



# NTVS

Flanged 2-way DIN-standard valve for district heating



Pressure balanced 2-way valve intended for control of hot, cold or glycol-mixed water or district heating within the temperature range  $-5...+185^{\circ}\text{C}$ . Intended for use with the RVAN... actuators.

- ✓ Size DN15...DN150
- ✓ Kvs value 0.4...310
- ✓ Media temperature  $-5...185^{\circ}\text{C}$
- ✓ Pressure rating PN16
- ✓ No leakage
- ✓ Pressure balanced
- ✓ Flange distance according to DIN

## Function

The valve is closed when the stem is in its lowest position and completely open in the highest position.

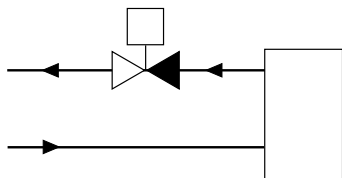


Fig. 1 2-way valve

At pressure drops of 7 bar or higher, we recommend using a metal packing (stainless steel). Use the extra letter M at the end of the reference type when ordering a valve with metal packing, for example NTVS50-27M instead of the usual NTVS50-27. For valves with metal packing, the maximum leakage is 0.05 % of kvs

The NTVS valves meet the requirements of DIN-standard DIN 3202/F1 and ISO 5752 table 1.

From DN20 to DN150, the valve is pressure balanced, and is therefore able to handle high differential pressures with lower actuator force.

## Installation

- ✓ Before installation of the control valve, ensure that the pipe is clean. Make sure that pipe scale, metal chips, welding slag and other foreign materials are removed.
- ✓ For maximum efficiency and minimum wear, install the valve in a vertical position with the stem pointing upward. If the valve is mounted with the actuator on the side, more wear is caused to the valve stuffing box. The valve should never be mounted at an angle of more than  $90^{\circ}$ .

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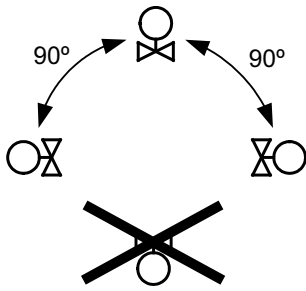
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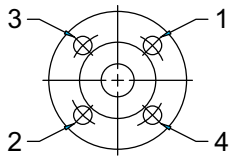
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- ✓ Install the valve according to the fluid direction arrow shown on the valve.
- ✓ Adjust the connection between the valve and the counter flange to minimise the tension between them.
- ✓ Tighten the bolts crosswise, as shown in the picture below. Tighten one flange at a time. After conducting a test run, the bolts should be tightened crosswise once more.



- ✓ Fit a strainer/filter upstream of the valve to prolong the equipment's life span.
- ✓ A water quality according to VDI 2035 is recommended.

## Technical data

<b>Application</b>	Heating systems, cooling systems, district heating systems, district cooling systems, ventilation systems
<b>Pressure rating</b>	PN16
<b>Connection</b>	Flanges according to EN 1092-2
<b>Flow characteristics</b>	Equal percentage
<b>Max. leakage</b>	0.0 % of the kvs value (PTFE gasket, carbon-filled 25 %, no leakage) / 0.05 % of kvs for NTVS...-...M models with metal packing
<b>Media</b>	Hot water, cold water, glycol-mixed water (max. 50 % glycol)
<b>Media temperature</b>	-5...+185 °C
<b>Rangeability</b>	100:1
<b>Max. diff. pressure</b>	1600 kPa

## Material

<b>Body</b>	Nodular cast iron (GJS) EN-JS1050
<b>Seat</b>	Stainless steel 1.4301 or gunmetal CC491K (RG5)
<b>Plug</b>	Stainless steel 1.4305 (DN15...DN100) or gunmetal CC491K (RG5) (DN25...DN150)
<b>Stem</b>	Stainless steel 1.4305
<b>Lining</b>	Stainless steel 1.4301
<b>Seat packing, soft seal</b>	PTFE with 25 % carbon
<b>Seat packing, metal seal</b>	Stainless steel 1.4057
<b>Packing box</b>	Dezincifications resistant brass CW 602N, self-adjusting teflon
<b>O-rings</b>	Viton

## Models

Article	Nominal diameter	Kvs	Stroke	Actuator
NTVS15-0.4	DN15	0.4	20 mm	RVAN5
NTVS15-1.0	DN15	1.0	20 mm	RVAN5
NTVS15-1.6	DN15	1.6	20 mm	RVAN5
NTVS15-2.7	DN15	2.7	20 mm	RVAN5
NTVS20-0.8	DN20	0.8	20 mm	RVAN5
NTVS20-1.6	DN20	1.6	20 mm	RVAN5
NTVS20-2.7	DN20	2.7	20 mm	RVAN5
NTVS20-3.9	DN20	3.9	20 mm	RVAN5
NTVS20-6.3	DN20	6.3	20 mm	RVAN5
NTVS25-1.6	DN25	1.6	20 mm	RVAN5
NTVS25-2.5	DN25	2.5	20 mm	RVAN5
NTVS25-4.0	DN25	4.0	20 mm	RVAN5
NTVS25-6.3	DN25	6.3	20 mm	RVAN5
NTVS25-10	DN25	10	20 mm	RVAN5
NTVS32-4.0	DN32	4.0	20 mm	RVAN5
NTVS32-6.3	DN32	6.3	20 mm	RVAN5
NTVS32-10	DN32	10	20 mm	RVAN5
NTVS32-16	DN32	16	20 mm	RVAN5
NTVS40-6.3	DN40	6.3	20 mm	RVAN5

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— 3 —

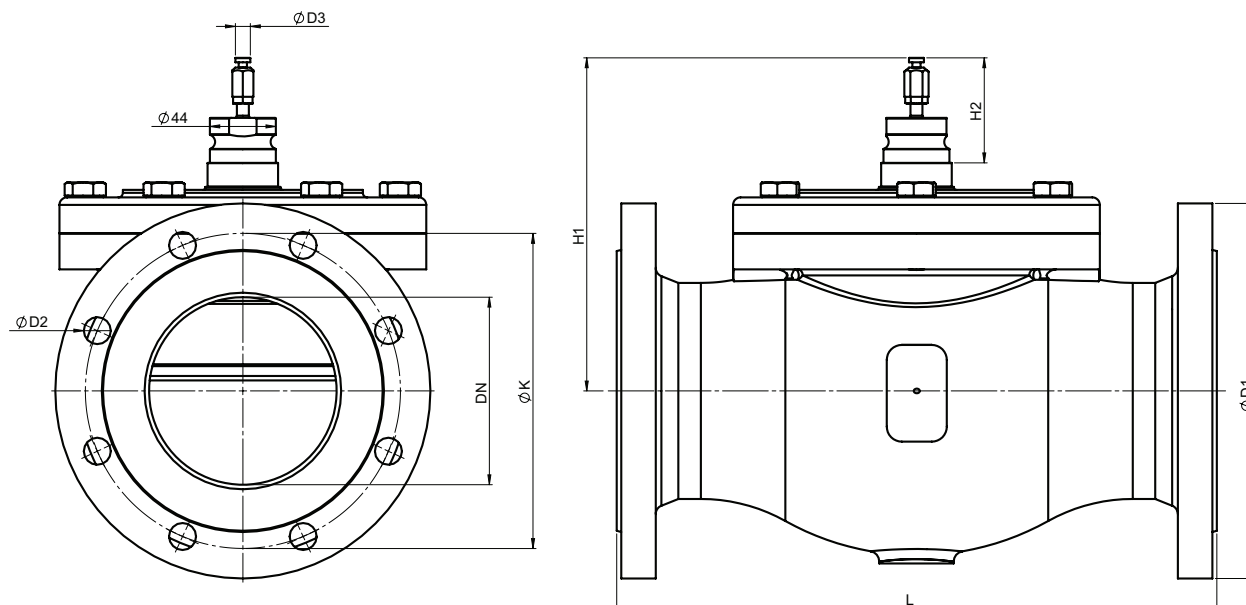
  
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Article	Nominal diameter	Kvs	Stroke	Actuator
NTVS40-10	DN40	10	20 mm	RVAN5
NTVS40-16	DN40	16	20 mm	RVAN5
NTVS40-27	DN40	27	20 mm	RVAN5
NTVS50-6.3	DN50	6.3	20 mm	RVAN5
NTVS50-10	DN50	10	20 mm	RVAN5
NTVS50-16	DN50	16	20 mm	RVAN5
NTVS50-27	DN50	27	20 mm	RVAN5
NTVS50-39	DN50	39	20 mm	RVAN5
NTVS65-16	DN65	16	20 mm	RVAN5
NTVS65-27	DN65	27	20 mm	RVAN10
NTVS65-39	DN65	39	20 mm	RVAN10
NTVS65-63	DN65	63	20 mm	RVAN10
NTVS80-100	DN80	100	20 mm	RVAN10
NTVS100-160	DN100	160	38 mm	RVAN18
NTVS125-215	DN125	215	40 mm	RVAN25
NTVS150-310	DN150	310	40 mm	RVAN25

## Accessories

Article	Description
S0603080300	Spare parts kit, packing box
STEMHEATER	Valve stem heater, 24V AC, 50W for RVAN

## Dimensions



Connection	L	H1	H2	Stroke	$\phi D1$	$\phi D2$	$\phi D3$	$\phi K$	Weight (kg)
DN15	130	137.5	70	20	95	14 (x4)	10	65	3
DN20	150	142.5	70	20	105	14 (x4)	10	75	3
DN25	160	147.5	70	20	115	14 (x4)	10	85	4
DN32	180	160	70	20	140	18 (x4)	10	100	6

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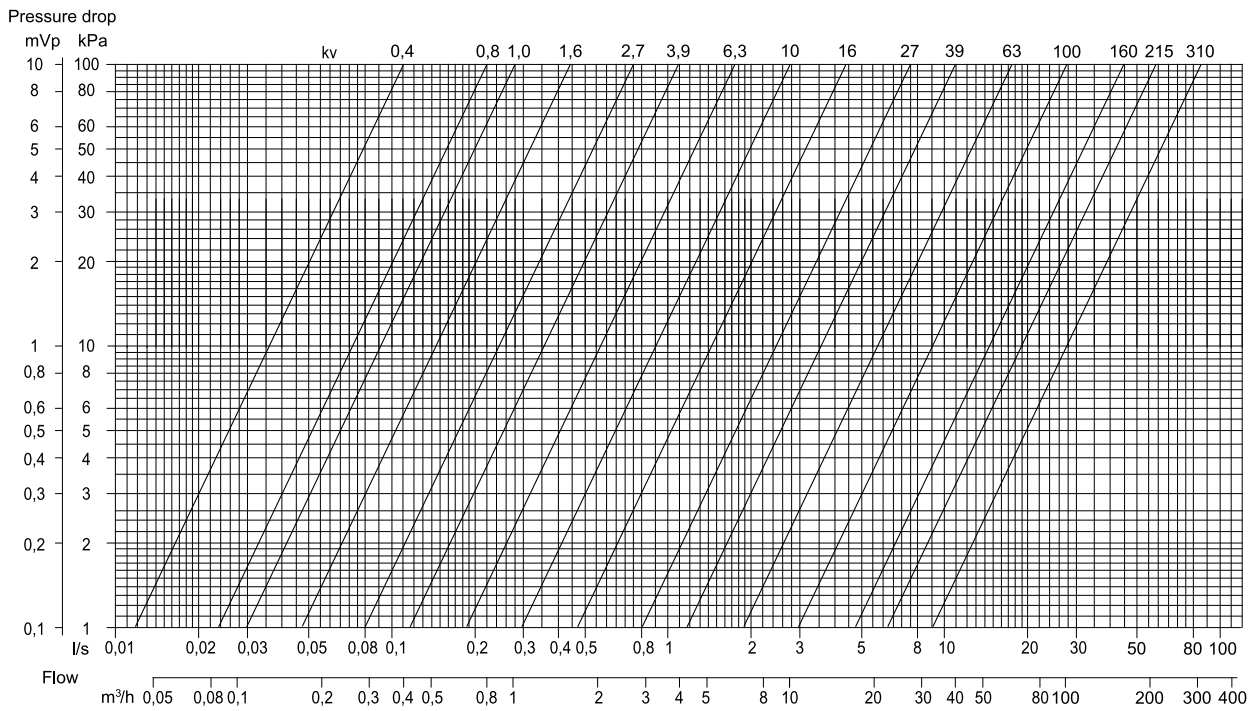
— 4 —

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Connection	L	H1	H2	Stroke	øD1	øD2	øD3	øK	Weight (kg)
DN40	200	165	70	20	150	18 (x4)	10	110	8
DN50	230	172.5	70	20	165	18 (x4)	10	125	11
DN65	290	182.5	70	20	185	18 (x4)	10	145	15
DN80	310	190	70	20	200	18 (x8)	10	160	20
DN100	350	200	70	38	220	18 (x8)	13.5	180	37
DN125	400	215	70	40	250	18 (x8)	13.5	210	55
DN150	480	232.5	70	40	285	22 (x8)	13.5	240	88

[mm], unless otherwise specified

## Pressure drop diagram



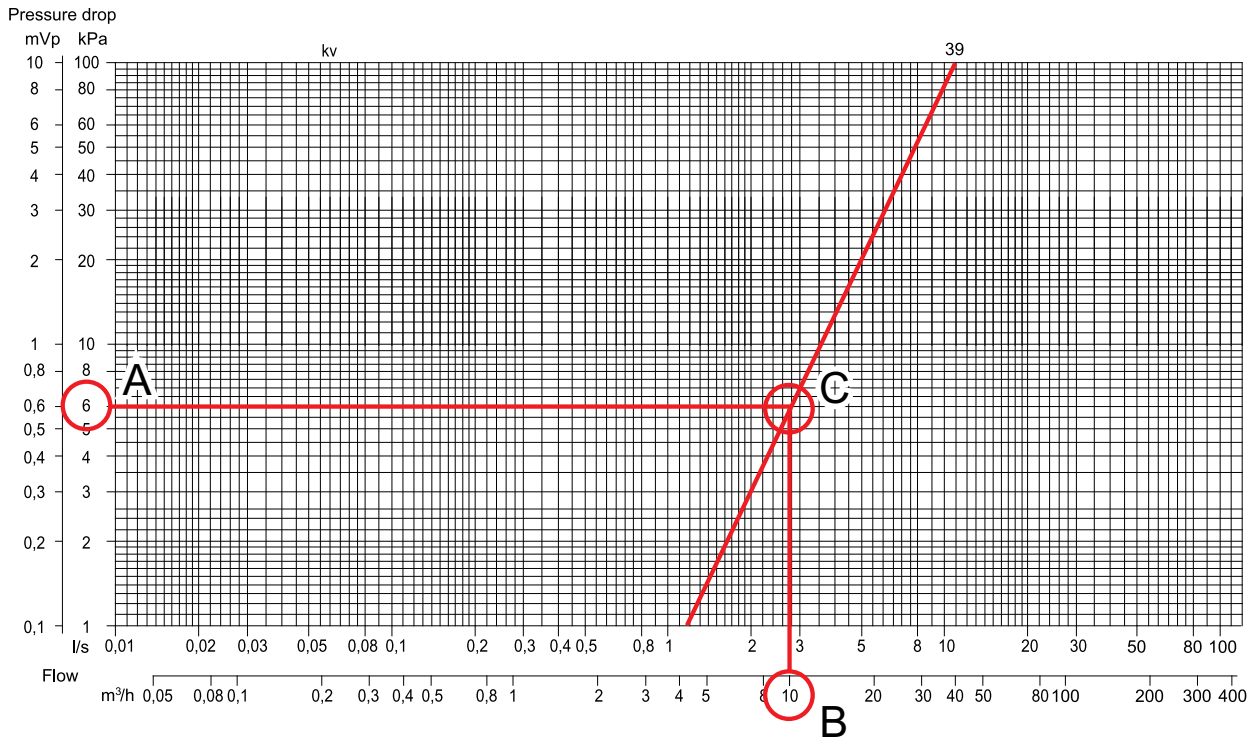


Fig. 2 Example, pressure drop diagram: If the pressure drop is 6 kPa (A) and the flow is 10 m³/h (B), a valve with the kvs 39 (C) is preferably selected. See the markings in the picture above.

## Documentation

All documentation can be downloaded from [www.regincontrols.com](http://www.regincontrols.com).