

RE 27 761/11.02

Replaces: 05.92

**Fine throttle
Type F**

Nominal sizes 5 and 10

Series 2X and 3X

Maximum operating pressure 210 bar

Maximum flow 80 L/min

K 080/12
F 10 K 3-2X/..K 3080/8
F 10 P 3-3X/..**Overview of contents****Contents**

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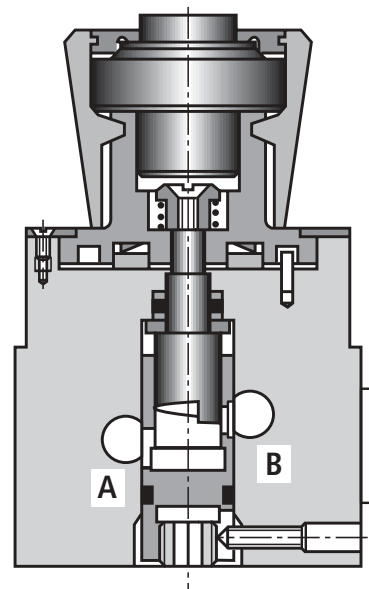
Page**Features**

- For subplate mounting,
- For threaded connections,
- for manifold mounting,
- Lockable rotary knob.

Function

Flow control valves, type F are fine throttle valves with an orifice type throttle. They basically comprise of a housing (1), adjustment element (2) and orifice (3). They are used to throttle a flow almost independently of temperature variations.

Throttling of a flow from A to B is carried out at the orifice aperture (4). The throttle opening is adjusted by rotating the cylindrical pin (5). The low dependence on temperature is due to the throttle area being designed as an orifice.



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Ordering details

	F			3	—	/		*	
Nominal size 5	= 5								Further details in clear text
Nominal size 10	= 10								NBR seals, suitable for mineral oil (HL, HLP) to DIN 51 524
For manifold mounting	= K								FKM seals, suitable for phosphate ester (HFD-R)
For threaded connections	= G								
For subplate mounting	= P								
Series 20 to 29 (version "K")									
(20 to 29: unchanged installation and connection dimensions)									
Series 30 to 39 (versions "G" and "P")									
(30 to 39: unchanged installation and connection dimensions)									

NS 5		NS 10			
Progressive		Progressive		Linear	
Orifice 0.2	= 0,2 Q	Orifice 5	= 5 Q	Orifice 0.2	= 0,2 Q
Orifice 0.6	= 0,6 Q	Orifice 10	= 10 Q	Orifice 0.6	= 0,6 Q
Orifice 1.2	= 1,2 Q	Orifice 16	= 16 Q	Orifice 1.2	= 1,2 Q
Orifice 3	= 3 Q	Orifice 25	= 25 Q	Orifice 3	= 3 Q
Orifice 6	= 6 Q			Orifice 6	= 6 Q
Orifice 10	= 10 Q				

Technical data (for applications outside these parameters, please consult!)

General

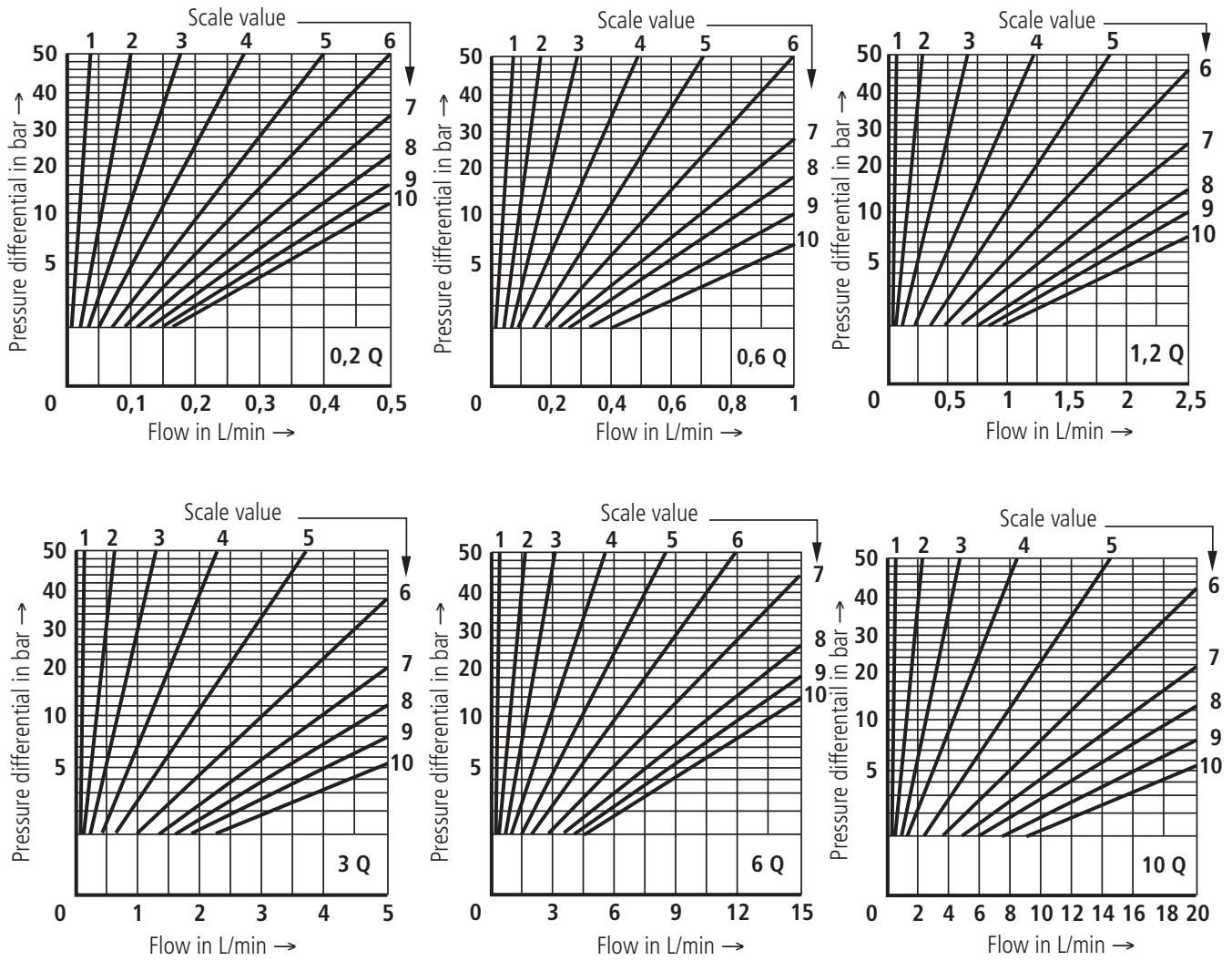
Installation		Optional
Ambient temperature range	°C	–30 to +80 with NBR seals –20 to +80 with FKM seals
Weight	kg	
	– Manifold mounting	1.0
	– Threaded connections	1.6
	– Subplate mounting	1.4

Hydraulic

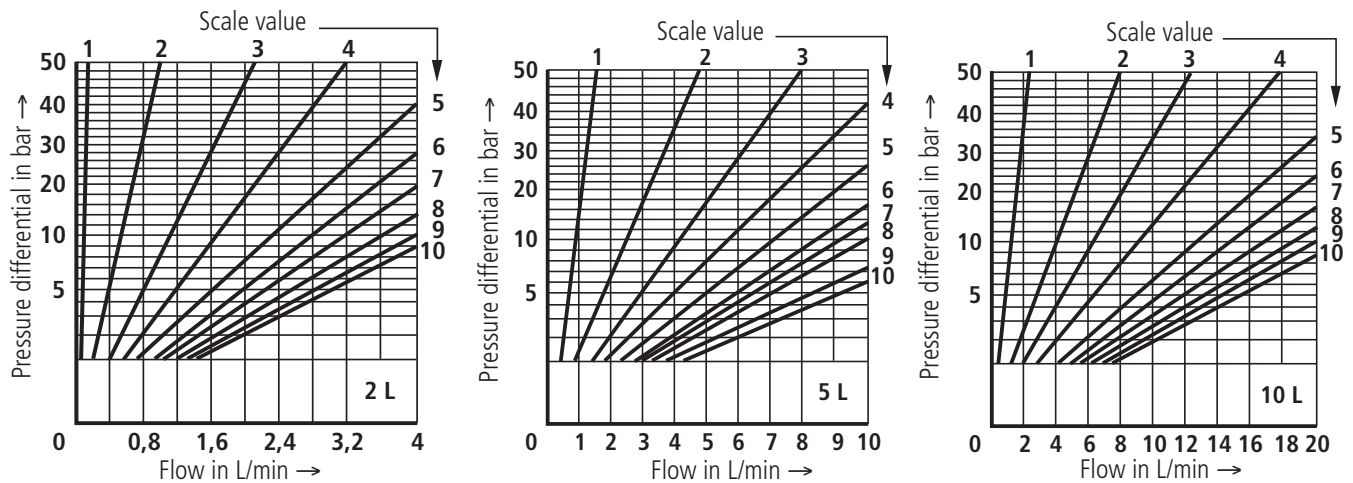
Pressure fluid		Mineral oil (HL, HLP) to DIN 51 524; Fast bio-degradable pressure fluids to VDMA 24 568 (also see RE 90 221); HETG (rape seed oil); HEPG (polyglycols); HEES (synthetic ester); Other pressure fluids on request
Cleanliness class to ISO code		Maximum permissible degree of contamination of the pressure fluid is to ISO 4406 (C) class 20/18/15 ¹⁾
Pressure fluid temperature range	°C	–30 to +80 with NBR seals –20 to +80 with FKM seals
Viscosity range	mm ² /s	2.8 to 380
Operating pressure, max.	bar	Up to 210
Flow, max.	L/min	Up to 80
Adjustment angle	°	300
Operating torque	Nm	
	– At 100 bar	1.1
	– At 200 bar	1.8

¹⁾ The cleanliness class stated for the components must be adhered too in hydraulic systems. Effective filtration prevents faults from occurring and at the same time increases the component service life.
For the selection of filters see catalogue sheets RE 50 070, RE 50 076 and RE 50 081.

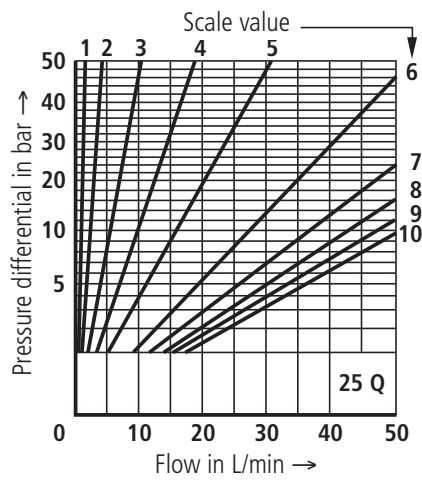
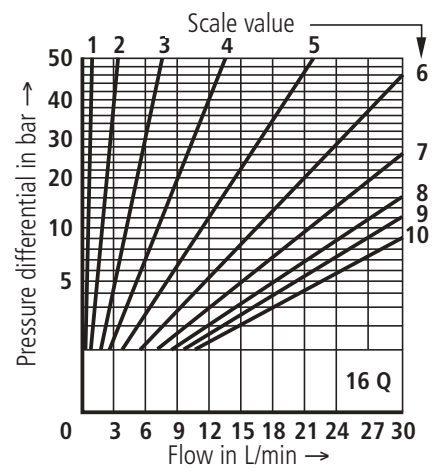
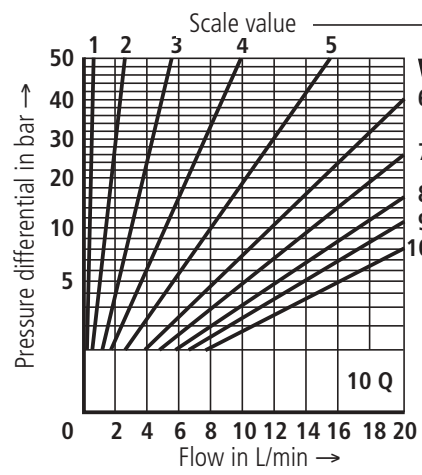
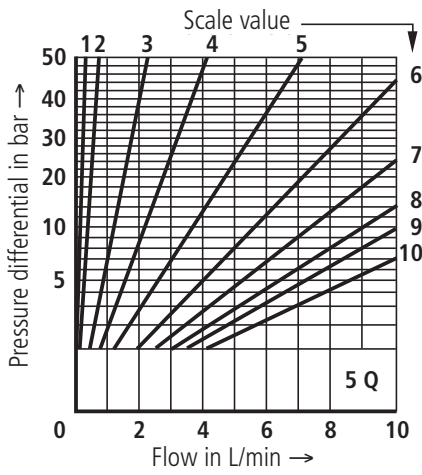
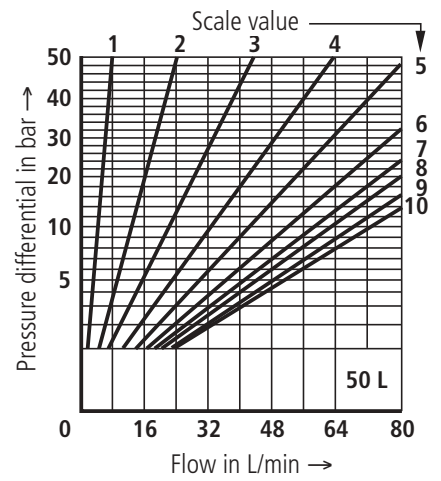
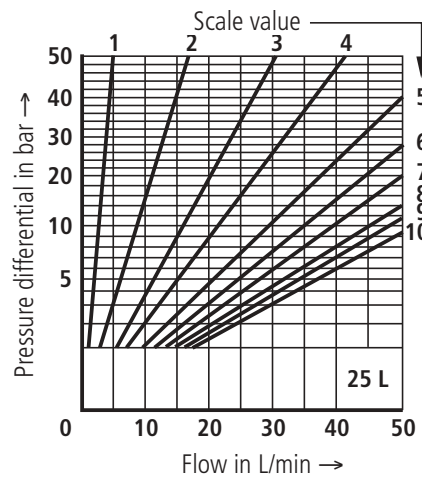
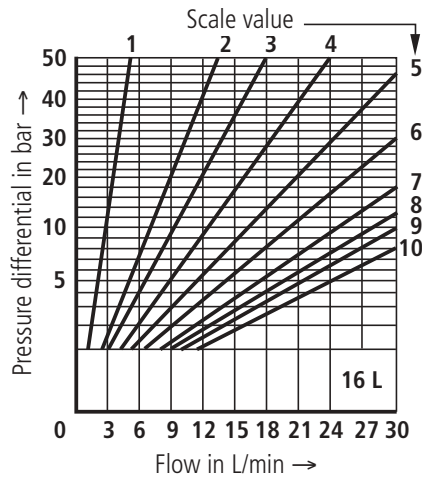
Δp -Q-characteristic curves: NS 5 (measured at $\nu = 41 \text{ mm}^2/\text{s}$, $\vartheta_{\text{oil}} = 40 \text{ }^\circ\text{C} \pm 5 \text{ }^\circ\text{C}$)



Δp -Q-characteristic curves: NS 10 (measured at $\nu = 41 \text{ mm}^2/\text{s}$, $\vartheta_{\text{oil}} = 40 \text{ }^\circ\text{C} \pm 5 \text{ }^\circ\text{C}$)



Δp -Q-characteristic curves: NS 10 (measured at $\nu = 41 \text{ mm}^2/\text{s}$, $\vartheta_{\text{oil}} = 40 \text{ }^\circ\text{C} \pm 5 \text{ }^\circ\text{C}$)



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