

Check valve, cartridge type

RE 20380/11.06
Replaces: 12.02

1/8

Type M-SR

Sizes 6 to 30
Component series 1X
Maximum operating pressure 315 bar
Maximum flow 400 l/min



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Features

- For installation in manifold blocks
 - as angle valve
 - as straight valve
- Leak-free closure in one direction
- Various cracking pressures, optional (see ordering code)

Information on available spare parts:
www.boschrexroth.com/spc

Ordering code

M-SR

-1X/

*

Check valve, cartridge design

= M-SR

Size 6 (not as angle valve)

= 6

Size 8

= 8

Size 10

= 10

Size 15

= 15

Size 20

= 20

Size 25

= 25

Size 30

= 30

Component design

Angle valve

= KE

Straight valve

= KD

Further details in clear text

Seal material

No code = NBR seals

V = FKM seals (with angle valve only)

⚠ Important!

Observe compatibility of seals with hydraulic fluid used!

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

Cracking pressure (see characteristic curves on pages 4 and 5)

00 = Without spring (not for straight valve)

02 =

05 = (Standard)

15 =

30 =

50 =

Standard types

Type	Material number	Type	Material number
M-SR 6 KD05-1X/	R900301889	M-SR 20 KE02-1X/	R900345744
M-SR 8 KE02-1X/	R900357438	M-SR 20 KE05-1X/	R900340979
M-SR 8 KE05-1X/	R900346083	M-SR 25 KE05-1X/	R900344778
M-SR 10 KE05-1X/	R900344549	M-SR 30 KE05-1X/	R900344919
M-SR 15 KE02-1X/	R900348943		
M-SR 15 KE05-1X/	R900345372		

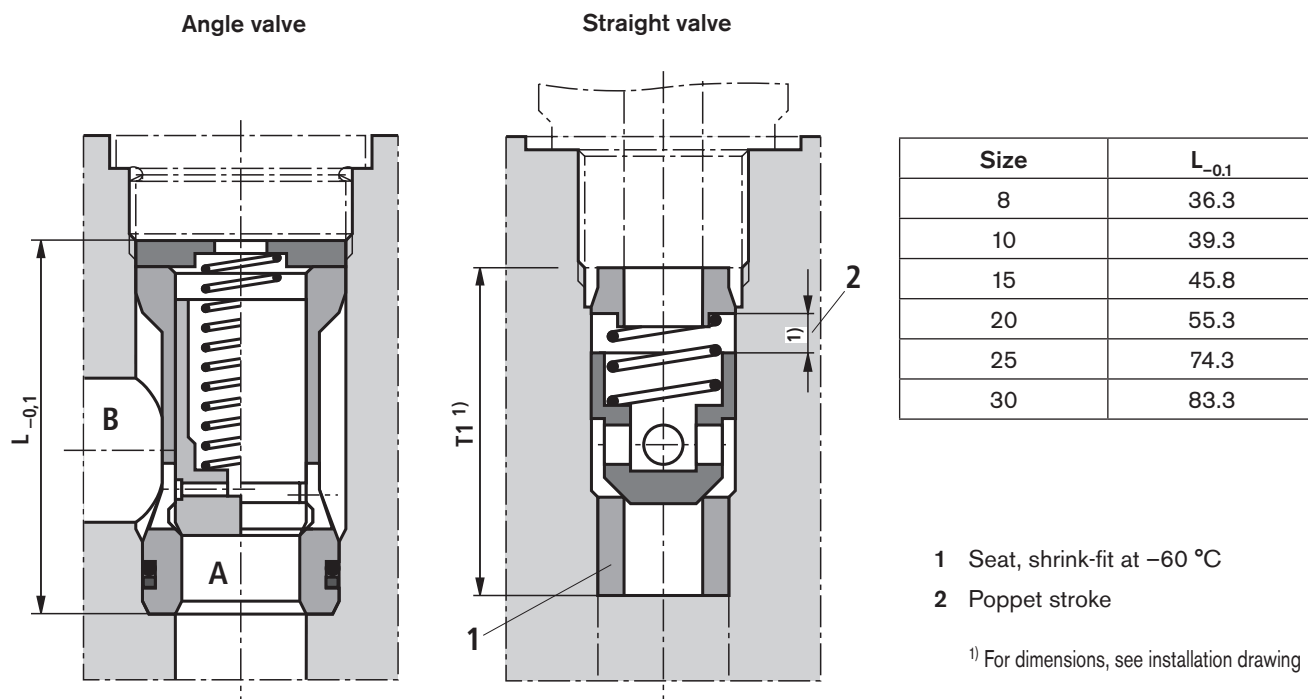
Further standard types and components can be found in the EPS (standard price list).

Symbols

With spring

Without spring

Sections



Technical data (for applications outside these parameters, please consult us!)

General									
Sizes		Size	6	8	10	15	20	25	30
Weight	– Angle valve	kg	–	0.03	0.05	0.08	0.14	0.32	0.47
	– Straight valve	kg	0.05	0.05	0.05	0.1	0.2	0.25	0.3
Installation orientation			Optional						
Ambient temperature range			°C	–20 to +80 (NBR seals) –20 to +80 (FKM seals)					
Hydraulic									
Maximum operating pressure			bar	315					
Cracking pressure			bar	See characteristic curves on pages 4 and 5					
Maximum flow			l/min	See characteristic curves on pages 4 and 5					
Hydraulic fluid			Mineral oil (HL, HLP) to DIN 51524 ¹⁾ ; fast bio-degradable hydraulic fluids to VDMA 24568 (see also RE 90221); HETG (rape seed oil) ¹⁾ ; HEPG (polyglycols) ²⁾ ; HEES (synthetic esters) ²⁾ ; other hydraulic fluids on enquiry						
Hydraulic fluid temperature range			°C	–30 to +80 (for NBR seals) –20 to +80 (for FKM seals)					
Viscosity range			mm ² /s	2.8 to 500					
Max. permissible degree of contamination of the hydraulic fluid - cleanliness class to ISO 4406 (c)			Class 20/18/15 ³⁾						

¹⁾ Suitable for NBR and FKM seals

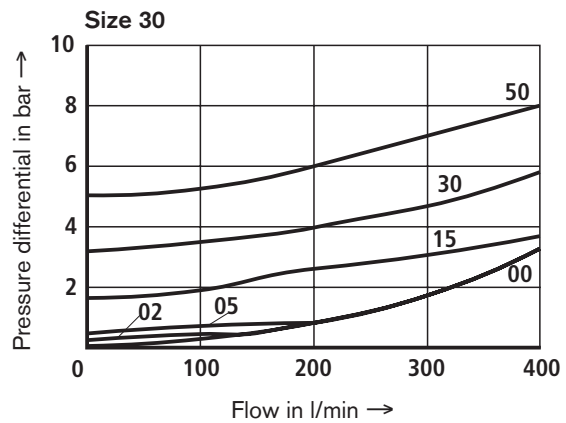
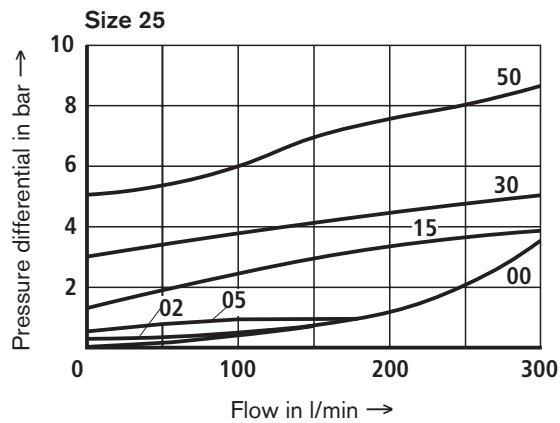
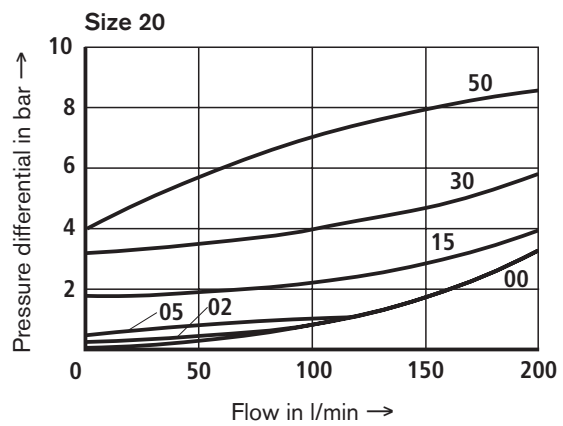
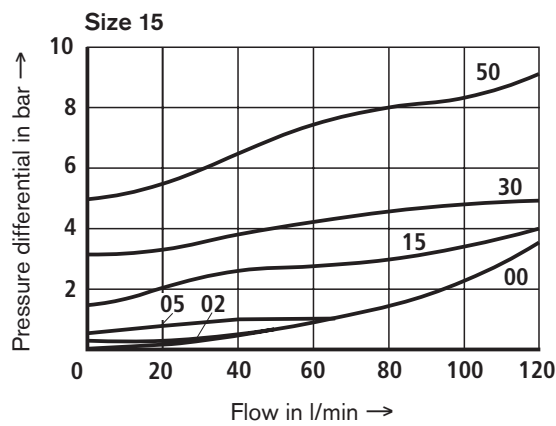
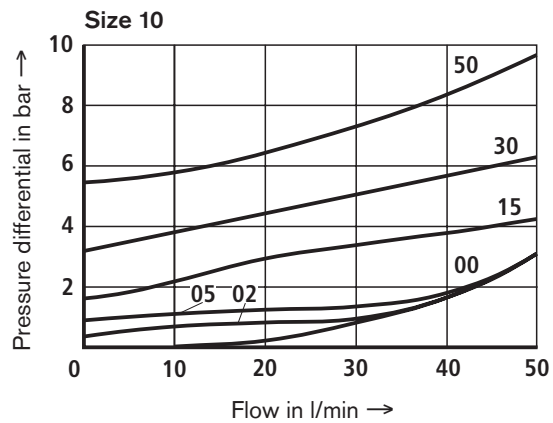
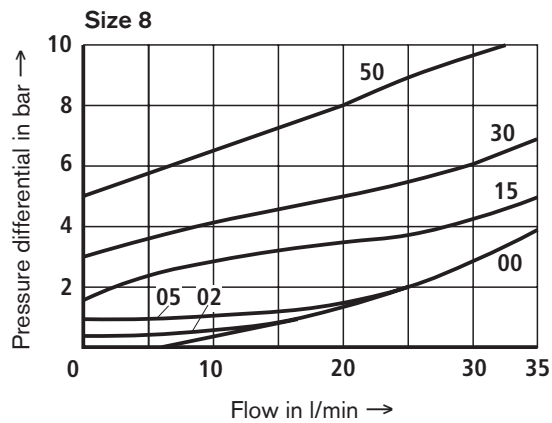
²⁾ Suitable only for FKM seals

³⁾ The cleanliness classes specified for components must be adhered to in hydraulic systems. Effective filtration prevents malfunction and, at the same time, prolongs the service life of components.

For the selection of filters, see data sheets RE 50070, RE 50076, RE 50081, RE 50086 and RE 50088.

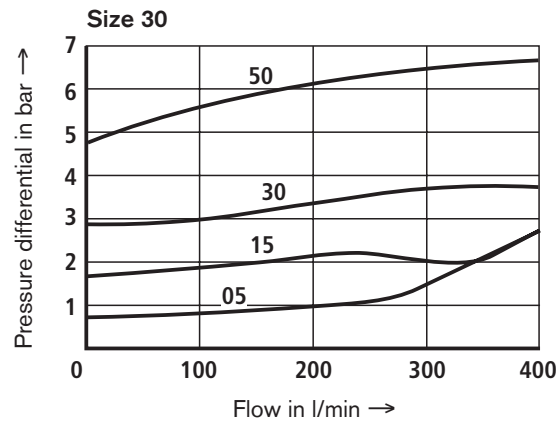
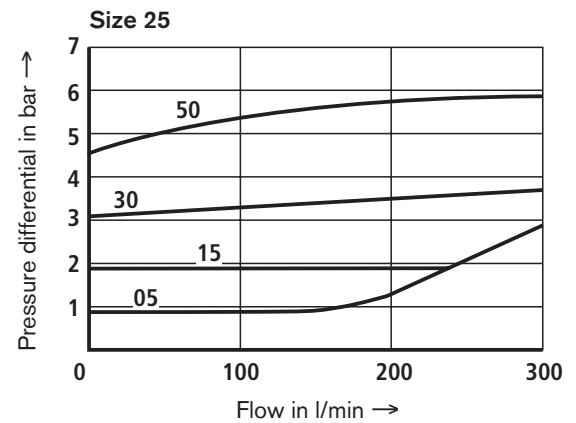
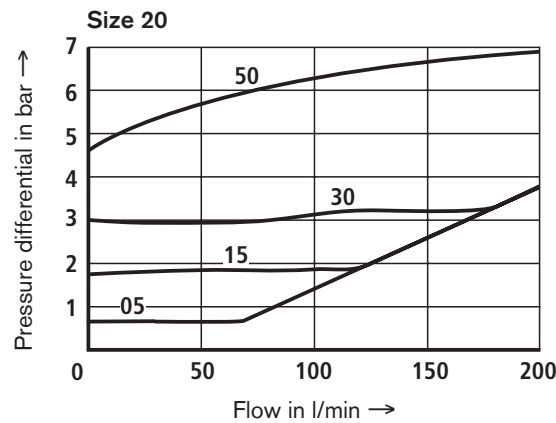
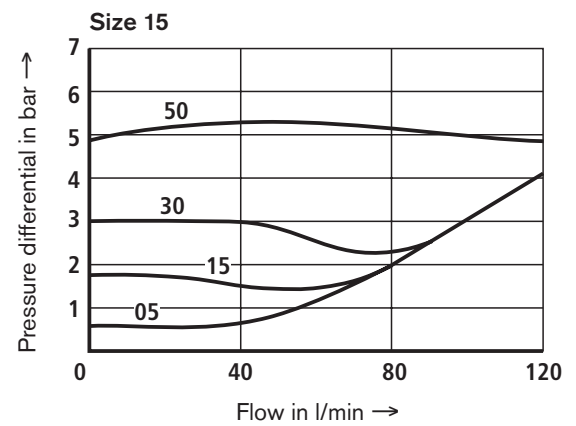
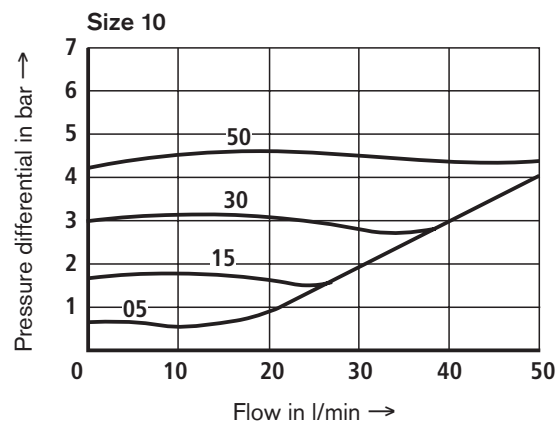
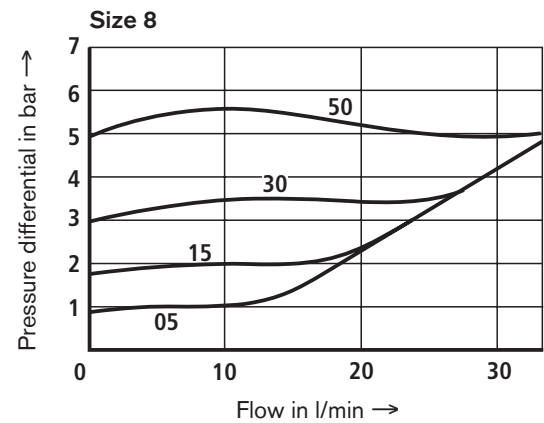
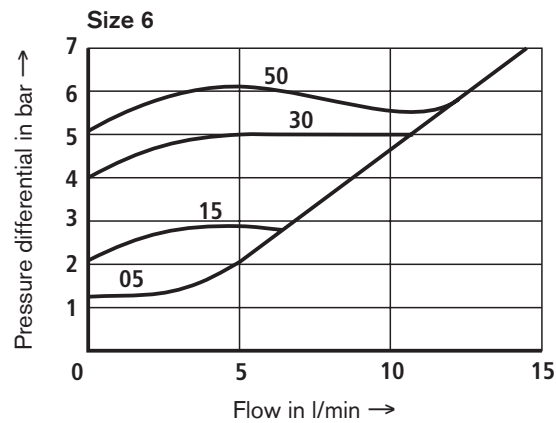
Characteristic curves (measured with HLP46, $\vartheta_{oil} = 40 \text{ }^{\circ}\text{C} \pm 5 \text{ }^{\circ}\text{C}$) – angle valve

Pressure differential Δp in dependence upon flow q_v at cracking pressure

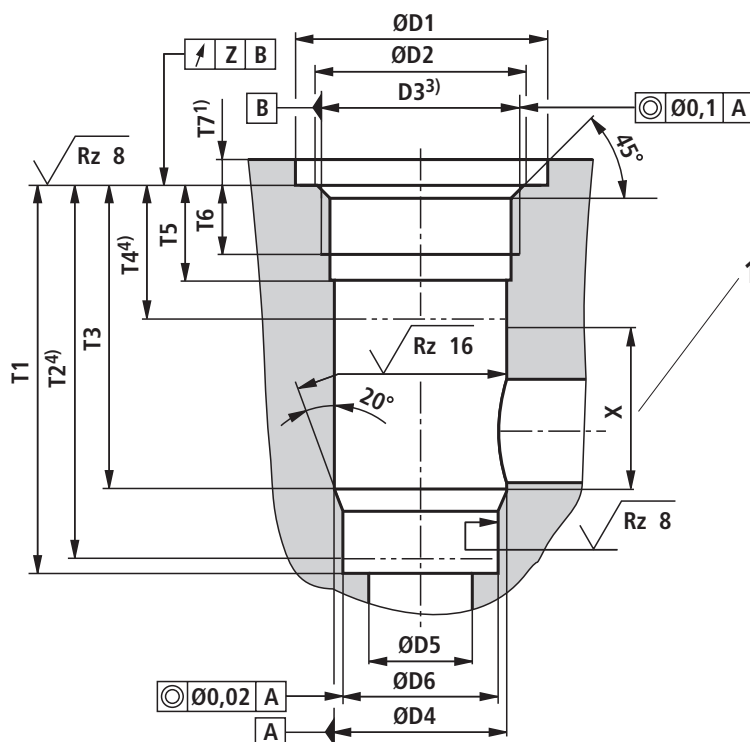


Characteristic curves (measured with HLP46, $\vartheta_{oil} = 40\text{ °C} \pm 5\text{ °C}$) – straight valve

Pressure differential Δp in dependence upon flow q_v at cracking pressure



Mounting cavity: Angle valve for plug screw to RN 143.21 (nominal dimensions in mm)



1 Area for drain bore

Size	Plug screws ²⁾ Material no.	p_N in bar	ØD1	ØD2	D3	ØD4 ^{H8}	ØD5	ØD6 ^{H7}
8	R900002423	315	23	17.1	G3/8 ³⁾	14	8	13
10	R900002422	315	28	21.4	G1/2 ³⁾	18	10	17
15	R900012091	315	33	26.8	G3/4 ³⁾	24	15	22
20	R900002424	315	41	33.8	G1 ³⁾	30	20	28
25	R900012411	250	51	42.5	G1 1/4 ³⁾	38	25	36
30	R900012412	250	56	48.5	G1 1/2 ³⁾	44	30	42

Size	T1 ^{+0.1}	T2	T3	T4	T5	T6	T7 ^{+0.5}	T8 ^{+0.2}	X	Z
8	48.5	47.5	38.5	20	15	12	6	–	18	0.05
10	53.5	52.5	43.5	24	18	14	6	–	19	0.05
15	62	60.5	50	26	20.5	16	6	–	24	0.05
20	71.5	70	56.5	26	20.5	16	7	–	30	0.05
25	90.5	88	72.5	28	22	16	7	–	43	0.1
30	99.5	96.5	79.5	31	22	16	7	–	48	0.1

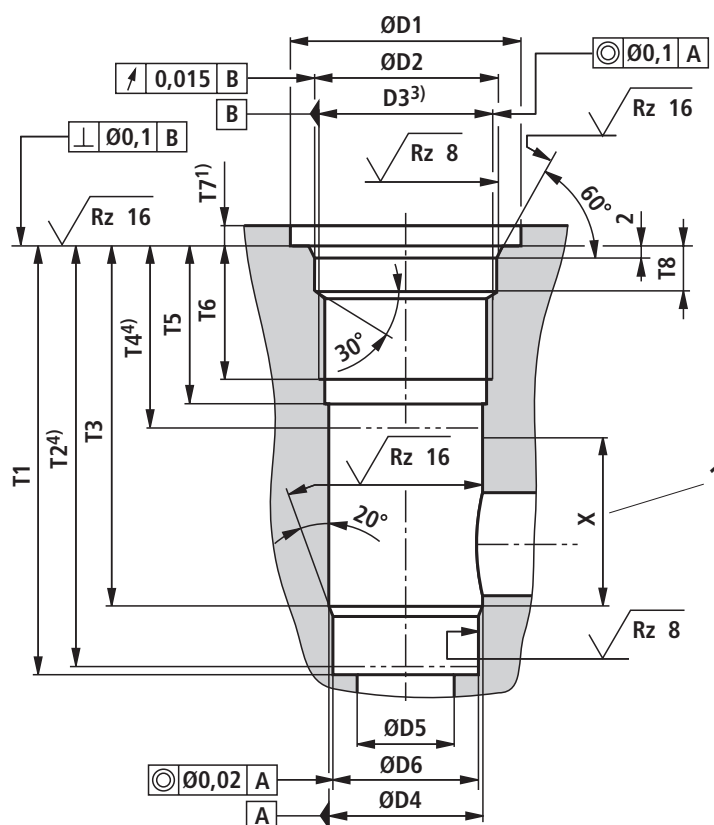
¹⁾ Dimension for countersinking the screw head. When installing the cartridge more deeply, extend dimension T7 accordingly.

²⁾ With NBR seal

³⁾ Pipe thread "G..." to ISO 228/1

⁴⁾ Depth of fit

Mounting cavity: Angle valve for plug screw to RN 143.28 (nominal dimensions in mm)



1 Area for drain bore

Size	Plug screws ²⁾ Material no.	p_N in bar	ØD1	ØD2	D3	ØD4 ^{H8}	ØD5	ØD6 ^{H7}
25	R900323609	315	56 ^{+0.5}	44 ^{H8}	M42 x 1.5 ³⁾	38	25	36
30	R900323610	315	62 ^{+0.5}	50 ^{H8}	M48 x 1.5 ³⁾	44	30	42

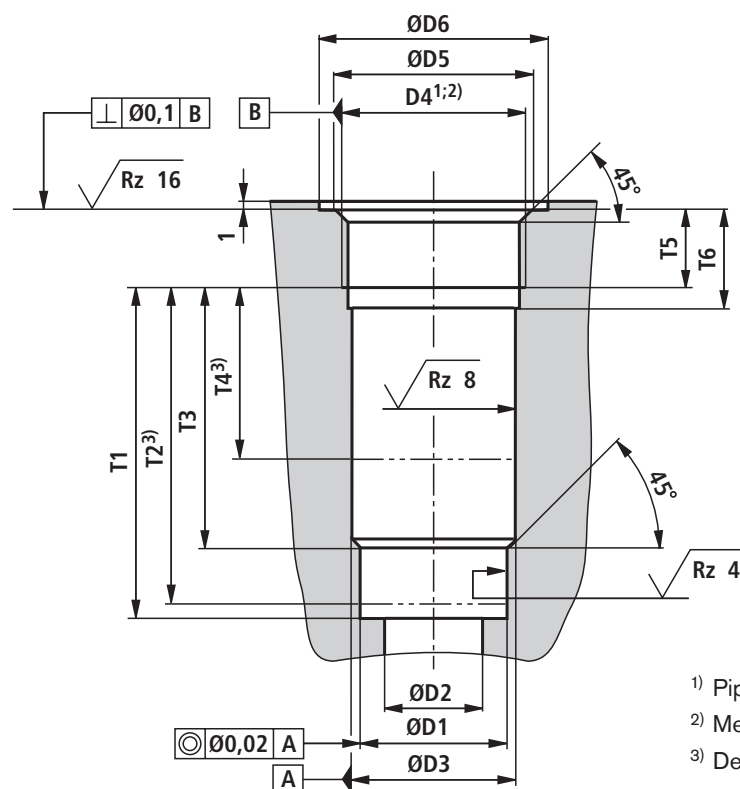
Size	T1 ^{+0.1}	T2	T3	T4	T5	T6	T7 ^{+0.5}	T8 ^{+0.2}	X	Z
25	106.5	104	88.5	45	39	33	5	12	43	–
30	115.5	112.5	95.5	48	39	33	5	12	48	–

¹⁾ Dimension for countersinking the screw head. When installing the cartridge more deeply, extend dimension T7 accordingly.

²⁾ With NBR seal

³⁾ Metric ISO fine thread to DIN 13

⁴⁾ Depth of fit

Mounting cavity: Straight valve (nominal dimensions in mm)

Size	ØD1 ^{H7}	ØD2	ØD3 ^{H8}	D4 ¹⁾	ØD5 ^{±0.1 1)}	D4 ²⁾	ØD5 ^{±0.1 2)}	ØD6
6	10	6	11	G1/4	13.6	M14 x 1.5	14.4	25
8	13	8	14	G3/8	17.1	M18 x 1.5	18.4	28
10	17	10	18	G1/2	21.4	M22 x 1.5	22.4	34
15	22	15	24	G3/4	26.8	M27 x 2	27.4	42
20	28	20	30	G1	33.8	M33 x 2	33.5	47
25	36	25	38	G1 1/4	42.5	M42 x 2	42.5	58
30	42	30	44	G1 1/2	48.5	M48 x 2	48.5	65

Size	T1 _{-0.1}	T2	T3	T4	T5	T6	Z	Poppet stroke
6	29.8	27.8	21.8	19	12	16	0.05	4
8	32.8	30.8	22.8	18	12	16	0.05	4
10	38.8	36.8	28.8	21	14	19	0.05	4
15	48.4	46.4	36.4	27	16	21	0.05	5
20	59	57	44	29	18	24	0.05	5
25	73	71	55	39	20	26	0.1	7
30	83	81	63	42	22	28	0.1	7