

# Thermostatic valves Series 178UM-179UM-1178UM-1179UM 188UM-189UM-1188UM-1189UM



## Main features

- Available in the following versions:
  - Angle body, straight body
  - For iron, copper and polyethylene piping
  - With 3/8" radiator connection and 1/2" connection on pipe side.
- Plug stroke pre-setting device for series 188UM-189UM-1188UM-1189UM.
- Compact size and reduced weight.
- Conforms with UNI 8464/90 standard.

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## Description

Thermostatic valves with simple setting **series 178UM-179UM-1178UM-1179UM** and those with pre-setting **series 188UM-189UM-1188UM-1189UM** are used as shut-off and control devices for heat emitters (radiators, fan coils, radiant panels, etc.) in heating and air-conditioning systems. The valves are available in the configuration with straight or angle body, with male or female thread, and should be installed on the delivery pipe of the heat emitter. Connection to the heat emitter is through an O-RING sealed straight tailpiece with use of a socket head wrench.



### 178UM

Nickel-plated thermostat adaptable valve. Angle body. Connection for iron pipe, size 1/2"M. **Cylinder tailpiece with sealed O-ring**. ABS handwheel with movable stem. Compatible with thermostatic actuators series 148 and electrothermic actuator 22C.

Type	Part number	Dn	Kvs	Weight (g)
178UM	178UMSN38	3/8"	2,1	210
178UM	178UMSN12	1/2"	2,6	260
178UM	178UMSN34	3/4"	3,3	370



### 179UM

Nickel-plated thermostat adaptable valve. Straight body. Connection for iron pipe, size 1/2"M. **Cylinder tailpiece with sealed O-ring**. ABS handwheel with movable stem. Compatible with thermostatic actuators series 148 and electrothermic actuator 22C.

Type	Part number	Dn	Kvs	Weight (g)
179UM	179UMSN38	3/8"	1,1	230
179UM	179UMSN12	1/2"	1,8	280
179UM	179UMSN34	3/4"	2,6	370



### 1178UM

Nickel-plated thermostat adaptable valve. Straight body. Connection for copper or plastic pipe, size 1/2"M. **Cylinder tailpiece with sealed O-ring**. ABS handwheel with movable stem. Compatible with thermostatic actuators series 148 and electrothermic actuator 22C.

Type	Part number	Dn body	Dn pipe	Kvs	Weight (g)
1178UM	1178UMSN38X	3/8"	1/2"	2,6	200
1178UM	1178UMSN12	1/2"	1/2"	2,6	230



### 1179UM

Nickel-plated thermostat adaptable valve. Straight body. Connection for copper or plastic pipe, size 1/2"M. **Cylinder tailpiece with sealed O-ring**. ABS handwheel with movable stem. Compatible with thermostatic actuators series 148 and electrothermic actuator 22C.

Type	Part number	Dn body	Dn pipe	Kvs	Weight (g)
1179UM	1179UMSN38X	3/8"	1/2"	1,8	220
1179UM	1179UMSN12	1/2"	1/2"	1,8	260


**188UM**

Nickel-plated thermostat adaptable valve like 178UM **with pre-setting** and ABS handwheel with fixed stem

Type	Part number	Dn	Kvs	Weight (g).
188UM	188UMSN38	3/8"	2,1	230
188UM	188UMSN12	1/2"	2,6	280
188UM	188UMSN34	3/4"	3,3	350


**189UM**

Nickel-plated thermostat adaptable valve like 179UM **with pre-setting** and ABS handwheel with fixed stem

Type	Part number	Dn	Kvs	Weight (g)
189UM	189UMSN38	3/8"	1,1	250
189UM	189UMSN12	1/2"	1,8	350
189UM	189UMSN34	3/4"	2,6	390


**1188UM**

Nickel-plated thermostat adaptable valve like 1178UM **with pre-setting** and ABS handwheel with fixed stem

Type	Part number	Dn body	Dn pipe	Kvs	Weight (g)
1188UM	1188UMSN38X	3/8"	1/2"	2,6	220
1188UM	1188UMSN12	1/2"	1/2"	2,6	250


**1189UM**

Nickel-plated thermostat adaptable valve like 1179UM **with pre-setting** and ABS handwheel with fixed stem

Type	Part number	Dn body	Dn pipe	Kvs	Weight (g)
1189UM	1189UMSN38X	3/8"	1/2"	1,8	240
1189UM	1189UMSN12	1/2"	1/2"	1,8	280

**Application**

These valves are designed for room temperature control in manual or automatic mode when coupled with thermostatic actuators (series 148, 148SD, 148CD) or else electrothermic actuators (Art. 22C). The use of thermostatic valves allows installation of metering systems (see Sections on Measuring and metering systems) as required by Italian legislation (Act 10/94 Art. 28).

## Operation

Valve operation is controlled by manual or automatic movement of the plug which shuts off the heat carrier fluid. The hydraulic flow rate and pressure drop characteristics for the valves can be deduced from appropriate charts; in the thermostatic function, they assume the characteristics of such device.

### Pre-setting for series 188UM-189UM-1188UM-1189UM:

These valves are provided with active memory presetting which, when using thermostatic or thermoelectric actuators, enables exact balancing of the system.

Such balancing is obtained by turning a ring nut located under the handwheel in order to limit the plug stroke. Above all, the active memory presetting allows, in case of removing the handwheel used in thermostating the system, permanent retention of the balancing made.

The reliability of the thermostatic valves **series 178UM-179UM-1178UM-1179UM** and **series 188UM-189UM-1188UM-1189UM** is guaranteed by the 100% testing of the production that checks for water tightness of the valve body and its components towards the outside and tight seal of the plug in its flow shut-off function.

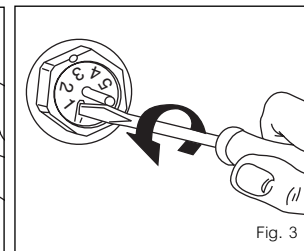
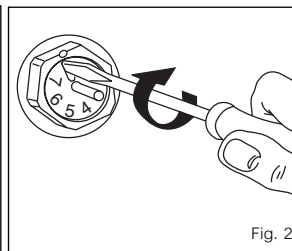
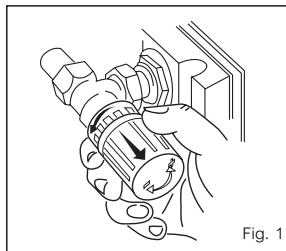
## Pre-setting

		Pre-setting								
		Qms (l/h)								
Dn		1	2	3	4	5	6	7	Max	Qmn
	3/8"	80	175	215	215	215	215	215	215	215
	1/2"	80	175	215	215	215	215	215	215	215
	3/4"	80	180	230	230	230	230	230	230	230
	3/8"	75	160	200	200	200	200	200	200	200
	1/2"	75	175	225	225	225	225	225	225	225
	3/4"	80	180	240	240	240	240	240	240	240
	±%	60	30	20	10	10	10	10	10	10

Where :  $K_v = \frac{q_{ms}}{316}$

## How to adjust series 188UM-189UM-1188UM-1189UM

- 1 - Unscrew handwheel (**Fig.1**)
- 2 - Remove the ring nut by turning it anti-clockwise
- 3 - Fully close the pre-setting ring nut (**Fig.2**)
- 4 - Open to required position by making the number to coincide with the reference notch (**Fig.3**)

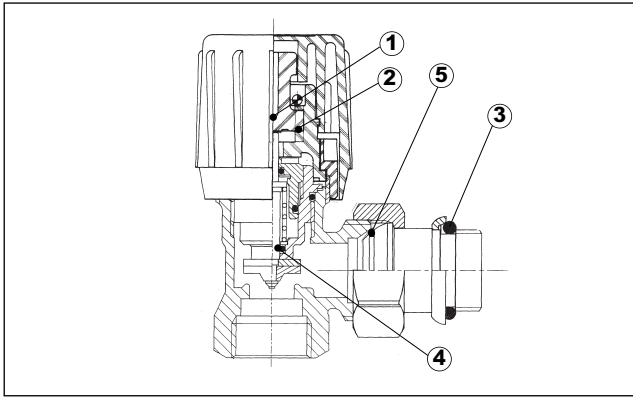


## Installation

The choice of valves and lockshields depends on the size of connection to the radiator and the connecting piping. Manual thermostatic valve with simple setting **series 178UM-179UM-1178UM-1179UM** and those with pre-setting **series 188UM-189UM-1188UM-1189UM** can be installed on heat emitters supplied by iron, copper and plastic piping, in combination with lockshields **series 195UM, 196UM, 1195UM, 1196UM**. When the system requires thermostating, merely unscrew the handwheel and replace it with a thermostatic or thermoelectric actuator by tightening the ring nut. All this can be done without plumbing work and with the system running. When it is required to build a thermostatted system immediately, use can be made of thermostatic valve bodies **series 130UM, 131UM, 1130UM, 1131MU**, identical in configuration, but without the handwheel for manual control.

### Hydraulic characteristics

Kv values in the various pre-setting positions						
Setting position	188UM 3/8" 1188UM 3/8"	188UM 1/2" 1188UM 1/2"	188UM 3/4"	189UM 3/8" 1189UM 3/8"	189UM 1/2" 1189UM 1/2"	189UM 3/4"
<b>1</b>	0.27	0.27	0.27	0.27	0.27	0.27
<b>2</b>	0.60	0.62	0.67	0.57	0.64	0.64
<b>3</b>	0.88	0.90	1.00	0.78	0.90	0.95
<b>4</b>	1.12	1.13	1.30	0.91	1.12	1.23
<b>5</b>	1.31	1.32	1.56	0.97	1.30	1.51
<b>6</b>	1.46	1.47	1.80	1.00	1.44	1.74
<b>7</b>	1.60	1.60	2.00	1.02	1.55	1.96
<b>A</b>	2.05	2.60	3.30	1.10	1.80	2.60



**Design features**

Valve body	Brass CW617N
Handwheel	Polypropylene
O-ring	EPDM
Tailpiece	Brass CW614N

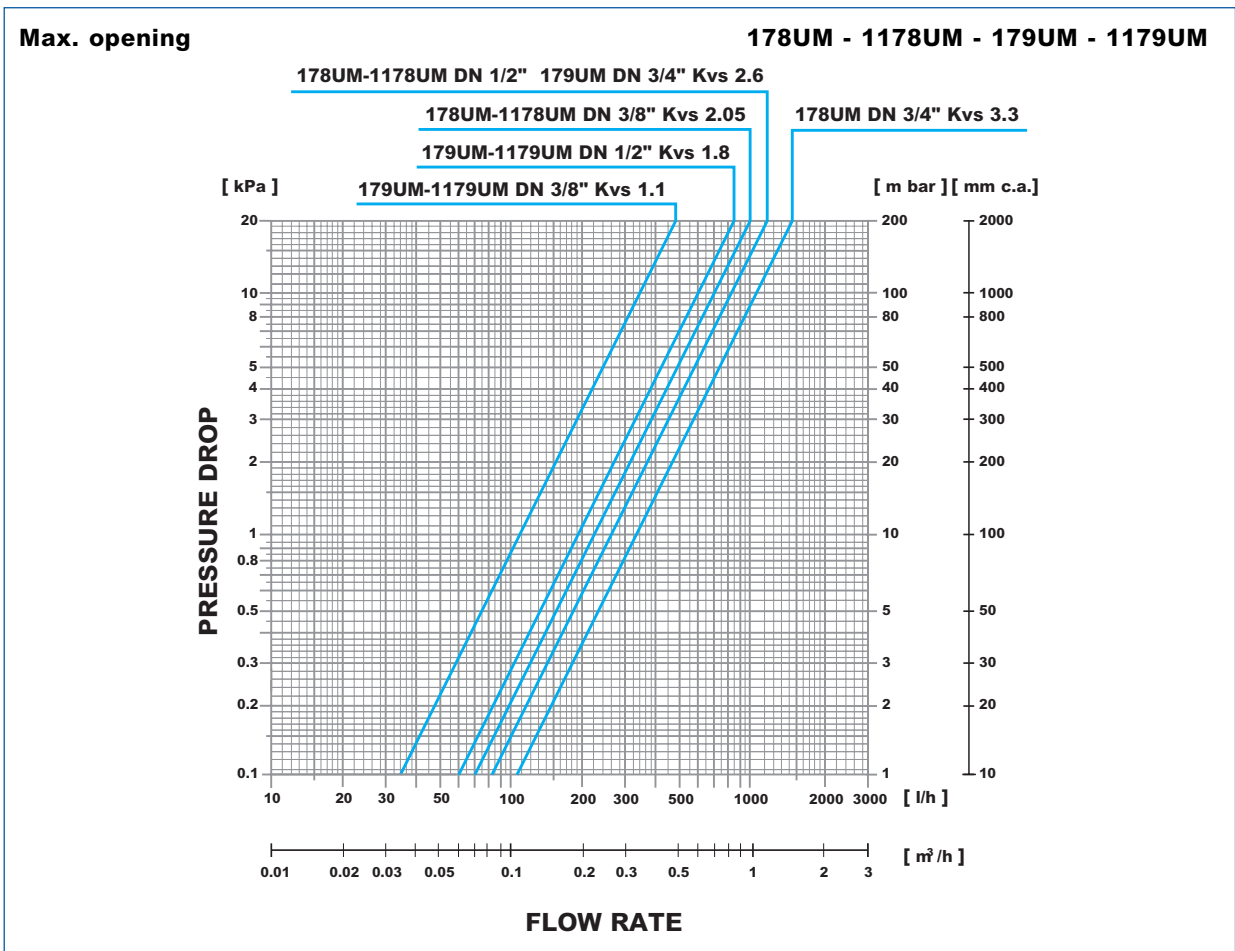
**Technical features**

Nominal pressure	10 bar
Max. temperature	110 °C
Usable liquids	Water also with glycol ≤50%

**Features**

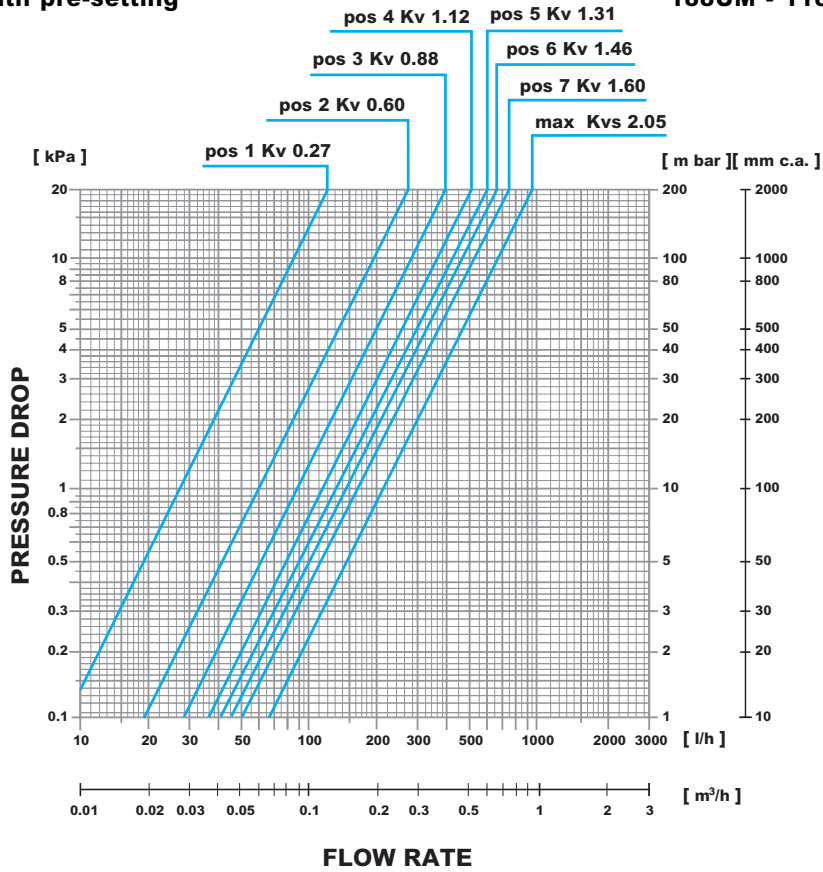
- 1) Pre-setting stuffing box nut, can also be replaced with system under pressure
- 2) Complete plug replaceable without emptying the system by using Art. 225.
- 3) O-RING sealed straight tailpiece
- 4) Elastomeric plug seal (vulcanised EPDM : Ethylene-Polypropylene Diene Monomer)
- 5) O-ring

**Flow rate/pressure drop charts**



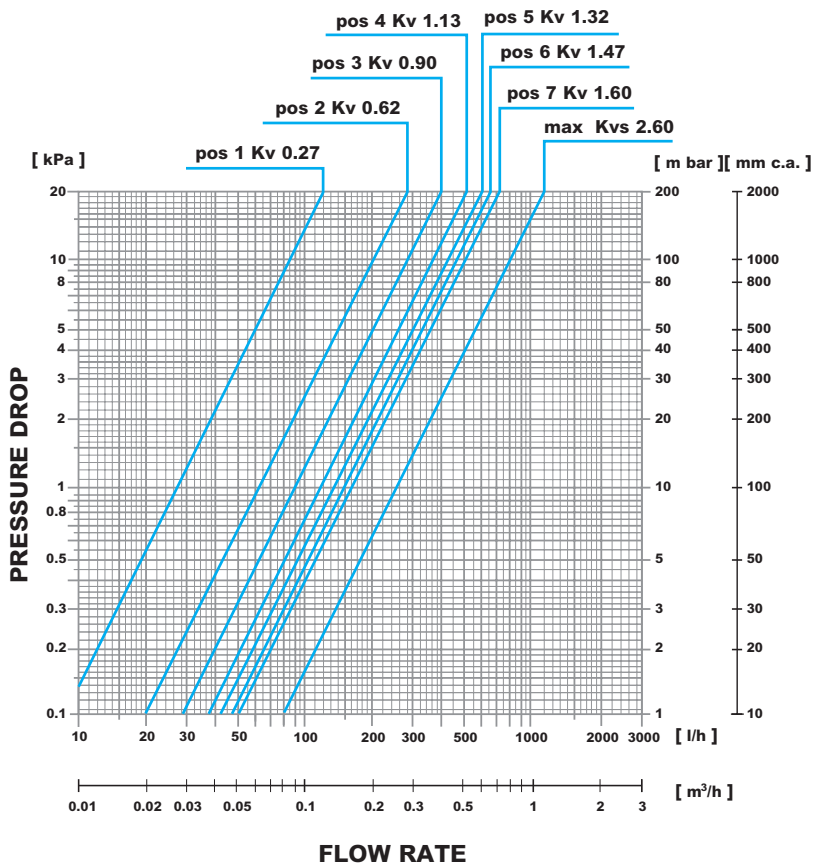
Angle body with pre-setting

188UM - 1188UM - DN 3/8"



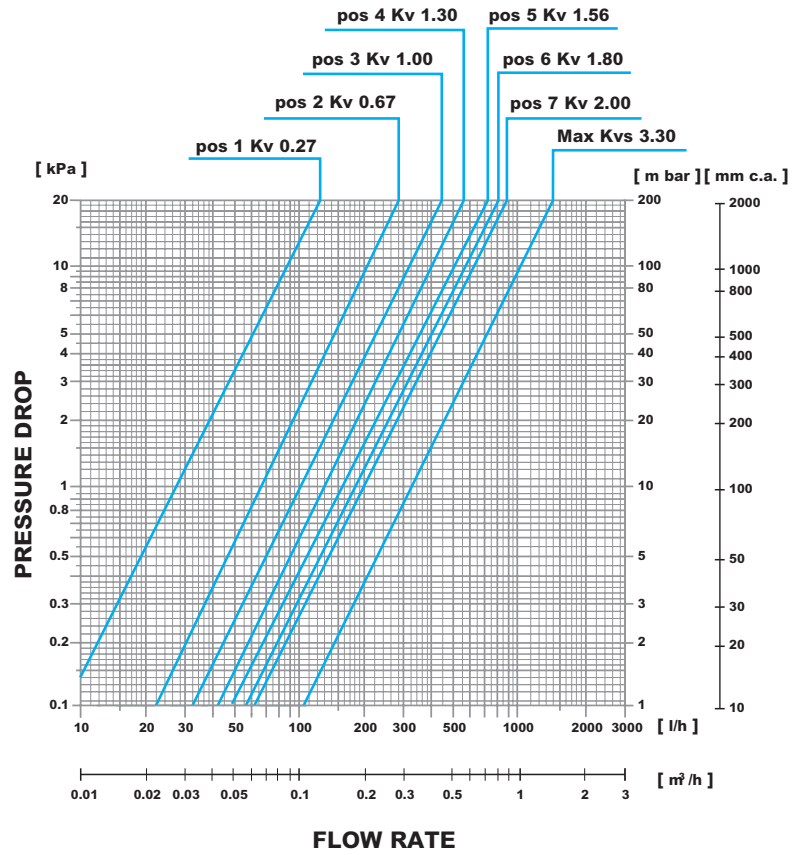
Angle body with pre-setting

188UM - 1188UM - DN 1/2"



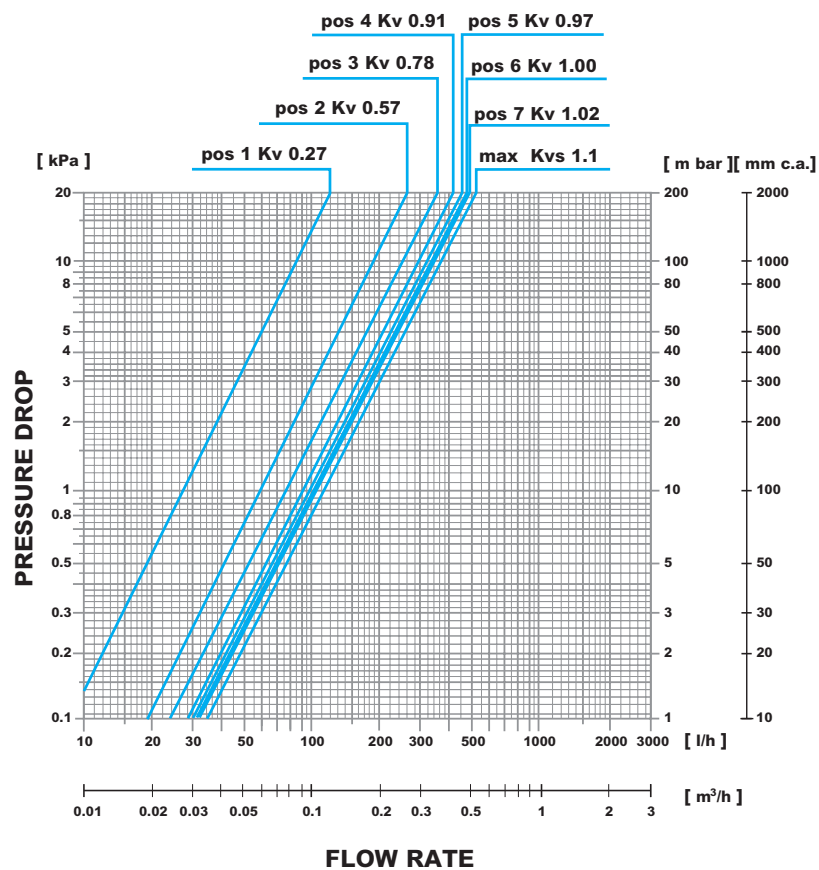
**Angle body with pre-setting**

**188UM - DN 3/4"**



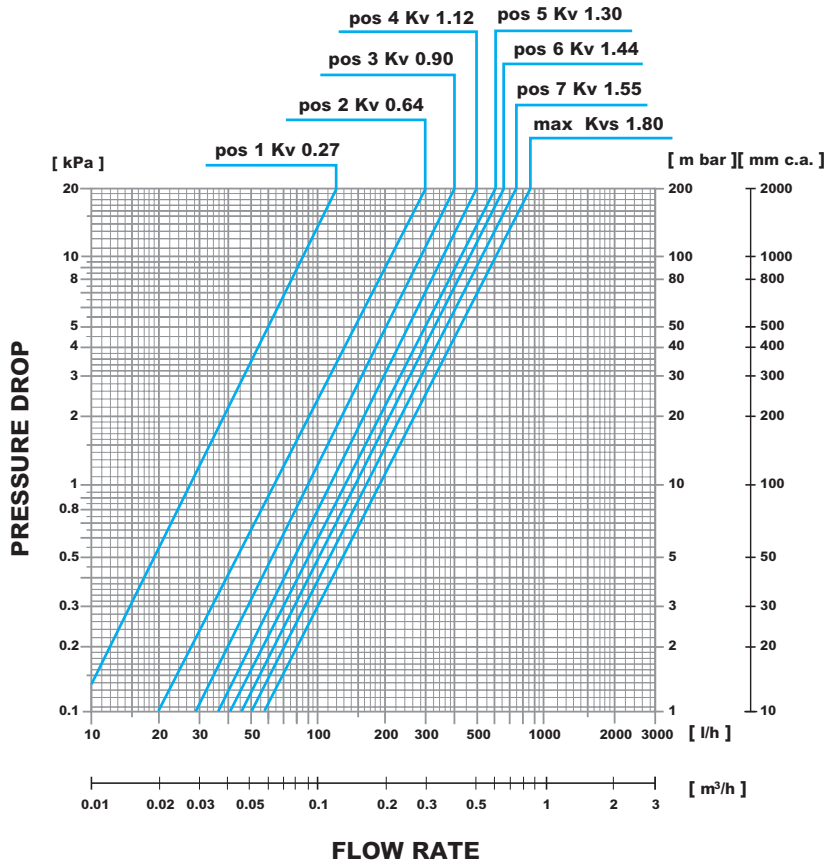
**Straight body with pre-setting**

**189UM - 1189UM - DN 3/8"**



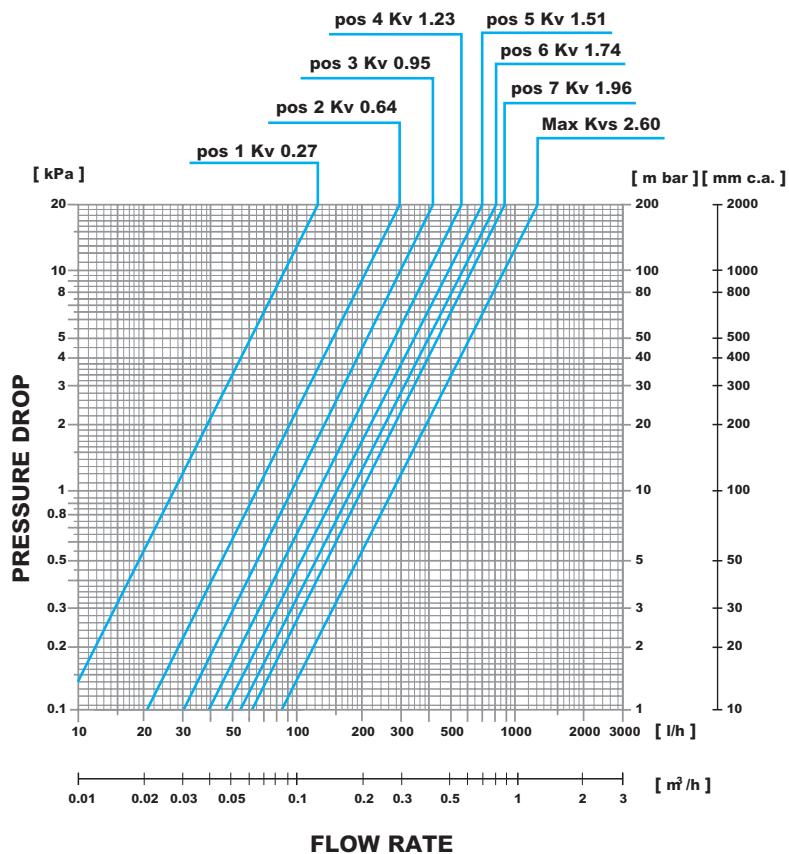
Straight body with pre-setting

189UM - 1189UM - DN 1/2"



Straight body with pre-setting

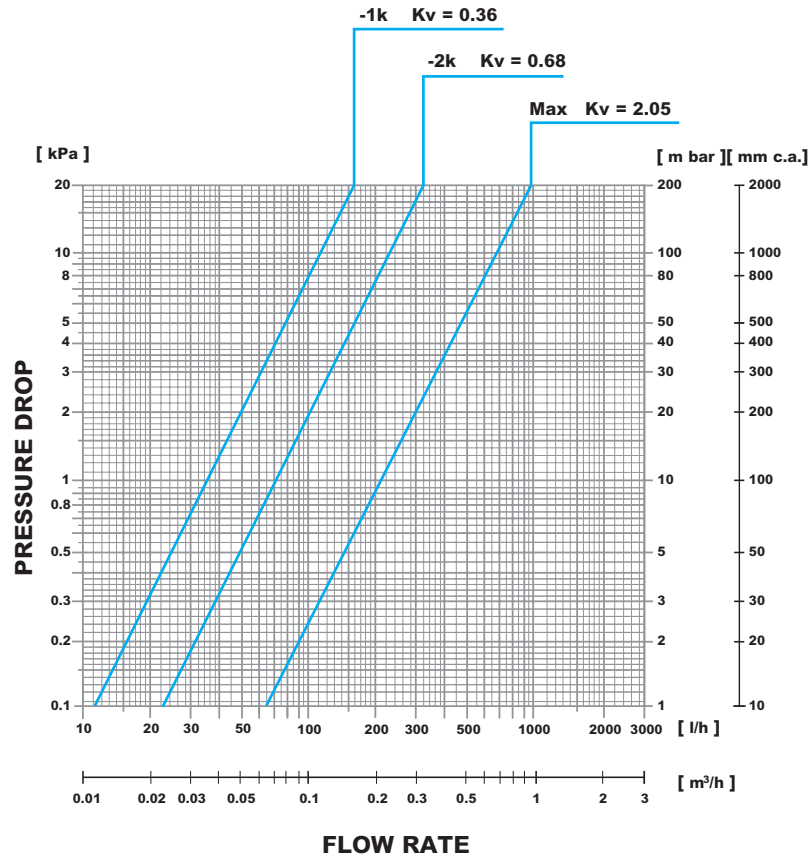
189UM - DN 3/4"





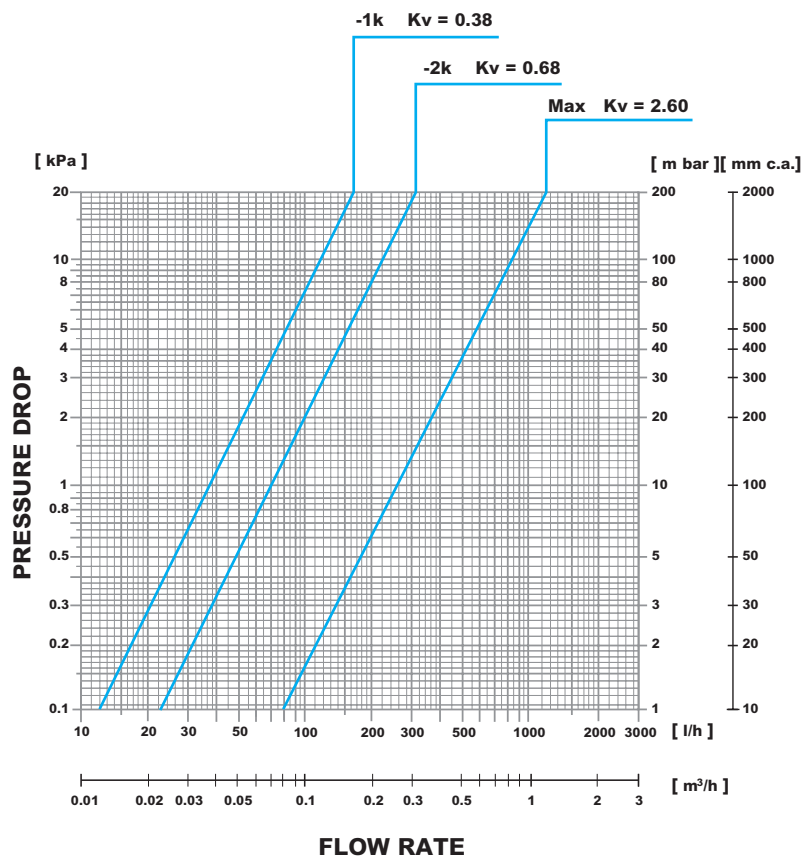
**Angle body with actuator 148**

**188UM - 1188UM - DN 3/8"**



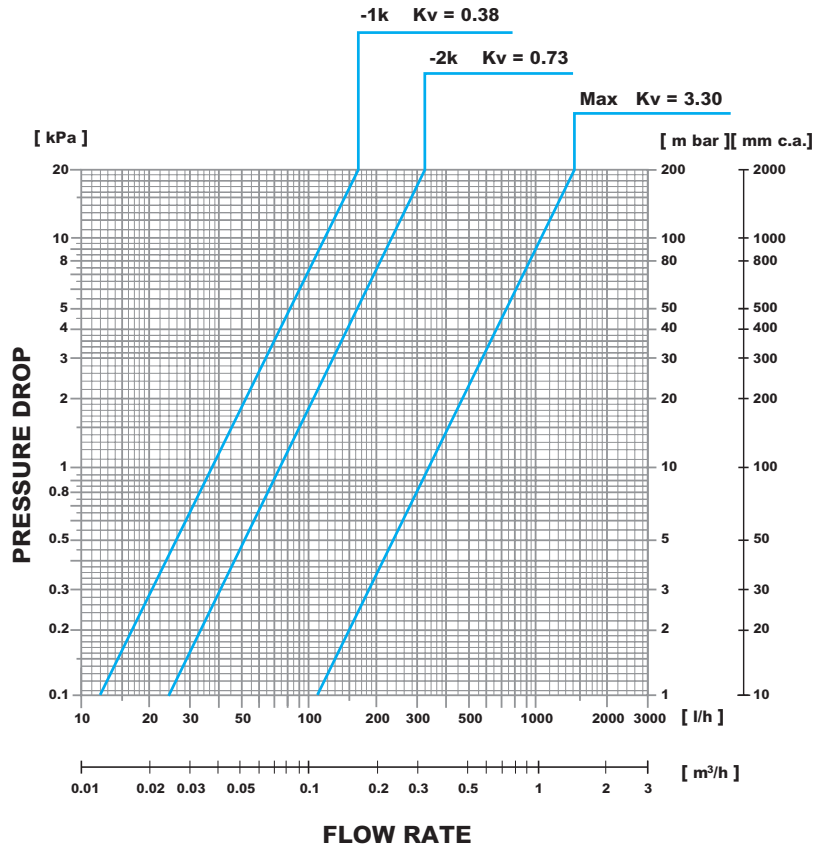
**Angle body with actuator 148**

**188UM - 1188UM - DN 1/2"**



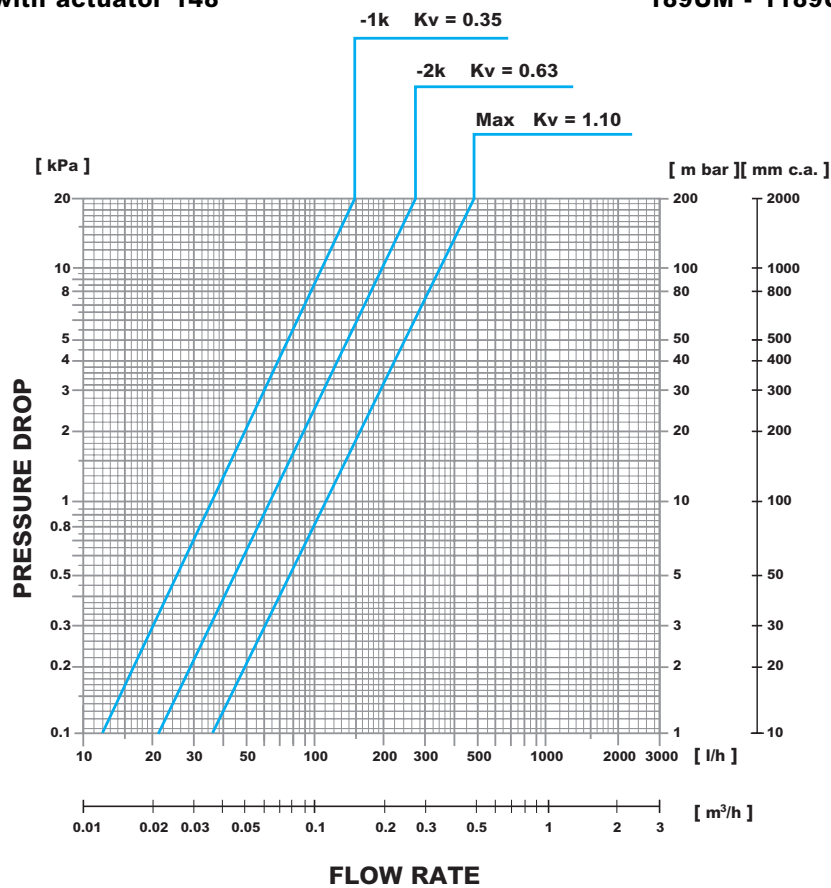
Angle body with actuator 148

188UM - DN 3/4"



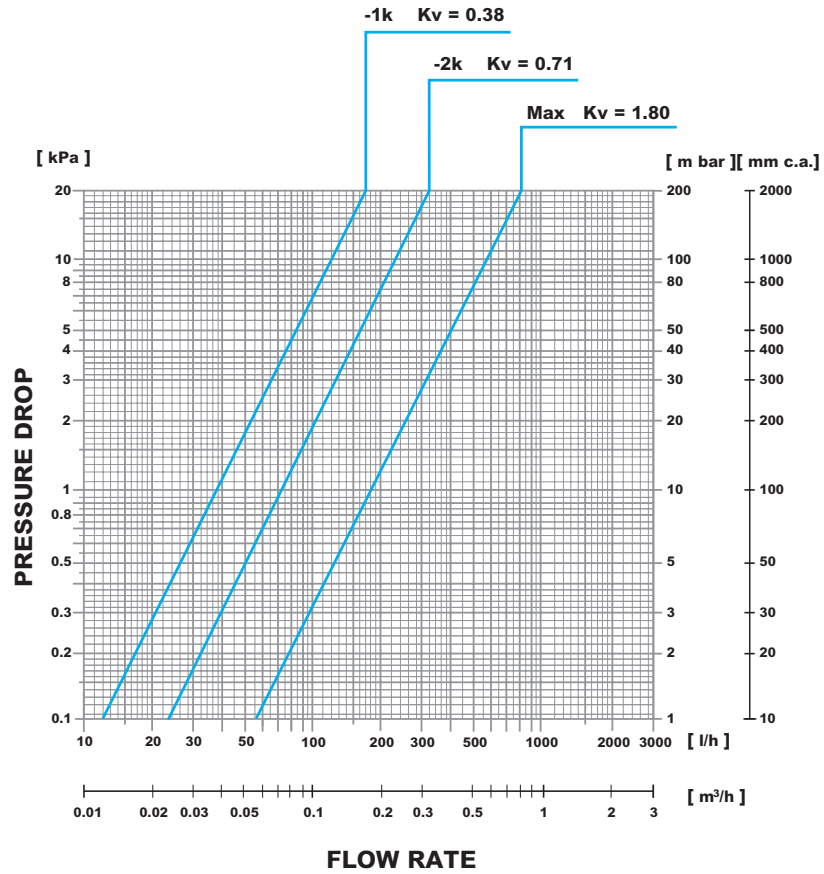
Straight body with actuator 148

189UM - 1189UM - DN 3/8"



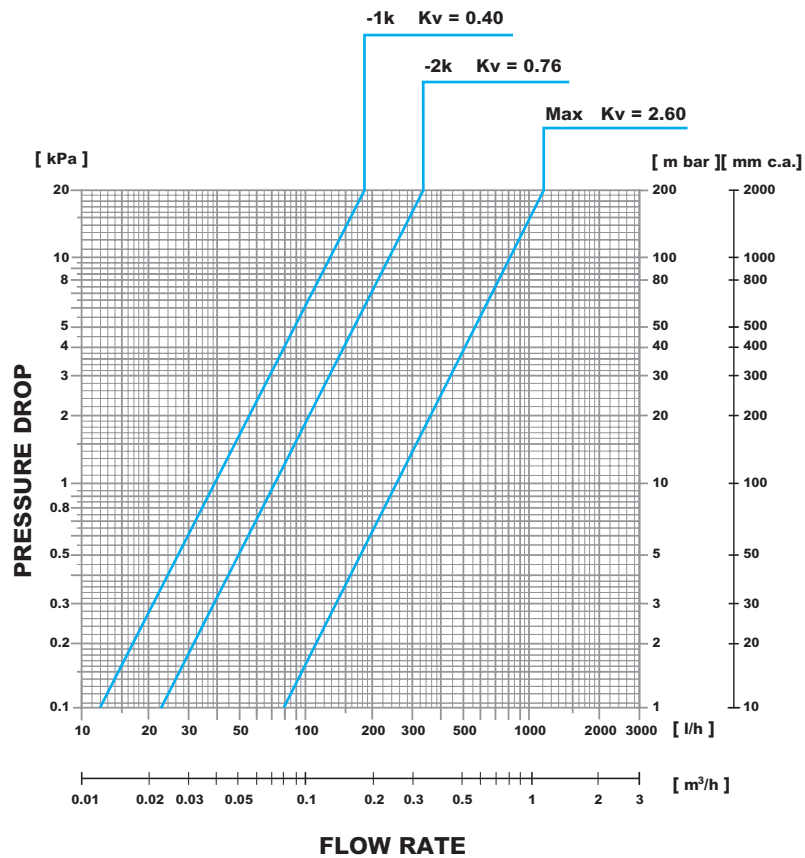
**Straight body with actuator 148**

**189UM - 1189UM - DN 1/2"**



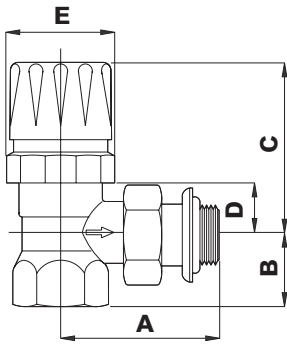
**Straight body with actuator 148**

**189UM - DN 3/4"**



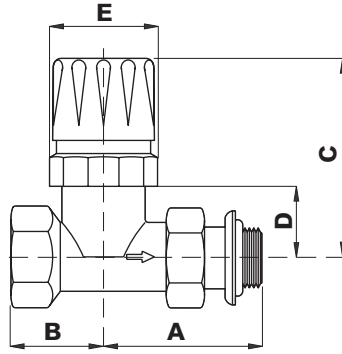
**Overall dimensions (mm)**

**178UM**



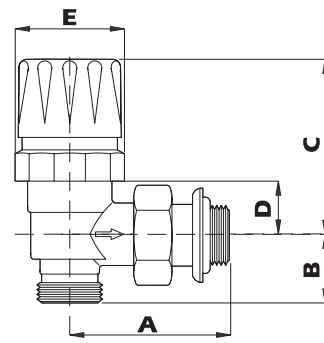
DN	A	B	C	D	E
3/8"	49	20	56	18	35
1/2"	53	23	56	18	35
3/4"	61	28	56	18	35

**179UM**



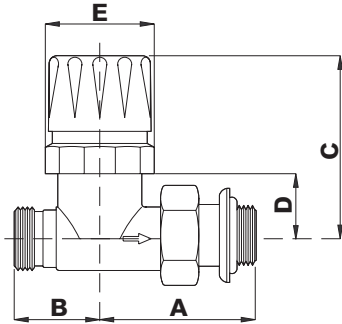
DN	A	B	C	D	E
3/8"	49	26	62	24.5	35
1/2"	53	29	62	24.5	35
3/4"	61	34	62	24.5	35

**1178UM**



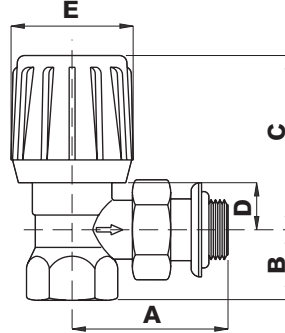
DN	A	B	C	D	E
1/2" x 3/8"	49	20,5	56	18	35
1/2" x 1/2"	53	20,5	56	18	35

**1179UM**



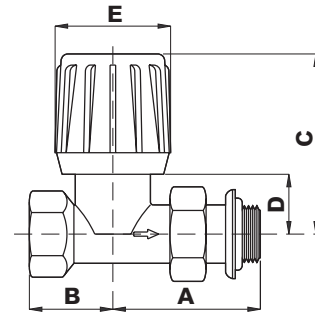
DN	A	B	C	D	E
3/8"	49	26	62	24,5	35
1/2"	53	26	62	24,5	35

**188UM**



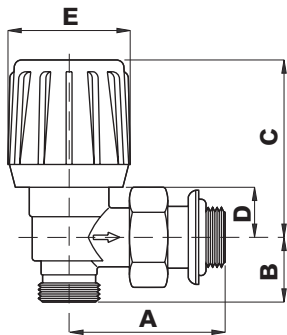
DN	A	B	C	D	E
3/8"	49	20	62	18	40
1/2"	53	23	62	18	40
3/4"	61	28	62	18	40

**189UM**



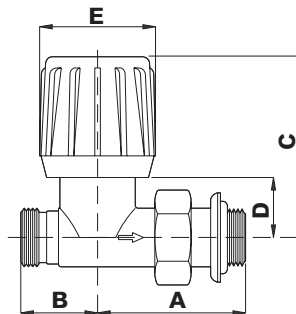
DN	A	B	C	D	E
3/8"	49	26	68	24.5	40
1/2"	53	29	68	24.5	40
3/4"	61	34	68	24.5	40

**1188UM**



DN	A	B	C	D	E
3/8"	49	20,5	62	18	40
1/2"	53	20,5	62	18	40

**1189UM**



DN	A	B	C	D	E
3/8"	49	26	68	24,5	40
1/2"	53	26	68	24,5	40

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