FRIGA-BOHN

REFRIGERATION CATALOG

2021 EDITION

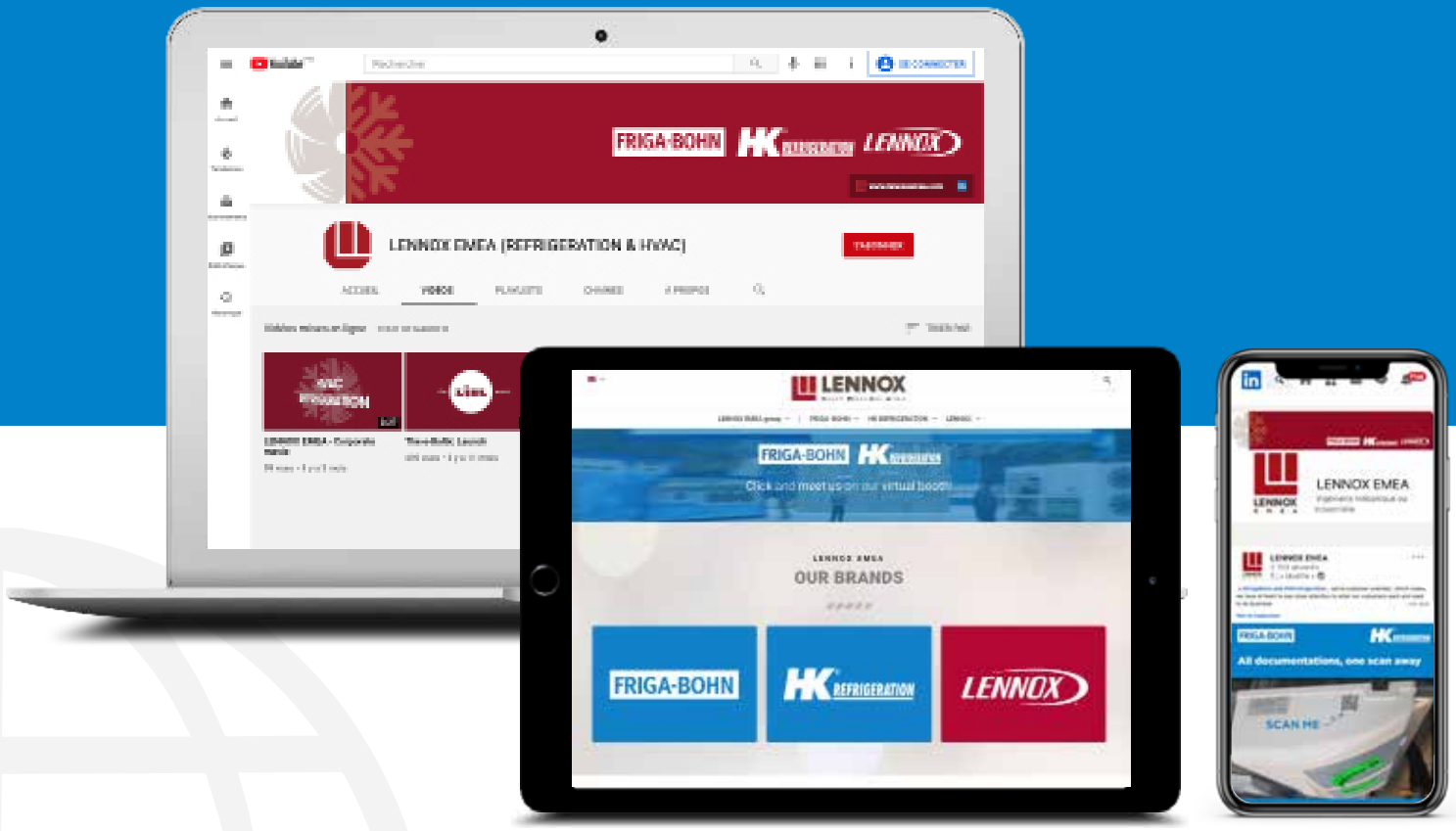
Commercial & industrial refrigeration

products and systems

UNIT COOLERS | CONDENSERS | DRY COOLERS
REFRIGERATION MONOBLOCKS | SPLIT SYSTEMS | CONDENSING UNITS
COMPRESSOR RACKS | CHILLED WATER PRODUCTION

STAY TUNED!

DON'T MISS ANY INFORMATION



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CAFÉS | RESTAURANTS
CONVENIENCE STORES
SUPERMARKETS | HYPERMARKETS
STORAGE & LOGISTICS
FOOD PROCESSING
CENTRAL KITCHENS
ENERGY SECTOR

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CAFÉS | RESTAURANTS
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ENERGY SECTOR

WHO ARE WE?

LENNOX EMEA (**E**urope, **M**iddle-**E**ast, **A**frica), a division of Lennox International Incorporated (LII), is a leading provider of refrigeration, heating, air conditioning and air handling solutions. We are committed to assisting our clients in their projects in order to provide optimal and sustainable solutions.

At LENNOX EMEA, we ensure that every employee develops within the group and contributes to our customers' projects success. Our reputation grows every day by providing maximum comfort and efficiency through our air conditioning and refrigeration solutions.

Our reputation as a leading market player is based on simple principles that guide our actions: the ability to listen to our customers, knowledge of their business and understanding of their needs.

The commitment and expertise of all **LENNOX EMEA** employees are key to the trust our customers place in us every day and to ensuring the continuity of our relationships.

More than ever, **LENNOX EMEA** is committed to meeting tomorrow's challenges by your side.

Ricardo FREITAS
VP, Managing Director LENNOX EMEA

LENNOX INTERNATIONAL

LENNOX EUROPE MIDDLE-EAST AFRICA

OUR KEY FIGURES

900 employees in Europe

3 European production sites: Genas, Longvic and Burgos

Quality certification: ISO 9001 - 14001 - OHSAS 18001

1 European training centre

1 European HVAC&R development centre

9 subsidiaries and sales offices

Commercial presence over 46 countries

A world of applications

CAFÉS | RESTAURANTS

Our systems and associated services will be a real asset for offering optimized solutions, in terms of both comfort and food preservation.

CONVENIENCE STORES

The location of local businesses in urban areas must meet specific acoustic requirements and optimize the available space. Attentive to these needs, we offer a collection of systems and services adapted to these requirements.

SUPERMARKETS | HYPERMARKETS

Our refrigeration systems ensure that your energy costs are optimized, while ensuring preservation of your foodstuffs.

STORAGE & LOGISTICS

Precise control of the humidity and quality of the air generated by our systems allows you to store your different products under the best possible conditions according to your needs.

FOOD PROCESSING

We offer highly reliable, tailor-made solutions, suitable for food processing, in compliance with the regulations in force and the quality requirements of your company.

CENTRAL KITCHENS

Our solutions will ensure the comfort of your employees, while preserving your foodstuffs.

ENERGY SECTOR

In terms of energy and cogeneration, our systems are designed to offer sustainable and optimum performance: your operation will benefit from adapted noise levels, small footprint, low energy consumption and ease of maintenance.

ECODESIGN
Directive 2009/125/EC

The **KYOTO** Agreement (1997), the **COP 21** (Paris 2015) and the **COP 22** (Marrakech 2016) set targets for limiting global warming to 1.5 °C. The **Ecodesign Directive 2009/125/EC** defines a framework for all energy-consuming equipment. Voted on in 2007, and implemented since 2008, it aims to reduce the power consumption of electronic devices through better design (ecodesign). For example, products that use energy must meet minimum energy efficiency criteria to limit negative environmental impacts throughout the product's life cycle.

It is mandatory for all products marketed and used in the European Union (CE marking).

REGULATION EU 2015/1095
for condensing units and industrial chillers

The regulations arising from the Ecodesign of each product family set minimum efficiencies to be achieved in 2 steps:

Step 1 > 1 July 2016
Step 2 > 1 July 2018

The following are not affected:

Condensing units where the condenser part does not use air as the heat transfer medium.
Split systems (combination of a condensing unit and one or more unit coolers, monoblocks or splits).
Compressor racks without condensers.

CE

The **CE marking** was created within the framework of European technical harmonization legislation. It represents a manufacturer's commitment that its product complies with the regulatory requirements for free movement throughout the European Union. This marking is mandatory for all products covered by one or more European regulatory texts that explicitly provide for it. As a manufacturer, and in order to allow the circulation of our products, we rigorously ensure the conformity of our products with regard to the essential requirements defined by European legislation.

Our declaration of conformity specifies the applicable guidelines for the entire catalogue by product range.

It can be found on our website under "downloads > certificates > CE".

PED

Pressure Equipment Directive

In the event of failure, pressure equipment can cause significant physical and material damage. The design, construction, operation and monitoring of this equipment is therefore essential to ensure its safe operation. The PED provides for classification of pressure equipment according to category.

COMPRESSORIZED PRODUCTS

Compressorized products are governed by the Pressure Equipment Directive (PED) 2014/68/EU and have the marking CE0094 indicating their compliance with this Directive. Our declaration of conformity can be downloaded from our website under "downloads > certificates > PED". The operating pressure of our products is indicated in the technical data sheets, which are also available on our website.

HEAT EXCHANGERS

Unit coolers and condensers have the CE mark according to the Low Voltage Directive 2014/35/EU and are therefore excluded from the scope of Directive 2014/68/EU as they fall within category I at most, heat exchangers consisting of pipes, intended for air cooling or the condensation of a refrigerant.

The operating pressure and temperature values of our products are available through our declaration of conformity. This is available for download on our website under "downloads > certificates > CE".

ISO

A guarantee of quality

The ISO family of standards has been developed to address various aspects of quality management. ISO certification enables us to guarantee the circulation of safe and quality products on the market. The various ISO standards also contribute to the fact that companies such as ours optimize their production methods, while guaranteeing our employees' safety.

Our company is ISO-certified and thus meets quality assurance criteria:

ISO 9001 - lays down the criteria applicable to a quality management system.
ISO 14001 - lays down the criteria applicable to an environmental management system.
OHSAS 18001 - establishes the method for setting up an occupational health and safety management system.

WHAT IS F-GAS?

The chlorofluorocarbon (CF) and hydrofluorocarbon (HCFC) refrigerants used in cooling systems today are considered to be powerful greenhouse gases. To prevent climate changes and global warming, the European Commission has adopted a roadmap to reduce global emissions by 2050.

EU Regulation No. 517/2014, known as **F-Gas**:

Lays down rules regarding the containment, use, recovery and destruction of fluorinated greenhouse gases and the related measures.
Lays down the conditions for marketing certain products and equipment containing HFCs.
Imposes conditions on certain specific uses of fluorinated greenhouse gases.
Sets quantitative limits (quotas) for marketing HFCs.

This Regulation is for all companies that install, maintain and sell equipment containing refrigerants, as well as those that handle and distribute them.

DESIGN & MAINTENANCE OF EQUIPMENT

All equipment must be designed to prevent accidental discharge of greenhouse gases. Technical measures are taken upstream in order to minimize these leaks (refer to Regulation (EU) No. 517/2014 specifying the procedures for leakage checks).

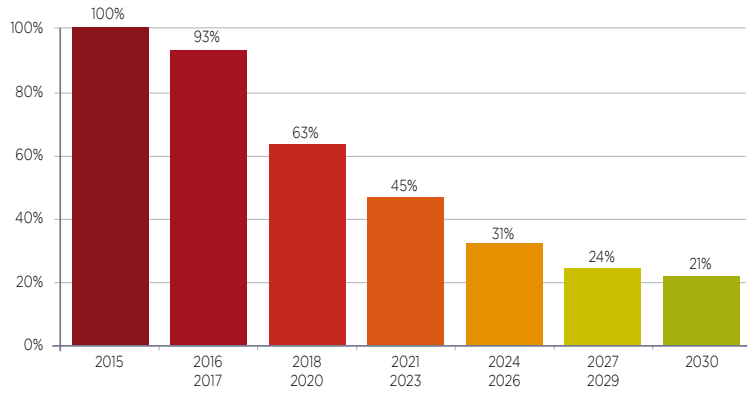
The F-Gas regulation on fluorinated fluids imposes:

Frequent inspections.
Qualification of companies & their agents.

QUOTAS: "PHASE DOWN"

The European Commission is responsible for assigning the HFCs quotas available on the market to companies. This measure aims to reduce the total amount of HFCs available on the market, so that the remaining share of HFCs (21% in 2030) is only used for the maintenance of existing equipment and/or for certain specific applications for which there is no alternative.

Timetable for marketing (expressed in t CO2e)



WHAT IS GWP?

All HFCs refrigerants placed on the market are classified according to a Global Warming Potential (GWP). The GWP is an index that characterizes the action of a chemical compound on the greenhouse effect within a given time. The reference refrigerant is CO2, of which the GWP is 1. The lower the index, the more environmentally-friendly the refrigerant.

New equipment is subject to restrictions based on the GWP of the refrigerants. So, refrigerants with a GWP greater than 2500 have been banned in new installations since January 2020.

The availability of HFCs will be limited by falling production quotas.

Refrigerants and limits of use according to their GWP

Refrigerants	R507A	R404A	R452A	R407A	R410A	R407F	R407C	R134a	R449A	R448A	R32	R513A	R450A	R454C	R455A	R152a	1234ze	1234yf	R290 (Propane)	R744 (CO_2)	R717 (NH_3)
GWP	2 500							1 500						150							
	3985	3922	2141	2107	2088	1825	1774	1430	1397	1273	675	631	600	148	145	124	6	4	3	1	0
Authorization for use	before **2020**		up to **2022**																		

CO_2, THE ECO-FRIENDLY REFRIGERANT

In the pursuit of alternative solutions to this HFCs quota reduction, the choice of CO2 may, depending on the application, seem obvious.

Naturally present in the atmosphere, CO2 (R744) has an OPD of 0 and a GWP of 1. It is therefore 1,300 to 4,000 times less harmful to the planet than HFCs type refrigerants can be. CO2 has many advantages: it is not toxic or flammable, it is not governed by legislation on fluorinated refrigerants or subject to the associated taxes, it is inexpensive and it is not subject to a charge limitation.

The good thermophysical properties of CO2 also help reduce energy consumption, enabling the use of more compact components than for a system operating with a conventional refrigerant.

EMERGENCE OF A2L REFRIGERANTS

While CO2 is of course an alternative to HFCs, it may not be the most suitable solution for your application. Therefore, other solutions exist, such as A2L refrigerants.

WHAT ARE A2L REFRIGERANTS?

Refrigerants are classified according to their flammability and toxicity. These factors then determine a safety class.

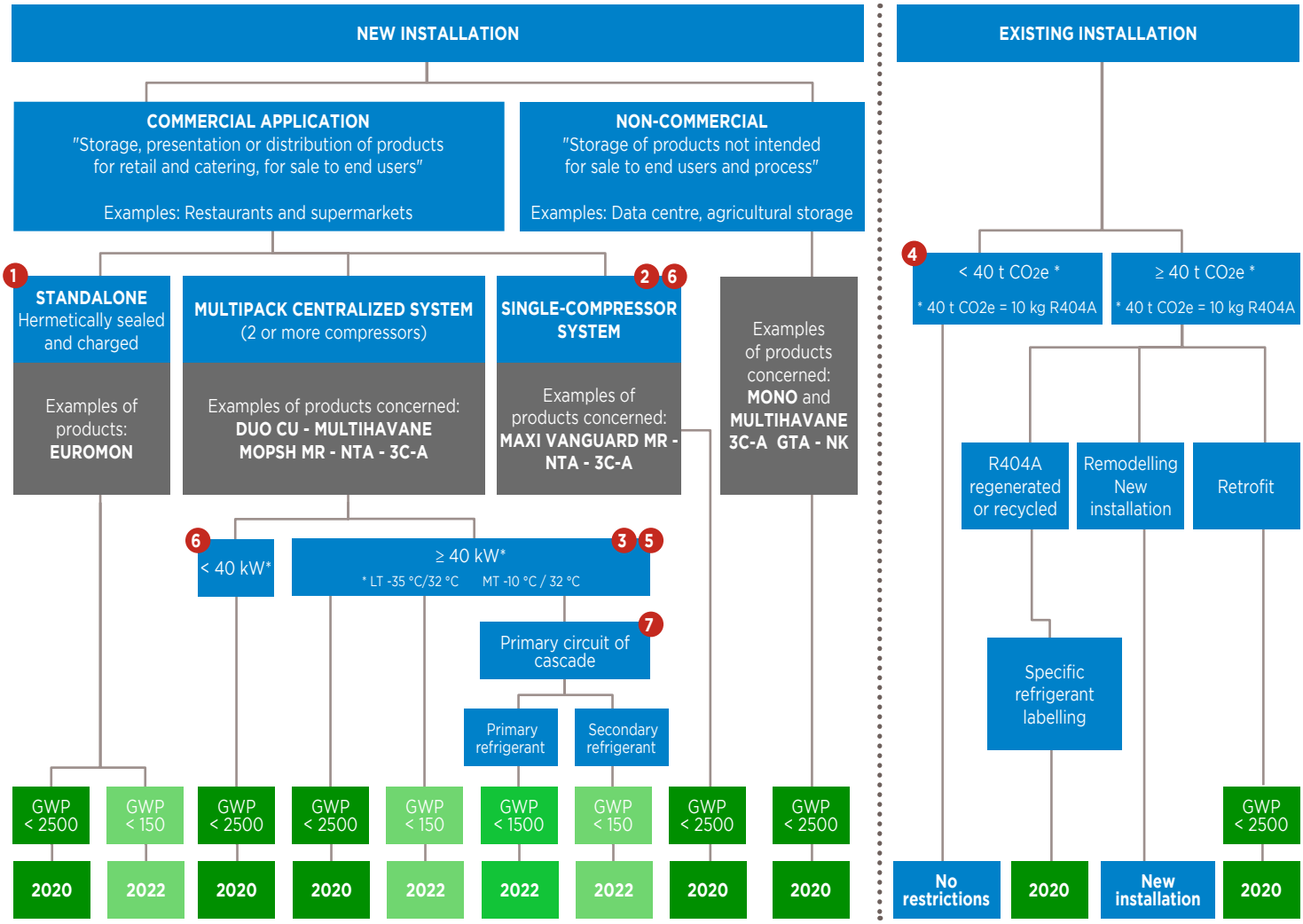
	Non-flammable	Moderately flammable	Flammable	Highly flammable
Low toxicity	**A1**	**A2L**	**A2**	**A3**
High toxicity	**B1**	**B2L**	**B2**	**B3**

A2L refrigerants are non-toxic and slightly flammable. 'Slightly flammable' means they are harder to ignite and less capable of propagating a flame than A2 or A3 refrigerants.

Refrigerants	R507A	R404A	R452A	R407A	R410A	R407F	R407C	R134a	R449A	R448A	R32	R513A	R450A	R454C	R455A	R152a	1234ze	1234yf	R290 (Propane)	R744 (CO_2)	R717 (NH_3)
GWP	3985	3922	2141	2107	2088	1825	1774	1430	1397	1273	675	631	600	148	145	124	6	4	3	1	0
Safety class	**A1**	**A1**	**A1**	**A1**	**A1**	**A1**	**A1**	**A1**	**A1**	**A1**	**A2L**	**A1**	**A1**	**A2L**	**A2L**	**A2**	**A2L**	**A2L**	**A3**	**A1**	**B2**

A2L refrigerants are interesting because they offer a similar technology to HFCs, but they have a lower GWP.

F-Gas | Impact of F-Gas according to installation type



1 2 3 see text: **Annex 1 F-Gas Regulation (EU) No. 517/2014**

1 Refrigerators and freezers for commercial use (hermetically sealed equipment)

2 Stationary refrigeration equipment, that contains, or whose functioning relies upon, HFCs with GWP of 2 500 or more except equipment intended for application designed to cool products to temperatures below – 50 °C

3 Multipack centralized refrigeration systems for commercial use with a rated capacity of 40 kW or more that contain, or whose functioning relies upon, fluorinated greenhouse gases with GWP of 150 or more, except in the primary refrigerant circuit of cascade systems where fluorinated greenhouse gases with a GWP of less than 1 500 may be used

4 see text: **F-Gas Regulation (EU) No. 517/2014 Article 13 §3**

5 6 7 see text: **C (2017) 5230 Final 4.08.2017 + Annexes 1 and 2**

5 If two completely independent refrigeration circuits separately guarantee MT and LT in direct expansion systems, then the prohibition only applies to one or the other independent circuit, if it alone exceeds the capacity threshold. If one of the refrigeration circuits can guarantee both MT and LT at the same time, the sum of the capacities is relevant for the calculation of the system capacity. If not, the highest capacity is used to see if the 40 kW threshold has been exceeded. In the case of multi-functional systems, only the refrigeration capacities are taken into consideration, not the air conditioning or heating capacities.

6 "Centralized systems" are understood to be systems where the ability to refrigerate an entire store is produced centrally in one location, often in a separate machine room. The majority of refrigeration systems currently installed in larger supermarkets and hypermarkets are "centralized multipack refrigeration systems".

In addition, other, more decentralized refrigeration systems are commonly used, especially in smaller supermarkets and convenience stores. These systems include the use of multiple distributed condensers and/or standalone units, which will not be affected by the 2022 requirement.

Condensing units are likely to be affected if they fall under the definition of centralized multipack systems referred to in Article 2(37) of Regulation (EU) No 517/2014, for example if they have two or more compressors operating in parallel; and if their cooling capacity is greater than 40 kW.

7 This definition implies the division of the medium temperature circuit into a primary and a secondary circuit. However, a simple cascade with R134a in the primary circuit, which meets the requirements for medium temperature cooling in a direct expansion system (DX system) and absorbs the heat from a CO2 circuit for the low temperature, is not covered by this definition.

It is important to emphasize that the requirement set for 2022 does not allow the presence, in the primary circuit, of a simple cascade, for example with HFCs R134a (of which the global warming potential is 1,430 times higher than that of CO2), which satisfies all the requirements for medium temperature cooling while absorbing the heat from a CO2 circuit for the low temperature. This requirement, on the other hand, requires that the medium temperature itself be divided into two circuits, where only the primary circuit would be allowed to use HFCs < 1,500, such as R134a.

NEW
REFRIGERANTS

CO_2 | A2L

A2L CO_2 60 bar CO_2 80 bar

A2L CO_2 60 bar

A2L CO_2 60 bar CO_2 80 bar

COMMERCIAL UNIT COOLERS

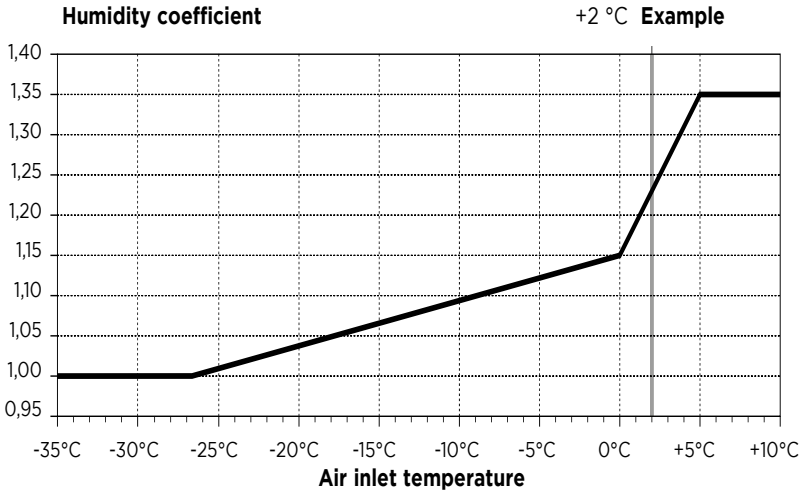
MR | MH | 3C-A | NTA

Standard conditions

Standard conditions	t_{A1} Air inlet temp.	t_{em} Evaporating temp.	Standard DTM
SC 1	+10°C	0°C	10K
SC 2	0°C	- 8°C	8K
SC 3	-18°C	-25°C	7K
SC 4	-25°C	-31°C	6K
SC 5	-34°C	-40°C	6K

Humidity coefficient

Standard conditions	Relative humidity	Rated power / Standard power
SC 1	85%	1,35
SC 2	85%	1,15
SC 3	95%	1,05
SC 4	95%	1,01



Example

Or:

Desired power	**Q = 6,000 W**
Air inlet temperature	**t_{A1} = +2 °C**
Evaporating temperature	**tem = -8 °C**
Refrigerant	**R 22**

hence:
DTM = tA1 - tem = (+2)-(-8) = 10K

To select under standard conditions,
the following correction coefficients should be applied:

- humidity coefficient	**1.15/1.23 = 0.935**
- correction coefficient of DTM	**8/10 = 0.8**
- refrigerant coefficient	**1/0.95 = 1.05**

Expressed under the standard conditions given,
the desired power of 6,000 W becomes:

6000 x 0,935 x 0,8 x 1,05 = 4712 W

Therefore we select a **3C-A 3245 L R448A**

Embedded equipment

Our machines are static. Included in a refrigeration system, they can be excited by motors, compressors, diesel generators, vehicles or other devices and be subjected to vibration.

It is the responsibility of the system's prime contractor to verify that the excitation frequencies cannot, under any circumstances, put the components in resonance, under penalty of inevitable breakage (especially in the case of an embedded system).

DTM correction coefficient

For refrigerants with low glide (less than 1K), or without glide, it is assumed that the power is directly proportional to the difference between the air inlet temperature and the evaporating temperature (DTM), namely:

$$\text{Desired power} = \frac{\text{Rated power x DTM desired}}{\text{Standard DTM}}$$

For more information, consult our software

Refrigerant coefficient

Standard conditions	R449A	R134a	R407A	R407C	R407F	R410A	R448A	R450A	R452A	R507A	R513A	R1234yf	R454C	R455A
SC 1	1	0,90	0,94	0,94	0,94	0,95	0,99	0,89	0,97	0,94	0,96	0,96	0,97	1,08
SC 2	1	0,89	0,95	0,95	0,94	0,96	0,99	0,87	0,99	0,95	0,95	0,96	0,93	1,08
SC 3	1	0,90	1,02	1,03	1,02	1,03	0,97	0,88	1,06	1,03	0,97	0,98	0,91	1,08
SC 4	1	-	1,02	1,04	1,04	1,04	0,95	0,83	1,07	1,04	0,91	0,93	0,88	1,06

C1 : Altitude coefficient

C1 = (1 - 0.000075 x H*) ***H** = Altitude in meters above sea level

C2 : DTM coefficient

DTM	8	9	10	11	12	13	14	15	16	17	18
C2	0,53	0,60	0,67	0,73	0,80	0,87	0,93	1	1,07	1,13	1,20

C3 : Ambient temperature coefficient $t_{A.1}$

$t_{1.1}$	15	20	25	30	35	40	45	50
C3	1,03	1,02	1	0,98	0,96	0,94	0,92	0,91

C4 : Refrigerant coefficient

		R449A	R134a	R407A	R407C	R407F	R410A	R448A	R450A	R452A	R507A	R513A
C4	DTM = 15K	1	0,92	1,01	1,01	1,01	0,98	1,01	0,89	0,97	0,93	0,92

Sound pressure correction according to number of fans

Fan	Nb	1	2	3	4	5	6	8	10	12
Correction	dB(A)	0	3	5	6	7	8	9	10	11

Sound pressure correction according to distance

Distance	m	5	6	8	10	12	16	32	64	128
Correction	dB(A)	+6	+4,5	+2	0	-1,5	-4	-10	-16	-22

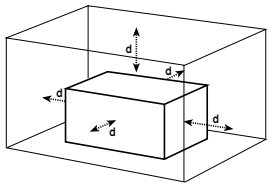
Noise levels

Noise level LpA:
The sound pressure Lp indicated in the specification tables was measured at 10 meters in a free field over a reflecting plane, in accordance with standard EN 13487 (parallelepiped reference surface). The relationship between sound pressure Lp and sound power Lw is given by the following formula:

$$LpA = LwA - 10 \log \frac{Si}{So}$$

Si = parallelepiped surface for d = 10 m
So = reference area 1 m^2

Only the sound power spectrum and the LwA value are contractually binding. For a distance other than 10 m, see the correction factors below. For an accurate calculation of the sound pressure on site, take into account the sound power of each fan and its position as well as the characteristics of the environment (directivity, reflections, etc.).



Selection

"**P**" = power at the condenser.

To determine a model, the application conditions must be brought into line with the selection conditions. To do this, divide the desired power "**P**" by the 5 coefficients below:

C1 altitude coefficient
C2 DTM coefficient
C3 ambient temperature coefficient
C4 refrigerant coefficient

according to the formula : $P1 = \frac{P}{C1 \times C2 \times C3 \times C4}$

Select a model from the table corresponding to the selected rotation speed and check that the noise level meets the required level. Where the selection can lead to an **L** or **P** model being selected, with no dimensional constraints, choose the most economical model. Similarly, to find out the power "**P**" of a module under conditions other than those in the documentation, apply the formula:

$$P = P1 \times (C1 \times C2 \times C3 \times C4)$$

Example

Desired power "**P**"	58 kW
Altitude	200 m
DTM	14 K
Ambient temperature	+30 °C
Refrigerant	R134a
Sound pressure at 5 m (parallelepiped measuring surface)	37 dB(A)

Or: **C1 = 0,99 - C2 = 0,93 - C3 = 0,98 - C4 = 0,92**

hence:

$$\frac{58}{0,99 \times 0,93 \times 0,98 \times 0,92} = 69,9 \text{ kW}$$

Basic noise level - Distance correction: **37 - 6 = 31 dB(A)**
Sound pressure at = **31 dB(A)**

Note: if the noise level is very different, look for the appropriate model in the other tables.

NOTES

EVB

Under-counter unit cooler
Commercial range

HFC

240 - 410 W

Compact design for perfect integration into bar counters.
Hygienic unit, with anti-corrosion components.
Easy maintenance: the EVB is fully accessible by removing the fan panel and the clip-on drain pan.

CASING

Robust, made of white pre-painted galvanized sheet steel and stainless steel fasteners.
ABS drain pan with rounded corners and no retention zone for perfect hygiene.

For easy installation, the casing and drain pan are reversible according to the constraints of the bar.

VENTILATION

Aluminium turbine.

COIL

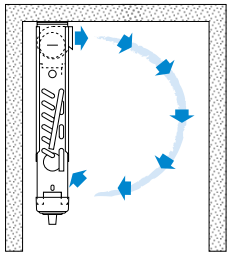
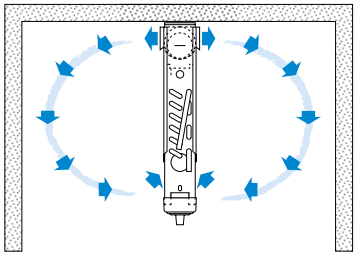
Coils completely covered with polyester protection as standard.
Low refrigerant volume: Ø 5/16" tubes.

DEFROST

OPTION	
E1K	Electric defrost. KIT TO INSTALL

INSTALLATION

For wall mounting, choose models M1, M2 and M3. They have a small footprint and provide excellent air distribution.
For central mounting, choose models C1 and C2. They ensure an optimized airflow as well as partitioning of the space into two parts.

M1 - M2 - M3	C1 - C2
	

EVB M(A) 1(B)

(A) **M** = wall mounting
C = central mounting
(B) Model

> **The EVB is available with HFCs. For more information, please consult our software.**

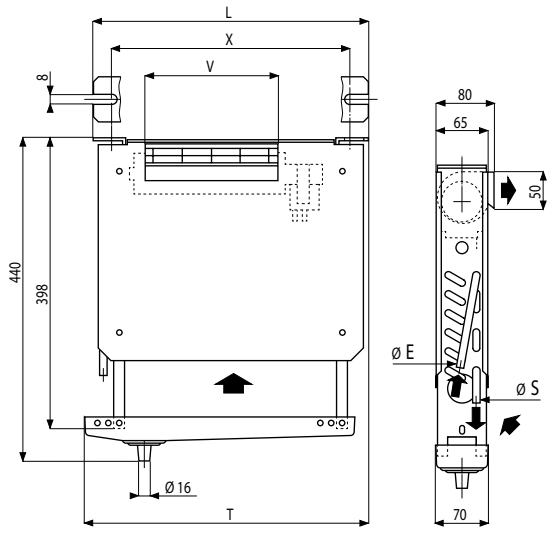
EVB

3.63 mm

CONDITIONS	REFRIGERANTS	EVB ...	M1	M2	M3	C1	C2
SC1	**R449A**	**W**	**240**	**300**	**380**	**240**	**410**
Circuit volume		**dm³**	0,3	0,3	0,4	0,3	0,4
Fan (1) 230V/1/50Hz 2,200 rpm Ø 45 mm	Airflow	**m³/h**	60	100	100	60	110
	Air throw (2)	**m**	3,5	3,5	3,5	2x 3,5	2x 3,5
		Num.	1	1	1	2	2
		W total	15	22	22	26	30
		A total	0,15	0,22	0,22	0,26	0,30
Electric defrost	230V/1/50Hz	**W**	210	210	290	210	290
Connections	Inlet	**Ø E**	5/16"	5/16"	5/16"	5/16"	5/16"
	Outlet	**Ø S**	5/16"	5/16"	5/16"	5/16"	5/16"
Net weight		**kg**	4	4	5	5	6

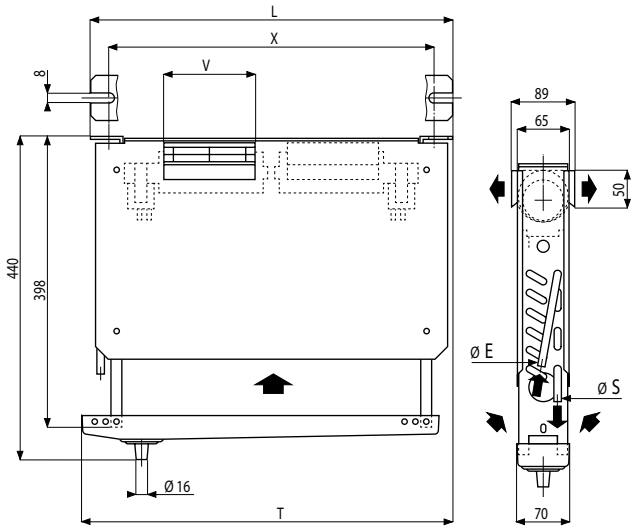
(1) Motor, class B, long life bearings.
(2) When the section of the room allows air circulation.

M1 - M2 - M3



		M1	M2	M3
L	**mm**	370	370	490
X	**mm**	340	340	460
T	**mm**	386	386	506
V	**mm**	120	180	180

C1 - C2



		C1	C2
L	**mm**	370	490
X	**mm**	340	460
T	**mm**	386	506
V	**mm**	60	120

NOTES

XR

Ceiling or wall-mounted unit cooler
Commercial range

HFC

370 - 1050 W

Compact design and **ceiling or wall mounting possible** for perfect integration in small spaces and optimization of the storage area.

"Keyhole" fixing and drilling template printed on the cardboard packaging to **save installation time**.

Access to all components from the front for **easy maintenance**.

COILS

Aluminium fins with 4.23 mm spacing and sinusoidal profile.
Combined with copper tubes with a grooved internal structure, the coils are very efficient and compact.
Coils completely covered with polyester protection as standard.

Ceiling mounting

CASING

Galvanized sheet steel and plastic drain pan, white colour.
Intermediate drain pan for ceiling mounting, limiting water condensation.

Wall mounting

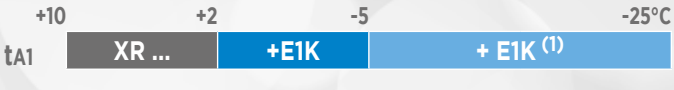
VENTILATION

Single-phase motor fans, 230 V, 50-60 Hz, Ø 200 mm, protected by an enclosed casing, delivered with cable 3 x 0.75 mm² length 1 m:
  - 4P / 1,500 rpm (low noise level).
  - 2P / 3,000 rpm, motor with built-in thermal protection (high performance).

ADVANTAGES

"Keyhole" fixing requiring only one operator.
Drilling template printed on the cardboard packaging.
8 pre-cut holes for the tubes and cables.
Factory delivered for ceiling mounting, simple conversion for wall mounting.
4 possible drain tube positions with ceiling mounting (2 with wall mounting) to offer the user the maximum available volume.
Access to all components from the front.

DEFROST



OPTION	
E1K	Electric defrost. KIT TO INSTALL

*(1) **ATTENTION** use SC3 for ceiling mounting only: E1K kit must be mounted.*

XR(A) 60(B)

(A) Ceiling or wall-mounted unit cooler
(B) Model

**The XR is available with HFCs.
For more information,
please consult our software.**

XR — **4.23** mm

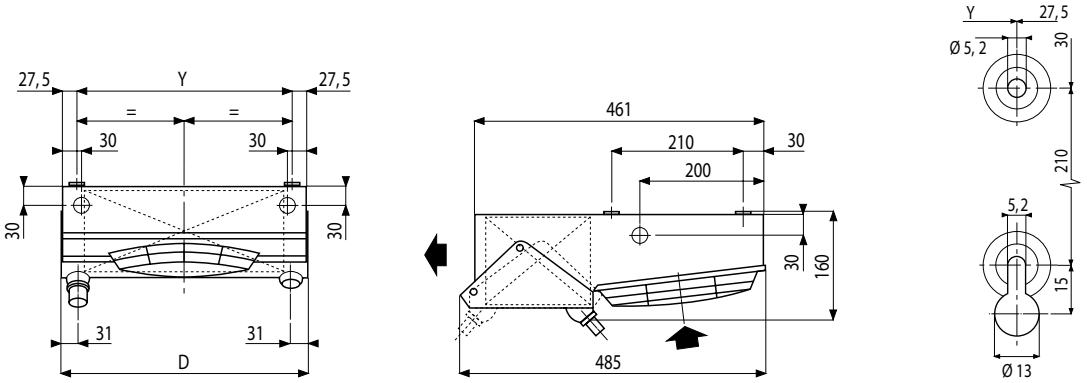
CONDITIONS	REFRIGERANTS	XR ...	60	72	80	85	90	100	105	122
SC2	R449A	W	470	600	660	680	770	820	900	1050

CONDITIONS	REFRIGERANTS	XR ...	60	72	80	85	90	100	105	122
SC3	R449A	W	370	490	560	570	650	670	730	870

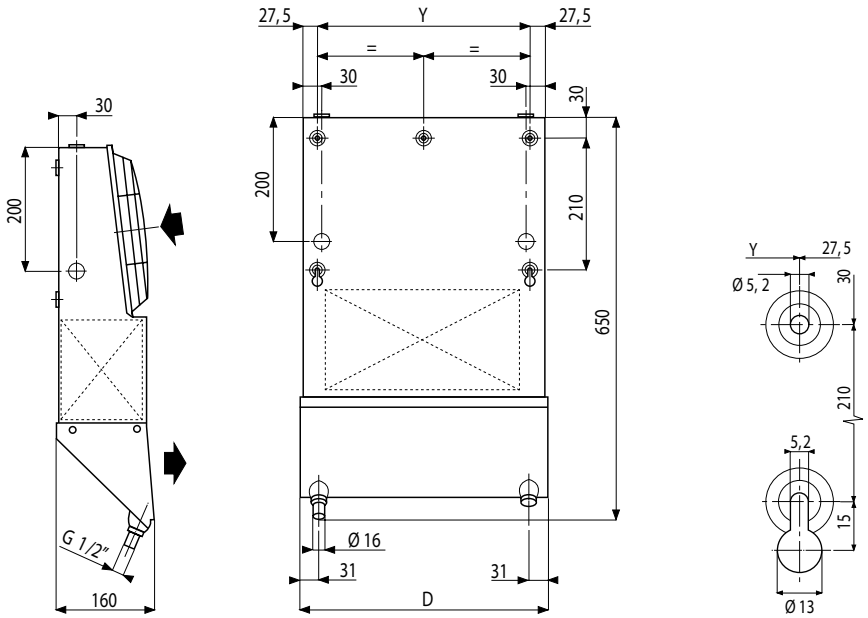
			60	72	80	85	90	100	105	122
Surface area		m^2	1,5	2,0	2,5	2,0	3,0	2,5	3,0	3,8
Circuit volume		dm^3	0,3	0,3	0,4	0,3	0,5	0,4	0,5	0,7
Fan 230V/1/50-60 Hz Ø 200 mm	Airflow	m^3/h	270	250	230	440	360	410	500	480
	Air throw (2)	m	2,5	2,0	2,0	3,0	2,0	3,0	2,5	2,5
		Nb	1	1	1	1	1	1	1	1
		tr/min	1500	1500	1500	3000	1500	3000	3000	3000
	230V/1/50Hz	W total	43	43	43	80	43	80	80	80
		A total	0,25	0,25	0,25	0,50	0,25	0,50	0,50	0,50
Electric defrost **E1K** (3)		Nb	1	1	1	1	1	1	1	1
	230V/1/50Hz	W total	400	400	400	400	600	400	600	600
		A total	1,8	1,8	1,8	1,8	2,7	1,8	2,7	2,7
Connections	Inlet (4)	Ø ODF	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
			10mm	10mm	10mm	10mm	10mm	10mm	10mm	10mm
	Outlet (4)	Ø ODF	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
			10mm	10mm	10mm	10mm	10mm	10mm	10mm	10mm
Net weight		kg	7	8	8	8	10	8	10	10

(1) Standard conditions:
SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
SC3 / -18 °C (air inlet temp.) / -25 °C (evaporating temp.) / DT1 = 7K
(2) When the section allows air circulation (see CECOMAF GT 6001, DIN8955, ENV328).
(3) ATTENTION use SC3 for ceiling mounting only: E1K kit must be mounted.
(4) ODF: female to receive the tube of the same diameter.

XR | Ceiling mounting



XR | Wall mounting



XR

XR ...

4.23 mm

		60	72	80	85	90	100	105	122
D	**mm**	399	399	399	399	560	399	560	560
Y	**mm**	330	330	330	330	485	330	485	485

MF | MFE

Ceiling unit cooler
Commercial range

HFC

ABS

Certificate of conformity cetim "Hygiene & Security"

140 - 790 W

Save time during installation with the motor wired onto the terminal block as standard.
Compact and **streamlined** design for perfect integration in small spaces and optimization of the storage area.
Casing can be fully removed for **easy maintenance**.
Direct access to all components on the upper plate **facilitating maintenance operations**.

CASING

Recyclable ABS casing, guaranteeing:
High resistance to thermal and mechanical shocks.
Perfect hygiene as a result of the rounded corners that eliminate retention zones.
No sharp edges for increased safety.

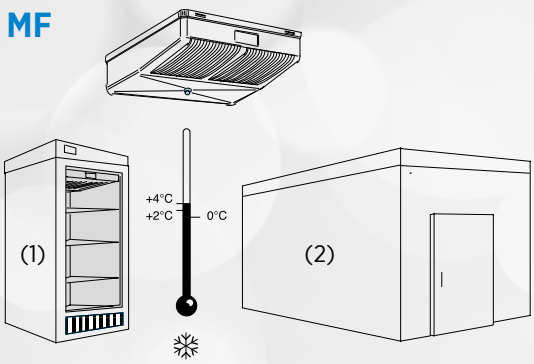
OPTION

EMA

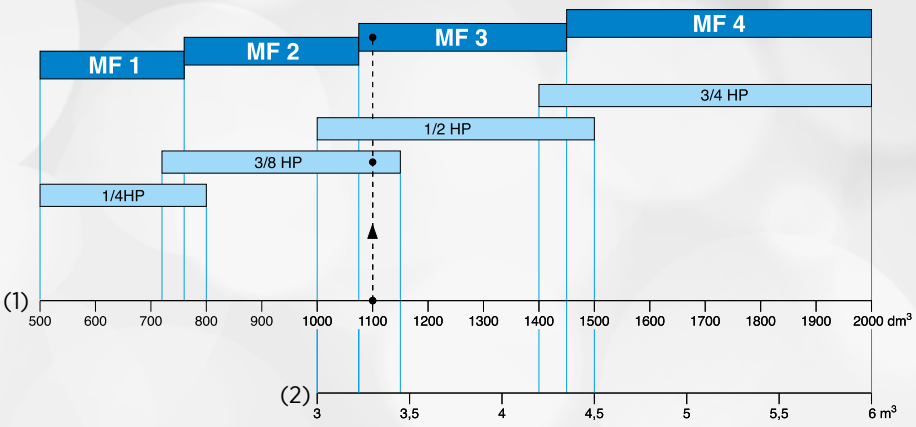
Wall kit available on MF1 and MF2. KIT TO INSTALL
(Do not use on MFE1 and MFE2)

ABS

MF



(1) Heavy duty cabinet.
(2) Standard cold room



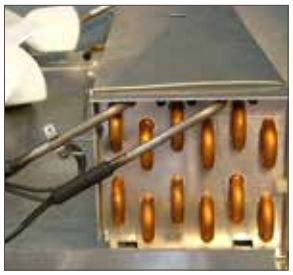
Example: Heavy duty cabinet - Volume: 1,100 dm³ - temperature +2 °C
Selection: **MF 3** (and 3/8 HP compressor).

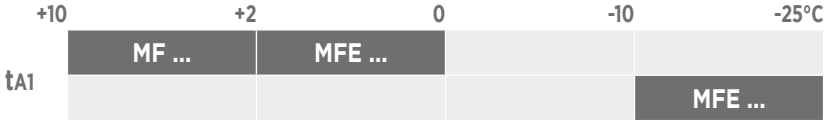
VENTILATION

4-pole motor(s), polypropylene blade.
Corrosion resistant blade and grille.

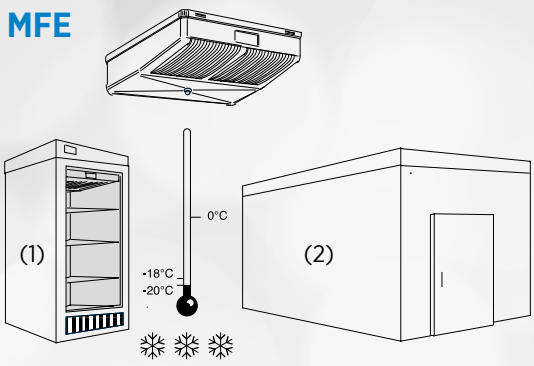
COILS

Aluminium fins with 4.23 mm spacing and sinusoidal profile.
Combined with copper tubes with a grooved internal structure, the coils are very efficient and compact.
Completely covered with polyester protection as standard.
Low refrigerant volume.

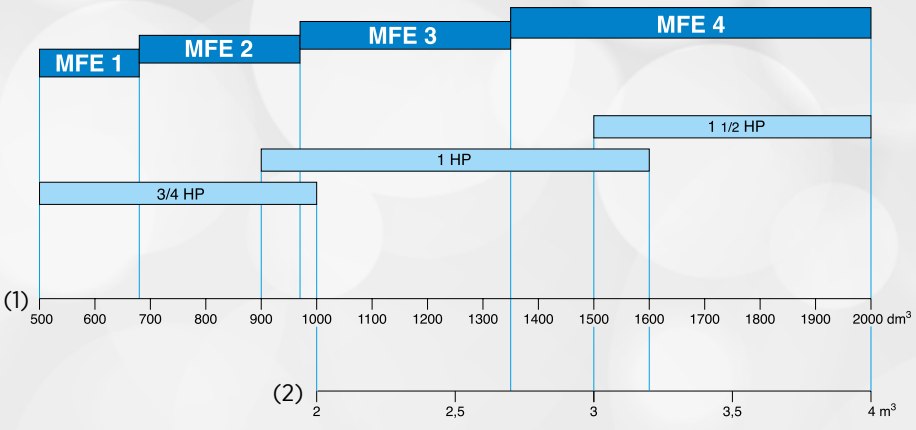




MFE



(1) Heavy duty cabinet.
(2) Standard cold room



Data provided for information purposes only.

MF (A) 1 (B)

(A) **MF** = positive temperature without defrost
MFE = negative temperature with defrost
(B) Number of fans

> **The MF | MFE is available with HFCs. For more information, please consult our software.**

MF | MFE

4.23 mm

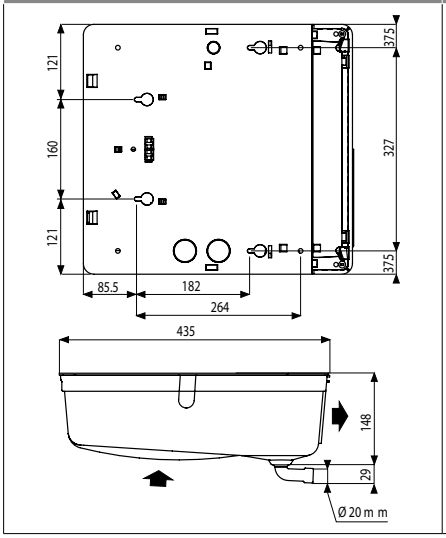
CONDITIONS	REFRIGERANT	MF ...	1	2	3	4
SC2 (1)	**R449A**	**W**	**300**	**380**	**740**	**790**

CONDITIONS	REFRIGERANT	MFE ...	1	2	3	4
SC3 (1)	**R449A**	**W**	**220**	**270**	**520**	**600**
SC4 (1)	**R449A**	**W**	**140**	**200**	**380**	**400**
Electric defrost	230V/1/50 Hz	**W**	140	160	330	330
		A	0.64	0.73	1.5	1.5

			1	2	3	4
Surface area		m^2	1,1	1,4	2,3	2,8
Circuit volume		dm^3	0,2	0,3	0,5	0,6
Fan (3) 230V/1/50-60Hz Ø 200 mm 1,500 rpm	Airflow	m^3/h	270	250	460	430
	Air throw (2)	**m**	3,5	3,0	6,0	5,5
		Num.	1	1	2	2
	230 V/1/50 Hz	**W total**	38	38	76	76
		A total	0,33	0,33	0,66	0,66
Connections	Inlet	**Ø ODF**	5/16"	5/16"	5/16"	5/16"
	Outlet	**Ø ODF**	5/16"	5/16"	5/16"	5/16"
Net Weight		**kg**	4	4	8	9

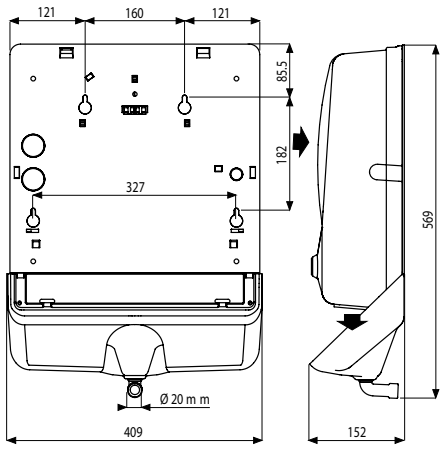
(1) Standard conditions:
SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
SC3 / -18 °C (air inlet temp.) / -25 °C (evaporating temp.) / DT1 = 7K
SC4 / -25 °C (air inlet temp.) / -31 °C (evaporating temp.) / DT1 = 6K
(2) When the section of the room allows air circulation.
(3) Closed motor, class B, protected by its impedance, long-lasting lubrication.

MF 1-2 | MFE 1-2

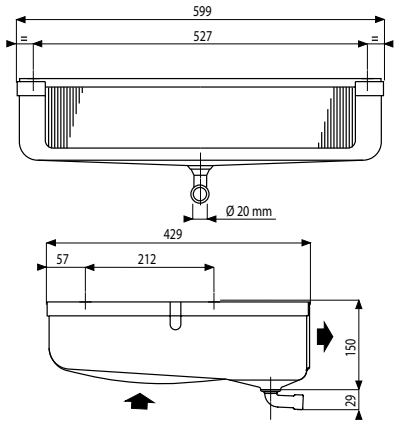


MF 1-2 - EMA kit

Wall mounting with **EMA** kit for **MF 1-2**



MF 3-4 | MFE 3-4



MR | MRE

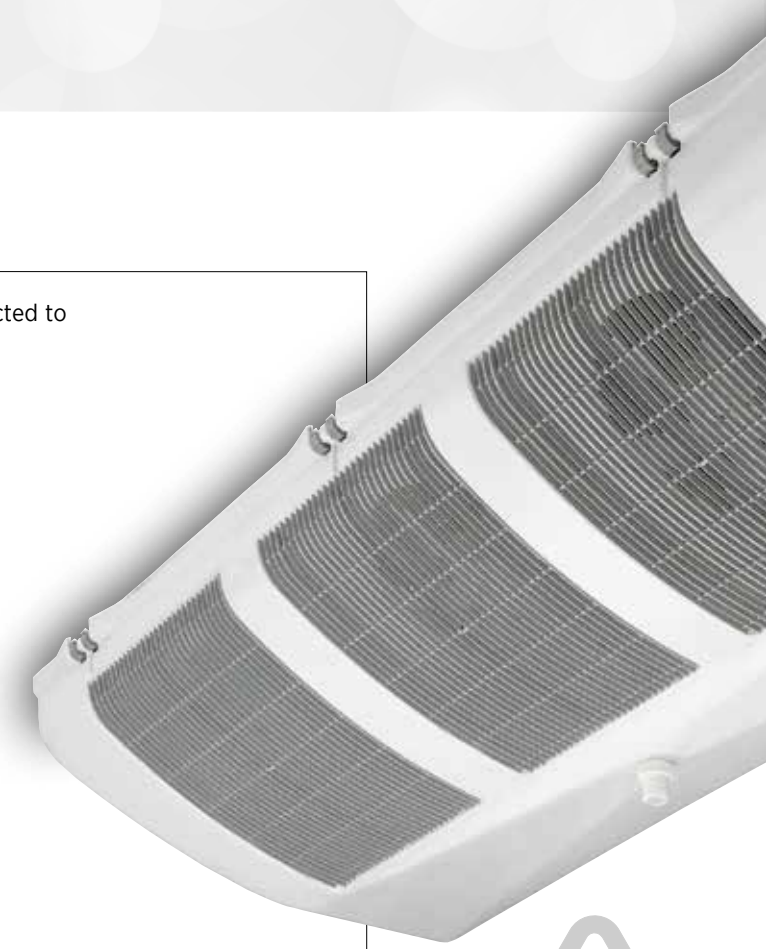
Ceiling unit cooler
Commercial range

CO2 60 bar
CO2 80 bar
A2L
HFC
W GLYCOL

ABS

320 - 2760 W

Compact and **streamlined design** for perfect integration in small spaces and optimization of the storage area.
Easy installation and **maintenance** with easy access to all components.
Harmonious integration into the environment thanks to the aesthetic design.
Robust unit with polyester coil protection.



VENTILATION

Motor fan 50-60 Hz, Ø 200 mm, protected by a closed casing, connected to terminal box (except MR 75/65).

CASING

Recyclable ABS casing, guaranteeing:
High resistance to thermal and mechanical shocks.
Perfect hygiene as a result of the rounded corners that eliminate retention zones.
No sharp edges for increased safety.

OPTIONS	
DMP	Expansion valve fitted
EEC	Unit cooler completely assembled in the factory with: - Expansion valve - Solenoid valve - Pipework equipped with a ball valve (role of the siphon performed by the manifold).

Save time during installation by choosing these additional options.

DEFROST

Electric heater in a notch under the coil, helping to dissipate heat evenly.
Recovery of condensate through an intermediate drain pan before evacuation to the large condensate connection (Ø 1" G).

OPTIONS	
THD (MRE)	For cold rooms at negative temperatures, single pole reversing thermostat for defrost end at +12 °C (±3 K) and delayed ventilation restart at +2 °C (±3 K). Supplied with a probe and a fixing bracket.
E1U	Light electric defrost.
E1K	Light electric defrost. KIT TO INSTALL

tA1	+10	+2	-5	-10	-25°C
	MR ... R / L	+E1K | E1U			
				MRE ... E / C	

Select your coil treatment to extend your unit cooler's lifespan! Contact us.

COILS

Aluminium fins with 4.23 or 6.35 mm spacing and sinusoidal profile.
Combined with copper tubes with a grooved internal structure, the coils are very efficient and compact.
Completely covered with polyester protection as standard.
Versions available:
- Multi-refrigerant HFCs/A2L,
- CO2 (60 or 80 bar).
- WCO (glycol water, coolant).

MR(A) 75(B) R(C)

(A) **MR** = positive temperature without defrost
MRE = negative temperature with defrost
(B) Model
(C) Fin spacing: **R** = 4.23 mm (positive) **E** = 4.23 mm (negative)
L = 6.35 mm (positive) **C** = 6.35 mm (negative)

The MR | MRE is available with CO_2, A2Ls, HFCs and glycol water. For more information, please consult our software.

MR | MRE

4.23 mm

CONDITIONS	REFRIGERANTS	MR ... R	75	110	135	160	180	210	270
SC2 (1)	CO_2 - 60 bar (2)	W	600	930	1240	1440	1740	1970	2630
	R449A	W	700	1060	1340	1600	1920	2170	2760
Connections HFCs	Inlet (3)	Ø ODF	1/2" 12mm	1/2" 12mm	1/2" 12mm	D 1/2" *	D 1/2" *	D 1/2" *	D 1/2" *
	Outlet (3)	Ø ODF	3/8" 10mm	3/8" 10mm	3/8" 10mm	1/2" 12mm	1/2" 12mm	1/2" 12mm	1/2" 12mm

CONDITIONS	REFRIGERANTS	MRE ... E	75	110	135	160	180	210	270
SC3 (1)	CO_2 - 60 bar (2)	W	510	800	1060	1210	1470	1650	2190
	R449A	W	520	770	1050	1190	1420	1660	2230
SC4 (1)	CO_2 - 60 bar (2)	W	410	640	860	990	1200	1350	1790
	R449A	W	410	580	830	940	1120	1310	1780
Connections HFCs	Inlet (3)	Ø ODF	1/2" 12mm	1/2" 12mm	D 1/2" *	D 1/2" *	D 1/2" *	D 1/2" *	D 1/2" *
	Outlet (3)	Ø ODF	3/8" 10mm	3/8" 10mm	1/2" 12mm	1/2" 12mm	1/2" 12mm	5/8" 16mm	3/4" 18mm

			75	110	135	160	180	210	270
Surface area		m^2	3,4	3,7	6,1	6,0	8,0	10,1	13,4
Circuit volume		dm^3	0,6	0,6	1,0	1,0	1,4	1,7	2,3
Airflow		m^3/h	290	650	580	880	880	870	1160
Fan 230V/1/50-60Hz 1,500 rpm	Air throw (4)	m	3,0	3,7	3,5	4,1	4,1	4,0	4,5
	Ø 200 mm	Nb	1	2	2	3	3	3	4
	230 V/1/50 Hz	W max	38	76	76	114	114	114	152
		A max (5)	0,24	0,48	0,48	0,72	0,72	0,72	0,96
Electric defr. MR > option E1K MRE > standard	230 V/1/50 Hz	Nb	1	1	1	1	1	1	1
		W	400	440	730	960	960	1200	1600
		A	1,8	2,0	3,3	4,4	4,4	5,5	7,3
Net weight		kg	3	8	10	15	15	15	20

(1) Standard conditions:
SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
SC3 / -18 °C (air inlet temp.) / -25 °C (evaporating temp.) / DT1 = 7K
SC4 / -25 °C (air inlet temp.) / -31 °C (evaporating temp.) / DT1 = 6K
(2) Operating pressure - Specific coil - Connection diameters to be defined when ordering.
(3) ODF: female to receive the tube of the same diameter.
(4) Residual air speed: 0.25 m/s.
(5) Adjustment of overload protection. For air temperatures "ti" other than +20 °C, multiply the intensities by the ratio 293/(273 + "ti") to obtain the approximate value of the intensity after the room has been brought up to temperature.

* Distributor: Ø 1/2" male to solder. Connecting piece supplied for solder expansion valve Ø 12 mm.

MRE(A) 65(B) C(C)

(A) **MR** = positive temperature without defrost
MRE = negative temperature with defrost
(B) Model
(C) Fin spacing: **R** = 4.23 mm (positive) **E** = 4.23 mm (negative)
L = 6.35 mm (positive) **C** = 6.35 mm (negative)

The MR | MRE is available with CO2, A2Ls, HFCs and glycol water. For more information, please consult our software.

MR | MRE

6.35 mm

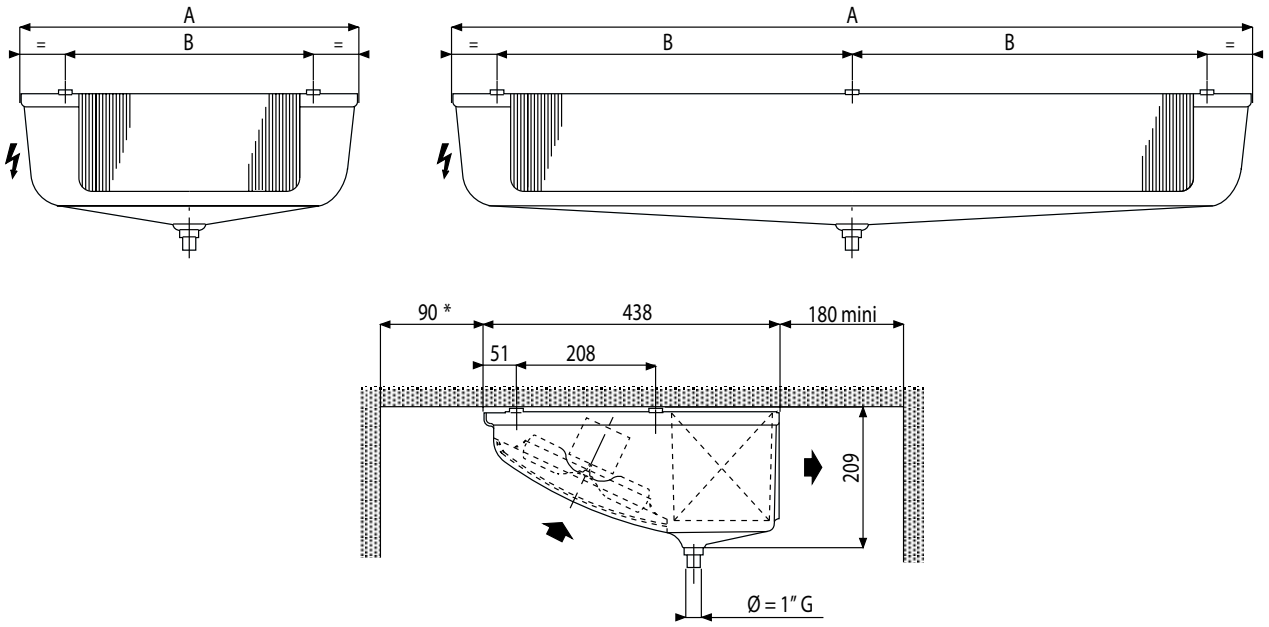
CONDITIONS	REFRIGERANTS	MR ... L	65	100	120	140	170	190	250
SC2 (1)	CO2 - 60 bar (2)	W	540	780	1130	1290	1560	1780	2390
	CO2 - 80 bar	W	470	680	1010	-	1430	1640	2220
	R449A	W	620	880	1230	1380	1690	1940	2550
Connections HFCs	Inlet (3)	Ø ODF	1/2" 12mm	1/2" 12mm	1/2" 12mm	D 1/2" *	D 1/2" *	D 1/2" *	D 1/2" *
	Outlet (3)	Ø ODF	3/8" 10mm	3/8" 10mm	3/8" 10mm	1/2" 12mm	1/2" 12mm	1/2" 12mm	1/2" 12mm

CONDITIONS	REFRIGERANTS	MRE ... C	65	100	120	140	170	190	250
SC3 (1)	CO2 - 60 bar (2)	W	460	670	960	1090	1320	1500	2000
	CO2 - 80 bar	W	410	590	870	-	1210	1390	1850
	R449A	W	450	610	900	1040	1260	1460	1950
SC4 (1)	CO2 - 60 bar (2)	W	370	540	780	890	1080	1230	1640
	CO2 - 80 bar	W	320	450	690	-	970	1120	1480
	R449A	W	350	490	720	820	1000	1170	1590
Connections HFCs	Inlet (3)	Ø ODF	1/2" 12mm	1/2" 12mm	D 1/2" *	D 1/2" *	D 1/2" *	D 1/2" *	D 1/2" *
	Outlet (3)	Ø ODF	3/8" 10mm	3/8" 10mm	1/2" 12mm	1/2" 12mm	1/2" 12mm	5/8" 16mm	3/4" 18mm

			65	100	120	140	170	190	250
Surface area		m^2	2,3	2,5	4,2	4,2	5,6	7,0	9,3
Circuit volume		dm^3	0,6	0,6	1,0	1,0	1,4	1,7	2,3
Airflow		m^3/h	310	660	620	960	960	930	1240
Fan 230 V/1/50-60 Hz 1,500 rpm	Air throw (4)	m	3,0	3,7	3,5	4,1	4,1	4,0	4,5
	Ø 200 mm	Nb	1	2	2	3	3	3	4
	230 V/1/50 Hz	W max	38	76	76	114	114	114	152
		A max (5)	0,24	0,48	0,48	0,72	0,72	0,72	0,96
Electric defr. MR > option E1K MRE > standard	230 V/1/50 Hz	Nb	1	1	1	1	1	1	1
		W	400	440	730	960	960	1200	1600
		A	1,8	2,0	3,3	4,4	4,4	5,5	7,3
Net weight (6)		kg	3	8	10	15	15	15	20

(1) Standard conditions:
SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
SC3 / -18 °C (air inlet temp.) / -25 °C (evaporating temp.) / DT1 = 7K
SC4 / -25 °C (air inlet temp.) / -31 °C (evaporating temp.) / DT1 = 6K
(2) Operating pressure - Specific coil - Connection diameters to be defined when ordering.
(3) ODF: female to receive the tube of the same diameter.
(4) Residual air speed: 0.25 m/s.
(5) Adjustment of overload protection. For air temperatures "ti" other than +20 °C, multiply the intensities by the ratio 293/(273 + "ti") to obtain the approximate value of the intensity after the room has been brought up to temperature.
(6) Standard net weight - Specific net weight for CO2 80 bar: contact us.

* Distributor: Ø 1/2" male to solder. Connecting piece supplied for solder expansion valve Ø 12 mm.



* 90 min.: Casing swivel - 160 min.: Casing removal

MR

MR ... R

4.23 mm

		75	110	135	160	180	210	270
A	**mm**	514	784	784	1174	1174	1174	1504
B	**mm**	326	596	596	493	493	493	658

MR ... L

6.35 mm

		65	100	120	140	170	190	250
A	**mm**	514	784	784	1174	1174	1174	1504
B	**mm**	326	596	596	493	493	493	658

MRE

MRE ... E

4.23 mm

		75	110	135	160	180	210	270
A	**mm**	514	784	784	1174	1174	1174	1504
B	**mm**	326	596	596	493	493	493	658

MRE ... C

6.35 mm

		65	100	120	140	170	190	250
A	**mm**	514	784	784	1174	1174	1174	1504
B	**mm**	326	596	596	493	493	493	658

MH | MHE

Ceiling unit cooler
Commercial range

1310 - 7390 W

Compact and **streamlined** design for perfect integration in small spaces and optimization of the storage area.
Excellent air distribution.
Easy access to all components **facilitating maintenance operations**.

CASING

Mounted on hinges, allowing easy access to all components (coil, motor fans, defrost heaters, connections, etc.).
Easy to clean: sheet steel, fully pre-painted white.

VENTILATION

Factory-wired axial motor fans (Ø 300 mm).

OPTIONS	
MM6	Motor fan 230V/1/60. CONTACT US
EC3	EC motor (electronic commutation) 2 speeds.

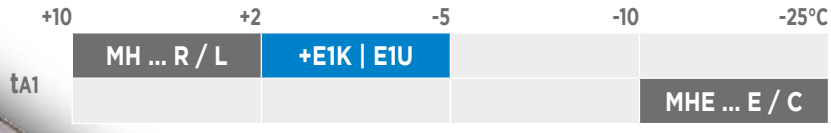
Save time during installation by choosing these additional options.

OPTIONS	
DMP	Expansion valve fitted.
EEC	Unit cooler completely assembled in the factory with: - Expansion valve. - Solenoid valve. - Pipework equipped with a ball valve (role of the siphon performed by the manifold).

DEFROST

Shielded electrical heaters housed in notches on the front and back of the coil.
Homogeneous heat dissipation thanks to an electrical heater under the coil.
Defrost heaters connected in the factory, on the terminal box (MHE range only).
Power supply 230V single phase for models MHE 320E, 380E and 250C, 310C.
400V three-phase power supply for models MHE 460E, 550E, 640E, 770E and 370C, 450C, 510C, 630C.

OPTIONS	
THD (MHE)	For cold rooms at negative temperatures, single pole reversing thermostat for defrost end at +12 °C (±3 K) and delayed ventilation restart at +2 °C (±3 K). Supplied with a probe and a fixing bracket.
E1U	Light electric defrost.
E1K	Light electric defrost (kit to install).



Select your coil treatment to extend your unit cooler's lifespan! Contact us.

COILS

Aluminium fins with 4.23 or 6.35 mm spacing.
Combined with copper tubes with a grooved internal structure, the coils are very efficient and compact.
Versions available:
- Multi-refrigerant HFCs.
- CO_2 (60 bar).
- WCO (glycol water, coolant). CONTACT US

MH(A) 320(B) R(C)

(A) **MH** = positive temperature without defrost
MHE = negative temperature with defrost
(B) Model
(C)Fin spacing: **R** = 4.23 mm (positive) **E** = 4.23 mm (negative)
L = 6.35 mm (positive) **C** = 6.35 mm (negative)

The MH | MHE is available with CO_2, A2Ls, HFCs and glycol water. For more information, please consult our software.

MH | MHE — 4,23 mm

CONDITIONS	REFRIGERANTS	MH ... R	320	380	460	550	640	770
SC2 (1)	CO_2 - **60 bar** (2)	**W**	**3210**	**3670**	**4770**	**5300**	**6130**	**7390**
	R449A	**W**	**2860**	**3420**	**4460**	**5230**	**6040**	**7060**

CONDITIONS	REFRIGERANTS	MHE ... E	320	380	460	550	640	770
SC3 (1)	CO_2 - **60 bar** (2)	**W**	**2670**	**3000**	**3840**	**4160**	**5370**	**6070**
	R449A	**W**	**2090**	**2480**	**2970**	**3820**	**4180**	**5040**
SC4 (1)	CO_2 - **60 bar** (2)	**W**	**2150**	**2430**	**3080**	**3310**	**4340**	**4920**
	R449A	**W**	**1630**	**1970**	**2270**	**3020**	**3290**	**3990**

			320	380	460	550	640	770
Surface area		**m^2**	9,7	13,0	14,6	19,5	19,6	26,2
Circuit volume		**dm^3**	1,7	2,2	2,5	3,3	3,4	4,5
airflow		**m^3/h**	2290	2070	3430	3110	4600	4160
Fan 230 V/1/50-60 Hz 1,500 rpm	Air throw (3)	**m**	16	16	16	16	16	16
	Ø 300 mm	**Nb**	2	2	3	3	4	4
	230 V/1/50 Hz	**W max**	234	234	351	351	468	468
		A max (4)	1,54	1,54	2,31	2,31	3,08	3,08
Electric defrost MH > **E1K** optional MHE > standard *	Coil	**Nb**	2	2	2	2	2	2
	Drain pan	**Nb**	1	1	1	1	1	1
		W total	1800	1800	2700	2700	3600	3600
	230 V/1/50Hz	**A total**	7,83 *	7,83 *	11,7	11,7	15,7	15,7
	400 V/3/50Hz	**A total**	-	-	3,9 *	3,9 *	5,2 *	5,2 *
Connections HFCs	Inlet (5)	**Ø ODF**	D 1/2"	D 1/2"	D 1/2"	D 1/2"	D 5/8"	D 5/8"
	Outlet (5)	**Ø ODF**	5/8"	5/8"	3/4"	3/4"	7/8"	7/8"
Net weight		**kg**	34	35	46	48	54	57

(1) Standard conditions:
SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
SC3 / -18 °C (air inlet temp.) / -25 °C (evaporating temp.) / DT1 = 7K
SC4 / -25 °C (air inlet temp.) / -31 °C (evaporating temp.) / DT1 = 6K
(2) Operating pressure - Specific coil - Connection diameters to be defined when ordering.
(3) Residual air speed: 0.25 m/s.
(4) Adjustment of overload protection. For air temperatures "ti" other than +20 °C, multiply the intensities by the ratio 293/(273 + "ti") to obtain the approximate value of the intensity after the room has been brought up to temperature.
(5) ODF: female to receive the tube of the same diameter.

* Factory assembled (MHE)

MHE(A) 250(B) C(C)

(A) **MH** = positive temperature without defrost
MHE = negative temperature with defrost
(B) Model
(C) Fin spacing: **R** = 4.23 mm (positive) **E** = 4.23 mm (negative)
L = 6.35 mm (positive) **C** = 6.35 mm (negative)

The MH | MHE is available with CO_2, A2Ls, HFCs and glycol water. For more information, please consult our software.

MH | MHE

6,35 mm

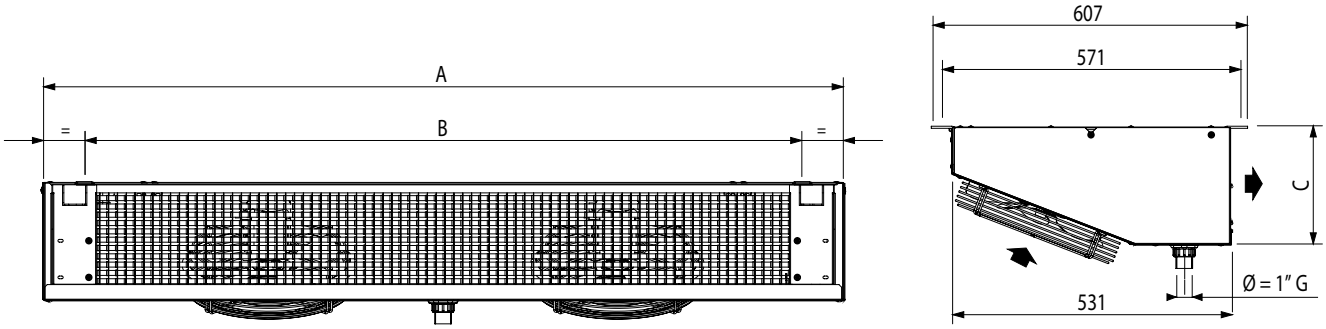
CONDITIONS	REFRIGERANTS	MH ... L	250	310	370	450	510	630
SC2 (1)	CO_2 - **60 bar** (2)	W	2780	3320	4190	4860	5440	6690
	R449A	W	2280	2810	3520	4300	4670	5160

CONDITIONS	REFRIGERANTS	MHE ... C	250	310	370	450	510	630
SC3 (1)	CO_2 - **60 bar** (2)	W	2320	2740	3400	3850	4680	5520
	R449A	W	1650	2000	2450	3020	3360	4150
SC4 (1)	CO_2 - **60 bar** (2)	W	1880	2230	2750	3080	3800	4490
	R449A	W	1310	1590	1920	2500	2670	3320

			250	310	370	450	510	630
Surface area		m^2	6,7	9,0	10,1	13,5	13,6	18,1
Circuit volume		dm^3	1,7	2,2	2,5	3,3	3,4	4,5
airflow		m^3/h	2450	2290	3680	3430	4920	4590
Fan 230 V/1/50-60 Hz 1,500 rpm	Air throw (3)	m	17	17	17	17	17	17
	Ø 300 mm	Nb	2	2	3	3	4	4
	230 V/1/50 Hz	W max	234	234	351	351	468	468
		A max (4)	1,54	1,54	2,31	2,31	3,08	3,08
Electric defrost MH > **E1K** optional MHE > standard *	Coil	Nb	2	2	2	2	2	2
	Drain pan	Nb	1	1	1	1	1	1
		W total	1800	1800	2700	2700	3600	3600
	230 V/1/50Hz	A total	7,83 *	7,83 *	11,7	11,7	15,7	15,7
	400 V/3/50Hz	A total	-	-	3,9 *	3,9 *	5,2 *	5,2 *
Connections HFCs	Inlet (5)	Ø ODF	D 1/2"	D 1/2"	D 1/2"	D 1/2"	D 5/8"	D 5/8"
	Outlet (5)	Ø ODF	5/8"	5/8"	3/4"	3/4"	7/8"	7/8"
Net weight		kg	34	35	46	48	54	57

* Factory assembled (MHE)

(1) Standard conditions:
SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
SC3 / -18 °C (air inlet temp.) / -25 °C (evaporating temp.) / DT1 = 7K
SC4 / -25 °C (air inlet temp.) / -31 °C (evaporating temp.) / DT1 = 6K
(2) Operating pressure - Specific coil - Connection diameters to be defined when ordering.
(3) Residual air speed: 0.25 m/s.
(4) Adjustment of overload protection. For air temperatures "ti" other than +20 °C, multiply the intensities by the ratio 293/(273 + "ti") to obtain the approximate value of the intensity after the room has been brought up to temperature.
(5) ODF: female to receive the tube of the same diameter.



MH

MH ... R

4.23 mm

		320	380	460	550	640	770
A	**mm**	1531	1531	2197	2197	2499	2499
B	**mm**	1372	1372	2038	2038	2340	2340
C	**mm**	228	228	228	228	260	260

MH ... L

6.35 mm

		250	310	370	450	510	630
A	**mm**	1531	1531	2197	2197	2499	2499
B	**mm**	1372	1372	2038	2038	2340	2340
C	**mm**	228	228	228	228	260	260

MHE

MHE ... E

4.23 mm

		320	380	460	550	640	770
A	**mm**	1531	1531	2197	2197	2499	2499
B	**mm**	1372	1372	2038	2038	2340	2340
C	**mm**	228	228	228	228	260	260

MHE ... C

6.35 mm

		250	310	370	450	510	630
A	**mm**	1531	1531	2197	2197	2499	2499
B	**mm**	1372	1372	2038	2038	2340	2340
C	**mm**	228	228	228	228	260	260

KRS | KRS-W

Refrigeration cassette
Commercial range

1.6 - 9.4 kW

Quiet operation ensured by anti-vibration mounts on the motor.
Adjustable airflow to ensure **occupant comfort**.
Access to all components **facilitating maintenance operations**.
Easy cleaning as a result of easy access to the washable filter, clipped on the diffuser.

ROOM

Made from galvanized sheet steel with double insulation: inside by a polystyrene shell, and outside by a thick layer of closed-cell insulating foam.

ABS

VENTILATION

6-speed centrifugal motor fans with high static pressure and high airflow performance.
3 speeds are factory pre-wired on each model. Three other intermediate speeds can be selected depending on the power and noise level requirements (see table on next page).
Single-phase motors, 230V, 50Hz, class B, with internal thermal protection.
The turbine blades, specially designed for this range, ensure high airflow rates while guaranteeing low noise levels.

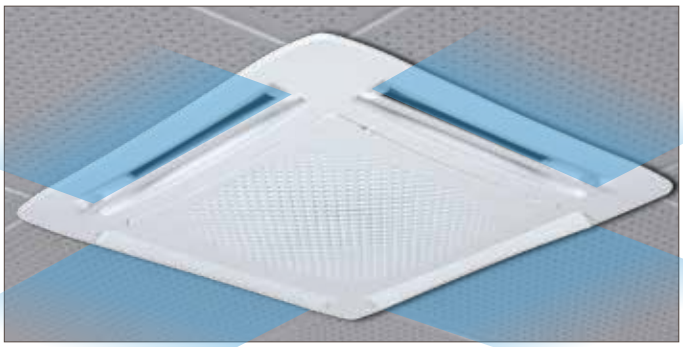
COILS

Aluminium fins crimped on copper tubes:

Aluminium fins	KRS	KRS-W
Spacing	2,81 mm	2.1 mm (KRS-W1) 1.81 mm (KRS-W2)
Epoxy protection	yes	no
Grooved copper tubes	yes	no

DIFFUSER

Aesthetically pleasing, it adapts perfectly to all environments.
Made of smooth white ABS and lined on the inside with insulation to prevent condensation.
Manually adjustable damper system that provides air diffusion in four directions.



CONDENSATE LIFT PUMP

Cassette delivered with a drain pan, a condensate lift pump and a float for starting the pump.
The maximum lift height is 650 mm from the pump level.

INSTALLATION | MAINTENANCE

1.

2.

3.

4.

KRS(A)-W(B) 1(C)

(A) Silent refrigeration cassette
(B) **KRS** = direct expansion **KRS-W** = glycol water
(C) **KRS 1** = room 600 x 600 mm
KRS 2 = room 800 x 800 mm

The KRS | KRS-W is available with HFCs and glycol water. For more information, please consult our software.

KRS | KRS-W

4,23 mm

CONDITIONS	REFRIGERANT		KRS 1						KRS 2					
Motor speeds*			V1	-	-	V2	-	V3	V1	-	V2	-	-	V3
			ST	NC	NC	ST	NC	ST	ST	NC	ST	NC	NC	ST
		rpm.	400	540	600	700	820	1120	280	360	470	560	670	750
DTM = 10K tA1 = 8°C (1)	R449A	kW	1,7	2,2	2,3	2,6	3,0	3,5	3,7	4,4	5,4	6,0	6,5	7,0
DTM = 12K tA1 = 12°C (1)	R449A	kW	2,4	2,8	3,1	3,6	3,9	4,6	4,8	5,7	7,1	7,9	8,8	9,4
Connections	inlet	Ø OD	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
	outlet	Ø OD	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"

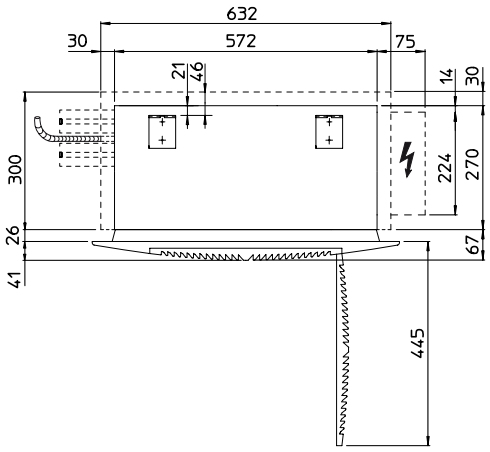
CONDITIONS	REFRIGERANT		KRS-W 1						KRS-W 2					
Motor speeds*			V1	-	-	V2	-	V3	V1	-	V2	-	-	V3
			ST	NC	NC	ST	NC	ST	ST	NC	ST	NC	NC	ST
		rpm.	400	540	600	700	820	1120	280	360	470	560	670	750
DTM = 10K tA1 = 12°C (2)	W	kW	1,6	1,9	2,1	2,3	2,5	2,8	3,3	3,9	4,5	4,8	5,1	5,2
Connections	inlet	Ø OD	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
	outlet	Ø OD	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"

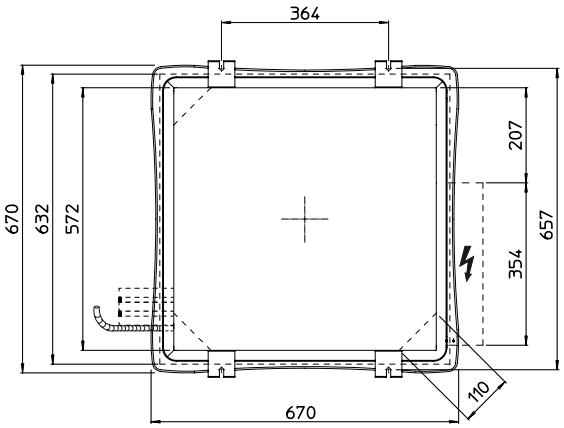
			KRS 1 | KRS-W 1						KRS 2 | KRS-W 2					
Airflow		m^3/h	300	410	450	530	620	850	700	900	1200	1400	1680	1880
Circuit tube vol.		dm^3	2	2	2	2	2	2	4	4	4	4	4	4
Acoustics	Lp (3)	dB(A)	26	33	35	38	42	49	25	31	37	41	44	47
	Lw(A)	dB(A)	40	47	49	52	56	63	39	45	51	55	58	61
Net weight	room + diffuser	kg	28	28	28	28	28	28	46	46	46	46	46	46

* **ST**: Motor speeds pre-wired as standard
NC: Intermediate motor speeds not wired (to choose a speed that is not wired, have the installer make the connection > see installation instructions).
KRS 1 : 1 fan 230V/1/50 Hz - 100 W max - 0.45 A max
KRS 2 : 1 fan 230V/1/50 Hz - 170 W max - 0.74 A max

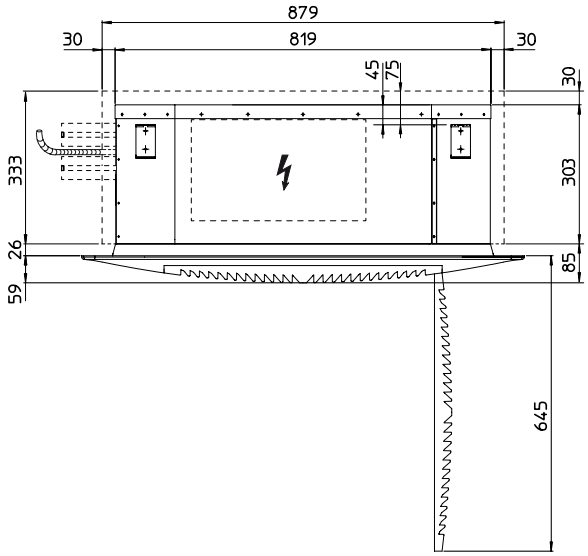
(1) **DX - Q0m - HR = 85%** - Evaporating temperature must not be below -3 °C.
(2) Glycol water regime (ethylene glycol 30%) = 0 / +4 °C.
(3) Sound pressure in dB(A) measured at 2 m, hemispherical measuring surface, in a free field over a reflecting plane, given as an indication only.

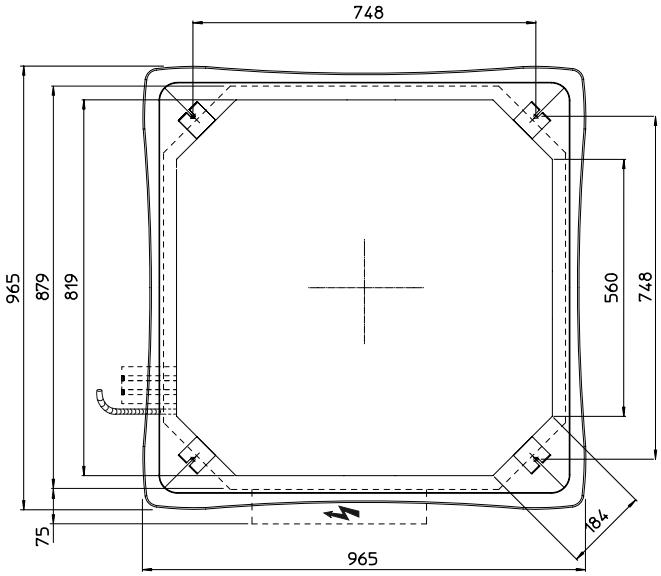
KRS | KRS-W 1





KRS | KRS-W 2





NOTES

NTA

Dual-discharge unit cooler
Commercial range

CO2 60 bar | CO2 80 bar | A2L | HFC | W GLYCOL

ABS

0.9 - 22 kW

Easy to install and use as a result of its compactness, making it perfect for small spaces.
Easy access to all components for **easy cleaning** and **maintenance**.
Comfort: the directional airflow, the low air speed and the low noise level of the NTA help to create a comfortable environment.
Energy efficiency: with optimized performance, new refrigerants and the EC option, the NTA leads to real energy savings..

COILS

Aluminium fins with 3.5 or 6 mm spacing.
Combined with grooved copper tubes, the coils are very efficient and compact.
Multi-refrigerant CO2, A2L and HFCs compatible coils.
Versions available:
- Multi-refrigerant HFCs/A2L,
- CO_2 (60 or 80 bar).
- WCO (glycol water, coolant).

Select your coil treatment to extend your unit cooler's lifespan! Contact us.

VENTILATION

Bell mounted electric fans Ø 350 mm.
The AC motor fans are of the closed, single-phase capacitor type, 230V/1/50-60Hz, IP 55, class F, with internal thermal protection.
Available in version (depending on acceptable noise level):
- HS (high speed) = 1,250 rpm. - 105 W max. / 0.5 A max.
- LS (low speed) = 850 rpm. - 74 W max. / 0.45 A max.

OPTIONS	
EC4	EC motor fan - 4 speeds - 230V/1/50-60Hz.
EC3	EC motor fan - 2 "boost" speeds (max air flow) - 230V/1/50-60Hz.
RCS	Blower heater. KIT TO INSTALL

CASING

Removable grille and retractable casing made from recyclable ABS.
High resistance to thermal shock.
Horizontal condensate drain plug 1"G with screw thread.
Perfect hygiene as a result of the rounded corners that eliminate retention areas and through the use of protected steel and stainless steel fastening screws.
Internal drain pans avoiding condensation on the casing.
Increased safety due to the absence of sharp edges.

OPTIONS	
AFD	Deflectors to direct the air flow

ABS

DEFROST

OPTIONS	
E1U	Light electric defrost.
E1K	Light electric defrost. KIT TO INSTALL
2TH	**TH 5709L**: single-pole reversing thermostat for defrost end at +12 °C (±3 °C) and delayed ventilation restart at +2 °C (±3 °C) (kit to install). **THS 5708L**: single-pole safety thermostat for heaters at +24 °C (±3 °C), recommended with electric defrost (kit to install).

OPTIONS	
PRK	Condensate lift pump. KIT TO INSTALL
EXT	Electronic expansion valve fitted. CONTACT US
DMP	Expansion valve fitted.
EEC	Complete factory-assembled unit cooler: - Expansion valve. - Solenoid valve. - Pipework equipped with a fitted ball valve (role of the siphon performed by the manifold).
KVP	Pressostatic valve kit. KIT TO INSTALL

Save time during installation by choosing these additional options.

NTA M(A) OR(B) 1(C)-AC(D)

(A) **M** = multi-refrigerant - **C** = CO2 - **W** = glycol water
(B) Fin spacing: **R** = 3.5 mm - **L** = 6 mm
(C) Number of fans
(D) **AC** = AC motor - **EC4** = EC motor - **EC3** = EC+ motor

The NTA is available with CO_2, A2Ls, HFCs and glycol water. For more information, please consult our software.

NTA M .. R .. -AC / NTA C .. R .. -AC

3.5 mm

CONDITIONS	REFRIGERANTS		NTA ... -AC	0R 1	1R 1	2R 2	3R 2	4R 2	5R 3	6R 3	7R 4	8R 4	9R 5
SC1 (1)	CO_2 - 60 bar (2)	HS*	kW	2,7	4,0	5,3	7,1	8,3	10,7	13,1	15,7	16,3	18,6
		LS*	kW	2,1	3,0	4,2	5,5	6,2	8,3	9,9	12,2	12,6	14,8
	R449A	HS*	kW	2,4	3,8	5,0	6,7	7,9	9,9	12,9	16,1	17,7	21,6
		LS*	kW	2,0	2,9	4,1	5,3	6,1	7,9	9,8	12,3	13,3	16,3
SC2 (1)	CO_2 - 60 bar (2)	HS*	kW	1,9	2,8	3,7	4,9	5,7	7,4	8,9	10,6	10,9	12,1
		LS*	kW	1,5	2,1	2,9	3,8	4,4	5,8	6,8	8,3	8,5	9,8
	R449A	HS*	kW	1,6	2,5	3,3	4,5	5,3	6,5	8,4	10,7	11,8	14,2
		LS*	kW	1,3	2,0	2,7	3,6	4,1	5,3	6,5	8,3	8,9	10,9

			NTA ... -AC	0R 1	1R 1	2R 2	3R 2	4R 2	5R 3	6R 3	7R 4	8R 4	9R 5
Sound pressure	Lp 4 m (3)	HS*	dB(A)	38	38	41	41	41	42	42	44	44	44
		LS*	dB(A)	29	29	32	32	32	34	34	35	35	36
Fan Ø 350 mm			Nb	1	1	2	2	2	3	3	4	4	5
	Airflow	HS*	m^3/h	1630	1460	3250	3070	2920	4610	4180	5840	5570	6960
		LS*	m^3/h	1120	980	2230	2090	1970	3130	2810	3940	3740	4680
	Air throw (4)	HS*	m	2 x 14	2 x 12	2 x 14	2 x 13	2 x 12	2 x 13	2 x 12	2 x 12	2 x 12	2 x 12
		LS*	m	2 x 10	2 x 10	2 x 10	2 x 10	2 x 10	2 x 10	2 x 9	2 x 10	2 x 9	2 x 9
	230 V/1 50-60 Hz (5)	HS*	W max	125	125	250	250	250	375	375	500	500	625
		LS*	W max	74	74	148	148	148	222	222	296	296	370
		HS*	A max	0,60	0,60	1,20	1,20	1,20	1,80	1,80	2,40	2,40	3,00
		LS*	A max	0,52	0,52	1,04	1,04	1,04	1,56	1,56	2,08	2,08	2,60
Surface area			m^2	5,8	11,6	11,6	17,4	23,2	26,2	43,6	46,5	58,1	72,7
Circuit volume			dm^3	0,8	1,7	1,7	2,5	3,3	3,8	6,3	6,7	8,4	10,5
Electric defrost E1K (6)	230 V/1/50 Hz		W total	350	800	800	1200	1600	1800	3000	3200	3200	3440
			A total	1,5	3,5	3,5	5,2	7,0	7,8	13,0	13,9	13,9	14,8
Connections HFCs	Inlet (7)		Ø	D 3/8"	D 1/2"	D 1/2"	D 1/2"	D 1/2"	D 1/2"	D 1/2"	D 1/2"	D 5/8"	D 5/8"
	Outlet (7)		Ø ODF	3/8"	5/8"	5/8"	5/8"	5/8"	5/8"	7/8"	7/8"	1"1/8	1"1/8
Net weight			kg	18	20	27	30	32	42	49	59	63	77

* **HS** = high speed: 1,250 rpm / **LS** = low speed: 850 rpm

(1) Standard conditions:
SC1 : +10 °C (air inlet temp.) / 0 °C (evaporating temp.) / DT1 = 10K
SC2 : 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
(2) Operating pressure - Specific coil - Connection diameters to be defined when ordering.
(3) Average sound pressure level in dB(A) calculated at 4 m, level with the blades, in a free field over a reflecting plane, given as an indication only.
(4) Residual air speed: 0.25 m/s.
(5) Adjustment of overload protection. For air temperatures "ti" other than +20 °C, multiply the intensities by the ratio 293/(273 + "ti") to obtain the approximate value of the intensity after heating the room.
(6) Electric defrost option.
(7) Distributor: male to solder - ODF: female to receive the tube of the same diameter.
(8) Standard net weight - Specific net weight For CO_2 80 bar: contact us.

NTA M(A) 0L(B) 1(C)-AC(D)

(A) **M** = multi-refrigerant - **C** = CO2 - **W** = glycol water
(B) Fin spacing: **R** = 3.5 mm - **L** = 6 mm
(C) Number of fans
(D) **AC** = AC motor - **EC4** = EC motor - **EC3** = EC+ motor

The NTA is available with CO_2, A2Ls, HFCs and glycol water. For more information, please consult our software.

NTA M .. L .. -AC / NTA C .. L .. -AC

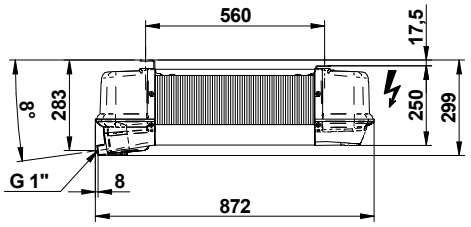
6 mm

CONDITIONS	REFRIGERANTS	NTA ... -AC		0L 1	1L 1	2L 2	3L 2	4L 2	5L 3	6L 3	7L 4	9L 5
SC1 (1)	CO_2 - 60 bar (2)	HS*	kW	2,0	3,7	5,6	6,8	7,7	10,2	11,4	14,4	16,9
		LS*	kW	1,6	2,8	4,4	5,2	5,8	7,9	8,7	11,3	13,5
	CO_2 - 80 bar (2)	HS*	kW	1,7	3,3	4,9	6,1	-	-	-	-	-
		LS*	kW	1,4	2,5	3,9	4,7	-	-	-	-	-
	R449A	HS*	kW	1,7	3,3	4,7	5,9	6,8	8,7	10,3	13,3	17,3
		LS*	kW	1,4	2,6	3,8	4,7	5,4	7,0	8,0	10,4	13,4
SC2 (1)	CO_2 - 60 bar (2)	HS*	kW	1,4	2,6	3,9	4,7	5,3	7,0	7,8	9,7	11,1
		LS*	kW	1,1	2,0	3,0	3,6	4,1	5,5	6,0	7,7	9,1
	CO_2 - 80 bar (2)	HS*	kW	1,2	2,3	3,4	4,3	-	-	-	-	-
		LS*	kW	1,0	1,8	2,7	3,3	-	-	-	-	-
	R449A	HS*	kW	1,1	2,2	3,1	4,0	4,6	5,8	6,9	8,8	11,7
		LS*	kW	0,9	1,8	2,5	3,2	3,6	4,7	5,5	7,0	9,2

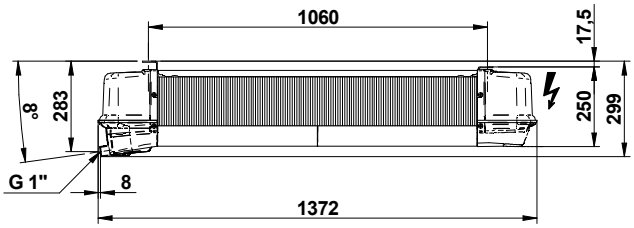
		NTA ... -AC		0L 1	1L 1	2L 2	3L 2	4L 2	5L 3	6L 3	7L 4	9L 5
Sound pressure	Lp 4 m (3)	HS*	dB(A)	38	38	41	41	41	42	42	44	44
		LS*	dB(A)	29	29	32	32	32	34	34	35	36
Fan Ø 350 mm			Nb	1	1	2	2	2	3	3	4	5
	Airflow	HS*	m^3/h	1700	1500	3250	3120	3010	4680	4520	6020	7520
		LS*	m^3/h	1170	1020	2230	2130	2040	3190	3060	4080	5100
	Air throw (4)	HS*	m	2 x 15	2 x 13	2 x 14	2 x 13	2 x 13	2 x 13	2 x 13	2 x 13	2 x 13
		LS*	m	2 x 11	2 x 10	2 x 10	2 x 10	2 x 10	2 x 10	2 x 10	2 x 10	2 x 10
	230 V/1 50-60 Hz (5)	HS*	W max	125	125	250	250	250	375	375	500	625
		LS*	W max	74	74	148	148	148	222	222	296	370
		HS*	A max	0,60	0,60	1,20	1,20	1,20	1,80	1,80	2,40	3,00
		LS*	A max	0,52	0,52	1,04	1,04	1,04	1,56	1,56	2,08	2,60
Surface area			m^2	3,5	8,9	10,6	14,2	17,7	21,3	26,6	35,5	44,3
Circuit volume			dm^3	0,8	2,1	2,5	3,3	4,2	5,0	6,3	8,4	10,5
Electric defrost E1K (6)	230 V/1/50 Hz		W total	350	800	800	1200	1600	1800	3000	3200	3440
			A total	1,5	3,5	3,5	5,2	7,0	7,8	13,0	13,9	14,8
Connections HFCs	Inlet (7)		Ø	D 3/8"	D 1/2"	D 1/2"	D 1/2"	D 1/2"	D 1/2"	D 1/2"	D 1/2"	D 5/8"
	Outlet (7)		Ø ODF	3/8"	5/8"	5/8"	5/8"	5/8"	5/8"	7/8"	7/8"	1"1/8
Net weight (8)			kg	18	20	29	31	33	44	47	60	73

* **HS** = high speed: 1250 rpm / **LS** = low speed: 850 rpm

(1) Standard conditions:
SC1 : +10 °C (air inlet temp.) / 0 °C (evaporating temp.) / DT1 = 10K
SC2 : 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
(2) Operating pressure - Specific coil - Connection diameters to be defined when ordering.
(3) Average sound pressure level in dB(A) calculated at 4 m, level with the blades, in a free field over a reflecting plane, given as an indication only.
(4) Residual air speed: 0.25 m/s.
(5) Adjustment of overload protection. For air temperatures "ti" other than +20 °C, multiply the intensities by the ratio 293/(273 + "ti") to obtain the approximate value of the intensity after heating the room.
(6) Electric defrost option.
(7) Distributor: male to solder - ODF: female to receive the tube of the same diameter.
(8) Standard net weight - Specific net weight For CO_2 80 bar: contact us.



NTA ... 1



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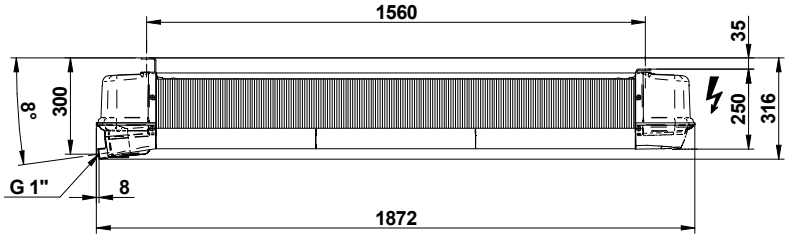

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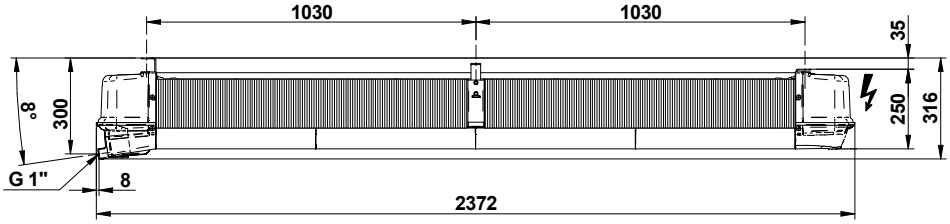

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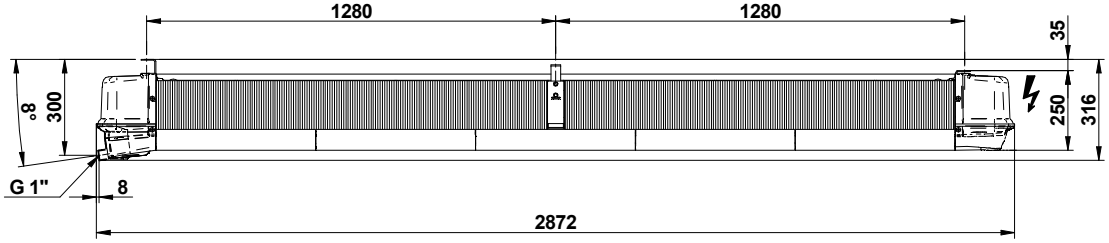
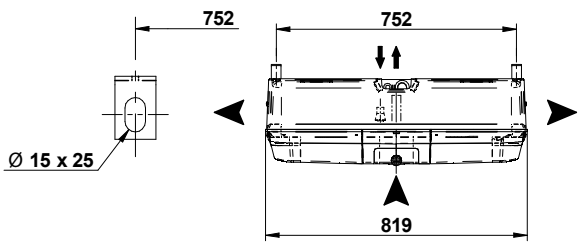
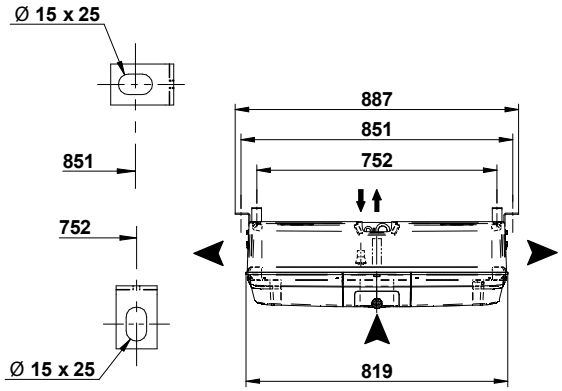


NTA ... 5



NTA ... 1 / NTA ... 2 / NTA ... 3



NTA ... 4 / NTA ... 5

3C-A

Cubic unit cooler
Commercial and semi-industrial range

CO2 60 bar | CO2 80 bar | A2L | HFC | W GLYCOL

0.7 - 38 kW

Easy maintenance; the design of the 3C-A allows quick access to all components.

The optimized coil design, high-efficiency motors, and the ability to select an EC motor (optional) allow an improved energy efficiency.

Versatile product with components, design and options that adapt to all your needs.

CASING

Easy to clean: galvanized sheet steel, fully pre-painted white.
Pivoting, hinged drain pan with rounded corners, made from pre-painted aluminium, eliminating retention zones and ensuring complete safety through the absence of sharp corners.

OPTIONS	
PEI	White painted casing.
CIN	316L stainless steel casing.
EIS	Insulated drain pan.
DPK	Intermediate drain pan (3C-A .. R/L). KIT TO INSTALL

VENTILATION

High-performance, factory-wired motors.
Axial motor fans not requiring systematic maintenance:

	models	temp.	fan	voltage	freq.	IP	class
Ø 300 mm 4P - 1,320 rpm	**3C-A 3XXX R/L**	**+**	Standard	**230V/1**	**50/60Hz**	**44**	**B**
	3C-A 3XXX E/C	**-**	Standard **+ RFA**	**230V/1**	**50/60Hz**	**44**	**B**
Ø 450 mm* 4P/6P - 1,320/1,070 rpm	**3C-A 4XXX R/L**	**+**	Standard	**400V/3**	**50Hz**	**54**	**F**
	3C-A 4XXX E/C	**-**	Standard	**400V/3**	**50Hz**	**54**	**F**

* Two-speed motor fans, high-speed wired (Δ) by default.

OPTIONS	
M23	Motor fan 230-400V/3/50Hz (Ø 450 mm). CONTACT US
MM5	Motor fan 230V/1/50Hz (Ø 450 mm).
M60	Motor fan 230-400V/3/60Hz (Ø 450 mm).
MP5	Air pressure motor fan (available pressure 50 Pa - Ø 450 mm).
RFA	Shell / airflow straightener (streamer). KIT TO INSTALL
VGT	RFA + fixing parts for textile duct (Ø 450 mm). KIT TO INSTALL
VPM	VGT + flexible defrost cuff. (Ø 450 mm). KIT TO INSTALL
EC2	EC motor (electronic commutation) 0-10V - Ø 450 mm.
EC3	EC motor (electronic commutation) 2 speeds - Ø 300 mm.

Save time during installation by choosing these additional options.

OPTIONS	
EXT	Electronic expansion valve fitted.
DMP	Expansion valve fitted.
EVL	DMP + Solenoid valve fitted.
EEC	EVL + copper siphon equipped with a ball valve delivered not fitted.

COILS

Aluminium fins with 4 or 6 mm spacing.
Combined with grooved copper tubes, the coils are very efficient and compact.
Versions available:
- Multi-refrigerant HFCs and A2L,
- CO_2 (60 or 80 bar),
- WCO (glycol water, coolant).

OPTION	
PGI	Stainless steel guard plate.

Select your coil treatment to extend your unit cooler's lifespan! Contact us.

DEFROST

Two defrost modes for the coil: electric (230V/1, 230V/3 or 430V/3), hot gases.
Quick defrosting of the condensate pan thanks to a heater under the intermediate drain pan.

OPTIONS	
HG1	Hot gases (coil: hot gases, drain pan: electric heaters).
HGT	Hot gases (coil and drain pan). CONTACT US
RVU	Shell defrost heaters.
RVK	Shell defrost heaters. KIT TO INSTALL
RVB	Shell defrost heaters + terminal box.
RCS	Blower heater. KIT TO INSTALL - 1,300 W or 2,300 W (Ø 300 mm). - 2,500 W or 4,500 W (Ø 450 mm).
HDA	Suction defrost hood. KIT TO INSTALL
2TH	Defrost and safety thermostats (5709L + 5708L).
THD	Defrost thermostat (5709L).
THS	Safety thermostat (5708L).
E1U	Light electric defrost.
E1K	Light electric defrost. KIT TO INSTALL
E3K	Full electric defrost. KIT TO INSTALL

tA1	+10	+2	-5	-10	-25°C
	3C-A .. R/L	+E1K / E1U			+E3K
					3C-A .. E/C

			Number of heaters					
			Ø 300 mm			Ø 450 mm		
Electric defrost level	Models	Kit | Option	Models	Coil	Drain pan	Models	Coil	Drain pan
Light	3C-A .. R/L	E1K | E1U	3xxx *except 3142*	3 *2*	-	All	3	-
Full	3C-A .. L	E3K	3xx3	3	1	4xxx *except 4263*	8 *5*	1 *1*
	3C-A .. C	standard	3xx4 3xx5	3 4	1 1			
	3C-A .. R	E3K	3xx2	2	1	4xxx *except 4263*	8 *5*	1 *1*
	3C-A .. E	standard	3xx3	3	1			

3C-A 3(A)1(B)42(C)-R(D)

(A) Fan diameter: **3** = Ø 300 mm - **4** = Ø 450 mm
(3) Number of fans
(C) Model
(D) Fin spacing: **R** = 4 mm (positive) **E** = 4 mm (negative)
L = 6 mm (positive) **C** = 6 mm (negative)

The 3C-A is available with CO_2, A2Ls, HFCs and glycol water. For more information, please consult our software.

3C-A (1/2)

4 mm

CONDITIONS	REFRIGERANTS	3C-A ... -R	3142	3143	3145	3155	3165	3243	3245	3343	3344	3345	4165	4166	3354
SC2 (1)	CO_2 - 60 bar (2)	kW	1,6	2,2	2,8	3,2	3,6	4,4	5,6	6,6	7,7	8,2	8,7	9,4	8,8
	R449A	kW	1,4	2,0	2,5	3,0	3,4	4,0	5,3	6,2	7,3	8,0	7,9	8,2	8,6

CONDITIONS	REFRIGERANTS	3C-A ....-E	3142	3143	3145	3155	3165	3243	3245	3343	3344	3345	4165	4166	3354
SC3 (1)	CO_2 - 60 bar (2)	kW	1,3	1,8	2,3	2,6	2,9	3,5	4,6	5,5	6,2	6,6	7,2	7,7	7,0
	R449A	kW	1,0	1,3	1,9	2,2	2,5	2,9	4,0	4,5	5,4	5,8	5,7	6,2	6,4
SC4 (1)	CO_2 - 60 bar (2)	kW	1,1	1,5	1,8	2,1	2,3	2,8	3,7	4,4	5,0	5,3	5,8	6,2	5,6
	R449A	kW	0,7	1,0	1,4	1,7	2,0	2,3	3,1	3,5	4,2	4,6	4,3	4,9	5,1

			3142	3143	3145	3155	3165	3243	3245	3343	3344	3345	4165	4166	3354
Surface area		m^2	4,1	6,2	10,3	12,8	15,4	12,3	20,5	18,5	24,6	30,8	23,1	27,7	30,8
Circuit volume		dm^3	0,7	1,0	1,7	2,1	2,5	2,0	3,3	3,0	4,0	5,0	3,8	4,5	5,0
Airflow		m^3/h	1600	1480	1270	1420	1530	2950	2530	4420	4100	3800	5160	4130	4510
Air throw (3)		m	15	14	12	14	15	17	15	20	19	18	25	24	21
Fan 1,350 rpm		Nb	1	1	1	1	1	2	2	3	3	3	1	1	3
		Ø	300	300	300	300	300	300	300	300	300	300	450	450	300
	230 V/1/50-60 Hz	W max	72	72	72	72	72	144	144	216	216	216	-	-	216
		A max (4)	0,32	0,32	0,32	0,32	0,32	0,64	0,64	0,96	0,96	0,96	-	-	0,96
	400 V/3/50 Hz	W max	-	-	-	-	-	-	-	-	-	-	500	500	-
		A max (4)	-	-	-	-	-	-	-	-	-	-	1,00	1,00	-
3C-A ... -R Electric defrost E1K (5)		Nb	2	3	3	3	3	3	3	3	3	3	3	3	3
		W Total	580	870	870	1080	1290	1740	1740	2580	2580	2580	1080	1080	3240
	230 V/1/50 Hz	A Total	2,5	3,8	3,8	4,7	5,6	7,6	7,6	11,2	11,2	11,2	4,7	4,7	14,1
	400 V/3/50 Hz	A Total	-	-	-	-	-	-	-	-	-	-	-	-	-
3C-A ... -E Standard electric defrost	Coil + drain pan	Nb	2 + 1	3 + 1	5 + 1	5 + 1	5 + 1	3 + 1	5 + 1	3 + 1	5 + 1	5 + 1	8 + 1	8 + 1	5 + 1
		W Total	870	1160	1740	2160	2580	2320	3480	3440	5160	5160	3240	3240	6480
	230 V/1/50 Hz	A Total	3,8	5,1	7,6	9,4	11,2	10,1	15,1	15,0	-	-	14,1	14,1	-
	400 V/3/50 Hz	A Total	-	-	-	-	-	-	-	-	7,4	7,4	-	-	9,4
Connections HFCs	Inlet (6)	Ø OD	3/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	7/8"	7/8"	5/8"
	Outlet (6)	Ø ODF	3/8"	5/8"	5/8"	5/8"	5/8"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"
Net weight		kg	17	18	20	22	24	28	32	41	43	45	41	43	48

(1) Standard conditions:
SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
SC3 / -18 °C (air inlet temp.) / -25 °C (evaporating temp.) / DT1 = 7K
SC4 / -25 °C (air inlet temp.) / -31 °C (evaporating temp.) / DT1 = 6K
(2) Operating pressure - Specific coil - Connection diameters to be defined when ordering.
(3) Residual air speed: 0.25 m/s.
(4) Adjustment of overload protection. For air temperatures "ti" other than +20 °C, multiply the intensities by the ratio 293/(273 + "ti") to obtain the approximate value of the intensity after the room has been brought up to temperature.
(5) Electric defrost option.
(6) OD: Male connection - ODF: female to receive the tube of the same diameter.

3C-A 3(A)4(B)44(C)-R(D)

(A) Fan diameter: **3** = Ø 300 mm - **4** = Ø 450 mm
(3) Number of fans
(C) Model
(D) Fin spacing: **R** = 4 mm (positive) **E** = 4 mm (negative)
L = 6 mm (positive) **C** = 6 mm (negative)

The 3C-A is available with CO2, A2Ls, HFCs and glycol water. For more information, please consult our software.

3C-A (2/2) — 4 mm

CONDITIONS	REFRIGERANTS	3C-A ... -R	3444	3445	4263	3455	3545	4264	4265	4266	4364	4366	4386	4466
SC2 (1)	CO2 - 60 bar (2)	kW	10,3	11,1	12,7	12,8	13,6	15,4	17,4	18,9	23,1	28,0	34,8	37,7
	R449A	kW	9,7	10,9	11,2	12,5	13,7	13,8	15,9	17,6	20,9	26,1	33,2	34,4

CONDITIONS	REFRIGERANTS	3C-A ... -E	3444	3445	4263	3455	3545	4264	4265	4266	4364	4366	4386	4466
SC3 (1)	CO2 - 60 bar (2)	kW	8,4	9,0	10,3	10,1	10,7	12,6	14,3	15,6	18,9	22,3	28,3	30,5
	R449A	kW	7,2	8,0	8,0	9,3	9,6	9,7	11,6	12,8	15,0	19,8	23,7	25,6
SC4 (1)	CO2 - 60 bar (2)	kW	6,8	7,3	8,2	8,2	8,6	10,1	11,5	12,6	15,2	17,8	22,8	24,5
	R449A	kW	5,7	6,4	6,2	7,2	7,6	7,5	9,0	10,1	11,6	15,5	18,5	19,9

			3444	3445	4263	3455	3545	4264	4265	4266	4364	4366	4386	4466
Surface area		m^2	32,8	41,1	27,7	51,3	51,3	37,0	46,2	55,4	55,4	83,1	110,9	110,9
Circuit volume		dm^3	5,4	6,7	4,5	8,4	8,4	6,0	7,5	9,0	9,0	13,5	18,1	18,1
Airflow		m^3/h	5460	5070	11740	5700	6340	10990	10310	8270	16480	12400	16780	16540
Air throw (3)		m	22	21	32	23	24	31	30	29	35	33	35	36
Fan 1,350 rpm		Nb	4	4	2	4	5	2	2	2	3	3	3	4
		Ø	300	300	450	300	300	450	450	450	450	450	450	450
	230 V/1/50-60 Hz	W max	288	288	-	288	360	-	-	-	-	-	-	-
		A max (4)	1,28	1,28	-	1,28	1,60	-	-	-	-	-	-	-
	400 V/3/50 Hz	W max	-	-	1000	-	-	1000	1000	1000	1500	1500	1500	2000
		A max (4)	-	-	2,00	-	-	2,00	2,00	2,00	3,00	3,00	3,00	4,00
3C-A ... -R Electric defrost E1K (5)		Nb	3	3	3	3	3	3	3	3	3	3	3	3
		W Total	3450	3450	2160	4320	4320	2160	2160	2160	3240	3240	3960	3960
	230 V/1/50 Hz	A Total	15,0	15,0	9,4	-	-	9,4	9,4	9,4	14,1	14,1	-	-
	400 V/3/50 Hz	A Total	-	-	-	6,2	6,2	-	-	-	-	-	5,7	5,7
3C-A ... -E Electric defrost standard	Coil + drain pan	Nb	5 + 1	5 + 1	5 + 1	5 + 1	5 + 1	8 + 1	8 + 1	8 + 1	8 + 1	8 + 1	8 + 1	8 + 1
		W Total	6900	6900	4320	8640	8640	6480	6480	6480	9720	9720	11880	11880
	230 V/1/50 Hz	A Total	-	-	-	-	-	-	-	-	-	-	-	-
	400 V/3/50 Hz	A Total	10,0	10,0	6,3	12,5	12,5	9,4	9,4	9,4	14,0	14,0	17,1	17,1
Connections HFCs	Inlet (6)	Ø OD	5/8"	7/8"	7/8"	7/8"	7/8"	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"3/8	1"3/8
	Outlet (6)	Ø ODF	7/8"	1"1/8	1"3/8	1"3/8	1"3/8	1"3/8	1"3/8	1"3/8	1"5/8	1"5/8	2"1/8	2"1/8
Net weight		kg	54	57	58	65	70	62	65	69	84	95	114	123

(1) Standard conditions:
SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
SC3 / -18 °C (air inlet temp.) / -25 °C (evaporating temp.) / DT1 = 7K
SC4 / -25 °C (air inlet temp.) / -31 °C (evaporating temp.) / DT1 = 6K
(2) Operating pressure - Specific coil - Connection diameters to be defined when ordering.
(3) Residual air speed: 0.25 m/s.
(4) Adjustment of overload protection. For air temperatures "ti" other than +20 °C, multiply the intensities by the ratio 293/(273 + "ti") to obtain the approximate value of the intensity after the room has been brought up to temperature.
(5) Electric defrost option.
(6) OD: Male connection - ODF: female to receive the tube of the same diameter.

3C-A 3(A)1(B)43(C)-L(D)

(A) Fan diameter: **3** = Ø 300 mm - **4** = Ø 450 mm
(3) Number of fans
(C) Model
(D) Fin spacing: **R** = 4 mm (positive) **E** = 4 mm (negative)
L = 6 mm (positive) **C** = 6 mm (negative)

The 3C-A is available with CO_2, A2Ls, HFCs and glycol water. For more information, please consult our software.

3C-A (1/2) — 6 mm

CONDITIONS	REFRIGERANTS	3C-A ... -L	3143	3144	3145	3155	3165	3243	3244	3245	3343	3344	4165	3345	3354
SC2 (1)	CO_2 - 60 bar (2)	kW	1,9	2,3	2,5	2,9	3,2	3,8	4,4	4,8	5,4	6,8	7,7	7,6	7,8
	CO_2 - 80 bar (2)	kW	1,6	2,0	2,3	2,7	3,0	3,4	4,0	4,3	4,9	6,2	-	6,9	-
	R449A	kW	1,6	2,0	2,3	2,7	3,2	3,4	4,2	4,8	5,6	6,4	6,9	7,3	7,5

CONDITIONS	REFRIGERANTS	3C-A ... -C	3143	3144	3145	3155	3165	3243	3244	3245	3343	3344	4165	3345	3354
SC3 (1)	CO_2 - 60 bar (2)	kW	1,5	1,9	2,1	2,4	2,6	3,1	3,5	3,7	4,2	5,6	6,4	6,1	6,3
	CO_2 - 80 bar (2)	kW	1,4	1,7	1,9	2,2	2,4	2,8	3,1	3,3	3,7	5,1	-	5,5	-
	R449A	kW	1,1	1,4	1,7	2,0	2,3	2,4	2,9	3,5	3,8	4,5	4,9	5,2	5,4
SC4 (1)	CO_2 - 60 bar (2)	kW	1,2	1,5	1,7	1,9	2,1	2,5	2,8	2,9	3,3	4,5	5,2	4,9	5,1
	CO_2 - 80 bar (2)	kW	1,1	1,3	1,5	1,7	1,9	2,2	2,4	2,6	2,9	4,0	-	4,4	-
	R449A	kW	0,9	1,1	1,3	1,5	1,8	1,9	2,3	2,8	3,0	3,6	3,8	4,1	4,2

			3143	3144	3145	3155	3165	3243	3244	3245	3343	3344	4165	3345	3354
Surface area		m^2	4,3	5,7	7,1	8,9	10,6	8,5	11,4	14,2	12,8	17,0	16,0	21,3	21,3
Circuit volume		dm^3	1,0	1,3	1,7	2,1	2,5	2,0	2,7	3,3	3,0	4,0	3,8	5,0	5,0
Airflow		m^3/h	1560	1470	1380	1520	1600	3120	2940	2770	4680	4410	5560	4150	4740
Air throw (3)		m	15	14	13	15	16	18	17	16	21	20	26	19	22
Fan 1,350 rpm		Nb	1	1	1	1	1	2	2	2	3	3	1	3	3
		Ø	300	300	300	300	300	300	300	300	300	300	450	300	300
	230 V/1/50-60 Hz	W max	72	72	72	72	72	144	144	144	216	216	-	216	216
		A max (4)	0,32	0,32	0,32	0,32	0,32	0,64	0,64	0,64	0,96	0,96	-	0,96	0,96
	400 V/3/50 Hz	W max	-	-	-	-	-	-	-	-	-	-	500	-	-
		A max (4)	-	-	-	-	-	-	-	-	-	-	1,00	-	-
3C-A ... -R Electric defrost E1K (5)		Nb	3	3	3	3	3	3	3	3	3	3	3	3	3
		W Total	870	870	870	1080	1290	1740	1740	1740	2580	2580	1080	2580	3240
	230 V/1/50 Hz	A Total	3,8	3,8	3,8	4,7	5,6	7,6	7,6	7,6	11,2	11,2	4,7	11,2	14,1
	400 V/3/50 Hz	A Total	-	-	-	-	-	-	-	-	-	-	-	-	-
3C-A ... -E Standard electric defrost	Coil + drain pan	Nb	3 + 1	3 + 1	4 + 1	4 + 1	4 + 1	3 + 1	3 + 1	4 + 1	3 + 1	3 + 1	8 + 1	4 + 1	3 + 1
		W Total	1160	1160	1450	1800	2150	2320	2320	2900	3440	3440	3240	4300	4320
	230 V/1/50 Hz	A Total	5,1	5,1	6,3	7,8	9,3	10,1	10,1	12,6	15,0	15,0	14,1	-	-
	400 V/3/50 Hz	A Total	-	-	-	-	-	-	-	-	-	-	-	6,2	6,2
Connections HFCs	Inlet (6)	Ø OD	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"
	Outlet (6)	Ø ODF	5/8"	5/8"	5/8"	5/8"	5/8"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"
Net weight		kg	18	19	19	21	23	28	29	30	39	41	39	43	46

(1) Standard conditions:
SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
SC3 / -18 °C (air inlet temp.) / -25 °C (evaporating temp.) / DT1 = 7K
SC4 / -25 °C (air inlet temp.) / -31 °C (evaporating temp.) / DT1 = 6K
(2) Operating pressure - Specific coil - Connection diameters to be defined when ordering.
(3) Residual air speed: 0.25 m/s.
(4) Adjustment of overload protection. For air temperatures "ti" other than +20 °C, multiply the intensities by the ratio 293/(273 + "ti") to obtain the approximate value of the intensity after the room has been brought up to temperature.
(5) Electric defrost option.
(6) OD: Male connection - ODF: female to receive the tube of the same diameter.

3C-A 4(A) 1(B) 66(C) -L(D)

(A) Fan diameter: **3** = Ø 300 mm - **4** = Ø 450 mm
(3) Number of fans
(C) Model
(D) Fin spacing: **R** = 4 mm (positive) **E** = 4 mm (negative)
L = 6 mm (positive) **C** = 6 mm (negative)

The 3C-A is available with CO2, A2Ls, HFCs and glycol water. For more information, please consult our software.

3C-A (2/2)

6 mm

CONDITIONS	REFRIGERANTS	3C-A ... -L	4166	3444	3445	4263	3455	3545	4264	4266	4364	4366	4386	4466
SC2 (1)	CO2 - 60 bar (2)	kW	8,6	9,1	10,2	10,9	11,7	12,6	13,5	17,3	20,3	25,7	31,6	34,6
	CO2 - 80 bar (2)	kW	-	-	-	-	-	-	-	-	-	-	-	-
	R449A	kW	7,9	8,5	9,8	9,8	11,4	12,6	12,2	16,0	18,6	24,3	29,5	32,0

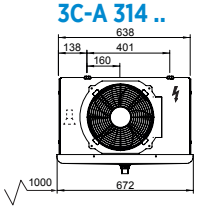
CONDITIONS	REFRIGERANTS	3C-A ... -C	4166	3444	3445	4263	3455	3545	4264	4266	4364	4366	4386	4466
SC3 (1)	CO2 - 60 bar (2)	kW	7,1	7,5	8,3	8,9	9,4	10,0	11,1	14,3	16,6	20,7	25,8	28,1
	CO2 - 80 bar (2)	kW	-	-	-	-	-	-	-	-	-	-	-	-
	R449A	kW	5,4	6,0	7,2	6,8	8,1	8,8	8,4	11,2	12,8	17,0	20,7	22,1
SC4 (1)	CO2 - 60 bar (2)	kW	5,7	6,1	6,7	7,2	7,6	8,1	8,9	11,5	13,4	16,6	20,8	22,6
	CO2 - 80 bar (2)	kW	-	-	-	-	-	-	-	-	-	-	-	-
	R449A	kW	4,2	4,7	5,7	5,3	6,5	6,9	6,5	8,8	9,9	13,5	16,2	17,2

			4166	3444	3445	4263	3455	3545	4264	4266	4364	4366	4386	4466
Surface area		m^2	19,2	22,7	28,4	19,2	35,5	35,5	25,5	38,3	38,3	57,5	76,6	76,6
Circuit volume		dm^3	4,5	5,4	6,7	4,5	8,4	8,4	6,0	9,0	9,0	13,5	18,1	18,1
Airflow		m^3/h	5290	5880	5540	12300	6060	6920	11690	10580	17540	15870	17780	21160
Air throw (3)		m	25	23	22	33	24	25	32	31	36	34	36	37
Fan 1,350 rpm		Nb	1	4	4	2	4	5	2	2	3	3	3	4
		Ø	450	300	300	450	300	300	450	450	450	450	450	450
	230 V/1/50-60 Hz	W max	-	288	288	-	288	360	-	-	-	-	-	-
		A max (4)	-	1,28	1,28	-	1,28	1,60	-	-	-	-	-	-
	400 V/3/50 Hz	W max	500	-	-	1000	-	-	1000	1000	1500	1500	1500	2000
		A max (4)	1,00	-	-	2,00	-	-	2,00	2,00	3,00	3,00	3,00	4,00
3C-A ... -R Electric defrost E1K (5)		Nb	3	3	3	3	3	3	3	3	3	3	3	3
		W Total	1080	3450	3450	2160	4320	4320	2160	2160	3240	3240	3960	3960
	230 V/1/50 Hz	A Total	4,7	15,0	15,0	9,4	-	-	9,4	9,4	14,1	14,1	-	-
	400 V/3/50 Hz	A Total	-	-	-	-	6,2	6,2	-	-	-	-	5,7	5,7
3C-A ... -E Electric defrost standard	Coil + drain pan	Nb	8 + 1	3 + 1	4 + 1	5 + 1	4 + 1	4 + 1	8 + 1	8 + 1	8 + 1	8 + 1	8 + 1	8 + 1
		W Total	3240	4600	5750	4320	7200	7200	6480	6480	9720	9720	11880	11880
	230 V/1/50 Hz	A Total	14,1	-	-	-	-	-	-	-	-	-	-	-
	400 V/3/50 Hz	A Total	-	6,6	8,3	6,3	10,4	10,4	9,4	9,4	14,0	14,0	17,1	17,1
Connections HFCs	Inlet (6)	Ø OD	7/8"	5/8"	7/8"	7/8"	7/8"	7/8"	1"1/8	1"1/8	1"1/8	1"1/8	1"3/8	1"3/8
	Outlet (6)	Ø ODF	7/8"	7/8"	1"1/8	1"3/8	1"3/8	1"3/8	1"3/8	1"3/8	1"5/8	1"5/8	2"1/8	2"1/8
Net weight		kg	41	52	55	56	62	66	59	65	81	90	108	117

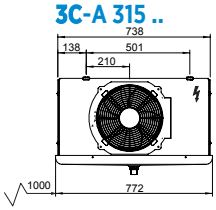
(1) Standard conditions:
SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
SC3 / -18 °C (air inlet temp.) / -25 °C (evaporating temp.) / DT1 = 7K
SC4 / -25 °C (air inlet temp.) / -31 °C (evaporating temp.) / DT1 = 6K
(2) Operating pressure - Specific coil - Connection diameters to be defined when ordering.
(3) Residual air speed: 0.25 m/s.
(4) Adjustment of overload protection. For air temperatures "ti" other than +20 °C, multiply the intensities by the ratio 293/(273 + "ti") to obtain the approximate value of the intensity after the room has been brought up to temperature.
(5) Electric defrost option.
(6) OD: Male connection - ODF: female to receive the tube of the same diameter.

3C-A | Ø 300 mm

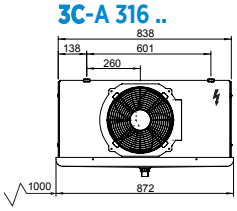
3C-A 314 ..



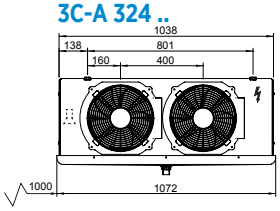
3C-A 315 ..



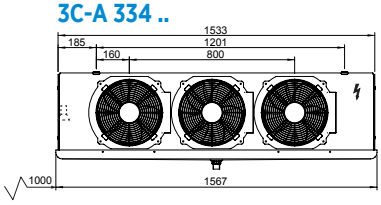
3C-A 316 ..



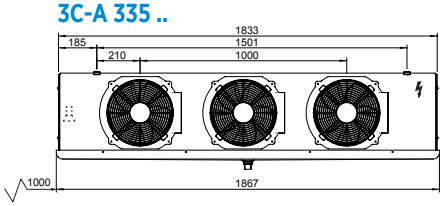
3C-A 324 ..



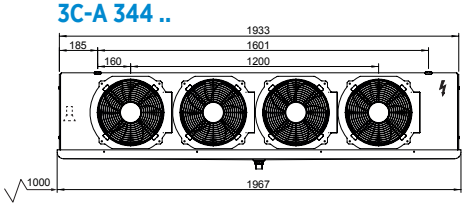
3C-A 334 ..



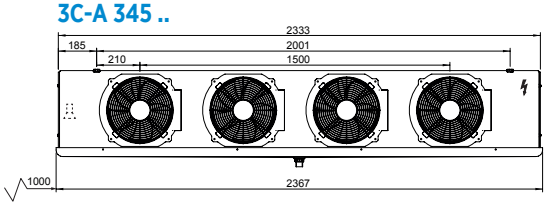
3C-A 335 ..



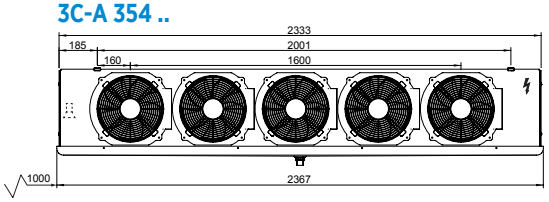
3C-A 344 ..



3C-A 345 ..

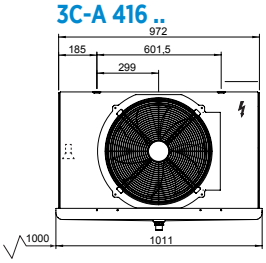


3C-A 354 ..

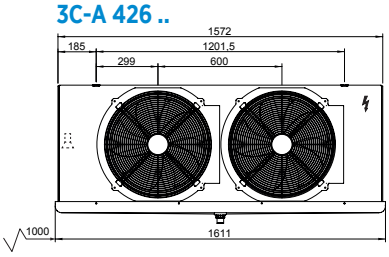


3C-A | Ø 450 mm

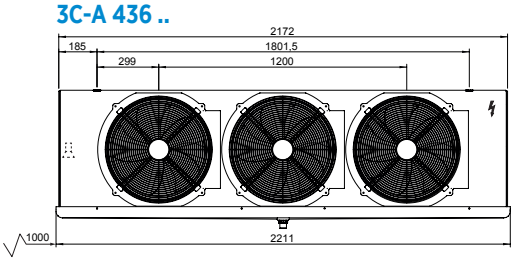
3C-A 416 ..



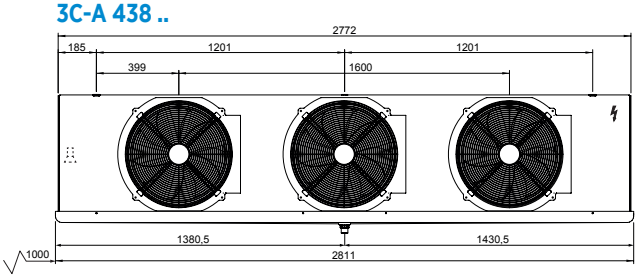
3C-A 426 ..



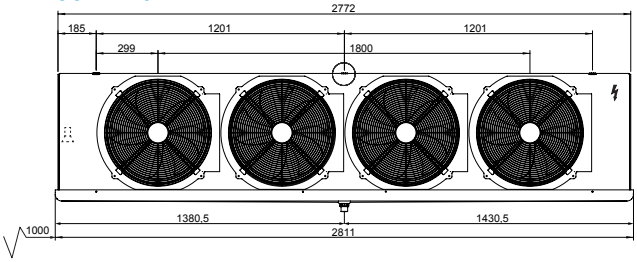
3C-A 436 ..

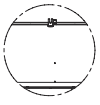


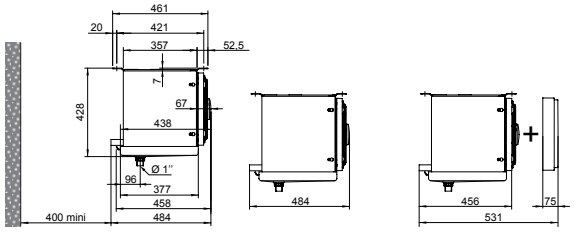
3C-A 438 ..

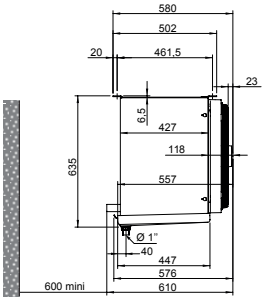


3C-A 446 ..









EXTronic

Mounted electronic expansion valve solution for unit coolers

Faster - More **efficient** - More **economical**.
Efficient unit cooler.
Mounted directly on the 3C-A and NTA unit cooler (for other unit coolers, contact us).
Environmentally friendly.

DESCRIPTION

Superheat regulator for electronic expansion valve.
Superheat setting according to the refrigerant.
Optimizes the refrigeration circuit.
Control and automatic closing of the valve.
Superheat probe to be installed on the pipe.
Safety > alarms in case of overheating or other problems.
Multi-refrigerant > an expansion valve compatible with several refrigerants in a single unit cooler.

WIDE CHOICE OF REFRIGERANTS

R407A, R407C, R407F, R452A, R449A, R448A, R450A, R513A.
R744 (CO_2) : Driver compatible, but please note that a specific pressure sensor is required. CONTACT US
A2L refrigerants. CONTACT US
Possibility of adding a refrigerant by updating the Driver (via RS485 input and a computer).

WIDE CHOICE OF REFRIGERANTS

LowSH (low superheat) > change of reactivity below 5 °C superheat.

4 START-UP PARAMETERS

Type of refrigerant.
Application mode: cold room / display case.
Super heat setpoint.
MOP for negative applications (CS setting).

OPTIONS

SAFETRONIC

An optional Safetronic kit by EXTronic.
This Safetronic kit guarantees closure of the connected electronic valve in the event of a power failure.

POSSIBILITY OF CONNECTION TO BMS

Possibility of direct connection (RS 485 Modbus).
Possibility of connecting EXTronic to a BMS (all makes possible) > to monitor or modify the parameters.
Easy to install and configure.
Better control of the cold room.
Better unit cooler + EXTronic monitoring.

PRODUCT ADVANTAGES

TECHNIQUES

Mounted directly on the unit cooler.
Multi-refrigerant: several refrigerants in a single controller.
Adapted to the constraints of a cold room:
- Temperature: withstands extreme temperature conditions (-40 °C to +60 °C).
- Humidity: IP 65.
Easy to set up.
Max. power supply: 15W.
Facilitates retrofitting when changing refrigerant.
Safetronic option > no solenoid valve.

EFFICIENT UNIT COOLER

Rapid temperature drop compared to thermostatic expansion > energy savings.
More efficient and faster than the thermostatic expansion valve > economical.
Quality of products preserved.
Safety guaranteed by Safetronic.

ENVIRONMENTALLY FRIENDLY

Use of low GWP refrigerants.
Multi-refrigerant: allows you to have a single expansion valve regardless of the refrigerant used.
Installation retrofit and expansion valve function retained. Port dimensioned and compatible with all selection refrigerants: R449A, R448A, R407A, R407F, R452A, R450A and R513A.

GTI | GTA

Dual-discharge unit coolers
Industrial range

CO2 50 bar
HFC
W GLYCOL

GTA | GTA-W

GTI | GTI-W

11 - 87 kW

Easy installation: the unit coolers are delivered in the installation position.
Acoustic comfort: a choice of fan speeds.
Easy maintenance: components that are quick to access without disassembly.

CASING

Pre-painted galvanized steel for corrosion and impact resistance.
The exterior drain pans of the GTA-W are removable, and are either fixed or hinge-mounted (optional).
The GTI(-W) and GTA(-W) are equipped with end caps and delivered on a wooden base.

OPTIONS

	GTI / GTI-W | GTA / GTA-W
EIS	Insulated drain pan.
BCS	Hinged condensate pan.
	GTA / GTA-W
CIN	Stainless steel casing.
ECB	Wooden crate packaging.

VENTILATION

GTI / GTI-W

Motor fans Ø 450 mm, 230-400 V/3/50 Hz:
4P = 1,500 rpm.
6P = 1,000 rpm.
8P = 750 rpm.

GTA / GTA-W

Motor fans Ø 630 mm, 400 V/3/50 Hz, IP 54, class F, with built-in thermal protection
4P = 1,330 rpm.
6/8P = 890 / 690 rpm.

OPTIONS

	GTI / GTI-W
M60	Motor fans 230-400V/3/50-60Hz (adapted blades).
	GTA / GTA-W
EC1	EC 400V/3/50-60Hz motors.
EC2	EC 230V/1/50-60Hz motors.
C3V	3-speed switch (motors EC1 and EC2).
CMU	Factory motor wiring.
M60	Motor fans 400V/3/50-60Hz.
MVI	Stainless steel fan grille.

DEFROST

Three defrost modes for the coil:
electric (230V/1, 230V/3 or 400V/3), hot water, hot gas.
Quick defrosting of the condensate pan thanks to a heater under the intermediate drain pan. .

OPTIONS	
	GTI / GTI-W
E1U	Light electric defrost.
HGB	Hot gas defrost (coil only).
	GTA / GTA-W
E1U	Light electric defrost
E1K	Light electric defrost. KIT TO INSTALL
ELU	Electric defrost (coil+ drain pan)
HG1	Hot gas defrost (coil: hot gases, drain pan: heaters).
EEK	Drain pan electric defrost. KIT TO INSTALL
ECU	Additional electric coil defrost. CONTACT US
ECK	Additional electric coil defrost. KIT TO INSTALL
DEG	Hot glycol water defrost (coil).

Look after your coils to extend their service life! Contact us.

COILS

Aluminium fins with 4.23 or 6.35 mm spacing.
Combined with copper tubes, the coils are very efficient and compact.
Versions available:
- Multi-refrigerant HFCs.
- CO2 (50 bar).
- WCO (glycol water, coolant).

OPTIONS	
EGK	Glycol water and heat transfer refrigerant extension. KIT TO INSTALL

INSTALLATION | MAINTENANCE

Easy access to the drain pans and motorized fans facilitating installation and maintenance.
Delivered in assembly position, the GTA(-W) is designed to be installed on the ceiling.
To facilitate installation of the glycol water version, a connection kit is available as an option (option EGK).

GTI(A) 3(B)44(C) 4P(D)

(A) **GTI**: direct expansion unit cooler **GTI-W**: glycol water unit cooler
(B) Number of fans
(C) Fin spacing: **4** = 4,23 mm - **7** = 6,35 mm
(D) **4P** = 1,500 rpm. - **6P** = 1,000 rpm. - **8P** = 750 rpm.

The GTI is available with CO_2, HFCs and glycol water. For more information, please consult our software.

GTI ... 4P/6P/8P - 1,500/1,000/750 rpm. — 4,23 mm

CONDITIONS	REFRIGERANTS		GTI ...	344	364	444	464	484	564	584
SC1 (1)	CO_2 - **50 bar** (2)	4P	kW	33,4	42,8	46,7	55,5	62,3	71,0	75,9
		6P	kW	26,7	32,4	36,7	42,6	46,0	54,0	56,7
		8P	kW	21,6	25,1	29,2	33,1	34,8	41,8	43,2
	R449A	4P	kW	34,8	44,6	46,0	60,2	70,5	73,0	77,9
		6P	kW	29,2	36,7	39,1	49,1	55,1	59,4	64,1
		8P	kW	24,8	29,8	33,5	39,9	43,4	48,5	52,9
SC2 (1)	CO_2 - **50 bar** (2)	4P	kW	22,5	29,5	32,2	37,7	42,9	48,7	51,7
		6P	kW	18,2	22,5	25,4	29,2	31,9	37,3	39,0
		8P	kW	14,8	17,4	20,3	22,9	24,2	29,0	29,9
	R449A	4P	kW	21,1	27,0	28,6	36,6	38,0	44,3	49,8
		6P	kW	17,2	20,8	23,3	28,0	29,3	34,4	37,5
		8P	kW	14,0	16,3	18,8	21,9	22,6	27,1	28,7

				344	364	444	464	484	564	584
Surface area			m^2	98,4	147,5	131,2	196,7	262,3	245,9	327,9
Circuit tube vol.			dm^3	19,0	28,5	25,4	38,1	50,8	47,6	63,4
Airflow		4P	m^3/h	13950	13350	18600	17800	17000	22250	21250
		6P	m^3/h	9360	8960	12480	11950	11410	14930	14260
		8P	m^3/h	6670	6390	8900	8500	8130	10650	10170
Fan * Ø 630 mm 400V/3/50Hz			Nb	3	3	4	4	4	5	5
	Air throw (3)	4P	m	2x7	2x7	2x7	2x7	2x7	2x7	2x7
		6P	m	2x5	2x5	2x6	2x5	2x5	2x5	2x5
		8P	m	2x4	2x4	2x4	2x4	2x4	2x4	2x4
Acoustics **Lw = Lp +30 dB(A)**	**Lp 4m** (4)	4P	dB(A)	50	50	51	51	51	52	52
		6P	dB(A)	40	40	41	41	41	42	42
		8P	dB(A)	33	33	34	34	34	35	35
Electric defrost **E1U**	Coil		Nb	6	6	6	6	6	6	6
	400 V/3/50 Hz		W Total	6000	6000	9240	9240	9240	12000	12000
			A Total	9	9	14	14	14	18	18
Connections **HFCs**	Inlet (5)		Ø	7/8"	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"3/8
	Outlet (6)		Ø	1"5/8	1"5/8	2"1/8	2"1/8	2"1/8	2"5/8	2"5/8
Net weight			kg	181	215	228	264	307	326	379

* **4P** : 360 W max - 1 A max (7). **6P** : 115 W max - 0.6 A max (7). **8P** : 72 W max - 0.4 A max (7).

(1) Standard conditions:
SC1 / +10 °C (air inlet temp.) / 0 °C (evaporating temp.) / DT1 = 10K
SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
(2) Operating pressure - Specific coil - Connection diameters to be defined when ordering.
(3) Residual air speed: 0.25 m/s, in accordance with the standard.
(4) Average sound pressure level in dB(A) calculated at 4 m, level with the blades, in a free field over a reflecting plane, given as an indication only.
(5) Distributor: male to solder.
(6) ODF = female, to receive the tube of the same diameter.
(7) Adjustment of overload protection.

GTI(A) 3(B) 44(C) 4P(D)

(A) **GTI**: direct expansion unit cooler **GTI-W**: glycol water unit cooler
(B) Number of fans
(C) Fin spacing: **4** = 4,23 mm - **7** = 6,35 mm
(D) **4P** = 1,500 rpm. - **6P** = 1,000 rpm. - **8P** = 750 rpm.

The GTI is available with CO_2, HFCs and glycol water. For more information, please consult our software.

GTI ... 4P/6P/8P - 1,500/1,000/750 rpm. — 6,35 mm

CONDITIONS	REFRIGERANTS		GTI ...	347	367	387	467	487	567	587
SC1 (1)	CO_2 - **50 bar** (2)	4P	kW	27,4	36,2	41,3	47,6	55,6	60,3	68,4
		6P	kW	22,3	28,2	31,6	37,4	42,3	47,1	52,4
		8P	kW	18,3	22,3	24,5	29,7	32,8	37,3	40,8
	R449A	4P	kW	28,3	38,8	49,5	55,6	66,4	67,6	77,3
		6P	kW	24,8	31,2	38,6	44,4	51,8	54,5	60,8
		8P	kW	21,7	27,7	31,2	37,1	41,8	48,2	51,9
SC2 (1)	CO_2 - **50 bar** (2)	4P	kW	18,6	25,0	28,4	32,5	38,3	41,6	46,7
		6P	kW	15,3	19,6	21,8	25,7	29,3	32,6	36,1
		8P	kW	12,6	15,5	17,0	20,6	22,8	25,9	28,2
	R449A	4P	kW	17,0	22,7	25,8	29,3	34,6	38,0	44,6
		6P	kW	14,0	18,2	20,2	23,6	27,0	30,2	34,5
		8P	kW	11,6	14,5	15,9	19,1	21,3	24,1	27,0

				347	367	387	467	487	567	587
Surface area			m^2	67,7	101,5	135,3	135,3	180,4	169,1	225,5
Circuit tube vol.			dm^3	19,0	28,5	38,1	38,1	50,8	47,6	63,4
Airflow		4P	m^3/h	14160	13680	13260	18240	17680	22800	22100
		6P	m^3/h	9500	9180	8900	12240	11860	15300	14830
		8P	m^3/h	6770	6540	6340	8730	8460	10910	10570
Fan * Ø 630 mm 400V/3/50Hz			Nb	3	3	3	4	4	5	5
	Air throw (3)	4P	m	2x7	2x7	2x7	2x7	2x7	2x7	2x7
		6P	m	2x5	2x5	2x5	2x5	2x5	2x5	2x5
		8P	m	2x4	2x4	2x4	2x4	2x4	2x4	2x4
Acoustics **Lw = Lp +30 dB(A)**	**Lp 4m** (4)	4P	dB(A)	50	50	50	51	51	52	52
		6P	dB(A)	40	40	40	41	41	42	42
		8P	dB(A)	33	33	33	34	34	35	35
Defrost defrost **E1U**	Coil		Nb	6	6	6	6	6	6	6
	400 V/3/50 Hz		W Total	6000	6000	6000	9240	9240	12000	12000
			A Total	9	9	9	14	14	18	18
Connections **HFCs**	Inlet (5)		Ø	7/8"	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"3/8
	Outlet (6)		Ø	1"5/8	1"5/8	1"5/8	2"1/8	2"1/8	2"1/8	2"5/8
Net weight			kg	171	198	217	241	280	298	347

* **4P** : 360 W max - 1 A max (7). **6P** : 115 W max - 0.6 A max (7). **8P** : 72 W max - 0.4 A max (7).

(1) Standard conditions:
SC1 / +10 °C (air inlet temp.) / 0 °C (evaporating temp.) / DT1 = 10K
SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
(2) Operating pressure - Specific coil - Connection diameters to be defined when ordering.
(3) Residual air speed: 0.25 m/s, in accordance with the standard.
(4) Average sound pressure level in dB(A) calculated at 4 m, level with the blades, in a free field over a reflecting plane, given as an indication only.
(5) Distributor: male to solder.
(6) ODF = female, to receive the tube of the same diameter.
(7) Adjustment of overload protection.

GTI(A) 3(B)44(C) 4P(D)

(A) **GTI**: direct expansion unit cooler **GTI-W**: glycol water unit cooler
(B) Number of fans
(C) Fin spacing: **4** = 4,23 mm - **7** = 6,35 mm
(D) **4P** = 1,500 rpm. - **6P** = 1,000 rpm. - **8P** = 750 rpm.

The GTI is available with CO_2, HFCs and glycol water. For more information, please consult our software.

GTA ... R 4D/6D/6Y - 1,330/890/690 rpm. — 4,23 mm

CONDITIONS	REFRIGERANTS	GTA ... R ...		24	26	28	34	36	38	44	46	48
SC2 (1)	CO_2 - **50 bar** (2)	4D	kW	**35,7**	**44,7**	**49,0**	**53,6**	**66,6**	**72,2**	**71,6**	**89,7**	**98,4**
		6D	kW	**31,3**	**36,3**	**40,9**	**47,0**	**56,8**	**60,5**	**62,7**	**73,1**	**82,0**
		6Y	kW	**26,8**	**30,5**	**31,0**	**38,5**	**45,9**	**49,0**	**52,5**	**61,3**	**62,4**
	R449A	4D	kW	**31,6**	**41,2**	**42,7**	**47,0**	**60,8**	**64,5**	**63,7**	**82,8**	**86,6**
		6D	kW	**27,9**	**32,5**	**36,6**	**41,7**	**52,3**	**55,1**	**56,3**	**65,4**	**73,9**
		6Y	kW	**24,4**	**27,5**	**30,3**	**36,6**	**43,8**	**45,5**	**49,1**	**55,6**	**61,0**
Surface area			m^2	130	195	260	195	292	390	260	390	520
Circuit tube vol.			dm^3	25,1	37,7	50,3	37,7	56,6	75,4	50,3	75,4	100,5
Airflow		4D	m^3/h	22680	21660	20750	34020	32480	31130	45360	43310	41500
		6D	m^3/h	17770	16780	15920	26650	25180	23880	35540	33570	31840
		6Y	m^3/h	13700	12750	11930	20540	19130	17900	27390	25510	23860
Fan * Ø 630 mm 400V/3/50Hz			Nb	2	2	2	3	3	3	4	4	4
	Air throw (3)	4D	m	2x17	2x15	2x14	2x17	2x15	2x14	2x17	2x15	2x14
		6D	m	2x12	2x11	2x10	2x12	2x11	2x10	2x12	2x11	2x10
		6Y	m	2x10	2x9	2x8	2x10	2x9	2x8	2x10	2x9	2x8
Acoustics **Lw = Lp +30 dB(A)**	**Lp 4m** (4)	4D	dB(A)	57	57	57	59	59	59	60	60	60
		6D	dB(A)	48	48	48	50	50	50	51	51	51
		6Y	dB(A)	41	41	41	43	43	43	44	44	44
Electric defrost **E1U** (5)	Coil		Nb	12	12	12	12	12	12	12	12	12
	400 V/3/50 Hz		W Total	9000	9000	9000	13800	13800	13800	18000	18000	18000
			A Total	13	13	13	20	20	20	26	26	26
Electric defrost **ELU+EEK** (5)	Coil + drain pan		Nb	12+6	12+6	12+6	12+6	12+6	12+6	12+6	12+6	12+6
	400 V/3/50 Hz		W Total	13500	13500	13500	20700	20700	20700	27000	27000	27000
			A Total	19,5	19,5	19,5	30	30	30	39	39	39
Kit **ECK** or Kit **EEK**	Coil		Nb	6	6	6	6	6	6	6	6	6
	400 V/3/50 Hz		W Total	4500	4500	4500	6900	6900	6900	9000	9000	9000
			A Total	6,5	6,5	6,5	10	10	10	13	13	13
	Max. nb kit		ECK	1	1	2	1	1	2	1	1	2
			EEK	1	1	1	1	1	1	1	1	1
Connections **HFCs**	Inlet (6)	4D	Ø	1"1/8	1"3/8	1"3/8	1"3/8	1"5/8	1"5/8	1"5/8	2x1"3/8	2x1"3/8
		6D/Y	Ø	1"1/8	1"1/8	1"3/8	1"3/8	1"5/8	1"5/8	1"5/8	1"5/8	2x1"3/8
	Outlet (7)	4D	Ø	1"5/8	1"5/8	1"5/8	2"1/8	2"1/8	2"1/8	2"1/8	2"5/8	2"5/8
		6D/Y	Ø	1"3/8	1"5/8	1"5/8	2"1/8	2"1/8	2"1/8	2"1/8	2"1/8	2"5/8
Net weight			kg	260	292	316	349	395	433	457	506	549

* **4D** : 1,250 W max - 2.48 A max (8) - **6D** : 600 W max - 1.20 A max (8) - **6Y**: 400 W max - 0.68 A max (8).

(1) Standard conditions:
SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
(2) Operating pressure - Specific coil - Connection diameters to be defined when ordering.
(3) Residual air speed: 0.25 m/s, in accordance with the standard.
(4) Average sound pressure level in dB(A) calculated at 4 m, level with the blades, in a free field over a reflecting plane, given as an indication only.
(5) Option and electric defrost kit.
(6) Distributor: male to solder.
(7) ODF = female, to receive the tube of the same diameter.
(8) Adjustment of overload protection.

GTI(A) 3(B) 44(C) 4P(D)

(A) **GTI**: direct expansion unit cooler **GTI-W**: glycol water unit cooler
(B) Number of fans
(C) Fin spacing: **4** = 4,23 mm - **7** = 6,35 mm
(D) **4P** = 1,500 rpm. - **6P** = 1,000 rpm. - **8P** = 750 rpm.

The GTI is available with CO_2, HFCs and glycol water. For more information, please consult our software.

GTA ... L 4D/6D/6Y - 1,330/890/690 rpm. — 6,35 mm

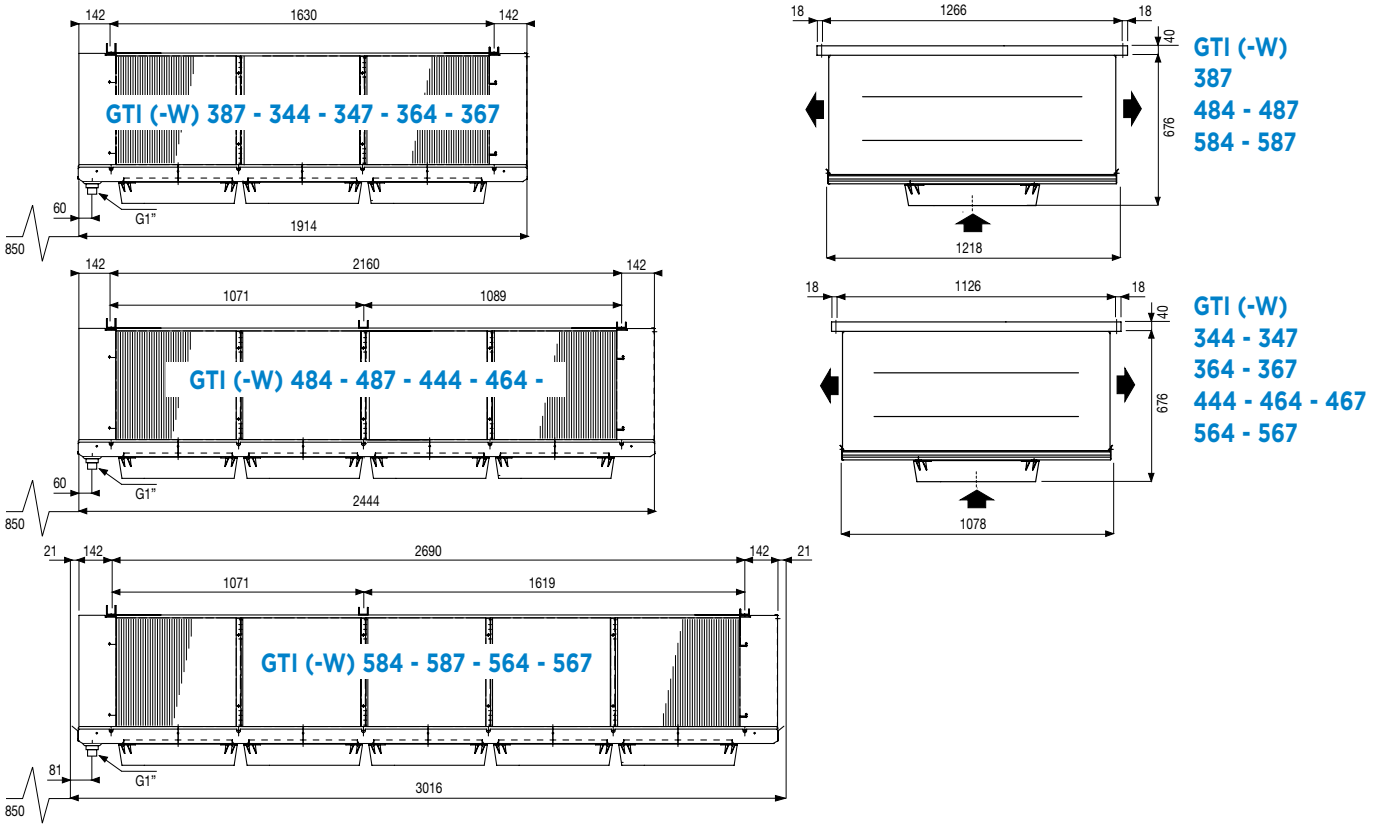
CONDITIONS	REFRIGERANTS	GTA ... L ...		24	26	28	34	36	38	44	46	48
SC2 (1)	CO_2 - **50 bar** (2)	4D	kW	**28,6**	**36,1**	**43,3**	**42,9**	**56,1**	**64,2**	**57,2**	**72,7**	**86,8**
		6D	kW	**25,4**	**31,7**	**37,0**	**36,9**	**47,7**	**55,0**	**50,0**	**63,7**	**74,2**
		6Y	kW	**22,2**	**27,2**	**29,4**	**32,5**	**40,9**	**45,9**	**43,9**	**54,6**	**59,1**
	R449A	4D	kW	**25,0**	**33,7**	**38,6**	**37,5**	**50,6**	**58,4**	**50,3**	**67,8**	**77,8**
		6D	kW	**22,4**	**28,7**	**33,5**	**33,7**	**43,2**	**50,4**	**45,1**	**57,9**	**67,5**
		6Y	kW	**19,7**	**24,9**	**28,3**	**29,6**	**37,4**	**42,5**	**39,7**	**50,1**	**56,8**

				24	26	28	34	36	38	44	46	48
Surface area			m^2	89	134	179	134	201	268	179	268	357
Circuit tube vol.			dm^3	25,1	37,7	50,3	37,7	56,6	75,4	50,3	75,4	100,5
Airflow		4D	m^3/h	23260	22410	21650	34890	33610	32480	46520	44810	43310
		6D	m^3/h	18300	17510	16780	27440	26270	25180	36590	35020	33570
		6Y	m^3/h	14210	13450	12750	21320	20180	19130	28420	26900	25510
Fan * Ø 630 mm 400V/3/50Hz			Nb	2	2	2	3	3	3	4	4	4
	Air throw (2)	4D	m	2x18	2x16	2x15	2x18	2x16	2x15	2x18	2x16	2x15
		6D	m	2x13	2x12	2x11	2x13	2x12	2x11	2x13	2x12	2x11
		6Y	m	2x11	2x10	2x9	2x11	2x10	2x9	2x11	2x10	2x9
Acoustics **Lw = Lp +30 dB(A)**	**Lp 4m** (3)	4D	dB(A)	57	57	57	59	59	59	60	60	60
		6D	dB(A)	48	48	48	50	50	50	51	51	51
		6Y	dB(A)	41	41	41	43	43	43	44	44	44
Electric defrost **E1U** (4)	Coil		Nb	12	12	12	12	12	12	12	12	12
	400 V/3/50 Hz		W Total	9000	9000	9000	13800	13800	13800	18000	18000	18000
			A Total	13	13	13	20	20	20	26	26	26
Electric defrost **ELU+EEK** (4)	Coil + drain pan		Nb	12+6	12+6	12+6	12+6	12+6	12+6	12+6	12+6	12+6
	400 V/3/50 Hz		W Total	13500	13500	13500	20700	20700	20700	27000	27000	27000
			A Total	19,5	19,5	19,5	30	30	30	39	39	39
Kit **ECK** or Kit **EEK**	Coil		Nb	6	6	6	6	6	6	6	6	6
	400 V/3/50 Hz		W Total	4500	4500	4500	6900	6900	6900	9000	9000	9000
			A Total	6,5	6,5	6,5	10	10	10	13	13	13
	Max. nb kit		ECK	1	1	2	1	1	2	1	1	2
			EEK	1	1	1	1	1	1	1	1	1
Connections **HFCs**	Inlet (6)	4D	Ø	1"1/8	1"3/8	1"3/8	1"3/8	1"5/8	1"5/8	1"5/8	2x1"3/8	2x1"3/8
		6D/Y	Ø	1"1/8	1"1/8	1"3/8	1"3/8	1"3/8	1"5/8	1"5/8	1"5/8	2x1"3/8
	Outlet (7)	4D	Ø	1"5/8	1"5/8	1"5/8	2"1/8	2"1/8	2"1/8	2"1/8	2"5/8	2"5/8
		6D/Y	Ø	1"3/8	1"3/8	1"3/8	1"5/8	1"5/8	2"1/8	2"1/8	2"1/8	2"5/8
Net weight			kg	260	292	316	349	395	433	457	506	549

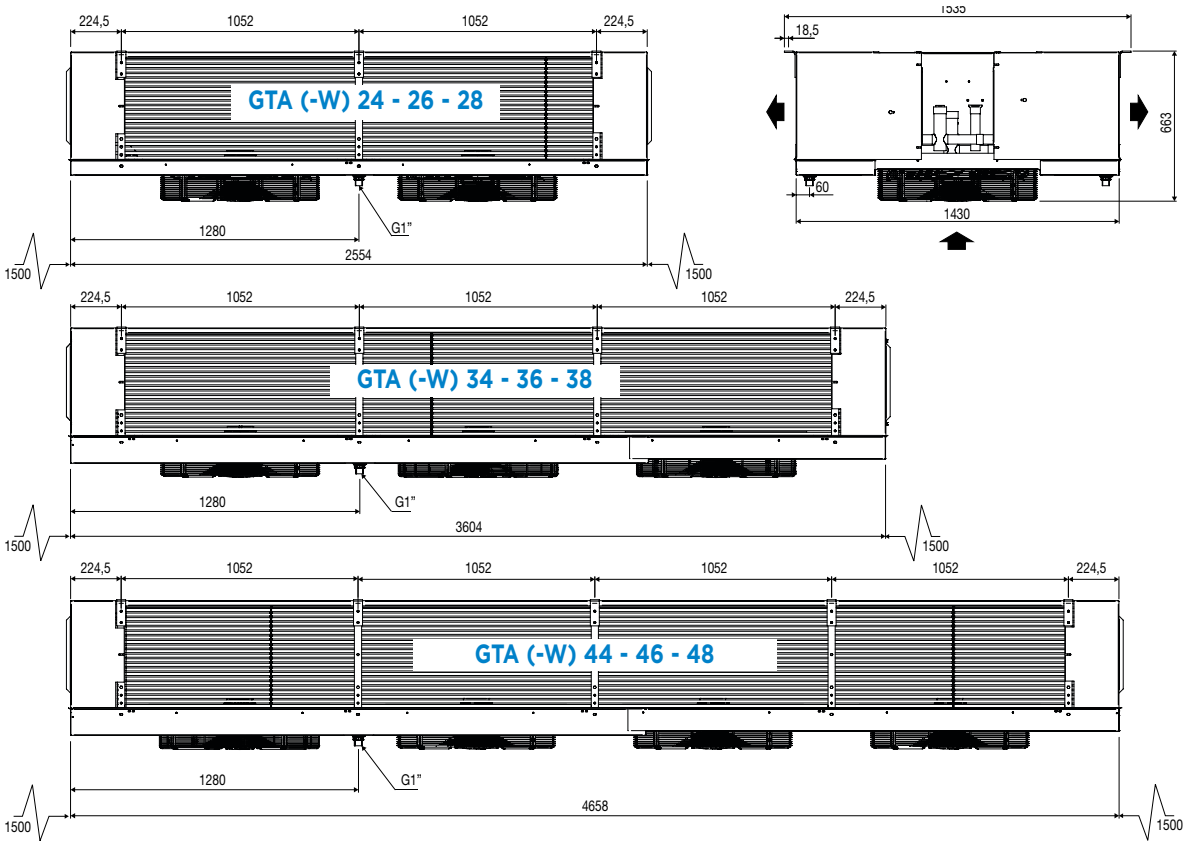
* **4D** : 1,250 W max - 2.48 A max (8) - **6D** : 600 W max - 1.20 A max (8) - **6Y**: 400 W max - 0.68 A max (8).

(1) Standard conditions:
SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
(2) Operating pressure - Specific coil - Connection diameters to be defined when ordering.
(3) Residual air speed: 0.25 m/s, in accordance with the standard.
(4) Average sound pressure level in dB(A) calculated at 4 m, level with the blades, in a free field over a reflecting plane, given as an indication only.
(5) Option and electric defrost kit.
(6) Distributor: male to solder.
(7) ODF = female, to receive the tube of the same diameter.
(8) Adjustment of overload protection.

GTI / GTI-W



GTA / GTA-W



NK

Cubic unit cooler
Industrial range

CO2 40 bar | CO2 50 bar | HFC | W GLYCOL

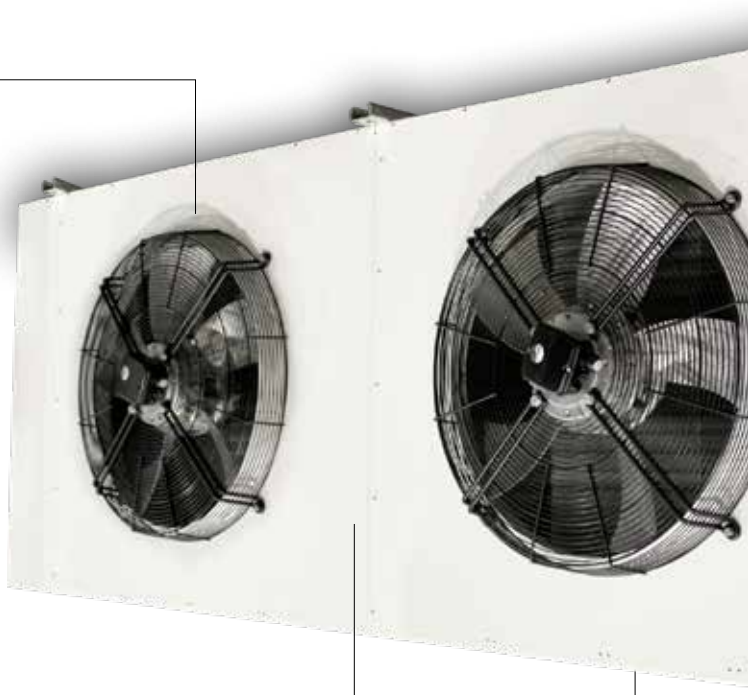
6 - 155 kW

Highly adaptable product with **many options available**.

A **T version**, for a **large exchange surface**, and an **H version**, with **high efficiency**, to best suit your application.

Easy installation: the NKs are delivered in the installation position.

VENTILATION



2 types of motor fans on the NK range:
- Ø 630 mm 4/6 Poles (1,500/1,000 rpm)
- Ø 800 mm 6/8 Poles (870/630 rpm).

Three-phase motors, 400V, 50 Hz, IP54, class F.

The numerous "fan number/fan diameter" combinations ensure the right air throw for perfect adaptability to the cold room.

OPTIONS	
CMU	Factory motor wiring.
C2V	2-speed motor wiring.
M60	Motor fans 230-400V/3/60Hz (Ø 800 mm).
VPA	Air pressure shell also allowing connection of a textile duct. KIT TO INSTALL
VGT	Textile duct shell with grille.
VSC	Hinged fan panel.
MVI	Stainless steel fan grille.

CASING

Pre-painted galvanized steel for corrosion and impact resistance.
Limited condensation: presence of an aluminium interior drain pan under the main drain pan.

OPTIONS	
CIN	Stainless steel casing.
ECB	Wooden crate packaging.
EIS	Insulated drain pan.
KMS	Feet for floor mounting. KIT TO INSTALL
RAL	White polyester paint.

Select your coil treatment to extend your unit cooler's lifespan! Contact us.

COILS

Aluminium fins with 4.23, 6.35, 9 or 12 mm spacing.
Combined with copper tubes, the coils are very efficient and compact.
Two types of fins available:
- High efficiency H-type fins, particularly suitable for the storage of packaged products, allow fast defrosting.
- T-type fins, for a large exchange surface, allow energy savings by limiting the number of daily defrosts, ideal for limiting product dehydration.

Versions available:
- Multi-refrigerant HFCs.
- CO2 (40 bar NKT & 50 bar NKH).
- WCO (glycol water, coolant). CONTACT US

OPTIONS	
EGU	Glycol water extension. KIT TO INSTALL CONTACT US

DEFROST

NKH ... C, NKH ... S, NKT ... C, NKT ... S, and NKT ... T

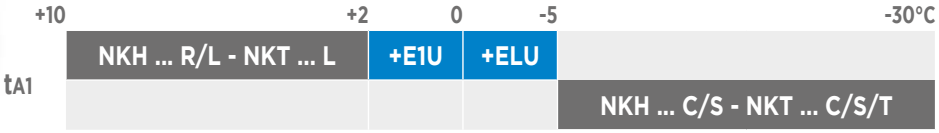
The product design allows even heat dissipation, by the presence of shielded electrical heaters, allowing fast and efficient defrosting.

The heaters are connected in the factory, for a 400V/3 power supply, on a terminal block housed in a terminal box.

Hot gas defrost (total or partial) available as an option.

NKH ... R, NKH ... L, and NKT ... L

Water defrost available as an option for a room with a temperature greater than or equal to +4 °C. The height of the unit cooler is then increased by 40 mm.



OPTIONS	
DAE	Water defrost (spraying).
DEG	Hot glycol water defrost (coil).
E1U	Light electric defrost (coil + drain pan).
ELU	Electric defrost for "low temperature" models (coil + drain pan).
ECU	Additional electric coil defrost.
ECK	Additional electric coil defrost. KIT TO INSTALL
HDA	Suction defrost hood. KIT TO INSTALL
VPM	Flexible defrost sleeve + air pressure shell. KIT TO INSTALL
HG1	Partial hot gas defrost (coil: hot gases, drain pan: heaters).
HGT	Total hot gas defrost (coil and drain pan).
RVU	Shell defrost heaters.
RVK	Shell defrost heaters. KIT TO INSTALL

C2V | Two-speed wiring

Suitable ventilation and noise level
High speed after the charging phase requiring high power.
Low speed during long storage phase or when staff are present for reduced noise level.

HDA + VPM | Defrost hood + flexible sleeve

Defrost in negative application
Avoids hot air circulation during defrost cycles. Reduced defrost cycle time for energy savings.

VPA | Air pressure shell

Even airflow distribution
Increased air reach, optimizes airflow and allows efficient air distribution in the cold room.

Application requiring the installation of a textile duct
Shell for textile duct with airflow straightening blades (duct not supplied).

NKT(A) 1x6(B) Y(C) B2(D) L(E)

(A) Fin type: **T** = Large heat exchange surface - **H** = High-efficiency fin
(B) Number of fans x Ø: **6** = Ø 630 mm - **8** = Ø 800 mm
(C) Motor connection: **D** = Triangle - **Y** = Star
(D) Module
(E) Fin spacing: **R** = 4.23 mm (positive) - **L** = 6.35 mm (positive) - **C** = 6.35 mm (negative) - **S** = 9 mm (negative) - **T** = 12 mm (negative)

The NK is available with CO_2, HFCs and glycol water. For more information, please consult our software.

NKT ... L | T = Large exchange surface

6.35 mm

NKT ... L	Power		Coil		Ventilation				Electric defrost									Connections		Net weight
	DT 8K - SC2 (1)								E1U (5) 400 V/3/50 Hz			ELU (5) 400 V/3/50 Hz			ECK kit (6) 400 V/3/50 Hz			HFCs		
	CO2 (2) 40 bar	R449A	Surface area	Circuit volume	Nb x Ø	Airflow	Air throw (3) Standard	Acoustics Lp 4m (4)	Number	W	A	Number	W	A	Number	W	A	Inlet	Outlet	
	kW	kW	m²	dm³	mm	m³/h	m	dB(A)										Ø D	Ø	kg
1x6Y B2	16,8	15,0	96	27	1x630	10600	34	51	6	6900	10	9	10350	14,9	3	3450	5	5/8"	1"3/8	180
1x6D B2	18,7	17,1	96	27	1x630	13330	45	59	6	6900	10	9	10350	14,9	3	3450	5	5/8"	1"3/8	180
1x6Y B3	19,8	18,3	128	36	1x630	10120	33	51	10	10350	19,1	12	13800	19,9	3	3450	5	7/8"	1"5/8	200
1x6Y B4	21,5	20,6	160	45	1x630	9680	32	51	13	13800	19,9	15	17250	24,9	3	3450	5	1"1/8	1"5/8	220
1x6D B3	22,5	21,0	128	36	1x630	12610	43	59	10	10350	19,1	12	13800	19,9	3	3450	5	7/8"	1"5/8	200
1x8Y C2	24,7	22,8	154	44	1x800	14740	33	42	6	9000	13	9	13500	19,5	3	4500	6,5	7/8"	1"5/8	270
1x6D B4	24,6	23,9	160	45	1x630	11940	42	59	13	13800	19,9	15	17250	24,9	3	3450	5	1"1/8	1"5/8	220
1x8Y C3	28,4	26,8	205	58	1x800	13940	31	42	10	13500	19,1	12	18000	26	3	4500	6,5	1"1/8	2"1/8	300
1x8D C2	28,8	26,6	154	44	1x800	19580	45	48	6	9000	13	9	13500	19,5	3	4500	6,5	7/8"	1"5/8	270
2x6Y B2	34,1	31,2	192	54	2x630	21200	35	54	6	13200	19,1	9	19800	28,6	3	6600	9,5	1"1/8	2"1/8	310
1x8D C3	33,9	31,7	205	58	1x800	18690	43	48	10	13500	19,1	12	18000	26	3	4500	6,5	1"1/8	2"1/8	300
2x6D B2	37,8	35,2	192	54	2x630	26660	46	62	6	13200	19,1	9	19800	28,6	3	6600	9,5	1"1/8	2"1/8	310
2x6Y B3	39,7	37,1	256	73	2x630	20230	34	54	10	19800	28,6	12	26400	38,1	3	6600	9,5	1"3/8	2"1/8	350
2x6Y B4	43,2	41,9	320	91	2x630	19350	33	54	13	26400	38,1	15	33000	47,6	3	6600	9,5	1"5/8	2"1/8	390
2x6D B3	44,9	42,7	256	73	2x630	25220	45	62	10	19800	28,6	12	26400	38,1	3	6600	9,5	1"3/8	2"1/8	350
2x8Y C2	49,5	46,1	308	87	2x800	29470	34	45	6	17400	25,1	9	26100	37,7	3	8700	12,6	1"3/8	2"1/8	480
3x6Y B2	51,2	46,6	288	82	3x630	31800	40	56	6	19500	28,1	9	29250	42,2	3	9750	14,1	1"3/8	2"1/8	440
2x6D B4	50,6	48,7	320	91	2x630	23880	43	62	13	26400	38,1	15	33000	47,6	3	6600	9,5	1"5/8	2"1/8	390
2x8Y C3	57,1	54,2	410	116	2x800	27880	32	45	10	26100	37,7	12	34800	50,2	3	8700	12,6	1"5/8	2"5/8	540
3x6D B2	56,9	53,2	288	82	3x630	39990	52	64	6	19500	28,1	9	29250	42,2	3	9750	14,1	1"3/8	2"1/8	440
2x8D C2	57,3	53,5	308	87	2x800	39170	46	51	6	17400	25,1	9	26100	37,7	3	8700	12,6	1"3/8	2"1/8	480
3x6Y B3	59,3	56,6	385	109	3x630	30350	39	56	10	29250	42,2	12	39000	56,3	3	9750	14,1	1"5/8	2"5/8	500
3x6Y B4	63,6	62,5	481	136	3x630	29030	37	56	13	39000	56,3	15	48750	70,4	3	9750	14,1	1"5/8	2"5/8	550
4x6Y B2	68,3	62,3	385	109	4x630	42390	44	57	6	25800	37,2	9	38700	55,9	3	12900	18,6	1"5/8	2"5/8	560
2x8D C3	67,7	64,2	410	116	2x800	37380	44	51	10	26100	37,7	12	34800	50,2	3	8700	12,6	1"5/8	2"5/8	540
3x6D B3	67,1	65,1	385	109	3x630	37830	51	64	10	29250	42,2	12	39000	56,3	3	9750	14,1	1"5/8	2"5/8	500
3x8Y C2	74,3	69,7	461	130	3x800	44210	39	47	6	25800	37,2	9	38700	55,9	3	12900	18,6	1"5/8	2"5/8	680
3x6D B4	73,0	72,8	481	136	3x630	35820	49	64	13	39000	56,3	15	48750	70,4	3	9750	14,1	1"5/8	2"5/8	550
4x6D B2	75,8	71,1	385	109	4x630	53320	58	65	6	25800	37,2	9	38700	55,9	3	12900	18,6	1"5/8	2"5/8	560
4x6Y B3	78,3	74,9	513	145	4x630	40470	43	57	10	38700	55,9	12	51600	74,5	3	12900	18,6	1"5/8	2"5/8	640
3x8Y C3	85,4	82,0	615	174	3x800	41810	37	47	10	38700	55,9	12	51600	74,5	3	12900	18,6	1"5/8	2"5/8	770
4x6Y B4	87,1	83,7	641	181	4x630	38710	41	57	13	51600	74,5	15	64500	93,1	3	12900	18,6	1"5/8	2"5/8	720
3x8D C2	87,1	81,1	461	130	3x800	58750	53	53	6	25800	37,2	9	38700	55,9	3	12900	18,6	1"5/8	2"5/8	680
4x6D B3	90,5	86,1	513	145	4x630	50440	56	65	10	38700	55,9	12	51600	74,5	3	12900	18,6	1"5/8	2"5/8	640
4x8Y C2	99,2	92,0	615	174	4x800	58940	43	48	6	34200	49,4	9	51300	74	3	17100	18,6	2x1"3/8	2x2"1/8	870
4x6D B4	101,3	97,1	641	181	4x630	47770	54	65	13	51600	74,5	15	64500	93,1	3	12900	18,6	1"5/8	2"5/8	720
3x8D C3	101,5	97,6	615	174	3x800	56070	50	53	10	38700	55,9	12	51600	74,5	3	12900	18,6	1"5/8	2"5/8	770
4x8Y C3	110,2	108,7	820	232	4x800	55750	41	48	10	51300	74	12	68400	98,7	3	17100	24,7	2x1"5/8	2x2"5/8	990
4x8D C2	114,9	106,9	615	174	4x800	78330	59	54	6	34200	49,4	9	51300	74	3	17100	18,6	2x1"3/8	2x2"1/8	870
4x8D C3	136,3	128,5	820	232	4x800	74760	56	54	10	51300	74	12	68400	98,7	3	17100	24,7	2x1"5/8	2x2"5/8	990

* ***Ø 630 mm*** : 400 V/3/50 Hz - Δ = 1,500 rpm. - 1,900 W max - 3.2 A max - Y = 1,000 rpm. - 1,350 W max - 2.2 A max (7)
* ***Ø 800 mm*** : 400 V/3/50 Hz - Δ = 870 rpm. - 1,900 W max - 3.9 A max - Y = 630 rpm. - 1,100 W max - 2 A max (7)

(1) Standard conditions: SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
SC3 / -18 °C (air inlet temp.) / -25 °C (evaporating temp.) / DT1 = 7K
SC4 / -25 °C (air inlet temp.) / -31 °C (evaporating temp.) / DT1 = 6K
(2) Operating pressure: 40 bar - Connection diameters to be defined when ordering.
(3) Residual air speed: 0.25 m/s. - Air throw with **VPA** option = Standard **+15 m**

NKT(A) 1x6(B) Y(C) B2(D) L(E)

(A) Fin type: **T** = Large heat exchange surface - **H** = High-efficiency fin
(B) Number of fans x Ø: **6** = Ø 630 mm - **8** = Ø 800 mm
(C) Motor connection: **D** = Triangle - **Y** = Star
(D) Module
(E) Fin spacing: **R** = 4.23 mm (positive) - **L** = 6.35 mm (positive) - **C** = 6.35 mm (negative) - **S** = 9 mm (negative) - **T** = 12 mm (negative)

The NK is available with CO2, HFCs and glycol water. For more information, please consult our software.

NKT ... C | T = Large exchange surface

6.35 mm

NKT ... C	Power DT 7K - SC3 (1)		Power DT 6K - SC4 (1)		Coil		Ventilation				Electric defrost 400 V/3/50 Hz			Connections HFCs		Net weight
	CO2 (2) 40 bar	R449A	CO2 (2) 40 bar	R449A	Surface area	Circuit volume	Nb x Ø	Airflow	Air throw (3) Standard	Acoustics Lp 4m (4)	Number	W	A	Inlet	Outlet	
	kW	kW	kW	kW		dm³	mm	m³/h	m	dB(A)				Ø D	Ø	kg
1x6Y B2	14,0	10,1	11,1	7,6		27	1x630	10600	34	51	9	10350	14.9	5/8"	1"3/8	200
1x6D B2	15,5	11,4	12,2	8,6		27	1x630	13330	45	59	9	10350	14.9	5/8"	1"3/8	200
1x6Y B3	16,2	12,4	12,8	9,5		36	1x630	10120	33	51	12	13800	19.9	7/8"	1"5/8	220
1x6Y B4	17,3	14,1	13,7	10,9		45	1x630	9680	32	51	15	17250	24.9	1"1/8	2"1/8	240
1x6D B3	18,2	14,2	14,4	10,7		36	1x630	12610	43	59	12	13800	19.9	7/8"	1"5/8	220
1x8Y C2	20,6	14,9	16,3	11,3		44	1x800	14740	33	42	9	13500	19.5	1"1/8	2"1/8	290
1x6D B4	20,8	16,4	16,5	12,5		45	1x630	11940	42	59	15	17250	24.9	1"1/8	2"1/8	240
1x8Y C3	23,3	18,3	18,6	14,1		58	1x800	13940	31	42	12	18000	26	1"1/8	2"1/8	330
1x8D C2	23,9	17,1	18,8	12,8		44	1x800	19580	45	48	9	13500	19.5	1"1/8	2"1/8	290
2x6Y B2	27,7	21,0	21,9	15,9		54	2x630	21200	35	54	9	19800	28.6	1"1/8	2"1/8	340
1x8D C3	27,4	21,6	21,7	16,4		58	1x800	18690	43	48	12	18000	26	1"1/8	2"1/8	330
2x6D B2	30,5	23,4	24,0	17,6		54	2x630	26660	46	62	9	19800	28.6	1"1/8	2"1/8	340
2x6Y B3	33,0	25,3	26,2	19,5		73	2x630	20230	34	54	12	26400	38.1	1"3/8	2"5/8	390
2x6Y B4	36,0	29,0	28,8	22,5		91	2x630	19350	33	54	15	33000	47.6	1"5/8	2"5/8	430
2x6D B3	37,4	29,0	29,6	22,1		73	2x630	25220	45	62	12	26400	38.1	1"3/8	2"5/8	390
2x8Y C2	41,3	31,2	32,7	23,8		87	2x800	29470	34	45	9	26100	37.7	1"3/8	2"5/8	520
3x6Y B2	42,1	30,9	33,3	23,6		82	3x630	31800	40	56	9	29250	42.2	1"5/8	2"5/8	490
2x6D B4	41,5	33,6	32,9	25,7		91	2x630	23880	43	62	15	33000	47.6	1"5/8	2"5/8	430
2x8Y C3	46,9	37,3	37,4	28,9		116	2x800	27880	32	45	12	34800	50.2	1"5/8	2"5/8	580
3x6D B2	46,9	35,1	36,9	26,5		82	3x630	39990	52	64	9	29250	42.2	1"5/8	2"5/8	490
2x8D C2	47,9	36,1	37,8	27,2		87	2x800	39170	46	51	9	26100	37.7	1"3/8	2"5/8	520
3x6Y B3	47,7	37,6	37,8	29,0		109	3x630	30350	39	56	12	39000	56.3	1"5/8	2"5/8	550
3x6Y B4	50,1	43,9	39,6	34,0		136	3x630	29030	37	56	15	48750	70.4	1"5/8	2"5/8	620
4x6Y B2	55,7	40,8	44,0	30,9		109	4x630	42390	44	57	9	38700	55.9	1"5/8	2"5/8	630
3x6D B3	56,2	42,9	44,4	32,9		109	3x630	37830	51	64	12	39000	56.3	1"5/8	2"5/8	550
2x8D C3	56,5	44,0	44,8	33,7		116	2x800	37380	44	51	12	34800	50.2	1"5/8	2"5/8	580
3x8Y C2	61,8	45,7	49,1	34,7		130	3x800	44210	39	47	9	38700	55.9	2x1"3/8	2x2"1/8	740
4x6D B2	61,4	46,0	48,2	35,0		109	4x630	53320	58	65	9	38700	55.9	1"5/8	2"5/8	630
3x6D B4	63,1	50,9	50,2	39,1		136	3x630	35820	49	64	15	48750	70.4	1"5/8	2"5/8	620
4x6Y B3	65,5	49,7	52,0	38,3		145	4x630	40470	43	57	12	51600	74.5	2x1"5/8	2x2"5/8	720
3x8Y C3	69,4	56,1	55,2	43,5		174	3x800	41810	37	47	12	51600	74.5	1"5/8	3"1/8	840
4x6Y B4	72,2	57,3	57,7	44,5		181	4x630	38710	41	57	15	64500	93.1	1"5/8	3"1/8	800
3x8D C2	71,6	52,6	56,4	40,1		130	3x800	58750	53	53	9	38700	55.9	2x1"3/8	2x2"1/8	740
4x6D B3	75,0	57,1	59,3	43,3		145	4x630	50440	56	65	12	51600	74.5	2x1"5/8	2x2"5/8	720
4x8Y C2	82,7	63,3	65,6	48,7		174	4x800	58940	43	48	9	51300	74	2x1"3/8	2x2"5/8	940
4x6D B4	83,3	66,6	66,2	50,8		181	4x630	47770	54	65	15	64500	93.1	1"5/8	3"1/8	800
3x8D C3	81,3	66,4	64,1	50,8		174	3x800	56070	50	53	12	51600	74.5	1"5/8	3"1/8	840
4x8Y C3	94,1	74,9	75,1	58,2		232	4x800	55750	41	48	12	68400	98.7	2x1"5/8	2x2"5/8	1080
4x8D C2	96,1	73,3	75,8	55,8		174	4x800	78330	59	54	9	51300	74	2x1"3/8	2x2"5/8	940
4x8D C3	111,0	88,6	87,8	68,1		232	4x800	74760	56	54	12	68400	98.7	2x1"5/8	2x2"5/8	1080

(4) **Lp** = Average sound pressure level in dB(A) calculated at 4 m, level with the blades, in a free field over a reflecting plane, given as an indication only.
Lw = **Lp +30 dB(A)**
(5) Electric defrost options.
(6) Electric defrost kit.
(7) Adjustment of overload protection. For air temperatures "ti" other than +20 °C, multiply the intensities by the ratio 293/(273 + "ti") to obtain the approximate value of the intensity after heating the room.

NKT(A) 1x6(B) Y(C) B2(D) L(E)

(A) Fin type: **T** = Large heat exchange surface - **H** = High-efficiency fin
(B) Number of fans x Ø: **6** = Ø 630 mm - **8** = Ø 800 mm
(C) Motor connection: **D** = Triangle - **Y** = Star
(D) Module
(E) Fin spacing: **R** = 4.23 mm (positive) - **L** = 6.35 mm (positive) - **C** = 6.35 mm (negative) - **S** = 9 mm (negative) - **T** = 12 mm (negative)

The NK is available with CO_2, HFCs and glycol water. For more information, please consult our software.

NKT ... S | T = Large exchange surface

9 mm

NKT ... S	Power DT 7K - SC3 (1)		Power DT 6K - SC4 (1)		Coil		Ventilation				Electric defrost 400 V/3/50 Hz			Connections HFCs		Net weight
	CO2 (2) 40 bar	R449A	CO2 (2) 40 bar	R449A	Surface area	Circuit volume	Nb x Ø	Airflow	Air throw (3) Standard	Acoustics Lp 4m (4)	Number	W	A	Inlet	Outlet	
	kW	kW	kW	kW	m²	dm³	mm	m³/h	m	dB(A)				Ø D	Ø	kg
1x6Y B2	13,5	9,6	10,7	7,2	70	27	1x630	10920	35	51	9	10350	14.9	5/8"	1"3/8	190
1x6D B2	14,9	10,8	11,8	8,0	70	27	1x630	13780	46	59	9	10350	14.9	5/8"	1"3/8	190
1x6Y B3	15,8	12,0	12,5	9,0	93	36	1x630	10510	33	51	12	13800	19.9	7/8"	1"5/8	220
1x6Y B4	17,1	13,7	13,6	10,4	117	45	1x630	10130	32	51	15	17250	24.9	1"1/8	2"1/8	240
1x6D B3	17,7	13,5	14,0	10,1	93	36	1x630	13200	44	59	12	13800	19.9	7/8"	1"5/8	220
1x8Y C2	19,8	14,1	15,7	10,5	112	44	1x800	15280	34	42	9	13500	19.5	1"1/8	2"1/8	280
1x6D B4	20,3	15,8	16,1	11,9	117	45	1x630	12630	42	59	15	17250	24.9	1"1/8	2"1/8	240
1x8D C2	23,0	16,1	18,2	12,1	112	44	1x800	20190	46	48	9	13500	19.5	1"1/8	2"1/8	280
1x8Y C3	22,9	17,8	18,2	13,5	149	58	1x800	14590	32	42	12	18000	26	1"1/8	2"1/8	320
2x6Y B2	26,8	19,6	21,2	14,8	140	54	2x630	21840	36	54	9	19800	28.6	1"1/8	2"1/8	330
1x8D C3	26,9	20,6	21,2	15,5	149	58	1x800	19420	44	48	12	18000	26	1"1/8	2"1/8	320
2x6D B2	29,4	22,2	23,1	16,6	140	54	2x630	27570	47	62	9	19800	28.6	1"1/8	2"1/8	330
2x6Y B3	32,1	24,6	25,6	18,5	187	73	2x630	21030	35	54	12	26400	38.1	1"3/8	2"1/8	370
2x6Y B4	35,6	28,1	28,4	21,4	233	91	2x630	20270	34	54	15	33000	47.6	1"5/8	2"5/8	410
2x6D B3	36,2	27,6	28,7	20,9	187	73	2x630	26410	46	62	12	26400	38.1	1"3/8	2"1/8	370
2x8Y C2	39,7	28,8	31,5	21,5	224	87	2x800	30560	34	45	9	26100	37.7	1"5/8	2"5/8	500
3x6Y B2	40,6	29,5	32,2	22,2	210	82	3x630	32750	41	56	9	29250	42.2	1"5/8	2"5/8	470
2x6D B4	40,7	32,3	32,3	24,4	233	91	2x630	25270	45	62	15	33000	47.6	1"5/8	2"5/8	410
3x6D B2	45,0	33,3	35,5	24,9	210	82	3x630	41350	54	64	9	29250	42.2	1"5/8	2"5/8	470
2x8D C2	46,3	32,8	36,5	24,8	224	87	2x800	40390	47	51	9	26100	37.7	1"5/8	2"5/8	500
2x8Y C3	46,0	36,3	36,7	27,6	299	116	2x800	29190	33	45	12	34800	50.2	1"5/8	2"5/8	560
3x6Y B3	46,7	36,4	37,0	27,7	280	109	3x630	31540	40	56	12	39000	56.3	1"5/8	2"5/8	530
4x6Y B2	53,8	39,0	42,5	29,1	280	109	4x630	43670	45	57	9	38700	55.9	1"5/8	2"5/8	610
3x6Y B4	49,7	41,5	39,3	31,5	350	136	3x630	30400	39	56	15	48750	70.4	1"5/8	2"5/8	590
3x6D B3	54,4	41,0	43,1	30,9	280	109	3x630	39610	52	64	12	39000	56.3	1"5/8	2"5/8	530
2x8D C3	55,1	41,9	43,8	31,9	299	116	2x800	38840	45	51	12	34800	50.2	1"5/8	2"5/8	560
3x8Y C2	59,6	43,4	47,3	32,5	336	130	3x800	45840	39	47	9	38700	55.9	2x1"3/8	2x2"1/8	710
4x6D B2	59,1	43,6	46,6	32,8	280	109	4x630	55140	59	65	9	38700	55.9	1"5/8	2"5/8	610
3x6D B4	61,7	47,4	49,1	36,2	350	136	3x630	37900	51	64	15	48750	70.4	1"5/8	2"5/8	590
4x6Y B3	63,9	48,2	51,2	36,5	373	145	4x630	42050	43	57	12	51600	74.5	2x1"5/8	2x2"1/8	690
3x8D C2	69,2	49,5	54,6	37,4	336	130	3x800	60580	54	53	9	38700	55.9	2x1"3/8	2x2"1/8	710
3x8Y C3	68,1	52,9	54,2	39,9	448	174	3x800	43780	38	47	12	51600	74.5	2x1"5/8	2x2"5/8	800
4x6Y B4	71,3	55,7	57,1	41,9	467	181	4x630	40540	43	57	15	64500	93.1	2x1"5/8	2x2"5/8	770
4x6D B3	72,6	54,2	57,5	40,6	373	145	4x630	52820	57	65	12	51600	74.5	2x1"5/8	2x2"1/8	690
4x8Y C2	77,2	60,5	63,2	45,7	448	174	4x800	61120	44	48	9	51300	74	2x1"3/8	2x2"5/8	910
3x8D C3	82,8	60,9	65,7	46,3	448	174	3x800	58270	52	53	12	51600	74.5	2x1"5/8	2x2"5/8	800
4x6D B4	81,7	63,5	64,9	47,7	467	181	4x630	50540	56	65	15	64500	93.1	2x1"5/8	2x2"5/8	770
4x8D C2	92,7	69,6	73,2	52,3	448	174	4x800	80770	60	54	9	51300	74	2x1"3/8	2x2"5/8	910
4x8Y C3	92,1	73,5	73,6	56,0	597	232	4x800	58370	42	48	12	68400	98.7	2x1"5/8	2x2"5/8	1030
4x8D C3	108,6	84,9	86,1	64,6	597	232	4x800	77690	58	54	12	68400	98.7	2x1"5/8	2x2"5/8	1030

* ***Ø 630 mm*** : 400 V/3/50 Hz - Δ = 1500 rpm. - 1,900 W max - 3.2 A max - Y = 1000 rpm. - 1350 W max - 2.2 A max (7)
* ***Ø 800 mm*** : 400 V/3/50 Hz - Δ = 870 rpm. - 1,900 W max - 3.9 A max - Y = 630 rpm. - 1,100 W max - 2 A max (7)

(1) Standard conditions: SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
SC3 / -18 °C (air inlet temp.) / -25 °C (evaporating temp.) / DT1 = 7K
SC4 / -25 °C (air inlet temp.) / -31 °C (evaporating temp.) / DT1 = 6K
(2) Operating pressure: 40 bar - Connection diameters to be defined when ordering.
(3) Residual air speed: 0.25 m/s. - Air throw with **VPA** option = Standard **+15 m**

NKT(A) 1x6(B) Y(C) B2(D) L(E)

(A) Fin type: **T** = Large heat exchange surface - **H** = High-efficiency fin
(B) Number of fans x Ø: **6** = Ø 630 mm - **8** = Ø 800 mm
(C) Motor connection: **D** = Triangle - **Y** = Star
(D) Module
(E) Fin spacing: **R** = 4.23 mm (positive) - **L** = 6.35 mm (positive) - **C** = 6.35 mm (negative) - **S** = 9 mm (negative) - **T** = 12 mm (negative)

The NK is available with CO_2, HFCs and glycol water. For more information, please consult our software.

NKT ... T | T = Large exchange surface

12 mm

NKT ... T	Power DT 7K - SC3 (1)		Power DT 6K - SC4 (1)		Coil		Ventilation				Electric defrost 400 V/3/50 Hz			Connections HFCs		Net weight
	CO2 (2) 40 bar	R449A	CO2 (2) 40 bar	R449A	Surface area	Circuit volume	Nb x Ø	Airflow	Air throw (3) Standard	Acoustics Lp 4m (4)	Number			Inlet	Outlet	
	kW	kW	kW	kW	m²	dm³	mm	m³/h	m	dB(A)		W	A	Ø D	Ø	kg
1x6Y B2	10,9	8,3	8,6	6,3	54	27	1x630	11120	35	51	9	10350	14.9	5/8"	1"3/8	190
1x6D B2	11,9	9,3	9,4	7,0	54	27	1x630	14050	46	59	9	10350	14.9	5/8"	1"3/8	190
1x6Y B3	13,2	10,4	10,5	7,9	72	36	1x630	10760	34	51	12	13800	19.9	7/8"	1"5/8	210
1x6D B3	14,6	11,7	11,6	8,9	72	36	1x630	13570	45	59	12	13800	19.9	7/8"	1"5/8	210
1x6Y B4	14,9	12,1	11,9	9,3	91	45	1x630	10430	33	51	15	17250	24.9	1"1/8	2"1/8	230
1x8Y C2	16,0	12,1	12,8	9,0	87	44	1x800	15620	34	42	9	13500	19.5	1"1/8	2"1/8	280
1x6D B4	16,9	13,8	13,4	10,5	91	45	1x630	13080	43	59	15	17250	24.9	1"1/8	2"1/8	230
1x8D C2	18,5	13,8	14,7	10,4	87	44	1x800	20580	47	48	9	13500	19.5	1"1/8	2"1/8	280
1x8Y C3	19,3	15,5	15,5	11,9	116	58	1x800	15020	33	42	12	18000	26	1"1/8	2"1/8	310
2x6Y B2	21,8	16,9	17,3	12,9	109	54	2x630	22230	36	54	9	19800	28.6	1"1/8	2"1/8	320
1x8D C3	22,5	18,0	17,9	13,7	116	58	1x800	19900	45	48	12	18000	26	1"1/8	2"1/8	310
2x6D B2	23,8	19,1	18,8	14,3	109	54	2x630	28110	48	62	9	19800	28.6	1"1/8	2"1/8	320
2x6Y B3	26,6	21,3	21,2	16,2	145	73	2x630	21530	36	54	12	26400	38.1	1"3/8	2"1/8	360
2x6D B3	29,4	23,9	23,5	18,2	145	73	2x630	27140	47	62	12	26400	38.1	1"3/8	2"1/8	360
2x6Y B4	30,4	24,8	24,4	19,0	181	91	2x630	20860	34	54	15	33000	47.6	1"5/8	2"5/8	400
2x8Y C2	31,8	25,5	25,3	19,4	174	87	2x800	31250	35	45	9	26100	37.7	1"3/8	2"5/8	490
3x6Y B2	32,8	25,6	26,1	19,3	163	82	3x630	33350	41	56	9	29250	42.2	1"5/8	2"5/8	460
2x6D B4	34,2	28,2	27,3	21,4	181	91	2x630	26160	45	62	15	33000	47.6	1"5/8	2"5/8	400
3x6D B2	35,9	28,3	28,4	21,5	163	82	3x630	42160	54	64	9	29250	42.2	1"5/8	2"5/8	460
2x8D C2	36,3	29,5	29,4	22,2	174	87	2x800	41150	48	51	9	26100	37.7	1"3/8	2"5/8	490
2x8Y C3	38,8	31,6	31,1	24,2	232	116	2x800	30030	34	45	12	34800	50.2	1"5/8	2"5/8	550
3x6Y B3	39,4	31,4	31,4	24,0	217	109	3x630	32290	40	56	12	39000	56.3	1"5/8	2"5/8	520
4x6Y B2	43,7	33,5	34,7	25,1	217	109	4x630	44460	46	57	9	38700	55.9	1"5/8	2"5/8	600
3x6D B3	43,5	35,4	34,5	26,8	217	109	3x630	40700	53	64	12	39000	56.3	1"5/8	2"5/8	520
2x8D C3	45,1	36,5	35,9	28,0	232	116	2x800	39790	46	51	12	34800	50.2	1"5/8	2"5/8	550
3x6Y B4	43,7	38,0	34,7	29,1	272	136	3x630	31290	39	56	15	48750	70.4	1"5/8	2"5/8	580
3x8Y C2	47,8	38,7	38,6	29,5	261	130	3x800	46870	40	47	9	38700	55.9	1"5/8	2"5/8	700
4x6D B2	47,7	37,0	37,8	28,0	217	109	4x630	56210	60	65	9	38700	55.9	1"5/8	2"5/8	600
3x6D B4	51,3	43,1	40,9	32,9	272	136	3x630	39240	51	64	15	48750	70.4	1"5/8	2"5/8	580
4x6Y B3	53,3	41,4	42,5	31,6	290	145	4x630	43050	44	57	12	51600	74.5	2x1"5/8	2x2"1/8	670
3x8D C2	55,7	44,5	44,2	33,8	261	130	3x800	61730	55	53	9	38700	55.9	1"5/8	2"5/8	700
3x8Y C3	57,8	47,9	46,3	36,6	348	174	3x800	45050	39	47	12	51600	74.5	1"5/8	3"1/8	790
4x6Y B4	60,9	49,8	48,8	38,0	362	181	4x630	41710	43	57	15	64500	93.1	1"5/8	3"1/8	750
4x6D B3	59,1	46,5	47,0	35,1	290	145	4x630	54270	58	65	12	51600	74.5	2x1"5/8	2x2"1/8	670
4x8Y C2	63,8	51,5	50,8	39,1	348	174	4x800	62500	45	48	9	51300	74	2x1"3/8	2x2"5/8	890
3x8D C3	67,0	55,6	53,3	42,3	348	174	3x800	59690	53	53	12	51600	74.5	1"5/8	3"1/8	790
4x6D B4	68,6	56,6	54,8	43,1	362	181	4x630	52310	57	65	15	64500	93.1	1"5/8	3"1/8	750
4x8D C2	72,8	59,1	58,8	44,7	348	174	4x800	82300	61	54	9	51300	74	2x1"3/8	2x2"5/8	890
4x8Y C3	77,7	63,4	62,2	48,7	464	232	4x800	60060	43	48	12	68400	98.7	2x1"5/8	2x2"5/8	1010
4x8D C3	90,5	73,4	72,0	56,2	464	232	4x800	79590	59	54	12	68400	98.7	2x1"5/8	2x2"5/8	1010

(4) **Lp** = Average sound pressure level in dB(A) calculated at 4 m, level with the blades, in a free field over a reflecting plane, given as an indication only.
Lw = **Lp +30 dB(A)**
(5) Electric defrost options.
(6) Electric defrost kit.
(7) Adjustment of overload protection. For air temperatures "ti" other than +20 °C, multiply the intensities by the ratio 293/(273 + "ti") to obtain the approximate value of the intensity after heating the room.

NKT(A) 1x6(B) Y(C) B2(D) L(E)

(A) Fin type: **T** = Large heat exchange surface - **H** = High-efficiency fin
(B) Number of fans x Ø: **6** = Ø 630 mm - **8** = Ø 800 mm
(C) Motor connection: **D** = Triangle - **Y** = Star
(D) Module
(E) Fin spacing: **R** = 4.23 mm (positive) - **L** = 6.35 mm (positive) - **C** = 6.35 mm (negative) - **S** = 9 mm (negative) - **T** = 12 mm (negative)

The NK is available with CO_2, HFCs and glycol water. For more information, please consult our software.

NKH ... R | H = High-efficiency fin

4.23 mm

NKH ... R	Power		Coil		Ventilation				Electric defrost									Connections		Net weight
	DT 8K - SC2 (1)								E1U (5) 400 V/3/50 Hz			ELU (5) 400 V/3/50 Hz			ECK kit (6) 400 V/3/50 Hz			HFCs		
	CO2 (2) 50 bar	R449A	Surface area	Circuit volume	Nb x Ø	Airflow	Air throw (3) Standard	Acoustics Lp 4m (4)	Number	W	A	Number	W	A	Number	W	A	Inlet	Outlet	
	kW	kW	m²	dm³	mm	m³/h	m	dB(A)										Ø D	Ø	kg
1x6Y B1	18,5	17,3	74	14	1x630	10270	33	51	6	6900	10	6	6900	10	-	-	-	7/8"	1"5/8	160
1x6D B1	20,3	19,7	74	14	1x630	12770	43	59	6	6900	10	6	6900	10	-	-	-	7/8"	1"5/8	160
1x6Y B2	22,7	22,2	111	22	1x630	9480	30	51	7	10350	14,9	9	10350	14,9	3	3450	5	1"1/8	1"5/8	180
1x6Y B3	25,0	23,6	149	29	1x630	8830	29	51	10	13800	19,9	12	13800	19,9	3	3450	5	1"1/8	1"5/8	200
1x6D B2	26,0	25,5	111	22	1x630	11580	40	59	7	10350	14,9	9	10350	14,9	3	3450	5	1"1/8	1"5/8	180
1x8Y C1	28,1	26,1	124	24	1x800	15260	31	42	6	9000	13	6	9000	13	-	-	-	1"3/8	2"1/8	240
1x6D B3	29,6	27,8	149	29	1x630	10670	38	59	10	13800	19,9	12	13800	19,9	3	3450	5	1"1/8	1"5/8	200
1x8Y C2	33,2	31,9	186	36	1x800	14220	29	42	7	9000	13	9	13500	19,5	3	4500	6,5	1"3/8	2"1/8	270
1x8D C1	32,9	30,5	124	24	1x800	20260	43	48	6	9000	13	6	9000	13	-	-	-	1"3/8	2"1/8	240
2x6Y B1	37,2	34,6	149	29	2x630	20530	36	54	6	13200	19,1	6	13200	19,1	-	-	-	1"3/8	2"1/8	270
1x8D C2	40,2	38,9	186	36	1x800	19130	40	48	7	9000	13	9	13500	19,5	3	4500	6,5	1"3/8	2"1/8	270
2x6D B1	41,0	39,9	149	29	2x630	25540	44	62	6	13200	19,1	6	13200	19,1	-	-	-	1"3/8	2"1/8	270
2x6Y B2	45,7	43,2	223	43	2x630	18970	32	54	7	19800	28,6	9	19800	28,6	3	6600	9,5	1"3/8	2"1/8	300
2x6Y B3	48,6	47,9	297	58	2x630	17650	30	54	10	26400	38,1	12	26400	38,1	3	6600	9,5	1"5/8	2"1/8	340
2x6D B2	52,3	50,2	223	43	2x630	23160	42	62	7	19800	28,6	9	19800	28,6	3	6600	9,5	1"3/8	2"1/8	300
3x6Y B1	55,9	52,6	223	43	3x630	30800	38	56	6	19500	28,1	6	19500	28,1	-	-	-	1"5/8	2"1/8	370
2x8Y C1	55,0	52,9	248	48	2x800	30520	32	45	6	17400	25,1	6	17400	25,1	-	-	-	1"5/8	2"5/8	420
2x6D B3	59,5	56,3	297	58	2x630	21340	39	62	10	26400	38,1	12	26400	38,1	3	6600	9,5	1"5/8	2"1/8	340
3x6D B1	63,2	60,1	223	43	3x630	38310	50	64	6	19500	28,1	6	19500	28,1	-	-	-	1"5/8	2"1/8	370
2x8Y C2	65,1	62,7	371	72	2x800	28440	30	45	7	17400	25,1	9	26100	37,7	3	8700	12,6	1"5/8	2"5/8	480
2x8D C1	63,9	61,6	248	48	2x800	40530	44	51	6	17400	25,1	6	17400	25,1	-	-	-	1"5/8	2"5/8	420
3x6Y B2	67,8	67,4	334	65	3x630	28450	36	56	7	19500	28,1	9	29250	42,2	3	9750	14,1	2x1"3/8	2x2"1/8	430
4x6Y B1	74,6	68,4	297	58	4x630	41070	44	57	6	25800	37,2	6	25800	37,2	-	-	-	1"5/8	2"5/8	480
3x6Y B3	71,3	70,4	445	86	3x630	26480	33	56	10	29250	42,2	12	39000	56,3	3	9750	14,1	1"5/8	2"5/8	490
3x8Y C1	83,7	72,4	371	72	3x800	45780	37	47	6	25800	37,2	6	25800	37,2	-	-	-	1"5/8	2"5/8	570
2x8D C2	80,7	76,5	371	72	2x800	38260	41	51	7	17400	25,1	9	26100	37,7	3	8700	12,6	1"5/8	2"5/8	480
3x6D B2	77,4	77,9	334	65	3x630	34750	47	64	7	19500	28,1	9	29250	42,2	3	9750	14,1	2x1"3/8	2x2"1/8	430
3x6D B3	89,4	82,8	445	86	3x630	32010	44	64	10	29250	42,2	12	39000	56,3	3	9750	14,1	1"5/8	2"5/8	490
4x6D B1	82,5	78,3	297	58	4x630	51080	55	65	6	25800	37,2	6	25800	37,2	-	-	-	2x1"5/8	2x2"1/8	480
3x8D C1	97,6	84,4	371	72	3x800	60790	50	53	6	25800	37,2	6	25800	37,2	-	-	-	1"5/8	2"5/8	570
4x6Y B2	91,7	86,3	445	86	4x630	37930	40	57	7	25800	37,2	9	38700	55,9	3	12900	18,6	2x1"3/8	2x2"1/8	550
3x8Y C2	100,1	92,8	557	108	3x800	42650	34	47	7	25800	37,2	9	38700	55,9	3	12900	18,6	2x1"5/8	2x2"1/8	670
4x6Y B3	97,5	95,6	594	115	4x630	35310	37	57	10	38700	55,9	12	51600	74,5	3	12900	18,6	2x1"5/8	2x2"1/8	630
4x6D B2	105,0	100,3	445	86	4x630	46330	52	65	7	25800	37,2	9	38700	55,9	3	12900	18,6	2x1"3/8	2x2"1/8	550
4x8Y C2	129,3	109,8	742	144	4x800	56870	38	48	7	34200	49,4	9	51300	74	3	17100	24,7	2x1"5/8	2x2"5/8	840
4x8Y C1	110,3	106,2	495	96	4x800	61040	41	48	6	34200	49,4	6	34200	49,4	-	-	-	2x1"5/8	2x2"5/8	740
4x6D B3	119,3	112,5	594	115	4x630	42680	49	65	10	38700	55,9	12	51600	74,5	3	12900	18,6	2x1"5/8	2x2"1/8	630
3x8D C2	121,3	113,2	557	108	3x800	57390	47	53	7	25800	37,2	9	38700	55,9	3	12900	18,6	2x1"5/8	2x2"1/8	670
4x8D C1	131,8	123,7	495	96	4x800	81060	56	54	6	34200	49,4	6	34200	49,4	-	-	-	2x1"5/8	2x2"5/8	740
4x8D C2	154,6	133,9	742	144	4x800	76520	52	54	7	34200	49,4	9	51300	74	3	17100	24,7	2x1"5/8	2x2"5/8	840

* ***Ø 630 mm*** : 400 V/3/50 Hz - Δ = 1500 rpm. - 1,900 W max - 3.2 A max - Y = 1000 rpm. - 1350 W max - 2.2 A max (7)
* ***Ø 800 mm*** : 400 V/3/50 Hz - Δ = 870 rpm. - 1,900 W max - 3.9 A max - Y = 630 rpm. - 1,100 W max - 2 A max (7)

(1) Standard conditions: SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
SC3 / -18 °C (air inlet temp.) / -25 °C (evaporating temp.) / DT1 = 7K
SC4 / -25 °C (air inlet temp.) / -31 °C (evaporating temp.) / DT1 = 6K
(2) Operating pressure: 50 bar - Connection diameters to be defined when ordering.
(3) Residual air speed: 0.25 m/s. - Air throw with **VPA** option = Standard **+15 m**

NKT(A) 1x6(B) Y(C) B2(D) L(E)

(A) Fin type: **T** = Large heat exchange surface - **H** = High-efficiency fin
(B) Number of fans x Ø: **6** = Ø 630 mm - **8** = Ø 800 mm
(C) Motor connection: **D** = Triangle - **Y** = Star
(D) Module
(E) Fin spacing: **R** = 4.23 mm (positive) - **L** = 6.35 mm (positive) - **C** = 6.35 mm (negative) - **S** = 9 mm (negative) - **T** = 12 mm (negative)

The NK is available with CO_2, HFCs and glycol water. For more information, please consult our software.

NKH ... L | H = High-efficiency fin

6.35 mm

NKH ... L	Power		Coil		Ventilation				Electric defrost									Connections		Net weight
	DT 8K - SC2 (1)								E1U (5) 400 V/3/50 Hz			ELU (5) 400 V/3/50 Hz			ECK kit (6) 400 V/3/50 Hz			HFCs		
	CO2 (2) 50 bar	R449A	Surface area	Circuit volume	Nb x Ø	Airflow	Air throw (3) Standard	Acoustics Lp 4m (4)	Number	W	A	Number	W	A	Number	W	A	Inlet	Outlet	
	kW	kW	m²	dm³	mm	m³/h	m	dB(A)										Ø D	Ø	kg
1x6Y B1	15,1	15,0	51	14	1x630	10720	34	51	6	6900	10	6	6900	10	-	-	-	7/8"	1"3/8	160
1x6D B1	16,4	17,1	51	14	1x630	13450	45	59	6	6900	10	6	6900	10	-	-	-	7/8"	1"3/8	160
1x6Y B2	19,5	19,5	77	22	1x630	10070	32	51	7	6900	10	9	10350	14,9	3	3450	5	1"1/8	1"5/8	180
1x6Y B3	21,9	22,5	102	29	1x630	9490	30	51	10	10350	14,9	12	13800	19,9	3	3450	5	1"1/8	1"5/8	190
1x6D B2	21,8	22,8	77	22	1x630	12460	42	59	7	6900	10	9	10350	14,9	3	3450	5	1"1/8	1"5/8	180
1x8Y C1	22,7	22,7	85	24	1x800	15830	33	42	6	9000	13	6	9000	13	-	-	-	1"3/8	1"5/8	230
1x6D B3	25,8	26,8	102	29	1x630	11600	40	59	10	10350	14,9	12	13800	19,9	3	3450	5	1"1/8	1"5/8	190
1x8D C1	25,9	26,8	85	24	1x800	20870	45	48	6	9000	13	6	9000	13	-	-	-	1"3/8	1"5/8	230
1x8Y C2	27,1	29,1	128	36	1x800	14990	31	42	7	9000	13	9	13500	19,5	3	4500	6,5	1"3/8	2"1/8	260
2x6Y B1	26,0	30,7	102	29	2x630	21440	37	54	6	13200	19,1	6	13200	19,1	-	-	-	1"3/8	2"1/8	260
1x8D C2	34,2	35,0	128	36	1x800	19970	43	48	7	9000	13	9	13500	19,5	3	4500	6,5	1"3/8	2"1/8	260
2x6D B1	33,0	34,8	102	29	2x630	26910	46	62	6	13200	19,1	6	13200	19,1	-	-	-	1"3/8	2"1/8	260
2x6Y B2	39,2	39,1	153	43	2x630	20140	33	54	7	13200	19,1	9	19800	28,6	3	6600	9,5	1"3/8	2"1/8	290
2x6Y B3	44,1	45,1	204	58	2x630	18990	32	54	10	19800	28,6	12	26400	38,1	3	6600	9,5	1"5/8	2"1/8	330
2x6D B2	43,8	45,5	153	43	2x630	24930	44	62	7	13200	19,1	9	19800	28,6	3	6600	9,5	1"3/8	2"1/8	290
2x8Y C1	45,6	47,6	170	48	2x800	31660	34	45	6	17400	25,1	6	17400	25,1	-	-	-	1"3/8	2"1/8	400
3x6Y B1	45,5	46,0	153	43	3x630	32160	40	56	6	19500	28,1	6	19500	28,1	-	-	-	1"5/8	2"1/8	360
2x6D B3	51,7	53,7	204	58	2x630	23200	42	62	10	19800	28,6	12	26400	38,1	3	6600	9,5	1"5/8	2"1/8	330
3x6D B1	50,0	52,4	153	43	3x630	40360	52	64	6	19500	28,1	6	19500	28,1	-	-	-	1"5/8	2"1/8	360
2x8D C1	52,1	53,7	170	48	2x800	41740	46	51	6	17400	25,1	6	17400	25,1	-	-	-	1"5/8	2"1/8	400
2x8Y C2	57,3	58,4	255	72	2x800	29980	31	45	7	17400	25,1	9	26100	37,7	3	8700	12,6	1"5/8	2"5/8	460
3x6Y B2	58,4	59,4	230	65	3x630	30200	37	56	7	19500	28,1	9	29250	42,2	3	9750	14,1	2x1"3/8	2x2"1/8	410
4x6Y B1	60,7	61,4	204	58	4x630	42880	46	57	6	25800	37,2	6	25800	37,2	-	-	-	1"5/8	2"5/8	470
3x8Y C1	68,9	63,0	255	72	3x800	47490	39	47	6	25800	37,2	6	25800	37,2	-	-	-	1"5/8	2"5/8	550
3x6Y B3	65,2	67,0	306	86	3x630	28480	36	56	10	29250	42,2	12	39000	56,3	3	9750	14,1	1"5/8	2"5/8	460
2x8D C2	68,6	70,3	255	72	2x800	39940	43	51	7	17400	25,1	9	26100	37,7	3	8700	12,6	1"5/8	2"5/8	460
3x6D B2	65,1	69,2	230	65	3x630	37390	49	64	7	19500	28,1	9	29250	42,2	3	9750	14,1	2x1"3/8	2x2"1/8	410
4x6D B1	66,1	68,1	204	58	4x630	53820	58	65	6	25800	37,2	6	25800	37,2	-	-	-	2x1"5/8	2x2"1/8	470
3x8D C1	79,0	74,5	255	72	3x800	62620	53	53	6	25800	37,2	6	25800	37,2	-	-	-	1"5/8	2"5/8	550
4x6Y B2	78,5	78,5	306	86	4x630	40270	42	57	7	25800	37,2	9	38700	55,9	3	12900	18,6	2x1"3/8	2x2"1/8	530
3x6D B3	77,7	79,8	306	86	3x630	34800	47	64	10	29250	42,2	12	39000	56,3	3	9750	14,1	1"5/8	2"5/8	460
3x8Y C2	87,3	86,6	383	108	3x800	44960	37	47	7	25800	37,2	9	38700	55,9	3	12900	18,6	2x1"5/8	2x2"1/8	650
4x6Y B3	88,6	90,6	409	115	4x630	37980	40	57	10	38700	55,9	12	51600	74,5	3	12900	18,6	2x1"5/8	2x2"1/8	600
4x6D B2	87,7	91,4	306	86	4x630	49860	55	65	7	25800	37,2	9	38700	55,9	3	12900	18,6	2x1"3/8	2x2"1/8	530
4x8Y C1	91,3	91,6	340	96	4x800	63320	43	48	6	34200	49,4	6	34200	49,4	-	-	-	2x1"5/8	2x2"1/8	720
4x8Y C2	114,2	103,3	511	144	4x800	59950	40	48	7	34200	49,4	9	51300	74	3	17100	24,7	2x1"5/8	2x2"1/8	800
3x8D C2	103,1	104,3	383	108	3x800	59900	50	53	7	25800	37,2	9	38700	55,9	3	12900	18,6	2x1"5/8	2x2"1/8	650
4x6D B3	103,7	107,8	409	115	4x630	46390	52	65	10	38700	55,9	12	51600	74,5	3	12900	18,6	2x1"5/8	2x2"1/8	600
4x8D C1	106,0	108,0	340	96	4x800	83490	59	54	6	34200	49,4	6	34200	49,4	-	-	-	2x1"5/8	2x2"1/8	720
4x8D C2	133,7	126,0	511	144	4x800	79870	55	54	7	34200	49,4	9	51300	74	3	17100	24,7	2x1"5/8	2x2"1/8	800

(4) **Lp** = Average sound pressure level in dB(A) calculated at 4 m, level with the blades, in a free field over a reflecting plane, given as an indication only.
Lw = **Lp +30 dB(A)**
(5) Electric defrost options.
(6) Electric defrost kit.
(7) Adjustment of overload protection. For air temperatures "ti" other than +20 °C, multiply the intensities by the ratio 293/(273 + "ti") to obtain the approximate value of the intensity after heating the room.

NKT(A) 1x6(B) Y(C) B2(D) L(E)

(A) Fin type: **T** = Large heat exchange surface - **H** = High-efficiency fin
(B) Number of fans x Ø: **6** = Ø 630 mm - **8** = Ø 800 mm
(C) Motor connection: **D** = Triangle - **Y** = Star
(D) Module
(E) Fin spacing: **R** = 4.23 mm (positive) - **L** = 6.35 mm (positive) - **C** = 6.35 mm (negative) - **S** = 9 mm (negative) - **T** = 12 mm (negative)

The NK is available with CO_2, HFCs and glycol water. For more information, please consult our software.

NKH ... C | H = High-efficiency fin

6.35 mm

NKH ... C	Power DT 7K - SC3 (1)		Power DT 6K - SC4 (1)		Coil		Ventilation				Electric defrost 400 V/3/50 Hz			Connections HFCs		Net weight
	CO2 (2) 50 bar	R449A	CO2 (2) 50 bar	R449A	Surface area	Circuit volume	Nb x Ø	Airflow	Air throw (3) Standard	Acoustics Lp 4m (4)	Number	W	A	Inlet	Outlet	
	kW	kW	kW	kW	m²	dm³	mm	m³/h	m	dB(A)				Ø D	Ø	kg
1x6Y B1	12,1	10,6	9,7	8,3	51	14	1x630	10720	34	51	6	6900	10	7/8"	1"5/8	170
1x6D B1	13,1	12,0	10,4	9,4	51	14	1x630	13450	45	59	6	6900	10	7/8"	1"5/8	170
1x6Y B2	15,8	14,0	12,8	11,1	77	22	1x630	10070	32	51	9	10350	14.9	1"1/8	2"1/8	190
1x6Y B3	18,4	16,7	14,9	13,4	102	29	1x630	9490	30	51	12	13800	19.9	1"3/8	2"1/8	210
1x6D B2	17,5	16,2	14,1	12,8	77	22	1x630	12460	42	59	9	10350	14.9	1"1/8	2"1/8	190
1x8Y C1	18,8	16,3	15,2	13,0	85	24	1x800	15830	33	42	6	9000	13	1"3/8	2"1/8	250
1x6D B3	20,9	19,5	16,9	15,6	102	29	1x630	11600	40	59	12	13800	19.9	1"3/8	2"1/8	210
1x8D C1	21,5	19,1	17,3	15,1	85	24	1x800	20870	45	48	6	9000	13	1"3/8	2"1/8	250
1x8Y C2	23,7	21,0	19,2	16,8	128	36	1x800	14990	31	42	9	13500	19.5	1"3/8	2"1/8	280
2x6Y B1	24,4	21,9	19,6	17,3	102	29	2x630	21440	37	54	6	13200	19.1	1"3/8	2"1/8	290
1x8D C2	27,7	25,0	22,3	19,8	128	36	1x800	19970	43	48	9	13500	19.5	1"3/8	2"1/8	280
2x6D B1	26,4	24,5	21,1	19,3	102	29	2x630	26910	46	62	6	13200	19.1	1"3/8	2"1/8	290
2x6Y B2	31,9	28,8	25,7	23,1	153	43	2x630	20140	36	54	9	19800	28.6	1"5/8	2"1/8	320
2x6Y B3	37,0	33,7	30,1	27,3	204	58	2x630	18990	32	54	12	26400	38.1	1"5/8	2"5/8	360
3x6Y B1	37,7	32,5	30,5	25,8	153	43	3x630	32160	40	56	6	19500	28.1	1"5/8	2"5/8	410
2x6D B2	36,3	33,1	29,4	26,2	153	43	2x630	24930	44	62	9	19800	28.6	1"5/8	2"5/8	320
2x8Y C1	36,6	33,0	29,4	26,3	170	48	2x800	31660	34	45	6	17400	25.1	1"5/8	2"5/8	440
2x8Y C2	46,0	37,3	37,1	29,7	255	72	2x800	29980	31	45	9	26100	37.7	1"5/8	2"5/8	500
3x6D B1	41,0	37,0	33,0	29,1	153	43	3x630	40360	52	64	6	19500	28.1	1"5/8	2"5/8	410
2x6D B3	42,1	39,7	34,1	31,7	204	58	2x630	23200	42	62	12	26400	38.1	1"5/8	2"5/8	360
2x8D C1	41,4	38,8	33,1	30,8	170	48	2x800	41740	46	51	6	17400	25.1	1"5/8	2"5/8	440
3x6Y B2	47,0	42,9	37,9	34,5	230	65	3x630	30200	37	56	9	29250	42.2	2x1"3/8	2x2"1/8	460
3x8Y C1	55,9	42,9	45,1	33,5	255	72	3x800	47490	39	47	6	25800	37.2	1"5/8	2"5/8	600
2x8D C2	55,7	44,8	44,9	35,1	255	72	2x800	39940	43	51	9	26100	37.7	1"5/8	2"5/8	500
4x6Y B1	49,0	43,2	39,4	34,4	204	58	4x630	42880	44	57	6	25800	37.2	2x1"5/8	2x2"1/8	520
3x6Y B3	55,6	50,9	45,2	41,0	306	86	3x630	28480	36	56	12	39000	56.3	2x1"5/8	2x2"1/8	520
3x6D B2	52,0	49,9	41,7	39,7	230	65	3x630	37390	49	64	9	29250	42.2	2x1"3/8	2x2"1/8	460
3x8D C1	63,6	50,3	51,0	39,0	255	72	3x800	62620	53	53	6	25800	37.2	1"5/8	2"5/8	600
4x6D B1	53,0	48,9	42,5	38,8	204	58	4x630	53820	58	65	6	25800	37.2	2x1"5/8	2x2"1/8	520
3x8Y C2	71,5	55,4	58,1	44,2	383	108	3x800	44960	37	47	9	38700	55.9	2x1"5/8	2x2"5/8	700
4x6Y B3	70,8	60,3	57,0	47,5	409	115	4x630	37980	40	57	12	51600	74.5	2x1"5/8	2x2"5/8	670
3x6D B3	63,3	59,9	51,2	47,9	306	86	3x630	34800	47	64	12	39000	56.3	2x1"5/8	2x2"1/8	520
3x8D C2	83,7	67,3	67,6	52,1	383	108	3x800	59900	50	53	9	38700	55.9	2x1"5/8	2x2"5/8	700
4x8Y C1	73,4	66,2	59,1	52,9	340	96	4x800	63320	43	48	6	34200	49.4	2x1"5/8	2x2"5/8	780
4x6D B3	84,5	70,1	68,4	55,5	409	115	4x630	46390	52	65	12	51600	74.5	2x1"5/8	2x2"5/8	670
4x8D C1	86,2	77,9	69,4	61,9	340	96	4x800	83490	59	54	6	34200	49.4	2x1"5/8	2x2"5/8	780

* ***Ø 630 mm*** : 400 V/3/50 Hz - Δ = 1500 rpm. - 1,900 W max - 3.2 A max - Y = 1000 rpm. - 1350 W max - 2.2 A max (7)
* ***Ø 800 mm*** : 400 V/3/50 Hz - Δ = 870 rpm. - 1,900 W max - 3.9 A max - Y = 630 rpm. - 1,100 W max - 2 A max (7)

(1) Standard conditions: SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
SC3 / -18 °C (air inlet temp.) / -25 °C (evaporating temp.) / DT1 = 7K
SC4 / -25 °C (air inlet temp.) / -31 °C (evaporating temp.) / DT1 = 6K
(2) Operating pressure: 50 bar - Connection diameters to be defined when ordering.
(3) Residual air speed: 0.25 m/s. - Air throw with **VPA** option = Standard **+15 m**

NKT(A) 1x6(B) Y(C) B2(D) L(E)

(A) Fin type: **T** = Large heat exchange surface - **H** = High-efficiency fin
(B) Number of fans x Ø: **6** = Ø 630 mm - **8** = Ø 800 mm
(C) Motor connection: **D** = Triangle - **Y** = Star
(D) Module
(E) Fin spacing: **R** = 4.23 mm (positive) - **L** = 6.35 mm (positive) - **C** = 6.35 mm (negative) - **S** = 9 mm (negative) - **T** = 12 mm (negative)

The NK is available with CO_2, HFCs and glycol water. For more information, please consult our software.

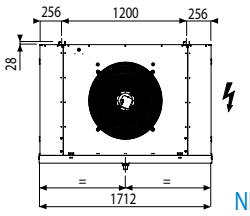
NKH ... S | H = High-efficiency fin

9 mm

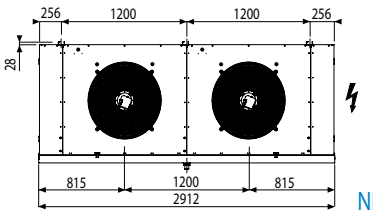
NKH ... S	Power DT 7K - SC3 (1)		Power DT 6K - SC4 (1)		Coil		Ventilation				Electric defrost 400 V/3/50 Hz			Connections HFCs		Net weight
	CO2 (2) 50 bar	R449A	CO2 (2) 50 bar	R449A	Surface area	Circuit volume	Nb x Ø	Airflow	Air throw (3) Standard	Acoustics Lp 4m (4)	Number	W	A	Inlet	Outlet	
	kW	kW	kW	kW	m²	dm³	mm	m³/h	m	dB(A)				Ø D	Ø	kg
1x6Y B1	11,4	9,2	9,1	7,1	37	14	1x630	11000	35	51	6	6900	10	7/8"	1"5/8	170
1x6D B1	12,3	10,2	9,9	7,9	37	14	1x630	13860	46	59	6	6900	10	7/8"	1"5/8	170
1x6Y B2	15,1	12,4	12,2	9,7	56	22	1x630	10450	33	51	9	10350	14.9	1"1/8	1"5/8	190
1x6D B2	16,6	14,1	13,4	11,0	56	22	1x630	13050	44	59	9	10350	14.9	1"1/8	1"5/8	190
1x8Y C1	17,6	14,0	14,3	11,0	62	24	1x800	16180	34	42	6	9000	13	1"3/8	2"1/8	250
1x6Y B3	17,8	15,1	14,5	11,9	75	29	1x630	9950	32	51	12	13800	19.9	1"1/8	2"1/8	210
1x8D C1	20,2	16,1	16,3	8,1	62	24	1x800	21230	47	48	6	9000	13	1"3/8	2"1/8	250
1x6D B3	20,1	17,3	16,2	13,7	75	29	1x630	12280	42	59	12	13800	19.9	1"1/8	2"1/8	210
1x8Y C2	22,6	18,8	18,3	14,8	94	36	1x800	15470	32	42	9	13500	19.5	1"3/8	2"1/8	280
2x6Y B1	22,9	18,5	18,5	14,5	75	29	2x630	22010	38	54	6	13200	19.1	1"3/8	2"1/8	280
2x6D B1	24,8	20,8	19,9	16,2	75	29	2x630	27720	47	62	6	13200	19.1	1"3/8	2"1/8	280
1x8D C2	26,4	21,9	21,3	17,2	94	36	1x800	20490	44	48	9	13500	19.5	1"3/8	2"1/8	280
2x6Y B2	30,3	25,0	25,1	19,8	112	43	2x630	20900	37	54	9	19800	28.6	1"3/8	2"1/8	320
3x6Y B1	35,2	28,2	28,5	22,1	112	43	3x630	33010	41	56	6	19500	28.1	1"5/8	2"5/8	400
2x6D B2	34,4	28,7	27,9	22,5	112	43	2x630	26100	45	62	9	19800	28.6	1"5/8	2"5/8	320
2x8Y C1	34,3	28,3	27,7	22,3	125	48	2x800	32350	35	45	6	17400	25.1	1"5/8	2"5/8	430
2x6Y B3	34,2	30,6	29,1	24,3	150	58	2x630	19890	33	54	12	26400	38.1	1"5/8	2"5/8	360
3x6D B1	38,3	31,4	31,0	24,5	112	43	3x630	41580	54	64	6	19500	28.1	1"5/8	2"5/8	400
2x8Y C2	44,0	33,9	35,6	26,2	187	72	2x800	30950	33	45	9	26100	37.7	1"5/8	2"5/8	480
2x8D C1	39,0	32,6	33,1	16,4	125	48	2x800	42460	48	51	6	17400	25.1	1"5/8	2"5/8	430
2x6D B3	40,4	35,1	32,7	27,8	150	58	2x630	24560	44	62	12	26400	38.1	1"5/8	2"5/8	360
4x6Y B1	46,0	36,1	37,1	27,9	150	58	4x630	44020	47	57	6	25800	37.2	1"5/8	2"5/8	510
3x8Y C1	52,3	37,5	42,3	28,6	187	72	3x800	48530	40	47	6	25800	37.2	1"5/8	2"5/8	590
3x6Y B2	44,9	38,0	36,2	30,0	169	65	3x630	31350	39	56	9	29250	42.2	2x1"1/8	2x2"1/8	450
2x8D C2	53,1	39,4	42,9	30,3	187	72	2x800	40990	45	51	9	26100	37.7	1"5/8	2"5/8	480
4x6D B1	49,8	40,9	40,0	32,1	150	58	4x630	55450	59	65	6	25800	37.2	2x1"3/8	2x2"1/8	510
3x6D B2	49,5	43,3	39,8	34,0	169	65	3x630	39150	51	64	9	29250	42.2	2x1"1/8	2x2"1/8	450
3x8D C1	59,8	43,3	48,1	21,9	187	72	3x800	63700	55	53	6	25800	37.2	1"5/8	2"5/8	590
4x6Y B2	60,9	44,9	49,4	34,1	225	86	4x630	41800	43	57	9	38700	55.9	2x1"3/8	2x2"1/8	570
3x6Y B3	53,7	46,2	43,8	36,7	225	86	3x630	29840	37	56	12	39000	56.3	2x1"3/8	2x2"1/8	510
3x8Y C2	68,1	50,3	55,4	38,8	281	108	3x800	46420	38	47	9	38700	55.9	2x1"5/8	2x2"1/8	670
4x6D B2	67,3	50,9	54,4	38,8	225	86	4x630	52200	57	65	9	38700	55.9	2x1"3/8	2x2"1/8	570
3x6D B3	60,7	52,9	49,2	42,0	225	86	3x630	36840	49	64	12	39000	56.3	2x1"3/8	2x2"1/8	510
4x6Y B3	68,7	54,9	58,4	42,2	300	115	4x630	39790	42	57	12	51600	74.5	2x1"3/8	2x2"5/8	640
3x8D C2	79,7	58,6	64,5	44,9	281	108	3x800	61480	52	53	9	38700	55.9	2x1"5/8	2x2"1/8	670
4x8Y C1	68,8	57,1	55,5	44,9	250	96	4x800	64700	45	48	6	34200	49.4	2x1"5/8	2x2"5/8	770
4x6D B3	81,1	62,8	65,7	48,5	300	115	4x630	49120	55	65	12	51600	74.5	2x1"3/8	2x2"5/8	640
4x8Y C2	87,2	64,6	73,0	48,4	375	144	4x800	61890	42	48	9	51300	74	2x1"5/8	2x2"5/8	860
4x8D C1	80,9	65,7	65,3	33,1	250	96	4x800	84930	61	54	6	34200	49.4	2x1"5/8	2x2"5/8	770
4x8D C2	104,8	75,1	84,6	56,8	375	144	4x800	81970	58	54	9	51300	74	2x1"5/8	2x2"5/8	860

(4) **Lp** = Average sound pressure level in dB(A) calculated at 4 m, level with the blades, in a free field over a reflecting plane, given as an indication only.
Lw = **Lp +30 dB(A)**
(5) Electric defrost options.
(6) Electric defrost kit.
(7) Adjustment of overload protection. For air temperatures "ti" other than +20 °C, multiply the intensities by the ratio 293/(273 + "ti") to obtain the approximate value of the intensity after heating the room.

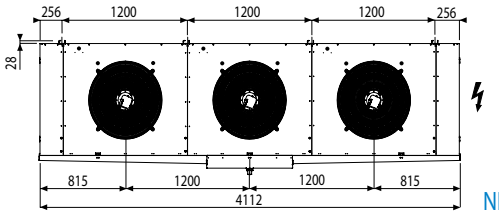
NK | Ø 630 mm



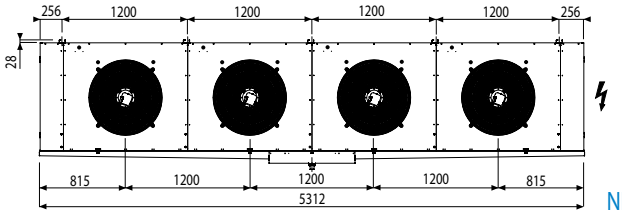
NK ... 1x6 ...



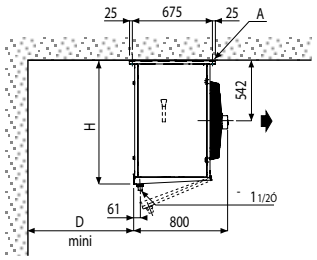
NK ... 2x6 ...

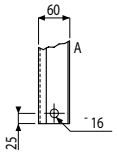


NK ... 3x6 ...



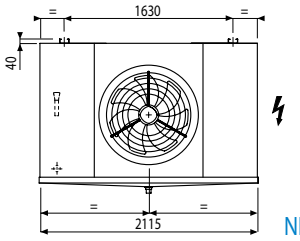
NK ... 4x6 ...



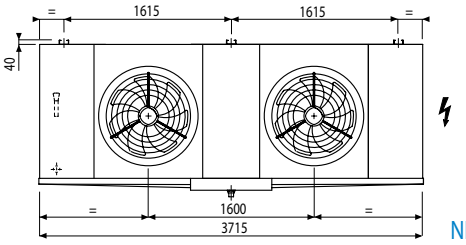


	D	H
1	550	1115
2	700	1115
3	800	1158
4	850	1158

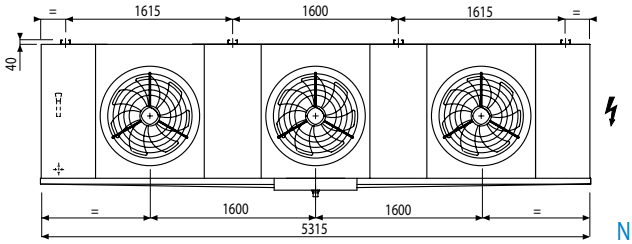
NK | Ø 800 mm



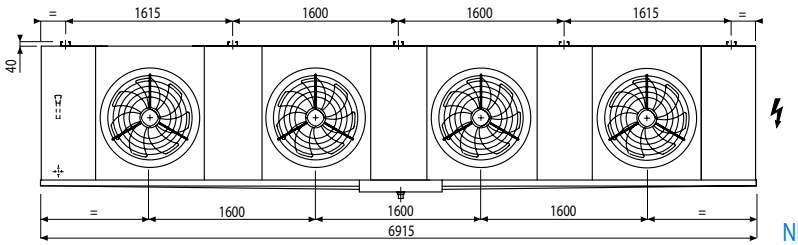
NK ... 1x8 ...



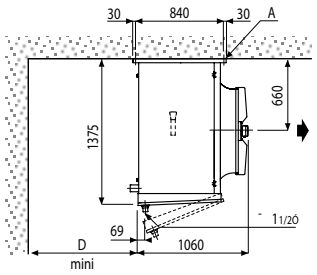
NK ... 2x8 ...

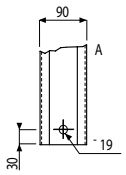


NK ... 3x8 ...



NK ... 4x8 ...





	D
1	700
2	900
3	1000
4	1050

NW

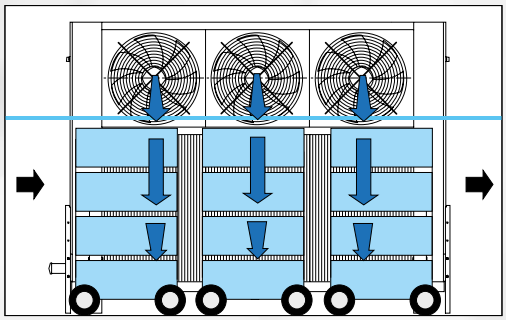
Unit cooler for blast freezing and rapid cooling tunnel
Industrial range

CO2 40 bar | CO2 50 bar | HFC | W GLYCOL

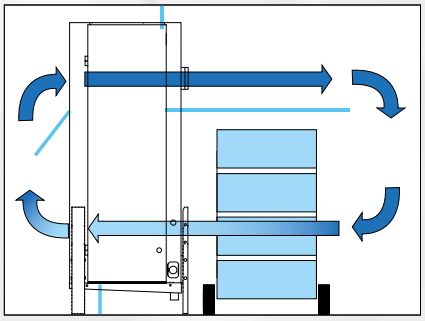
3.5 - 66 kW

The NW is an asset for ensuring **fast**, **even freezing** of foodstuffs.

The design of the product and the selection of its components allow for **easy installation** and **maintenance**.



THE PRINCIPLE OF A BLAST FREEZING AND RAPID COOLING TUNNEL



1 CASING

Pre-painted galvanized steel for corrosion and impact resistance.
Limited condensation: presence of an aluminium interior drain pan under the main drain pan.

OPTIONS	
ECB	Wooden crate packaging.

2 VENTILATION

There are two types of motor fans on the NW range:

Axial fans

A models, externally mounted, equipped with protective grilles.
Three-phase external rotor motors, 400 V, 50 Hz, IP54, class F, 4P (1,500 rpm), internal thermal protection.
Air pressure available up to 100 Pa.

Centrifugal motor fans

C models, double inlet direct drive.
Three-phase motors protected by an enclosed casing, 230/400 V, 50 Hz, IP54, class F, 4P (1,000 rpm), internal thermal protection.
Air pressure available up to 200 Pa.

OPTIONS	
CMU	Factory motor wiring.

3 COILS

Aluminium fins with 6.35, 9 or 12 mm spacing.
Combined with copper tubes, the coils are very efficient and compact.
Versions available:
- Multi-refrigerant HFCs.
- CO2 (40 and 50 bar).
- WCO (glycol water, coolant). CONTACT US

4 DEFROST

OPTIONS	
DAE	Water defrost (spraying).
E1U	Light electric defrost.
ECU	Additional electric coil defrost.
ECK	Additional electric coil defrost. KIT TO INSTALL
HGT	Hot gases (coil and drain pan).
RVU	Shell defrost heaters.
RVK	Shell defrost heaters. KIT TO INSTALL

Accessibility

INSTALLATION | MAINTENANCE

Installed against a wall, it allows maximum charging of the cold room.
Height-adjustable support feet promote even air distribution over the products.
Floor mounting for easy installation and maintenance.
Two possible blowing positions: horizontal (H2) and vertical (H4) for centrifugal pressure only.
Easy maintenance: easily removable aluminium main drain pan, hinged side panels for quick access to electrical and refrigeration connections.

NW 12(A) A1(B) R(C) 100Pa(D)

(A) Model
(B) **A** = Axial fan - **C** = Centrifugal fan / **1** = Number
(D) Fin spacing: **R** = 6.35 mm (positive) **C** = 6.35 mm (negative)
L = 9 mm (positive) **S** = 9 mm (negative)
M = 12 mm (positive) **T** = 12 mm (negative)
(D) Available pressure

The NW is available with CO_2, HFCs and glycol water. For more information, please consult our software.

NW ... R - Axial fans — 6.35 mm

0 Pa (1)	CONDITIONS	REFRIGERANTS	NW ... R	12 A1	14 A1	25 A2	30 A2	45 A3	60 A4
	SC2 (2)	CO_2 - **50 bar** (3)	**kW**	**12,8**	**14,7**	**25,2**	**29,6**	**44,6**	**59,5**
		R449A	**kW**	**13,4**	**16,1**	**27,4**	**32,7**	**49,5**	**66,2**
	Airflow		**m³/h**	7920	7590	15840	15190	22780	30380
	Air throw (4)		**m**	19	18	22	21	26	30

100 Pa (1)	CONDITIONS	REFRIGERANTS	NW ... R	12 A1	14 A1	25 A2	30 A2	45 A3	60 A4
	SC2 (2)	CO_2 - **50 bar** (3)	**kW**	**11,0**	**12,3**	**21,7**	**24,7**	**37,2**	**49,7**
		R449A	**kW**	**11,7**	**13,8**	**23,9**	**28,0**	**42,2**	**56,3**
	Airflow		**m³/h**	6000	5640	12000	11290	16940	22580
	Air throw (4)		**m**	15	14	17	16	20	23

			12 A1	14 A1	25 A2	30 A2	45 A3	60 A4
Surface area		**m²**	44,7	59,6	89,4	119,1	178,7	238,3
Circuit volume		**dm³**	12,6	16,8	25,1	33,5	50,3	67,0
Fan 1,500 rpm	**Ø 560 mm**	**Nb**	1	1	2	2	3	4
	400 V/3/50 Hz	**W max**	1200	1200	2400	2400	3600	4800
		A max	2,4	2,4	4,8	4,8	7,2	9,6
Acoustics	**Lp 4m** (5)	**dB(A)**	52	52	55	55	57	58
	Lw	**dB(A)**	82	82	85	85	87	88
Electric defrost **E1U** (6)	Coil + drain pan	**Nb**	4+2	7+2	4+2	7+2	7+2	7+2
	230-400 V/3/50 Hz	**W Total**	3900	5850	6600	9900	14400	22500
		A Total	9.8/5.6	14.7/8.4	16.6/9.5	24.9/14.3	36.1/20.8	56.5/32.5
Connections **HFCs**	Inlet	**Ø**	5/8"	5/8"	7/8"	7/8"	1"1/8	1"3/8
	Outlet	**Ø**	1"3/8	1"3/8	1"5/8	1"5/8	2"1/8	2"1/8
Net weight		**kg**	180	195	280	305	420	530

NW ... R - Centrifugal — 6.35 mm

200 Pa (1)	CONDITIONS	REFRIGERANTS	NW ... R	12 C1	14 C1	24 C2	28 C2	43 C3	58 C4
	SC2 (2)	CO_2 - **50 bar** (3)	**kW**	**10,7**	**12,3**	**21,3**	**24,8**	**33,8**	**47,1**
		R449A	**kW**	**12,0**	**14,6**	**24,8**	**29,5**	**44,4**	**59,4**
	Airflow		**m³/h**	5770	5770	11880	11540	17300	23070
	Air throw (4)		**m**	18	18	22	21	25	28

			12 C1	14 C1	24 C2	28 C2	43 C3	58 C4
Surface area		**m²**	44,7	59,6	89,4	119,1	178,7	238,3
Circuit volume		**dm³**	12,6	16,8	25,1	33,5	50,3	67,0
Turbine 1,000 rpm	**12/12**	**Nb**	1	1	2	2	3	4
	230-400 V/3/50 Hz	**W max**	1300	1300	2600	2600	3900	5200
		A max	3,4	3,4	3,4	3,4	3,4	3,4
Acoustics	**Lp 4m** (5)	**dB(A)**	51	52	55	55	56	58
	Lw	**dB(A)**	81	82	85	85	86	88
Electric defrost **E1U** (6)	Coil + drain pan	**Nb**	4+2	7+2	4+2	7+2	7+2	7+2
	230-400 V/3/50 Hz	**W Total**	3900	5850	6600	9900	14400	22500
		A Total	9.8/5.6	14.7/8.4	16.6/9.5	24.9/14.3	36.1/20.8	56.5/32.5
Connections **HFCs**	Inlet	**Ø**	5/8"	5/8"	7/8"	7/8"	1"1/8	1"3/8
	Outlet	**Ø**	1"1/8	1"3/8	1"5/8	1"5/8	2"1/8	2"1/8
Net weight		**kg**	180	195	280	305	420	530

NW 12(A) A1(B) C(C) 100Pa(D)

(A) Model
(B) **A** = Axial fan - **C** = Centrifugal fan / **1** = Number
(D) Fin spacing: **R** = 6.35 mm (positive) **C** = 6.35 mm (negative)
L = 9 mm (positive) **S** = 9 mm (negative)
M = 12 mm (positive) **T** = 12 mm (negative)
(D) Available pressure

The NW is available with CO_2, HFCs and glycol water. For more information, please consult our software.

NW ... C - Axial fans — 6.35 mm

0 Pa (1)

CONDITIONS	REFRIGERANTS	NW ... C	12 A1	14 A1	25 A2	29 A2	45 A3	60 A4
SC3 (2)	CO_2 - **50 bar** (3)	kW	10,4	12,4	21,0	24,9	37,2	47,7
	R449A	kW	9,5	11,5	19,5	23,6	35,3	47,4
SC4 (2)	CO_2 - **50 bar** (3)	kW	8,4	10,0	16,9	20,3	30,2	38,4
	R449A	kW	7,4	9,0	15,3	18,6	27,5	37,1
Airflow		m^3/h	7920	7590	15840	15190	22780	30380
Air throw (4)		m	19	18	22	21	26	30

100 Pa (1)

CONDITIONS	REFRIGERANTS	NW ... C	12 A1	14 A1	25 A2	29 A2	45 A3	60 A4
SC3 (2)	CO_2 - **50 bar** (3)	kW	9,0	9,9	18,1	20,0	31,1	40,3
	R449A	kW	8,4	9,9	17,2	20,4	30,9	41,6
SC4 (2)	CO_2 - **50 bar** (3)	kW	7,3	8,4	14,7	16,2	25,4	32,7
	R449A	kW	6,6	7,9	13,5	16,2	24,3	32,7
Airflow		m^3/h	6000	5640	12000	11290	16940	22580
Air throw (4)		m	15	14	17	16	20	23

			12 A1	14 A1	25 A2	29 A2	45 A3	60 A4
Surface area		m^2	44,7	59,6	89,4	119,1	178,7	238,3
Circuit volume		dm^3	12,6	16,8	25,1	33,5	50,3	67,0
Fan 1,500 rpm	**Ø 560 mm**	Nb	1	1	2	2	3	4
	400 V/3/50 Hz	W max	1200	1200	2400	2400	3600	4800
		A max	2,4	2,4	4,8	4,8	7,2	9,6
Acoustics	**Lp 4m** (5)	dB(A)	52	52	55	55	57	58
	Lw	dB(A)	82	82	85	85	87	88
Electric defrost standard	Coil + drain pan	Nb	7+2	10+2	7+2	10+2	10+2	10+2
	230-400 V/3/50 Hz	W Total	5850	7800	9900	13200	19200	30000
		A Total	8.4	11.3	14.3	19.1	27.7	43.3
Connections **HFCs**	Inlet	Ø	5/8"	7/8"	1"1/8	1"1/8	1"1/8	1"3/8
	Outlet	Ø	1"3/8	1"5/8	2"1/8	2"1/8	2"1/8	2"5/8
Net weight		kg	180	195	280	305	420	530

(1) Additional available air pressure in pascals.
(2) Standard conditions:
SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
SC3 / -18 °C (air inlet temp.) / -25 °C (evaporating temp.) / DT1 = 7K
SC4 / -25 °C (air inlet temp.) / -31 °C (evaporating temp.) / DT1 = 6K
(3) Operating pressure - Specific coil - Connection diameters to be defined when ordering.
(4) Residual air speed: 0.25 m/s.
(5) Average sound pressure level in dB(A) calculated at 4 m, level with the blades, in a free field over a reflecting plane, given as an indication only.
(6) Electric defrost option.
(5) Average sound pressure level in dB(A) calculated at 4 m, level with the blades, in a free field over a reflecting plane, given as an indication only.

NW 12(A) A1(B) R(C) 100Pa(D)

(A) Model
(B) **A** = Axial fan - **C** = Centrifugal fan / **1** = Number
(D) Fin spacing: **R** = 6.35 mm (positive) **C** = 6.35 mm (negative)
L = 9 mm (positive) **S** = 9 mm (negative)
M = 12 mm (positive) **T** = 12 mm (negative)
(D) Available pressure

The NW is available with CO_2, HFCs and glycol water. For more information, please consult our software.

NW ... L - Axial fans — 9 mm

	CONDITIONS	REFRIGERANTS	NW ... L	9 A1	11 A1	20 A2	24 A2	36 A3	49 A4
0 Pa (1)	SC2 (2)	CO_2 - **40 bar** (3)	**kW**	**10,6**	**12,5**	**21,3**	**25,2**	**38,2**	**50,7**
		R449A	**kW**	**9,3**	**11,9**	**19,6**	**24,4**	**36,7**	**49,4**
	Airflow		**m^3/h**	8070	7770	16130	15530	23300	31070
	Air throw (4)		**m**	21	21	25	24	29	34

	CONDITIONS	REFRIGERANTS	NW ... L	9 A1	11 A1	20 A2	24 A2	36 A3	49 A4
100 Pa (1)	SC2 (2)	CO_2 - **40 bar** (3)	**kW**	**9,2**	**10,6**	**18,5**	**21,5**	**32,2**	**43,1**
		R449A	**kW**	**8,3**	**10,5**	**17,6**	**21,6**	**32,4**	**43,7**
	Airflow		**m^3/h**	6230	5870	12460	11740	17610	23480
	Air throw (4)		**m**	17	16	20	19	23	27

			9 A1	11 A1	20 A2	24 A2	36 A3	49 A4
Surface area		**m^2**	40,8	54,4	81,7	108,9	163,3	217,7
Circuit volume		**dm^3**	15,9	21,1	31,7	42,3	63,4	84,5
Fan 1,500 rpm	**Ø 560 mm**	**Nb**	1	1	2	2	3	4
	400 V/3/50 Hz	**W max**	1200	1200	2400	2400	3600	4800
		A max	2,4	2,4	4,8	4,8	7,2	9,6
Acoustics	**Lp 4m** (5)	**dB(A)**	52	52	55	55	57	58
	Lw	**dB(A)**	82	82	85	85	87	88
Electric defrost **E1U** (6)	Coil + drain pan	**Nb**	4+2	7+2	4+2	7+2	7+2	7+2
	230-400 V/3/50 Hz	**W Total**	3900	5850	6600	9900	14400	22500
		A Total	9.8/5.6	14.7/8.4	16.6/9.5	24.9/14.3	36.1/20.8	56.5/32.5
Connections **HFCs**	Inlet	**Ø**	5/8"	5/8"	5/8"	7/8"	7/8"	1"1/8
	Outlet	**Ø**	1"1/8	1"1/8	1"3/8	1"5/8	2"1/8	2"1/8
Net weight		**kg**	185	205	295	325	445	565

NW ... L - Centrifugal — 9 mm

	CONDITIONS	REFRIGERANTS	NW ... L	9 C1	10 C1	18 C2	22 C2	33 C3	44 C4
200 Pa (1)	SC2 (2)	CO_2 - **40 bar** (3)	**kW**	**9,0**	**10,3**	**18,0**	**20,9**	**28,5**	**42,2**
		R449A	**kW**	**8,1**	**10,1**	**16,7**	**20,6**	**31,7**	**42,5**
	Airflow		**m^3/h**	5850	5700	11700	11400	17110	22810
	Air throw (4)		**m**	19	18	23	22	26	29

			9 C1	10 C1	18 C2	22 C2	33 C3	44 C4
Surface area		**m^2**	40,8	54,4	81,7	108,9	163,3	217,7
Circuit volume		**dm^3**	15,9	21,1	31,7	42,3	63,4	84,5
Turbine 1,000 rpm	**12/12**	**Nb**	1	1	2	2	3	4
	230-400 V/3/50 Hz	**W max**	1300	1300	2600	2600	3900	5200
		A max	3,4	3,4	3,4	3,4	3,4	3,4
Acoustics	**Lp 4m** (5)	**dB(A)**	52	51	55	54	56	57
	Lw	**dB(A)**	82	81	85	84	86	87
Electric defrost **E1U** (6)	Coil + drain pan	**Nb**	4+2	7+2	4+2	7+2	7+2	7+2
	230-400 V/3/50 Hz	**W Total**	3900	5850	6600	9900	14400	22500
		A Total	9.8/5.6	14.7/8.4	16.6/9.5	24.9/14.3	36.1/20.8	56.5/32.5
Connections **HFCs**	Inlet	**Ø**	5/8"	5/8"	5/8"	7/8"	7/8"	7/8"
	Outlet	**Ø**	1"1/8	1"1/8	1"3/8	1"5/8	1"5/8	2"1/8
Net weight		**kg**	185	205	295	325	445	565

NW 12(A) A1(B) C(C) 100Pa(D)

(A) Model
(B) **A** = Axial fan - **C** = Centrifugal fan / **1** = Number
(D) Fin spacing: **R** = 6.35 mm (positive) **C** = 6.35 mm (negative)
L = 9 mm (positive) **S** = 9 mm (negative)
M = 12 mm (positive) **T** = 12 mm (negative)
(D) Available pressure

> **The NW is available with CO_2, HFCs and glycol water. For more information, please consult our software.**

NW ... S - Axial fans

9 mm

	CONDITIONS	REFRIGERANTS	NW ... S	9 A1	11 A1	19 A2	24 A2	36 A3	48 A4
0 Pa (1)	SC3 (2)	CO_2 - **40 bar** (3)	kW	**8,6**	**9,9**	**17,5**	**20,1**	**31,6**	**42,1**
		R449A	kW	**6,2**	**7,8**	**12,2**	**16,3**	**24,6**	**33,2**
	SC4 (2)	CO_2 - **40 bar** (3)	kW	**6,8**	**7,7**	**13,8**	**15,8**	**25,0**	**33,3**
		R449A	kW	**4,6**	**5,8**	**9,0**	**12,3**	**18,5**	**25,2**
	Airflow		m^3/h	8070	7770	16130	15530	23300	31070
	Air throw (4)		m	21	21	25	24	29	34

	CONDITIONS	REFRIGERANTS	NW ... S	9 A1	11 A1	19 A2	24 A2	36 A3	48 A4
100 Pa (1)	SC3 (2)	CO_2 - **40 bar** (3)	kW	**7,6**	**8,6**	**15,3**	**17,4**	**26,9**	**35,8**
		R449A	kW	**5,6**	**7,1**	**11,1**	**14,6**	**22,0**	**29,8**
	SC4 (2)	CO_2 - **40 bar** (3)	kW	**6,0**	**6,8**	**12,1**	**13,8**	**21,4**	**28,6**
		R449A	kW	**4,2**	**5,3**	**8,2**	**11,0**	**16,7**	**22,8**
	Airflow		m^3/h	6230	5870	12460	11740	17610	23480
	Air throw (4)		m	17	16	20	19	23	27

			9 A1	11 A1	19 A2	24 A2	36 A3	48 A4
Surface area		m^2	40,8	54,4	81,7	108,9	163,3	217,7
Circuit volume		dm^3	15,9	21,1	31,7	42,3	63,4	84,5
Fan 1,500 rpm	**Ø 560 mm**	Nb	1	1	2	2	3	4
	400 V/3/50 Hz	W max	1200	1200	2400	2400	3600	4800
		A max	2,4	2,4	4,8	4,8	7,2	9,6
Acoustics	**Lp 4m** (5)	dB(A)	52	52	55	55	57	58
	Lw	dB(A)	82	82	85	85	87	88
Electric defrost standard	Coil + drain pan	Nb	7+2	10+2	7+2	10+2	10+2	10+2
	230-400 V/3/50 Hz	W Total	5850	7800	9900	13200	19200	30000
		A Total	8.4	11.3	14.3	19.1	27.7	43.3
Connections **HFCs**	Inlet	Ø	5/8"	5/8"	7/8"	7/8"	1"1/8	1"1/8
	Outlet	Ø	1"3/8	1"3/8	1"5/8	2"1/8	2"1/8	2"5/8
Net weight		kg	185	205	295	325	445	565

(1) Additional available air pressure in pascals.
(2) Standard conditions:
SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
SC3 / -18 °C (air inlet temp.) / -25 °C (evaporating temp.) / DT1 = 7K
SC4 / -25 °C (air inlet temp.) / -31 °C (evaporating temp.) / DT1 = 6K
(3) Operating pressure - Specific coil - Connection diameters to be defined when ordering.
(4) Residual air speed: 0.25 m/s.
(5) Average sound pressure level in dB(A) calculated at 4 m, level with the blades, in a free field over a reflecting plane, given as an indication only.
(6) Electric defrost option.

NW 12(A) A1(B) R(C) 100Pa(D)

(A) Model
(B) **A** = Axial fan - **C** = Centrifugal fan / **1** = Number
(D) Fin spacing: **R** = 6.35 mm (positive) **C** = 6.35 mm (negative)
L = 9 mm (positive) **S** = 9 mm (negative)
M = 12 mm (positive) **T** = 12 mm (negative)
(D) Available pressure

The NW is available with CO_2, HFCs and glycol water. For more information, please consult our software.

NW ... M - Axial fans — 12 mm

	CONDITIONS	REFRIGERANTS	NW ... M	9 A1	11 A1	19 A2	23 A2	34 A3	47 A4
0 Pa (1)	SC2 (2)	CO_2 - 40 bar (3)	kW	8,5	10,4	17,0	20,9	29,8	41,9
		R449A	kW	8,4	10,5	17,2	21,5	32,3	43,7
	Airflow		m^3/h	8230	7950	16460	15900	23840	31790
	Air throw (4)		m	22	21	26	25	30	34

	CONDITIONS	REFRIGERANTS	NW ... M	9 A1	11 A1	19 A2	23 A2	34 A3	47 A4
100 Pa (1)	SC2 (2)	CO_2 - 40 bar (3)	kW	7,5	9,0	15,0	18,1	26,2	36,3
		R449A	kW	7,5	9,3	15,4	19,1	28,6	38,6
	Airflow		m^3/h	6420	6080	12850	12170	18250	24340
	Air throw (4)		m	17	17	21	20	24	27

			9 A1	11 A1	19 A2	23 A2	34 A3	47 A4
Surface area		m^2	31,7	42,3	63,4	84,5	126,8	169,0
Circuit volume		dm^3	15,9	21,1	31,7	42,3	63,4	84,5
Fan 1,500 rpm	Ø 560 mm	Nb	1	1	2	2	3	4
	400 V/3/50 Hz	W max	1200	1200	2400	2400	3600	4800
		A max	2,4	2,4	4,8	4,8	7,2	9,6
Acoustics	Lp 4m (5)	dB(A)	52	52	55	55	57	58
	Lw	dB(A)	82	82	85	85	87	88
Electric defrost E1U (6)	Coil + drain pan	Nb	4+2	7+2	4+2	7+2	7+2	7+2
	230-400 V/3/50 Hz	W Total	3900	5850	6600	9900	14400	22500
		A Total	9.8/5.6	14.7/8.4	16.6/9.5	24.9/14.3	36.1/20.8	56.5/32.5
Connections HFCs	Inlet	Ø	5/8"	5/8"	5/8"	7/8"	7/8"	1"1/8
	Outlet	Ø	1"1/8	1"1/8	1"3/8	1"5/8	1"5/8	2"1/8
Net weight		kg	185	200	290	320	435	555

NW ... M - Centrifugal — 12 mm

	CONDITIONS	REFRIGERANTS	NW ... M	8 C1	10 C1	17 C2	21 C2	31 C3	42 C4
200 Pa (1)	SC2 (2)	CO_2 - 40 bar (3)	kW	7,2	8,7	13,3	17,6	24,8	35,3
		R449A	kW	7,0	8,7	14,3	17,8	27,5	36,9
	Airflow		m^3/h	5900	5770	11800	11530	17300	23070
	Air throw (4)		m	19	19	23	23	26	30

			8 C1	10 C1	17 C2	21 C2	31 C3	42 C4
Surface area		m^2	31,7	42,3	63,4	84,5	126,8	169,0
Circuit volume		dm^3	15,9	21,1	31,7	42,3	63,4	84,5
Turbine 1,000 rpm	12/12	Nb	1	1	2	2	3	4
	230-400 V/3/50 Hz	W max	1300	1300	2600	2600	3900	5200
		A max	3,4	3,4	3,4	3,4	3,4	3,4
Acoustics	Lp 4m (5)	dB(A)	52	52	55	55	56	57
	Lw	dB(A)	82	82	85	85	86	87
Electric defrost E1U (6)	Coil + drain pan	Nb	4+2	7+2	4+2	7+2	7+2	7+2
	230-400 V/3/50 Hz	W Total	3900	5850	6600	9900	14400	22500
		A Total	9.8/5.6	14.7/8.4	16.6/9.5	24.9/14.3	36.1/20.8	56.5/32.5
Connections HFCs	Inlet	Ø	5/8"	5/8"	5/8"	7/8"	7/8"	7/8"
	Outlet	Ø	1"1/8	1"1/8	1"3/8	1"3/8	1"5/8	2"1/8
Net weight		kg	185	200	290	320	435	555

NW 12(A) A1(B) C(C) 100Pa(D)

(A) Model
(B) **A** = Axial fan - **C** = Centrifugal fan / **1** = Number
(D) Fin spacing: **R** = 6.35 mm (positive) **C** = 6.35 mm (negative)
L = 9 mm (positive) **S** = 9 mm (negative)
M = 12 mm (positive) **T** = 12 mm (negative)
(D) Available pressure

> **The NW is available with CO_2, HFCs and glycol water. For more information, please consult our software.**

NW ... T - Axial fans

12 mm

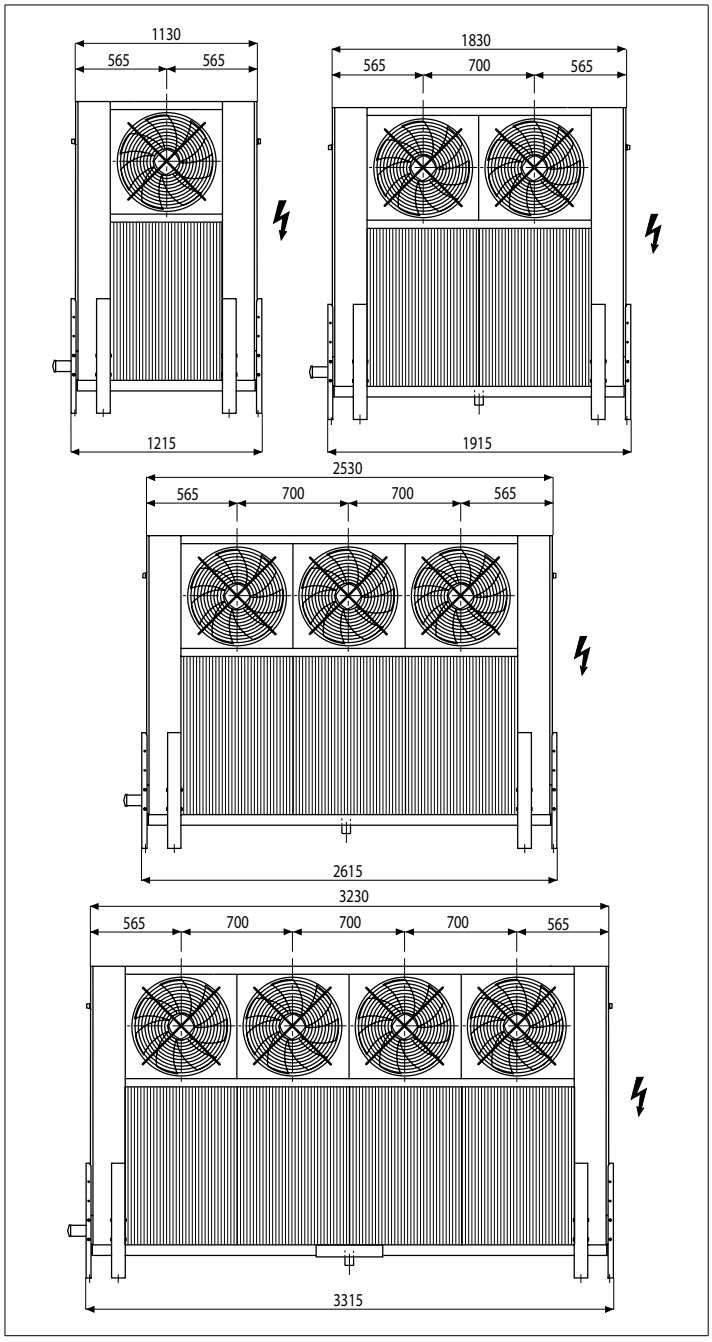
	CONDITIONS	REFRIGERANTS	NW ... T	9 A1	11 A1	18 A2	22 A2	34 A3	46 A4
0 Pa (1)	SC3 (2)	CO_2 - **40 bar** (3)	kW	7,0	8,4	14,1	16,9	26,0	34,7
		R449A	kW	5,2	7,0	10,8	14,5	21,9	29,7
	SC4 (2)	CO_2 - **40 bar** (3)	kW	5,5	6,6	11,1	13,4	20,7	27,6
		R449A	kW	3,8	5,2	8,1	11,0	16,5	22,5
	Airflow		m^3/h	8230	7950	16460	15900	23840	31790
	Air throw (4)		m	22	21	26	25	30	34

	CONDITIONS	REFRIGERANTS	NW ... T	9 A1	11 A1	18 A2	22 A2	34 A3	46 A4
100 Pa (1)	SC3 (2)	CO_2 - **40 bar** (3)	kW	6,2	7,3	12,5	14,8	22,5	30,1
		R449A	kW	4,7	6,3	9,8	13,0	19,5	26,5
	SC4 (2)	CO_2 - **40 bar** (3)	kW	4,9	5,8	9,9	11,8	18,0	24,0
		R449A	kW	3,5	4,7	7,3	10,0	14,9	20,3
	Airflow		m^3/h	6420	6080	12850	12170	18250	24340
	Air throw (4)		m	17	17	21	20	24	27

			9 A1	11 A1	18 A2	22 A2	34 A3	46 A4
Surface area		m^2	31,7	42,3	63,4	84,5	126,8	169,0
Circuit volume		dm^3	15,9	21,1	31,7	42,3	63,4	84,5
Fan 1,500 rpm	**Ø 560 mm**	Nb	1	1	2	2	3	4
	400 V/3/50 Hz	W max	1200	1200	2400	2400	3600	4800
		A max	2,4	2,4	4,8	4,8	7,2	9,6
Acoustics	**Lp 4m** (5)	dB(A)	52	52	55	55	57	58
	Lw	dB(A)	82	82	85	85	87	88
Electric defrost standard	Coil + drain pan	Nb	7+2	10+2	7+2	10+2	10+2	10+2
	230-400 V/3/50 Hz	W Total	5850	7800	9900	13200	19200	30000
		A Total	8.4	11.3	14.3	19.1	27.7	43.3
Connections HFCs	Inlet	Ø	5/8"	5/8"	7/8"	7/8"	1"1/8	1"1/8
	Outlet	Ø	1"3/8	1"3/8	1"5/8	1"5/8	2"1/8	2"1/8
Net weight		kg	185	200	290	320	435	555

(1) Additional available air pressure in pascals.
(2) Standard conditions:
SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
SC3 / -18 °C (air inlet temp.) / -25 °C (evaporating temp.) / DT1 = 7K
SC4 / -25 °C (air inlet temp.) / -31 °C (evaporating temp.) / DT1 = 6K
(3) Operating pressure - Specific coil - Connection diameters to be defined when ordering.
(4) Residual air speed: 0.25 m/s.
(5) Average sound pressure level in dB(A) calculated at 4 m, level with the blades, in a free field over a reflecting plane, given as an indication only.
(6) Electric defrost option.

NW .. A ..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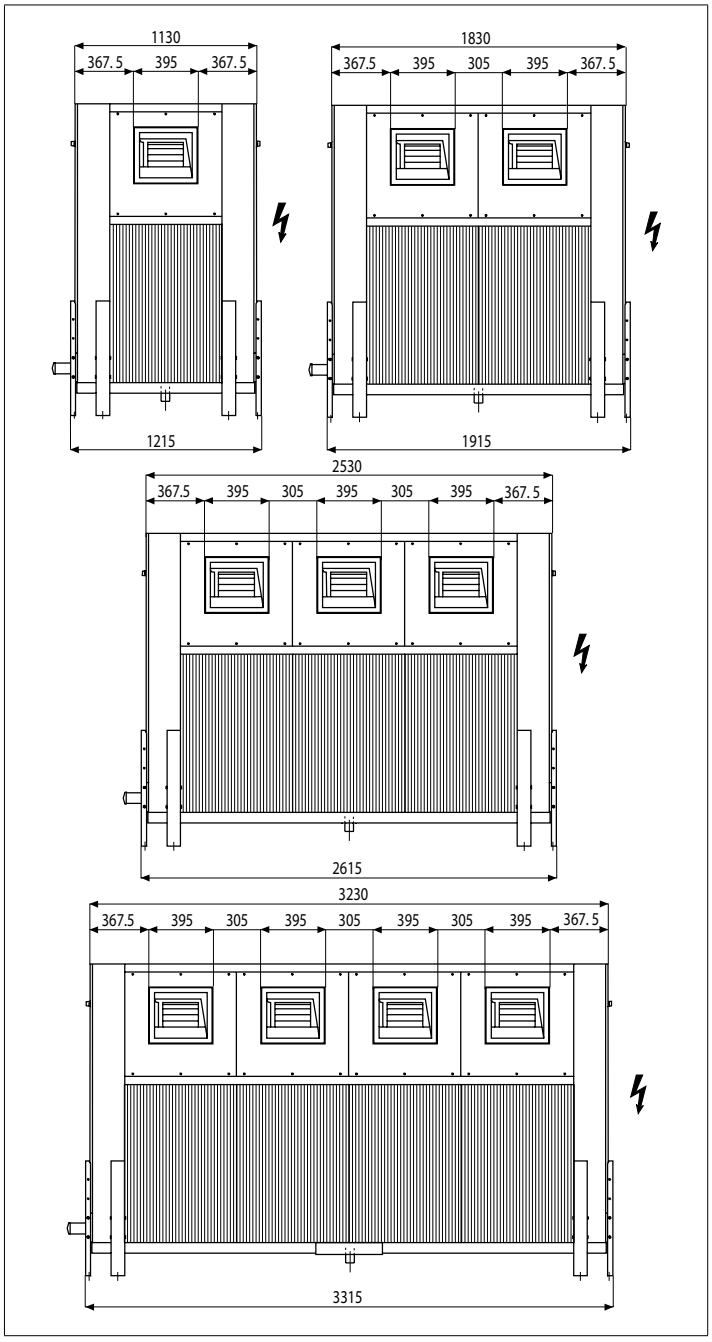
NW .. C ..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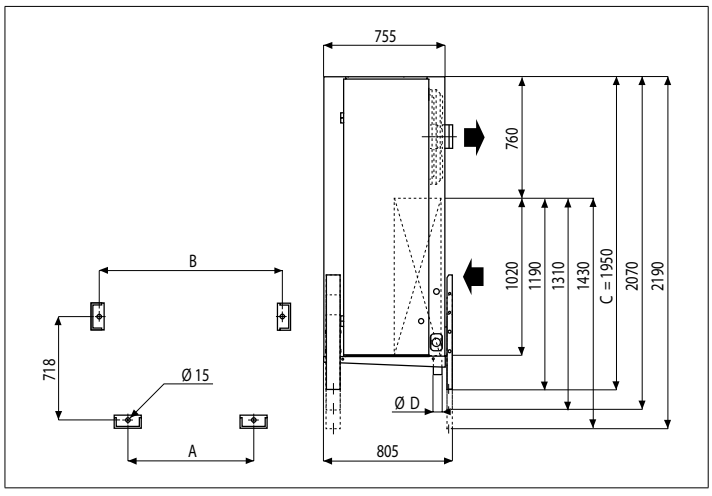
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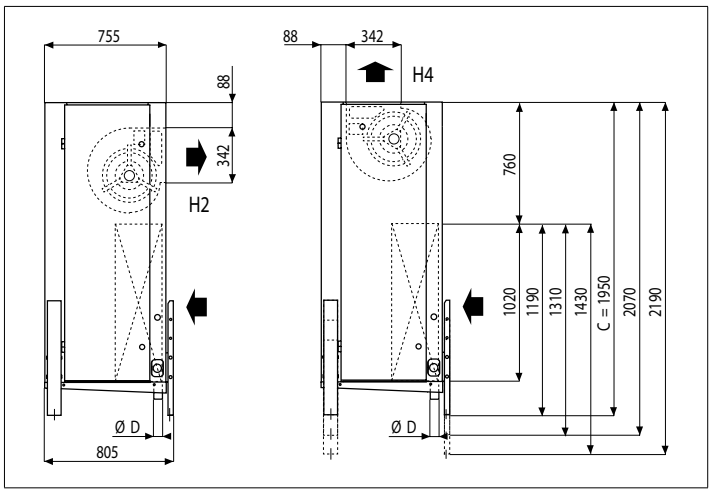
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1020
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1430
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2070
2190
Ø D

NF

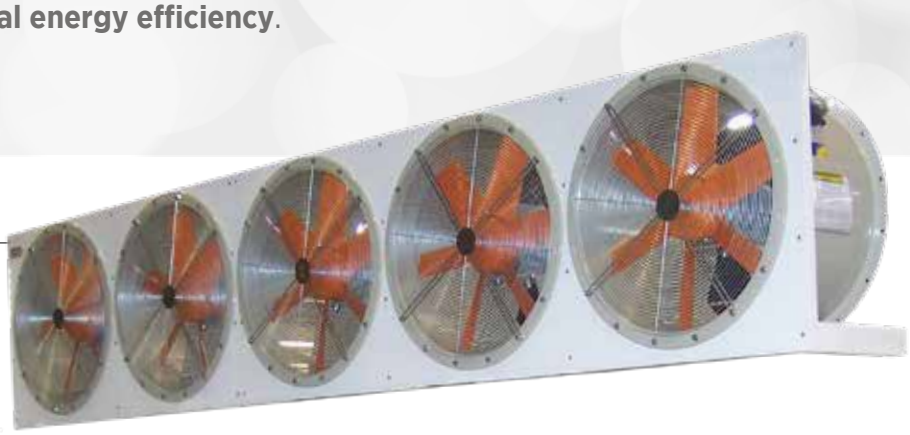
Unit cooler for blast freezing and rapid cooling tunnel
Industrial range

CO2 40 bar
HFC
W GLYCOL

35 - 130 kW

High speed air circulation ensures **very rapid cooling** of foodstuffs.

Large exchange surface for **optimal energy efficiency**.



VENTILATION

Ventilation assembly delivered separately, to be positioned above the coil.

Motor fans Ø 710 mm, 230-400V/3/50Hz, IP 55, class F.

OPTIONS	
ECB	Wooden crate packaging.

COILS

Embossed aluminium fins with 9 mm spacing.

Combined with staggered copper tubes, the coils are very efficient and compact.

Versions available:
- Multi refrigerants HFCs
- CO2 (40 bar)
- WCO (glycol water, coolant)

DEFROST

Drain pan under the exchanger assembly.

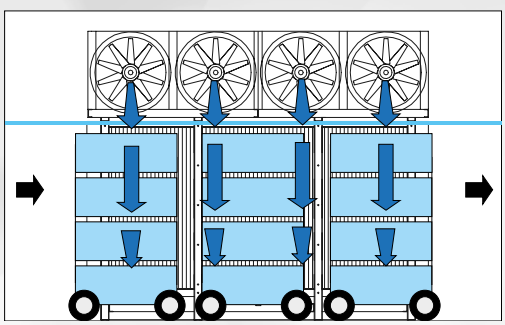
Electric defrost.

OPTIONS	
DAE	Water defrost (spraying).

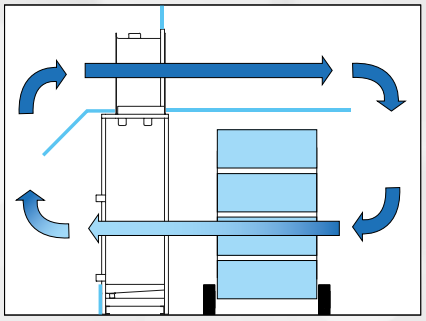
INSTALLATION | MAINTENANCE

Because of the height, the NF is delivered in 2 parts:
- an assembly comprising coil, frame, drain pan and heaters,
- a motor fan assembly.

Drain pan tilted towards the large drain pipe (Ø 1 1/2" G) to avoid dirt accumulation and facilitate cleaning.



THE PRINCIPLE OF A BLAST FREEZING AND RAPID COOLING TUNNEL



NFT (A) 280 (B)

(A) Fin spacing: **NFT** = 9 mm
(B) Model

> **The NF is available with CO2 HFCs and Glycol Water. For more information, please consult our software.**

NFT - 100 Pa (1)

9 mm

CONDITIONS	REFRIGERANTS	NFT ...	280	401	507	676	802
SC3 (2)	CO_2 - **40 bar** (3)	**kW**	**53,5**	**77,9**	**100,2**	**130,3**	**151,8**
	R449A	**kW**	**39,3**	**59,7**	**76,9**	**101,7**	**122,8**
SC4 (2)	CO_2 - **40 bar** (3)	**kW**	**42,6**	**62,0**	**79,7**	**103,7**	**120,3**
	R449A	**kW**	**29,9**	**45,3**	**58,5**	**77,5**	**93,3**

			280	401	507	676	802
Surface area		**m^2**	308,0	442,3	559,9	746,6	884,7
Circuit volume		**dm^3**	119,6	171,7	217,4	289,8	343,4
Fan*		**Nb**	2	3	4	5	6
Airflow		**m^3/h**	31800	46500	60400	78500	94200
Air throw (4)		**m**	41	49	56	64	71
Electric defrost	Coil + drain pan	**Nb**	19+2	19+2	19+2	19+2	19+2
	400 V/3/50 Hz	**W total**	27300	47250	59850	79800	92400
		A total	39.6	68.5	86.7	115.7	133.9
Connections HFCs	Inlet	**Ø** (5)	1"3/8	2x1"1/8	2x1"3/8	2x1"3/8	2x1"3/8
	Outlet	**Ø** (6)	2"5/8	2x2"1/8	2x2"5/8	2x2"5/8	2x3"1/8
Net weight		**kg**	600	830	1060	1330	1560

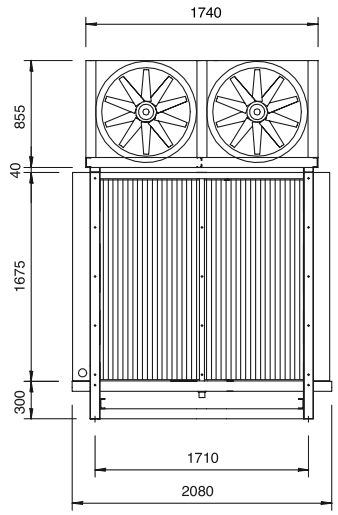
* Ø 710 mm - 1,420 rpm - 2.2 kW max - 230 V/3/50 Hz: 8.5 A max - 400V/3/50Hz: 4.9 A max. (7).

(1) Additional available air pressure in pascals.
(2) Standard conditions:
SC3 / -18 °C (air inlet temp.) / -25 °C (evaporating temp.) / DT1 = 7K
SC4 / -25 °C (air inlet temp.) / -31 °C (evaporating temp.) / DT1 = 6K
(3) Operating pressure - Specific coil - Connection diameters to be defined when ordering.
(4) Residual air speed: 0.25 m/s.
(5) Distributor: male to solder.
(6) Ø: male to solder.
(7) Adjustment of overload protection.

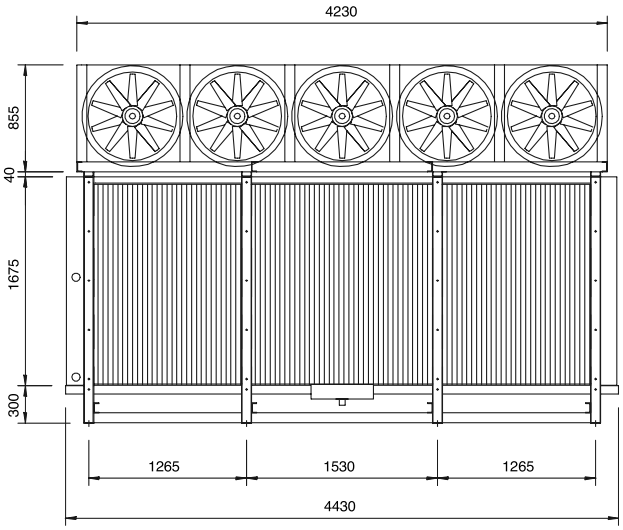
Sound power per fan Lw

	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
Lw - dB(A)	**58**	**78**	**86**	**91**	**93**	**90**	**83**	**72**

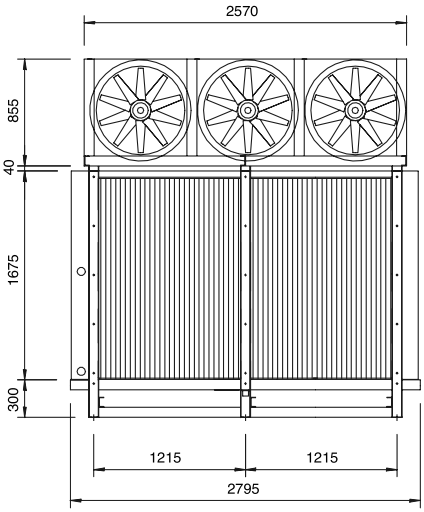
NFT 280



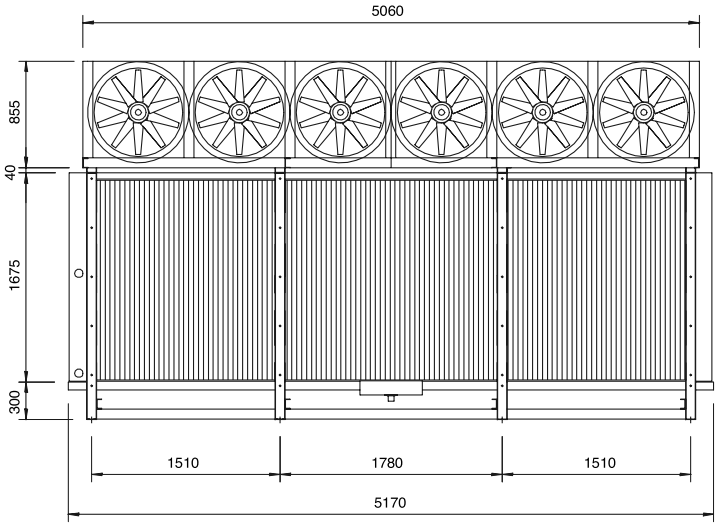
NFT 676



NFT 401



NFT 802



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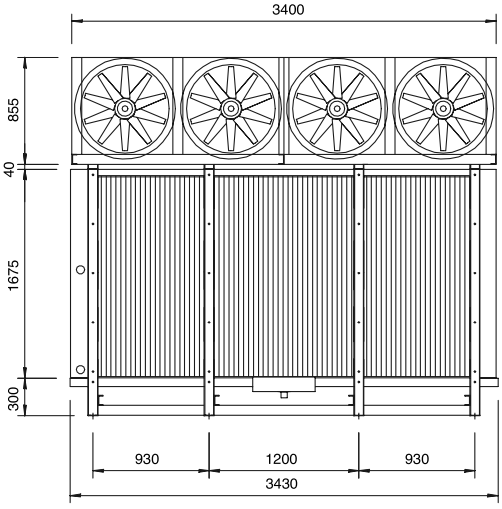
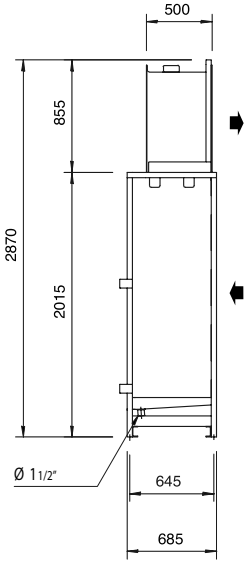


NFT



NC

Centrifugal unit cooler
Industrial range

CO2 50 bar
HFC
W GLYCOL

5 - 95 kW

With many options available, t**he NC adapts to the needs of your application as closely as possible.**

Adaptable, you can choose to install the NC on the floor or ceiling, depending on the requirements of the environment, thanks to its 4 modular blowing positions.

Easy maintenance with easy access to all components.

CASING

Robust, made of white pre-painted galvanized sheet steel.
Limited condensation: presence of an exterior drain pan and an aluminium intermediate drain pan.

OPTIONS	
IPH	Noise insulation (M1*).
FLA	Suction filters (M1*).
CFA	Suction filter box (M1*).
ECB	Wooden crate packaging.

* M1: Non-flammable.

COILS

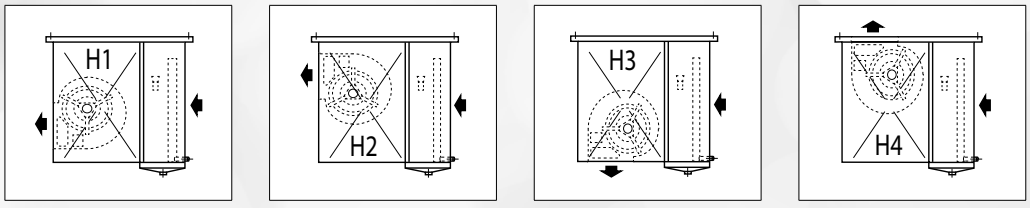
Aluminium fins with 4.23 or 6.35 mm spacing.
Combined with copper tubes, the coils are very efficient and compact.
Versions available:
- Multi-refrigerant HFCs.
- CO2 (50 bar).
- WCO (glycol water, coolant).

OPTIONS	
HGT	Hot gases (coil and drain pan).

Select your coil treatment to extend your unit cooler's lifespan! Contact us.

PRODUCT ADVANTAGES

Can be installed on the floor or ceiling.
4 blowing positions (H1 to H4) can be selected; can be easily changed at a later date.



VENTILATION

Double inlet direct drive centrifugal motor fans.
"Power/noise level" pair can be optimized by adding an optional variable speed drive, available factory-fitted or as a kit (VVU/VVK).
Enclosed motors with built-in thermal protection, IP 54 class F, designed for environments from -40 °C to +70 °C.
Pressure available up to 200 pascal.
Speed of rotation 1,000 rpm.

OPTIONS	
CMU	Factory motor wiring.
VGT	Textile duct shell. KIT TO INSTALL
VPS	Blower louvred shutters. KIT TO INSTALL CONTACT US
VVU	Variable speed drive. CONTACT US
VVK	Variable speed drive. KIT TO INSTALL CONTACT US

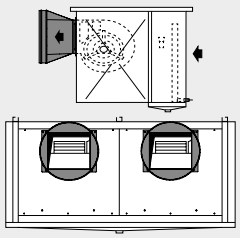
DEFROST

OPTIONS	
E1U	Light electric defrost.
HGB	Hot gas defrost (coil only). CONTACT US

OPTION APPLICATIONS

Application requiring the installation of a textile duct

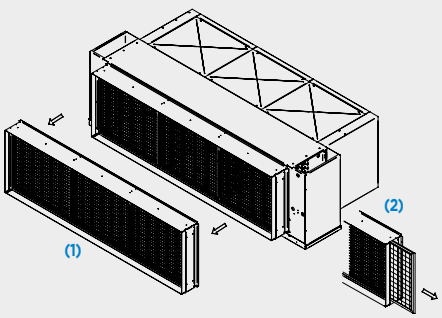
VGT
Circular shell for connection of a textile duct (duct not supplied).
- diameter 400 mm
(models 831 | 1622 | 2393)
- diameter 550 mm
(models 1591 | 3162 | 4693 | 6294)



Air filtration and duct on suction

FLA
Gravimetric air filter on suction.

CFA (1)
Box for connecting a suction duct; the filter can be removed from the side of the box for easy maintenance (2).



Power, adapted noise level and thermal insulation

VVU / VVK
Voltage variation variable speed drive.
Provides acoustic comfort at low and medium speeds when staff are present.

IPH
10 mm thick insulation to attenuate vibrations and provide thermal insulation of the device limiting the effects of condensation.

NCP(A) 831(B) H3(C)

(A) Fin spacing: **NCP** = 4.23 mm (positive)
NCN = 6.35 mm (negative)

(B) Model
(C) Air direction

The NC is available with CO_2, HFCs and glycol water. For more information, please consult our software.

NCP — 4,23 mm

	CONDITIONS	REFRIGERANTS	NCP ...	831	1622	1591	2393	3162	4693	6294
100 Pa (1)	SC1 (2)	CO_2 - **50 bar** (3)	kW	**12,1**	**23,6**	**23,4**	**35,2**	**44,1**	**68,9**	**88,1**
		R449A	kW	**11,6**	**22,3**	**22,3**	**32,8**	**45,0**	**66,9**	**87,7**
	SC2 (2)	CO_2 - **50 bar** (3)	kW	**8,2**	**16,2**	**16,0**	**24,2**	**29,7**	**47,3**	**59,6**
		R449A	kW	**7,5**	**14,6**	**15,1**	**21,5**	**29,7**	**43,9**	**59,2**
	Airflow		m^3/h	3200	6310	6680	9420	13270	19870	26460
	Acoustics	**Lp 4 m** (4)	dB(A)	44	47	55	49	58	59	61
		Lw	dB(A)	74	77	85	79	88	89	91

	CONDITIONS	REFRIGERANTS	NCP ...	831	1622	1591	2393	3162	4693	6294
150 Pa (1)	SC1 (2)	CO_2 - **50 bar** (3)	kW	**10,8**	**21,2**	**22,5**	**31,5**	**42,5**	**66,1**	**84,8**
		R449A	kW	**10,2**	**19,8**	**21,5**	**29,1**	**42,6**	**64,1**	**84,4**
	SC2 (2)	CO_2 - **50 bar** (3)	kW	**7,4**	**14,6**	**15,4**	**21,8**	**28,7**	**45,5**	**57,4**
		R449A	kW	**6,7**	**12,9**	**14,6**	**19,0**	**28,5**	**42,3**	**57,0**
	Airflow		m^3/h	2740	5400	6280	8060	12460	18640	24820
	Acoustics	**Lp 4 m** (4)	dB(A)	42	45	53	46	56	58	59
		Lw	dB(A)	72	75	83	76	86	88	89

	CONDITIONS	REFRIGERANTS	NCP ...	831	1622	1591	2393	3162	4693	6294
200 Pa (1)	SC1 (2)	CO_2 - **50 bar** (3)	kW	**-**	**-**	**21,2**	**-**	**40,2**	**62,2**	**80,1**
		R449A	kW	**-**	**-**	**20,3**	**-**	**40,3**	**60,2**	**79,8**
	SC2 (2)	CO_2 - **50 bar** (3)	kW	**-**	**-**	**14,5**	**-**	**27,2**	**42,8**	**54,4**
		R449A	kW	**-**	**-**	**13,8**	**-**	**26,9**	**39,9**	**53,7**
	Airflow		m^3/h	-	-	5740	-	11380	17000	22630
	Acoustics	**Lp 4 m** (4)	dB(A)	-	-	51	-	54	56	57
		Lw	dB(A)	-	-	81	-	84	86	87

		NCP ...	831	1622	1591	2393	3162	4693	6294
Surface area		m^2	47,0	86,6	75,2	126,2	142,0	208,8	275,6
Circuit volume		dm^3	9,1	16,8	14,5	24,4	27,5	40,4	53,3
Turbine		Nb	1	2	1	3	2	3	4
	230V/1/50 Hz	W	670	1340	-	2010	-	-	-
		A max (5)	2,9	5,8	-	8,7	-	-	-
	230-400V/3/50 Hz	W	-	-	1300	-	2600	3900	5200
		A max (5)	-	-	3,4	-	6,8	10,2	13,6
Connections	Inlet	Ø	5/8"	5/8"	7/8"	7/8"	7/8"	1"1/8	1"1/8
	Outlet	Ø	7/8"	1"1/8	1"1/8	1"3/8	1"3/8	1"5/8	2"1/8
Net weight		kg	88	151	118	200	241	305	463

(1) Additional available air pressure in pascals.
(2) Standard conditions:
SC1 / +10 °C (air inlet temp.) / 0 °C (evaporating temp.) / DT1 = 10K
SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
(3) Operating pressure - Specific coil - Connection diameters to be defined when ordering.
(4) Average sound pressure level in dB(A) calculated at 4 m, level with the turbines, in a free field over a reflecting plane, given as an indication only.
(5) Adjustment of overload protection. For air temperatures "ti" other than +20 °C, multiply the intensities by the ratio 293/(273 + "ti")
to obtain the approximate value of the intensity after the room has been brought up to temperature.

NCP(A) 831(B) H3(C)

(A) Fin spacing: **NCP** = 4.23 mm (positive)
NCN = 6.35 mm (negative)

(B) Model
(C) Air direction

The NC is available with CO_2, HFCs and glycol water. For more information, please consult our software.

NCN — 6,35 mm

	CONDITIONS	REFRIGERANTS	NCN ...	831	1622	1591	2393	3162	4693	6294
100 Pa (1)	SC2 (2)	CO_2 - **50 bar** (3)	**kW**	**7,2**	**14,1**	**13,6**	**20,9**	**25,8**	**40,0**	**51,3**
		R449A	**kW**	**6,5**	**12,5**	**12,6**	**18,4**	**24,7**	**36,9**	**48,5**
	Airflow		**m^3/h**	3270	6470	6770	9680	13490	20200	26910
	Acoustics	**Lp 4 m** (4)	**dB(A)**	44	47	55	49	58	60	61
		Lw	**dB(A)**	74	77	85	79	88	90	91

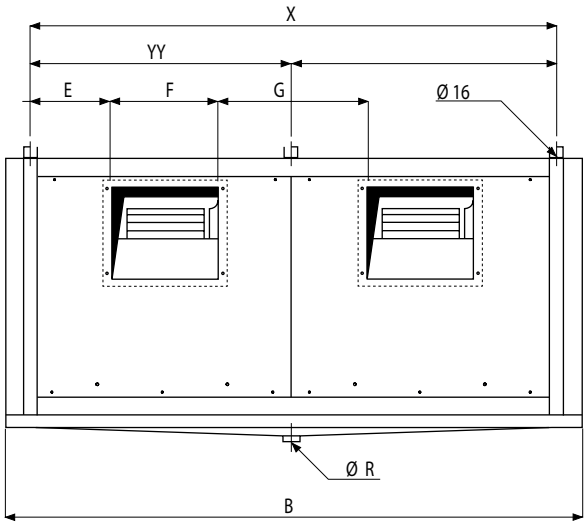
	CONDITIONS	REFRIGERANTS	NCN ...	831	1622	1591	2393	3162	4693	6294
150 Pa (1)	SC2 (2)	CO_2 - **50 bar** (3)	**kW**	**6,6**	**12,8**	**13,2**	**19,0**	**25,0**	**38,7**	**49,7**
		R449A	**kW**	**5,8**	**11,2**	**12,2**	**16,5**	**23,9**	**35,8**	**47,2**
	Airflow		**m^3/h**	2810	5560	6390	8310	12720	19040	25360
	Acoustics	**Lp 4 m** (4)	**dB(A)**	42	45	54	47	57	58	59
		Lw	**dB(A)**	72	75	84	77	87	88	89

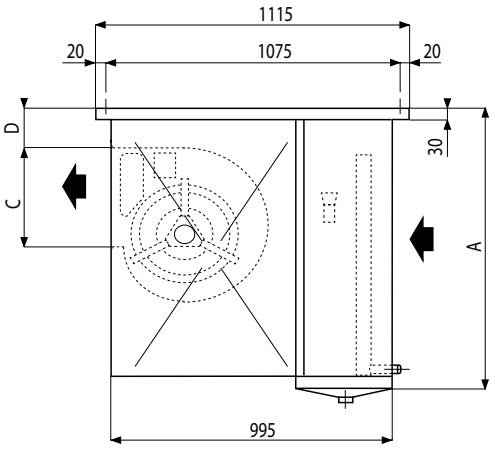
	CONDITIONS	REFRIGERANTS	NCN ...	831	1622	1591	2393	3162	4693	6294
200 Pa (1)	SC2 (2)	CO_2 - **50 bar** (3)	**kW**	**-**	**-**	**12,6**	**-**	**23,8**	**36,8**	**47,4**
		R449A	**kW**	**-**	**-**	**11,6**	**-**	**22,8**	**34,1**	**44,7**
	Airflow		**m^3/h**	-	-	5880	-	11680	17470	23260
	Acoustics	**Lp 4 m** (4)	**dB(A)**	-	-	52	-	55	56	58
		Lw	**dB(A)**	-	-	82	-	85	86	88

		NCN ...	831	1622	1591	2393	3162	4693	6294
Surface area		**m^2**	32,3	59,6	51,7	86,8	97,7	143,6	189,6
Circuit volume		**dm^3**	9,1	16,8	14,5	24,4	27,5	40,4	53,3
Turbine		**Nb**	1	2	1	3	2	3	4
	230V/1/50 Hz	**W**	670	1340	-	2010	-	-	-
		A max (5)	2,9	5,8	-	8,7	-	-	-
	230-400V/3/50 Hz	**W**	-	-	1300	-	2600	3900	5200
		A max (5)	-	-	3,4	-	6,8	10,2	13,6
Electric defrost **E1U** (6)	Coil + drain pan	**Nb**	5+1	5+1	5+1	5+1	5+1	5+1	5+1
	230-400V/3/50 Hz	**W total**	3900	6600	5400	9600	9600	17100	22800
		A total	9.8/5.6	16.6/9.5	13.6/7.8	24.1/13.9	24.1/13.9	42.9/24.7	57.2/32.9
Connections	Inlet	**Ø**	5/8"	5/8"	5/8"	7/8"	7/8"	1"1/8	1"1/8
	Outlet	**Ø**	7/8"	1"1/8	1"1/8	1"3/8	1"3/8	1"5/8	2"1/8
Net weight		**kg**	88	151	118	200	241	305	463

(1) Additional available air pressure in pascals.
(2) Standard conditions:
SC1 / +10 °C (air inlet temp.) / 0 °C (evaporating temp.) / DT1 = 10K
SC2 / 0 °C (air inlet temp.) / -8 °C (evaporating temp.) / DT1 = 8K
(3) Operating pressure - Specific coil - Connection diameters to be defined when ordering.
(4) Average sound pressure level in dB(A) calculated at 4 m, level with the turbines, in a free field over a reflecting plane, given as an indication only.
(5) Adjustment of overload protection. For air temperatures "ti" other than +20 °C, multiply the intensities by the ratio 293/(273 + "ti")
to obtain the approximate value of the intensity after the room has been brought up to temperature.
(6) Electric defrost option.

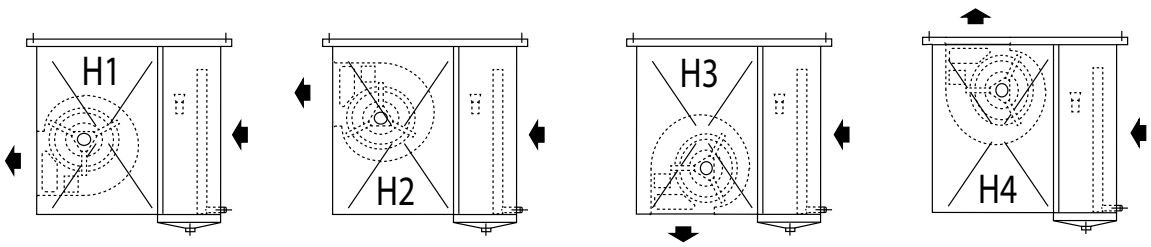
NC





		831	1622	1591	2393	3162	4693	6294
A	**mm**	760	760	870	765	875	880	880
B	**mm**	1170	1810	1490	2450	2450	3410	4370
C	**mm**	290	290	342	290	342	342	342
D	**mm**	152	152	197	152	197	197	197
E	**mm**	234	234	363	234	363	363	363
F	**mm**	331	331	395	331	395	395	395
G	**mm**	-	306	-	306	564	564	564
X	**mm**	790	1430	1110	2070	2070	3030	3990
Y	**mm**	-	-	-	-	-	-	1995
Ø R	**mm**	1"	1"	1"	1"1/2	1"1/2	1"1/2	1"1/2

NC | Blower positions



MA

Axial fan condenser
Commercial range

HFC

2.8 - 12.4 kW

Modular concept (coil + separate motors) where blowing is possible both vertically and horizontally.

The quick connection of the motor fan enables **easy installation**.

"Plug & play" motor fan for **easy maintenance**.

VENTILATION

2 single-fan models and 1 dual-fan model, Ø 355 mm.

Available in 04P, 06P and 08P ensuring an optimal noise level.

Motor fan(s) delivered unmounted, cable gland to be positioned at the bottom.

COILS

Aluminium fins with 3.17 mm spacing.

Combined with staggered copper tubes, the coils are very efficient and compact.

Completely covered with polyester protection as standard.

CASING

Galvanized sheet steel covered with white polyester paint.

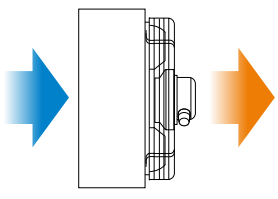
OPTIONS

PIE Feet for floor mounting allowing vertical air discharge.

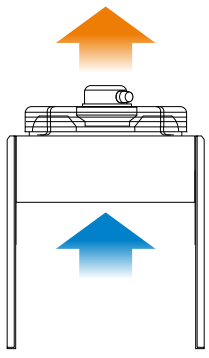
KIT TO INSTALL

Both horizontal and vertical installation are possible with the standard feet!

In case of installation with horizontal air direction, remember to take into account the direction of the prevailing winds to avoid any risk of recirculation of hot air!



Horizontal air position



Vertical air position

HFC

MA 1(A) 04P(B)

(A) Model
(B) **04P** = 1,300 rpm
06P = 910 rpm
08P = 650 rpm

The MA is available with HFCs. For more information, please consult our software.

MA ... 04P - (1,300 rpm)

3.17 mm

CONDITIONS	REFRIGERANTS	MA ...	1 04P	2 04P	3 04P
DT = 15K	**R449A**	**kW**	**4,1**	**8,0**	**12,4**
Surface area		**m²**	5,7	13,0	20,9
Circuit volume		**dm³**	0,9	1,9	3,4
Fan 230V/1/50Hz (1)	Airflow	**m³/h**	1970	2300	4200
	Nb x Ø	**mm**	1 x 355	1 x 355	2 x 355
Energy class			E	D	E
Acoustics	**Lw** (2)	**dB(A)**	77	77	80
	Lp (3)	**dB(A)**	46	46	49
Inlet	Ø **E**	**ODF* / ODM****	8 mm-3/8"ODM	1/2"	5/8"
Outlet	Ø **S**	**ODF* / ODM****	8 mm-3/8"ODM	1/2"	5/8"
Net weight with fan(s)		**kg**	7	12	15

MA ... 06P - (910 rpm)

3.17 mm

CONDITIONS	REFRIGERANTS	MA ...	1 06P	2 06P	3 06P
DT = 15K	**R449A**	**kW**	**3,2**	**6,0**	**9,4**
Surface area		**m²**	5,7	13,0	20,9
Circuit volume		**dm³**	0,9	1,9	3,4
Fan 230V/1/50Hz (1)	Airflow	**m³/h**	1220	1450	2650
	Nb x Ø	**mm**	1 x 355	1 x 355	2 x 355
Energy class			E	D	D
Acoustics	**Lw** (2)	**dB(A)**	68	68	71
	Lp (3)	**dB(A)**	37	37	40
Inlet	Ø **E**	**ODF* / ODM****	8 mm-3/8"ODM	1/2"	5/8"
Outlet	Ø **S**	**ODF* / ODM****	8 mm-3/8"ODM	1/2"	5/8"
Net weight with fan(s)		**kg**	7	12	15

MA ... 08P - (650 rpm)

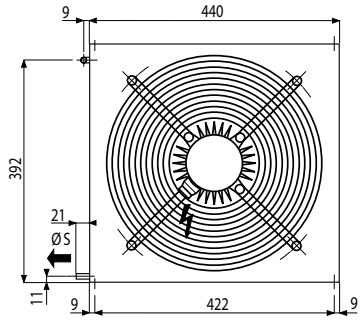
3.17 mm

CONDITIONS	REFRIGERANTS	MA ...	1 08P	2 08P	3 08P
DT = 15K	**R449A**	**kW**	**2,9**	**5,0**	**8,0**
Surface area		**m²**	5,7	13,0	20,9
Circuit volume		**dm³**	0,9	1,9	3,4
Fan 230V/1/50Hz (1)	Airflow	**m³/h**	950	1110	2060
	Nb x Ø	**mm**	1 x 355	1 x 355	2 x 355
Energy class			E	D	D
Acoustics	**Lw** (2)	**dB(A)**	57	57	60
	Lp (3)	**dB(A)**	26	26	29
Inlet	Ø **E**	**ODF* / ODM****	8 mm-3/8"ODM	1/2"	5/8"
Outlet	Ø **S**	**ODF* / ODM****	8 mm-3/8"ODM	1/2"	5/8"
Net weight with fan(s)		**kg**	7	12	15

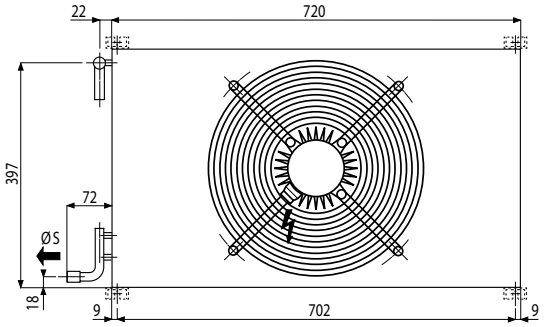
(1) 04P : 205 W max - 0.90 A max (4) - 06P: 95 W max - 0.45 A max (4) - 08P: 74 W max - 0.35 A max (4)
(2) Sound power level in dB(A), obtained in accordance with standard NF EN 13487 (parallelepiped reference surface).
(3) Sound pressure in dB(A) measured at 10 m, parallelepiped measuring surface, in a free field over a reflecting plane, given as an indication only. Values measured under nominal operating conditions, with clean coil, at rated voltage.
(4) Adjustment of overload protection.

* ODF: female to receive the tube of the same diameter.
** ODM: male to receive the tube of the same diameter.

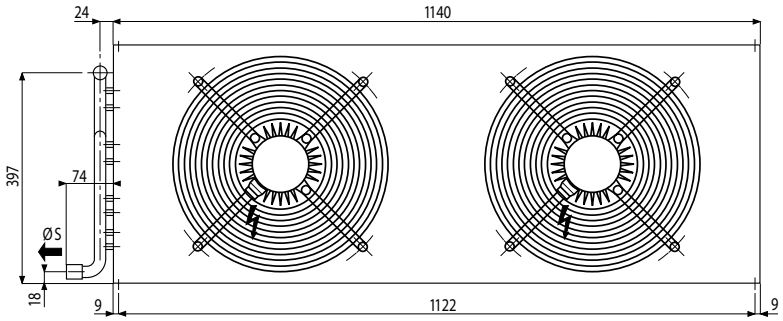
MA 1



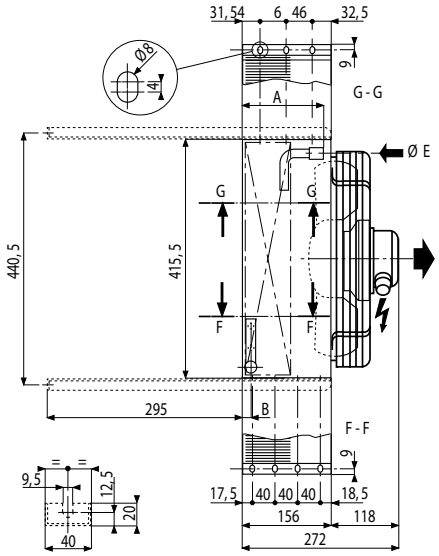
MA 2



MA 3



MA 1 - 2 - 3



		MA 1 ...	MA 2 ...	MA 3 ...
A	**mm**	125	122	122
B	**mm**	34	15	15
Packing	**mm**	570 x 430 x 185	880 x 430 x 185	1280 x 460 x 185
Fan package	**mm**	460 x 460 x 185 (x1)	460 x 460 x 185 (x1)	460 x 460 x 185 (x2)

WA

Axial fan condenser
Commercial range

HFC

7.8 - 95 kW

Modular product that adapts to the needs of the application with a wide choice of coils and motor fans.

The design of the WA allows **installation flexibility** (horizontal or vertical) for two air delivery directions.

"Plug & play" motor fan for **easy maintenance**.

CASING

Robust, made of white pre-painted galvanized sheet steel.
The use of stainless steel fasteners gives it excellent corrosion resistance and long-lasting aesthetics.

Select your coil treatment to extend your unit cooler's lifespan! Contact us.

COILS

Aluminium fins with 2.12 mm spacing.
Combined with staggered copper tubes, the coils are very efficient and compact.
Covered with polyester protection as standard.

VENTILATION

Axial motor fans with external rotor requiring no specific maintenance:
Ø 500 mm, 2 speeds:
- 04/06P = 1,500/1,000 rpm
- 08/12P = 750/500 rpm

Ø 630 mm, 2 speeds:
- 04/06P = 1,500/1,000 rpm
- 06/08P = 1,000/750 rpm
- 08/12P = 750/500 rpm
- 16P = 375 rpm

400V, three-phase, 50Hz, monoblock, with external rotor, with built-in thermal protector, IP 54, class F.

High efficiency, low noise profiled blades.

2-speed motor connection:
Δ = high speed,
Y = low speed.

"Plug & play" motor fans for easy maintenance.

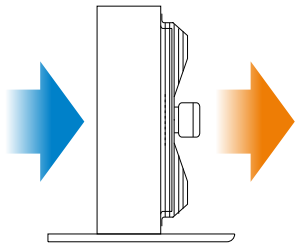
OPTIONS	
IRP	Rotary proximity switch(es).
M60	Motor fan 400V/3/60Hz (Ø 630 mm).
MM5	Motor fan 230V/1/50Hz - 04P - 06P - 08P.
M24*	Motor fan 230V/3/50-60Hz - 08/12P.

* Motor fans not held in stock.

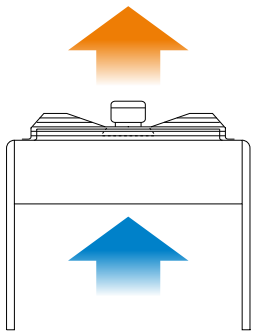
Both horizontal and vertical installation are possible with the standard feet!

In case of installation with horizontal air direction, remember to take into account the direction of the prevailing winds to avoid any risk of hot air recirculation!

Coils and motor fans can be supplied separately.



Horizontal air position



Vertical air position

WA 15(A) 04/06P(B)

(A) Model
(B) **04/06P** = 1500/1000 tr/min
06/08P = 1000/750 tr/min
08/12P = 750/500 tr/min
16P = 375 tr/min

The WA is available with HFCs. For more information, please consult our software.

WA ... 04P/06P - (1,500/1,000 rpm)

2.12 mm

CONDITIONS	REFRIGERANTS		WA ...	15	19	22	30	39	44	48	58	67	54	59	81	95
DT = 15K	**R449A**	04P (Δ)	**kW**	**14,0**	**18,8**	**21,6**	**28,5**	**37,4**	**43,5**	**43,6**	**55,6**	**62,5**	**54,5**	**61,3**	**82,0**	**95,1**
		06P (Y)	**kW**	**12,7**	**16,4**	**18,6**	**25,7**	**32,8**	**37,3**	**38,9**	**49,1**	**54,6**	**49,0**	**54,9**	**73,4**	**84,2**
Surface area			**m²**	18	26	35	35	53	70	53	79	105	72	95	107	143
Circuit tube vol.			**dm³**	3	4	6	6	9	12	9	13	18	12	16	18	24
Fan *	Airflow	04P (Δ)	**m³/h**	7500	6940	6450	15010	13870	12910	22520	20810	19360	21350	19480	32030	29230
		06P (Y)	**m³/h**	6050	5510	5070	12100	11020	10130	18140	16540	15200	17510	16010	26260	24010
			Nb x mm	1 x 500	1 x 500	1 x 500	2 x 500	2 x 500	2 x 500	3 x 500	3 x 500	3 x 500	2 x 630	2 x 630	3 x 630	3 x 630
Energy class		—04P/06P		E/E	E/E	E/D	E/E	E/E	E/D	E/E	E/E	E/D	E/E	E/E	E/E	E/E
Acoustics	**Lw** (1)	04P (Δ)	**dB(A)**	74	73	73	77	76	76	79	78	78	93	93	95	95
		06P (Y)	**dB(A)**	69	68	68	72	71	71	74	72	72	85	85	87	87
	Lp (2)	04P (Δ)	**dB(A)**	43	42	42	46	45	45	48	47	47	62	62	63	63
		06P (Y)	**dB(A)**	38	37	37	41	40	40	43	41	41	54	54	55	55
Circuits			**Nb**	2	4	4	4	6	8	8	8	8	8	8	12	16
Inlet			**ODF** (4)	1/2"	5/8"	5/8"	3/4"	7/8"	7/8"	7/8"	1"1/8	1"1/8	1"1/8	1"1/8	1"3/8	1"3/8
Outlet			**ODF** (4)	1/2"	5/8"	5/8"	5/8"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	1"1/8	1"1/8	1"1/8
Net weight			**kg**	36	40	44	63	72	80	92	104	116	93	103	137	152

* Ø 500 mm - 400 V/3/50 Hz - Δ: 710 W max - 1.4 A max (3) - Y: 480 W max - 0.8 A max (3)
Ø 630 mm - 400 V/3/50 Hz - Δ: 1,900 W max - 3.2 A max (3) - Y: 1,350 W max - 2.2 A max (3)

WA ... 06P/08P - (1,000/750 rpm)

2.12 mm

CONDITIONS	REFRIGERANTS		WA ...	41	42	57	65
DT = 15K	**R449A**	06P (Δ)	**kW**	**40,6**	**45,0**	**61,1**	**68,2**
		08P (Y)	**kW**	**35,4**	**38,5**	**53,3**	**58,1**
Surface area			**m²**	72	95	107	143
Circuit tube vol.			**dm³**	12	16	18	24
Fan *	Airflow	06P (Δ)	**m³/h**	12800	11630	19200	17440
		08P (Y)	**m³/h**	10300	9270	15440	13910
			Nb x mm	2 x 630	2 x 630	3 x 630	3 x 630
Energy class		—06P/08P		D/D	D/C	D/D	D/D
Acoustics	**Lw** (1)	06P (Δ)	**dB(A)**	83	83	85	85
		08P (Y)	**dB(A)**	77	77	79	79
	Lp (2)	06P (Δ)	**dB(A)**	52	52	53	53
		08P (Y)	**dB(A)**	46	46	47	47
Circuits			**Nb**	8	8	12	16
Inlet			**ODF** (4)	1"1/8	1"1/8	1"3/8	1"3/8
Outlet			**ODF** (4)	7/8"	1"1/8	1"1/8	1"1/8
Net weight			**kg**	89	99	131	146

* Ø 630 mm - 400 V/3/50 Hz - Δ: 420 W max - 0.78 A max (3) - Y: 300 W max - 0.5 A max (3)

WA 10(A) 08/12P(B)

(A) Model
(B) **04/06P** = 1500/1000 tr/min
06/08P = 1000/750 tr/min
08/12P = 750/500 tr/min
16P = 375 tr/min

The WA is available with HFCs. For more information, please consult our software.

WA ... 08P/12P - (750/500 rpm)

2.12 mm

CONDITIONS	REFRIGERANTS		WA ...	10	13	14	21	26	27	32	37	40	34	36	47	51
DT = 15K	**R449A**	08P (Δ)	**kW**	**8,9**	**10,9**	**11,9**	**18,1**	**22,0**	**24,1**	**27,1**	**32,9**	**35,9**	**35,1**	**38,8**	**52,9**	**58,7**
		12P (Y)	**kW**	**7,9**	**9,4**	**10,2**	**15,9**	**19,0**	**20,3**	**23,8**	**28,6**	**30,5**	**28,8**	**30,7**	**43,3**	**46,0**
Surface area			**m²**	18	26	35	35	53	70	53	79	105	72	95	107	143
Circuit tube vol.			**dm³**	3	4	6	6	9	12	9	13	18	12	16	18	24
Fan *	Airflow	08P (Δ)	**m³/h**	3230	2940	2710	6460	5880	5420	9690	8820	8130	10170	9400	15250	14100
		12P (Y)	**m³/h**	2620	2390	2180	5250	4780	4360	7880	7170	6550	7540	6800	11300	10200
			Nb x mm	1 x 500	1 x 500	1 x 500	2 x 500	2 x 500	2 x 500	3 x 500	3 x 500	3 x 500	2 x 630	2 x 630	3 x 630	3 x 630
Energy class		08P/12P		C/C	C/B	C/B	C/C	C/B	C/B	C/C	C/B	C/B	C/C	C/C	C/C	C/C
		12P (Y)		C	B	B	C	B	B	C	B	B	C	C	C	C
Acoustics	**Lw** (1)	08P (Δ)	**dB(A)**	66	66	66	69	69	69	71	71	71	67	67	69	69
		12P (Y)	**dB(A)**	58	58	58	61	61	61	63	63	63	60	60	62	62
	Lp (2)	08P (Δ)	**dB(A)**	35	35	35	38	38	38	40	40	40	36	36	37	37
		12P (Y)	**dB(A)**	27	27	27	30	30	30	32	32	32	29	29	30	30
Circuits			**Nb**	2	4	4	4	6	8	8	8	8	8	8	12	16
Inlet			**ODF** (4)	1/2"	5/8"	5/8"	3/4"	7/8"	7/8"	7/8"	1"1/8	1"1/8	1"1/8	1"1/8	1"3/8	1"3/8
Outlet			**ODF** (4)	1/2"	5/8"	5/8"	5/8"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	1"1/8	1"1/8	1"1/8
Net weight			**kg**	36	40	44	63	72	80	92	104	116	89	99	131	146

* Ø 500 mm - 400 V/3/ 50-60 Hz - Δ: 120 W max - 0.35 A max (3) - Y: 80 W max - 0.16 A max (3)
Ø 630 mm - 400 V/3/50-60 Hz - Δ: 235 W max - 0.55 A max (3) - Y: 140 W max - 0.27 A max (3)

WA ... 16P - (375 rpm)

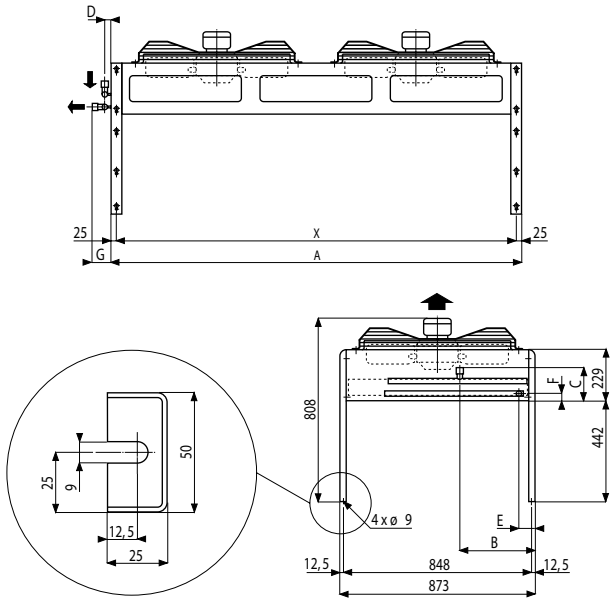
2.12 mm

CONDITIONS	REFRIGERANTS		WA ...	23	24	28	29
DT = 15K	**R449A**	16P (Y)	**kW**	**21,5**	**22,6**	**32,4**	**33,8**
Surface area			**m²**	72	95	107	143
Circuit tube vol.			**dm³**	12	16	18	24
Fan *	Airflow	16P (Y)	**m³/h**	5000	4560	7500	6840
			Nb x mm	2 x 630	2 x 630	3 x 630	3 x 630
Energy class		16P		B	B	B	B
Acoustics	**Lw** (1)	16P (Y)	**dB(A)**	57	57	59	59
	Lp (2)	16P (Y)	**dB(A)**	26	26	27	27
Circuits			**Nb**	8	8	12	16
Inlet			**ODF** (4)	1"1/8	1"1/8	1"3/8	1"3/8
Outlet			**ODF** (4)	7/8"	1"1/8	1"1/8	1"1/8
Net weight			**kg**	89	99	131	146

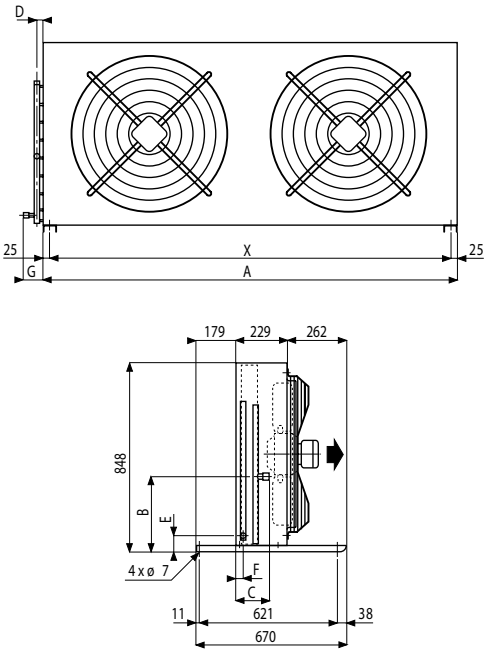
* Ø 630 mm - 400 V/3/50-60 Hz - Y: 90 W max - 0.2 A max (3)

(1) Sound power level in dB(A), obtained in accordance with standard NF EN 13487 (parallelepiped reference surface).
(2) Sound pressure in dB(A) measured at 10 m, parallelepiped measuring surface, in a free field over a reflecting plane, given as an indication only.
Values measured under nominal operating conditions, with clean coil, at rated voltage.
(3) Adjustment of overload protection.
(4) ODF = Female to receive the tube of the same diameter

WA | Vertical air position



WA | Horizontal air position



WA ... 04P/06P		15	19	22	30	39	44	48	58	67	54	59	81	95
A	mm	730	730	730	1390	1390	1390	2050	2050	2050	1870	1870	2770	2770
B	mm	240	520	340	340	495	390	390	470	390	470	390	455	455
C	mm	150	150	150	150	155	155	155	155	155	150	150	160	160
D	mm	20	25	25	25	30	30	30	30	30	25	25	50	50
E	mm	55	40	55	55	45	55	55	45	55	45	55	45	60
F	mm	73	53	34	73	53	34	73	53	34	53	34	53	34
G	mm	78	81	81	81	88	88	92	88	88	85	85	115	115
X	mm	680	680	680	1340	1340	1340	2000	2000	2000	1820	1820	2720	2720

WA ... 06P/08P		41	42	57	65
A	mm	1870	1870	2770	2770
B	mm	470	390	455	455
C	mm	150	150	160	160
D	mm	25	25	50	50
E	mm	45	55	45	60
F	mm	53	34	53	34
G	mm	85	85	115	115
X	mm	1820	1820	2720	2720

WA ... 08P/12P		10	13	14	21	26	27	32	37	40	34	36	47	51
A	mm	730	730	730	1390	1390	1390	2050	2050	2050	1870	1870	2770	2770
B	mm	240	520	340	340	495	390	390	470	390	470	390	455	455
C	mm	150	150	150	150	155	155	155	155	155	150	150	160	160
D	mm	20	25	25	25	30	30	30	30	30	25	25	50	50
E	mm	55	40	55	55	45	55	55	45	55	45	55	45	60
F	mm	73	53	34	73	53	34	73	53	34	53	34	53	34
G	mm	78	81	81	81	88	88	92	88	88	85	85	115	115
X	mm	680	680	680	1340	1340	1340	2000	2000	2000	1820	1820	2720	2720

WA ... 16P		23	24	28	29
A	mm	1870	1870	2770	2770
B	mm	470	390	455	455
C	mm	150	150	160	160
D	mm	25	25	50	50
E	mm	45	55	45	60
F	mm	53	34	53	34
G	mm	85	85	115	115
X	mm	1820	1820	2720	2720

NEOSTAR

Axial fan condenser
Commercial and industrial range

HFC

18 - 1280 kW

To best meet the needs of your application, two versions of NEOSTAR are available:

- **NEOSTAR "Power":** available up to 1,250 kW, it guarantees **optimized heat exchange** and **reduced size**!

- **NEOSTAR "Silence":** the selection of its components optimizes its power consumption and makes it an **efficient** product with a **low noise level**.

Adaptability: more than 870 possible models to suit your project.

Whatever the model chosen, the NEOSTAR guarantees:
- **Easy installation** (the motors are wired and connected in the factory).
- **Easy maintenance** (quick access to the coil).

CASING

Robust, made of white pre-painted galvanized sheet steel.

The use of stainless steel fasteners gives it excellent corrosion resistance and long-lasting aesthetics.

The Neostar is delivered screwed on a wooden base.

The raised support feet available up to 1,840 mm to best meet installation constraints.

OPTIONS	
RAL	Special colour polyester paint.
REH	Feet raised by 240 mm KIT TO INSTALL (ground clearance 800 mm)
RE2	Feet raised by 840 mm KIT TO INSTALL (ground clearance 1,400 mm).
RE3	Feet raised by 1,340 mm KIT TO INSTALL (ground clearance 1,900 mm).
RE4	Feet raised by 1,840 mm KIT TO INSTALL (ground clearance 2,400 mm).
ECB	Wooden crate packaging.

Select your coil treatment to extend your unit cooler's lifespan! Contact us.

COILS

Aluminium fins with 1.9 mm spacing.
Combined with staggered, grooved copper tubes, the coils are very efficient and compact.

OPTIONS	
MCI	Multi-circuit.
AAS	Advanced Adiabatic System: adiabatic sprinkler system. CONTACT US

VENTILATION

The NEOSTAR range of air-cooled condensers is equipped as standard with two-speed external rotor motor fans (triangle and star coupling).

NEOSTAR POWER

The Neostar Power range of motor fans is equipped with motors:
- Ø 800 mm (PN): 06P (D/Y) = 885/685 rpm
- Ø 910 mm (PU): 06P (D/Y) = 880/670 rpm,

NEOSTAR SILENCE

The Neostar Silence range of motor fans is equipped with motors:
- Ø 800 mm : 08P (D/Y) = 680/540 rpm,
- Ø 800 mm : 12P (D/Y) = 440/330 rpm (special motor fan),
- Ø 800 mm : 16P (Y) = 255 rpm.

These motors are 400V/3/50Hz, protected by an enclosed casing, IP54, class F. When the heated air temperature exceeds 60 °C, contact us.

The motor fans are wired as standard and connected in the factory, as follows:
- 1 to 3 electrical boxes for L models (in-line motors),
- 2 to 8 electrical boxes for P models (parallel motors).

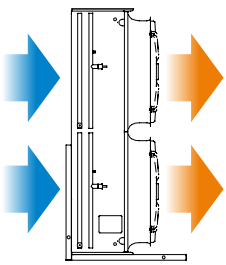
Special voltage ventilation:
- M60 : Motor fans 400 V/3/60Hz, IP54, class F, version 06P Ø 910 mm
- M26 : Motor fans 230 V/3/60Hz, IP54, class F, version 06P Ø 910 mm

OPTIONS	
M26	Motor fans 230V/3/60Hz. CONTACT US
IRP	Rotary proximity switch(es).
	AC MOTORS
M60	Motor fans 400V/3/60Hz. CONTACT US
MTH	Motors equipped with protection thermostat. Option necessary with high starting frequency (more than 30 starts per hour) or use of variable speed drives.
C2V	Factory wiring 2 speeds in one electrical box.

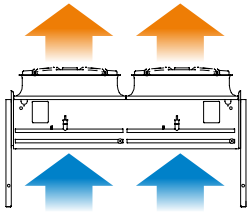
Opt for an EC motor in order to optimize the operation of your installation. Do you need an energy balance to make your decision? Contact us.

Both horizontal and vertical installation are possible with the standard feet!

In case of installation with horizontal air direction, remember to take into account the direction of the prevailing winds to avoid any risk of recirculation of hot air!



Horizontal air position



Horizontal air position

TECHNICAL DETAILS OF OPTIONS ON AC MOTORS

AC MOTOR possible options			
WIRING AND BOX	**Power**	**Standard:**	**Power wiring on terminals** (no protection option integrated into this option).
		SCU	**Without motor wiring** (note that no regulation is possible with this option).
	Protection	**CMP**	**Motor protection box IP54**, including one circuit breaker per motor, a fault summary and a main switch. Possibility of floor mounting support kit (MSK).
		MSK	Floor support for cabinets above H = 800 x W = 1,000
REGULATION	**Simple** cascade on/off	**RP1** (including CMP)	**Pressure regulation** in cascade in an IP54 enclosure allowing different regulation stages to be managed: **From 1 to 4 regulation stages** > possibility of managing 2 circuits. **From 4 to 10 regulation stages** • Configuration of day/night operation possible. • Integrated clock. 1 or 2 pressure sensors depending on the number of separate circuits present.
	Advanced control by variation	**RP3** (including CMP) Variable frequency drive	**An IP54 ventilated control cabinet** with a variable frequency drive including its fuse protection. A pressure sensor to manage a circuit.

TECHNICAL DETAILS OF OPTIONS ON EC MOTORS

EC MOTOR possible options			
WIRING AND BOX	**Power**	**Standard:**	**Power wiring on terminals.** The power, fault, bus and control wiring is carried out.
		SCM	**Without motor wiring.**
		CCE	**Power wiring in IP54 box and protection by stage included (in L for each fan and in P for 2 fans).** The power, fault, bus and control wiring is carried out.
REGULATION	**Simple**	**SE1** *	**Direct control of the motors by customer 0-10 V signal:** only one circuit possible (contact us in case of multiple circuits, or 4-20 mA control signal).
		SE2	**Automatic speed control by pressure (setpoint can only be changed via a computer):** pressure sensor included. Only one circuit possible.
	Advanced control	**CE4**	**Automatic speed control by pressure (setpoint can be changed via the PLC) / 1 circuit:** a pressure sensor and a single circuit possible (contact us in case of multiple circuits).
		CE5	**Automatic speed control by pressure (setpoint can be changed via the PLC) / 2 circuits:** 2 pressure sensors and 2 separate circuits possible (contact us in case of multiple circuits).
		CE6	**Automatic speed control by pressure (setpoint can be changed via the PLC) / signal comparison:** 2 pressure sensors and signal comparison (contact us in case of multiple circuits).
ADDITIONAL FUNCTIONS		**VMA**	**Maximum speed setting** (configuration done on each fan, via a computer). Only with standard or **CCE**.
		MJN	**Possibility of setting a maximum night speed** (clock by signal 0/10). Only with **SE1** or **CE4**.

** Default option if no customer choice.*

HFC

PN(A) 06(B) D(C) P(D) 08(E) A2(F)

(A) **PN** (Power Normal) - **PU** (Power Ultra)
SN (Silence Normal) - **SE** (Silence Extra) - **SU** (Silence Ultra)
(B) Number of poles
(C) **D** = triangle coupling
Y = star coupling
(D) Fan arrangement:
L = in-line fans
P = fans in parallel
(E) Number of fans
(F) Module type: **A** - **B** - **D**

The NEOSTAR range offers hundreds of possible configurations with:

- **2 versions**: Power or Silence,
- **2 designs**: In-Line or Parallel,
- **3 module sizes**: 1,200 mm; 1,500 mm and 2,000 mm,
- **numerous** ventilation options, etc.

Contact your sales representative to select the right model for your application.

1.9 mm

CONDITIONS	REFRIGERANTS		NEOSTAR		
DT = 15K (1)	**R449A**	**kW**	**18,3**	**>**	**1281,6**
Surface area		**m²**	68	>	3399
Circuit tube volume		**dm³**	9	>	424
Fan	Airflow	**m³/h**	4980	>	365530
		Nb x mm	1 x 800 mm	>	16 x 910 mm
Acoustics	**Lp** (2)	**dB(A)**	16	>	67
	Lw (3)	**dB(A)**	48	>	100
Actual power consumption (4)		**W total**	105	>	39680
Energy class			A+	>	E
Net weight		**kg**	150	>	2390

(1) DT = difference between the ambient temperature and the condensing temperature considered to be equal to the pressure equivalent at the condenser inlet.
(2) Sound pressure in dB(A) measured at 10 m, parallelepiped measuring surface, in a free field over a reflecting plane, given as an indication only.
Values measured under nominal operating conditions, with clean coil, at rated voltage.
(3) Sound power level in dB(A), obtained in accordance with standard NF EN 13487 (parallelepiped reference surface).
(4) Power consumption of all motors.

NOTES

MXW

Axial fan condenser
Commercial and industrial range

HFC

130 - 1670 kW

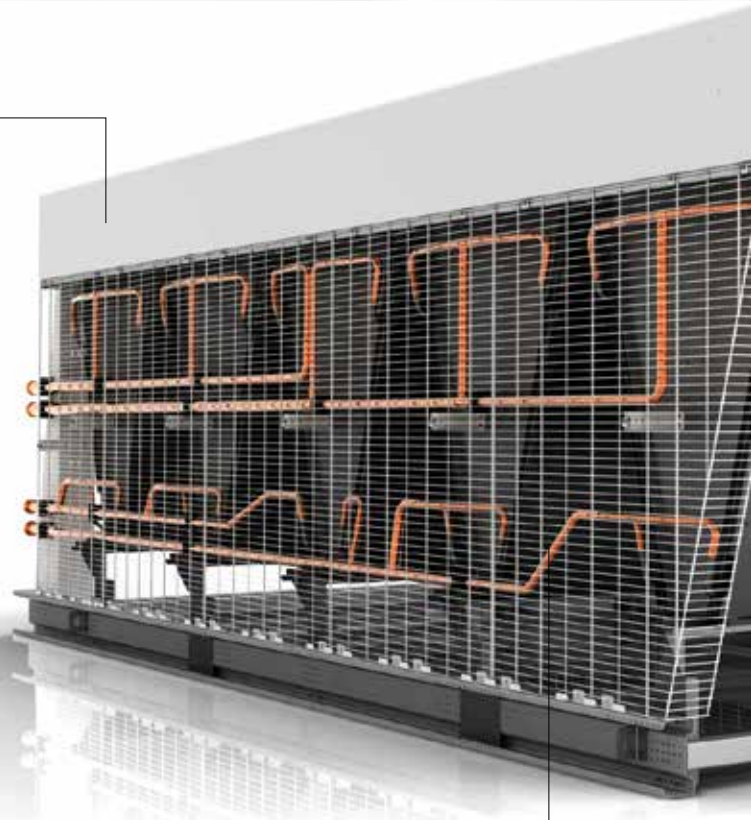
A range designed for installations where **space may be a problem**.
High performance density ensuring **optimized energy consumption**.
Microchannel technology allowing a significant reduction in refrigerant charge.
State of the art aesthetics for harmonious integration on the site.

CASING

Galvanized sheet steel covered with white polyester paint.
State-of-the-art aesthetics and reduced height (< 2 m) for harmonious integration on the site.

OPTIONS	
ACR	SilenTop (photo 1).
G2F	Side protection grilles (2 sides).
PAV	Anti-vibration pads.
CON	Packaging for container


1



COILS

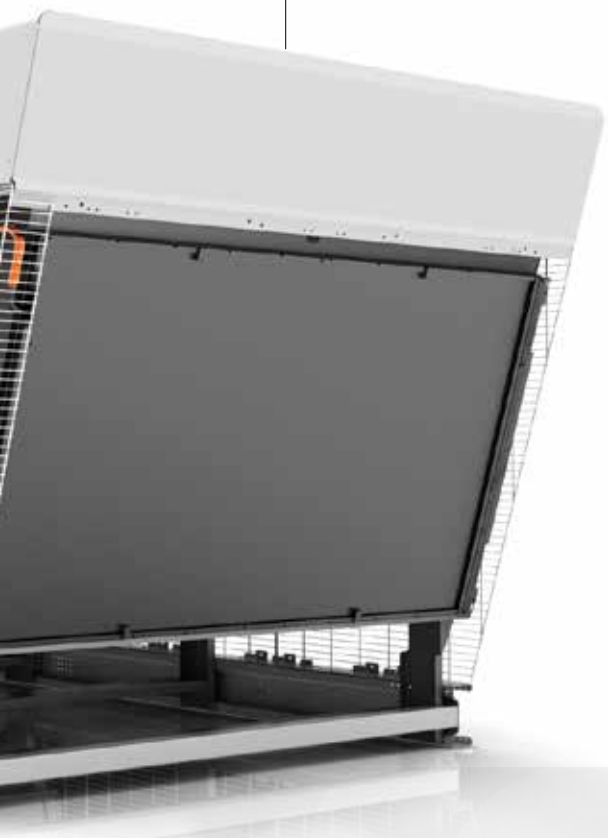
Aluminium microchannel coils, offering reliability and sturdiness.
Lightweight, they allow a significant reduction in the quantity of refrigerant and the weight of the condenser.
Intensive quality control to minimize the risk of leakage.

OPTIONS	
MCI	Multi-circuit..

REGULATION AND PROTECTION CASING

OPTIONS	
CMP	Motor protection cabinet.
RP2	CMP + condensation pressure regulation by speed variation (voltage).
RP3	CMP + condensation pressure regulation by speed variation (frequency).
CSC	Signal comparators (multi-circuit configuration).

VENTILATION



The MXW range of air-cooled condensers is equipped with highly reliable external rotor motor fans.

EC motors

Highly reliable electronically commutated (EC) motor fans ensure optimized operation of your installation.
- Ø 800 mm : EC1 (reinforced EC motor) = up to 1,020 rpm.
- Ø 800 mm : EC2 = up to 730 rpm.

The use of EC motors helps to reduce energy consumption for a given power: a detailed comparison of the energy balance can be carried out for each study (contact us).

The EC motor fans are wired as standard and connected in the factory.

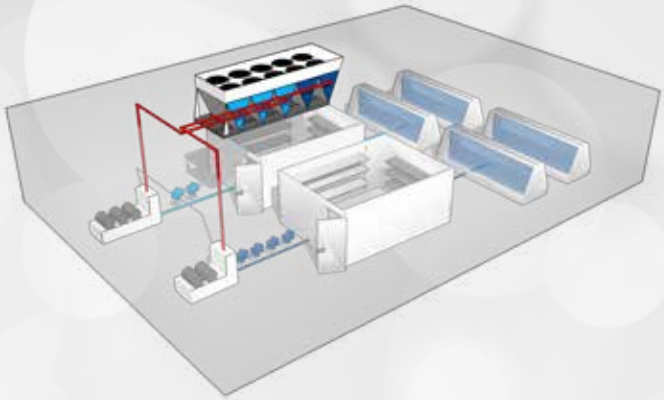
AC motors (option)

- Ø 800 mm : 06P (D/Y) (reinforced motor) = 910/730 rpm
- Ø 800 mm : 06P (D/Y) = 885/685 rpm
- Ø 800 mm : 08P (D/Y) = 660/485 rpm
- Ø 800 mm : 12P (D/Y) = 435/340 rpm
- Ø 800 mm : 16P (Y) = 255 rpm.

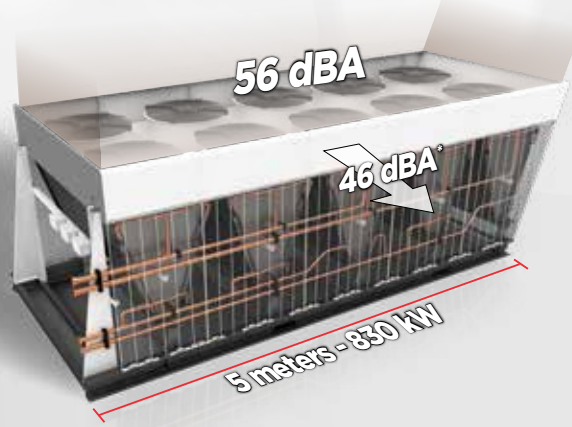
These motors are in 400V/3/50Hz, bi-speed (triangle and star coupling), protected by an enclosed casing, IP54, class F. When the heated air temperature exceeds 60 °C, contact us.

OPTIONS	
CMU	Factory motor wiring. (AC motors).
SCM	Without EC motor wiring.
C2V	Factory wiring 2 speeds in one electrical box.
IRP	Rotary proximity switch(es).
MTH	Motors equipped with protection thermostat. Advise with high starting frequencies (more than 30 starts per hour) or use of variable speed drives.

PRODUCT ADVANTAGES



Optimized installation costs: The modular design allows the independent connection of modules for autonomous control of several compressor rack discharges. In this way, the user can have a single condenser, reducing installation cost. In addition, the reduced refrigerant charge ensures low maintenance costs. The modules are composed of two coils that can be easily removed for maintenance.



** Sound pressure level in dB(A) calculated at 10 m, level with the blades, in a free field over a reflecting plane.*

Response to space constraints: The MXW range responds to the problem of space by combining original architecture and innovative technology; the use of microchannel coils and their W-shaped arrangement allows for easy installation in a small space.

Ideal integration in an urban environment: Different ventilation solutions that help to reduce noise levels considerably and reach 19 dB(A) at 10 m per module. In addition, the **SilenTop** (optional) hides the motor fans and acts as an acoustic enclosure.

The high mechanical resistance of the microchannel coils allows easy and fast cleaning with the use of high pressure cleaners.

Easy access to the coil facilitates maintenance operations.

The modules are composed of two coils that can be easily removed for maintenance.

MXW EC1(A) 8(D) P04(E)
MXW 06(B) D(C) 8(D) P04(E)

(A) EC motors: **EC1** (reinforced EC motor) = up to 1,020 rpm. - **EC2** = up to 730 rpm.
(B) AC motors: Number of poles
(C) AC motors: **D** = triangle coupling - **Y** = star coupling
(D) Fan diameter
(E) Number of fans

The MXW is available with HFCs. For more information, please consult our software.

MXW EC1 | Reinforced EC motor — Microchannels

1020 rpm

CONDITIONS	REFRIGERANTS MXW EC1 ...		8P04	8P06	8P08	8P10	8P12	8P14	8P16	8P18	8P20
DT = 15K (1)	**R449A**	**kW**	**358,5**	**537,8**	**717,0**	**896,2**	**1075,5**	**1254,8**	**1434,1**	**1613,3**	**1792,5**
Power consumption		**kW**	8,49	12,74	16,98	21,23	25,48	29,72	33,97	38,21	42,46
Airflow		**m^3/h**	93360	140040	186720	233400	280080	326760	373440	420120	466800
Energy class			D	D	D	D	D	D	D	D	D
Acoustics	**Lw** (2)	**dB(A)**	95	97	98	99	100	100	101	102	102
	Lp (3)	**dB(A)**	63	65	66	67	68	67	68	69	69

800 rpm

CONDITIONS	REFRIGERANTS MXW EC1 ...		8P04	8P06	8P08	8P10	8P12	8P14	8P16	8P18	8P20
DT = 15K (1)	**R449A**	**kW**	**310,3**	**465,4**	**620,6**	**775,7**	**930,8**	**1086,0**	**1241,1**	**1396,3**	**1551,4**
Power consumption		**kW**	4,26	6,39	8,52	10,65	12,78	14,91	17,04	19,17	21,30
Airflow		**m^3/h**	71880	107820	143770	179710	215650	251590	287530	323470	359420
Energy class			D	D	D	D	D	D	D	D	D
Acoustics	**Lw** (2)	**dB(A)**	89	91	92	93	94	94	95	96	96
	Lp (3)	**dB(A)**	57	59	60	61	62	61	62	63	63

500 rpm

CONDITIONS	REFRIGERANTS MXW EC1 ...		8P04	8P06	8P08	8P10	8P12	8P14	8P16	8P18	8P20
DT = 15K (1)	**R449A**	**kW**	**203,2**	**304,8**	**406,4**	**508,0**	**609,6**	**711,2**	**812,8**	**914,4**	**1016,0**
Power consumption		**kW**	1,16	1,74	2,32	2,90	3,48	4,06	4,64	5,22	5,80
Airflow		**m^3/h**	41380	62070	82760	103450	124140	144830	165520	186210	206900
Energy class			B	B	B	B	B	B	B	B	B
Acoustics	**Lw** (2)	**dB(A)**	73	75	76	77	78	78	79	80	80
	Lp (3)	**dB(A)**	41	43	44	45	46	45	46	47	47

400 rpm

CONDITIONS	REFRIGERANTS MXW EC1 ...		8P04	8P06	8P08	8P10	8P12	8P14	8P16	8P18	8P20
DT = 15K (1)	**R449A**	**kW**	**171,8**	**257,7**	**343,6**	**429,5**	**515,4**	**601,3**	**687,2**	**773,1**	**858,9**
Power consumption		**kW**	0,65	0,98	1,30	1,63	1,95	2,28	2,60	2,93	3,25
Airflow		**m^3/h**	31740	47610	63470	79340	95210	111080	126950	142820	158680
Energy class			A+	A+	A+	A+	A+	A+	A+	A+	A+
Acoustics	**Lw** (2)	**dB(A)**	66	68	69	70	71	71	72	73	73
	Lp (3)	**dB(A)**	34	36	37	38	39	38	39	40	40

200 rpm

CONDITIONS	REFRIGERANTS MXW EC1 ...		8P04	8P06	8P08	8P10	8P12	8P14	8P16	8P18	8P20
DT = 15K (1)	**R449A**	**kW**	**136,5**	**204,7**	**272,9**	**341,1**	**409,3**	**477,6**	**545,8**	**614,0**	**682,2**
Power consumption		**kW**	0,17	0,26	0,34	0,43	0,52	0,60	0,69	0,77	0,86
Airflow		**m^3/h**	14450	21680	28900	36130	43360	50580	57810	65030	72260
Energy class			A+	A+	A+	A+	A+	A+	A+	A+	A+
Acoustics	**Lw** (2)	**dB(A)**	48	50	51	52	53	53	54	55	55
	Lp (3)	**dB(A)**	16	18	19	20	21	20	21	22	22

MXW EC1(A) 8(D) P04(E)
MXW 06(B) D(C) 8(D) P04(E)

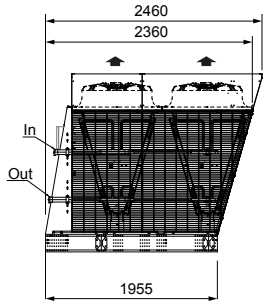
(A) EC motors: **EC1** (reinforced EC motor) = up to 1,020 rpm. - **EC2** = up to 730 rpm.
(B) AC motors: Number of poles
(C) AC motors: **D** = triangle coupling - **Y** = star coupling
(D) Fan diameter
(E) Number of fans

The MXW is available with HFCs. For more information, please consult our software.

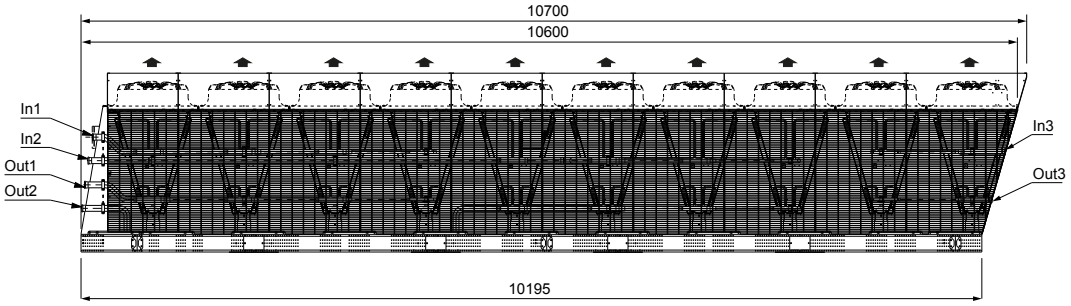
MXW EC1 | Reinforced EC motor — Microchannels

		MXW EC1 ...	8P04	8P06	8P08	8P10	8P12	8P14	8P16	8P18	8P20
Circuit volume		**dm^3**	22,5	36,1	50,7	70,7	87,4	102,0	121,7	131,8	141,3
		Nb	4	6	8	10	12	14	16	18	20
Fan	400V/3	**W max**	9600	14400	19200	24000	28800	33600	38400	43200	48000
	50-60 Hz	**A max**	15,2	22,8	30,4	38,0	45,6	53,2	60,8	68,4	76,0
Inlet	Inlet **1**	**Ø**	2"1/8	2"5/8	2"5/8	2"5/8	2"5/8	2"5/8	2"5/8	2"5/8	2"5/8
	Inlet **2**	**Ø**	-	-	-	2"1/8	2"5/8	2"5/8	2"5/8	2"5/8	2"5/8
	Inlet **3**	**Ø**	-	-	-	-	-	-	-	1"3/8	2"1/8
Outlet	Outlet **1**	**Ø**	2"1/8	2"1/8	2"5/8	2"1/8	2"1/8	2"5/8	2"5/8	2"5/8	2"5/8
	Outlet **2**	**Ø**	-	-	-	2"1/8	2"1/8	2"1/8	2"5/8	2"5/8	2"5/8
	Outlet **3**	**Ø**	-	-	-	-	-	-	-	1" 3/8	2" 1/8
Net weight		**kg**	575	846	1117	1388	1659	1930	2201	2472	2743

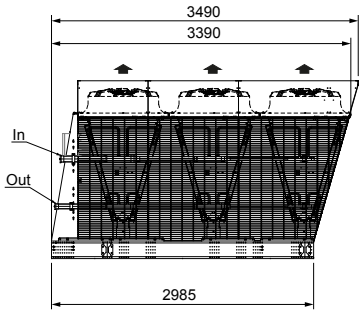
(1) DT = difference between the ambient temperature and the condensing temperature considered to be equal to the pressure equivalent at the condenser inlet.
(2) Sound power level in dB(A), obtained in accordance with standard NF EN 13487 (parallelepiped reference surface).
(3) Sound pressure in dB(A) measured at 10 m, parallelepiped measuring surface, in a free field over a reflecting plane, given as an indication only.
Values measured under nominal operating conditions, with clean coil, at rated voltage.



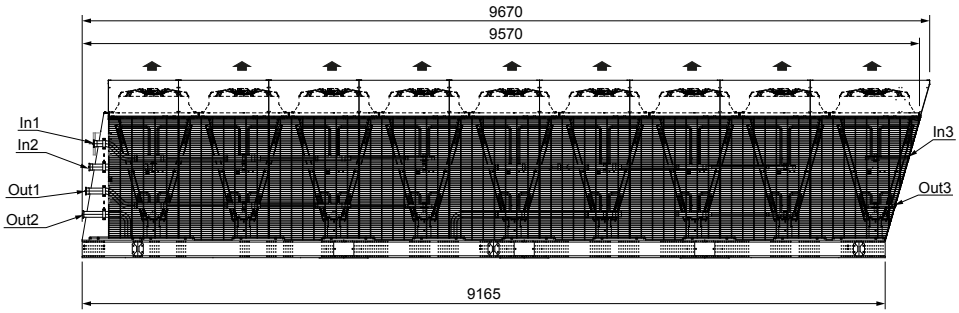
MXW EC1 8P04



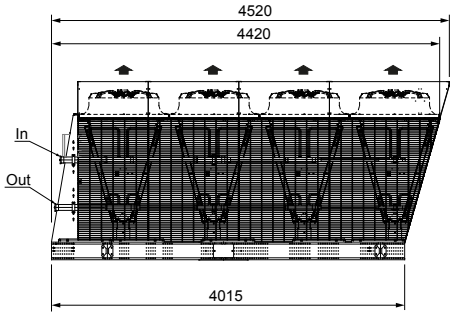
MXW EC1 8P20



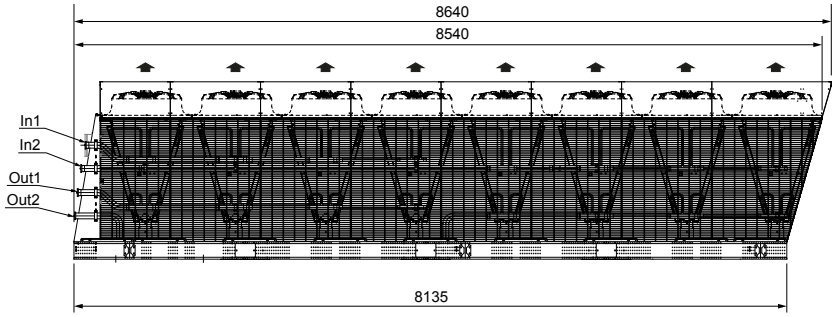
MXW EC1 8P06



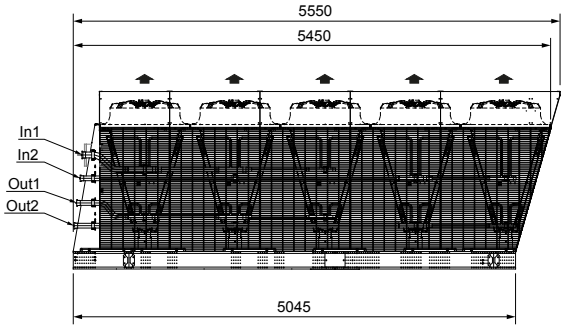
MXW EC1 8P18



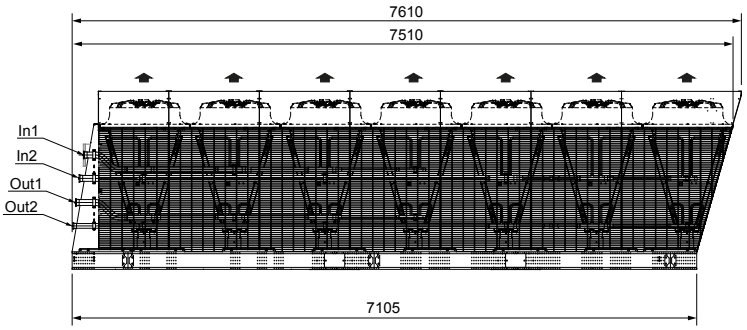
MXW EC1 8P08



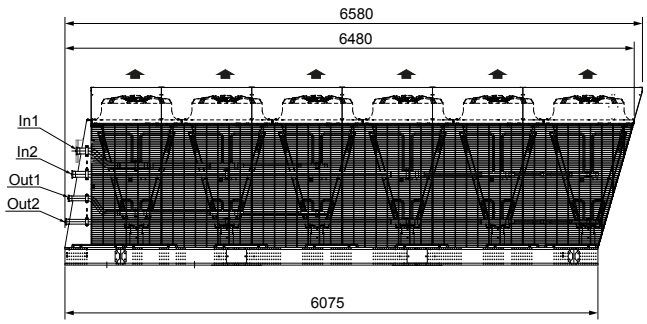
MXW EC1 8P16



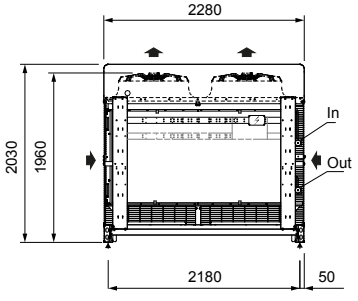
MXW EC1 8P10



MXW EC1 8P14



MXW EC1 8P12



CCT

Centrifugal fan condenser
Commercial range

HFC

11 - 130 kW

Versatility: the CCT offers 2 possible blowing directions and 8 air inlet/outlet combinations.

Fully removable for easy installation in cramped or hard-to-reach areas (DEM option).

CASING

Robust, made of galvanized sheet steel.

OPTIONS	
UCC	Compressor box. CONTACT US
PEI	White paint.
IPH	Noise insulation.
FLA	Suction filters.
DEM	Removable device.
ECB	Wooden crate packaging.

VENTILATION

Centrifugal motor fans: pressure available up to 150 pascal, adapted performance.

"Double inlet" type fans with direct drive, rotation speed 1,000 rpm.

Motors protected by an enclosed casing with built-in thermal protector, IP54, class F, 230V/1/50Hz and 400V/3/50Hz.

Electrical connections are made in the factory in an easily accessible box (three-phase motor: factory coupling in 400V).

To facilitate pressure regulation by fan stop, the turbines are separated by a partition preventing air bypassing.

OPTIONS	
CMU	Factory motor wiring.
VPS	Blower louvred shutters. KIT TO INSTALL
VVU	Variable speed drive. CONTACT US
VVK	Variable speed drive. KIT TO INSTALL CONTACT US

Select your coil treatment to extend your unit cooler's lifespan! Contact us.

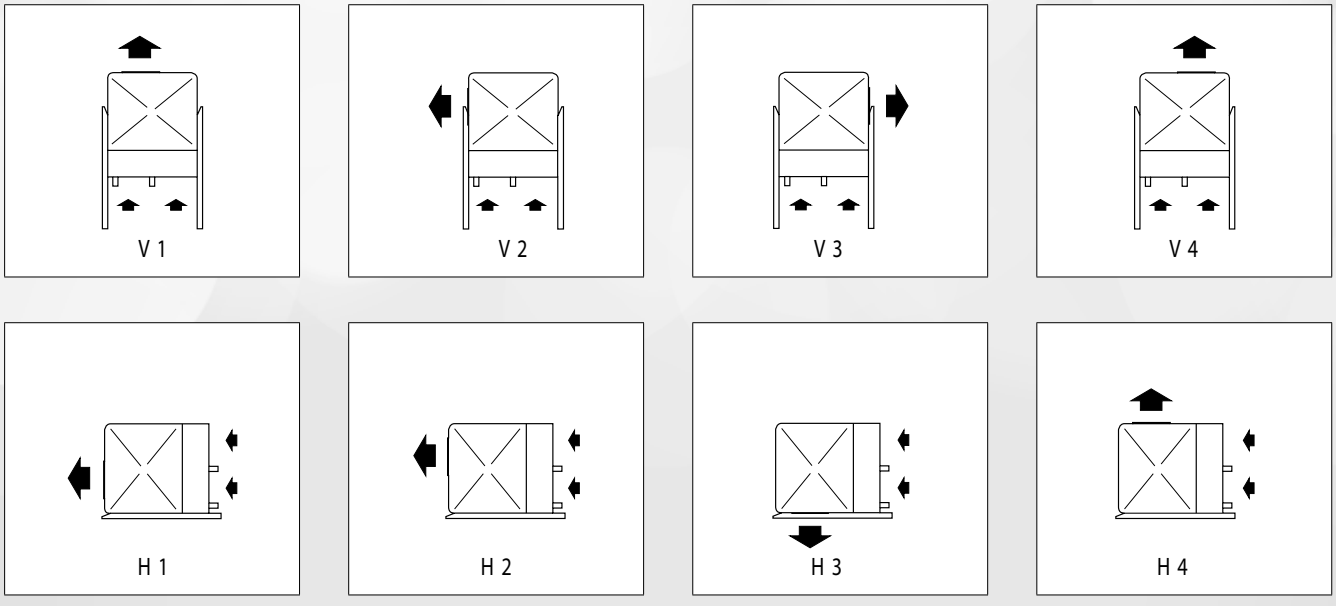
COILS

Aluminium fins with 2.12 mm spacing.
Combined with staggered copper tubes, the coils are very efficient and compact.

OPTIONS	
MCI	Multi-circuit.

PRODUCT ADVANTAGES

The two positions of the unit, vertical air or horizontal air, each offer four possibilities for orientation of the air outlets (to be specified when ordering):



Possibility on site of changing the position of the air outlet.
For installation that is difficult to access, condensers can be disassembled and reassembled on site. DEM OPTION

CCT 1x(A) 10M(B) A3(C)

(A) Number of turbines
(B) **12T** = Three-phase - **10M** = Single-phase
(C) Type of module

> **The CCT is available with HFCs. For more information, please consult our software.**

CCT ... - 1,000 rpm — **2.12** mm

	CONDITIONS		CCT ...	1x10M A3	1x10M B5	1x12T B2	1x12T B5	2x10M B5	2x12T B2	2x12T B5	3x12T B2	3x12T B5	4x12T B3	4x12T B5
0 Pa (2)	**DT = 15K** (1)	**R449A**	**kW**	**14,8**	**20,1**	**24,5**	**33,7**	**40,1**	**49,1**	**67,5**	**73,8**	**101,1**	**115,2**	**135,0**
	Power consumption		**kW**	0,59	0,63	2,10	1,92	1,26	4,20	3,84	6,29	5,76	8,14	7,68
	Airflow		**m³/h**	3540	3630	7080	6750	7260	14160	13500	21240	20250	27880	27000
	Acoustics	**Lp** (3)	**dB(A)**	44	44	55	54	46	58	56	59	58	60	59
		Lw	**dB(A)**	75	75	86	85	78	90	88	91	90	92	91

	CONDITIONS		CCT ...	1x10M A3	1x10M B5	1x12T B2	1x12T B5	2x10M B5	2x12T B2	2x12T B5	3x12T B2	3x12T B5	4x12T B3	4x12T B5
50 Pa (2)	**DT = 15K** (1)	**R449A**	**kW**	**14,2**	**19,6**	**24,1**	**32,7**	**38,9**	**48,3**	**65,5**	**72,5**	**98,0**	**112,7**	**130,9**
	Power consumption		**kW**	0,54	0,58	1,98	1,79	1,15	3,97	3,58	5,95	5,36	7,69	7,15
	Airflow		**m³/h**	3340	3480	6880	6480	6960	13760	12960	20640	19440	27020	25920
	Acoustics	**Lp** (3)	**dB(A)**	44	44	55	53	46	57	55	58	57	59	58
		Lw	**dB(A)**	75	75	86	84	78	89	87	90	89	91	90

	CONDITIONS		CCT ...	1x10M A3	1x10M B5	1x12T B2	1x12T B5	2x10M B5	2x12T B2	2x12T B5	3x12T B2	3x12T B5	4x12T B3	4x12T B5
100 Pa (2)	**DT = 15K** (1)	**R449A**	**kW**	**13,2**	**18,3**	**23,9**	**31,1**	**36,5**	**48,0**	**62,1**	**72,0**	**93,2**	**108,8**	**124,7**
	Power consumption		**kW**	0,49	0,52	1,85	1,60	1,04	3,70	3,20	5,56	4,80	7,10	6,40
	Airflow		**m³/h**	3010	3210	6810	6100	6420	13620	12200	20440	18290	25820	24390
	Acoustics	**Lp** (3)	**dB(A)**	42	42	53	51	44	56	54	57	55	58	57
		Lw	**dB(A)**	73	73	84	82	76	88	86	89	87	90	89

	CONDITIONS		CCT ...	1x10M A3	1x10M B5	1x12T B2	1x12T B5	2x10M B5	2x12T B2	2x12T B5	3x12T B2	3x12T B5	4x12T B3	4x12T B5
150 Pa (2)	**DT = 15K** (1)	**R449A**	**kW**	**12,0**	**16,0**	**22,6**	**29,0**	**32,2**	**45,3**	**57,8**	**68,1**	**86,8**	**103,6**	**115,7**
	Power consumption		**kW**	0,43	0,45	1,66	1,40	0,90	3,32	2,80	4,99	4,19	6,26	5,59
	Airflow		**m³/h**	2590	2770	6220	5540	5540	12450	11070	18670	16610	23990	22140
	Acoustics	**Lp** (3)	**dB(A)**	40	40	52	50	42	54	52	56	54	56	55
		Lw	**dB(A)**	71	71	83	81	74	86	84	88	86	88	87

(1) DT = difference between the ambient temperature and the condensing temperature considered to be equal to the pressure equivalent at the condenser inlet.
(2) Additional available pressure in pascals.
(3) Sound pressure in dB(A) measured at 10 m, parallelepiped measuring surface, in a free field over a reflecting plane, given as an indication only.
(4) Multi-circuit condensers: M = maximum number of circuits.

CCT 1x(A) 10M(B) A3(C)

(A) Number of turbines
(B) **12T** = Three-phase - **10M** = Single-phase
(C) Type of module

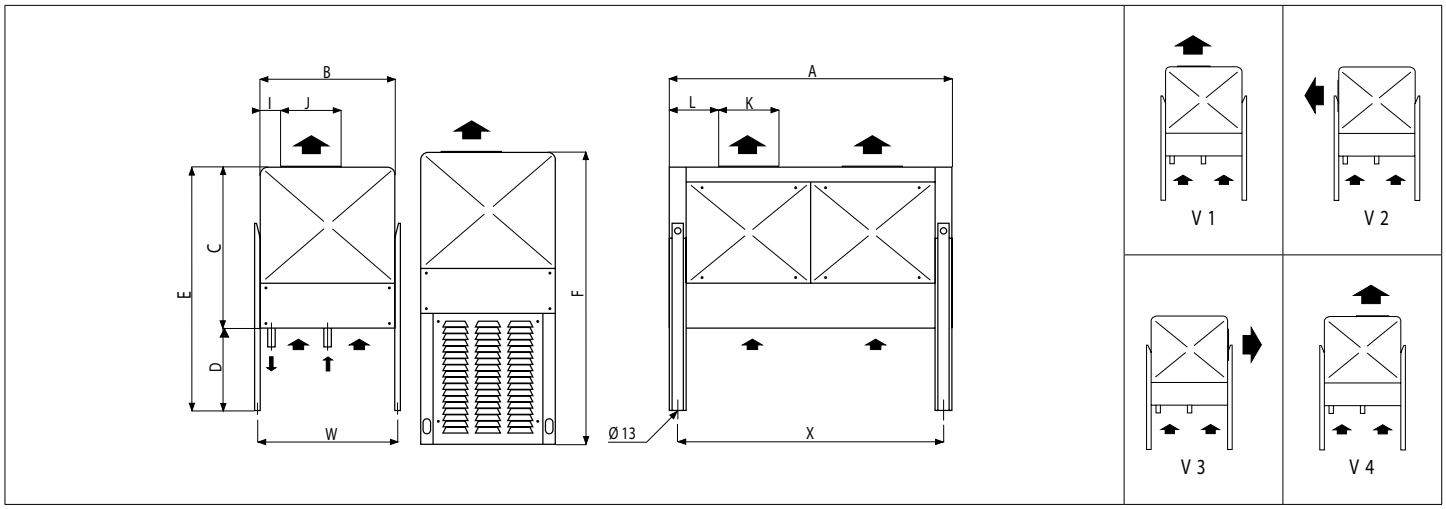
The CCT is available with HFCs. For more information, please consult our software.

CCT ... - 1,000 rpm — **2.12** mm

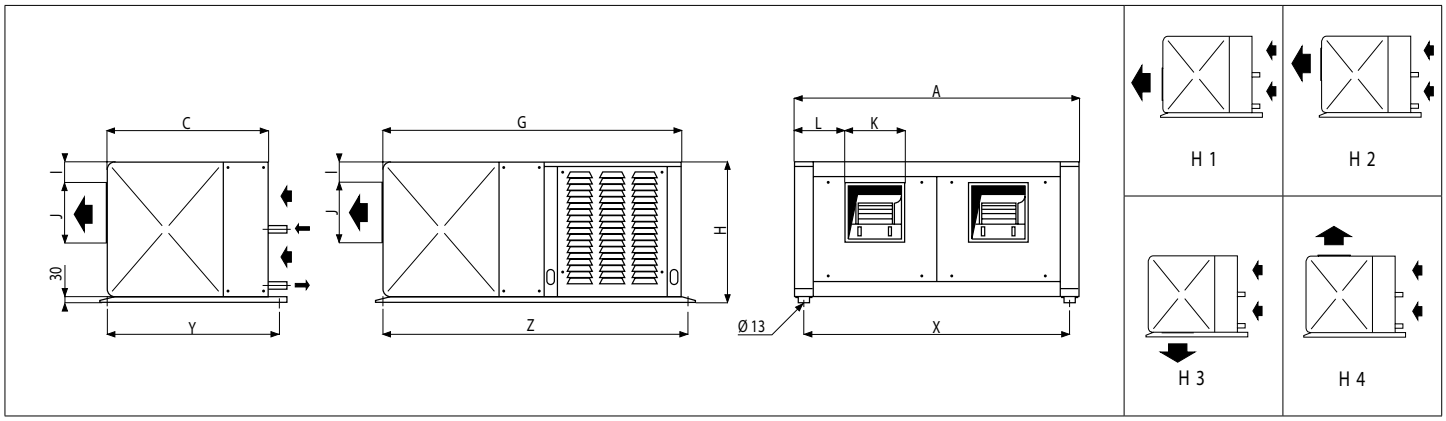
		CCT ...	1x10M A3	1x10M B5	1x12T B2	1x12T B5	2x10M B5	2x12T B2	2x12T B5	3x12T B2	3x12T B5	4x12T B3	4x12T B5
Surface area		**m^2**	39,9	98,7	49,3	98,7	197,4	98,7	197,4	148,0	296,1	263,2	394,7
Circuit volume		**dm^3**	3,6	8,8	4,4	8,8	17,7	8,8	17,7	13,2	26,5	23,6	35,3
Turbine		**Nb**	1	1	1	1	2	2	2	3	3	4	4
	230V/1	**W**	670	670	-	-	670	-	-	-	-	-	-
	50 Hz	**A max**	2,9	2,9	-	-	2,9	-	-	-	-	-	-
	230-400V/3	**W**	-	-	3300	3300	-	3300	3300	3300	3300	3300	3300
	50 Hz	**A max**	-	-	5,8	5,8	-	5,8	5,8	5,8	5,8	5,8	5,8
M (4)			3	6	4	6	11	8	11	11	16	22	22
Inlet		**Ø**	7/8"	1"1/8	1"1/8	1"1/8	1"3/8	1"3/8	1"5/8	1"5/8	1"5/8	1"5/8	1"5/8
Outlet		**Ø**	5/8"	7/8"	7/8"	7/8"	1"1/8	1"1/8	1"3/8	1"3/8	1"3/8	1"3/8	1"3/8
Net weight		**kg**	85	99	104	121	180	189	222	276	324	380	423

(1) DT = difference between the ambient temperature and the condensing temperature considered to be equal to the pressure equivalent at the condenser inlet.
(2) Additional available pressure in pascals.
(3) Sound pressure in dB(A) measured at 10 m, parallelepiped measuring surface, in a free field over a reflecting plane, given as an indication only.
(4) Multi-circuit condensers: M = maximum number of circuits.

CCT | Vertical airflow direction



CCT | Horizontal airflow direction



CCT

	CCT ...	1x10M A3	1x10M B5	1x12T B2	1x12T B5	2x10M B5	2x12T B2	2x12T B5	3x12T B2	3x12T B5	4x12T B3	4x12T B5
A	**mm**	830	1150	1150	1150	2110	2110	2110	3070	3070	4030	4030
B	**mm**	695	795	795	795	795	795	795	795	795	795	795
C	**mm**	835	835	835	835	835	835	835	835	835	835	835
D	**mm**	400	400	400	400	400	400	400	400	400	400	400
E	**mm**	1235	1235	1235	1235	1235	1235	1235	1235	1235	1235	1235
F	**mm**	1500	1600	1600	1600	1600	1600	1600	-	-	-	-
G	**mm**	1530	1630	1630	1630	1630	1630	1630	-	-	-	-
H	**mm**	725	825	825	825	825	825	825	825	825	825	825
I (V)	**mm**	120	173	170	170	173	170	170	170	170	170	170
I (H)	**mm**	94	97	94	94	97	94	94	94	94	94	94
J	**mm**	290	290	342	342	290	342	342	342	342	342	342
K	**mm**	331	331	395	395	331	395	395	395	395	395	395
L	**mm**	250	410	377	377	410	377	377	377	377	377	377
W	**mm**	725	825	825	825	825	825	825	825	825	825	825
X	**mm**	735	1055	1055	1055	2015	2015	2015	2975	2975	3935	3935
Y	**mm**	900	900	900	900	900	900	900	900	900	900	900
Z	**mm**	1575	1675	1675	1675	1675	1675	1675	-	-	-	-

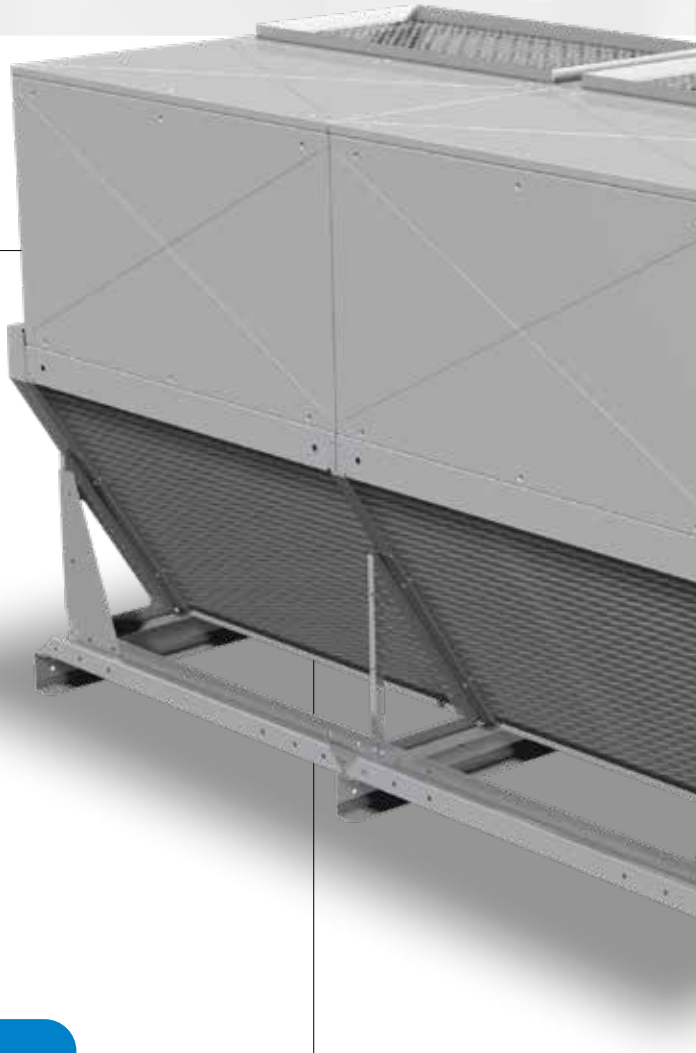
CCV

Centrifugal fan condenser
Commercial range

HFC

60 - 290 kW

Fully removable for **easy installation** in cramped or hard-to-reach areas.
Easy access to all components for **easy maintenance**.
Improved energy efficiency and **low noise levels** through the integration of EC motors.



CASING

Robust, made of galvanized sheet steel.
Elbows and manifolds protected by removable sheet metal.
Interchangeable sheet metal panels, 5 possible air outlet combinations.

OPTIONS	
PEI	White paint.
IPH	Noise insulation.
ECB	Wooden crate packaging.

Select your coil treatment to extend your unit cooler's lifespan! Contact us.

COILS

The condensers in the CCV range are equipped with two high-performance coils arranged in a "V", made from profiled aluminium fins with 2.12 mm spacing, set on copper tubes arranged in staggered rows, optimizing the exchange coefficient.
Two coils, but only one inlet and one outlet.
Coil accessible by simply removing two removable panels for easy cleaning.

OPTIONS	
MCI	Multi-circuit.

VENTILATION

Centrifugal motor fans: pressure available up to 200 pascal, adapted performance.
Three-phase, Ø 630 mm, IP 54, 380-480V/3/50Hz, 1,200 rpm.
Electronically commutated (EC) motor fans as standard.
Electrical connections made in the factory, in an easily accessible box.
Each turbine is separated by a partition wall to prevent air bypassing.

OPTIONS	
VPS	Blower louvre shutters (kit to install).
CSC	Signal comparator (multi-circuit coil).
PT1	Condensing pressure sensor (voltage 0-10V) (kit to install).

Electronically commutated (EC) motors provide optimum regulation of condensing pressure for improved energy efficiency and reduced noise levels.

PRODUCT ADVANTAGES

Easy handling: the structure of the frame makes it easier to use a pallet truck for transport (1).
Can be fully disassembled in 3 parts, the elements of the CCV allow passage through a standard 80 cm door.
Compact device, 2 "V" shaped coils optimizing the space in the machine room.
Possibility of installing the condenser on a refrigeration unit for a minimal footprint.
Quick commissioning: one inlet/outlet manifold for the 2 coils requiring only one connection, either on the left or on the right (2).

CCV 1(A) V1(B)

(A) Number of fans
(B) Air direction

> **The CCV is available with HFCs. For more information, please consult our software.**

CCV ... - 1,200 rpm*

2.12 mm

0 Pa (2)

CONDITIONS			CCV 1			CCV 2			CCV 3			CCV 4		
			V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3
DT = 15K (1)	**R449A**	**kW**	**69,3**	**73,2**	**76,0**	**138,0**	**146,4**	**151,9**	**206,1**	**218,1**	**227,3**	**277,7**	**293,8**	**302,9**
Power consumption		**kW**	2,55	2,37	2,23	5,10	4,74	4,46	7,65	7,11	6,69	10,20	9,48	8,92
Airflow		**m³/h**	13800	14850	15700	27600	29700	31400	41400	44550	47100	55200	59400	62800
Acoustics	**Lp** (3)	**dB(A)**	55	56	57	57	58	59	59	60	61	60	61	62
	Lw	**dB(A)**	86	87	88	89	90	91	91	92	93	92	93	94

50 Pa (2)

CONDITIONS			CCV 1			CCV 2			CCV 3			CCV 4		
			V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3
DT = 15K (1)	**R449A**	**kW**	**68,3**	**71,9**	**74,8**	**136,6**	**144,1**	**148,3**	**204,0**	**216,0**	**223,3**	**274,2**	**286,4**	**300,4**
Power consumption		**kW**	2,59	2,43	2,29	5,18	4,86	4,58	7,77	7,29	6,87	10,36	9,72	9,16
Airflow		**m³/h**	13500	14500	15350	27000	29000	30700	40500	43500	46050	54000	58000	61400
Acoustics	**Lp** (3)	**dB(A)**	54	56	57	56	58	59	58	60	61	59	61	62
	Lw	**dB(A)**	85	87	88	88	90	91	90	92	93	91	93	94

100 Pa (2)

CONDITIONS			CCV 1			CCV 2			CCV 3			CCV 4		
			V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3
DT = 15K (1)	**R449A**	**kW**	**67,1**	**70,3**	**73,5**	**134,3**	**139,5**	**147,1**	**201,0**	**212,5**	**219,2**	**267,1**	**281,6**	**295,3**
Power consumption		**kW**	2,65	2,49	2,35	5,30	4,98	4,70	7,95	7,47	7,05	10,60	9,96	9,40
Airflow		**m³/h**	13150	14150	14950	26300	28300	29900	39450	42450	44850	52600	56600	59800
Acoustics	**Lp** (3)	**dB(A)**	54	56	56	56	58	58	58	60	60	59	61	61
	Lw	**dB(A)**	85	87	87	88	90	90	90	92	92	91	93	93

150 Pa (2)

CONDITIONS			CCV 1			CCV 2			CCV 3			CCV 4		
			V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3
DT = 15K (1)	**R449A**	**kW**	**64,9**	**69,5**	**71,9**	**130,4**	**138,5**	**144,4**	**197,4**	**206,9**	**216,4**	**262,7**	**279,5**	**286,9**
Power consumption		**kW**	2,71	2,53	2,42	5,42	5,06	4,84	8,13	7,59	7,26	10,84	10,12	9,68
Airflow		**m³/h**	12800	13900	14550	25600	27800	29100	38400	41700	43650	51200	55600	58200
Acoustics	**Lp** (3)	**dB(A)**	53	55	56	55	57	58	57	59	60	58	60	61
	Lw	**dB(A)**	84	86	87	87	89	90	89	91	92	90	92	93

200 Pa (2)

CONDITIONS			CCV 1			CCV 2			CCV 3			CCV 4		
			V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3
DT = 15K (1)	**R449A**	**kW**	**63,7**	**68,6**	**70,3**	**127,4**	**137,0**	**139,5**	**190,0**	**204,8**	**212,5**	**256,6**	**275,9**	**281,6**
Power consumption		**kW**	2,78	2,58	2,49	5,56	5,16	4,98	8,34	7,74	7,47	11,12	10,32	9,96
Airflow		**m³/h**	12350	13600	14150	24700	27200	28300	37050	40800	42450	49400	54400	56600
Acoustics	**Lp** (3)	**dB(A)**	53	54	56	55	56	58	57	58	60	58	59	61
	Lw	**dB(A)**	84	85	87	87	88	90	89	90	92	90	91	93

* Technical specifications given at full speed (1,200 rpm)

(1) DT = difference between the ambient temperature and the condensing temperature considered to be equal to the pressure equivalent at the condenser inlet.
(2) Additional available pressure in pascals.
(3) Sound pressure in dB(A) measured at 10 m, parallelepiped measuring surface, in a free field over a reflecting plane, given as an indication only.

CCV 1(A) V1(B)

(A) Number of fans
(B) Air direction

> **The CCV is available with HFCs. For more information, please consult our software.**

CCV ... - 1,200 rpm*

2.12 mm

			CCV 1			CCV 2			CCV 3			CCV 4		
			V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3
Surface area		**m^2**	206	206	206	411	411	411	617	617	617	822	822	822
Circuit volume		**dm^3**	18,4	18,4	18,4	36,8	36,8	36,8	55,2	55,2	55,2	73,6	73,6	73,6
		Nb	1	1	1	2	2	2	3	3	3	4	4	4
Turbine	380-480V/3	**W max**	2900	2900	2900	5800	5800	5800	8700	8700	8700	11600	11600	11600
	3/50-60 Hz	**A max**	4,6	4,6	4,6	9,2	9,2	9,2	13,8	13,8	13,8	18,4	18,4	18,4
Inlet		**Ø**	1"1/8	1"1/8	1"1/8	1"3/8	1"3/8	1"3/8	1"5/8	1"5/8	1"5/8	2"1/8	2"1/8	2"1/8
Outlet		**Ø**	1"1/8	1"1/8	1"1/8	1"3/8	1"3/8	1"3/8	1"5/8	1"5/8	1"5/8	2"1/8	2"1/8	2"1/8
Net weight		**kg**	270	270	270	450	450	450	650	650	650	830	830	830

* Technical specifications given at full speed (1,200 rpm)

Noise level**

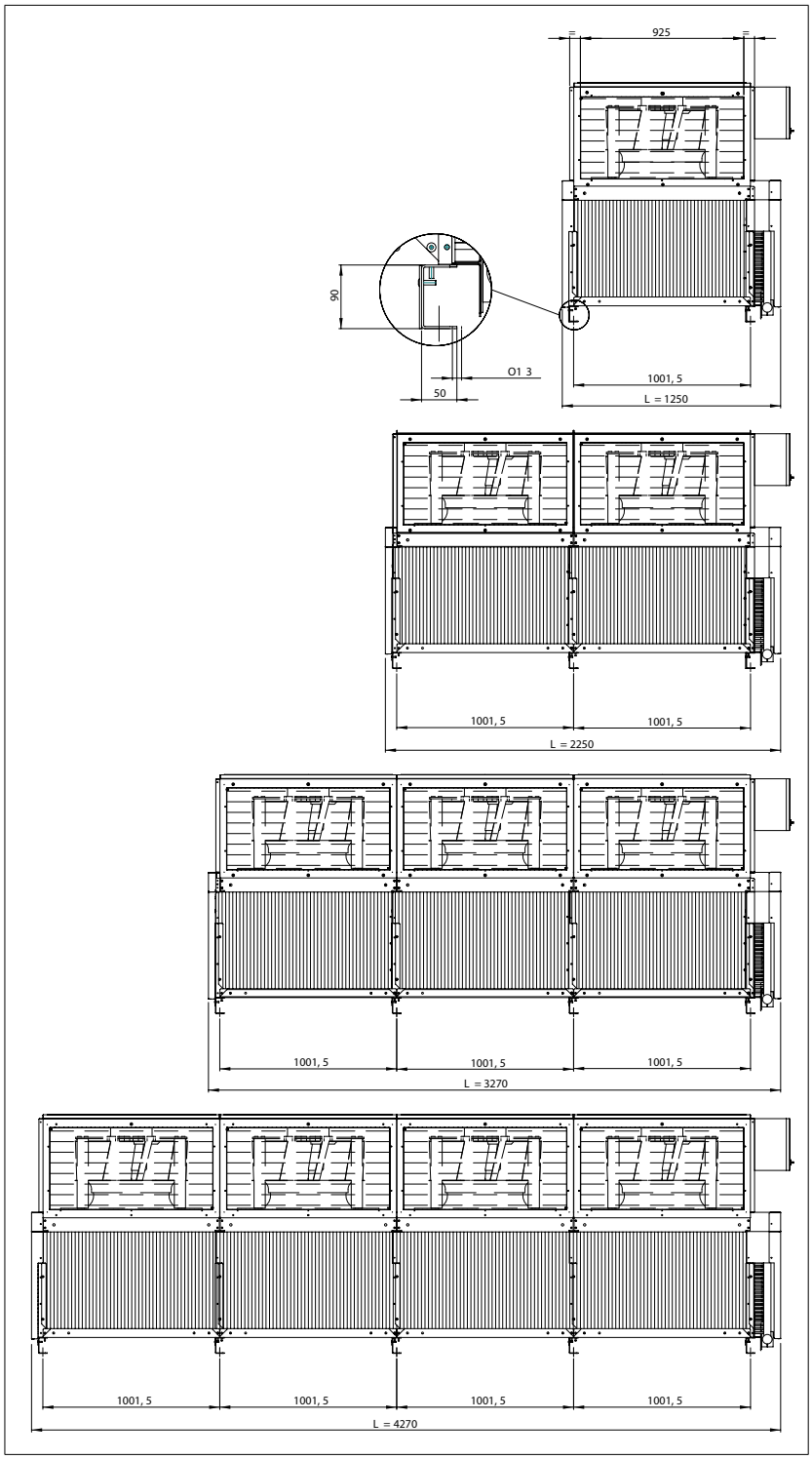
CCV ... - 1,200/900/600 rpm

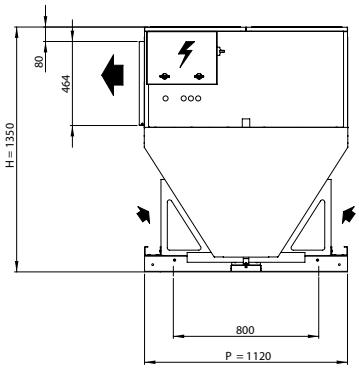
2.12 mm

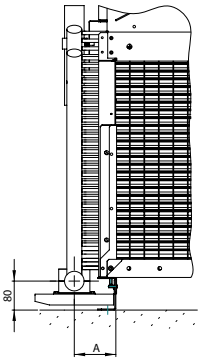
			CCV 1			CCV 2			CCV 3			CCV 4		
			V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3	V1 / V4	V1 + V4	V2 / V3
			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Speed of rotation	**100 %**	1,200 rpm	54	55	56	57	58	59	59	60	61	60	61	62
	75 %	900 rpm	47	48	49	50	51	52	52	53	54	53	54	55
	50 %	600 rpm	37	38	39	40	41	42	42	43	44	43	44	45

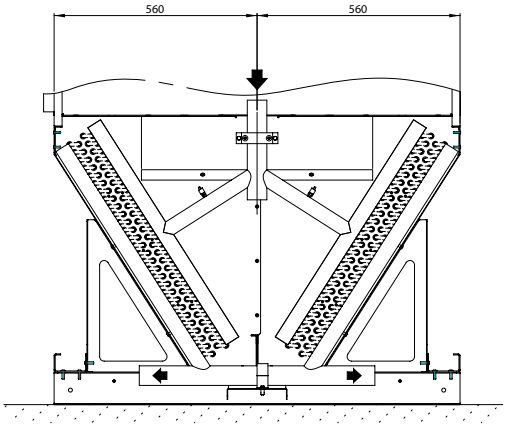
** Noise level given for different rotation speeds as an indication only (for 0 Pa)

CCV

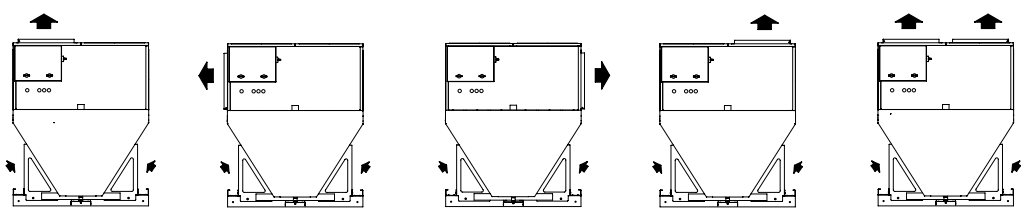








CCV | Airflow direction



MONOTOP

Compact ceiling refrigeration monoblock

R290

MT **1400** - **2800** W
LT **1050** - **2100** W

PED 2014/68/UE

"Plug & Play" unit, refrigerant pre-charged (< 150g) and factory pre-set for **easy installation**.
Safe product: compliance with the EN 378/2017 standard.
"Ceiling" type design that allows for **optimal air distribution** and **storage area optimization**.
The integration of a thermostatic expansion valve and hot gas defrosting of the coil and the condensate pan helps to **save energy**.

COMPRESSOR

R290 Hermetic compressor.

REFRIGERATION CIRCUIT

Thermostatic expansion valve.
Welded LP and HP pressure switches.
R290 Safety valve.
Filter dryer.
Condensation control by pressure switch.
Condenser clogged alert sensor.

REMOTE ELECTRONIC CONTROLLER

1. Fan indicator light.
2. Defrost indicator light.
3. Rapid cooling mode indicator light.
4. Alarm indicator light.
5. Max. temp. and rapid cooling key.
6. Min. temp. key.
7. Compressor indicator light.
8. Digital screen.
9. Defrost key.
10. Room lighting key.
11. On/off button.
12. Setpoint temp. and parameter confirmation key.

DEFROST

Hot gas defrosting of coil and drain pan.
Evaporation of defrost water.

OTHER COMPONENTS

Voltage protector.
Cable with plug (2.5 m), light and door microswitch.
Waterproof ceiling light.
Multifunction electronic control with remote control (5 m).
Evaporation room injected with foam, fully hermetic.
Extraction fan to avoid the possibility of gas stagnation.
Sealed coil connectors, contactors and relays.

MONOTO(A)P(B) 07(C) P(D)

(A) **MONOTO** = Compact ceiling refrigeration monoblock
(B) **P** = positive range - **N** = negative range
(C) Model
(D) **P** = R290

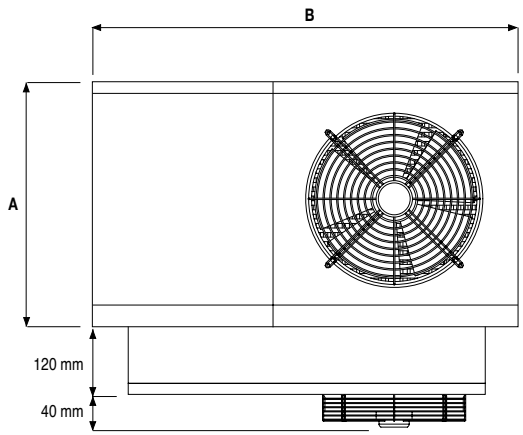
			MONOTOP		MONOTON	
			07P	13P	14P	26P
Cooling capacity (1)		W	1400	2800	1050	2100
Hermetic compressor		CV	3/4	3/4 (2)	1 1/4	1 1/4 (2)
	Power consumption	kW	0,5	1,0	0,7	1,4
Refrigerant charge (per circuit)		g	< 150	< 150	< 150	< 150
Standard room volume (2)		m^3	12	37	7	27
Room volume without precise data (3)		m^3	9	30	5	19
Airflow	Condenser	m^3/h	1100	2270	1100	2270
	Unit cooler	m^3/h	1100	3300	1100	3300
Max. input current	230V/1/50Hz (4)	A	5,1	10,5	5,7	11,8
Dimensions	**A**	mm	400	500	400	500
	B	mm	695	950	695	950
	C	mm	975	1180	975	1180
Panel cut-out	**Height**	mm	615	865	615	865
	Width	mm	405	405	405	405
Net weight		kg	70	125	90	140

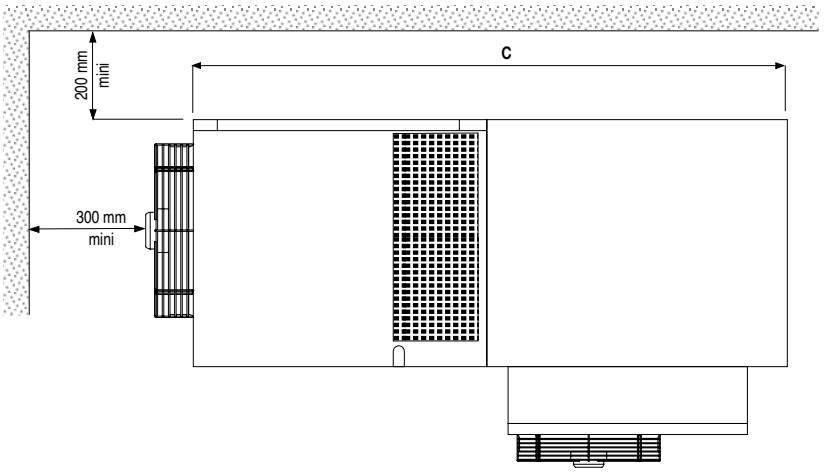
(1) Cooling capacity: 10K superheating - 3K subcooling
MONOTOP: room temperature 0 °C / outside temperature +32 °C - **MONOTON**: room temperature -20 °C / outside temperature +32 °C

(2) Standard: Insulation 100 mm for refrigerated and 120 mm for frozen (including floor); load density 250 kg/m³; movement of goods 10%; ambient temperature 32 °C; maximum temperature of incoming goods 25 °C for refrigerated and -15 °C for frozen;
specific heat of the goods 3.2 kJ/kg-K frozen; compressor operating hours 18 h/day.

(3) Recommended volume for cases where there is no starting data for the calculation, when for example conditions are more extreme than standard: low thermal insulation capacity of the room, uninsulated floor, high outside temperature, destination and use of the room in non-standard conditions, etc.

Outside temperature limit: 43 °C. If the temperature is higher, contact us. With fruit and vegetables, multiply the power of the unit by 0.65; or contact us.





eCO2Boost XS

CO_2 split system

MT **1** - **10** kW
LT **1** - **6** kW

PED 2014/68/

Easy installation: with its compact design, the condensing unit is easier to handle, and integration of an electronic expansion valve makes installation easier. Coupled to the 80 bar unit coolers, you will not need a safety valve.

Lower energy bills: the perfect match between unit and cooler ensures operation adapted to the refrigeration demand and integration of a Scroll inverter compressor allows an optimal cooling capacity.

Sustainable investment: choosing R744 (CO2) as the refrigerant will guarantee your customer lower energy consumption and exempt them from paying tax on refrigerants while protecting the environment.

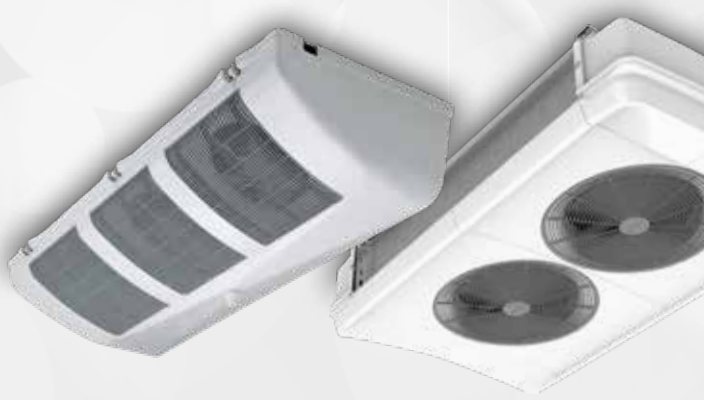
COMPRESSOR

Scroll inverter compressor for optimum cooling capacity and quiet operation.

GAS COOLER

Variable speed on the condensing fan.
Microchannel technology.

When opting to purchase an eCO2Boost XS system (unit + unit cooler), you get the support of a single provider for your entire installation and the guarantee that each component of the package will be available.



REGULATION

Integrated electronic cold loop expansion valve
Dry contact control of the condensing unit offers compatibility with all regulation systems available on the market.
Modbus communication as standard.

CASING

Robust, made of gray pre-painted galvanized sheet steel.

FAN

The high-end motor fans allow nearly silent operation of the condensing unit, giving residential neighbours peace and quiet:

eCO2Boost XS 1	**50** dB(A)*
eCO2Boost XS 2/3	**53** dB(A)*

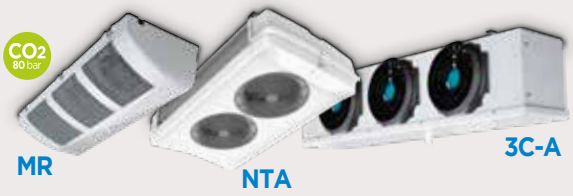
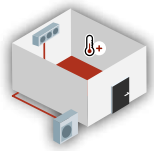
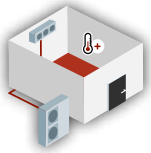
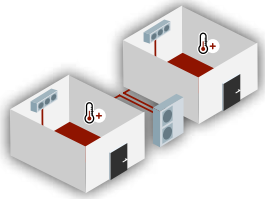
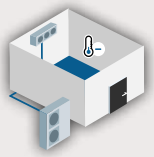
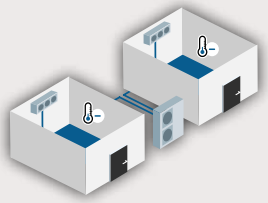
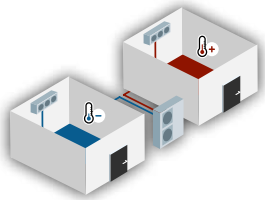
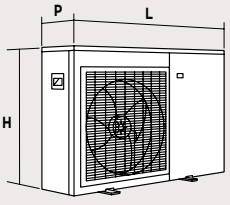
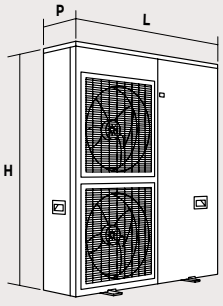
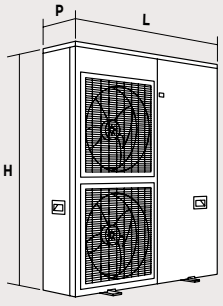
** Lp at 1 meter - Compressor frequency: 70 Hz*

With the 80 bar unit coolers, you will not need a safety valve.

UNIT COOLERS

The eCO2Boost XS condensing unit can, depending on the needs of your application, be coupled with a ceiling (MR), dual-discharge (NTA), or cubic (3C-A) unit cooler, 80 bar.
Factory-assembled with expansion valve and solenoid valve.

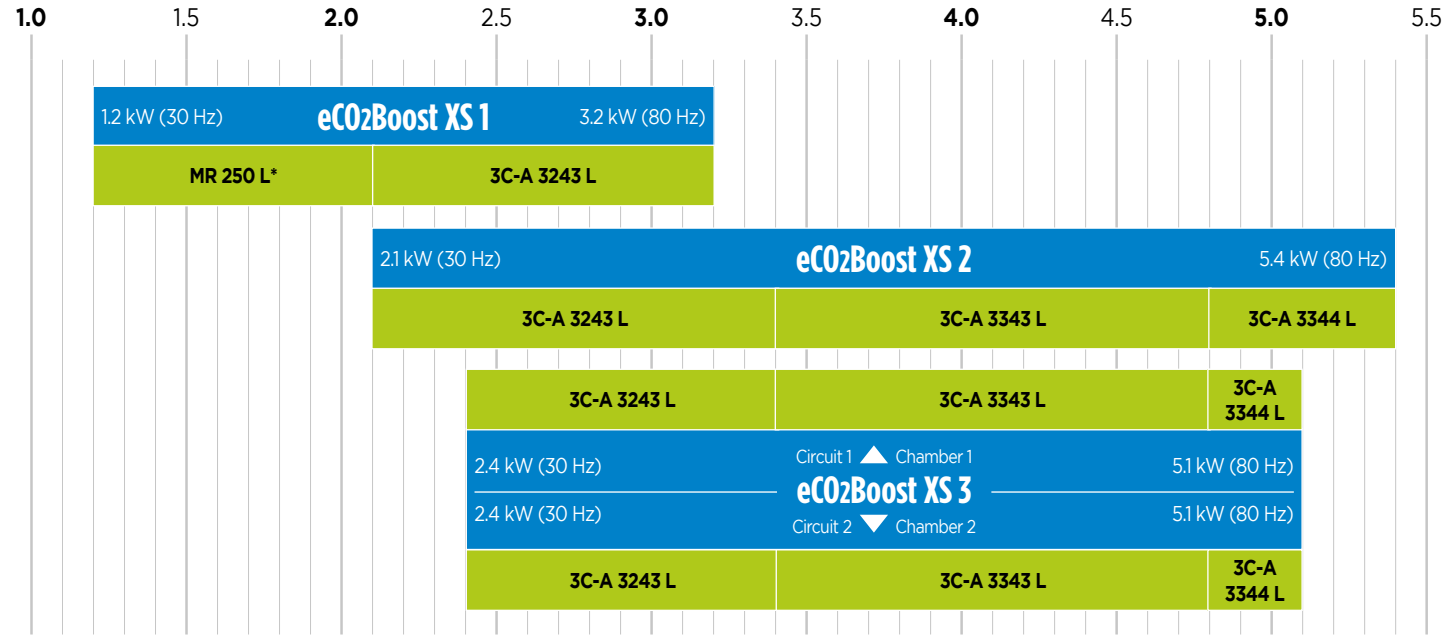
For more details, please refer to our MR, NTA and 3C-A unit cooler documentation.

	eCO2Boost XS 1 1 circuit	**eCO2Boost XS 2** 1 circuit	**eCO2Boost XS 3** 2 circuits
CO2 UNIT COOLERS (80 bar) 1 unit cooler / circuit			
MT cold chambers			
LT cold chambers	-		
MT cold chamber + **LT** cold chamber	-	-	
			
Dimensions **H** x **L** x **D**	**670** x **950** x **285** mm	**1300** x **1105** x **285** mm	
MT capacity	**1** - **10** kW		
LT capacity	-	**1** - **6** kW	
Compressor **Scroll Inverter**	**1** compressor	**2** compressors	**3** compressors
Noise level	**50** dB(A)*	**53** dB(A)*	
Power supply	230 V/1/50 Hz o 60 Hz	400 V/3/50 Hz o 60 Hz	
Weight	**58** kg	**113** kg	**141** kg

** Lp at 1 meter - Compressor frequency: 70 Hz*

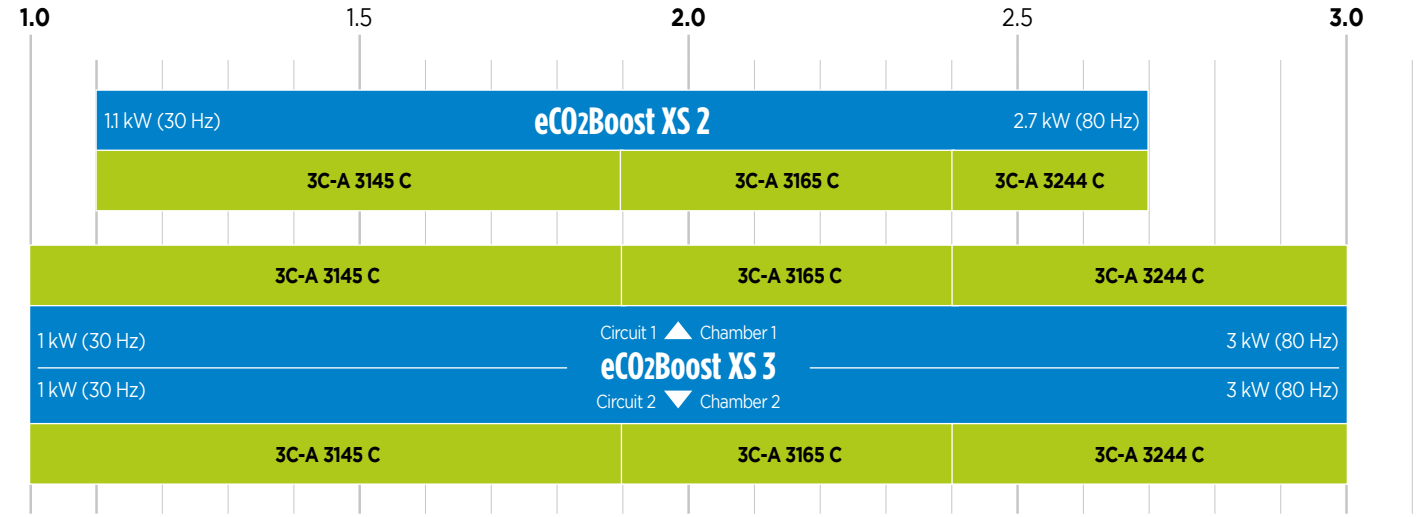
SAMPLE CONFIGURATIONS UNIT/UNIT COOLER FOR MT CHAMBER

Conditions SC2 | 0 °C - DT = 8K | -8 °C / 32 °C



SAMPLE CONFIGURATIONS UNIT/UNIT COOLER FOR LT CHAMBER

Conditions SC3 | -18 °C - DT = 7K | -25 °C / 32 °C



NOTES

VANGUARD

Condensing unit

HFC

MT **3.4** - **8.5** kW

LT **1.7** - **2.4** kW

DESP 2014/68/UE

Quick installation: complete electrical supply pre-wired in the factory

Easy maintenance: All the sheet metal elements are easy to remove and allow total accessibility to all the unit's components.

Condensing unit **adaptable** to the needs of the application with 18 existing models (13 for high temperature applications, 5 for low temperature applications)

The VANGUARD condensing unit can be coupled to a unit cooler, according to your needs, to form a split system known as the SPLIT VANGUARD

UNIT COOLER

The Vanguard can be coupled with ceiling unit coolers (MR or MH), the dual-discharge unit cooler (NTA), or the cubic unit cooler (3C-A).
The maximum distance between the Vanguard and the unit cooler is 20 m.
In the case of the SPLIT VANGUARD, the unit cooler is factory-assembled with expansion valve and solenoid valve.

For more details on our unit coolers, please refer to the MR, MH, NTA and 3C-A documentations.

Responsible product; its refrigerant charge is reduced by 30% and its coil is 100% recyclable

Sturdy and silent, it is designed to operate in high outdoor temperatures.

1 CASING

White pre-painted sheet steel; intended for outdoor use.
For size TB, front and rear compressor compartment panels made from black pre-painted sheet steel.

2 COMPRESSOR

Two compressor technologies:
- Hermetic piston compressors. Up to 1 1/2 HP in positive and 1 1/4 HP in negative.
- Scroll compressors. From 2 HP in positive and 2 1/2 HP in negative.
For size TB, noise-insulated compressor compartment to reduce the unit's noise level.

3 CONDENSER

Coil technology with all-aluminium microchannels, generously dimensioned to operate in high ambient temperatures (+43 °C).
Limited leakage risk: coil(s) soldered in a single operation and tested with helium.
Coil more environmentally friendly: it contains less refrigerant charge and is 100% recyclable.
Quieter, each model is controlled by a variable voltage regulator that helps to reduce the noise level, especially during the night.
Motor fans class F, IP55.

4 ELECTRICAL BOX

ABS electrical box, IP66, containing the components for protection and control of the unit:
- Compressor overload and overvoltage protection.
- Fan overvoltage protection.
- Terminals for supplying control and cooling stations.
- Disconnect switch.
- Fault relay for three-phase models.

5 OTHER COMPONENTS

Variable speed drive: all models have a variable speed drive to ensure optimum regulation of the condensing pressure.
Liquid receiver (2l., 3l., 5l.) with shut-off valve at the receiver outlet.
Liquid line with valve, filter dryer and hygroscopic indicator.
LP regulator pressure switch and HP safety pressure switch.

REGULATION

Electronic control
Air or electric defrost management
Lighting management
Display and referral of alarms
Additional programmable contact (door opening, entrapment safety, etc.)
Integrated forced operation for rapid cooling or blast freezing.

The SPLIT VANGUARD split system consists of the VANGUARD condensing unit, a unit cooler and a control system. Please contact us to choose the right combination of unit/ cooler for the refrigerant and the application.

VG H(A)P(B)012(C)

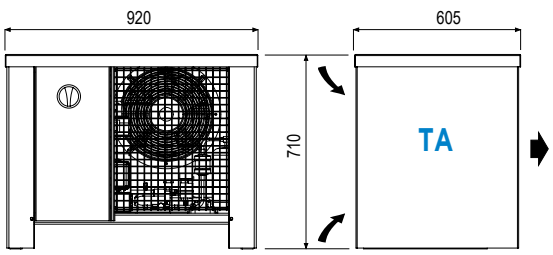
(A) **H** = hermetic compressor **SC** = Scroll compressor
(B) **P** = positive range **N** = negative range
(C) Model

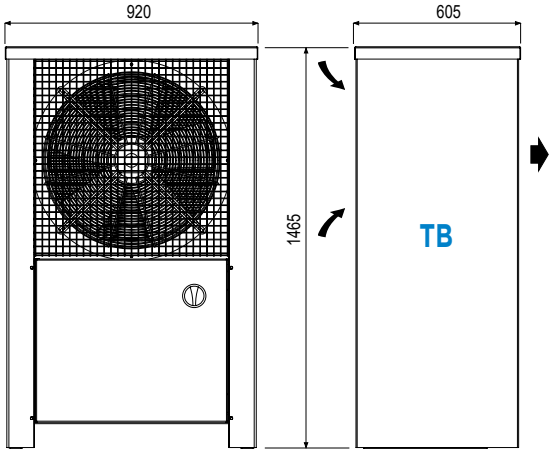
> **The VANGUARD is available with HFCs. For more information, please consult our software.**

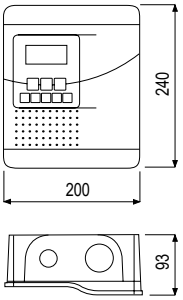
VANGUARD — Positive range

		VG ...	HP 012	HP 014	HP 017	HP 020	HP 024	HP 030	HP 038	ScP 043	ScP 050	ScP 065	ScP 075	ScP 086	ScP 103
Power (1)	R449A	kW	*Contact us*							3,40	3,90	5,20	6,00	7,00	8,50
Power consumption (1)	R449A	kW	*Contact us*							1,63	1,95	2,40	2,80	3,20	4,10
Compressor power		Cv	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6
Voltage		50Hz	230V/1	230V/1	230V/1	230V/1	230V/1	230V/1	230V/1	400V/3	400V/3	400V/3	400V/3	400V/3	400V/3
Current drawn		A max.	5,0	5,6	6,6	6,0	6,8	8,7	12,9	4,6	5,6	9,8	10,7	12,5	14,5
Acoustics (2)	Lp at 10 m	dB(A)	38	38	39	39	39	39	36	36	36	41	41	41	41
Ventilation - 230V/1/50Hz		mm	1x300	1x300	1x300	1x300	1x300	1x300	1x400	1x400	1x400	1x560	1x560	1x560	1x560
Liquid capacity		l.	2	2	2	2	2	2	2	3	3	3	5	5	5
Connections	Suction	Ø	3/8"	1/2"	1/2"	1/2"	1/2"	5/8"	5/8"	5/8"	7/8"	7/8"	7/8"	7/8"	1"1/8
	Liquid	Ø	1/4"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"	1/2"	1/2"
Casing	Size		TA	TA	TA	TA	TA	TB	TB	TB	TB	TB	TB	TB	TB
Net weight		kg	100	100	100	100	100	150	150	150	160	170	170	180	180

(1) Evaporating temperature **-10 °C** / Ambient temperature **+32 °C** - Superheat: 10K - Subcool: 3K.
(2) Sound pressure in dB(A) measured at 10 m, in a free field over a reflecting plane, in accordance with standard EN 13487 (parallelepiped reference surface).







VG H(A)P(B)012(C)

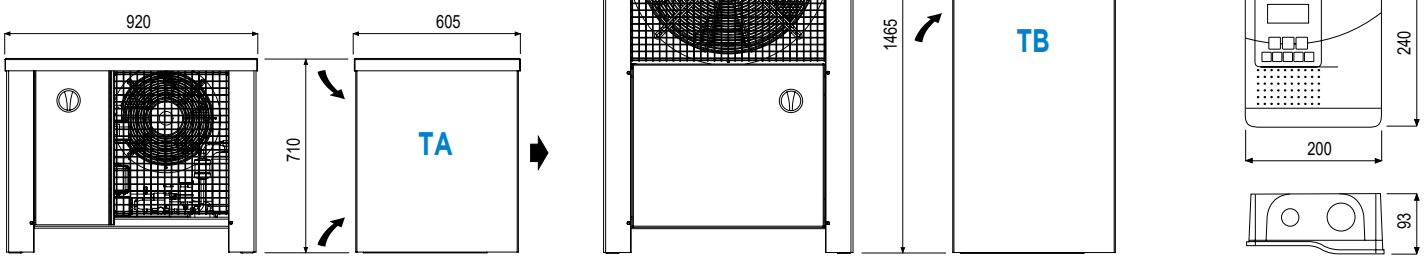
(A) **H** = hermetic compressor **SC** = Scroll compressor
(B) **P** = positive range **N** = negative range
(C) Model

> **The VANGUARD is available with HFCs. For more information, please consult our software.**

VANGUARD — Negative range

		VG ...	HN 008	HN 013	ScN 022	ScN 027	ScN 031
Power (1)	R449A	kW	*Contact us*		1,70	2,10 (3)	2,40 (3)
Power consumption (1)	R449A	kW	*Contact us*		1,90	2,30	2,60
Compressor power		Cv	3/4	1 1/4	2 1/2	3	4
Voltage		50Hz	230V/1	230V/1	400V/3	400V/3	400V/3
Current drawn		A max.	5,0	7,9	6,1	6,9	7,1
Acoustics (2)	Lp at 10 m	dB(A)	38	39	39	39	40
Ventilation - 230V/1/50Hz		mm	1x300	1x300	1x400	1x400	1x400
Liquid capacity		l.	2	2	2	5	5
Connections	Suction	Ø	1/2"	1/2"	7/8"	7/8"	7/8"
	Liquid	Ø	3/8"	3/8"	3/8"	3/8"	3/8"
Casing	Size		TA	TA	TB	TB	TB
Net weight		kg	100	100	150	160	170

(1) Evaporating temperature **-35 °C** / Ambient temperature **+32 °C** - Superheat: 10K - Subcool: 3K.
(2) Sound pressure in dB(A) measured at 10 m, in a free field over a reflecting plane, in accordance with standard EN 13487 (parallelepiped reference surface).
(3) Product only available in split system.



VG H(A)P(B)012(C) MR 100L(D)

(A) **H** = hermetic compressor **SC** = Scroll compressor
(B) **P** = positive range **N** = negative range
(C) Model
(D) Split system **SPLIT VANGUARD** > unit coolers:
MR (ceiling) **MH** (ceiling) **NTA** (dual-discharge) **3CA** (cubic)

The SPLIT VANGUARD is available with HFCs. Please contact us to choose the right combination of unit/cooler for the refrigerant and the application.

SPLIT VANGUARD — ti = +8 °C - DT1 = 10K

VG ...		HP 012 MR 100L	HP 014 MR 110R	HP 017 MR 135R	HP 020 MR 160R	HP 024 MR 180R	HP 030 MR 210R	HP 038 NTA M1R 1-AC GV	ScP 043 NTA M3R 2-AC PV	ScP 050 NTA M3R 2-AC GV	ScP 065 NTA M4R 2-AC GV	ScP 075 NTA M5R 3-AC GV	ScP 086 NTA M6R 3-AC PV	ScP 103 NTA M6R 3-AC GV
Power (1)	kW	1,33	1,57	1,88	2,21	2,57	3,34	4,24	4,71	5,57	7,30	8,30	9,62	11,44
Power consumption (1)	kW	0,75	0,87	1,07	1,21	1,32	1,59	2,19	1,94	2,42	2,95	3,38	3,86	5,00
Room volume (indicative)	m^3	12	14	17	20	24	32	42	48	58	81	96	116	146

SPLIT VANGUARD — ti = +6 °C - DT1 = 6K

VG ...		HP 012 MR 160R	HP 014 MR 180R	HP 017 MR 210R	HP 020 MR 270R	HP 024 MH 320R	HP 030 MH 380R	HP 038 3CA 3245R	ScP 043 3CA 3343R	ScP 050 3CA 3344R	ScP 065 3CA 3354R	ScP 075 3CA 3444R	ScP 086 3CA 4263R	ScP 103 3CA 4264R
Power (1)	kW	1,43	1,69	2,03	2,37	2,75	3,59	4,53	5,04	5,94	7,83	8,90	10,29	12,21
Power consumption (1)	kW	0,81	0,92	1,13	1,28	1,48	1,75	2,53	2,16	2,69	3,21	3,66	4,40	5,49
Room volume (indicative)	m^3	17	20	24	28	33	44	56	63	75	102	117	138	169

SPLIT VANGUARD — ti = +2 °C - DT1 = 8K

VG ...		HP 012 MR 110R	HP 014 MR 135R	HP 017 MR 160R	HP 020 MR 180R	HP 024 MR 210R	HP 030 MR 270R	HP 038 MH 380R	ScP 043 3CA 3243R	ScP 050 3CA 3245R	ScP 065 3CA 3343R	ScP 075 3CA 3344R	ScP 086 3CA 3354R	ScP 103 3CA 3444R
Power (1)	kW	1,13	1,35	1,62	1,91	2,22	2,88	3,69	4,08	4,86	6,33	7,19	8,34	9,98
Power consumption (1)	kW	0,72	0,83	1,05	1,15	1,25	1,54	2,19	2,03	2,54	3,17	3,61	4,04	5,05
Room volume (indicative)	m^3	10	12	14	17	19	25	33	36	43	57	65	77	93

SPLIT VANGUARD — ti = 0 °C - DT1 = 8K

VG ...		HP 012 MR 110R	HP 014 MR 135R	HP 017 MR 160R	HP 020 MR 180R	HP 024 MR 210R	HP 030 MR 270R	HP 038 3CA 3165R	ScP 043 3CA 3243R	ScP 050 3CA 3245R	ScP 065 3CA 3343R	ScP 075 3CA 3344R	ScP 086 3CA 3354R	ScP 103 3CA 3444R
Power (1)	kW	1,05	1,24	1,50	1,77	2,05	2,67	3,43	3,78	4,53	5,87	6,68	7,75	9,31
Power consumption (1)	kW	0,71	0,85	1,03	1,12	1,25	1,57	2,24	2,15	2,63	3,16	3,59	4,02	5,28
Room volume (indicative)	m^3	8	9	12	14	16	21	28	31	38	50	58	69	86

(1) Ambient temperature **+32 °C** - Superheat: 10K - Subcool: 3K.

All the information on the unit coolers can be found in the **MR**, **MH**, **NTA** and **3C-A** documentation

VG H(A)N(B)008(C) MRE 120C(D)

(A) **H** = hermetic compressor **SC** = Scroll compressor
(B) **P** = positive range **N** = negative range
(C) Model
(D) Split system **SPLIT VANGUARD** > unit coolers:
MR (ceiling) **MH** (ceiling) **NTA** (dual-discharge) **3CA** (cubic)

The SPLIT VANGUARD is available with HFCs. Please contact us to choose the right combination of unit/cooler for the refrigerant and the application.

SPLIT VANGUARD — ti = -20 °C - DT1 = 7K

VG ...		HN 008 MRE 120C	HN 013 MRE 190C	ScN 022 3CA 3243C	ScN 027 3CA 3244C	ScN 031 3CA 3343C
Power (1)	kW	0,82	1,44	2,52	3,08	3,48
Power consumption (1)	kW	0,84	1,39	2,35	2,80	3,20
Room volume (indicative)	m^3	9	18	36	46	54

SPLIT VANGUARD — ti = -25 °C - DT1 = 6K

VG ...		HN 008 MRE 120C	HN 013 MRE 190C	ScN 022 3CA 3243C	ScN 027 3CA 3244C	ScN 031 3CA 3343C
Power (1)	kW	0,67	1,18	2,12	2,61	2,93
Power consumption (1)	kW	0,77	1,27	2,30	2,73	3,09
Room volume (indicative)	m^3	8	14	29	37	43

(1) Ambient temperature **+32 °C** - Superheat: 10K - Subcool: 3K.

All the information on the unit coolers can be found in the **MR**, **MH**, **NTA** and **3C-A** documentation

NOTES

MAXI

Condensing unit

HFC

MT **3** - **16.6** kW

LT **1.5** - **5.7** kW

PED 2014/68/

Easy installation: complete electrical supply pre-wired in the factory.

Easy maintenance: accessibility to all components.

Versatility: several versions are available to meet your requirements, SH (semi-hermetic) or SC (scroll) compressor;
ALN condenser (low noise level) or AS (oversized condenser).

COMPRESSOR

Two technologies to choose from: semi-hermetic or Scroll compressor.
Multi-refrigerant compressor.

OPTION	
CAC	Additional housing belt (Scroll version).
VFA	Valve + filter on suction.

CASING

Robust, made of white pre-painted sheet metal.

The MAXI condensing unit can be coupled to a unit cooler, according to your needs, to form a split system called the MAXIBOREAL

UNIT COOLER

The MAXI condensing unit can, depending on the needs of your application, be coupled with a dual-discharge unit cooler (NTA) or a cubic unit cooler (3C-A).

Factory-assembled with expansion valve and solenoid valve.

For more details on our unit coolers, please refer to the NTA and 3C-A documentation.

CONDENSER

1 to 4 fans.
Variable speed of rotation.

OPTION	
RPC	Condensing pressure regulation.
GPC	Condenser protection grille.

ELECTRICAL BOX

Fully integrated electrical cabinet.
General disconnector switch.

OPTION	
SPE	Wiring on terminal block (without electric board).

OTHER COMPONENTS

Receiver supplied with valve.
The liquid line consists as standard of a filter dryer, a liquid indicator and a service valve.
LP control by adjustable pressure switch.
HP safety by cartridge pressure switch with automatic reset.

The MAXIBOREAL split system consists of the MAXI condensing unit, a unit cooler and a control system.

Please contact us to choose the right combination of unit/cooler for the refrigerant and the application.

REGULATION

Piloting by electronic regulation.
Air or electric defrost management.
Lighting management.
Display and referral of alarms.
Additional programmable contact (door opening, entrapment safety, etc.).
Integrated forced operation for rapid cooling or blast freezing.

MAXI(A) SH(B) P(C) 32(D) A(E)

(A) **MAXI** = Condensing unit **MAXIBOREAL** = Split system
(B) **SH** = Semi-hermetic compressor **SC** = Scroll compressor
(C) **P** = positive range **N** = negative range
(D) Model
(E) **A** = Standard **AS** = Oversized **ALN** = Low noise level

The MAXI is available with HFCs. For more information, please consult our software.

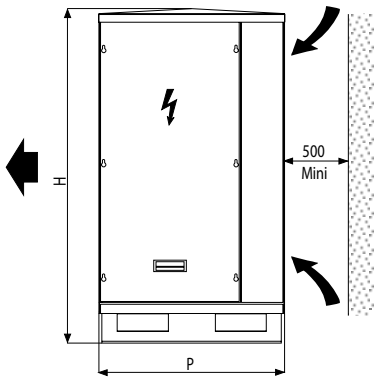
MAX | Standard — Positive range

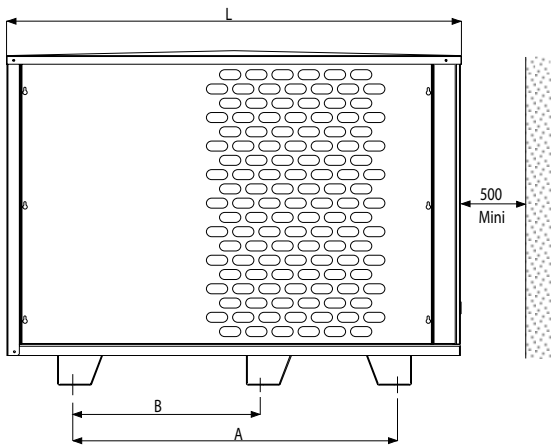
		MAXI SH ...	P23A	P26A	P33A	P41A	P53A	P66A	P83A	-
Power (1)	R449A	kW	3,1	4,1	5,3	6,5	8,3	10,6	12,2 (2)	-
Power consumption (1)	R449A	kW	1,7	2,3	2,5	3,2	4,2	5,7	7,4	-
Current drawn - 400V/3/50Hz		A max	5,15	7,00	7,80	10,20	13,20	15,20	19,86	-

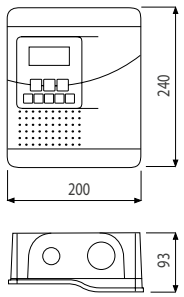
		MAXI SC ...	P23A	P26A	P33A	P41A	P53A	P66A	P83A	P104A
Power (1)	R449A	kW	3,0	3,8	4,9	6,8	8,1	9,8	11,1 (2)	16,6
Power consumption (1)	R449A	kW	1,9	2,1	2,5	3,4	4,5	5,3	7,7	9,8
Current drawn - 400V/3/50Hz		A max	6,45	6,20	7,90	11,40	13,40	14,00	18,00	26,00

		MAXI ...	P23A	P26A	P33A	P41A	P53A	P66A	P83A	P104A
Fan	Nb x Ø	mm	1 x 355	1 x 355	2 x 355	2 x 355	2 x 355	2 x 500	2 x 500	2 x 500
		50 Hz	230V/1	230V/1	230V/1	230V/1	230V/1	400V/3	400V/3	400V/3
Airflow		m^3/h	1380	2200	2640	4200	4200	9600	11540	10314
Speed of rotation		rpm	1000	1500	1000	1500	1500	1000	1500	1500
Liquid capacity		l.	3	3	5	5	5	11	11	11
Dimensions	L	mm	1190	1190	1350	1350	1350	1450	1450	1450
	D	mm	475	475	550	550	550	600	600	600
	H	mm	810	810	1060	1060	1060	1470	1470	1470
	A	mm	805	805	955	955	955	1049	1049	1049
	B	mm	-	-	-	-	-	617	617	617
Connections	Suction	Ø	5/8"	7/8"	7/8"	7/8"	1 1/8"	1 1/8"	1 3/8"	1 3/8"
	Liquid	Ø	3/8"	3/8"	1/2"	1/2"	1/2"	1/2"	5/8"	5/8"
Net weight		kg	140	140	160	175	175	220	230	230

(1) **A**: Evaporating temperature **-10 °C** / Ambient temperature **+32 °C** - Superheat: 10K - Subcool: 3K.
(2) Product only available in split system.







MAXI(A) SH(B) P(C) 32(D) A(E)

(A) **MAXI** = Condensing unit **MAXIBOREAL** = Split system
(B) **SH** = Semi-hermetic compressor **SC** = Scroll compressor
(C) **P** = positive range **N** = negative range
(D) Model
(E) **A** = Standard **AS** = Oversized **ALN** = Low noise level

> **The MAXI is available with HFCs. For more information, please consult our software.**

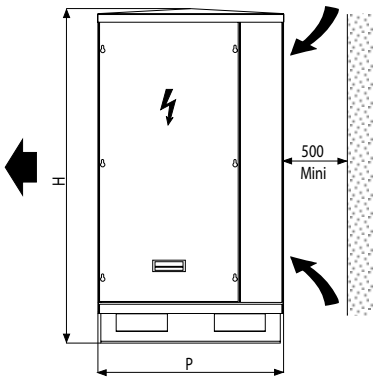
MAX | Standard — Negative range

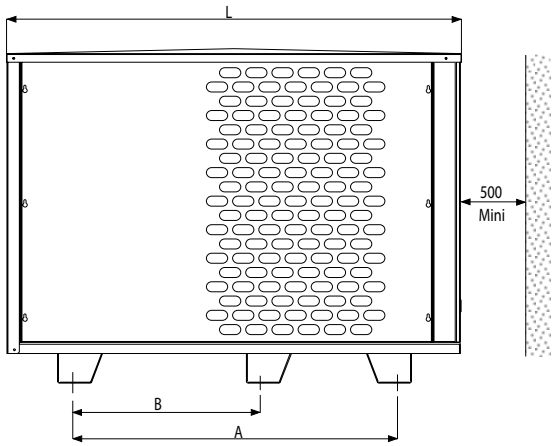
		MAXI SH ...	N24A	N34A	N42A	N73A	-
Power (1)	R449A	kW	1,5	2,2 (2)	2,7	4,1	-
Power consumption (1)	R449A	kW	1,4	2,0	2,3	3,7	-
Current drawn		A max	7,35	10,40	11,60	18,30	-

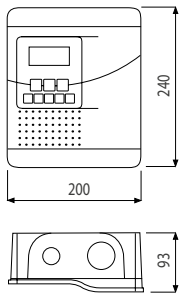
		MAXI SC ...	-	N34A	N42A	N73A	N84A
Power (1)	R449A	kW	-	1,7 (2)	2,9 (2)	4,3	5,7 (2)
Power consumption (1)	R449A	kW	-	2,0	3,4	4,4	6,3
Current drawn - 400V/3/50Hz		A max	-	8,20	11,90	19,40	25,00

		MAXI ...	N24A	N34A	N42A	N73A	N84A
Fan	Nb x Ø	mm	1 x 355	1 x 355	2 x 355	2 x 355	2 x 500
		50 Hz	230V/1	230V/1	230V/1	230V/1	400V/3
Airflow		m^3/h	1380	2200	2640	4200	9600
Speed of rotation		rpm	1000	1500	1000	1500	1000
Liquid capacity		l.	5	5	5	5	5
Dimensions	L	mm	1190	1190	1350	1350	1450
	D	mm	475	475	550	550	600
	H	mm	810	810	1060	1060	1470
	A	mm	805	805	955	955	1049
	B	mm	-	-	-	-	617
Connections	Suction	Ø	7/8"	7/8"	1 1/8"	1 1/8"	1 3/8"
	Liquid	Ø	3/8"	3/8"	3/8"	1/2"	1/2"
Net weight		kg	140	140	175	175	230

(1) **A**: Evaporating temperature **-35 °C** / Ambient temperature **+32 °C** - Superheat: 10K - Subcool: 3K.
(2) Product only available in split system.







NOTES

DUO CU

Encased outdoor condensing unit

HFC

MT **7** - **48** kW
LT **6** - **15** kW

PED 2014/68/

Compact design for perfect integration in small spaces.
Suitable for residential areas thanks to its **low noise level**.
Ready to install: factory pre-equipped unit with complete refrigeration and electrical supply.
Easy maintenance: accessibility to all components.

CASING

Galvanized sheet steel covered with white polyester paint.
Easy removal of front and side panels.
IP21 casing.

LIQUID RECEIVER

Vertical receiver with a capacity of 18 or 45 l. with safety valve.
Two inlet/outlet shut-off valves.
Liquid outlet equipped with a filter dryer, an indicator and a liquid outlet valve.

OIL LINE

HP oil separator with integrated oil reserve with high and low indicator.
HP oil return line with filter.
Electronic oil controller per compressor.

MANIFOLDS

Copper suction and delivery.
Filter on the suction.

The integration of a Digital™ compressor ensures power modulation from 10 to 100% and makes the DUO CU unit perfectly suited to multi-station applications.

COMPRESSORS

Multi-refrigerant compressors: R134a, R407F, R407A, R448A, R449A, R450A and R513A.
Two Scroll compressors including one Digital™ (except DUO CU LT 26).
Suction and delivery shut-off valves, crankcase heater and rigid suspension elements.
Compressors equipped with noise insulation casings.

CONDENSER

Microchannel technology coil, Epoxy treated (13-18-25-29-45-57).
Aluminium finned coil and copper tubes (76-114).
Axial or centrifugal condenser fan(s) with speed variation or EC motors depending on model.
Heat recovery (only on DUO CU MT):
- Tapping points with valves on standby upstream of the condenser.
- Optional heat recovery module for hot water production at 55 °C or heating.
- Integrated control.

75% reduction of the refrigerant charge thanks to the microchannel technology.

CONTACT US

OPTIONS Epoxy fins or Ozkem coil treatment available.

REGULATION AND SAFETY

Complete integrated electrical cabinet IP54.
Electronic regulation by PLC with pressostatic back-up mode.
"Floating" HP control with external probe.
Icc 15 kA.
General disconnect switch.
Switchover to back-up mode:
- Automatic by LPE/HPE support pressure switches.
- Manual by switch on cabinet door.
2 condenser fan protection outlets.
4 cooling station outputs 2x10A.

CONTROL DEVICES

1 LP general safety pressure switch.
1 LPE support pressure switch (switchover to back-up mode).
1 LP regulator pressure switch per compressor.
1 HP cartridge pressure switch with automatic reset per compressor.
1 HPE support pressure switch (switchover to back-up mode).
1 HP and LP sensor.

In order to best meet your needs, the **DUO CU** is available in 6 models:

DUO CU(A) MT(B) 29(C) A(D)

(A) Condensing unit
(B) **MT** = positive range - **LT** = negative range
(C) Model (compressor)
(D) **A** = fans without available pressure - **C** = fans with available pressure

The DUO CU is available with HFCs. For a precise selection, please consult our software.

Fans without available pressure — Positive range

CONDITIONS	REFRIGERANTS	DUO CU MT ... A	29	45	57	76	114
Power (1)	R407F	kW	14,1	20,0	-	36,3	-
	R407A	kW	13,6	19,9	-	35,0	45,6*
	R448A	kW	13,3	19,9	25,0*	35,0	45,6*
	R449A	kW	13,6	19,9	24,8*	35,0	45,5*
	R450A	kW	7,5	11,4 (5)	13,8	19,5 (5)	-
	R513A	kW	9,0	13,6	16,7	23,2	31,6
	R134a	kW	8,4	12,9	16,1	22,1	31,6
Power consumption (1)	R407F	kW	6,8	10,0	-	17,7	-
	R407A	kW	6,2	9,4	-	16,7	26,1*
	R448A	kW	6,3	9,3	11,5*	16,6	27,9*
	R449A	kW	6,3	9,3	11,5*	16,6	27,9*
	R450A	kW	3,5	5,1	6,4	9,4	14,1
	R513A	kW	4,0	5,9	7,5	10,7	16,4
	R134a	kW	3,8	5,6	7,7	10,2	15,2

			29	45	57	76	114
Compressor		Nb	2	2	2	2	2
Input Current (1)		A max.	**17,5**	**24,4**	**29,5**	**37,4**	**58,4**
Fan	Type		AC	AC	AC	AC	AC
	Nb x Ø	mm	2x 450	2x 450	2x 450	2x 710	2x 710
Noise level	**Lp 10m** (2)	dB(A)	41	42	45	44	46
Max. airflow		m^3/h	11500	11500	11500	26000	26000
Liquid capacity		l.	18	18	18	45	45
Connections	Suction	Ø	1"3/8	1"3/8	1"5/8	2"1/8	2"1/8
	Liquid	Ø	5/8"	5/8"	7/8"	7/8"	1"1/8
Casing	Size		T1A	T1A	T1A	T2A	T2A
Dimensions	**L**	mm	1195	1195	1195	1960	1960
	D	mm	660	660	660	1195	1195
	H	mm	1504	1504	1504	1635	1635
Net weight		kg	290	300	310	530	540
Max. outside temperature: -10 °C (R449A)			+43°C	+40°C	+36°C	+41°C	+37°C
Coil (4)			(▥)	(▥)	(▥)	▤	▤

* New options - Please note: outside temperature limited to +34 °C

(1) Evaporating temperature: **-10 °C** / Ambient temperature: **+32 °C -** Total superheat 10K and subcool 3K.
(2) Sound pressure in dB(A) measured at 10 m, parallelepiped measuring surface, in a free field over a reflecting plane, given as an indication only.
(3) Additional available pressure in pascals.
(4) ▤ Aluminium finned coil and copper tubes (optional epoxy fins or Ozkem coil treatment available)
▥ Coil with microchannel technology (▥) Coil with Epoxy treated microchannel technology.
(5) Product only available in split system.

DUO CU(A) MT(B) 29(C) A(D)

(A) Condensing unit
(B) **MT** = positive range - **LT** = negative range
(C) Model (compressor)
(D) **A** = fans without available pressure - **C** = fans with available pressure

> **The DUO CU is available with HFCs. For a precise selection, please consult our software.**

Fans with available pressure — Positive range

CONDITIONS	REFRIGERANTS	DUO CU MT ... C	29	45	57	76	114
Power (1) **150 Pa** (3)	**R407F**	**kW**	**14,2**	**20,1**	**-**	**36,6**	**-**
	R407A	**kW**	**13,7**	**19,3**	**-**	**34,4**	**45,2***
	R448A	**kW**	**13,7**	**20,0**	**25,0***	**35,3**	**46,3***
	R449A	**kW**	**13,7**	**20,0**	**25,0***	**35,3**	**45,5***
	R450A	**kW**	**7,5**	**11,4**	**13,8**	**19,5**	**26,3**
	R513A	**kW**	**9,0**	**13,6**	**16,8**	**23,2**	**31,7**
	R134a	**kW**	**8,4**	**12,9**	**16,1**	**22,1**	**31,6**
Power consumption (1)	**R407F**	**kW**	**8,2**	**11,4**	**-**	**21,1**	**-**
	R407A	**kW**	**7,7**	**10,9**	**-**	**20,1**	**29,3***
	R448A	**kW**	**7,7**	**10,7**	**12,9***	**20**	**31,0***
	R449A	**kW**	**7,7**	**10,7**	**12,9***	**20**	**31,0***
	R450A	**kW**	**4,4**	**6,3**	**7,7**	**12,5**	**17,0**
	R513A	**kW**	**4,9**	**7,2**	**8,9**	**14,0**	**19,7**
	R134a	**kW**	**4,6**	**6,7**	**9,1**	**13,1**	**18,1**

			29	45	57	76	114
Compressor		**Nb**	2	2	2	2	2
Input current (1)		**A max.**	**19,5**	**26,4**	**28,9**	**43,9**	**64,9**
Fan	Type		AC	AC	AC	AC	AC
	Nb x Ø	**mm**	2x 346x314	2x 346x314	2x 346x314	2x 630	2x 630
Noise level	**Lp 10m** (2)	**dB(A)**	56	56	56	57	57
Max. airflow		**m^3/h**	11900	11900	11900	28400	28400
Liquid capacity		**l.**	18	18	18	45	45
Connections	Suction	**Ø**	1"3/8	1"3/8	1"5/8	2"1/8	2"1/8
	Liquid	**Ø**	5/8"	5/8"	7/8"	7/8"	1"1/8
Casing	Size		**T1C**	**T1C**	**T1C**	**T2C**	**T2C**
Dimensions	**L**	**mm**	1195	1195	1195	1960	1960
	D	**mm**	660	660	660	1195	1195
	H	**mm**	1407	1407	1407	1622	1622
Net weight		**kg**	330	340	350	540	550
Max. outside temperature: -10 °C (R449A)			+43°C	+40°C	+37°C	+42°C	+37°C
Coil (4)			**( )**	**( )**	**( )**		

* New options - Please note: outside temperature limited to +34 °C

(1) Evaporating temperature: **-10 °C** / Ambient temperature: **+32 °C -** Total superheat 10K and subcool 3K.
(2) Sound pressure in dB(A) measured at 10 m, parallelepiped measuring surface, in a free field over a reflecting plane, given as an indication only.
(3) Additional available pressure in pascals.
(4) Aluminium finned coil and copper tubes (optional epoxy fins or Ozkem coil treatment available)
Coil with microchannel technology **( )** Coil with Epoxy treated microchannel technology.

DUO CU(A) LT(B) 13(C) 1F(D) A(E)

(A) Condensing unit
(B) **MT** = positive range - **LT** = negative range
(C) Model (compressor)
(D) **1F** = 1 fan - **2F** = 2 fans
(E) **A** = fans without available pressure - **C** = fans with available pressure

> **The DUO CU is available with HFCs. For a precise selection, please consult our software.**

Fans without available pressure — Negative range

CONDITIONS	REFRIGERANTS	DUO CU LT ... A	13	18	25	13 1F	18 1F	25 1F	13 2F	18 2F	25 2F
Power (1)	R407F	kW	-	-	-	6,9	10,1	13,1	6,8	10,1	13,1
	R448A	kW	-	-	-	6,5	9,9	12,3	6,4	9,9	12,3
	R449A	kW	-	-	-	6,5	9,8	12,3	6,4	9,8	12,3
Power consumption (1)	R407F	kW	-	-	-	6,7	8,9	10,7	6,5	9,3	11,1
	R448A	kW	-	-	-	6,4	8,1	9,1	5,8	8,6	9,5
	R449A	kW	-	-	-	6,4	8,2	9,1	5,8	8,6	9,5

			13	18	25	13 1F	18 1F	25 1F	13 2F	18 2F	25 2F
Compressor		Nb	2	2	2	2	2	2	2	2	2
Input current (1)		A max.	19,6	25,2	29,2	17,9	26,3	27,1	19,9	26,6	27,4
Fan	Type		AC	AC	AC	AC	AC	AC	AC	EC	EC
	Nb x Ø	mm	2x 450	2x 450	2x 450	1 x 800	1 x 800	1 x 800	2 x 450	2 x 500	2 x 500
Noise level	**Lp 10m** (2)	dB(A)	42	44	46	46	45	46	43	56	53
Max. airflow		m^3/h	11500	11500	11500	20000	20000	20000	11500	19000	19000
Liquid capacity		l.	18	18	18	18	18	18	18	18	18
Connections	Suction	Ø	1"1/8	1"3/8	1"3/8	1"1/8	1"3/8	1"3/8	1"1/8	1"3/8	1"3/8
	Liquid	Ø	1/2"	5/8"	5/8"	1/2"	5/8"	5/8"	1/2"	5/8"	5/8"
Casing	Size		T1A	T1A	T1A	T3A	T3A	T3A	T1A	T4A	T4A
Dimensions	**L**	mm	1195	1195	1195	1320	1320	1320	1195	1320	1320
	D	mm	660	660	660	1128	1128	1128	660	1128	1128
	H	mm	1504	1504	1504	1560	1560	1560	1504	1965	1965
Net weight		kg	290	300	310	320	325	325	320	325	325
Max. outside temperature: -35 °C (R449A)			+43°C	+43°C	+40°C	+42°C	+40°C	+38°C	+37°C	+40°C	+38°C
Coil (4)			(▥)	(▥)	(▥)	▥	▥	▥	(▥)	▥	▥

* New options - Please note: outside temperature limited to +34 °C

(1) Evaporating temperature: **-35 °C** / Ambient temperature: **+32 °C -** Total superheat 10K and subcool 3K.
(2) Sound pressure in dB(A) measured at 10 m, parallelepiped measuring surface, in a free field over a reflecting plane, given as an indication only.
(3) Additional available pressure in pascals.
(4) ▥ Aluminium finned coil and copper tubes (optional epoxy fins or Ozkem coil treatment available)
▥ Coil with microchannel technology (▥) Coil with Epoxy treated microchannel technology.

DUO CU(A) LT(B) 13(C) 1F(D) C(E)

(A) Condensing unit
(B) **MT** = positive range - **LT** = negative range
(C) Model (compressor)
(D) **1F** = 1 fan - **2F** = 2 fans
(E) **A** = fans without available pressure - **C** = fans with available pressure

The DUO CU is available with HFCs. For a precise selection, please consult our software.

Fans with available pressure — Negative range

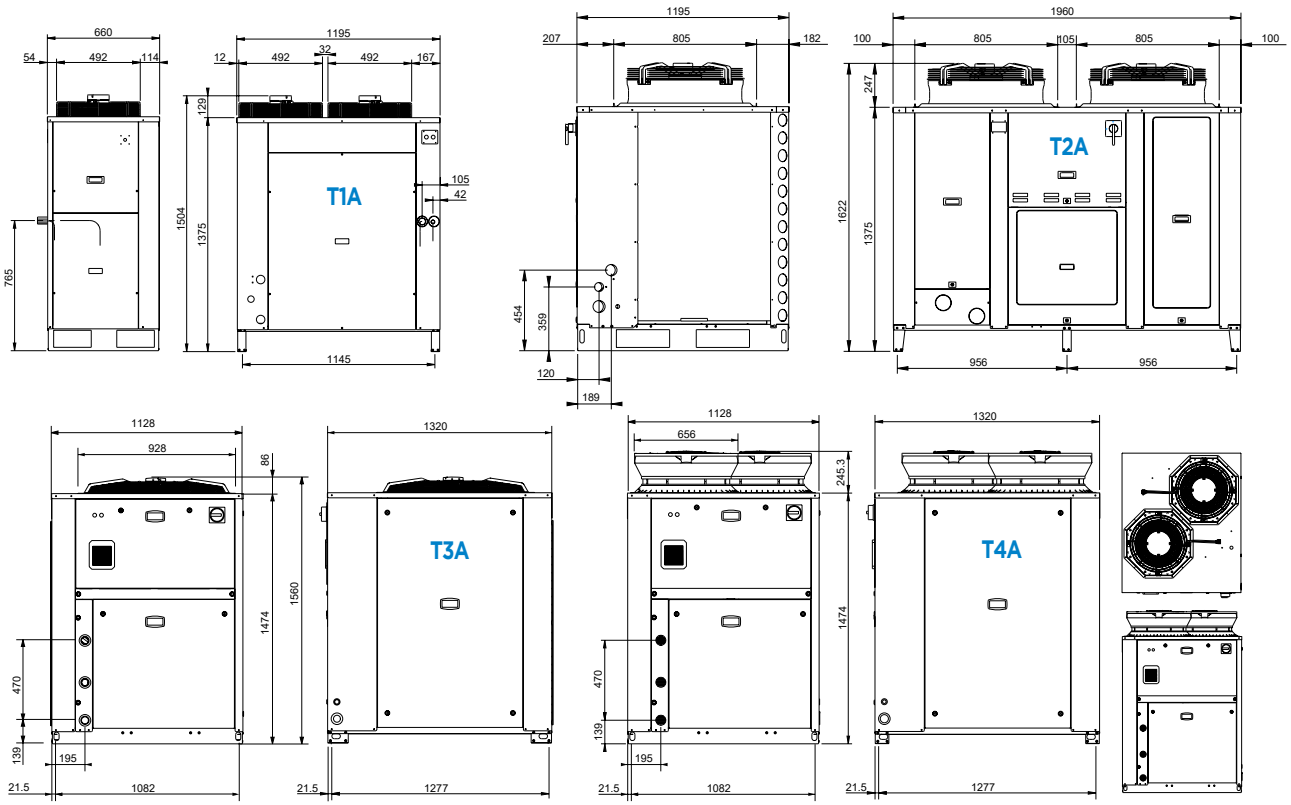
CONDITIONS	REFRIGERANTS	DUO CU LT ... C	13 1F	18 1F	25 1F
Power (1) 150 Pa (3)	R407F	kW	6,9	10,1 (5)	13,1
	R448A	kW	6,5	9,9	12,3
	R449A	kW	6,5	9,8	12,3
Power consumption (1)	R407F	kW	8,3	9,6	11,3
	R448A	kW	7,3	8,8	9,6
	R449A	kW	7,3	8,8	9,7

			13 1F	18 1F	25 1F
Compressor		Nb	2	2	2
Input current (1)		A max.	20.2	26,9	27,7
Fan	Type		AC	AC	AC
	Nb x Ø	mm	1 x 800	1 x 800	1 x 800
Noise level	Lp 10m (2)	dB(A)	49	46	47
Max. airflow		m^3/h	17000	19000	19000
Liquid capacity		l.	18	18	18
Connections	Suction	Ø	1"1/8	1"3/8	1"3/8
	Liquid	Ø	1/2"	5/8"	5/8"
Casing	Size		T3C	T3C	T3C
Dimensions	L	mm	1325	1320	1320
	D	mm	1125	1128	1128
	H	mm	1783	1783	1783
Net weight		kg	320	325	325
Max. outside temperature: -35 °C (R449A)			+40°C	+40°C	+38°C
Coil (4)					

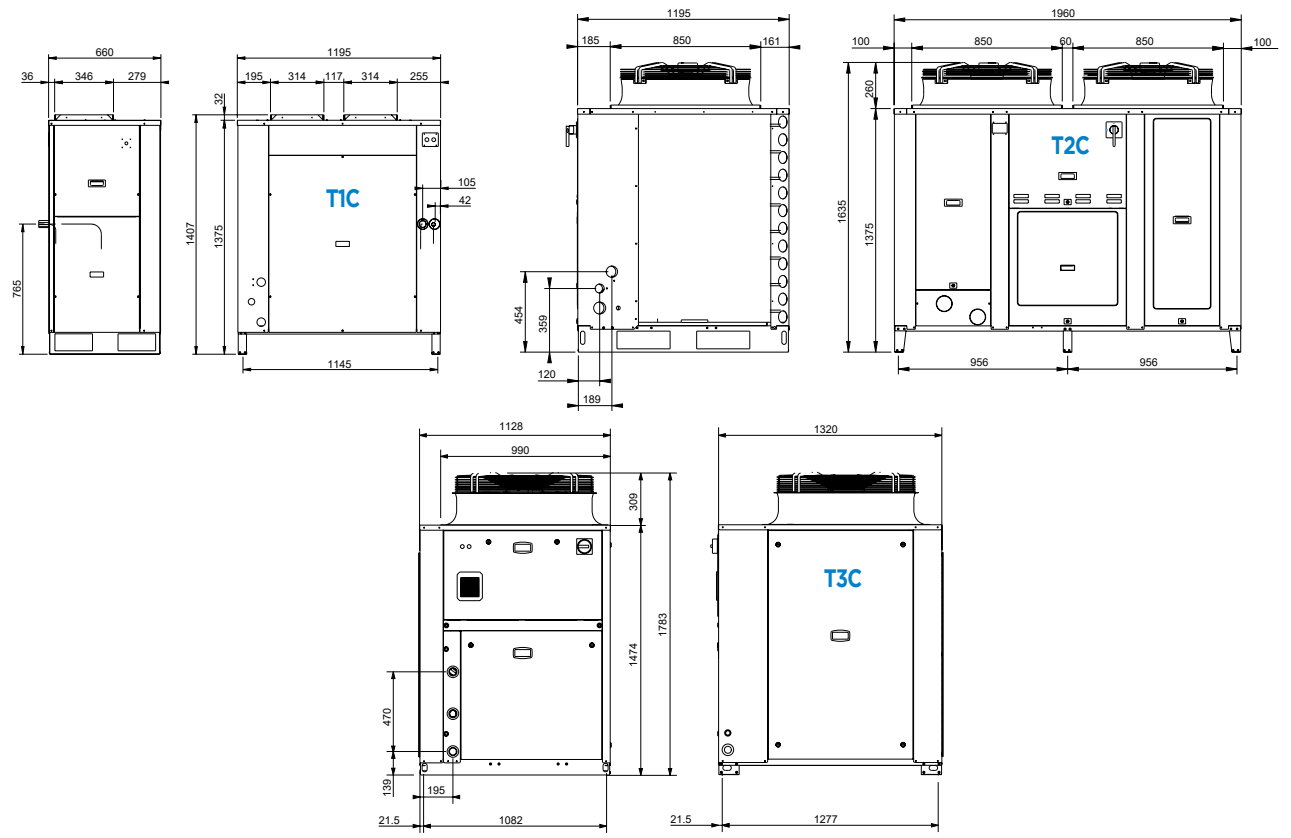
* New options - Please note: outside temperature limited to +34 °C

(1) Evaporating temperature: **-35 °C** / Ambient temperature: **+32 °C -** Total superheat 10K and subcool 3K.
(2) Sound pressure in dB(A) measured at 10 m, parallelepiped measuring surface, in a free field over a reflecting plane, given as an indication only.
(3) Additional available pressure in pascals.
(4) Aluminium finned coil and copper tubes (optional epoxy fins or Ozkem coil treatment available)
Coil with microchannel technology ( ) Coil with Epoxy treated microchannel technology.
(5) Product only available in split system.

DUO CU .. A | Fans without available pressure



DUO CU .. C | Fans with available pressure



MEGA

Condensing unit

HFC

MT **11** - **72** kW

LT **3.3** - **22.5** kW

PED 2014/68/

Easy access to components to **facilitate service** and **maintenance operations**.

Versatility; several versions are available to match your requirements:
- **SH** (semi-hermetic) or **Sc** (scroll) compressor,
- **ALN** (low noise level) condenser or **AS** (oversized condenser).

CASING

Rigid frame, made of heavy gage sheet metal, which limits the transmission of vibrations.

OPTION	
CAC	Additional housing belt (Scroll).
GPC	Condenser protection grille.
CAR	Casing made from white pre-painted galvanized sheet metal.
ECC	Crate packing.

COMPRESSOR

Two technologies to choose from: semi-hermetic reciprocating or Scroll compressor.
In all cases, the following are supplied: delivery and suction valves, crankcase heater and oil indicator.

RECEIVER

The receiver is supplied with an outlet valve and a safety valve (receiver ≥ 11 l.).

OPTION	
BAC	Liquid separator.
LIQ	Liquid line with filter dryer, hygroscopic indicator and service valve.
RLS	Oversized receiver.

ELECTRICAL BOX

Wiring secured in a junction box.

OPTION	
ARM	Electrical cabinet with main disconnect switch (compressor and condenser protection).

CONDENSER

Option: standard or oversized condenser for ambient temperatures up to +43 °C.
1 to 4 fans.

REGULATION AND SAFETY

Semi-hermetic compressor models equipped with an oil differential pressure switch (except SH P100 - P170 - N85 - N105 with oil presence sensor).
LP control by adjustable pressure switch.
HP safety by 1 or 2 cartridge pressure switches with automatic reset. (according to standard EN 378-2: 2009).

OPTION	
MAN	HP and LP pressure gages.
EVL	Solenoid valve (not fitted).
SHU	Oil separator.
RPC	Condensing pressure regulation.
VFA	Valve + filter on suction.

PRODUCT ADVANTAGES

Casing option (CAR) allowing the unit to be installed outside.
Large liquid receiver: distance between the unit and the unit coolers up to 25 meters.
Oversized condenser for applications under high ambient temperatures.
A wide range of options can be supplied pre-assembled in the factory to reduce installation time on site.

MEGA SH(A) P(B)80(C)A(D)

(A) **SH** = Semi-hermetic compressor **Sc** = Scroll compressor
(B) **P** = positive range **N** = negative range
(C) Model
(D) **A** = Standard **AS** = Oversized

> **The MEGA is available with HFCs. For more information, please consult our software.**

MEGA | Standard — Positive range

		MEGA ... A	SH P 80	SH P 85	SH P 100	Sc P 100	SH P 170	Sc P 170	SH P 200	SH P 250	SH P 300	SH P 350	SH P 400	SH P 500
Power (1)	R449A	kW	**12,3**	**15,6**	**19,7**	**20,3**	**22,3**	**23,8**	**27,8**	**35,0**	**43,9**	**51,8**	**60,3**	**71,9**
Power consumption	R449A	kW	**6,2**	**8,1**	**9,4**	**11,4**	**10,4**	**13,4**	**14,0**	**18,2**	**23,1**	**26,7**	**32,1**	**37,5**
Current drawn		A max.	15,9	19,8	23,5	25,3	26,9	31,0	35,7	44,7	57,9	67,8	79,6	99,7
Fan	1,500 rpm	mm	1x500	2x500	2x500	2x500	2x500	2x500	2x630	2x630	4x630	4x630	4x630	4x630
Airflow		m^3/h	5315	11950	11270	11268	10630	10630	21300	21300	46400	46400	46400	42600
Liquid capacity		l.	11	11	15	15	24	24	30	30	40	40	40	40
Connections	Suction	Ø	1"3/8	1"3/8	1"3/8	1"3/8	1"5/8	1"5/8	1"5/8	2"1/8	2"1/8	2"1/8	2"1/8	2"1/8
	Liquid	Ø	5/8"	5/8"	5/8"	5/8"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	1"1/8	1"1/8
Weight without **CAR** option		kg	264	313	337	272	362	277	418	470	558	597	600	623
Weight with **CAR** option		kg	339	398	422	357	447	362	538	590	718	757	760	783

MEGA | Oversized condenser — Positive range

		MEGA ... AS	SH P 80	SH P 85	SH P 100	Sc P 100	SH P 170	SH P 200	SH P 250	SH P 300	SH P 350	SH P 400
Power (1)	R449A	kW	**11,0**	**13,7**	**16,8**	**16,7**	**19,4**	**24,7** (2)	**32,3** (2)	**37,0**	**44,0**	**51,1**
Power consumption	R449A	kW	**7,0**	**8,5**	**9,9**	**13,4**	**12,9**	**18,0**	**22,2**	**24,5**	**28,3**	**33,8**
Current drawn		A max.	16,9	19,8	23,5	25,3	31,6	42,5	51,5	57,9	67,8	79,6
Fan	1,500 rpm	mm	2x500	2x500	2x500	2x500	2x630	4x630	4x630	4x630	4x630	4x630
Airflow		m^3/h	11950	11270	10630	10630	21300	46400	46400	42600	42600	42600
Liquid capacity		l.	11	11	15	15	24	40	40	40	40	40
Connections	Suction	Ø	1"3/8	1"3/8	1"3/8	1"3/8	1"5/8	1"5/8	2"1/8	2"1/8	2"1/8	2"1/8
	Liquid	Ø	5/8"	5/8"	5/8"	5/8"	7/8"	7/8"	7/8"	7/8"	7/8"	1"1/8
Weight without **CAR** option		kg	294	322	419	280	415	501	553	578	617	620
Weight with **CAR** option		kg	379	407	504	365	535	661	713	738	777	780

(1) **A**: Evaporating temperature **-10 °C** / Ambient temperature **+32 °C** - Superheat: 10K - Subcool: 3K.
AS: Evaporating temperature **-10 °C** / Ambient temperature **+42 °C** - Superheat: 10K - Subcool: 3K.
(2) Product only available in split system.

MEGA SH(A) N(B)55(C)A(D)

(A) **SH** = Semi-hermetic compressor **Sc** = Scroll compressor
(B) **P** = positive range **N** = negative range
(C) Model
(D) **A** = Standard **AS** = Oversized

> **The MEGA is available with HFCs. For more information, please consult our software.**

MEGA | Standard — Negative range

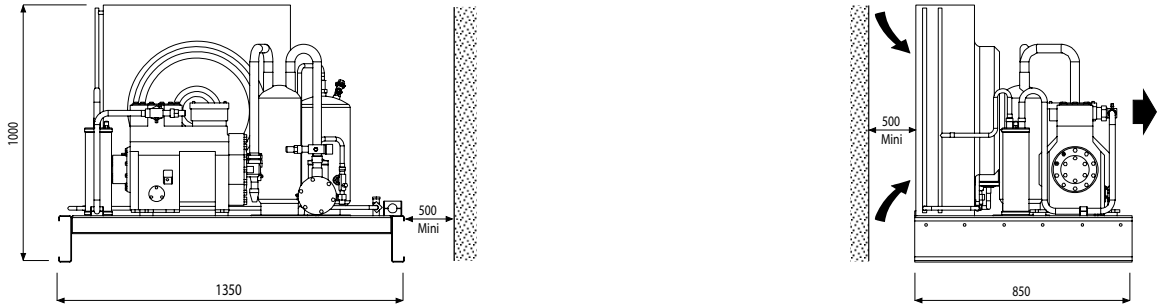
		MEGA ... A	SH N 55	SH N 85	SH N 105	Sc N 105	Sc N 155	SH N 155	SH N 205	SH N 255	SH N 305	SH N 405
Power (1)	R449A	kW	**4,2**	**4,9**	**6,8** (2)	**7,1** (2)	**8,8** (2)	**9,9** (2)	**11,9**	**13,8**	**18,2**	**20,5**
Power consumption	R449A	kW	**3,9**	**4,2**	**6,0**	**7,1**	**9,0**	**8,5**	**10,0**	**11,7**	**16,0**	**19,4**
Current drawn		A max.	13,8	14,5	19,6	21,1	26,5	26,6	30,9	38,5	52,0	63,0
Fan	1,500 rpm	mm	1x500	1x500	2x500	2x500	2x500	2x500	2x500	2x500	2x630	2x630
Airflow		m^3/h	5635	5635	11950	11948	11268	11270	10630	10630	21300	21300
Liquid capacity		l.	11	11	15	15	15	15	24	24	30	30
Connections	Suction	Ø	1"1/8	1"3/8	1"3/8	1"3/8	1"5/8	1"5/8	2"1/8	2"1/8	2"1/8	2"1/8
	Liquid	Ø	1/2"	1/2"	5/8"	5/8"	5/8"	5/8"	7/8"	7/8"	7/8"	7/8"
Weight without **CAR** option		kg	269	277	326	253	293	359	385	417	497	508
Weight with **CAR** option		kg	332	340	400	327	367	433	459	491	727	738

MEGA | Oversized condenser — Negative range

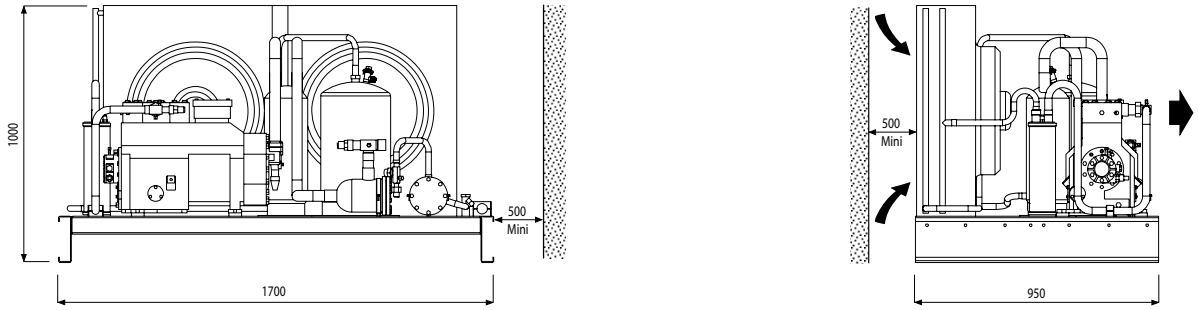
		MEGA ... AS	SH N 55	SH N 85	SH N 105	Sc N 105	Sc N 155	SH N 155	SH N 205	SH N 255	SH N 305	SH N 405
Power (1)	R449A	kW	**3,3**	**3,4** (2)	**4,6**	**6,2** (2)	**7,5** (2)	**6,6**	**7,8**	**9,5** (2)	**11,8**	**14,7**
Power consumption	R449A	kW	**3,9**	**4,8**	**5,9**	**8,4**	**11,1**	**8,1**	**9,5**	**13,2**	**16,2**	**22**
Current drawn		A max.	13,8	15,5	19,6	21,1	26,5	26,6	30,9	43,2	52,0	69,8
Fan	1,500 rpm	mm	1x500	2x500	2x500	2x500	2x500	2x500	2x500	2x630	2x630	4x630
Airflow		m^3/h	5315	11950	11270	11270	10630	10630	10630	21300	21300	46400
Liquid capacity		l.	11	11	15	15	15	15	24	24	30	40
Connections	Suction	Ø	1"1/8	1"3/8	1"3/8	1"3/8	1"5/8	1"5/8	2"1/8	2"1/8	2"1/8	2"1/8
	Liquid	Ø	1/2"	1/2"	5/8"	5/8"	5/8"	5/8"	7/8"	7/8"	7/8"	7/8"
Weight without **CAR** option		kg	273	311	355	272	303	367	385	489	497	591
Weight with **CAR** option		kg	368	369	370	346	377	441	459	719	727	881

(1) **A**: Evaporating temperature **-35 °C** / Ambient temperature **+32 °C** - Superheat: 10K - Subcool: 3K.
AS: Evaporating temperature **-35 °C** / Ambient temperature **+42 °C** - Superheat: 10K - Subcool: 3K.
(2) Product only available in split system.

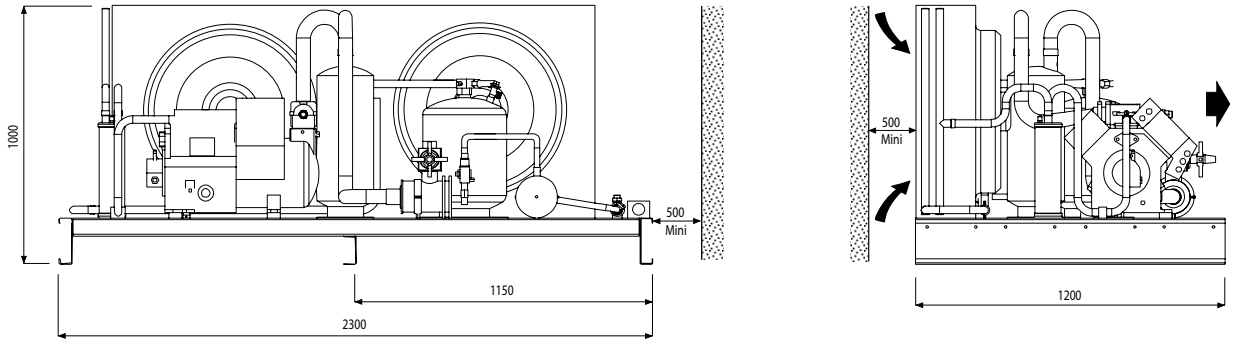
MEGA | 1 x Ø 500 mm



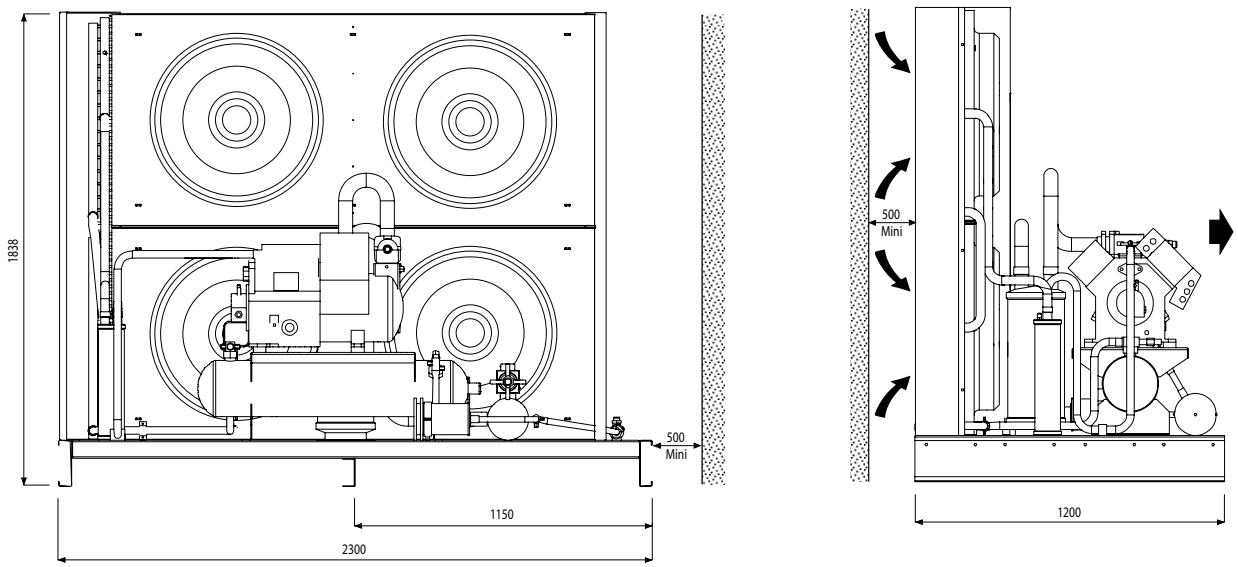
MEGA | 2 x Ø 500 mm



MEGA | 2 x Ø 630 mm



MEGA | 4 x Ø 630 mm



MONOHAVANE

Condensing unit

HFC

MT **13** - **72** kW

LT **4** - **22** kW

DESP 2014/68/UE

Easy installation: the Monohavane condensing unit is ready to install and is supplied with a factory pre-wired control cabinet.

Modular version: to best meet the needs of your application, you can upgrade the standard version and choose a low noise level (LN) or also opt for an S+ (oversized) condenser for high ambient temperatures.

CASING

Sheet metal frame and white pre-painted casing.
Optimized for outdoor installation on the ground or on a roof.

OPTION	
GPC	Condenser protection grille.
ANM	Handling rings (kit to install).

ELECTRICAL BOX

Waterproof with disconnect switch on the side and "power" indicator.
Unit outputs and protection designed to receive as many cooling station outputs as necessary.
Closure of the box by 1/4 turn screw.

REGULATION AND SAFETY

LP control provided by an adjustable LP pressure switch.
HP control provided by adjustable HP pressure switches.
HP safety provided by 1 or 2 HP cartridge pressure switches with automatic reset. (according to standard EN 378-2: 2009).
Oil differential pressure switch.

OPTION	
BAC	Liquid separator.
BPS	LP safety pressure switch
MAN	HP and LP pressure gages.

COMPRESSOR

Noise insulation of the compressor compartment in low noise level version.
Semi-hermetic reciprocating compressor from 7.5 to 50 hp with suction and delivery valves, crankcase heater and cylinder head blower in negative application.

CONDENSER

Choice of condenser: A (standard) or AS and AS+ (oversized).
The oversized condenser of the AS version allows installation in high ambient temperatures, up to +42 °C, and up to +45 °C on consultation.
The ALN low noise level version is ideal for urban areas.
From 2 to 4 fans with elbow protection by housing.

LIQUID RECEIVER AND LINE

Receiver equipped with valves and a safety valve.
Liquid line consisting of a cartridge filter dryer, a hygroscopic indicator and a service valve.

OPTION	
RLS	Oversized receiver.
SHU	Oil separator.
VFA	Valve + filter on suction.
EVL	Solenoid valve (kit to install).

MAINTENANCE

Easily removable side maintenance panels for easy access to all components.
The door can be placed in hood position to facilitate work on the electrical cabinet.

MONOHV P(A)75(B)AS(C)

(A) **P** = positive range **N** = negative range
(B) Model
(C) **A** = Standard **AS** = Oversized **AS+** = Oversized plus
ALN = Low noise level

> **The MONOHAVANE is available with HFCs. For precise selection, please consult our software.**

MONOHAVANE — Positive range

MONOHV P...			A	AS	AS+	ALN
Power (1)	R449A	kW	**15,6 > 69,8**	**14,0 > 63,2**	**13,4 > 44,1**	**15,6 > 48,5**
Power consumption*	R449A	kW	**8,1 > 35,5**	**8,5 > 36,7**	**8,6 > 26,0**	**7,1 > 21,6**
Current drawn		A max.	19,8 > 99,8	19,8 > 99,8	19,8 > 70,0	18,3 > 60,4
Acoustics (2)		dB(A)	-	-	-	39 > 50
Fan	Nb x Ø	mm	2x 500 > 2x 910	2x 500 > 2x 910	2x 500 > 2x 910	2x 630 > 2x 800
Airflow		m3/h	15000 > 45000	10630 > 42620	10630 > 42620	6060 > 21776
Liquid capacity		l.	21 > 50	21 > 50	21 > 50	21 > 50
Net weight		kg	480 > 980	500 > 1100	500 > 1090	530 > 1030

(1) **A**: Evaporating temperature **-10 °C** / Ambient temperature **+32 °C** - Superheat: 10K - Subcool: 3K.
AS: Evaporating temperature **-10 °C** / Ambient temperature **+42 °C** - Superheat: 10K - Subcool: 3K.
AS+: Evaporating temperature **-10 °C** / Ambient temperature **+44 °C** - Superheat: 10K - Subcool: 3K.
ALN: Evaporating temperature **-10 °C** / Ambient temperature **+32 °C** - Superheat: 10K - Subcool: 3K.
(2) Lp at 10 m: Sound pressure in dB(A) measured at 10 m, in a free field over a reflecting plane, in accordance with standard EN 13487 (parallelepiped reference surface).

MONOHAVANE — Negative range

MONOHV N...			A	AS	AS+	ALN
Power (1)	R449A	kW	**5,2 > 20,5**	**3,4 > 14,3**	**3,2 > 13,9**	**4,8 > 20,7**
Power consumption*	R449A	kW	**4,9 > 19,4**	**4,8 > 20,3**	**4,8 > 19,6**	**3,7 > 16,5**
Current drawn		A max.	15,5 > 63,0	15,5 > 66,4	15,5 > 68,2	17,8 > 80,3
Acoustics (2)		dB(A)	-	-	-	42 > 51
Fan	Nb x Ø	mm	2x 500 > 2x 630	2x 500 > 3x 630	2x 500 > 2x 910	2x 500 > 2x 800
Airflow		m3/h	11948 > 21300	11948 > 31950	10630 > 42620	4066 > 16247
Liquid capacity		l.	21 > 40	21 > 50	21 > 50	21 > 50
Net weight		kg	520 > 700	520 > 840	540 > 980	550 > 980

(1) **A**: Evaporating temperature **-35 °C** / Ambient temperature **+32 °C** - Superheat: 10K - Subcool: 3K.
AS: Evaporating temperature **-35 °C** / Ambient temperature **+42 °C** - Superheat: 10K - Subcool: 3K.
AS+: Evaporating temperature **-35 °C** / Ambient temperature **+44 °C** - Superheat: 10K - Subcool: 3K.
ALN: Evaporating temperature **-35 °C** / Ambient temperature **+32 °C** - Superheat: 10K - Subcool: 3K.
(2) Lp at 10 m: Sound pressure in dB(A) measured at 10 m, in a free field over a reflecting plane, in accordance with standard EN 13487 (parallelepiped reference surface).

MULTIHAVANE

Condensing unit

HFC

HT **100** - **275** kW
MT **15** - **225** kW
LT **5** - **65** kW

DESP 2014/68/

Unit ready to use and pre-wired in the factory to **save time on installation**.

Versatile unit that be adapted to the needs of your application:
- Outdoor installation, on the ground or a roof.
- Two compressor technologies available: Scroll or semi-hermetic.
- Possibility of adjusting the noise level with the low noise level (LN) option.
- Optional oversized condenser for high ambient temperatures.

Easy access to all components for **easy maintenance**.

CONDENSER

NEOSTAR (L or P) and WA type condensers, regulated by cascade stop.
Low noise level: silent condenser.
Oversized condenser: for operation in high ambient temperatures, up to 43 °C.

OPTION	
GPC	Condenser protection grille.

CASING

Base of frame in high-strength folded galvanized sheet metal.
White sheet metal casing.
Removable panels with 1/4 turn latches.
Designed for easy handling by crane (lifting rings as standard).
Low noise level: noise insulation of the compressor compartment.

COMPRESSOR

The compressors are charged with ester oil and are equipped as shown in the table below:

	SH Octagon	Scroll	SH
Number of compressors	2-3-4	2-3-4	2-3
Crankcase heater	Yes	Yes	Yes
Suction and delivery valves	Yes	Yes	Yes
HP safety pressure switch	Yes	Yes	Yes
Oil pump	From 4VC	No	Yes
Cylinder head fan	Negative	No	Negative

OPTION	
COQ	Noise insulation casing on Scroll (except ZF15, ZB38 and ZB45).

REGULATION AND SAFETY

For Scroll or Octagon 2-compressor racks: Pressure regulation with 1 LP regulator pressure switch per compressor and 1 HP regulator pressure switch per condenser fan.
For other racks: Electronic regulation by controller with LP/HP sensors signal 4/20 mA.
A LP general safety pressure switch.
One oil differential pressure switch per compressor for semi-hermetic compressors and from the 4VC compressor for OCT).
1 or 2 HP cartridge pressure switches with automatic reset per compressor.
Two pressure gages (LP+HP).
Connection of each element in 1/4" flexible tube.

OPTION	
BP1	Additional LP pressure switch.
BPS	LP safety pressure switch per compressor (automatic reset).
CDP	LP/HP pressure sensor signal 4/20 mA.
HPG	HP general pressure switch.
HPS	Additional HP pressure switch.

ELECTRICAL BOX

Electrical cabinet with latch-locked double door.
Front panel disconnect switch and power indicator.
All the electrical equipment is connected to the circuit board, which includes protection and control of the condensing unit.

OIL LINE

LP oil return with a removable oil separator and a receiver equipped with a high and low indicator, shut-off valves and a calibrated degassing valve in the LP manifold with a shut-off valve.
Float oil level regulators and shut-off valve per compressor for SH and electronic for Scroll.

LIQUID LINE

Liquid line with filter dryer(s) with removable cartridge(s), 3/8" SAE charging valve(s) and a hygroscopic indicator and shut-off valve(s).

RECEIVER

Horizontal liquid receiver with 2 inlet/outlet shut-off valves.
Single or double safety valve with 3-way valve if the capacity is > or = 100 l.

MANIFOLDS

Suction and delivery manifolds in 304L stainless steel for SH and copper for Sc and OCT, fixed with polypropylene collars on the suction side and high temperature resistant polyamide on the delivery side.
General filter unit on the suction or per compressor depending on model with removable cartridge(s).

CONNECTION VALVES

Suction valve and liquid outlet valve depending on the model.

OPTION	
SIL	Delivery muffler (only for SH version).
TXL	Electronic oil level controllers.
ALR	Optoelectronic refrigerant level alarm.
SSD	Double safety valve with 3-way valve only for receivers with a capacity of less than 100 L (standard for the others).
PR2	2 return suction valves and 2 liquid outlet valves (only for SH version).
BAC	Liquid separator (except SC), with oil return system by suction or gravity depending on model.
RLS	Oversized liquid receiver.

MHV SH(A) 2(B)PHT(C) 4HE-25Y(D) A(E) C3(F) L(G)2(H)-D(I)

(A) Compressor technology: **SC** = Scroll **OCT** = Octagon **SH** = Semi-hermetic
(B) Number of compressors
(C) **N** = Negative / te = - 35 °C **P** = Positive / te = - 10 °C **PHT** = Positive High Temp. / te = 0 °C
(D) Compressor type
(E) Condenser version: **A** = Standard **AS** = Oversized **ALN** = Low noise level
(F) Box type: **C1 - C2 - C3 - C4 - C5**
(G) Fan arrangement: **L** = in-line **P** = parallel
(H) Number of fans
(I) Module type or fan Ø: **A** = 1,200 **B** = 1,500 **D** = 2,000 **5** = 500 mm **6** = 630 mm

The MULTIHAVANE is available with HFCs. For precise selection, please consult our software.

MULTIHAVANE — High temperature positive range

		MHV SH ...	A		AS	
Power (1)	R449A	kW	**109,1**	**273,8**	**98,6**	**202,2**
Power consumption (1)		kW	**39,6**	**102,6**	**45,0**	**95,7**
Current drawn		A max.	88,8 > 237,9		94,0 > 210,8	
Compressors		Nb	2 > 3		2 > 3	
Liquid capacity		l.	145 > 200		145 > 200	
Net weight		kg	1860 > 3142		2140 > 2822	

(1) **A**: Evaporating temperature **0 °C** / Ambient temperature **+32 °C** - Superheat: 10K - Subcool: 3K.
AS: Evaporating temperature **0 °C** / Ambient temperature **+42 °C** - Superheat: 10K - Subcool: 3K.

MHV SH(A) 2(B) P(C)
4MF-13X(D) A(E) C3(F) L(G) 2(H)-A(I)

> The MULTIHAVANE is available with HFCs. For precise selection, please consult our software.

(A) Compressor technology: **SC** = Scroll **OCT** = Octagon **SH** = Semi-hermetic
(B) Number of compressors
(C) **N** = Negative / te = - 35 °C **P** = Positive / te = - 10 °C **PHT** = Positive High Temp. / te = 0 °C
(D) Compressor type
(E) Condenser version: **A** = Standard **AS** = Oversized **ALN** = Low noise level
(F) Box type: **C1 - C2 - C3 - C4 - C5**
(G) Fan arrangement: **L** = in-line **P** = parallel
(H) Number of fans
(I) Module type or fan Ø: **A** = 1,200 **B** = 1,500 **D** = 2,000 **5** = 500 mm **6** = 630 mm

MULTIHAVANE — Positive range

MHV SH ...			A	AS	ALN
Power (1)	R449A	kW			
Power consumption (1)		kW	**31,0 > 120,7**	**34,8 > 128,7**	**29,1 > 64,0**
Current drawn		A max.	59,1 > 255,4	62,5 > 255,4	55,4 > 139,7
Compressors		Nb	2 > 3	2 > 3	2 > 3
Acoustics (2)		dB(A)	-	-	46 > 54
Liquid capacity		l.	68 > 200	68 > 200	68 > 145
Net weight		kg	1598 > 3114	1618 > 3254	1828 > 3067

MHV OCT ...			A	AS	ALN
Power (1)	R449A	kW		77,4	
Power consumption (1)		kW	**11,4 > 55,9**	**14,0 > 45,2**	**10,6 > 53,8**
Current drawn		A max.	21,9 > 120,2	25,1 > 120,2	21,8 > 117,7
Compressors		Nb	2 > 4	2 > 4	2 > 4
Acoustics (2)		dB(A)	-	-	33 > 49
Liquid capacity		l.	40 > 98	40 > 98	40 > 98
Net weight		kg	789 > 2414	822 > 2457	1160 > 2912

MHV SC ...			A	AS	ALN
Power (1)	R449A	kW			
Power consumption (1)		kW	**8,8 > 54,2**	**10,2 > 64,6**	**8,1 > 52,2**
Current drawn		A max.	23,4 > 132,7	24,2 > 132,7	23,0 > 130,2
Compressors		Nb	2 > 4	2 > 4	2 > 4
Acoustics (2)		dB(A)	-	-	38 > 50
Liquid capacity		l.	40 > 98	40 > 98	40 > 98
Net weight		kg	701 > 2134	728 > 2177	875 > 2632

(1) **A**: Evaporating temperature **-10 °C** / Ambient temperature **+32 °C** - Superheat: 10K - Subcool: 3K.
AS: Evaporating temperature **-10 °C** / Ambient temperature **+42 °C** - Superheat: 10K - Subcool: 3K.
ALN: Evaporating temperature **-10 °C** / Ambient temperature **+32 °C** - Superheat: 10K - Subcool: 3K.
(2) Lp at 10 m: Sound pressure in dB(A) measured at 10 m, in a free field over a reflecting plane, in accordance with standard EN 13487 (parallelepiped reference surface).

MHV SH(A) 2(B)N(C) 4HE-18Y(D) A(E) C3(F) L(G)2(H)-A(I)

(A) Compressor technology: **SC** = Scroll **OCT** = Octagon **SH** = Semi-hermetic
(B) Number of compressors
(C) **N** = Negative / te = - 35 °C **P** = Positive / te = - 10 °C **PHT** = Positive High Temp. / te = 0 °C
(D) Compressor type
(E) Condenser version: **A** = Standard **AS** = Oversized **ALN** = Low noise level
(F) Box type: **C1 - C2 - C3 - C4 - C5**
(G) Fan arrangement: **L** = in-line **P** = parallel
(H) Number of fans
(I) Module type or fan Ø: **A** = 1,200 **B** = 1,500 **D** = 2,000 **5** = 500 mm **6** = 630 mm

The MULTIHAVANE is available with HFCs. For precise selection, please consult our software.

MULTIHAVANE — Negative range

MHV SH ...			A	AS	ALN
Power (1)	R449A	kW			
Power consumption (1)		kW	**20,6 > 66,2**	**20,7 > 68,4**	**19,0 > 64,2**
Current drawn		A max.	57,7 > 185,8	57,7 > 185,8	54,0 > 183,3
Compressors		Nb	2 > 3	2 > 3	2 > 3
Acoustics (2)		dB(A)	-	-	43 > 54
Liquid capacity		l.	68 > 200	68 > 200	68 > 145
Net weight		kg	1594 > 2788	1594 > 2788	1770 > 3286

MHV OCT ...			A	AS	ALN
Power (1)	R449A	kW			
Power consumption (1)		kW	**6,4 > 24,9**	**6,5 > 24,2**	**5,8 > 24,9**
Current drawn		A max.	16,6 > 72,4	16,6 > 72,4	15,9 > 72,4
Compressors		Nb	2 > 4	2 > 4	2 > 4
Acoustics (2)		dB(A)	-	-	33 > 47
Liquid capacity		l.	40 > 68	40 > 68	40 > 68
Net weight		kg	792 > 2368	792 > 2368	913 > 2658

MHV SC ...			A	AS	ALN
Power (1)	R449A	kW			
Power consumption (1)		kW	**6,4 > 41,8**	**7,6 > 48,7**	**5,8 > 41,8**
Current drawn		A max.	17,6 > 107,4	17,6 > 107,4	16,8 > 107,4
Compressors		Nb	2 > 4	2 > 4	2 > 4
Acoustics (2)		dB(A)	-	-	38 > 49
Liquid capacity		l.	40 > 98	40 > 98	40 > 98
Net weight		kg	692 > 2292	692 > 2292	813 > 2582

(1) **A**: Evaporating temperature **-35 °C** / Ambient temperature **+32 °C** - Superheat: 10K - Subcool: 3K.
AS: Evaporating temperature **35 °C** / Ambient temperature **+42 °C** - Superheat: 10K - Subcool: 3K.
ALN: Evaporating temperature **-35 °C** / Ambient temperature **+32 °C** - Superheat: 10K - Subcool: 3K.
(2) Lp at 10 m: Sound pressure in dB(A) measured at 10 m, in a free field over a reflecting plane, in accordance with standard EN 13487 (parallelepiped reference surface).

DUO MR

Scroll compressor receiver rack

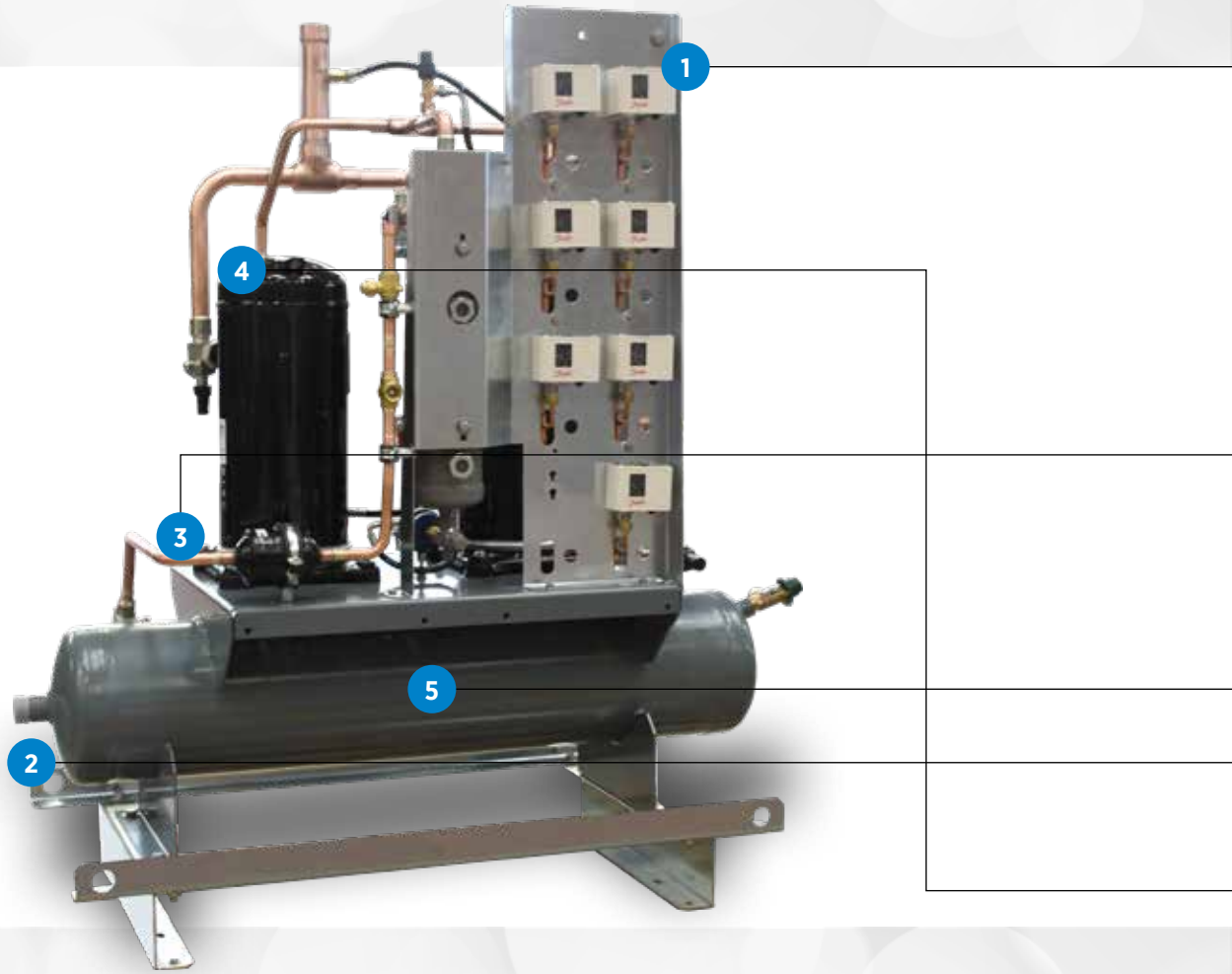
HFC

MT **8** - **55** kW

PED 2014/68/

Ready-to-install unit (factory pre-assembled components and complete electrical supply) for **quick installation**.

Compact and **silent** for perfect integration into its environment.



ELECTRICAL BOX OPTION (ARM)

Icc 15 kA.
General disconnect switch.
Electronic regulation by PLC EC2-552.
Pressure control in back-up mode with anti-run cycle timer.
Switchover to back-up mode:
- Automatic by LPE/HPE support pressure switches.
- Manual by switch on cabinet door.

5 Cooling station outputs 2x10A
1 or 2 condenser fan outlets:

Type	Model	Operation	LP control	HP control
AC	Three-phase: **NEOSTAR SU 16Y L02 B2 CCT 2x12T B2**	**Normal**	EC2-552	Pressostatic
		Back-up	Pressostatic	-
	Single-phase: **CCT 2x10M B5**	**Normal**	EC2-552	Pressostatic or voltage variation
		Back-up	Pressostatic	-
EC	**CCV 1**	**Normal**	EC2-552	EC2-552 (+ 1 CDP)
		Back-up	Pressostatic	IR33

OPTIONS	
ARM	Complete electrical box. KIT TO INSTALL
DPS	3 additional cooling station outputs 2x10A.

1 CONTROL DEVICES

1 LP general safety pressure switch.
1 LP regulator pressure switch per compressor.
1 HP cartridge pressure switch with automatic reset per compressor.
2 HP regulator pressure switches.
1 LPE and HPE support pressure switch (switchover to back-up mode).
1 LP sensor.

OPTIONS	
CDP	HP pressure sensors 4-20 mA signal (EC condenser – CCV 1). KIT TO INSTALL
RPC	Condensing pressure control by voltage variation (condenser CCT 2x10M B5). KIT TO INSTALL

2 MANIFOLDS

Copper suction and delivery.

3 OIL LINE

HP oil separator with integrated oil reserve with high and low indicator.
HP oil return line with filter.
Electronic oil level controller.

4 COMPRESSORS

2 Scroll technology compressors, one of which has DIGITAL™ power variation.
Equipped with suction and delivery shut-off valves, crankcase heater and rigid suspension elements.
Rack pre-wired in the factory with 3 m of cable available.

OPTIONS	
COQ	Noise insulation casings. KIT TO INSTALL

5 LIQUID RECEIVER

Horizontal receiver with a capacity of 40 L.
2 inlet/outlet shut-off valves.
Liquid outlet equipped with a filter dryer, an indicator and a liquid outlet valve.
Simple safety valve.

PRODUCT ADVANTAGES

Integrated pressostatic back-up operation.
Supports for easy handling of the unit.

HFC

DUO MR(A) 30(B)

(A) Compressor unit on bottle
(B) Compressor model

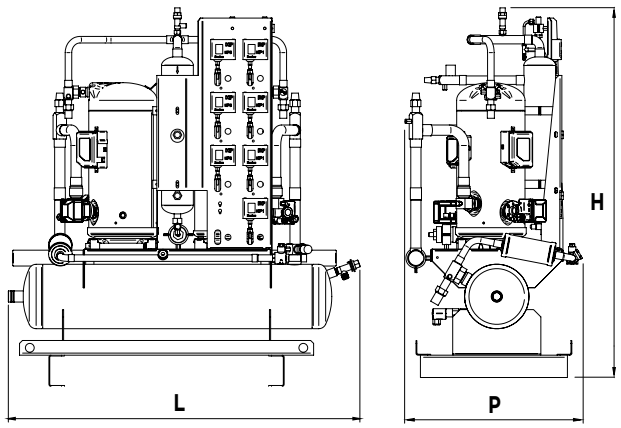
> **The DUO MR is available with HFCs. For more information, please consult our software.**

DUO MR — Positive range

		DUO MR ...	30	45	57	76	114
Compressor type			ZB30+ZBD30	ZB45+ZBD45	ZB57+ZBD57	ZB76+ZBD76	ZB114+ZBD114
Power (1)	R407F	kW	**14,2**	**20,8**	**27,0**	**38,2**	**54,7**
	R407A	kW	**13,9**	**19,8**	**27,0**	**35,6**	**50,0**
	R448A	kW	**14,1**	**20,7**	**26,7**	**36,6**	**52,9**
	R449A	kW	**14,1**	**20,6**	**26,7**	**36,6**	**52,8**
	R134a	kW	**8,6**	**12,5**	**15,7**	**21,3**	**31,6**
Power consumption*	R407F	kW	**6,0**	**8,7**	**11,0**	**15,2**	**22,8**
	R407A	kW	**5,8**	**8,2**	**11,0**	**14,5**	**21,7**
	R448A	kW	**5,7**	**8,0**	**9,9**	**14,2**	**22,2**
	R449A	kW	**5,7**	**8,0**	**9,9**	**14,2**	**22,2**
	R134a	kW	**3,7**	**5,2**	**7,2**	**9,6**	**13,9**
Compressor		Nb	2	2	2	2	2
Input current*		A max.	15,8	24,2	28,0	40,8	66,6
Receiver volume		l.	40	40	40	40	40
Noise level	Lp 10m (2)	dB(A)	41	43	50	48	53
Connections	Suction	Ø	1"5/8	1"5/8	1"5/8	2"1/8	2"1/8
	Delivery	Ø	7/8"	7/8"	7/8"	1"1/8	1"1/8
	Liquid inlet	Ø	7/8"	7/8"	7/8"	7/8"	1"1/8
	Liquid outlet	Ø	5/8"	5/8"	5/8"	1"1/8	1"1/8
Weight		kg	196	200	210	260	275

(1) Evaporating temperature **-10 °C** / Ambient temperature **+42 °C** - Superheat: 10K - Subcool: 3K.
(2) Sound pressure level at 10 m given as an indication only.

DUO MR | Dimensions



DUO MR ...		30	45	57	76	114
L	mm	1200	1200	1200	1200	1260
P	mm	530	530	610	600	600
H	mm	1330	1330	1330	1286	1296

COMPACT

Octagon and Scroll compressor rack

HFC

MT **16** - **110** kW
LT **6** - **38** kW

PED 2014/68/UE

Modular rack to best meet the needs of your application, available with Scroll or Semi-Hermetic Octagon compressors.

Compact to save space.

MCONTROL DEVICES

1 LP general safety pressure switch
1 or 2 HP cartridge pressure switch(es) with automatic reset per compressor (according to standard EN 378-2: 2009).
2 pressure gages (LP+HP)
1 oil differential pressure switch per compressor for semi-hermetic piston models of compressor 4TC to 4NC.

OPTIONS	
	Safety pack
BPS	LP safety pressure switch per compressor.
HPG	HP general safety pressure switch.
	Regulation pack
BP1	LP pressure switch (automatic reset).
HPS	Additional HP pressure switches.
CDP	HP/LP pressure sensors signal 4-20 mA.
ALF	Height-adjustable float coolant level alarm.
ALR	Optoelectronic refrigerant level alarm.

FRAME

One-piece frame designed to avoid vibration problems.

OPTIONS	
PAV	Anti-vibration pads. KIT TO INSTALL
ARM	Electrical cabinet. CONTACT US

CONNECTION PACK

1 connecting valve on the suction, the delivery and the liquid outlet.

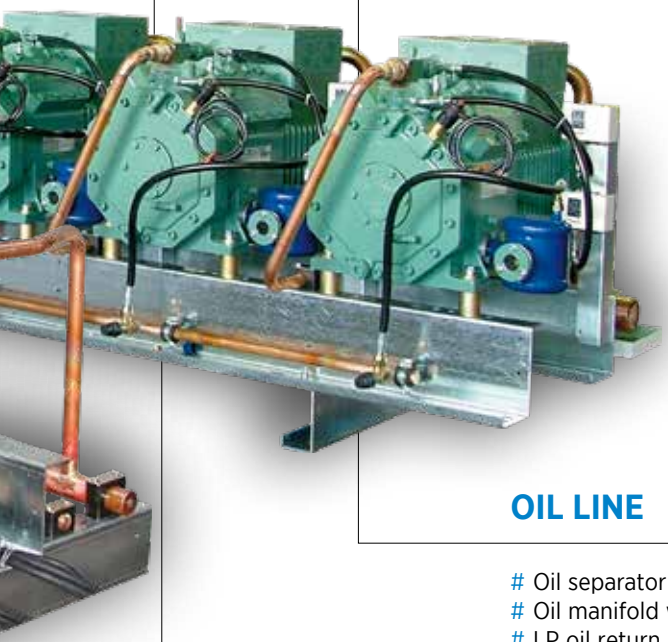
COMPRESSORS

Scroll technology (Copeland) or Octagon semi-hermetic piston technology (Bitzer).
Equipped with suction and delivery shut-off valves, crankcase heater and rigid suspension elements.
Cylinder head fan for semi-hermetic reciprocating models in negative application.

MANIFOLDS

Copper suction and delivery.
Polypropylene collar on the suction side and high temperature resistant polyamide on the delivery side.
A general filter unit on the suction side.

OPTIONS	
BDR	Condensate drain pan under suction manifolds.



Do you have a specific request?

Contact us to design the unit that meets your needs.

OIL LINE

Oil separator and receiver with high and low indicator.
Oil manifold with flexible connection at the ends.
LP oil return line with filter and indicator.
Float oil level regulator with shut-off valve per compressor for SH and electronic for Scroll.
Degassing valve.

OPTIONS	
TXL	Electronic oil level controllers (Compact Octagon).

LIQUID STATION

Liquid station delivered separately.
2 inlet/outlet shut-off valves.
Liquid outlet equipped with a removable filter dryer box and an indicator.
Single or double safety valve (according to PED).

OPTIONS	
BAC	Liquid separator (only for semi-hermetic compressor).
RLS	Oversized liquid receiver.
SSD	Double safety valve with 3-way valve (for receivers < 120 litres).

COM 2(A)P(B) 4EES-4Y(C)

(A) Number of compressors
(B) **P** = Positive range - **N** = Negative range
(C) Compressor type

The COMPACT is available with HFCs. For more information, please consult our software.

COMPACT | Octagon — Positive range

		COM ...	2P 4EES-4Y	2P 4DES-5Y	2P 4CES-6Y	3P 4EES-4Y	3P 4DES-5Y	2P 4TES-9Y	4P 4EES-4Y	2P 4PES-12Y	3P 4CES-6Y
Power (1)	R449A	kW	**21,6**	**25,4**	**31,4**	**32,4**	**38,0**	**39,3**	**43,2**	**44,4**	**47,1**
Power consumption (1)		kW	**9,5**	**11,1**	**13,6**	**14,3**	**16,7**	**16,6**	**19,1**	**18,4**	**20,5**
Compressor		Nb	2	2	2	3	3	2	4	2	3
Max. current drawn		A	20	25	32	31	38	39	41	43	48
Receiver volume		l.	45	45	60	60	60	60	60	60	60
Connection pack standard option	Delivery	Ø	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8
	Suction	Ø	1"5/8	1"5/8	1"5/8	1"5/8	2"1/8	2"1/8	2"1/8	2"1/8	2"1/8
	Liquid	Ø	7/8"	7/8"	7/8"	7/8"	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8
Rack weight		kg	374	383	390	472	482	481	573	491	498
Receiver size	L	mm	666	666	666	666	666	666	666	666	666
	D	mm	402	402	402	402	402	402	402	402	402
	H	mm	1137	1137	1338	1338	1338	1338	1338	1338	1338
Receiver weight		kg	60	60	80	80	80	80	80	80	80

		COM ...	4P 4DES-5Y	2P 4NES-14Y	3P 4TES-9Y	4P 4CES-6Y	3P 4PES-12Y	4P 4TES-9Y	3P 4NES-14Y	4P 4PES-12Y	4P 4NES-14Y
Power (1)	R449A	kW	**50,7**	**53,4**	**58,9**	**62,8**	**66,7**	**78,6**	**80,2**	**88,9**	**106,9**
Power consumption (1)		kW	**22,2**	**22,3**	**24,9**	**27,3**	**27,5**	**33,2**	**33,4**	**36,7**	**44,5**
Compressor		Nb	4	2	3	4	3	4	3	4	4
Max. current drawn		A	50	52	59	64	65	78	77	86	103
Receiver volume		l.	60	60	60	60	120	120	120	120	120
Connection pack standard option	Delivery	Ø	1"3/8	1"3/8	1"3/8	1"3/8	1"3/8	1"5/8	1"5/8	1"5/8	1"5/8
	Suction	Ø	2"1/8	2"1/8	2"1/8	2"1/8	2"5/8	2"5/8	2"5/8	2"5/8	2"5/8
	Liquid	Ø	1"1/8	1"1/8	1"1/8	1"1/8	1"3/8	1"3/8	1"3/8	1"3/8	1"3/8
Rack weight		kg	589	504	637	608	656	794	670	815	823
Receiver size	L	mm	666	666	666	666	714	714	714	714	714
	D	mm	402	402	402	402	455	455	455	455	455
	H	mm	1338	1338	1338	1338	1834	1834	1834	1834	1834
Receiver weight		kg	80	80	80	80	120	120	120	120	120

(1) Evaporating temperature **-10 °C** / Ambient temperature **+45 °C** - Superheat: 10K - Subcool: 3K.

COM 2(A)P(B) 4EES-4Y(C)

(A) Number of compressors
(B) **P** = Positive range - **N** = Negative range
(C) Compressor type

> **The COMPACT is available with HFCs. For more information, please consult our software.**

COMPACT | Octagon — Negative range

			COM ...	2N 4EES-4Y	2N 4DES-5Y	2N 4CES-6Y	3N 4EES-4Y	2N 4TES-9Y	3N 4DES-5Y	2N 4PES-12Y	4N 4EES-4Y	3N 4CES-6Y
Power (1)	R449A	kW		**5,6**	**6,5**	**8,4**	**8,4**	**9,9**	**9,8**	**10,5**	**11,2**	**12,6**
Power consumption (1)		kW		**4,3**	**5,0**	**6,5**	**6,4**	**7,2**	**7,5**	**7,5**	**8,5**	**9,7**
Compressor		Nb		2	2	2	3	2	3	2	4	3
Max. current drawn		A		15	19	25	23	27	29	29	30	38
Receiver volume		l.		45	45	45	45	45	45	45	45	45
Connection pack standard option	Delivery	Ø		1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8
	Suction	Ø		1"3/8	1"3/8	1"5/8	1"5/8	1"5/8	1"5/8	1"5/8	1"5/8	1"5/8
	Liquid	Ø		5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"
Rack weight		kg		371	376	388	470	474	476	484	566	492
Receiver dimensions	L	mm		666	666	666	666	666	666	666	666	666
	D	mm		402	402	402	402	402	402	402	402	402
	H	mm		1137	1137	1137	1137	1137	1137	1137	1137	1137
Receiver weight		kg		60	60	60	60	60	60	60	60	60

			COM ...	2N 4NES-14Y	4N 4DES-5Y	3N 4TES-9Y	3N 4PES-12Y	4N 4CES-6Y	4N 4TES-9Y	3N 4NES-14Y	4N 4PES-12Y	4N 4NES-14Y
Power (1)	R449A	kW		**13,6**	**13,1**	**14,9**	**15,8**	**16,9**	**19,9**	**20,3**	**21,0**	**27,1**
Power consumption (1)		kW		**9,4**	**10,1**	**10,8**	**11,2**	**13,0**	**14,4**	**14,2**	**14,9**	**18,9**
Compressor		Nb		2	4	3	3	4	4	3	4	4
Max. current drawn		A		35	39	40	44	51	54	52	58	70
Receiver volume		l.		60	60	60	60	60	60	60	60	60
Connection pack standard option	Delivery	Ø		1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8
	Suction	Ø		2"1/8	2"1/8	2"1/8	2"1/8	2"1/8	2"1/8	2"1/8	2"5/8	2"5/8
	Liquid	Ø		7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	1"1/8	1"1/8
Rack weight		kg		490	577	624	634	597	769	646	796	805
Receiver size	L	mm		666	666	666	666	666	666	666	666	666
	D	mm		402	402	402	402	402	402	402	402	402
	H	mm		1338	1338	1338	1338	1338	1338	1338	1338	1338
Receiver weight		kg		80	80	80	80	80	80	80	80	80

(1) Evaporating temperature **-35 °C** / Ambient temperature **+40 °C** - Superheat: 10K - Subcool: 3K.

COM 2(A)P(B) ZB38(C)

(A) Number of compressors
(B) **P** = Positive range - **N** = Negative range
(C) Compressor type

> **The COMPACT is available with HFCs. For more information, please consult our software.**

COMPACT | Scroll — Positive range

			COM ...	2P ZB38	2P ZB45	2P ZB50	3P ZB38	2P ZB66	3P ZB45	3P ZB50	2P ZB76	2P ZB95	3P ZB66
Power (1)	R449A	kW		**16,7**	**19,6**	**23,0**	**25,1**	**28,7**	**29,4**	**34,5**	**34,0**	**41,4**	**43,0**
Power consumption (1)		kW		**7,7**	**8,8**	**10,5**	**11,6**	**13,2**	**13,1**	**15,7**	**15,1**	**19,7**	**19,7**
Compressor		Nb		2	2	2	3	2	3	3	2	2	3
Max. current drawn		A		22	22	25	33	31	34	38	36	46	47
Receiver volume		l.		45	45	45	45	45	45	60	60	60	60
Connection pack standard option	Delivery	Ø		1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8
	Suction	Ø		1"5/8	1"5/8	1"5/8	1"5/8	1"5/8	1"5/8	2"1/8	2"1/8	2"1/8	2"1/8
	Liquid	Ø		7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	1"1/8	7/8"	1"1/8	1"1/8
Rack weight		kg		287	292	328	340	334	346	403	338	348	408
Receiver size	L	mm		666	666	666	666	666	666	666	666	666	666
	D	mm		402	402	402	402	402	402	402	402	402	402
	H	mm		1137	1137	1137	1137	1137	1137	1338	1338	1338	1338
Receiver weight		kg		60	60	60	60	60	60	80	80	80	80

			COM ...	4P ZB50	2P ZB114	3P ZB76	4P ZB66	3P ZB95	4P ZB76	3P ZB114	4P ZB95	4P ZB114
Power (1)	R449A	kW		**46,0**	**49,0**	**50,9**	**57,4**	**62,1**	**67,9**	**73,4**	**82,8**	**97,9**
Power consumption (1)		kW		**21,0**	**23,4**	**22,7**	**26,3**	**29,6**	**30,3**	**35,1**	**39,5**	**46,9**
Compressor		Nb		4	2	3	4	3	4	3	4	4
Max. current drawn		A		50	58	53	62	70	71	87	93	115
Receiver volume		l.		60	60	60	60	60	60	120	120	120
Connection pack standard option	Delivery	Ø		1"1/8	1"3/8	1"3/8	1"3/8	1"3/8	1"3/8	1"3/8	1"5/8	1"5/8
	Suction	Ø		2"1/8	2"1/8	2"1/8	2"1/8	2"5/8	2"5/8	2"5/8	2"5/8	2"5/8
	Liquid	Ø		1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"3/8	1"3/8	1"3/8
Rack weight		kg		474	361	425	491	438	506	448	526	533
Receiver size	L	mm		666	666	666	666	666	666	714	714	714
	D	mm		402	402	402	402	402	402	455	455	455
	H	mm		1338	1338	1338	1338	1338	1338	1834	1834	1834
Receiver weight		kg		80	80	80	80	80	80	120	120	120

(1) Evaporating temperature **-10 °C** / Ambient temperature **+45 °C** - Superheat: 10K - Subcool: 3K.

COM 2(A)N(B) ZF15(C)

(A) Number of compressors
(B) **P** = Positive range - **N** = Negative range
(C) Compressor type

> **The COMPACT is available with HFCs. For more information, please consult our software.**

COMPACT | Scroll — Negative range

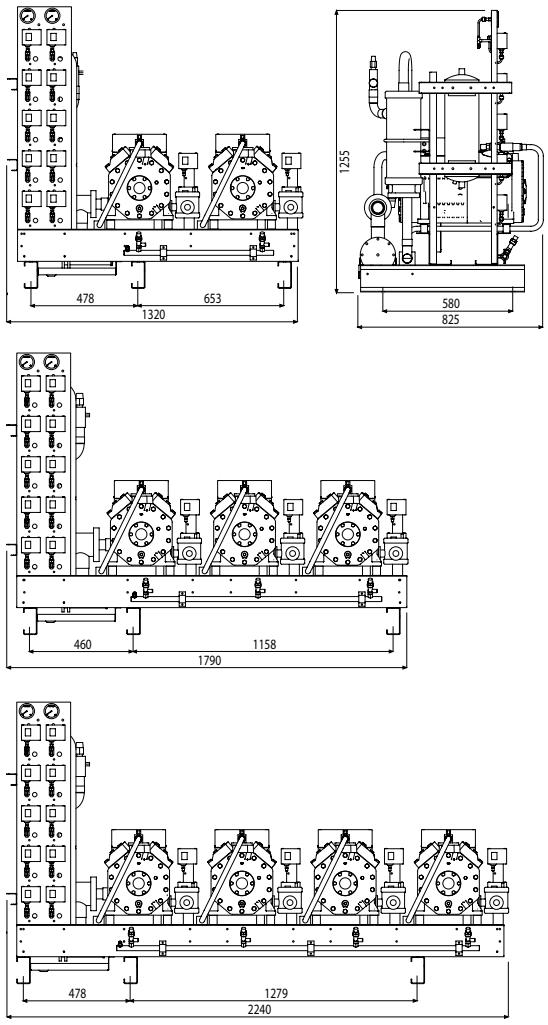
			COM ...	2N ZF15	3N ZF15	2N ZF25	2N ZF34	3N ZF25	2N ZF41	4N ZF25
Power (1)	R449A	kW		**5,5**	**8,2**	**9,0**	**11,7**	**13,4**	**14,3**	**17,9**
Power consumption (1)		kW		**5,5**	**8,3**	**7,5**	**10,2**	**11,3**	**11,6**	**15,1**
Compressor		Nb		2	3	2	2	3	2	4
Max. current drawn		A		16	24	25	32	38	38	50
Receiver volume		l.		45	45	45	45	45	60	60
Connection pack standard option	Delivery	Ø		1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8
	Suction	Ø		1"3/8	1"5/8	1"5/8	2"1/8	2"1/8	2"1/8	2"1/8
	Liquid	Ø		5/8"	5/8"	5/8"	5/8"	5/8"	7/8"	7/8"
Rack weight		kg		289	344	414	402	530	424	641
Receiver size	L	mm		666	666	666	666	666	666	666
	D	mm		402	402	402	402	402	402	402
	H	mm		1137	1137	1137	1137	1137	1338	1338
Receiver weight		kg		60	60	60	60	60	80	80

			COM ...	2N ZF49	3N ZF34	3N ZF41	4N ZF34	3N ZF49	4N ZF41	4N ZF49
Power (1)	R449A	kW		**17,6**	**17,6**	**21,5**	**23,5**	**26,5**	**28,6**	**35,3**
Power consumption (1)		kW		**15,3**	**15,4**	**17,4**	**20,5**	**23,0**	**23,2**	**30,6**
Compressor		Nb		2	3	3	4	3	4	4
Max. current drawn		A		49	48	57	64	73	76	98
Receiver volume		l.		60	60	60	60	60	60	120
Connection pack standard option	Delivery	Ø		1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"3/8
	Suction	Ø		2"1/8	2"1/8	2"5/8	2"5/8	2"5/8	2"5/8	2"5/8
	Liquid	Ø		7/8"	7/8"	7/8"	7/8"	7/8"	1"1/8	1"1/8
Rack weight		kg		443	510	542	617	575	661	702
Receiver size	L	mm		666	666	666	666	666	666	714
	D	mm		402	402	402	402	402	402	455
	H	mm		1338	1338	1338	1338	1338	1338	1834
Receiver weight		kg		80	80	80	80	80	80	120

(1) Evaporating temperature **-35 °C** / Ambient temperature **+40 °C** - Superheat: 10K - Subcool: 3K.

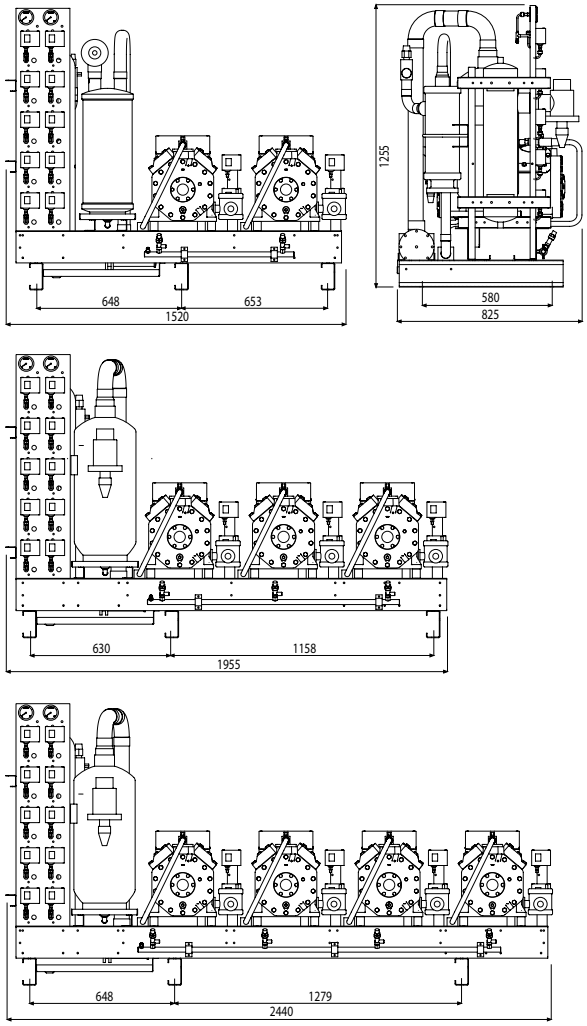
COMPACT | Octagon

without BAC option

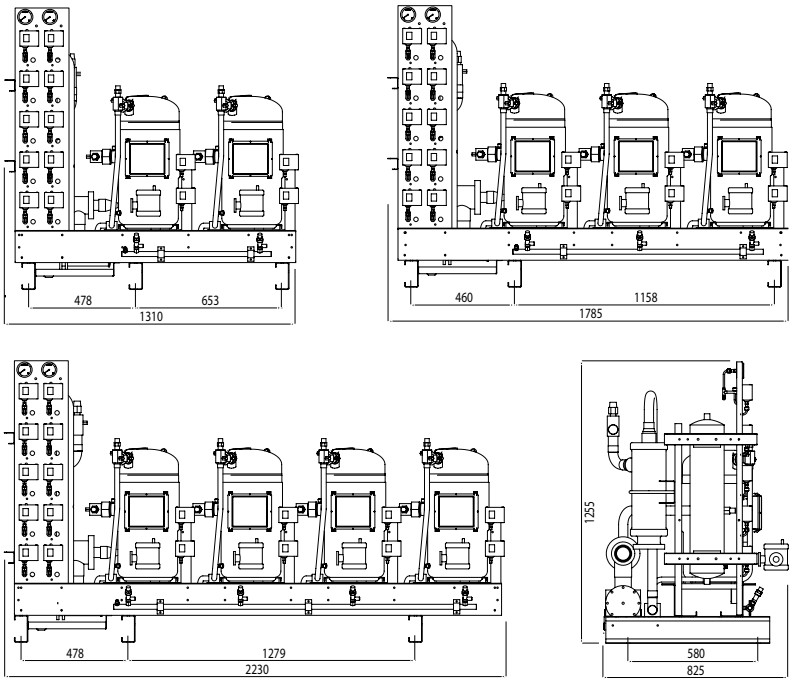


COMPACT | Octagon

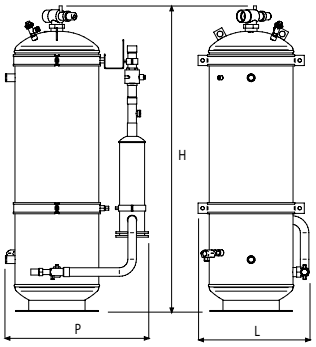
with BAC option



COMPACT | Scroll



Liquid station



		45 l.	60 l.	120 l.
L	**mm**	666	666	714
D	**mm**	402	402	455
H	**mm**	1137	1338	1834
Weight	**kg**	60	80	120

MOPSH | MOSC

Semi-hermetic and Scroll compressor rack

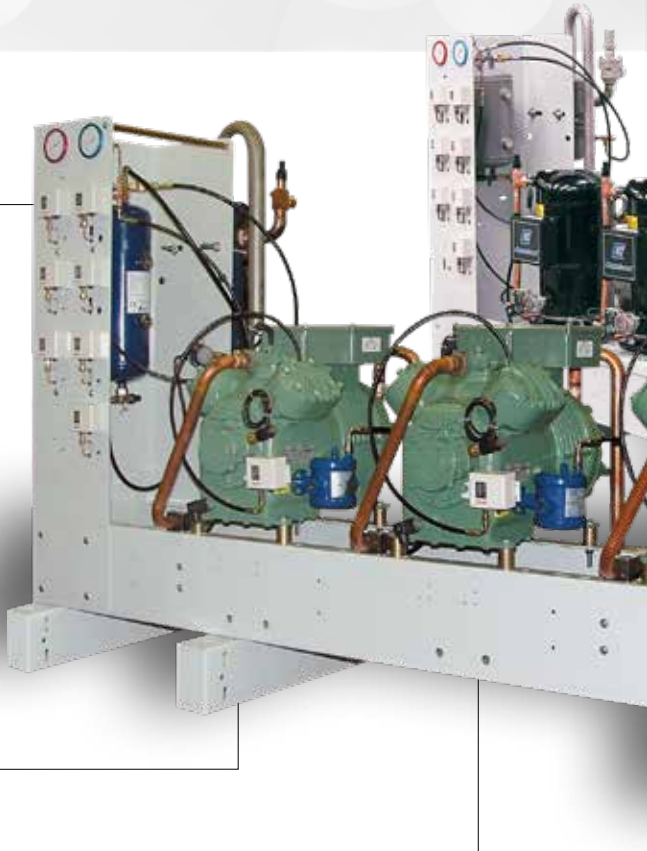
HFC

MT **57** - **385** kW
LT **23** - **120** kW

DESP 2014/68/UE

Modular rack to best meet the needs of your application, available with Scroll (Copeland), Semi-Hermetic (Copeland or Bitzer) compressors.

Compact design (width from 800 to 1,000 mm) that fits perfectly in restricted and hard-to-access areas.



CONTROL AND SAFETY DEVICES

1 LP general safety pressure switch
1 or 2 HP cartridge pressure switch(s) with automatic reset per compressor.
2 pressure gages (LP + HP).
Differential oil pressure switch per compressor. MOPSH

OPTIONS	
ALF	Height-adjustable float coolant level alarm.
ALR	Optoelectronic refrigerant level alarm.
BAC	Liquid separator. MOPSH
VFA	Suction valve and filter on each compressor. MOPSH
SIL	Delivery muffler (1 per compressor). MOPSH

LIQUID STATION

Liquid station delivered separately.
Inlet/outlet shut-off valves.
Liquid outlet equipped with a removable filter dryer unit ≤ 150 l. and 2 parallel units with shut-off valves > 150 l.
Indicator and general shut-off valve on outlet.
Single or double safety valve (according to PED).

OPTIONS	
RLS	Oversized liquid receiver.
SSD	Double safety valve with 3-way valve (for receivers < 120 litres).
BD1	Single liquid drier bypass (1 filter unit) in operation.

MANIFOLDS

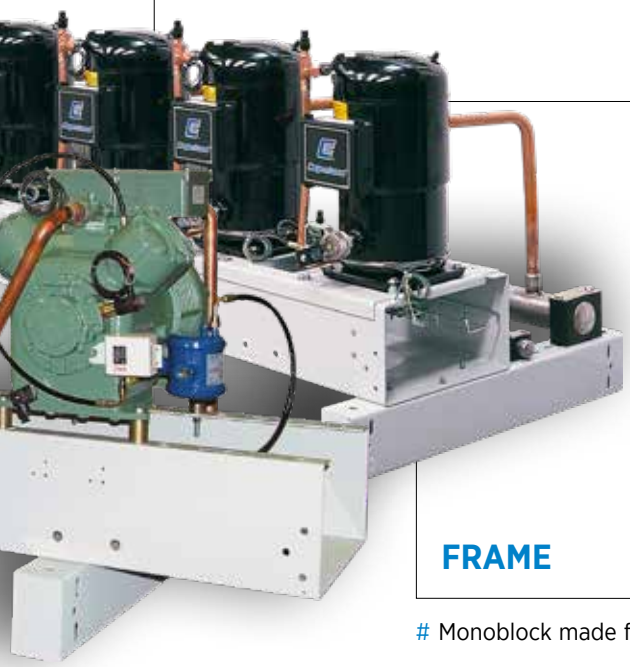
Suction and delivery all stainless steel 304 L.
One Schrader pressure port with shut-off valve per manifold (mano pressure switch connection, etc.).
Polypropylene collars on the suction and high temperature resistant polyamide on the delivery.
A general suction filter unit with removable cartridge up to 186 kW cooling capacity in positive and 47 kW in negative. One unit per compressor on top. MOPSH
A removable cartridge filter unit mounted on the suction manifold. MOSC

OPTION	
BDR	Condensate drain pan under suction manifolds.

COMPRESSORS

With Rotalock valves on suction and delivery + cylinder head fan in negative, crankcase heater and oil pump. MOPSH
Equipped with Rotalock suction and delivery valves, crankcase heaters HP cartridge safety pressure switches and rigid suspension elements. MOSC
Negative models also include an injection system with different configurations depending on the compressors: shut-off valve, filter, solenoid valve and capillary. MOSC

OPTION	
VAR	Power variation. CONTACT US



OIL LINE

Removable oil separator and oil receiver with high/low indicators and shut-off valves.
Oil manifold with flexible connections at the ends.
LP oil return line with filter, indicator and shut-off valve per compressor.
Degassing valve.
Float level controllers. MOPSH

OPTIONS	
TXL	Electronic oil level controllers. MOPSH
EVH	Oil return solenoid valve.

FRAME

Monoblock made from painted folded U-profile sheet steel, thickness 4 mm.

OPTIONS	
CCB	Terminal block control wiring.
ARM	Electrical cabinet. CONTACT US
CAR	Casing (with integrated electrical cabinet). CONTACT US
PAV	Anti-vibration pads. KIT TO INSTALL
ANM	Rack handling rings (delivered not assembled with the rack). KIT TO INSTALL

PACK

OPTIONS	
	Connection pack
PR1	Customer connection valves (1 delivery, 1 suction, 1 liquid).
PR2	Customer connection valves (1 delivery, 2 suction, 2 liquid).
PR3	Customer connection valves (1 delivery, 3 suction, 3 liquid).
	Safety pack
BPS	LP safety pressure switch per compressor.
HPG	HP general pressure switch (automatic).
	Regulation pack
BP1	LP pressure switch (automatic) per compressor.
HPS	Additional HP pressure switches.
CDP	HP/LP pressure sensors signal 4-20 mA.

Do you have a specific request?

Contact us to design the unit that meets your needs.

MOPSH(A) 2(B)P(C) 4JE-15Y(D)

(A) **MOPSH** = Semi-hermetic compressor - **MOSC** = Scroll compressor
(B) Number of compressors
(C) **P** = Positive range - **N** = Negative range
(D) Compressor type

The MOPSH is available with HFCs. For more information, please consult our software.

MOPSH | Semi-Hermetic — Positive range

MOPSH ...			2P 4JE-15Y	2P 4HE-18Y	2P 4GE-23Y	3P 4JE-15Y	3P 4HE-18Y	4P 4JE-15Y	3P 4GE-23Y	4P 4HE-18Y	3P 4FE-28Y
Power (1)	R449A	kW	**62,3**	**73,1**	**84,9**	**93,4**	**109,6**	**124,5**	**127,3**	**146,2**	**151,2**
Power consumption (1)		kW	**25,0**	**30,0**	**35,6**	**37,4**	**45,0**	**49,9**	**53,4**	**59,9**	**62,4**
Compressor		Nb	2	2	2	3	3	4	3	4	3
Max. current drawn		A	58,6	69,8	83,3	87,9	104,7	117,2	125,0	139,6	149,5
Receiver volume		l.	60	60	120	150	150	150	150	150	250
Connection pack standard option	Delivery	Ø	1"3/8	1"5/8	1"5/8	1"5/8	1"5/8	2"1/8	2"1/8	2"1/8	2"1/8
	Suction	Ø	2"5/8	2"5/8	3"1/8	3"1/8	3"1/8	2x2"5/8	2x2"5/8	2x2"5/8	2x2"5/8
	Liquid	Ø	1"1/8	1"1/8	1"3/8	1"3/8	1"3/8	2x1"3/8	2x1"3/8	2x1"3/8	2x1"3/8
Rack dimensions	L	mm	1915	1915	1915	2515	2515	3115	2515	3115	2515
	D	mm	800	800	800	800	1000	1000	1000	1000	1000
	H	mm	1500	1500	1500	1500	1500	1450	1450	1450	1450
	A	mm	655	655	655	755	755	755	755	755	755
Weight		kg	610	620	630	850	860	1100	900	1140	960

MOPSH ...			4P 4GE-23Y	3P 6GE-34Y	4P 4FE-28Y	3P 6FE-44Y	5P 4FE-28Y	4P 6GE-34Y	4P 6FE-44Y	5P 6GE-34Y	5P 6FE-44Y
Power (1)	R449A	kW	**169,8**	**189,3**	**201,6**	**226,8**	**252,0**	**252,5**	**302,4**	**315,6**	**378,1**
Power consumption (1)		kW	**71,2**	**78,8**	**83,2**	**94,2**	**103,9**	**105,1**	**125,6**	**131,3**	**157,1**
Compressor		Nb	4	3	4	3	5	4	4	5	5
Max. current drawn		A	166,7	186,9	199,3	222,9	249,1	249,2	297,2	311,5	371,6
Receiver volume		l.	250	250	250	250	350	250	350	350	350
Connection pack standard option	Delivery	Ø	2"1/8	2"5/8	2"5/8	2"5/8	3"1/8	3"1/8	3"1/8	3"1/8	3"1/8
	Suction	Ø	2x2"5/8	2x3"1/8	2x3"1/8	2x3"1/8	3x3"1/8	3x3"1/8	3x3"1/8	3x3"1/8	3x3"1/8
	Liquid	Ø	2x1"3/8	2x1"3/8	2x1"5/8	2x1"5/8	3x1"3/8	3x1"3/8	3x1"3/8	3x1"3/8	3x1"5/8
Rack dimensions	L	mm	3115	2515	3115	2515	3715	3115	3115	3715	3715
	D	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000
	H	mm	1450	1450	1580	1580	1580	1580	1580	1580	1780
	A	mm	755	755	755	755	755	755	755	755	755
Weight		kg	1160	1020	1240	1080	1540	1380	1430	1650	1720

(1) Evaporating temperature **-10 °C** / Ambient temperature **+45 °C** - Superheat: 10K - Subcool: 3K.

MOPSH(A) 2(B)N(C) / 4HE-18Y(D)

(A) **MOPSH** = Semi-hermetic compressor - **MOSC** = Scroll compressor
(B) Number of compressors
(C) **P** = Positive range - **N** = Negative range
(D) Compressor type

The MOPSH is available with HFCs. For more information, please consult our software.

MOPSH | Semi-Hermetic — Negative range

			MOPSH ...	2N 4HE-18Y	2N 4GE-23Y	2N 4FE-28Y	3N 4HE-18Y	3N 4GE-23Y	2N 6GE-34Y	4N 4HE-18Y	2N 6FE-44Y	3N 4FE-28Y
Power (1)	R449A	kW		**20,0**	**24,2**	**29,0**	**30,1**	**36,4**	**37,4**	**40,1**	**43,4**	**43,4**
Power consumption (1)		kW		**14,4**	**17,4**	**20,7**	**21,6**	**26,1**	**25,1**	**28,8**	**31,7**	**31,0**
Compressor		Nb		2	2	2	3	3	2	4	2	3
Max. current drawn		A		49,1	57,7	72,8	73,6	86,5	90,4	98,2	112,4	109,2
Receiver volume		l.		60	60	120	120	150	120	150	150	150
Connection pack standard option	Delivery	Ø		1"3/8	1"3/8	1"3/8	1"3/8	1"3/8	1"3/8	1"3/8	1"3/8	1"5/8
	Suction	Ø		2"5/8	2"5/8	2"5/8	2"5/8	2x2"5/8	2x2"1/8	2x2"5/8	2x2"5/8	2x2"5/8
	Liquid	Ø		7/8"	1"1/8	1"3/8	1"3/8	2x7/8"	2x7/8"	2x7/8"	2x7/8"	2x7/8"
Rack dimensions	L	mm		1915	1915	1915	2515	2515	1915	3115	1915	2515
	D	mm		800	800	800	800	800	800	800	800	1000
	H	mm		1500	1500	1500	1500	1450	1450	1450	1450	1450
	A	mm		655	655	655	655	755	755	755	755	755
Weight		kg		600	610	640	820	840	690	1060	720	930

			MOPSH ...	3N 6GE-34Y	4N 4FE-28Y	3N 6FE-44Y	5N 4FE-28Y	4N 6GE-34Y	4N 6FE-44Y	5N 6GE-34Y	5N 6FE-44Y
Power (1)	R449A	kW		**56,0**	**57,9**	**65,2**	**72,4**	**74,7**	**86,9**	**93,4**	**108,6**
Power consumption (1)		kW		**37,7**	**41,4**	**47,6**	**51,7**	**50,3**	**63,4**	**62,9**	**79,3**
Compressor		Nb		3	4	3	5	4	4	5	5
Max. current drawn		A		135,6	145,6	168,6	182,0	180,8	224,8	226,0	281,0
Receiver volume		l.		150	250	250	250	250	250	350	350
Connection pack standard option	Delivery	Ø		1"5/8	1"5/8	1"5/8	1"5/8	1"5/8	2"1/8	2"1/8	2"1/8
	Suction	Ø		2x2"5/8	2x3"1/8	2x3"1/8	3x2"5/8	2x3"1/8	3x2"5/8	3x3"1/8	3x3"1/8
	Liquid	Ø		2x1"1/8	2x1"1/8	2x1"1/8	3x1"1/8	2x1"3/8	3x1"1/8	3x1"1/8	3x1"1/8
Rack dimensions	L	mm		2515	3115	2515	3715	3115	3115	3715	3715
	D	mm		1000	1000	1000	1000	1000	1000	1000	1000
	H	mm		1580	1580	1580	1580	1580	1580	1580	1780
	A	mm		755	755	755	755	755	755	755	755
Weight		kg		1000	1200	1050	1470	1290	1370	1610	1680

(1) Evaporating temperature **-35 °C** / Ambient temperature **+40 °C** - Superheat: 10K - Subcool: 3K.

MOSC(A) 5(B)P(C) ZB50(D)

(A) **MOPSH** = Semi-hermetic compressor - **MOSC** = Scroll compressor
(B) Number of compressors
(C) **P** = Positive range - **N** = Negative range
(D) Compressor type

The MOSC is available with HFCs. For more information, please consult our software.

MOSC | Scroll — Positive range

			MOSC ...	5P ZB50	5P ZB76	6P ZB76	5P ZB95	5P ZB114	6P ZB95	6P ZB114
Power (1)	R449A	kW		**57,5**	**84,9**	**101,9**	**103,5**	**122,4**	**124,2**	**146,9**
Power consumption (1)		kW		**26,2**	**37,9**	**45,4**	**49,4**	**58,6**	**59,2**	**70,3**
Compressor		Nb		5	5	6	5	5	6	6
Max. current drawn		A		73	102	122	141	167	169	200
Receiver volume		l.		60	120	120	120	150	150	150
Connection pack standard option	Delivery	Ø		1"5/8	1"5/8	2"1/8	2"1/8	2"1/8	2"1/8	2"5/8
	Suction	Ø		2"5/8	3"1/8	3"1/8	3"1/8	3"1/8	4"1/8	4"1/8
	Liquid	Ø		1"1/8	1"3/8	1"3/8	1"3/8	1"5/8	1"5/8	1"5/8
Rack weight		kg		3115	3115	3715	3115	3115	3715	3715
Receiver size	L	mm		800	800	800	1000	1000	1000	1000
	D	mm		1500	1500	1500	1500	1500	1500	1500
	H	mm		655	655	755	755	755	755	755
Receiver weight		kg		820	820	980	890	930	1040	1100

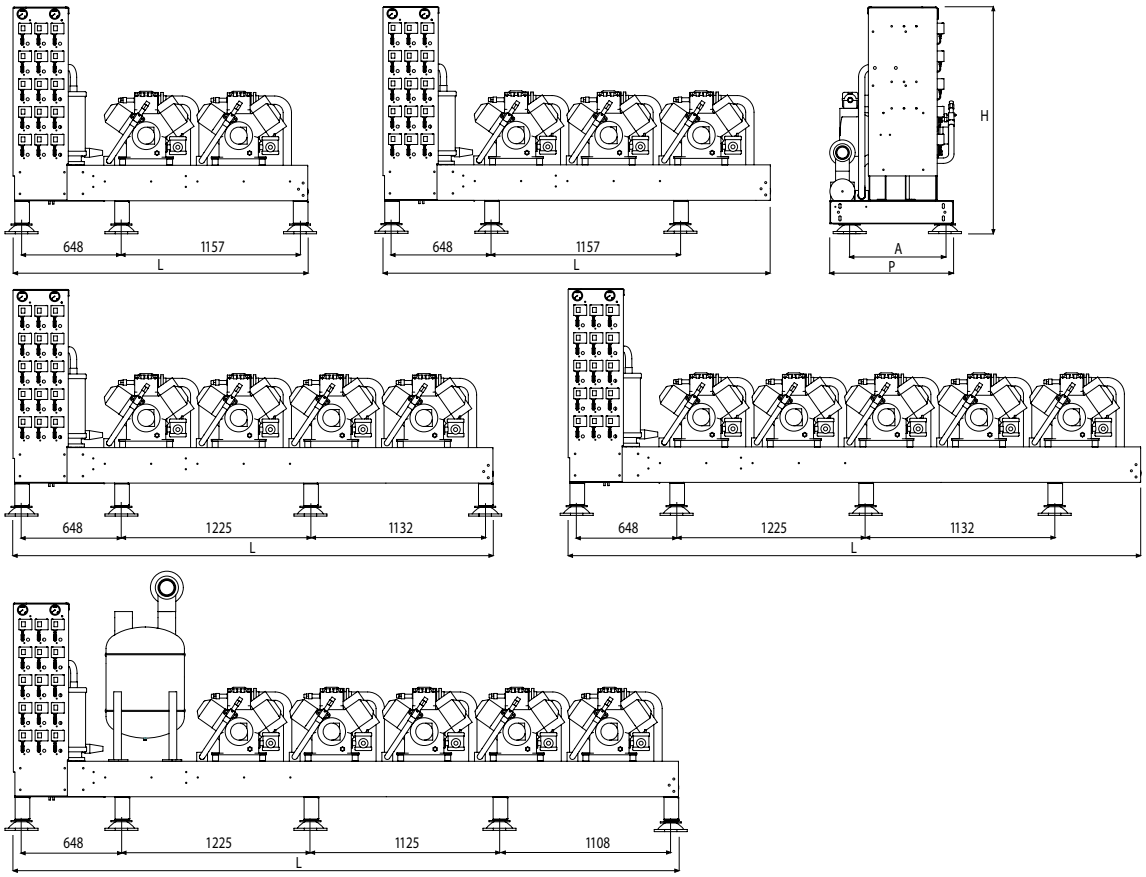
(1) Evaporating temperature **-10 °C** / Ambient temperature **+45 °C** - Superheat: 10K - Subcool: 3K.

MOSC | Scroll — Negative range

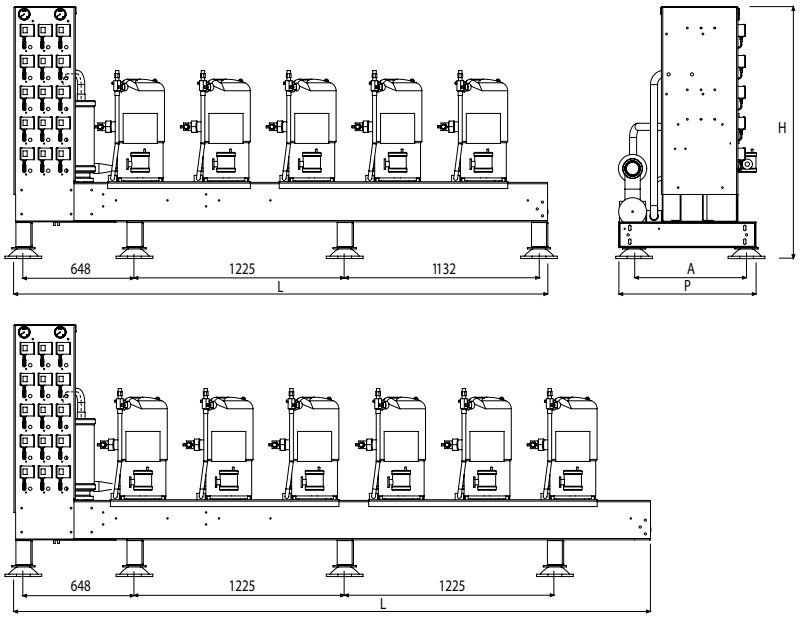
			MOSC ...	5N ZF25	5N ZF34	6N ZF34	5N ZF41	6N ZF41	5N ZF49	6N ZF49
Power (1)	R449A	kW		**22,4**	**29,4**	**35,2**	**35,8**	**42,9**	**44,1**	**52,9**
Power consumption (1)		kW		**18,9**	**25,6**	**30,7**	**29,1**	**34,9**	**38,3**	**45,9**
Compressor		Nb		5	5	6	5	6	5	6
Max. current drawn		A		81	112	134	126	151	153	184
Receiver volume		l.		60	60	120	150	150	150	150
Connection pack standard option	Delivery	Ø		1"3/8	1"3/8	1"3/8	1"3/8	1"5/8	1"3/8	1"5/8
	Suction	Ø		2"5/8	2"5/8	3"1/8	3"1/8	3"1/8	3"1/8	4"1/8
	Liquid	Ø		1"1/8	1"1/8	1"3/8	1"3/8	1"3/8	1"3/8	1"5/8
Rack weight		kg		3115	3115	3715	3115	3715	3115	3715
Receiver size	L	mm		800	800	800	800	800	800	1000
	D	mm		1500	1500	1500	1500	1500	1500	1500
	H	mm		655	655	755	755	755	755	755
Receiver weight		kg		820	820	980	890	1040	930	1100

(1) Evaporating temperature **-35 °C** / Ambient temperature **+40 °C** - Superheat: 10K - Subcool: 3K.

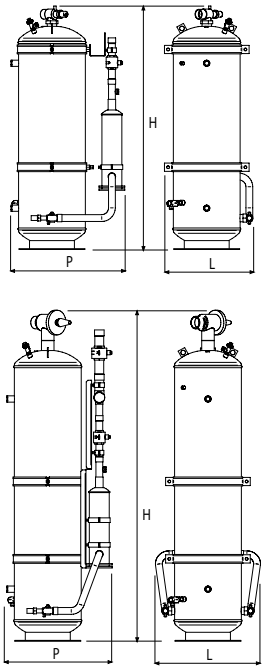
MOPSH | Semi-Hermetic



MOSC | Scroll



Liquid station



		60 l.	120 l.	150 l.	250 l.	350 l.
L'	**mm**	666	714	790	739	993
P'	**mm**	402	455	538	638	856
H'	**mm**	1366	1834	1605	2010	1942
Weight	**kg**	90	130	150	250	290

NOTES

MAKE YOUR SELECTIONS
INDEPENDENTLY

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