

1.7

# Check valve

## Type Z1S...30

Sizes 6 to 22  
Up to 315bar  
Up to 400 L/min



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### Features

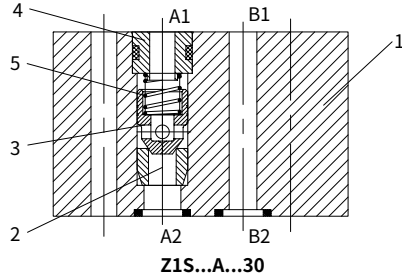
- Sandwich plate valve  
for use in vertical sandwich installation
- 8 different checking functions, optional  
(detail refer to the Ordering code)

## Function and symbols

The Z1S ...valve is a direct operated check valve in sandwich plate design. It mainly consist of the housing(1)and check valve cartridge (2).

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

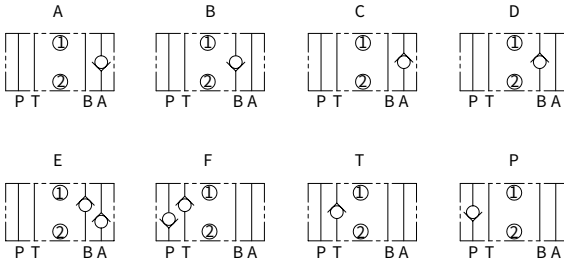
The stroke of the poppet (3) is limited by the spring seat (4). The integrated spring (5) holds the poppet (3) in the closed position.



## Ordering code

Z1S					30	/	*
Sandwich plate check valve		Further details in clear text					
Nominal size 6	= 6	No code = NBR seals					
Nominal size 10	= 10	V = FKM seals					
Nominal size 16	= 16	30= 30 series					
Nominal size 22	= 22	1 = Crack pressure 0.5bar					
Closed in port A (A1 to A2)	=A	2 = Crack pressure 3bar					
Closed in port B (B1 to B2)	=B	3 = Crack pressure 5bar					
Closed in port A (A2 to A1)	=C						
Closed in port B (B2 to B1)	=D						
Closed in ports A and B (A2 to A1) and (B2 to B1)	=E						
Closed in ports P and T (P1 to P2) and (T2 to T1)	=F						
Closed in port P (P1 to P2)	=P						
Closed in port T (T2 to T1)	=T						

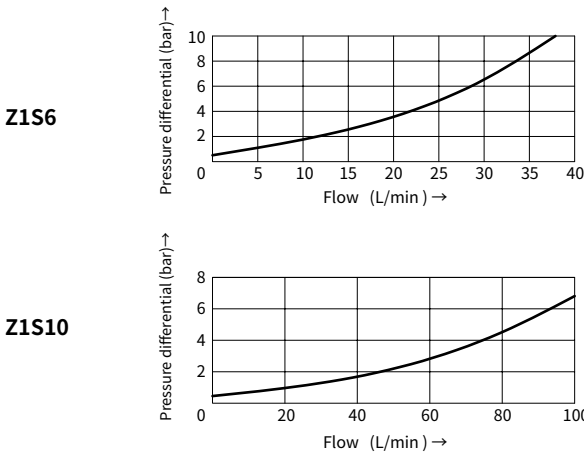
**Symbols** ( ① =valve side, ② = sub-plate side)



**Technical data**

Nominal size		6	10	16	22
Weight	kg	0.8	2.3	8.5	13
Max. flow -rate	L/min	42	100	200	400
Max. operating pressure	bar	To 315			
Crack pressure	bar	0.5, 3, 5			
Viscosity range	mm <sup>2</sup> /s	-2.8 to 500			
Fluid temperature range	°C	-20 to +70			
Fluid		Mineral oil suitable for NBR and FKM seal Phosphate ester for FKM seal			
Degree of contamination		Maximum permissible degree of fluid contamination: Class 9. NAS 1638 or 20/18/15, ISO4406			

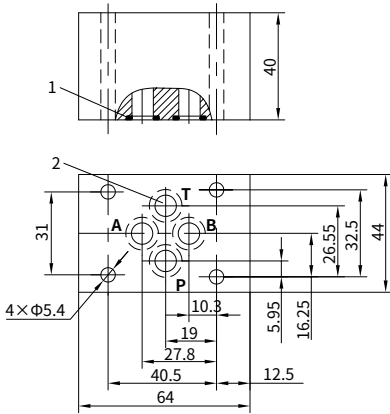
**Characteristic curves** (Measured at  $\theta_{oil}=40^{\circ}\text{C} \pm 5^{\circ}\text{C}$ , using HLP46)



## Unit dimensions (Sizes 6 and 10)

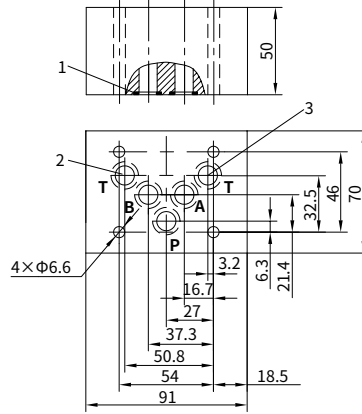
(Dimensions in mm)

**Z1S6**

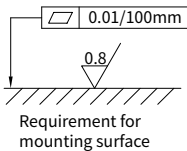
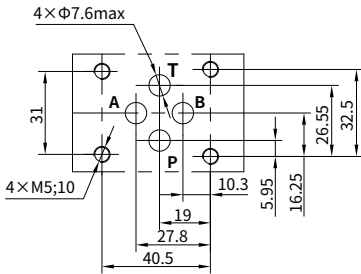


- 1 O-ring 9.25 x 1.78
- 2 Check valve of Z1S6T and Z1S6F are integrated at the line.

**Z1S10**



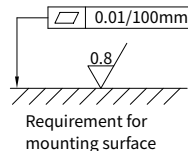
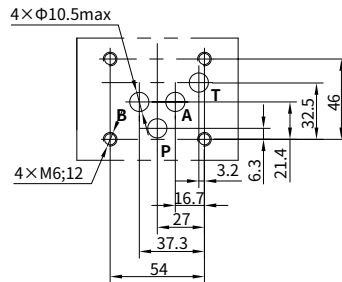
- 1 O-ring 10.82 x 1.78
- 2 Port T of Z1S10T and Z1S10F is blocked.
- 3 Check valves of Z1S10T and Z1S10F are integrated at the line.



It must be ordered separately if connection plate is needed.

Type:

- G341/01(G1/4), G341/02 (M14×1.5)
- G342/01(G3/8), G342/02 (M18×1.5)
- G502/01(G1/2), G502/02 (M22×1.5)



It must be ordered separately if connection plate is needed.

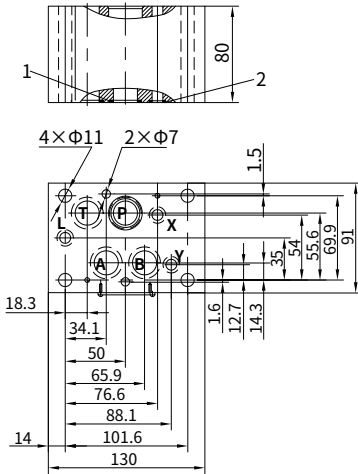
Type:

- G66/01(G3/8), G66/02 (M18×1.5)
- G67/01(G1/2), G67/02 (M22×1.5)
- G534/01(G3/4), G534/02 (M27×2)

# Unit dimensions (Sizes 16 and 22)

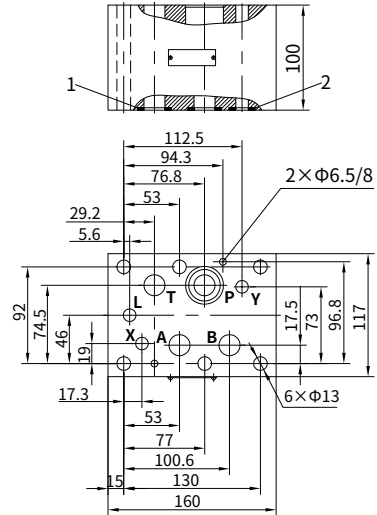
(Dimensions in mm)

**Z1S16**

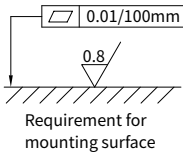
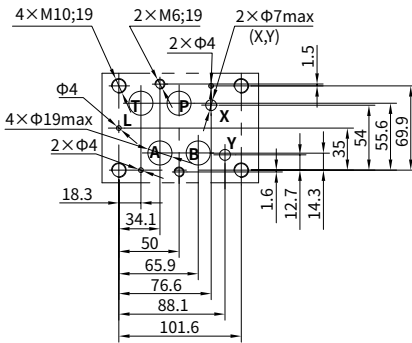


- 1 O-rings 22×2.5 (Ports A, B, P, T)
- 2 O-rings 10×2 (Ports X, Y, L)

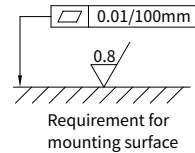
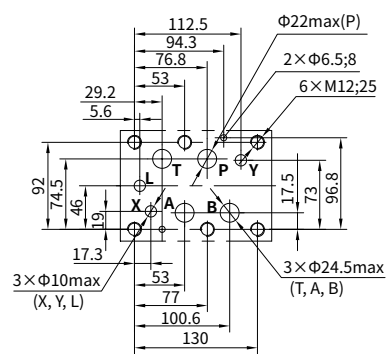
**Z1S22**



- 1 O-rings 27×3 (Ports A, B, P, T)
- 2 O-rings 19×3 (Ports X, Y, L)



It must be ordered separately if connection plate is needed.  
 Type: G172/01(G3/4), G172/02(M27×2)  
 G174/01(G1), G172/02 (M33×2)



It must be ordered separately if connection plate is needed.  
 Type: G153/01(G1), G153/02 (M33×2)  
 G154/01(G11/4), G154/02 (M42×2)  
 G156/01(G11/2), G156/02 (M48×2)

**China**

+86 400 101 8889

**America**

+01 630 995 3674

**Germany**

+49 172 3683463

**Japan**

+81 03 6809 1696



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