



# 2FRM6...type Two Ways Flow Control Valve

2FRM6...type



Size 6

Max. Working Pressure: 315 bar

Max. Flow: 32 L/min

## Contents

Function and configurations	02
Symbols	02
Specifications	03
Technical data	04
Characteristic curves	05
Unit dimensions	06-07

## Features

- For subplates see catalogue
- External closing of the pressure compensator, optional
- Check valve, optional
- Rotary knob with scale, optional lockable

# Function and configurations

2FRM type flow valve is a two-way flow control valve, it is used to maintain a constant flow and is independent of pressure and temperature. It consists of valve housing(1), knob rotary(2), orifice(3), pressure compensator(4), optional check valve(9).

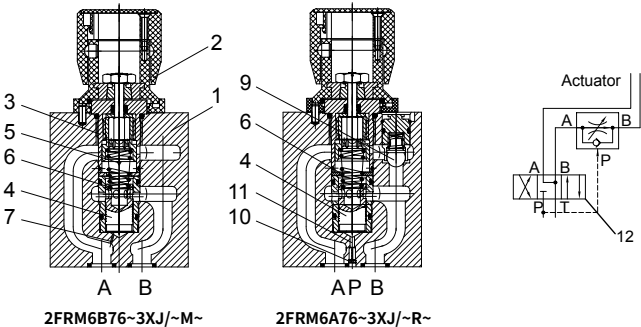
## 2FRM6B~3XJ/~M

Flow from A to B is throttled at throttle channel(5). Throttle cross-section is varied by turning the knob rotary(2). To avoid effects of pressure at port B on constant flow, a compensator(4) is fitted. Spring(6) separately compress the compensator(4) and orifice(3) tightly.

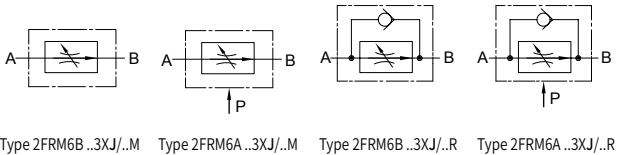
Spring(6) compresses the compensator(4) tightly to maintain it open when no fluid flows through the valve. Once the fluid flows across the valve, the pressure in port A applies a force to pressure compensator(4) via the orifice(7).The pressure compensator(4) moves into the compensating position until the force is balanced. If the pressure in port A rises, the compensator(4) moves to its closing direction until force is balanced again. Due to the compensator(4) continuous action, a constant flow is obtained.

## 2FRM6A~3XJ/~R

The function of this valve is basically the same as that of valve type 2FRM6B~3XJ/~R. However, pressure compensator (4) of this type of valve is connected with port P(11) so that pressure compensator(4) can be closed by external pressure. Any pressure in port P through the orifice (10) can make the compensator (4) closed against the force of compression spring (6) .When the directional valve (12) acts, fluid flows from P to B, control is achieved as type 2FRM6B. This flow controls the valve with the external pressure compensator which can be closed. It only works by controlling the inlet flow.



# Symbols



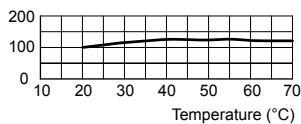
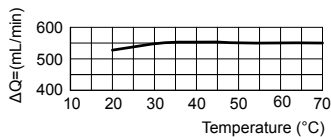
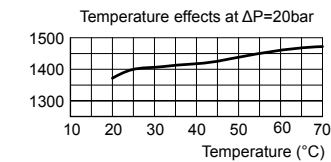
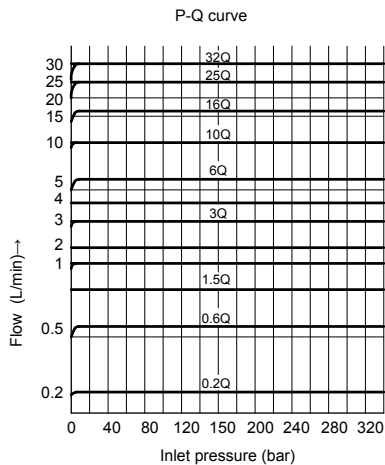
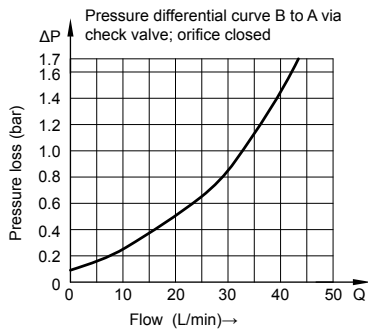
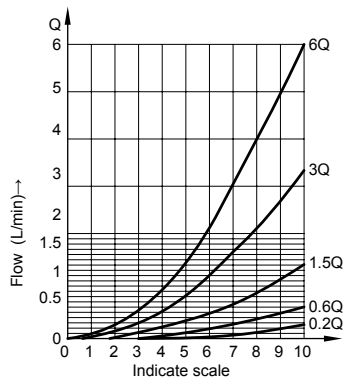
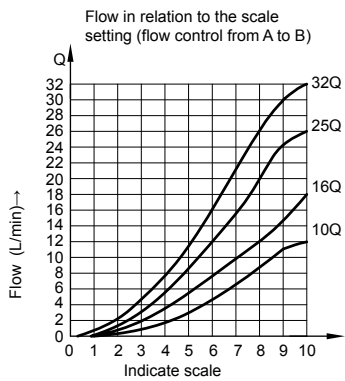
# Specification

		2FRM	6			6	-	2XJ	/				*
Two ways flow valve													
Nominal size 6		=6											
With pressure compensator external close (Restraining starting impact, can not work with Z4S6)		=A											
Without pressure compensator external close (Standard type)		=B											
Without pressure compensator external close ( for meter plate mounting)		=SB											
Regulating element:													
Lockable rotary knob with scale		= 3											
Rotary knob with scale		= 7											
Zero position of the markings at port P													
20J to 29J Series (20J to 29J: unchanged installation and connection dimensions)				=2XJ									
Further details in clear text													
No code= NBR seals V = FKM seals													
R= With check valve													
M= Without check valve													
Flow (A → B)													
0.2Q= up to 0.2L/min													
0.6Q= up to 0.6L/min													
1.5Q= up to 1.5L/min													
3Q= up to 3.0L/min													
6Q= up to 6.0L/min													
10Q= up to 10.0L/min													
16Q= up to 16.0L/min													
25Q= up to 25.0L/min													
32Q= up to 32.0L/min													

# Technical data

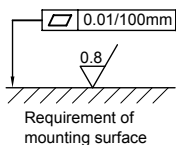
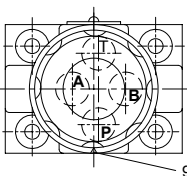
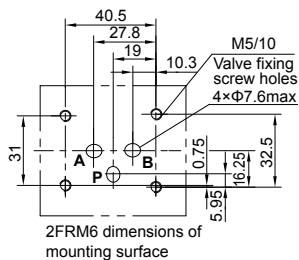
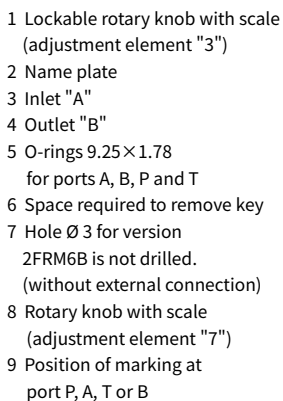
Max. operating pressure at port A		bar	315									
Pressure differential ΔP for free return flow B to A			See characteristic curves									
Minimum pressure differential		bar	6 to 14									
Pressure stability up to P= 315 bar		%	±2(Qmax)									
Flow -rate	Qmax	L/min	0.2	0.6	1.5	3	6	10	16	25	32	
	Qmin to 100bar	mL/min	15	15	15	15	25	50	70	100	250	
	Qmin to 315bar		25	25	25	25	25	50	70	100	250	
Fluid			Mineral oil suit, Phosphoric acid ester									
Fluid temperature range		°C	– 20 to + 80									
Viscosity range		mm²/s	10 to 800									
Degree of contamination			Maximum permissible degree of fluid contamination: Class 9. NAS 1638 or 20/18/15, ISO4406									
Installation position			Optional									
Circumstances temperature range		°C	-20 to +50									
Weight	2FRM6A...2FRM6B...	kg	Approx.1.3									
	2FRM6SB...	kg	Approx.1.5									

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



## 04

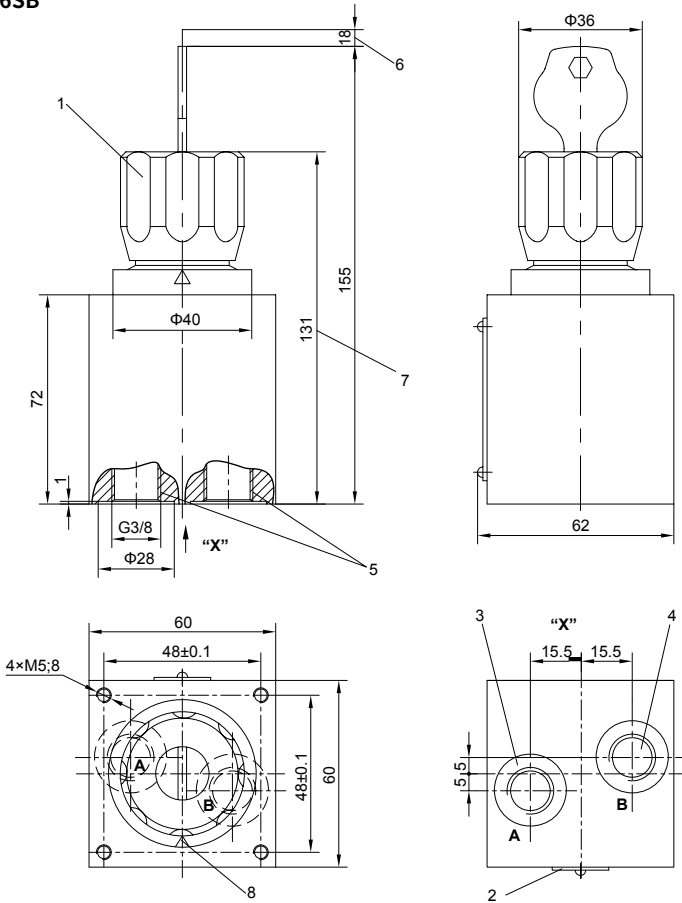
### Type 2FRM6A...and 2FRM6B



## Unit dimensions

(Dimensions in mm)

### Type 2FRM6SB



1 Lockable rotary knob with scale  
(adjustment element "3")

2 Name plate

3 Inlet a

4 Outlet "B"

5 Connection thread G 3/8 to ISO 228/1

6 Space required to remove key

7 Rotary knob with scale (adjustment element "7")

8 Position of marking opposite to the nameplate