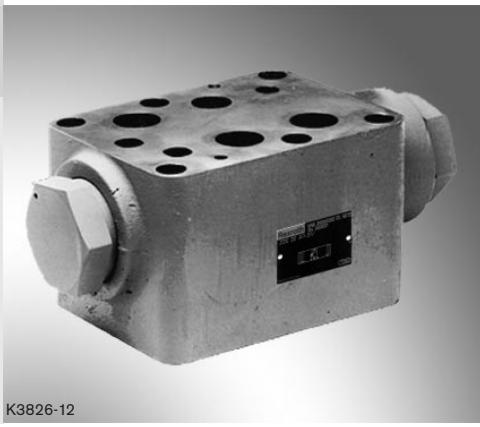
Rexroth
Bosch Group

Check valve, pilot operated

RE 21564/08.05 1/6
Replaces: 02.03

Type Z2S

Size 25
Component series 5X
Maximum operating pressure 315 bar
Maximum flow 450 l/min


K3826-12

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Features

- Sandwich plate valve
- Position of ports to ISO 4401-08-07-0-94
- For the leak-free closure of one or two actuator ports, optional
- For use in vertical stacking assemblies
- 4 different cracking pressures, optional

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

Ordering code

Z2S	22		–5X/	*

Sandwich plate check valve

Size 25 = **22**

Leak-free closure

In channels A and B = **–**

In channel A = **A**

In channel B = **B**

Cracking pressure

3 bar = **1**

5 bar = **2**

7,5 bar = **3**

10 bar = **4**

5X = Component series 50 to 59
(50 to 59: unchanged installation and connection dimensions)

Seal material

no code = NBR seals

V = FKM seals

⚠ Caution!
Observe compatibility of seal material with hydraulic fluid used!

Further details in clear text

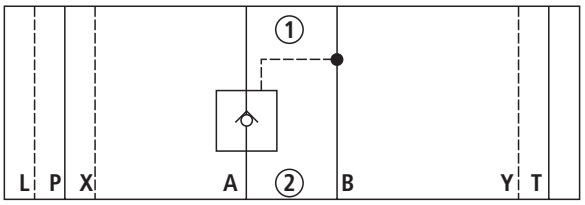
Standard types

Type	Material number
Z2S 22 -1-5X/	R900432915
Z2S 22 A1-5X/	R900433032
Z2S 22 B1-5X/	R900433037

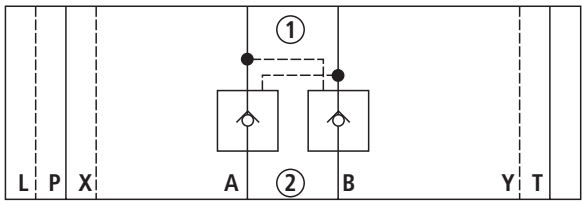
Further standard types and components can be found in the EPS (standard price list).

Symbols (① = component side, ② = plate side)

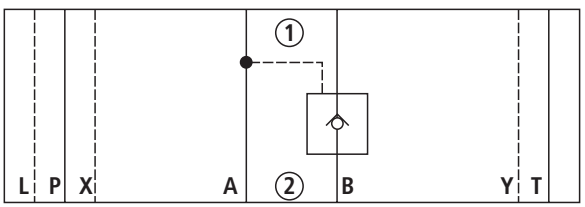
Type Z2S 22 A…



Type Z2S 22 –…



Type Z2S 22 B…



Function, section, circuit example

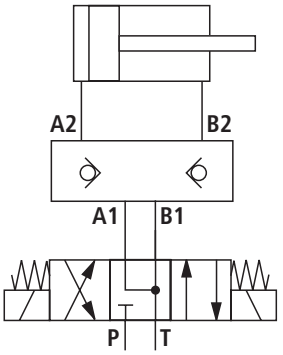
Isolator valves of type Z2S are pilot operated check valves of sandwich plate design.

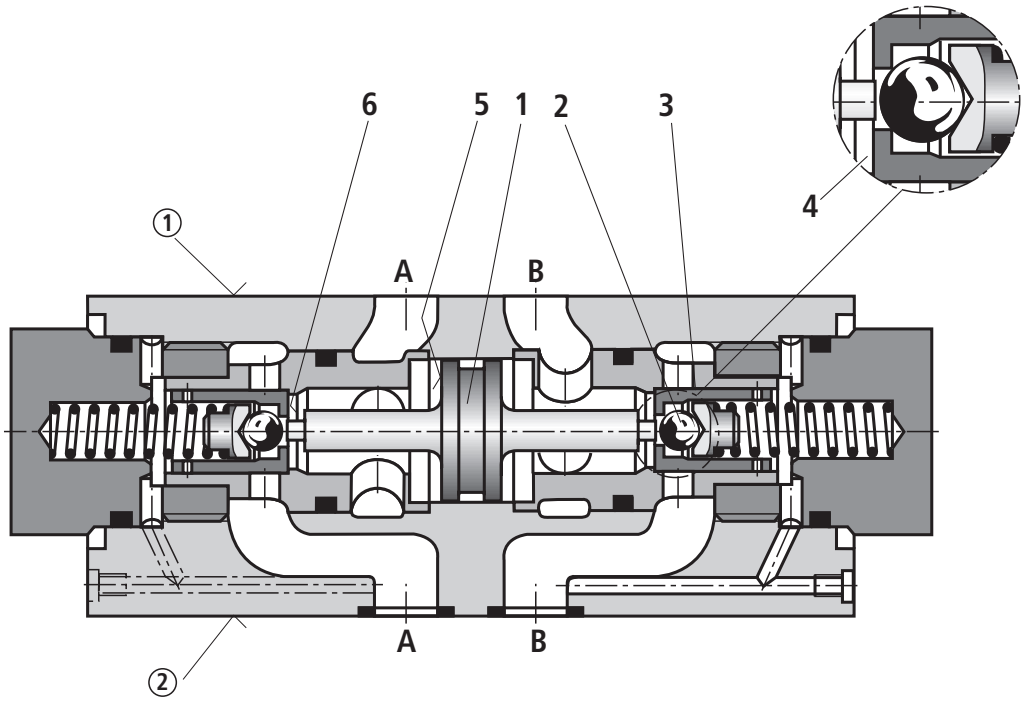
They are used for the leak-free closure of one or two actuator ports, even over longer periods of standstill.

In direction A1 to A2 or B1 to B2 the fluid can flow freely, whereas in the opposite direction the flow is blocked.

When fluid flows through the valve in the direction from A1 to A2, spool (1) is pressurised and shifted to the right. This causes ball seat valve (2) to open and then pushes poppet (3) off its seat.

In order to ensure reliable closing of the valve poppets, the actuator ports of the directional valve must be unloaded to the tank in the central position (see circuit example).





4 Area A_1
5 Area A_2
6 Area A_3

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

General		
Weight	kg	approx. 12
Installation orientation		Optional
Ambient temperature range	°C	–30 to +50 (NBR seals) –20 to +50 (FKM seals)

Hydraulic		
Maximum operating pressure	bar	315
Cracking pressure in free direction		See characteristic curves below
Maximum flow	l/min	450
Direction of flow		See symbols on page 2
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 (NBR seals) –20 to +80 (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]
Area ratio		A_1/A_2 = 1/13.6; A_3/A_2 = 1/2.8 (see sectional drawing, page 2)

[1] Suitable for NBR and FKM seals

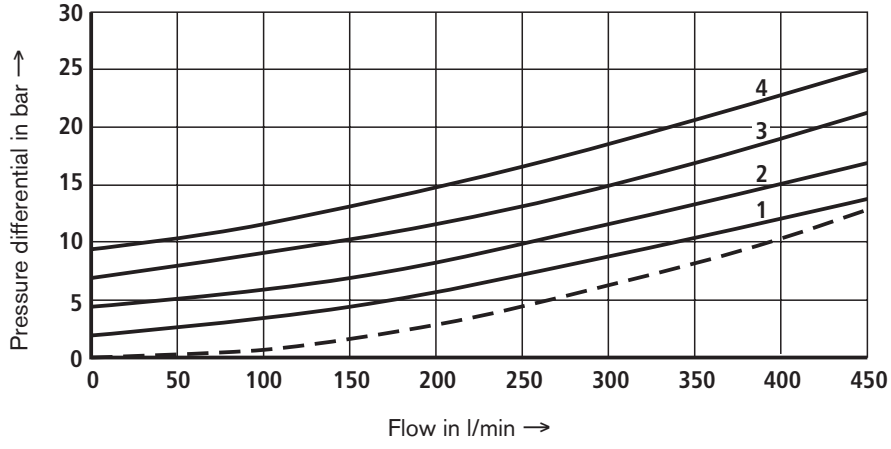
[2] Suitable only for FKM seals

[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, ϑ_{oil} = 40 °C ± 5 °C)

Δp-q_V charactersistic curves



A1 → A2; B1 → B2

A2 → A1; B2 → B1

Cracking pressure:

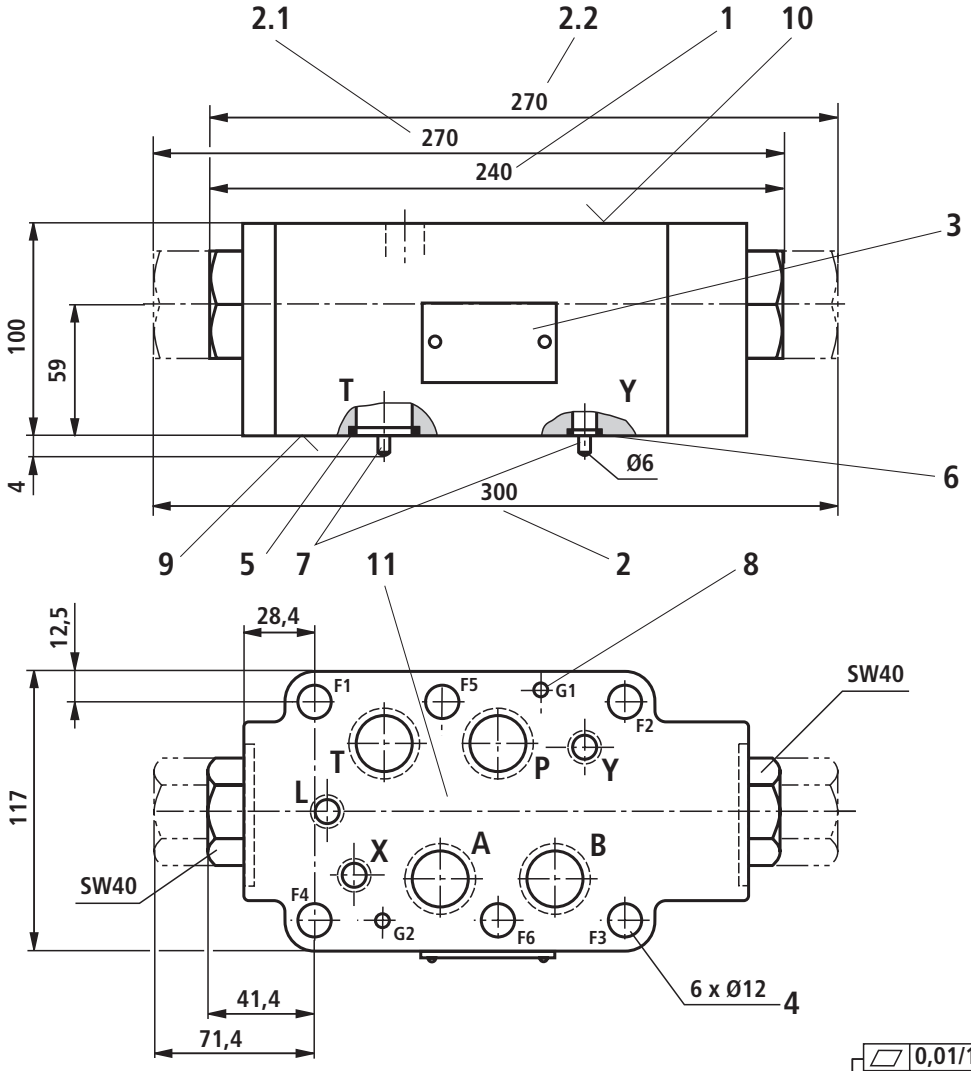
1 3 bar

2 5 bar

3 7.5 bar

4 10 bar

Unit dimensions (nominal dimensions in mm)



Required surface quality of mating surface

1 Valve with cracking pressure 3 or 5 bar, leak-free closure in channel A and/or B

2 Valve with cracking pressure 7.5 or 10 bar, leak-free closure in channel A and B

2.1 Valve with cracking pressure 7.5 or 10 bar, leak-free closure in channel A

2.2 Valve with cracking pressure 7.5 or 10 bar, leak-free closure in channel B

3 Nameplate

4 6 through-bores for valve fixing

5 Identical seal rings for ports A, B, P, T

6 Identical seal rings for ports X, Y, L

7 Locating pins

8 Locating bores

9 Plate side

10 Component side

11 Position of ports to ISO 4401-08-07-0-94

Valve fixing screws (separate order)

6 socket head cap screws ISO 4762 - M12 - 10.9

(friction coefficient $\mu_{total} = 0.14$);
tightening torque $M_T = 130$ Nm
(please adjust in the case of changed surfaces)

Notes

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