

ENGINEERING
TOMORROW



September 2021 | 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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New Multi-Refrigerants Evolution Allowing A2L (A1) for Optyma™ Plus and Optyma™ Slim Pack



Danfoss is pleased to announce the launch of the new Optyma **Plus** and Optyma **Slim Pack** new multi-refrigerant condensing unit evolution, adding the use of A2L mildly flammable refrigerants R454C, R455A, and R1234yf.

Our existing A1 versions will remain unchanged and continue to be available even though models will be progressively replaced by new versions and code numbers during Q4/2021. The refrigerant letter, code models, equipment, designation, and performance for these models will all be changed. For a quick overview you can have a look at our [brochure](#). For more detailed information the European Catalogue is available for [download](#).

Features and benefits

- Operating envelopes remain identical with the addition of
 - Allowing multi-refrigerant use, including low-GWP A2L refrigerants
 - Providing a range validated for the use of A2L refrigerants without additional risks of ignition



Sealed electrical box



A1/A2L compressor



Electrical components approved for A2Ls



A2L upgraded design



Optyma Plus: Stackable units



Louvers and holes for compressor compartment ventilation



Optyma Plus: preprogrammed controller with A2Ls



Fan timer for ventilation before compressor starts



Flare connections approved for A2Ls



Designation and code numbers Optyima™ Plus, Optyima™ Slim Pack A2L (A1) models MLZ015-026

| Current Optyima Plus designation | Code No. | New Optyima Plus designation | Code No. |
|----------------------------------|----------|------------------------------|----------|
| OP-MPXM034MLP00E | 114X4264 | OP-MPIM034MLP00E | 114X4204 |
| OP-MPXM034MLP00G | 114X4261 | OP-MPIM034MLP00G | 114X4205 |
| - | - | | |
| - | - | | |
| OP-MPXM046MLP00E | 114X4284 | OP-MPIM046MLP00E | 114X4206 |
| OP-MPXM046MLP00G | 114X4281 | OP-MPIM046MLP00G | 114X4207 |
| OP-MPXM057MLP00E | 114X4293 | OP-MPIM057MLP00E | 114X4208 |
| OP-MPXM057MLP00G | 114X4290 | OP-MPIM057MLP00G | 114X4209 |

| Current Optyima Slim Pack designation W05 | Code No. | New Optyima Slim Pack W05 designation | Code No. |
|---|----------|---------------------------------------|----------|
| OP-MSXM034MLW05E | 114X7062 | OP-MSIM034MLW05E | 114X7266 |
| OP-MSXM034MLW05G | 114X7061 | OP-MSIM034MLW05G | 114X7267 |
| OP-MSXM044MLW05E | 114X7162 | OP-MSIM044MLW05E | 114X7268 |
| OP-MSXM044MLW05G | 114X7161 | OP-MSIM044MLW05G | 114X7269 |
| OP-MSXM046MLW05E | 114X7064 | OP-MSIM046MLW05E | 114X7270 |
| OP-MSXM046MLW05G | 114X7063 | OP-MSIM046MLW05G | 114X7271 |
| OP-MSXM057MLW05E | 114X7066 | OP-MSIM057MLW05E | 114X7272 |
| OP-MSXM057MLW05G | 114X7065 | OP-MSIM057MLW05G | 114X7273 |

| Current Optyima Slim Pack designation W09 | Code No. | New Optyima Slim Pack W09 designation | Code No. |
|---|----------|---------------------------------------|----------|
| OP-MSXM034MLW09E | 114X7196 | OP-MSIM034MLW09E | 114X7274 |
| OP-MSXM034MLW09G | 114X7195 | OP-MSIM034MLW09G | 114X7275 |
| OP-MSXM044MLW09E | 114X7212 | OP-MSIM044MLW09E | 114X7276 |
| OP-MSXM044MLW09G | 114X7211 | OP-MSIM044MLW09G | 114X7277 |
| OP-MSXM046MLW09E | 114X7198 | OP-MSIM046MLW09E | 114X7278 |
| OP-MSXM046MLW09G | 114X7197 | OP-MSIM046MLW09G | 114X7279 |
| OP-MSXM057MLW09E | 114X7200 | OP-MSIM057MLW09E | 114X7280 |
| OP-MSXM057MLW09G | 114X7199 | OP-MSIM057MLW09G | 114X7281 |

Codes are available to order now.

Please contact your local Danfoss contact for more information about the impact for each product and other solutions Danfoss can offer. Condensing unit performance data with A2L refrigerants is available in [CoolSelector2](#).

Alternatively, you can consult instructions on the [Danfoss YouTube channel](#).

Urgent Software Update v08.095.008 Affecting Certain Alarms on Our System Manager AK-SM800 Series



We have detected that the current version of System Manager AK-SM800 08.095.007 has a software bug affecting alarm transmission from certain network devices.

Please note that after extensive testing, we have generated the list below of affected devices which also could impact some types of the Pack and Case Controllers.

A fix has been implemented in a new software update **08.095.008** and is available on the web under the following [link](#).

Affected Devices

The table below highlights an example list of supported devices that will not transmit alarms to the AK-SM800 in version 08.095.007. This is not an exhaustive list, rather aimed to provide a high-level overview of device types that function as expected or not.

| Generic Field Bus Devices | Alarm Receipts |
|------------------------------------|----------------|
| AK2-PC 782 (pack) | ✓ |
| AK2-PC 781 (pack) | ✓ |
| AK2-CC 750xx (cases) | ✓ |
| AK-CC xx (cases) | ✓ |
| EKC-CC xx (cases) | ✓ |
| PI-200 (cases) | ✓ |
| PI-200 (packs) | ✗ |
| EKC-Packs (i.e. PC 514xx, 531xx) | ✗ |
| AK-PC 351, 551, 651 (pack) | ✗ |
| MCX (general/non-case application) | ✗ |
| SLV | ✗ |
| DGS Gas Sensors | ✗ |
| Coresense | ✗ |
| Energy Meters | ✗ |
| 3rd Party (all non-cases) | ✗ |

Containment Actions

If your application has any of the devices marked as 'x' in the above table and the site has yet to be updated, please ensure using the new AK-SM800 software [update](#). The previous software version 08.091 is not impacted.

It is recommended to **upgrade to version 08.095.008 as soon as possible**.

TD1/TDE1 Thermostatic Expansion Valves Material Change for Capillary Tube and Bulb



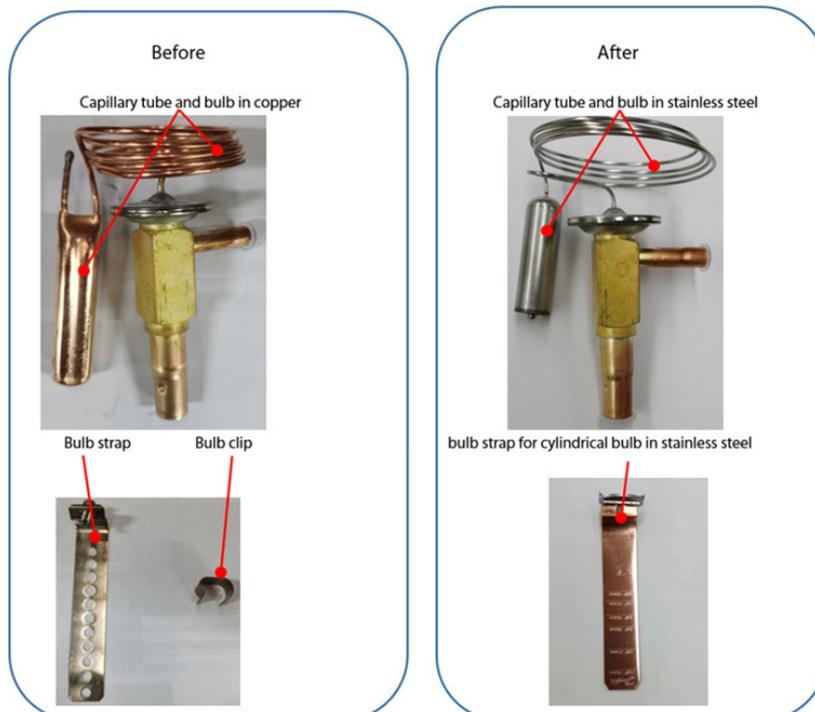
Old copper capillary tube and bulb



New stainless steel capillary tube and bulb

Adapting to market demands and customer requirements, Danfoss will change the material of the capillary tube and bulb of TD1/TDE1 thermostatic expansion valves from copper to stainless steel. Bulb clip/strap accessory will be changed to the dedicated bulb strap designed for the cylindrical stainless-steel bulb.

SSH (static superheat) characteristics and valve performance will remain the same level as the current TD1/TDE1. So, this change includes a change to Form and Fit, but no change to the function.



Old (copper) product will be phased out and new (stainless-steel) product will be phased in.

Production of TD1 with Copper Cap: Tube and bulb will be stopped in March 2022, last buy order date is 1st Feb. 2022.

Production of new TD1 with stainless-steel Cap: Tube and bulb will start from Nov. 2021

TXI 2 Injection Valve Phase Out



Danfoss is committed to fighting global warming and we fully support the transition away from high ODP and high GWP refrigerants.

Since the TXI 2 was designed for systems using R22 or R407C, and it is still using a copper capillary tube and bulb, we have decided to phase out this product.

Additionally, Danfoss will standardize our tube and bulb material offering across all Danfoss thermostatic expansion valves. All capillary tubes and bulbs will be converted to stainless-steel and current copper capillary tubes will be phased out.

If needed, we recommend making TXI 2 stock and find replacement in the market.

Production of TXI 2 will be stopped in March 2022 and last buy order date is 1st Feb. 2022.

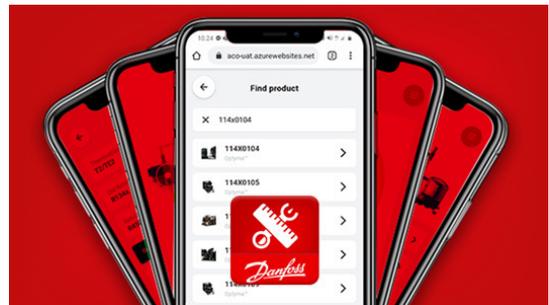
Affected products: All TXI 2 existing code numbers.

Ref Tools App - The Essential All-in-One Tool

Ref Tools is an essential all-in-one mobile app for air conditioning and refrigeration technicians. Get the guidance, support, information, and tools you need - on the job and in the field.

Ref Tools is a free, powerful app including 8 of our most popular tools:

- **Refrigerant Slider:**
Quickly calculate pressure/temperature ratios and find essential information on over 80 refrigerants.
- **Low-GWP Tool:**
Find and compare climate-friendly refrigerants for retrofitting by checking compatibility with the cooling system's TXV.
- **Magnetic Tool:**
Test and troubleshoot solenoid valve coils quickly and easily.
- **Spare Parts:**
Access and order an extensive list of Danfoss spare parts and service kits.
- **Troubleshooter:**
Get help diagnosing issues in refrigeration systems.
- **TXV Superheat Tuner:**
Optimize superheat in less than 15 minutes
- **Product Finder:**
Find and share extensive product-related data.
- **Podcasts:**
Relax a bit with our collection of podcasts.



In addition to giving you quick access to helpful tools, Ref Tools lets you track your most visited service sites and save unique settings for each one. You'll save time and simplify each service call.

Download [Ref Tools app](#)

Click here to [access the browser version](#)

Videos in YouTube

- Danfoss solenoid valve troubleshooting, videos for solenoid valves – [LINK](#)
- Superheat and Subcooling, livestream recording – [LINK](#)
- What's new in Coolselector®2 | Latest Updates + Q&A, livestream recording - [LINK](#)

Details for Additional Information

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