DAIKIN

Refrigeration

Product catalogue 2018

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 Mini-zeas, Zeas and Conveni-Pack units are rigorously tested in order to provide you reliable operation.
With the acquisition of Zanotti group, we expand our refrigeration business providing a larger and more diverse product line for all aspects in the cold chain.

Refrigeration

Inverter technology


Scroll compressor


Screw compressor


Reciprocating compressor


Swing compressor

For latest data, please consult my.daikin.eu

Why choose Daikin?

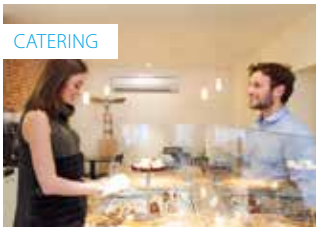
We know refrigeration inside out

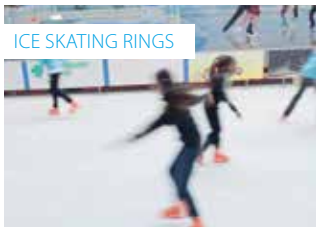
- We have over 100 years of experience in the Refrigeration business.
- We can meet all refrigeration needs from farm to fork, thanks to our wide range of refrigeration products.
- Innovative and Reliable own technology and expertise on Refrigerants, controls and compressors!
- Your advisor for solutions to meet your needs in line with legislation (F-gas regulation, ecodesign,...) and with focus on reliability, safety, Total Equivalent Warming impact (see page 7) and running cost.

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:





...

We can fulfill any refrigeration need

Daikin Refrigeration – United in cold

HUBBARD
a member of DAIKIN group

Hubbard Products Ltd., is one of the UK's leading designers, manufacturers and suppliers of commercial cooling equipment and has earned an enviable Global reputation for innovation and design-led excellence.

DAIKIN

Daikin Europe N.V. is a major European producer of air conditioners, heating systems and refrigeration equipment, with approximately 5,500 employees throughout Europe and major manufacturing facilities based in Belgium, the Czech Republic, Germany, Italy, Turkey and the UK. Globally, Daikin is renowned for its pioneering approach to product development and the unrivalled quality and versatility of its integrated solutions.

Tewis
a member of DAIKIN group

Tewis is a leading company in the design and engineering of refrigeration systems. Along with their expertise in customising controls (including monitoring), Tewis offers total comprehensive solutions for Refrigeration and Climate applications. Over the last few years, Tewis has focused on developing a range of CO_2 based refrigeration systems and has established a long-lasting relationship with key Spanish and Portuguese food retailers. Its mission and philosophy to date has been to achieve high reliability and realise remarkable energy savings for their customer base.

DAIKIN
Daikin Chemicals

Daikin Chemicals is one of the world's foremost manufacturer of fluorochemical products and is a leading expert in that field. We strive to find new possibilities for living and industry by making the most of fluorine characteristics using our own exclusively developed technologies.

ZANOTTI

Zanotti is a refrigeration specialist founded in 1962. With over 50 years of experience in food storing services covering the needs of commercial and industrial refrigeration, but also the needs of the transportation of fresh and frozen products. Zanotti changed the refrigeration world from the early days with the introduction of the Uniblock, an all in one plug and play refrigeration unit for cold rooms. Today they employ more than 600 people, with three production facilities and an annual turnover of approx 130 million Euro.

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)

TEWI =

DIRECT warming impact	+	**INDIRECT warming impact**
Refrigerant used		CO_2 emissions of electricity production
TACKLED BY		
F-gas legislation		**Eco design directive**
POTENTIAL IMPACT (when leakage occurs)		**GUARANTEED IMPACT linked to energy consumption**

Reduction of CO_2 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_2 emissions caused by electricity production (Indirect warming impact). Country per country situation is different, however on average in Europe CO_2 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

Testing in Daikin Europe factory

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.

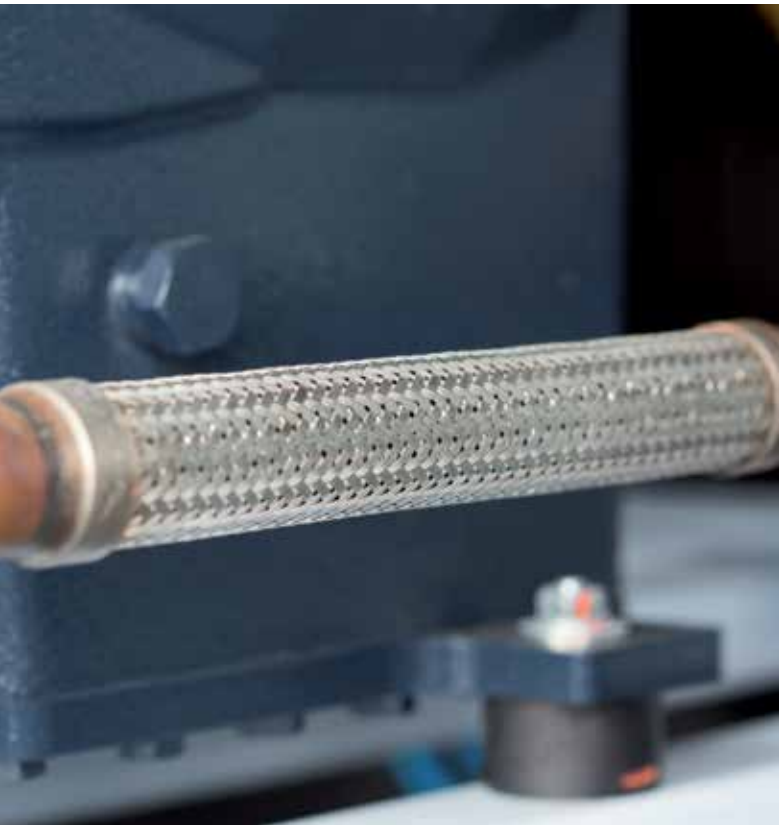
Daikin Europe N.V. continually adapts its environmental policy to the changing global, European and local legislative frameworks. It stimulates and promotes the strict application of all relevant legislation and formulates recommendations to facilitate implementation.

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 unit leaving production on our factory line in Oostende - Belgium, 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!

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

YouTube



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

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.eu
or on the Business Portal 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

Daikin refrigeration product portfolio and Ecodesign Directive

Model	MONOBLOCKS BIBLOCKS WINEBLOCKS	JEHCCU JEHSCU	MINI ZEAS	ZEAS	MULTI ZEAS	CONVENI-PACK	BOOSTER	OTHER RANGES		
								Refrigerating capacity <20kw	Refrigerating capacity <50kw	Refrigerating Capacity >50kW
Medium temperature (Te = -10°C)	out of scope	in scope	in scope	in scope	out of scope(1)	out of scope(2)	-	in scope	in scope	out of scope
Low temperature (Te = -35°C)	out of scope	in scope	in scope	in scope	out of scope(1)	-	out of scope(3)	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 operates 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

Acting ahead of legislation

What does the F-Gas regulation mean?

GWP < 2500

Common commercial HFC refrigerants:
R-134a, R-407A, R-407C, R-407F, R-410A

GWP 2500

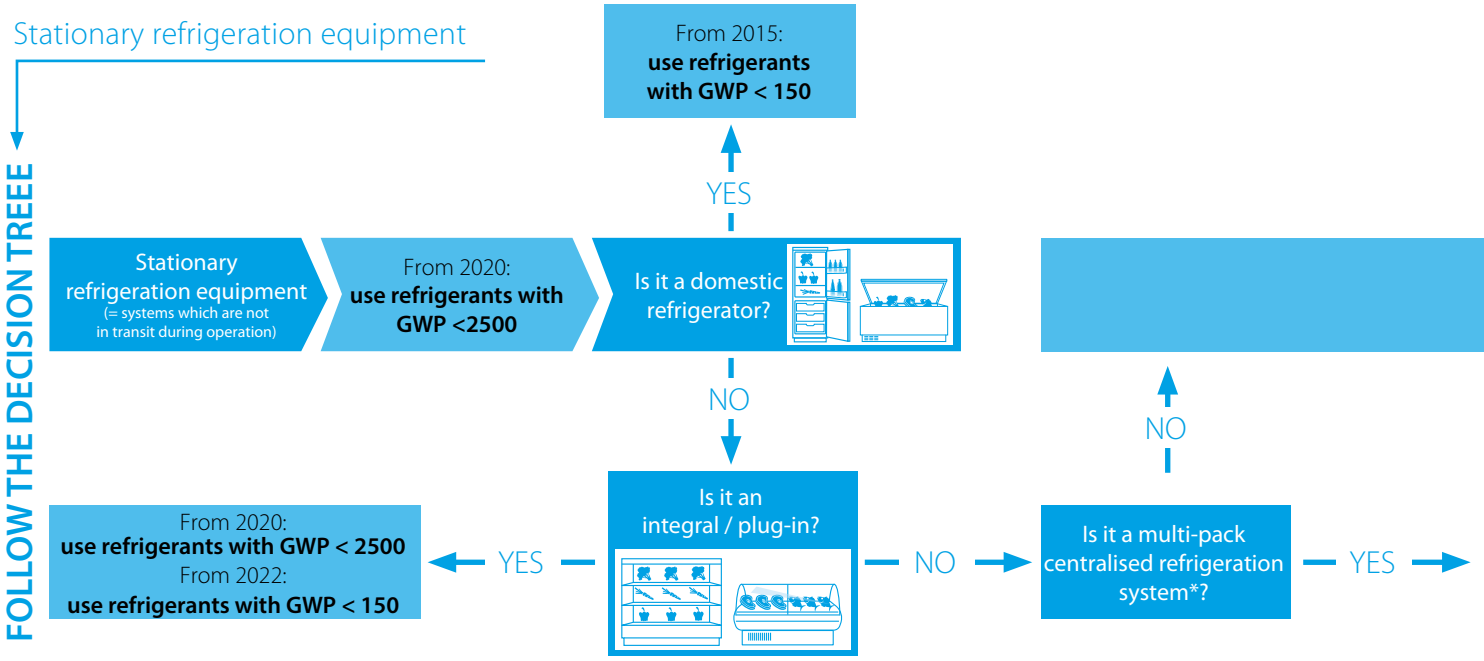
GWP > 2500

Common commercial HFC refrigerants:
R-404A, R-507

Ban from the year 2020 onwards
in new stationary refrigeration equipment

Ban from the year 2030 onwards
in servicing existing stationary refrigeration equipment

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 refigerants 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

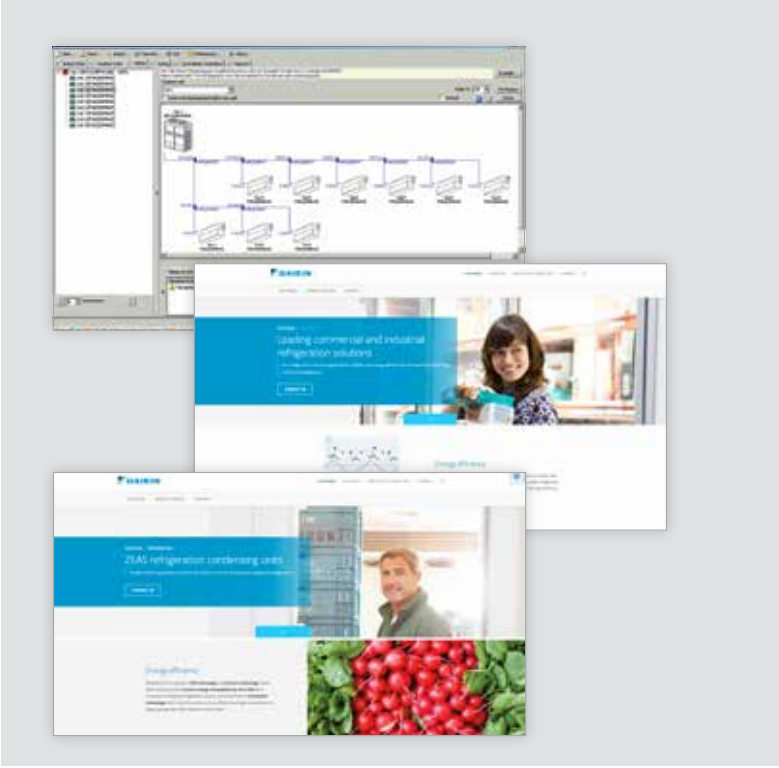
2 choices

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

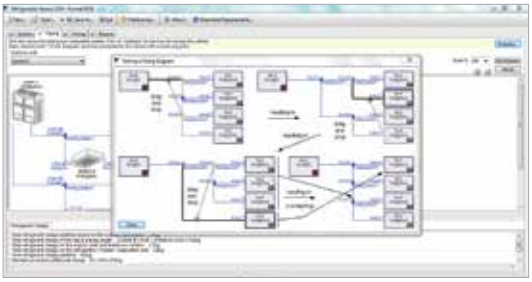
- **GWP < 1500 in the primary refrigerant circuit of cascade system**
- **GWP < 150 in the other refrigerant circuits of the cascade system**

Use a multiple compressor refrigerant system
• **GWP < 150**

Tools and platforms



Sales supporting apps



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

Refrigeration Xpress selection software

User-friendly selection software for Conveni-Pack, JEHCCU / JEHSCU, monoblocks, bi-blocks and ZEAS condensing units. Its detailed report includes a list of materials, piping and wiring diagrams, and device options. Design software available for Conveni-Pack and Zeas condensing units.

Psychrometric Diagram Viewer

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"

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 Technoblock selection software.

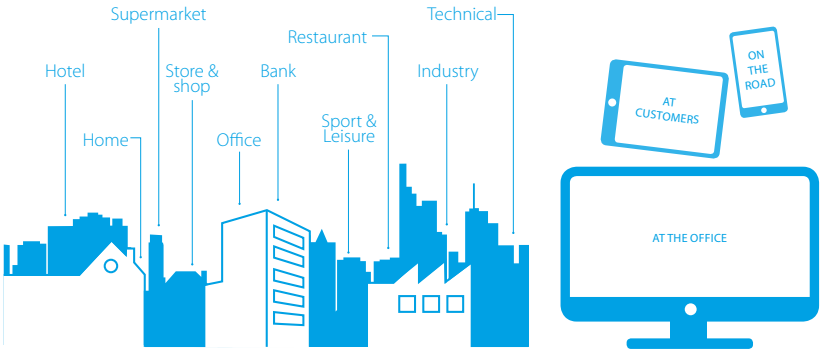
Please contact your local Daikin refrigeration sales team for more information.

Where to download the software?
Where to find catalogues and data books?

› Experience our business platform that thinks with you at 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

Register and login on
my.daikin.eu
and get what you want!

Find our solution for different applications:



Quick selection guides for Uniblocks and Wineblocks

E-Care APP

Easy access to all the information about your unit, in mobile format. Daikin e-Care app incl. functionalities such as:
› Product registration
› e-Configurator
› e-Doctor

E. LECLERC, HYPERMARKET
ZEAS

BEER COOLING FACILITY,
CHILLED WITH ZEAS

EDEKA, SUPERMARKET
CONVENI-PACK (2) AND ZEAS (1)

COOMBE FISHERIES
HIGH-PERFORMANCE REFRIGERATION EQUIPMENT

ZIGGO DOME, EVENT HALL
ZEAS FOR COOLING (6) AND FREEZING (2)

SERVICE STATION
ZEAS

Products overview

			Technology compressor		Page	Hermetic			Semi-hermetic		Capacity control			
			Application	Refrigerant		Reciprocating compressor	Rotary	Scroll	Reciprocating compressor	Screw	Varispeed	External frequency drive	DC control	Digital scroll
Plug & Play solution for cold room & wine rooms	Uni-block 		MT	R134a	22-25	•		•						
				R407C	22-25	•								
				R407H	22-25	•								
				R290	22-25	•								
			LT	R452A	22-25	•								
				R407F	22-25			•						
				R290	22-25	•								
	Biblock 		MT	R134a	26-28	•								
			LT	R452A	26-28	•								
				R407F	26-28	•								
	Wineblock 		HT Cooling	R134a	29-30	•								
Condensing units	Single CU (ON/OFF or INVERTER) 		MT	R449A*	34-40	•		•	•		•	•		•
				R134a	34-40	•		•	•		•	•		•
				R410A	44			•					•	
				FGAS FREE CO2	54		•		•			•	•	
			LT	R449A*	34-40	•		•	•		•	•		
				R407F	34-40	•		•	•		•	•		
				R410A	44			•					•	
				FGAS FREE CO2	54		•		•			•	•	
	Twin CU 		MT	R449A*	41	•		•	•		•	•		•
				R134a	41	•		•	•		•	•		•
				R410A	44			•					•	
				FGAS FREE CO2	54				•			•		
			LT	R449*	41	•		•	•		•	•		
				R407F	41	•		•	•		•	•		
				R410A	44			•					•	
	Multi CU 		MT	R449A	42-43			•			•	•		•
				R410A	44			•					•	
				FGAS FREE CO2	54				•			•		
			LT	R449A	42-43			•			•	•		
				R410A	44			•					•	
	Booster CU (MT + LT) 		MT	FGAS FREE CO2	55-57				•			•		
			LT	FGAS FREE CO2	55-57				•			•		
Compressor rack and packs	Racks 		MT	R449A	59-61	•		•	•	•	•	•		•
				R134a	59-61	•		•	•	•	•	•		•
			LT	R449A	59-61	•		•	•	•	•	•		
				R407F	59-61			•	•	•	•	•		
			MT	FGAS FREE CO2	64-65				•			•		
			MT	FGAS FREE CO2	66				•			•		
			LT	FGAS FREE CO2	66				•			•		
Integrated solutions (Refrigeration and climatisation)	Conveni-pack 		MT	R410A	72			•					•	
			LT	R410A	72			•					•	
			AC	R410A	72			•					•	
			HR + HP	R410A	72			•					•	
	MIX CU 		AC	FGAS FREE CO2	78-79				•			•		
			MT	FGAS FREE CO2	78-79				•			•		
	MIX RACK 		AC	FGAS FREE CO2	78-79				•			•		
			MT	FGAS FREE CO2	78-79				•			•		


Freezing (Low temperature)
(-20° C / +35°C)
Chilling (Medium temperature)
(0° C / +35°C)
Cooling (High Temperature)
(+20° C/+10°C)
Heating
Cooling capacity (kW)
10
100
200
500
0.8-11.8
1.1-1.9
0.8-3.7
1.2-5.7
0.6-54.0
2.6-8.1
0.8-2.6
0.8-13.8
0.6-4.8
4.4-11.8
0.7-2.3
1.0-77.2
1.0-69.6
3.0-15.2
3.2-40.0
0.4-28.1
0.5-23.7
2.8-6.5
1.5-8.0
8.1-27.9
6.3-25.8
9.9-26.5
15.4-47.5
5.7-19.0
5.1-17.7
4.2-10.7
45.6-183.4
17.0-75.8
36.0-119.7
13.1-70.7
7.0-29.6
18.0-90.0
8.0-30.0
1.6-295.0
0.7-233.0
0.4-89.7
0.5-88.8
30.0-512.0
30.0-400.0
15.0-240.0
13.7-22.8
3.5-7.0
14.0-26.8
16.8-42.0
18.0-150.0
15.0-220.0
18.0-150.0
15.0-220.0

Plug and Play solutions

for cold rooms and wine rooms

Model	Product name	Capacity (kW)
Commercial units Uni-Block	LMCLN-AV3/AW1 LMCMD-AV3/AW1	
	LMSLN-AV3/AW1 LMSMD-AV3/AW1	
Uni-block system for wall mounted installation in medium sized cold rooms	LMDMD-AW1	
Commercial units Bi-Block	SB.LBCLN-AV3/AW1 SB.LBCMD-AV3/AW1	
	SB.LBTLN-AV3/AW1 SB.LBTMD-AV3/AW1	
Wineblocks Monoblock	LMSWHD-AV3018 LMSWHD-AV3118	
Wineblocks Bi-Block	SB.LBCWHD-AV30DR SB.LBCWHD-AV31DR	
	SB.LBWWHD-AV3096 SB.LBWWHD-AV3196	

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

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

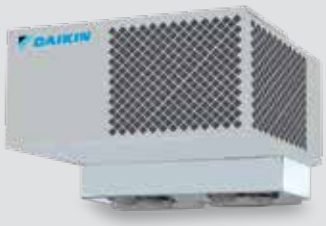
Cooling (High Temperature) (+20°C/+10°C)

LMCLN-AV3/AW1 and LMCMD-AV3/AW1

Uni-block system for low and medium temperature refrigeration

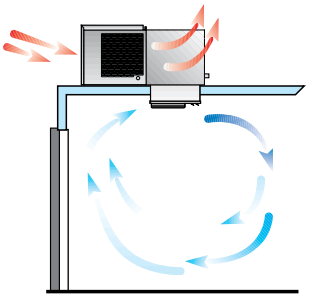
For roof mounted installation in small and medium sized cold rooms

- Rapid mounting on the roof of the cold room
- Ceiling assembly leaves the space inside the cold room completely free
- The white colour of the evaporator blends unobtrusively with the cold room walls
- Extremely fast to assemble, reducing installation time and cost
- Best surface-to-capacity ratio
- Remote electronic command station with easy-to-use user interface programmable according to various system requirements



LMCLN-AV3/AW1 and LMCMD-AV3/AW1

Installation type



Low Temperature Refrigeration				LMCLN	100AV3	170AV3	200AW1	300AW1
Refrigerating capacity	Low temperature	R-452A	Nom	kW	0.565	0.931	1.527	2.212
Recomm. Cold Room Volume	Low temperature	V 100		m^3	2.1	5	11.4	20.2
Power input	Max.			W	910	1,970	2,540	3,210
Dimensions	Unit	HeightxWidthxDepth		mm	690x830x540	660x790x730	690x880x930	800x1,000x930
Weight	Unit			kg	48.0	68.0	87.0	102.0
	Packed unit			kg	61.0	82.0	222.0	124.0
Compressor	Type				Hermetic Reciprocating			
	Piston displacement			m^3/h	3.03	5.99	8.4	12.9
Defrost					Hot gas			
Evaporator	Air flow			m^3/h	500	550	1,100	2,300
	Air throw			m	3	4		9.5
Refrigerant	Type/GWP				R-452A/2,141			
	Charge			kg/TCO2Eq	0.500/1.071	0.420/0.899	0.720/1.542	0.960/2.055
Power supply	Phase/Frequency/Voltage			Hz/V	1~/50/230		3~/50/400	

Medium Temperature Refrigeration				LMCMD	050AV3	060AV3	075AV3	100AV3	122AV3
Refrigerating capacity	Medium temperature	R-134a	Nom	kW	0.836	1.091	1.302	1.761	1.979
Recomm. Cold Room Volume	Medium temperature	V 100		m^3	5.7	8.3	10.8	16.4	18.3
Power input	Max.			W	1,230	1,480	1,740	1,900	2,350
Dimensions	Unit	HeightxWidthxDepth		mm	690x830x540	660x790x730		690x880x930	
Weight	Unit			kg	42.0	59.0		74.0	75.0
	Packed unit			kg	55.0	73.0		95.0	97.0
Compressor	Type				Hermetic Reciprocating				
	Piston displacement			m^3/h	3.8	4.52	5.69	6	8.36
Defrost					Hot gas				
Evaporator	Air flow			m^3/h	500	550		1,100	
	Air throw			m	3	4			
Refrigerant	Type/GWP				R-134a/1,430				
	Charge			kg/TCO2Eq	0.550/0.787	0.540/0.772	0.600/0.858	0.730/1.044	0.700/1.001
Power supply	Phase/Frequency/Voltage			Hz/V	1~/50/230				

Medium Temperature Refrigeration				LMCMD	120AW1	150AW1	200AW1	300AW1
Refrigerating capacity	Medium temperature	R-134a	Nom	kW	1.979	3.209	3.482	4.752
Recomm. Cold Room Volume	Medium temperature	V 100		m^3	18.3	36.9	41.1	61.1
Power input	Max.			W	2,430	2,930	3,220	3,670
Dimensions	Unit	HeightxWidthxDepth		mm	690x880x930	800x1,000x930		920x1,120x1,200
Weight	Unit			kg	75.0	92.0	93.0	151.0
	Packed unit			kg	87.0	114.0	115.0	184.0
Compressor	Type				Hermetic Reciprocating			
	Piston displacement			m^3/h	8.36	9.37	10.52	11.81
Defrost					Hot gas			
Evaporator	Air flow			m^3/h	1,100	2,300		3,450
	Air throw			m	4	9.5		
Refrigerant	Type/GWP				R-134a/1,430			
	Charge			kg/TCO2Eq	0.700/1.001	1,150.000/1.645	1.100/1.573	2.000/2.860
Power supply	Phase/Frequency/Voltage			Hz/V	3~/50/400			

LMSLN-AV3/AW1 and LMSMD-AV3/AW1

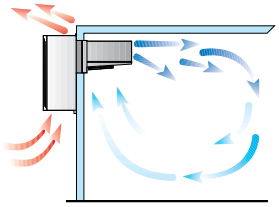
Uni-block system for low and medium temperature refrigeration

For wall mounted installation in small and medium sized cold rooms

- Rapid mounting on the wall of the cold room by straddle-mounting, which is ideal for new installations or through-wall mounting, which is ideal for refurbishment projects
- Metallic grey coloured finish of the outdoor unit
- The white colour of the evaporator blends unobtrusively with the cold room walls
- Compressor compartment insulated with suitable soundproofing material to reduce sound levels
- Microchannel condensers available in order to reduce the refrigerant charge as much as possible and ensuring higher energy efficiency
- The units are provided with a new generation control panel with an easy-to-use interface

LMSLN-AV3/AW1 and LMSMD-AV3/AW1

Installation type



Low Temperature Refrigeration				LMSLN	100AV3	120AV3	170AV3	172AV3	200AW1	300AW1
Refrigerating capacity	Low temperature	R-452A	Nom	kW	0.579	0.807	0.922	1.193	1.526	2.090
Recomm. Cold Room Volume	Low temperature	V 100		m^3	2.2	3.9	4.9	7.6	11.4	18.1
Power input	Max.			W	910.00	1,300.00	2,000.00	2,080.00	2.54	3.20
Dimensions	Unit	HeightxWidthxDepth		mm	930x925x530			930x925x865		1,030x1,150x840
Weight	Unit			kg	60.0	61.0		78.0	80	114
	Packed unit			kg	75.0	76.0		95.0	97	133
Compressor	Type				Hermetic Reciprocating					
	Piston displacement			m^3/h	3.03	4.54	5.99		8.3	12.9
Defrost					Hot gas					
Evaporator	Air flow			m^3/h	530			1,050		1,370
	Air throw			m	5				5	8
Refrigerant	Type/GWP				R-452A/2,141					
	Charge			kg/TCO2Eq	0.600/1.285			0.890/1.905	0.900/1.93	1.750/3.75
Power supply	Phase/Frequency/Voltage			Hz/V	1~/50/230				3N~/50/400	

Medium Temperature Refrigeration				LMSMD	030AV3	050AV3	060AV3	075AV3	100AV3	102AV3	122AV3
Refrigerating capacity	Medium temperature	R-134a	Nom	kW	0.838	0.952	1.112	1.388	1.491	1.768	1.920
Recomm. Cold Room Volume	Medium temperature	V 100		m^3	5.7	6.8	8.6	11.8	13.0	16.5	18.5
Power input	Max.			W	970	1,220	1,430	1,690	1,780	1,890	2,330
Dimensions	Unit	HeightxWidthxDepth		mm	930x925x530					930x925x0.865	
Weight	Unit			kg	48	49		54	55	73	
	Packed unit			kg	63	64		69	70	90	
Compressor	Type				Hermetic Reciprocating						
	Piston displacement			m^3/h	2.53	3.8	4.52	5.69	6.00		8.36
Defrost					Hot gas						
Evaporator	Air flow			m^3/h	530					1,050	
	Air throw			m	5						
Refrigerant	Type/GWP				R-134a/1,430						
	Charge			kg/TCO2Eq	0.680/0.972			0.650/0.930		0.850/1.216	0.780/1.115
Power supply	Phase/Frequency/Voltage			Hz/V	1~/50/230						

Medium Temperature Refrigeration				LMSMD	120AW1	130AW1	150AW1	200AW1
Refrigerating capacity	Medium temperature	R-134a	Nom	kW	1.992	2.275	3.129	3.430
Recomm. Cold Room Volume	Medium temperature	V 100		m^3	18.5	22.7	35.7	40.3
Power input	Max.			W	2,420	2,790	3,070	3,380
Dimensions	Unit	HeightxWidthxDepth		mm	930x925x865		1,030x1,150x840	
Weight	Unit			kg	73	75	91	93
	Packed unit			kg	90	92	110	112
Compressor	Type				Hermetic Reciprocating			
	Piston displacement			m^3/h	8.36	9.37	10.52	11.81
Defrost					Hot gas			
Evaporator	Air flow			m^3/h	1,050		1,370	
	Air throw			m	5		8	
Refrigerant	Type/GWP				R-134a/1,430.0			
	Charge			kg/TCO2Eq	0.8/1.115		1.6/2.288	
Power supply	Phase/Frequency/Voltage			Hz/V	3~/50/400			

LMDMD-AW1

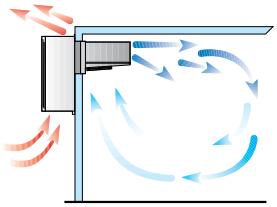
Uni-block system for low and medium temperature refrigeration

For wall mounted installation in medium sized cold rooms

- Rapid mounting on the wall of the cold room by through-wall mounting
- Extremely fast to assemble, reducing installation time and cost
- The white colour of the evaporator blends unobtrusively with the cold room walls
- Very compact and very efficient
- Remote electronic command station with easy-to-use user interface programmable according to various system requirements

LMDMD-AW1

Installation type



Low and medium temperature refrigeration				LMDMD-AW1	350	400	600	750
Refrigerating capacity	Medium temperature	R-134a	Nom	kW	4.981 (2)	6.988 (2)	8.290 (2)	10.664 (2)
Dimensions	Unit	Height x Width x Depth		mm	857 x 1,280 x 1,140	857 x 1,750 x 1,140		857 x 1,790 x 1,240
	Packed unit	Height x Width x Depth		mm	1,060 x 1,330 x 1,210	1,065 x 1,850 x 1,300		1,065 x 1,850 x 1,420
Weight	Unit			kg	162	221	222	244
	Packed unit			kg	202	276	277	361
Compressor	Type				Hermetic Reciprocating			
	Nominal power			kW	3.7	4.8	6.3	7.4
	Starting method				Direct			
Operation range	Cold room temperature	Min. ~Max.		°C	-5 ~10			
Refrigerant	Type				R-134a			
	GWP				1,430			
Evaporator	Air flow			m^3/h	3,900	5,600		8,000
	Air throw			m	10 (3)			17 (3)
Condenser	Air flow			m^3/h	2,700	4,000		5,600
Defrost					Hot gas			
Power supply	Voltage/Phase/Frequency			V/Hz	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.


Claessens

SB.LBCLN-AW1/AV3 and SB.LBCMD-AW1/AV3

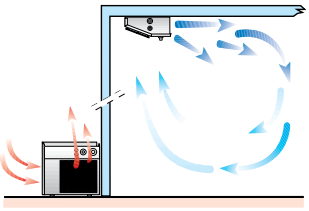
Bi-block system for low and medium temperature refrigeration

Condensing unit for floor standing or roof mounted installation

- Condensing unit for floor standing or roof mounted installation and ceiling mounted evaporator
- Thermostatic expansion valve ensuring optimum capacity in accordance with the required load for better energy efficiency
- Extremely fast to assemble thanks to quick connection joints
- Reduced installation time and cost
- Best surface-to-capacity ratio

SB.LBCLN-AV3/AW1

Installation type



Low Temperature Refrigeration				SB.LBCLN	100AV3	120AV3	170AV3	172AV3	200AW1	300AW1
Refrigerating capacity	Low temperature	R-452A	Nom	kW	0.579	0.807	0.970	1.193	1.526	2.090
Recomm. Cold Room Volume	Low temperature	V 100		m^3	2.2	3.9	5.3	7.6	11.4	18.1
Power input	Max.			W	950	1,330	2,000	2,080	2.590	3.360
Dimensions	Condensing unit	HeightxWidthxDepth		mm	640x690x860					740x760x960
	Evaporator unit	HeightxWidthxDepth		mm	360x690x545			360x990x545		360x1,440x545
Weight	Condensing unit			kg	50	52		63	65	85
	Evaporator unit			kg	9			16		24
	Packed condensing unit			kg	66.0	68.0		79.0	81.0	101.0
	Packed evaporator unit			kg	11.5			18.9		27.6
Compressor	Type				Hermetic Reciprocating					
	Piston displacement			m^3/h	3.03	4.54	5.99		8.3	12.9
Defrost					Electric					
Evaporator	Air flow			m^3/h	730			1,360		2,060
	Air throw			m	6					
Refrigerant	Type/GWP				R-452A/2,141					
	Charge			kg/TCO2Eq	0.93/1.991			1.6/3.426		2.3/4.924
Power supply	Phase/Frequency/Voltage			Hz/V	1~/50/230				3~/50/400	

Medium Temperature Refrigeration				SB.LBCMD	050AV3	060AV3	075AV3	100AV3	122AV3
Refrigerating capacity	Medium temperature	R-134a	Nom	kW	0.952	1.112	1.388	1.768	1.992
Recomm. Cold Room Volume	Medium temperature	V 100		m^3	6.8	8.6	11.8	16.5	18.5
Power input	Max.			W	1,250	1,460	1,720	1,930	2,460
Dimensions	Condensing unit	HeightxWidthxDepth		mm	640x690x860				
	Evaporator unit	HeightxWidthxDepth		mm	360x690x545			360x990x545	
Weight	Condensing unit			kg	41		44	62	
	Evaporator unit			kg	9			16	
	Packed condensing unit			kg	57.0		60.0	78.0	
	Packed evaporator unit			kg	11.5			18.9	
Compressor	Type				Hermetic Reciprocating				
	Piston displacement			m^3/h	3.8	4.52	5.69	6	8.36
Defrost					Electric				
Evaporator	Air flow			m^3/h	730			1,360	
	Air throw			m	6				
Refrigerant	Type/GWP				R-134a/1,430				
	Charge			kg/TCO2Eq	0.93/1.333			1.6/2.288	
Power supply	Phase/Frequency/Voltage			Hz/V	1~/50/230				

Medium Temperature Refrigeration				SB.LBCMD	120AW1	150AW1	151AW1	200AW1	201AW1
Refrigerating capacity	Medium temperature	R-134a	Nom	kW	1.992	3.129		3.430	
Recomm. Cold Room Volume	Medium temperature	V 100		m^3	18.5	35.7		40.3	
Power input	Max.			W	2,380	3,230	3,150	3,530	3,450
Dimensions	Condensing unit	HeightxWidthxDepth		mm	640x690x860	740x760x960			
	Evaporator unit	HeightxWidthxDepth		mm	360x990x545	360x1,440x545	710x970x770	360x1,440x545	710x970x770
Weight	Condensing unit			kg	62	75	81	77	88
	Evaporator unit			kg	16	24	40	24	40
	Packed condensing unit			kg	78.0	92.0	98.0	94.0	105.0
	Packed evaporator unit			kg	18.9	27.6	56.0	27.6	56.0
Compressor	Type				Hermetic Reciprocating				
	Piston displacement			m^3/h	8.36	10.52		11.81	
Defrost					Electric				
Evaporator	Air flow			m^3/h	1,360	2,060	2,320	2,060	2,250
	Air throw			m	6		13	6	13
Refrigerant	Type/GWP				R-134a/1,430				
	Charge			kg/TCO2Eq	1.6/2.288	2.3/3.289			
Power supply	Phase/Frequency/Voltage			Hz/V	3~/50/400				

SB.LBTLN-AV3/AW1 and SB.LBTMD-AV3/AW1

Bi-block system for low and medium temperature refrigeration

Condensing unit for floor standing or roof mounted installation

- Condensing unit for floor standing or roof mounted installation and ceiling mounted evaporator
- Extremely fast to assemble thanks to quick connection joints
- Reduced installation time and cost
- Best surface-to-capacity ratio

SB.LBTLN-AV3/AW1

Low Temperature Refrigeration		SB.LBTLN-AV3/AW1	100			120			170			172			200			300		
			1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Refrigerating capacity	Low temperature R-452A Nom	kW	0.579			0.807			970			1.193			1.526			2.090		
Recomm. Cold Room Volume	Low temperature V 100	m^3	2.2			3.9			5.3			7.6			11.4			18.1		
Power input	Max.	W	950			1,330			2,000			2,080			2,590			3,360		
Dimensions	Condensing unit HeightxWidthxDepth	mm	640x690x860															740x760x960		
	Evaporator unit HeightxWidthxDepth	mm	360x690x545															360x1,440x545		
Weight	Condensing unit	kg	50.0			52.0						63.0			65			85		
	Evaporator unit	kg	9.0									16.0						24		
	Packed condensing unit	kg	66.0			68.0						79.0			81.0			102.0		
	Packed evaporator unit	kg	11.5									18.9			18.9			27.6		
Compressor	Type		Hermetic Reciprocating																	
	Piston displacement	m^3/h	3.03			4.54			5.99						8.3			12.9		
Defrost			Electric																	
Evaporator	Air flow	m^3/h	730									1,360						2,060		
	Air throw	m	6																	
Refrigerant	Type/GWP		R-452A/2,141.0																	
	Charge	kg/TCO2Eq	0.715/1.531									1.280/2.740						1.500/3.212		
Piping Length		m	2.5	5	10	2.5	5	10	2.5	5	10	2.5	5	10	2.5	5	10	2.5	5	10
Power supply	Phase/Frequency/Voltage	Hz/V	1~/50/230																	

Medium Temperature Refrigeration		SB.LBTMD-AV3	050			060			075			100			122		
			1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Refrigerating capacity	Medium temperature R-134a Nom	kW	0.952			1.112			1.388			1.768			1.992		
Recomm. Cold Room Volume	Medium temperature V 100	m^3	6.8			8.6			11.8			16.5			18.5		
Power input	Max.	W	1,250			1,460			1,720			1,930			2,460		
Dimensions	Condensing unit HeightxWidthxDepth	mm	640x690x860														
	Evaporator unit HeightxWidthxDepth	mm	360x690x545									360x990x545					
Weight	Condensing unit	kg	41.0						44			62.0					
	Evaporator unit	kg	9.0									16.0					
	Packed condensing unit	kg	57.0						78								
	Packed evaporator unit	kg	11.5									18.9					
Compressor	Type		Hermetic Reciprocating														
	Piston displacement	m^3/h	3.8			4.52			5.69			6			8.36		
Defrost			Electric														
Evaporator	Air flow	m^3/h	730									1,360					
	Air throw	m	6														
Refrigerant	Type/GWP		R-134a/1,430														
	Charge	kg/TCO2Eq	0.715/1.022									1.280/1.830					
Piping Length		m	2.5	5	10	2.5	5	10	2.5	5	10	2.5	5	10	2.5	5	10
Power supply	Phase/Frequency/Voltage	Hz/V	1~/50/230														

Medium Temperature Refrigeration		SB.LBTMD-AW1	120			150			200		
			1	2	3	1	2	3	1	2	3
Refrigerating capacity	Medium temperature R-134a Nom	kW	1.992			3.129			3.430		
Recomm. Cold Room Volume	Medium temperature V 100	m^3	18.5			35.7			40.3		
Power input	Max.	W	2,380			3,220			3,530		
Dimensions	Condensing unit HeightxWidthxDepth	mm	640x690x860			740x760x960					
	Evaporator unit HeightxWidthxDepth	mm	360x990x545			360x1,440x545					
Weight	Condensing unit	kg	62			75			77		
	Evaporator unit	kg	16			24					
	Packed condensing unit	kg	78.0			92.0			94.0		
	Packed evaporator unit	kg	18.9			27.6					
Compressor	Type		Hermetic Reciprocating								
	Piston displacement	m^3/h	8.36			10.52			11.81		
Defrost			Electric								
Evaporator	Air flow	m^3/h	1,360			2,060					
	Air throw	m	6								
Refrigerant	Type/GWP		R-134a/1,430								
	Charge	kg/TCO2Eq	1.280/1.830			1.500/2.145					
Piping Length		m	2.5	5	10	2.5	5	10	2.5	5	10
Power supply	Phase/Frequency/Voltage	Hz/V	3~/50/400								

LMSWHD-AV3018/AV3118

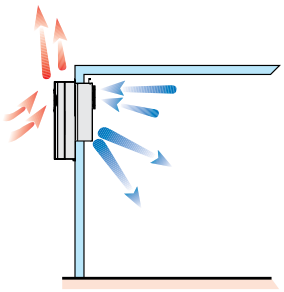
Wineblock - Monoblock units for high temperature refrigeration

Monoblock system suitable for through-wall installation

- Accurate humidity and temperature control to guarantee the quality of products (e.g. wines)
- Integrated humidifier available depending on model to have one unit which covers it all: perfect humidity & temperature control
- Electronic controller managing both temperature and humidity of the cold room

LMSWHD-AV3018/118

Installation type



High Temperature Refrigeration					LMSWHD-AV3018/AV3118	030	050	060	075
Refrigerating capacity	High temperature	R-134a	Nom	kW		0.60 (1)	1.00 (1)	1.40 (1)	2.00 (1)
Heating capacity	R-134a	Nom		kW		0.70	1.05	1.40	1.75
Power input	Max.			W		1,210	1,690	2,310	2,780
Range RH%				%		60-80			
Dimensions	Unit	HeightxWidthxDepth		mm		735x400x435		735x620x435	
	Packed unit	HeightxWidthxDepth		mm		955x495x435		955x495x655	
Weight	Unit			kg		49	52	77	79
	Packed unit			kg		59	62	89	91
Compressor	Type					Hermetic Reciprocating			
	Piston displacement			m^3/h		1.4	2.3	3.8	5.7
Condenser	Air flow			m^3/h		600		1,200	
Defrost						Air			
Evaporator	Air flow			m^3/h		600		1,200	
Operation range	Cold room temperature	Min.~Max.		°C		10~20			
	Ambient temperature	Min.~Max.		°C		10~40			
Refrigerant	Type/GWP					R-134a/1,430			
	Charge			kg/TCO2Eq		0.43/0.61	0.38/0.54	0.45/0.64	0.60/0.86
Power supply	Phase/Frequency/Voltage			Hz/V		1~/50/230			

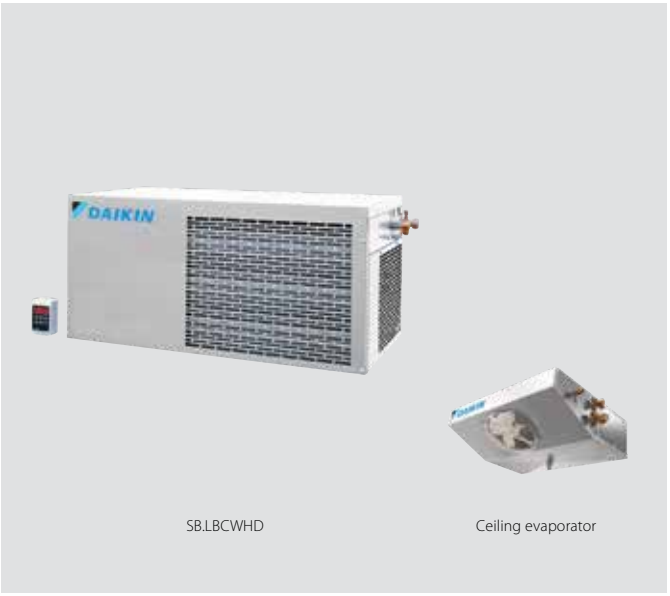
(1)When normally running: +14°C / +30°C
LMSWHD-AV3018: Version with humidifier kit included. LMSWHD-AV3118: Version without humidifier kit.

SB.LBCWHD-AV30DR/31DR

Wineblock - Split units for high temperature refrigeration

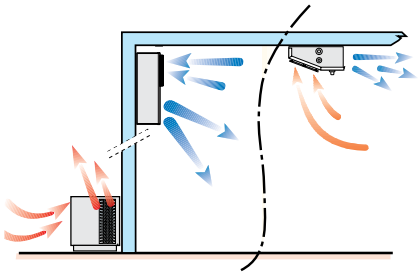
Compact condensing unit and small-sized ceiling mounted evaporator

- Accurate humidity and temperature control to guarantee the quality of products. Best for wine conservation and refinement.
- Thermostatic expansion valve ensuring optimum capacity in accordance with the required load for better energy efficiency
- Integrated humidifier available depending on model to have one unit which covers it all: perfect humidity & temperature control
- Electronic controller managing both temperature and humidity of the cold room



SB.LBCWHD | Ceiling evaporator

Installation type



High Temperature Refrigeration			SB.LBCWHDAV30DR/31DR*		030	050	060	075
Refrigerating capacity	High temperature	R-134a	Nom	kW	0.60 (1)	1.00 (1)	1.40 (1)	2.00 (1)
Heating capacity	R-134a		Nom	kW	0.90		1.60	
Power input	Max.			W	1.42	1.55	2.44	2.55
Range RH%				%	60-80			
Dimensions	Condensing unit	HeightxWidthxDepth		mm	357x682x337		390x882x427	
	Evaporator unit	HeightxWidthxDepth		mm	215x669x490		215x1,089x490	
	Packed condensing unit	HeightxWidthxDepth		mm	590x400x800		610x510x1,000	
	Packed evaporator unit	HeightxWidthxDepth		mm	540x250x1,190			
Weight	Condensing unit			kg	33	36	61	63
	Evaporator unit			kg	13		19	
	Packed condensing unit			kg	38	41	68	70
	Packed evaporator unit			kg	14.5		22	
Compressor	Type				Hermetic Reciprocating			
	Piston displacement			m^3/h	1.4	2.3	3.8	5.7
Condenser	Air flow			m^3/h	600		1,200	
Defrost					Air			
Evaporator	Air flow			m^3/h	600		1,200	
Operation range	Cold room temperature	Min.~Max.		°C	10~20			
	Ambient temperature	Min.~Max.		°C	10~40			
Refrigerant	Type/GWP				R-134a/1,430			
	Charge			kg/TCO2Eq	1.3/1.86		1.8/2.57	
Power supply	Phase/Frequency/Voltage			Hz/V	1~/50/230			

(1)When normally running: +14°C / +30°C
* SB.LBCWHD-AV30DR: Unit with humidifier kit included; SB.LBCWHD-AV31DR: Unit without humidifier kit.

SB.LBWWHD-AV3096/3196

Wineblock - Split units for high temperature refrigeration

Compact condensing unit and small-sized wall mounted evaporator

- Accurate humidity and temperature control to guarantee the quality of products. Best for wine conservation and refinement.
- Thermostatic expansion valve ensuring optimum capacity in accordance with the required load for better energy efficiency
- Integrated humidifier available depending on model to have one unit which covers it all: perfect humidity & temperature control
- Electronic controller managing both temperature and humidity of the cold room

SB.LBWWHD | Wall evaporator

High Temperature Refrigeration			SB.LBWWHD-AV3096/3196	030	050	060	075
Refrigerating capacity	High temperature R-134a	Nom	kW	0.60	1.00	1.40	2.00
Heating capacity	R-134a	Nom	kW	0.70	1.05	1.40	1.75
Power input	Max.		W	1.23	1.71	2.26	2.72
Range RH%			%	60-80			
Dimensions	Condensing unit	HeightxWidthxDepth	mm	357x682x337		390x882x427	
	Evaporator unit	HeightxWidthxDepth	mm	570x375x210		570x595x210	
	Packed condensing unit	HeightxWidthxDepth	mm	590x400x800		610x510x1,000	
	Packed evaporator unit	HeightxWidthxDepth	mm	610x250x525		610x250x745	
Weight	Condensing unit		kg	33.0	36.0	61.0	63.0
	Evaporator unit		kg	13.0		19.0	
	Packed condensing unit		kg	38.0	41.0	68.0	70.0
	Packed evaporator unit		kg	14.5		21.0	
Compressor	Type			Hermetic Reciprocating			
	Piston displacement		m^3/h	1.4	2.3	3.79	5.7
Condenser	Air flow		m^3/h	600		1,200	
Defrost				Air			
Evaporator	Air flow		m^3/h	600		1,200	
Operation range	Cold room temperature	Min.~Max.	°C	10~20			
	Ambient temperature	Min.~Max.	°C	10~40			
Refrigerant	Type/GWP			R-134a/1,430.0			
	Charge		kg/TCO2Eq	1.3/1.86		1.8/2.57	
Power supply	Phase/Frequency/Voltage		Hz/V	1~/50/230			

(1)When normally running: +14°C / +30°C
*SB.LBWWHD-AV3096: Unit with humidifier kit included; SB.LBWWHD-AV3196: Unit without humidifier kit.

Condensing units

Model	Product name	Capacity (kW)	0	2	5	10	25	50	100	150	300	450
Commercial plug-in condensing units	JEHCCU and JEHSCU											
Open frame condensing unit	LA											
Small condensing units	LU LF LL											
	LV (Inverter)											
	LT (Twin)											
Large condensing units	CM series											
Small inverter condensing unit for commercial refrigeration	Mini-ZEAS LRMEQ-BY1											
Inverter condensing unit for commercial refrigeration	ZEAS LREQ-BY1											
	Multi ZEAS LREQ-BY1R											
CO_2		 Coming soon										
												

Freezing (Low temperature) (-20° C)

Chilling (Medium temperature) (0° C)

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.

Product overview - JEHCCU and JEHSCU condensing units

	Scroll compressor	Reciprocating compressor	230 V current	400 V current
MT cooling				
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 0400 CM3	●			●
JEHSCU 0500 CM3	●			●
JEHSCU 0600 CM3	●			●
JEHSCU 0680 CM3	●			●
JEHSCU 0800 CM3	●			●
JEHSCU 1000 CM3	●			●
LT cooling				
JEHCCU 0115 CL1		●	●	
JEHSCU 0200 CL3	●			●
JEHSCU 0300 CL3	●			●
JEHSCU 0400 CL3	●			●
JEHSCU 0500 CL3	●			●
JEHSCU 0600 CL3	●			●
JEHSCU 0750 CL3	●			●

● = R404A ▲ = R-407F ■ = R-407A ◆ = R-134A

NEW

× = R-448A ★ = R-449A ✳ = R-452A

Refrigeration capacity (kW)

	<1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MT cooling																
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 0400 CM3					◆		■★×	●▲								
JEHSCU 0500 CM3						◆	★×	●▲■								
JEHSCU 0600 CM3							◆			●■★×	▲					
JEHSCU 0680 CM3							◆				●■×★	▲				
JEHSCU 0800 CM3								◆					▲■★×	●		
JEHSCU 1000 CM3										◆					■	●▲★×
LT cooling																
JEHCCU 0115 CL1	●■															
JEHSCU 0200 CL3		●■														
JEHSCU 0300 CL3		●■★×														
JEHSCU 0400 CL3			■★×	●												
JEHSCU 0500 CL3			■	●★×												
JEHSCU 0600 CL3				■★×	●											
JEHSCU 0750 CL3					■★×	●										

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

JEHCCU-CM1/JEHCCU-CM3

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
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
		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										
	Piston displacement			m^3/h	1,80		3,18	3,79	2,64	4,51	5,69	3,18	4,21	4,52	
Fan	Type				Axial										
	Air flow rate	Cooling	Nom	m^3/h	1.300									2.700	
Sound pressure level	Nom.			dBA	29 (2)				28 (2)	29 (2)		28 (2)		34 (2)	
Refrigerant	Type				R-134a	R-404A	R-134a		R-404A	R-134a		R-404A			
	Type 2				-	R-407A	-		R-407A	-		R-407A			
	Type 3				-	R-407F	-		R-407F	-		R-407F			
	GWP				1.430,0	3.921,6	1.430,0		3.921,6	1.430,0		3.921,6			
	GWP Type 2				-	2.107	-		2.107	-		2.107			
	GWP Type 3				-	1.825	-		1.825	-		1.825			
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

JEHSCU-CM1/JEHSCU-CM3

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

JEHSCU-CM1/CM3

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
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
		R-404A*	Te -10°C			-						2,61	3,48	2,77	2,64	2,72	2,65	2,90	2,57
		R-407A	Te -10°C			-							3,44	3,09	2,81	2,75	2,65	2,88	2,35
		R-407F	Te -10°C			-							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
		R-404A*	Te -10°C		kWh/a	-						12.939	10.448	14.881	18.673	21.344	23.536	27.407	39.372
		R-407A	Te -10°C		kWh/a	-							10.033	13.054	17.546	20.622	24.031	26.747	38.515
		R-407F	Te -10°C		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	2,83	-				
		R-404A*	Te -10°C	Declared COP (COP2)		2,65	2,54	2,24	2,44	2,41	2,26	-	2,66	-					
		R-407A	Te -10°C	Declared COP (COP2)		2,55	2,38	2,21	2,50	2,32	2,20	-	2,72	-					
		R-407F	Te -10°C	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
		R-404A*	Te -10°C	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
		R-407A	Te -10°C	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
		R-407F	Te -10°C	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	
		R-404A*	Te -10°C	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
		R-407A	Te -10°C	Declared COP (COP3)		-			1,48	1,45	1,38	-	1,48	1,43	1,39	1,43	-	1,38	-
		R-407F	Te -10°C	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	
Compressor	Type					Scroll compressor													
	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	ZB58KCE-TFD	ZB76KCE-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														
	Piston displacement			m^3/h		5,90	6,80	8,60	5,90	6,80	8,60	9,90	9,90	11,40	14,40	17,10	18,80	22,10	29,10
Fan	Type					Axial													
	Air flow rate	Cooling	Nom	m^3/h		2.700							4.250	-				8.500	
Sound pressure level	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)	
Refrigerant	Type					R-134a													
	Type 2					R-404A													
	Type 3					R-407A						-	R-407A						
	Type 4					R-407F						-	R-407F						
	GWP					1.430													
	GWP Type 2					3.921,6													
	GWP Type 3					2.107						-	2.107						
	GWP Type 4					1.825						-	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"			3/8"
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

JEHCCU-CL1/JEHSCU-CL3

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

JEHCCU/SCU-CL1/CL3

Low Temperature Refrigeration					JEHCCU-CL1/JEHSCU-CL3	JEHCCU0115CL1	JEHSCU0200CL3	JEHSCU0300CL3	JEHSCU0400CL3	JEHSCU0500CL3	JEHSCU0600CL3	JEHSCU0750CL3	JEHSCU0950CL3-EVI
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				m^3/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		m^3/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

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
› Compressors:
- LUU* : Tecumseh
- LUA* : Embraco
- LUE* : Scroll
- LUF* : Digital 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)

Normal cooling

Condensing unit			LUUMF	50AV3	100AV3	122AV3	120AW1	150AW1	200AW1	250AW1	255AW1
Refrigeration capacity	-10° C		W	930	1094	2130	2130	2720	3010	3920	4230
Power input			kW	0,68	1,4	1,4	1,45	2,08	2,18	2,97	2,99
COP 32°C (1)				2,02	2,23	2,15	2,15	1,95	1,88	2,00	2,17
COP 25°C (1)				1,70	1,86	1,81	1,81	1,65	1,60	1,71	1,85
COP 43°C (1)				1,26	1,37	1,34	1,34	1,23	1,19	1,29	1,40
Dimensions	Unit	Height	mm	485					586		717
		Width	mm	745					852		1006
		Depth	mm	515					600		682
Condenser air flow			m^3/h	1000	1460	1460	1460	2600	2600	2400	3950
Compressor				Hermetic Tecumseh							
Refrigerant			Type/GWP	R404A / 3922							
Power supply			V/~/ Hz	230/1/50			400/3/50				

Deep freezing

Condensing unit			LUULF	120AV3	170AV3	300AW1
Refrigeration capacity	-35° C		W	620	870	1480
Power input			kW	1,08	1,35	2,38
COP 32°C (1)				1,35	1,11	1,14
COP 25°C (1)				0,96	0,95	0,97
COP 43°C (1)				0,73	0,73	0,73
Dimensions	Unit	Height	mm	485		586
		Width	mm	745		852
		Depth	mm	515		600
Condenser air flow			m^3/h	1000	1460	2600
Compressor				Hermetic Tecumseh		
Refrigerant			Type/GWP	R404A / 3922		
Power supply			V/~/ Hz	230/1/50		400/3/50

Other refrigerants, compressors and options availibal 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; (2) Not existing at the moment
* Note: Depending on model, selection from Selection software based on R404A, R134a, R407F. Some models also available with R449A

LU*	Condesing units
LL*	Low noise condesing units
Compressor:	
LUU*	Tecumseh
LUA*	Embraco
LUE*	Scroll
LUF*	Digital Scroll

LUB, LLB

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
› Compressors:
- LUB* : Bitzer
- LUD* : Dorin
- LUR* : Frascold
- LUC* : Copeland stream
› 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)

Normal cooling

Condensing unit		LUBMF-AW1	100	120	200	250	255	300	350	450	600	750	800	M00
Refrigeration capacity	-10° C	W	1.850	2.380	3.400	4.210	4.560	5.950	7.160	9.510	11.970	13.950	16.910	21.180
Power input		kW	1,65	1,65	2,50	3,17	3,19	4,03	4,93	6,34	7,61	8,69	8,61	12,45
COP 32°C (1)			2,45	2,26	2,06	2,14	2,37	2,68	2,35	2,44	2,54	2,47	2,50	2,45
COP 25°C (1)			2,01	1,87	1,72	1,76	1,96	2,25	1,97	2,05	2,12	2,07	2,10	2,07
COP 43°C (1)			1,45	1,36	1,25	1,27	1,41	1,68	1,48	1,53	1,59	1,55	1,57	1,54
SEPR(1)			-					3,25	2,80	2,95	3,09	2,97	3,01	2,90
Annual Electricity Consumption(1)		Kwh/a	-					11.249	15.707	19.782	23.791	28.907	34.556	44.904
Dimensions	Unit	Height	mm	485		586		717	960					
		Width	mm	745		852		1.006	1.360		1.630			2.030
		Depth	mm	515		600		682	931		1.120			
Condenser air flow		m³/h	1.460	1.460	2.600	2.400	3.950	3.640	6.530	6.220	9.090	9.090	8.230	11.100
Compressor			Semi-Hermetic Bitzer											
Refrigerant		Type/GWP	R404A / 3922											
Power supply		V/~/ Hz	400/3~/50											

Deep freezing

Condensing unit		LUBLF-AW1	170	200	455	500	650	800	M00	M25
Refrigeration capacity	-35° C	W	670	1130	3020	3830	5510	6430	6990	8640
Power input		kW	0,93	1,75	3,82	5,24	7,02	8,21	10,83	12,25
COP 32°C (1)			1,14	1,28	1,45	1,51	1,42	1,47	1,51	1,50
COP 25°C (1)			0,98	1,10	1,25	1,30	1,23	1,27	1,30	1,30
COP 43°C (1)			0,75	0,84	0,98	1,02	0,95	0,96	1,01	1,03
SEPR(1)			-				1,66	1,69	1,73	1,75
Annual Electricity Consumption(1)		Kwh/a	-				24730	28369	30158	36899
Dimensions	Unit	Height	mm	485	717		960			
		Width	mm	745	1006		1360		1630	
		Depth	mm	515	682		931		1120	
Condenser air flow		m³/h	1000	1460	3640	3640	6220	6220	6480	9090
Compressor			Semi-Hermetic Bitzer							
Refrigerant		Type/GWP	R404A / 3922							
Power supply		V/~/ Hz	400/3~/50							

LU*: Condensing units
LL*: Low noise condensing units
Compressor:
LUB*: Bitzer
LUD*: Dorin
LUR*: Frascold
LUC*: Copeland Stream

Other refrigerants, compressors and options availibal 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

* Note: Depending on model, selection from Selection software based on R404A, R134a, R407F. Some models also available with R449A

LTT, LTP, LTL

Twin condensing unit for outdoor installation with twin-hermetic and 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
› Compressors:
- LTT* : Twin Scroll
- LTP* : Digital Scroll
- LTL* : Semi hermetic Bitzer
› 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)

Normal cooling

Condensing unit	LTTMF-AW1	046	060	070	080	082	100	120	150
Refrigeration capacity -10° C	W	8.130	10.085	11.846	13.097	14.152	17.620	21.022	23.714
Power input	kW	5,97	7,13	8,29	9,45	9,68	11,94	13,44	15,68
COP/EER (1)		1,94	1,92	1,97	1,90	2,20	2,06	2,20	2,11
SEPR(1)		3,57	3,68	3,80	3,75	3,96	3,85	3,99	4,18
Annual Electricity Consumption(1)	Kwh/a	14017	16.859	19.168	21.454	21.944	28.100	36.536	30.916
Dimensions Unit Height	mm	1.480							
Width	mm	1.680				2.405			
Depth	mm	750							
Condenser air flow	m^3/h	7.800	7.800	7.300	7.300	15.600	15.600	15.600	14.600
Compressor		Twin Scroll - Copeland							
Refrigerant	Type/GWP	R404A / 3922							
Power supply	V/~/ Hz	400/3~/50							

Deep freezing

Condensing unit	LTTLF-AW1	100	120	150	200	260	300
Refrigeration capacity -35° C	W	6.512	7.709	9.644	13.009	16.307	18.964
Power input	kW	12,97	13,97	14,41	19,58	23,96	26,96
COP/EER (1)		0,98	0,97	1,16	1,17	1,19	1,12
SEPR(1)		1,85	1,93	2,05	2,03	2,08	2,05
Annual Electricity Consumption(1)	Kwh/a	26.307	29.722	37.990	47.775	58.560	68.836
Dimensions Unit Height	mm	1480					
Width	mm	1680			2405		
Depth	mm	750					
Condenser air flow	m^3/h	7.600	7.300	7.300	15.600	14.600	14.600
Compressor		Twin Scroll - Copeland					
Refrigerant	Type/GWP	R404A / 3922					
Power supply	V/~/ Hz	400/3~/50					

Other refrigerants, compressors and options availible 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

Compressor:
LTT*: Twin Scroll
LTP*: Digital Scroll
LTL*: Semi hermetic Bitzer

LTT* : Twin Scroll
LTP* : Digital Scroll
LTL* : Semi hermetic Bitzer

LHE

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
› 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.

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; greed, ventilation fan and double door for frames 4, 5, 6 and 7.

LHB, LHD, LHR and LHC

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
› Compressors:
- LHB*: Bitzer
- LHD* : Dorin
- LHR* : Frascold
- LHC* : 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.

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

ZEAS condensing unit for medium and low temperature refrigeration

Why choose ZEAS?

Whether it is restaurants, supermarkets or event halls – Zeas from Daikin is as individual as the requirements of the industries where it is used.

High energy efficiency

› Daikin DC inverter scroll compressor with economizer technology
› DC inverter fan technology
› Eco-design compliant

BENEFITS

› **Lower energy bills**
The use of Daikin proven DC technology results in lower energy bill compared to the use of standard ON/OFF units and even other capacity controller refrigeration units

› **Our units are future proof**
Combining Daikin innovating economizer technology with in house DC technology results in very high efficient units allowing us to outperformed the most severe eco-design minimum performance for the coming decades

Reliable operation

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

BENEFITS

› **Optimal food conservation**
Accurate temperature and humidity control can be easily suited to the requirements for different foods and beverages resulting in less of precious products

› **Longer lifetime expectation of our compressor**
Less thermal stress on our bearings and motor windings due to the implementation of Daikin High quality DC technology in our compressor

› **Longer lifetime expectations of our units**
The use of our innovating economizer technology in our units guarantee that our the compressor always operates within his operating envelop even in the most harvest conditions: excessive superheat at the inlet of the compressor resulting from improper quality of installation on the refrigerated cabinets side

› **No leaks**
Each new Daikin designed unit is put on a vibration plate in the factory to be sure that no leak and component damage can occur during transport. Even further, in the assemble line the Zeas unit undergo several leak test

› **No "dead on arrival"**
ALL units leaving the factory, have already run at the end of the assembly line

› **Lower installation cost**
Due to the use of the onboard economizer technology and the use of the correct low GWP refrigerant we only required the use of smaller pipes compared to other traditional systems, thus also lowered the refrigerant charge of the system

Small foot print and low weight

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

BENEFITS

› **Only light weight supporting structures are required**

› **No installation restrictions anymore**
Our mini Zeas due to his compact design, light weight and very silent operation can be installed everywhere!

› **No special crane are required**
The ZEAS units are so compact that it can fit in an elevator

Peace of mind

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

BENEFITS

› **Happy neighbours and no installation restrictions anymore**
The focus on sound criteria during the design of the units results in the most silent unit(s) of the market (till 25 dB(A) @ 10 m free field conditions)

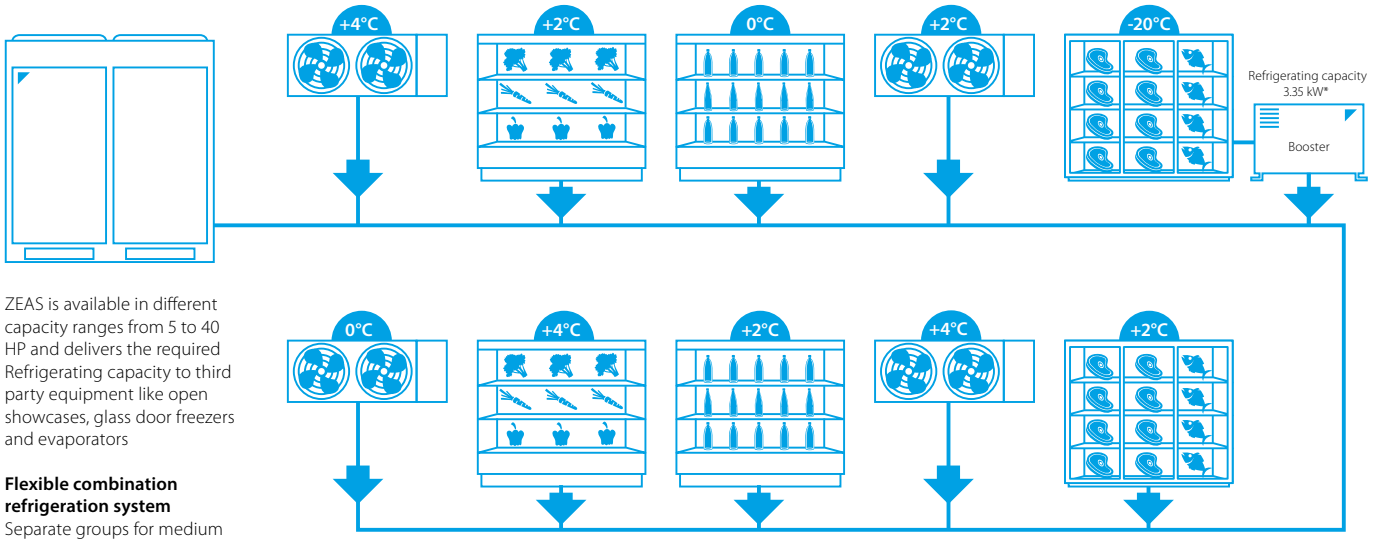
Intelligent control

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

BENEFITS

› **Quick installation and commissioning**
Advanced software solution for easy system configuration and commissioning
› **Peace of mind**
Easy monitoring of ZEAS unit by third party Building Management Systems through the use of our Modbus interface

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.

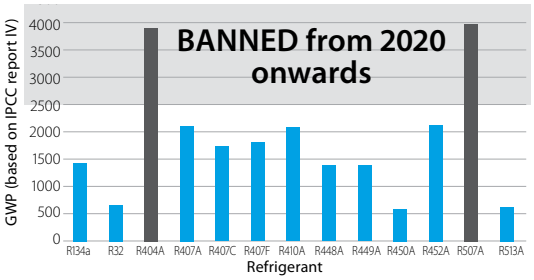
Operating range
Ambient temperatures: -20°C to +43 °C
Evaporating temperatures: -45°C to +10°C

* 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!

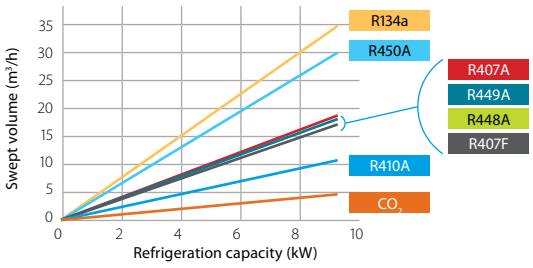
Use of refrigerant in refrigeration system with a refrigeration lower than 40 kW



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

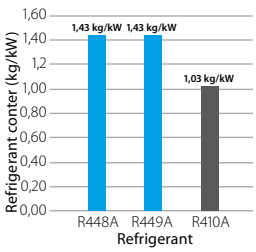


This means that for the same delivered refrigeration capacity we can use smaller main and linecomponents, thus reducing the installation cost and the amount of refrigerant charge in the system!

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"
CO2	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_2, Ammonia and Propane.
- an A1 refrigerant, therefore no special safety measurements are required.

LRMEQ-BY1

Mini-ZEAS condensing unit for commercial refrigeration with scroll technology

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 pipping diameters, thus reducing the refrigerant content in the system helping to lower our CO2 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

LRMEQ-BY1

Daikin technology increases the love for German Gourmet

DAIKIN's new Mini-ZEAS condensing unit is ensuring constant refrigeration in storage and production areas at the newly refurbished butcher shop, in mid west Germany. The key to maintaining the quality of the shop's fresh meat and deli products is to store them at constant temperatures, which is also legislatively required to be quality controlled at all times. DAIKIN's new Mini-ZEAS condensing unit, which is specially designed for small-scale commercial refrigeration applications, ensures exactly that. **Fleischeslust, Bensheim,Germany.**

Medium Temperature Refrigeration				LRMEQ-BY1	3	4
Connectable capacity	Minimum~Maximum			%	50~100	
Refrigerating capacity	Medium temp.	Nom.		kW	5.90 (1)	8.40 (1)
Power input	Medium temp.	Nom.		kW	2.53 (1)	3.65 (1)
COP	Medium temp.	Nom.			2.33 (1)	2.30 (1)
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	HeightxWidthxDepth		mm	1,345x900x320	
Weight	Unit			kg	126	
Heat exchanger	Type				Cross fin coil	
Compressor	Type				Hermetically sealed scroll compressor	
	Starting method				Direct on line (inverter driven)	
Fan	Type				Propeller	
	Quantity				2	
	Air flow rate	Cooling	Nom.	m^3/min	106	
Fan motor	Output			W	70	
	Drive				Direct drive	
Sound pressure level	Nom.			dBA	51 (2)	
Piping connections	Liquid	OD		mm	9,52	
	Gas	OD		mm	19.1	
Refrigerant	Type/GWP				R-410A/2,087.5	
	Charge			kg/TCO2Eq	4.50/9.39	
	Control				Electronic expansion valve	
Power supply	Phase/Frequency/Voltage			Hz/V	3N~/50/380-415	

(1)Cooling: evaporating temp. -10°C; outdoor temp. 32°C; suction SH10°C
(2)Sound pressure data: measured at 1m in front of unit, at 1.5m height

LREQ-BY1

ZEAS condensing unit for commercial refrigeration with scroll technology

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

LREQ-BY1(R)

- 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 CO2 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

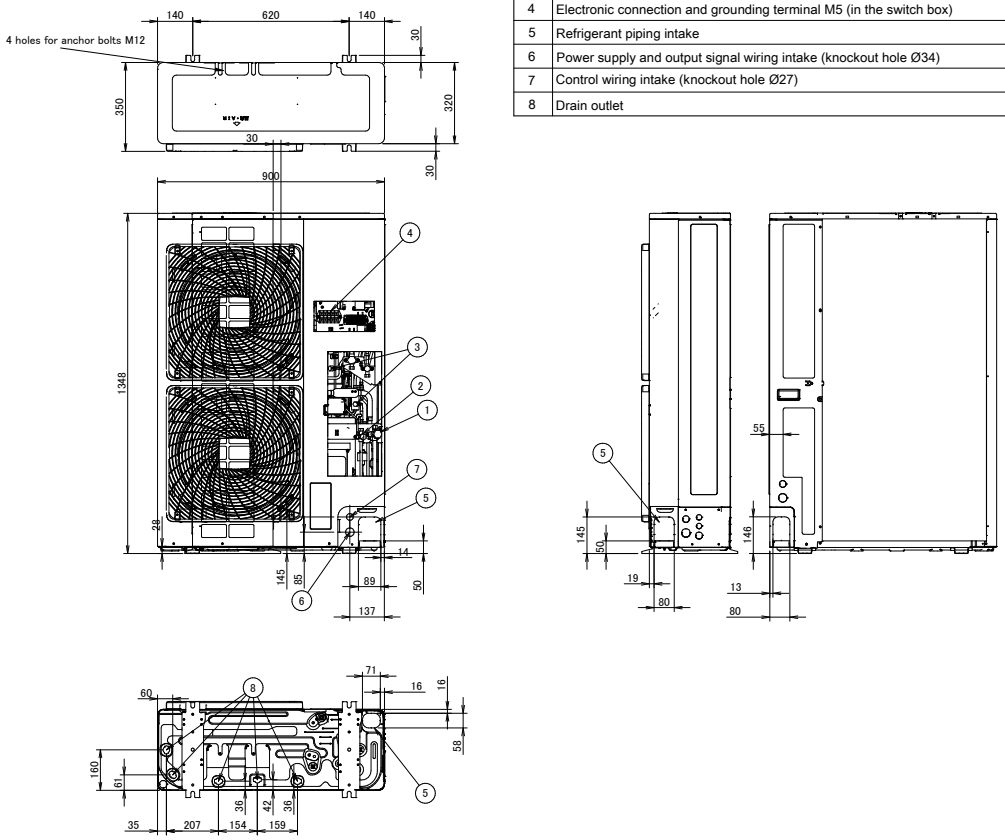
				LREQ-BY1	5	6	8	10	12	15	20
Refrigerating capacity	Low temperature	Nom.		kW	5,51 (1)	6,51 (1)	8,33 (1)	10,0 (1)	10,7 (1)	13,9 (1)	15,4 (1)
	Medium temperature	Nom.		kW	12,5 (2)	15,2 (2)	19,8 (2)	23,8 (2)	26,5 (2)	33,9 (2)	37,9 (2)
Power input	Low temperature	Nom.		kW	4,65 (1)	5,88 (1)	7,72 (1)	9,27 (1)	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			1,80	1,77	1,84	1,88	1,80	1,70	1,70
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	22.805	27.453	33.817	39.747	44.363	61.090	67.325
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^3/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	
	Air flow rate	Cooling	Nom.	m^3/min	95	102	171	179	191	230	240
Fan motor	Output			W	350		750			350	750
	Drive				Direct drive						
Fan motor 2	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_2eq	10,9		16,5			24,0	
	Control				Electronic expansion valve						
Power supply	Phase/Frequency/Voltage			Hz/V	3~/50/380-415						

				LREQ-BY1	30	40
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. -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

LRMEQ, BY1

1	Gas pipe connection Ø19.1 brazing
2	Liquid pipe connection Ø9.5 brazing
3	(2X) Service port (in the unit)
4	Electronic connection and grounding terminal M5 (in the switch box)
5	Refrigerant piping intake
6	Power supply and output signal wiring intake (knockout hole Ø34)
7	Control wiring intake (knockout hole Ø27)
8	Drain outlet



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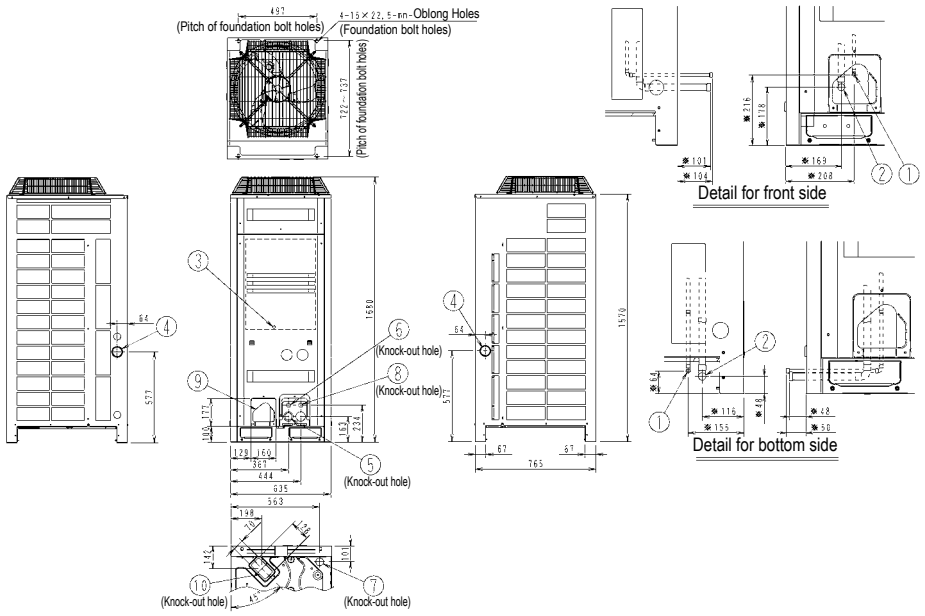
LREQ5,6BY1



MODEL
LREQ5, 6BY1

3D076985

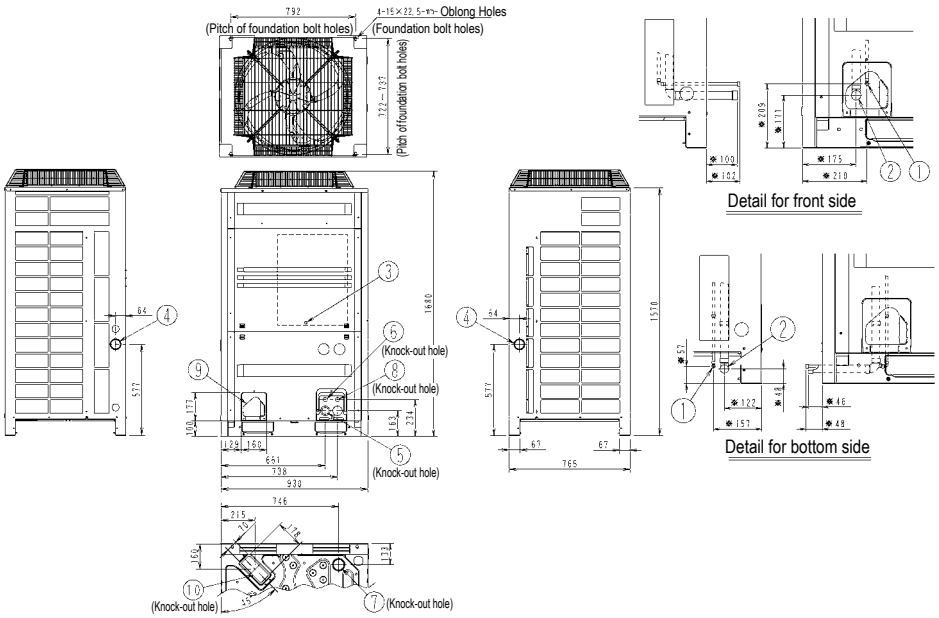
No.	Parts name	Remarks
1	Liquid pipe connection port	ø 9.5
2	Gas pipe connection port	ø 22.2
3	Earth terminal	Inside of electric component box (M8)
4	Power cord routing hole (side)	ø 62
5	Power cord routing hole (front)	ø 45
6	Power cord routing hole (front)	ø 27
7	Power cord routing hole (bottom)	ø 50
8	Wire routing hole (front)	ø 27
9	Pipe routing hole (front)	
10	Pipe routing hole (bottom)	

NOTES

1. Detail for front side and detail for bottom side indicate the dimensions after fixing the attached piping.
2. "※" is a size in the state where accessory piping is connected.

Detailed technical drawings

LREQ8-12BY1



MODEL
LREQ8,10, 12BY1

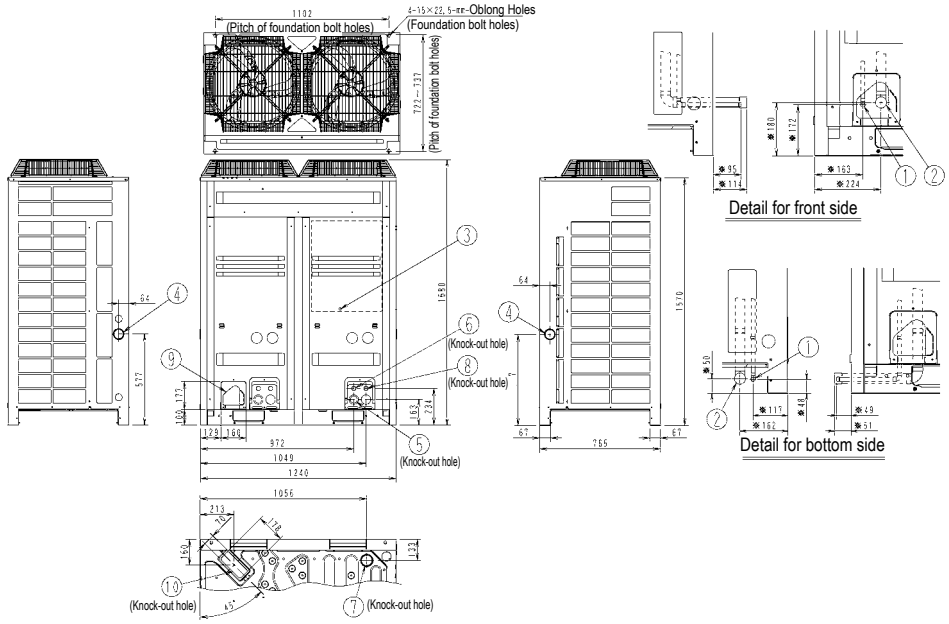
3D076986

No.	Parts name	Remarks
1	Liquid pipe connection port	ø 12.7
2	Gas pipe connection port	ø 28.6
3	Earth terminal	Inside of electric component box (M8)
4	Power cord routing hole (side)	ø 62
5	Power cord routing hole (front)	ø 45
6	Power cord routing hole (front)	ø 27
7	Power cord routing hole (bottom)	ø 65.5
8	Wire routing hole (front)	ø 27
9	Pipe routing hole (front)	
10	Pipe routing hole (bottom)	

NOTES

1. Detail for front side and detail for bottom side indicate the dimensions after fixing the attached piping.
2. "※" is a size in the state where accessory piping is connected.

LREQ15-20BY1



MODEL
LREQ15, 20 BY1

3D076987

No.	Parts name	Remarks
1	Liquid pipe connection port	ø 12.7
2	Gas pipe connection port	ø 34.9
3	Earth terminal	Inside of electric component box (M8)
4	Power cord routing hole (side)	ø 62
5	Power cord routing hole (front)	ø 45
6	Power cord routing hole (front)	ø 27
7	Power cord routing hole (bottom)	ø 65.5
8	Wire routing hole (front)	ø 27
9	Pipe routing hole (front)	
10	Pipe routing hole (bottom)	

NOTES

1. Detail for front side and detail for bottom side indicate the dimensions after fixing the attached piping.
2. "※" is a size in the state where accessory piping is connected.

Daikin Condensing units with CO_2 refrigerant

Coming soon

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

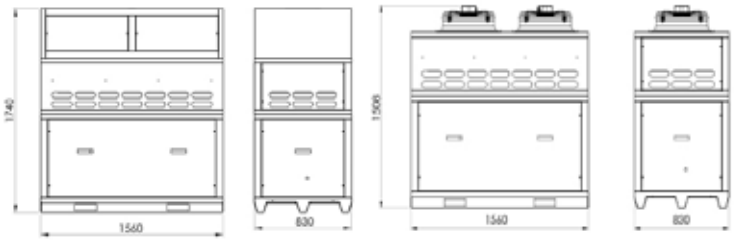
Electronic Control

Proportional Modulation

Heating Interchanger (Optional)

Protective Case

FNV42



FNV58

☑ MT — 1 comp.

FC17 832 mm	7 kW / 9 kW
FNV42 1.560 mm	18 kW / 22 kW
FNV58 1.560 mm	38 kW / 45kW

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

LT MT Clime Global — MSC Mechanical subcooler — PC Parallel compressor — Heating interchanger — Axial — Radial

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 CO2 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

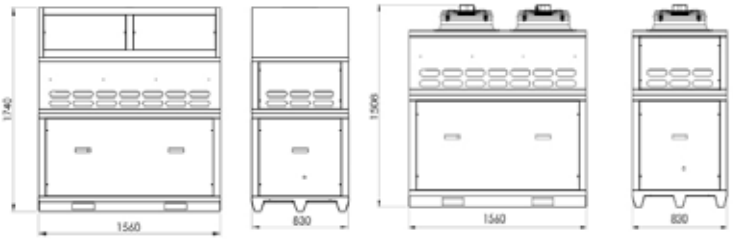
Electronic Control

Proportional Modulation

Heating Interchanger (Optional)

Protective Case

FNV42



FNV58

☑ MT
☑ MT + LT

2 comp.
1+1 2+1

FNV42 1.560 mm	8 kW 18 kW 22 kW
FNV58 1.560 mm	10 kW 40 kW 45 kW

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

LT MT Clime Global

MSC Mechanical subcooler

PC Parallel compressor

Heating interchanger

Axial

Radial

Large Booster Condensing units

Large condensing units with Transcritical cycle

- Gas cooler with Axial or Radial EC fans.
- Air connection: Three different configurations
- (Optional) Heat recovery heat exchanger to take advantage of the "free heat" for air conditioning or for sanitary application
- Galvanized and painted sheet metal chassis and weather proof enclosure.
- Optional: acoustic insolation
- Large liquid receiver
- All piping done in stainless steel
- Design adapted for loading and transportation
- (Optional) Parallel compressor(s) to improve further the efficiency of the unit. Only for FCZ range where more than 2 compressor(s) can be used
- Compressor configuration Bitzer/Dorin:
  MT compressor(s)
  Possibility to have combination of MT and LT compressor
- Racks Standard delivery:
  Inverter: 1x MT and 1x LT
- Electrical Panel including electronic controller and control panel
- High safety level with pressure relief valves, pressure switches and intelligent controls
- Visible panel of manometers and pressostats
- High modular concept.
- The gascooler can be disconnected from the unit

F-Gas Free

Electronic Control

Proportional Modulation

Heating Interchanger (Optional)

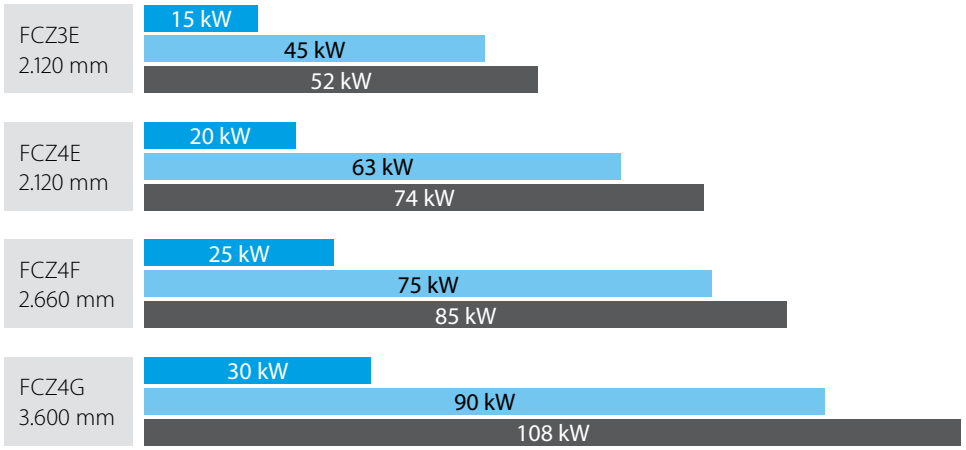
Protective Case

Parallel compressors (Optional)

Switchboard

Mechanical Subcooler (Optional)

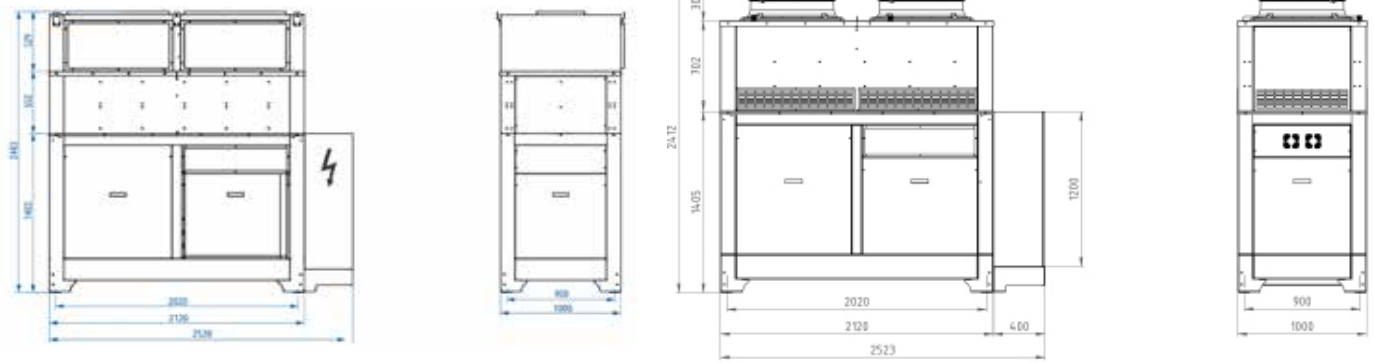
☑ MT — 3 4 comp.
☑ MT + LT — 2+1 3+1 3+2 4+1



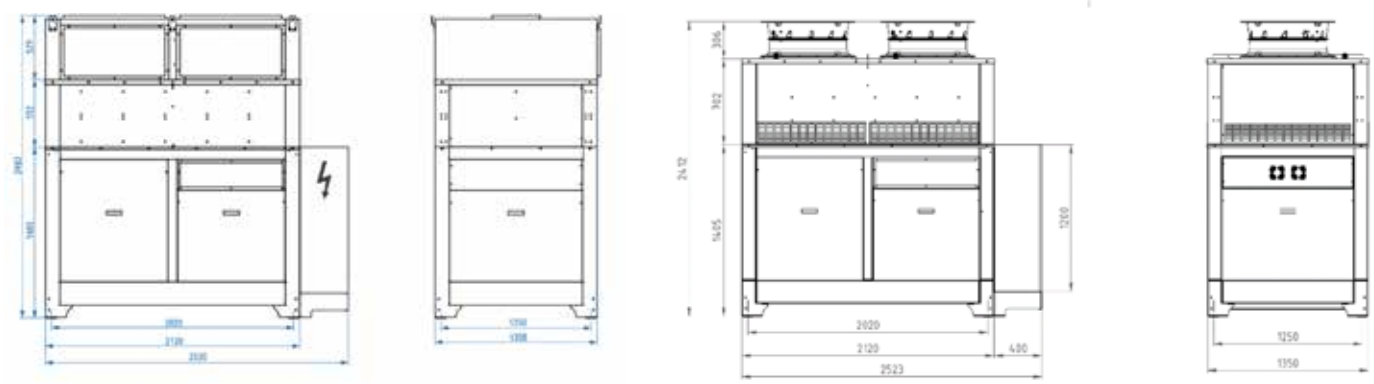
Conditions: LT: Tev.: -35°C SH: 8°K
MT: Tev.: -10°C SH: 8°K
Clime: Tev. med: 5°C SH: 8°K

LT MT Clime Global — MSC Mechanical subcooler — PC Parallel compressor — Heating interchanger — Axial — Radial

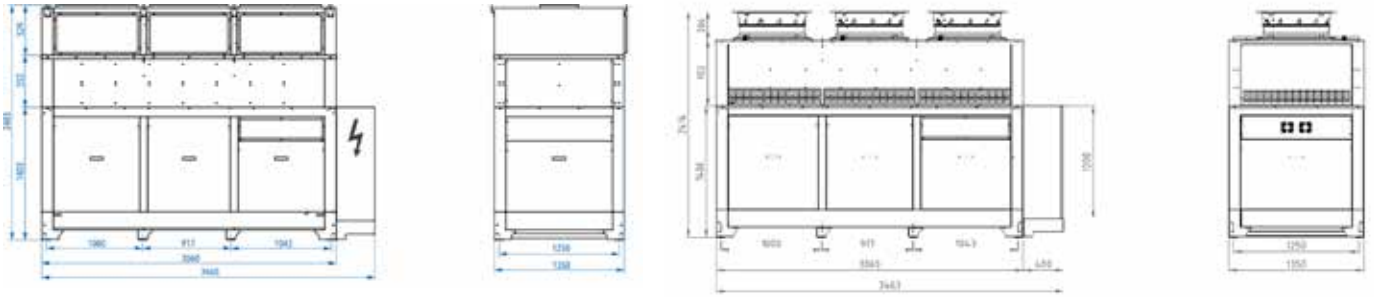
FCZ3E



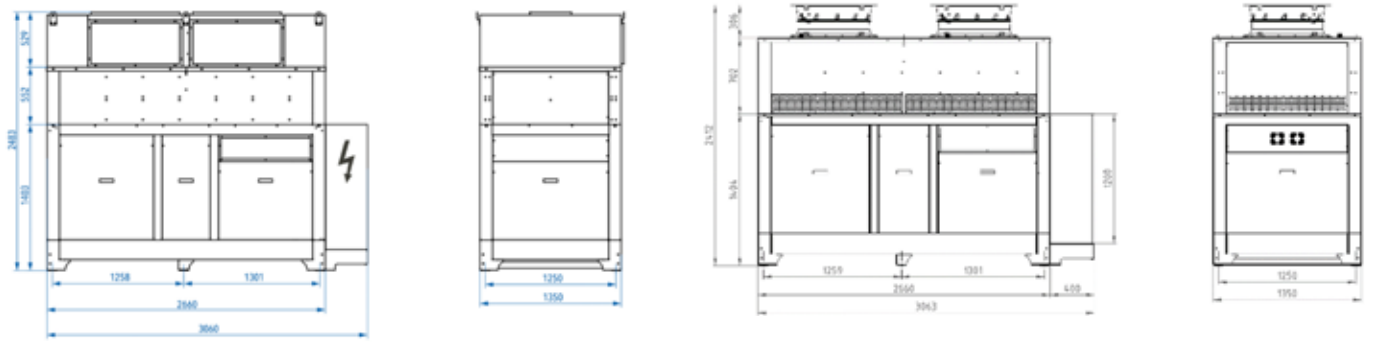
FCZ4E



FCZ4G



FCZ4F



Compressor packs & racks

Compressor packs & racks

Freezing (Low temperature) (-20° C)

Chilling (Medium temperature) (0° C)

Model	Product name	Capacity (kW)	0	2	5	10	25	50	100	150	300	450	500
	LR Series												
Racks	Mini racks - FNB Compressor racks - FCCE Duplex racks - FUF, FUG, FUH, FUJ												

Compressor packs & racks

Multi compressor units

- ☑ Open frame for multi-compressors racks
- ☑ Three or four compressors on parallel
- ☑ Many different compressor types
  - › Hermetic
  - › Hermetic Scroll (Brand: Copeland)
  - › Semihermetic reciprocating (Brand: Bitzer, Dorin, Copeland Stream & Frascold)
  - › Screw compressors: For LRV model is a single screw from J&E Hall and for LRS model Bitzer (twin screw)
    - Larger Refrigeration capacities or solution with screw compressors has to be selected from our technical department.
    - Consist in many models for medium and low temperature, with a refrigeration capacity up to 900,000 Watt.
- ☑ Compatible with latest refrigerants*

Standard features

- › Metal open frame with electrical switchboard
- › Compressor parallel with discharge and suction header
- › Liquid receiver
- › Liquid line
- › High and low pressure switch
- › Electrical switchboard complete with electronic control

Most common used options:

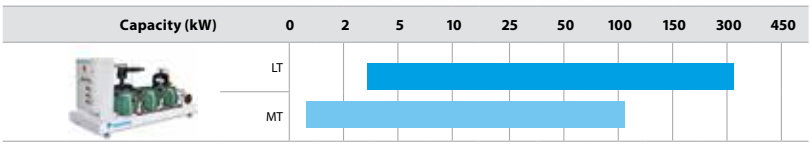
- › Panels to close the frame and put it outside
- › Oil equalization through mechanical floating valve
- › Oil equalization through electronic valve
- › Oversized liquid receiver
- › Refrigerant charge

Other options available on request

*Note: Selection from Selection software based on R404A, R134a and R407F

Single Screw compressor

The single screw compressor consists of a main single screw and two gate rotors. They are designed for high capacities and optimal performances through the step less capacity control.



LRE

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 depending on the used compressor
› 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.

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

Accessories:

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
INSRD	Closed frame with double layer sound proofing material

RIC. LIQ.	Oversized liquid receiver
CFF	Compressors sound shell
ELC.C	Electronic card EWCM4180 - XC1000D – EWCM9100
FQD	Frequency driver

Other additional equipment and special requirements on request

LRB, LRD, LRR, LRC

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, R 449A, R448A, R452A R407F
› Reciprocating semi hermetic compressors:
LRB - Bitzer
LRD - Dorin
LRR - Frascold,
LRC - 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.

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

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INSRD	Closed frame with double layer sound proofing material
CFF	Compressors sound shell
FQD	Frequency driver

RIC. LIQ.	Oversized liquid receiver
FREON	Refrigerant charge
ELC.C	Electronic card EWCM4180 - XC1000D – EWCM9100
CR1	CR1 Capacity controller
CR2	CR2 Capacity controller
CAP	Capacity step controled compressors

Other additional equipment and special requirements on request

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

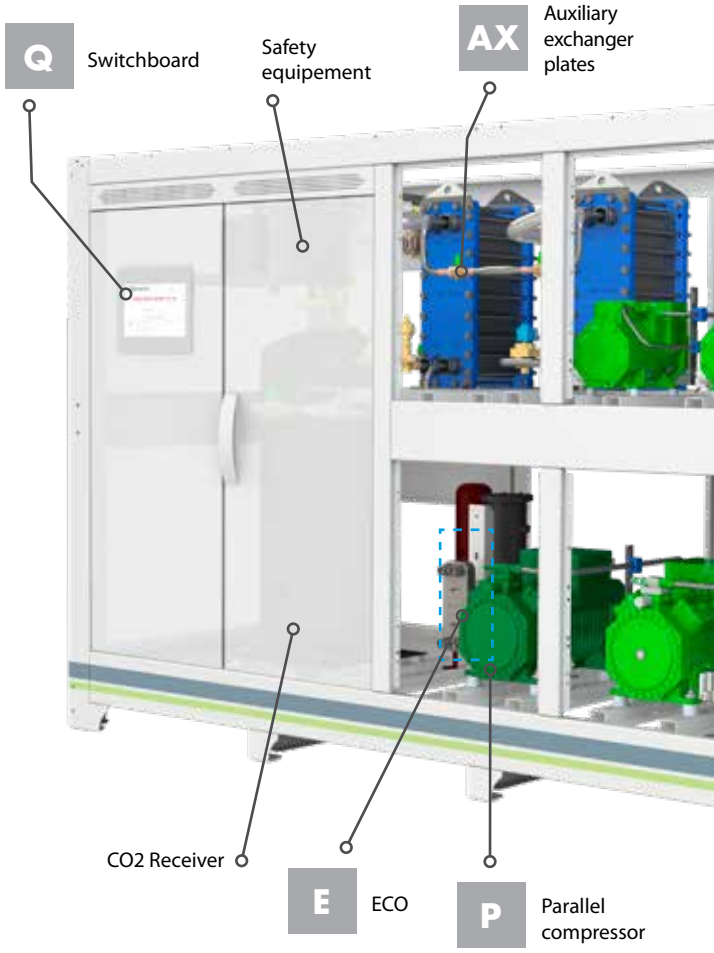
MT

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

FullCO$_2$ models are available in sheet metal chassis, accesible 360º 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

EASY MAINTENANCE

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.

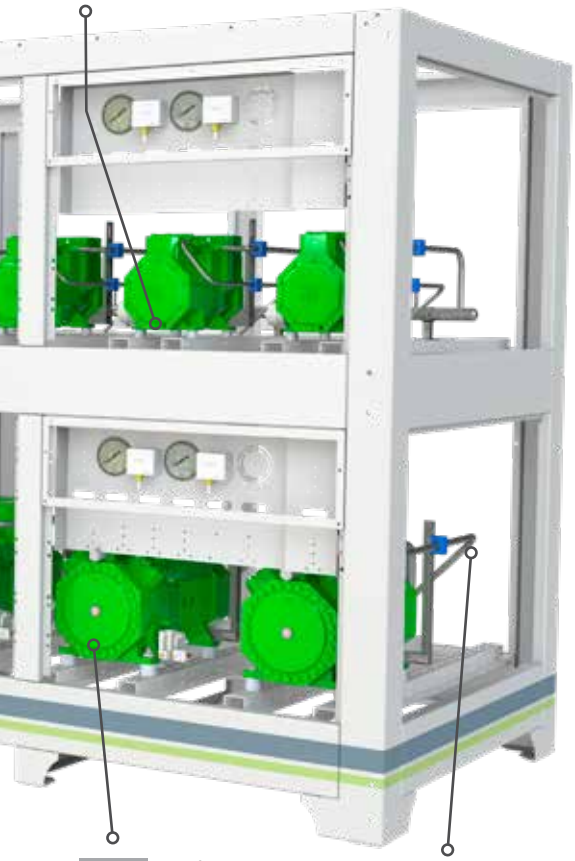
Double safety

double safety

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

Tewis
a member of DAIKIN group

FULL CO_2



BT — **Low temperature group**
Covers freezing needs. Equipped with oil system, gas cooler connections and all necessary protection and safety elements.

MT — **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_2 receiver.

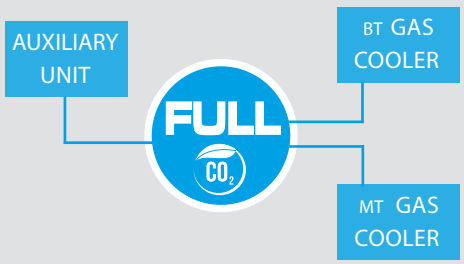
AX — **Auxiliary exchanger plates**
They keep the plant at its optimum operating point when ambient temperatures are high.

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_2 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_2 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.

Compressor packs & racks

Small Racks

Small transcritical units without condenser

- Small dimensions: 1600 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 CO2 pressure.
- 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

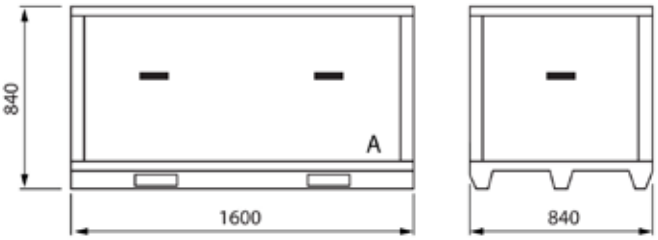
Plug&Play

Electronic Control

Proportional Modulation

Heating Interchanger (Optional)

Protective Case



☑ MT		1	2 comp.
☑ MT + LT		2+1	

FNB 1.560 mm	10 kW	
	40 kW	
	45 kW	

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

LT MT Clime Global

MSC Mechanical subcooler

PC Parallel compressor

Heating interchanger

Compressor packs & racks

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 F-Gas Free

Plug&Play

Proportional Modulation

Protective Case

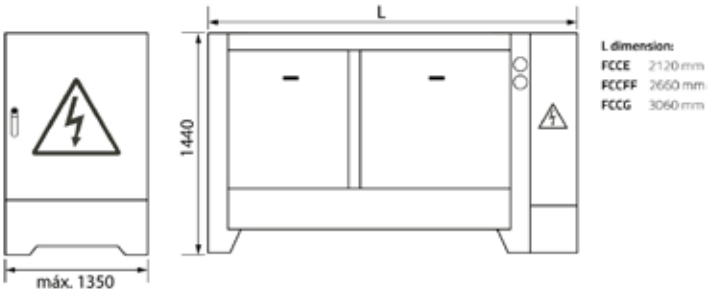
Switchboard

Electronic Control

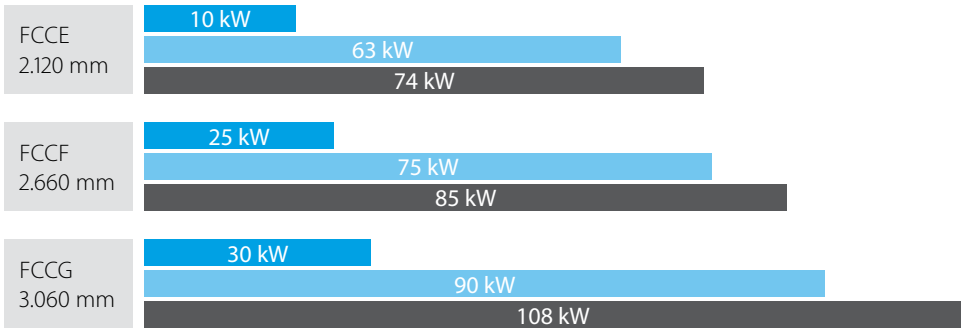
Heating Interchanger (Optional)

PC Parallel compressors (Optional)

MSC Mechanical Subcooler (Optional)



☑ MT	2	3	4	5 comp.
☑ MT + LT	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

LT MT Clime Global MSC Mechanical subcooler PC Parallel compressor Heating interchanger

Compressor packs & racks

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

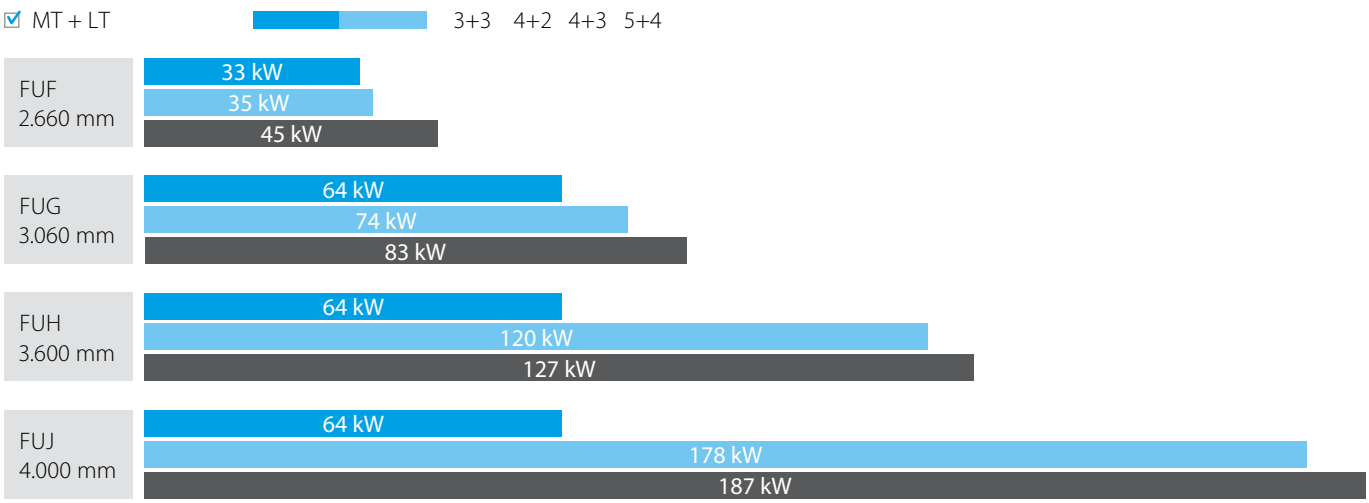
Switchboard

Parallel compressors (Optional)

Proportional Modulation

Electronic Control

Mechanical Subcooler (Optional)



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

LT MT Clime Global

MSC Mechanical subcooler

PC Parallel compressor

Heating interchanger

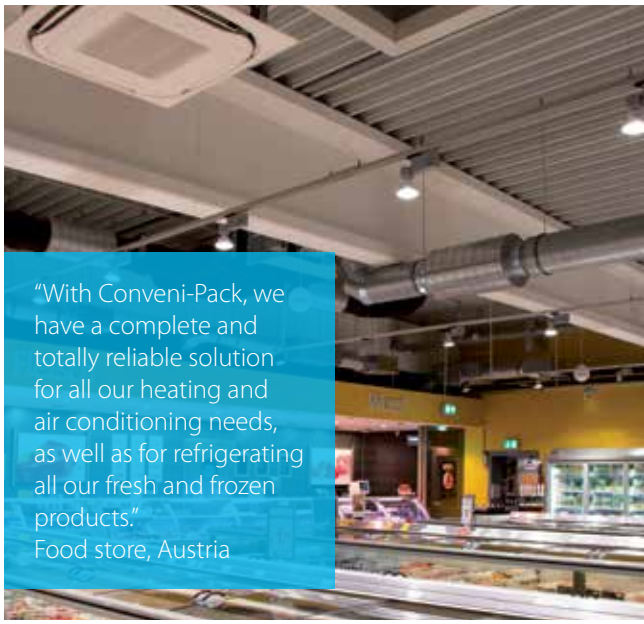
Switchboard & electronic control

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_2 solutions with Booster circuit and allows to manage up to two circuits for the recovery of heat.
- Televis 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.



"With Conveni-Pack, we have a complete and totally reliable solution for all our heating and air conditioning needs, as well as for refrigerating all our fresh and frozen products."
Food store, Austria

"The flexible system optimally accommodates different cooling temperatures for all refrigerating units and can be controlled remotely. The system's near-silent operation guarantees that the noise level is kept at a minimum for residents."
Hotel 47°, Germany

"An organic market should not just sell sustainable food products but should also use green energy and as little as possible. It was not just for reasons of conscience and image that Bergfeld's Biomarkt in Bonn decided on ZEAS from Daikin."
Bergfeld's Biomarkt, Germany

"We wanted a future-proof, energy efficient and proven technology with high reliability."
Bakery cooperative, Germany

"Freshness and healthy nutrition contribute to patient recovery. The storage of easily perishable goods plays a key role here. That's why Municipal Hospital opted for a special refrigeration technology: ZEAS."
Kiel Municipal Hospital, Germany

"Quality and operational safety are important here at Germany's largest manufacturer of organic meat and sausage products. A total of 28 ZEAS systems with future-proof R-410A guarantee a fault-free and closed refrigeration chain."
kff kurhessische fleischwaren GmbH, Germany

In a German supermarket Conveni-Pack teams up with ZEAS to supply service counters, fridges, an air curtain and indoor A/C units, a cooling storage room and deep-freeze cabinets.

Integrated solutions

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

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

Cooling/AC (High Temperature) (+20°C/+10°C)

Heating

Model	Product name	Capacity (kW)	0	2	5	10	25	50	100	150	300	450
Integrated solution for chilling, freezing, comfort cooling and heating	Conveni-Pack LRYEQ-AY											
	Mini racks, Racks, Duplex											

Service station (Ranst, Belgium) Conveni-Pack

Discover why a Belgian petrol station owner chose Daikin for its shop comfort and refrigeration needs.
www.youtube.com/DaikinEurope

Conveni-Pack,

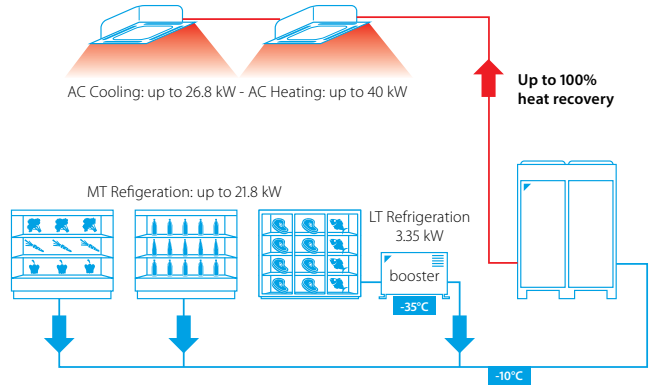
integrated solution for commercial refrigeration, heating and air conditioning

Why choose Conveni-Pack?

Competition in the retail food sector is fierce. This does not just affect the income you can earn from sales - operating costs are also a determing factor for success.

Energy efficient heat recovery system

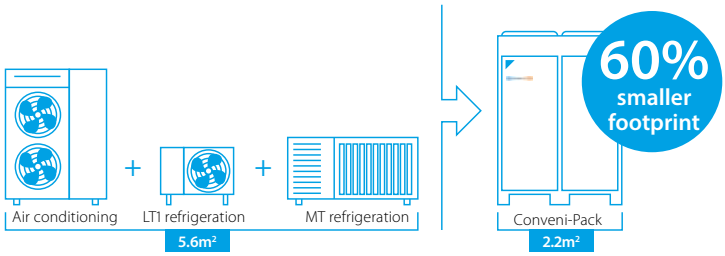
› Conveni-Pack recovers up to 100% of the heat extracted from supermarket refrigeration cases and re-uses it to heat the retail space and improve shop comfort at no additional cost (heat recovery system)
› Savings of up to 50% on energy costs
› Daikin inverter scroll compressor with economizer technology



Above-mentioned scheme is an example of what can be delivered depending on predefined conditions.
For more detailed information, please consult the technical specifications in this catalogue.

Installing a compact solution

› Easy to install, even in small spaces
› Small footprint (up to 60% smaller footprint than conventional systems) and low weight
› Reduced piping requirements
› Minimal planning groundwork and lower assembly costs



Unique combination

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

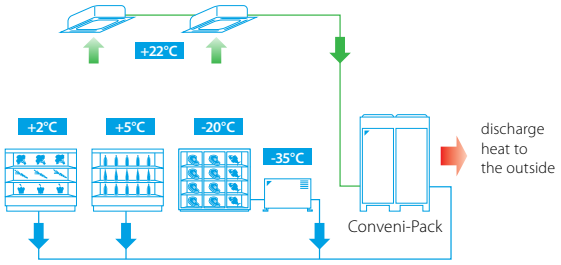
Reliable operation

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

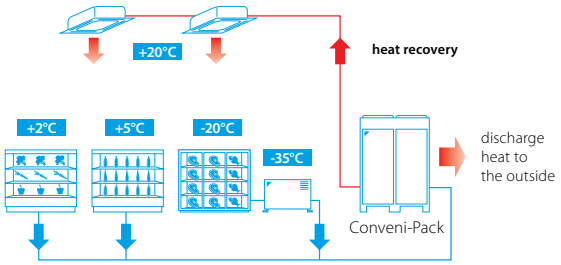
Year-round climate comfort

› 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.

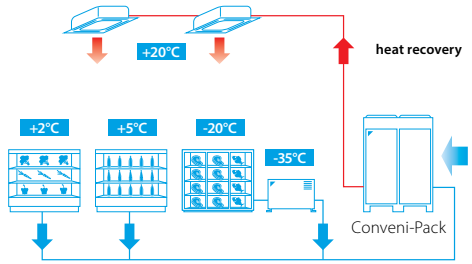
Summer



Spring/Autumn



Winter



If available heat from the cabinet is not sufficient to fulfill the demand from the shop, the outdoor unit will also operate as a heat pump system.

Internationally awarded

Winner of several awards* thanks to the innovating technology used and environmental friendly solution offered:

- Winner of UK Environmental Product of the Year, Cooling Industry Awards - 2006
- Winner of Incentive Prize, German Environment Ministry - 2007
- Winner of the Innovation Trophy, equipmag (exhibition in France) - 2008
- 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.

Discover more references on
www.daikineurope.com/references

Benefits for installers/consultants

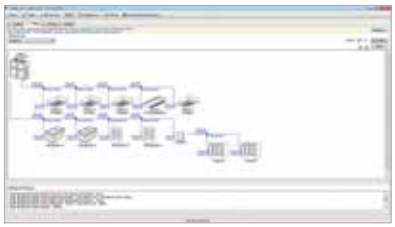
- Integrated electrical & control box
- Unit already pre-charged with refrigerant
- Established VRV technology ensuring optimised installation and maintenance
- Reduced delivery time thanks to European manufacturing plant
- Flexible system for multiple applications
- Connectable to all grocery refrigeration 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

LRYEQ-AY

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_2 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

Conveni pack, in combination with a ZEAS unit.

This store was nominated by spar as its 'local supermarket of the year', thanks in part to its owner's strategic investment in a key department: Refrigeration. By installing a Conveni pack in combination with Zeas, it was possible to **save around €10,000 on energy costs each year**, from money that would otherwise have spent on heating. **SPAR, Supermarket.**

Medium Temperature Refrigeration				**LRYEQ-AY**	**16**
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^3/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^3/min	230
Fan motor	Output			W	750
	Drive				Direct drive
Sound pressure level	Nom.			dBA	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_2eq	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 air conditioning 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)[1]			5,6	7,1	8,0	9,0	11,2	14,0	16,0	22,4	28,0
Heating capacity (kW)[2]			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)

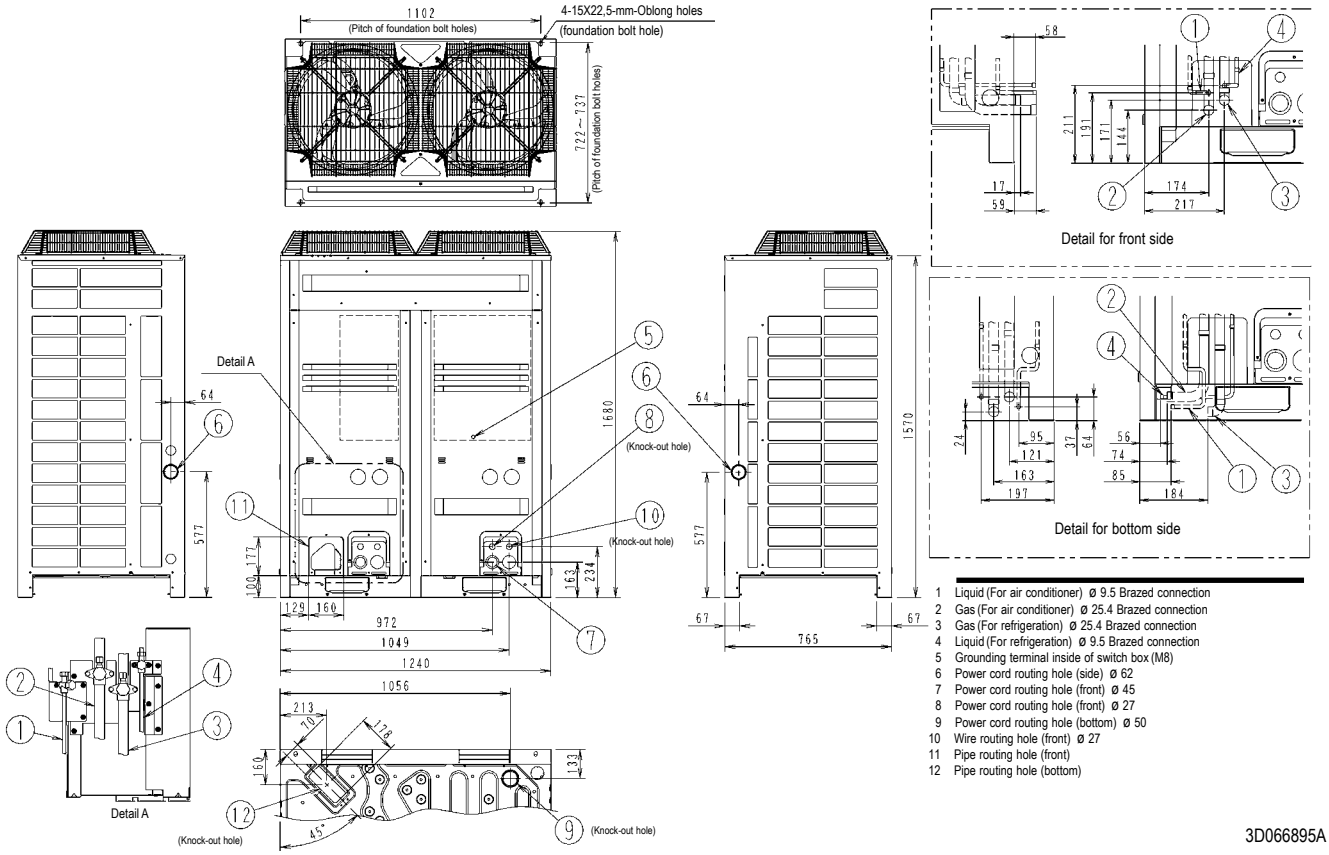
Model	Product Name		80	100	125	140	200	250
Heating capacity (kW)[2]			7,4 - 9,2	11,6 - 13,4	15,6	16,2 - 19,9	29,4	29,4 - 31,1
Biddle air curtain free hanging	CYVS-DK		●	●	●	●	●	●
Biddle air curtain cassette	CYVM-DK		●	●	●	●	●	●
Biddle air curtain recessed	CYVL-DK		●	●	●	●	●	●

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

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

Detailed technical drawings

LRYEQ16AY



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LRYEQ-AY

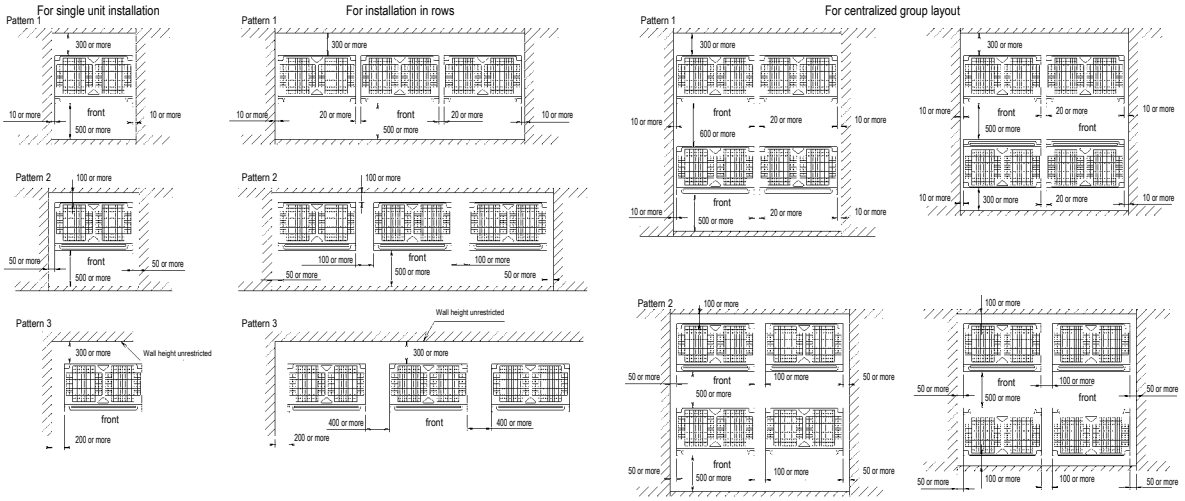
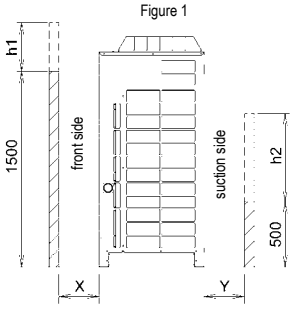


Figure 1

1. Heights of walls in case of patterns 1 and 2:
   Front: 1500
   Suction side: 500mm
   Side: Height unrestricted
   The installation space as shown on this drawing is based on cooling operation at 32°C (outdoor air temperature).
   If the design outdoor air temperature exceeds 32°C degrees, provide a broader suction space than showing on the drawing.
2. If the walls are higher than mentioned above, then additional space is needed.
   Suction side: service space + h2/2
   Front side: service space + h1/2
   See figure 1
3. When installing the units, select the pattern that best fits the available space.
   Always keep in mind to leave sufficient space for a person to pass between unit and wall and for the air to circulate freely.
   If more units are to be installed than are catered for in the above patterns, your layout should take into account of the possibility of short circuits).
4. Provide sufficient space at the front to connect refrigerant piping (comfortably).



3D106211

LCBKQ-AV1

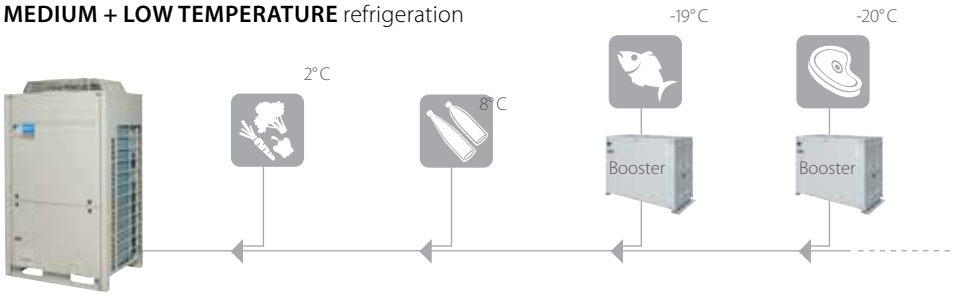
Booster unit

- 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

LCBKQ3AV1

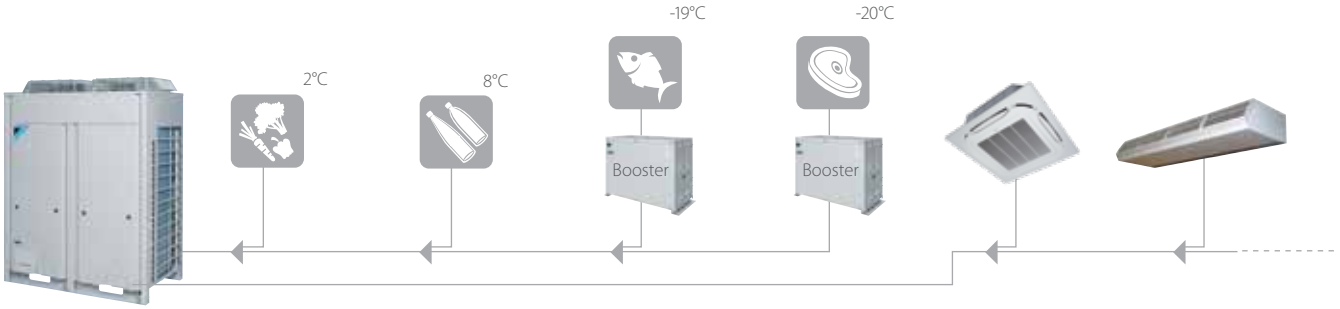
Booster with ZEAS:

MEDIUM + LOW TEMPERATURE refrigeration



Booster with Conveni-Pack:

MEDIUM + LOW TEMPERATURE refrigeration + space air conditioning + Biddle air curtain



Low Temperature Refrigeration				LCBKQ-AV1
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^3/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^3/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

Medium temperature with air conditioning

Mini racks

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

FNB FNV58 1.560 mm	18 kW 27 kW 45 kW

Racks

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

FCCE 2.120 mm	18 kW 40 kW 52 kW
FCZ 3E FCZ 4E 2.120 mm	18 kW 50 kW 74 kW

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

FCZ4F 2.660 mm	36 kW 70 kW 85 kW
FCZ4G FCCG 3.060 mm	36 kW 93 kW 108 kW

Duplex racks

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

FUJ 4.000 mm	115 kW 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

- 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
- 85 kW

FCZ4G
4.000 mm

FCCG
3.060 mm

- 9 kW
- 30 kW
- 70 kW
- 108 kW

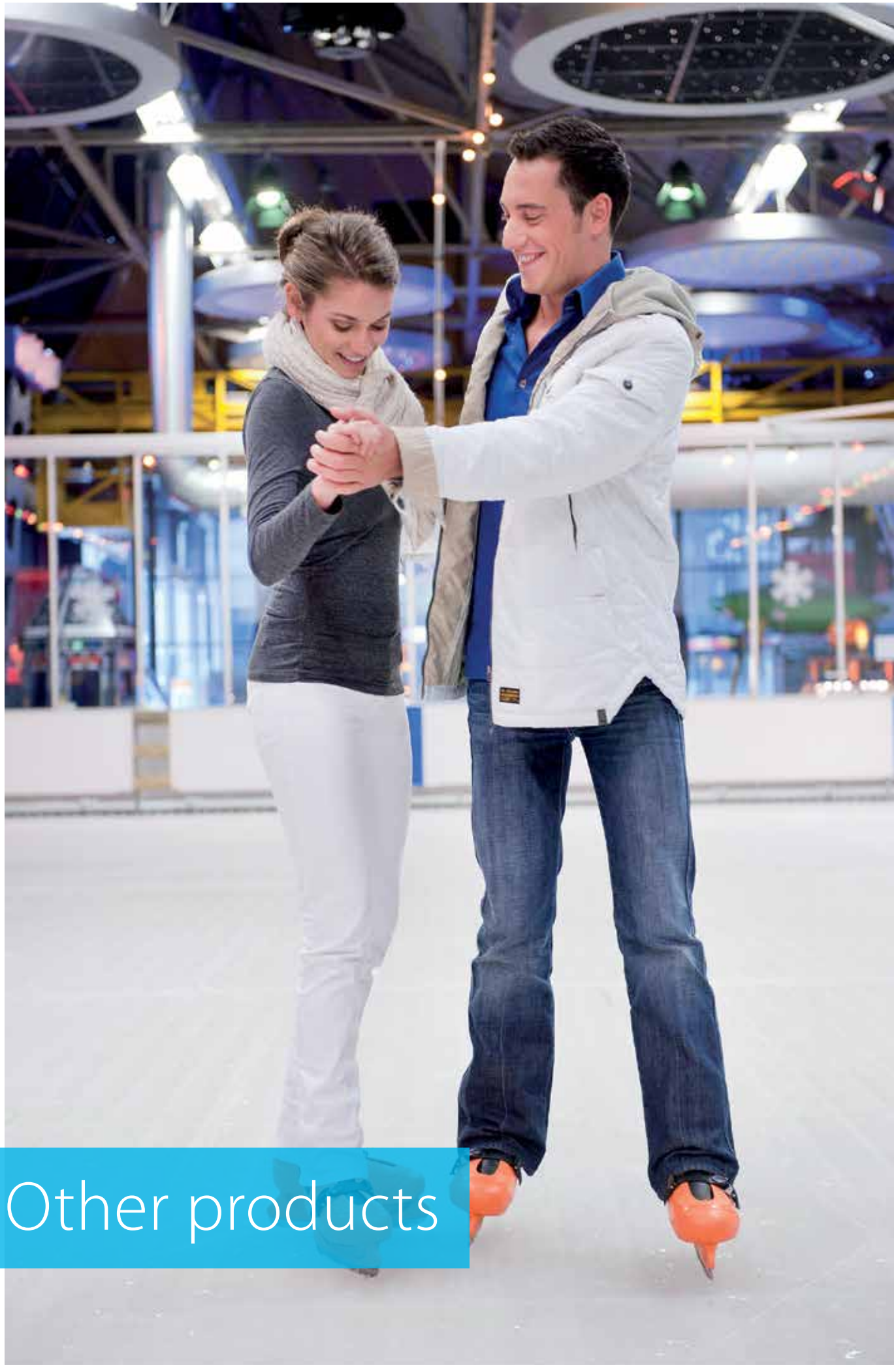
Duplex racks

☑ 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

LT MT Clime Global — MSC Mechanical subcooler — PC Parallel compressor — Heating interchanger — Axial — Radial



Other products

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 to 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

Options:

› 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)

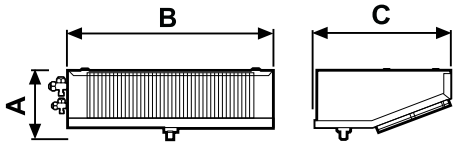
Types:

› flat evaporator
› double flow
› cubic design

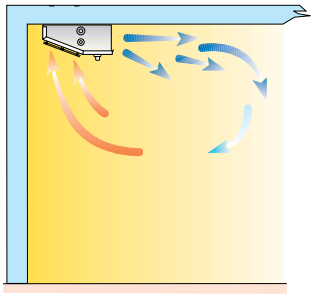
› Evaporator only
› Evaporator + EEV/TEV
› Evaporator + EEV/TEV + electronic controller

Dimensions

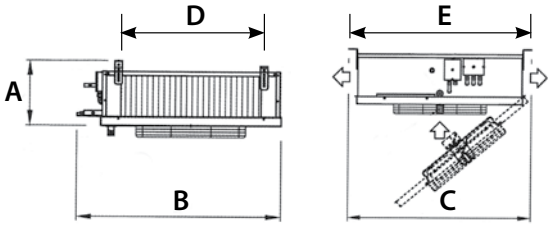
Flat



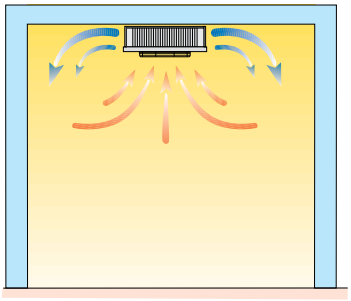
mm	A	B	C
201	215	614	410
202	215	1034	410
203	215	1614	410
232	150	713	455
301	300	910	690
302	300	1530	690
303	300	2150	690
304	300	2770	690
305	300	3390	690



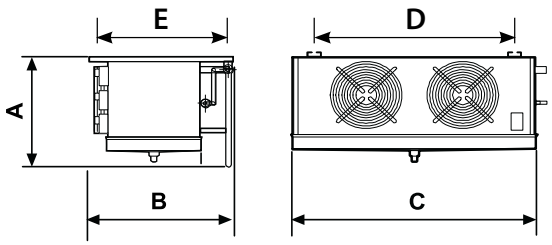
Double flow



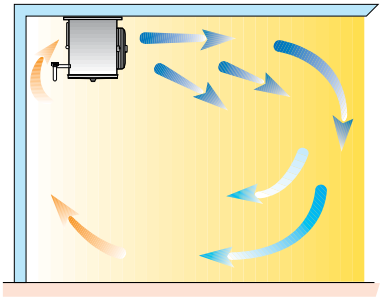
mm	A	B	C	D	E
231	171	579	585	293	600
232	171	889	585	603	600
233	171	1199	585	913	600
234	171	1509	585	1223	600
352	300	1671	995	1214	1065
353	300	2291	995	1834	1065
354	300	2911	995	2454	1065
355	300	3531	995	3074	1065



Cubic



mm	A	B	C	D	E
301	420	480	789	495	345
302	420	480	1254	960	345
303	420	480	1719	1425	345
HEU351	545	690	805	605	540
HEU352	530	690	1220	965	540
HEU353	600	690	1690	1370	540
HEU403	620	700	1840	1520	545
HEU502	844	992	1829	1526	740
SKC352	490	606	1614	1270	450
SKC353	490	606	2234	1890	450
SKC452	610	650	2032	1680	510
SKC503	800	830	3350	2760	675



Other products

Model	Refrigerant		Capacity range
Large- Monoblock for wall mounting LMH Industrial type	Standard refrigerant: MT: R134a, LT: R452A Other refrigerants possible upon request		0° 2,5 to 28,9kW -20° 2,5 to 28,6kW
Large- Monoblock for shock freezing LMH	Direct mounting trough the wall Standard refrigerant: MT: R134a, LT: R452A Other refrigerants possible upon request		-40° 11,8 to 13,5 kW
Open frame condensing units with Bitzer semi hermetic compressor LA	Standard refrigerants: R134a, R407H, R449A Other refrigerants upon request Semi hermetic Bitzer compressor Liquid receiver with safety pressure relief valve for PED units Many different options and accessories available upon request.		-10° 3,26 to 29,5 kW -30° 1,1 to 24 kW
Mid to Large Bi-Block with cubic evaporator LBH/LBK	MT: R134a, LT: R452A, R407F Other refrigerants possible upon request		0° 14,3 to 25,28 kW

C° capacity on evaporation temp.

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

Other products

Model	Refrigerant		Capacity range
Mid to Large Bi-Block with cubic evaporator LBJ/LBM	MT: R134a, LT: R452A, R407F Other refrigerants possible upon request		0° 13,2 to 91,8 kW -20° 10,9 to 66,1 kW -40° 4,6 to 32,45 kW
Commercial Biblock model for workrooms LBHD / LBEH	MT: R134a, LT: R452A, R407F Other refrigerants possible upon request		-10° 4,7 to 15 kW
Water Chiller LWW (water cooled) LWA (air cooled)	Standard Refrigerant: MT: R134a, R449A		-5° 19,4 to 197 kW -10° 16,3 to 165,2 kW -15° 13,3 to 86 kW -20° 10,6 to 69,1 kW

C° capacity on evaporation temp.

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

Hubbard

Products

Hubbard Products has an enviable global reputation for innovation and excellence in refrigeration design, refrigeration engineering and refrigeration solutions for static and transport refrigeration requirements.

Hubbard serves the cool chain supply sector offering a wide range of direct drive, alternator drive, Diesel drive and stand alone electrical units for panel vans, box body vehicles and truck and trailer combinations.

Hubbard Products Ltd., is one of the UK's leading designers, manufacturers and suppliers of energy-efficient commercial cooling equipment and has earned a Global reputation for innovation and design-led excellence.

- Cellar Cooling
- Convenience and Retail Cooling
- Multi Compressor Packs
- Cold Room Units
- Heat Recovery Systems
- Transport Refrigeration
- Low GWP, natural refrigeration systems

Made to Order

Made to Order

We build units according to customer requirements.

Our refrigeration experts are able to give the best advice, personalised to each situation.

We can provide complete solutions, entirely tailored to the customer needs.

Contact us to find the best solution for your business.

Please contact the refrigeration department at Daikin Europe (refrigeration@bxl.daikineurope.com) or your local refrigeration product manager.

Options

Options

for ZEAS and Conveni-Pack

		Conveni-Pack	ZEAS						Multi-ZEAS	
		LRYEQ16AY	LREQ5BY1	LREQ6BY1	LREQ8BY1	LREQ10BY1	LREQ12BY1	LREQ15BY1	LREQ20BY1	LREQ15BY1Rx2	LREQ20BY1Rx2
SEE NEXT PAGE	Digital pressure gauge kit	BHGP26A1									
Pressure gauge kit		-	KHGP26B140								
Snowbreak hood*	(a+b+c+d) kit	KPS26C504	KPS26C160		KPS26C280			KPS26C504			
	a. Air outlet	KPS26C504T	KPS26C160T		KPS26C280T			KPS26C504T			
	b. Air inlet (left)	KPS26C504L	KPS26C504L								
	c. Air inlet (right)	KPS26C504R	KPS26C504R								
	d. Air inlet (rear)	KPS26C504B	KPS26C160B		KPS26C280B			KPS26C504B			
Central drain pan kit		KWC26C450**	KWC26C160		KPS26C280			KPS26C450		KPS26C450*** x2	
SEE NEXT PAGE	Modbus communication kit	BRR9A1V1								BRR9A1V1****	
Booster unit		LCBKQ3AV19								-	
Suction branch pipe for multi		-	-							EKHRQZM*****	
Refnet header		KHRQM22M29H8									
		KHRQ22M64H8									
		KHRQM22M75H8									
Refnet joint		KHRQ22M20TA8									
		KHRQ22M29T9									
		KHRQ22M64T8									
		KHRQ22M75T8									
intelligent touch Controller		DSC601C51	-								
intelligent touch Manager		DCM601A51	-								

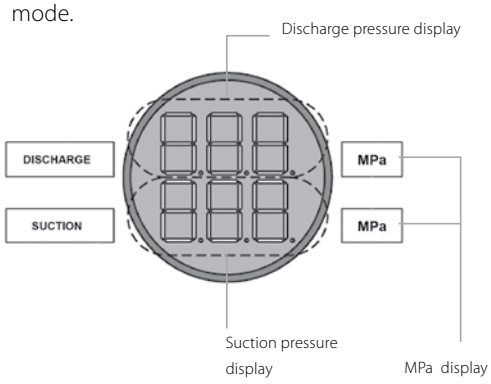
* Snowbreak hoods are field-supplied. For technical drawings and more information, contact your dealer. It is recommended to install a snowbreak hood when regular snowfall occurs.
** In cold areas, provide a drain pan heater (field supply) to prevent drained water from freezing up in the drain pan *** required for each module
**** software update required (to be executed during commissioning) ***** mandatory

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.



BHGP26A1

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

BRR9AV1

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

Options

Monoblock, Biblock and Wineblock

Options Monoblock units	Option code	Medium temperature applications		Low temperature applications	
		LMSMD	LMCMD	LMSLN	LMCLN
Electronic control panel (MIR 90)	D.CNT CTR	•	No	Yes	No
Cable for door switch connection	D.MIC.POR	Yes (only in combination with D.CNTR.CTR option)	No	Yes (only in combination with D.CNTR.CTR option)	No
Remote control panel (5 m cable length)	D.PAN.SNG	Yes (only in combination with D.CNTR.CTR option)	No	Yes (only in combination with D.CNTR.CTR option)	No
Common remote control panel for multiple units	D.PAN.MUL	Yes (only in combination with D.CNTR.CTR option)	Yes	Yes (only in combination with D.CNTR.CTR option)	•
Longer remote control panel cable (till 10 m)	D.CAV PRM 10 mt	Yes (only in combination with D.CNTR.CTR option)	Yes	Yes (only in combination with D.CNTR.CTR option)	•
Longer remote control panel cable (till 15 m)	D.CAV PRM 15 mt	Yes (only in combination with D.CNTR.CTR option)	Yes	Yes (only in combination with D.CNTR.CTR option)	•
winter kit 1 full: Condenser fan pressure switch + Compressor crankcase heater + Supplemental solenoid valve on the discharge line	D.PRS VNT + D.RES CAR + D.SOL.SBR	•	• (cap ≥ 300: included)	•	• (cap ≥ 300: included)
Winter kit 2 basic: Condenser fan speed regulator (temperature controlled)	D.VVE.TER	No	only for 300	No	No
Winter kit 2 full: Condenser fan speed regulator (temperature controlled) + Compressor crankcase heater + Supplemental solenoid valve on the discharge line	D.VVE.TER + D.RES CAR + D.SOL.SBR	• (cap ≥ 200: included)	• (cap ≥ 300: included)	• (cap ≥ 300: included)	• (cap ≥ 300: included)
Winter kit 3 basic: Condenser fan speed regulator (Pressure controlled)	D.VVE.PRS	No	only for 300	No	No
Winter kit 3 full: Condenser fan speed regulator (pressure controlled) + Compressor crankcase heater + Supplemental solenoid valve on the discharge line	D.VVE.PRS + D.RES CAR + D.SOL.SBR	• (cap ≥ 200: included)	• (cap ≥ 300: included)	• (cap ≥ 300: included)	• (cap ≥ 300: included)
Anti-corrosion treatment (cataphoresis) on condenser coil	D.FRS CND	•	•	•	•
Anti-corrosion treatment (cataphoresis) on evaporator coil	D.FRS EVP	•	•	•	•
Voltage monitor	D.MON TEN	•	•	•	•
Water-cooled condenser (water from net) with pressure controlled water valve	D.CON ACQ	•	•	•	•
switchboard heater	D.QUA.RIS	•	Only for cap ≥ 060	•	Only for cap ≥ 060
Centrifugal fan kit	D.VNT.CEN	•	Only for cap ≥ 060	•	Only for cap ≥ 060
Serial output	D.KIT.SUP	•	•	•	•

Options Biblock units	Option code	Medium temperature applications		Low temperature applications	
		SB.LBTMD	SB.LBCMD	SB.LBTLN	SB.LBCLN
Common remote control panel for multiple units	D.PAN.MUL	No	•	No	•
Longer remote control panel cable (till 10 m)	D.CAV PRM 10 mt	•	•	•	•
Longer remote control panel cable (till 15 m)	D.CAV PRM 15 mt	•	•	•	•
Fixed calibration high pressure switch AR	D.PRS HPF	Only Cap ≥ 100	Only Cap ≥ 100	Only Cap ≥ 172	Only Cap ≥ 172
Winter kit 2 basic: Condenser fan speed regulator (temperature controlled)	D.VVE.TER	•	•	•	•
Anti-corrosion treatment (cataphoresis) on condenser coil	D.FRS CND	•	•	•	•
Anti-corrosion treatment (cataphoresis) on evaporator coil	D.FRS EVP	•	•	•	•
Voltage monitor	D.MON TEN	•	•	•	•
Water-cooled condenser (water from net) with pressure controlled water valve	D.CON ACQ	•	•	•	•
switchboard heater	D.QUA.RIS	•	•	•	•
Serial output	D.KIT.SUP	•	•	•	•
Liquid line solenoid valve	D.SOL.LIQ	No	•	No	•

Options Wineblock units (mono- as well as biblock models)	Options	LMSWHD	SB.LBCWHD SB.LBWWHD
Anti-corrosion treatment (cataphoresis) on condenser coil	D.FRS CND	•	•
Anti-corrosion treatment (cataphoresis) on evaporator coil	D.FRS EVP	•	•
Voltage monitor	D.MON TEN	•	•
Water-cooled condenser (water from net) with pressure controlled water valve	D.CON ACQ	•	•
Serial output	D.KIT SUP	•	•
Winter kit 2 basic: Condenser fan speed regulator (temperature controlled)	D.VVE.TER	•	•
Winter kit 3 basic: Condenser fan speed regulator (pressure controlled)	D.VVE.PRS	•	•

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 hermectic 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	•	•

Ice bar

Cabinet cooling

Supermarket

Multi ZEAS
condensing units

Cold storage

Notes

Notes

KEEP COOL, SAVE MONEY

Daikin refrigeration products are designed to reduce environmental impact. That's why Daikin ZEAS and Conveni-Pack already comply with the latest F-gas regulation. This secures your investments and enables you to plan ahead for long-term projects, already complying with all the regulations.

Daikin Europe N.V. Naamloze Vennootschap Zandvoordestraat 300 · 8400 Oostende · Belgium · www.daikin.eu · BE 0412 120 336 · RPR Oostende (Publisher)

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