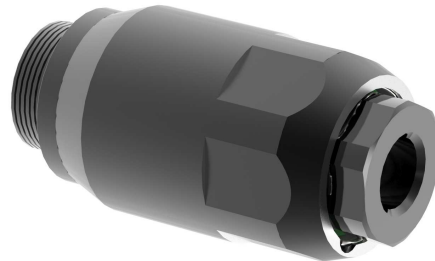
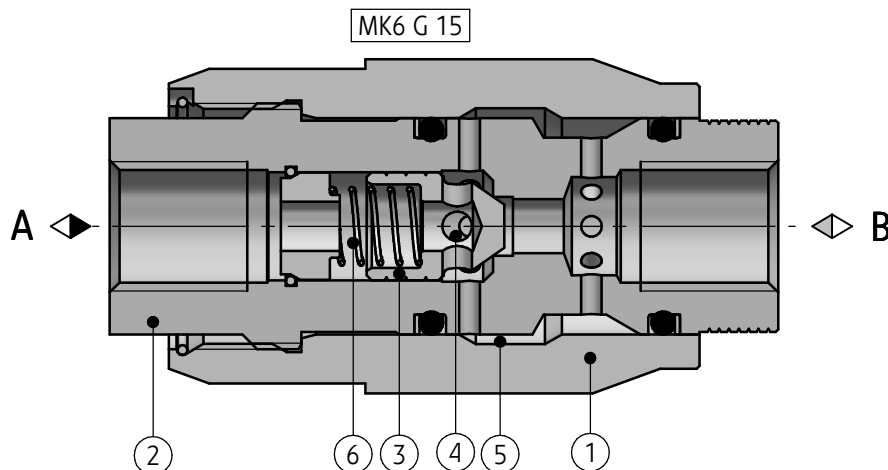


### APPLICATION

Valves type MK are throttle / check valves in which flow is dependent on temperature and pressure drop at the throttle point. They are designed to control the fluid flow rate in one direction and allow free flow in the opposite direction. The valves may be used in hydraulic systems, when working resistance is constant or change in speed at changing load is of no importance. The valves are for direct in-line mounting in any position by means of couplings.



### DESCRIPTION OF OPERATION



When there is a flow in throttle direction, fluid reaches the rear side of the poppet 3 of the check valve which is pushed onto its seat in the housing 2 by the spring 6. The fluid flows to the variable orifice 4 through the side bores in the poppet 3. Throttling takes place between the housing 2 and adjustable sleeve 1. With flow in the opposite direction, the fluid acts on the face surface of

the poppet 3. The poppet 3 is lifted from its seat and the fluid flows freely through the valve. Simultaneously, part of the fluid getting through the ring slot 5 creates the desired effect as its self-cleaning.

#### Caution :

The valve install in hydraulic system to take hold on hexagon of housing item 2.

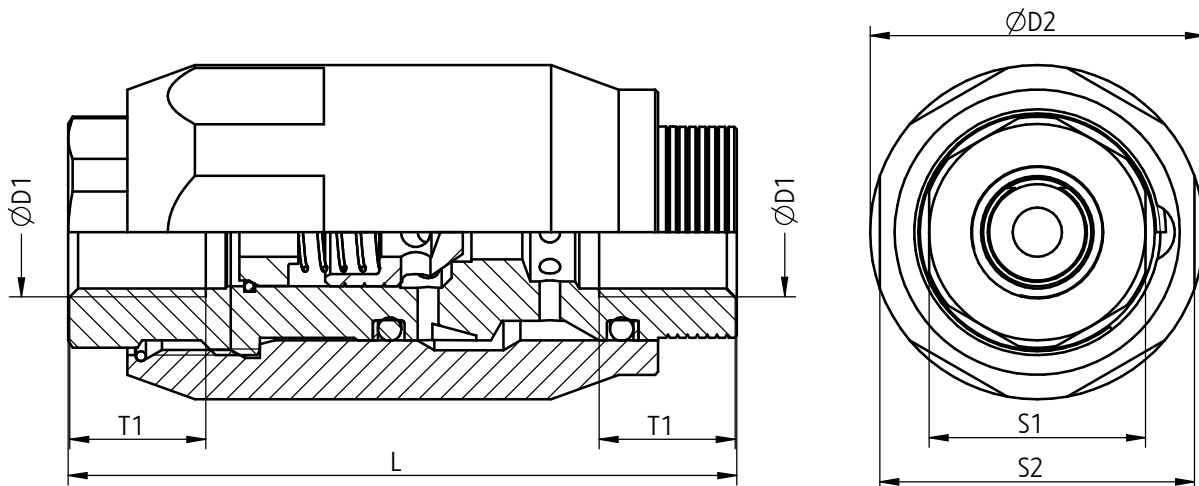
It isn't to allow for turn up the valve by nut item 1.

Do not adjust under pressure.

## TECHNICAL DATA

Hydraulic fluid	Mineral oil
<b>Filtration</b>	<b>up to 16 µm</b>
Recommended filtration	up to 10 µm
Nominal fluid viscosity	37 mm <sup>2</sup> /s at the temperature of 55 °C
Viscosity range	2,8 to 380 mm <sup>2</sup> /s
Optimum working temperature (fluid in a tank)	40 °C - 55 °C
Fluid temperature range	- 20 °C - +70 °C
<b>Maximum operating pressure</b>	<b>31,5 MPa</b>
<b>Cracking pressure</b>	<b>0,05 MPa</b>

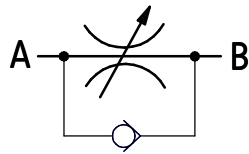
## OVERALL DIMENSIONS



Size	ØD1	ØD2	L	S1	S2	T1	Weight [kg]
6	G1/4	34	68	22	32	14	0,3
8	G3/8	38	66	24	36	12,5	0,4
10	G1/2	48	80	30	46	14	0,7
15	G3/4	58	97	36	55	16	1,1
20	G1	72	113	46	70	18	1,9
25	G1 1/4	87	129	55	85	20	3,2
30	G1 1/2	93	145	60	90	22	4,1

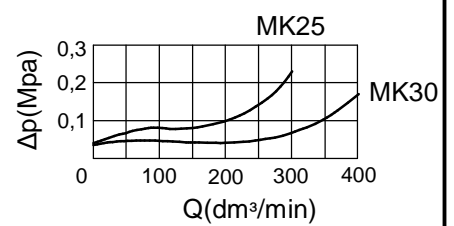
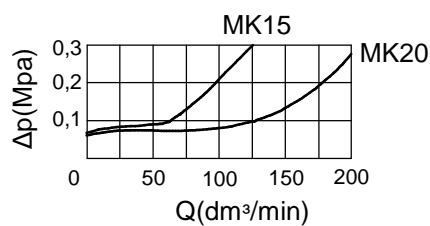
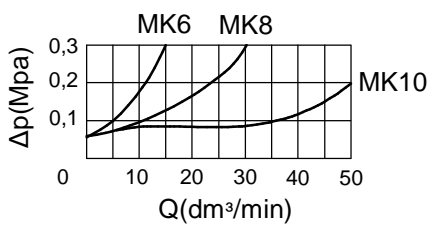
## SCHEMES

Graphical symbol

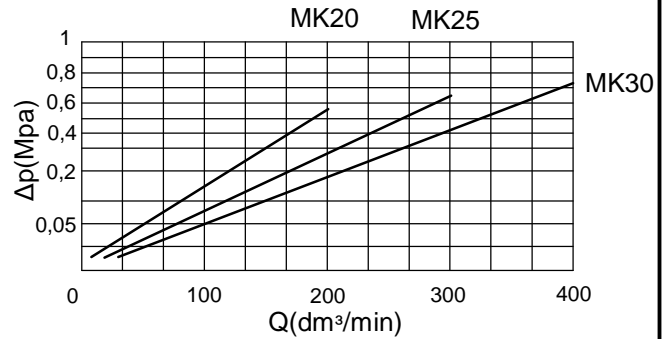
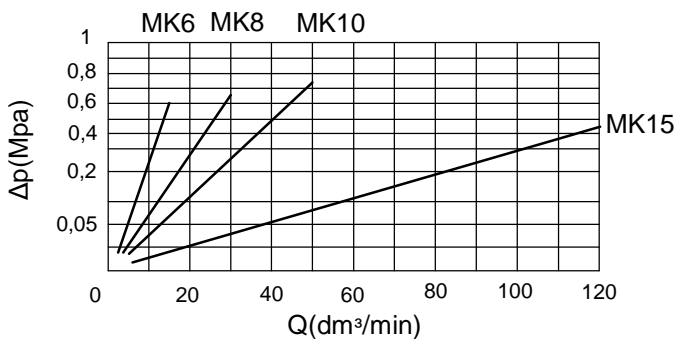


## PERFORMANCE CURVES

measured at  $v = 41 \text{ mm}^2/\text{s}$  and  $t = 50^\circ\text{C}$



$\Delta p - Q$  curve - via open check valve with closed throttle



$\Delta p - Q$  curve - via closed check valve with open throttle

## HOW TO ORDER

Orders coded in the way showed below should be forwarded to the manufacturer.

<b>MK</b>		<b>G</b>			<b>*</b>
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### Nominal size

Size 6	= 6
Size 8	= 8
Size 10	= 10
Size 15	= 15
Size 20	= 20
Size 25	= 25
Size 30	= 30

### Mounting

**Direct in-line mounting** = **G**

### Series number

(10-19) - installation and connection dimensions remain unchanged = 1X  
**series 15** = **15**

### Sealing

**NBR** (for fluids on mineral oil base) = **no code**  
**FPM** (for fluids on phosphate ester base) = **V**

Further requirements in clear text (to be agreed upon with the manufacturer)

### UWAGI:

Throttle/check valve should be ordered according to the above coding.

**The symbols in bold are the preferred versions available in short delivery time.**

Coding example : MK 10 G 15

PONAR Wadowice S.A.  
 ul. Wojska Polskiego 29  
 34-100 Wadowice  
 tel. +48 33 488 29 00  
 fax. +48 33 488 21 03  
[www.ponar-wadowice.pl](http://www.ponar-wadowice.pl)

