

FRS

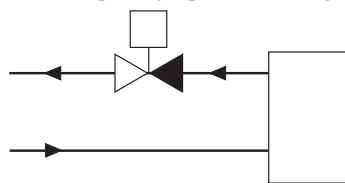
Flanged 2-way district heating valve

Flanged valves for heating, district heating and air handling systems. The valves are intended for use together with Regin's RVAN actuators. Adapters are also available for adaptation to actuators of other brands. The valves are mainly intended for district heating and were primarily developed to replace the TAC valve STL. The valves (DN20...DN40 with kvs 0.6-4.0) are available in DIN-standard lengths as well and are then called FRSD..., for instance FRSD32-1,6. Standard FRS valve DN15 is already in DIN-standard.

- ✓ Size DN15...DN65
- ✓ Kv value 0.6...20
- ✓ Media temperature -5...+150°C
- ✓ Pressure rating PN16
- ✓ Tight close-off (PTFE-sealing)
- ✓ Replacement valve for STL-valves

Function

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



2-way valve

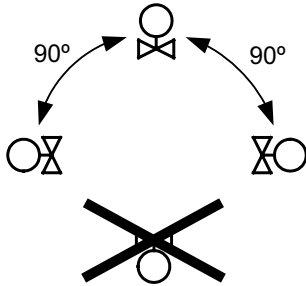
Actuator force

For valves with kvs 10, 16 and 20, the following force is required:

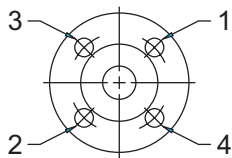
At differential pressure	Force
6 bar	570 N
8 bar	755 N
10 bar	944 N
12 bar	1133 N
14 bar	1322 N
16 bar	1511 N

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°.



- Install the valve according to the fluid direction arrow shown on the valve.
- Make sure there is ample space above the valve to facilitate easy removal of the valve actuator.
- 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

Application	Heating systems, cooling systems, district heating systems, district cooling systems, ventilation systems
Pressure rating	PN16
Connection	Flanges according to ISO 7005-2
Flow characteristics	Equal percentage
Max. leakage	0.0 % of the kvs value (PTFE gasket, carbon-filled 25 %, no leakage)
Media	Hot water, cold water, glycol-mixed water (max. 50 % glycol)
Media temperature	-5...+150 °C
Rangeability	100:1
Stroke	20 mm
Max. diff. pressure	1600 kPa

Material

Body	Gunmetal CC491K (RG5)
Seat	Stainless steel 1.4305
Plug	Stainless steel 1.4305
Stem	Stainless steel 1.4305
Seat packing	PTFE with 25 % carbon
Packing box	Dezincification resistant brass CW 602N
O-rings	Viton
Flanges	Epoxy-coated steel
Flange hub	Epoxy coated steel (DN20...DN40), gunmetal 1400 LG2 (DN50...DN65)

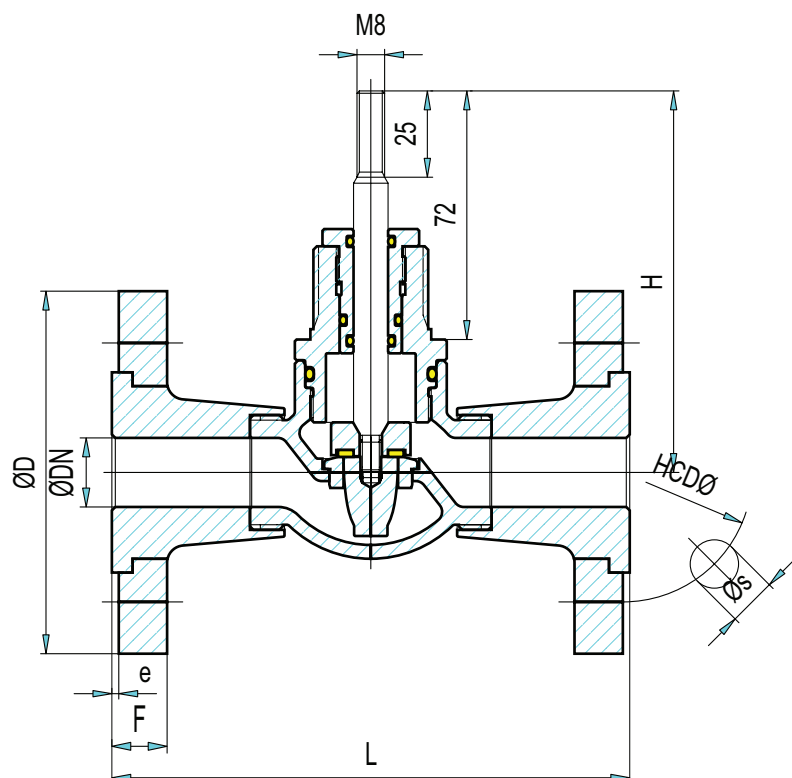
Models

Article	Nominal diameter	Kvs	Actuator
FRS15-0,6	DN15	0.6	RVAN5
FRS15-1,0	DN15	1.0	RVAN5
FRS15-1,6	DN15	1.6	RVAN5
FRS15-2,5	DN15	2.5	RVAN5
FRS20-0,6	DN20	0.6	RVAN5
FRS20-1,0	DN20	1.0	RVAN5
FRS20-2,5	DN20	2.5	RVAN5
FRS20-1,6	DN20	1.6	RVAN5
FRS20-4,0	DN20	4.0	RVAN5
FRS25-0,6	DN25	0.6	RVAN5
FRS25-1,0	DN25	1.0	RVAN5
FRS25-1,6	DN25	1.6	RVAN5
FRS25-2,5	DN25	2.5	RVAN5
FRS25-4,0	DN25	4.0	RVAN5
FRS32-0,6	DN32	0.6	RVAN5
FRS32-1,0	DN32	1.0	RVAN5
FRS32-1,6	DN32	1.6	RVAN5
FRS32-2,5	DN32	2.5	RVAN5
FRS32-4,0	DN32	4.0	RVAN5
FRS32-6,3	DN32	6.3	RVAN5
FRS32-10	DN32	10	RVAN18
FRS32-16	DN32	16	RVAN18
FRS40-0,6	DN40	0.6	RVAN5
FRS40-1,0	DN40	1.0	RVAN5
FRS40-1,6	DN40	1.6	RVAN5
FRS40-2,5	DN40	2.5	RVAN5
FRS40-4,0	DN40	4.0	RVAN5
FRS40-6,3	DN40	6.3	RVAN5
FRS40-10	DN40	10	RVAN18
FRS40-16	DN40	16	RVAN18
FRS40-20	DN40	20	RVAN18
FRS50-2,7	DN50	2.7	RVAN5
FRS50-6,3	DN50	6.3	RVAN5
FRS50-10	DN50	10	RVAN18
FRS50-16	DN50	16	RVAN18
FRS50-20	DN50	20	RVAN18
FRS65-2,7	DN65	2.7	RVAN5
FRS65-6,3	DN65	6.3	RVAN5
FRS65-10	DN65	10	RVAN18
FRS65-16	DN65	16	RVAN18
FRS65-20	DN65	20	RVAN18

Accessories

Article	Description
S6321457301	Spare parts kit, packing box

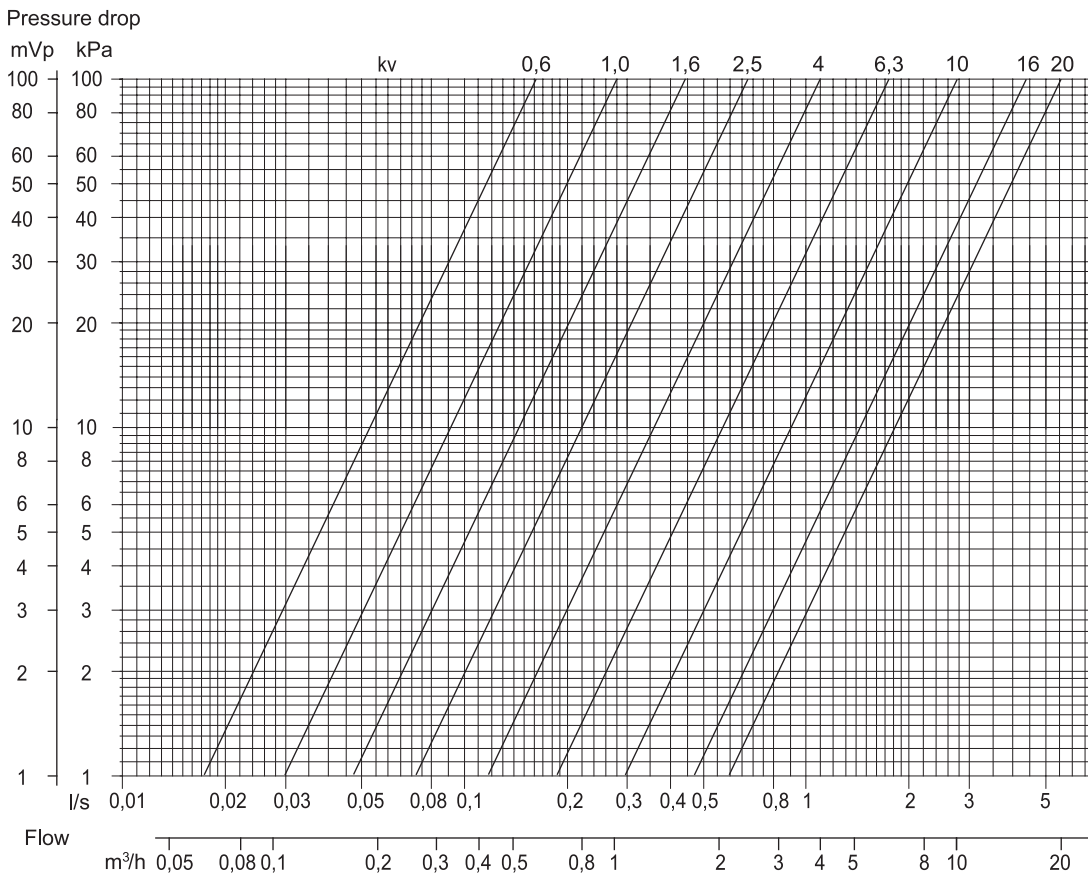
Dimensions



DN	ØD	L (STL)	L (DIN)	F	e	H	ØHCD	Øs (x4)
15	95	130*	N/A	16	2	110	65	14
20	105	142	150	16	2	110	75	14
25	115	156	160	16	2	115	85	14
32	140	165	180	18	2	115	100	18
40	150	170	200	18	3	115	110	18
50	165	214	N/A	20	3	115	125	18
65	185	214	N/A	20	3	115	145	18

Measurements in mm unless otherwise specified.

Pressure drop diagram



Example: calculation of kv value

If the pressure drop is 6 kPa (A) and the flow is 1 m³/h (B), the kv value is 4 (C). See the markings in the picture to the right.

