

ENGINEERING  
TOMORROW



September 2024 | 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 Strobe and Horn Model for DGS

A new model of the DGS Strobe and Horn will replace the current one, starting from October 2024.



Current model



New model

The product functionality of the new model does not change. Yet while the current model has power supply Vac/dc, the new model presents only Vdc power supply.

On the new model the cable gland will be pre-mounted, and the wiring labelled to make installation easier.

### Affected product

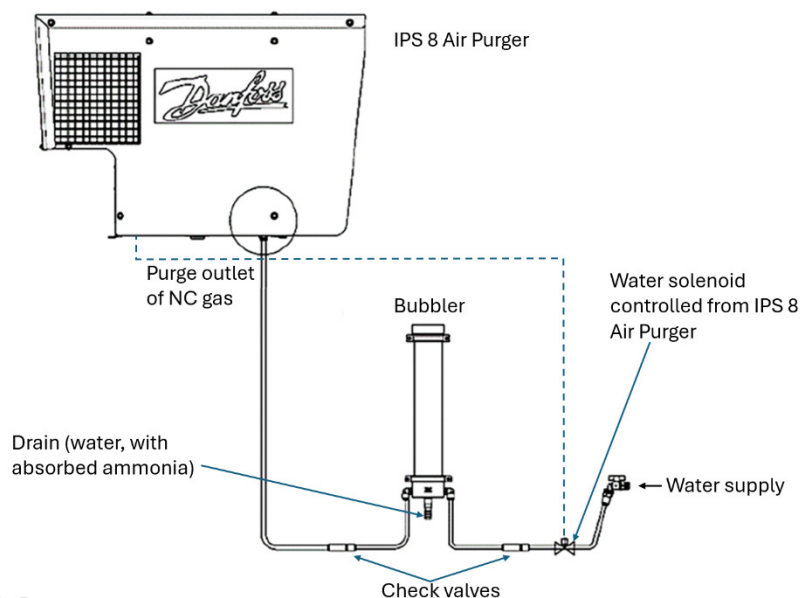
Current Code	Description	Replacement Code	Description
080Z2819	Strobe & Horn	080Z2822	DGS Strobe & Horn

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

## Release of Bubbler-Kit for IPS 8 Air Purger

We are very pleased to announce the release of the Bubbler for our IPS 8 Air Purger.

With our solution of IPS 8 Air Purger combined with the Bubbler, we can help customers to keep machine rooms free of ammonia smelling, while IPS 8 is removing the non-condensable gases, and purging to the Bubbler with water.



### Affected product

Sales Code Number	Description
084H5070	Bubbler for IPS

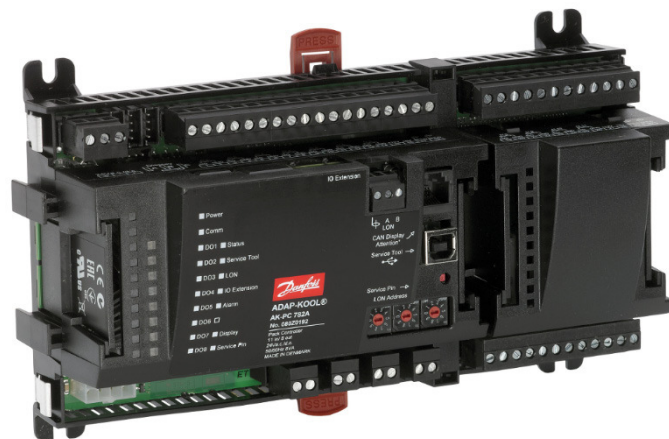
For more information, please visit Danfoss Product Store or contact your local Danfoss sales representative.

## AK-PC 782A and AK-PC 782B – Release of New Software Version 4.10

A new software version 4.10 for both the Pack controllers AK-PC 782A (PN 080Z0192) and AK-PC 782B (PN 080Z0202) is now available, with the intention to support the continuous development of transcritical CO<sub>2</sub> packs and to correct some minor bugs.

With this software release new features have been added to both the AK-PC 782A and AK-PC 782B:

- Heat Recovery improvement
- HR with additional status descriptions
- HR delta temperature check
- DO indicating Pack producing heat
- En/disable fixed receiver pressure
- Increase "Pgc HR max" from 99 bar to 122 bar
- Increase "Pgc HR min" from 110 bar to 121 bar
- Increase max "Prec setpoint" from 59 bar to 61 bar
- Bug fixing



The current AK-PC 782A with software ver. 3.50 or older and AK-PC 782B with software ver. 3.60 can both be upgraded to the software ver. 4.10 if desired, by using the Service Tool. The upgrade is optional.

The software ver. 4.10 is available from wk. 26.2024.

The software is available via this link: [Pack controllers software download | Danfoss](#)

Please refer to your local Danfoss sales representative to have access to this new software release.

## AK-PI 200 End-of-Life and Phase Out

We would like to inform you that AK-PI 200 Protocol Interface has reached its end-of-life and will no longer be produced. Orders should no longer be placed.



AK-PI 200 (080Z8521)

### Affected product

Listed below is the affected product to be removed from the portfolio.

AK-PI Series	
AK-PI 200 Control, Protocol Interface	080Z8521

In relation to this topic, we would like to point out that EKA 176(A) communication cards, used with legacy AK-CC 550(A) case controllers, to connect them to AK-PI 200 via Danbuss network have already ceased production. These have been supported as service parts only for approximately last 10 years.

This effectively ends the service and spare part support for Danbuss communication protocol. Where applicable, installations should migrate to Modbus network.

The products affected are subject to an immediate phase-out, with no additional new volumes available.

More information about the AK-SM 800A portfolio can be found [here](#).

If you need additional information, do not hesitate to contact your local Danfoss sales representative.

## New Software Version SW 1.25 on Stepper Valve Driver EKF 1A and 2A

The software for the stepper valve driver type EKF series (EKF 1A and EKF 2A) will be updated from SW 1.24 to SW 1.25.

Following are the changes in the new software version (SW 1.25):

### Improvements

1. New Danfoss expansion valves will be added to the preselection menu via dip switch and KoolProg.  
For example, (ETS 175L, ETS 250L, and ETS 400L) oil-free and high-temperature, ETS 500L, and ETS 500L oil-free and high-temperature, and ETS 8M (Bipolar).
2. Thermal protection will be renamed to duty cycle.
3. EKF 2A (080G5036) model will be configurable through KoolProg.

### Identification

The product will have the new product version (PV) and software version (SW) number visible on the product label and packaging label.

- EKF 1A; 080G5030 PV02/SW1.24 -> EKF 1A; 080G5030 PV03/SW1.25
- EKF 2A; 080G5035 PV02/SW1.24 -> EKF 2A; 080G5035 PV03/SW1.25
- EKF 2A; 080G5036 PV00/SW1.24 -> EKF 2A; 080G5036 PV01/SW1.25

The EKF series product label is shown below as an example.



PV = Product Version, SW = Software Version

PV and SW numbers can be found on the box label too.

### Actions for customers

1. The new KoolProg software must be downloaded and installed to prepare configuration files for EKF SW 1.25.  
The new KoolProg software version is 5.1.0.
2. Old configuration files made in KoolProg for SW1.24 or older should not be used with the SW1.25 version.
3. Customers using the dip switch feature can continue using their current selection without any impact.
4. New products can be identified using the product version and software version number marked on the product.

### Affected products

Product Code	Description
080G5030	Stepper Valve driver EKF 1A
080G5035	Stepper Valve driver EKF 2A
080G5036	Stepper Valve driver EKF 2A

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

## Product Launch: EKE 100 Superheat Controllers and Valve Drivers

We are pleased to announce the release of the EKE 100 family of superheat controllers and valve drivers (6 models) for sale globally.

The new EKE 100 is a family of superheat controller and stepper valve drivers. EKE 100 1V is for single valve control, and EKE 100 2V is for dual valve control. The EKE 100 series can be used in air conditioning, heat pumps, commercial refrigeration, and food retail applications. The product is intended to be used as a stand-alone controller for superheat management or as a valve driver in connection with a master/system controller.

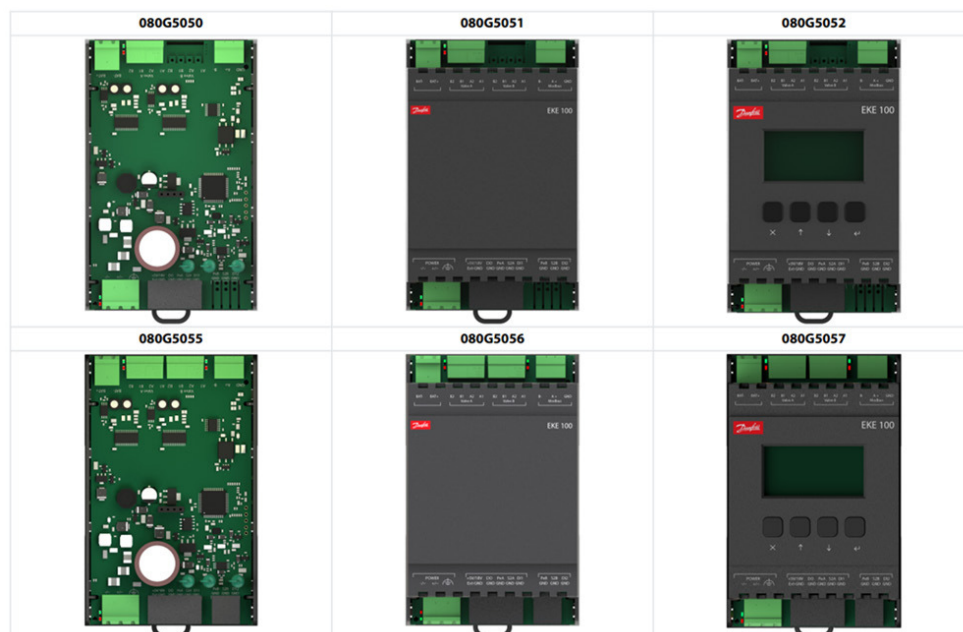
The EKE 100, superheat controller and valve driver is designed for Danfoss stepper motor valves in mind (i.e ETS series, ETS Colibri, ETS Large, ETS P, ETS 8M (Bipolar), ETS 6, KVS, CCM/CCMT) but it can also be used with 3rd party valves. For more details check product technical documentations.

### Features

- 1 valve and 2 valve independent control.
- Available in IP00, IP20, IP20 with display.
- Supports both NTC10K and PT1000 temperature sensors.
- Superheat control and stepper valve driver.
- Fast setup using KoolProg PC suite and Koolkey.
- Lost step prevention.
- Open circuit detection.
- LED indication for valve movement and alarm/warning.
- Digital output for alarm signal.
- Modbus communication.

Product Code	Product Description	Product Version	Software Version
080G5050	EKE 100 1V IP00	PV03	2.00
080G5051	EKE 100 1V IP20	PV03	2.00
080G5052	EKE 100 1V IP20 with display	PV03	2.00
080G5055	EKE 100 2V IP00	PV03	2.00
080G5056	EKE 100 2V IP20	PV03	2.00
080G5057	EKE 100 2V IP20 with display	PV03	2.00

### EKE 100 2V variants





## Updates

The following updates have been made to the product:

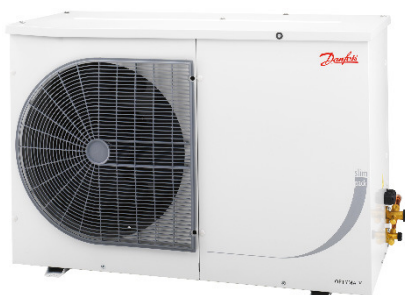
1. EKE 100 has a built-in 5V/18V supply for pressure transmitters. The supply is auto-set when a transmitter is selected from the preset values in configuration or can be manually changed in advanced configuration.
2. KoolProg version 5.1 and onwards must be used to configure EKE 100. The configuration tool KoolProg can be downloaded from <https://www.danfoss.com/en/service-and-support/downloads/dcs/koolprog/>

EKE 100 superheat controller and stepper valve driver data sheet: [Download Data Sheet](#)

## Approvals

CE and EMC, UKCA, EAC, cURus are some of the major approvals that has been obtained on the product. For more information, please visit Danfoss Product Store or contact your local Danfoss sales representative.

## Optyma™ Slim Pack – Secop Reciprocating Compressor Phase Out



As part of the supplier decision, we will be forced to phase out all our package condensing units which are including SECOP compressor, what's limited to 16 codes.

### Affected Products

R134a, R513A, R1234yF A1, and A1-A2L Optyma Slim Pack condensing unit range products are bellow.

Description for Optyma Slim Pack	Compressor designation	Article code W05 version A1 models	Article code W05 version A1 + A2L models	Article code W09 version A1 models	Article code W09 version A1 + A2L models	Cooling cap R513A kW	Remaining compressor stock to support dedicated codes
OP-MSGM012SC	SC12G	114X7099	114X7238	114X7207	114X7291	0.64	20
OP-MSGM015SC	SC15G	114X7100	114X7239	114X7208	114X7292	0.72	23
OP-MSGM018SC	SC18G	114X7101	114X7240	114X7131	114X7293	0.86	0
OP-MSGM021SC	SC21G	114X7102	114X7241	114X7132	114X7294	1.03	0

Cooling capacity upon EN13215 HBP -10°C/LBP -35°C evap., 32°C amb. SH10K, SCOK

**Replacement table for R448A/R449A Package condensing unit  
SC 12G compressor**



Description	Article code W05 and W09 version A1 model	Article code W05 and W09 version A1 + A2L model	Optyma Plus A1 and A1+ A2L models	Cooling cap. kW
OP-MSGM012SC OP-MSSM012SC	114X7099 (W05) 114X7207 (W09)	114X7238 (W05) 114X7291 (W09)	None	0.64 (R513A)
<b>Alternative product</b>				
Description	Article code W05 and W09 version A1 model	Article code W05 and W09 version A1 + A2L model	Optyma Plus A1 and A1+ A2L models	Cooling cap. kW
OP-MSTM008DY OP-MPBM008DY OP-MPTM008DY	None	114X7226 (W05) 114X7286 (W09)	114X4119 (A1) 114X4107 (A1+A2L)	0.786 (R448A)

**SC 15G compressor**

Description	Article code W05 and W09 version A1 model	Article code W05 and W09 version A1 + A2L model	Optyma Plus A1 and A1+ A2L models	Cooling cap. kW
OP-MSGM015SC OP-MSSM015SC	114X7100 (W05) 114X7208 (W09)	114X7239 (W05) 114X7292 (W09)	None	0.72 (R513A)
<b>Alternative product</b>				
Description	Article code W05 and W09 version A1 model	Article code W05 and W09 version A1 + A2L model	Optyma Plus A1 and A1+ A2L models	Cooling cap. kW
OP-MSTM008DY OP-MPBM008DY OP-MPTM008DY	None	114X7226 (W05) 114X7286 (W09)	114X4119 (A1) 114X4107 (A1+A2L)	0.786 (R448A)

**SC 18G compressor**

Description	Article code W05 and W09 version A1 model	Article code W05 and W09 version A1 + A2L model	Optyma Plus A1 and A1+ A2L models	Cooling cap. kW
OP-MSGM018SC OP-MSSM018SC	114X7101 (W05) 114X7131 (W09)	114X7240 (W05) 114X7293 (W09)	None	0.86 (R513A)
<b>Alternative product</b>				
Description	Article code W05 and W09 version A1 model	Article code W05 and W09 version A1 + A2L model	Optyma Plus A1 and A1+ A2L models	Cooling cap. kW
OP-MSTM008DY OP-MPBM008DY OP-MPTM008DY	None	114X7226 (W05) 114X7286 (W09)	114X4119 (A1) 114X4107 (A1+A2L)	0.786 (R448A)
OP-MSTM009DY OP-MSBM009DY OP-MPBM009DY OP-MPTM009DY		114X7229 (W05) 114X7287 (W09) 114X7108 (W05) 114X7133 (W09)	114X4120 (A1) 114X4111 (A1+A2L)	0.891 (R448A)



### SC 21G compressor

Description	Article code W05 and W09 version A1 model	Article code W05 and W09 version A1 + A2L model	Optyma Plus A1 and A1+ A2L models	Cooling cap. kW	
OP-MSGM021SC	114X7102 (W05)	114X7241 (W05)	none	1.03	
OP-MSSM021SC	114X7132 (W09)	114X7294 (W09)			
<b>Alternative product</b>					
Description	Article code W05 and W09 version A1 model	Article code W05 and W09 version A1 + A2L model	Optyma Plus A1 and A1+ A2L models	Cooling cap. kW	
OP-MSTM009DY	114X7108 (W05) 114X7133 (W09)	114X7229 (W05)	114X4120 (A1) 114X4111 (A1+A2L)	0.891 (R448A)	
OP-MSBM009DY		114X7287 (W09)			
OP-MPB009DY		114X7109 (W05) 114X7134 (W09)	114X7230 (W05)		114X4121 (A1) 114X4113 (A1+A2L)
OP-MPTM009DY			114X7288 (W00)		
OP-MSTM012DP	114X7109 (W05) 114X7134 (W09)	114X7230 (W05)	114X4121 (A1) 114X4113 (A1+A2L)	1.134 (R448A)	
OP-MSBM012DP		114X7288 (W00)			
OP-MPB012DP		114X7109 (W05) 114X7134 (W09)	114X7230 (W05)		114X4121 (A1) 114X4113 (A1+A2L)
OP-MPTM012DP			114X7288 (W00)		

Optyma bare alternatives can be found in Coolselector upon refrigerant required switching to R134a, R513a.



### SC 12G compressor

Description	Article code W05 and W09 version A1 model	Article code W05 and W09 version A1 + A2L model	Optyma Plus A1 and A1+A2L models	Cooling cap. kW
OP-MSGM012SC	114X7099 (W05)	114X7238 (W05)	None	0.64 (R513A)
OP-MSSM012SC	114X7207 (W09)	114X7291 (W09)		
<b>Alternative product</b>				
Description		Article code for A01 version	Article code for A04 version	Cooling cap. kW
OP-MCGC012SC		114X0341	114X0343	0.519 (R134a) 0.545 (R513A)
OP-MCGC015SC		114X0449	114X0451	0.650 (R134a) 0.674 (R513A)

### SC 15G compressor

Description	Article code W05 and W09 version A1 model	Article code W05 and W09 version A1 + A2L model	Optyma Plus A1 and A1+ A2L models	Cooling cap. kW
OP-MSGM015SC	114X7100 (W05)	114X7239 (W05)	None	0.72 (R513A)
OP-MSSM015SC	114X7208 (W09)	114X7292 (W09)		

Alternative product				
Description		Article code for A01 version	Article code for A04 version	Cooling cap. kW
OP-MCGC015SC		114X0449	114X0451	0.650 (R134a) 0.674 (R513A)
OP-MCGC018SC		114X0557	114X0559	0.746 (R134a) 0.786 (R513A)
OP-MCGC021SC		114X0565	114X0567	0.862 (R134a) 0.900 (R513A)

### SC 18G compressor

Description	Article code W05 and W09 version A1 model	Article code W05 and W09 version A1 + A2L model	Optyma Plus A1 and A1+ A2L models	Cooling cap. kW
OP-MSGM018SC	114X7101 (W05)	114X7240 (W05)	None	0.86 (R513A)
OP-MSSM018SC	114X7131 (W09)	114X7293 (W09)		0.9 (R513A)
Alternative product				
Description		Article code W05 and W09 version A1 + A2L model	Optyma Plus A1 and A1+ A2L models	Cooling cap. kW
OP-MCGC018SC		114X0557	114X0559	0.746 (R134a) 0.786 (R513A)
OP-MCGC021SC		114X0565	114X0567	0.862 (R134a) 0.900 (R513A)
SC12/12GXT2	Twin compressor condensing unit 114G6380 T2 version			1.15 (R134a) 1.119 (R513A)

### SC 21G compressor

Description	Article code W05 and W09 version A1 model	Article code W05 and W09 version A1 + A2L model	Optyma Plus A1 and A1+ A2L models	Cooling cap. kW
OP-MSGM021SC	114X7102 (W05)	114X7241 (W05)	none	1.03
OP-MSSM021SC	114X7132 (W09)	114X7294 (W09)		
Alternative product				
Description		Article code W05 and W09 version A1 + A2L model	Optyma Plus A1 and A1+A2L models	Cooling cap. kW
OP-MCGC021SC		114X0565	114X0567	0.862 (R134a) 0.900 (R513A)
SC12/12GXT2	Twin compressor condensing unit 114G6380 T2 version			1.15 (R134a) 1.119 (R513A)
OP-MCZC030MT	Commercial range A02 version: 114X5721 (3-phase) and 114X5722 (single phase)			1.292 (R134a) 1.371 (R513A)

Please contact your local Danfoss sales representative for more information and alternative solutions Danfoss can offer within this range of Danfoss light commercial condensing units, both A1 or A2L (A1).

Complementary, you can find alternatives via [Coolselector®2](#) or consult the latest package condensing unit.

## Details for Additional Information

### UK/IE

[Cooling United Support Hub](#)

[Support Made Easy](#)

[customerservice.uk@danfoss.com](mailto:customerservice.uk@danfoss.com)

[customerservice.ie@danfoss.com](mailto:customerservice.ie@danfoss.com)

Customer Service UK & IE tel: 0330 808 6888

### Denmark

[Cooling United Support Hub](#)

[Support Made Easy](#)

[kundeservice.dk@danfoss.com](mailto:kundeservice.dk@danfoss.com)

Kundeservice tel: 69 91 80 80

### Norway

[Cooling United Support Hub](#)

[Support Made Easy](#)

[kundeservice.no@danfoss.com](mailto:kundeservice.no@danfoss.com)

Kundeservice tel: 23 96 71 00

### Sweden

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