

## Modular Two Ways Flow Control Valve

Model: Z2FRM6...2X



**ГИДРООТВЕТ**  
доступная гидравлика



- ◆ Size 6
- ◆ Maximum working pressure 315 bar
- ◆ Maximum working flow 32 L/min

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### Features

- Modular type valve
- Porting pattern to DIN24340 form A, without locating hole (standard)
- Porting pattern to ISA04401 and CETOP-RP 121H
- With 1 or 2 flow control cartridges
- Internal hexagonal adjusting type

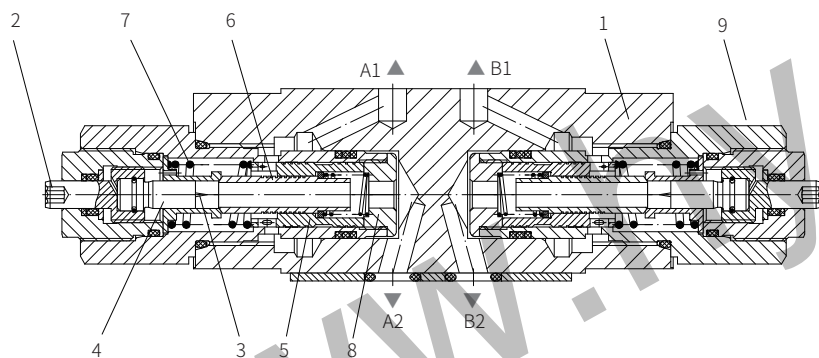
## Function description, sectional drawing

The Z2FRM6 valve is modular type two-way flow control valve and the 2FRM6K valve is cartridge type two-way flow control valve.

The Z2FRM6 flow control valve is used to maintain constant flow and independent of the pressure and temperature. It mainly includes the valve body (1) and one or two flow control valve model 2FRM6K (9).

The throttling of the flow from the oil port A2/B2 (A) to the oil port A1/B1 (B) occurs at the throttle area (3). The throttle rod (4) is driven by the adjustment element (2). In order to keep the flow in the oil port A1/B1(B) constant and independent of pressure, a pressure compensator (5) is required to be installed downstream of the throttle area (3). The compression spring (7) presses the pressure compensator (5) against the plug screw (8) and holds the pressure compensator in the open position when there is no flow through the valve. When the fluid flow through the valve, the pressure at oil port A2/B2(A) acts to the pressure compensator (5). Then the pressure compensator (5) moves until the forces balance. If the pressure on the oil port A2/B2 (A) increases, the pressure compensator (5) moves to the closed direction until force balance is reached again. Because the pressure compensator (5) continuously acts as compensation, the flow can be maintained.

The fluid flows freely from oil port A1/B1 (B) to A2/B2 (A) via check valve (6).



Model Z2FRM6C2-2XJ/...R...

## Models and specifications

### Modular two ways flow control valve model 2FRM6

Z2FRM	6	B	2	2X	R	*
modular two ways flow control valve						more information in text
size 6	=6					sealing material
flow control function (meter-out control) in						No code = NBR seals
oil port A	=A					V= FKM seals
oil port B	=B					(consult for other seals)
oil port A and B	=C					R= with check valve
oil port T	=T					flow A→B 6Q= to 6L/min
without external closing of the pressure compensator	=B					32Q= to 32L/min
internal hexagonal adjusting element	=2					2X= 20 to 29 series
						(20 to 29 series installation and connection size unchanged)

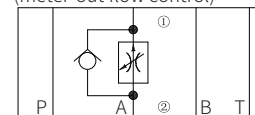
### Flow control valve model 2FRM6K

2FRM	6	K	2	1X	R	*
flow control valve						more information in text
size 6	=6					sealing material
insert cartridge type	=K					No code = NBR seals
internal hexagonal adjusting element	=2					V= FKM seals
						(consult for other seals)
						R= with check valve
10 to 19 series						flow A→B 6Q= to 6L/min
(10 to 19 series installation and connection size unchanged)						32Q= to 32L/min

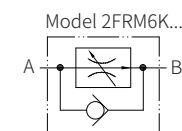
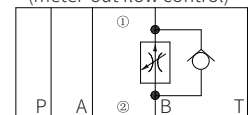
## Functional symbols

(①=Valve side ②=Subplate side)

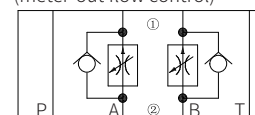
Model Z2FRM6A-...  
(meter-out flow control)



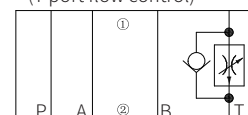
Model Z2FRM6B-...  
(meter-out flow control)



Model Z2FRM6C-...  
(meter-out flow control)



Model Z2FRM6T-...  
(T port flow control)



## Technical parameters

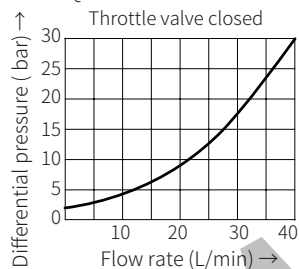
	Modular flow control valve model Z2FRM6	Flow control valve model 2FRM6K
Installation type	Flat installation	installation position: optional
Connection type	Indirect connection via a subplate or oil block, mounting surface according to DIN 24 340A, ISO4401 and CETOP-RP 121H	
weight	kg 1.3 (flow control function at oil ports A, B or T) 1.5 (flow control function at oil ports A and B)	0.2
Maximum working pressure	bar 315	
Working medium	Minerals; Phosphate ester	
Working medium temperature range	°C -20 to +80	
Viscosity range	mm <sup>2</sup> /s 10 to 800	
Flow range	L/min 0.05 to 6; 0.25 to 32	
Cleanliness of oil	The maximum allowable pollution level of oil is ISO4406 Class 20/18/15	
Minimum pressure difference	bar 18 (2FRM6K type flow control valve)	
Pressure stability $\Delta P=315\text{bar}$	% $\pm 3$ (Qmax)	

## Characteristic curve

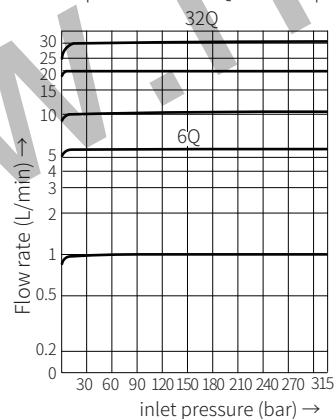
(Measured when using HLP 46,  $\vartheta_{\text{oil}} = 40^\circ\text{C} \pm 5^\circ\text{C}$ )

Modular flow control valve model Z2FRM6

$\Delta P$ -Q- characteristic curve via check valve

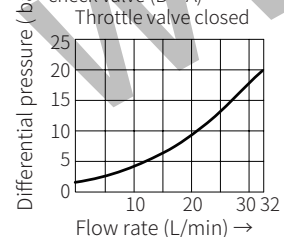


The relationship between flow Q and inlet pressure P



Flow control valve model Z2FRM6K

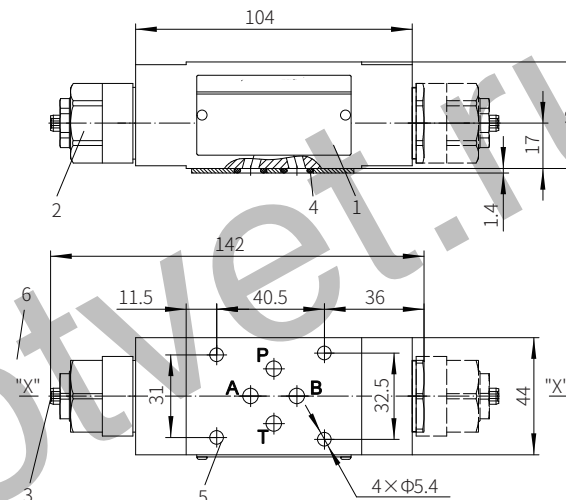
$\Delta P$ -Q- characteristic curve via check valve (B→A)



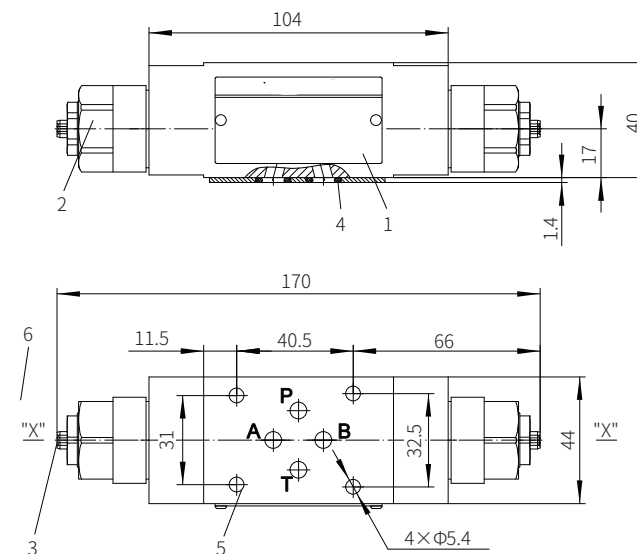
## Component size

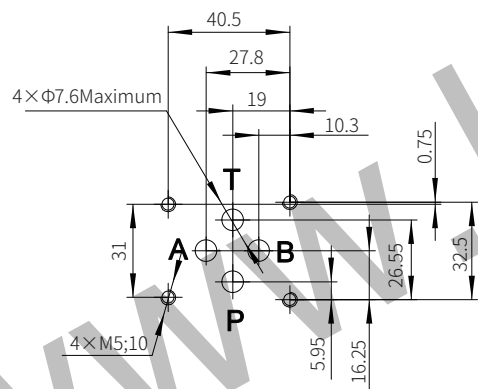
Size unit: mm

Model Z2FRM6A2-2XJ/...R...and Z2FRM6B2-2XJ/...R...

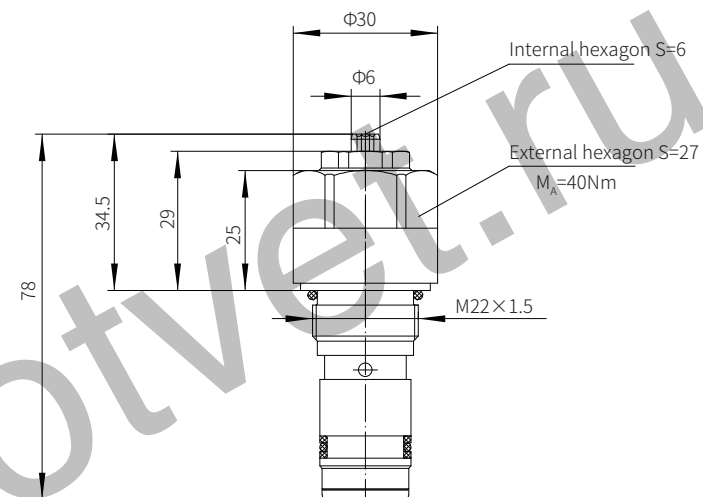


Model Z2FRM6C2-2XJ/...R...





- Valve fixing screw  
Tightening torque  $M_A=7.8\text{Nm}$   
M5-10.9 grade GB/T70.1-2000  
The length is determined by the  
stacking height and must be  
ordered separately



Insert hole

