

Thermostatic actuator with remote probe Series 148SD2



Main features

- Used for:
 - Radiant panel heating systems
 - Heat exchangers
- Temperature setting ranges available :
 - 20 / 50 °C
 - 20 / 70 °C
- Reduced overall dimensions and weights

WATTS[®]
INDUSTRIES

A Division of Watts Water Technologies Inc.

Description

The thermostatic actuator with remote copper probe, **series 148SD2**, is a device serving for controlling the flow rate of the heat-carrier fluid in relation to the operating temperature of the system.



148SD2

Thermostatic actuator with immersion remote sensor for adjust flow of heat carrier in relation to the temperature in radiant panel heating systems, with presence of a storage tank and for water-air heat exchangers.

Setting range : 20°C ÷ 50°C and 20°C ÷ 70°C.

Bulb length : 97 mm (20°C ÷ 50 °C) - 66 mm (20°C ÷ 70 °C).

Bulb thickness : 12 mm. 2,5 m capillary tube.

Type	Part number	Bulb	Setting	Weight (g)
148SD2	148SD2050	97mm	20-50°C	250
148SD2	148SD2070	66mm	20-70°C	250



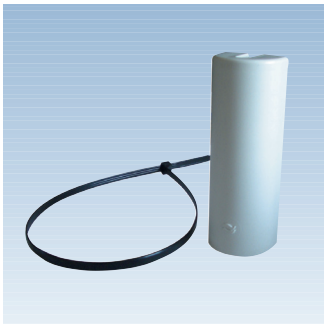
148SD12

Sensor pocket for actuator series 148SD2.

Threaded : 1/2" M.

Sealing with o-ring.

Type	Part number	Weight (g)
148SD12	148SD122050	100
148SD12	148SD122070	50



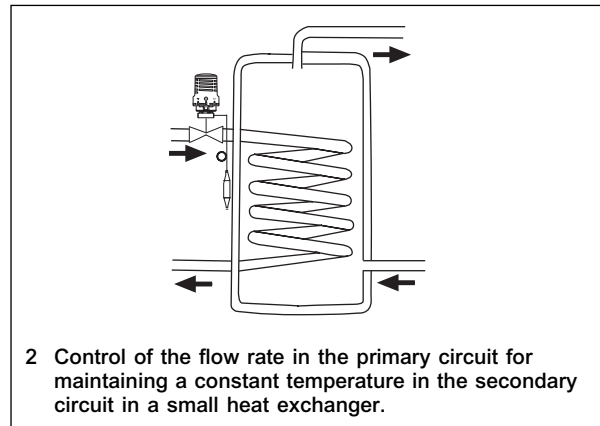
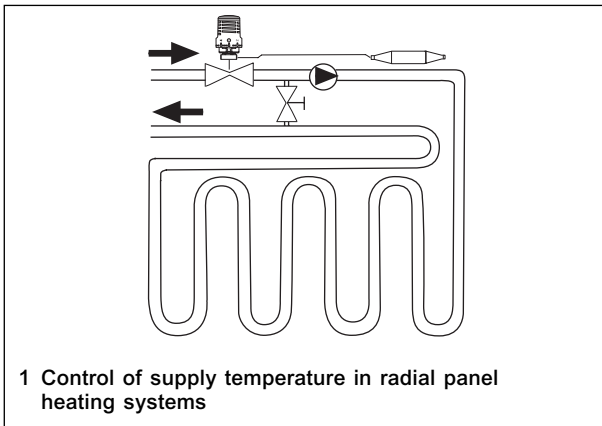
148SDCOP

Insulating cover and string fixing on each manifolds 20-50 and 20-70.

Type	Part number	Weight (g)
148SDCOP	148SDCOP	10

Application

The Series 148SD2 thermostatic actuator can be used for the following plant engineering applications :



Operation

Operation of the **series 148SD2** thermostatic actuator is based on a sensitive element seated under the control handwheel and connected to the remote probe via a liquid-filled capillary, which detects the operating temperature. The temperature is set by rotating the handwheel which is marked with the following setting range:

Setting range	20°C	25°C	30°C	35°C	40°C	45°C	50°C
148SD2050	20°C	25°C	30°C	35°C	40°C	45°C	50°C
148SD2070	20°C	28°C	37°C	45°C	53°C	62°C	70°C

Depending on the deviation from the preset temperature (set-point), the actuator adjusts the flow rate of the heat-carrier fluid through the plug movement of the valve on which it is mounted, thus controlling the temperature of the work fluid.

Hydraulic characteristics

The Kv values for the thermostatic / fan-coil valves and for each DN are listed in the following table

Series 148SD2 with thermostatic actuator and fan-coil valves	DN	PN bar	DP max bar	kv				kvs
				Proportional band				A
				2k	4k	6k	-8k	A
Series 130UM	3/8"	10	1	0,39	0,75	0,98	1,2	2,2
Series 130UM	1/2"	10	1	0,4	0,78	1,0	1,3	2,6
Series 130UM	3/4"	10	0,8	0,4	0,82	1,15	1,4	3,4
Series 131UM	3/8"	10	1	0,34	0,65	0,85	1,0	1,1
Series 131UM	1/2"	10	1	0,35	0,72	0,95	1,25	1,9
Series 131UM	3/4"	10	0,8	0,38	0,80	1,1	1,36	2,6
Series 2131 - 3131 - 4131	1/2"	16	0,7	0,35	0,65	0,9	1,2	1,7
Series 2131 - 3131 - 4131	3/4"	16	0,5	0,4	0,8	1,1	1,45	2,5 (Mix.) 2,8 (Div.)
Series 2131 - 3131	1"	16	0,4	0,5	0,9	1,5	2,0	4,5

Reliability of the **series 148SD2** is guaranteed by 100% testing of the production.

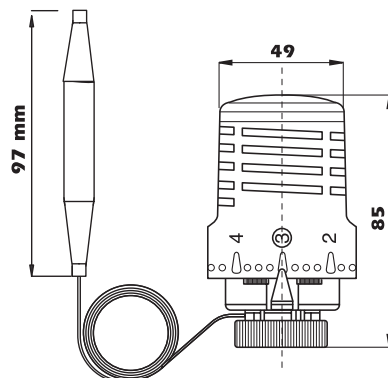
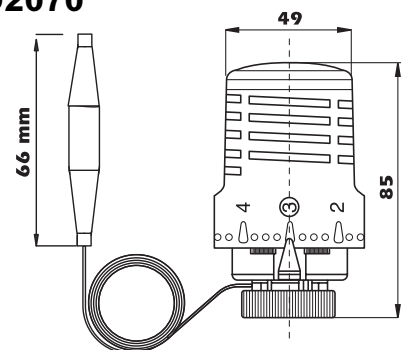
Design features	
Handwheel	ABS
Sensitive element capsule	Bronze
Probe	Copper
Plug seal	EPDM
Thrust rod	30% polyamide
Springs	Stainless steel

Technical features		
Setting range	20 ÷ 25°C	20 ÷ 70°C
Max. temperature, probe side	55°C	80°C
Nominal lift	0.175 mm/°C	0.105 mm/°C
Probe length	97 mm	66 mm
Probe diameter	12 mm	12 mm
Length of capillary	2 mm	2 mm

Installation

The thermostatic actuator can be installed on thermostatic valves **series 130, 131** and on fan-coil valves **series 2131, 3131, 4131**, with the contact probe in the most suitable position for measuring the operating temperature. For such purpose, it is possible to use the following accessory: sensor pocket **art. 148SD12** or **art. 148SDCOP** for installation on manifolds.

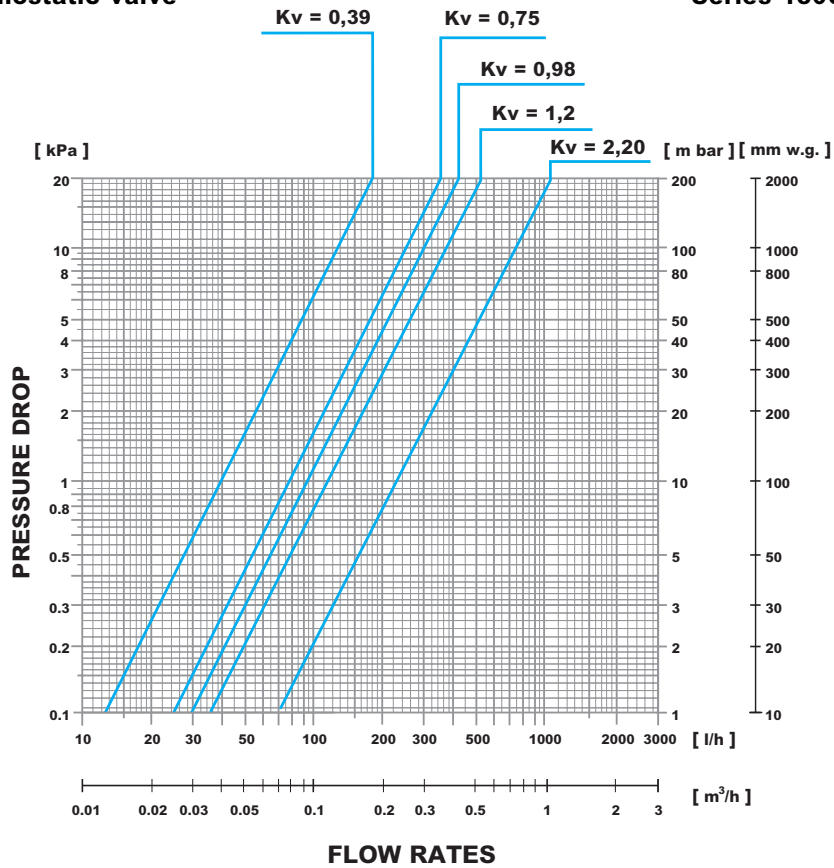
Overall dimensions (mm)

148SD2050

148SD2070


Flow rate/pressure drop charts

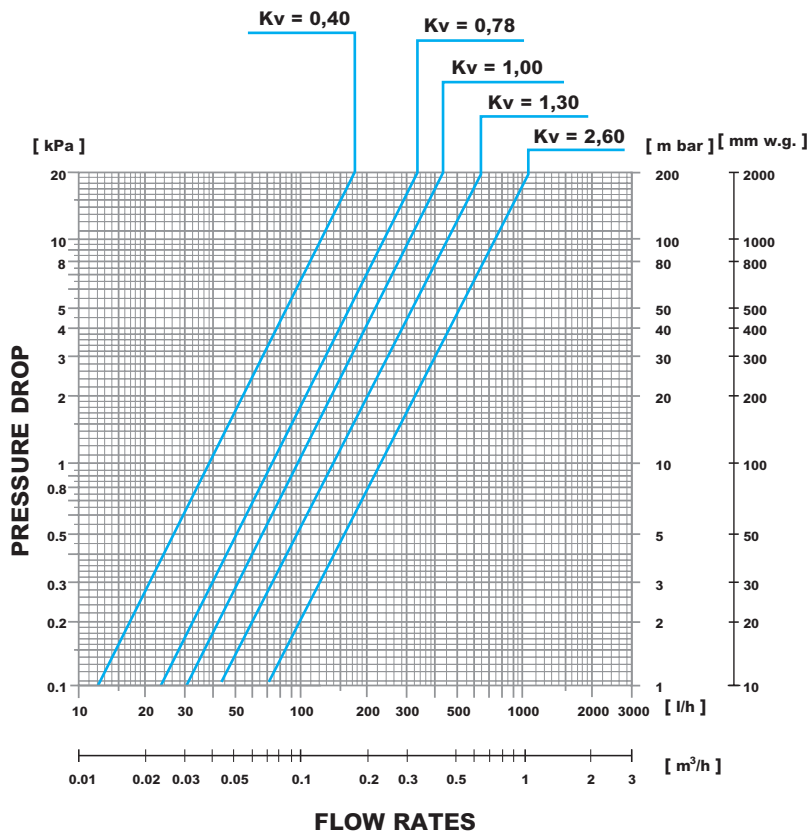
148SD2 + Thermostatic valve

Series 130UM - DN 3/8"



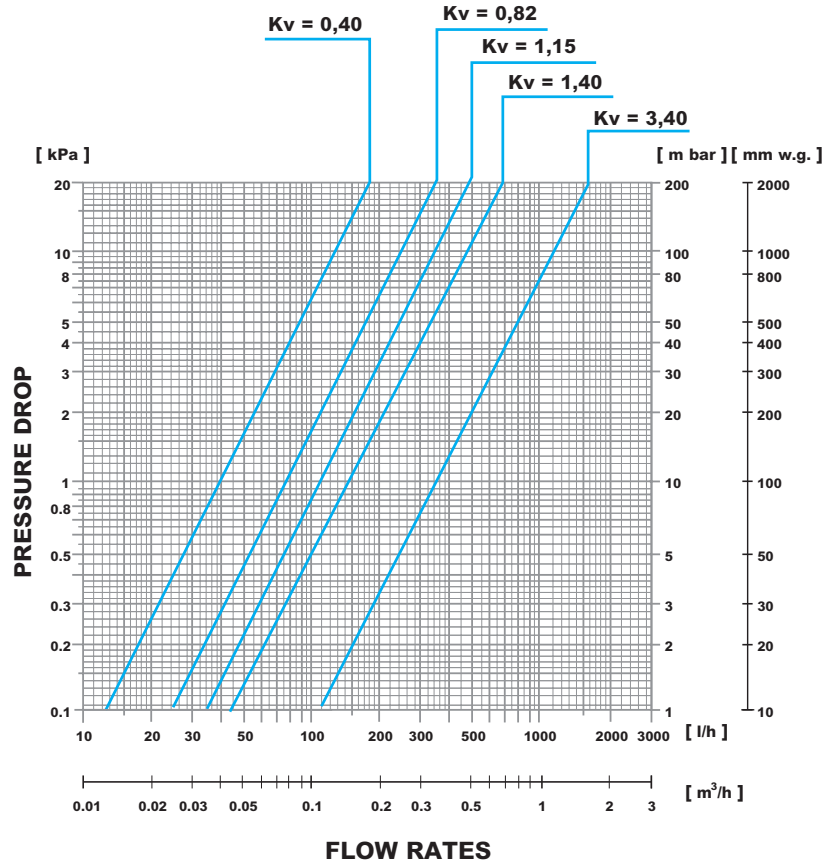
148SD2 + Thermostatic valve

Series 130UM - DN 1/2"



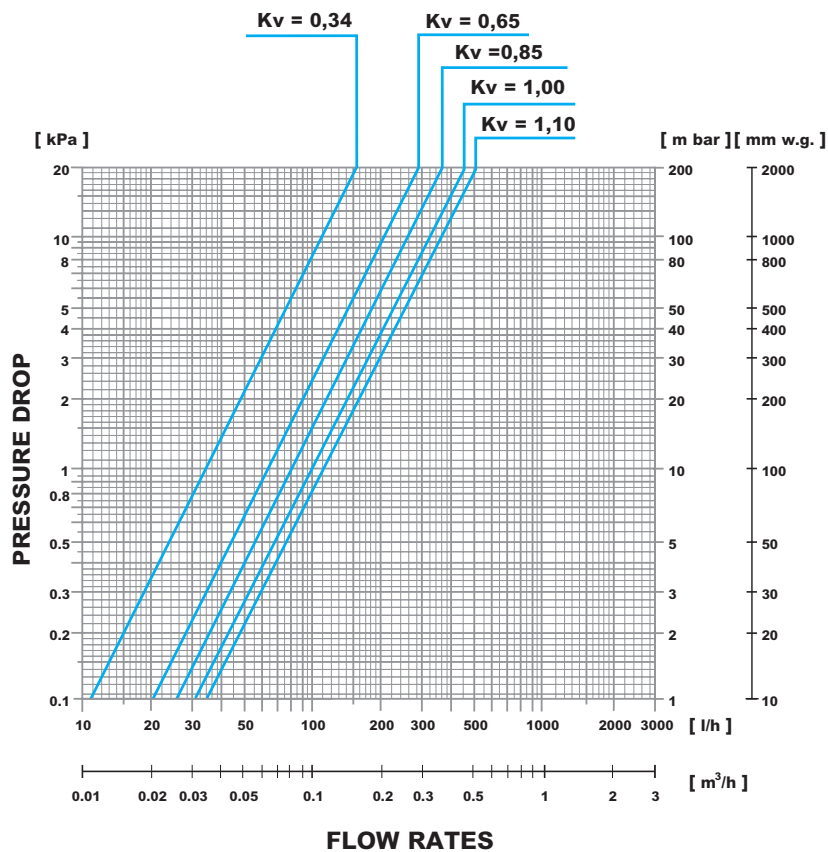
148SD2 + Thermostatic valve

Series 130UM - DN 3/4"



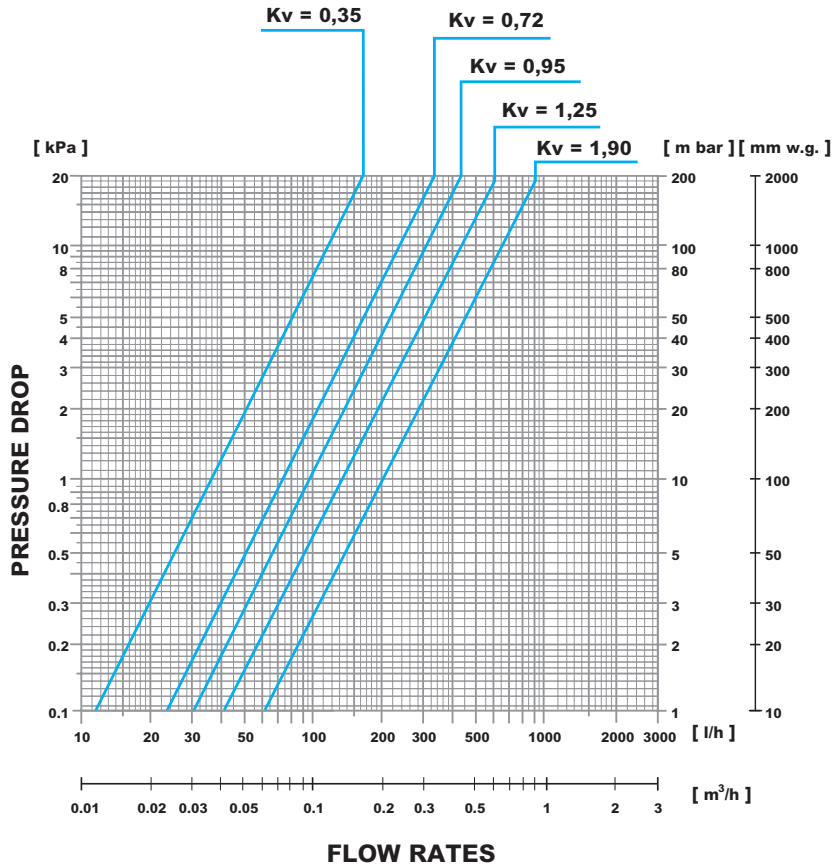
148SD2 + Thermostatic valve

Series 131UM - DN 3/8"



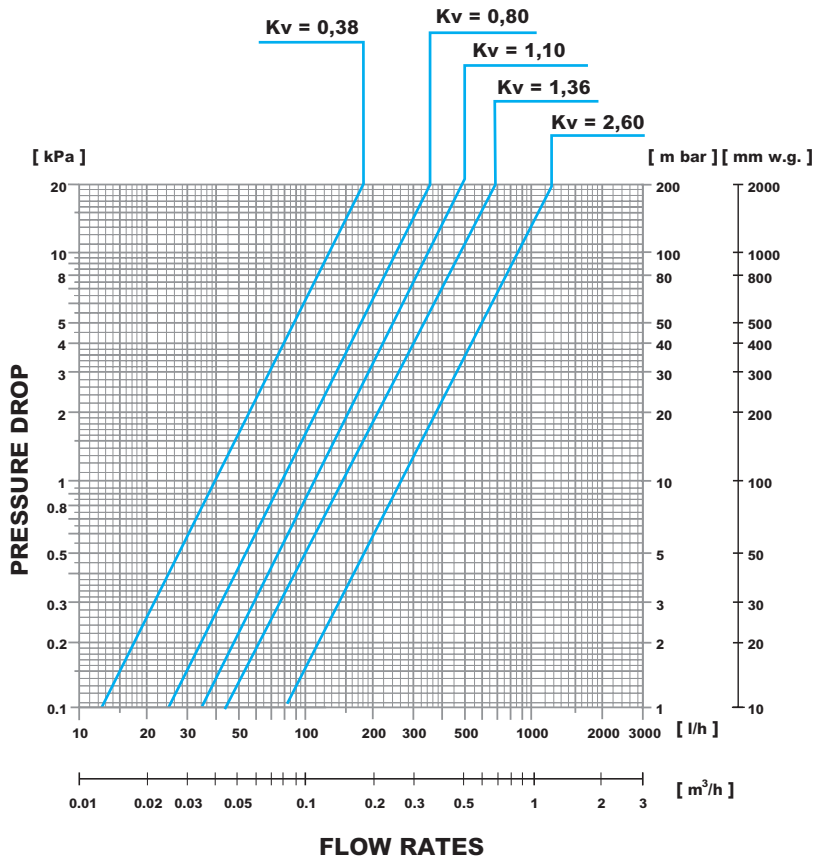
148SD2 + Thermostatic valve

Series 131UM - DN 1/2"



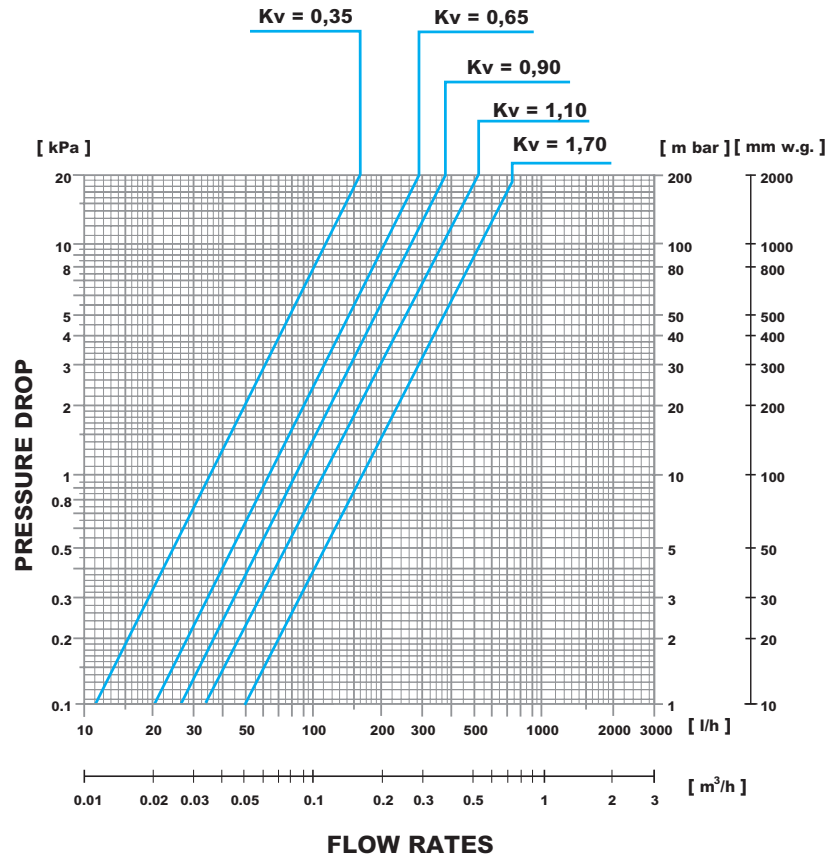
148SD2 + Thermostatic valve

Series 131UM - DN 3/4"



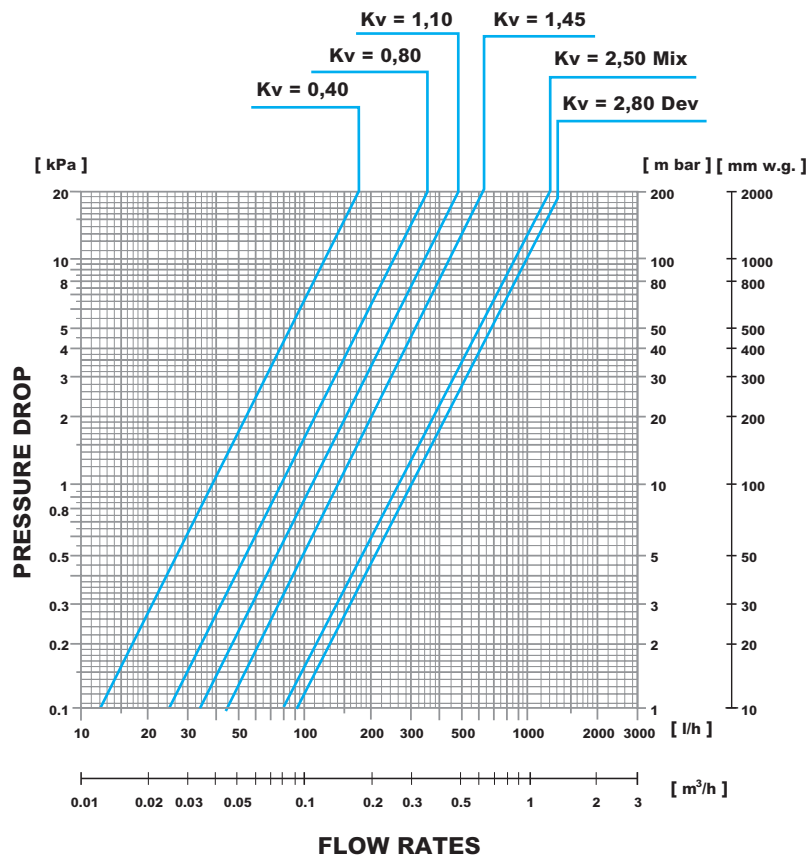
148SD2 + Fan-coil valve

Series 2131 - 3131 - 4131 - DN 1/2"



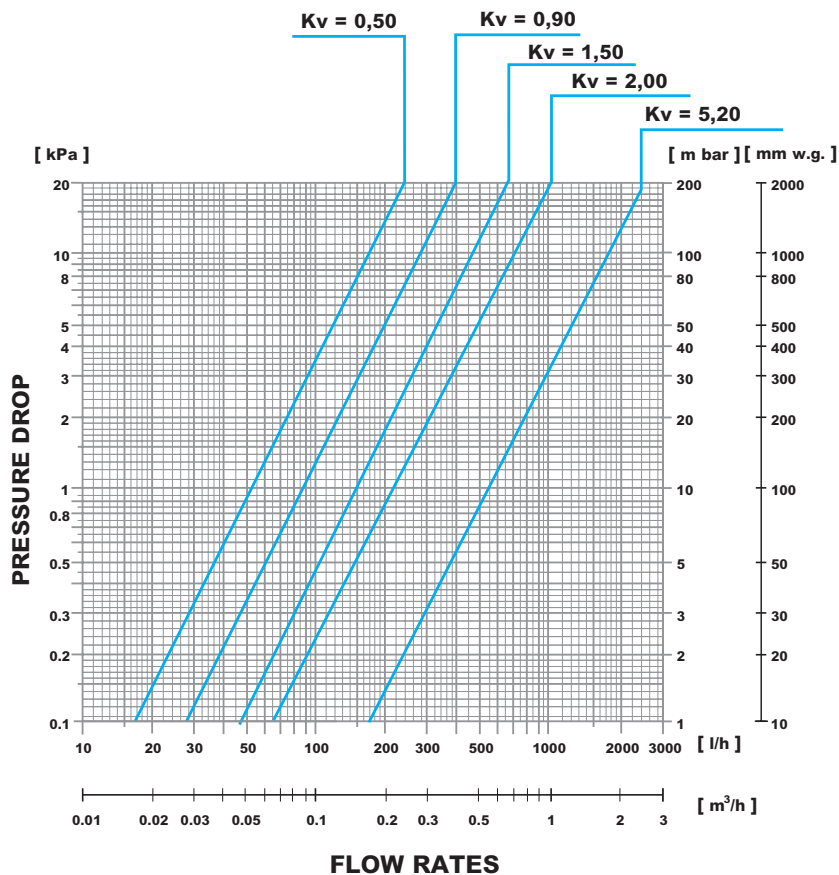
148SD2 + Fan-coil valve

Series 2131 - 3131 - 4131 - DN 3/4"



148SD2 + Fan-coil valve

Series 2131 - 3131 - DN 1"



The descriptions and photographs contained in this product specification sheet are supplied by way of information only and are not binding. Watts Industries reserves the right to carry out any technical and design improvements to its products without prior notice.



Watts Industries Italia S.r.l.

Via Brenno, 21 - 20046 Biassono (MI), Italy

Ph. : +39 039 49.86.1 - Fax : +39 039 49.86.222

e-mail : info@wattsindustries.it

www.wattsindustries.com