

RE 21 553/02.03

Replaces: 06.02

**Check valve,
hydraulically pilot operated
Type Z2S 10**

Nominal size 10

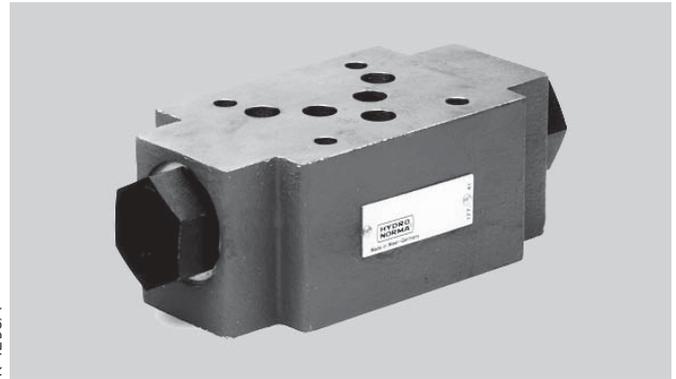
Series 3X

Maximum operating pressure 315 bar

Maximum flow 120 L/min

Overview of contents

Contents	Page
Features	1
Ordering details, preferred types	1
Symbols, function, section	2
Technical data, characteristic curves	3
Unit dimensions	4



K 4258/1

Type Z2S 10-1-3X/...

Features

- Sandwich plate valve, porting pattern to DIN 24 340 form A, ISO 4401 and CETOP – RP 121 H
- For the leak-free closure of one or two actuator ports
- For use in vertical stacking assemblies
- 4 different opening pressures, optional

Ordering detailsSandwich plate
check valve, NS 10

Z2S 10		- 3X/	*
--------	--	-------	---

Leak-free closure of ports A and B	= -
Leak-free closure of port A	= A
Leak-free closure of port B	= B
Opening pressure 1.5 bar	= 1
Opening pressure 3 bar	= 2
Opening pressure 6 bar	= 3
Opening pressure 10 bar	= 4

No code =

V =

3X =

Further details in clear text

NBR seals

FKM seals

(other seals on request)

⚠ Attention!The compatibility of the seals and pressure
fluid has to be taken into account!

Series 30 to 39

(30 to 39: unchanged installation and connection dimensions)

Preferred types (readily available)

Type	Material No.	Type	Material No.
Z2S 10 -1-3X/	R900407394	Z2S 10A1-3X/	R900407424
Z2S 10 -2-3X/	R900421985	Z2S 10B1-3X/	R900407434

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



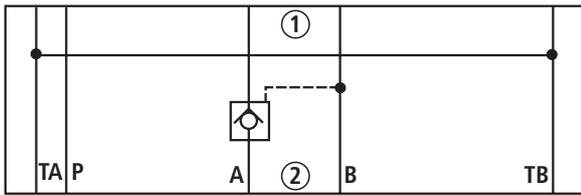
© 2003

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

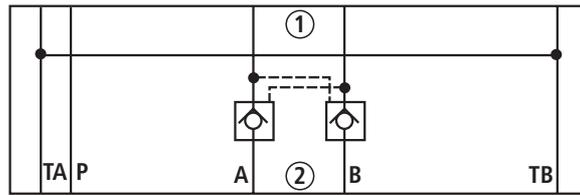
All rights reserved. No part of this document may be reproduced or stored, processed, duplicated or circulated using electronic systems, in any form or by means, without the prior written authorisation of Bosch Rexroth AG. In the event of contravention of the above provisions, the contravening party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

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

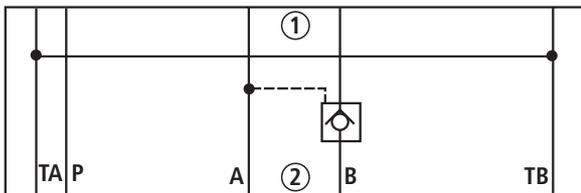
Type Z2S 10 A.-3X/...



Type Z2S 10 -.3X/...



Type Z2S 10 B.-3X/...



Function, section

The hydraulic pilot operated check valve type Z2S is of sandwich plate design.

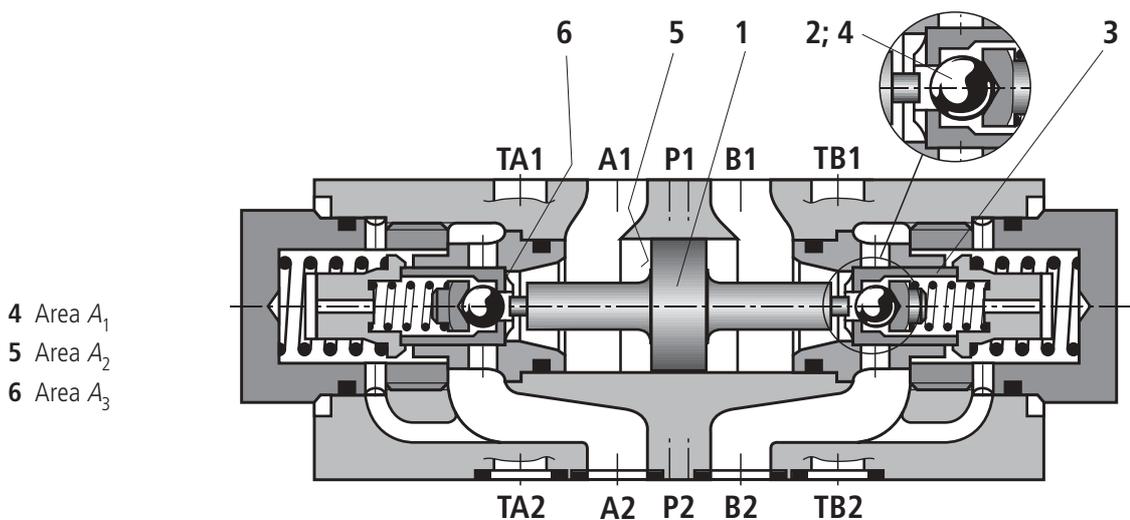
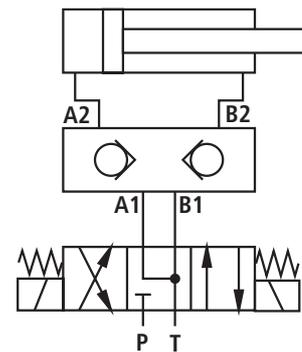
It is used for the leak-free closure of one or two actuator ports, even for long periods of time.

Free-flow occurs from A1 to A2 or B1 to B2, flow in the opposite direction is blocked.

When fluid flows through the valve from A1 to A2, pressure is applied to the spool (1) which is then pushed to the right, thereby opening the ball poppet valve (2) which then pushes open the sleeve (3).

In order to ensure correct closing of the valve, the actuator ports of the directional valve must be connected to tank in the neutral position (see circuit example).

Circuit example



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

General

Installation		Optional
Ambient temperature range	°C	− 30 ... + 80 (NBR seals)
	°C	− 20 ... + 80 (FKM seals)
Weight	kg	Approx. 3

Hydraulic

Maximum operating pressure	bar	315
Maximum flow	L/min	120
Flow direction		See symbols
Opening pressure in the free-flow direction		See characteristic curves
Area ratio	L/min	$A_1 / A_2 = 1 / 11,45$; $A_3 / A_2 = 1 / 2,86$ (see sectional drawing on page 2)
Pressure fluid		Mineral oil (HL, HLP) to DIN 51 524 ¹⁾ ; Fast bio-degradable pressure fluids to VDMA 24 568 (also see RE 90 221); HETG (rape seed oil) ¹⁾ ; HEPG (polyglycols) ²⁾ ; HEES (synthetic ester) ²⁾ ; other pressure fluids on request
Pressure fluid temperature range	°C	− 30 ... + 80 (NBR seals)
	°C	− 20 ... + 80 (FKM seals)
Viscosity range	mm ² /s	2.8 ... 500
Cleanliness class to ISO code		Maximum permissible degree of contamination of the pressure fluid is to ISO 4406 (C) class 20/18/15 ³⁾

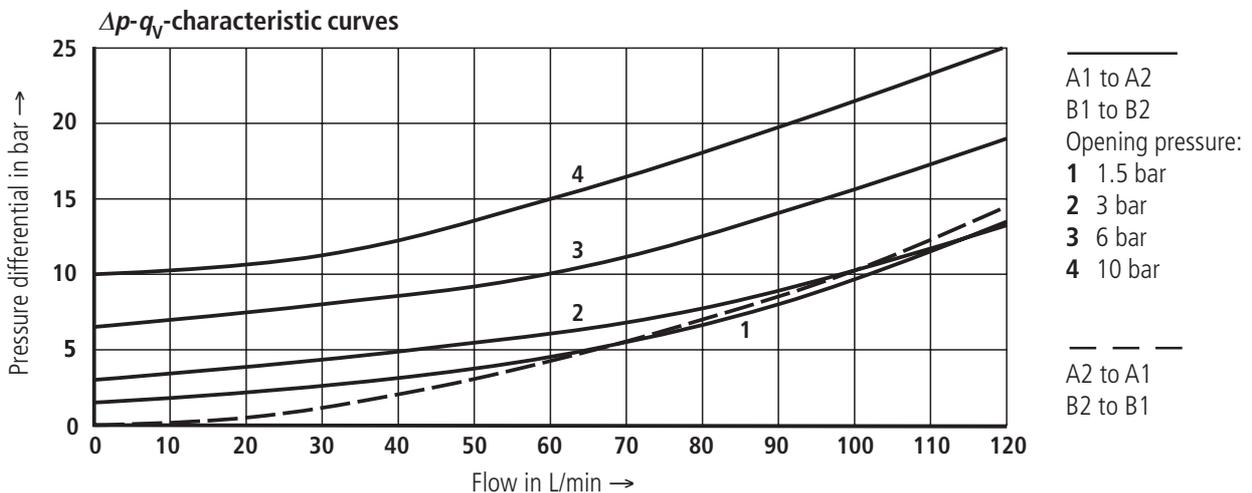
1) Suitable for NBR **and** FKM seals

2) **Only** suitable for FKM seals

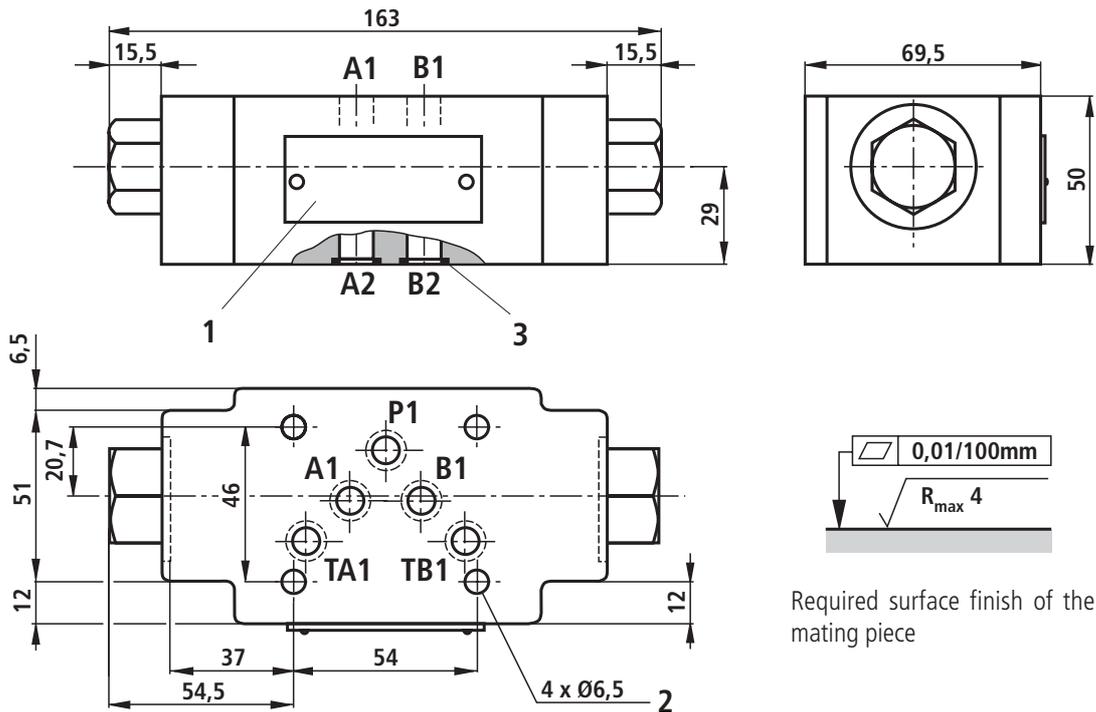
3) The cleanliness class stated for the components must be adhered too in hydraulic systems. Effective filtration prevents faults from occurring and at the same time increases the component service life.

For the selection of filters see catalogue sheets RE 50 070, RE 50 076 and RE 50 081.

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



Unit dimensions (dimensions in mm)



- 1 Name plate
- 2 4 through drillings for valve fixing screws
- 3 Same seal rings for ports A2, B2, P2, TA2, TB2

Valve fixing screws M6 DIN 912–10.9,
 $M_A = 15.5$ Nm, must be ordered separately!

⚠ Attention!

If X and Y ports are needed (e.g. for a NS 10 pilot operated directional valves) then the **SO30** version is required!

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
 eMail: info@boschrexroth.co.uk

The data specified above only serves to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The details stated do not release you from the responsibility for carrying out your own assessment and verification. It must be remembered that our products are subject to a natural process of wear and ageing.