

Pressure relief valves

Size 10



direct operated
interface to DIN 24 340 and ISO 6264

PN [p_{max.}] = 315 bar

7501410.06.02.06

Description (standard units)

Design

The pressure relief valves of type D B C 10 are direct-operated seat valves.

Actuation

The pressure is set manually by means of a rotary knob. The setting can, if desired, be locked (E10-closure) or lead sealed.

Line connection and mounting

The mounting of the units depends on the line connection and type:

Line connection:	Mounting:
Subplate	On subplate by means of bolts Sealing by means of O-rings
Threaded port	On equipment rack, etc. by means of bolts
Plug-in design	Complete unit is screwed into threaded bore



Features

- High flow rating
- Insensitive to vibration

Type key

Pressure relief valve

D	B	C	10	001	...	O	...
				1	2	3	4		5		6

- 1 Actuation: **H** – Manual setting
HV – Manual setting (lockable)
HK – Set-screw with cover (can be lead sealed)
- 2 Line connection: **S5** – Threaded port - flange mounting
E – Plug-in design
G – Subplate, interface to DIN 24 340-E10 and ISO 6264-AR-06-2-A
- 3 Port size: (except plug-in-design and subplate) **5** – G 3/4 (Internal thread to DIN ISO 228/1)
- 4 Pressure setting range: **50** – up to 50 bar
70 – up to 100 bar
80 – up to 210 bar
90 – up to 315 bar
- 5 Engineering version: **1**
2 – (with subplate)
- 6 Sealing material: **O** – Perbunan
V – Viton

Subplate

P	DB	10	G	...	001	...	O	O
				1		2		

- 1 Line connection: **4** – G 1/2 (Internal thread to DIN ISO 228/1)
¹⁾**5** – G 3/4
- 2 Engineering version: **1**
- ¹⁾ Upon request

Parameters according to VDI 3276

Type designation	D B C 10...S5..	D B C 10...G..	D B C 10...E..
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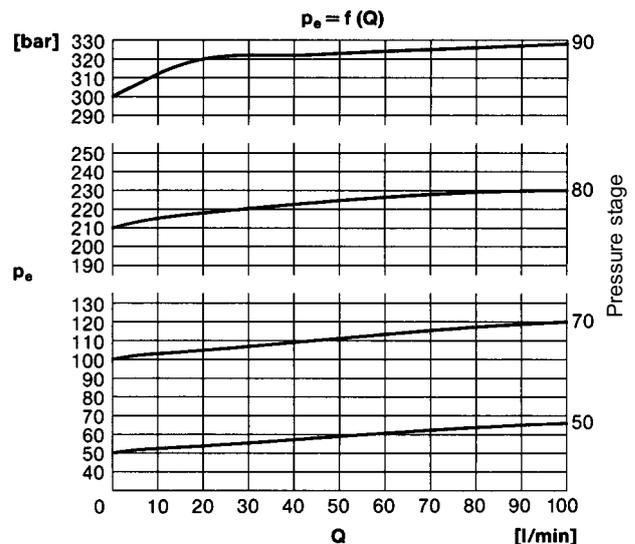
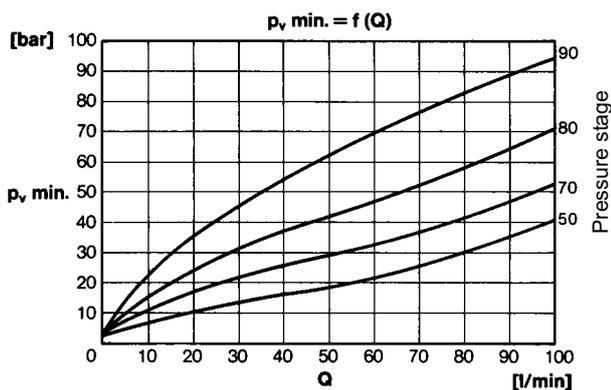
General parameters

Designation	Pressure relief valve		
Symbol			
Design	Seat valve, directoperated		
Type mounting	Flange	Plug-in design	
Line connection	Thread	Subplate	
Mounting position	Optional		
Flow direction	From P to T		
Actuation	By hand		
Weight [kg]	2.6	2.6	0.7
Weight of subplate [kg]	-	2	-
Ambient temperature range ϑ_u [°C]	-20 to +50		
Size NG	10		

Hydraulic parameters

Operating pressure range p_e max. [bar]	Up to 315		
Adjustable pressure range p_v [bar]	p_v min.: see characteristic curve p_v max.: Pressure stage: 50: 50 Pressure stage: 70: 100 Pressure stage: 80: 210 Pressure stage: 90: 315		
Pressure fluid temperature ϑ_m max. [°C]	+70		
Viscosity range ν [mm ² /s]	12 bis 500		
Flow Q [l/min]	See characteristic curve		

Characteristic curve



p_v min. = smallest adjustable pressure under which valve remains closed by pressure spring $Q = 0$ (l/min).

Ordering

The units are designated by their type number. The composition of this number can be drawn from the type code. The standard versions are listed in the type survey. When ordering any of the standard versions, please state type number as well as catalog number to preclude possible misinterpretations.

When inquiring about or ordering units not listed in our type survey of this publication, the type number made up by you by means of the type code, however, will do. The corresponding catalog number will then be stated in our confirmation of order. Units with flanged connection are delivered complete with mounting bolts and O-rings. The subplate must be ordered separately.

Example of order

Wanted: Pressure relief valve size 10, with threaded port for switch board installation, with manual setting, setting pressure max. 315 bar

Pressure relief valve:

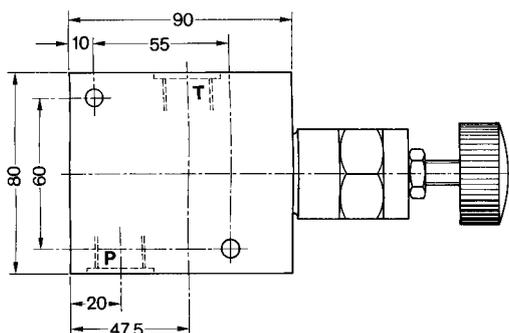
Type No.: D B C 10 H S 5 90 001 1 O O
 Cat. No.: **6014598**

Type survey (standard versions)

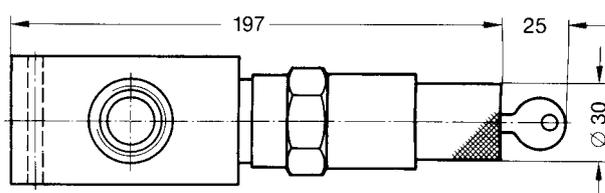
Size	Q [l/min]	p _v max. [bar]	Actuation	Line connection	Type	Cat. No.
10	See characteristic curve	50 100 210 315	By hand	Threaded connection Flange mounting	D B C 10 H S 5 50 001 1 O O	6014621
					D B C 10 H S 5 70 001 1 O O	6014622
					D B C 10 H S 5 80 001 1 O O	6014623
					D B C 10 H S 5 90 001 1 O O	6014598
		50 100 210 315		Plug-in connection	D B C 10 H E 50 001 1 O O	6014601
					D B C 10 H E 70 001 1 O O	6014624
					D B C 10 H E 80 001 1 O O	6014625
					D B C 10 H E 90 001 1 O O	6014574
		50 100 210 315	Subplate G 1/2 P D B 10 G 4 001 1 O O 2852600	D B C 10 H G 50 001 2 O O	6014626	
				D B C 10 H G 70 001 2 O O	6014627	
				D B C 10 H G 80 001 2 O O	6014628	
				D B C 10 H G 90 001 2 O O	6014597	

Dimensional drawings

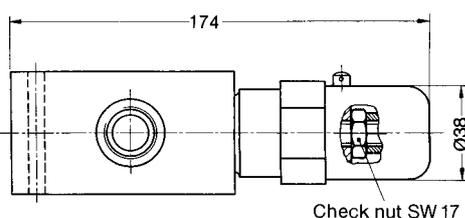
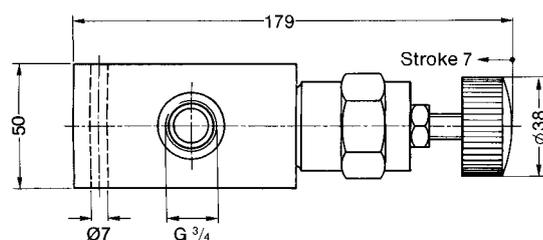
D B C 10 H S5...



D B C 10 HV S5...



D B C 10 HK S5...

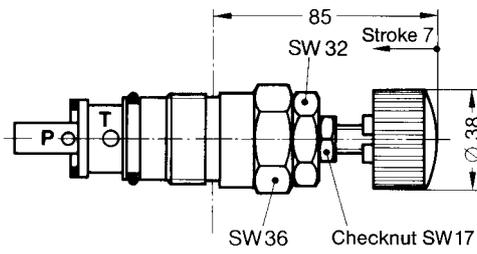


Dimensional drawings

Pressure relief valve

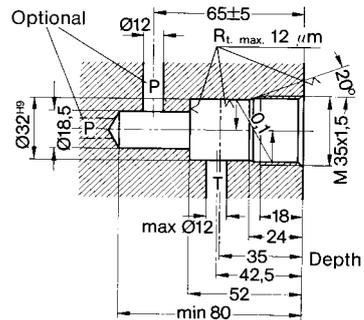
D B C 10 H E...

Tightening torque approx. 140 Nm

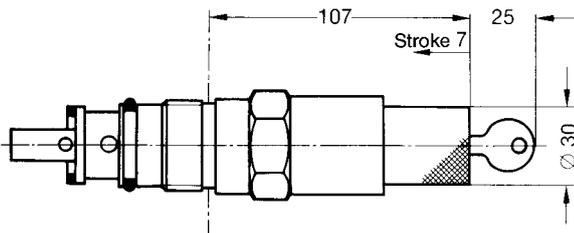


Mounting bore

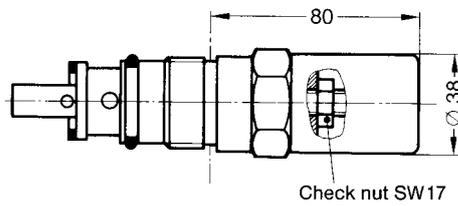
to D B C 10..E...



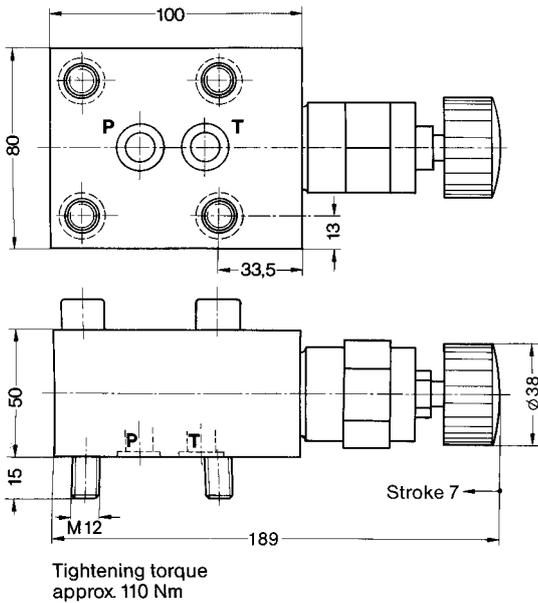
D B C 10 HV E...



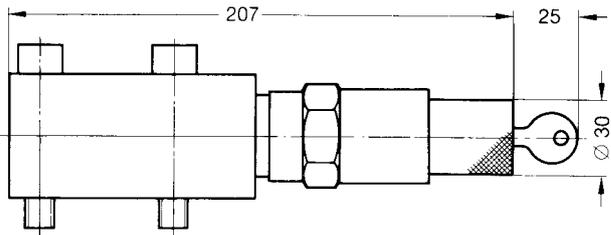
D B C 10 HK E...



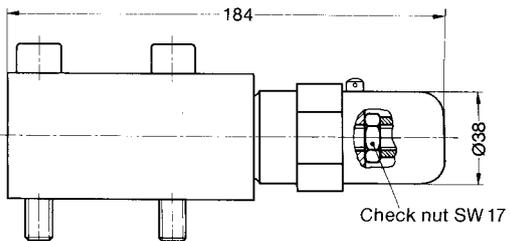
D B C 10 H G...



D B C 10 HV G...

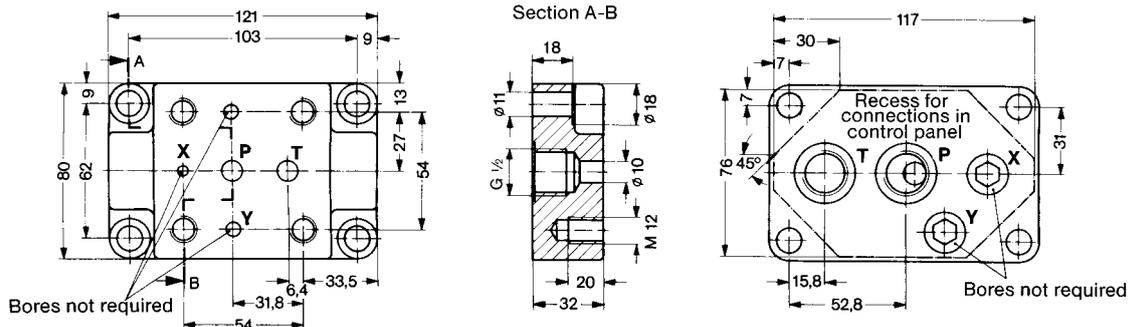


D B C 10 HK G...



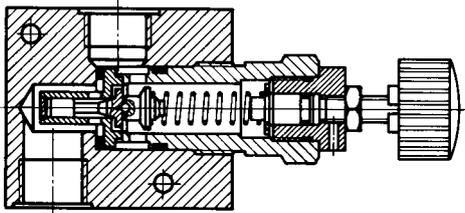
Subplate with hole pattern to DIN 24 340-E10 and ISO 6264-AR-06-2-A

G 1/2

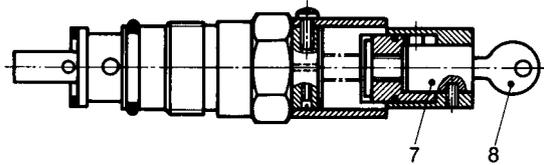


Spare part drawings

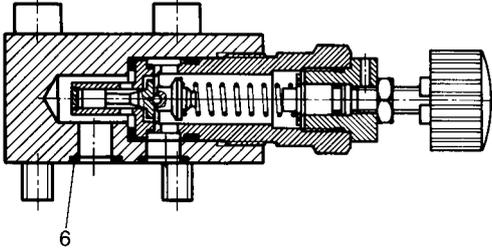
D B C 10 H S5...



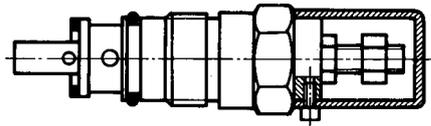
D B C 10 HV...



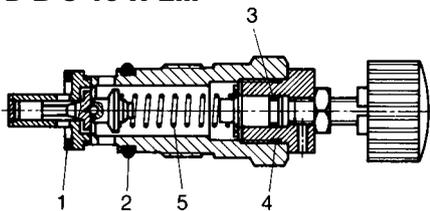
D B C 10 H G...



D B C 10 HK...



D B C 10 H E...



Spare parts (Number of pieces)

Part	Designation	D B C 10 H S5... D B C 10 HK S5... D B C 10 H E... D B C 10 HK E...	D B C 10 HV S5... D B C 10 HV E...	D B C 10 H G... D B C 10 HK G...	D B C 10 HV G...	Cat. No.
1	Usit-ring (22.7 x 30 x 2)	1	1	1	1	0659044
2	O-ring (26.7 x 2.6)	1	1	1	1	0701518
3	O-ring (7.6 x 1.8)	1	1	1	1	0701484
4	O-ring (20.3 x 1.8)	1	1	1	1	0701259
5	Spring Pressure stage 50 Pressure stage 70 Pressure stage 80 Pressure stage 90	1 1 1 1	1 1 1 1	1 1 1 1	1 1 1 1	0720691 0720692 0720693 0720403
6	O-ring (13.9 x 2.6)	-	-	2	2	0701289
7	Lock cylinder with key	-	1	-	1	0568519
8	Key	-	1	-	1	0660051

Mounting bolts

-	Cylinder bolt (M 12 x 65 DIN 912-10.9)	-	-	4	4	0700476
Spare parts sets		1	1	-	-	0727599
		-	-	1	1	0727600
1 set consisting of parts:		1...4	1...4	1...4 and 6	1...4 and 6	-