

Electric Drives
and Controls

Hydraulics

Linear Motion and
Assembly Technologies

Pneumatics

Service

Rexroth
Bosch Group

Check valve, pilot-to-close

RE 18117-02/02.10 1/8
Replaces: 04.07

Type KGD (High Performance)

Component size 2
Component series A
Maximum operating pressure 350 bar
Maximum flow 160 l/min



H7420

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Features

– Cartridge valve
1 – Mounting cavity R/T-2A
2 – For installation into blocks
2 – Leak-free closure in one direction
3 – Pilot-to-close
4 – Various cracking pressures, on request
5
5
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Function, section, symbol

General

Valves of type KGD are pilot-to-close check valves, which are closed in the initial position.

They basically consist of plug screw (1), piston (2), compression spring (3) and pilot spool (4).

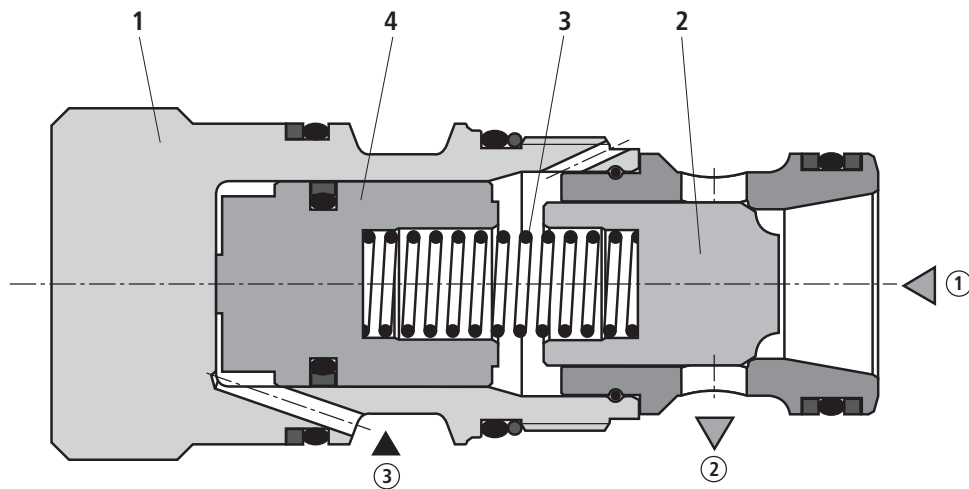
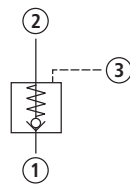
These valves are primarily used in rapid speed circuits.

Function

Cartridge valves of type KGD allow free flow from main port ① to main port ②. The reverse flow from main port ② to ① is impossible.

The pressure in main port ③ counteracts the pressure in main port 1 at a ratio of 1.8:1 and holds the cartridge valve closed (checking position).

Symbol



- ① = Main port 1 (A)
- ② = Main port 2 (B)
- ③ = Main port 3 (X)

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

General

Weight	kg	0.3
Installation position		Optional
Ambient temperature range	°C	-40 to +110

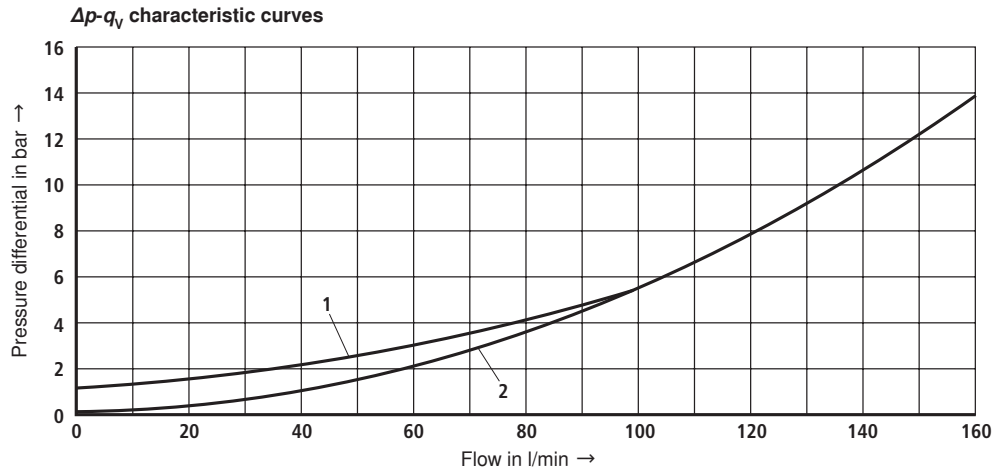
Hydraulic

Max. operating pressure – Main ports ①, ②	bar	350
Maximum pilot pressure – Main port ③	bar	350
Maximum flow	l/min	160
Hydraulic fluid		Mineral oil (HL, HLP) to DIN 51524; fast bio-degradable hydraulic fluids to VDMA 24568 (see also data sheet 90221); HETG (rape seed oil); HEPG (polyglycols); HEES (synthetic esters); other hydraulic fluids on request
Hydraulic fluid temperature range	°C	-40 to +110
Viscosity range	mm ² /s	2.8 to 500
Permissible max. degree of contamination of the hydraulic fluid - cleanliness class to ISO 4406 (c)		Class 20/18/15 ¹⁾
Maximum leakage	cm ³ /min	< 0.05
Closing ratio		1.8:1

¹⁾ The cleanliness class stated for the components must be adhered to in hydraulic systems. Effective filtration prevents faults from occurring and at the same time increases the component service life.

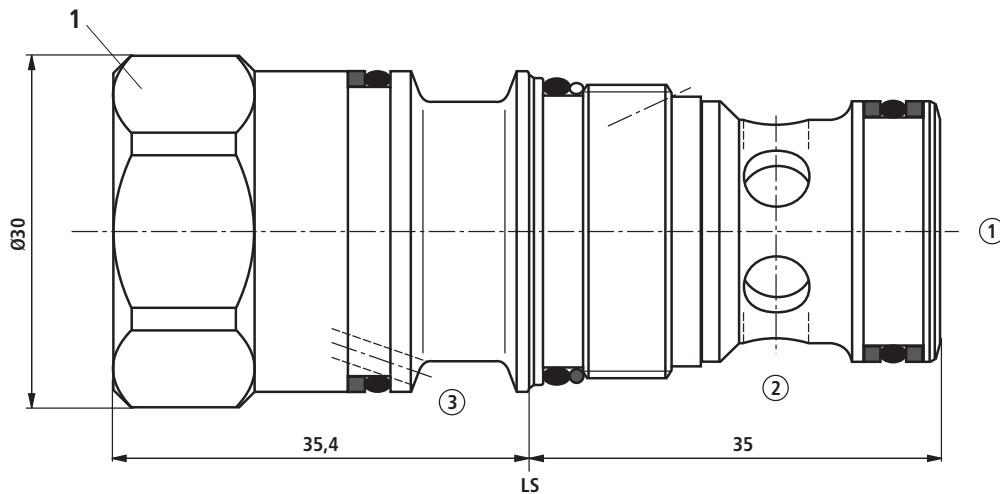
For the selection of filters see catalogue sheets 50070, 50076, 50081, 50086, 50087 and 50088.

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



1	Cracking pressure 1.0 bar	1 → 2
2	Cracking pressure 0.5 bar	1 → 2

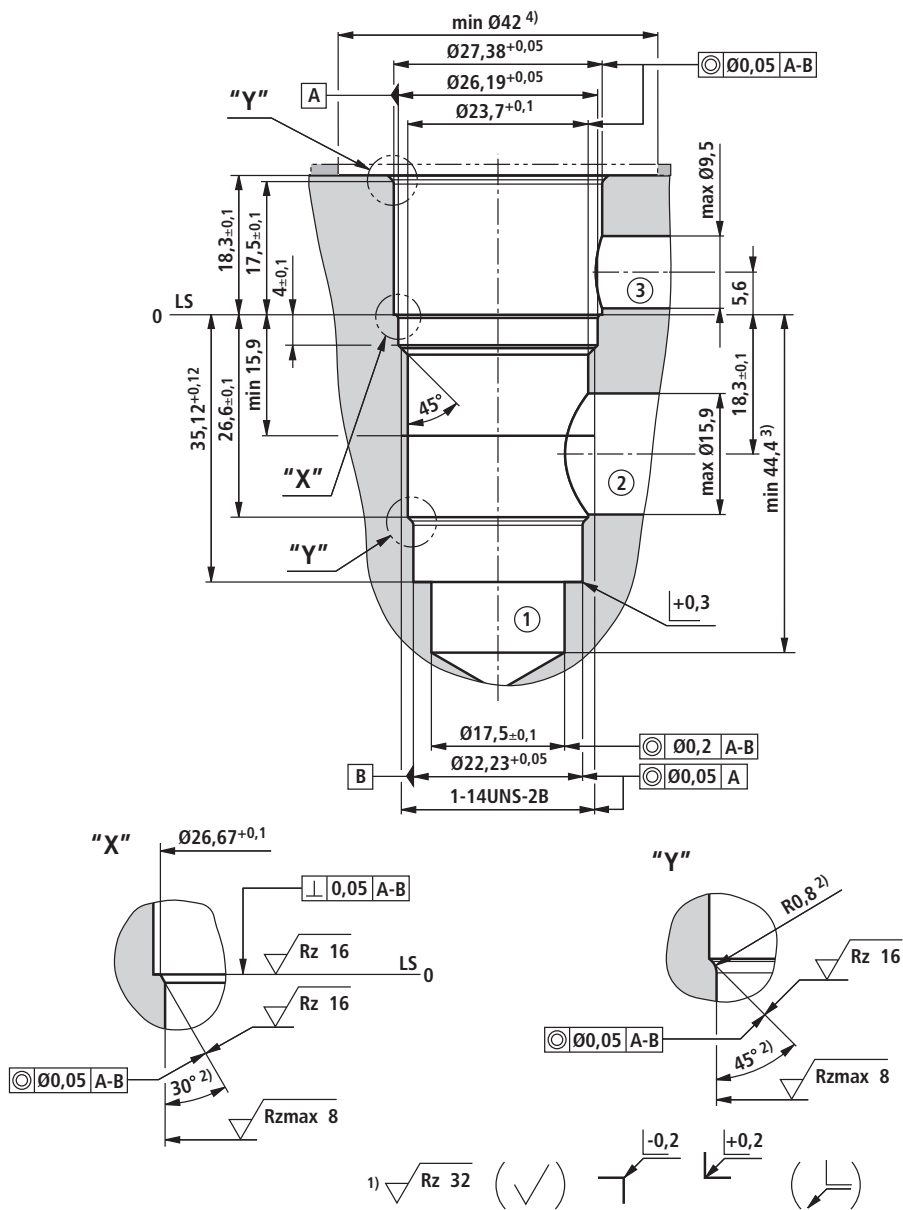
Unit dimensions (dimensions in mm)



1 27 A/F, tightening torque $M_T = 100^{+10} \text{ Nm}$

- ① = Main port 1 (A)
- ② = Main port 2 (B)
- ③ = Main port 3 (X)
- LS = Location shoulder

Mounting cavity R/T-2A; 3 main ports; thread 1-14UNS-2B (dimensions in mm)



1) Deviating from T-2A

2) All seal ring insertion faces are rounded and free from burrs

3) Depth for moving parts

4) with countersink

① = Main port 1 (A)

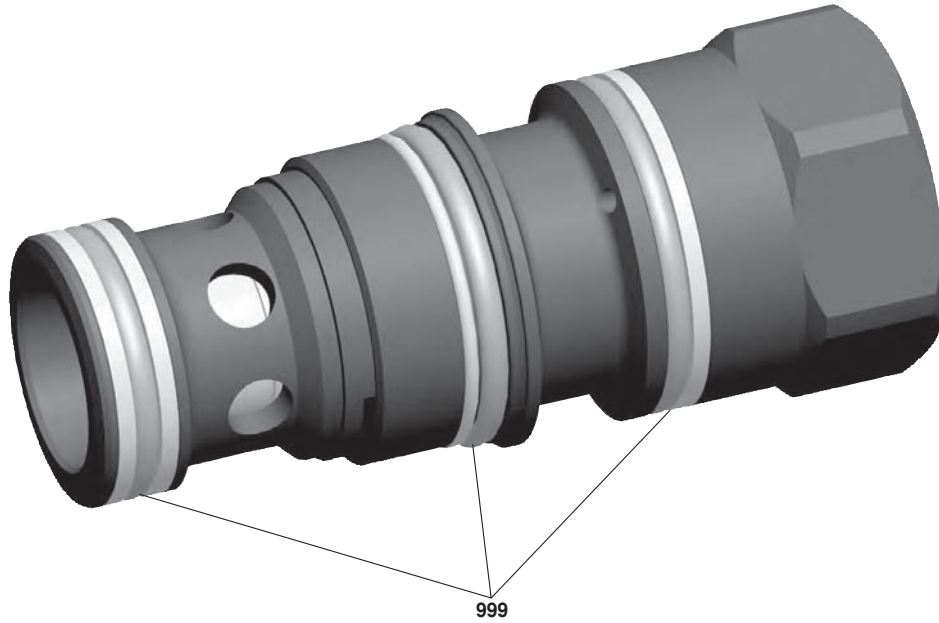
② = Main port 2 (B)

③ = Main port 3 (X)

LS = Location shoulder

Tolerance for all angles $\pm 0.5^\circ$

Available individual components



Item	Designation	Material no.
999	Valve seal kit	R961003250

Notes

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