

ENGINEERING  
TOMORROW



June 2025 | 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!

## Table of Contents

KoolProg Ver 5.4.x: Maintenance Release Update.....	3
Alsmart® Design New Version Release: AS-Key .....	4
Optyma™ Bare Condensing Unit Reciprocating Compressor Replacement.....	4
Release of IPS 8 with R290 (Propane) .....	6
Optyma™ Slim Pack Piping Change (Rev2) .....	7
Strengthened Spindle and Cast Nut Designs of ICM Large Valves DN100-DN150 .....	8
New and Updated Literature.....	10
Details for Additional Information.....	10

## KoolProg Ver 5.4.x: Maintenance Release Update

A new version of KoolProg (Ver. 5.4) is now available for download, which we have made several improvements and enhancements.

The new version of KoolProg is available for download here: [Link](#)

### Detailed description

#### 1. Supports EKE 100 & 110 controllers with latest SW versions

Product Description	Part Code	Software Version
EKE 100 1V Injection controller	080G5050	3.10 & 3.11
	080G5051	3.10 & 3.11
	080G5052	3.10 & 3.11
EKE 100 2V Injection controller	080G5055	3.10 & 3.11
	080G5056	3.10 & 3.11
	080G5057	3.10 & 3.11
EKE 110 1V Injection controller	080G5059	2.0

*Please note:*

The EKE 110 currently works only with Adam and ICP Con converters. A new, updated version of KoolKey - compatible with EKE 110 - is scheduled for release in Q3 2025.

#### 2. Supports convert setting functionality for EKE 100 and EKE 110 controller families

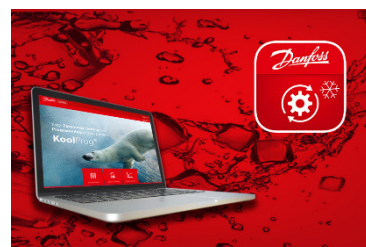
Supports convert setting functionality for EKE 100 and EKE 110 controller families.

#### 3. Implemented KoolProg Software auto update feature

Whenever a new version of KoolProg is released into the market, user shall receive a pop-up message to update the KoolProg to its latest version.

#### 4. Improvements

Performance has been improved significantly in the online service window.



### Known issues/ Specific limitations to this release

1. KoolProg sometimes doesn't close the communication port when the MPK device is disconnected from KoolKey. This requires KoolKey disconnection and re-connection to free up the communication port.
2. MPK (EKA 201) doesn't support unknown controller file programming as these files cannot be opened in KP.
3. MYK version below 5.01 may not support all KoolProg features for AK-CC 55 controllers.
4. When performing convert settings for EKE 100 - 1V code numbers, the Convert Settings report currently displays parameters specific to EKE 100 - 2V code numbers. This issue will be resolved in the next KoolProg release.

### Affected products

EKE 100 and EKE 110

### Key message to customers

Supports updated software versions of EKE 100 & EKE 110 and with convert setting functionality.

## Alsmart® Design New Version Release: AS-Key

We are pleased to announce the release of the **AS-Key**, a new license key now available for purchase as part of the Alsmart® Universal Controller Platform.



### Product Description

The newly introduced **AS-Key** accessory provides a **permanent license** for using Alsmart Design, the software tool chain that works seamlessly with Alsmart® Universal controllers to develop custom software applications.

All versions of Alsmart Design include **90 days of free usage**. After this period, the AS-Key is required to continue accessing the software.

**Affected product:** AS-Key (P/N: 080G6036)

For more information, please contact your local Danfoss sales representative.

You can also find additional information on our website: [www.danfoss.com](http://www.danfoss.com)

The latest version of **Alsmart Design v. 1.08.0003** is available for download in the dedicated Alsmart section of the [Danfoss Partner Portal](#).

To access it, please follow the instructions behind this link: [Alsmart Partner Portal - Quick setup guide](#)



## Optyma™ Bare Condensing Unit Reciprocating Compressor Replacement

As part of the supplier decision, we will need to replace all our bare condensing units equipped with reciprocating T and F compressors series.

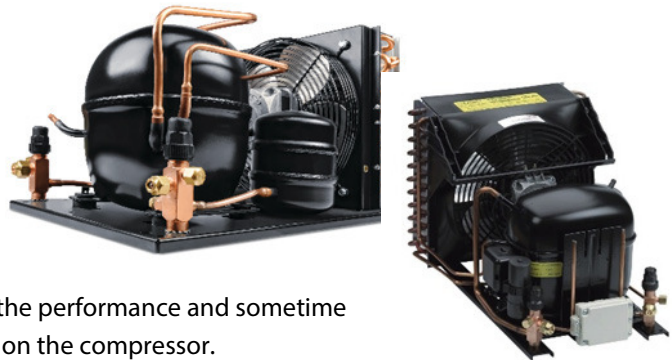
Due to manufacturer compressor phase out and new available range we have designed alternative solutions to adapt to each specific customer's need.

The possible change might impact the condensing unit size, the performance and sometime customer connection pipe when connection is made directly on the compressor.

### Affected products

All bare light commercial condensing unit ranges equipped with brand labelled TL and FR compressors series.

- 15 compressors
- 63 condensing unit details will be given later upon condensing unit design development



### Current condensing unit range to be phased out

Code	Condensing unit designation	Compressor type	Refr.	Capacity (Watt)
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### Alternative with existing or new code creation

Condensing unit designation	Capacity (Watt)	Code or development
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\*Designation to be confirmed

LBP	114E2123	TLS5FXNO	TLS5F-A-CSIR05	R134a R513A	63,95
	114E2227	TLS5FXN0		R404A R452A	66
	114G1602	TLS5FXN2			
	114F1508	TL4CNXNO	TL4CN-A-CSIR05	R290	104
	114H1506	TL4CLXN0	TL4CL-A-CSIR05	R404A R452A	92
	114E2471	TL4CLXNO			
	114X1208	OP-LCHC004TLA00G			105
	114X1209	OP-LCHC004TLA01G			
	114X1211	OP-LCHC004TLA04G			
	114F1504	TL5CNXN0	TL5CN-A-CSIR05	R290	118
	114E2454	OP-FR6CLXNO	FR6CL-A-CSIR05	R404A R452A	164
	114E2503	FR6CLXN0			
	114X1216	OP-LCQC006FRA00G			169
	114X1217	OP-LCQC006FRA01G			
	114X1219	OP-LCQC006FRA04G			
	114H2726	FR6CLXT2			162
	114H2726	FR6CLXT2			
	114E2593	FR8,5CLXT0	FR8.5CL-A-CSIR05	R404A R452A	188
	114E2517	FR8,5CLXT1			
	114H3728	FR8,5CLXT2			199
	114X0104	OP-MCGC003TLA00G	TL3G-A-CSIR05	R134a R513A	132
	114X0105	OP-MCGC003TLA01G			
	114X0107	OP-MCGC003TLA04G			

Cool Cap working cond. LT -35°C RG 20°C

OP-LCG/QC004KLA00G*	67	Model development requires relevant customer request
OP-LCG/QC004KLA04G*		
OP-LCNC004CNA11G*	99	Model development requires relevant customer request
OP-LCQC004MYA00G*	136	Version development requires customer request
OP-LCQC004MYA01G*		114X1221
OP-LCQC004MYA04G*		Version development requires customer request
OP-LCQC004MYA01G*	136	114X1221
OP-LCQC006NLA00G*	160	Model development requires relevant customer request
OP-LCQC006NLA01G*		
OP-LCQC006NLA04G*		
OP-LCQC006MYA00G*	196	Version development requires customer request
OP-LCHC007NLA00G	210	114X1328
OP-LCQC006MYA01G	196	114X1337
OP-LCHC007NLA01G	210	114X1329
OP-LCQC006MYA04G*	196	Version development requires customer request
OP-LCHC007NLA04G	221	114X1331
OP-MCG/QC004KLA00G*	187	Model development relevant requires customer request
OP-MCG/QC004KLA01G*		
OP-MCG/QC004KLA04G*		

### Current condensing unit range to be phased out

Code	Condensing unit designation	Compressor type	Refr.	Capacity (Watt)
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### Alternative with existing or new code creation

Condensing unit designation	Capacity (Watt)	Code or development
-----------------------------	-----------------	---------------------

\*Designation to be confirmed

MBP	114X0108	OP-MCGC004TLA00G	TL4G-A-CSIR05	R134a R513A	162
	114X0109	OP-MCGC004TLA01G			
	114G1706	TL4GXT2			
	114X0111	OP-MCGC004TLA04G			
	114B0006	OP-TL4GHXN0	TL4GH-K-CSIR05	R134a R513A	167
	114G1760	TL4GXT2 115V 60HZ	TL4G-G-CSIR05	R404A R452A	203
	114G1900	TL4GXN0 115V 60HZ			
	114E2541	TL5GXN0	TL5G-A-CSIR05	R134a R513A	225
	114E2548	TL5GXT0			
	114X0112	OP-MCGC005TLA00G			193
	114X0113	OP-MCGC005TLA01G			
	114G1708	TL5GXT2			
	114X0115	OP-MCGC005TLA04G			
	114X0200	OP-MCGC006FRA00G	FR6GX	R134a R513A	278
	114X0201	OP-MCGC006FRA01G			
	114X0203	OP-MCGC006FRA04G			
	114X0216	OP-MCGC007FRA00G	FR7,5GX	R134a R513A	305
	114X0217	OP-MCGC007FRA01G			
	114X0219	OP-MCGC007FRA04G			
	114E2522	FR8,5GXN0	FR8.5G-A-CSIR05	R134a R513A	353,6
	114E2362	FR8,5GXN0			369
	114E2332	FR8,5GXN0			
	114E2201	FR8,5GXN0			353
	114E2346	FR8,5GXT0			
	114X0224	OP-MCGC008FRA00G			
	114X0225	OP-MCGC008FRA01G			360
	114G2716	FR8,5GXT2			353
	114X0227	OP-MCGC008FRA04G			
	114X0232	OP-UCGC010FRA00G	FR10GX	R134a R513A	370
	114X0233	OP-MCGC010FRA01G			
	114G2719	FR10GXT2			
	114X0336	OP-MCGC011FRA00G	FR11G-A-CSIR05	R134a R513A	473
	114X0337	OP-MCGC011FRA01G			
	114G3717	FR11GXT2			478,6
	114X0339	OP-MCGC011FRA04G			
	114X2316	OP-MCHC006FRA00G	FR6DLX	R404A R452A	499
	114X2317	OP-MCHC006FRA01G			
	114X2319	OP-MCHC006FRA04G			
	114E2527	FR6DLXT2			467
	114H3727	FR6DLXT2			

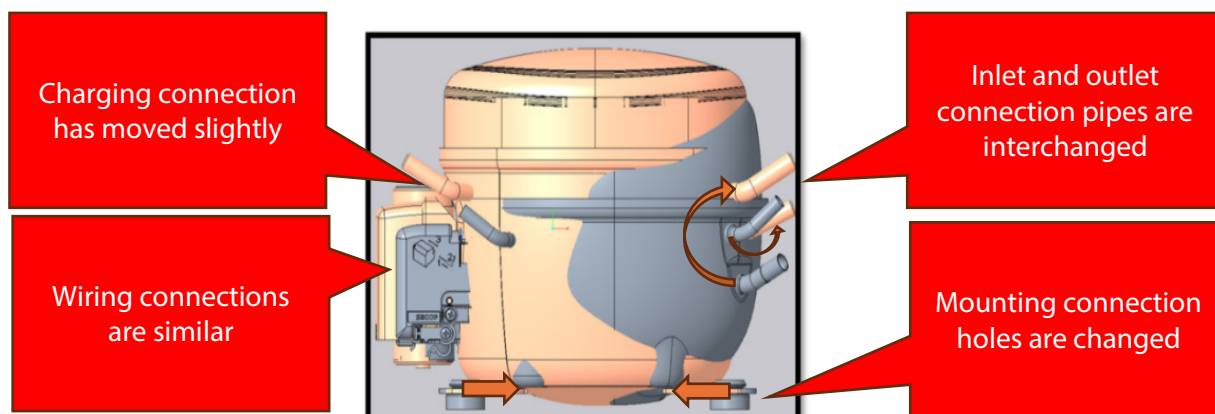
Cool Cap working cond. MBP -10°C RG 20°C

OP-MCG/QC004KLA00G*	187	Model development relevant requires customer request
OP-MCG/QC004KLA01G*		
OP-MCG/QC004KLA04G*		
OP-MCG/QC004KLA00G*		
OP-MCG/QC004KLA04G*	187	
OP-MCG/QC004KLA00G*	187	
OP-MCG/QC004KLA01G*		
OP-MCG/QC004KLA04G*		
OP-MCGC006NLA00G	301	114X0228
OP-MCGC006NLA01G*		Version development requires customer request
OP-MCGC006NLA04G*		
OP-MCGC006NLA00G	301	114X0228
OP-MCGC006NLA01G*		Version development requires customer request
OP-MCGC006NLA04G*		
OP-MCGC007NLA00G	357	114X0244
OP-MCGC007NLA01G*	357	Version development requires customer request
OP-MCGC007NLA04G*		Version development requires customer request
OP-MCGC008NLA00G	417	114X0204
OP-MCGC010SCA01G*	426	Version development requires customer request
OP-MCGC010SCA04G		114X0223
OP-MCGC012SCA00G	535	114X0340
OP-MCGC012SCA01G		114X0341
OP-MCGC012SCA04G		114X0343
OP-MCGC012SCA00G	535	114X0340
OP-MCGC012SCA01G		114X0341
OP-MCGC012SCA04G		114X0343



## Customer impact

- Last call for existing calls can be made up to
  - **End June for ordering**
  - **Delivery up to September 2025**
- Products will be stopped after stock consumption
- Dimension for implementation inside the customer application
  - Change in mounting dimensions
  - Change in terms of tubing connection (inlet and outlet)
  - Compressor connection change (see below superposed view, old compressor in grey)

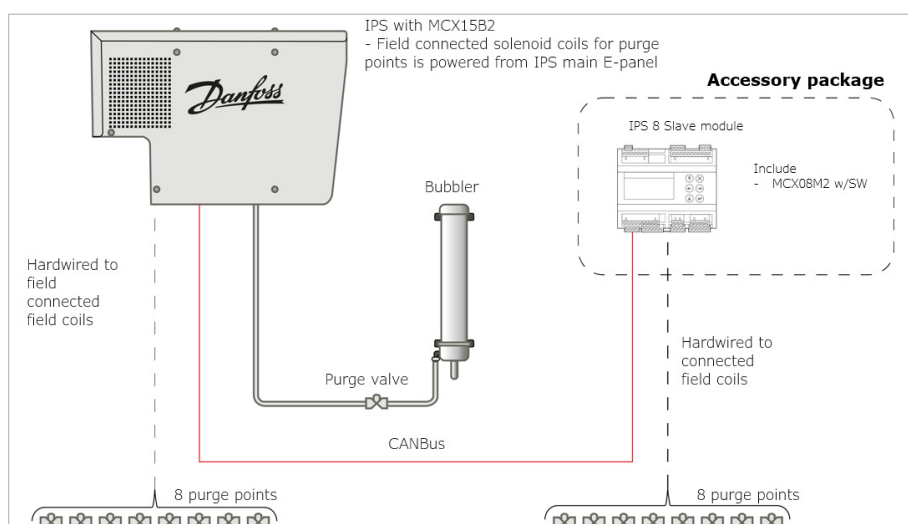


- Cooling capacity deviation
- Possible compressor replacement issue on field due to new compressor fitment

## Release of IPS 8 with R290 (Propane)

We are pleased to announce that for the Danfoss IPS 8 Air Purger, we can now offer a solution that supports an additional 8 purge points, providing a total of up to 16 purge points.

The IPS 8 extension module increases the number of purge points by an additional 8, resulting in a total of 16 purge points. This solution features an MCX08M2-based controller with a built-in HMI and included software, enabling communication with the MCX15B2 controller in the IPS 8 Air Purger.



The IPS 8 extension module can be positioned remotely from the IPS 8 Air Purger, such as placing the Air Purger in the machine room and the extension module near the condenser.

Sales Code Number	Description
080G5040	IPS 8 extension module

## Optyma™ Slim Pack Piping Change (Rev2)

As part of Danfoss' continuous quality monitoring, due to infrequent and extremely rare abnormal vibration discovered in the field under very specific working conditions, we are pleased to announce that we have extended the discharge tube piping design to ensure reliable operation for years to come, under all intended working conditions.

### Description

Under specific working conditions Optyma Slim Pack models under mentioned can exhibit higher vibration levels. We have not detected any abnormal noise yet after several years of operation, but to ensure high quality products this optimization is part of our continuous product improvement process.

### Affected products

All Optyma Slim Pack models with DS and CS compressors.



Optyma Slim Pack W05 Designation	Optyma Slim Pack W05 Code	Optyma Slim Pack W09 Designation	Optyma Slim Pack W09 Code
OP-MSTM026DSW05G	114X7234	OP-MSTM026DSW09G	114X7300
OP-MSTM026DSW05E	114X7235	OP-MSTM026DSW09E	114X7301
OP-MSTM022DSW05G	114X7233	OP-MSTM022DSW09G	114X7299
<b>OP-MSTM034DSW05G</b>	<b>114X7237</b>	OP-MSTM034DSW09G	114X7302
<b>OP-MSTM034DSW05E</b>	<b>114X7236</b>	OP-MSTM034DSW09E	114X7303
OP-LSVM026DSW05G	114X7227	OP-LSVM026DSW09G	114X7297
OP-LSVM034DSW05G	114X7228	OP-LSVM034DSW09G	114X7298
OP-MSTM038DSW05G	114X7326	OP-MSTM038DSW09G	114X7328
OP-MSSM030CSW05G	114X7249	OP-MSSM030CSW09G	114X7305
OP-MSSM026CSW05G	114X7248	OP-MSSM026CSW09G	114X7304

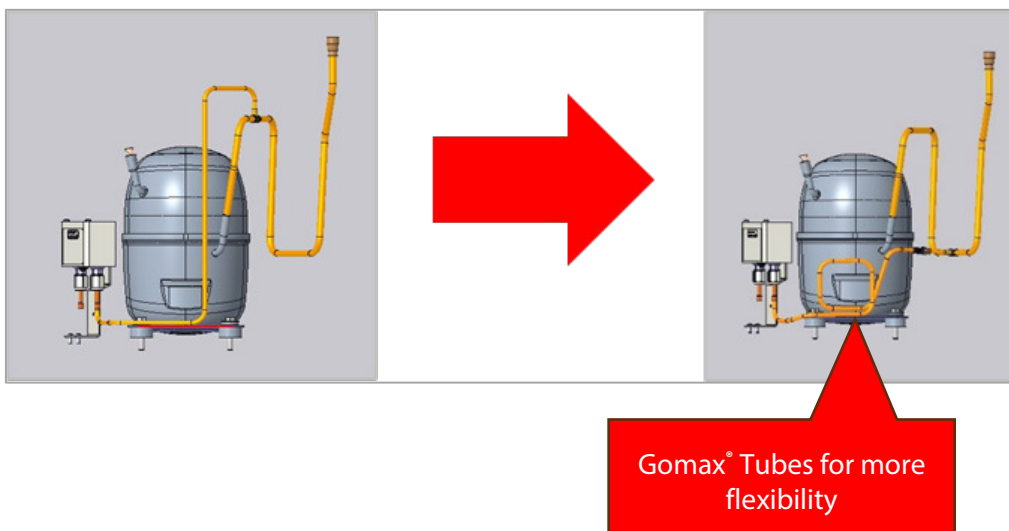
The 2 models in green **\_XX DS\_** have already been announced and implemented.

**For 114X7236, 114X7237**

**Serial number: 198397CG0225**

**Implementation date: 16-01-2025**

The new design will ensure the flexibility and reliability of the brazed parts under all intended working conditions.



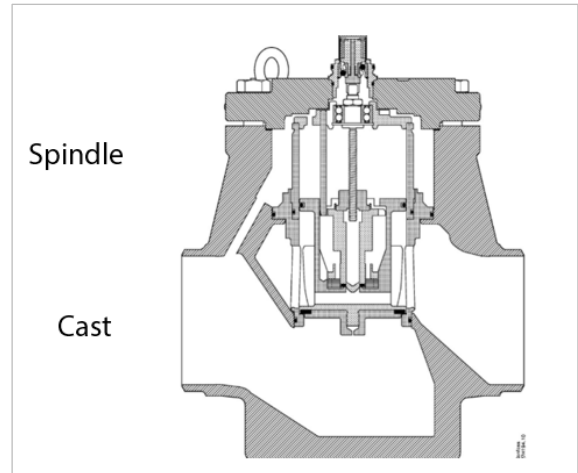
## Strengthened Spindle and Cast Nut Designs of ICM Large Valves DN100-DN150

We are pleased to announce that, as part of our ongoing quality improvement efforts and to address supplier shortages, Danfoss has decided to modify the design of the ICM Large's spindle and cast nut, resulting in improved lead times.


We have strengthened the design by:

- Increasing spindle thread diameter from 8 to 10 mm. (see Figure 1)
- Changed the nut going from M8 thread to M10 (see Figure 1)

Apart from the change of spindle and nut, nothing else has been changed in the ICM 100–150, thus no impact on specified  $K_v$  ( $C_v$ ) values or performance.



**Figure 1**

Current Design	New Design
<ul style="list-style-type: none"> <li>▪ Spindle diameter 8 mm</li> <li>▪ Nut with M8 thread</li> </ul> 	<ul style="list-style-type: none"> <li>▪ Spindle diameter 10 mm</li> <li>▪ Nut with M10 thread</li> </ul> 

This change will apply to ICM sizes 100, 125, and 150, and will be implemented in two steps:

1. Launch of New Repair Kits:
  - A new repair kit will be introduced for each size, totaling three kits, which will include a new spindle, new cast nut, and locking ring for retrofitting.
  - New sales codes for the repair kits will be created.
  - Existing repair kits will be phased out.
2. Implementation in all ICM Large products:
  - The change will be applied to all ICM Large products (100, 125, and 150), including assembled valves and overhaul kits.
  - Implementation will occur under existing sales codes, with no changes to the sales codes.

We anticipate a transition period during which both versions will be available from stock.

**Note: This change is backward compatible with all ICM 100-150 models available on the market.**



## Step 1: Repair kits

### New repair kits

Sales Code	Description	Expected Implementation Date
027H7482	ICM 100 Repair kit vers.2	CN Factory: WK 21, 2025 MX Factory: WK 29, 2025
027H7483	ICM 125 Repair kit vers.2	
027H7484	ICM 150 Repair kit vers.2	CN Factory: WK 21, 2025

### Existing repair kits which will be phased out

Sales Code	Description	Expected Phased Out Date **
027H7135	ICM 100 Repair kit	Q1, 2026
027H7155	ICM 125 Repair kit	
027H7175	ICM 150 Repair kit	
027H7479	ICM 100 Repair kit with peek nut	
027H7480	ICM 125 Repair kit with peek nut	
027H7481	ICM 150 Repair kit with peek nut	

\*\* The dates provided are based on the best estimation of raw material stock levels and forecasts. These dates may change in response to variations in stock and forecast.

## Step 2: ICM Complete Valve and Overhaul Kit

This change applies to all ICM Large models (100, 125, and 150), including assembled valves and overhaul kits. The implementation will be carried out using existing sales codes, with no changes to the sales codes.

Sales Code	Description	Expected Implementation Date**
027H7130	ICM 100 DN, DIN Connection	Q1, 2026
027H7131	ICM 100 DN, ANSI Connection	
027H7150	ICM 125 DN, DIN Connection	
027H7151	ICM DN 125, ANSI connection	
027H7170	ICM 150 DN, DIN Connection	
027H7171	ICM 150 DN, ANSI Connection	
027H7136	ICM 100 Function module	
027H7156	ICM 125 Function module	
027H7176	ICM 150 Function module	

\*\* The dates provided are based on the best estimation of raw material stock levels and forecasts. These dates may change in response to fluctuations in stock and forecast.

## New and Updated Literature

- Data Sheet - Motor operated valve, type ICMTS with actuator, type ICAD 600B-TS - [LINK](#)
- User Guide - Pump and Level controller, type EKE 3470P - [LINK](#)
- Data Sheet - Liquid level switch, type LLS 4000 and LLS 4000U - [LINK](#)
- Data Sheet - Thermostatic Expansion Valves type TR6 - [LINK](#)
- Fact Sheet - Refrigerant constants, Antoine equation - [LINK](#)
- Service Guide - Optyma™ iCO<sub>2</sub> - [LINK](#)
- Service Guide - GD Troubleshooting Guide Level 1 - [LINK](#)
- Data Sheet - Shut-off ball valve Type GBC and GBC E - [LINK](#)
- Data Sheet - A2L Gas Sensor Type DST G200 - [LINK](#)



## Details for Additional Information

If you need additional information on Danfoss products and solutions, please **click the link below**, select your country and find contact details for our sales and service offices.

[→ Contact Danfoss](#)