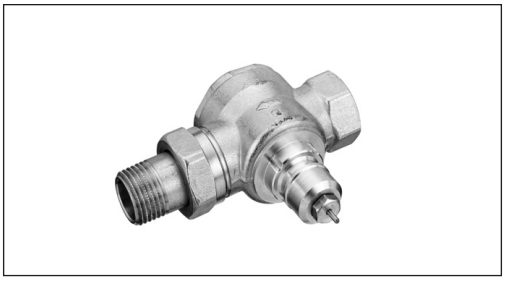
Data sheet High capacity valve body, type RA-G

Application



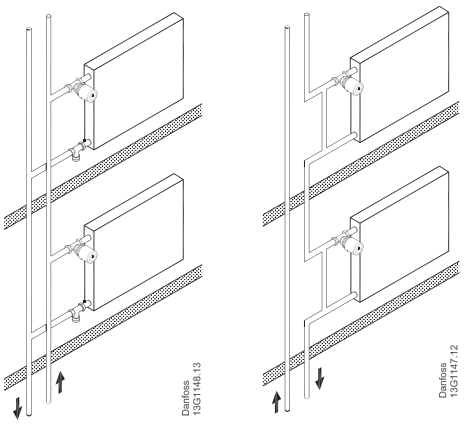
For using in conventional pump circulated 1-pipe system, gravity circulate system as well as zone control. RA-G valves have capacities optimised for this type of system which require high flow rates at low pressure drops to function correctly.

The technical data for RA-G valve bodies in combination with RA 2000 sensors meet Euronorm EN 215.

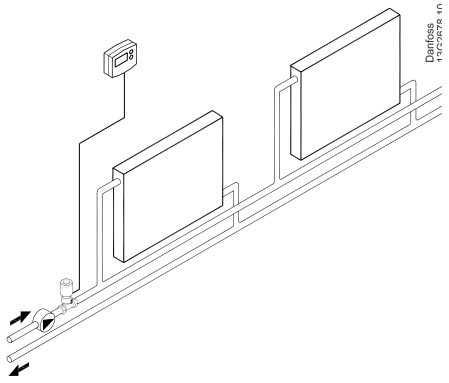
For easy identification the protective cap is grey. The valves are nickel plated.

RA-G valves can be used with the whole range of RA2000 sensors and RA version RTW sensors and TWA.

In order to avoid deposition and corrosion the composition of the hot water must be in accordance with the VDI 2035.



1. Gravity circulation system *2. One-pipe system*



3. Zone control application
Thermal actuator TWA in combination with room thermostat/programmer

Ordering and specifications

Type	Code no.	Design	Connection ISO 7-1		k_v-values[1] [m³/h] P-Band [K]					Max. pressure			Max. flow temp.
										Working	Diff.[2]	Test	
			Inlet	Outlet	0.5	1.0	1.5	2.0	k_{vs}	bar	bar	bar	°C
RA-G 20	**013G3976**	Straight	R_p 3/4	R 3/4	0.57	1.17	1.6	2.02	3.0	10	0.2	16	120
RA-G 25	**013G3978**	Straight	R_p 1	R 1	0.68	1.35	1.93	2.53	4.43		0.16		

[1] *The k_v-value indicates the water flow (Q) in m³/h at a pressure drop (Δp) across the valve of 1 bar. $k_v = V : \sqrt{\Delta p}$.*

[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.*

Spare parts

Product	Units	Code no
Gland seal	10 pcs.	**013G0290**

The gland seal may be replaced with the heating system in operation.

RA-G solution in one pipe system

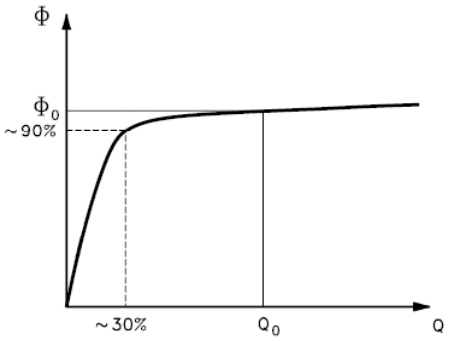


Figure 1

Because of low dT across radiator in one-pipe system, the scope for regulation of heat emission is narrow (flat radiator curve) as figure1 showed. This means that in a one-pipe installation extra water in addition to the sized volume does not really lead to any extra heat transmission.

A water quantity of 30% of the previous level means that heat emission is reduced by ~ 10%.

A reduction of 10% of the heat emission will give no problems in practice, since radiator surfaces are often oversized.

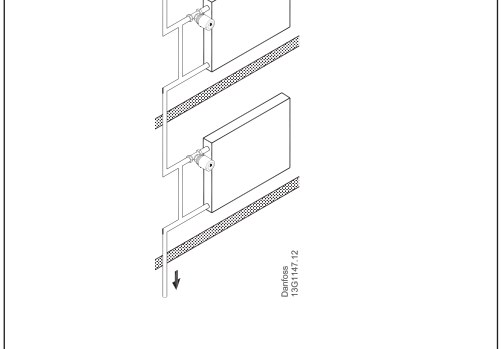


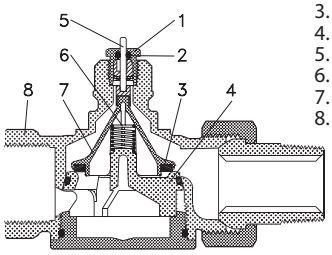
Figure 2

1. A bypass must be established (figure 2). The size of the bypass pipe must normally be one dimension smaller than the dimension of the main pipe system.
2. The RA-G - with the same dimension as the main pipe system - is then mounted at the inlet to the radiator.

According to this rules, the flow share into radiator could reach 30% of previous level because of high capacity of RA-G valve.

In case the bypass has the same diameter as the supply pipe to the radiator, it is recommended to use flow restrictor to providing a suitable flow share to radiator.

Construction

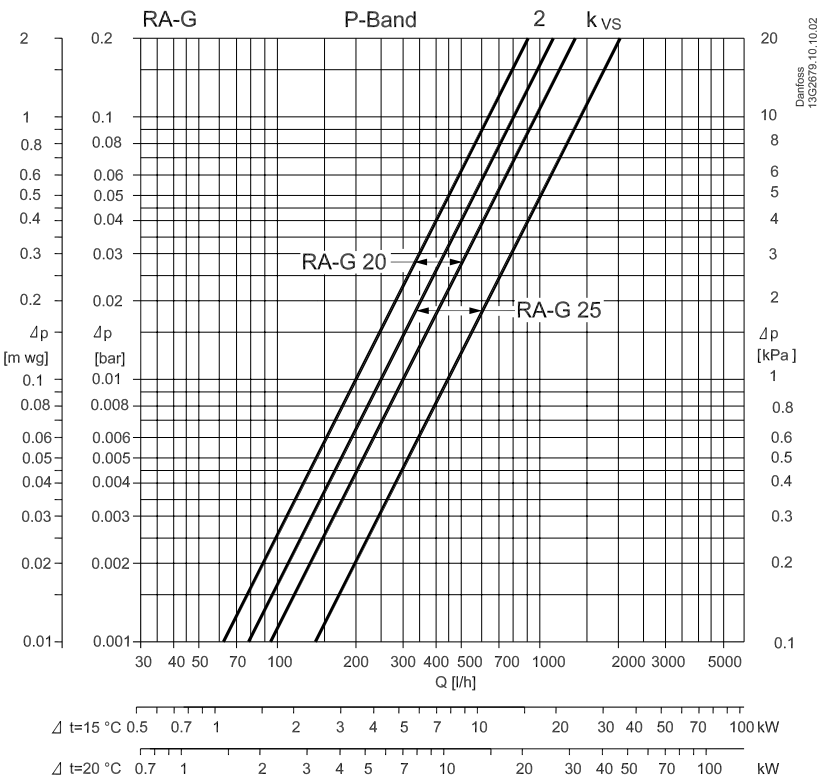


1. Seal
2. O-ring
3. Valve cone
4. Valve seat
5. Pressure pin
6. Valve spring
7. Spindel
8. Valve body

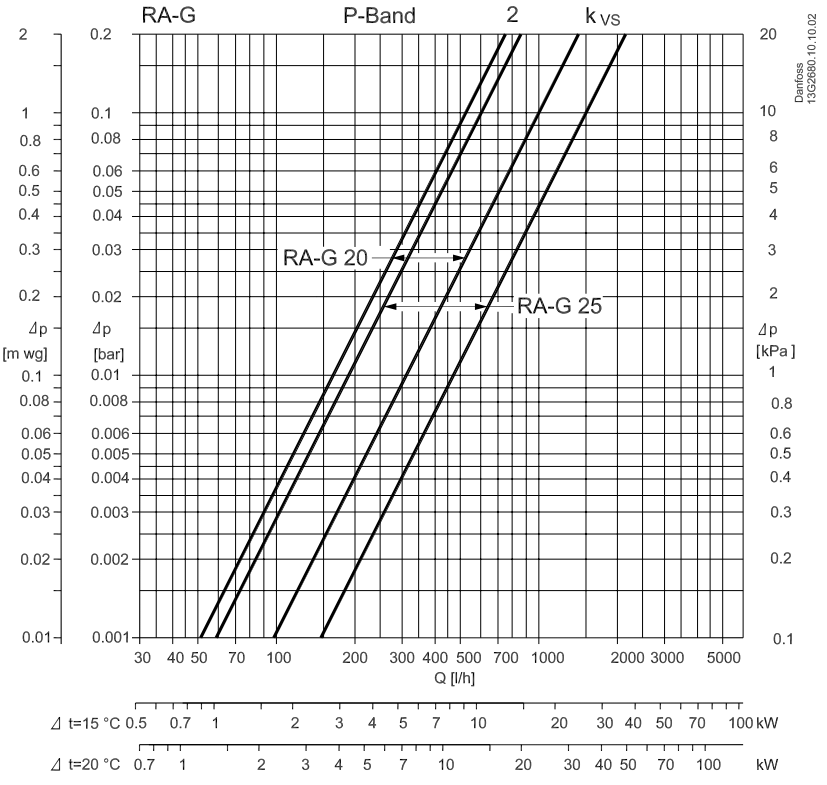
Materials in contact with water

Valve body	Ms 58 brass
O-Ring	EPDM
Valve cone	NBR
Pressure pin	Chrome steel
Federschale	Zinnbronze

Capacities

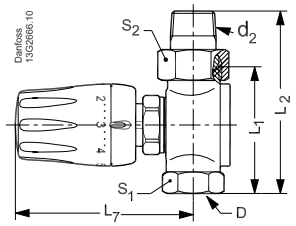


Valve capacities in combination with RA 2000 thermostatic sensors



Valve capacities in combination with RTW thermostatic sensors

Dimensions



Type	Connection ISO 7-1			L_1	L_2	L_7	Spanner	
	DN	D	d_2				S_1	S_2
RA-G 20	10	Rp ¾	R ¾	74	106	107	32	37
RA-G 25	15	Rp 1	R 1	90	126	111	41	46

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