

Data Sheet

RA-UN Valve Body with Integrated Presetting - for Systems with High Temp. Spreading

Application



Straight



Angle



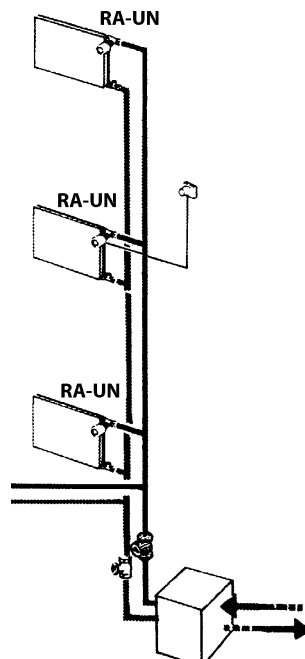
Horizontal angle

RA-UN valve bodies can be used with all types of thermostatic elements in the Danfoss RA 2000 series and with thermal actuators type TWA.

RA-UN valve bodies are used in two-pipe heating systems and is available with the following setting ranges for max. water flow:

$$k_v = 0.02 - 0.48 \text{ m}^3/\text{h}$$

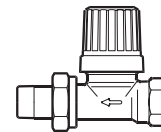
System (example)



The valve bodies are supplied with a protective cap and adjusting screw 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. 013G5000) should be used.

To be able to distinguish between other valve bodies of the RA 2000 series the protective cap is yellow.

RA-UN



Compression fittings for 15 mm, 10 mm or 8 mm copper tube are available for valve body RA-UN with 3/8" and 1/2" BSP connections.

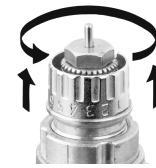
The gland seal of the valve can be replaced without draining down the system.

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.

Presetting

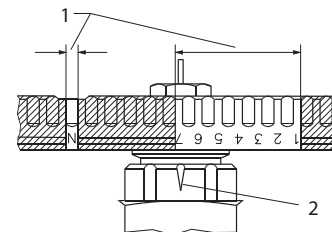
The presetting values of the integrated valves can be adjusted easily and accurately without the use of tools (factory setting: 'N'):

- Remove the protective cap or the thermostatic sensor
- Lift up the setting ring
- Turn the setting ring until the desired presetting aligns with the reference mark
- The reference mark will always point towards the radiator connection
- Let go of the setting ring



Presetting can be selected infinitely variably within the range of 1 to 7. At setting 'N' the valve is fully open. Setting in the shaded areas of the drawing should be avoided.

When the radiator thermostat has been installed, the presetting is protected against unintended regulation.



1. Presetting range
2. Reference mark

Data and Ordering

Type	Design	Connection		Code no.
		Inlet	Outlet	
RA-UN 10 ¹⁾	Angle	R _p 3/8	R 3/8	013G3001
	Straight			013G3002
	Horizontal angle			013G3041
RA-UN 15 ¹⁾	Angle	R _p 1/2	R 1/2	013G3003
	Straight			013G3004
	Horizontal angle			013G3043
RA-UN 20	Angle	R _p 3/4	R 3/4	013G3005
	Straight			013G3006

Type	Design	Presetting, k _v -values with RA 2000 sensor, m ³ /h ²⁾									With actuator N(k _{vs})
		X _p	1	2	3	4	5	6	7	N	
RA-UN 10 ²⁾	Angle	X _p =1	0.02	0.06	0.10	0.16	0.20	0.25	0.28	0.31	0.57
	Straight										
	Horizontal angle										
RA-UN 15 ²⁾	Angle	X _p =2	0.02	0.06	0.11	0.17	0.23	0.30	0.35	0.48	0.57
	Straight										
	Horizontal angle										
RA-UN 20	Angle										
	Straight										

Technical data:

Max. working pressure: 10 bar, max. differential pressure³⁾: 0.6 bar, test pressure 16 bar, max. water temperature: 120 °C.

- 1) The valve inlet is prepared for compression fittings.
- 2) The k_v -value indicates the water flow (Q) in m³/h at a pressure drop (Δp) across the valve of 1 bar an.

$$k_v = \frac{Q}{\sqrt{\Delta p}}$$
 The k_{vs} -value states the flow Q at maximum lift, i.e. at fully open valve at setting N.
- 3) 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. The differential pressure can be reduced by the use of the Danfoss differential pressure regulators.

Accessories and Spare Parts

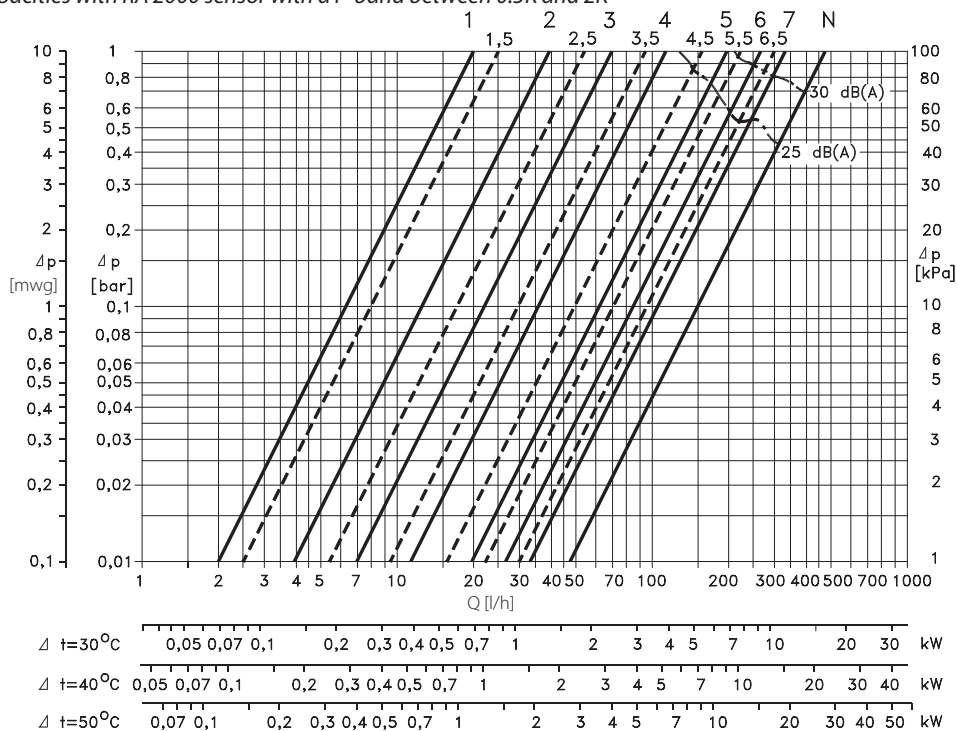
Product	Code no.
Gland seal (10 pcs.)	013G0290

The gland seal of the valve can be replaced under pressure, i.e. while the installation is in operation.

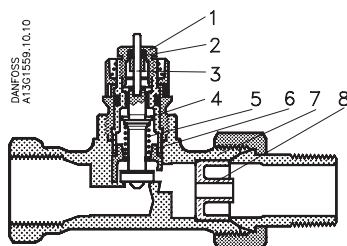
Capacity

RA-UN presetting diagram

Capacities with RA 2000 sensor with a P-band between 0.5K and 2K



Design



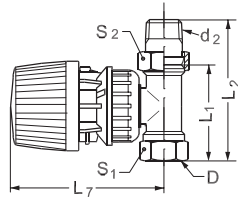
1. Gland seal
2. O-Ring
3. Pressure pin
4. Seal
5. Regulation spring
6. Setting dial
7. Valve body
8. k_v -nozzle

The radiator thermostats consist of a thermostatic element of the RA 2000 series and a valve body. The element and the valve body are ordered separately.

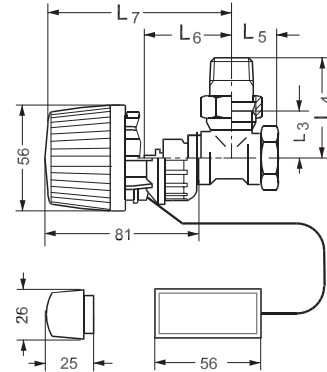
Materials in contact with water

k _v -limiter	PPS
O-ring	EPDM
Valve cone	NBR
Pressure pin and valve spring	Chrome steel
Valve body and other metal parts	Ms 58

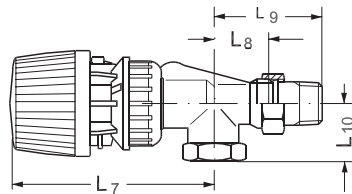
Dimensions



Straight valve body with thermostatic sensor RA 2990



Horizontal valve body with thermostatic sensor RA 2992



Angle valve body with thermostatic sensor RA 2990

Type	Connection			L ₁	L ₂	L ₃	L ₄	L ₅	L ₆	L ₇	L ₈	L ₉	L ₁₀	Arc. flats	
	DN	D	d ₂											S1	S2
RA-UN 10	10	R _p 3/8	R 3/8	60	85	27	52	22	47	96				22	27
RA-UN 10 UK	10	R _p 3/8	R 3/8						59	108	26	51	22	22	27
RA-UN 15	15	R _p 1/2	R 1/2	67	95	30	58	26	47	96				27	30
RA-UN 15 UK	15	R _p 1/2	R 1/2						60	109	29	57	27	27	30
RA-UN 20	20	R _p 1	R 1	74	106	34	66	29	47	96				32	37

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