

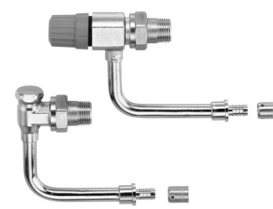
Data Sheet

Valve Body Type RA-FN/HC, Lock Shield Valve Type RLV-S/HC

Application



RA-FN/HC Angle



RA-FN/HC Reversed angle (UK)

RA-FN/HC:

All RA-FN/HC valve bodies can be used together with all types of thermostatic elements with RA connection. The valve body RA-FN/HC is used in two-pipe heating systems. The valve bodies are supplied with a protective cap which can be used for manual regulation during the construction phase. The protective cap must not be used as a manual shut off device. A special manual shut off device (code no. 013G5002) should be used. To be able to distinguish between other valve bodies of the RA 2000 series the RA-FN/HC protective cap is grey. RA-FN/HC has connection for 12 mm hydro cable both axial and radial compression fittings are available. RA-FN/HC are also available with 1/2" connection. Valve bodies are manufactured from brass with nickel plating. The pressure pin of the gland seal is of chromium steel and works in a lifetime lubricated O-ring. The complete gland assembly (stuffing box) can be replaced without draining down the system. Should water treatment be used it is essential that dosing instructions of the manufacturer are strictly observed. It is recommended that formulations containing mineral oil are avoided.

RLV-S/HC:

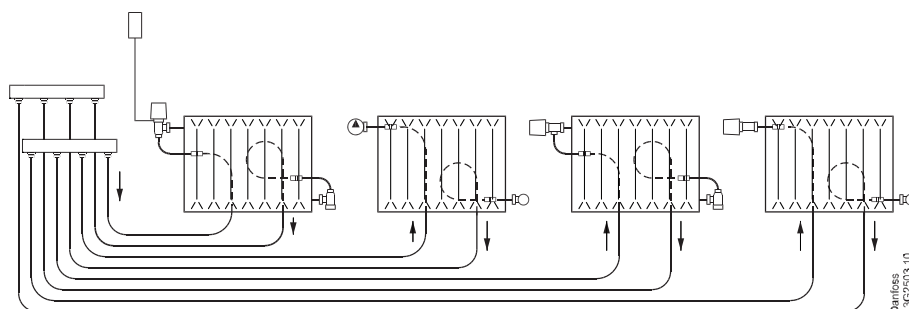
By means of a lockshield valve, type RLV-S/HC, every radiator can be shut off individually to allow trouble-free maintenance or repair without affecting other radiators in the system. RLV-S/HC is intended for mounting on the outlet of the radiator. RLV-S/HC lockshield valves are available in angle version. RLV-S/HC has connection for 12 mm hydro cable both axial and radial compression fittings are available. RLV-S/HC are also available with 1/2" connection.

k_{vs} -value RLV-S/HC 15 = 1.26 m³/h

Factory setting is fully open valve.
Dimensions correspond to DIN 3842-1.

In order to avoid deposition and corrosion the composition of the hot water must be in accordance with the VDI 2035 guideline (Verein Deutscher Ingenieure).

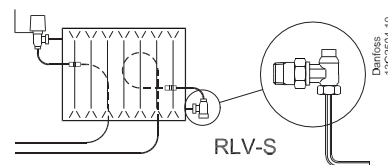
Principles



Closing/Opening RLV-S

Close the valve by means of an 8 mm allen key (turn allen key right).

Open RLV-S with 4 turns and the valve will be fully open (turn allen key left).



Data and Ordering

Pat- tern	Type RA- FN 15/ RLV-S 15	Code No.	k _v -value (RA-FN/HC) ¹⁾ (m ³ /h at 1 bar pressure drop) P-band = K					Max. pressure			Max. Work- ing temp. °C
			0.5K	1.0K	1.5K	K _v ²⁾ 2.0K	K _{vs} ³⁾ Fully open	Work- ing ²⁾ (bar)	Diff. (bar)	Test (bar)	
An- gle	C/C 33/45, Axial press fit	013G3190	0.13	0.26	0.38	0.49	0.94	10	0.6	16	90
	C/C 33/45, Radial press fit	013G3191	0.13	0.26	0.38	0.49	0.94	10	0.6	16	90
	C/C 75, Axial press fit	013G3192	0.13	0.26	0.38	0.49	0.94	10	0.6	16	90
	C/C 75, Ra- dial press fit	013G3189	0.13	0.26	0.38	0.49	0.94	10	0.6	16	90
	C/C 75, 1/2" thread	013G3200	0.13	0.26	0.38	0.49	0.94	10	0.6	16	90
UK	C/C 50/45, Axial press fit	013G3195	0.14	0.27	0.39	0.49	0.71	10	0.6	16	90
	C/C 50/45, Radial press fit	013G3196	0.14	0.27	0.39	0.49	0.71	10	0.6	16	90
	C/C 75, Axial press fit	013G3197	0.14	0.27	0.39	0.49	0.71	10	0.6	16	90
	C/C 75, Ra- dial press fit	013G3198	0.14	0.27	0.39	0.49	0.71	10	0.6	16	90
	C/C 75, 1/2" thread	013G3199	0.14	0.27	0.39	0.49	0.71	10	0.6	16	90

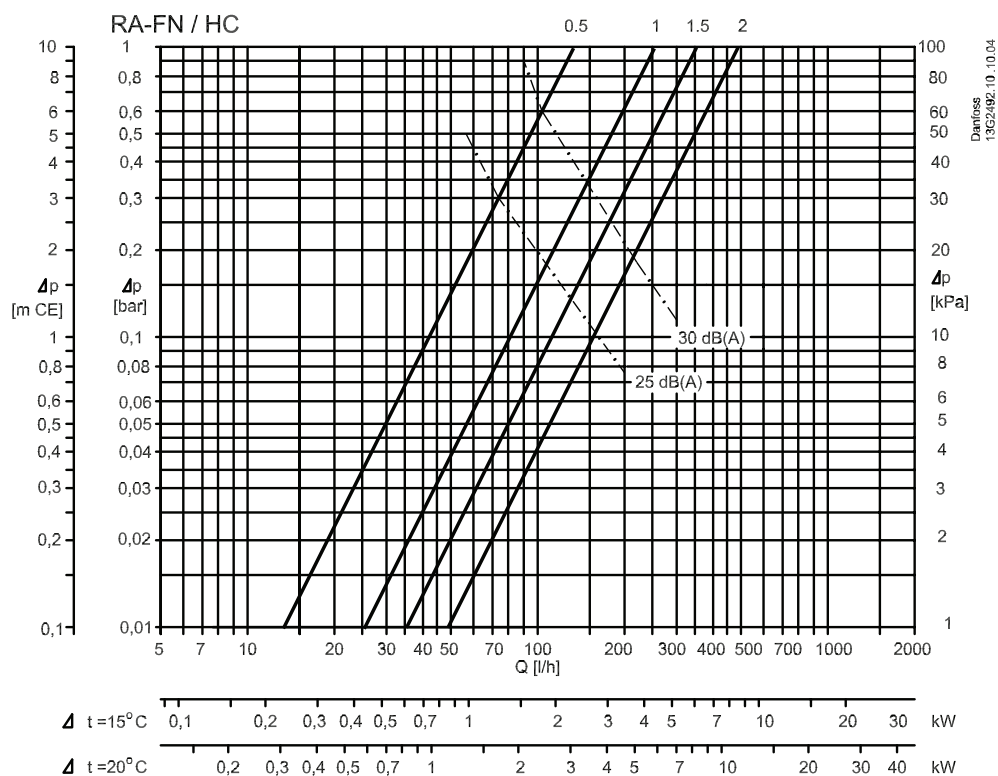
¹⁾ The k_v-value indicates the water flow (Q) in m³/h at a pressure drop (Δp) across the valve of 1 bar;

$k_v = \frac{Q}{\sqrt{\Delta p}}$. The k_v-value is stated according to EN 215, at X_p = 2K i.e. the valve is closed at 2°C higher room temperature. At lower settings the X_p value is reduced to 0.5K. The k_{vs}-value states the flow Q at a maximum lift, i.e. at fully open valve.

²⁾ Working pressure = static + differential pressure. The maximum differential pressure specified is the maximum pressure at which the valves give satisfactory regulation. As with any device which imposes a pressure drop in the system, noise may occur under certain flow/pressure conditions. To ensure quiet operation, maximum pressure drop should not exceed 30 to 35 kPa. The differential pressure can be reduced by the use of the Danfoss differential pressure regulators.

³⁾ Note: The K_{vs}-value for RLV-S/HC is 1,26m³/h.

Capacities

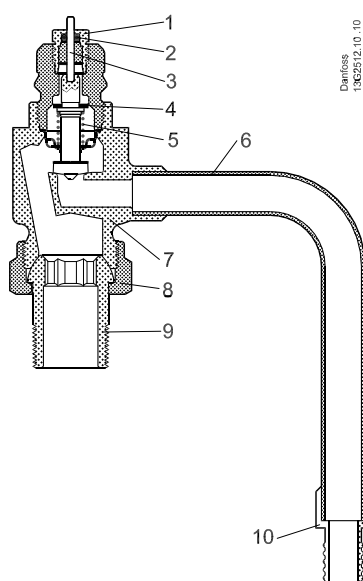


Note:
As with any device which imposes a pressure drop in the system, noise may occur under certain flow/pressure conditions.

To ensure quiet operation, maximum pressure drop should not exceed 30-35 kPa (3-3,5 mwg).

Construction

RA-FN/HC



1. Gland seal
2. O-Ring
3. Pressure pin
4. Seal
5. Regulation spring
6. Elbow
7. Valve body
8. Union nut
9. Tail piece
10. Fitting

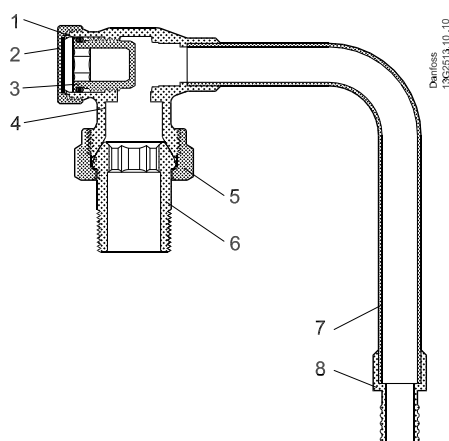
Valve body and other metal parts	Ms 58, brass
O-ring	EPDM
Valve cone	NBR
Pressure pin and valve spring	Steel/chrome
Elbow	Copper

The valve bodies are nickle-plated on the outside.

The radiator thermostats consist of the thermostatic elements of the RA 2000 series and the valve body RA-FN/HC.

The element and the valve body are ordered separately.

RLV-S/HC

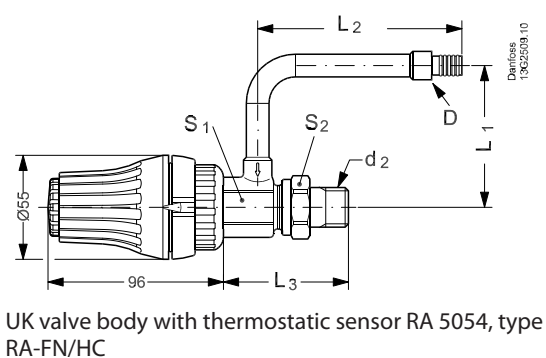


1. O-Ring
2. Cover cap
3. Shut off spindle
4. Valve body
5. Union nut
6. Tail piece
7. Elbow
8. Connection piece

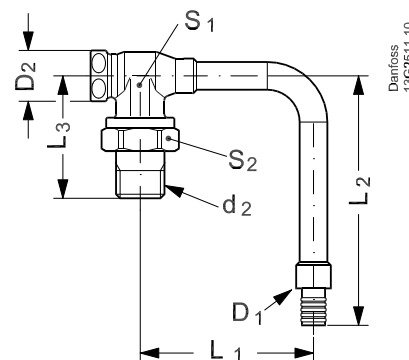
Valve body and other metal parts	Ms 58, brass
O-ring	EPDM
Elbow	Copper

The valve bodies are nickle-plated on the outside.

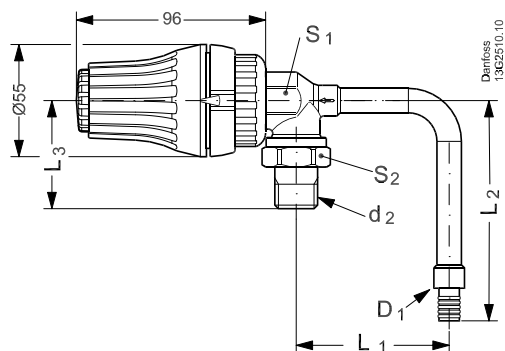
Dimensions



UK valve body with thermostatic sensor RA 5054, type RA-FN/HC



Angle lockshield valve body, type RLV-S



Angle valve body with thermostatic sensor RA 5054, type RA-FN/HC

Code number	Type RA-FN 15/ RLV-S 15	D1	D2	ISO 7-1	L1	L2	L3	Arc.flats	
				d2				S1	S2
013G3190	RA-FN A 33, axial	21		R1/2	33	110	53	25	30
	RLV-S 45, axial	21	24	R1/2	45	110	53	21	30
013G3191	RA-FN A 33, Radial	21		R1/2	33	110	53	25	30
	RLV-S 45, Radial	21	24	R1/2	45	110	53	21	30
013G3192	RA-FN A 75, Axial	21		R1/2	75	110	53	25	30
	RLV-S 75, Axial	21	24	R1/2	75	110	53	21	30
013G3189	RA-FN A 75, Radial	21		R1/2	75	110	53	25	30
	RLV-S 75, Radial	21	24	R1/2	75	110	53	21	30
013G3200	RA-FN A 75, 1/2" con.	24		R1/2	75	104	53	25	30
	RLV-S 75, 1/2" con.	24	24	R1/2	75	104	53	21	30
013G3195	RA-FN UK 50, Axial	21		R1/2	50	110	66	27	30
	RLV-S 45, Axial	21	24	R1/2	45	110	53	21	30
013G3196	RA-FN UK 50, Radial	21		R1/2	50	110	66	27	30
	RLV-S 45, Radial	21	24	R1/2	45	110	53	21	30
013G3197	RA-FN UK 75, Axial	21		R1/2	75	110	66	27	30
	RLV-S 75, Axial	21	24	R1/2	75	110	53	21	30
013G3198	RA-FN UK 75, Radial	21		R1/2	75	110	66	27	30
	RLV-S 75, Radial	21	24	R1/2	75	110	53	21	30
013G3199	RA-FN UK 75, 1/2" con.	24		R1/2	75	104	66	27	30
	RLV-S 75, 1/2" con.	24	24	R1/2	75	104	53	21	30

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