

Data Sheet

Flow directors for aluminium segment radiators - to be used with RA-N integrated valves

Application



Flow director 013G1523 / 013G1524

The Danfoss flow director is designed to be used with integrated valves type RA-N 013G1382 for incorporation into aluminium or bi-metal segment radiators from different radiator manufactures.

Aluminium and bi-metal segment radiators are constructed by a series of elements, which are joined together with nipples. The first segment is used as inlet pipe, while return is through the bottom of the second segment.

When integrated valves are used with segment radiators, the flow needs to be directed correctly through the valve to avoid noise problems. This is made with the flow director.

Code Nos. and Technical Data

Flow director

Flow director type	Connection radiator	Connection integr. valve	Max. water temperature	Code no.
For aluminium/bi-metal segment radiators	1", RH thread	1/2"	120 °C	013G1523
For aluminium/bi-metal segment radiators	1", LH thread	1/2"	120 °C	013G1524

Valve for flow directors

Valve type	Differential pressure ¹⁾		Test pressure	Work. pressure	Max. water temp.	Code no.
	Recom.	Technical				
For Danfoss RA type sensors	0.05-0.2 bar	0.6 bar	16 bar	10 bar	120 °C	013G1382

1) The technical differential pressure indicates the upper limit for a proper valve function. In most two-pipe systems the recommended differential pressure is sufficient. In order to achieve a noiseless function we recommend in smaller systems to apply automatic bypass valves or automatic balancing valves. If pump differential pressure exceeds the recommended max. valve differential pressure it is recommended that an automatic balancing valve type ASV-P/PV is added to the system.

Pre-setting values, flow director + valve

Flow director + valve	Presetting								
	k _v -value ^{2) 3)}								k _{vs}
	1	2	3	4	5	6	7	N	
Flow director + RA 013G1382 int. valve	0.13	0.18	0.24	0.30	0.36	0.44	0.53	0.63	0.68

- 2) k_v -values indicate the flow volume (Q) in m³/h at a pressure loss (Δp) across the valve of 1 bar ;
 $k_v = \frac{Q}{\sqrt{\Delta p}}$. At setting N, the k_v -value in accordance with EN 215 can be stated as $X_p = 2 K$. At lower preset values, X_p will be reduced until approximately $X_p 0.5$ at presetting 1. The k_{vs} values indicate the valve capacity, when the valve is fully open.
- 3) When using a liquid filled radiator thermostat e.g. RAW, RAS-D or remote setting element type RA 5060, X_p will be increased by factor 1.6 (at setting N, ref. EN 215).

Accessories and Spare Parts

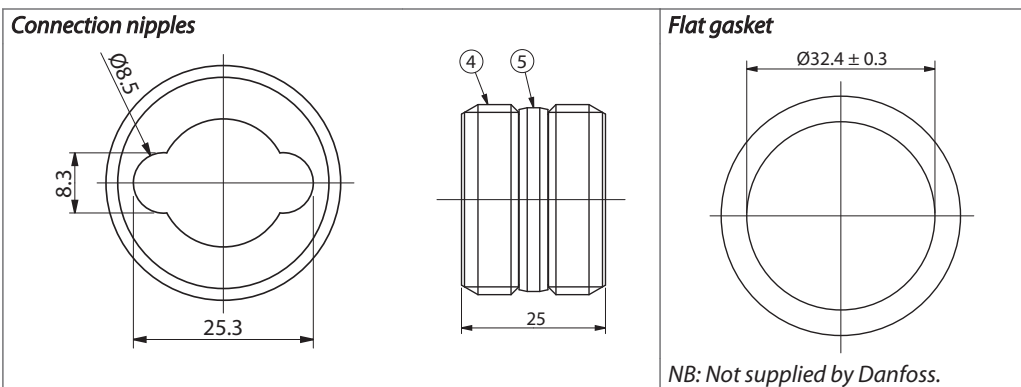
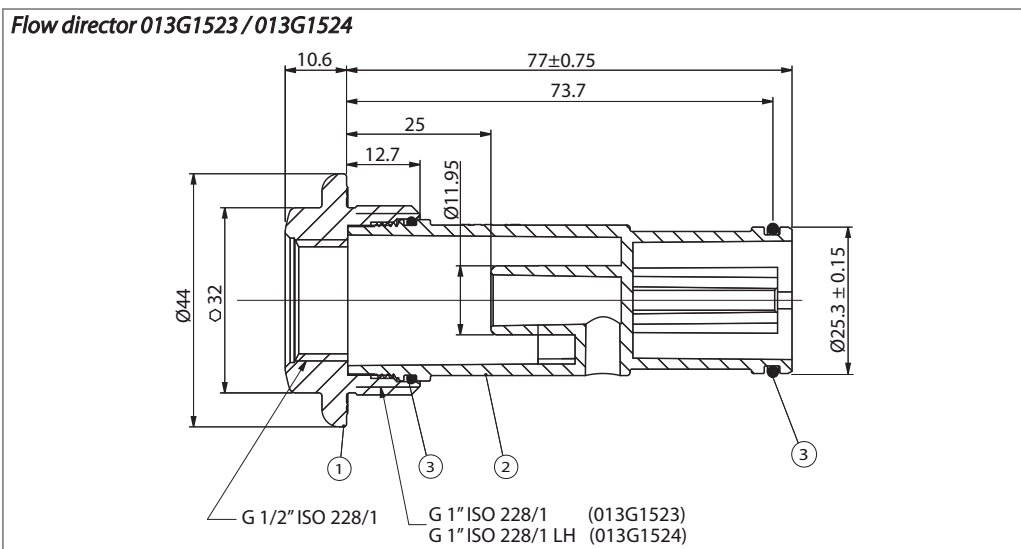
For flow director

Product	Code no.
Open connection nipple - to be used with flow director 013G1523	013G1506
Closed connection nipple	013G1507
Open connection nipple - to be used with flow director 013G1524	013G1548
Closed connection nipple	013G1549

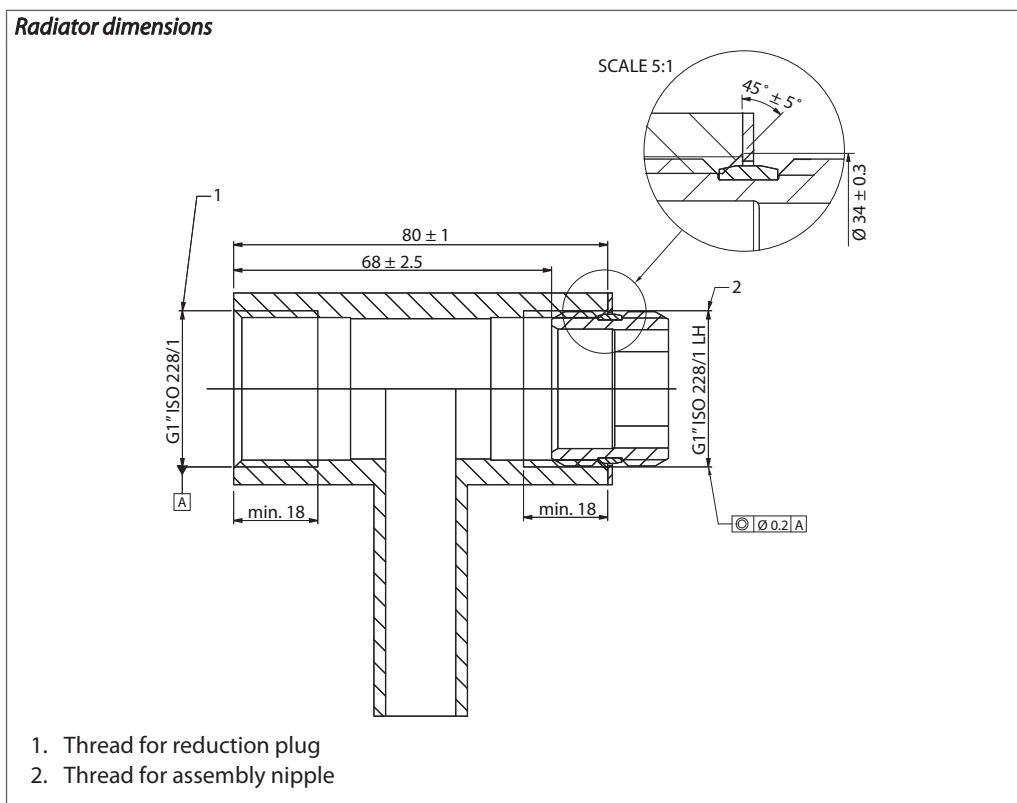
For RA-N 013G1382 integrated valve

Gland seal	013G0290
Protection cap (red)	013L0951

Design and Dimensions



Materials		
1.	Plug	Nickel plated steel
2.	Flow director body	PPS
3.	O-ring	EPDM
4.	Nipple	Steel or brass
5.	Flat ring	EPDM



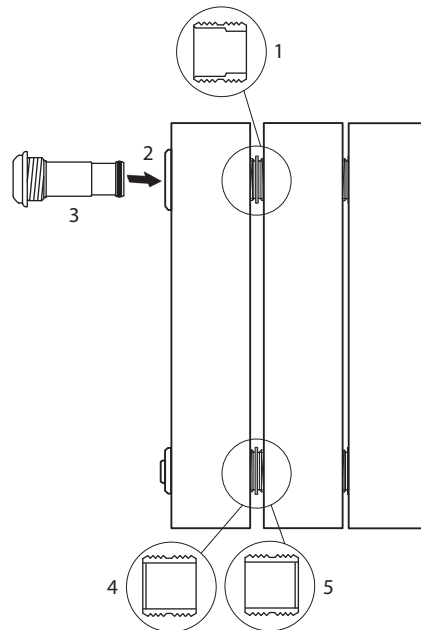
Assembly Guide

Flow director 013G1523 and open nipple (upper connection) 013G1506 is for radiators with RH thread.

Closed (lower connection) nipple can be either 013G1507 or 013G1549, depending on assembly side.

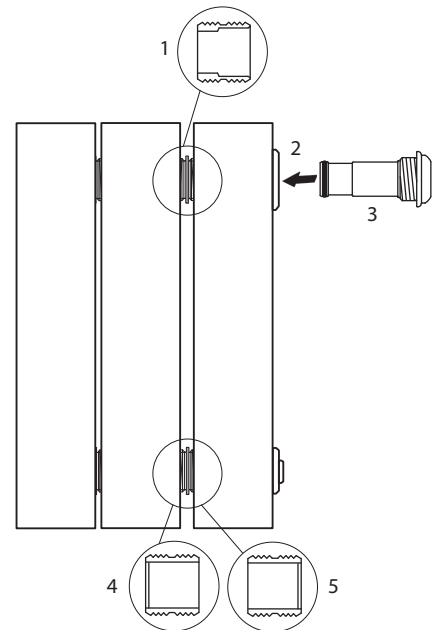
Flow director 013G1524 and open nipple (upper connection) 013G1548 is for radiators with LH thread.

Radiator with LH thread - left side mounting



- 1. Open nipple 013G1548
- 2. LH thread
- 3. Flow director 013G1524
- 4. Closed nipple 013G1549
- 5. Closed nipple 013G1507

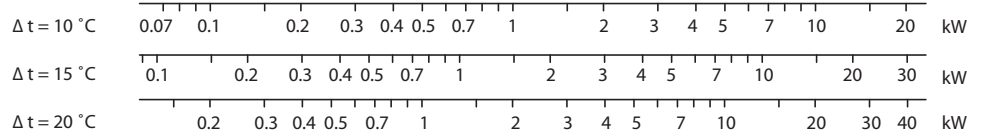
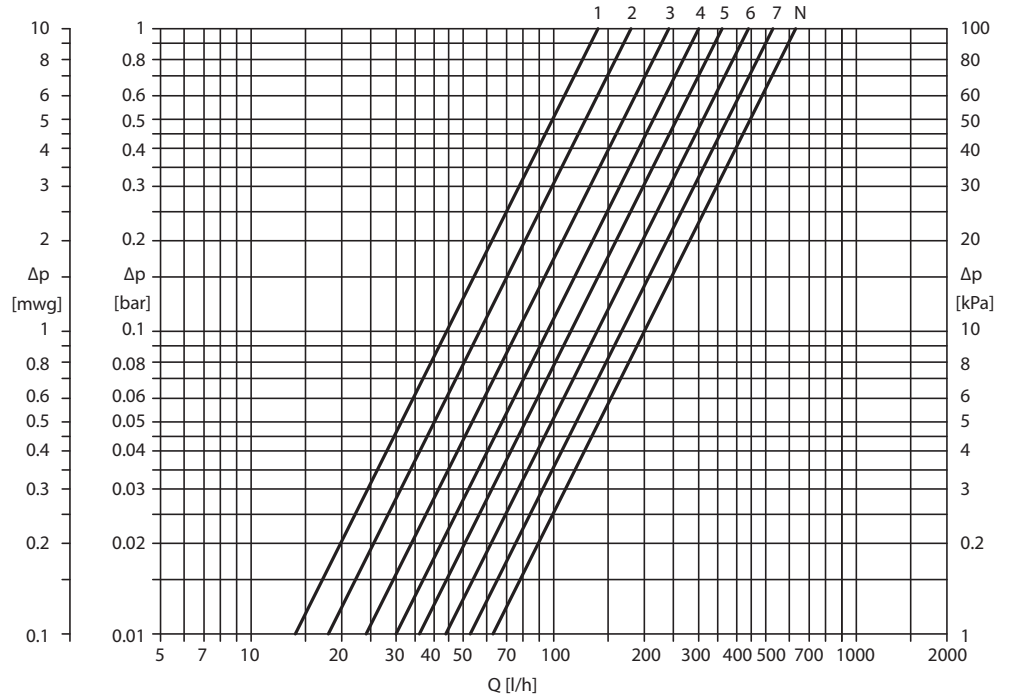
Radiator with RH thread - right side mounting



- 1. Open nipple 013G1506
- 2. RH thread
- 3. Flow director 013G1523
- 4. Closed nipple 013G1549
- 5. Closed nipple 013G1507

Capacities, Flow Director with Integrated Valve

Flow director 013G1523/013G1524 + integrated valve 013G1382



Danfoss A/S
Heating Solutions
Haarupvaenget 11
8600 Silkeborg
Denmark
Phone: +45 7488 8000
Fax: +45 7488 8100
Email: heating.solutions@danfoss.com
www.heating.danfoss.com

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.
