

Check valve

RE 21534/10.05
Replaces: 21533

1/6

Type Z1S

Size 6
 Component series 4X
 Maximum operating pressure 350 bar
 Maximum flow 40 l/min



H5550

Table of contents

Contents

Features	
Ordering code	
Notes	
Symbols	
Function, sections	
Technical data	
Characteristic curves	
Unit dimensions	

Features

Page

1	– Sandwich plate valve for use in vertical stacking assemblies
2	– Position of ports to DIN 24340 form A (without locating bore) (standard)
2	– Position of ports to ISO 4401-03-02-0-94 (with locating bore)
3	– 8 different checking functions, optional
3	– Improved freedom from leakage due to poppet/bushing made of heavy-duty plastic material
4	– Optional seawater-resistant version
4	– Supplementary documentation:
5	Sandwich plates size 6 RE 48050 and RE 59015

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

Ordering code

Z1S	6		-4X/	V	*
Check valve, sandwich plate					Further details in clear text
Size 6	= 6				No code = Without locating bore
Leak-free closure in channel A (A1 → A2)	= A				/60¹⁾ = With locating bore
Leak-free closure in channel B (B1 → B2)	= B				/62 = With locating bore and locating pin
Leak-free closure in channel A (A2 → A1)	= C				ISO 8752-3x8-St
Leak-free closure in channel B (B2 → B1)	= D				Seal material
Leak-free closure in channels A and B (A2 → A1) and (B2 → B1)	= E			V =	FKM seals (other seals on enquiry)
Leak-free closure in channels P and T (P1 → P2) and (T2 → T1)	= F				⚠ Caution!
Leak-free closure in channel P (P1 → P2)	= P				Observe compatibility of seals with hydraulic fluid used!
Leak-free closure in channel T (T2 → T1) (For symbol, see page 3)	= T				No code = Standard
Cracking pressure				J =	Seawater-resistant ²⁾
0.5 bar	= 05		4X =		Component series 40 to 49
1.5 bar	= 15		(40 to 49: unchanged installation and connection dimensions)		
3.0 bar	= 30				
5.0 bar	= 50				

¹⁾ Locating pin ISO 8752-3x8-St,
Material no. R900005694 (separate order)

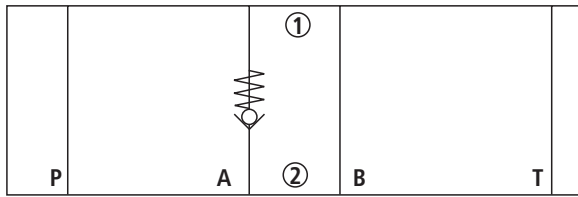
²⁾ With ordering code "J", outside parts are galvanised in contrast to the standard version

Notes

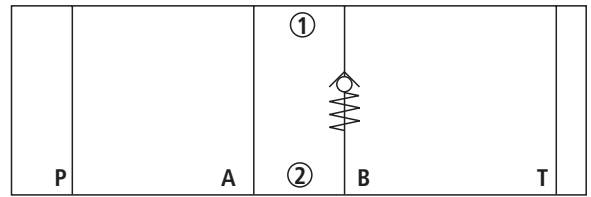
- Valve housing (steel) and spool with sealing bushing (plastic) can be disassembled to allow proper disposal.
- The integrated plastic bushing (blue) assumes a sealing function! Do not remove or damage!

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

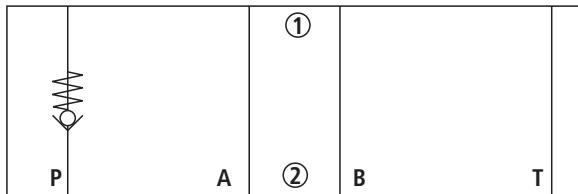
Type Z1S 6 A...



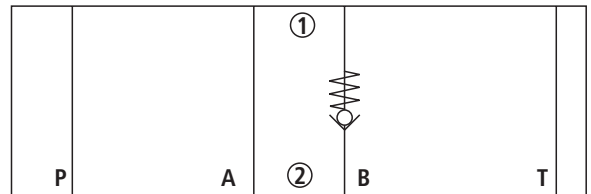
Type Z1S 6 D...



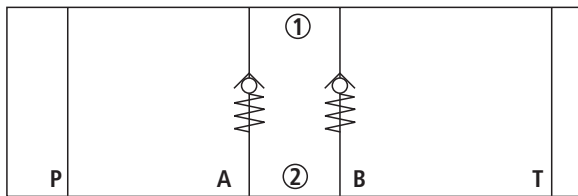
Type Z1S 6 P...



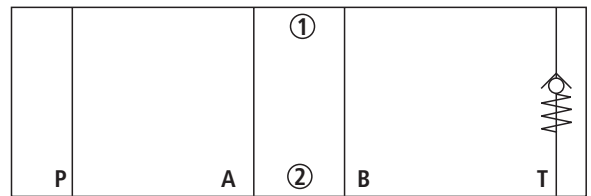
Type Z1S 6 B...



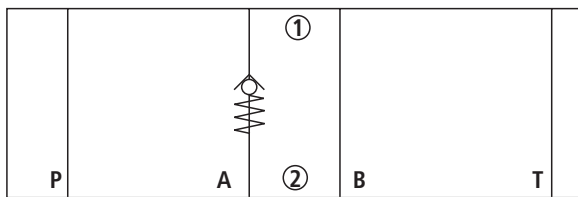
Type Z1S 6 E...



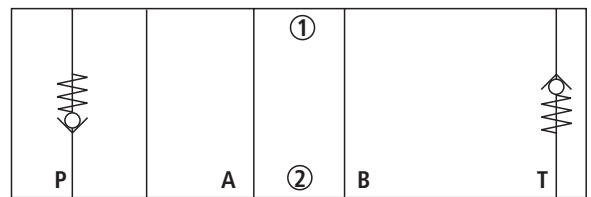
Type Z1S 6 T...



Type Z1S 6 C...



Type Z1S 6 F...



Function, sections

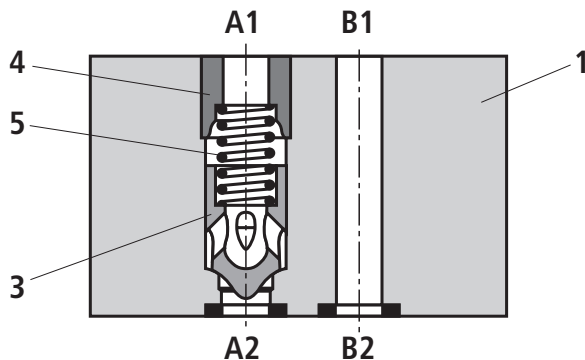
Valve type Z1S is a direct operated check valve of sandwich plate design.

It is used for leak-free checking in one direction and allows free flow in the opposite direction.

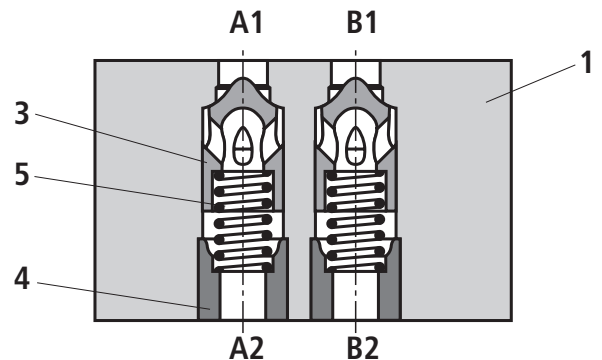
The stroke of poppet (3) is limited by sealing bushing (4). The integrated spring (5) supports the closing movement. When no fluid flows through the valve, spring (5) holds poppet (3) in the closed position.

⚠ Caution!

In all installation positions, in which the blue sealing bushing (4) is mounted on the plate side (section 2), no additional seal may be used at this position! On the component side (section 1) sealing is provided (as usual) by a seal ring.



Section 1: Type Z1S 6 A...



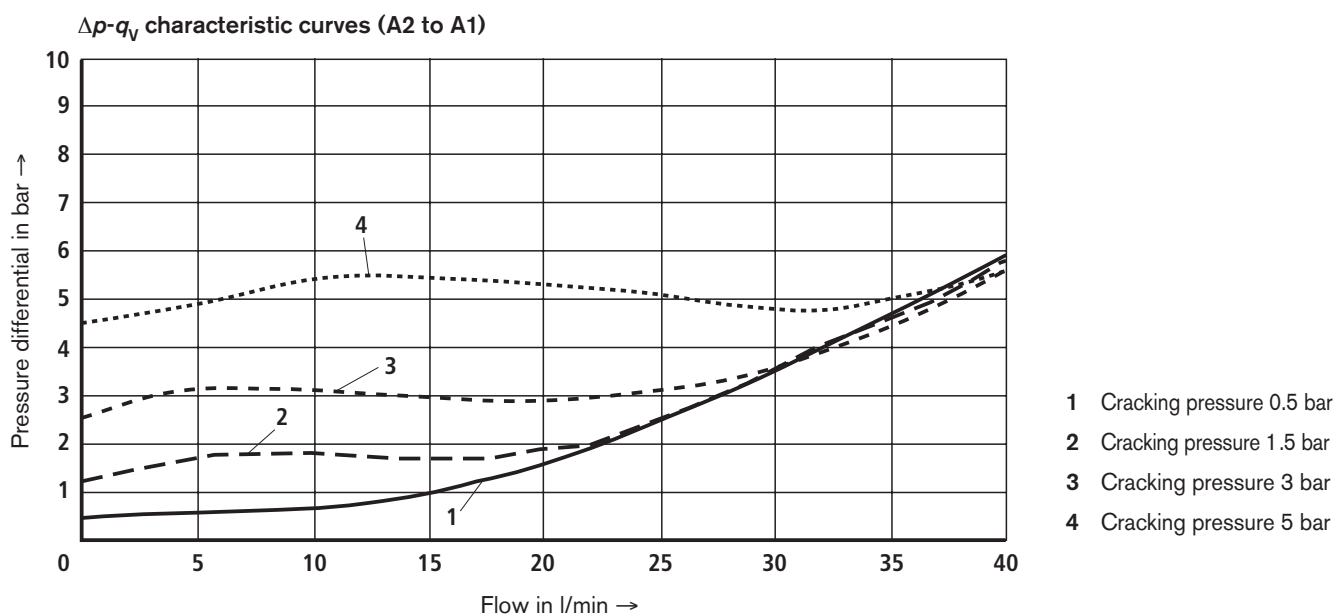
Section 2: Type Z1S 6 E...

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

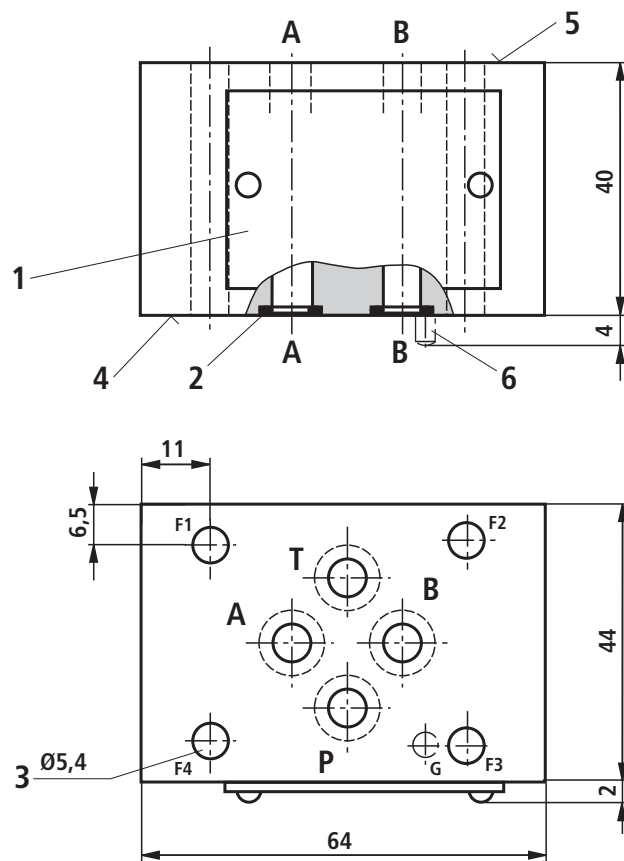
General			
Weight	kg	0.8	
Installation orientation		Optional	
Ambient temperature range	°C	-20 to +80	
Hydraulic			
Maximum operating pressure	bar	350	
Cracking pressure	- Metal seal	bar	0.5; 1.5; 3; 5
	- Soft seal	bar	0.5
Maximum flow	l/min	40	
Hydraulic fluid		Mineral oil (HL, HLP) to DIN 51524; fast bio-degradable hydraulic fluids to VDMA 24568 (see also RE 90221); HETG (rape seed oil); HEPG (polyglycols); HEES (synthetic esters); other hydraulic fluids on enquiry	
Hydraulic fluid temperature range	°C	-20 to +80	
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 ¹⁾	

¹⁾ 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.

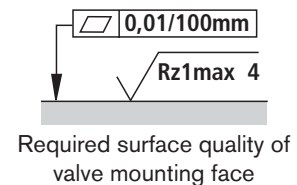
For the selection of filters, see data sheets RE 50070, RE 50076, RE 50081, RE 50086 and RE 50088.

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

Unit dimensions (nominal dimensions in mm)



- 1 Nameplate
- 2 Seal ring
- 3 Valve fixing bores
- 4 Plate side – position of ports to DIN 24340 form A (**without** locating bore), or ISO 4401-03-02-0-94 (**with** locating bore for locating pin ISO 8752-3x8-St; versions “/60” and “/62”)
- 5 Component side – position of ports to DIN 24340 form A (**without** locating bore), or ISO 4401-03-02-0-94 (**with** locating bore $\varnothing 3 \times 5$ mm deep)
- 6 Locating pin ISO 8752-3x8-St; only version “/62”



Valve fixing screws (separate order)

4 socket head cap screws ISO 4762 - M5 - 10.9

(at friction coefficient $\mu_{\text{total}} = 0.14$);

tightening torque $M_T = 6 \text{ Nm} \pm 10\%$

(please adjust in the case of changed surfaces)

Note!

In the case of ordering code “J” (seawater-resistant) we recommend the use of socket head cap screws to ISO4762-M5-10.9 of grade “A3C” or “NEL” (not-electrolytically applied zinc lamella coating).

Notes

Bosch Rexroth AG
Hydraulics
Zum Eisengießer 1
97816 Lohr am Main, Germany
Phone +49 (0) 93 52 / 18-0
Fax +49 (0) 93 52 / 18-23 58
documentation@boschrexroth.de
www.boschrexroth.de

© This document, as well as the data, specifications and other information set forth in it, are the exclusive property of Bosch Rexroth AG. It may not be reproduced or given to third parties without its consent.

The data specified above only serve to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The information given does not release the user from the obligation of own judgment and verification. It must be remembered that our products are subject to a natural process of wear and aging.

Notes

Bosch Rexroth AG
Hydraulics
Zum Eisengießer 1
97816 Lohr am Main, Germany
Phone +49 (0) 93 52 / 18-0
Fax +49 (0) 93 52 / 18-23 58
documentation@boschrexroth.de
www.boschrexroth.de

© This document, as well as the data, specifications and other information set forth in it, are the exclusive property of Bosch Rexroth AG. It may not be reproduced or given to third parties without its consent.

The data specified above only serve to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The information given does not release the user from the obligation of own judgment and verification. It must be remembered that our products are subject to a natural process of wear and aging.

Notes

Bosch Rexroth AG
Hydraulics
Zum Eisengießer 1
97816 Lohr am Main, Germany
Phone +49 (0) 93 52 / 18-0
Fax +49 (0) 93 52 / 18-23 58
documentation@boschrexroth.de
www.boschrexroth.de

© This document, as well as the data, specifications and other information set forth in it, are the exclusive property of Bosch Rexroth AG. It may not be reproduced or given to third parties without its consent.

The data specified above only serve to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The information given does not release the user from the obligation of own judgment and verification. It must be remembered that our products are subject to a natural process of wear and aging.