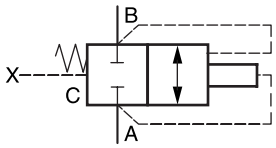
8

Notes

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

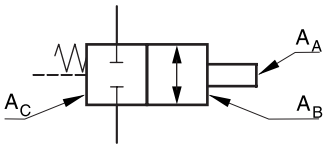
X control oil connection, inlet

Y control oil connection, outlet

Z_1 control oil connection, preferred inlet

Z_2 control oil connection, preferred outlet

Control surfaces - graphics



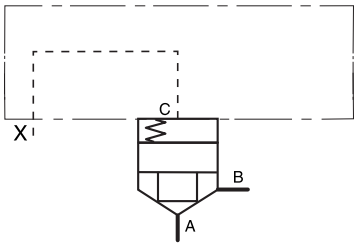
Description

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

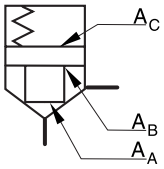
A_B Area, which is subjected to the pressure at port B

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

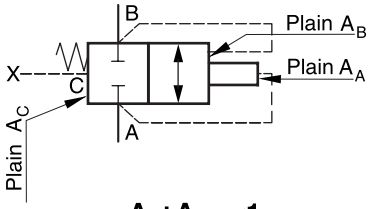
Port identifications - schematics



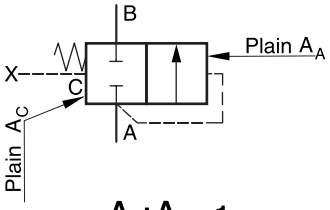
Control surfaces - schematics



Area representation

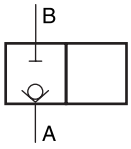


$A_A : A_C = <1$

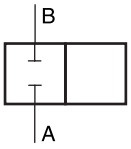


$A_A : A_C = 1$

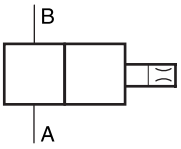
Design representation



Seat design

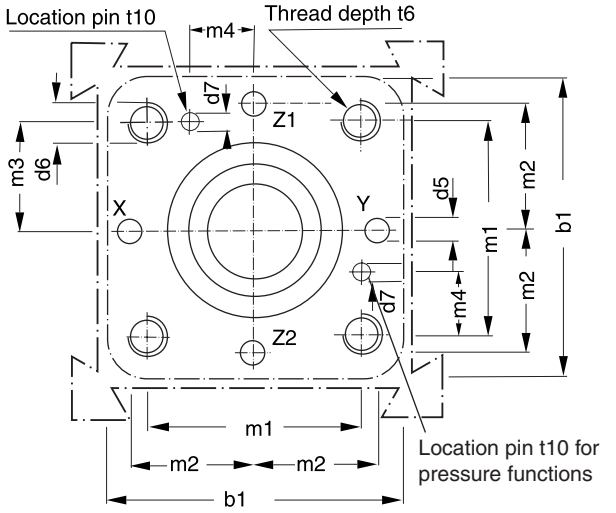


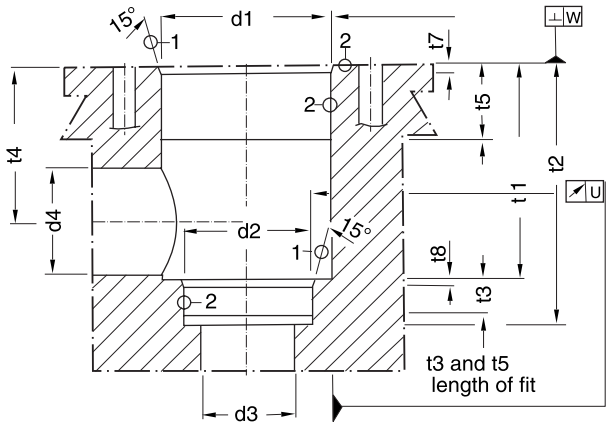
Spool design



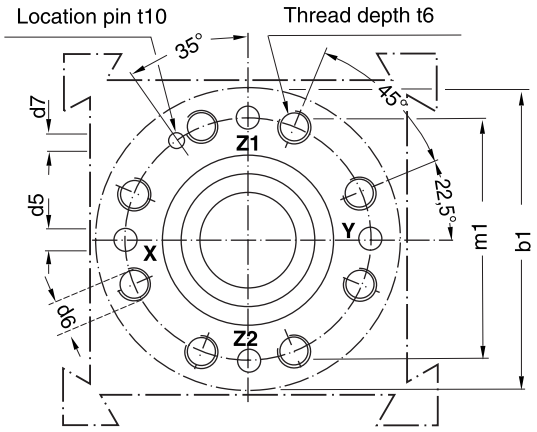
Dampening poppet

Code: ISO 7368-B*-*-2-A/B
NG 16 to NG 63





Code: ISO 7368-B*-*-2-A
NG 80 to NG 100



Hole and mounting pattern acording ISO 7368

Required surface finish:

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

Nom. size	b1	d1 H7	d2 H7	d3	d3 max	d4	d4 max*	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*	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

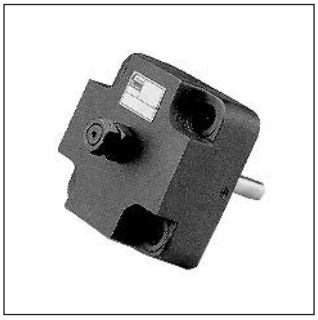
* only together with $d4_{max}$ and $t4_{max}$

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.

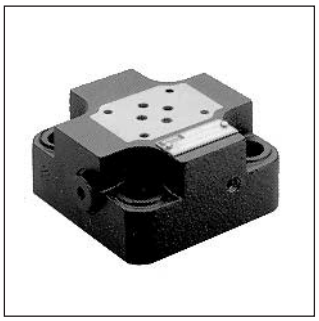
Features

- Installation cavity and mounting pattern according to ISO 7368
- One sleeve only for all poppets
- 5 poppet shapes
- 6 poppet springs
- Optional seal between ports B and C
- Cover with adjustable stroke limitation for poppet
- Cover with mounting pattern for pilot valve assembly
- Combinations for complex functions
- Normally open cartridge (CE*F04)
- 8 nominal sizes NG16...NG100

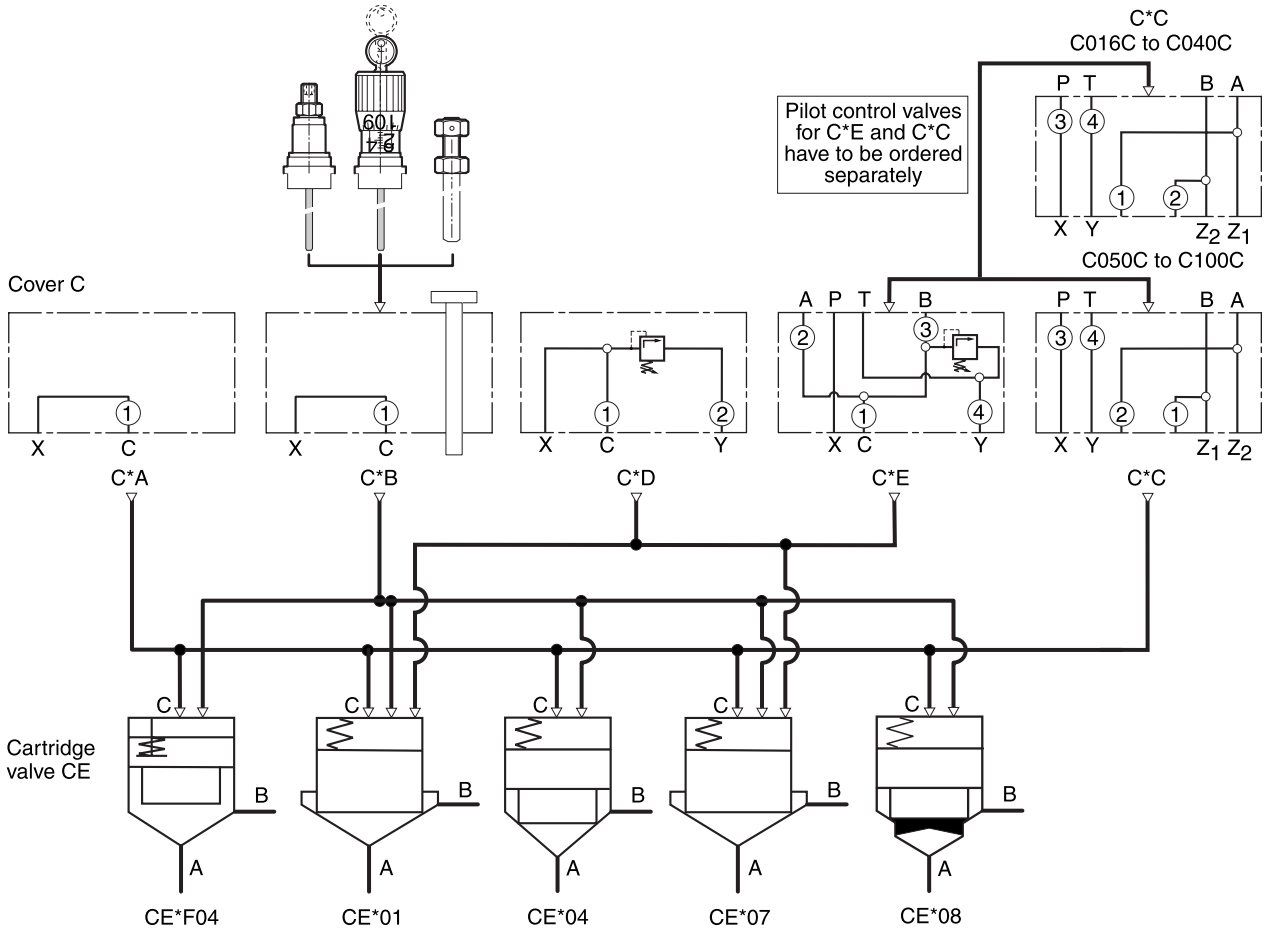

CE


C*B


C*A


C*C

Pilot control



8

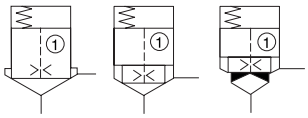
CE □ □ □ □ □ □ □

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	Seal
N	**NBR**
V	FPM

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



Orifice position

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

[1)] Only for spring S and U.
Not for poppet code 01.
Only size NG16 to NG63
[2)] Only with spring code L

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

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**

[3)] Not for NG80 and NG100

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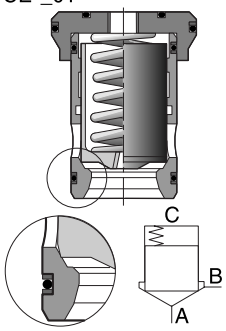
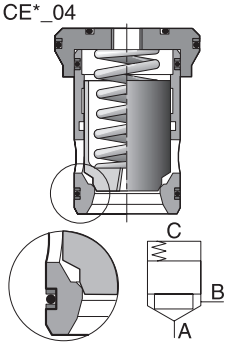
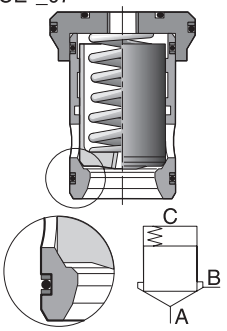
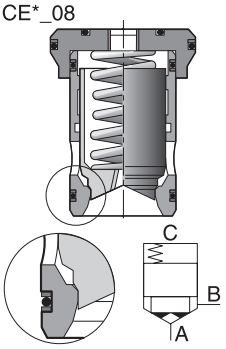
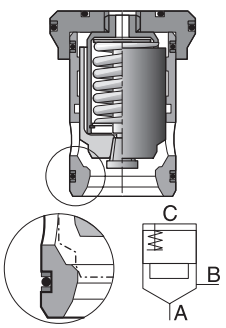
For spare parts see "Accessories" in this chapter.
For orifice recommendations see "Combination Examples" in this chapter.

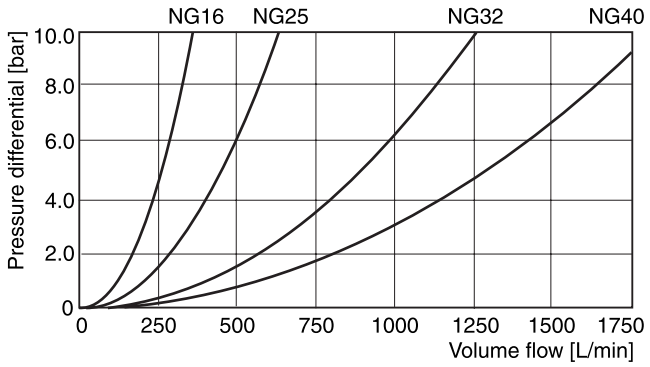
Bold letters =
Short-term availability

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

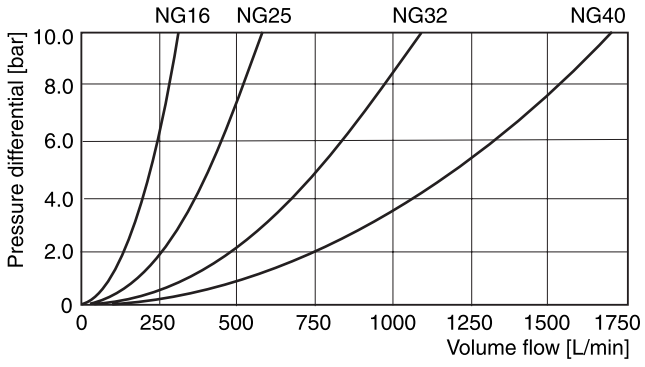
General									
Design type			2 way slip-in cartridge valves according to ISO 7368						
Operation			Hydraulic						
Mounting position			unrestricted						
Ambient temperature		[C°]	-40....+60						
Nominal size			**16**	**25**	**32**	**40**	**50**	**63**	**80**	**100**
Weight	cartridge	[kg]	0.3	0.6	1.1	1.7	3.7	7.1	12.8	27
Hydraulic									
Fluid			Hydraulic fluid according to DIN 51 524...525						
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	port A, B, X, Z1, Z2	[bar]	350						
	port Y	[bar]	According to pilot system, max. 350 (see 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		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	
	flow direction B → A		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)

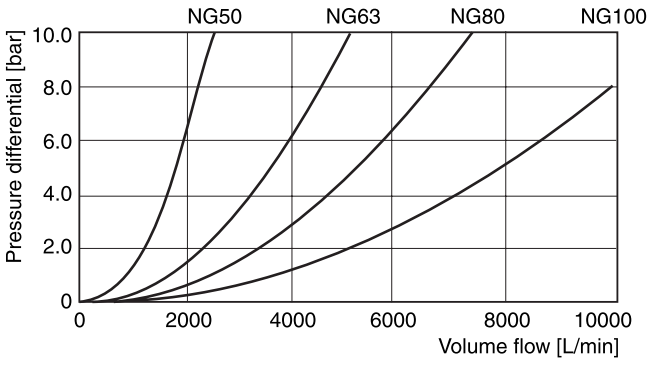
Poppet 01, 04, 07



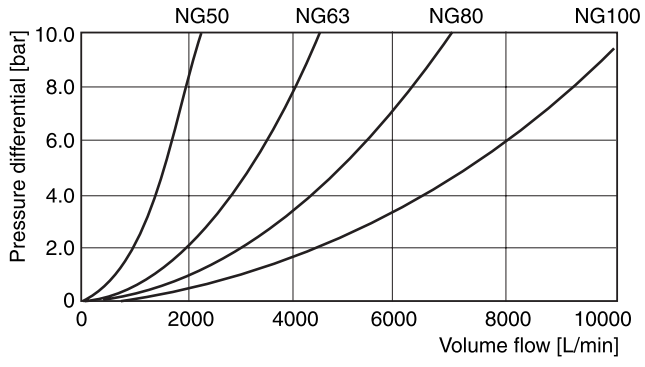
Poppet 08



Poppet 01, 04, 07



Poppet 08



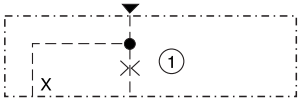
8

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**



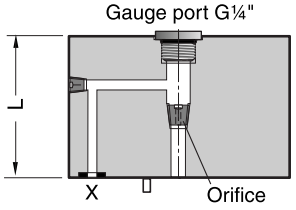
Orifice position

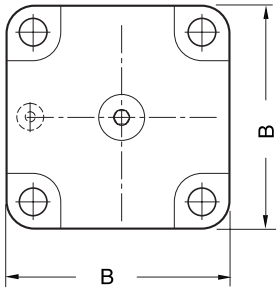
Bold letters =
Short-term availability

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

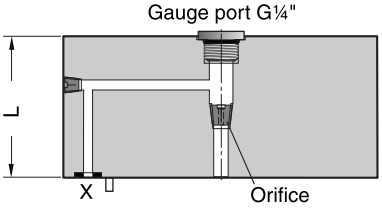
Dimensions

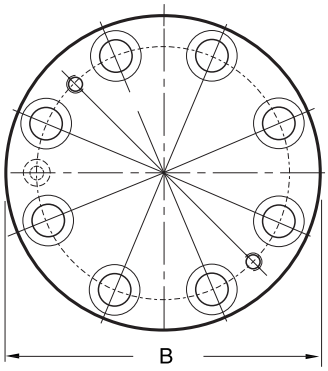
NG16 to NG63





NG80 to NG100





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	Ø250	105	1/8 NPT	34
NG100	Ø300	120	1/8 NPT	58

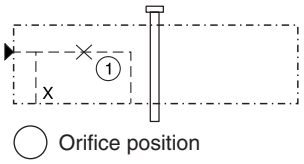
C		B				
Cover	**Nominal size**	**Cover with X-connection and stroke limiter**	**Adjustment**	**Orifice**	**Seal**	**Design series** (not required for ordering)

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

Code	Adjustment
N	**Screw / spindle**
Y	Knob E10 lock, only NG16-NG50

Code	Seal
N	**NBR**
V	FPM

Code	Orifice
99	**Without orifice, open**



Orifice position

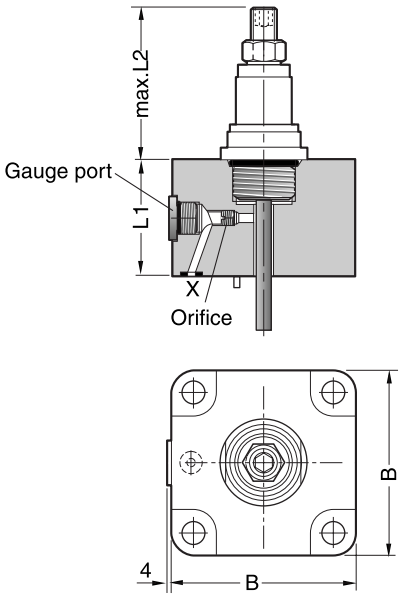
For orifice recommendations, bolt and seal kits see "Accessories" in this chapter.

Bold letters =
Short-term availability

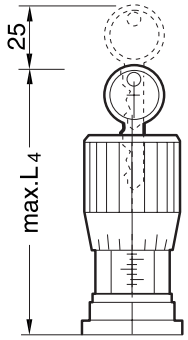
8

Dimensions NG16 - NG25

Adjustment N



Adjustment Y

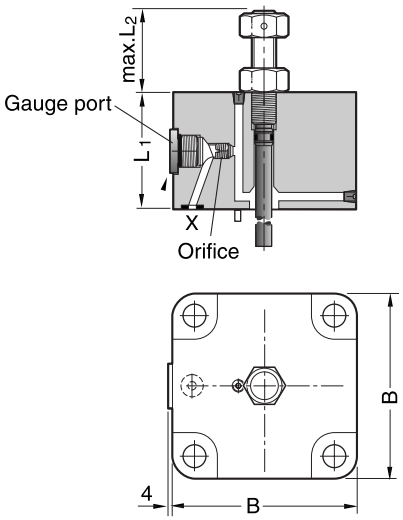


Size	B	L1	L2 max.	L4 max.	Gauge port	Orifice thread	Weight [kg]
NG16	65	36	72	100	G 1/4"	M6	0.9
NG25	85	45	72	100			1.9

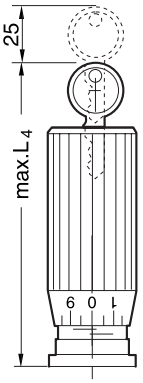
CE-C_UK.INDD RH

Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

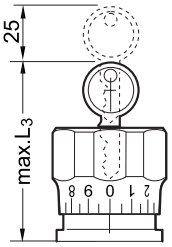
Dimensions NG32 - NG50
Adjustment N



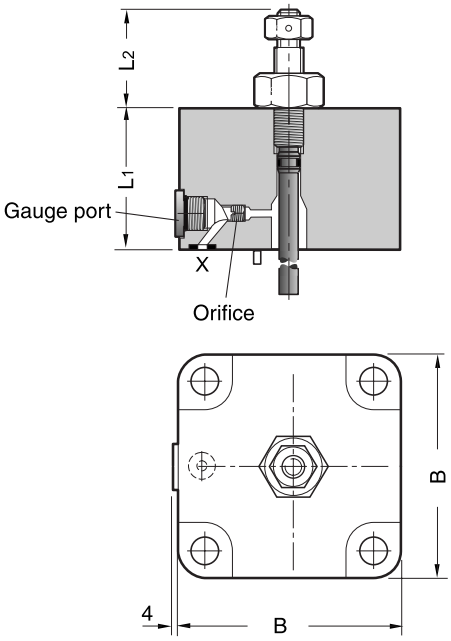
Adjustment Y (NG32)



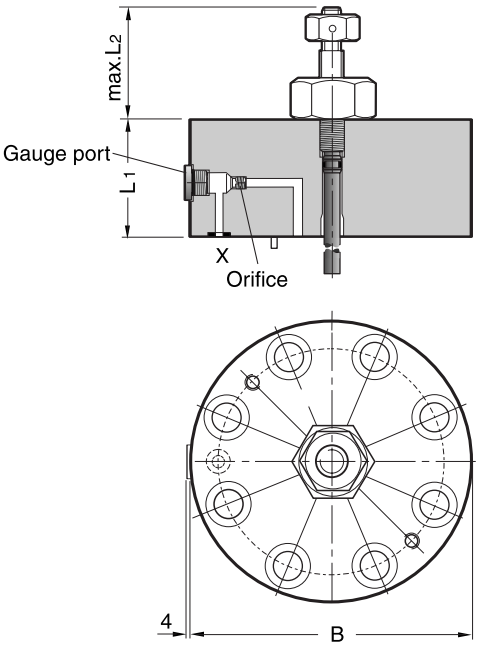
Adjustment Y (NG40/50)



Dimensions NG63
Adjustment N



Dimensions NG80-100
Adjustment N



Size	B	L1	L2 max.	L3	L4 max.	Gauge port	Orifice thread	Weight [kg]
NG32	102	50	48	—	141	G¼"	1/16 NPT	2.91
NG40	125	60	50	123	—		1/16 NPT	5.39
NG50	140	70	50	127	—		1/16 NPT	8.41
NG63	180	85	65	—	—		1/8 NPT	15.1
NG80	Ø250	105	95	—	—		1/8 NPT	34.0
NG100	Ø300	120	120	—	—		1/8 NPT	60.0

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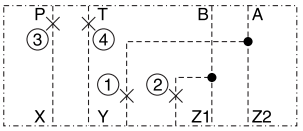
C		C	A						
				1	2	3	4		
Cover	**Nominal size**	**Cover for pilot system mounting**	**Without auxilliary function**	**Orifice / choke**				**Seal**	**Design series** (not required for ordering)

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

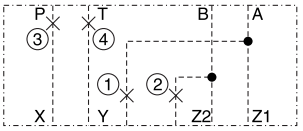
Code	Seal
N	**NBR**
V	FPM

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

NG16 to NG40



NG50 to NG100



◯ Orifice position

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

Bold letters =
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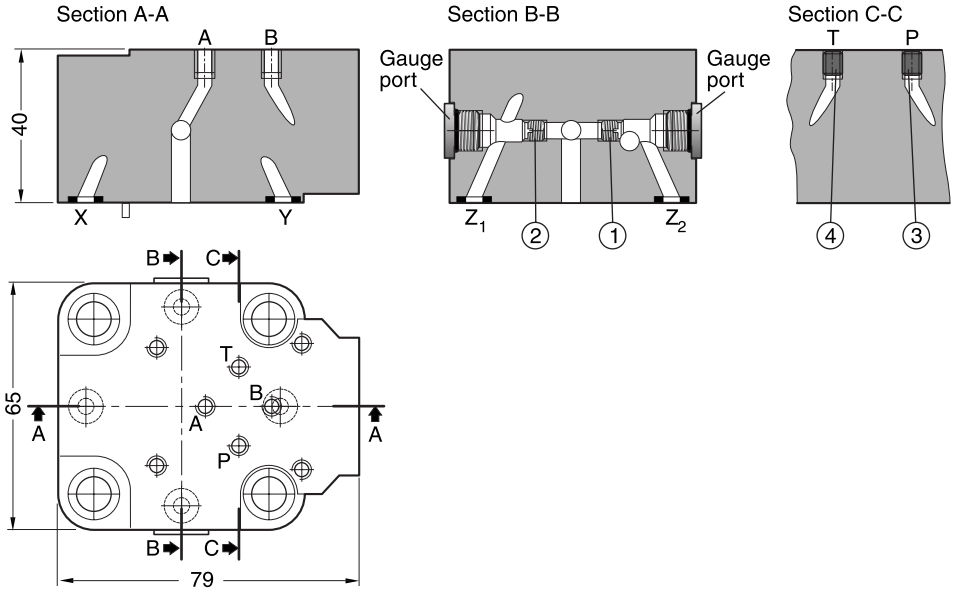
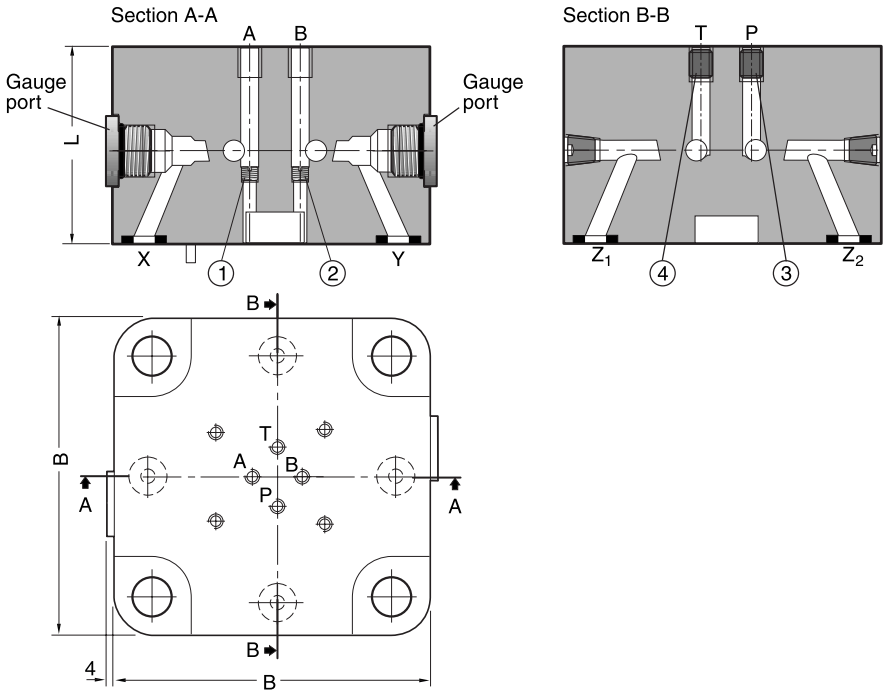
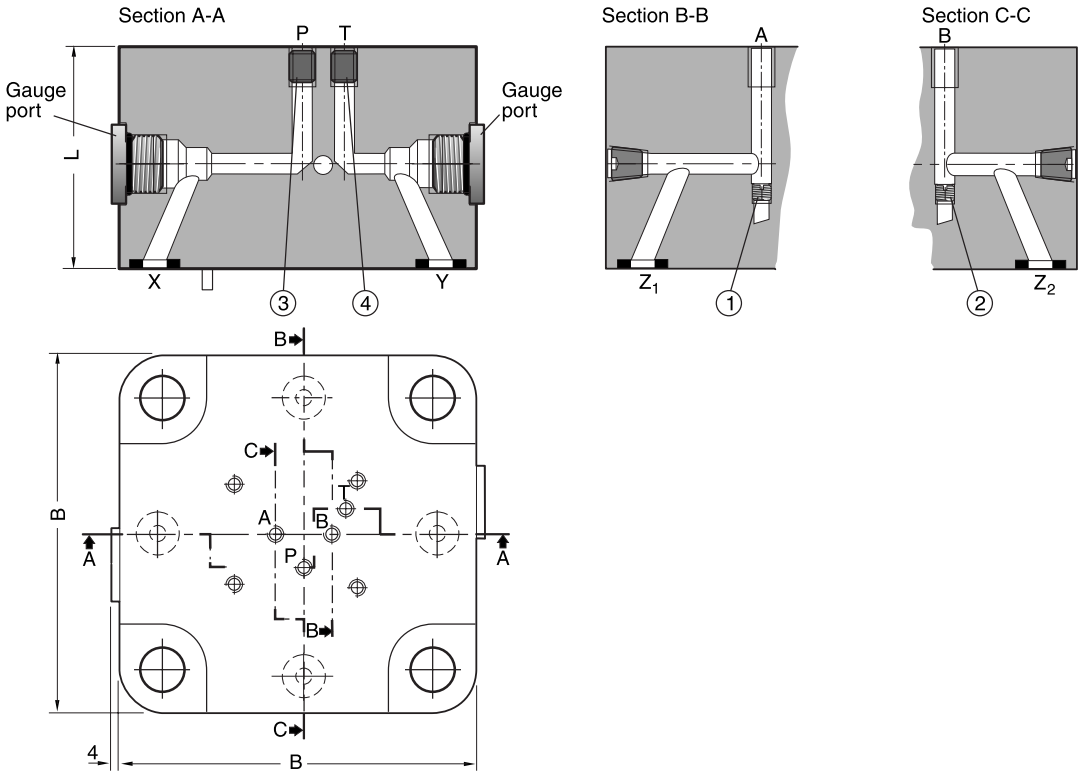
Dimensions NG16



Dimensions NG25 to NG40



Dimensions NG50 to NG63



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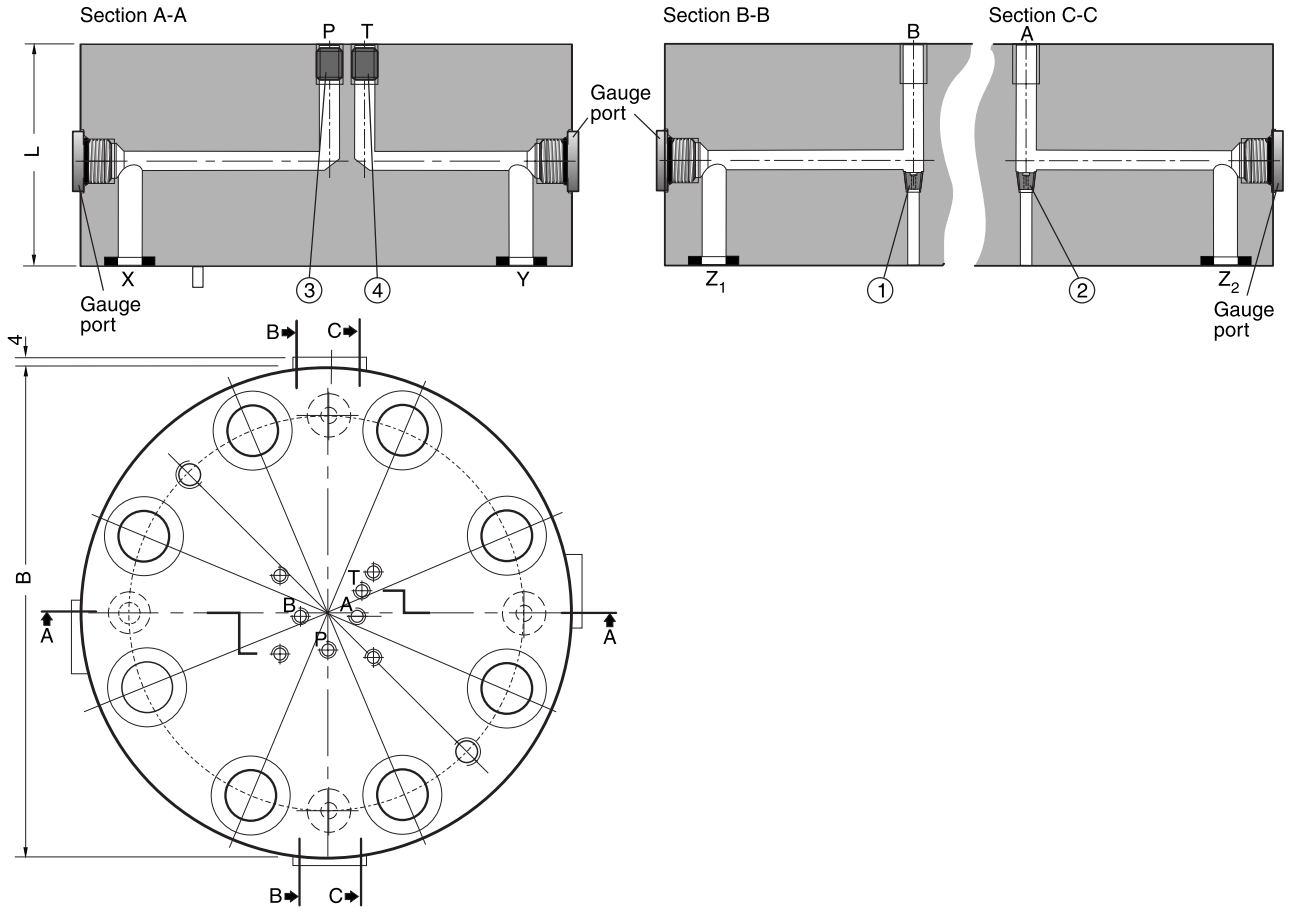
Dimensions NG80 to NG100



Size	B	L	Gauge port	Weight [kg]	Orifice thread			
					①	②	③	④
NG16	79 [1)]	40	G¼"	1.0	M5	M5	M5	M5
NG25	85	45		1.9	M5	M5	M6	M6
NG32	102	50		2.9	M5	M5	M6	M6
NG40	125	60		5.3	M5	M5	M6	M6
NG50	140	70		8.5	M6	M6	M8	M8
NG63	180	85		15.3	M6	M6	M8	M8
NG80	Ø250	105		34	1/16 NPT	1/16 NPT	M10x1	M10x1
NG100	Ø300	120		60	1/16 NPT	1/16 NPT	M10x1	M10x1

[1)] Width 65mm

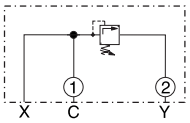
C		D					
Cover	Nominal size	Cover with pressure relief valve	Pressure range	Pressure adjustment	Orifice / choke ① ②	Seal	Design series (not required for ordering)

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

Code	Seal
N	**NBR**
V	FPM

Code	Pressure range [bar]
07	**75**
17	**175**
25	**250**
35	**350**

Code	Orifice
99	**Without orifice, open**



Orifice position

Code	Adjustment
N	**Screw with lock nut**
Y	Knob E10 lock

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

Bold letters =
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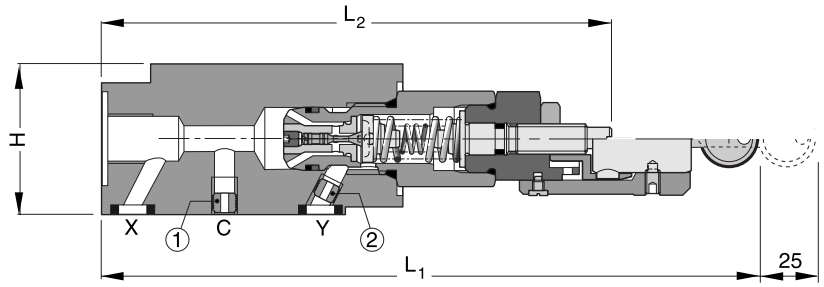
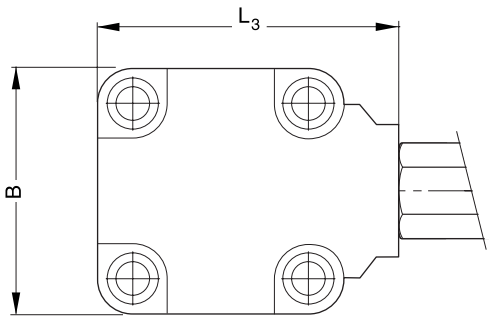
Dimensions





Size	B	H	L1 max.	L2 max.	L3 max.	Orifice thread ①	Orifice thread ②
NG16	65	40	160	125	82	M5	M5
NG25	85	45	166	132	88	M5	M5
NG32	102	50	183	152	105	M5	M5

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Hydraulic Controls Division
Kaarst, Germany

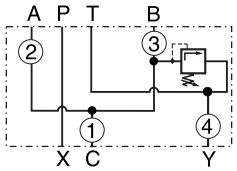
C		E			①	②	③	④		
Cover	Nominal size	Cover with pressure relief and pilot system mounting	Pressure range	Pressure adjustment	Orifice / choke				Seal	Design series (not required for ordering)

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

Code	Seal
N	**NBR**
V	FPM

Code	Pressure range [bar]
07	**75**
17	**175**
25	**250**
35	**350**

Code	Orifice
99	**Without orifice, open**



Orifice position

Code	Adjustment
S	**Screw with lock nut**
L	Knob E10 lock

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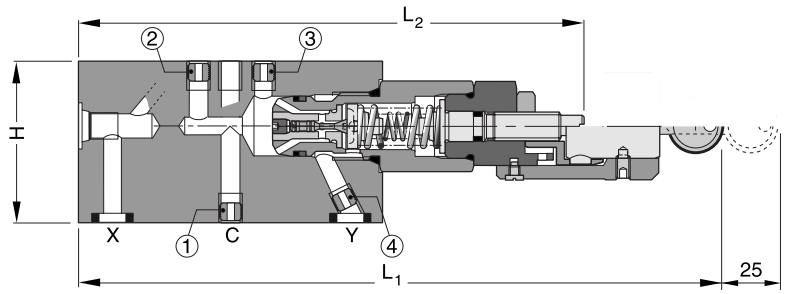
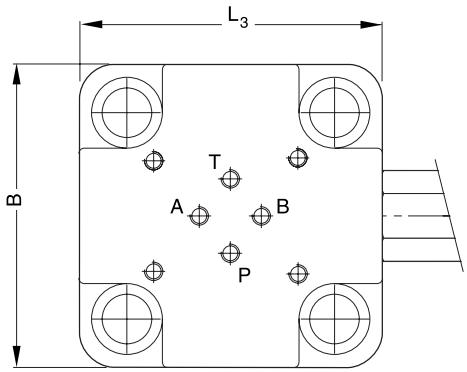
For orifice recommendations, bolt and seal kits see "Accessories" in this chapter.

Dimensions





Size	B	H	L1 max.	L2 max.	L3 max.	Orifice thread			
						①	②	③	④
NG16	65	40	160	125	82	M5	M5	M5	M5
NG25	85	45	166	132	88	M5	M5	M6	M6
NG32	102	50	183	152	105	M5	M5	M6	M6

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Pressure relief valve DSD*P*, subplate mounting NG06

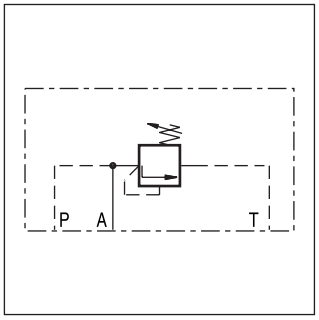
V-DSDA100 [ ] **P07** [ ]

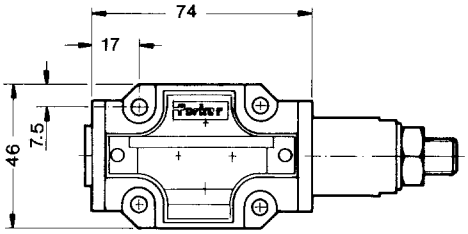
Pressure adjustment

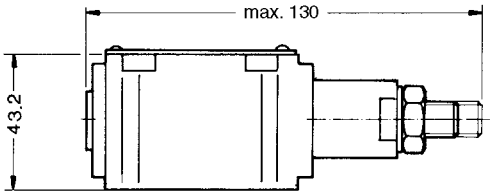
Code	Adjustment
2	**Hexagon screw with lock nut**
61	Knob E10 lock

Pressure range

Code	Pressure range [bar]
E	**175**
K	**350**







Pressure relief valve ZUD*AT*Z*, sandwich plate NG06

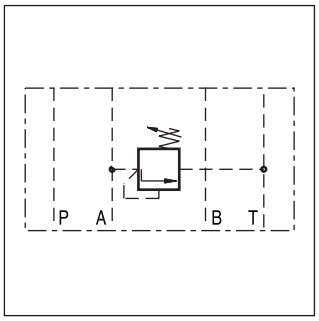
V-ZUDB1AT [ ] **Z07** [ ]

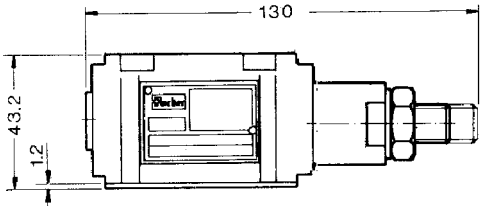
Pressure adjustment

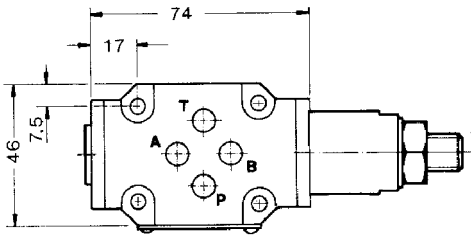
Code	Adjustment
2	**Hexagon screw with lock nut**
61	Knob E10 lock

Pressure range

Code	Pressure range [bar]
E	**175**
K	**350**







Bold letters =
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Pressure relief valve ZUD*PT*Z*, sandwich plate mounting NG06

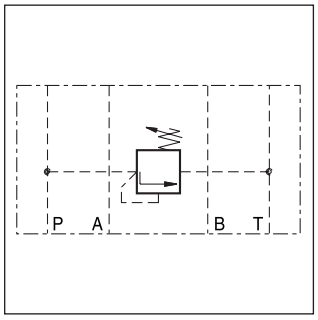
V-ZUDB1PT [ ] **Z07** [ ]

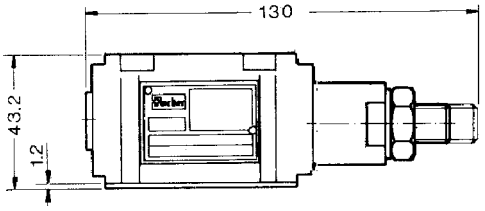
Pressure adjustment

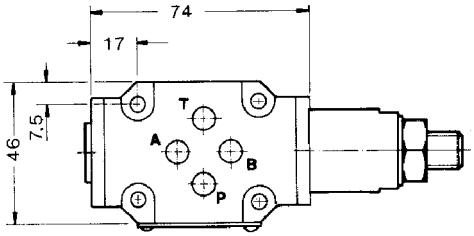
Code	Adjustment
2	**Hexagon screw with lock nut**
61	Knob E10 lock

Pressure range

Code	Pressure range [bar]
E	**175**
K	**350**







Preload valve DSB*P*, subplate mounting NG06

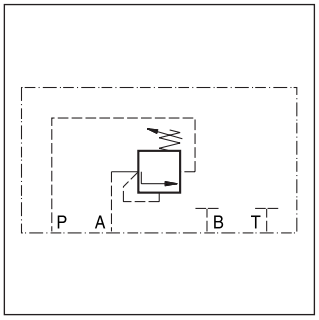
V-DSBA100 [ ] **P07** [ ]

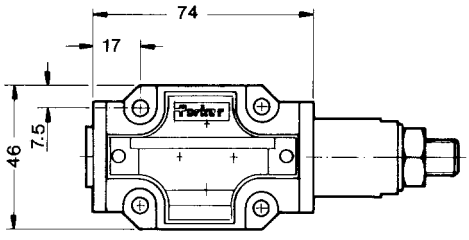
Pressure adjustment

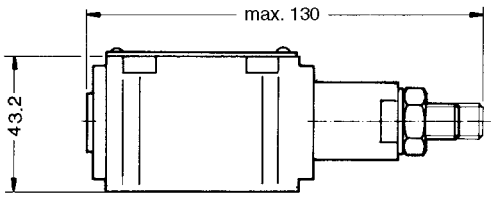
Code	Adjustment
2	**Hexagon screw with lock nut**
61	Knob E10 lock

Pressure range

Code	Pressure range [bar]
B	**70**







Bold letters =
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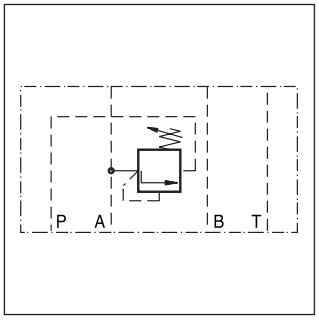
Preload valve DSB*Z*, sandwich plate mounting NG06

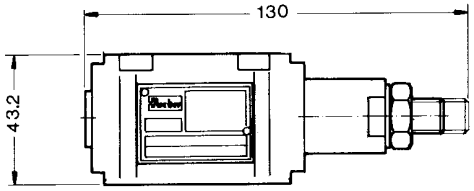
V-DSBA100 [ ] **Z07** [ ]

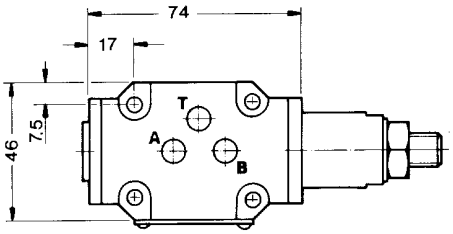
Pressure adjustment | **Pressure range**

Code	Adjustment
2	**Hexagon screw with lock nut**
61	Knob E10 lock

Code	Pressure range [bar]
B	**70**







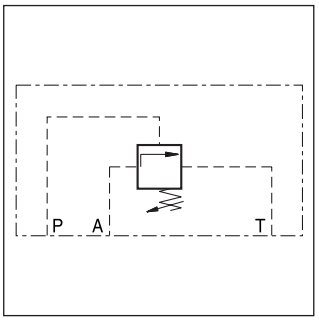
Unloading valve DAF*P*, subplate mounting NG06

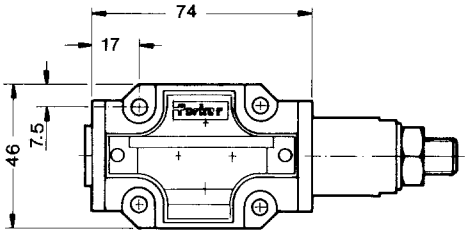
V-DAFA100 [ ] **P07** [ ]

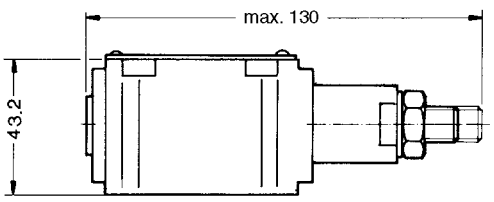
Pressure adjustment | **Pressure range**

Code	Adjustment
2	**Hexagon screw with lock nut**
61	Knob E10 lock

Code	Pressure range [bar]
E	**175**
K	**350**







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Kaarst, Germany

Unloading valve DAF*Z*, sandwich plate mounting NG06

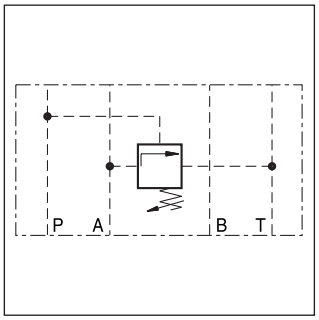
V-DAFA100 [ ] **Z07** [ ]

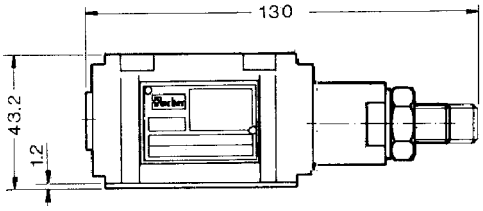
Pressure adjustment

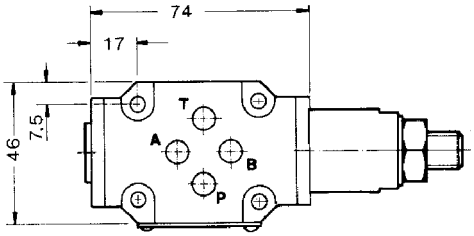
Code	Adjustment
2	**Hexagon screw with lock nut**
61	Knob E10 lock

Pressure range

Code	Pressure range [bar]
E	**175**
K	**350**







Pressure sequence valve DNL*P*, subplate mounting NG06

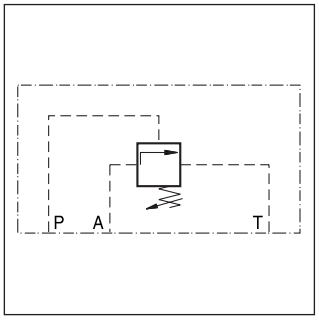
V-DNLA100 [ ] **P07** [ ]

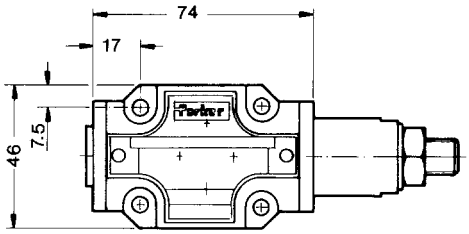
Pressure adjustment

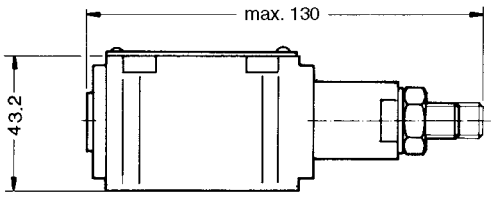
Code	Adjustment
2	**Hexagon screw with lock nut**
61	Knob E10 lock

Pressure range

Code	Pressure range [bar]
E	**175**
K	**350**







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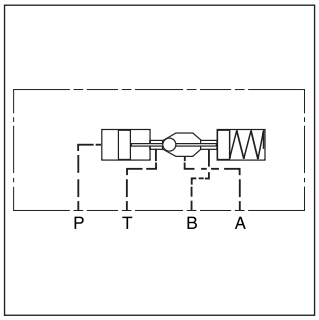
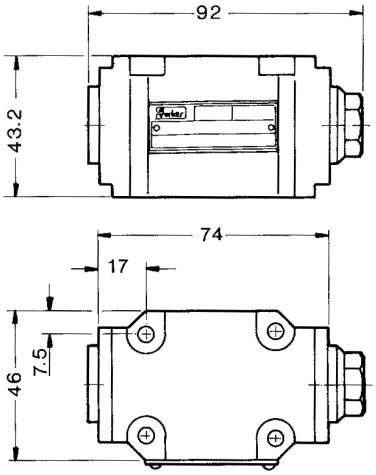
Hydraulic Controls Division
Kaarst, Germany

Check valve, hydraulically pilot operated NG06
Size NG6 with pilot control, for subplate assembly

Ordering code

SVLA1006P07

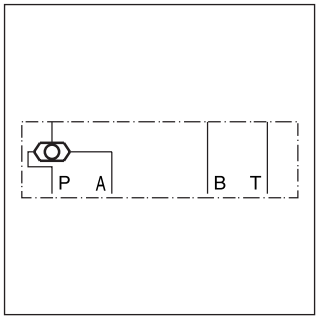


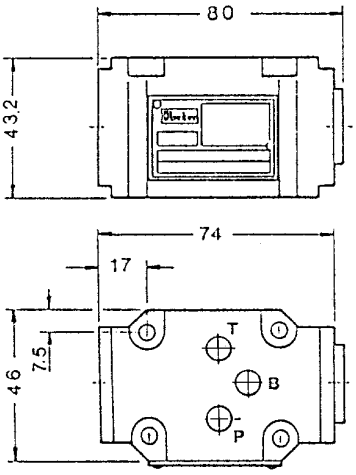


Shuttle valve - sandwich plate NG06
Size NG6, sandwich plate assembly

Ordering code

ZSRA1PP0Z07

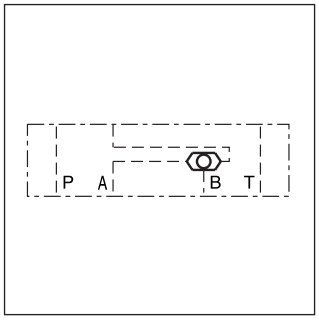


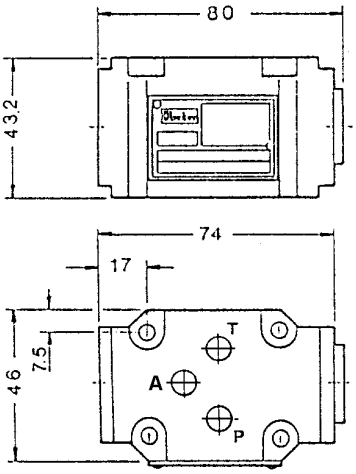


Shuttle valve - sandwich plate NG06
Size NG6, sandwich plate assembly

Ordering code

ZSRB1AA0Z07





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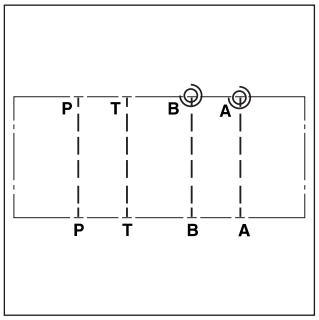
access08.INDD RH

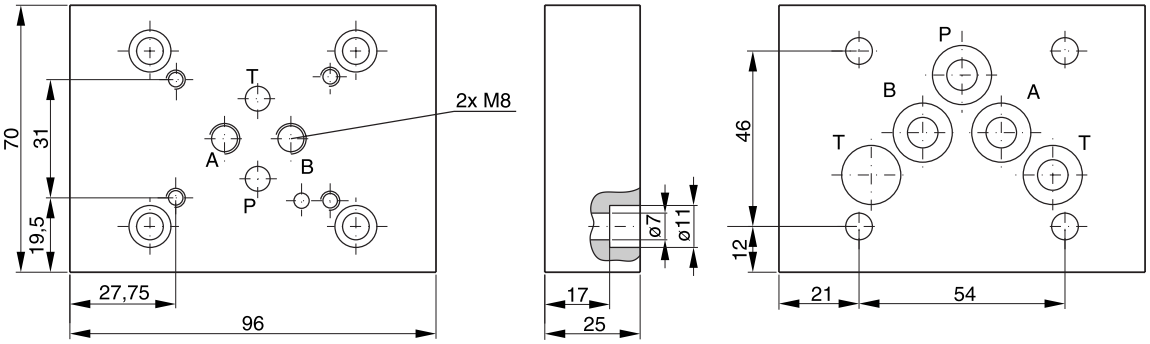
Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

Adaptor plate
Nominal size NG10 to NG06

Ordering code

PADA1007-AA-BB

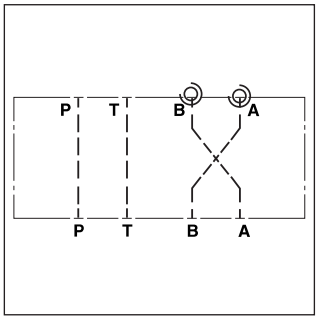


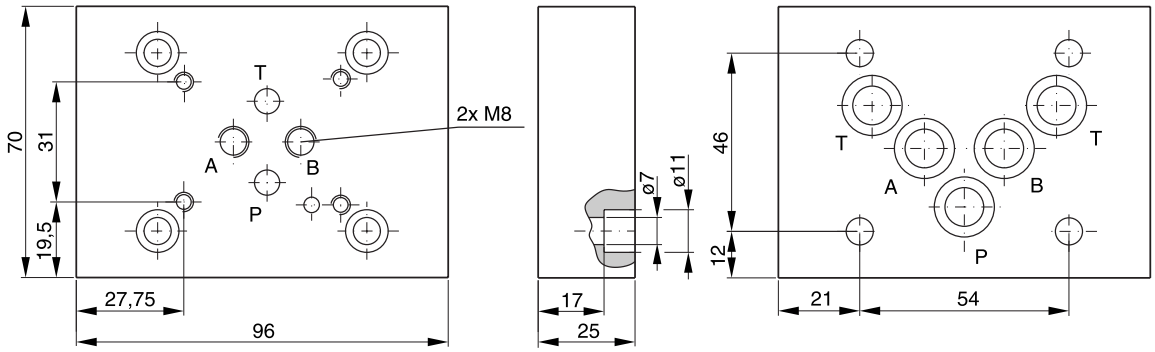


Adaptor plate
Nominal size NG10 to NG06

Ordering code

PADA1007/A-B/B-A





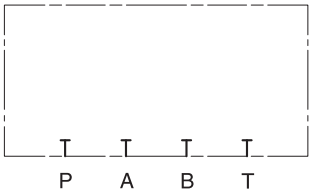
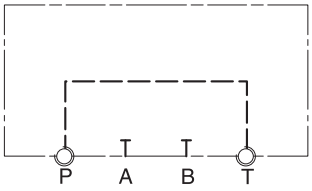
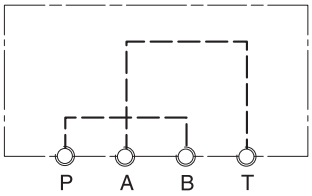
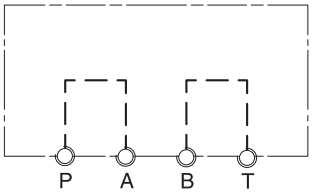
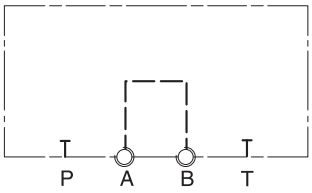
Attention:
For NG50 and larger:
If pilot system NG06 is used, mount adapter plate PADA 1007/A-B/B-A or PADA 1007/A-A/B-B (NG10 to NG06) on cover.
Adaptor plate: PADA 1007/A-B/B-A or PADA 1007/A-A/B-B
Sealing kit: SK-PADA 1007
Bolt kit: BK-PADA 1007

access08.INDD RH

Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

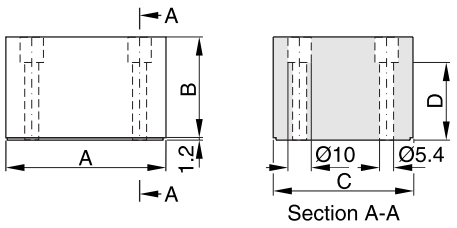
Catalogue HY11-3500/UK
Cover Plates NG06

2 Way Slip-In Cartridge Valves
Accessories

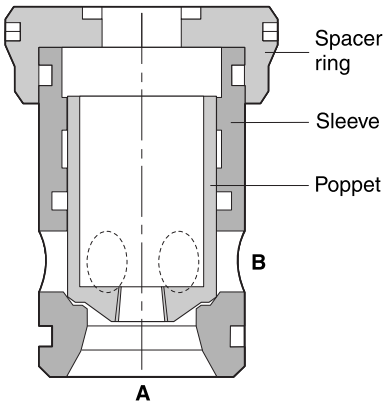
Symbol	Type	Seal	Dimensions			
			A	B	C	D
	D51VP071C D51VP071VC	NBR FPM	55	25	48	18.2
	CS06013H CS06013V	NBR FPM	76	40	45	40
	D51DC071D D51DC071VD	NBR FPM	60	25	50	17
	CS06080N CS06080V	NBR FPM	76	40	45	40
	CS06047N CS06047V	NBR FPM	76	40	45	40

Cover plates are supplied with O-ring and O-ring support plate.

Dimensions



Poppets, cages, 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
Sleeve	RK-35038871	RK-35038872	RK-35038873	RK-35036403	RK-35036417	RK-35036432	RK-25036452	RK-25036470
Spacer ring	RK-35036364	RK-35036375	RK-35036393	RK-35036402	RK-35036416	RK-35036435	RK-25036453	RK-25036471

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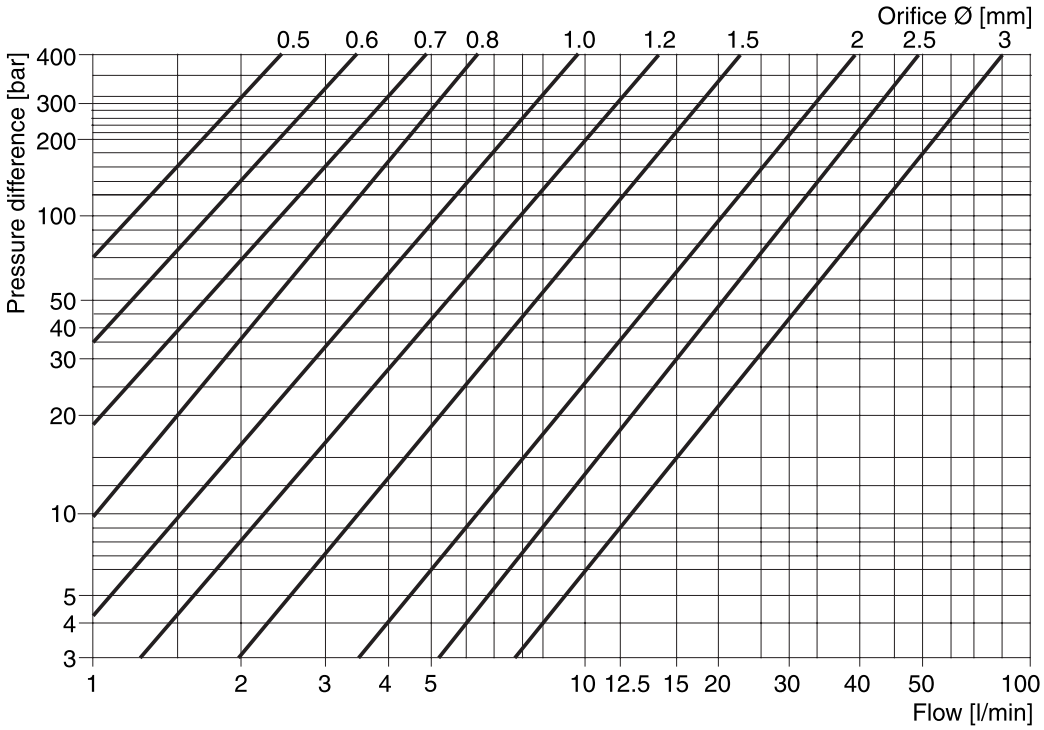
Springs, seals, fitting bolts

Size	16	25	32	40	50	63	80	100
Spring								
Type L 0.1 bar [1]	4505 1368	4505 1375	4505 1376	4505 1382	4505 1384	4505 1388	4505 1395	4505 1400
Type N 0.5 bar [1]	4505 1369	4505 1374	4505 1377	4505 1381	4505 1385	4505 1389	4505 1396	4505 1401
Type P 0.8 bar [2]	4505 1587	4505 1588	4505 1589	—	—	—	—	—
Type S 1.6 bar [1]	4505 1370	4505 1372	4505 1378	4505 1380	4505 1386	4505 1390	4505 1397	4505 1402
Type U 4.0 bar [1]	4505 1371	4505 1373	4505 1379	4505 1383	4505 1387	4505 1391	4505 1398	4505 1403
Seal kits FPM NBR	 SK-CBE160V SK-CBE160	 SK-CBE250V SK-CBE250	 SK-CBE320V SK-CBE320	 SK-CBE400V SK-CBE400V	 SK-CBE500V SK-CBE500	 SK-CBE630V SK-CBE630	 SK-CBE800V SK-CBE800	 SK-CBE1000V SK-CBE1000
Bolt kits (DIN 912 12.9)	BK-M8x40- 4pcs	BK-M12x50- 4pcs	BK-M16x55- 4pcs	BK-M20x70- 4pcs	BK-M2x75- 4pcs	BK-M30x100- 4pcs	BK-M24x120- 8pcs	BK-M30x130- 8pcs
Recommended torque [Nm]	27	94	234	460	460	1570	790	1570

[1] not for poppet 02
[2] only for poppet 02

Diagram to choose the orifice Ø



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

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.

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Orifices

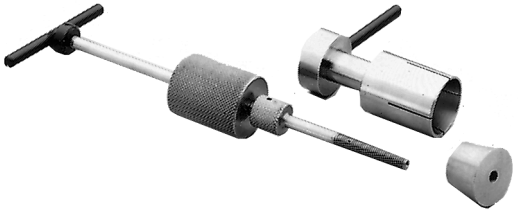
Orifice kit	Orifice kit, sorted by thread with different diameters, consisting of 2 pieces of each marked diameter												
Ø	0.0	0.8	0.9	1.0	1.1	1.2	1.3	1.5	1.8	2.0	2.2	2.5	3.0
DK-M4	x	x	x	x	x	x	x	x	-	x	-	-	-
DK-M5	x	x	x	x	x	x	x	x	-	x	-	-	-
DK-M6	x	x	x	x	x	x	x	x	-	x	-	-	-
DK-M8	x	-	-	x	-	x	-	x	x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

Orifice kits of one size (20 pcs. per box):
DK - thread - orifice size
E.g. DK - M4 - 08
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.



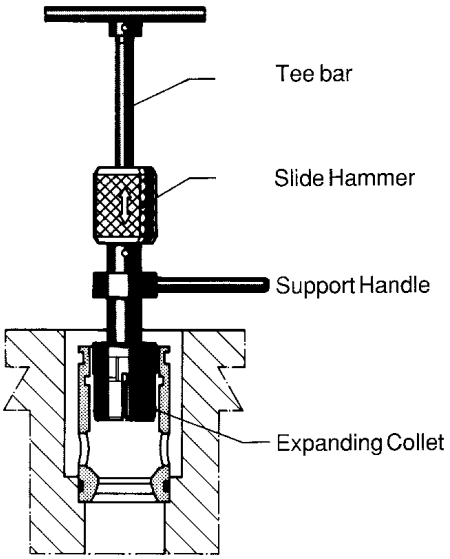


Figure 1

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

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Removal CE080 toCE100

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.

Ordering Code

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

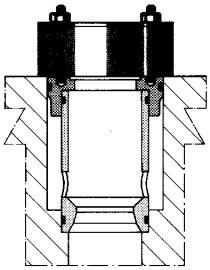


Figure 2

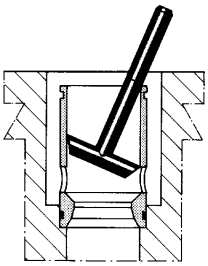


Figure 3

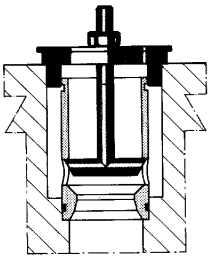


Figure 4

Notes

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

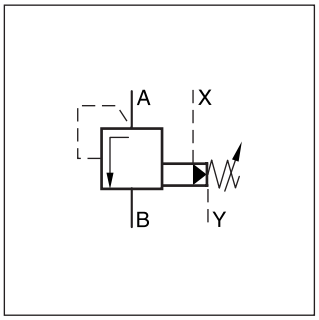
The pressure relief valve series RS consists of a manual adjusted pilot stage with a directional valve for an electrically controlled vent function and a cartridge main part.

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

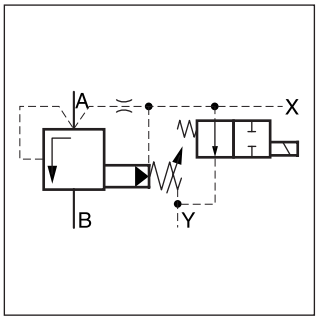
Features

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

RS*E

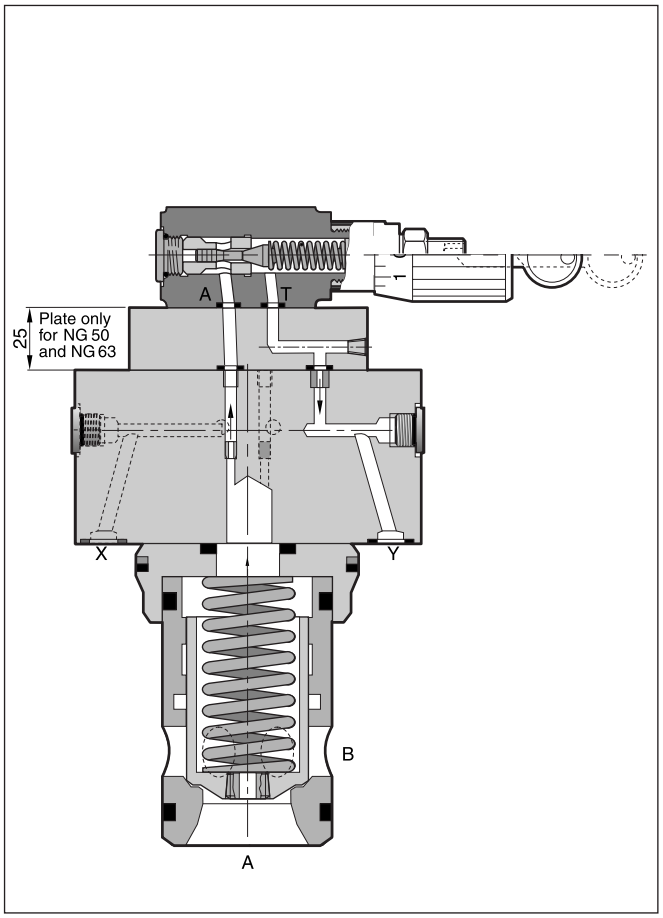


R*E

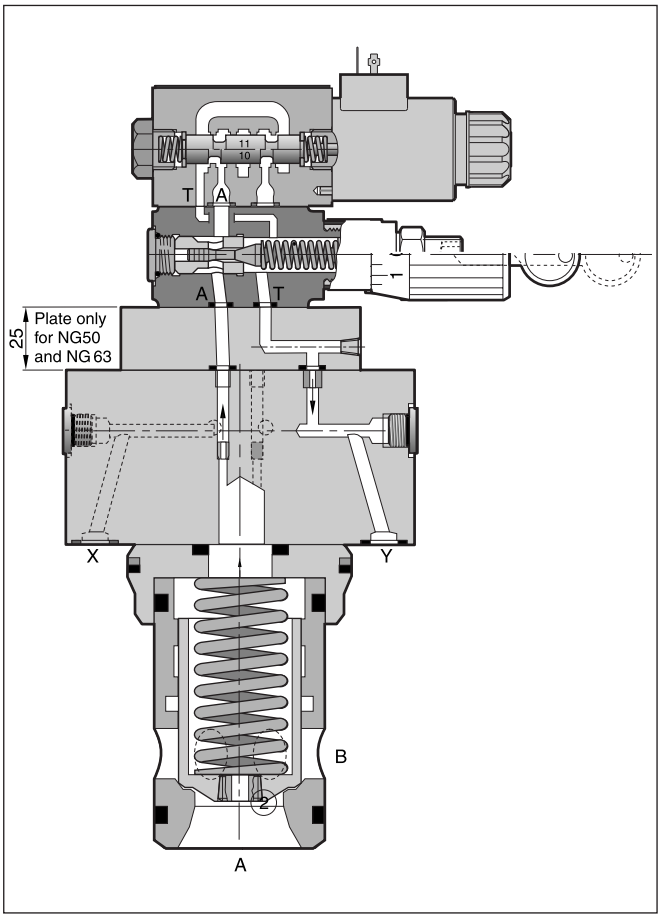


RS*E

R*E



RS*E



8

R*E

R		E			1	S			
Pressure relief valve	**Nominal size**	**Slip-in mounting ISO 7368**	**Pressure stages**	**Adjustment**	**Pilot oil** Pilot int., Drain ext.	**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
17	up to 175 bar
25	up to 250 bar
35	up to 350 bar

Code	Spool type
omit	Standart
S07	with poppet seals

Code	Seal
N	NBR
V	FPM

Code	Adjustment
S	Hexagon screw with lock nut
L	DIN lock

RS*E

RS		E			1	S				W			
Pressure relief valve w. elec. unloading	**Nominal size**	**Slip-in mounting ISO 7368**	**Pressure stages**	**Adjustment**	**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
17	up to 175 bar
25	up to 250 bar
35	up to 350 bar

Code	Adjustment
S	Hexagon screw with lock nut
L	DIN lock

Code	Seal
N	NBR
V	FPM

Code	Spool type
omit	Standard
S07	with poppet seals

Code	Options
omit	Standart
S	with slow unloading

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

[1] use plug with rectifier at AC

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

R*E

General							
Nominal size		**16**	**25**	**32**	**40**	**50**	**63**
Interface		Slip-in mounting acc. ISO 7368					
Mounting position		as desired, horizontal mounting prefered					
Ambient temperature	[°C]	-20...+80					
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 depressurized					
Pressure stages	[bar]	75, 175, 250, 350					
Nominal flow	[l/min]	220	500	950	1400	2300	4000
Fluid		Hydraulic oil according to DIN 51524 ... 525					
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		**16**	**25**	**32**	**40**	**50**	**63**
Interface		Slip-in mounting acc. ISO 7368					
Mounting position		as desired, horizontal mounting prefered					
Ambient temperature	[°C]	-20...+80					
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 depressurized					
Pressure stages	[bar]	75, 175, 250, 350					
Nominal flow	[l/min]	220	500	950	1400	2300	4000
Fluid		Hydraulic oil according to DIN 51524 ... 525					
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 180 °C possible					
Max. switching frequency	[1/h]	16000					
Protection class		IP 65 in according with EN 60529 (plugged and mounted)					
Direct current	Code	K	J	U	G		
Supply voltage	[V]	12	24	98	205		
Power	[W]	31	31	31	31		
Current	[A]	2.5	1.25	0.31	0.15		
Solenoid connection		Connector as per EN 175301-803					
Wiring min.	[mm²]	3 x 1.5 recommended					
Wiring length max.	[m]	50 recommended					

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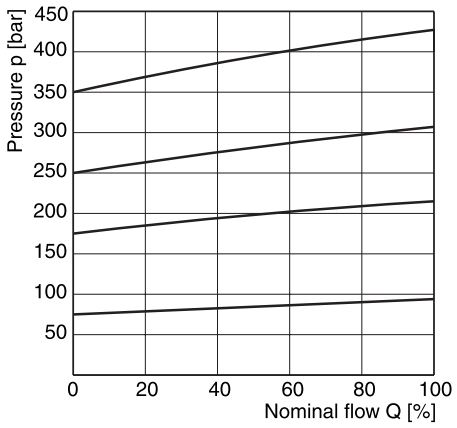
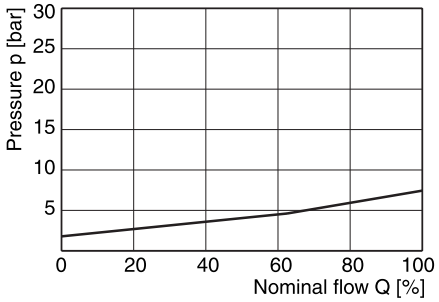
p/Q performance curve [1)]

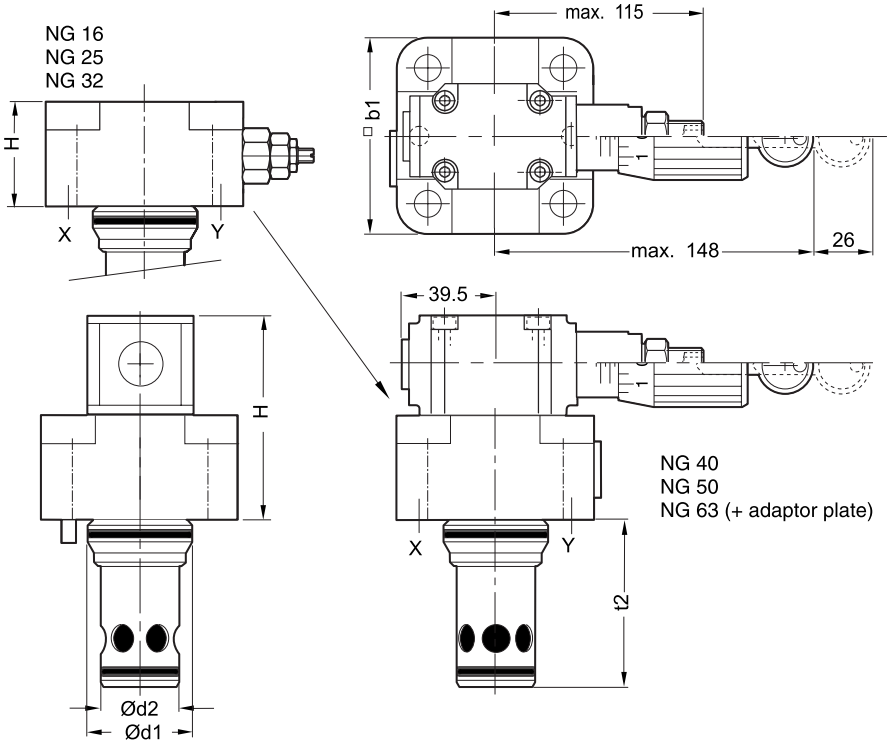


Minimum pressure curve



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

Dimensions R*E



Size	H	b_1	d_1	d_2	t_2
NG16	40	79 [1)]	32	25	58
NG25	45	85	45	34	72
NG32	50	102	60	45	85
NG40	103	125	75	55	105
NG50	138	140	90	68	122
NG63	153	180	120	90	155

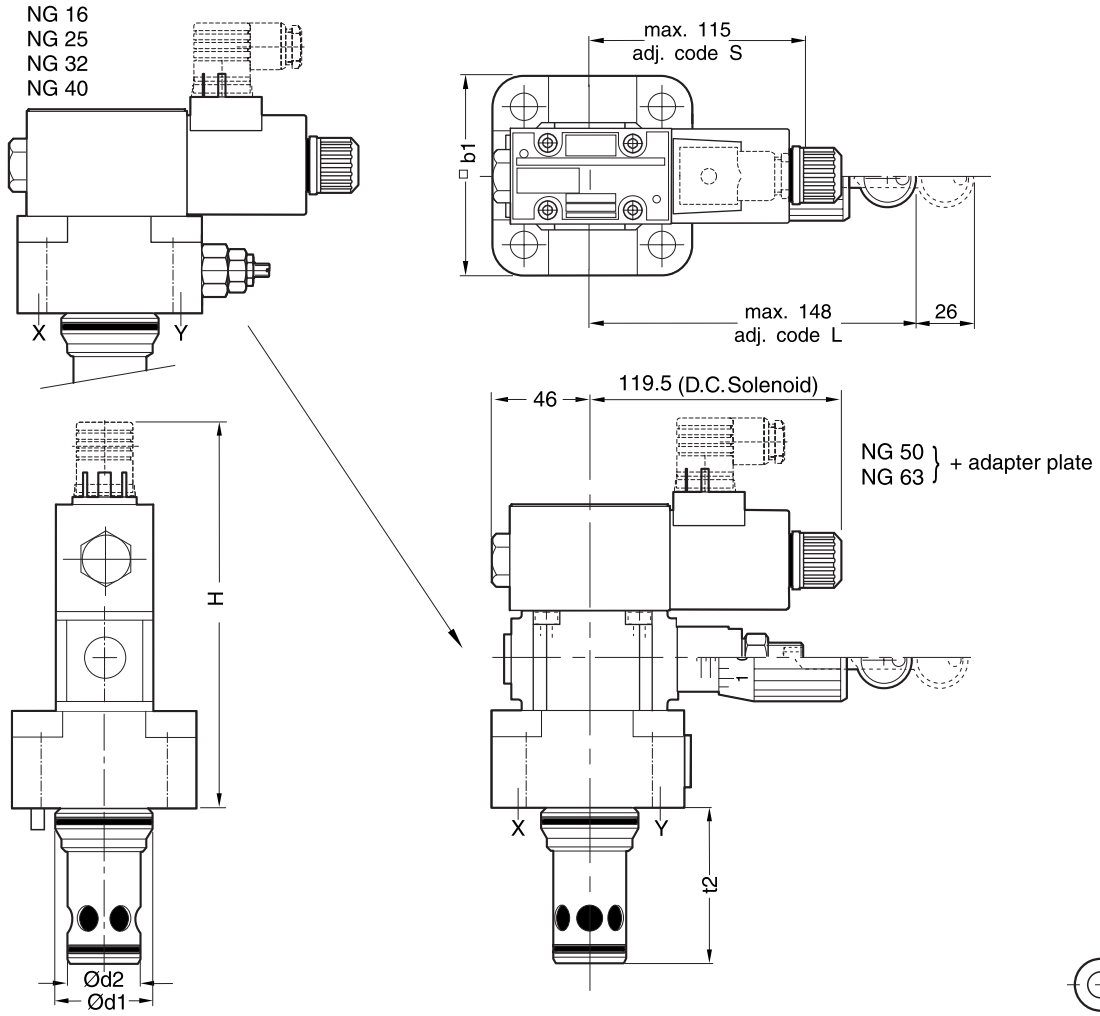
[1)] width 65mm

NG	Bolt kit - DIN912 12.9	[Nm]	Kit NBR	Kit FPM
16	BK-M8x50-4pcs	33	SK-R16E	SK-R16EV
25	BK-M12x50-4pcs	115	SK-R25E	SK-R25EV
32	BK-M16x55-4pcs	281	SK-R32E	SK-R32EV
40	BK-M20x70-4pcs	553	SK-R40E	SK-R40EV
50	BK-M20x75-4pcs	553	SK-R50E	SK-R50EV
63	BK-M30x100-4pcs	1910	SK-R63E	SK-R63EV

R-RSE_UK.INDD RH

Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

RS*E



Size	H	b_1	d_1	d_2	t_2
NG16	135	79 [1]	32	25	56
NG25	140	85	45	34	72
NG32	145	102	60	45	85
NG40	196	125	75	55	105
NG50	231	140	90	68	122
NG63	246	180	120	90	155

[1] width 65mm

NG	Bolt kit - DIN912 12.9	[Nm]	Kit NBR	Kit FPM
16	BK-M8x50-4pcs	33	SK-RS16E	SK-RS16EV
25	BK-M12x50-4pcs	115	SK-RS25E	SK-RS25EV
32	BK-M16x55-4pcs	281	SK-RS32E	SK-RS32EV
40	BK-M20x70-4pcs	553	SK-RS40E	SK-RS40EV
50	BK-M20x75-4pcs	553	SK-RS50E	SK-RS50EV
63	BK-M30x100-4pcs	1910	SK-RS63E	SK-RS63EV

R-RSE_UK.INDD RH

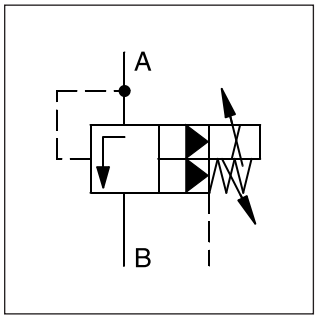
Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

Notes

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.

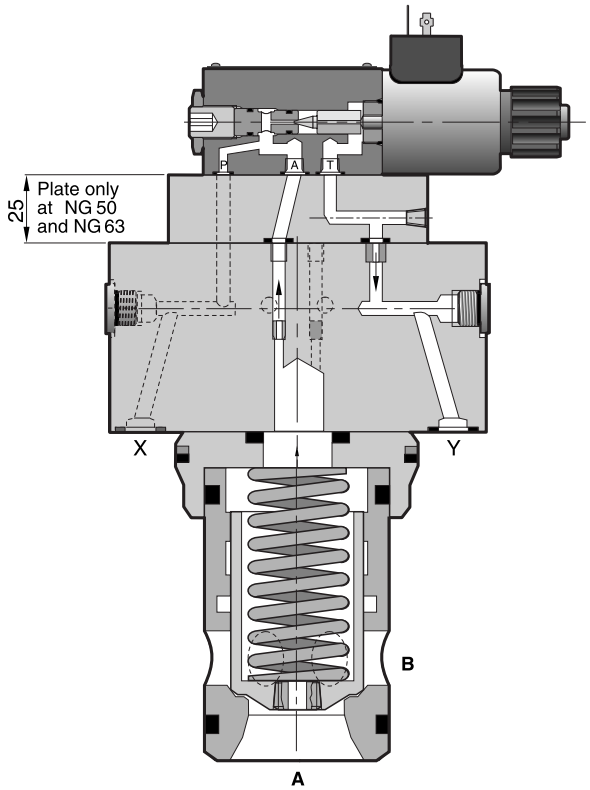
The RE*W model code embraces the pilot valves, covers and cartridges that are also offered as separate items. See combination examples for details.

In combination with the digital power amplifier PCD00A-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



8

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**	**Normaly open**	**Solenoid**	**Without plug**	**Options**	**Design series**	**Spool type**

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

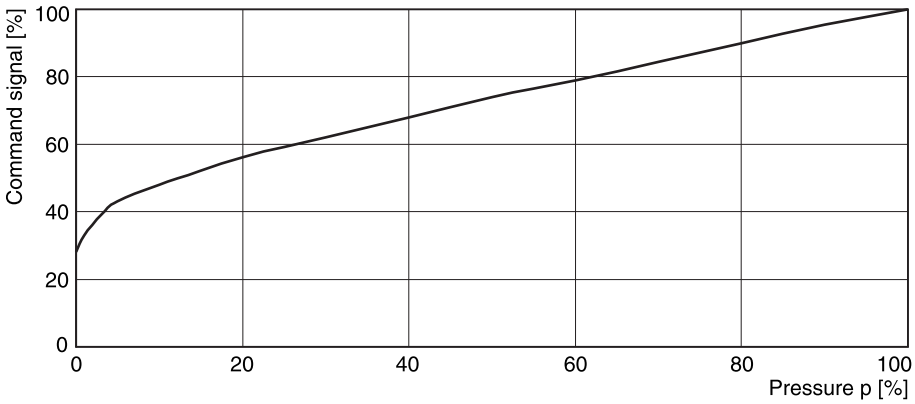
Code	Solenoid
K	12V, 2.3A
X	16V, 1.3A

Code	Seal
N	NBR
V	FPM

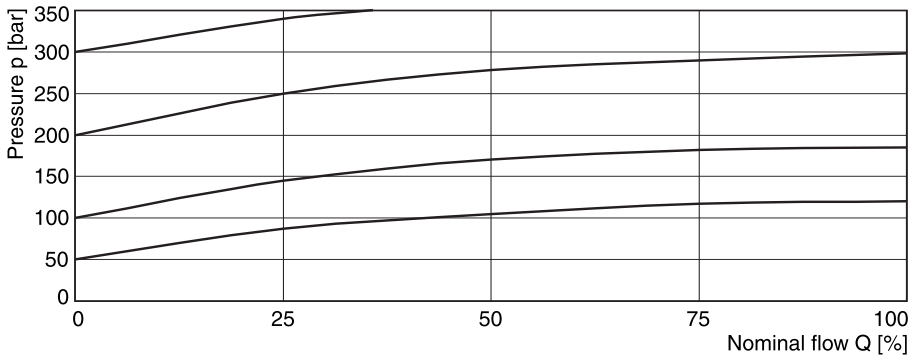
Technical data

General							
Nominal size		**16**	**25**	**32**	**40**	**50**	**63**
Interface		Slip-in mounting acc. ISO 7368					
Mounting position		as desired, horizontal mounting prefered					
Ambient temperature	[°C]	-20...+80					
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 depressurized					
Pressure stages	[bar]	105, 175, 250, 350					
Nominal flow	[l/min]	220	500	950	1400	2300	4000
Fluid		Hydraulic oil according to DIN 51524 ... 525					
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 (prop. solenoid)							
Duty ratio	[%]	100 ED					
Protection class		IP65 in accordance with EN 60529 (plugged and mounted)					
Nominal voltage	[V]	12 (max. current 2.3A), 16 (max. current 1.3A)					
Coil resistance	[Ohm]	4 at 20°C					
Solenoid connectors		Connector as per EN 175301-803					
Power amplifier, recommended		PCD00A-400					

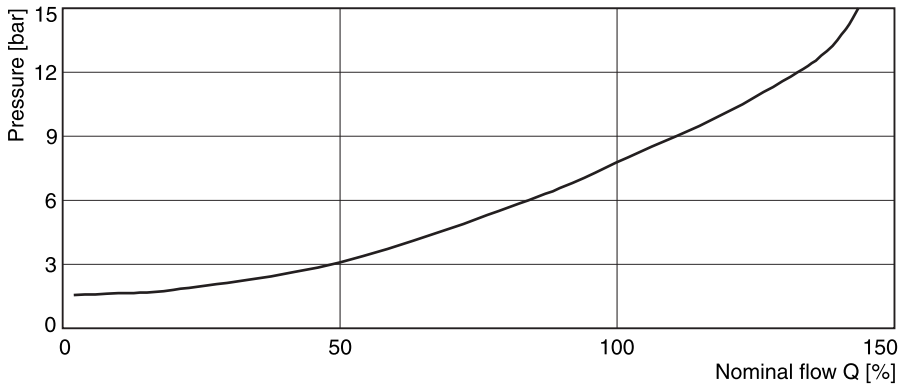
Signal/pressure curve



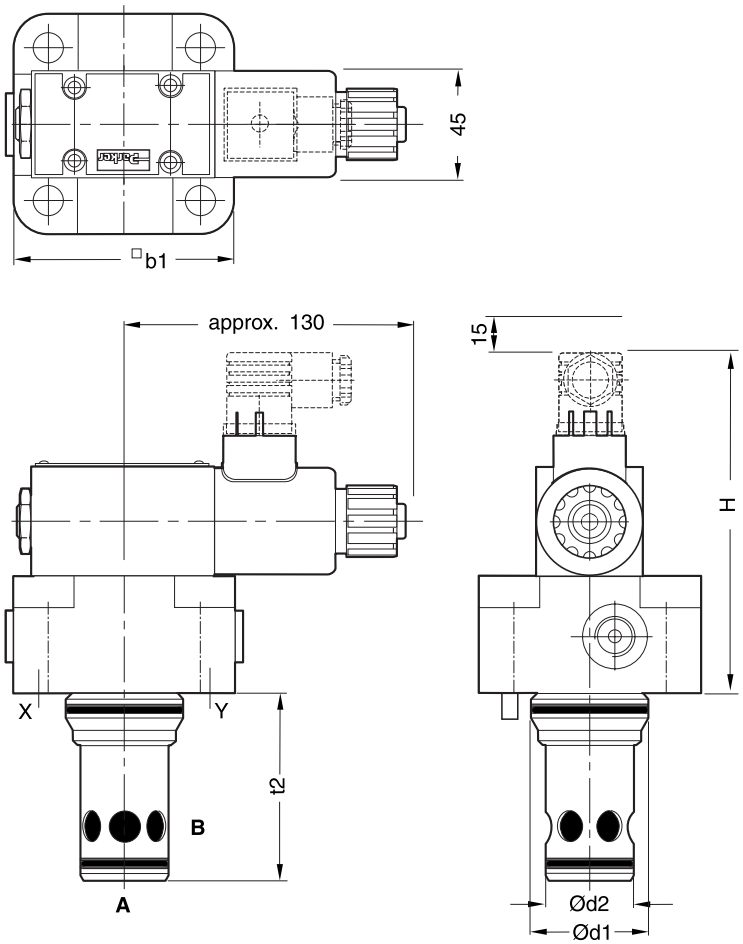
p/Q performance curve



Minimum pressure curve



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



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NG	H	b_1	d_1	d_2	t_2
16	135	79 [1]	32	25	56
25	140	85	45	34	72
32	145	102	60	45	85
40	137 (179) [2]	125	75	55	105
50	172 (214) [2]	140	90	68	122
63	187 (229) [2]	180	120	90	155

[1] width 65mm
[2] with mech. max. adjustment

NG	Bolt kit - DIN912 12.9	[Nm]	Kit NBR	Kit FPM
16	BK-M8x50-4pcs	33	SK-RE16E	SK-RE16EV
25	BK-M12x50-4pcs	115	SK-RE25E	SK-RE25EV
32	BK-M16x55-4pcs	281	SK-RE32E	SK-RE32EV
40	BK-M20x70-4pcs	553	SK-RE40E	SK-RE40EV
50	BK-M20x75-4pcs	553	SK-RE50E	SK-RE50EV
63	BK-M30x100-4pcs	1910	SK-RE63E	SK-RE63EV

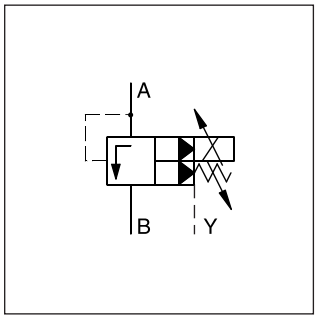
REEW_UK.INDD RH

Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

The proportional pressure relief valve series RE*E*T consists of a proportional pilot stage with onboard electronics 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.

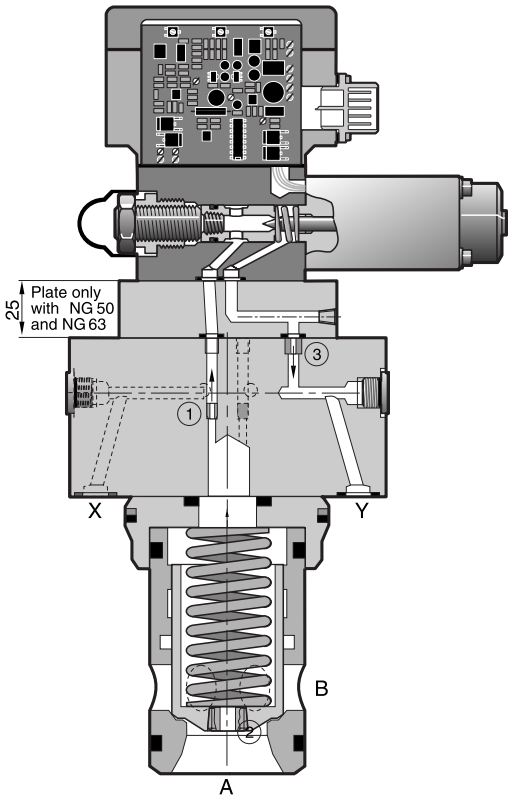
The valve comes factory set with linearized characteristics.

The RE*T model code embraces the pilot valves, covers and cartridges that are also offered as separate items. The pilot valve with onboard electronics (RE06M*T) is not shown in the combination examples.



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



8

Ordering code

RE		E		T	1	S		1		0			
Prop. pressure relief valve w. elec. unloading	**Nominal size**	**Slip-in mounting ISO 7368**	**Pressure stages**	**On-board electronics**	**Pilot oil** Pilot int., Drain ext.	**Poppet spring**	**Seal**	**Normaly open**	**Command signal**	**Electr. attachments**	**Options**	**Design series**	**Spool type**

Code	Nominal size
16	NG16
25	NG25
32	NG32
40	NG40
50	NG50
63	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	Seal
N	NBR
V	FPM

Code	Spool type
omit	Standard
S07 [1]	with poppet seals

[1] not for NG16

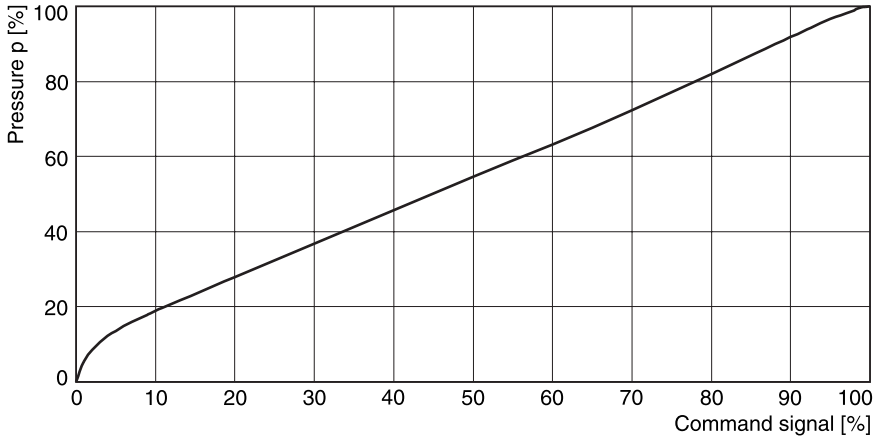
Code	Options
omit	Standart
M	Mech. max. adjustment

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

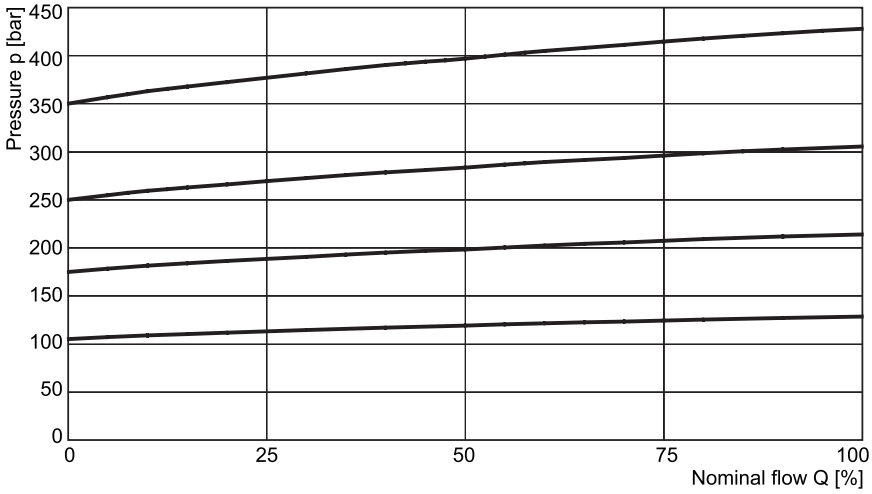
Technical data

General							
Nominal size		**16**	**25**	**32**	**40**	**50**	**63**
Interface		Slip-in mounting acc. ISO 7368					
Mounting position		as desired, horizontal mounting prefered					
Ambient temperature	[°C]	-20...+80					
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 depressurized					
Pressure stages	[bar]	105, 175, 250, 350					
Nominal flow	[l/min]	220	500	950	1400	2300	4000
Fluid		Hydraulic oil according to DIN 51524 ... 525					
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 (prop. solenoid)							
Duty ratio	[%]	100 ED					
Protection class		IP65 in accordance with EN 60529 (plugged and mounted)					
Supply voltage	[V]	14.5...30					
Ripple in supply voltage	[%]	max. 5					
Current consumption	[A]	max. 2.8					
Input range							
voltage input	[V]	0...+10 max. / 10kOhm					
current input	[mA]	0...+20 / 500Ohm					
Adjustment range of ramp time	[s]	0...5					
Installation cross-section	[mm²]	Min. 1, shielded					
cable length	[m]	Max. 50					
Electrical connection		No. 5004072; 6pole + PE / connector EN 175201-804 / cable ~ 8...10mm					

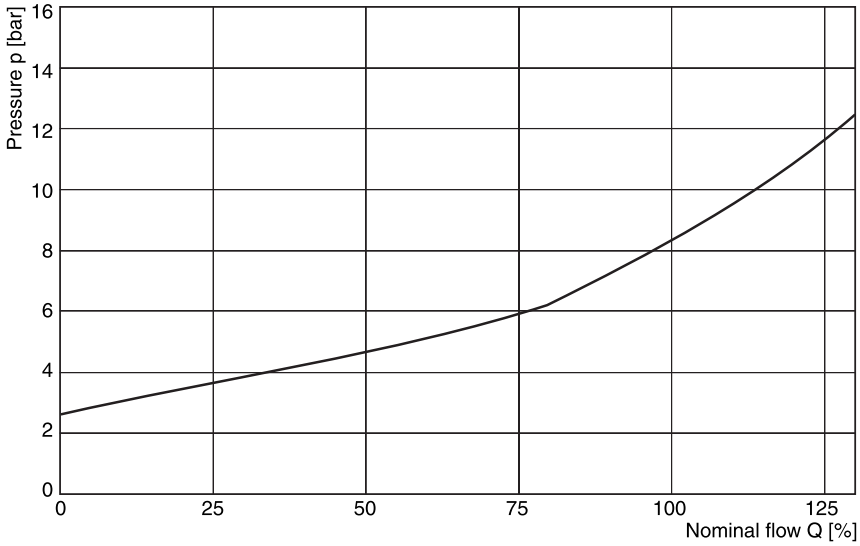
Command pressure curve RE*E*T



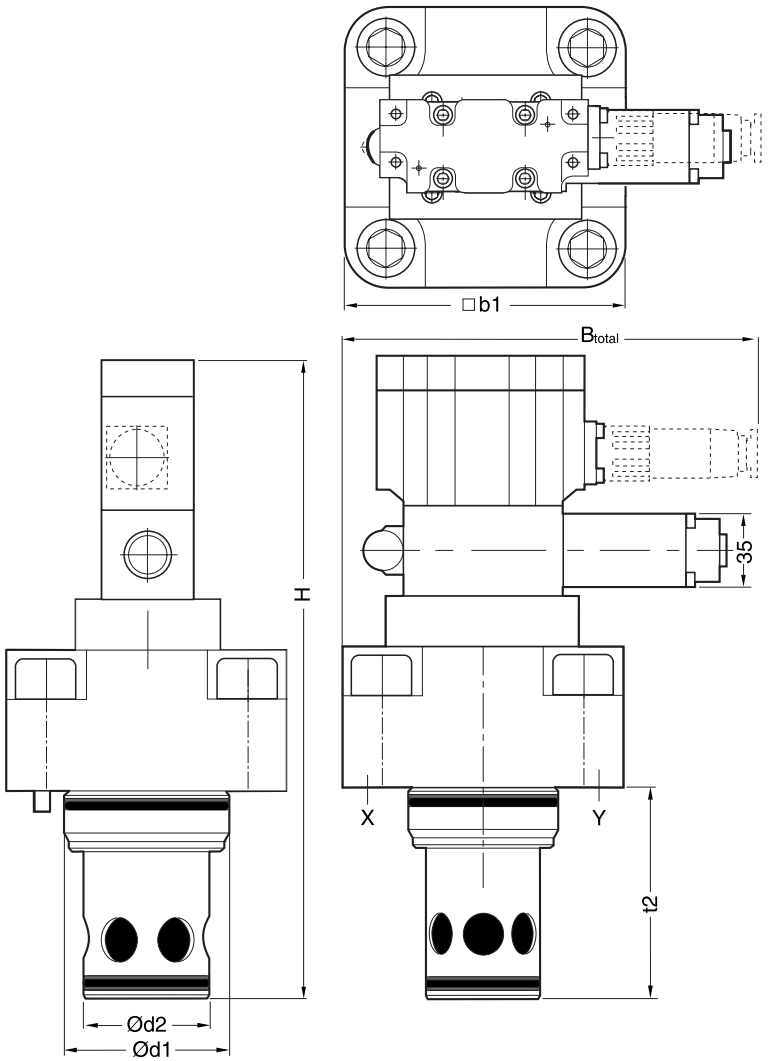
p/Q performance curve RE*E*T



Minimum pressure curve RE*E*T



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



NG	H	b_1	d_1	d_2	t_2
16	177	79 [1]	32	25	56
25	122	85	45	34	72
32	127	102	60	45	85
40	137 (179) [2]	125	75	55	105
50	172 (214) [2]	140	90	68	122
63	187 (229) [2]	180	120	90	155

[1] width 65mm
[2] with mech. max. adjustment

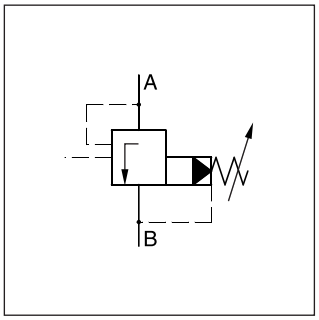
NG	Bolt kit - DIN912 12.9	[Nm]	Kit NBR	Kit FPM
16	BK-M8x50-4pcs	33	SK-RE16E	SK-RE16EV
25	BK-M12x50-4pcs	115	SK-RE25E	SK-RE25EV
32	BK-M16x55-4pcs	281	SK-RE32E	SK-RE32EV
40	BK-M20x70-4pcs	553	SK-RE40E	SK-RE40EV
50	BK-M20x75-4pcs	553	SK-RE50E	SK-RE50EV
63	BK-M30x100-4pcs	1910	SK-RE63E	SK-RE63EV

REET_UK.INDD RH

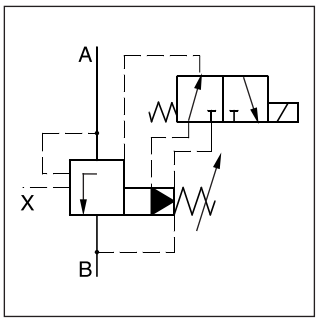
Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

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 pressure differential between opening and closing is 13%.
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.

US*E



UR*E



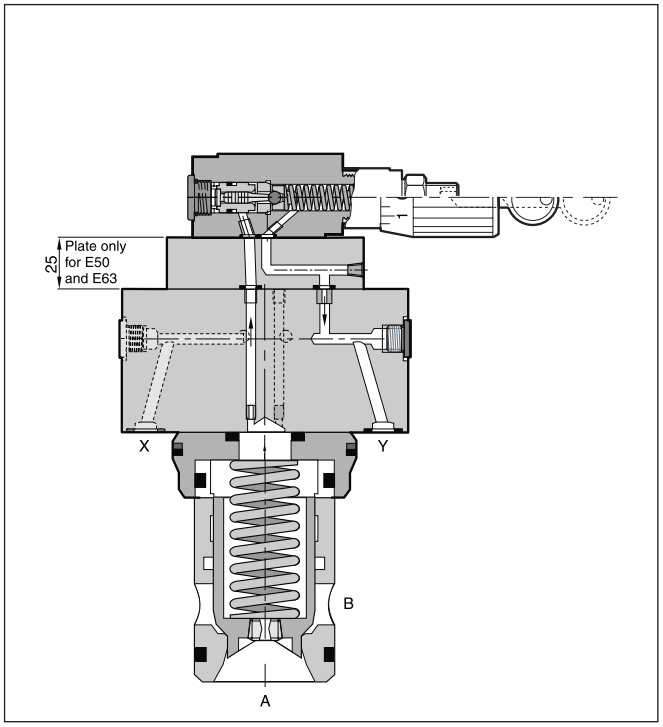
US*E

Features

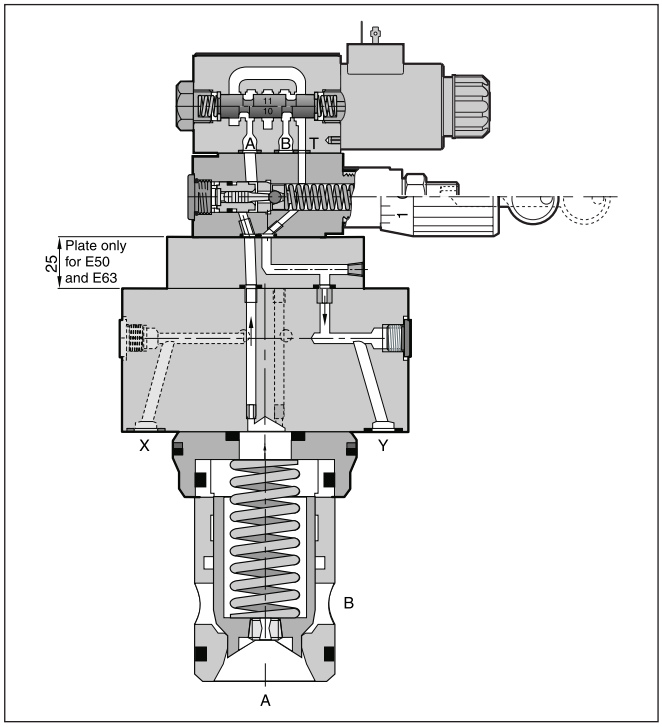
- Pilot operated unloading valve
- Cavity and mounting pattern according to ISO 7368
- 4 pressure stages
- 2 switching types (series US*E)
- 2 adjustment modes
  - hexagon screw with lock nut
  - DIN lock
- 6 sizes NG16 to NG63

8

UR*E



US*E



URE-USE_UK.INDD RH

Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

UR*E

UR		E			1	S			S08
Unloading valve	**Nominal size**	**Slip-in mounting ISO 7368**	**Pressure stages**	**Adjustment**	**Pilot oil** Pilot int., Drain ext.	**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	Seal
N	NBR
V	FPM

Code	Adjustment
L	DIN lock
S	Hexagon screw with lock nut

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

US		E			1	S				W			S08
Unloading valve with elec. unloading	**Nominal size**	**Slip-in mounting ISO 7368**	**Pressure stages**	**Adjustment**	**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	Options
omit	Standard
S	with slow unloading

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

[1] use plug with rectifier at AC

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 activ, unpress. circulation
9	Solenoid activated, unpress. circulation

Code	Adjustment
L	DIN lock
S	Hexagon screw with lock nut

Code	Seal
N	NBR
V	FPM

UR*E

General							
Nominal size		**16**	**25**	**32**	**40**	**50**	**63**
Interface		Slip-in mounting acc. ISO 7368					
Mounting position		as desired, horizontal mounting prefered					
Ambient temperature	[°C]	-20...+80					
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, Port B and Y depressurized					
Pressure stages	[bar]	75, 175, 250, 350					
Pressure differential	[%]	13					
Nominal flow	[l/min]	220	500	950	1400	2300	4000
Fluid		Hydraulic oil according to DIN 51524 ... 525					
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					

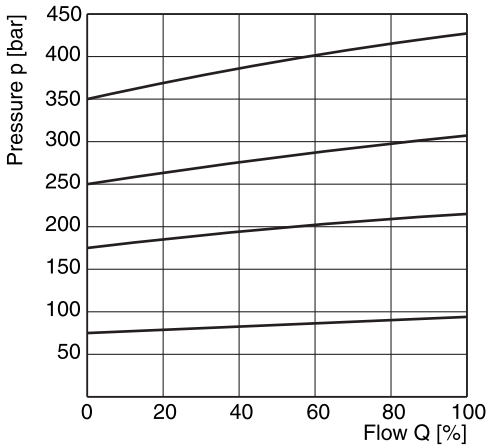
US*E

General							
Nominal size		**16**	**25**	**32**	**40**	**50**	**63**
Interface		Slip-in mounting acc. ISO 7368					
Mounting position		as desired, horizontal mounting prefered					
Ambient temperature	[°C]	-20...+80					
Weight	[kg]	2.7	5.2	6.4	9.5	15.2	24.3
Hydraulic							
Max. operating pressure	[bar]	Ports A and X 350, port B and Y depressurized					
Pressure stages	[bar]	75, 175, 250, 350					
Pressure differential	[%]	13					
Nominal flow	[l/min]	220	500	950	1400	2300	4000
Fluid		Hydraulic oil according to DIN 51524 ... 525					
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 180 °C possible					
Max. switching frequency	[1/h]	16000					
Protection class		IP 65 in according with EN 60529 (plugged and mounted)					
Direct current	Code	K	J	U	G		
Supply voltage	[V]	12	24	98	205		
Power	[W]	31	31	31	31		
Current	[A]	2.5	1.25	0.31	0.15		
Solenoid connection		Connector as per EN 175301-803					
Wiring min.	[mm²]	3 x 1.5 recommended					
Wiring length max.	[m]	50 recommended					

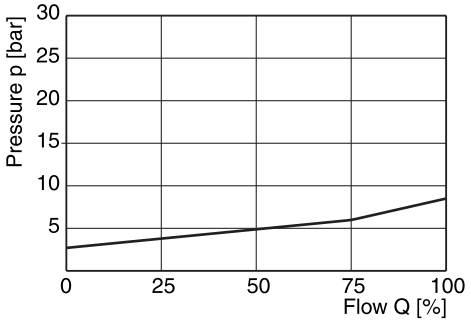
8

p/Q performance curve

Series UR/US*E [1)]



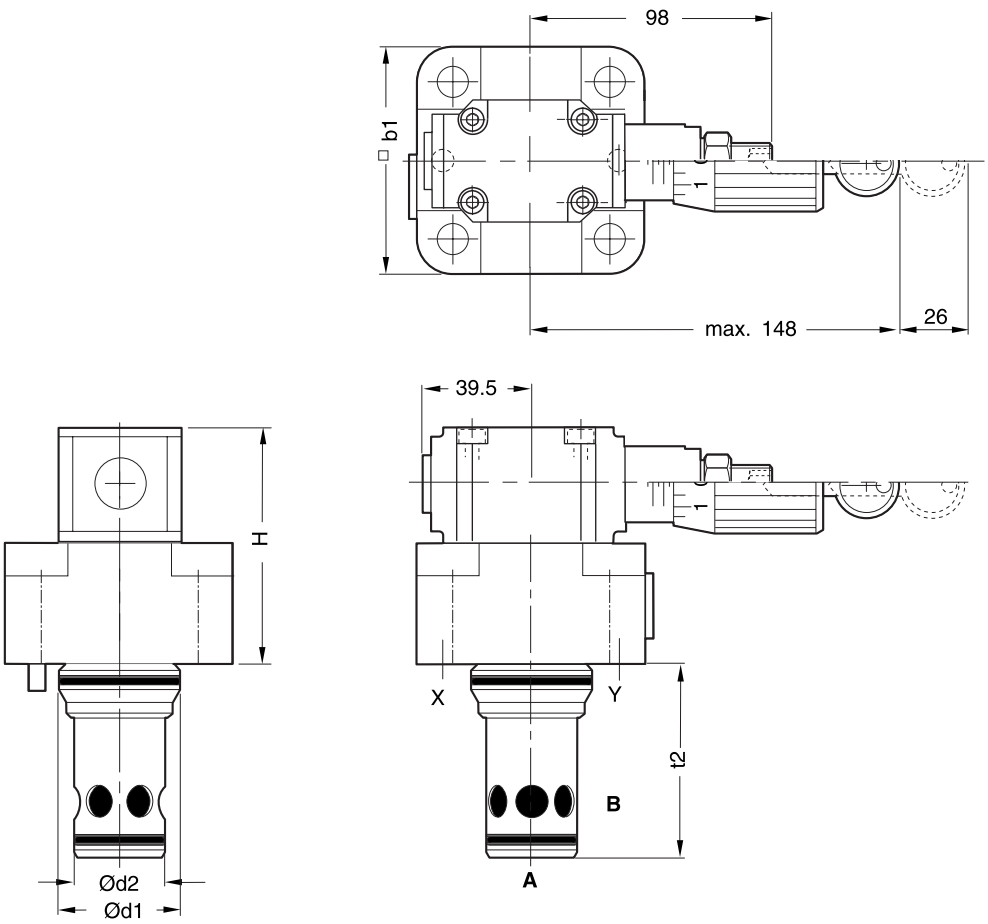
Minimum pressure curve



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

8

UR*E



NG	H	b_1	d_1	d_2	t_2
16	40	79 [1]	32	25	58
25	45	85	45	34	72
32	50	102	60	45	85
40	103	125	75	55	105
50	138	140	90	68	122
63	153	180	120	90	155

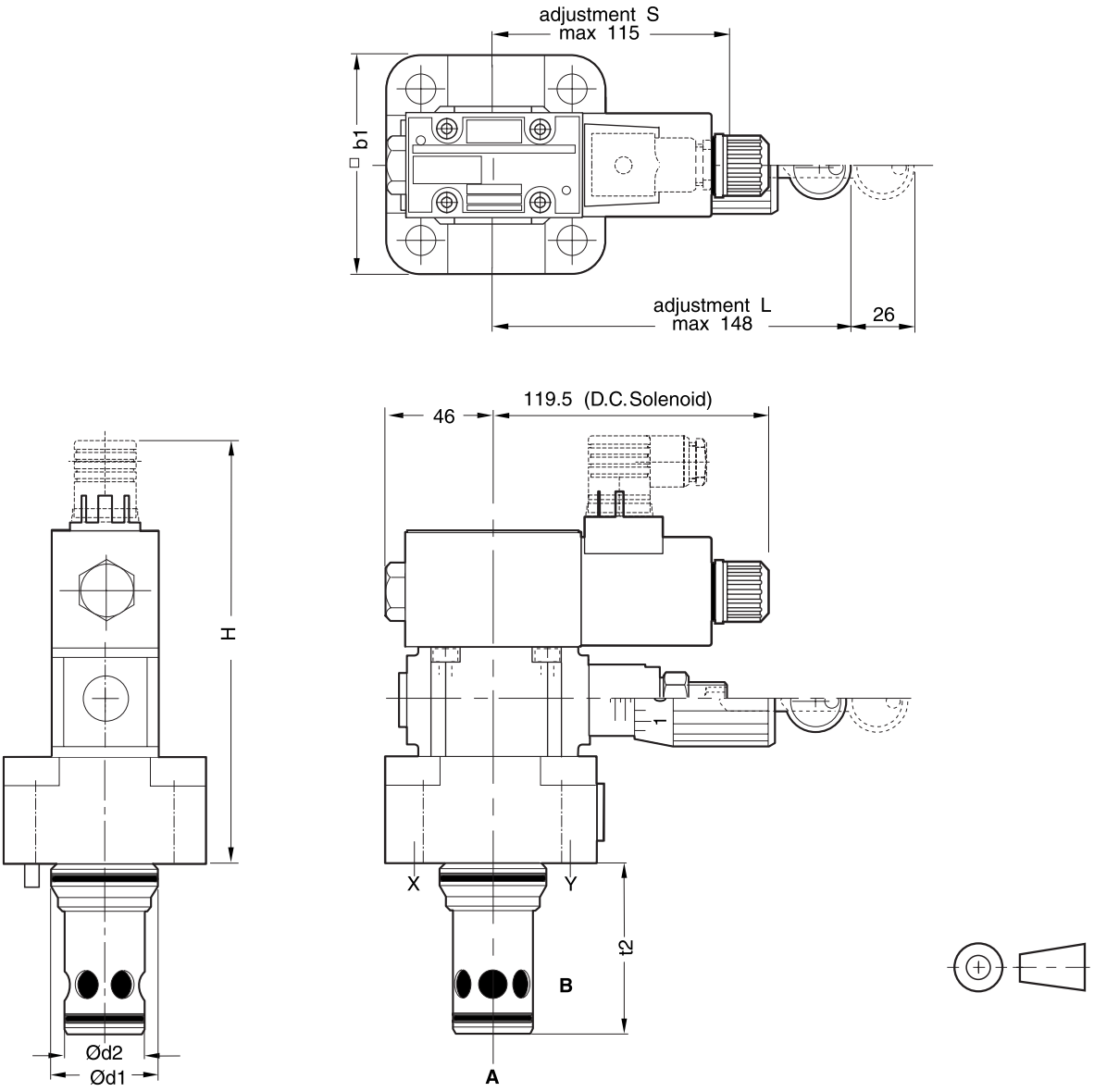
[1] width 65mm

NG	Bolt kit - DIN912 12.9	[Nm]	Kit NBR	Kit FPM
16	BK-M8x50-4pcs	33	SK-R16E	SK-R16EV
25	BK-M12x50-4pcs	115	SK-R25E	SK-R25EV
32	BK-M16x55-4pcs	281	SK-R32E	SK-R32EV
40	BK-M20x70-4pcs	553	SK-R40E	SK-R40EV
50	BK-M20x75-4pcs	553	SK-R50E	SK-R50EV
63	BK-M30x100-4pcs	1910	SK-R63E	SK-R63EV

URE-USE_UK.INDD RH

Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

US*E



NG	H	b_1	d_1	d_2	t_2
16	177	79 [1]	32	25	56
25	181	85	45	34	72
32	186	102	60	45	85
40	196	125	75	55	105
50	231	140	90	68	122
63	246	180	120	90	155

[1] width 65mm

NG	Bolt kit - DIN912 12.9	[Nm]	Kit NBR	Kit FPM
16	BK-M8x50-4pcs	33	SK-RS16E	SK-RS16EV
25	BK-M12x50-4pcs	115	SK-RS25E	SK-RS25EV
32	BK-M16x55-4pcs	281	SK-RS32E	SK-RS32EV
40	BK-M20x70-4pcs	553	SK-RS40E	SK-RS40EV
50	BK-M20x75-4pcs	553	SK-RS50E	SK-RS50EV
63	BK-M30x100-4pcs	1910	SK-RS63E	SK-RS63EV

URE-USE_UK.INDD RH

Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

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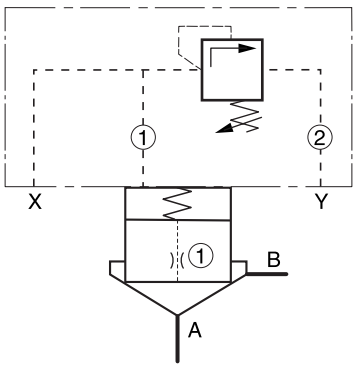
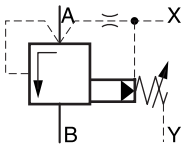
Pressure relief valve with screw-in cartridge



NG16 - NG32



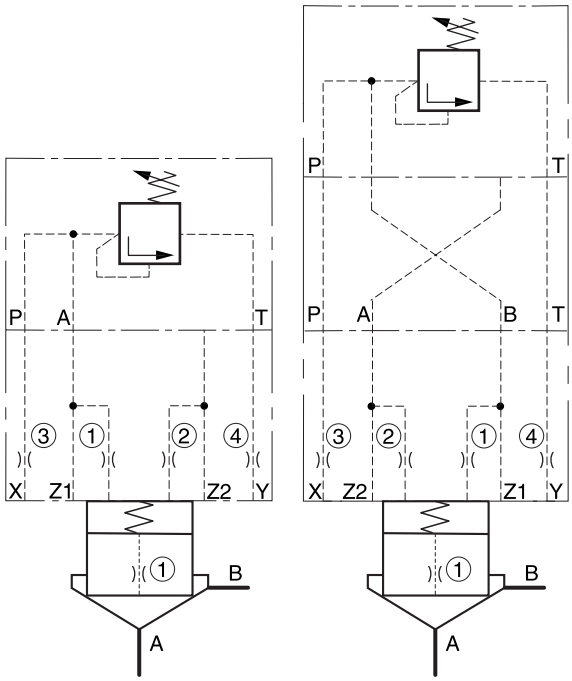
Description	Type NG16	NG25	NG32
Cover incl. pressure valve [1]	C016Dxx9999x	C025Dxx9999x	C032Dxx9999x
Cover orifice ①	M5xØ1.0	M5xØ1.1	M5xØ1.2
Cover orifice ②	M5xØ1.2	M6xØ1.3	M5xØ1.4
Cartridge [2]	CE016C01*	CE025C01*	CE032C01*
Poppet orifice ①	1/16NPT x Ø0.8	1/16NPT x Ø0.9	1/16NPT x Ø1.0
Spring	1.6 bar, type S (order no. see spare parts)		
Bolt kit cover	BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs

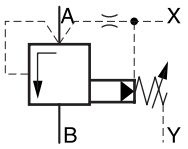
Shown orifice Ø and springs are recommendations.
xxØ00 = plug
xxØ99 = open

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

8

Pressure relief valve with external pilot





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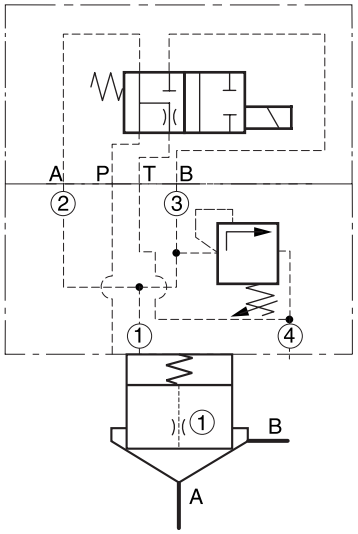
Description		Type NG16	NG25	NG32	NG40	NG50	NG63
Pressure valve [1]		V-DSDA100xP07x					
Adaptor plate [2]		without				PADA1007/A-B/B-A	
Cover [3]		C016CA*	C025CA*	C032CA*	C040CA*	C050CA*	C063CA*
Cover orifice	①	M5xØ1.1	M5xØ1.3	M5xØ1.4	M5xØ1.5	M6xØ1.6	M6xØ1.7
Cover orifice	②	M5xØ00				M6xØ00	
Cover orifice	③	M5xØ99	M6xØ99			M8xØ99	
Cover orifice	④	M5xØ1.3	M6xØ1.5	M6xØ1.7	M6xØ1.8	M8xØ2.0	M8xØ2.2
Cartridge [4]		CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*
Poppet orifice	①	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 (order no. see spare parts)					
Bolt kit cover		BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs	BK-M20x70-4pcs	BK-M20x75-4pcs	BK-M30x100-4pcs
Bolt kit pilot		BK-M5x45-4pcs					

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

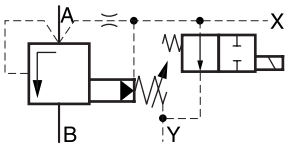
[1] Complete type see pilot valves
[2] Included O-rings and mounting bolts
[3] Complete type see ordering code C*C
[4] Complete type see ordering code CE*

Pressure relief valve with electrical vent function, normally open
Pressure relief valve with screw-in cartridge



NG16 - NG32

Flow A → B



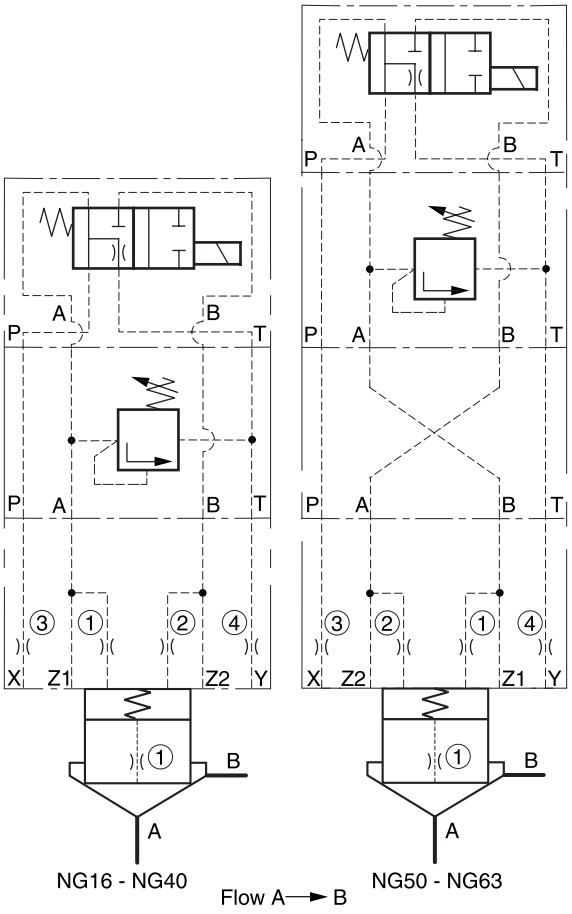
8

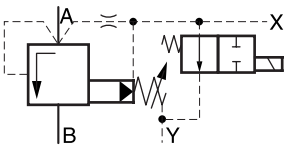
Description	Type NG16	NG25	NG32
4/2 DC valve [1]	D1VW104K*		
Cover incl. pressure valve [2]	C016Exx99999999x	C025Exx99999999x	C032Exx99999999x
Cover orifice ①	M5xØ1.0	M5xØ1.1	M5xØ1.2
Cover orifice ②	M5xØ99	M6xØ99	
Cover orifice ③	M5xØ00	M6xØ00	
Cover orifice ④	M5xØ1.2	M6xØ1.3	M6xØ1.4
Cartridge [3]	CE016C01*	CE025C01*	CE032C01*
Poppet orifice ①	1/16NPT x Ø0.8	1/16NPT x Ø0.8	1/16NPT x Ø1.0
Spring	1.6 bar, type S (order no. see spare parts)		
Bolt kit cover	BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs
Bolt kit 4/2 DC valve	BK-M5x30-4pcs		

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*E
[3] Complete type see ordering code CE*

Pressure relief valve with electrical vent function, normally open
Pressure relief valve with external pilot





Description	Type					
	NG16	NG25	NG32	NG40	NG50	NG63
4/2 DC valve [1]	D1VW104K*					
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	M6xØ1.5	M6xØ1.8	M8xØ2.0	M8xØ2.2
Cartridge [5]	CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*
Poppet orifice ①	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 (order no. see spare parts)					
Bolt kit cover	BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs	BK-M20x70-4pcs	BK-M20x75-4pcs	BK-M30x100-4pcs
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 CE*

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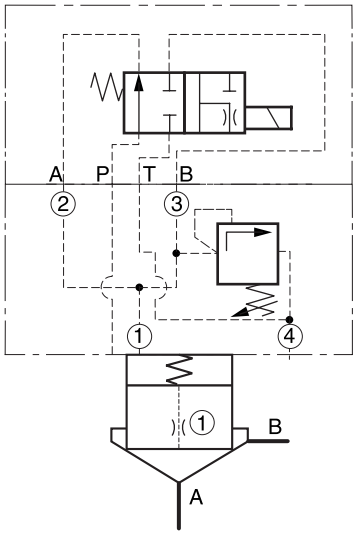
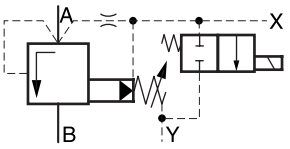
Pressure relief valve with electrical vent function, normally closed
Pressure relief valve with screw-in cartridge



NG16 - NG32

Flow A → B



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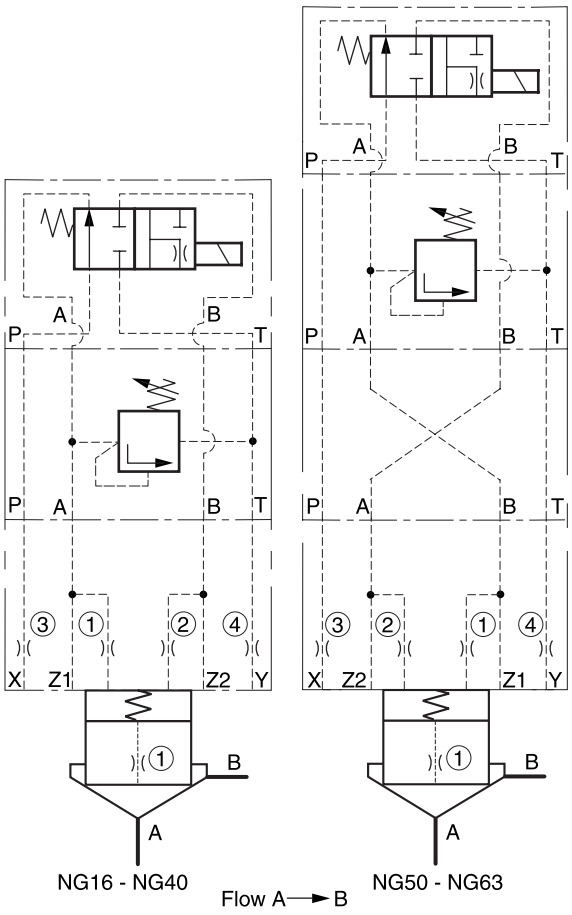
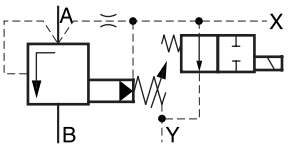
Description	Type NG16	NG25	NG32
4/2 DC valve [1]	D1VW105K*		
Cover incl. pressure valve [2]	C016Exx99999999x	C025Exx99999999x	C032Exx99999999x
Cover orifice ①	M5xØ1.0	M5xØ1.1	M5xØ1.4
Cover orifice ②	M5xØ99	M6xØ99	
Cover orifice ③	M5xØ00	M6xØ00	
Cover orifice ④	M5xØ1.2	M6xØ1.3	M6xØ1.4
Cartridge [3]	CE016C01*	CE025C01*	CE032C01*
Poppet orifice ①	1/16NPT x Ø0.8	1/16NPT x Ø0.8	1/16NPT x Ø1.0
Spring	1.6 bar, type S (order no. see spare parts)		
Bolt kit cover	BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs
Bolt kit 4/2 DC valve	BK-M5x30-4pcs		

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*E
[3] Complete type see ordering code CE*

Pressure relief valve with electrical vent function, normally closed
Pressure relief valve with external pilot





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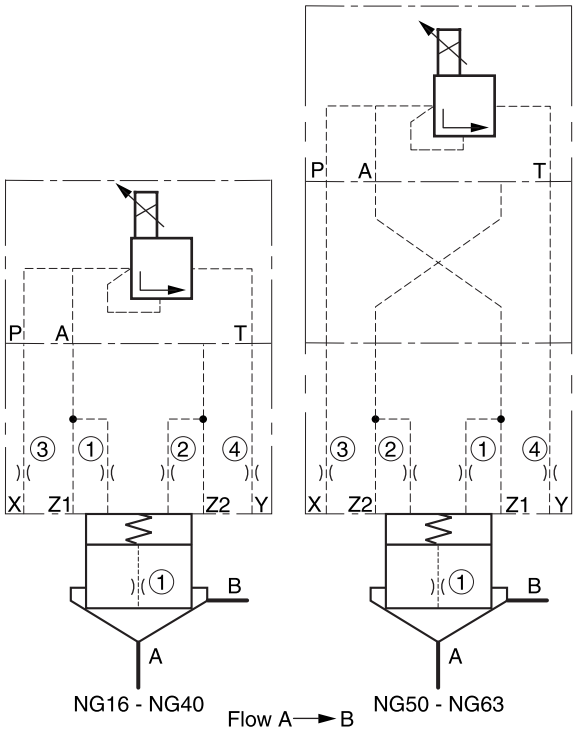
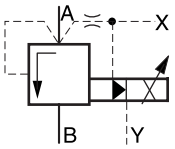
Description	Type NG16	NG25	NG32	NG40	NG50	NG63
4/2 DC valve [1]	D1VW105K*					
Pressure valve [2]	V-ZUDB1ATxZ07x					
Adaptor plate [3]	without				PADA1007/A-B/B-A	
Cover [4]	C016CA*	C025CA*	C032CA*	C040CA*	C050CA*	C063CA*
Cover orifice ①	M5xØ1.1	M5xØ1.3	M5xØ1.4	M5xØ1.5	M6xØ1.6	M6xØ1.7
Cover orifice 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]	CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*
Poppet orifice ①	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 (order no. see spare parts)					
Bolt kit cover	BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs	BK-M20x70-4pcs	BK-M20x75-4pcs	BK-M30x100-4pcs
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 CE*

Proportional pressure relief valve



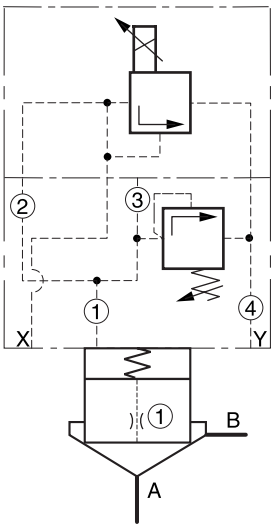


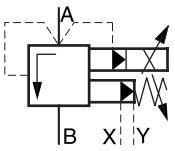
Description		Type					
		NG16	NG25	NG32	NG40	NG50	NG63
Pressure valve [1]		RE06MxW2V1KW					
Adaptor plate [2]		without				PADA1007/A-B/B-A	
Cover [3]		C016CA*	C025CA*	C032CA*	C040CA*	C050CA*	C063CA*
Cover orifice	①	M5xØ1.1	M5xØ1.3	M5xØ1.4	M5xØ1.4	M6xØ1.5	
Cover orifice	②	M5xØ00				M6xØ00	
Cover orifice	③	M5xØ99	M6xØ99			M8xØ99	
Cover orifice	④	M5xØ1.2	M6xØ1.4	M6xØ1.5	M6xØ1.5	M8xØ1.6	
Cartridge [4]		CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*
Poppet orifice	①	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	
Spring		0.5 bar, type S (order no. see spare parts)					
Bolt kit cover		BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs	BK-M20x70-4pcs	BK-M20x75-4pcs	BK-M30x100-4pcs
Bolt kit pilot		BK-M5x30-4pcs					

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 CE*

Proportional pressure relief valve with mechanical pressure protection
Mechanical pressure relief valve with screw-in cartridge





Flow A → B

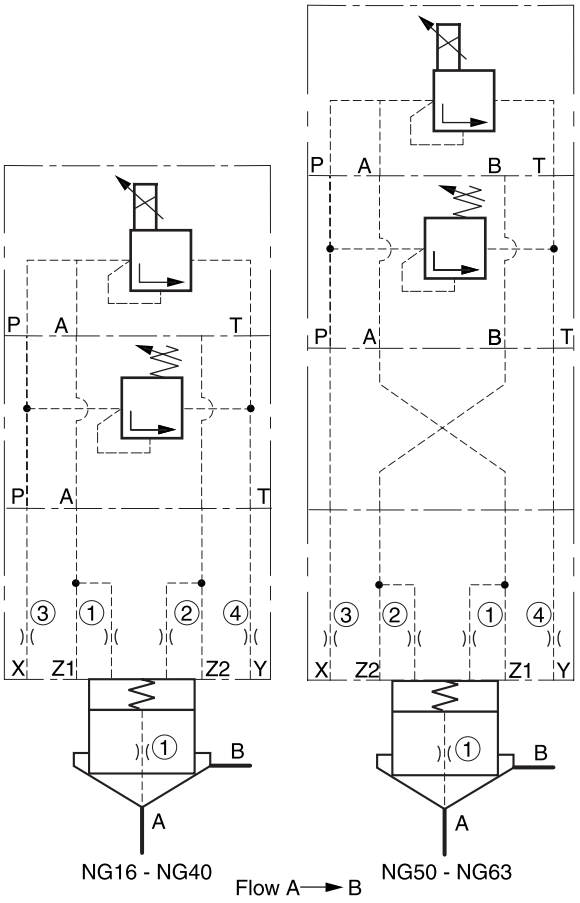
8

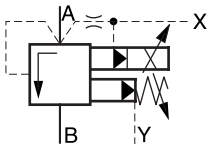
Description	Type NG16	NG25	NG32
Prop. DC valve [1]	RE06MxW2V1xW		
Cover incl. pressure valve [2]	C016Exx99999999x	C025Exx99999999x	C032Exx99999999x
Cover orifice ①	M5xØ1.0	M5xØ1.1	M5xØ1.4
Cover orifice ②	M5xØ99		
Cover orifice ③	M5xØ00		
Cover orifice ④	M5xØ1.2	M6xØ1.3	M6xØ1.7
Cartridge [3]	CE016C01*	CE025C01*	CE032C01*
Poppet orifice ①	1/16NPT x Ø0.8	1/16NPT x Ø0.9	1/16NPT x Ø1.2
Spring	1.6 bar, type S (order no. see spare parts)		
Bolt kit cover	BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs
Bolt kit 4/2 DC valve	BK-M5x30-4pcs		

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*C
[3] Complete type see ordering code CE*

Proportional pressure relief valve with mechanical pressure protection
Mechanical pressure relief valve with external pilot





Description		Type					
		NG16	NG25	NG32	NG40	NG50	NG63
Pressure valve [1]		RE06MxW2V1KW					
Max. pressure valve [2]		V-ZUDB1PTxZ07x					
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	M6xØ1.6	
Cover orifice	②	M5xØ00				M6xØ00	
Cover orifice	③	M5xØ99	M6xØ99			M8xØ99	
Cover orifice	④	M5xØ1.2	M6xØ1.4		M6xØ1.5	M8xØ1.6	
Cartridge [5]		CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*
Poppet orifice	①	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	
Spring		0.5 bar, type N (order no. see spare parts)					
Bolt kit cover		BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs	BK-M20x70-4pcs	BK-M20x75-4pcs	BK-M30x100-4pcs
Bolt kit pilot		TK1482					

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

[1] Complete type see chapter “Pressure Valves“, series RE06*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 CE*

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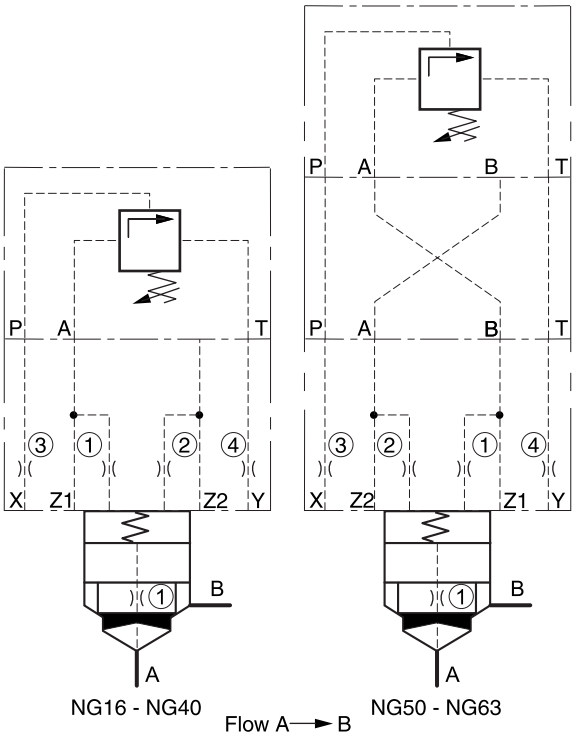
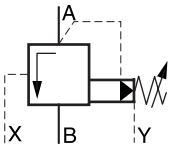
Unloading valve



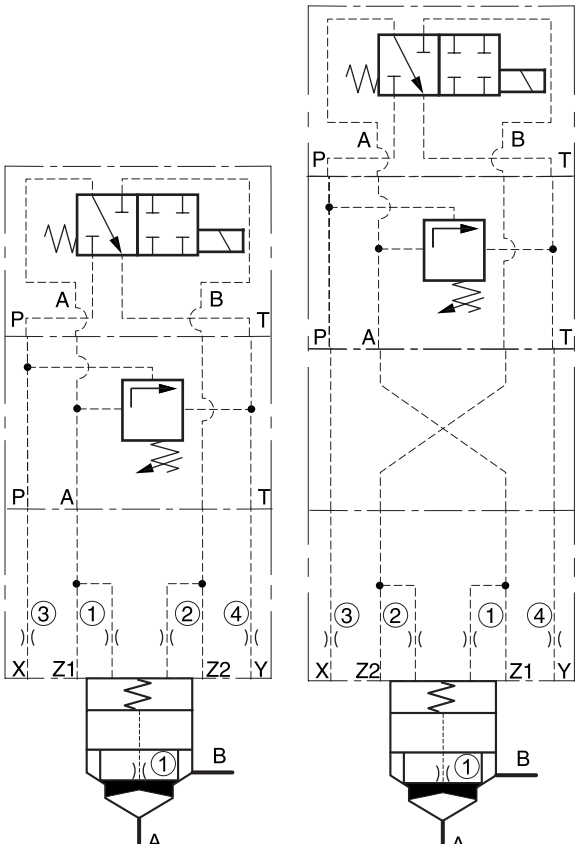


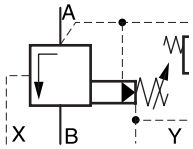
Description	Type NG16	NG25	NG32	NG40	NG50	NG63
Unloading valve [1]	V-DAFA100xP07					
Adaptor plate [2]	without				PADA1007/A-B/B-A	
Cover [3]	C016CA*	C025CA*	C032CA*	C040CA*	C050CA*	C063CA*
Cover orifice ①	M5xØ1.4	M5xØ1.5	M5xØ1.6	M5xØ1.7	M6xØ1.8	M6xØ1.9
Cover orifice ②	M5xØ00				M6xØ00	
Cover orifice ③	M5xØ99	M6xØ99			M8xØ99	
Cover orifice ④	M5xØ1.5	M6xØ1.6	M6xØ1.7	M6xØ1.8	M8xØ1.9	M8xØ2.0
Cartridge [4]	CE016C08*	CE025C08*	CE032C08*	CE040C08*	CE050C08*	CE063C08*
Poppet orifice ①	1/16NPT x Ø0.9	1/16NPT x Ø1.0	1/16NPT x Ø1.1	1/16NPT x Ø1.2	1/16NPT x Ø1.3	1/16NPT x Ø1.4
Spring	1.6 bar, type S (order no. see spare parts)					
Bolt kit cover	BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs	BK-M20x70-4pcs	BK-M20x75-4pcs	BK-M30x100-4pcs
Bolt kit pilot	BK-M5x45-4pcs					

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 CE*

Unloading valve with electrical vent function, normally open





Description		Type NG16	NG25	NG32	NG40	NG50	NG63
4/2 DC valve [1]		D1VW76K*					
Pressure valve [2]		V-DAFA100xZ07x					
Adaptor plate [3]		without				PADA1007/A-B/B-A	
Cover [4]		C016CA*	C025CA*	C032CA*	C040CA*	C050CA*	C063CA*
Cover orifice	①	M5xØ1.4	M5xØ1.5	M5xØ1.6	M5xØ1.7	M6xØ1.8	M6xØ1.9
Cover orifice	②	M5xØ00				M6xØ00	
Cover orifice	③	M5xØ99	M6xØ99			M8xØ99	
Cover orifice	④	M5xØ1.5	M6xØ1.6	M6xØ1.7	M6xØ1.8	M8xØ1.9	M8xØ2.2
Cartridge [5]		CE016C08*	CE025C08*	CE032C08*	CE040C08*	CE050C08*	CE063C08*
Poppet orifice	①	1/16NPT x Ø0.9	1/16NPT x Ø1.0	1/16NPT x Ø1.1	1/16NPT x Ø1.2	1/16NPT x Ø1.3	1/16NPT x Ø1.4
Spring		1.6 bar, type S (order no. see spare parts)					
Bolt kit cover		BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs	BK-M20x70-4pcs	BK-M20x75-4pcs	BK-M30x100-4pcs
Bolt kit pilot		BK-M5x75-4pcs					

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 CE*

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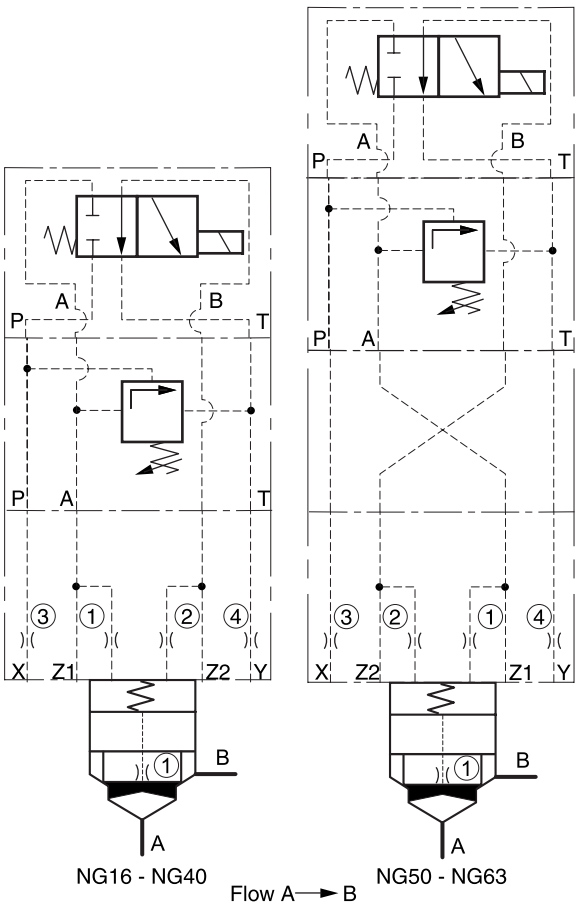
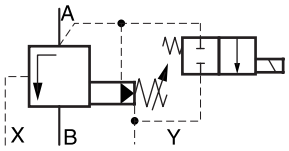
Unloading valve with electrical vent function, normally closed





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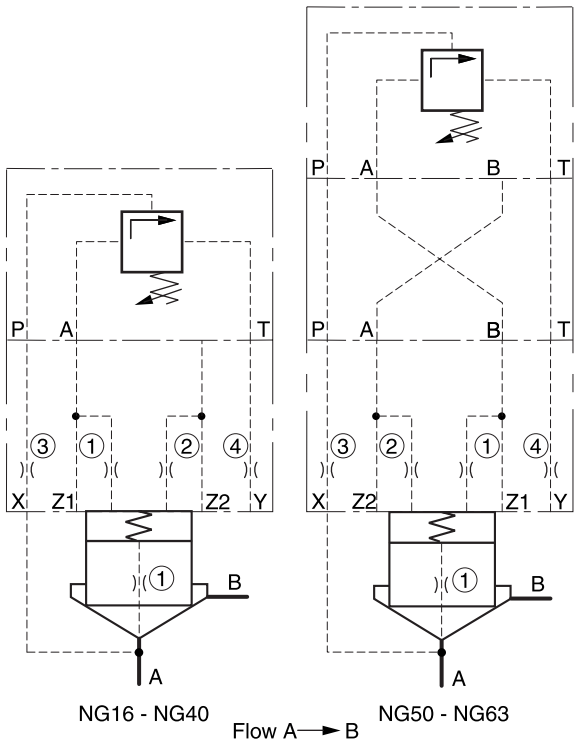
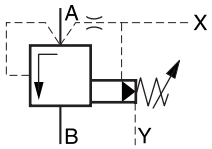
Description	Type NG16	NG25	NG32	NG40	NG50	NG63
4/2 DC valve [1]	D1VW78K*					
Pressure valve [2]	DAFA100xZ07x					
Adaptor plate [3]	without				PADA1007/A-B/B-A	
Cover [4]	C016CA*	C025CA*	C032CA*	C040CA*	C050CA*	C063CA*
Cover orifice ①	M5xØ1.4	M5xØ1.5	M5xØ1.6	M5xØ1.7	M6xØ1.8	M6xØ1.9
Cover orifice ②	M5xØ00				M6xØ00	
Cover orifice ③	M5xØ99	M6xØ99			M8xØ99	
Cover orifice ④	M5xØ1.5	M6xØ1.6	M6xØ1.7	M6xØ1.8	M8xØ1.9	M8xØ2.2
Cartridge [5]	CE016C08*	CE025C08*	CE032C08*	CE040C08*	CE050C08*	CE063C08*
Poppet orifice ①	1/16NPT x Ø0.9	1/16NPT x Ø1.0	1/16NPT x Ø1.1	1/16NPT x Ø1.2	1/16NPT x Ø1.3	1/16NPT x Ø1.4
Spring	1.6 bar, type S (order no. see spare parts)					
Bolt kit cover	BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs	BK-M20x70-4pcs	BK-M20x75-4pcs	BK-M30x100-4pcs
Bolt kit pilot	BK-M5x75-4pcs					

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 CE*

Pressure sequence valve



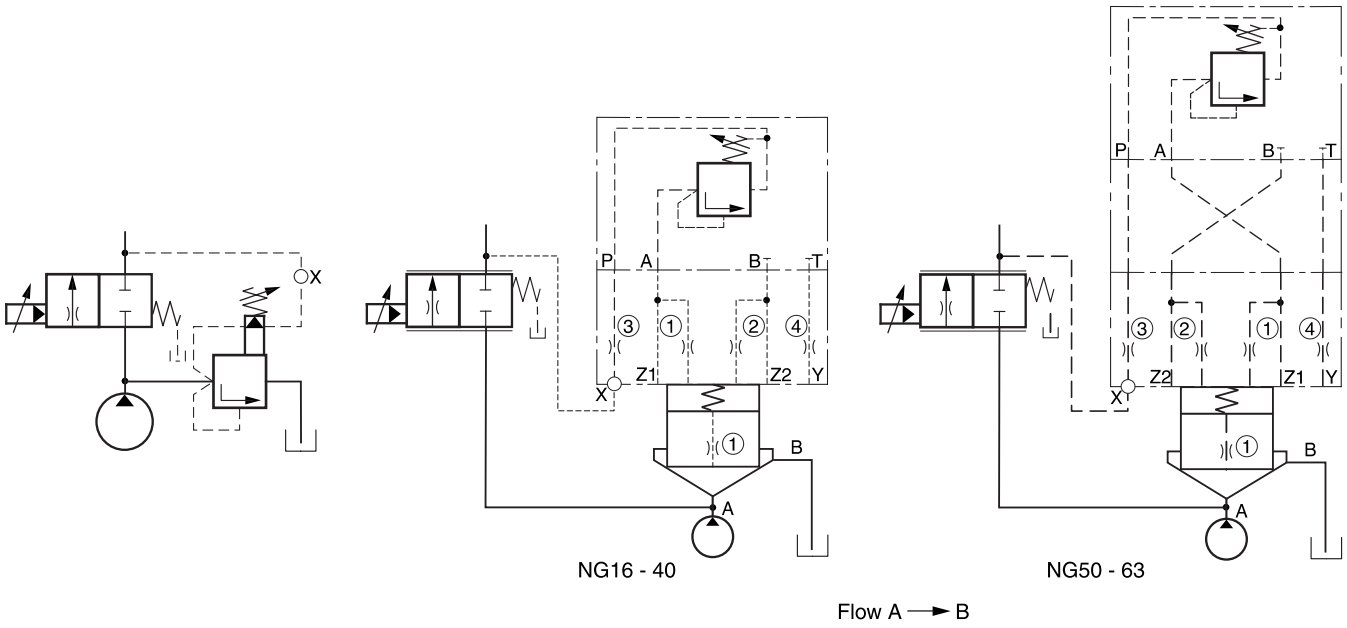


Description	Type					
	NG16	NG25	NG32	NG40	NG50	NG63
Press. sequ. valve [1]	DNLA100xP07x					
Adaptor plate [2]	without				PADA1007/A-B/B-A	
Cover [3]	C016CA*	C025CA*	C032CA*	C040CA*	C050CA*	C063CA*
Cover orifice ①	M5xØ1.1	M5xØ1.3	M5xØ1.4	M5xØ1.5	M6xØ1.6	M6xØ1.7
Cover orifice ②	M5xØ00				M6xØ00	
Cover orifice ③	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	1/16NPT x Ø00					
Spring	1.6 bar, type S (order no. see spare parts)					
Bolt kit cover	BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs	BK-M20x70-4pcs	BK-M20x75-4pcs	BK-M30x100-4pcs
Bolt kit pilot	BK-M5x45-4pcs					

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 CE*

3 way compensator



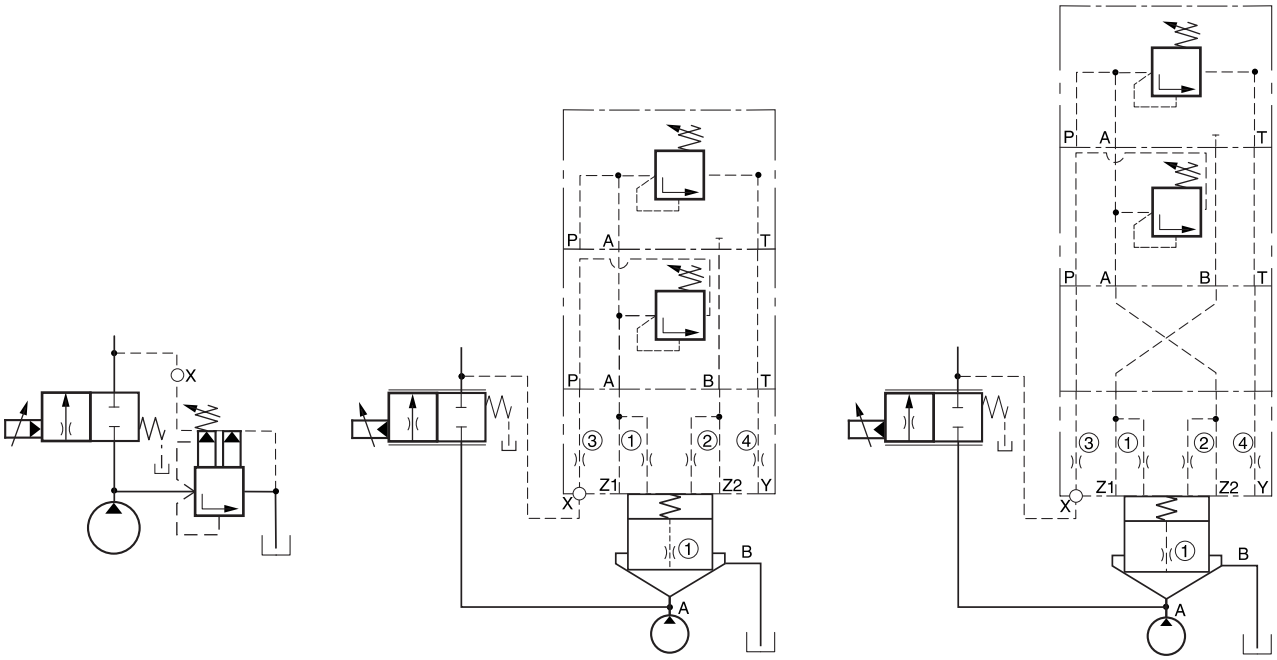
8

Description		Type NG16	NG25	NG32	NG40	NG50	NG63
Preload valve [1]		DSBA100xP07x					
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]		CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*
Poppet orifice	①	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 (order no. see spare parts)					
Bolt kit cover		BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs	BK-M20x70-4pcs	BK-M20x75-4pcs	BK-M30x100-4pcs
Bolt kit pilot		BK-M5x45-4pcs					

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 CE*

3 way compensator with mechanical maximum pressure protection



NG16 - 40

NG50 - 63

Flow A → B

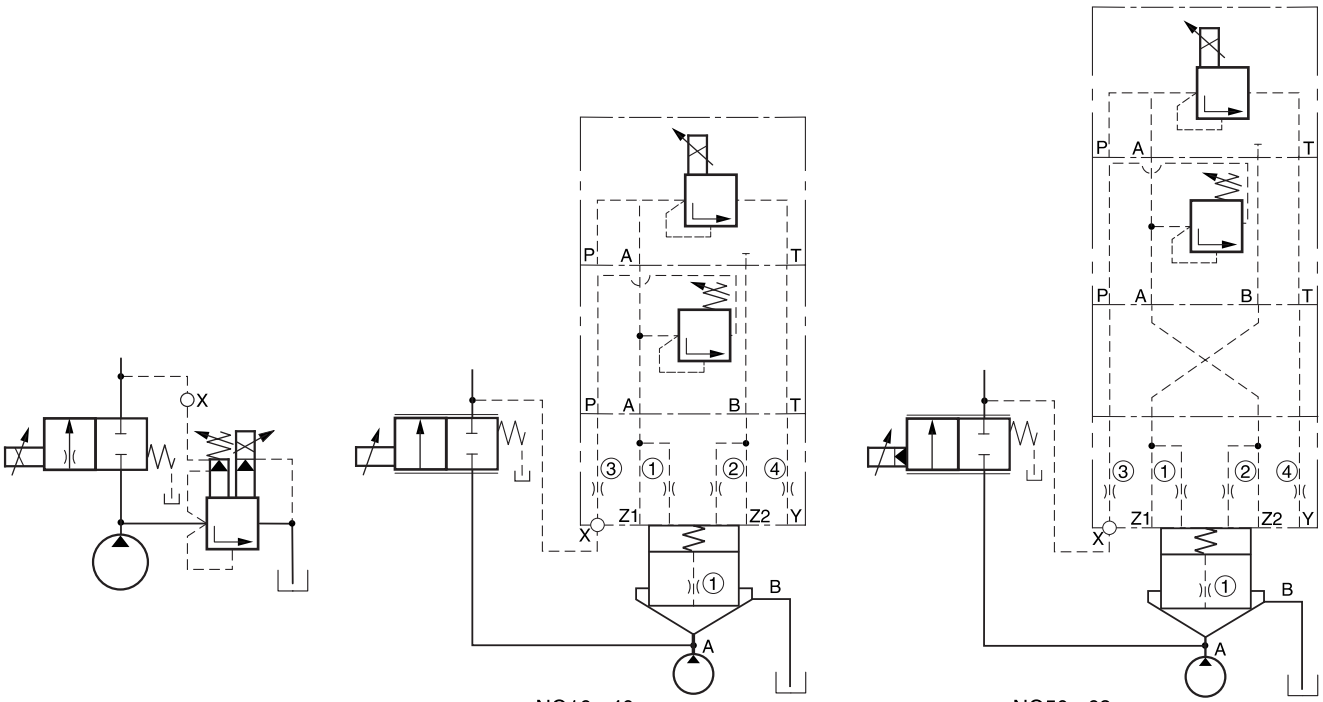
8

Description		Type NG16	NG25	NG32	NG40	NG50	NG63
Pressure valve [1]		DSDA100xP07x					
Preload valve [2]		DSBA100xZ07x					
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]		CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*
Poppet orifice	①	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 (order no. see spare parts)					
Bolt kit cover		BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs	BK-M20x70-4pcs	BK-M20x75-4pcs	BK-M30x100-4pcs
Bolt kit pilot		TK1482					

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

[1] Complete type see examples pressure relief valve
[2] Complete type see examples pilot valve
[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 proportional pressure relief valve for pressure control



8

Description	Type					
	NG16	NG25	NG32	NG40	NG50	NG63
Prop. press. valve [1]	RE06MxW2V1KW*					
Preload valve [2]	DSBA100xZ07x					
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]	CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*
Poppet orifice ①	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 (order no. see spare parts)					
Bolt kit cover	BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs	BK-M20x70-4pcs	BK-M20x75-4pcs	BK-M30x100-4pcs
Bolt kit pilot	TK1482					

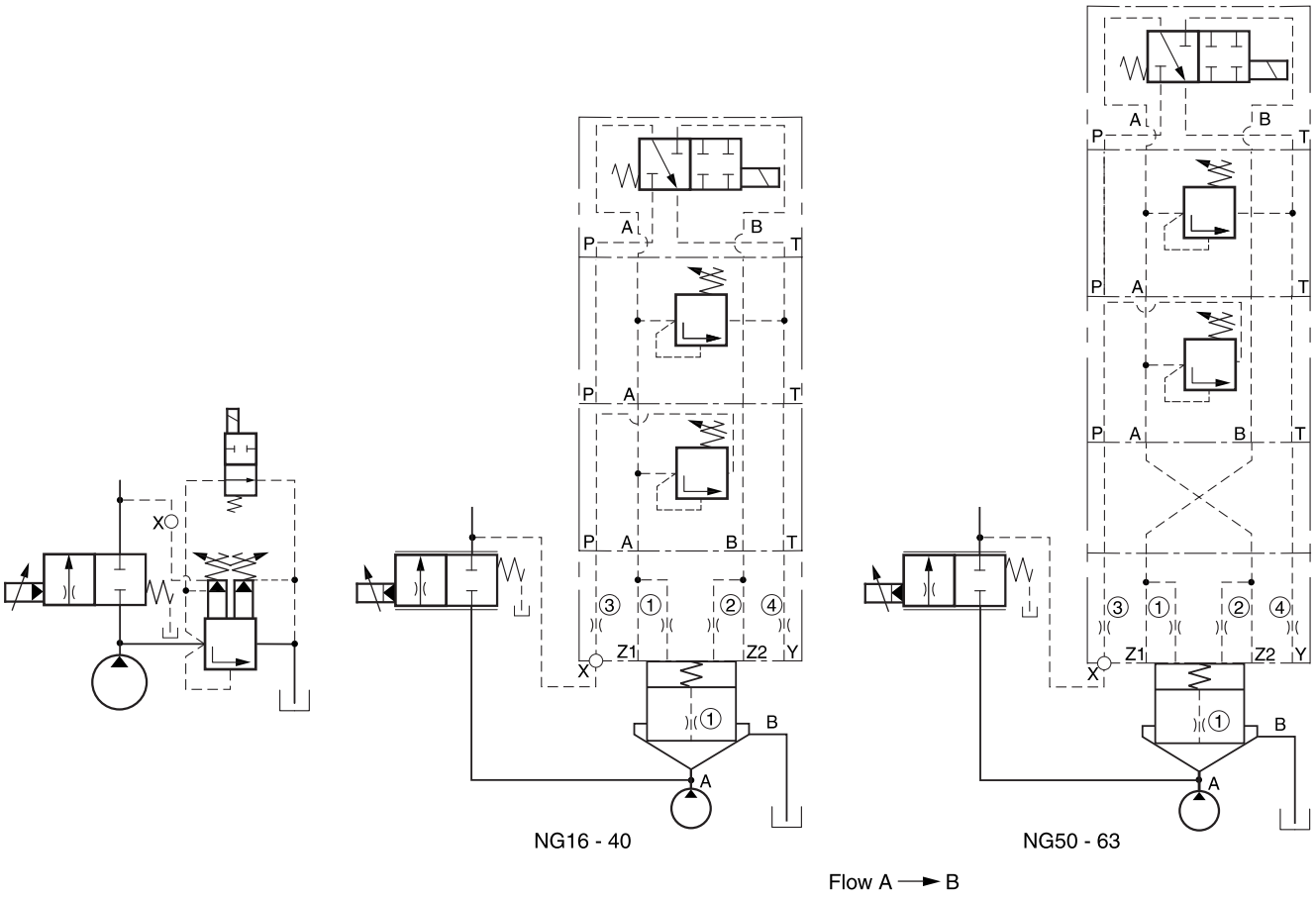
Shown orifice Ø and springs are recommendations.
xxØ00 = plug
xxØ99 = open

[1] Complete type see chapter “Pressure Valves“, series RE06W.
[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*

comb-pressure.INDD RH

Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

3 way compensator with mechanical max. pressure protection and electrical vent function



Description		Type NG16	NG25	NG32	NG40	NG50	NG63
4/2 DC valve [1]		D1VW76K*					
Press. valve [2]		ZUDB1ATxZ07x					
Preload valve [3]		DSBA100xZ07x					
Adaptor plate [4]		without				PADA1007/A-B/B-A	
Cover [5]		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 [6]		CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*
Poppet orifice	①	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 (order no. see spare parts)					
Bolt kit cover		BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs	BK-M20x70-4pcs	BK-M20x75-4pcs	BK-M30x100-4pcs
Bolt kit pilot		TK1473					

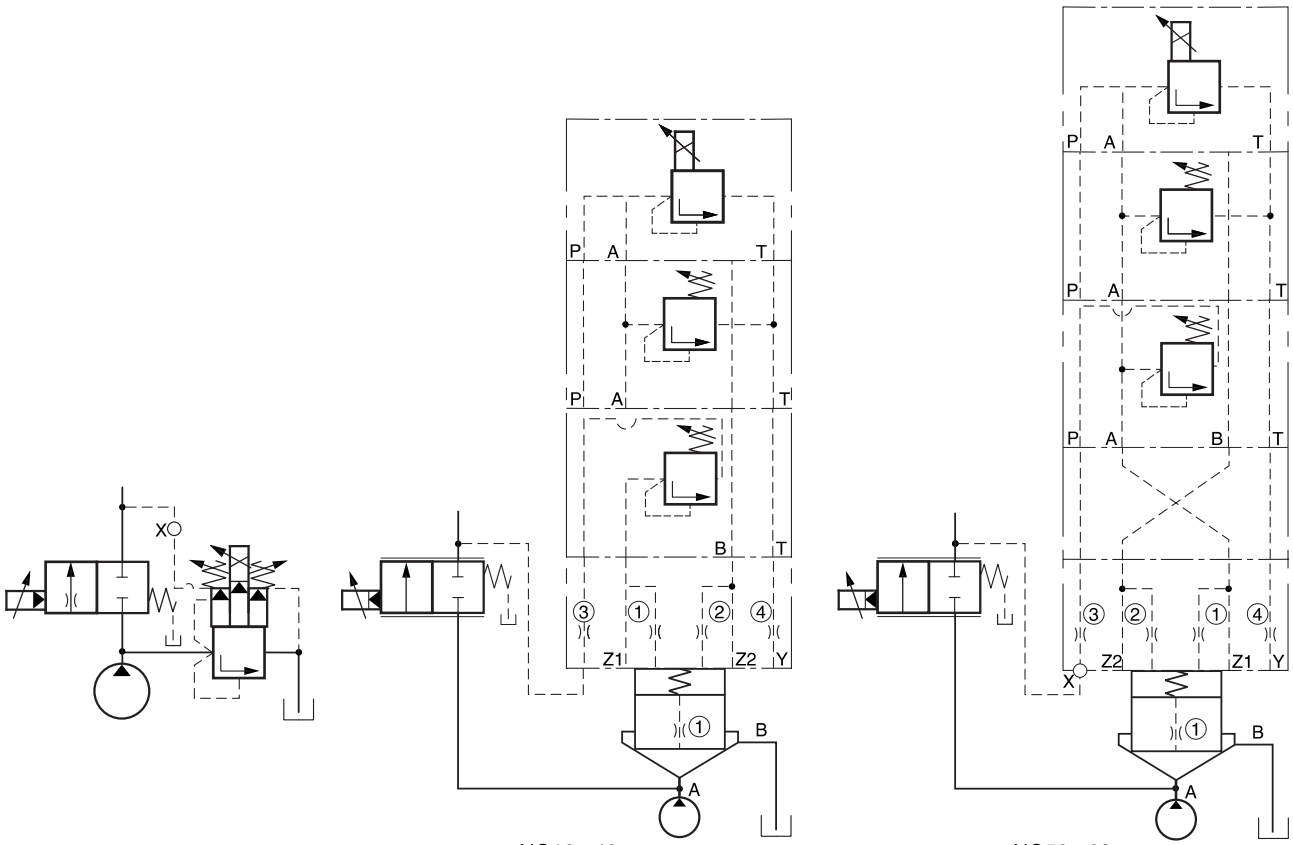
Shown orifice Ø and springs are recommendations.
xxØ00 = plug
xxØ99 = open

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

comb-pressure.INDD RH

Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

3 way compensator with mechanical max. pressure protection and proportional pressure relief valve for pressure control



Description	Type					
	NG16	NG25	NG32	NG40	NG50	NG63
Prop. press. valve [1]	RE06MxW2V1KW*					
Press. valve [2]	ZUDB1ATxZ07x					
Preload valve [3]	DSBA100xZ07x					
Adaptor plate [4]	without				PADA1007/A-B/B-A	
Cover [5]	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 [6]	CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*
Poppet orifice ①	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 (order no. see spare parts)					
Bolt kit cover	BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs	BK-M20x70-4pcs	BK-M20x75-4pcs	BK-M30x100-4pcs
Bolt kit pilot	TK1473					

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

[1] Complete type see chapter "Pressure Valves", series RE06W*.
[2] Complete type see pilot valves
[3] Complete type see pilot valves
[4] Included O-rings and mounting bolts
[5] Complete type see ordering code C*C
[6] Complete type see ordering code CE*

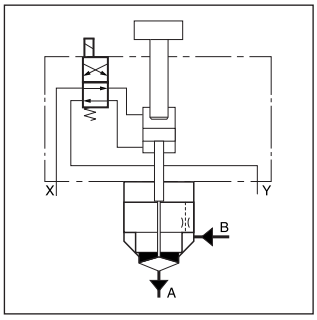
comb-pressure.INDD RH

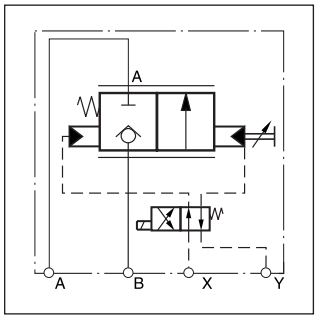
Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

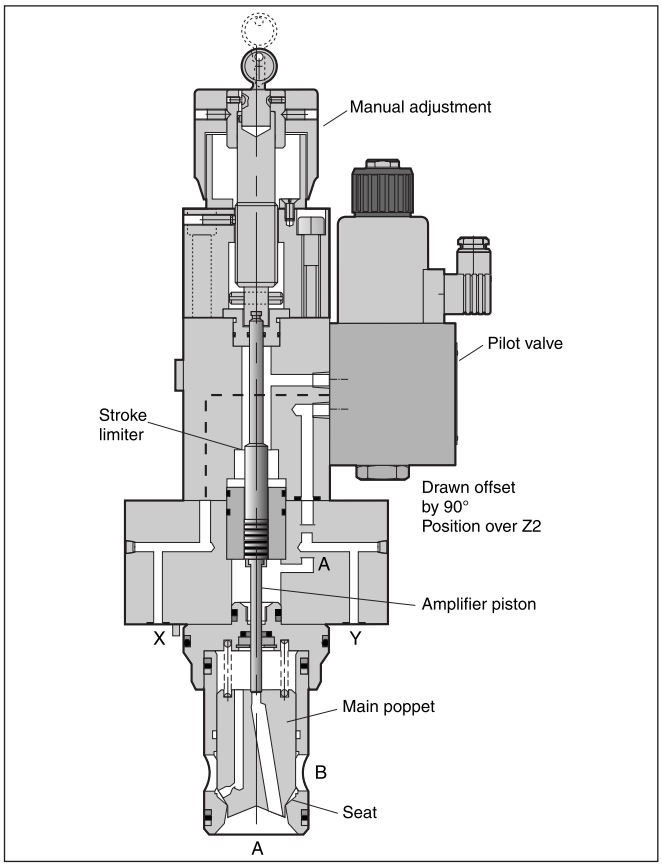
Accumulator discharge valves are preferably used in hydraulic systems where high volume flow rates are discharged from accumulators over a short operating period (in the range of milliseconds).

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

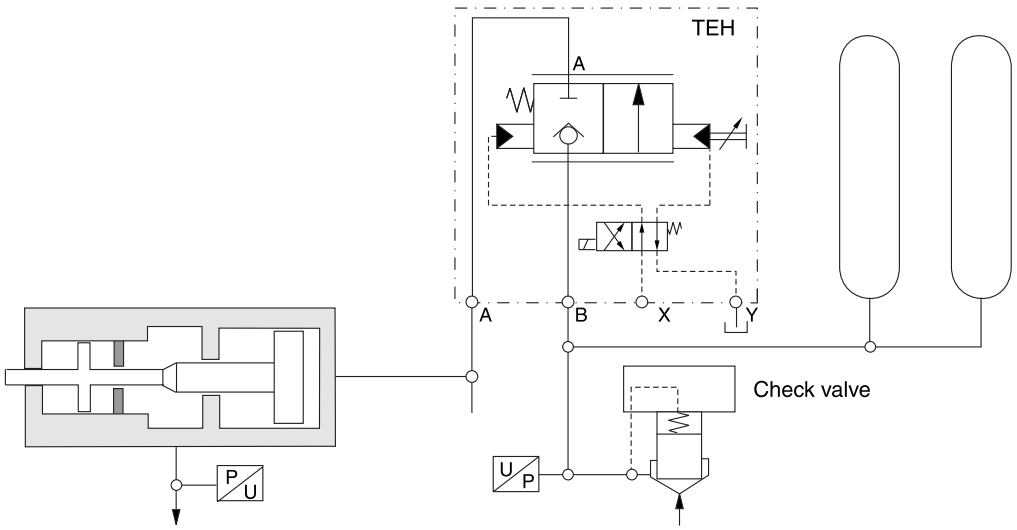
The amplifier piston is pressed down onto the main poppet by pilot pressure in the X-line and pushes the main poppet into the seat. By switching the pilot valve the pilot pressure pushes the amplifier piston against the manual adjusted stroke limiter. The main poppet is forced by pressure in the B-line to follow the amplifier piston immediately and opens the adjusted area for flow from B to A. In the neutral position, the flow from B to A is blocked. With pilot pressure in X flow from A to B is blocked as well. Without pilot pressure oil can pass from A to B through the orifice in the poppet.







Example accumulator system for an injection cylinder



TEH_UK.INDD RH

Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

Ordering code

TEH		E	L	0	9		2		W		
Throttle valve with shut-off function	**Nominal size**	**Cartridge valve ISO 7368**	**Manual adjustment with DIN-lock**	**Spool form**	**Flow code**	**Flow direction**	**Pilot oil guide external/ external**	**Seals**	**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	Solenoid
J	**24V= / 1.25A**
U	98V= / 0.31A*
G	205V= / 0.15A*

* For 110V 50Hz or 220V 50Hz use plug with rectifier.

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

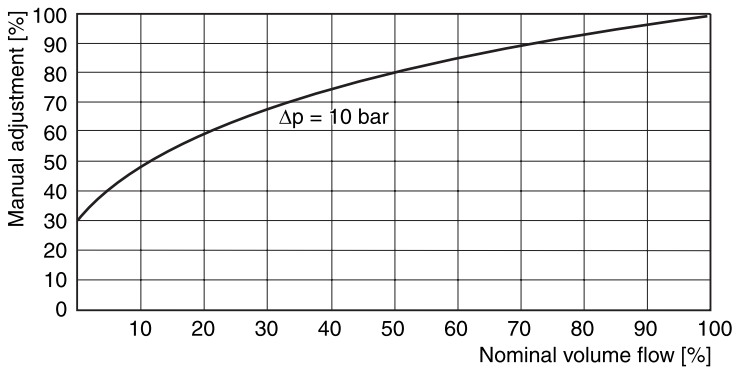
Code	Seal
N	**NBR**
V	FPM

Bold letters =
Short-term availability

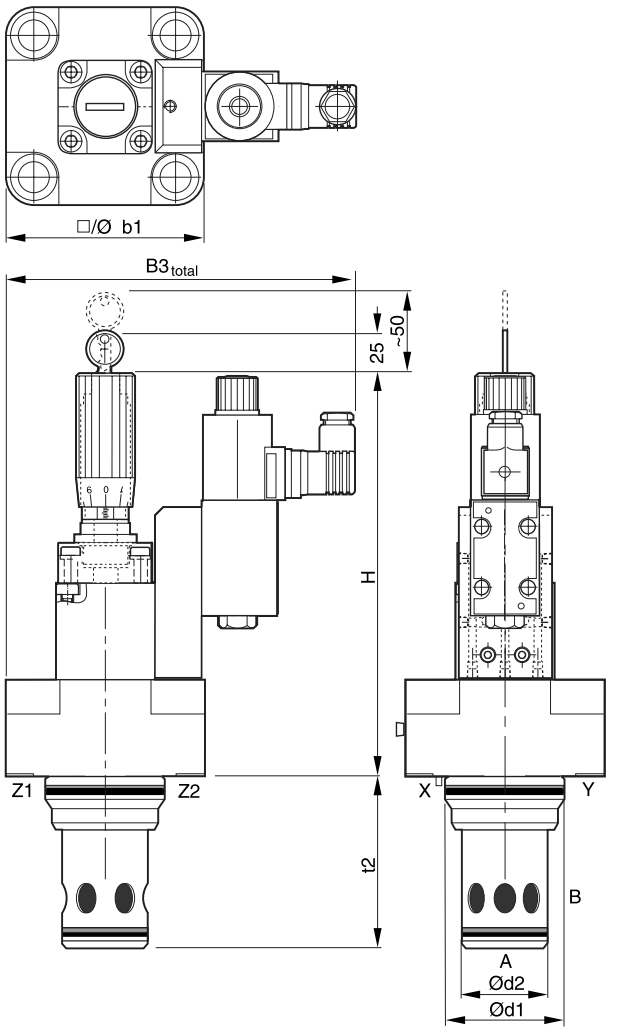
Technical data

General							
Nominal size		**NG32**	**NG40**	**NG50**	**NG63**	**NG80**	**NG100**
Design		Throttle valve, slip-in cartridge according to ISO 7368					
Mounting position		unrestricted					
Ambient temperature	[°C]	-20...+80					
Weight	[kg]	9	13	22	38	62	85
Extracting tools		See accessories					
Hydraulics							
Nominal flow Δp= 10 bar	[l/min]	950	1400	2300	4000	6000	9500
Fluid		Hydraulic oil as per DIN 51 524					
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					
Pilot valve		4/2 flow control valve, see chapter 2					
		Type D1DW			Type D3W		

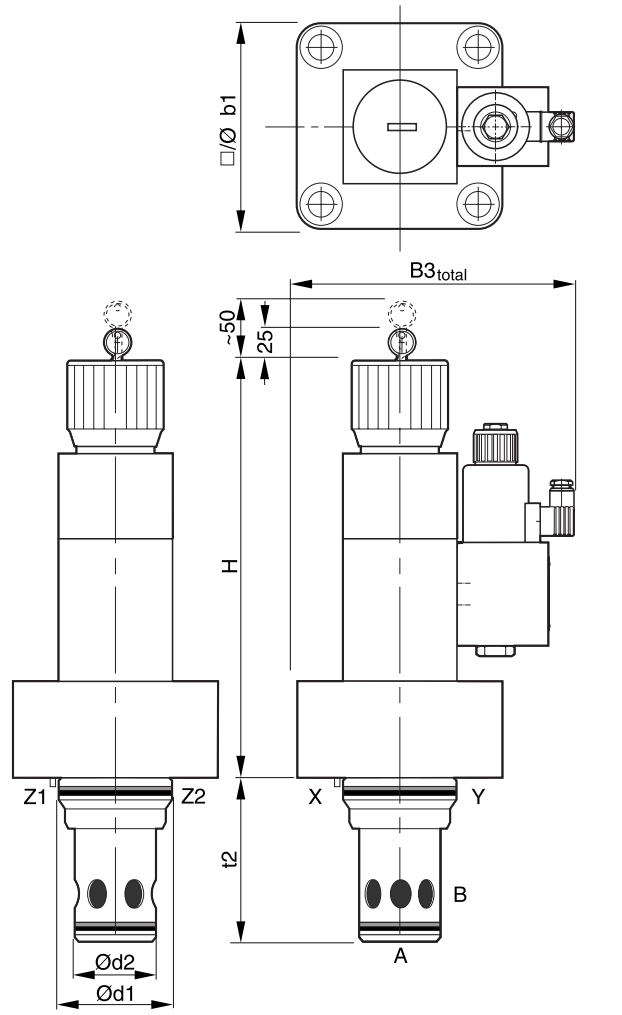
Characteristic curve



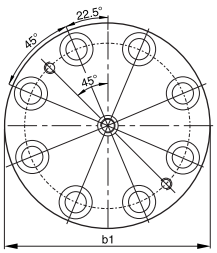
TEH NG32...50



TEH NG63...100

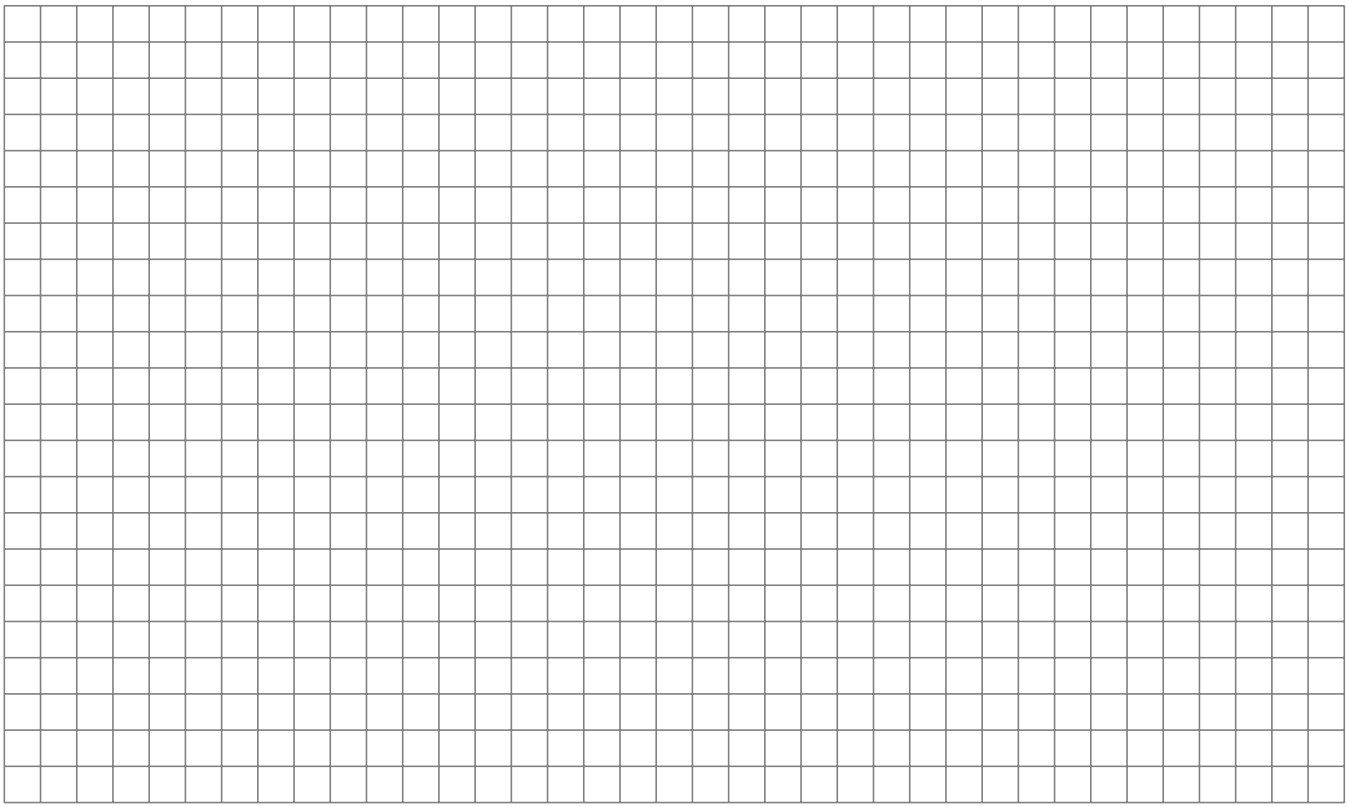


Size	32	40	50	63	80	100
H	255	265	275	407	427	442
b1	102	125	140	180	Ø250	Ø300
$d1^{H7}$	60	75	90	120	145	180
$d2^{H7}$	45	55	68	90	110	135
$t2^{+0.1}$	85	105	122	155	205	245
$B3_{total}$	205	216	224	255	290	315



NG	Bolt kit - DIN912 12.9		Kit NBR	Kit FPM
32	BK-M16x55-4pcs	281 Nm	SK-TEHE10-E32	SK-TEHE10-E32V
40	BK-M16x55-4pcs	553 Nm	SK-TEHE10-E40	SK-TEHE10-E40V
50	BK-M20x75-4pcs	553 Nm	SK-TEHE10-E50	SK-TEHE10-E50V
63	BK-M30x100-4pcs	1910 Nm	SK-TEHE10-E63	SK-TEHE10-E63V
80	BK-M24x120-8pcs	935 Nm	SK-TEHE10-E80	SK-TEHE10-E80V
100	BK-M30x140-8pcs	1910 Nm	SK-TEHE10-E100	SK-TEHE10-E100V

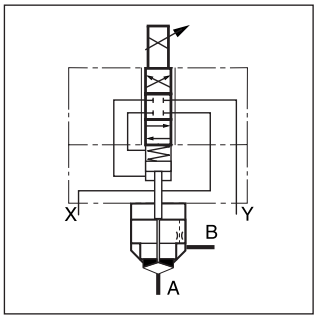
Notes



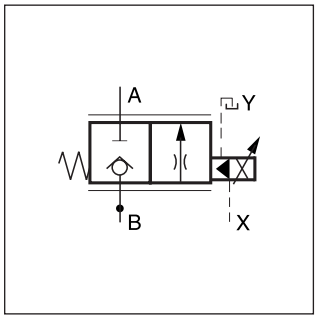
The 2/2 way proportional throttle valves series TDA are used to control large oil flows.

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 symbol

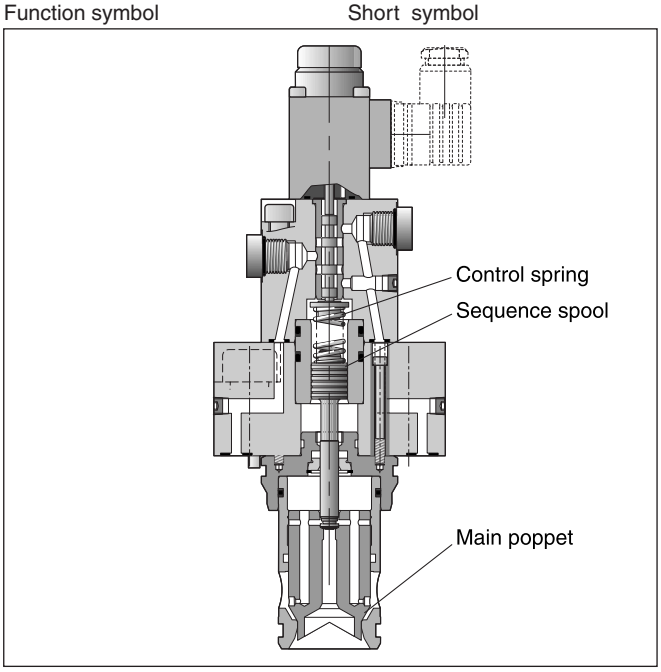


Short symbol

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 independent 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.



8

Ordering Code

TDA		E	W	0	9		2				W	
Proportional throttle valve	**Nominal size**	**Slip-in valve DIN ISO 7368**	**Design**	**Poppet shape**	**Nominal flow**	**Flow direction**	**Piloting**	**Seal**	**Solenoid voltage**	**Solenoid connector**	**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	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

TDA_UK.INDD RH

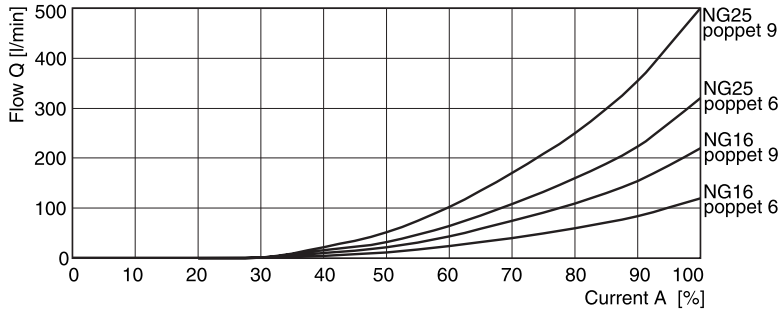
Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

General									
Nominal size			**16**	**25**	**32**	**40**	**50**	**63**	**80**	**100**
Design			Proportional throttle valve, slip-in cartridge according to ISO 7368							
Mounting position			unrestricted							
Ambient temperature		[°C]	-20...+80							
Weight		[kg]	3.1	4.3	5.8	9.2	15	33	63	87
Hydraulics										
Max. operating pressure		[bar]	Ports A, B and X up to 350, Y not pressurized							
Flow, Δp=10bar		[l/min]	220	500	950	1400	2300	4000	6000	9500
Fluid			Hydraulic oil as per DIN 51524...525							
Fluid temperature,	recommended	[°C]	+30 ... +50							
	permitted	[°C]	-20 ... +60							
Viscosity	recommended	[cSt]/[mm²/s]	30 ... 50							
	permitted	[cSt]/[mm²/s]	20 ... 380							
Filtration			Permissible contamination class NAS 1638 class 9 to achive with filter β10 > 75							
Flow direction			See ordering code							
Min. operating pressure		[bar]	Port A → B ca. 10; Port B → A ca. 15							
Opening point			At 30% of nominal current							
Pilot oil	supply drain		Depending on flow dirction A or B using X or external X External using Y, if possible pressureless, max. 100bar							
Pilot oil at p = 100bar		[l/min]	Port X → Y <1.5							
Repeatabiltity		[%]	< 1							
Hysteresis		[%]	< 3							
Response time at px=50bar		[ms]	20	25	30	35	45	55	65	80
Manufacturing tolerance		[%]	±5 of Qnom							
Electrical (proportional solenoid)										
Duty ratio			100% ED							
Protection class			IP65 according to EN 60529 (plugged and mounted)							
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	
Electrical control			PCD 00A-400							
Solenoid connection			Connector as per EN 175301-803							

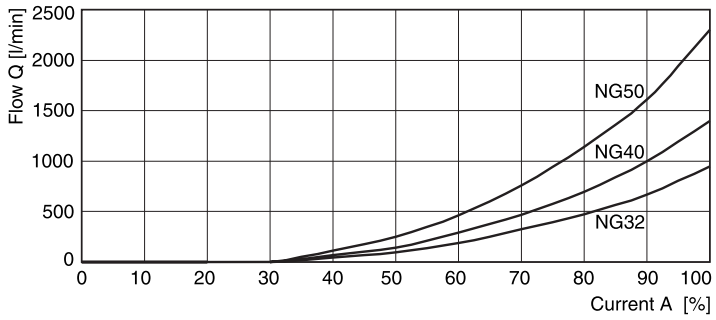
The pilot pressure in X-line must be at least 25% (NG16-40) or 45% (NG50-100) of the pressure in the draining-off line of the cartridge to make sure that the main poppet closes safely without malfunction.

Solenoid current / flow curves

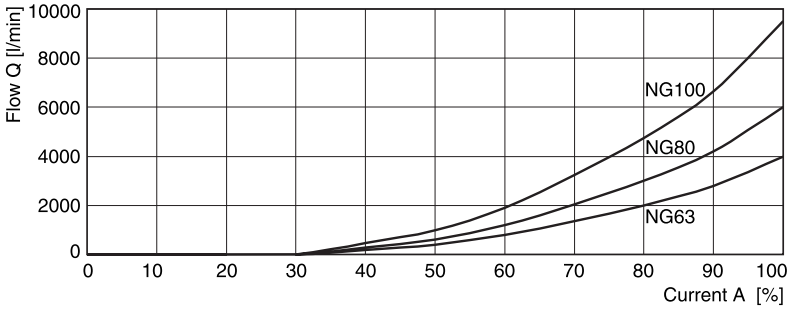
NG16-25 (Δp=10bar)



NG32-50 (Δp=10bar)

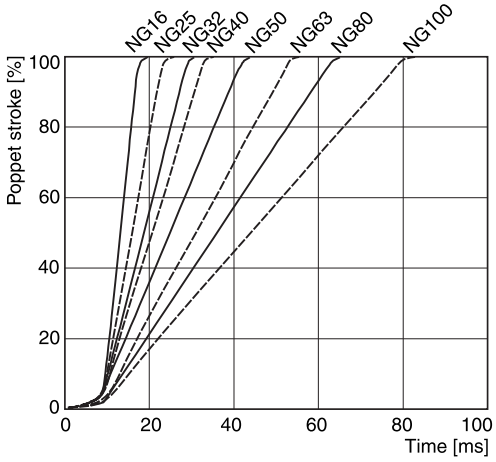


NG63-100 (Δp=10bar)



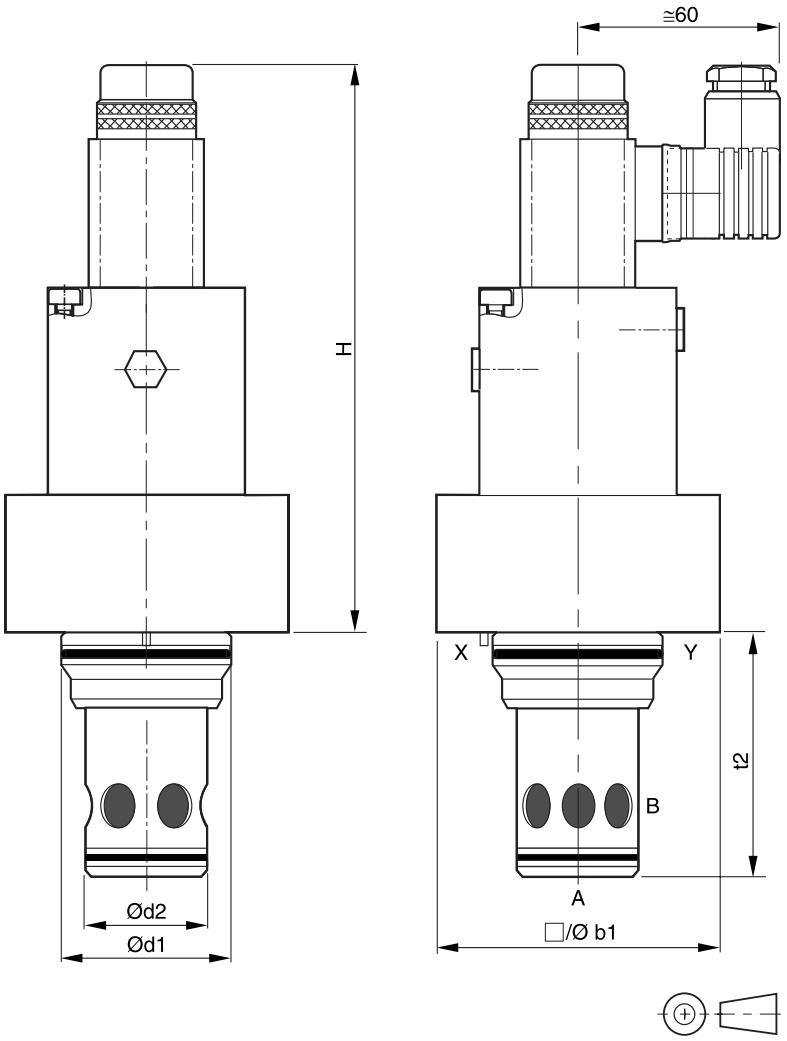
$$\Delta p_{actual} = \left(\frac{Q_{actual}}{Q_{nominal}}\right)^2 \bullet \Delta p_{nominal}$$

Poppet stroke / time curve

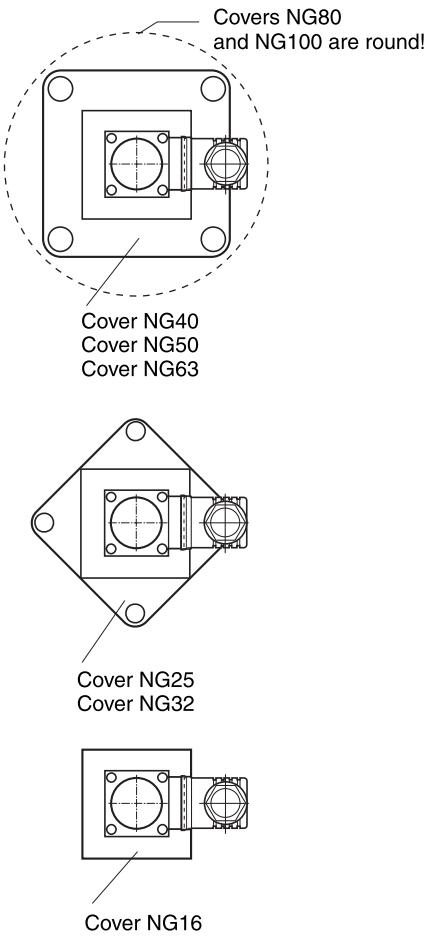


8

Valves



Valve covers



8

Size	16	25	32	40	50	63	80	100
H	168	173	178	262	198	287	327	342
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

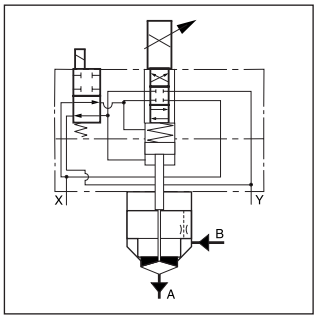
NG	Bolt kit - DIN912 12.9		Kit NBR	Kit FPM
16	BK-M8x100-4pcs	33 Nm	SK-TDA016EN-20	SK-TDA016EV-20
25	BK-M12x50-4pcs	115 Nm	SK-TDA025EN-20	SK-TDA025EV-20
32	BK-M16x55-4pcs	281 Nm	SK-TDA032EN-20	SK-TDA032EV-20
40	BK-M20x70-4pcs	553 Nm	SK-TDA040EN-20	SK-TDA040EV-20
50	BK-M20x75-4pcs	553 Nm	SK-TDA050EN-20	SK-TDA050EV-20
63	BK-M30x100-4pcs	1910 Nm	SK-TDA063EN-20	SK-TDA063EV-20
80	BK-M24x120-8pcs	935 Nm	SK-TDA080EN-20	SK-TDA080EV-20
100	BK-M30x140-8pcs	1910 Nm	SK-TDA100EN-20	SK-TDA100EV-20

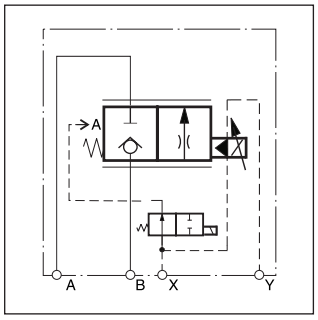
Accumulator discharge valves are preferably used in hydraulic systems where high flow rates are discharged from hydraulic accumulators over a short operating period (in the range of milliseconds).

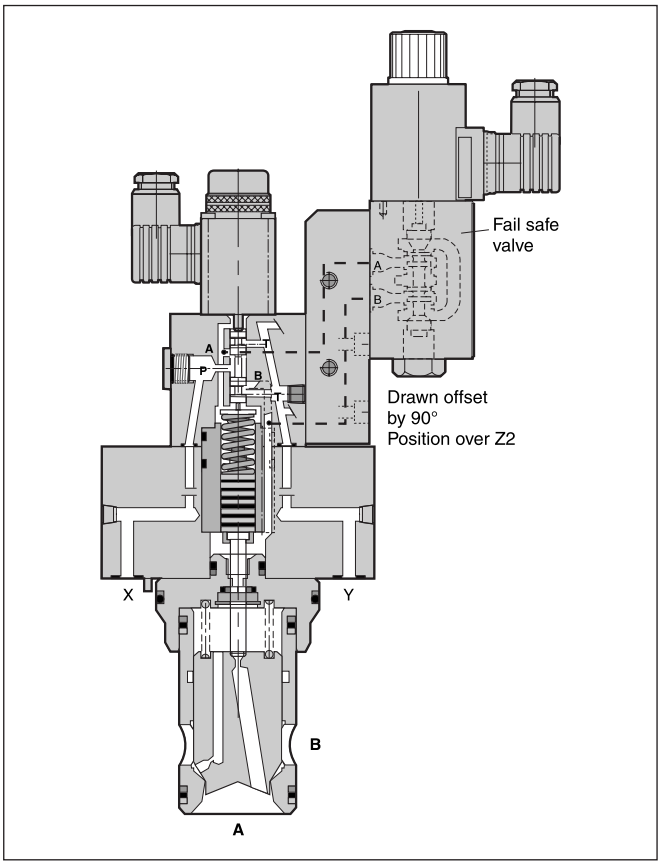
Typical applications are injection molding and die casting machines as well as hydraulic presses.

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.

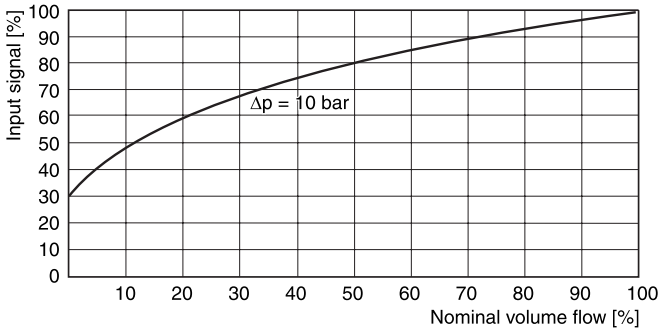
The directional valve provides the safety function. When the solenoid is deenergized and the spring is in the end position, pilot pressure from X presses the control piston into lower end position and, the main poppet is closed. As a result the flow from B to A or from the reservoir system to the machine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



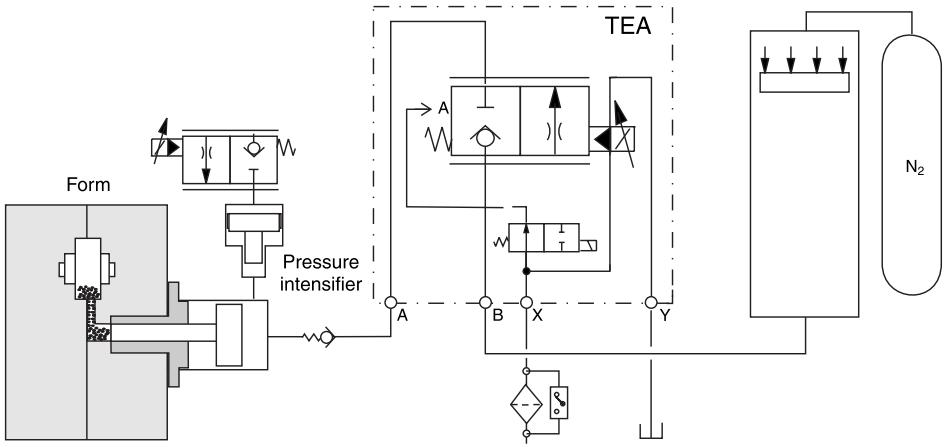




Characteristic curve



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	**24V= / 1.25A**
U	98V= / 0.31A*
G	205V= / 0.15A*

* For 110V 50Hz or 220V 50Hz use plug with rectifier.

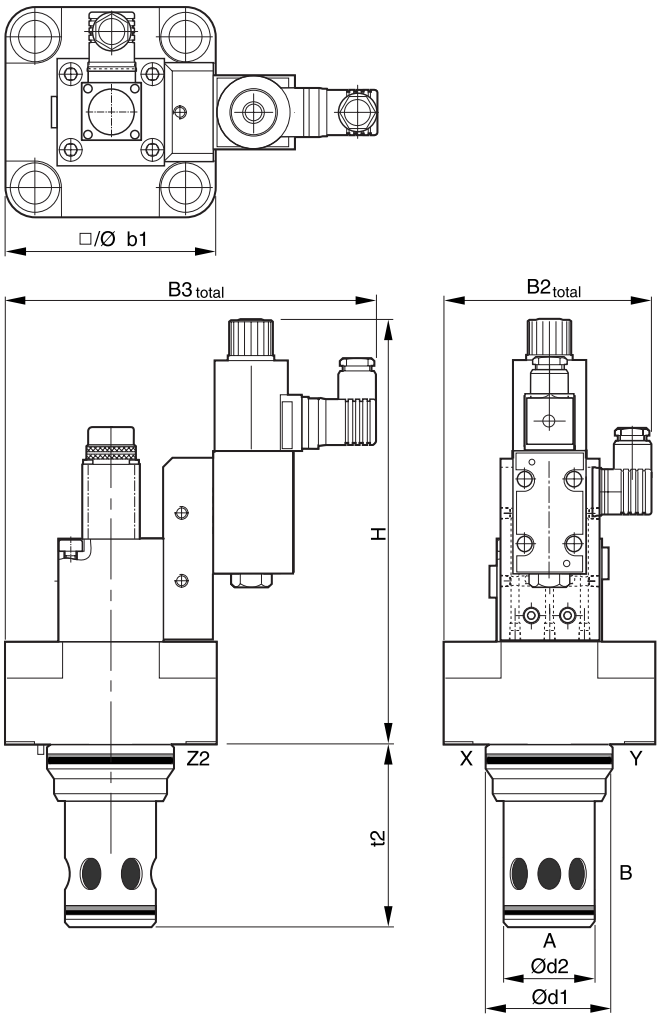
Code	Prop. solenoid voltage
L	6 VDC
X	16 VDC

Code	Seal
N	**NBR**
V	FPM

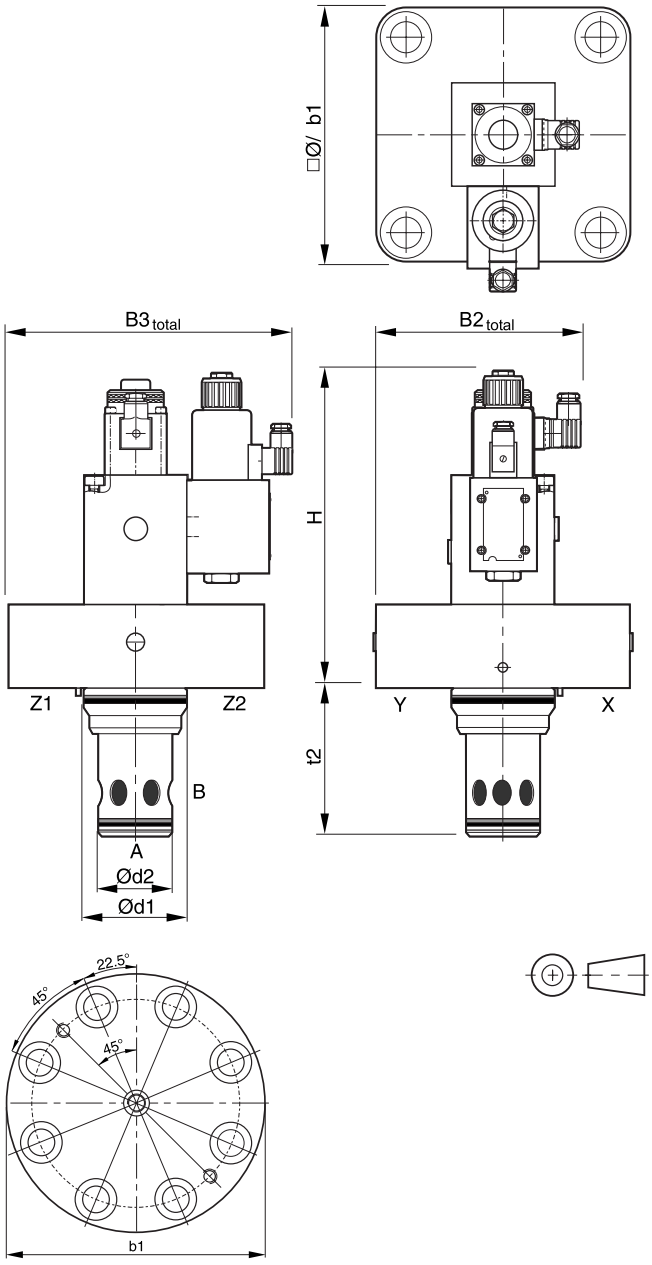
Technical data

General							
Nominal size		**NG32**	**NG40**	**NG50**	**NG63**	**NG80**	**NG100**
Design		Proportional throttle valve, slip-in cartridge according to ISO 7368					
Mounting position		unrestricted					
Ambient temperature	[°C]	-20...+80					
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, Y not pressurized					
Nominal flow Δp= 10 bar	[l/min]	950	1400	2300	4000	6000	9500
Fluid		Hydraulic oil as per DIN 51 524					
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					
Response time at px=50bar	[ms]	30	35	45	55	65	80
Manufacturing tolerance	[%]	±5 of Qnom					
Opening point		At 30% of nominal current					
Pilot oil	supply	Depending on flow dirction A or B using X or external X					
Pilot oil at p = 100bar	[l/min]	Port X → Y <1.5					
Repeatabiltity	[%]	< 1					
Hysteresis	[%]	< 3					
Electrical (proportional solenoid)							
Duty ratio		100% ED					
Protection class		IP65 according to EN 60529 (plugged and mounted)					
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	
Electrical control		PCD 00A-400					
Solenoid connection		Connector as per EN 175301-803					
Pilot valve		4/2 flow control valve, see chapter 2					
		Type D1DW			Type D3W		

TEA NG32...50



TEA NG63...100

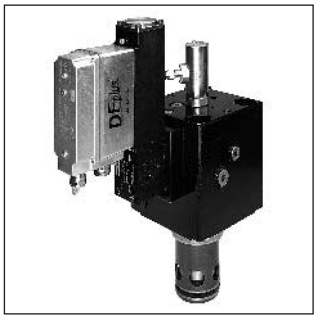


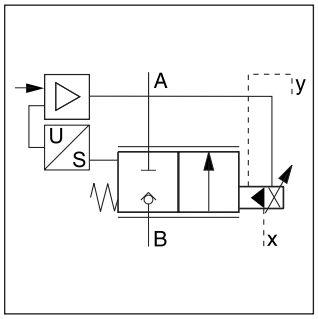
Size	32	40	50	63	80	100
H	250	260	270	312	337	352
b1	102	125	140	180	Ø250	Ø300
$d1^{H7}$	60	75	90	120	145	180
$d2^{H7}$	45	55	68	90	110	135
$t2^{+0.1}$	85	105	122	155	205	245
$B2_{total}$	106	118	125	158	193	218
$B3_{total}$	205	216	224	255	290	315

NG	Bolt kit - DIN912 12.9		Kit NBR	Kit FPM
32	BK-M16x55-4pcs	281 Nm	SK-TEHE10-E32	SK-TEHE10-E32V
40	BK-M16x55-4pcs	553 Nm	SK-TEHE10-E40	SK-TEHE10-E40V
50	BK-M20x75-4pcs	553 Nm	SK-TEHE10-E50	SK-TEHE10-E50V
63	BK-M30x100-4pcs	1910 Nm	SK-TEHE10-E63	SK-TEHE10-E63V
80	BK-M24x120-8pcs	935 Nm	SK-TEHE10-E80	SK-TEHE10-E80V
100	BK-M30x140-8pcs	1910 Nm	SK-TEHE10-E100	SK-TEHE10-E100V

Notes

The 2/2 way proportional throttle valves series TDL are used in applications where high flow has to be precisely controlled with a very fast response time. Typical applications are die casting, injection moulding and hydraulic presses.



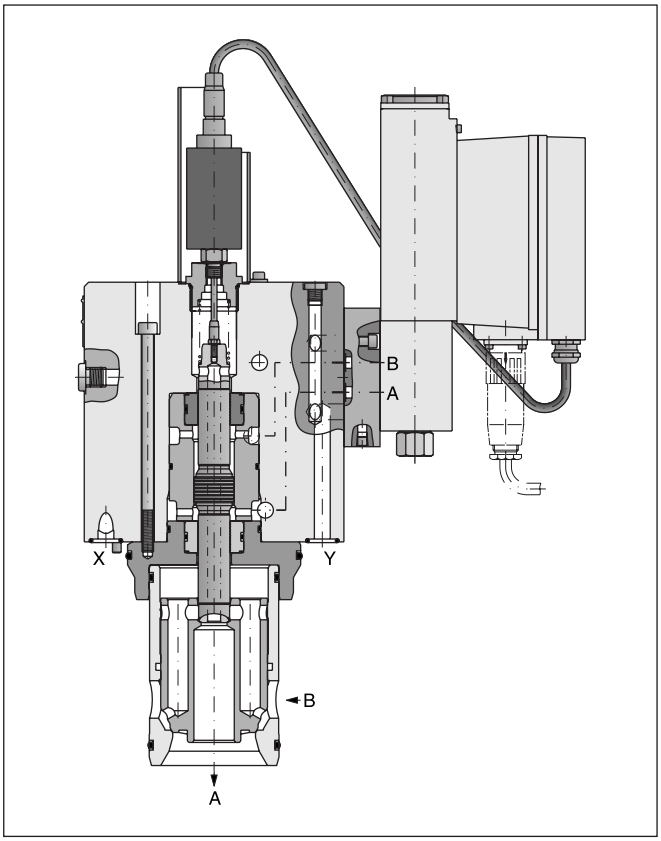


Function

The TDL valve has a 3-stage design consisting of the DFplus pilot valve, the hydraulic follow-up system with LVDT and the main stage with poppet and sleeve.

With the DFplus pilot valve the TDL achieves extremely fast response times: from 14ms (NG40) up to 22ms (NG100) with an adjustment precision of 0.5% of the nominal adjusted flow. The follow-up spool enables the poppet to be positioned independent of the differential pressure, which can become as high as the maximum working pressure.

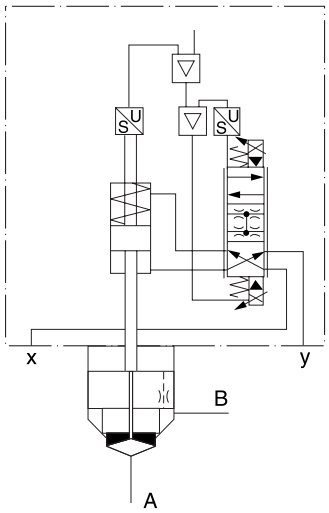
The optimum dynamics are achieved at a control pressure >50 bar. The TDL has integrated electronics controlling both the position of the follow-up piston and the spool position of the DFplus pilot valve. All this makes the TDL a completely factory set unit with minimum or no need for on-site setting.



Features

- Pilot operated 2/2 way proportional throttle valve
- Cavity and mounting pattern according to ISO 7368
- For speed and position control
- Fast step response
- Flow direction B to A
- Completely adapted unit with integrated electronics
- Fail safe position
- 5 sizes NG40 up to NG100

Function symbol



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Ordering code

TDL		E	H	9	9	B	2			0	
Proportional throttle valve with LVDT	**Nominal size**	**Slip-in cartridge**	**Closed pilot circle, fast valve type, integrated electronics**	**Sinus poppet**	**Nominal flow**	**Flow direction B → A**	**Pilot supply external, drain external**	**Seal**	**Electronic**	**Standard electronics**	**Serial number** (not required for ordering)

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

Code	Electronic
B	**Supply voltage 0...+10V**
S	Supply 4...+20mA

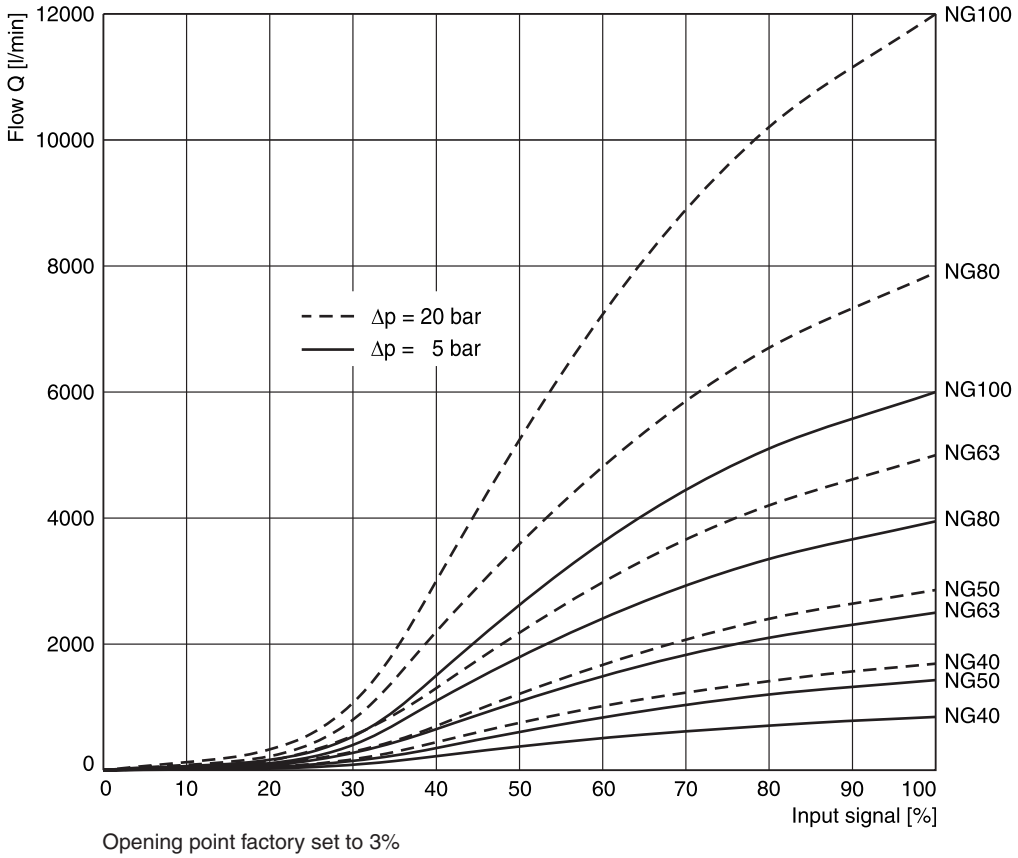
Code	Seal
N	**NBR**
V	FPM

Bold letters =
Short-term availability

Performance curves

Characteristic flow/signal line

(Δp = 5/20 bar constant, viscosity 25mm²/s)



Opening point factory set to 3%

General						
Design type		Proportional throttle valve, slip-in cartridge according to ISO 7368				
Mounting pattern		ISO 7368 : 1989				
Actuation		Hydraulic operation via integrated pilot control valve in the cover assembly				
Mounting position		unrestricted				
Hydraulic						
Fluid		Hydraulic oil as per DIN 51 524 ... 525				
Viscosity, recommended	[cSt]/[mm²/s]	20 ... 100				
maximum	[cSt]/[mm²/s]	10... 800				
Fluid temperature	[°C]	0 ... +60				
Filtration		ISO 4406 : 1999; 18/16/13				
Nominal sizes	DIN	**NG40**	**NG50**	**NG63**	**NG80**	**NG100**
Weight	[kg]	15	26	52	105	157
Nominal flow at Δp=20 bar	[l/min]	2500	4100	6800	9500	13500
Max. operating pressure	[bar]	Ports A, B, X: 350; Port Y: 10				
Flow direction		B to A				
Pilot pressue, min.	[bar]	50% of the prevailing pressure				
Inlet		From port B via X, or external X				
Outlet		Always external via Y, without pressure, max. 10 bar				
Leakage oil pilot control		X → Y at p = 175 bar				
Release off	[l/min]	NG40 to 63 <1.2; NG80 to 100 <2.0				
Enable on	[l/min]	NG40 to 63 <2.5; NG80 to 100 <4.0				
Min. supply pressure port B	[bar]	Approx. 5				
Max. pilot fluid flow	[l/min]	13	24	42	54	65
Static/dynamic						
Hysteresis	[%]	< 1				
Repetitive precision	[%]	< 0.5				
Resp. time t at px > 50 bar	[ms]	12	16	20	17.5	22
Electrical						
Protection class		IP65				
Supply voltage	[V]	22...30, ripple < 5% eff., surge free				
Permitted waviness	[%]	Max. 5				
Power consumption	[A]	Max. 2.8				
Input signal range:						
Voltage input		0...+10V / 100kΩ				
Current input		4...+20mA / 250Ω				
Release input	[V]	5...30				
Ambient temperature	[°C]	0...+50				
Installation section diameter		Min 1.0 mm² shielded				
Line length	[m]	Max. 50				

Flow at different Δp $Q_{actual} = Q_{nominal} \cdot \sqrt{\Delta p_{actual} / 20}$

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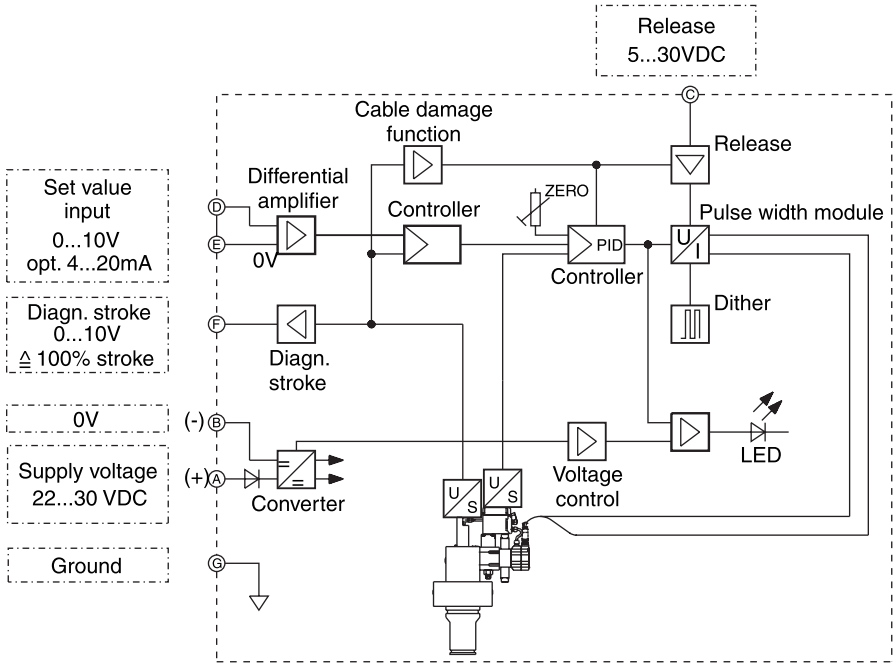
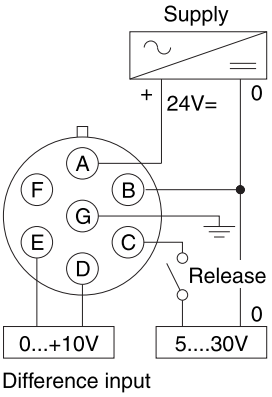
Block circuit diagram electronics

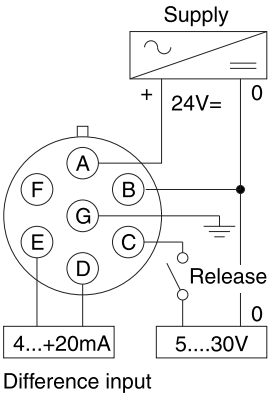


Connection diagrams

Electronics type B

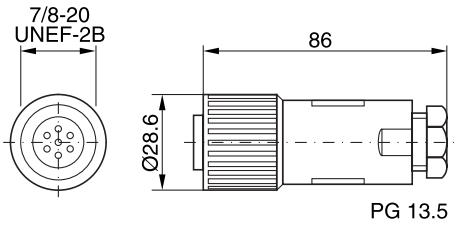


Electronics type S



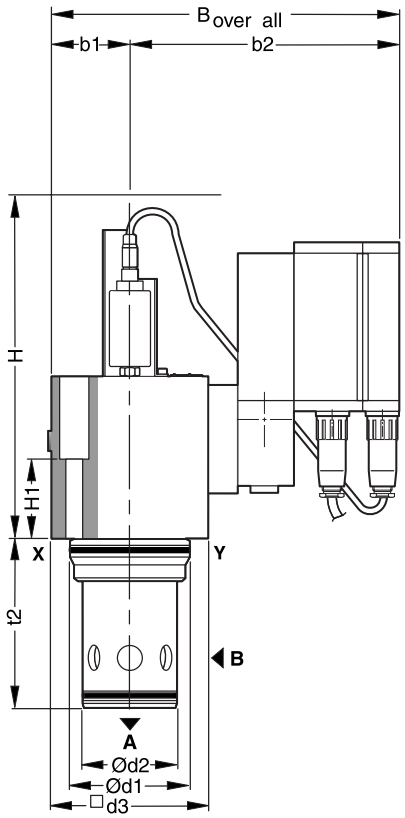
Connector

(EMV conforming)

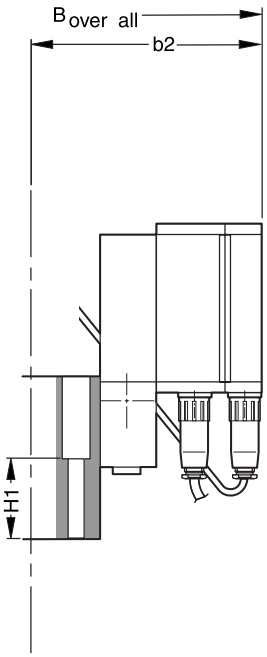


ID no. 5004072 included in the delivery scope

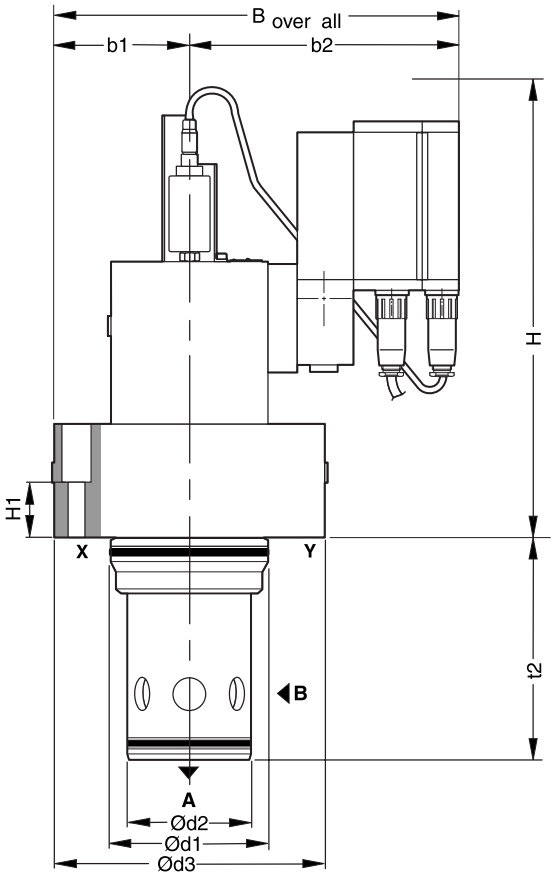
Pilot valve NG50-63

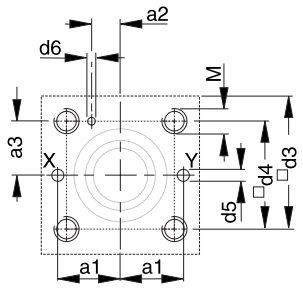


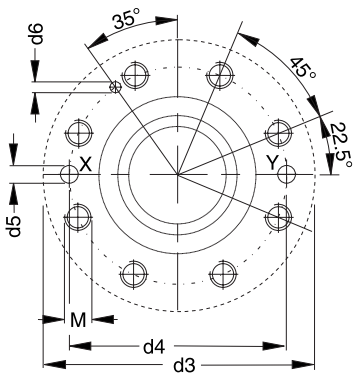
Pilot valve NG40

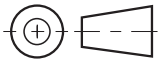


Pilot valve NG80-100







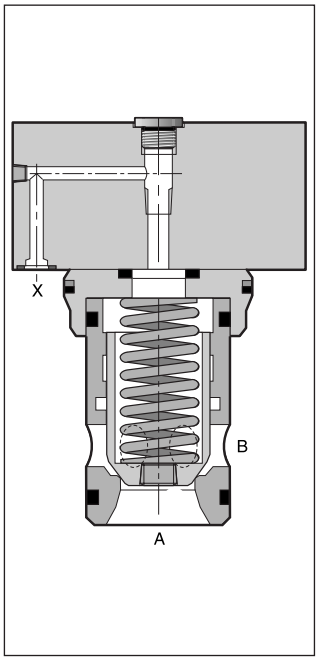


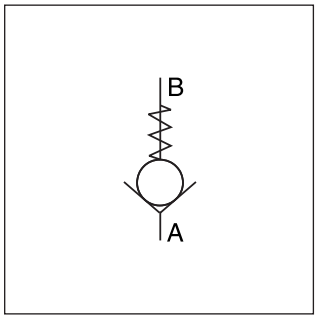
NG	$B_{o.a.}$	H	H1	$t2_{\pm 0.1}$	a1	a2	a3	b1	b2	$Ød1_{H7}$	$Ød1_{H7}$	d3	d4	Ød5	Ød6	M
40	275	280	90	105	50 ±0.2	23 ±0.2	42 ±0.2	62.5	210	75	55	125	85 ±0.2	max. 10	6+0.22x10	M20x45
50	355	330	130	122	58 ±0.2	30 ±0.2	50 ±0.2	70	285	90	68	140	100 ±0.2	max. 10	8+0.22x10	M20x45
63	395	325	115	155	75 ±0.2	38 ±0.2	62.5 ±0.2	90	305	120	90	180	125 ±0.2	max. 12	8+0.22x10	M30x65
80	385	425	80	205	–	–	–	125	260	145	110	250	200 ±0.2	max. 16	10+0.22x10	M24x55
100	425	440	89	245	–	–	–	150	275	180	135	300	245 ±0.2	max. 20	10+0.22x10	M30x65

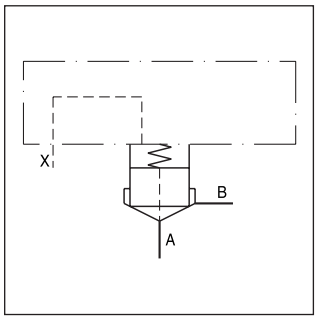
NG	Bolt kit - DIN912 12.9		Kit	
			NBR	FPM
40	BK-M20x1200-4pcs	553 Nm	SK-TDL040EN-38	SK-TDL040EV-38
50	BK-M20x160-4pcs	553 Nm	SK-TDL050EN-38	SK-TDL050EV-38
63	BK-M30x180-4pcs	1910 Nm	SK-TDL063EN-38	SK-TDL063EV-38
80	BK-M24x120-8pcs	935 Nm	SK-TDL080EN-38	SK-TDL080EV-38
100	BK-M30x140-8pcs	1910 Nm	SK-TDL100EN-38	SK-TDL100EV-38

Notes

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







Features

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

Technical data

Design			2 way cartridge valve, according to ISO 7368 : 1989						
Actuation			Hydraulical						
Mounting position			unrestricted						
Environmental temperature		[°C]	-40 ... +60						
Nominal size		NG	**16**	**25**	**32**	**40**	**50**	**63**	**80**	**100**
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	[mm²/s]	30 ... 80						
	permitted	[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						

Ordering code

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

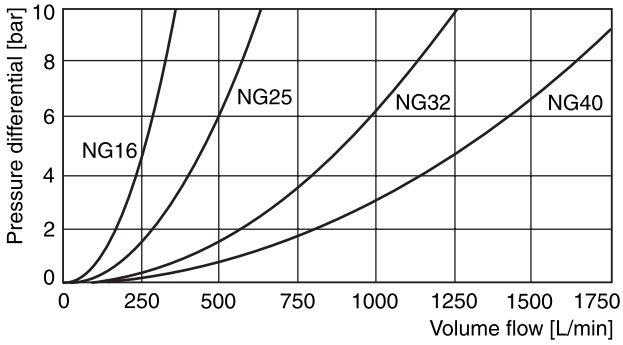
Code	Seal
omit	**NBR**
V	FPM

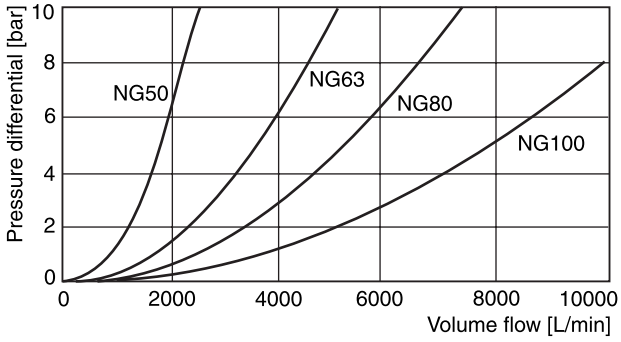
Code	Size
16	**NG16**
25	**NG25**
32	**NG32**
40	**NG40**
50	**NG50**
63	**NG63**
80	NG80
100	NG100

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

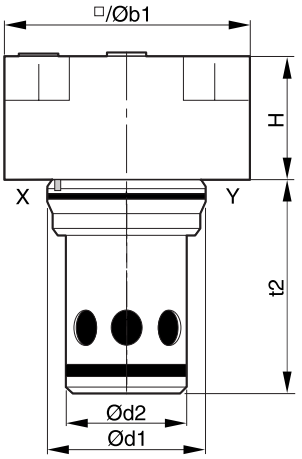
Bold letters =
Short-term availability

Performance curves





Dimensions



Size	16	25	32	40	50	63	80	100
H	40	45	50	60	70	85	105	120
b1	65	85	102	125	140	180	250	300
$d1^{H7}$	32	45	60	75	90	120	145	180
$d2^{H7}$	25	34	45	56	68	90	110	135
$t2^{+0.1}$	55.5	72	85	105	122	155	205	245

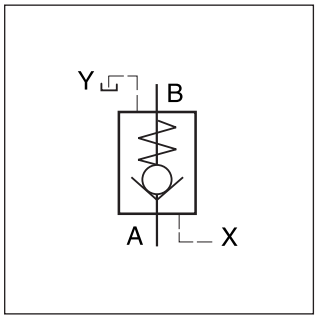
NG	Bolt kit - DIN912 12.9	[Nm]	Kit NBR	Kit FPM
10	BK-M8x50-4pcs	33	SK-CB-E160	SK-CB-E160V
25	BK-M12x50-4pcs	115	SK-CB-E250	SK-CB-E250V
32	BK-M16x55-4pcs	281	SK-CB-E320	SK-CB-E320V
40	BK-M20x70-4pcs	553	SK-CB-E400	SK-CB-E400V
50	BK-M20x75-4pcs	553	SK-CB-E500	SK-CB-E500V
63	BK-M30x100-4pcs	1910	SK-CB-E630	SK-CB-E630V
80	BK-M24x120-8pcs	935Nm	SK-CB-E630	SK-CB-E630V
100	BK-M30x140-8pcs	1910Nm	SK-CB-E630	SK-CB-E630V

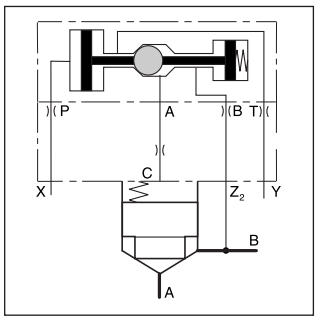
Springs

	Ordering Number							
Spring Type	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

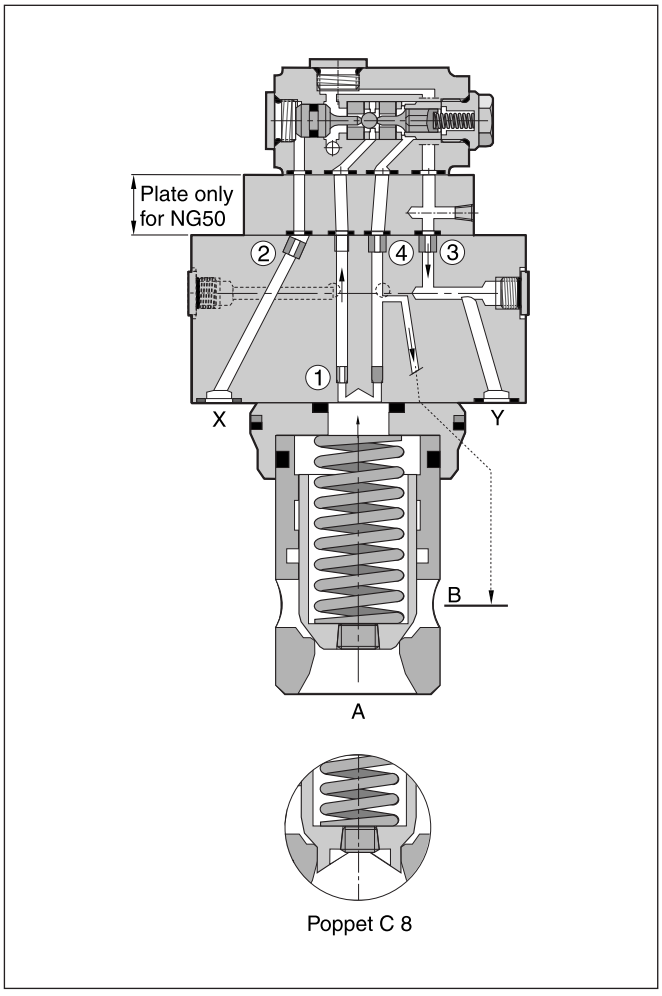
When no pressure is applied to the X-port, the flow from B to A is blocked, because the pressure in B is also effective on top of the poppet.

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



Poppet C 8

8

Ordering code

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

Code	Seal
omit	**NBR**
V	FPM

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

[1] with damping nose

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

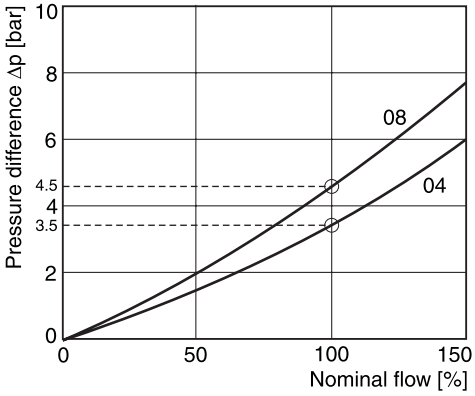
Code	Size
16	NG16
25	NG25
32	NG32
40	NG40
50	NG50

Bold letters =
Short-term availability

Technical data

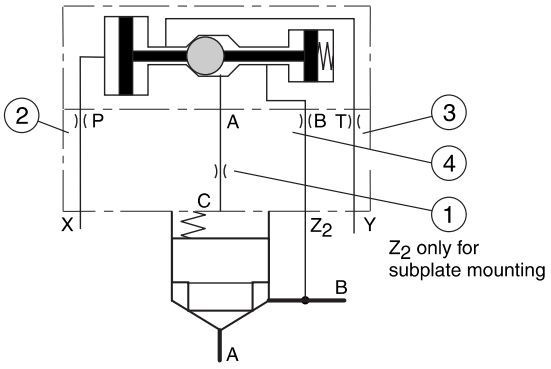
General						
Nominal size			**NG16**	**NG25**	**NG32**	**NG40**	**NG50**
Interface			Slip-in mounting acc. ISO 7368				
Mounting position			unrestricted				
Ambient temperature		[°C]	-20...+80				
Weight		[kg]	2.3	3.2	4.6	7.8	12.0
Hydraulics							
Max. operating pressure		[bar]	350				
Nominal flow		[l/min]	250	450	900	1300	1800
Fluid			Hydraulic oil acc. to DIN 51524...525				
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				

Δp/Q flow curve

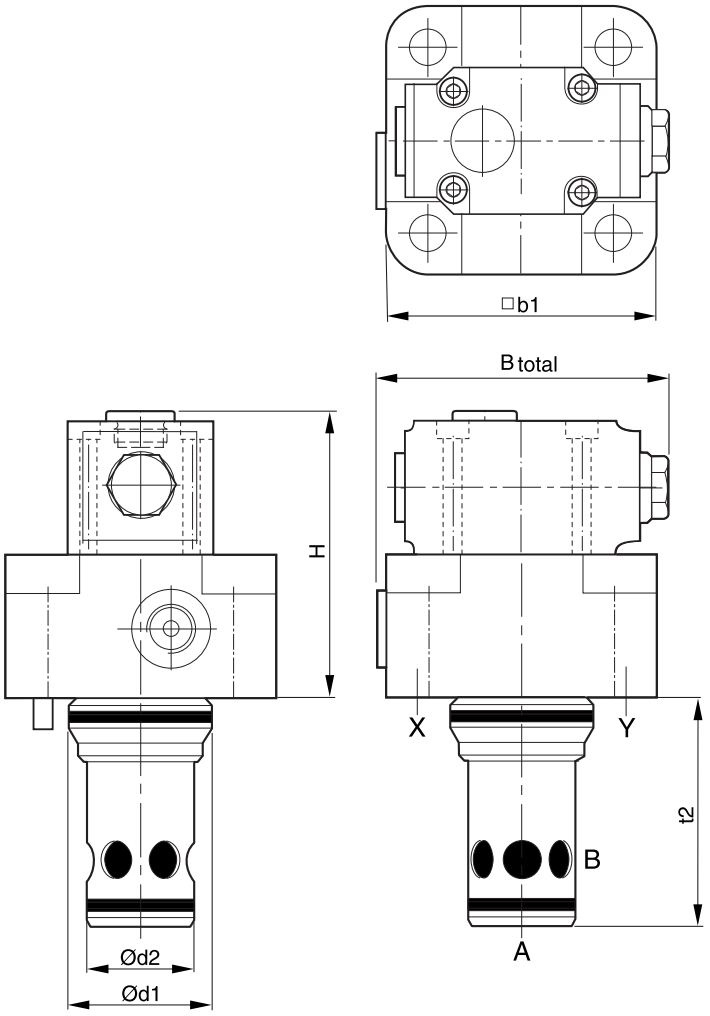


Poppet type 04, 08, without spring

Standard orifices



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



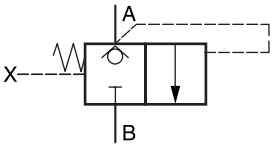
Size	16	25	32	40	50
H	84	88	93	103	138
b1	79*	85	102	125	140
$d1^{H7}$	32	45	60	75	90
$d2^{H7}$	25	34	45	55	68
$t2^{+0.1}$	56	72	85	105	122
Bges.	99	94	103	125	140

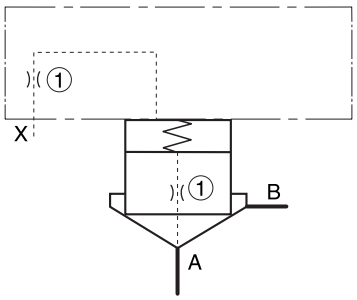
* width 65 mm

NG	Bolt kit - DIN912 12.9	[Nm]	Kit NBR	Kit FPM
16	BK-M8x50-4pcs	33	SK-SVLB10-E16	SK-SVLB10-E16V
25	BK-M12x50-4pcs	115	SK-SVLB10-E25	SK-SVLB10-E25V
32	BK-M16x55-4pcs	281	SK-SVLB10-E32	SK-SVLB10-E32V
40	BK-M20x70-4pcs	553	SK-SVLB10-E40	SK-SVLB10-E40V
50	BK-M20x75-4pcs	553	SK-SVLB10-E50	SK-SVLB10-E50V

Notes

2 way seat valve, flow A ⇒ B



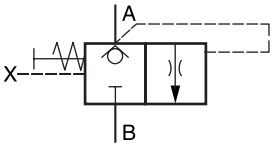


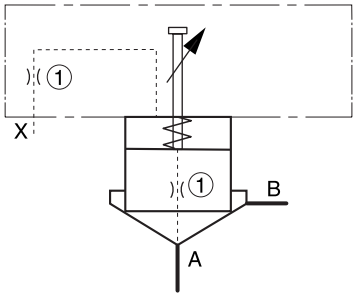
Description	Type							
	NG16	NG25	NG32	NG40	NG50	NG63	NG80	NG100
Cover [1]	C016AA*	C025AA*	C032AA*	C040AA*	C050AA*	C063AA*	C080AA*	C100AA*
Cover orifice ①	1/16xØ0.8	1/16xØ1.0	1/16xØ1.2	1/8xØ1.5	1/8xØ1.8	1/8xØ2.0	1/8xØ2.2	1/8xØ2.5
Cartridge [2]	CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*	CE080C01*	CE100C01*
Poppet orifice ①	1/16xØ00							
Spring	1.6 bar, type S (Order no. see spare parts)							
Bolt kit cover	BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs	BK-M20x70-4pcs	BK-M20x75-4pcs	BK-M30x100-4pcs	BK-M24x120-8pcs	BK-M30x130-8pcs

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*

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





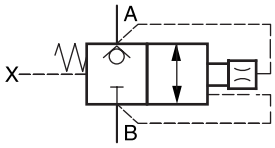
Description	Type							
	NG16	NG25	NG32	NG40	NG50	NG63	NG80	NG100
Cover [1]	C016B**	C025B**	C032B**	C040B**	C050B**	C063B**	C080B**	C100B**
Cover orifice ①	M6xØ0.8	M6xØ1.0	1/16xØ1.2	1/16xØ1.5	1/16xØ1.8	1/8xØ2.0	1/8xØ2.2	1/8xØ2.5
Cartridge [2]	CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*	CE080C01*	CE100C01*
Poppet orifice ①	1/16xØ00							
Spring	1.6 bar, type S (Order no. see spare parts)							
Bolt kit cover	BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs	BK-M20x70-4pcs	BK-M20x75-4pcs	BK-M30x100-4pcs	BK-M24x120-8pcs	BK-M30x130-8pcs

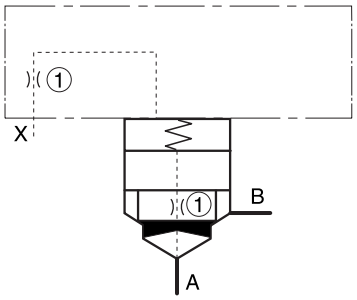
[1] Complete type see ordering code C*B
[2] Complete type see ordering code CE*

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

8

2 way functions with dampening poppet, flow A ⇔ B



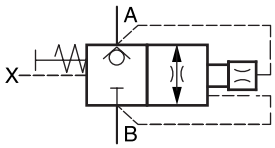


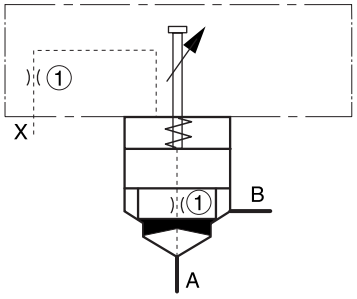
Description	Type							
	NG16	NG25	NG32	NG40	NG50	NG63	NG80	NG100
Cover [1]	C016AA*	C025B*	C032AA*	C040AA*	C050AA*	C063AA*	C080AA*	C100AA*
Cover orifice ①	1/16xØ0.8	1/16xØ1.0	1/16xØ1.2	1/8xØ1.5	1/8xØ1.8	1/8xØ2.0	1/8xØ2.2	1/8xØ2.5
Cartridge [2]	CE016C08*	CE025C08*	CE032C08*	CE040C08*	CE050C08*	CE063C08*	CE080C08*	CE100C08*
Poppet orifice ①	1/16xØ00							
Spring	1.6 bar, type S (Order no. see spare parts)							
Bolt kit cover	BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs	BK-M20x70-4pcs	BK-M20x75-4pcs	BK-M30x100-4pcs	BK-M24x120-8pcs	BK-M30x130-8pcs

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*

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



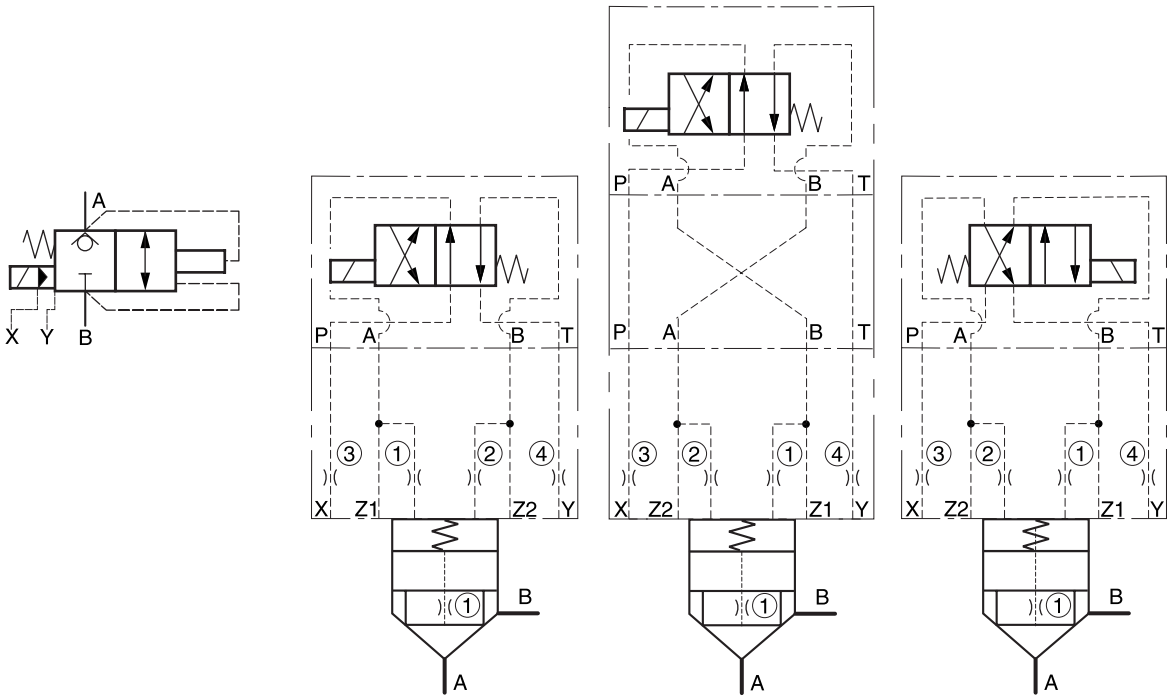


Description	Type							
	NG16	NG25	NG32	NG40	NG50	NG63	NG80	NG100
Cover [1]	C016B*	C025B*	C032B*	C040B*	C050B*	C063B*	C080B*	C100B*
Cover orifice ①	M6xØ0.8	M6xØ1.0	1/16xØ1.2	1/16xØ1.5	1/16xØ1.8	1/8xØ2.0	1/8xØ2.2	1/8xØ2.5
Cartridge [2]	CE016C08*	CE025C08*	CE032C08*	CE040C08*	CE050C08*	CE063C08*	CE080C08*	CE100C08*
Poppet orifice ①	1/16xØ00							
Spring	1.6 bar, type S (Order no. see spare parts)							
Bolt kit cover	BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs	BK-M20x70-4pcs	BK-M20x75-4pcs	BK-M30x100-4pcs	BK-M24x120-8pcs	BK-M30x130-8pcs

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

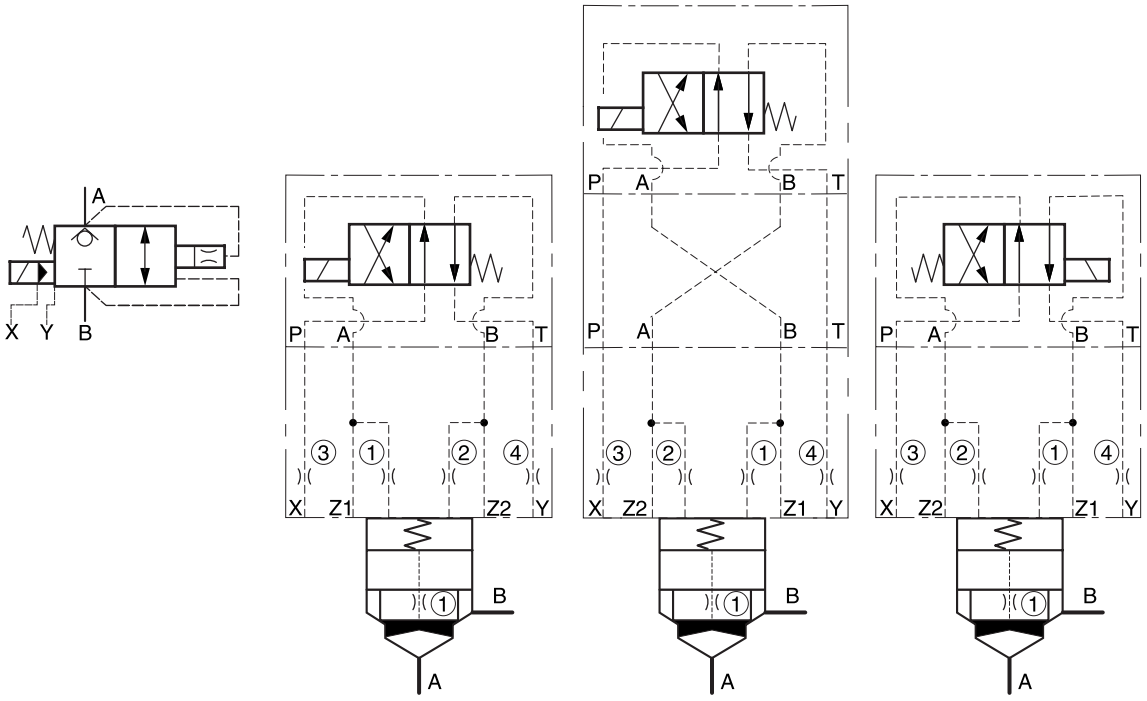
8

Description	Type									
	Pilot NG06						Pilot NG10			
	NG16	NG25	NG32	NG40	NG50	NG63	NG50	NG63	NG80	NG100
4/2-DC valve [1]	D1VW20B*						D3W20H*			
Adaptot 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 [2]	CE016C04*	CE025C04*	CE032C04*	CE040C04*	CE050C04*	CE063C04*	CE050C04*	CE063C04*	CE080C04*	CE100C04*
Poppet orifice ①	1/16NPTxØ00									
Spring	1.6 bar, type S (Order no. see spare parts)									
Bolt kit cover	BK-M8x40 -4pcs	BK-M12x50 -4pcs	BK-M16x55 -4pcs	BK-M20x70 -4pcs	BK-M20x75 -4pcs	BK-M30x100 -4pcs	BK-M24x120 -8pcs	BK-M30x130 -8pcs	BK-M24x120 -8pcs	BK-M30x140 -8pcs
Bolt kit pilot	BK-M5x30-4pcs						BK-M6x40-4pcs			

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

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

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

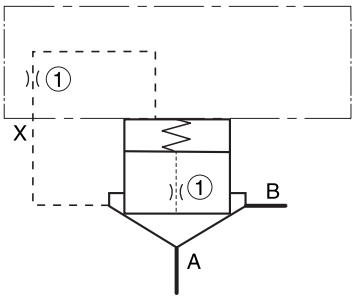
8

Description	Type									
	Pilot NG06						Pilot NG10			
	NG16	NG25	NG32	NG40	NG50	NG63	NG50	NG63	NG80	NG100
4/2-DC valve [1]	D1VW20B*						D3W20H*			
Adaptot 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 [2]	CE016C08*	CE025C08*	CE032C08*	CE040C08*	CE050C08*	CE063C08*	CE050C08*	CE063C08*	CE080C08*	CE100C08*
Poppet orifice ①	1/16NPTxØ00									
Spring	1.6 bar, type S (Order no. see spare parts)									
Bolt kit cover	BK-M8x40 -4pcs	BK-M12x50 -4pcs	BK-M16x55 -4pcs	BK-M20x70 -4pcs	BK-M20x75 -4pcs	BK-M30x100 -4pcs	BK-M24x120 -8pcs	BK-M30x130 -8pcs	BK-M24x120 -8pcs	BK-M30x140 -8pcs
Bolt kit pilot	BK-M5x30-4pcs						BK-M6x40-4pcs			

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

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

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	M5xØ00				M6xØ99		1/16xØ99	
Cartridge [2]	CE016C01*	CE025C01*	CE032C01*	CE040C01*	CE050C01*	CE063C01*	CE080C01*	CE100C01*
Poppet orifice ①	1/16NPTxØ00							
Spring	1.6 bar, type S (Order no. see spare parts)							
Bolt kit cover	BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs	BK-M20x70-4pcs	BK-M20x75-4pcs	BK-M30x100-4pcs	BK-M24x120-8pcs	BK-M30x130-8pcs

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

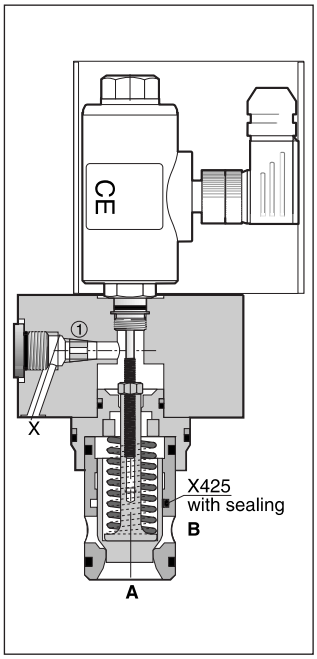
[1] Complete type see ordering code C*A
[2] Complete type see ordering code CE*

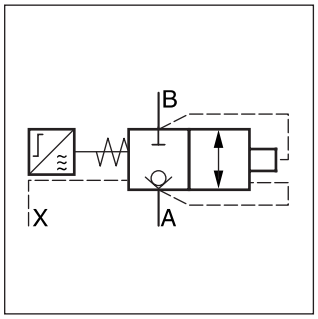
8

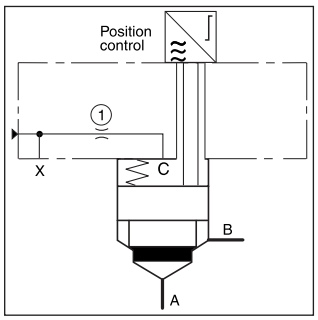
Notes

The 2/2 way seat valves series C10 D*C are equipped with an inductive switch to monitor the closed position. After the poppet is lifted from the seat, the design of the poppet ensures that only a minimum amount of oil can pass the seat before the inductive switch changes the signal.

The poppet has a 60/40 area ratio (A_A = 0.6 A_C, A_B = 0.4 A_C) and is capable for flow from A to B and B to A.







Features

- German trade association certificate, No. 00 077
- Cavity and mounting pattern acc. to DIN ISO 7368
- Monitored closed position
- Inductive switch CE conform
- Optional poppet sealing
- 6 sizes NG16 up to NG63

Ordering code

	C	10	D	E	C	101	E		/ 0			00	
Seal	2/2 way valve	Poppet shape	Hydraulically operated	Design series	Inductive monitoring German trade association certificate 00 077	Cover	Slip-in cartridge	Nominal size	Cavity and mounting pattern DIN ISO 7368	Spring	Orifice (1)		Poppet seal

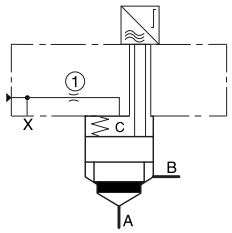
Code	Seal
N	NBR
V	FPM

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

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

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

Code	Orifice
99	Without orifice, open

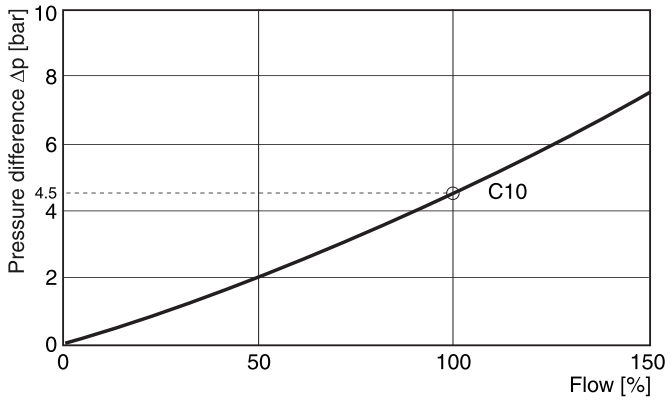


○ Orifice (see accessories)

8

General							
Size			**16**	**25**	**32**	**40**	**50**	**63**
Interface			2 way slip-in cartridge valves DIN ISO 7368					
Mounting position			unrestricted					
Operation			Hydraulic					
Ambient temperature		[C°]	-40...+60					
Weight		[kg]	1.5	2.7	4.3	7.4	12	23
Hydraulic								
Max. operating press., connection A, B, X		[bar]	350					
Nominal flow Δp 5 bar		[l/min]	220	450	900	1300	1800	3600
Fluid			Hydraulic oil acc. to DIN 51 524...525					
Fluid temperature,	recommended	[C°]	+30...+50					
	permitted	[C°]	-20...+60					
Viscosity	recommended	[cSt]/[mm²/s]	30...80					
	permitted	[cSt]/[mm²/s]	20...380					
Filtration			NAS 1638 class 9, to be achieved by ß10 > 75					
Control volume at max. stroke		[cm³]	2.03	6.45	12.21	20.32	39.40	94.56
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					

Flow diagram

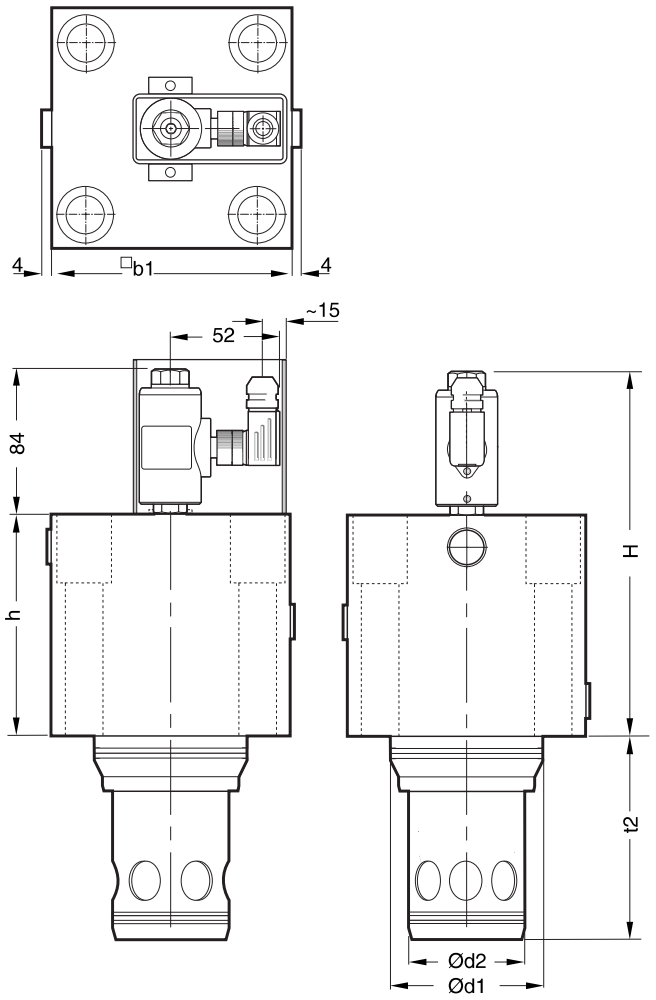


Orifice recommendation and thread

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

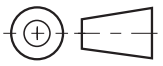
Orifices Ø in mm, thread in NPT

Dimensions



Nominal size	H	h	b1	d1	d2	t2 +0.1
16	130	40	79 [1)]	32	25	56
25	135	45	85	45	34	72
32	140	50	102	60	45	85
40	150	60	125	75	55	105
50	160	70	140	90	68	122
63	175	85	180	120	90	155

[1)] width 65 mm



Seal and bolt kits

Nominal size		**16**	**25**	**32**	**40**	**50**	**63**
Seal kit	FPM	SK-CBE16V	SK-CBE25V	SK-CBE32V	SK-CBE40V	SK-CBE50V	SK-CBE63V
	NBR	SK-CBE16	SK-CBE25	SK-CBE32	SK-CBE40	SK-CBE50	SK-CBE63
Bolt kit	[DIN 912 12.9]	BK-M8x40-4pcs	BK-M12x50-4pcs	BK-M16x55-4pcs	BK-M20x70-4pcs	BK-M20x75-4pcs	BK-M30x100-4pcs
Recommended torque	[Nm]	27	94	234	460	460	1570

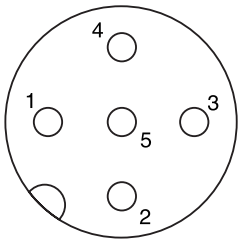
Attention!

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

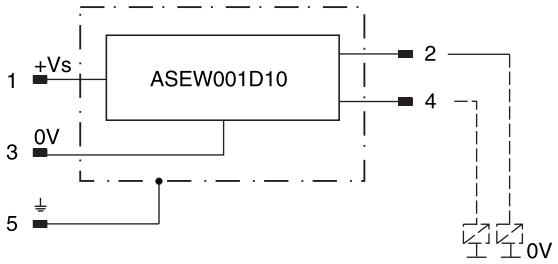
Electrical characteristics of position control as per IEC 61076-2-101 (M12x1)

Protection class		IP 65 in accordance with EN 60529 (plugged and mounted)
Ambient temperature	[°C]	0...+50
Supply voltage / ripple	[V]	18...42 / 10%
Current consumption without load	[A]	≤ 30
Max. output current per channel, ohmic	[mA]	400
Min. output load per channel, ohmic	[kOhm]	100
Max. output drop at 0.2A	[V]	≤ 1.1
Max. output drop at 0.4A	[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 brad shield recommended
Wiring length max.	[m]	50 recommended

M12 pin assignment



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



8

Extract from the German trade association certificate

Fachausschüsse
Eisen und Metall III
und Hebezeuge
Prüf-und Zertifizierungsstelle
im BG-PRÜFZERT

Hauptverband der gewerblichen Berufsgenossenschaften

00 077
Bescheinigungs-Nummer

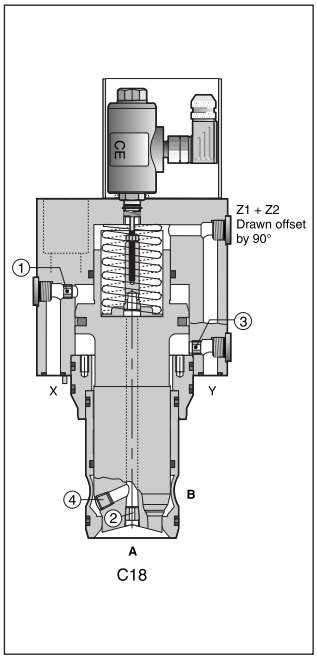
Name und Anschrift des Bescheinigungsinhabers: (Auftraggeber)	**Parker Hannifin GmbH** Hydraulic Controls Division Gutenbergstr. 38 - 40, D- 41564 Kaarst	
Name und Anschrift des Herstellers:	**Parker Hannifin GmbH** Hydraulic Controls Division Gutenbergstr. 38 - 40, D- 41564 Kaarst	
Zeichen des Auftraggebers:	Zeichen der Prüf- und Zertifizierungsstelle: EM III 612.1:612.28-UB Gb/bt	Ausstellungsdatum: 15.05.2000
Produktbezeichnung:	**2/2- Wegesitzventil mit Überwachung** **Einbauventil nach DIN 24342 (entspricht DIN ISO 7368)**	
Typ:	C10 DCC 101.....	

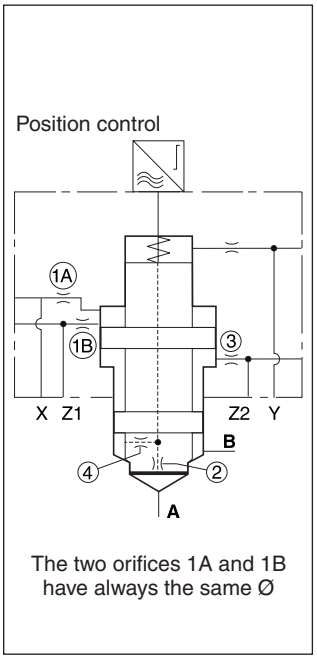
Das geprüfte Baumuster entspricht den einschlägigen Bestimmungen der Richtlinie 98/37/EG (**Maschinen**).

C10_UK.INDD RH

Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

Active 2/2 way monitored seat valves with cartridge design according to ISO 7368 are preferably used for safety circuits: mainly for safety guards, mould form tools and locking mechanisms for presses and injection moulding machines. Pilot pressure actively opens and closes the main poppet - independent of pressure in the main ports.





The two orifices 1A and 1B have always the same Ø

Features

- German trade association certificate, No. 00 078
- Cavity and mounting pattern acc. to ISO 7368
- Monitored closed position
- Inductive switch CE conform
- Active design with separate control surfaces
- Sealing between control surfaces and connection B
- 5 sizes NG25 up to NG63

Ordering code

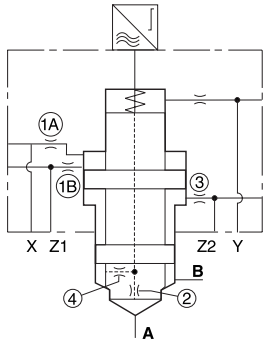
	C	18	D	E	C	107	E		/ 0					
												1	2	3	4
Seal	2/2 way valve	Poppet shape	Hydraulically operated	Design series	Inductive monitoring German trade association certificate 00 077	Cover	Slip-in cartridge	Nominal size	Cavity and mounting pattern DIN ISO 7368	Spring	Orifice			

Code	Seal
N	NBR
V	FPM

Code	Size
25	NG25
32	NG32
40	NG40
50	NG50
63	NG63

Code	Spring
S	Opening press. 1.6 bar
U	Opening press. 4.0 bar

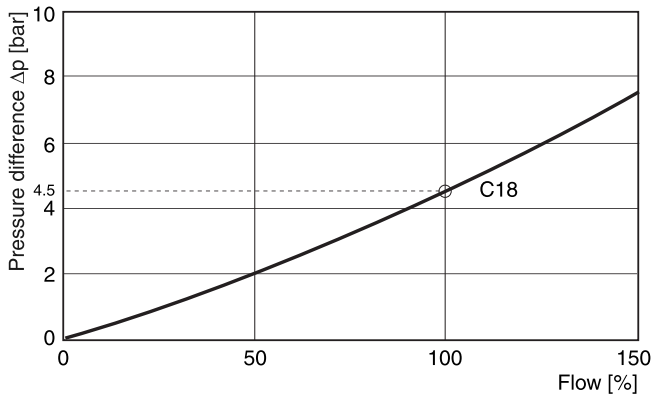
Code	Orifice
99	Without orifice, open



○ Orifice (see accessories)

General							
Size			**25**	**32**	**40**	**50**	**63**
Interface			2 way slip-in cartridge valves DIN ISO 7368				
Mounting position			unrestricted				
Operation			Hydraulic				
Ambient temperature		[C°]	-40...+60				
Weight		[kg]	3.2	6.7	8.7	13.8	26.3
Hydraulic							
Max. operating pressure, all connections		[bar]	350				
Nominal flow, Δp 5 bar		[L/min]	450	900	1300	1800	3600
Fluid			Hydraulic oil acc. to DIN 51 524...525				
Fluid temperature	recommended	[C°]	+30...+50				
	permitted	[C°]	-20...+60				
Viscosity	recommended	[cSt]/[mm²/s]	30...80				
	permitted	[cSt]/[mm²/s]	20...380				
Filtration			NAS 1638 class 9, to achieved by ß10 > 75				
Control volume spring chamber, surface C		[cm³]	6.45	12.21	20.32	39.40	94.56
Control surface	FC	[%]	100				
	FSt	[%]	123.8	108.6	121.5	117	121
	FA/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				

Flow diagram



Orifice thread

Orifice	NG25	NG32	NG40	NG50	NG63
1	M6	M6	M6	*1/16	*1/8
2	M6	M6	M6	*1/16	*1/16
3	M6	M6	M6	*1/16	*1/8
4	M6	M6	M6	*1/16	*1/16

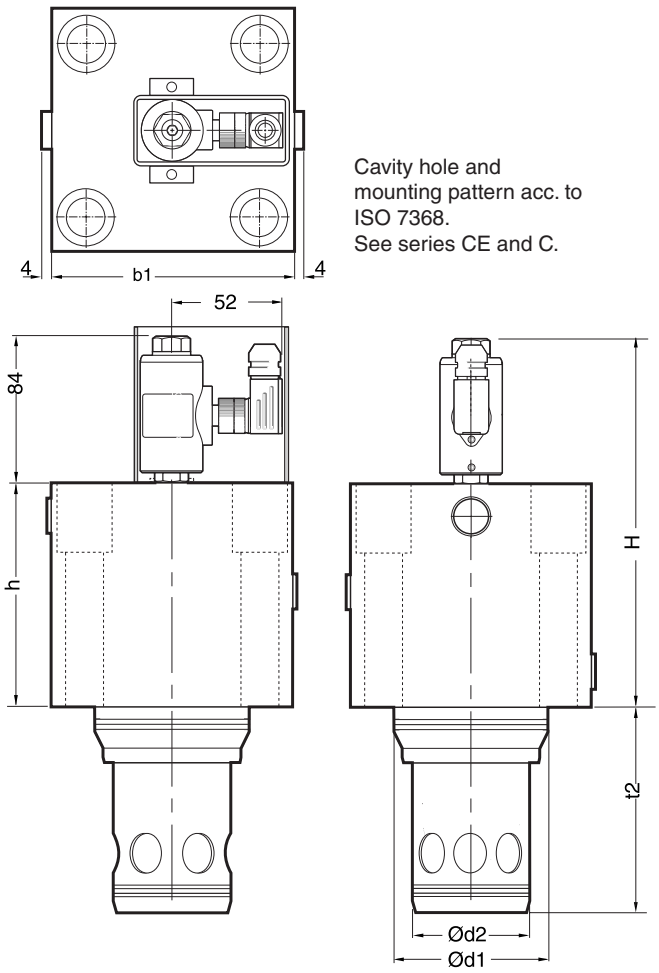
*Thread in NPT

Orifice recommendation

Orifice	NG25	NG32	NG40	NG50	NG63
①-④	Ø 1.2	Ø 1.5	Ø 2.0	Ø 2.5	Ø 3.0

Depending on function, plugs must be used.

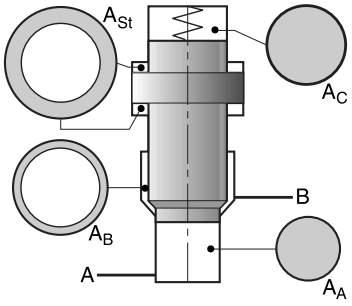
Dimensions



Cavity hole and mounting pattern acc. to ISO 7368.
See series CE and C.

Nominal size	25	32	40	50	63
H	174	174	194	214	234
h	90	90	110	130	150
b1	85	102	125	140	180
d1	45	60	75	90	120
d2	34	45	55	68	90
t2 +0.1	72	85	105	122	155

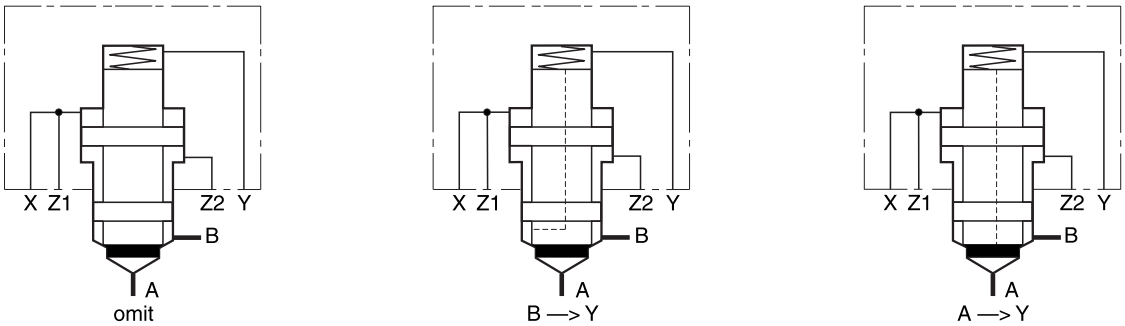
Control surfaces



NG	A_A [%]	A_B [%]	A_C [%]	A_{St} [%]
25	60	40	100	124
32	60	40	100	109
40	60	40	100	121
50	60	40	100	117
63	60	40	100	121

8

Pilot guide inside the poppet



Seal and bolt kits

Nominal size		25	32	40	50	63
Seal kit	FPM	SK-C13DB10-E25V	SK-C13DB10-32V	SK-C13DB-E40V	SK-C13DB10-E50V	SK-C13DB10-E63V
	NBR	SK-C13DB10-E25	SK-C13DB10-32	SK-C13DB10-E40	SK-C13DB10-E50	SK-C13DB10-E63
Bolt kit	[DIN 912 12.9]	BK-M12x50-4pcs	BK-M16x90-4pcs	BK-M20x110-4pcs	BK-M20x120-4pcs	BK-M30x160-4pcs
Recommemded torque	[Nm]	94	234	460	460	1570

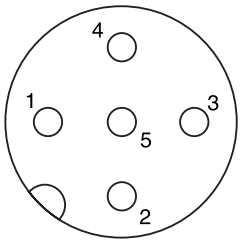
Attention!

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

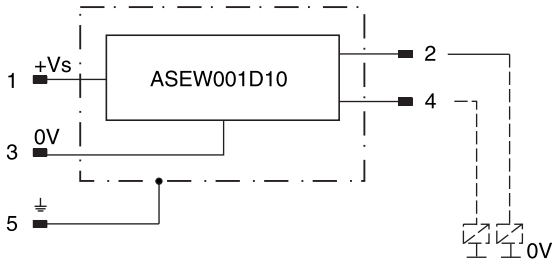
Electrical characteristics of position control as per IEC 61076-2-101 (M12x1)

Protection class		IP 65 in accordance with EN 60529 (plugged and mounted)
Ambient temperature	[°C]	0...+50
Supply voltage / ripple	[V]	18...42 / 10%
Current consumption without load	[A]	≤ 30
Max. output current per channel, ohmic	[mA]	400
Min. output load per channel, ohmic	[kOhm]	100
Max. output drop at 0.2A	[V]	≤ 1.1
Max. output drop at 0.4A	[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 brad shield recommended
Wiring length max.	[m]	50 recommended

M12 pin assignment



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



8

Extract from the German trade association certificate

Fachausschüsse
Eisen und Metall III
und Hebezeuge
Prüf-und Zertifizierungsstelle
im BG-PRÜFZERT

Hauptverband der gewerblichen Berufsgenossenschaften

00 078
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: EM III 612.1:612.28-UB Gb/bt	Ausstellungsdatum: 15.05.2000

Produktbezeichnung:	**2/2- Wegesitzventil mit Überwachung** **aktiv gesteuerte Einbauventile nach DIN 24342 (entspricht DIN ISO 7368)**
Typ:	C18 DCC 107.....

Das geprüfte Baumuster entspricht den einschlägigen Bestimmungen der Richtlinie 98/37/EG (**Maschinen**).

C18DC_UK.INDD RH

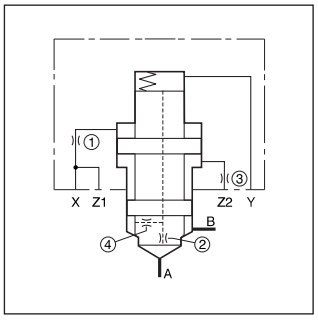
Parker Hannifin GmbH & Co. KG
Hydraulic Controls Division
Kaarst, Germany

Active 2/2 way seat valves with cartridge design according to ISO 7368 are preferably used where opening and closing should be controlled by pilot pressure only - independent of the pressure in the main ports.

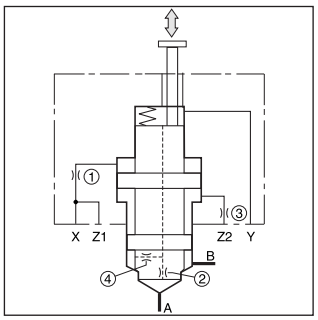
The C18 DB series is offered as hydraulically controlled valve (C18 DB 107), with additional stroke limiter (C18 DBN 112) and with the mounting pattern for a pilot valve (C18 DB 121).

Features

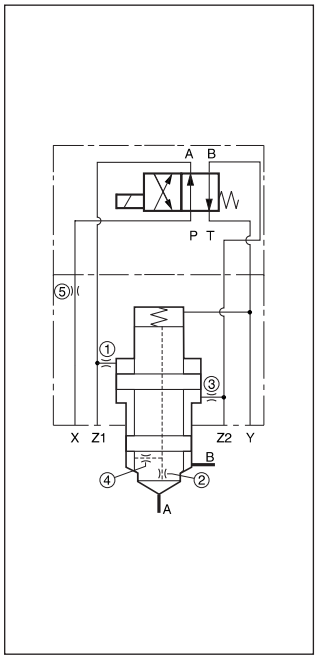
- Cavity and mounting pattern acc. to ISO 7368
- Active design with separate control areas
- Sealing between control surfaces and connection B
- Up to 5 sizes:
  - C18 DB 107 - 5 sizes NG25 up to NG63
  - C18 DBN 112 - 3 sizes NG25 up to NG40
  - C18 DB 121 - 2 sizes NG32 up to NG40



C18DB107



C18DBN112



C18DB121

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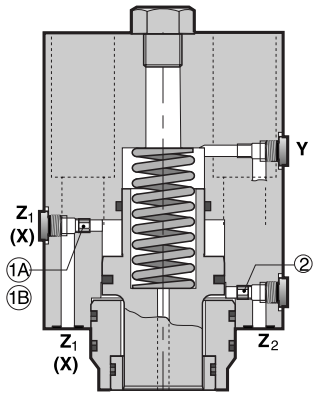
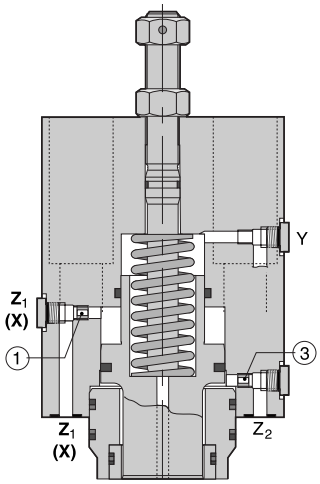


C18DB107



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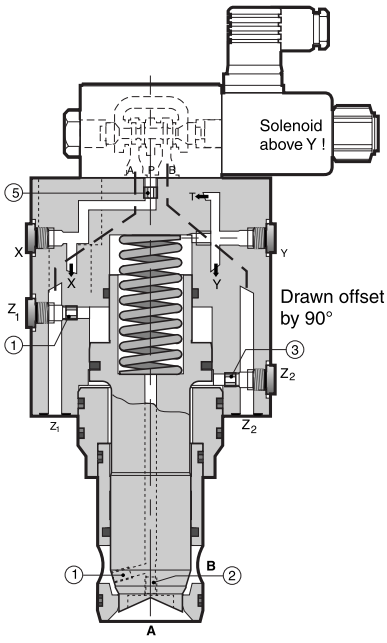


C18DB121

	C	18	D	B			E	/		0						
												1	2	3	4	5 [1]
Seal	**2/2 way valve**	**Poppet with damping**	**Hydrau-lically operated**	**Design series**	**Stroke limiter**	**Cover**	**Slip-in cartridge**		**Nominal size**	**Cavity and mounting pattern DIN ISO 7368**	**Spring**	**Orifice**				

Code	Seal
N	NBR
V	FPM

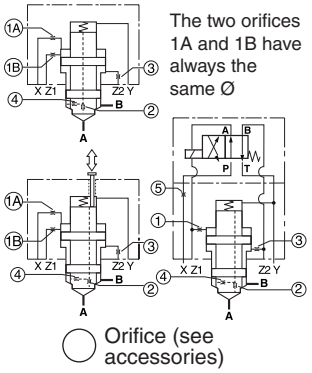
Code	Stroke limiter
omit	Cover 107 and 121, no stroke limiter
N	Cover 112, with stroke limiter, adjustment spindle and lock nut

Code	Cover
107	Standard, without add. function
112	With stroke limiter, only NG25, 32 and 40
121	Designed for DC pilot valves only NG32 and 40

Code	Size
25	NG25
32	NG32
40	NG40
50	NG50
63	NG63

[1] only for code 121

Code	Orifice
99	Without orifice, open



The two orifices 1A and 1B have always the same Ø

Code	Spring
S	Opening press. 1.6 bar
U	Opening press. 4.0 bar

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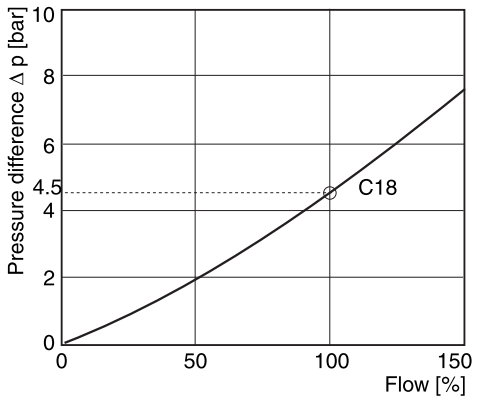
General							
Size			25	32	40	50	63
Design type			2 way slip-in cartridge valves DIN ISO 7368				
Mounting position			unrestricted				
Operation			Hydraulic				
Ambient temperature		[C°]	-40...+60				
Weight		[kg]	3.2	6.7	8.7	13.8	26.3
Hydraulic							
Operating pressure, all connections		[bar]	350				
Nominal flow, Δp 5 bar		[L/min]	450	900	1300	1800	3600
Fluid			Hydraulic oil acc. to DIN 51 524...525				
Fluid temperature	recommended	[C°]	+30...+50				
	permitted	[C°]	-20...+60				
Viscosity	recommended	[mm²/s]	30...80				
	permitted	[mm²/s]	20...380				
Contamination			NAS 1638 class 9, to achieved by ß10 > 75				
Control volume spring chamber, surface C		[cm³]	6.45	12.21	20.32	39.40	94.56
Control surface	FC	[%]	100				
	FSt	[%]	123.8	108.6	121.5	117	121
	FA/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				

Flow diagram



Orifice thread

Orifice	NG25	NG32	NG40	NG50	NG63
1	M6	M6	M6	*1/16	*1/8
2	M6	M6	M6	*1/16	*1/16
3	M6	M6	M6	*1/16	*1/8
4	M6	M6	M6	*1/16	*1/16
5	—	M6	M6	—	—

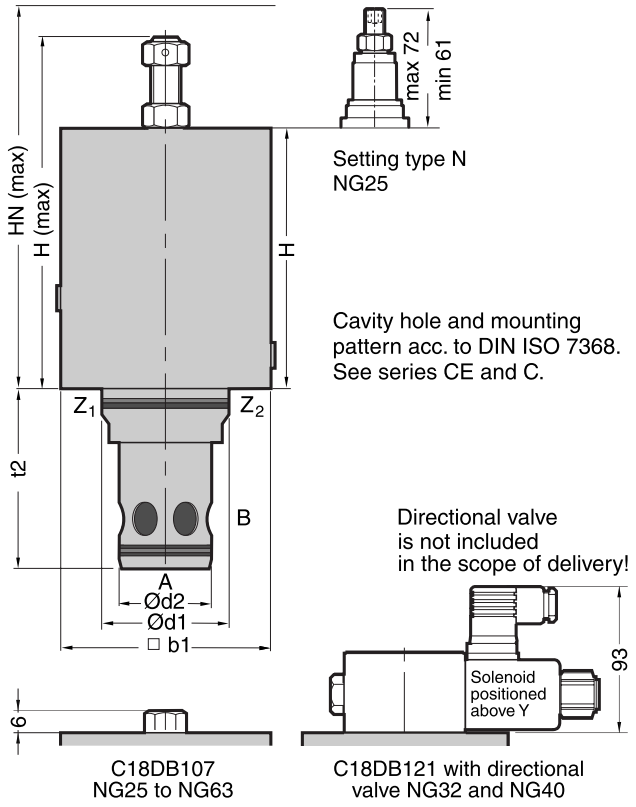
*Thread in NPT

Orifice recommendation

Orifice	NG25	NG32	NG40	NG50	NG63
① - ⑤	Ø 1.2	Ø 1.5	Ø 2.0	Ø 2.5	Ø 3.0

Depending on function, plugs and orifices must be used.

Dimensions



Nominal size	25	32	40	50	63
H max	234	142	208	189	241
HN max	162	197	227	202	222
h	90	125	140	130	150
b1	85	102	125	140	180
d1	45	60	75	90	120
d2	34	45	55	68	90
t2 + 0.1	72	85	105	122	155

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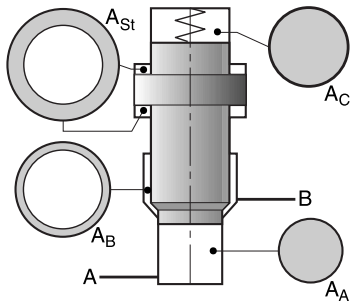
Control surfaces



NG	A_A [%]	A_B [%]	A_C [%]	A_{St} [%]
25	60	40	100	124
32	60	40	100	109
40	60	40	100	121
50	60	40	100	117
63	60	40	100	121

Seal kits

Nominal size		25	32	40	50	63
Seal kit	FPM	SK-C13DB10-E25V	SK-C13DB10-32V	SK-C13DB-E40V	SK-C13DB10-E50V	SK-C13DB10-E63V
	NBR	SK-C13DB10-E25	SK-C13DB10-32	SK-C13DB10-E40	SK-C13DB10-E50	SK-C13DB10-E63

Mounting kits

Nominal size		25	32	40	50	63
Cover code 107 consisting of:	[DIN 912 12.9]	BK-M12x50-4pcs	BK-M16x90-4pcs	BK-M20x110-4pcs	BK-M20x120-4pcs	BK-M30x160-4pcs
Cover code 112 consisting of:	[DIN 912 12.9]	BK-M12x50-4pcs	BK-M16x90-4pcs	BK-M20x110-4pcs	—	—
Cover code 121 consisting of:	[DIN 912 12.9]	—	BK-M16x90-4pcs	BK-M20x110-4pcs	—	—
Recommended torque	[Nm]	94	234	460	460	1570

C18DB_UK.INDD RH

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Hydraulic Controls Division
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