

Restrictive Valve and Restrictive Check Valve

Model: MG/MK...1X



- ◆ Size 6 to 30
- ◆ Maximum working pressure 350 bar
- ◆ Maximum working flow 400 L/min

Contents

Function description, sectional drawing	02
Models and specifications	02
Functional symbols	03
Technical parameters	03
Characteristic curve	04
Component size	05

Features

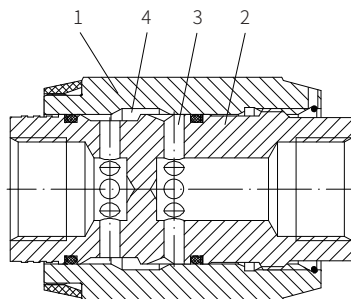
- Suitable for direct in-line mounting
- Performance depends on pressure and viscosity

Function description, sectional drawing

The MG and MK valve is a restrictive valve and restrictive check valve which is related to oil pressure and viscosity.

Model MG (restrictive valve)

This valve throttles in both flow directions. The hydraulic oil flows through side hole (3) to the throttling orifice (4) which is formed by valve body (2) and adjusting sleeve (1). The cross-section of the throttling orifice (4) can be adjusted infinitely by rotating the adjusting sleeve (1).

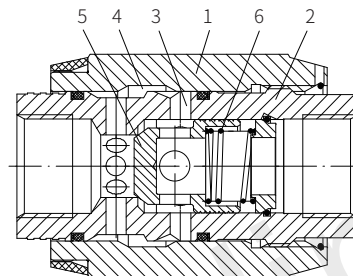


Restrictive valve MG

Model MK (restrictive check valve)

When the fluid flows through the valve in throttling direction, the pressure oil and spring (6) presses the spool (5) onto the valve seat, then the connection is blocked. The hydraulic oil flows through the side hole (3) to the throttling orifice (4) which is formed by valve body (2) and adjusting sleeve (1).

In the opposite direction, the pressure acts on the face of the spool (5) to open the check valve and allow the fluid to flow through the check valve without throttling. At the same time, parts of the hydraulic oil flows through the annular groove to achieve the desired self-cleaning effect.

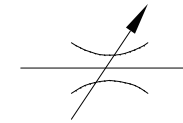


Restrictive check valve MK

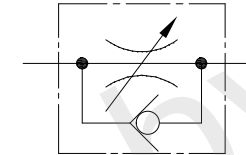
Models and specifications

restrictive valve =MG		G		1X		/		*		more information in text	
restrictive check valve =MK										sealing material	
size 6 =6										No code= NBR seals	
size 8 =8										V= FKM seals	
size 10 =10										(consult for other seals)	
size 15 =15											
size 20 =20											
size 25 =25											
size 30 =30											
threaded connection =G										No code= G thread	
										2= metric thread	
										1X= 10 to19 series	
										(10 to 19 series installation and connection size unchanged)	

Functional symbols



Model MG



Model MK

Technical parameters

Overview								
Installation position		Optional						
Environment temperature range		°C	-20 to +50					
Weight		6	8	10	15	20	25	30
	kg	0.3	0.4	0.7	1.1	1.9	3.2	4.1
Hydraulic								
Maximum working pressure		bar	315					
Cracking pressure MK model		bar	0.5					
Maximum flow		L/min	400					
Oil fluid		Mineral oil (HL, HLP) ¹⁾ in accordance with DIN 51524; Fast living organisms Degraded oil according to VDMA 24568; HETG (Rapeseed oil) ¹⁾ ; HEPG (Polyethyleneglycol) ²⁾ ; HEES (Synthetic Fats) ²⁾						
Oil temperature range		°C	-30 to +80 (NBR seal) , -20 to +80 (FKM seal)					
Viscosity range		mm²/s	10 to 800					
Cleanliness of oil		The maximum allowable pollution level of oil is ISO4406 class 20 / 18 / 15						

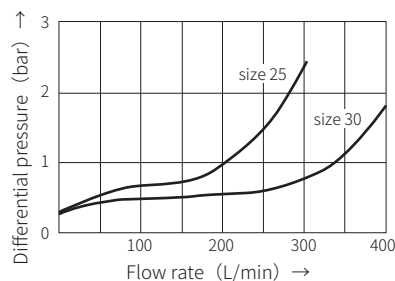
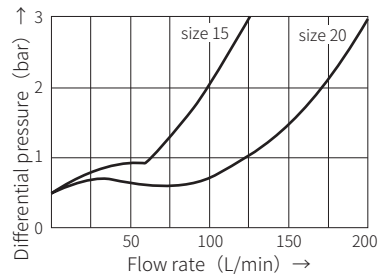
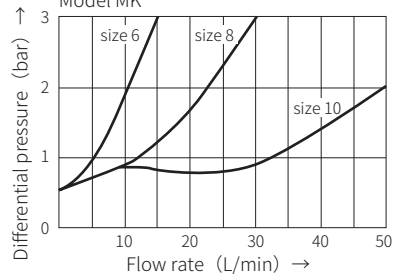
1) The oil must meet the cleanliness degree requested by the components in the hydraulic system. Effective oil filtration can prevent failure and increase the service life of the components.

Characteristic curve

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

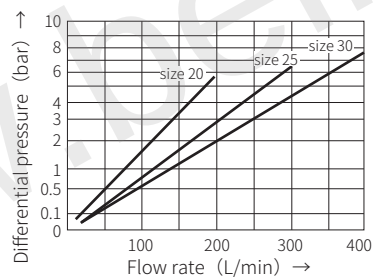
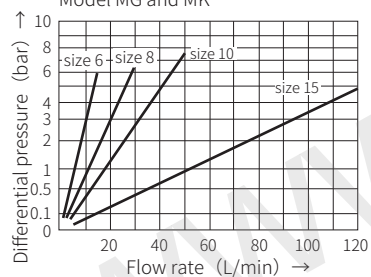
Δp - q_v -characteristic curve via the opened check valve with closed throttle

Model MK



Δp - q_v -characteristic curve via the opened throttle

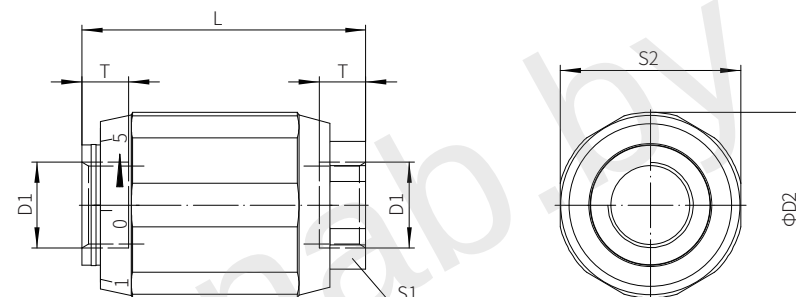
Model MG and MK



Component size

Size unit: mm

Model MK and MG



Size	D1		D2	L1	S1	S2	T1
	G	Metric					
6	G1/4	M14×1.5	34	65	22	32	12
8	G3/8	M18×1.5	38	65	24	36	12
10	G1/2	M22×1.5	48	80	30	46	14
15	G3/4	M27×2	58	100	41	55	16
20	G1	M33×2	72	110	46	70	18
25	G1 1/4	M42×2	87	130	55	85	20
30	G1 1/2	M48×2	93	150	60	90	22