



Commercial Refrigeration Catalogue 2021





Daikin is a strong challenger in the refrigeration market. We can create the ideal solution for each customer's specific situation. As our products contain the latest technologies we ensure the highest energy efficiency. Our units are rigorously tested in order to provide you reliable operation. With the acquisition of the Zanotti, Tewis and AHT groups, we expand our refrigeration business providing a larger and more diverse product line for all aspects in the cold chain.

Refrigeration

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Any refrigeration system that contains fluorinated greenhouse gases is in scope of the F-gas regulations.

For fully/partially pre-charged equipment: contains fluorinated greenhouse gases. Actual refrigerant charge depends on the final unit construction, details can be found on the unit labels.

For non pre-charged equipment (including, but not limited to racks): its functioning relies on fluorinated greenhouse gases.

The F-gas regulations do not apply to systems that contain only natural refrigerants such as propane (R-290) and carbon dioxide (R-744).

Refrigerant	GWP AR4	GWP AR5
R-134A	1430	1300
R-407C	1774	1620
R-407F	1825	1670
R-407H	1490	1380
R-410A	2088	1920
R-448A	1387	1270
R-449A	1397	1280
R-452A	2141	1945
R-290	3	3
R-744	1	1



Inverter technology



Scroll compressor



Screw compressor



Reciprocating compressor



Swing compressor



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

<p>POST HARVEST PROCESSING</p> 	<p>FOOD PROCESSING</p> 	<p>WAREHOUSING</p> 	<p>FOOD RETAIL</p> 
		<p>RESTAURANTS/PUBS</p> 	<p>HOME DELIVERY SOLUTIONS</p> 
		<p>PHARMA SOLUTIONS</p> 	
















Truck - Transport ref
LONG Distances

Light truck - Transport ref
MEDIUM Distances

Van - Transport ref
SHORT Distances

We can meet all refrigeration needs from farm to fork

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

<p>FOOD RETAIL</p> 	<p>EVENT SPACES</p> 	<p>COLD STORAGE</p> 	<p>CATERING</p> 
<p>CHILLED TRANSPORT</p> 	<p>HOTELS</p> 	<p>ICE SKATING RINKS</p> 	<p>CLEANROOMS/HOSPITALS</p> 
<p>BREWERY</p> 	<p>BAR</p> 	<p>FISHERY</p> 	<p>SEASONING (CHEESE/MEAT)</p> 
<p>BUTCHERS</p> 	<p>RESTAURANTS</p> 	<p>INDUSTRY</p> 	<p>...</p> <p>We can fulfill any refrigeration need</p>

Daikin Refrigeration – United in cold



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 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.



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.



AHT develops, manufactures and sells refrigerating and freezing showcases specifically suited for food retailers. Leading the "plug-in" type showcases segment, AHT leads the market by the active launch of new products corresponding to evolving store layouts. Furthermore, utilizing its technological capabilities and business resources, AHT serves large accounts which include major food retail chains worldwide.



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 CO₂ 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.



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.

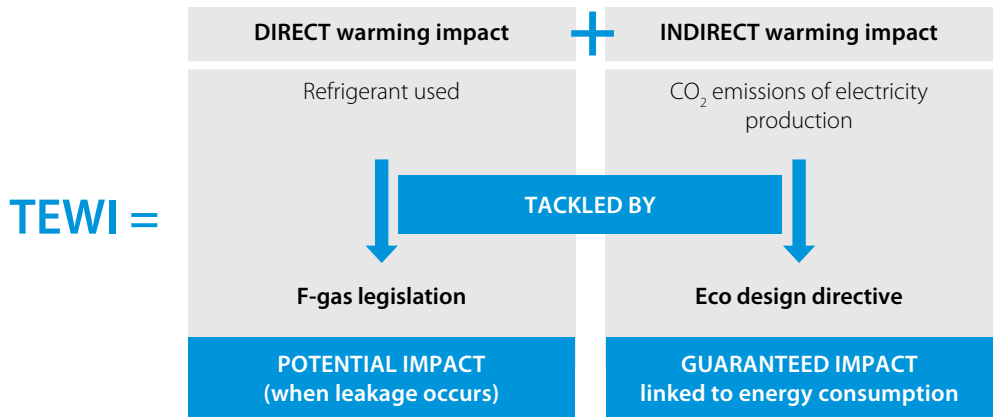


Meeting customer needs!

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)



Reduction of CO₂ 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 CO₂ emissions caused by electricity production (Indirect warming impact). Country per country situation is different, however on average in Europe CO₂ 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!





E. LECLERC, HYPERMARKET
ZEAS



BEER COOLING FACILITY,
CHILLED WITH ZEAS



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

COOMBE FISHERIES
HIGH-PERFORMANCE ZANOTTI LT REFRIGERATION EQUIPMENT



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


























Products overview

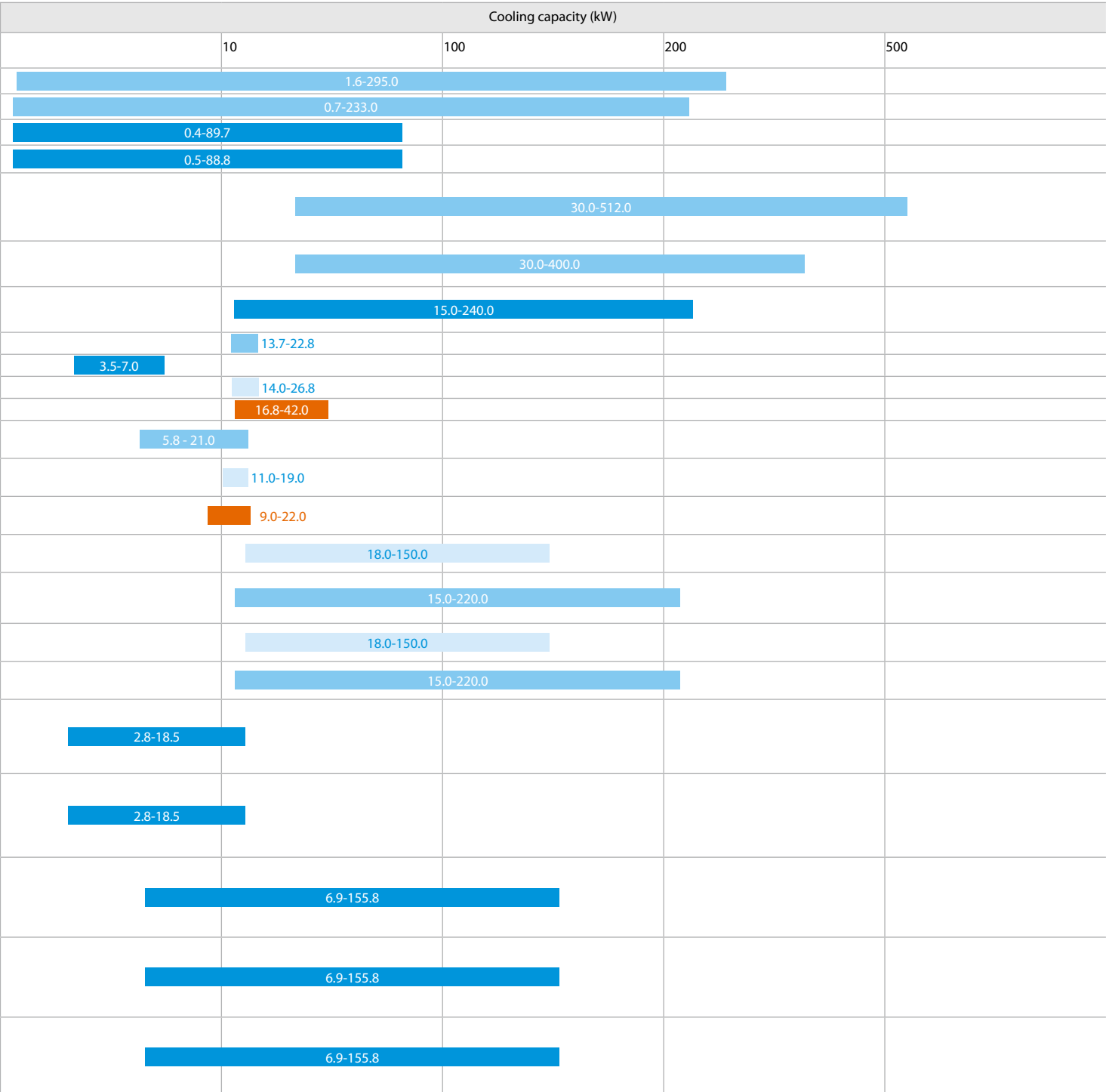
			Technology compressor	Page	Hermetic				Semi-hermetic		Capacity control							
			Application	Refrigerant		Reciprocating compressor	Rotary	Scroll	Swing	Reciprocating compressor	Screw	Varispeed	External frequency drive	DC control	Digital scroll			
Plug & Play solution for cold room & wine rooms	Plug-in coolers suitable for HoReCa		LT / MT	R290	16	•						(•)						
	Uni-block		MT	R134a	27	•		•										
				R407C	27	•												
				R407H	27	•												
			R290	27	•													
			LT	R452A	27	•												
				R407F	27					•								
	R290	27		•														
	HT Cooling		For wine applications	R134a	33	•												
Biblock		For wine applications	MT	R134a	30	•												
			LT	R452A	30	•												
				R407F	30	•												
	HT Cooling		For wine applications	R134a	34	•												
Condensing units	Single CU (ON/OFF or INVERTER)		MT	R449A*	39	•		•		•		•	•		•			
				R134a	39	•		•			•		•	•		•		
				R-410A	39			•								•		
					39		•					•			•	•		
			LT	R449A*	42	•		•				•		•	•			
				R407F	42	•		•				•		•	•			
				R-410A	42			•								•		
					42		•					•			•	•		
	Twin CU	MT		R449A*	43	•		•			•		•	•		•		
				R134a	43	•		•			•		•	•		•		
				R-410A	43			•								•		
					43		•					•			•	•		
		LT	R449*	43	•		•				•		•	•				
			R407F	43	•		•				•		•	•				
			R-410A	43			•								•			
			R449A	44			•						•	•		•		
Multi CU	MT		R-410A	44			•							•				
				44		•				•			•	•				
	LT		R449A	44			•					•	•					
			R-410A	44			•								•			
Booster CU (MT + LT)		MT		57						•			•					
		LT		57						•			•					



Cooling capacity (kW)				
	10	100	200	500
NA	NA	NA	NA	NA
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				
0.6-2.3				
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				

Products overview




		Technology compressor	Page	Hermetic				Semi-hermetic		Capacity control					
		Application	Refrigerant		Reciprocating compressor	Rotary	Scroll	Swing	Reciprocating compressor	Screw	Varispeed	External frequency drive	DC control	Digital scroll	
															
Compressor rack and packs	Racks 	MT	R449A	62	•		•		•	•	•	•		•	
			R134a	62	•		•		•	•	•	•		•	
		LT	R449A	62	•		•			•	•	•	•		
			R407F	62				•		•	•	•	•		
		MT		68						•			•		
		MT		69						•			•		
Integrated solutions (Refrigeration and climatisation)	Conveni-pack 	MT	R-410A	74			•							•	
		LT	R-410A	74			•							•	
		AC	R-410A	74			•							•	
		HR + HP	R-410A	74			•							•	
	CO ₂ Conveni-Pack 	MT		76				•							•
		AC		76				•							•
		HR + HP		76				•							•
	MIX CU 	AC		84						•			•		
		MT		84						•			•		
	MIX RACK 	AC		84						•			•		
		MT		84						•			•		
	Food processing	SAS - SAR  mono-block Bi-block	MT	R134a	36	hermetic									
R404A				36	hermetic										
UAV - USV 		MT	R134a	90	hermetic				semi-hermetic						
			R404A	90	hermetic				semi-hermetic						
			R407F	90	hermetic				semi-hermetic						







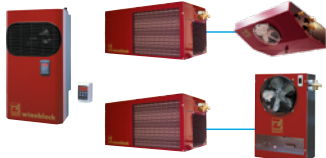






Plug and Play solutions


for cold rooms and wine rooms

Model	Product name	
Horizontal coolers	Paris Macao Malta	
Ice cream merchandisers	RIO H RIO S	
Promotion display coolers	Air curtain GD XL/XLS Coolbox	

Model	Product name	Capacity (kW)	0	1	2	3,5	5	10	15	25	35
Uni-block system for wall mounted installation (optional through-wall) in small and medium sized cold rooms R-290 Propane natural refrigerant	MGM/BGM			Freezing (Low temperature) (-20°C / +35°C)	Chilling (Medium temperature) (0°C / +35°C)						
Uni-block system for roof mounted installation in small and medium sized cold rooms R-290 Propane natural refrigerant	(M)SB			Freezing (Low temperature) (-20°C / +35°C)	Chilling (Medium temperature) (0°C / +35°C)						
Uni-block system for wall mounted installation in medium sized cold rooms	AS					Freezing (Low temperature) (-20°C / +35°C)	Chilling (Medium temperature) (0°C / +35°C)				
Bi-block system for wall mounted installation	GS			Freezing (Low temperature) (-20°C / +35°C)	Chilling (Medium temperature) (0°C / +35°C)						
Bi-block system for floor standing or roof mounted installation with capillary expansion system	SP-O			Freezing (Low temperature) (-20°C / +35°C)	Chilling (Medium temperature) (0°C / +35°C)						
Bi-block system for floor standing or roof mounted installation with thermostatic expansion valve	DB-O			Freezing (Low temperature) (-20°C / +35°C)	Chilling (Medium temperature) (0°C / +35°C)						
Uni-block system (RCV) and Bi-block system (RDV) for wine applications	RCV / RDV			Freezing (Low temperature) (-20°C / +35°C)	Chilling (Medium temperature) (0°C / +35°C)						

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

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

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



HoReCa range

Plug in, Refrigerate, Sell more!

Integral freezer and chiller cabinets

The chiller and freezer unit that maximizes your product display

- › High energy-saving can be achieved in comparison to conventional open units
- › Environmentally friendly with natural refrigerant propane (GWP 3)
- › Brilliant LED lighting system to enhance product display & help drive sales
- › Intelligent fan motor providing more further energy savings, typically 0.5 kWh daily
- › Plug in models, requiring no additional installation
- › Virtually maintenance-free refrigeration system
- › Easy clean and hygienic food safe synthetic interior casings



Flexible location options for Paris

- ✓ Can be used as a stand alone unit
- ✓ Can be used in a line up
- ✓ Can be used as an island
- ✓ Maximizes the use of floor space with an end cabinet
- ✓ Can be either installed below shelving or integrated into existing shelving systems

EU and UK models have same specs but different electricity plugs.

		PARIS	145_EU_403751	145_UK_403775	185_UK_403776	185_EU_403752	210_EU_403753	210_UK_403777	250_UK_403778	250_EU_403754	
Classification acc. EN 23953-2		L1									
Climate class acc. EN 23953-2		3									
Energy efficiency index EEI		%	39.1		38.0		34.6		32.5		
Use		Display & Sale									
Dimensions	Gross content		l	609		807		936		1,136	
	Net content		l	420		568		660		808	
	Total display area (TDA)		m ²	0.83		1.03		1.27		1.54	
	Length	Outside	mm	1,457		1,854		2,102		2,502	
		Inside	mm	1,328		1,723		1,973		2,373	
	Depth	Outside	mm	853							
		Inside	mm	723							
	Height	Outside	front	770							
			rear	833							
		Inside	front	655							
rear			705								
Stacking height	front	mm	550								
	rear	mm	550								
Net weight		kg	95		120		136		155		
Gross weight		kg	101		130		147		166		
Operation range	Ambient temperature	Min.	°C 16								
		Max.	°C 25								
	Relative humidity		%	60 or less							
	Product temperature	Min.	°C -23								
		Max.	°C -18								
	Sound pressure in 1m distance		dB(A)	43.6							
Blowing agent		R-601 (HC) GWP 5									
Daily energy consumption	Edaily	kWh/day	5.40		6.10		6.50		7.10		
Annual energy consumption	AE	kWh/a	1,971.00		2,226.50		2,372.50		2,591.50		
HVAC	Rejected heat capacity		W	225		254		271		296	
	Dehumidification		Liter/day	0							
Refrigerant	Type		R-290								
	GWP		3								
	Charge		g	80		90		100		110	
Max. allowable operating pressure		bar	30								
Power supply	Voltage		V	220-240							
	Frequency		Hz	50							
	Nominal power acc. EN 60335-2-89		W	460							
	Nominal power during defrost		W	900							
	Nominal current during defrost		A	3.9							
	Nominal power LED		W	28		29		39		46	
	Fuse protection		RCBO, 30mA, C16								
	Defrost heater power		W	0							
Cord length		mm	2,400								

With process-related interior fitting | Energy test results are declared for climate class 3, test procedure according to EN 23953-2 (initial door openings, 12h LED switched on with door openings, one defrost per day) Chiller cabinets only on request

All round visibility booster

Uniting latest technology and brilliant design

- › Extremely low energy consumption due to RPM regulated compressor technology and electronic energy-saving fan
- › Use of natural and efficient refrigerant R290 (propane)
- › AHT e-conomize: Additional energy saving potential due to extensive optimization of technology and construction
- › Convincingly efficient: the island chest freezer and chiller MACAO impresses with smart, up-to-date technical features, maximum energy efficiency and a new dimension of sales potency
- › Sales-boosting product visibility thanks to glass panels on all four sides
- › Improved ease of use thanks to semi-automatic defrosting and easy-to-clean plastic bin
- › Attractive LED interior lighting
- › Robust, smooth-running, single-piece and fully extrusion-coated glass sliding lids (lockable)



EU and UK models have same specs but different electricity plugs.

				MACAO 100_EU_403755	100_UK_403779	145_EU_403756	145_UK_403780	210_EU_403757	210_UK_403781	
Classification acc. EN 23953-2										L1
Climate class acc. EN 23953-2										3
Energy efficiency index EEI				%		54.3		46.9		40.7
Use										Display & Sale
Dimensions	Gross content			l		338		500		763
	Net content			l		156		241		362
	Total display area (TDA)			m ²		0.49		0.76		1.13
	Length	Outside		mm		999		1,455		2,100
		Inside		mm		872		1,328		1,973
	Depth	Outside		mm				850		
		Inside		mm				723		
	Height	Outside	front	mm				900		
			rear	mm				925		
		Inside	front	mm				523		
			rear	mm				523		
	Stacking height	front		mm				280		
		rear		mm				280		
Net weight				kg		103		122		167
Gross weight				kg		126		130		175
Operation range	Ambient temperature	Min.	°C				16			
		Max.	°C				25			
	Relative humidity			%				60 or less		
	Product temperature	Min.	°C				-23			
		Max.	°C				-18			
	Sound pressure in 1m distance			dB(A)				43.6		
Blowing agent										R-601 (HC) GWP 5
Daily energy consumption				kWh/day		5.40		6.10		7.00
Annual energy consumption				kWh/a		1,971.00		2,226.50		2,555.00
HVAC	Rejected heat capacity			W		225		254		292
	Dehumidification			Liter/day				0		
Refrigerant	Type							R-290		
	GWP							3		
	Charge			g		70		100		110
	Max. allowable operating pressure			bar				30		
Power supply	Voltage			V				220-240		
	Frequency			Hz				50		
	Nominal power acc. EN 60335-2-89			W				400		
	Nominal power during defrost			W				900		
	Nominal current during defrost			A				3.9		
	Nominal power LED			W		17		25		34
	Fuse protection							RCBO, 30mA, C16		
	Defrost heater power			W				0		
Cord length			mm				2,400			

(1) - Energy test results are declared for climate class 3, test procedure according to EN 23953-2 (initial door openings, 12h LED switched on with door openings, one defrost per day)

(2) - With process-related interior fitting

Integral freezer and chiller cabinets

Create a greater impact for your customers, as they benefit from all round product visibility enhanced with LED lighting

- › 100 % CFC and PFC free
- › Ready to plug in
- › Guaranteeing the quality of the frozen goods thanks to constant internal temperature and high power reserves
- › Intelligent fan motor for more energy efficiency – saves approximately 0,5 kWh daily
- › Brilliant LED lighting system
- › Higher energy-saving
- › Improved display area with optimum useful load
- › Easy access from both sides
- › Low investment and operating costs
- › Maintenance-free
- › Environmentally friendly with natural refrigerant propane



EU and UK models have same specs but different electricity plugs.

		MALTA	145_EU_403758	145_UK_403782	185_EU_403759	185_UK_403783
Classification acc. EN 23953-2					L1	
Climate class acc. EN 23953-2					3	
Energy efficiency index EEI		%			52.9	
Use					Display & Sale	
Dimensions	Gross content		l	603		795
	Net content		l	425		571
	Total display area (TDA)		m ²	0.73		0.99
	Length	Outside	mm	1,456		1,851
		Inside	mm	1,328		1,723
	Depth	Outside	mm		855	
		Inside	mm		723	
	Height	Outside	front	mm	770	
			rear	mm	833	
		Inside	front	mm	655	
			rear	mm	655	
	Stacking height	front	mm		550	
rear		mm		550		
Net weight		kg		103		
Gross weight		kg		110		
Operation range	Ambient temperature	Min.	°C	16		
		Max.	°C	25		
	Relative humidity		%		60 or less	
	Product temperature	Min.	°C		-23	
		Max.	°C		-18	
	Sound pressure in 1m distance		dB(A)		43.6	
Blowing agent				R-601 (HC) GWP 5		
Daily energy consumption	Edaily	kWh/day	6.70		7.30	
Annual energy consumption	AE	kWh/a	2,445.50		2,664.50	
HVAC	Rejected heat capacity		W	279		304
	Dehumidification		Liter/day		0	
Refrigerant	Type				R-290	
	GWP				3	
	Charge		g	80		90
	Max. allowable operating pressure		bar	30		30
Power supply	Voltage		V		220-240	
	Frequency		Hz		50	
	Nominal power acc. EN 60335-2-89		W		460	
	Nominal power during defrost		W		900	
	Nominal current during defrost		A		3.9	
	Nominal power LED		W	20		25
	Fuse protection				RCBO, 30mA, C16	
	Defrost heater power		W		0	
	Cord length		mm		2,400	

(1) - Energy test results are declared for climate class 3, test procedure according to EN 23953-2 (initial door openings, 12h LED switched on with door openings, one defrost per day)

(2) - With process-related interior fitting

Ice cream freezer - horizontal: with flat glass sliding lids

More volume, more sales. A range of freezers to meet all circumstances

- › Excellent product visibility due to low cabinet height
- › Ready to plug in
- › Easy-to-move, 2-part, flat glass sliding lids with the proven and patented injected, one-piece AHT lid frame
- › Environmentally friendly with natural refrigerant
- › 100 % CFC and PFC free
- › Low energy consumption
- › Adjustable thermostat
- › Intelligent fan motor for more energy efficiency – saves approximately 0,5 kWh daily
- › Reinforced insulation (72 mm) for reserve refrigeration and low energy consumption
- › Inner container made of white, pre-painted, galvanised sheet metal
- › Outer-skin condenser – no dirt, no maintenance
- › Modular system: same height and depth, different lengths available
- › Suitable for climate class 3 to climate class 7
- › Supplied in robust packaging (undersliding)
- › Freezing: -14 °C to -23 °C



			RIO H	68_EU_403766	100_EU_403767	125_EU_403768	150_EU_403769	
Classification acc. EN 23953-2						7		
Climate class acc. EN 23953-2						L1		
Energy efficiency index EEI			%	41.2	33.9	41.0	44.4	
Use						Display & Sale		
Dimensions	Gross content		l	147	262	352	422	
	Net content		l	117	215	291	367	
	Total display area (TDA)		m ²	0.29	0.46	0.59	0.73	
	Length	Outside	mm	680	1,000	1,250	1,500	
		Inside	mm	530	850	1,100	1,350	
	Depth	Outside	mm			650		
		Inside	mm			500		
	Height	Outside	mm			880		
Stacking height		mm			610			
Net weight			kg	51	63	71	79	
Gross weight			kg	55	67	76	84	
Operation range	Ambient temperature	Min.	°C			16		
		Max.	°C			35		
	Relative humidity		%		75		150	
	Product temperature	Min.	°C			-23		
		Max.	°C			-14		
	Sound pressure in 1m distance		dB(A)		39		40	
Blowing agent						R-601 (HC) GWP 5		
Daily energy consumption			kWh/day	2.0 / 3.0 / 1.4	2.5 / 3.8 / 1.6	2.8 / 4.0 / 1.8	3.7 / 4.8 / 2.2	
Annual energy consumption			kWh/a	474.50	511.00	730.00	912.50	
HVAC	Rejected heat capacity		W	54	58	83	104	
	Dehumidification		Liter/day			0		
Refrigerant	Type					R290 / R4014A / R600a		
	GWP					5		
	Charge		g	50 / 100 / 50	60 / 120 / 60	70 / 140 / 70	75 / 150 / 75	
	Max. allowable operating pressure		bar			30		
Power supply	Voltage		V			220-240		
	Frequency		Hz			50		
	Nominal power acc. EN 60335-2-89		W		240 / 230 / 120		280 / 250 / 140	300 / 350 / 160
	Nominal power during defrost		W		240		280	300
	Nominal current during defrost		A		2.1 / 1.6 / 0.7		2.3 / 1.7 / 0.9	2.5 / 2.4 / 1.1
	Nominal power LED		W			no light		
	Fuse protection		A			16		
	Defrost heater power		W			220-240		
	Cord length		mm			1750		

Ice cream freezer - horizontal: with curved glass sliding lids

More volume, more sales. A range of freezers to meet all circumstances

- › Excellent product visibility due to low cabinet height
- › Ready to plug in
- › Easy-to-move, 2-part, flat glass sliding lids with the proven and patented injected, one-piece AHT lid frame
- › Environmentally friendly with natural refrigerant
- › 100 % CFC and PFC free
- › Low energy consumption
- › Brilliant LED lighting system which enhances product display, drives sales and reduces maintenance
- › Adjustable thermostat
- › Intelligent fan motor for more energy efficiency – saves approximately 0,5 kWh daily
- › Reinforced insulation (72 mm) for reserve refrigeration and low energy consumption
- › Inner container made of white, pre-painted, galvanised sheet metal
- › Outer-skin condenser – no dirt, no maintenance
- › Modular system: same height and depth, different lengths available
- › Suitable for climate class 3 to climate class 7
- › Supplied in robust packaging (undersliding)
- › Freezing: -14 °C to -23 °C



			RIO S	68_EU_403770	100_EU_403771	125_EU_403772	150_EU_403773	175_EU_403774	
Classification acc. EN 23953-2			7						
Climate class acc. EN 23953-2			L1						
Energy efficiency index EEI			%	49.8	45.1	50.5	57.3	62.5	
Use			Display & Sale						
Dimensions	Gross content		l	132	238	322	405	488	
	Net content		l	102	190	258	327	396	
	Total display area (TDA)		m ²	0.31	0.50	0.64	0.78	0.92	
	Length	Outside	mm	680	1,000	1,250	1,500	1,750	
		Inside	mm	530	850	1,100	1,350	1,600	
	Depth	Outside	mm	650					
		Inside	mm	500					
	Height	Outside	front	mm					
			rear	mm					
	Stacking height	front	mm	530					
rear			mm	570					
Net weight			kg	49	59	66	74	81	
Gross weight			kg	53	63	71	79	87	
Operation range	Ambient temperature	Min.	°C						
		Max.	°C						
	Relative humidity		%	75					
	Product temperature	Min.	°C						
		Max.	°C						
	Sound pressure in 1m distance		dB(A)	39		40		43	
Blowing agent			R-601 (HC) GWP 5						
Daily energy consumption	Edaily	kWh/day	2.3 / 3.0 / 1.5	2.6 / 4.1 / 1.8	3.5 / 4.4 / 2.1	4.6 / 5.4	6.4 / 7.2		
Annual energy consumption	AE	kWh/a	547.50	638.75	839.50	1095.00	1350.50		
HVAC	Rejected heat capacity		W	63	73	96	125	154	
	Dehumidification		Liter/day	0					
Refrigerant	Type		R290 / R404A / R600a						
	GWP		5						
	Charge		g	50 / 100 / 50	60 / 130 / 60	70 / 140 / 70	75 / 150	80 / 170	
	Max. allowable operating pressure		bar	30					
Power supply	Voltage		V	220-240					
	Frequency		Hz	50					
	Nominal power acc. EN 60335-2-89		W	240 / 230 / 120	280 / 250 / 140	300 / 350 / 160	320 / 410	370 / 460	
	Nominal power during defrost		W	240	280	300	320	370	
	Nominal current during defrost		A	2.1 / 1.6 / 0.7	2.3 / 1.7 / 0.9	2.5 / 2.4 / 1.1	2.8 / 2.7	3.7 / 3.4	
	Nominal power LED		W	12	18	25	32	40	
	Fuse protection		A	16					
	Defrost heater power		W	220-240					
	Cord length		mm	1750					

Air curtain display cooler

For perfect merchandise presentation

- › Air curtain for optimum cooling efficiency
- › Energy efficient
- › Low maintenance condenser
- › Cooling cassette system
- › Cassette replacement within 15 minutes (easy service)
- › Night blind to save energy consumption (reed switch)
- › Inside light
- › Plug-in refrigeration
- › Automatic defrost and condensate water evaporation
- › Shelf supports can be fixed in inclined position
- › Use of natural and efficient refrigerant R290 (propane)
- › 100 % CFC and PFC free



EU and UK models have same specs but different electricity plugs.

			AC	S_UK_403784	M_UK_403785	M_EU_403761	W_UK_403786	S_EU_403760	W_EU_403762	
Classification acc. EN 23953-2			M2							
Climate class acc. EN 23953-2			3							
Energy efficiency index EEI			42.5	38.6			48.6	42.5	48.6	
Use			Display & Sale							
Dimensions	Gross content		l	245	463	463	325	245	325	
	Net content		l	190	324	324	250	190	250	
	Total display area (TDA)		m ²	1.00	1.72	1.72	1.20	1.00	1.20	
	Length	Outside	mm	706	716		914	706	914	
	Depth	Outside	mm	766	771			766		
	Height	Outside	mm	1,495	1,973			1,495		
Shelf depth			mm	1 x 388, 2 x 321						
Net weight			kg	144	152		135	144	135	
Gross weight			kg	135	165		150	135	150	
Operation range	Ambient temperature	Min.	°C		16					
		Max.	°C		25					
	Relative humidity		%	60 or less						
	Product temperature	Min.	°C		-1					
		Max.	°C		7					
	Sound pressure in 1m distance		dB(A)	52.8	53.3		52.3	52.8	52.3	
Blowing agent			R-601 (HC) GWP 5							
Daily energy consumption	Edaily		kWh/day	8.50	10.50		10.70	8.50	10.70	
Annual energy consumption	AE		kWh/a	3,102.50	3,832.50		3,905.50	3,102.50	3,905.50	
HVAC	Rejected heat capacity		W	354	438		446	354	446	
	Dehumidification		Liter/day	0						
Refrigerant	Type		R-290							
	GWP		3							
	Charge		g	140						
	Max. allowable operating pressure		bar	30						
Power supply	Voltage		V							
	Frequency		Hz	50						
	Nominal power acc. EN 60335-2-89		W	680	880		850	680	850	
	Nominal current acc. EN 60335-2-89		A	3.5	5.2		5.0	3.5	5.0	
	Nominal power LED		W	18	25		18			
	Fuse protection		RCBO, 30mA, C16							
	Cord length		mm	2,500						

(1) - Energy test results are declared for climate class 3, test procedure according to EN 23953-2, use of night blind for 12h, light on for 12h

(2) - With process-related interior fitting

Glass door merchandiser

For better product visibility

- › Illuminated led header for maximum branding opportunities and horizontal led lighting for better product visibility
- › Slim design ideal for in aisle retail placement
- › Low profile, hinged door system
- › Electronic temperature control with digital read out
- › Spiral condenser helps improve performance and reduces maintenance time
- › Low profile fixed rollers allow easy movement



EU and UK models have same specs but different electricity plugs.

				GD_XLS_UK_403788	GD_XLS_EU_403764	GD_XL_EU_403763	GD_XL_UK_403787
Classification acc. EN 23953-2				M1			M2
Climate class acc. EN 23953-2				6			3
Energy efficiency index EEI				20.5			21
Use				Display & Sale			
Dimensions	Gross content			l	713		1,060
	Net content			l	372		770
	Total display area (TDA)			m ²	1.82		2.3
	Length	Outside	mm	1,195			
	Depth	Outside	mm	655		928	
	Height	Outside	mm	1,973			
Net weight				kg	181		227
Gross weight				kg	210		253
Operation range	Ambient temperature	Min.	°C	16			
		Max.	°C	27		25	
	Relative humidity			%	70 or less		
	Product temperature	Min.	°C	-1		2	
		Max.	°C	5		7	
Sound pressure in 1m distance			dB(A)	50		53	
Blowing agent				R-601 (HC) GWP 5			
Daily energy consumption				Edaily	kWh/day	5.80	7.70
Annual energy consumption				AE	kWh/a	2,117.00	2,810.50
HVAC	Rejected heat capacity			W	242		321
	Dehumidification			Liter/day		0	
Refrigerant	Type			R-290			
	GWP			3			
	Charge			g	120		150
	Max. allowable operating pressure			bar	30		
Power supply	Voltage			V			
	Frequency			Hz			
	Nominal power acc. EN 60335-2-89			W	390		1,700
	Nominal current acc. EN 60335-2-89			A	2.2		7.6
	Nominal power LED			W	50		40
	Fuse protection			RCBO, 30mA, C16			FI-LS, 30mA, C16
	Cord length			mm	3,000		3,100

(1) - Energy test results are declared for climate class 3, test procedure according to EN 23953-2

(2) - With process-related interior fitting

Promotion cooler

Maximum mobility and merchandise presentation with a high „cool factor“

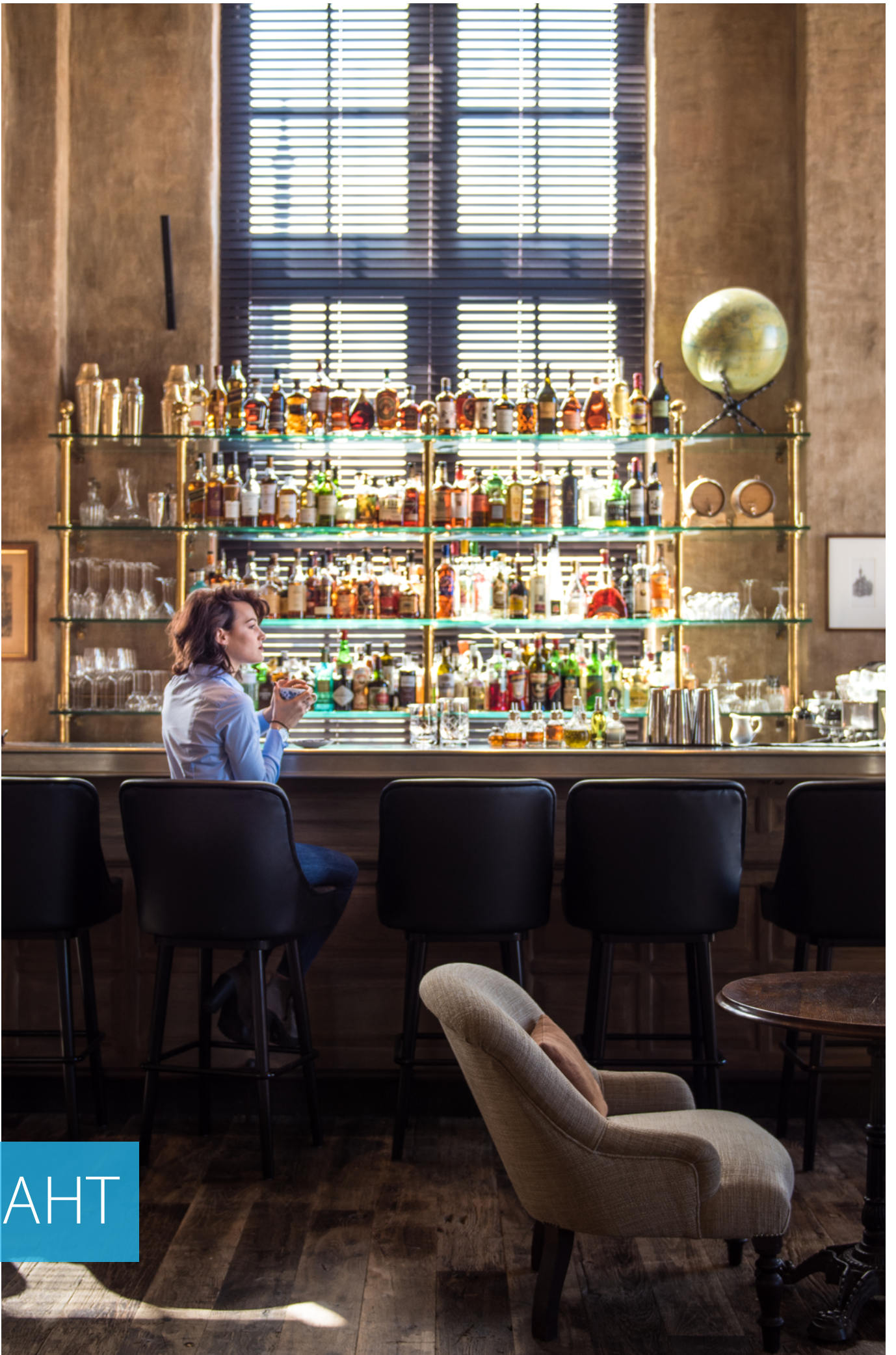
- › Presentation of snacks and beverages
- › Sales-supporting promotion of complementary product groups
- › High capacity
- › COOLBOX generates high revenues with low space requirements
 - especially with fast-moving products
- › Plug, chill & sell – immediately ready for use
- › Unique condensate technology
- › Multi functional usage
- › 100% environment- & climate-friendly



EU and UK models have same specs but different electricity plugs.

			CB	CB124_EU_403765	CB124_UK_403789	
Classification acc. EN 23953-2					H1	
Climate class acc. EN 23953-2					3	
Energy efficiency index EEI			%		43.5	
Use					Display & Sale	
Dimensions	Gross content		l		1,034 (0.000)	
	Net content		l		766 (2.000)	
	Total display area (TDA)		m ²			3.00 (2.000)
	Length	Outside	mm			1,240
		Inside	mm			1,180
	Depth	Outside	mm			885
		Inside	mm			640
	Height	Outside	mm			2,150
		Inside	mm			1,420
Shelf depth		mm			450	
Net weight			kg		346 (2.000)	
Gross weight			kg		374 (2.000)	
Operation range	Ambient temperature	Min.	°C		16	
		Max.	°C		25	
	Relative humidity		%			60 or less
	Product temperature	Min.	°C			1
		Max.	°C			10
	Sound pressure in 1m distance		dB(A)			43.6
Blowing agent					R-601 (HC) GWP 5	
Daily energy consumption			kWh/day		17.40 (1.000)	
Annual energy consumption			kWh/a		6,351.00	
HVAC	Rejected heat capacity		W		725	
	Dehumidification		Liter/day		0	
Refrigerant	Type				R-290	
	GWP				3	
	Charge		g		150	
	Max. allowable operating pressure		bar		30	
Power supply	Phase				1N~	
	Voltage		V		220-240	
	Frequency		Hz		50	
	Nominal power acc. EN 60335-2-89		W		1,700	
	Nominal current acc. EN 60335-2-89-		A		7.5	
	Nominal power LED		W		70	
	Fuse protection				RCBO, 30mA, C16	
	Cord length		mm		3,500	

With process-related interior fitting | Energy test results are declared for climate class 3, test procedure according to EN 23953-2, use of night blind for 12h, light on for 12h



AHT

Zanotti

Touch control

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



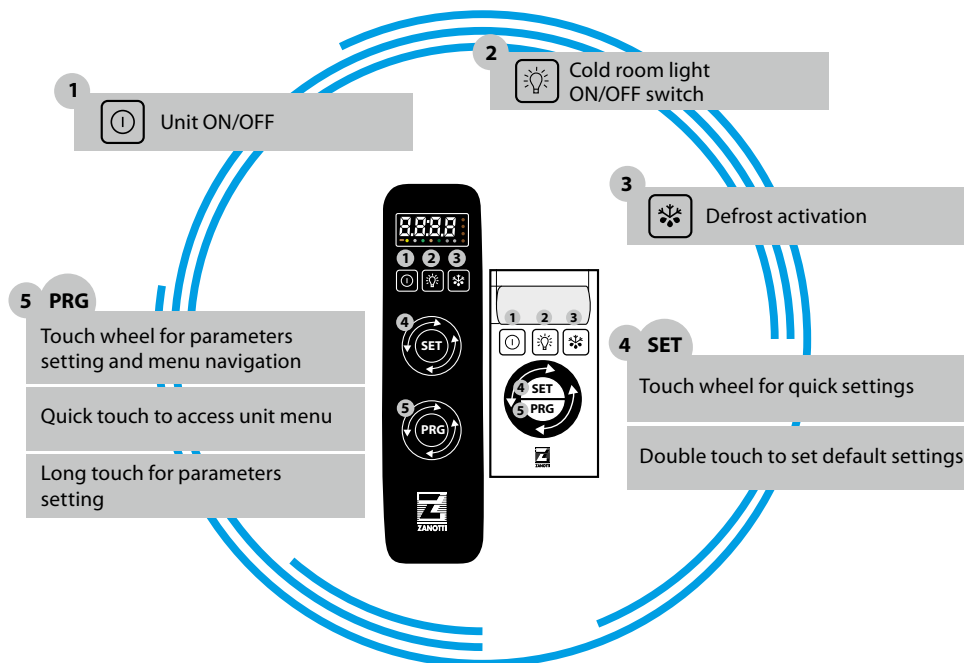
GM Monoblock Unit



GS Split Unit



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



for two units in a cold storage cell

ALTERNATIVE REMOTE CONTROL

› For cold rooms where it is required by law to maintain a certain temperature (Products for hospitals, Pharmaceutical products) for safety and control it is necessary to install 2 units in the same cold room, so that they can always be working in alternate hours - when one is off, the other unit is working.

› If an aggregate in full function gets blocked, the second aggregate starts automatically. When the temperature for remote controls with thermostat is not achieved for a certain period of time (product feed, open cell door for longer period of time,...), the unit changes into the standby function.

- › Remote control for two aggregates. Adjustable timer for alternate operation.
- › In case of device failure of one the refrigeration units, the control can be switched on the other unit nearby. Alarm message through Lamp and buzzer.
- › Thermostat for Safety at high Temperatures in the cold room (only with models with Thermostat).

Uni-block system for low and medium temperature refrigeration

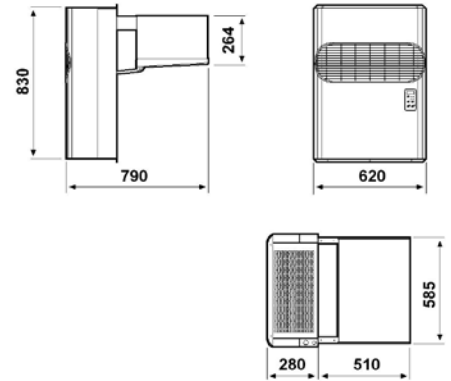
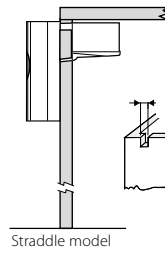
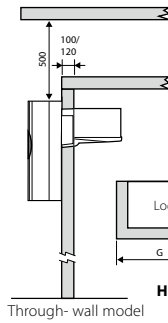
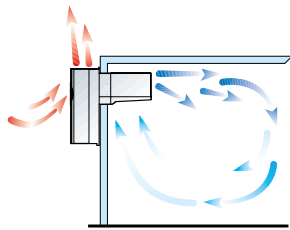
Available with R290 (propane)



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 and 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

Installation type



Low Temperature Refrigeration, Medium Temperature Refrigeration				GM	0870Y1AAA	110DA11XA	112DA11XA	117DA11XA	218DA11XA	220DB11XA	320DB11XA	330DB11XA	340DB11XA	103EA11XA	105EA11XA	106EA11XA	107EA11XA					
Refrigerating capacity	Low temperature	R-290	Nom	kW	0.871 (1)	-	-	-	-	-	-	-	-	-	-	-	-					
	Medium temperature	R-452A	Nom	kW	-	0.679 (3)	0.889 (3)	1.080 (3)	1.336 (3)	1.688 (3)	2.491	2.349 (3)	3.160	-	-	-	-					
	Medium temperature	R-134a	Nom	kW	-	-	-	-	-	-	-	-	-	0.855	0.978 (1)	1.120 (1)	1.315 (1)					
Recommended Cold Room Volume	Low temperature	V 100		m ³	4.4	-	-	-	-	25	-	36	-	-	-	-	-					
	Medium temperature	V 100		m ³	-	-	-	-	-	-	-	-	-	5.8	-	-	-					
Power input	Max.			W	1.26	-	-	-	-	-	-	-	-	-	-	-	-					
Dimensions	Unit	HeightxWidthxDepth		mm	735x400x790			830x620x790			830x620x862			830x620x1024			735x400x790					
	Packed unit	HeightxWidthxDepth		mm	942x450x850			1,050x670x850			1,050x670x940			1,050x660x1,090			942x450x850					
Weight	Unit			kg	64	56	64		80		105	113	52	53			56					
	Packed unit			kg	75	67	75		96		122	140	63	64			67					
Compressor	Type				Hermetic Reciprocating																	
	Nominal power			kW	0.9	0.74	0.9		1.3		1.5	2.2	2.9		0.4	0.5	0.4	0.7				
Condenser	Starting method				Direct																	
	Air flow			m ³ /h	600			1,200			1,500			2,200			600					
Evaporator	Defrost				Hot gas																	
	Air flow			m ³ /h	600			1,200			1,800			1,500			2,100					
Operation range	Air throw			m	4	4 (2)			10 (2)			10 (2)			4 (2)							
	Cold room temperature	Min.~Max.		°C	-25~-15																	
Refrigerant	Type/GWP				R-290/3			R-452A/2,141			R-452A/2,140			R-452A/2,141			R-452A/2,140			R-134a/1,430		
	Charge			kg/TCO2Eq	-/-	0.38/0.81	0.34/0.73	0.35/0.75	0.86/1.84	0.84/1.80	-/-	0.98/2.10	-/-	0.40/0.57	0.43/0.61	0.33/0.47	0.33/0.47					
Power supply	Phase/Frequency/Voltage			Hz/V	1~/50/230			1~/50/230			3N~/50/400			3N~/50/400			1~/50/230					

Low Temperature Refrigeration, Medium Temperature Refrigeration				GM	110EA11XA	211EA11XA	212EB11XA	315EB11XA	320EB11XA	1280Y1AAA	2210Y1AAA	
Refrigerating capacity	Medium temperature	R-134a	Nom	kW	1.351 (1)	1.806 (1)	2.034 (1)	3.079 (1)	3.351 (1)	-	-	
	Medium temperature	R-290	Nom	kW	-	-	-	-	-	1.281	2.206 (3)	
Recommended Cold Room Volume	Medium temperature	V 100		m ³	-	-	-	-	-	11	22	
Power input	Max.			W	-	-	-	-	-	0.94	1.61	
Dimensions	Unit	HeightxWidthxDepth		mm	735x400x790		830x620x790		830x620x862		735x400x790	
	Packed unit	HeightxWidthxDepth		mm	942x450x850		1,050x670x850		1,050x670x940		942x450x850	
Weight	Unit			kg	64	80		98	100	56	80	
	Packed unit			kg	75	96		115	117	67	96	
Compressor	Type				Hermetic Reciprocating							
	Nominal power			kW	0.9		1.7		2.2		0.56	
Condenser	Starting method				Direct							
	Air flow			m ³ /h	600		1,200		1,500		600	
Evaporator	Defrost				Hot gas							
	Air flow			m ³ /h	600		1,200		1,800		600	
Operation range	Air throw			m	4 (2)		10 (2)		10 (2)		4	
	Cold room temperature	Min.~Max.		°C	-5~-10							
Refrigerant	Type/GWP				R-134a/1,430						R-290/3	
	Charge			kg/TCO2Eq	0.40/0.57	0.71/1.02	0.70/1.00	0.95/1.36	1.00/1.43	-/-	-/-	
Power supply	Phase/Frequency/Voltage			Hz/V	1~/50/230		3N~/50/400		3N~/50/400		1~/50/230	

(1)When normally running: 0°C / +30°C | (2)Use air throw as a base. Air throw is affected by many factors such as height of room, product storage, location of evaporator, etc. | (3)When normally running: -20°C / +30°C | Contains fluorinated greenhouse gases

Uni-block system for low and medium temperature refrigeration

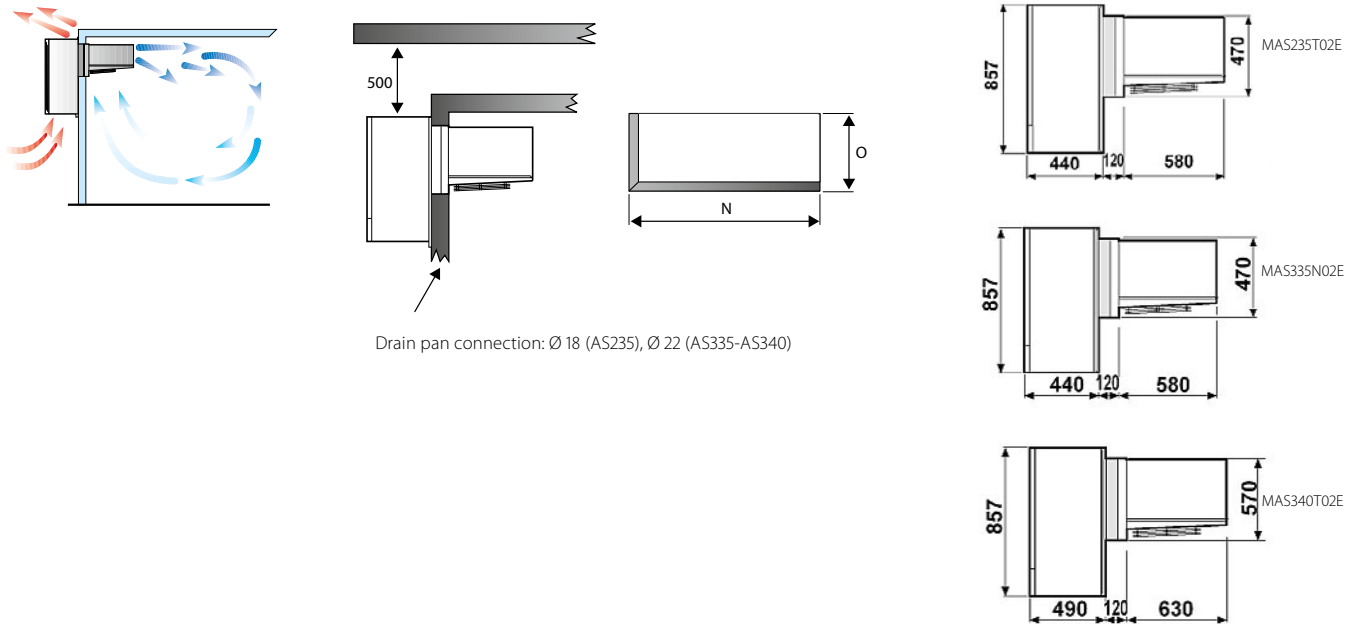
For wall mounted installation in medium sized cold rooms

- › 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
- › Low temperature models are available. Please contact your local dealer



AS

Installation type



Low Temperature Refrigeration, Medium Temperature Refrigeration				AS	235T02E	335N02E	335T02E	340T02E
Refrigerating capacity	Medium temperature	R-134a	Nom	kW	4.981 (1)	6.988 (1)	8.290 (1)	10.664 (1)
Dimensions	Unit	HeightxWidthxDepth		mm	857x1,280x1,140		857x1,750x1,140	
	Packed unit	HeightxWidthxDepth		mm	1,060x1,330x1,210		1,065x1,850x1,300	
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			
Condenser	Air flow			m ³ /h	2,700		4,000	5,600
Defrost					Hot gas			
Evaporator	Air flow			m ³ /h	3,900		5,600	8,000
	Air throw			m		10 (2)		17 (2)
Operation range	Cold room temperature	Min.~Max.		°C	-5~10			
	Refrigerant	Type/GWP				R-134a/1,430		
Power supply	Charge			kg/TCO ₂ Eq	1.80/2.57		2.50/3.58	4.50/6.44
	Phase/Frequency/Voltage			Hz/V	3N~/50/400			

(1)When normally running: 0°C / +30°C | (2)Use air throw as a base. Air throw is affected by many factors such as height of room, product storage, location of evaporator, etc. | Contains fluorinated greenhouse gases

Uni-block system for low and medium temperature refrigeration

Available with R290 (propane)



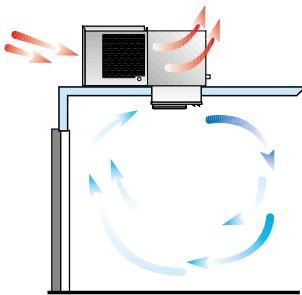
For roof mounted installation in small and medium sized cold rooms

- > 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
- > For higher capacities, please contact your local dealer

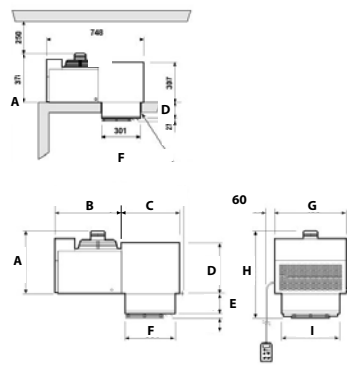


SB

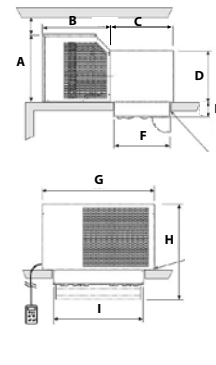
Installation type



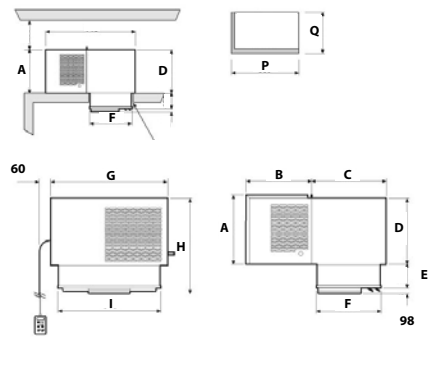
SB120



SB140



SB125-235



Low Temperature Refrigeration, Medium Temperature Refrigeration				SB	010DA11XX	0870Y1AA	117DA11XX	1710Y2AA	220DB11XX	2650Y3AC	330DB11XX	005EA11XX	106EA11XX	107EA11XX
Refrigerating capacity	Low temperature	R-290	Nom	kW	-	0.873 (3)	-	1.713 (3)	-	2.653 (3)	-	-	-	-
	Medium temperature	R-452A	Nom	kW	0.628 (3)	-	1.029 (3)	-	1.699 (3)	-	2.472 (3)	-	-	-
	Medium temperature	R-134a	Nom	kW	-	-	-	-	-	-	-	0.857 (1)	1.120 (1)	1.338 (1)
Recommended Cold Room Volume	Low temperature	V 100		m ³	-	4.4	-	13	-	28	-	-	-	-
Power input	Max.			W	-	1.26	-	2.49	-	1.26	-	-	-	-
	Dimensions	Unit	HeightxWidthxDepth	mm	525x430x771	506x620x719	503x1,075x924	540x820x809	762x1,300x1,044	645x820x929	525x430x771	506x620x719		
Weight	Packed unit	HeightxWidthxDepth		mm	690x540x830	690x730x790	660x730x790	-x-x-	690x930x880	-x-x-	800x930x1,000	690x540x830	660x730x790	
	Unit			kg	48	68	102	87	200	102	42	59		
	Packed unit			kg	61	82	-	108	-	124	55	73		
Compressor	Type				Hermetic Reciprocating									
	Nominal power			kW	0.6	0.9	1.3	1.8	1.5	2.7	2.2	0.5	0.6	0.7
Condenser	Starting method				Direct									
	Air flow			m ³ /h	400	750		1,400	2,000	1,500	400	750		
Evaporator	Defrost				Hot gas									
	Air flow			m ³ /h	500	550		1,100	2,500	2,300	500	550		
Operation range	Air throw			m	3 (2)	4	4 (2)	4	4 (2)	4	10 (2)	3 (2)	4 (2)	
	Cold room temperature	Min.~Max.		°C				-25~-15					-5~-10	
Refrigerant	Type/GWP				R-452A/2,141.0	R-290/3	R-452A/2,141.0	R-290/3	R-452A/2,141.0	R-290/3	R-452A/2,141.0		R-134a/1,430.0	
	Charge			kg/TCO ₂ Eq	0.50/1.07	-/-	0.42/0.90	-/-	0.72/1.54	-/-	0.96/2.06	0.47/0.67	0.40/0.57	0.46/0.66
Power supply	Phase/Frequency/Voltage			Hz/V		1~/50/230				3N~/50/400			1~/50/230	

Low Temperature Refrigeration, Medium Temperature Refrigeration				SB	1310Y1AA	210EA11XX	212EB11XX	2180Y1AA	315EB11XX	320EB11XX	3370Y2AA	425EB11XX	530EB11XX	5820Y3AB
Refrigerating capacity	Medium temperature	R-134a	Nom	kW	-	1.799 (1)	2.022 (1)	-	3.282 (1)	3.550 (1)	-	3.774 (1)	4.871 (1)	-
	Medium temperature	R-290	Nom	kW	1.309 (1)	-	-	2.179 (1)	-	-	3.367 (1)	-	-	5.821 (1)
Recommended Cold Room Volume	Medium temperature	V 100		m ³	11	-	-	21	-	-	39	-	78	
Power input	Max.			W	0.94	-	-	1.58	-	-	2.51	-	4.66	
	Dimensions	Unit	HeightxWidthxDepth	mm	506x620x719		540x820x809		645x820x929		652x1,300x1,044	760x920x1,042	785x1,075x1,046	652x1,300x1,044
Weight	Packed unit	HeightxWidthxDepth		mm	690x730x790	690x930x880		720x930x880	800x930x1,000	-x-x-	880x1,100x1,100	920x1,200x1,120	-x-x-	
	Unit			kg	59	74	75	92	92	75	110	151	75	
	Packed unit			kg	73	95	96	114	114	139	184	-		
Compressor	Type				Hermetic Reciprocating									
	Nominal power			kW	0.56	0.9	1.7	0.9	2.2	2.6	1.12	2.9	3.7	2.7
Condenser	Starting method				Direct									
	Air flow			m ³ /h	750		1,400		1,500		1,750	3,100	3,200	2,900
Evaporator	Defrost				Hot gas									
	Air flow			m ³ /h	550		1,100		2,300		1,500	2,300	3,450	3,600
Operation range	Air throw			m	4		4 (2)		4		10 (2)	10 (2)	4	
	Cold room temperature	Min.~Max.		°C					-5~-10					
Refrigerant	Type/GWP				R-290/3	R-134a/1,430.0	R-290/3	R-134a/1,430.0	R-290/3	R-134a/1,430.0	R-290/3	R-134a/1,430.0	R-290/3	
	Charge			kg/TCO ₂ Eq	-/-	0.75/1.07	0.78/1.12	-/-	0.86/1.23	0.82/1.17	-/-	0.93/1.33	2.60/3.7	-/-
Power supply	Phase/Frequency/Voltage			Hz/V		1~/50/230	3N~/50/400	1~/50/230	3N~/50/400	1~/50/230	3N~/50/400		3N~/50/400	

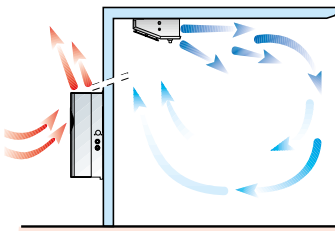
(1)When normally running: 0°C / +30°C | (2)Use air throw as a base. Air throw is affected by many factors such as height of room, product storage, location of evaporator, etc. | (3)When normally running: -20°C / +30°C | Contains fluorinated greenhouse gases

Bi-block system for low and medium temperature refrigeration

Condensing unit for wall mounted installation

- › Wall mounted condensing unit and ceiling mounted evaporator
- › Extremely rapid mounting
- › Best surface-to-capacity ratio
- › Low sound levels thanks to optional compressor compartment soundproofing
- › New generation control panel: possibility to connect it to classic remote management systems or to a Modbus system

Installation type



Low Temperature Refrigeration, Medium Temperature Refrigeration		GS	SB.BGS110P			SB.BGS112P			SB.BGS117P			SB.BGS218P			SB.BGS220P			SB.BGS330P		
			1D	2D	3D	1D	2D	3D	1D	2D	3D	1D	2D	3D	1D	2D	3D	1D	2D	3D
Refrigerating capacity	Low temperature R-452A Nom	kW	0.679 (3)			0.889 (3)			1.080 (3)			1.336 (3)			1.688 (3)			2.349 (3)		
Dimensions	Condensing unit HeightxWidthxDepth	mm	735x400x280						830x620x280						830x620x350					
	Evaporator unit HeightxWidthxDepth	mm	215x654x410						215x1,074x410						215x1,654x410					
	Packed WidthxDepth	mm	490x610						490x740						600x740					
	condensing unit Packed HeightxWidthxDepth	mm	470x260x780						470x260x1,200						470x260x1,780					
Weight	Condensing unit	kg	46			54			64			84								
	Evaporator unit	kg	13						19			28								
	Packed condensing unit	kg	57			65			76			98								
	Packed evaporator unit	kg	15						21			31								
Compressor	Type		Hermetic Reciprocating																	
	Nominal power	kW	0.74			0.9			1.3			1.5			2.2					
Condenser	Air flow	m ³ /h	600						Direct			1,200			1,500					
	Defrost		Hot gas																	
Evaporator	Air flow	m ³ /h	600						1,200			1,800								
	Air throw	m	4 (2)																	
Operation range	Cold room temperature	Min.~Max. °C	-25~-15																	
	Refrigerant Type/GWP		R-452A/2,141																	
Power supply	Charge	kg/TCO ₂ Eq	0.60/1.28			0.56/1.20			0.53/1.13			0.86/1.84			0.84/1.80			0.98/2.10		
	Phase/Frequency/Voltage	Hz/V	1~/50/230									3N~/50/400								

Low Temperature Refrigeration, Medium Temperature Refrigeration		GS	SB.MGS103P		SB.MGS105P		SB.MGS106P		SB.MGS107P		SB.MGS110P		SB.MGS211P		SB.MGS212P		SB.MGS213P		SB.MGS315P		SB.MGS320P	
			1E	2E	3E	1E	2E	3E	1E	2E	3E	1E	2E	3E	1E	2E	3E	1E	2E	3E	1E	2E
Refrigerating capacity	Medium temperature R-134a Nom	kW	0.855 (1)		0.978 (1)		1.120 (1)		1.351 (1)		1.806 (1)		2.034 (1)		2.175 (1)		3.079 (1)		3.351 (1)			
Dimensions	Condensing unit HeightxWidthxDepth	mm	735x400x280						830x620x280						830x620x350							
	Evaporator unit HeightxWidthxDepth	mm	215x654x410						215x1,074x410						215x1,654x410							
	Packed WidthxDepth	mm	490x610						490x740						600x740							
	condensing unit Packed HeightxWidthxDepth	mm	470x260x780						470x260x1,200						470x260x1,780							
Weight	Condensing unit	kg	42		43		46		54		64		77		79							
	Evaporator unit	kg	13						19			28										
	Packed condensing unit	kg	53		54		57		65		76		91		93							
	Packed evaporator unit	kg	15						19			31										
Compressor	Type		Hermetic Reciprocating																			
	Nominal power	kW	0.4		0.5		0.4		0.7		0.9		1.7		2		2.2		2.6			
Condenser	Air flow	m ³ /h	600						Direct			1,200			1,500							
	Defrost		Electric																			
Evaporator	Air flow	m ³ /h	600						1,200			1,800										
	Air throw	m	4 (2)																			
Operation range	Cold room temperature	Min.~Max. °C	-5~-10																			
	Refrigerant Type/GWP		R-134a/1,430.0																			
Power supply	Charge	kg/TCO ₂ Eq	0.85/1.22		0.72/1.03		0.78/1.12		0.60/0.86		0.85/1.22		0.71/1.02		0.70/1.00		0.75/1.07		0.95/1.36		0.99/1.42	
	Phase/Frequency/Voltage	Hz/V	1~/50/230									3N~/50/400										

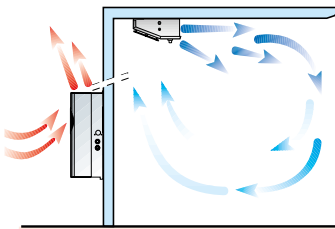
(1)When normally running: 0°C / +30°C | (2)Use air throw as a base. Air throw is affected by many factors such as height of room, product storage, location of evaporator, etc. | (3)When normally running: -20°C / +30°C | Contains fluorinated greenhouse gases | Precharged pipe 10 m length | Precharged pipe 5 m length | Precharged pipe 2,5 m length

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

Installation type



Low Temperature Refrigeration, Medium Temperature Refrigeration				SP-O	SB.BSP110P			SB.BSP112P			SB.BSP117P			SB.BSP218P			SB.BSP220P			SB.BSP330P		
Refrigerating capacity	Low temperature	R-452A	Nom	kW	0.662 (3)			0.905 (3)			1.088 (3)			1.342 (3)			1.719 (3)			2.384 (3)		
Dimensions	Condensing unit	HeightxWidthxDepth		mm	357x620x337									390x820x427			427x820x427					
	Evaporator unit	HeightxWidthxDepth		mm	215x614x410									215x1,034x410			215x1,614x410					
	Packed condensing unit	WidthxDepth		mm	520x780									620x1,010								
Weight	Condensing unit	HeightxWidthxDepth		mm	260x470x780									260x470x1,200			260x470x1,780					
	Evaporator unit	HeightxWidthxDepth		mm	260x470x780									260x470x1,200			260x470x1,780					
	Packed condensing unit	HeightxWidthxDepth		mm	260x470x780									260x470x1,200			260x470x1,780					
Compressor	Type	Hermetic Reciprocating			Hermetic Reciprocating									Hermetic Reciprocating			Hermetic Reciprocating					
	Nominal power	kW			0.75			1.1			1.3			1.5			2.2					
	Starting method	Direct			Direct									Direct			Direct					
	Air flow	m ³ /h			750			750			1,400			1,500								
Evaporator	Air flow	m ³ /h			600									1,200			1,800					
	Air throw	m			4 (2)									4 (2)			4 (2)					
Operation range	Cold room temperature	Min.~Max.		°C	-25~-15									-25~-15			-25~-15					
	Refrigerant	Type/GWP			R-452A/2,141									R-452A/2,141			R-452A/2,141					
Power supply	Charge	kg/TCO ₂ Eq			0.80/1.71			0.93/1.99			1.10/2.36			1.00/2.14			1.30/2.78					
	Phase/Frequency/Voltage	Hz/V			1~/50/230									1~/50/230			3N~/50/400					

Low Temperature Refrigeration, Medium Temperature Refrigeration				SP-O	SB.MSP106P			SB.MSP107P			SB.MSP212P			SB.MSP315P			SB.MSP320P		
Refrigerating capacity	Medium temperature	R-134a	Nom	kW	1.140 (1)			1.422 (1)			1.816 (1)			3.188 (1)			3.492 (1)		
Dimensions	Condensing unit	HeightxWidthxDepth		mm	357x620x337									390x820x427			427x820x427		
	Evaporator unit	HeightxWidthxDepth		mm	215x614x410									215x1,034x410			215x1,614x410		
	Packed condensing unit	WidthxDepth		mm	520x780									620x1,010					
Weight	Condensing unit	HeightxWidthxDepth		mm	260x470x780									260x470x1,200			260x470x1,780		
	Evaporator unit	HeightxWidthxDepth		mm	260x470x780									260x470x1,200			260x470x1,780		
	Packed condensing unit	HeightxWidthxDepth		mm	260x470x780									260x470x1,200			260x470x1,780		
Compressor	Type	Hermetic Reciprocating			Hermetic Reciprocating									Hermetic Reciprocating			Hermetic Reciprocating		
	Nominal power	kW			0.4			0.7			0.9			2.2			2.6		
	Starting method	Direct			Direct									Direct			Direct		
	Air flow	m ³ /h			750			750			1,400			1,500					
Evaporator	Air flow	m ³ /h			600									1,200			1,800		
	Air throw	m			4 (2)									4 (2)			4 (2)		
Operation range	Cold room temperature	Min.~Max.		°C	-5~-10									-5~-10			-5~-10		
	Refrigerant	Type/GWP			R-134a/1,430									R-134a/1,430			R-134a/1,430		
Power supply	Charge	kg/TCO ₂ Eq			0.88/1.26			0.84/1.20			1.00/1.43			1.00/1.43			1.50/2.15		
	Phase/Frequency/Voltage	Hz/V			1~/50/230									1~/50/230			3N~/50/400		

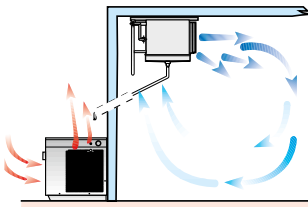
(1)When normally running: 0°C / +30°C | (2)Use air throw as a base. Air throw is affected by many factors such as height of room, product storage, location of evaporator, etc. | (3)When normally running: -20°C / +30°C | Contains fluorinated greenhouse gases | Precharged pipe 2.5 m length | Precharged pipe 5 m length | Precharged pipe 10 m length

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
- › For higher capacities, please contact your local dealer

Installation type



				DB-O	SB.BDB 110DA12XX	SB.BDB 112DA12XX	SB.BDB 117DA12XX	SB.BDB 320DA13XX	SB.BDB 330DA13XX	SB.BDB 218DA12XX	SB.BDB 220DA12XX
Refrigerating capacity	Low temperature	R-452A	Nom	kW	0.662 (1)	0.905 (1)	1.088 (1)	2.384 (1)	2.38 (1)	1.342 (1)	1.719 (1)
Dimensions	Condensing unit	Height x Width x Depth	mm		357 x 620 x 337			427 x 820 x 427		390 x 820 x 427	
	Evaporator unit	Height x Width x Depth	mm		215 x 614 x 410			215 x 1,614 x 410		215 x 1,034 x 410	
	Packed condensing unit	Height x Width x Depth	mm		590 x 419 x 810			610 x 520 x 1,010			
	Packed evaporator unit	Height x Width x Depth	mm		260 x 470 x 780			260 x 470 x 1,200			
Weight	Condensing unit		kg		45		50	72	78	61	69
	Evaporator unit		kg			13			28		19
	Packed condensing unit		kg		55		60	86	92	75	83
	Packed evaporator unit		kg			15			31		21
Compressor	Type				Hermetic Reciprocating						
	Nominal power		kW		0.75	1.1	1.3	2.2		1.3	1.5
Operation range	Starting method				Direct						
	Cold room temperature	Min. ~Max.	°C		-25 ~-15						
Refrigerant	Type				R-452A						
	GWP				2,142						
Evaporator	Air flow		m ³ /h		600			1,800		1,200	
	Air throw		m		4 (3)						
Condenser	Air flow		m ³ /h		750			1,500		1,400	
Defrost					Electric						
Power supply	Voltage/Phase/Frequency		V/Hz		230/1~/50			400/3N~/50		230/1~/50	400/3N~/50

				DB-O	SB.MDB 106A12XX	SB.MDB 107A12XX	SB.MDB 315A13XX	SB.MDB 320A13XX	SB.MDB 425A13XX	SB.MDB 635A13XX	SB.MDB 645A13XX	SB.MDB 706A13XX	SB.MDB 530A13XX	SB.MDB 707A13XX	SB.MDB 212A12XX								
Refrigerating capacity	Medium temperature	R-134a	Nom	kW	1.140 (2)	1.422 (2)	3.188 (2)	3.492 (2)	3.606 (2)	7.293 (2)	8.779 (2)	11.014 (2)	5.070 (2)	14.069 (2)	1.816 (2)								
Dimensions	Condensing unit	Height x Width x Depth	mm		357 x 620 x 337			427 x 820 x 427		540 x 920 x 540		654 x 1,575 x 642		885 x 1,725 x 742		594 x 1,075 x 532		885 x 1,725 x 742		390 x 820 x 427			
	Evaporator unit	Height x Width x Depth	mm		215 x 614 x 410			215 x 1,614 x 410		545 x 805 x 690		600 x 1,690 x 690		620 x 1,840 x 700		530 x 1,220 x 690		620 x 1,840 x 700		215 x 1,034 x 410			
	Packed condensing unit	Height x Width x Depth	mm		590 x 419 x 810			610 x 520 x 1,010		610 x 520 x 1,010		880 x 650 x 1,200		750 x 890 x 1,840		780 x 890 x 1,990		710 x 820 x 1,280		780 x 890 x 1,990		610 x 520 x 1,010	
	Packed evaporator unit	Height x Width x Depth	mm		260 x 470 x 780			260 x 470 x 1,200		260 x 470 x 1,200		702 x 814 x 1,004		865 x 780 x 1,850		1,100 x 880 x 2,000		865 x 780 x 1,850		1,100 x 880 x 2,000		260 x 470 x 1,200	
Weight	Condensing unit		kg		43		69	70	95	158	159	195	104	220	59								
	Evaporator unit		kg			13	28	28	37		84	102	53	102	19								
	Packed condensing unit		kg		53		83	84	114	247	248	309	193	334	73								
	Packed evaporator unit		kg		15		30	30	53		140	165	85	165	21								
Compressor	Type				Hermetic Reciprocating																		
	Nominal power		kW		0.4	0.7	2.2	2.6	2.94	4.8	6.3	7.4	3.7	9.555	0.9								
Operation range	Starting method				Direct																		
	Cold room temperature	Min. ~Max.	°C		-5 ~10																		
Refrigerant	Type				R-134a																		
	GWP				1,430																		
Evaporator	Air flow		m ³ /h		600		1,800	1,800	2,300	6,800	6,400	8,400	4,600	8,000	1,200								
	Air throw		m		4 (3)				12 (3)	11 (3)	13 (3)	11 (3)	12 (3)	12 (3)	4 (3)								
Condenser	Air flow		m ³ /h		750		1,500	3,150	5,500	7,000	8,100	3,200	8,100	1,400									
Defrost					Electric																		
Power supply	Voltage/Phase/Frequency		V/Hz		230/1~/50		400/3N~/50	400/3N~/50		400/3N~/50				230/1~/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.

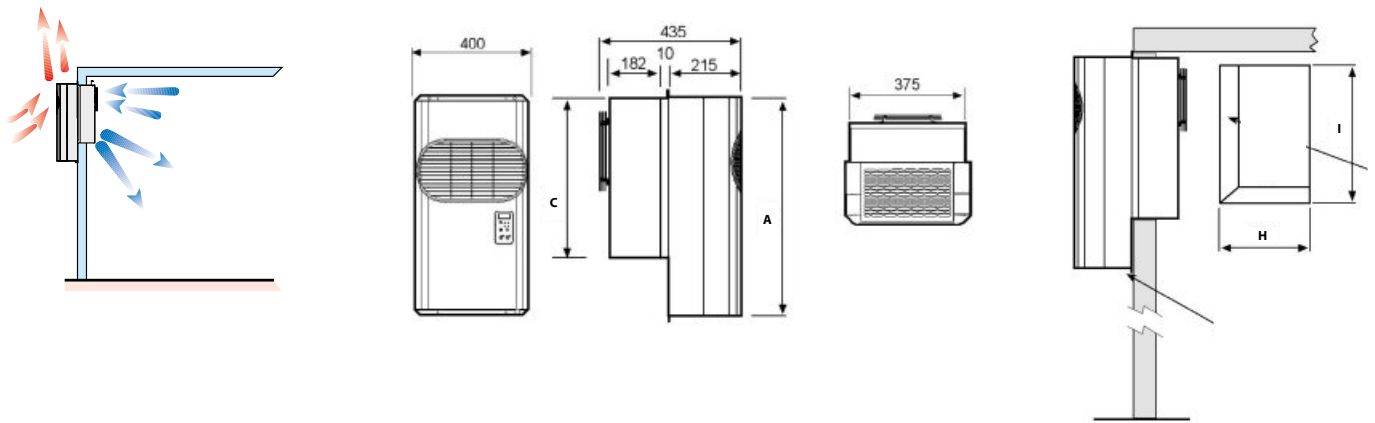
Wineblock - Monoblock units for high temperature refrigeration

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



Installation type



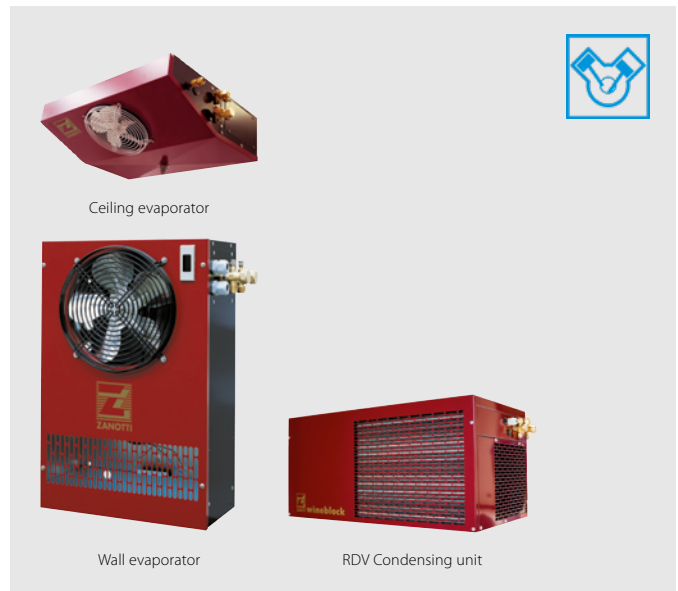
High Temperature Refrigeration				RCV	101527E	101528E	102527E	102528E	201527E	201528E	202527E	202528E
Refrigerating capacity	High temperature	R-134a	Nom	kW	0.6		1		1.4		2.3	
Heating capacity	R-134a	Nom		kW	0.7		1.05		1.4		1.75	
Dimensions	Unit	HeightxWidthxDepth		mm	735x400x435				735x620x435			
	Packed unit	HeightxWidthxDepth		mm	955x435x495				955x655x495			
Weight	Unit			kg	49	50	52	53	77	78	79	80
	Packed unit			kg	59	60	62	63	89	90	91	92
Compressor	Type				Hermetic Reciprocating							
	Nominal power			kW	0.25		0.37		0.46		0.55	
Condenser	Air flow			m ³ /h	600				1,200			
Evaporator	Air flow			m ³ /h	600				1,200			
	Air throw			m	4 (1)				10~20			
Operation range	Cold room temperature	Min.~Max.		°C	10~20							
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) Use air throw as a base. Air throw is affected by many factors such as height of room, product storage, location of evaporator, etc. | Contains fluorinated greenhouse gases | When normally running: +10°C / +30°C

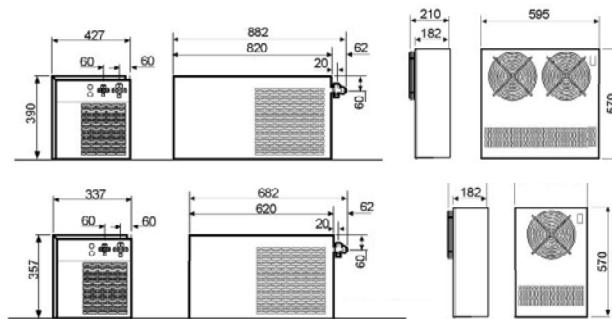
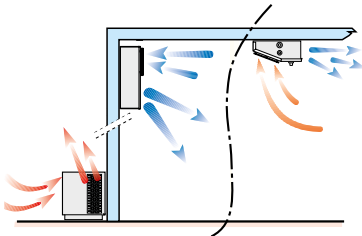
Wineblock - Split units for high temperature refrigeration

Compact condensing unit and small-sized wall or ceiling mounted evaporators

- › Accurate humidity and temperature control to guarantee the quality of products (e.g. wines)
- › 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



Installation type



High Temperature Refrigeration			RDV	SB.RDV 101523E	SB.RDV 101524E	SB.RDV 101525E	SB.RDV 101529E	SB.RDV 102523E	SB.RDV 102524E	SB.RDV 102525E	SB.RDV 102529E	SB.RDV 201523E	SB.RDV 201524E
Refrigerating capacity	High temperature	R-134a Nom	kW	0.600 (2)				1.000 (2)				1.400 (2)	
Heating capacity	R-134a	Nom	kW	0.700	0.900	0.700	1.050	0.900	1.050	1.400	1.600		
Dimensions	Condensing unit	HeightxWidthxDepth	mm	357x682x337				390x882x427					
	Evaporator unit	HeightxWidthxDepth	mm	570x375x210	215x669x490				570x375x210	570x375x210	570x595x210	215x1,089x490	
	Packed condensing unit	WidthxDepth	mm	800x400				510x1,000					
	Packed evaporator unit	HeightxWidthxDepth	mm	610x250x525	540x250x1,190				610x250x525	540x250x1,190	610x250x745	540x250x1,190	
Weight	Condensing unit		kg	33		32		36		35		61	
	Evaporator unit		kg	13		12		13		12		19	
	Packed condensing unit		kg	38		37		41		40		68	
	Packed evaporator unit		kg	15		14		15		14		21	22
Compressor	Type			Hermetic Reciprocating									
	Nominal power		kW	0.25				0.37				0.46	
Condenser	Air flow		m ³ /h	600				600				1,200	1,100
	Evaporator		m ³ /h	500	400	500	400	500	400	500	1,000	800	
Operation range	Air throw		m	4 (1)									
	Cold room temperature	Min.~Max.	°C	10~20									
Refrigerant	Type/GWP			R-134a/1,430									
	Charge		kg/TCO2Eq	1.30/1.86				1.80/2.57					
Power supply	Phase/Frequency/Voltage		Hz/V	1~/50/230									

High Temperature Refrigeration			RDV	SB.RDV 201525E	SB.RDV 201529E	SB.RDV 202523E	SB.RDV 202524E	SB.RDV 202525E	SB.RDV 202529E			
Refrigerating capacity	High temperature	R-134a Nom	kW	1.400 (2)				2.300 (2)				
Heating capacity	R-134a	Nom	kW	1.600	1.400	1.750 (2)	1.600	1.750 (2)				
Dimensions	Condensing unit	HeightxWidthxDepth	mm	390x882x427				390x882x427				
	Evaporator unit	HeightxWidthxDepth	mm	215x1,089x490	570x595x210				215x195x490	215x1,089x490	570x595x210	
	Packed condensing unit	WidthxDepth	mm	510x1,000				510x1,000				
	Packed evaporator unit	HeightxWidthxDepth	mm	540x250x1,190	610x250x745				540x1,089x1,190	540x250x1,190	610x250x745	
Weight	Condensing unit		kg	60		63	68		62			
	Evaporator unit		kg	18		19		18				
	Packed condensing unit		kg	67		70	75		69			
	Packed evaporator unit		kg	20		21	22		20			
Compressor	Type			Hermetic Reciprocating								
	Nominal power		kW	0.46				0.55				
Condenser	Air flow		m ³ /h	1,100				1,200				
	Evaporator		m ³ /h	800	1,000				800	1,000		
Operation range	Air throw		m	4 (1)								
	Cold room temperature	Min.~Max.	°C	10~20								
Refrigerant	Type/GWP			R-134a/1,430								
	Charge		kg/TCO2Eq	1.80/2.57				1.80/2.57				
Power supply	Phase/Frequency/Voltage		Hz/V	1~/50/230								

(1) Use air throw as a base. Air throw is affected by many factors such as height of room, product storage, location of evaporator, etc. | (2) When normally running: +10°C / +30°C | Contains fluorinated greenhouse gases



Seasoning units

Monoblock and bi-block units for

- Meat drying and seasoning
- Cheese seasoning

For small and medium size coldrooms

- › Quick and easy installation
- › Low noise and vibration
- › Electronic control
- › Constant and detailed control of temperature and humidity level during operation
- › Compact and functional, with removable panels to allow easy access to internal components
- › More units available suitable for large coldrooms

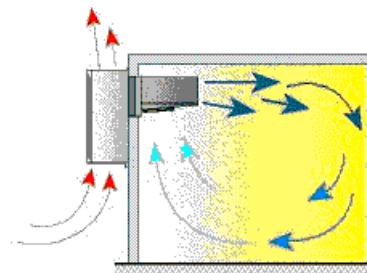


Drying units / Seasoning units: SAS

- › Coldroom temperature: **+10°C to +25°C**
- › Humidity: **till 60%**

Special treatment units: SAR

- › Coldroom temperature: **+2°C to +4°C**
- › Humidity: **till 40%**



Cooling capacity :


























- › from 2.900 to 18.500 Watt

	SAR	SAR221TR01E	SAR135TR01E	SAR235TR01E
Refrigerating capacity	W	2900	4500	7250
Weight	Condensing unit	kg	145	224
	Evaporator unit	kg	103	224
Compressor	Type		Hermetic	
	Nominal power	kW	1.1	1.5
	Starting method		Direct	
Condenser	Air flow	m ³ /h	1400	2700
Evaporator	Air flow	m ³ /h	800	3000
Operation range	Cold room temperature	Min.~Max. °C	+10° +25°	
Refrigerant	Type	R134a		
Power supply	Phase/Frequency/Voltage	Hz/V 3N~/50/400		

	SAS	SAS221TR01E	SAS135TR01E	SAS235TR01E	SAS335TR01E	SAS340TR01E	SAS221TR86E	SAS135TR86E	SAS235TR86E	SAS335TR86E	SAS340TR86E	
Refrigerating capacity	W	3400	4900	8200	12800	15900	3400	4900	8200	12800	15900	
Weight	Condensing unit	kg	105	127	207	268	309	84	100	165	213	
	Evaporator unit	kg	105	127	207	268	309	20	28	42	55	
Compressor	Type	Hermetic										
	Nominal power	kW	0.7	1.1	2.2	3.7	5.5	0.7	1.1	2.2	3.7	5.5
	Starting method		Direct									
Condenser	Air flow	m ³ /h	1400	1500	2700	4000	5600	1400	1500	2700	4000	5600
Evaporator	Air flow	m ³ /h	800	1700	3000	4700	6500	800	1700	3000	4700	6500
Operation range	Cold room temperature	Min.~Max. °C	+10° +25°									
Refrigerant	Type	R134a										
Power supply	Phase/Frequency/Voltage	Hz/V 3N~/50/400										



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											
												
Small condensing units	CU series											
												
Semi condensing units	CU series											
												
Twin condensing units	CU series											
												
Large condensing units	CM series											
												
Small inverter condensing unit for commercial refrigeration	Mini-ZEAS LRMEQ-BY1											
	Mini-ZEAS LRLEQ-BY1											
Inverter condensing unit for commercial refrigeration	ZEAS LREQ-BY1											
	Multi ZEAS LREQ-BY1R											
CO ₂ condensing units												
												
												

Condensing unit for commercial refrigeration with reciprocating technology



JEHCCU-CM1/CM3

Refrigeration solution for small food retailers

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

Medium Temperature Refrigeration				JEHCCU-CM1/CM3	0040CM1	0050CM1	0051CM1	0063CM1	0067CM1	0077CM1	0095CM1	0100CM1	0113CM1	0140CM1	0170CM1	0140CM3	0170CM3			
Refrigerating capacity	Medium temperature (t)	R-134a	Nom	kW	0.59	-	0.89	1.06	-	1.29	1.60	-	-	-	-	-	-			
		R-407A	Nom	kW	-	0.80	-	-	1.07	-	-	-	1.33	1.66	1.92	-	1.92	-		
		R-407F	Nom	kW	-	0.86	-	-	1.15	-	-	-	1.41	1.74	2.08	-	2.08	-		
		R-448A	Nom	kW	-	0.87	-	-	1.12	-	-	-	1.35	1.64	2.15	2.57	2.15	2.57		
		R-449A	Nom	kW	-	0.87	-	-	1.12	-	-	-	1.35	1.64	2.15	2.57	2.15	2.57		
		R-452A	Nom	kW	-	0.95	-	-	1.23	-	-	-	1.48	1.79	2.20	2.69	2.20	2.69		
Seasonal energy performance ratio SEPR	R-134a	Te -10°C		1.50	-	1.77	1.77	-	-	1.85	1.86	-	-	-	-	-	-			
	R-407A	Te -10°C		-	1.59	-	-	1.62	-	-	-	1.66	1.78	1.74	-	1.66	-			
	R-407F	Te -10°C		-	1.77	-	-	1.76	-	-	-	1.77	1.85	1.93	-	1.85	-			
	R-448A	Te -10°C		-	1.66	-	-	1.64	-	-	-	1.64	1.71	2.09	1.73	2.00	1.76			
	R-449A	Te -10°C		-	1.66	-	-	1.64	-	-	-	1.64	1.71	2.09	1.73	2.00	1.76			
	R-452A	Te -10°C		-	1.67	-	-	1.67	-	-	-	1.68	1.73	1.92	1.65	1.83	1.73			
Parameters at full load and ambient temp. 25°C	R-134a	Te -10°C	Declared COP (COP2)	1.84	-	2.01	2.05	-	2.22	2.30	-	-	-	-	-	-	-			
	R-407A	Te -10°C	Declared COP (COP2)	-	1.69	-	-	1.69	-	-	-	1.74	1.90	1.87	-	2.09	-			
	R-407F	Te -10°C	Declared COP (COP2)	-	1.93	-	-	1.94	-	-	-	1.95	2.07	2.22	-	1.78	-			
	R-448A	Te -10°C	Declared COP (COP2)	-	1.91	-	-	1.90	-	-	-	1.89	1.95	2.42	1.93	2.11	2.01			
	R-449A	Te -10°C	Declared COP (COP2)	-	1.91	-	-	1.90	-	-	-	1.89	1.95	2.42	1.93	2.32	2.01			
	R-452A	Te -10°C	Declared COP (COP2)	-	1.90	-	-	1.90	-	-	-	1.90	1.98	2.18	1.85	2.32	1.99			
Parameters at full load and ambient temp. 32°C (Point A)	R-134a	Te -10°C	Rated COP (COPA)	1.5	-	1.77	1.77	-	1.85	1.86	-	-	-	-	-	-	-			
	R-407A	Te -10°C	Rated COP (COPA)	-	1.59	-	-	1.62	-	-	-	1.66	1.78	1.74	-	1.66	-			
	R-407F	Te -10°C	Rated COP (COPA)	-	1.77	-	-	1.76	-	-	-	1.77	1.85	1.93	-	1.85	-			
	R-448A	Te -10°C	Rated COP (COPA)	-	1.66	-	-	1.64	-	-	-	1.64	1.71	2.09	1.73	2.00	1.76			
	R-449A	Te -10°C	Rated COP (COPA)	-	1.66	-	-	1.64	-	-	-	1.64	1.71	2.09	1.73	2.00	1.76			
	R-452A	Te -10°C	Rated COP (COPA)	-	1.67	-	-	1.67	-	-	-	1.68	1.73	1.92	1.65	1.83	1.73			
Parameters at full load and ambient temp. 43°C	R-134a	Te -10°C	Rated cooling capacity (PA)	kW	0.59	-	0.89	1.06	-	1.29	1.60	-	-	-	-	-	-			
	R-407A	Te -10°C	Rated cooling capacity (PA)	kW	-	0.80	-	-	1.07	-	-	1.33	1.66	1.92	-	1.92	-			
	R-407F	Te -10°C	Rated cooling capacity (PA)	kW	-	0.86	-	-	1.15	-	-	1.41	1.74	2.08	-	2.08	-			
	R-448A	Te -10°C	Rated cooling capacity (PA)	kW	-	0.87	-	-	1.12	-	-	1.35	1.64	2.15	2.57	2.15	2.57			
	R-449A	Te -10°C	Rated cooling capacity (PA)	kW	-	0.87	-	-	1.12	-	-	1.35	1.64	2.15	2.57	2.15	2.57			
	R-452A	Te -10°C	Rated cooling capacity (PA)	kW	-	0.95	-	-	1.23	-	-	1.48	1.79	2.20	2.69	2.20	2.69			
	R-134a	Te -10°C	Rated power input (DA)	kW	0.39	-	0.50	0.60	-	0.70	0.86	-	-	-	-	-	-			
	R-407A	Te -10°C	Rated power input (DA)	kW	-	0.50	-	-	0.66	-	-	0.80	0.94	1.11	-	1.16	-			
	R-407F	Te -10°C	Rated power input (DA)	kW	-	0.49	-	-	0.65	-	-	0.79	0.94	1.07	-	1.12	-			
	R-448A	Te -10°C	Rated power input (DA)	kW	-	0.53	-	-	0.68	-	-	0.82	0.96	1.03	1.49	1.08	1.46			
	R-449A	Te -10°C	Rated power input (DA)	kW	-	0.53	-	-	0.68	-	-	0.82	0.96	1.03	1.49	1.08	1.46			
	R-452A	Te -10°C	Rated power input (DA)	kW	-	0.57	-	-	0.74	-	-	0.88	1.03	1.15	1.63	1.20	1.55			
Parameters at full load and ambient temp. 43°C	R-134a	Te -10°C	Declared COP (COP3)	1.42	-	1.40	1.40	-	1.49	1.50	-	-	-	1.56	-	1.47	-			
	R-407A	Te -10°C	Declared COP (COP3)	-	1.42	-	-	-	-	-	-	-	-	1.58	-	1.49	-			
	R-407F	Te -10°C	Declared COP (COP3)	-	1.46	-	-	-	-	-	-	-	-	1.58	-	1.49	-			
	R-448A	Te -10°C	Declared COP (COP3)	-	1.27	-	-	1.26	-	-	-	1.25	1.33	1.62	1.42	1.53	1.43			
	R-449A	Te -10°C	Declared COP (COP3)	-	1.27	-	-	1.26	-	-	-	1.25	1.33	1.62	1.42	1.53	1.43			
	R-452A	Te -10°C	Declared COP (COP3)	-	1.31	-	-	1.32	-	-	-	1.34	1.37	1.52	1.35	1.44	1.39			
	R-134a	Te -10°C	Cooling capacity (P3)	kW	-	-	0.75	0.86	-	1.06	1.34	-	-	-	-	-	-			
	R-407A	Te -10°C	Cooling capacity (P3)	kW	-	0.75	-	-	-	-	-	-	-	1.79	-	1.78	-			
	R-407F	Te -10°C	Cooling capacity (P3)	kW	-	0.79	-	-	-	-	-	-	-	1.85	-	1.84	-			
	R-448A	Te -10°C	Cooling capacity (P3)	kW	-	0.73	-	-	0.91	-	-	1.10	1.34	1.79	2.23	1.77	2.20			
	R-449A	Te -10°C	Cooling capacity (P3)	kW	-	0.73	-	-	0.91	-	-	1.10	1.34	1.79	2.23	1.77	2.20			
	R-452A	Te -10°C	Cooling capacity (P3)	kW	-	0.80	-	-	1.01	-	-	1.23	1.46	1.83	2.28	1.81	2.26			
Dimensions	Unit	HeightxWidthxDepth	mm	607 x 876 x 420											662 x 1,101 x 444					
	Weight	Unit	kg	49	-	57	-	56	-	58	57	58	67	68	67	68				
	Compressor	Type		Reciprocating compressor																
		Piston displacement	m³/h	1.8	-	3.18	-	3.79	-	2.64	-	4.51	-	5.69	-	3.18	4.21	4.52	4.52	4.52
	Sound pressure level	Type		28																
		Nom.	dBA	32																
Piping connections	Liquid line connection	inch	1/4"											3/8"						
	Suction line connection	inch	3/8"											5/8"						
Refrigerant	Type/GWP		R-134a/ 1.430	R-452A/ 2.141	R-134a/1.430	R-452A/ 2.141	R-134a/1.430	R-452A/ 2.141	R-407A/ 2.107	R-448A/ 1.387	R-449A/ 1.397	R-452A/ 2.141	R-407A/ 2.107	R-448A/ 1.387	R-449A/ 1.397	R-452A/ 2.107	R-407F/ 1.825	R-448A/ 1.387	R-449A/ 1.397	
	Type 2 - GWP Type 2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Type 3 - GWP Type 3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Type 4 - GWP Type 4		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Type 5 - GWP Type 5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	GWP Type 6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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 Return Gas 20°C (medium temperature application) | (2) Average sound pressure level is measured at 10m in anechoic room

Condensing unit for commercial refrigeration with scroll technology



JEHSCU-CM1/CM3

Refrigeration solution for small food retailers

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

Medium Temperature Refrigeration			JEHSCU-CM1/CM3			0200CM1	0250CM1	0300CM1	0200CM3	0250CM3	0300CM3	0350CM3	0360CM3	0400CM3	0500CM3	0600CM3	0680CM3	0800CM3	1000CM3			
Refrigerating capacity	Medium temperature (t)	R-134a	Nom	kW	2.13	-	-	2.24	-	-	-	3.48	3.80	4.37	-	-	-	8.21	10.75			
		R-407A	Nom	kW	3.48	4.09	-	3.45	4.05	4.69	-	5.77	6.76	8.28	9.54	10.7	12.95	-	-			
Seasonal energy performance ratio SEPR	Te-10°C	R-407F	Nom	kW	3.33	3.82	4.63	3.33	3.94	4.58	-	5.73	6.75	8.18	9.59	-	12.9	-	-			
		R-407H	Nom	kW	-	-	-	3.30	3.76	4.51	-	-	5.96	-	9.24	10.3	12.3	-	-			
		R-448A	Nom	kW	3.33	3.82	4.73	3.33	3.82	4.73	5.46	5.76	6.37	7.88	9.45	10.5	12.8	15.85	-			
		R-448A	Nom	kW	3.33	3.82	4.73	3.33	3.82	4.73	5.46	5.76	6.37	7.88	9.45	10.5	12.8	15.85	-			
		R-449A	Nom	kW	1.92	-	-	2.19	-	-	-	2.08	2.36	2.36	-	-	-	3.10	3.37	-		
Annual electricity consumption Q	Te-10°C	R-134a		kWh/a	2.18	2.06	-	2.12	1.99	1.92	-	3.48	3.79	3.21	3.19	2.96	3.12	-	-			
		R-407F		kWh/a	1.92	1.83	1.74	1.88	1.83	1.69	-	3.22	3.49	3.07	3.12	-	2.95	-	-			
		R-407H		kWh/a	-	-	-	1.93	2.02	1.80	-	3.15	3.03	-	2.90	2.68	3.24	-	-			
		R-448A		kWh/a	2.02	1.93	1.85	2.02	1.93	1.85	2.72	3.02	3.13	2.97	3.22	2.96	2.88	2.83	-			
		R-449A		kWh/a	2.02	1.93	1.85	2.02	1.93	1.85	2.72	3.02	3.13	2.97	3.22	2.96	2.88	2.83	-			
Parameters at full load and ambient temp. 25°C	Te-10°C	R-134a	Declared COP (COP2)		2.21	-	-	2.62	-	-	-	2.46	2.86	2.90	-	-	-	16,257	19,586			
		R-407A	Declared COP (COP2)		2.61	2.44	-	2.55	2.36	2.26	-	-	-	-	-	-	-	25,491	-			
		R-407F	Declared COP (COP2)		2.46	2.33	2.21	2.39	2.29	2.14	-	-	-	-	-	-	-	26,882	-			
		R-407H	Declared COP (COP2)		-	-	-	2.37	2.48	2.21	-	-	-	-	-	-	-	-	-			
		R-448A	Declared COP (COP2)		2.53	2.32	2.23	2.53	2.32	2.23	-	-	-	-	-	-	-	-	27,302	34,432		
Parameters at part load and ambient temp. 25°C (Point B)	Te-10°C	R-134a	Declared COP (COPB)		2.53	2.32	2.23	2.53	2.32	2.23	-	-	-	-	-	-	-	-	27,302	34,432		
		R-407A	Declared COP (COPB)		-	-	-	-	-	-	-	2.77	2.90	2.60	2.51	2.37	2.55	-	-			
		R-407F	Declared COP (COPB)		-	-	-	-	-	-	-	2.53	2.66	2.36	2.39	-	2.5	-	-			
		R-407H	Declared COP (COPB)		-	-	-	-	-	-	-	2.47	2.37	-	2.32	2.17	2.68	-	-			
		R-448A	Declared COP (COPB)		-	-	-	-	-	-	-	2.18	2.56	2.51	2.41	2.39	2.18	2.33	2.26			
Parameters at full load and ambient temp. 32°C (Point A)	Te-10°C	R-134a	Rated COP (COPA)		1.92	-	-	2.19	-	-	-	2.08	2.36	2.36	-	-	-	2.2	2.21			
		R-407A	Rated COP (COPA)		2.18	2.06	-	2.12	1.99	1.92	-	2.24	2.28	2.11	2.05	1.93	2.08	-	-			
		R-407F	Rated COP (COPA)		1.92	1.83	1.74	1.88	1.83	1.69	-	1.97	2.10	1.88	1.91	-	2.1	-	-			
		R-407H	Rated COP (COPA)		-	-	-	1.93	2.02	1.80	-	-	1.89	-	1.92	1.78	2.2	-	-			
		R-448A	Rated COP (COPA)		2.02	1.93	1.85	2.02	1.93	1.85	1.77	2.04	1.98	1.78	1.96	1.79	2.05	1.83	-			
Parameters at full load and ambient temp. 43°C	Te-10°C	R-449A	Rated COP (COPA)		2.02	1.93	1.85	2.02	1.93	1.85	1.77	2.04	1.98	1.78	1.96	1.79	2.05	1.83	-			
		R-134a	Rated cooling capacity (PA)	kW	2.13	-	-	2.24	-	-	-	3.48	3.80	4.37	-	-	-	8.21	10.75			
		R-407A	Rated cooling capacity (PA)	kW	3.48	4.09	-	3.45	4.05	4.69	-	5.77	6.76	8.28	9.54	10.7	12.95	-	-			
		R-407F	Rated cooling capacity (PA)	kW	3.33	3.82	4.63	3.33	3.94	4.58	-	5.73	6.75	8.18	9.59	-	12.9	-	-			
		R-407H	Rated cooling capacity (PA)	kW	-	-	-	3.30	3.76	4.51	-	-	5.96	-	9.24	10.3	12.3	-	-			
Parameters at part load and ambient temp. 15°C (Point C)	Te-10°C	R-448A	Rated cooling capacity (PA)	kW	3.33	3.82	4.73	3.33	3.82	4.73	5.46	5.76	6.37	7.88	9.45	10.5	12.8	15.85	-			
		R-449A	Rated cooling capacity (PA)	kW	3.33	3.82	4.73	3.33	3.82	4.73	5.46	5.76	6.37	7.88	9.45	10.5	12.8	15.85	-			
		R-134a	Rated power input (DA)	kW	1.11	-	-	1.03	-	-	-	1.68	1.61	1.85	-	-	-	3.74	4.86			
		R-407A	Rated power input (DA)	kW	1.60	1.99	-	1.63	2.04	2.45	-	2.58	2.97	3.93	4.65	5.54	6.24	-	-			
		R-407F	Rated power input (DA)	kW	1.74	2.09	2.66	1.78	2.16	2.71	-	2.91	3.21	4.36	5.03	-	6.13	-	-			
Parameters at part load and ambient temp. 5°C (Point D)	Te-10°C	R-407H	Rated power input (DA)	kW	-	-	-	1.71	1.86	2.50	-	-	3.15	-	4.82	5.79	5.58	-	-			
		R-448A	Rated power input (DA)	kW	1.65	1.98	2.56	1.65	1.98	2.56	3.09	2.83	3.22	4.43	4.83	5.85	6.23	8.68	-			
		R-449A	Rated power input (DA)	kW	1.65	1.98	2.56	1.65	1.98	2.56	3.09	2.83	3.22	4.43	4.83	5.85	6.23	8.68	-			
		R-134a	Declared COP (COP3)		1.42	-	-	1.52	-	-	-	1.52	-	-	-	-	-	1.59	1.60			
		R-448A	Declared COP (COP3)		1.31	1.36	1.31	1.31	1.36	1.31	1.26	1.41	1.37	1.24	1.42	1.42	1.32	-	-			
Dimensions	Unit		HeightxWidthxDepth	mm	662 x1,101 x444																	
	Weight		Unit	kg	70	72	74	70	72	74	74	74	112	119	123	125	126	126	222	226		
	Compressor		Type		Reciprocating compressor												Scroll compressor			Reciprocating compressor		
	Fan		Piston displacement	m ³ /h	5.9	6.8	8.6	5.9	6.8	8.6	9.9	9.9	11.4	14.4	17.1	18.8	22.1	29.1	-	-		
	Sound pressure level		Type		Axial																	
Piping connections		Nom.	dBA	33	34	36	33	34	36	39	37	37	38	40	40	43	43	-	-			
Refrigerant		Liquid line connection	inch	3/8"																		
Refrigerant		Suction line connection	inch	3/4"																		
Refrigerant		Type/GWP		R-134a/1430	R-407A/2107	R-407A/2107	R-134a/1430	R-407A/2107	R-407A/2107	R-407A/2107	R-134a/1430.0	R-134a/1430	R-134a/1430	R-407A/2107	R-407A/2107	R-407A/2107	R-407A/2107	R-407A/2107	R-407A/2107			
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 Return Gas 20°C (medium temperature application) | (2) Average sound pressure level is measured at 10m in anechoic room

Condensing unit for commercial refrigeration with scroll / reciprocating technology

Refrigeration solution for small food retailers



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

Low Temperature Refrigeration			JEHCCU-CL1	JEHSCU-CL3	0115CL1	0135CL1	0180CL3	0210CL3	0300CL3	0400CL3	0500CL3	0600CL3	0750CL3	0950CL3 EVI			
Refrigerating capacity Medium temperature (1)	R-407A	Nom	kW	-	-	-	-	-	-	2.29	2.77	3.31	4.29	4.96			
	R-407F	Nom	kW	-	-	-	-	-	-	2.38	2.87	-	-	4.88			
	R-448A	Nom	kW	-	-	0.98	1.36	1.62	2.53	2.53	-	3.49	4.81	4.86			
	R-449A	Nom	kW	-	-	0.98	1.36	1.62	2.53	-	-	-	-	4.86			
	R-452A	Nom	kW	0.64	0.81	1.13	1.53	-	-	-	-	-	-	-			
Seasonal energy performance ratio SEPR	R-407A	Te -35°C	-	-	-	-	-	-	-	1.67	1.67	1.64	-	1.76			
	R-407F	Te -35°C	-	-	-	-	-	-	-	1.65	1.64	-	-	1.63			
	R-448A	Te -35°C	-	-	1.00	1.00	0.97	1.67	-	1.64	-	1.64	1.64	1.76			
	R-449A	Te -35°C	-	-	1.00	1.00	0.97	1.67	-	1.64	-	1.64	1.64	1.76			
	R-452A	Te -35°C	1.05	0.98	1.07	1.05	-	-	-	-	-	-	-	-			
Annual electricity consumption Q	R-407A	Te -35°C	kWh/a	-	-	-	-	-	-	10 212	12 364	15 026	-	20 958			
	R-407F	Te -35°C	kWh/a	-	-	-	-	-	-	10 730	13 018	-	-	22 348			
	R-448A	Te -35°C	kWh/a	-	-	-	-	-	-	11 276	-	15 878	21 856	20 551			
	R-449A	Te -35°C	kWh/a	-	-	-	-	-	-	11 276	-	15 878	21 856	20 551			
Parameters at full load and ambient temp. 25°C	R-448A	Te -35°C	Declared COP (COP2)	-	-	1.15	1.09	1.16	-	-	-	-	-	-			
	R-449A	Te -35°C	Declared COP (COP2)	-	-	1.15	1.09	1.16	-	-	-	-	-	-			
	R-452A	Te -35°C	Declared COP (COP2)	1.20	1.15	1.26	1.25	-	-	-	-	-	-	-			
Parameters at part load and ambient temp. 25°C (Point B)	R-407A	Te -35°C	Declared COP (COPB)	-	-	-	-	-	1.24	1.25	1.35	-	-	1.51			
	R-407F	Te -35°C	Declared COP (COPB)	-	-	-	-	-	1.23	1.23	-	-	-	1.35			
	R-448A	Te -35°C	Declared COP (COPB)	-	-	-	-	-	1.30	-	1.29	1.43	1.42	1.42			
	R-449A	Te -35°C	Declared COP (COPB)	-	-	-	-	-	1.30	-	1.29	1.43	1.42	1.42			
Parameters at full load and ambient temp. 32°C (Point A)	R-407A	Te -35°C	Rated COP (COPA)	-	-	-	-	-	0.98	0.97	0.93	-	-	1.08			
	R-407F	Te -35°C	Rated COP (COPA)	-	-	-	-	-	0.95	0.93	-	-	-	1.08			
	R-448A	Te -35°C	Rated COP (COPA)	-	1.00	1.00	0.97	1.02	-	-	0.83	1.18	1.24	1.24			
	R-449A	Te -35°C	Rated COP (COPA)	-	1.00	1.00	0.97	1.02	-	-	0.83	1.18	1.24	1.24			
	R-452A	Te -35°C	Rated COP (COPA)	1.05	0.98	1.08	1.05	-	-	-	-	-	-	-			
Parameters at full load and ambient temp. 43°C	R-407A	Te -35°C	Rated cooling capacity (PA)	kW	-	-	-	-	2.29	2.77	3.31	4.29	4.96	-			
	R-407F	Te -35°C	Rated cooling capacity (PA)	kW	-	-	-	-	2.38	2.87	-	-	-	4.88			
	R-448A	Te -35°C	Rated cooling capacity (PA)	kW	-	-	0.98	1.36	1.62	2.53	-	3.49	4.81	4.86			
	R-449A	Te -35°C	Rated cooling capacity (PA)	kW	-	-	0.98	1.36	1.62	2.53	-	3.49	4.81	4.86			
	R-452A	Te -35°C	Rated cooling capacity (PA)	kW	0.64	0.81	1.13	1.53	-	-	-	-	-	-			
	R-407A	Te -35°C	Rated power input (DA)	kW	-	-	-	-	2.33	2.85	3.57	4.17	3.94	-			
	R-407F	Te -35°C	Rated power input (DA)	kW	-	-	-	-	2.51	3.08	-	-	-	4.51			
	R-448A	Te -35°C	Rated power input (DA)	kW	-	-	0.98	1.36	1.67	2.48	-	4.19	4.08	3.93			
	R-449A	Te -35°C	Rated power input (DA)	kW	-	-	0.98	1.36	1.67	2.48	-	4.19	4.08	3.93			
	R-452A	Te -35°C	Rated power input (DA)	kW	0.61	0.83	1.06	1.47	-	-	-	-	-	-			
	R-407A	Te -35°C	Declared COP (COP3)	-	-	-	-	-	0.67	0.66	0.64	0.73	-	-			
	R-407F	Te -35°C	Declared COP (COP3)	-	-	-	-	-	0.62	-	-	-	-	-			
	R-448A	Te -35°C	Declared COP (COP3)	-	-	-	-	-	0.68	-	0.46	0.81	-	-			
	R-449A	Te -35°C	Declared COP (COP3)	-	-	-	-	-	0.68	-	0.46	0.81	-	-			
Parameters at part load and ambient temp. 15°C (Point C)	R-452A	Te -35°C	Declared COP (COP3)	0.82	0.71	-	-	-	0.68	0.68	-	0.46	0.81	-			
	R-407A	Te -35°C	Cooling capacity (P3)	kW	-	-	-	-	2.01	2.40	2.88	3.79	-	-			
	R-407F	Te -35°C	Cooling capacity (P3)	kW	-	-	-	-	2.04	-	-	-	-	-			
	R-448A	Te -35°C	Cooling capacity (P3)	kW	-	-	-	-	2.23	-	2.82	4.26	-	-			
	R-449A	Te -35°C	Cooling capacity (P3)	kW	-	-	-	-	2.23	1.43	2.82	4.26	-	-			
	R-452A	Te -35°C	Cooling capacity (P3)	kW	0.49	0.57	-	-	-	-	-	-	-	-			
	R-407A	Te -35°C	Power input (D3)	kW	-	-	-	-	2.98	3.64	4.48	5.20	-	-			
	R-407F	Te -35°C	Power input (D3)	kW	-	-	-	-	3.30	-	-	-	-	-			
	R-448A	Te -35°C	Power input (D3)	kW	-	-	-	-	3.29	-	6.15	5.28	-	-			
	R-449A	Te -35°C	Power input (D3)	kW	-	-	-	-	3.29	2.11	6.15	5.28	-	-			
Parameters at part load and ambient temp. 5°C (Point D)	R-452A	Te -35°C	Power input (D3)	kW	0.60	0.81	-	-	-	-	-	-	-	-			
	R-407A	Te -35°C	Declared COP (COPC)	-	-	-	-	-	1.69	1.69	1.68	-	-	1.74			
	R-407F	Te -35°C	Declared COP (COPC)	-	-	-	-	-	1.68	1.69	-	-	-	1.67			
	R-448A	Te -35°C	Declared COP (COPC)	-	-	-	-	-	1.75	-	1.78	1.71	-	1.75			
Dimensions	Unit	HeightxWidthxDepth	mm	607 x876 x420	606 x876 x430	-	662 x1,101 x444	-	78	132	872 x1,353 x575	133	203	1,727 x1,348 x605			
	Weight	kg	55	61	83	81	-	-	-	-	-	-	-	200			
	Compressor	Type		Reciprocating compressor													
		Piston displacement	m ³ /h	4.55	6	9.45	11.83	8	-	-	11.8	14.5	17.1	21.4	17.1		
	Fan	Type		Axial													
Nom.		dBA	31	27	-	38	-	33	37	39	-	-	41	37			
Piping connections	Liquid line connection	inch	-														
	Suction line connection	inch	1/2"			3/8"		5/8"		3/4"			1/2"			7/8"	
Refrigerant	Type/GWP		R-404A/3,921.6	R-404A/3,922	R-448A/1,387	R-448A/1,387	R-404A/3,922	R-404A/3,922	R-404A/3,922	R-404A/3,922	R-404A/3,922	R-404A/3,922	R-404A/3,922	R-404A/3,922			
	Type 2 - GWP Type 2		-	R-452A/2.141	R-449A/1,397	R-449A/1,397	R-449A/1,397	R-407A/2,107	R-407A/2,107	R-407A/2,107	R-407A/2,107	R-448A/1,387	R-407A/2,107	R-404A/3,922			
	Type 3 - GWP Type 3		-	-	R-452A/2.141	R-449A/1,397	R-449A/1,397	R-407F/1,825	R-407F/1,825	R-407F/1,825	R-407F/1,825	R-449A/1,397	R-449A/1,397	R-407F/1,825			
	Type 4 - GWP Type 4		-	-	-	-	-	R-448A/1,387	R-448A/1,387	R-448A/1,387	-	-	-	R-448A/1,387			
	Type 5 - GWP Type 5		-	-	-	-	-	R-449A/1,397	R-449A/1,397	R-449A/1,397	-	-	-	R-449A/1,397			
Power supply	Phase/Frequency/Voltage	Hz/V	1~/50/230						3~/50/400								

(1) Refer to condition: Outside ambient temperature = 32°C, Evaporation temperature = -35°C and Return Gas 20°C (low temperature application) | (2) Average sound pressure level is measured at 10m in anechoic room | * Condition with high discharge temperature

Condensing unit for outdoor installation with semi hermetic compressors

General features:

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

General Description:

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



Standard characteristics:

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

Normal cooling

Condensing unit		VCU	1010	1015	1020	1022	1025	1030	1040	1050	1060	1090
Refrigeration capacity	0° C	W	2,786	3,189	4,248	5,133	5,943	7,334	9,596	11,711	13,899	17,574
	-10° C	W	1,929	2,335	2,957	3,550	4,161	5,155	6,897	8,270	9,885	12,520
Power input		kW	0,98	1,15	1,5	1,5	1,5	2,15	2,87	3,4	4,2	5
COP 32°C ⁽¹⁾			2,14	2,09	2,36	2,43	2,35	2,4	2,39	2,42	2,35	2,48
COP 25°C ⁽¹⁾			2,51	2,43	2,83	2,84	2,75	2,8	2,81	2,83	2,74	2,89
COP 43°C ⁽¹⁾			1,66	1,66	1,81	1,92	1,86	1,89	1,87	1,9	1,85	1,94
SEPR ⁽¹⁾			-	-	-	-	-	3,37	3,39	3,32	3,014	3,38
Annual Electricity Consumption ⁽¹⁾		Kwh/a	-	-	-	-	-	9,407	12,520	15,180	19,331	22,788
Dimensions	Unit	Height	mm	625	625	800	800	800	800	1480	1480	1480
		Width	mm	1150	1150	1400	1400	1400	1400	1400	1400	1680
		Depth	mm	500	500	550	550	550	550	550	550	750
Condenser air flow		m³/h	1,830	1,830	3,600	3,600	3,370	3,050	3,050	6,740	6,740	6,740
Compressor			Bitzer reciprocating compressor									
Refrigerant	Type/GWP		R-134a/1430									
Power supply	V~/Hz		400/3~/50									

Deep freezing

Condensing unit		HCU	1007	1010	1015	1020	1020	1030	1050	1060	1090	1120	
Refrigeration capacity	-25° C	W	971	1,193	1,562	1,875	3,099	4,025	5,657	7,563	8,823	9,358	
	-35° C	W	536	690	886	1,097	1,854	2,478	3,497	4,677	5,394	5,641	
Power input		kW	0,54	0,68	0,8	1	1,39	1,88	2,62	3,47	3,81	3,92	
COP 32°C ⁽¹⁾			0,98	1,02	1,09	1,1	1,33	1,32	1,33	1,35	1,42	1,44	
COP 25°C ⁽¹⁾			1,15	1,2	1,27	1,29	1,53	1,52	1,53	1,55	1,61	1,62	
COP 43°C ⁽¹⁾			0,68	0,68	0,75	0,74	1,05	1,04	1,07	1,07	1,16	1,04	
SEPR ⁽¹⁾			-	-	-	-	-	1,73	1,75	1,8	1,83	1,79	
Annual Electricity Consumption ⁽¹⁾		Kwh/a	-	-	-	-	-	10,695	14,882	19,427	21,964	23,562	
Dimensions	Unit	Height	mm	625	625	625	625	800	800	800	1480	1480	1480
		Width	mm	1150	1150	1150	1150	1400	1400	1400	1400	1680	1680
		Depth	mm	500	500	500	500	550	550	550	550	750	750
Condenser air flow		m³/h	1,830	1,830	1,830	1,830	3,600	3,600	3,050	7,200	6,740	6,740	
Compressor			Bitzer reciprocating compressor										
Refrigerant	Type/GWP		R-449A/1397										
Power supply	V~/Hz		400/3~/50										

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

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

General features:

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

General Description:

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



Standard characteristics:

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

Normal cooling

Condensing unit		GCU	4040	4060	4080	5120	5140	5180
Refrigeration capacity	0° C	W	11,900	15,200	19,200	27,800	30,400	36,400
	-10° C	W	8,328	10,596	13,800	19,783	21,249	25,694
Power input		kW	3.53	4.4	5.7	8.42	8.3	10
COP/EER ⁽¹⁾			2.4	2.4	2.4	2.3	2.6	2.6
SEPR ⁽¹⁾			3.52	3.6	3.71	3.55	3.75	3.8
Annual Electricity Consumption ⁽¹⁾		Kwh/a	14,526	18,098	22,905	24,299	34,808	41,562
Dimensions Unit	Height	mm	1480	1480	1480	1480	1480	1480
	Width	mm	1680	1680	1680	2405	2405	2405
	Depth	mm	750	750	750	750	750	750
Condenser air flow		m ³ /h	7,800	7,800	7,300	15,600	15,600	14,600
Compressor			Bitzer reciprocating compressor					
Refrigerant	Type/GWP		R-134A/1430					
Power supply	V~/ Hz		400/3~/50					

Deep freezing

Condensing unit		HCU	4080	4100	412
Refrigeration capacity	-25° C	W	9,400	11,100	13,600
	-35° C	W	5,732	6,725	8,904
Power input		kW	4.5	5.3	6.7
COP/EER ⁽¹⁾			1.3	1.3	1.3
SEPR ⁽¹⁾			1.78	1.8	1.83
Annual Electricity Consumption ⁽¹⁾		Kwh/a	23,949	27,806	36,214
Dimensions Unit	Height	mm	1480	1480	1480
	Width	mm	1680	1680	1680
	Depth	mm	750	750	750
Condenser air flow		m ³ /h	7,600	7,900	7,300
Refrigerant	Type/GWP		R 407F/1825		
Power supply	V~/ Hz		400/3~/50		

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

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

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
- › Reciprocating semi hermetic compressors: Bitzer, Dorin, Frascold, Copeland stream
Other types, brands and capacities are possible on request
- › Conditions:
MT: Ambient temperature: 35°C Evp. Temperature: -10°C
LT: Ambient temperature: 35°C Evp. Temperature: -35°C

General description:

Basic Frame Version:

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

Basic Refrigerating System:

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

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

Compressors used for low temperature are complete with fan heads.

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

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

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

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



CM Semi hermetic

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, thermal contacts for each single fan

Auxiliary circuit 230 volt through transformer 400V/230V

Electronic card XC440C

IP55 with grid 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

Condensing units with inverter driven compressor

High reliability , low cost and easy installation

- › Large operating range for outdoor temperatures from -20° to + 45°C and evaporation temperatures from -20°C to +5°C
- › Control box
- › Oil separator & condenser fan speed regulator
- › Liquid receiver with safety valve
- › High and low pressure switches
- › Low vibration
- › Low sound level: from 30 dB(A) @10 meters (free field conditions)
- › Micro-channel condenser for highest efficiency
- › Compatible with several low GWP refrigerants: R134a, R513A and R450A
- › Factory preconfigured for easy and fast commissioning



MT-Application		GCI	2010	2015	2020	2022	2025	2030	2040	3050	3060	4090	4120							
			B3B1D4R	B3B1D4R	B3B1D4R	B3B1D4R	B3B1D4R	B3B1D4R	B3B1D4R	B3B1D4R	B3B1D4R	B3B1D4R	B3B1D4R	B3B1D4R						
Cooling-Capacity nominal*	min. (30 Hz)	kW	1.18	1.39	1.67	2.11	2.68	3.29	4.41	5.22	5.93	7.53	8.37							
	max. (70 Hz)	kW	2.72	3.17	3.74	4.66	5.86	7.17	9.26	11.25	12.5	15.5	16.78							
Power consumption (nominal)*	max. (70 Hz)	kW	1.3	1.5	1.8	2.1	2.5	3	4	4.7	5.8	7	7.8							
Evaporation temperature		°C	-20°C bis +5°C																	
Compressor	Type		2HES-1Y 2GES-2Y 2FES-2Y 2EES-2Y 2DES-2Y 2CES-3Y 4EES-4Y 4DES-5Y 4CES-6Y 4TES-9Y 4PES-12Y																	
	Amount		1																	
	Piston displacement	m ³ /h	6.51	7.58	9.54	11.36	13.42	16.24	22.72	26.84	32.48	41.33	48.50							
			(50Hz)	(50Hz)	(50Hz)	(50Hz)	(50Hz)	(50Hz)	(50Hz)	(50Hz)	(50Hz)	(50Hz)	(50Hz)							
	Starting method		Direct (Inverter)																	
	max. Running Current	A	3.8	5	5.3	6	7.5	9.1	12.2	14.5	17.7	19.9	22.7							
	Starting Current	A	16.7	22.5	22.5	26	30.7	37	53.3	62.2	82.4	81	99							
	max. Power-Consumption	kW	2	2.7	2.9	3.3	4	5	6.9	8.1	9.7	13	14							
Fan	Amount		1					2												
	diameter	mm						450												
	Airflow	m ³ /h	2943					2701		5850		5366								
	Starting method		Direct																	
Collection container	Inlet Volume	l	5.7					10				21								
	PED Category		1					2												
Noise level	10m distance free field cond.	dB(A)	30		34		35			39		40		41		42				
Dimensions	Unit	mm	800 x 1400 x 550									1480 x 1400 x 550								
Weight	Unit	kg	160	170		193			195		210		225		230		295		300	
Refrigerant	Type		R134a / R513A / R450A																	
	GWP		1430 / 631 / 605																	
Power supply	Phase/Frequency/Voltage	Hz/V	3 ~ / 50 Hz / 400 V																	
	Nominal current consumption (FLA)	A	2.7	3.2	3.6	4.1	4.7	5.6	7.2	8.4	10.3	12	13.3							
Pipe connections	Liquide Line	mm	10					12				35								
	Suction Line	mm	16	18		22			28		35									





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

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

- › **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

BENEFITS

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

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

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

- › **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

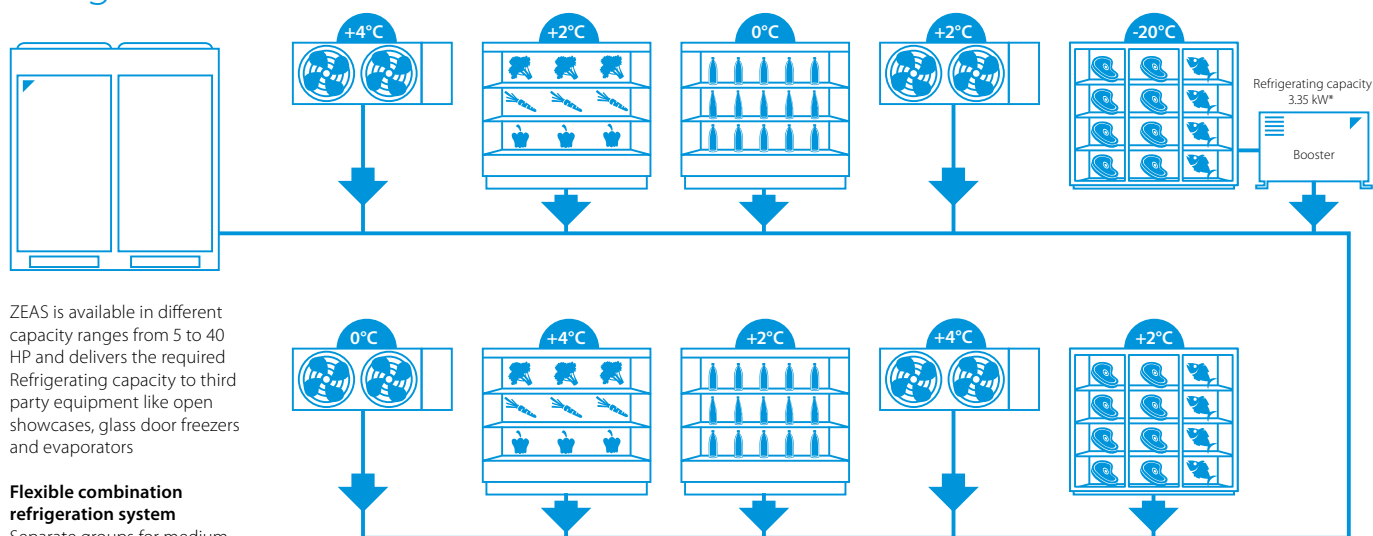
BENEFITS

- › **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)

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.

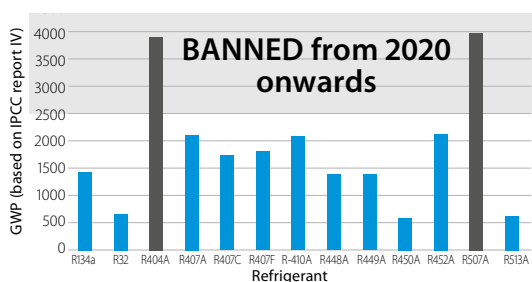
Operating range
 Ambient temperatures: -20°C to +43 °C
 Evaporating temperatures: -45°C to +10°C

* $T_e = -35^\circ\text{C}$, $T_c = -10^\circ\text{C}$, 10 K SH, $T_{amb} = 32^\circ\text{C}$
 * Only Zeas. Not applicable for Mini-Zeas and Multi-Zeas

Why R-410A?

R-410A 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!

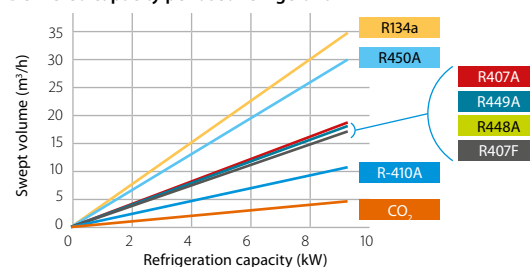
Use of refrigerant in refrigeration system with a refrigeration lower than 40 kW



Contributes to reducing installation cost and refrigerant charge

R-410A 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

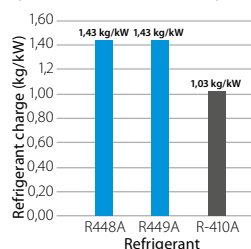


This means that for the same delivered refrigeration capacity we can use smaller components, thus reducing the installation cost and the amount of refrigerant charge in the system!

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

Refrigerant	Suction piping diameter
R134a	1 1/8"
R407A	7/8"
R407F	7/8"
R448A	7/8"
R449A	7/8"
R450A	1 1/4"
R-410A	3/4"
CO ₂	1/2"

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



R-410A 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 CO₂, Ammonia and Propane.
- > an A1 refrigerant, therefore no special safety measurements are required.

Mini-ZEAS condensing unit

Refrigeration solution for small food retailers

- › Inverter technology guarantees optimal food conservation by ensuring an accurate temperature and humidity control
- › The economized scroll contributes to a longer lifetime expectation of the refrigeration equipment and less maintenance requirement
- › The use of R-410A refrigerant allows the use of smaller piping diameters, thus reducing the refrigerant content in the system helping to lower our 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



Medium Temperature Refrigeration				LRMEQ/LRLEQ	3BY1	4BY1	3BY1	4BY1	
Connectable capacity	Minimum~Maximum		%	50~100					
Refrigerating capacity	Low	Nom.	kW	-	-	-	2.78 (1)	3.62 (1)	
	Medium	Nom.	kW	5.90	8.40	-	-	-	
Power input	Low	Nom.	kW	-	-	-	2.60 (1)	3.41 (1)	
	Medium	Nom.	kW	2.53	3.65	-	-	-	
COP	Medium	Nom.		2.33	2.30	-	-	-	
Seasonal energy performance ratio SEPR	R-410A	Te -10°C - Te -35°C		4.17	4.08	-	1.74	1.68	
Annual electricity consumption Q	R-410A	Te -10°C - Te -35°C		8,698	12,651	-	11,920	16,048	
Parameters at part load and ambient temp. 25°C (Point B)	R-410A	Te -10°C - Te -35°C		Declared COP (COPB)	2.93	2.87	1.26	1.23	
Parameters at full load and ambient temp. 32°C (Point A)	R-410A	Te -10°C		Rated COP (COPA)	2.33	2.30	-	-	
		Te -35°C		Rated COP (COPA)	-	-	1.07	1.06	
		Te -10°C - Te -35°C		Rated cooling capacity (PA)	5.90	8.40	2.78	3.62	
				Rated power input (DA)	2.53	3.65	2.60	3.41	
Parameters at full load and ambient temp. 43°C	R-410A	Te -10°C		Declared COP (COP3)	1.51	1.48	-	-	
		Te -35°C		Declared COP (COP3)	-	-	0.59	0.66	
		Te -10°C - Te -35°C		Cooling capacity (P3)	5.28	7.22	2.13	3.02	
				Power input (D3)	3.50	4.89	3.58	4.57	
Parameters at part load and ambient temp. 15°C (Point C)	R-410A			Declared COP (COPC)	4.12	3.92	1.63	1.63	
Parameters at part load and ambient temp. 5°C (Point D)	R-410A			Declared COP (COPD)	5.15	5.20	2.13	1.98	
Dimensions	Unit	HeightxWidthxDepth		mm	1,345x900x320				
Weight	Unit			kg	126		130		
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	70							
	Drive	Direct drive							
	Sound pressure level	Nom.	dB(A)	51 (1)				51.0 (2)	
Piping connections	Liquid	OD	mm	9,52					
	Gas	OD	mm	19.1					
Refrigerant	Type/GWP	R-410A/2,087.5							
Refrigerant	Charge	kg/TCO2Eq	4.50/9.39				6.90/14.4		
Power supply	Control	Electronic expansion valve							
	Phase/Frequency/Voltage	Hz/V	3N~/50/380-415						

(1) Sound pressure data: measured at 1m in front of unit, at 1.5m height | (2)Cooling: evaporating temp. -35°C; outdoor temp. 32°C; suction SH10°C | Cooling: evaporating temp. -10°C; outdoor temp. 32°C; suction SH10°C

ZEAS condensing unit for commercial refrigeration with scroll technology

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

- › One model for all applications from -45°C to 10°C evaporating temperature
- › Perfect solution for all cooling and freezing applications with variable load conditions and high energy efficiency requirements. In particular used in supermarkets, cold storage, blast coolers and freezers etc.
- › DC inverter scroll compressor with economiser function results in high energy efficiency and reliable performance
- › Reduced 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			2,23						
		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		3.000		3.400		2.600	3.400				
	Piston displacement	m³/h	11,18		13,85		19,68		23,36		25,27		32,24	35,8		
	Speed	rpm	5.280		6.540		4.320		6.060		6.960		5.280	6.960		
	Starting method	Direct on line (inverter driven)														
Compressor 2	Output	W	-				3.600									
	Speed	rpm	-				2.900									
Compressor 3	Output	W	-						3.600							
	Speed	rpm	-						2.900							
Fan	Type	Propeller fan														
	Quantity			1			2									
Fan motor	Air flow rate	Cooling	Nom.	m³/min	95	102	171	179	191	230	240					
	Output	W	350													
Fan motor 2	Drive	Direct drive														
	Output	W	-				350		750							
Sound pressure level	Nom.	dBA	55,0 (3)		56,0 (3)		57,0 (3)		59,0 (3)		61,0 (3)		62,0 (3)		63,0 (3)	
Operation range	Evaporator	Cooling	Max.-Min.	°CDB	10--45											
	Refrigerant	Type / GWP	R-410A / 2.087,5													
Charge		kg	5,2		7,9		11,5									
		TCO ₂ eq	10,9		16,5		24,0									
Power supply	Control	Electronic expansion valve														
	Phase/Frequency/Voltage	Hz/V	3~/50/380-415													
		LREQ-BY1		30				40								
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



CO₂ Condensing units

Hubbard Condensing units with CO₂ refrigerant



- › Transcritical CO₂ Commercial Condensing Units for food retailers
- › Wide range of capacities: 2 to 10HP MT and LT
- › Designed for quiet and energy-saving operation
- › Inverter technology reduces energy consumption by up to 30%
- › EC fans work efficiently and quietly
- › Easy and flexible installation
- › Designed as plug & play solutions



F-Gas Free



Protective Case



Plug&Play



Switchboard



Proportional Modulation



Electronic Control

Medium Temperature			GCU 2020 PXB1	GCU 2040 PXB1	GCU 4070PXB1
Capacity *		HP	2	4	10
	Min.	kW	1.80	3.25	6.25
	Max.		3.39	6.50	12.54
Power & Energy EcoDesign (2009/125/EC)		Ph./Hz./VAC	3PH / 50Hz / 400VAC		
	FLC	A	8.64	16.04	18.25
	COP/SEPR	kWh/a	1.87 / 3.57 SEPR	3.24 SEPR	2.92 SEPR
Compressor	Compression		2 Stage (Intercooler)		
	Type		Panasonic Hermetic Rotary		
	Cap Ctrl.		ABB Frequency Inverter		
	RPM		2,200 ~ 4,200	2,200 ~ 4,800	1,800 ~ 3,600
	Qty.		1		
	Oil		DAPHNE PZ68S		
Gas cooler fans	Type		0.7	1.15	1.80
	Qty.		Ebmpapst EC		
		m ³ /s	1		
Sound pressure (10 m)			1.05		2
		mm	450		
Refrigerant	Type/GWP		40.0	45.0	48.0
Receiver volume				R744/1	
Standard pipe run				12.50	20.00
Liquid connections	Inch/Type		25	35	40
Suction connections	Inch/Type		3/8"/K65		1/2"/K65
Oil separator	Standard		no		yes/Turbooil
Oil level control	Standard		N/A		Cappillary
Dimensions	Unit L x D x H		1452 x 574 x 799		1684 x 773 x 1438
Surface area			0.83		1.29
Weight			151	155	285
Colour	RAL		Light Grey RAL 7035 (Powder Coated & Baked)		
Controller	Type		CAREL pRack pR300 Electronic Controller		
High side PRV		Bar	N/A	120	
Intermediate PRV		Bar	90		80
Compressor HP Switch	Standard			Yes x 1	
PED 2014/68/EU	Category			Cat. III	

* Nominal T_{evap.} -10°C | T_{amb} +32°C | 10K Superheat

Hubbard Condensing units with CO₂ refrigerant



- › Transcritical CO₂ Commercial Condensing Units for food retailers
- › Wide range of capacities: 2 to 10HP MT and LT
- › Designed for quiet and energy-saving operation
- › Inverter technology reduces energy consumption by up to 30%
- › EC fans work efficiently and quietly
- › Easy and flexible installation
- › Designed as plug & play solutions



- F-Gas Free
- Plug&Play
- Proportional Modulation
- Protective Case
- Switchboard
- Electronic Control

Medium Temperature		HCU2020PXB1	HCU2040PXB1	HCU4070PXB1
Capacity *	HP	2HP	4HP	10HP
	Min. kW	0.81	1.7	3.3
	Max. kW	1.42	3.03	6.56
Power & Energy	Ph./Hz./VAC	3PH/50Hz/400VAC		
	FLC	8,64	16,04	18,25
	COP/SEPR	-	1,5	1,55
Compressor	Compression	2 Stage (Intercooler)		
	Type	Panasonic Hermetic Rotary		
	Cap Ctrl.	ABB Frequency Inverter		
	RPM	2200 to 4200	2700 to 4800	1800 to 3600
	Qty.	1		
	Oil	Daphne PZ685		
Gas cooler fans	Type	0,7	1,15	2,3
	Qty.	Ebmpapst EC		
		1		
Sound pressure	m ³ /s	1.05		2.1
	Ø (dia.) mm	450		48
Refrigerant	Type/GWP	40	R744/1	48
Receiver volume	l	12.5	35	20
Standard pipe run	m	25	35	40
Liquid connections	Inch/Type	3/8" (K65)		1/2" (K65)
Suction connections	Inch/Type	3/8" (K65)		1/2" (K65)
Oil separator	Standard	No	Yes/Turbooil	
Oil level control	Standard	N/A	Capillary	
Dimensions	Unit L x D x H	1452 x 574 x 799		1684 x 773 x 1438
Surface area	m ²	0.83		1.29
Weight	kg	157	161	300
Colour	RAL	Light Grey RAL7035 (Powder Coated & Baked)		
Controller	Type	CAREL pRack pR300 Electronic Controller & Ultracap		
High side PRV	Bar	N/A	120	
Intermediate PRV	Bar	90		80
Compressor HP Switch	Standard	Yes x 1		
PED 2014/68/EU	Category	Cat. III		

* Nominal Tevap -35°C | Tamb +32°C | 10K Superheat

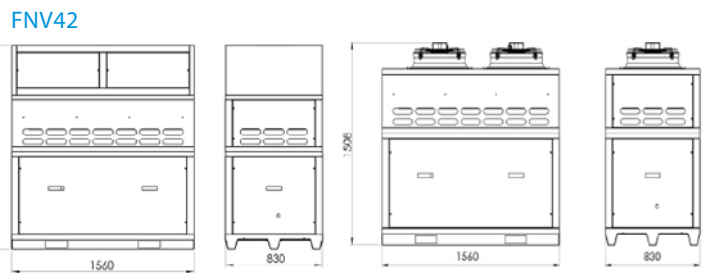
Standard Condensing units

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		



MT 1 comp.

FC17	832 mm	7 kW	9 kW
FNV42	1560 mm	18 kW	22 kW
FNV58	1560 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	Mechanical subcooler	Parallel compressor	Heating interchanger	Axial	Radial
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Small Booster Condensing units

Small condensing units with Transcritical cycle

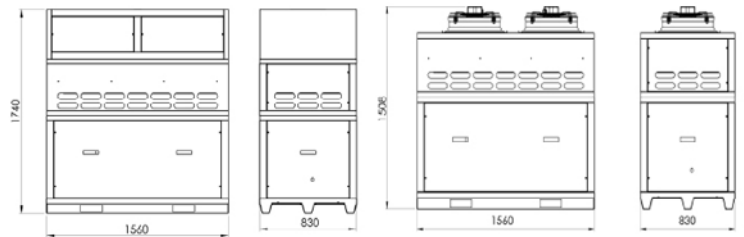
- › Gas cooler with Axial or Radial EC fans.
- › Air connection: Three different configurations
- › V-shaped gas cooler optimized for CO₂ applications
- › Compressor configuration:
 - CU: 1 x MT
 - Racks: 1 x MT + 1 x LT/2xMT
- › Racks Standard delivery:
 - Inverter: 1x MT and 1x LT compressor
 - CU: 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



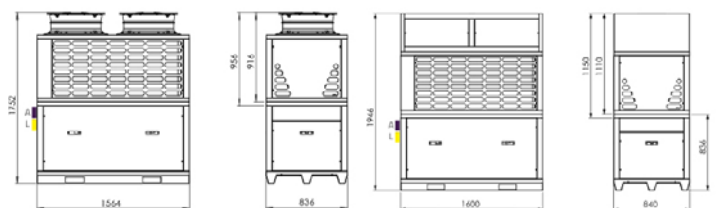
- › Reduced dimensions
- › Easy to transport
- › Until 6 assembly options

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

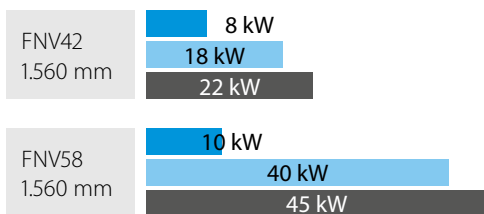
FNV42



FNV58



- MT
- MT + LT



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

					Mechanical subcooler		Parallel compressor		Heating interchanger		Axial		Radial
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Commercial Refrigeration

Compact centrally equipped for the generation of cold with CO₂ in the transcritical cycle

- > Serves refrigeration services in one or two temperatures, working as a booster.
- > It can include up to 1 heat exchanger and 1 parallel compressor (optional).
- > Equipped with a double battery V with greater exchange surface that allows a lower flow.
- > The battery can act as an evaporator in case of heat demand if it does not need cold generation (optional RHX plus NV58)
- > The casing has 3 air output configurations.
- > The electrical panel is equipped with the control unit and can disconnect via external control.
- > There are 2 independent modules to house compressors and gas cooler.



F-Gas Free



Plug&Play



Proportional Modulation



Switchboard



Electronic Control



Heating Interchanger (Optional)



Parallel compressors (Optional)



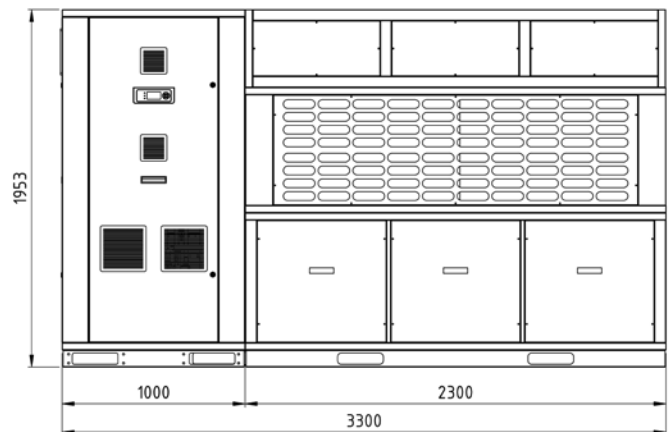
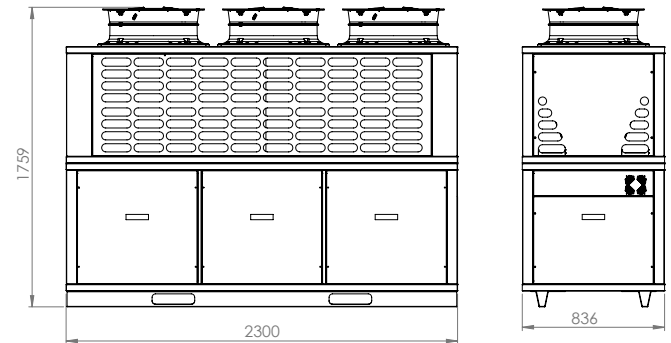
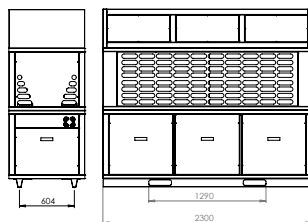
AXIAL EC FAN

- Fans** > 3x Ø500 mm
- Air flow** > 24.000 m³/h
- Sound pressure at 10 m** > 46 up to 57 dB(A)
- > Silent version available



RADIAL EC FAN

- Fans** > 3x Ø500 mm
- Air flow** > 22.500 m³/h
- Available pressure** > 100 Pa
- Sound pressure at 10 m** > 50 up to 56 dB(A)



NV66				
Application		MT	MT + pc	MT + LT
Cooling capacity	kW	44	54	40 + 4
Compressors	nº	2	3	2 + 1
Inverter compressors	nº	1	1 + 1	1 + 0 (opt.)
Optional equipment		IHX / RHX		
Recovery (max capacity)	kW	30	38	40
		30	45	40
NV66+				
Application		MT	MT + pc	MT + LT + cp
Cooling capacity	kW	68	60 + 8	54 + 8
Compressors	nº	3	3 + 1	2 + 1 + 1
Inverter compressors	nº	1	1 + 0	1 + 0 + 1
Optional equipment		IHX / RHX		
Recovery (max capacity)	kW	45	45	40

Temperature, LT = Low Temperature, pc = Parallel compressor



Parallel compressor



Heating interchanger



Axial



Radial

Large Booster Condensing units

Large condensing units with Transcritical cycle

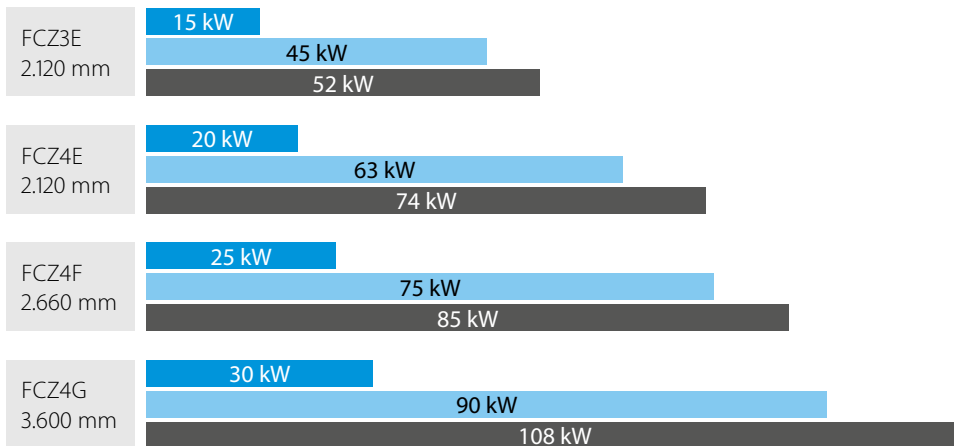
- › Gas cooler with Axial or Radial EC fans.
- › Air connection: Three different configurations
- › (Optional) Heat recovery heat exchanger to take advantage of the "free heat" for air conditioning or for sanitary application
- › Galvanized and painted sheet metal chassis and weather proof enclosure.
- › Optional: acoustic insulation
- › 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
- MT + LT



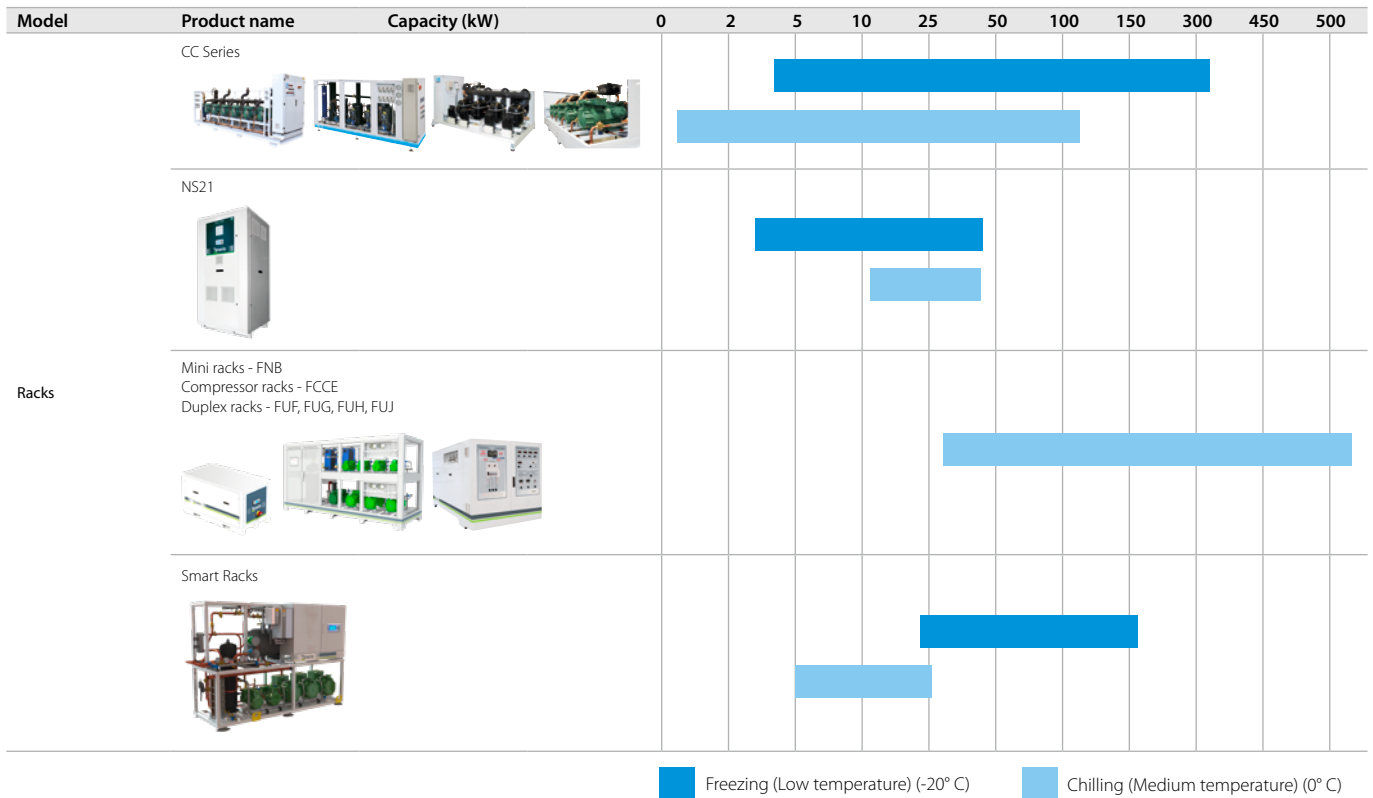
Conditions: LT: Tev.: -35°C SH: 8°K
 MT: Tev.: -10°C SH: 8°K
 Clime: Tev. med: 5°C SH: 8°K

LT	MT	Clime	Global	Mechanical subcooler	Parallel compressor	Heating interchanger	Axial	Radial
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Compressor packs & racks

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 (Brand: J&E Hall (single screw) and 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

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.

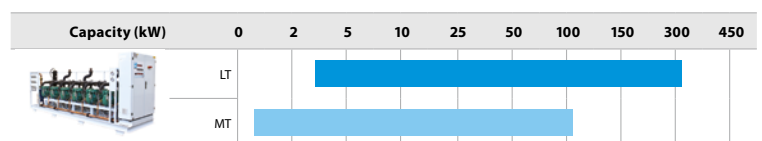
YouTube



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

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 grid 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
CCF	Compressors sound shell
ELC.C	Electronic card EWCM4180 - XC1000D – EWCM9100
FQD	Frequency driver

Other additional equipment and special requirements on request

Multi compressor rack unit with semi hermetic compressors

General features:

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

Standard configuration:

Basic Frame Version:

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

Basic Refrigerating System:

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

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

Compressors used for low temperature are complete with fan heads.

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

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

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

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



CC Semi hermetic

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, thermal contacts for each single fan

Auxiliary circuit 230 volt through transformer 400V/230V

Electronic card XC440C

IP55 with grid 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

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
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 controlled compressors

Other additional equipment and special requirements on request



High power CO₂ commercial racks

Full Duplex offer the highest power for the commercial cold range with CO₂ in 2 MT and LT temperatures

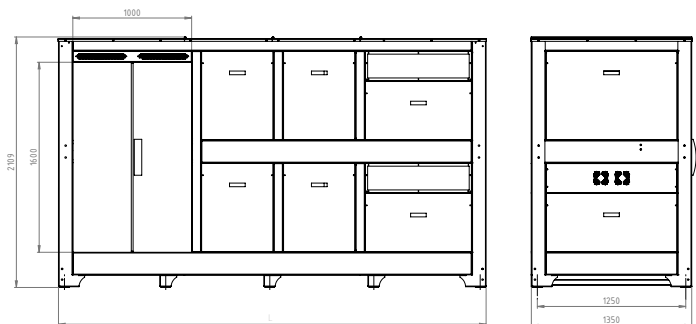
- › Reduced assembly space with the double-deck transcritical cycle booster machines.
- › The Modulation and operational reliability is ensured thanks to the number of compressor they house.
- › It can include up to 3 heat exchangers and 1 parallel compressor (optional).
- › Possibility of 2 RHX: 1 for Domestic Hot water and 1 for air conditioning.
- › Cooling capacity ranges from 8kW up to 250kW - Heat recovery up to 190kW.
- › Variable frequency drive.
- › Touch screen and management synoptic available.
- › High efficiency electronics and control possible (optional)
 - Tewis Machine Interface (TMI): developed to measure and send alarms both in plant and by telemanagement
 - Intuitive interface
 - Compatible with Tellevis System and open protocol for integration of Modbus RTU/TCP or BACnet MS/TP systems (optional)
 - Management of parameters and performance with selectors and light indicators
- › Stainless Steel AINSI 340L used



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

Dimensions **without gas cooler**

Chassis: CD4G 3060 mm | CD4H 3600 mm | CD4J 4000 mm



CD4G - 3060 mm							
Application		MT			MT + LT + pc		
Cooling Capacity	kW	194 + 22	191 + 25	183 + 32	230 + 22	228 + 25	240 + 32
Compressors Qty.	nº	3 + 2	3 + 3	3 + 4	2 + 2 + 1	2 + 3 + 1	2 + 4 + 1
Inverter Compressors	nº	1 + 1			1 + 1 + 1		
Recovery (Max)	kW	150			170		190
CD4H - 3600 mm							
Application		MT			MT + LT		
Cooling capacity	kW	230 + 22	184 + 25	176 + 32	200 + 22	228 + 25	240 + 32
Compressors Qty.	nº	4 + 2	4 + 3	4 + 4	3 + 2 + 1	3 + 3 + 1	3 + 4 + 1
Inverter compressors	nº	1 + 1			1 + 1 + 1		
Recovery (max)	kW	170				150	
CD4J - 4000 mm							
Application		MT + LT + pc					
Cooling capacity	kW	220 + 22		217 + 25		209 + 32	
Compressors Qty.	nº	4 + 2 + 1		4 + 3 + 1		4 + 4 + 1	
Inverter compressors	nº	1 + 1 + 1					
Recovery (max)	kW	170			150		

Temperature, LT = Low Temperature, pc = Parallel compressor

	Parallel compressor		Heating interchanger
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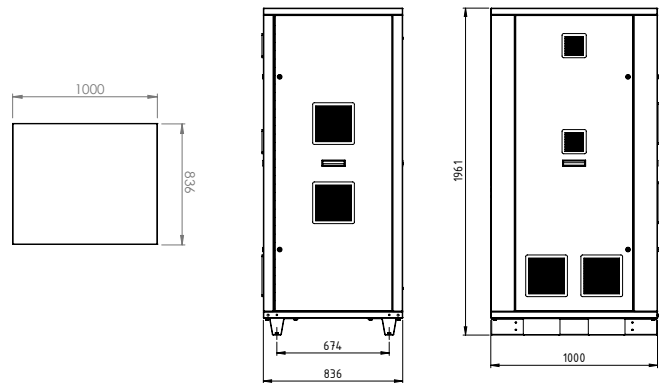
Commercial Refrigeration in a transcritical cycle

Mini compact units for the generation of cold with CO₂ in the transcritical cycle

- › The unit has a footprint of less than 1m² and has been adopted for better loading and transportation.
- › It serves refrigeration and freezing, working as a booster.
- › The design allows easy access to the components, making easy tasks.
- › Up to 2 MT compressors and 1 LT compressor.
- › Frequency inverter for the first MT compressor and optional for the LT compressor.
- › There is a vertical liquid container (48l) with internal exchanger prepared for its connection to the emergency unit.
- › Oil separator accumulator included.
- › 2 Electronic refrigerant level sensors for high and low levels
- › All pipes and connections in copper.
- › Possibility to connect the unit to an external RHX. In MT-models the RHX can be installed
- › The switchboard with control unit and complete wiring is compatible with Tewis Remote Management Systems.
- › Outdoor chassis option
- › Combination with gas coolers possible.
- › Soundproofing (optional)



	F-Gas Free		Protective Case
	Plug&Play		Switchboard
	Proportional Modulation		Electronic Control



BITZER		GNS21JC302XBX	GNS21JC872YBX	GNS21JC882YBX	TNS21JC304XBX	TNS21JC881YBX	TNS21JC880YBX
Application		MT			MT+LT		
Capacity MT*	kW	18.17	22.63	35.15	14.24	31.88	31.22
Capacity LT*	kW	0			3.9	3.23	3.9
GC Capacity	kW	32.08	39.96	62.08	32.08	62.08	62.08
MT Compressors	nº	1x 2MTE-5K + 1x 2KTE-7K	1x 4PTC-7K + 1x 4MTC-7K	1x 4MTC-10K + 1x 4KTC-10K	1x 2MTE-5K + 1x 2KTE-7K	1x 4MTC-10K + 1x 4KTC-10K	1x 4MTC-10K + 1x 4KTC-10K
LT Compressors	nº	-			1x 2MSL-07K	1x 2NSL-05K	1x 2MSL-07K

DORIN		GNS21JC677XDX	GNS21JC684XDX	GNS21JC750XDX	TNS21JC670XDX	TNS21JC679XDX	TNS21JC678XDX	TNS21JC658XDX	TNS21JC753XDX	TNS21JC659XDX
Application		MT			MT+LT					
Capacity MT*	kW	25.58	36.35	44.71	21.07	27.93	30.33	31.83	34.05	40.19
Capacity LT*	kW	0			4.37	8.15	5.83	4.37	10.3	4.37
GC Capacity	kW	45.17	64.18	78.95	45.17	64.18	64.18	64.18	78.95	78.95
MT Compressors	nº	1x CD475-4.7H + 1x CD475-6.4M	1x CD490-6.4H + 1x CD490-9.2M	1x CD4120-9.2H + 1x CD490-9.2M	1x CD475-4.7H + 1x CD475-6.4M	1x CD490-6.4H + 1x CD490-9.2M	1x CD490-6.4H + 1x CD490-9.2M	1x CD490-6.4H + 1x CD490-9.2M	1x CD4120-9.2H + 1x CD490-9.2M	1x CD4120-9.2H + 1x CD490-9.2M
LT Compressors	nº	-			1x CDS101B	1x CDS181B	1x CDS151B	1x CDS101B	1x CDS301B	1x CDS101B

* Calculation conditions: T_{ev} MT -8°C, T_{ev} LT -32°C, GC outlet +35°C. | Design pressures: MP (MT suction) : 52 bar, LP (LT suction) : 30 bar, IP (Container and liquid line) : 70 bar, HP (Discharge): 120 bar | Temperature, LT = Low Temperature, pc = Parallel compressor

AXIAL		GNV58PE	GNV58PE LPS	GNV66PE	GNV66PE LPS
Capacity	kW	58.84	52.15	88.4	79.27
Air flow	m ³ /h	16.400	12.800	24.000	19.200
Sound pressure 10m	dBA	52	46	53	45
Fans	nº	2x Ø500 EC		3x Ø500 EC	

RAD.		GNV58NE	GNV66NE
Capacity	kW	56.28	85.61
Air flow	m ³ /h	15.000	22.500
Sound pressure 10m	dBA	49	50
Fans	nº	2x Ø500 EC	3x Ø500 EC



Mini compact cooling racks with CO₂

Compact compressor rack equipped for the generation of cold with CO₂ in the transcritical cycle

- › Ideal solution for retail applications with a surface of 400m² to 1,200m²
- › It serves refrigeration in 1 or 2 temperatures, working as a booster.
- › Cooling capacity ranges from 40kW up to 115kW.
- › It can include up to 3 heat exchangers and 1 parallel compressor (optional).
- › Frequency inverter for the first MT compressor and optional for the LT compressor.
- › Up to 5 compressors.
- › Easy commissioning and maintenance as all connections are at the same side of the unit.
- › With its compact design (width of 790mm) it can pass through every standard doorway.
- › The horizontal liquid container (80/160l) with internal exchanger prepared for its connection to the emergency unit.
- › Oil separator accumulator included.
- › 2 Electronic refrigerant level sensors for high and low levels
- › All pipes and connections in copper.

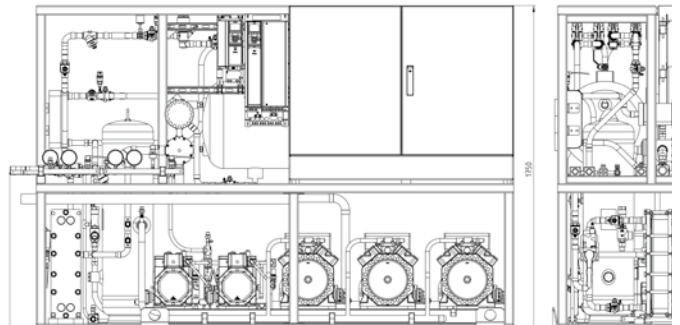


Smart Rack

- › Stainless steel collectors
- › Tubular frame
- › The electrical panel is located above the compressors.
- › Connection with 10" touchpad Tewis Machine Supervisor (TMS) is possible (optional).

Two different frame sizes available:

- › 4 compressors: length 2,125 mm
- › 5 compressors: length 2,550 mm



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

		GSR2FJ_093YBX	GSR2FJ_041YBX	TSR2EJ_585YBX	TSR2FJ_092YBX	TSR2FJ_086YBX	TSR2FJ_089YBX
Application		MT	MT	MT+LT	MT+LT	MT+LT	MT+LT
Capacity MT*	70 Hz	kW 89.34	kW 110.45	kW 36.84	kW 62.13	kW 72.51	kW 78.92
Capacity LT*	70 Hz	kW -	kW -	kW 5.79	kW 5.79	kW 5.79	kW 6.48
MT Compressors	n°	1x 4JTC-15K (V.F.) + 2x 4JTC-15K	1x 4HTC-20K (V.F.) + 1x 4FTC-20K	1x 4JTC-15K (V.F.) + 1x 4JTC-15K	1x 4HTC-20K (V.F.) + 1x 4FTC-20K	1x 4HTC-20K (V.F.) + 2x 4HTC-20K	1x 4HTC-20K (V.F.) + 1x 4HTC-20K
Parallel Compressors	n°	1x 4MTC-10K	1x 4JTC-15K	-	-	-	1x 4MTC-10K
LT Compressors	n°	-	-	1x 2KSL-1K	1x 2KSL-1K	1x 2KSL-1K	1x 2KSL-1K
		TSR2FJ_439YBX	TSR2FJ_090YBX	TSR2FJ_490YBX	TSR2FJ_489YBX	TSR2EJ_112YBX	TSR2FJ_128YBX
Application		MT+LT	MT+LT	MT+LT	MT+LT	MT+LT	MT+LT
Capacity MT*	70 Hz	kW 66.98	kW 64.89	kW 57.85	kW 71.2	kW 20.47	kW 45.77
Capacity LT*	70 Hz	kW 10.46	kW 12.7	kW 14.16	kW 14.16	kW 18.5	kW 18.5
MT Compressors	n°	1x 4HTC-20K (V.F.) + 1x 4HTC-20K	1x 4JTC-15K (V.F.) + 1x 4HTC-20K	1x 4JTC-15K (V.F.) + 1x 4JTC-15K	1x 4HTC-20K (V.F.) + 1x 4HTC-20K	1x 4JTC-15K (V.F.) + 1x 4JTC-15K	1x 4HTC-20K (V.F.) + 1x 4FTC-20K
Parallel Compressors	n°	-	1x 4MTC-10K	1x 4MTC-10K	1x 4MTC-10K	-	-
LT Compressors	n°	1x 2KSL-1K + 1x 2KSL-1K	1x 2GSL-3K	1x 2JSL-2K + 1x 2JSL-2K	1x 2JSL-2K + 1x 2JSL-2K	1x 2HSL-3K + 1x 2HSL-3K	1x 2HSL-3K + 1x 2HSL-3K
		TSR2FJ_364YBX	TSR2EJ_893YBX	TSR2FJ_193YBX	TSR2EJ_895YBX	TSR2FJ_444YBX	TSR2FJ_088YBX
Application		MT+LT	MT+LT	MT+LT	MT+LT	MT+LT	MT+LT
Capacity MT*	70 Hz	kW 80.75	kW 22.5	kW 77.73	kW 22.81	kW 38.18	kW 69.43
Capacity LT*	70 Hz	kW 18.5	kW 21.06	kW 21.06	kW 28.07	kW 28.07	kW 28.07
MT Compressors	n°	1x 4HTC-20K (V.F.) + 2x 4FTC-20K	1x 4JTC-15K (V.F.) + 1x 4HTC-20K	1x 4HTC-20K (V.F.) + 2x 4FTC-20K	1x 4HTC-20K (V.F.) + 1x 4HTC-20K	1x 4JTC-15K (V.F.) + 2x 4HTC-20K	1x 4HTC-20K (V.F.) + 2x 4FTC-20K
Parallel Compressors	n°	-	-	-	-	-	-
LT Compressors	n°	2x 2HSL-3K	1x 2GSL-3K + 1x 2GSL-3K	1x 2GSL-3K + 1x 2GSL-3K	1x 2FSL-4K + 1x 2FSL-4K	1x 2FSL-4K + 1x 2FSL-4K	1x 2FSL-4K + 1x 2FSL-4K

* Calculation conditions: Tev MT -8°C, Tev LT -32°C, Tsgc +35°C. | Design pressures: MP (MT suction) : 52 bar, LP (LT suction) : 30 bar, IP (Container and liquid line) : 70 bar, HP (Discharge): 120 bar | Temperature, LT = Low Temperature, pc = Parallel compressor

Parallel compressor	Heating interchanger
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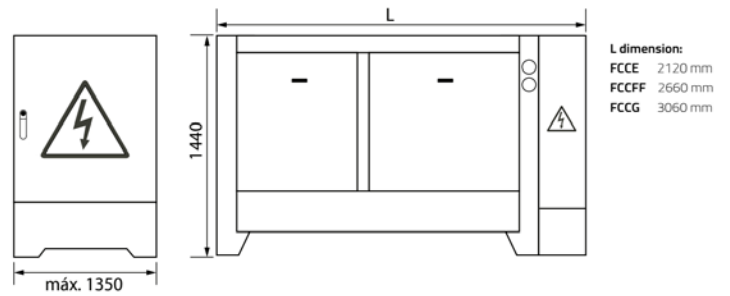
Medium Racks

Transcritical units without condenser

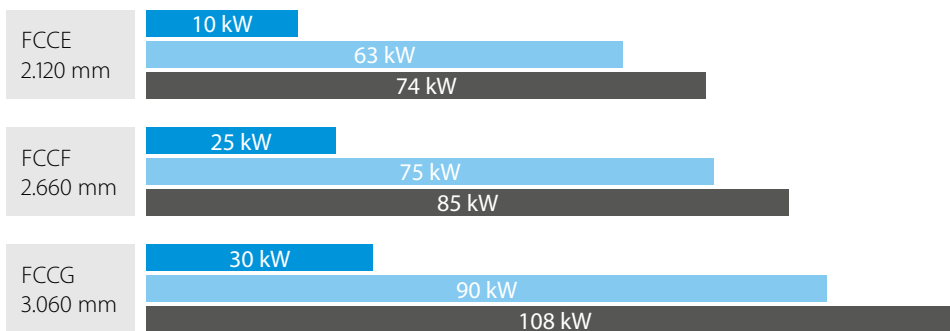
- › Adapted design for loading and transportation
- › Integrated switchboard. Easy to use via touch screen and displays an exclusive control software
- › Heat recovery (optional) which allows to take advantage of the heat generated by the system discharge for air conditioning or ACS.
- › Parallel compressor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



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



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



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

LT	MT	Clime	Global	Mechanical subcooler	Parallel compressor	Heating interchanger
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Large Racks

Transcritical double units without condenser

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



F-Gas Free



Protective Case



Heating Interchanger (Optional)



Plug&Play



Switchboard



Parallel compressors (Optional)



Proportional Modulation

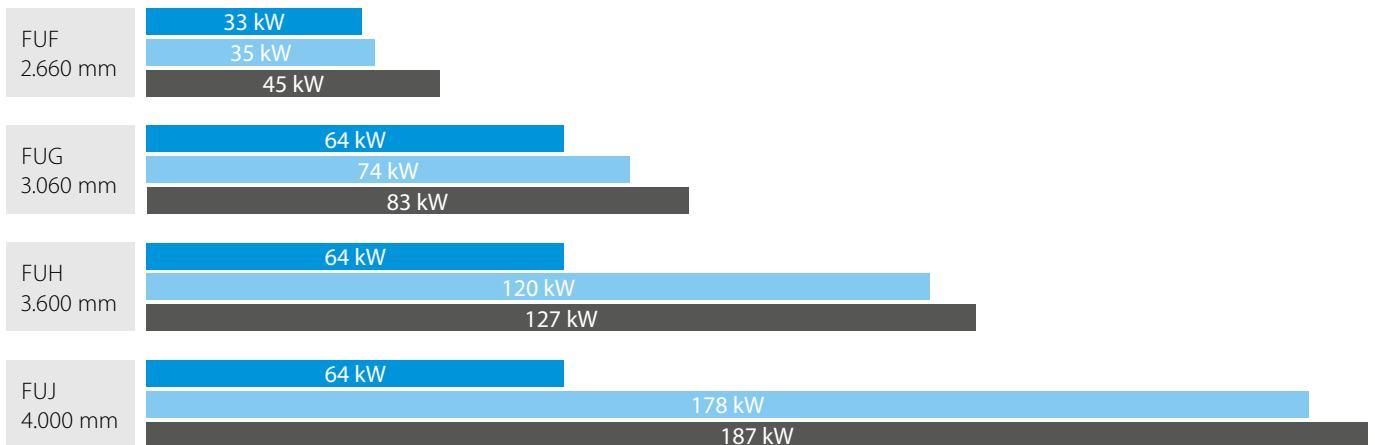


Electronic Control



Mechanical Subcooler (Optional)

MT + LT 3+3 4+2 4+3 5+4



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

Switchboard & electronic control

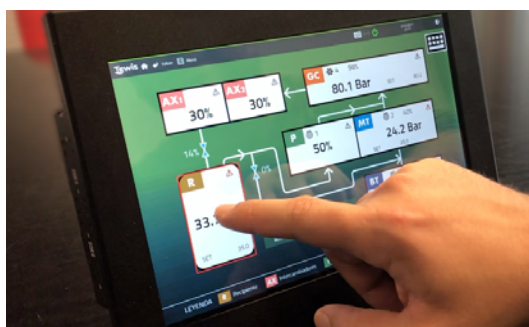
Switchboard

- › 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 CO₂ 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.





Fresh ideas for reliable performance

Choose the better solution – with Tewis Full CO₂ refrigeration systems


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





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
Conveni-Pack LRYEQ-AY  	LT											
	MT											
	A/C											
	HR + HP											
CO ₂ Conveni-Pack LRNUN-AY1, LRYEN-AY1  	MT											
	AC											
	HR											
Mini racks, Racks, Duplex 	MT											
	A/C											

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



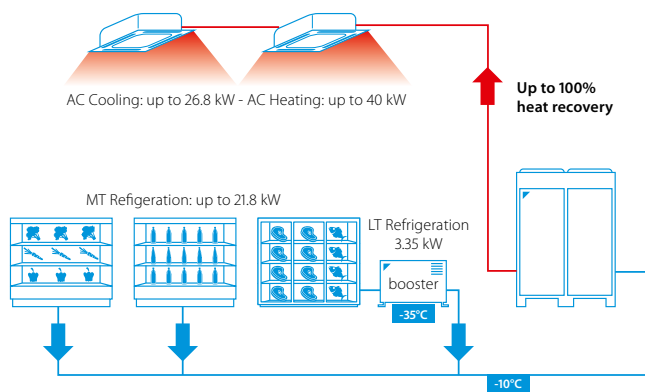
Conveni-Pack, integrated solution for commercial refrigeration, heating and air conditioning

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 determining factor for success.

Energy efficient heat recovery system

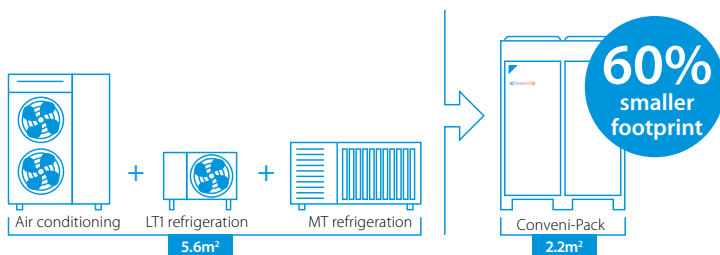
- › Conveni-Pack recovers up to 100% of the heat extracted from supermarket refrigeration cases and re-uses it to heat the retail space and improve shop comfort at no additional cost (heat recovery system)
- › Savings of up to 50% on energy costs
- › Daikin inverter scroll compressor with economizer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



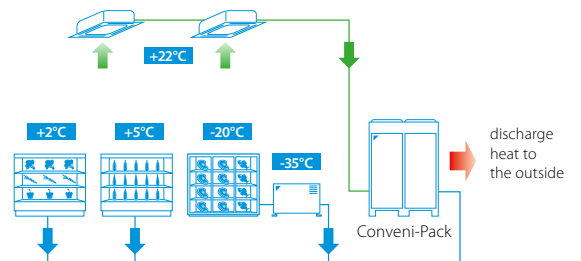
Unique combination

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

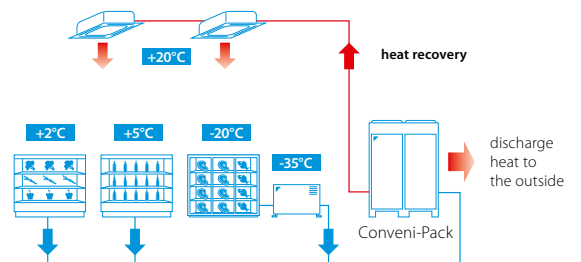
Reliable operation

- › 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.

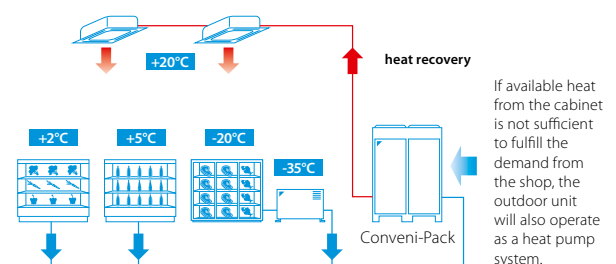
Summer



Spring/Autumn



Winter



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

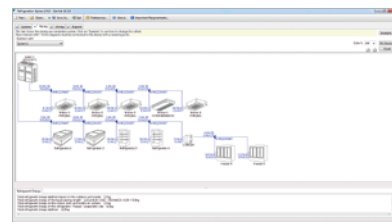
Benefits for shop owners

- › 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

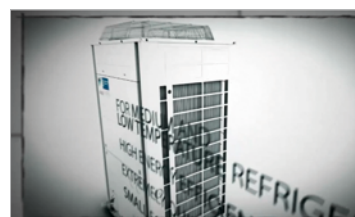
Refrigeration Xpress

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



CO₂ Conveni-Pack



Why choose CO₂ Conveni-pack?

- ✓ DX Refrigeration, Heating & Space cooling by CO₂, for those whom demand a totally natural solution
- ✓ Heat recovery, and for those colder days automatic heat pump operation
- ✓ Fully assembled & packaged unit, providing low noise levels
- ✓ Mass produced in Daikin Europe's award winning factory
- ✓ Each unit is fully factory & run tested
- ✓ All units in stock, fast delivery
- ✓ Reduces annual energy consumption by up to 50%, compared to other manufacturers solutions.
- ✓ Hermetic swing compressor, complete with two stage compression, for lower running temperatures
- ✓ Oversized DC Brushless motor technology for improved reliability & efficiency
- ✓ Automatically balances refrigeration & space heating / cooling loads
- ✓ "Plug and Play" technology, reduced "On site" commissioning
- ✓ Optimized control logic for reliability and efficiencies
- ✓ Adaptable evaporation temperature control

Natural HVACR 4 life



Project for demonstration of innovative, integrated HVACR installations with natural refrigerant.

OBJECTIVES

- **Remove barriers** in the market for introducing integrated refrigeration and air conditioning systems that use natural refrigerants which have a lower Global Warming Potential.
- **Raise awareness** among installers, engineers, customers and general public on the potential of a combined air conditioning and refrigeration system that uses CO₂ as a natural refrigerant.
- **Contribute** to the implementation of the EU F-gas Directive.

ACTIONS

1. Demonstrate viability

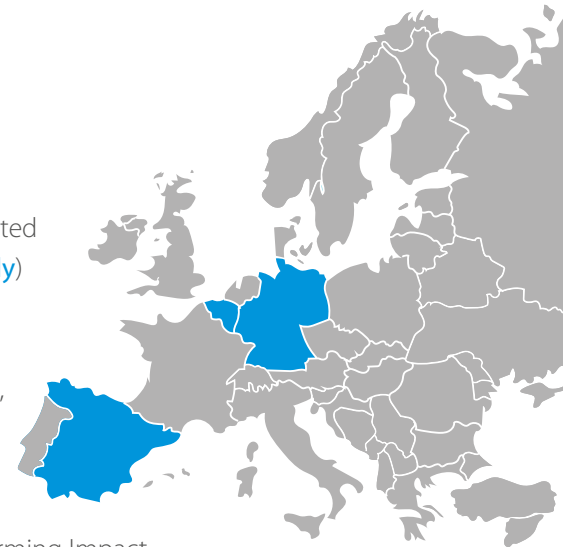
- test prototype in **Belgium** that integrates air conditioning and refrigeration with heat recovery in real life settings;
- install, operate and monitor the new concept in European supermarkets, located in both temperate and warm climate zones (**Germany** and **Spain, respectively**)

2. Organise training sessions for installers and customers

3. Help update the definitions of standards and energy labelling schemes for multi-functional products by providing information on tested risk management, procedures regarding flammability and toxicity of natural refrigerants

4. Develop a cassette-type indoor unit using CO₂ that best provides comfort cooling and heating

5. Research the potential of cold storage for improving the Total Equivalent Warming Impact



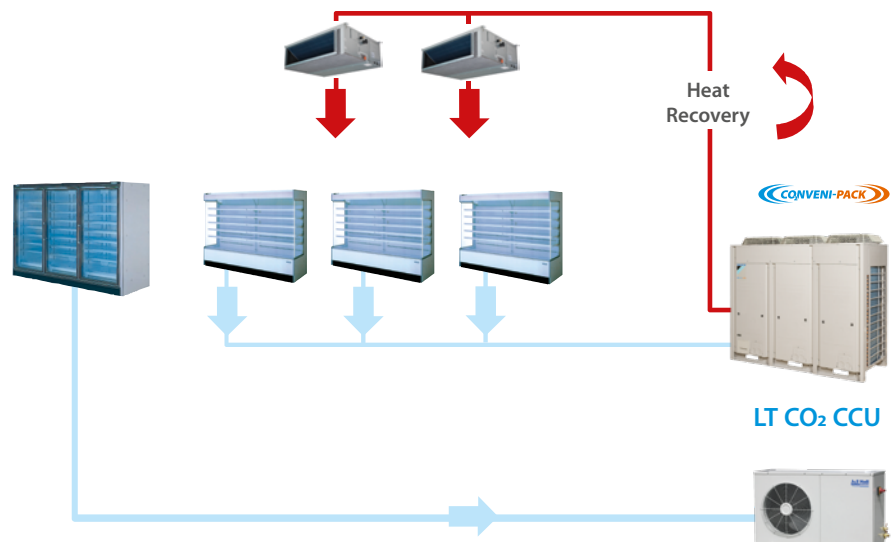
For more information refer to the website: naturalhvacr4life.eu

Low Temperature Showcases

Optional CO₂ CCU's are also available for Remote LT applications (not connected to Conveni-pack)



Plugin LT showcases with propane or LT condensing units with CO₂ are available to satisfy also freezer capacity needs.



CO₂ 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 CO2 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

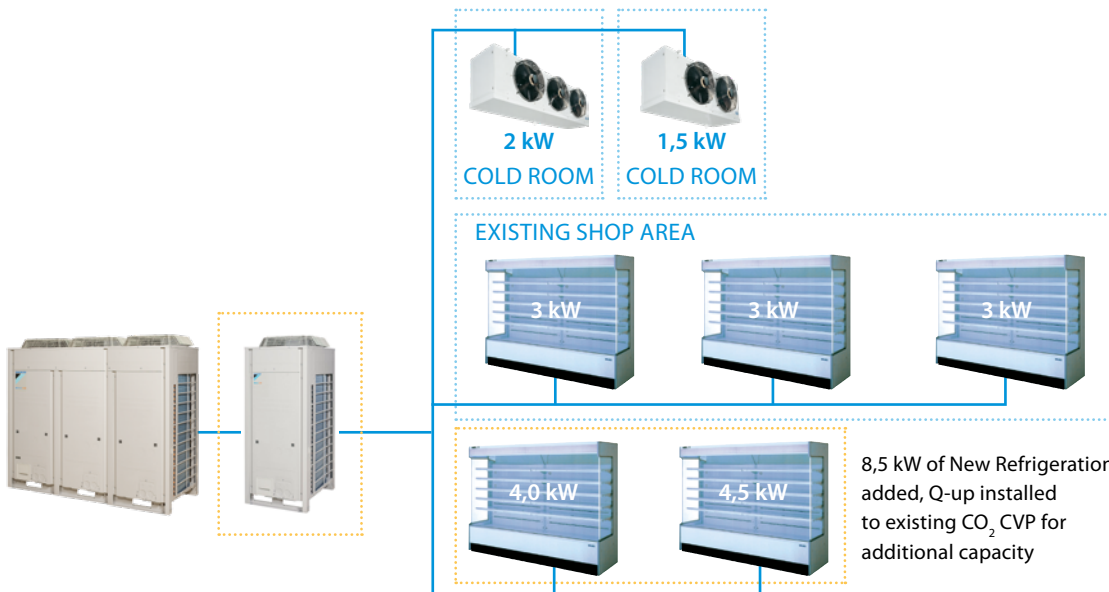


Medium Temperature Refrigeration, Cooling Only, Heating Only		LRYEN		10AY1	
Dimensions	Unit	HeightxWidthxDpeth	mm	1,680x1,930x765	
Weight	Unit		kg	563	
Heat exchanger	Type	Cross fin coil			
Compressor	Type	Hermetically sealed swing compressor			
	Output			4,600.0 W	
	Piston displacement			6.16 m ³ /h	
	Starting method	Direct on line (inverter driven)			
Fan	Type	Propeller fan			
	Quantity	3			
	Air flow rate	Cooling	Nom.	300 m ³ /min	
Fan motor	Output			750 W	
Sound pressure level	Nom.			64.0 dBA	
Refrigerant	GWP	1.0			
	Type 2	R-744			
	Charge			6.30 kg	
	Control	Electronic expansion valve			
Power supply	Phase/Frequency/Voltage			3N~/50/380-415 Hz/V	

LRYEN10AY1+LRNUN5A7Y1 | Compressor 1 | Compressor 2 | Compressor 3 | Factory charge of unit | Only K65 with D.P. 120 bar is allowed to use for AC piping connections. | The safety valve pressure is indicated as gauge pressure. | Only K65 with D.P. 90 bar is allowed to use for refrigeration piping.

Capacity-up module for CO₂ Conveni-Pack

- › 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 CO₂ 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



Model	Refrigeration Capacity*	HR Capacity
DAIKIN CO ₂ CVP AC10	3 - 14.5 kW	22 kW

Q-up can also easily be added later, as part of a system upgrade

Model	Refrigeration Capacity*	HR Capacity
DAIKIN CO ₂ CVP AC10 + Q-up	3 - 21 kW	22 kW

* Refrigeration capacity given under following conditions: Te = -10°C, 10 K SH and ambient = 32°C

Medium Temperature Refrigeration		LRNUN		5AY1	
Dimensions	Unit	HeightxWidthxDPTH	mm	1,680x635x765	
Weight	Unit		kg	173	
Heat exchanger	Type			Cross fin coil	
Compressor	Type			Hermetically sealed swing compressor	
	Output		W	4,600.0	
	Piston displacement		m ³ /h	6.16	
	Starting method			Direct on line (inverter driven)	
Fan	Type			Propeller fan	
	Quantity			1	
	Air flow rate	Cooling	Nom.	m ³ /min	102
Fan motor	Output		W	350	
Sound pressure level	Nom.		dBA	65.0 (1)	
Refrigerant	GWP			1.0	
	Type 2			R-744	
	Charge		kg	3.20	
	Control			Electronic expansion valve	
Power supply	Phase/Frequency/Voltage		Hz/V	3N~/50/380-415	

(1)LRYEN10A7Y1+LRNUN5A7Y1 | Compressor 1 | Compressor 2 | Compressor 3 | Factory charge of unit | Only K65 with D.P. 120 bar is allowed to use for AC piping connections. | The safety valve pressure is indicated as gauge pressure. | Only K65 with D.P. 90 bar is allowed to use for refrigeration piping.

Concealed ceiling unit with medium ESP for CO₂ Conveni-pack

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

- › Slimmest unit in class, only 245mm (300mm built-in height) and therefore narrow ceiling voids are no longer a challenge

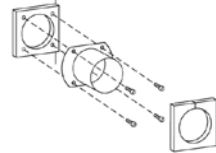


- › Medium external static pressure up to 150Pa facilitates using flexible ducts of varying lengths
- › Possibility to change ESP via wired remote control allows optimisation of the supply air volume
- › Discretely concealed in the wall: only the suction and discharge grilles are visible
- › Multi zoning kit allows multiple individually-controlled climate zones to be served by one indoor unit
- › Reduced energy consumption thanks to specially developed DC fan motor and drain pump
- › Optional fresh air intake

Fresh air intake opening in casing



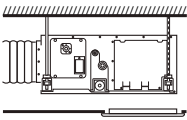
Optional fresh air intake kit



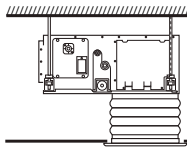
* Brings in up to 10% of fresh air into the room

* Allow larger quantities of fresh air to be brought in

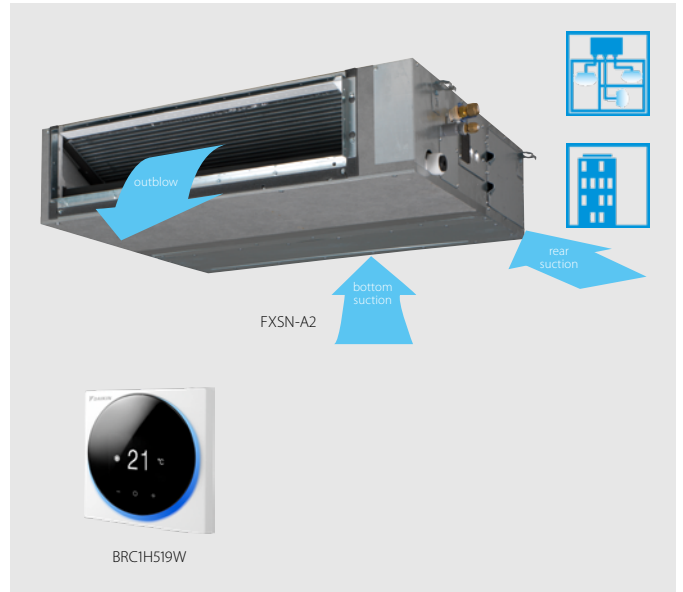
- › Flexible installation: air suction direction can be altered from rear to bottom suction and choice between free use or connection to optional suction grilles



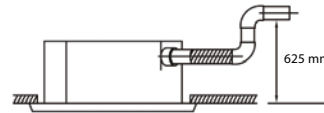
For free use into a false ceiling



For connecting onto a suction canvas (not supplied by Daikin)



- › Standard built-in drain pump with 625mm lift increases flexibility and installation speed

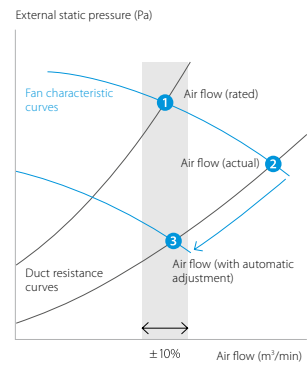


Automatic Airflow Adjustment function

Automatically selects the most appropriate fan curve to achieve the units' nominal air flow within ±10%

Why?

After installation the real ducting will frequently differ from the initially calculated air flow resistance * the real air flow may be much lower or higher than nominal, leading to a lack of capacity or uncomfortable air temperature. Automatic Airflow Adjustment function will adapt the unit's fan speed to any ducting automatically (10 or more fan curves are available on every model), making installation much faster.



Indoor unit		FXSN	50A2	71A2	112A2			
Cooling capacity	Total capacity Nom.	kW	5.60	8.00	12.50			
Heating capacity	Total capacity Nom.	kW	6.30	9.00	14.0			
Power input - 50Hz	Cooling	Nom. kW	0.186	0.258	0.388			
	Heating	Nom. kW	0.181	0.253	0.383			
Dimensions	Unit HeightxWidthxDpeth	mm	245x700x800	245x1,000x800	245x1,400x800			
Weight	Unit	kg	31.0	40.0	50.0			
Casing	Material			Galvanised steel plate				
Fan	Air flow rate	Cooling	High / Medium / Low	m ³ /min	15.2 / 13.0 / 11.0	23.0 / 19.5 / 16.0	36.0 / 31.5 / 26.0	
		- 50Hz	Heating	High / Medium / Low	m ³ /min	15.2 / 13.0 / 11.0	23.0 / 19.5 / 16.0	36.0 / 31.5 / 26.0
		External static pressure - 50Hz	Factory set / High	Pa	30 / 150	40 / 150	50 / 150	
Air filter	Type			Resin net				
Sound power level	Cooling	At high fan speed	dBA	61	63	66		
	Heating	High / Medium / Low	dBA	36.0 / 33.0 / 31.0	37.0 / 34.0 / 32.0	40.0 / 38.0 / 34.0		
Sound pressure level	Cooling	High / Medium / Low	dBA	38.0 / 35.0 / 32.0	39.0 / 36.0 / 33.0	42.0 / 40.0 / 38.0		
	Heating	High / Medium / Low	dBA					
Refrigerant	Type/GWP			R-744/1.0				
Piping connections	Liquid	OD	mm	9.52				
	Gas	OD	mm	12.7				
	Drain			VP20 (I.D. 20/O.D. 26), drain height 625 mm				
Power supply	Phase/Frequency/Voltage	Hz/V		1~/50/60/220-240/220				
Current - 50Hz	Maximum fuse amps (MFA)	A		16				
Control systems	Infrared remote control			BRC4C65 / BRC4C66				
	Wired remote control			BRC1H52W/S/K				

Contains fluorinated greenhouse gases

R-410A 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 CO₂ 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



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)		
Compressor 2	Speed	Less than 6 times/hour		
			rpm	2.900
			W	3.600
Compressor 3	Speed		rpm	2.900
	Output		W	4.500
Fan	Type	Propeller fan		
	Quantity	2		
Fan motor	Air flow rate	Cooling	Nom.	m ³ /min
	Output			W
Sound pressure level	Nom.	Direct drive		
				62,0
Operation range	Evaporator	Cooling	Min.-Max.	°CDB
	Cooling	Ambient	Min.-Max.	°CDB
	Heating	Ambient	Min.-Max.	°CDB
Refrigerant	Type	R-410A		
	GWP	2.087,5		
	Charge		kg	11,5
	Control		TCO ₂ eq	24,0
Power supply	Electronic expansion valve			
	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 R-410A 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

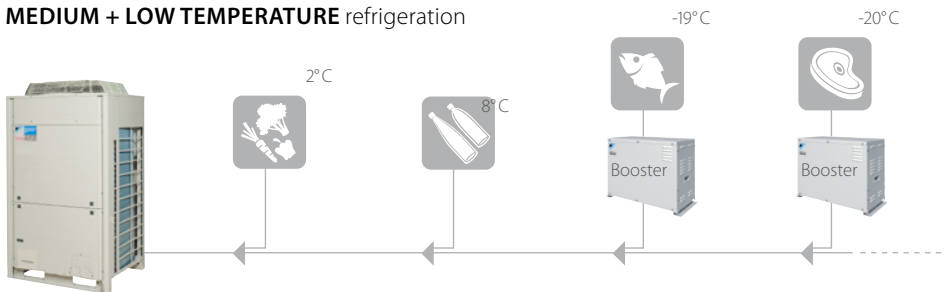
Booster unit for R-410A

- > 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



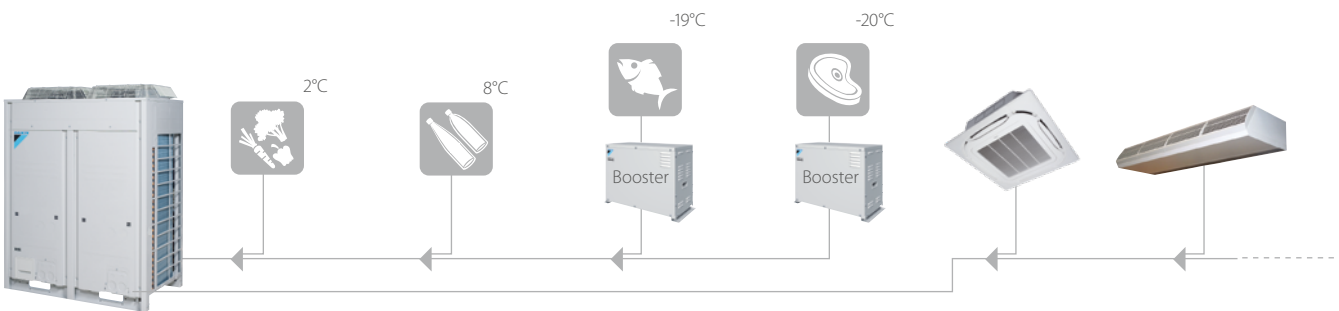
Booster with ZEAS:

MEDIUM + LOW TEMPERATURE refrigeration



Booster with R-410A Conveni-Pack:

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



Low Temperature Refrigeration			LCBKQ-AV1		3
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	18 kW
FNV58	27 kW
1.560 mm	45 kW



Racks

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

FCCE	18 kW
2.120 mm	40 kW
	52 kW

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

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

FCZ4F	36 kW
2.660 mm	70 kW
	85 kW

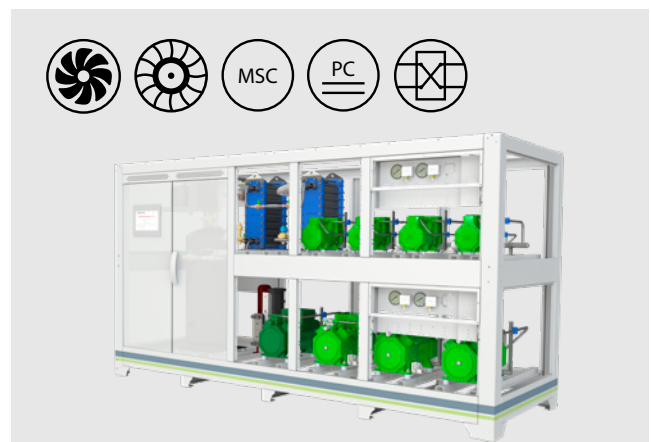
FCZ4G	36 kW
FCCG	93 kW
3.060 mm	108 kW



Duplex racks

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

FUJ	115 kW
4.000 mm	230 kW
	250 kW



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

Low temperature with air conditioning



Tewis
a member of **DAIKIN** group

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)

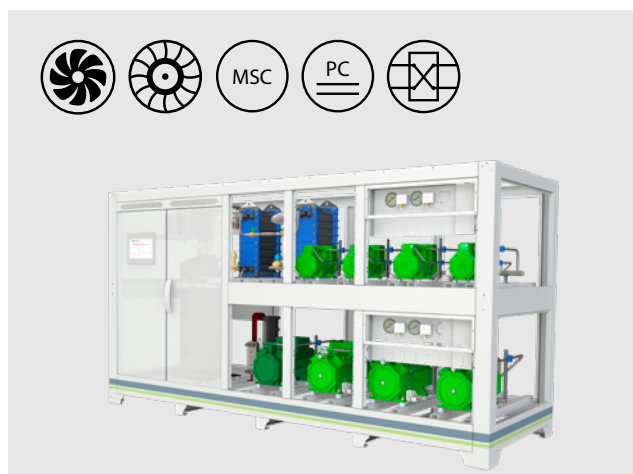
FCZ4F 2.660 mm	9 kW
	30 kW
	60 kW
FCZ4G 4.000 mm	85 kW
	9 kW
FCCG 3.060 mm	30 kW
	70 kW
	108 kW



Duplex racks

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

FUJ 4.000 mm	18 kW
	100 kW
	200 kW
	250 kW



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)



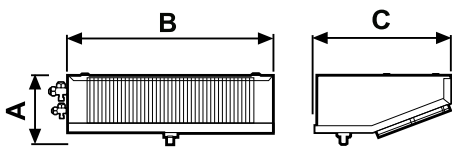
Types:

- › flat evaporator
- › double flow
- › cubic design
- › Evaporator only
- › Evaporator + EEV/TEV
- › Evaporator + EEV/TEV + electronic controller

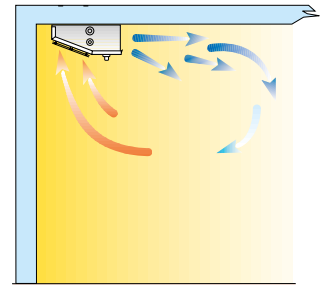
For technical selection, prices, accessories and delivery time please use the Zanotti software and contact our technical department. We are happy to help you.

Dimensions

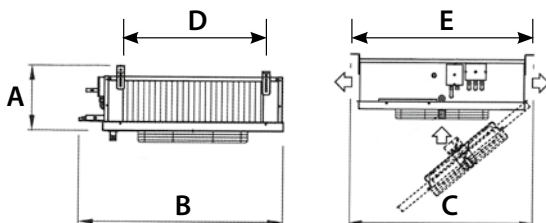
Flat



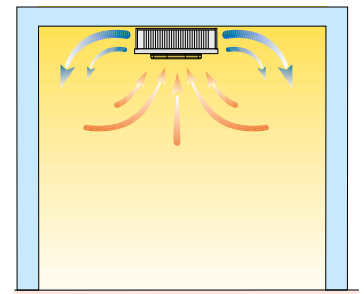
mm	A	B	C
201	215	614	410
202	215	1034	410
203	215	1614	410
232	150	713	455
301	300	910	690
302	300	1530	690
303	300	2150	690
304	300	2770	690
305	300	3390	690



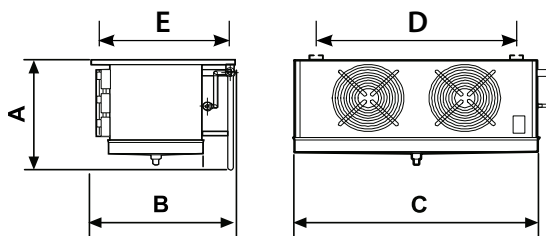
Double flow



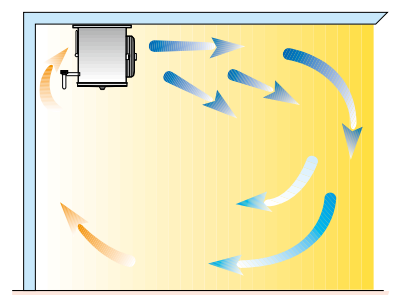
mm	A	B	C	D	E
231	171	579	585	293	600
232	171	889	585	603	600
233	171	1199	585	913	600
234	171	1509	585	1223	600
352	300	1671	995	1214	1065
353	300	2291	995	1834	1065
354	300	2911	995	2454	1065
355	300	3531	995	3074	1065



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 Monoblocks

Model	Capacity range
<p>Small- Monoblock for wall mounting. These units are perfect for cold rooms built on trailers and therefore liable to continuous moving. For small to medium-sized cold rooms.</p> <p>AS-R, AS-E</p> <ul style="list-style-type: none"> > Standard refrigerant: <ul style="list-style-type: none"> • MT: R404A, R134a • LT: R290, R1270 > Defrost: hot gas > Compressor type: Hermetic > Refrigerated volume (R404A): <ul style="list-style-type: none"> • MT (0°C): 73m³ ~182m³ • LT (-20°C): 48m³ ~ 158m³ 	 <p>0° 5,906 kW ~ 11,872 kW</p> <p>-20° 4,113 kW ~ 8,755 kW</p> <p>Referring refrigerant R404A</p>
<p>Large- Monoblock for shock freezing. Direct mounting through the wall and outside installation without any protection. For medium and large-sized cold rooms.</p> <p>RS</p> <ul style="list-style-type: none"> > Standard refrigerant: <ul style="list-style-type: none"> • MT: R404A, R134a • LT: R407F > Defrost: Electric > Compressor type: Hermetic, semi-hermetic > Refrigerated volume: <ul style="list-style-type: none"> • MT (0°C): 19m³ ~ 951m³ • LT (-20°C): 9.4m³ ~ 1, 130m³ > Multi temperature (+5°C ~ -25°C) and freezing versions (-30°C ~ -50°C) available 	 <p>0° 1,914 kW ~ 40,157 kW</p> <p>-20° 1,447kW ~ 36,025 kW</p> <p>Referring refrigerant R404A</p>
<p>Large- Monoblock for shock freezing. Duct connection. Direct mounting through the wall and floorstanding outside installation without any protection. For large-sized cold rooms.</p> <p>BX</p> <ul style="list-style-type: none"> > Standard refrigerant: <ul style="list-style-type: none"> • MT: R404A, R134a • LT: R452A > Defrost: Electric > Compressor type: Semi-Hermetic > Refrigerated volume: <ul style="list-style-type: none"> • MT (0°C): 1,137m³ ~ 1,949m³ • LT (-20°C): 838m³ ~ 1,938m³ > Multi temperature (+5°C ~ -25°C) and freezing versions (-30°C ~ -50°C) available 	 <p>0° 42,266kW ~63,311 kW</p> <p>-20° 28,522kW ~51,514kW</p> <p>Referring refrigerant R404A</p>

C° Cooling capacity



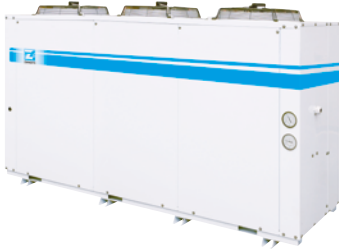



External reference temperature: 35°C

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

Other Bi-blocks

Model	Capacity range	
<p>Small- Bi-Block with cubic evaporator. For medium-sized cold rooms Low noise condensing unit and evaporator with accessories installed, supplied without piping. Thermostatic expansion valve and remote control panel. Suitable for outdoor use.</p> <p>DB-S</p> <ul style="list-style-type: none"> > Refrigerant: <ul style="list-style-type: none"> • MT: R404A, R134a • LT: R407F > Defrost: Electric > Compressor type: Hermetic > Refrigerated volume: <ul style="list-style-type: none"> • MT (0°C): 7.6m³ ~ 256m³ • LT (-20°C): 2.8m³ ~ 270m³ > Multi temperature (+5°C ~ -25°C) version available 		<p>0° 1,088 kW ~ 12,973kW</p> <p>-20° 0.720 ~ 11,841kW</p> <p>Referring refrigerant R404A</p>
<p>Bi-Block with cubic evaporator for medium and big sized cold rooms. Condensing unit and evaporator supplied with accessories. Suitable for outdoor installation without any protection.</p> <p>DB-D</p> <ul style="list-style-type: none"> > Refrigerant: <ul style="list-style-type: none"> • MT: R404A, R134a • LT: R407F > Defrost: Electric > Compressor type: Hermetic, semi-hermetic > Refrigerated volume: <ul style="list-style-type: none"> • MT (0°C): 19m³ ~ 1,949m³ • LT (-20°C): 9.4m³ ~ 1,938m³ > Multi temperature (+5°C ~ -25°C) and freezing versions (-30°C ~ -50°C) available 		<p>0° 1,914kW ~ 63,311kW</p> <p>-20° 1,447kW ~ 51,514kW</p> <p>Referring refrigerant R404A</p>

Other

Model	Capacity range
<p>Small Mono and Bi-Block seasoning conditioner unit for meat and cheeses maturity process.</p> <p>Equipped with an electronic temperature and humidity control system, complete with the operation and standby times.</p> <p>SAR models are used for the resting time of raw hams.</p> <p>SAS - SAR</p> <ul style="list-style-type: none"> › Standard Refrigerant: <ul style="list-style-type: none"> • MT: R134a, R404A › Defrost : hot gas › Compressor type: hermetic › Refrigerated volume: <ul style="list-style-type: none"> • Drying room: 5m³ - 45m³ • Seasoning room: 20m³ - 160m³ 	 <p>mono-block Bi-block</p> <p>+10° -5° 2.8kW - 7.6kW</p> <p>+25° ~ +10° 2.9kW - 18.5kW</p> <p>Referring refrigerant R404A</p>
<p>Large mobile grain process and seasoning conditioner</p> <p>DUK</p> <ul style="list-style-type: none"> › Refrigerant: <ul style="list-style-type: none"> • R404A - R407F - R134a › Defrost: Hot gas › Compressor type: Hermetic 	 <p>+25° +10° 31kW - 129.4kW</p> <p>*with refrigerant R404A</p> <p>Referring refrigerant R404A</p>
<p>Water Chiller available in 1 or 2 circuits to cool glycol water with different ranges of temperature.</p> <p>Air condenser, welded plate gas and liquid heat exchanger, electronic control panel.</p> <p>ZC</p> <ul style="list-style-type: none"> › Standard Refrigerant: <ul style="list-style-type: none"> • MT: R134a, R404A, R407C › Compressor type: semi-hermetic or scroll 	 <p>-5° 19.4 kW to 197 kW Ethilenic glycole 25%, air condensation 35°C</p> <p>-10° 16.3 kW to 165.2 kW Ethilenic glycole 25%, air condensation 35°C</p> <p>-15° 13.3 kW to 86 kW Ethilenic glycole 25%, air condensation 35°C</p> <p>-20° 10.6 kW to 69.1 kW Ethilenic glycole 25%, air condensation 35°C</p> <p>Referring refrigerant R404A</p>
<p>Large Mono and Bi-Block seasoning conditioner unit for meat and cheeses maturity process.</p> <p>Suitable for medium to large industrial cooling cells.</p> <p>The air treatment unit (AISI304 stainless steel) is placed on the floor inside the cooling environment and contains all the cooling and electrical equipment. Control is done via the station that supervises:</p> <ul style="list-style-type: none"> › temperature and humidity levels › airflow inside the cell (by means of ducts) <p>UAV - USV</p> <ul style="list-style-type: none"> › Standard Refrigerant: <ul style="list-style-type: none"> • MT: R134a , R404A, R407F › Drying room: 20m³ - 480m³ › Seasoning room: 75m³ - 1,600m³ › Compressor type: hermetic or semi-hermetic 	  <p>+25° +10° 6.9kW - 155.8kW</p> <p>Referring refrigerant R404A</p>
<p>Open frame condensing units with Bitzer semi hermetic compressor</p> <p>ZH</p> <ul style="list-style-type: none"> › Standard refrigerants: <ul style="list-style-type: none"> • 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. 	 <p>-10° 2.3 kW to 44 kW</p> <p>-30° 1.5 kW to 31.5 kW</p>

C° Cooling capacity
External reference temperature: 35°C

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



Options

Options for ZEAS and Conveni-Pack

	CO ₂ Conveni-Pack		Conveni-Pack	ZEAS						Multi-ZEAS		
	LRVEN10AY1	LRNUN5AY1	LRYEQ16AY	LREQ5BY1	LREQ6BY1	LREQ8BY1	LREQ10BY1	LREQ12BY1	LREQ15BY1	LREQ20BY1	LREQ15BY1Rx2	LREQ20BY1Rx2
Digital pressure gauge kit	-			BHGP26A1								
Pressure gauge kit	-			KHGP26B140								
Pressure Reduction Kit	EKPRV1			-								
(a+b+c+d) kit	KPS26C504	KPS26C160	KPS26C504	KPS26C160	KPS26C280				KPS26C504			
a. Air outlet	KPS26C504T (left side)	KPS26C160T	KPS26C504T	KPS26C160T	KPS26C280T				KPS26C504T			
b. Air inlet (left)	KPS26C504B	-	KPS26C504L	KPS26C504L								
c. Air inlet (right)	KPS26C504L	KPS26C160L	KPS26C504R	KPS26C504R								
d. Air inlet (rear)	KPS26C504R	KPS26C160R	KPS26C504B	KPS26C160B	KPS26C280B				KPS26C504B			
Air outlet (right side)	KPS26C160T			-								
Air inlet (rear)	KPS26C160B			-								
Central drain pan kit	-		KWC26C450**	KWC26C160	KPS26C280				KPS26C450	KPS26C450*** x2		
Modbus communication kit	BRR9B1V1			BRR9A1V1								
Booster unit	-			LCBKQ3AV19								
Suction branch pipe for multi	-			-								EKHRQZM*****
Refnet header	-			KHRQM22M29H8								
	-			KHRQ22M64H8								
	-			KHRQM22M75H8								
	-			KHRQ22M20TA8								
Refnet joint	-			KHRQ22M29T9								
	-			KHRQ22M64T8								
	-			KHRQ22M75T8								
	-			-								
Intelligent Controller	DSC601C51			-								
Intelligent Manager	DCM601A51			-								

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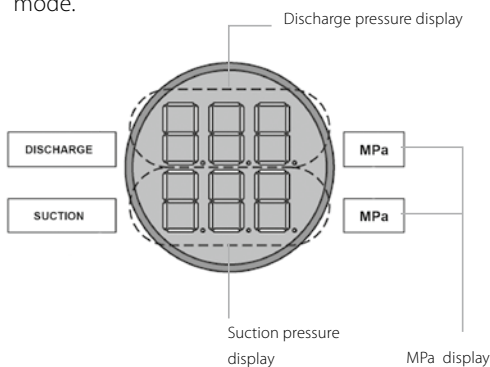
* Snowbreak hoods are field-supplied. For technical drawings and more information, contact your dealer. It is recommended to install a snowbreak hood when regular snowfall occurs.
 ** In cold areas, provide a drain pan heater (field supply) to prevent drained water from freezing up in the drain pan *** 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 and R-410A Conveni-Pack systems.

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



Modbus communication kit

BRR9A1V1

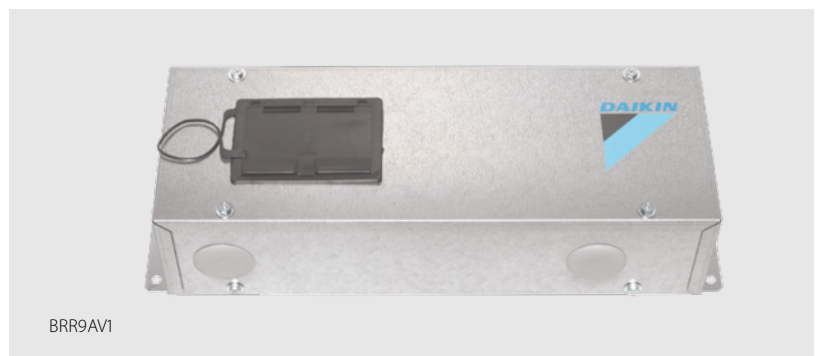
The Daikin Modbus Communication Interface lets you fully integrate Daikin ZEAS and Daikin R-410A Conveni-Pack systems with building control automation networks and other monitoring systems.

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 R-410A Conveni-Pack systems and the Booster.

Control values

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



Display values

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



Options

Zanotti Uniblock

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

Zanotti Bi-block

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

Zanotti Wineblock

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

Zanotti condensing units

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

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



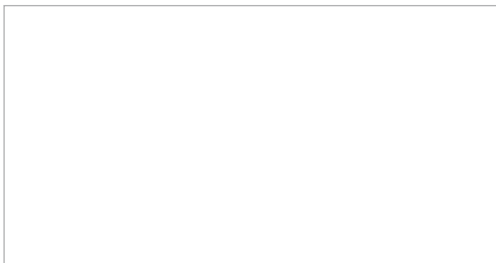


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