

Pressure relief valve, directly operated

RE 25722/11.07
Replaces: 01.05

Type ZDBY D / Z2DBY D

Nominal size (NG) 6 and 10
Unit series 1X
Maximum working pressure 315 bar
Maximum flow rate 60 and 120 l/min



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Features

- Modular valve
- Mounting hole configuration to ISO 4401
- 3 pressure stages
- 5 effective directions
- With 1 or 2 pressure valve cartridges
- 2 setting elements:
 - Sleeve with hexagon socket
 - Rotary knob, lockable, with scale
- Subplates as per catalog sections RE 45053 (NG6) and RE 45055 (NG10) (order separately)

Ordering data

Z		DB	Y		D		-1X/	V	*
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Modular valve = Z

With 2 pressure valve cartridges (only enter for versions "DC" and "DD") = 2

Pressure relief valve = DB

Mounting hole configuration to ISO 4401 = Y

NG6 = 6

NG10 = 10

Directly operated = D

Injection from → to

P → T = P

A → T = A

B → T = B

A → T and B → T = C

A → B and B → A = D

Setting element

Sleeve with hexagon socket = 2

Rotary knob, lockable, with scale¹⁾ = 3

¹⁾ 2H key is included in scope of delivery

Further information in plain text

No code = mounting hole configuration ISO 4401, without locating bore

60 = mounting hole configuration ISO 4401 with locating bore

V = FPM seals (other seals available on request)

Note

Take compatibility of seals and pressure fluid into account!

max. setting pressure

80 = setting pressure range up to 80 bar

160 = setting pressure range up to 160 bar

315 = setting pressure range up to 315 bar

1X = Unit series 10 to 19 (10 to 19: installation and connection dimensions unchanged)

Preferred types

Material No.	Type NG6	Setting	Symbols
0 811 109 131	ZDBY 6 DP 2-1X/80V/60		
0 811 109 132	ZDBY 6 DP 2-1X/160V/60		
0 811 109 133	ZDBY 6 DP 2-1X/315V/60		
0 811 109 130	ZDBY 6 DP 3-1X/80V/60		
0 811 109 135	ZDBY 6 DA 2-1X/80V/60		
0 811 109 136	ZDBY 6 DA 2-1X/160V/60		
0 811 109 137	ZDBY 6 DA 2-1X/315V/60		
0 811 109 134	ZDBY 6 DA 3-1X/80V/60		
0 811 109 139	ZDBY 6 DB 2-1X/80V/60		
0 811 109 140	ZDBY 6 DB 2-1X/160V/60		
0 811 109 141	ZDBY 6 DB 2-1X/315V/60		
0 811 109 138	ZDBY 6 DB 3-1X/80V/60		
0 811 109 143	Z2DBY 6 DC 2-1X/80V/60		
0 811 109 144	Z2DBY 6 DC 2-1X/160V/60		
0 811 109 145	Z2DBY 6 DC 2-1X/315V/60		
0 811 109 142	Z2DBY 6 DC 3-1X/80V/60		
0 811 109 147	Z2DBY 6 DD 2-1X/80V/60		
0 811 109 148	Z2DBY 6 DD 2-1X/160V/60		
0 811 109 149	Z2DBY 6 DD 2-1X/315V/60		
0 811 109 146	Z2DBY 6 DD 3-1X/80V/60		
Material No.	Type NG10	Setting	Symbols
0 811 101 275	ZDBY 10 DP 2-1X/80V		
0 811 101 276	ZDBY 10 DP 2-1X/160V		
0 811 101 277	ZDBY 10 DP 2-1X/315V		
0 811 101 278	ZDBY 10 DP 3-1X/80V		
0 811 101 279	ZDBY 10 DP 3-1X/160V		
0 811 101 280	ZDBY 10 DA 2-1X/80V		
0 811 101 281	ZDBY 10 DA 2-1X/160V		
0 811 101 282	ZDBY 10 DA 2-1X/315V		
0 811 101 283	ZDBY 10 DA 3-1X/80V		
0 811 101 284	ZDBY 10 DA 3-1X/160V		
0 811 101 285	ZDBY 10 DB 2-1X/80V		
0 811 101 286	ZDBY 10 DB 2-1X/160V		
0 811 101 287	ZDBY 10 DB 2-1X/315V		
0 811 101 288	ZDBY 10 DB 3-1X/80V		
0 811 101 289	ZDBY 10 DB 3-1X/160V		
0 811 101 290	Z2DBY 10 DC 2-1X/80V		
0 811 101 291	Z2DBY 10 DC 2-1X/160V		
0 811 101 292	Z2DBY 10 DC 2-1X/315V		
0 811 101 293	Z2DBY 10 DC 3-1X/80V		
0 811 101 294	Z2DBY 10 DC 3-1X/160V		
0 811 101 295	Z2DBY 10 DD 2-1X/80V		
0 811 101 296	Z2DBY 10 DD 2-1X/160V		
0 811 101 297	Z2DBY 10 DD 2-1X/315V		
0 811 101 298	Z2DBY 10 DD 3-1X/80V		
0 811 101 299	Z2DBY 10 DD 3-1X/160V		

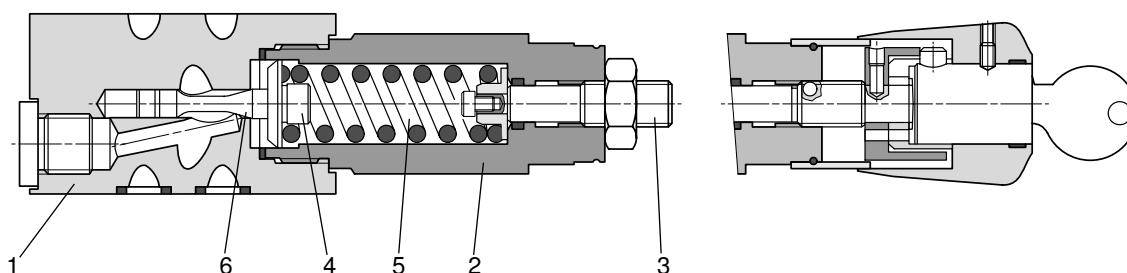
Function, sectional diagram

Type ZDBY and Z2DBY pressure valves are directly operated pressure relief valves in modular design. They are used to limit the system pressure. The valves essentially consist of the housing (1) and one or two pressure valve cartridges (2). The system pressure is adjusted by means of the setting element (3).

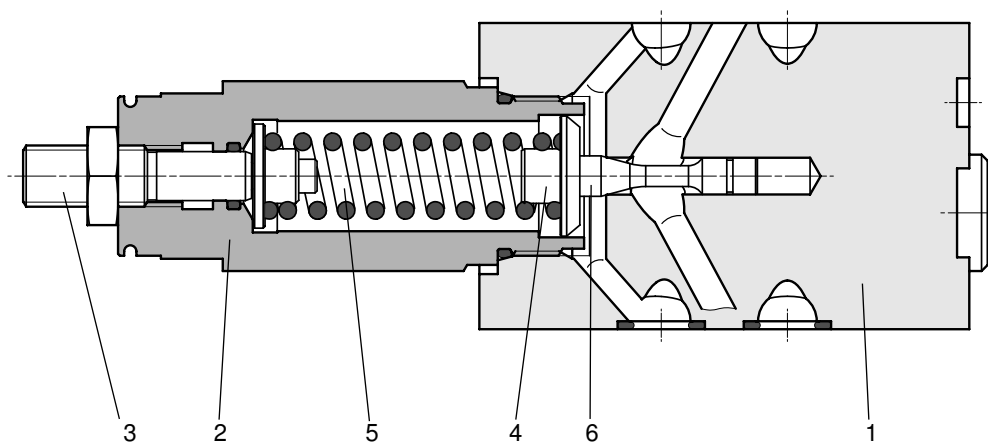
In initial position the valves are closed. The pressure in the A-duct acts on the piston (4). If the pressure in the A-duct exceeds the value set at the spring (5), the pilot poppet (6) opens. Pressure fluid then flows from duct P to duct T. Control oil is returned from the spring chambers internally via the T-duct.

Type ZDBY 6 D P2-1X/..

Type ...D P3-1X...



Type ZDBY 10 D P2-1X...



Technical data NG6

General

Valve function	Pressure reducing valve, directly operated		
Type of mounting	Intermediate plate NG6, ISO 4401-03-02-0-05		
Installation position	Optional		
Weight	Version 2	kg	1.4
	Version 3	kg	1.8

Hydraulic

Pressure fluid	Mineral oil (HL, HLP) to DIN 51524. Rapidly biodegradable pressure fluids to VDMA 24568 (see also RE 90221), HETG (rapeseed oil), HEPG (polyglycols), HEES (synthetic ester), other pressure fluids available on request		
Maximum permissible degree of contamination of pressure fluid. Purity class to ISO 4406 (c)	Class 20/18/15 ¹⁾		
Pressure fluid temperature range	°C	-25...+80	
Seals	FPM (Viton® Dupont)		
Viscosity range	mm ² /s	10...500	
Max. setting pressure	bar	80, 160 or 315	
Max. working pressure	bar	315	
Max. flow rate	l/min	60	

¹⁾ The purity classes stated for the components must be complied with in hydraulic systems. Effective filtration prevents problems and also extends the service life of components. For a selection of filters, see catalog sections RE 50070, RE 50076 and RE 50081.

Technical data NG10

General

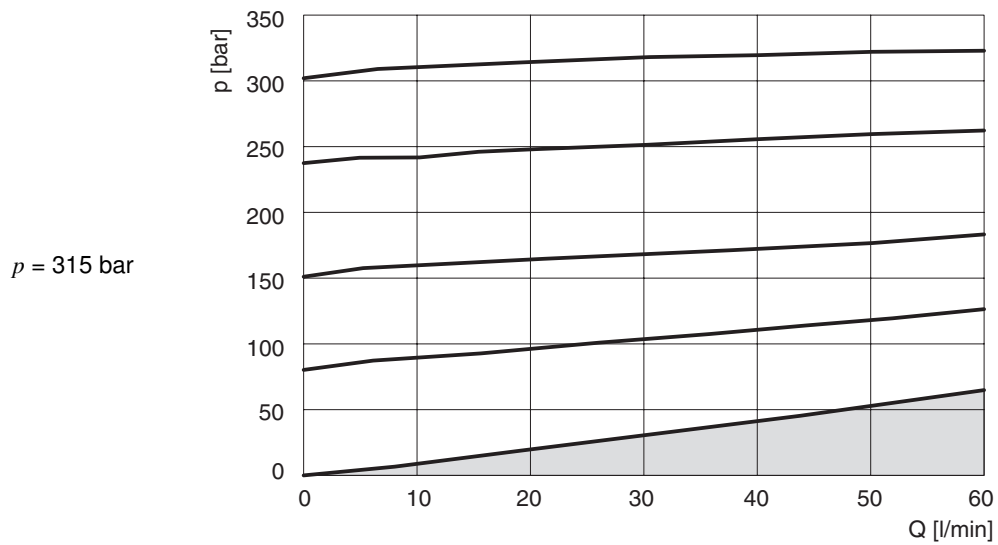
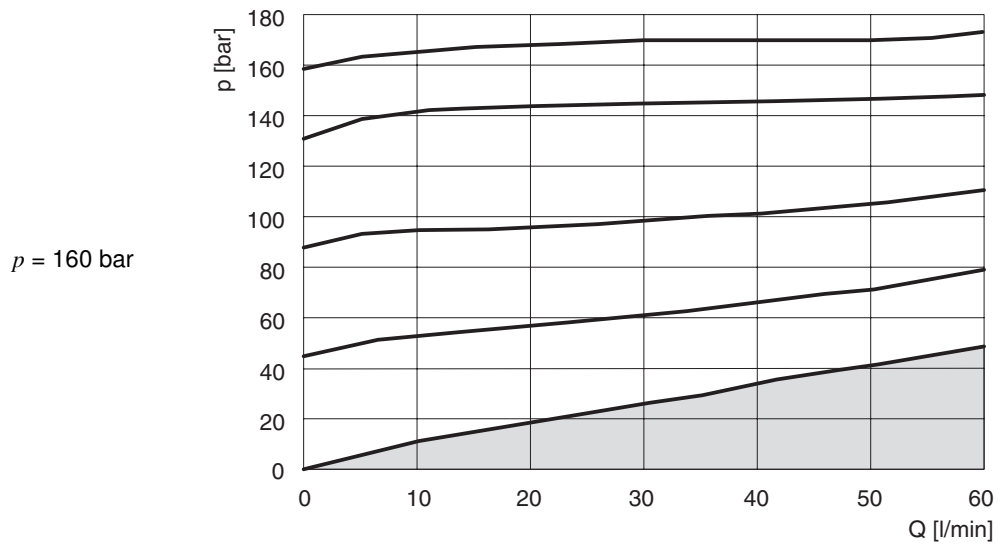
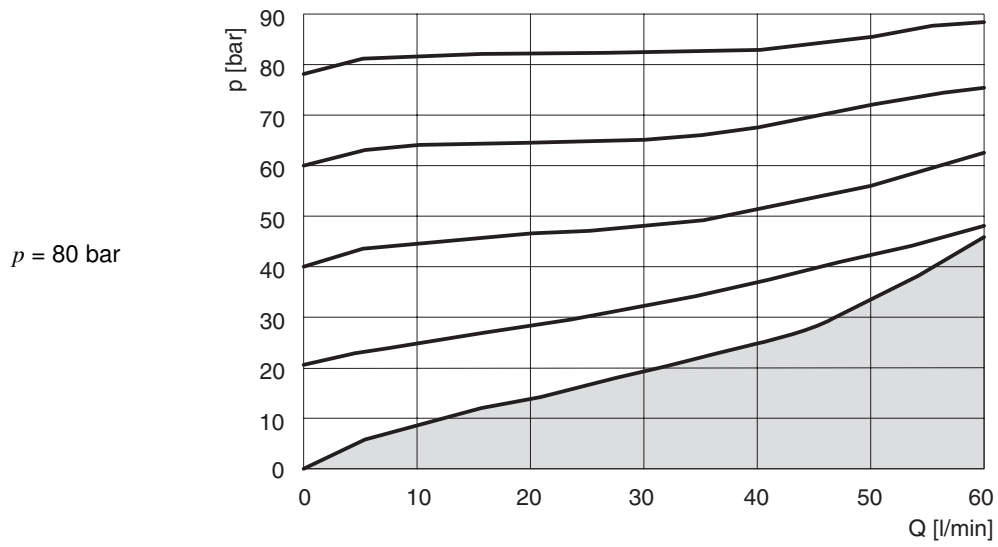
Valve function	Pressure reducing valve, directly operated		
Type of mounting	Intermediate plate NG10, ISO 4401-05-04-0-05		
Installation position	Optional		
Mass	Version 2	kg	2.9
	Version 3	kg	3.5

Hydraulic

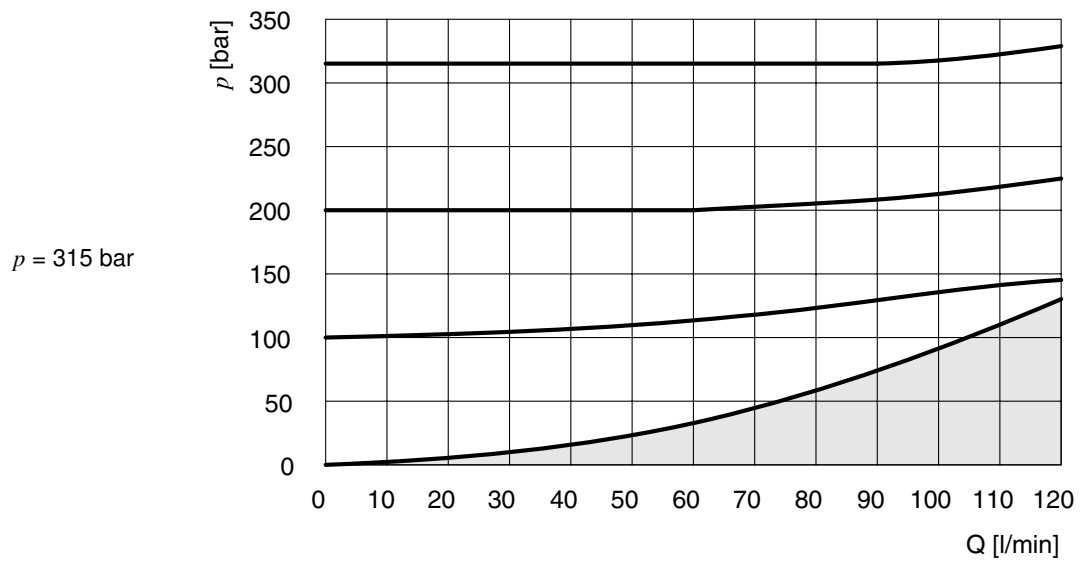
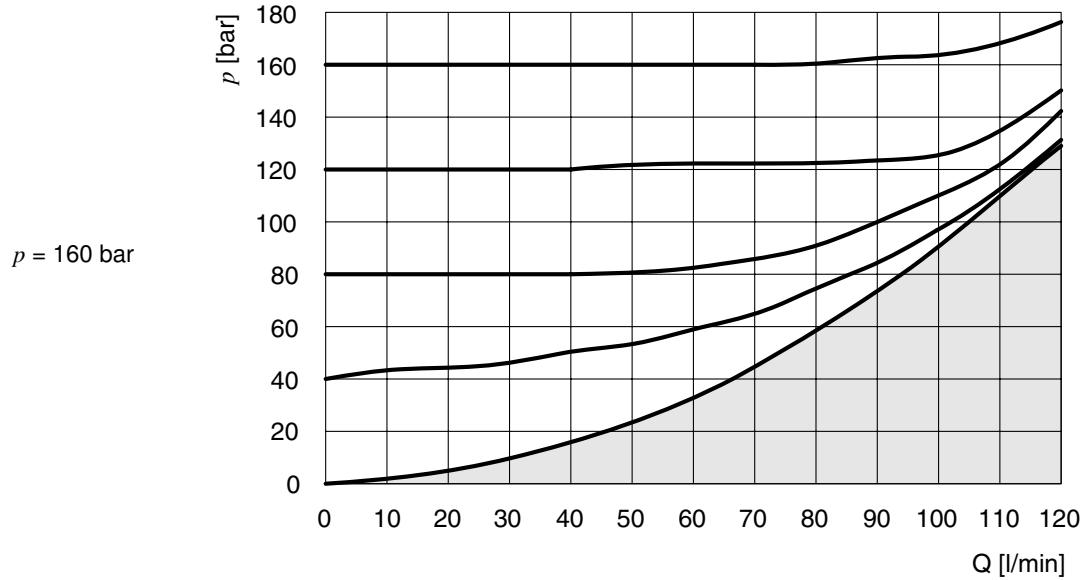
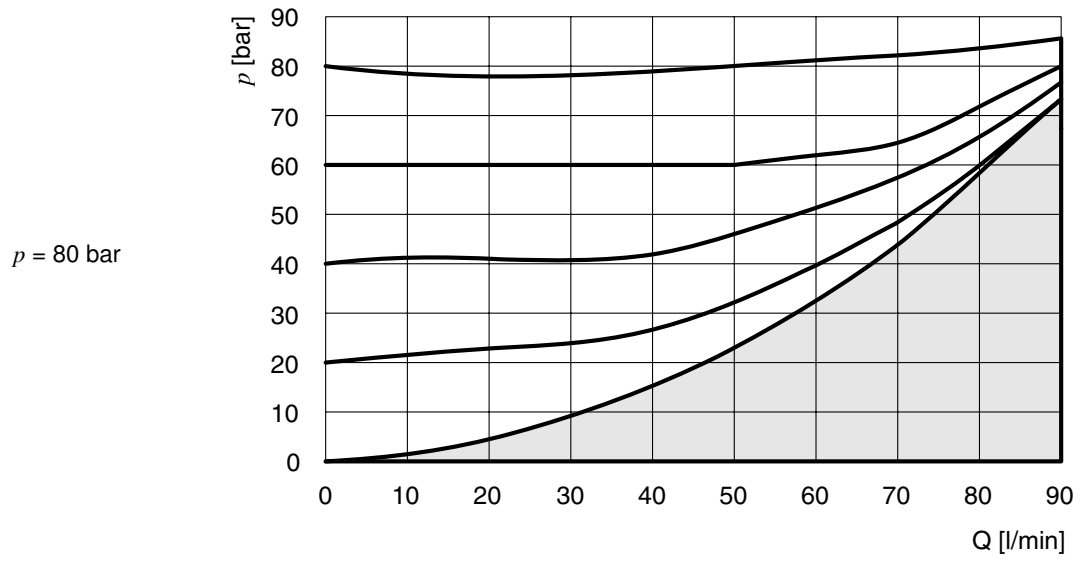
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Maximum permissible degree of contamination of pressure fluid. Purity class to ISO 4406 (c)	Class 20/18/15 ¹⁾		
Pressure fluid temperature range	°C	-25...+80	
Seals	FPM (Viton® Dupont)		
Viscosity range	mm ² /s	10...500	
Max. setting pressure	bar	80	160 or 315
Max. working pressure	bar	315	315
Max. flow rate	l/min	90	120

¹⁾ The purity classes stated for the components must be complied with in hydraulic systems. Effective filtration prevents problems and also extends the service life of components. For a selection of filters, see catalog sections RE 50070, RE 50076 and RE 50081.

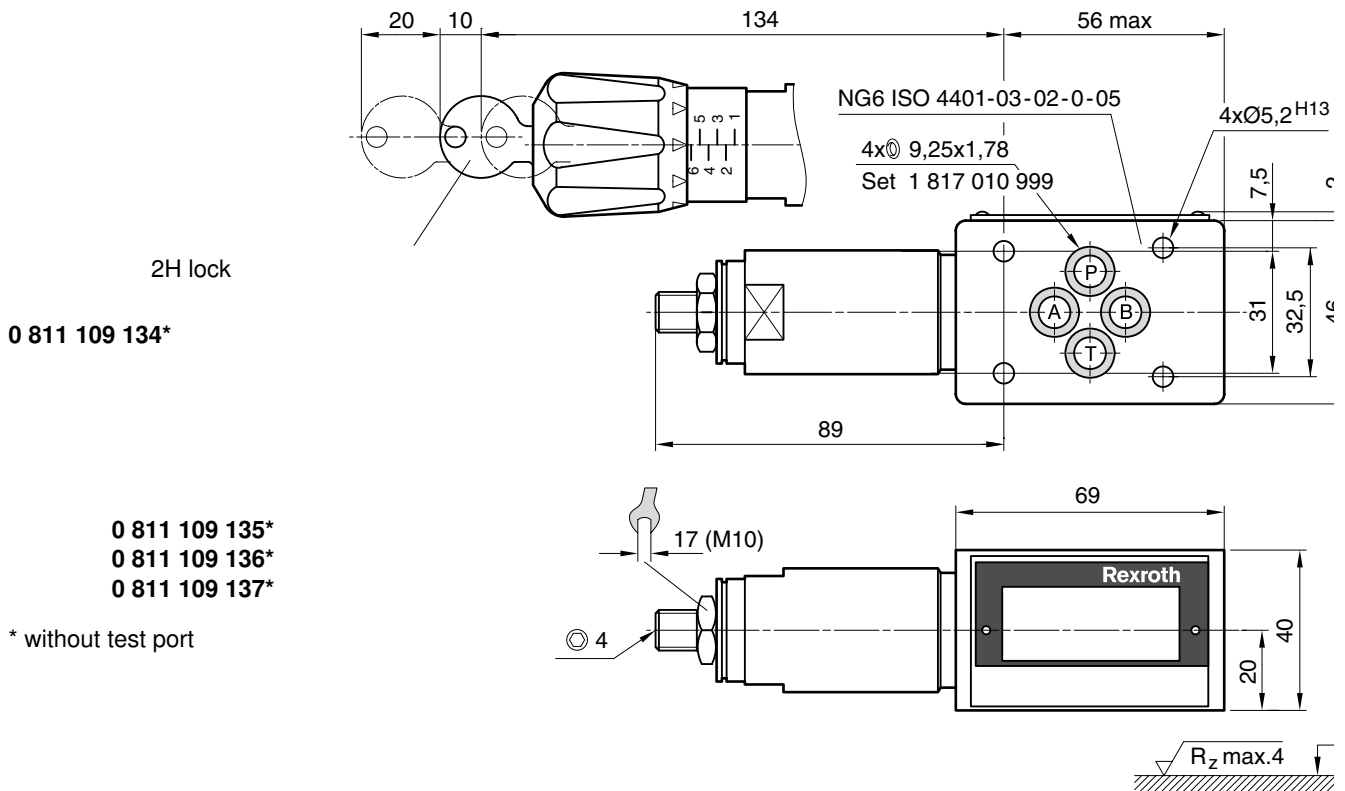
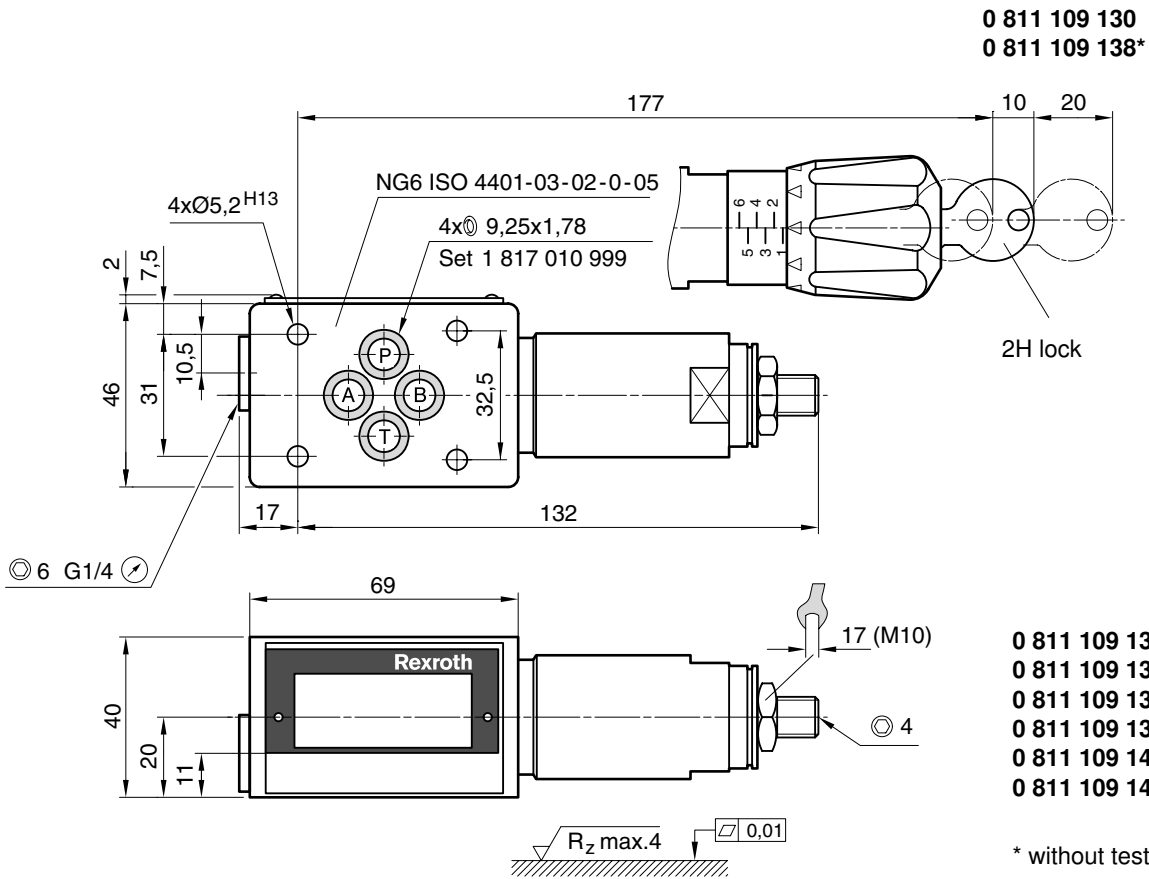
Characteristic curves NG6 ($\nu = 35 \text{ mm}^2/\text{s}$)



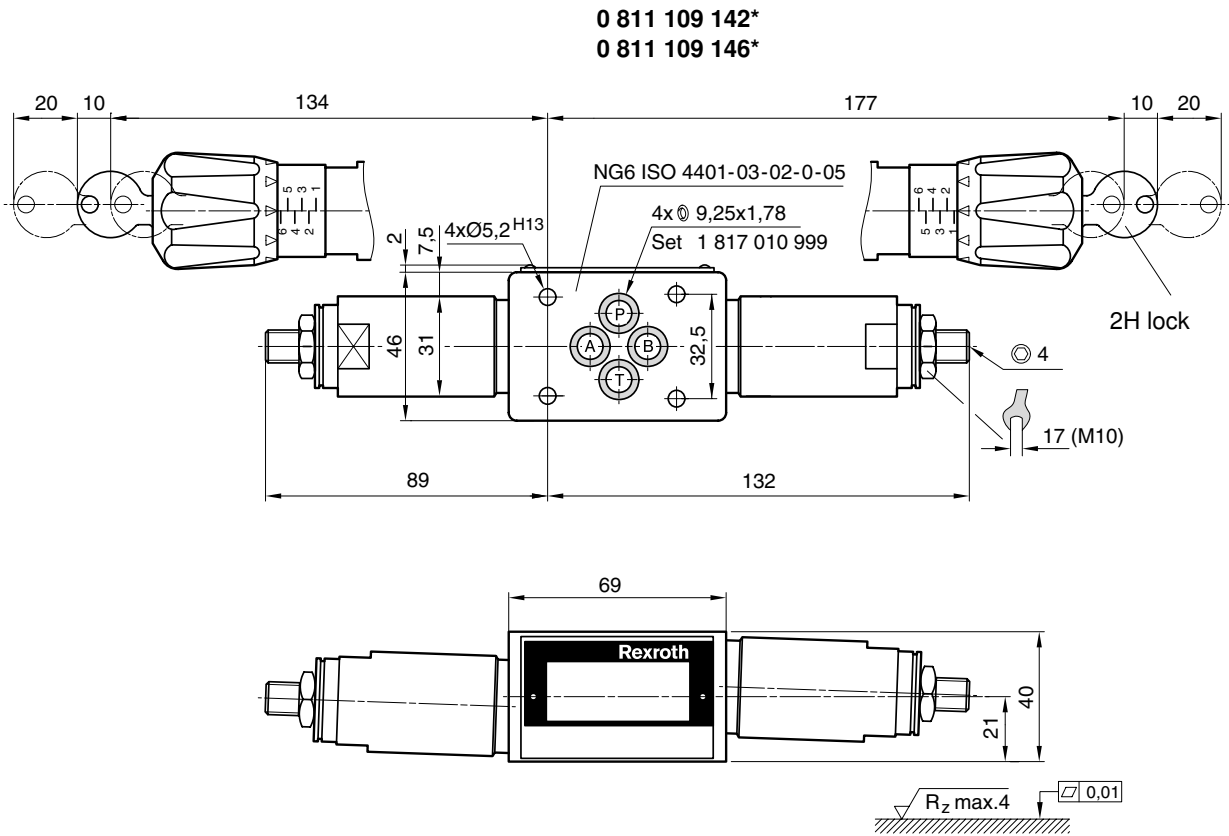
Characteristic curves NG10 ($\nu = 35 \text{ mm}^2/\text{s}$)



Unit dimensions NG6 (in mm)



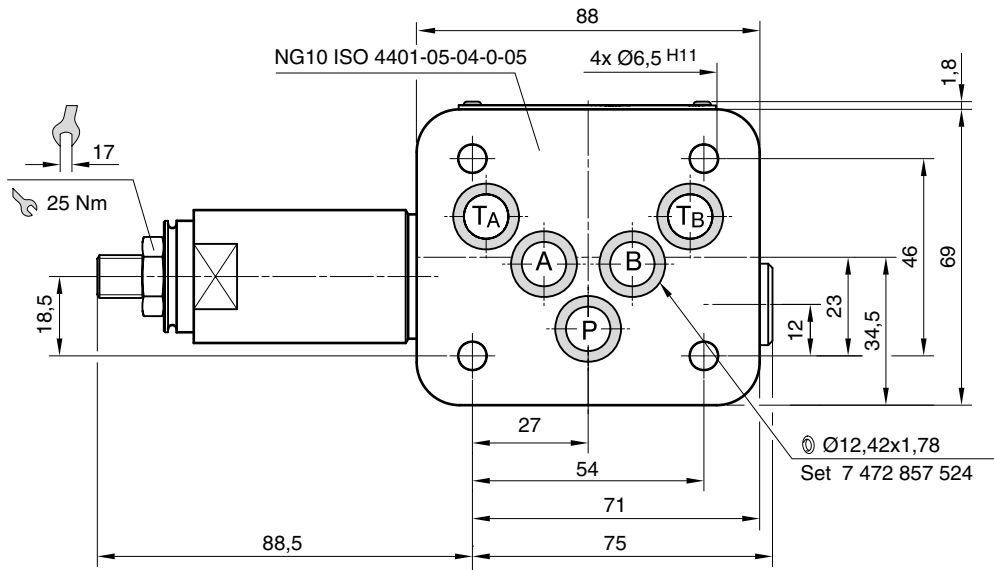
Unit dimensions NG6 (in mm)



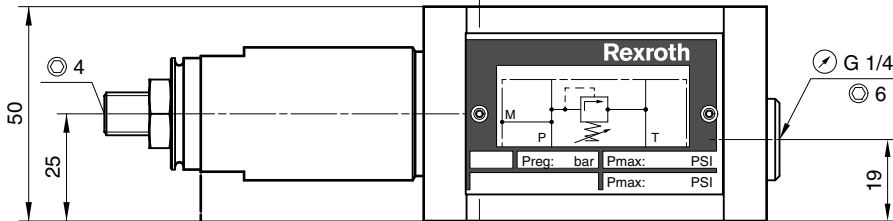
- 0 811 109 143*
- 0 811 109 144*
- 0 811 109 145*
- 0 811 109 147*
- 0 811 109 148*
- 0 811 109 149*

* without test port

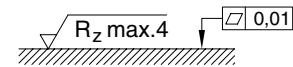
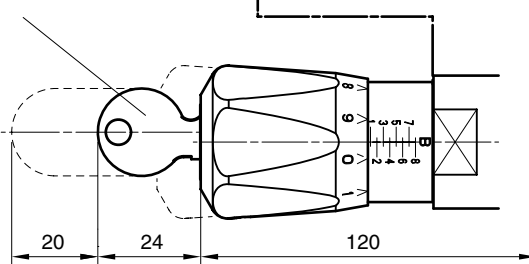
Unit dimensions NG10 (in mm)



0 811 101 275
0 811 101 276
0 811 101 277

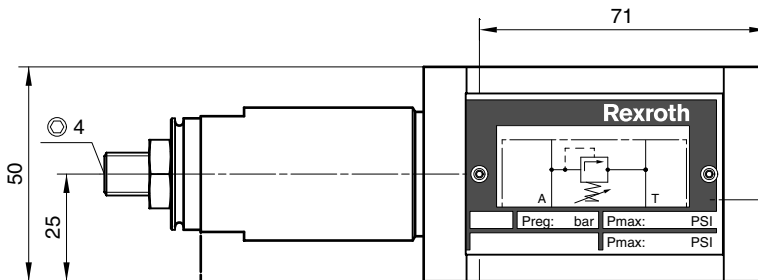


2H lock

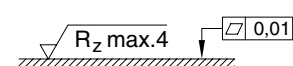
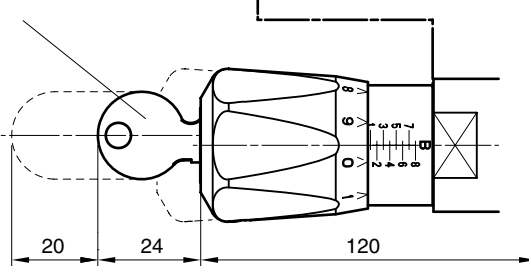


0 811 101 278
0 811 101 279

0 811 101 280*
0 811 101 281*
0 811 101 282*



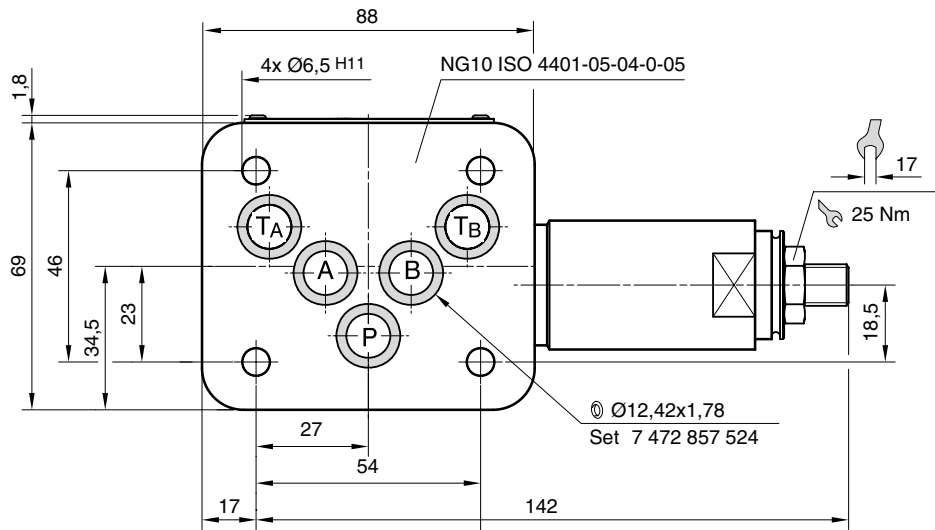
2H lock



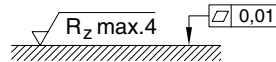
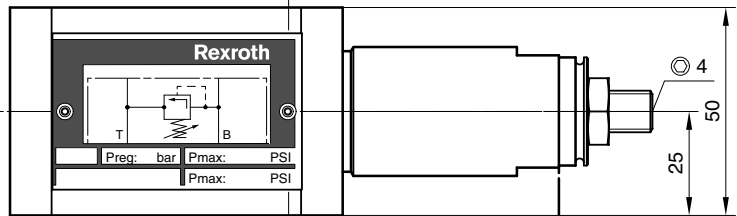
0 811 101 283*
0 811 101 284*

* without test port

Unit dimensions NG10 (in mm)

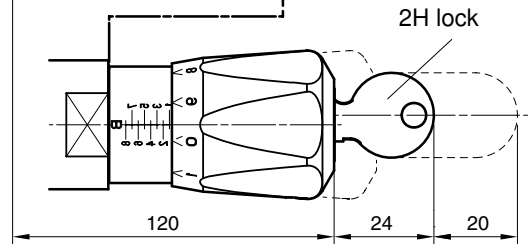


- 0 811 101 285*
- 0 811 101 286*
- 0 811 101 287*

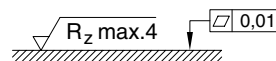
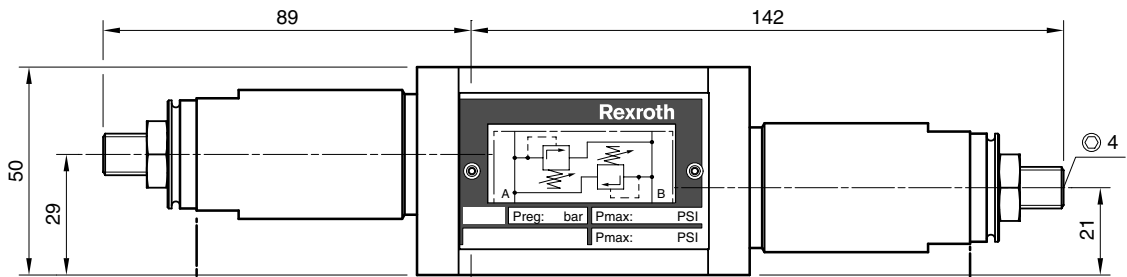


* without test port

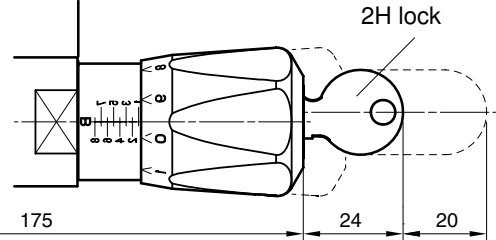
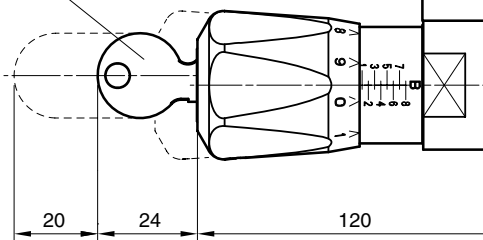
- 0 811 101 288*
- 0 811 101 289*



- 0 811 101 290*
- 0 811 101 291*
- 0 811 101 292*
- 0 811 101 295*
- 0 811 101 296*
- 0 811 101 297*

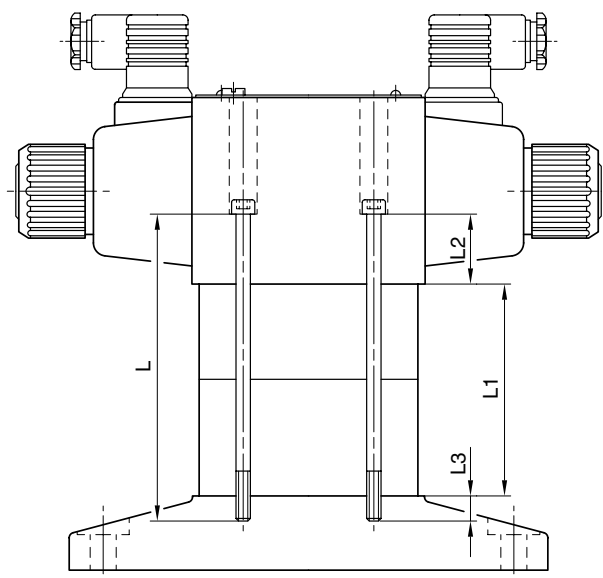



2H lock



- 0 811 101 293*
- 0 811 101 294*
- 0 811 101 298*
- 0 811 101 299*

Fastening bolts



NG	Qty.		L_2 [mm] + L_3 [mm]*	L_1 [mm]	L [mm]	
6	4	M5	30	40	70	2 910 151 180
				50	80	2 910 151 182
				80	110	2 910 150 706
				100	130	–
				120	150	1 813 414 806
10	4	M6	40	50	90	–
				70	110	2 910 151 226
				100	140	–
				140	180	2 910 151 660
				150	190	–

* With Rexroth directional control valve NG6 clamping length 22 mm and NG10 clamping length 30 mm and subplate as per RE 45053 and RE 45055