

ENGINEERING
TOMORROW



August 2022 | 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.

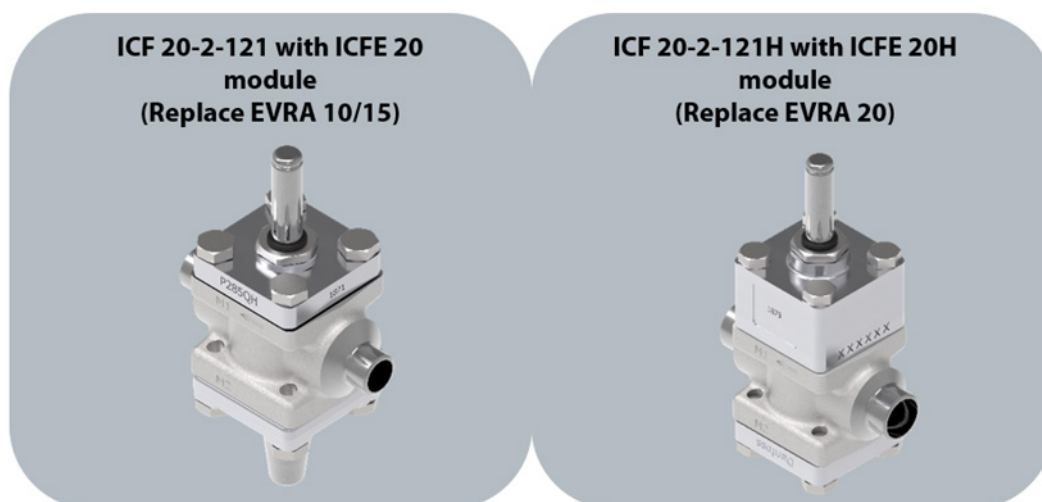
We hope you will enjoy reading Danfoss Tech Insider!

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Solenoid Valve for Refrigeration Applications: ICF 20-2 to Replace EVRA(T) 10, 15 and 20

Danfoss has released ICF 20-2 solenoid valve that is specifically designed to replace EVRA 15, 20 and even size 10. It is a 1:1 replacement of EVRA 15 and 20 (10 will come later) but it will also open to the well-known flexibility of the ICF platform.



Key features:

- Direct weld replacing flanges and gaskets increase safety and saves time
- Flat top cover gasket supports the use in systems down to -60°C and CO₂ up to 65 bar
- Serviceability and full flexibility with the ICF platform
- Manual opener becomes standard for both variants
- Many more refrigerants available since it is now based on the ICF platform (Please, see [Product store](#))

The valves can be calculated and selected in [Coolselector2](#)

Main features	Existing range			New range	
	EVRA(T) 10	EVRA(T) 15	EVRA(T) 20	ICF 20-2-121 Replaces EVRA(T) 10/15	ICF 20-2-121H Replaces EVRA(T) 20
MWP	42 bar / 609 psi			65 bar / 943 psi	
Temp range	-40 to +105 °C			-60 to +120 °C	
Kv [m3/hr]	1,5	2,7	4,5	3,2	4,9
Min. OPD	0,05 bar (EVRA) 0 bar (EVRAT)			0 bar	0,2 bar
Manual Stem	Optional			Standard (ICFO 20)	Standard (ICEF 20H)
Design	Servo Diaphragm			Servo Diaphragm	Servo Piston

Coolselector2

ICF 20-2-121 and ICF 20-2-121H will replace EVRA(T) 15 and 20 going forward. Therefore, it has been decided to remove EVRA 15 and 20 from Coolselector2. ICF 20-2 belongs to the ICF family where it can be found but will also be visible in [Coolselector2](#) under category "Solenoid valves".

Phase out of EVRA

ICF 20-2 will replace EVRA 15 and 20 but not overnight. We will have a transition period where EVRA is still available. EVRA 15/20 will be available globally in 2022, but in 2023 phaseout of EVRA 15/20 will start up and they will be fully phased out by December 31st 2023.

For a more detailed plan please, contact your local Danfoss sales representative.

Product sales codes

7 codes of each variant will be released with different connection types and sizes.

ICF 20-2-121

Code number	Description	Conn. type	Conn. std.
027L3802	Valve station ICF 20-2-121	DIN 15	EN 10220
027L3803	Valve station ICF 20-2-121	DIN 20	EN 10220
027L3801	Valve station ICF 20-2-121	ANSI 15	ANSI B 36.10
027L3805	Valve station ICF 20-2-121	ANSI 20	ANSI B 36.10
027L3809	Valve station ICF 20-2-121	SOC 20	ASME B 16.11
027L3811	Valve station ICF 20-2-121	22 SD	EN 1254-5
027L3813	Valve station ICF 20-2-121	7/8 SA	ASME B 16.50

ICF 20-2-121H

Code number	Description	Conn. type	Conn. std.
027L3804	Valve station ICF 20-2-121H	DIN 20	EN 10220
027L3807	Valve station ICF 20-2-121H	DIN 25	EN 10220
027L3806	Valve station ICF 20-2-121H	ANSI 20	ANSI B 36.10
027L3808	Valve station ICF 20-2-121H	ANSI 25	ANSI B 36.10
027L3810	Valve station ICF 20-2-121H	SOC 20	ASME B 16.11
027L3812	Valve station ICF 20-2-121H	22 SD	EN 1254-5
027L3814	Valve station ICF 20-2-121H	7/8 SA	ASME B 16.50

Learn more – and get in touch

To learn more about how the ICF 20-2 can save time and money during installation and how this standardized solution can improve operational safety and efficiency please contact your local Danfoss representative.

AK-CC55 Compact Case Controller Software Update

Danfoss is announcing a software update for case controller AK-CC55 Compact. The software is upgraded from version 2.0x to a newer version 2.1x, which brings a set of new and improved features, while keeping the core application functionality of the controller unchanged.



The new features and functions in the update are:

- Extension of thermostat range from -50°C down to -60°C
- Function to remote lock display keypad on type AK-UI55 Set display
- Possibility to stop fan only at door open (refrigeration still active)
- Improved SH-Close control when running Modulating Thermostat (MTR)
- Separate defrost/thermostat parameters for thermostat band 2
- Option to disable compressor 2
- Possibility to user define temperature sensors type for S3, S4 and S5
- Improved Melt function when running modulating thermostat control
- Possibility to calibrate sensor S2 and S5 for long cable runs

This update is applicable only to AK-CC55 Compact. Find more information about AK-CC55 Compact on our [Global Product Store here](#).

How to update your controller?

The software can be updated using [KoolProg](#) PC software, MMIMYK gateway, and the proper firmware file (084B4081SW2,13). You may need to update existing setting files from the previous software version to the latest. This can be done using Set parameters in [KoolProg](#).

Connection to front ends

The ED3/ED4 files needed to connect to AK-SM 800(A) are available on the [ADAP-KOOL® software site](#). EDF files needed to connect to AK-SC 255/355 are not available. Please downgrade AK-CC55 Compact controller to firmware ver. 1.91 for AK-SC255 or AK-SC355 support.

Applicable front ends	X
AK-SC 255	
AK-SC 355	
AK-SM 8xx	x
AK-SM 8xxA	x
AKA 24x (GW)	(x)
AK-SM 720	x
AK-SM 350	x

No files are needed to connect to AK-SM 350 and AK-SM 720 because they are generated automatically.

No files are needed to connect to AKA 245 because they are generated automatically (but a limited number of parameters can be accessed).

The update will come preinstalled on the controllers coming out of production and will be available to download for updating the existing installations from week 34, 2022.

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

AK-CC55 Multi Coil Case Controller Software Update

Danfoss is announcing a software update for case controller AK-CC55 Multi Coil. The software is upgraded from version 1.8x to a newer version 1.9x, which brings a set of new and improved features, while keeping the core application functionality of the controller unchanged.

The new features and functions in the update are:

- Extension of thermostat range from -50°C down to -60°C
- Function to remote lock display keypad on type AK-UI55 Set display
- Possibility to stop fan only at door open (refrigeration still active)
- Improved SH-Close control when running Modulating Thermostat (MTR)
- Separate defrost/thermostat parameters for thermostat band 2
- Possibility to user define temperature sensors type for S3, S4 and S5
- Improved Melt function when running modulating thermostat control
- Possibility to calibrate sensor S2 and S5 for long cable runs



This update is applicable only AK-CC55 Multi Coil. Find more information about AK-CC55 Multi Coil on our [Global Product Store here](#).

How to update your controller?

The software can be updated using [KoolProg](#) PC software, MMIMYK gateway, and the proper firmware file (084B4084SW1,91). You may need to update existing setting files from the previous software version to the latest. This can be done using Set parameters in [KoolProg](#).

EKC 326A Gas Cooler Phase-Out



The existing EKC 326A gas cooler control will be phased out due to end of life of several components.

This, in addition to the global critical situation of shortage for electronic components, is leading us to a phase out being not able from now on to grant the availability of this product.

The affected product is:

084B7252 EKC 326A Gas Cooler control

There will not be a direct replacement of this product, but you might find a workaround solution in using the following combination of components as alternative.

For service/replacement alternative components solution:

- 1 pcs. – code: 080Z0201 – AK-PC 772A
- 2 pcs. – code: 080Z0055 – AK-PS 250 (power supply for AK-PC 772A and AK-XM 208C)
- 1 pcs. – code: 080Z0251 – AK-OB 110 (for high pressure valve control – ICMTS)
- 1 pcs. – code: 080Z0023 – AK-XM 208C (for receiver valve control – CCMT)

OR

For service/replacement alternative components solution:

- 1 pcs. – code: 080Z0201 – AK-PC 772A
- 1 pcs. – code: 080Z0055 – AK-PS 250 (power supply for AK-PC 772A)
- 1 pcs. – code: 080Z0251 – AK-OB 110 (for high pressure valve control – ICMTS)
- 1 pcs. – code: 080Z0023 – AK-XM 208C (for receiver valve control – CCMT)
- 1 pcs. – code: 080Z0053 – AK-PS 075 (power supply of AK-XM 208C for CCMT 2 – CCMT 8)
- 1 pcs. – code: 080Z0054 – AK-PS 125 (power supply of AK-XM 208C for CCMT 16 – CCMT 42)

For new installations note that:

- CCMT valve used for high pressure control
- The below options will not allow for the use of ICMTS for high pressure valve control.

For a new installation alternative components solution (also providing a complete controller for a Pack 3MT/IT + 2LT):

- 1 pcs. – code: 080Z0201 – AK-PC 772A
- 1 pcs. – code: 080Z0055 – AK-PS 250 (power supply for AK-PC 772A)
- 1 pcs. – code: 080Z0023 – AK-XM 208C (for receiver valve control – CCMT)
- 1 pcs. – code: 080Z0053 – AK-PS 075 (power supply of AK-XM 208C for CCMT 2 – CCMT 8)
- 1 pcs. – code: 080Z0054 – AK-PS 125 (power supply of AK-XM 208C for CCMT 16 – CCMT 42)

For a new installation alternative components solution (also providing a complete controller for a Pack 18MT/IT + 4LT):

- 1 pcs. – code: 080Z0192 – AK-PC 782A
- 1 pcs. – code: 080Z0055 – AK-PS 250 (power supply for AK-PC 782A)
- 1 pcs. – code: 080Z0023 – AK-XM 208C (for receiver valve control – CCMT)
- 1 pcs. – code: 080Z0053 – AK-PS 075 (power supply of AK-XM 208C for CCMT 2 – CCMT 8)
- 1 pcs. – code: 080Z0054 – AK-PS 125 (power supply of AK-XM 208C for CCMT 16 – CCMT 42)
- 1 pcs. – Outdoor Air Temperature Sensors (various options available)

For configuration of either the AK-PC 772A or AK-PC 782A the Service Tool AK-ST 500 can be used by installing the relative software in a PC. Connection between the PC and the controller is possible through a standard USB-B 1.0 – 2.0 cable.

Service Tool is required for above options via free download: [AK-ST 500 software application](#)

For installation of each product and additional power supply options, please refer to the specific product technical manual.

Optyma™ Compressor Spare Part Code Modification

Optyma light commercial reciprocating Secop compressor spare part code has been modified

As per the end of the agreement with SECOP Danfoss no longer can use the 195B codes (SECOP codes) and we are changing them to the 118Uxxx codes that are the standard spare part codes for PL47.

Please find bellow the cross-reference of all codes:

Old compressor code	Description	New compressor spare part code
195B0031	SPARE PART, COMP FR6CL (SINGLE PACK)	118U5338
195B0038	SPARE PART, COMP FR8.5CL (SINGLE PACK)	118U5339
195B0609	SPARE PART, COMP SC21CLX (SINGLE PACK)	118U5340
195B0427	SPARE PART, COMP GS26CLX (SINGLE PACK)	118U5341
195B0074	SPARE PART, COMP SC10CL (SINGLE PACK)	118U5342
195B0021	SPARE PART, COMP TL4CL (SINGLE PACK)	118U5344
195B0350	SPARE PART, COMP NL7CLX (SINGLE PACK)	118U5345
195B0481	SPARE PART, COMP NL8.4CLX (SINGLE PACK)	118U5346
195B0076	SPARE PART, COMP SC12CL (SINGLE PACK)	118U5347
195B0088	SPARE PART, COMP SC15CL (SINGLE PACK)	118U5349
195B0439	SPARE PART, COMP GS34CLX (SINGLE PACK)	118U5350
195B0066	SPARE PART, COMP SC18CLX (SINGLE PACK)	118U5351
195B0027	SPARE PART, COMP FR10G (SINGLE PACK)	118U5352
195B0043	SPARE PART, COMP SC10G (SINGLE PACK)	118U5353
195B0059	SPARE PART, COMP SC18G (SINGLE PACK)	118U5354
195B0636	SPARE PART, COMP SC21G (SINGLE PACK)	118U5356
195B0006	SPARE PART, COMP TL3G (SINGLE PACK)	118U5357
195B0008	SPARE PART, COMP TL4G (SINGLE PACK)	118U5358
195B0011	SPARE PART, COMP TL5G (SINGLE PACK)	118U5359
195B0023	SPARE PART, COMP FR6G (SINGLE PACK)	118U5360
195B0411	SPARE PART, COMP NL6.1MF (SINGLE PACK)	118U5361
195B0024	SPARE PART, COMP FR7.5G (SINGLE PACK)	118U5362
195B0026	SPARE PART, COMP FR8.5G (SINGLE PACK)	118U5363
195B0370	SPARE PART, COMP NL7.3 (SINGLE PACK)	118U5364
195B0371	SPARE PART, COMP NL8.4MF (SINGLE PACK)	118U5365
195B0028	SPARE PART, COMP FR11G (SINGLE PACK)	118U5366
195B0050	SPARE PART, COMP SC12G (SINGLE PACK)	118U5367
195B0053	SPARE PART, COMP SC15G (SINGLE PACK)	118U5368
195B0433	SPARE PART, COMP GS26MFX (SINGLE PACK)	118U5369

195B0435	SPARE PART, COMP GS34MFX (SINGLE PACK)	118U5370
195B0032	SPARE PART, COMP FR6DL (SINGLE PACK)	118U5373
195B0624	SPARE PART, COMP SC18MLX (SINGLE PACK)	118U5374
195B0345	SPARE PART, COMP SC10MLX (SINGLE PACK)	118U5375
195B0323	SPARE PART, COMP SC12MLX (SINGLE PACK)	118U5376
195B0391	SPARE PART, COMP SC15MLX (SINGLE PACK)	118U5377
195B0436	SPARE PART, COMP GS21MLX (SINGLE PACK)	118U5379
195B0438	SPARE PART, COMP GS34MLX (SINGLE PACK)	118U5380
195B0122	SPARE PART, COMP TL4GH (SINGLE PACK)	118U5385
195B0010	SPARE PART, COMP TLS5F (SINGLE PACK)	118U5386
195B0060	SPARE PART, COMP SC18/18G (SINGLE PACK)	118U5387
195B0637	SPARE PART, COMP SC21/21G (SINGLE PACK)	118U5388
195B0042	SPARE PART, COMP SC12G (SINGLE PACK)	118U5389
195B0151	SPARE PART, COMP SC10CLX (SINGLE PACK)	118U5390
195B0237	SPARE PART, COMP SC15CLX.2 (SINGLE PACK)	118U5391
195B0075	SPARE PART, COMP SC10DL (SINGLE PACK)	118U5392
195B0641	SPARE PART, COMP SC15DL (SINGLE PACK)	118U5393
195B0056	SPARE PART, COMP SC15/15G (SINGLE PACK)	118U5394
195B0119	SPARE PART, COMP SC12/12CL (SINGLE PACK)	118U5395
195B0099	SPARE PART, COMP SC15G (SINGLE PACK)	118U5396
195B0061	SPARE PART, COMP SC12CL (SINGLE PACK)	118U5397
195B0125	SPARE PART, COMP FF8.5GX (SINGLE PACK)	118U5398
195B0186	SPARE PART, COMP FF10GX (SINGLE PACK)	118U5399
195B0651	SPARE PART, COMP SC18G (SINGLE PACK)	118U5400
195B0646	SPARE PART, COMP SC15CLX (SINGLE PACK)	118U5401
195B0738	SPARE PART, COMP DLE4.8CN (SINGLE PACK)	118U5402
195B0420	SPARE PART, COMP TL5CN (SINGLE PACK)	118U5403
195B0589	SPARE PART, COMP TL4CN (SINGLE PACK)	118U5404
195B0346	SPARE PART, COMP NL7CN (SINGLE PACK)	118U5405
195B0655	SPARE PART, COMP SC10CNX (SINGLE PACK)	118U5406
195B0265	SPARE PART, COMP NL9CN (SINGLE PACK)	118U5407
195B0649	SPARE PART, COMP SC12CNX (SINGLE PACK)	118U5408
195B0645	SPARE PART, COMP SC15CNX (SINGLE PACK)	118U5409
195B0654	SPARE PART, COMP SC18CNX (SINGLE PACK)	118U5410
-	SPARE PART, COMP SC12/12CLX (SINGLE PACK)	118U5411
195B0001	SPARE PART, COMP PL50F (SINGLE PACK)	118U5412
195B0686	SPARE PART, COMP PL35G/A (SINGLE PACK)	118U5413
195B0254	SPARE PART, COMP TL3F/A (SINGLE PACK)	118U5414
195B0091	SPARE PART, COMP NL7F/A (SINGLE PACK)	118U5415
195B0092	SPARE PART, COMP NL9F/A (SINGLE PACK)	118U5416
195B0003	SPARE PART, COMP TL4G/G (SINGLE PACK)	118U5417
195B0093	SPARE PART, COMP NL11F/A (SINGLE PACK)	118U5418
195B0274	SPARE PART, COMP NL10MF/K (SINGLE PACK)	118U5419
195B0648	SPARE PART, COMP SC18GH/K (SINGLE PACK)	118U5420
195B0051	SPARE PART, COMP SC12/12G/A (SINGLE PACK)	118U5421
195B0077	SPARE PART, COMP SC12DL/A (SINGLE PACK)	118U5424
195B0428	SPARE PART, COMP SC18CLX.2/D (SINGLE PACK)	118U5425
195B0642	SPARE PART, COMP SC18/18CL/A (SINGLE PACK)	118U5426

195B0644	SPARE PART, COMP SC21/SC21 (SINGLE PACK)	118U5427
195B0390	SPARE PART, COMP NF7MLX/A (SINGLE PACK)	118U5428
195B0332	SPARE PART, COMP SC18CLX.2/A (SINGLE PACK)	118U5429
195B0650	SPARE PART, COMP SC15CLX.2/D (SINGLE PACK)	118U5430
195B0304	SPARE PART, COMP NF7CLX/G (SINGLE PACK)	118U5512
195B0656	SPARE PART, COMP SC18MLX/D (SINGLE PACK)	118U5513
195B0111	SPARE PART, COMP SC10/10DL (SINGLE PACK)	118U5515
195B0112	SPARE PART, COMP SC12/12DL (SINGLE PACK)	118U5516
195B0643	SPARE PART, COMP SC15/15DL (SINGLE PACK)	118U5517

AK-CH 6xx, EKC 33x and AK-PC 5xx Product Families Phase-Out

The existing AK-CH 6xx, EKC 33x and AK-PC 5xx product families will be phased out due to end of life of several components.

This, in addition to the global critical situation of shortage for electronic components, is leading us to a phase out being not able from now on to grant the availability of these products.

The affected products are the following:

Code no.	Description
080Z0132	AK-CH 650, CHILLER CONTROLLER
080Z0136	AK-CH 650A, CONTROLLER, UK-D-F-NL-I
084B7104	EKC 331, CONTROLLER, CAPACITY
084B7105	EKC 331T, CONTROLLER, CAPACITY W. TEMP
084B8007	AK-PC 530, PACK CONTROLLER
084B8012	AK-PC 520, PACK CONTROLLER
084B8013	AK-PC560, DIGITAL SCROLL, PACK CONTROLLER
084B8014	AK-PC 531B, PACK CONTROLLER

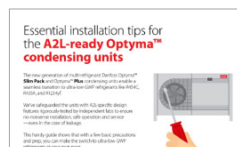
There will not be a direct replacement of these products, but you might find a suitable alternative controller to some of them evaluating our existing AK-PC 351, 551 and 651 product families.

Phase-out activity has started for all the code numbers and is expected to be completed within the end of Q3 2022. In the meantime, a limited number of sales orders will be accepted only until any existing stock is depleted.

If you have any questions regarding this information, please contact your local Danfoss representative.

Videos, infograms and webinars

- Big and Small Smart Stores, Livestream with experts - [LINK](#)
- Cold Room Essentials webinars on-demand - [LINK](#)
- EET thermostat: Switch from Mechanical to Electronic - Infogram - [LINK](#)
- Upcoming and on-demand webcasts from Danfoss Mobile Training Unit - [LINK](#)
- Inverter compressors - Infogram - [LINK](#)
- Installation tips for the A2L-ready Optyma™ condensing units – Infogram - [LINK](#)



Details for Additional Information

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