

# Pricelist 2019-2020 Refrigeration



Technical information for Refrigeration products

A woman with curly hair, wearing a blue cardigan and jeans, is crouching next to a large glass display case in a store. She is looking at the contents of the case, which appear to be packaged goods. The case is part of a long row of similar units. The background shows a tiled floor and a ceiling with recessed lighting.

Daikin is a strong challenger in the refrigeration market. We can create the ideal solution for each customer's specific situation. As our products contain the latest technologies we ensure the highest energy efficiency. Our units are rigorously tested in order to provide you reliable operation.

With the acquisition of Zanotti and Tewis, we expand our refrigeration business providing a full product line for all aspects in the cold chain including natural refrigerant solutions with CO<sub>2</sub>.

# Table of contents

<b>Why choose Daikin Refrigeration?</b>	<b>4</b>	<b>Zanotti Refrigeration Range</b>	<b>52</b>
Tools & platforms	11	Correction factors & selection tools	56
Ecodesign for refrigeration	12	Monoblocks	66
Why Maintenance	16	Split units	72
		Wine storage units	78
<b>NEW</b> <b>Tewis Refrigeration Range</b>	<b>18</b>	CU Series - condensing units	82
FULL CO <sub>2</sub> range	20	CC Series - multi compressor rack units	88
Compressor packs & racks	24	CM Series - multi compressor condensing units	92
CO <sub>2</sub> condensing units	30	Options & Accessories	96
		Evaporators range	99
<b>Daikin Refrigeration Range</b>	<b>32</b>	Other product ranges	100
ZEAS/ Mini-ZEAS condensing unit range	34	Capacity selection tables for condensing unit range	104
Conveni-Pack	39		
Booster	43	<b>Daikin Service</b>	<b>120</b>
Accessories	44	Commissioning	121
JEHCCU & JEHSCU condensing units	46	Maintenance	122
		E-Parts	123
		Service Academy	123
<b>F-Gas Regulation</b>		<b>Terms and Conditions</b>	<b>124</b>

For non-pre-filled devices: the functioning relies on fluorinated greenhouse gases.

For complete / partial pre-filled devices: contains fluorinated greenhouse gases.



Inverter technology



Scroll compressor



Reciprocating compressor



Swing compressor

For latest data, please consult [my.daikin.eu](http://my.daikin.eu)

## NOTE:

All prices are list prices, excl. VAT and valid from 1. April 2019 till 31. March 2020.

All prior pricelists are not valid anymore. The Daikin Commercial Terms and Conditions apply (see last page or <https://www.daikin-ce.com/t&c>).

We reserve the right for printing errors and model changes.

Drawings and pictures show specific configurations; technical data and refrigeration capacity is given based on different conditions and for certain refrigerants and could be different. Please note that it is necessary to use technical manuals and design software for technical selection of equipment!

For any questions and support to select the right equipment, as well as for more information about Ecodesign conditions and regulation (see details on pages 12-15), please contact your local Daikin sales office!



## Refrigeration

### Why choose Daikin refrigeration?

We have over 100 years of experience in the refrigeration business.

- We can meet all refrigeration needs from farm to fork, thanks to our wide range of refrigeration products.
- Innovative and reliable own technology and expertise on refrigerants, controls and compressors!
- Your advisor for solutions to meet your needs in line with legislation (F-gas regulation, Eco design,...) and with focus on reliability, safety, Total Equivalent Warming impact and running cost.

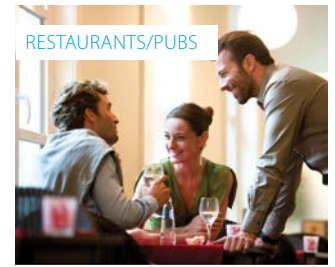
### Benefits for the installer/consultant

- › Plug and play solutions through monobloc and bi-bloc systems
- › Pre-charged and factory-tested
- › Compact design for restricted installation space
- › Shorter delivery time for Conveni-Pack and ZEAS as they are manufactured in Europe
- › Easy and intuitive selection of outdoor condensing units with Refrigeration Xpress
- › Wide range to match most refrigeration needs according to F-gas Regulation

### Benefits for the end user

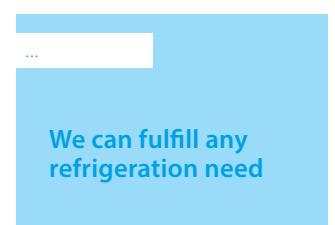
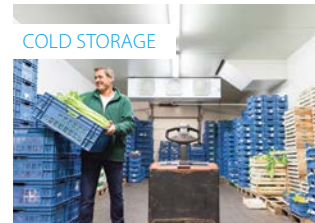
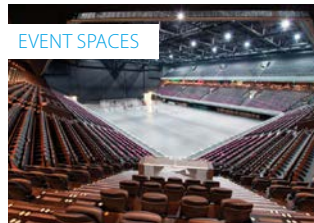
- › High efficiency technology for high ROI
- › Heat recovery technology on Conveni-Pack
- › Proven reliability and high performance
- › Ideal for urban applications
- › Contributing to better environment thanks to low total equivalent warming impact

# Controlled temperatures throughout the whole supply chain



# We can meet all refrigeration needs from farm to fork

Our extended product line-up is able to provide solutions for:

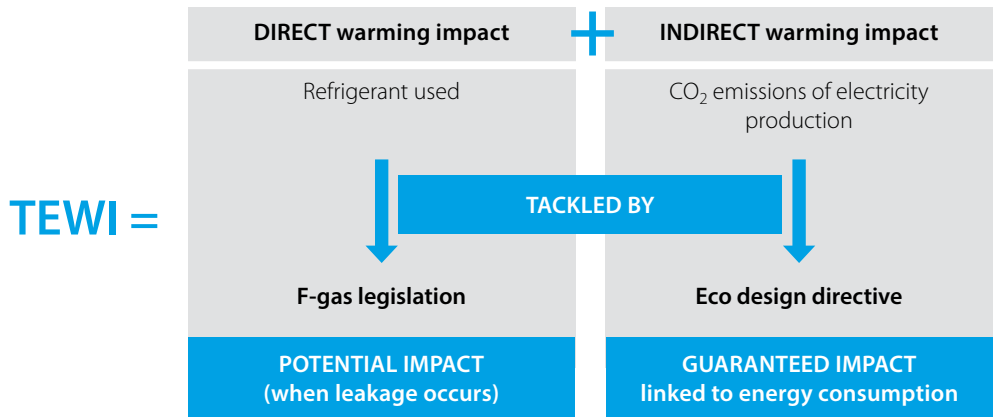


# Meeting customer needs!

Depending on type of application, location and customers interest/values, the optimal refrigeration solution for the customer can potentially be different! **Thanks to our wide product portfolio, Daikin can offer what a customer really needs!**

The DNA of our advice is:

- ✓ Safety and Reliability
- ✓ Reducing the Total Equivalent Warming Impact (TEWI)



Reduction of CO<sub>2</sub> emissions is one of the main priorities for the future. A refrigeration plant’s global warming effect is the combination of the possible refrigerant losses (Direct warming impact) and the CO<sub>2</sub> emissions caused by electricity production (Indirect warming impact). Country per country situation is different, however on average in Europe CO<sub>2</sub> release at energy production is quite high (average 0,45kg/kwh of Electrical Energy)! Due to this, there is a significant greenhouse effect over the lifetime of the refrigeration plant and efficiency is thus one of the crucial focus points in reducing TEWI! When various refrigeration solutions are being compared it is thus important to take into account both aspects as in some cases optimizing the direct warming impact (eg: changing refrigerant) will have an opposite effect on the indirect warming impact!

- ✓ Reducing your running cost

Through focus on reliability & quality, through extensive testing on each product, and energy efficiency our aim is to reduce your operational cost to the absolute minimum!





# Daikin's Quality Philosophy

Each and every Daikin branded unit has already run in factory, avoiding dead on arrival.

Daikin is committed to providing the most efficient and safe solutions to meet all of your refrigeration needs, today and in the future.

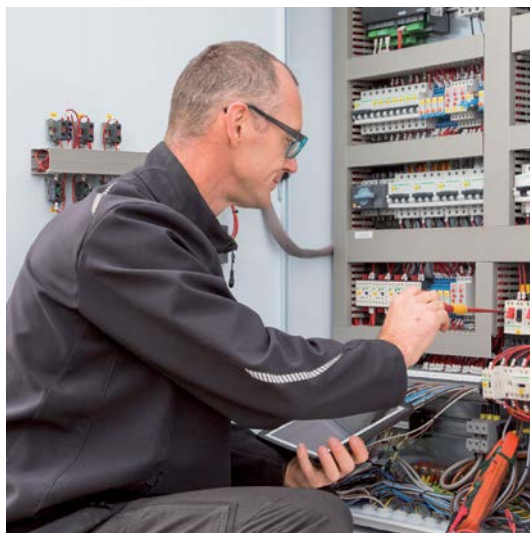
We are aware of our responsibility to protect the environment and our policies and practices keep environmental sustainability at the heart of everything we do. We conduct our business in accordance with green principles, because it makes economical as well as ecological sense.

Daikin Europe N.V. continually adapts its environmental policy to the changing global, European and local legislative frameworks. It stimulates and promotes the strict application of all relevant legislation and formulates recommendations to facilitate implementation.

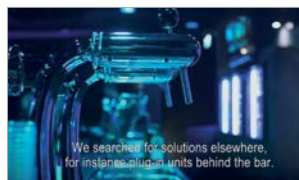
Tests during development and during production, to evaluate the performance of our products so that they meet the envisioned capacities, energy efficiency and reliability, is the foundation of our quality philosophy! Each and every Daikin branded unit leaving production

line has been rigorously tested from design stage (eg: vibration test) up to final production (each and every unit has a leakage test, electrical test and a running test)! As units can be exposed to severe weather conditions during the lifetime of the equipment, they are foreseen with anti-corrosion treatments and resistant casing to ensure a long life!

Our newest members of the group, Zanotti, Tewis and Hubbard, already have a long experience on the market meeting high quality standards. Gradually, Daikin's long life experience echoes into Zanotti, Tewis and Hubbard products

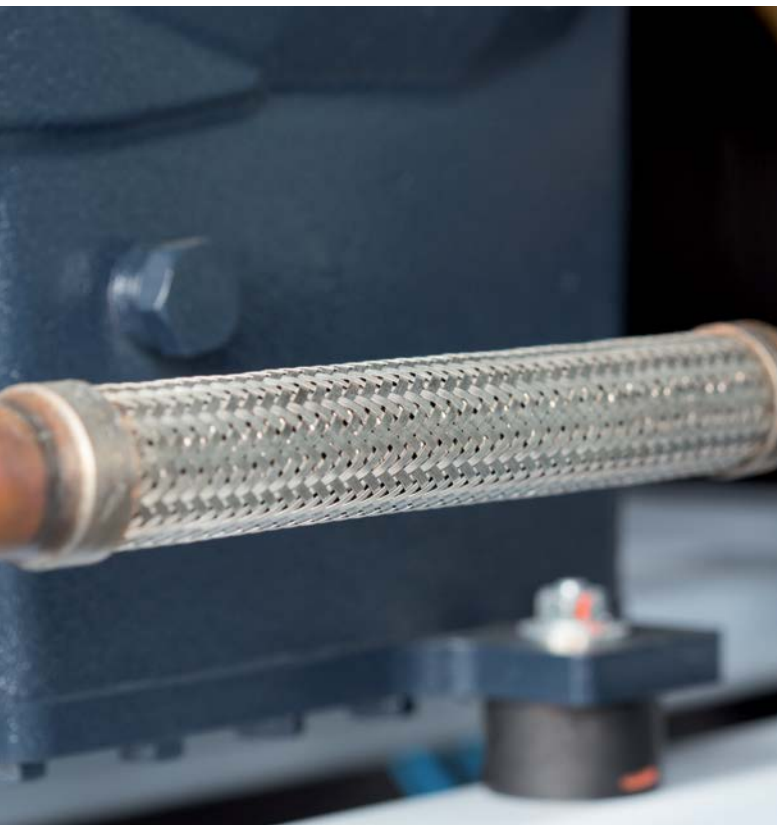


See how transportation is simulated and vibrations are tested on our shaker (search: vibration ZEAS)

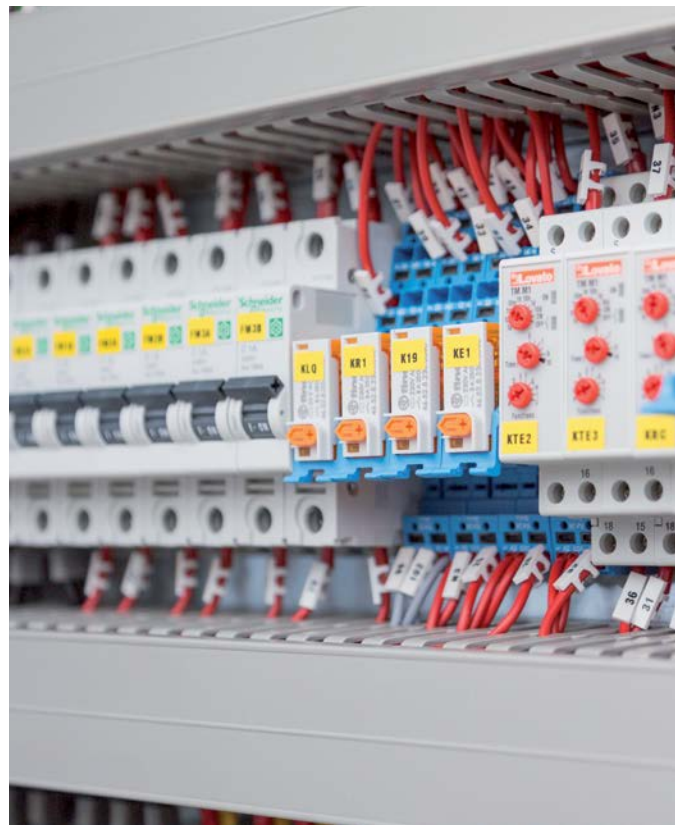


**You Tube**





Vibration damper assembly



Logical, orderly and „tidy“ installation in the control cabinet



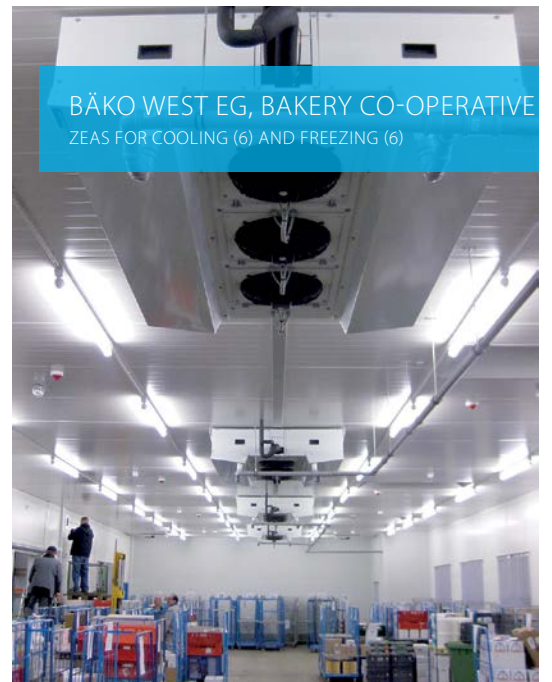
Everything cleanly processed with high quality



Easily accessible and clearly laid out compound machines









## Online support

### Business portal

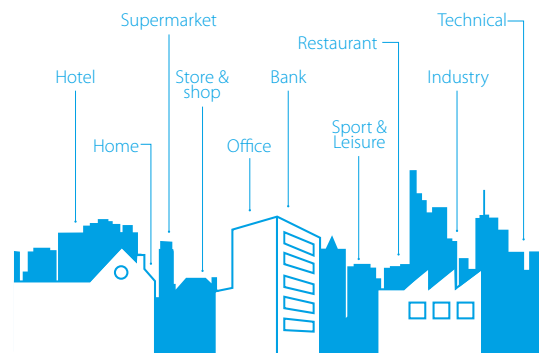
- › Experience our new extranet that thinks with you at [my.daikin.eu](http://my.daikin.eu)
- › Find information in seconds via a powerful search
- › Customise the options so you see only info relevant for you
- › Access via mobile device or desktop

[my.daikin.eu](http://my.daikin.eu)



## Internet

Find our solution for different applications:



- › Get more commercial details on our flagship products via our website

[www.daikin-ce.com](http://www.daikin-ce.com)

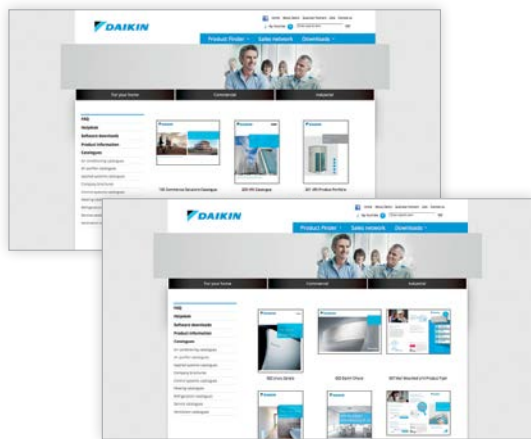
# Tools and platforms

We're here to help you!

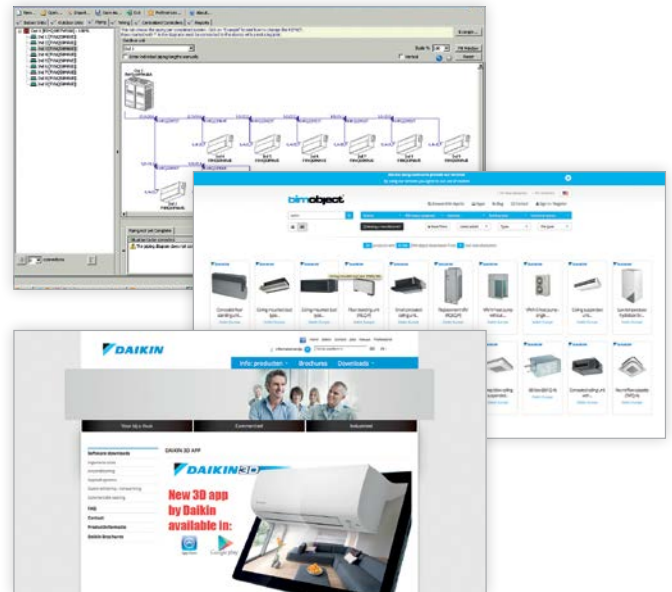
## Literature

See all the literature available (catalogues, flyers, solution guides, product profiles, product portfolios, reference book ...)

- > for you
- > for your customers



[www.daikin.eu/en\\_us/customers/support.html](http://www.daikin.eu/en_us/customers/support.html)



## Sales supporting apps

We offer a variety of building modelling, selection, simulation and quotation software tools to support your sales.

The **Psychrometric Diagram Viewer** helps designers, consultants, students and other professionals to get more insight in our fields of activities: "the air that we condition"

<https://www.daikin-ce.com/software>

Some of our most used apps:



- > **Daikin Altherma simulator:** for appropriate heat pump selection
- > **3D app:** Allows you to choose the air conditioning and watch it at home BEFORE you buy!
- > **Error code app:** quickly know the meaning of fault codes for each product family
- > **Load calculation tool:** helps you to calculate the heat and cool load of your building
- > **Multi selection tool:** for quick calculation of multi split combinations & piping lengths
- > **Xpress:** quick quotation tool for VRV
- > **Astra:** AHU design software
- > **BIM models** for VRV units
- > ...



# Acting ahead of legislation

## Ecodesign Directive - Energy related products

The EU's Ecodesign Directive 2009/125/EC is designed to encourage the market to use more efficient products. It also helps manufacturers to agree a better definition of efficiency for remote condensing units. Since 01/07/2016 refrigeration units also need to comply with this system of minimum efficiency requirements.

In catalogues the seasonal data will be marked with the seasonal flower.



Find more information about the seasonal data in refrigeration on our website: [www.daikin-ce.com](http://www.daikin-ce.com) or on the Business Portal [my.daikin.eu](http://my.daikin.eu)

## EN 13215: Definition of the nominal operating conditions (capacity, COP and power consumption)

Temperature application	Medium	Low
Ambient temperature	32°C	32°C
Evaporation temperature	-10°C	-35°C
Suction gas side	10 K superheat OR 20°C suction gas temperature	
Subcooling degree of the liquid	Depending on the condenser coil used in the refrigeration system	

To define the efficiency of a condensing unit the Ecodesign Directive used the EN13215 regulation. Both methodologies are allowed to define delivered cooling capacity and efficiency of a unit.

→ This has also an impact on the SEPR AND COP value.

# Two methodologies to evaluate the unit performance

## Low capacities

Condensing unit installed indoor

### COP methodology:

- › If the medium temperature cooling capacity is lower than 5 kW and low temperature cooling capacity is lower than 2 kW
- › COP given on 25°C ambient temperature
- › COP given on 32°C ambient temperature
- › COP given on 43°C: mandatory if ambient temperature design is higher or equal to 35°C

### Minimum efficiency (COP):

- › Medium temperature:
  - Capacity lower or equal 1 kW = 1,2
  - Capacity lower or equal 5 kW = 1,4
- › Low temperature:
  - Capacity lower or equal 1 kW = 0,75
  - Capacity lower or equal 2 kW = 0,85

## Higher capacities

Condensing unit installed outdoors  
(climate depending)







### SEPR methodology:





- › If the medium temperature cooling capacity is between 5kW and 50kW and low temperature cooling capacity is between 2kW and 20kW
- › SEPR given on the reference climate zone of Strasbourg
- › COP given on 43°C: mandatory if ambient temperature design is higher or equal to 35°C

### Minimum efficiency (SEPR):

- › Medium temperature:
  - Capacity lower or equal 20 kW = 2,25
  - Capacity lower or equal 50 kW = 2,35
- › Low temperature:
  - Capacity lower or equal 8 kW = 1,5
  - Capacity lower or equal 20 kW = 1,6

# Refrigeration product portfolio and Ecodesign Directive

Type	MONOBLOCKS BIBLOCKS WINEBLOCKS	JEHCCU	JEHSCU	CONDENSING UNITS	TWIN CONDENSING UNITS	INVERTER CONDENSING UNITS
				CU 	CU-T 	CI 
Medium temperature (Te = -10°C)	In scope*	In scope	In scope	In scope <sup>(4)</sup>	In scope <sup>(4)</sup>	In scope <sup>(4)</sup>
Low temperature (Te = -35°C)	In scope*	In scope	In scope	In scope <sup>(4)</sup>	In scope <sup>(4)</sup>	In scope <sup>(4)</sup>

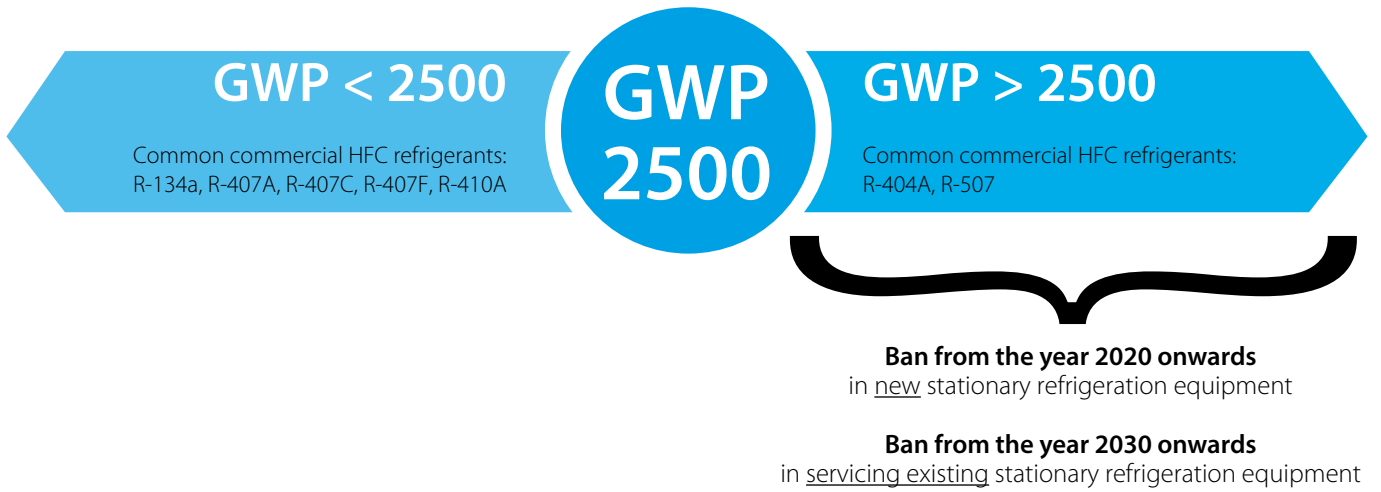
Type	ZEAS	MULTI ZEAS	CONVENI-PACK	MULTI COMPRESSORS CONDENSING UNITS	OTHER RANGES		
				CM / CL 	Refrigerating Capacity <20kw	Refrigerating Capacity <50kw	Refrigerating Capacity >50kW
Medium temperature (Te = -10°C)	In scope	Out of scope <sup>(1)</sup>	Out of scope <sup>(2)</sup>	In scope <sup>(4)</sup>	In scope	In scope	Out of scope
Low temperature (Te = -35°C)	In scope	Out of scope <sup>(1)</sup>	-	In scope <sup>(4)</sup>	In scope	Out of scope	Out of scope

(1) Delivered capacity of the multi Zeas units in medium and low temperature application are higher than the upper boundary (MT: Q > 50 kW; LT: Q > 20 kW) mentioned in the Ecodesign Directive  
 (2) The CVP can only operate when also Daikin indoor units are connected. This means that the CVP can be seen as a condensing unit with multiple condensers which is considered out of scope of the Ecodesign Directive ENTR LOT1  
 (3) The booster unit is not seen as a condensing unit, because the heat extracted from the evaporator side is (LT -side) discharge in the MT refrigerant line of a CVP or Zeas unit and not to the surrounding air as described in the Ecodesign Directive ENTR LOT1  
 (4) Only the models which the delivered refrigeration capacity is within the capacity range defined in the Ecodesign directive (LT < 20 kW, MT < 50 kW)

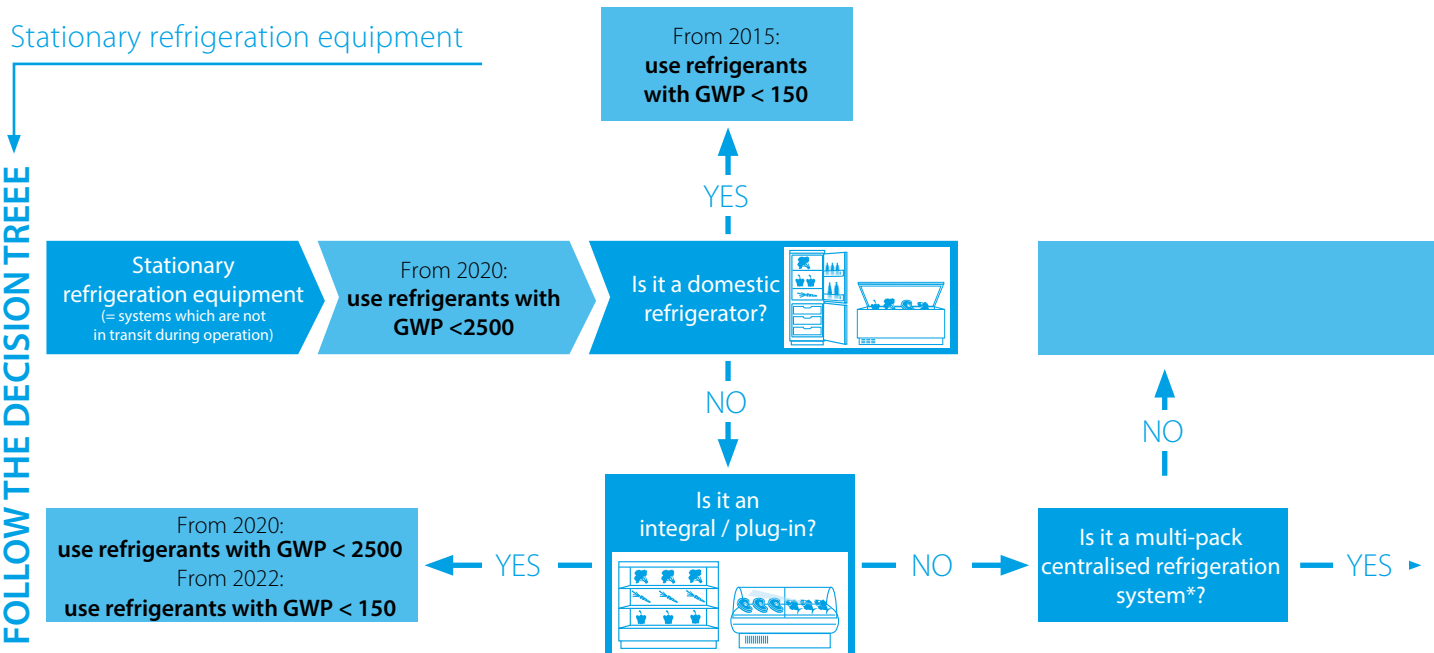


# Acting ahead of legislation

## What does the F-Gas regulation mean?



## F-Gas Regulation



\*\*Multipack centralised refrigeration systems = Systems with two or more compressors operated in parallel, which are connected to one or more common condensers and to a number of cooling devices such as display cases, cabinets, freezers or to chilled store rooms.



Shop with refrigeration requirement  
MT = 75kW and LT = 15 kW



MT= 75kW  
LT= 15kW

Use a cascade system with a combination of **GWP < 1500** and **GWP < 150** with following conditions:

- **GWP < 1500** in the **primary refrigerant circuit of cascade system**
- **GWP < 150** in the other refrigerant circuits of the cascade system



MT= 75kW  
LT= 15kW

Use a multiple compressor refrigerant system

- **GWP < 150**



MT= 37,5kW + 37,5kW  
LT= 15kW

Use distributed solution of refrigeration systems with each systems having **capacity lower than 40kW**

- **GWP < 2500**



Use refrigerants with **GWP < 2500**

NO  
↑

Is the capacity 40 kW or more?  
(based on the eco-design conditions- see page 10)

→ YES →

NO  
↑

Are these units intended for storage, display or dispensing of products for sale to end-users?

→ YES →

2 choices

Use a cascade system with a combination of **GWP < 1500** and **GWP < 150** with following conditions:

- **GWP < 1500** in the **primary refrigerant circuit of cascade system**
- **GWP < 150** in the other refrigerant circuits of the cascade system

Use a multiple compressor refrigerant system

- **GWP < 150**

# Why Maintenance?



## Peace of mind

Daikin Service and our Service Partner Network teams strive to develop smart services & solutions to exceed your expectations. Ensuring that your Refrigeration Systems are maintained by professionals gives you peace of mind!

## Improved Safety

When a Refrigeration System doesn't operate in optimal condition over longer periods of time, it could cause unsafe working conditions or accidents. Regular maintenance ensures the system operates safely and complies with local regulations and requirements.

## Cost Savings

In the long run, maintenance is always cheaper than ad-hoc service interventions. Preventive maintenance allows you and Daikin to plan ahead and avoid rushed interventions. Our specialists will come prepared, thus avoiding repeated visits and extra interruptions. Another benefit is the clear and transparent costs which can easily be budgeted, as well as clear and well-founded lifecycle reports which indicate future needs and requirements to be considered well in advance. Over time this reduces the Total Cost of Ownership (TCO) and related operational costs.

## Full Legal Compliance

Knowing that your Refrigeration System is maintained and serviced gives you the assurance all relevant legal requirements (e.g. F-gas regulation) are fulfilled.

**REGULATION (EU) No 517/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 April 2014 on fluorinated greenhouse gases and repealing Regulation (EC) No 842/2006.**

## Minimized System Downtime

Scheduled care visits are transparent and easy to plan which gives sufficient time to find suitable dates for visits to avoid impact on production or comfort. A well-maintained Refrigeration System is less likely to fail during high season. Keeping a unit up-to-date on all inspections and maintenance checks means less worry that the unit will break down when it is needed the most.

## Increased System Efficiency

Regular maintenance of a Refrigeration System ensures that electricity costs and performance are not jeopardized, and that the safety features and the integrity of the Refrigeration System are in line with the latest standards and regulations. Routine maintenance such as inspections, oil and fluid changes, part replacements and other little fixes can help your Refrigeration System to run much more efficiently. In turn, your company will benefit from fuel and energy savings because the Refrigeration System will be running at peak performance.





### Emergency Call-out

In case your Refrigeration System should still break down, all Daikin Care packages include access to a Hotline number for emergency call-out. Preventive and Extended Care also include Emergency Service Hotline access outside of regular office hours.

### Genuine Spare Parts, Tools and Equipment

The spare parts used by Daikin Service or our Service Partner Network are all certified by Daikin, which means that the risk of failure and disturbances can be reduced while ensuring that the warranty is valid.

In case opening, overhaul or repair is needed, Daikin as an OEM manufacturer has all the original tools, casts and equipment to ensure the repair is carried out according to factory recommendations and will keep your equipment up and running.

Daikin uses advanced service tools when we care for our Refrigeration Systems. These tools are not found on the open market and they facilitate advanced troubleshooting and reporting to be done to ensure that the Refrigeration System is optimized and parametrised correctly as well as verifying the integrity of the Refrigeration System.

### Attractive Retrofit solutions

Daikin also offers attractive Retrofit solutions for a range of older Refrigeration Systems. Core parts of the Refrigeration System will be replaced to ensure it can run for many more years. Using Daikin certified retrofit solutions from Daikin or Daikin Certified partners allow you to enjoy the benefits of reduced operating costs, no need to refurbish or reinstall and will include an attractive warranty policy if performed under a care agreement.



# **NEW** Tewis Refrigeration Range





## Product range overview - Tewis 19


FULL CO <sub>2</sub> range	20
Compressor packs & racks	24
Small racks	24
Medium racks	25
Large racks	26
CO <sub>2</sub> condensing units	30
Standard condensing units	30
Small Booster condensing units	31

# Product range overview -



# Tewis

Model	Product name	Capacity (kW)	0	10	100	200	500
Condensing units	CO <sub>2</sub> Booster CU MT			18,0-90,0			
	CO <sub>2</sub> Booster CU LT			8,0-30,0			
Compressor rack and packs	Racks MT				30,0-512,0		
	Racks MT				30,0-400,0		
	Racks LT			15,0-240,0			

 Freezing (Low temperature)  
(-20°C / +35°C)

 Chilling (Medium temperature)  
(0°C / +35°C)

# Tewis - FULL CO<sub>2</sub> range



## Advantages of using R744 (also known as CO<sub>2</sub>) as refrigerant



- Non flammable
- Non toxic
- GWP = 1 - low global warming potential
- ODP= 0 - ozone depletion potential
- High density in suction - higher performance with smaller machines
- Requires low amount of refrigerant

## A solution for all your refrigeration needs

In mild climates\*, all CO<sub>2</sub> systems need the support of an auxiliary unit with another refrigerant . The requirements of these units vary according to the base operation of the plant.

### Transcritical operation

- ▶ Auxiliary Unit
- ▶ Efficiency
- ▶ Maintenance
- ▶ Costs
- ▶ Work pressure

### Subcritical operation

- ▶ Auxiliary Unit
- ▶ Efficiency
- ▶ Maintenance
- ▶ Costs (with retrofit)
- ▶ Work pressure

\*As long as the ambient temperature can reach 30°C

# High performance solutions



We bet on CO<sub>2</sub> as a low GWP natural refrigerant and high safety and thus, we bring the most advanced technology in security and the most suitable materials. CO<sub>2</sub> is an excellent refrigerant although it is noticeably affected by the external temperature conditions. Hence it is fundamental to study the different operating options.

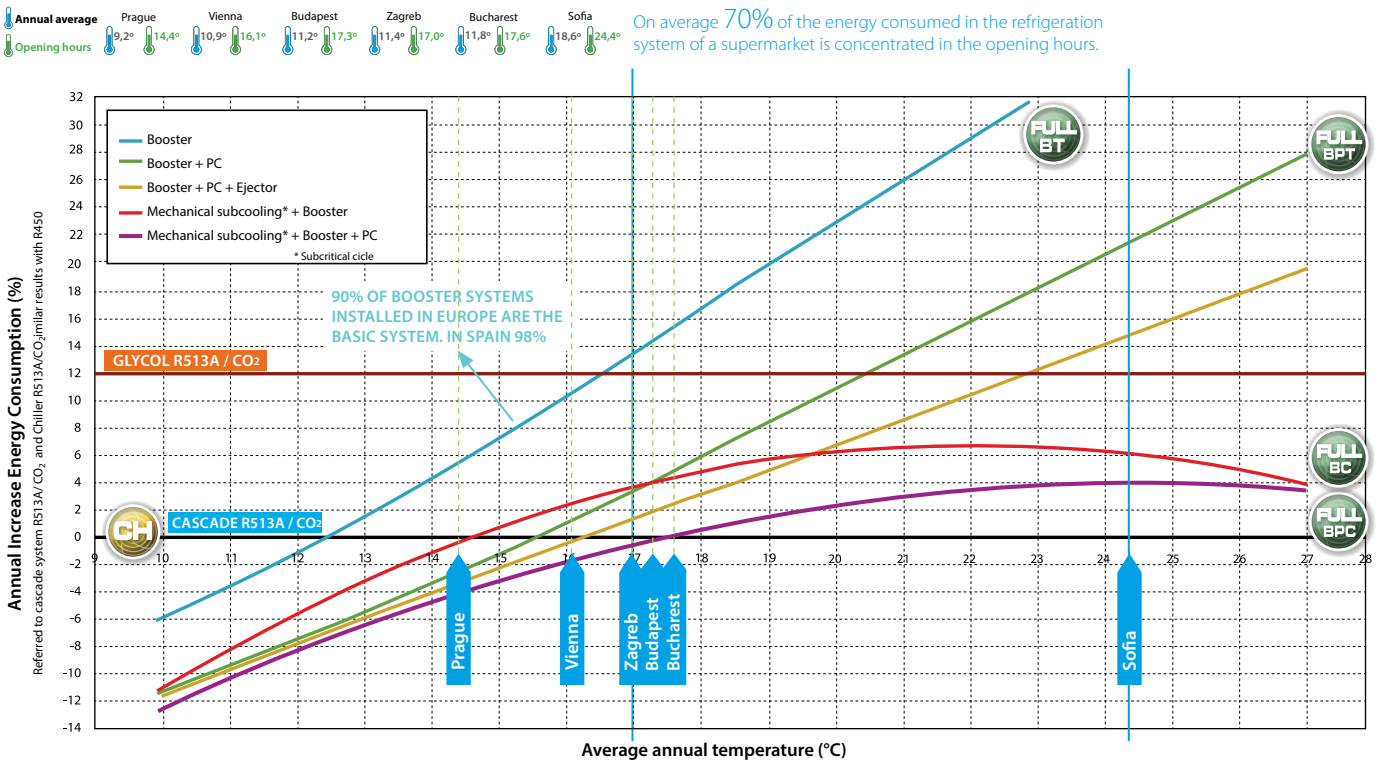
## Natural refrigerants CO<sub>2</sub>

Comparing new technologies

Solution	Application	Efficiency	Complexity	Maintenance
Booster Booster DOMINO	MT & LT			
Booster + Parallel compressor C.P + DOMINO	MT & LT			
Booster + Parallel compressor + Mechanical subcooling Mech. Subcooling + DOMINO	MT & LT			

Each of the configurations proposed in this range responds to specific operating needs. Based on a research by the Jaume I University and Tewis, the following table shows the energy consumption of each configuration with respect to a traditional cascade plant.

The temperature is the external agent that influences the most the selection of one type of installation CO<sub>2</sub> or another, so we will also take into consideration the central hours of the day in which the supermarkets are open and, therefore, concentrate the consumption of the refrigeration needs.



# The final leap towards natural refrigeration

## Power and compressors

The compression sets are made up of 2 to 4 compressors except in the case of parallel compression, which adds up to 2 specific compressors.

### BT

**FULL SERIES** 10 kW - 60 kW

### MT

10 kW **FULL BT** 110 kW

Transcritical booster

20 kW **FULL BPT** 210 kW

Traditional booster with parallel compression

15 kW **FULL BC** 190 kW

Booster with condensation assistant

30 kW **FULL BPC** 240 kW

Subcritical booster with parallel compression



## Efficiency improvement by modulation

One frequency inverter for each compression group adapts its function parameters to the system cooling necessities continuously *saving energy and extending the service life of the machine.*



## Chassis

Full CO<sub>2</sub> models are available in sheet metal chassis, accessible 360° with *option of housing and acoustic insulation.*



## Plug & play

The units are prepared for a *very agile start-up at a mechanical and electronic level,* with built-in electric panel.



## Technology for everyone

Automation and operation of the system are made with *open technology standards.* Thus the customer does not depend on a single manufacturer or installer, which *decreases maintenance and repair costs.*



## Double safety

Several components have been designed to perform a second function in case of failure *avoiding the system shutdown.*

# FULL CO<sub>2</sub>



**BT<sup>-</sup>** **Low temperature group**  
Covers freezing needs. Equipped with oil system, gas cooler connections and all necessary protection and safety elements.

**MT<sup>+</sup>** **Medium temperature group**  
It covers the refrigeration needs and allows the operation of the BT group. Equipped with oil system, gas cooler connections and all necessary protection and safety elements. Includes CO<sub>2</sub> receiver.

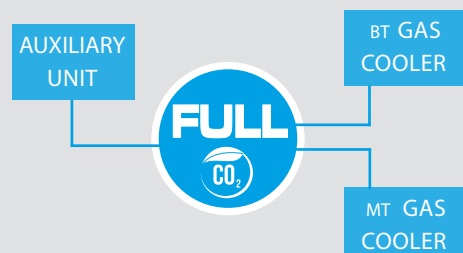
**AX** **Auxiliary exchanger plates**  
They keep the plant at its optimum operating point when ambient temperatures are high.

**P** **Parallel compressor**  
The efficiency of the system is considerably increased.

**E** **Economizer**  
Increases the efficiency of the system by making the MT compressors give part of their power to the BT group.

**Q** **Switchboard**  
Integrated and easy to use via touch screen, it displays an exclusive control software.

## Full CO<sub>2</sub> general scheme



## Retrofit & external condensation

Our system offers the possibility to take advantage of an existing machine using it in ancillary functions and also, recover a large amount of gas, with the consequent savings.

FullBC & FullBPC models allow to assist the condensation of the CO<sub>2</sub> booster in different ways:

- > Using an already present unit (Retrofit).
- > Partially using equipment from another service such as air conditioning.
- > Installing a specific equipment recommended by Tewis.

# Small Racks

## Small transcritical units without condenser

- > Small dimensions: 1.600 x 840 x 840 mm
- > Easy transportation
- > Complete switchboard with protections, according to European legislation
- > Switchboard includes an advanced control software to manage all the electrical and electronic switches of the machine
- > 2 compressors
- > Safety mode: In case of anomalous increase in temperature or pressure in the liquid zone, the safety equipment is activated by stabilizing the CO<sub>2</sub> pressure. The equipment is designed to take
- > Proportional modulation: A frequency inverter in each group of compressors adapts its operation to the specific demand of each moment, saving energy and prolonging the life of the plant. the current of a generator set and works even during a power cut.
- > Heat recovery (optional) which allows to take advantage of the heat generated by the system discharge for air conditioning or ACS.



F-Gas Free



Switchboard



Plug&Play



Electronic Control



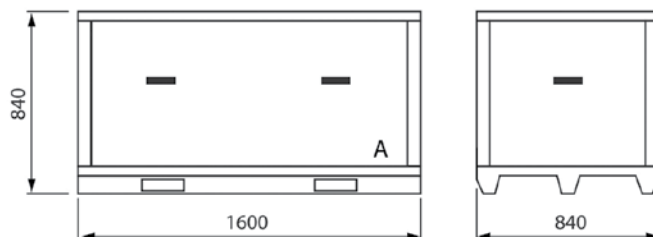
Proportional Modulation



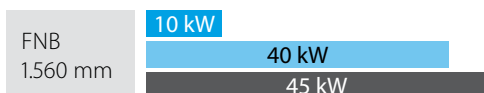
Heating Interchanger (Optional)



Protective Case



- MT
- MT + LT



Conditions: LT: Tev.: -35°C SH: 8°K  
 MT: Tev.: -10°C SH: 8°K  
 Clime: Tev. med: 5°C SH: 8°K



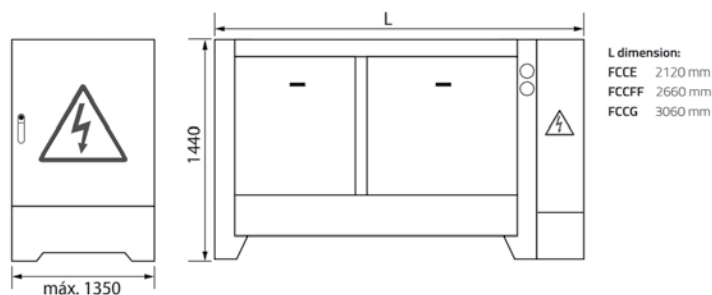
# Medium Racks

## Transcritical units without condenser

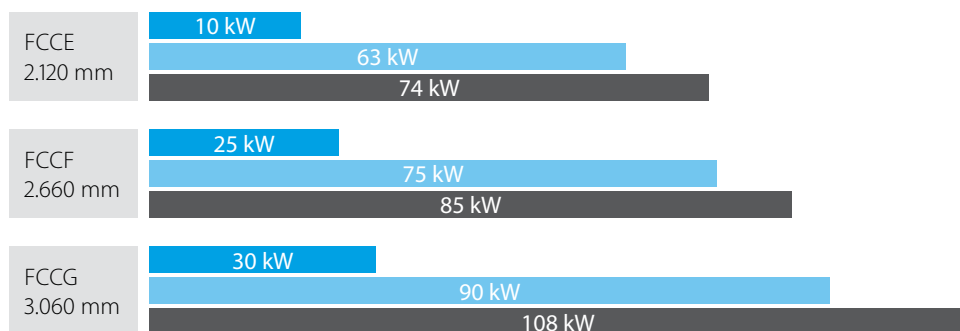
- › Adapted design for loading and transportation
- › Integrated switchboard. Easy to use via touch screen and displays an exclusive control software
- › Heat recovery (optional) which allows to take advantage of the heat generated by the system discharge for air conditioning or ACS.
- › Parallel compressor (optional).
- › The parallel compression includes one or two compressors that extract steam from the accumulation tank, lightening the load of the rest of the compressors and improving their efficiency index.
- › Possibility of incorporating up to 4 compressors
- › Proportional modulation: A frequency inverter in each group of compressors adapts its operation to the specific demand of each moment, saving energy and prolonging the life of the plant.
- › Mechanical subcooler exchanger, connected to an auxiliary unit that cools the discharge of the transcritical fluid, reducing steam and increasing the efficiency of the system



F-Gas Free	Switchboard
Plug&Play	Electronic Control
Proportional Modulation	Heating Interchanger (Optional)
Protective Case	Parallel compressors (Optional)
	Mechanical Subcooler (Optional)



- MT
  - MT + LT
- |     |     |     |         |
|-----|-----|-----|---------|
| 2   | 3   | 4   | 5 comp. |
| 2+1 | 3+1 | 3+2 | 4+1     |



Conditions: LT: Tev.: -35°C SH: 8°K  
 MT: Tev.: -10°C SH: 8°K  
 Clime: Tev. med: 5°C SH: 8°K

				Mechanical subcooler	Parallel compressor	Heating interchanger
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# Large Racks

## Transcritical double units without condenser

- › Integrated switchboard. Easy to use via touch screen and displays an exclusive control software (see next page)
- › Parallel compressors (optional), which increase considerably the efficiency of the system
- › Possibility of incorporating up to 9 compressors
- › Low and Medium temperature compressors
- › Economizer: Increases the efficiency of the system by making the MT compressors give part of their power to the LT compressors group.
- › Proportional modulation: A frequency inverter in each group of compressors adapts its operation to the specific demand of each moment, saving energy and prolonging the life of the plant.
- › Mechanical subcooler exchanger, connected to an auxiliary unit that cools the discharge of the transcritical fluid, reducing steam and increasing the efficiency of the system
- › Stainless steel in 100% of the pipes



F-Gas Free



Protective Case



Heating Interchanger (Optional)



Plug&Play



Switchboard



Parallel compressors (Optional)



Proportional Modulation

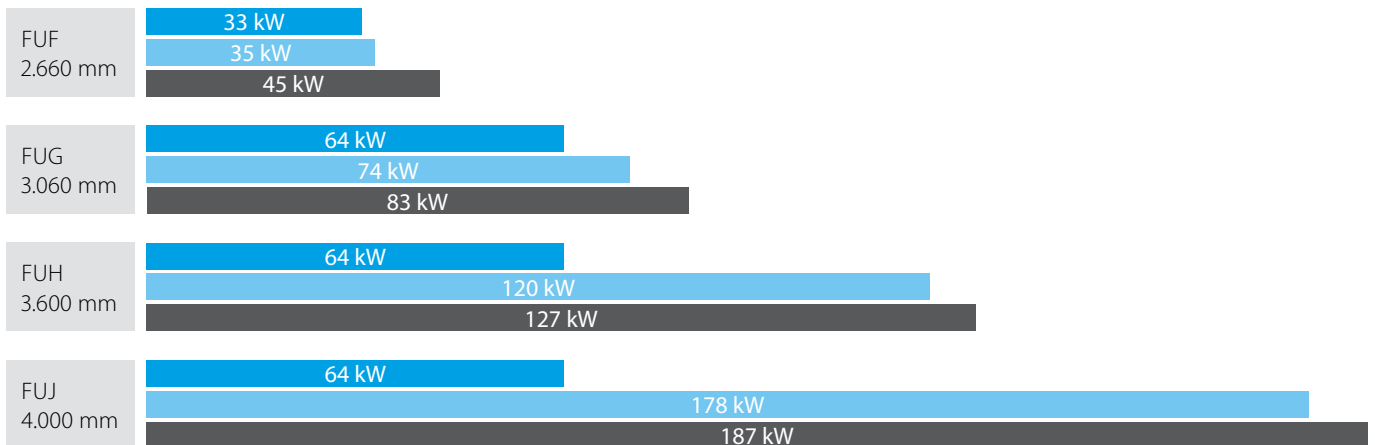


Electronic Control



Mechanical Subcooler (Optional)

MT + LT      3+3   4+2   4+3   5+4



Conditions: LT: Tev.: -35°C SH: 8°K  
 MT: Tev.: -10°C SH: 8°K  
 Clime: Tev. med: 5°C SH: 8°K



Mechanical subcooler



Parallel compressor



Heating interchanger

# Switchboard & electronic control

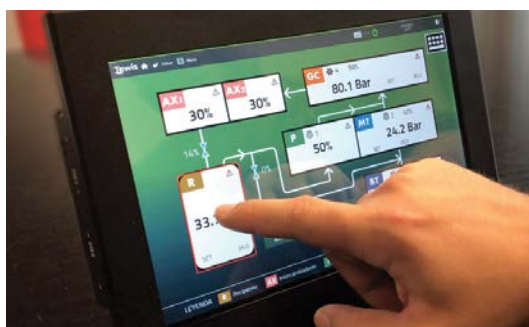
## Switchboard

- › Bench-mounted switchboard, including complete wiring.
- › Power supply at 400V / 3F + N / 50Hz
- › Frequency inverter in the first compressor in sections BT, MT and parallel
- › Booster components and remote gas coolers electrically protected against overcurrents and short circuits.
- › Option: electrical connections of power supply to the auxiliary unit



## Electronic control

- › It represents the best option for transcritical and subcritical CO<sub>2</sub> solutions with Booster circuit and allows to manage up to two circuits for the recovery of heat.
- › Tewis System compatible and open for the integration of Modbus RTU / TCP or BACnet MS / TP (optional) systems.
- › Touch screen with synoptic and real-time data.
- › Data logging and alarms.
- › Historical charts and data tables.
- › Parameter management.



# Medium temperature with air conditioning



## Mini racks

- MT + Air conditioning (with or w/o condenser)
  1+2 (max. 3)

FNB	18 kW
FNV58	27 kW
1.560 mm	45 kW



## Racks

- MT + Air conditioning (with or w/o condenser)
  2+2 (max. 4)

FCCE	18 kW
2.120 mm	40 kW
	52 kW

FCZ 3E	18 kW
FCZ 4E	50 kW
2.120 mm	74 kW

- MT + Air conditioning (with or w/o condenser)
  2+3 (max. 5)

FCZ4F	36 kW
2.660 mm	70 kW
	85 kW

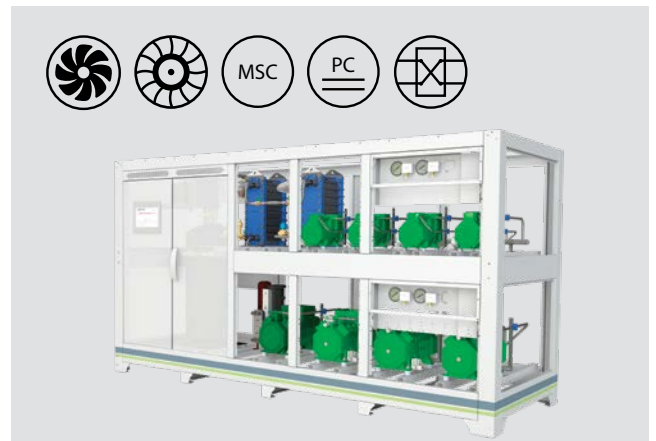
FCZ4G	36 kW
FCCG	93 kW
3.060 mm	108 kW



## Duplex racks

- MT + Air conditioning (with or w/o condenser)
  5+4 (max. 9)

FUJ	115 kW
4.000 mm	230 kW
	250 kW



Conditions: LT: Tev.: -35°C SH: 8°K  
 MT: Tev.: -10°C SH: 8°K  
 Clime: Tev. med: 5°C SH: 8°K

# Low temperature with air conditioning



## Racks

☑ MT + LT + Air conditioning (with or w/o condenser) 1+2+1 (max. 4)

FCCE FCZ3E FCZ4E 2.120 mm	9 kW
	30 kW
	30 kW
	52 kW
FCZ4E 2.120 mm	9 kW
	30 kW
	50 kW
	74 kW

☑ MT + LT + Air conditioning (with or w/o condenser) 1+2+2 (max. 5)

FCZ4F 2.660 mm	9 kW
	30 kW
	60 kW
FCZ4G 4.000 mm	85 kW
	9 kW
FCCG 3.060 mm	30 kW
	70 kW
	108 kW



## Duplex racks

☑ MT + LT + Air conditioning (with or w/o condenser) 2+3+4 (max. 9)

FUJ 4.000 mm	18 kW
	100 kW
	200 kW
	250 kW



# Standard Condensing units

## Standard condensing units with transcritical cycle

- › Chassis in galvanized and painted steel sheet. Bodyworking and soundproofing available
- › High modular concept.
- › The gascooler can be disconnected from the unit
- › Electrical board with all the necessary electronics for the operation of the unit
- › 1 MT compressor
- › (Optional) Frequency drive
- › All piping done in stainless steel
- › Multiple options possible to facilitate transport of the unit
- › All necessary safety devices
- › 3 air exit configurations
- › Reduced dimensions
- › Easy to transport
- › Until 6 assembly options



F-Gas Free



Switchboard



Plug&Play



Electronic Control



Proportional Modulation

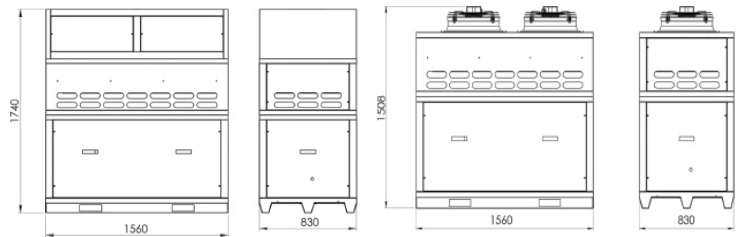


Heating Interchanger (Optional)

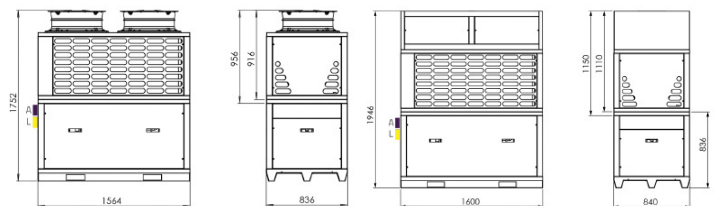


Protective Case

FNV42



FNV58



MT  1 comp.

FC17	7 kW
832 mm	9 kW

FNV42	18 kW
1.560 mm	22 kW

FNV58	38 kW
1.560 mm	45kW

Conditions: LT: Tev.: -35°C SH: 8°K  
 MT: Tev.: -10°C SH: 8°K  
 Clime: Tev. med: 5°C SH: 8°K

CO<sub>2</sub> Condensing Units

# Small Booster Condensing units

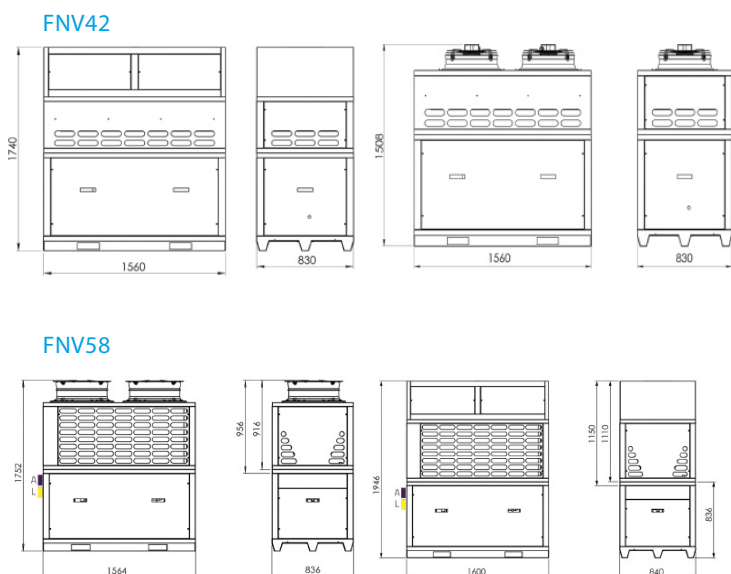
## Small condensing units with Transcritical cycle

- › Gas cooler with Axial or Radial EC fans.
- › Air connection: Three different configurations
- › V-shaped gas cooler optimized for CO<sub>2</sub> applications
- › Compressor configuration:
  - CU: 1 x MT
  - Racks: 1 x MT + 1 x LT/2xMT
- › Racks Standard delivery:
  - Inverter: 1x MT and 1x LT compressor
  - CU: inverter optional
- › High safety level with pressure relief valves, pressure switches and intelligent controls
- › Stainless steel Piping
- › Galvanized and painted sheet metal chassis and weather proof enclosure.
- › Optional: acoustic insulation
- › Electrical Panel including electronic controller and control panel
- › Modular concept - The gascooler can be disassembled from the unit and assembled in different configurations

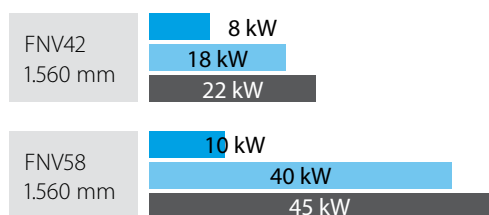


- › Reduced dimensions
- › Easy to transport
- › Until 6 assembly options

	F-Gas Free		Switchboard
	Plug&Play		Electronic Control
	Proportional Modulation		Heating Interchanger (Optional)
	Protective Case		



- MT  2 comp.
- MT + LT  1+1  2+1



Conditions: LT: Tev.: -35°C SH: 8°K  
 MT: Tev.: -10°C SH: 8°K  
 Clime: Tev. med: 5°C SH: 8°K

<span style="display: inline-block; width: 15px; height: 10px; background-color: #0070C0; margin-right: 5px;"></span> LT	<span style="display: inline-block; width: 15px; height: 10px; background-color: #00AEEF; margin-right: 5px;"></span> MT	<span style="display: inline-block; width: 15px; height: 10px; background-color: #999; margin-right: 5px;"></span> Clime	<span style="display: inline-block; width: 15px; height: 10px; background-color: #333; margin-right: 5px;"></span> Global	Mechanical subcooler	Parallel compressor	Heating interchanger	Axial	Radial
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# Daikin Refrigeration Range

## Product range overview - Daikin 33

ZEAS/ Mini-ZEAS condensing unit range	34
LRMEQ-BY1	36
LRLEQ-BY1	37
LREQ-BY1	38
Conveni-Pack	39
LRYEQ-AY	41
Indoor units and Biddle air curtains for connection to Conveni-Pack	42
Booster unit	43
LCBKQ-AV1	43
Accessories for ZEAS and Conveni-Pack	44
Commercial condensing units	46
Product overview - condensing units	47
JEHCCU-CM1/3	48
JEHSCU-CM1/3	49
JEHCCU-CL1/JEHSCU-CL3	50



# Product range overview - Daikin

Model	Product name	Capacity (kW)	0	2	5	10	25	50	100	150	300	450
Small inverter condensing unit for commercial refrigeration	Mini-ZEAS LRMEQ-BY1 LRLEQ-BY1			Freezing	Chilling							
Inverter condensing unit for commercial refrigeration	ZEAS LREQ-BY1				Freezing	Chilling						
	Multi ZEAS LREQ-BY1R						Freezing	Chilling				
Integrated solution for chilling, freezing and comfort cooling and heating	Conveni-Pack LRYEQ-AY			Freezing		Chilling	Air conditioning	Heating				
Booster unit to allow both ZEAS and Conveni-Pack freezing applications	Booster unit LCBKQ-AV1			Freezing								
Commercial condensing units with reciprocating technology	CCU JEHCCU-M1/M3/L1/L3 JEHCCU-CM1/CM3			Freezing	Chilling							
	SCU JEHSCU-M1/M3/L3 JEHSCU-CM1/CM3			Freezing	Chilling							



## ZEAS condensing unit for refrigeration

### Why choose ZEAS?

#### High energy efficiency

- › Daikin inverter scroll compressor with economizer technology
- › DC inverter fan technology
- › Eco-design compliant
- › F-Gas regulation (R-410A) compliant

#### Reliable operation

- › ZEAS condensing units are rigorously tested on the assembly line
- › Proven inverter scroll technology
- › Anti-corrosion treatment on the housing ensures long life even in extreme conditions

#### Small foot print and low weight

- › Extremely compact design
- › Easy to install, even in the smallest spaces
- › Indoor installation possible
- › Best surface to capacity ratio on the market
- › Low weight thanks to the compact design

#### Comfort

- › Quiet operation, unobtrusive for customers and neighbours
  - High grade sound insulation on panels and compressors
  - Condenser fans designed to limit noise
  - 4 low noise operation settings including night mode
- › Wide temperature range allows multiple cabinet, freezer and cold room combinations

#### Intelligent control

- › Unit can be connected to a 3rd party monitoring system
- › Remote control of target evaporation temperature, reset errors and other functions
- › Refrigeration unit can be controlled remotely through a powerful interface

### Benefits for installers

- › Reduced delivery time thanks to European manufacturing plant
- › Reduced piping requirements and installation time
- › Integrated electrical & control box
- › Unit already pre-charged with refrigerant

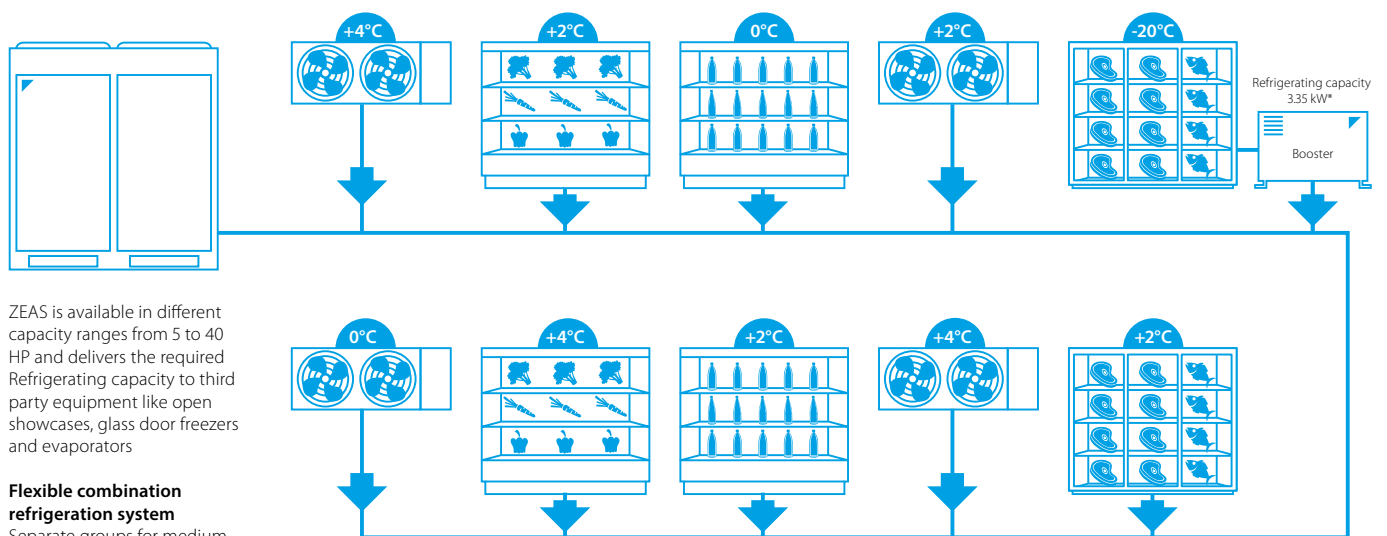
### Benefits for consultants

- › One model can cover for most refrigeration needs in the market
- › Wide capacity range
- › High modularity of the refrigeration system
- › Suitable to indoor installations through the use of high ESP fans

### Benefits for end users

- › Energy consumption is cut by 10 to 35% compared to traditional refrigeration equipment
- › Small footprint and low weight requiring only light weight supporting structures
- › A neighbourhood-friendly choice with its special night operation mode

# ZEAS, the smart choice for medium and low temperature refrigeration



ZEAS is available in different capacity ranges from 5 to 40 HP and delivers the required Refrigerating capacity to third party equipment like open showcases, glass door freezers and evaporators

### Flexible combination refrigeration system

Separate groups for medium and low temperature cooling, each with multiple cabinets and different temperatures. This flexibility and energy savings of up to 50% are only possible with ZEAS-systems.

### Operating range

Ambient temperatures: -20°C to +43 °C  
Evaporating temperatures: -45°C to +10°C

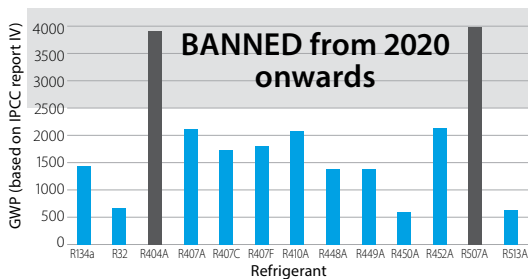
\* Te = -35°C, Tc = -10°C, 10 K SH, Tamb = 32°C

\* Only Zeas. Not applicable for Mini-Zeas and Multi-Zeas

## Why R410A?

R410A is a lower GWP refrigerant (less than 2500) than R404A and is fully F-gas compliant. It's future proof: it can be used even after 2030!

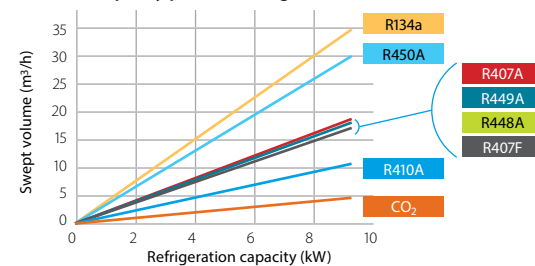
### Use of refrigerant in refrigeration system with a refrigeration lower than 40 kW



### Contributes to reducing installation cost and refrigerant charge

R410A is a high pressure refrigerant which for the same swept volume can deliver much more refrigeration capacity than standard mid pressure and low pressure refrigerants.

### Delivered capacity per used refrigerant

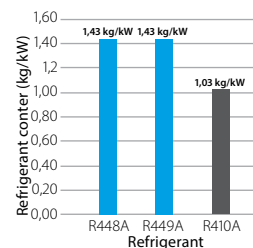


This means that for the same delivered refrigeration capacity we can use smaller main and line components, thus reducing the installation cost and the amount of refrigerant charge in the system!

### For a capacity of 8,4 kW (Te = -10°C / Tamb = 32°C)

Refrigerant	Suction piping diameter
R134a	1 1/8"
R407A	7/8"
R407F	7/8"
R448A	7/8"
R449A	7/8"
R450A	1 1/4"
R410A	3/4"
CO <sub>2</sub>	1/2"

### Refrigerant charge per used refrigerant (Te = -10°C / Tamb = 32°C)



### R410A is also:

- > an easy to handle, common used refrigerant in the air conditioning world, therefore it is easy to find an installer which can work with this refrigerant, compared to CO<sub>2</sub>, Ammonia and Propane.
- > an A1 refrigerant, therefore no special safety measurements are required.

# Mini-ZEAS condensing unit for commercial refrigeration with scroll technology

Refrigeration solution for small food retailers

- › Smaller than equivalent products in the market, ideal for those places where space is limited.
- › Advanced software solution for easy system configuration and commissioning



Medium Temperature Refrigeration				LRMEQ-BY1	3	4
<b>Price</b>				€	<b>5.370,-</b>	<b>6.080,-</b>
Refrigerating capacity	Medium temperature	Nom.	kW	5,90 (1)	8,40 (1)	
Power input	Medium temperature	Nom.	kW	2,53 (2)	3,65 (2)	
Seasonal energy performance ratio SEPR	R-410A	Te -10°C		4,17	4,08	
Annual electricity consumption Q	R-410A	Te -10°C	kWh/a	8.698	12.651	
Parameters at full load and ambient temp. 32°C (Point A)	R-410A	Te -10°C	Rated COP (COPA)	2,33	2,30	
Parameters at full load and ambient temp. 43°C	R-410A	Te -10°C	Declared COP (COP3)	1,51	1,48	
Dimensions	Unit	Height	mm	1.345		
		Width	mm	900		
		Depth	mm	320		
Weight	Unit		kg	126		
Heat exchanger	Type			Cross fin coil		
Compressor	Type			Hermetically sealed scroll compressor		
	Frequency ON/OFF Starting method			Less than 6 times/hour Direct on line (inverter driven)		
Fan	Type			Propeller		
	Quantity			2		
Fan motor	Air flow rate	Cooling	Nom.	m <sup>3</sup> /min	106	
	Output			W	70	
	Drive				Direct drive	
Sound pressure level	Nom.			dBA	51 (2)	
Operation range	Evaporating temperature	Min.		°C	-20 (3)	
		Max.		°C	5	
	Ambient temperature	Min.~Max.		°CDB	-20~43	
Refrigerant	Type				R-410A	
	GWP				2.087,5	
	Charge			kg	4.50	
				TCO <sub>2eq</sub>	9.39	
	Control				Electronic expansion valve	
Power supply	Circuits	Quantity			1	
	Phase/Frequency/Voltage			Hz/V	3N~/50/380-415	

(1) Cooling: evaporating temp. -10°C; outdoor temp. 32°C; suction SH10°C (2) Cooling: evaporating temp. -35°C; outdoor temp. 32°C; suction SH10°C (3) Sound pressure data: measured at 1m in front of unit, at 1,5m height | RLA is based on following conditions: outdoor temp. 32°CDB; suction SH 10°C; saturated temperature equivalent to suction pressure -10°C

# Mini-ZEAS condensing unit for deep freezing

## Refrigeration solution for small food retailers

- › Inverter technology guarantees optimal food conservation by ensuring an accurate temperature and humidity control
- › The economized scroll contributes to a longer lifetime expectation of the refrigeration equipment and less maintenance requirement
- › The use of R-410A refrigerant allows the use of smaller piping diameters, thus reducing the refrigerant content in the system helping to lower our CO<sub>2</sub> footprint. R-410A is fully compliant with the latest F-Gas regulation and can be still used after 2020 and beyond
- › The DC economized compressor improves drastically the efficiency of the unit, thus helps lowering the energy bill!
- › Lowest sound level in the market down to 31 dBA. Sound level can be even further reduced thanks to the low noise modes
- › The weight of the unit is very low, therefore the unit can even be mounted on the wall
- › Up to 75% smaller than equivalent products in the market, ideal for those places where space is limited
- › Advanced software solution for easy system configuration and commissioning



LRLEQ-BY1

Low Temperature Refrigeration				LRLEQ-BY1	3	4
<b>Price</b>				€	<b>5.773,-</b>	<b>6.536,-</b>
Refrigerating capacity	Low temperature Nom.		kW	2,78 (1)	3,62 (1)	
Power input	Low temperature Nom.		kW	2,60 (1)	3,41 (1)	
Seasonal energy performance ratio SEPR	R-410A	Te -10°C		1,74	1,68	
Annual electricity consumption Q	R-410A	Te -10°C	kWh/a	11.920	16.048	
Parameters at full load and ambient temp. 32°C (Point A)	R-410A	Te -10°C	Rated COP (COPA)	1,07	1,06	
Parameters at full load and ambient temp. 43°C	R-410A	Te -10°C	Declared COP (COP3)	0,59	0,66	
Dimensions	Unit	Height	mm	1.345		
		Width	mm	900		
		Depth	mm	320		
Weight	Unit		kg	130		
Heat exchanger	Type			Cross fin coil		
Compressor	Type			Hermetically sealed scroll compressor		
	Frequency ON/OFF			Less than 6 times/hour		
Fan	Starting method			Direct on line (inverter driven)		
	Type			Propeller		
	Quantity			2		
Fan motor	Air flow rate	Cooling	Nom.	m <sup>3</sup> /min	106	
	Output			W	70	
	Drive			Direct drive		
Sound pressure level	Nom.			dB(A)	51,0 (2)	
Operation range	Evaporating temperature	Min.		°C	-45 (2)	
		Max.		°C	-20	
	Ambient temperature	Min.~Max.		°CDB	-20~43	
Refrigerant	Type			R-410A		
	GWP			2.087,5		
	Charge			kg	6,90	
				TCO <sub>2</sub> eq	14,4	
	Control			Electronic expansion valve		
Power supply	Circuits	Quantity			1	
	Phase/Frequency/Voltage			Hz/V	3N~/50/380-415	

(1) Cooling: evaporating temp. -35°C; outdoor temp. 32°C; suction SH10°C

(2) Sound pressure data: measured at 1m in front of unit, at 1,5m height

# ZEAS condensing unit for commercial refrigeration with scroll technology

Refrigeration solution for medium to large capacity applications featuring proven VRV technology

- > One model for all applications from -45°C to 10°C evaporating temperature
- > Perfect solution for all cooling and freezing applications with variable load conditions and high energy efficiency requirements. In particular used in supermarkets, cold storage, blast coolers and freezers etc.
- > DC inverter scroll compressor with economiser function results in high energy efficiency and reliable performance
- > Reduced CO<sub>2</sub> emissions thanks to the use of R-410A refrigerant and low energy consumption
- > Factory tested and pre-programmed for quick and easy installation and commissioning
- > VRV (Variable Refrigerant Volume) technology for flexible application range
- > Increased installation flexibility thanks to limited dimensions
- > Low sound level including „night mode“ operation
- > For small freezing capacity, single ZEAS units can be connected to a booster unit
- > Dedicated unit to allow multi combination of 2 x 15 HP or 2 x 20 HP resulting in less pipework or installation time



				LREQ-BY1	5	6	8	10	12	15	20				
<b>Price</b>				€	9.217,-	10.420,-	11.754,-	13.383,-	18.167,-	14.531,-	20.406,-				
Refrigerating capacity	Low temperature	Nom.	kW	5,51 (1)	6,51 (1)	8,33 (1)	10,0 (1)	10,7 (1)	13,9 (1)	15,4 (1)					
	Medium temperature	Nom.	kW	12,5 (2)	15,2 (2)	19,8 (2)	23,8 (2)	26,5 (2)	33,9 (2)	37,9 (2)					
Power input	Low temperature	Nom.	kW	4,65 (1)	5,88 (1)	7,72 (1)	9,27 (1)	9,89 (1)	12,8 (1)	14,1 (1)					
	Medium temperature	Nom.	kW	5,10 (2)	6,56 (2)	8,76 (2)	10,6 (2)	12,0 (2)	15,2 (2)	17,0 (2)					
Seasonal energy performance ratio SEPR	R-410A	Te -10°C		3,86	3,79	3,64	3,42	3,51	3,38	3,23					
		Te -35°C		1,61	1,65	1,71	1,69	1,67	1,60	1,61					
Annual electricity consumption Q	R-410A	Te -10°C	kWh/a	19.907	24.681	33.483	42.794	46.377	61.683	72.030					
		Te -35°C	kWh/a	25.547	29.366	36.361	44.054	47.872	64.822	71.162					
Parameters at full load and ambient temp. 32°C (Point A)	R-410A	Te -10°C	Rated COP (COPA)	2,45	2,32	2,26	2,25	2,21	2,23						
		Te -35°C	Rated COP (COPA)	1,18	1,11	1,08			1,09						
Parameters at full load and ambient temp. 43°C	R-410A	Te -10°C	Declared COP (COP3)	1,54	1,57	1,40	1,46	1,47	1,46	1,51					
		Te -35°C	Declared COP (COP3)	0,76	0,74	0,68	0,70	0,71	0,74						
Dimensions	Unit	Height	mm	1.680											
		Width	mm	635				930				1.240			
		Depth	mm	765											
Weight	Unit		kg	166				242				331		337	
Heat exchanger	Type	Cross fin coil													
Compressor	Type	Hermetically sealed scroll compressor													
	Output	W	2.600	3.200	2.100	3.000	3.400	2.600	3.400						
	Piston displacement	m <sup>3</sup> /h	11,18	13,85	19,68	23,36	25,27	32,24	35,8						
	Speed	rpm	5.280	6.540	4.320	6.060	6.960	5.280	6.960						
	Starting method	Direct on line (inverter driven)													
Compressor 2	Output	W	-				3.600								
	Speed	rpm	-				2.900								
Compressor 3	Output	W	-				3.600								
	Speed	rpm	-				2.900								
Fan	Type	Propeller fan													
	Quantity		1				2								
Fan motor	Air flow rate	Cooling	Nom.	m <sup>3</sup> /min	95	102	171	179	191	230	240				
	Output	W	350				750				350		750		
Fan motor 2	Drive	Direct drive													
	Output	W	-				350				750				
Sound pressure level	Nom.	dBA	55,0 (3)	56,0 (3)	57,0 (3)	59,0 (3)	61,0 (3)	62,0 (3)	63,0 (3)						
Operation range	Evaporator	Cooling	Max.-Min.	°CDB	10--45										
Refrigerant	Type / GWP	R-410A / 2.087,5													
	Charge	kg	5,2				7,9				11,5				
	TCO <sub>2eq</sub>		10,9				16,5				24,0				
Power supply	Control	Electronic expansion valve													
		Phase/Frequency/Voltage	Hz/V	3~/50/380-415											

				LREQ-BY1	30	40
<b>Price</b>				€	36.686,-	41.164,-
System	Outdoor unit module 1			LREQ15BY1R	LREQ20BY1R	
	Outdoor unit module 2			LREQ15BY1R	LREQ20BY1R	
Refrigerating capacity	Medium temperature	Nom.	kW	67,8 (1)	75,8 (1)	
	Low temperature	Nom.	kW	27,8	29,6	
Power input	Medium temperature	Nom.	kW	30,4	34,0	
	Low temperature	Nom.	kW	25,6	27,6	
Sound pressure level	Nom.	dBA	65,0	66,0		
Piping connections	Liquid			ø 19,05		
	Gas			ø 41,28		

(1) Cooling: evaporating temp. -35°C; outdoor temp. 32°C; suction SH10°C (2) Cooling: evaporating temp. -10°C; outdoor temp. 32°C; suction SH10°C (3) Sound pressure data: measured at 1m in front of unit, at 1,5m height | RLA is based on following conditions: outdoor temp. 32°CDB; suction SH 10°C; saturated temperature equivalent to suction pressure -10°C

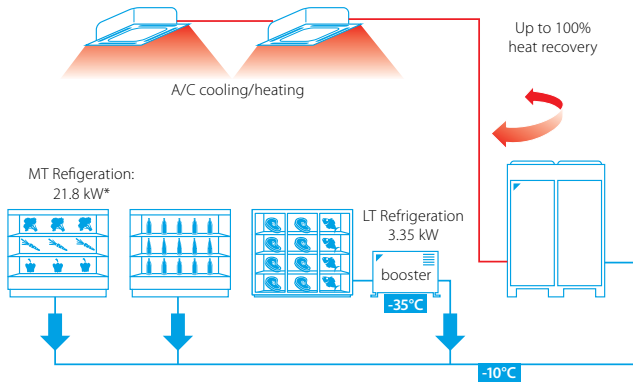
# Conveni-Pack, integrated solution for refrigeration, heating and air conditioning



## Why choose Conveni-Pack?

### High energy efficiency

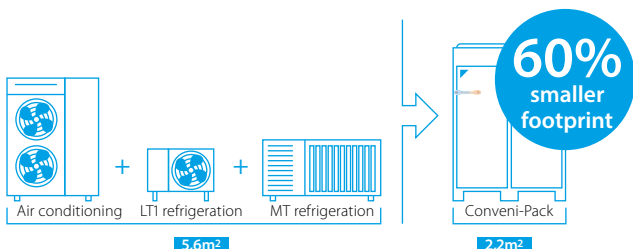
- › Conveni-Pack recovers up to 100% of the heat extracted from supermarket refrigeration cases and re-uses it to heat the retail space at no additional cost
- › Savings of up to 50% on energy costs
- › Daikin inverter scroll compressor with economizer technology



\*maximum available Refrigerating capacity when no booster units are connected

### Very compact design

- › Easy to install, even in small spaces
- › Small footprint (up to 60% smaller footprint than conventional systems) and low weight
- › Reduced piping requirements



### Unique combination

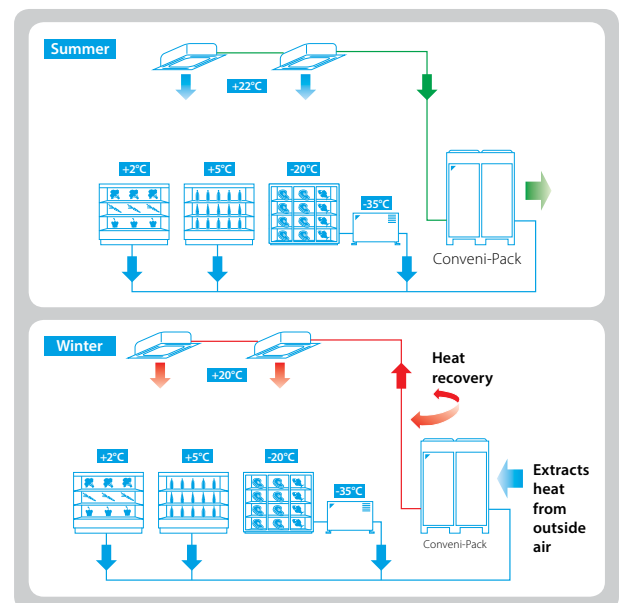
- › First mass-produced, whole-building system to combine refrigeration, heating, air conditioning in one circuit

### Reliable operation

- › Error-proof component selection
- › Factory leak-tested and pre-charged

### Year-round climate comfort

- › Quiet operation: Improved acoustics thanks to night operation mode, inverter control and inverter driven fans with optimised blades and grills
- › High grade sound insulation on both panels and compressors
- › Specially designed fan blades to limit sound emissions
- › 4 low sound operation settings including night mode
- › The heat recovered from refrigerated and freezer display cabinets can be used to provide heating for the shop.



## Internationally awarded

Since the introduction Conveni-Pack was recognized as innovative and environmentally – proof of which are the below mentioned German and Irish awards:

- › Winner of 2014 Institute of Refrigeration Ireland (IRI) Environmental award
- › Environmental Friendliness category of the Top Retail Product Awards 2014 in Germany



## Reference

### Edeka Buschkühle supermarket (Germany)

2 Conveni-Pack systems supply 32 meters of service counters, 12.5 meters of convenience fridges, one cooling storage room for fruit, an air curtain and 5 indoor units; the ZEAS system supplies two deep-freeze cabinets with a total capacity of 5 kW.



## Benefits for installers/consultants

- › Integrated electrical & control box
- › Unit already pre-charged with refrigerant
- › Established VRV technology ensuring optimised installation and maintenance
- › Reduced delivery time thanks to European manufacturing plant
- › Flexible system for multiple applications
- › Connectable to all grocery refrigeration applications and supplied with a wide range of air conditioning indoor units to meet shop requirements
- › Outdoor units can be positioned up to 35m above or 10m below the indoor units
- › Piping length possible up to 130m
- › Suitable for indoor installation through the use of high ESP fans

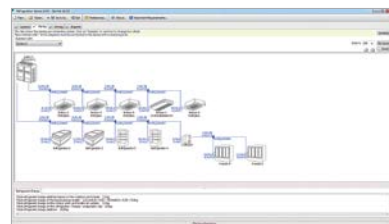
## Benefits for shop owners

- › Thought design for supermarkets and smaller retail outlets
- › Maximised retail sales space available as
- › Conveni-Pack has a footprint up to 60% smaller than conventional grocery refrigeration systems
- › Reduced energy consumption by up to 50% through heat recovery
- › Quiet operation, thus ideal for densely populated urban areas

## Marketing tools

### Refrigeration Xpress

User-friendly design software for Conveni-Pack, CCU, SCU and ZEAS condensing units. Its detailed report includes a list of materials, piping and wiring diagrams, and device options.



### Short videos

- › Watch a short animation on the unique refrigeration solution Conveni-Pack
- › Discover why a Belgian petrol station owner chose Daikin for its shop comfort and refrigeration needs. [www.youtube.com/DaikinEurope](http://www.youtube.com/DaikinEurope)





# Conveni-Pack refrigeration system with heat recovery

Refrigeration solution for food retailers featuring award winning technology for heat recovery

- › Integrates high and low temperature refrigeration and air conditioning (including heating) into one system
- › By using heat recovery, optimised controls and state of the art compressor technology, Conveni-pack can reduce annual energy consumption up to 50% or more, compared to conventional systems
- › Lower associated CO<sub>2</sub> emissions thanks to the heat pump technology
- › Conveni-pack's modular design allows it to be used for smaller as well as larger shops
- › The modularity of the Conveni-pack system maximises installation flexibility. Outdoor units can be grouped into blocks or rows, or distributed around the building, to meet individual installation constraints
- › The heat extracted from the refrigeration showcases or evaporators can be re-used for comfort heating of the shop at no extra cost
- › Low sound level including „night mode“ operation



LRYEQ16AY

Medium Temperature Refrigeration				LRYEQ-AY	16	
<b>Price</b>				€	<b>24.987,-</b>	
Cooling capacity	Air conditioning	Nom.	kW		14,0 (1)	
	Refrigeration	Nom.	kW		21,8 (2)	
Heating capacity	Air conditioning	Nom.	kW		27,0 (3)	
	Refrigeration	Nom.	kW		21,8 (4)	
Dimensions	Unit	Height	mm		1.680	
		Width	mm		1.240	
		Depth	mm		765	
Weight	Unit		kg		370	
Heat exchanger	Type				Cross fin coil	
Compressor	Type				Hermetically sealed scroll compressor	
	Piston displacement		m <sup>3</sup> /h		13,34	
	Speed		rpm		6.300	
	Output		W		2.500	
	Starting method					Direct on line (inverter driven)
	Frequency ON/OFF					Less than 6 times/hour
Compressor 2	Speed		rpm		2.900	
	Output		W		3.600	
Compressor 3	Speed		rpm		2.900	
	Output		W		4.500	
Fan	Type				Propeller fan	
	Quantity				2	
	Air flow rate	Cooling	Nom.	m <sup>3</sup> /min		230
Fan motor	Output		W		750	
	Drive				Direct drive	
Sound pressure level	Nom.		dB(A)		62,0	
Operation range	Evaporator	Cooling	Min.-Max.	°CDB	-20~10	
	Cooling	Ambient	Min.-Max.	°CDB	-5~43	
	Heating	Ambient	Min.-Max.	°CDB	-15~21	
Refrigerant	Type				R-410A	
	GWP				2.087,5	
	Charge			kg		11,5
				TCO <sub>2</sub> eq		24,0
	Control					Electronic expansion valve
Power supply	Phase/Frequency/Voltage			Hz/V	3~/50/380-415	

(1) Cooling priority mode: indoor temp. 27°CDB, 19°CWB; outdoor temp. 32°CDB; piping length: 7,5m; level difference: 0m (2) Cooling priority mode: evaporating temp. -10°C; outdoor temp. 32°CDB; Suction SH: 10°C (3) Heat recovery 100% mode: indoor temp. 20°CDB; outdoor temp. 7°CDB, 6°CWB; refrigeration load 18kW; piping length: 7,5m; level difference: 0m (4) Saturated temperature equivalent to suction pressure (refrigeration side): -10°C (under chilled condition); connection capacity for indoor air conditioner: 10HP, when heat recovery is 100%




# Indoor units and Biddle air curtains for connection to Conveni-Pack

To respond to all shop requirements for comfort cooling and heating, a wide range of AC indoor units and Biddle air curtains are available.

Capacity class (kW)

Model	Product name		50	63	71	80	100	125	140	200	250
Cooling capacity (kW) <sup>1</sup>			5,6	7,1	8,0	9,0	11,2	14,0	16,0	22,4	28,0
Heating capacity (kW) <sup>2</sup>			6,3	8,0	9,0	10,0	12,5	16,0	18,0	25,0	31,5
Round flow cassette	FXFQ-A		•	•		•	•	•			
2-way blow ceiling mounted cassette	FXCQ-A		•	•		•		•			
Ceiling mounted corner cassette	FXKQ-MA			•							
Concealed ceiling unit with inverter driven fan	FXSQ-A		•	•		•	•	•			
Concealed ceiling unit with inverter driven fan	FXMQ-P7		•	•		•	•	•			
Large concealed ceiling unit	FXMQ-MB									•	•
Ceiling suspended unit	FXHQ-A			•			•				
4-way blow ceiling suspended unit	FXUQ-A				•		•				
Floor standing unit	FXLQ-P		•	•							
Concealed floor standing unit	FXNQ-A		•	•							

Capacity class (kW)

Model	Product Name		80	100	125	140	200	250
Heating capacity (kW) <sup>2</sup>			7,4 - 9,2	11,6 - 13,4	15,6	16,2 - 19,9	29,4	29,4 - 31,1
Biddle air curtain free hanging	CYVS-DK		•	•	•	•	•	•
Biddle air curtain cassette	CYVM-DK		•	•	•	•	•	•
Biddle air curtain recessed	CYVL-DK		•	•	•	•	•	•

<sup>1</sup> Nominal cooling capacities are based on: indoor temperature: 27°CDB / 19°CWB, outdoor temperature: 35°CDB, piping length: 7,5m, level difference: 0m

<sup>2</sup> Nominal heating capacities are based on: indoor temperature: 20°CDB, outdoor temperature: 7°CDB / 6°CWB, piping length: 7,5m, level difference: 0m

# Booster unit

- > A booster unit allows to connect freezer showcases / rooms to ZEAS and Conveni-Pack outdoor units
- > Reduced piping requirements, from 4 to 2 pipes, compared to a conventional system
- > Low sound mode available reducing sound emissions significantly without giving in on Refrigerating capacity



Low Temperature Refrigeration				LCBKQ-AV1	3
<b>Price</b>				€	<b>4.946,-</b>
Refrigerating capacity	Low temperature	Nom.	kW		3,35 (1)
Dimensions	Unit	Height	mm		480
		Width	mm		680
		Depth	mm		310
Weight	Unit		kg		47
Compressor	Type				Hermetically sealed swing compressor
	Piston displacement		m <sup>3</sup> /h		10,16
	Number of revolutions		rpm		6.540
	Output		W		1.300
	Starting method				Direct on line (inverter driven)
	Frequency ON/OFF				Less than 6 times/hour
Fan	Type				Propeller fan
	Air flow rate	Cooling	Nom.	m <sup>3</sup> /min	1,6
Operation range	Evaporator	Cooling	Min.-Max.	°CDB	-45~-20
	Ambient temperature	Min.-Max.		°C	-15~43
Refrigerant	Type				R-410A
	GWP				2.087,5
	Control				Electronic expansion valve
Piping connections	For outdoor unit	Liquid	OD	mm	6,35
	To indoor unit	Liquid	OD	mm	6,35
	For indoor unit	Gas	OD	mm	15,9
	To outdoor unit	Gas	OD	mm	9,5
Power supply	Phase/Frequency/Voltage		Hz/V		1~/50/220-240

(1) Evaporating temp. -35°C; outdoor temp. 32°C; suction SH 10K; saturated temp. to discharge pressure of booster unit -10°C

## Options - Refrigeration

	Conveni-Pack	ZEAS						Multi-ZEAS			
	LRYEQ16AY	LREQ5BY1	LREQ6BY1	LREQ8BY1	LREQ10BY1	LREQ12BY1	LREQ15BY1	LREQ20BY1	LREQ15BY1Rx2	LREQ20BY1Rx2	
Digital pressure gauge kit		BHGP26A1									
Pressure gauge kit	-	KHGP26B140									
(a+b+c+d) kit	KPS26C504	KPS26C160	KPS26C280				KPS26C504				
a. Air outlet	KPS26C504T	KPS26C160T	KPS26C280T				KPS26C504T				
Snowbreak hood*	b. Air inlet (left)	KPS26C504L		KPS26C504L							
	c. Air inlet (right)	KPS26C504R		KPS26C504R							
	d. Air inlet (rear)	KPS26C504B	KPS26C160B	KPS26C280B				KPS26C504B			
	Communication box	BRR9A1V1								BRR9A1V1****	
Booster unit	LCBKQ3AV19										
Suction branch pipe for multi	-	-							EKHRQZM*****		
Refnet header	KHRQM22M29H8										
	KHRQ22M64H8										
	KHRQM22M75H8										
	KHRQ22M20TA8										
	KHRQ22M29T9										
Refnet joint	KHRQ22M64T8										
	KHRQ22M75T8										
Intelligent Controller	DSC601C51	-									
Intelligent Manager	DCM601A51	-									

\* Snowbreak hoods are field-supplied. For technical drawings and more information, contact your dealer. It is recommended to install a snowbreak hood when regular snowfall occurs.

\*\* In cold areas, provide a drain pan heater (field supply) to prevent drained water from freezing up in the drain pan \*\*\* required for each module

\*\*\*\* software update required (to be executed during commissioning) \*\*\*\*\* mandatory

# Accessories

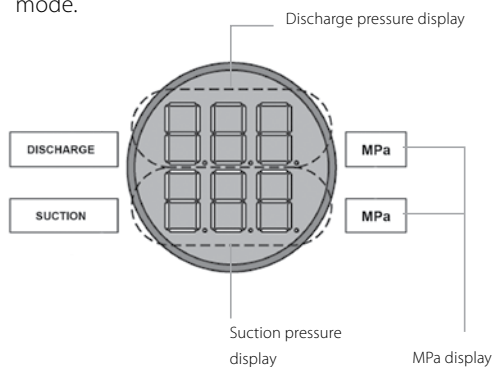
## for ZEAS and Conveni-Pack

### Digital pressure gauge kit

#### BHGP26A1

The digital measurement display allows you to diagnose a unit at a glance and it can be used with all ZEAS units and Conveni-Pack systems.

- › Digital measurement display for fixed installation or service applications.
- › Displays high and low pressure.
- › Displays error codes in the event of a fault.
- › Displays up to 32 operating parameters.
- › Displays error code history (last three).
- › Scrolls and stores output values.
- › Automatically returns to normal operating display mode.



### Modbus communication kit

#### BRR9A1V1

The Daikin Modbus Communication Interface lets you fully integrate Daikin ZEAS and Daikin Conveni-Pack systems with building control automation networks and other monitoring systems.

The interface allows you to read all the operational parameters and control important values using the Modbus protocol. This unifying component transforms ZEAS and Conveni-Pack into a transparent, customisable refrigeration unit and means that you can create object-specific and energy-optimised shop concepts, including remote monitoring application.

Pro interfaces can be used to connect up to 32 ZEAS units, and are also suitable for use with Conveni-Pack systems and the Booster.

#### Control values

- › Target evaporation temperature
- › Low pressure level for on and off points
- › Forced stop
- › Error messages can be cancelled remotely



#### Display values

- › Model information and operating status
- › Refrigerant operating pressure and temperatures
- › Electrical operating data and temperatures for components
- › Target values
- › Fan stage and compressor frequency, operating hours
- › Warning and error messages as well as system safety functions

## ACCESSORIES for ZEAS + CONVENI-PACK



### Communication box - ModBus interface

<b>Type</b>	<b>BRR9A1V1</b>		
<b>Price<sup>2</sup></b>	<b>€</b>	<b>1.650,-</b>	
Power input	230V / 1~ / 50Hz		
Dimensions WxDxH	in [mm]	124 x 397 x 87	
Weight	in [kg]	2,10	

### Digital pressure gauge kit



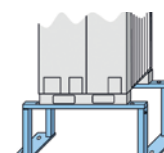
<b>Type</b>	<b>BHGP26A1</b>		
<b>Price<sup>2</sup></b>	<b>€</b>	<b>see VRV price list</b>	

### Wind protection



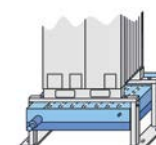
<b>Type</b>	<b>DE.KI_WINPROVRV1</b>	<b>DE.KI_WINPROVRV2</b>	<b>DE.KI_WINPROVRV3</b>
<b>Price<sup>2</sup></b>	<b>€</b>	<b>1.785,-</b>	<b>833,-</b>
Suitable for	right + left side, L=730 mm	front side, L=930 mm	front side, L=1.240 mm

### Base frame



<b>Type</b>	<b>CE.KI_FRAMEVRV2</b>	<b>CE.KI_FRAMEVRV3</b>
<b>Price<sup>2</sup></b>	<b>€</b>	<b>544,-</b>
Suitable for	ZEAS 5-6-8-10-12 HP	ZEAS 15-20 HP + CVP

### Drain pan<sup>1</sup>



<b>Type</b>	<b>CE.KI_DRAINPANVRV2</b>	<b>CE.KI_DRAINPANVRV3</b>
<b>Price<sup>2</sup></b>	<b>€</b>	<b>476,-</b>
Suitable for	ZEAS 5-6-8-10-12 HP	ZEAS 15-20 HP + CVP

### Conditions & Remarks:

<sup>1</sup> Drain pan can be installed only together with base frame, heater cable not included

<sup>2</sup> Warranty: 36 months, parts only

## JEHCCU and JEHSCU

### Commercial plug-in condensing units

#### Why Daikin condensing units?

Daikin's commercial condensing units are ideal for use in cold stores, pubs, hotels, butchers, bakeries and similar locations which need reliable cooling at medium temperature.

› Daikin JEHCCU and JEHSCU series plug-in condensing units are the perfect solution for those looking for compact and economically priced solutions.

› Highly energy-efficient with operating ambient temperatures ranging from -15°C to +43°C.

› Daikin condensing kits are suitable for refrigerants R-407F, R-407A, R-404A, R-134a and latest low GWP refrigerants R-448A and R-449A

› Carefully designed details: the whole range utilizes proven and specially optimized components for Daikin.

› Fast assembly, easy handling and an energy-optimized design ensure low investment and operating costs

› Redesigned to be lightweight and compact, with easy access, making installation and maintenance straightforward.

› Improved design and sound insulation make them ideal for urban locations, particularly near residential areas.



**NEW**  
 ✕ = R-448A   ★ = R-449A

 Scroll compressor	 Reciprocating compressor	230 V current	400 V current
---	--	---------------	---------------

● = R-404A   ▲ = R-407F   ■ = R-407A   ◆ = R-134A

				Refrigeration capacity (kW)															
MT cooling				<1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
JEHCCU 0040 CM1		●	●	◆															
JEHCCU 0051 CM1		●	●	◆															
JEHCCU 0063 CM1		●	●	◆															
JEHCCU 0077 CM1		●	●		◆														
JEHCCU 0095 CM1		●	●		◆														
JEHCCU 0050 CM1		●	●	●▲■★															
JEHCCU 0067 CM1		●	●	■●▲★															
JEHCCU 0100 CM1		●	●	●▲■★															
JEHCCU 0113 CM1		●	●	●▲■★															
JEHCCU 0140 CM1/3		●	●	■●▲★															
JEHSCU 0200 CM1/3	●		●	◆●▲■★✕															
JEHSCU 0250 CM1/3	●		●	◆●▲■★✕				●■											
JEHSCU 0300 CM1/3	●		●	◆●▲■★✕			●■	●											
JEHSCU 0350 CM3	●		●	◆●▲■★✕			●	●■											
JEHSCU 360 CM3	●		●	◆●▲■★✕			●	●■											
JEHSCU 0400 CM3	●		●	◆			■★	●▲											
JEHSCU 0500 CM3	●		●	◆					★✕	●▲									
JEHSCU 0600 CM3	●		●	◆						●■	▲								
JEHSCU 0680 CM3	●		●	◆						●■	▲								
JEHSCU 0800 CM3	●		●	◆								▲■			★✕	●			
JEHSCU 1000 CM3	●		●	◆													■	●▲	★✕

LT cooling				<1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
JEHCCU 0115 CL1		●	●	●■															
JEHSCU 0200 CL3	●		●	●■															
JEHSCU 0300 CL3	●		●	●■★✕															
JEHSCU 0400 CL3	●		●	■★	●														
JEHSCU 0500 CL3	●		●	■	●★														
JEHSCU 0600 CL3	●		●	■★	●														
JEHSCU 0750 CL3	●		●		■★	●													
JEHSCU 950 CM3	●		●						●■										

MT: Evaporation temperature -10°C, ambient temperature 32°C  
 LT: Evaporation temperature -35°C, ambient temperature 32°C  
 Refrigeration 2019-2020



# Condensing unit for commercial refrigeration with reciprocating technology

## Refrigeration solution for small food retailers

- › Designed specifically for small capacity refrigeration applications in small food stores (eg. in bakeries and butchers), cold rooms, bottle coolers and display cabinets
- › Compact and lightweight for even the smallest of city centre locations
- › All components can be accessed, making maintenance quick and easy
- › Ideal for urban applications: sound proofing and low operating sound levels mean the unit is quiet
- › The optimised compressor range and increased condenser surface deliver high levels of energy efficiency and reliability is ensured by using high quality components and production processes
- › Micro channel heat exchanger technology reduces the amount of refrigerant used in the system, lowering environmental impact



JEHCCU-CM1/CM3

Medium Temperature Refrigeration				JEHCCU-CM1/CM3				0040 CM1	0050 CM1	0051 CM1	0063 CM1	0067 CM1	0077 CM1	0095 CM1	0100 CM1	0113 CM1	0140 CM1	0140 CM3
Price				€				1.331,-	1.336,-	1.640,-	1.711,-	1.584,-	1.742,-	1.776,-	1.596,-	1.689,-	1.844,-	1.873,-
Refrigerating capacity	Medium temperature	R-134a	Nom	kW	0,55 (1)	-	0,83 (1)	0,99 (1)	-	1,20 (1)	1,49 (1)	-						
		R-404A*	Nom	kW	-	0,91 (1)	-	-	1,23 (1)	-	-	1,50 (1)	1,76 (1)	2,19 (1)	2,22 (1)			
		R-407A	Nom	kW	-	0,72 (1)	-	-	0,97 (1)	-	-	1,19 (1)	1,49 (1)	1,73 (1)	1,74 (1)			
		R-407F	Nom	kW	-	0,78 (1)	-	-	1,03 (1)	-	-	1,26 (1)	1,55 (1)	1,87 (1)	1,88 (1)			
Power input	Medium temperature	R-134a	Nom	kW	0,43 (1)	-	0,54 (1)	0,64 (1)	-	0,74 (1)	0,90 (1)	-						
		R-404A*	Nom	kW	-	0,63 (1)	-	-	0,76 (1)	-	-	0,93 (1)	1,10 (1)	1,18 (1)	1,24 (1)			
		R-407A	Nom	kW	-	0,54 (1)	-	-	0,70 (1)	-	-	0,84 (1)	0,98 (1)	1,11 (1)	1,16 (1)			
		R-407F	Nom	kW	-	0,53 (1)	-	-	0,69 (1)	-	-	0,83 (1)	0,98 (1)	1,07 (1)	1,12 (1)			
Parameters at full load and ambient temp. 25°C	R-134a	Te -10°C	Declared COP (COP2)	1,55	-	1,75	1,80	-	1,96	2,05	-							
		R-404A* Te -10°C	Declared COP (COP2)	-	1,88	-	-	1,92	-	-	1,87	1,95	1,96	2,02				
		R-407A Te -10°C	Declared COP (COP2)	-	1,39	-	-	1,45	-	-	1,50	1,65	1,58	1,58				
		R-407F Te -10°C	Declared COP (COP2)	-	1,62	-	-	1,66	-	-	1,68	1,78	1,95	1,87				
Parameters at full load and ambient temp. 32°C (Point A)	R-134a	Te -10°C	Rated COP (COPA)	1,28	-	1,53	1,55	-	1,63	1,65	-							
		R-404A* Te -10°C	Rated COP (COPA)	-	1,45	-	-	1,61	-	-	1,61	1,60	1,68	1,80				
		R-407A Te -10°C	Rated COP (COPA)	-	1,33	-	-	1,37	-	-	1,42	1,52	1,57	1,50				
		R-407F Te -10°C	Rated COP (COPA)	-	1,47	-	-	1,49	-	-	1,51	1,58	1,75	1,67				
Parameters at full load and ambient temp. 43°C	R-134a	Te -10°C	Declared COP (COP3)	1,18	-	1,20	1,21	-	1,30	1,32	-							
		R-404A* Te -10°C	Declared COP (COP3)	-	1,10	-	-	1,18	-	-	1,21	1,20	1,26	1,31				
		R-407A Te -10°C	Declared COP (COP3)	-	1,16	-	-	-	-	-	-	1,38	1,30	-				
		R-407F Te -10°C	Declared COP (COP3)	-	1,20	-	-	-	-	-	-	1,39	1,32	-				
Dimensions	Unit	Height	mm	607												662		
		Width	mm	876												1.101		
		Depth	mm	420												444		
Weight	Unit	kg			45	53			54			55			68			
Compressor	Type	Reciprocating compressor																
	Model	AE4440Y-FZ1A   AE4460Z-FZ1C   CAJ4461Y   CAJ4476Y   CAJ9480Z   CAJ4492Y   CAJ4511Y   CAJ9510Z   CAJ9513Z   CAJ4517Z   TAJ4517Z																
	Oil	Charged volume	l	0,3			0,9											-
	Oil Type	Uniqema Emkarate RL32CF																
Fan	Type	Axial																
	Air flow rate	Cooling	Nom	m³/h	1.300												2.700	
Sound pressure level	Nom.	dB(A)			29 (2)			28 (2)	29 (2)			28 (2)			34 (2)			
Refrigerant	Type	R-134a			R-404A			R-134a			R-404A			R-404A				
	Type 2	-			R-407A			-			R-407A			-				
	Type 3	-			R-407F			-			R-407F			-				
	GWP	1.430,0			3.921,6			1.430,0			3.921,6			1.430,0				
	GWP Type 3	-			2.107			-			2.107			-				
Piping connections	Liquid line connection	inch			1/4"			3/8"										
	Suction line connection	inch			3/8"			1/2"									5/8	
Power supply	Phase/Frequency/Voltage	Hz/V			1~/50/230												3~/50/400	

(1) Refer to condition: Outside ambient temperature = 32°C, Evaporation temperature = -10°C and 10K superheat (medium temperature application)

(2) Average sound pressure level is measured at 10m in anechoic room

\* R-404A refrigerant is not 2020 F-Gas Compliant





# Condensing unit for commercial refrigeration with scroll technology

## Refrigeration solution for small food retailers

- › Designed specifically for small capacity refrigeration applications in small food stores (eg. in bakeries and butchers), cold rooms, bottle coolers and display cabinets
- › Compact and lightweight for even the smallest of city centre locations
- › All components can be accessed, making maintenance quick and easy
- › Ideal for urban applications: sound proofing and low operating sound levels mean the unit is quiet
- › The optimised compressor range and increased condenser surface deliver high levels of energy efficiency and reliability is ensured by using high quality components and production processes
- › Micro channel heat exchanger technology reduces the amount of refrigerant used in the system, lowering environmental impact



Medium Temperature Refrigeration				JEHSCU-CM1/CM3														
				0200 CM1	0250 CM1	0300 CM1	0200 CM3	0250 CM3	0300 CM3	0350 CM3	0360 CM3	0400 CM3	0500 CM3	0600 CM3	0680 CM3	0800 CM3	1000 CM3	
<b>Price</b>				€ 2.304,-	2.531,-	2.796,-	2.269,-	2.531,-	2.769,-	2.884,-	2.889,-	2.989,-	3.091,-	3.389,-	3.709,-	4.882,-	5.744,-	
Refrigerating capacity	Medium temperature	R-134a Nom	kW	2,05 (1)	2,59 (1)	3,09 (1)	2,17 (1)	2,48 (1)	3,06 (1)	3,48 (1)	3,69 (1)	4,24 (1)	5,24 (1)	6,16 (1)	6,89 (1)	7,95 (1)	10,40 (1)	
		R-404A* Nom	kW	3,54 (1)	3,99 (1)	4,92 (1)	3,49 (1)	4,21 (1)	4,89 (1)	5,50 (1)	5,92 (1)	6,70 (1)	8,03 (1)	9,45 (1)	10,15 (1)	12,95 (1)	16,45 (1)	
		R-407A Nom	kW	3,39 (1)	3,98 (1)	4,65 (1)	3,36 (1)	3,94 (1)	4,54 (1)	-	5,61 (1)	6,57 (1)	8,03 (1)	9,24 (1)	10,35 (1)	12,55 (1)	14,75 (1)	
		R-407F Nom	kW	3,26 (1)	3,73 (1)	4,50 (1)	3,22 (1)	3,85 (1)	4,45 (1)	-	5,61 (1)	6,62 (1)	7,99 (1)	9,36 (1)	10,40 (1)	12,65 (1)	15,95 (1)	
Power input	Medium temperature	R-134a Nom	kW	1,11 (1)	1,21 (1)	1,45 (1)	1,03 (1)	1,17 (1)	1,46 (1)	1,68 (1)	1,61 (1)	1,85 (1)	2,30 (1)	2,70 (1)	3,15 (1)	3,74 (1)	4,86 (1)	
		R-404A* Nom	kW	1,57 (1)	2,00 (1)	2,62 (1)	1,70 (1)	2,04 (1)	2,52 (1)	3,04 (1)	2,88 (1)	3,33 (1)	4,39 (1)	4,92 (1)	5,53 (1)	5,96 (1)	8,62 (1)	
		R-407A Nom	kW	1,60 (1)	1,99 (1)	2,47 (1)	1,63 (1)	2,03 (1)	2,45 (1)	-	2,58 (1)	2,97 (1)	3,93 (1)	4,62 (1)	5,54 (1)	6,24 (1)	8,41 (1)	
		R-407F Nom	kW	1,74 (1)	2,09 (1)	2,66 (1)	1,78 (1)	2,16 (1)	2,71 (1)	-	2,91 (1)	3,21 (1)	4,36 (1)	5,03 (1)	5,98 (1)	6,13 (1)	8,84 (1)	
Seasonal energy performance ratio SEPR	R-134a Te -10°C										2,29	-	2,69	2,63	2,57	2,92	2,88	
											2,61	3,48	2,77	2,64	2,72	2,65	2,90	2,57
											3,44	3,09	2,81	2,75	2,65	2,88	2,35	
											3,2	2,83	2,60	2,69	2,59	2,83	2,53	
Annual electricity consumption Q	R-134a Te -10°C	kWh/a												11.969	14.381	16.491	16.741	22.226
		kWh/a									12.939	10.448	14.881	18.673	21.344	23.536	27.407	39.372
		kWh/a									10.033	13.054	17.546	20.622	24.031	26.747	38.515	
		kWh/a									10.766	14.365	18.883	21.395	24.655	27.475	38.831	
Parameters at full load and ambient temp. 25°C	R-134a Te -10°C	Declared COP (COP2)		2,15	2,54	2,50	2,55	2,52		2,46	2,8							
		Declared COP (COP2)		2,65	2,54	2,24	2,44	2,41	2,26	-	2,66							
		Declared COP (COP2)		2,55	2,38	2,21	2,50	2,32	2,20	-	2,72							
		Declared COP (COP2)		2,43	2,31	2,16	2,35	2,25	2,10	-	2,5							
Parameters at full load and ambient temp. 32°C (Point A)	R-134a Te -10°C	Rated COP (COPA)		1,85	2,14	2,13	2,12	2,13	2,10	2,08	2,29	2,29	2,28		2,19	2,13	2,14	
		Rated COP (COPA)		2,25	2,00	1,88	2,06	2,07	1,94	1,81	2,06	2,01	1,83	1,92	1,84	2,17	1,91	
		Rated COP (COPA)		2,13	2,01	1,89	2,07	1,95	1,86	-	2,17	2,21	2,04	2,00	1,87	2,01	1,75	
		Rated COP (COPA)		1,88	1,79	1,69	1,81	1,79	1,65	-	1,93	2,06	1,83	1,86	1,74	2,06	1,80	
Parameters at full load and ambient temp. 43°C	R-134a Te -10°C	Declared COP (COP3)		1,35	1,53		1,57		1,52		1,6	1,55	1,56	1,59	1,53	1,52		
		Declared COP (COP3)		1,53	1,33	1,25		1,36	1,28	1,11	1,31	1,28	1,15	1,27	1,22	1,47	1,18	
		Declared COP (COP3)					1,48	1,45	1,38	-	1,48	1,43	1,39	1,43	-	1,38	-	
		Declared COP (COP3)														1,52	-	
Dimensions	Unit	Height		mm			662			872			872			1.727		
		Width		mm			1.101			1.353			1.353			1.348		
		Depth		mm			444			575			575			641		
Weight	Unit	kg		70	72	74	70	72	74	112	119	123	125	126	218			
		Scroll compressor																
Compressor	Type																	
	Model	ZB15KQE-PFJ ZB19KQE-PFJ ZB21KQE-PFJ ZB15KQE-TFD ZB19KQE-TFD ZB21KQE-TFD ZB26KQE-TFD ZB26KQE-TFD ZB29KQE-TFD ZB38KQE-TFD ZB45KQE-TFD ZB48KQE-TFD ZB58KQE-TFD ZB76KQE-TFD																
	Oil	Charged volume		l						1,5			1,36	2,07	1,89	1,80	2,5	3,2
	Oil Type	Polyester oil (Copeland Ultra 22 CC, 32 CC and 32-3MAF, Mobil EAL™ Arctic 22 CC, Uniqem Emkarate RL32CF																
Fan	Type	Axial																
	Air flow rate	Cooling Nom	m³/h			2.700			4.250						8.500			
Refrigerant	Nom.	dBA		33 (2)	34 (2)	36 (2)	33 (2)	34 (2)	36 (2)	39 (2)	37 (2)	37 (2)	38 (2)	40 (2)	43 (2)			
	Type	R-134a																
	Type 2	R-404A																
	Type 3	R-407A																
	Type 4	R-407F																
	GWP	1.430																
	GWP Type 2	3.921,6																
	GWP Type 3	2.107																
	GWP Type 4	1.825																
	Piping connections	Liquid line connection		inch			3/8"			3/4"			1/2"			3/4"		
Suction line connection		inch			3/4"			1/2"			7/8"			1 1/8"				
Power supply	Phase/Frequency/Voltage		Hz/V			1~/50/230			3~/50/400									

(1) Refer to condition: Outside ambient temperature = 32°C, Evaporation temperature = -10°C and 10K superheat (medium temperature application) ; (2) Average sound pressure level is measured at 10m in anechoic room  
 \* R-404A refrigerant is not 2020 F-Gas Compliant; \*\* Also compatible with refrigerants R-448A and R-449A. For more information consult RefrigXpress  
 Blue cells contain preliminary data



# Condensing unit for commercial refrigeration with scroll / reciprocating technology

## Refrigeration solution for small food retailers

- › Designed specifically for small capacity refrigeration applications in small food stores (eg. in bakeries and butchers), cold rooms, bottle coolers and display cabinets
- › Compact and lightweight for even the smallest of city centre locations
- › All components can be accessed, making maintenance quick and easy
- › Ideal for urban applications: sound proofing and low operating sound levels mean the unit is quiet
- › The optimised compressor range and increased condenser surface deliver high levels of energy efficiency and reliability is ensured by using high quality components and production processes
- › Micro channel heat exchanger technology reduces the amount of refrigerant used in the system, lowering environmental impact



Low Temperature Refrigeration				JEHCCU-CL1/JEHSCU-CL3	JEHCCU0115CL1	JEHSCU0200CL3	JEHSCU0300CL3	JEHSCU0400CL3	JEHSCU0500CL3	JEHSCU0600CL3	JEHSCU0750CL3	JEHSCU0950CL3-EVI
<b>Price</b>				€	1.527,-	2.567,-	3.418,-	3.993,-	5.080,-	5.109,-	5.771,-	6.798,-
Refrigerating capacity	Low temperature	R-404A* Nom	kW	0,69 (1)	1,42 (1)	1,98 (1)	2,91 (1)	3,53 (1)	4,13 (1)	5,29 (1)	5,9 (1)	
		R-407A Nom	kW	-	1,16 (1)	1,51 (1)	2,29 (1)	2,77 (1)	3,31 (1)	4,29 (1)	4,96 (1)	
Power input	Low temperature	R-404A* Nom	kW	0,72 (1)	1,46 (1)	1,81 (1)	2,38 (1)	3,10 (1)	3,69 (1)	3,88 (1)	4,35 (1)	
		R-407A Nom	kW	-	1,31 (1)	1,77 (1)	2,33 (1)	2,85 (1)	3,57 (1)	4,17 (1)	3,94 (1)	
Seasonal energy performance ratio SEPR	R-404A* Te -35°C			-	-	-	1,88	1,79	1,80	1,82	1,79	
		R-407A Te -35°C		-	-	-	1,67	1,52	1,51	1,76		
Annual electricity consumption Q	R-404A* Te -35°C		kWh/a	-	-	-	11.555	14.732	17.107	21.649	24.503	
	R-407A Te -35°C		kWh/a	-	-	-	10.212	12.364	16.220	21.146	20.958	
Parameters at full load and ambient temp. 25°C	R-404A* Te -35°C		Declared COP (COP2)	1,11	1,16	1,40	-					1,58
	R-407A Te -35°C		Declared COP (COP2)	-	1,12	1,08	-					1,51
Parameters at full load and ambient temp. 32°C (Point A)	R-404A* Te -35°C		Rated COP (COPA)	0,96	0,97	1,09	1,22	1,14	1,06	1,36	1,36	
	R-407A Te -35°C		Rated COP (COPA)	-	0,89	0,85	0,98	0,97	0,93	1,03	1,26	
Parameters at full load and ambient temp. 43°C	R-404A* Te -35°C		Declared COP (COP3)	0,69	0,60	0,70	0,86	0,79	0,64	0,98	1,06	
	R-407A Te -35°C		Declared COP (COP3)	-	0,55	-	0,67	0,66	0,64	0,73	-	
Dimensions	Unit	Height	mm	607	662			872			1.727	1.727
		Width	mm	876	1.101			1.353			1.348	1.348
		Depth	mm	420	444			575			605	605
Weight	Unit			kg	55	76	77	132	133	203	200	
		Compressor		Type	Reciprocating compressor	Scroll compressor						
		Model		CAJ2446Z	ZF06K4E-TFD	ZF09K4E-TFD	ZF13K4E-TFD	ZF15K4E-TFD	ZF18K4E-TFD	ZF25K5E-TFD	ZF18KVE-TFD-EVI	
		Oil		Charged volume	l	0,9	1,90				1,90	
		Oil Type		Uniqema Emkarate RL32CF	Polyester oil (Copeland Ultra 22 CC, 32 CC and 32-3MAF, Mobil EAL™ Arctic 22 CC, Uniqem Emkarate RL32CF)							
		Piston displacement		m³/h	4,55	5,90	8,00	11,80	14,50	17,10	21,40	17,1
Fan	Type		Axial									
	Air flow rate	Cooling	Nom	m³/h	1.300	2.700			-		5.750	5.870
Sound pressure level	Nom.		dBA	31 (2)	32 (2)	33 (2)	37 (2)	39 (2)	41 (2)		37	
Refrigerant	Type		R-404A									
	Type 2		R-407A									
	GWP		3.921,6									
	GWP Type 2		2.107,0									
Piping connections	Liquid line connection		inch	3/8"			1/2"			7/8"		
	Suction line connection		inch	1/2"	3/4"			7/8"		1 1/8"	1/2"	
Power supply	Phase/Frequency/Voltage		Hz/V	1~/50/230							3~/50/400	

(1) SRG 20°C, Ta=32°C, Te=-35°C (2) Average sound pressure level is measured at 10m in anechoic room  
\* R-404A refrigerant is not 2020 F-Gas Compliant

Blue cells contain preliminary data



# Zanotti Refrigeration Range







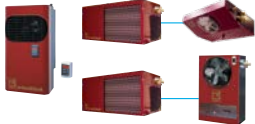




## Product range overview - Zanotti 53

Monoblocks	66	CC Series - multi compressor rack units	88
GM - Monoblock wall-mounted	66	Multi compressors rack unit with Scroll/Digital scroll and hermetic reciprocating compressors	88
MAS - Monoblock unit wall-mounted	68	Multi compressors rack unit with semi hermetic reciprocating compressors	90
SB - Monoblock ceiling-mounted	70	CM Series - multi compressor condensing units	92
Split units	72	Multi compressor condensing unit with scroll/digital scroll compressors	92
GS - Wall-mounted condensing unit with ceiling evaporator	72	Multi compressor condensing unit with semi hermetic compressors	94
SP - Floor mounted condensing unit with ceiling mounted evaporator	74	Options & Accessories	96
DB - Split condensing unit floor mounted with ceiling or cubic evaporator	76	Evaporators range	98
Wine storage units	78	Evaporators with or without TEV for different operations and refrigerants	98
RCV - monoblock for wine storage rooms	78	Other product ranges	100
RDV - split unit for wine storage rooms	80	Transport range	100
CU Series - condensing units	82	Industrial range	100
Condensing unit for outdoor installation with hermetic compressors	82	Other product overview	101
Condensing unit for outdoor installation with semi hermetic compressors	84		
Twin condensing unit for outdoor installation with twin-semi hermetic compressors	86		

More information on ordering Zanotti units?  
Questions on the Zanotti range?

Please contact the refrigeration department at Daikin Central Europe or your local refrigeration product manager.

# Product range overview - Zanotti

Model	Product name	Capacity (kW)	0	2	3	5	10	20	30	50	70	100	200	300
Monoblock- wall mounted F-Gas (R-134a/R-452A) propane (R-290)	GM			Chilling (0°C/+35°C)		Freezing (-20°C/+35°C)								
Monoblock- wall mounted	MAS						Chilling (0°C/+35°C)							
Monoblock- ceiling mounted F-Gas (R-134a/R-452A) propane (R-290)	SB			Chilling (0°C/+35°C)		Freezing (-20°C/+35°C)								
Split units: Condensing unit wall mounted with ceiling mounted evaporator	GS			Chilling (0°C/+35°C)		Freezing (-20°C/+35°C)								
Split units: Condensing unit floor-standing with ceiling mounted evaporator (capillary injection)	SP			Chilling (0°C/+35°C)		Freezing (-20°C/+35°C)								
Split units with TEV	DB			Chilling (0°C/+35°C)		Freezing (-20°C/+35°C)								
Monoblock or split units: Special solutions for wine cooling rooms	RCV / RDV			Freezing (-20°C/+35°C)										
Condensing unit series With hermetic, scroll and semi hermetic compressors	CU			Chilling (0°C/+35°C)		Freezing (-20°C/+35°C)								
Multi compressor racks With hermetic, scroll and semi hermetic compressors	CC						Chilling (0°C/+35°C)		Freezing (-20°C/+35°C)					
Multi compressor condensing units With hermetic, scroll and semi hermetic compressors	CM						Chilling (0°C/+35°C)		Freezing (-20°C/+35°C)					
Evaporators	EVP			Chilling (0°C/+35°C)		Freezing (-20°C/+35°C)		Cooling (+20°C/+10°C)						

■ Chilling (0°C/+35°C)
 ■ Freezing (-20°C/+35°C)
 ■ Cooling (+20°C/+10°C)



and



# United in cold

## About the Zanotti acquisition

With the acquisition of Zanotti, Daikin can now provide a diverse product line up for all aspects of the cold chain that extend from those used in food production and transportation (overland shipping) to those found at retailers.

## About the Zanotti product range

Zanotti's commercial range contains a large range of units used for refrigeration of restaurants, supermarkets and distribution centers.

Special air treatment systems are available for maturing of salamis and cheeses, wine conservation and refinement, silos cooling for grain and seeds.

Next to the commercial product range, Zanotti has a complete range for **transport refrigeration** and **industrial refrigeration** for applications as the food industry, clean rooms, ice skating rinks,...





The largest range of stationary commercial cooling solutions for the food industry

Zanotti manufactures a wide range of stationary refrigeration systems. This includes solutions in monoblock and split designs for any capacity, condensing units and racks for single or multiple users. These systems are used in restaurants, super- and hypermarkets, grocery stores, distribution centers and fresh food processing plants.

Zanotti offers special air treatment systems and temperature control solutions for small scale traditional food processing, such as cheese and salami maturing, and for wine preservation and refinement. The portfolio is completed by refrigeration systems for grain and seed silos.



## Correction factors

# Correction factors

The cooling capacities listed in the list below are for the outside temperature of + 35 ° C

Fowling factors are in scope:

*Basis of calculation		MT	LT
*Insulation	mm	100	120
*Charge density	kg/m <sup>3</sup>	250	250
*Goods movement	%	7	
*Goods inlet temperature	°C	25	-5
*Specific temperature of the product	kcal/kg°C	0,77	0,44
*Compressor working hours	hours	18	18
*Outside temperature	°C	35	35

For quick calculation of the required cooling capacity(Potn) if the actual conditions are deferent as the estimated bases, is it necessary to use the correction factors (K) to adapt the theoretically needed capacity (Potteo) to the real required refrigeration capacity.

The same Factors are used also to correct the volume of the real cooling room (Vreal) in relation to the theoretical volume (Vteo). according to this fact the fowling correction factors (K) must take into account:

### [K<sub>text</sub>] Correction factor for outside temperature

	+30°C	+35°C	+40°C	+45°C
K <sub>text</sub>	0,94	1,00	1,07	1,15

to calculate the capacity with different outside conditions (outdoor temperature) is it necessary to use the table above:

### [K<sub>t</sub>] Correction factor of the cooling room temperature

When the cooling room temperature is different from the calculation basis is it necessary to change the correction factor according to theselect required cell temperature according to the table below.

	+10°C	+5°C	0°C	-5°C	-15°C	-20°C	-25°C
K <sub>t</sub>	0,68	0,85	1,00	1,15	0,79	1,00	1,29

### [K<sub>%</sub>] Factor for the daily T/O of goods in the cooling room

Calculation bases is the estimation of 10% goods movements/day.

If a cold storage with a high T/O is required and depending on the loading density can give a value (in percentage) of the actual estimated goods movement is it necessary to use the corresponding factor as listed in the following table.

	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
K <sub>%</sub>	0,67	1,00	1,33	1,66	1,99	2,32	2,64	2,97	3,30	3,63	3,96

### [K<sub>e</sub>] Factor cooling room panel thicknesses

If the thickness of the panel is different than in the basic calculation so is it needed to use the correction factor from the following table:

	MT			LT		
	100 mm	80 mm	60 mm	120 mm	100 mm	80 mm
K <sub>e</sub>	0,91	1	1,10	0,89	1,00	1,14

### [K<sub>resp</sub>] Goods humidity

for the calculation basis, the humidity of the goods is not taken into account, for the cold rooms, which is stocked with such goods (fruits, vegetables, etc.) please consider the following factor:

$$K_{resp} = 1,25$$

With the following formula is it possible to get all the selected factors:

$$Pot_n = Pot_{teo} + [Pot_{teo} \times (K_{te}-1)] + [Pot_{teo} \times (K_{tc}-1)] + [Pot_{teo} \times (K_{\%}-1)] + [Pot_{teo} \times (K_e-1)] + [Pot_{teo} \times (K_{resp}-1)]$$

So we get the power which is actually needed. With this achievement is it already possible to select the most suitable unit.

Also possible to calculate the actual correct volume of the roomand to adjust and for required conditions

The following formula remains:

$$V_{real} = V_{teo} + [V_{teo} \times (K_{te}-1)] + [V_{teo} \times (K_{tc}-1)] + [V_{teo} \times (K_{\%}-1)] + [V_{teo} \times (K_e-1)] + [V_{teo} \times (K_{resp}-1)]$$

## Calculation example

### INSTALLATION DATA

Outdoor temperature:	+40°C
Cooling temp. temperature:	+5°C
Panel thickness:	100 mm
Daily goods movement:	10%
Goods:	fruits
Cold room volume:	50 m <sup>3</sup>

According to the table for cooling / volume of cooling rooms a cooling capacity of 4.370W is needed.

According to the correction factors, we get the following values:

Outdoor temperature:	+40°C 1,07
Cooling room temperature:	+5°C 0,85
Panel thickness:	100 mm 0,91
Daily goods movement:	10% 1,00
Goods:	fruit 1,25

Using the formulas, we get:

Cooling capacity

$$Pot_n = 4.370 + [4.370 \times (1,07-1)] + [4.370 \times (0,85-1)] + [4.370 \times (0,91-1)] + [4.370 \times (1,00-1)] + [4.370 \times (1,25-1)] = 4.720 \text{ W}$$

Volume of the cooling room

$$V_{real} = 50 + [50 \times (1,07-1)] + [50 \times (0,85-1)] + [50 \times (0,91-1)] + [50 \times (1,00-1)] + [50 \times (1,25-1)] = 54 \text{ m}^3$$



# Zanotti selection tools

## Quick selection for Monobloc Units:

How to select the right unit?

- ① Select ambient temperature
- ② Select cold room temperature
- ③ Select cold room/cooling volume (m<sup>3</sup>)  
Find correct model



Type	Volume Cold room / Refrigeration Capacity / R134a MT															
	Ta=25°C						Ta=35°C									
	Cold room temperature						Cold room temperature									
	-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W		-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W	
MGM103EA11XA	4,1	758	5,2	905	6,7	1.070	8,3	1.239	3,4	677	4,5	815	5,7	962	7,1	1.100
MGM105EA11XA	5,1	880	6,6	1.055	8,3	1.256	11	1.481	4	753	5,3	914	7,1	1.103	9	1.280
MGM106EA11XA	6,1	1.001	8,0	1.205	10	1.416	12	1.671	5	874	6,6	1.047	8,3	1.248	11	1.466
MGM107EA11XA	8	1.188	10	1.409	12	1.628	14	1.926	7	1.038	8,3	1.237	11	1.453	13	1.736
MGM110EA11XA	8	1.217	10	1.443	12	1.677	15	1.984	7	1.068	9	1.283	11	1.507	14	1.807
MGM211EA11XA	12	1.580	14	1.902	18	2.246	23	2.639	10	1.406	13	1.705	16	2.030	20	2.331
MGM212EB11XA	13	1.739	17	2.165	22	2.575	30	3.150	12	1.539	14	1.927	20	2.334	26	2.804
MGM213EB11XA	14	1.911	19	2.325	26	2.806	33	3.383	12	1.666	17	2.074	22	2.484	28	3.040
MGM315EB11XA	24	2.703	32	3.256	39	3.857	49	4.643	21	2.416	27	2.964	34	3.491	43	4.193
MGM320EB11XA	27	2.956	35	3.533	42	4.133	52	4.869	24	2.667	31	3.210	38	3.774	46	4.438

Insulation 60 mm

Conditions for calculated volumes	Commercial and Industrial application	
	Medium Temperature	Low temperature
Inside coldroom temperature	0°C	-20°C
External ambient temperature	35°C	
Load density of stored product	250 kg/m <sup>3</sup>	
Average specific heat of stored	0,77 kcal/kg	0,44 kcal/kg
Operating time of the refrigeration system	18 h	
Insulation thickness	Depending on the requirement	
Product temperature	25°C	-5°C
Product daily turnover	Commercial 10% / Industrial 7%	

V60 = max allowed volume with an insulation thickness of 60 mm  
V80 = max allowed volume with an insulation thickness of 80 mm  
V100 = max allowed volume with an insulation thickness of 100 mm  
V120 = max allowed volume with an insulation thickness of 120 mm

## Zanotti technical selection software:

In order to obtain a precise selection of the refrigeration capacity and the equipment as well as to be able to select further products from our product range, we recommend our Zanotti selection software.

Please contact your local Daikin refrigeration sales team for more information.



# Monoblock wall-mounted

## R134a MT

Type	Volume Cold room / Refrigeration Capacity / R134a MT															
	Ta=25°C							Ta=35°C								
	Cold room temperature							Cold room temperature								
	-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W		-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W	
MGM103EA11XA	4,1	758	5,2	905	6,7	1.070	8,3	1.239	3,4	677	4,5	815	5,7	962	7,1	1.100
MGM105EA11XA	5,1	880	6,6	1.055	8,3	1.256	11	1.481	4	753	5,3	914	7,1	1.103	9	1.280
MGM106EA11XA	6,1	1.001	8,0	1.205	10	1.416	12	1.671	5	874	6,6	1.047	8,3	1.248	11	1.466
MGM107EA11XA	8	1.188	10	1.409	12	1.628	14	1.926	7	1.038	8,3	1.237	11	1.453	13	1.736
MGM110EA11XA	8	1.217	10	1.443	12	1.677	15	1.984	7	1.068	9	1.283	11	1.507	14	1.807
MGM211EA11XA	12	1.580	14	1.902	18	2.246	23	2.639	10	1.406	13	1.705	16	2.030	20	2.331
MGM212EB11XA	13	1.739	17	2.165	22	2.575	30	3.150	12	1.539	14	1.927	20	2.334	26	2.804
MGM213EB11XA	14	1.911	19	2.325	26	2.806	33	3.383	12	1.666	17	2.074	22	2.484	28	3.040
MGM315EB11XA	24	2.703	32	3.256	39	3.857	49	4.643	21	2.416	27	2.964	34	3.491	43	4.193
MGM320EB11XA	27	2.956	35	3.533	42	4.133	52	4.869	24	2.667	31	3.210	38	3.774	46	4.438

Insulation 60 mm

Type	-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W		-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W	
	MGM103EA11XA	4,5	758	5,7	905	7,4	1.070	9,1	1.239	3,7	677	4,9	815	6,3	962	7,7
MGM105EA11XA	5,6	880	7,2	1.055	9,1	1.256	12	1.481	4,4	753	5,8	914	7,8	1.103	10	1.280
MGM106EA11XA	6,7	1.001	8,7	1.205	11	1.416	14	1.671	5,5	874	7,2	1.047	9,1	1.248	12	1.466
MGM107EA11XA	9	1.188	11	1.409	14	1.628	15	1.926	7,1	1.038	9,1	1.237	12	1.453	15	1.736
MGM110EA11XA	9	1.217	11	1.443	14	1.677	16	1.984	7	1.068	10	1.283	12	1.507	15	1.807
MGM211EA11XA	13	1.580	15	1.902	20	2.246	25	2.639	11	1.406	15	1.705	17	2.030	22	2.331
MGM212EB11XA	15	1.739	19	2.165	25	2.575	33	3.150	13	1.539	15	1.927	22	2.334	28	2.804
MGM213EB11XA	15	1.911	21	2.325	28	2.806	36	3.383	14	1.666	18	2.074	24	2.484	31	3.040
MGM315EB11XA	26	2.703	35	3.256	43	3.857	54	4.643	23	2.416	30	2.964	37	3.491	47	4.193
MGM320EB11XA	30	2.956	38	3.533	46	4.133	57	4.869	26	2.667	34	3.210	42	3.774	51	4.438

Insulation 80 mm

Type	-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W		-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W	
	MGM103EA11XA	4,9	758	6,3	905	8,1	1.070	10	1.239	4,1	677	5,4	815	6,9	962	8,5
MGM105EA11XA	6,1	880	7,9	1.055	10,0	1.256	13	1.481	4,8	753	6,4	914	8,5	1.103	11	1.280
MGM106EA11XA	7,4	1.001	9,6	1.205	12	1.416	15	1.671	6	874	7,9	1.047	10	1.248	13	1.466
MGM107EA11XA	9	1.188	12	1.409	15	1.628	17	1.926	8	1.038	10	1.237	13	1.453	16	1.736
MGM110EA11XA	10	1.217	12	1.443	15	1.677	18	1.984	8	1.068	11	1.283	13	1.507	17	1.807
MGM211EA11XA	14	1.580	17	1.902	22	2.246	28	2.639	12	1.406	16	1.705	19	2.030	24	2.331
MGM212EB11XA	16	1.739	21	2.165	27	2.575	36	3.150	14	1.539	17	1.927	24	2.334	31	2.804
MGM213EB11XA	17	1.911	23	2.325	31	2.806	40	3.383	15	1.666	20	2.074	26	2.484	34	3.040
MGM315EB11XA	29	2.703	38	3.256	47	3.857	59	4.643	25	2.416	33	2.964	41	3.491	52	4.193
MGM320EB11XA	33	2.956	42	3.533	51	4.133	63	4.869	29	2.667	37	3.210	46	3.774	56	4.438

Insulation 100 mm

## R452A LT

Type	Volume Cold room / Refrigeration Capacity / R452A LT											
	Ta=25°C						Ta=35°C					
	Cold room temperature						Cold room temperature					
	-25°C m3 W		-20°C m3 W		-15°C m3 W		-25°C m3 W		-20°C m3 W		-15°C m3 W	
BGM110DA11XA	2,0	581	2,9	732	4,0	882	1,5	500	2,2	624	3,1	768
BGM112DA11XA	3,4	798	4,5	955	6,1	1.129	2,4	660	3,5	820	4,7	974
BGM117DA11XA	4,5	950	6,2	1.144	7,8	1.335	3,4	814	5	1.010	6,4	1.169
BGM218DA11XA	6,6	1.182	8,6	1.427	12	1.690	5,1	1.028	7,2	1.249	9,4	1.492
BGM220DB11XA	9,4	1.481	13	1.806	16	2.104	7,2	1.246	10	1.567	13	1.834
BGM330DB11XA	16	2.084	23	2.537	30	3.029	12	1.732	17	2.160	24	2.653
BGM110DA11XA	2,2	581	3,3	732	4,5	882	1,7	500	2,5	624	3,6	768
BGM112DA11XA	3,8	798	5,2	955	6,9	1.129	2,8	660	4,0	820	5,3	974
BGM117DA11XA	5,2	950	7,0	1.144	8,9	1.335	3,9	814	5,7	1.010	7,3	1.169
BGM218DA11XA	7,5	1.182	9,8	1.427	13	1.690	5,9	1.028	8,2	1.249	11	1.492
BGM220DB11XA	11	1.481	15	1.806	19	2.104	8,2	1.246	12	1.567	15	1.834
BGM330DB11XA	18	2.084	26	2.537	35	3.029	14	1.732	20	2.160	28	2.653
BGM110DA11XA	2,5	581	3,7	732	5,1	882	1,9	500	2,8	624	4	768
BGM112DA11XA	4,3	798	5,8	955	7,8	1.129	3,1	660	4,5	820	6	974
BGM117DA11XA	5,8	950	7,9	1.144	10	1.335	4,4	814	6,4	1.010	8,2	1.169
BGM218DA11XA	8,4	1.182	11	1.427	15	1.690	6,6	1.028	9,2	1.249	12	1.492
BGM220DB11XA	12	1.481	17	1.806	21	2.104	9,2	1.246	13	1.567	17	1.834
BGM330DB11XA	20	2.084	29	2.537	39	3.029	16	1.732	22	2.160	31	2.653

Insulation 80 mm

Insulation 100 mm

Insulation 120 mm

# Monoblock ceiling-mounted

## R134a MT

Type	Volume Cold room / Refrigeration Capacity / R134a MT															
	Ta=25°C						Ta=35°C									
	Cold room temperature						Cold room temperature									
	-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W		-5°C m3 W		+10°C m3 W					
MSB005EA11XX	3,5	773	4,6	921	6,1	1.087	7,8	1.265	2,7	661	3,7	806	4,8	944	6,4	1.125
MSB106EA11XX	5,2	997	7,1	1.198	9,1	1.400	12	1.633	3,9	850	5,6	1.046	7,3	1.233	9,1	1.457
MSB107EA11XX	7,1	1.201	9,1	1.428	12	1.633	14	1.885	5,6	1.057	7,4	1.248	9,1	1.449	12	1.733
MSB210EA11XX	10	1.588	13	1.904	17	2.258	21	2.602	7,9	1.389	11	1.704	14	1.449	17	2.327
MSB212EB11XX	12	1.749	15	2.152	21	2.583	27	3.100	9,1	1.527	13	1.919	17	2.315	23	2.804
MSB315EB11XX	22	2.840	31	3.461	39	4.118	48	4.825	19	2.540	26	3.100	33	3.679	42	4.324
MSB320EB11XX	26	3.115	34	3.741	42	4.372	52	5.065	22	2.823	30	3.383	37	3.947	46	4.607
MSB425EB11XX	29	3.336	39	4.081	50	4.926	62	5.885	22	2.799	32	3.526	42	4.348	54	5.265
MSB530EB11XX	37	4.137	52	5.217	68	6.419	85	7.632	30	3.523	43	4.578	57	5.647	72	6.727

Insulation 60 mm

	-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W		-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W	
MSB005EA11XX	3,8	773	5,1	921	6,6	1.087	8,6	1.265	2,9	661	4,0	806	5,3	944	7,0	1.125
MSB106EA11XX	5,7	997	7,7	1.198	10	1.400	13	1.633	4,3	850	6,1	1.046	8,0	1.233	10	1.457
MSB107EA11XX	7,7	1.201	10	1.428	13	1.633	15	1.885	6,2	1.057	8,1	1.248	10	1.449	14	1.733
MSB210EA11XX	11	1.588	15	1.904	18	2.258	23	2.602	8,6	1.389	12	1.704	15	1.449	19	2.327
MSB212EB11XX	13	1.749	16	2.152	23	2.583	30	3.100	10	1.527	15	1.919	19	2.315	25	2.804
MSB315EB11XX	25	2.840	34	3.461	43	4.118	53	4.825	21	2.540	28	3.100	36	3.679	45	4.324
MSB320EB11XX	29	3.115	37	3.741	46	4.372	56	5.065	25	2.823	33	3.383	40	3.947	50	4.607
MSB425EB11XX	32	3.336	43	4.081	55	4.926	68	5.885	25	2.799	35	3.526	46	4.348	59	5.265
MSB530EB11XX	41	4.137	57	5.217	75	6.419	93	7.632	33	3.523	47	4.578	63	5.647	79	6.727

Insulation 80 mm

	-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W		-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W	
MSB005EA11XX	4,2	773	5,6	921	7,3	1.087	9,4	1.265	3,2	661	4,4	806	5,8	944	7,7	1.125
MSB106EA11XX	6,3	997	8,5	1.198	11	1.400	14	1.633	4,7	850	6,7	1.046	8,8	1.233	11	1.457
MSB107EA11XX	8,5	1.201	11	1.428	14	1.633	17	1.885	6,8	1.057	8,9	1.248	11	1.449	15	1.733
MSB210EA11XX	12	1.588	16	1.904	20	2.258	25	2.602	9,5	1.389	13	1.704	17	1.449	21	2.327
MSB212EB11XX	14	1.749	18	2.152	25	2.583	33	3.100	11	1.527	16	1.919	21	2.315	28	2.804
MSB315EB11XX	27	2.840	37	3.461	47	4.118	58	4.825	23	2.540	31	3.100	40	3.679	50	4.324
MSB320EB11XX	32	3.115	41	3.741	51	4.372	62	5.065	27	2.823	36	3.383	44	3.947	55	4.607
MSB425EB11XX	35	3.336	47	4.081	60	4.926	75	5.885	27	2.799	38	3.526	51	4.348	65	5.265
MSB530EB11XX	45	4.137	63	5.217	82	6.419	102	7.632	36	3.523	52	4.578	69	5.647	87	6.727

Insulation 100 mm

## R452A LT

Type	Volume Cold room / Refrigeration Capacity / R452A LT											
	Ta=25°C						Ta=35°C					
	Cold room temperature						Cold room temperature					
	-25°C m3 W		-20°C m3 W		-15°C m3 W		-25°C m3 W		-20°C m3 W		-15°C m3 W	
BSB010DA11XX	1,2	549	1,9	670	2,6	786	0,9	474	1,3	583	2,0	687
BSB117DA11XX	3,4	927	4,9	1.107	6,4	1.272	2,4	784	3,6	951	4,9	1.113
BSB220DB11XX	7,8	1.521	11	1.825	14	2.147	5,5	1.277	8,6	1.569	12	1.861
BSB330DB11XX	14	2.167	20	2.675	27	3.136	10	1.854	14	2.272	21	2.720

Insulation 80 mm

	-25°C m3 W		-20°C m3 W		-15°C m3 W		-25°C m3 W		-20°C m3 W		-15°C m3 W	
BSB010DA11XX	1,3	549	2,1	670	2,9	786	1,0	474	1,5	583	2,2	687
BSB117DA11XX	3,9	927	5,6	1.107	7,3	1.272	2,8	784	4,1	951	5,6	1.113
BSB220DB11XX	8,9	1.521	12	1.825	16	2.147	6,2	1.277	9,8	1.569	13	1.861
BSB330DB11XX	16	2.167	23	2.675	31	3.136	12	1.854	16	2.272	24	2.720

Insulation 100 mm

	-25°C m3 W		-20°C m3 W		-15°C m3 W		-25°C m3 W		-20°C m3 W		-15°C m3 W	
BSB010DA11XX	1,5	549	2,4	670	3,3	786	1,1	474	1,7	583	2,5	687
BSB117DA11XX	4,4	927	6,3	1.107	8,2	1.272	3,1	784	4,6	951	6,3	1.113
BSB220DB11XX	10	1.521	14	1.825	18	2.147	7	1.277	11	1.569	15	1.861
BSB330DB11XX	18	2.167	26	2.675	35	3.136	13	1.854	18	2.272	27	2.720

Insulation 120 mm

# Split unit, wall-mounted with ceiling evaporator

## R134a

Type	Volume Coldroom / Refrigeration Capacity / R134a															
	Ta=25°C							Ta=35°C								
	Cold room temperature							Cold room temperature								
	-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W		-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W	
SB.MGS103EA11XX	4,1	758	5,2	905	6,7	1.070	8,3	1.239	3,4	677	4,5	815	5,7	962	7,1	1.100
SB.MGS105EA11XX	5,1	880	6,6	1.055	8,3	1.256	11	1.481	4	753	5,3	914	7,1	1.103	9,1	1.280
SB.MGS106EA11XX	6,1	1.001	8,0	1.205	10	1.416	12	1.671	5	874	6,6	1.047	8,3	1.248	11	1.466
SB.MGS107EA11XX	7,8	1.188	10	1.409	12	1.628	14	1.926	6,5	1.038	8,3	1.237	11	1.453	13	1.736
SB.MGS110EA11XX	8,1	1.217	10	1.443	12	1.677	15	1.984	6,7	1.068	9,1	1.283	11	1.507	14	1.807
SB.MGS211EA11XX	12	1.580	14	1.902	18	2.246	23	2.639	10	1.406	13	1.705	16	2.030	20	2.331
SB.MGS212EB11XX	13	1.739	17	2.165	22	2.575	30	3.150	12	1.539	14	1.927	20	2.334	26	2.804
SB.MGS213EB11XX	14	1.911	19	2.325	26	2.806	33	3.383	12	1.666	17	2.074	22	2.484	28	3.040
SB.MGS315EB11XX	24	2.703	32	3.256	39	3.857	49	4.643	21	2.416	27	2.964	34	3.491	43	4.193
SB.MGS320EB11XX	27	2.956	35	3.533	42	4.133	52	4.869	24	2.667	31	3.210	38	3.774	46	4.438

Insulation 60 mm

	-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W		-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W	
SB.MGS103EA11XX	4,5	758	5,7	905	7,4	1.070	9,1	1.239	3,7	677	4,9	815	6,3	962	7,7	1.100
SB.MGS105EA11XX	5,6	880	7,2	1.055	9,1	1.256	12	1.481	4,4	753	5,8	914	7,8	1.103	10	1.280
SB.MGS106EA11XX	6,7	1.001	8,7	1.205	11	1.416	14	1.671	5,5	874	7,2	1.047	9,1	1.248	12	1.466
SB.MGS107EA11XX	8,6	1.188	11	1.409	14	1.628	15	1.926	7,1	1.038	9,1	1.237	12	1.453	15	1.736
SB.MGS110EA11XX	8,9	1.217	11	1.443	14	1.677	16	1.984	7,4	1.068	10	1.283	12	1.507	15	1.807
SB.MGS211EA11XX	13	1.580	15	1.902	20	2.246	25	2.639	11	1.406	15	1.705	17	2.030	22	2.331
SB.MGS212EB11XX	15	1.739	19	2.165	25	2.575	33	3.150	13	1.539	15	1.927	22	2.334	28	2.804
SB.MGS213EB11XX	15	1.911	21	2.325	28	2.806	36	3.383	14	1.666	18	2.074	24	2.484	31	3.040
SB.MGS315EB11XX	26	2.703	35	3.256	43	3.857	54	4.643	23	2.416	30	2.964	37	3.491	47	4.193
SB.MGS320EB11XX	30	2.956	38	3.533	46	4.133	57	4.869	26	2.667	34	3.210	42	3.774	51	4.438

Insulation 80 mm

	-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W		-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W	
SB.MGS103EA11XX	4,9	758	6,3	905	8,1	1.070	10,0	1.239	4,1	677	5,4	815	6,9	962	8,5	1.100
SB.MGS105EA11XX	6,1	880	7,9	1.055	10	1.256	13	1.481	4,8	753	6,4	914	8,5	1.103	11	1.280
SB.MGS106EA11XX	7,4	1.001	9,6	1.205	12	1.416	15	1.671	6,0	874	7,9	1.047	10	1.248	13	1.466
SB.MGS107EA11XX	9,4	1.188	12	1.409	15	1.628	17	1.926	7,8	1.038	10	1.237	13	1.453	16	1.736
SB.MGS110EA11XX	9,8	1.217	12	1.443	15	1.677	18	1.984	8,1	1.068	11	1.283	13	1.507	17	1.807
SB.MGS211EA11XX	14	1.580	17	1.902	22	2.246	28	2.639	12	1.406	16	1.705	19	2.030	24	2.331
SB.MGS212EB11XX	16	1.739	21	2.165	27	2.575	36	3.150	14	1.539	17	1.927	24	2.334	31	2.804
SB.MGS213EB11XX	17	1.911	23	2.325	31	2.806	40	3.383	15	1.666	20	2.074	26	2.484	34	3.040
SB.MGS315EB11XX	29	2.703	38	3.256	47	3.857	59	4.643	25	2.416	33	2.964	41	3.491	52	4.193
SB.MGS320EB11XX	33	2.956	42	3.533	51	4.133	63	4.869	29	2.667	37	3.210	46	3.774	56	4.438

Insulation 100 mm

## R452A

Type	Volume Coldroom / Refrigeration Capacity / R452A											
	Ta=25°C						Ta=35°C					
	Cold room temperature						Cold room temperature					
	-25°C m3 W		-20°C m3 W		-15°C m3 W		-25°C m3 W		-20°C m3 W		-15°C m3 W	
SB.BGS110DA11XX	2,0	581	2,9	732	4,0	882	1,5	500	2,2	624	3,1	768
SB.BGS112DA11XX	3,4	798	4,5	955	6,1	1.129	2,4	660	3,5	820	4,7	974
SB.BGS117DA11XX	4,5	950	6,2	1.144	7,8	1.335	3,4	814	5	1.010	6,4	1.169
SB.BGS218DA11XX	6,6	1.182	8,6	1.427	12	1.690	5,1	1.028	7,2	1.249	9,4	1.492
SB.BGS220DB11XX	9,4	1.481	13	1.806	16	2.104	7,2	1.246	10	1.567	13	1.834
SB.BGS330DB11XX	16	2.084	23	2.537	30	3.029	12	1.732	17	2.160	24	2.653

Insulation 80 mm

	-25°C m3 W		-20°C m3 W		-15°C m3 W		-25°C m3 W		-20°C m3 W		-15°C m3 W	
SB.BGS110DA11XX	2,2	581	3,3	732	4,5	882	1,7	500	2,5	624	3,6	768
SB.BGS112DA11XX	3,8	798	5,2	955	6,9	1.129	2,8	660	4,0	820	5,3	974
SB.BGS117DA11XX	5,2	950	7,0	1.144	8,9	1.335	3,9	814	5,7	1.010	7,3	1.169
SB.BGS218DA11XX	7,5	1.182	9,8	1.427	13	1.690	5,9	1.028	8,2	1.249	11	1.492
SB.BGS220DB11XX	11	1.481	15	1.806	19	2.104	8,2	1.246	12	1.567	15	1.834
SB.BGS330DB11XX	18	2.084	26	2.537	35	3.029	14	1.732	20	2.160	28	2.653

Insulation 100 mm

	-25°C m3 W		-20°C m3 W		-15°C m3 W		-25°C m3 W		-20°C m3 W		-15°C m3 W	
SB.BGS110DA11XX	2,5	581	3,7	732	5,1	882	1,9	500	2,8	624	4	768
SB.BGS112DA11XX	4,3	798	5,8	955	7,8	1.129	3,1	660	4,5	820	6	974
SB.BGS117DA11XX	5,8	950	7,9	1.144	10	1.335	4,4	814	6,4	1.010	8,2	1.169
SB.BGS218DA11XX	8,4	1.182	11	1.427	15	1.690	6,6	1.028	9,2	1.249	12	1.492
SB.BGS220DB11XX	12	1.481	17	1.806	21	2.104	9,2	1.246	13	1.567	17	1.834
SB.BGS330DB11XX	20	2.084	29	2.537	39	3.029	16	1.732	22	2.160	31	2.653

Insulation 120 mm

# Split unit, floor mounted with ceiling evaporator

## R134a

Type	Volume Coldroom / Refrigeration Capacity / R134a															
	Ta=25°C								Ta=35°C							
	Cold room temperature								Cold room temperature							
	-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W		-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W	
SB.MSP106EA11XX	6,1	1.003	8,2	1.225	10,7	1.463	13,2	1.741	4,9	858	6,7	1.073	9,1	1.281	11,6	1.533
SB.MSP107EA11XX	9,1	1.286	10,7	1.526	14,0	1.810	17,4	2.151	7,1	1.116	9,1	1.339	11,6	1.604	14,9	1.895
SB.MSP212EB11XX	11,6	1.595	14,9	1.948	19,0	2.286	24,0	2.719	9,9	1.399	13,2	1.702	15,7	2.061	20,7	2.399
SB.MSP213EB11XX	13,2	1.755	17,4	2.158	24,0	2.694	30,6	3.243	11,6	1.531	14,9	1.942	20,7	2.395	26,4	2.896
SB.MSP315EB11XX	25,6	2.796	33,1	3.380	41,3	4.082	52,1	4.869	21,5	2.465	28,1	3.045	36,4	3.635	44,6	4.316
SB.MSP320EB11XX	28,9	3.058	36,4	3.676	44,6	4.328	55,4	5.125	24,8	2.763	32,2	3.340	39,7	3.924	48,8	4.604

Insulation 60 mm

Type	-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W		-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W	
	SB.MSP106EA11XX	6,7	1.003	9,0	1.225	11,8	1.463	14,5	1.741	5,4	858	7,4	1.073	10,0	1.281	12,7
SB.MSP107EA11XX	10,0	1.286	11,8	1.526	15,5	1.810	19,1	2.151	7,8	1.116	10,0	1.339	12,7	1.604	16,4	1.895
SB.MSP212EB11XX	12,7	1.595	16,4	1.948	20,9	2.286	26,4	2.719	10,9	1.399	14,5	1.702	17,3	2.061	22,7	2.399
SB.MSP213EB11XX	14,5	1.755	19,1	2.158	26,4	2.694	33,6	3.243	12,7	1.531	16,4	1.942	22,7	2.395	29,1	2.896
SB.MSP315EB11XX	28,2	2.796	36,4	3.380	45,5	4.082	57,3	4.869	23,6	2.465	30,9	3.045	40,0	3.635	49,1	4.316
SB.MSP320EB11XX	31,8	3.058	40,0	3.676	49,1	4.328	60,9	5.125	27,3	2.763	35,5	3.340	43,6	3.924	53,6	4.604

Insulation 80 mm

Type	-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W		-5°C m3 W		0°C m3 W		+5°C m3 W		+10°C m3 W	
	SB.MSP106EA11XX	7,4	1.003	9,9	1.225	13,0	1.463	16,0	1.741	5,9	858	8,1	1.073	11,0	1.281	14,0
SB.MSP107EA11XX	11,0	1.286	13,0	1.526	17	1.810	21	2.151	8,6	1.116	11,0	1.339	14,0	1.604	18	1.895
SB.MSP212EB11XX	14,0	1.595	18,0	1.948	23	2.286	29	2.719	12,0	1.399	16,0	1.702	19	2.061	25	2.399
SB.MSP213EB11XX	16,0	1.755	21	2.158	29	2.694	37	3.243	14,0	1.531	18,0	1.942	25	2.395	32	2.896
SB.MSP315EB11XX	31,0	2.796	40	3.380	50	4.082	63	4.869	26,0	2.465	34,0	3.045	44	3.635	54	4.316
SB.MSP320EB11XX	35	3.058	44	3.676	54	4.328	67	5.125	30	2.763	39	3.340	48	3.924	59	4.604

Insulation 100 mm

## R452A

Type	Volume Coldroom / Refrigeration Capacity / R452A							
	Ta=25°C				Ta=35°C			
	Cold room temperature				Cold room temperature			
	-25°C m3 W		-20°C m3 W		-25°C m3 W		-20°C m3 W	
SB.BSP110DA11XX	2,0	576	3,1	730	1,4	473	2,1	599
SB.BSP112DA11XX	3,6	814	5,1	985	2,6	663	3,8	831
SB.BSP117DA11XX	4,9	959	6,9	1.177	3,6	814	5,1	991
SB.BSP218DA11XX	6,7	1.160	9,9	1.428	4,8	953	7,5	1.239
SB.BSP220DB11XX	9,9	1.500	15	1.856	7,7	1.255	10,7	1.571
SB.BSP330DB11XX	19,8	2.285	28	2.824	14,0	1.830	20,7	2.312

Insulation 80 mm

Type	-25°C m3 W		-20°C m3 W		-25°C m3 W		-20°C m3 W	
	SB.BSP110DA11XX	2,2	576	3,4	730	1,5	473	2,4
SB.BSP112DA11XX	4,0	814	5,6	985	2,8	663	4,2	831
SB.BSP117DA11XX	5,4	959	7,5	1.177	4,0	814	5,6	991
SB.BSP218DA11XX	7,4	1.160	10,9	1.428	5,3	953	8,3	1.239
SB.BSP220DB11XX	10,9	1.500	16,4	1.856	8,5	1.255	11,8	1.571
SB.BSP330DB11XX	21,8	2.285	30,9	2.824	15,5	1.830	22,7	2.312

Insulation 100 mm

Type	-25°C m3 W		-20°C m3 W		-25°C m3 W		-20°C m3 W	
	SB.BSP110DA11XX	2,4	576	3,7	730	1,7	473	2,6
SB.BSP112DA11XX	4,4	814	6,2	985	3,1	663	4,6	831
SB.BSP117DA11XX	5,9	959	8,3	1.177	4,4	814	6,2	991
SB.BSP218DA11XX	8,1	1.160	12	1.428	5,8	953	9,1	1.239
SB.BSP220DB11XX	12	1.500	18	1.856	9,3	1.255	13	1.571
SB.BSP330DB11XX	24	2.285	34	2.824	17	1.830	25	2.312

Insulation 120 mm

# Split unit, floor mounted with ceiling or cubic evaporator

## R134a

Type	Volume Coldroom / Refrigeration Capacity / R134a											
	Ta=25°C						Ta=35°C					
	Cold room temperature						Cold room temperature					
	-5°C m3 W		0°C m3 W		+5°C m3 W		-5°C m3 W		0°C m3 W		+5°C m3 W	
MDB106EA11XX	6,1	1.003	8,2	1.255	10,7	1.463	4,9	858	6,7	1.073	9,1	1.281
MDB107EA11XX	9,1	1.286	10,7	1.526	14,0	1.810	7,1	1.116	9,1	1.339	11,6	1.604
MDB212EB11XX	11,6	1.595	14,9	1.948	19,0	2.286	9,9	1.399	13,2	1.702	15,7	2.061
MDB213EB11XX	13,2	1.755	17,4	2.158	24,0	2.694	11,6	1.530	14,9	1.942	20,7	2.395
MDB315EB11XX	25,6	2.796	33,1	3.380	41,3	4.082	21,5	2.465	28,1	3.045	36,4	3.635
MDB320EB11XX	28,9	3.058	36,4	3.676	44,6	4.328	24,8	2.765	32,2	3.340	39,7	3.924
MDB425EB11XX	29,8	3.155	39,7	3.923	51,2	4.837	24,0	2.670	33,1	3.394	43,0	4.181
MDB530EB13XX	43,8	4.270	60,3	5.462	77,7	6.753	36,4	3.688	50,4	4.755	66,1	5.924
MDB635EB13XX	70,2	6.255	91,7	7.779	115,7	9.448	59,5	5.436	78,5	6.843	100,8	8.403
MDB645EB13XX	88,4	7.542	115,7	9.448	144,6	11.459	73,6	6.486	98,3	8.229	125,6	10.174
MDB706EB13XX	116,5	9.528	150,4	11.860	187,6	14.320	96,7	8.166	128,1	10.314	162,8	12.701
MDB707EB13XX	157,9	12.358	196,7	14.947	244,6	17.999	135,5	10.835	173,6	13.419	217,4	16.265

Insulation 60 mm

	-5°C m3 W		0°C m3 W		+5°C m3 W		-5°C m3 W		0°C m3 W		+5°C m3 W	
MDB106EA11XX	6,7	1.003	9,0	1.255	11,8	1.463	5,4	858	7,4	1.073	10,0	1.281
MDB107EA11XX	10,0	1.286	11,8	1.526	15,5	1.810	7,8	1.116	10,0	1.339	12,7	1.604
MDB212EB11XX	12,7	1.595	16,4	1.948	20,9	2.286	10,9	1.399	14,5	1.702	17,3	2.061
MDB213EB11XX	14,5	1.755	19,1	2.158	26,4	2.694	12,7	1.530	16,4	1.942	22,7	2.395
MDB315EB11XX	28,2	2.796	36,4	3.380	45,5	4.082	23,6	2.465	30,9	3.045	40,0	3.635
MDB320EB11XX	31,8	3.058	40,0	3.676	49,1	4.328	27,3	2.765	35,5	3.340	43,6	3.924
MDB425EB11XX	32,7	3.155	43,6	3.923	56,4	4.837	26,4	2.670	36,4	3.394	47,3	4.181
MDB530EB13XX	48,2	4.270	66,4	5.462	85,5	6.753	40,0	3.688	55,5	4.755	72,7	5.924
MDB635EB13XX	77,3	6.255	100,9	7.779	127,3	9.448	65,5	5.436	86,4	6.843	110,9	8.403
MDB645EB13XX	97,3	7.542	127,3	9.448	159,1	11.459	80,9	6.486	108,2	8.229	138,2	10.174
MDB706EB13XX	128,2	9.528	165,5	11.860	206,4	14.320	106,4	8.166	140,9	10.314	179,1	12.701
MDB707EB13XX	173,6	12.358	216,4	14.947	269,1	17.999	149,1	10.835	190,9	13.419	239,1	16.265

Insulation 80 mm

	-5°C m3 W		0°C m3 W		+5°C m3 W		-5°C m3 W		0°C m3 W		+5°C m3 W	
MDB106EA11XX	7,4	1.003	9,9	1.255	13	1.463	5,9	858	8,1	1.073	11	1.281
MDB107EA11XX	11	1.286	13	1.526	17	1.810	8,6	1.116	11	1.339	14	1.604
MDB212EB11XX	14	1.595	18	1.948	23	2.286	12	1.399	16	1.702	19	2.061
MDB213EB11XX	16	1.755	21	2.158	29	2.694	14	1.530	18	1.942	25	2.395
MDB315EB11XX	31	2.796	40	3.380	50	4.082	26	2.465	34	3.045	44	3.635
MDB320EB11XX	35	3.058	44	3.676	54	4.328	30	2.765	39	3.340	48	3.924
MDB425EB11XX	36	3.155	48	3.923	62	4.837	29	2.670	40	3.394	52	4.181
MDB530EB13XX	53	4.270	73	5.462	94	6.753	44	3.688	61	4.755	80	5.924
MDB635EB13XX	85	6.255	111	7.779	140	9.448	72	5.436	95	6.843	122	8.403
MDB645EB13XX	107	7.542	140	9.448	175	11.459	89	6.486	119	8.229	152	10.174
MDB706EB13XX	141	9.528	182	11.860	227	14.320	117	8.166	155	10.314	197	12.701
MDB707EB13XX	191	12.358	238	14.947	296	17.999	164	10.835	210	13.419	263	16.265

Insulation 100 mm

## R452A

Type	Volume Coldroom / Refrigeration Capacity / R452A							
	Ta=25°C				Ta=35°C			
	Cold room temperature				Cold room temperature			
	-25°C m3 W		-20°C m3 W		-25°C m3 W		-20°C m3 W	
BDB110DA11XX	2,0	576	3,1	730	1,4	473	2,1	599
BDB112DA11XX	3,6	814	5,1	985	2,6	663	3,8	831
BDB117DA11XX	5,5	1.026	7,9	1.259	4,1	870	5,8	1.060
BDB218DA11XX	7,5	1.241	10,7	1.528	5,4	1.020	8,3	1.325
BDB220DB11XX	9,9	1.500	15	1.856	7,7	1.255	10,7	1.571
BDB320DB11XX	17,4	2.106	26	2.628	13,2	1.730	18,2	2.157
BDB330DB11XX	19,0	2.217	29	2.856	14,0	1.825	20,7	2.332

Insulation 80 mm

	-25°C m3 W		-20°C m3 W		-25°C m3 W		-20°C m3 W	
BDB110DA11XX	2,2	576	3,4	730	1,5	473	2,4	599
BDB112DA11XX	4,0	814	5,6	985	2,8	663	4,2	831
BDB117DA11XX	6,0	1.026	8,5	1.259	4,5	870	6,4	1.060
BDB218DA11XX	8,3	1.241	11,8	1.528	5,9	1.020	9,1	1.325
BDB220DB11XX	10,9	1.500	16,4	1.856	8,5	1.255	11,8	1.571
BDB320DB11XX	19,1	2.106	28,2	2.628	14,5	1.730	20,0	2.157
BDB330DB11XX	20,9	2.217	31,8	2.856	15,5	1.825	22,7	2.332

Insulation 100 mm

	-25°C m3 W		-20°C m3 W		-25°C m3 W		-20°C m3 W	
BDB110DA11XX	2,4	576	3,7	730	1,7	473	2,6	599
BDB112DA11XX	4,4	814	6,2	985	3,1	663	4,6	831
BDB117DA11XX	6,6	1.026	9,3	1.259	5	870	7	1.060
BDB218DA11XX	9,1	1.241	13	1.528	6,5	1.020	10	1.325
BDB220DB11XX	12	1.500	18	1.856	9,3	1.255	13	1.571
BDB320DB11XX	21	2.106	31	2.628	16	1.730	22	2.157
BDB330DB11XX	23	2.217	35	2.856	17	1.825	25	2.332

Insulation 120 mm

# Monoblock unit for mobile containers wall-mounted

## R134a

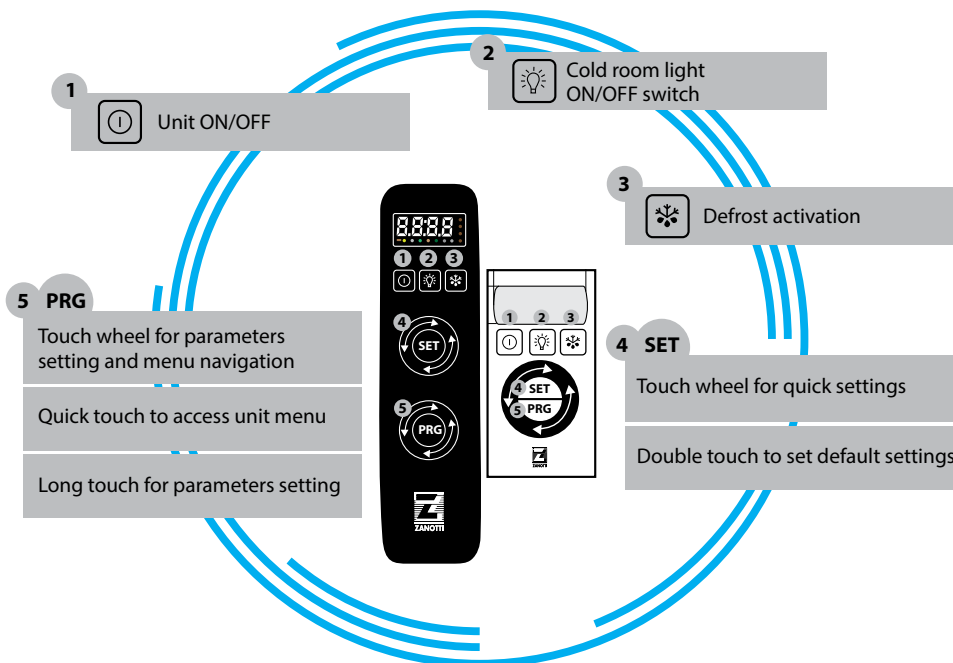
Type	Volume Coldroom / Refrigeration Capacity / R134a												
	Ta=25°C						Ta=35°C						
	Cold room temperature						Cold room temperature						
	-5°C m3 W		0°C m3 W		+5°C m3 W		-5°C m3 W		0°C m3 W		+5°C m3 W		
MAS235T02E	43,0	4.205	57,9	5.325	76,0	6.652	35,5	3.574	49,6	4.699	63,6	5.768	Insulation 60 mm
MAS335N02E	67,8	6.071	87,6	7.467	111,6	9.180	57,0	5.236	76,0	6.637	97,5	8.192	
MAS335T02E	82,6	7.133	106,6	8.829	133,9	10.748	68,6	6.102	91,7	7.805	116,5	9.504	
MAS340T02E	113,2	9.314	142,1	11.292	171,1	13.257	99,2	8.320	124,8	10.103	153,7	12.073	
	-5°C m3 W		0°C m3 W		+5°C m3 W		-5°C m3 W		0°C m3 W		+5°C m3 W		Insulation 80 mm
MAS235T02E	47,3	4.205	63,6	5.325	83,6	6.652	39,1	3.574	54,5	4.699	70,0	5.768	
MAS335N02E	74,5	6.071	96,4	7.467	122,7	9.180	62,7	5.236	83,6	6.637	107,3	8.192	
MAS335T02E	90,9	7.133	117,3	8.829	147,3	10.748	75,5	6.102	100,9	7.805	128,2	9.504	
MAS340T02E	124,5	9.314	156,4	11.292	188,2	13.257	109,1	8.320	137,3	10.103	169,1	12.073	
	-5°C m3 W		0°C m3 W		+5°C m3 W		-5°C m3 W		0°C m3 W		+5°C m3 W		Insulation 100 mm
MAS235T02E	52,0	4.205	70,0	5.325	92,0	6.652	43,0	3.574	60,0	4.699	77,0	5.768	
MAS335N02E	82,0	6.071	106,0	7.467	135	9.180	69,0	5.236	92,0	6.637	118,0	8.192	
MAS335T02E	100,0	7.133	129,0	8.829	162	10.748	83,0	6.102	111,0	7.805	141	9.504	
MAS340T02E	137,0	9.314	172	11.292	207	13.257	120,0	8.320	151,0	10.103	186	12.073	

# Zanotti

## Touch control

Zanotti presents the new "Touch Screen" control panel for GM monobloc units and GS split units. This new one User interface consists of keypad and display and allows easy access to all manual functions of the units.

The control of the refrigeration cycle, switching the unit on and off, the lighting in the cold room, activating the manual defrost process and setting the parameters are the features that are more intuitive with the new keyboard.



## for two units in a cold storage cell

### ALTERNATIVE REMOTE CONTROL

> For cold rooms where it is required by law to maintain a certain temperature (Products for hospitals, Pharmaceutical products) for safety and control two aggregates in the same Cooling cell to be installed so that they are the same in alternate operation working hours.

> If an aggregate is in full function blocked due to a fault, automatically starts the second one Aggregate. For remote controls with Thermostat when the temperature is not for a certain period of time achieved (product feed, open cell door for a longer Period), the unit changes into the standby function.



- > Remote control for two aggregates adjustable Timer for the alternate Operation of the Aggregate.
- > In case of device failure, switch the Control on the standing device around. Alarm message through Lamp and buzzer.
- > Thermostat for Safety at high Temperatures in the cold room (only with models with Thermostat).





# Monoblock wall-mounted

## Wall mounted or alternatively through wall by using Mounting kit

The models of the GM series are compact, highly versatile units. Developed to be mounted on the wall of the cold room or mounted through the cooling cell panel using a through the wall kit.

The unit frame is made of painted sheet steel with an epoxy powder coating.

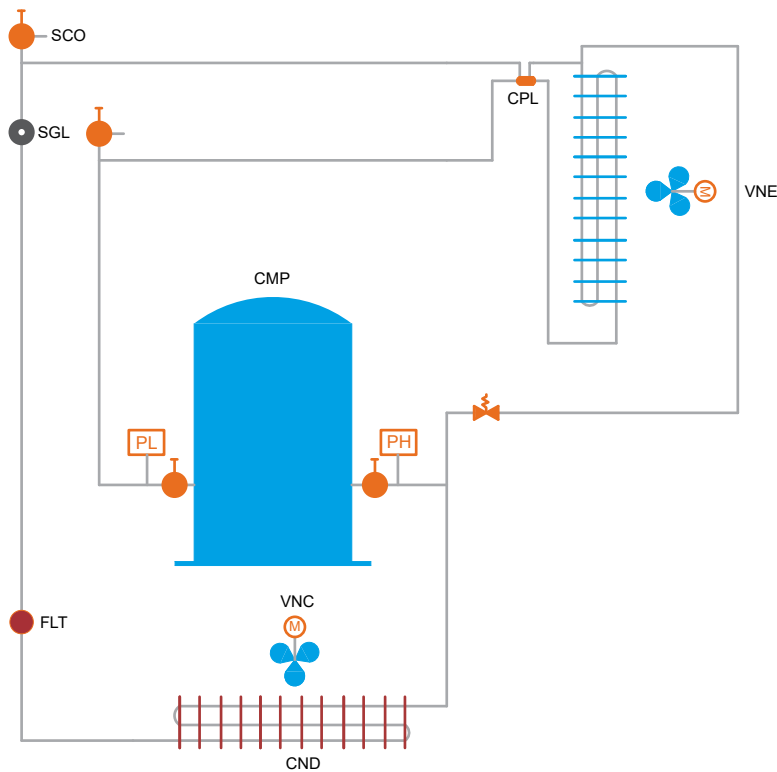
The compressors are hermetic compressors and by default filled with R134a for MT and R452A for LT, further refrigerant variants are available on request.

Many different options and accessories available upon request.

## Main characteristics:

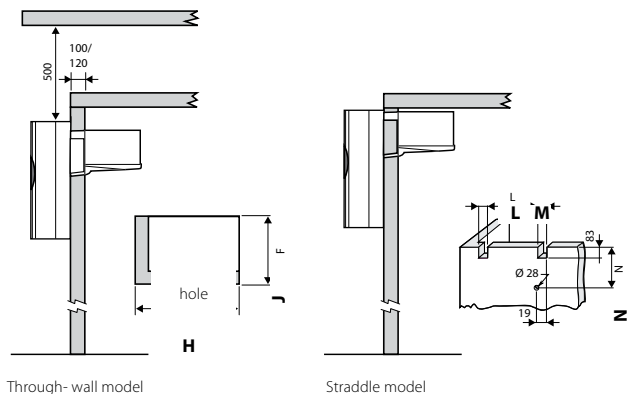
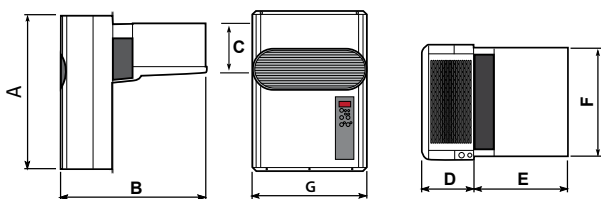
- › For small to mid-size cold rooms
- › Fast assembly / mounting
- › Excellent space requirement vs. performance ratio
- › Automatic warning upon condenser pollution
- › New generation control panel with touch LCD: connection with classic remote management systems or Modbus system
- › Equipped with HP, LP switch and filter dryer (standard)
- › Pre charged with refrigerant
- › Low sound level
- › Two models: straddle or through wall
- › Discharge gas defrosting

## Installation type, dimensions and refrigeration cycle diagram



### Legend:

- CMP: compressor
- SGL: sight glass
- PL: LP switch
- PH: HP switch
- CND: condenser
- VNC: condenser fan motor
- FLT: filter dryer
- VAL: closing valve
- CPL: capillary pipe
- VNE: evaporator fan motor
- EVP: evaporator
- SCO: service valve



(in mm)	A	B	C	D	E	F	G	H	J	L	M	N
GM1	735	850	264	280	570	368	400	375	335	288	43	316
GM2	830	850	264	280	570	585	620	590	335	503	43	316
GM3	830	920	364	350	570	585	620	590	440	503	43	410



MGM-E / BGM-D

Low temperature refrigeration				GM	BGM110 DA11XA	BGM0870 Y1AA	BGM112 DA11XA	BGM117 DA11XA	BGM218 DA11XA	BGM220 DB11XA	BGM330 DB11XA
<b>Price</b>				€	1.879,-	2.031,-	1.956,-	1.969,-	2.164,-	2.393,-	3.028,-
Refrigerating capacity	Low temperature	R-290	Nom	kW	-	0,87 (1)	0,889 (1)	1,080 (1)	1,336 (1)	1,688 (1)	2,349 (1)
		R-452A	Nom	kW	0,679 (1)	-					
Dimensions	Unit	HeightxWidthxDepth		mm	735x400x790			830x620x790			830x620x862
	Packed unit	HeightxWidthxDepth		mm	942x450x850			1.050x670x850			1.050x670x940
Weight	Unit			kg	56		64		80		105
	Packed unit			kg	67		75		96		122
Compressor	Type				Hermetic Reciprocating						
	Nominal power			kW	0,74	0,9		1,3		1,5	2,2
	Starting method				Direct						
Condenser	Air flow			m <sup>3</sup> /h	600	720	600		1.200		1.500
Defrost					Hot gas						
Evaporator	Air flow			m <sup>3</sup> /h	600	672	600		1.200		1.500
	Air throw			m	4			10			
Operation range	Cold room temperature	Min. ~Max.		°C	-25~-15						
Refrigerant	Type/GWP				R-452A/2.141	R-290/3			R-452A/2.141		
	Charge			kg/TCO <sub>2</sub> Eq	0,38/0,81	0,15/0,0000	0,34/0,73	0,35/0,75	0,86/1,84	0,84/1,80	0,98/2,10
Power supply	Phase/Frequency/Voltage			Hz/V	1~/50/230					3N~/50/400	

Medium temperature refrigeration				GM	MGM103 EA11XA	MGM105 EA11XA	MGM106 EA11XA	MGM128 OY1AA	MGM107 EA11XA	MGM110 EA11XA	MGM211 EA11XA	MGM221 OY1AA	MGM212 EB11XA	MGM213 EB11XA	MGM315 EB11XA	MGM320 EB11XA
<b>Price</b>				€	1.479,-	1.505,-	1.557,-	1.700,-	1.687,-	1.735,-	2.283,-	2.352,-	2.360,-	2.532,-	2.813,-	2.940,-
Refrigerating capacity	Medium temperature	R-134a	Nom	kW	0,855 (2)	0,978 (2)	1,120 (2)	-	1,315 (2)	1,351 (2)	1,806 (2)	-	2,034 (2)	2,175 (2)	3,079 (2)	3,351 (2)
		R-290	Nom	kW	-	-	1,31 (1)	-	-	-	2,18 (1)	-	-	-	-	-
Dimensions	Unit	HeightxWidthxDepth		mm	735x400x790						830x620x790			830x620x682		
	Packed unit	HeightxWidthxDepth		mm	942x450x850						1.050x670x850			1.050x670x940		
Weight	Unit			kg	52	53		56		64		80		98	100	
	Packed unit			kg	63	64		67		75		96			115	
Compressor	Type				Hermetic Reciprocating											
	Starting method				Direct											
Condenser	Air flow			m <sup>3</sup> /h	600				1.200	-		1.200		1.500		
Defrost					Hot gas											
Evaporator	Air flow			m <sup>3</sup> /h	600				1.200	1.125		1.200		1.800		
	Air throw			m	4				4					10		
Operation range	Cold room temperature	Min. ~Max.		°C	-5~-10											
Refrigerant	Type/GWP				R-134a/1.430	R-290/3		R-134a/1.430	R-290/3		R-134a/1.430					
	Charge			kg/TCO <sub>2</sub> Eq	0,40/0,57	0,43/0,61	0,15/0,00	0,33/0,47	0,40/0,57	0,71/1,02	0,15/0,00	0,70/1,00	0,75/1,07	0,95/1,36	1,00/1,43	
Power supply	Phase/Frequency/Voltage			Hz/V	1~/50/230					3N~/50/400						

(1) When normally running: -20°C / +30°C

(2) When normally running: 0°C / +30°C

# Monoblock unit wall-mounted

## Wall mounted solution for mobile containers

The models of the AS and AS-R series are compact units characterized by high versatility. To be mounted on the wall. Developed to be mounted through the cooling panel for mobile containers.

The unit frame is made of painted sheet steel with an epoxy powder coating.

Hermetic compressors and by default filled with R134a for MT and R452A for LT.

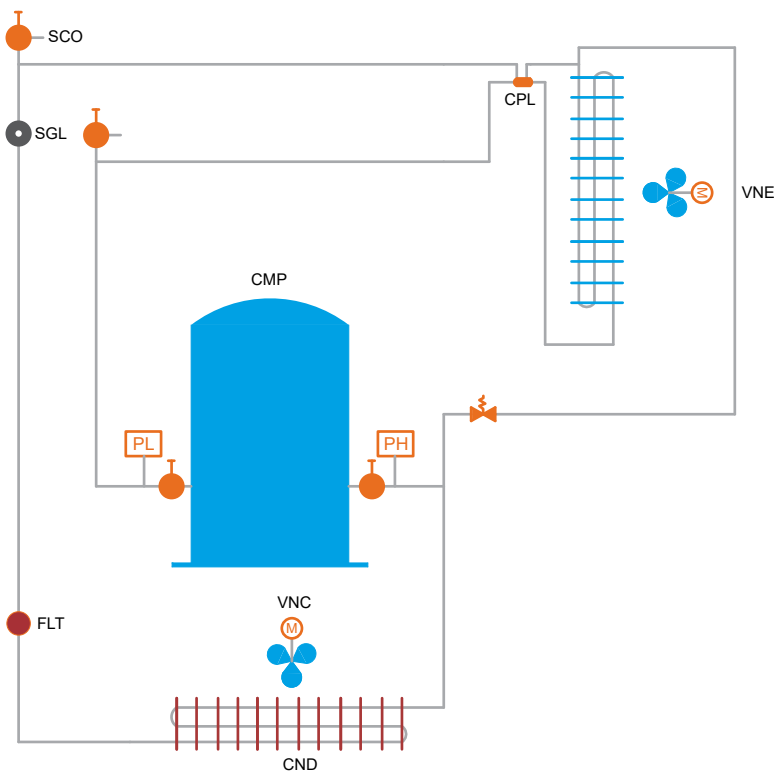
Further refrigerant variants are available on request.

Many different options and accessories available upon request.

## Main characteristics:

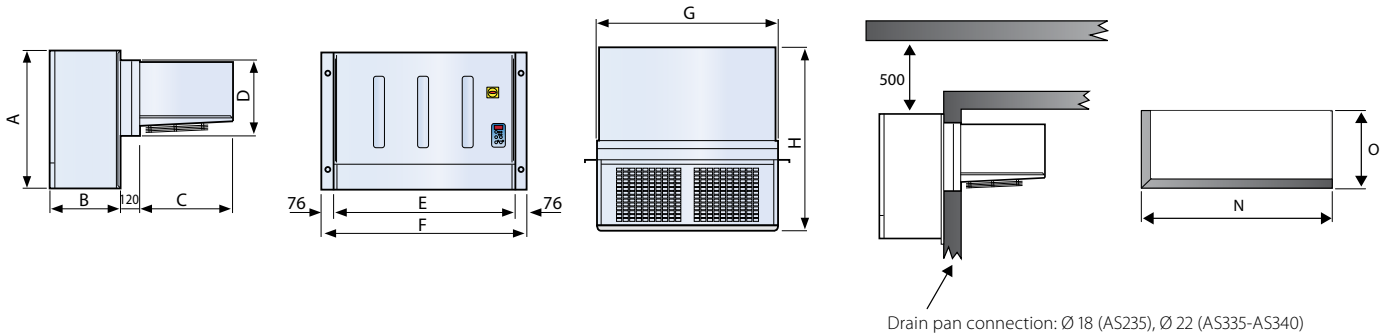
- › For small to mid-size cold rooms
- › Fast assembly / mounting
- › Excellent space requirement vs. performance ratio
- › Automatic warning upon condenser pollution
- › New generation control panel
- › Equipped with HP and LP pressure switch (standard)
- › Low sound level due to acoustic insulation of the compressor chamber (optional)
- › Discharge gas defrosting

## Installation type, dimensions and refrigeration cycle diagram



### Legend:

- CMP: compressor
- SGL: sight glass
- PL: LP switch
- PH: HP switch
- CND: condenser
- VNC: condenser fan motor
- FLT: filter dryer
- VAL: closing valve
- CPL: capillary pipe
- VNE: evaporator fan motor
- EVP: evaporator
- SCO: service valve



Drain pan connection: Ø 18 (AS235), Ø 22 (AS335-AS340)

(in mm)	A	B	C	D	E	F	G	H	N	O
MAS 235	857	440	580	470	1.128	1.280	1.120	1.140	1.130	480
MAS 335	857	440	580	470	1.598	1.750	1.590	1.140	1.600	480
MAS 340	857	490	630	570	1.638	1.790	1.630	1.240	1.640	580



<b>MT cooling</b>		<b>MAS-E</b>	<b>235T02</b>	<b>335N02</b>	<b>335T02</b>	<b>340T02</b>
<b>Price</b>		€	<b>7.767,-</b>	<b>9.472,-</b>	<b>10.777,-</b>	<b>14.170,-</b>
Refrigerating capacity	Ambient temp. +5°C	kW	5,768	8,192	9,504	12,073
	Recommended room volume	m <sup>3</sup>	77	118	141	186
	Ambient temp. 0°C	kW	4,699	6,637	7,805	10,103
	Recommended room volume	m <sup>3</sup>	60	92	111	151
Power input		kW	3,7	4,8	6,3	7,4
Air flow rate	Condensing unit	m <sup>3</sup> /h	2.700	4.000	4.000	5.600
	Evaporator	m <sup>3</sup> /h	3.900	5.600	5.600	8.000
Defrosting					Discharge gas	
Sound pressure level <sup>(1)</sup>	At 10m distance	dB(A)	39	43	44	45
Refrigerant	Type/GWP		R-134a/1.430			
Insulation		mm	100			
Power supply			400 V / 3 ~ / 50 Hz			

Chilling: charged goods 250 kg /m<sup>3</sup>, handling 10%, material input temperature 25 °C, specific heat of the product 0,77 kcal / (kg · K), 18 compressor running hours, outdoor temperature 35 °C"

(1) Sound pressure data: measured at 10 meters distance according to ISO 3746/79"

Information on availability on request

# Monoblock ceiling-mounted

## The interior of the cooling room remains unaffected

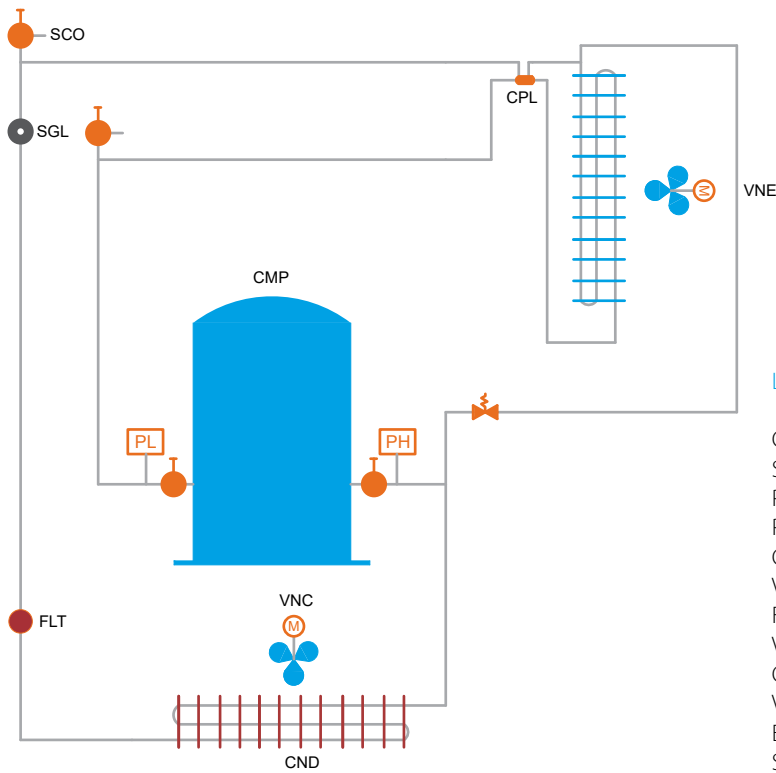
The models of the SB series are highly versatile, compact units. Developed to be mounted on the ceiling of the cold room. The unit frame is made of painted sheet steel with an epoxy powder coating. The compressors are hermetic compressors and by default filled with R134a for MT and R452A for LT. Further refrigerant variants are available on request.

Many different options and accessories available upon request.

## Main characteristics:

- › For small to mid-size cold rooms
- › Fast assembly / mounting
- › Excellent space requirement vs. performance ratio
- › Automatic warning upon condenser pollution
- › New generation control panel: connection with classic remote management systems or Modbus system
- › Equipped with HP, LP switch and filter dryer (standard)
- › Pre charged with refrigerant
- › Low sound level
- › Two models: straddle or through wall
- › Discharge gas defrosting
- › Capillary tube gas expansion

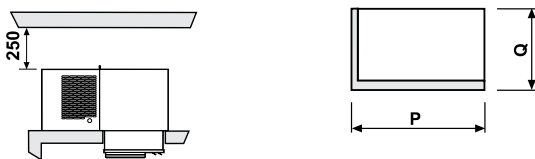
## Installation type, dimensions and refrigeration cycle diagram



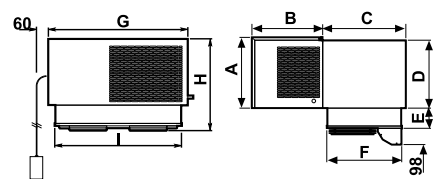
### Legend:

- CMP: compressor
- SGL: sight glass
- PL: LP switch
- PH: HP switch
- CND: condenser
- VNC: condenser fan motor
- FLT: filter dryer
- VAL: closing valve
- CPL: capillary pipe
- VNE: evaporator fan motor
- EVP: evaporator
- SCO: service valve

SB125-235



SB125-225-135-140-235



(in mm)	A	B	C	D	E	F	G	H	I	P	Q
SB120	378	470	301	307	147	301	430	525	350	355	306
SB125	357	337	382	340	150	332	620	506	545	550	337
SB225	390	427	382	360	150	332	820	540	745	750	337
SB135	427	427	502	410	220	452	820	645	745	750	458
SB140	540	540	502	410	122	452	920	760	745	750	458
SB235	542	542	502	520	220	452	1.075	785	1.000	1.015	458



Low temperature refrigeration				BSB	010DA11XX	0870Y1AA	117DA11XX	330DB11XX	2650Y3AB	220DB11XX	1710Y2AA
<b>Price</b>				€	2.194,-	2.615,-	2.450,-	3.902,-	6.350,-	3.190,-	5.294,-
Refrigerating capacity	Low temperature	R-290	Nom	kW	-	0,871 (1)	-	-	2,650 (1)	-	1,710 (1)
		R-452A	Nom	kW	0,628 (1)	-	1,029 (1)	2,472 (1)	-	1,699 (1)	-
Dimensions	Unit	Height x Width x Depth		mm	525 x 430 x 771	340 x 620 x 719	506 x 620 x 719	645 x 820 x 929	1.044 x 1.300 x 520	540 x 820 x 809	924 x 1.075 x 360
	Packed unit	Height x Width x Depth		mm	690 x 540 x 830	660 x 730 x 790		800 x 930 x 1.000		690 x 930 x 880	
Weight	Unit			kg	48	68		102	200	87	102
	Packed unit			kg	61	82		124	114	108	-
Compressor	Type	Hermetic Reciprocating									
	Nominal power			kW	0,6	-	1,3	2,2	-	1,5	-
	Starting method	Direct									
Operation range	Cold room temperature	Min. ~Max.		°C	-25 ~-15						
Refrigerant	Type				R-452A	R290	R-452A		R290	R-452A	R290
	GWP				2.141,0	3,0	2.141,0		3,0	2.141,0	3,0
Evaporator	Air flow			m <sup>3</sup> /h	500	780	550	2.300	2.560	1.100	1.320
	Air throw			m	3 (3)	4 (3)		10 (3)		4 (3)	
Condenser	Air flow			m <sup>3</sup> /h	400	640	750	1.500	2.010	1.400	1.200
Defrost	Hot gas										
Power supply	Voltage / Phase / Frequency			V/Hz	230 / 1~ / 50			400 / 3N~ / 50			230 / 1~ / 50

Medium temperature refrigeration				MSB	005EA11XX	106EA11XX	107EA11XX	1310Y1AA	315EB11XX	2180Y1AA	320EB11XX	3370Y2AA	425EB11XX	210EA11XX	5820Y3AB	212EB11XX	530EB11XX		
<b>Price</b>				€	1.854,-	1.939,-	2.091,-	2.280,-	3.110,-	2.932,-	3.457,-	4.651,-	5.001,-	2.673,-	8.088,-	2.882,-	6.846,-		
Refrigerating capacity	Medium temperature	R-134a	Nom	kW	0,857 (2)	1,120 (2)	1,338 (2)	-	3,282 (2)	-	3,550 (2)	-	3,774 (2)	1,799 (2)	-	2,022 (2)	4,871 (2)		
		R-290	Nom	kW	-	-	1,31 (2)	-	2,18 (2)	-	3,37 (2)	-	-	-	5,82 (2)	-	-		
Dimensions	Unit	Height x Width x Depth		mm	525x430x771	506 x 620 x 719	340x620x719	645x820x929	360x820x809	645x 820x929	1.044x1.300x410	760x920x1.042	540x820x809	1.044x1.300x520	540x820x809	785x1.075x1.046			
	Packed unit	Height x Width x Depth		mm	690x540x830	660 x 730 x 790		800 x 930 x 1.000		880x1.100x1.100		690x930x880	-	690x930x880	920x1.200x1.120				
Weight	Unit			kg	42	59		92	75	92	102	110	74	200	75	151			
	Packed unit			kg	55	73		114			139	95	96		184				
Compressor	Type	Hermetic Reciprocating																	
	Nominal power			kW	0,5	0,6	0,7	-	2,2	-	2,6	-	2,9	0,9	-	1,7	3,7		
	Starting method	Direct																	
Operation range	Cold room temperature	Min. ~Max.		°C	-5 ~-10														
Refrigerant	Type				R-134a		R290	R-134a	R290	R-134a	R290	R-134a	R290	R-134a	R290	R-134a			
	GWP				1.430,0		3,0	1.430,0	3,0	1.430,0	3,0	1.430,0	3,0	1.430,0	3,0	1.430,0			
Evaporator	Air flow			m <sup>3</sup> /h	500	550		610	2.300	1.220	2.300	1.500	2.300	1.100	3.600	1.100	3.450		
	Air throw			m	3 (3)	4 (3)		10 (3)			4 (3)		10 (3)						
Condenser	Air flow			m <sup>3</sup> /h	400	750		640	1.500	1.200	1.500	1.755	3.100	1.400	2.900	1.400	3.200		
Defrost	Hot gas																		
Power supply	Voltage / Phase / Frequency			V/Hz	230 / 1~ / 50			400 / 3N~ / 50					230 / 1~ / 50		400 / 3N~ / 50				

(1) When normally running: -20°C / +30°C

(2) When normally running: 0°C / +30°C

(3) Use air throw as a base. Air throw is affected by many factors such as height of room, product storage, location of evaporator, etc.

# Split unit, wall-mounted with ceiling evaporator

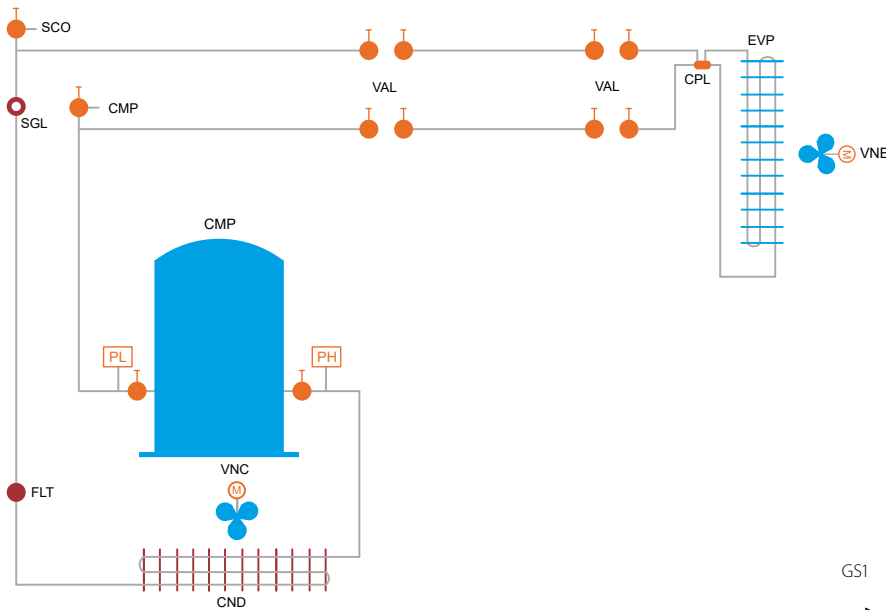
## Space saving split unit solution

- › The models of the GS series are highly versatile, compact units.
- › Outdoor unit is developed to be mounted on the wall inside the building, evaporator to be mounted on the ceiling of the cold room.
- › The unit frame is made of painted sheet steel with an epoxy powder coating.
- › The compressors are hermetic compressors and by default filled with R134a for MT and R452A for LT. Further refrigerant variants are available on request.
- › Many different options and accessories available upon request.
- › The units are already equipped with all components to be ready to use - including electronic controller, pre-charged piping and refrigerant charge.

## Main characteristics:

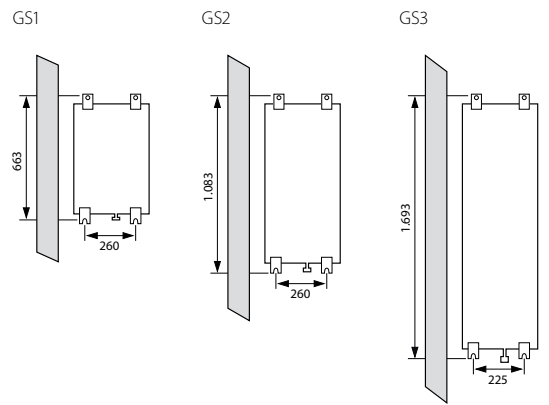
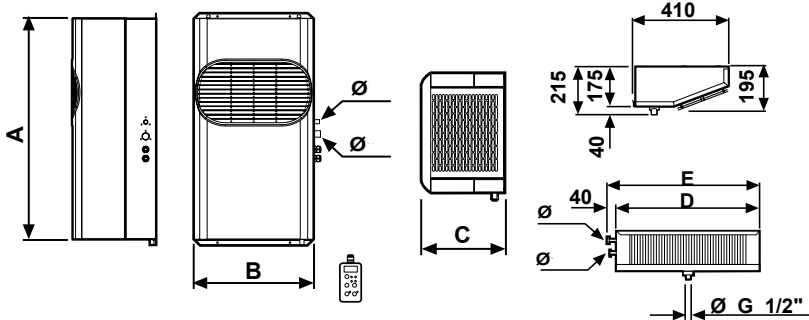
- › For small to mid-size cold rooms
- › Fast assembly / mounting
- › Low space evaporator can be ceiling mounted
- › Wall condenser can be installed up to 15 meters away
- › Excellent space requirement vs. performance ratio
- › Automatic warning for contamination of condenser
- › New generation control panel: connection with classic remote management systems or Modbus system
- › Discharge gas defrosting
- › Capillary gas expansion
- › HP, LP switch
- › Crankcase heater and fan speed controller as standard
- › Cable connection for door switch
- › Cable for door frame heating
- › Filter dryer and sight glass
- › 5 m connection cable
- › 2,5, 5, and 10 m insulated refrigeration piping ready pre-charged with refrigerant
- › Low sound level due to acoustic insulation of the compressor chamber (optional)

## Installation type, dimensions and refrigeration cycle diagram



### Legend:

- CMP: compressor
- SGL: sight glass
- PL: LP switch
- PH: HP switch
- CND: condenser
- VNC: condenser fan motor
- FLT: filter dryer
- VAL: closing valve
- CPL: capillary pipe
- VNE: evaporator fan motor
- EVP: evaporator
- SCO: service valve



(in mm)	A	B	C	D	E
GS1	735	400	290	614	654
GS2	830	620	290	1.034	1.074
GS3	830	620	360	1.614	1.654





<b>MT cooling (with 2,5m pre-charged piping)</b>		<b>SB.MGS</b>	<b>103P1E</b>	<b>105P1E</b>	<b>106P1E</b>	<b>107P1E</b>	<b>110P1E</b>	<b>211P1E</b>	<b>212P1E</b>	<b>213P1E</b>	<b>315P1E</b>	<b>320P1E</b>	
<b>Price</b>		€	1.848,-	2.014,-	2.040,-	2.145,-	2.272,-	2.574,-	2.910,-	3.196,-	3.463,-	3.651,-	
<b>MT cooling (with 5m pre-charged piping)</b>		<b>SB.MGS</b>	<b>103P2E</b>	<b>105P2E</b>	<b>106P2E</b>	<b>107P2E</b>	<b>110P2E</b>	<b>211P2E</b>	<b>212P2E</b>	<b>213P2E</b>	<b>315P2E</b>	<b>320P2E</b>	
<b>Price</b>		€	1.903,-	2.069,-	2.095,-	2.200,-	2.327,-	2.638,-	2.974,-	3.260,-	3.527,-	3.715,-	
<b>MT cooling (with 10m pre-charged piping)</b>		<b>SB.MGS</b>	<b>103P3E</b>	<b>105P3E</b>	<b>106P3E</b>	<b>107P3E</b>	<b>110P3E</b>	<b>211P3E</b>	<b>212P3E</b>	<b>213P3E</b>	<b>315P3E</b>	<b>320P3E</b>	
<b>Price</b>		€	2.022,-	2.188,-	2.214,-	2.319,-	2.446,-	2.799,-	3.135,-	3.421,-	3.688,-	3.876,-	
Refrigerating capacity	Ambient temp.+5°C	kW	0,962	1,103	1,248	1,543	1,507	2,03	2,334	2,484	3,491	3,774	
	Recommended room volume	m <sup>3</sup>	6,9	8,5	10	13	13	19	24	26	41	46	
	Ambient temp.0°C	kW	0,815	0,914	1,047	1,237	1,283	1,705	1,927	2,074	2,964	3,21	
	Recommended room volume	m <sup>3</sup>	5,4	6,4	7,9	10	11	16	17	20	33	37	
Power input		kW	0,4	0,5	0,4	0,7	0,9	0,9	1,7	2	2,2	2,6	
Air flow rate	Condensing unit	m <sup>3</sup> /h	600	600	600	600	600	1.200	1.200	1.200	1.500	1.500	
	Evaporator	m <sup>3</sup> /h	600	600	600	600	600	1.200	1.200	1.200	1.800	1.800	
Defrosting			Electrical defrosting										
Sound pressure level <sup>(2)</sup>	At 10m distance	dB(A)	36	36	37	38	38	37	38	39	44	44	
Refrigerant	Type/GWP		R-134a/1.430										
Piping length	AG – IG	Maximum	15										
Insulation		mm	100										
Power supply			230 V / 1 ~ / 50 Hz					400 V / 3 ~ / 50 Hz					
<b>LT cooling (with 2,5m pre-charged piping)</b>		<b>SB.BGS</b>	<b>110P1D</b>	<b>112P1D</b>	<b>117P1D</b>	<b>218P1D</b>	<b>220P1D</b>	<b>330P1D</b>					
<b>Price</b>		€	2.374,-	2.408,-	2.571,-	2.824,-	3.075,-	3.771,-					
<b>LT cooling (with 5m pre-charged piping)</b>		<b>SB.BGS</b>	<b>110P2D</b>	<b>112P2D</b>	<b>117P2D</b>	<b>218P2D</b>	<b>220P2D</b>	<b>330P2D</b>					
<b>Price</b>		€	2.429,-	2.463,-	2.626,-	2.888,-	3.139,-	3.835,-					
<b>LT cooling (with 10m pre-charged piping)</b>		<b>SB.BGS</b>	<b>110P3D</b>	<b>112P3D</b>	<b>117P3D</b>	<b>218P3D</b>	<b>220P3D</b>	<b>330P3D</b>					
<b>Price</b>		€	2.548,-	2.582,-	2.745,-	3.049,-	3.300,-	3.996,-					
Refrigerating capacity	Ambient temp.-15°C	kW	0,768	0,974	1,169	1,492	1,834	2,653					
	Recommended room volume	m <sup>3</sup>	4	6	8,2	12	17	31					
	Ambient temp.-20°C	kW	0,624	0,82	1,01	1,249	1,567	2,16					
	Recommended room volume	m <sup>3</sup>	2,8	4,5	6,4	9,2	13	22					
Power input		kW	0,7	0,9	1,3	1,3	1,5	2,2					
Air flow rate	Condensing unit	m <sup>3</sup> /h	600	600	600	1.200	1.200	1.500					
	Evaporator	m <sup>3</sup> /h	600	600	600	1.200	1.200	1.800					
Defrosting			Electrical defrosting										
Sound pressure level <sup>(2)</sup>	At 10m distance	dB(A)	38	40	40	39	39	44					
Refrigerant	Type/GWP		R-452A/2.141										
Piping length	AG – IG	Maximum	15										
Insulation		mm	120										
Power supply			230 V / 1 ~ / 50 Hz				400 V / 3 ~ / 50 Hz						

Chilling: charged goods 250 kg / m<sup>3</sup>, handling 10%, material input temperature 25 °C, specific heat of the product 0,77 kcal / (kg · K), 18 compressor running hours, outdoor temperature 35 °C  
 Freezing: charged goods 250 kg / m<sup>3</sup>, handling 10%, material input temperature -5 °C, specific heat of the product 0,44 kcal / (kg · K), 18 compressor running hours, outdoor temperature 35 °C  
 (1) Sound pressure data: measured at 10 meters distance according to ISO 3746/79\*  
 Units on stock in Belgium, usually available within approx. one week

# Split unit, floor mounted with ceiling evaporator

## Space saving split solution with floor standing condensor

The models of the SP series are highly versatile, compact units. Outdoor unit is developed to be mounted on floor outside of the building, evaporator to be mounted on the ceiling of the cold room.

The unit frame is made of painted sheet steel with an epoxy powder coating.

The compressors are hermetic compressors and by default filled with R134a for MT and R452A for LT. Further refrigerant variants are available on request.

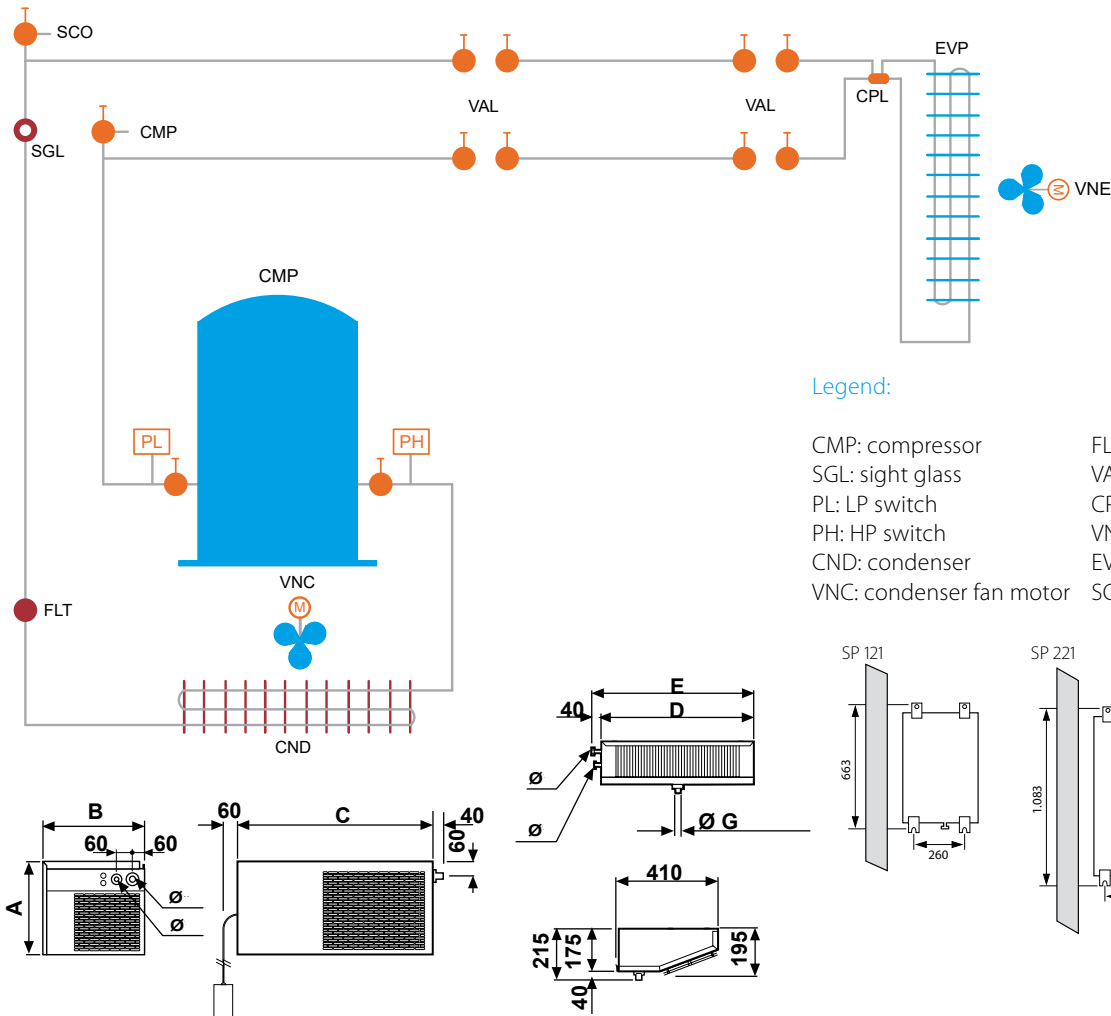
Many different options and accessories available upon request.

The units are already equipped with all components to be ready to use - including electronic controller, pre-charged piping and refrigerant charge.

## Main characteristics:

- › For small to mid-size cold rooms
- › Fast assembly / mounting
- › Low space evaporator can be ceiling mounted
- › Wall condenser can be installed up to 20 meters away
- › Excellent space requirement vs. performance ratio
- › Automatic warning for contamination of condenser
- › New generation control panel: connection with classic remote management systems or Modbus system
- › Discharge gas defrosting
- › Capillary gas expansion
- › HP, LP switch
- › Crankcase heater and fan speed controller as standard
- › Cable connection for door switch
- › Cable for door frame heating
- › Filter dryer and sight glass
- › 5 m connection cable
- › 2,5, 5, and 10 m insulated refrigeration piping ready pre-charged with refrigerant
- › Low sound level due to acoustic insulation of the compressor chamber (optional)

## Installation type, dimensions and refrigeration cycle diagram



### Legend:

- CMP: compressor
- SGL: sight glass
- PL: LP switch
- PH: HP switch
- CND: condenser
- VNC: condenser fan motor
- FLT: filter dryer
- VAL: closing valve
- CPL: capillary pipe
- VNE: evaporator fan motor
- EVP: evaporator
- SCO: service valve

(in mm)	A	B	C	D	E
SP121/123	357	337	620	614	654
SP221	390	427	820	1.034	1.074
SP135	427	427	820	1.614	1.654



<b>MT cooling (with 2,5m pre-charged piping)</b>		<b>SB.MSP</b>	<b>106P1E*</b>	<b>107P1E*</b>	<b>212P1E*</b>	<b>213P1E*</b>	<b>315P1E*</b>	<b>320P1E<sup>(2)</sup></b>
<b>Price</b>		€	<b>2.434,-</b>	<b>2.607,-</b>	<b>3.152,-</b>	<b>3.264,-</b>	<b>3.472,-</b>	<b>3.743,-</b>
<b>MT cooling (with 5m pre-charged piping)</b>		<b>SB.MSP</b>	<b>106P2E<sup>(2)</sup></b>	<b>107P2E<sup>(2)</sup></b>	<b>212P2E<sup>(2)</sup></b>	<b>213P2E<sup>(2)</sup></b>	<b>315P2E<sup>(2)</sup></b>	<b>320P2E<sup>(2)</sup></b>
<b>Price</b>		€	<b>2.489,-</b>	<b>2.662,-</b>	<b>3.216,-</b>	<b>3.328,-</b>	<b>3.536,-</b>	<b>3.807,-</b>
<b>MT cooling (with 10m pre-charged piping)</b>		<b>SB.MSP</b>	<b>106P3E<sup>(2)</sup></b>	<b>107P3E<sup>(2)</sup></b>	<b>212P3E<sup>(2)</sup></b>	<b>213P3E<sup>(2)</sup></b>	<b>315P3E<sup>(2)</sup></b>	<b>320P3E<sup>(2)</sup></b>
<b>Price</b>		€	<b>2.608,-</b>	<b>2.781,-</b>	<b>3.377,-</b>	<b>3.489,-</b>	<b>3.697,-</b>	<b>3.968,-</b>
Refrigerating capacity	Ambient temp.+5°C	kW	1,281	1,604	2,061	2,395	3,635	3,924
	Recommended room volume	m <sup>3</sup>	11	14	19	25	44	48
	Ambient temp.0°C	kW	1,073	1,339	1,702	1,942	3,045	3,34
	Recommended room volume	m <sup>3</sup>	8,1	11	16	18	34	39
Power input		kW	0,4	0,7	0,9	1,7	2,2	2,6
Air flow rate	Condensing unit	m <sup>3</sup> /h	750	750	1.400	1.400	1.500	1.500
	Evaporator	m <sup>3</sup> /h	600	600	1.200	1.200	1.800	1.800
Defrosting			Electrical defrosting					
Sound pressure level <sup>(1)</sup>	At 10m distance	dB(A)	41	41	41	41	41	44
Refrigerant	Type/GWP		R-134a/1.430					
Piping length	AG – IG Maximum	m	20					
Insulation		mm	100					
Power supply			230 V / 1 ~ / 50 Hz			400 V / 3 ~ / 50 Hz		

<b>LT cooling (with 2,5m pre-charged piping)</b>		<b>SB.BSP</b>	<b>110P1D<sup>(2)</sup></b>	<b>112P1D<sup>(2)</sup></b>	<b>117P1D<sup>(2)</sup></b>	<b>218P1D<sup>(2)</sup></b>	<b>220P1D<sup>(2)</sup></b>	<b>330P1D<sup>(2)</sup></b>
<b>Price</b>		€	<b>2.408,-</b>	<b>2.508,-</b>	<b>2.638,-</b>	<b>2.997,-</b>	<b>3.208,-</b>	<b>3.840,-</b>
<b>LT cooling (with 5m pre-charged piping)</b>		<b>SB.BSP</b>	<b>110P2D<sup>(2)</sup></b>	<b>112P2D<sup>(2)</sup></b>	<b>117P2D<sup>(2)</sup></b>	<b>218P2D<sup>(2)</sup></b>	<b>220P2D<sup>(2)</sup></b>	<b>330P2D<sup>(2)</sup></b>
<b>Price</b>		€	<b>2.463,-</b>	<b>2.563,-</b>	<b>2.693,-</b>	<b>3.061,-</b>	<b>3.272,-</b>	<b>3.904,-</b>
<b>LT cooling (with 10m pre-charged piping)</b>		<b>SB.BSP</b>	<b>110P3D<sup>(2)</sup></b>	<b>112P3D<sup>(2)</sup></b>	<b>117P3D<sup>(2)</sup></b>	<b>218P3D<sup>(2)</sup></b>	<b>220P3D<sup>(2)</sup></b>	<b>330P3D<sup>(2)</sup></b>
<b>Price</b>		€	<b>2.582,-</b>	<b>2.682,-</b>	<b>2.812,-</b>	<b>3.222,-</b>	<b>3.433,-</b>	<b>4.065,-</b>
Refrigerating capacity	Ambient temp.-15°C	kW	0,758	1,00	1,203	1,499	1,918	2,773
	Recommended room volume	m <sup>3</sup>	3,9	6,3	8,7	12	17	33
	Ambient temp.-20°C	kW	0,599	0,831	0,991	1,239	1,571	2,167
	Recommended room volume	m <sup>3</sup>	2,6	4,6	6,2	9,1	13	22
Power input		kW	0,7	1,1	1,3	1,3	1,5	2,2
Air flow rate	Condensing unit	m <sup>3</sup> /h	750	750	750	1.400	1.400	1.500
	Evaporator	m <sup>3</sup> /h	600	600	600	1.200	1.200	1.800
Defrosting			Electrical defrosting					
Sound pressure level <sup>(1)</sup>	At 10m distance	dB(A)	41	41	41	42	40	44
Refrigerant	Type/GWP		R-452A/2.141					
Piping length	AG – IG Maximum	m	20					
Insulation		mm	120					
Power supply			230 V / 1 ~ / 50 Hz			400 V / 3 ~ / 50 Hz		

Chilling: charged goods 250 kg / m<sup>3</sup>, handling 10%, material input temperature 25 °C, specific heat of the product 0,77 kcal / (kg · K), 18 compressor running hours, outdoor temperature 35 °C  
 Freezing: charged goods 250 kg / m<sup>3</sup>, handling 10%, material input temperature -5 °C, specific heat of the product 0,44 kcal / (kg · K), 18 compressor running hours, outdoor temperature 35 °C

(1) Sound pressure data: measured at 10 meters distance according to ISO 3746/79°;

(2) Information on availability on request;

\*units on stock in Hungary, usually available within approx. two days

# Split unit, floor mounted with ceiling or cubic evaporator

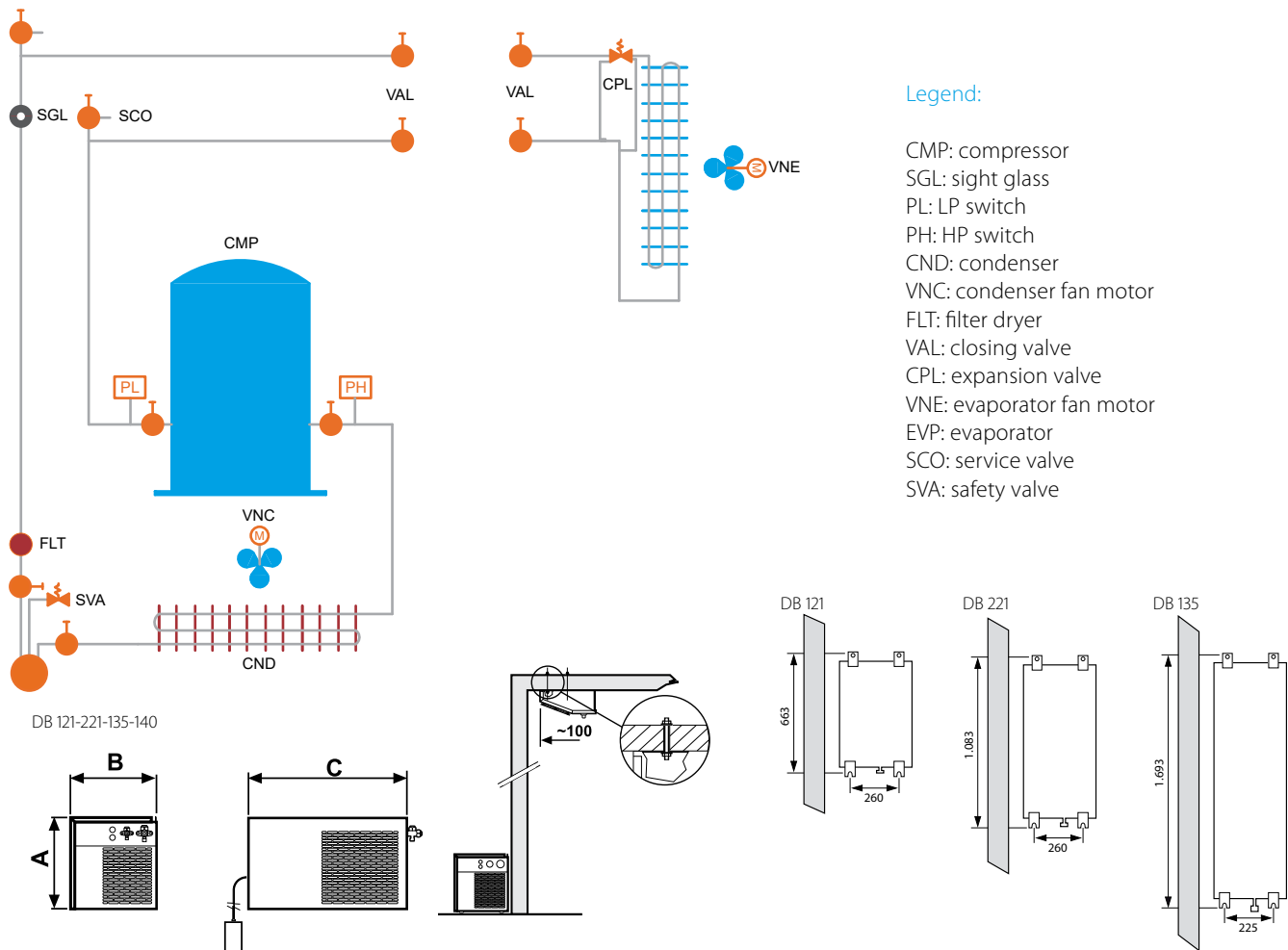
## Unit for outdoor installation with wide range of standard equipment

The models of the BO series are highly versatile, compact units. Outdoor unit is developed to be mounted on floor or wall outside of the building, evaporator to be mounted on the ceiling of the cold room. Two evaporator types are available, the compact ceiling or cubic evaporator (depending on required capacity). The unit frame is made of painted sheet steel with an epoxy powder coating. The compressors are hermetic compressors and by default filled with R134a for MT and R452A for LT. Further refrigerant variants are available on request. Many different options and accessories available upon request. The units are already equipped with all components to be ready to use - including electronic controller, pre-charged piping and refrigerant charge and TEV

## Main characteristics:

- > For small to mid-size cold rooms
- > Fast assembly / mounting
- > Low space evaporator can be ceiling mounted
- > Wall condenser can be installed up to 30 meters away
- > Excellent space requirement vs. performance ratio
- > Automatic warning for contamination of condenser
- > New generation control panel: connection with classic remote management systems or Modbus system
- > Discharge gas or electric defrosting
- > TEV gas expansion
- > HP, LP switch
- > Crankcase heater and fan speed controller as standard
- > Cable connection for door switch
- > Cable for door frame heating
- > Filter dryer and sight glass
- > 5 m connection cable
- > Low sound level due to acoustic insulation of the compressor chamber (optional)

## Installation type, dimensions and refrigeration cycle diagram



### Legend:

- CMP: compressor
- SGL: sight glass
- PL: LP switch
- PH: HP switch
- CND: condenser
- VNC: condenser fan motor
- FLT: filter dryer
- VAL: closing valve
- CPL: expansion valve
- VNE: evaporator fan motor
- EVP: evaporator
- SCO: service valve
- SVA: safety valve

(in mm)	A	B	C	D	E
121	357	337	620	-	-
123	357	337	620	-	-
221	390	427	820	-	-
135	427	427	820	-	-
140	540	540	920	605	540
B235T	654	642	1.575	965	540
335	654	642	1.575	1.370	540
340	885	742	1.725	1.520	545



<b>MT cooling</b>		<b>SB.MDB-XX</b>	106EA11 <sup>(2)</sup>	107A12 <sup>(2)</sup>	212A12 <sup>(2)</sup>	213A12 <sup>(2)</sup>	315A13*	320A13 <sup>(2)</sup>	425A13 <sup>(2)</sup>	530A13*	635A13 <sup>(2)</sup>	645A13*	706A13 <sup>(2)</sup>	707A13 <sup>(2)</sup>	
<b>Price</b>		€	2.361,-	2.680,-	3.160,-	3.316,-	3.651,-	3.881,-	5.671,-	6.281,-	7.630,-	8.836,-	11.001,-	11.689,-	
Refrigerating capacity	Ambient temp.+5°C	kW	1,281	1,604	2,061	2,395	3,635	3,924	4,181	5,924	8,403	10,174	12,701	16,265	
	Recommended room volume	m <sup>3</sup>	11	14	19	25	44	48	52	98	151	191	250	336	
	Ambient temp.0°C	kW	1,073	1,339	1,702	1,942	3,045	3,340	3,394	4,755	6,843	8,229	10,314	13,419	
	Recommended room volume	m <sup>3</sup>	8,1	11	16	18	34	39	40	75	117	147	194	267	
Power input		kW	0,4	0,7	0,9	1,7	2,2	2,6	2,94	3,7	4,8	6,3	7,4	9,555	
Air flow rate	Condensing unit	m <sup>3</sup> /h	750	750	1.400	1.400	1.500	1.500	3.150	3.200	5.500	7.000	8.100	8.100	
	Evaporator	m <sup>3</sup> /h	600	600	1.200	1.200	1.800	1.800	2.300	4.600	6.800	6.400	8.400	8.000	
Defrosting			Electrical defrosting												
Sound pressure level <sup>(1)</sup>	At 10m distance	dB(A)	41	41	41	41	44	44	45	45	47	49	51	53	
Refrigerant	Type/GWP		R-134a/1.430												
Piping length	AG – IG	Maximum	30												
Insulation		mm	100												
Power supply			230 V / 1 ~ / 50 Hz					400 V / 3 ~ / 50 Hz							

<b>LT cooling</b>		<b>SB.BDB-XX</b>	110DA12*	112DA12*	117DA12 <sup>(2)</sup>	218DA12*	220DA12*	320DA13 <sup>(2)</sup>	330DA13*	
<b>Price</b>		€	2.746,-	2.808,-	2.987,-	3.329,-	3.608,-	4.027,-	4.153,-	
Refrigerating capacity	Ambient temp.-15°C	kW	0,758	1,000	1,203	1,499	1,918	2,502	2,773	
	Recommended room volume	m <sup>3</sup>	3,9	6,3	8,7	12	17	26	33	
	Ambient temp.-20°C	kW	0,599	0,831	0,991	1,239	1,571	1,850	2,167	
	Recommended room volume	m <sup>3</sup>	2,6	4,6	6,2	9,1	13	17	22	
Power input		kW	0,7	1,1	1,3	1,3	1,5	1,5	2,2	
Air flow rate	Condensing unit	m <sup>3</sup> /h	750	750	750	1.400	1.400	1.500	1.500	
	Evaporator	m <sup>3</sup> /h	600	600	600	1.200	1.200	1.800	1.800	
Defrosting			Electrical defrosting							
Sound pressure level <sup>(1)</sup>	At 10m distance	dB(A)	41	41	41	42	42	44	44	
Refrigerant	Type/GWP		R-452A/2.141							
Piping length	AG – IG	Maximum	30							
Insulation		mm	120							
Power supply			230 V / 1 ~ / 50 Hz				400 V / 3 ~ / 50 Hz			

Chilling: charged goods 250 kg /m<sup>3</sup>, handling 10%, material input temperature 25 °C, specific heat of the product 0,77 kcal / (kg · K), 18 compressor running hours, outdoor temperature 35 °C

Freezing: charged goods 250 kg/m<sup>3</sup>, handling 10%, material input temperature -5 °C, specific heat of the product 0,44 kcal / (kg · K), 18 compressor running hours, outdoor temperature 35 °C

(1) Sound pressure data: measured at 10 meters distance according to ISO 3746/79;

(2) Information on availability on request;

\*units on stock in Hungary, usually available within approx. two days

# Monoblock unit for wine storage rooms

## Ensures optimal conditions for wine conservation and Refinement

The models of the RCV series are highly versatile, compact units. Ensuring optimal temperature and humidity through humidification and permanent air circulation.

Developed to be mounted through the cooling panel.

The unit frame is made of painted sheet steel with an epoxy powder coating.

The compressors are hermetic compressors and by default filled with R134a.

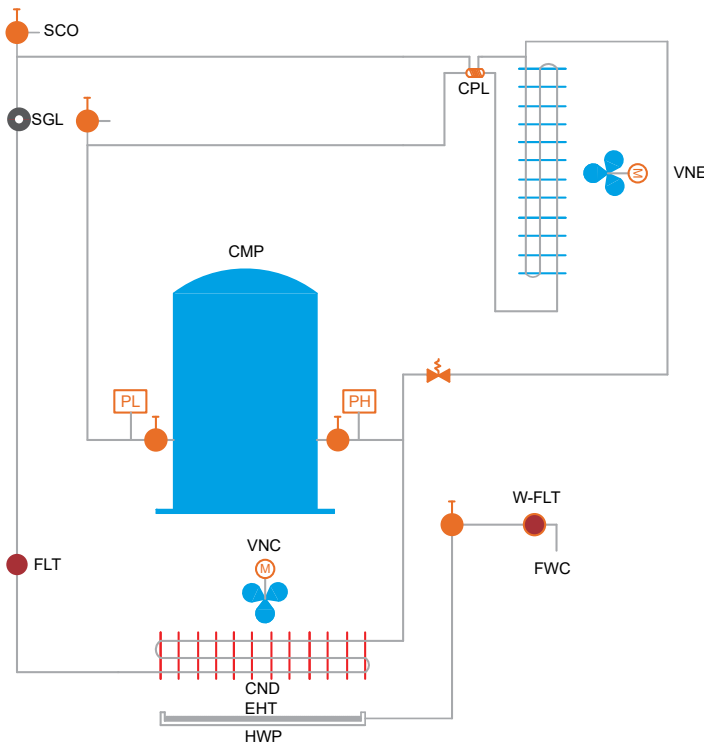
Many different options and accessories available upon request.

The units are already equipped with all components to be ready to use.

## Main characteristics:

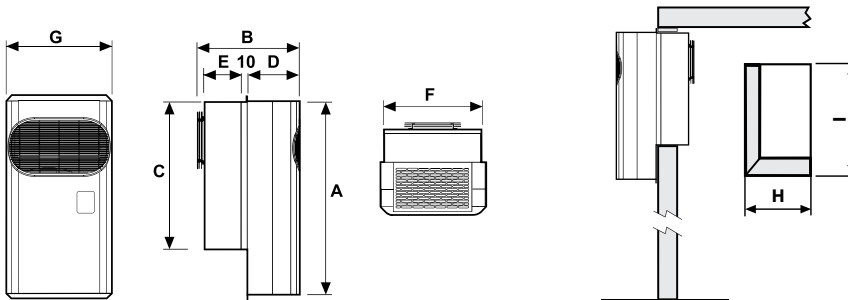
- › Alternatively with or without humidification (carbon filter needed for humidification)
- › Suitable for small to medium sized rooms
- › Silent and economical operation
- › Capillary gas expansion
- › Air defrosting
- › HP and LP switch (standard)
- › Units available on stock
- › Equipped with filter dryer and sight glass (for RDV units)
- › The user- friendly, pre-programmed electronic control unit regulates temperature as well as humidity

## Installation type, dimensions and refrigeration cycle diagram for Monoblock (RCV)



### Legend:

- CMP: compressor
- SGL: sight glass
- PL: LP switch
- PH: HP switch
- CND: condenser
- VNC: condenser fan motor
- FLT: filter dryer
- VAL: closing valve
- CPL: capillary pipe
- VNE: evaporator fan motor
- EVP: evaporator
- SCO: service valve
- SVA: safety valve
- EHT: electrical heating
- HWP: heating water pan
- W-FLT: water filter
- FWC: fresh water connection



(in mm)	A	B	C	D	E	F	G	H	I
RCV1	735	435	570	215	182	375	400	380	575
RCV2	735	435	570	215	182	595	620	600	575



RCV-E

MT cooling			RCV-E	101527**	102527**	201527**	202527**	101528**	102528*	201528**	202528*
				Without humidification				With humidification			
Price			€	3.528,-	3.625,-	4.293,-	4.543,-	3.989,-	4.089,-	4.793,-	5.164,-
Refrigerating capacity	Ambient temp.+14 °C	kW	0,60	1,00	1,40	2,30	0,60	1,00	1,40	2,30	
	Recommended room volume	m <sup>3</sup>	25	45	60	100	25	45	60	100	
Power input		kW	0,25	0,37	0,46	0,55	0,25	0,37	0,46	0,55	
Air flow rate	Condensing unit	m <sup>3</sup> /h	600	600	1.200	1.200	600	600	1.200	1.200	
	Evaporator	m <sup>3</sup> /h	600	600	1.200	1.200	600	600	1.200	1.200	
Defrosting			Air defrosting								
Sound pressure level <sup>(1)</sup>	At 10m distance	dB(A)	39	39	40	40	39	39	40	40	
Refrigerant	Type		R-134a								
	GWP		1.430								
Insulation		mm	100								
Power supply			230 V / 1 ~ / 50 Hz								

(1) Sound pressure data: measured at 10 meters distance according to ISO 3746/79\*;

\*units on stock in Hungary, usually available within approx. two days;

\*\*units on stock in Belgium, usually available within approx. one week

# Split unit for wine storage rooms

## Ensures optimal conditions for wine conservation and refinement

The models of the RDV series are highly versatile, compact units. Outdoor unit is developed to be mounted on floor or wall. Inside of the building, evaporator to be mounted on the ceiling or wall of the cold room.

Two evaporator types are available: compact ceiling or wall. The unit frame is made of painted sheet steel with an epoxy powder coating.

The compressors are hermetic compressors and by default filled with R134a.

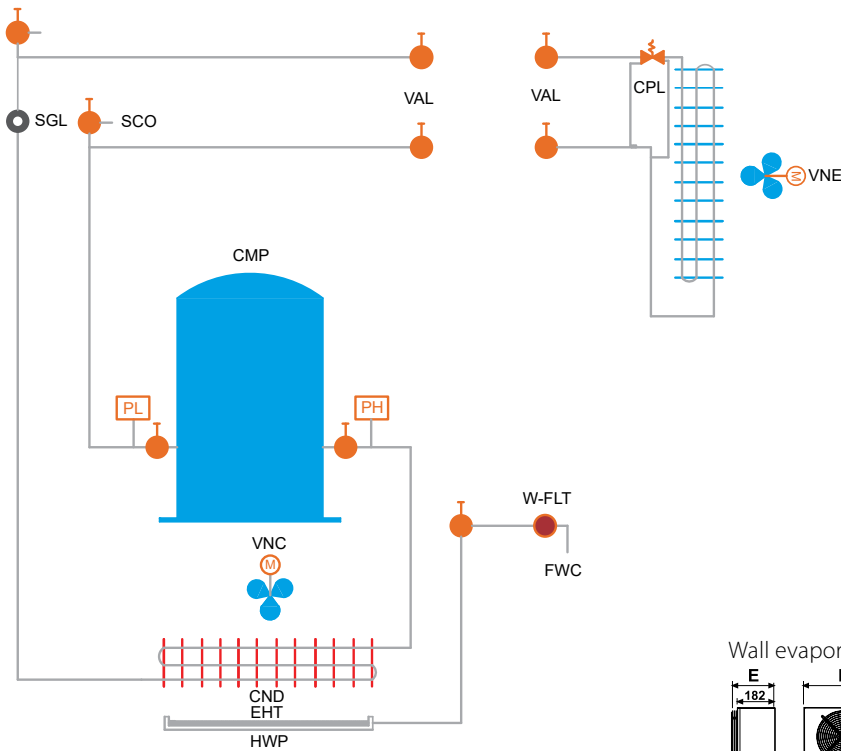
Many different options and accessories available upon request. The units are already equipped with all components to be ready to use.

Ensuring optimal temperature and humidity through humidification and permanent air circulation.

## Main characteristics:

- > Alternatively with or without humidification (carbon filter needed for humidification)
- > Suitable for small to medium-sized rooms
- > Silent and economical operation
- > TEV gas expansion
- > Two evaporator types (can be installed up to 20 meters away)
- > Air defrosting
- > HP and LP switch (standard)
- > Units available on stock
- > Equipped with filter dryer and sight glass (for RDV units)
- > The user-friendly, pre-programmed electronic control unit regulates temperature as well as humidity (for RDV units)

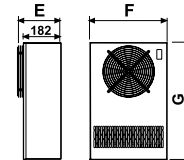
## Installation type, dimensions and refrigeration cycle diagram for Bi-Block (RDV)



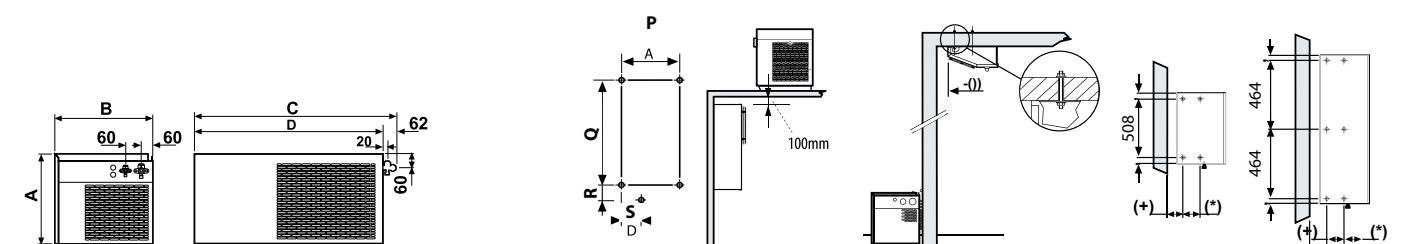
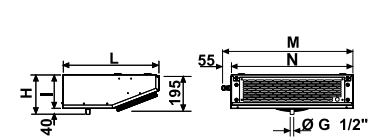
### Legend:

- CMP: compressor
- SGL: sight glass
- PL: LP switch
- PH: HP switch
- CND: condenser
- VNC: condenser fan motor
- FLT: filter dryer
- VAL: closing valve
- CPL: expansion valve
- VNE: evaporator fan motor
- EVP: evaporator
- SCO: service valve
- SVA: safety valve
- EHT: electrical heating
- HWP: heating water pan
- W-FLT: water filter
- FWC: fresh water connection

Wall evaporator



Ceiling evaporator



(in mm)	A	B	C	D	E	F	G	H	I	L	M	N	P	Q	R	S
RDV1	357	337	682	620	210	375	570	215	175	490	669	614	330	420	21	47
RDV2	390	427	882	820	210	595	570	215	175	490	1.089	1.034	550	420	21	47





MT cooling		SB.RDV-E	101529**	102529**	201529**	202529**	101523**	102523**	201523**	202523**
			Wall evaporator without humidification				Wall evaporator with humidification			
<b>Price</b>		€	4.397,-	4.494,-	5.207,-	5.409,-	4.842,-	4.941,-	5.663,-	5.869,-
Refrigerating capacity	Ambient temp.+14 °C	kW	0,60	1,00	1,40	2,30	0,60	1,00	1,40	2,30
	Recommended room volume	m <sup>3</sup>	25	45	60	100	25	45	60	100
Power input		kW	0,25	0,37	0,46	0,55	0,25	0,37	0,46	0,55
Air flow rate	Condensing unit	m <sup>3</sup> /h	600	600	1.200	1.200	600	600	1.200	1.200
	Evaporator	m <sup>3</sup> /h	600	600	1.200	1.200	600	600	1.200	1.200
Defrosting			Air defrosting				Air defrosting			
Sound pressure level <sup>(1)</sup>	At 10m distance	dB(A)	39	39	40	40	39	39	40	40
Refrigerant	Type/GWP		R-134a/1.430				R-134a/1.430			
Piping length	AG – IG      Maximum	m	20				20			
Insulation		mm	100				100			
Power supply			230 V / 1 ~ / 50 Hz				230 V / 1 ~ / 50 Hz			

MT cooling		SB.RDV-E	101524**	102524**	201524**	202524**	101525**	102525*	201525*	202525*
			Ceiling evaporator without humidification				Ceiling evaporator with humidification			
<b>Price</b>		€	4.427,-	4.526,-	5.300,-	5.507,-	4.874,-	4.976,-	5.761,-	5.972,-
Refrigerating capacity	Ambient temp.+14 °C	kW	0,60	1,00	1,40	2,30	0,60	1,00	1,40	2,30
	Recommended room volume	m <sup>3</sup>	25	45	60	100	25	45	60	100
Power input		kW	0,25	0,37	0,46	0,55	0,25	0,37	0,46	0,55
Air flow rate	Condensing unit	m <sup>3</sup> /h	600	600	1.100	1.100	600	600	1.100	1.100
	Evaporator	m <sup>3</sup> /h	400	400	800	800	400	400	800	800
Defrosting			Air defrosting				Air defrosting			
Sound pressure level <sup>(1)</sup>	At 10m distance	dB(A)	39	39	40	40	39	39	40	40
Refrigerant	Type/GWP		R-134a/1.430				R-134a/1.430			
Piping length	AG – IG      Maximum	m	20				20			
Insulation		mm	100				100			
Power supply			230 V / 1 ~ / 50 Hz				230 V / 1 ~ / 50 Hz			

(1) Sound pressure data: measured at 10 meters distance according to ISO 3746/79\*;  
 \*units on stock in Hungary, usually available within approx. two days;  
 \*\*units on stock in Belgium, usually available within approx. one week

# Condensing unit for outdoor installation with hermetic compressors

## General features:

- › Capacity for MT cooling: 0,9 kW to 26,7 kW
- › Capacity for LT cooling: 0,6 kW to 12 kW
- › Ambient temperature range : - 25°C - +43°C
- › R134A a, R 449A, R448A, R452A R407F, depending on the compressor
- › Tecumseh, Maneurop, Copeland scroll
- › Conditions:
  - MT: Ambient temperature: 35°C Evp. Temperature: -10°C
  - LT: Ambient temperature: 35°C Evp. Temperature: -35°C

## General Description:

Compact air cooled condensing unit floor mounting, low noise, with hermetic compressors. Designed specifically for small capacity refrigeration applications in small food stores (eg. in bakeries and butchers), cold rooms, bottle coolers and display cabinets. All components can be accessed, allowing for quick and easy maintenance. The optimized compressor range and increased condenser surface deliver high levels of energy efficiency and reliability is ensured by using high quality components and production processes.



## Standard characteristics:

- › Hermetic compressor with integral protection
- › Dual HP/LP fixed switch with auto reset
- › Liquid line filter dryer, liquid line sight glass
- › Curved condenser with 6-pole fan motor
- › Liquid receiver with safety pressure relief valve for PED units (depending on the model & PED class)
- › Electrical box with capacity controller (only for digital scroll)
- › Crankcase heater (only scroll type)

For technical selection, prices, accessories and delivery time please use the Zanotti software and contact our technical department. We are happy to help you.

## Normal cooling

Condensing unit	GCU-E	1006U01	107U01	1010U01	1012U01	1015U01	2025U01	2028U01	2035U01	2040U01E	
<b>Price</b>	€	On request	On request	On request	On request	On request	On request	On request	On request	On request	
Refrigeration capacity	0° C	W	1.428	1.704	2.097	2.470	3.162	5.186	6.102	7.350	7.557
	-10° C	W	974	1.177	1.498	1.710	2.075	3.013	3.848	4.628	5.173
Power input	kW	0,61	0,7	0,83	0,88	1,2	1,53	1,82	2,17	2,67	
COP 32°C (1)		1,59	1,67	1,8	1,93	1,72	1,96	2,11	2,13	1,94	
COP 25°C (1)		1,84	1,93	2,07	2,23	1,98	2,23	2,4	2,42	2,2	
COP 43°C (1)		1,23	1,31	1,5	1,53	1,35	1,55	1,66	1,68	1,55	
SEPR (1)		-	-	-	-	-	-	-	-	2,4	
Annual Electricity Consumption (1)	Kwh/a	-	-	-	-	-	-	-	-	13.257	
Dimensions Unit	Height	mm	625	625	625	625	800	800	800	800	
	Width	mm	1.150	1.150	1.150	1.150	1.400	1.400	1.400	1.400	
	Depth	mm	500	500	500	500	550	550	550	550	
Condenser air flow	m³/h	1.840	1.840	1.840	1.830	1.830	3.600	3.600	3.600	3.370	
Compressor		Tecumseh reciprocating hermetic compressor									
Refrigerant	Type/GWP	R-134A/1430									
Power supply	V~/ Hz	230/1~/50					400/3~/50				

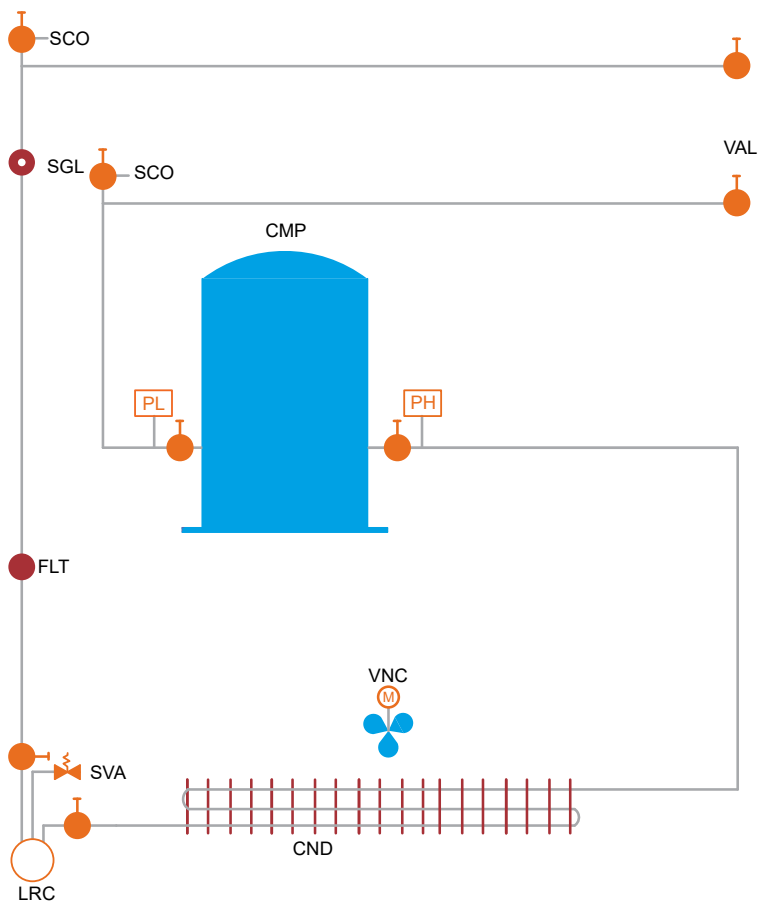
## Deep freezing

Condensing unit	HCU-D	1010U01	1012U01	1015U01	1017U01	1020U01	2025U01	2035U01	
<b>Price</b>	€	On request	On request	On request	On request	On request	On request	On request	
Refrigeration capacity	-25° C	W	673	778	1.058	1.323	1.790	2.597	(2)
	-35° C	W	377	449	626	802	1.021	1.481	(2)
Power input	kW	0,45	0,53	0,62	0,85	1,2	1,41	(2)	
COP 32°C (1)		0,83	0,85	1	0,94	0,85	1,05	(2)	
COP 25°C (1)		0,98	0,99	1,16	1,09	1	1,22	(2)	
COP 43°C (1)		0,62	0,64	0,76	0,73	0,59	0,79	(2)	
SEPR (1)		-	-	-	-	-	-	(2)	
Annual Electricity Consumption (1)	Kwh/a	-	-	-	-	-	-	(2)	
Dimensions Unit	Height	mm	625	625	625	625	800	800	
	Width	mm	1.150	1.150	1.150	1.150	1.400	1.400	
	Depth	mm	500	500	500	500	550	550	
Condenser air flow	m³/h	1.840	1.840	1.840	1.840	1.830	3.600	(2)	
Compressor		Tecumseh reciprocating hermetic compressor							
Refrigerant	Type/GWP	R-452A/2.141							
Power supply	V~/ Hz	230/1~/50					400/3~/50		

Other refrigerants, compressors and options available on request (1) Nominal operating conditions according to Ecodesign EN 13125: Ambient temperature 32°C/25°C/43°C, Evaporation temperature -10°C -35°C, 20°C suction gas temperature, Sub cooling 0K; (2) Not existing at the moment

## CU Series

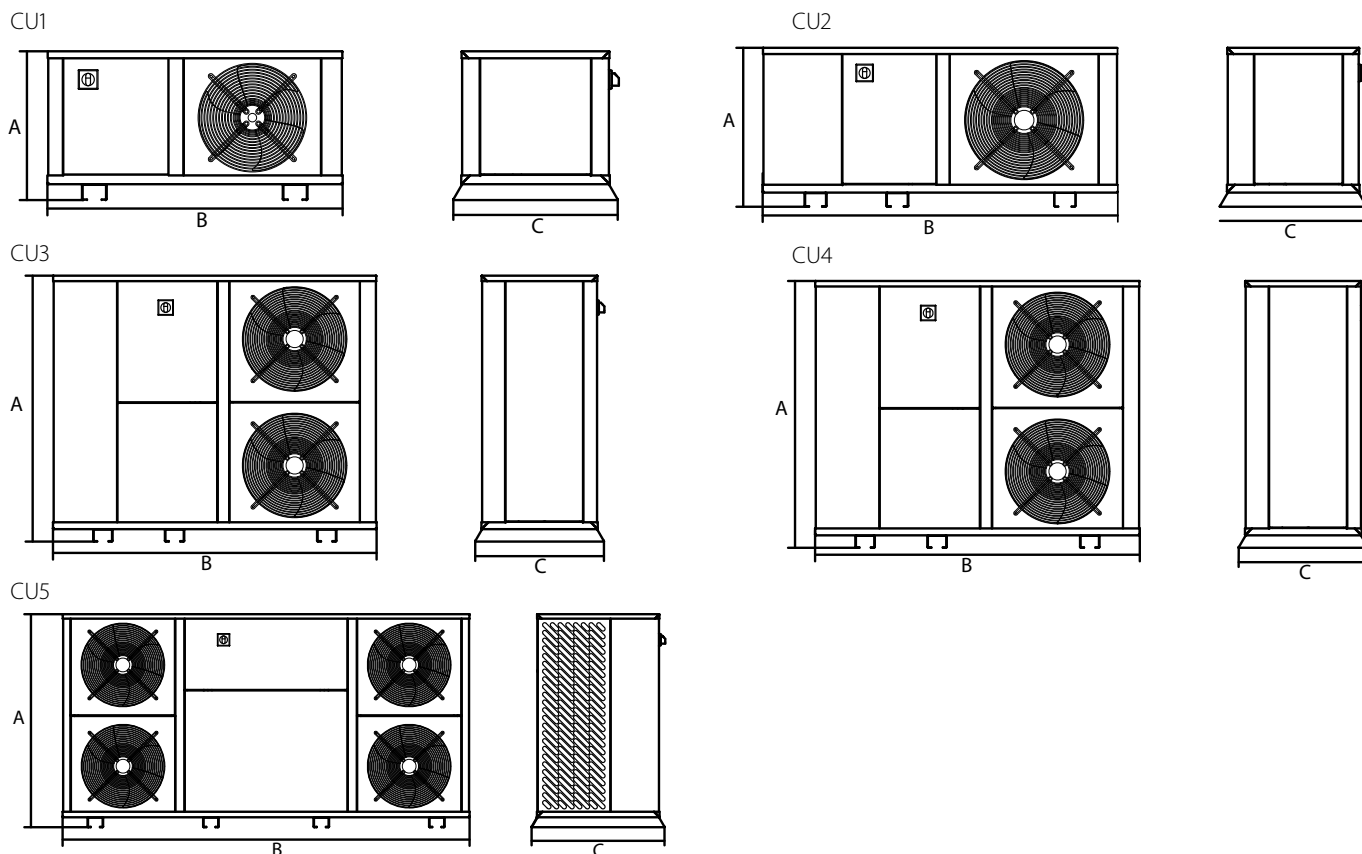
### Refrigeration flow diagram and main components



#### Legend:

- CMP: compressor
- SCO: service valve
- SGL: sight glass
- PL: LP switch
- PH: HP switch
- SVA: safety valve
- LRC: liquid receiver
- CND: condenser
- VNC: condenser fan motor
- FLT: filter dryer
- VAL: closing valve

### Drawings and dimensions



(in mm)	Frame 1	Frame 2	Frame 3	Frame 4	Frame 5
A	625	800	1.480	1.480	1.480
B	1.150	1.400	1.400	1.680	2.405
C	500	550	550	750	750

# Condensing unit for outdoor installation with semi hermetic compressors

## General features:

- › Capacity for MT cooling: 1,37 kW to 72,3 kW
- › Capacity for LT cooling: 0,77 kW to 35,2 kW
- › Ambient temperature range : - 25°C - +43°C
- › R134A a, R 449A, R448A, R452A R407F, R 407A
- › Reciprocating: Bitzer, Dorin, Frascold
- › Copeland Digital scroll and Stream reciprocation compressors
- › Conditions:
  - MT: Ambient temperature: 35°C Evp. Temperature: -10°C
  - LT: Ambient temperature: 35°C Evp. Temperature: -35°C

## General Description:

Compact air cooled condensing unit floor mounting, low noise, with semi hermetic compressors. Designed specifically for small capacity refrigeration applications in small and medium sized food stores (e.g. in bakeries and butchers), cold rooms, bottle coolers and display cabinets. All components can be accessed, allowing for quick and easy maintenance. The optimized compressor range and increased condenser surface deliver high levels of energy efficiency and reliability is ensured by using high quality components and production processes.



## Standard characteristics:

- › Semi-hermetic compressors
- › Crankcase heater - Kriwan
- › Curved condenser with 6-pole fan motor
- › Electrical box with terminal strip
- › Liquid receiver with safety pressure relief valve for PED units
- › Liquid line filter dryer, liquid line sight glass
- › Dual HP/LP adjustable switch with auto reset
- › Suction vibration eliminator
- › Frequency driver (only with Inverter option)
- › Bitzer Varispeed compressor (only for Inverter option)
- › Electrical box with running processor (only for Inverter)

For technical selection, prices, accessories and delivery time please use the Zanotti software and contact our technical department. We are happy to help you.

## Normal cooling

Condensing unit		GCU-E	1010B01	1015B01	2020B01	2022B01	2025B01	2030B01	2040B01	3050B01	3060B01	4090B01
Price		€	On request	On request	On request	On request	On request	On request	On request	On request	On request	On request
Refrigeration capacity	0° C	W	2.786	3.189	4.248	5.133	5.943	7.334	9.596	1.1711	13.899	17.574
	-10° C	W	1.929	2.335	2.957	3.550	4.161	5.155	6.897	8.270	9.885	12.520
Power input		kW	0,98	1,15	1,5	1,5	1,5	2,15	2,87	3,4	4,2	5
COP 32°C (1)			2,14	2,09	2,36	2,43	2,35	2,4	2,39	2,42	2,35	2,48
COP 25°C (1)			2,51	2,43	2,83	2,84	2,75	2,8	2,81	2,83	2,74	2,89
COP 43°C (1)			1,66	1,66	1,81	1,92	1,86	1,89	1,87	1,9	1,85	1,94
SEPR(1)			-	-	-	-	-	3,37	3,39	3,32	3,01	3,38
Annual Electricity Consumption(1)		Kwh/a	-	-	-	-	-	9.407	12.520	15.180	19.331	22.788
Dimensions	Unit	Height	mm	625	625	800	800	800	800	1.480	1.480	1.480
		Width	mm	1.150	1.150	1.400	1.400	1.400	1.400	1.400	1.400	1.680
		Depth	mm	500	500	550	550	550	550	550	550	750
Condenser air flow		m³/h	1.830	1.830	3.600	3.600	3.370	3.050	3.050	6.740	6.740	6.740
Compressor			Bitzer reciprocating compressor									
Refrigerant	Type/GWP		R-134a/1430									
Power supply	V~/ Hz		400/3~/50									

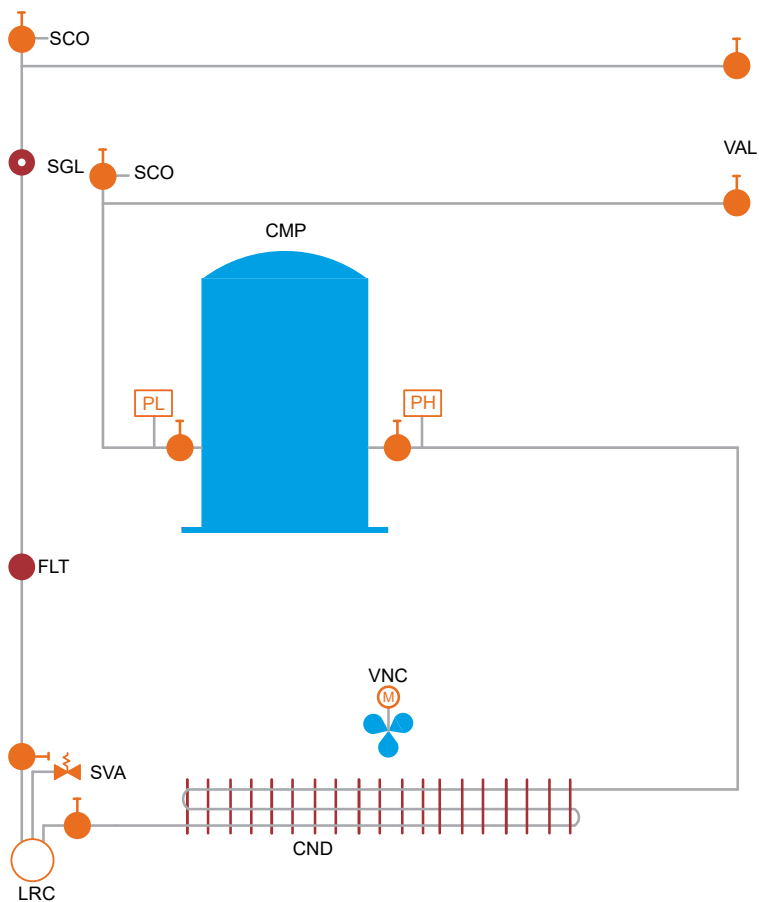
## Deep freezing

Condensing unit		HCU-B	1007B01	1010B01	1015B01	1020B01	2020B01	2030B01	2050B01	3060B01	4090B01	4120B01
Price		€	On request	On request	On request	On request	On request	On request	On request	On request	On request	On request
Refrigeration capacity	-25° C	W	971	1.193	1.562	1.875	3.099	4.025	5.657	7.563	8.823	9.358
	-35° C	W	536	690	886	1.097	1.854	2.478	3.497	4.677	5.394	5.641
Power input		kW	0,54	0,68	0,8	1	1,39	1,88	2,62	3,47	3,81	3,92
COP 32°C (1)			0,98	1,02	1,09	1,1	1,33	1,32	1,33	1,35	1,42	1,44
COP 25°C (1)			1,15	1,2	1,27	1,29	1,53	1,52	1,53	1,55	1,61	1,62
COP 43°C (1)			0,68	0,68	0,75	0,74	1,05	1,04	1,07	1,07	1,16	1,04
SEPR(1)			-	-	-	-	-	1,73	1,75	1,8	1,83	1,79
Annual Electricity Consumption(1)		Kwh/a	-	-	-	-	-	10.695	14.882	19.427	21.964	23.562
Dimensions	Unit	Height	mm	625	625	625	625	800	800	1.480	1.480	1.480
		Width	mm	1.150	1.150	1.150	1.150	1.400	1.400	1.400	1.400	1.680
		Depth	mm	500	500	500	500	550	550	550	550	750
Condenser air flow		m³/h	1.830	1.830	1.830	1.830	3.600	3.600	3.050	7.200	6.740	6.740
Compressor			Bitzer reciprocating compressor									
Refrigerant	Type/GWP		R-449A/1397									
Power supply	V~/ Hz		400/3~/50									

Other refrigerants, compressors and options available on request (1)Nominal operating conditions according to Ecodesign EN 13215: Ambient temperature 32°C/25°C/43°C, Evaporation temperature -10°C -35°C, 20°C suction gas temperature, Sub cooling 0K

## CU Series

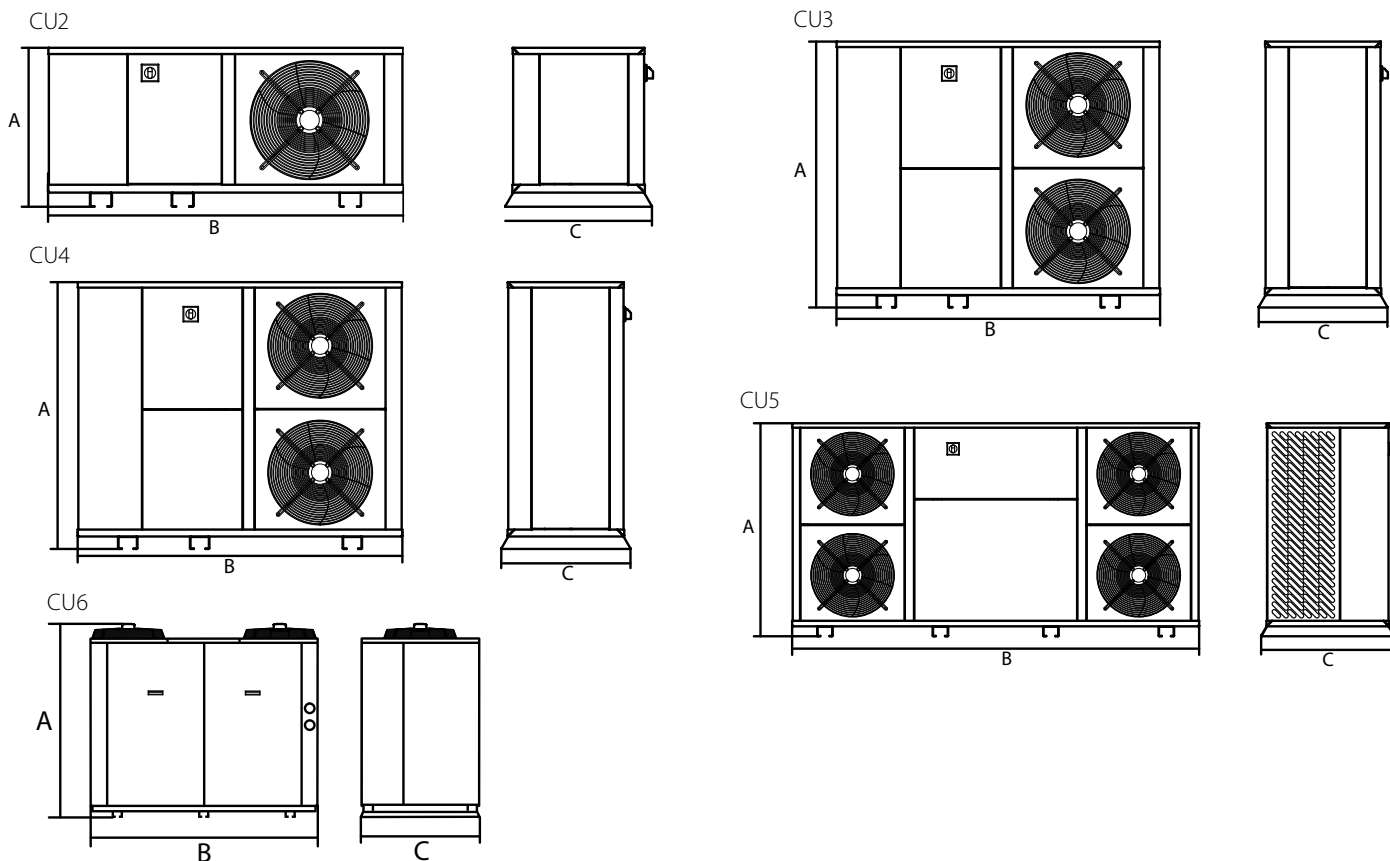
### Refrigeration flow diagram and main components



#### Legend:

- CMP: compressor
- SCO: service valve
- SGL: sight glass
- PL: LP switch
- PH: HP switch
- SVA: safety valve
- LRC: liquid receiver
- CND: condenser
- VNC: condenser fan motor
- FLT: filter dryer
- VAL: closing valve

### Drawings and dimensions



(mm)	Frame 2	Frame 3	Frame 4	Frame 5	Frame 6/7
<b>A</b>	800	1.480	1.480	1.480	1.800
<b>B</b>	1.400	1.400	1.680	2.405	2.431
<b>C</b>	550	550	750	750	1.111

# Twin condensing unit for outdoor installation with twin-semi hermetic compressors

## General features:

- › Capacity for MT cooling: 8,5 kW to 26 kW
- › Capacity for LT cooling: 7,5 kW to 12 kW
- › Ambient temperature range : - 25°C - +43°C
- › R134A a, R 449A, R448A, R452A R407F
- › Reciprocating: Bitzer, Dorin, Frascold
- › Copeland Digital scroll and Stream reciprocation compressors
- › Conditions:
  - MT: Ambient temperature: 35°C Evp. Temperature: -10°C
  - LT: Ambient temperature: 35°C Evp. Temperature: -35°C

## General Description:

Compact air cooled condensing unit floor mounting, low noise, with hermetic compressors. Designed specifically for small capacity refrigeration applications in small food stores (eg. in bakeries and butchers), cold rooms, bottle coolers and display cabinets. All components can be accessed, making maintenance quick and easy. The optimized compressor range and increased condenser surface deliver high levels of energy efficiency and reliability is ensured by using high quality components and production processes.



## Standard characteristics:

- › Two compressors parallel connected
- › Level control oil system
- › Curved condenser with 6-pole fan motor
- › Electrical box with terminal strip
- › Liquid receiver with safety pressure relief valve for PED units
- › Liquid line filter dryer, liquid line sight glass
- › Dual HP/LP adjustable switch with auto reset
- › Suction vibration eliminator
- › Electrical box with Running processor (only for Inverter)

For technical selection, prices, accessories and delivery time please use the Zanotti software and contact our technical department. We are happy to help you.

## Normal cooling

Condensing unit		GCU-E	4040L01	4060L01	4080L01	5120L01	5140L01	5180L01
Price		€	On request	On request	On request	On request	On request	On request
Refrigeration capacity	0° C	W	11.900	15.200	19.200	27.800	30.400	36.400
	-10° C	W	8.328	10.596	13.800	19.783	21.249	25.694
Power input		kW	3,53	4,4	5,7	8,42	8,3	10
COP/EER (1)			2,4	2,4	2,4	2,3	2,6	2,6
SEPR(1)			3,52	3,6	3,71	3,55	3,75	3,8
Annual Electricity Consumption(1)		Kwh/a	14.526	18.098	22.905	24.299	34.808	41.562
Dimensions Unit	Height	mm	1.480	1.480	1.480	1.480	1.480	1.480
	Width	mm	1.680	1.680	1.680	2.405	2.405	2.405
	Depth	mm	750	750	750	750	750	750
Condenser air flow		m³/h	7.800	7.800	7.300	15.600	15.600	14.600
Compressor			Bitzer reciprocating compressor					
Refrigerant	Type/GWP		R-134A/1.430					
Power supply	V~/ Hz		400/3~/50					

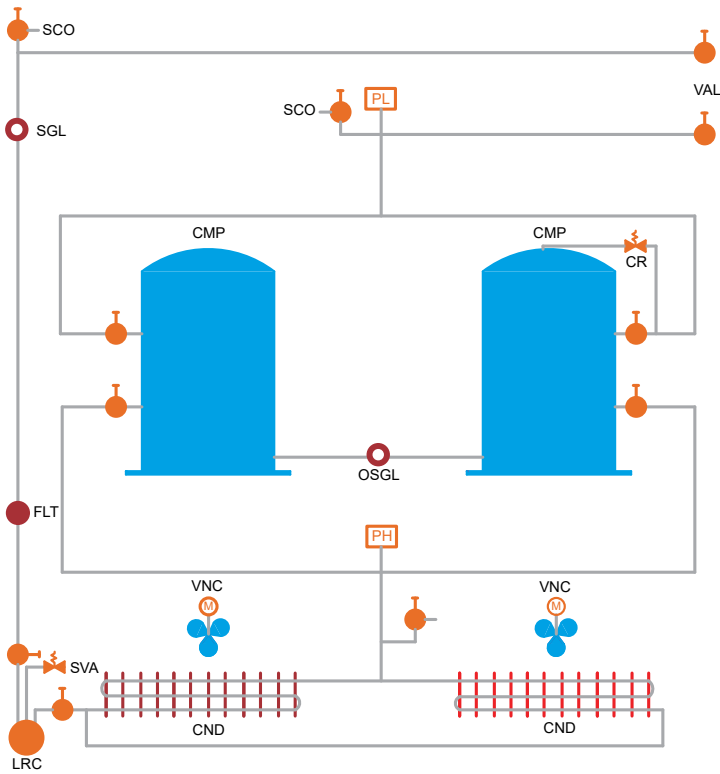
## Deep freezing

Condensing unit		HCU-J	4080L01	4100L01	412L01
Price		€	On request	On request	On request
Refrigeration capacity	-25° C	W	9.400	11.100	13.600
	-35° C	W	5.732	6.725	8.904
Power input		kW	4,5	5,3	6,7
COP/EER (1)			1,3	1,3	1,3
SEPR(1)			1,78	1,8	1,83
Annual Electricity Consumption(1)		Kwh/a	23.949	27.806	36.214
Dimensions Unit	Height	mm	1.480	1.480	1.480
	Width	mm	1.680	1.680	1.680
	Depth	mm	750	750	750
Condenser air flow		m³/h	7.600	7.900	7.300
Refrigerant	Type/GWP		R 407F/1.825		
Power supply	V~/ Hz		400/3~/50		

Other refrigerants, compressors and options available on request. (1)Nominal operating conditions according to Ecodesign EN 13215: Ambient temperature 32°C, Evaporation temperature -10°C/ -35°C, 20°C suction gas temperature, Sub cooling 0K

## CU Series

### Refrigeration flow diagram and main components

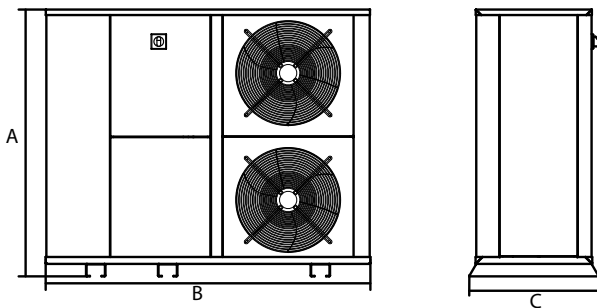


#### Legend:

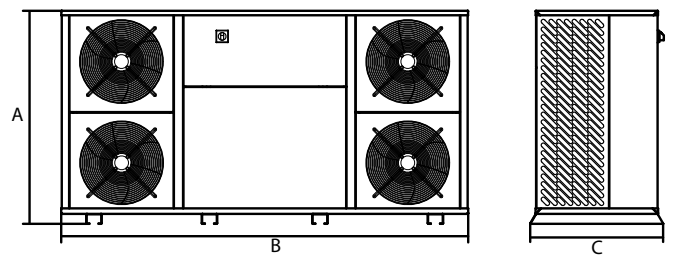
CMP: compressor  
 SCO: service valve  
 SGL: sight glass  
 PL: LP switch  
 PH: HP switch  
 SVA: safety valve  
 LRC: liquid receiver  
 CND: condenser  
 VNC: condenser fan motor  
 FLT: filter dryer  
 VAL: closing valve  
 OSGL: oil sight glass

### Drawings and dimensions

CU4



CU5



(mm)	Frame 4	Frame 5
A	1480	1480
B	1680	2405
C	750	750

# Multi compressors rack unit with Scroll/Digital scroll and hermetic reciprocating compressors

## General features:

- > Capacity for MT cooling: 7,2 kW to 26 kW
- > Capacity for LT cooling: 6,6 kW to 12 kW
- > Ambient temperature range : - 25°C - +43°C
- > R134A a, R 449A, R448A, R452A R407F, R 407A
- > !! Copeland scroll/digital scroll, Tecumseh and Maneurop reciprocation hermetic compressors  
Other types, brands and capacities are possible upon request
- > Conditions:
  - MT: Ambient temperature: 35°C Evp. Temperature: -10°C
  - LT: Ambient temperature: 35°C Evp. Temperature: -35°C

## Standard configuration:

### Basic Frame Version:

Basic frame made from folded and pre-painted steel sheet, with complete closed frame with simple sound proof material and anti-vibration  
Supports (CC Standard)

### Basic Refrigerating System:

The compressors (3 or 4) are connected in parallel, with one suction and discharge header. Each compressor is fitted with shut-off valves on suction line and discharge line.

The compressors are fixed to the frame through rubber anti-vibration supports.

The oil equalization system is composed of an oil separator and an equalization header, which are mounted on the compressor oil sight glass connection.

According to the number of compressors fitted, there is one or two oil level indicator/s, fitted onto the equalization header.

The refrigerating system is equipped with liquid receivers, if there is more than one receiver, the installation is made in parallel with a safety valve, a dehydration cartridge filter, interchangeable, liquid level alarm, liquid sight glass and shut-off valves.

On suction line there is a mechanical cartridge filter, interchangeable.

## Nomenclature:

- CC-E: Scroll compressor
- CC-ED: Digital scroll compressor
- CC-H: Hermetic reciprocating compressor (Tecumseh or Maneurop)



## The refrigerating system is fitted with:

- > General high pressure switch, adjustable and auto-resetting
- > General low pressure switch, adjustable and auto-resetting
- > Emergency low pressure switch, adjustable and auto-resetting
- > Low pressure switches for each compressor emergency, adjustable and auto-resetting
- > High pressure switches to control condenser fans, adjustable and auto-resetting
- > Low pressure probe, placed on suction header for capacity control
- > High pressure gauge
- > Low pressure gauge
- > With or without integrated condenser

## Electrical panel:

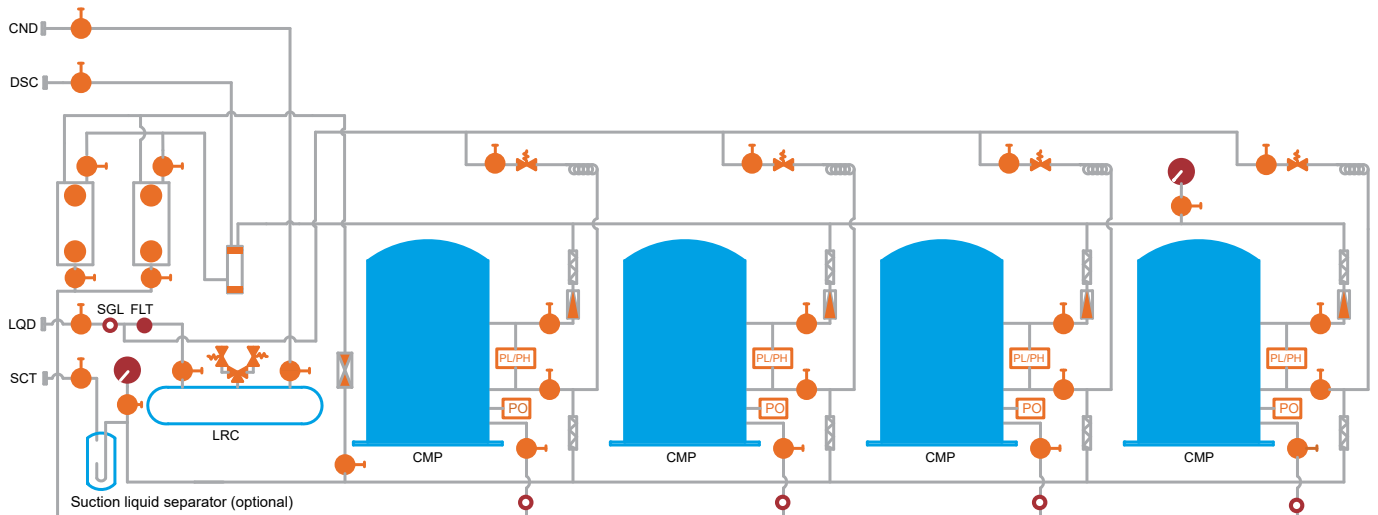
Standard power distribution  
Disconnecting switch  
Compressors protection, with overload cut-out motor protector; fuses for fans protection, thermo contacts for each single fan  
Auxiliary circuit 230 volt through transformer 400V/230V  
Electronic card XC440C  
IP55 with greed and ventilation fan  
On the door there is the electronic card and 4 lamps: emergency (button + lamp), fans block, high pressure switch block, low pressure  
Switch block, and selector for on/off compressors.  
Condensation control through pressure switches: 1 pressure switch every 2 fans, standard 2 pressures

For technical selection, prices, accessories and delivery time please use the Zanotti software and contact our technical department. We are happy to help you.



## CC Series

### Refrigeration flow diagram and main components

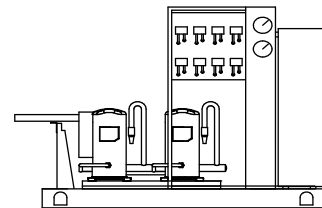
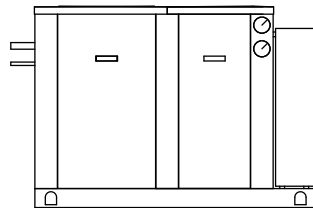
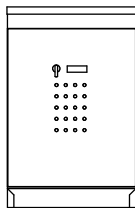


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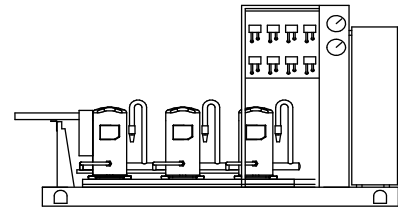
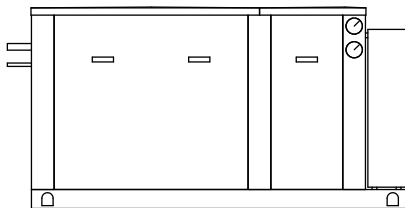
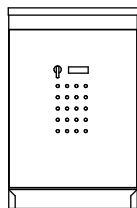
CMP: compressor  
 SCO: service valve  
 SGL: sight glass  
 PL: LP switch  
 PH: HP switch  
 SVA: safety valve  
 LRC: liquid receiver  
 FLT: filter dryer  
 VAL: closing valve  
 OSGL: oil sight glass  
 CND: condensing connection  
 DSC: discharge connection  
 LQD: liquid connection  
 SCT: suction connection

### Drawings and dimensions

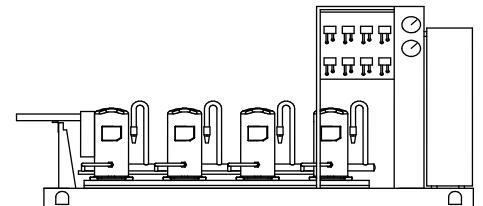
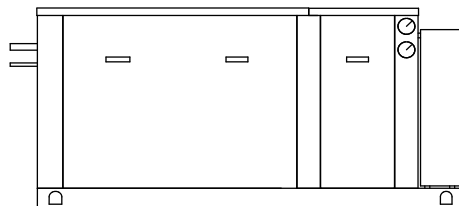
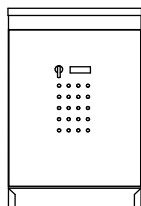
Frame CC1



Frame CC2



Frame CC3



(mm)	Frame 1	Frame 2	Frame 3
A	Dimensions on request		
B			
C			

Different special frames and dimensions possible on request

# Multi compressor rack unit with semi hermetic compressors

## General features:

- › Capacity for MT cooling: 25 kW to 320 kW
- › Capacity for LT cooling: 13 kW to 133 kW
- › Ambient temperature range : - 25°C - +43°C
- › R134A a, R 449A, R448A, R452A R407F, R 407A
- › !! Reciprocating semi hermetic compressors: Bitzer, Dorin, Frascold, Copeland stream
- Other types, brands and capacities are possible on request
- › Conditions:
  - MT: Ambient temperature: 35°C Evp. Temperature: -10°C
  - LT: Ambient temperature: 35°C Evp. Temperature: -35°C

## Standard configuration:

### Basic Frame Version:

Basic frame made from folded and painted steel sheet, screwed with bolts to make a basic structure to fix the components on it.

### Basic Refrigerating System:

The compressors (3 or 4) are connected in parallel, with only one suction and discharge header. Each compressor is fitted with shut-off valves on suction line and discharge line.

The compressors are fixed to the frame through rubber anti-vibration supports.

Compressors used for low temperature are complete with fan heads.

The oil equalization system is composed of an oil separator and an equalization header, which are mounted on the compressor oil sight glass connection.

According to the number of compressors fitted, there is one or two oil level indicator/s, fitted onto the equalization header.

The refrigerating system is equipped with liquid receivers, if there is more than one receiver, the installation is made in parallel with a safety valve, a dehydration cartridge filter, interchangeable, liquid level alarm, liquid sight glass and shut-off valves.

On suction line there is a mechanical cartridge filter, interchangeable.

## Nomenclature:

- CC- B Bitzer
- CC- D Dorin
- CC- C Copeland stream
- CC- R Frascold



## The refrigerating system is fitted with:

- › General high pressure switch, adjustable and auto-resetting
- › General low pressure switch, adjustable and auto-resetting
- › Oil pressure switch for each compressor
- › Emergency low pressure switch, adjustable and auto-resetting
- › Low pressure switches for each compressor emergency, adjustable and auto-resetting
- › High pressure switches to control condenser fans, adjustable and auto-resetting (the pressure switches control 2 fans; if there are more than 4 condenser fans, the quantity of pressure switches installed increases to a maximum of 4)
- › Low pressure probe, placed on suction header for capacity control
- › High pressure gauge
- › Low pressure gauge

## Electrical panel:

Standard power distribution

Disconnecting switch

Compressors protection, with overload cut-out motor protector, fuses for fans protection, thermos contacts for each single fan

Auxiliary circuit 230 volt through transformer 400V/230V

Electronic card XC440C

IP55 with greed and ventilation fan

On the door there is the electronic card and 4 lamps : emergency (button + lamp), fans block, high pressure switch block, low pressure

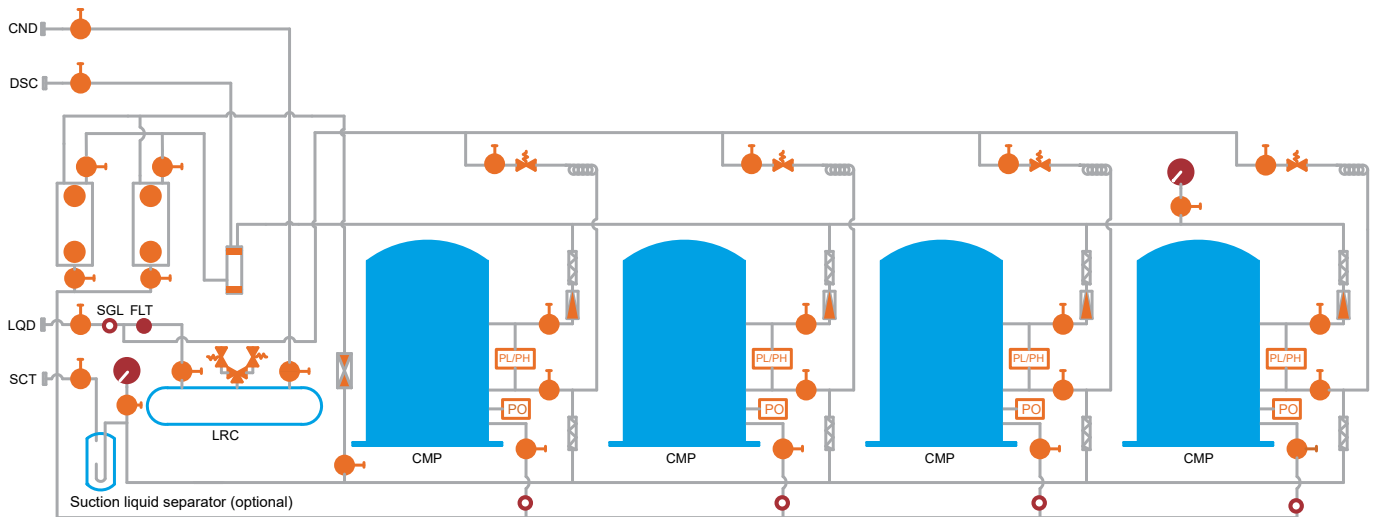
Switch block, and selector for on/off compressors

Condensation control through pressure switches: 1 pressure switch every 2 fans, standard

For technical selection, prices, accessories and delivery time please use the Zanotti software and contact our technical department. We are happy to help you.

## CC Series

### Refrigeration flow diagram and main components

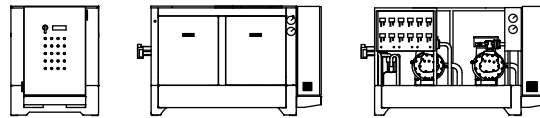


#### Legend:

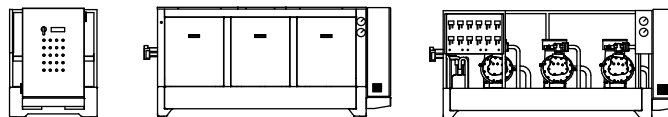
CMP: compressor  
 SCO: service valve  
 SGL: sight glass  
 PL: LP switch  
 PH: HP switch  
 SVA: safety valve  
 LRC: liquid receiver  
 FLT: filter dryer  
 VAL: closing valve  
 OSGL: oil sight glass  
 CND: condensing connection  
 DSC: discharge connection  
 LQD: liquid connection  
 SCT: suction connection

### Drawings and dimensions

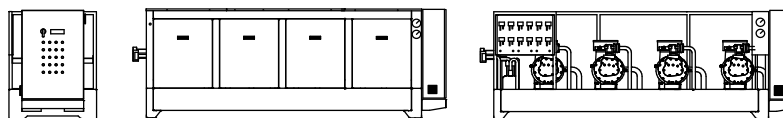
Frame CC1



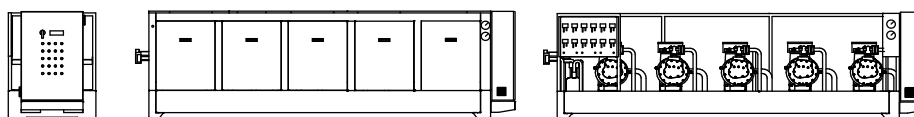
Frame CC2



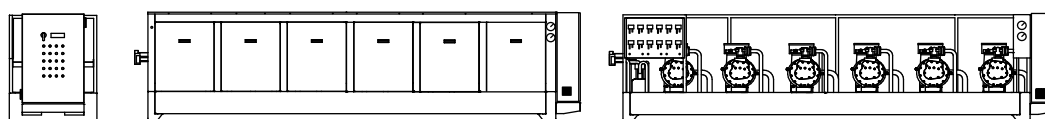
Frame CC3



Frame CC4



Frame CC5



(mm)	Frame 1	Frame 2	Frame 3
A	Dimensions on request		
B	Dimensions on request		
C	Dimensions on request		

Different special frames and dimensions possible upon request

# Multi compressor condensing unit with scroll/digital scroll compressors

## General features:

- › Capacity for MT cooling: 10,5 kW to 102 kW
- › Capacity for LT cooling: 7,5 kW to 48,5 kW
- › Ambient temperature range : - 25°C - +43°C
- › R134A a, R 449A, R448A, R452A R407F, R 407A
- › !! Copeland scroll and digital scroll compressors  
Other types, brands and capacities are possible on request
- › Conditions:  
MT: Ambient temperature: 35°C Evp. Temperature: -10°C  
LT: Ambient temperature: 35°C Evp. Temperature: -35°C

## Standard configuration:

### Basic Frame Version:

Basic frame made from pre-painted steel sheet, with vertical condenser placed on 1 or 2 sides of the unit and fans (2, 3, 4, or 5) placed on frame top covering sheet. The compressors are installed in a soundproof compartment separate from the condenser side, but allowing ventilation. The compartment is simple soundproofing insulated (SMP).

### Basic Refrigerating System:

The compressors (3 or 4) are connected in parallel, with one suction and discharge header. Each compressor is fitted with shut-off valves on suction line and discharge line.

The compressors are fixed to the frame through rubber anti-vibration supports.

The oil equalization system is composed of an oil separator and an equalization header, which are mounted on the compressor oil sight glass connection.

According to the number of compressors fitted, there are one or two oil level indicator/s, fitted onto the equalization header.

The refrigerating system is equipped with liquid receivers, if there is more than one receiver, the installation is made in parallel with a safety valve, a dehydration cartridge filter, interchangeable, liquid level alarm, liquid sight glass and shut-off valves.

On suction line there is a mechanical cartridge filter, interchangeable.

## Nomenclature:

CC-E: Scroll compressor

CC-ED: Digital scroll compressor



## The refrigeration system is fitted with:

- › General high pressure switch, adjustable and autoresetting
- › General low pressure switch, adjustable and autoresetting
- › Emergency low pressure switch, adjustable and autoresetting
- › Low pressure switches for each compressor emergency, adjustable and autoresetting
- › Low pressure probe, placed on suction header for capacity control
- › High pressure gauge
- › Low pressure gauge

## Standard electrical panel:

Standard power distribution

Disconnecting switch

Compressors protection, with overload cut-out motor protector; fuses for fans protection, thermo- contacts for each single fan.

Auxiliary circuit 230 volt through transformer 400V/230V

Electronic card XC440C

Four alarm signals: emergency (button + lamp, fans block, high pressure switch block, low pressure switch block).

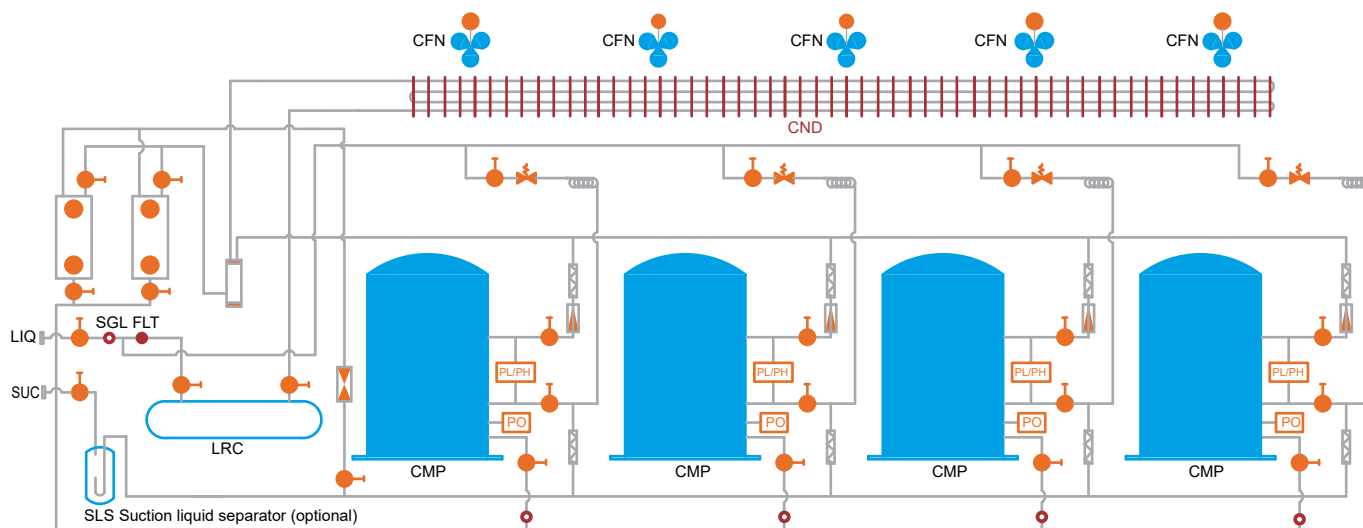
Electronic speed regulator for condenser fan with pressure probe for three phase fans and with temperature probe for mono phase fans + bypass

The electrical panel is placed horizontally on the top front side of the unit, inside the panel sheets for frame 1, 2 and 3; greeed, ventilation fan and double door for frames 4, 5, 6 and 7.

For technical selection, prices, accessories and delivery time please use the Zanotti software and contact our technical department. We are happy to help you.

## CM Series

### Refrigeration flow diagram and main components

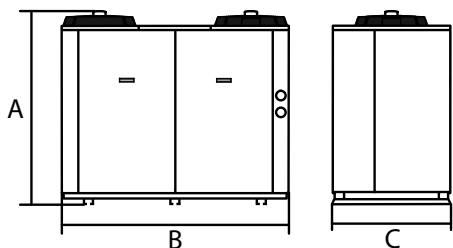


#### Legend:

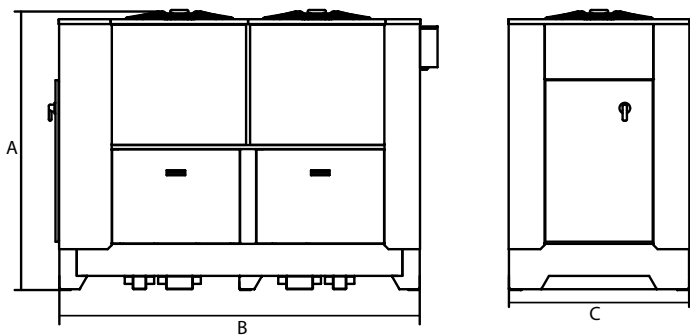
- CMP: compressor
- SCO: service valve
- SGL: sight glass
- PL: LP switch
- PH: HP switch
- SVA: safety valve
- LRC: liquid receiver
- CND: condenser
- VNC: condenser fan motor
- FLT: filter dryer
- VAL: closing valve
- OSGL: oil sight glass
- LQD: liquid connection
- SCT: suction connection

### Drawings and dimensions

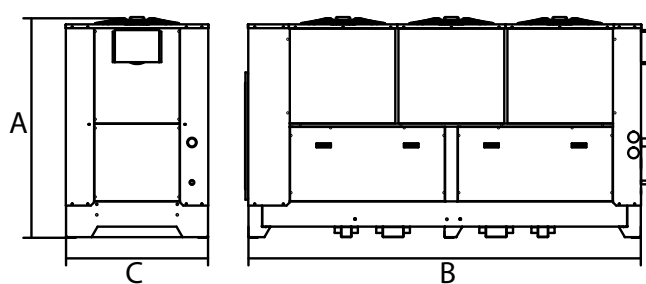
CM1\_2\_3



CM4



CM5\_6\_7



(mm)	Frame 1	Frame 2	Frame 3	Frame 4	Frame 5	Frame 6	Frame 7
A	1.800	1.800	1.800	2.098	2.098	2.098	2.098
B	2.431	2.431	2.431	2.913	3.943	4.973	6.003
C	1.111	1.111	1.111	1.357	1.357	1.357	1.357

# Multi compressor condensing unit with semi hermetic compressors

## General features:

- › Capacity for MT cooling: 48 kW to 150 kW
- › Capacity for LT cooling: 20 kW to 85 kW
- › Ambient temperature range : - 25°C - +43°C
- › R134A a, R 449A, R448A, R452A R407F, R 407A
- › !! Reciprocating semi hermetic compressors: Bitzer, Dorin, Frascold, Copeland stream  
Other types, brands and capacities are possible on request
- › Conditions:  
MT: Ambient temperature: 35°C Evp. Temperature: -10°C  
LT: Ambient temperature: 35°C Evp. Temperature: -35°C

## General description:

### Basic Frame Version:

Basic frame made from folded and painted steel sheet, screwed with bolts to make a basic structure to fix the components on it.

### Basic Refrigerating System:

The compressors (3 or 4) are connected in parallel, with only one suction and discharge header. Each compressor is fitted with shut-off valves on suction line and discharge line.

The compressors are fixed to the frame through rubber anti-vibration supports.

Compressors used for low temperature are complete with fan heads.

The oil equalization system is composed of an oil separator and an equalization header, which are mounted on the compressor oil sight glass connection.

According to the number of compressors fitted, there is one or two oil level indicator/s, fitted onto the equalization header.

The refrigerating system is equipped with liquid receivers, if there is more than one receiver, the installation is made in parallel with a safety valve, a dehydration cartridge filter, interchangeable, liquid level alarm, liquid sight glass and shut-off valves. On suction line there is a mechanical cartridge filter, interchangeable.

## Nomenclature:

- CC- B Bitzer
- CC- D Dorin
- CC- C Copeland stream
- CC- R Frascold



## The refrigeration system is fitted with:

- › General high pressure switch, adjustable and autoresetting
- › General low pressure switch, adjustable and autoresetting
- › Oil pressure switch for each compressor
- › Emergency low pressure switch, adjustable and autoresetting
- › Low pressure switches for each compressor emergency, adjustable and autoresetting
- › Electronic speed regulator for condenser fan with pressure probe for three phase fans and with temperature probe for mono phase fans + bypass
- › Low pressure probe, placed on suction header for capacity control
- › High pressure gauge
- › Low pressure gauge

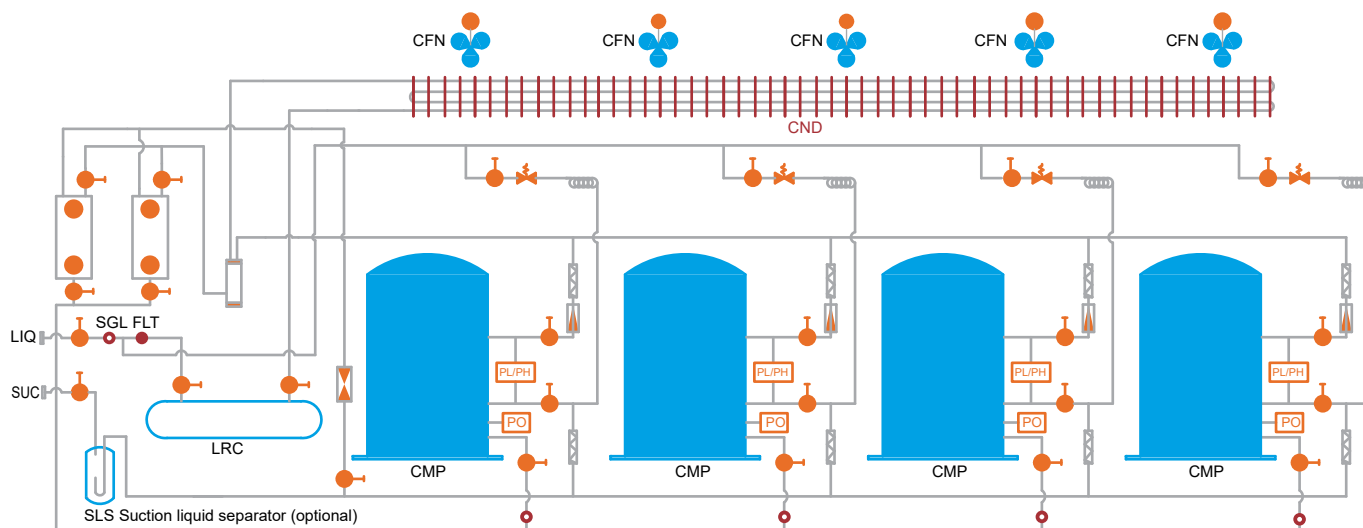
## Electrical panel:

Standard power distribution  
Disconnecting switch  
Compressors protection, with overload cut-out motor protector; fuses for fans protection, thermos contacts for each single fan  
Auxiliary circuit 230 volt through transformer 400V/230V  
Electronic card XC440C  
IP55 with greed and ventilation fan  
On the door there is the electronic card and 4 lamps: emergency (button + lamp), fans block, high pressure switch block, low pressure  
Switch block, and selector for on/off compressors

For technical selection, prices, accessories and delivery time please use the Zanotti software and contact our technical department. We are happy to help you.

## CM Series

### Refrigeration flow diagram and main components

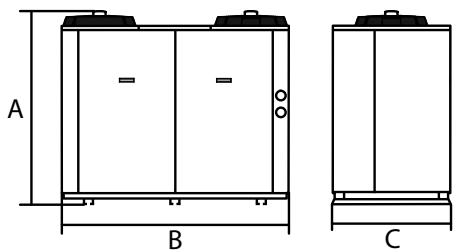


#### Legend:

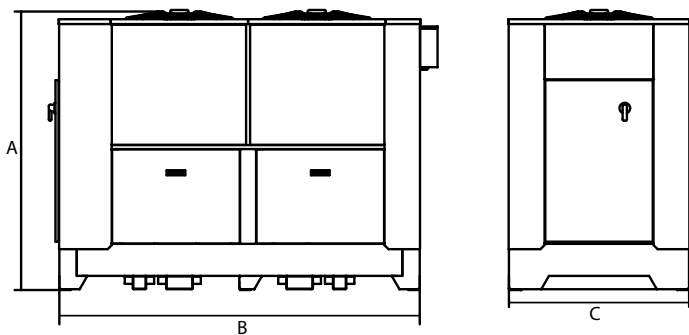
- |                    |                          |                         |
|--------------------|--------------------------|-------------------------|
| CMP: compressor    | SVA: safety valve        | VAL: closing valve      |
| SCO: service valve | LRC: liquid receiver     | OSGL: oil sight glass   |
| SGL: sight glass   | CND: condenser           | LQD: liquid connection  |
| PL: LP switch      | VNC: condenser fan motor | SCT: suction connection |
| PH: HP switch      | FLT: filter dryer        |                         |

### Drawings and dimensions

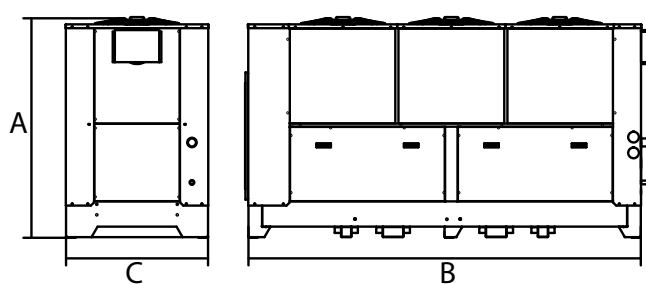
CM1\_2\_3



CM4



CM5\_6\_7



(mm)	Frame 1	Frame 2	Frame 3	Frame 4	Frame 5	Frame 6	Frame 7
A	1.800	1.800	1.800	2.098	2.098	2.098	2.098
B	2.431	2.431	2.431	2.913	3.943	4.973	6.003
C	1.111	1.111	1.111	1.357	1.357	1.357	1.357

# Options & accessories

## Zanotti Monoblock

		GM	SB	AS			
				Standard	Transport coldroom	Container	
<b>Options which need to be ordered with the unit</b>	Winter kit 1: Condenser fan pressure switch + Crankcase heater + Double defrost solenoid valve	PRS VNT + RES CAR + SOL SBR	•	•			
	Winter kit 2: Condenser fan speed regulator with temperature control+ Double defrost solenoid valve	VVE TER + RES CAR + SOL SBR	•	• (Std on 235)	•	Std on 135	Std on 121, 123, 221, 135
	Winter kit 3: Condenser fan speed regulator with pressure control + Crankcase heater + Double defrost solenoid valve	VVE PRS + RES CAR + SOL SBR	•	•	Std	Std on 235, 335, 340	Std on 235, 335, 340
	Winter kit 4: BEST COP condenser fan speed regulator + Crankcase heater + Double defrost solenoid valve	VVEBCO + RES CAR + SOL SBR	•	•	•	•	•
	Simple low noise housing	INS SEM	•				
	Evaporator cataporesis treatment	FRS EVP	•	•	•	•	•
	Condensator cataporesis treatment	FRS CND	•	•	•	•	•
	Zanotti remote control panel with 5 m cable	PAN SNG	•				
	Watercooled condenser	CON ACQ	•	•	•	•	•
	Voltage monitor	MON TEN	•	•	•	•	•
	Phase sequence control	CTR FAS				Only for scroll	
	3 m cable for door heater (for MT only, standard for LT)	RES POR	•	•	•	•	•
	Remote control panel for 2-3-4 units	PAN MUL	•		•		Only for 235, 335, 340
	Audible and visual alarm	ALR SNV	•		•		Only for 235, 335, 340
	Prearrangement for supervising system	KIT SUP	•	•	•	•	•
Kit long distance (more than 10 meters)	KIT DIS	•					
<b>Option where afterwards installation is possible</b>	Kit for through wall construction	KIT PAN	•	Std	Std	Std	Std

## Zanotti Bi-block

		GS	SPO	DBO	
<b>Options which need to be ordered with the unit</b>	Simple low noise housing	FRS CND	•		
	Condensate drain electrical heater	RES SCC	X (Std LT)	X (Std LT)	X (Std LT)
	Evaporator cataporesis treatment	FRS EVP	•	•	•
	Condensator cataporesis treatment	FRS CND	•	•	•
	Water-cooled condenser	CON ACQ	•	•	•
	Voltage monitor	MON TEN	•	•	•
	3 m micro-switch door cable	MIC POR	•	•	•
	1 m cold room lightning cable	CAV LCE			•
	3 m cable for door heater	RES POR	•	•	•
	Remote control panel for 2-3-4 units	PAN MUL	•	•	•
	Audible and visual alarm	ALR SNV	•	•	•
	Prearrangement for supervising system	KIT SUP	•	•	•
	Kit long distance (more than 10 meters)	KIT DIS	•		
cold room lamp	KIT LCE	•	•	•	

## Zanotti Wineblock

			RCV	RDV
<b>Options (Mandatory to be ordered with the unit)</b>	Winter kit 1: Condenser fan pressure switch + Crankcase heater	PRS VNT + RES CAR	•	
	Winter kit 3: Condenser fan speed regulator with pressure control + Crankcase heater	VVE PRS + RES CAR	•	•
	Winterkit 4: BEST COP condenser fan speed regulator + Crankcase heater	VVEBCO + RES CAR	•	•
	Evaporator cataporesis treatment	FRS EVP	•	•
	Condensator cataporesis treatment	FRS CND	•	•
	Watercooled condenser	CON ACQ	•	•
	Voltage monitor	MON TEN	•	•
<b>Options (Installation afterwards possible)</b>	Prearrangement for supervising system	KIT SUP	•	•



## Zanotti condensing units

		Condensing unit for outdoor installation		Twin condensing unit for outdoor installation with twin-semi hermetic compressors
		with hermetic compressors	with semi hermetic compressors	
RES CAR	Crankcase heater	•	•	•
PRO TRM	Thermal overload protection	•	•	•
VVE BCO	BESTCOP Condenser fan speed controller	•	•	•
VVE PRS	Pressure condenser fan speed controller	•	•	•
VVE TER	Temperature condenser fan speed controller	•	•	•
PRS LPF	LP switch (fixed calibration)	•	•	•
SEP ASP	Suction liquid separator	•	•	•
SEP OIL	Oil separator	•	•	•
VEN RAD	Radial type condenser fans	•	•	•
REG POT	Compressors capacity controller	•	•	•
SOL LIQ	Liquid line solenoid valve	•	•	•
CON ACQ	Watercooled condensation	•	•	•
VLT DIF	Different voltage	•		
FRS CND	Anti-corrosion protection on condenser coil	•	•	•
FRS EVP	Anti-corrosion protection on evaporator coil	•	•	•
IMB FUM	Fumigation according to ISPM15	•	•	•
PRS VNT	Condenser fan pressure switch	•	•	•
PRS HPR	HP switch with auto reset	•	•	•
MON TEN	Voltage monitor	•	•	•
INS SEM	Simple low noise housing	•	•	•
INS DOP	Enhanced low noise housing	•	•	•
QUA ELE	Power control box with magneto thermic switches	•	•	•
RES CAR	Crankcase heater	•	•	•
FQD	Frequency driver		•	•

		Multi compressor condensing unit	
		with scroll/digital scroll compressors	with semi hermetic compressors
INSRD	Closed frame with double layer sound proofing material	•	•
AC&R	Mechanical oil equalization system with oil reserve, oil line filter, pressure reduction valve onto oil reserve	•	•
TRAXOIL	Electronic oil distribution system	•	•
RIC.LIQ.	Oversized liquid receiver	•	•
CFF	Compressors sound shell	•	•
ELC.C	Electronic card EWCM4180 - XC1000D - EWCM9100	•	•

## Piping table for Bi-block units

Material	Refrigerant	Application	Type	Code	Material description	Unit size/type
Piping Kits (SP/GS) Bi Block units	R134a	MT t0 -10°C	GS1/SP1	2KTC001E	Pre charged pipe 2,5 meter length for GS1/SP1	GS1xxx/SP121-123/LBBM-LBCM < cap index 100
				2KTC002E	Pre charged pipe 5 meter length for GS1/SP1	
				2KTC003E	Pre charged pipe 10 meter length for GS1/SP1	
			GS2/SP2	2KTC004E	Pre charged pipe 2,5 meter length for GS/SP2-3	GS2xxx-GS3xxx/SP221-135/LBBL-LBCL < cap index 172
				2KTC005E	Pre charged pipe 5 meter length for GS/SP2-3	
				2KTC006E	Pre charged pipe 10 meter length for GS/SP2-3	
			GS3/SP3	2KTC007E	Pre charged pipe 2,5 meter length for GS/SP3	MGS340
				2KTC008E	Pre charged pipe 5 meter length for GS/SP3	
				2KTC009E	Pre charged pipe 10 meter length for GS/SP3	
	R452A	LT t0 -30°C	GS1/SP2	2KTC001D	Pre charged pipe 2,5 meter length for GS1/SP1	GS1xxx/SP121-123/LBBM-LBCM < cap index 100
				2KTC002D	Pre charged pipe 5 meter length for GS1/SP1	
				2KTC003D	Pre charged pipe 10 meter length for GS1/SP1	
			GS2/SP3	2KTC004D	Pre charged pipe 2,5 meter length for GS/SP2-3	GS2xxx-GS3xxx/SP221-135/LBBL-LBCL < cap index 172
				2KTC005D	Pre charged pipe 5 meter length for GS/SP2-3	
				2KTC006D	Pre charged pipe 10 meter length for GS/SP2-3	
GS3/SP4	2KTC007D	Pre charged pipe 2,5 meter length for GS/SP3	BGS340			
	2KTC008D	Pre charged pipe 5 meter length for GS/SP3				
	2KTC009D	Pre charged pipe 10 meter length for GS/SP3				

# Evaporators with or without TEV for different operations and refrigerants

## General features:

- › Capacity for LT/MT cooling: 0,5 to 213 kW
- › Ambient/cooling room temperature range: - 40°C - +25°C
- › Refrigerants: R134A a, R 449A, R448A, R452A R407F, R 407A
- › Fin distance: from 3 mm 11 mm
- › Fin materials: Al
- › Tube materials: Cu
- › Conditions:
  - MT: Ambient temperature: 35°C Evp. Temperature: -10°C
  - LT: Ambient temperature: 35°C Evp. Temperature: -35°C

## Accessories:

- › Electric defrost heating
- › Hot gas defrost
- › Drain pan heating
- › Fan ring heater
- › High efficient EC fans
- › Wiring on terminal box
- › Included valves and regulation
- › Fin materials AISI 304, AISI 316
- › Tube materials AISI 304, AISI 316
- › Casing in stainless steel (Inox)

## Types:

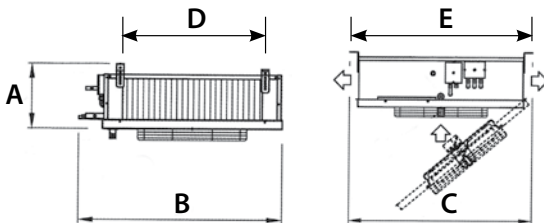
- › flat evaporator
- › double flow
- › cubic design

## Options:

- › Evaporator only
- › Evaporator + EEV/TEV
- › Evaporator + EEV/TEV + electronic controller

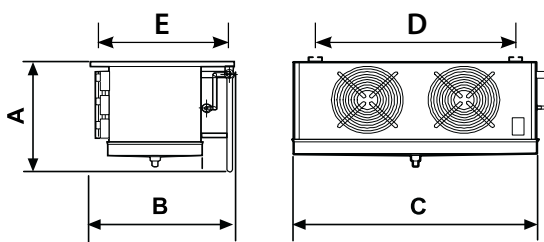
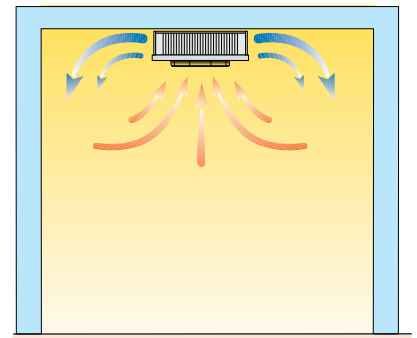
For technical selection, prices, accessories and delivery time please use the Zanotti software and contact our technical department. We are happy to help you.

## Dimensions



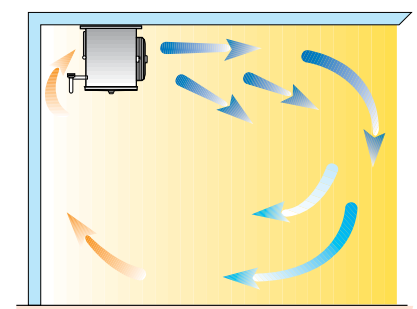
Double flow

mm	A	B	C	D	E
<b>231</b>	171	579	585	293	600
<b>232</b>	171	889	585	603	600
<b>233</b>	171	1.199	585	913	600
<b>234</b>	171	1.509	585	1.223	600
<b>352</b>	300	1.671	995	1.214	1.065
<b>353</b>	300	2.291	995	1.834	1.065
<b>354</b>	300	2.911	995	2.454	1.065
<b>355</b>	300	3.531	995	3.074	1.065

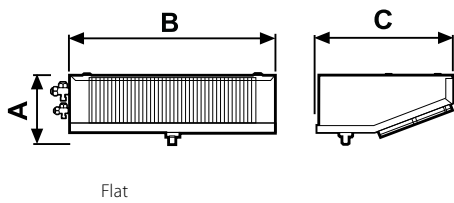


Cubic

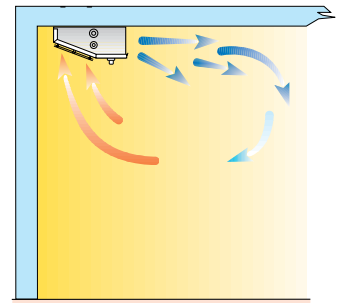
mm	A	B	C	D	E
<b>301</b>	420	480	789	495	345
<b>302</b>	420	480	1.254	960	345
<b>303</b>	420	480	1.719	1.425	345
<b>HEU351</b>	545	690	805	605	540
<b>HEU352</b>	530	690	1.220	965	540
<b>HEU353</b>	600	690	1.690	1.370	540
<b>HEU403</b>	620	700	1.840	1.520	545
<b>HEU502</b>	844	992	1.829	1.526	740
<b>SKC352</b>	490	606	1.614	1.270	450
<b>SKC353</b>	490	606	2.234	1.890	450
<b>SKC452</b>	610	650	2.032	1.680	510
<b>SKC503</b>	800	830	3.350	2.760	675



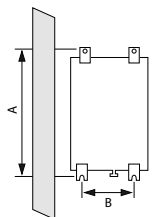
## Evaporators range



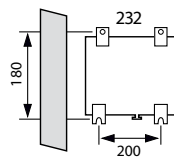
mm	A	B	C
<b>201</b>	215	614	410
<b>202</b>	215	1.034	410
<b>203</b>	215	1.614	410
<b>232</b>	150	713	455
<b>301</b>	300	910	690
<b>302</b>	300	1.530	690
<b>303</b>	300	2.150	690
<b>304</b>	300	2.770	690
<b>305</b>	300	3.390	690



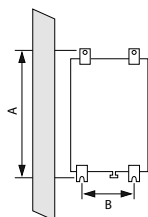
## Mounting diagram



mm	201	202	203
<b>A</b>	663	1.083	1.696
<b>B</b>	260	260	260



Flat evaporator



mm	301	302	303	304	305
<b>A</b>	659	1.279	1.899	2.519	3.139
<b>B</b>	690	690	690	690	690

# Other Products

## Transportation refrigeration

Zanotti offers various systems for the refrigerated transport of fresh and frozen foods in small and medium sized vehicles.

For refrigerated transport with large vehicles Zanotti manufactures monoblock and panel-mounted diesel units (Un0° series).



## Industrial range

Zanotti's core business in the industrial sector includes large cooling systems for logistics centers and cold storage solutions in the food, catering and petrochemical industries.




Many sports and leisure facilities, such as ice skating rinks or indoor winter sports halls use Zanotti freezing technology.



# Other product overview

Model	Refrigerant	Capacity range
<p>Small- Monoblock for wall mounting</p> <p>AS-R</p>	<p>Standard refrigerant: MT: R134a, LT: R452A</p> <p>Other refrigerants possible upon request</p>	 <p>0° 0,43 to 7,4 kW</p> <p>-20° 0,75 to 7,4 kW</p> <p>P 1,5 to 7,4 kW</p>
<p>Large- Monoblock for wall mounting</p> <p>RS</p>	<p>Standard refrigerant: MT: R134a, LT: R452A</p> <p>Other refrigerants possible upon request</p>	 <p>0° 0,75 to 22 kW</p> <p>-20° 1,5 to 37 kW</p>
<p>Large- Monoblock for shock freezing</p> <p>PRS • CBX</p>	<p>Direct mounting trough the wall</p> <p>Standard refrigerant: MT: R134a, LT: R452A</p> <p>Other refrigerants possible upon request</p>	 <p>-40° 5,5 to 18,5 kW</p> <p>P 1,5 to 7,4 kW</p>
<p>Open frame condensing units with Bitzer semi hermetic compressor</p> <p>ZH</p>	<p>Standard refrigerants: R134a, R407H, R449A</p> <p>Other refrigerants upon request</p> <p>Semi hermetic Bitzer compressor</p> <p>Liquid receiver with safety pressure relief valve for PED units</p> <p>Many different options and accessories available upon request.</p>	 <p>-10° 2,3 kW to 44 kW</p> <p>-30° 1,5 kW to 31,5 kW</p>
<p>Large- Monoblock for shock freezing</p> <p>CBX • PBX</p>	<p>Duct connection</p> <p>Standard refrigerant: MT: R134a, LT: R452A</p> <p>Other refrigerants possible upon request</p>	 <p>-40° 22 to 55 kW</p> <p>P 22 to 55 kW</p>

# Other product overview

Model	Refrigerant	Capacity range
<p>Small- Bi-Block with cubic evaporator</p> <p>DBS</p>	<p>MT: R134a, LT: R452A, R407F</p> <p>Other refrigerants possible upon request</p>	 <p>0° 0,4 to 7,4 kW</p> <p>-20° 0,7 to 11 kW</p>
<p>Middle- Bi-Block with cubic evaporator</p> <p>DBD</p>	<p>MT: R134a, LT: R452A, R407F</p> <p>Other refrigerants possible upon request</p>	 <p>0° 0,75 to 30 kW</p> <p>-20° 1,1 to 44,5 kW</p>
<p>Middle- Bi-Block with cubic evaporator</p> <p>CDB • PDB</p>	<p>MT: R134a, LT: R452A, R407F</p> <p>Other refrigerants possible upon request</p>	 <p>-40° 5,5 to 56 kW</p> <p>P 2,2 to 60 kW</p>

# Other product overview

Model	Refrigerant	Capacity range
<p>Small Mono and Bi-Block seasoning conditioner unit for meat and cheeses maturity process</p> <p>SAS</p>	<p>Standard Refrigerant: MT: R134a Other refrigerants possible upon request</p>	<p>+12° 0,7 to 5,5 kW</p>
<p>Large mobile grain process and seasoning conditioner</p> <p>DUK</p>	<p>R404A - R407F</p>	<p>0° 7,5 to 37 kW</p>
<p>Water Chiller</p> <p>ZC</p>	<p>Standard Refrigerant: MT: R134a, R449A</p>	<p>-5° 19,4 to 197 kW</p> <p>-10° 16,3 to 165,2 kW</p> <p>-15° 13,3 to 86 kW</p> <p>-20° 10,6 to 69,1 kW</p>
<p>Large Mono and Bi-Block seasoning conditioner unit for meat and cheeses maturity process</p> <p>UAV</p>	<p>Standard Refrigerant: MT: R134a Other refrigerants possible upon request</p>	<p>+12° 1,5 to 36,8 kW</p>

-40° capacity on evaporation temp.

P power input

For technical selection, prices, accessories and delivery time please use the Zanotti software and contact our technical department. We are happy to help you.



# Capacity selection tables for condensing unit range

The capacity table can be used to select the unit for needed capacity and certain conditions.

To have an accurate selection and for information's about annual electricity consumption and seasonal energy performance ratio (SEPR) please consult the Zanotti selection software and contact your Daikin local sales office.



# CU-U condensing unit range with Tecumseh hermetic compressor

## R134a

Unit code		GCU-E	1006U01	1007U01	1010U01	1012U01	1015U01	2025U01	2028U01	2035U01	2040U01
Tev °C	Ta °C	Comp. Type	CAJ4476Y	CAJ4492Y	CAJ4511Y	CAJ4513Y	FH4518Y	TAG4528Y	TAG4534Y	TAG4543Y	TAG4547Y
0	20	Unit capacity	1793	2134	2722	2997	3915	6459	7620	9183	9599
	25		2011	1988	2549	2815	3658	6032	7112	8562	8897
	30		1558	1843	2374	1635	3394	5680	6606	7953	8218
	35		1428	1699	2097	2470	3162	5186	6102	7350	7557
	40		1303	1555	2023	2275	2852	4765	5600	6745	6906
	45		1176	1412	X	2096	2578	4345	5099	6132	6259
-5	20		1469	1757	2262	2474	3181	4962	6049	7255	7890
	25		1370	1637	2120	2326	2969	4625	5638	6755	7304
	30		1420	1516	1975	2175	2744	4286	5221	6256	6727
	35		1160	1393	1826	2024	2512	3947	4801	5756	6158
	40		1052	1270	1676	1872	2276	3608	4383	5254	5597
	45		944	1147	1526	1721	2040	3269	3970	4749	5042
-10	20		1184	1421	1848	2010	2529	3641	4658	5605	6357
	25		1098	1320	1668	1886	2347	3380	4321	5197	5861
	30		1010	1218	1607	1761	2154	3118	3983	4791	5369
	35		919	1115	1427	1639	1968	2856	3645	4384	4882
	40		827	1010	1356	1507	1751	2594	3307	3976	4399
	45		735	902	1227	1378	1547	2331	2971	3567	3921

## R452A

Unit code		HCU-D	1010U01	1012U01	1015U01	1017U01	1020U01	2015U01	2035U01
Tev °C	Ta °C	Comp. Type	CAJ2432Z	CAJ2440Z	CAJ2446Z	CAJ2464Z	FH2480Z	TFH2511Z	nn
-25	20	Unit capacity	897	1036	1374	1709	2382	3537	nn
	25		824	948	1271	1580	2192	3208	nn
	30		749	862	1165	1451	1994	2895	nn
	35		673	778	1058	1323	1790	2597	nn
	40		598	698	951	1194	1582	2311	nn
	45		524	622	844	1063	1374	2036	nn
-30	20		678	795	1065	1333	1844	2716	nn
	25		619	722	978	1225	1681	2435	nn
	30		558	651	891	1120	1511	2175	nn
	35		496	583	802	1015	1336	1931	nn
	40		436	517	714	910	1156	1698	nn
	45		377	453	627	803	972	1471	nn
-35	20		494	589	799	1012	1372	2009	nn
	25		446	529	728	923	1229	1776	nn
	30		397	472	655	837	1081	1562	nn
	35		348	416	582	750	928	1363	nn
	40		299	362	509	664	770	1174	nn
	45		251	309	438	575	605	990	nn

Suction gas temperature 20°C, Liquid sub cooling 0K, Ta: Ambient temperature, Tev: Temperature evaporation  
For other compressor brands, conditions or refrigerants please consult the selection software or contact your local Daikin sales office

X: Data not available yet, Please contact your Local Daikin office

# CU-E condensing unit range with Copeland scroll compressor

## R134a

Unit code		GCU-E	2035E01	2040E01	2050E01	2060E01	2070E01	3080E01	3090E01	3100E01	5130E01	5130E01
Tev °C	Ta °C	Comp. Type	ZB26	ZB29	ZB38	ZB45	ZB48	ZB57	ZB66	ZB76	ZB95	ZB114M
0	20	Unit capacity	6093	6556	8427	10209	11438	13224	15069	17442	22798	26851
	25		5806	4241	8005	9688	10883	12588	14315	16568	21736	25551
	30		5509	5915	7573	9143	10310	11929	13534	15664	20622	24172
	35		5202	5578	7128	8576	9718	11248	12730	14723	19441	22708
	40		4887	5230	6665	7987	9104	10545	11905	13780	18181	22154
	45		4561	4873	X	X	X	9822	11061	12811	16828	19505
-5	20		5042	5437	7033	8498	9629	10960	12584	14545	18942	22298
	25		5805	5177	6685	8065	9183	10435	11953	13811	18065	21202
	30		4560	4908	6331	7611	8719	9892	11301	13054	17130	20035
	35		4308	4631	5966	7137	8237	9331	10633	12280	16125	18790
	40		4048	4346	5588	6646	7734	8754	9950	11493	15034	17462
	45		3782	4053	5191	6139	7209	8161	9255	10699	13840	16044
-10	20		4118	4450	5775	6974	7995	8961	10366	11958	15546	18225
	25		3923	4326	5489	6613	7637	8529	9842	11348	14810	17292
	30		3723	4016	5200	6237	7263	8085	9304	10725	14011	16300
	35		3517	3790	4904	5845	6871	7628	8757	10096	13136	15238
	40		3305	3559	4597	5440	6459	7159	8203	9463	12170	14100
	45		3089	3322	4274	5023	6027	6680	7645	8833	11097	12877

## R407F

Unit code		HCU-J	2030E01	2035E01	2040EH0	2050E01	2060E01	3075E01	4100E01	4130E01	4150E01
Tev °C	Ta °C	Comp. Type	ZF09	ZF11	ZF13	ZF15	ZF18	ZF25	ZF34	ZF41	ZF49
-25	20	Unit capacity	3068	3776	4129	5115	6211	7993	11050	13033	15550
	25		2911	3574	3916	4834	5890	7557	10442	12325	14628
	30		2734	3343	3695	4539	5555	7135	9838	11610	13718
	35		2538	3085	3463	4231	5203	6725	9230	10881	12779
	40		2323	2800	3219	3907	4832	6329	8612	10131	11769
	45		2089	X	X	X	X	X	X	X	X
-30	20		2477	3060	3321	4117	4980	6435	8910	10596	12815
	25		2347	2895	3151	3894	4728	6078	8406	10012	12063
	30		2199	2702	2974	3661	4466	5733	7902	9415	11320
	35		2035	2485	2790	3417	4191	5397	7391	8798	10528
	40		1855	2244	2598	3161	3902	5071	6864	8152	9681
	45		1659	X	X	X	X	X	X	X	X
-35	20		1977	2455	2637	3269	3925	5112	7082	8486	10316
	25		1867	2316	2500	3092	3728	4819	6662	8000	9708
	30		1743	2154	2360	2908	3519	4532	6237	7493	9087
	35		1605	1971	2216	2716	3301	4259	5800	6958	8435
	40		1455	1769	2066	2516	3071	3987	5343	6355	7734
	45		1291	1549	X	X	X	3717	4861	X	X

Suction gas temperature 20°C, Liquid sub cooling 0K, Ta: Ambient temperature, Tev: Temperature evaporation  
For other compressor brands, conditions or refrigerants please consult the selection software or contact your local Daikin sales office

X: Data not available yet, Please contact your Local Daikin office

# CU-E condensing unit range with copeland scroll compressor

## R449A

Unit code		GCU-B	2023E01	2030E01	2035E01	2040EH0	3050E01	3060E01	3070E01	5080E01	5090E01	5100E01
Tev °C	Ta °C	Comp. Type	ZB18	ZB21	ZB26	ZB29	ZB38	ZB45	ZB48	ZB57	ZB66	ZB76
0	20	Unit capacity	6364	7961	9322	10141	13912	16419	18490	21532	24925	28662
	25		6038	7527	8824	9602	13169	15552	17488	20511	23682	27257
	30		5706	7074	8316	9054	12399	14656	16453	19454	22373	25790
	35		5537	6601	7794	8492	11615	13742	15402	18364	20991	24239
	40		4998	6255	7155	8020	10830	12822	14355	17247	19526	22585
	45		X	X	X	X	X	X	X	X	X	X
-5	20		5345	6716	7851	8593	11771	13877	15664	18178	21056	24223
	25		5074	6360	7439	8149	11139	13145	14817	17314	20000	23047
	30		4790	5981	7013	7690	10475	12372	13922	16418	18868	21779
	35		4496	5582	6569	7216	9794	11577	13006	15496	17658	20409
	40		4189	5162	6105	6725	9112	10778	12095	14552	16364	18927
	45		X	X	X	X	X	X	X	X	13591	14985
-10	20		4445	5606	6548	7215	9883	11643	13171	15250	17593	20277
	25		4216	5308	6202	6841	9331	11004	12429	14491	16672	19250
	30		3977	4993	5842	6458	8752	10328	11647	13715	15684	18131
	35		3728	4662	5468	6063	8159	9633	10847	12926	14621	16904
	40		3470	4316	5077	5654	7565	8940	10053	12124	13474	15554
	45		X	X	X	X	X	X	X	X	11311	12234

## R449A

Unit code		HCU-B	2030E01	2035E01	2040E01	2050E01	2060E01	3075E01	4100E01	4130E01	4150E01
Tev °C	Ta °C	Comp. Type	ZF09	ZF11	ZF13	ZF15	ZF18	ZF25	ZF34	ZF41	ZF49
-25	20	Unit capacity	3097	3809	4405	5372	6265	8092	10674	12912	15169
	25		2959	3637	4178	591	5326	7698	10153	12245	14340
	30		2810	3448	3930	6791	5552	7281	9593	11525	13445
	35		2649	3238	3661	4473	5129	6842	8997	10755	12483
	40		2474	3005	3372	4135	4644	6380	8370	9939	12000
	45		2283	X	X	X	X	X	X	X	X
-30	20		2493	3088	355	4344	5105	6550	8631	10483	12373
	25		2384	2956	3371	4122	4825	6236	8209	9958	11750
	30		2270	2808	3177	3886	4512	5905	7759	9394	10988
	35		2144	2642	2971	3636	4152	5555	7283	8792	10219
	40		2006	2455	2751	3371	3729	5186	6783	8152	9395
	45		1855	2243	X	X	X	4798	X	X	X
-35	20		1973	2465	2804	3457	4083	5229	6860	8379	9924
	25		1891	2362	2663	3279	3845	4976	6512	7959	9381
	30		1801	2247	2519	3093	3576	4712	6148	7517	8807
	35		1704	2117	2369	2899	3261	4434	5768	7049	8198
	40		1597	1967	2215	2695	2881	4142	5372	6551	7546
	45		1478	1795	2056	2481	X	3833	4961	X	X

Suction gas temperature 20°C, Liquid sub cooling 0K, Ta: Ambient temperature, Tev: Temperature evaporation  
For other compressor brands, conditions or refrigerants please consult the selection software or contact your local Daikin sales office

X: Data not available yet, Please contact your Local Daikin office

# CU-ED condensing unit range with Copeland digital scroll compressor

## R134a

Unit code		GCU-E	2040ED01	2050ED01	2060ED01	3080ED01	3100ED01
Tev °C	Ta °C	Comp. Type	ZBD29	ZBD38	ZBD45	ZBD57	ZBD76
0	20	Unit capacity	ZBD29	8237	9865	13084	17511
	25		6782	7826	9336	12425	16583
	30		6339	7417	8801	11745	15626
	35		5721	7009	8259	11044	14643
	40		5348	6596	7710	10321	13637
	45		4966	X	X	9577	12611
-5	20		5596	6920	8221	10788	14530
	25		5306	6584	7773	10234	13738
	30		5008	6253	7322	9663	12925
	35		4703	5924	6867	9075	12094
	40		4389	5594	6407	8470	11248
	45		4068	5257	5940	7848	10391
-10	20		4553	5732	6764	8774	11855
	25		4310	5459	6390	8311	11218
	30		4062	5194	6014	7836	10539
	35		3807	4932	5636	7347	9850
	40		3548	4671	5257	6846	9157
	45		3284	4404	4875	6334	8462

## R449

Unit code		GCU-B	2030ED01	2040ED01	3050ED01	3060ED01	5080ED01
Tev °C	Ta °C	Comp. Type	ZBD21	ZBD29	ZBD38	ZBD45	ZBD57
0	20	Unit capacity	7975	10467	13969	16480	21573
	25		7569	9858	13299	15705	20584
	30		7141	9232	12593	14882	19578
	35		6692	8590	11852	14016	18545
	40		X	X	11076	13111	17479
	45		X	X	X	X	X
-5	20		6746	8913	11783	13891	18146
	25		6415	8421	11232	13252	17329
	30		6060	7902	10640	12563	16491
	35		5685	7364	10011	11831	15625
	40		5290	6812	9348	11060	14727
	45		X	X	X	X	13792
-10	20		5647	7523	9833	11589	15123
	25		5371	7116	9370	11049	14450
	30		5078	4489	8874	10470	12754
	35		4768	6248	8345	9853	13033
	40		4442	5795	7784	9200	12284
	45		X	X	X	X	11505

Suction gas temperature 20°C, Liquid sub cooling 0K, Ta: Ambient temperature, Tev: Temperature evaporation  
For other compressor brands, conditions or refrigerants please consult the selection software or contact your local Daikin sales office

X: Data not available yet, Please contact your Local Daikin office

# CU-B condensing unit range with Bitzer semi hermetic compressor

## R134a

Unit code		GCU-E	1010B01	10150B01	2020B01	2022B01	2025B01	2030B01	2040B01	3050B01	3060B01	4090B01
Tev °C	Ta °C	Comp. Type	2HES-1Y	2GES-2Y	2FES-2Y	2EES-2Y	2DES-2Y	2CES-3Y	4EES-4Y	4DES-5Y	4CES-6Y	4TES-9Y
0	20	Unit capacity	3374	3842	5258	6288	7269	8918	11769	14372	17035	21824
	25		3176	3623	4911	5894	6819	8380	11036	13485	15984	20404
	30		2980	3405	4574	5511	6378	7853	10312	12596	14939	18984
	35		2780	3189	4248	5133	5943	7334	9596	11711	13899	17574
	40		2593	2976	3931	4760	5513	6818	8888	10832	12866	16180
	45		2401	2765	3623	4389	5086	6304	X	9964	X	14813
-5	20		2787	3190	4344	8179	6018	7392	9845	11871	14155	18174
	25		2619	3005	4050	4849	5642	6944	9231	11139	13287	16994
	30		2453	2821	3766	4528	5273	6505	8624	10403	12425	15809
	35		2288	2639	3490	4213	4910	6074	8023	9669	11567	14628
	40		2125	2459	3224	3903	4552	5647	7429	8939	10711	13459
	45		1964	2283	2966	3595	4197	5221	6843	8217	9856	12309
-10	20		22269	2607	3535	4193	4898	6026	8109	9643	11570	14859
	25		2125	2451	3289	3919	4686	5657	7601	9046	10866	13891
	30		1985	2296	3050	3654	4281	5297	7097	8447	10165	12912
	35		1846	2144	2820	3395	3983	4943	6598	7848	9465	11931
	40		1709	1994	2598	3140	3689	4594	6106	7251	8765	10954
	45		1574	1847	2383	2887	3398	4248	5620	6657	8064	9990

## R134a

Unit code		GCU-E	4120B01	5140B01	5150B01	5180B01	5230B01	6250B01	6280B01	7340B01	7440B01
Tev °C	Ta °C	Comp. Type	4PES-12Y	4NES-14Y	4JE-15Y	4HE-18Y	4GE-23Y	6JE-25Y	6HE-28Y	6GE-34Y	6FE-44Y
0	20	Unit capacity	22479	30712	34957	39908	45063	51561	58862	69627	81027
	25		21037	28741	32839	37250	42238	48412	55323	65526	76222
	30		19597	26764	30748	35133	39388	45257	51766	61405	71383
	35		18166	24795	28680	32750	36525	42110	48206	57283	66567
	40		16753	22846	26634	30371	33660	38985	44658	53181	61787
	45		15365	20931	24609	28000	30803	35896	41138	49122	X
-5	20		18644	25394	29075	33386	37726	42680	49012	57826	67691
	25		17454	23763	27292	31382	35376	40063	46066	54447	63698
	30		16258	22122	25535	29383	32984	37428	43101	51041	59697
	35		15063	20481	23798	27388	30565	34793	40129	47629	55705
	40		13875	18850	22080	25398	28136	32176	37161	44233	51740
	45		12702	17239	20378	23411	25714	29595	34209	40874	47819
-10	20		15188	20630	23799	27495	31038	34805	40208	47346	55708
	25		14216	19294	22312	25823	29129	32641	37760	44574	52448
	30		13231	17940	20851	24167	27156	30453	35303	41784	49167
	35		12239	16578	19410	22522	25143	28259	32843	38989	45885
	40		11247	15200	17982	20882	23114	26078	30383	36201	42622
	45		10262	13875	16562	19244	21094	23927	27928	33433	39400

Suction gas temperature 20°C, Liquid sub cooling 0K, Ta: Ambient temperature, Tev: Temperature evaporation  
For other compressor brands, conditions or refrigerants please consult the selection software or contact you local Daikin sales office

X: Data not available yet, Please contact your Local Daikin office

# CU-B condensing unit range with Bitzer semi hermetic compressor

## R449A

Unit code		GCU-B	1005B01	10007B01	2010B01	2015B01	2020B01	2030B01	3040B01	3045B01	3050B01
Tev °C	Ta °C	Comp. Type	2KES-05Y	2JES-07Y	2HES-2Y	2GES-2Y	2EES-3Y	2DES-3Y	2CES-4Y	4FES-5Y	4DES-5Y
0	20	Unit capacity	3287	4092	5770	6623	9887	11410	14751	16485	21667
	25		3047	3796	5396	6129	9271	10690	13878	15485	20217
	30		2806	3499	5010	5753	8663	9985	12999	14501	18822
	35		2565	3203	4619	5307	8059	9290	12121	13525	17440
	40		2326	X	4227	4858	7457	X	11251	12548	16026
	45		X	X	3840	X	X	X	X	X	14534
-5	20		2723	3422	4765	5489	8273	9592	12323	13759	18292
	25		2522	3177	4457	5135	7755	8986	11595	12910	17052
	30		2319	2927	4134	4767	7233	8382	10841	12067	15817
	35		2115	2675	3804	4391	6709	7779	10083	11226	14602
	40		1911	2422	3473	4009	6187	7179	9332	10384	13420
	45		1708	X	3148	3627			8603	9543	12286
-10	20		2223	2822	3884	4493	6848	7977	10197	11365	15240
	25		2055	2617	3629	4199	6406	7461	9568	10645	14190
	30		1885	2409	3363	3894	5959	6945	8931	9923	13110
	35		1713	2197	3089	3581	5512	6429	8292	9204	12055
	40		1540	1983	2814	3262	5066	5915	7657	8489	11078
	45		1368	X	2540	2940	4626	X	7032	7780	10236

## R449A

Unit code		GCU-B	3055B01	3060B01	5090B01	5100B01	5120B01	5150B00	5200B01	6250B01	7300B01
Tev °C	Ta °C	Comp. Type	4DES-7Y	4CES-6Y	4TES-9Y	4TES-12Y	4PES-15Y	4JE-15Y	4NES-20Y	4HE-25Y	4GE-30Y
0	20	Unit capacity	22881	25121	35615	36432	42048	49994	48232	62256	73955
	25		21434	23469	33235	34100	39277	46622	45131	58347	69401
	30		20020	21816	30906	31792	36536	43394	42083	54445	64844
	35		18624	20200	28614	29502	33819	40270	39068	50538	60263
	40		X	18628	26342	27226	21123	37208	X	X	55638
	45		X	17108	24076	X	X	34167	X	X	X
-5	20		19218	21352	X	30446	35074	42542	40494	52560	62248
	25		17996	19926	29837	28473	32719	39817	37874	49285	58455
	30		16781	18558	25770	26501	30365	37183	35261	45954	54585
	35		15570	17237	23789	24535	28023	34603	35658	42585	50659
	40		14362	15952	21837	22586	25700	32042	30072	39191	46699
	45		X	14693	19910	X	X	29467	X	X	X
-10	20		15973	18367	24658	25174	28931	36593	33630	43915	51873
	25		14928	17135	22924	23469	26900	34289	31384	41111	48666
	30		13886	15951	21207	21790	24880	31996	29156	38289	46387
	35		12850	14798	19514	20134	22881	29692	26942	35444	42061
	40		11820	13659	17855	18499	20911	27354	24750	32572	38714
	45		X	12514	16240	16883	18980	24961	X	X	X

Suction gas temperature 20°C, Liquid sub cooling 0K, Ta: Ambient temperature, Tév: Temperature evaporation  
For other compressor brands, conditions or refrigerants please consult the selection software or contact you local Daikin sales office

X: Data not available yet, Please contact your Local Daikin office

## CU-B condensing unit range with Bitzer semi hermetic compressor

### R449A

Unit code		HCU-B	1007B01	1010B01	1015B01	1020B01	2020B01	2030B01	2050B01	3060B01	4090B01
Tev °C	Ta °C	Comp. Type	2JES-07Y	2HES-1Y	2GES-2Y	2FES-2Y	2DES-2Y	4FES-3Y	4DES-5Y	4CES-6Y	4TES-9Y
-25	20	Unit capacity	1305	1614	2042	2490	3994	5185	7340	9635	11451
	25		1200	1479	1890	2297	3695	4794	6783	8945	10558
	30		1087	1338	1730	2091	3996	4407	6217	8251	9684
	35		971	1193	1562	1875	3099	4025	5657	7563	8823
	40		584	1045	1389	1652	2803	3651	5117	6889	7967
	45		738	X	1211	X	2509	X	X	X	X
-30	20		988	1241	1558	1917	3106	4085	5798	7591	9007
	25		904	1132	1438	1760	2859	3758	5328	7014	8255
	30		812	1017	1306	1593	2613	3435	4856	6440	7526
	35		715	898	1166	1416	2367	3118	4392	5874	6813
	40		616	774	1021	1231	2121	2810	3944	5322	6108
	45		519	646	876	1038	1875	2514	3522	4789	5404
-35	20		714	913	1140	1417	2341	3121	4438	5814	6869
	25		645	825	1043	1290	2137	2850	4040	5333	6239
	30		568	732	933	1154	1935	2583	3650	4862	5632
	35		487	633	814	1008	1733	2323	3271	4403	5041
	40		403	529	691	853	1530	2073	2905	3956	4460
	45		318	418	567	688	1326	1835	2554	3522	3881

### R449A

Unit code		HCU-B	4120B01	4140B01	5180B01	5230B01	6250B01	628001	6340B01	7440B01
Tev °C	Ta °C	Comp. Type	4PES-12Y	4NES-14Y	4HE-18Y	4GE-23Y	6JE25Y	6HE-28Y	6GE-34Y	6FE-44Y
-25	20	Unit capacity	12463	15261	22135	26127	28219	32120	39019	47585
	25		11433	14098	20590	24417	26134	29838	36585	44580
	30		10394	12896	19025	22676	24059	27541	34113	41480
	35		9358	11678	17459	20921	22000	25231	31591	38309
	40		8340	10468	15908	19168	19960	22909	29010	35092
	45		X	X	X	X	X	X	X	X
-30	20		9743	12035	17528	20744	22205	25454	31165	37723
	25		8895	11057	16244	19335	20479	23572	29155	35243
	30		8028	10069	14944	17914	18745	21654	27125	32568
	35		7163	9076	13645	16495	17010	19714	25058	30005
	40		6314	8081	12361	15076	15283	17767	22935	27319
	45		5499	7088	11109	13681	13572	15825	20738	24635
-35	20		7387	9216	13473	16006	16964	19605	24286	29149
	25		6655	8380	12390	14838	15516	18018	22583	27035
	30		5929	7564	11311	13677	14070	16413	20897	24836
	35		5212	6756	10240	12529	12624	14794	13193	22582
	40		4511	5940	9184	11399	11174	13164	17431	22306
	45		3833	5104	8148	10294	9717	11528	15576	18039

Suction gas temperature 20°C, Liquid sub cooling 0K, Ta: Ambient temperature, Tev: Temperature evaporation  
For other compressor brands, conditions or refrigerants please consult the selection software or contact your local Daikin sales office

X: Data not available yet, Please contact your Local Daikin office

# CI-LT Inverter Twin condensing unit range with Bitzer semi hermetic compressor

## R134a

Unit code		GCI-E	4040E01	4050L01	4070L01	5110L01	5130L01	5160L01
Tev °C	Ta °C	Comp. Type	2DES-2Y 2EES-2Y	4FES-3Y 2DES-2Y	4EES-4Y 4FES-3Y	4CES-6Y 4DES-5Y	4VES-7Y 4CES-6Y	4TES-9Y 4VES-7Y
0	20	Unit capacity	14562	18130	22895	33667	39318	44795
	25		13677	17013	21480	31360	36881	41949
	30		12809	15915	20086	29613	34473	39139
	35		11955	14828	18708	27608	32085	36356
	40		11109	13764	17340	25610	29710	33590
	45		10268	12660	15973	23614	27343	30834
-5	20		12043	14960	19020	27923	32541	37085
	25		11310	14043	17861	26269	30569	34779
	30		10585	13131	16699	24601	28570	32442
	35		9868	12221	15538	22926	26562	30094
	40		9158	11312	14382	21254	24563	27751
	45		8455	10403	13234	19594	22589	25431
-10	20		9808	12161	15577	22828	26525	30215
	25		9189	11396	14612	21458	24897	28302
	30		8586	10638	13645	20087	23245	26360
	35		7993	9556	12679	18714	21583	24401
	40		7409	9136	11717	17341	19928	22438
	45		6830	8386	10761	15966	18292	20484

## R407F

Unit code		GCI-J	4070L01	4090L01	4110L01
Tev °C	Ta °C	Comp. Type	4EES-4Y 4FES-3Y	4DES-4Y 4FES-4Y	4CES-6Y 4DES-5Y
-25	20	Unit capacity	12051	14665	16990
	25		11134	13519	15785
	30		10203	12387	14567
	35		9281	11275	13377
	40		8391	10191	12253
	45		X	X	X
-30	20		9471	11490	13791
	25		8702	10538	12780
	30		7926	9595	11738
	35		7162	8672	10682
	40		6424	7776	9631
	45		X	X	X
-35	20		7197	8698	10836
	25		6551	7906	9936
	30		5913	7132	9014
	35		5290	6381	8073
	40		4690	5654	7114
	45		X	X	X

Suction gas temperature 20°C, Liquid sub cooling 0K, Ta: Ambient temperature, Tev: Temperature evaporation  
For other compressor brands, conditions or refrigerants please consult the selection software or contact your local Daikin sales office

X: Data not available yet, Please contact your Local Daikin office



## CI-LT Inverter Twin condensing unit range with Bitzer semi hermetic compressor

### R449A

Unit code		GCI-B	4046L01	4060L01	4070L01	5100L01	5120L01	5150L01
Tev °C	Ta °C	Comp. Type	2FES-3Y 2GES-2Y	4EES-3Y 4FES-3Y	2DES-3Y 2EES-3Y	4FES-5Y 2CES-4Y	4EES-6Y 4FES-5Y	4DES-7Y 4EES-6Y
0	20	Unit capacity	15239	18142	22176	32176	38255	44680
	25		14192	16925	20759	30180	35854	41805
	30		13136	15701	19366	28206	33498	38996
	35		12072	14476	17988	26248	31163	36231
	40		11005	X	X	X	28823	X
	45		X	X	X	X	X	X
-5	20		12747	15284	18691	27050	32099	37668
	25		11884	14266	17489	25350	30073	35220
	30		10994	13223	16288	23655	28042	32792
	35		10087	12169	15089	21962	26012	30386
	40		9172	X	13896	20278	23988	28001
	45		X	X	X	X	X	X
-10	20		10521	12726	15582	22496	26642	31407
	25		9802	11849	14546	21047	24901	29305
	30		9056	10966	13512	19590	23160	27216
	35		8294	10079	12480	8137	21428	25144
	40		7525	9188	11455	16701	19715	23095
	45		X	X	X	X	X	X

### R449

Unit code		HCI-B	4100L01B	4120L01B	4150L01
Tev °C	Ta °C	Comp. Type	4EES-4Y 4FES-3Y	4DES-5Y 4EES-4Y	4CES-6Y 4DES-5Y
-25	20	Unit capacity	12203	14856	17209
	25		11276	13691	15877
	30		10347	12558	14576
	35		9429	11450	13306
	40		8533	10364	12072
	45		X	X	10874
-30	20		9655	11729	13712
	25		8872	10761	12596
	30		8099	9815	11509
	35		7340	8891	10451
	40		6598	7992	9419
	45		X	X	8411
-35	20		7402	8976	10580
	25		6742	8173	9647
	30		6102	7387	8747
	35		5480	6625	7874
	40		4877	5890	7026
	45		X	5191	6195

Suction gas temperature 20°C, Liquid sub cooling 0K, Ta: Ambient temperature, Tev: Temperature evaporation  
For other compressor brands, conditions or refrigerants please consult the selection software or contact you local Daikin sales office

X: Data not available yet, Please contact your Local Daikin office

# CU-T Twin condensing unit range with Copeland scroll compressor

## R134a

Unit code		GCU-E	4080T01	4100T01	4120T01	4150T01	5160T01	5180T01	5200T01
Tev °C	Ta °C	Comp. Type	2x ZB30	2x ZB38	2x ZB45	2x ZB48	2x ZB57	2x ZB66	2x ZB76
0	20	Unit capacity	13078	16796	20350	22803	66379	30871	33786
	25		12462	15977	19334	21724	25135	29421	33078
	30		11829	15146	18284	20620	23856	27923	31325
	35		11178	14294	17197	19484	22540	26381	29531
	40		10508	13410	16071	18310	21184	24797	27695
	45		9816	X	X	X	19785	23174	25821
-5	20		10839	14005	16927	19184	21850	25665	28987
	25		10338	13343	16097	18333	20838	24466	27573
	30		9818	12663	15222	17441	19785	23215	26110
	35		9279	11960	14307	16509	18695	21924	24609
	40		8724	11231	13360	15540	17573	20603	23082
	45		8156	10472	12385	14535	16423	19265	21541
-10	20		8878	11512	13902	15944	17880	21088	23849
	25		8462	10960	13204	15252	17039	20077	22663
	30		8033	10401	12474	14526	16170	19036	21451
	35		7592	9827	11713	13767	15278	17973	20224
	40		7141	9234	10928	12971	14363	16895	18992
	45		6680	8614	10123	12183	13431	15812	17764

## R407F

Unit code		HCU-J	4100T01	4120T01	4150T01	5200T01	5260T01	5300T01
Tev °C	Ta °C	Comp. Type	2x ZF15	2x ZF18	2x ZF25	2x ZF34	2x ZF41	2x ZF49
-25	20	Unit capacity	9954	12078	15153	21543	25980	30923
	25		9394	11436	14306	20287	24608	29191
	30		8805	10758	13488	19104	23223	27449
	35		8184	11041	12682	17902	21812	25665
	40		X	X	X	16676	20363	X
	45		X	X	X	X	X	X
-30	20		8048	9754	12512	17372	21146	25552
	25		7601	9247	11812	16391	19996	24085
	30		7133	8713	11135	15395	18830	22627
	35		6642	8151	10468	14376	17630	21119
	40		6126	7557	9794	13326	16377	19534
	45		X	X	X	X	X	X
-35	20		6417	7764	10098	13861	16961	20588
	25		6056	7360	8527	13022	15980	19396
	30		5685	6942	8972	12174	14980	18169
	35		5300	6506	8423	11300	13393	16889
	40		4898	6048	7873	10387	12831	15537
	45		X	X	X	X	X	X

Suction gas temperature 20°C, Liquid sub cooling 0K, Ta: Ambient temperature, Tev: Temperature evaporation  
For other compressor brands, conditions or refrigerants please consult the selection software or contact your local Daikin sales office

X: Data not available yet, Please contact your Local Daikin office

# CU-T Twin condensing unit range with Copeland scroll compressor

## R449A

Unit code		GCU-B	4046T01	4060T01	4070T01	4080T01	5100T01	5120T01
Tev °C	Ta °C	Comp. Type	2x ZB19	2x ZB21	2x ZB26	2x ZB29	2x ZB38	2x ZB45
0	20	Unit capacity	12728	15921	18643	20283	27823	32837
	25		12077	15055	17648	19205	26336	31105
	30		11407	14149	16634	18108	24797	29313
	35		10715	13203	15589	16984	23230	27484
	40		9997	X	14502	X	21661	25644
	45		X	X	X	X	X	X
-5	20		10690	13421	15703	17187	23543	27754
	25		10147	12270	14879	16298	22279	26289
	30		9581	11962	14026	15380	20950	24774
	35		8992	11164	13138	14431	19588	23154
	40		8380	10330	12210	X	18224	21557
	45		X	X	X	X	X	X
-10	20		8890	11211	13096	14429	19765	23285
	25		8431	10615	12404	13682	18663	22007
	30		7954	9986	11685	12916	17504	20655
	35		7457	9324	10936	12126	16317	19267
	40		6940	8631	10155	11308	15131	17880
	45		X	X	X	X	X	X

## R449A

Unit code		HCU-B	4100T01	4120T01	4150T01	5200T01	5260T01
Tev °C	Ta °C	Comp. Type	2x ZB15	2x ZF18	2x ZF25	2x ZF34	2x ZF41
-25	20	Unit capacity	10725	12829	15646	20880	25825
	25		10163	12179	14838	19803	24490
	30		9562	11483	13977	18654	23050
	35		8928	10712	13060	17435	21511
	40		8253	9837	12086	16147	19877
	45		X	X	X	X	X
-30	20		8671	10385	12750	16948	20966
	25		8223	9862	12104	16079	19916
	30		7750	9279	11418	15155	18789
	35		7252	8619	10689	14178	17585
	40		6724	7863	9915	13153	16303
	45		X	X	X	X	X
-35	20		6900	8242	10235	13510	16758
	25		6540	7802	9710	12794	15917
	30		6167	7292	9162	12047	15033
	35		5778	6696	8585	11268	14098
	40		5372	6002	7974	10456	13110
	45		X	X	X	X	X

Suction gas temperature 20°C, Liquid sub cooling 0K, Ta: Ambient temperature, Tev: Temperature evaporation  
For other compressor brands, conditions or refrigerants please consult the selection software or contact your local Daikin sales office

X: Data not available yet, Please contact your Local Daikin office

# CU-T Twin condensing unit range with Copeland scroll compressor

## R134a

Unit code		GCU-E	4040L01	4060L01	4080L01	5120L01	5140L01
Tev °C	Ta °C	Comp. Type	2x 2DES-2Y	2x 4FES-3Y	2x 4EES-4Y	2x 4CES-6Y	2x 4VES-7Y
0	20	Unit capacity	14486	18718	23436	39909	37536
	25		13613	17545	22018	31886	35143
	30		12755	16381	20627	29872	32768
	35		11911	15224	19256	27872	30409
	40		11077	14073	17894	25890	28060
	45		10250	12928	16531	23930	25718
-5	20		11984	15425	19581	28148	30974
	25		11262	14465	18419	26512	29035
	30		10546	13496	17254	24852	27064
	35		9839	12525	16092	23185	25077
	40		9141	11557	14939	21525	23090
	45		8451	10598	13800	19889	21121
-10	20		9765	12522	16146	23045	25152
	25		9156	11723	15171	21691	23547
	30		8563	10918	14198	20329	21910
	35		7980	10113	13229	18963	20254
	40		7405	9312	12266	17599	18594
	45		6836	8518	11314	16239	16945

## R407F

Unit code		HCU-J	4080L01	4100L01	4120L01
Tev °C	Ta °C	Comp. Type	2x 4EFS-4Y	2x 4DES-5Y	2x 4CES-6Y
-25	20	Unit capacity	12214	14474	17152
	25		11271	13364	15999
	30		10330	12240	14816
	35		9403	11126	13641
	40		8497	10045	12514
	45		X	X	X
-30	20		9596	11339	14015
	25		8812	10406	13006
	30		8027	9472	11982
	35		7253	8550	10953
	40		6501	7654	9932
	45		X	X	X
-35	20		7290	8582	11106
	25		6636	7798	10191
	30		5988	7028	9272
	35		5353	6278	8352
	40		4738	5550	7432
	45		4152	4849	6515

Suction gas temperature 20°C, Liquid sub cooling 0K, Ta: Ambient temperature, Tev: Temperature evaporation  
For other compressor brands, conditions or refrigerants please consult the selection software or contact your local Daikin sales office

X: Data not available yet, Please contact your Local Daikin office

# CU-L Twin condensing unit range with Bitzer semihermetic compressor

## R449A

Unit code		GCU-B	4046L01	4060L01	4070L01	5100L01	5120L01
Tev °C	Ta °C	Comp. Type	2x 2FES-3Y	2x 2EES-3Y	2x 2DES-3Y	2x 4FES-5Y	2x 4EES-6Y
0	20	Unit capacity	15184	18770	21577	30345	37963
	25		14111	17546	20164	28415	35551
	30		13035	16342	18773	26499	33131
	35		12750	X	18000	X	X
	40		X	X	X	X	X
	45		X	X	X	X	X
-5	20		12722	15754	18203	25484	31886
	25		11837	14716	17009	23584	29854
	30		10932	13687	15811	22214	27783
	35		10015	12661	15015	20572	25696
	40		X	X	X	X	X
	45		X	X	X	X	X
-10	20		10520	13071	15185	21188	26511
	25		9787	12189	14157	19786	24755
	30		9034	11314	13136	18389	22991
	35		8269	10441	12121	16995	21224
	40		7492	9567	X	15603	19457
	45		X	X	X	X	X

## R407F

Unit code		HCU-B	4100L01	4120L01	4150L01
Tev °C	Ta °C	Comp. Type	2x 4EES-4Y	2x 4DES-5Y	2x 4CES-6Y
-25	20	Unit capacity	12136	14384	17066
	25		11189	13236	15765
	30		10238	12115	14488
	35		9311	11020	13232
	40		X	9948	X
	45		X	X	X
-30	20		9622	11358	13660
	25		8818	10400	12560
	30		8030	9467	11494
	35		7263	8559	10458
	40		6521	7677	9448
	45		X	6821	X
-35	20		7388	8685	10605
	25		6715	7892	9681
	30		6066	7121	8797
	35		5440	6374	7947
	40		4838	5656	2126
	45		X	4967	6328

Suction gas temperature 20°C, Liquid sub cooling 0K, Ta: Ambient temperature, Tev: Temperature evaporation  
For other compressor brands, conditions or refrigerants please consult the selection software or contact your local Daikin sales office

X: Data not available yet, Please contact your Local Daikin office

# Zanotti Condensing units with CO<sub>2</sub> refrigerant



Coming  
soon



# Fresh ideas for reliable performance

## Choose the better solution – with Tewis Full CO<sub>2</sub> refrigeration systems

Why do so many widely-known retail chains count on Tewis? Because Tewis offers a well-thought-out, complete range of efficient refrigeration systems. Especially when working with R-744 under high pressure, best quality solutions count double. Avoid problems – with Tewis features like full stainless steel piping or surprisingly intuitive control systems.





# Daikin Services

Saving energy doesn't stop with the purchase or installation of energy-efficient equipment; it has to be kept running under optimum conditions.

Good maintenance and servicing are key elements in ensuring the maximum performance.

**Are you sure the filters are clean and none of the components are defective?  
Are all of your settings correct?**

Any of these things may lead to a reduced level of comfort. And while you may not notice the difference right away, you will certainly notice it at the end of the year – when you pay your energy bill.

Our Daikin design team is constantly striving to improve the energy efficiency of our systems.

We at Daikin Service are here to support you in keeping your units up and running efficiently by means of optimised commissioning and start-up, regular and preventative maintenance, remote monitoring, improving the performance of units, and providing cost effective upgrades to benefit from the efficiency gains from our latest state of the art technology.

## Optimisation and upgrades



European Remote Monitoring Center



Upgrading / optimisation

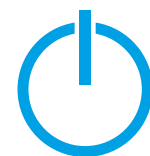
## Keep the installation in top condition



Care Packages

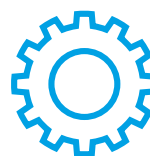


Installation support



Commissioning

## Parts and repairs



Spare parts



Repair service



## Commissioning

To guarantee your Daikin unit efficiency and long term performance, Daikin offers the **professional start-up of your Daikin system** by highly qualified, OEM educated engineers as part of the commissioning services.

Commissioning through an authorized Partner or by Daikin itself assures you that your unit is working as it should and is delivering all the benefits of a unique climate.

Every commissioning is documented as per Daikin standard and a detailed commissioning report is provided, detailing all activities done and recording the functioning of the units.



The prices listed are based on completion of the Pre-Commissioning checklist which covers a range of core activities including the general conditions at the site, provision of power and the required electrical distribution as well as installation related topics. This ensures that the service can be provided efficiently, on time and giving the best results. For the latest edition of the Pre-Commissioning checklist please visit: [www.daikin-ce.com](http://www.daikin-ce.com)

Description	Material Number	Price €
Commissioning CCU	CE.S_COM_REF_CCU	on request
Commissioning ZEAS	CE.S_COM_REF_ZEAS	on request
Commissioning MULTI-ZEAS	CE.S_COM_REF_MZEAS	on request
Commissioning CVP incl. Touch Manager Configuration	CE.S_COM_REF_CVPIM	on request
Commissioning CVP excl. Touch Manager Configuration	CE.S_COM_REF_CVP	on request
Commissioning Zanotti racks & packs	CE.S_COM_REF_SUP	on request
Commissioning Zanotti Condensing, Mono and Bi-Block Units	CE.S_COM_REF_SMALL	on request
<b>Additional Services &amp; Materials</b>		
On Request		on request
<b>Labourrates</b>		
Labour hour service engineer	CE.S_LA_HOUR	on request
Labour hour service engineer +50%	CE.S_LA_HOUR50	on request
Labour hour service engineer +100%	CE.S_LA_HOUR100	on request
Labour hour service foreman	CE.S_LA_FOR	on request
Labour hour project design	CE.S_LA_PRO	on request
<b>Travel Costs (not including parking, highway tolls etc )</b>		
Cost allowance per km	CE.S_TR_KM_AL	on request
Flat travel fee per case	CE.S_TR_CASE	on request
Special travel cost (plane, ferry...)	CE.S_TR_SPEC	on request
Travel zone 1	CE.S_TR_Z1	on request
Travel zone 2	CE.S_TR_Z2	on request
Travel zone 3	CE.S_TR_Z3	on request
Travel zone 4	CE.S_TR_Z4	on request
Hourly rate for car travel	CE.S_TR_HOUR	on request
<b>Cancellation</b>		
Failed travel (customer fault)	CE.S_COM_FAILTRAV	on request
<b>Training</b>		
Full day Training per person per day (minimum 5 participants)	CE.S_LA_TRA	on request

### NOTE:

The listed prices are subject to change and might change without prior notification.

Note that the prices are to be understood as NET prices without VAT and travel.

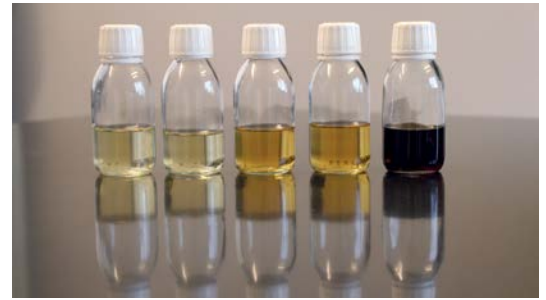
The listed prices are based on order confirmation minimum 10 day before commencement of work.

## Maintenance

Maintenance is the key element to ensure the quality, efficiency and flawless operation of any asset. Our Care agreements are based on years of experience to ensure you reap the full benefits of having Daikin Certified engineers maintain your equipment. Preventive maintenance and regular service is a key component in securing your investment. Dust, temperature, humidity and load degrade the reliability and performance of a refrigeration system over time.

Regular maintenance of a unit or system ensures that electricity costs and performance are not jeopardized, and that the safety features and the entire system are in line with the latest standards and regulations.

**Regular care** safeguards your investment for the full lifetime of the Daikin System. Downtime and failures are avoided, while keeping operating costs low, as they should be throughout the entire system lifecycle.



**Preventive care plans** give you cost transparency avoiding unexpected repair costs or degradation of comfort, quality or production loss.

Daikin Cares contains 3 different levels of maintenance agreements catering to your every need. In addition to these 3 Care packages Daikin offers a comprehensive set of options you can choose from.

### 1. Care:

**Care is the minimal requirement to fulfil current legislation requirements, and makes sure your refrigeration system is operating in a correct fashion and according to parameters.**

- The Care package includes the following services:
- Inspections based on predefined activities
  - Soft- and firmware upgrades as needed and if required
  - Validated Log book

### 2. Preventive Care:

**Preventive Care keeps the refrigeration system in optimal condition for a long time.**

In addition to the maintenance activities included in the Care package, Preventive Care includes:

- Service based on predefined activities
- Optimizations and detailed analysis of the retrieved data
- Lifecycle report with comprehensive, predictive status & measurement report
- On-site refrigeration system diagnostic and/or analysis during service intervention
- Recorded, retrievable service history of each refrigeration system
- Emergency support & callout
- Access to technical assistance and repair service

### 3. Extended Care:

**Extended Care provides maximum equipment availability at the minimum Total Cost of Ownership.**

In addition to the activities mentioned in the Preventive care package, Extended Care includes:

- Labor- & travel cost, spare parts for planned maintenances are included
- Labor- & travel cost, spare parts for repairs are included
- Extension of warranty

**Options:**

- Energy audit & reporting
- Remote monitoring
- Remote analysis
- Fleet management for larger systems or multi-site systems

Price in €

Description	Care	Preventive Care	Extended Care
Maintenance CCU	on request	on request	on request
Maintenance ZEAS 6-12 HP	on request	on request	on request
Maintenance ZEAS 15-20 HP	on request	on request	on request
Maintenance MULTI-ZEAS	on request	on request	on request
Maintenance CVP INC. ITM	on request	on request	on request
Maintenance CVP EXC. ITM	on request	on request	on request

### Options

Description	Per Hour on request	
Specialist support and consultancy	on request	
Emergency support	Monday-Friday 17-22h on request	Weekend, Holiday, Nights on request
Call out Time	Call out Time 8h on request	Call out Time 4h on request

**NOTE:**

The listed prices are subject to change and might change without prior notification. Note that the prices are to be understood as NET prices without VAT and travel. The listed prices are based on order confirmation minimum 10 days before commencement of work.

## Service

### E-Parts

Find the correct spare part for your Daikin unit, check availability (real-time) and order online.

All in just a few simple steps.

#### Your benefits:

- › fast handling
- › free shipment
- › 24/7 accessibility
- › flexible delivery
- › "real time" availability

#### Register now to use the E-Parts service

Create access for you and your colleagues.

- Simply go to [my.daikin.eu](http://my.daikin.eu)
- download the registration form
- fill it in
- and email it back to your local Daikin office

#### Always accessible for you

You can find the links to E-Parts and to the spareparts bank on our Business Portal:

<http://eparts.daikin-ce.com>

<https://my.daikin.eu>



### Service Academy

The Daikin Service Academy offers individual learning paths covering all service cases for Daikin products. Our goal is to help you delivering better Service on site and therefore grow your business.

#### Goals & Objectives

With the Daikin Service Academy we want to offer a uniform European learning program for service technicians (internal & external) to become the best of the best.

- › Ensure that our partners have skilled labour available
- › Enable and deliver high quality Service to our end users
- › Enhance performance and efficiency, using less time for service interventions
- › Improve quality and hence customer satisfaction on site
- › Foster career paths to keep service technicians in the HVAC-R industry
- › Offer trainings in local language wherever possible

#### Our training packages cover following areas:

- › Installation & Pre-Commissioning
- › Commissioning
- › Maintenance
- › Troubleshooting & Repair
- › Application & Design



#### Want to know more?

Please contact us for more information about the Daikin Academy Central Europe: [academy@daikin-ce.com](mailto:academy@daikin-ce.com)

# Všeobecne obchodné podmienky spoločnosti Daikin Airconditioning Central Europe - Slovakia s.r.o.

(aktualizácia január2019)

1. Tieto všeobecne obchodné podmienky (ďalej ako „Podmienky“) vymedzujú základné obchodné podmienky medzi predávajúcim spoločnosťou **DAIKIN AIRCONDITIONING CENTRAL EUROPE - SLOVAKIA s.r.o.**, sídlo Galvaniho ul 15/C, 821 04 Bratislava, IČO: 31 400 264, zápis v Obchodnom registri Okresného súdu Bratislava I, odd.: Sro, vl.č.: 9396/B (ďalej aj len „Predávajúci“) a jej obchodným partnerom – právnickou osobou alebo fyzickou osobou - podnikateľom, ktorí pri uzatváraní a plnení zmluvy vystupujú v rámci svojej obchodnej alebo inej podnikateľskej činnosti, výrobky nakupujúce za účelom ich využitia pri podnikaní alebo ďalšej obchodnej činnosti (B2B) (ďalej aj len „Zákazník“) a vzťahujú sa na všetky ponuky, dodávky tovaru a poskytnuté služby, resp. uzatvorené kúpne zmluvy (ďalej aj len „kúpna zmluva“). Tieto Podmienky sa vzťahujú na všetky zmluvné vzťahy medzi Predávajúcim a Zákazníkom, týkajúce sa predaja tovaru a poskytnutých zákazníckych služieb od okamihu uzavretia kúpnej zmluvy, ak v kúpnej zmluve nebolo výslovné dohodnuté inak. Uzavretím kúpnej zmluvy zmluvné strany akceptujú, že vzniknutý záväzkový vzťah sa bude riadiť režimom zákona č. 513/1991 Zb. Obchodný zákonník v platnom znení (ďalej len „Obchodný zákonník“) a týmito Podmienkami. Neupravené zmluvné vzťahy sa riadia príslušnými právnymi normami slovenského právneho poriadku. Podmienky sú platné pre zmluvné strany v znení platnom v okamihu uzavretia kúpnej zmluvy. Časť I sa vzťahuje na dodávky tovaru. Časť II sa vzťahuje na poskytnutie služieb zo strany nášho zákazníckeho servisu Zákazníkovi. Akékoľvek zmluvy odlišujúce sa od týchto Podmienok sú platné iba v prípade, ak budú z našej strany písomne potvrdené a riadne podpísané. Akékoľvek neformálne potvrdenia sú neplatné. Obchodné podmienky objednávateľa sa neaplikujú. Prevzatie tovaru sa považuje za súhlas s týmito Podmienkami. Naš zákaznícky servis pre spotrebiteľov (B2C) sa riadi osobitnými všeobecnými obchodnými podmienkami. Naše všeobecne obchodné podmienky sú zverejnené na www.daikin.sk.

2. Vymedzenie niektorých pojmov:

„tovar“ znamená tovar patriaci do sortimentu Predávajúceho, najmä klimatizácie, produkty určené na ohrev vody, čistenie vzduchu a vykurovanie a ich príslušenstvo vyrábané pod značkou DAIKIN,

„zmluvné strany“ znamená spolu Predávajúci a Zákazník,

„kúpna zmluva“ uzavretá písomným prijatím objednávky Predávajúceho, resp. dodaním tovaru alebo služby Zákazníkovi, pričom objednávka Zákazníka predstavuje návrh kúpnej zmluvy,

„objednávka“ znamená jednostranný právny úkon Zákazníka smerovaný Predávajúcemu, s cieľom nadobudnúť tovar alebo službu, obsahujúca obchodné meno, sídlo, IČO Zákazníka, špecifikáciu druhu a množstva tovaru alebo služby, spôsob odberu a miesto dodania tovaru, služby, kontaktné údaje (tel., email),

„obaly“ znamená veci používané pri manipulácii s tovarom s cieľom zamedzenia poškodenia tovaru pri dodávke tovaru, najmä papierové, kartónové a drevené obaly, fólie,

„my“ alebo „nás“ znamená Predávajúci, týkajúci sa Predávajúceho.

## I. VŠEOBECNÉ OBCHODNÉ PODMIENKY PRE DODÁVKY TOVARU

### 1. PONUKA

Naše zverejnené ponuky majú informatívny charakter. Zobrazenie vzorových produktov a akékoľvek informácie o rozmeroch, hmotnosti a technických údajoch sú nezáväzná a podliehajú zmenám vo výrobe a zmenám vzorových produktov. Takého zmeny nepredstavujú vadu tovaru.

### 2. USKUTOČNENIE OBJEDNÁVKY, ZMENA DODANIA

1. Objednávky Zákazníka musia byť uskutočnené v písomnej forme (prostredníctvom listu, faxu, e-mailu alebo prostredníctvom online objednávkového systému, ktorý je dostupný na www.daikin.sk. Potvrdenie doručenia objednávky zo strany Predávajúceho nepredstavuje prijatie objednávky. Je prijatie objednávky sa považuje až naše výslovné písomné prijatie objednávky alebo samotné dodanie objednávky. Akékoľvek ústne alebo telefonické dojednanie alebo dohoda musia byť potvrdené v písomnej forme.

2. Vyhradzujeme si právo na odstúpenie od zmluvy aj v prípade, ak sme už objednávku prijali, a to vtedy, ak medzičasom získané informácie o finančnej situácii Zákazníka nasvedčujú, že Zákazník nebude schopný za objednávku, alebo jej časť, riadne a včas zaplatiť.

3. Po prijatí objednávky si taktiež vyhradzujeme právo zmeniť a zlepšiť dodávku, napr. vo vzťahu k typu a dizajnu tovaru v rozsahu, v akom je možné od Zákazníka očakávať akceptáciu takýchto zmien a zlepšení s ohľadom na naše produktové portfólio tovaru (napr. dodanie rovnocenného alebo prepracovanejšieho zariadenia). Takéto zmeny a zlepšenia sa považujú za vopred odsúhlasené.

4. Na zrušenie alebo zmenu celej objednávky, alebo jej časti, je potrebný náš písomný súhlas a táto skutočnosť nás oprávňuje účtovať Zákazníkovi – okrem už poskytnutých služieb a vynaložených nákladov – poplatok (za zrušenie) vo výške 20 % z hodnoty objednávky (vrátane DPH), minimálne však 250 € . Na určité skupiny tovaru, ktoré sú vyrábané na základe osobitnej objednávky (napr. viacspiralové, skrutkové chladiče, AHU atď.) sa vzťahujú osobitné pravidlá na zrušenie objednávky, ktoré sú zverejnené na www.daikin.sk.

### 3. CENY A PLATBNÉ PODMIENKY

1. Ceny sú stanovené v našom platnom cenníku. Cenník je priebežne aktualizovaný. Týmto si vyhradzujeme právo zmeniť ceny aj v priebehu kalendárneho roka.

2. Ceny predstavujú netto ceny bez akýchkoľvek daní, ciel alebo poplatkov v uvedenej mene, vrátane balného, ak nie je uvedené inak. K cene je potrebné pripočítať danie, clá a poplatky vo výške stanovenej všeobecne záväzným právnym predpisom. Cena tovaru neobsahuje cenu dopravného.

3. Zákazník je povinný zaplatiť nám kúpnu cenu za objednaný tovar a služby dojednanú v kúpnej zmluve. Na základe kúpnej zmluvy bude Zákazníkovi vydaný daňový doklad, resp. faktúra, ktorá obsahuje údaje o nás a Zákazníkovi, právny titul na zaplatenie kúpnej ceny, kúpnu cenu bez DPH a kúpnu cenu bez DPH, dátum vystavenia faktúry, dátum splnatosť peňažného záväzku obsiahnutého vo faktúre, podpis oprávnenej osoby konať v našom mene. Nevystavenie daňového dokladu nemá vplyv na povinnosť Zákazníka zaplatiť nám kúpnu cenu tovaru riadne a včas. V prípade, ak k vystaveniu daňového dokladu zo našej strany nedošlo, je Zákazník povinný uhradiť nám kúpnu cenu najneskôr do 30 dní odo dňa dodania tovaru, a to aj vtedy, ak bol tovar objednaný na základe jednej objednávky dodaný Zákazníkovi po častiach.

4. Neakceptujeme žiadne výhrady k faktúram, ktoré obdržime viac ako dva týždne po doručení faktúry. Ak nebude uvedené inak, splnatosť faktúr je 30 dní od dátumu doručenia faktúry; dátum splnatosť predstavuje dátum, kedy má byť z našej strany obdržaná platba. V prípade omeškania úhrady budeme oprávnení účtovať úrok z omeškania vo výške 12% p.a. V prípade neplenia sa sme taktiež oprávnení požadovať úhradu všetkých nákladov súvisiacich s vymáhaním nášho nároku, vrátane, ale nielen, poplatkov za upomenky a vymáhanie samotného nároku.

5. V prípade, ak bola dohodnutá úhrada v splátkach, bude v prípade omeškania Zákazníka s úhradou čo i len jednej splátky splatná celá dlžná suma.

6. Dodanie tovaru sme oprávnení podmieniť požiadavkou platby vopred. Ak Zákazník nezaplatí riadne a včas, môžeme odmietnuť dodať tovar do doby, kým Zákazník neuhradí dlžnú sumu.

7. Zákazník nie je oprávnený zdržať a ani započítať platby vo vzťahu k záruke alebo iným nárokom.

### 4. DODACIA LEHOTA

1. Zverejnené dodacie lehoty sú informatívne. Uvedené lehoty sa snažíme dodržať a doručiť tovar v čo najkratšom čase. Zákazník nemá právo trvať na dodržaní určitej dodacej lehoty. Oneskorenie doručenia nezakladá Zákazníkovi právo na náhradu škody a ani právo na odstúpenie od zmluvy. To sa vzťahuje aj na prípady, ak termíny dodania nebudú splnené v dôsledku vyššej moci, štrajku, alebo iných udalostí mimo našej kontroly.

2. Za žiadnych okolností nie je Zákazník oprávnený požadovať od nás úhradu pokuty alebo inej sankcie v prípade nášho omeškania.

3. Čiastočné dodávky sú povolené.

4. V prípade, ak bude Zákazník v omeškaní s úhradou sa predchádzajúcu dodávku, sme oprávnení zdržať dodávky až do zaplatenia predchádzajúcej dodávky a nebudeme povinní objednávaťelvi v tejto súvislosti nahradiť žiadne vzniknuté škody.

### 5. PREVZATIE DODÁVKY, PRECHOD NEBEZPEČENSTVA, ONESKORENÉ PREVZATIE

1. Ak nebude dohodnuté inak, dodávky budú uskutočňované podľa pravidla CIP (Incoterms 2010) na uvedené miesto určenia.

2. Dodanie CIP zahŕňa iba minimálne poistenie prepravy. Dodatočné poistenie prepravy bude zabezpečené iba v prípadoch, ak o to bude výslovné požiadané zo strany Zákazníka a bude predmetom samostatnej zmluvy, a to na náklady Zákazníka.

3. Zákazník je povinný okamžite skontrolovať dodávku preberanú ním, alebo priamo jeho zákazníkmi za účelom zistenia škôd vzniknutých pri preprave a je povinný zaevidovať akékoľvek poškodenia balenia alebo tovaru v dodacom liste a odmietnuť doručovateľovej prevzatie.

V prípade, ak Zákazník zistí až neskôr, že tovar je poškodený, je povinný nám túto skutočnosť oznámiť bezodkladne, avšak nie neskôr ako do troch pracovných dní od prevzatia tovaru; v opačnom prípade môže zaniknúť možnosť uplatniť si nárok z poistenia.

4. V prípade, ak je Zákazník v omeškaní s prevzatím tovaru, sme oprávnení – bez ohľadu na naše ďalšie práva – účtovať mu daný tovar ako prevzatý, alebo iným spôsobom s ním naložiť bez stanovienia časového limitu. Ak s tovarom naložíme iným spôsobom, čas na doručenie začne plynúť v deň, kedy nám bude doručená písomná žiadosť Zákazníka o doručenie tovaru.

5. Sme oprávnení účtovať Zákazníkovi akékoľvek náklady, ktoré vznikli z dôvodu oneskoreného prevzatia, vrátane, ale nielen, akýchkoľvek nákladov na uskladnenie, čakacie doby, atď.

### 6. VÝHRADA VLASTNÍCTVA

1. Vlastníckym právom k dodanému tovaru disponujeme až do úplnej úhrady všetkých pohľadávok vzniknutých z nášho obchodného vzťahu so Zákazníkom, a to aj v prípade, ak bola kúpna cena za konkrétne stanovené pohľadávky zaplatená. Ak budú dané podmienené výrobky spracované, bezodplatne nadobudneme vlastnícke právo k novému produktu. Ak bude nami dodaný tovar zmiešaný, spracovaný alebo skombinovaný s inými produktmi, Zákazník na nás týmto prevádza, v miere zodpovedajúcej hodnote nášho tovaru, vlastnícke právo alebo spoluvlastnícky podiel na kombinovanom alebo novom výrobku, a to tak k rozpracovanému, ako aj k hotovému výrobku.

2. Zákazník je oprávnený opätovne predať nami dodaný tovar a výrobky vytvorené prostrednívom jeho spracovania, zmieszania alebo skombinovania iba v rámci bežnej obchodnej činnosti. Zákazník na nás týmto postupuje akékoľvek pohľadávky vyplývajúce z takého opätovného predaja, alebo z akékoľvek ineho právneho titulu voči tretím osobám, vrátane súvisiacich práv, za účelom zabezpečenia našich - budúcich – pohľadávok, ktoré môžu vzniknúť v rámci nášho obchodného vzťahu. Zákazník je povinný zaevidovať postúpenie týchto pohľadávok v jeho účtovníctve najneskôr v čase, keď dôjde k ďalšiemu predaju tovaru.

3. Pred zaplatením kúpnej ceny za tovar je Zákazník oprávnený opätovne predať daný tovar iba v prípade, ak bude zároveň informovať ďalšieho kupujúceho (konečného spotrebiteľa) o skutočnosti, že výnos z ďalšieho predaja bol predtým poskytnutý.

4. Zákazník je oprávnený prijímať úhrady postúpených pohľadávok za predpokladu, že si voči nám plní platobné povinnosti v zmysle ustanovení zmluvy. Zákazník nie je oprávnený iným spôsobom nakladať s podmieneným tovarom (napr. poskytnutie majetku ako zábezpeky, zriadenie záložného práva).

5. Zákazník je povinný nás bezodkladne informovať o zabavení alebo inom zásahu do podmieneného tovaru a / alebo postúpených pohľadávok a vysvetliť tretej strane, že disponujeme právnym titulom k predmetnému tovaru. Akékoľvek súvisiace náklady bude znášať Zákazník.

### 7. ZÁRUKA

Ak nebude dohodnuté inak a vylučujúci akékoľvek ďalšie nároky, poskytujeme záruku na akékoľvek vady tovaru v čase jeho dodania nasledovne:

1. Ak nie je nižšie uvedené inak, záručná doba je 36 mesiacov odo dňa dodania prebratia zariadenia. Dôkazné bremeno, že vada existovala už v čase dodania nesie Zákazník.

2. Zákazník si môže uplatniť reklamáciu iba v prípade, ak budú zariadenia nainštalované a zároveň uvedené do prevádzky Predávajúcim, alebo spoločnosťou vysloveno Predávajúcim v súlade s pokynmi na inštaláciu Predávajúceho a ak budú pravidelne udržiavané v zmysle servisných pokynov a/alebo návodu na obsluhu Predávajúceho.

3. Nebude poskytnutá žiadna záruka a/alebo prijatá zodpovednosť v prípade, ak Zákazník nenahlási viditeľné vady prostredníctvom písomného oznámenia v lehote 3 pracovných dní od dodania tovaru a akékoľvek ďalšie vady bezodkladne po ich počítateľnom zistení.

4. Predávajúci nezodpovedá za vady tovaru, o ktorých Zákazník vedel v čase objednania, resp. dodávky alebo s prihliadnutím na okolnosti, za ktorých sa kúpna zmluva uzavrela musel vedieť.

5. Ak nebude dohodnuté inak, tovary označené ako „Daikin Applied Systems“, „Zanotti“, „J&E Hall International for Daikin“, „Tewis“, „Hubbard“, „Dadanko“, ktoré sú zvyčajne vyrábané na základe konkrétnej objednávky, ako napríklad chladiče, tepelné čerpadlá, kondenzačné jednotky (vybavené spirálnymi, skrutkovým alebo odstredivým kompresorom), vzduchotechnické jednotky (AHU), chladiace kondenzátory a národné jednotky majú vo všeobecnosti záruku 12 mesiacov za predpokladu, že zariadenie bolo uvedené do prevádzky Predávajúcim, alebo osobou na to Predávajúcim autorizovanou. Na tovary označené ako „Luvex“ a „Güntner“, ako napr. ochladzovače vzduchu, výparníky, kondenzátory a príslušené varianty a príslušenstvo sa vo všeobecnosti vzťahuje 24 mesačná záručná doba.

6. V prípade výrobkov značky „Rotex“ platí vo všeobecnosti 24 mesačná záručná doba, okrem nasledovných výnimiek: 10 rokov na rúrky na podlahové kúrenie a systémové dosky, VA-potrubia a variosafe skladovacie nádrže na olej. 5 rokov na solárne panely, vario systémy a highcube nádrže na olej a variocestern nádrže na dažďovú vodu. 3 roky na zásobníky teplej vody HYS, SCC a SC.

7. V prípade reklamácie sa zaväzujeme, podľa nášho vlastného uváženia a vhodnosti, buď opraviť vadný tovar alebo diely alebo poskytnúť tovar alebo diely bez vad. Iné záručné nároky akékoľvek povahy sú vylúčené. Náklady na prácu, čas strávený cestovaním, potreby ako prostriedky na zmrazovanie, glykol a maziva alebo iné náklady (napr. na inštaláciu, dovybavenie) neznaša Predávajúci.

8. Predávajúci môže priebežne poskytnúť aktualizácie softvéru a/alebo hardwaru. Aktualizácie môžu zahŕňať opravy chýb, vylepšenia a aktualizácie. Aktualizácie sú poskytované Zákazníkovi v strojoju čitateľnej a inštalovateľnej podobe, vrátane pokynov na inštaláciu. Zákazník je povinný inštalovať aktualizácie na jeho vlastné náklady v primeranej lehote. Akákoľvek škoda, ktorá bude spôsobená nenainštalovaním aktualizácie bude vylučnou zodpovednosťou Zákazníka a Predávajúci nepreberá žiadnu zodpovednosť za nenainštalovanie aktualizácie na zariadenie.

9. Okrem prípadov uvedených v odsekoch 2 a 3, záruka a/alebo zodpovednosť sa nevzťahujú na vady, ktoré boli spôsobené nevhodným alebo nesprávnym používaním alebo zaochádzaním, nedodržaním prevádzkových podmienok alebo pokynov na údržbu, nadmerným užívaním alebo nevhodnými prevádzkovými materiálmi alebo náhradnými materiálmi alebo náhradnými dielmi, ktoré neboli dodané Predávajúcim. Záruka sa nevzťahuje na časti, ktorých opotrebovanosť je bežnou vlastnosťou, vrátane, ale nielen, filtre, trysky horákov, uhlíkové kefy motorov, spojky, elektródy, ochranné anódy, UV sondy, mreže, olej alebo iný spotrebný tovar.

10. Ak nám nebude poskytnutý požadovaný čas a možnosť prijať všetky potrebné záručné opatrenia, budeme zbavení zodpovednosti za reklamácie a náhradu škody. V prípade, ak bude Zákazník pokračovať v používaní vadného tovaru, poskytujeme záruku a/alebo nesieme zodpovednosť iba za pôvodnú vadu. Neuhrádzame žiadne náklady na opravy, ktoré budú vykonané bez nášho výslovného predchádzajúceho súhlasu. Za dôsledky takto vykonaných opráv nenesieme žiadnu zodpovednosť.

11. Záručná doba na náhradné diely a iné vylepšenia je 6 mesiacov od dodania (odovzdania na prepravu prepravovci).

12. Ak bude vada odstránená, na vymenení alebo opravený náhradný diel nezačína plynúť nová záručná doba.

13. Vyhradzujeme si právo odmietnuť odstrániť vady v prípade, ak bude Zákazník v omeškaní s plnením jeho platobných záväzkov.

14. V prípade, ak budú dodané a nainštalované výrobky iných výrobcov, záruka je obmedzená na reklamácie, ktoré si môžeme uplatniť voči dodávateľovi výrobku iného výrobcu. Zákazník nie je oprávnený uplatňovať si žiadne iné reklamácie a nie je oprávnený požadovať zályv z kúpnej ceny.

15. Tovar sa môže používať iba v súlade s jeho účelom využitím, súlade s návodom na používanie, resp. inými príslušnými predpismi a pokynmi.

Okamihom porušenia tejto povinnosti zanikajú všetky práva vyplývajúce zo záruky poskytnutej Zákazníkovi.

16. Predávajúci je oprávnený požadovať predloženie tovaru (resp. jeho časti), vrátane zlomeneých, chybných alebo predpokladaných poškodených častí alebo systémov, uplatneného v reklamácií na podrobné prešetrenie. V prípadoch, keď prešetrovanie odhalí, že nárok na záruku je neopodstatnený a záruka je preto zamietnutá (napr. časť bola poškodená vonkajšími faktormi, nedostatok údržby, časť funguje správne atď.), Predávajúci si môže uplatniť nárok na náhradu nákladov spojených s prešetrovaním a / alebo s prepravou.

### 8. ZODPOVEDNOSŤ

1. Zodpovednosť za škodu nesieme iba v prípadoch, ak sme preukázateľne konali úmyselne alebo s hrubou nebanalivosťou. Odmietame akúkoľvek zodpovednosť za ľahkú nebanalivosť. Zodpovednosť nenesieme predovšetkým za následné škody (napr. prestoje v dôsledku nesprávnych dodávok) a finančné strany, ušlý zisk, nedosiahnuté úspory, stratu záujmu a vzniknuté škody z nárokov tretích strán voči Zákazníkovi, ak vyššie uvedené nie je v priamej súvislosti s našim úmyslom alebo hrubou nebanalivosťou. V prípade vzniku škody v dôsledku chybného stavu tovaru, ktorý nám bol dodaný, nesieme zodpovednosť iba v rozsahu, v akom ju nesie jeho výrobca alebo dodávateľ voči nám. Naša zodpovednosť v žiadnom prípade nesmie prekročiť hodnotu faktúry za daný tovar.

## 9. UKONČENIE KÚPNEJ ZMLUVY

1. Kúpna zmluva sa končí dňom vysporiadania všetkých práv, povinností a nárokov zmluvných strán z nej vyplývajúcich. Pred touto dobou je možné kúpnu zmluvu ukončiť dohodou zmluvných strán alebo odstúpením v súlade s týmto článkom. Predávajúci je oprávnený od zmluvy odstúpiť:

a) ak kupujúci je v omeškaní zo zaplatením kúpnej ceny tovaru, a to aj napriek písomnej výzve predávajúceho na jej uhradenie v primeranej dodatočnej lehote,

b) po uzatvorení kúpnej zmluvy s kupujúcim vznikli preukázateľné skutočnosti na strane kupujúceho, ktoré odôvodňujú oprávnené pochybnosti o možnostiach skorého a úplného plnenia všetkých povinností a záväzkov zo strany kupujúceho, hlavne vo vzťahu ku zaplateniu kúpnej ceny, je predávajúci oprávnený od kúpnej zmluvy a dodania tovaru odstúpiť, resp. požadovať na kupujúcom okamžitú úhradu kúpnej ceny tovaru nezávislú na údajoch uvedených na faktúre,

c) nebola ani v primeranej dodatočnej lehote uhradená kúpna cena pred dodaním tovaru v súlade s týmito Podmienkami

d) v ostatných prípadoch, keď to umožňujú tieto Podmienky, kúpna zmluva alebo platné všeobecne záväzné právne predpisy.

2. Odstúpením kúpna zmluva zaniká od počiatku. Platnosť kúpnej zmluvy sa končí v momente doručenia odstúpenia Predávajúceho Zákazníkovi. Odstúpením od kúpnej zmluvy nezaniikajú práva a povinnosti, ktoré vznikli v dôsledku porušenia kúpnej zmluvy, a to najmä nárok na náhradu škody, zmluvné pokuty a iné sankcie, úšly zisk a pod.

3. Zákazník je v prípade odstúpenia povinný na vlastné náklady dopraviť tovar predávajúcemu. V prípade, že tak neurobí, je Predávajúci na náklady Zákazníka oprávnený tovar odobrať a dopraviť aj sám. Zákazník je povinný tovar odovzdať predávajúcemu v pôvodnom stave, t.j. v stave ku dňu prevzatia a odovzdania tovaru, s prihliadnutím na obvyklé opotrebovanie. Ak Zákazník poruší túto svoju povinnosť, Predávajúci je oprávnený tovar uviesť do pôvodného stavu na náklady Zákazníka, pričom nezodpovedá za žiadnu škodu, ktorá by týmto postupom Zákazníkovi mohla vzniknúť. Vrátene alebo odobratie tovaru podľa predchádzajúceho ustanovenia nemá vplyv na povinnosť Zákazníka zaplatiť kúpnu cenu tovaru v plnej hodnote.

## 10. VRÁTENIE TOVARU

1. Tovar je možné vrátiť alebo vymeniť iba na základe nášho výslovného súhlasu v písomnej forme. Vrátiť je možné tovar iba v minimálnej hodnote 100.00 € netto za jednu položku a maximálnej hodnote 50.000,00 € netto za položku a iba v prípade, že predmetný tovar nie je poškodený, nebol používaný, je v pôvodnom obale a je možné ho opätovne predať. Najmä nie je povolené vrátenie už nainštalovaných jednotiek (vrátane chladív) a vrátenie akýchkoľvek jednotiek vyhotovených na objednávku ako aj náhradných dielov.

2. Zákazník je povinný vyplniť formulár „Žiadosť o vrátenie tovaru“ (k dispozícii na stránke Predávajúceho <https://my.daikin.eu>) a zaslať nám ho na nami poskytnuté faxové číslo alebo na e-mailovú adresu v lehote 10 kalendárnych dní po dodaní. V opačnom prípade vrátenie predmetného tovaru nebudeme akceptovať.

3. Tovar musí byť vrátený na nami určené miesto s uhradením prepravného a na riziko Zákazníka.

4. V každom jednom prípade vrátenia tovaru bude Zákazníkovi uhradených maximálne 80% z nami účtovanej netto kúpnej ceny Zákazníkovi. Všetky štandardné vrátenia podliehajú poplatku vo výške 20% za opätovné naskladenie / administratívu.

5. Všetky vrátenia tovaru budú z našej strany skontrolované. V prípade, ak bude tovar vrátený nesprávnym spôsobom (t.j. nie v súlade s ods. 1 vyššie), sme oprávnení odmietnuť takéto vrátenie a vrátiť tovar Zákazníkovi na riziko a náklady Zákazníka. Prípadne môžeme účtovať vyšší poplatok opätovné naskladenie / administratívu ako uvedených 20%.

6. Dobropisy akékoľvek povahy budú výlučne započítané s budúciimi dodávkami.

## 11. INŠTALÁCIA

Je na zodpovednosť Zákazníka, aby nainštaloval a uviedol do prevádzky tovar a aby zabezpečil, aby jeho zamestnanci, zástupcovia a subdodávatelia, alebo akékoľvek osoby, ktoré Zákazník využije na inštaláciu a uvedenie tovaru do prevádzky, boli riadne vyškolení na túto činnosť a aby konali v súlade s ustanoveniami akýchkoľvek pokynov alebo príručiek dodávaných s tovarom.

## 12. ŽIVOTNÉ PROSTREDIE, LICENCIA

1. Zákazník nesie zodpovednosť za všetky náklady, poplatky a výdavky, ktoré mu vzniknú alebo ktoré budú súvisieť s vyradením, obnovou, recykloúcou a likvidáciou všetkých tovarov, alebo ich časti a nie je oprávnený domáhať na úhrady takto vzniknutých nákladov alebo poskytnutia príspevku z našej strany.

2. Zákazník nesie zodpovednosť za získanie a dodržanie všetkých príslušných licencií, oprávnení, povolení a súhlasov od príslušných regulačných orgánov a za dodržiavanie akýchkoľvek zákonných požiadaviek v súvislosti so skladovaním, inštaláciou, prevádzkou, používaním, údržbou, opravami, prepravou, vyradením, obnovou a prípadnou likvidáciou tovaru.

3. V prípade, ak Zákazník predá všetok tovar, alebo jeho časť inému subjektu, Zákazník je oprávnený uzatvoriť obdobné dojednanie s daným subjektom.

## 13. DOVERNOSŤ

1. Výšet informácie a / alebo poradenstvo, či už písomné alebo ústne, či už vo vzťahu k tovaru alebo k nášmu podnikaniu, ktoré sme poskytli Zákazníkovi, nesmú byť oznámené tretej strane bez nášho predchádzajúceho písomného súhlasu okrem prípadov, kedy predmetné informácie a / alebo poradenstvo budú verejne dostupné a ktoré sa stali dostupnými iným spôsobom, ako porušením tejto povinnosti, alebo ktorých uverejnenie podlieha zákonnej povinnosti.

2. Zákazník je povinný bezodkladne nám oznámiť akékoľvek zverejnenie vyžadované zákonom a z našej strany sme oprávnení hľadať vhodný nástroj, aby bolo takémuto zverejneniu zabránené. Zákazník sa týmto zaväzuje s nami plne spolupracovať (na náklady Zákazníka) v prípade, ak odmietneme takúto požiadavku.

## 14. PRÁVA DUŠEVNÉHO VLASTNÍCTVA

1. Zákazník nemá právo na nami vlastnené duševné vlastníctvo alebo duševné vlastníctvo, na ktoré nám bola poskytnutá licencia.

2. Zákazník nesmie pripustiť, aby bola odstránená alebo prekrytá akákoľvek ochranná známka, inštrukcia alebo upozornenie uvedené na tovare.

3. Všetky návrhy, vzorky, modely, experimentálne zariadenia, marketingové zariadenia, príslušenstvo a ďalšie predmety vzťahujúce sa k tovaru alebo jeho vývoju alebo výrobe sú našim majetkom, musí byť s nimi zaobchádzané ako s dôvernými a nesmú byť kopirované, reprodukované a ani sprístupňované žiadnym osobám bez nášho predchádzajúceho písomného súhlasu.

## 15. OSOBNÉ ÚDAJE

1. Osobné údaje Zákazníka, ktoré sme získali pri uskutočňovaní objednávky, budú elektronicky uložené a spracované za účelom vybavenia objednávky, dodania tovarov a služieb Zákazníkovi, riadenia vzťahov so Zákazníkom, pre naše vnútorné účtovné potreby a procesy a na právne a regulačné účely. Pre niektoré z týchto účelov budeme musieť zdieľať údaje Zákazníka s tretími stranami, avšak vždy zabezpečíme, aby boli údaje považované za dôverné a chránené danými tretími stranami.

2. Zákazník súhlasí s tým, že sa môžeme obrátiť na agentúry úverových referencií a/alebo spoločnosti na poistenie úverov, aby uskutočnili vyhľadávanie týkajúce sa úverov alebo kontrol voči Zákazníkovi, aby bolo možné posúdiť finančnú situáciu Zákazníka a zároveň súhlasí s tým, že sme oprávnení poskytnúť na tieto účely údaje o Zákazníkovi (meno, adresa, kontaktné údaje, meno vlastníka, údaje o objednávke, história objednávok, platobná disciplína, bilancia Zákazníka) najmä spoločnosti Atradius Credit Insurance N.V., Zweigniederlassung Österreich, CRIF GmbH, Österreich, Akzeptia Inkasso GmbH alebo inej.

3. Zákazník zároveň súhlasí s tým, že naša spoločnosť a ostatní členovia našej skupiny (tak, ako sú uvedení na [www.daikin.com](http://www.daikin.com)) sú oprávnení použiť osobné údaje Zákazníka (meno, adresa, kontaktné údaje v objednávke a história objednávok) aj pre naše vlastné marketingové účely a kontaktovať Zákazníka prostredníctvom telefónu, e-mailom alebo SMS alebo inou formou poslania správy o našich produktoch a službách, ktoré môžu byť pre Zákazníka zaujímavé. Zákazník je oprávnený tento súhlas kedykoľvek odvolať. Podrobné informácie nájdete v našich B2B & B2C pravidlách o ochrane osobných údajov, ktoré možno nájsť na [www.daikin.sk](http://www.daikin.sk).

## 16. SÚDNA PRÁVOMOC, ROZHODNÉ PRÁVO

1. Všetky spory vyplývajúce z tejto zmluvy alebo s ňou súvisiace budú predložené na rozhodnutie všeobecným súdom Slovenskej republiky.

2. Všetky zmluvy uzatvorené z našej strany a všetky spory vzniknuté v súvislosti s týmito zmluvami sa budú riadiť a vykladať v súlade so slovenským právom s výlučením jeho kolíznych noriem a Dohovorom OSN o kúpe tovaru.

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## 17. ODDELITELNOSŤ

V prípade, aj bude akékoľvek ustanovenie týchto všeobecných obchodných podmienok alebo akékoľvek zmluvy uzatvorenej medzi nami a Zákazníkom neplatné alebo neúčinné, táto skutočnosť nebude mať vplyv na ostatné ustanovenia týchto dokumentov. Neplatné ustanovenia budú nahradené ustanoveniami, ktoré budú v súlade so zákonom a ktoré budú najvernejšie vyjadrovať zámer zmluvných strán.

## II. VŠEOBECNÉ OBCHODNÉ PODMIENKY PRE POSKYTOVANIE SLUŽIEB

Nižšie uvedené podmienky sa vzťahujú na služby poskytované našim zákazníckym servisom, ako je inštalácia, uvedenie do prevádzky, inšpekcia a riešenie problémov, opravy a údržba, poskytovaným Zákazníkovi.

### 1. ROZSAH POSKYTOVANÝCH SLUŽIEB

1. Presný rozsah nami poskytovaných služieb je uvedený v našej písomnej ponuke alebo v našom písomnom prijatí objednávky. Akékoľvek ďalšie služby, ktoré nie sú výslovne uvedené v ponuke a/alebo v prijatí objednávky a ktoré budú poskytnuté z našej strany na žiadosť Zákazníka, budú účtované samostatne v zmysle nášho cenníka. Uvedené sa vzťahuje aj na prípady, ak z ohľadky na mieste samom vyplynie, že je potrebné poskytnutie ďalších služieb.

2. V prípade diaľkových monitorovacích jednotiek bude náš zákaznícky servis konať iba na základe pokynu od Zákazníka, alebo ak takáto požiadavka bola vopred písomne dohodnutá.

3. Služby poskytujeme výlučne na nami dodané a/alebo vyrobené zariadenia a diely jednotiek. Rozsah služieb preto nezahŕňa testovanie dielov od iných dodávateľov, skúšku tesnosti privodných potrubí vytvorených Zákazníkom, skúšku elektrického napájania a/alebo pripojok a hydraulické nastavovanie jednotky. V prípade jednotiek zložených z iných dielov naše služby nezahŕňajú inšpekciu celej jednotky. Predovšetkým nebudeme kontrolovať, či je zariadenie kompletné a či sú jeho bezpečnostné diely v súlade s príslušnými predpismi a ich najnovším vývojom.

4. Nie sme povinní kontrolovať, či sú poskytnuté informácie a dokumenty zo strany Zákazníka (napr. popis jednotiek, schémy) správne.

### 2. ODHADY NÁKLADOV

1. Odhady nákladov sú informatívne, a nie sú záväzné.

2. V prípade, ak bol z našej strany poskytnutý odhad nákladov alebo ponuka balíčka, vyžiadame si od Zákazníka predchádzajúci súhlas vo vzťahu k akýmkoľvek potrebným dodatočným prácam, ktoré je možné určiť pri realizácii, ktoré sú potrebné na sprevádzkovanie a ktoré prevyšujú 10% z celkovej ceny.

### 3. POVINNOSŤ SPOLUPRÁCE

1. Zákazník je povinný zabezpečiť, aby akákoľvek spolupráca z jeho strany, ktorá je nevyhnutná na poskytovanie služieb z našej strany bola poskytnutá včas a bezplatne.

2. Zákazník je predovšetkým povinný zabezpečiť prístup k jednotkám tak, ako to bude požadované. Zákazník je povinný splniť na jeho vlastné náklady všetky potrebné technické požiadavky (napr. zdroje energií) v výnimkov prípadov, kedy majú byť takéto požiadavky splnené z našej strany na základe osobitnej dohody. Zákazník je povinný zabezpečiť, aby bolo príslušné pracovisko dostatočne osvetlené. V prípade, ak to bude potrebné, Zákazník je povinný zabezpečiť rebriky a lešenia za účelom umožnenia bezpečného prístupu našich zamestnancov na pracovisko. Pracovisko musí byť ľahko dostupné vozidlom zákazníckeho servisu.

3. Zákazník je povinný zabezpečiť, aby boli diaľkové monitorovacie jednotky spojené s telekomunikačnou sieťou.

4. Zákazník je povinný poskytnúť všetky potrebné informácie a podklady s cieľom umožniť hladké poskytovanie dohodnutých služieb. Pred začiatkom poskytovania služieb je Zákazník predovšetkým povinný oznámiť akékoľvek zmeny uskutočnené nim, alebo tretími osobami v štandardných nastaveniach, kontrolnom systéme a iných parametroch ako aj poškodenia jednotky, o ktorých má Zákazník vedomosť.

5. Po uvedení jednotky do prevádzky je Zákazník povinný splniť požiadavky uvedené v súvisiacich podmienkach našej spoločnosti.

6. V prípade, ak Zákazník neposkytne potrebnú súčinnosť, sme oprávnení prerušiť práce. Okrem toho bude Zákazník povinný znášať všetky súvisiace náklady navyše, vrátane straty času našich zamestnancov, ktorých nebude možné narychlo využiť iným spôsobom ako aj akékoľvek náklady na dodatčný cestovný čas na základe platných cien uvedených v našom cenníku.

### 4. CENY A PLATOBNÉ PODMIENKY

1. Ceny za poskytnutie služieb vychádzajú z cenníka za služby platného v čase uskutočnenia objednávky, ak nie je uvedené inak v písomnej ponuke z našej strany.

2. Služby budú vo všeobecnosti účtované v závislosti na skutočne strávenom čase podľa dohodnutých hodinových sadziieb plus cestovné výdavky účtované na základe paušálnych poplatkov, alebo na základe reálne stráveného času (km a čas).

3. Naše štandardné servisné hodiny sú pondelok – piatok od 8:30 do 16:30 . Mimo servisných hodín bude účtovaný 50% príplatok k štandardnej cene. 100% príplatok k cene bude účtovaný za prácu poskytnutú v nedeľu a počas sviatkov a v čase od 20:00 do 7:00.

4. Náhradné diely budú účtované na základe cenníka platného v deň výmeny dielu jednotky. Vlastníckym právom k náhradným dielom disponujeme do úhrady faktúry v celej výške.

5. Faktúry budú vystavené po poskytnutí služieb alebo po vzájomnej písomnej dohode.

6. V prípade, ak Zákazník zruší objednávku, dohodnuté stanovisko/jednotka bude nedostupná, Zákazníkovi bude účtovaný poplatok vo výške 50% hodnoty objednávky plus cestovné výdavky, minimálne však vo výške 250,00 Eur.

7. Ak nebude určené inak, faktúry budú splatné bez zrážok ihneď po fakturácii.

8. V ostatných prípadoch sa bude primerane aplikovať článok 4 (Cena a platobné podmienky) našich všeobecných obchodných podmienok pre predaj.

### 5. ZÁRUKA

1. Zodpovedáme za starostlivé a profesionálne poskytovanie služieb. Všetky služby budú poskytované kvalifikovanými zamestnancami.

2. Zodpovednosť zo záruky preberáme iba v prípade, ak Zákazník uskutoční písomné oznámenie o viditeľných vadách v lehote 3 pracovných dní po vykonaní servisu a o akýchkoľvek iných vadách bezodkladne po ich počiatočnom zistení.

3. V ostatných prípadoch sa bude primerane aplikovať článok 7 (Záruka) našich všeobecných obchodných podmienok pre predaj.

### 6. RÔZNE

Ak nie je uvedené inak, ustanovenia našich všeobecných obchodných podmienok pre predaj, najmä týkajúce sa lehoty dodania, výhrady vlastníctva, zodpovednosti, životného prostredia a licencií, osobných údajov, súdnej právomoci a rozhodného práva sa budú primerane vzťahovať aj na poskytovanie služieb.

**Všeobecné obchodné podmienky Predávajúceho sú dostupné aj na internete na [www.daikin.sk](http://www.daikin.sk)**

### **DAIKIN AIRCONDITIONING CENTRAL EUROPE - SLOVAKIA s.r.o.,**

sídlo Galvaného ul 15/C, 821 04 Bratislava, IČO: 31 400 264,

zápis v Obchodnom registri Okresného súdu Bratislava I, oddiel: Sro, vl.č.: 9396/B

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# Daikin & Tewis CO<sub>2</sub> solutions



## FULL CO<sub>2</sub> Solution - For all refrigeration needs

With the acquisition of Tewis Smart Systems S.L. Daikin is extending its refrigeration portfolio with refrigerants R-410A, R-134a and others with future-proof CO<sub>2</sub> technologies.

Series GM and FULL CO<sub>2</sub> are specially designed for food retail application.

### CO<sub>2</sub> refrigerant - ODP 0, GWP 1, non-flammable, non-toxic

- Wide capacity range
- Air conditioning and heat recovery function
- Auxiliary unit
- Parallel compressor
- Transcritical and subcritical operation possible
- Control with MODBUS communication & touch monitor



**Tewis**  
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### DAIKIN AIRCONDITIONING CENTRAL EUROPE – SLOVAKIA s.r.o.

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**Price**

**2019-2020 Refrigeration**