

Electric Drives  
and Controls

Hydraulics

Linear Motion and  
Assembly Technologies

Pneumatics

Service

**Rexroth**  
Bosch Group

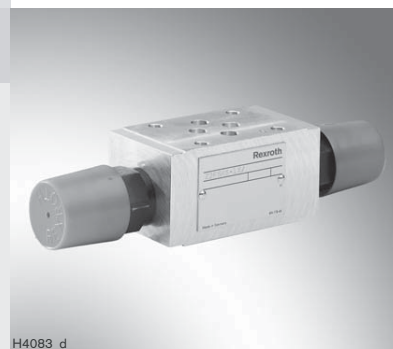
## Double throttle check valve

RE 27510/05.06  
Replaces: 11.02

1/4

### Type Z2FSK 6

Size 6  
Component series 1X  
Maximum operating pressure 210 bar  
Maximum flow 40 l/min



H4083\_d

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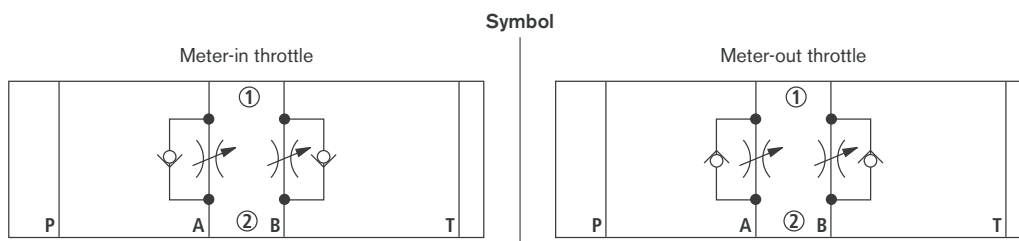
### Features

<b>Page</b>	– Sandwich plate valve
1 and 2	– Porting pattern to ISO 4401-03-02-0-05
2	– Type of adjustment:
2	Hexagon socket head cap screw with locknut and protective cap
3	– For limiting the flow in 2 actuator ports
3	– For meter-in or meter-out throttling
4	

## Ordering code, symbols (① = component side, ② = plate side)

Material no. R900564521

Type designation: Z2FSK 6-2-1X/2QV



## Function, section

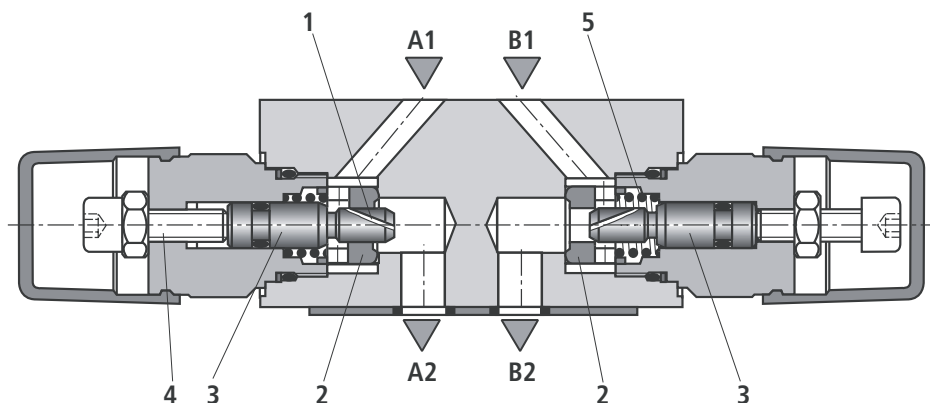
Valves of type Z2FSK 6 are double throttle check valves of sandwich plate design.

They are used for limiting the flow in two actuator ports.

Two symmetrically arranged throttle check valves limit the flow in one direction and allow free flow in the reverse direction.

In the case of meter-in throttling, the hydraulic fluid is fed through channel A1 via throttling point (1), which is formed by valve seat (2) and throttling spool (3), to actuator A2. Throttling spool (3) can be axially adjusted by means of set screw (4) and therefore allows throttling point (1) to be adjusted.

The hydraulic fluid returning from actuator B2 shifts valve seat (2) against spring (5) towards throttling spool (3) and thus allows a free flow of the fluid. Depending on the installation orientation, the throttling effect can be implemented for the supply or the return flow.



Type Z2FSK 6-2-X/2QV  
(meter-in throttle)

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

### General

Weight	kg	approx. 0.5
Installation orientation		Optional
Ambient and storage temperature range	°C	-20 to +80 (FKM seals)

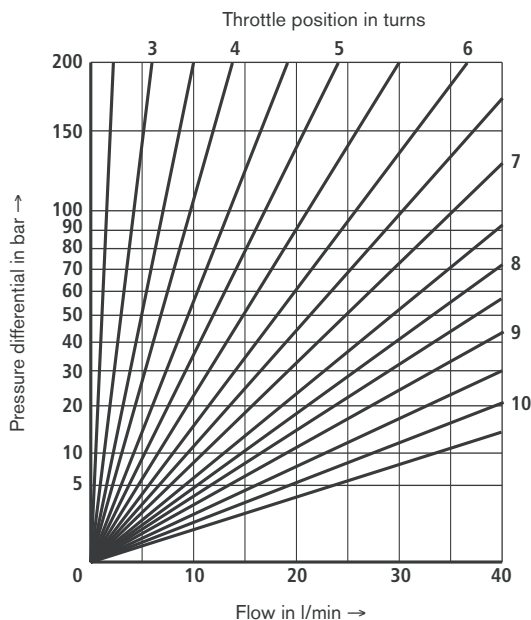
### Hydraulic

Maximum operating pressure	bar	210
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 (FKM seals)
Viscosity range	mm <sup>2</sup> /s	10 to 800
Max. permissible degree of contamination of the hydraulic fluid - cleanliness class to ISO 4406 (c)		Class 20/18/15 <sup>1)</sup>

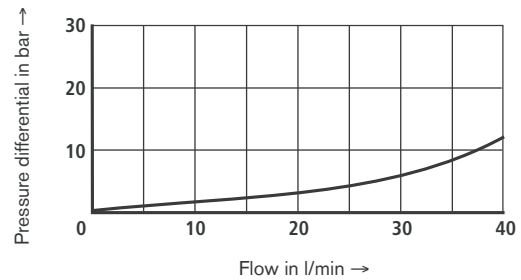
<sup>1)</sup> The cleanliness classes specified for components must be adhered to in hydraulic systems. Effective filtration prevents malfunction and, at the same time, prolongs the service life of components. For the selection of filters, see data sheets RE 50070, RE 50076, RE 50081, RE 50086 and RE 50088.

## Characteristic curves (measured at $v = 41 \text{ mm}^2$ , $\vartheta_{\text{oil}} = 40 \text{ °C} \pm 5 \text{ °C}$ )

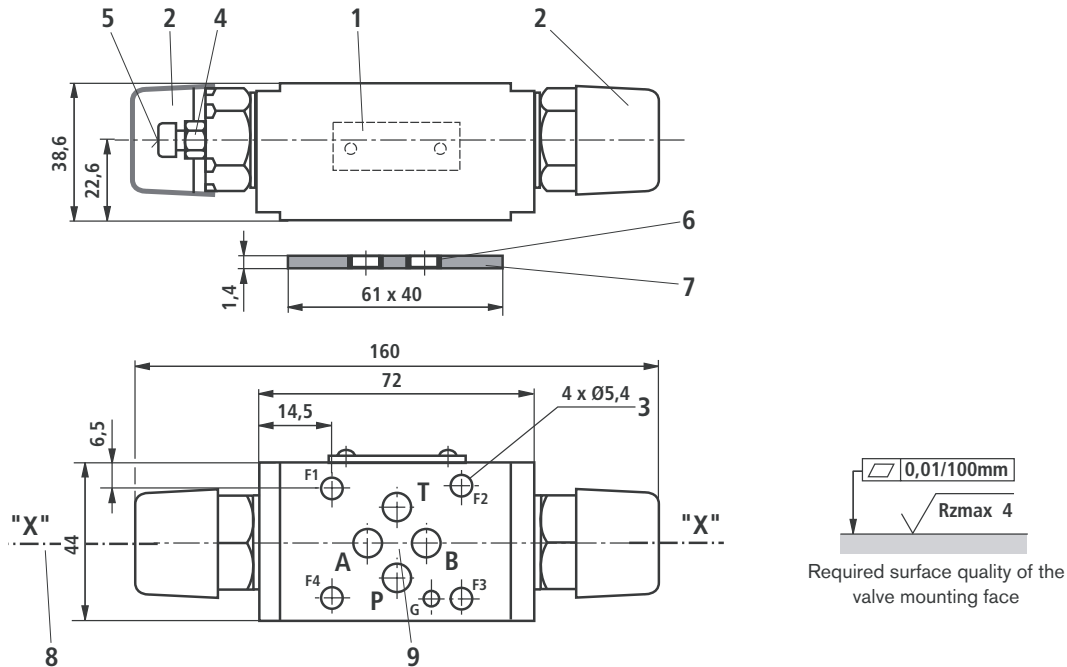
$\Delta p$ - $q_v$  characteristic curves



$\Delta p$ - $q_v$  characteristic curves (throttle closed)



## Unit dimensions (nominal dimensions in mm)



- 1 Nameplate
- 2 Adjustment element (hexagon socket head cap screw with locknut and protective cap)
- 3 Valve mounting bores
- 4 Locknut A/F 10
- 5 Setscrew for changing the flow cross-section (hexagon A/F 5)
- 6 Identical seal rings for ports A, B, P, T
- 7 R-ring plate
- 8 The meter-in throttle can be converted into a meter-out throttle by turning the component around the axis "X"-"X"
- 9 Porting pattern to ISO 4401-03-02-0-05 (with locating bore Ø3 for locating pin ISO 8752-3x8-St, Material no. **R900005694**, separate order)

### Valve fixing screws (separate order)

**4 socket head cap screws ISO 4762 – M5 - 10.9-fIZn-240h-L**  
Friction coefficient  $\mu_{\text{total}} = 0.09$  to 0.14

### Note!

The length of the fixing screws of the sandwich plate valve (screw-in depth  $\geq 10$  mm) must be selected to suit the components installed above and below the double throttle check valve. The type of screw and the tightening torque must be adapted to the individual requirements. Please inquire screws of the required length from Bosch Rexroth.

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