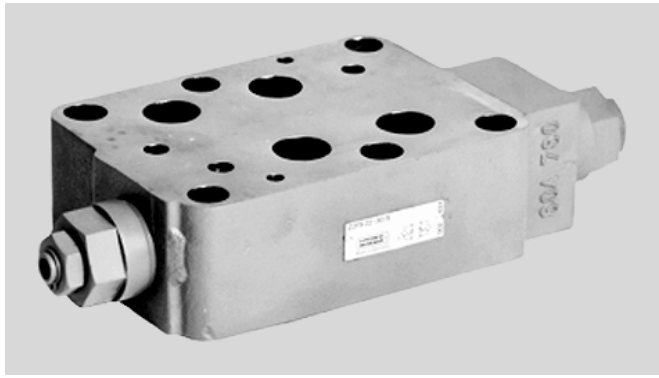
RE 27 536/04.02

Replaces: 05.92

Double throttle check valve Type Z2FS 22

Nominal size 25
Series 3X
Maximum operating pressure 350 bar
Maximum flow 360 L/min



K 3210/10

Type Z2FS 22-3X/...

Overview of contents

Features

- Sandwich plate design
- For limiting the main or pilot flow of two actuator ports
- For meter-in or meter-out control
- Porting pattern to DIN 24 340 form A, ISO 4401 and CETOP–RP 121 H

Ordering details

Z2FS	22–3X/		*

Double throttle check valve

Nominal size 25 = **22**

Series 30 to 39 = **3X**
(30 to 39: unchanged installation and connection dimensions)

Meter-in control = **S**
Meter-out control = **S2**

Further details in clear text

No code = NBR seals
V = FKM seals
(other seals on request)

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

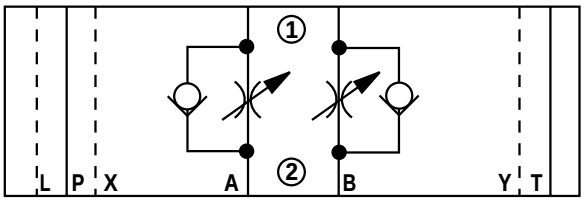
Preferred types (readily available)

Type	Material No.
Z2FS 22 -3X/S	00456783
Z2FS 22 -3X/S2	00443176

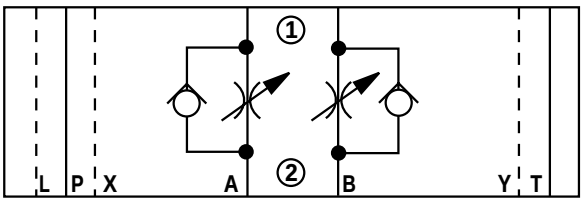
Preferred types and standard components are highlighted in the RPS (standard price list) .

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

Z2FS 22…–3X/S.. (meter-in control)



Z2FS 22…–3X/S2.. (meter-out control)



Function, section

The type Z2FS 22 valves are double throttle check valves of sandwich plate design.

They serve to limit a main or pilot flow in one or two actuator ports.

Two symmetrically arranged throttle check valve limit flow (by means of adjustable throttling spools) in one direction and give free return flow in the other

With meter-in control, fluid is fed via port A over the throttle area (1) to the actuator. The throttling spool (4.1) can be axially moved by means of the setting screw (5) and thus the throttle position (1) can be adjusted.

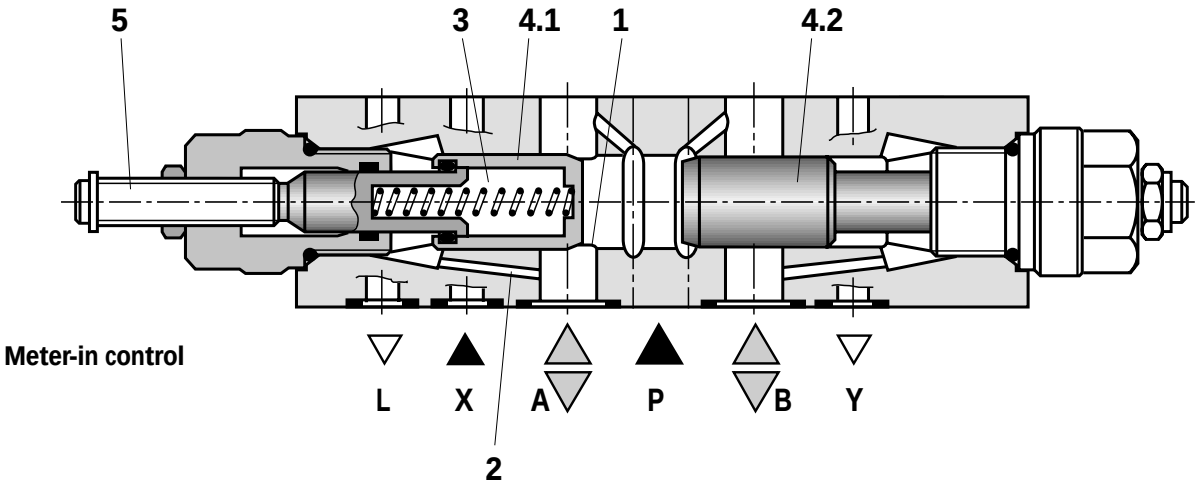
At the same time the pressure fluid within port A is applied to the spring loaded side (3) of the throttle spool (4.1) via a channel (2). The applied pressure, in addition to the spring force, holds the throttle spool (4.1) in the throttle position.

The pressure fluid returning from the actuator moves the throttle spool (4.2) and thereby permits free-flow via the valve which is now operating as a check valve.

Depending on the model (S or S2) the throttle effect may be either in meter-in or meter-out.

Main flow limiting

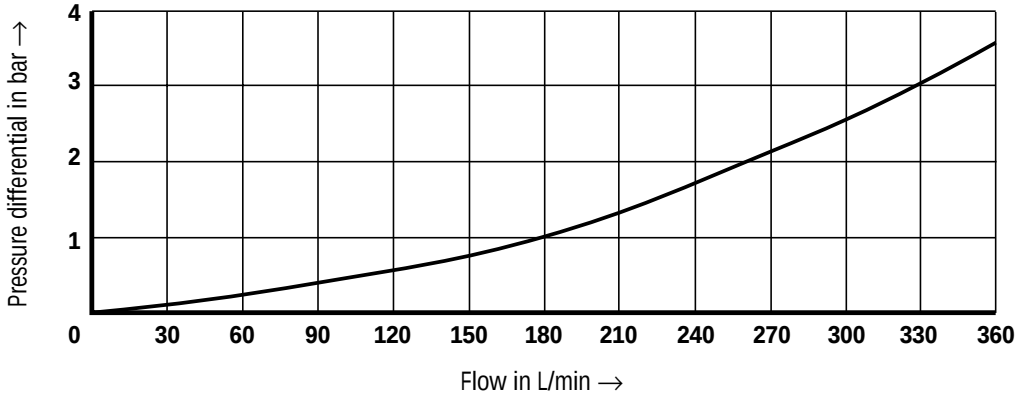
In order to vary the speed of the actuator (main flow limiting), the double throttle check valve is mounted between the directional valve and the subplate.



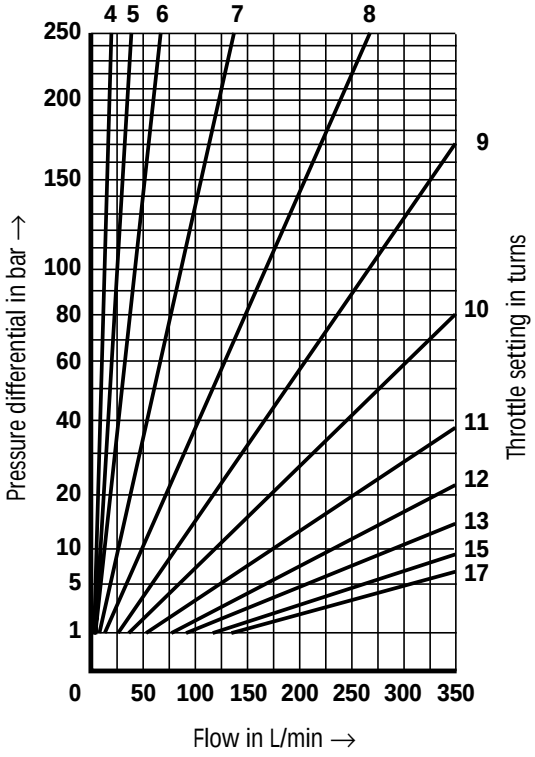
Technical data (for applications outside these parameters, please consult us!)

Installation		Optional
Ambient temperature range	°C	– 30 to + 50 (NBR seals)
		– 20 to + 50 (FKM seals)
Weight	kg	Approx. 8
Maximum operating pressure	bar	350
Maximum flow	L/min	360
Pressure fluid [1] Suitable for NBR **and** FKM seals [2] **Only** suitable for FKM seals		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 to + 80 (NBR seals)
		– 20 to + 80 (FKM seals)
Viscosity range	mm^2/s	2.8 to 380
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 of $\beta_{10} \geq 75$.

Characteristic curves (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C)

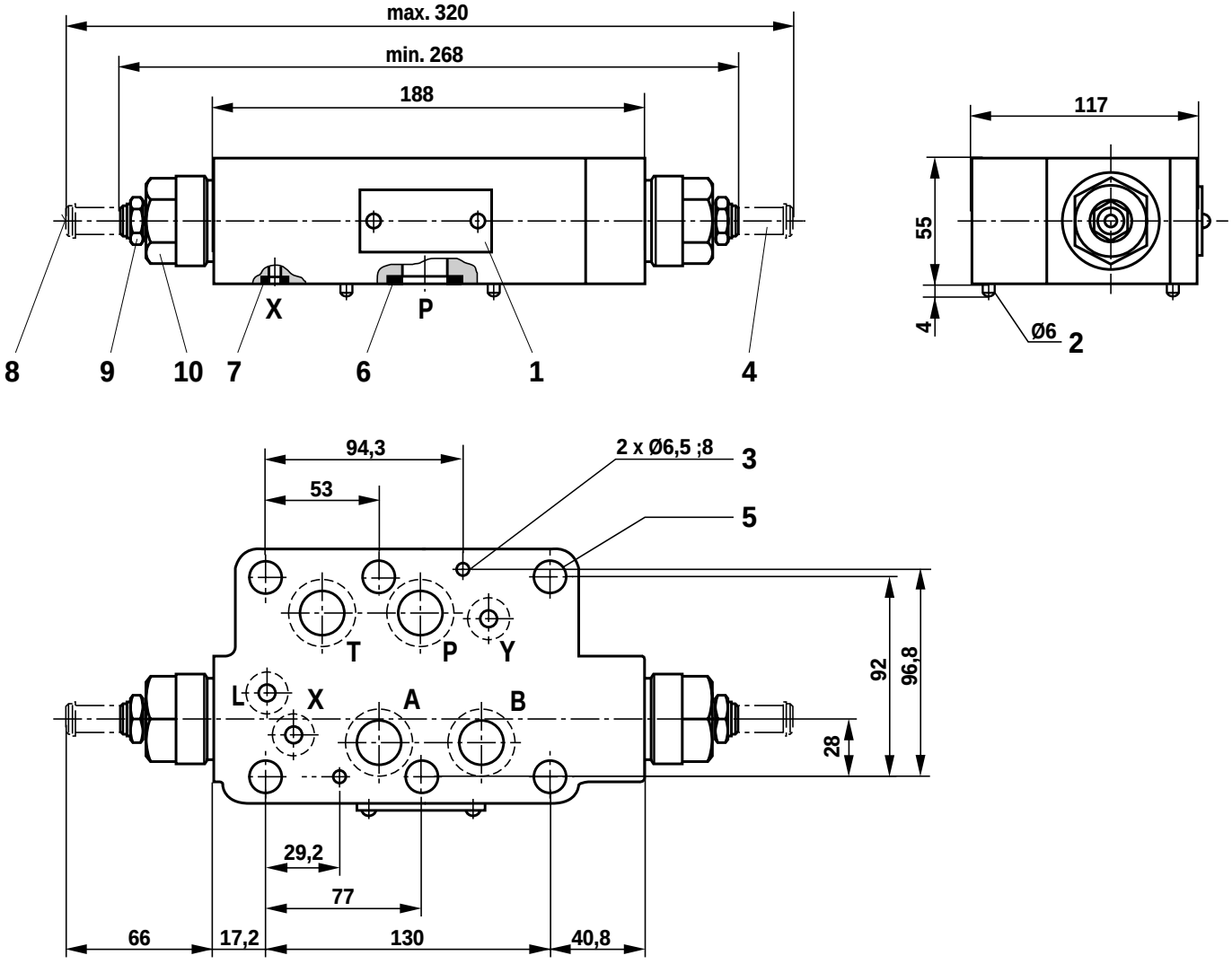


Pressure differential Δp in relationship to the flow q_V via the check valve, with the throttle closed.



Pressure differential Δp in relationship to the flow q_V at a constant throttle setting.

Unit dimensions (dimensions in mm)



1 Name plate

2 Locating pins

3 2 holes for locating pins

4 Setting screw for changing the flow cross-section
- Anti-clockwise = larger flow
- Clockwise = smaller flow

5 6 holes for valve fixing

6 Same seals for ports A, B, P and T

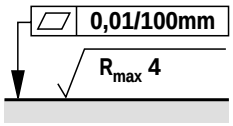
7 Same seals for ports X, Y and L

8 Internal hexagon 6 A/F

9 Hexagon 22 A/F

10 Hexagon 32 A/F

Valve fixing screws
M14 DIN 912-10.9,
Tighening torque M_A = 205 Nm,
must be separately ordered.



Required surface finish of mating piece

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