Danfoss

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TECH INSIDER

Introduction

Danfoss Tech Insider keeps you well informed on the latest news and updates in Danfoss Cooling and Sensing Solutions. The content is intended to give a quick overview of core technical news and updates in our product portfolio, includ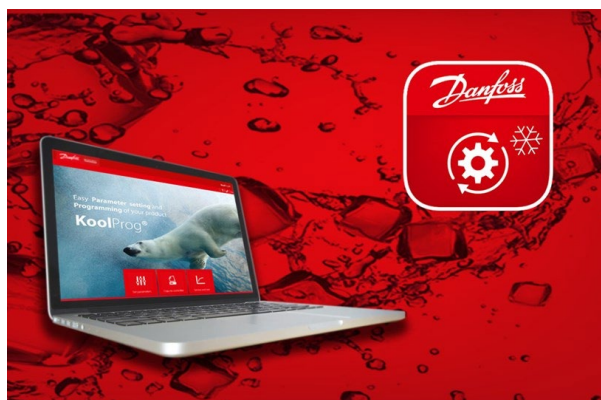ing links to relevant documentation and more information. Danfoss Tech Insider is sent out on a monthly basis to ensure you are always up to date with the latest innovations and changes made to Danfoss products and solutions.
We hope you will enjoy reading Danfoss Tech Insider!

Table of Contents

Superheat Controller EKE 1A, 1B, 1C and 1D Parameter Update with KoolProg

Below recommendation only applies if using KoolProg in languages other than English (USA) and Chinese:

If you are using KoolProg in any other language than English (USA) or Chinese it is recommended to update your EKE 1A, 1B, 1C or 1D as described below. Otherwise the controller in some cases will revert to default settings.

Before updating you need a path file. To obtain this path file free of charge, please send a mail to our technical support requesting "Patch file for EKE1 update". Use the mail address for your local customer service as stated end of this Tech Insider.

Below information contains detailed steps on correcting the issue using the patch file on current release 4.3.0.x.
- Step 1: Install KoolProg market version 4.3.0.x. Link for download page (Please ignore if already installed)
- Step 2: Unzip and save the Patch file folder (which you received as described above) on your PC
- Step 3: Close the KoolProg tool, if kept opened in your PC
- Step 4: Ensure you have the admin right to install the software
- Step 5: Open the patch folder and run the patch file by double clicking on "KoolProg_Patch" application.

EKE_Patch_Release > EKE_Patch_Release

Name	Date modified	Type	Size
EKELibrary.dll	20-12-2020 08:33	Application extension	44 KB
KoolProg_Patch	21-12-2020 20:32	Application	9 KB
KoolProg_Patch.exe.config	03-04-2019 12:52	XML Configuration File	1 KB
KoolProg_Patch.pdb	21-12-2020 20:32	Program Debug Data...	12 KB
ProductConfig	14-11-2019 14:16	XML Document	43 KB
readme	23-12-2020 10:57	Text Document	1 KB

- Step 6: A black screen will appear shortly and closes automatically
- Step 7: Now the installed KoolProg version is updated with the Patch file and are ready for use

List of affected codes:
Controllers: 080G5300, 080G5350, 080G5400, 080G5360

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

Thermostatic Expansion Valve TR6 Upgrade from 46 to 49 bar

As the market transitions to low-GWP alternatives for R410A, it has become clear some of these refrigerants will operate at higher pressures. For this reason, the TR6 thermostatic expansion valve will be updated for increased maximum working pressures (MWPs). The valve will meet the new market needs of 49 bar MWP. The current MWP is 45.5bar. The product will be validated for 49 bar through the required tests.

No changes to the valve design or its components are necessary as the TR6 could already operate at 49 bar MWP. The only visible change to the product will be on the label displayed on the top of the TR6 declaring compliance with the 49 bar MWP.

This change does not require any update to components of the finished goods. There is no change in fit, form, or function of the valve.

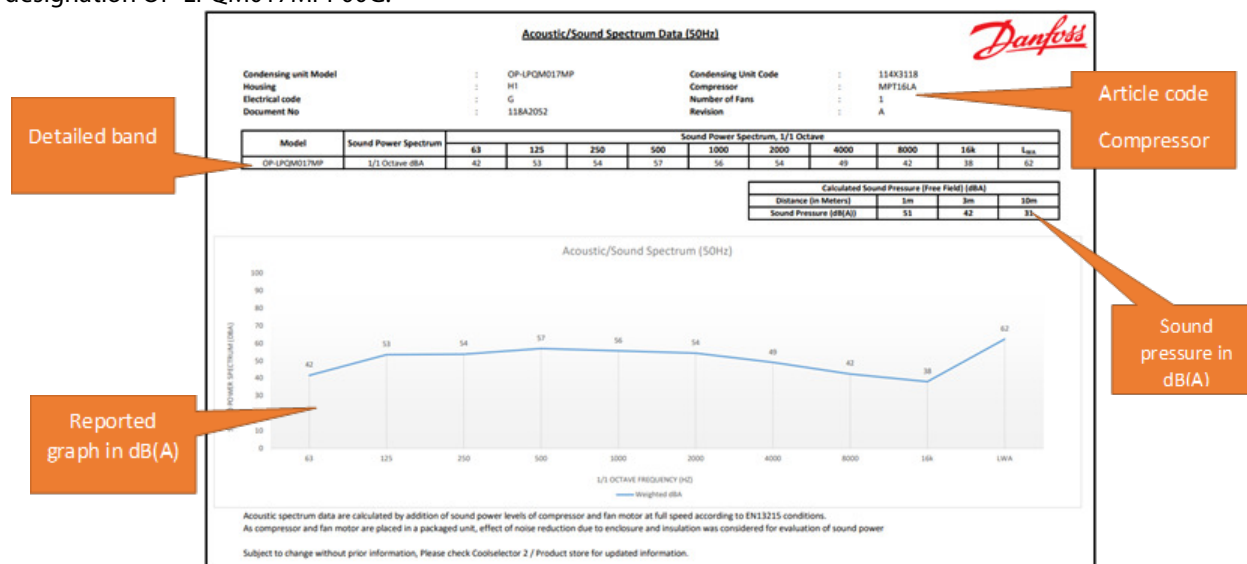This change affects all adjustable and fixed TR6 valves.

Optyma™ Packaged Condensing Unit Sound Spectrum

As part of our continuous product documentation upgrade, Danfoss is now able to provide you with simulated sound spectrum per band. Simulated acoustic spectrum data is calculated by combining the compressor sound power levels and fan motor at full speed, according to EN13215 conditions with correction factors for housing impact.

Simulated sound spectrum data is available for packaged Optyma Slim Pack and Optyma Plus condensing units.

Below is an example of where you can find information. The example is for article code (LBP application) 114X3118 designation OP-LPQM017MPP00G.

Acoustic/Sound Spectrum Data (50Hz)

Condensing unit Model	:	OP-LPQM017MP	Condensing Unit Code	:	114X3118
Housing	:	H1	Compressor	:	MPT16LA
Electrical code	:	G	Number of Fans	:	1
Document No	:	118A2052	Revision	:	A

Model	Sound Power Spectrum	Sound Power Spectrum, 1/1 Octave									
		63	125	250	500	1000	2000	4000	8000	16k	L$_{WA}$
OP-LPQM017MP	1/1 Octave dBA	42	53	54	57	56	54	49	42	38	62

Calculated Sound Pressure (Free Field) [dBA]		
Distance (in Meters)	1m	3m	10m
Sound Pressure (dB(A))	51	42	31

Acoustic/Sound Spectrum (50Hz)

Acoustic spectrum data are calculated by addition of sound power levels of compressor and fan motor at full speed according to EN13215 conditions.
As compressor and fan motor are placed in a packaged unit, effect of noise reduction due to enclosure and insulation was considered for evaluation of sound power

Subject to change without prior information, Please check Coolselector 2 / Product store for updated information.

You can currently find all the Sound Power per Band Data inside **Danfoss' official product store** using the designation or article code, by looking into Documentation Type = White paper

Please contact your local Danfoss contact for more information about the impact for each product and other solutions Danfoss can offer.

Thermostatic Expansion Valves TU and TC with UL 207 Approval

To support an increased request for UL approved TU and TC valves Danfoss now has obtained the UL 207 approval for these valves. To make this approval officially valid, all standard TU and TC valves with 4K Static Superheat, will now be marked accordingly.

On request, all non-standard and/or customer specific TU and TC valves can be marked according to the below mentioned rules for marking.
For now, the following types (externally equalized) are UL approved for all refrigerants, including R410A: TUAE, TUBE, TUCE, TCAE, TCBE and TCCE.
The internally equalized types: TUA, TUB and TUC are UL approved for all other refrigerants than R410A. Work is ongoing to approve these types for R410A as well. Approval expected to be obtained within 1st quarter of 2021.
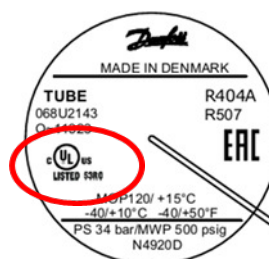
Description
The UL approval marking will be added to the valves in 2nd week of 2021.
Laser engraving of the top of the valve types TUA, TUAE, TUB, TUBE, TUC, TUCE, TCAE, TCBE and TCCE for normal pressure refrigerants will be changed as follows:
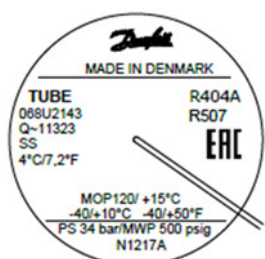

Laser engraving today   **Laser engraving going forward**

The factory set value will be removed from the valves. Reason is that if the customer changes the setting during installation, this value is no longer correct.
Instead of having the factory set value on the valve in the laser engraving, it will be moved to the external packaging label. This way, the set information will be correct as the valve is received, but customer can change the setting without ending up with contradicting information on the product.
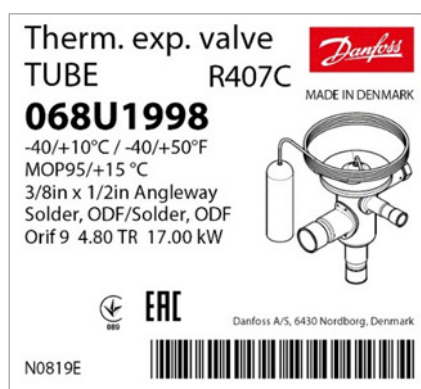
Packaging label today   **Packaging label going forward**

Affected products

All standard TU and TC valves.

Customer impact

No change to the valves' form, fit and function. Maximum Working Pressure (MWP) will remain unchanged.
Apart from the added UL marking, the only change is that the previously engraved factory set value has been removed and moved to the packaging label.

New Extended Software for AK-CC55 Single Coil and Single Coil UI

Danfoss is now introducing a new extended software for AK-CC55 Single Coil and Single Coil UI, which is updated in all new orders of the product from stock end January.

The software is updated from version 1.33 to software version 1.53, and implements support of an external stepper motor driver, support of a dehumidifier, support of a second defrost stop sensor, support of 2 extra history log probes as well as an Event log.

Upgrade possible to software 1.53

Firmware software on existing AK-CC55 Single Coils and Single Coil UI can be updated using **KoolProg** PC software, MMIMYK gateway. Setting files can be updated from one software version to another using KoolProg.

Support of an external stepper motor driver:

AK-CC55 Single Coil and Single Coil UI now supports a stepper motor valve via a 0–10 V DC. signal to an external stepper valve driver EKE 1P or similar driver. This feature is enabled by selecting "Valve driver" for the AO1 analog output configuration.

The AKV output is then designated for control of a liquid line solenoid valve to achieve a normally closed function if the controller loses power.

Please note that Application 7 cannot be used for this function.

Support of a dehumidifier:

AK-CC55 Single Coil and Single Coil UI now supports a dehumidifier function. In application 8 the user can select either humidity control or dehumidifier control. The controller measures the humidity via a 0–10 V signal from an external humidity sensor.

Support of a second defrost stop senso:

AK-CC55 Single Coil and Single Coil UI now supports a second S5 defrost stop sensor which can be selected via d10 defrost stop method. By selecting "3: S5A and S5B," the DI1 input will be converted to an analog input for S5B in all applications (except 8, where DI1 is used for a humidity sensor).

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

AK-CC55 Connect App
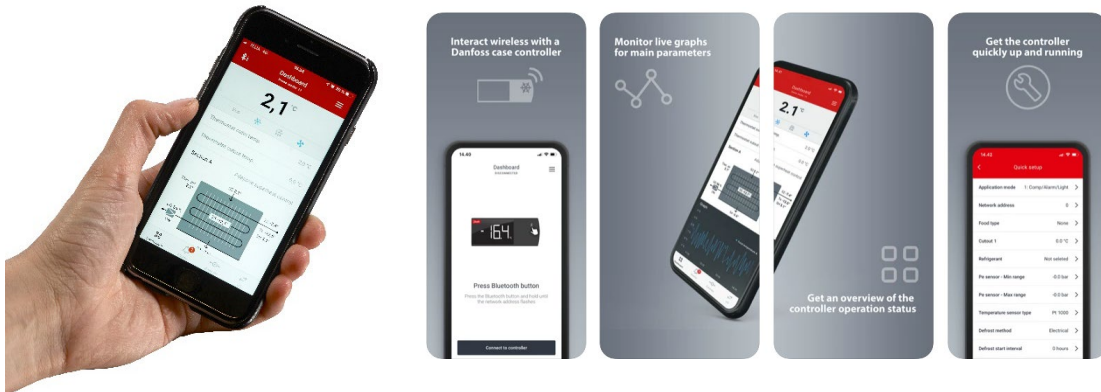
New features will be added in the next release of the AK-CC55 Connect app, with two new probes and an event log. If you do not have the CC55 Connect app yet, you can find it at this **link**

Two extra log probes:
Superheat A and Superheat reference A

Event log
The new event log which will register and store the following standard events:
- Parameter change (time and from/to)
- Power up/Reset (time)
- Make new factory (time)
- Reset to factory (time)
- SW upgraded (time and from/to)

Adaptive defrost can now be carried out without receiving the "Te mean" value from the pack controller normally distributed via the AK-SM 800 system manager.

If you need additional information, please contact your local Danfoss sales representative.
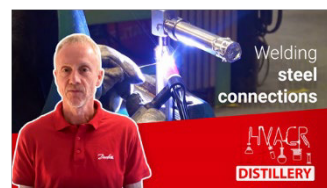
Danfoss Cool YouTube – Latest Videos

Coolselector© 2 Short Q&A videos:

- Top 3 cold room tips– LINK
- Cold room temperature – LINK
- Calculating velocity – LINK
- Prevent compressor failure – LINK

HVACR Distillery CCMT series:

- Welding steel connections – LINK
- Brazing steel connections – LINK
- Brazing bi-metal connections – LINK

Ref Tools Updates

- Product Finder now shows your local Danfoss product portfolio
- Improved search functionality in the Product Finder tool
- Magnetic Tool has an improved threshold for calibration
- Magnetic Tool will display a warning if used on a non-compatible device

Upcoming Webinars

Cold Rooms: Commissioning good practice

- Wednesday 3rd March 2021 at 9:00 – 9:45 and 15:00 – 15:45 CET

Cold Rooms: Avoiding compressor failure

- Wednesday 17th March 2021 at 9:00 – 9:45 and 15:00 – 15:45 CET

Cold Rooms: Refrigerant choices A1, A2L & A3

- Wednesday 31st March 2021 at 9:00 – 9:45 and 15:00 – 15:45 CET

Details for Additional Information

UK/IE

Cooling United Support Hub
Support Made Easy
customerservice.uk@danfoss.com
Customer Service UK tel: 0330 808 6888
customerservice.ie@danfoss.com
Customer Service IE tel: 1 800 816 868

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