

ENGINEERING  
TOMORROW



April 2022 | Danfoss Climate Solutions for cooling

# TECH INSIDER



## Introduction

Danfoss Tech Insider keeps you updated with the latest news on the cooling and industrial products portfolios from Danfoss Climate Solutions. The content is intended to give a quick overview of core technical news and updates in our product portfolio, including links to relevant documentation and more information.

Danfoss Tech Insider is sent out, on a monthly basis, to ensure you are always up to date with the latest innovations and changes made to Danfoss products and solutions.

We hope you will enjoy reading Danfoss Tech Insider!

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## Full Range of Solenoid Valves for Drinking Water

Our lead-free ECO brass solenoid valves range has undergone rigorous testing to meet and/or exceed European regulations and standards including the British WRAS, the Swedish RISE, the Norwegian SINTEF, the France Carso according to ACS guidelines and the Polish PZH. Wetted materials in accordance with 4MS (4 member states Germany, Holland, France and UK), DVGW, KTW and W270.

Danfoss solenoid valves are built to last. Our engineers used innovative methods, such as including a reinforced and soft-closing diaphragm, to ensure not only the integrity of the valve, but the entire water system as well.

### Key features:

- Safe EPDM sealing protects against bacterial and other hazardous contamination
- Long product life
- Clip-on coil for easy installation and use

The high-quality EPDM sealing is fully compliant with new strict European regulations. The valves' reliability, coupled with the ease of installation afforded by their design, makes them the clear choice for use in a wide variety of applications:

- Water supply systems
- Houses and large apartments
- Commercial buildings
- Industrial buildings
- Industrial laundry facilities
- Industrial dishwashing facilities
- Food processing machinery



### Danfoss range of solenoid valves approved for drinking water

Valve	System	Type	NC/NO	ISO228/1 connection	Seal material	Orifice size (mm)	K <sub>v</sub> -value (m <sup>3</sup> /h)	Media temp. (°C)	Differential pressure (bar)	Application	Code no.
		EV220BW 15-25	NC	G½"	EPDM	15	4	0-90	0,3 - 10	Open	132U1500
		EV220BW 15-25	NC	G3/4"	EPDM	20	8	0-90	0,3 - 10	Open	132U2000
		EV220BW 15-25	NC	G1"	EPDM	25	11	0-90	0,3 - 10	Open	132U2500
		EV220BW 15-25	NO	G½"	EPDM	15	4	0-90	0,3 - 10	Open	132U1501
		EV220BW 15-25	NO	G3/4"	EPDM	20	8	0-90	0,3 - 10	Open	132U2001
		EV220BW 15-25	NO	G1"	EPDM	25	11	0-90	0,3 - 10	Open	132U2501
		EV221BW 10-22	NC	G3/8"	EPDM	10	1,5	0-90	0,1 - 10	Open	132U1000
		EV221BW 10-22	NC	G½"	EPDM	10	1,5	0-90	0,1 - 10	Open	132U1002
		EV221BW 10-22	NC	G½"	EPDM	14	2,5	0-90	0,3 - 10	Open	132U1300
		EV221BW 10-22	NC	G3/4"	EPDM	20	6	0-90	0,3 - 10	Open	132U2002
		EV221BW 10-22	NC	G1"	EPDM	20	6	0-90	0,3 - 10	Open	132U2200
		EV221BW 10-22	NO	G3/8"	EPDM	10	1,5	0-90	0,1 - 10	Open	132U1001
		EV221BW 10-22	NO	G½"	EPDM	10	1,5	0-90	0,1 - 10	Open	132U1003
		EV221BW 10-22	NO	G½"	EPDM	14	2,5	0-90	0,3 - 10	Open	132U1301
		EV221BW 10-22	NO	G3/4"	EPDM	20	6	0-90	0,3 - 10	Open	132U2003
EV221BW 10-22	NO	G1"	EPDM	20	6	0-90	0,3 - 10	Open	132U2201		
		EV250BW 0-22	NC	G3/8"	EPDM	10	2,5	0-90	0-10 / ²0 - 6	Closed	132U2450
		EV250BW 10-22	NC	G½"	EPDM	12	4	0-90	0-10 / ²0 - 6	Closed	132U2452
		EV250BW 10-22	NC	G3/4"	EPDM	18	6	0-90	0-10 / ²0 - 6	Closed	132U2454
		EV250BW 10-22	NC	G1"	EPDM	22	7	0-90	0-10 / ²0 - 6	Closed	132U2456
		EV250BW 10-22	NO	G3/8"	EPDM	10	2,5	0-90	0-10	Closed	132U2451
		EV250BW 10-22	NO	G½"	EPDM	12	4	0-90	0-10	Closed	132U2453
		EV250BW 10-22	NO	G3/4"	EPDM	18	4,9	0-90	0-10	Closed	132U2455
		EV250BW 10-22	NO	G1"	EPDM	22	5,2	0-90	0-10	Closed	132U2457

For more information, visit our website or contact your nearest Danfoss representative or wholesaler:

[Solenoid valves for drinking water - Ensure pure water | Danfoss](#)

## RT Pressure Switches and Thermostats - Temporary Change of Bellows Housing Screws



Due to extended delivery times for screws and to prevent a production stop it was necessary to temporarily use these alternative screws in production for bellows housing assembly of RT pressure switches and thermostats.

The temporary screw has a different head. Apart from this visual difference, there is no other impact on the product, neither function nor performance.

The temporary screw will be used in production from week 7 to 17, both weeks included (end of April), 2022.

### Affected code numbers as per the table below

Component number	Object description	Component number	Object description
017-504866	RT106 Thermostat M/15	017-514066	RT107 Thermostat M/15
017-504966	RT106 Thermostat M/15	017-514166	RT107 Thermostat M/15
017-505166	RT106 Thermostat M/15	017-618266	RT107E Thermostat M/15 ATEX
017-514866	RT106 Thermostat M/15	017-521666	RT123E Thermostat M/15 ATEX
017-505066	RT106 Thermostat M/12	017-522066	RT123 Thermostat M/15
017-506066	RT108 Thermostat M/12	017-522466	RT123 Thermostat M/15
017D001466	RT260A Diff. Pressure Switch M/9	017-514266	RT107 Thermostat M/12
017D001566	RT260A Diff. Pressure Switch M/9	017-514466	RT107 Thermostat M/12
017D001666	RT260A Diff. Pressure Switch M/9	017-514566	RT107 Thermostat M/9
017-505266	RT5A Pressure Switch M/15	017-520566	RT120 Thermostat M/15
017-506166	RT5A Pressure Switch M/15	017-520866	RT120 Thermostat M/15
017L001766	RT5AL Pressure Switch M/15	017-521166	RT120 Thermostat M/15
017-522766	RT124 Thermostat M/15	017-521466	RT120 Thermostat M/15
017-523166	RT124 Thermostat M/15	017-152466	RT120 Thermostat I/12
017-522966	RT124 Thermostat M/15	017-520666	RT120 Thermostat M/15
017-506066	RT108 Thermostat M/12	017-520966	RT120 Thermostat M/15
017-513566	RT107 Thermostat M/15	017-521266	RT120 Thermostat M/15
017-513666	RT107 Thermostat M/15	017-520766	RT120 Thermostat M/15
017-513766	RT107 Thermostat M/15	017-522266	RT123 Thermostat M/15
017-515366	RT107E Thermostat M/15 ATEX	017-618366	RT123E Thermostat M/15 ATEX
017-513966	RT107 Thermostat M/15		

We do apologize for any inconvenience caused by this issue. Should you have any questions not addressed here, please contact your local Danfoss Technical Support Engineer.

## NRVT - New 140 bar Check Valve for CO<sub>2</sub>



Danfoss is now introducing a new NRVT 140 bar check valve that has been released for sale with sizes of 3/8 inch and 1/2 inch.

The release of the 5/8 inch valve will follow in July 2022.

Product information such as ordering; specifications and features are shared in below tables.

Type	Size in inch	Soft Spring Code no.	Initial quantity available in CDC in April 2022	Hard Spring Code no.	Initial quantity available in CDC in April 2022	Release status
NRVT 10s	3/8	020-6401	30	020-6411	30	Released
NRVT 12s	1/2	020-6402	30	020-6412	30	Released
NRVT 16s	5/8	020-6403	30	020-6413	30	Will release in July 2022

### Main features

- Stable operation covering full map of compressor
- Fulfills high temperature and pressure requirements for the discharge lines used in transcritical CO<sub>2</sub> systems.
  - Rupture proof, optimized TIG welding
  - Specially selected sealing material for CO<sub>2</sub> refrigerant
- Hermetic brass body design
- Compatible to connect both copper/SS tubes
- In compliance to PED & UL regulations

Product Specifications	
Product type name	NRVT
Application	CO <sub>2</sub> applications
Refrigerants	R744
Maximum working pressure (MWP)	140 bar (2030 psig)
Maximum media temperature	-40 to 150°C
Connection size	3/8 in., 1/2 in., 5/8 in. (in July)
Min. OPD	Soft spring: initial open < 0.01 bar, full open < 0.05 bar Hard spring: initial open < 0.25 bar, full open < 0.9 bar
Main applications	<ul style="list-style-type: none"> <li>▪ BLDC CO<sub>2</sub> compressor discharge line, bundle with EVT</li> <li>▪ Semi-hermetic CO<sub>2</sub> compressor discharge line</li> <li>▪ Hot gas defrost line</li> <li>▪ Low pressure lift Multi Ejector Solution, suction line</li> </ul>

Please find more information on product store here – in the category:

[Check valve for commercial A/C and Refrigeration.](#)

If you need additional information, please contact your local Danfoss sales representative.

## New FIA-140B Strainer for Large Capacity CO<sub>2</sub> Transcritical Systems



Danfoss is now starting up a new range of manual valves with 140 bar MWP, to meet the increasing demand for large manual valves in industrial design for R744, CO<sub>2</sub> transcritical systems.

FIA-140B strainer housings are released now as the first function in the new range. Strainer inserts are shared with other FIA valves in the SVL platform.

Thanks to the sizing of the FIA-140B, system design can be simplified and more compact together with saving the cost of parallel valves, pipes, fittings, and labour.

The FIA-140B strainer is especially applicable in medium and high-pressure part of the CO<sub>2</sub> transcritical system:

- Upstream to HP valve
- Upstream to By-pass valve
- Upstream to MT compressors
- Upstream to Hotgas defrost valves

The FIA-140B range comes in straight and angle versions in sizes from DN50 to DN100. It is designed for favorable flow conditions and can be fitted with the existing range of stainless-steel plain and pleated filter inserts from 150 to 500 microns.

Service and maintenance are made easy thanks to

- Replaceable high pressure fiber gasket between valve body and top part
- Replaceable and cleanable filter inserts

To accommodate the higher pressure level, FIA-140B come with 2 thick-walled Butt-Weld connections according to EN 10216-2 and ANSI B 36.10 SCH 80. In addition, 2 short-ended brazing (hard soldering) connections according to EN 1254-5 and ASME B16.50 makes a perfect fit with K65 copper pipes.

The FIA-140B range is available in the newly released [Coolselector2 v4.8.0](#).

For details on the installation and maintenance of the FIA-140B please refer to the Installation Guide:

[FIA-140B Strainer](#)

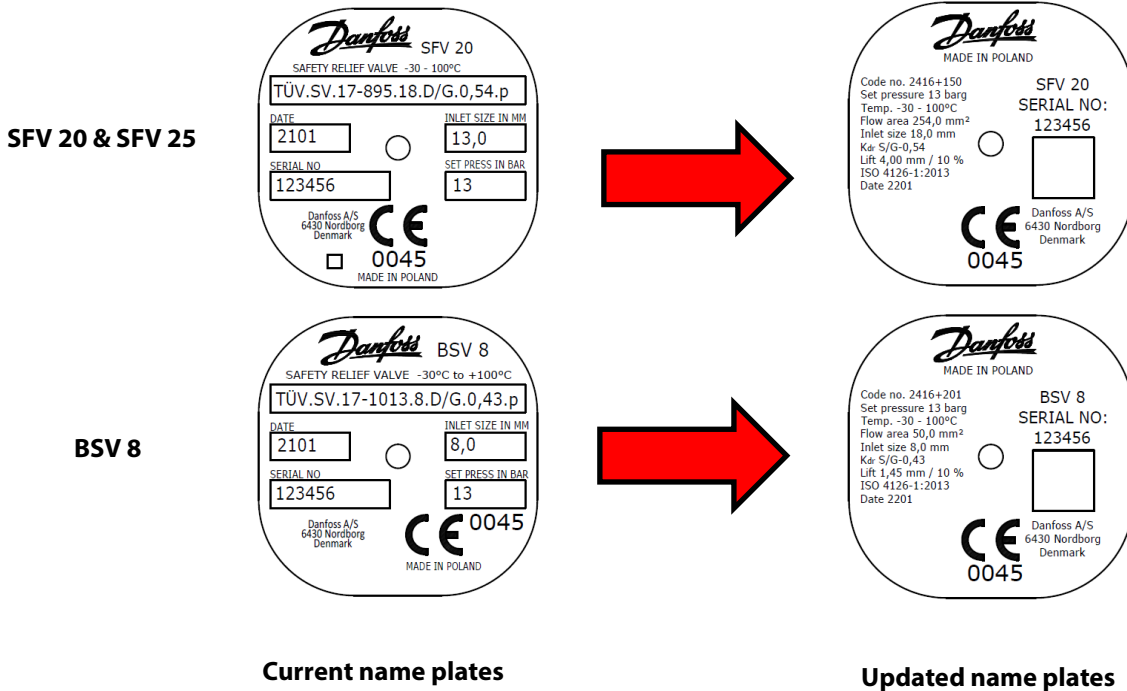
### Learn more – and get in touch

You are more than welcome to contact your local sales representative or Technical Support if you wish to find out more. You can also visit our website at [IR.danfoss.com](http://IR.danfoss.com) where you can learn more about our offerings for industrial refrigeration.

## Safety Valves BSV 8, SFV 20 & SFV 25 - Name Plate Layout Update

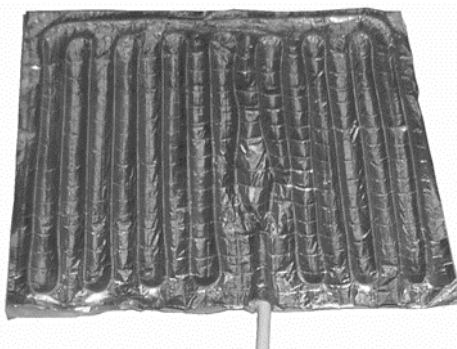
To fulfil new requirements of EN ISO 4126-1:2013 + A1:2016 + A2:2019 standard, it was decided to update the name plate layout of safety valves. The new standard requires the data to be presented in a different way. The new layout of the name plate includes the same relevant information as currently seen, but in a different arrangement.

There is no change in product specifications.



All SFV 20 & SFV 25 with manufacturing date code starting from 2202 (February 2022) will have new name plates.  
 All BSV 8 with manufacturing date code starting from 2201 (January 2022) will have new name plates.

## Discontinuation of Surface Sump Heaters for DSH and DSF Large Compressors



This info is to announce the discontinuation of surface sump heaters (SSH) 230 x 150 mm dedicated to DSH and DSF large scroll compressors.

From now on, Danfoss commercial compressors recommends the use of belt heater 75 W instead of the surface sump heater for large DSH and DSF compressors.

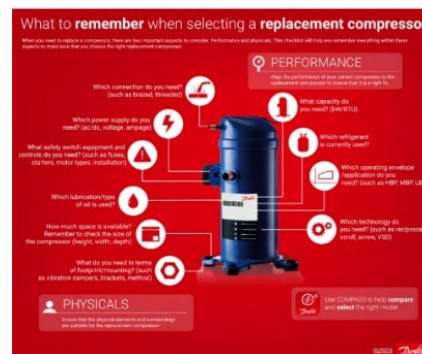
The SSH references dedicated to these compressor models will be phased out.

The deadline for placing final orders on the SSH 230 x 150 mm (last time buy) is July 1, 2022. After this date, availability will depend on remaining stocks. Please note that surface sump heaters will still be available in their 200 x 200 mm format for large SH compressors that do not have the same baseplate as DSH/DSF compressors.

Surface sump heater references phased out		Alternative heater references	
Reference	Designation	Reference	Designation
120Z0769	Surface sump heaters <b>24 V</b> 56 W Industry pack 12 pcs	120Z0870	Belt heaters <b>24 V</b> 75 W Multipack 6 pcs
120Z0770	Surface sump heaters <b>230 V</b> 56 W Industry pack 12 pcs	7773108	Belt heaters <b>230 V</b> 75 W Multipack 6 pcs
		7973005	Belt heaters <b>230 V</b> 75 W Multipack 50 pcs
120Z0771	Surface sump heaters <b>400 V</b> 56 W Industry pack 12 pcs	7773118	Belt heaters <b>400 V</b> 75 W Multipack 6 pcs
120Z0772	Surface sump heaters <b>460 V</b> 56 W Industry pack 12 pcs	120Z0464	Belt heaters <b>460 V</b> 75 W Multipack 6 pcs
120Z0773	Surface sump heaters <b>575 V</b> 56 W Industry pack 12 pcs	120Z0465	Belt heaters <b>575 V</b> 75 W Multipack 6 pcs

## Videos in YouTube & Infograms & On-Demand Content

- Refrigerant Safety | Ask an Expert:
  - Maintenance work on safety valves - [LINK](#)
  - How to select a safety valve? - [LINK](#)
- Essential compressor replacement checklist – [INFOGRAM](#)
- Low GWP Walk-in cold room - [INFOGRAM](#)
- Data Center World 2022 event: on-demand - [LINK](#)



## Details for Additional Information

### Italy/IT

[Cooling United Support Hub](#)

[Support Made Easy](#)

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