

## Modular Hydraulic Control Check Valve

Model: Z2S16...5X



- ◆ Size 16
- ◆ Maximum working pressure 315 bar
- ◆ Maximum working flow 300L/min

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### Features

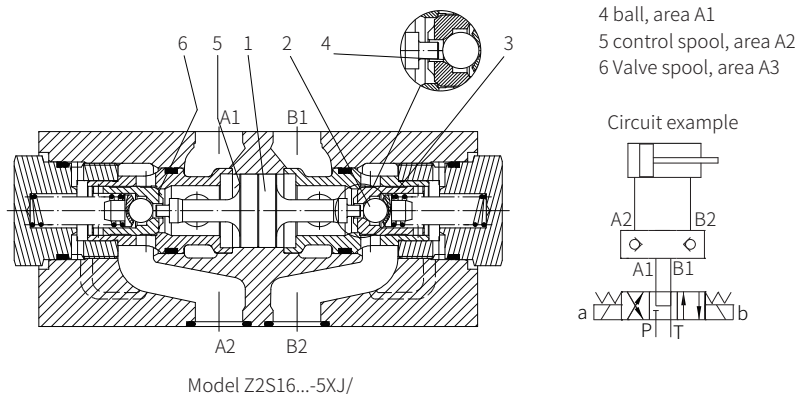
- One or two working ports blocked without leakage
- For vertical installation
- 4 cracking pressures, optional

## Function description, sectional drawing

The Z2S type is a superimposed structure hydraulically controlled check valve. This type of valve can keep one or two working oil ports leakage-free even if it is shut down for a long time.

There is a free flow in the direction A1 to A2 or B1 to B2 but closed in the opposite direction. When the oil flows from A1 to A2, the spool (1) is pushed to the right under pressure, opens the ball valve core (2) and then opens the sleeve valve core (3).

In order to ensure that the valve is closed correctly in the center position, the working oil port of the directional valve must be connected to the tank when it is in the neutral position (see circuit example).



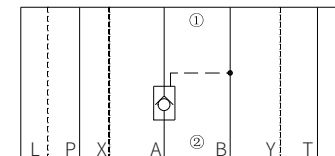
## Models and specifications

Z2S 16 - 5X		50 to 59 series	
modular hydraulic control check valve		No code= sealing material NBR seals FKM seals (consult for other seals)	
size 16	=16	5X= 50 to 59 series (50 to 59 series installation and connection size unchanged)	
leakage-free blocking in oil ports A and B	=-		
oil port A	=A		
oil port B	=B		
cracking pressure 3 bar	=1		
cracking pressure 5 bar	=2		
cracking pressure 7.5 bar	=3		
cracking pressure 10 bar	=4		

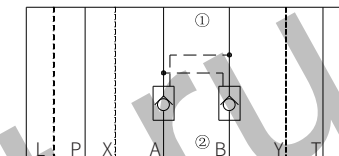
## Functional symbols

(①= Valve side, ②= Subplate side)

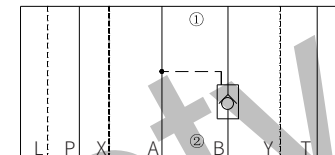
Model Z2S16A-...



Model Z2S16-...



Model Z2S16B-...



## Technical parameters

Overview	
Installation position	Optional
Environmental temperature range	°C -30 to +80 (NBR seal) -20 to +80 (FKM seal)
weight	kg About 6.5
Hydraulic	
Maximum working pressure	bar 315
Maximum flow	L/min 300
Flow direction	See the symbol
Cracking pressure in free flow direction	See characteristic curve
Area ratio	L/min A1/A2=1/11.8; A3/A2=1/2.8 (See section view above)
Pressure medium	Mineral oil (HL, HLP) <sup>1)</sup> in accordance with DIN 51524; Fast living organisms degraded oil according to VDMA 24568; HETG (Rapeseed oil) <sup>1)</sup> ; HEPG(Polyethyleneglycol) <sup>2)</sup> ; HEES (Synthetic Fats) <sup>2)</sup>
Pressure medium temperature range	°C -30 to +80 (NBR seal) -20 to +80 (FKM seal)
Viscosity range	mm <sup>2</sup> /s 2.8 to 500
Cleanliness of oil	The maximum allowable pollution level of oil is ISO4406 level 20/18/15

1) For NBR seal and FKM seal.

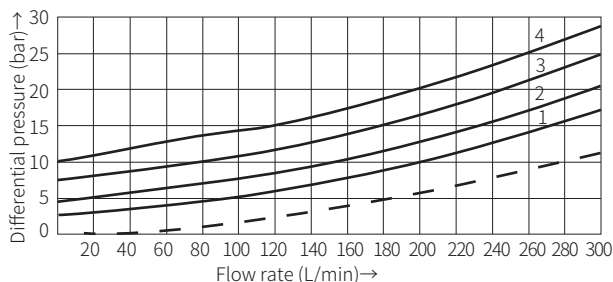
2) Only for FKM seal.

3) The oil must meet the cleanliness degree requested by the components in the hydraulic system. Effective oil filtration can prevent failure and increase the service life of the components.

## Characteristic curve

(Measured when using HLP46,  $\vartheta_{oil}=40^{\circ}\text{C} \pm 5^{\circ}\text{C}$ )

$\Delta p-q_v$  Characteristic curve



— A1 to A2  
B1 to B2

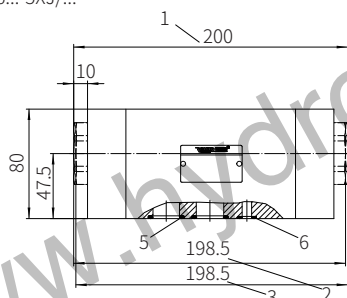
1 Cracking pressure 3bar  
2 Cracking pressure 5bar  
3 Cracking pressure 7.5bar  
4 Cracking pressure 10 bar

----- A2 to A1  
B2 to B1

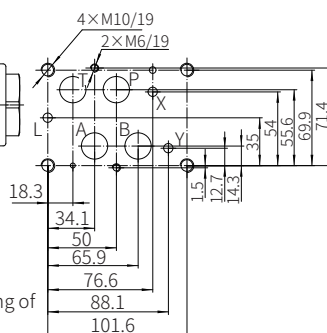
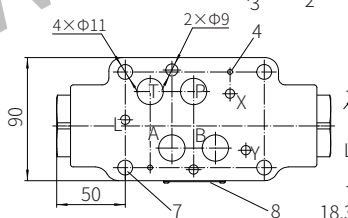
## Component size

Size unit: mm

Model Z2S16...-5XJ/...



- 1 Check valve in ports A and B
- 2 Check valve in port B
- 3 Check valve in port A
- 4 Locating hole
- 5 O-ring 10x2 (for oil port X, Y, L)
- 6 O-ring 22x15 (for oil port A, B, P, T)
- 7 Mounting hole
- 8 Name plate



Required surface finishing of mating components

Valve fixing screw

M6-10.9 grade GB/T70.1-2000

Tightening torque  $M_A=13.7\text{Nm}$

M10-10.9 grade GB/T70.1-2000

Tightening torque  $M_A=60\text{Nm}$

Need to order separately

It must be ordered separately if connection subplate is needed.

Subplate model:

G172/01 (G3/4"); G172/02 (M27x2)

G174/01 (G1"); G174/02 (M33x2)