

RE 21 533/05.02

Replaces: 08.97

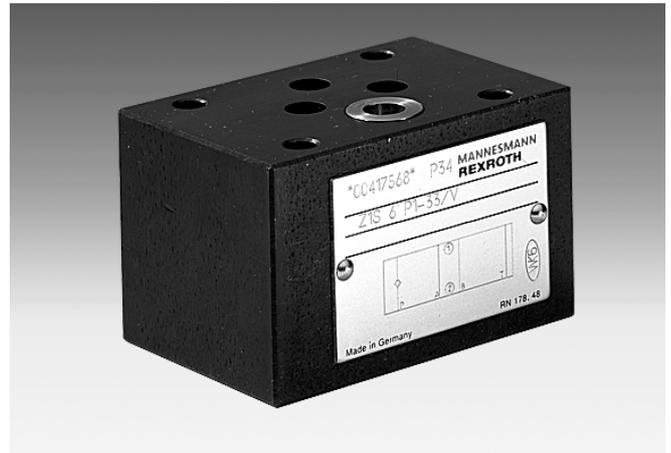
**Check valve
Type Z1S**

Nominal size 6

Series 3X

Maximum operating pressure 315 bar

Maximum flow 40 L/min



H/A 5550/96•

Type Z1S 6 P-3X/V

Overview of contents

Contents	Page
Features	1
Ordering details	1
Symbols	2
Function, section	2
Technical data	3
Characteristic curves	3
Unit dimensions	4
Preferred types	4

Features

- Sandwich plate valve for use in vertical stacking assemblies
- Porting pattern to DIN 24 340 form A, **without** locating pin hole (standard)
- Porting pattern to ISO 4401 and CETOP–RP 121 H, **with** locating pin hole, (ordering detail .../60 at the end of the valve type code)
- 8 different closing functions

Ordering details

Z1S 6		3X/V		*
Leak-free closure in port A (A1 → A2)	= A			Further details in clear text No code = Without locating pin hole /60¹⁾ = With locating pin hole No code = Metallic seal W4 = Soft seal V = FKM seals (other seals on request) ⚠ Attention! The compatibility of the seals and pressure fluid has to be taken into account! 3X = Series 30 to 39 (30 to 39: unchanged installation and connection dimensions)
Leak-free closure in port B (B1 → B2)	= B			
Leak-free closure in port A (A2 → A1)	= C			
Leak-free closure in port B (B2 → B1)	= D			
Leak-free closure in ports A and B (A2 → A1) and (B2 → B1)	= E			
Leak-free closure in ports P und T (P1 → P2) and (T2 → T1)	= F			
Leak-free closure in port P (P1 → P2)	= P			
Leak-free closure in port T (T2 → T1)	= T			
(Symbols, see page 2)				
Opening pressure 0.5 bar	= 1			
Opening pressure 3.0 bar	= 2			
Opening pressure 5.0 bar (Versions 2 and 3 not with soft seal "W4")	= 3			

¹⁾ Locating pin 3 x 8 DIN EN ISO 8752, Material No. 00005694 (separate order)

For preferred types see page 4, are readily available.



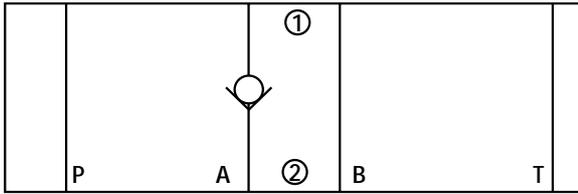
© 2002
by Bosch Rexroth AG, Industrial Hydraulics, D-97813 Lohr am Main

All rights reserved. No part of this document may be reproduced or stored, processed, duplicated or circulated using electronic systems, in any form or by any means, without the prior written authorisation of Bosch Rexroth AG. In the event of contravention of the above provisions, the contravening party is obliged to pay compensation.

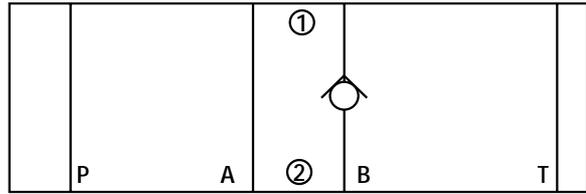
This document was prepared with the greatest of care, and all statements have been examined for correctness. This document is subject to alterations for reason of the continuing further developments of products. No liability can be accepted for any incorrect or incomplete statements.

Symbols (① = valve side, ② = subplate side)

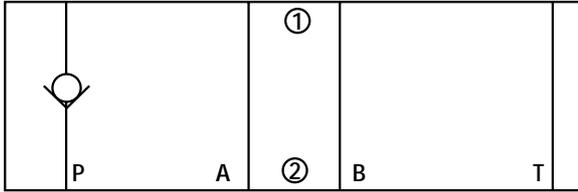
Type Z1S 6 A.-../..



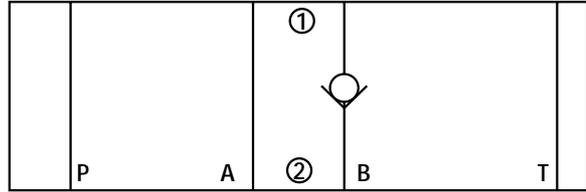
Type Z1S 6 D.-../..



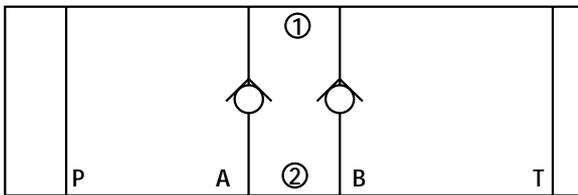
Type Z1S 6 P.-../..



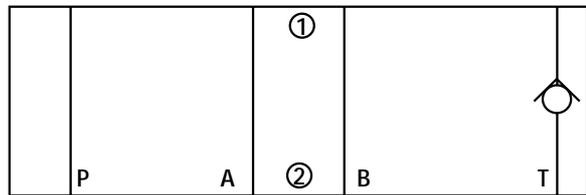
Type Z1S 6 B.-../..



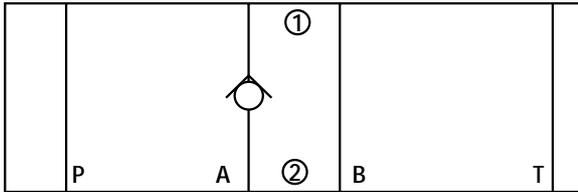
Type Z1S 6 E.-../..



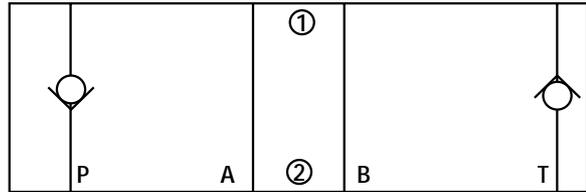
Type Z1S 6 T.-../..



Type Z1S 6 C.-../..



Type Z1S 6 F.-../..



Function, section

The Z1S 6 valve is a direct operated check valve of sandwich plate design.

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

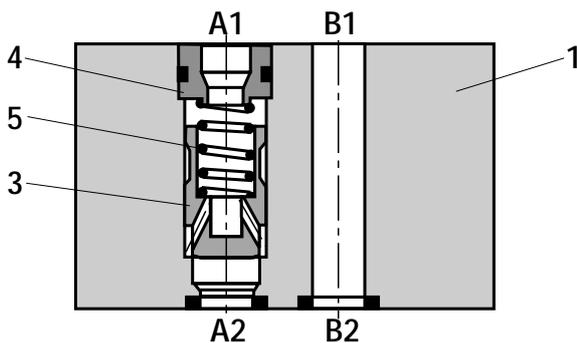
The stroke of the poppet (3) is limited by the spring plate (4). The integrated spring (5) supports the closing action. The spring (5) holds the poppet (3) in the closed position when there is no flow through the valve.

Type Z1S 6 ..-3X/V (with metallic seal)

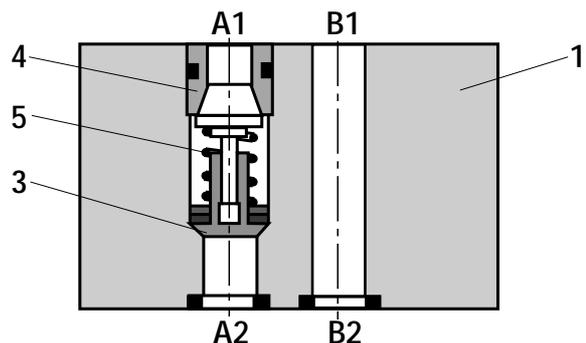
This valve type has a metallic seal between poppet (3) and housing (1). Valves of this design are especially suitable for applications with operating pressures above 100 bar and flow velocities over 4 m/s.

Type Z1S 6 ..-1-3X/VW4 (with soft sea)

This valve type has a soft seal between poppet (3) and housing (1) and seals hermetically. Valves of this design are especially suitable for the applications with flow velocities of up to 4 m/s and low operating pressures.



Type Z1S 6 A1-3X/V

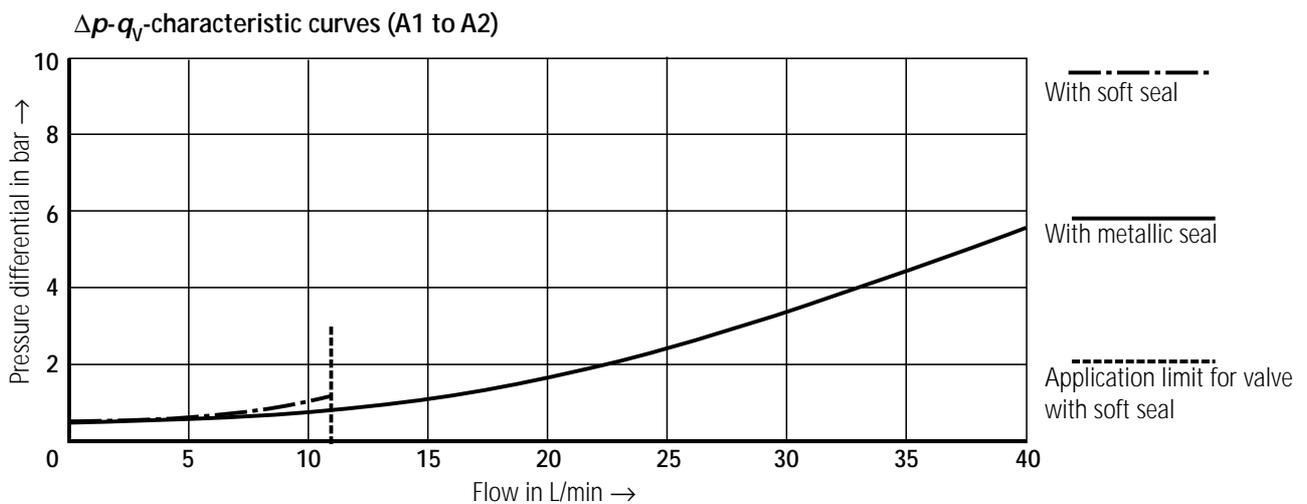


Type Z1S 6 A1-3X/VW4

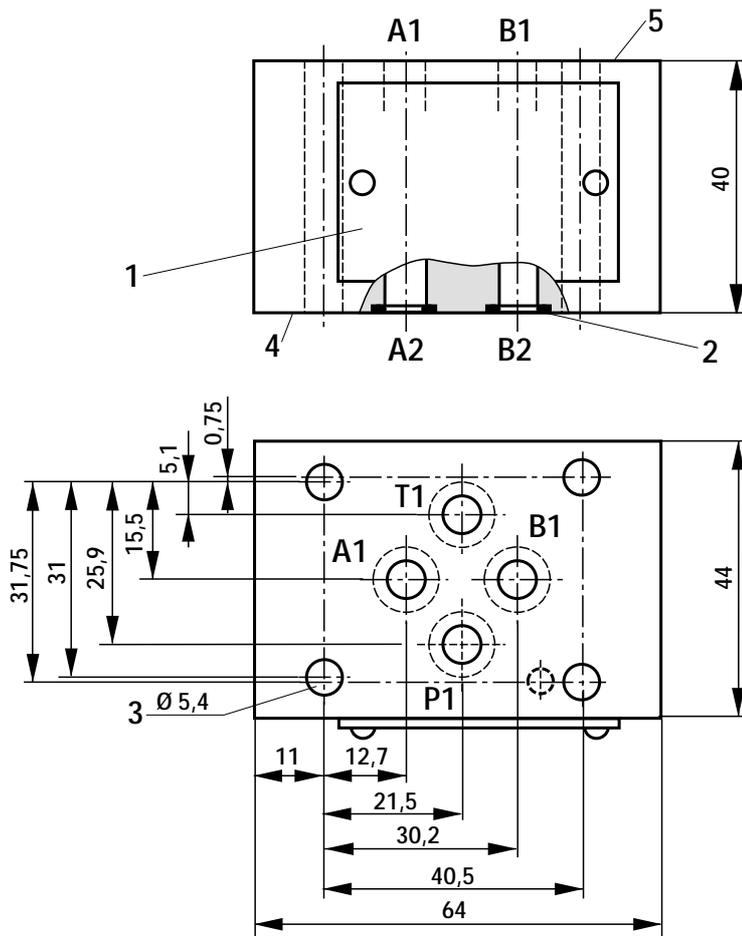
Technical data (for applications outside these parameters, please consult us!)

General		
Installation		Optional
Ambient temperature range	°C	- 20 to + 80
Weight	kg	0.8
Hydraulic		
Maximum operating pressure	bar	315
Opening pressure	- Metallic seal	bar 0.5; 3; 5
	- Soft seal	bar 0.5
Maximum flow	L/min	40
Flow velocities	- Metallic seal	m/s > 4
	- Soft seal	m/s < 4
Pressure fluid		Mineral oil (HL, HLP) to DIN 51 524; Fast bio-degradable pressure fluids to VDMA 24 568 (also see RE 90 221); HETG (rape seed oil); HEPG (polyglycols); HEES (synthetic ester); other pressure fluids on request
Pressure fluid temperature range	°C	- 20 to + 80
Viscosity range	mm ² /s	2.8 to 500
Degree of contamination		Maximum permissible degree of contamination of the pressure fluid is to NAS 1638 class 9. We therefore recommend a filter with a minimum retention rate of $\beta_{10} \geq 75$.

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



Unit dimensions (dimensions in mm)



- 1 Name plate
- 2 Seal ring
- 3 Valve fixing holes
- 4 Porting pattern to ISO 4401 and CETOP-RP 121 H, **with** locating pin hole, $\varnothing 3 \times 5$ mm deep for locating pin $\varnothing 3 \times 8$ mm, DIN EN ISO 8752, Material No. 00005694 (separate order)
- 5 Porting pattern to ISO 4401 and CETOP-RP 121 H, **with** locating pin hole, $\varnothing 4 \times 4$ mm deep

Valve fixing screws

M5 DIN 912-10.9,
Tightening torque $M_A = 8.9$ Nm,
must be ordered separately.

Preferred typed (readily available)

Type	Material No.	Type	Material No.
Z1S 6 C1-3X/V	00417570	Z1S 6 P1-3X/V W4	00457785
Z1S 6 D1-3X/V	00417573	Z1S 6 P2-3X/V	00335004
Z1S 6 E1-3X/V	00417574	Z1S 6 T1-3X/V	00417569
Z1S 6 F1-3X/V	00417575	Z1S 6 T2-3X/V	00489067
Z1S 6 P1-3X/V	00417568	Z1S 6 T3-3X/V	00488332

Preferred types and standard components are highlighted in the RPS (Standard Price list).

Bosch Rexroth AG Industrial Hydraulics

D-97813 Lohr am Main
Zum Eisengießer 1 • D-97816 Lohr am Main
Telefon 0 93 52 / 18-0
Telefax 0 93 52 / 18-23 58 • Telex 6 89 418-0
eMail documentation@boschrexroth.de
Internet www.boschrexroth.de

Bosch Rexroth Limited

Cromwell Road, St Neots,
Cambs, PE19 2ES
Tel: 0 14 80/22 32 56
Fax: 0 14 80/21 90 52
E-mail: info@boschrexroth.co.uk

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. It must be remembered that our products are subject to a natural process of wear and ageing.