

## 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

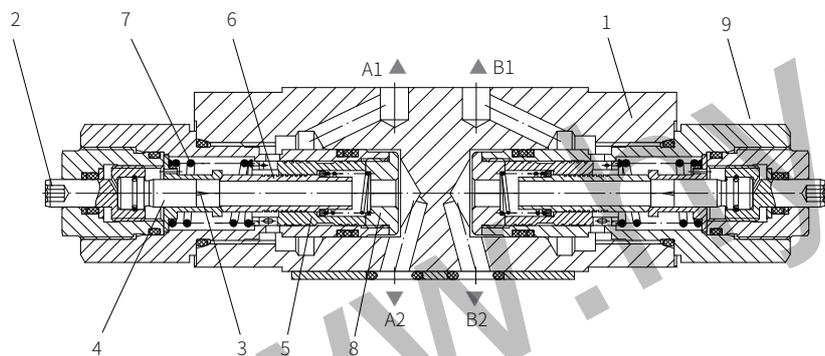
Function description, sectional drawing

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.

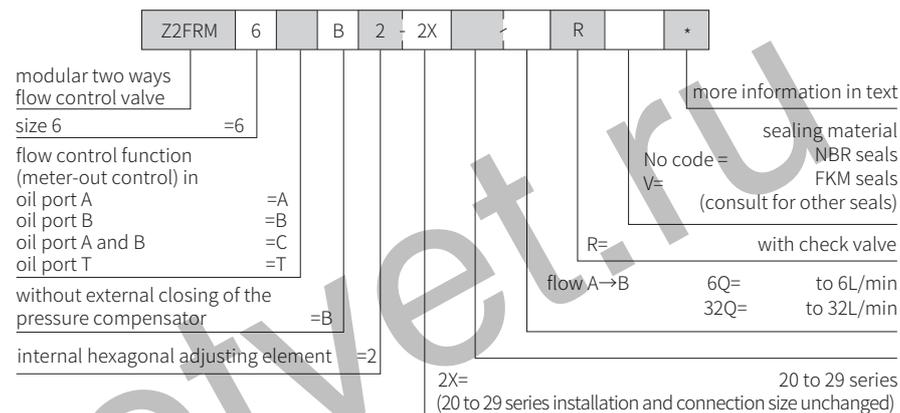
The fluid flows freely from oil port A1/B1 (B) to A2/B2 (A) via check valve (6).



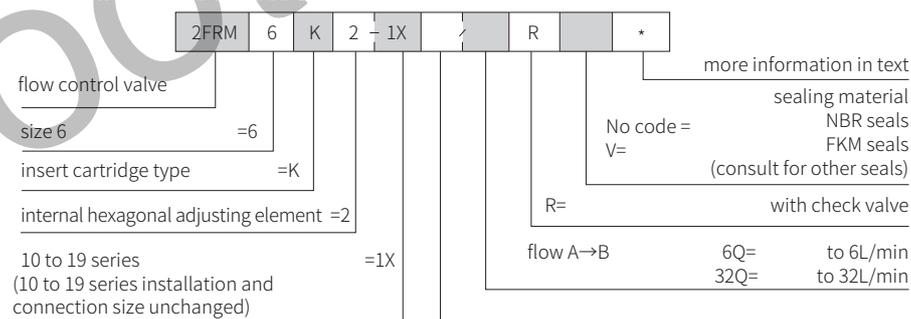
Model Z2FRM6C2-2XJ/...R...

Models and specifications

Modular two ways flow control valve model 2FRM6



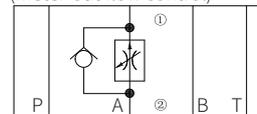
Flow control valve model 2FRM6K



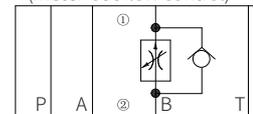
Functional symbols

(①=Valve side ②=Subplate side)

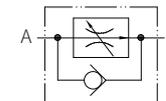
Model Z2FRM6A-... (meter-out flow control)



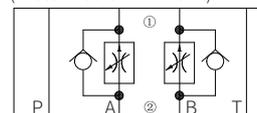
Model Z2FRM6B-... (meter-out flow control)



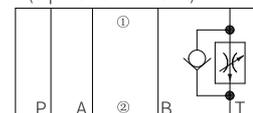
Model 2FRM6K...



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



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



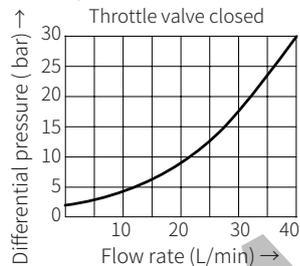
Technical parameters

	Modular flow control valve model Z2FRM6	Flow control valve model Z2FRM6K
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 (Z2FRM6K type flow control valve)	
Pressure stability $\Delta P=315\text{bar}$	% $\pm 3$ (Qmax)	

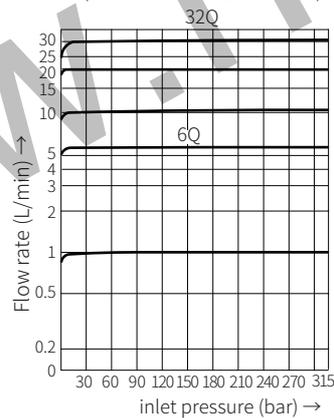
Characteristic curve

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

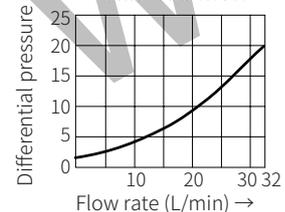
Modular flow control valve model Z2FRM6  
 $\Delta P$ -Q- characteristic curve via check valve



The relationship between flow Q and inlet pressure P



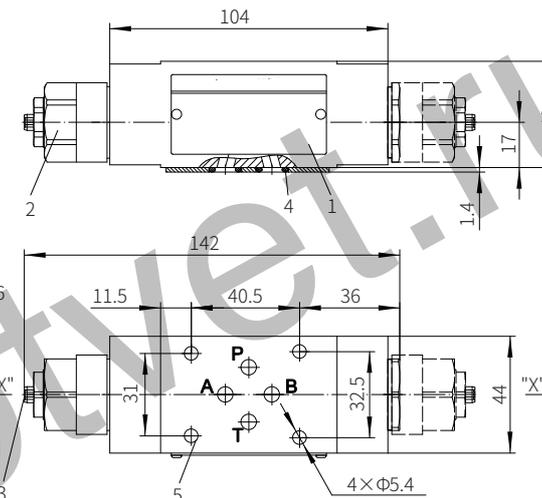
Flow control valve model Z2FRM6K  
 $\Delta P$ -Q- characteristic curve via check valve (B→A)  
Throttle valve closed



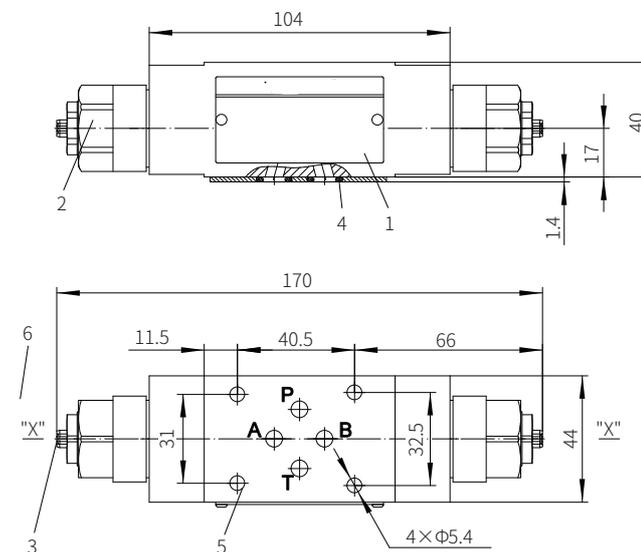
Component size

Size unit: mm

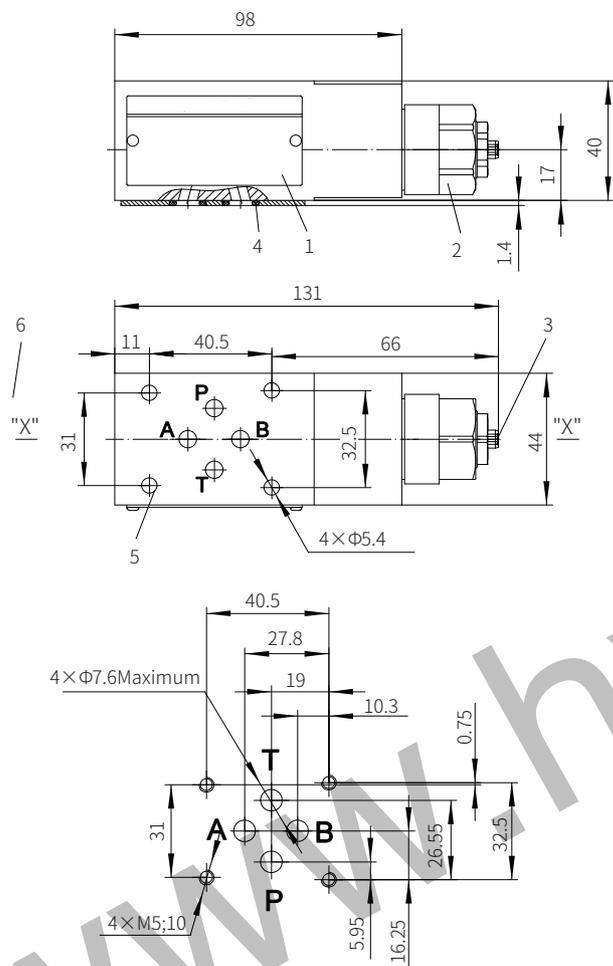
Model Z2FRM6A2-2XJ/...R...and Z2FRM6B2-2XJ/...R...



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



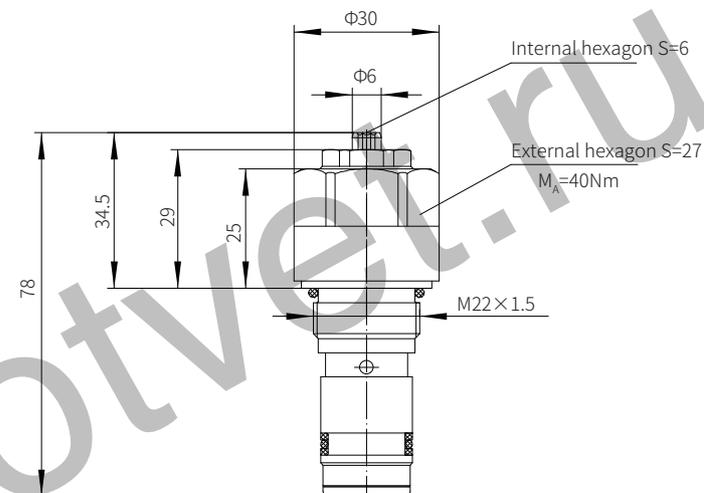
Model Z2FRM6T2-2XJ/...R...



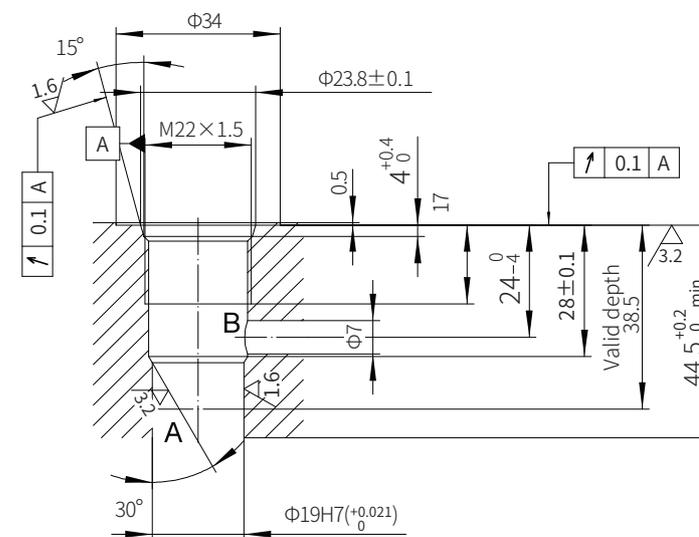
- 1 Name plate
  - 2 Flow control cartridge valve model 2FRM6K
  - 3 Adjustment element, internal hexagon S3
  - 4 O-ring 9.25x1.78
  - 5 Valve fixing screw hole
  - 6 Rotate the valve around the "X" - "X" axis to change it from meter-out to meter-in, and from port T flow control to port P flow control
- 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

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Model 2FRM6K... 1XJ/...



Insert hole



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