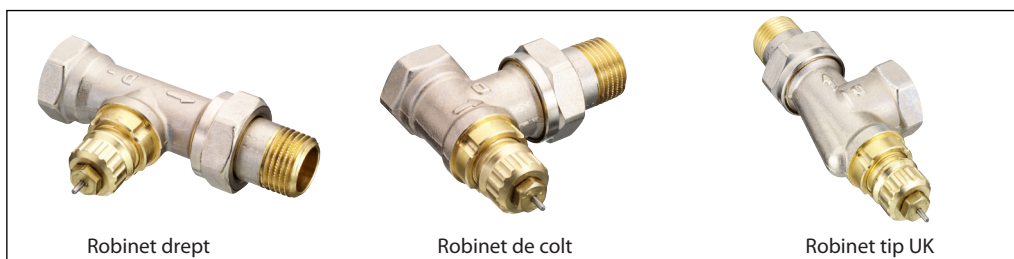


# Corp robinet tip RA-FN

Aplicație



KEYMARK certificat conform cu EN 215

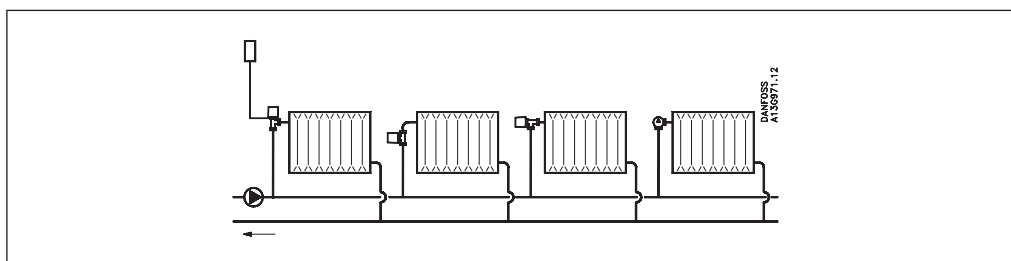


Toate corpurile robinetelor RA-FN pot fi utilizate împreună cu toate tipurile de elemente termostactice din Seriile RA 2000 (RTD –R). Corpul robinetului RA-FN este utilizat în sistemele de încălzire cu două conducte. Corpurile robinetelor sunt livrate cu un capac protector și șurub de reglare care pot fi utilizate pentru reglarea manuală în faza de construcție. Capacul de protecție nu trebuie utilizat ca dispozitiv de închidere manuală. Un dispozitiv special de închidere (cod nr. 013G5000) va fi utilizat. Pentru a-l putea distinge între alte corpuri de robinete ale seriei RA 2000, capacul protector RA-FN este echipat cu un șurub gri.

Racordurile de compresie pentru tuburi de cupru de 15 mm, 10 mm sau 8 mm sunt disponibile pentru corpurile de robinete RA-N cu conexiuni de 3/8" și 1/2" BSP.

Corpurile de robinete sunt fabricate din alamă placată cu nichel. Arcul de presiune al garniturii de etanșare este din oțel cromat și funcționează cu o garnitură inelară permanent lubrifiată. Întregul ansamblu de etanșare poate fi înlocuit fără golirea sistemului. În cazul în care se tratează apa, este esențială respectarea instrucțiunilor de dozare ale fabricantului. Este recomandată evitarea formulelor care conțin ulei mineral.

Principii



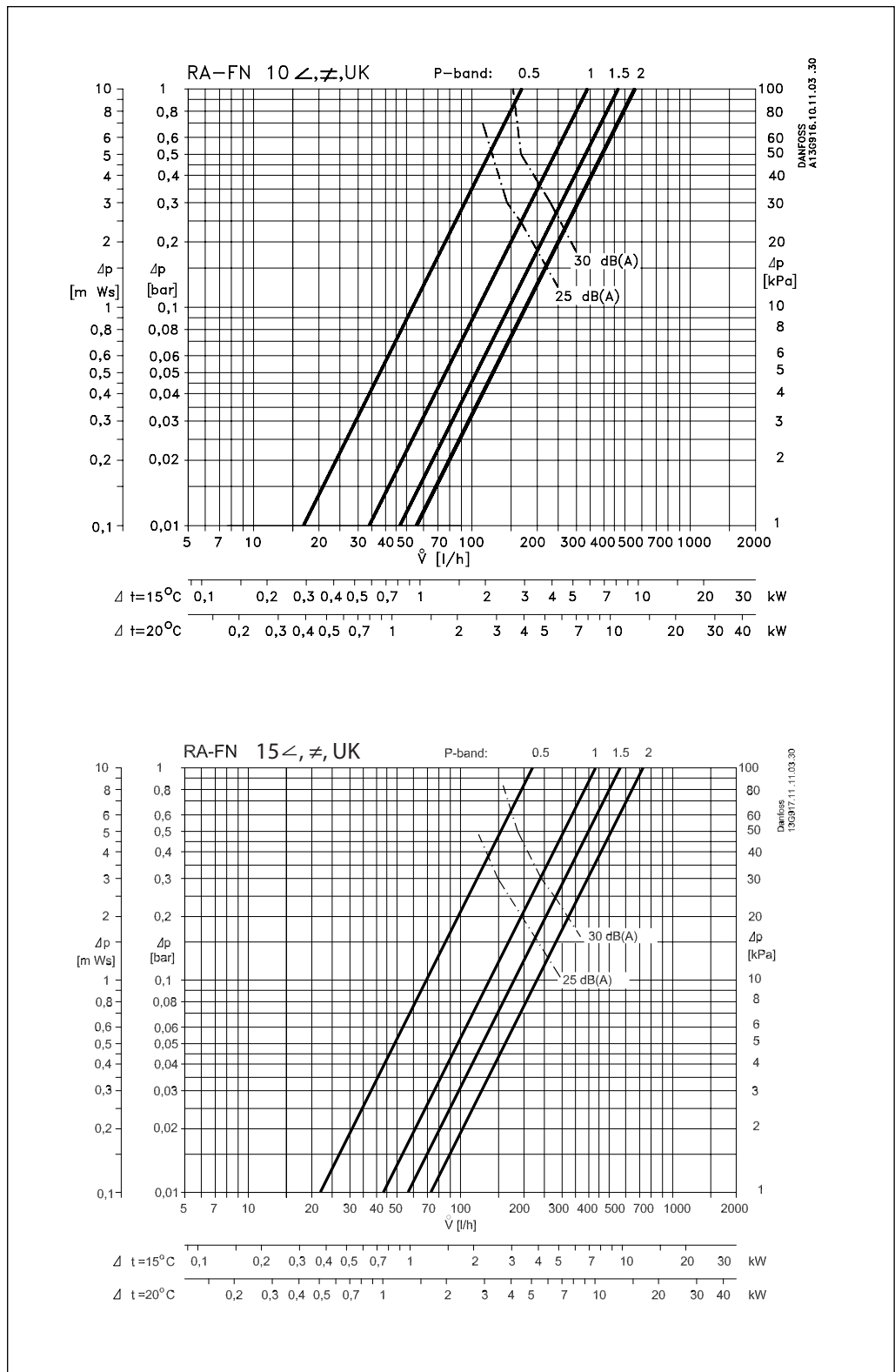
Date și clasificare

Model	Tip	Nr. cod	Valoare kv (m3/h la scădere de presiune de 1 bar)					Presiune max.			Tempe- ratura de lucru maximă °C
			0.5K	1.0K	1,5K	K <sub>v</sub> (2,0K)	K <sub>vs</sub> pentru vana complet deschisă	De lucru <sup>2)</sup> (bar)	De dif. (bar)	De verfi- care (bar)	
Drept	RA-FN 10	013G0002	0.17	0.34	0.47	0.56	0.65	10	0.6	16	120
	RA-FN 15	013G0004	0.22	0.43	0.57	0.73	0.90	10	0.6	16	120
	RA-FN 20	013G0006	0.30	0.58	0.83	1.04	1.40	10	0.6	16	120
	RA-FN 25	013G0027	0.30	0.58	0.83	1.04	1.40	10	0.6	16	120
tip UK	RA-FN 10	013G0141	0.17	0.34	0.47	0.56	0.65	10	0.6	16	120
	RA-FN 15	013G0143	0.22	0.43	0.57	0.73	0.90	10	0.6	16	120
	RA-FN 20	013G0145	0.25	0.50	0.67	0.80	1.00	10	0.6	16	120
de colț	RA-FN 10	013G0001	0.17	0.34	0.47	0.56	0.65	10	0.6	16	120
	RA-FN 15	013G0003	0.22	0.43	0.57	0.73	0.90	10	0.6	16	120
	RA-FN 20	013G0005	0.30	0.58	0.83	1.04	1.40	10	0.6	16	120
	RA-FN 25	013G0028	0.30	0.58	0.83	1.04	1.40	10	0.6	16	120

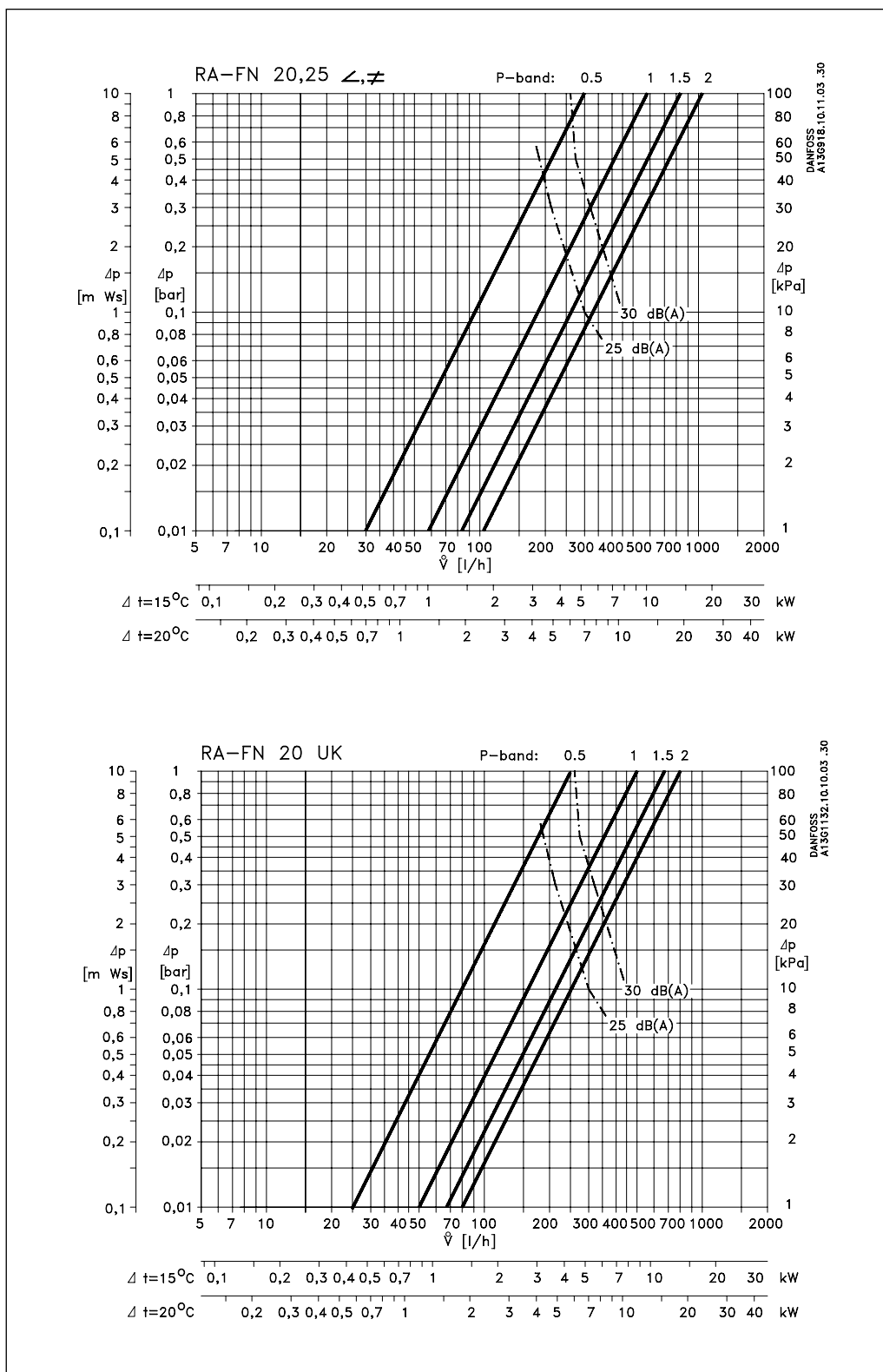
1) Valoarea kv indică debitul de apă (Q) în m3/h la o cădere de presiune în robinet ( $\Delta p$ ) de 1 bar;  
 $kv=Q \sqrt{\Delta p}$ . Valoarea kv este stabilită în funcție de EN 215, la  $XP=2K$  adică robinetul este închis la o temperatură a camerei mai mare de 2°C. La setări mai mici, valoarea XP este redusă la 0,5 K.  
 Valoarea kvs stabilește debitul Q la ridicare minimă, adică la deschiderea maximă a robinetului.

2) Presiunea de lucru = presiunea statică + presiunea diferențială. Presiunea maximă diferențială specificată este presiunea maximă la care robinetele prezintă reglare satisfăcătoare. Ca la fiecare dispozitiv introdus în sistem care presupune o cădere de presiune, în anumite condiții de debit/presiune se produce zgomot. Pentru a asigura o funcționare silențioasă, căderea maximă de presiune nu trebuie să depășească 30 - 35 kPa. Presiunea diferențială poate fi redusă prin utilizarea reguletoarelor de presiune diferențială Danfoss tip AVD, AVDL, AVDS, IVD sau ASV-P.

Capacitate



Capacitate

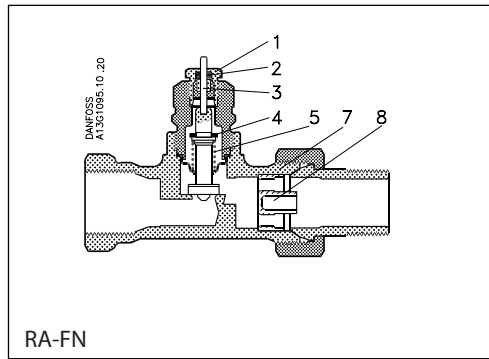


Notă:

Ca la fiecare dispozitiv introdus în sistem care presupune o cădere de presiune, în anumite condiții de debit/presiune se produce zgomot. Pentru a asigura o funcționare silențioasă, căderea maximă de presiune nu trebuie să depășească 30 - 35 KPa (3-3,5 mwg).

Construcție

1. Garnitură de etanșare
2. Garnitură inelară
3. Ac de presiune
4. Etanșare
5. Arc de reglaj
7. Corpul robinetului
8. Duză kv



Termostatele de radiator se compun din elementele termostactice ale seriei RA 2000 (RTD –R) și din corpul robinetului RA-FN.  
Elementul și corpul robinetului se comandă separat.

Corpul robinetului și alte părți metalice	Ms 58, alamă
Garnitură inelară	EPDM
Conul robinetului	NBR
Ac de presiune	Oțel cromat
Duză	PP

Corpul robinetului este nichelat la exterior.

Dimensiuni

Robinetul drept cu senzor termostatic RA 2990

Robinetul unghi cu senzor termostatic RA 2992

Robinetul tip UK cu senzor termostatic RA 2990

Tip	Racord		L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	L <sub>5</sub>	L <sub>6</sub>	L <sub>7</sub>	L <sub>8</sub>	L <sub>9</sub>	L <sub>10</sub>	Dimensiune cheie	
	D	d <sub>2</sub>											S <sub>1</sub>	S <sub>2</sub>
RA-FN 10	R <sub>p</sub> 3/8	R3/8	50	75	24	49	20	47	96				22	27
RA-FN 10 (UK)	R <sub>p</sub> 3/8	R3/8						61	110	26	51	22	22	27
RA-FN 15	R <sub>p</sub> 1/2	R1/2	55	82	26	53	23	47	96				27	30
RA-FN 15 (UK)	R <sub>p</sub> 1/2	R1/2						60	111	29	57	27	27	30
RA-FN 20	R <sub>p</sub> 3/4	R3/4	65	98	30	63	26	47	96				32	37
RA-FN 20 (UK)	R <sub>p</sub> 3/4	R3/4						61	110	34	66	30	32	37
RA-FN 25	R <sub>p</sub> 1	R 1	90	125	40	75	34	52	101				41	46

**Danfoss s.r.l.**

Șos. Oltenitei 208, Popești-Leordeni  
RO-077160, Jud. Ilfov  
Tel: +40 31 222 21 01  
Fax: +40 31 222 21 08  
E-mail: danfoss.ro@danfoss.com  
www.incalzire.danfoss.com

Firma Danfoss nu își asumă nici o responsabilitate pentru posibilele erori din cataloage, broșuri și alte materiale tipărite. Danfoss își rezervă dreptul de a modifica produsele sale fără notificare. Aceasta se aplică de asemenea produselor care au fost deja comandate cu condiția ca modificările să nu afecteze în mod substanțial specificațiile deja convenite. Toate mărcile comerciale sunt proprietatea companiilor respective. Danfoss și emblema Danfoss reprezintă mărci comerciale ale Danfoss A/S. Toate drepturile sunt rezervate.

## Application



The RAS-C & RAS-CK series is a programme of thermostatic radiator sensors, which covers all central and district heating systems.

RAS-C & RAS-CK sensors are self-actuating proportional controllers with a small P-band, designed for use in 2-pipe domestic heating systems.

RAS-C sensors are equipped with a snap-lock mechanism, which ensures quick, firm and long lasting mounting onto the valve body, without the use of any tools.

RAS-CK is specially designed for non Danfoss valves and has M30 X1.5 connection. RAS-CK is mounted onto the the valve body with a M32 spanner.

All RAS-C & RAS-CK sensors incorporate a Frost Protection Setting.

Furthermore, the RAS-C range includes models with features for positive shut-off.

RAS-C 5042 is equipped with 2 m of ultra-thin capillary tube, coiled up within the remote sensor housing. After sensor mounting capillary tube is pulled out to the required length.

The RAS-C and RAS-CK construction is particularly robust, with both end-stop strength limits and sensor bending force limits being substantially above the requirements of the European Standard EN 215.

## Ordering and specifications

### RAS-C & RAS-CK thermostatic sensors

Type	Sensor	Colour	Features	Setting range <sup>1)</sup>	Code no.
RAS-C 5023	Built-in	Black/White	Temp. limitation	8 - 28 °C	<b>013G5023</b>
RAS-C 5040	Built-in	Black/White	Positive shut-off		<b>013G5040</b>
RAS-C 5042	Remote <sup>2)</sup>	Black/White	Capillary tube, 2 m		<b>013G5042</b>
RAS-CK 5025	Built-in	Black/White	With M30x1.5 connection Temp. limitation		<b>013G5025</b>

<sup>1)</sup> Temperatures stated for  $X_p = 2K$ , i.e. the valve is closed at 2 °C higher room temperature.

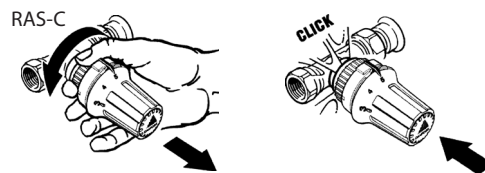
<sup>2)</sup> The remote sensor is delivered with 2 m of capillary tube coiled up within the sensor. When mounting the sensor, only the capillary tube required is uncoiled.

### Accessories

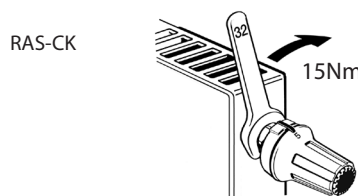
Product	Code no.
Anti-theft plug for RAS-C, black	013G5242
Anti-theft protection rings for RAS-CK, black	013G5326
Anti-theft protection rings for RAS-CK, white	013G5389

**Mounting**

The RAS-C elements with snap-on coupling are easy to mount and require no use of tools, once the valve cover has been removed. The sensor is fitted to the valve by applying a gentle pressure. When the sensor is in place, the snap-on mechanism is activated and the sensor has been correctly mounted. If mounting and dismantling are carried out again, the mechanism must be tightened manually by turning the tightening ring.

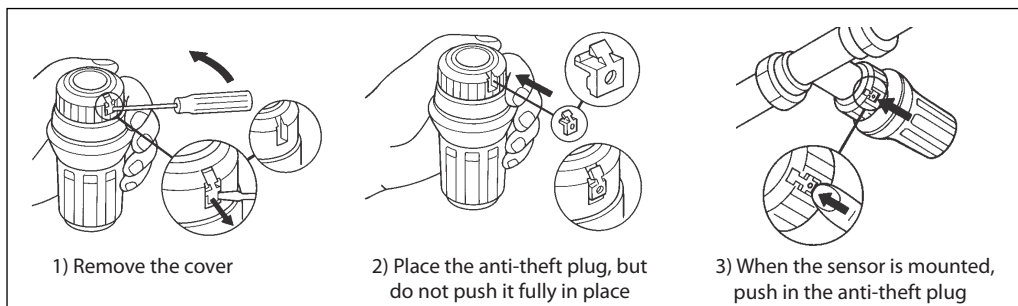


The RAS-CK elements are mounted onto the valve with a M32 spanner.



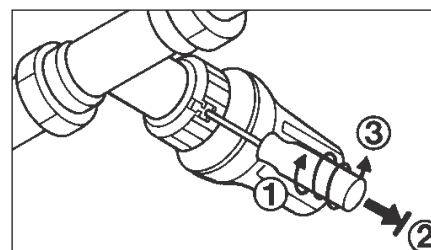
**Theft protection**

**RAS-C**



Anti theft plug for RAS-C: *code no. 013G5242*

The theft protection of RAS-C can be removed without damaging the sensor by using a screwdriver.



**RAS-CK**

To lock the RAS-CK sensor to the valve to protect against unintended dismantling two anti-theft protection rings are clamped together around the union nut of the sensor. The half-rings can only be removed by destruction. The anti-theft protection rings are available in white *code no. 013G5389* and black *code no. 013G5326*.



Setting the temperature

\* = Frost protection setting

	10	14	18	22	26	30 °C
<b>0</b>	<b>*</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
	8	12	16	20	24	28 °C

The required room temperature is set by turning the setting dial. The temperature scales show the correlation between scale values and the room temperature. The temperature values stated are for guidance only as the obtained room temperature will often be influenced by installation conditions.

The temperature scales are stated according to European standards at  $X_p = 2^\circ\text{C}$ . This means that the radiator thermostats close at a sensor temperature which is  $2^\circ\text{C}$  higher than stated on the temperature scales. RAS-CK has no 0-setting.

Dimensions

RAS-C with built-in sensor: length 88,5 - 95,2; height 62

RAS-CK with M30 connection: length 87 - 93,7; height 62

RAS-C with remote sensor: length 90,6 - 95,2; height 62; remote sensor width 35,6; remote sensor length 35; remote sensor width 71

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.

---





## Data Sheet

# Lockshield Valve Type RLV-D & RLV-S

### Application



*RLV-D with pushfit elbow*



*RLV-D with compression fitting*



*RLV-S Straight*



*RLV-S Angle*

#### **Type RLV-D**

The RLV-D is a lockshield valve designed for use in domestic heating systems and meets the requirements in BS2767-10. Fittings and valve body dimensions are identical to those of the RA-FR valve body used with the RAS-C & RAS-D radiator thermostats, allowing the installer greater freedom in terms of work flow and ease of installation. Adjustment of the lockshield for regulation and isolation is by means of a 6mm Allen key socket in the valve body which is normally covered and protected by a screw-on brass cap. RLV-D can also be used in closed comfort cooling systems, if the piping system is free of oxygen.

The push-fit fitting is suitable for 10mm copper pipes manufactured in accordance to BS 2871 part 1 / BS EN 1057: 1996 and for 10 mm polybutelene (PB) pipes including Hep20, Polyplumb, OsmaGold, and 10 mm cross linked

Polyethylene (PEX) pipes made in accordance to BS7291 part 1:1990 or part 3:1990. Always use plastic pipe inserts of the same brand as the pipe used.

#### **Type RLV-S**

The RLV-S is a lockshield valve designed for use in domestic heating systems and meets the requirements in BS2767-10. Fittings and valve body dimensions are identical to those of the RA-FN valve body used with RA 2000 radiator thermostats, allowing the installer greater freedom in terms of work flow and ease of installation. Adjustment of the lockshield for regulation and isolation is by means of a 6mm Allen key socket in the valve body which is normally covered and protected by a screw-on brass cap. RLV-S can also be used in closed comfort cooling systems, if the piping system is free of oxygen.

### Code Nos. and Technical Data

#### **RLV-D**

Pattern	Type	Connection sizes		Code no.
		Pipe	Radiator	
Angled with pushfit-elbow	RLV-D	10 mm pushfit	1/2"	<b>003L020500</b>
Angled with compression fitting	RLV-D	15 mm	1/2"	<b>003L020300</b>
	RLV-D	8/10 mm	1/2"	<b>003L020400</b>

**RLV-S**

Pattern	Type	Connection sizes		Code no.
		Pipe	Radiator	
Angled	RLV-S 10	3/8"	3/8"	<b>003L012100</b>
	RLV-S 15	1/2"	1/2"	<b>003L012300</b>
	RLV-S 15	15 mm	1/2"	<b>003L012315</b>
	RLV-S 20	3/4"	3/4"	<b>003L012500</b>
Straight	RLV-S 10	3/8"	3/8"	<b>003L012200</b>
	RLV-S 15	1/2"	1/2"	<b>003L012400</b>
	RLV-S 15	15 mm	1/2"	<b>003L012415</b>
	RLV-S 20	3/4"	3/4"	<b>003L012600</b>

**Features**

Pipe connection	Compression fitting	RLV-D push-fit
Maximum Working Pressure	10 bar	3 bar
Maximum Working Temperature	120°C	92°C
Valve Body Finish	Nickel Plated	Nickel Plated
Gland Seal Type	'O' Ring	'O' Ring
Supplied with LSV Cap (nickel plated brass)	Yes	Yes
Supplied with Wheelhead Cap	No	No

**Accessories**

A white (RAL 9010) plastic Wheel Head and Cover Cap can be retro-fitted to the RLV-D and RLV-S valves. The Wheel Head allows manual operation

of the lockshield valves. The Cover Cap provides the option of a more conventional lockshields valve design

**Wheel Head & Cover Cap for RLV-D & RLV-S**

Description	Code no.
Wheel Head	<b>003L010600</b>
Cover Cap (50 pcs.)	<b>003L010800</b>

For the RLV-D push-fit version the collet cover or the collet clip provide added security against unintended pipe disconnection. Both collet

covers and clips give added security, but the cover also improves the neatness of the installation.

**Cover and Clip for RLV-D Push-fit**

Description	Code no.
Collect Cover for push-fit connection (10 pcs.)	<b>013G491200</b>
Collect Clip for push-fit connection (10 pcs.)	<b>013G491300</b>

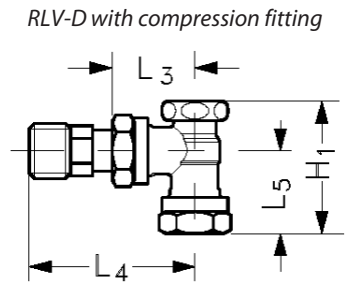
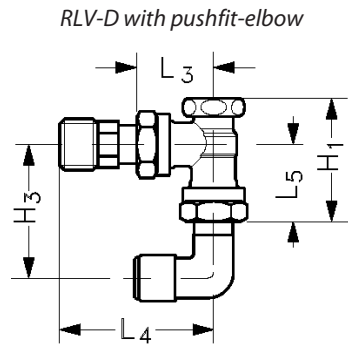
**Drain-off tail piece for RLV-D**

Description	Code no.
Drain-off tail piece	<b>003L010500</b>

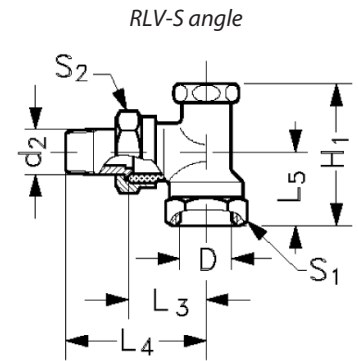
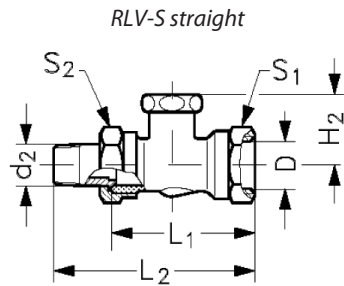
**Compression fitting for RLV-S**

Description	Code no.
1/2" x 8 mm copper compression fitting	<b>013G410800</b>
1/2" x 10 mm copper compression fitting	<b>013G411000</b>
1/2" x 15 mm copper compression fitting	<b>013G411500</b>
3/4" x 15 mm x 2.5 mm copper compression fitting for PEX plastic pipe	<b>013G415500</b>
3/4" x 15 mm x 2.5 mm copper compression fitting for Alupex plastic pipe	<b>013G418500</b>

Dimensions



Type	H <sub>1</sub>	H <sub>3</sub>	L <sub>3</sub>	L <sub>4</sub>	L <sub>5</sub>
RLV-D with pushfit-elbow	48	49-55	30	60	30
RLV-D with compression fitting	48	-	30	60	30



Type	D	d <sub>2</sub>	H <sub>1</sub>	H <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	L <sub>5</sub>	S <sub>1</sub>	S <sub>2</sub>
RLV-S 10	G 3/8	R 3/8	42	26	51	75	27	51	23	22	27
RLV-S 15	G 1/2	R 1/2	52	28	53	80	30	57	27	27	30
RLV-S 20	G 3/4	R 3/4	52	28	61	92	34	65	30	32	37

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

---

Datasheet

# H-piece valves, type RLV-KB, for valve radiators in two-pipe systems.

Application



By means of the H-piece valve type RLV-KB, every valve radiator with a centre distance between the connections of 50 mm can be blocked individually, e.g. in order to carry out trouble-free maintenance without affecting other parts of the system.

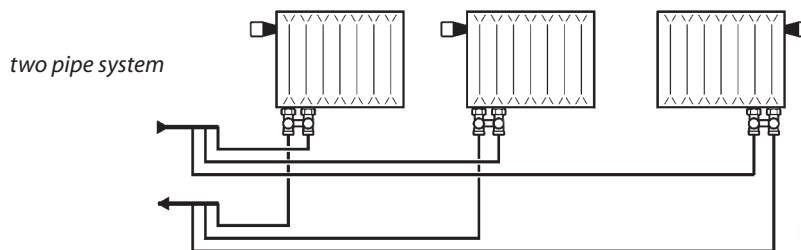
RLV-KB is factory set fully open.

Connection to copper, soft steel, PEX and Alupex pipes is made with Danfoss compression fittings. See separate data sheet.

H-piece valve type RLV-KB is nickel plated and is available in straight and angle versions. Special adapters ensure that the H-piece valve can be used both for radiators with an internal thread of G 1/2 and with an external thread of G 3/4. All adapters are self-sealing.

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

System



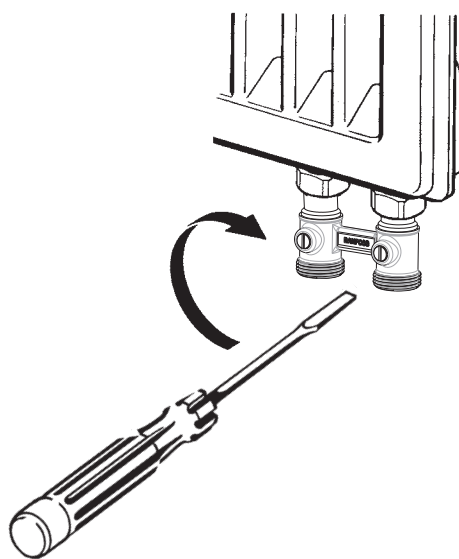
Ordering and Data

Type	Version	Connection		Kvs m3/h	Max. operation pressure	Test pressure	Max. water temperature	Code no.
		Radiator	System					
RLV-KB	Angle	G 1/2	G 3/4	1.4	10 bar	16 bar	120 °C	003L0394
	Straight							003L0392
	Angle	G 3/4	G 3/4					003L0393
	Straight							003L0391

Accessories

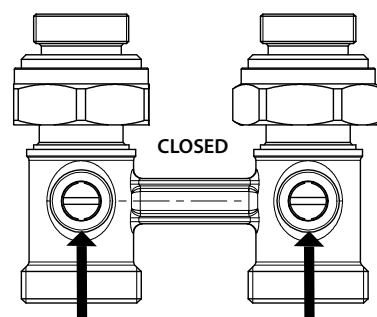
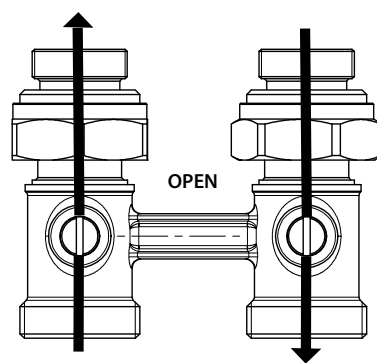
Product	Code no.
<p>Adapter (Self-sealing connection nipple for valve radiator with G 1/2 internal thread) Packing size = 20 pcs.</p>	003L0399

Adjustment

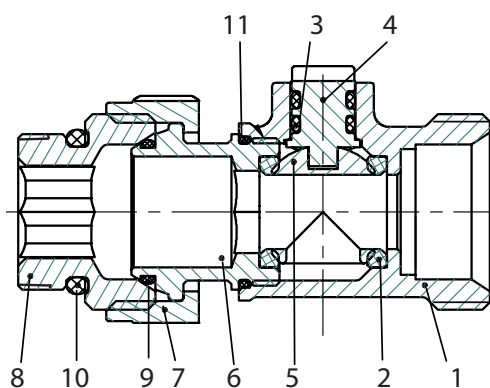


Use a flat headed screwdriver to adjust the valve to fully open or closed.

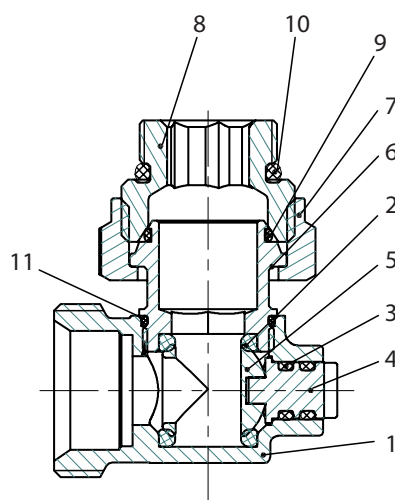
**NB:** Please pay attention to the sealing surface on the radiator, it must be suitable for O-Ring sealing.



Design



Straight



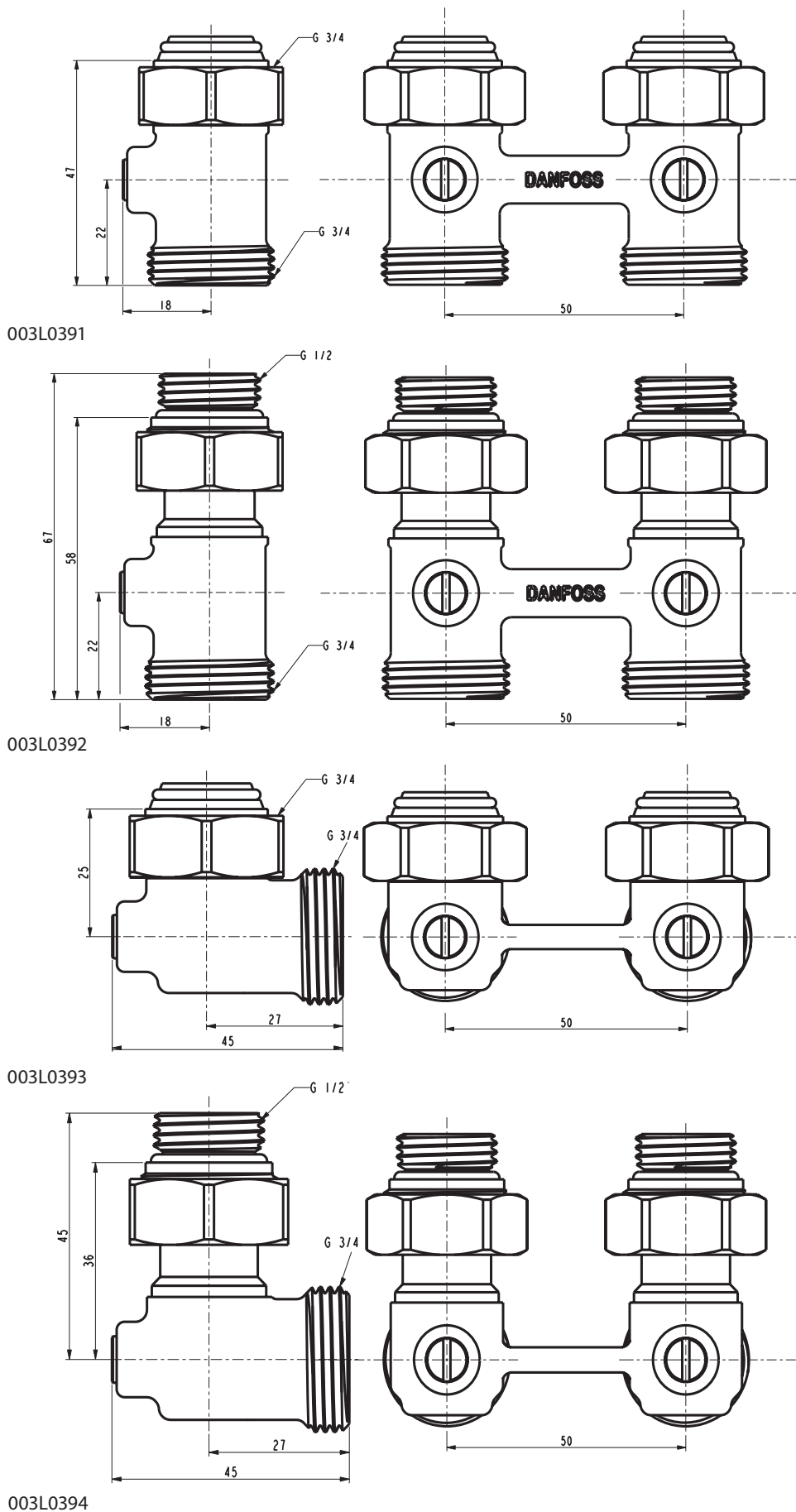
Angle

1. Valve body
2. Ball valve sealing
3. O-Ring
4. Stem
5. Ball
6. Tail piece
7. Union nut
8. Adapter
9. Tail piece O-Ring
10. Adapter O-Ring
11. Body O-Ring

*Materials in contact with water*

Valve body and other metal parts	CW617N
O-rings	EPDM
Ball Seal	PTFE

Dimensions



**Danfoss A/S**

Heating Segment • [heating.danfoss.com](http://heating.danfoss.com) • +45 7488 2222 • E-Mail: [heating@danfoss.com](mailto: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 all Danfoss logotypes are trademarks of Danfoss A/S. All rights reserved.

---