

FREEZER UNITS



FOR CLIMATE CONTROL,
COMMERCIAL REFRIGERATION
AND INDUSTRIAL APPLICATIONS

Swedish freezer units. Mini, Midi,

The Frigadon range of commercial refrigeration products is characterised by compact packaged "plug-in" units available in a wide selection of standard model, which can easily be adapted to customer specifications. All products have an environment-friendly refrigerant in a small hermetically sealed system.

All units have a similar layout simplifying maintenance and servicing.

The range consists of the Mini, Midi, Maxi and Mega sizes, with refrigeration capacities from 0.5 kW to 8.3 kW. The units are designed to cope with harsh Swedish climate without putting any undue stress on the environment, and need only a minimum of maintenance. The units can be factory fitted with accessories such as weather-proofing, watercooled condenser and soundproofing.



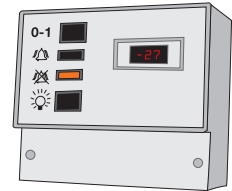
Minifrost 12-E and 15-E

Nominal cooling capacities 1.15 and 1.55 kW.
Temperature range -25 to -12°C.



Minifrost 12

Nominal cooling capacity 1.15 kW.
Temperature range -25 to -12°C.



Remote control panel

Standard for all units. For indoor use only.



Midifrost 20 and 30

Nominal cooling capacities 2.00 and 2.90 kW.
Temperature range -25 to -12°C.



Maxifrost 35 and 45

Nominal cooling capacities 3.20 and 4.40 kW.
Temperature range -25 to -12°C.



Megafrost 70 and 90

Nominal cooling capacities 6.40 and 8.30 kW.
Temperature range -25 to -12°C.

Maxi and Megafrost



Megafrost installed in BoxModule.

Technical data

Packaged units Mini, Midi, Maxi, Megafrost

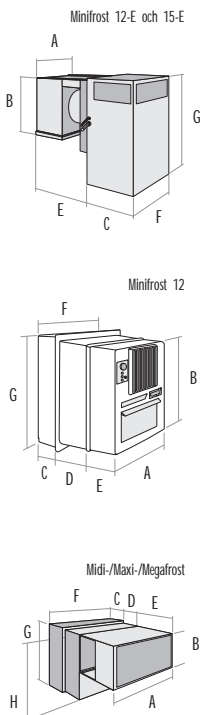
The Frigadon freezer units comprise condensing and evaporator sections within a packaged unit. The units are delivered "ready to run". Just install and connect to an electrical supply. Standard equipment includes:

- Automatic condensate water disposal (wall mounted units only)
- Microprocessor controller
- Temperature display with acoustic alarm for high/low temperatures
- Alarm pilot lamp with reset button and open-circuit alarm device (Not Minicool)
- Internal starting, operating and safety devices
- Electrical supply cable fitted for easy wiring to external safety breaker
- Electric defrost

The units are installed through the wall. Ceiling mounted units are made to order. If the units are installed through an outer wall, the weatherproofed model (additional designation -V) should be ordered

The weatherproofed units are equipped as follows:

- Thermostatically controlled crankcase heater
- Pressure regulated variable speed condenser fan (not Minicool)
- Front cover in UV-stabilized impact resistant light grey plastic (Minicool only)



		Minifrost		Minifrost	Midifrost		Maxifrost		Megafrost	
		12-E	15-E	12	20	30	35	45	70	90
Electrical supply	Volt/phase/Hz	230/1/50	400/3N/50	230/1/50	400/3N/50		400/3N/50		400/3N/50	
Fuse	Amp, slow	16	10	16	10	10	10	16	16	25
Absorbed power, max	kW	2.10	2.70	2.10	2.75	3.90	4.15	5.45	7.75	10.00
Absorbed power nominal 1)	kW	1.00	1.95	1.00	2.00	2.90	3.15	4.00	6.45	8.15
Cooling capacity 2) T ₂ =-35°C	kW	0.70	1.10	0.70	1.50	2.10	2.30	3.20	4.50	6.10
Cooling capacity 2) T ₂ =-30°C	kW	1.15	1.55	1.15	2.00	2.90	3.20	4.40	6.40	8.30
Cooling capacity 3) T ₂ =-35°C	kW	0.55	0.90	0.55	1.20	1.80	2.00	2.70	3.80	5.10
Cooling capacity 3) T ₂ =-30°C	kW	0.95	1.25	0.95	1.70	2.50	2.70	3.70	5.50	7.20
Refrigerant	type	R-404A	R-404A	R-404A	R-404AR-404A		R-404A R-404A		R-404A R-404A	
Refrigerant charge	kg	0.90	1.00	0.80	1.70	1.80	2.80	3.00	5.00	5.50
Sound level 4)	dB(A)	58	59	58	65	67	69	70	72	74
Air volume, evaporator	m ³ /s	0.85	1.00	0.85	0.50	0.64	0.65	0.85	1.38	2.00
Dimension A	mm	450	450	600	650	650	870	870	1470	1470
Dimension B	mm	500	500	700	590	590	730	730	730	730
Dimension C	mm	360	360	170	340	340	390	390	390	390
Dimension D	mm	-	-	250	290	290	390	390	390	390
Dimension E	mm	500	500	180	540	540	720	720	720	720
Dimension F	mm	505	505	650	750	750	975	975	1575	1575
Dimension G	mm	755	755	750	1095	1095	1190	1190	1290	1290
Dimension H	mm	-	-	-	995	995	1090	1090	1190	1190
Installation hole size, width	mm	460	460	615	675	675	895	895	1495	1495
Installation hole size, height	mm	510	510	715	1020	1020	1110	1110	1210	1210
Max wall/ceiling thickness	mm	100/-	100/-	430/250	300/300300/300		400/400400/400		400/400400/400	
Weight	kg	75	75	75	140	145	240	250	390	400
Suitable room size at -20°C 5)	m ³	12	18	12	44	87	106	147	267	356
Suitable room size at -25°C 5)	m ³	5	8	5	12	44	55	88	133	202

1. Nominal absorbed power at T₂=-30°C, T₁=+40°C and ambient temp=+27°C
2. Cooling capacity at T₁=+40°C, ambient temp=+27°C and room temp -T₂= 10°C
3. Cooling capacity at T₁=+45°C, ambient temp=+32°C and room temp -T₂= 10°C

4. Sound level measured at condenser side 1 metre from unit.
5. Room volume at normal usage and ventilation. Ambient temp=+27°C, U-value 0,21 W/m²/K and compressor run time =18h/24h. Ambient temp=+32°C => Volume x 0,65

Split Units Mini, Midi, Maxi, Megafrost

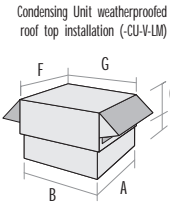
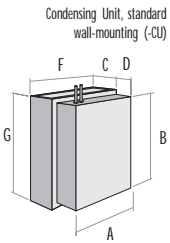
The Frigadon split systems are used where packaged units cannot be installed or where there are several Frigadon evaporator units to be connected to a central Frigadon

condensing unit. Example: a freezer room, freezer display counters and/or freezer cabinets (or similar) connected to a single condensing unit.

Condensing Unit (-CU)

Suitable for wall mounting, rooftop installation (-LM) or sitting on rack/stand. Standard units are "ready to run" and the equipment includes receiver, sight glass, internal starting, operating, and safety devices and necessary mounting hardware. The Frigadon condensing unit is controlled with a pump-

down cycle, thereby rendering any wiring between units unnecessary. The standard unit has external pipe connections for easy installation. The Frigadon condensing unit can be supplied in a weatherproofed model (additional designation -V).



Condensing Unit (-CU)

		Minifrost		Midifrost		Maxifrost		Megafrost	
		5-CU	12-CU	20-CU	30-CU	35-CU	45-CU	70-CU	90-CU
Electrical supply	Volt/phase/Hz	230/1/50		400/3N/50		400/3N/50		400/3N/50	
Fuse	Amps, slow	10	16	10	16	16	20	25	25
Absorbed power, max	kW	0.90	2.03	2.68	3.76	4.00	5.22	7.47	9.31
Absorbed power nominal 1)	kW	0.50	0.98	1.93	2.76	3.00	3.77	6.17	7.46
Cooling capacity 1)	kW	Corresponds to packaged units							
Refrigerant	type	R-404A	R-404A	R-404A	R-404A	R-404A	R-404A	R-404A	R-404A
Refrigerant charge	kg	0.40	0.60	1.20	1.25	4.20	4.60	6.70	7.00
Sound level 4)	dB(A)	55	58	65	67	69	70	72	74
Dimension A	mm	600	600	650	650	870	870	1470	1470
Dimension B	mm	700	700	995	995	1090	1090	1190	1190
Dimension C	mm	100	170	340	340	390	390	390	390
Dimension D	mm	250	250	290	290	390	390	390	390
Dimension F	mm	650	650	750	750	975	975	1575	1575
Dimension G	mm	750	750	1095	1095	1190	1190	1290	1290
Retaining bolt holes c-c, width	mm	460	460	615	615	835	835	1415	1415
Retaining bolt holes c-c, height	mm	735	735	1040	1040	1135	1135	1235	1235
Weight	kg	40	65	110	115	195	200	300	310

1. Nominal absorbed power at $T_2 = -30^\circ\text{C}$, $T_1 = +40^\circ\text{C}$ and ambient temp $= +27^\circ\text{C}$

4. Sound level measured at condenser side 1 metre from unit.

Evaporator Unit (-EU)

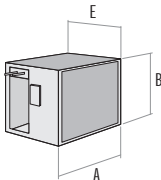
Suitable for wall or ceiling installation (must be specified when ordering). Standard units are "ready to run" and the equipment includes expansion valve, liquid line solenoid valve, electric defrost (not 12-EU) and microprocessor controller with temperature display.

All controls are fitted within a remote control panel (not Minicool) to be installed as required (indoor use only). The standard unit has external pipe connections for easy installation. All Evaporator Units must be connected to a heated, insulated drain (not included).

Minifrost, Evaporator Unit standard wall installation (-EU)



Midi, Maxi, Megafrost Evaporator Unit ceiling installation (-EU-TA)



Evaporator Unit (-EU)

		Minifrost		Midifrost		Maxifrost		Megafrost	
		12-EU	20-EU	30-EU	35-EU	45-EU	70-EU	90-EU	
Electrical supply	Volt/phase/Hz	230/1/50		230/1/50		230/1/50		230/1/50	
Fuse	Amp, slow	10	10	10	10	10	10	10	10
Absorbed power, max	kW	0.08	0.15	0.24	0.24	0.29	0.29	0.29	0.70
Cooling capacity, $\Delta t = 10^\circ\text{C}$, RH60%	kW	1.15	2.00	2.90	3.20	4.40	6.40	8.30	
Refrigerant	type	R-404A	R-404A	R-404A	R-404A	R-404A	R-404A	R-404A	R-404A
Refrigerant charge	kg	0.30	0.50	0.55	1.20	1.40	2.80	3.00	
Dimension A	mm	600	650	650	870	870	1470	1470	
Dimension B	mm	700	590	590	730	730	730	730	
Dimension E	mm	170	540	540	720	720	720	720	
Retaining bolt holes c-c, width	mm	525	615	615	895	895	1415	1415	
Retaining bolt holes c-c, height	mm	735	590	590	750	750	750	750	
Weight	kg	20	40	40	55	55	90	95	

Additional types and accessories

Frigadon has a complete range of standard accessories which are not separate parts but are integrated in the unit at manufacture and tested before delivery.

Frigadon's products are "made to order", ready to run units, focusing on the exact needs of the customer.

Choose model/accessory

Weatherproofed model

Designation V

Unit for installation through an outer wall. The units are equipped with crankcase heater, pressure regulated variable speed condenser fan and front cover in UV-stabilized, impact resistant light grey plastic (the latter only applies to Minifrost).

Arctic model

Designation AR

Air-cooled condenser set-up for ambient temperatures down to -30°C .

Built-in or separate light armature

Designation B

Integrated on the evaporator side or for separate wall/ceiling installation. Complete with retaining screws, cable

clamps and door switch for control light/evaporator fan. Available as 1 x 60, 2 x 60, 3 x 60 and 4 x 60 W.

Built-in electrical heating

Designation EV

For outdoor freezer rooms that need to be kept at a constant temperature. Capacity 1 to 15 kW.

Combi

Designation KO

Cooling/freezing in the same unit.

Soundproofing

Designation LD

Reduces sound level by approx 3 – 5 dB(A) on the condenser side.

Tropicalized model

Designation T

Air-cooled condenser set-up for ambient temperatures up to $+45^{\circ}\text{C}$.

Water-cooled condenser

Designation VK

Air-cooled condenser replaced with plate heat-exchanger carefully calculated to your specifications, complete with automatic water regulating valve or manual regulating valves.

Customer specified colour

The complete unit or just the front cover painted in the colour of your choice.

Customer specified units

Please ask for quotation.

Specification guide

1. Choose model – packaged or split system.
2. Choose standard or weatherproofed model.
3. Choose capacity. Make your own calculation or use the quick guide under *Technical Data*. (Intended only as a guideline).
4. Choose wall or ceiling installation.
DI = Drop-In installation (through ceiling, packaged units only).

LM = Rooftop installation (Condensing units only).
TA = Ceiling installation (Evaporator units only).

5. Other types/accessories from the above list.

For further information, please contact the Frigadon sales office. See also our other brochures: "Cooling Units", "Air-conditioning Units" and "Water Chillers".

Frigadon

Frigadon is an up to date company working with development, design and manufacturing of refrigeration systems for industry and commercial use. About 20 personnel are employed, working with various applications of refrigeration.

Frigadon has been in the market since 1977. Operations began with small plug-in units for cold rooms. Today, the most expansive market is water chillers and custom designed products supplied to the industry on an OEM basis*.

Our customers are mainly refrigeration installers and industries who buy process cooling and OEM applications. Most are located in Scandinavia, although some can be found in Europe.

Our products are designed for Swedish climate conditions and meet the requirements of Svensk Kylnorm.

*OEM stands for Original Equipment Manufacturer. This means that Frigadon manufactures other companies' original products.



Retailer



Frigadon AB
Box 7001
S-300 07 Halmstad, Sweden
Visiting address: Kvarndalsv. 12

Phone: +46 (0)35-16 64 60
Fax: +46 (0)35-12 40 23
E-mail: frigadon@frigadon.se
www.frigadon.se