

Data Sheet

FHV Regulating Valve

Application



FHV control valves are ideally suited for controlling the temperature of individual under-floor heated rooms and for systems using floor heating in conjunction with radiators.

Danfoss offers the following versions:

- FHV-R provides temperature control of under-floor heating circuits, using a return temperature limiting valve fitted with a type FJVR sensor element.
- FHV-A enables floor temperature control via a presettable thermostatic valve fitted with a type RA 2000 sensor element.

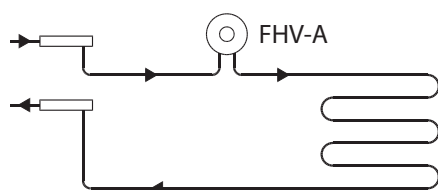
FHV control valves are flexible to use and easy to install in the floor heating circuit.

With the FHV-A, the integrated presetting simplifies hydraulic balancing of the system. Connections to the $\frac{3}{4}$ " external thread are made with Danfoss compression connectors.

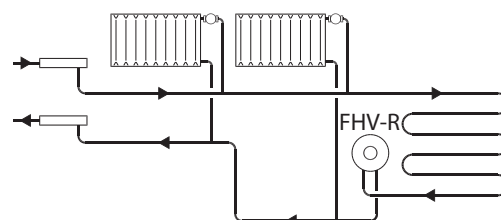
Note!

If using the FHV-A for room temperature control, the flow temperature should not be permitted to exceed the maximum recommended by the floor heating supplier. When the FHV-R is used for controlling floor heating, the heated floor area should not be greater than 10 m².

System Lay-outs



Floor heating system, heating circuit with FHV-A in flow.



Floor temperature control of mixed system, heating circuit with FHV-R in return.

Technical Specifications

Type	Connection	k _{vS} (m ³ /h)	Max. pressure			Max. flow temp.
			Working	Differential	Test	
FHV-R	G $\frac{3}{4}$ A	0.88	6 bar	0.6 bar	10 bar	90° C
FHV-A	G $\frac{3}{4}$ A	0.04 - 0.79	6 bar	0.6 bar	10 bar	90° C

Ordering

FHV sets (with enclosure box and front cover)	For sensor	Colour	Code no.
FHV-R set: return temperature limiter valve with air vent and bleed key	FJVR	white	003L1000
FHV-A set: valve with presetting, air vent and bleed key	RA2000	white	003L1001
FHV-R set: return temperature limiter valve with air vent, bleed key and drain tap	FJVR	white	003L1015

Sensors	Temp. range	Colour	Code no.
FJVR return temperature limiting sensor	10–50° C	white	003L1040
FJVR return temperature limiting sensor	10–50° C	chrome	003L1072
RA2000 room temperature sensor with frost protection, limiting and locking of temperature set-point	5–26° C	white	013G2990
RA2000 room temperature sensor with frost protection, limiting and locking of temperature set-point, connection with clamping ring and Allen screw	5–26° C	white	013G2910
RA2000 room temperature sensor with frost protection, limiting and locking of temperature	5–26° C	white	013G2994

Accessories

Accessory	Code no.
Mounting aid with integrated spirit level	003L1338
Drain key	003L1340
Round front cover for FHV-R / -A	003L1050
Square front cover for FHV-R / -A	003L1052
Extension piece for RA sensors, 17.9 mm	003L1035
Extension piece for FJVR sensors, 17.9 mm	003L1036
Anti theft plugs for RA2000 sensors (50 pcs.)	013G1232
Allen key for RA2000 sensors	013G1236
Threaded range limiting pins for RA2000 sensors (30 pcs.)	013G1237
Gland seal for FHV-R / -A	013G0290

Compression Fittings

Compression Fitting	Code no.
Compression fittings for PEX tubes, 15 x 2.5 mm	013G4147
Compression fittings for PEX tubes, 16 x 2.2 mm	013G4163
Compression fittings for PEX tubes, 18 x 2.5 mm	013G4159
Compression fittings for PEX tubes, 20 x 2.5 mm	013G4161
Compression fittings for ALUPEX tubes, 14 x 2 mm	013G4184
Compression fittings for ALUPEX tubes, 16 x 2 mm	013G4186
Compression fittings for ALUPEX tubes, 18 x 2 mm	013G4188
Compression fittings for ALUPEX tubes, 20 x 2 mm	013G4190

Presetting

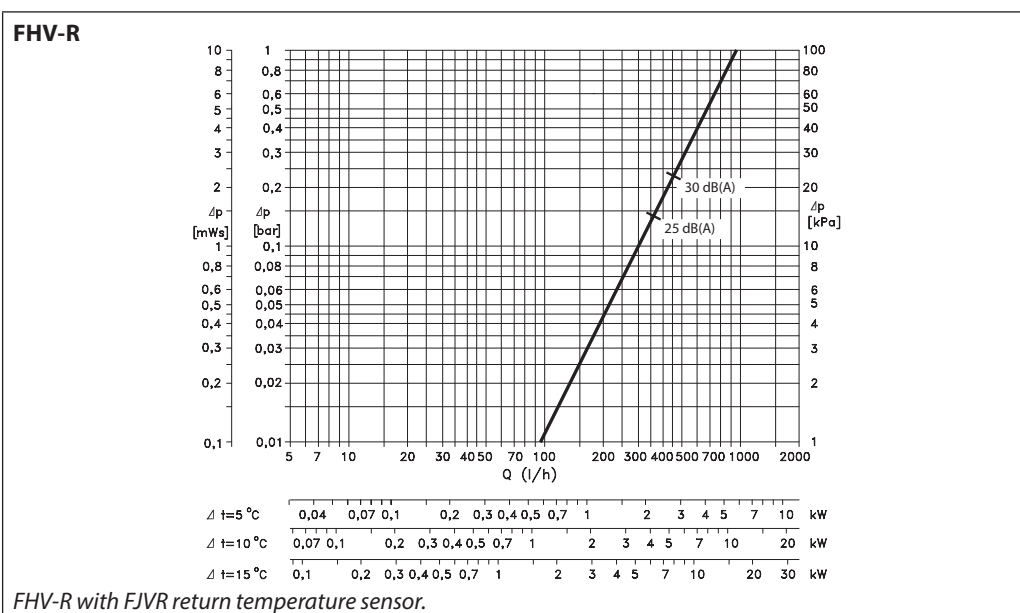
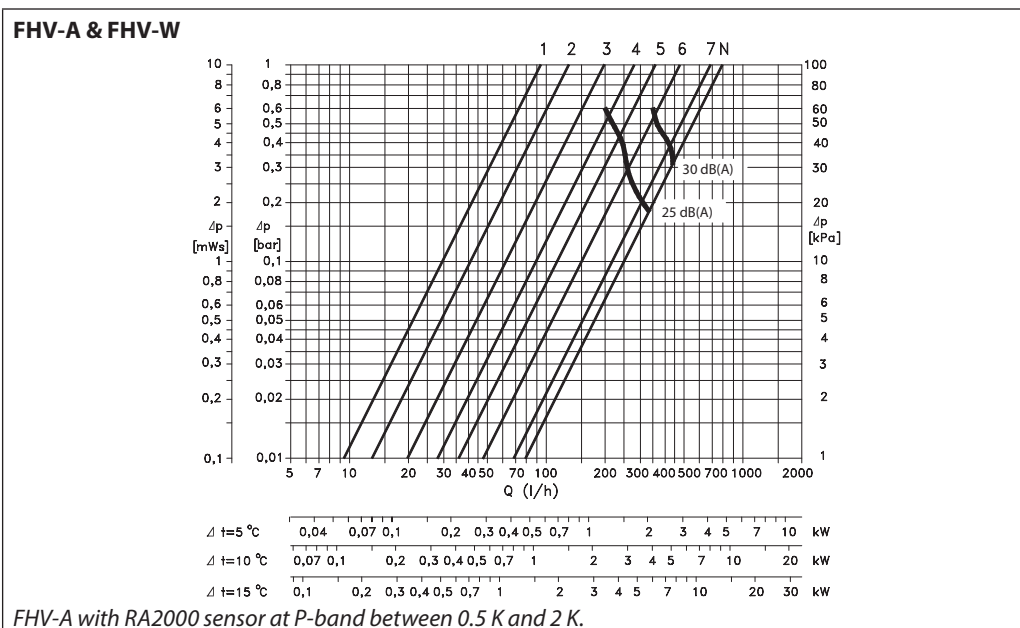
Danfoss presettable valve bodies incorporate easy-to-use adjustment rings with clearly engraved setting markers scaled from 1 - 7 and N. The preset level can be selected in 0.5 increments between 1 and 7 (see capacity diagram for flow rates). At setting N the valve is fully open (flushing option).

Setting values can be set quickly and precisely without any tools:

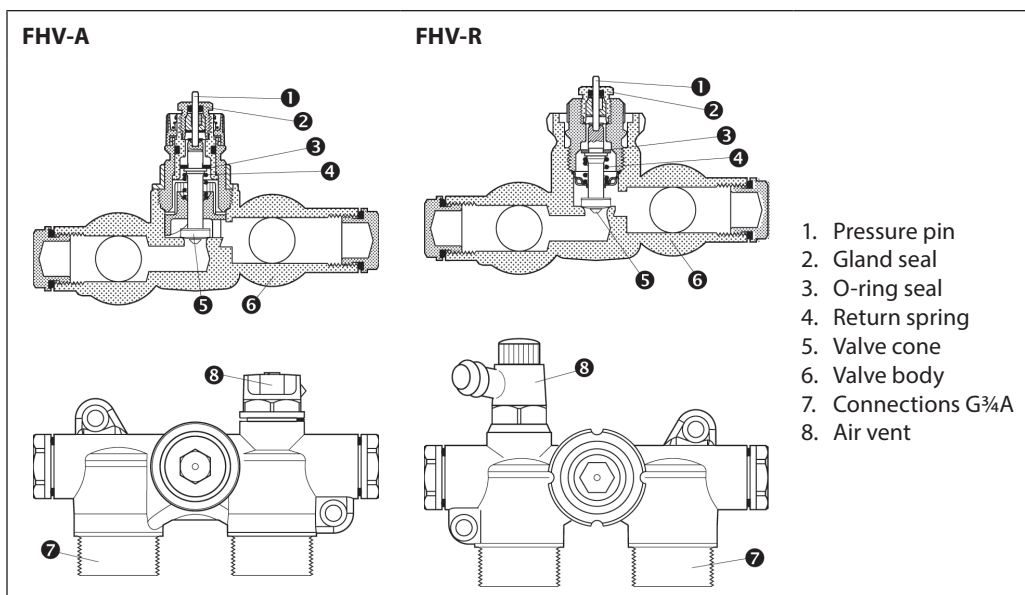
1. Remove protective cap or sensor element.
2. Lift setting ring.
3. Turn anti-clockwise to the desired engraved setting value.
4. Allow setting ring to spring back into position.



Capacity Diagram



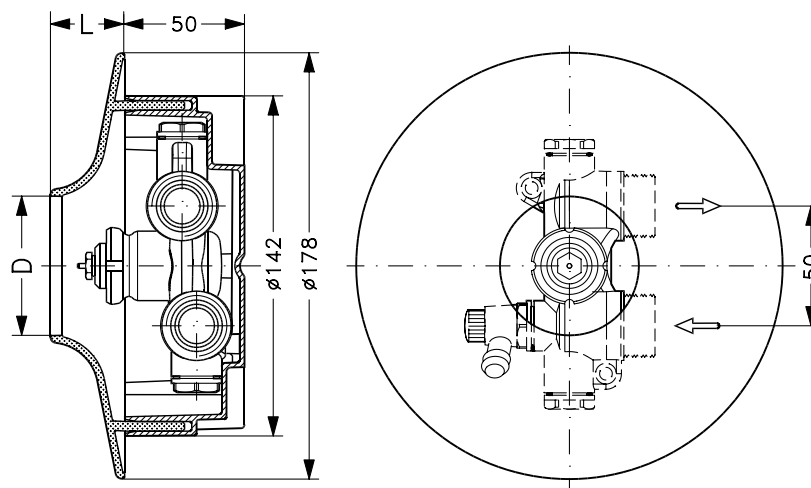
Design



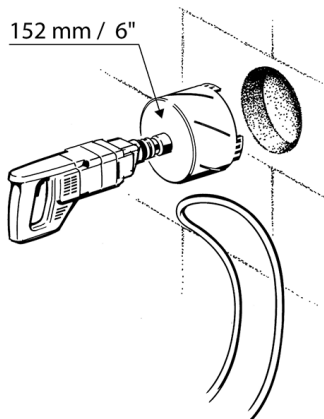
Materials in contact with water

Setting cylinder	PPS
Spindle	Ms, resistant against de-zincification
O-ring	EPDM
Valve cone	NBR
Pressure pin, valve spring	Chrome-plated steel
Other metal parts	Ms 58

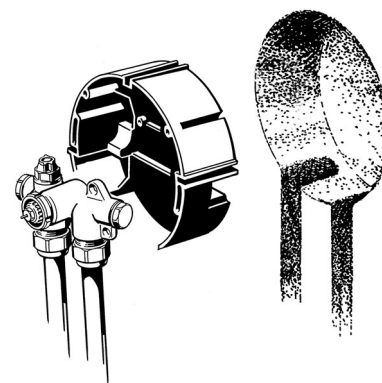
Dimensions



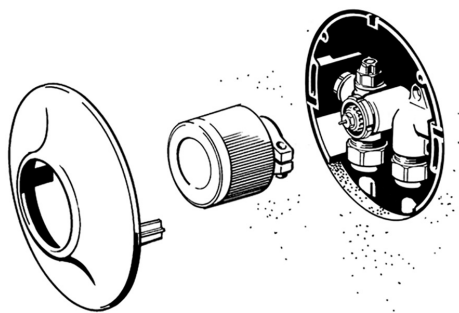
Installation



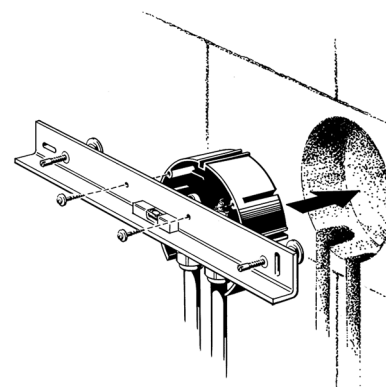
FHV valves are equally suited for installation in solid and partition walls.



All connections are made within the wall enclosure box.



Sensor and cover are simply plugged on.



An optional installation tool with spirit level (code no. 003L1338) is available to make assembly extra easy and reliable.

