



General Catalog
产品目录

Condensing Unit & Monoblock & Evaporator
冷凝机组&一体式机组&冷风机

杭州格伦制冷设备有限公司
Hangzhou Glen Refrigeration Equipment Co., LTD

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Glen Refrigeration
杭州格伦制冷设备有限公司

Glenwin
Glen Refrigeration

Condensing Unit and Monoblock Refrigeration System

Contents

Glen Refrigeration

Hangzhou Glen Refrigeration Equipment Co., LTD focuses on R&D, production and sales of condensing units and refrigeration units, perfectly adapted to any commercial or industrial refrigeration applications.

The entire range of Glen Refrigeration condensing units includes indoor condensing units, outdoor condensing units, air cooled condensing units, water-cooled condensing units, DC inverter condensing units, cold room evaporators, monoblock refrigeration units, and many other products. Our condensing units meet the European standards and CB standards.

We offer the most complete range on the market in low temperature (LBP) and medium/high temperature (MHBP) applications.

The units can operate under any climate-even in hottest tropical conditions, with conventional refrigerants, R404A, R448A, R449A, R455A and natural refrigerant R290.

Our condensing units integrate innovation into tradition. In order to guarantee the greatest reliability and durability, Glen Refrigeration condensing units adopt famous brand compressor, Saginomiya and Danfoss parts, offering oil separator, suction accumulator, metal housing, etc. The innovative electric board provides multi protection for your condensing units.

Glen refrigeration has been leading the way in energy efficiency, and we offer water-cooled condensing unit, inverter condensing unit to help our partners lower energy use and costs throughout their operations.

Choosing a Glen Refrigeration condensing unit is the guarantee of an efficient and successful installation for any commercial refrigeration application, such as petrol stations, convenience stores, butcheries, bakeries, ice machines, cold rooms, milk tanks, restaurants, hotels, catering, kitchens etc. Glen Refrigeration has proudly served the food retailing industry with the most customer-focused solutions and innovations.

We are Glen Refrigeration, Leading Condensing Unit and Monoblock Refrigeration Unit Manufacturer in China.

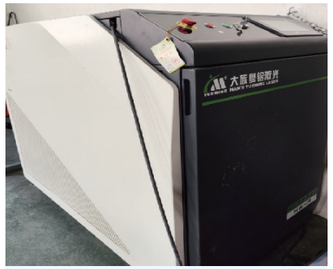
Design and production factory

Large laser cutting machine

Automatic bending machine

CNC bending machine

Auto straightening cutting machine



Laser welding machine

Your trusted and reliable partner of commercial refrigeration solutions

We understand your business and help you choose the best refrigeration solutions that fits you.

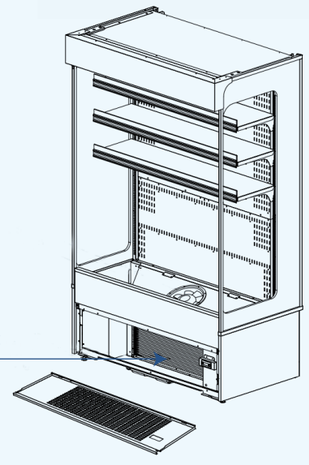
R290 Self-Contained Condensing Unit for Plug-in

Glen Refrigeration enlarges its R290 condensing units, including inverter and non-inverter, offering with Sanyo compressor, designed for medium and low temperature commercial refrigeration, well-suited for multidecks, semi verticals, serve-over counters, freezer cabinets, display cases, blast freezers, blast chillers, OEM equipment. Low height and high efficiency are of concern. This new series R290 condensing unit is equipped with a reliable Sanyo horizontal rotary compressor, developed with propane refrigerant, ensures greatest benefits in terms of climate-friendly solution.

Synegic operation of DC inverter compressor and variable speed drive brings exceptional results in energy efficiency and quality of products preservation.

- Environment friendly refrigerant
- High reliable Sanyo compressor
- Low vibration low noise
- Excellent performance
- Space saving design
- More flexible

Condensing Unit



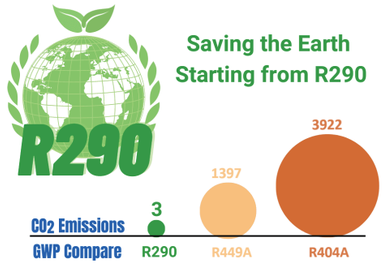
Non-Inverter R290 Condensing Unit

Model	Power supply	Horsepower
GL-HSR7.5EL	220~240V/50Hz	0.75 HP
GL-HSR10EL	220~240V/50Hz	1 HP
GL-HSR15EL	220~240V/50Hz	1.5 HP
GL-HSR20EL	220~240V/50Hz	2 HP

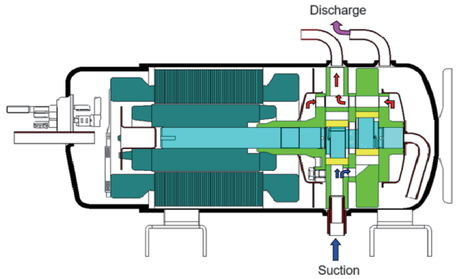
Inverter R290 Condensing Unit

Model	Power supply	Horsepower
GL-BHSR10EL	220V	1 HP
GL-BHSR20EL	220V	2 HP
GL-BHSR30EL	220V	3 HP

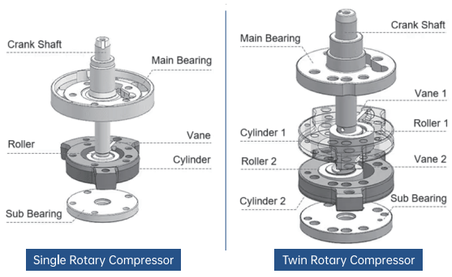
> Product Features



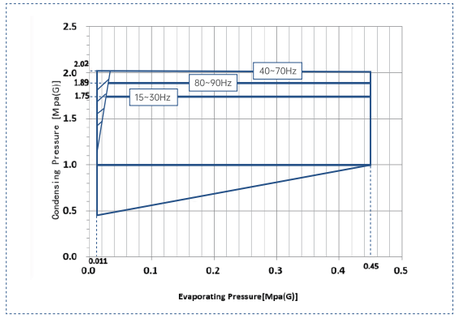
Self-contained condensing unit available in R290 natural refrigerant, ensures greatest benefits in terms of climate-friendly solution.



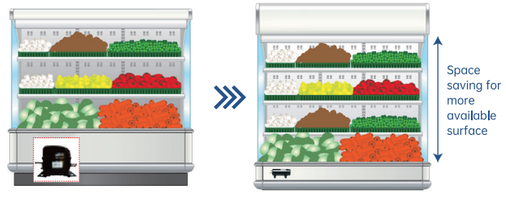
With their unique structure and long track record on the Japanese market, Sanyo rotary refrigeration compressors have a reputation for outstanding reliability.



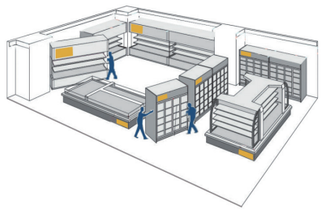
All rotating bodies generate vibrations when they rotate. But the vibration can be reduced by balancing of two rotor design during operation.



Unique rotary refrigeration compressor design makes it both suited for medium and low temperature refrigeration, and has excellent performance in LBP application.



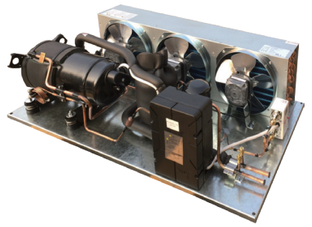
Thank's to its low height and compactness, this condensing unit allows a larger merchandising space for each display cases.



Self-contained condensing units allow easily move cabinets inside the supermarket, no more need of compressor racks, more selling area available.

Horizontal Condensing Unit

R448A R449A R404A



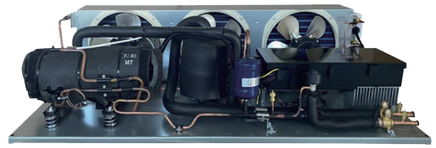
Medium-Low Temperature
Single phase 220V-240V/50Hz

Model			GL-HSN7.5EL	GL-HSN10EL	GL-HSN15EL	GL-HSN20EL	GL-HSN25EL	GL-HSN30EL
Nominal input (W)			780	850	1250	1550	1700	2300
Power supply			Single phase 220V-240V/50Hz					
Refrigerant max.(KG)			R404A(1.2)	R404A(1.2)	R404A(1.4)	R404A(3.0)	R404A(3.0)	R404A(3.0)
Start-up current (A)			25	27	37	50	53	60
Max. running current (A)			4.3	5.2	6.5	8.6	9.7	12.7
Evap. temp. range (℃)			-40~-5℃					
Ambient temp. (℃)			-7~43℃					
Condenser	Style	Row*Loop	4 Row 4.5 Loop	4 Row 4.5 Loop	5 Row 4.5 Loop	5 Row 4.5 Loop	5 Row 4.5 Loop	6 Row 4.5 Loop
		Length	540mm	540mm	630mm	900mm	995mm	1060mm
	Fan motor	Output power*QTY	16W*2	16W*2	16W*2	16W*3	16W*3	16W*3
		Diameter (mm)*QTY	Φ230*2	Φ230*2	Φ230*2	Φ230*3	Φ230*3	Φ230*3
		Air flow (m³/hr)	820*2	820*2	820*2	820*3	820*3	820*3
Pipe (mm)	Gas inlet OD		Φ12.7(1/2")					
	Liquid outlet OD		Φ9.52(3/8")					
Out dimension	Length (mm)		680	680	790	1050	1150	1210
	Width (mm)		485	485	485	540	540	570
	Height (mm)		261	261	261	263	263	263
Installation dimension (L*W)			660*465	660*465	770*465	1030*520	1125*520	1190*550
Refrigeration capacity	Evap. temp.(℃)		Refrigeration capacity: W Ambient temp.:32℃					
	-40		505	635	840	1260	1405	1620
	-35		655	825	1090	1580	1760	2080
	-30		810	955	1190	1890	2110	2630
	-25		975	1210	1545	2310	2575	3320
	-20		1190	1440	1865	2730	3040	3955
	-15		1430	1710	2100	3095	3450	4540
	-10		1795	2070	2426	3680	4100	5485
	-5		2135	2370	2790	4100	4570	6485
Wiring capacity	Leakage protector	Rated current (A)	10	10	15	25	25	30
		Leak current (mA)	30	30	30	30	30	30
	Diameter (mm²)	In10m	2.0	2.0	2.0	4.0	4.0	4.0
		In 20m	2.0	2.0	3.5	6.0	6.0	6.0
		In 30m	3.5	3.5	3.5	6.0	6.0	8.0

Note: Single phase 220V/60HZ horizontal condensing units are available.

Inverter Horizontal Condensing Unit

R448A R449A R404A



Medium-Low temperature
Single phase 220V

Model		GL-BHSN15EL	GL-BHSN20EL	GL-BHSN30EL
Power supply		Single phase 220V		
Evap. temp. range (℃)		-45~0℃		
Ambient temp. (℃)		-7~43℃		
Refrigerant max. (KG)		R404A(3.0)		
Compressor		C-6RHVN63L0B	C-7RHVN113L0B	C-7RHVN153L0B
Max working current(A)		7	9.7	13.5
Condenser	Spec(Low*Loop*Length)	5*4.5*630	5*4.5*900	6*4.5*1060
	Fan motor output power (W) *QTY (PCS)	16*2	16*3	16*3
	Fan diameter (mm)	∠34° ϕ 230		
	Air volume (m³/hr)	820*2	820*3	820*3
Pipe (mm)	Suction inlet OD	Φ12.7(1/2")		
	Liquid outlet OD	Φ9.52(3/8")		
Out dimension	Length (mm)	790	1050	1210
	Width (mm)	540	540	570
	Height (mm)	263	263	263

Refrigeration capacity	Evap. temp.(℃)	Refrigeration capacity: W Ambient temp.:32℃								
		40HZ	60HZ	80HZ	40HZ	60HZ	80HZ	40HZ	60HZ	80HZ
	-40	420	660	920	690	1040	1385	835	1250	1670
	-35	520	820	1150	875	1310	1750	1070	1605	2140
	-30	640	1050	1420	1040	1560	2080	1357	2040	2715
	-25	700	1100	1550	1275	1912	2550	1710	2565	3420
	-20	800	1280	1780	1500	2250	3000	2035	3050	4070
	-15	980	1560	2150	1700	2550	3400	2340	3510	4680
	-10	1265	2025	2850	2025	3040	4050	2850	4275	5700
	-5	1358	2164	3015	2430	3645	4860	3340	5010	6680

Outdoor Condensing Unit

> Product Introduction

Glen Refrigeration's outdoor condensing units, designed specifically for high temp., medium temp. and low temp. refrigeration. Features Sanyo rotary compressor, Panasonic scroll compressor, Emerson scroll compressor and manufactured under strict specifications with the latest advancements in technology for commercial refrigeration and industrial refrigeration applications.

Today, our outdoor condensing units widely used in many commercial refrigeration applications, like cold rooms, process cooling, retail refrigeration and industrial chillers. Glen Refrigeration produces outdoor condensing units ranging in cooling capacity from 1 HP to 25 HP. In addition, we also produce parallel-compressor outdoor condensing unit.

With a very simple user interface, low energy consumption, fast commissioning and easy maintenance, outdoor condensing unit by Glen Refrigeration is the perfect solution for convenience stores, restaurant cold rooms, fuel stations, food stores, milk cooling and ice making equipment.

> Product Features

High reliability

Famous brand compressors with functional components and protection devices guarantee the greatest reliability and durability.

High ambient compatible

Optimum condenser design increases heat exchange, fan with variable speed control for improved condensing unit's capacity, efficiency, reliability & intended to work at a most extreme ambient temperature of 43°C.

Space efficient

Compact bases scaled to capacity and all in one service across allows side by side installation of multiple units.

Silent operation

Compressor jacket combined sound insulation cotton inside of the condensing unit to reduce the noise maximally. Or choose Panasonic scroll compressor for running more quietly.

Wide application

Wide range of applications from low temperature refrigeration to high temperature application.

A Worldwide of Applications

GLEN REFRIGERATION, THE PARTNER FOR YOUR PROJECTS

GLEN REFRIGERATION listens to your needs, then offers a set of systems and services that meet the demands of your business and help you optimize your investments.

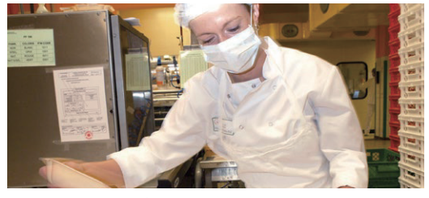
We are a major global player in the commercial refrigeration markets and has proudly served the commercial refrigeration industry with the most customer-focused solutions and innovations.

Refrigerated warehouses and producing areas

Food processing plants

Convenience stores

Food retail refrigeration



Process kitchens

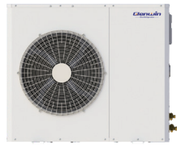
Restaurant cold rooms

Milk cooling and ice making equipment

Distribution center

Sanyo Compressor Outdoor Condensing Unit

R448A R449A R404A



Medium-Low temperature
220V~240V/50Hz and 380V/50Hz

Model		GL-SN10EL	GL-SN15EL	GL-SN25EL	GL-SN30EL	GL-SN25FL	GL-SN30FL
Horsepower (HP)		1 HP	1.5 HP	2.5 HP	3 HP	2.5 HP	3 HP
Evap.temp. range (°C)		-45~-5°C					
Ambient temperature (°C)		-7~43°C					
Refrigerant		R404A, R448A, R449A					
Power supply		Single phase 220V/50Hz				Three phase 380V/50Hz	
Compressor	Type	Sanyo rotary refrigeration compressor					
	Model	C-R133L4AL	C-R220L4AL	C-3RV359L4AAL	C-3R463L4AAL	C-3RP359L4AAL	C-3RP547L4AAL
	Power	1 HP	1.5 HP	2.5 HP	3 HP	2.5 HP	3 HP
Fan motor	Fan QTY (PCS)	1	1	1	1	1	1
	Power supply	Single phase 220V/50Hz					
	Input power (W)	160W	160W	160W	160W	160W	160W
	Fan spec	φ496	φ496	φ496	φ496	φ496	φ496
	Air volume (m³/h)	3600	3600	3600	3600	3600	3600
Stop valve	Suction inlet OD	12.7(1/2")		15.88(5/8")			
	Liquid outlet OD	9.52(3/8")		9.52(3/8")			
Refrigeration capacity	Evap. temp.(°C)	Refrigeration capacity: W Ambient temp.: 32°C					
	-40°C	505	840	1260	1620	1260	1620
	-35°C	655	1090	1580	2080	1580	2080
	-30°C	810	1190	1890	2630	1890	2630
	-25°C	975	1545	2310	3320	2310	3320
	-20°C	1190	1865	2730	3955	2730	3955
	-15°C	1430	2100	3095	4540	3095	4540
	-10°C	1795	2426	3680	5485	3680	5485
	-5°C	2135	2790	4100	6485	4100	6485
Product dimension (mm) L*W*H		995*420*675			1000*420*822	995*420*675	1000*420*822
Install dimension (mm) Hole-L*W		φ12-585*380			φ12-585*380	φ12-585*380	φ12-585*380
		18-A			18-B	18-A	18-B

Note: Single phase 220V/60Hz outdoor condensing units are available.

Panasonic Scroll Compressor Outdoor Condensing Unit

R448A R449A R404A

Medium-Low temperature
Three phase 380V/50Hz

Model		GL-SN40FL	GL-SN50FL	GL-SN60FL	GL-SN70FL	GL-SN80FL	GL-SN100FL	GL-SN125FL
Horsepower (HP)		4 HP	5 HP	6 HP	7 HP	8 HP	10 HP	12.5 HP
Evap.temp. range(°C)		-45~5°C						
Ambient temperature (°C)		0~40°C						
Refrigerant		R404A						
Power supply		Three phase 380V/50Hz						
Compressor model		C-SBN303L8A	C-SBN373L8A	C-SBN453L8A	3CC120SA03	3CC137SA03	3CC171SA03	3CC216SA03
Fan motor	Fan QTY (PCS)	1	2	2	2	2	2	2
	Power supply	Single phase 220V/50Hz						Three phase 380V/50Hz
	Input power (W)	160W	160W	160W	160W	160W	250W	415W
	Fan spec.	φ496	φ496	φ496	φ496	φ496	φ500	φ550
	Air volume (m³/h)	3600	3600*2	3600*2	3600*2	3600*2	4800*2	6500*2
Stop valve	Suction inlet OD	15.88(5/8")	19.05(3/4")			22.2(7/8")	28.5(11/8")	
	Liquid inlet OD	9.52(3/8")	12.7(1/2")			15.88(5/8")	15.88(5/8")	
Refrigeration capacity	Evap.temp. (°C)	Refrigeration capacity:W Ambient temp.:32°C						
	-45°C	1560	1990	2315	3355	3590	4240	5290
	-40°C	1920	2480	2880	4055	4350	5235	6530
	-35°C	2425	3080	3580	4910	5275	6470	8070
	-30°C	3075	3835	4455	5945	6390	7980	9960
	-25°C	3880	4770	5535	7195	7745	9850	12290
	-20°C	4830	5930	6890	8705	9390	12165	15185
	-15°C	5925	7375	8570	10535	11380	15025	18755
	-10°C	7170	9170	10660	12750	13790	18550	23155
	-5°C	8560	11415	13255	15430	16720	22910	28595
Product dimension (mm) L*W*H		1000*420*822	1010*440*1220			1290*780*920	1290*780*1130	1550*890*1150
Install dimension (mm) Hole-L*W		φ12-585*380	φ12-585*400			ϕ 12-(420+420)*740		ϕ12-(570+570)*860
		18-B	18-C			18-D		18-E

Note: 3 phase 440V~460V/60Hz or 3 phase 200V~220V/60Hz or 3 phase 380V/60Hz outdoor condensing units are all available

Emerson Scroll Compressor (ZB Series)
Outdoor Condensing Unit

R448A R449A R404A

High-Medium temperature
Single phase 220V/50Hz and Three phase 380V/50Hz

Model		GL-GN20EM	GL-GN30EM	GL-GN40EM	GL-GN20FM	GL-GN30FM	GL-GN40FM	GL-GN50FM	GL-GN60FM	GL-GN70FM	GL-GN80FM	GL-GN100FM	GL-GN130FM	GL-GN150FM	GL-GN200FM	GL-GN220FM	GL-GN250FM
Power supply		Single phase 220V/50Hz			Three phase 380V/50Hz												
Evap.temp. range (°C)		-25~5°C													-20~10°C		
Ambient temperature (°C)		0~40°C															
Refrigerant		R404A, R448A, R449A															
Pressure controller		High pressure & Low pressure switch															
Emerson compressor	Power	2HP	3HP	4HP	2HP	3HP	4HP	5HP	6HP	7HP	8HP	10HP	13HP	15HP	20HP	22HP	25HP
	Model	ZB15KQE	ZB21KQE	ZB29KQE	ZB15KQE	ZB21KQE	ZB29KQE	ZB38KQE	ZB45KQE	ZB48KQE	ZB58KQE	ZB76KQE	ZB95KQE	ZB114KQE	ZB130KQE	ZB150KQE	ZB190KQE
Condenser fan motor	Fan QTY (PCS)	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2
	Power supply	Single phase 220V/50Hz											Three phase 380V/50Hz				
	Power (W)	160W									250W		415W		780W	800W	
Pipe (mm/inch)	Suction inlet OD	15.88(3/8")						19.05(3/4")			22.2(7/8")	28.5(1 1/8")		34.93(1 3/8")		41.27(1-5/8")	
	Liquid outlet OD	9.52(3/8")						12.7(1/2")			15.88(5/8")				19.05(3/4")	22.22(7/8")	
External dimension (mm) L*W*H		995	1000		995	1000		1010			1340	1340	1550	1550	1805	1955	1955
		420	420		420	420		440			780	780	890	890	961	961	961
		675	822		675	822		1220			920	1130	1150	1400	1820	1820	1900
Install dimension (mm) Hole-L*W		ϕ12-585*380			ϕ12-585*380			ϕ12-585*400			ϕ12-(420+420)*740		ϕ12-(570+570)*860		/	/	/
		18-A	18-B		18-A	18-B		18-C			18-D		18-E		/	/	/
Refrigeration capacity	Evap. Temp.(°C)	Refrigeration capacity: W Ambient temp.:32°C															
	-25°C	2093	3140	4250	2093	3140	4250	5340	6280	6910	7950	11160	13670	16100	/	/	/
	-20°C	2520	3780	5150	2520	3780	5150	6380	7540	8290	9460	13300	16290	19220	20640	25520	31950
	-15°C	3073	4610	6290	3073	4610	6290	7850	9170	10090	10770	16040	19650	23200	25420	31000	38810
	-10°C	3666	5500	7480	3666	5500	7480	9300	10950	12040	13560	19050	23340	27600	30830	37390	46810
	-5°C	4400	6600	8860	4400	6600	8860	11000	12890	14180	15950	22330	27360	32690	36980	44780	56060
	0°C	5266	7900	10260	5266	7900	10260	12800	15700	17270	18500	25960	31850	37970	44000	53270	66700
	5°C	6233	9350	12650	6233	9350	12650	15800	18600	20460	21320	29850	36600	44050	52000	62980	78850

Note: 3 phase 460V/60Hz and 3 phase 220V/60Hz outdoor condensing units are all available.

High efficiency all year round
Equipped with dynamic discharge valve that allows the discharge gas to reach desired pressure. This helps reduce efficiency loss by preventing gas re-compression.

Compactness
The small footprint of Copeland Scroll compressors enables compact system designs of condensing unit compared with reciprocating compressors.

Robustness and reliability
The Copeland Compliant Scroll design is tolerant to stresses caused by liquid slugging, flooded starts and debris commonly found in refrigeration systems.

Smooth operation
Copeland Scroll compressors are designed with a discharge check valve that isolates the high pressure discharge gas, allows to start unloaded, resulting in low inrush currents.

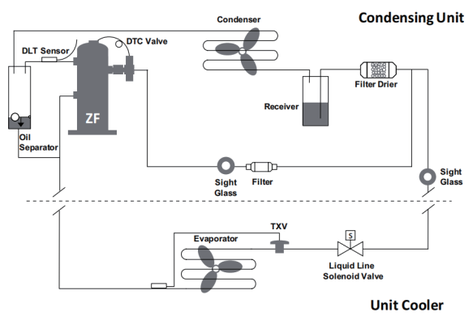
> Application Cases

Emerson Scroll Compressor(ZF Series)
Outdoor Condensing Unit

R448A R449A R404A

Medium-Low temperature
Three phase 380V/50Hz

Model		GL-GN30FLF	GL-GN40FLF	GL-GN50FLF	GL-GN60FLF	GL-GN70FLF	GL-GN80FLF	GL-GN100FLF	GL-GN120FLF	GL-GN150FLF	GL-GN180FLF
Power supply		Three phase 380V/50Hz									
Evap.temp. range (°C)		-40~5°C									
Ambient temperature (°C)		0~40°C									
Refrigerant		R404A, R448A, R449A									
Pressure controller		High pressure & Low pressure switch									
Emerson compressor	Power	3HP	4HP	5HP	6HP	7HP	8HP	10HP	12HP	15HP	18HP
	Model	ZF09KQE	ZF13KQE	ZF15KQE	ZF18KQE	ZF25KQE	ZF28KQE	ZF34KQE	ZF41KQE	ZF49KQE	ZF54KQE
Fan motor	Fan QTY (PCS)	1	1	2	2	2	2	2	2	2	2
	Power supply	Single phase 220V/50Hz							Three phase 380V/50Hz		
	Power (W)	160W					250W		415W		780W
Pipe (mm/inch)	Suction inlet OD	15.88(5/8")		19.05(3/4")			22.2(7/8")	28.5(1 1/8")		34.93(1 3/8")	
	Liquid outlet OD	9.52(3/8")		12.7(1/2")			15.88(5/8")				19.05(3/4")
External dimension (mm) L*W*H		1000*420*822		1010*440*1220			1340*780*920	1340*780*1130	1550*890*1150	1550*900*1440	1805*961*1820
Install dimension (mm) Hole-L*W		ϕ12-585*380		ϕ12-585*400			ϕ12-(420+420)*740		ϕ12-(570+570)*860		/
		18-B		18-C			18-D		18-E		/
Refrigeration capacity	Evap. Temp.(°C)	Refrigeration capacity: W Ambient temp.:32℃									
	-40°C	1530	2190	2660	3290	4090	4670	5300	6710	8070	9230
	-35°C	1940	2780	3420	4170	5120	5850	6820	8560	10210	11690
	-30°C	2410	3480	4290	5170	6420	7340	8540	10620	12720	14560
	-25°C	2960	4310	5300	6340	7960	9100	10510	12980	15650	17910
	-20°C	3600	5270	6470	7700	9730	11120	12790	15710	19050	21800
	-15°C	4350	6380	7840	9300	11710	13380	15440	18900	/	/
	-10°C	5230	7660	9430	11170	13870	15850	18510	22640	/	/
	-5°C	6230	9110	11260	13360	16200	18510	22060	26990	/	/
	0°C	7390	10760	13360	15910	/	/	/	/	/	/
	5°C	8710	12610	15760	18840	/	/	/	/	/	/



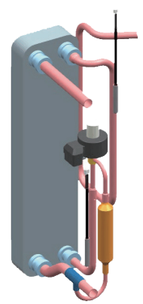
> Application Cases

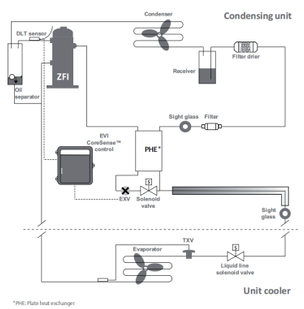
Emerson Scroll Compressor(ZFI Series)
Outdoor Condensing Unit

R448A R449A R404A

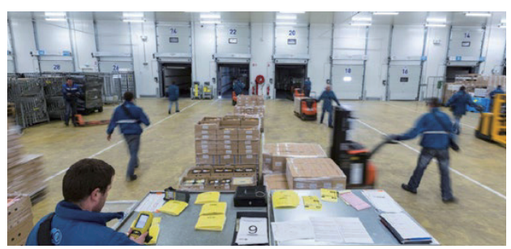
Medium-Low temperature
Three phase 380V/50Hz

Model		GL-GN40FLI	GL-GN60FLI	GL-GN70FLI	GL-GN80FLI	GL-GN100FLI	GL-GN120FLI	GL-GN150FLI	GL-GN200FLI	GL-GN250FLI
Power supply		Three phase 380V/50Hz								
Evap.temp. range (°C)		-40~5°C								
Ambient temperature (°C)		0~40°C								
Refrigerant		R404A, R448A, R449A								
Pressure controller		High pressure & Low pressure switch								
Emerson compressor	Power	4HP	6HP	7HP	8HP	10HP	12HP	15HP	20HP	25HP
	Model	ZFI20KQE	ZFI26KQE	ZFI36KQE	ZFI39KQE	ZFI50KQE	ZFI59KQE	ZFI68KQE	ZFI59KQE	ZFI68KQE
Fan motor	Fan QTY (PCS)	1	2	2	2	2	2	2	2	2
	Power supply	Single phase 220V/50Hz					Three phase 380V/50Hz			
	Power (W)	160W			250W		415W		780W	800W
Pipe (mm/inch)	Suction inlet OD	15.88(5/8")	19.05(3/4")		22.2(7/8")	28.5(1 1/8")		34.93(1 3/8")		41.27(1-5/8")
	Liquid outlet OD	9.52(3/8")	12.7(1/2")		15.88(5/8")				19.05(3/4")	22.22(7/8")
External dimension (mm) L*W*H		1000*420*822	1010*440*1220		1340*780*920	1340*780*1130	1550*890*1150	1550*900*1440	1805*961*1820	1955*961*1900
Install dimension (mm) Hole-L*W		φ12-585*380	φ12-585*400		φ12-(420+420)*740		φ12-(570+570)*860		/	/
		18-B	18-C		18-D		18-E		/	/
Refrigeration capacity	Evap. Temp.(°C)	Refrigeration capacity: W Ambient temp.:32°C								
	-40°C	3250	5090	6290	7220	8660	10550	11970	13600	17450
	-35°C	4070	6120	7670	8800	10290	12530	14230	16230	21300
	-30°C	4990	7330	9270	10630	12400	15090	17130	19550	25700
	-25°C	6040	8740	11080	12710	14910	18160	20600	23500	30900
	-20°C	7230	10390	13090	15040	17770	21650	24560	28030	37100
	-15°C	8600	12300	15320	17580	20940	25510	/	/	44400
	-10°C	10140	14490	17740	20350	24340	29650	/	/	52900
	-5°C	11900	17010	20320	23340	27910	34010	/	/	62900
	0°C	13880	19860	/	/	/	/	/	/	/
	5°C	16110	23060	/	/	/	/	/	/	/





› Application Cases



Emerson Scroll Compressor (ZSI series) Outdoor Condensing Unit

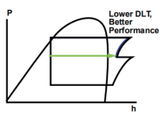
R448A R449A R404A

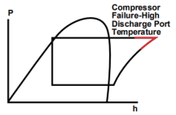
Medium-Low temperature
220V/50Hz and 380V/50Hz

Model		GL-GN30EL	GL-GN40EL	GL-GN30FL	GL-GN40FL	GL-GN50FL	GL-GN60FL	GL-GN70FL
Power supply		Single phase 220V/50Hz		Three phase 380V/50Hz				
Evap.temp. range (°C)		-30~0°C						
Ambient temperature (°C)		0~40°C						
Refrigerant		R404A, R448A, R449A						
Pressure controller		High pressure & Low pressure switch						
Emerson compressor	Power	3HP	4HP	3HP	4HP	5HP	6HP	7HP
	Model	ZSI08KQE	ZSI11KQE	ZSI09KQE	ZSI11KQE	ZSI15KQE	ZSI18KQE	ZSI21KQE
Fan motor	Fan QTY (PCS)	1	1	1	1	2	2	2
	Power supply	Single phase 220V/50Hz						
	Power (W)	160W						
Pipe (mm/inch)	Suction inlet OD	15.88(5/8")		15.88(5/8")		19.05(3/4")		
	Liquid outlet OD	9.52(3/8")		9.52(3/8")		12.7(1/2")		
External dimension (mm) L*W*H		1000*420*822		1000*420*822		1010*440*1220		
Install dimension (mm) Hole-L*W		Φ12-585*380		Φ12-585*380		Φ12-585*400		
		18-B		18-B		18-C		
Refrigeration capacity	Evap Temp (°C)	Refrigeration capacity: W Ambient temp.: 32°C						
	-30°C	2080	2810	2340	2790	4010	5160	5770
	-25°C	2590	3600	2930	3570	5110	6380	7100
	-20°C	3190	4460	3600	4420	6310	7810	8700
	-15°C	3890	5420	4370	5380	7660	9480	10570
	-10°C	4700	6550	5250	6490	9240	11420	12740
	-5°C	5640	7880	6270	7810	11110	13660	15220
	0°C	6710	9460	7440	9380	13350	16230	18030

With Liquid Injection

Without Liquid Injection





› Application Cases

Open-Type Outdoor Condensing Unit

R448A R449A R404A

Medium-Low temperature
220V~240V/50Hz and 380V/50Hz

Model		GL-VSN15EL	GL-VSN25EL	GL-VSN30EL	GL-VSN25FL	GL-VSN30FL
Horsepower(HP)		1.5 HP	2.5 HP	3 HP	2.5 HP	3 HP
Evap.temp.range(°C)		-45~-5°C				
Ambient temperature(°C)		-7~43°C				
Refrigerant		R404A, R448A, R449A				
Powersupply		Sing phase 220V/50Hz			Three phase 380V/50Hz	
Compressor	Type	Sanyo rotary refrigeration compressor				
	Model	C-R220L4AL	C-3RV359L4AAL	C-3R463L4AAL	C-3RP359L4AAL	C-3RP547L4AAL
	Power	1.5 HP	2.5 HP	3 HP	2.5 HP	3 HP
Fan motor	Fan QTY (PCS)	1	1	1	1	1
	Power supply	Single phase 220V/50Hz				
	Input power (W)	62	165	205	165	205
	Fan diameter (mm)	φ300	φ350	φ400	φ350	φ400
	Air volume (m^3/h)	1200	2100	3600	2100	3600
Stop valve	Suction inlet OD	12.7(1/2")	15.88(5/8")			
	Liquid outlet OD	9.52(3/8")	9.52(3/8")			
Refrigeration capacity	Evap. temp.(°C)	Refrigeration capacity: W Ambient temp.: 32°C				
	-40°C	840	1260	1620	1260	1620
	-35°C	1090	1580	2080	1580	2080
	-30°C	1190	1890	2630	1890	2630
	-25°C	1545	2310	3320	2310	3320
	-20°C	1865	2730	3955	2730	3955
	-15°C	2100	3095	4540	3095	4540
	-10°C	2426	3680	5485	3680	5485
	-5°C	2790	4100	6485	4100	6485
Product dimension (mm) L*W*H		615*540*431	680*580*540	720*600*540	680*580*540	720*600*540
Install dimension (mm) L*W		595*520	650*550	690*570	650*550	690*570

Note: Single phase 220V/60Hz open-type outdoor condensing units are available.

DC Inverter Condensing Unit for Commercial Refrigeration

To further increase efficiencies offered by our standard range, we also provide a comprehensive range of INVERTER condensing units.

TYPICALLY 20%~30% ENERGY SAVINGS

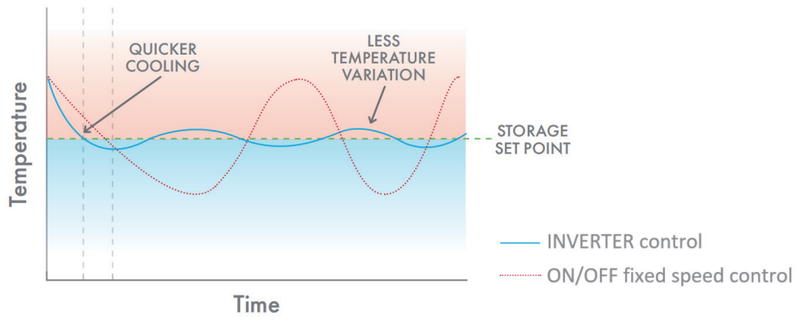
> Product Features

- DC-inverter compressor, step-less regulation of load and rotary speed, low-noise and high efficiency, above 35% power saving annually.
- DC-inverter fan design, automatic adjustment of fan speed, low running noise, more efficiency.
- Thickened soundproof cotton design muffling noise more efficiently, running more quietly.
- Integrated cabin design, no machine room, easy to install.
- Compact design, smaller size, saving installation space.

> Temperature Control Comparison

INVERTER Control vs. ON/OFF Fixed Speed Control

Inverter units benefit from continuous load matching which means they use significantly less energy, typically giving 20%~30% energy saving.



DC Inverter Outdoor Condensing Unit

R448A R449A R404A

Medium-Low temperature
Single phase 220V /Three phase 380V

Model		GL-BSN30EL	GL-BSN40EL	GL-BSN50FL	GL-BSN60FL	GL-BSN70FL	GL-BSN80FL	GL-BRN100FL
Power supply		Single phase 220V	Three phase 380V					
Evap. temp. range (°C)		-35~0°C						
Ambient temp. (°C)		-7~43°C						
Refrigerant		R404A, R448A, R449A						
Pressure sensor		High pressure: 0MPa~5MPa						
		Low pressure: 0MPa~2MPa						
Fan motor	Fan motor*QTY (PCS)	1	1	2	2	2	2	2
	Power supply	DC 312V						
	Power (W)	100W						
Pipe (mm)	Gas inlet OD	Φ15.88(5/8")		Φ22.7(7/8")			Φ22.7(7/8")	
	Liquid outlet OD	Φ9.52(3/8")		Φ12.7(1/2")			Φ15.88(5/8")	
Out dimension	Length (mm)	1000	1060	1010	1010	1010	1180	1180
	Width (mm)	420	420	440	440	440	480	480
	Height (mm)	822	920	1220	1220	1220	1545	1545
Install dimension (mm) Hole-L*W		ϕ12-585*380		ϕ12-585*400			ϕ12-820*450	
	Evap. temp.(°C)	Refrigeration capacity: W Ambient temp.: 32°C Speed: 75Hz						
Refrigeration capacity	-35°C	2490	3360	3850	5010	5760	5940	6820
	-30°C	3100	4190	4830	6280	7220	7700	8830
	-25°C	3810	5140	5960	7800	8960	9680	11110
	-20°C	4630	6250	7280	9530	10950	11920	13680
	-15°C	5590	7550	8820	11460	13170	14480	16620
	-10°C	6720	9070	10610	13570	15600	17420	19990
	-5°C	8010	10810	12670	15860	18230	20800	23870

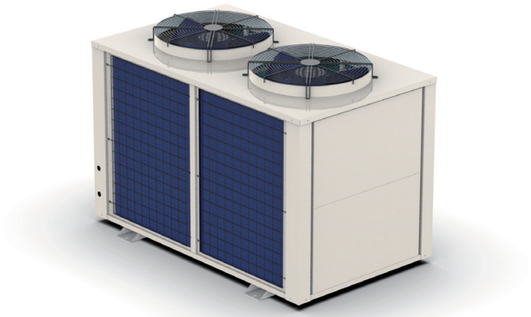
Why Choose Parallel-Compressor Outdoor Condensing Unit?

Modular Parallel-Compressor Outdoor Condensing Unit allows business operators to remotely locate all individual refrigeration systems to a single system for increased efficiency.

Energy Efficiency

Each piece of refrigeration equipment such as glass door freezer, multideck display chiller, freezer cabinet, has its own refrigeration system. Each one of these systems releases heat into the surrounding kitchen or store. In turn, this heat increases the load on the air conditioning system, resulting in higher energy usage.

By combining all these individual refrigeration systems into one remotely located system, business owners can remove the heat and reduce their air conditioning load. Remote systems, typically roof-mounted, also reduce inside noise level and extend the life of equipment.



Design Efficiency

Parallel-Compressor Outdoor Condensing Unit is composed of one INVERTER Panasonic scroll compressor and one FIXED SPEED Panasonic scroll compressor to handle the refrigeration load from individual pieces of equipment. The minimum refrigeration load can reach 30% of the INVERTER Panasonic scroll compressor.

Installation Efficiency

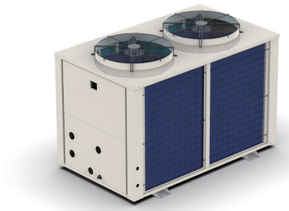
With conventional remote refrigeration systems, each roof mounted condensing unit requires a hole through the roof so that refrigerant piping can be run to the equipment. The more remote systems you have, the more holes you have in your roof. With an Parallel-Compressor Outdoor Condensing Unit , you have one hole only. This single roof penetration point reduces installation costs and chances of roof leakage.

Parallel-Compressor Condensing Unit Are Used In Many Places

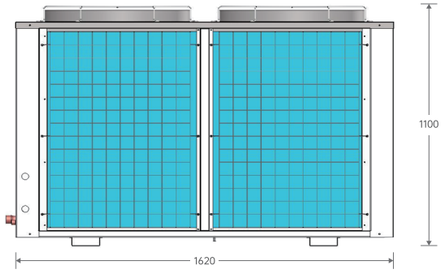
Parallel-Compressor Outdoor Condensing Unit

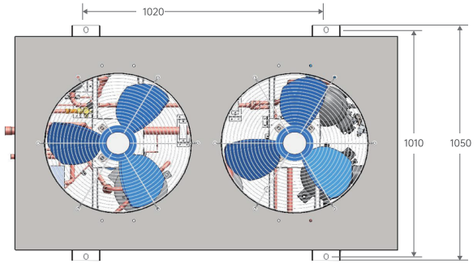
R448A R449A R404A

High-Medium-Low temperature
Three phase 380V/50Hz



Model		GL-BSN12FL	GL-BSN140FL	GL-BSN160FL	GL-BSN180FL
Horsepower(HP)		12 HP	14 HP	16 HP	18 HP
Power supply		Three phase 380V/50Hz			
Evap.temp. range(℃)		-30℃~10℃			
Ambient temperature(℃)		0~40℃			
Refrigerant		R404A			
Compressor	Type	Variable speed	Variable speed	Variable speed	Variable speed
	Model	3CB084ZA0M	3CB084ZA0M	3CB084ZA0M	3CB084ZA0M
	Type	Fixed speed	Fixed speed	Fixed speed	Fixed speed
	Model	C-SBN303L8A	C-SBN453L8A	3CC137SA03	3CC171SA03
Pressure controller		High pressure: Fixed Low pressure: Adjustable			
Fan motor	Fan QTY (PCS)	2	2	2	2
	Power supply	Single phase 220V/50Hz			
	Input power (W)	280W*2	280W*2	280W*2	280W*2
Pipe (mm/in)	Suction inlet OD	34.93(1-3/8")			
	Liquid outlet OD	19.05(3/4")			
Refrigeration capacity	Evap. temp.(℃)	Refrigeration capacity: W Ambient temp.: 32℃			
	-30℃	11860	13330	15360	17020
	-20℃	17630	19820	22390	25310
	-15℃	21220	24020	26880	30720
	-10℃	25450	29130	32280	37300
	-5℃	30755	35675	39115	45645
	0℃	36060	42220	46020	53990
Product dimension (mm)L*W*H	Length	1620			
	Width	1050			
	Height	1100			
Install dimension (mm) Hole- L*W		1020*1010			



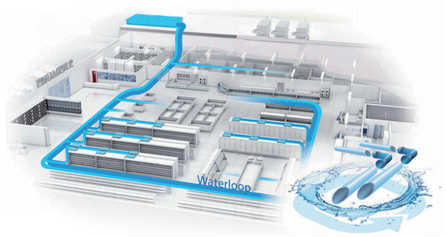


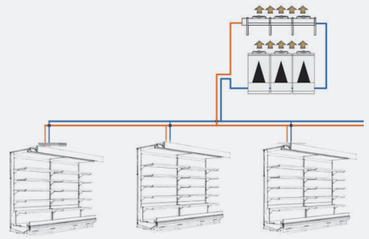
High Efficiency Water-Cooled Condensing Unit

Glen Refrigeration offers R290 Water-Cooled Condensing Unit for positive and negative temperature refrigeration, designed for quiet and high efficiency operation, that replaces the traditional layout of compressor racks and long refrigerant distribution lines. Condensation by a water circuit, the heat is carried by the water loop out of the system and rejected by a dry cooler typically placed on the roof. Synergic operation of DC inverter compressor and electronic expansion valve using intelligent control system brings exceptional results in terms of energy efficiency and quality of products preservation. This solution can be connected to various refrigeration equipment like multidecks, semi verticals, serve-over counters, freezer cabinets and also cold rooms.

Water-Loop System

- Inverter DC compressor combined water cooled condenser, consumes less power and has a higher efficiency.
- Installation efficiency due to simplicity of water loop.
- Easy layout change with simple disconnection of water pipes from refrigerated cabinets.
- Wider sales area as there is no more need for a Machinery room for compressor racks.
- High investment recovery in case of store relocation.
- Gas leak reduction due to lower system charge and isolation.

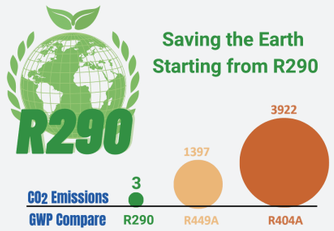




Benefits

- Constant product temperature.
- Reduced energy consumption.
- Reliability increase for factory assembled unit.
- Limited damages in case of failures.
- Easy adaptation to every climate.

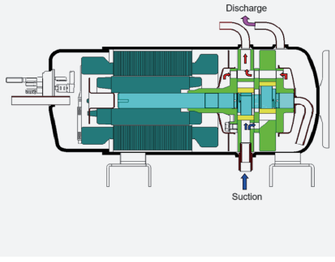
Product Features



Environmental Respect

The models of the R290 range water cooled condensing unit characterized by climate-friendly and less refrigerant charge.

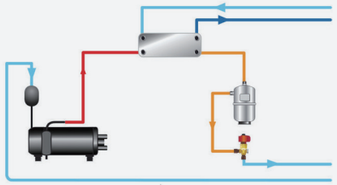
- R290 Refrigerant
- Overall charge reduction - 80%.
- No more long refrigerant pipes.
- Only small and compact refrigerant systems.
- Overall leaks reduction - 85%.
- Limited charge on units.



High Reliability

Pursuing the objectives of longer life and high reliability, the compressor we used is famous brand Sanyo refrigeration compressor.

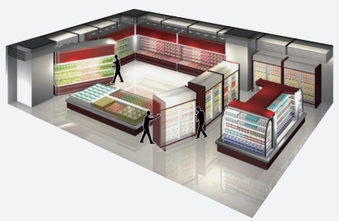
- Sanyo rotary refrigeration compressor with reputation for outstanding reliability.
- Water cooled condenser offers a lower condensing temperature, good to compressor.
- Simple installation and maintenance, don't require welding in the field.



Energy Efficiency

Guarantees the best operating conditions for each independent unit, yielding up to 25% energy savings in comparison to other systems.

- Sanyo DC inverter compressor with the intelligent inverter and control
- Individual control of suction and discharge pressure.
- Lowest pressure difference due to the wide modulation range.
- Reduced compressor cycling.



Flexibility

The self-contained water-cooled condensing unit offers a great advantage-maximum flexibility in items of moving or modification.

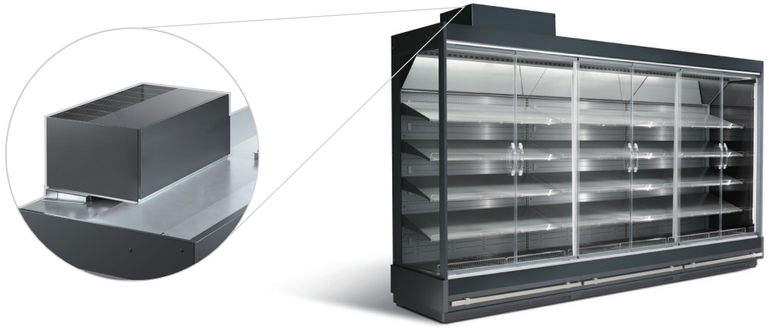
- Easy layout change. Possibility to easily move cabinets inside the Supermarket.
- Flexible sales area. Easy installation or de-installation of new/promotional cabinets.
- Critical components fully contained within cabinet.
- No plant room required.

Inverter Water Cooled Condensing Unit (Low Profile)

R448A R449A R404A

Medium-Low temperature
Single phase 220V/50Hz or 220V/60Hz

Model		GL-BHSN10EL-SL	GL-BHSN20FL-SL	GL-BHSN30EL-SL
Horsepower (HP)		1 HP	2 HP	3 HP
Power supply		Single phase 220V/50Hz or 220V/60Hz		
Evap. temp. range (°C)		-40~-5°C		
Ambient temperature (°C)		-7~43°C		
Compressor model		C-7RHVN63L0B	C-7RHVN113L0B	C-7RHVN153L0B
Refrigerant		R404A, R448A, R449A		
Speed range		30~80Hz		
Max run current (A)		4	9	13
Water pipe	Water inlet OD	3/4" External Thread		
	Water outlet OD	3/4" External Thread		
Refrigerant pipe	Gas inlet OD	Φ12.7 (1/2")		
	Liquid outlet OD	Φ9.52 (3/8")		
Our dimension	L*W*H (mm)	850*425*385		
Installation pitch of holes		φ8-830*365		
Refrigeration capacity	Evap. temp.(°C)	Refrigeration capacity: W Ambient temp.:32°C Speed:80Hz		
	-40°C	920	1380	1670
	-35°C	1150	1750	2140
	-30°C	1420	2080	2715
	-25°C	1550	2550	3420
	-20°C	1780	3000	4070
	-15°C	2150	3400	4680
	-10°C	2850	4050	5700
	-5°C	3015	4860	6680



Non-Inverter Water Cooled Condensing Unit (Low Profile)

R448A R449A R404A

Medium-Low temperature
Single phase 220V/50Hz

Model		GL-HSN10EL-SL	GL-HSN15EL-SL	GL-HSN20EL-SL	GL-HSN25EL-SL	GL-HSN30EL-SL
Horsepower (HP)		1 HP	1.5 HP	2 HP	2.5 HP	3 HP
Power supply		220V/50Hz				
Evap. temp. range (°C)		-40~-5°C				
Ambient temp. (°C)		-7~43°C				
Refrigerant max.(KG)		R404A(1.2)	R404A(1.4)	R404A(3.0)	R404A(3.0)	R404A(3.0)
Start-up current (A)		27	37	50	53	60
Max. running current (A)		4	5	8	9	12
Pressure controller		High & Low pressure switch				
Water pipe	Inlet OD	3/4" External Thread				
	Outlet OD	3/4" External Thread				
Refrigerant pipe	Inlet OD	12.7 (1/2")				
	Outlet OD	9.52 (3/8")				
External dimension	Length(mm)	850	850	850	850	850
	Width(mm)	425	425	425	425	425
	Height(mm)	340	340	340	340	340
Installation pitch of holes		Φ8-830*365				
Refrigeration capacity	Evap. Temp.(°C)	Refrigeration capacity: W Ambient temp.:32°C				
	-40°C	635	840	1260	1405	1620
	-35°C	825	1090	1580	1760	2080
	-30°C	955	1190	1890	2110	2630
	-25°C	1210	1545	2310	2575	3320
	-20°C	1440	1865	2730	3040	3955
	-15°C	1710	2100	3095	3450	4540
	-10°C	2070	2426	3680	4100	5485
	-5°C	2370	2790	4100	4570	6485
Wiring capacity	Leakage protector	Rated current (A)	10	15	25	25	30
		Leak current (mA)	30	30	30	30	30
	Diameter (mm^2)	In 10m	2.0	2.0	4.0	4.0	4.0
		In 20m	2.0	3.5	6.0	6.0	6.0
		In 30m	3.5	3.5	6.0	6.0	8.0

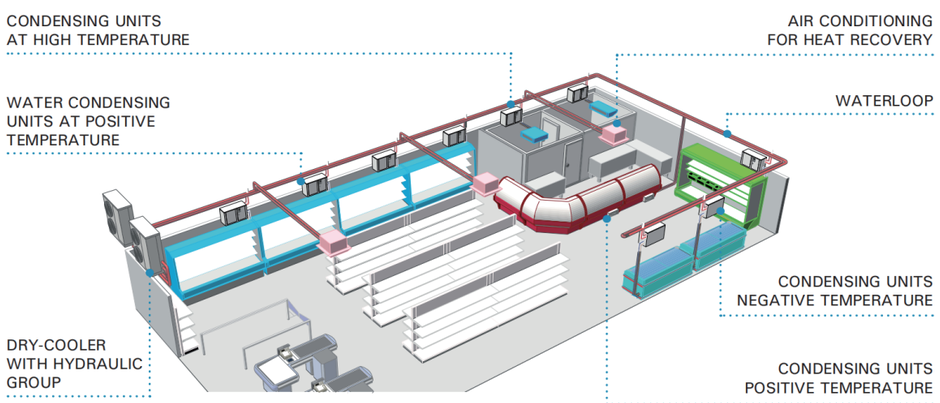
Note: Single phase 220V/60Hz water cooled condensing units are available.

Inverter Water Cooled Condensing Unit

R448A R449A R404A

Medium-Low temperature
Single phase 220V or three phase 380V

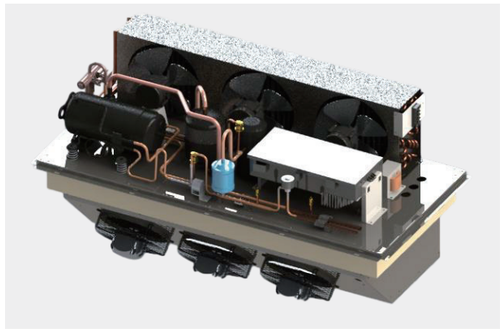
Model		GL-BSN30EL-SL	GL-BSN40FL-SL	GL-BSN50FL-SL	GL-BSN60FL-SL	GL-BSN70FL-SL	GL-BSN80FL-SL	GL-BRN100FL-SL
Horsepower (HP)		3 HP	4 HP	5 HP	6 HP	7 HP	8 HP	10 HP
Power supply		Single phase 220V	Three phase 380V					
Evap. Temp. Range (°C)		-40~-5°C						
Ambient temp. (°C)		-7~43°C						
Refrigerant		R404A, R448A, R449A						
Speed range		30~80Hz	30-90Hz					
Max run current (A)		12	12	14	16	16	18	20
Water pipe	Water inlet OD	3/4"	1-1/4"(DN32)					
	Water outet OD	3/4"	1-1/4"(DN32)					
Refrigerant pipe	Gas inlet OD	Φ12.7(1/2")	Φ15.88(5/8")	19.05(3/4")			Φ22.7(7/8")	
	Liquid outlet OD	Φ9.52(3/8")	Φ9.52(3/8")	12.7(1/2")			Φ15.88(5/8")	
External dimnesion	L*W*H (mm)	975*420*680						
Installation pitch of holes		ϕ12-530*380						
Refrigeration capacity	Evap.Temp. (°C)	Refrigeration capacity: W Ambient temp.:32°C Speed:80Hz						
	-40°C	1670	2466	2802	3082	3110	3649	4147
	-30°C	2970	3799	4317	4748	5391	6326	7189
	-20°C	4362	5912	6719	7390	8394	9849	11193
	-10°C	5969	8804	10005	11005	12236	14357	16315



R290 Monoblock Refrigeration Unit

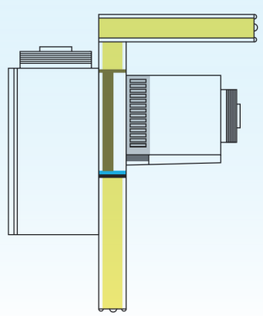
The future in refrigeration is natural refrigerants.

Monoblock Refrigeration Units with propane are already indispensable in the refrigeration industry. In Europe, all newly installed plug-in-ready refrigerated cabinets in supermarkets are cooled with the natural refrigerant propane. There are no significant alternatives that can compete with hydrocarbons in terms of efficiency and environmental protection. This is unlikely to change in the future. And also for cold rooms and their small condensing units. Propane is the refrigerant of your choice if you emphasize with the environment and energy efficiency.



The monoblock refrigeration system is a type of refrigeration system that integrates multiple components, including the compressor, condenser, and evaporator, into a single unit. This advanced system combines cutting-edge technology with exceptional performance to deliver efficient and reliable refrigeration. With a powerful cooling capacity, it ensures rapid and consistent temperature control.

It comes already pre-assembled and attached to a cold room panel. One part, the evaporator, is attached to the inner site of the panel. Outside, there is the condenser, compressor and all other electric parts. The unit is pre-tested, pre-charged and ready to go. This makes it very easy and fast for installation.



- Pre-charged with refrigerant
- Quick and easy installation
- Sanyo DC inverter compressor
- Electronic expansion valve
- Automatic defrosting by hot gas
- MT and LT cold rooms possible
- Power supply 220V/50Hz or 220V/60Hz
- Natural refrigerant R290

Wall Mount Monoblock Refrigeration Unit

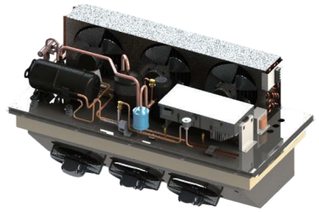
R448A R449A R404A

Medium-Low temperature
Single phase 220V/50Hz or 220V/60Hz

Model		GL-BYTCN10EL	GL-BYTCN20EL	GL-BYTCN30EL	GL-BYTCN40EL
Horsepower (HP)		1 HP	2 HP	3 HP	4 HP
Power supply		Single phase 220V/50Hz or 220V/60Hz			
Evap. Temp. Range (°C)		-40~-5°C			
Ambient Temp. (°C)		-7~43°C			
Refrigerant		R404A, R448A, R449A			
Max. run current (A)		5	9	13	18
Rated input power		780	1550	2260	3200
Compressor		Sanyo inverter compressor			
		C-6RVN63L0B	C-7RVN113L0B	C-7RVN153L0B	C-RZ420L4BAL
Speed range		30~80Hz			
Defrost		Hot gas defrost			
Pressure control		High pressure switch/Low pressure switch			
Condenser fan motor	Power (W)	120	150	120	150
	QTY (PCS)	1	1	2	2
Evaporator fan motor	Power (W)	80	120	80	120
	QTY (PCS)	1	1	2	2
External dimension	Length ±3 (mm)	600	720	925	1025
	Width ±3(mm)	710	890	890	980
	Height ±3 (mm)	710	825	825	950
Net weight (KGS)		71 KG	82 KG	105 KG	150 KG
Refrigeration capacity	Evap. Temp.(°C)	Refrigeration capacity: W Ambient temp.: 32°C Speed: 70Hz			
	-35°C	760	1520	2050	2840
	-25°C	820	2300	3230	4050
	-15°C	1560	3050	4350	5800
	-5°C	2250	4280	6850	9100

Top Mount Monoblock Refrigeration Unit

R448A R449A R404A



Medium-Low temperature
Single phase 220V/50Hz or 220V/60Hz

Model		GL-BYTDN10EL	GL-BYTDN20EL	GL-BYTDN30EL
Horsepower (HP)		1 HP	2 HP	3 HP
Power supply		Single phase 220V/50Hz or 220V/60Hz		
Evap. Temp. Range (°C)		-40~-5°C		
Ambient Temp. (°C)		-7~43°C		
Refrigerant		R404A, R448A, R449A		
Max. run current (A)		5	9	13
Rated input power		780	1550	2260
Compressor		Sanyo inverter compressor		
		C-6RHVN63L0B	C-7RHVN113L0B	C-7RHVN153L0B
Speed range		30~80Hz		
Defrost		Hot gas defrost		
Pressure control		High pressure switch/Low pressure switch		
Condenser fan motor	Power (W)	23	23	23
	QTY (PCS)	2	3	3
Evaporator fan motor	Power (W)	36	36	36
	QTY (PCS)	2	2	3
External dimension	Length ±3 (mm)	937	1187	1347
	Width ±3(mm)	522	577	607
	Height ±3 (mm)	590	590	590
Refrigeration capacity	Evap. Temp.(°C)	Refrigeration capacity: W Ambient temp: 32°C Speed: 70Hz		
	-35°C	760	1520	2050
	-25°C	820	2300	3230
	-15°C	1560	3050	4350
	-5°C	2250	4280	6850

Hot Gas Defrost System

The advanced hot gas defrost system

Introducing Glen Refrigeration's Hot Gas Defrost System, combines an optimized mechanical hot gas defrost system with today's proven technology to provide the best solution to your needs, dependable performance, increased productivity, protection for your perishable investment and the peace of mind to continue running your business at its most profitable level.

Glen Refrigeration's Hot Gas Defrost Systems are divided into two series. One is for cooling only; the other is for heating and cooling. They are designed for simplicity and optimal performance in agricultural, processing cooling, cold storage, and warehouse application.

The Hot Gas Defrost System with heating function widely uses in fruit ripening chamber, mushroom growing room, maintain the temperature of fruits and vegetables in winter.

About Hot Gas Defrost

Hot gas defrost is the energy-efficient alternative to electric defrost refrigeration systems. Hot gas defrost systems work by routing hot compressor discharge gas through the outlet of the evaporator, thawing any accumulated defrost. This gas then condenses back into a liquid and flows back into a common liquid line. Evaporator coil heaters do not energize, defrost times are significantly reduced and product temperature stay more stable.

Hot Gas Defrost vs. Electric Defrost

ELECTRIC DEFROST vs. HOT GAS DEFROST		
Number of defrost	4@40 minites/day	4@10 minites/day
Steaming	Steaming is produced by excessive heat generated by coil heaters	Limited steaming is created because of the efficienct use of hot gas as well as shorter defrost times
Overall investment	Lower initial investment Higher monthly energy bills Higher labor cost	Slightly higher initial investment Lower monthly energy bills Lower labor cost
Run time	18 hours	22 hours
Average box temperature rise	15-20°F	2-3°F

Hot Gas Defrost Benefits

Dependable Performance

Glen Refrigeration's Hot Gas Defrost Systems provide a fast and efficient defrost performance alternative over comparable electric defrost systems, thus it can help end users to save more money.

Tremendous Energy Savings

Hot gas defrost systems can save thousands of dollars more than electric defrost per year. The Hot Gas Defrost Refrigeration System can save you more money and energy with intelligent defrost management.

Enhanced Product Integrity

Because of shorter defrost cycles, the box temperature remains more stable, resulting in consistent product temperatures.

Hot Gas Defrost Refrigeration System (Cooling only)

Hot Gas Defrost Refrigeration System (Heating and Cooling)

Application Cases

Hot Gas Defrost Condensing Unit and Evaporator

Hot Gas Defrost * Sanyo Compressor — Medium-Low Temperature

Horsepower	Power supply	Condensing unit		Match evaporator model
		Model	Compressor	
2.5 HP	Single phase 220V/50Hz	GL-SN25EL-R	C-3RV359L4AAL	GL-DD30-302E-R
3 HP	Single phase 220V/50Hz	GL-SN30EL-R	C-3R463L4AA	GL-DD40-302E-R
2.5 HP	3 phase 380V/50Hz	GL-SN25FL-R	C-3RP359L4AAL	GL-SD30-401F-R
3 HP	3 phase 380V/50Hz	GL-SN30FL-R	C-3RP547L4AAL	GL-SD40-401F-R

Note: Please refer to the parameters of Sanyo compressor outdoor condensing units.

Hot Gas Defrost * Panasonic Scroll Compressor — Medium-Low Temperature

Horsepower	Power supply	Condensing unit		Match evaporator model
		Model	Compressor	
4 HP	3 phase 380V/50Hz	GL-SN40FL-R	C-SBN303L8A	GL-DD50-352F-R
5 HP	3 phase 380V/50Hz	GL-SN50FL-R	C-SBN373L8A	GL-DD60-402F-R
6 HP	3 phase 380V/50Hz	GL-SN60FL-R	C-SBN453L8A	GL-DD70-402F-R
8 HP	3 phase 380V/50Hz	GL-SN80FL-R	3CC137SA03	GL-DD100-403F-R
10 HP	3 phase 380V/50Hz	GL-SN100FL-R	3CC171SA03	GL-DD120-453F-R
12.5 HP	3 phase 380V/50Hz	GL-SN125FL-R	3CC216SA03	GL-DD150-503F-R

Note: Please refer to the parameters of Panasonic scroll compressor outdoor condensing units.

Hot Gas Defrost * Emerson Scroll Compressor (ZF Series) — Medium-Low Temperature

Horsepower	Power supply	Condensing unit		Match evaporator model
		Model	Compressor	
3 HP	3 phase 380V/50Hz	GL-GN30FLF-R	ZF09KQE	GL-DD40-302F-R
4 HP	3 phase 380V/50Hz	GL-GN40FLF-R	ZF13KQE	GL-DD50-352F-R
5 HP	3 phase 380V/50Hz	GL-GN50FLF-R	ZF15KQE	GL-DD60-402F-R
6 HP	3 phase 380V/50Hz	GL-GN60FLF-R	ZF18KQE	GL-DD70-402F-R
7 HP	3 phase 380V/50Hz	GL-GN70FLF-R	ZF25KQE	GL-DD80-452F-R
8 HP	3 phase 380V/50Hz	GL-GN80FLF-R	ZF28KQE	GL-DD100-403F-R
10 HP	3 phase 380V/50Hz	GL-GN100FLF-R	ZF34KQE	GL-DD120-453F-R
12 HP	3 phase 380V/50Hz	GL-GN120FLF-R	ZF41KQE	GL-DD150-503F-R
15 HP	3 phase 380V/50Hz	GL-GN150FLF-R	ZF49KQE	GL-DD180-504F-R

Note: Please refer to the parameters of Emerson scroll compressor (ZF series) outdoor condensing units.

Hot Gas Defrost * Emerson Scroll Compressor (ZB Series) — High-Medium Temperature

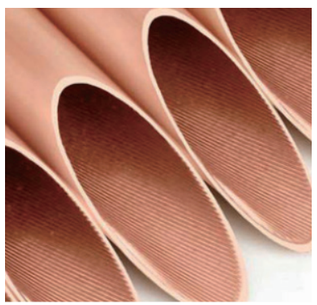
Horsepower	Power supply	Condensing unit		Match evaporator model
		Model	Compressor	
2 HP	Single phase 220V/50Hz	GL-GN20EM-R	ZB15KQE	GL-DD30-302E-R
3 HP	Single phase 220V/50Hz	GL-GN30EM-R	ZB21KQE	GL-DD40-302E-R
4 HP	3 phase 380V/50Hz	GL-GN40FM-R	ZB29KQE	GL-DD50-352F-R
5 HP	3 phase 380V/50Hz	GL-GN50FM-R	ZB38KQE	GL-DD60-402F-R
6 HP	3 phase 380V/50Hz	GL-GN60FM-R	ZB45KQE	GL-DD70-402F-R
7 HP	3 phase 380V/50Hz	GL-GN70FM-R	ZB48KQE	GL-DD80-452F-R
8 HP	3 phase 380V/50Hz	GL-GN80FM-R	ZB58KQE	GL-DD100-403F-R
10 HP	3 phase 380V/50Hz	GL-GN100FM-R	ZB76KQE	GL-DD120-453F-R
13 HP	3 phase 380V/50Hz	GL-GN130FM-R	ZB95KQE	GL-DD150-503F-R
15 HP	3 phase 380V/50Hz	GL-GN150FM-R	ZB114KQE	GL-DD180-504F-R

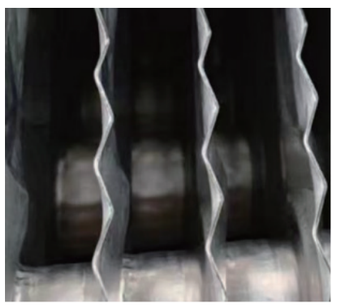
Note: Please refer to the parameters of Emerson scroll compressor (ZB series) outdoor condensing units.

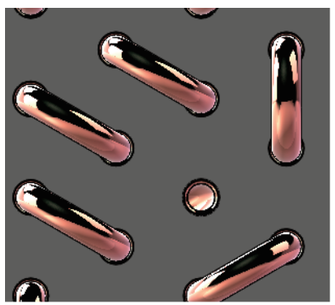
Cold Room Evaporator

Product Features

- The evaporator pipeline is designed according to fork-shaped structure, ensuring the higher heat transfer efficiency, using the forced draught air flow for better air distribution.
- The evaporator adopts inner grooved copper tube, increasing the internal coil surface, having a low oil film coefficient thus providing higher efficiency and capacity.
- Fins are produced from high-grade aluminum, with double sine wave pattern and rippled fin edges to provide higher heat transfer efficiency.
- The evaporator casing comes in high quality with spraying process, which is corrosion-resistant.
- Fan motors used in all the models are high quality EBM and WEIGUANG motors, fitted with thermistor motor protection. Fan motors are of the highest quality offered in the industry ensuring long life and durability for both high and low temperature application.
- The defrosting heating tube is made of stainless steel and filled with magnesium oxide, which is divided into fin defrosting and water pan defrosting, optimizing the defrosting position, fast defrosting speed, high efficiency, and small temperature rise in the storage room.



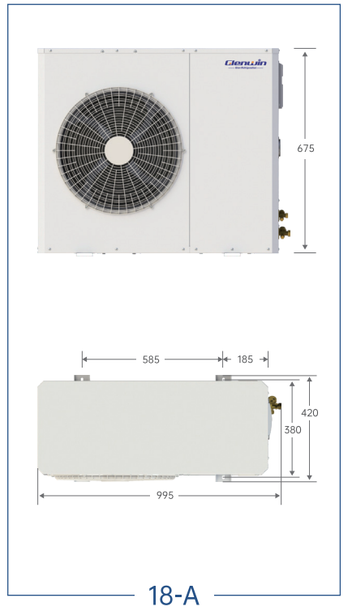




Cold Room Evaporator

Product series	Model	Capacity	Fan motor parameter				Heater parameter		Air blowing distance
		DT=7K	Air flow	Voltage	Diameter	QTY	Voltage	Input power	
		KW	m^3/h	V	Φmm	PCS	V	W	m
S series with single fan	GL-DD15-301E	2.3KW	1200	220V	300	1	220V	1700	6
	GL-SD30-401F	4KW	3500	380V	400	1	220V	1700	10
	GL-SD40-401F	5KW	3500	380V	400	1	220V	2620	10
	GL-SD60-451F	8KW	6000	380V	400	1	220V	4000	12
D series with multi-fan	GL-DD30-302E	3.5KW	2400	220V	300	2	220V	2460	7
	GL-DJ30-302E	2.4KW		220V	300	2	220V	2460	
	GL-DD40-302E	4.5KW	2400	220V	300	2	220V	2940	7
	GL-DJ40-302E	2.7KW		220V	300	2	220V	2940	
	GL-DD50-352E/F	6KW	4200	220V/380V	350	2	220V	4500	9
	GL-DJ50-352E/F	4.2KW		220V/380V	350	2	220V	4500	
	GL-DD60-402F	8KW	6000	380V	400	2	220V	5300	12
	GL-DJ60-402F	6KW		380V	400	2	220V	5300	
	GL-DD70-402F	8.5KW	6000	380V	400	2	220V	6600	12
	GL-DJ70-402F	6.5KW		380V	400	2	220V	6600	
	GL-DD80-452F	10KW	10800	380V	450	2	220V	6600	14
	GL-DJ80-452F	7KW		380V	450	3	220V	6600	
	GL-DD100-403F	12.5KW	11800	380V	400	3	220V	7900	14
	GL-DJ100-403F	8.5KW		380V	400	3	220V	7900	
	GL-DD120-453F	15.5KW	16200	380V	450	3	220V	9700	15
	GL-DJ120-453F	11.5KW		380V	450	3	220V	9700	
	GL-DD150-503F	17.5KW	18000	380V	500	3	220V	9700	17
	GL-DJ150-503F	13KW		380V	500	3	220V	9700	
	GL-DD180-504F	22.5KW	24000	380V	500	4	220V	11500	18
	GL-DJ180-504F	16KW		380V	500	4	220V	11500	
	GL-DD200-504F	27.5KW	32000	380V	500	4	220V	11500	19
	GL-DJ200-504F	17.8KW		380V	500	4	220V	11500	
D series with long air throw	GL-DD150-503FT	17.5KW	18000	380V	500	3	220V	9700	20
	GL-DJ150-503FT	13KW		380V	500	3	220V	9700	
	GL-DD180-504FT	22.5KW	24000	380V	500	4	220V	11500	22
	GL-DJ180-504FT	16KW		380V	500	4	220V	11500	

Technical Drawings



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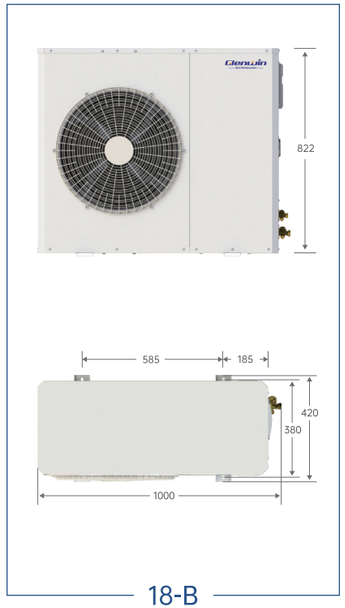
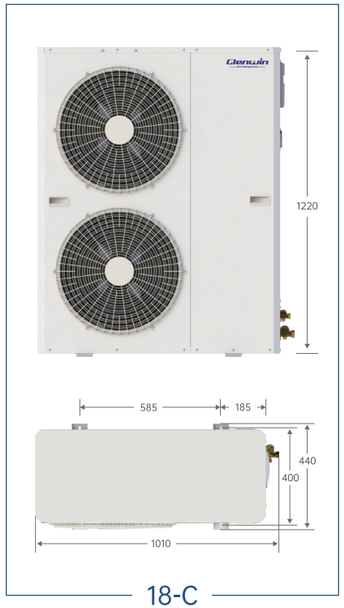
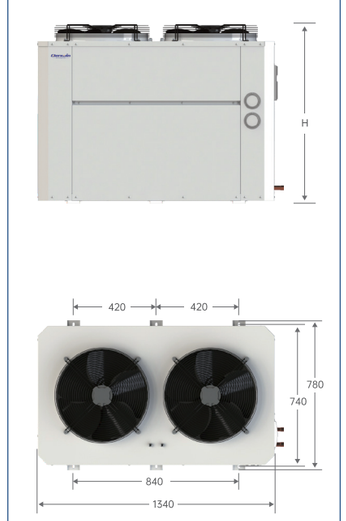


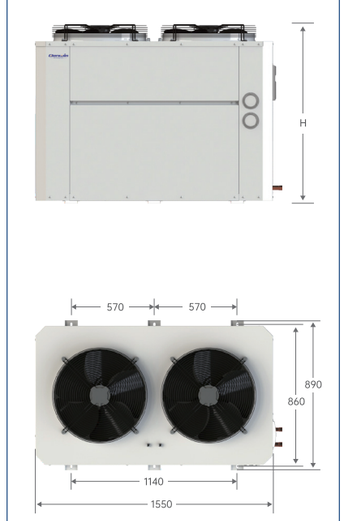
18-B



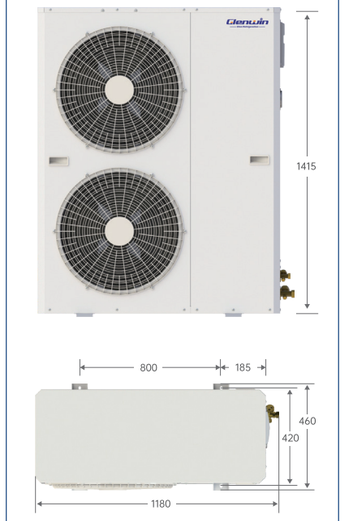
18-C



18-E



18-F



18-D