip-in cartridge valves according to ISO 7368						
Actuation			hydraulic						
Mounting position			unrestricted						
Ambient temperature		[C°]	-20....+60						
$MTTF_D$ value		[years]	150						
Nominal size			NG16	NG25	NG32	NG40	NG50	NG63	NG80	NG100
Weight	cartridge	[kg]	0.3	0.6	1.1	1.7	3.7	7.1	12.8	27
Hydraulic									
Fluid			Hydraulic fluid according to DIN 51524...51525						
Viscosity	recommended	[mm²/s]	30...80						
	max. permitted	[mm²/s]	20...380						
Fluid temperature		[C°]	-20...+60						
Max. contamination			ISO 4406 1999; 18/16/13						
Operating pressure	without pilot valve	[bar]	420						
	port A, B, X, Z1, Z2	[bar]	350, 420 (depending on p_{max} of pilot valves)						
	port Y	[bar]	According to pilot system, max. 350 (depending on p_{max} of pilot valves)						
Nominal flow at Δp 5 bar	poppet 01, 04, 07	[l/min]	250	450	900	1350	1800	3600	5250	8000
	poppet 08	[l/min]	230	400	800	1250	1625	3400	5000	7500
Pilot volume requirement	at poppet 01	[cm³]	2.0	6.5	10.2	17.4	34.5	77.4	190.1	342.6
	at poppet 04		2.0	6.5	12.2	20.3	39.4	94.6	190.1	363.4
	at poppet 07		2.0	6.5	10.2	17.4	34.5	77.4	—	—
	at poppet 08		2.0	7.4	15.3	23.2	49.2	111.8	217.3	415.3
Opening pressure	flow direction A → B	[bar]	Poppet 01 / 07		spring:	L = 0.1	N = 0.5	S = 1.6	T = 2.5	U = 4.0
			Poppet 04 / 08		spring:	L = 0.2	N = 0.9	S = 2.7	T = 4	U = 6.6
Opening pressure	flow direction B → A	[bar]	Poppet 01 / 07		not possible					
			Poppet 04 / 08		spring:	L = 0.3	N = 1.3	S = 4.0	T = 6.3	U = 10.0

Performance curves (without spring and poppet seal, C-chamber unloaded)

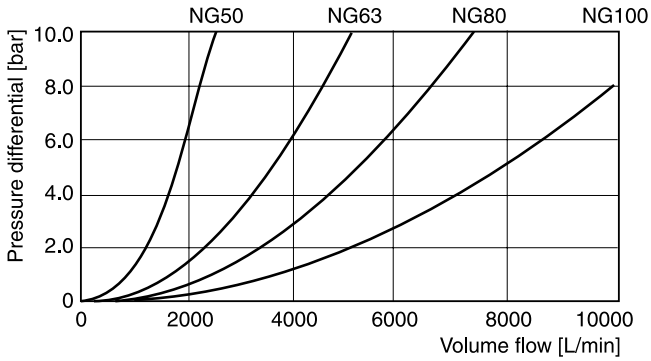
Poppet 01, 04, 07



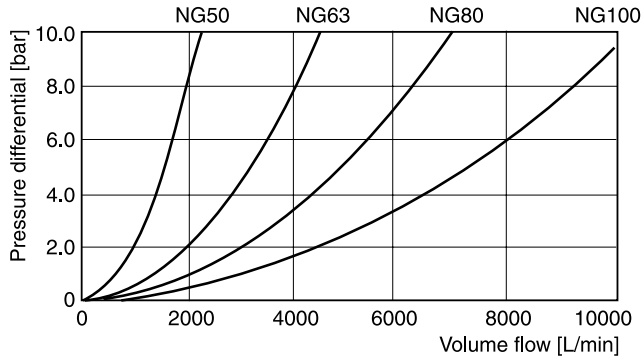
Poppet 08



Poppet 01, 04, 07



Poppet 08



All characteristic curves measured with HLP46 at 50 °C.

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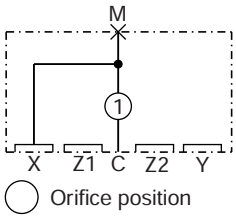
C		A	A			
Cover	**Nominal size**	**Cover with X-connection and gauge port G¼"**	**Without auxilliary function**	**Orifice**	**Seal**	**Design series** (not required for ordering)

Code	Size
016	**NG16**
025	**NG25**
032	**NG32**
040	**NG40**
050	**NG50**
063	**NG63**
080	**NG80**
100	**NG100**

Code	Seal
N	**NBR**
V	FPM

Code	Orifice
99	**Without orifice, open**

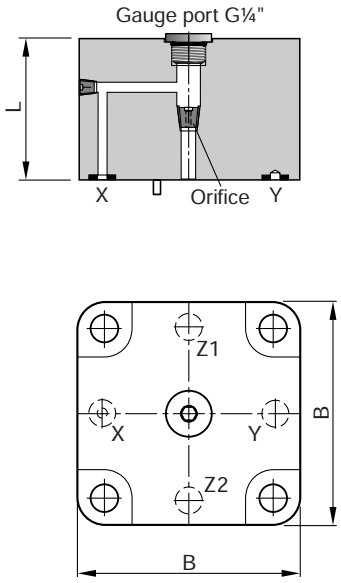


For orifice recommendations, bolt and seal kits see "Accessories" in this chapter.

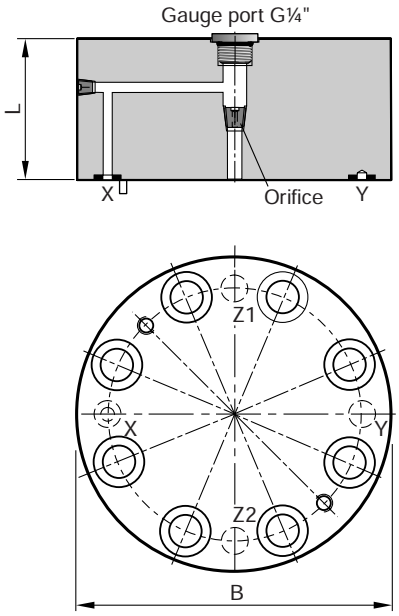
Bold letters =
Short-term availability

Dimensions

NG16 to NG63



NG80 to NG100



Ports Y, Z1 and Z2: O-ring recess diameter on valve body

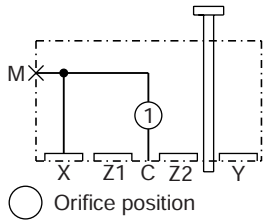
Size	B	L	Orifice thread	Weight [kg]
NG16	65	36	1/16 NPT	0.9
NG25	85	45	1/16 NPT	1.9
NG32	102	50	1/16 NPT	2.9
NG40	125	60	1/8 NPT	5.3
NG50	140	70	1/8 NPT	8.5
NG63	180	85	1/8 NPT	15.5
NG80	Ø 250	105	1/8 NPT	34
NG100	Ø 300	120	1/8 NPT	58

C		B	N			
Cover	**Nominal size**	**Cover with X-connection and stroke limiter**	**Adjustment screw/ spindle**	**Orifice**	**Seal**	**Design series** (not required for ordering)

Code	Size
016	**NG16**
025	**NG25**
032	**NG32**
040	**NG40**
050	**NG50**
063	**NG63**
080	**NG80**
100	**NG100**

Code	Seal
N	**NBR**
V	FPM

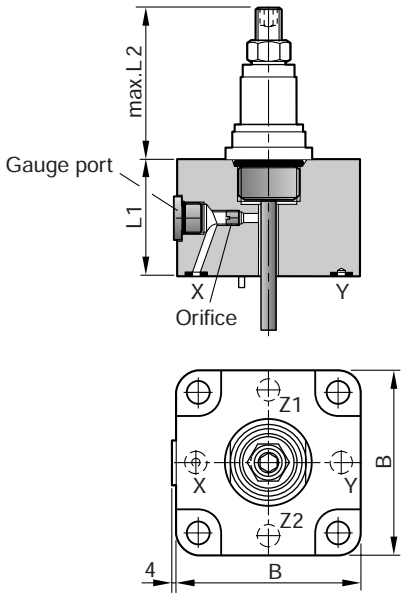
Code	Orifice
99	**Without orifice, open**



For orifice recommendations, bolt and seal kits see "Accessories" in this chapter.

Bold letters =
Short-term availability

Dimensions NG16 - NG25



Ports Y, Z1 and Z2: O-ring recess diameter on valve body

Size	B	L1	L2 max.	Gauge port	Orifice thread	Weight [kg]
NG16	65	36	72	G 1/4"	M6	0.9
NG25	85	45	72			1.9

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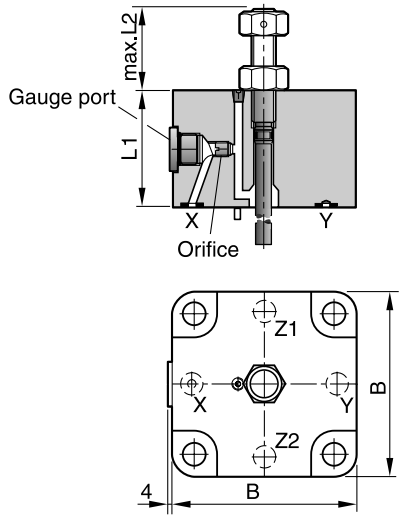
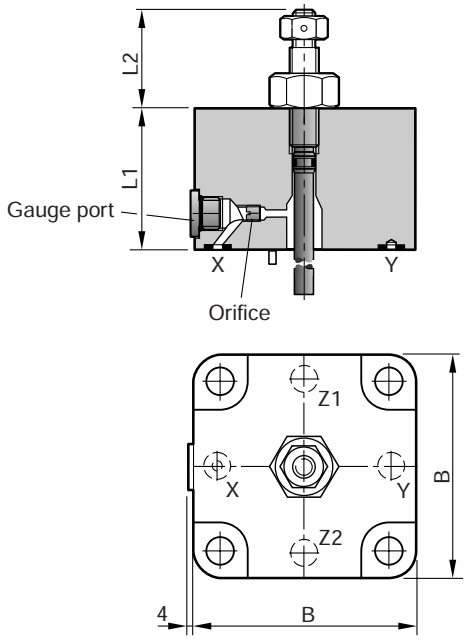
Dimensions NG32 - NG50

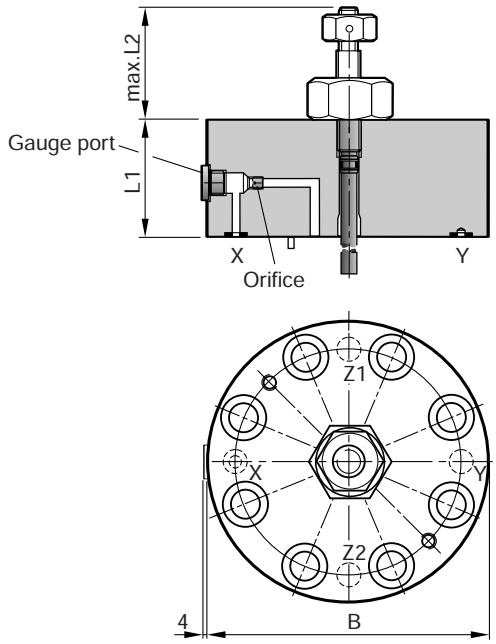


Ports Y, Z1 and Z2: O-ring recess diameter on valve body

Dimensions NG63



Dimensions NG80-100



Ports Y, Z1 and Z2: O-ring recess diameter on valve body

Size	B	L1	L2 max.	Gauge port	Orifice thread	Weight [kg]
NG32	102	50	48	G¼"	1/16 NPT	2.91
NG40	125	60	50	G¼"	1/16 NPT	5.39
NG50	140	70	50	G¼"	1/16 NPT	8.41
NG63	180	85	65	G¼"	1/8 NPT	15.1
NG80	Ø 250	105	95	G¼"	1/8 NPT	34.0
NG100	Ø 300	120	120	G¼"	1/8 NPT	60.0

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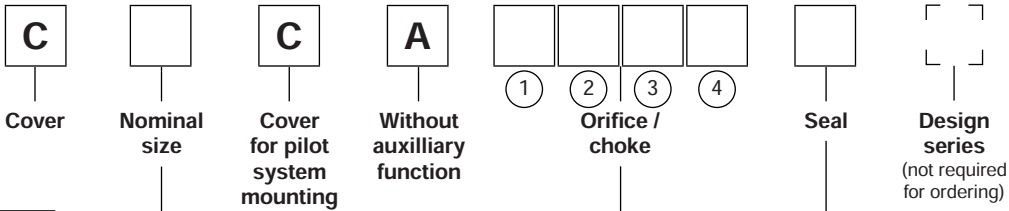
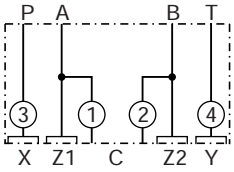


Code	Size
016	**NG16**
025	**NG25**
032	**NG32**
040	**NG40**
050	**NG50**
063	**NG63**
080	**NG80**
100	**NG100**

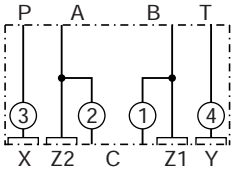
Code	Seal
N	**NBR**
V	FPM

Code	Orifice
99	**Without orifice, open**
00	**Plug**

NG16 to NG40



NG50 to NG100



Orifice position

Attention:

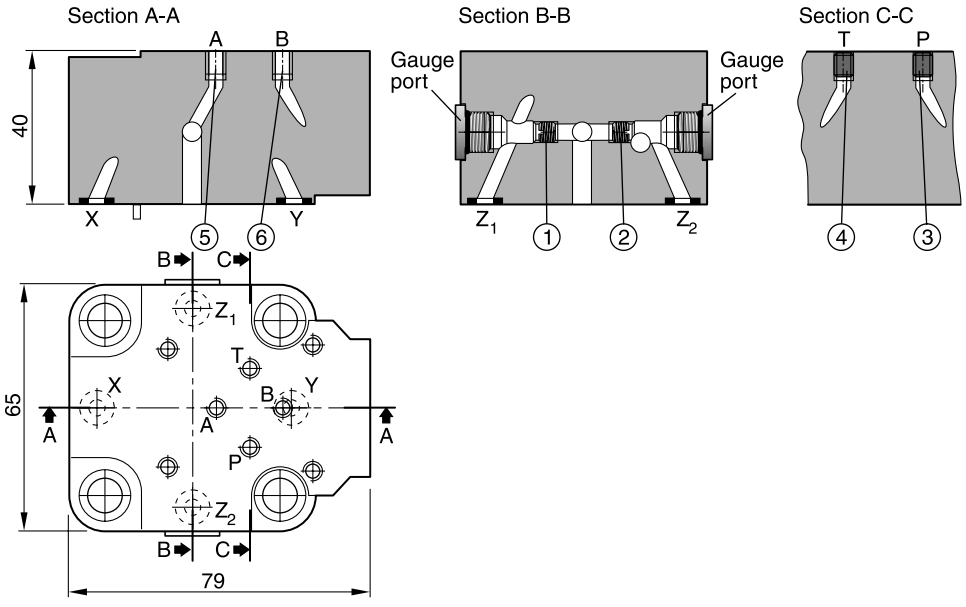
For NG50 and larger:
If pilot system NG06 should be used, mount adapter plate PADA 1007/A-B/B-A or PADA 1007/A-A/B-B (NG10 to NG06) see "Accessories" in this chapter.

For orifice recommendations, bolt and seal kits see "Accessories" in this chapter.

Bold letters =
Short-term availability

8

Dimensions NG16



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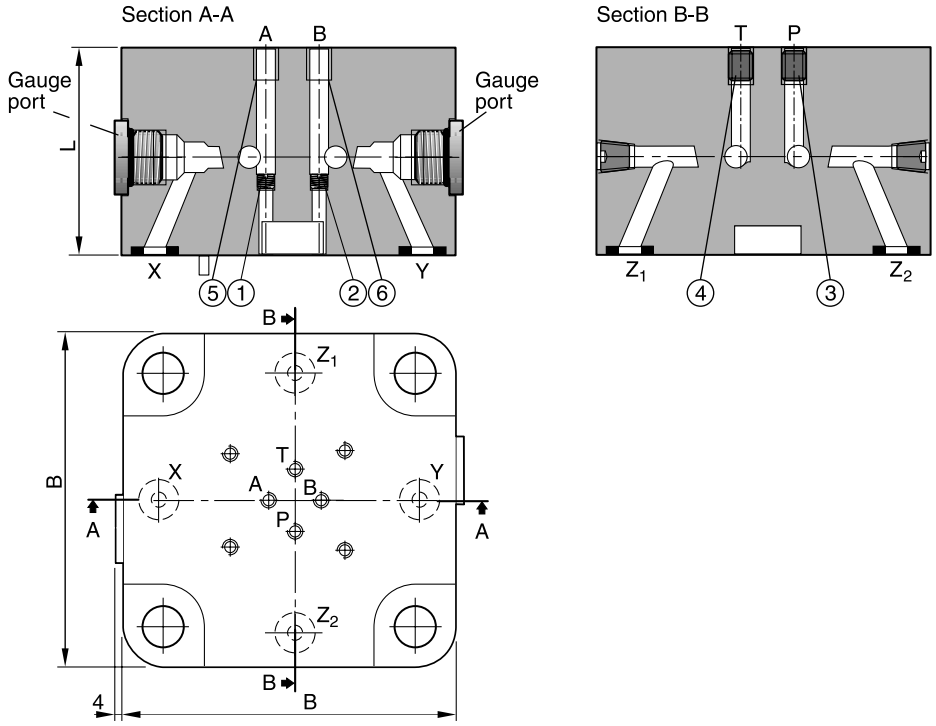
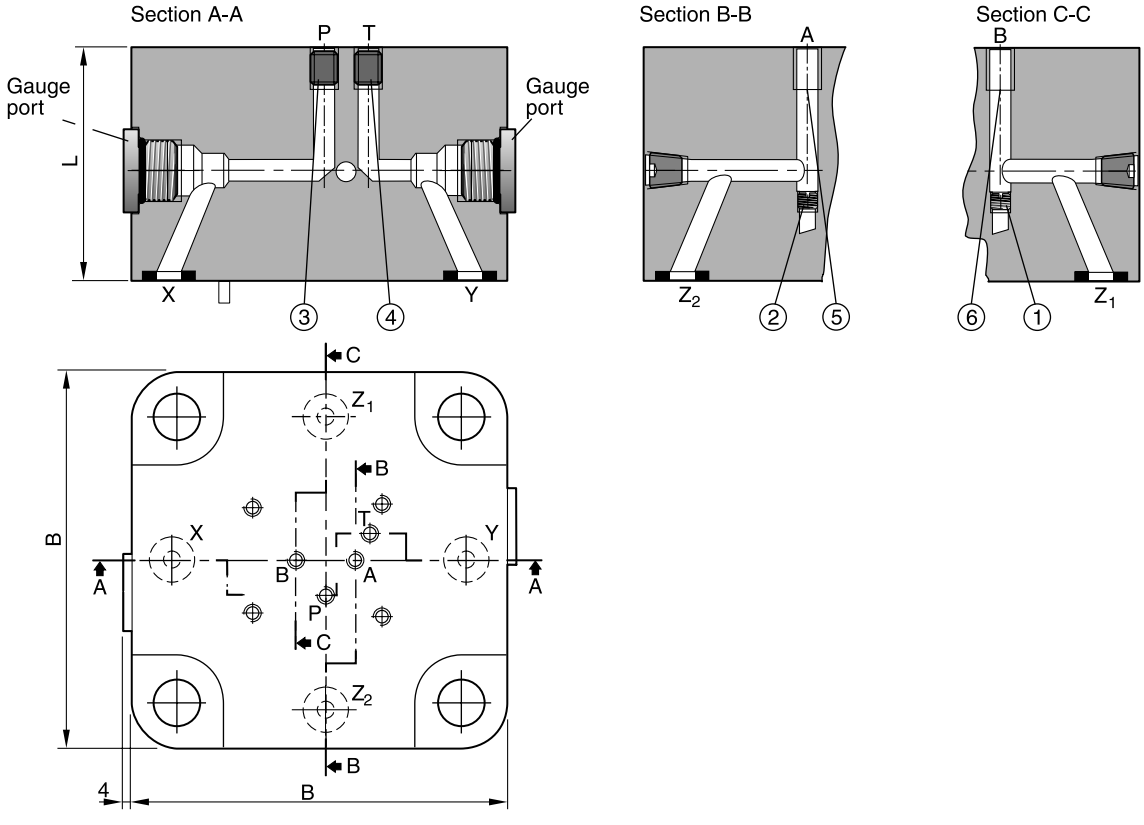
Dimensions NG25 to NG40

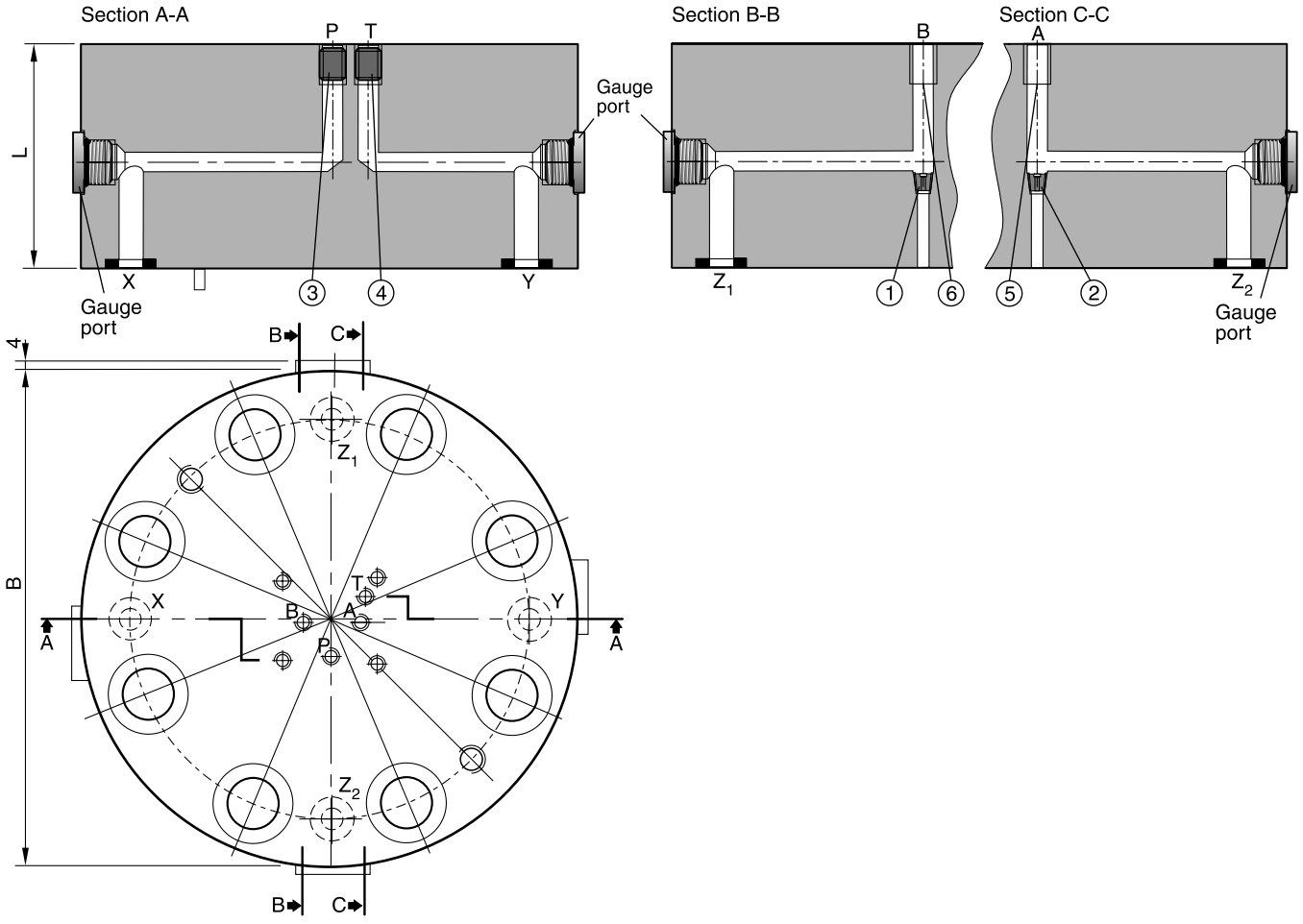


Dimensions NG50 to NG63



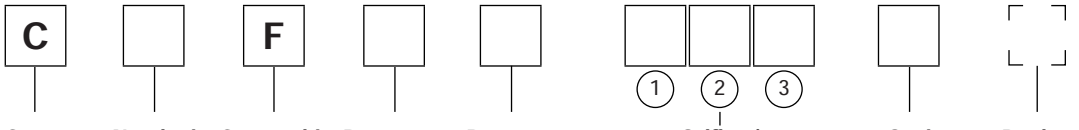
CE-C UK.INDD CM 28.08.13

Dimensions NG80 to NG100



Size	B	L	Gauge port	Weight [kg]	Orifice thread					
					①	②	③	④	⑤	⑥
NG16	79 [1)]	40	G¼"	1.0	M5	M5	M5	M5	M5	M5
NG25	85	45	G¼"	1.9	M5	M5	M6	M6	M6	M6
NG32	102	50	G¼"	2.9	M5	M5	M6	M6	M6	M6
NG40	125	60	G¼"	5.3	M5	M5	M6	M6	M6	M6
NG50	140	70	G¼"	8.5	M6	M6	M8	M8	M8	M8
NG63	180	85	G¼"	15.3	M6	M6	M8	M8	M8	M8
NG80	Ø 250	105	G¼"	34	1/16 NPT	1/16 NPT	1/8 NPT	1/8 NPT	1/8 NPT	1/8 NPT
NG100	Ø 300	120	G¼"	60	1/16 NPT	1/16 NPT	1/8 NPT	1/8 NPT	1/8 NPT	1/8 NPT

[1)] Width 65 mm.



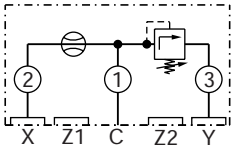
Cover | **Nominal size** | **Cover with pressure relief valve** | **Pressure range** | **Pressure adjustment** | **Orifice / choke** | **Seal** | **Design series** (not required for ordering)

Code	Size
016	**NG16**
025	**NG25**
032	**NG32**

Code	Seal
N	**NBR**
V	FPM

Code	Pressure range [bar]
07	**75**
10	**105**
17	**175**
21	**210**
25	**250**
35	**350**

Code	Orifice
99	**Without orifice, open**



Orifice position

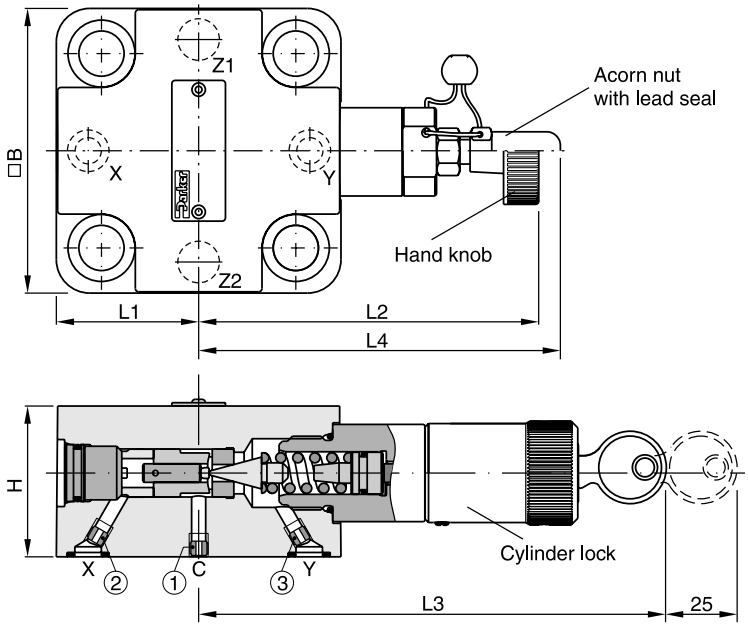
Code	Adjustment
S	**Hand knob (standard)**
A	Acorn nut with lead seal
L	Cylinder lock

Bold letters =
Short-term availability

For orifice recommendations, bolt and seal kits see "Accessories" in this chapter.

8

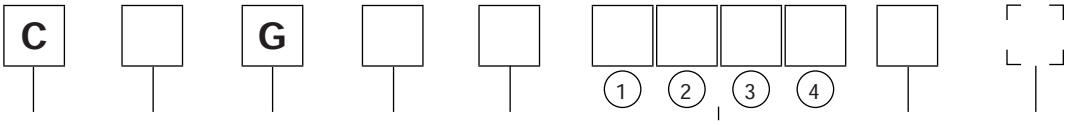
Dimensions



Ports Z1 and Z2: O-ring recess diameter on valve body

Size	B	H	L1	L2 max.	L3	L4	Orifice thread		
							①	②	③
NG16	65 [1)]	40	32.5	114	125.5	117	M5	M4	M5
NG25	85	45	42.5	102	114	105	M5	M5	M5
NG32	102	50	51	95	106	97.5	M6	M6	M6

[1)] Width 79 mm.



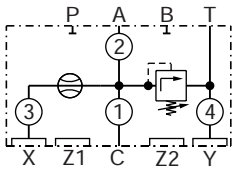
Cover | **Nominal size** | **Cover with pressure relief valve and pilot system mounting** | **Pressure range** | **Pressure adjustment** | **Orifice / choke** | **Seal** | **Design series** (not required for ordering)

Code	Size
016	**NG16**
025	**NG25**
032	**NG32**

Code	Seal
N	**NBR**
V	FPM

Code	Pressure range [bar]
07	**75**
10	**105**
17	**175**
21	**210**
25	**250**
35	**350**

Code	Orifice
99	**Without orifice, open**



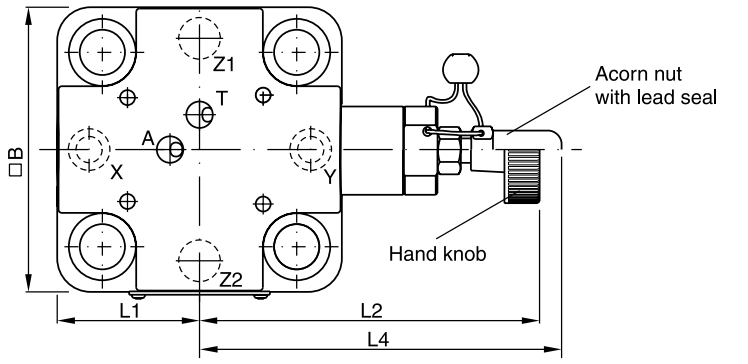
Orifice position

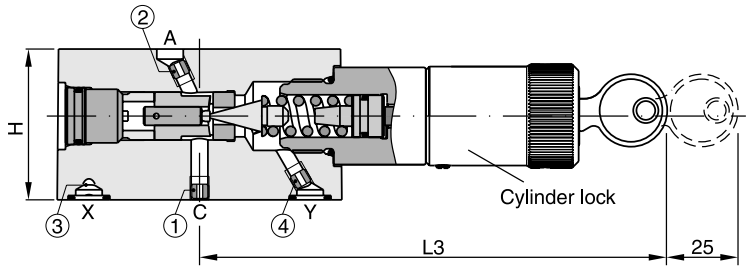
Code	Adjustment
S	**Hand knob (standard)**
A	Acorn nut with lead seal
L	Cylinder lock

Bold letters =
Short-term availability

For orifice recommendations, bolt and seal kits see "Accessories" in this chapter.

Dimensions





Ports Z1 and Z2: O-ring recess diameter on valve body

Size	B	H	L1	L2 max.	L3	L4	Orifice thread			
							①	②	③	④
NG16	65 [1)]	40	32.5	114	125.5	117	M5	M5	M4	M5
NG25	85	45	42.5	102	114	105	M5	M5	M5	M5
NG32	102	50	51	95	106	97.5	M6	M6	M6	M6

[1)] Width 79 mm.

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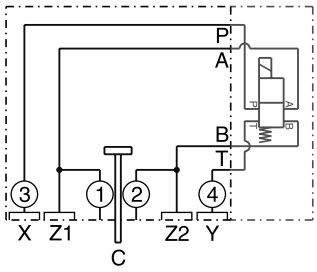
Ordering code

C		H	N			N	
				1	2 3 4		
Cover	**Nominal size**	**Stroke limiter and DC valve mounting pattern**	**Screws with lock nut**		**Orifice / choke**	**Seal NBR**	**Design series** (not required for ordering)

Code	Size
016	**NG16**
025	**NG25**
032	**NG32**
040	**NG40**
050	**NG50**
063	**NG63**
080	**NG80**
100	**NG100**

Code	Orifice
99	**Without orifice, open**
00	**Plug**



◯ Orifice position

Attention:

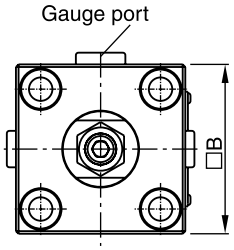
For NG63, 80 and 100:
If pilot system NG06 should be used, mount adapter plate PADA 1007/A-B/B-A or PADA 1007/A-A/B-B (NG10 to NG06), see "Accessories" in this chapter.

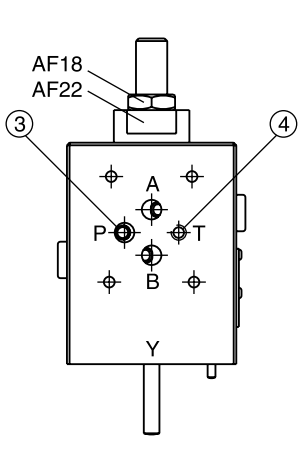
For orifice recommendations, bolt and seal kits see "Accessories" in this chapter.

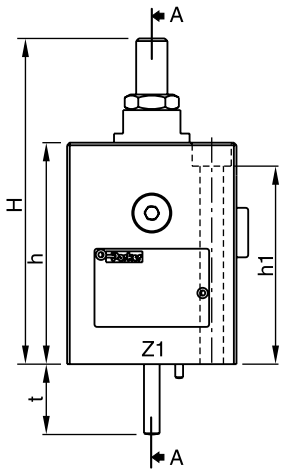
Bold letters =
Short-term availability

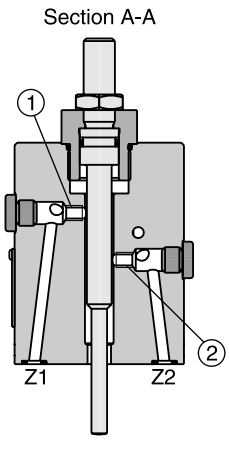
8

Dimensions NG16

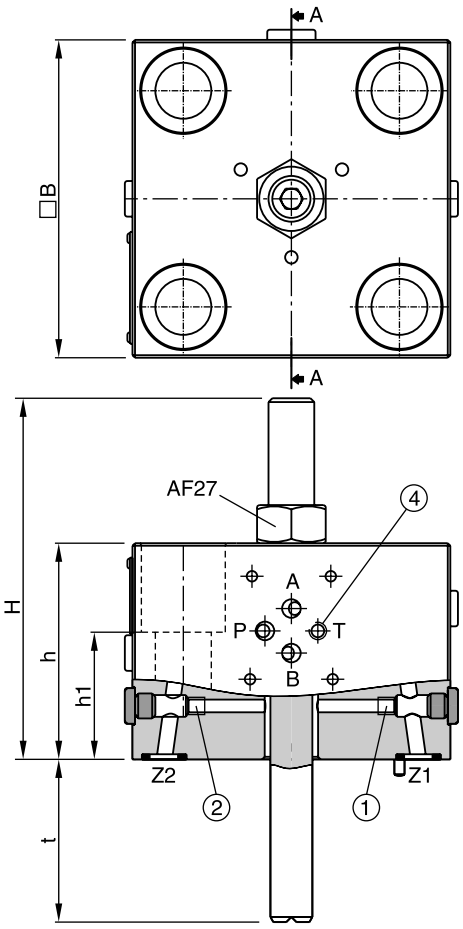


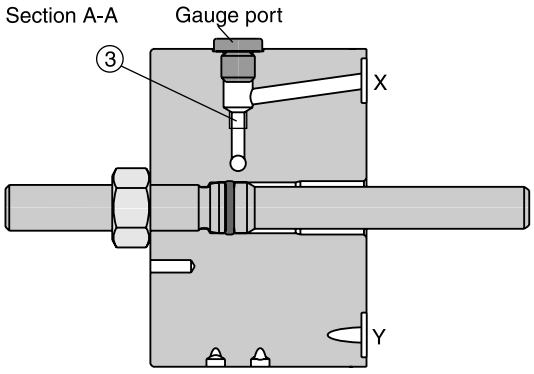






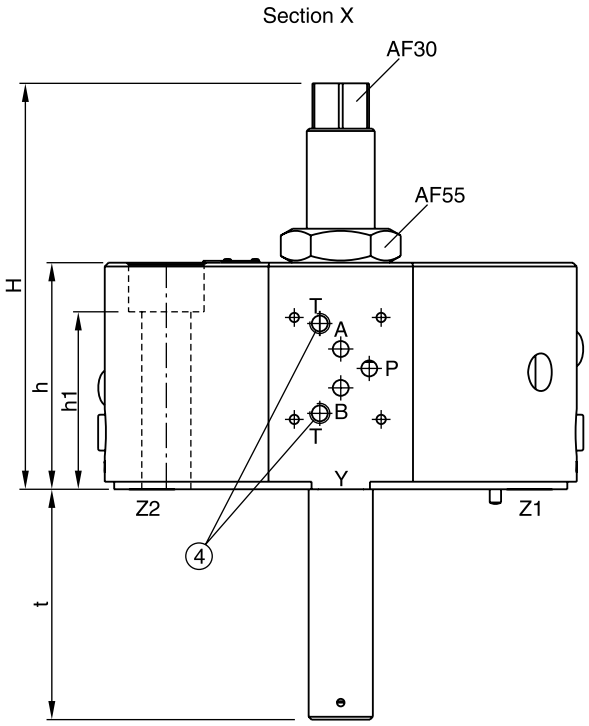
Dimensions NG25 to NG63

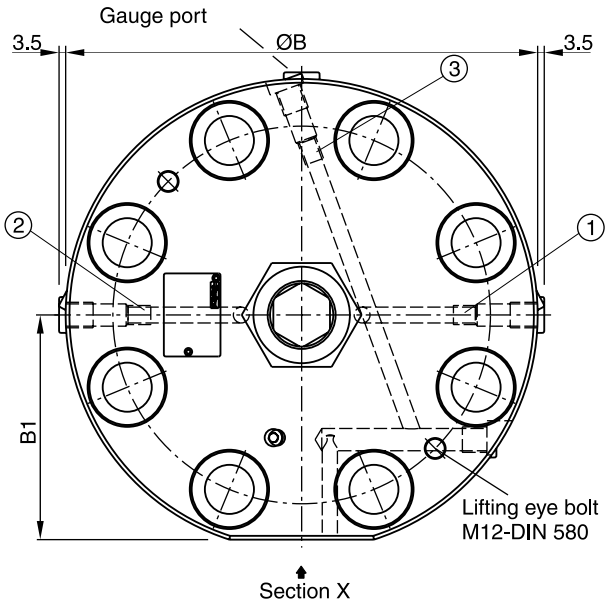




8

Dimensions NG80 to NG100

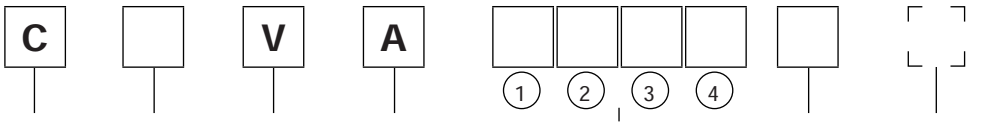




8

Size	B	B1	H	h	h1	t	Gauge port	Orifice thread			
								①	②	③	④
NG16	65	–	125	85	76	27	G1/4	M5	M5	M5	M5
NG25	85	–	114	85	70	36.5	G1/4	M6	M6	M6	M6
NG32	102	–	132.5	85	56	47.5	G1/4	M6	M6	M6	M6
NG40	125	–	142	85	50	64	G1/4	M6	M6	M6	M6
NG50	140	–	147.5	85	60	72.5	G1/4	M8	M8	M8	M8
NG63	180	–	161	110	75	90	G1/4	M8	M8	M8	M8
NG80	Ø 250	119	215	120	94	122	G1/4	1/8 NPT	1/8 NPT	1/8 NPT	1/8 NPT
NG100	Ø 300	144	240	120	85	145	G1/4	1/8 NPT	1/8 NPT	1/8 NPT	1/8 NPT

Ordering code

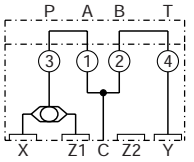


Code	Size
016	**NG16**
025	**NG25**
032	**NG32**
040	**NG40**
050	**NG50**
063	**NG63**

Bold letters =
Short-term availability

Code	Seal
N	**NBR**
V	FPM

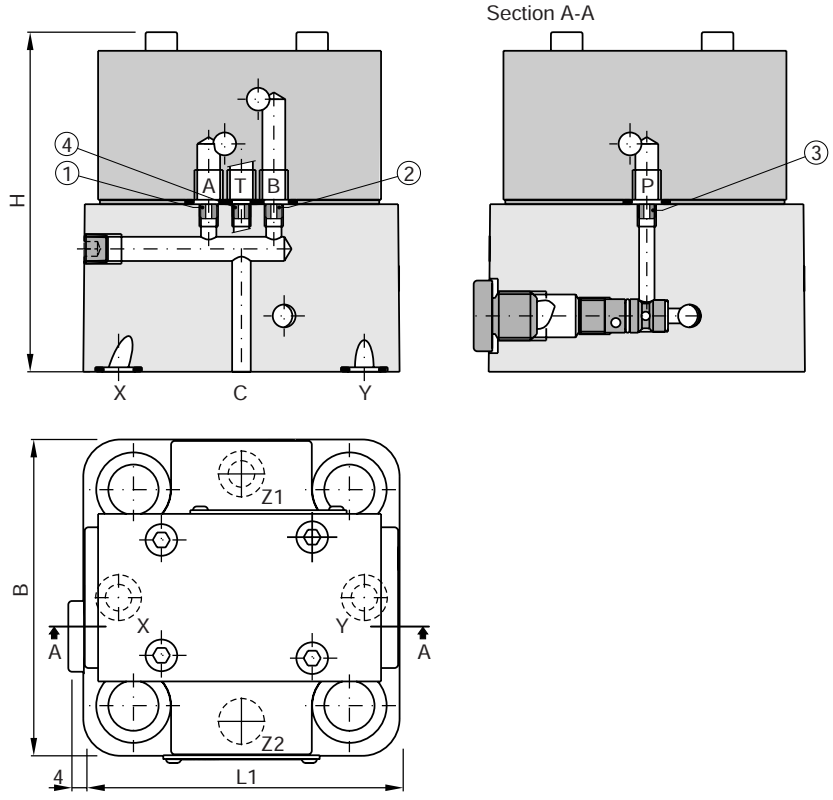
Code	Orifice
99	**Without orifice, open**

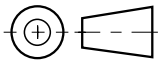


Orifice position

For orifice recommendations, bolt and seal kits see "Accessories" in this chapter.

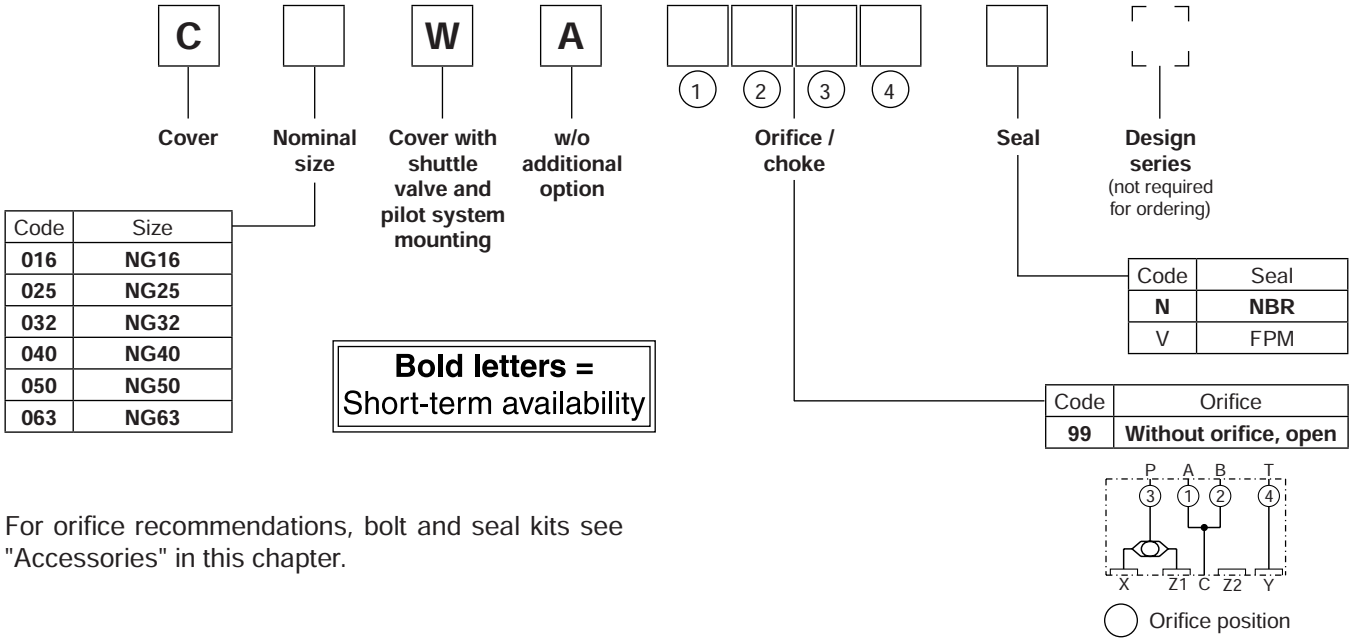
Dimensions





Port Z2: O-ring recess diameter on valve body

Size	B	H	L1	Orifice thread			
				①	②	③	④
NG16	65	86.5	85	M5	M5	M5	M5
NG25	85	91.5	85	M5	M5	M5	M5
NG32	102	96.5	102	M5	M5	M5	M5
NG40	125	106.5	125	M6	M6	M6	M6
NG50	140	126.5	140	M8	M8	M8	M8
NG63	180	141	180	M8	M8	M8	M8



Code	Size
016	**NG16**
025	**NG25**
032	**NG32**
040	**NG40**
050	**NG50**
063	**NG63**

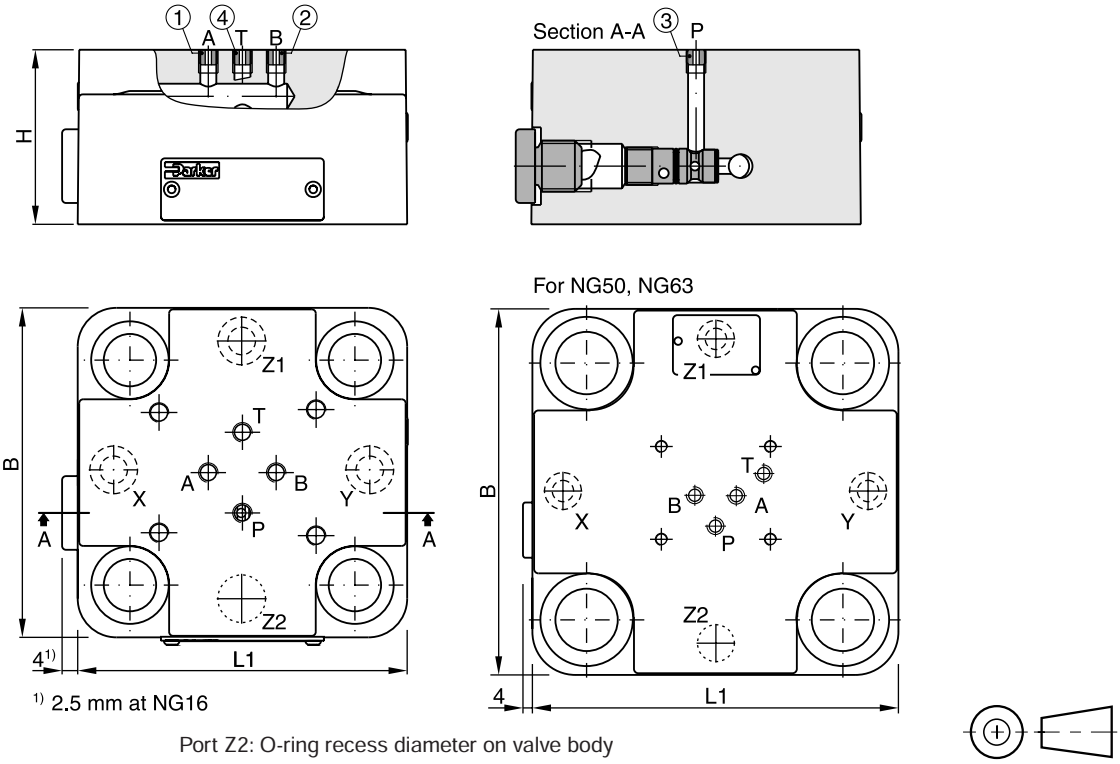
Bold letters =
Short-term availability

Code	Seal
N	**NBR**
V	FPM

Code	Orifice
99	**Without orifice, open**

For orifice recommendations, bolt and seal kits see "Accessories" in this chapter.

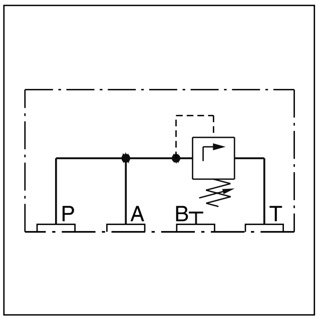
Dimensions



Port Z2: O-ring recess diameter on valve body

Size	B	H	L1	Orifice thread			
				①	②	③	④
NG16	65	40	77.5	M5	M5	M5	M5
NG25	85	45	85	M5	M5	M5	M5
NG32	102	50	102	M5	M5	M5	M5
NG40	125	60	125	M6	M6	M6	M6
NG50	140	70	140	M8	M8	M8	M8
NG63	180	85	180	M8	M8	M8	M8

Pilot valve with pressure relief function R06M, sub-plate mounting NG06, see combination examples. $MTTF_D$ value 150 years, flow rate maximum 5 l/min.



Ordering code R06M

R06M			4		
	Pressure range	Pressure adjustment	Pilot oil	Seal	Design series (not required for ordering)

Code	Pressure range [bar]
10	**105**
17	**175**
21	**210**
25	**250**
35	**350**

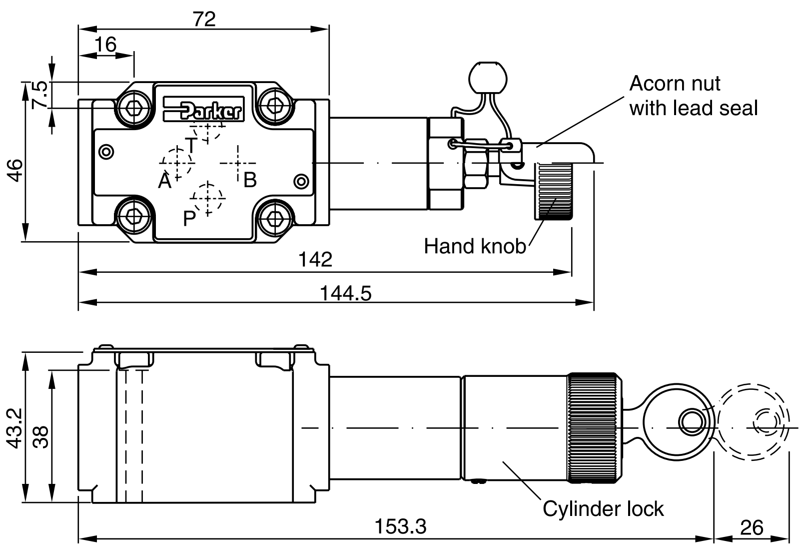
Code	Seal
N	**NBR**
V	FPM

Code	Adjustment
S	**Hand knob (standard)**
A	Acorn nut with lead seal
L	Cylinder lock

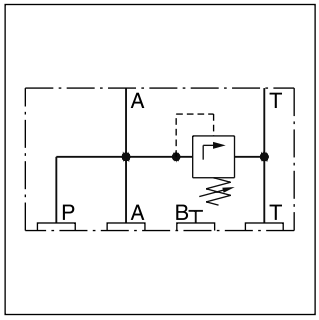
Bold letters =
Short-term availability

8

Dimensions R06M



Pilot valve with pressure relief function RS06M, sandwich plate mounting NG06, see combination examples. $MTTF_D$ value 150 years, flow rate maximum 5 l/min.



Ordering code RS06M

RS06M | ☐ | ☐ | **4** | ☐ | ⬚

Pressure range | **Pressure adjustment** | **Pilot oil** | **Seal** | **Design series** (not required for ordering)

Code	Pressure range [bar]
10	**105**
17	**175**
21	**210**
25	**250**
35	**350**

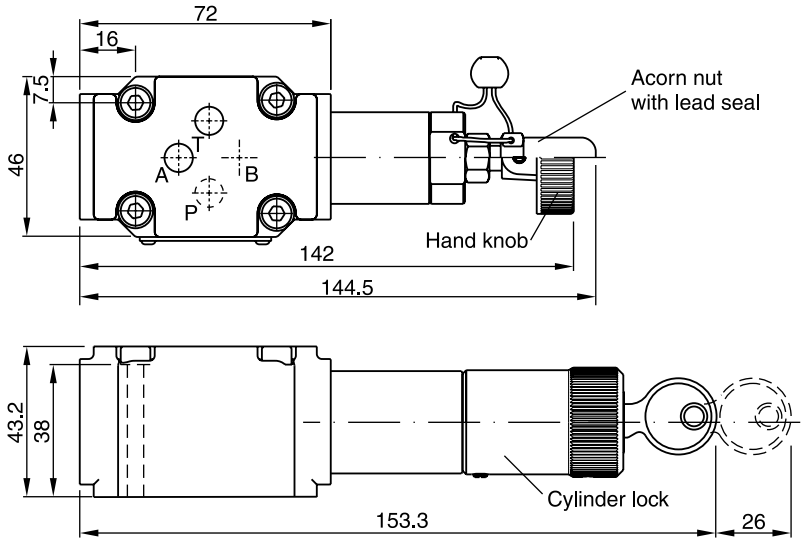
Code	Seal
N	**NBR**
V	FPM

Code	Adjustment
S	**Hand knob (standard)**
A	Acorn nut with lead seal
L	Cylinder lock

Bold letters =
Short-term availability

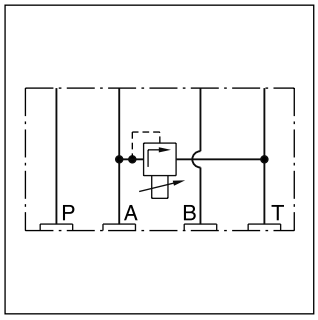
8

Dimensions RS06M

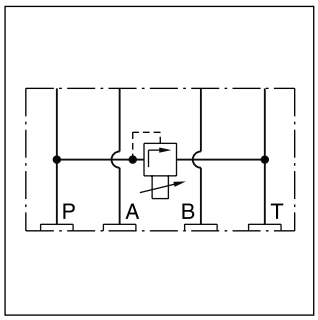


Pilot valve with proportional relief function RPDM2*,
sandwich mounting NG06.
$MTTF_D$ value 150 years, flow rate maximum 5 l/min.

*For technical details see series RE06M*W.



RPDM2AT



RPDM2PT

Ordering code

RPDM	2				V	
	Pressure adjustment	**Pressure relief**	**Pressure range**	**Solenoid voltage**	**Seal FPM**	**Design series** (not required for ordering)

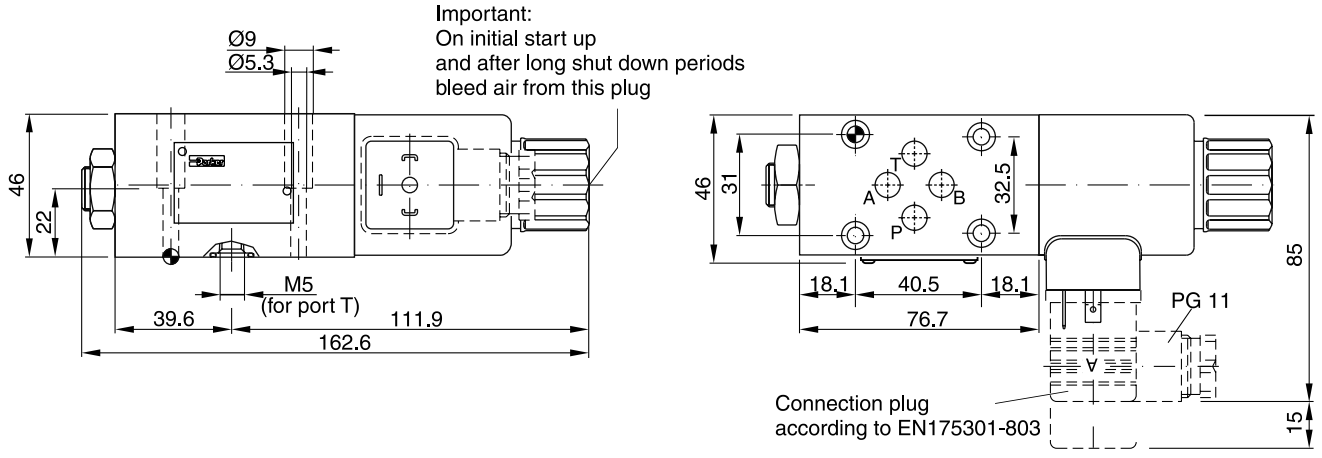
Code	Adjustment
AT	A to T
PT	P to T

Code	Solenoid voltage
K	**12 V, 2.3 A**
X	16 V, 1.3 A

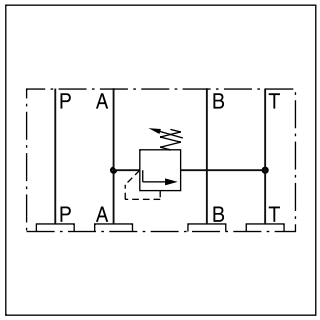
Code	Pressure range [bar]
10	105
17	175
25	250
35	350

Bold letters =
Short-term availability

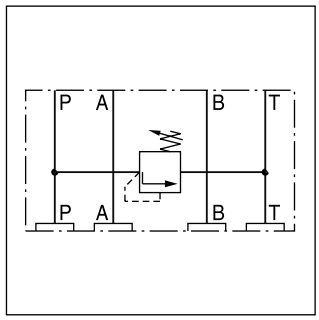
Dimensions



Sandwich valve with pressure relief function ZUDB, sandwich plate mounting NG06, see combination examples. $MTTF_D$ value 150 years, flow rate maximum 5 l/min.



ZUDB1AT*



ZUDB1PT*

Ordering code ZUDB1

□ – **ZUDB1** □ □ **Z07** □

Seal | **Pressure relief** | **Pressure adjustment** | **Pressure range**

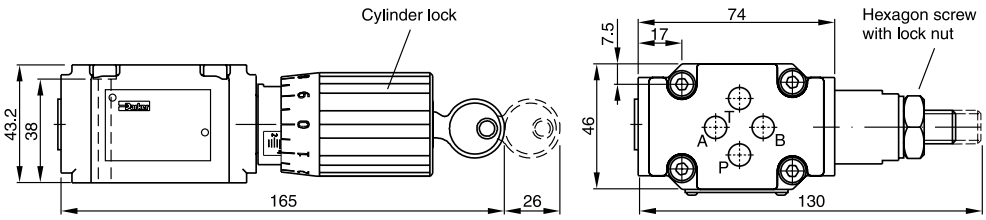
Code	Seal
omit	**NBR**
V	FPM

Code	Pressure relief
AT	**A to T**
PT	**P to T**

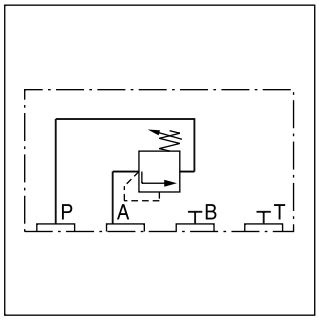
Code	Pressure range [bar]
B	**70**
E	**175**
G	**250**
K	**350**

Code	Adjustment
2	**Hexagon screw with lock nut**
61	Cylinder lock

Bold letters =
Short-term availability



Pilot valve with preload function DSB*P*, subplate mounting NG06, see combination examples.
$MTTF_D$ value 150 years, flow rate maximum 5 l/min.



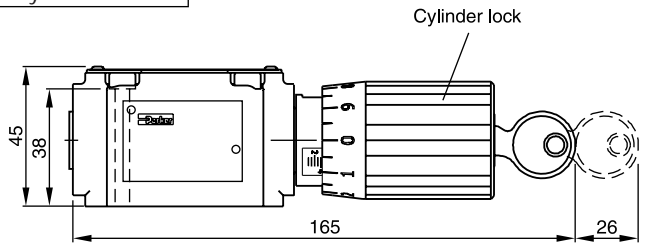
□ – **DSBA100** □ **P07** □

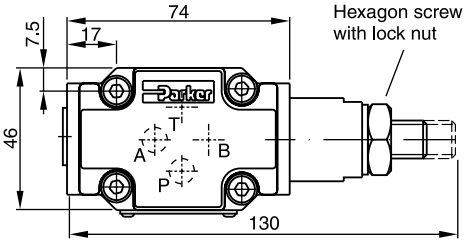
Seal | **Pressure adjustment** | **Pressure range**

Code	Seal
omit	**NBR**
V	FPM

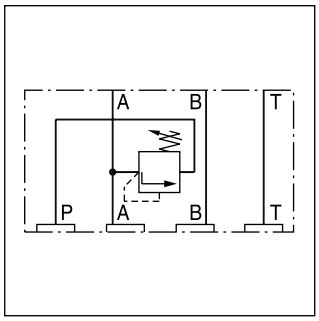
Code	Adjustment
2	**Hexagon screw with lock nut**
61	Cylinder lock

Code	Pressure range [bar]
B	**70**
E	**175**
G	**250**
K	**350**





Pilot valve with preload function DSB*Z*, sandwich plate mounting NG06, see combination examples.
$MTTF_D$ value 150 years, flow rate maximum 5 l/min.



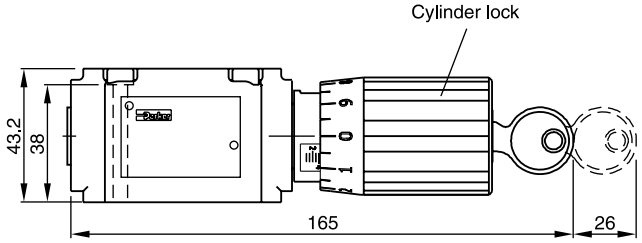
□ – **DSBA100** □ **Z07** □

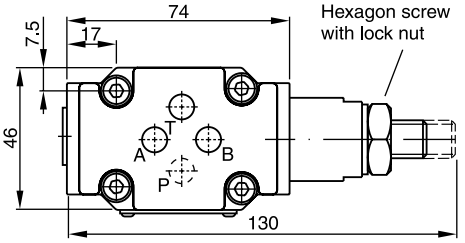
Seal | **Pressure adjustment** | **Pressure range**

Code	Seal
omit	**NBR**
V	FPM

Code	Adjustment
2	**Hexagon screw with lock nut**
61	Cylinder lock

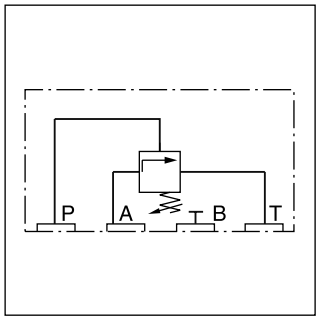
Code	Pressure range [bar]
B	**70**
E	**175**
G	**250**
K	**350**





Bold letters =
Short-term availability

Pilot valve with unloading function UR06M, subplate mounting NG06, see combination examples. $MTTF_D$ value 150 years, flow rate maximum 5 l/min.



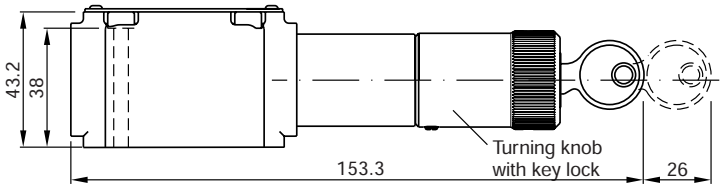
UR 06 M [ ] [ ] **4** [ ]

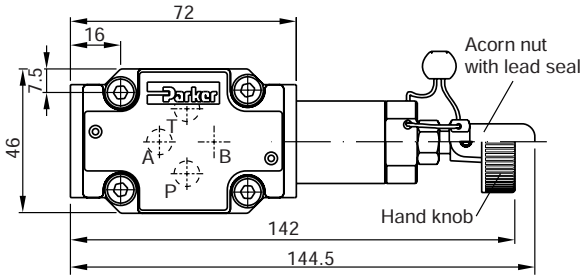
Pressure range | **Adjustment** | **Pilot oil drain internal** | **Seal**

Code	Pressure range [bar]
07	70
17	175
25	250
35	350

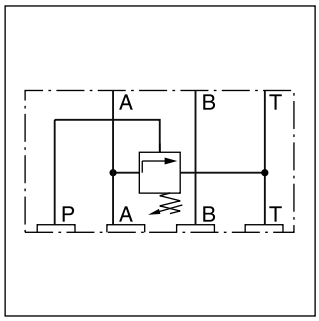
Code	Seal
N	NBR
V	FPM

Code	Adjustment
S	Hand knob (standard)
A	Acorn nut with lead seal
L	Cylinder lock





Pilot valve with unloading function US06M, subplate mounting NG06, see combination examples. $MTTF_D$ value 150 years, flow rate maximum 5 l/min.



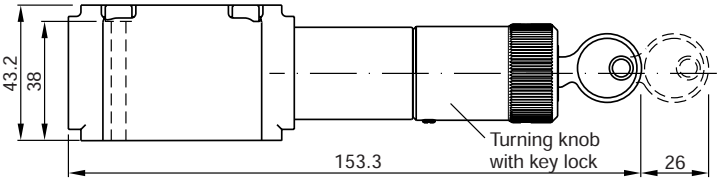
US 06 M [ ] [ ] **4** [ ]

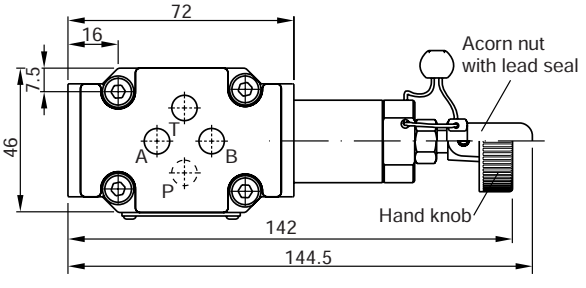
Pressure range | **Adjustment** | **Pilot oil drain internal** | **Seal**

Code	Pressure range [bar]
07	70
17	175
25	250
35	350

Code	Seal
N	NBR
V	FPM

Code	Adjustment
S	Hand knob (standard)
A	Acorn nut with lead seal
L	Cylinder lock





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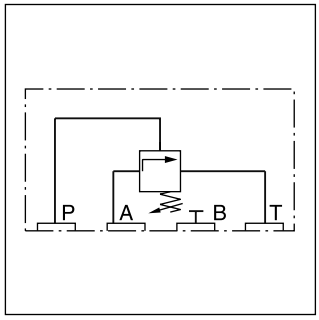
Pilot valve for pressure sequence function S06M, subplate mounting NG06, see combination examples.
$MTTF_D$ value 150 years, flow rate maximum 5 l/min.



Ordering code S06M

S06M | ☐ | ☐ | **4** | ☐ | ☐

Pressure range | **Pressure adjustment** | **Pilot oil inlet internal/ outlet internal** | **Seal** | **Design series** (not required for ordering)

Code	Pressure range [bar]
07	**70**
17	**175**
25	**250**
35	**350**

Code	Seal
N	**NBR**
V	FPM

Code	Adjustment
S	**Hand knob (standard)**
A	Acorn nut with lead seal
L	Cylinder lock

Bold letters =
Short-term availability

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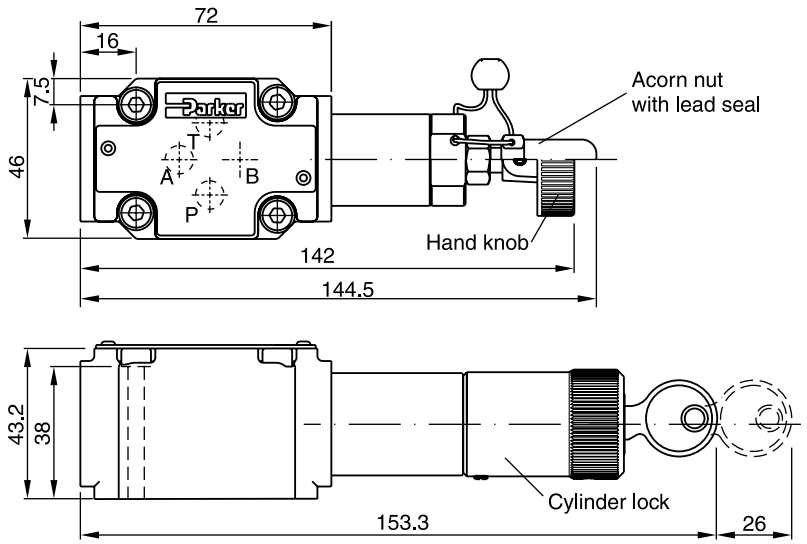
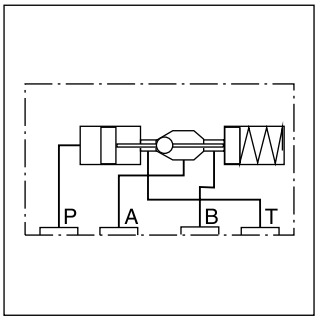
Dimensions S06M

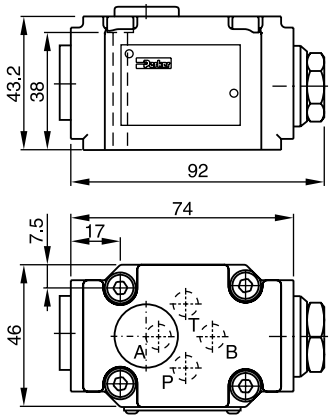


Check valve, hydraulically pilot operated NG06
with pilot control, for subplate mounting.
$MTTF_D$ value 75 years, flow rate maximum 5 l/min.

Ordering code

SVLA1006P07

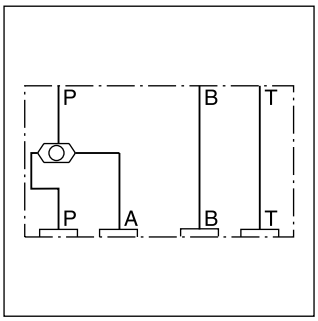


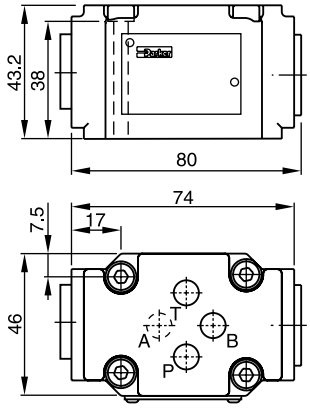


Shuttle valve - sandwich plate mounting NG06
$MTTF_D$ value 150 years, flow rate maximum 5 l/min.

Ordering code

ZSRA1PP0Z07

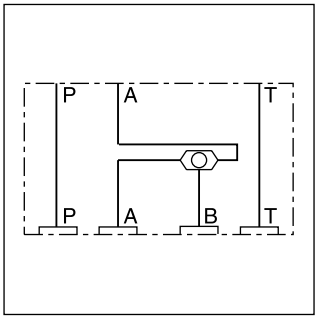


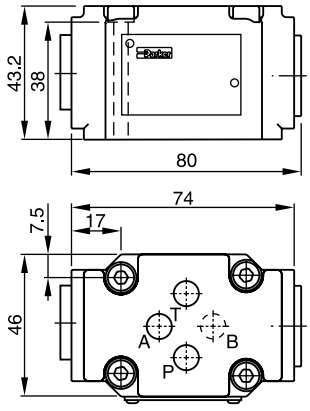


Shuttle valve - sandwich plate mounting NG06
$MTTF_D$ value 150 years, flow rate maximum 5 l/min.

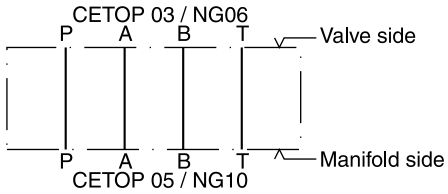
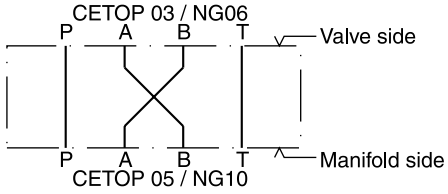
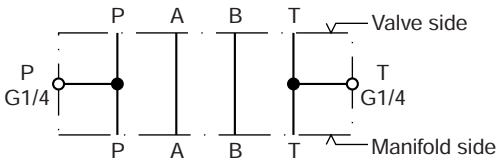
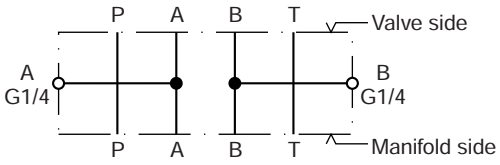
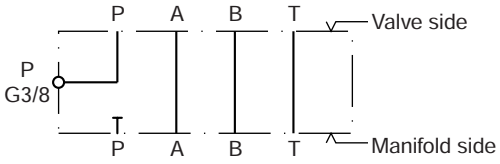
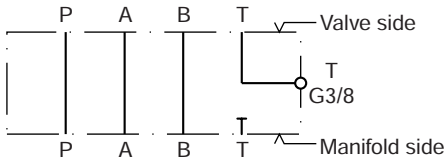
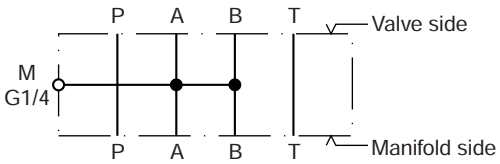
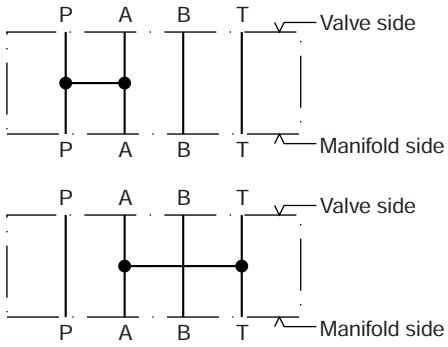
Ordering code

ZSRB1AA0Z07



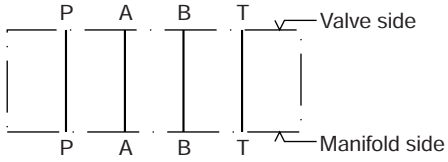
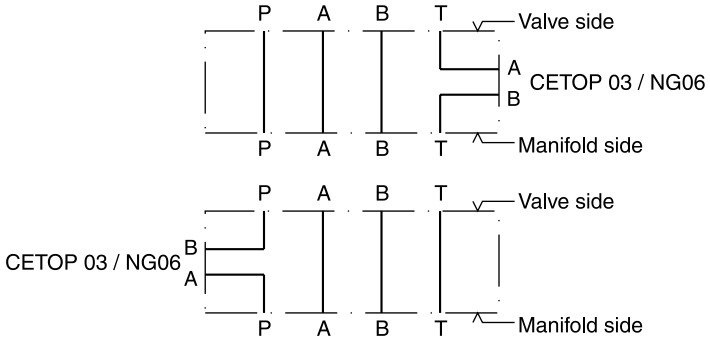
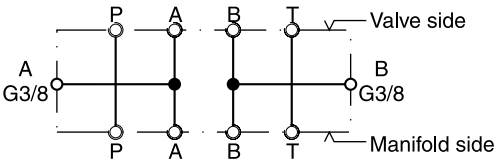
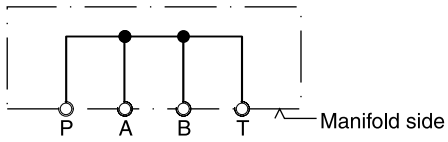
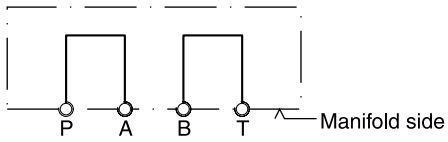
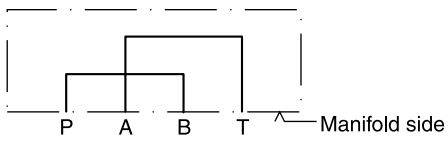
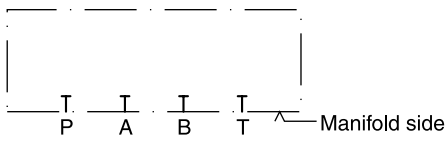


8

Symbol	Type	Size	Hight
	**PADA 1007-AA-BB**	NG10-NG06	25
	**PADA 1007/A-B/B-A**	NG10-NG06	25
	H06-1044	NG06	30
	**H06-1039**	NG06	30
	**H06-504**	NG06	30
	**H06-711**	NG06	30
	H06-1274	NG06	30
	**H06-1040**	NG06	30

Attention:
Details for cover-, sandwich- and adaptor plates see chapter 12.

Bold letters =
Short-term availability

Symbol	Type	Size	Hight
	**H06DO-1291**	NG06	10
	H06DU-814	NG06	71.3
 All ports can be equiped with orifices or plugs (1/16NPT)	CS06040N	NG06	40.3
 All ports can be equiped with orifices or plugs (1/16NPT)	CS06082N	NG06	40.3
 All ports can be equiped with orifices or plugs (1/16NPT)	CS06080N	NG06	40.3
	**D51DC071D**	NG06	26.3
	**D51VP071C** **D51VP101D**	NG06 NG10	26.3 26.9

Attention:
Details for cover-, sandwich- and adaptor plates see chapter 12.

Bold letters =
Short-term availability

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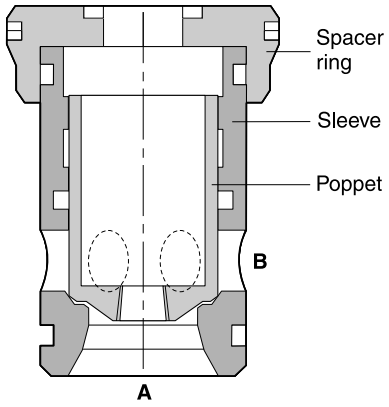
Poppets, sleeves, spacer rings



Size	16	25	32	40	50	63	80	100
Poppet 01	RK-45036369	RK-45036379	RK-45036392	RK-45036409	RK-45036421	RK-45036437	RK-35036449	RK-35036467
Poppet 04	RK-45036370	RK-45036380	RK-45036395	RK-45036406	RK-45036422	RK-45036436	RK-35036460	RK-35036468
Poppet 07	RK-35037531	RK-45036964	RK-45036965	RK-45036966	RK-45036967	RK-45036968	—	—
Poppet 08	RK-45036368	RK-45036381	RK-45036391	RK-45036408	RK-45036424	RK-45036438	RK-35036459	RK-35036469
CE-sleeve	RK-35038871	RK-35038872	RK-35038873	RK-35036403	RK-35036417	RK-35036432	RK-25036452	RK-25036470
CP-sleeve	RK-35039384	RK-35039385	RK-35039386	RK-35039387	RK-35039388	RK-35039389	—	—
Spacer ring	RK-35036364	RK-35036375	RK-45036393	RK-35036402	RK-35036416	RK-35036435	RK-25036453	RK-25036471

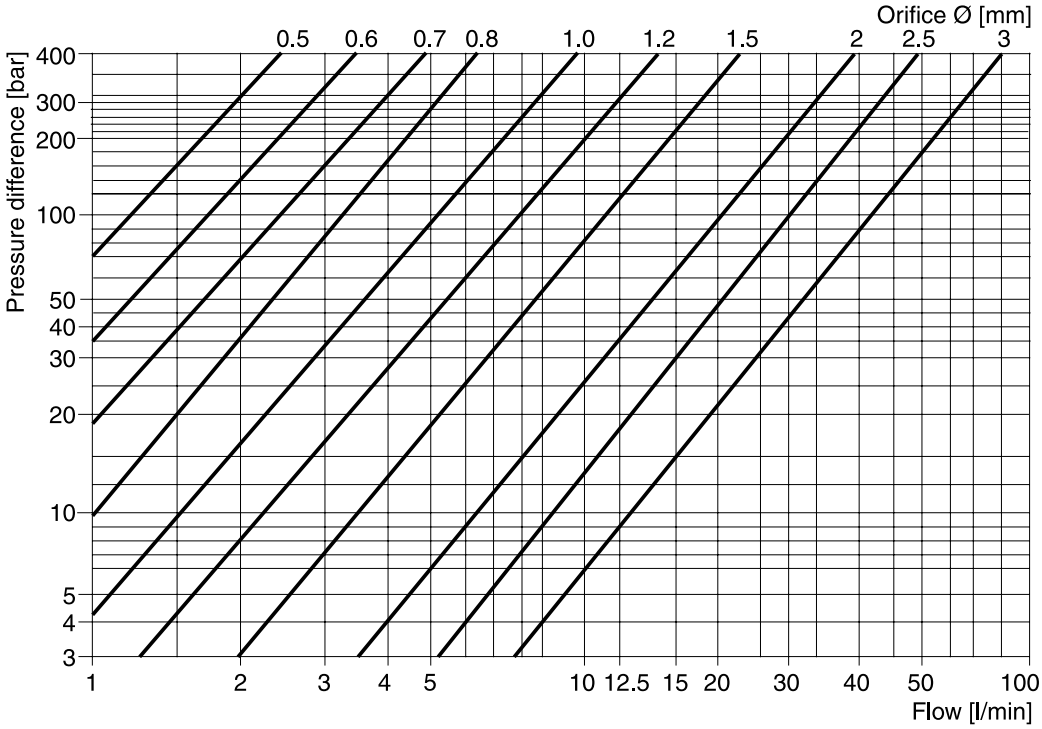
Springs, seals, fitting bolts

Size / Spring [1)]	16	25	32	40	50	63	80	100
Type L; 0.1 bar	FK-CE016-L	FK-CE025-L	FK-CE032-L	FK-CE040-L	FK-CE050-L	FK-CE063-L	FK-CE080-L	FK-CE100-L
Type N; 0.5 bar	FK-CE016-N	FK-CE025-N	FK-CE032-N	FK-CE040-N	FK-CE050-N	FK-CE063-N	FK-CE080-N	FK-CE100-N
Type S; 1.6 bar	FK-CE016-S	FK-CE025-S	FK-CE032-S	FK-CE040-S	FK-CE050-S	FK-CE063-S	FK-CE080-S	FK-CE100-S
Type T; 2.5 bar	FK-CE016-T	FK-CE025-T	FK-CE032-T	FK-CE040-T	FK-CE050-T	FK-CE063-T	FK-CE080-T	FK-CE100-T
Type U; 4.0 bar	FK-CE016-U	FK-CE025-U	FK-CE032-U	FK-CE040-U	FK-CE050-U	FK-CE063-U	FK-CE080-U	FK-CE100-U
Seal kits FPM NBR	 SK-CBE160V SK-CBE160	 SK-CBE250V SK-CBE250	 SK-CBE320V SK-CBE320	 SK-CBE400V SK-CBE400	 SK-CBE500V SK-CBE500	 SK-CBE630V SK-CBE630	 SK-CBE800V SK-CBE800	 SK-CBE1000V SK-CBE1000
Bolt kits (ISO 4762-12.9)	BK414 4x M8x40	BK391 4x M12x50	BK415 4x M16x55	BK416 4x M20x70	BK417 4x M20x75	BK418 4x M30x100	BK419 8x M24x120	BK509 8x M30x130
Recommended torque [Nm]	31.8	108	264	517	517	1775	890	1775

Ordering code example:
FK-CE016-U ⇒ 10 pcs., spring for NG16, type U

[1)] 1 spring kit contains 10 springs.

Diagram to choose the orifice Ø



Values measured at a viscosity of 40 cST and a temperature of 50 °C.

Orifices

There are different orifices available to realize different opening / closing velocities.
The control volume of each nominal valve size can be found at the CE series.

8

Orifice kits, sorted by thread with different diameters

Orifice kit	Orifice kit, sorted by thread with different diameters, consisting of 2 pieces of each marked diameter												
Ø	0.0	0.8	0.9	1.0	1.1	1.2	1.3	1.5	1.8	2.0	2.2	2.5	3.0
DK-M4	•	•	•	•	•	•	•	•	–	•	–	–	–
DK-M5	•	•	•	•	•	•	•	•	–	•	–	–	–
DK-M6	•	•	•	•	•	•	•	•	–	•	–	–	–
DK-M8	•	–	–	•	–	•	–	•	•	•	•	•	–
DK-M10x1	•	–	–	•	–	•	–	•	•	•	–	•	•
DK-1/16NPT	•	•	•	•	•	•	•	•	–	•	–	–	–
DK-1/8NPT	•	–	–	•	–	•	–	•	•	•	–	•	•

Orifice kits, thread with one defined diameter 20 pcs per box.

Orifice kits of one size:
Ordering Code Examples

DK-M4-08 ⇒ 20 pcs, orifice size 0.8 mm

DK-M5-10 ⇒ 20 pcs, orifice size 1.0 mm

DK-M8-12 ⇒ 20 pcs, orifice size 1.2 mm

Orifice gauge: Order no. DK-05-30

Removal CE016 to CE063

The extracting tools consist of tee bar, slide hammer, support handle, and expanding collet (fig. 1).

At first the spacer ring is removed. Next, spring and poppet are withdrawn. Finally, the expanding collet is inserted into the sleeve and braced by means of the tee bar. Using the slide hammer, collet and sleeve are extracted from the cavity.

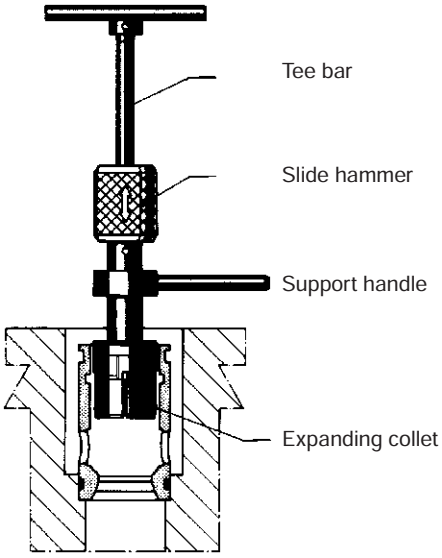


Figure 1

Ordering Code

Valve size	Order no.:
CE016 *	090 4600 09779
CE025 *	090 4600 09780
CE032 *	090 4600 09781
CE040 *	090 4600 09782
CE050 *	090 4600 09783
CE063 *	090 4600 09784
CE016 to CE063 *	090 4600 09785

8

Removal CE080 to CE100

The extracting tools consist of spacer ring puller (fig. 4), puller (fig. 3), and puller thrust plate. At first the spacer ring is removed. Next the puller is inserted into the sleeve and aligned by the puller thrust plate. Tightening the nut then extracts the sleeve from the cavity.

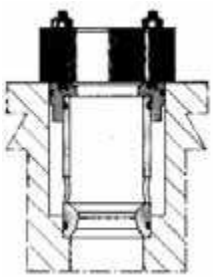


Figure 2

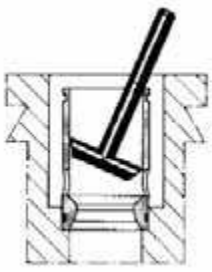


Figure 3

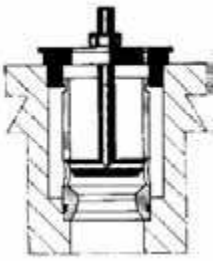


Figure 4

Ordering Code

Valve size	Order no.:
CE080	090 4600 10628
CE100	090 4600 10629

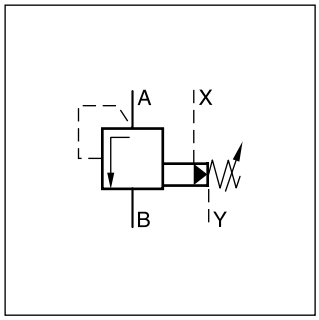
* CE/CP respectively

The pressure relief valve series R consists of a manual adjustment pilot stage and a cartridge main stage.

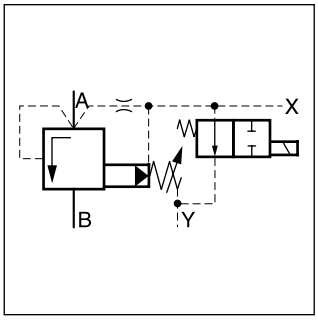
The pressure relief valve series RS consists of a manual adjusted pilot stage with a directional valve for an electrically controlled vent function and a cartridge main part.

The R/RS*E model codes embrace the pilot valves, covers and cartridges that are also offered as separate items. See combination examples for details.

RS*E



R*E



RS*E (simplified symbol)

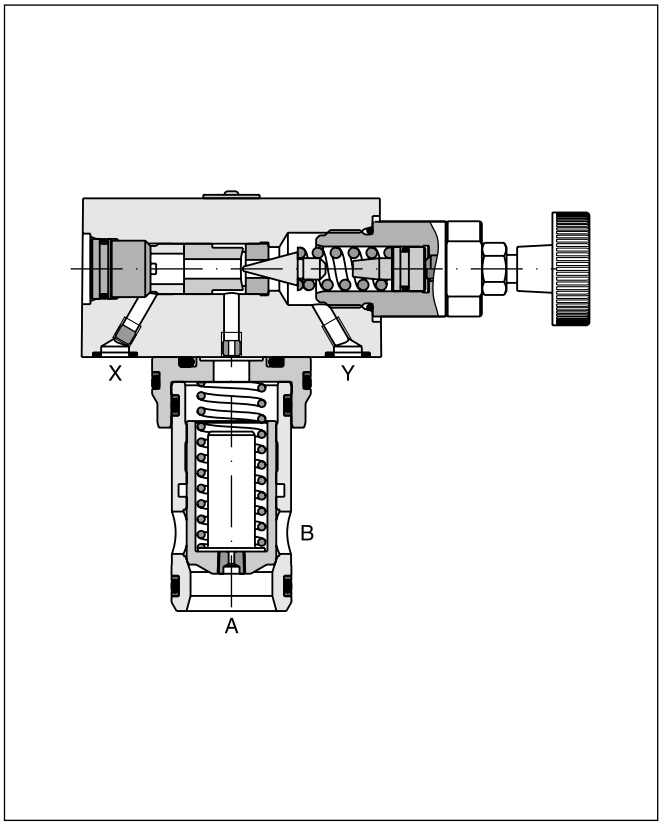
Features

- Pilot operated with manual adjustment
- Cavity and mounting pattern according to ISO 7368
- 6 pressure stages
- 2 switching types (series RS*E)
- 2 adjustment modes
  - Hand knob
  - Cylinder lock
- Remote control via port X
- 6 sizes, NG16 to NG63

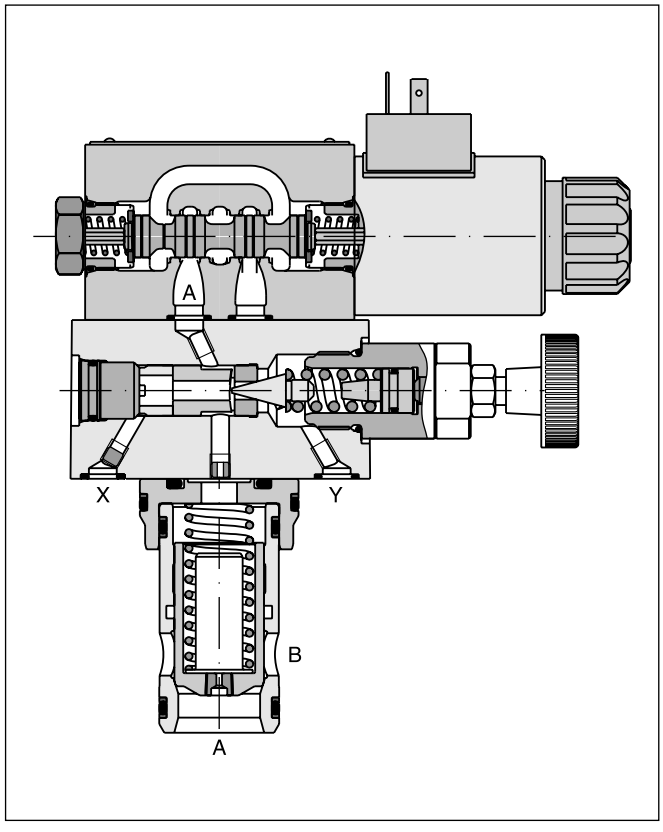
Note

Port X only usable for remote vent function

R25E



RS25E



R*E

R		E			1	S			
Pressure relief valve	**Nominal size**	**Slip-in mounting ISO 7368**	**Pressure stages**	**Adjust-ment**	**Pilot oil** (pilot internal, drain external)	**Poppet spring**	**Seal**	**Design series** (not required for ordering)	**Spool type**

Code	Nominal size
16	NG16
25	NG25
32	NG32
40	NG40
50	NG50
63	NG63

Code	Pressure stages
07	up to 70 bar
10	up to 105 bar
17	up to 175 bar
21	up to 210 bar
25	up to 250 bar
35	up to 350 bar

Code	Adjustment
S	Hand knob (standard)
A	Acorn nut with lead seal
L	Cylinder lock

Code	Seal
N	NBR
V	FPM

Code	Spool type
omit	Standard
S07	with poppet seals

RS*E

RS		E			1	S				W			
Pressure relief valve with elec. un-loading	**Nominal size**	**Slip-in mounting ISO 7368**	**Pressure stages**	**Adjust-ment**	**Pilot oil** (pilot int., drain ext.)	**Poppet spring**	**Seal**	**Switching type**	**Solenoid**	**Without plug**	**Options**	**Design series** (not required for ordering)	**Spool type**

Code	Nominal size
16	NG16
25	NG25
32	NG32
40	NG40
50	NG50
63	NG63

Code	Pressure stages
07	up to 70 bar
10	up to 105 bar
17	up to 175 bar
21	up to 210 bar
25	up to 250 bar
35	up to 350 bar

Code	Adjustment
S	Hand knob (standard)
A	Acorn nut with lead seal
L	Cylinder lock

Code	Switching type
1	Solenoid not activated, unpress. circulation
9	Solenoid activated, unpress. circulation

Code	Seal
N	NBR
V	FPM

Code	Solenoid
K	12 V
J	24 V
U [1)]	98 V
G [1)]	205 V

Code	Options
omit	Standard
S	with slow unloading

Code	Spool type
omit	Standard
S07	with poppet seals

[1)] To be used in combination with rectifier plugs at 120 VAC / 230 VAC power supply.

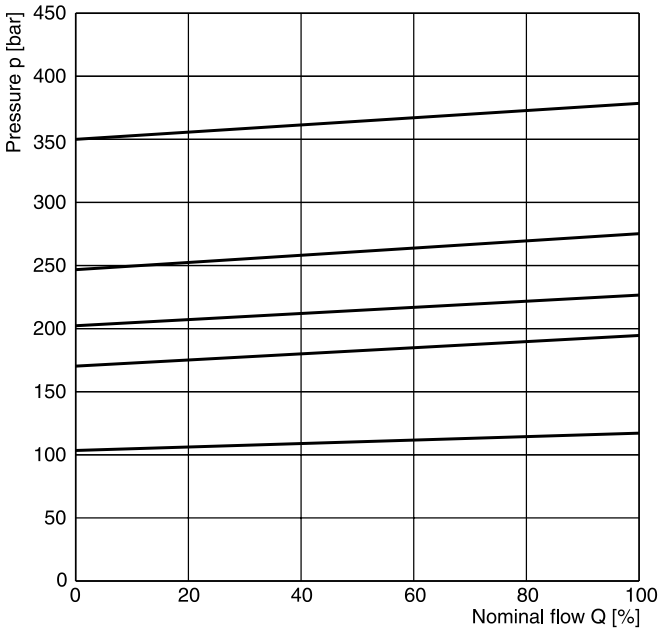
R*E

General							
Nominal size		NG16	NG25	NG32	NG40	NG50	NG63
Interface		Slip-in mounting acc. ISO 7368					
Mounting position		as desired, horizontal mounting preferred					
Ambient temperature	[°C]	-20...+80					
$MTTF_D$ value	[years]	75					
Weight	[kg]	2.2	3.5	4.9	8.0	13.7	22.8
Hydraulic							
Max. operating pressure	[bar]	Ports A and X up to 350, Ports B and Y 30					
Pressure stages	[bar]	75, 105, 175, 210, 250, 350					
Nominal flow	[l/min]	220	500	950	1400	2300	4000
Fluid		Hydraulic oil according to DIN 51524 ...51525					
Viscosity, recommended	[cSt] / [mm²/s]	30 ... 50					
permitted	[cSt] / [mm²/s]	20 ... 380					
Fluid temperature	[°C]	-20 ... +70					
Filtration		ISO 4406 (1999); 18/16/13					

RS*E

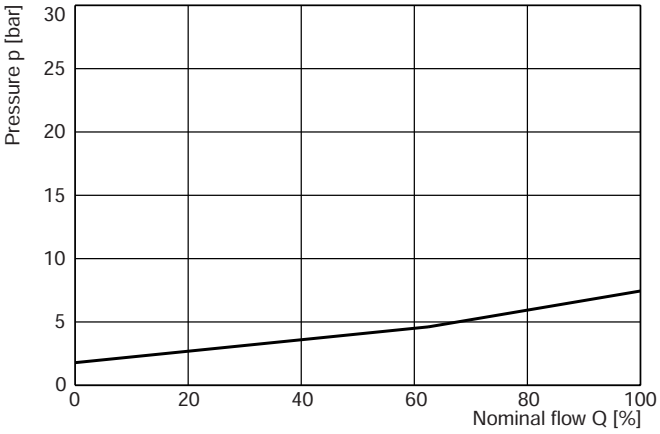
General							
Nominal size		NG16	NG25	NG32	NG40	NG50	NG63
Interface		Slip-in mounting acc. ISO 7368					
Mounting position		as desired, horizontal mounting preferred					
Ambient temperature	[°C]	-20...+80					
$MTTF_D$ value	[years]	75					
Weight	[kg]	2.7	5.2	6.4	9.5	15.2	24.3
Hydraulic							
Max. operating pressure	[bar]	Ports A and X 350, ports B and Y 30					
Pressure stages	[bar]	75, 105, 175, 210, 250, 350					
Nominal flow	[l/min]	220	500	950	1400	2300	4000
Fluid		Hydraulic oil according to DIN 51524 ...51525					
Viscosity, recommended	[cSt] / [mm²/s]	30 ... 50					
permitted	[cSt] / [mm²/s]	20 ... 380					
Fluid temperature	[°C]	-20 ... +70					
Filtration		ISO 4406 (1999); 18/16/13					
Electrical (solenoid)							
Duty ratio		100 % ED; CAUTION: coil temperature up to 150 °C possible					
Protection class		IP65 in accordance with EN 60529 (with correctly mounted plug-in connector)					
	Code	K		J		U	G
Supply voltage	[V]	12 V =		24 V =		98 V =	205 V =
Tolerance supply voltage	[%]	±10		±10		±10	±10
Current consumption	[A]	2.72		1.29		0.33	0.13
Power consumption	[W]	32.7		31		31.9	28.2
Solenoid connection		Connector as per EN175301-803, solenoid identification as per ISO 9461					
Wiring min.	[mm²]	3 x 1.5 recommended					
Wiring length max.	[m]	50 recommended					

p/Q performance curve [1)]



All characteristic curves measured with HLP46 at 50 °C.

Minimum pressure curve



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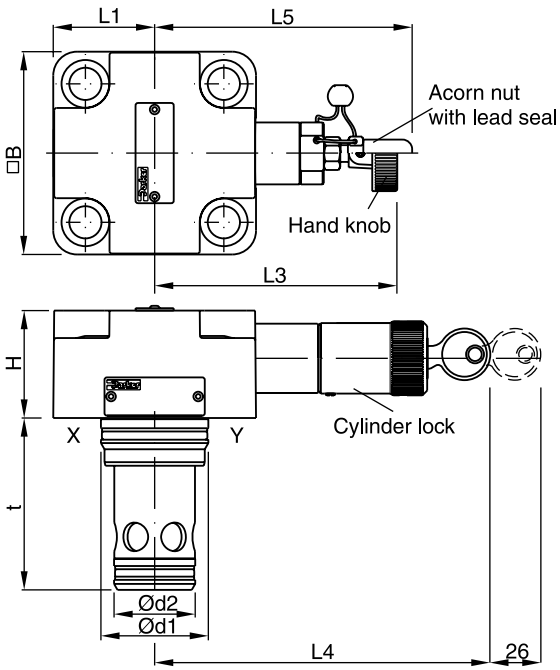
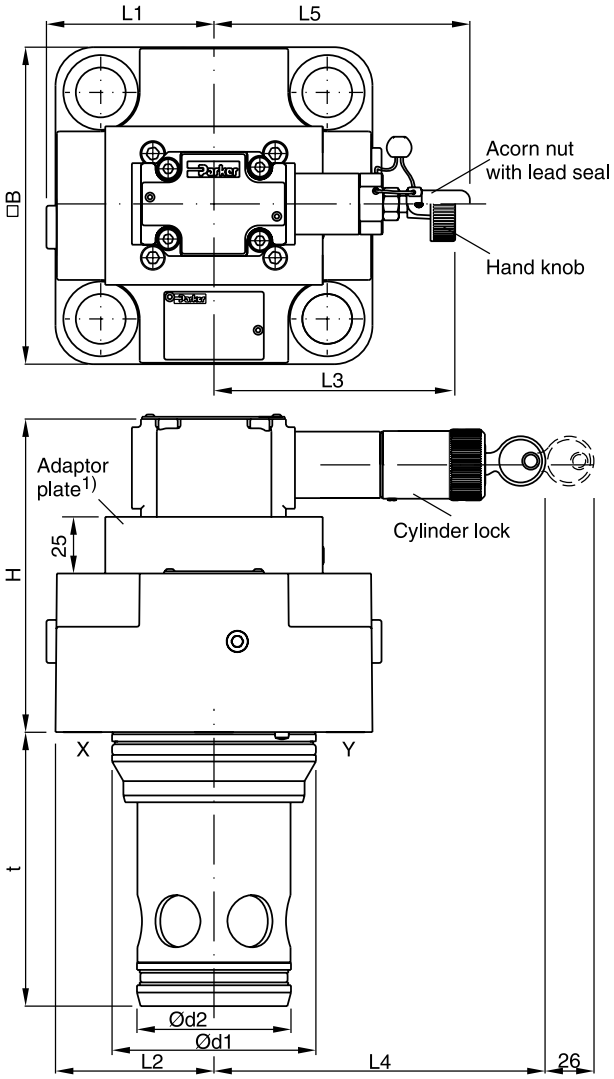
[1)] The performance curves are measured with external drain.
For internal drain the tank pressure has to be added to curve.

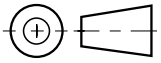
Dimensions R*E

NG16 - NG32



NG40 - NG63 [1)]





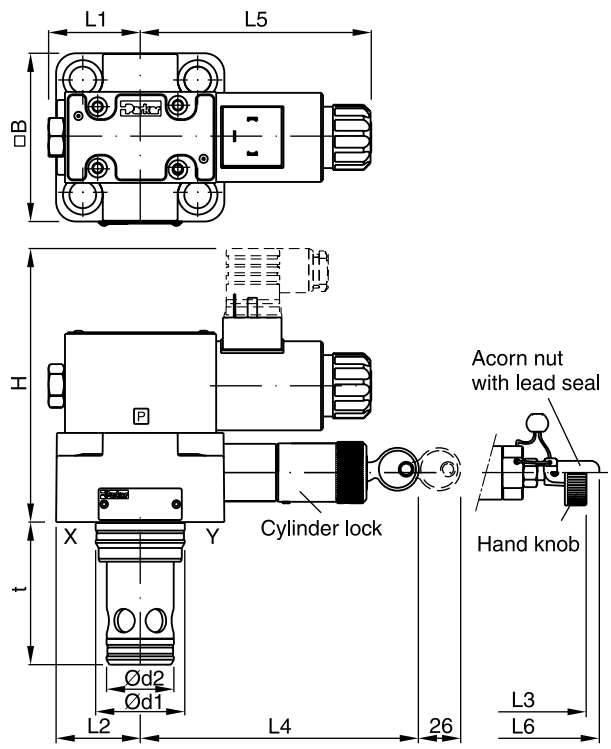
Size	H	B	L1	L2	L3	L4	L5	d1	d2	t
NG16	40	65 [2)]	32.5	–	114	125.5	117	32	25	56
NG25	47	85	42.5	–	102	114	105	45	34	71
NG32	50	102	51	–	95	106	97.5	60	45	85
NG40	106	125	62.5	66.5	106	144	110.5	75	55	105
NG50	141	140	70	74	106	144	110.5	90	68	121
NG63	155	180	90	94	106	144	110.5	120	90	155

NG	Kit	ISO 4762-12.9	[Nm]	Kit NBR	Kit FPM
16	BK414	4 x M8x40	33	SK-R16EN	SK-R16EV
25	BK391	4 x M12x50	115	SK-R25EN	SK-R25EV
32	BK415	4 x M16x55	281	SK-R32EN	SK-R32EV
40	BK416	4 x M20x70	553	SK-R40EN	SK-R40EV
50	BK417	4 x M20x75	553	SK-R50EN	SK-R50EV
63	BK418	4 x M30x100	1910	SK-R63EN	SK-R63EV

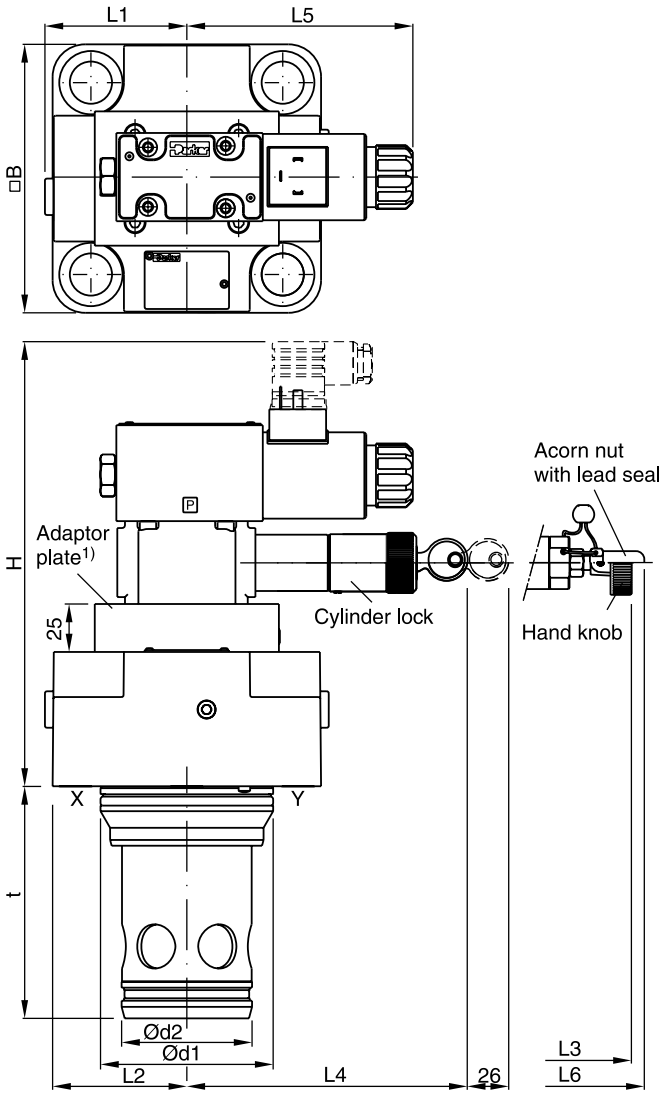
[1)] NG40 without adaptor plate.
[2)] Width 79 mm.

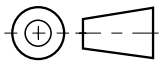
Dimensions RS*E

NG16 - NG32



NG40 - NG63 [1)]





Size	H	B	L1	L2	L3	L4	L5	L6	d1	d2	t
NG16	133	65 [2)]	32.5	–	114	125.5	117	117	32	25	56
NG25	137	85	42.5	–	102	114	117	105	45	34	71
NG32	143	102	51	–	95	106	117	97.5	60	45	85
NG40	196	125	62.5	66.5	106	144	117	110.5	75	55	105
NG50	231	140	70	74	106	144	117	110.5	90	68	121
NG63	246	180	90	94	106	144	117	110.5	120	90	155

NG	Kit	ISO 4762-12.9	[Nm]	Kit NBR	Kit FPM
16	BK414	4 x M8x40	33	SK-RS16EN	SK-RS16EV
25	BK391	4 x M12x50	115	SK-RS25EN	SK-RS25EV
32	BK415	4 x M16x55	281	SK-RS32EN	SK-RS32EV
40	BK416	4 x M20x70	553	SK-RS40EN	SK-RS40EV
50	BK417	4 x M20x75	553	SK-RS50EN	SK-RS50EV
63	BK418	4 x M30x100	1910	SK-RS63EN	SK-RS63EV

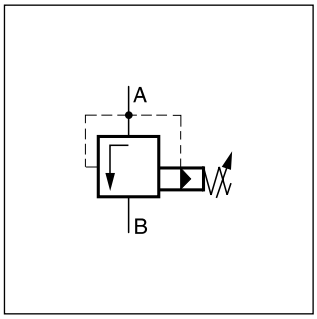
[1)] NG40 without adaptor plate.
[2)] Width 79 mm.

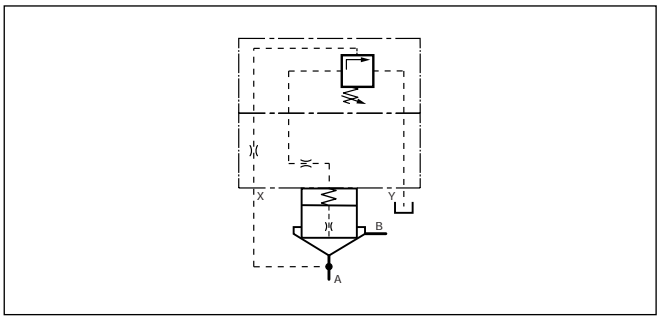
R-RS_E UK.INDD CM 24.07.13

The pilot operated pressure relief valves series DSDU limit the system pressure by opening the pressure port to tank. They are mostly used for accumulator pressure relief. The valve is set and sealed by the German technical monitoring association TÜV. The valve delivery includes a copy of the TÜV certificate of conformity.

Features

- TÜV certificate
- CE certification (module G) according to directive 97/23/EC
- Installation cavity and mounting pattern according to ISO 7368
- 3 sizes, NG16 to NG32
- Remote control via port X





detailed symbol

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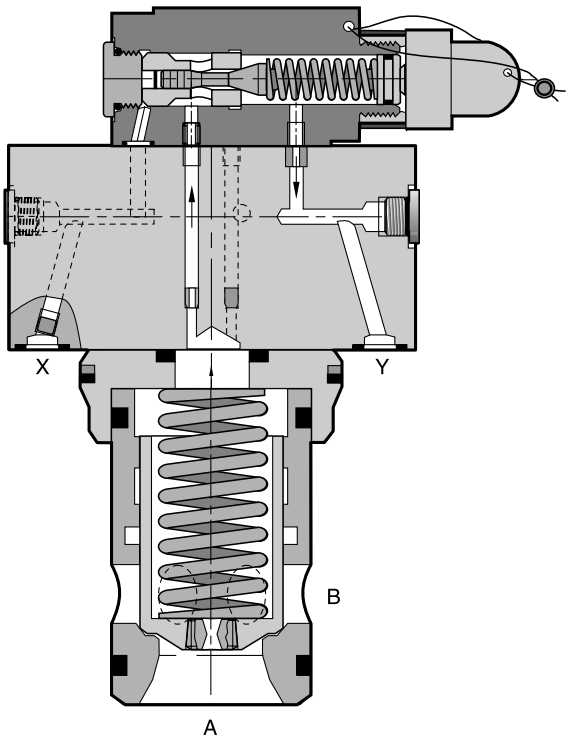


Ordering code

	DSDU			TÜV	
Seals	Pressure relief valve	Type code	Pressure stage		Desired opening pressure in bar (please specify)

Code	Seals
omit	NBR
V	FPM

Type Code			Pressure stage	Opening pressure ranges [bar]
1078 E16	1078 E25	1078 E32		
Q_{max} [l/min] depending on opening pressure				
150	215	500	B	50 - 75
165 190	235 280	550 640	E	76 - 125 126 - 175
215 230	310 355	750 800	G	176 - 200 201 - 250
255 280	390 400	900 950	K	251 - 300 301 - 350

Ordering Examples

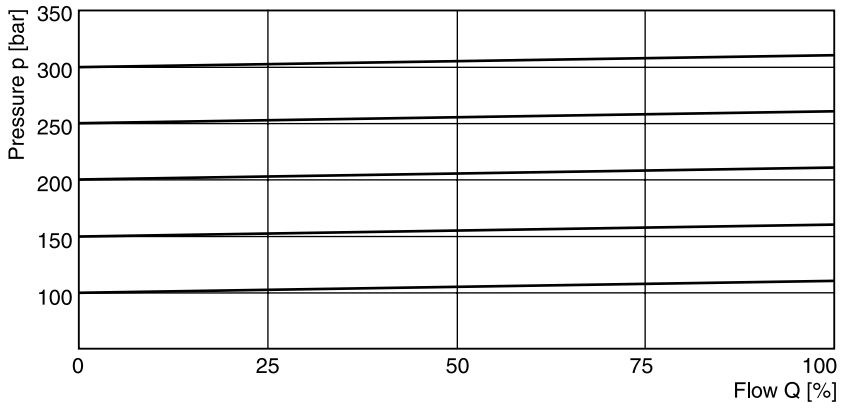
DSDU 1078 E32E - 120 bar matches Q_{max} 550 l/min, opening pressure 120 bar

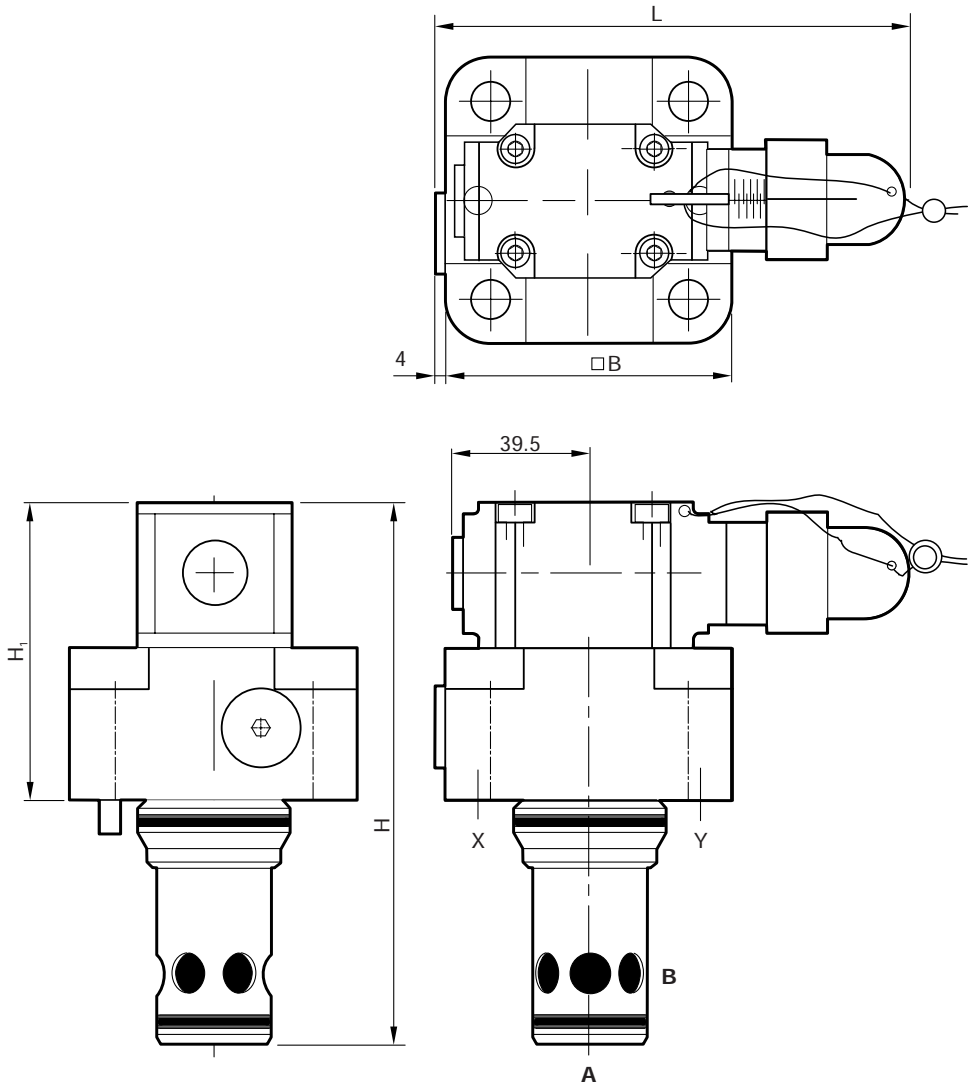
DSDU 1078 E32E - 150 bar matches Q_{max} 640 l/min, opening pressure 150 bar

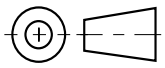
Technical data

General				
Size		NG16	NG25	NG32
Interface		Slip-in mounting according to ISO 7368		
Mounting position		as desired, horizontal mounting preferred		
Ambient temperature	[°C]	-20...+80		
$MTTF_D$ value	[years]	150		
Weight	[kg]	2.2	3.5	4.9
Hydraulic				
Max. operating pressure	[bar]	Ports A and X 350, B and Y depressurized		
Pilot		External / external		
Adjustment pressure	[bar]	See ordering code		
Nominal flow	[l/min]	See ordering code		
Fluid		Hydraulic oil according to DIN 51524 ... 51525		
Viscosity, recommended	[cSt] / [mm²/s]	30 ... 50		
permitted	[cSt] / [mm²/s]	12 ... 230		
Fluid temperature, permitted	[°C]	-5 ... +70		
recommended	[°C]	30 ... 50		
Filtration		ISO 4406 (1999); 18/16/13		

p/Q curve







NG	H	H_1	B	L
16	140	84	79 *	142
25	160	88	85	135
32	178	93	102	143

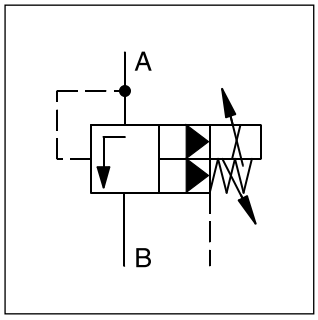
NG	Kit	ISO 4762-12.9	[Nm]	Kit NBR	Kit FPM
16	BK414	4 x M8x40	31.8	SK-DSDB10-E16	SK-DSDB10-E16V
25	BK391	4 x M12x50	108	SK-DSDB10-E25	SK-DSDB10-E25V
32	BK415	4 x M16x55	264	SK-DSDB10-E32	SK-DSDB10-E32V

* Width 65 mm.

The proportional pressure relief valve series RE*E*W consists of a proportional pilot stage and a slip-in cartridge main stage. A mechanical maximum pressure stage is optionally available. For sizes NG25 and NG32 a screw-in cartridge is used, for sizes NG40, NG50 and NG63 an additional sandwich unit.

The RE*W model code embraces the pilot valves, covers and cartridges that are also offered as separate items. See combination examples for details.

In combination with the digital power amplifier PC-D00A-400 the valve parameters can be saved, changed and duplicated.

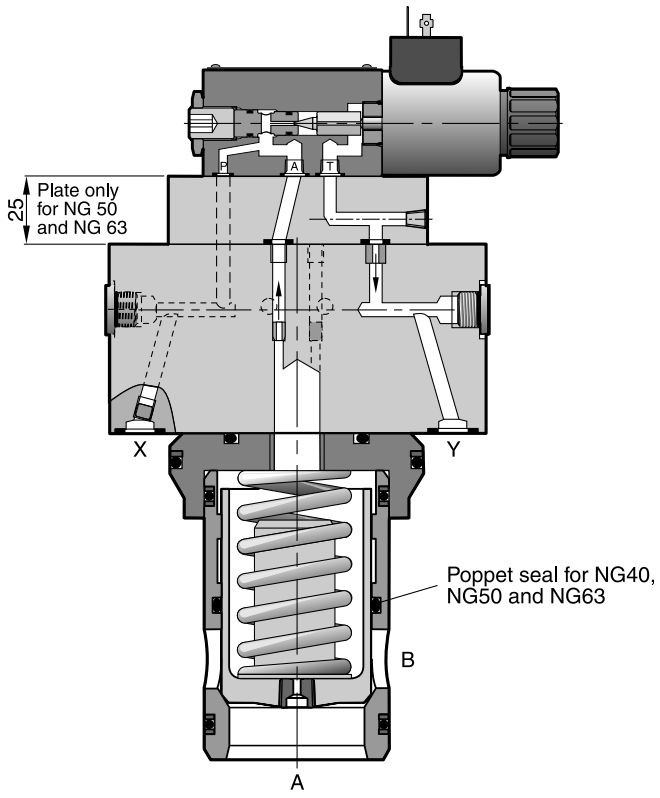


Features

- Pilot operated with proportional solenoid
- Continuous adjustment by proportional solenoid
- Optional mechanical max. pressure stage
- Cavity and mounting pattern according to ISO 7368
- 4 pressure stages
- 6 sizes, NG16 to NG63

Note

Port X only usable for remote vent function



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Ordering code

RE		E		W	1	S		1		W			
Prop. pressure relief valve	**Nominal size**	**Slip-in mounting ISO 7368**	**Pressure stages**	**Off-board electronics**	**Pilot oil** (pilot int., drain ext.)	**Poppet spring**	**Seal**	**Normally open**	**Solenoid**	**Without plug**	**Options**	**Design series**	**Spool type**

Code	Nominal size
16	NG16
25	NG25
32	NG32
40 [1)]	NG40
50 [1)]	NG50
63 [1)]	NG63

Code	Pressure stages
10	up to 105 bar
17	up to 175 bar
25	up to 250 bar
35	up to 350 bar

Code	Spool type
omit	Standard
S07	with poppet seals

Code	Options
omit	Standard
M	Mech. max. adjustment

Code	Solenoid
K	12 V, 2.5 A
X	16 V, 1.3 A

Code	Seal
N	NBR
V	FPM

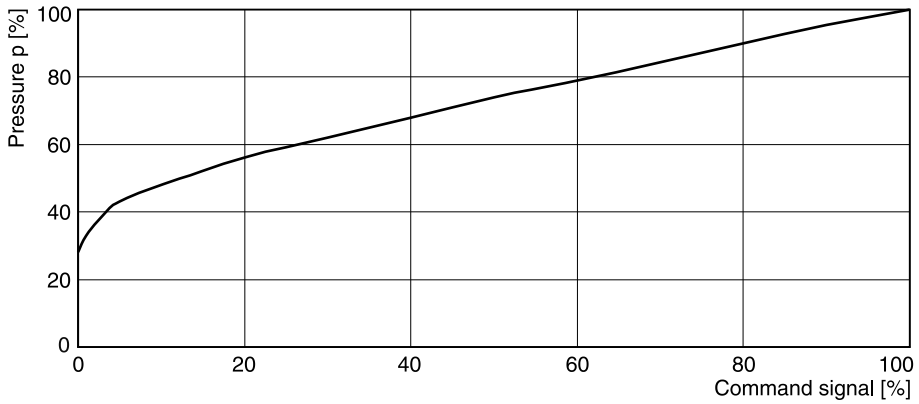
[1)] With poppet seal.

8

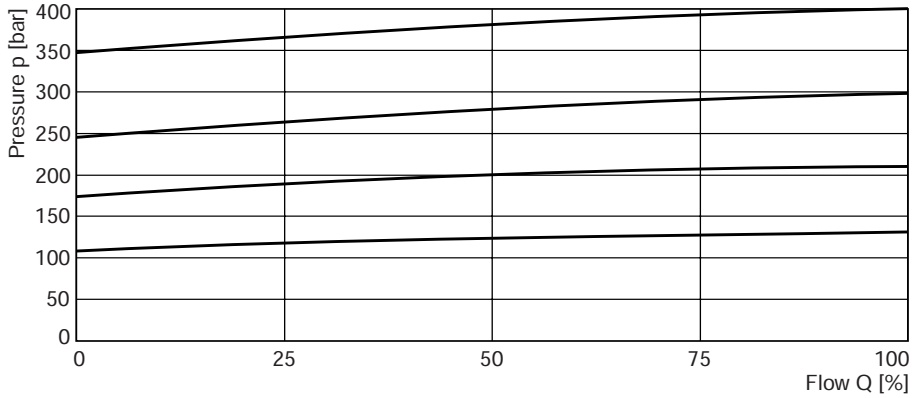
Technical data

General							
Nominal size		NG16	NG25	NG32	NG40	NG50	NG63
Interface		Slip-in mounting acc. ISO 7368					
Mounting position		as desired, horizontal mounting preferred					
Ambient temperature	[°C]	-20...+80					
$MTTF_D$ value	[years]	75					
Weight	[kg]	2.7	5.2	6.4	9.5	15.2	24.3
Hydraulic							
Max. operating pressure	[bar]	Ports A and X 350, ports B and Y 30					
Pressure stages	[bar]	105, 175, 250, 350					
Nominal flow	[l/min]	220	500	950	1400	2300	4000
Fluid		Hydraulic oil according to DIN 51524 ...51525					
Viscosity, recommended permitted	[cSt] / [mm²/s] [cSt] / [mm²/s]	30 ... 50 20 ... 380					
Fluid temperature	[°C]	-20 ... +70					
Filtration		ISO 4406 (1999); 18/16/13					
Electrical (prop. solenoid)							
Duty ratio		100 % ED; CAUTION: coil temperature up to 150 °C possible					
Protection class		IP65 in accordance with EN 60529 (with correctly mounted plug-in connector)					
Nominal voltage	[V]	12 (max. current 2.5 A)			16 (max. current 1.3 A)		
Coil resistance at 20 °C	[Ohm]	4.28			12		
Solenoid connectors		Connector as per EN 175301-803					
Power amplifier, recommended		PCD00A-400					

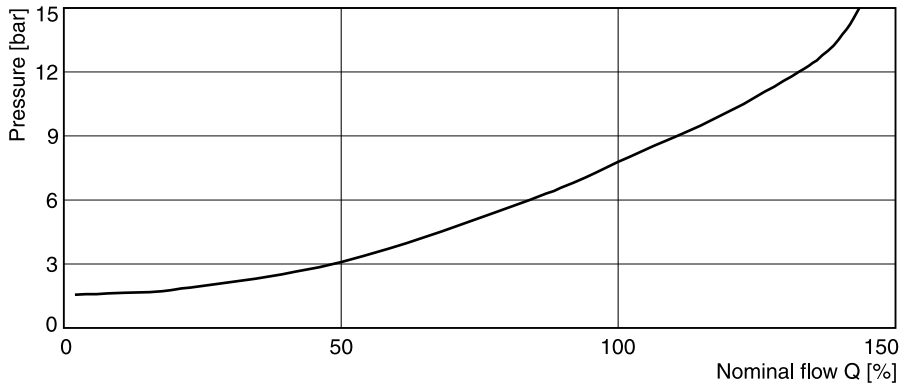
Signal/pressure curve



p/Q performance curve



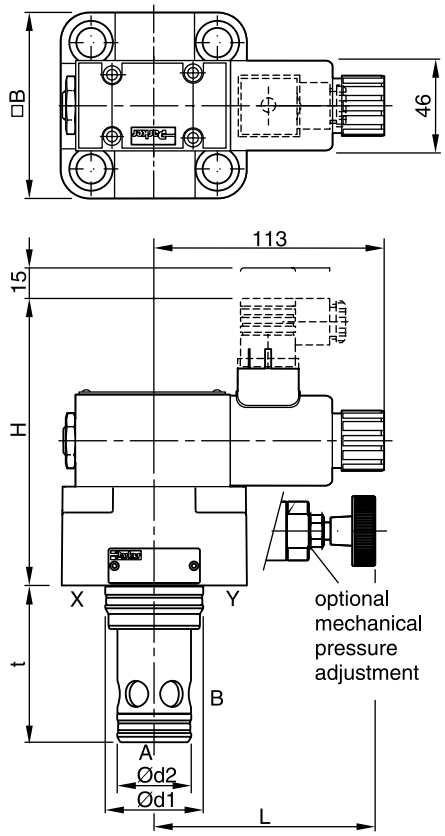
Minimum pressure curve



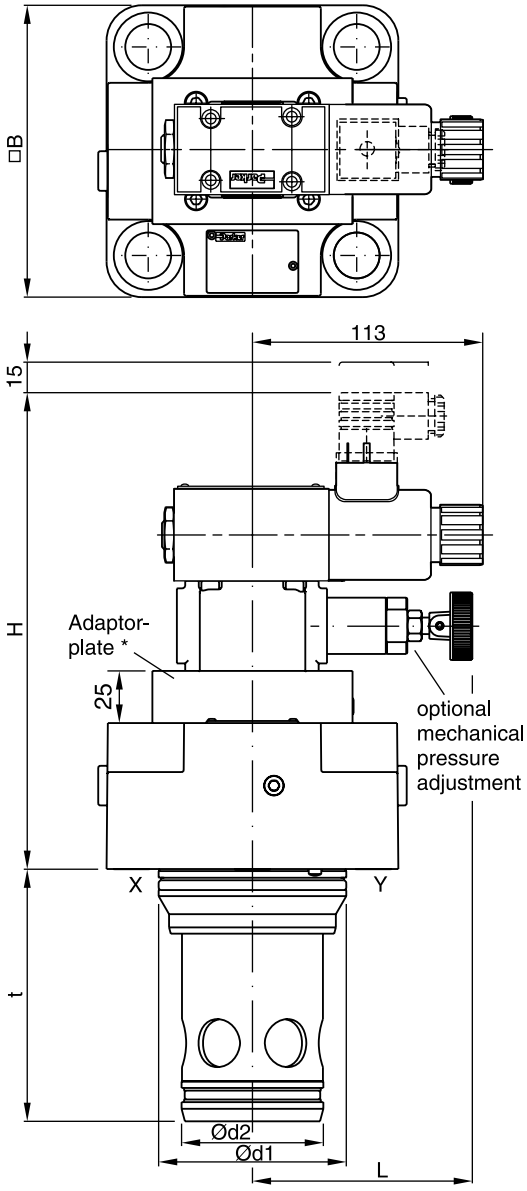
All characteristic curves measured with HLP46 at 50 °C.

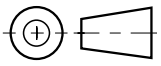
The performance curves are measured with external drain. For internal drain the tank pressure has to be added to curve.

NG16 - NG32



NG40 - NG63 *)





Size	H	B	d_1	d_2	t	L
NG16	135	79 [1)]	32	25	56	114
NG25	140	85	45	34	72	102
NG32	145	102	60	45	85	95
NG40	137 (180.2) [2)]	125	75	55	105	106
NG50	172 (215.2) [2)]	140	90	68	122	106
NG63	187 (230.2) [2)]	180	120	90	155	106

NG	Kit	ISO 4762-12.9	[Nm]	Kit NBR	Kit FPM
16	BK414	4 x M8x40	31.8	SK-RE16EN	SK-RE16EV
25	BK391	4 x M12x50	108	SK-RE25EN	SK-RE25EV
32	BK415	4 x M16x55	264	SK-RE32EN	SK-RE32EV
40	BK416	4 x M20x70	517	SK-RE40EN	SK-RE40EV
50	BK417	4 x M20x75	517	SK-RE50EN	SK-RE50EV
63	BK418	4 x M30x100	1775	SK-RE63EN	SK-RE63EV

* NG40 without adaptor plate.
[1)] Width 65 mm.
[2)] With mechanical pressure adjustment.

RE_E_W UK.INDD CM 24.07.13

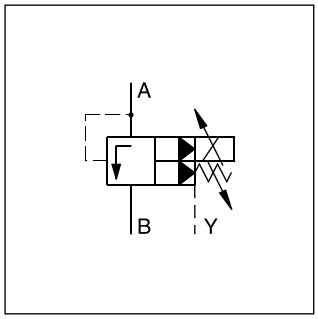
The proportional pressure relief valves series RE*E*T with onboard electronics and a slip-in cartridge main stage is electronically based on the functionality of the digital amplifier PCD00.

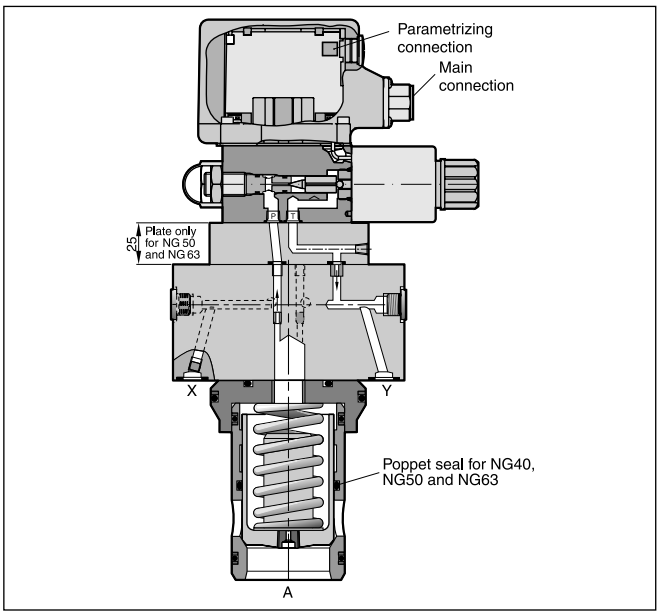
The digital onboard electronics is situated in a robust metal housing and can be used in rough environments.

The nominal values of the valves are factory set. Additionally the ProPxD software permits the editing of all parameters. The software is also used for the digital electronic modules. The cable for connection to a serial RS232C interface is available as accessory.

The valves are optionally available with a mechanical maximum pressure adjustment.

The RE*T model code embraces the pilot valves, covers and cartridges that are also offered as separate items.





Features

- Pilot operated pressure relief valve
- Onboard electronics
- Optional mechanical max. pressure stage
- Factory setting
- Ramp time adjustment
- Linearized characteristics
- 4 pressure stages
- Cavity and mounting pattern according to ISO 7368
- 6 sizes, NG16 to NG63

Note

Port X only usable for remote vent function.

8

Ordering code

RE		E		T	1	S		1		0			
Prop. pressure relief valve with elec. unloading	Nominal size	Slip-in mounting ISO 7368	Pressure stages	On-board electronics	Pilot oil (pilot int., drain ext.)	Poppet spring	Seal	Normally open	Command signal	Electr. attach-ments	Options	Design series (not required for ordering)	Spool type

Code	Nominal size
16	NG16
25	NG25
32	NG32
40 [1]	NG40
50 [1]	NG50
63 [1]	NG63

Code	Pressure stages
10	up to 105 bar
17	up to 175 bar
25	up to 250 bar
35	up to 350 bar

Code	Spool type
omit	Standard
S07 [2]	with poppet seals

Code	Options
omit	Standard
M	Mechanical max. adjustment

Code	Command signal
F	Voltage input 0...+10 V with ref. output +10 V
R	Current input 4...20 mA

Code	Seal
N	NBR
V	FPM

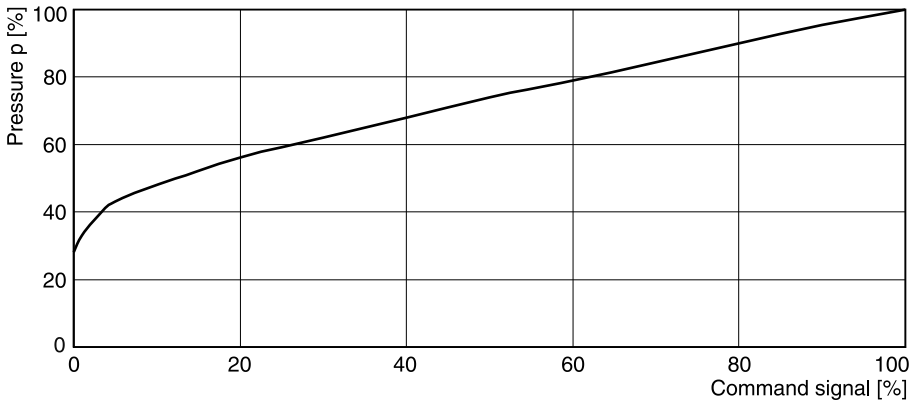
[1] With poppet seal.
[2] Not for NG16.

Please order plugs separately, item no. 5004072
Parametrizing cable OBE -> RS-232: item no. 40982923

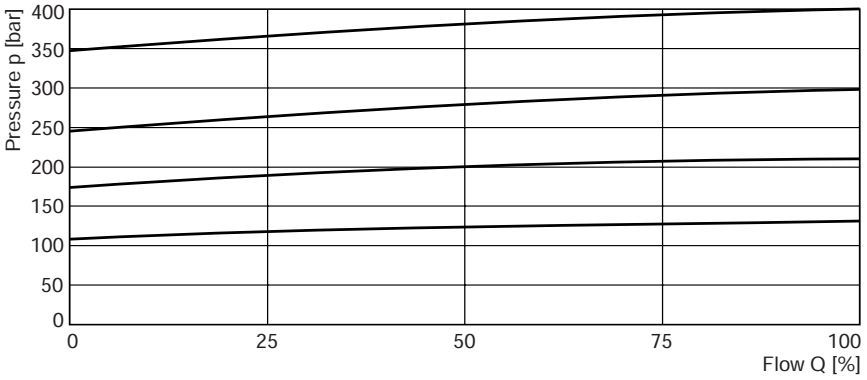
General								
Nominal size			NG16	NG25	NG32	NG40	NG50	NG63
Interface			Slip-in mounting acc. ISO 7368					
Mounting position			as desired, horizontal mounting preferred					
Ambient temperature		[°C]	-20...+60					
$MTTF_D$ value		[years]	50					
Weight		[kg]	2.7	5.2	6.4	9.5	15.2	24.3
Vibration strength		[g]	10 sinus 5...2000 Hz acc. to IEC 68-2-6 30 noise 20...2000 Hz acc. to IEC 68-2-36 15 shock acc. to IEC 68-2-27					
Hydraulic								
Max. operating pressure		[bar]	Ports A and X 350, ports B and Y 30					
Pressure stages		[bar]	105, 175, 250, 350					
Nominal flow		[l/min]	220	500	950	1400	2300	4000
Fluid			Hydraulic oil according to DIN 51524 ... 51525					
Viscosity,	recommended	[cSt] / [mm²/s]	30 ... 50					
	permitted	[cSt] / [mm²/s]	20 ... 380					
Fluid temperature		[°C]	-20 ... +60					
Filtration			ISO 4406 (1999); 18/16/13					
Electrical								
Duty ratio ED		[%]	100					
Supply voltage		VDC	18...30, ripple < 5 % eff., surge free					
Current consumption max.		[A]	2.0					
Pre-fusing		[A]	2.5 medium lag					
Potentiometer supply		[V]	+10 / ±5 % max. 10 mA					
Command signal	Code F voltage	[V]	0...+10, ripple < 0.01 % eff., surge free, Ri = 100 kOhm					
	Code R current	[mA]	4...20, ripple < 0.01 % eff., surge free, Ri = 200 Ohm < 3.6 mA = enable off, > 3.8 mA = enable on (acc. NAMUR NE43)					
Differential input voltage max.		[V]	30 for terminal D and E against PE (terminal G)					
		[V]	11 for terminal D and E against 0V (terminal B)					
Adjustment ranges	Min current	[%]	0...50					
	Max current	[%]	50...100					
	Ramp	[s]	0...32.5					
Interface			RS 232C, parametrizing connection 5-pole					
EMC			EN 61000-6-2, EN 61000-6-4					
Central connection			6 + PE acc. EN 175201-804					
Cable specification		[mm²]	7 x 1.0 overall braid shield					
Cable length max.		[m]	50					

8

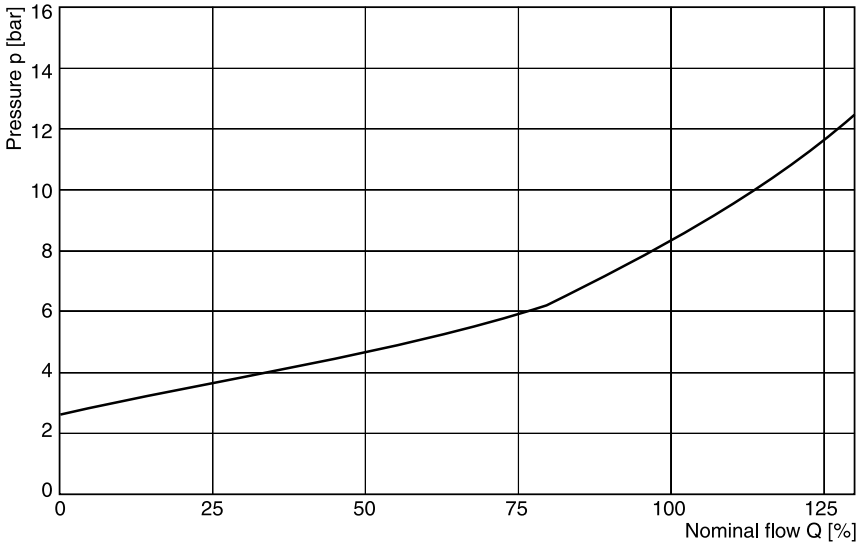
Command pressure curve RE*E*T



p/Q performance curve RE*E*T



Minimum pressure curve RE*E*T

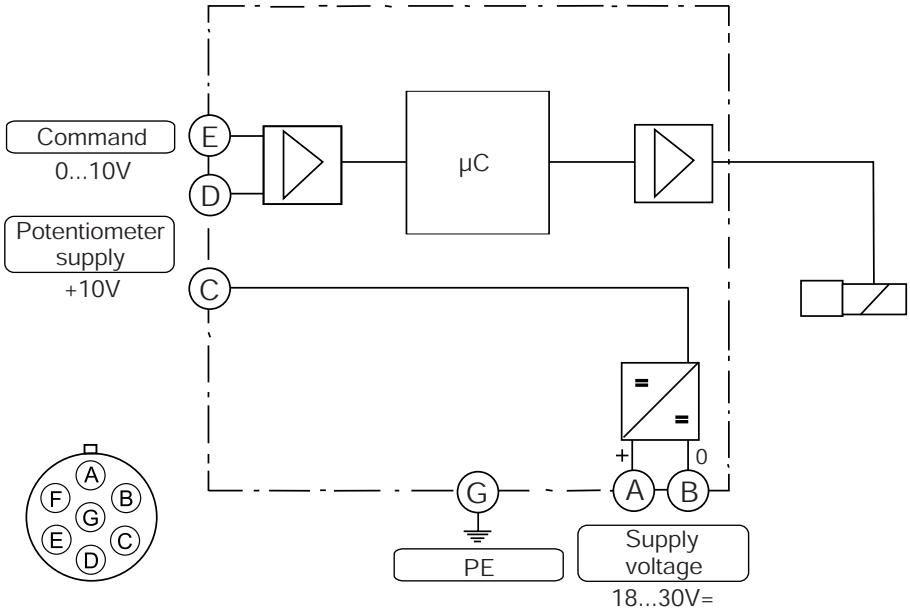


All characteristic curves measured with HLP46 at 50 °C.

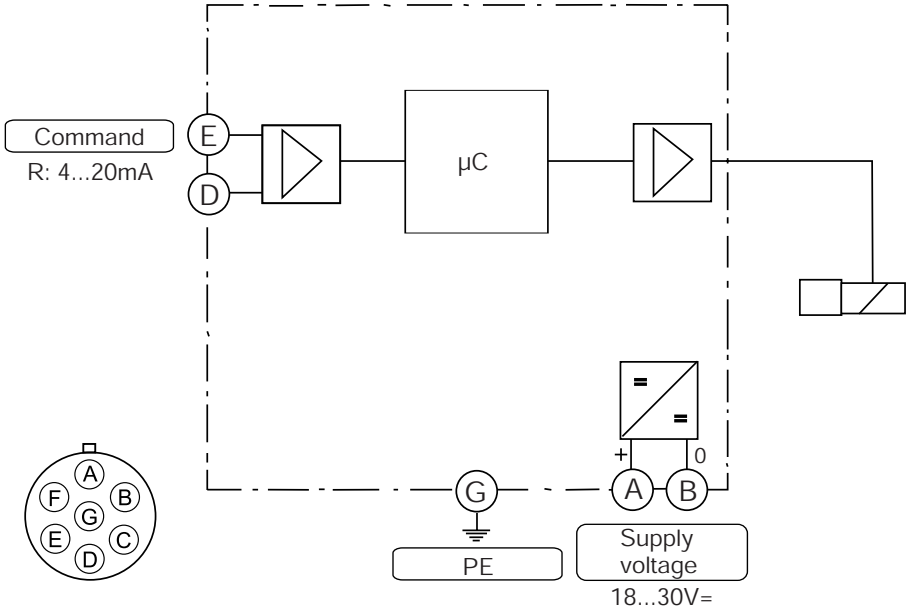
The performance curves are measured with external drain. For internal drain the tank pressure has to be added to curve.

Block diagram

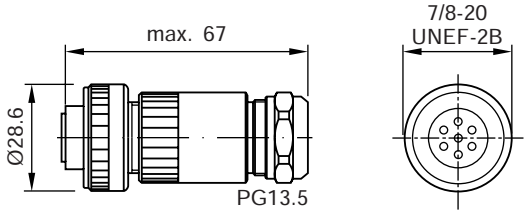
Code F
6 + PE acc. EN 175201-804



Code R
6 + PE acc. EN 175201-804



Female connector (EMC conform)



Please order plugs separately,
ID no. 5004072

ProPxD interface program

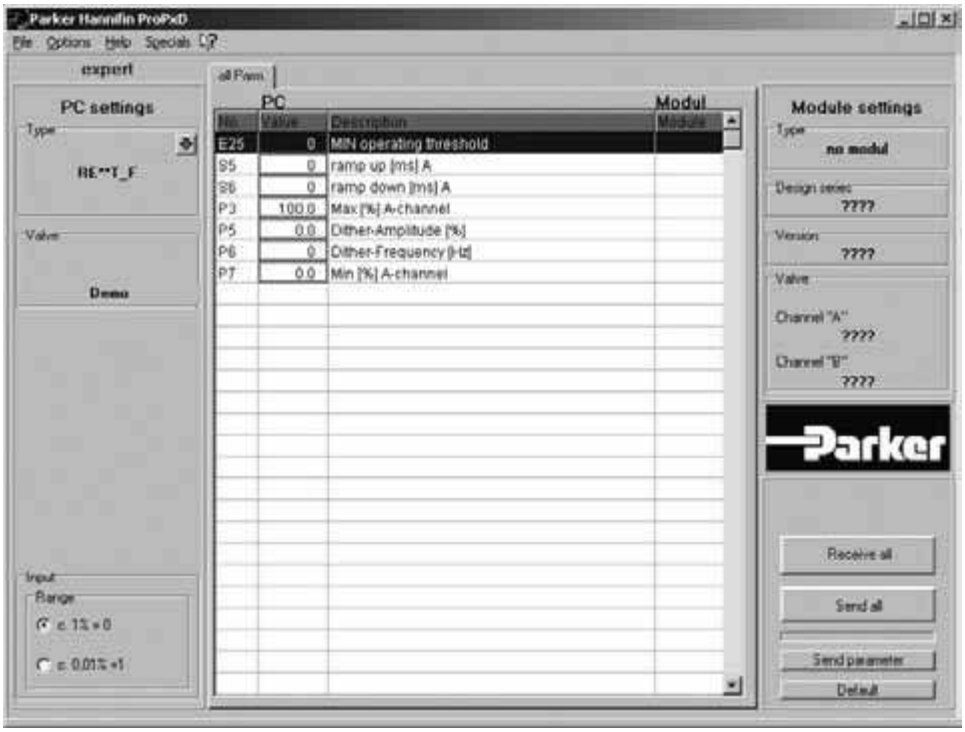
The new ProPxD software permits comfortable parameter setting for the electronic module series PCD, PWD, PZD, PID and PWDXX.

Via the clearly arranged entry mask the parameters can be displayed and modified. Storage of complete parameter sets is possible as well as print-out or record as text file for further documentation. Stored parameter sets may be loaded anytime and transmitted to the electronic module in the same manner as the basic parameters which are available for all usable valve series. Inside the electronic a nonvolatile memory stores the data with the option for recalling or modification.

Features

- Comfortable editing of all parameters
- Depiction and documentation of parameter sets
- Storage and loading of optimized parameter adjustments
- Executable with all actual Windows® operating systems from Windows® 95 upwards
- Plain communication between PC and electronic via serial interface RS232C and null modem cable

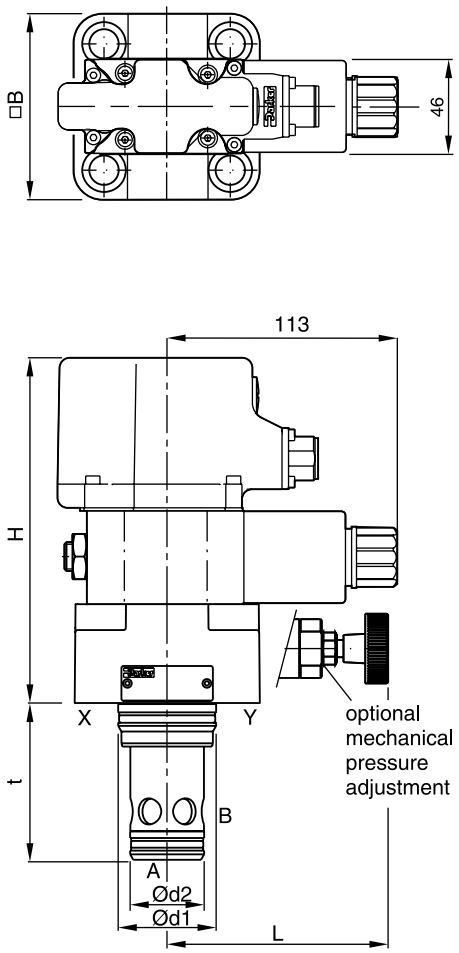
Comfortable PC user software, free of charge:
www.parker.com/euro_hcd - see "Support"



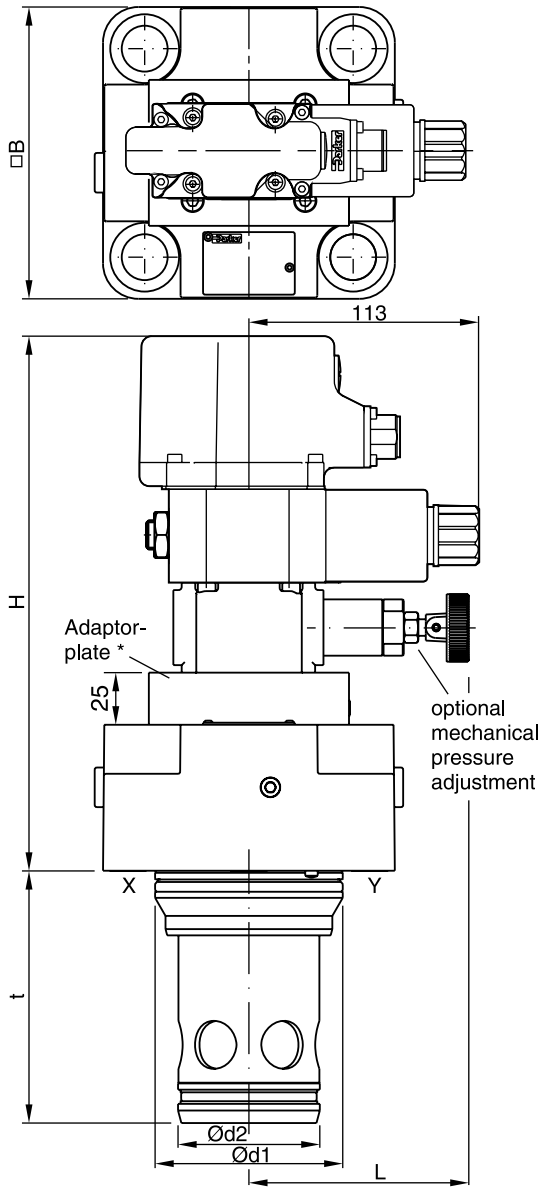
The parametrizing cable may be ordered under item no. 40982923.

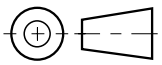
8

NG16 - NG32



NG40 - NG63 *





Size	H	B	d_1	d_2	t	L
NG16	179	79 [1]	32	25	56	114
NG25	124	85	45	34	72	102
NG32	129	102	60	45	85	95
NG40	139 (182.2) [2]	125	75	55	105	106
NG50	174 (217.2) [2]	140	90	68	122	106
NG63	189 (232.2) [2]	180	120	90	155	106

NG	Kit	ISO 4762-12.9	[Nm]	Kit NBR	Kit FPM
16	BK414	4 x M8x40	31.8	SK-RE16EN	SK-RE16EV
25	BK391	4 x M12x50	108	SK-RE25EN	SK-RE25EV
32	BK415	4 x M16x55	264	SK-RE32EN	SK-RE32EV
40	BK416	4 x M20x70	517	SK-RE40EN	SK-RE40EV
50	BK417	4 x M20x75	517	SK-RE50EN	SK-RE50EV
63	BK418	4 x M30x100	1775	SK-RE63EN	SK-RE63EV

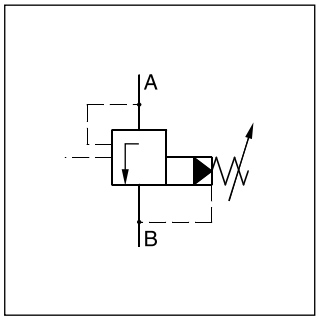
* NG40 without adaptor plate.
[1] Width 65 mm.
[2] With mechanical pressure adjustment.

RE_E_T UK.INDD CM 24.07.13

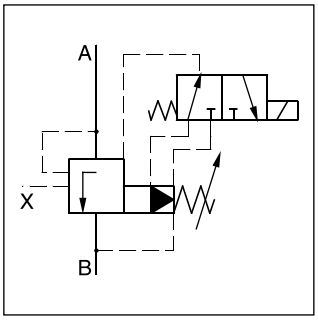
The unloading valve series UR*E consists of a mechanical pilot stage and a slip-in cartridge main stage. These valves are used to unload a circuit at low pressure. The mechanically adjustable pressure signal to unload the main stage has to be applied to port X. The nominal pressure differential between opening and closing is 15 %.

In addition the series US*E is vented by electrical operation. The UR*E/US*E model codes embrace the pilot valves, covers and cartridges that are also offered as separate items. See combination examples for details.

US25E



UR*E



US*E

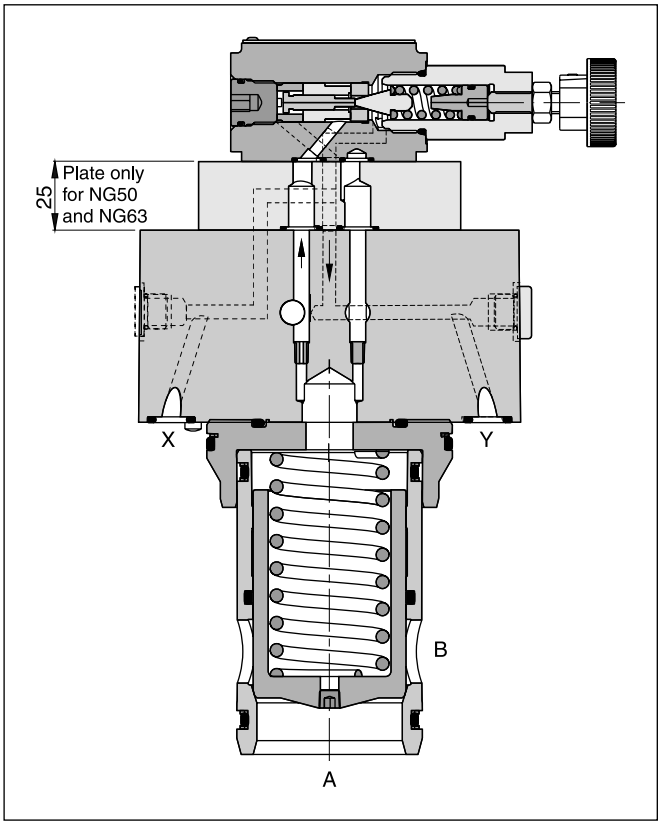
Features

- Pilot operated unloading valve
- Cavity and mounting pattern according to ISO 7368
- 4 pressure stages
- 2 switching types (series US*E)
- 2 adjustment modes
  - Hand knob
  - Turning knob with key lock
- 6 sizes NG16 to NG63

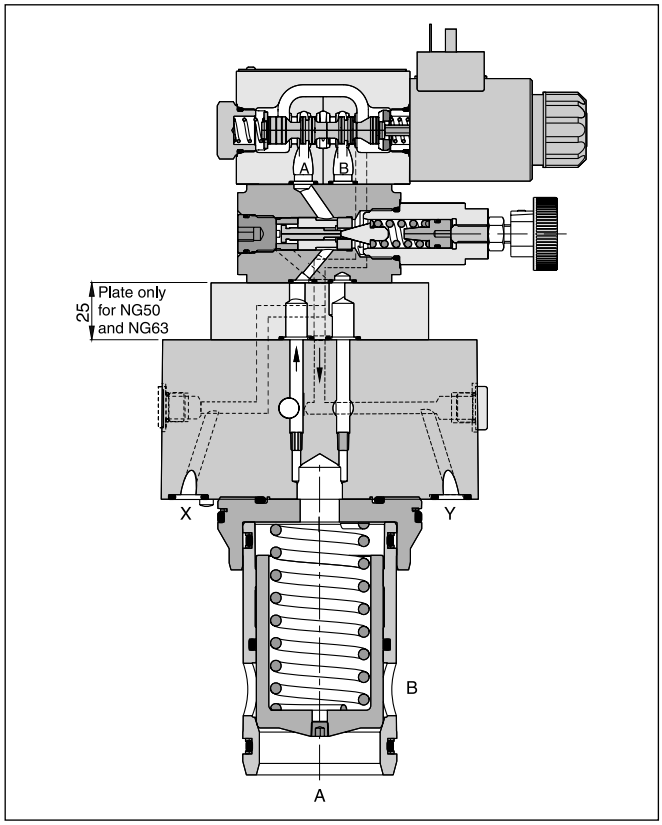
Note

Port X only usable for remote vent function

UR*E



US*E



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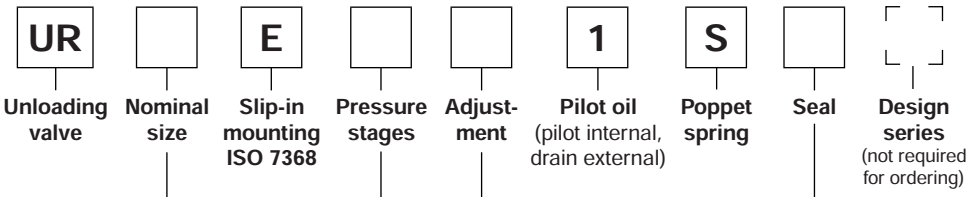
UR*E



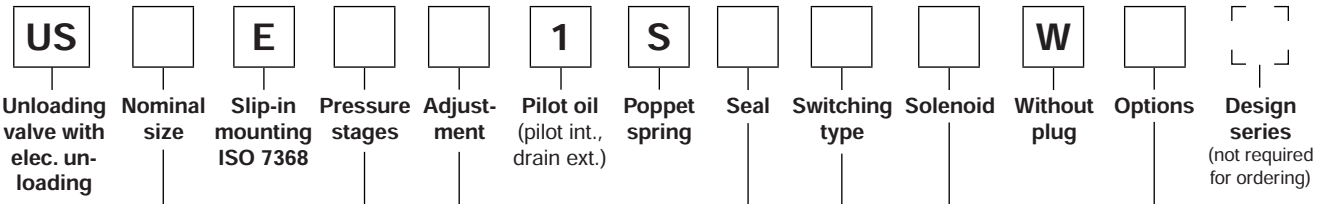
Code	Nominal size
16	NG16
25	NG25
32	NG32
40	NG40
50	NG50
63	NG63

Code	Seal
N	NBR
V	FPM

Code	Adjustment
S	Hand knob (standard)
A	Acorn nut with lead seal
L	Cylinder lock

Code	Pressure stages
07	up to 70 bar
17	up to 175 bar
25	up to 250 bar
35	up to 350 bar

US*E



Code	Nominal size
16	NG16
25	NG25
32	NG32
40	NG40
50	NG50
63	NG63

Code	Spool type
omit	Standard
S	with slow unloading

Code	Solenoid
K	12 V
J	24 V
U [1]	98 V
G [1]	205 V

Code	Pressure stages
07	up to 70 bar
17	up to 175 bar
25	up to 250 bar
35	up to 350 bar

Code	Switching type
1	Solenoid not activated, unpress. circulation
9	Solenoid activated, unpress. circulation

Code	Adjustment
S	Hand knob (standard)
A	Acorn nut with lead seal
L	Cylinder lock

Code	Seal
N	NBR
V	FPM

[1] To be used in combination with rectifier plugs at 120 VAC / 230 VAC power supply.

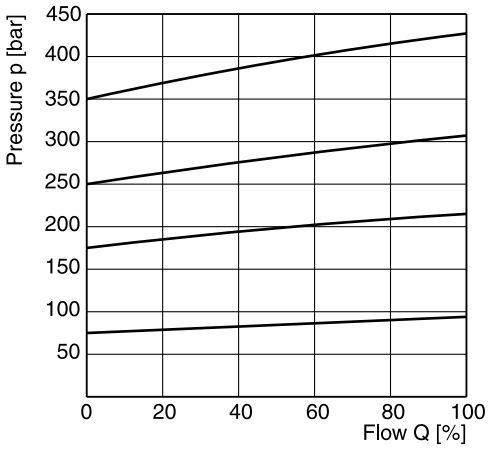
UR*E

General							
Nominal size		NG16	NG25	NG32	NG40	NG50	NG63
Interface		Slip-in mounting acc. ISO 7368					
Mounting position		as desired, horizontal mounting preferred					
Ambient temperature	[°C]	-20...+80					
$MTTF_D$ value	[years]	75					
Weight	[kg]	2.2	3.5	4.9	8.0	13.7	22.8
Hydraulic							
Max. operating pressure	[bar]	Ports A and X up to 350, Ports B and Y 30					
Pressure stages	[bar]	75, 175, 250, 350					
Pressure differential, nominal	[%]	15					
Nominal flow	[l/min]	220	500	950	1400	2300	4000
Fluid		Hydraulic oil according to DIN 51524 ...51525					
Viscosity, recommended permitted	[cSt] / [mm²/s] [cSt] / [mm²/s]	30 ... 50 20 ... 380					
Fluid temperature	[°C]	-20 ... +70					
Filtration		ISO 4406 (1999); 18/16/13					

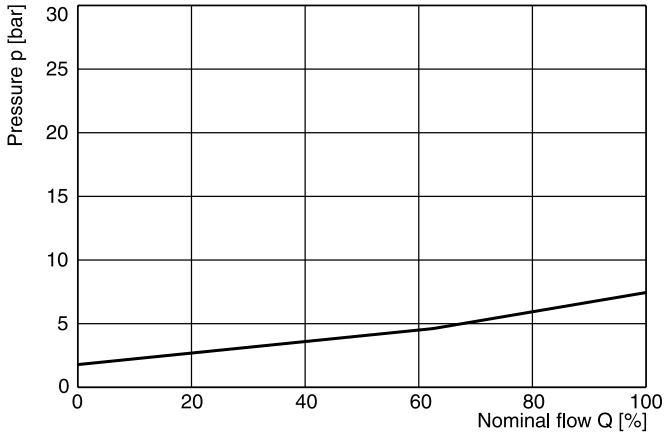
US*E

General							
Nominal size		NG16	NG25	NG32	NG40	NG50	NG63
Interface		Slip-in mounting acc. ISO 7368					
Mounting position		as desired, horizontal mounting preferred					
Ambient temperature	[°C]	-20...+80					
$MTTF_D$ value	[years]	75					
Weight	[kg]	2.7	5.2	6.4	9.5	15.2	24.3
Hydraulic							
Max. operating pressure	[bar]	Ports A and X 350, ports B and Y 30					
Pressure stages	[bar]	75, 175, 250, 350					
Pressure differential, nominal	[%]	15					
Nominal flow	[l/min]	220	500	950	1400	2300	4000
Fluid		Hydraulic oil according to DIN 51524 ...51525					
Viscosity, recommended permitted	[cSt] / [mm²/s] [cSt] / [mm²/s]	30 ... 50 20 ... 380					
Fluid temperature	[°C]	-20 ... +70					
Filtration		ISO 4406 (1999); 18/16/13					
Electrical (solenoid)							
Duty ratio		100 % ED; CAUTION: coil temperature up to 150 °C possible					
Protection class		IP65 in accordance with EN 60529 (with correctly mounted plug-in connector)					
	Code	K	J		U	G	
Supply voltage	[V]	12 V =	24 V =		98 V =	205 V =	
Tolerance supply voltage	[%]	±10	±10		±10	±10	
Current consumption	[A]	2.72	1.29		0.33	0.13	
Power consumption	[W]	32.7	31		31.9	28.2	
Solenoid connection		Connector as per EN175301-803, solenoid identification as per ISO 9461					
Wiring min.	[mm²]	3 x 1.5 recommended					
Wiring length max.	[m]	50 recommended					

p/Q performance curve [1)]



Minimum pressure curve



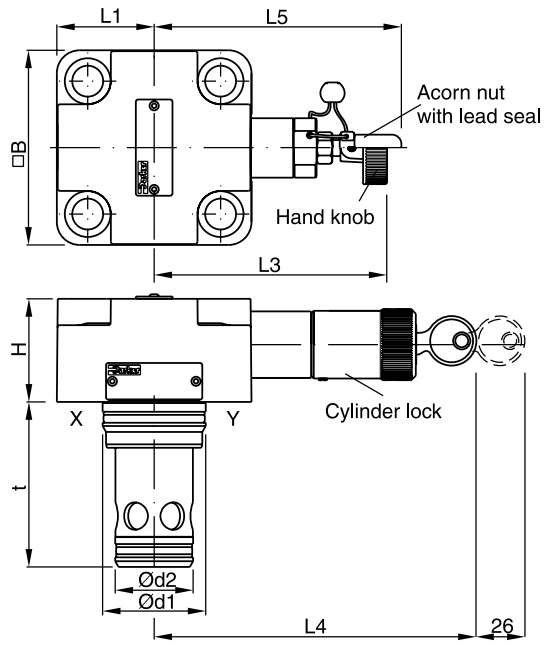
All characteristic curves measured with HLP46 at 50 °C.

8

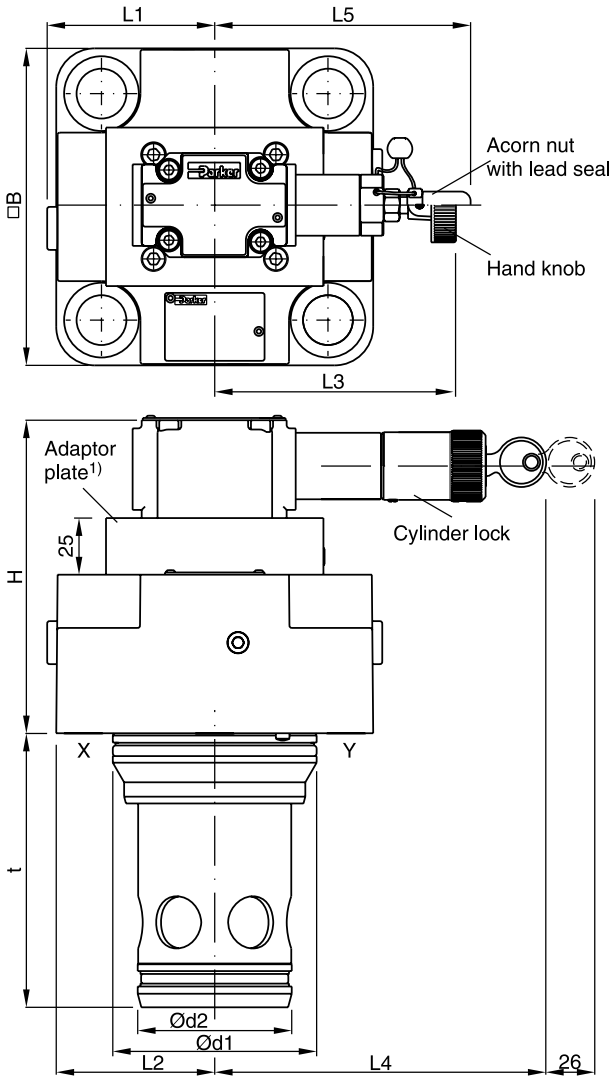
[1)] The performance curves are measured with external drain.
For internal drain the tank pressure has to be added to curve.

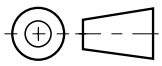
Dimensions

UR*E NG16 to NG32



UR*E NG40 to NG63 [1)]





Size	H	B	L1	L2	L3	L4	L5	d1	d2	t
NG16	40	65 [2)]	32.5	—	114	125.5	117	32	25	56
NG25	47	85	42.5	—	102	114	105	45	34	71
NG32	50	102	51	—	95	106	97.5	60	45	85
NG40	106	125	62.5	66.5	106	144	110.5	75	55	105
NG50	141	140	70	74	106	144	110.5	90	68	121
NG63	155	180	90	94	106	144	110.5	120	90	155

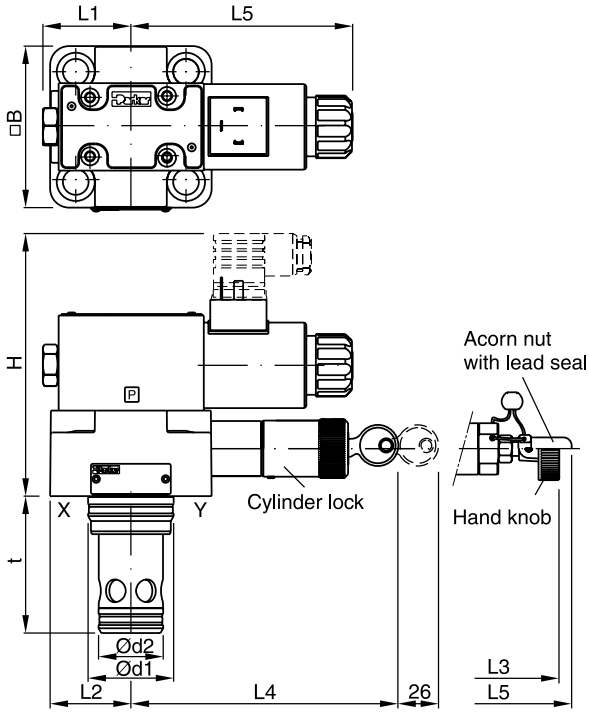
NG	Kit	ISO 4762-12.9	[Nm]	Kit NBR	Kit FPM
16	BK414	4 x M8x40	31.8	SK-R16EN	SK-R16EV
25	BK391	4 x M12x50	108	SK-R25EN	SK-R25EV
32	BK415	4 x M16x55	264	SK-R32EN	SK-R32EV
40	BK416	4 x M20x70	517	SK-R40EN	SK-R40EV
50	BK417	4 x M20x75	517	SK-R50EN	SK-R50EV
63	BK418	4 x M30x100	1775	SK-R63EN	SK-R63EV

[1)] NG40 without adaptor plate.
[2)] Width 79 mm.

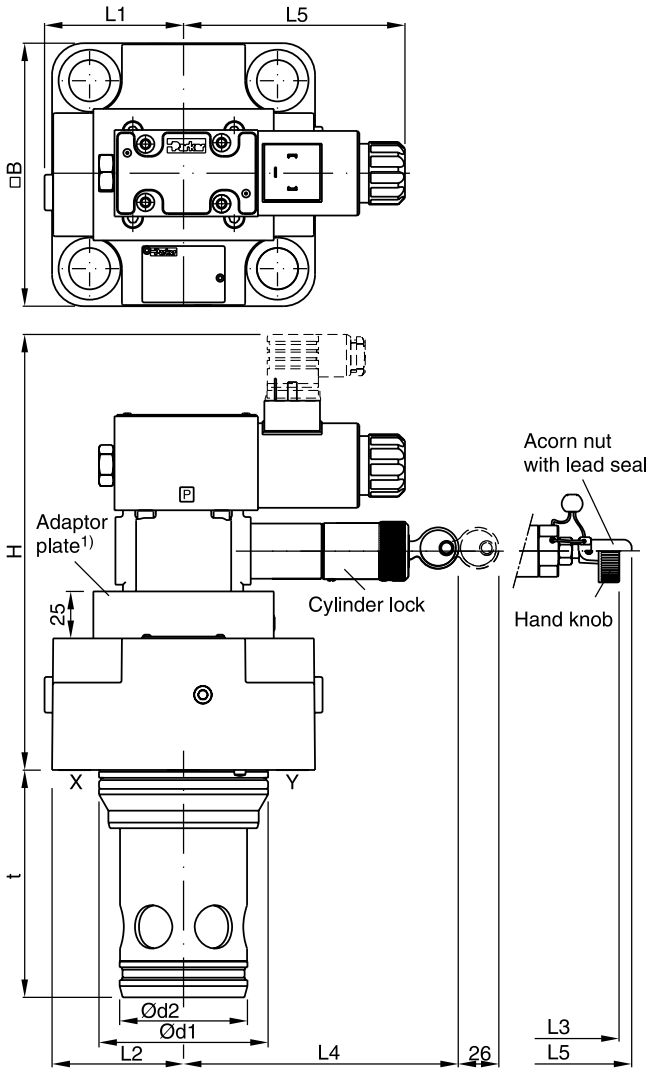
URE-USE UK.INDD CM 24.07.13

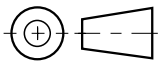
Dimensions

US*E NG16 to NG32



US*E NG40 to NG63 [1)]



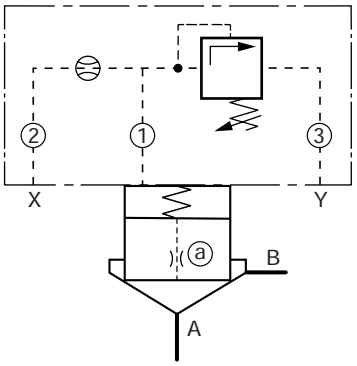


Size	H	B	L1	L2	L3	L4	L5	d1	d2	t
NG16	40	65 [2)]	32.5	—	114	125.5	117	32	25	56
NG25	47	85	42.5	—	102	114	105	45	34	71
NG32	50	102	51	—	95	106	97.5	60	45	85
NG40	106	125	62.5	66.5	106	144	110.5	75	55	105
NG50	141	140	70	74	106	144	110.5	90	68	121
NG63	155	180	90	94	106	144	110.5	120	90	155

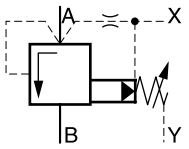
NG	Kit	ISO 4762-12.9	[Nm]	Kit NBR	Kit FPM
16	BK414	4 x M8x40	31.8	SK-RS16EN	SK-RS16EV
25	BK391	4 x M12x50	108	SK-RS25EN	SK-RS25EV
32	BK415	4 x M16x55	264	SK-RS32EN	SK-RS32EV
40	BK416	4 x M20x70	517	SK-RS40EN	SK-RS40EV
50	BK417	4 x M20x75	517	SK-RS50EN	SK-RS50EV
63	BK418	4 x M30x100	1775	SK-RS63EN	SK-RS63EV

[1)] NG40 without adaptor plate.
[2)] Width 79 mm.

Pressure relief valve with cover with integrated pressure relief function



NG16 - NG32



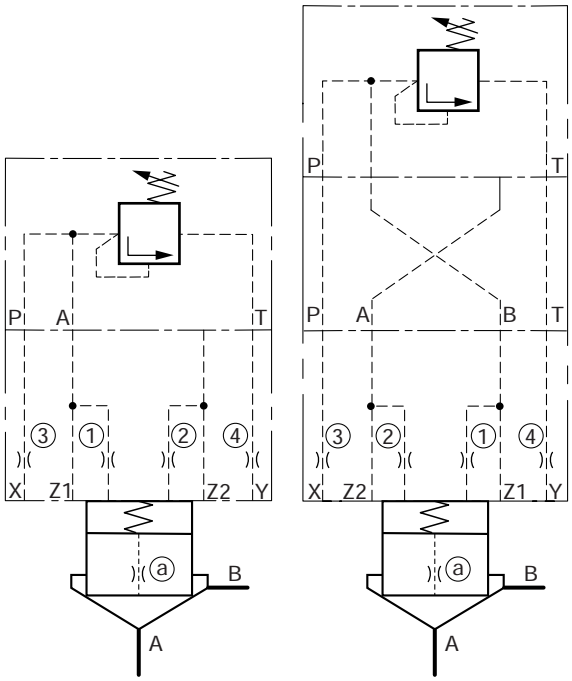
8

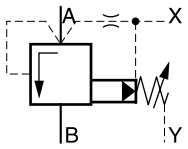
Description	Type NG16	NG25	NG32
Cover incl. pressure valve [1]	C016Fxxxxxxxxx	C025Fxxxxxxxxx	C032Fxxxxxxxxx
Cover orifice ①	M5xØ1.0	M5xØ1.1	M6xØ1.2
Cover orifice ②	M4xØ0.8	M5xØ0.9	M6xØ1.0
Cover orifice ③	M5xØ99	M5xØ99	M6xØ99
Cartridge [2]	CP016C07S00X	CP025C07S00X	CP032C07S00X
Poppet orifice ⓐ	1/16NPT x Ø0.9	1/16NPT x Ø1.1	1/16NPT x Ø1.2
Spring	1.6 bar, typ S		
Volume reduction	45036578	45036579	45036580
Bolt kit cover	BK414, 4x M8x40	BK391, 4x M12x50	BK415, 4x M16x55

Shown orifice Ø and springs are recommendations.
xxØ00 = plug
xxØ99 = open

[1] Complete type see ordering code C*F.
[2] Complete type see ordering code CP*.

Pressure relief valve with separate pilot





8

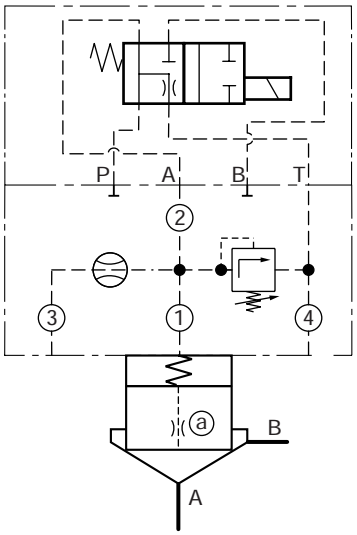
Adaptor plates see chapter 12

Description	Type					
	NG16	NG25	NG32	NG40	NG50	NG63
Pressure valve [1]	R06Mxxx4x					
Adaptor plate [2]	without				PADA1007/A-B/B-A	
Cover [3]	C016CA*	C025CA*	C032CA*	C040CA*	C050CA*	C063CA*
Cover orifice ①	M5xØ1.1	M5xØ1.3	M5xØ1.4	M5xØ1.5	M6xØ1.6	M6xØ1.7
Cover orifice ②	M5xØ00				M6xØ00	
Cover orifice ③	M5xØ99	M6xØ99			M8xØ99	
Cover orifice ④	M5xØ1.3	M6xØ1.5	M6xØ1.7	M6xØ1.8	M8xØ2.0	M8xØ2.2
Cartridge [4]	CP016C07*	CP025C07*	CP032C07*	CP040C07*	CP050C07*	CP063C07*
Poppet orifice ⓐ	1/16NPT x Ø0.9	1/16NPT x Ø1.1	1/16NPT x Ø1.2	1/16NPT x Ø1.3	1/16NPT x Ø1.4	1/16NPT x Ø1.5
Spring	1.6 bar, type S					
Volume reduction	45036578	45036579	45036580	45036581	45036582	45036583
Bolt kit cover	BK414, 4x M8x40	BK391, 4x M12x50	BK415, 4x M16x55	BK416, 4x M20x70	BK417, 4x M20x75	BK418, 4x M30x100
Bolt kit pilot	BK443, 4x M5x45					

Shown orifice Ø and springs are recommendations.
xxØ00 = plug
xxØ99 = open

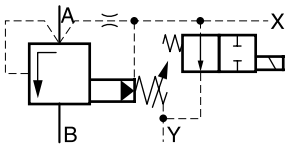
[1] Complete type see pilot valves.
[2] Included O-rings and mounting bolts.
[3] Complete type see ordering code C*C.
[4] Complete type see ordering code CP*.

Pressure relief valve with electrical vent function, normally open and cover with integrated pressure relief function



NG16 - NG32

Flow A → B



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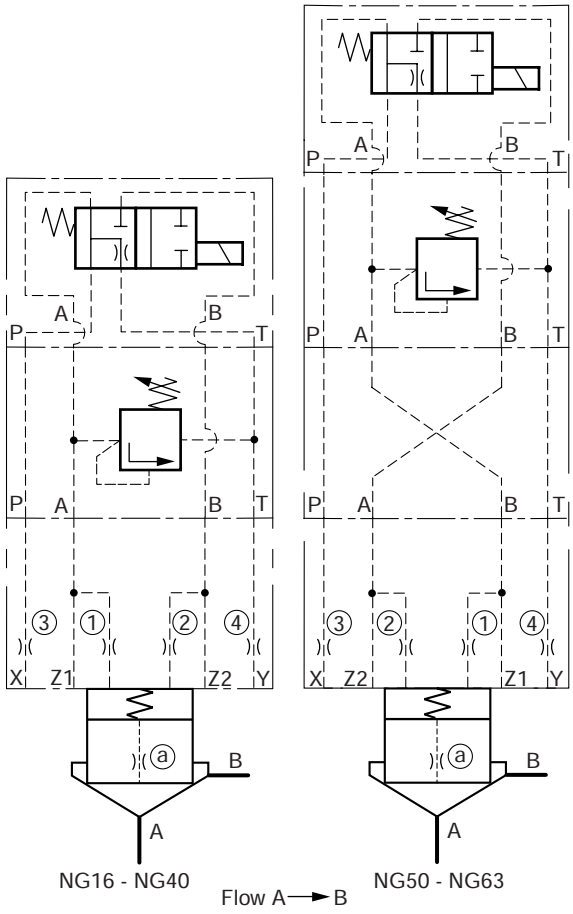
Description	Type NG16	NG25	NG32
4/2 DC valve [1]	D1VW104K*		
Cover incl. pressure valve [2]	C016Gxxxxxxxxx	C025Gxxxxxxxxx	C032Gxxxxxxxxx
Cover orifice ①	M5xØ1.0	M5xØ1.1	M6xØ1.2
Cover orifice ②	M5xØ99	M5xØ99	M6xØ99
Cover orifice ③	M4xØ00	M5xØ00	M6xØ00
Cover orifice ④	M5xØ1.2	M5xØ1.3	M6xØ1.4
Cartridge [3]	CP016C07*	CP025C07*	CP032C07*
Poppet orifice ⓐ	1/16NPT x Ø0.8	1/16NPT x Ø0.8	1/16NPT x Ø1.0
Spring	1.6 bar, type S		
Volume reduction	45036578	45036579	45036580
Bolt kit cover	BK414, 4x M8x40	BK391, 4x M12x50	BK415, 4x M16x55
Bolt kit 4/2 DC valve	BK375, 4x M5x30		

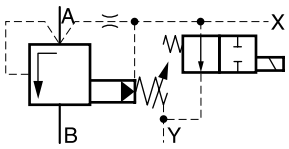
Shown orifice Ø and springs are recommendations.
xxØ00 = plug
xxØ99 = open

[1] Complete type see chapter "Directional Control Valves", series D1VW.
[2] Complete type see ordering code C*G.
[3] Complete type see ordering code CP*.

Examples pressure.INDD CM 24.07.13

Pressure relief valve with electrical vent function, normally open and pilot in sandwich design





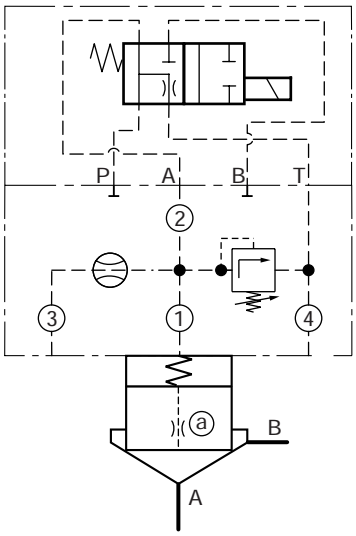
Adaptor plates see chapter 12

Description	Type NG16	NG25	NG32	NG40	NG50	NG63
4/2 DC valve [1]	D1VW104K*					
Pressure valve [2]	V-ZUDB1ATxZ07x					
Adaptor plate [3] NG10-NG06	without				PADA1007/A-B/B-A	
Cover [4]	C016CA*	C025CA*	C032CA*	C040CA*	C050CA*	C063CA*
Cover orifice ①	M5xØ1.1	M5xØ1.3	M5xØ1.4	M5xØ1.5	M6xØ1.6	M6xØ1.7
Cover orifice ②	M5xØ00				M6xØ00	
Cover orifice ③	M5xØ99	M6xØ99			M8xØ99	
Cover orifice ④	M5xØ1.3	M6xØ1.5	M6xØ1.5	M6xØ1.8	M8xØ2.0	M8xØ2.2
Cartridge [5]	CP016C07*	CP025C07*	CP032C07*	CP040C07*	CP050C07*	CP063C07*
Poppet orifice ⓐ	1/16NPT x Ø0.9	1/16NPT x Ø1.1	1/16NPT x Ø1.2	1/16NPT x Ø1.3	1/16NPT x Ø1.4	1/16NPT x Ø1.5
Spring	1.6 bar, type S					
Volume reduction	45036578	45036579	45036580	45036581	45036582	45036583
Bolt kit cover	BK414, 4x M8x40	BK391, 4x M12x50	BK415, 4x M16x55	BK416, 4x M20x70	BK417, 4x M20x75	BK418, 4x M30x100
Bolt kit pilot	TK1482					

Shown orifice Ø and springs are recommendations.
xxØ00 = plug
xxØ99 = open

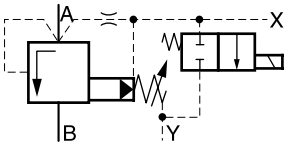
[1] Complete type see chapter "Directional Control Valves", series D1VW.
[2] Complete types see pilot valves.
[3] Included O-rings and mounting bolts.
[4] Complete type see ordering code C*C.
[5] Complete type see ordering code CP*.

Pressure relief valve with electrical vent function, normally closed and cover with integrated pressure relief function



NG16 - NG32

Flow A → B



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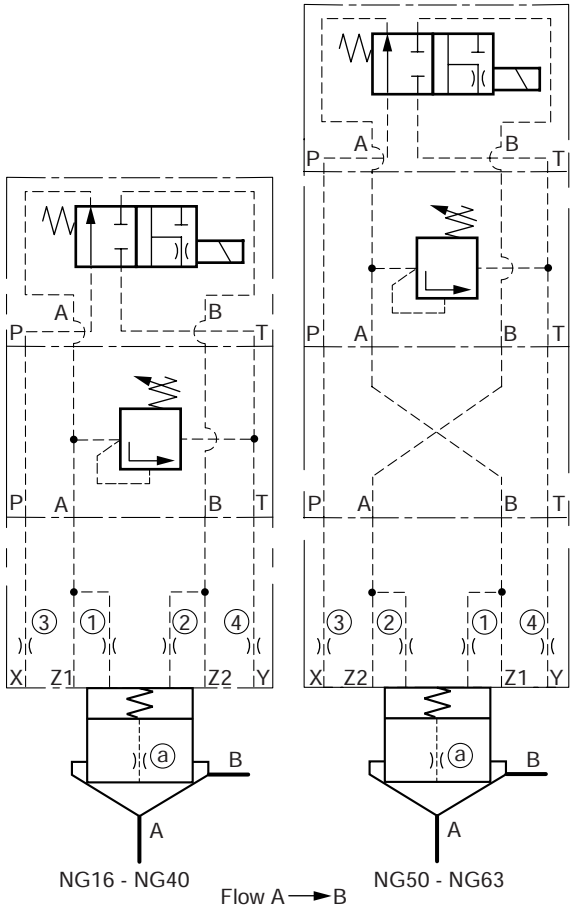
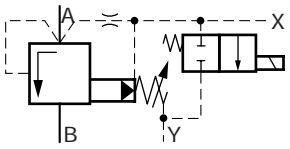
Description	Type NG16	NG25	NG32
4/2 DC valve [1]	D1VW105K*		
Cover incl. pressure valve [2]	C016Gxxxxxxxxxxx	C025Gxxxxxxxxxxx	C032Gxxxxxxxxxxx
Cover orifice ①	M5xØ1.0	M5xØ1.1	M6xØ1.4
Cover orifice ②	M5xØ99	M5xØ99	M6xØ99
Cover orifice ③	M4xØ00	M5xØ00	M6xØ00
Cover orifice ④	M5xØ1.2	M5xØ1.3	M6xØ1.4
Cartridge [3]	CP016C07*	CP025C07*	CP032C07*
Poppet orifice ⓐ	1/16NPT x Ø0.8	1/16NPT x Ø0.8	1/16NPT x Ø1.0
Spring	1.6 bar, type S		
Volume reduction	45036578	45036579	45036580
Bolt kit cover	BK414, 4x M8x40	BK391, 4x M12x50	BK415, 4x M16x55
Bolt kit 4/2 DC valve	BK375, 4x M5x30		

Shown orifice Ø and springs are recommendations.
xxØ00 = plug
xxØ99 = open

[1] Complete type see chapter "Directional Control Valves", series D1VW.
[2] Complete type see ordering code C*G.
[3] Complete type see ordering code CP*.

Pressure relief valve with electrical vent function, normally closed and pilot in sandwich design





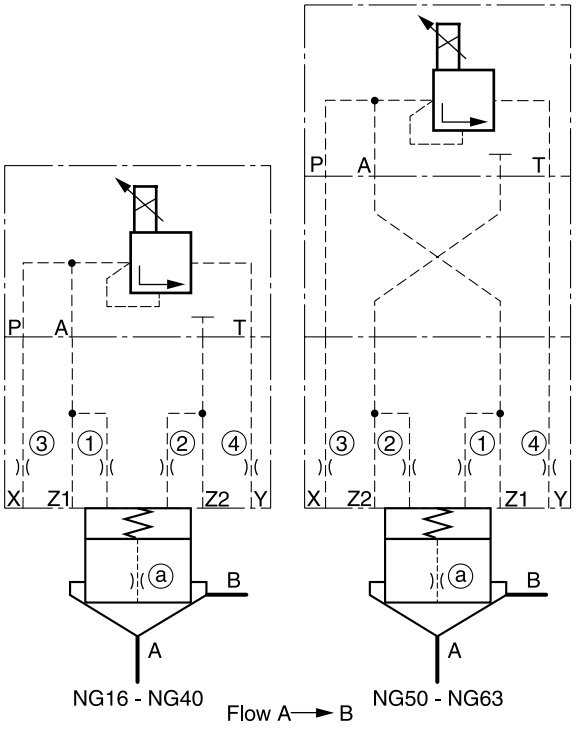
Adaptor plates see chapter 12

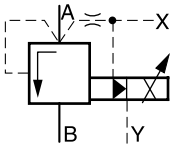
Description	Type					
	NG16	NG25	NG32	NG40	NG50	NG63
4/2 DC valve [1]	D1VW105K*					
Pressure valve [2]	V-ZUDB1ATxZ07x					
Adaptor plate [3]	without				PADA1007/A-B/B-A	
Cover [4]	C016CA*	C025CA*	C032CA*	C040CA*	C050CA*	C063CA*
Cover orifice ①	M5xØ1.1	M5xØ1.3	M5xØ1.4	M5xØ1.5	M6xØ1.6	M6xØ1.7
Cover orifice ②	M5xØ00				M6xØ00	
Cover orifice ③	M5xØ99	M6xØ99			M8xØ99	
Cover orifice ④	M5xØ1.3	M6xØ1.5	M6xØ1.7	M6xØ1.8	M8xØ2.0	M8xØ2.2
Cartridge [5]	CP016C07*	CP025C07*	CP032C07*	CP040C07*	CP050C07*	CP063C07*
Poppet orifice ⓐ	1/16NPT x Ø0.9	1/16NPT x Ø1.1	1/16NPT x Ø1.2	1/16NPT x Ø1.3	1/16NPT x Ø1.4	1/16NPT x Ø1.5
Spring	1.6 bar, type S					
Volume reduction	45036578	45036579	45036580	45036581	45036582	45036583
Bolt kit cover	BK414, 4x M8x40	BK391, 4x M12x50	BK415, 4x M16x55	BK416, 4x M20x70	BK417, 4x M20x75	BK418, 4x M30x100
Bolt kit pilot	TK1482					

Shown orifice Ø and springs are recommendations.
xxØ00 = plug
xxØ99 = open

[1] Complete type see chapter "Directional Control Valves", series D1VW.
[2] Complete types see pilot valves.
[3] Included O-rings and mounting bolts.
[4] Complete type see ordering code C*C.
[5] Complete type see ordering code CP*.

Proportional pressure relief valve





Adaptor plates see chapter 12

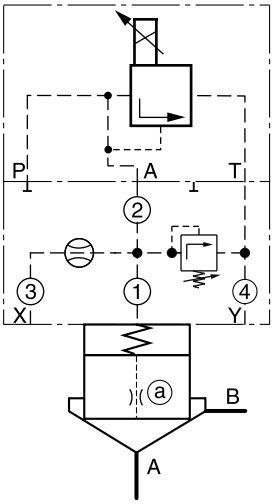
8

Description	Type					
	NG16	NG25	NG32	NG40	NG50	NG63
Pressure valve [1]	RE06MxW2V1KW					
Adaptor plate [2]	without				PADA1007/A-B/B-A	
Cover [3]	C016CA*	C025CA*	C032CA*	C040CA*	C050CA*	C063CA*
Cover orifice ①	M5xØ1.4	M5xØ1.4	M5xØ1.4	M5xØ1.4	M6xØ1.4	
Cover orifice ②	M5xØ00				M6xØ00	
Cover orifice ③	M5xØ99	M6xØ99			M8xØ99	
Cover orifice ④	M5xØ1.5	M6xØ1.5	M6xØ1.5	M6xØ1.5	M8xØ1.5	
Cartridge [4]	CP016C07*	CP025C07*	CP032C07*	CP040S07*	CP050S07*	CP063S07*
Poppet orifice ⓐ	1/16NPT x Ø1.3	1/16NPT x Ø1.3	1/16NPT x Ø1.3	1/16NPT x Ø1.3	1/16NPT x Ø1.3	
Spring	0.5 bar, type S					
Volume reduction	45036578	45036579	45036580	45036581	45036582	45036583
Bolt kit cover	BK414, 4x M8x40	BK391, 4x M12x50	BK415, 4x M16x55	BK416, 4x M20x70	BK417, 4x M20x75	BK418, 4x M30x100
Bolt kit pilot	BK375, 4x M5x30					

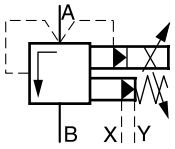
Shown orifice Ø and springs are recommendations.
xxØ00 = plug
xxØ99 = open

[1] Complete type see chapter "Pressure Valves", series RE06M*W.
[2] Inclusive O-Ringe and mounting bolts.
[3] Complete type see ordering code C*C.
[4] Complete type see ordering code CP*.

Proportional pressure relief valve with mechanical maximum pressure protection and cover with integrated pressure relief function



Flow A → B



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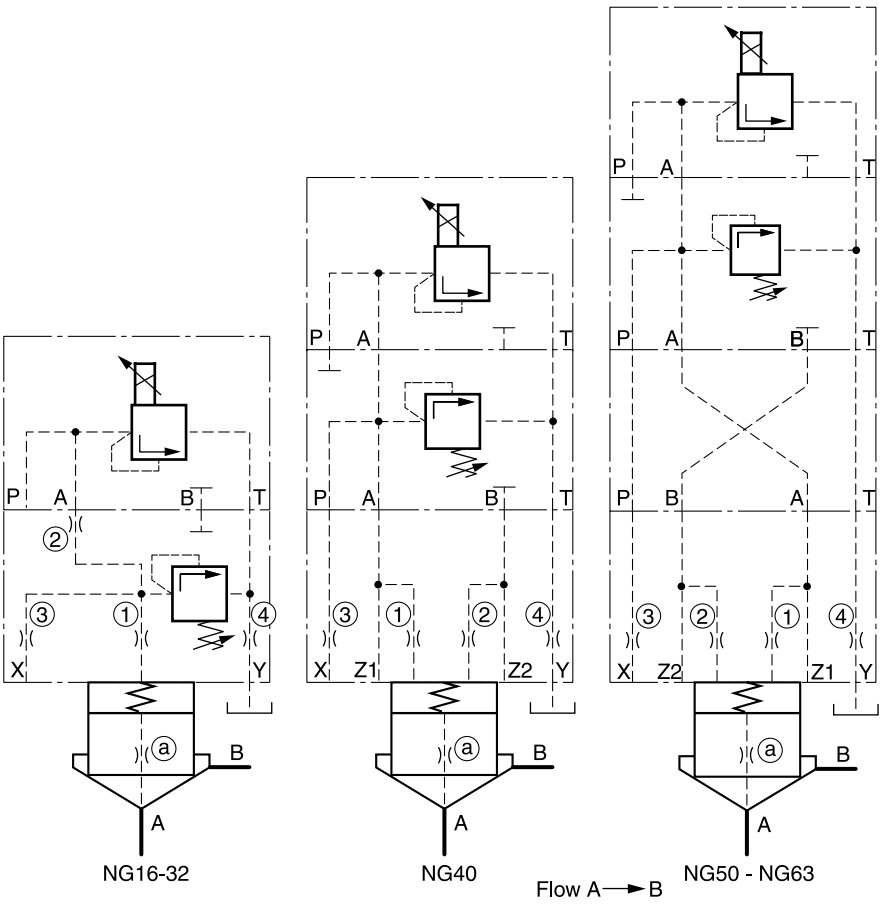
Description	Type NG16	NG25	NG32
Prop. DC valve [1]	RE06MxW2V1xW		
Cover incl. pressure valve [2]	C016Gxxxxxxxxxxx	C025Gxxxxxxxxxxx	C032Gxxxxxxxxxxx
Cover orifice ①	M5xØ1.4	M5xØ1.4	M6xØ1.4
Cover orifice ②	M5xØ99	M5xØ99	M6xØ99
Cover orifice ③	M4xØ99	M5xØ99	M6xØ99
Cover orifice ④	M5xØ1.5	M5xØ1.5	M6xØ1.5
Cartridge [3]	CP016C07*	CP025C07*	CP032C07*
Poppet orifice ⓐ	1/16NPT x Ø1.3	1/16NPT x Ø1.3	1/16NPT x Ø1.3
Spring	1.6 bar, type S		
Volume reduction	45036578	45036579	45036580
Bolt kit cover	BK414, 4x M8x40	BK391, 4x M12x50	BK415, 4x M16x55
Bolt kit 4/2 DC valve	BK375, 4x M5x30		

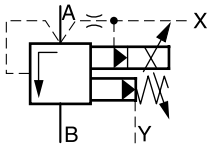
Shown orifice Ø and springs are recommendations.
xxØ00 = plug
xxØ99 = open

[1] Complete type see chapter "Pressure Valves", series RE06M*W.
[2] Complete type see ordering code C*G.
[3] Complete type see ordering code CP*.

Examples pressure.INDD CM 24.07.13

Proportional pressure relief valve with mechanical maximum pressure protection in sandwich design





Adaptor plates see chapter 12

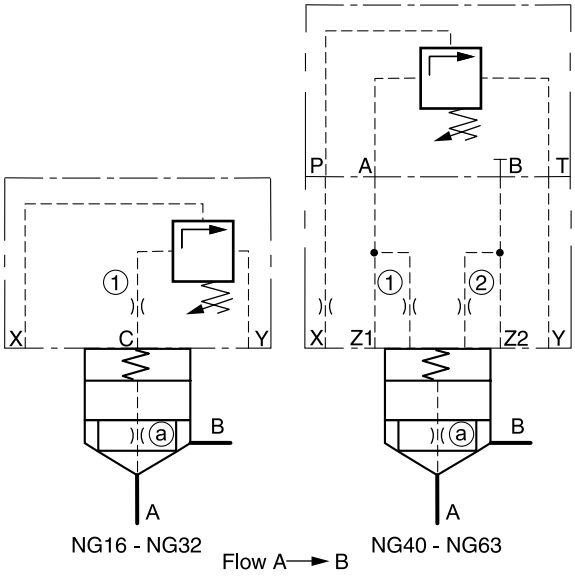
Description	Type					
	NG16	NG25	NG32	NG40	NG50	NG63
Pressure valve [1]	RE06MxW2V1KW					
Max. pressure valve [2]	V-ZUDB1PTxZ07x					
Adaptor plate [3] NG10-NG06	without				PADA1007/A-B/B-A	
Cover [4]	C016CA*	C025CA*	C032CA*	C040CA*	C050CA*	C063CA*
Cover orifice ①	M5xØ1.4	M5xØ1.4		M5xØ1.4	M6xØ1.4	
Cover orifice ②	M5xØ99				M6xØ00	
Cover orifice ③	M5xØ99	M6xØ99			M8xØ99	
Cover orifice ④	M5xØ1.5	M6xØ1.5		M6xØ1.5	M8xØ1.5	
Cartridge [5]	CP016C07*	CP025C07*	CP032C07*	CP040S07*	CP050S07*	CP063S07*
Poppet orifice ⓐ	1/16NPT x Ø1.3	1/16NPT x Ø1.3	1/16NPT x Ø1.3	1/16NPT x Ø1.3	1/16NPT x Ø1.3	
Spring	0.5 bar, type N					
Volume reduction	45036578	45036579	45036580	45036581	45036582	45036583
Bolt kit cover	BK414, 4x M8x40	BK391, 4x M12x50	BK415, 4x M16x55	BK416, 4x M20x70	BK417, 4x M20x75	BK418, 4x M30x100
Bolt kit pilot	TK1482					

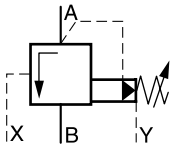
Shown orifice Ø and springs are recommendations.
xxØ00 = plug
xxØ99 = open

Examples pressure.INDD CM 24.07.13

[1] Complete type see chapter "Pressure Valves", series RE06M*W.
[2] Complete types see pilot valves.
[3] Included O-rings and mounting bolts.
[4] Complete type see ordering code C*C.
[5] Complete type see ordering code CP*.

Unloading valve





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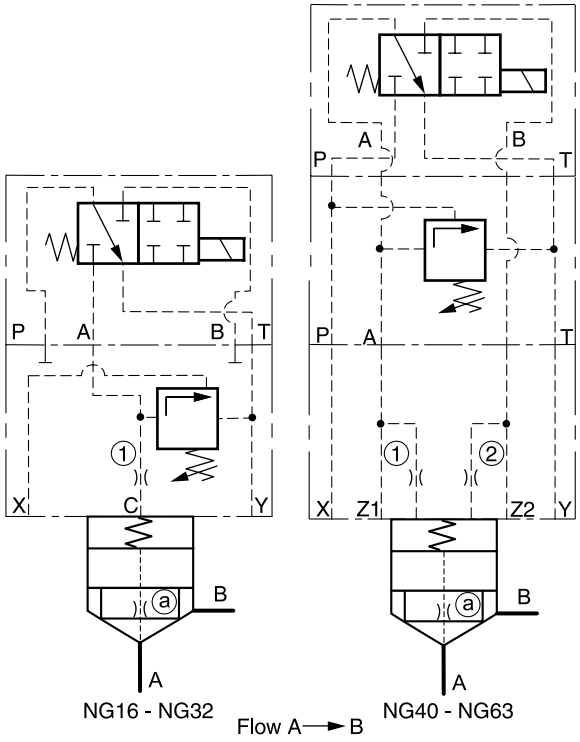
Adaptor plates see chapter 12

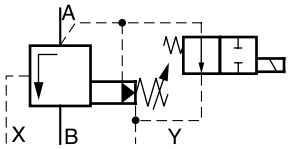
Description	Type					
	NG16	NG25	NG32	NG40	NG50	NG63
Unloading valve [1]	–			UR06Mxxx4x		
Adaptor plate [2] NG10-NG06	–	–	–	–	PADA1007/A-B/B-A	
Cover [3]	on request			C040CA*	C050CA*	C063CA*
Cover orifice ①	M5xØ1.4				M6xØ1.4	
Cover orifice ②	M5xØ00				M6xØ00	
Cartridge [4]	CP16C07*	CP25C07*	CP032C07*	CP040S07*	CP050S07*	CP063S07*
Poppet orifice ⓐ	1/16NPT x Ø1.2					
Spring	1.6 bar, type S					
Bolt kit cover	BK414, 4x M8x40	BK391, 4x M12x50	BK415, 4x M16x55	BK416, 4x M20x70	BK417, 4x M20x75	BK418, 4x M30x100
Bolt kit pilot	BK443, 4x M5x45					

Shown orifice Ø and springs are recommendations.
xxØ00 = plug
xxØ99 = open

[1] Complete types see pilot valves.
[2] Included O-rings and mounting bolts.
[3] Complete type see ordering code C*C.
[4] Complete type see ordering code CP*.

Unloading valve with electrical vent function, normally open





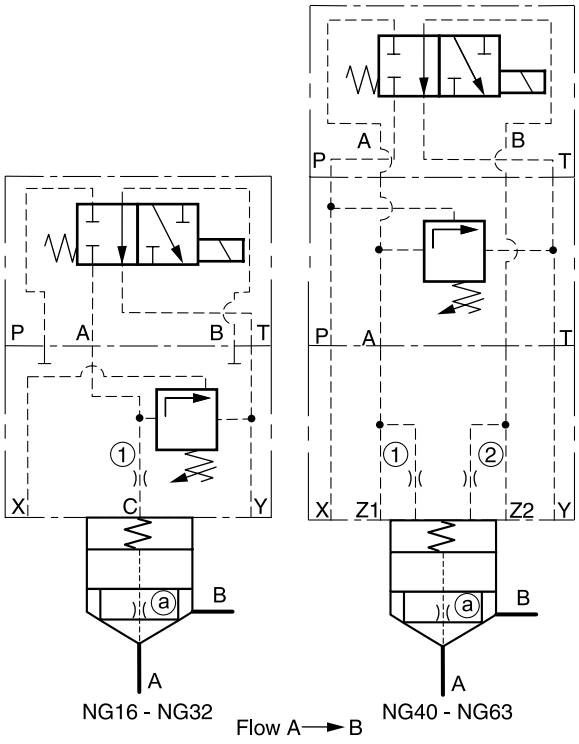
Adaptor plates see chapter 12

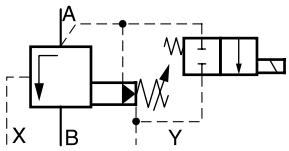
Description	Type					
	NG16	NG25	NG32	NG40	NG50	NG63
4/2 DC valve [1]	–			D1VW076K*		
Pressure valve [2]	US06Mxxx4x					
Adaptor plate [3] NG10-NG06	–	–	–	–	PADA1007/A-B/B-A	
Cover [4]	on request			C040CA*	C050CA*	C063CA*
Cover orifice ①	M5xØ1.4				M6xØ1.4	
Cover orifice ②	M5xØ00				M6xØ00	
Cartridge [5]	CP016C07*	CP025C07*	CP032C07*	CP040S07*	CP050S07*	CP063S07*
Poppet orifice ⓐ	1/16NPT x Ø1.2					
Spring	1.6 bar, type S					
Bolt kit cover	BK414, 4x M8x40	BK391, 4x M12x50	BK415, 4x M16x55	BK416, 4x M20x70	BK417, 4x M20x75	BK418, 4x M30x100
Bolt kit pilot	BK401, 4x M5x75					

Shown orifice Ø and springs are recommendations.
xxØ00 = plug
xxØ99 = open

[1] Complete type see chapter "Directional Control Valves", series D1VW.
[2] Complete types see pilot valves.
[3] Included O-rings and mounting bolts.
[4] Complete type see ordering code C*C.
[5] Complete type see ordering code CP*.

Unloading valve with electrical vent function, normally closed





Adaptor plates see chapter 12

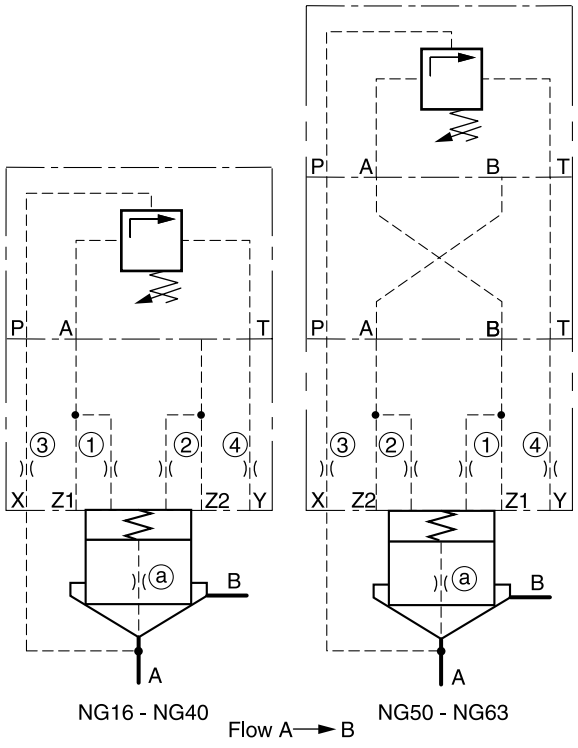
Description	Type					
	NG16	NG25	NG32	NG40	NG50	NG63
4/2 DC valve [1]	D1VW078K*					
Pressure valve [2]				US06Mxxx4x		
Adaptor plate [3] NG10-NG06	–	–	–	–	PADA1007/A-B/B-A	
Cover [4]	on request			C040CA*	C050CA*	C063CA*
Cover orifice ①	M5xØ1.4				M6xØ1.4	
Cover orifice ②	M5xØ00				M6xØ00	
Cartridge [5]	CP016C07*	CP025C07*	CP032C07*	CP040S07*	CP050S07*	CP063S07*
Poppet orifice ⓐ	1/16NPT x Ø1.2					
Spring	1.6 bar, type S					
Bolt kit cover	BK414, 4x M8x40	BK391, 4x M12x50	BK415, 4x M16x55	BK416, 4x M20x70	BK417, 4x M20x75	BK418, 4x M30x100
Bolt kit pilot	BK401, 4x M5x75					

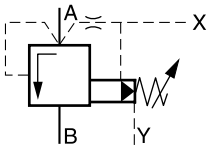
Shown orifice Ø and springs are recommendations.
xxØ00 = plug
xxØ99 = open

[1] Complete type see chapter "Directional Control Valves", series D1VW.
[2] Complete types see pilot valves.
[3] Included O-rings and mounting bolts.
[4] Complete type see ordering code C*C.
[5] Complete type see ordering code CP*.

Examples pressure.INDD CM 24.07.13

Pressure sequence valve





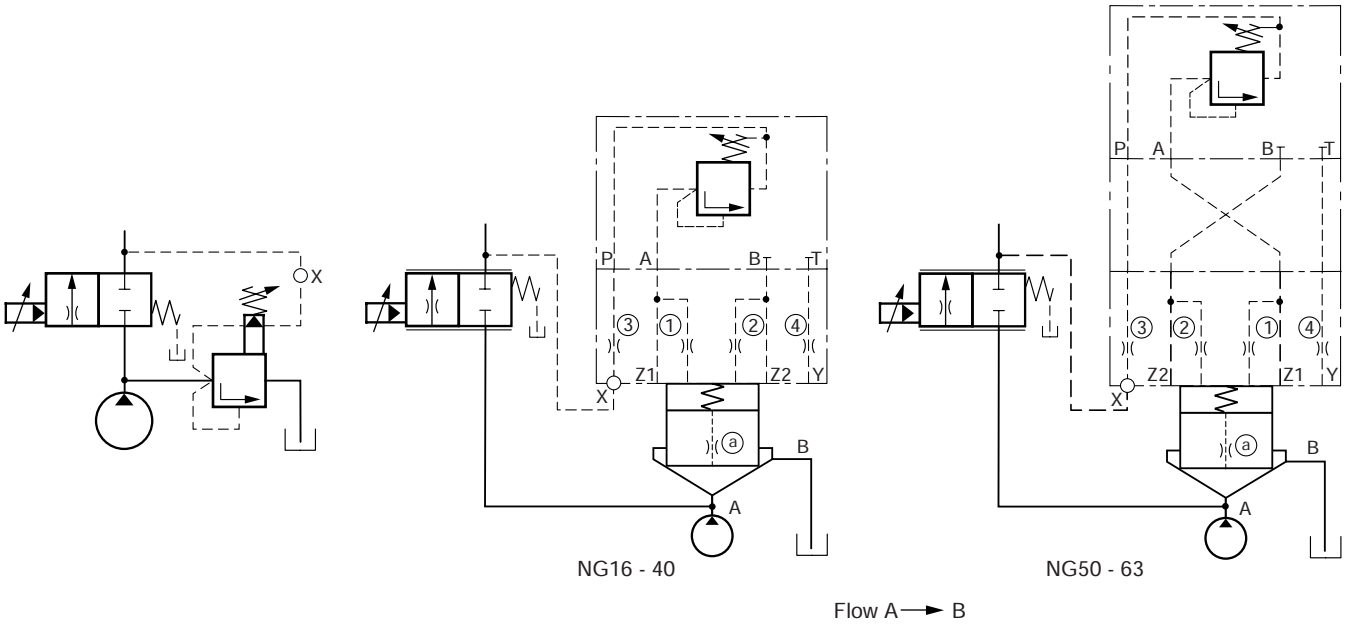
Adaptor plates see chapter 12

Description	Type					
	NG16	NG25	NG32	NG40	NG50	NG63
Press. sequ. valve [1]	S06Mxxx4x					
Adaptor plate [2] NG10-NG06	without				PADA1007/A-B/B-A	
Cover [3]	C016CA*	C025CA*	C032CA*	C040CA*	C050CA*	C063CA*
Cover orifice ①	M5xØ1.1	M5xØ1.3	M5xØ1.4	M5xØ1.5	M6xØ1.6	M6xØ1.7
Cover orifice ②	M5xØ00				M6xØ00	
Cover orifice ③	M5xØ0.9	M6xØ1.1	M6xØ1.2	M6xØ1.3	M8xØ1.4	M8xØ1.5
Cover orifice ④	M5xØ1.3	M6xØ1.5	M6xØ1.7	M6xØ1.8	M8xØ2.0	M8xØ2.2
Cartridge [4]	CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*
Poppet orifice ⓐ	1/16NPT x Ø00					
Spring	1.6 bar, type S					
Bolt kit cover	BK414, 4x M8x40	BK391, 4x M12x50	BK415, 4x M16x55	BK416, 4x M20x70	BK417, 4x M20x75	BK418, 4x M30x100
Bolt kit pilot	BK443, 4x M5x45					

Shown orifice Ø and springs are recommendations.
xxØ00 = closed bottom NG16 - NG50, plug NG63
xxØ99 = open

[1] Complete types see pilot valves.
[2] Included O-rings and mounting bolts.
[3] Complete type see ordering code C*C.
[4] Complete type see ordering code CE*.

3 way compensator (in combination with proportional throttle valve)



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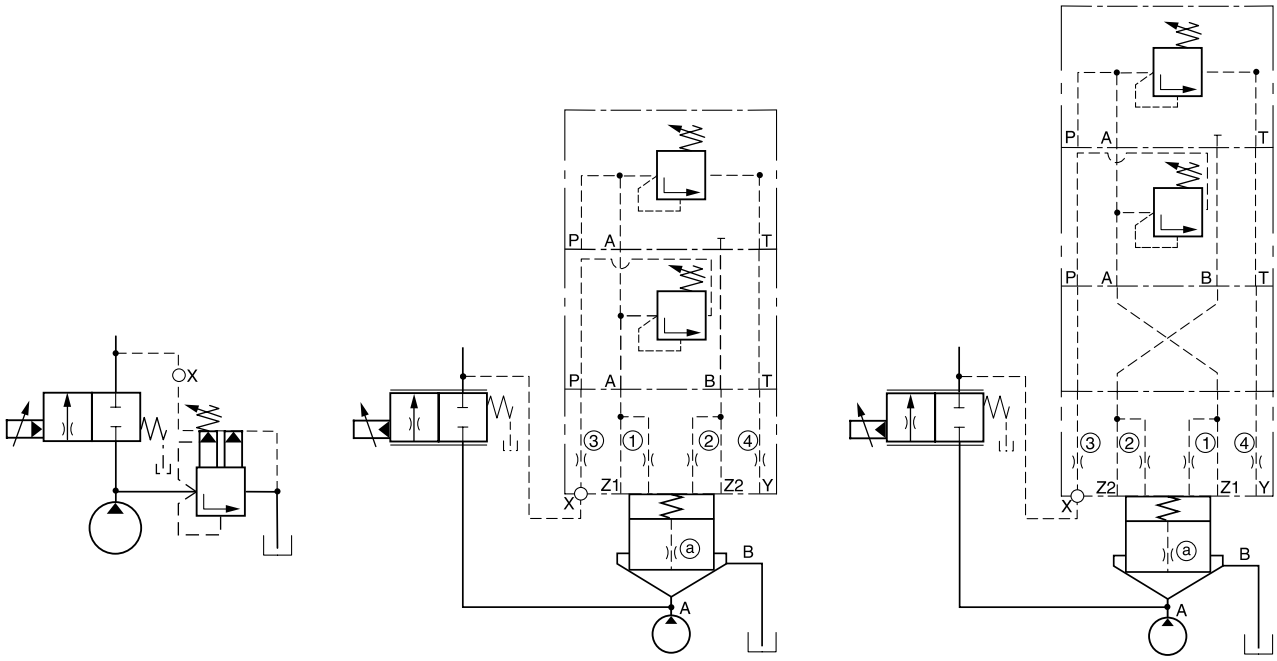
Adaptor plates see chapter 12

Description	Type					
	NG16	NG25	NG32	NG40	NG50	NG63
Preload valve [1]	DSBA100xP07x					
Adaptor plate [2] NG10-NG06	without				PADA1007/A-B/B-A	
Cover [3]	C016CA*	C025CA*	C032CA*	C040CA*	C050CA*	C063CA*
Cover orifice ①	M5xØ1.1	M5xØ1.3	M5xØ1.4	M5xØ1.5	M6xØ1.6	M6xØ1.7
Cover orifice ②	M5xØ00				M6xØ00	
Cover orifice ③	M5xØ99	M6xØ99			M8xØ99	
Cover orifice ④	M5xØ1.3	M6xØ1.5	M6xØ1.7	M6xØ1.8	M8xØ2.0	M8xØ2.2
Cartridge [4]	CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*
Poppet orifice ⓐ	1/16NPT x Ø0.9	1/16NPT x Ø1.1	1/16NPT x Ø1.2	1/16NPT x Ø1.3	1/16NPT x Ø1.4	1/16NPT x Ø1.5
Spring	1.6 bar, type S					
Bolt kit cover	BK414, 4x M8x40	BK391, 4x M12x50	BK415, 4x M16x55	BK416, 4x M20x70	BK417, 4x M20x75	BK418, 4x M30x100
Bolt kit pilot	BK443, 4x M5x45					

Shown orifice Ø and springs are recommendations.
xxØ00 = closed bottom NG16 - NG50, plug NG63
xxØ99 = open

[1] Complete type see pilot valves.
[2] Included O-rings and mounting bolts.
[3] Complete type see ordering code C*C.
[4] Complete type see ordering code CE*.

3 way compensator with mechanical maximum pressure protection (in combination with proportional throttle valve)



8

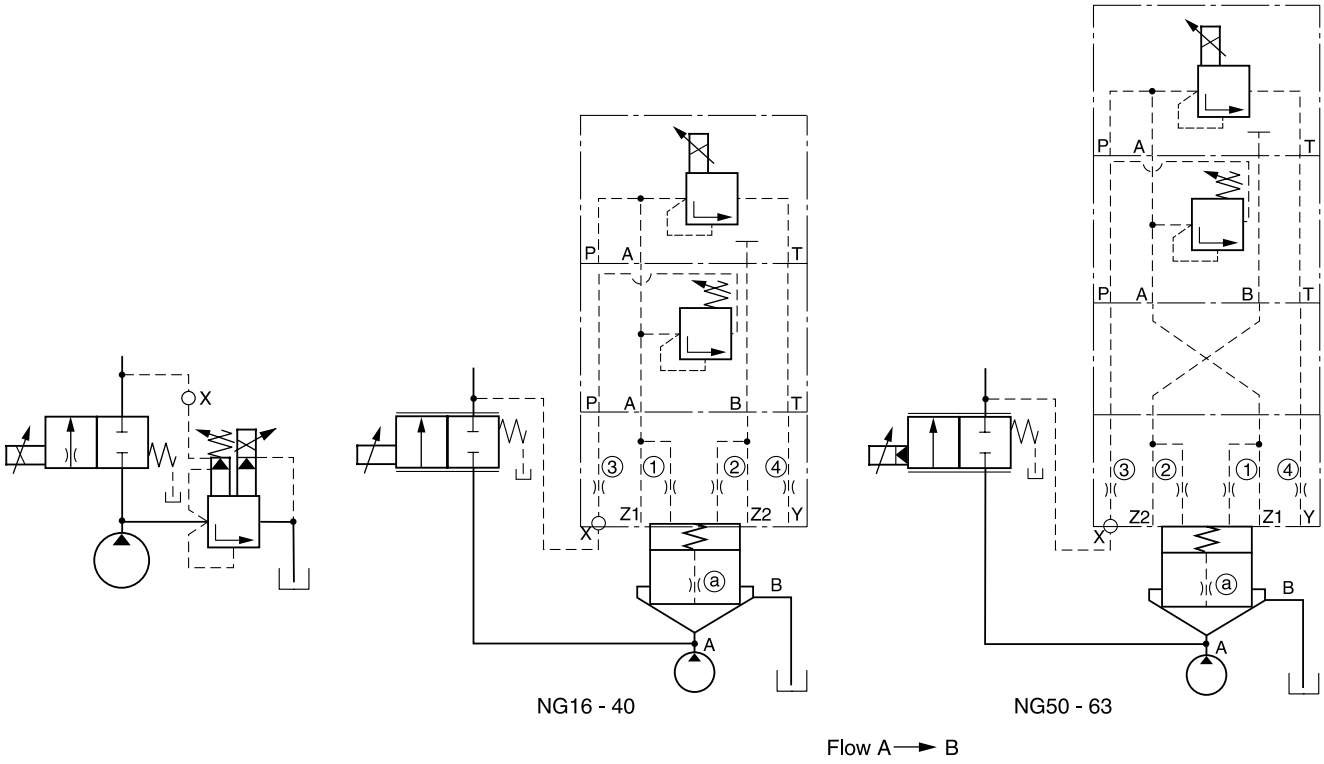
Adaptor plates see chapter 12

Description	Type					
	NG16	NG25	NG32	NG40	NG50	NG63
Pressure valve [1]	R06Mxxx4x					
Preload valve [1]	DSBA100xZ07x					
Adaptor plate [2] NG10-NG06	without				PADA1007/A-B/B-A	
Cover [3]	C016CA*	C025CA*	C032CA*	C040CA*	C050CA*	C063CA*
Cover orifice ①	M5xØ1.1	M5xØ1.3	M5xØ1.4	M5xØ1.5	M6xØ1.6	M6xØ1.7
Cover orifice ②	M5xØ00				M6xØ00	
Cover orifice ③	M5xØ99	M6xØ99			M8xØ99	
Cover orifice ④	M5xØ1.3	M6xØ1.5	M6xØ1.7	M6xØ1.8	M8xØ2.0	M8xØ2.2
Cartridge [4]	CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*
Poppet orifice ⓐ	1/16NPT x Ø0.9	1/16NPT x Ø1.1	1/16NPT x Ø1.2	1/16NPT x Ø1.3	1/16NPT x Ø1.4	1/16NPT x Ø1.5
Spring	1.6 bar, type S					
Bolt kit cover	BK414, 4x M8x40	BK391, 4x M12x50	BK415, 4x M16x55	BK416, 4x M20x70	BK417, 4x M20x75	BK418, 4x M30x100
Bolt kit pilot	TK1482					

Shown orifice Ø and springs are recommendations.
xxØ00 = closed bottom NG16 - NG50, plug NG63
xxØ99 = open

[1] Complete type see examples pilot valve.
[2] Included O-rings and mounting bolts.
[3] Complete type see ordering code C*C.
[4] Complete type see ordering code CE*.

3 way compensator with proportional pressure relief function (in combination with proportional throttle valve)



8

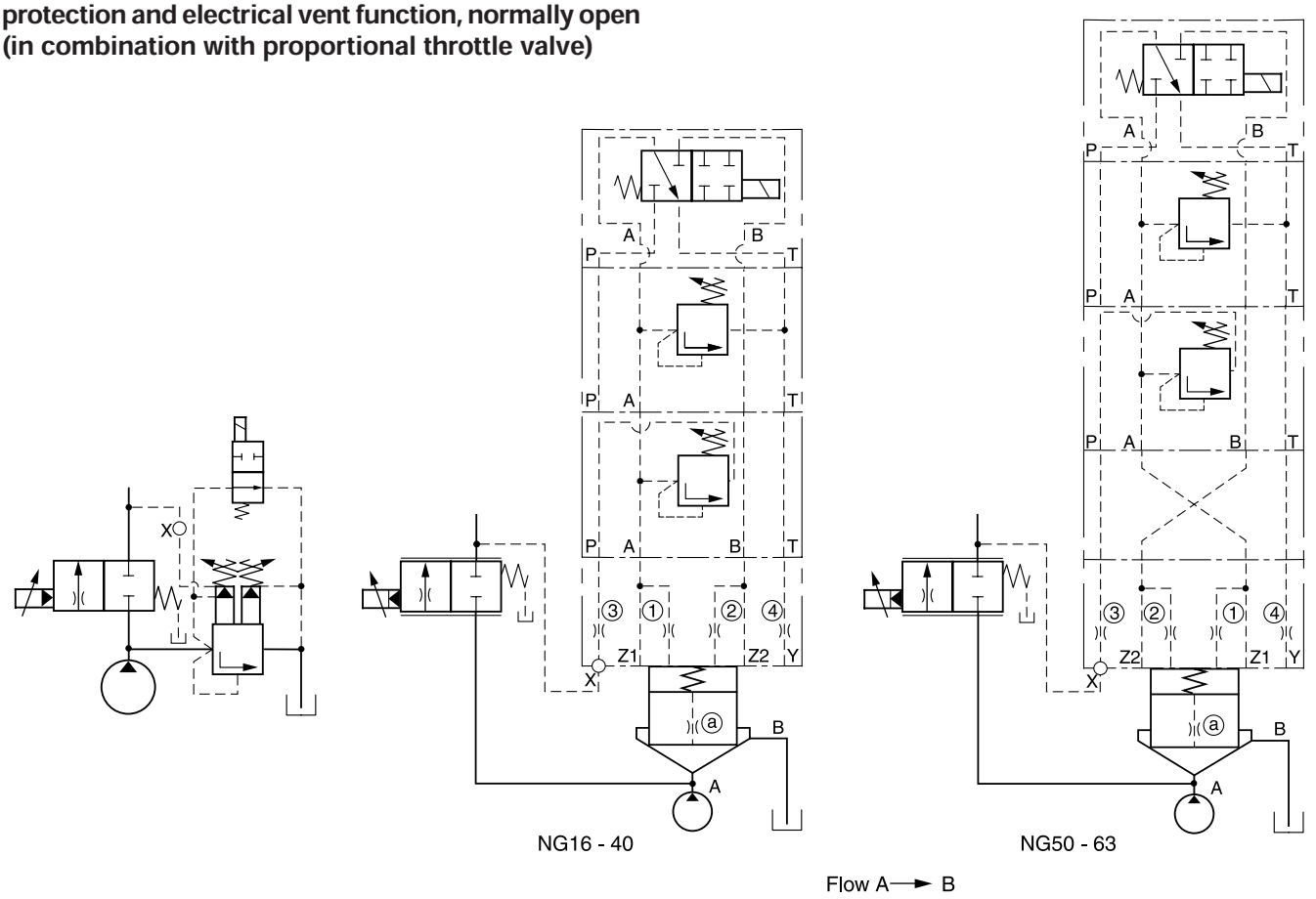
Adaptor plates see chapter 12

Description	Type NG16	NG25	NG32	NG40	NG50	NG63
Prop. press. valve [1]	RE06MxW2V1KW*					
Preload valve [2]	DSBA100xZ07x					
Adaptor plate [3] NG10-NG06	without				PADA1007/A-B/B-A	
Cover [4]	C016CA*	C025CA*	C032CA*	C040CA*	C050CA*	C063CA*
Cover orifice ①	M5xØ1.1	M5xØ1.3	M5xØ1.4	M5xØ1.5	M6xØ1.6	M6xØ1.7
Cover orifice ②	M5xØ00				M6xØ00	
Cover orifice ③	M5xØ99	M6xØ99			M8xØ99	
Cover orifice ④	M5xØ1.3	M6xØ1.5	M6xØ1.7	M6xØ1.8	M8xØ2.0	M8xØ2.2
Cartridge [5]	CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*
Poppet orifice ⓐ	1/16NPT x Ø0.9	1/16NPT x Ø1.1	1/16NPT x Ø1.2	1/16NPT x Ø1.3	1/16NPT x Ø1.4	1/16NPT x Ø1.5
Spring	1.6 bar, type S					
Volume reduction	45036578	45036579	45036580	45036581	45036582	45036583
Bolt kit cover	BK414, 4x M8x40	BK391, 4x M12x50	BK415, 4x M16x55	BK416, 4x M20x70	BK417, 4x M20x75	BK418, 4x M30x100
Bolt kit pilot	TK1482					

Shown orifice Ø and springs are recommendations.
xxØ00 = closed bottom NG16 - NG50, plug NG63
xxØ99 = open

[1] Complete type see chapter "Pressure Valves", series RE06M*W.
[2] Complete type see pilot valves.
[3] Included O-rings and mounting bolts.
[4] Complete type see ordering code C*C.
[5] Complete type see ordering code CE*.

3 way compensator with mechanical max. pressure protection and electrical vent function, normally open (in combination with proportional throttle valve)



Adaptor plates see chapter 12

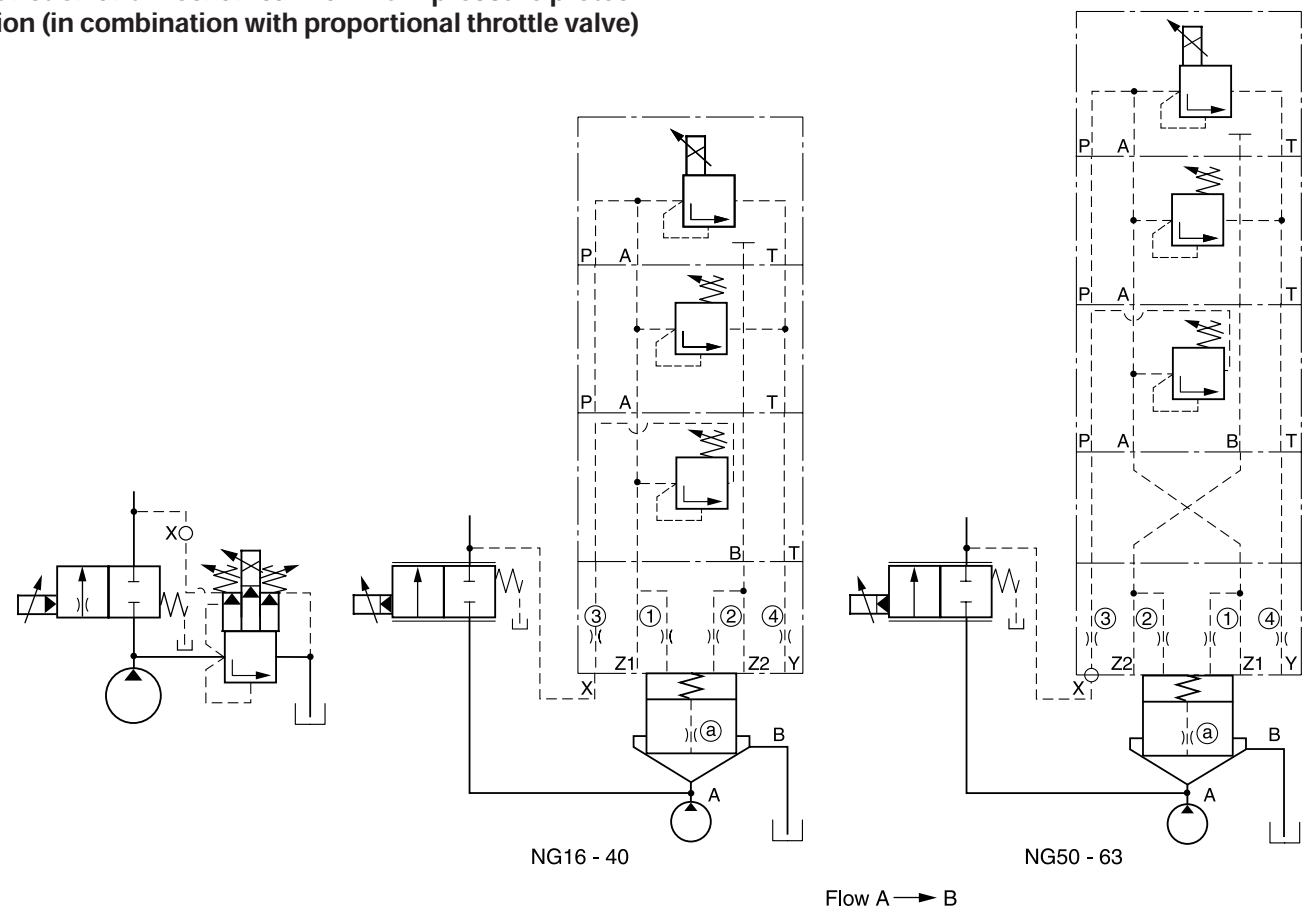
Description	Type					
	NG16	NG25	NG32	NG40	NG50	NG63
4/2 DC valve [1]	D1VW076K*					
Press. valve [2]	ZUDB1ATxZ07x					
Preload valve [2]	DSBA100xZ07x					
Adaptor plate [3] NG10-NG06	without				PADA1007/A-B/B-A	
Cover [4]	C016CA*	C025CA*	C032CA*	C040CA*	C050CA*	C063CA*
Cover orifice ①	M5xØ1.1	M5xØ1.3	M5xØ1.4	M5xØ1.5	M6xØ1.6	M6xØ1.7
Cover orifice ②	M5xØ00				M6xØ00	
Cover orifice ③	M5xØ99	M6xØ99			M8xØ99	
Cover orifice ④	M5xØ1.3	M6xØ1.5	M6xØ1.7	M6xØ1.8	M8xØ2.0	M8xØ2.2
Cartridge [5]	CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*
Poppet orifice ⓐ	1/16NPT x Ø0.9	1/16NPT x Ø1.1	1/16NPT x Ø1.2	1/16NPT x Ø1.3	1/16NPT x Ø1.4	1/16NPT x Ø1.5
Spring	1.6 bar, type S					
Bolt kit cover	BK414, 4x M8x40	BK391, 4x M12x50	BK415, 4x M16x55	BK416, 4x M20x70	BK417, 4x M20x75	BK418, 4x M30x100
Bolt kit pilot	TK1473					

Shown orifice Ø and springs are recommendations.
xxØ00 = closed bottom NG16 - NG50, plug NG63
xxØ99 = open

[1] Complete type see chapter "Directional Control Valves", series D1VW.
[2] Complete type see pilot valves.
[3] Included O-rings and mounting bolts.
[4] Complete type see ordering code C*C.
[5] Complete type see ordering code CE*.

Examples pressure.INDD CM 24.07.13

3 way compensator with proportional pressure relief function and mechanical maximum pressure protection (in combination with proportional throttle valve)



Adaptor plates see chapter 12

Description	Type NG16	NG25	NG32	NG40	NG50	NG63
Prop. press. valve [1]	RE06MxW2V1KW*					
Press. valve [2]	ZUDB1ATxZ07x					
Preload valve [2]	DSBA100xZ07x					
Adaptor plate [3] NG10-NG06	without				PADA1007/A-B/B-A	
Cover [4]	C016CA*	C025CA*	C032CA*	C040CA*	C050CA*	C063CA*
Cover orifice ①	M5xØ1.1	M5xØ1.3	M5xØ1.4	M5xØ1.5	M6xØ1.6	M6xØ1.7
Cover orifice ②	M5xØ00				M6xØ00	
Cover orifice ③	M5xØ99	M6xØ99			M8xØ99	
Cover orifice ④	M5xØ1.3	M6xØ1.5	M6xØ1.7	M6xØ1.8	M8xØ2.0	M8xØ2.2
Cartridge [5]	CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*
Poppet orifice ⓐ	1/16NPT x Ø0.9	1/16NPT x Ø1.1	1/16NPT x Ø1.2	1/16NPT x Ø1.3	1/16NPT x Ø1.4	1/16NPT x Ø1.5
Spring	1.6 bar, type S					
Volume reduction	45036578	45036579	45036580	45036581	45036582	45036583
Bolt kit cover	BK414, 4x M8x40	BK391, 4x M12x50	BK415, 4x M16x55	BK416, 4x M20x70	BK417, 4x M20x75	BK418, 4x M30x100
Bolt kit pilot	TK1473					

Shown orifice Ø and springs are recommendations.
xxØ00 = closed bottom NG16 - NG50, plug NG63
xxØ99 = open

[1] Complete type see chapter "Pressure Valves", series RE06M*W.
[2] Complete type see pilot valves.
[3] Included O-rings and mounting bolts.
[4] Complete type see ordering code C*C.
[5] Complete type see ordering code CE*.

The 2/2 way proportional throttle valves series TDA are used to control large oil flows.

Features

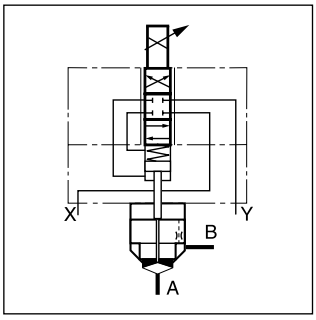
- Cavity and mounting pattern according to ISO 7368
- Fail-safe function at power failure
- Leak-free from port B to A
- Pressure differential up to 350 bar possible
- 8 sizes NG16 up to NG100

Function

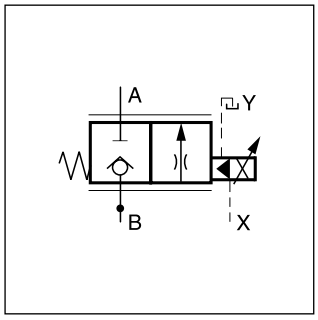
The TDA valve has a 3-stage design consisting of the first solenoid operated pilot stage with a spool in sleeve design, the second pilot stage with the control spring and the sequence spool and as main stage the poppet in the sleeve. The proportional solenoid operates the pilot spool against the feedback of the control spring and controls the position of the sequence spool. The main poppet follows the position of the sequence spool and provides an open area for flow from B to A (optional A to B) in proportion to the solenoid current. The poppet is positioned independently of the differential pressure, which can become as high as the maximum working pressure.

In combination with the digital power amplifier PCD00A-400 the valve parameters can be saved, changed and duplicated.

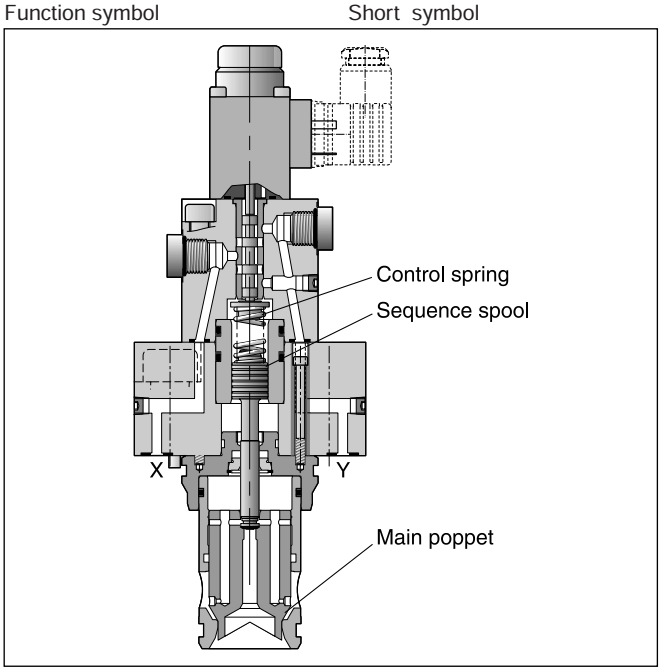
Valve with explosion proof solenoids EEx me II see catalogue HY11-3343.
Download:
www.parker.com/euro_hcd - see "Literature"



Function symbol



Short symbol



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Ordering Code

TDA		E	W	0			2			W	
Proportional throttle valve	Nominal size	Slip-in valve DIN ISO 7368	Design	Poppet shape	Nominal flow	Flow direction	Piloting	Seal	Solenoid voltage	Plug socket without plug	Design series (not required for ordering)

Code	Nominal size
016	NG16
025	**NG25**
032	**NG32**
040	**NG40**
050	**NG50**
063	NG63
080	NG80
100	NG100

Code	Nominal flow
9	**Nominal flow**
6 [1]	**50 % of nominal flow**

[1] Only for NG16 and NG25.

Code	Solenoid voltage
X	**16 VDC**
L	6 VDC

Code	Seal
N	**NBR**
V	**FPM**

Code	Flow direction
A	A to B
B	**B to A**

Bold letters =
Short-term availability

General									
Design		Proportional throttle valve, slip-in cartridge according to ISO 7368							
Nominal size		NG16	NG25	NG32	NG40	NG50	NG63	NG80	NG100
Mounting position		unrestricted							
Ambient temperature	[°C]	-20...+80							
MTTF$_D$ value	[years]	75							
Weight	[kg]	3.1	4.3	5.8	9.2	15	33	63	87
Extracting tool		see accessories							
Hydraulics									
Max. operating pressure	[bar]	Ports A, B and X up to 350, port Y: max. 10							
Fluid		Hydraulic oil acc. to DIN 51524...51525							
Fluid temperature	[°C]	0 ... +60							
Viscosity recommended permitted	[cSt] / [mm²/s] [cSt] / [mm²/s]	30 ... 80 20 ... 380							
Filtration		ISO 4406 (1999); 18/16/13							
Nominal flow at Δp = 10 bar	[l/min]	220	500	950	1400	2300	4000	6000	9500
Flow direction		see ordering code							
Pilot pressure, min.	[bar]	> 25 % of system pressure							
Min. operating pressure	[bar]	Port A → B approx. 10; Port B → A approx. 15							
Pilot oil supply drain		Depending on flow direction A or B using X or external X External using Y max. 10 bar							
Pilot oil at p = 100 bar	[l/min]	Port X → Y <1.5							
Opening point		At 30 % of nominal current							
Manufacturing tolerance	[%]	±5 of Qnom							
Static/dynamic									
Hysteresis	[%]	< 3							
Repeatabiltity	[%]	< 1							
Response time at px=50 bar	[ms]	20	25	30	35	45	55	65	80
Electrical (proportional solenoid)									
Duty ratio		100 % ED							
Protection class		IP65 according to EN 60529 (with correctly mounted plug-in connector)							
Solenoid	Code	L				X			
	at size	16-50		63-100		16-50		63-100	
Solenoid voltage	[V]	6				16			
Nominal current (100 % ED)	[A]	2.6				1.05			
Nominal resistance	[Ohm]	2.2		2.5		11.3		14	
Power amplifier, recommended		PCD 00A-400							
Solenoid connection		Connector as per EN 175301-803							

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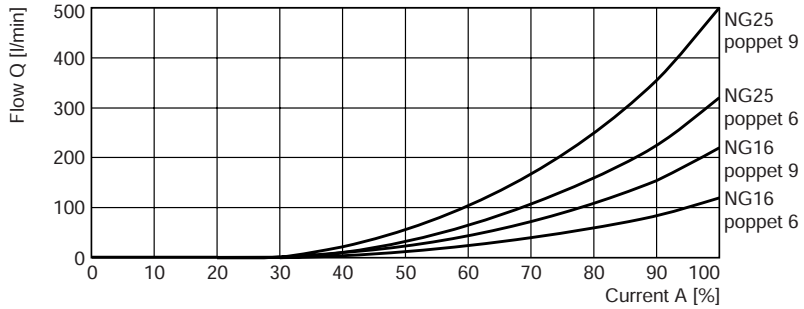
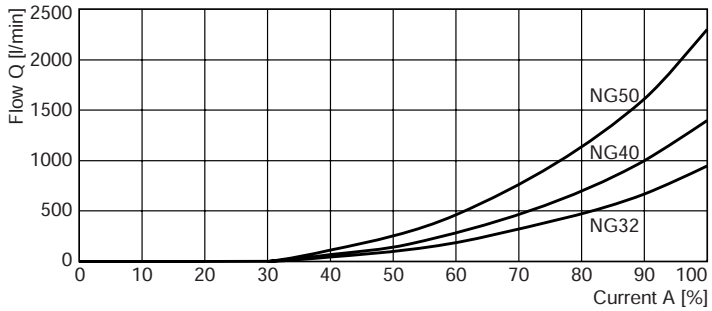
The pilot pressure in X-line must be at least 25 % (NG16-40) or 45 % (NG50-100) of the pressure in the draining-off line of the cartridge to make sure that the main poppet closes safely without malfunction.

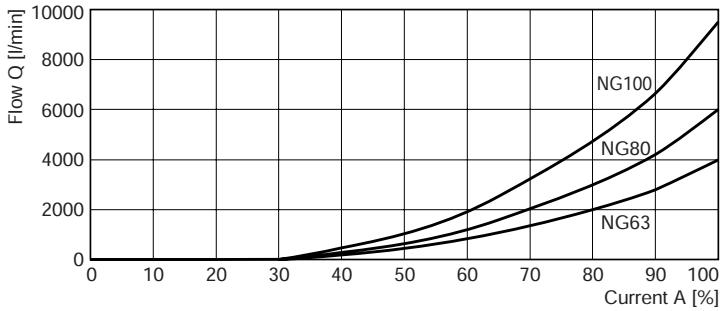
Solenoid current / flow curves
NG16-25 (Δp = 10 bar)



NG32-50 (Δp = 10 bar)

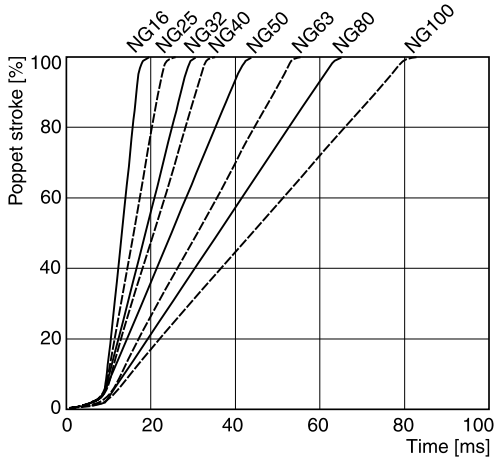


NG63-100 (Δp = 10 bar)



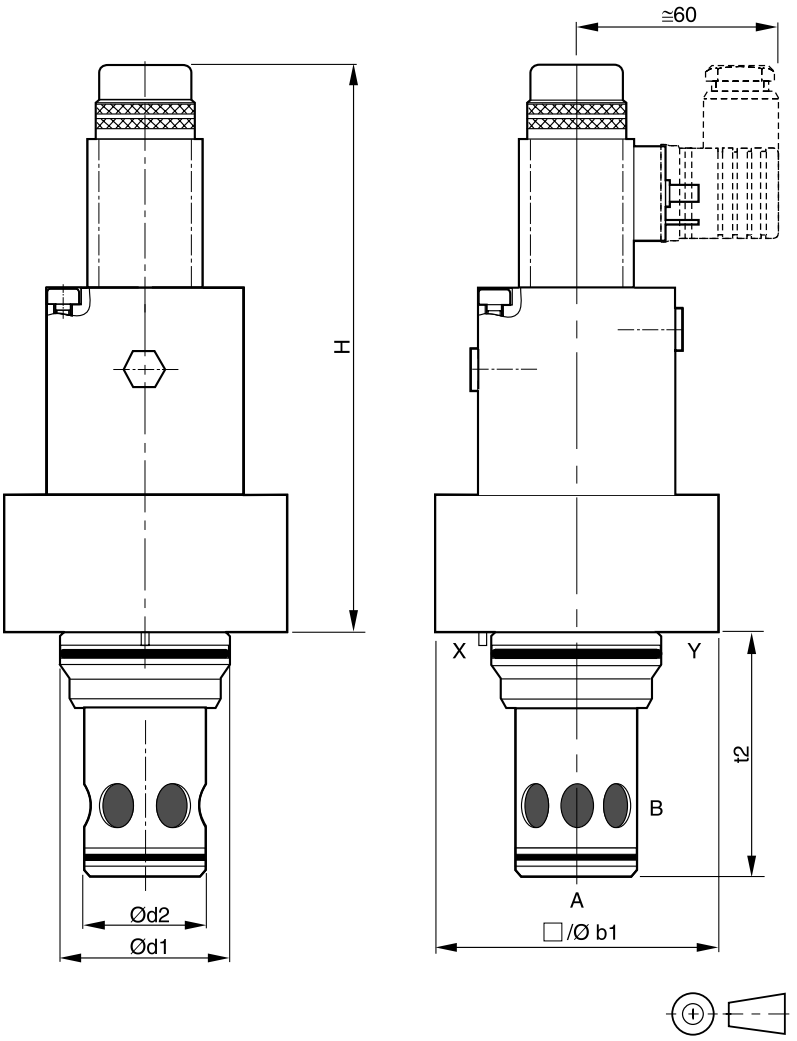
$$\Delta p_{actual} = \left(\frac{Q_{actual}}{Q_{nominal}}\right)^2 \bullet \Delta p_{nominal}$$

Poppet stroke / time curve

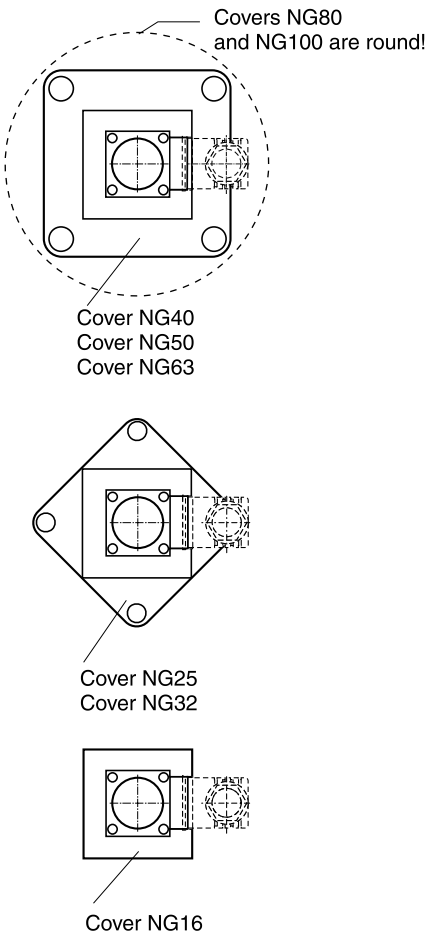


All characteristic curves measured with HLP46 at 50 °C.

Valves



Valve covers



8

Size	16	25	32	40	50	63	80	100
H	168	177	182	192	202	304	324	339
b1	65	85	102	125	140	180	Ø250	Ø300
$d1^{H7}$	32	45	60	75	90	120	145	180
$d2^{H7}$	25	34	45	55	68	90	110	135
$t2^{+0.1}$	56	72	85	105	122	155	205	245

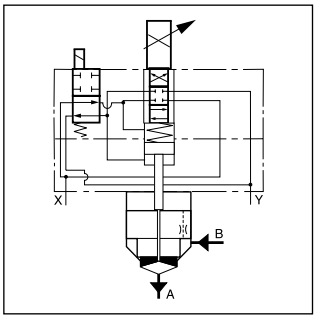
NG	Kit	ISO 4762-12.9		Kit	
				NBR	FPM
16	BK510	4x M8x100	31.8 Nm	SK-TDA016EN	SK-TDA016EV
25	BK391	4x M12x50	108 Nm	SK-TDA025EN	SK-TDA025EV
32	BK415	4x M16x55	264 Nm	SK-TDA032EN	SK-TDA032EV
40	BK416	4x M20x70	517 Nm	SK-TDA040EN	SK-TDA040EV
50	BK417	4x M20x75	517 Nm	SK-TDA050EN	SK-TDA050EV
63	BK418	4x M30x100	1775 Nm	SK-TDA063EN	SK-TDA063EV
80	BK419	8x M24x120	890 Nm	SK-TDA080EN	SK-TDA080EV
100	BK420	8x M30x140	1775 Nm	SK-TDA100EN	SK-TDA100EV

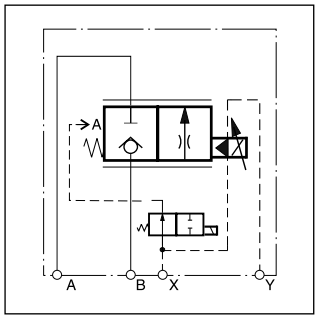
Accumulator discharge valves are preferably used in hydraulic systems where high flow rates are discharged from hydraulic accumulators over a short operating period (in the range of milliseconds).

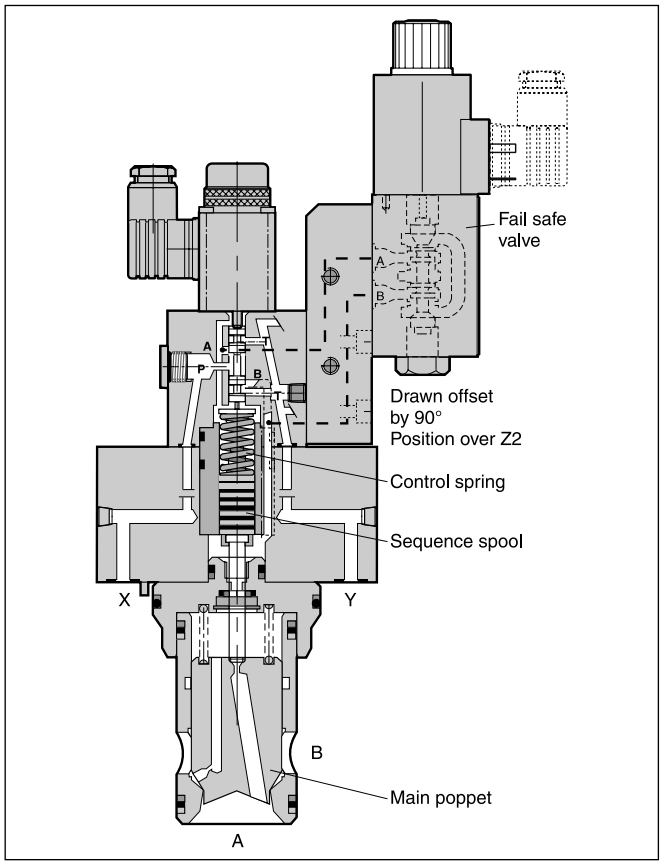
Typical applications are injection molding and die casting machines as well as hydraulic presses.

Basically the function of an accumulator discharge valve corresponds to the function of a TDA throttle valve. In addition a directional valve is integrated in the pilot circuit to meet the relevant safety regulations.

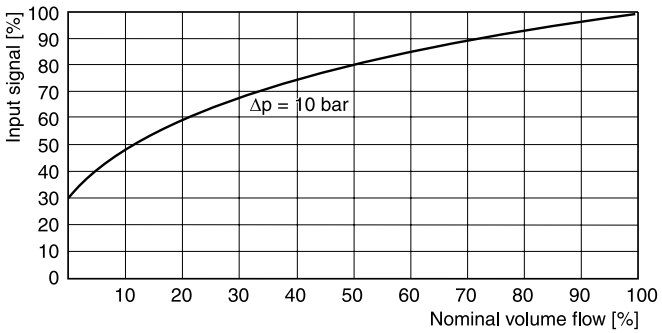
The directional valve provides the safety function. When the solenoid is deenergized and the spring is in end position, pilot pressure from X presses the control piston into lower end position and the main poppet is closed. As a result the flow from B to A or from the reservoir system to the machine is blocked.





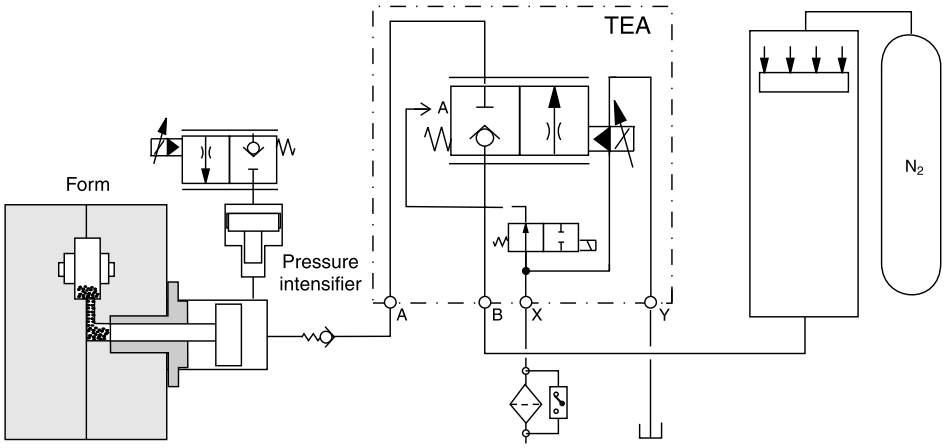


Characteristic curve



Characteristic curve measured with HLP46 at 50 °C.

Example accumulator system in a die casting machine



Ordering code

TEA		E	W	0	9		2			W		
Prop. throttle valve with shut-off function	Nominal size	Cartridge valve ISO 7368	Design	Spool form	Flow code	Flow direction	Pilot oil guide	Seals	Prop. solenoid voltage	Plug socket without plug	Solenoid voltage	Design series (not required for ordering)

Code	Nominal size
032	NG32
040	**NG40**
050	**NG50**
063	**NG63**
080	NG80
100	NG100

Code	Flow direction
A	A to B
B	**B to A**

Bold letters =
Short-term availability

Code	Solenoid
J	**24 V= / 1.25 A**
U [1)]	98 V= / 0.31 A
G [1)]	205 V= / 0.15 A

Code	Proportional solenoid voltage
L	**6 VDC**
X	**16 VDC**

Code	Seal
N	**NBR**
V	FPM

[1)] To be used in combination with rectifier plugs at 120 VAC / 230 VAC power supply.

Technical data

General							
Design		Proportional throttle valve, slip-in cartridge according to ISO 7368					
Nominal size		NG32	NG40	NG50	NG63	NG80	NG100
Mounting position		unrestricted					
Ambient temperature	[°C]	-20...+80					
$MTTF_D$ value	[years]	75					
Weight	[kg]	9	13	22	38	62	85
Extracting tools		See accessories					
Hydraulics							
Max. operating pressure	[bar]	Ports A, B and X up to 350, port Y: max 10					
Fluid		Hydraulic oil according to DIN 51524...51525					
Fluid temperature	[°C]	0...+60					
Viscosity, recommended	[cSt]/[mm²/s]	30...80					
permitted	[cSt]/[mm²/s]	20...380					
Filtration		ISO 4406 (1999); 18/16/13					
Nominal flow Δp = 10 bar	[l/min]	950	1400	2300	4000	6000	9500
Pilot pressure, min.	[bar]	> 25 % of system pressure					
Pilot oil	supply	Depending on flow direction A or B using X or external X					
Pilot oil at p = 100 bar	[l/min]	Port X → Y <1.5					
Opening point		At 30 % of nominal current					
Manufacturing tolerance	[%]	±5 of Qnom					
Hysteresis	[%]	< 3					
Repeatability	[%]	< 1					
Response time at px = 50 bar	[ms]	30	35	45	55	65	80
Electrical (proportional solenoid)							
Duty ratio		100 % ED					
Protection class		IP65 according to EN 60529 (with correctly mounted plug-in connector)					
Solenoid	Code	L			X		
at size		16-50	63-100		16-50	63-100	
Solenoid voltage	[V]	6			16		
Nominal current (100 % ED)	[A]	2.6			1.05		
Nominal resistance	[Ohm]	2.2	2.5		11.3	14	
Power amplifier, recommended		PCD 00A-400 Connector as per EN 175301-803					
Solenoid connection pilot valve		4/2 flow control valve, see chapter 2					
		Type D1DW			Type D3W		

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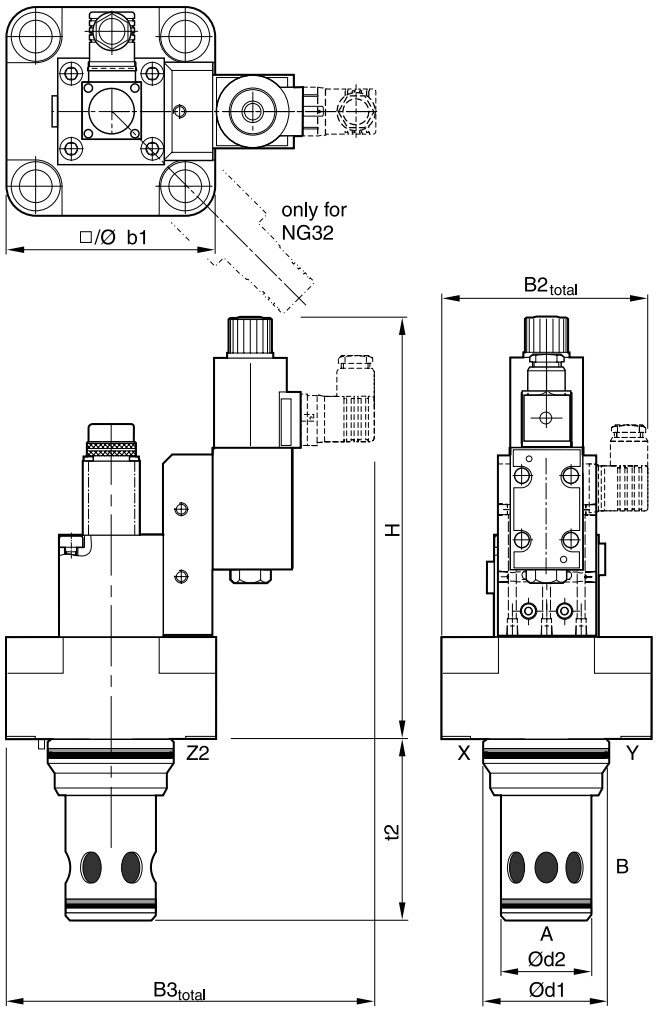
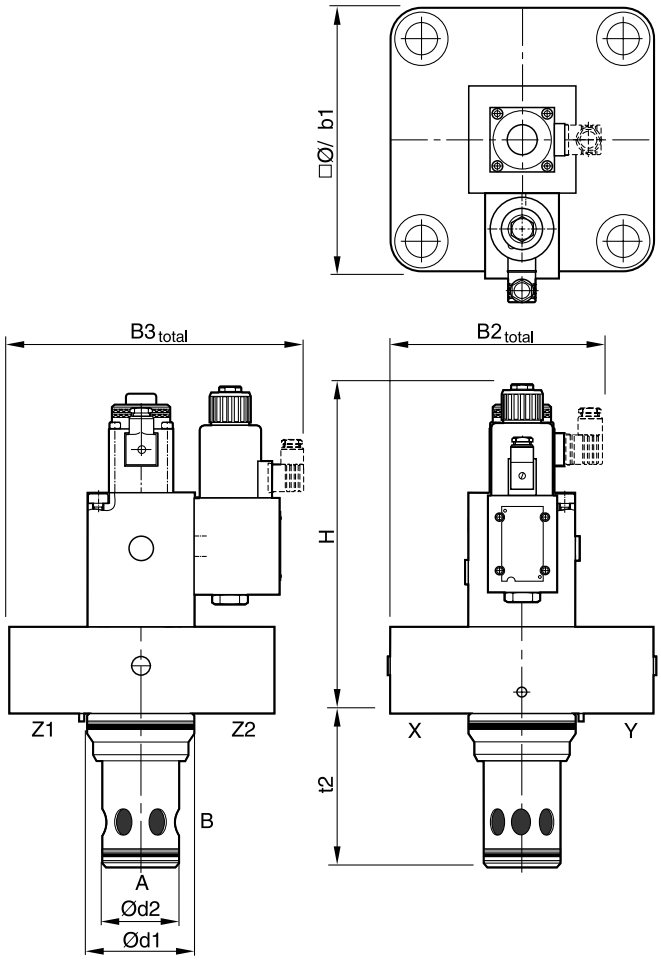
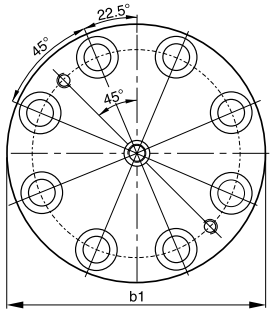
TEA NG32...50



TEA NG63...100



Size	32	40	50	63	80	100
H	250	260	270	312	337	352
b1	102	125	140	180	Ø250	Ø300
$d1^{H7}$	60	75	90	120	145	180
$d2^{H7}$	45	55	68	90	110	135
$t2^{+0.1}$	85	105	122	155	205	245
$B2_{total}$	106	118	125	158	193	218
$B3_{total}$	205	216	224	255	290	315



NG	Kit	ISO 4762-12.9		Kit NBR	Kit FPM
32	BK415	4x M16x55	264 Nm	SK-TEAN10E32	SK-TEAN10E32V
40	BK416	4x M20x70	517 Nm	SK-TEAN10E40	SK-TEAN10E40V
50	BK417	4x M20x75	517 Nm	SK-TEAN10E50	SK-TEAN10E50V
63	BK418	4x M30x100	1775 Nm	SK-TEAN10E63	SK-TEAN10E63V
80	BK419	8x M24x120	890 Nm	SK-TEAN10E80	SK-TEAN10E80V
100	BK420	8x M30x140	1775 Nm	SK-TEAN10E100	SK-TEAN10E100V

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The 2/2 way proportional throttle valves series TDP are used in applications where high flow has to be precisely controlled at maximum dynamics. Typical applications are die casting, injection moulding and hydraulic presses.

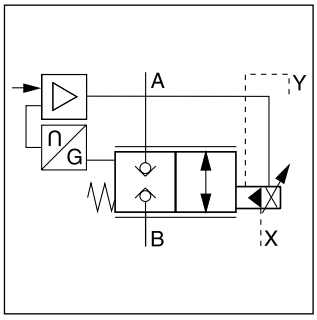
Function

The TDP valve has a 2-stage design consisting of a DFplus pilot valve and a main stage with poppet and LVDT.

With the DFplus pilot valve the TDP achieves extremely fast response times: from 10.5 ms (NG25) up to 28 ms (NG100) with an accuracy of <0.1 % of the nominal flow. The pilot valve actively controls the poppet - independent of the pressure conditions in the main ports.

It is basically required that the pilot pressure is at the level of the system pressure. At low system pressure the pilot pressure should be min. 140 bar, when high valve dynamics are desired.

The integrated electronics in the pilot of the TDP has two control loops for the main poppet and the pilot spool.



TDP032

Features

- Active pilot operated 2/2 way proportional throttle valve
- Cavity and mounting pattern according to ISO 7368 (except for size NG125)
- Fast step response
- Flow direction B to A and A to B
- Completely mounted and adapted unit with integrated electronics
- Fail save position in case of electrical and/or hydraulic power down
- 8 sizes NG25 up to NG125

TDP040

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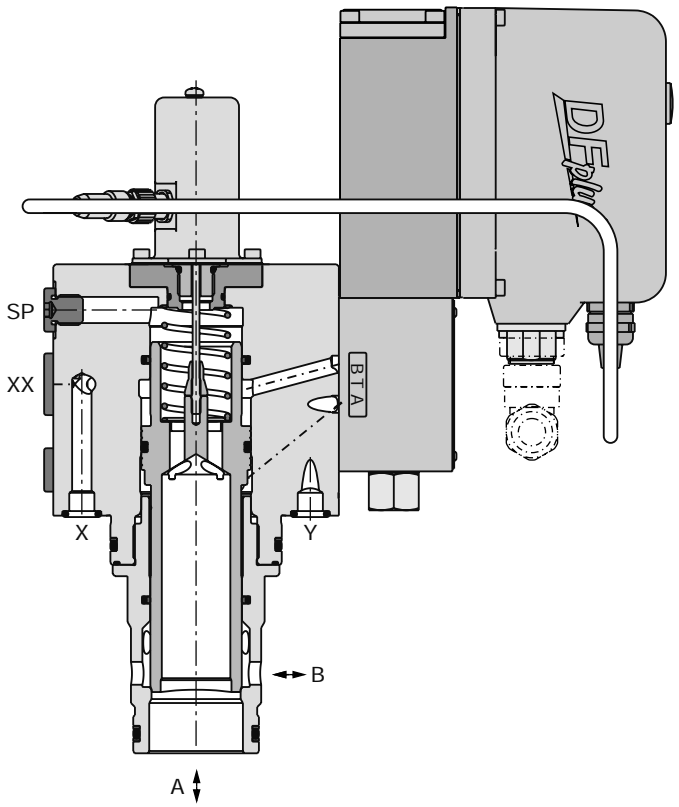
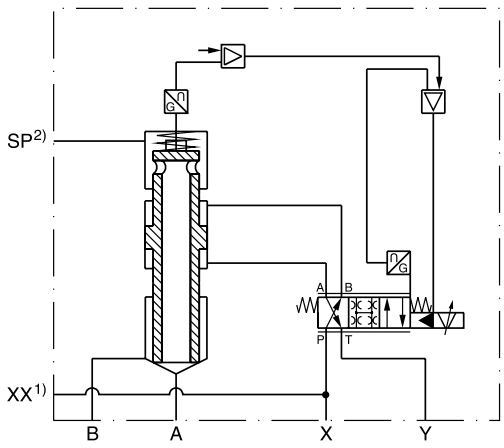


Function symbol



1) NG25 and NG32 without accu port XX.
2) NG25 without suction port SP.

Ordering code

TDP		E	H	9	9	C	2		B	0	
Proportional throttle valve with LVDT	**Nominal size**	**Slip-in cartridge**	**Closed pilot loop, fast valve type, integrated electronics**	**Sinus poppet**	**Nominal flow**	**Flow direction B → A A → B**	**Pilot oil** (supply external, drain external)	**Seal**	**Command signal 0...+10 V**	**Standard electronics**	**Design series** (not required for ordering)

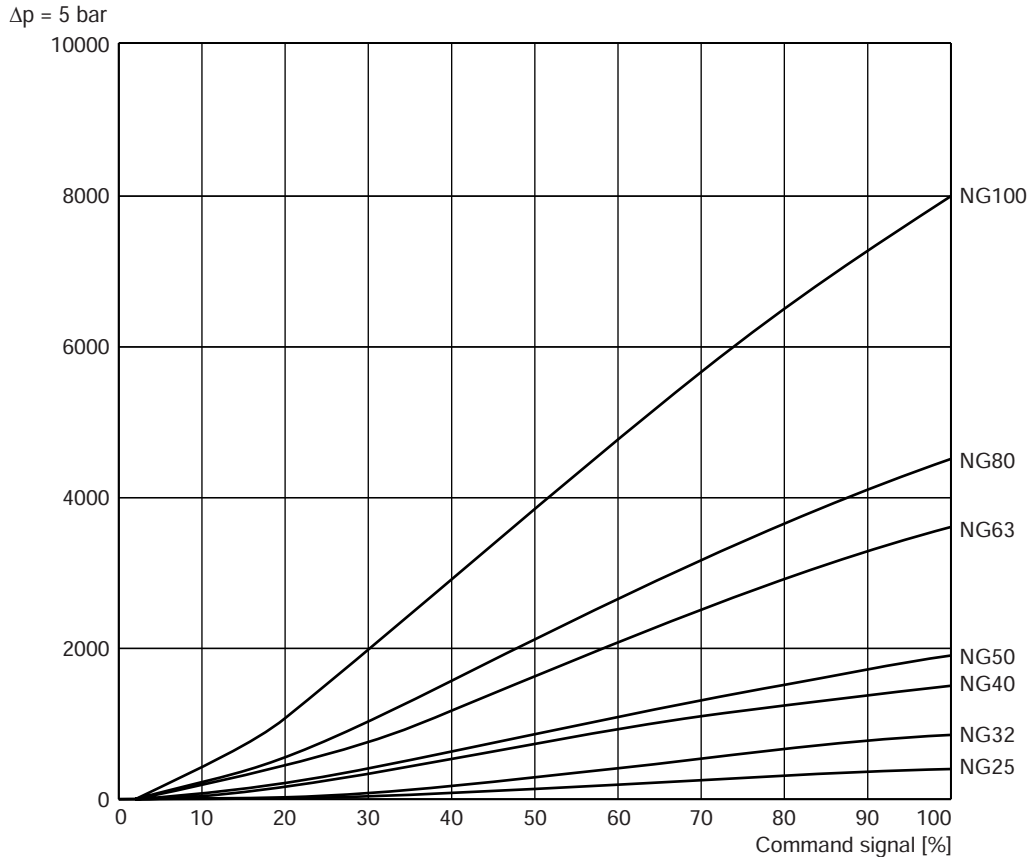
Code	Nominal size
025	NG25
032	NG32
040	NG40
050	NG50
063	NG63
080	NG80
100	NG100
125 [1]	NG125

Code	Seal
N [2]	NBR
V	FPM

Please order connector separately
Angle female connector must be used for NG25 to NG50.

[1] On request.
[2] HFC fluids suitable.

Performance curves
Characteristic flow/signal line



Opening point factory set to 3 %

Flow at different Δp $Q_{actual} = Q_{nominal} \bullet \sqrt{\Delta p_{actual} / \Delta p_{nominal}}$

Characteristic curve measured with HLP46 at 50 °C.

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General									
Design		Proportional throttle valve, slip-in cartridge according to ISO 7368 (except for size NG125)							
Nominal size	DIN	NG25	NG32	NG40	NG50	NG63	NG80	NG100	NG125
Mounting position		unrestricted							
Ambient temperature	[°C]	-20...+50							
$MTTF_D$ value	[years]	50							
Weight	[kg]	11	13	15	26	52	105	157	on request
Vibration resistance	[g]	10 sinus 5...2000 Hz acc. IEC 68-2-6 30 random noise 20...2000 Hz acc. IEC 68-2-36 15 shock acc. IEC 68-2-27							
Hydraulic									
Max. operating pressure	[bar]	Ports A, B, X and SP up to 350, XX observe accumulator pressure rating; port Y: max. 35							
Fluid		Hydraulic oil according to DIN 51524...51525							
Fluid temperature	[°C]	-20 ... +60							
Viscosity recommended	[cSt] / [mm²/s]	30 ... 80							
Viscosity permitted	[cSt] / [mm²/s]	20 ... 380							
Filtration		ISO 4406 (1999); 18/16/13							
Nominal flow at Δp = 5 bar	[l/min]	420	850	1500	1900	3600	4500	8000	on request
Recommended max. flow	[l/min]	800	2000	3000	4500	8000	13000	20000	on request
Flow direction		B to A and A to B							
Pilot pressure	[bar]	must be as high as system pressure							
Pilot oil supply		external via X							
Pilot oil drain		external via Y							
Leakage in pilot valve at 100 bar	[ml/min]	<400							
Pilot valve size		NG06				NG10			
Max. pilot flow at 140 bar pilot pr.	[l/min]	23	30	40	40	70	80	100	on request
Static/dynamic									
(for optimal dynamics see installation recommendation)									
Step response at pilot press. >140 bar	[ms]	10.5	12	14	20	17	23	28	on request
Frequency response at pilot press. >140 bar									
Amplitude -3 dB; 10 % ±5 %	[Hz]	95	80	74	66	52	46	41	on request
Phase -90°; 10 % +5 %	[Hz]	85	63	59	52	56	51	47	on request
Hysteresis	[%]	< 0.1							
Sensitivity	[%]	< 0.05							
Temperature drift	[%/K]	< 0.025							

Electrical		
Duty ratio	[%]	100
Protection class		IP65 in accordance with EN 60529 (with correctly mounted plug-in connector)
Supply voltage / ripple	[V]	22...30, ripple < 5 % eff., surge free
Current consumption max.	[A]	3.5
Pre-fusing	[A]	4.0 A medium lag
Input signal Voltage	[V]	0...+10, ripple < 0.01 % eff., surge free
Impedance	[kOhm]	100
Input capacitance typ.	[nF]	1
Differential input max.	[V]	30 for terminal D and E against PE (terminal G) 11 for terminal D and E against 0V (terminal B)
Enable signal	[V]	5...30, Ri = 9 kOhm
Diagnostic signal	[V]	0...+10, rated max. 5 mA
EMC		EN 61000-6-2, EN 61000-6-4
Electrical connection		6 + PE acc. EN 175201-804
Wiring min.	[mm²]	7 x 1.0 (AWG16) overall braid shield
Wiring length max.	[m]	50

Installation recommendations

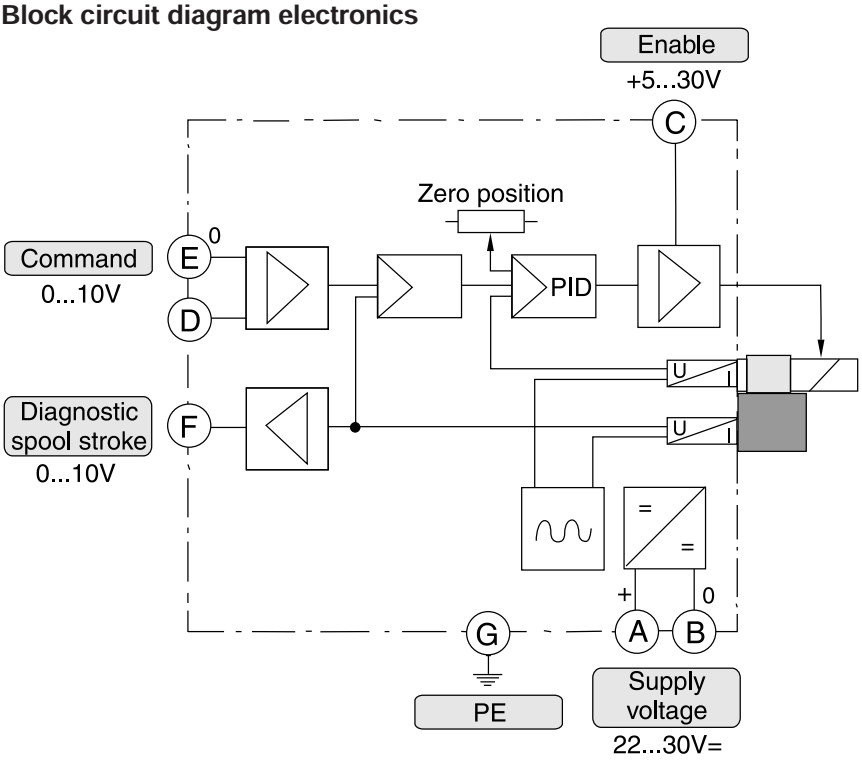
The maximum pilot flow is given in the technical data. At insufficient pilot oil supply – e.g. because of long distances and/or small diameters – an accumulator can be connected to port XX. See selection guide for correct dimensions.

Selection guide

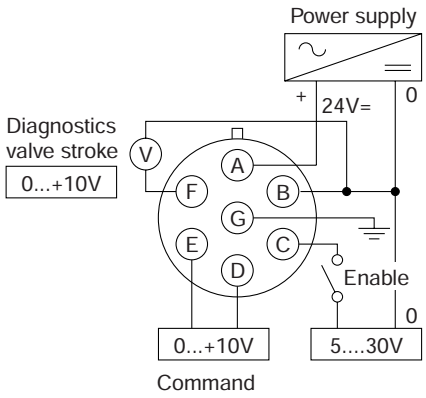
Size	Capacity [l]	Product type	Max. operating pressure [bar]	Recommended precharge pressure [bar]	Accu port XX
NG40	0.162	ADE016-25R	250	126	G 1/2
NG50	0.243	ADE032-21R	210	126	G 1/2
NG63	0.405	ADE050-21R	210	126	G 1
NG80	0.647	ADE075-21R	210	126	G 3/4
NG100	0.944	ADE100-21R	210	126	G 3/4
NG125	on request				G 1

Suction port SP: Contact Parker for installation recommendation.

Block circuit diagram electronics



Connection diagrams electronics code B



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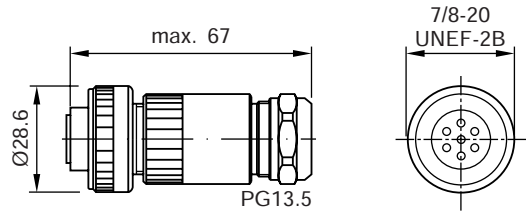
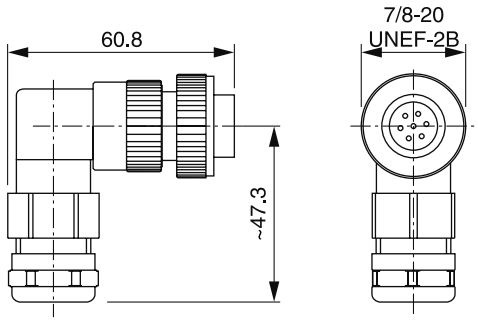
Female Connector
(EMC conform)



ID no. 5004072

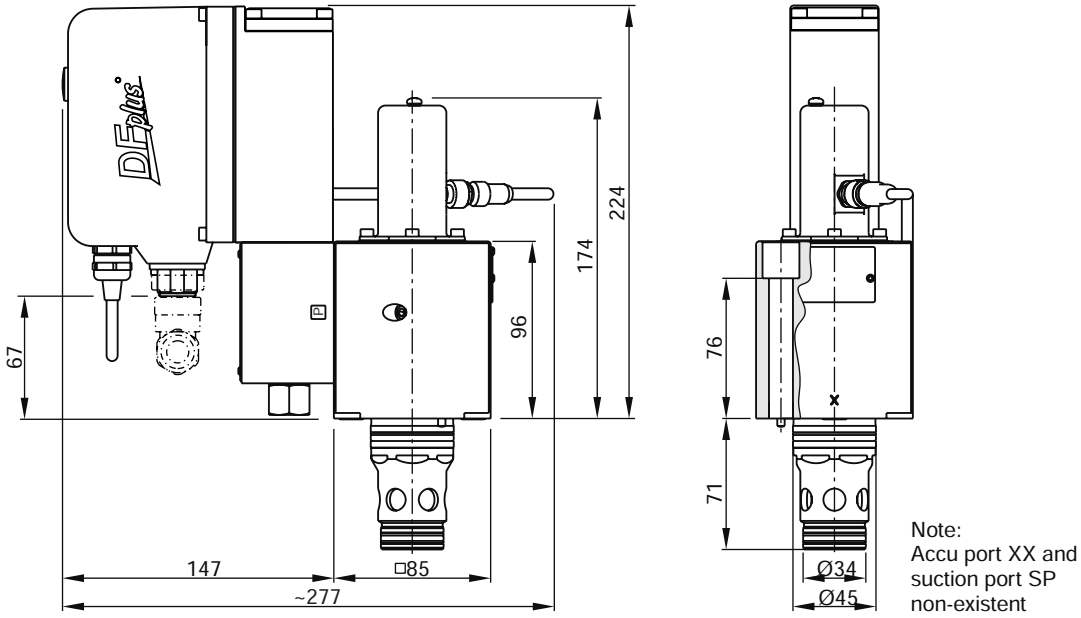
Angle female connector
(EMC conform)



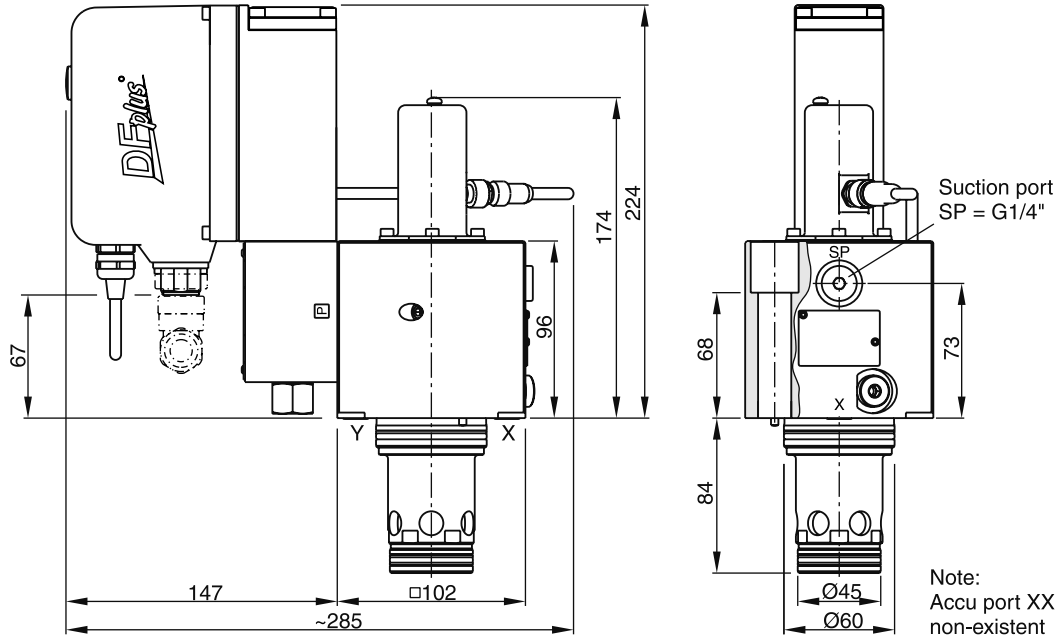
ID no. 5005160

Please order plugs separately.

NG25



NG32



8

NG	Bolt kit -		Kit NBR	Kit FPM
25	BK504 4 x M12x100 ISO 4762-12.9	108 Nm	SK-TDP025EN30	SK-TDP025EV30
32	BK529 4 x M16x100 ISO 4762-12.9	264 Nm	SK-TDP032EN30	SK-TDP032EV30

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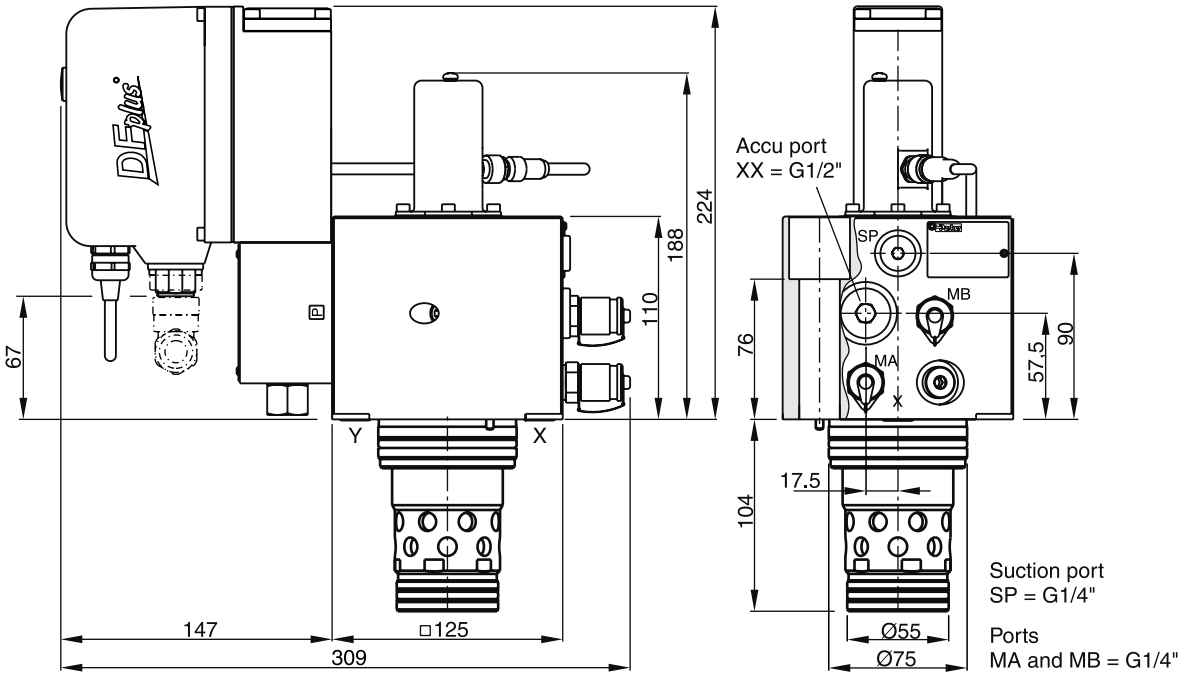
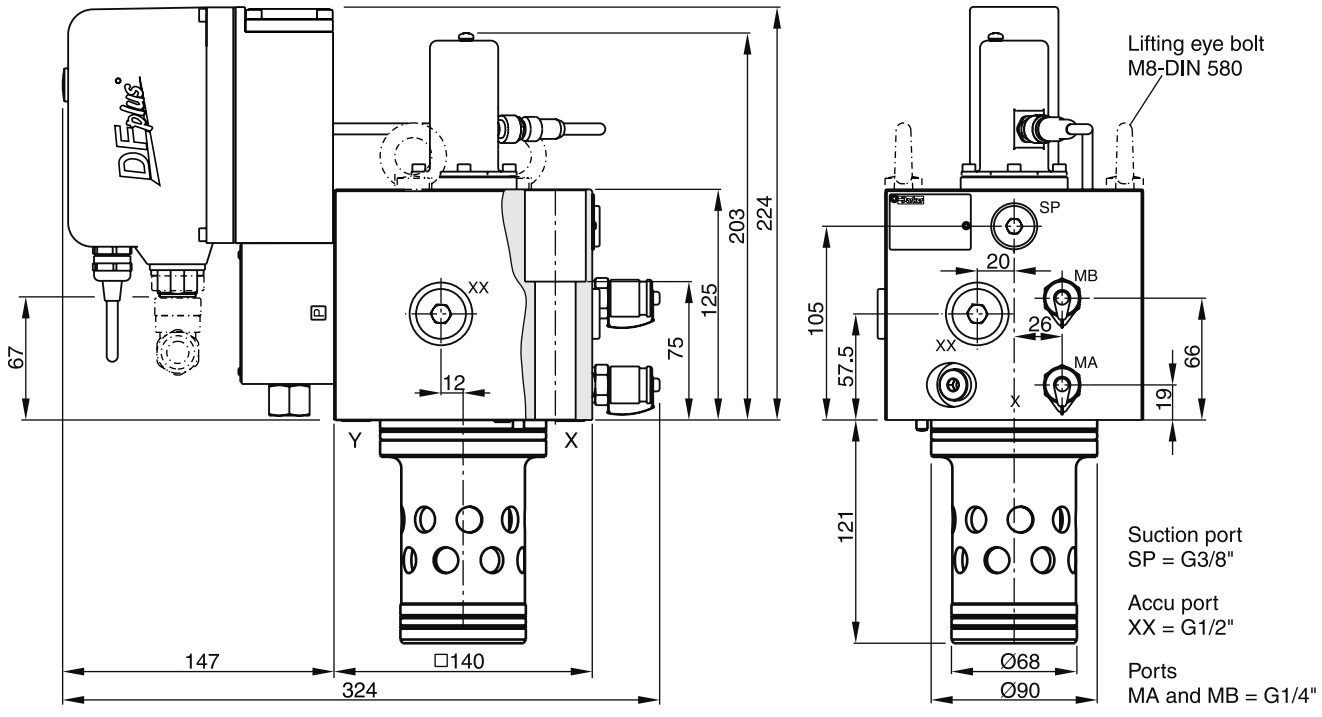
NG40



NG50



Lifting thread for disassembly M12

NG	Bolt kit -		Kit NBR	Kit FPM
40	BK513 4 x M20x110 ISO 4762-12.9	517 Nm	SK-TDP040EN30	SK-TDP040EV30
50	BK513 4 x M20x110 ISO 4762-12.9	517 Nm	SK-TDP050EN30	SK-TDP050EV30

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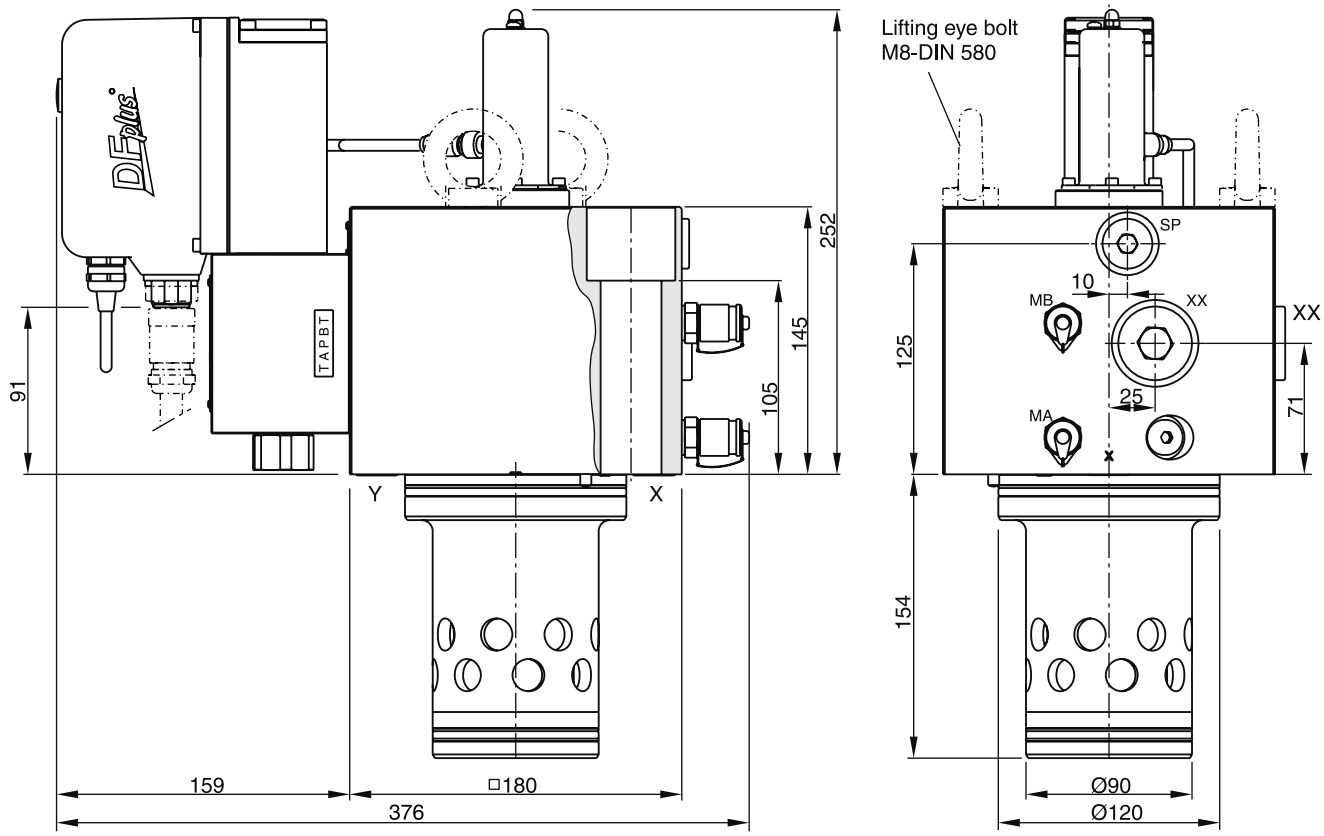
NG63



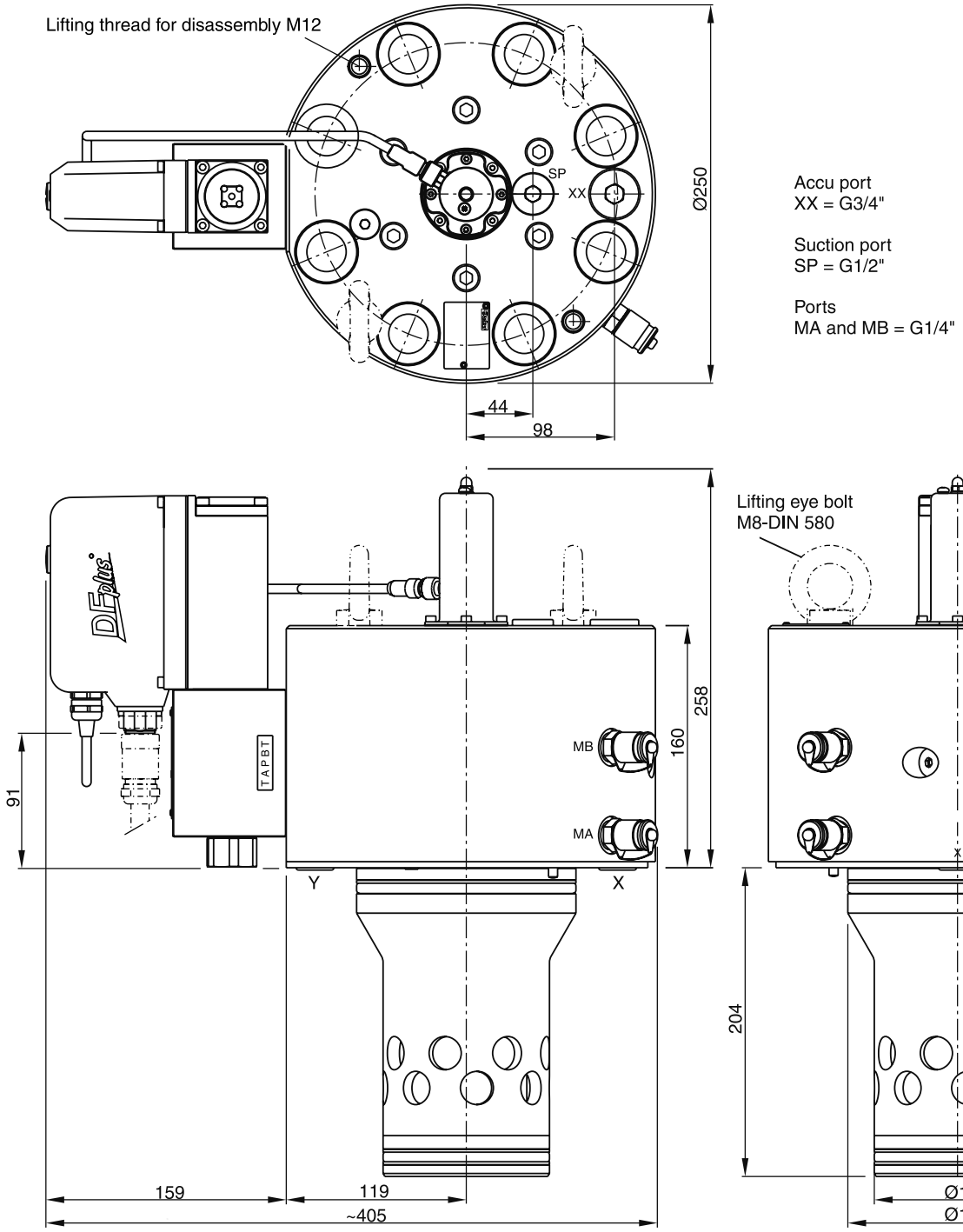
Suction port SP = G1/2" Accu port XX = G1" Ports MA and MB = G1/4"

Lifting thread for disassembly M12

8

NG	Bolt kit -		Kit NBR	Kit FPM
63	BK518 4 x M30x160 ISO 4762-12.9	1775 Nm	SK-TDP063EN30	SK-TDP063EV30

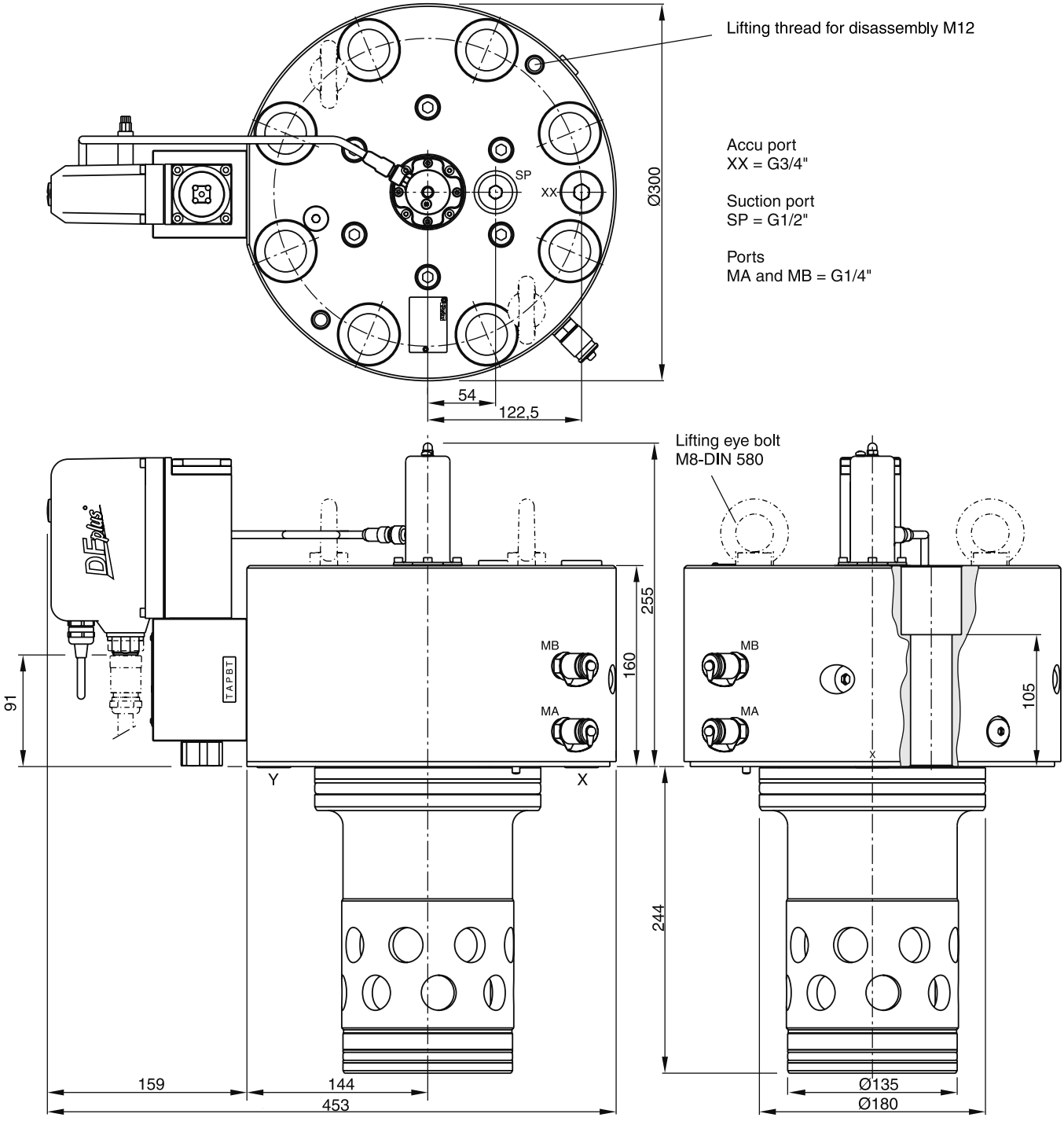
NG80



NG	Bolt kit -		Kit NBR	Kit FPM
80	BK530 8x M24x160 ISO 4762-12.9	890 Nm	SK-TDP080EN30	SK-TDP080EV30

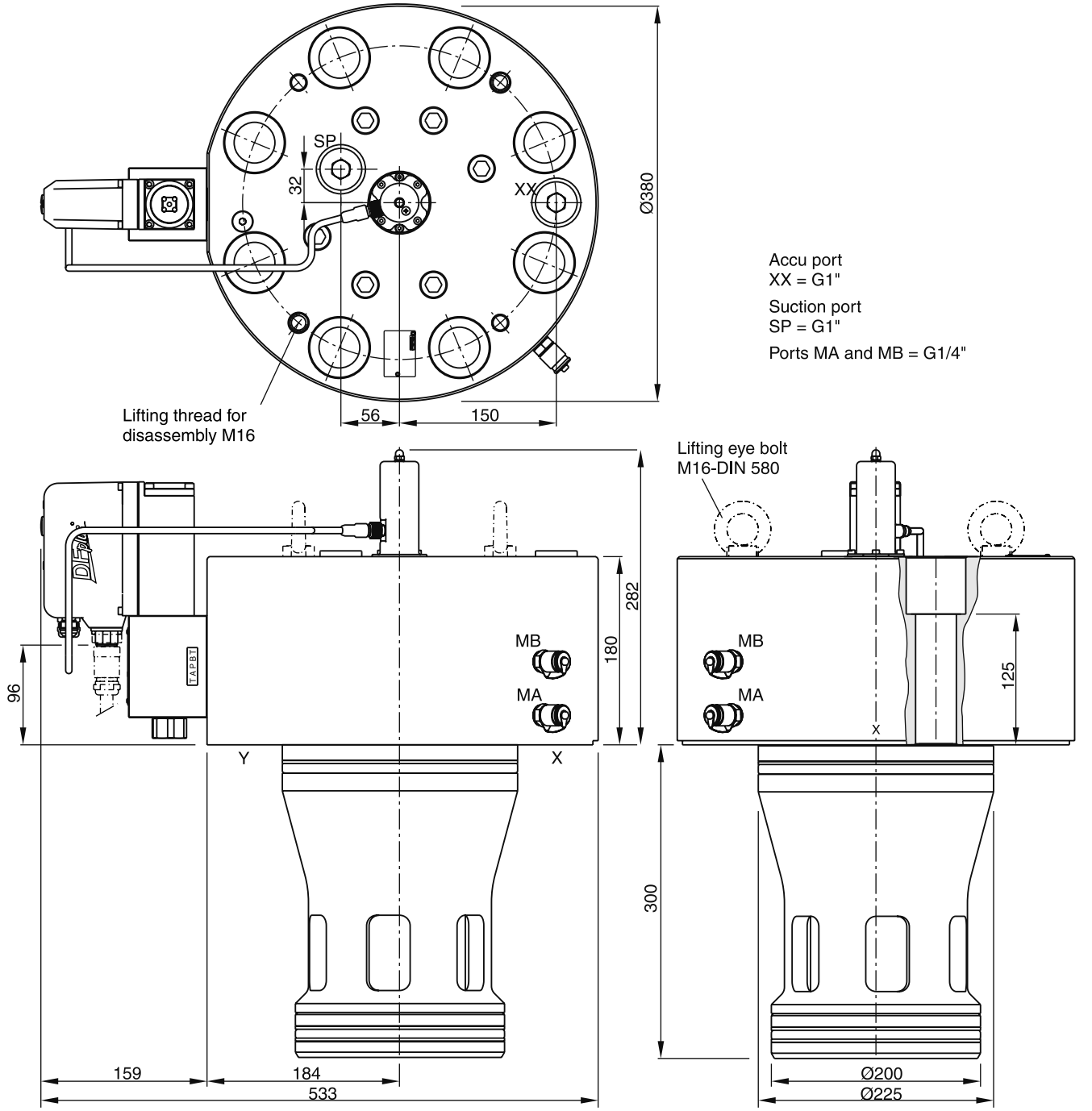
TDP UK.INDD CM 24.07.13

NG100



NG	Bolt kit -		Kit NBR	Kit FPM
100	BK531 8x M30x150 ISO 4762-12.9	1775 Nm	SK-TDP100EN30	SK-TDP100EV30

NG125

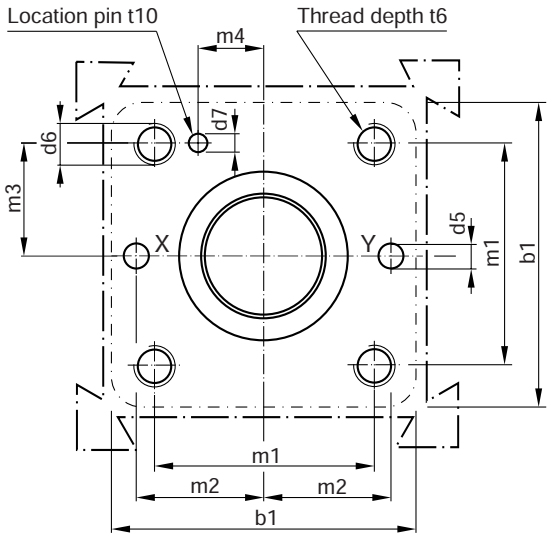


8

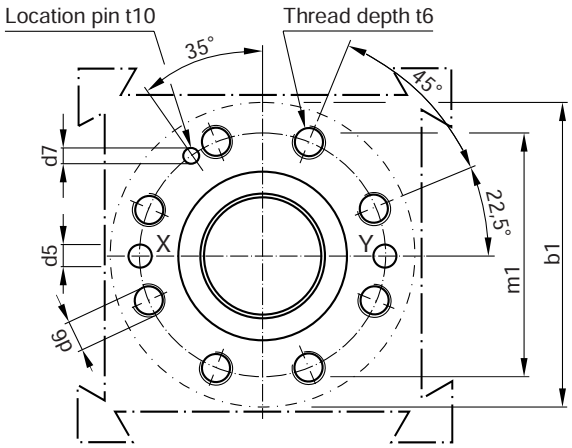
NG	Bolt kit -		Kit NBR	Kit FPM
125	BK537 8x M36x180 ISO 4762	3100 Nm	SK-TDP125EN30	SK-TDP125EV30

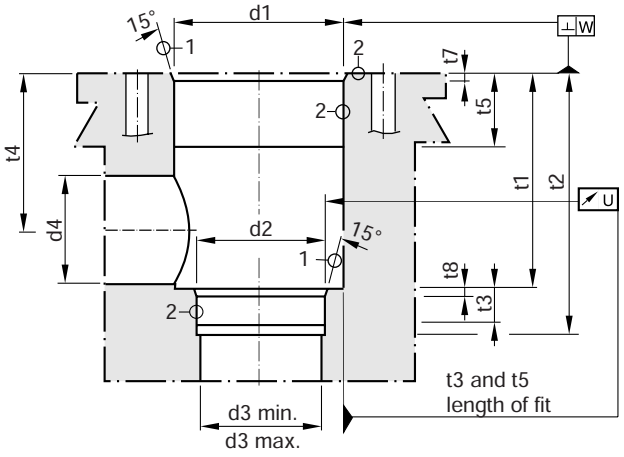
TDP UK.INDD CM 24.07.13

Code: ISO 7368-B*-*-2-A/B
NG25 to NG63



Code: ISO 7368-B*-*-2-A (except for size NG125)
NG80 to NG125





Required surface finish:

$(1) = \sqrt{R_{max}16}, (2) = \sqrt{R_{max}8}$

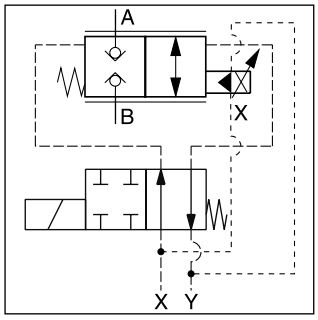
Deviating from ISO 7368 it is advisable to increase the diameters d3, d4 and d5.

Size	b1	d1 H7	d2 H7	d3	d3 max	d4 max[1)]	d5 max	d6	d7 H13	m1±0.2	m2±0.2	m3±0.2
25	85	45	34	25	27	32	6	M12	4	58	33	29
32	102	60	45	32	44	50	8	M 16	6	70	41	35
40	125	75	55	40	54	63	10	M 20	6	85	50	42.5
50	140	90	68	50	67	80	10	M 20	8	100	58	50
63	180	120	90	63	89	100	12	M 30	8	125	75	62.5
80	250	145	110	80	109	110	16	M 24	10	200	—	—
100	300	180	135	100	134	150	20	M 30	10	245	—	—
125	380	225	200	125	150	150	32	M 36	9	300	—	—

Size	m4±0.2	t1+0.5	t2+1	t3	t4	t4 max[1)]	t5	t6	t7	t8	t10	U	W
25	16	58	72	12	44	40.5	30	35	25	25	10	0.03	0.05
32	17	70	85	13	52	44	15	35	2.5	2.5	10	0.03	0.1
40	23	87	105	15	64	54	15	45	3	3	10	0.05	0.1
50	30	100	122	17	72	59	17	45	4	3	10	0.05	0.1
63	38	130	155	20	95	78	19	65	4	4	10	0.05	0.2
80	—	175	205	25	130	115	32	50	5	5	10	0.05	0.2
100	—	210	245	29	155	133	32	53	5	5	10	0.05	0.2
125	—	257	300 $^{+0.15}$	31	192	180	40	62	5.5	7	10	0.05	0.2

[1)] Only in combination with d4max and t4max.

2/2 way throttle valves series TEP base on the TDP range. Additionally, TEP valves are equipped with a direction control valve for shutting off the pilot system.



TEP040

Features

- Active pilot operated 2/2 way throttle valve
- Flow directions A-B and B-A
- Cavity and mounting pattern according to ISO 7368 (except for size NG125)
- Fast step responses
- Completely mounted and adapted unit with integrated electronics
- Fail save position at electrical and/or hydraulic power down
- 8 sizes NG25 up to NG125
- Shut-off function

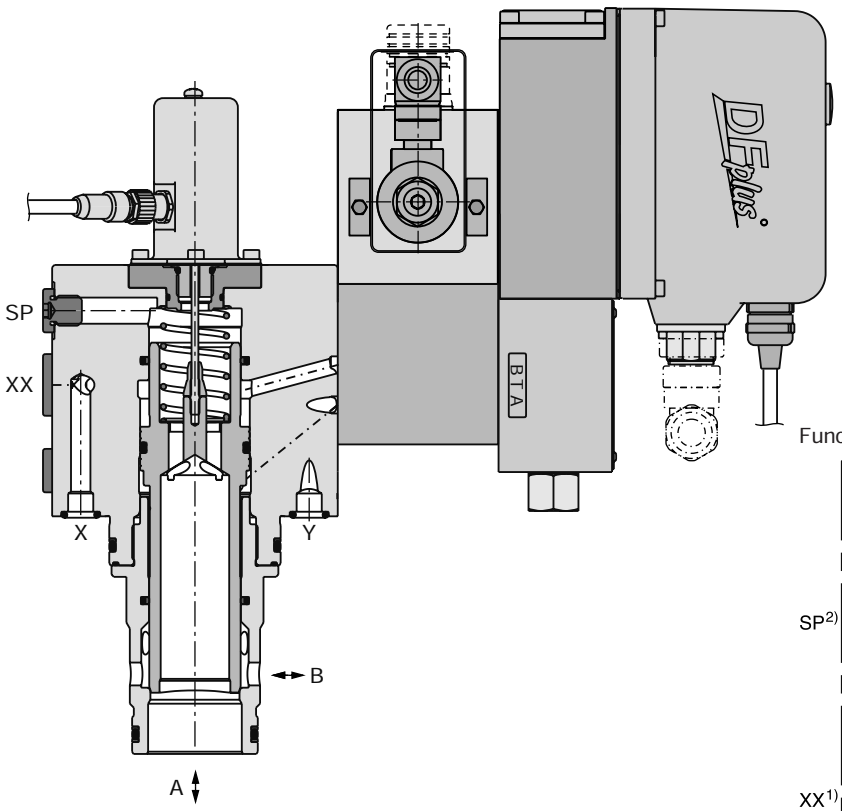
Structure and function

In the de-energized position of the shut-off valve, the upper pilot control surface of the main spool is pressurized, the lower one is relieved to tank. Without pilot pressure, the main spool is closed by spring force. Independent of the DFplus pilot valve, the main spool remains always closed, if the shut-off valve is not activated.

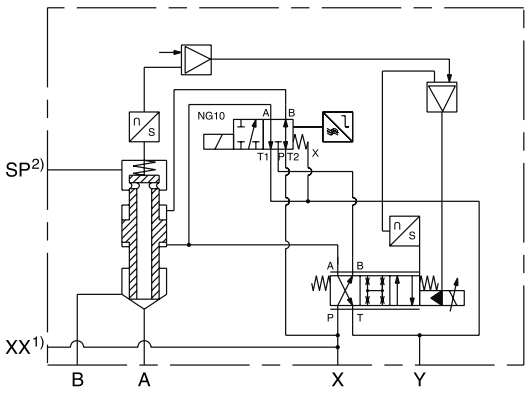
If the solenoid of the shut-off-valve is energized, the position of the main spool is controlled by DFplus pilot valve and LVDT.

The shut-off valve can be ordered with position control optionally.

TEP040



Function symbol



1) NG25 and NG32 without accu port XX.
2) NG25 without suction port SP.

8

Ordering code

TEP		E	H	9	9	C	2		B		J	
Proportional throttle valve with LVDT	**Nominal size**	**Slip-in cartridge**	**Closed pilot loop, fast valve type, integrated electronics**	**Sinus poppet**	**Nominal flow**	**Flow direction B → A A → B**	**Pilot oil** (supply external, drain external)	**Seal**	**Command signal 0...+10 V**	**Accessories**	**Solenoid check valve 24 V= / 1.25 A**	**Design series** (not required for ordering)

Code	Nominal size
025	NG25
032	NG32
040	NG40
050	NG50
063	NG63
080	NG80
100	NG100
125 [1)]	NG125

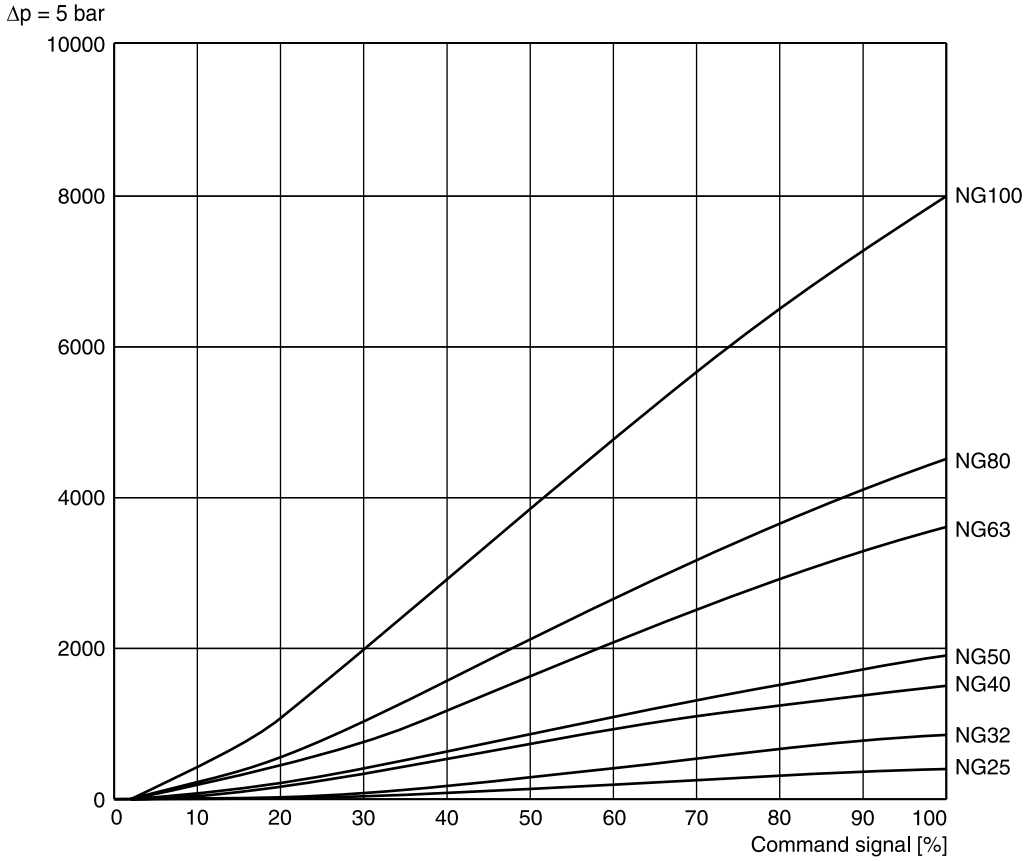
Code	Accessories shut-off valve
0	without position control
7	with position control

Code	Seal
H	for HFC fluid
N	NBR
V	FPM

Please order connector separately
Angle female connector must be used for NG25 to NG50.

[1)] On request.

Performance curves
Characteristic flow/signal line



Opening point factory set to 3 %

Flow at different Δp $Q_{actual} = Q_{nominal} \bullet \sqrt{\Delta p_{actual} / \Delta p_{nominal}}$

Characteristic curve measured with HLP46 at 50 °C.

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General									
Design		Proportional throttle valve, slip-in cartridge according to ISO 7368 (except for size NG125)							
Nominal size	DIN	NG25	NG32	NG40	NG50	NG63	NG80	NG100	NG125
Mounting position		unrestricted							
Ambient temperature	[°C]	-20...+50							
$MTTF_D$ value	[years]	50							
Weight	[kg]	11	13	15	26	52	105	157	on request
Vibration resistance	[g]	10 sinus 5...2000 Hz acc. IEC 68-2-6 30 random noise 20...2000 Hz acc. IEC 68-2-36 15 shock acc. IEC 68-2-27							
Hydraulic									
Max. operating pressure	[bar]	Ports A, B, X and SP up to 350; XX observe accumulator pressure rating; port Y: max. 35							
Fluid		Hydraulic oil according to DIN 51524...51525							
Fluid temperature	[°C]	-20 ... +60							
Viscosity recommended	[cSt] / [mm²/s]	30 ... 80							
Viscosity permitted	[cSt] / [mm²/s]	20 ... 380							
Filtration		ISO 4406 (1999); 18/16/13							
Nominal flow at Δp= 5 bar	[l/min]	420	850	1500	1900	3600	4500	8000	on request
Recommended max. flow	[l/min]	800	2000	3000	4500	8000	13000	20000	on request
Flow direction		B to A and A to B							
Pilot pressure	[bar]	must be as high as system pressure							
Pilot oil supply		external via X							
Pilot oil drain		external via Y							
Leakage in pilot valve at 100 bar	[ml/min]	<400							
Pilot valve size			NG06				NG10		
Max. pilot flow at 140 bar pilot pr.	[l/min]	23	30	40	40	70	80	100	on request
Static/dynamic									
(for optimal dynamics see installation recommendation)									
Step response at pilot press. >140 bar	[ms]	10.5	12	14	20	17	23	28	on request
Frequency response at pilot press. >140 bar									
Amplitude -3 dB; 10 % ±5 %	[Hz]	95	80	74	66	52	46	41	on request
Phase -90°; 10 % +5 %	[Hz]	85	63	59	52	56	51	47	on request
Hysteresis	[%]	< 0.1							
Sensitivity	[%]	< 0.05							
Temperature drift	[%/K]	< 0.025							

Electrical		
Duty ratio	[%]	100
Protection class		IP65 in accordance with EN 60529 (with correctly mounted plug-in connector)
Supply voltage / ripple	[V]	22...30, ripple < 5 % eff., surge free
Current consumption max.	[A]	3.5
Pre-fusing	[A]	4.0 A medium lag
Input signal Voltage	[V]	0...+10, ripple < 0.01 % eff., surge free
Impedance	[kOhm]	100
Input capacitance typ.	[nF]	1
Differential input max.	[V]	30 for terminal D and E against PE (terminal G) 11 for terminal D and E against 0V (terminal B)
Enable signal	[V]	5...30, Ri = 9 kOhm
Diagnostic signal	[V]	0...+10, rated max. 5 mA
EMC		EN 61000-6-2, EN 61000-6-4
Electrical connection		6 + PE acc. EN 175201-804
Wiring min.	[mm²]	7 x 1.0 (AWG16) overall braid shield
Wiring length max.	[m]	50

Installation recommendations

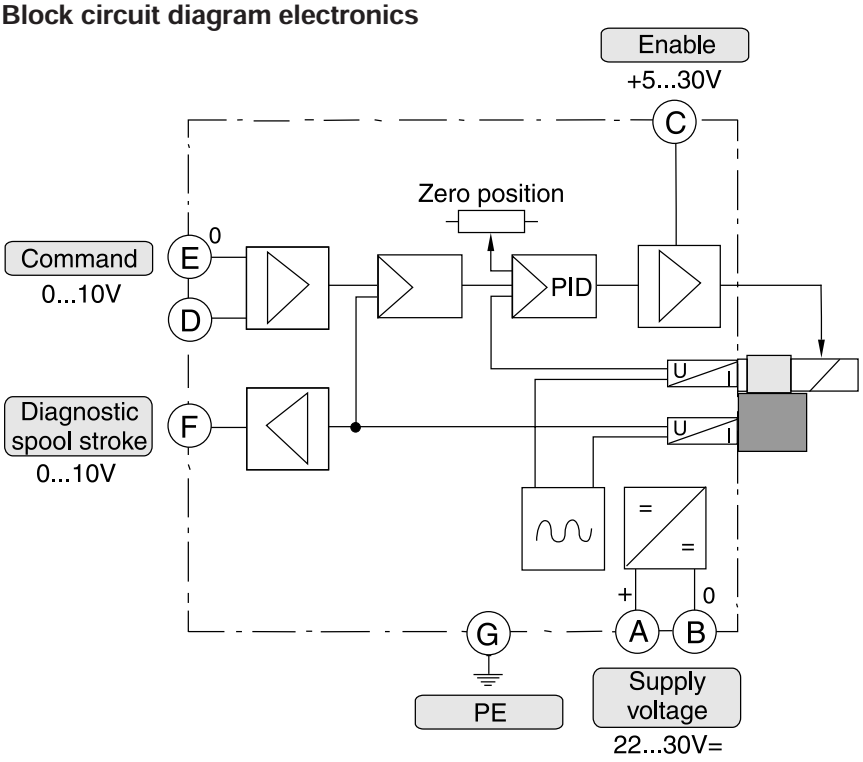
The maximum pilot flow is given in the technical data. At insufficient pilot oil supply - e.g. because of long distances and/or small diameters - an accumulator can be connected to port XX. See selection guide for correct dimensions.

Selection guide

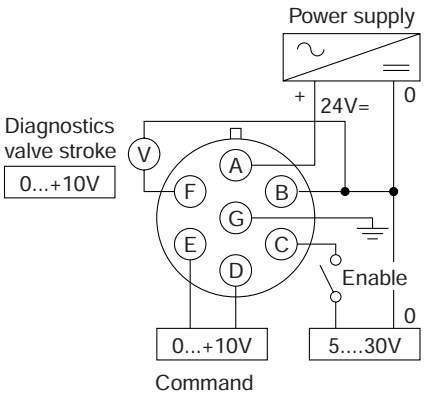
Size	Capacity [l]	Product type	Pressure rating [bar]	Accu port XX
NG40	0.162	ADE016-25R	126	G 1/2
NG50	0.243	ADE032-21R	126	G 1/2
NG63	0.405	ADE050-21R	126	G 1
NG80	0.647	ADE075-21R	126	G 3/4
NG100	0.944	ADE100-21R	126	G 3/4
NG125	on request			G 1

Suction port SP: Contact Parker for installation recommendation.

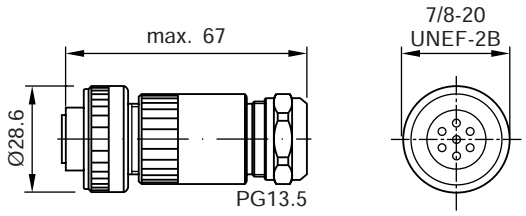
Block circuit diagram electronics



Connection diagrams electronics code B

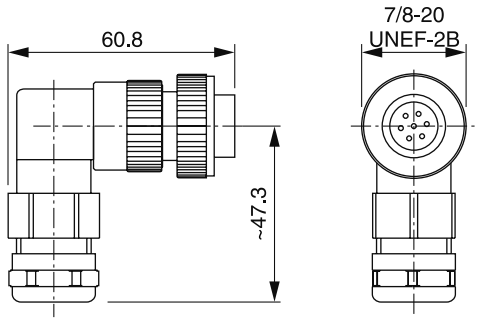


Female connector
(EMC conform)



ID no. 5004072

Angle female connector
(EMC conform)



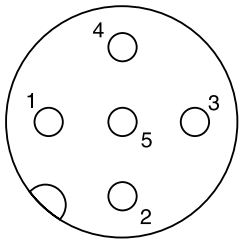
ID no. 5005160

Please order plugs separately.

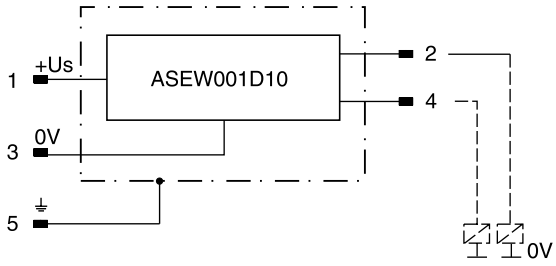
Electrical characteristics of position control as per IEC 61076-2-101 (M12x1)

Protection class		IP 65 in accordance with EN 60529 (with correctly mounted plug-in connector)
Ambient temperature	[°C]	0...+50
Supply voltage Us / ripple	[V]	18...42 / 10 %
Current consumption without load	[mA]	≤ 30
Max. output current per channel, ohmic	[mA]	400
Min. output load per channel, ohmic	[kOhm]	100
Max. output drop at 0.2 A	[V]	≤ 1.1
Max. output drop at 0.4 A	[V]	≤ 1.6
EMC		EN50081-1 / EN50082-2
Max. tolerance ambient field strength	[A/m]	<1200
Min. distance to next AC solenoid	[m]	>0.1
Interface		M12x1
Wiring min.	[mm²]	5 x 0.25 braid shield recommended
Wiring length max.	[m]	50 recommended

M12 pin assignment



1 Us 18...42V
2 Out B: normally open
3 0V
4 Out A: normally closed
5 Earth ground



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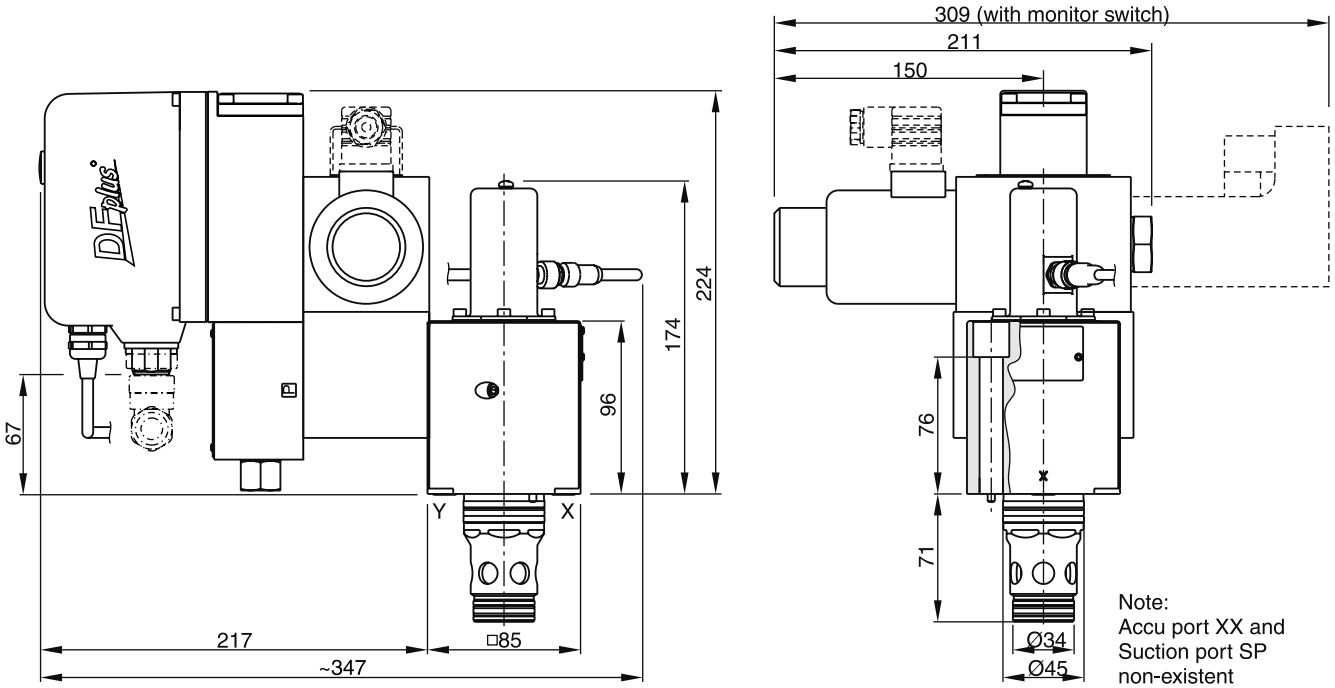
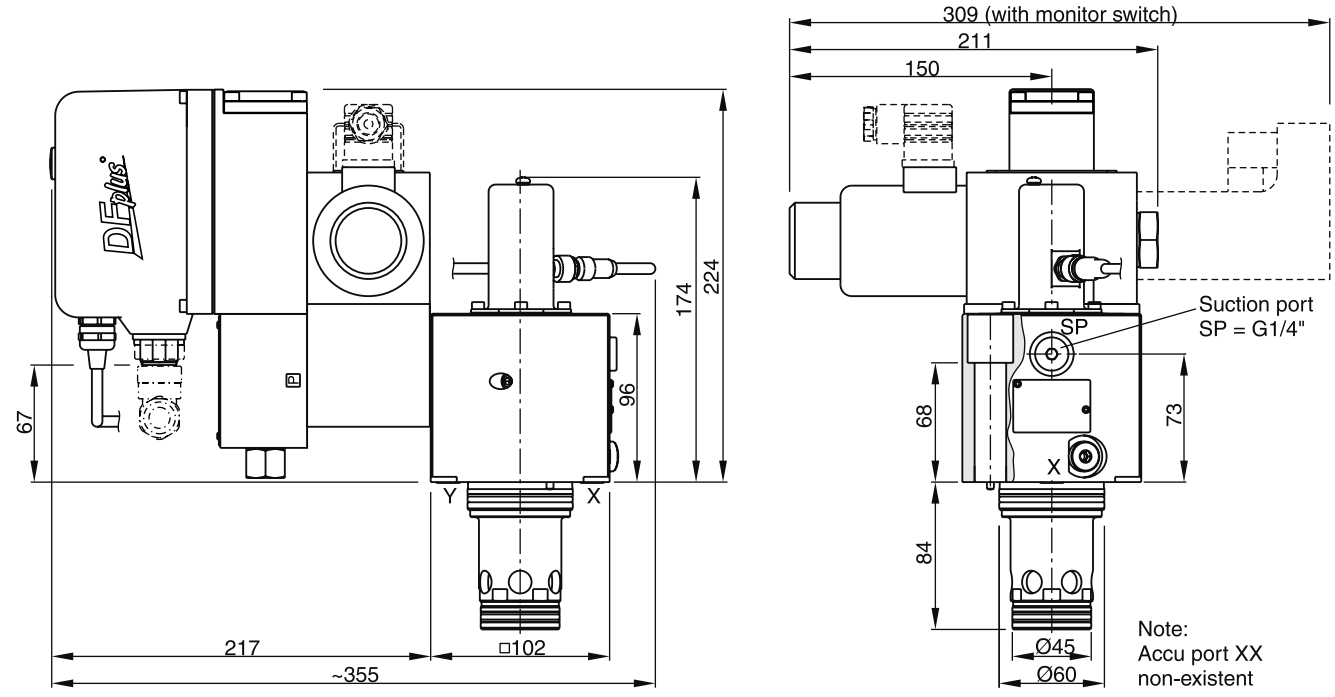
NG25



NG32



NG	Bolt kit -		Kit NBR	Kit FPM
25	BK504 4 x M12x100 ISO 4762-12.9	108 Nm	SK-TEP025EN30	SK-TEP025EV30
32	BK529 4 x M16x100 ISO 4762-12.9	264 Nm	SK-TEP032EN30	SK-TEP032EV30

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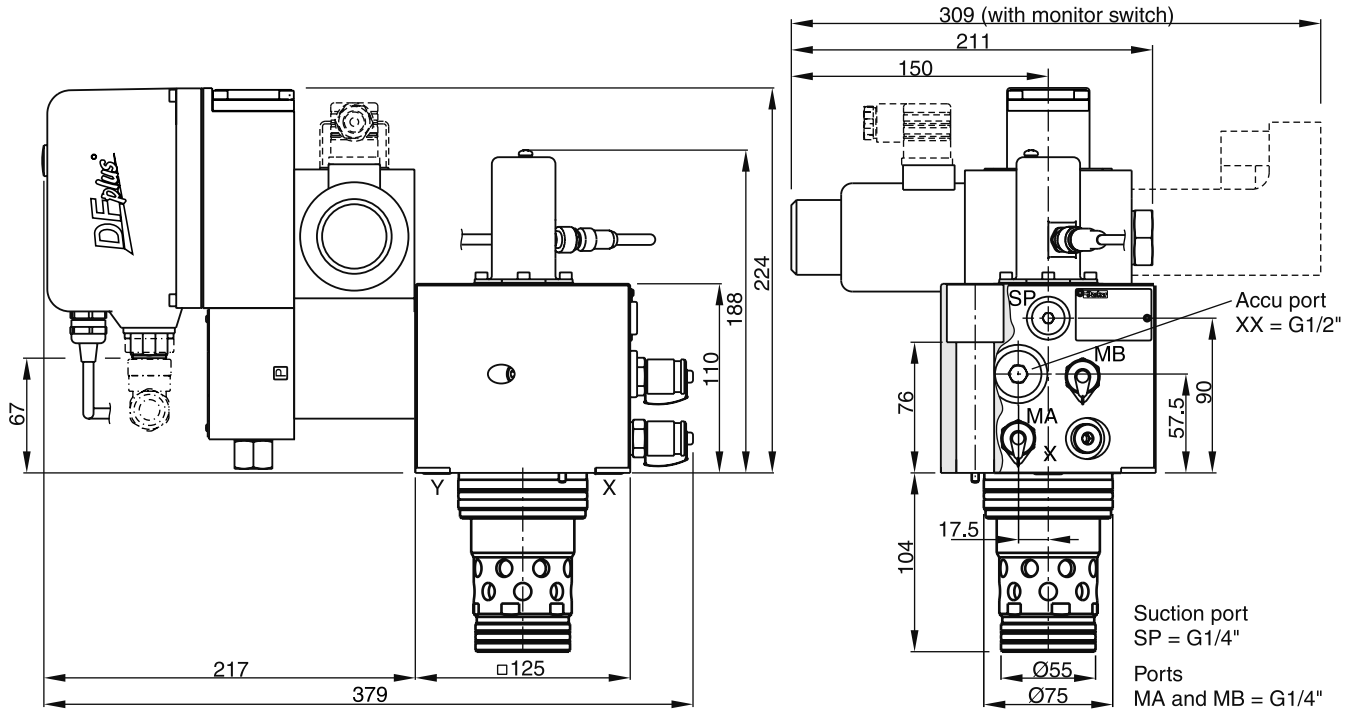
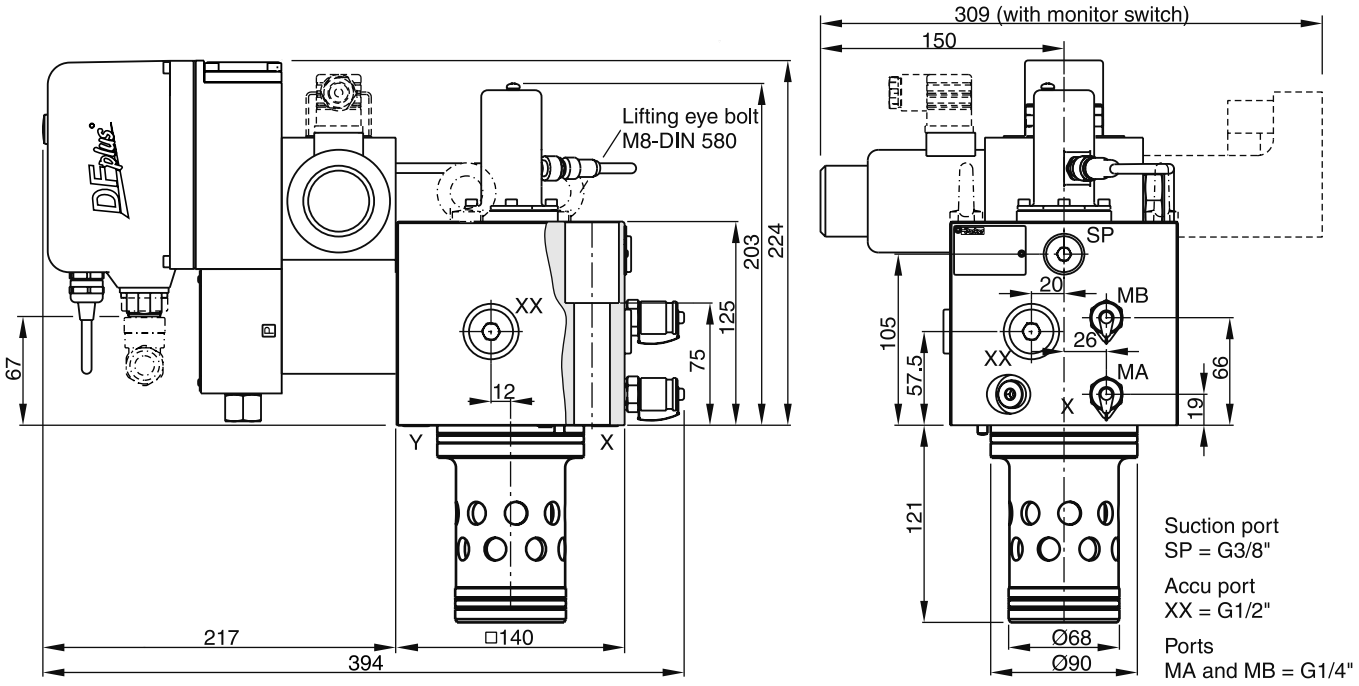
NG40



NG50

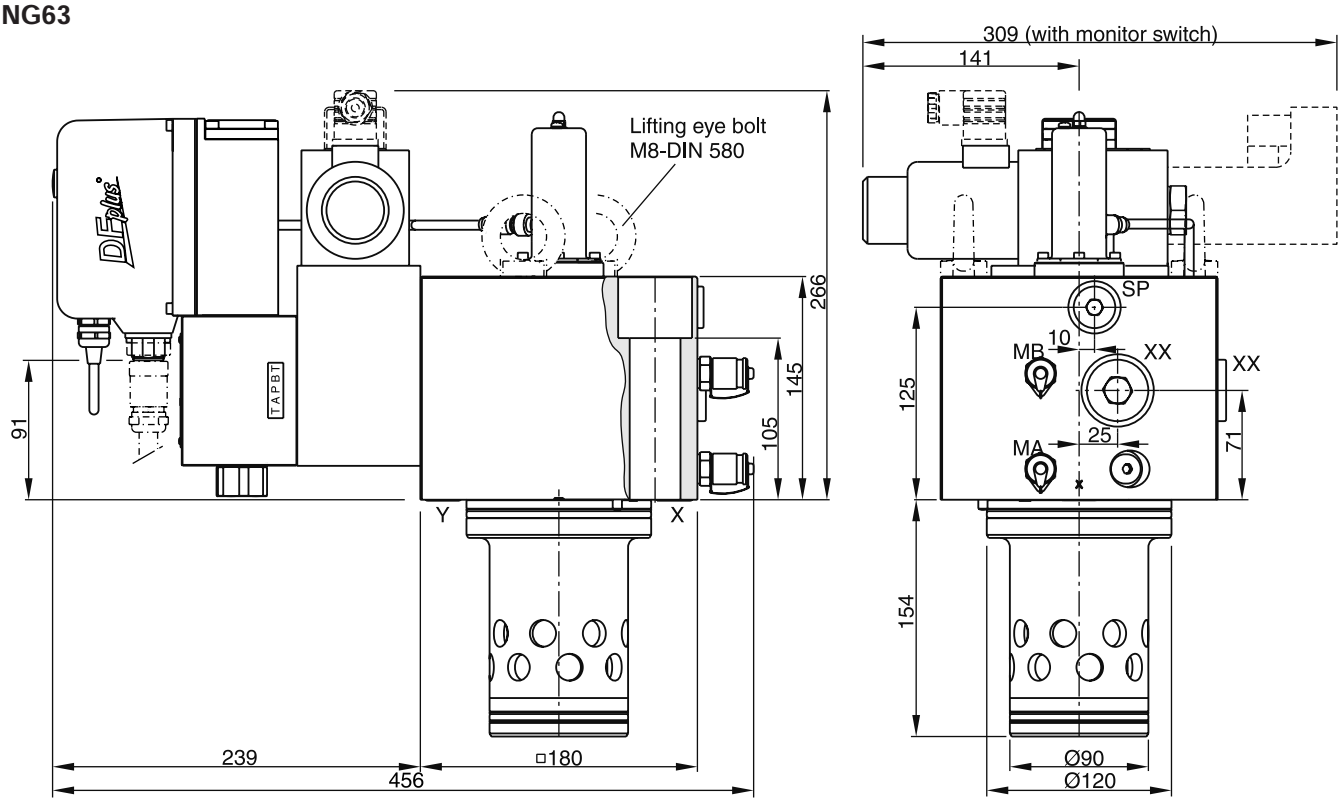


Lifting thread for disassembly M12

NG	Bolt kit -		Kit NBR	Kit FPM
40	BK513 4 x M20x110 ISO 4762-12.9	517 Nm	SK-TEP040EN30	SK-TEP040EV30
50	BK513 4 x M20x110 ISO 4762-12.9	517 Nm	SK-TEP050EN30	SK-TEP050EV30

TEP UK.indd CM 24.07.13

NG63



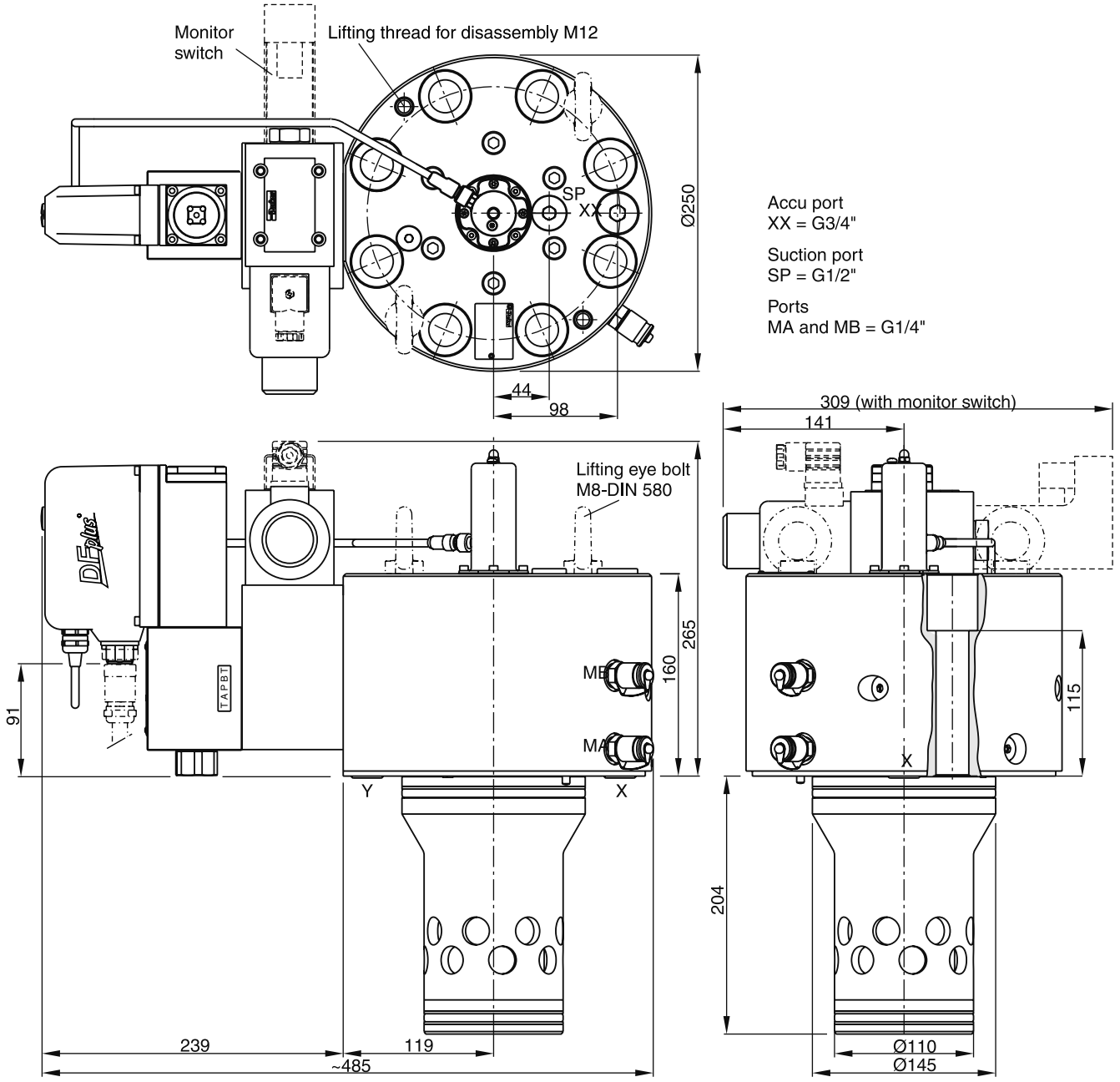
Suction port SP = G1/2" | Accu port XX = G1" | Ports MA and MB = G1/4"

Lifting thread for disassembly M12

8

NG	Bolt kit -		Kit NBR	Kit FPM
63	BK518 4x M30x160 ISO 4762-12.9	1775 Nm	SK-TEP063EN30	SK-TEP063EV30

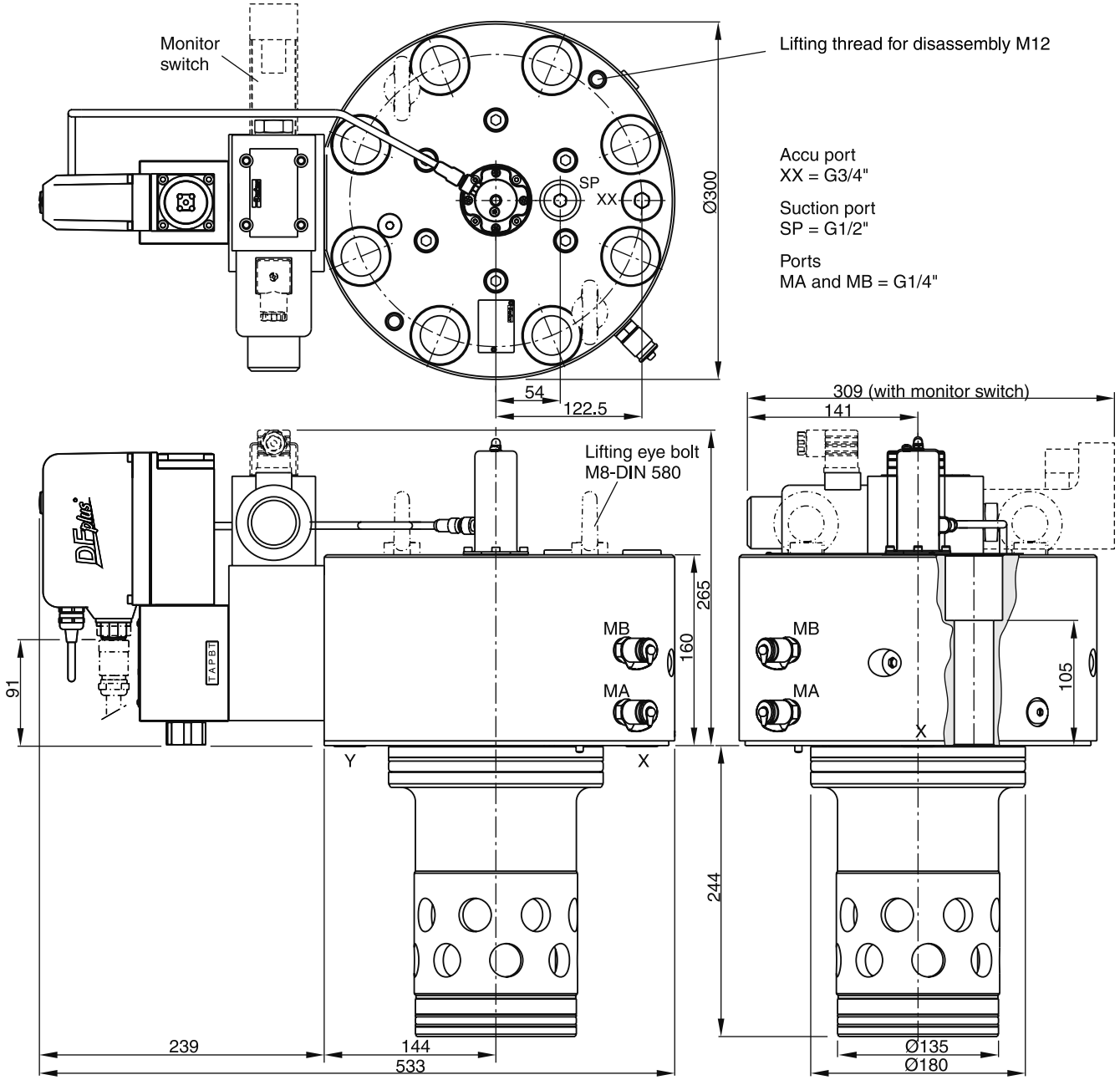
NG80



NG	Bolt kit -		Kit NBR	Kit FPM
80	BK530 8x M24x160 ISO 4762-12.9	890 Nm	SK-TEP080EN30	SK-TEP080EV30

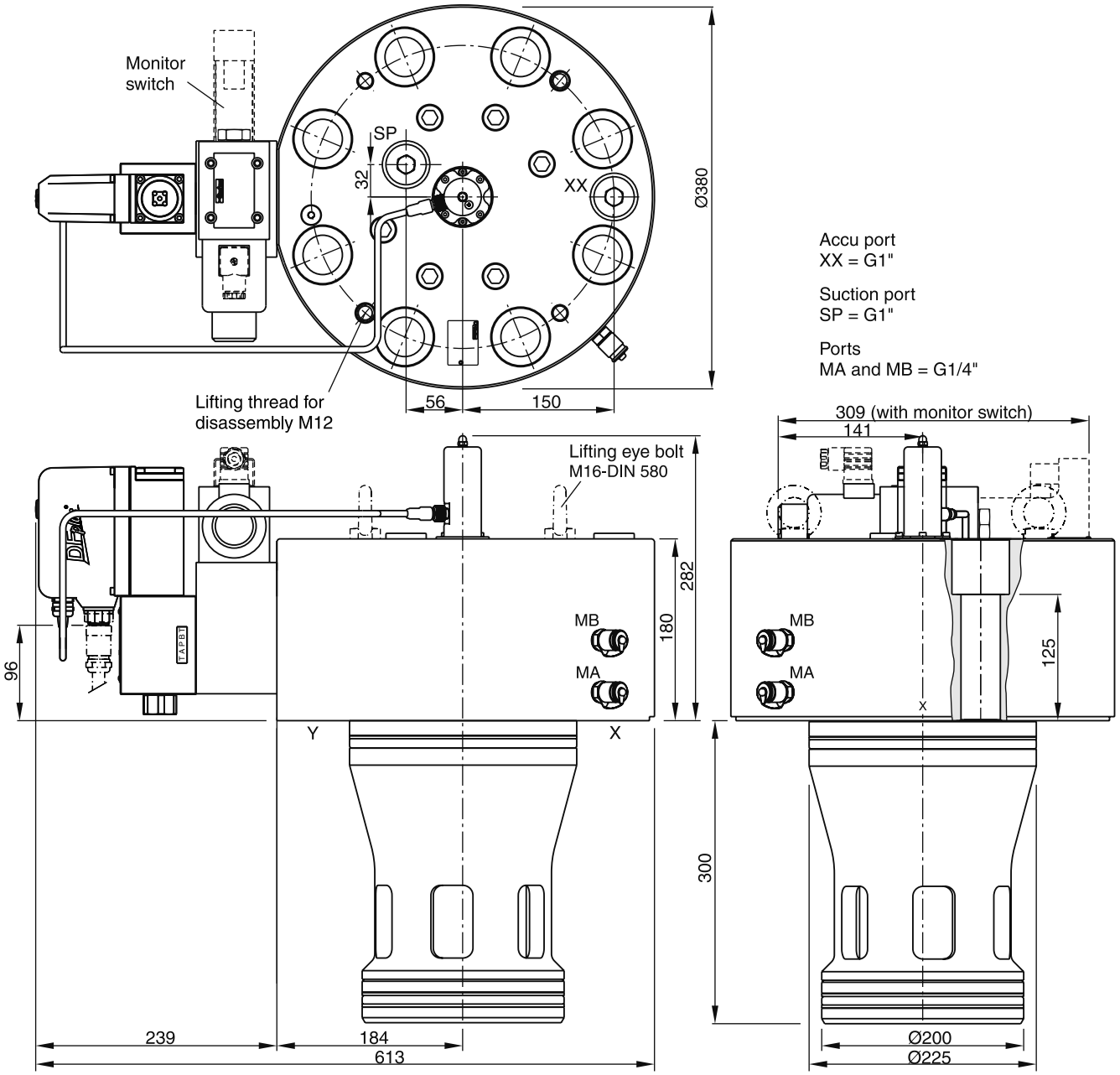
TEP UK.indd CM 24.07.13

NG100



NG	Bolt kit -		Kit NBR	Kit FPM
100	BK531 8x M30x150 ISO 4762-12.9	1775 Nm	SK-TEP100EN30	SK-TEP100EV30

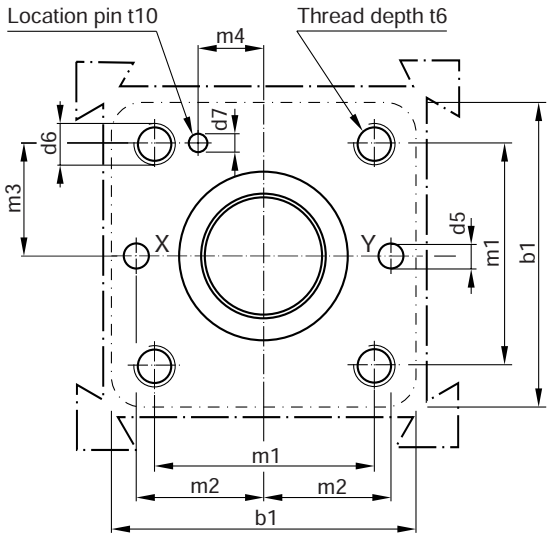
NG125



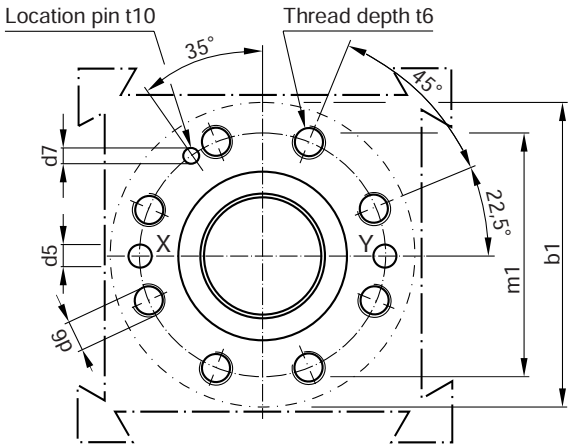
8

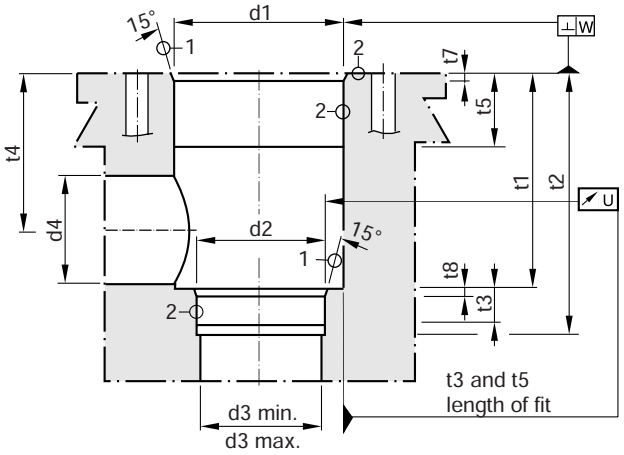
NG	Bolt kit -		Kit NBR	Kit FPM
125	BK537 8x M36x180 ISO 4762-12.9	3100 Nm	SK-TEP125EN30	SK-TEP125EV30

Code: ISO 7368-B*-*-2-A/B
NG25 to NG63



Code: ISO 7368-B*-*-2-A (except for size NG125)
NG80 to NG125





Required surface finish:

$\textcircled{1} = \sqrt{R_{max}16}, \textcircled{2} = \sqrt{R_{max}8}$

Deviating from ISO 7368 it is advisable to increase the diameters d3, d4 and d5.

Size	b1	d1 H7	d2 H7	d3	d3 max	d4 max[1)]	d5 max	d6	d7 H13	m1±0.2	m2±0.2	m3±0.2
25	85	45	34	25	27	32	6	M 12	4	58	33	29
32	102	60	45	32	44	50	8	M 16	6	70	41	35
40	125	75	55	40	54	63	10	M 20	6	85	50	42.5
50	140	90	68	50	67	80	10	M 20	8	100	58	50
63	180	120	90	63	89	100	12	M 30	8	125	75	62.5
80	250	145	110	80	109	110	16	M 24	10	200	—	—
100	300	180	135	100	134	150	20	M 30	10	245	—	—
125	380	225	200	125	150	150	32	M 36	9	300	—	—

Size	m4±0.2	t1+0.5	t2+1	t3	t4	t4 max[1)]	t5	t6	t7	t8	t10	U	W
25	16	58	72	12	44	40.5	30	35	25	25	10	0.03	0.05
32	17	70	85	13	52	44	15	35	2.5	2.5	10	0.03	0.1
40	23	87	105	15	64	54	15	45	3	3	10	0.05	0.1
50	30	100	122	17	72	59	17	45	4	3	10	0.05	0.1
63	38	130	155	20	95	78	19	65	4	4	10	0.05	0.2
80	—	175	205	25	130	115	32	50	5	5	10	0.05	0.2
100	—	210	245	29	155	133	32	53	5	5	10	0.05	0.2
125	—	257	300 $^{+0.15}$	31	192	180	40	62	5.5	7	10	0.05	0.2

[1)] Only in combination with $d4_{max}$ and $t4_{max}$

The 3/3 way proportional throttle valves series TPQ are used in applications where high flow has to be precisely controlled at maximum dynamics. Typical applications are die casting, injection moulding and hydraulic presses.

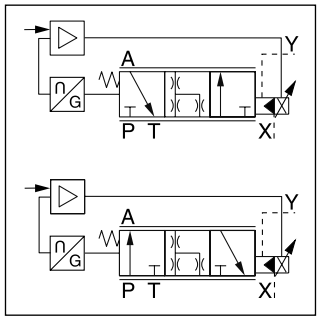
Function

TPQ has a 2-stage design consisting of a DFplus pilot valve and a main stage with spool and LVDT.

With the DFplus pilot valve the TPQ achieves extremely fast response times: from 7 ms (NG25) up to 20 ms (NG80) with an accuracy of <0.1 % of the nominal flow. The pilot valve actively controls the spool – independent of the pressure conditions in the main ports.

It is basically required that the pilot pressure is at the level of the system pressure. At low system pressure the pilot pressure should be min. 140 bar, when high valve dynamics are desired.

The integrated electronics in the pilot of the TPQ has two control loops for the main cone and the pilot spool.

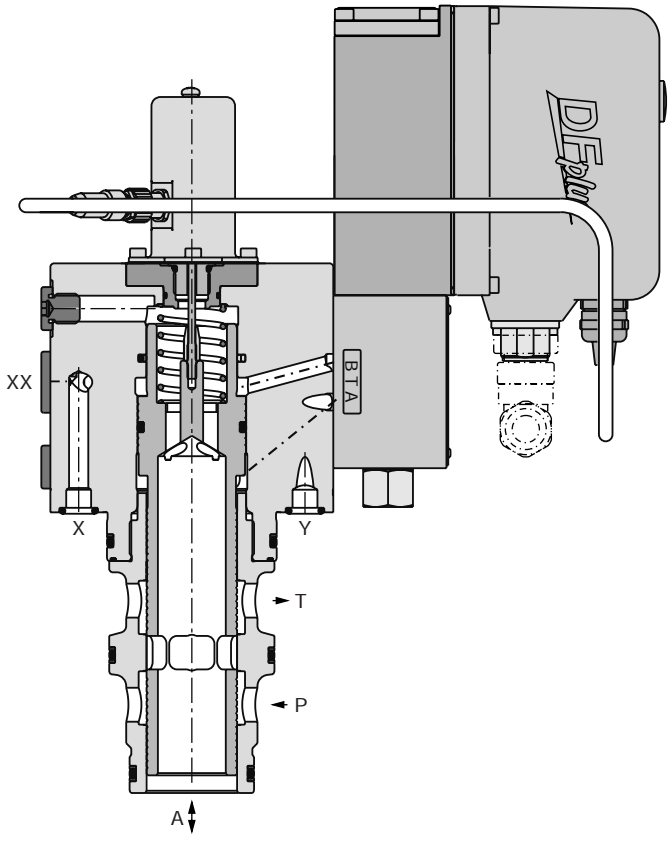


TPQ 040

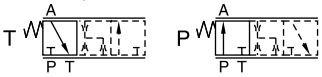
Features

- Active pilot operated 3/3 way proportional throttle valve
- Cavity according to Parker house norm
- Fast step response
- Flow direction A to T and P to A
- Completely mounted adapted unit with integrated electronics
- Fail safe position in case of electrical and/or hydraulic power down
- 6 sizes NG25 up to NG80

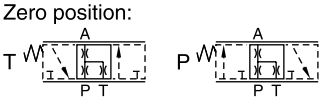
TPQ 040 P



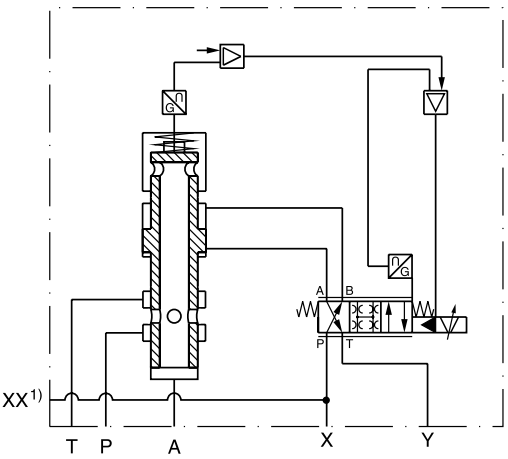
Failsafe position:



Zero position:



Function symbol
Fail safe position spool type P



1) NG25 and NG32 without accu port XX

8

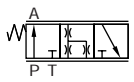
Ordering code

TPQ		W	H	2	5		2			0	
Proportional throttle valve with LVDT	**Nominal size**	**Parker Slip-in cartridge**	**Closed pilot loop, fast valve type, integrated electronics**	**Linear spool**	**Nominal flow**	**Spool type**	**Pilot oil supply external, drain external**	**Seal**	**Input signal**	**Standard electronics**	**Design series** (not required for ordering)

Code	Nominal size
025	NG25
032	NG32
040	NG40
050	NG50
063	NG63
080	NG80

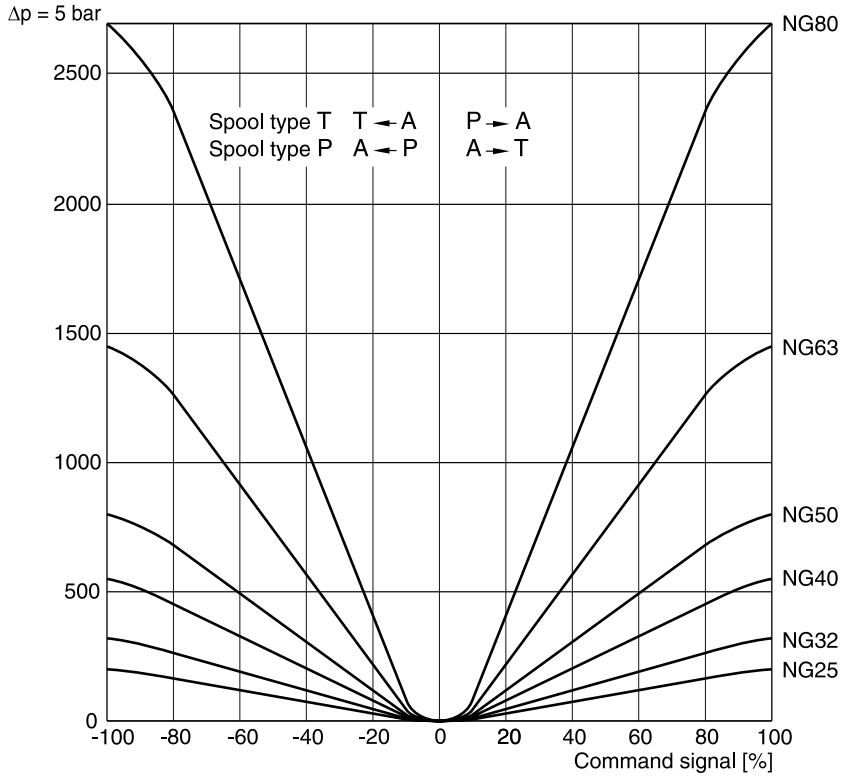
Code	Signal range
B	0...±10 V
S	4...+20 mA

Code	Seal
N	NBR
V	FPM
H	for HFC fluid

Zerolap		
Code	Spool type Input signal - 0 +	Fail save
P		P → A
T		A → T

Please order connector separately
Angle female connector must be used for NG25 to NG50.

Performance curves
Characteristic flow/signal line



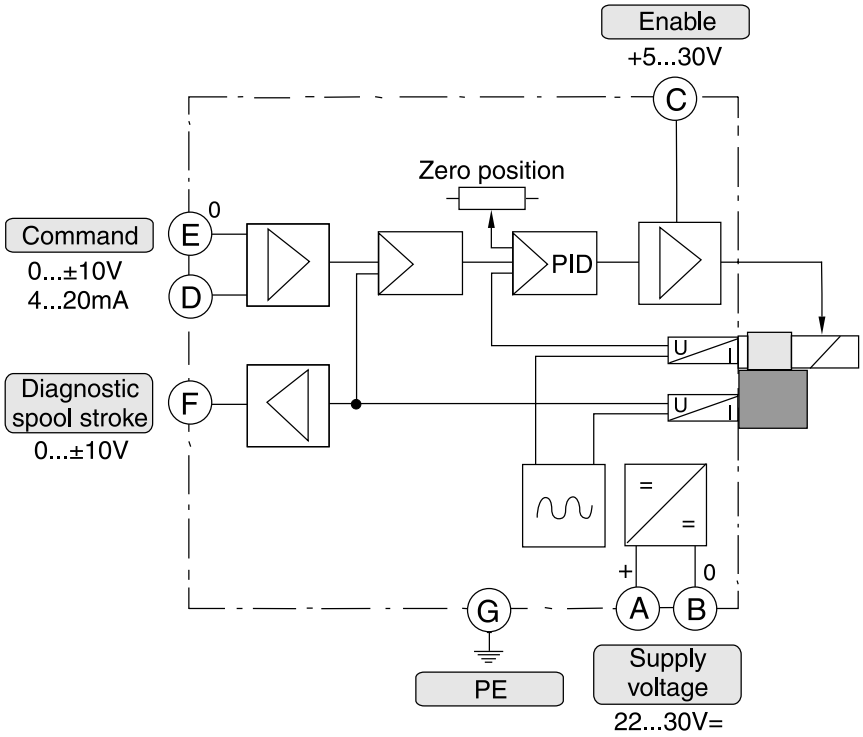
Flow at different Δp $Q_{actual} = Q_{nominal} \bullet \sqrt{\Delta p_{actual} / \Delta p_{nominal}}$

Characteristic curve measured with HLP46 at 50 °C.

General							
Design		Proportional throttle valve, slip-in cartridge					
Nominal size	DIN	NG25	NG32	NG40	NG50	NG63	NG80
Mounting position		unrestricted					
Ambient temperature	[°C]	-20...+50					
$MTTF_D$ value	[years]	50					
Weight	[kg]	11	13	15	26	52	105
Vibration resistance	[g]	10 sinus 5...2000 Hz acc. IEC 68-2-6 30 random noise 20...2000 Hz acc. IEC 68-2-36 15 shock acc. IEC 68-2-27					
Hydraulic							
Max. operating pressure	[bar]	Ports A, P, T, X up to 350, XX [1] observe accumulator pressure rating; port Y: max. 35					
Fluid		Hydraulic oil according to DIN 51524...51525					
Fluid temperature	[°C]	-20 ... +60					
Viscosity recommended	[cSt]/[mm²/s]	30 ... 80					
permitted	[cSt]/[mm²/s]	20 ... 380					
Filtration		ISO 4406 (1999); 18/16/13					
Nominal flow at Δp = 5 bar	[l/min]	200	320	550	800	1450	2700
Recommended max. flow	[l/min]	500	1000	1600	2250	3500	6500
Nominal overlap	[%]	< 1.5					
Flow direction		A to T or P to A					
Pilot pressure	[bar]	must be as high as system pressure					
Pilot oil supply		external via X					
drain		external via Y					
Leakage in pilot valve at 100 bar	[ml/min]	< 400					
Leakage in main stage at 100 bar	[l/min]	NG32 to 63 <2.5; NG80 <4.0					
Pilot valve size		NG06				NG10	
Max. pilot flow at 140 bar pilot press.	[l/min]	25	25	25	25	50	60
Static/dynamic							
(for optimal dynamics see installation recommendation)							
Step response at pilot press. >140 bar	[ms]	7	11	11	18	19	20
Frequency response at pilot press. >140 bar							
Amplitude -3 dB; ±5 %	[Hz]	210	105	70	45	35	30
Phase -90°; ±5 %	[Hz]	170	125	110	95	75	70
Hysteresis	[%]	< 0.1					
Sensitivity	[%]	< 0.05					
Temperature drift of center position	[%/K]	< 0.025					
Electrical							
Duty ratio	[%]	100					
Protection class		IP65 in accordance with EN 60529 (with correctly mounted plug-in connector)					
Supply voltage / ripple	[V]	22...30, ripple < 5 % eff., surge free					
Current consumption max.	[A]	3.5					
Pre-fusing	[A]	4.0 A medium lag					
Input signal Voltage	[V]	+10...0...-10, ripple < 0.01 % eff., surge free					
Impedance	[kOhm]	100					
Input capacitance typ.	[nF]	1					
Current	[mA]	4...12...20, ripple < 0.01 % eff., surge free					
		< 3.6 mA = enable off, > 3.8 mA = enable on acc. NAMUR NE43					
Impedance	[Ohm]	250					
Differential input max.	[V]	30 for terminal D and E against PE (terminal G),					
	[V]	11 for terminal D and E against 0V (terminal B)					
Diagnostic signal	[V]	0...±10 rated max. 5 mA					
Enable signal	[V]	5...30, Ri = 9 kOhm					
EMC		EN 61000-6-2, EN 61000-6-4					
Electrical connection		6 + PE acc. EN 175201-804					
Wiring min.	[mm²]	7x1.0 (AWG16) overall braid shield					
Wiring length	[m]	50					

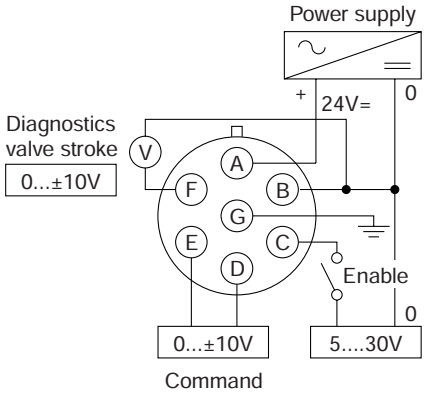
[1] Accu port XX: Please contact Parker for installation recommendation.

Block circuit diagram electronics

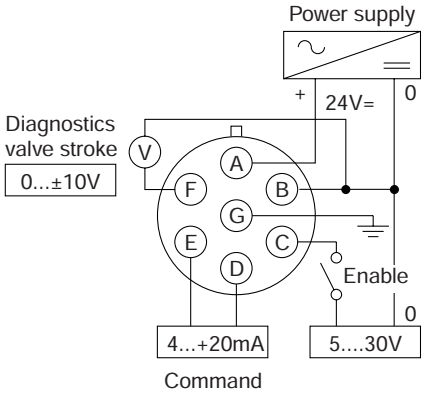


Connection diagrams

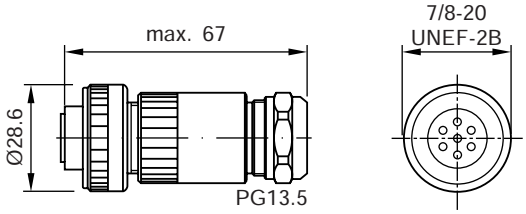
Electronics code B



Electronics code S



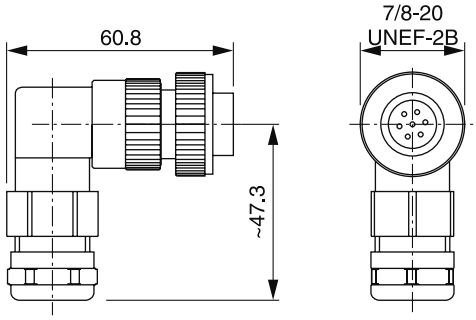
Female connector
(EMC conforming)



ID no. 5004072

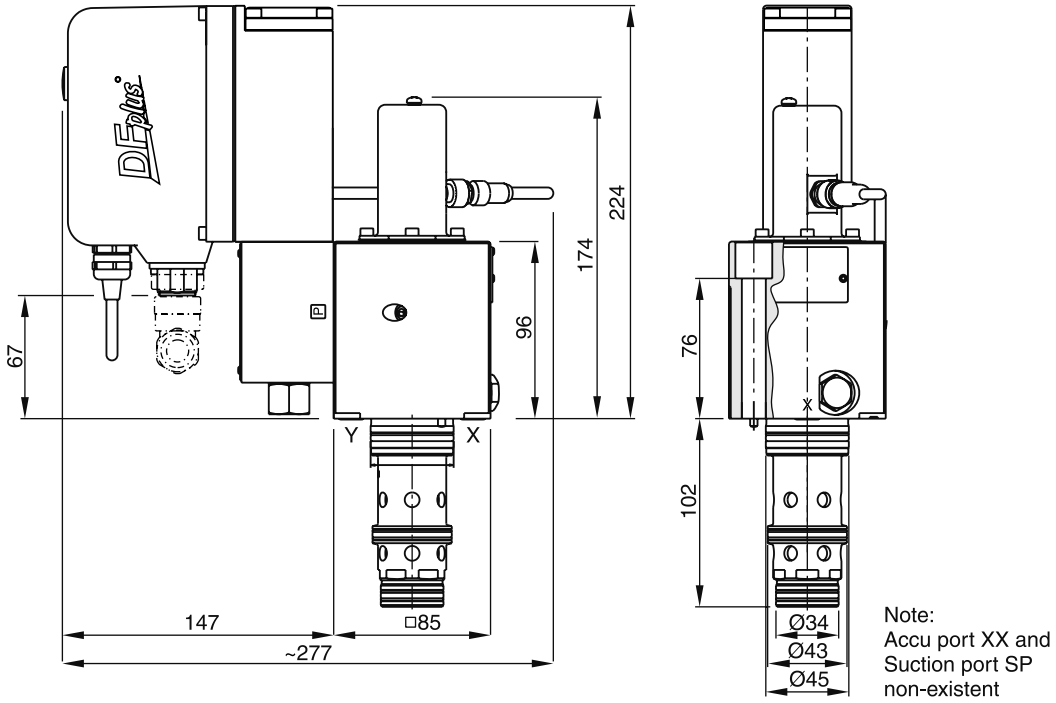
Please order plugs separately.

Angle female connector
(EMC conform)

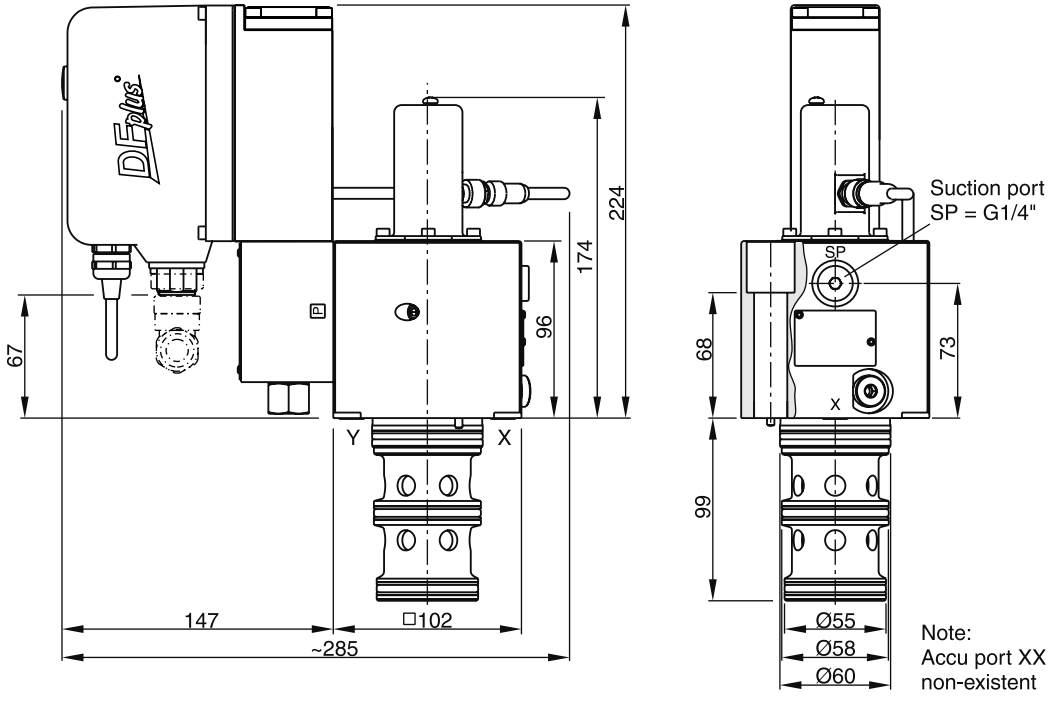


ID no. 5005160

NG25



NG32

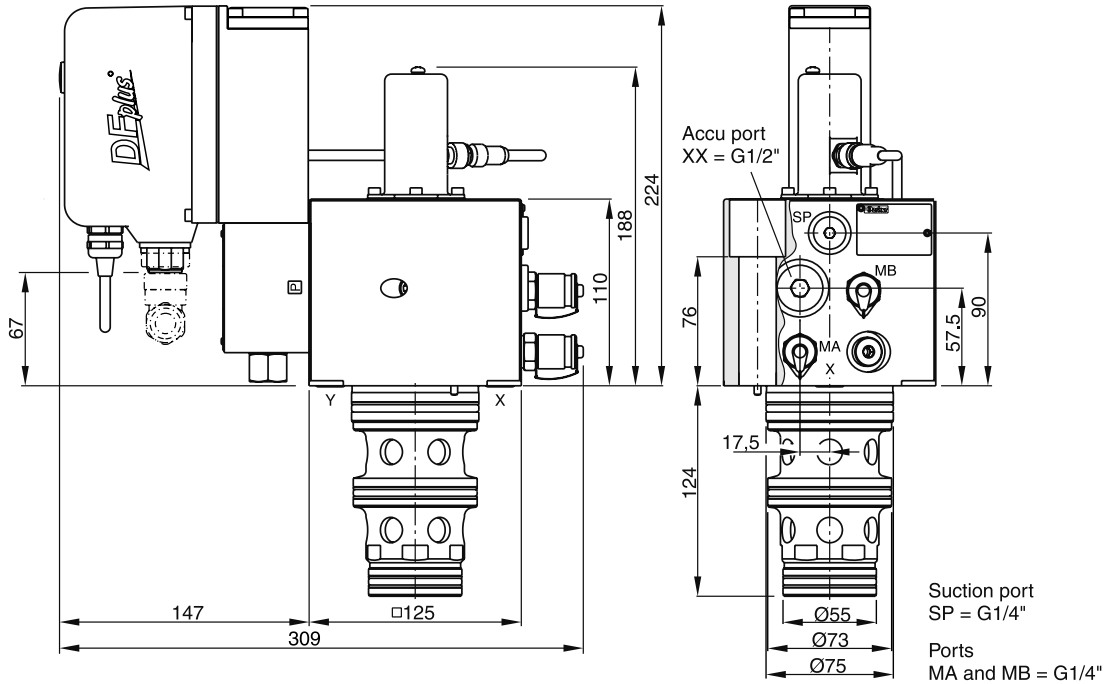


8

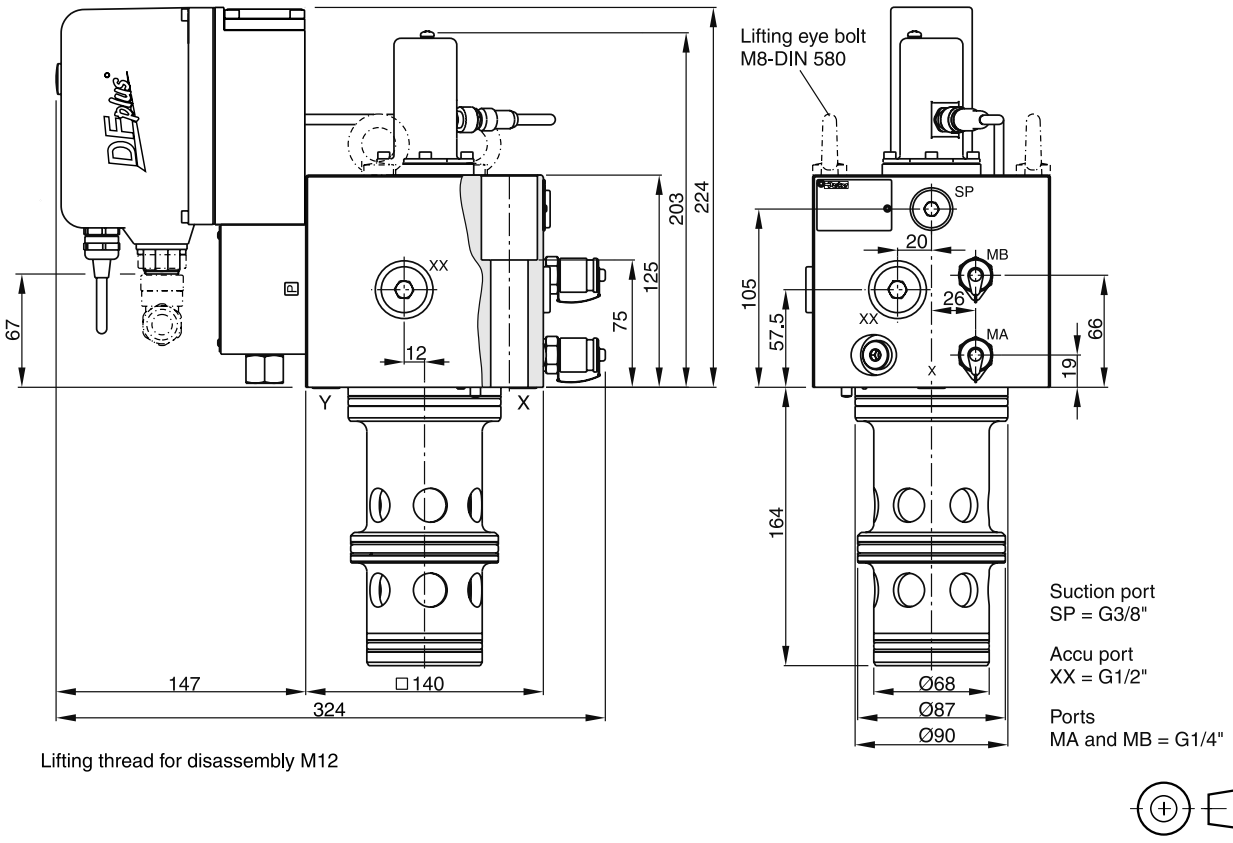
NG	Bolt kit -		Kit NBR	Kit FPM
25	BK504 4x M12x100 ISO 4762-12.9	108 Nm	SK-TPQ025EN30	SK-TPQ025EV30
32	BK529 4x M16x100 ISO 4762-12.9	264 Nm	SK-TPQ032EN30	SK-TPQ032EV30

TPQ UK.INDD CM 25.07.13

NG40



NG50

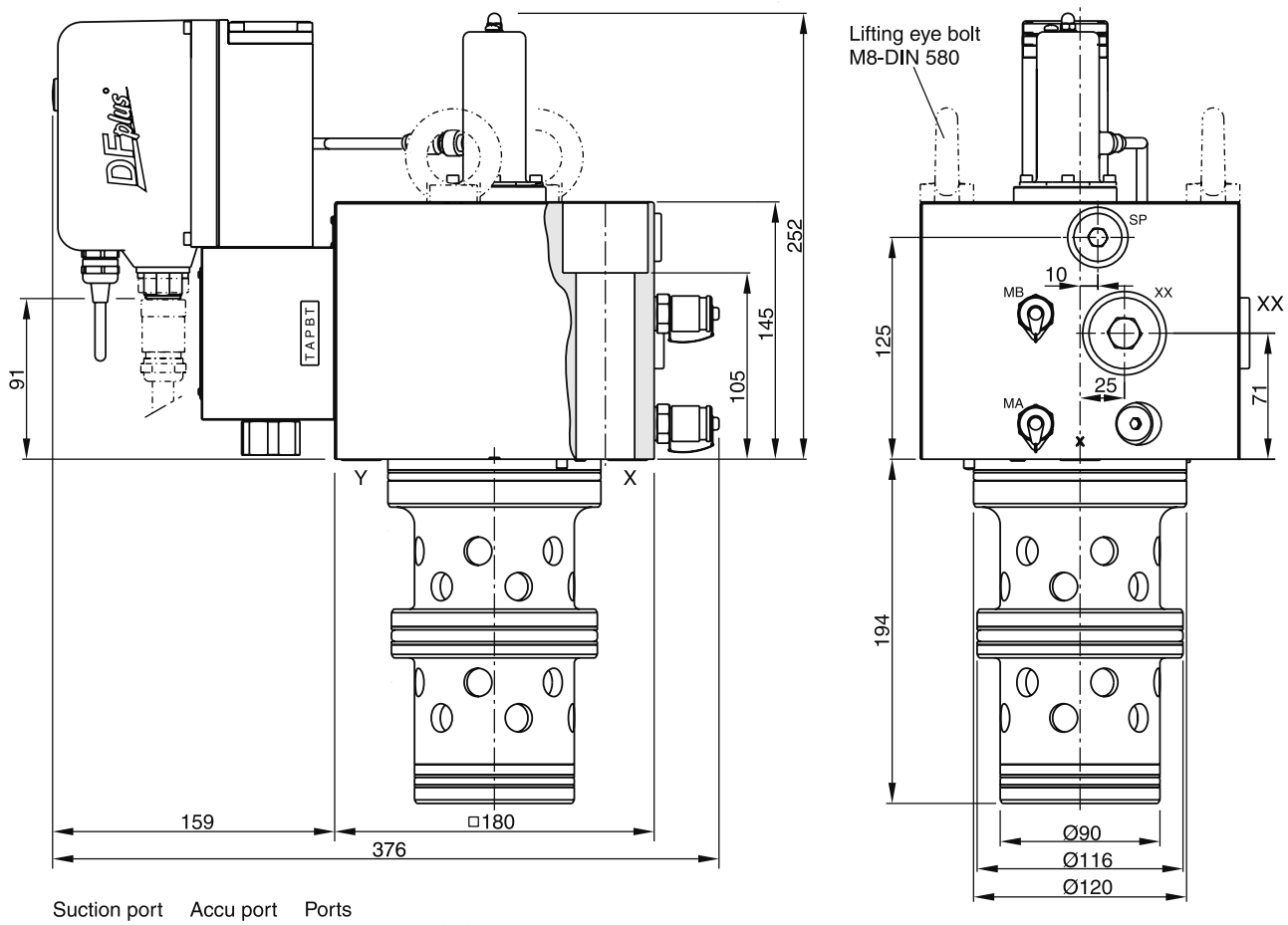


Lifting thread for disassembly M12

NG	Bolt kit -		Kit NBR	Kit FPM
40	BK513 4 x M20x110 ISO 4762-12.9	517 Nm	SK-TPQ040EN30	SK-TPQ040EV30
50	BK513 4 x M20x110 ISO 4762-12.9	517 Nm	SK-TPQ050EN30	SK-TPQ050EV30

TPQ UK.INDD CM 25.07.13

NG63

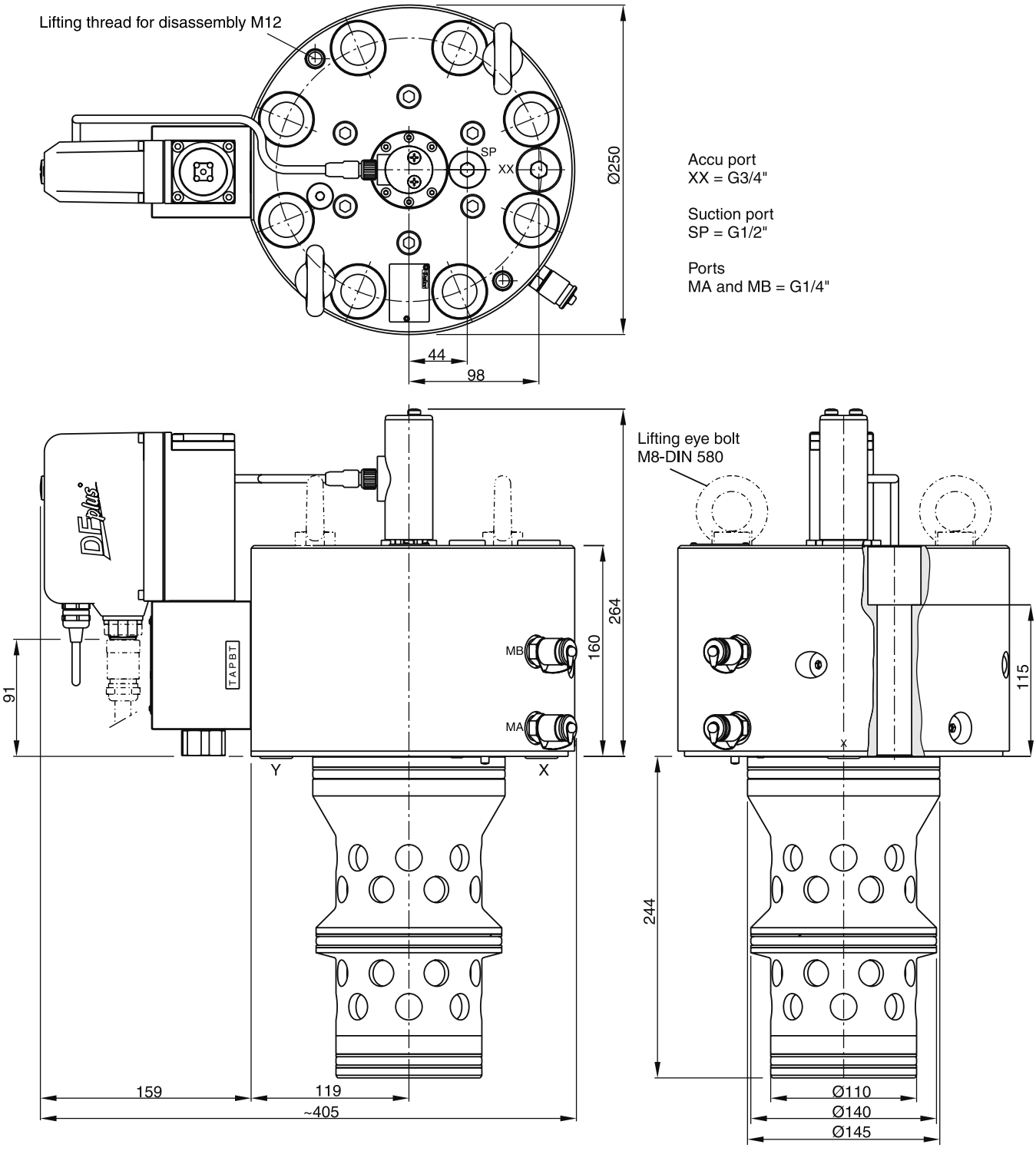


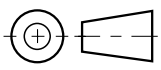
Suction port SP = G1/2"
Accu port XX = G1"
Ports MA and MB = G1/4"

Lifting thread for disassembly M12

NG	Bolt kit -		Kit NBR	Kit FPM
63	BK518 4x M30x160 ISO 4762-12.9	1775 Nm	SK-TPQ063EN30	SK-TPQ063EV30

NG80

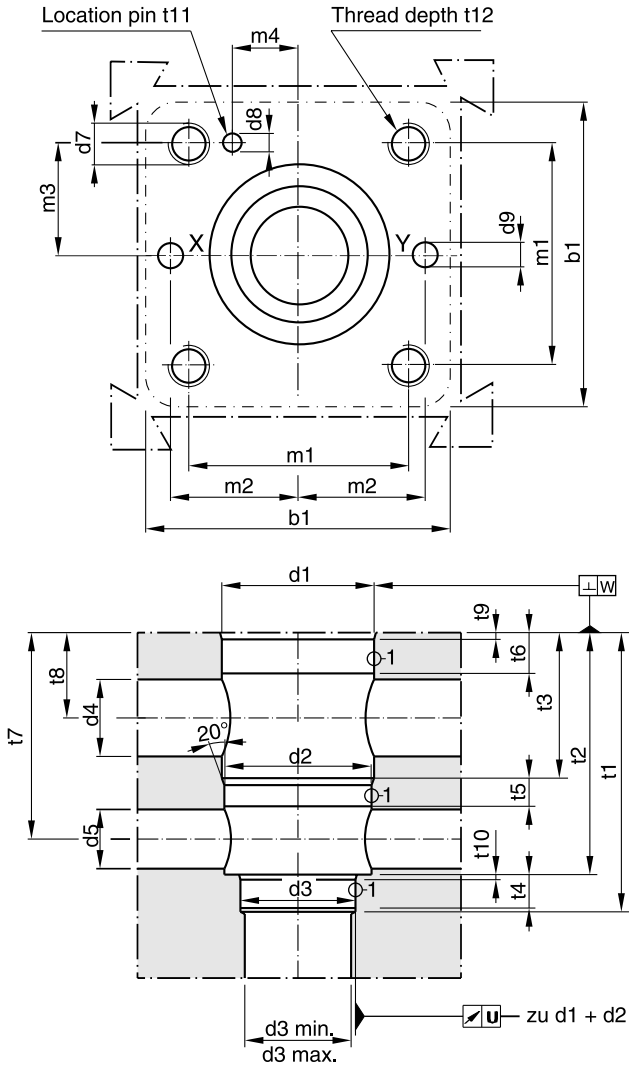




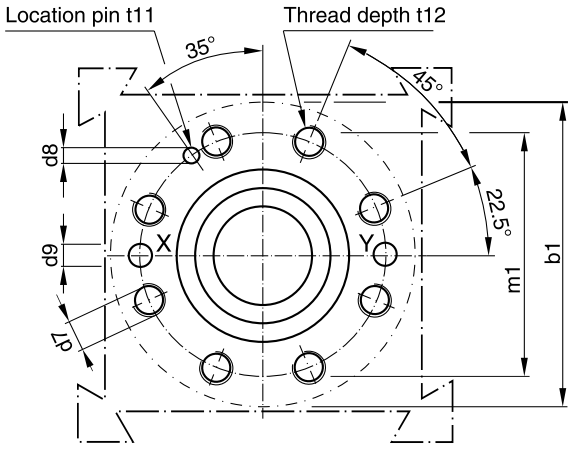
NG	Bolt kit -		Kit NBR	Kit FPM
80	BK530 8x M24x160 ISO 4762-12.9	517 Nm	SK-TPQ080EN30	SK-TPQ080EV30

TPQ UK.INDD CM 25.07.13

NG32 to NG63



NG80



Required surface finish:

$\sqrt{R_{max}25}, (1) = \sqrt{R_{max}8}$

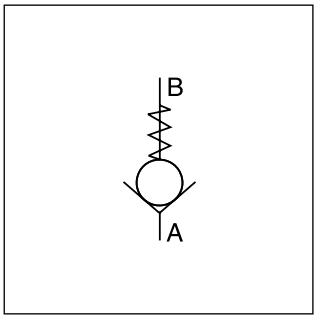
Size	b1	d1 H7	d2 H7	d3 H7	d3 min.	d3 max.	d4 max.	d5 max.	d7	d8 H13	d9
25	85	45	43	34	17	25	25	21	M 12	4	7.5
32	102	60	58	55	32	54	28	28	M 16	6	8
40	125	75	73	55	40	54	38	32	M 20	6	10
50	140	90	87	68	50	67	63	38	M 20	8	10
63	180	120	116	90	63	89	64	52	M 30	8	12
80	250	145	140	110	80	109	70	66	M 24	10	16

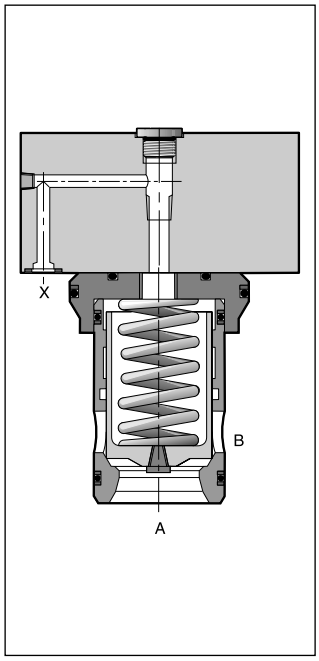
Size	m1 ±0.2	m2 ±0.2	m3 ±0.2	m4 ±0.2	$t1^{+3}_{+1}$	t2 ±0.2	t3 ±0.2	t4	t5	t6	t7 ±0.2	t8 ±0.2	t9	t10	t11	t12
25	58	33	29	16	103	$89^{+0.3}$	56	11.5	15	14.5	78	43.5	2.5x15°	2.5x15°	10	35
32	70	41	35	17	100	85	43	13.5	16	18	71	28.5	2.5x15°	2.5x15°	10	35
40	85	50	42.5	23	125	105	54	15	18	21	88	34	3x15°	3x15°	10	45
50	100	58	50	30	165	143	86	18	18	21	122	53	4x15°	3x15°	10	45
63	125	75	62.5	38	195	165	83.5	25	29.5	33	138.5	50	4x15°	4x15°	10	65
80	200	–	–	–	245	215	123	25	27	60	181	87	5x15°	5x15°	10	50

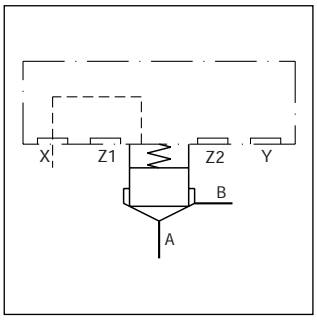
Check valves of the series C1DB consist of a slip-in valve, that is designed for a compact manifold block installation.

Features

- Cavity and mounting pattern according to ISO 7368
- 4 different springs
- 8 sizes NG16 to NG100







Ordering code

☐	—	C1DB	101	E	☐	/ 0	☐	99	00
Seal		Check valve	Cover	Slip-in valve	Nominal size		Design series	Closing spring	

Code	Seal
omit	**NBR**
V	FPM

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

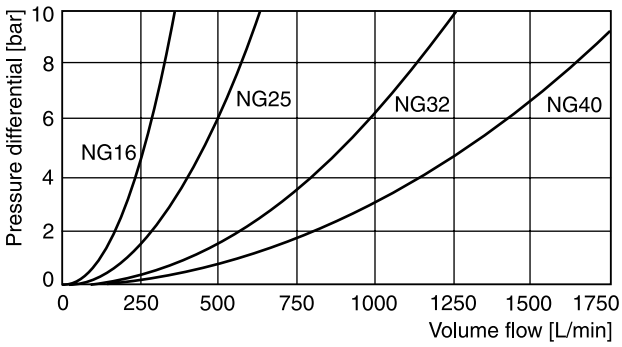
Code	Spring
L	0.1 bar
N	0.5 bar
S	**1.6 bar**
T	2.5 bar
U	4.0 bar

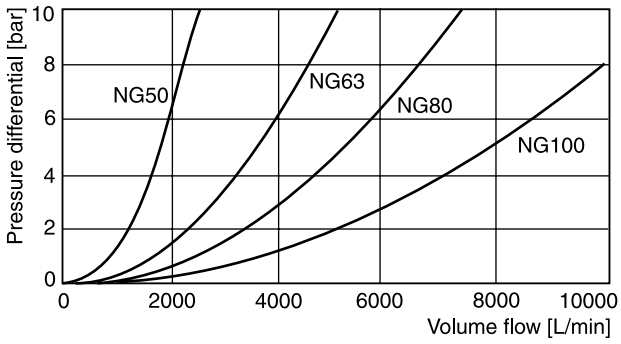
Bold letters =
Short-term availability

Technical data

Design			2 way cartridge valve, according to ISO 7368						
Actuation			Hydraulical						
Mounting position			unrestricted						
Environmental temperature		[°C]	-40 ... +60						
$MTTF_D$ value		[years]	150						
Nominal size			NG16	NG25	NG32	NG40	NG50	NG63	NG80	NG100
Weight		[kg]	1.2	2.5	3.9	7	11.4	21.8	45	74
Hydraulics									
Flow direction			See symbols						
Pressure medium			Hydraulic oil as per DIN 51 524 ... 536						
Viscosity	recommended	[cSt] / [mm²/s]	30 ... 80						
	permitted	[cSt] / [mm²/s]	20 ... 380						
Pressure fluid temperature		[°C]	-20 ... +60						
Permissible contamination			ISO 4406 (1999); 18/16/13						
Nominal pressure		[bar]	350						
Flow		[l/min]	250	450	900	1300	1800	3600	5250	8000
Opening pressure, spring		[bar]	L = 0.1; N = 0.5; S = 1.6; U = 4.0						

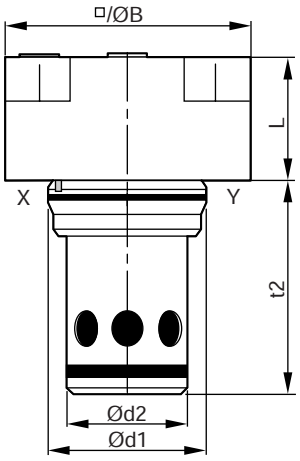
Performance curves





All characteristic curves measured with HLP46 at 50 °C.

Dimensions



NG	L	B	d1	d2	t2
16	36	65	32	25	56
25	45	85	45	34	72
32	50	102	60	45	85
40	60	125	75	55	105
50	70	140	90	68	122
63	85	180	120	90	155
80	105	Ø 250	145	110	205
100	120	Ø 300	180	135	245

8

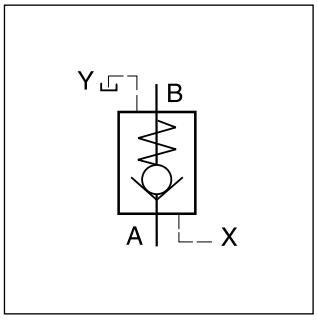
NG	Kit	ISO 4762-12.9	[Nm]	Kit NBR	Kit FPM	Orifice thread
16	BK441	4x M8x50	31.8	SK-CBE160	SK-CBE160V	1/16 NPT
25	BK391	4x M12x50	108	SK-CBE250	SK-CBE250V	1/16 NPT
32	BK415	4x M16x55	264	SK-CBE320	SK-CBE320V	1/16 NPT
40	BK416	4x M20x70	517	SK-CBE400	SK-CBE400V	1/8 NPT
50	BK417	4x M20x75	517	SK-CBE500	SK-CBE500V	1/8 NPT
63	BK418	4x M30x100	1775	SK-CBE630	SK-CBE630V	1/8 NPT
80	BK419	8x M24x120	890	SK-CBE630	SK-CBE630V	1/8 NPT
100	BK420	8x M30x140	1775	SK-CBE630	SK-CBE630V	1/8 NPT

Springs

Spring Type	Ordering Number							
	NG16	NG25	NG32	NG40	NG50	NG63	NG80	NG100
L (0.1 bar)	45051368	45051375	45051376	45051382	45051384	45051388	45051395	45051400
N (0.5 bar)	45051369	45051374	45051377	45051381	45051385	45051389	45051396	45051401
S (1.6 bar)	45051370	45051372	45051378	45051380	45051386	45051390	45051397	45051402
U (4.0 bar)	45051371	45051373	45051379	45051383	45051387	45051391	45051398	45051403

Hydraulically pilot operated check valves allow free flow from A to B. The counter-flow direction is blocked.

When pressure is applied to control port X, the ring chamber flow from B to A is released. The pilot control ratio is 6:1.

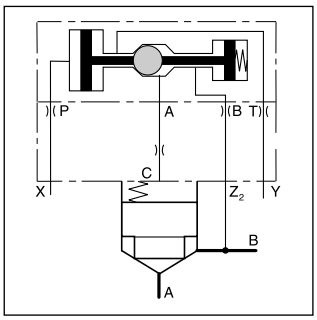


Function

When no pressure is applied to the X-port, the flow from B to A is blocked, because the pressure in B is also effective on top of the poppet.

Pressurizing the X-port relieves the area on top of the poppet to the drain port and allows flow from B to A.

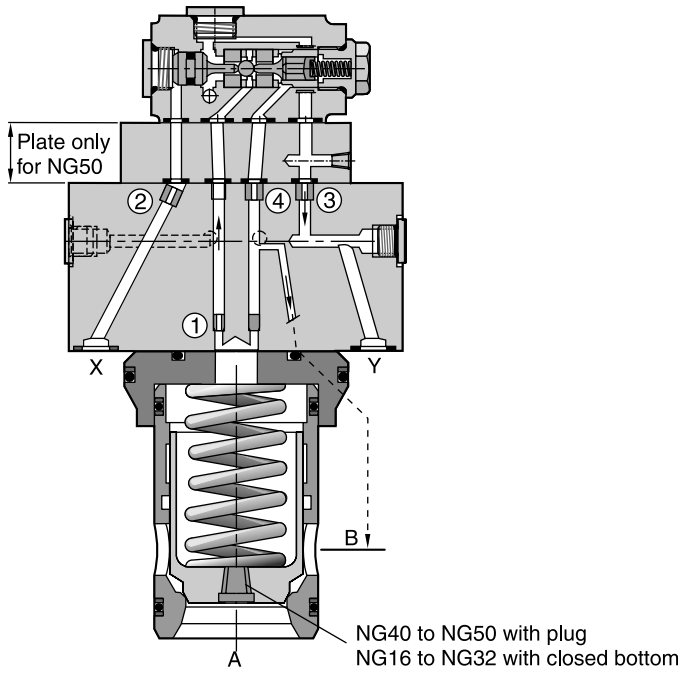
The seat design of the SVLB valve series provides leak-free separation of port A and B in the closed position.



Features

- Pilot operated check valve
- Cavity and mounting pattern acc. to ISO 7368
- Dampening poppet optional
- 5 sizes NG16 to NG50

8



Ordering code

	SVL	B	10		6	E			
Seal	Hydr. operated check valve	Slip-in mounting	Design style acc. to ISO 7368	Poppet type	Pilot control ratio 6:1	Slip-in cartridge valve	Valve size	Closing spring	Design series (not required for ordering)

Code	Seal
omit	**NBR**
V	FPM

Code	Poppet type
4	**04**
8 [1]	08

Code	Spring
N	0.5 bar
S	**1.6 bar**
T	2.5 bar
U	4.0 bar

Code	Size
16	NG16
25	**NG25**
32	**NG32**
40	NG40
50	NG50

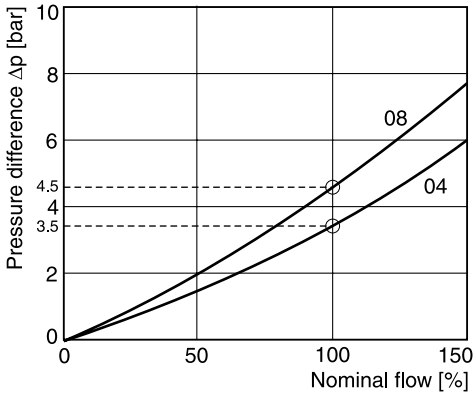
[1] With damping nose.

Bold letters =
Short-term availability

Technical data

General						
Nominal size		NG16	NG25	NG32	NG40	NG50
Interface		Slip-in mounting acc. ISO 7368				
Mounting position		unrestricted				
Ambient temperature	[°C]	-20...+80				
$MTTF_D$ value	[years]	75				
Weight	[kg]	2.3	3.2	4.6	7.8	12.0
Hydraulics						
Max. operating pressure	[bar]	350				
Nominal flow	[l/min]	250	450	900	1300	1800
Fluid		Hydraulic oil acc. to DIN 51524...51525				
Viscosity recommended	[cSt] / [mm²/s]	30...50				
Viscosity permitted	[cSt] / [mm²/s]	20...380				
Fluid temperature	[C°]	-20...+70				
Filtration		ISO 4406 (1999); 18/16/13				

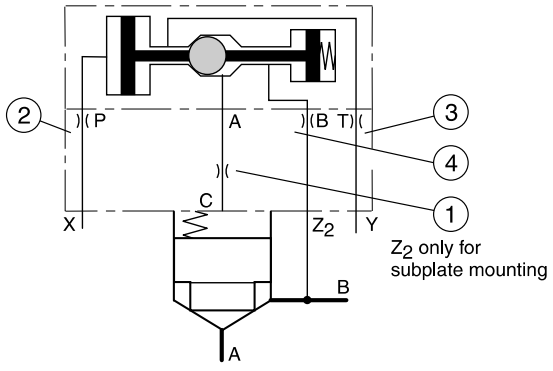
Δp/Q flow curve



Poppet type 04, 08, without spring.

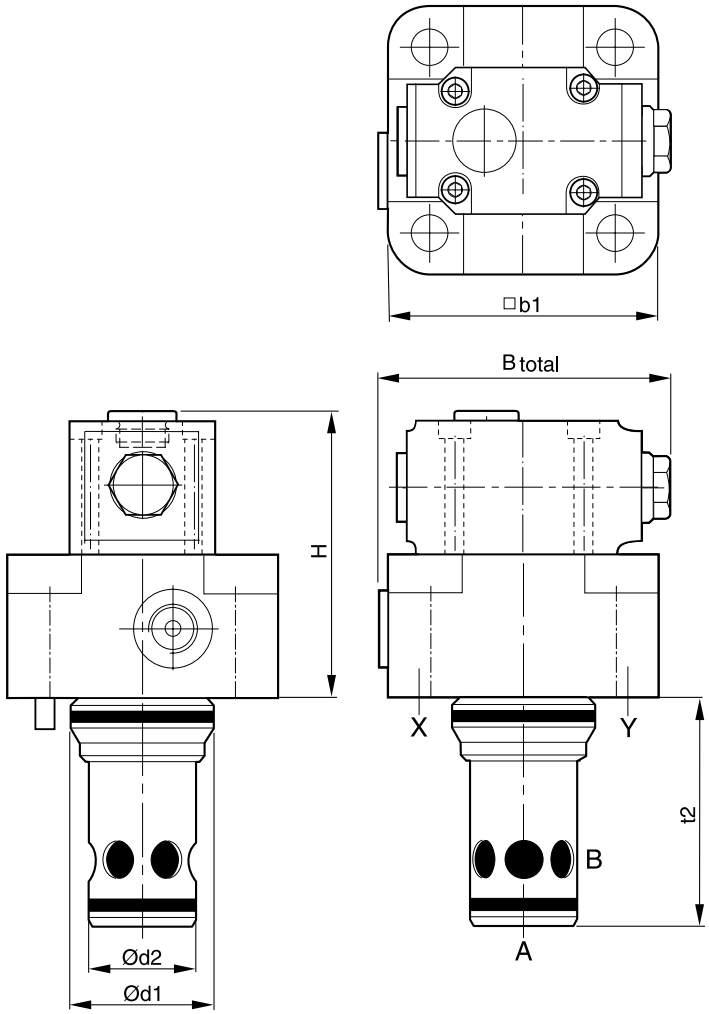
All characteristic curves measured with HLP46 at 50 °C.

Standard orifices



Pos.	E16	E25	E32	E40	E50
1	open (M5)	open (M5)	open (M5)	open (M5)	open (M6)
2	Ø1.2 (M5)	Ø1.2 (M6)	Ø1.2 (M6)	Ø1.2 (M6)	Ø1.2 (M8)
3	open (M5)	open (M6)	open (M6)	open (M6)	open (M8)
4	Ø1.0 (M5)	Ø1.2 (M5)	Ø1.3 (M5)	Ø1.5 (M6)	Ø2.0 (M6)

8



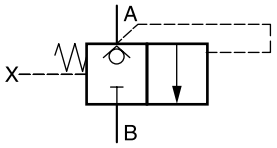
Size	16	25	32	40	50
H	84	88	93	103	138
b1	79*	85	102	125	140
$d1^{H7}$	32	45	60	75	90
$d2^{H7}$	25	34	45	55	68
$t2^{+0.1}$	56	72	85	105	122
Bges.	99	94	103	125	140

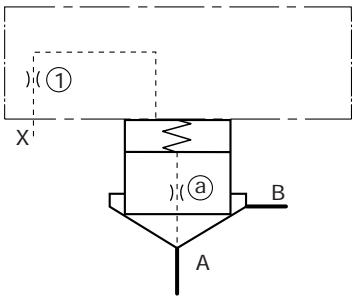
NG	Kit	ISO 4762-12.9	[Nm]	Kit NBR	Kit FPM
16	BK441	4x M8x50	31.8	SK-SVLB10E16	SK-SVLB10E16V
25	BK391	4x M12x50	108	SK-SVLB10E25	SK-SVLB10E25V
32	BK415	4x M16x55	264	SK-SVLB10E32	SK-SVLB10E32V
40	BK416	4x M20x70	517	SK-SVLB10E40	SK-SVLB10E40V
50	BK417	4x M20x75	517	SK-SVLB10E50	SK-SVLB10E50V

* Width 65 mm.

SVLB UK.INDD CM 24.07.13

2 way seat valve, flow A ⇒ B



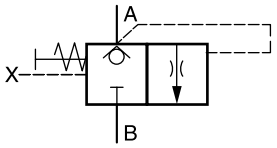


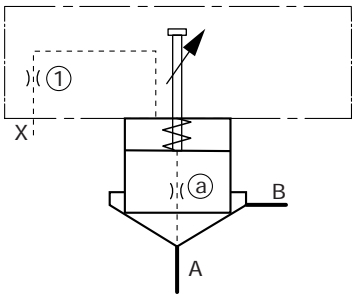
Description	Type							
	NG16	NG25	NG32	NG40	NG50	NG63	NG80	NG100
Cover [1]	C016AA*	C025AA*	C032AA*	C040AA*	C050AA*	C063AA*	C080AA*	C100AA*
Cover orifice ①	1/16xØ0.8	1/16xØ1.0	1/16xØ1.2	1/8xØ1.5	1/8xØ1.8	1/8xØ2.0	1/8xØ2.2	1/8xØ2.5
Cartridge [2]	CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*	CE080C01*	CE100C01*
Poppet orifice ⓐ	1/16xØ00							
Spring	1.6 bar, type S							
Bolt kit cover	BK414 4x M8x40	BK391 4x M12x50	BK415 4x M16x55	BK416 4x M20x70	BK417 4x M20x75	BK418 4x M30x100	BK419 8x M24x120	BK509 8x M30x130

Shown orifice Ø and springs are recommendations.
xxØ00 = closed bottom NG16 - NG50, plug NG63 - NG100
xxØ99 = open

[1] Complete type see ordering code C*A.
[2] Complete type see ordering code CE*.

2 way seat valve with stroke limiter, flow A ⇒ B



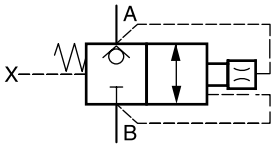


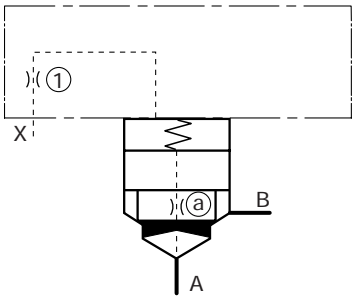
Description	Type							
	NG16	NG25	NG32	NG40	NG50	NG63	NG80	NG100
Cover [1]	C016B**	C025B**	C032B**	C040B**	C050B**	C063B**	C080B**	C100B**
Cover orifice ①	M6xØ0.8	M6xØ1.0	1/16xØ1.2	1/16xØ1.5	1/16xØ1.8	1/8xØ2.0	1/8xØ2.2	1/8xØ2.5
Cartridge [2]	CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*	CE080C01*	CE100C01*
Poppet orifice ⓐ	1/16xØ00							
Spring	1.6 bar, type S							
Bolt kit cover	BK414 4x M8x40	BK391 4x M12x50	BK415 4x M16x55	BK416 4x M20x70	BK417 4x M20x75	BK418 4x M30x100	BK419 8x M24x120	BK509 8x M30x130

Shown orifice Ø and springs are recommendations.
xxØ00 = closed bottom NG16 - NG50, plug NG63 - NG100
xxØ99 = open

[1] Complete type see ordering code C*B.
[2] Complete type see ordering code CE*.

2 way functions with dampening poppet, flow A ⇔ B





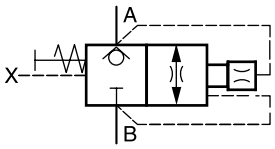
Description	Type							
	NG16	NG25	NG32	NG40	NG50	NG63	NG80	NG100
Cover [1]	C016AA*	C025B*	C032AA*	C040AA*	C050AA*	C063AA*	C080AA*	C100AA*
Cover orifice ①	1/16xØ0.8	1/16xØ1.0	1/16xØ1.2	1/8xØ1.5	1/8xØ1.8	1/8xØ2.0	1/8xØ2.2	1/8xØ2.5
Cartridge [2]	CE016C08*	CE025C08*	CE032C08*	CE040C08*	CE050C08*	CE063C08*	CE080C08*	CE100C08*
Poppet orifice ⓐ	1/16xØ00							
Spring	1.6 bar, type S							
Bolt kit cover	BK414 4x M8x40	BK391 4x M12x50	BK415 4x M16x55	BK416 4x M20x70	BK417 4x M20x75	BK418 4x M30x100	BK419 8x M24x120	BK509 8x M30x130

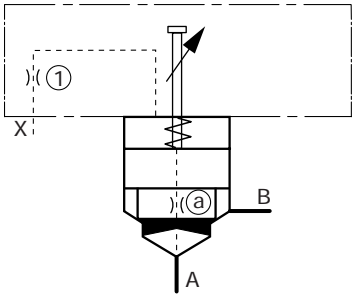
Shown orifice Ø and springs are recommendations.
xxØ00 = plug
xxØ99 = open

[1] Complete type see ordering code C*A.
[2] Complete type see ordering code CE*.

8

2 way functions with stroke limiter and dampening poppet, flow A ⇔ B



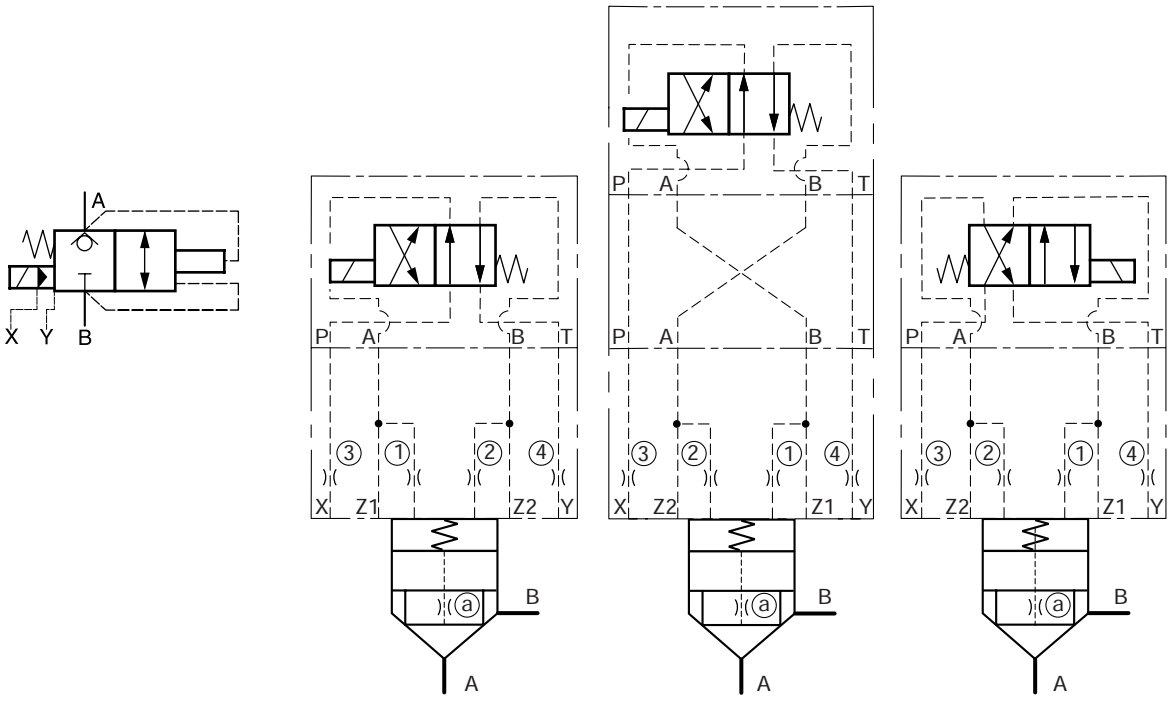


Description	Type							
	NG16	NG25	NG32	NG40	NG50	NG63	NG80	NG100
Cover [1]	C016B*	C025B*	C032B*	C040B*	C050B*	C063B*	C080B*	C100B*
Cover orifice ①	M6xØ0.8	M6xØ1.0	1/16xØ1.2	1/16xØ1.5	1/16xØ1.8	1/8xØ2.0	1/8xØ2.2	1/8xØ2.5
Cartridge [2]	CE016C08*	CE025C08*	CE032C08*	CE040C08*	CE050C08*	CE063C08*	CE080C08*	CE100C08*
Poppet orifice ⓐ	1/16xØ00							
Spring	1.6 bar, type S							
Bolt kit cover	BK414 4x M8x40	BK391 4x M12x50	BK415 4x M16x55	BK416 4x M20x70	BK417 4x M20x75	BK418 4x M30x100	BK419 8x M24x120	BK509 8x M30x130

Shown orifice Ø and springs are recommendations.
xxØ00 = plug
xxØ99 = open

[1] Complete type see ordering code C*B.
[2] Complete type see ordering code CE*.

2 way seat valve with pilot normally closed, flow A ⇔ B



NG16 - 40 with pilot NG06

NG50 - 63 with pilot NG06

NG50 - 100 with pilot NG10

8

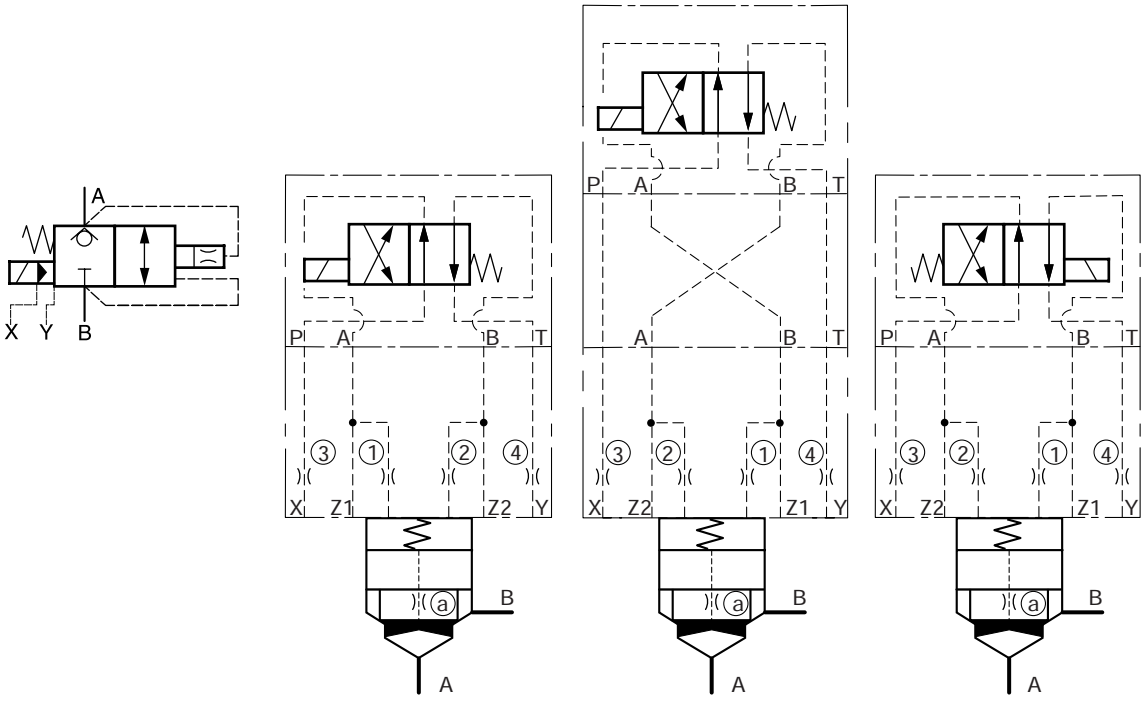
Description	Type									
	Pilot NG06						Pilot NG10			
	NG16	NG25	NG32	NG40	NG50	NG63	NG50	NG63	NG80	NG100
4/2-DC valve [1]	D1VW20B*						D3W20H*			
Adaptor plate [2]	without				PADA1007/A-B/B-A		without			
Cover [3]	C016CA*	C025CA*	C032CA*	C040CA*	C050CA*	C063CA*	C050CA*	C063CA*	C080CA*	C100CA*
Cover orifice ①	M5xØ0.8	M5xØ1.0	M5xØ1.2	M5xØ1.5	M6xØ1.8	M6xØ2.0	M6xØ1.8	M6xØ2.0	1/16xØ2.2	1/16xØ2.5
Cover orifice ②	M5xØ00				M6xØ00				1/16xØ00	
Cover orifice ③	M5xØ1.0	M6xØ1.2	M6xØ1.5	M6xØ1.8	M8xØ2.0	M8xØ2.2	M8xØ2.0	M8xØ2.2	M10x1xØ2.5	M10x1xØ3.0
Cover orifice ④	M5xØ99	M6xØ99			M8xØ99C				M10x1xØ99	
Cartridge [4]	CE016C04*	CE025C04*	CE032C04*	CE040C04*	CE050C04*	CE063C04*	CE050C04*	CE063C04*	CE080C04*	CE100C04*
Poppet orifice ⓐ	1/16NPTxØ00									
Spring	1.6 bar, type S									
Bolt kit cover	BK414 4x M8x40	BK391 4x M12x50	BK415 4x M16x55	BK416 4x M20x70	BK417 4x M20x75	BK418 4x M30x100	BK419 8x M24x120	BK509 8x M30x130	BK419 8x M24x120	BK420 8x M30x140
Bolt kit pilot	BK375 4x M5x30						BK385 4x M6x40			

Shown orifice Ø and springs are recommendations.
xxØ00 = closed bottom NG16 - NG50, plug NG63 - NG100
xxØ99 = open

[1] Complete type see chapter "Directional Control Valves", series D1VW, D3W.
[2] NG10-NG06 inclusive O-rings and mounting bolts.
[3] Complete type see ordering code C*C.
[4] Complete type see ordering code CE*.

Adaptor plates see chapter 12.

2 way seat valve with pilot and dampening poppet, normally closed, flow A ⇔ B



NG16 - 40 with pilot NG06

NG50 - 63 with pilot NG06

NG50 - 100 with pilot NG10

8

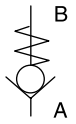
Description	Type									
	Pilot NG06						Pilot NG10			
	NG16	NG25	NG32	NG40	NG50	NG63	NG50	NG63	NG80	NG100
4/2-DC valve [1]	D1VW20B*						D3W20H*			
Adaptor plate [2]	without				PADA1007/A-B/B-A		without			
Cover [3]	C016CA*	C025CA*	C032CA*	C040CA*	C050CA*	C063CA*	C050CA*	C063CA*	C080CA*	C100CA*
Cover orifice ①	M5xØ0.8	M5xØ1.0	M5xØ1.2	M5xØ1.5	M6xØ1.8	M6xØ2.0	M6xØ1.8	M6xØ2.0	1/16xØ2.2	1/16xØ2.5
Cover orifice ②	M5xØ00				M6xØ00				1/16xØ00	
Cover orifice ③	M5xØ1.0	M6xØ1.2	M6xØ1.5	M6xØ1.8	M8xØ2.0	M8xØ2.2	M8xØ2.0	M8xØ2.2	M10x1xØ2.5	M10x1xØ3.0
Cover orifice ④	M5xØ99	M6xØ99			M8xØ99C				M10x1xØ99	
Cartridge [4]	CE016C08*	CE025C08*	CE032C08*	CE040C08*	CE050C08*	CE063C08*	CE050C08*	CE063C08*	CE080C08*	CE100C08*
Poppet orifice ⓐ	1/16NPTxØ00									
Spring	1.6 bar, type S									
Bolt kit cover	BK414 4x M8x40	BK391 4x M12x50	BK415 4x M16x55	BK416 4x M20x70	BK417 4x M20x75	BK418 4x M30x100	BK419 8x M24x120	BK509 8x M30x130	BK419 8x M24x120	BK420 8x M30x140
Bolt kit pilot	BK375 4x M5x30						BK385 4x M6x40			

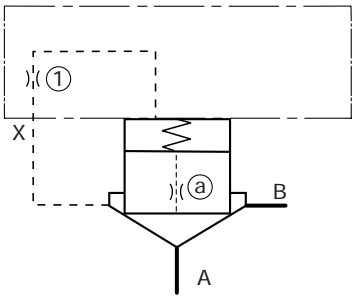
Shown orifice Ø and springs are recommendations.
xxØ00 = plug
xxØ99 = open

[1] Complete type see chapter "Directional Control Valves", series D1VW, D3W.
[2] NG10-NG06 inclusive O-rings and mounting bolts.
[3] Complete type see ordering code C*C.
[4] Complete type see ordering code CE*.

Adaptor plates see chapter 12.

Check valve, flow A ⇒ B





Description	Type							
	NG16	NG25	NG32	NG40	NG50	NG63	NG80	NG100
Cover [1]	C016AA*	C025AA*	C032AA*	C040AA*	C050AA*	C063AA*	C080AA*	C100AA*
Cover orifice ①	M5xØ99				M6xØ99		1/16xØ99	
Cartridge [2]	CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*	CE080C01*	CE100C01*
Poppet orifice ⓐ	1/16NPTxØ00							
Spring	1.6 bar, type S							
Bolt kit cover	BK414 4x M8x40	BK391 4x M12x50	BK415 4x M16x55	BK416 4x M20x70	BK417 4x M20x75	BK418 4x M30x100	BK419 8x M24x120	BK509 8x M30x130

Shown orifice Ø and springs are recommendations.
xxØ00 = closed bottom NG16 - NG50, plug NG63 - NG100
xxØ99 = open

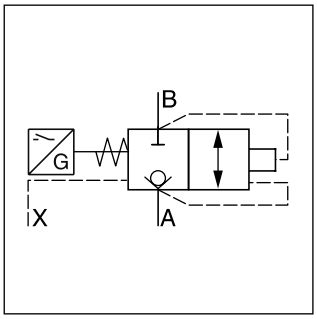
[1] Complete type see ordering code C*A.
[2] Complete type see ordering code CE*.

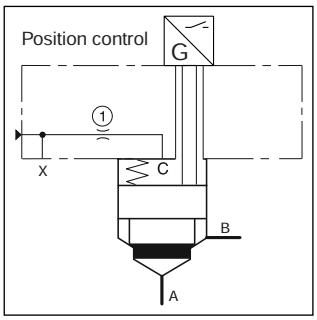
The 2/2 way seat valves series C10 D*C are equipped with an inductive switch to monitor the closed position.

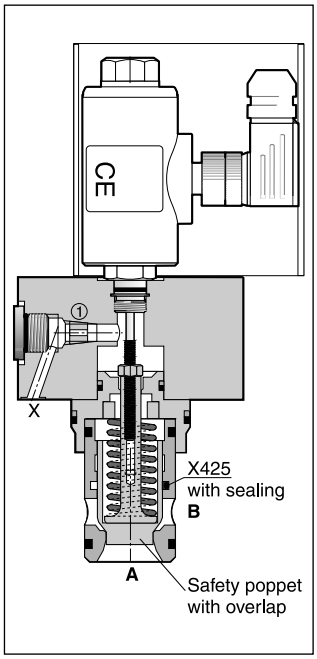
The poppet has a 60/40 area ratio (AA = 0.6 AC, AB = 0.4 AC) and is capable for flow in both directions.

The safety overlap of the poppet avoids opening of the valve before the signal of the inductive switch has changed.

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







C10 DEC 101 E25

Features

- German trade association certificate, No. 00 077 for NG16 to NG63 with cover 101
- Cover to mount a directional control valve (on the side) for cover 123
- Cavity and mounting pattern acc. to ISO 7368
- Monitored closed position
- Inductive switch CE conform
- Optional poppet sealing
- 8 sizes NG16 up to NG100

Ordering code

	C	10	D		C		E		/ 0						00	
											1	2	3	4		
Seal	2/2 way valve	Poppet shape	Hydraulically operated	Design series	Inductive monitoring [1]	Cover	Slip-in cartridge	Nominal size	Cavity and mounting pattern DIN ISO 7368	Spring			Orifice			Poppet seal

Code	Seal
omit	NBR
V	FPM

Code	Design Series
Cover 101	
E	NG16-NG63
G	NG80-NG100
Cover 123	
F	NG16-NG100

Code	Cover
101	without pilot valve interface
123 [2]	with pilot valve interface

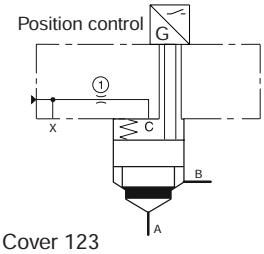
Code	Nominal size
16	NG16
25	NG25
32	NG32
40	NG40
50	NG50
63	NG63
80	NG80
100	NG100

Code	Spring
L	Opening pressure 0.1 bar
N	Opening pressure 0.5 bar
S	Opening pressure 1.6 bar
U	Opening pressure 4.0 bar

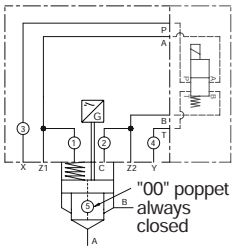
Code	Orifice
00	Plug
99	Without orifice, open

Code	Poppet seal
omit	—
X425	Only with spring code S and U

Cover 101



Cover 123



◯ Orifices (see 'Accessories')

[1] German trade association certificate 00 077 only for NG16 to NG63 with cover 101.

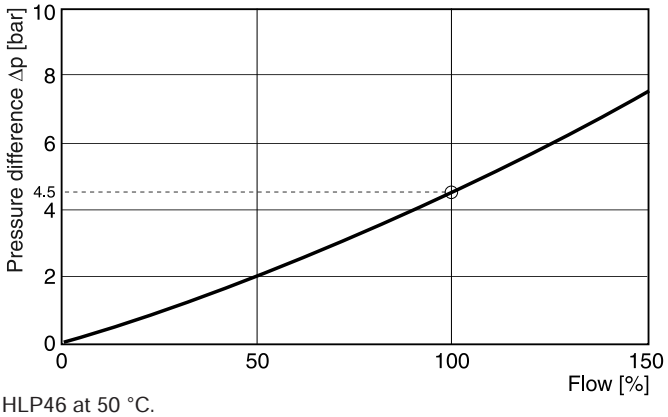
[2] The DC valve is not included in the delivery.

Technical data

General									
Size			NG16	NG25	NG32	NG40	NG50	NG63	NG80	NG100
Interface			2 way slip-in cartridge valves ISO 7368							
Mounting position			unrestricted							
Operation			Hydraulic							
Ambient temperature		[C°]	-20...+60							
$MTTF_D$ value		[years]	150							
Weight		[kg]	1.5	2.7	4.3	7.4	12	23	53	89
Hydraulic										
Max. operating pressure		[bar]	350, connection A, B, X							
Nominal flow Δp 5 bar		[l/min]	230	400	800	1250	1625	3400	5000	7500
Fluid			Hydraulic oil according to DIN 51524...51525							
Fluid temperature,	recommended	[C°]	+30...+50							
	permitted	[C°]	-20...+60							
Viscosity	recommended	[cSt] / [mm²/s]	30...80							
	permitted	[cSt] / [mm²/s]	20...380							
Filtration			ISO 4406 (1999); 18/16/13							
Control volume at max. stroke		[cm³]	2.03	6.45	12.21	20.32	39.40	94.56	950	1300
Control surface (surface C = 100 %) A/B		[%]	approx. 60 / 40 related on surface C							
Opening pressure										
	flow direction B—>A	[bar]	Spring: L = 0.25; N = 1.25; S = 4.0; U = 10.0							
	flow direction A—>B	[bar]	Spring: L = 0.16; N = 0.85; S = 2.7; U = 6.6							
Electrical (Inductive switch)			See position control							

Δp/Q performance curve

(without spring and poppet seal, C-chamber unloaded)



Characteristic curve measured with HLP46 at 50 °C.

Accessories

Orifice thread Ø

Cover	Orifice	NG16	NG25	NG32	NG40	NG50	NG63	NG80	NG100
101 [1)]	Nr.: 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	1/8
123 [1)]	No: 1, 2, 3, 4	M5	M6	M6	M6	M8	M8	1/8	1/8

Recommended orifice diameter

Cover	Orifice	NG16	NG25	NG32	NG40	NG50	NG63	NG80	NG100
101	①	Ø 0.8	Ø 1.2	Ø 1.5	Ø 2.0	Ø 2.5	Ø 3.0	Ø 3.0	Ø 3.0

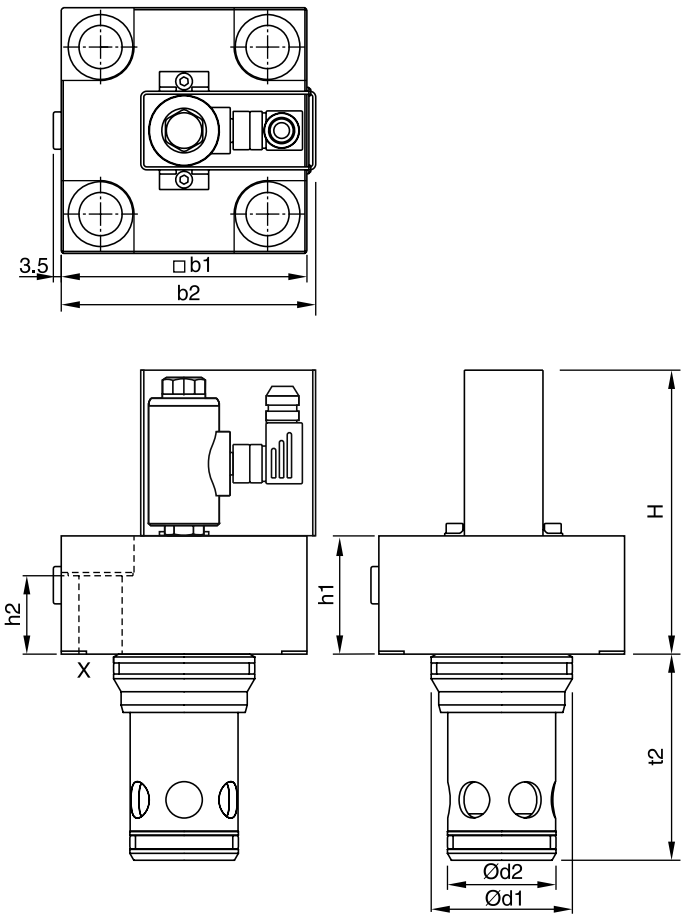
Depending on function, plugs must be used (code00).

[1)] Orifice thread in mm, thread in NPT.

C10 UK.INDD CM 28.08.13

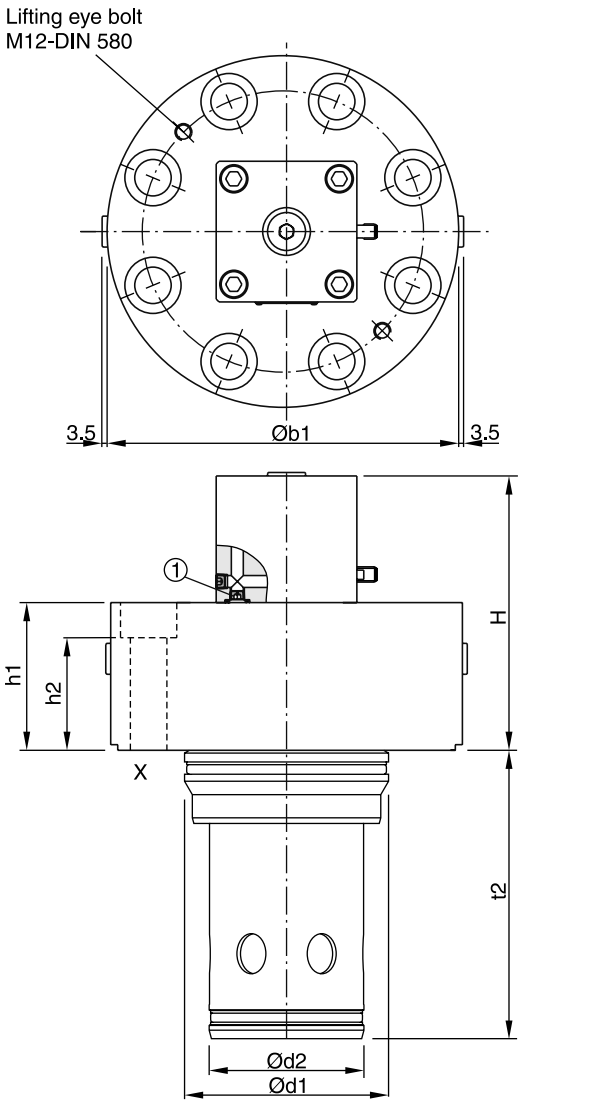
Dimensions C10D*C101

NG16 to NG63 with plug M12x1 [1)]



Cavity and mounting pattern acc. to ISO 7368

NG80 to NG100 without plug M12x1 [2)]



NG	H	h	h2	b1	d1	d2	t +0.1
16	130	36	28	65	32	25	56
25	135	45	32.5	85	45	34	72
32	140	50	32	102	60	45	85
40	150	60	40	125	75	55	105
50	160	70	45	140	90	68	122
63	175	85	55	180	120	90	155
80	195	105	80	250	145	110	205
100	210	120	89	300	180	135	245

Seal and bolt kits

Nominal size		16	25	32	40	50	63	80	100
Seal kit	FPM	SK-C10D-C10E160V	SK-C10D-C10E250V	SK-C10D-C10E320V	SK-C10D-C10E400V	SK-C10D-C10E500V	SK-C10D-C10E630V	SK-C10D-C10E800V	SK-C10D-C10E1000V
	NBR	SK-C10D-C10E160	SK-C10D-C10E250	SK-C10D-C10E320	SK-C10D-C10E400	SK-C10D-C10E500	SK-C10D-C10E630	SK-C10D-C10E800	SK-C10D-C10E1000
Bolt kit [ISO 4762-12.9]		BK414 4x M8x40	BK391 4x M12x50	BK415 4x M16x55	BK416 4x M20x70	BK527 4x M20x80	BK418 4x M30x100	BK419 8x M24x120	BK420 8x M30x140
Recommended torque [Nm]		31.8	108	264	517	517	1775	890	1775

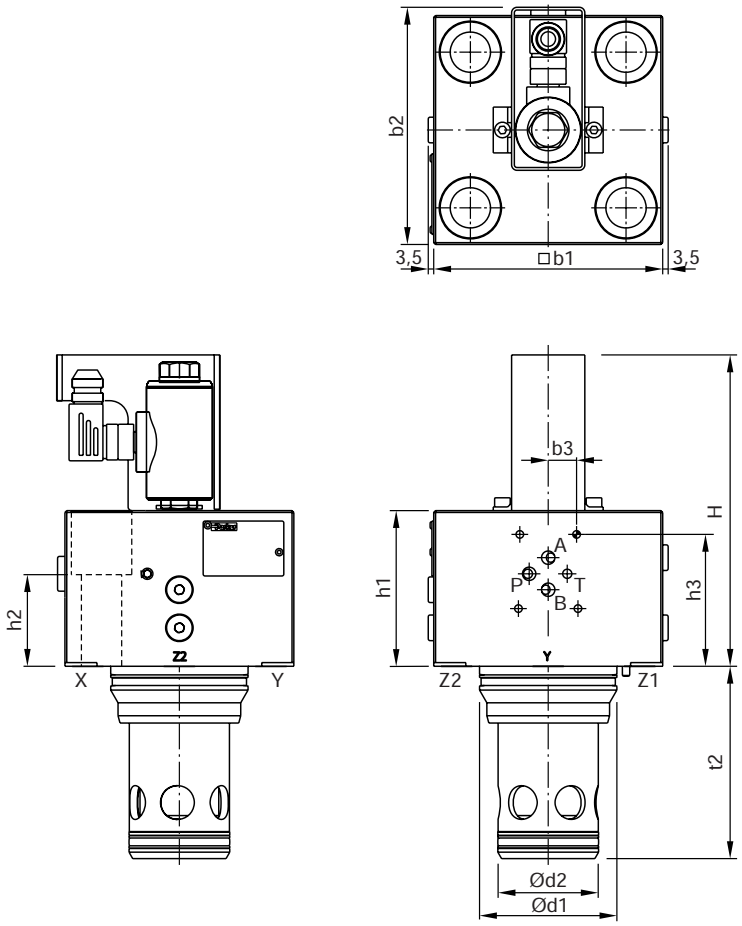
Attention!
The switch may only be adjusted by the valve manufacturer. The exchange of individual modules is not permitted.

[1)] Delivery includes plug M12x1 (order no.: 5004109).
[2)] Please order plug M12x1 separately.

C10 UK.INDD CM 28.08.13

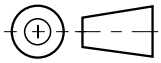
Dimensions C10D*C123

NG16 to NG50 with plug M12x1. [1)]
Pilot valve interface NG06.



Cavity and mounting pattern acc. to ISO 7368

NG	H	h1	h2	h3	b1	b2	b3	d1	d2	t2
16	170	85	76	72	65	99.5	15.5	31	25	56
25	170	85	70	72	85	109.5	15.5	45	34	72
32	170	85	56	72	102	118	15.5	60	45	85
40	170	85	50	72	125	130	15.5	75	55	105
50	170	85	60	72	140	137	15.5	90	68	122



Seal and bolt kits

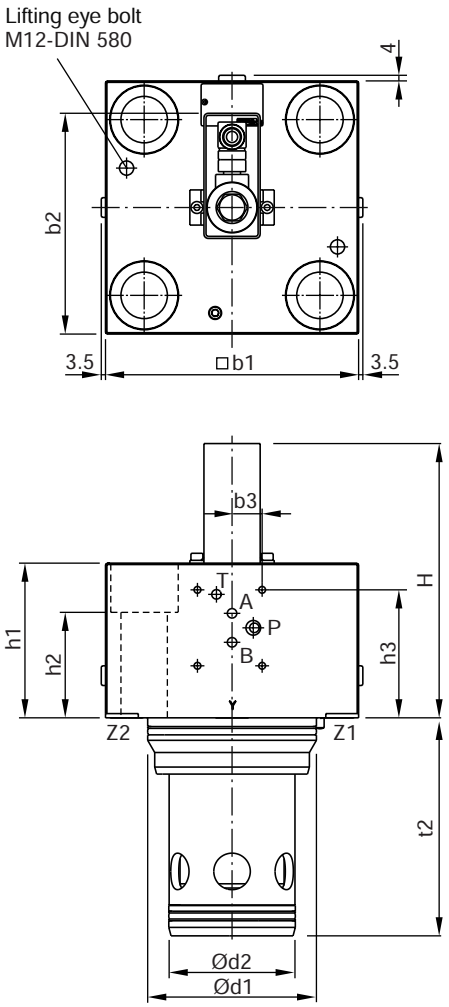
Nominal size		16	25	32	40	50
Seal kit	FPM	SK-C10D-C12E160V	SK-C10D-C12E250V	SK-C10D-C12E320V	SK-C10D-C12E400V	SK-C10D-C12E500V
	NBR	SK-C10D-C12E160N	SK-C10D-C12E250N	SK-C10D-C12E320N	SK-C10D-C12E400N	SK-C10D-C12E500N
Bolt kit [ISO 4762-12.9]		BK533 4x M8x90	BK532 4x M12x90	BK526 4x M16x80	BK527 4x M20x80	BK534 4x M20x90
Recommended torque ± 15 %	[Nm]	42,2	144	354	692	692

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

[1)] Delivery includes plug M12x1 (order no.: 5004109).

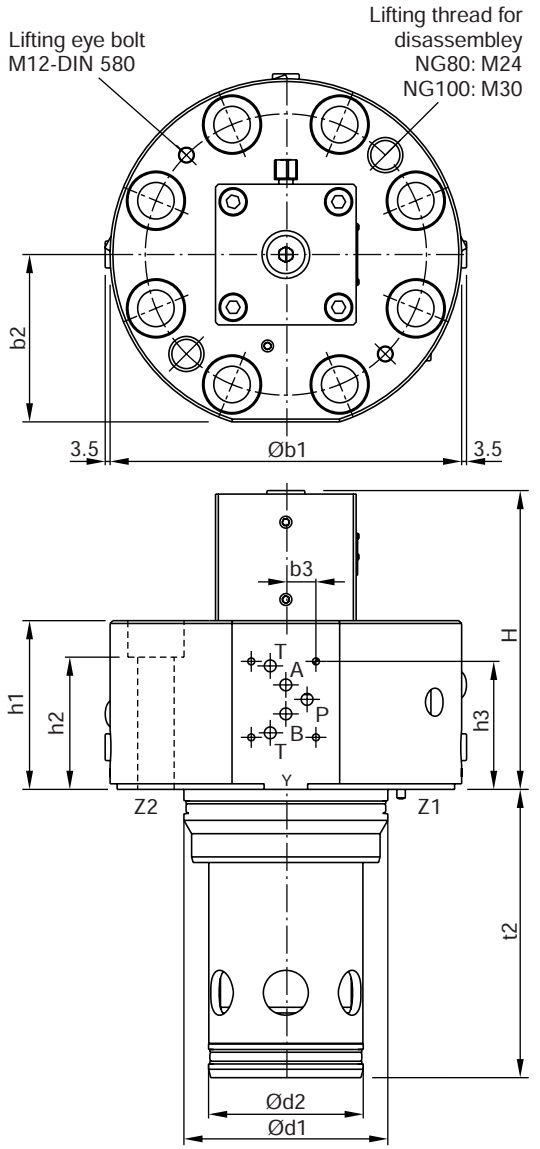
Dimensions C10D*C123

NG63 with plug M12x1. [1)]
Pilot valve interface NG10.



Cavity and mounting pattern acc. to ISO 7368

NG80 to NG100 without plug M12x1 [2)]
Pilot valve interface NG10.



NG	H	h1	h2	h3	b1	b2	b3	d1	d2	t2
63	195	110	75	91	180	157	21.5	120	90	155
80	212.5	120	94	91	250	119	21.5	145	110	205
100	212.5	120	85	91	300	144	21.5	180	135	245

Seal and bolt kits

Nominal size		63	80	100
Seal kit	FPM	SK-C10D-C12E630V	SK-C10D-C12E800V	SK-C10D-C12E1000V
	NBR	SK-C10D-C12E630N	SK-C10D-C12E800N	SK-C10D-C12E1000N
Bolt kit [ISO 4762-12.9]		BK536 4x M30x120	BK535 8x M24x130	BK517 8x M30x150
Recommended torque ± 15 %	[Nm]	2380	1190	2390

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

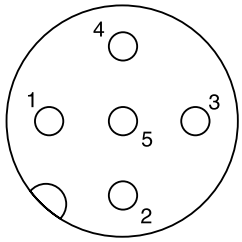
[1)] Delivery includes plug M12x1 (order no.: 5004109).
[2)] Please order plug M12x1 separately.

C10 UK.INDD CM 28.08.13

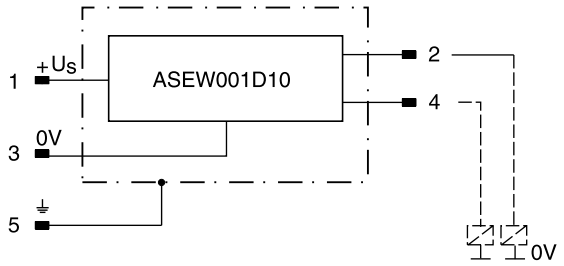
Electrical characteristics of position control as per IEC 61076-2-101 (M12x1), NG16 to NG63

Protection class		IP 65 in accordance with EN 60529 (with correctly mounted plug-in connector)
Ambient temperature	[°C]	0...+50
Supply voltage U_S / ripple	[V]	18...42 / 10 %
Current consumption without load	[mA]	≤ 30
Max. output current per channel, ohmic	[mA]	400
Min. output load per channel, ohmic	[kOhm]	100
Max. output drop at 0.2 A	[V]	≤ 1.1
Max. output drop at 0.4 A	[V]	≤ 1.6
EMC		EN50081-1 / EN50082-2
Max. tolerance ambient field strength	[A/m]	<1200
Min. distance to next AC solenoid	[m]	>0.1
Interface		M12x1
Wiring min.	[mm²]	5 x 0.25 braid shield recommended
Wiring length max.	[m]	50 recommended

M12 pin assignment



1 + U_S 18...42 V
2 Out B: normally open
3 0V
4 Out A: normally closed
5 Earth ground



8

Extract from the German trade association certificate

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

Hauptverband der gewerblichen Berufsgenossenschaften

00 077
Bescheinigungs-Nummer

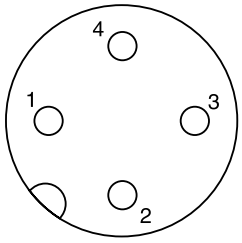
Name und Anschrift des Bescheinigungsinhabers: (Auftraggeber)	**Parker Hannifin GmbH** Hydraulic Controls Division Gutenbergstr. 38 - 40, D- 41564 Kaarst
Name und Anschrift des Herstellers:	**Parker Hannifin GmbH** Hydraulic Controls Division Gutenbergstr. 38 - 40, D- 41564 Kaarst
Zeichen des Auftraggebers:	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-Maschinenrichtline 2006/42/EG.

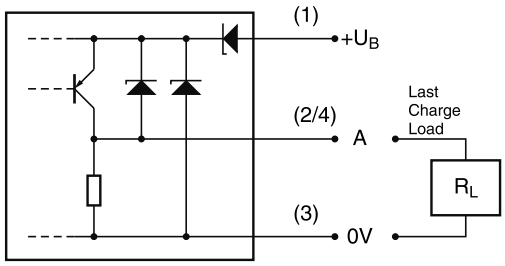
Electrical characteristics of position control M12x1 as per IEC 61076-2-101, NG80 to NG100

Protection class		IP 65 in accordance with EN 60529 (with correctly mounted plug-in connector)
Ambient temperature	[°C]	0...+50
Supply voltage U_S / ripple	[V]	10...30 / 10 %
Current consumption without load	[mA]	≤ 10
Max. output current per channel, ohmic	[mA]	200
Min. output load per channel, ohmic	[kOhm]	100
Max. output drop at 0.2 A	[V]	≤ 2
EMC		EN61000-6-4 / EN61000-6-2
Min. distance to next AC solenoid	[m]	>0.1
Interface		M12x1
Wiring min.	[mm²]	3 x 0.14 braid shield recommended
Wiring length max.	[m]	50 recommended

M12 pin assignment



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



8

Definition

Start position monitored:

The switching point of the inductive switch is within the overlap of the poppet.

After the signal of the inductive switch has changed, the poppet leaves the safety overlapping position.

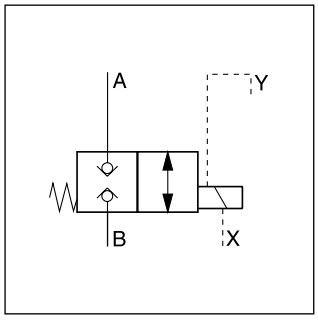
The new series of active pilot operated 2/2 way throttle valves TDW enables to open and close the main poppet solely by pilot pressure, independent of pressure build-up in the main ports A and B.

The main poppet is designed hollow and mostly pressure balanced. The operation is accomplished via minimal control surfaces resulting in low pilot oil demand and fast switching operations.

TDW is supplied as one unit to ensure easy installation – sleeve and body are screwed together. Additionally, the lower recess in the standardized mounting cavity is no longer required, providing the possibility to minimize pressure losses in the manifold block.

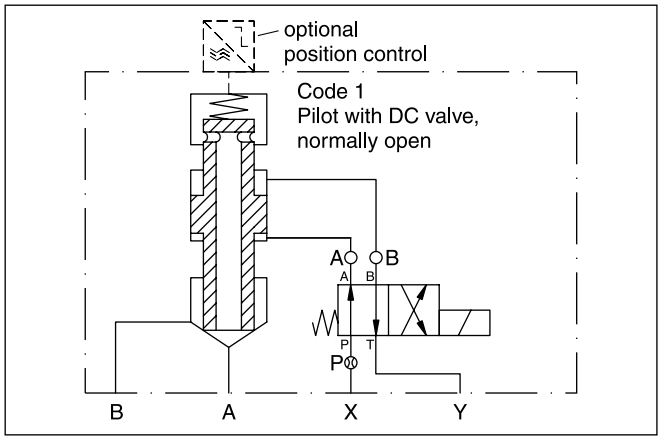
Features

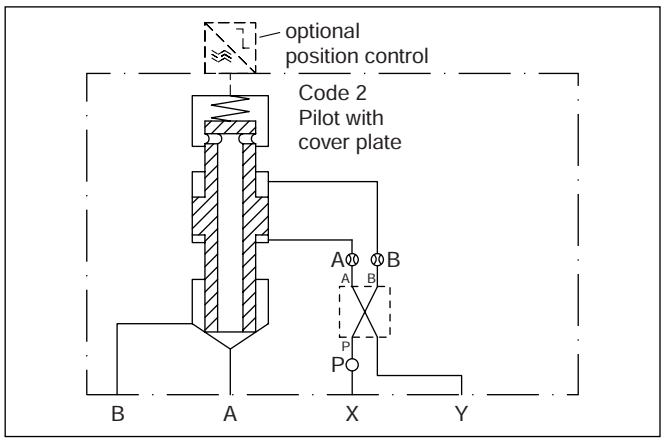
- Active pilot operated 2/2 way cartridge valves
- Cavity and mounting pattern according to ISO 7368 (except for size NG125)
- Flow direction B to A and A to B
- 8 sizes NG25 up to NG125
- Position monitoring optional

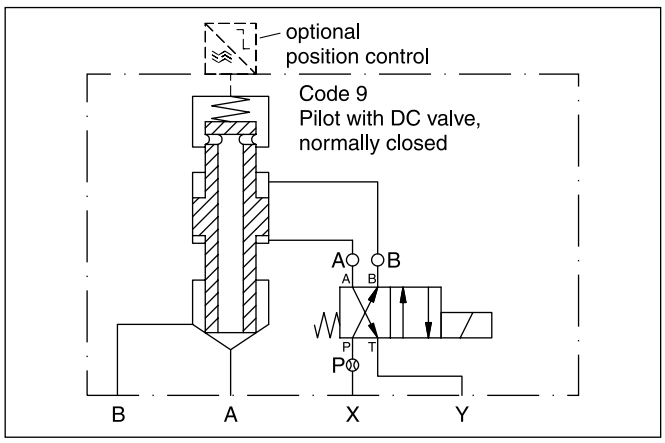


TDW040

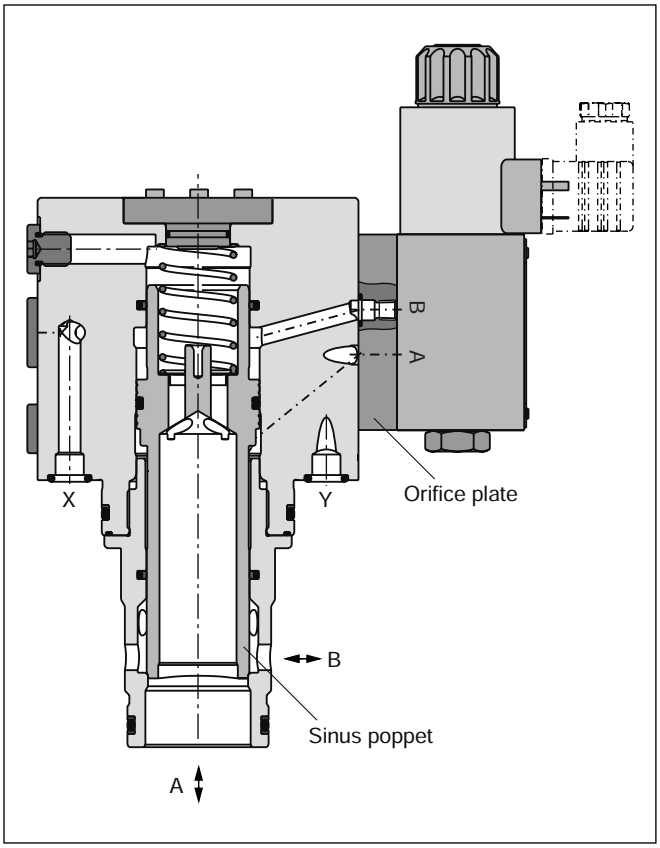
Function symbols







TDW040



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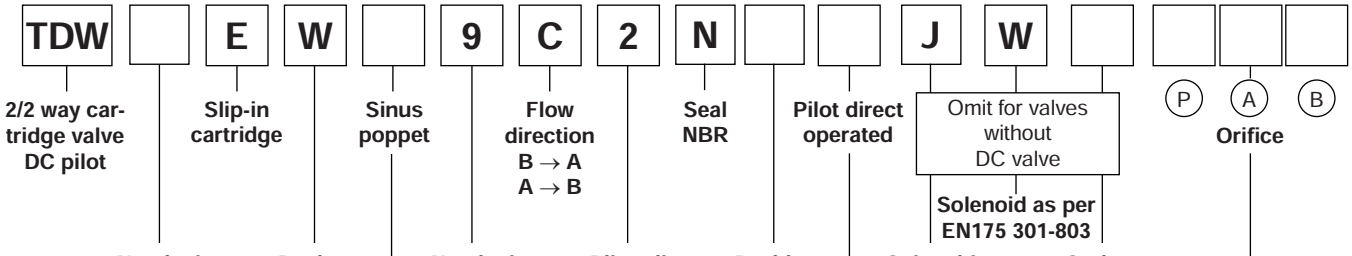


Code	Nominal size
025	NG25
032	NG32
040	NG40
050	NG50
063	NG63
080	NG80
100	NG100
125 [1]	NG125

Code	Poppet shape
8	with overlap
9	Standard

Code	Position control
0	w/o position control
8	start position monitored (in combination with overlapped poppet code 8)

Code	Pilot
1	with DC valve, normally open
2	with cover plate X = closing Y = opening
9	with DC valve, normally closed

Pilot with DC valve	
Code [2]	Nominal size
129999	NG25, NG32
159999	NG40
189999	NG50
209999	NG63
259999	NG80
309999	NG100
–	NG125 [1]

Pilot with cover plate	
Code	Nominal size
991212	NG25, NG32
991515	NG40
991818	NG50
992020	NG63
992525	NG80
993030	NG100
–	NG125 [1]

Code	Options
0	Standard
T	without manual override

8

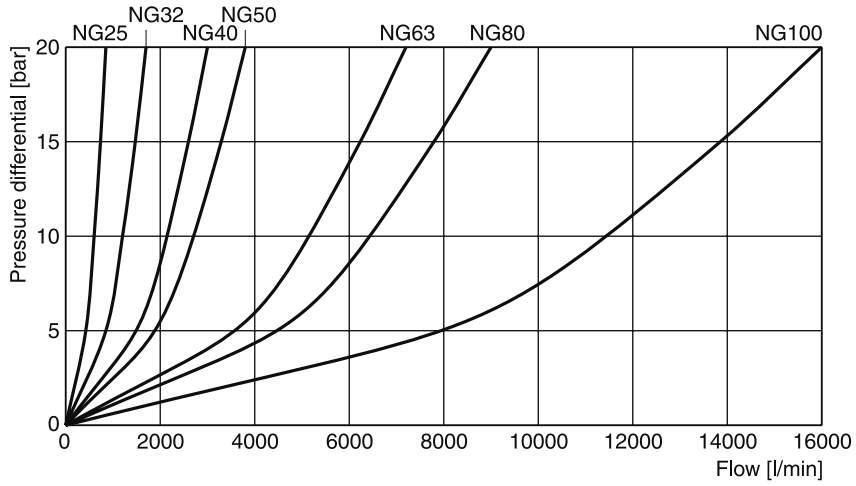
[1] On request.
[2] Example code 129999: 12 = dia. 1.2 mm, 99 = without orifice.

General									
Design		2-way slip-in cartridge valve according to ISO 7368 (except for size NG125)							
Nominal size	DIN	NG25	NG32	NG40	NG50	NG63	NG80	NG100	NG125
Mounting position		unrestricted							
Ambient temperature	[°C]	-20...+50							
$MTTF_D$ value	[years]	75							
Weight	[kg]	8	10	12	23	49	102	154	on request
Hydraulic									
Max. operating pressure	[bar]	Ports A, B, X up to 350, port Y: max. 210 (350 bar with cover plate)							
Fluid		Hydraulic oil according to DIN 51524...51525							
Fluid temperature	[°C]	-20 ... +60							
Viscosity recommended	[cSt] / [mm²/s]	30 ... 80							
Viscosity permitted	[cSt] / [mm²/s]	20 ... 380							
Filtration		ISO 4406 (1999); 18/16/13							
Nominal flow at Δp = 5 bar	[l/min]	420	850	1500	1900	3600	4500	8000	on request
Recommended max. flow	[l/min]	800	2000	3000	4500	8000	13000	20000	on request
Flow direction		B to A and A to B							
Pilot pressure	[bar]	must be as high as system pressure							
Overlap (for poppet code 8)	[mm]	3.7	3.7	3.7	3.7	3.7	3.7	3.7	on request
Electrical characteristics									
Duty ratio		100 % ED; CAUTION: coil temperature up to 150 °C possible							
Protection class		IP 65 in accordance with EN 60529 (with correctly mounted plug-in connector)							
	Code	J							
Supply voltage	[V]	24 V =							
Tolerance supply voltage	[%]	±10							
Current consumption hold	[A]	1.29							
Current consumption in rush	[A]	1.29							
Power consumption hold		31 W							
Power consumption in rush		31 W							
Solenoid connection		Connector as per EN 175301-803, solenoid identification as per ISO 9461 (code W).							
Wiring min.	[mm²]	3 x 1.5 recommended							
Wiring length max.	[m]	50 recommended							

With electrical connections the protective conductor (PE ⏚) must be connected according to the relevant regulations.

8

p/Q Performance curves (sinus poppet code 8 and 9)

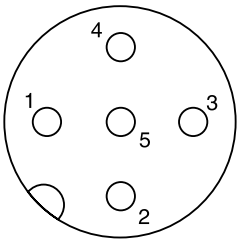


Characteristic curve measured with HLP46 at 50 °C.

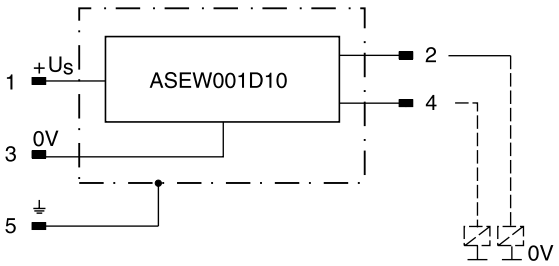
Electrical characteristics of position control as per IEC 61076-2-101 (M12x1), NG16 to NG63

Protection class		IP 65 in accordance with EN 60529 (with correctly mounted plug-in connector)
Ambient temperature	[°C]	0...+50
Supply voltage U_S / ripple	[V]	18...42 / 10 %
Current consumption without load	[mA]	≤ 30
Max. output current per channel, ohmic	[mA]	400
Min. output load per channel, ohmic	[kOhm]	100
Max. output drop at 0.2 A	[V]	≤ 1.1
Max. output drop at 0.4 A	[V]	≤ 1.6
EMC		EN50081-1 / EN50082-2
Max. tolerance ambient field strength	[A/m]	<1200
Min. distance to next AC solenoid	[m]	>0.1
Interface		M12x1
Wiring min.	[mm²]	5 x 0.25 braid shield recommended
Wiring length max.	[m]	50 recommended

M12 pin assignment



1 + U_S 18...42 V
2 Out B: normally open
3 0V
4 Out A: normally closed
5 Earth ground



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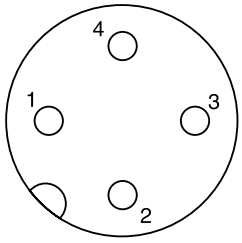
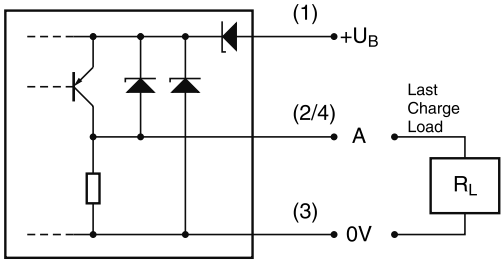
Electrical characteristics of position control M12x1 as per IEC 61076-2-101, NG80 to NG125

Protection class		IP 65 in accordance with EN 60529 (with correctly mounted plug-in connector)
Ambient temperature	[°C]	0...+50
Supply voltage U_S / ripple	[V]	10...30 / 10 %
Current consumption without load	[mA]	≤ 10
Max. output current per channel, ohmic	[mA]	200
Min. output load per channel, ohmic	[kOhm]	100
Max. output drop at 0.2 A	[V]	≤ 2
EMC		EN61000-6-4 / EN61000-6-2
Min. distance to next AC solenoid	[m]	>0.1
Interface		M12x1
Wiring min.	[mm²]	3 x 0.14 braid shield recommended
Wiring length max.	[m]	50 recommended

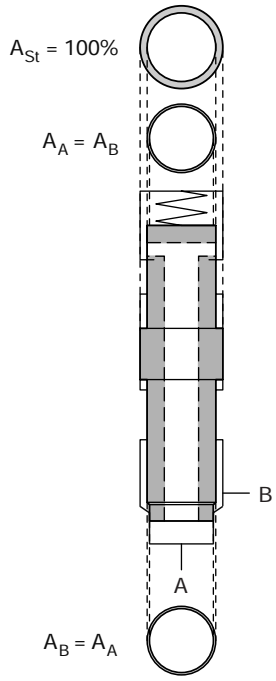
M12 pin assignment



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



Control surfaces



NG	A_{St} [%]	Ratio A_{St} / A_B [%]	Flow direction A - B (System pressure is closing the poppet)	Flow direction B - A (System pressure is opening the poppet)		Pilot oil volume for full stroke [cm³]
			Opening pressure p_{St} [bar]	Opening pressure P_{St} [bar]	Opening pressure P_B [bar]	
25	100	10.6	1.4 (+ 10.6 % of p_A)	1.4 (-10.6 % of p_B)	13.2	4.738
32	100	10.9	1.3 (+ 10.9 % of p_A)	1.3 (- 10.9 % of p_B)	11.9	5.293
40	100	11.2	1.2 (+ 11.2 % of p_A)	1.2 (- 11.2 % of p_B)	10.7	8.294
50	100	11.5	2.7 (+ 11.5 % of p_A)	2.7 (- 11.5 % of p_B)	23.5	12.893
63	100	11.7	2.4 (+ 11.7 % of p_A)	2.4 (- 11.7 % of p_B)	20.5	18.944
80	100	11.8	2.8 (+ 11.8 % of p_A)	2.8 (- 11.8 % of p_B)	23.7	28.501
100	100	12.0	5.0 (+ 12.0 % of p_A)	5.0 (- 12.0 % of p_B)	41.7	35.286
125	100	on request				

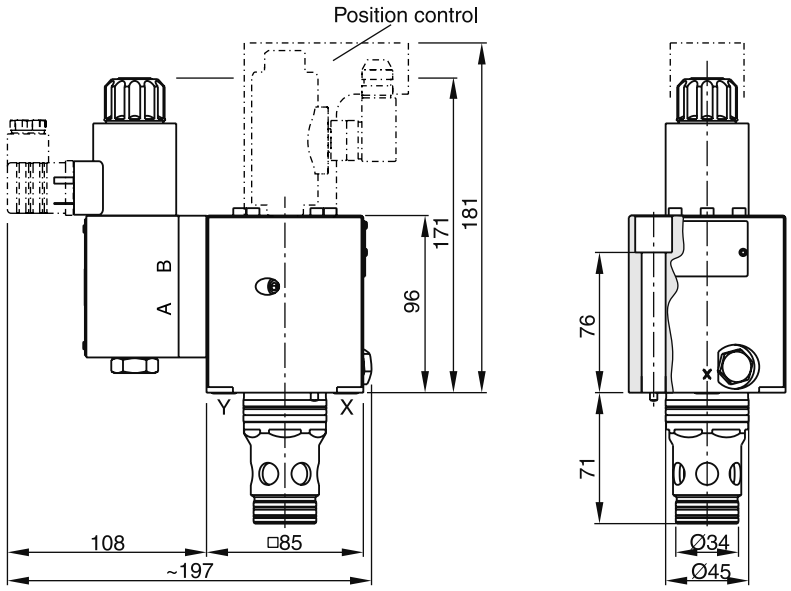
The main poppet is (almost) pressure balanced. The resulting areas A_A respectively A_B are small.

E.g. for NG100

A_{Nom} = 7854 mm² = 600 %
A_{St} = 1307 mm² = 100 %
A_A=A_B = 157 mm² = 12 %

Dimensions

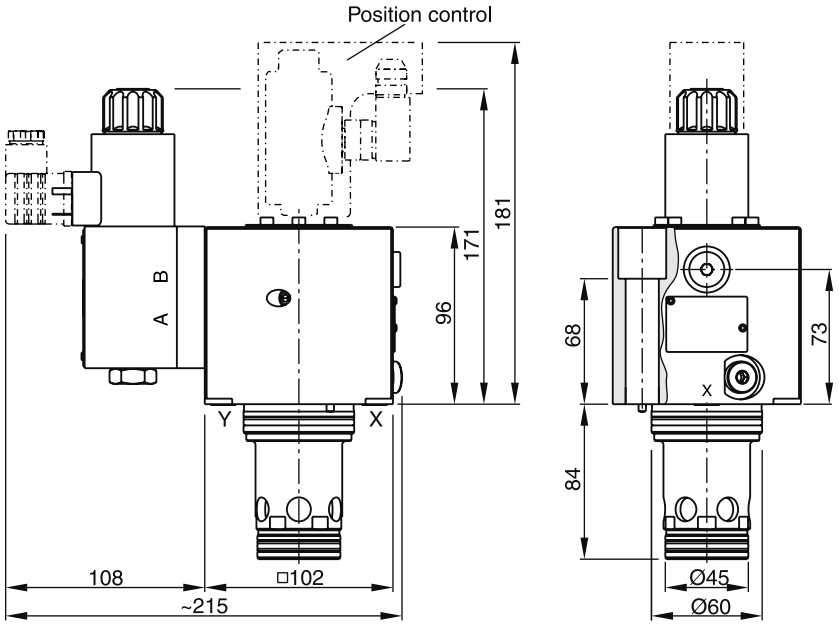
NG25



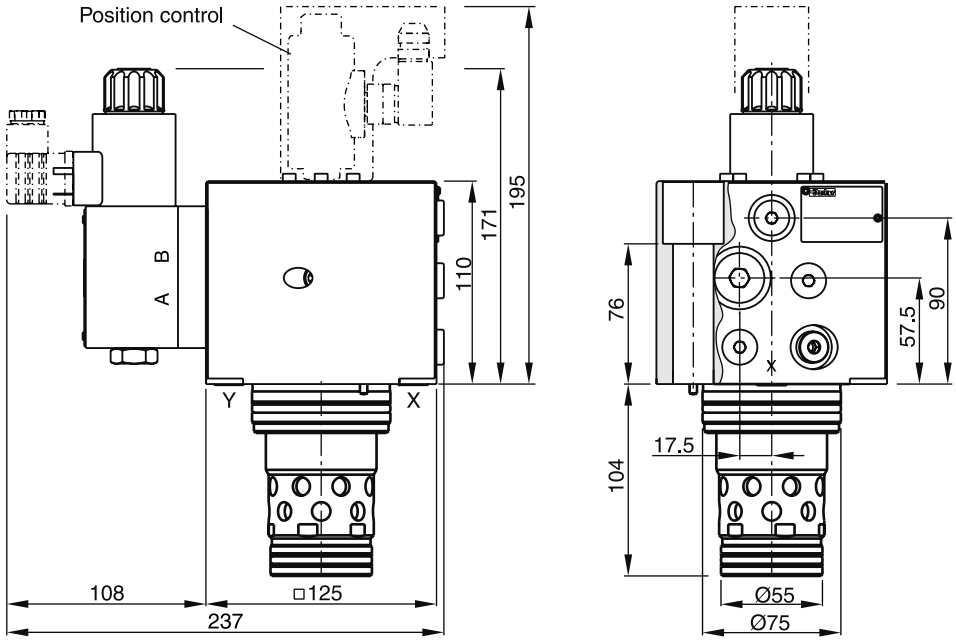
NG	Bolt kit		Kit NBR	Kit FPM
25	BK504 4x M12x100 ISO 4762-12.9	108 Nm	SK-TDW025EN30	SK-TDW025EV30

TDW UK.indd CM 25.07.13

NG32



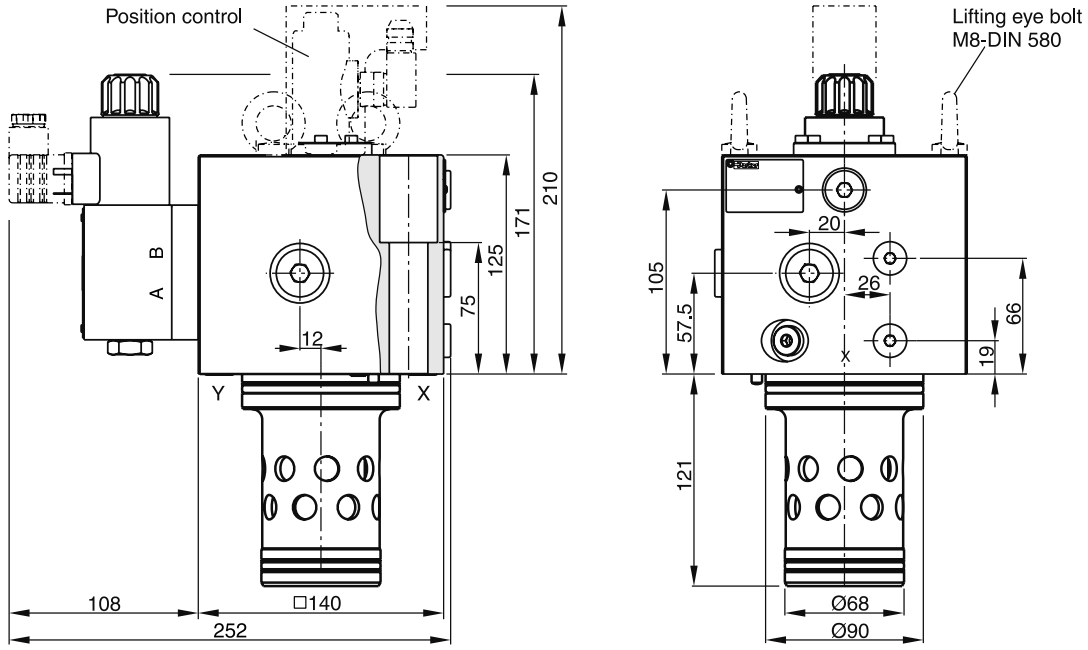
NG40



8

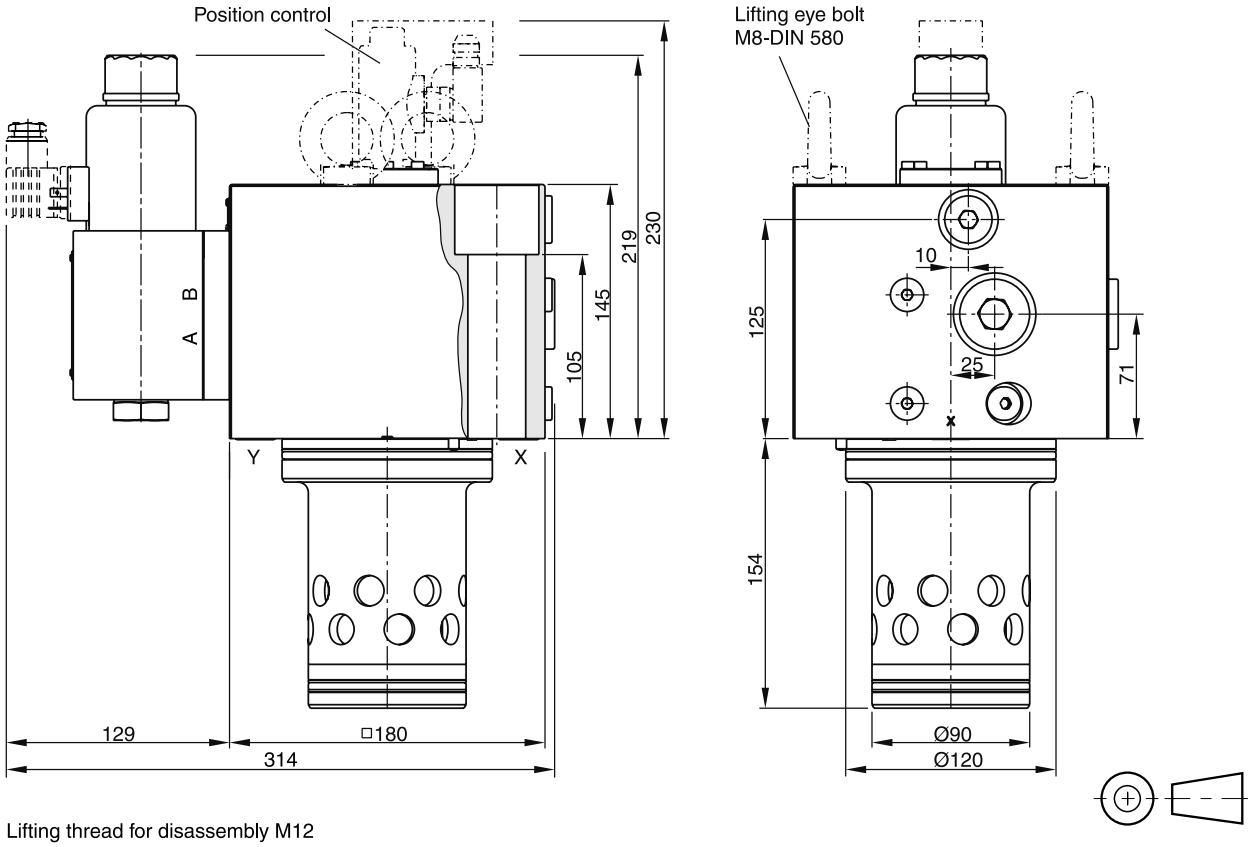
NG	Bolt kit		Kit NBR	Kit FPM
32	BK529 4 x M16x100 ISO 4762-12.9	264 Nm	SK-TDW032EN30	SK-TDW032EV30
40	BK513 4 x M20x110 ISO 4762-12.9	517 Nm	SK-TDW040EN30	SK-TDW040EV30

NG50



Lifting thread for disassembly M12

NG63

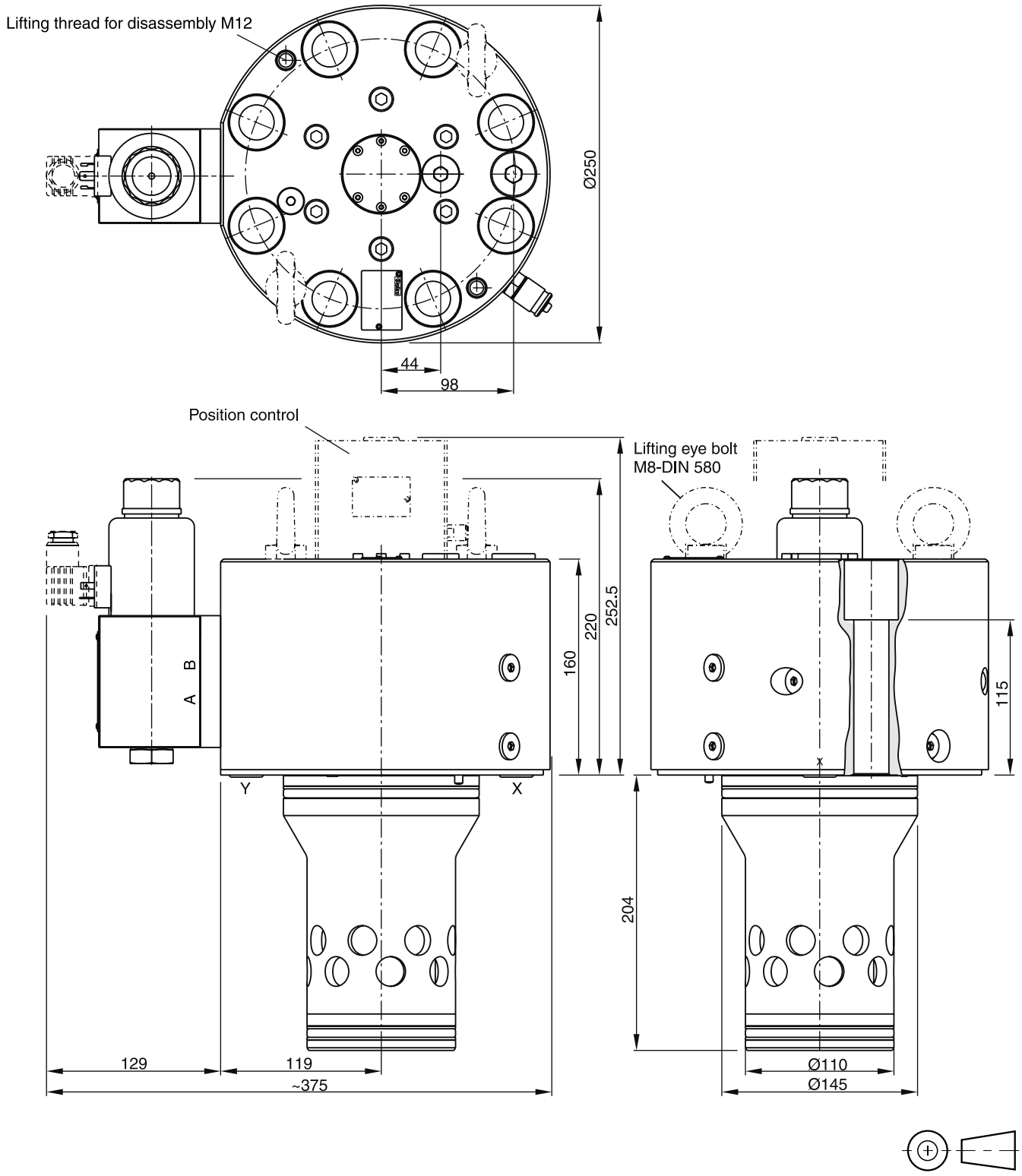


Lifting thread for disassembly M12

NG	Bolt kit		Kit NBR	Kit FPM
50	BK513	4 x M20x110 ISO 4762-12.9	SK-TDW050EN30	SK-TDW050EV30
63	BK518	4 x M30x160 ISO 4762-12.9	SK-TDW063EN30	SK-TDW063EV30

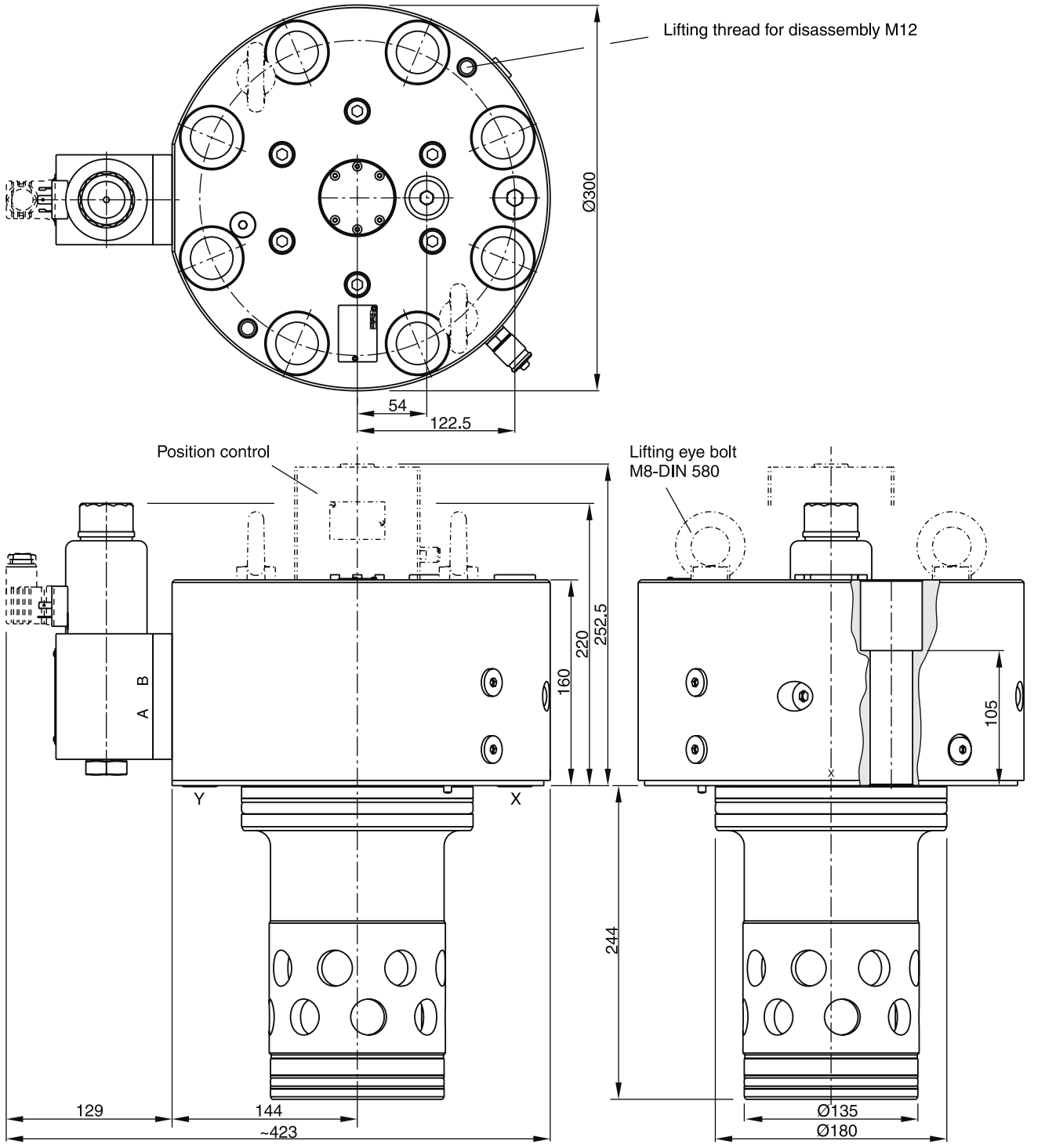
TDW UK.indd CM 25.07.13

NG80



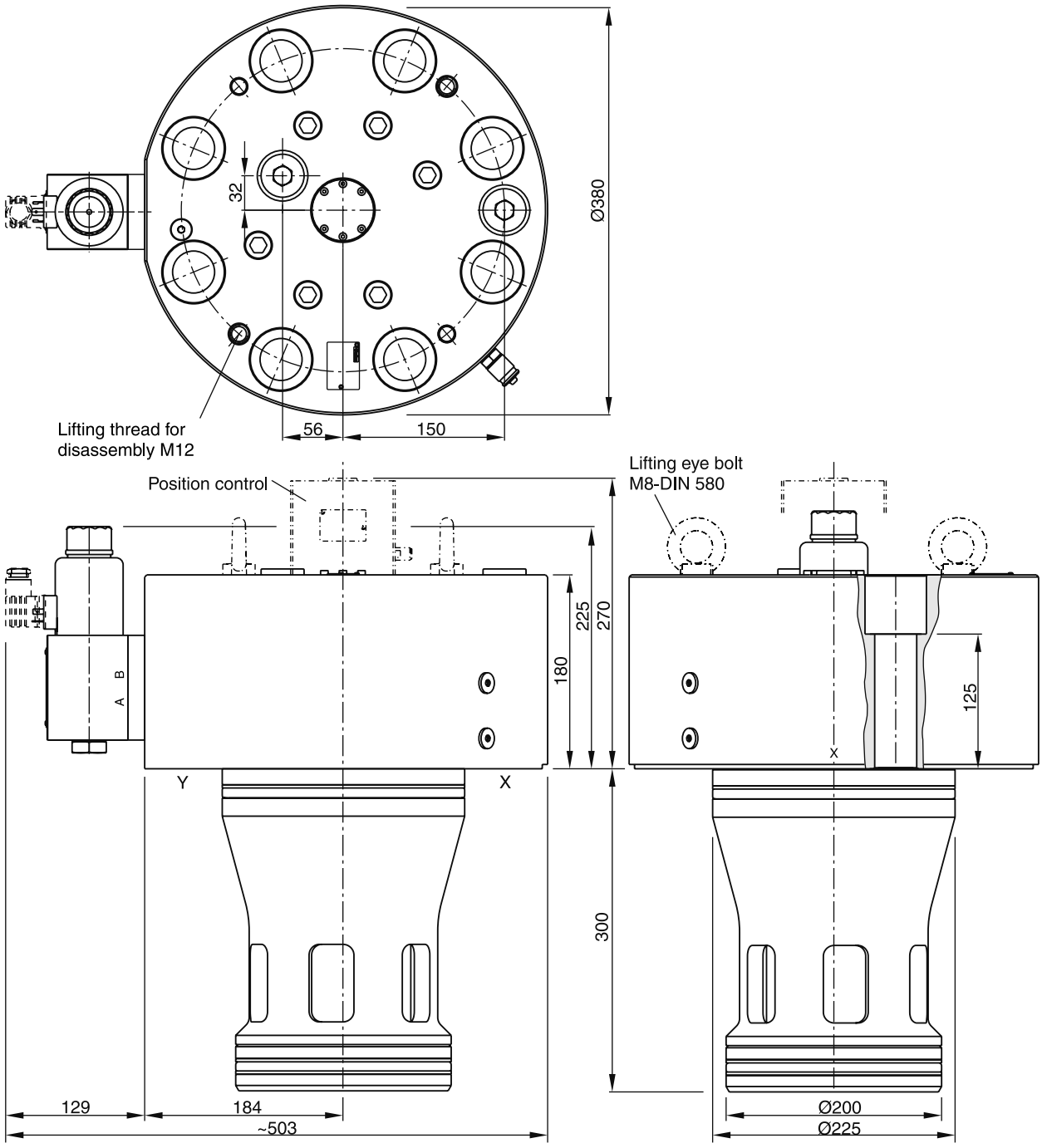
NG	Bolt kit		Kit NBR	Kit FPM
80	BK530 8x M24x160 ISO 4762-12.9	890 Nm	SK-TDW080EN30	SK-TDW080EV30

NG100



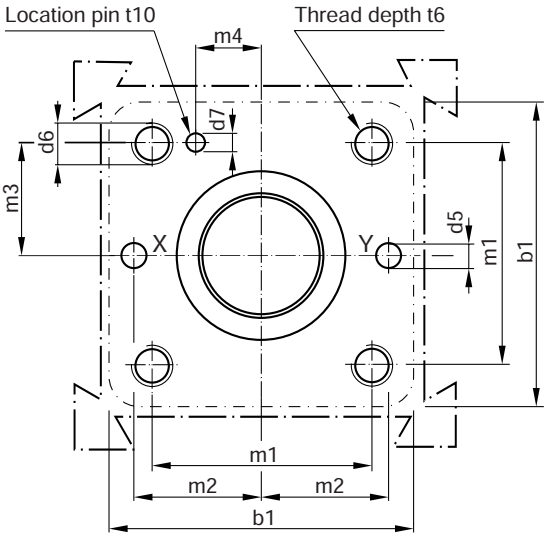
NG	Bolt kit		Kit NBR	Kit FPM
100	BK531 8x M30x150 ISO 4762-12.9	1775 Nm	SK-TDW100EN30	SK-TDW100EV30

NG125

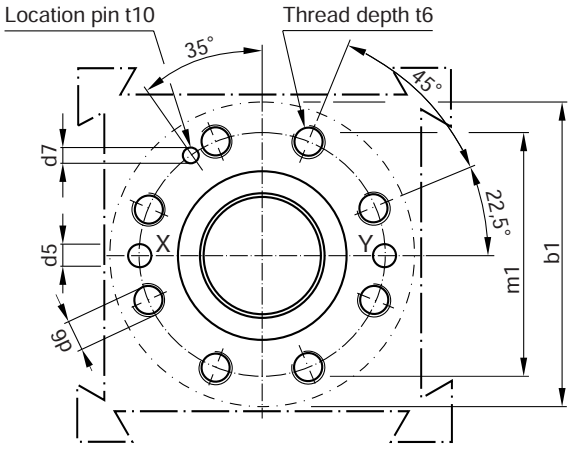


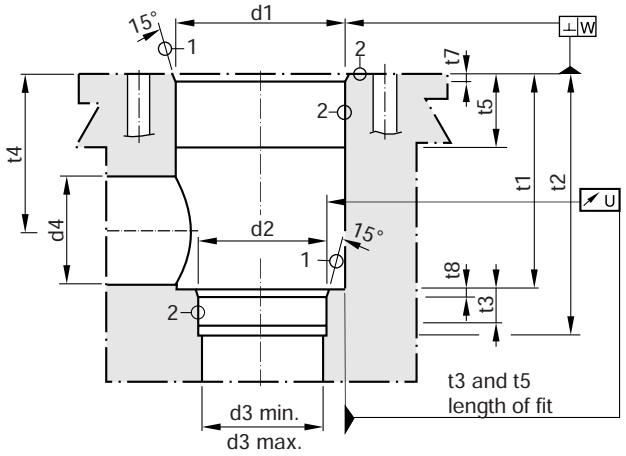
NG	Bolt kit		Kit NBR	Kit FPM
125	BK537 8x M36x180 ISO 4762-12.9	3100 Nm	SK-TDW125EN30	SK-TDW125EV30

Code: ISO 7368-B*-*-2-A/B
NG25 to NG63



Code: ISO 7368-B*-*-2-A (except for size NG125)
NG80 to NG125





Required surface finish:

$\textcircled{1} = \sqrt{R_{max}16}, \textcircled{2} = \sqrt{R_{max}8}$

Deviating from ISO 7368 it is advisable to increase the diameters d3, d4 and d5.

8

Size	b1	d1 H7	d2 H7	d3	d3 max	d4 max[1)]	d5 max	d6	d7 H13	m1±0.2	m2±0.2	m3±0.2
25	85	45	34	25	27	32	6	M 12	4	58	33	29
32	102	60	45	32	44	50	8	M 16	6	70	41	35
40	125	75	55	40	54	63	10	M 20	6	85	50	42.5
50	140	90	68	50	67	80	10	M 20	8	100	58	50
63	180	120	90	63	89	100	12	M 30	8	125	75	62.5
80	250	145	110	80	109	110	16	M 24	10	200	—	—
100	300	180	135	100	134	150	20	M 30	10	245	—	—
125	380	225	200	125	150	150	32	M 36	9	300	—	—

Size	m4±0.2	t1+0.5	t2+1	t3	t4	t4 max[1)]	t5	t6	t7	t8	t10	U	W
25	16	58	72	12	44	40.5	30	35	2,5	2,5	10	0.03	0.05
32	17	70	85	13	52	44	15	35	2.5	2.5	10	0.03	0.1
40	23	87	105	15	64	54	15	45	3	3	10	0.05	0.1
50	30	100	122	17	72	59	17	45	4	3	10	0.05	0.1
63	38	130	155	20	95	78	19	65	4	4	10	0.05	0.2
80	—	175	205	25	130	115	32	50	5	5	10	0.05	0.2
100	—	210	245	29	155	133	32	53	5	5	10	0.05	0.2
125	—	257	300 $^{+0.15}$	31	192	180	40	62	5.5	7	10	0,05	0.2

[1)] Only in combination with d4max and t4max.

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding

Hydraulic Cartridge Valves

The European Select Range Catalogue

Parker

ENGINEERING YOUR SUCCESS.

WARNING – USER RESPONSIBILITY

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.

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Parker Hannifin Corporation
Hydraulic Cartridge Systems Europe
Crewkerne, UK

The Select Range

The Select Range is a selection of the most popular and versatile valves from the complete range of Parker Hydraulic Cartridge Valves and are held in stock for delivery from the European Distribution Centre (EDCN).

All valves in The Select Range are proven items, with a good track record of service in many different applications. The Select Range should be used for new projects in the knowledge that they are available and will meet the majority of customer applications. If something different is required then further valve options can be selected from the main valve range, although availability may be subject to a manufacturing lead-time.

This catalogue is organized so that selection can be made by valve type first, then by flow/pressure requirements. This means that valve selection can be made with minimal part number knowledge.

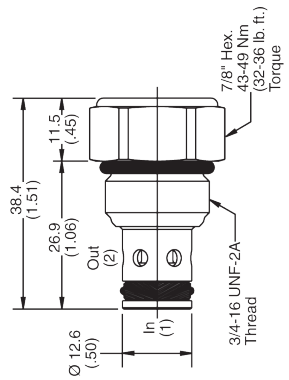
The data in this catalogue is only the basic information but full details of each valve, including the full specification and options, are shown in the main catalogue, available through the local Parker Sales companies, directly from EMDC, or alternatively on the website www.parker.com

Contents

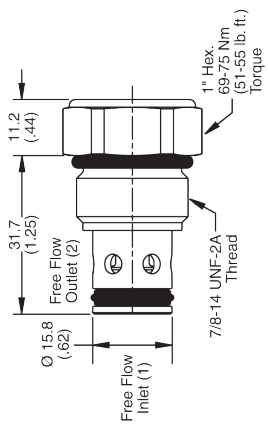
Product Index

Poppet Type

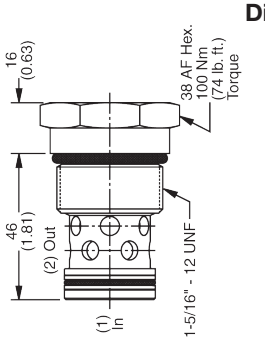
Dimensions Millimeters (inches)



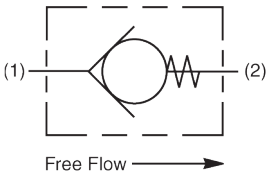
CVH081P



CVH103P



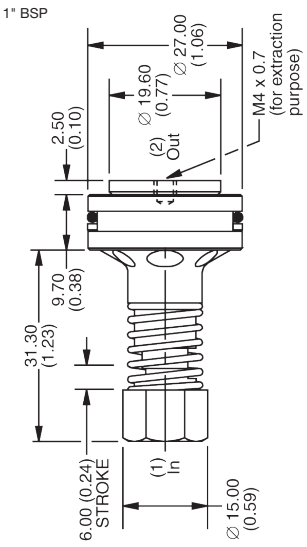
D06B2-0.1N



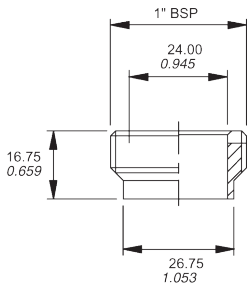
Series	Body	Max Inlet Pressure (bar)	Cracking Pressure (bar)	Flow Rating (l/min)	Features
CVH081P	B08-2-6B	350	0.3	38	• Spherical poppet for low leakage CVH type only. • Low pressure drop. • Good contamination tolerance.
CVH103P	B10-2-8B	350	0.3	60	
D06B2P-0.1N	B16-2-16B	420	0.1	280	

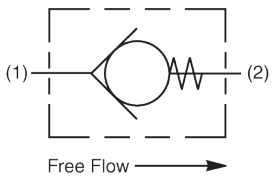
Poppet Type - Valve Insert

Dimensions Millimeters (inches)



D1B125-0.2N





Note:
Valve is supplied with retention round wire circlip (ref 8010977). As an alternative to circlip retention of the check valve insert, the screwed retainer shown here can be used to lock the insert beneath 1" BSP port and should be ordered separately.

For 1" BSP order as RT10001 - Torque to 85Nm (63 lb ft).

Series	Body	Max Inlet Pressure (bar)	Cracking Pressure (bar)	Flow Rating (l/min)	Features
D1B125-0.2N	LB10210S	420	0.2	300	• High flow capacity

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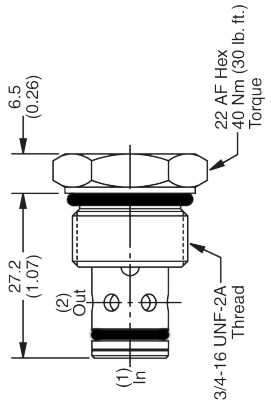
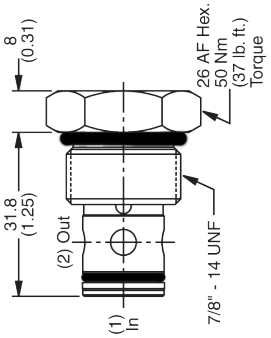
Ball Type

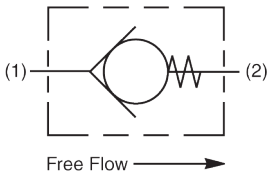
Dimensions Millimeters (inches)



D02B2



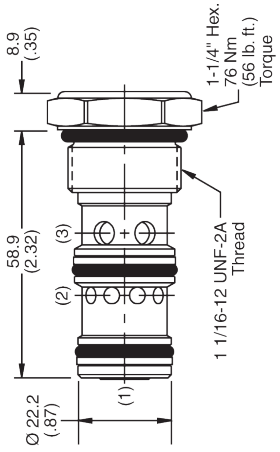
D04B2

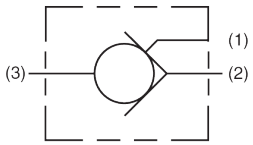


Series	Body	Max Inlet Pressure (bar)	Cracking Pressure (bar)	Flow Rating (l/min)	Features
D02B2-0.2N	B08-2-6B	420	0.2	45	• Ball type construction for cost effective design. • Single & dual pilot pistons available to create PO check valve assemblies. • Cartridge only
D02B2-2.1N	B08-2-6B	420	2.1	45	
D04B2-0.2N	B10-2-8B	420	0.2	90	
D04B2-2.1N	B10-2-8B	420	2.1	90	

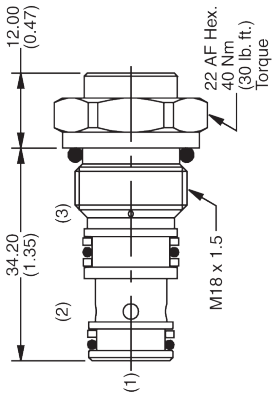
Pilot Operated

Dimensions Millimeters (inches)

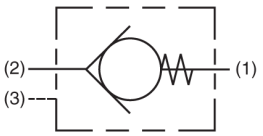




CPH104P



D4A020N



Series	Body	Max Inlet Pressure (bar)	Cracking Pressure (bar)	Flow Rating (l/min)	Features
CPH104P	B10-3-8B	350	2.1	30	• Extremely compact construction. • Sealed pilot
D4A020N	LB10310S	420	5	16	

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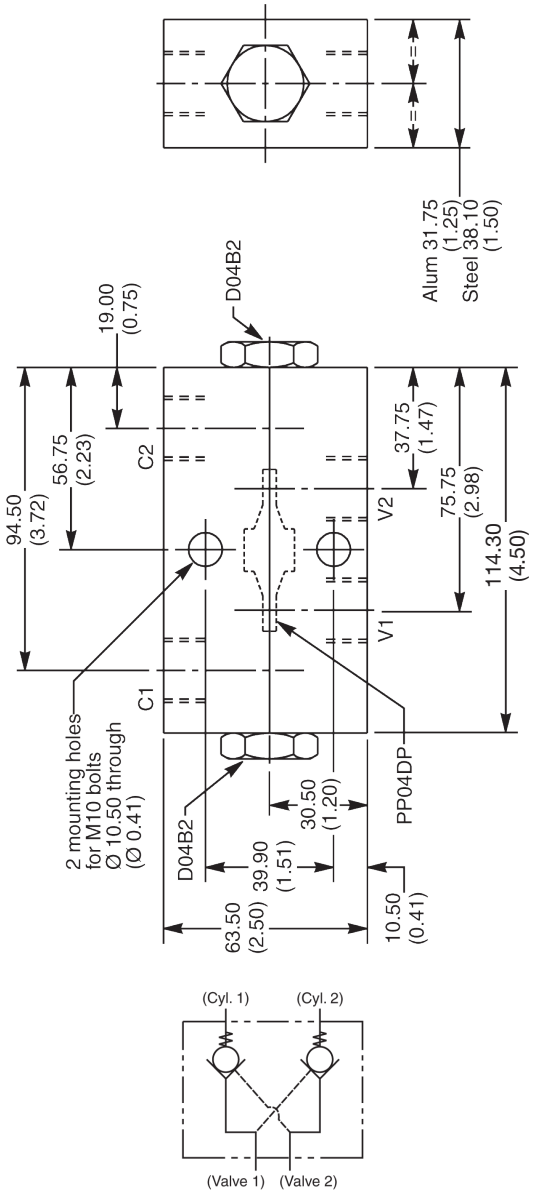
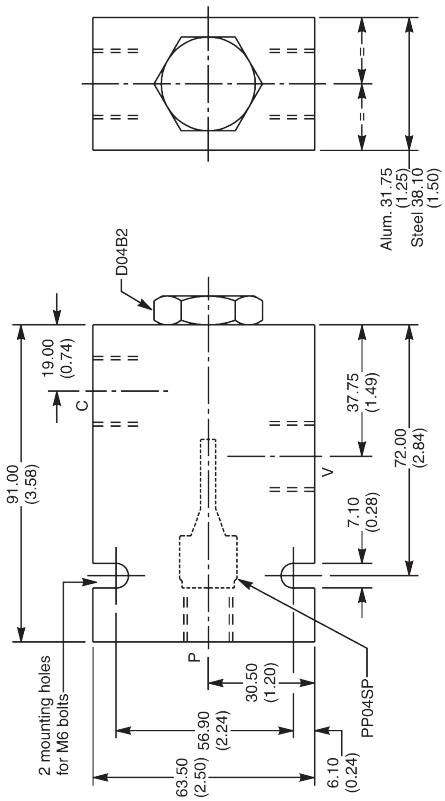
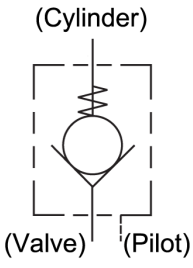
Pilot Piston Type

Dimensions Millimeters (inches)



PP04DP2.1N766S



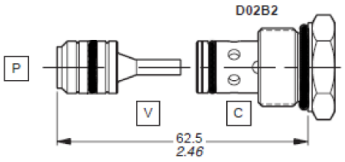


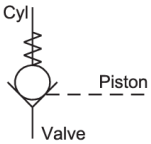
PP04SP2.1N761S

Series	Pilot Ratio	Max Inlet Pressure (bar)	Cracking Pressure (bar)	Flow Rating (l/min)	Features
PP04DP2.1N766S	4:1	420	2.1	40	• Complete assembly • Dual pilot operated check valve package with 3/8 BSP ports.
PP04SP2.1N761S	3:1	420	2.1	135	• Complete assembly • Single pilot operated check valve package with 1/2 BSP ports.

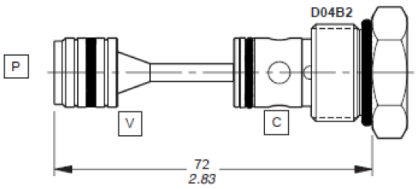
Single Pilot Piston

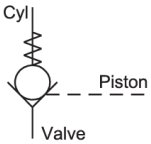
Dimensions Millimeters (inches)





PP02SP



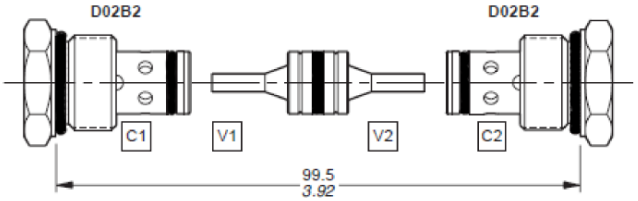


PP04SP

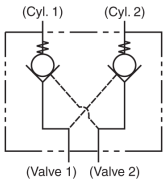
Series	Pilot Ratio	Max Inlet Pressure (bar)	Cracking Pressure (bar)	Flow Rating (l/min)	Features
PP02SP	4:1	420	2.1	40	• Single pilot piston only • For use with D02B2-2.1N
PP04SP	3:1	420	2.1	135	• Single pilot piston only • For use with D04B2-2.1N

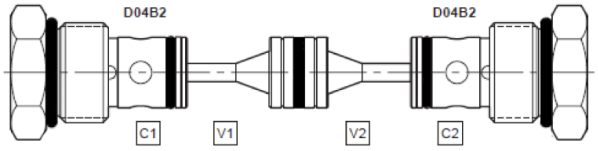
Dual Pilot Piston

Dimensions Millimeters (inches)

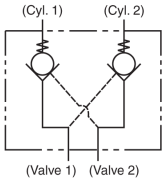


PP02DP





PP04DP



Series	Pilot Ratio	Max Inlet Pressure (bar)	Cracking Pressure (bar)	Flow Rating (l/min)	Features
PP02DP	4:1	420	2.1	40	• Dual pilot piston only • For use with 2 pcs D02B2-2.1N
PP04DP	3:1	420	2.1	135	• Dual pilot piston only • For use with 2 pcs D04B2-2.1N

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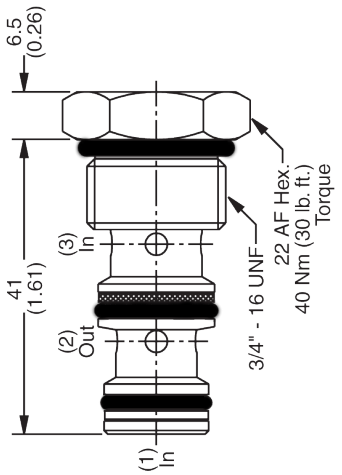
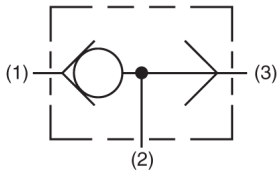
Ball Type

Dimensions Millimeters (inches)



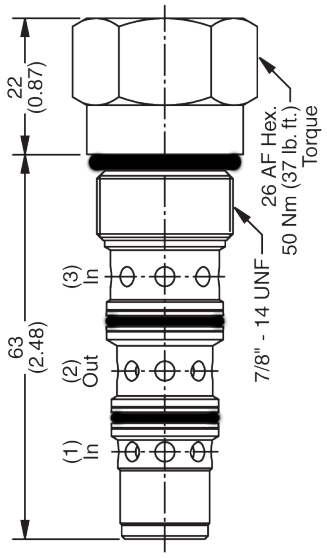


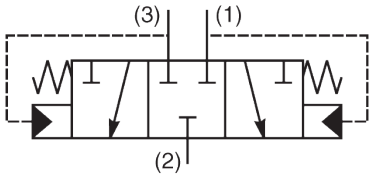
K02A3N

Series	Body	Max Inlet Pressure (bar)	Flow Rating (l/min)	Features
K02A3N	B08-3-6B	420	27	• Ball type construction • Contamination tolerant

Spool Type

Dimensions Millimeters (inches)





K04C3-5.0N

Series	Body	Max Inlet Pressure (bar)	Flow Rating (l/min)	Features
K04C3-5.0N	B10-4-8B	420	55	• High flow capacity • Use as a purge valve in transmission applications.

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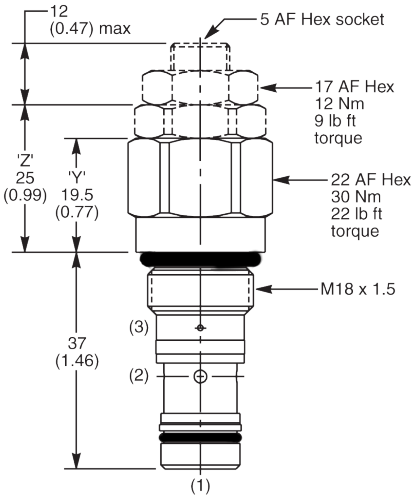
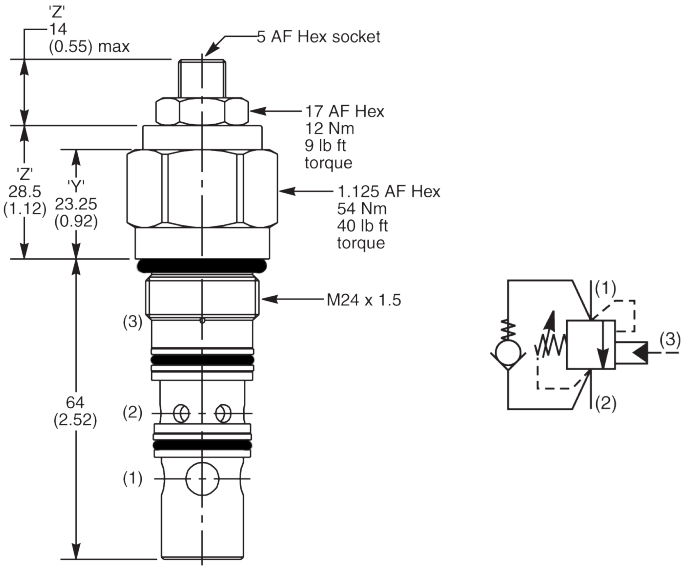
Counterbalance Type

Dimensions Millimeters (inches)



E2B020ZN



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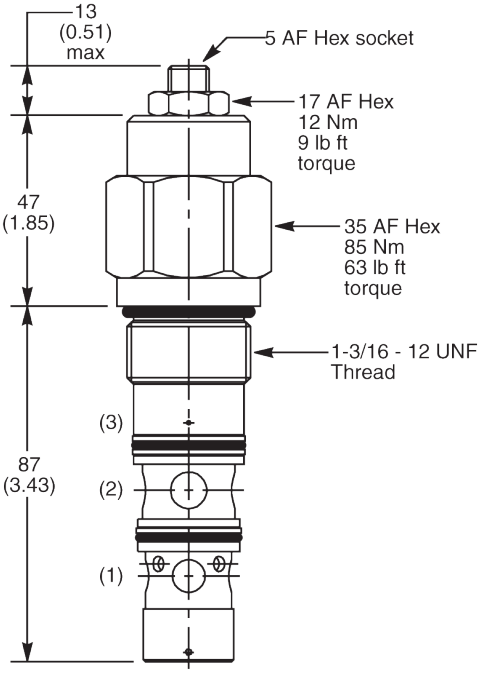

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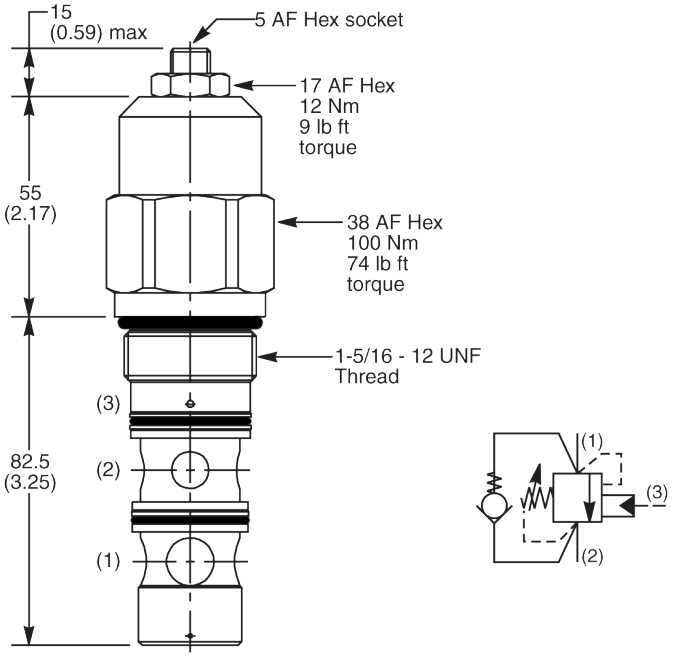

E2E125ZNMK2

Series	Body	Max Inlet Pressure (bar)	Standard Setting (bar)	Flow Rating (l/min)	Pilot Ratio	Features
E2B020ZN	LB10310S	420	215	20	4.5:1	• Compact construction • Excellent control & stability • Range of pilot ratios
E2B040ZNMK3	LB10251S	350	215	60	3:1	
E2B060ZNMK2	LB10039S	350	215	120	3:1	
E2E125ZNMK2	LB10076S	350	215	200	3:1	

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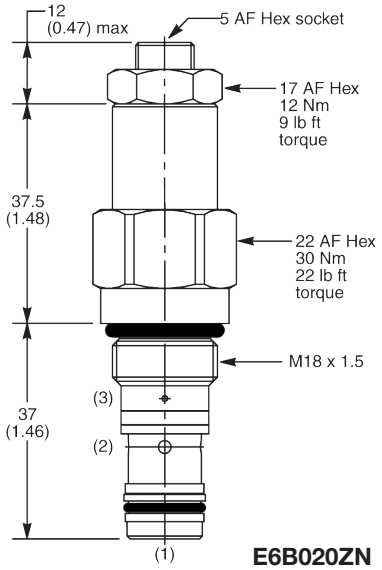
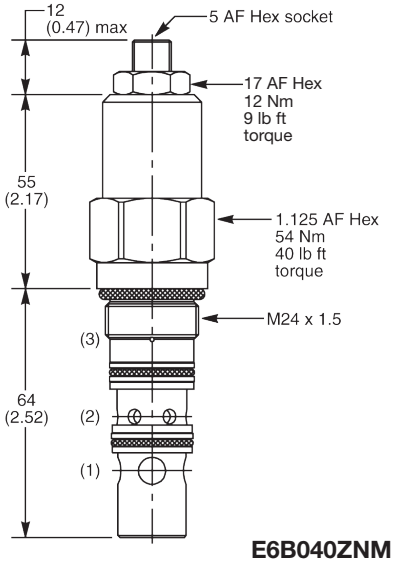
Counterbalance Type

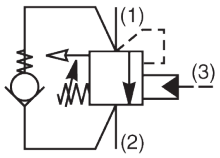
Dimensions Millimeters (inches)



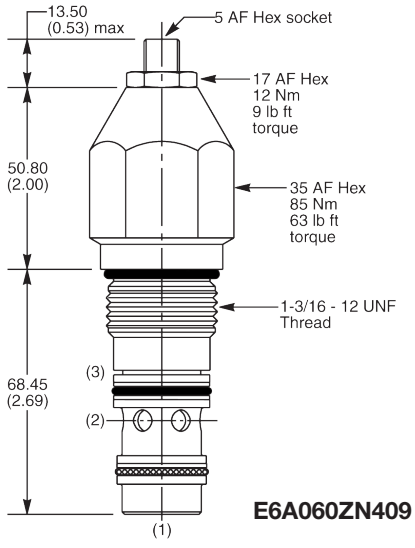
E6B020ZN



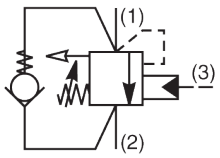
E6B040ZNMK3



Series	Body	Max Inlet Pressure (bar)	Standard Setting (bar)	Flow Rating (l/min)	Pilot Ratio	Features
E6B020ZN	LB10310S	420	215	20	4.5:1	• Independent of downstream pressure. • No requirement for separate drain line. • Compact construction
E6B040ZNMK3	LB10251S	350	215	60	3:1	



E6A060ZN409 / E6B060ZN409



Series	Body	Max Inlet Pressure (bar)	Standard Setting (bar)	Flow Rating (l/min)	Pilot Ratio	Features
E6A060ZN409	LB10039S	350	215	180	8:1	• Independent of downstream pressure. • No requirement for separate drain line. • High flow design
E6B060ZN409	LB10039S	350	215	180	3:1	

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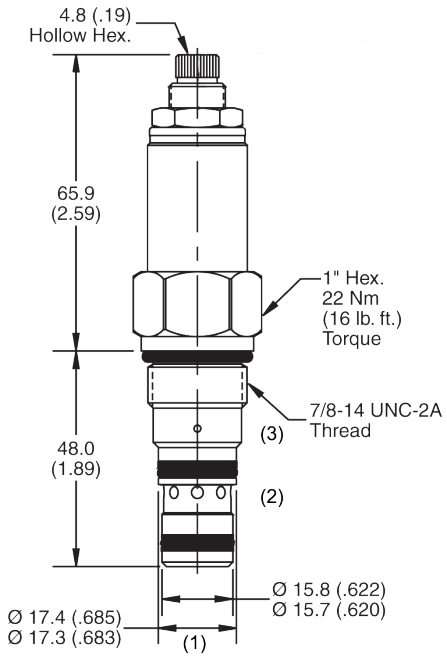
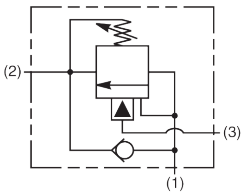
Crewkerne, UK

Counterbalance Type

Dimensions Millimeters (inches)



CB101AS30



Series	Body	Max Inlet Pressure (bar)	Standard Setting (bar)	Flow Rating (l/min)	Pilot Ratio	Features
CB101AS30	B10-3-8B	380	210	45	3:1	• 3:1 Pilot ratio • Fits common cavity

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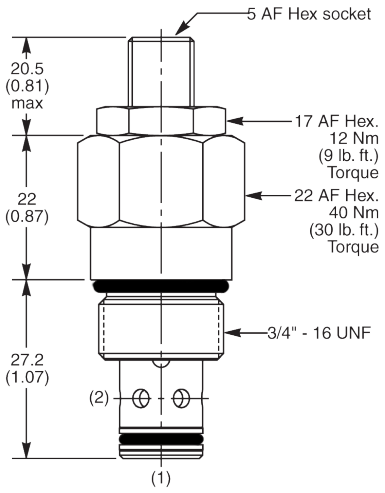
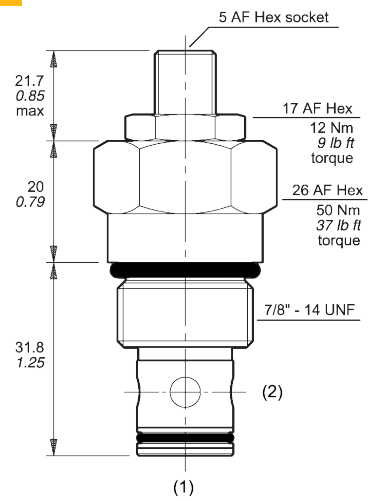
Needle Valve

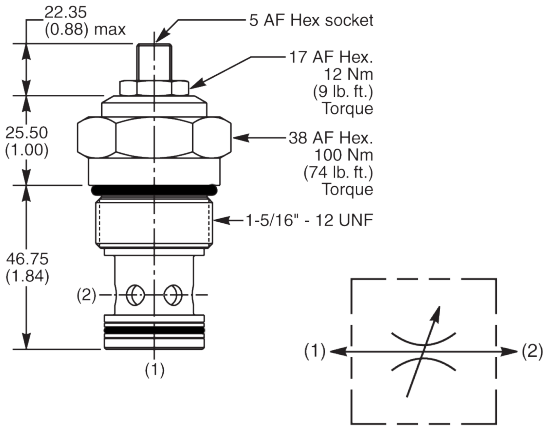
Dimensions Millimeters (inches)



J02A2ZN



J04A2ZN

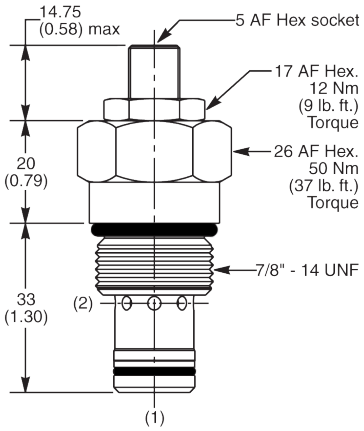


J06A2ZN

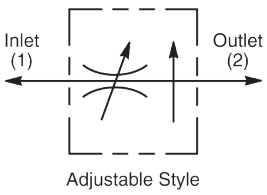
Series	Body	Max Inlet Pressure (bar)	Flow Rating (l/min)	Features
J02A2ZN	B08-2-6B	420	45	• High flow capacity from small valve / cavity. • Sensitive adjustment • Low leakage at shut off
J04A2ZN	B10-2-8B	420	110	
J06A2ZN	B16-2-16B	420	225	

Pressure Compensated Type

Dimensions Millimeters (inches)



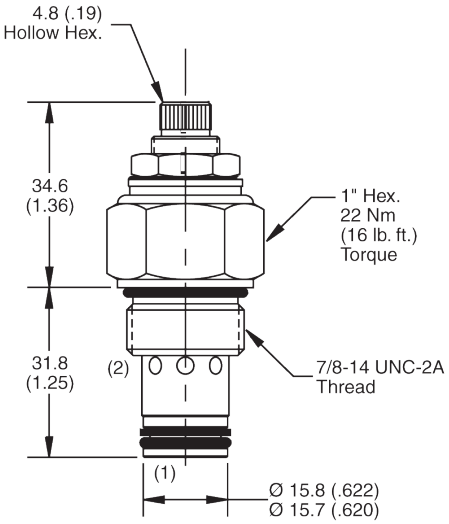
J04C2ZN



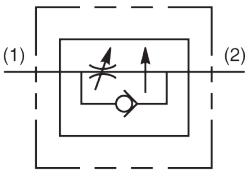
Series	Body	Max Inlet Pressure (bar)	Flow Rating (l/min)	Features
J04C2ZN	B10-2-8B	420	40	• Restricted reverse flow • Minimal flow change with pressure variation.

Pressure Compensated Type

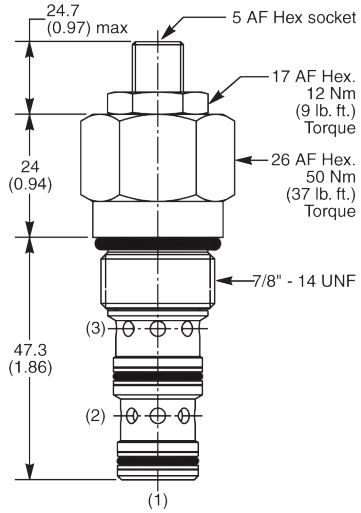
Dimensions Millimeters (inches)



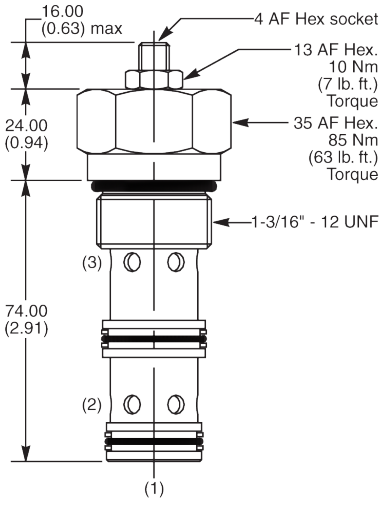
FA101S



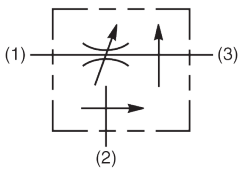
Series	Body	Max Inlet Pressure (bar)	Flow Rating (l/min)	Features
FA101S	B10-2-8B	210	20.6	• Free reverse flow



J04D3ZN



J1A125ZN



Series	Body	Max Inlet Pressure (bar)	Max Inlet Flow (l/min)	Priority Flow Rating (l/min)	Features
J04D3ZN	B10-2-8B	420	90	45	• 3 way flow control valve • Priority flow capabilities • Ideal for steering system applications.
J1A125ZN	LB10056S	350	150	90	• Fully compensated.

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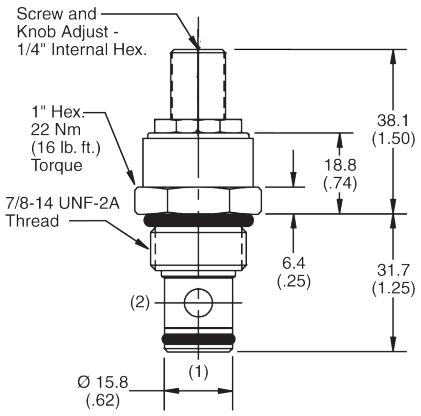
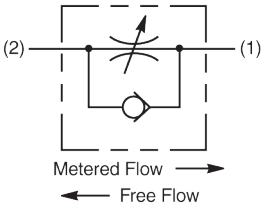
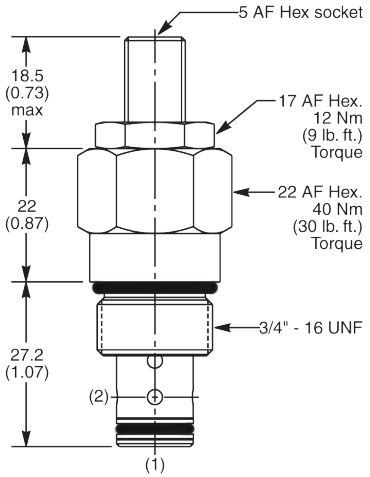
Needle Valve with Reverse Check

Dimensions Millimeters (inches)

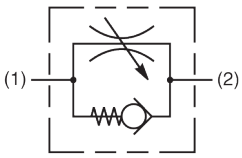


FV101S





J02B2ZN



Series	Body	Max Inlet Pressure (bar)	Flow Rating (l/min)	Features
FV101S	B10-2-8B	210	45	• High flow capacity • Free reverse flow • Metered flow from port 2 to 1.
J02B2ZN	B08-2-6B	420	30	• Sensitive adjustment • Low leakage at shut off • Free reverse flow • Metered flow from port 1to 2.

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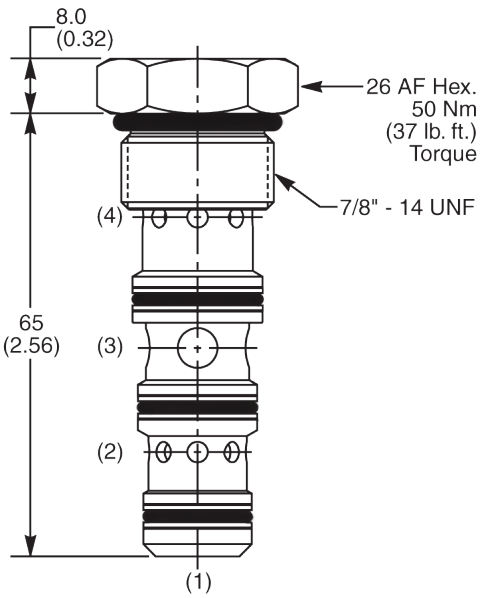
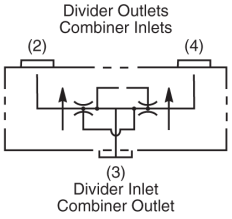
Pressure Compensated Type

Dimensions Millimeters (inches)





L04A3-30-30N

Series	Body	Max Inlet Pressure (bar)	Flow Rating (l/min)	Flow Ratio	Features
L04A3-30-30N	B10-4-8B	420	14-60	50:50	• Pressure compensated flow in both dividing and combining mode.

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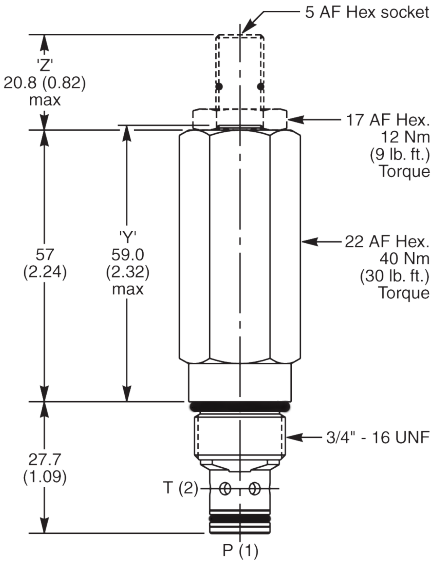
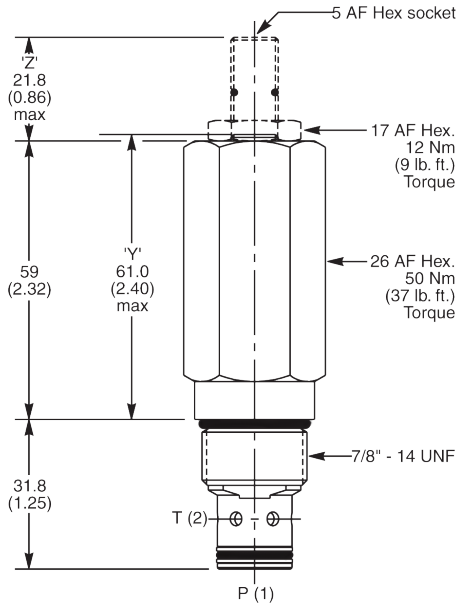
Direct Acting

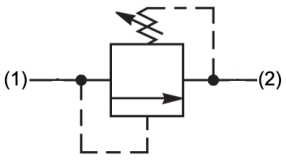


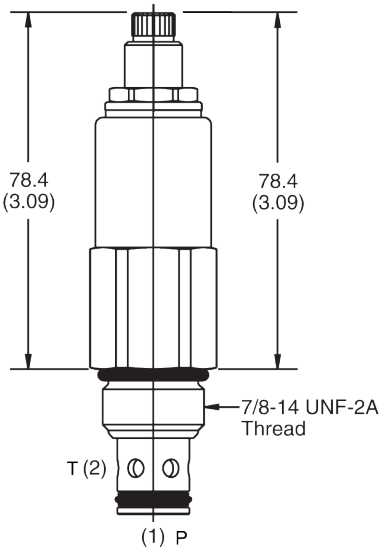
A02B2PZN



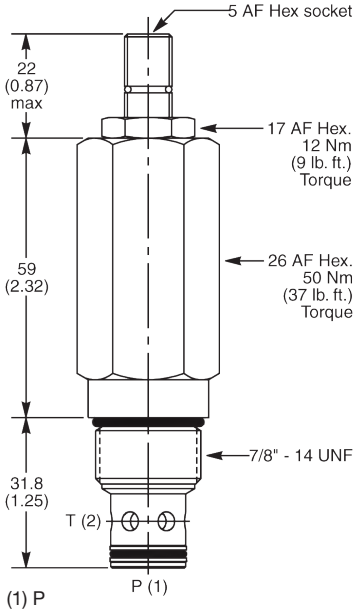
A04B2PZN

Dimensions Millimeters (inches)

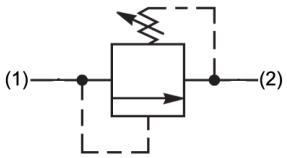




RD102S30



A04C2FZN



Series	Body	Max Inlet Pressure (bar)	Standard Setting (bar)	Flow Rating (l/min)	Pressure Range (bar)	Features
A02B2PZN	B08-2-6B	420	200	30	5-420	• Fast response • Stable throughout flow range. • Virtually leak free • Versatile relief valve
A04B2PZN	B10-2-8B	420	200	100	5-420	
RD102S30	B10-2-8B	250	103.4	38	41-207	
A04C2FZN	B10-2-8B	420	50	200	2-100	• Spool type • High flow capacity • Low pressure setting

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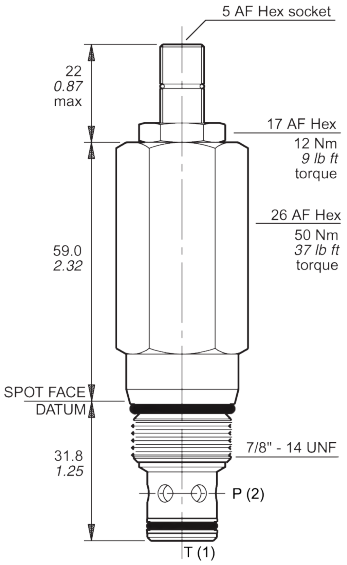
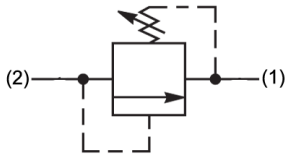
Differential Area

Dimensions Millimeters (inches)



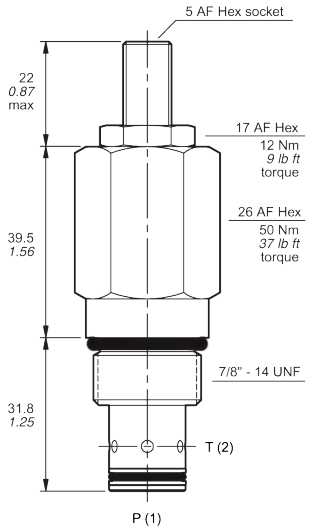


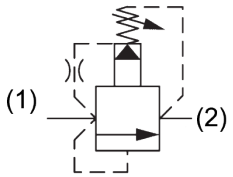
A04D2MZN

Series	Body	Max Inlet Pressure (bar)	Standard Setting (bar)	Flow Rating (l/min)	Adjustment Range (bar)	Features
A04D2MZN	B10-2-8B	350	200	150	2-350	• Fast reacting • Virtually leak free • Flat response

Pilot Operated

Dimensions Millimeters (inches)





A04G2PZN

Series	Body	Max Inlet Pressure (bar)	Standard Setting (bar)	Flow Rating (l/min)	Adjustment Range (bar)	Features
A04G2PZN	B10-2-8B	420	200	200	10-420	• High flow capacity • Full tank line back pressure capability.

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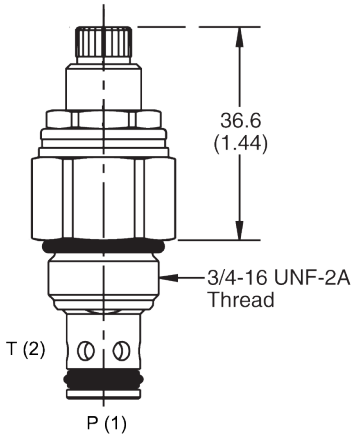
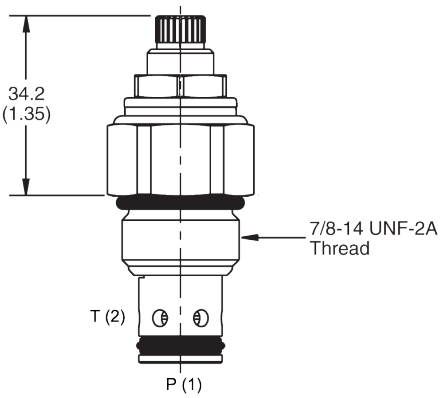
Pilot Operated

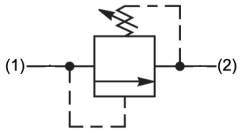
Dimensions Millimeters (inches)



RAH081S50



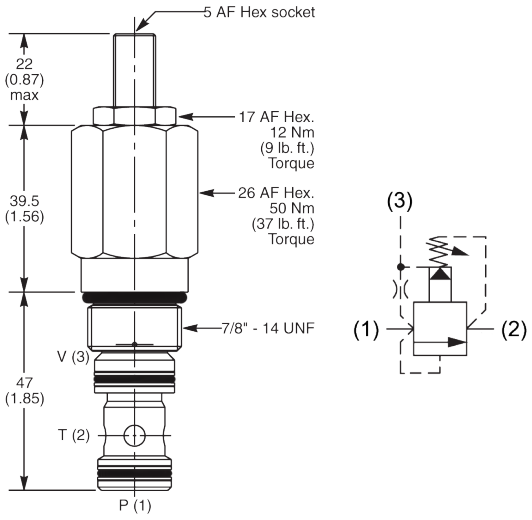
RAH101S50



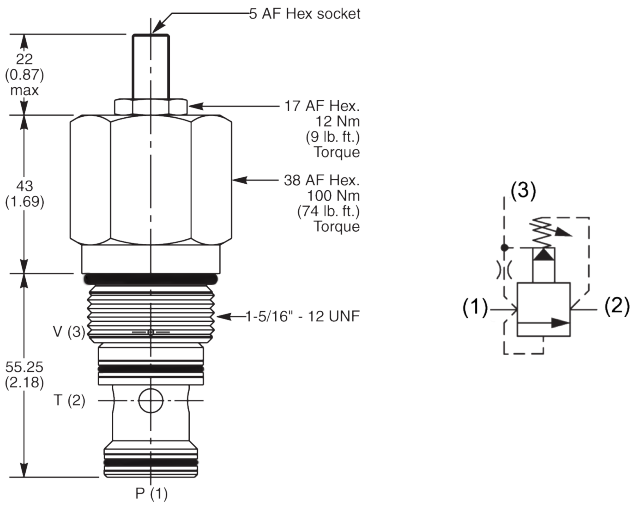
Series	Body	Max Inlet Pressure (bar)	Standard Setting (bar)	Flow Rating (l/min)	Adjustment Range (bar)	Features
RAH081S50	B08-2-6B	380	172.4	75	13.8 - 345	• Compact design • Consistent re-seat • Internal screening to protect pilot seat.
RAH101S50	B10-2-8B	380	172.4	113	13.8 - 345	

Ventable Relief Valve

Dimensions Millimeters (inches)



A04H3PZN



A06H3PZN

Series	Body	Max Inlet Pressure (bar)	Standard Setting (bar)	Flow Rating (l/min)	Adjustment Range (bar)	Features
A04H3PZN	B10-3S-8B	420	200	190	10 - 420	• High flow capacity • Full tank line back pressure capability. • Ideal for pump relief and unloading systems using the vent line.
A06H3PZN	B16-3S-16B	420	200	400	10 - 420	

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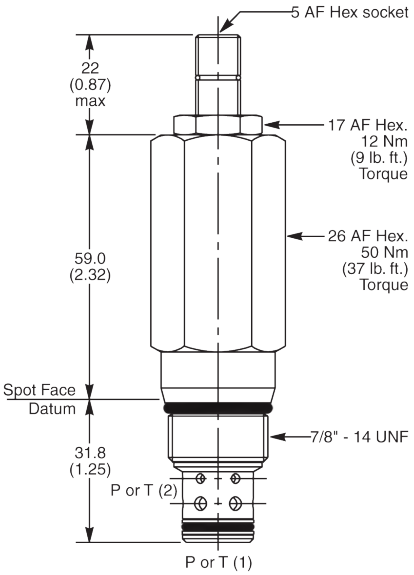
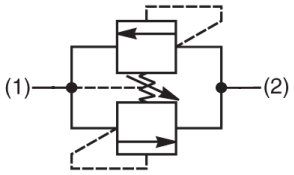
Cross Over Type

Dimensions Millimeters (inches)



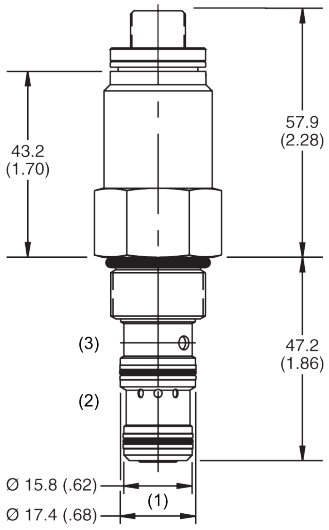


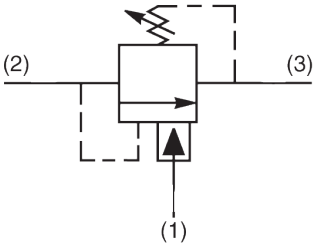
A04J2MZN

Series	Body	Max Inlet Pressure (bar)	Standard Setting (bar)	Setting Range (bar)	Flow Rating (l/min)	Features
A04J2MZN	B10-2-8B	420	200	10-350	120	• High flow capacity • Relieves in both directions • Cost effective with single adjustment.

Unloader Valve

Dimensions Millimeters (inches)





RU101S30C

Series	Body	Max Inlet Pressure (bar)	Standard Pressure Setting (bar)	Flow Capacity (l/min)	Setting Range (bar)	Features
RU101S30C	B10-3-8B	245	103.5	3.75	14-207	• Suitable for accumulator unloading circuits. • Ability to provide a fixed percentage between load and unload pressures.

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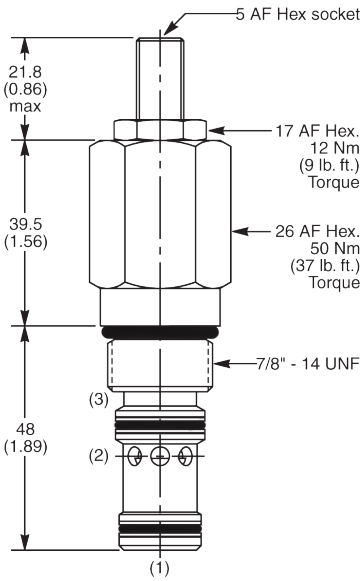
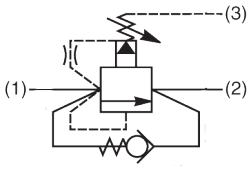
Crewkerne, UK

Pilot Operated

Dimensions Millimeters (inches)



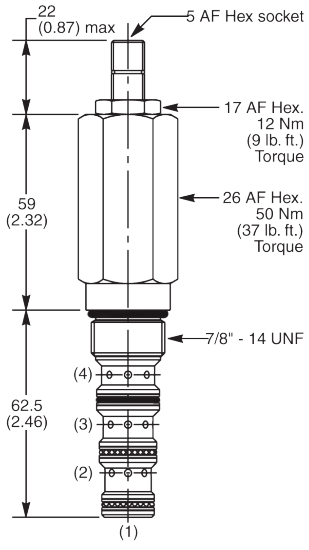


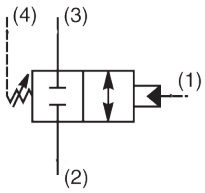
B04D3PZN

Series	Body	Max Inlet Pressure (bar)	Standard Setting (bar)	Flow Rating (l/min)	Adjustment Range (bar)	Features
B04D3PZN	B10-3S-8B	420	200	70	10 to 420	• High flow capacity

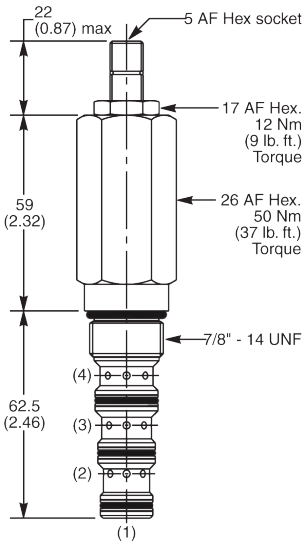
Direct Acting

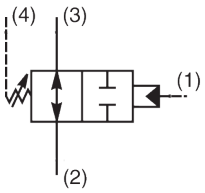
Dimensions Millimeters (inches)





B04H4GZN





B04J4GZN

Series	Body	Max Inlet Pressure (bar)	Standard Setting (bar)	Flow Rating (l/min)	Adjustment Range (bar)	Features
B04H4GZN	B10-4-8B	420	80	47	2 to 166	• External pilot and drain
B04J4GZN	B10-4-8B	420	80	47	2 to 166	

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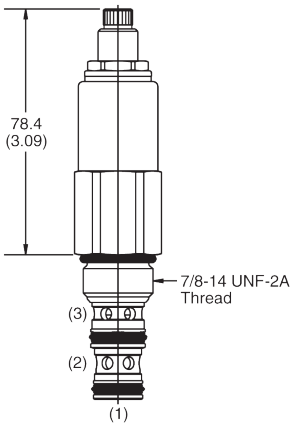
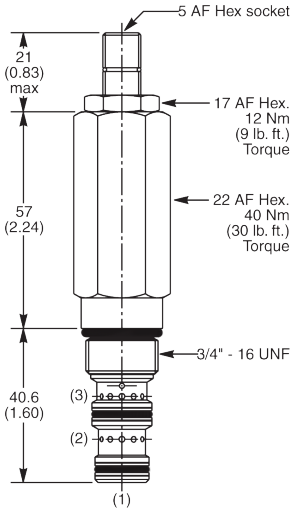
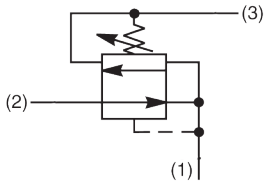
Direct Acting



PR103S



Dimensions Millimeters (inches)

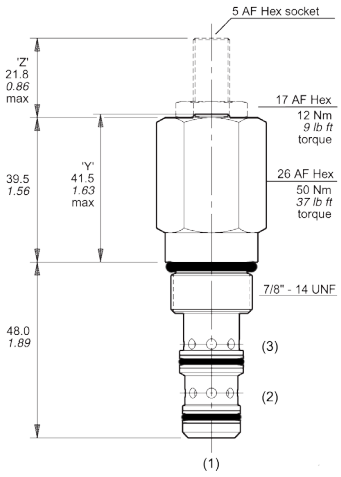


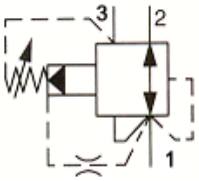
C02A3CZN / C02A3GZN

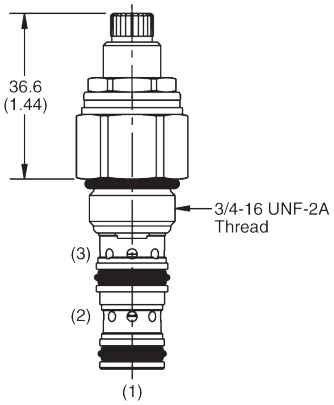
Series	Body	Max Inlet Pressure (bar)	Flow Rating (l/min)	Reducing Pressure Range (bar)	Features
C02A3CZN	B08-3-6B	420	20	5 to 40	• Partial reverse flow capacity
C02A3GZN	B08-3-6B	420	20	50 to 150	
PR103S21	B10-3-8B	210	56	28 to 124	

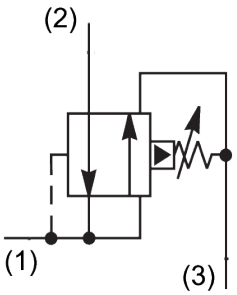
Pilot Operated

Dimensions Millimeters (inches)









C04B3MZN

PRH081S50

Series	Body	Max Inlet Pressure (bar)	Standard Setting (bar)	Flow Rating (l/min)	Reducing Pressure Range (bar)	Features
C04B3MZN	B10-3-8B	420	100	120	10 to 210	• Internal screening pilot protection. (PRH only) • Low pressure rise / flow characteristics.
PRH081S50	B08-3-6B	380	172.4	30	14 to 345	

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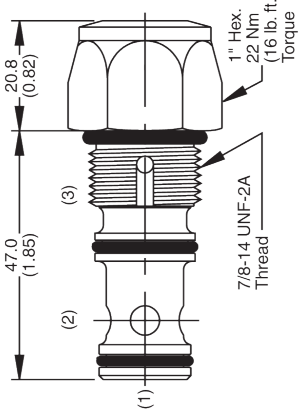
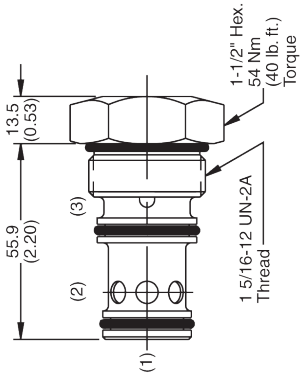
Poppet Type

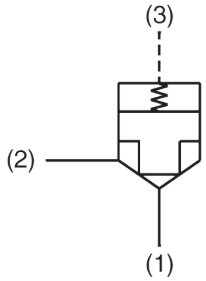
Dimensions Millimeters (inches)



10SLC1-A-150



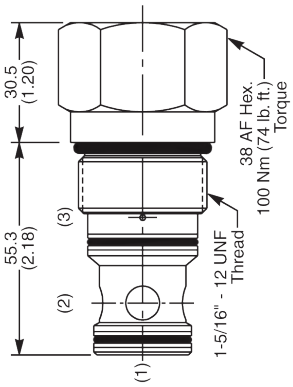
16SLC1-A-50

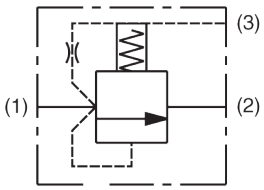


Series	Body	Max Inlet Pressure (bar)	Bias Spring (bar)	Flow Rating (l/min)	Features
10SLC1-A-150	B10-3S-8B	240	10.3	57	• Typically used to perform high flow directional switching operations.
16SLC1-A-50	B16-3S-16B	240	3.5	189	

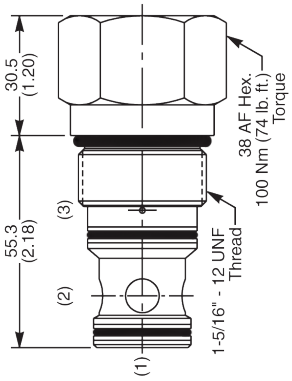
Spool Type

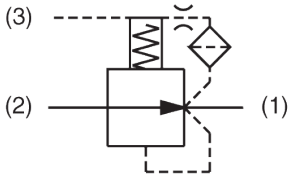
Dimensions Millimeters (inches)





R06F3-5.5N
Normally Closed





R06G3-5.5N
Normally Open

Series	Body	Max Inlet Pressure (bar)	Switching Pressure (bar)	Flow Rating (l/min)	Features
R06F3-5.5N	B16-3S-16B	420	5.5	270	• Typical application - to control flow or to regulate pressure.
R06G3-5.5N	B16-3S-16B	420	5.5	90	

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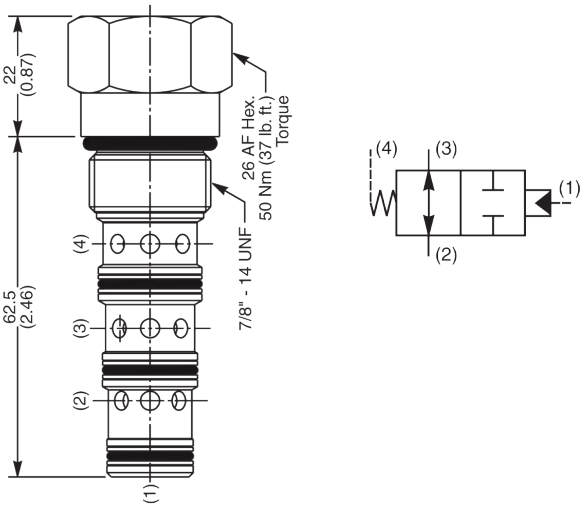
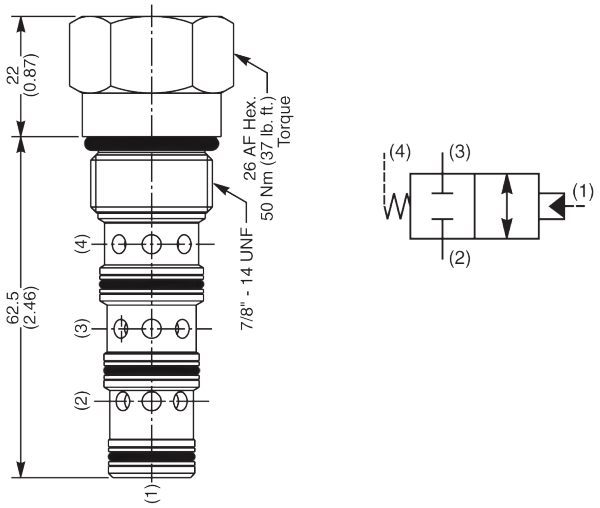
Diverter Type

Dimensions Millimeters (inches)



R04A4-5.0NS

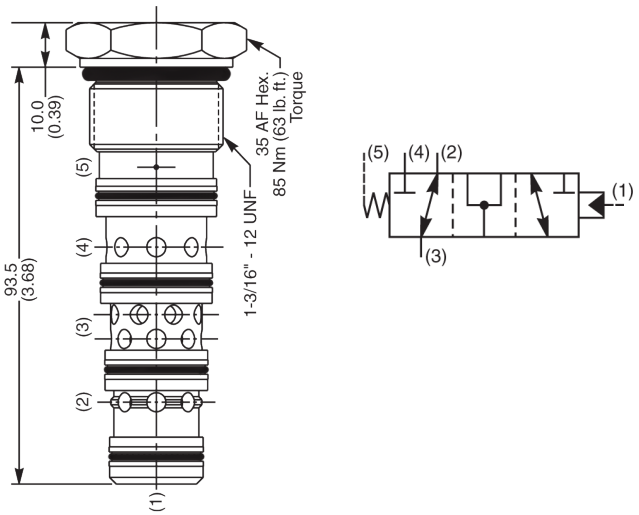


R04B4-5.0NS

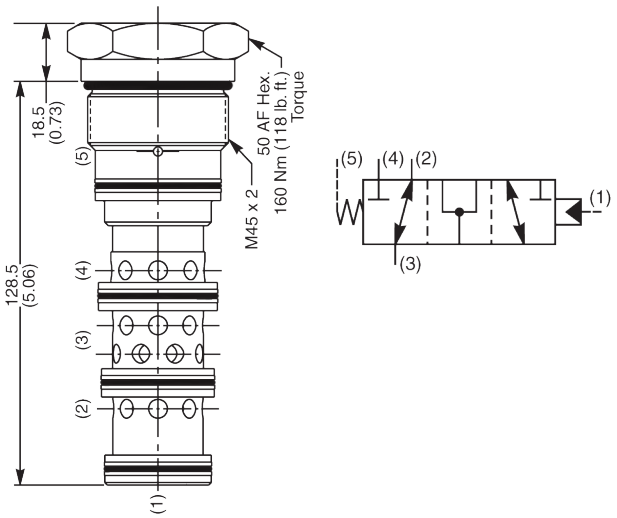
Series	Body	Max Inlet Pressure (bar)	Switching Pressure (bar)	Flow Rating (l/min)	Features
R04A4-5.0NS	B10-4-8B	420	5	47	• Range of switching pressures available • Sealed pilot
R04B4-5.0NS	B10-4-8B	420	5	47	

Pilot Operated

Dimensions Millimeters (inches)



N5A125-6.9N



N5A300-6.9N

Series	Body	Max Inlet Pressure (bar)	Switching Pressure (bar)	Flow Rating (l/min)	Features
N5A125-6.9N	LB10314S	420	6.9	90	• Range of switching pressures available
N5A300-6.9N	LB10316S	420	6.9	270	

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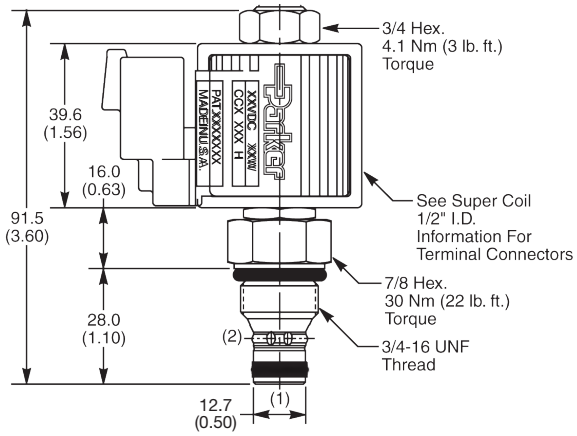
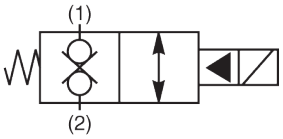
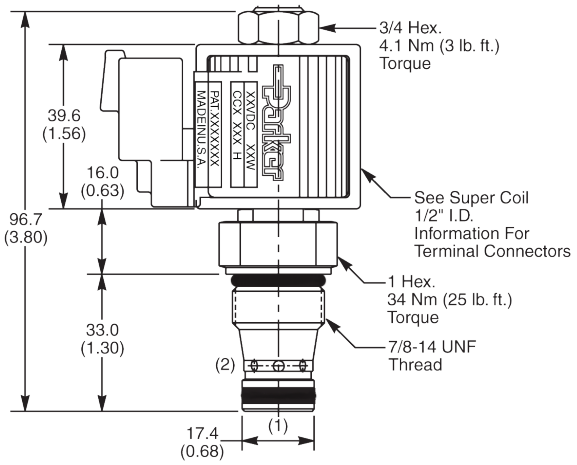
2 Way Bi-Directional Poppet

Dimensions Millimeters (inches)

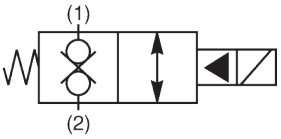


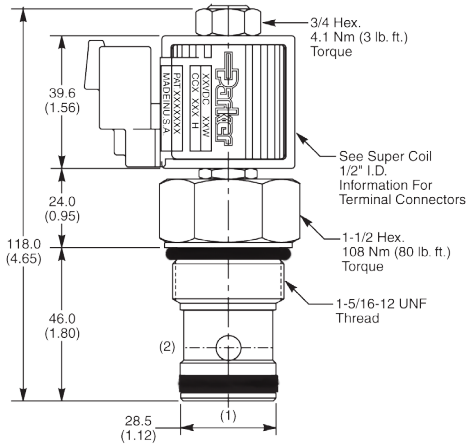
GS028100N



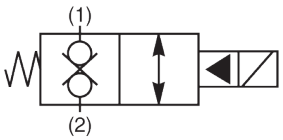


GS048100N





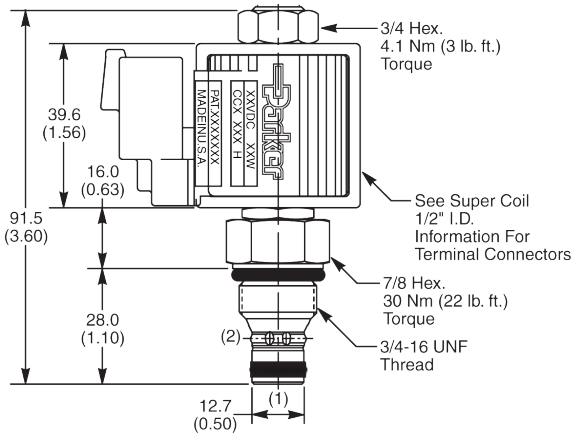
GS068100N



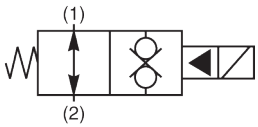
Series	Body	Max Inlet Pressure (bar)	Coil Type	Flow Rating (l/min)	Features
GS028100N	B08-2-6B	350	CC	34	• Normally closed • Bi-directional poppet valve
GS048100N	LB10545S	350	CC	68	
GS068100N	B16-2-16B	350	CC	190	

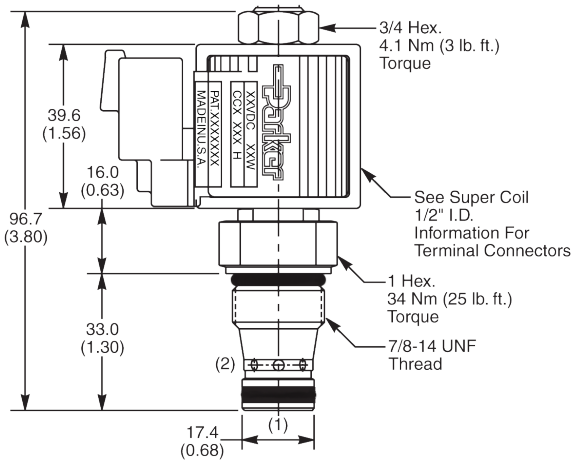
2 Way Bi-Directional Poppet

Dimensions Millimeters (inches)

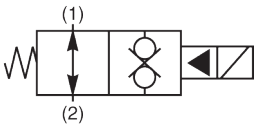


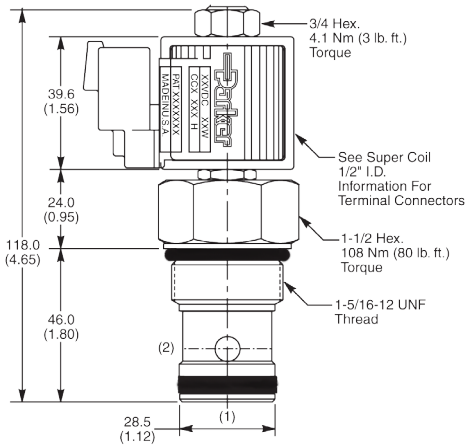
GS028600N



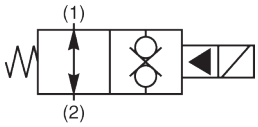


GS048600N





GS068600N



Series	Body	Max Inlet Pressure (bar)	Coil Type	Flow Rating (l/min)	Features
GS028600N	B08-2-6B	350	CC	34	• Normally open • Bi-directional poppet valve
GS048600N	LB10545S	350	CC	68	
GS068600N	B16-2-16B	350	CC	190	

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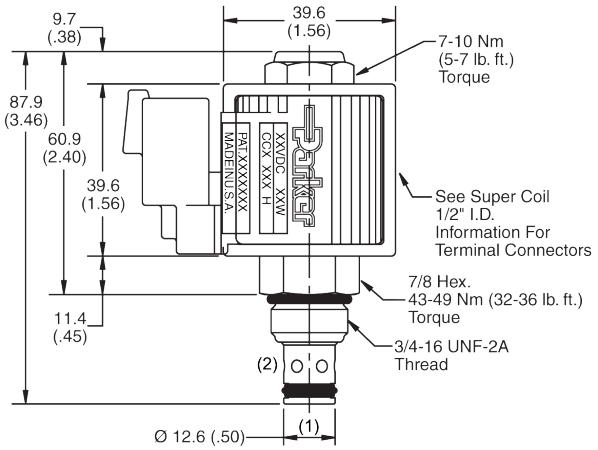
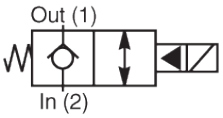
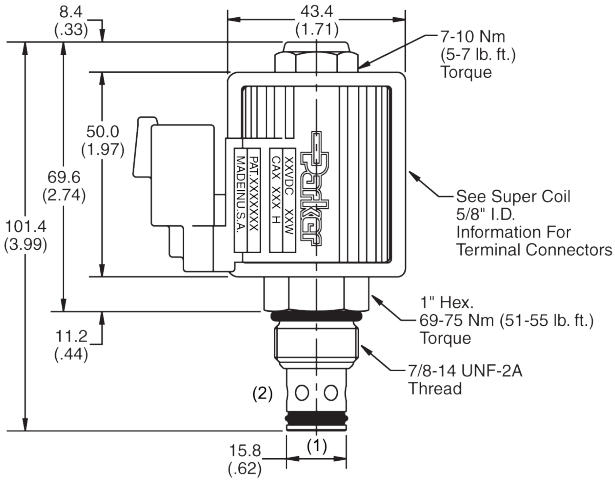
2 Way Poppet - Normally Closed

Dimensions Millimeters (inches)

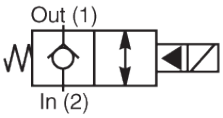


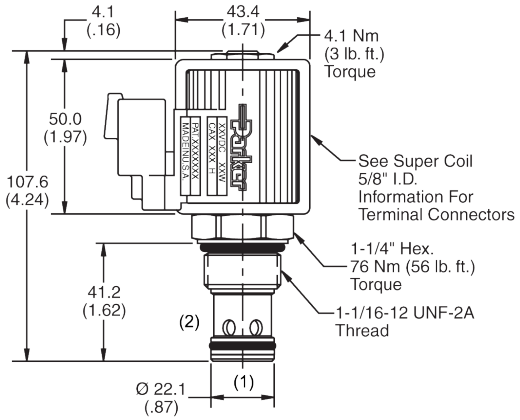
DSH081CR



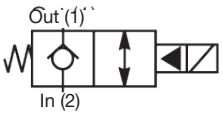


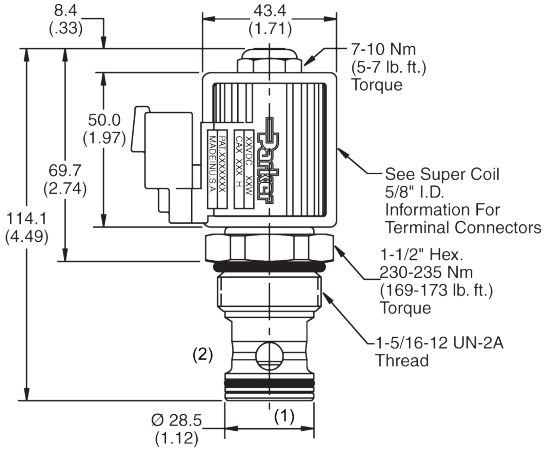
DSH101CR



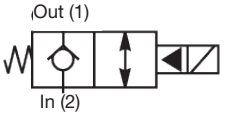


DSH121CR





DSH161CR



Series	Body	Max Inlet Pressure (bar)	Coil Type	Flow Capacity (l/min)	Features
DSH081CR	B08-2-6B	350	CC	30	• Free reverse flow • Low leakage
DSH101CR	B10-2-8B	350	CA	60	
DSH121CR	B12-2-12B	350	CA	90	
DSH161CR	B16-2-16B	210	CA	350	

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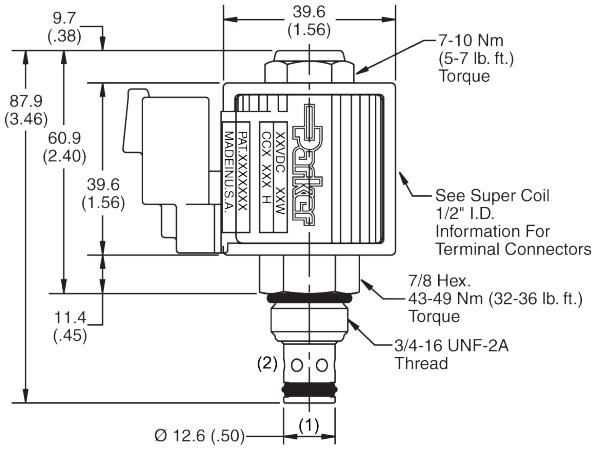
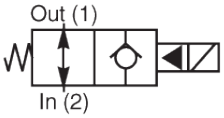
Crewkerne, UK

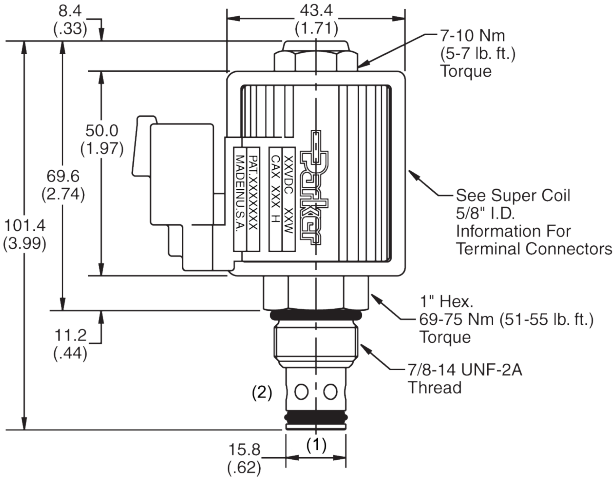
2 Way Poppet - Normally Open

Dimensions Millimeters (inches)



DSH081NR





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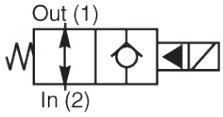

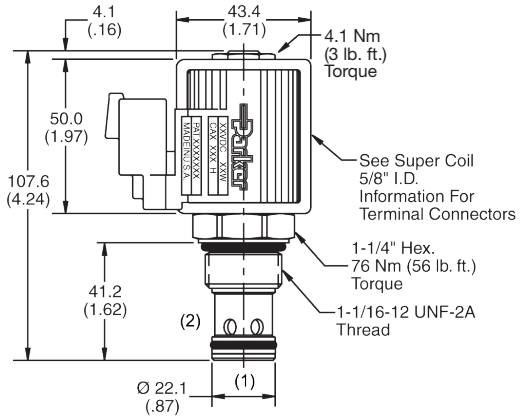

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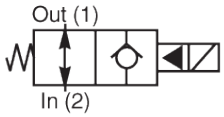
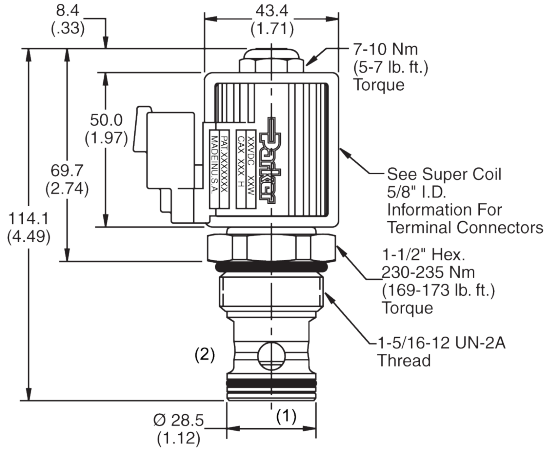
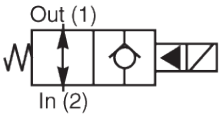




DSH161NR



Series	Body	Max Inlet Pressure (bar)	Coil Type	Flow Rating (l/min)	Features
DSH081NR	B08-2-6B	350	CC	30	• Low leakage • Free reverse flow
DSH101NR	B10-2-8B	350	CA	60	
DSH121NR	B12-2-12B	350	CA	90	
DSH161NR	B16-2-16B	210	CA	350	

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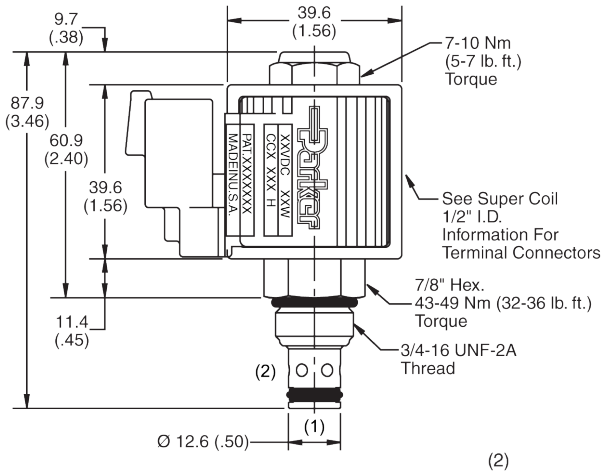
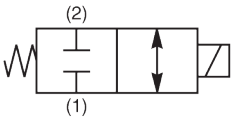
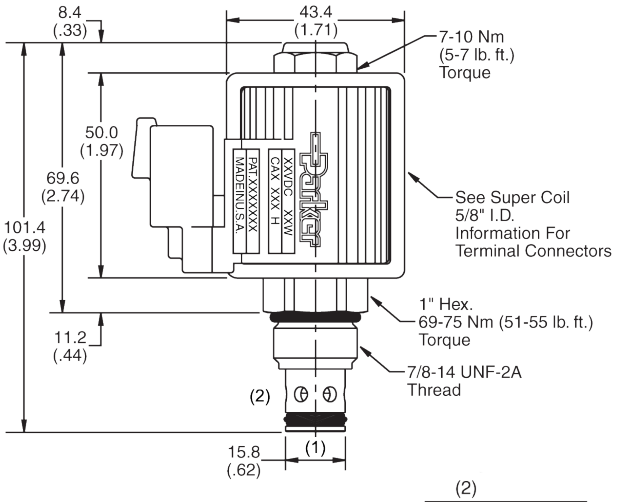
2 Way Spool - Normally Closed

Dimensions Millimeters (inches)

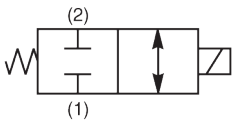


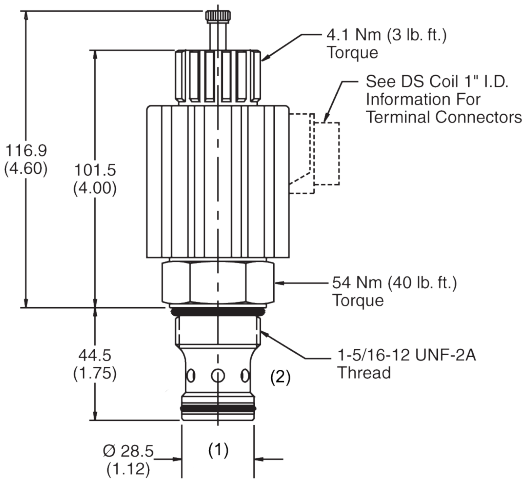
DSH082C



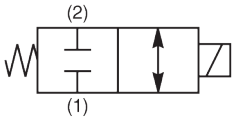


DSH102C





DS162C



Series	Body	Max Inlet Pressure (bar)	Coil Type	Flow Rating (l/min)	Features
DSH082C	B08-2-6B	350	CC	15	• Normally closed
DSH102C	B10-2-8B	350	CA	30	• Normally closed
DS162C	B16-2-16B	210	Series 1"	75	• Normally closed

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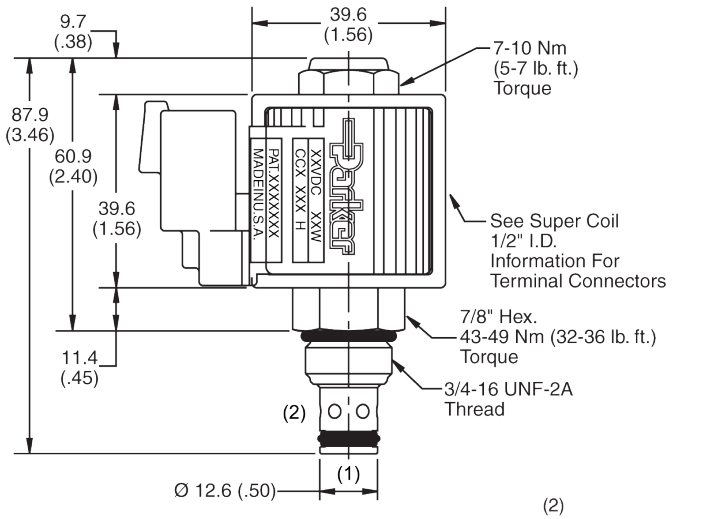
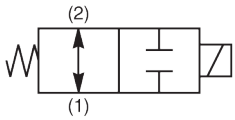
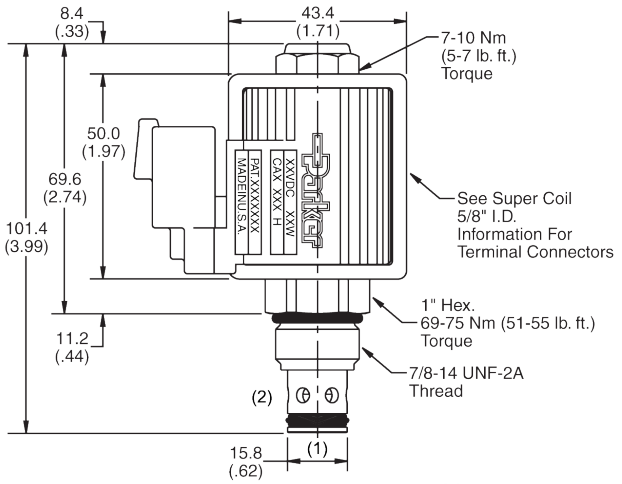
2 Way Spool Normally Open

Dimensions Millimeters (inches)

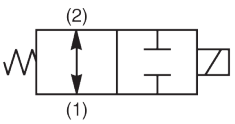


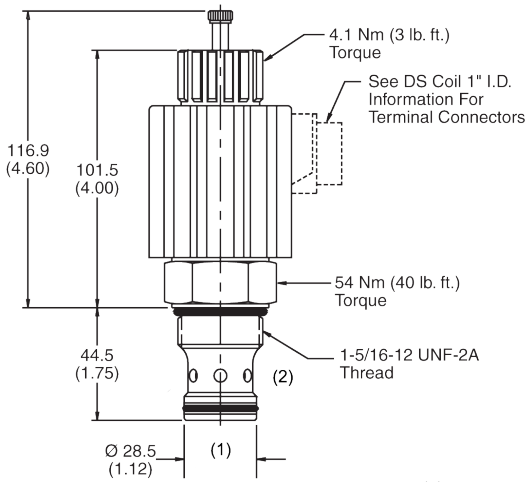
DSH082N



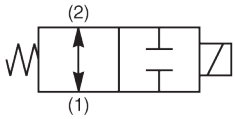


DSH102N





DS162N



Series	Body	Max Inlet Pressure (bar)	Coil Type	Flow Rating (l/min)	Features
DSH082N	B08-2-6B	350	CC	8.4	• Normally open
DSH102N	B10-2-8B	350	CA	19	• Normally open
DS162N	B16-2-16B	210	Series 1"	75	• Normally open

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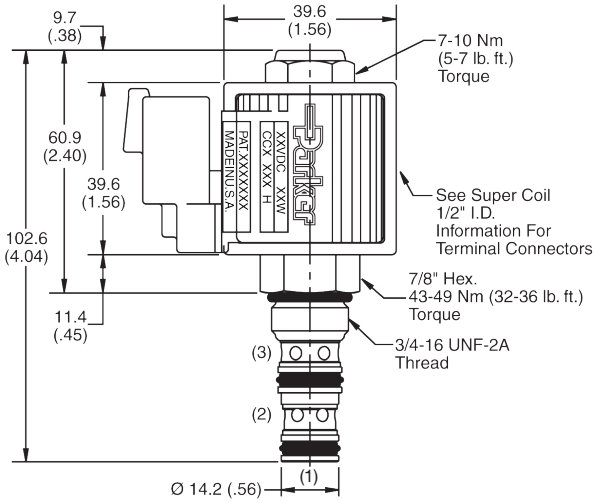
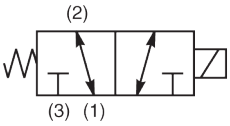
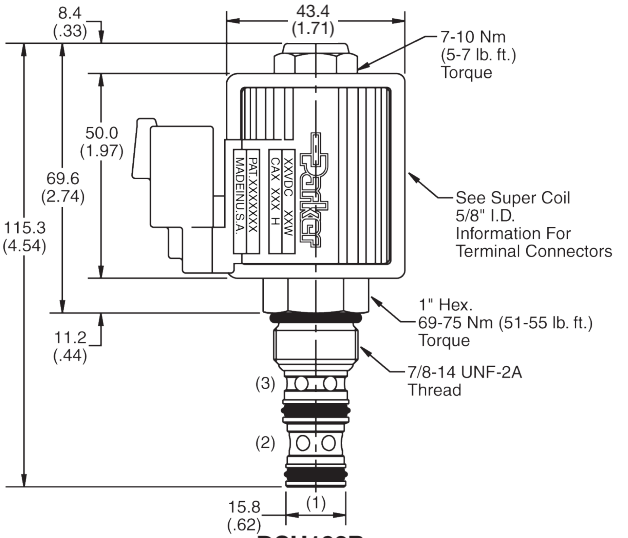
3 Way Spool Normally Closed

Dimensions Millimeters (inches)

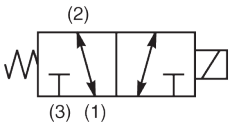


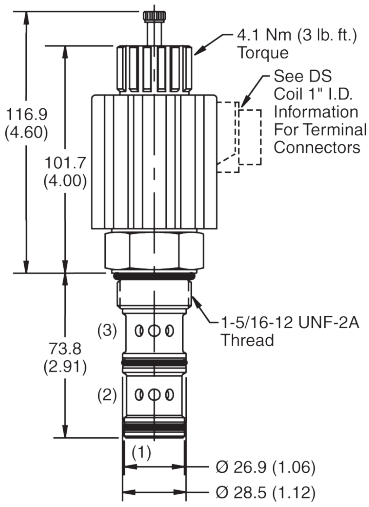
DSH083B



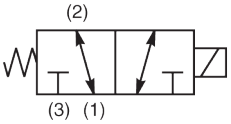


DSH103B





DS163



Series	Body	Max Inlet Pressure (bar)	Coil Type	Flow Rating (l/min)	Features
DSH083B	B08-3-6B	350	CC	15	• Normally closed
DSH103B	B10-3-8B	350	CA	30	• Normally closed
DS163	B16-3-16B	210	Series 1"	42	• Normally closed

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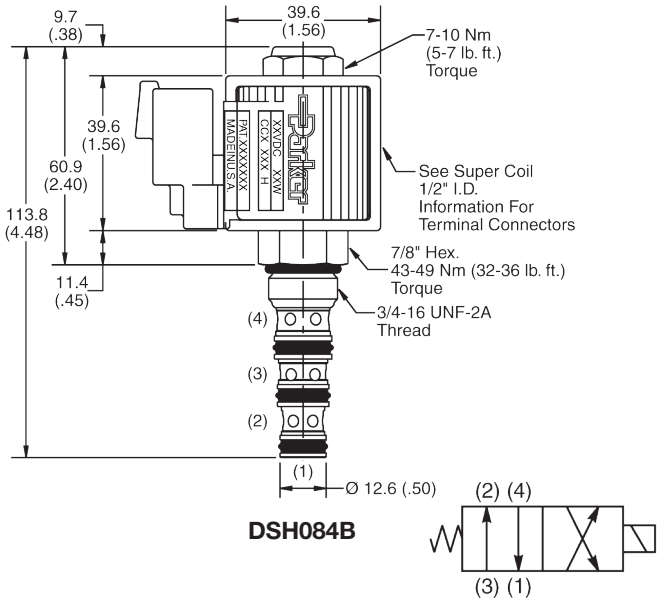
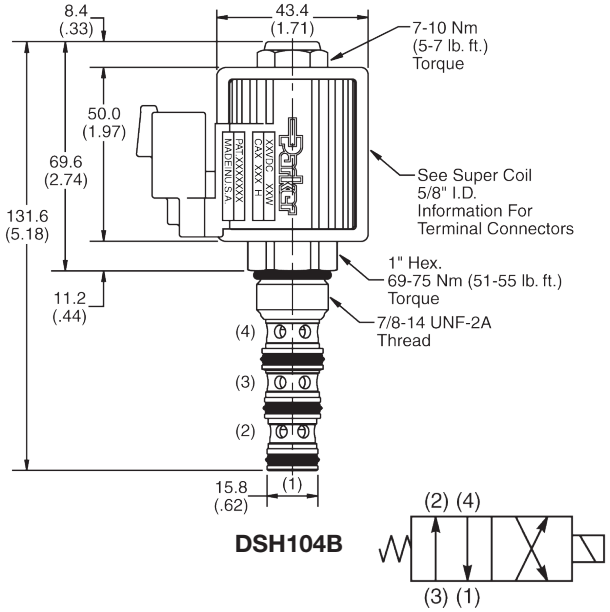
4 Way 2 Position Spool - Normally Closed

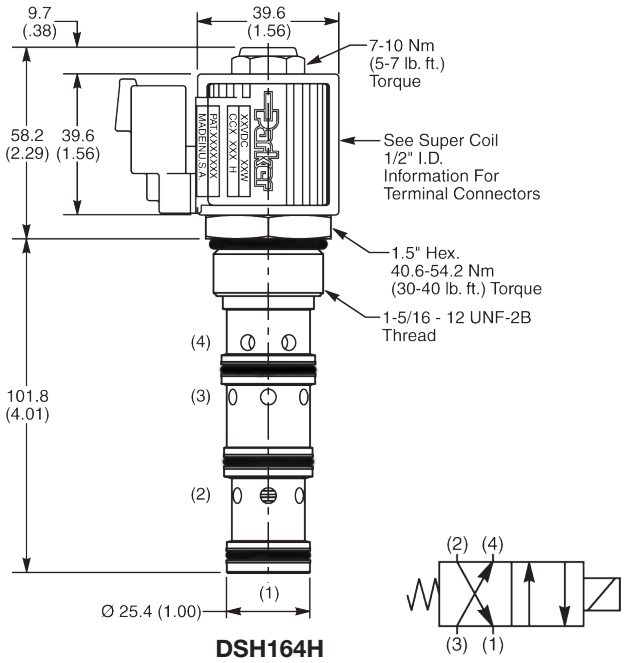
Dimensions Millimeters (inches)



DSH084B



DSH104B



DSH164H

Series	Body	Max Inlet Pressure (bar)	Coil Type	Flow Rating (l/min)	Features
DSH084B	B08-4-6B	350	CC	11 to 15	• Normally closed
DSH104B	B10-4-8B	350	CA	23 to 38	• Normally closed
DSH164H	B16-4-16B	350	CC	114	• Normally closed • Pilot operated

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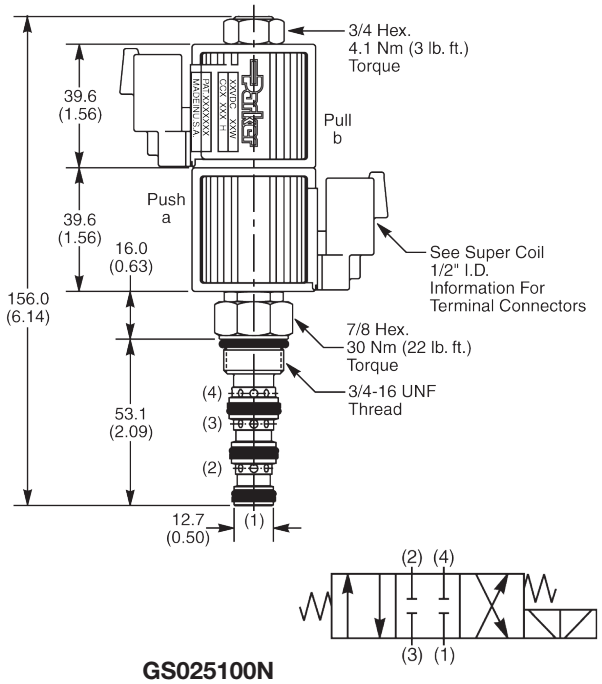
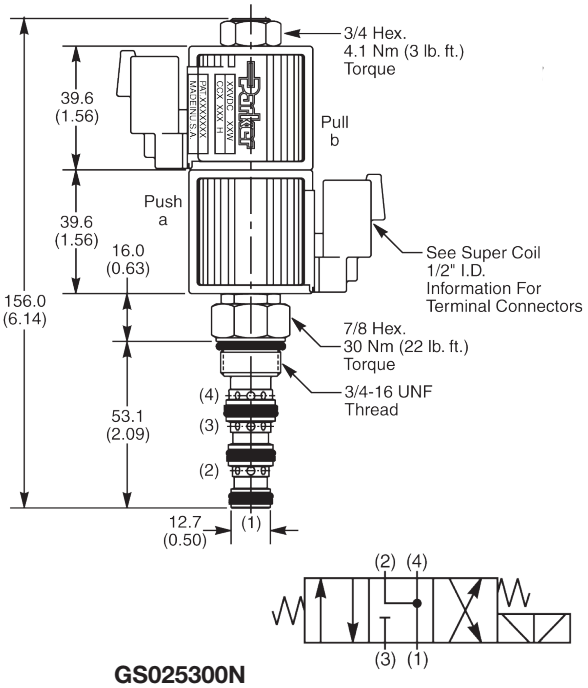
4 Way 3 Position Spool

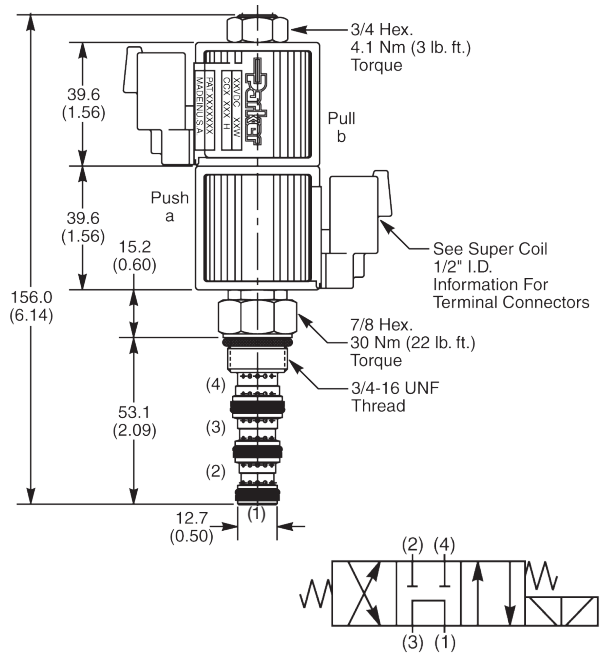
Dimensions Millimeters (inches)



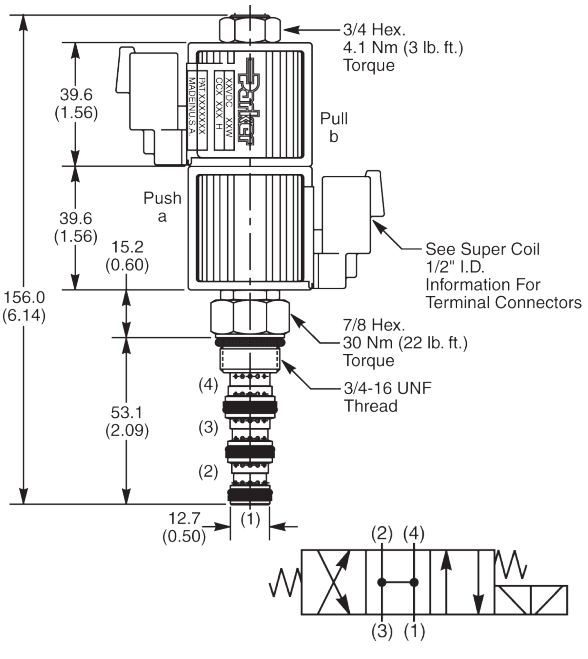
GS025100N



GS025300N



GS025700N

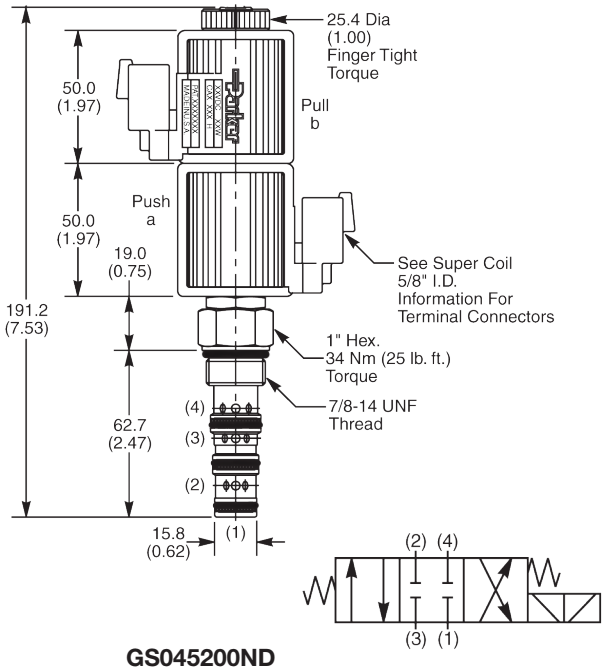


GS025900N

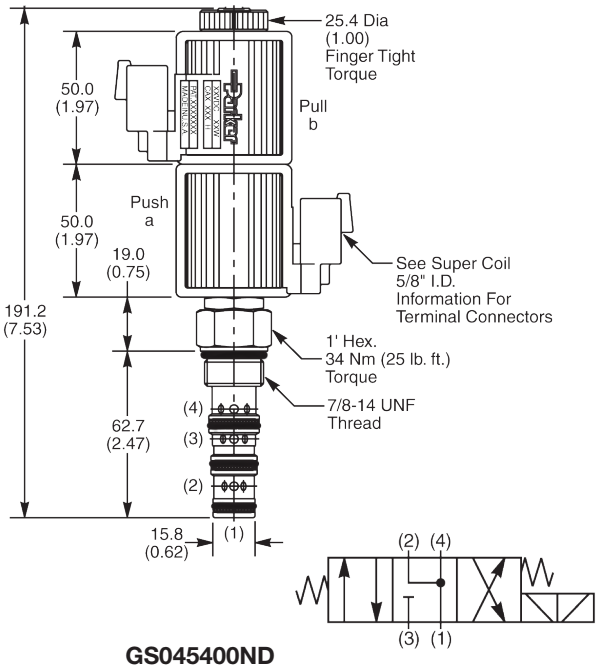
Series	Body	Max Inlet Pressure (bar)	Coil Type	Flow Rating (l/min)	Features
GS025100N	B08-4-6B	350	CC	17	• Double acting cylinder and bi-directional motor application. • Use with 2 pcs CC type coil
GS025300N	B08-4-6B	350	CC	15	
GS025700N	B08-4-6B	350	CC	13.3	
GS025900N	B08-4-6B	350	CC	13.3	

4 Way 3 Position Spool

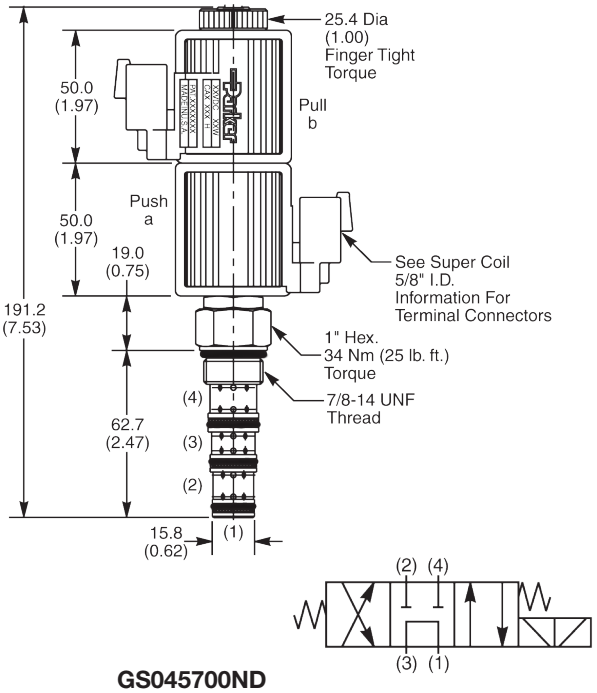
Dimensions Millimeters (inches)



GS045200ND



GS045400ND



GS045700ND

Series	Body	Max Inlet Pressure (bar)	Coil Type	Flow Rating (l/min)	Features
GS045200ND	B10-4-8B	350	CA	42	• Double acting cylinder and bi-directional motor application. • Use with 2 pcs CA type coil
GS045400ND	B10-4-8B	350	CA	42	
GS045700ND	B10-4-8B	350	CA	42	
GS045900ND	B10-4-8B	350	CA	42	

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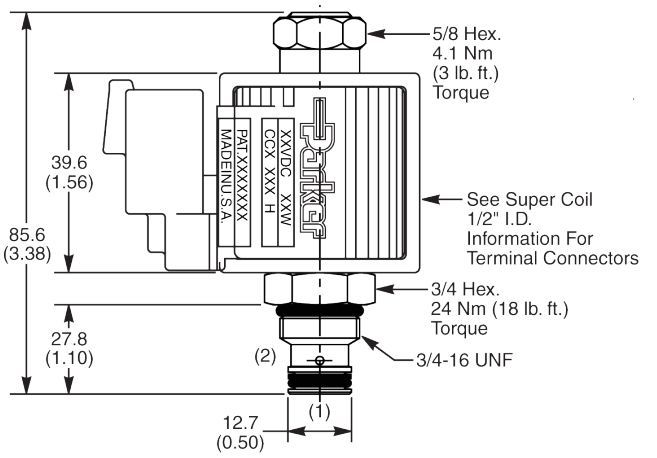
Pressure Relieving

Dimensions Millimeters (inches)



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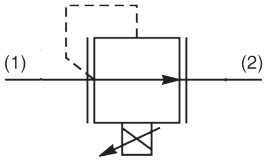

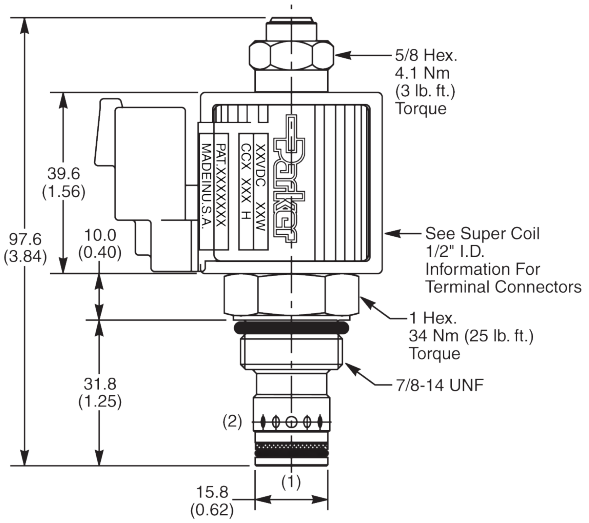

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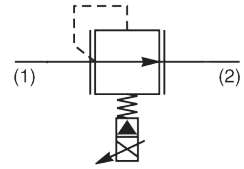

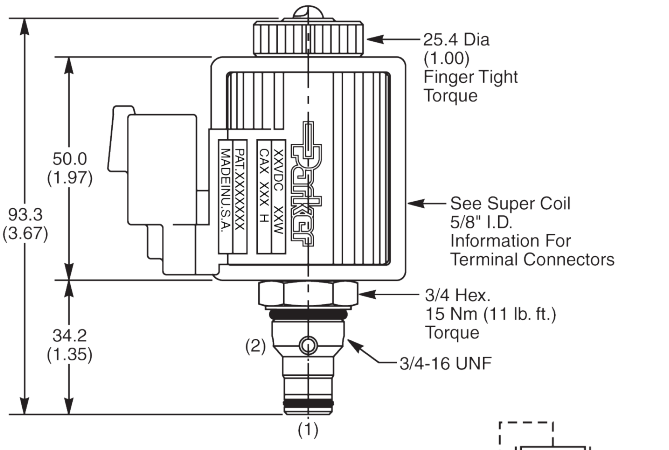

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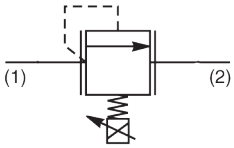

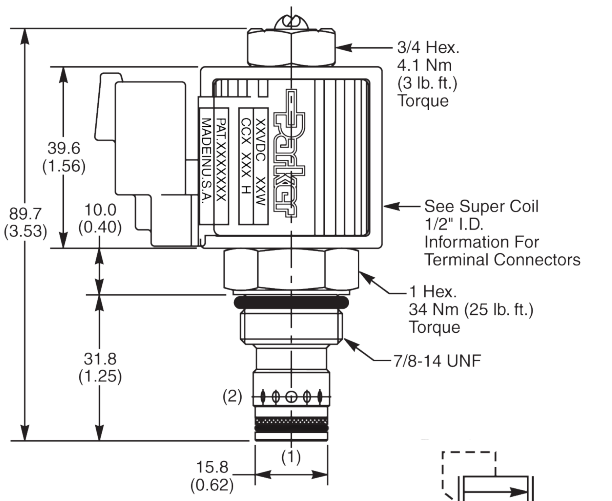

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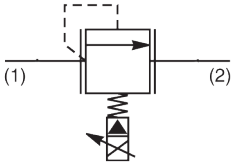
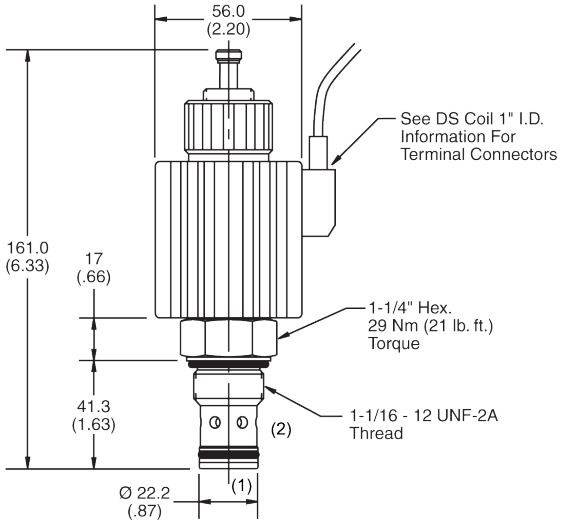
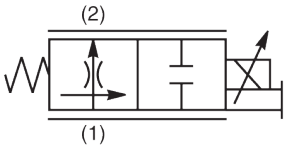


Series	Body	Max Inlet Pressure (bar)	Valve Type (De-energised condition)	Flow Capacity (l/min)	Coil Type	Features
AP02B2YP35C	B08-2-6B	350	Open	1.3	CC	• Alternative pressure settings available upon request.
AP04G2YP35CN	B10-2-8B	350	Open	95	CC	
AP02B2YR35ANL	B08-2-6B	350	Closed	1.9	CA	
AP04G2YR35CN	B10-2-8B	350	Closed	95	CC	

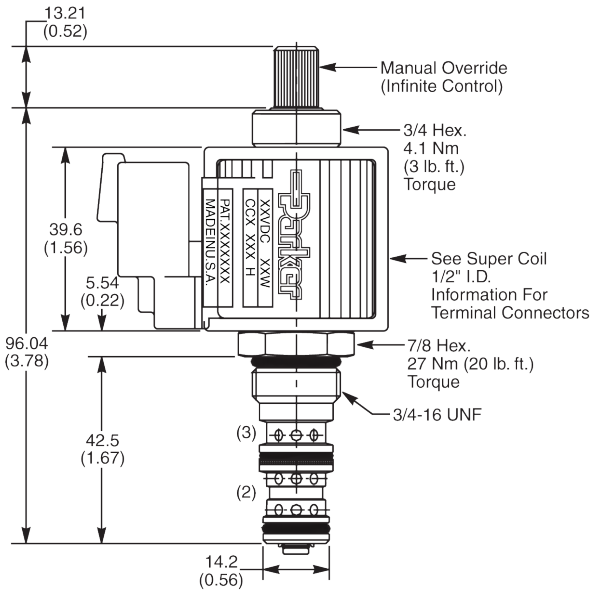
Normally Open Flow Control

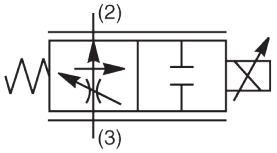
Dimensions Millimeters (inches)





DF122N14





JP02P2100N

Series	Body	Max Inlet Pressure (bar)	Flow Rating (l/min)	Coil Type
DF122N14	B12-2-12B	210	53	1" Series
JP02P2100N	B08-3-6B	210	19	CC

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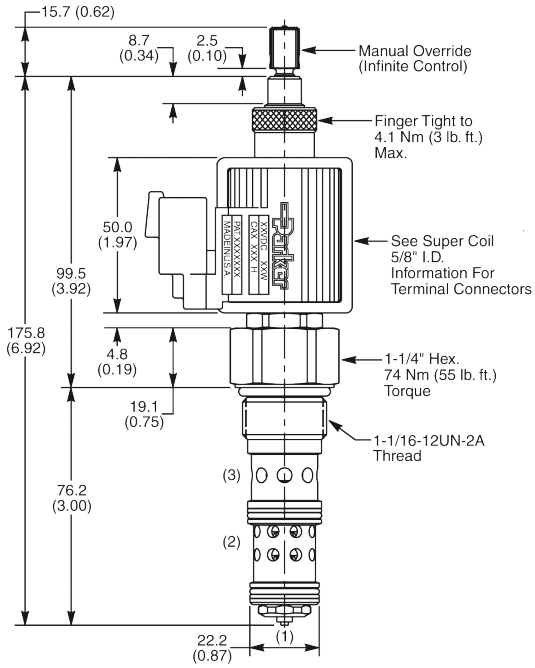
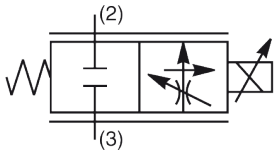
2 Way Flow Controls

Dimensions Millimeters (inches)

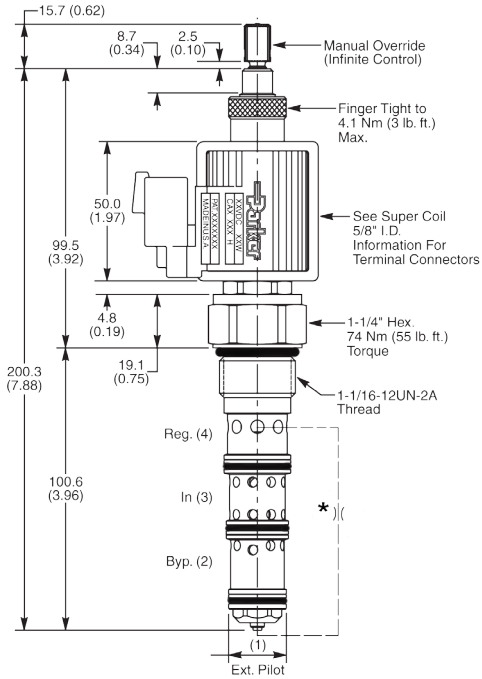


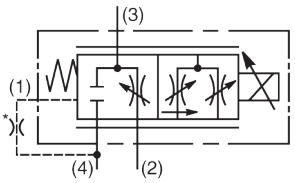


DFA125C21SN

3 Way Flow Controls

Dimensions Millimeters (inches)





DFA125C31SN

Series	Body	Max Inlet Pressure (bar)	Input Flow Capacity (l/min)	Output Flow Capacity (l/min)	Coil Type	Features
DFA125C21SN	B12-3L-12T	210	75	56.8	CA	• Pressure compensated on all ports
DFA125C31SN	B12-4L-12T	210	75	56.8	CA	

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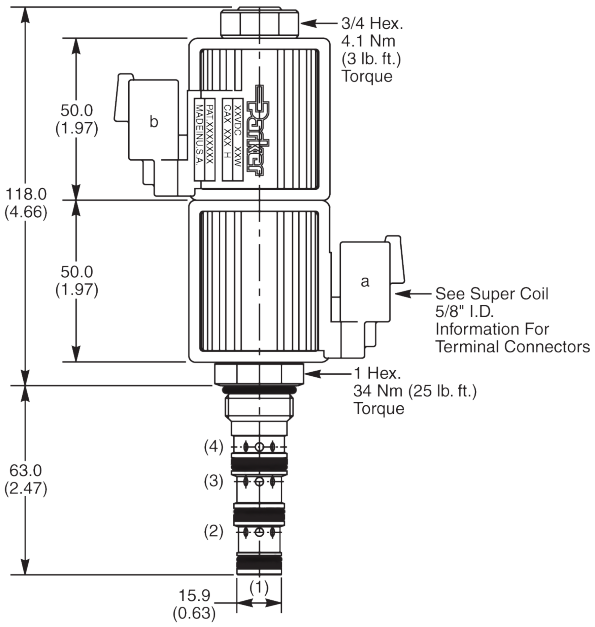
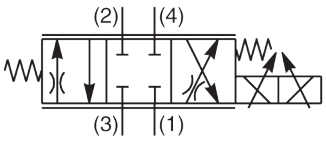
4 Way Directional Controls



DSP105C1 / DSP105C4

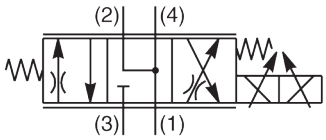
Dimensions Millimeters (inches)

CLOSED CENTER



DSP105C1

FLOATING CENTER



DSP105C4

Series	Body	Max Tank Pressure (bar)	Max Inlet Pressure (bar)	Flow Rating (l/min)	Coil Type	Features
DSP105C1	B10-4-8B	210	350	32	CA	• Pressure compensated on all ports
DSP105C4	B10-4-8B	210	350	32	CA	

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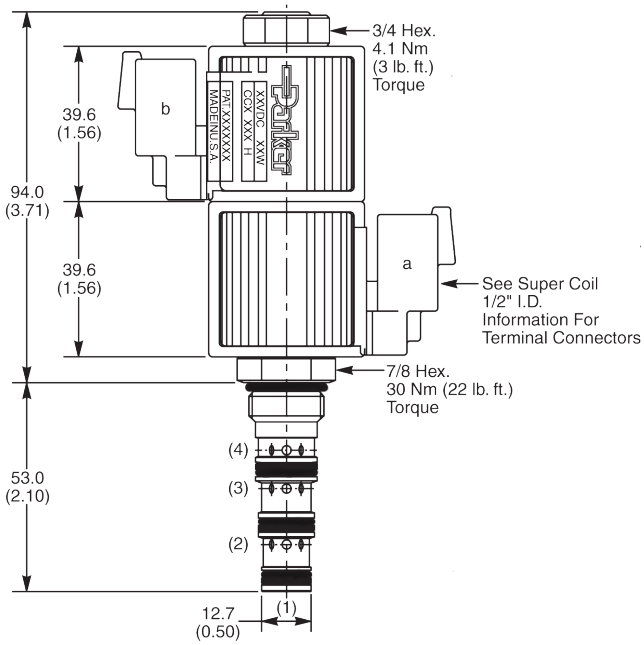
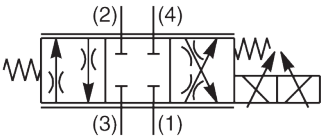
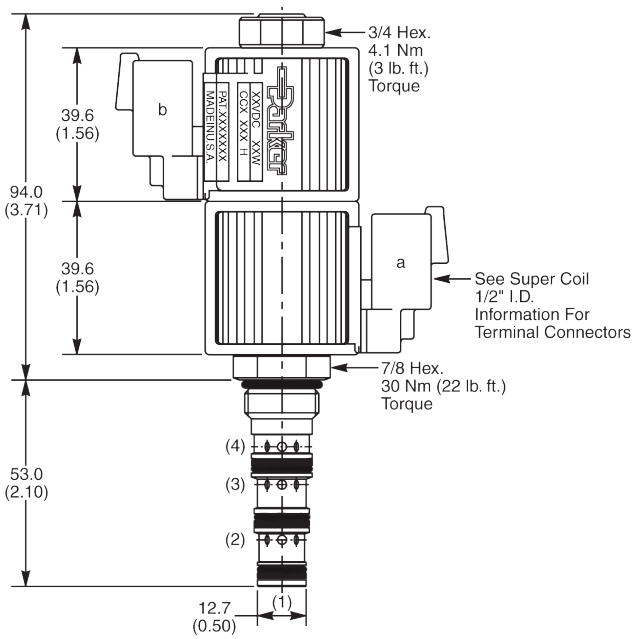
4 Way

Dimensions Millimeters (inches)

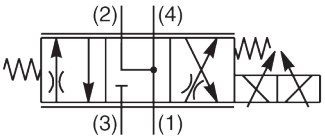


GP0251N





GP0253N



Series	Body	Max Tank Line Pressure (bar)	Max Inlet Pressure (bar)	Flow Rating (l/min)	Coil Type	Features
GP0251N	B08-4-6B	210	350	17	CC	• Can be used with a separate compensator.
GP0253N	B08-4-6B	210	350	15	CC	

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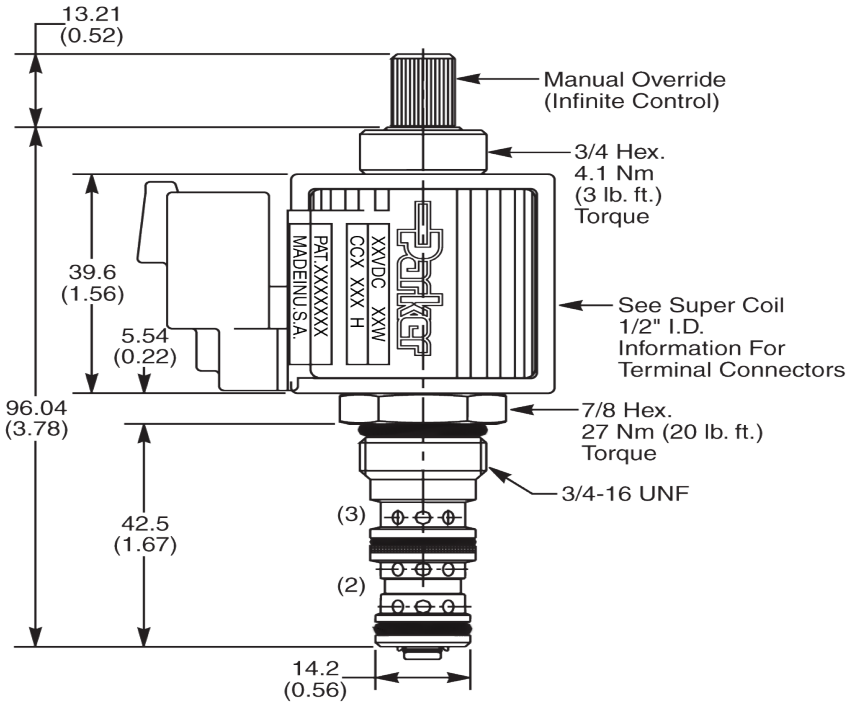
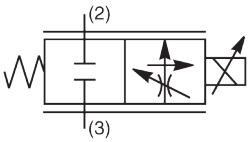
Crewkerne, UK

Normally Closed Flow Control

Dimensions Millimeters (inches)





JP02C2100N

Series	Body	Max Inlet Pressure (bar)	Coil Type	Flow Rating (l/min)	Features
JP02C2100N	B08-3-6B	210	CC	23	• Non-magnetic spool and housing assembly.

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Hydraulic Cartridge Systems Europe
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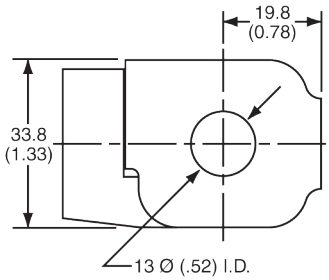
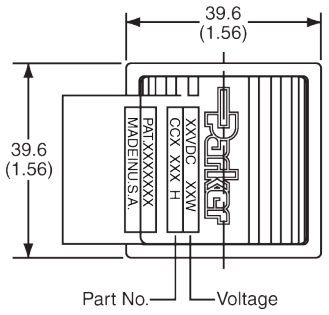
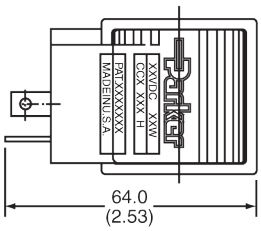
CC Type

Dimensions Millimeters (inches)

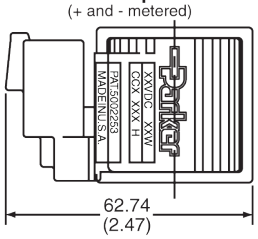




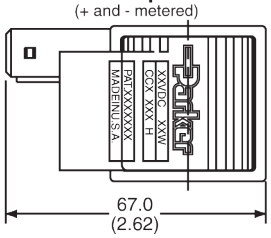
D - DIN 43650
(ground wire on AC only)



H - Integral Deutsch
DT04 - 2P - EP04
HE - Integral Deutsch with 3 Amp Diode
(+ and - metered)



A - Amp Junior
AD - Amp Junior with 3 Amp Diode
(+ and - metered)



Series	Termination	Watts	Volts	Amps	Ohms	Features
CCP012D	DIN 43650 DC	19	12VDC	1.58	7.58	• 1/2" tube diameter
CCP024D	DIN 43650 DC	19	24VDC	0.79	30.30	
CCP012A	AMP Jr	19	12VDC	1.58	7.58	
CCP024A	AMP Jr	19	24VDC	0.79	30.30	
CCP012H	Integral Deutsch	19	12VDC	1.58	7.58	
CCP024H	Integral Deutsch	19	24VDC	0.79	30.30	
CCP230D	DIN 43650 AC	22	230VAC	0.12	1919	

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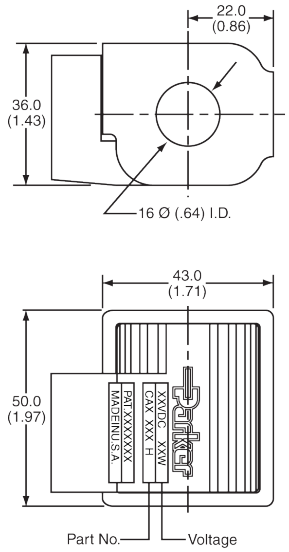
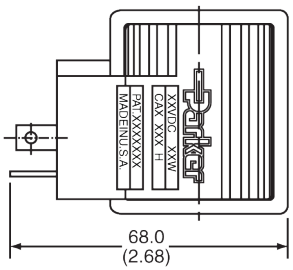
CA Type

Dimensions Millimeters (inches)



D - DIN 43650
(ground wire on AC only)



Series	Termination	Watts	Volts	Amps	Ohms	Features
CAP012D	DIN 43650 DC	28	12VDC	2.33	5.14	• 5/8" tube diameter
CAP024D	DIN 43650 DC	28	24VDC	1.17	20.6	
CAP012H	Integral Deutsch	28	12VDC	2.33	5.14	
CAP024H	Integral Deutsch	28	24VDC	1.17	20.6	
CAP230D	DIN 43650 AC	28	230VAC	0.15	1430	

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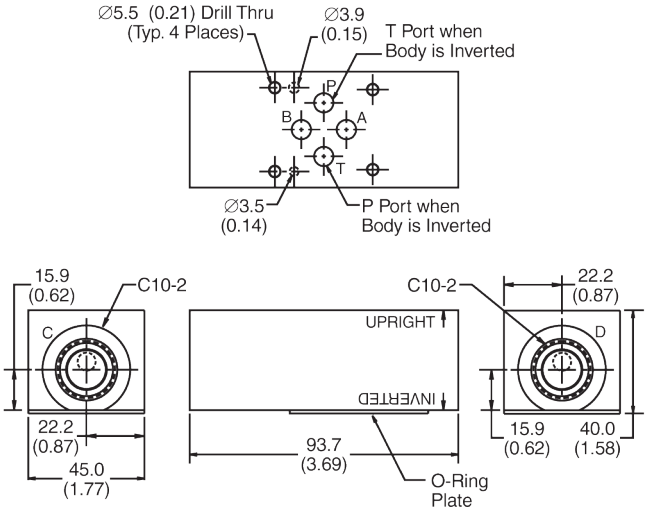
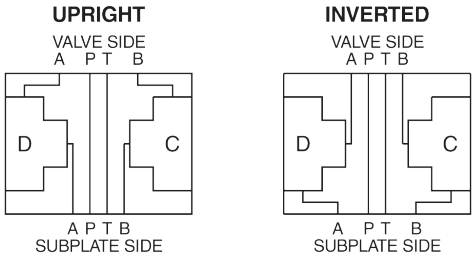
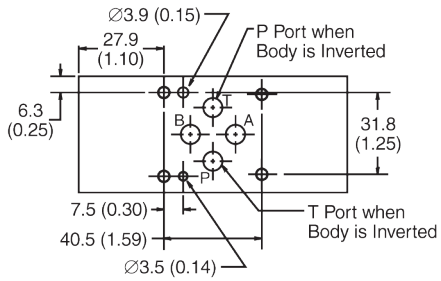
CETOP 3, Cartpak

Dimensions Millimeters (inches)



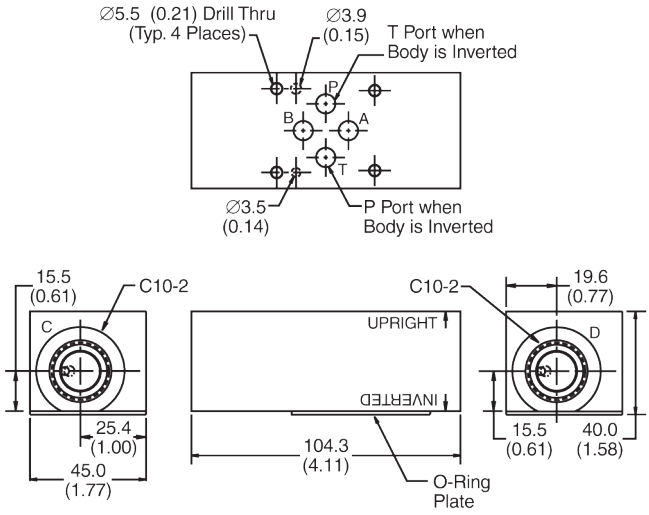
Body Schematic



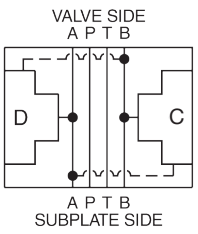


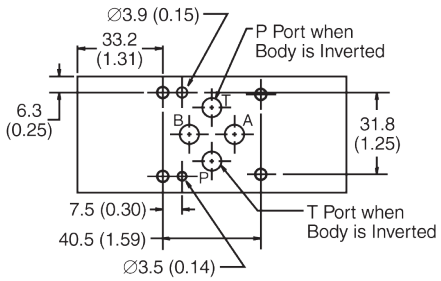
BD03-ABN-A

Series	Pressure Rating (bar)	Body Material	Typical Usage
BD03-ABN-A	210	Aluminium	• Meter in meter out flow control.



UPRIGHT



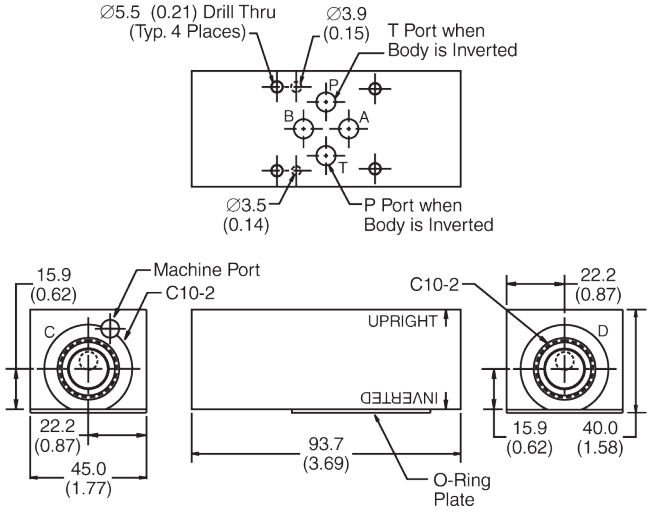


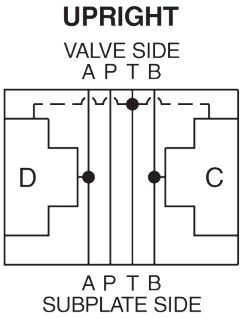
BD03-ABX-A

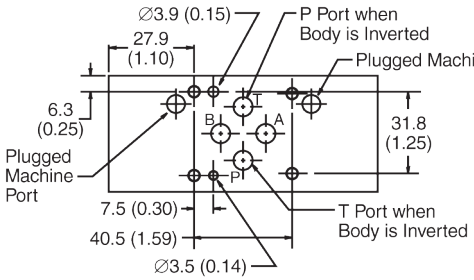
Series	Pressure Rating (bar)	Body Material	Typical Usage
BD03-ABX-A	210	Aluminium	• Cross line relief valve.

CETOP 3, Cartpak

Dimensions Millimeters (inches)

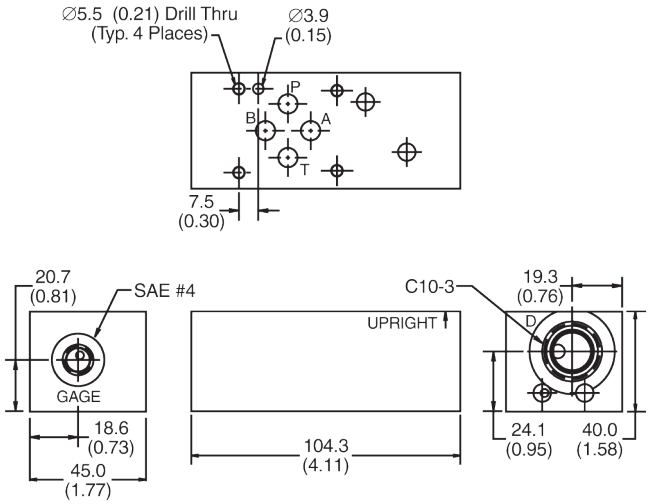


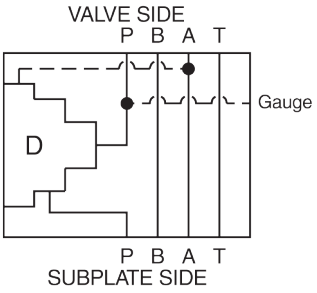


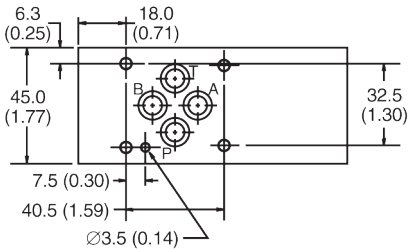


BD03-ABT-A

Series	Pressure Rating (bar)	Body Material	Typical Usage
BD03-ABT-A	210	Aluminium	• A or B relief valves or make up check valves.







BD03-BDA-A

Series	Pressure Rating (bar)	Body Material	Typical Usage
BD03-BDA-A	210	Aluminium	• P line pressure regulation.

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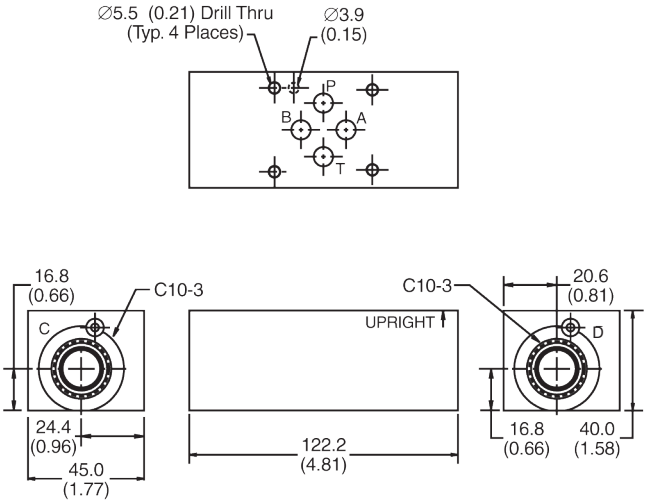
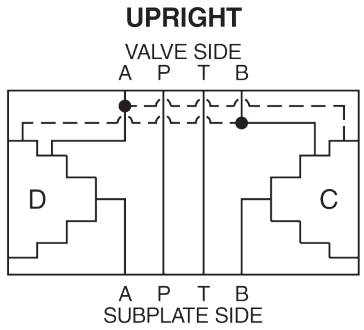
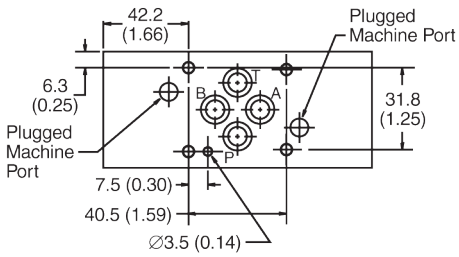
CETOP 3, Cartpak

Dimensions Millimeters (inches)

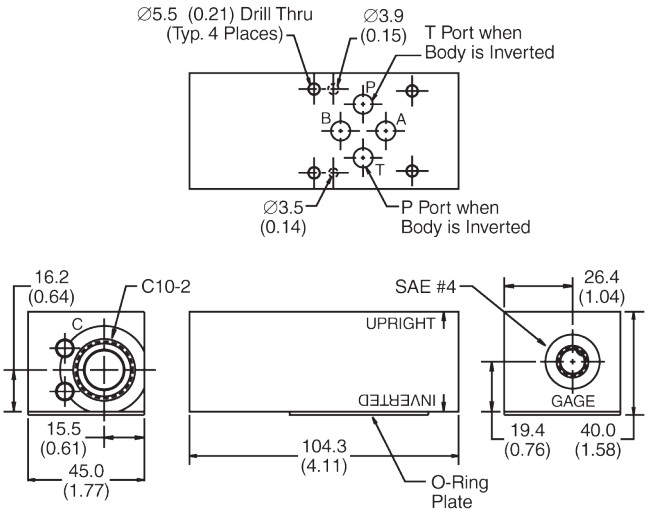


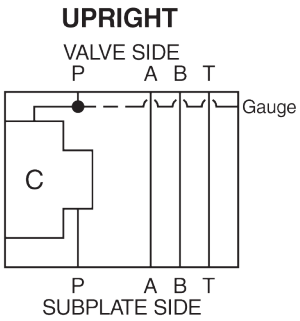


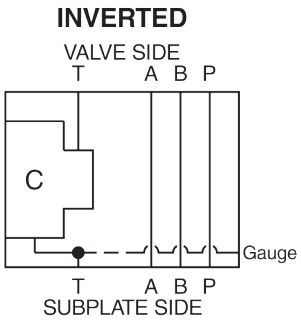


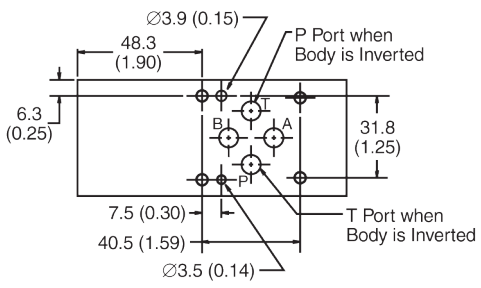
BD03-DDX-A

Series	Pressure Rating (bar)	Body Material	Typical Usage
BD03-DDX-A	210	Aluminium	• A & B port pressure regulating or dual counterbalance valve.









BD03-PN-A

Series	Pressure Rating (bar)	Body Material	Typical Usage
BD03-PN-A	210	Aluminium	• P line check valve or flow regulator.

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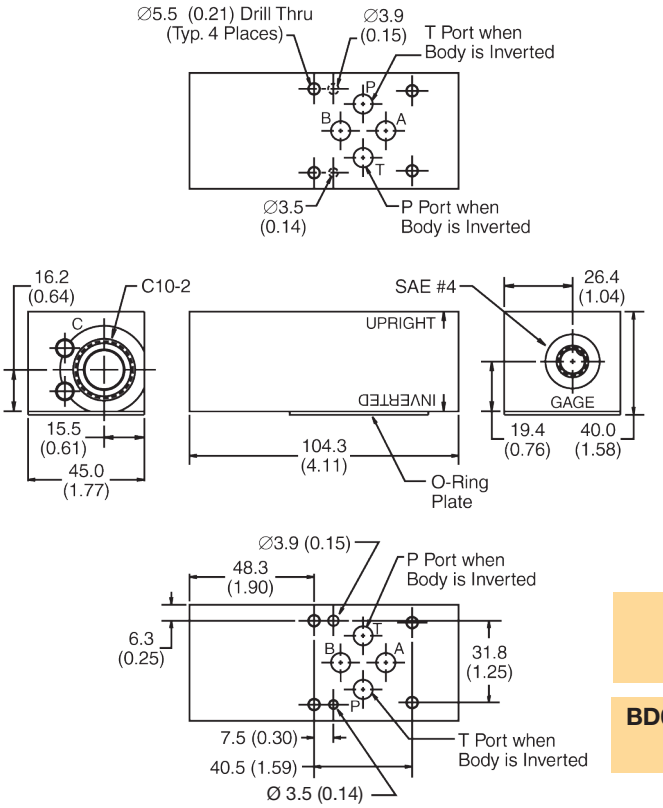
Crewkerne, UK

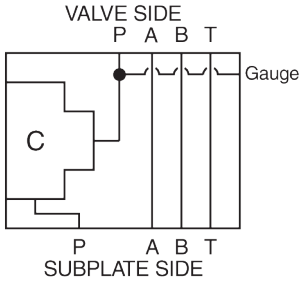
CETOP 3, Cartpak

Dimensions Millimeters (inches)

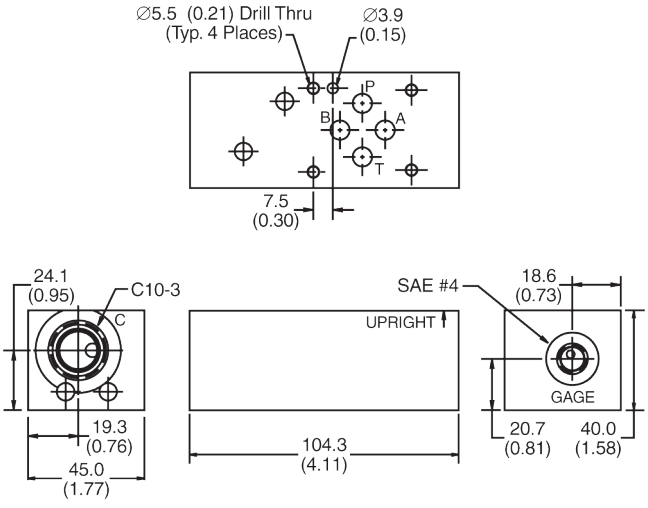


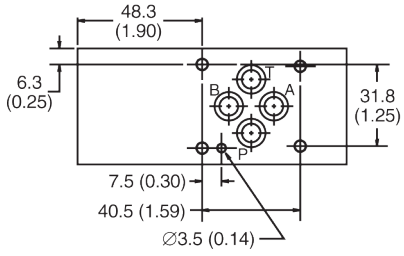
BD03-PN2-A

UPRIGHT



Series	Pressure Rating (bar)	Body Material	Typical Usage
BD03-PN2-A	210	Aluminium	• P line needle valve





BD03-PNR-A

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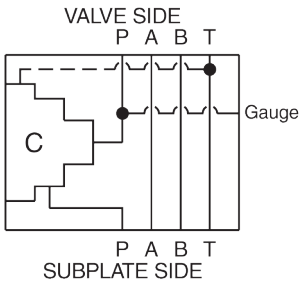

Series	Pressure Rating (bar)	Body Material	Typical Usage
BD03-PNR-A	210	Aluminium	• P line pressure regulator.

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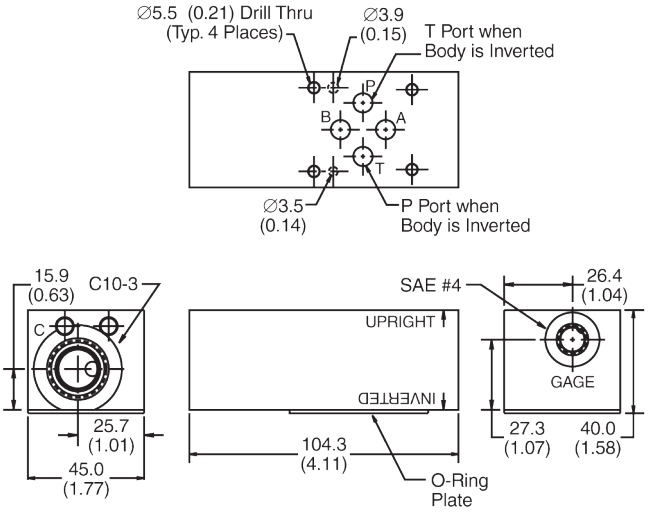
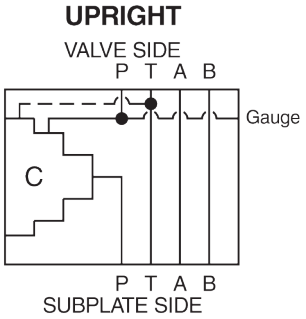
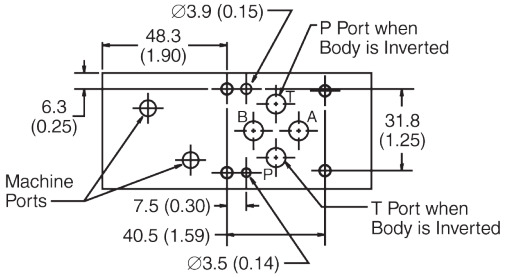
CETOP 3, Cartpak

Dimensions Millimeters (inches)

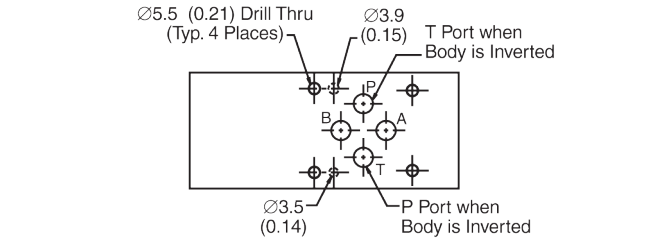


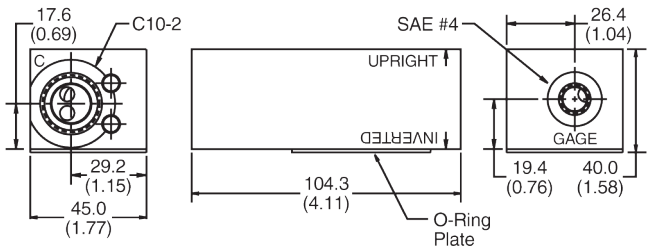


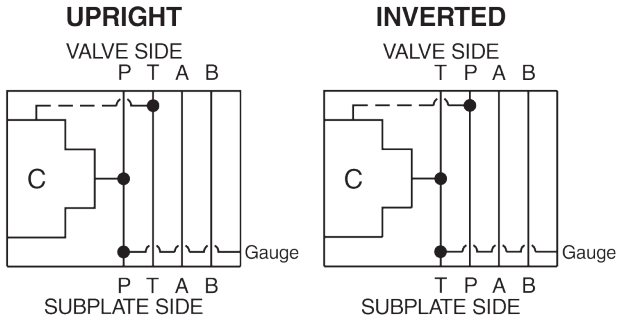


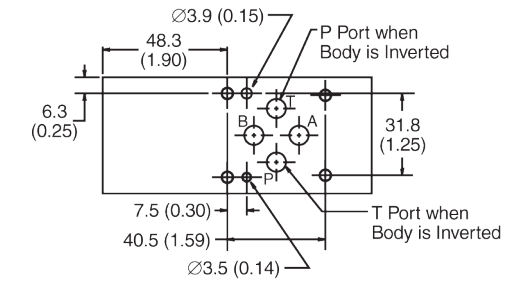
BD03-PNS-A

Series	Pressure Rating (bar)	Body Material	Typical Usage
BD03-PNS-A	210	Aluminium	• P line sequence valve.









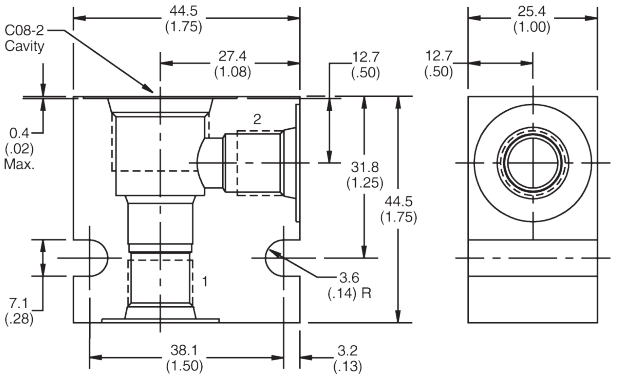
BD03-PT-A

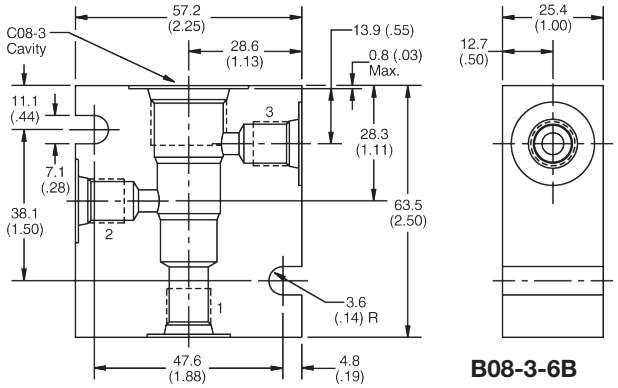
Series	Pressure Rating (bar)	Body Material	Typical Usage
BD03-PT-A	210	Aluminium	• P - T relief valve.

Parker Hannifin Corporation
Hydraulic Cartridge Systems Europe
Crewkerne, UK

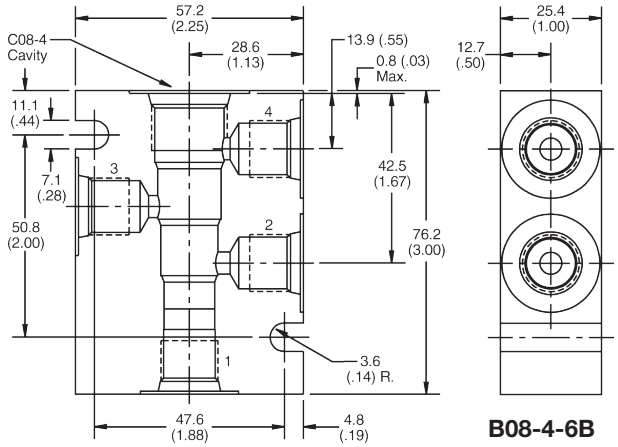
Standard, Steel

Dimensions Millimeters (inches)

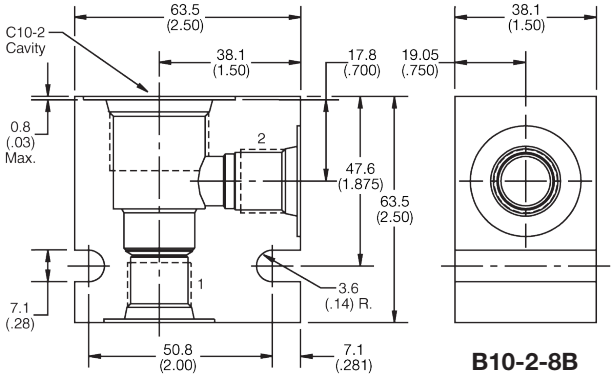




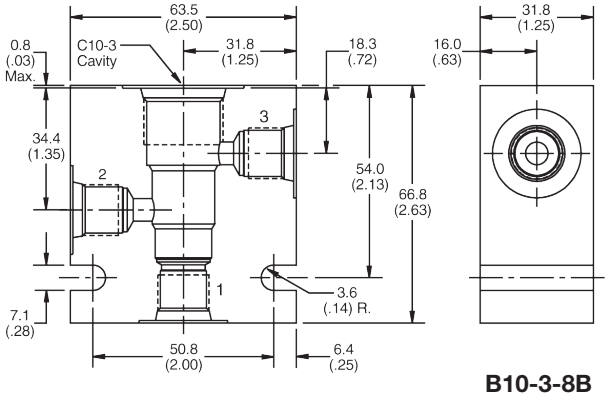
B08-3-6B



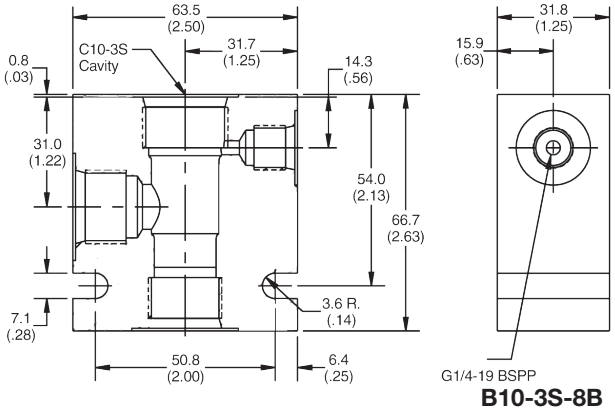
B08-4-6B



B10-2-8B



B10-3-8B



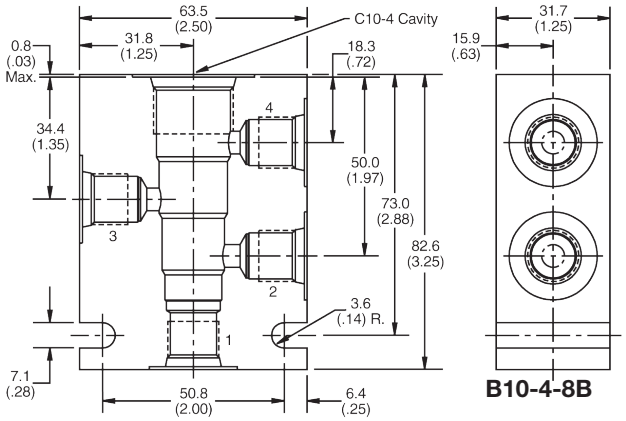
B10-3S-8B

Series	Cavity	Port Size	Porting	Body Material
B08-2-6B	C08-2	3/8 BSP	2 Way	Steel
B08-3-6B	C08-3	3/8 BSP	3 Way	Steel
B08-4-6B	C08-4	3/8 BSP	4 Way	Steel
B10-2-8B	C10-2	1/2 BSP	2 Way	Steel
B10-3-8B	C10-3	1/2 BSP	3 Way	Steel
B10-3S-8B	C10-3S	1/4 BSP & 1/2 BSP	3 Way short	Steel

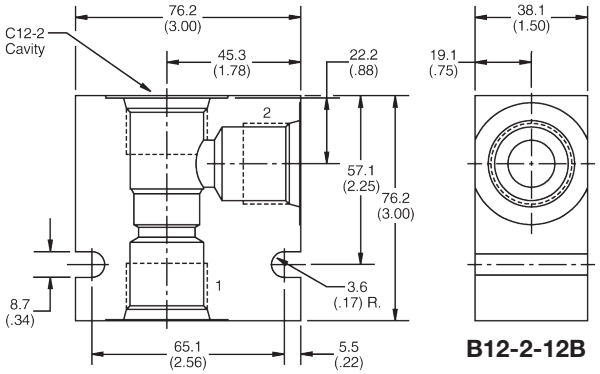
Parker Hannifin Corporation
Hydraulic Cartridge Systems Europe
Crewkerne, UK

Standard, Steel

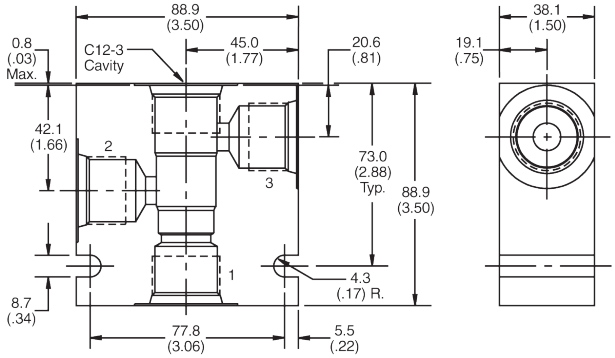
Dimensions Millimeters (inches)



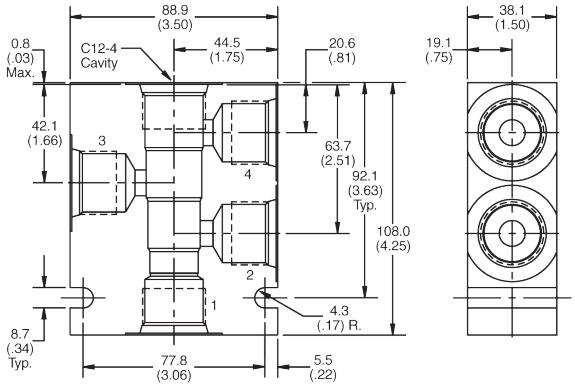
B10-4-8B



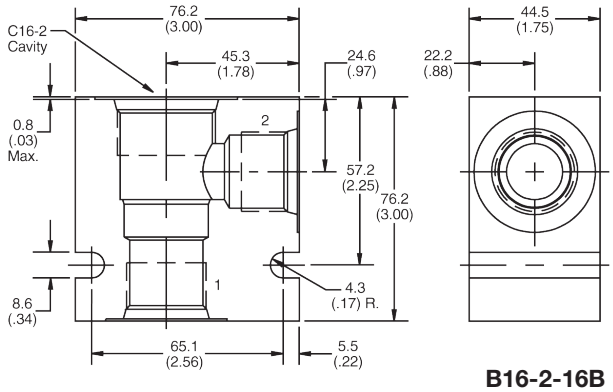
B12-2-12B



B12-3-12B



B12-4L-12T



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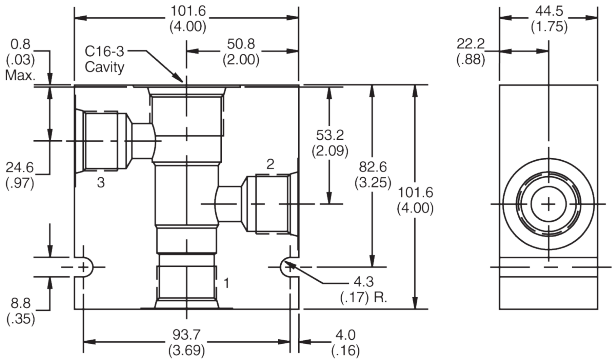


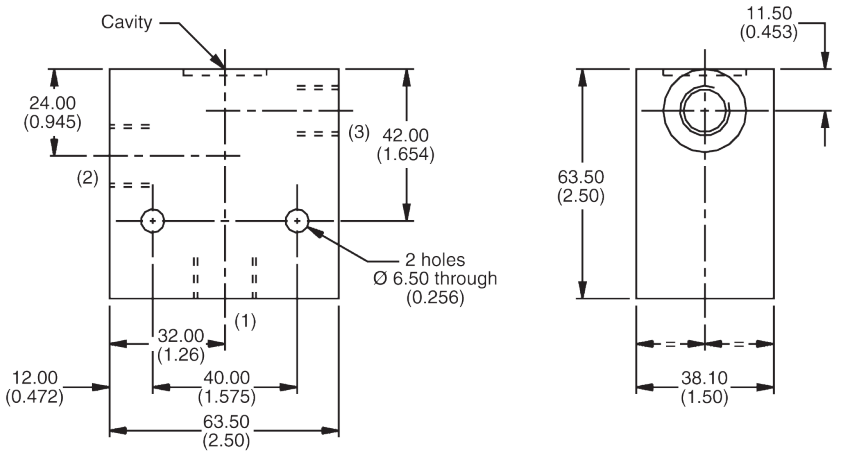
B16-3-16B

Series	Cavity	Port Size	Porting	Body Material
B10-4-8B	C10-4	1/2 BSP	4 Way	Steel
B12-2-12B	C12-2	3/4 BSP	2 Way	Steel
B12-3-12B	C12-3	3/4 BSP	3 Way	Steel
B12-4L-12T	C12-4	3/4 BSP	4 Way	Steel
B16-2-16B	C16-2	1 BSP	2 Way	Steel
B16-3-16B	C16-3	1 BSP	3 Way	Steel

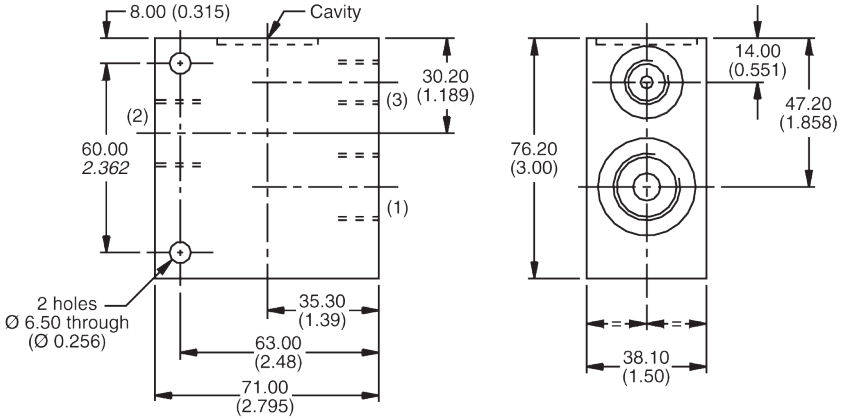
Parker Hannifin Corporation
Hydraulic Cartridge Systems Europe
Crewkerne, UK

Load Control

Dimensions Millimeters (inches)



LB10310S

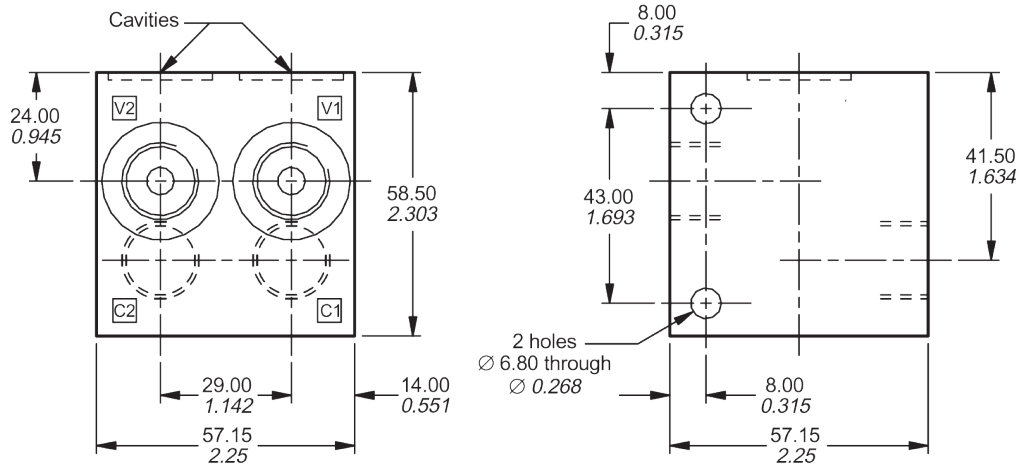


LB10251S

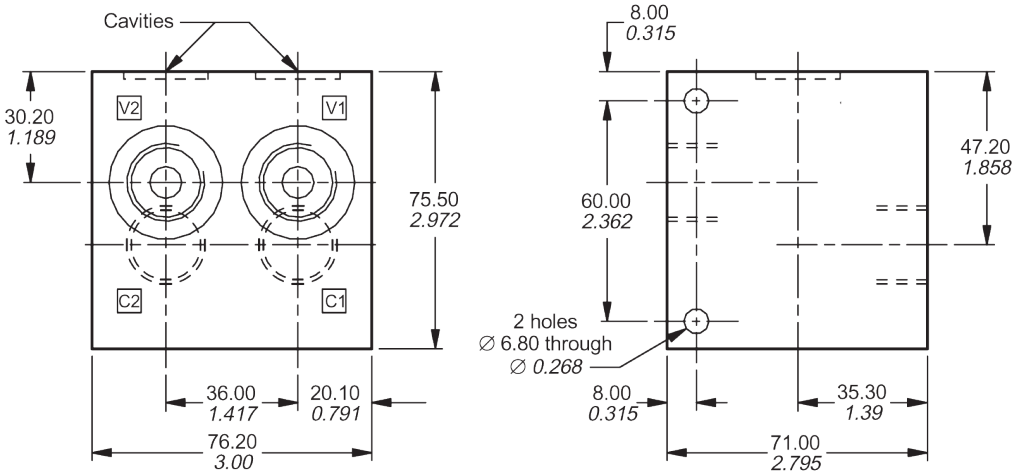
Series	Cavity	Porting	Main	Aux	Features
LB10310S	53-1	3 Way	3/8 BSP	1/4 BSP	• Use with either E*B020 or D4A020 Load Control Cartridge.
LB10251S	68-1	3 Way	1/2 BSP	1/4 BSP	• Use with either E2B040 or E6B040

Load Control - Dual

Dimensions Millimeters (inches)



LB10312S



LB10259S

Series	Cavity	Porting	Main	Aux	Features
LB10312S	53-1	4 Way Dual	3/8 BSP	1/4 BSP	• Use with either 2 pcs E2B020 or 2 pcs E6B020
LB10259S	68-1	4 Way Dual	3/8 BSP	-------	• Use with either 2 pcs E2B040 or 2 pcs E6B040

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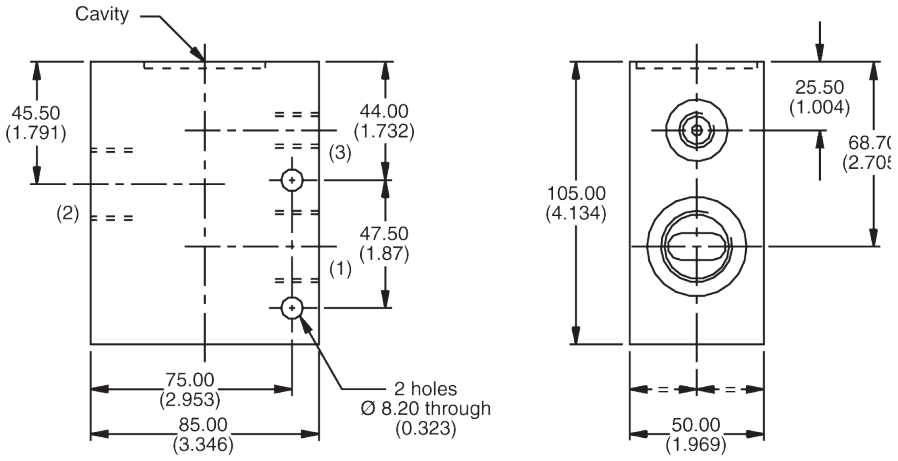
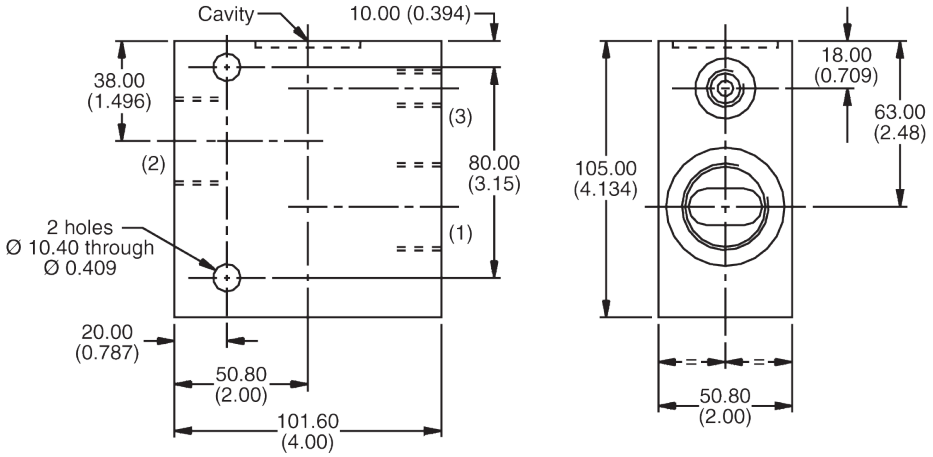
Hydraulic Cartridge Systems Europe
Crewkerne, UK

Load Control

Dimensions Millimeters (inches)



LB10039S

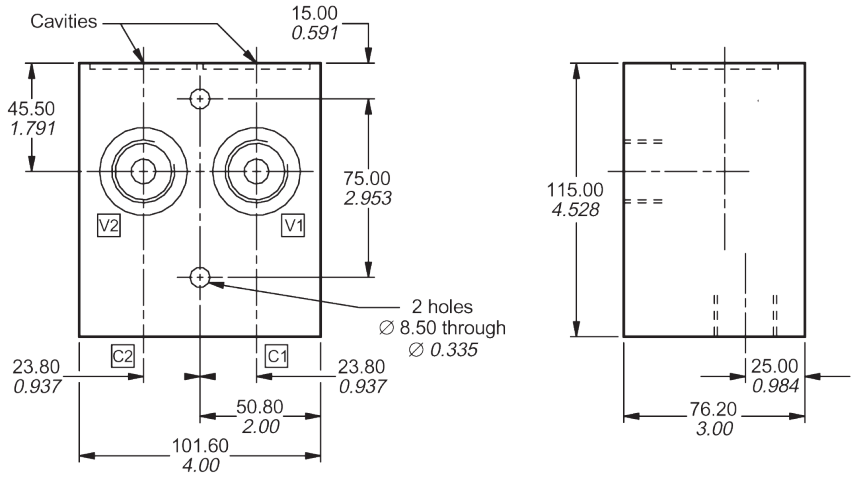


LB10076S

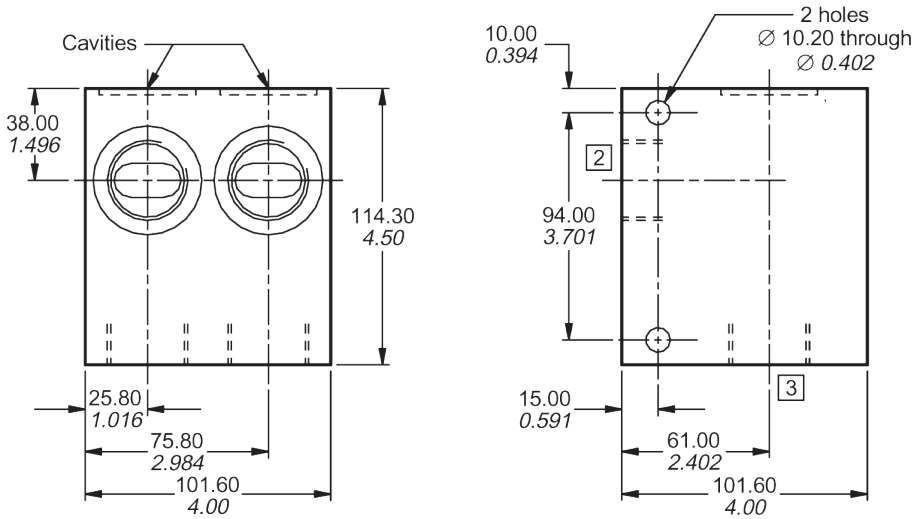
Series	Cavity	Porting	Main	Aux	Features
LB10039S	3C	3 Way	3/4 BSP	1/4 BSP	• Use with either E2B060 or E6B060 Load Control Cartridge.
LB10076S	3M	3 Way	1 BSP	1/4 BSP	• Use with E2E125 Load Control Cartridge.

Load Control - Dual

Dimensions Millimeters (inches)



LB10034S



LB10104S

Series	Cavity	Porting	Main	Aux	Features
LB10034S	3C	4 Way	3/4 BSP	-------	• Use with either 2 pcs E2B060 or 2 pcs E6B060 Load Control Cartridge.
LB10104S	3M	4 Way Dual	1 BSP	-------	• Use with 2 pcs E2F125 Load Control Cartridge.

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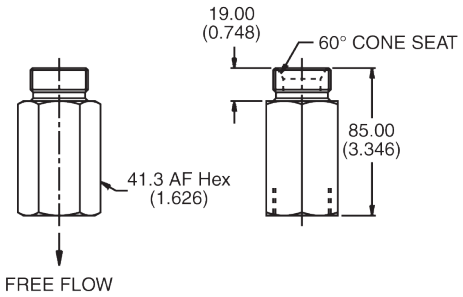
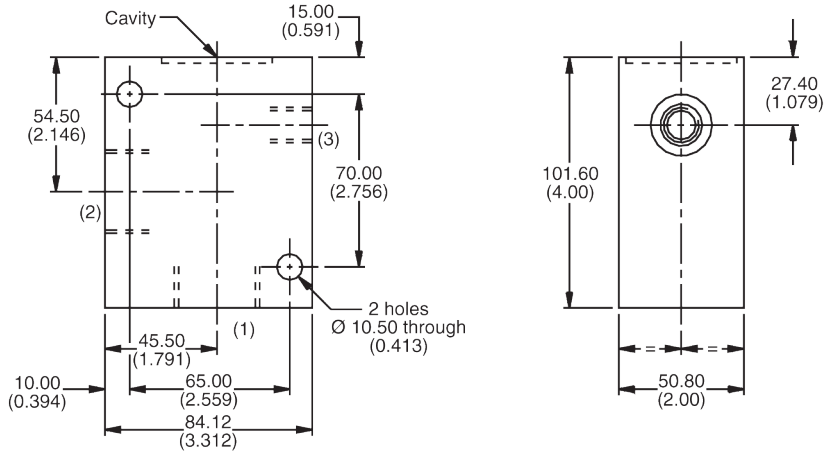
Steel Special Type

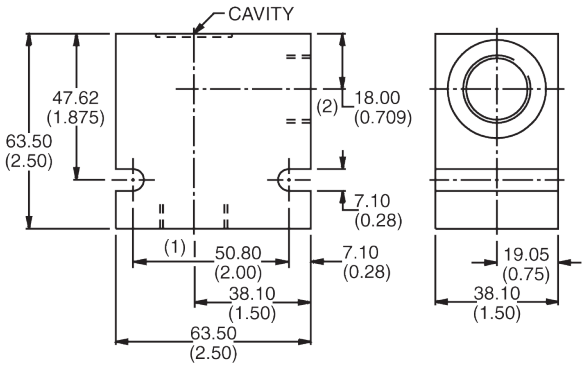
Dimensions Millimeters (inches)



LB10210S



LB10056S

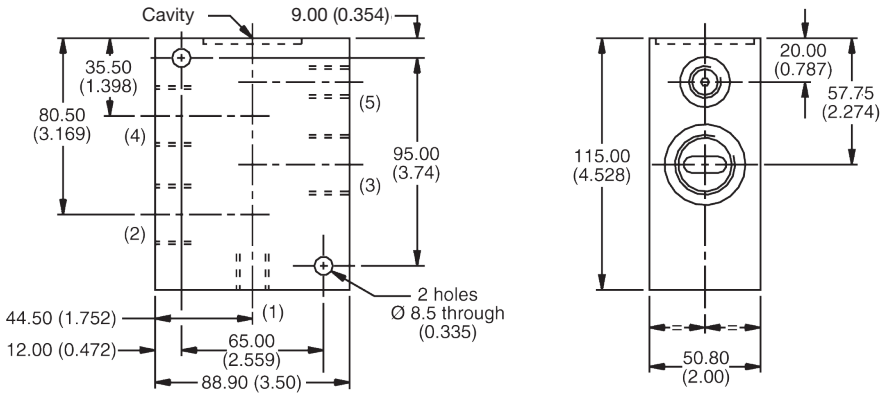


LB10545S

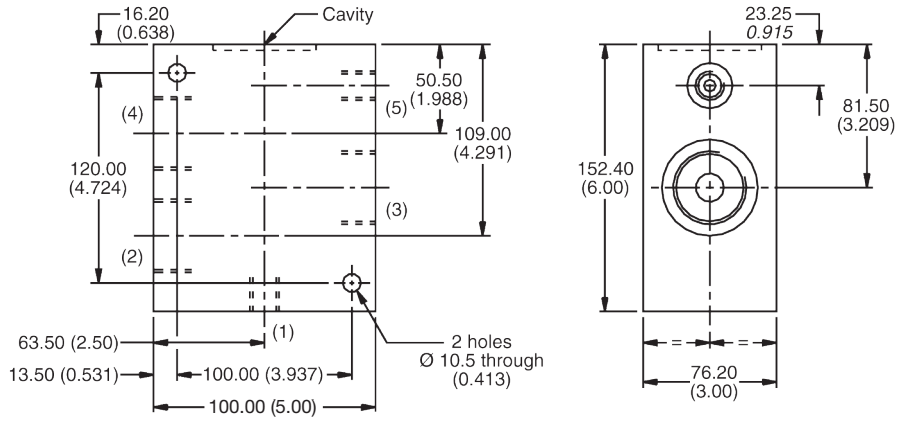
Series	Cavity	Porting	Main	Aux	Features
LB10210S	2C	2 Way	1 BSP	-------	• Use with D1B125 Check Valve Insert.
LB10056S	3A	3 Way	1 BSP	1/4 BSP	• Use with J1A125 Flow Control Valve.
LB10545S	2R	2 Way	1/2 BSP	1/4 BSP	• Use with bi-directional Solenoid Valves.

Steel Special Type

Dimensions Millimeters (inches)



LB10314S



LB10316S

Series	Cavity	Porting	Main	Aux	Features
LB10314S	5A	5 Way	3/4 BSP	1/4 BSP	• Use with N5A125 Directional Control Valve.
LB10316S	100-1	5 Way	1 1/4 BSP	3/8 BSP	• Use with N5A300 Directional Control Valve.

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Ed. 2013-08-01

Catalogue HY31-2011/UK, XM, 09/2011, ZZ.

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