



COOL UPDATE

Your go-to newsletter for technical updates and latest changes in refrigeration and industrial solutions—delivered nearly every month.



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Introduction

Danfoss Cool Update keeps you up to date with the latest developments in the Cooling and Industrial Products portfolios from Danfoss Climate Solutions. Each edition offers a quick overview of key technical updates and product news, with direct links to relevant documentation and further details. Published monthly, Cool Update ensures you're always informed about the latest innovations and changes across our products and solutions.

We hope you enjoy reading Danfoss Cool Update and find it both useful and inspiring!

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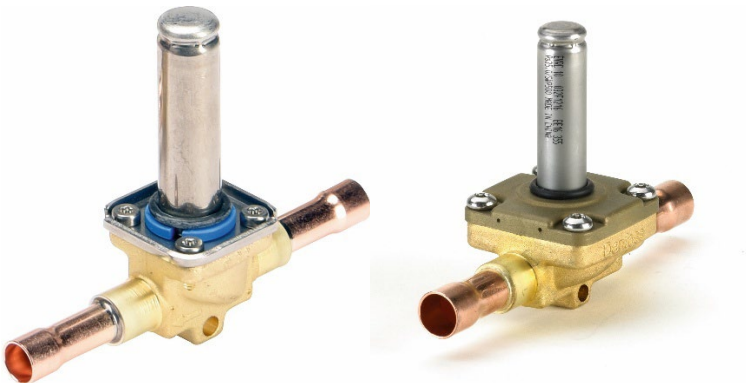
Not all products/variants are available in all countries. Please contact your local sales company for further info and product availability.

New Bi-Flow solenoid valve EVRC 6

Danfoss is pleased to introduce the new bi-directional solenoid valve EVRC 6, designed for reversible systems such as heat pumps and reverse hot gas defrost applications. This latest addition has received UL/CSA approval, making it suitable for the North American market.

The EVRC solenoid valves are compatible with the solenoid coils used in the EVR series.

For applications requiring higher capacity, the EVRC 15 and EVRC 20 valves are also available.



Available range of bi-flow solenoid valves EVRC

Code	Valve type	Kv value (normal flow)	Kv value (reverse flow)	Connection size (solder ODF)
032L1272	EVRC 6	0.9 m ³ /h	0.64 m ³ /h	3/8 in
032L1255	EVRC 15	2.7 m ³ /h	2.5 m ³ /h	5/8 in
032L1258	EVRC 20	3.6 m ³ /h	5.0 m ³ /h	7/8 in

For more information, please visit the Danfoss Store or contact your local sales representative.

Release of the redesigned Danfoss Gas Sensor product family

We are pleased to announce the release of the newly redesigned DGS (Danfoss Gas Sensor) product family. The redesigned devices maintain the same core functionalities as the previous generation while introducing several enhanced features.



The updated products will be launched under new product codes

Current part number	New part number	Object description
080Z2800	080Z2830 NEW	Gas Sensor - DGS-IR CO ₂
080Z2801	080Z2831 NEW	Gas Sensor - DGS-IR CO ₂ - 5m
080Z2802	080Z2832 NEW	Gas Sensor - DGS-IR 2 * CO ₂ - 5m
080Z2803	080Z2833 NEW	Gas Sensor - DGS-SC HFC gr.1
080Z2804	080Z2834 NEW	Gas Sensor - DGS-SC HFC gr.2
080Z2805	080Z2835 NEW	Gas Sensor - DGS-SC HFC gr.3
080Z2806	080Z2836 NEW	Gas Sensor - DGS-PE Propane
080Z2807	080Z2837 NEW	Gas Sensor - DGS-IR CO ₂ + LED & Buzz
080Z2808	080Z2838 NEW	Gas Sensor - DGS-IR CO ₂ - 5m + LED & Buzz
080Z2809	080Z2839 NEW	Gas Sensor - DGS-SC HFC gr.1 + LED & Buzz
080Z2810	080Z2840 NEW	Gas Sensor - DGS-SC HFC gr.2 + LED & Buzz
080Z2811	080Z2841 NEW	Gas Sensor - DGS-SC HFC gr.3 + LED & Buzz
080Z2812	080Z2842 NEW	Gas Sensor - DGS-PE Propane + LED & Buzz

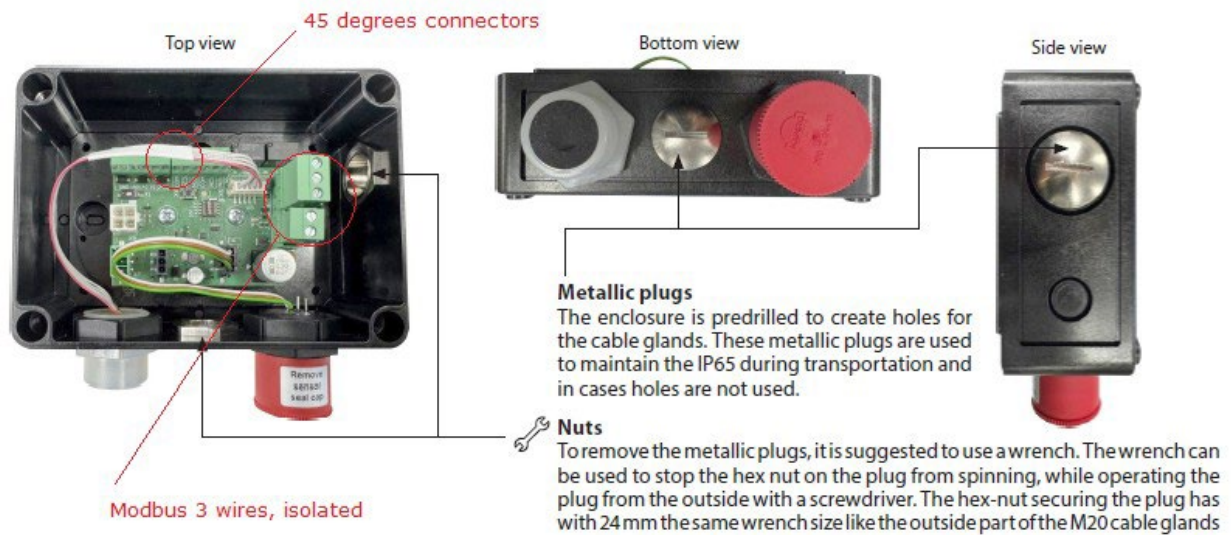
Key changes in the redesign

This redesign does not affect the main functions of the device.

The improvements include:

- Isolated Modbus circuit
- Modbus connector that now includes GND and is separated from the power supply
- Improved EMC immunity
- Case predrilled for cable passage, with metallic plugs to maintain the IP rating
- 45-degree connectors for easier access

The images below illustrate the changes in the redesigned DGS device



Compatibility and Accessories

Other products and accessories in the DGS portfolio (including spare sensors, the handheld service tool, strobe & horn, and power supply) remain unchanged and are fully compatible with the redesigned DGS product family.

The redesigned DGS version will be compatible only with the AK SM 800A.

Availability and Additional Information

The redesigned products will be available from September 2025.

A stock of current DGS products, compatible with previous versions of the System Manager prior to the AK-SM 800A, will still be available for gas sensor replacements.

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

GBCT copper tube versions: apply of new valve housing with access port integrated

Starting from Week 34, 2025, the Danfoss 140 bar ball valve GBCT (copper tube version) will feature a new valve housing with an integrated access port.

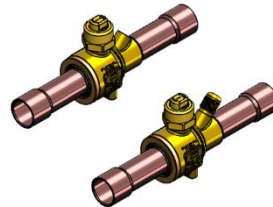
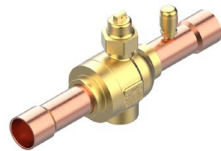
The changeover at the production plant will take place between August 25 and October 25, 2025. During this transition period, both the old and new designs will be available on the market.

The fit, form, and function of the product, as well as the code numbers, will remain unchanged.

Example of current and new design of GBCT 22s shown below



Current GBCT 22s, copper connector, without access port and with access port



New GBCT 22s, copper connector, without access port and with access port

This change will affect GBCT, copper tube versions shown below

Material	Description
009L6406	GBCT 28s Ball Valve CO2 140bar M/4
009L6410	GBCT 35s Ball Valve CO2 140bar M/4
009L6411	GBCT 42s Ball Valve CO2 140bar M/4
009L6412	GBCT 54s Ball Valve CO2 140bar M/2
009L6415	GBCT 6s Ball Valve CO2 140bar M/30
009L6416	GBCT 10s Ball Valve CO2 140bar M/30
009L6417	GBCT 12s Ball Valve CO2 140bar M/30
009L6418	GBCT 16s Ball Valve CO2 140bar M/30
009L6419	GBCT 18s Ball Valve CO2 140bar M/16
009L6420	GBCT 22s Ball Valve CO2 140bar M/16
009L6451	GBCT 28s Ball valve CO2 140bar w AP M/4
009L6453	GBCT 35s Ball Valve CO2 140bar w AP M/4
009L6454	GBCT 42s Ball Valve CO2 140bar w AP M/4
009L6456	GBCT 54s Ball Valve CO2 140bar w AP M/2
009L6581	GBCT 6s Ball Valve CO2 140bar w AP M/30
009L6582	GBCT 10s Ball Valve CO2 140bar w AP M/30
009L6585	GBCT 12s Ball Valve CO2 140bar w AP M/30
009L6586	GBCT 16s Ball Valve CO2 140bar w AP M/30
009L6588	GBCT 18s Ball Valve CO2 140bar w AP M/16
009L6589	GBCT 22s Ball Valve CO2 140bar w AP M/16

End of service and end of life for multiple products

At Danfoss, we prioritize product security and are committed to protecting our users by adhering to evolving global cybersecurity regulations and standards, such as RED and NIST.

To that end, we have phased out legacy products in the past and will continue to do so for products that can no longer be updated to meet the latest regulatory requirements or industry standards.

As part of this commitment, Danfoss ECS has achieved IEC 62443-4-1 certification for its secure development lifecycle process, ensuring that security is a priority in both current and new product development. This certification demonstrates our dedication to providing secure, future ready solutions.

In alignment with these standards, and driven by recent European cybersecurity legislation, we are enforcing a hard End of Service (EoS) policy for legacy products that have already reached their End of Life (EoL), as previously announced.

These products can no longer meet current regulatory or security requirements. Continuing to provide services for these products would place Danfoss under new legal obligations to maintain security updates.

For example:

- The AK SM 800 was officially declared End of Life in May 2021, as noted in the Product Note: System Manager Portfolio – Phase outs. According to that communication, End of Life status leads to End of Service. Although Danfoss extended minor support, such as EDx file updates, this is no longer permitted under the new legislation. Despite this, we have provided updates to EDx files, which constitute a violation of legislative requirements for an End-of-Life product.

We strongly encourage customers to contact Danfoss sales offices to discuss potential replacement projects. Danfoss will cease all services for legacy products. If you are still using one of the affected products, we highly recommend reaching out to your local Danfoss sales representative to explore secure replacement options.

Examples of affected products include

AK SM 800, AK SM 350, AK SM 720, PI 100/200/300 series, AKM, AKA, AK SC 255, AK SC 355, EM 100, AK CS, and EM 800.

Additionally, there may be other products that were phased out more than two years ago. For instance, the SC255 and SC355 were phased out in 2016, and the EM 100 in 2013, which is why we are reinforcing the End of Service for products phased out more than two years ago.

Additional technical explanation

Rising product vulnerabilities necessitate prompt action to prevent data breaches, as the cybersecurity landscape continues to evolve. Since all software contains bugs, legacy systems lacking modern security measures become increasingly susceptible to exploitation.

Recent trends underscore how these vulnerabilities can:

- Enable unauthorized access
- Cause denial of service (DoS)
- Disrupt operations or system availability
- Lead to data leakage or manipulation

The ability to promptly address vulnerabilities and resolve them through a professional process is crucial at every stage of the product or service lifecycle. Over the past year, there has been a noticeable increase in reports from external security researchers highlighting vulnerabilities in Danfoss products. This trend aligns with the growing emphasis on security and upcoming regulations, and it is anticipated that it will continue to rise in the future.

Real world examples

- Russia, 2022:

Sixteen supermarkets using AK SM 800 were targeted by cyberattacks at the start of the war. The hacker group Anonymous publicly encouraged disrupting Russian infrastructure.

→ Recommended action: Migrate to AK SM 800A with hardened security features.

- Israel, 2022:

Forty stores were hacked. All affected stores lacked proper firewall or VPN protection, and all used AK SM 800. Only the SM800 was affected; however, our sales team reported that a mix of SM800 and SM800A units was installed.

→ Recommended action: Replace with AK SM 800A and follow secure installation practices.

- May 2023 – Danfoss AK EM 100:

An external security researcher discovered several serious issues in the Danfoss AK EM 100 product that could allow hackers to access and take control of the system. As the AK EM 100 is no longer supported, Danfoss identified six specific issues (CVEs) and advised immediate decommissioning and migration.

→ Recommended action: Upgrade to AK SM 800A with Alsense Cloud.

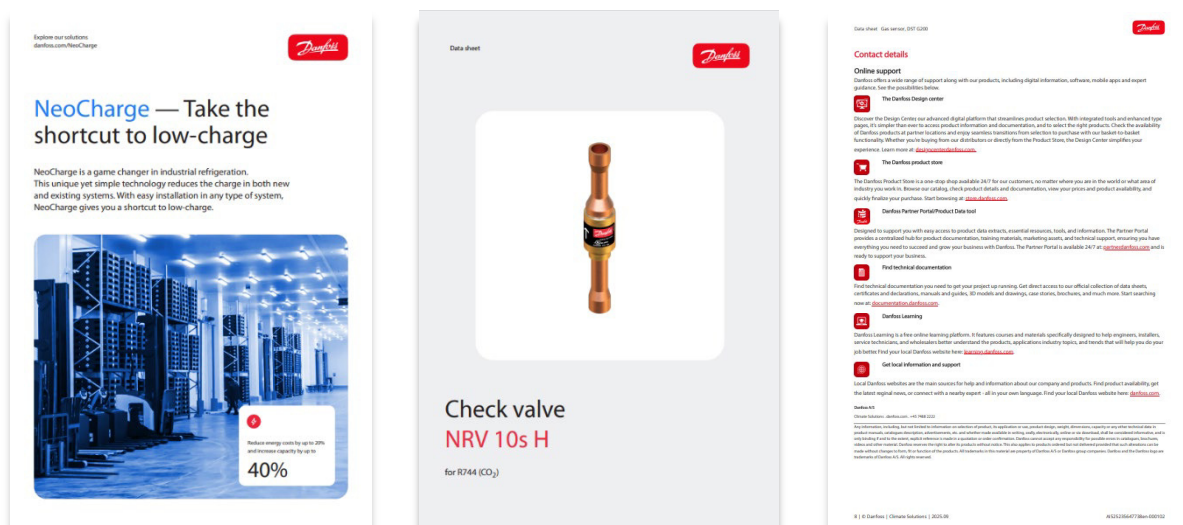
- August 2023 – Danfoss AK SM 800A:

An external security researcher reported that the Danfoss AK SM 800A product had vulnerabilities due to inadequate restrictions and input handling, potentially allowing hackers to take over the system. In response, Danfoss identified three specific issues and advised customers to resolve the problem by installing the latest software version, which at that time was V3.3.

→ This highlights the importance of using supported, actively maintained products

New and updated content

- Video – [Presenting Danfoss ADAP-KOOL | Smarter refrigeration & store management solutions](#)
- Video – [How advanced industrial refrigeration training advanced my career](#)
- Video – [The NeoCharge roadshow experience](#)
- Data sheet – [Thermostat type KPU](#)
- Data sheet – [Check valve type NRV1](#)
- Data sheet – [NRV check valve CO₂](#)
- Data sheet – [Colibri® Electric expansion valves Type ETS 12C, ETS 24C, ETS 25C, ETS 50C, ETS 100C](#)
- Data sheet – [Solenoid valve Type EVR 2 - EVR 40](#)
- Data sheet – [A2L Gas Sensor - Compact design DST, GSxx series](#)
- Data sheet – [A3 Gas Sensor](#)
- Data sheet – [Gas detecting sensor, type DGS](#)
- Data sheet – [A2L Gas Sensor, Types DST G54B, DST GR32](#)
- Data sheet – [A2L Gas Sensor, Types DST G54A, DST G54C, DST G55A](#)
- Data sheet – [Gas Sensor DST G200](#)
- Data sheet – [Shut-off valves, Type SSTC](#)
- User guide – [KoolProg](#)
- User guide – [Electronic refrigeration control, type ERC 21X series](#)
- Application guide – [Optyma™ iCO₂ condensing units - R744 | 50 Hz](#)
- Application guide – [Variable speed compressors NVK35FSC, NVS50FSC, NVS70FSC with controller N206 series](#)
- Application guide – [Variable speed compressors NUS100FSC, NUS125FSC & NUS160FSC with controller N112 series](#)
- Application guide – [Industrial Refrigeration systems in Potentially Explosive Atmospheres \(Hazards area\) ATEX 94/9/EC Directive \[Atmosphères EXplosives\]](#)
- Application guide – [Rotary compressors VRN](#)
- Product information – [DST GS-series gas sensors - the compact and resistant solution for gas detection](#)
- Brochure – [NeoCharge - take the shortcut to low-charge](#)
- Brochure – [Turn your waste heat into financial gains and lower emissions](#)



Contact information – Get in touch with Danfoss

Contact Danfoss Sales office, customer service and technical support

[Sales and services](#)

[Customer service](#)

Get technical support for installing Danfoss cooling solutions

[Cooling installer hub](#)

Get technical support for installing Danfoss sensing solutions

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