

MVDN: Control valve with threaded connection, PN 10

How energy efficiency is improved

Flow from both sides, plus the linear characteristic, ensure that the valve provides excellent energy efficiency.

Areas of application

Continuous regulation of the flow temperature in heating systems where a certain amount of leakage is desirable.

Features

- Nominal pressure 10 bar
- MVDN: three-way-mixing-valves with nominal diameters of DN 15...50
- Suitable for use with the motorised drives of type MDA5.1, MDA5.2, MDA10.1, MDA10.2.
- Manual adjustment by means of lever and end stops

Technical description

- Body and gate of brass CW617N
- Double O-ring of EPDM guarantees the tightness of the seal at the spindle.
- Lever of ABS
- Max. operating temperature 110 °C



Products

Type	Nominal diameter (DN)	k_{vs} value (m ³ /h)	Max. leakage rate (as % of k_{vs})	Weight (kg)
Three-way valve, body, lid, gate and spindle of brass				
MVDN15/3/2,5	15	2,5	1,0	0,5
MVDN20/3/4,0	20	4	1,0	0,7
MVDN20/3/6,0	20	6	1,0	0,7
MVDN25/3/8,0	25	8	1,0	0,9
MVDN25/3/12	25	12	1,0	0,9
MVDN32/3/15	32	15	1,0	1,2
MVDN32/3/18	32	18	1,0	1,2
MVDN40/3/26	40	26	1,0	2,2
MVDN50/3/40	50	40	1,0	2,4

Technical data

Pneumatic supply

Nominal pressure	PN 10
Max. operating pressure	10 bar

Features

Characteristic	linear
Angle of rotation	90°

Permitted ambient conditions

Operating temperature	2...110 °C
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Accessories

Type	Description
ZMVA	Assembly materials for MDA... actuator

Operation

The hot-water inlet is continuously opened by turning the spindle, while the cold-water inlet (heating return) is closed proportionately. This causes the temperature of the mixed water to rise (heating flow) while the flow remains practically constant.

On closing the hot-water inlet on the four-way valve, a by-pass to the boiler return is opened, which allows thermal circulation.

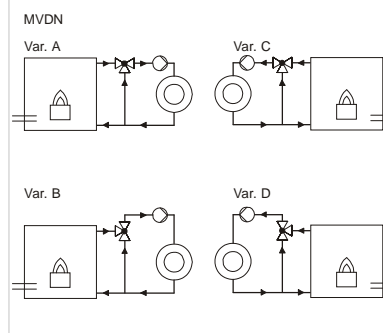
For automatic operation, a reversible drive with 90° angle of rotation is suitable. When the coupling is disengaged, the slider can be adjusted by hand.

Additional technical data

Body of brass, not injection-moulded. Tapped holes for fitting the bracket and the motor drive. Lever for manual adjustment, of ABS Scale, printed on both sides, for the following types of fitting: Boiler flow from left or right.

The ABS lever is supplied with the valve.

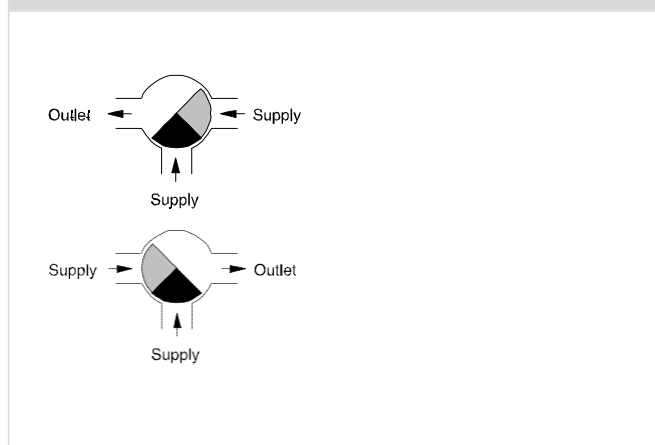
Examples of use



Engineering and fitting notes

All control valves should be used only in closed circuits. If used in open circuits, an excessive oxygen mixture may damage the valves. To prevent this from happening, use an oxygen binding agent, but consult the manufacturer of the binding agent with regard to compatibility and corrosion. Consult the material list, see MD 54.026. The composition of the water should be in accordance with VDI 2035.

Schematic



Using with water

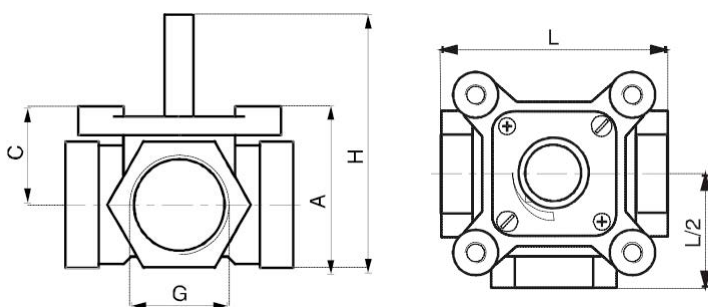
When using water, mixed with glycol or an inhibitor, consult the manufacturer with regard to the compatibility of the materials and seals used in the control valves. Please refer to the materials list below. If glycol is used, we recommend a concentration of between 20% and 50%.

Permissible fitting positions

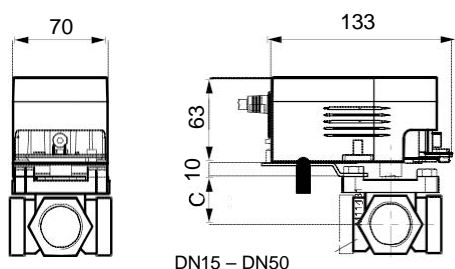
The control unit can be fitted in any position; however, we do not recommend fitting it in the upside-down position. The ingress of condensate, drops of water etc. into the drive should be prevented.

Dimension drawing MVDN

DN 15...50



Three-way valve with MDA5/10... actuator



DN	G	L	A	H	C
15	Rp 1/2	80	51.5	79.5	34.5
20	Rp 3/4	80	51.5	79.5	34.5
25	Rp 1	82	62	90	37
32	Rp 1 1/4	85	62	90	37
40	Rp 1 1/2	116	73,5	101,5	41
50	Rp 2	125	76,5	104,5	41

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