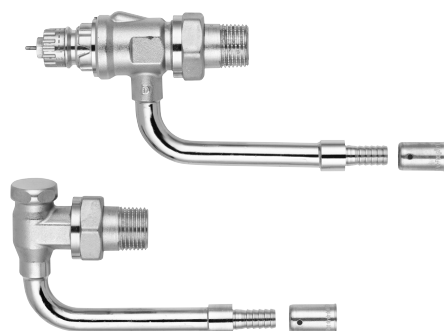


## Data Sheet

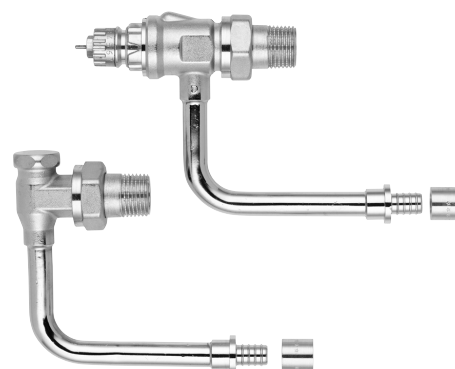
# Valve Set for Hydro Cable

## - Valve Body RA-N/HC & Lockshield Valve RLV-S/HC

### Application



*RA-N/HC and RLV-S/HC,  
radial*



*RA-N/HC and RLV-S/HC,  
axial*

#### RA-N/HC radiator valve

All RA-N/HC valve bodies can be used together with all types of thermostatic elements with Danfoss RA connection in two-pipe heating systems.

RA-N/HC valves are fitted with a kv limiting device for presetting of max. water flow within a range of 0.04 to 0.69 m<sup>3</sup>/h.

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-N/HC protective cap is red.

RA-N/HC has a connection for PEX 12 x 1.1 mm and 16 x 1.5 mm hydro cable, both axial and radial compression fittings are available. RA-N/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 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 lockshield valve

RLV-S/HC is intended for mounting on the outlet of the radiator.

Using RLV-S/HC each radiator can be shut off individually to allow trouble-free maintenance or repair without affecting other radiators in the system.

RLV-S/HC is available in angle version with a connection for PEX 12 x 1.1 mm and 16 x 1.5 mm hydro cable, both axial and radial compression fittings are available.

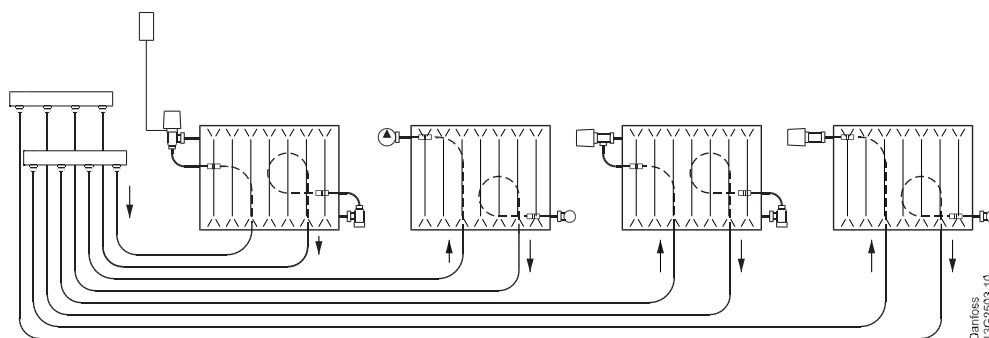
RLV-S/HC is also available with 1/2" connection.

Default setting is fully open valve.

Dimensions correspond to DIN 3842-1.

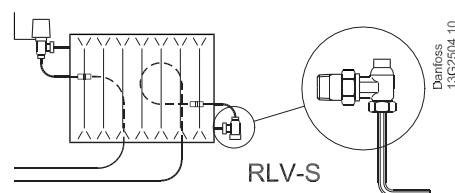
In order to avoid deposition and corrosion the composition of the hot water must be in accordance with the VDI 2035 guideline (Verein Deutscher Ingenieure).

Principles



**Closing and Opening RLV-S/HC**

Use an 8 mm Allen key to close the RLV-S/HC by turning it clockwise.  
 Open the RLV-S/HC by turning the Allen key anti-clockwise. With 4 turns the valve will be fully open.



Technical Data and Ordering

RA-N/HC & RLV-S/HC	Design	Presetting										Code no.
		k <sub>v</sub> -value <sup>1)</sup>										
		1	2	3	4	5	6	7	N	N		
RA-N/HC UK 50 RLV-S/HC 45	Radial 12mm	0.04	0.06	0.10	0.15	0.21	0.28	0.36	0.44	0.69	013G2190	
RA-N/HC UK 50 RLV-S/HC 45	Radial 16mm										013G2191	
RA-N/HC UK 75 RLV-S/HC 75	Radial 12mm										013G2192	
RA-N/HC UK 75 RLV-S/HC 75	Radial 16mm										013G2193	
RA-N/HC UK 50 RLV-S/HC 45	Axial 12mm										013G2194	
RA-N/HC UK 75 RLV-S/HC 75	Axial 12mm										013G2195	

<sup>1)</sup> The k<sub>v</sub>-value indicates the water flow (Q) in m<sup>3</sup>/h at a pressure drop (Δp) across the valve of 1 bar; k<sub>v</sub> = Q:√Δp. The kv-value is stated according to EN 215, at XP = 2K, i.e. the valve is closed at 2°C higher room temperature. At lower settings the XP value is reduced to 0.5K. The k<sub>vS</sub>-value states the flow Q at a maximum lift, i.e. at fully open valve.

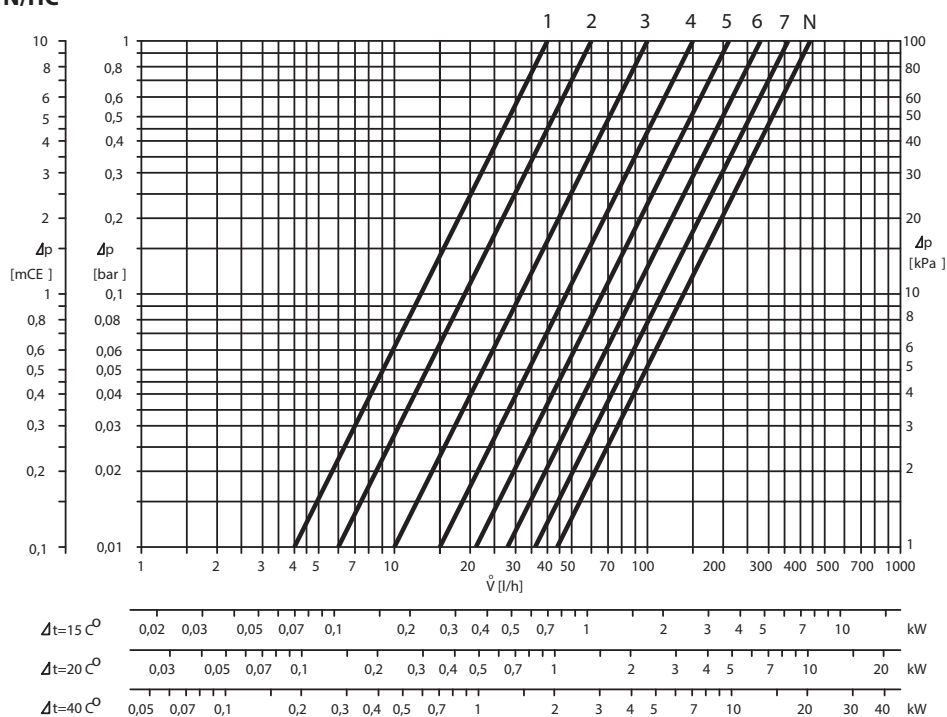
<sup>2)</sup> k<sub>vS</sub>-value for RLV-S/HC: 1.26 m<sup>3</sup>/h

Technical Data	
Max. working pressure <sup>3)</sup>	10 bar
Max. differential pressure	0.6 bar
Test pressure	16 bar
Max. working temperature	120 °C

<sup>3)</sup> 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.

Capacities

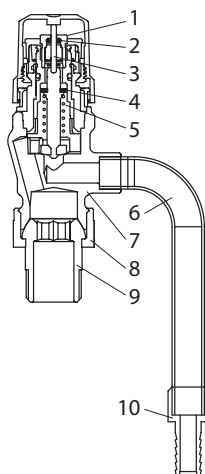
RA-N/HC



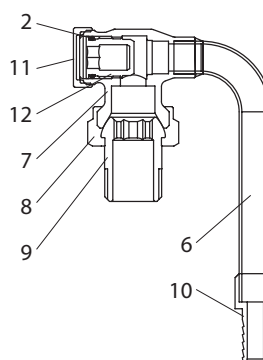
Note!

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-N/HC



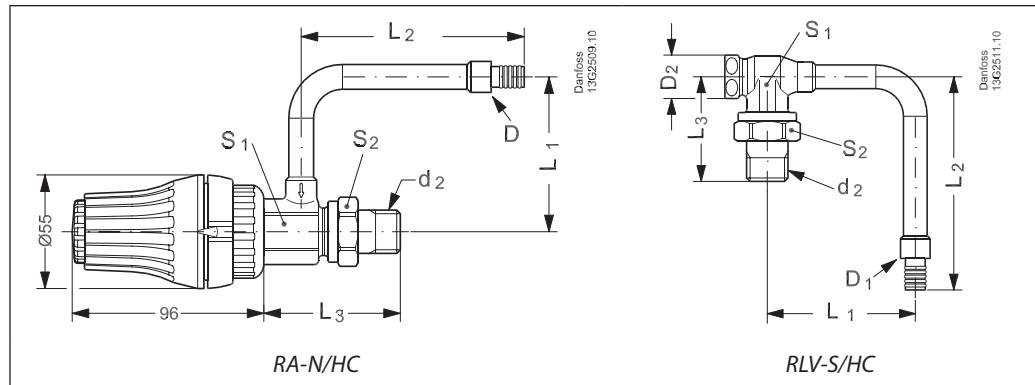
RLV-S/HC

- 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
- 11. Cover cap
- 12. Shut off spindle

Valve body and other metal parts	Brass, CuZn4Pb2
O-ring	EPDM
Valve cone	NBR
Pressure pin and valve spring	Steel/chrome
Elbow	Copper

The valve bodies are nickle-plated on the outside.

Dimensions



Code no.	RA-N/HC RLV-S/HC	Design	D1	D2	ISO 7-1	L1	L2	L3	Arc.flats	
					d2				S1	S2
013G2190	RA-N/HC UK 50	12 mm Radial	15	-	R½	50	112,5	72,6	24	30
	RLV-S/HC 45		15	24	R½	45	112,5	53	21	30
013G2191	RA-N/HC UK 50	16 mm Radial	15	-	R½	50	113,5	72,6	24	30
	RLV-S/HC 45		15	24	R½	45	113,5	53	21	30
013G2192	RA-N/HC UK 75	12 mm Radial	15	-	R½	75	112,5	72,6	24	30
	RLV-S/HC 75		15	24	R½	75	112,5	53	21	30
013G2193	RA-N/HC UK 75	16 mm Radial	15	-	R½	75	113,5	72,6	24	30
	RLV-S/HC 75		15	24	R½	75	113,5	53	21	30
013G2194	RA-N/HC UK 50	12 mm Axial	19	-	R½	50	107,5	72,6	24	30
	RLV-S/HC 45		19	24	R½	45	107,5	53	21	30
013G2195	RA-N/HC UK 75	12 mm Axial	19	-	R½	75	107,5	72,6	24	30
	RLV-S/HC 75		19	24	R½	75	107,5	53	21	30

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