



Radiator thermostats for domestic 2-pipe systems RAS-C² range



Application



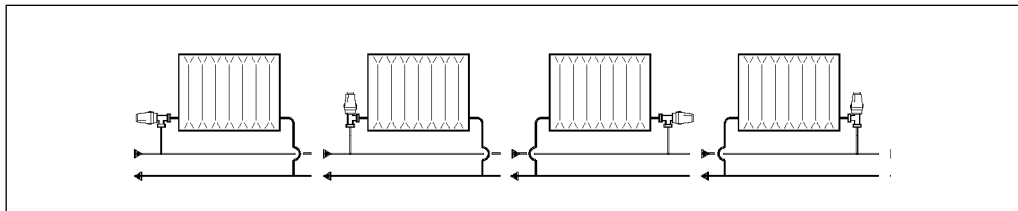
RAS-C² radiator thermostats are designed for use in 2-pipe domestic heating systems.

All RAS-C² Combi Packs comprises a RA-FS angled or straight pattern bi-directional valve and a RAS-C² sensor designed for 2-pipe heating systems. Combi Packs are also available with a RLV-D lockshield valve. For further data on the lockshield valve please see separate RLV-D data sheet. The valves have a 1/2" BSP (R1/2") tail piece connection to the radiator and are available with 15mm, 10mm or 8mm compression fitting or an elbow with 10mm push-fit fitting to connect the valve to the pipe work. The valve bodies are reversible and bi-directional

and include a flow-selectable feature to ensure trouble free installation without any risk of water hammer. For optimum performance, Danfoss recommend the sensor be mounted horizontal where at all possible. The valve is supplied with a protective cap, which can be used for manual regulation during the construction phase. The cap must not be used as a manual shut of device.

RAS-C² sensors incorporate a "Frost Protection" setting and a "Positive Off" feature for maximum user flexibility. Temperature range is from 8°C to 28°C.

System



Ordering details

Valve bodies and RAS-C² thermostatic sensors supplied complete in Combi-pack form

Symbol	Type	Code no.	Comprising	Temp. range °C, X _p = 2 K
	RAS-C ² Combi 6050	013G605000	15mm angle valve body and thermostatic sensor	8 - 28
	RAS-C ² Combi 6055	013G605500	8/10mm angle valve body and thermostatic sensor	8 - 28
	RAS-C ² Combi 6060	013G606000	Angle valve body, RAS-C thermostatic sensor and elbow with 10mm push-fit fitting	8 - 28
	RAS-C ² Combi 6005	013G600500	15mm angle valve body, lockshield valve and thermostatic sensor	8 - 28
	RAS-C ² Combi 6006	013G600600	8/10mm angle valve body, lockshield valve and thermostatic sensor	8 - 28
	RAS-C ² Combi 6007	013G600700	Angle valve body, lockshield valve, thermostatic sensor and elbows with 10mm push-fit fitting	8 - 28

Ordering, continued

Symbol	Type	Code no.	Comprising	Temp. range °C $X_p = 2K$
	RAS-C ² Combi Pack	013G605100	15 mm bi-directional straight valve body and thermostatic sensor. 8/10/15 mm fittings.	8 - 28
	RAS-C ² Combi Pack	013G605600	8/10 mm bi-directional straight valve body and thermostatic sensor. 8/10/15 mm fittings.	8 - 28
	RAS-C ² Radiator Pack	013G600300	15 mm bi-directional straight valve body, lockshield valve, thermostatic sensor 8/10/15 mm fittings.	8 - 28
	RAS-C ² Radiator Pack	013G600400	8/10 mm bi-directional straight valve body, lockshield valve, thermostatic sensor 8/10/15 mm fittings.	8 - 28

 RAS-C² sensors supplied in a Separate Box

Type	Code no.	Sensor (Max. sensor temperature 60°C.)	Temp. range °C ($X_p = 2K$)
RAS-C ²	013G604000	Built-in. (Includes positive shut-off)	8 - 28

RA-FS angle valves supplied in Separate Boxes

Type	Code.no.	Design	Connections		k _v -value (m ³ /h at Δp = 1 bar)					Max. pressure			Max. temp. °C
					P-band (K)					Working pressure bar	Diff. (Δp) pressure bar ²⁾	Test pressure bar	
			Inlet	Outlet	0.5	1.0	2.0	3.0	k _{vs}				
RA-FS 15 ¹⁾³⁾	013G628100	Rev. Angle	15 mm	1/2" BSP	0.13	0.27	0.50	0.64	0.73	10	0.6	16	120
	013G628300	Rev. Angle	8/10 mm	1/2" BSP									
RA-FS 15 ³⁾ with push-fit elbow		Rev. Angle	10 mm	1/2" BSP						3	0.6	6	92

 1) RA-FS valves must only be used with RAS-C² or RAS-D sensors

2) 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 45 kPa (0.45 bar). The differential pressure can be reduced using Danfoss automatic by-pass valve AVDO.

3) Only available in Combi packs

The push-fit fitting is suitable for 10mm copper pipes manufactured in accordance to BS 2871 part 1 / BS EN 1057 : 1996 and suitable for 10mm polybuthelene (PB) including Hep₂O, Polyplumb, OsmaGold and 10mm cross linked polyethylene (PEX) pipes made in accordance to BS 7291 part

1 : 1990 or part 3 : 1990.

Always use plastic pipe inserts of the same brand as the pipe used.

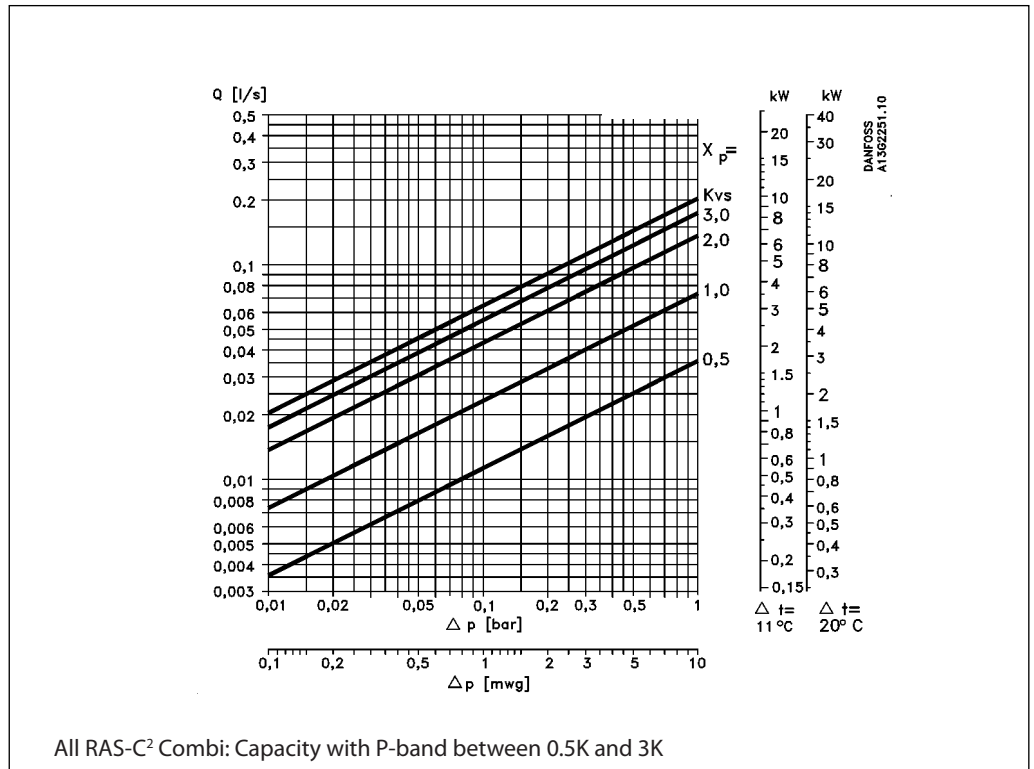
Approved to EN 215

All Danfoss RAS-C² sensors and RA-FS valves are manufactured to the highest standards and are approved to the European CEN standard EN215, which supersedes BS 6284, 1983.

Quality standards

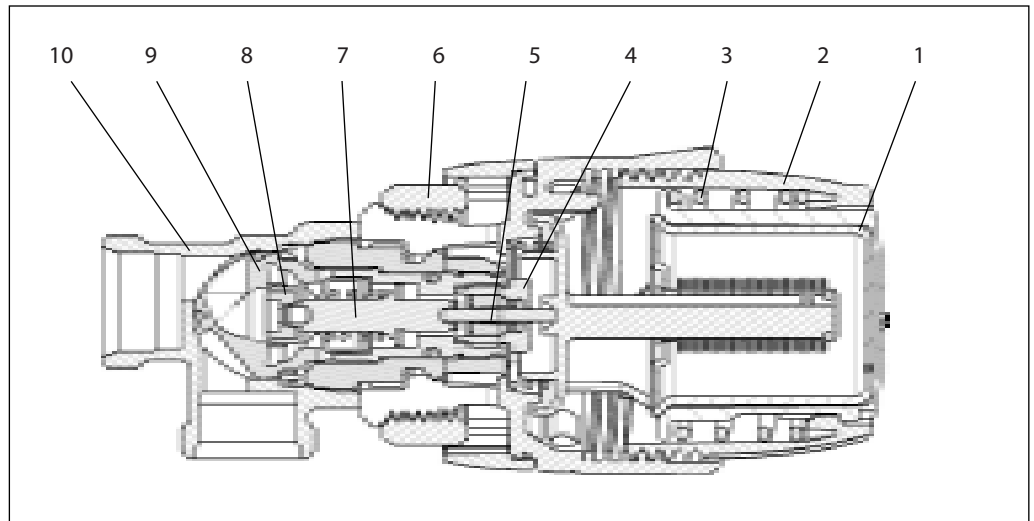
All Danfoss radiator thermostats and valves are manufactured in factories, assessed and certified by BSI against ISO 9001 / BS 5750.

Capacities



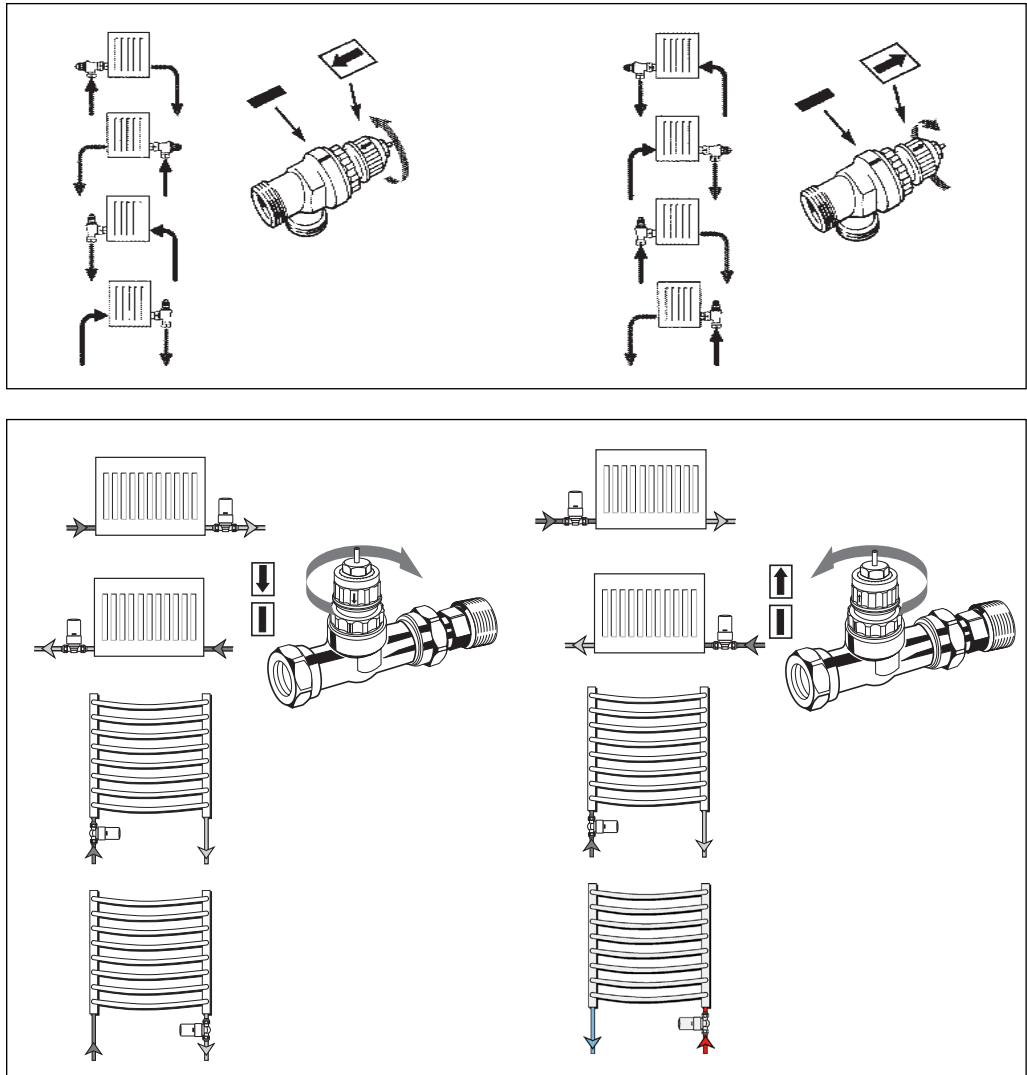
Construction

1. Actuator
2. Setting dial
3. Safety spring
4. Gland seal
5. Pressure pin
6. Securing union nut
7. Spindle
8. Bi-directional valve cone
9. Revolver
10. Valve body



Water in the heating system must be in accordance with the British Standard "Code of Practise". Should water treatment be used it is essential that dosing of the manufacturer are strictly observed. It is recommended that formulations containing mineral oil are avoided.

Valve setting

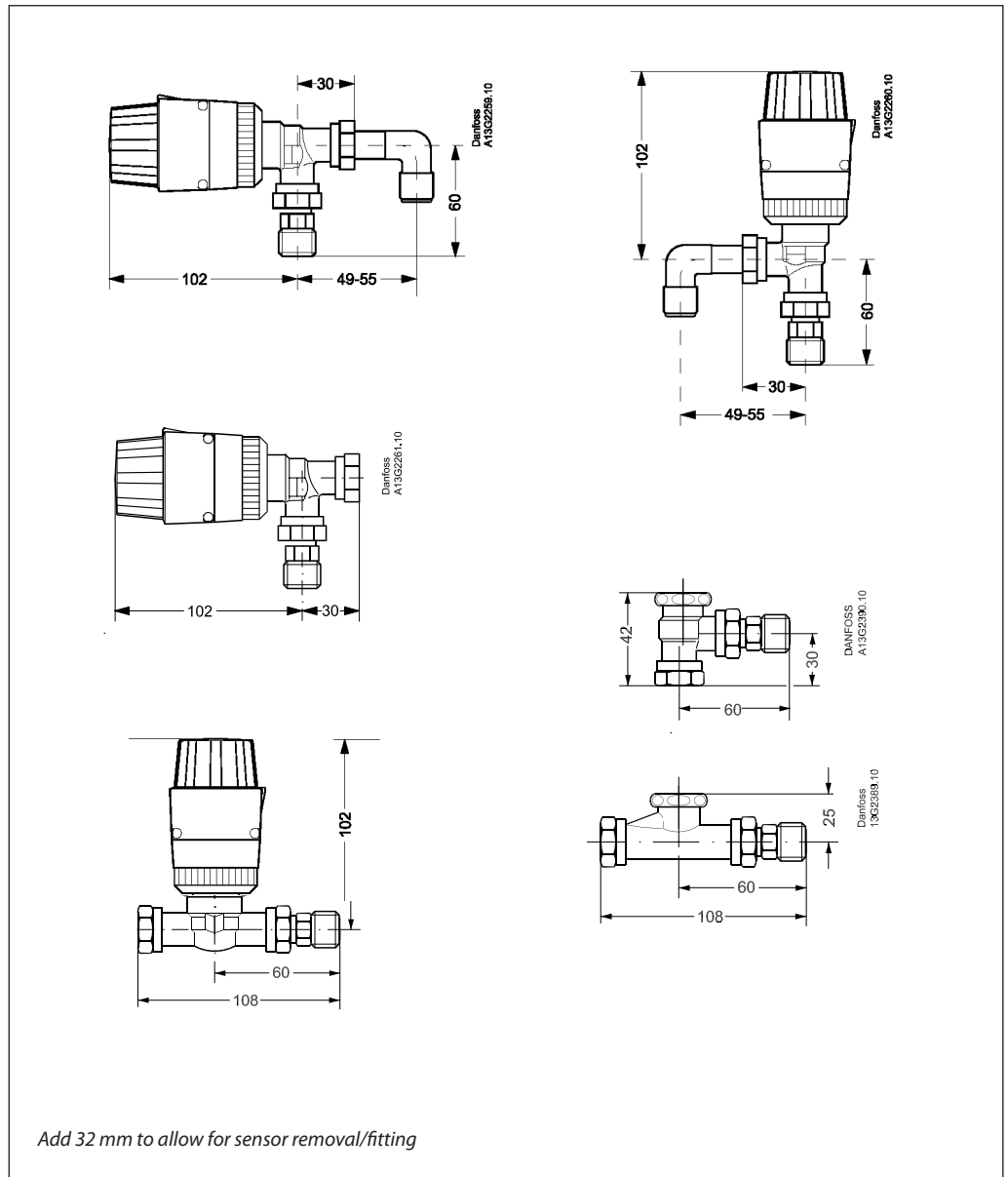


Commissioning the valve

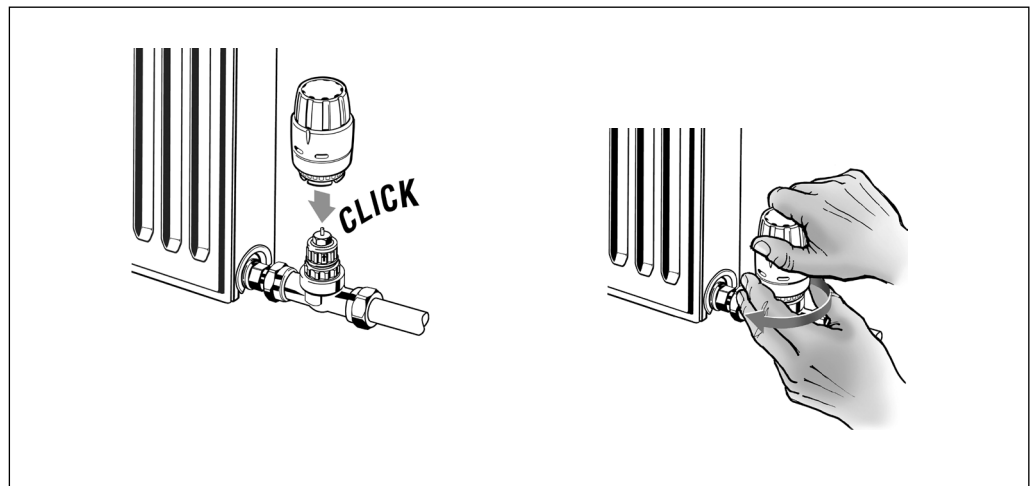
The valve is a bi-directional valve with a flow direction selection feature. This feature does not have to be used, although we recommend that it is set during system commissioning.

- Establish the flow direction through the valve using the diagrams above, turning the setting ring as necessary to ensure that water flow through the valve is always in the correct direction and the risk of water hammer is eliminated.
- If the flow direction needs to be changed there is no need to remove the valve, simply turn the setting ring.





Dimensions



Sensor Mounting



Accessories

Symbol	Code no.	Description
	013G0290	RA 2000 gland seals (sold in boxes of 10)
	013G5001	Blanking cap (sold singly)
	013G4912	Collet cover for push-fit connection (10pcs.)
	013G4913	Collet clip for push-fit connection (10pcs.)

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