ICD INVERTER

Intercold

Step-less Regulation

in a high efficiency **integrated** Unit

Highest quality DC inverter condensing units Reduces energy consumption up to

30%

www.intercold.eu

Intercold
Refrigeration & Air Conditioning

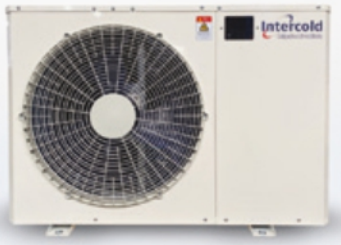
Contents

Intercold

HFC INVERTER CONDENSING UNITS

CONDENSING UNITS

Multi DC Inverter / 10-18 HP



DC Inverter / 1-4HP

DC Inverter /4-10HP

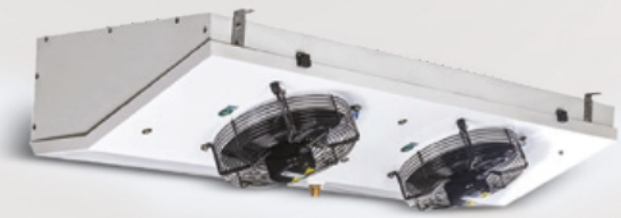
Horizontal DC Inverter

MONOBLOCK INVERTER

Wall Mounted

Top Mounted

EVAPORATOR



Slim Type

Dual Slim Type

CUBE TYPE EVAPORATOR

www.intercold.eu

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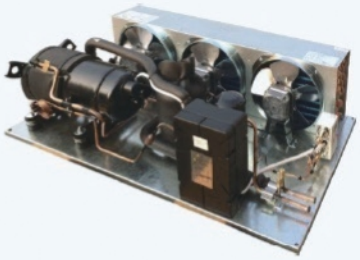
R290 Self-Contained Condensing Unit for Plug-in

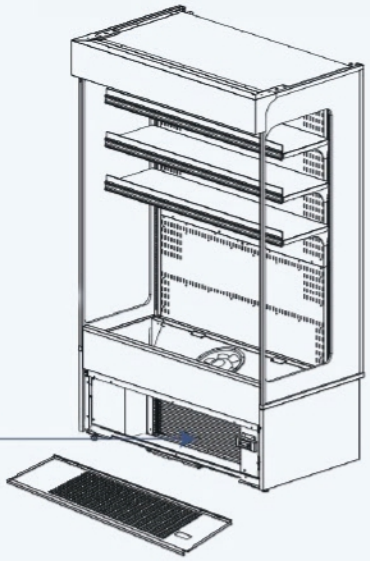
Intercold Refrigeration enlarges its R290 condensing units, including inverter and non-inverter, offering with Sanyo compressor, designed for medium and low temperature commercial refrigeration, well-suited for multidecks, semi verticals, serve-over counters, freezer cabinets, display cases, blast freezers, 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.

Synergic 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



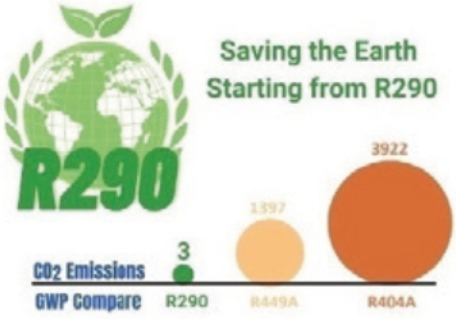
Non-Inverter R290 Condensing Unit

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

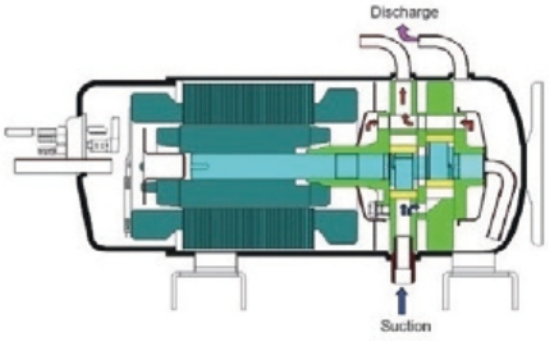
Inverter R290 Condensing Unit

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

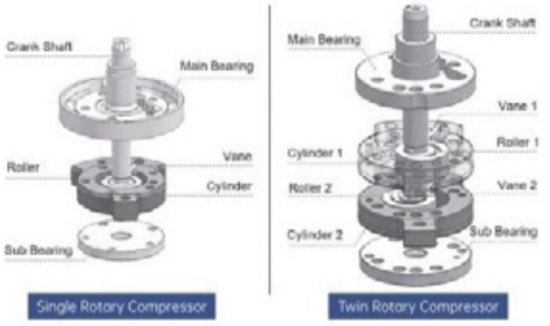
> Product Features



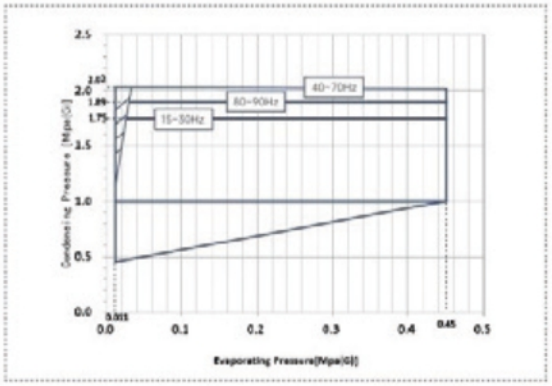
Self-contained condensing unit available in R290 natural refrigerant, ensures greatest benefits in terms of climate-friendly solution.



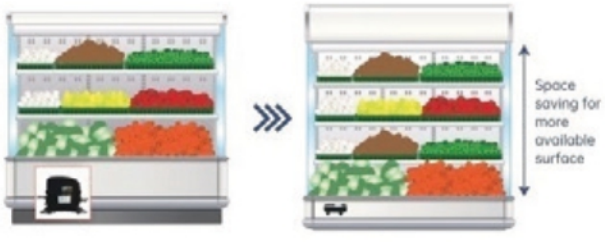
With their unique structure and long track record on the Japanese market, Sanyo rotary refrigeration compressors have a reputation for outstanding reliability.



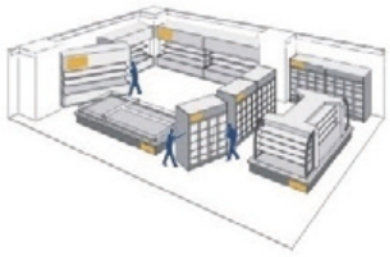
All rotating bodies generate vibrations when they rotate. But the vibration can be reduced by balancing of two rotor design during operation.



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.

Intercold
Refrigeration & Air Conditioning

Horizontal Condensing Unit

R290

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

Model			ICD-HSR7.5EL	ICD-HSR10EL	ICD-HSR15EL	ICD-HSR20EL
Horsepower (HP)			0.75HP	1HP	1.5HP	2HP
Power supply			Single phase 220V-240V/50Hz			
Evap. temp. range (℃)			-40~-5℃			
Ambient temp. range (℃)			-7~43℃			
Refrigerant			R290			
Start-up current (A)			23	24	41	56
Max. running current (A)			5	6	11	15
Condenser	Condenser style		Copper tube aluminum fin condenser			
	Fan motor	Output power*QTY	16W*2	16W*2	16W*2	16W*3
		Diameter (mm)*QTY	Φ230*2	Φ230*2	Φ230*2	Φ230*3
		Air flow (m^3/hr)	820*2	820*2	820*2	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
	Width (mm)		485	485	485	520
	Height (mm)		261	261	261	263
Installation dimension (L*W)			660*465	660*465	770*465	1030*520
Refrigeration capacity	Evap. temp.(℃)		Refrigeration capacity: W Ambient temp.:32℃			
	-40		455	572	756	1197
	-35		590	742	981	1501
	-30		729	860	1071	1795
	-25		878	1089	1390	2195
	-20		1071	1296	1678	2594
	-15		1287	1539	1890	2940
	-10		1616	1863	2183	3496
	-5		1922	2133	2511	3895
Wiring capacity	Diameter Leakage protector (mm^2)	Rated current (A)	10	10	15	25
		Leak current (mA)	30	30	30	30
		In10m	2.0	2.0	2.0	4.0
		In 20m	2.0	2.0	3.5	6.0
		In 30m	3.5	3.5	3.5	6.0

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

Inverter Horizontal Condensing Unit

R290

Medium-Low temperature
220V/50Hz and 220V/60Hz

Model		ICD-BHSR10EL			ICD-BHSR20EL			ICD-BHSR30EL		
Horsepower (HP)		1HP			2HP			3HP		
Power supply		Single phase 220V								
Evap. temp. range (°C)		-45~0°C								
Ambient temp. range (°C)		-7~43°C								
Refrigerant max. (KG)		R290								
Max working current(A)		7			11			16		
Condenser	Condenser type	Copper tube aluminum fin condenser								
	Fan motor output power (W) *QTY (PCS)	16*2			16*3			16*3		
	Fan diameter (mm)	∠34° ϕ 230								
	Air volume (m^3/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	378	594	828	621	936	1246	751	1125	1503
	-35	468	738	1035	787	1179	1575	963	1444	1926
	-30	576	945	1278	936	1404	1872	1221	1836	2443
	-25	630	990	1395	1147	1720	2295	1539	2308	3078
	-20	720	1152	1602	1350	2025	2700	1831	2745	3663
	-15	882	1404	1935	1530	2295	2700	2106	3159	4212
	-10	1138	1822	2565	1822	2736	3645	2565	3847	5130
	-5	1222	1947	2713	2187	3280	4374	3006	4509	6012

Intercold
Refrigeration & Air Conditioning

Horizontal Condensing Unit

R404A R448A R449A R454C R455A

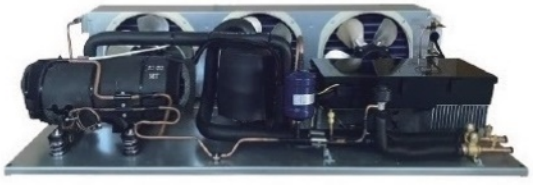
Medium-Low Temperature
Single phase 220V-240V/50Hz

Model			ICD-HSN7.5EL	ICD-HSN10EL	ICD-HSN15EL	ICD-HSN20EL	ICD-HSN25EL	ICD-HSN30EL
Horsepower (HP)			0.75HP	1HP	1.5HP	2HP	2.5HP	3HP
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. range (°C)			-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 (m^3/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 (mm^2)	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

R404A R448A R449A R454C R455A



Medium-Low temperature
Single phase 220V

Model		ICD-BHSN10EL			ICD-BHSN20EL			ICD-BHSN30EL		
Horsepower (HP)		1HP			2HP			3HP		
Power supply		Single phase 220V								
Evap. temp. range (°C)		-45~0°C								
Ambient temp. range (°C)		-7~43°C								
Refrigerant max. (KG)		R404A(3.0)								
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 (m^3/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.(°C)	Refrigeration capacity: W Ambient temp.:32°C								
		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

Intercold 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. Intercold Refrigeration produces outdoor condensing units ranging in cooling capacity from 1 HP to 30 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 Intercold 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

INTERCOLD REFRIGERATION, THE PARTNER FOR YOUR PROJECTS

INTERCOLD 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

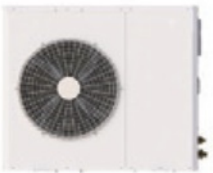
Restaurant cold rooms

Milk cooling and ice making equipment

Distribution center

Sanyo Compressor Outdoor Condensing Unit

R404A R448A R449A R454C R455A



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

Model		ICD-SN10EL	ICD-SN15EL	ICD-SN25EL	ICD-SN30EL	ICD-SN25FL	ICD-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 temp. range (°C)		-7~43°C					
Refrigerant		R404A, R448A, R449A					
Power supply		Single phase 220V/50Hz				Three phase 380V/50Hz	
Compressor	Type	Sanyo rotary refrigeration compressor					
	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

R404A R448A R449A R454C R455A

Medium-Low temperature
Three phase 380V/50Hz

Model		ICD-SN40FL	ICD-SN50FL	ICD-SN60FL	ICD-SN70FL	CD-SN80FL	ICD-SN100FL	ICD-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 temp. range (°C)		0~40°C						
Refrigerant		R404A						
Power supply		Three phase 380V/50Hz						
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			Φ12-(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

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

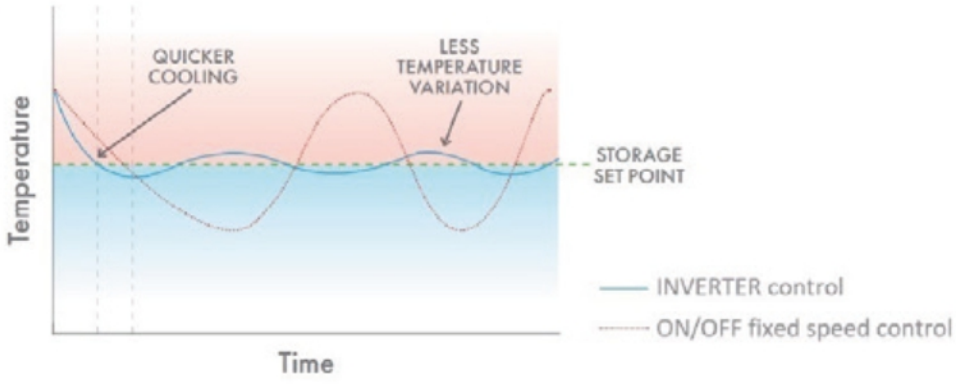
> Product Features

- 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

R404A R448A R449A R454C R455A

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

Model		ICD-BSN30EL	ICD-BSN40FL	ICD-BSN50FL	ICD-BRN60FL	ICD-BRN70FL	ICD-BSN80FL	ICD-BRN100FL
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)		-35~0°C						
Ambient temp. range (°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	
Refrigeration capacity	Evap. temp.(°C)	Refrigeration capacity: W Ambient temp.: 32°C Speed: 75Hz						
	-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.

> Parallel-Compressor Condensing Unit Are Used In Many Places

> 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

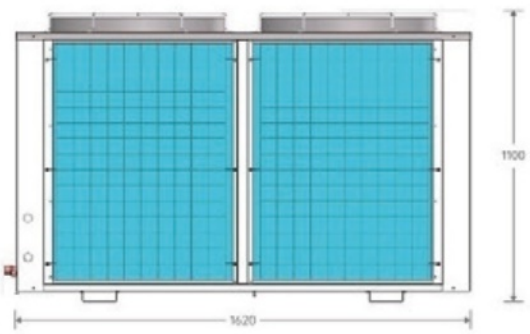
With conventional remote refrigeration systems, each roof mounted condensing unit requires a hole through the roof so that refrigerant piping can be run to the equipment. The more remote systems you have, the more holes you have in your roof. With an Parallel-Compressor Outdoor Condensing Unit , you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

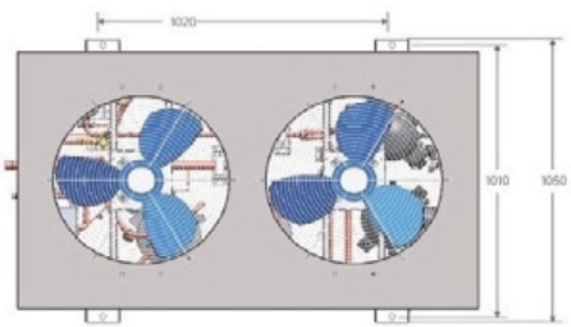
Parallel-Compressor Outdoor Condensing Unit

R404A R448A R449A R454C R455A

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

Model		ICD-BSN120FL	ICD-BSN140FL	ICD-BSN160FL	ICD-BSN180FL
Horsepower(HP)		12 HP	14 HP	16 HP	18 HP
Power supply		Three phase 380V/50Hz			
Evap.temp. range(℃)		-30℃~10℃			
Ambient temp. range (℃)		0~40℃			
Refrigerant		R404A			
Compressor	Type	Variable speed	Variable speed	Variable speed	Variable speed
	Type	Fixed speed	Fixed speed	Fixed speed	Fixed speed
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/inch)	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			



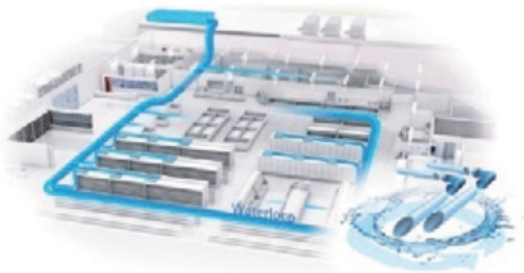


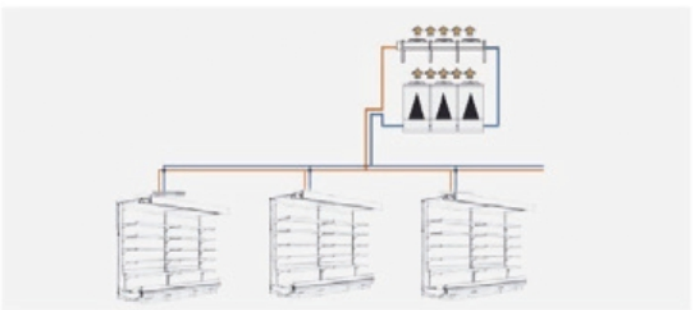
High Efficiency Water-Cooled Condensing Unit

Intercold 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

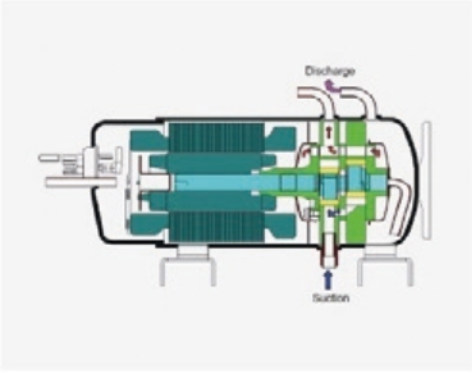
- Constant product temperature.
- Reduced energy consumption.
- Reliability increase for factory assembled unit.
- Limited damages in case of failures.
- Easy adaptation to every climate.

> Product Features

Environmental Respect

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

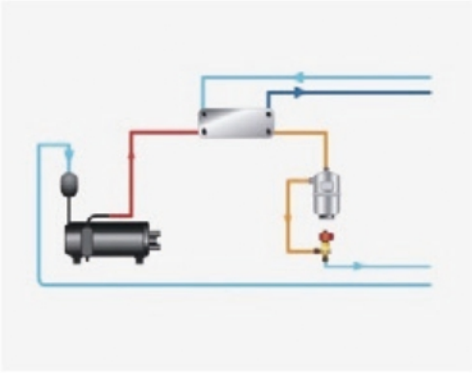
- R290 Refrigerant
- Overall charge reduction - 80%.
- No more long refrigerant pipes.
- Only small and compact refrigerant systems.
- Overall leaks reduction - 85%.
- Limited charge on units.



High Reliability

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

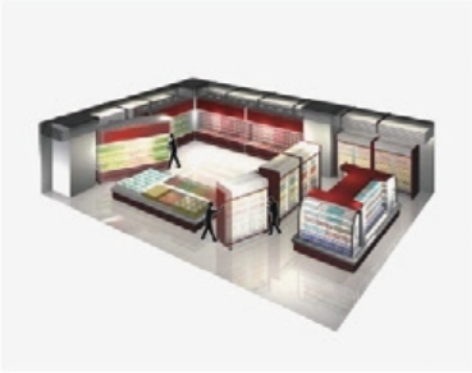
- Sanyo rotary refrigeration compressor with reputation for outstanding reliability.
- Water cooled condenser offers a lower condensing temperature, good to compressor.
- Simple installation and maintenance, don't require welding in the field.



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)

Medium-Low temperature
220V/50Hz and 220V/60Hz

Model		ICD-BHSR10EL-SL	ICD-BHSR20FL-SL	ICD-BHSR30EL-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 temp. range (°C)		-7~43°C		
Refrigerant		R290		
Speed range		30~80Hz		
Max run current (A)		7	11	16
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)	880*470*282		
Installation pitch of holes		Φ8-870*405		
Refrigeration capacity	Evap. temp.(°C)	Refrigeration capacity: W Ambient temp.:32°C Speed:80Hz		
	-40°C	828	1242	1503
	-35°C	1035	1575	1926
	-30°C	1278	1872	2443
	-25°C	1395	2295	3078
	-20°C	1602	2700	3663
	-15°C	1935	3060	4212
	-10°C	2565	3645	5130
	-5°C	2714	4374	6012

Non-Inverter Water Cooled Condensing Unit (Low Profile)

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

Model			ICD-HSR10EL-SL	ICD-HSR15EL-SL	ICD-HSR20EL-SL
Horsepower (HP)			1 HP	1.5 HP	2 HP
Power supply			220V/50Hz		
Evap. temp. range (°C)			-40~-5°C		
Ambient temp. range (°C)			-7~43°C		
Refrigerant max.(KG)			R290		
Start-up current (A)			24	41	56
Max. running current (A)			6	11	15
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)	880		
		Width(mm)	470		
		Height(mm)	282		
Installation pitch of holes			Φ8-830*365		
Refrigeration capacity	Evap. Temp.(°C)		Refrigeration capacity: W Ambient temp.:32°C		
	-40°C		571	756	1134
	-35°C		742	981	1422
	-30°C		859	1071	1701
	-25°C		1089	1390	2079
	-20°C		1296	1678	2457
	-15°C		1539	1890	2785
	-10°C		1863	2183	3312
	-5°C		2133	2511	3690
Wiring capacity	Leakage protector	Rated current (A)	10	15	25
		Leak current (mA)	30	30	30
	Diameter (mm^2)	In 10m	2.0	2.0	4.0
		In 20m	2.0	3.5	6.0
		In 30m	3.5	3.5	6.0

Inverter Water Cooled Condensing Unit (Low Profile)

R404A R448A R449A R454C R455A

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

Model		ICD-BHSN10EL-SL	ICD-BHSN20FL-SL	ICD-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 temp. range (°C)		-7~43°C		
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)	880*470*282		
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)

R404A R448A R449A R454C R455A

Medium-Low temperature
Single phase 220V/50Hz

Model			ICD-HSN10EL-SL	ICD-HSN15EL-SL	ICD-HSN20EL-SL	ICD-HSN25EL-SL	ICD-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. range (°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	880
		Width(mm)	425	425	425	425	470
		Height(mm)	340	340	340	340	282
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

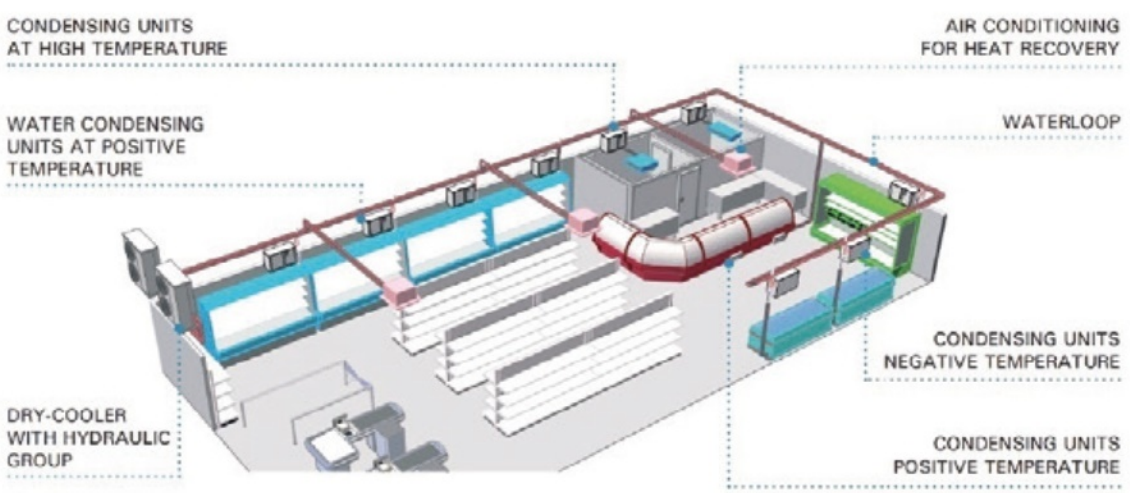
Note: Single phase 220V/60Hz water cooled condensing units are available.

Inverter Water Cooled Condensing Unit

R404A R448A R449A R454C R455A

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

Model		CD-BSN30EL-SL	CD-BSN40FL-SL	CD-BRN50FL-SL	CD-BRN60FL-SL	CD-BSN70FL-SL	CD-BSN80FL-SL	CD-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. range (°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



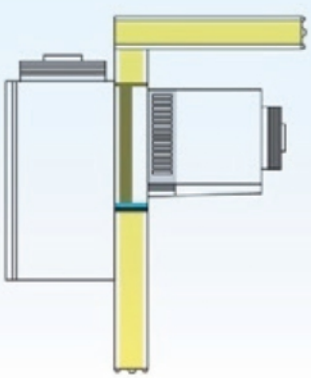
R290 Monoblock Refrigeration Unit

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

R404A R448A R449A R454C R455A

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

Model		ICD-BYTCN10EL	ICD-BYTCN20EL	ICD-BYTCN30EL	ICD-BYTCN40EL
Horsepower (HP)		1 HP	2 HP	3 HP	4 HP
Power supply		Single phase 220V/50Hz or 220V/60Hz			
Evap. Temp. Range (°C)		-35~-5°C			
Ambient temp. range (°C)		-7~43°C			
Refrigerant		R404A, R448A, R449A			
Max. run current (A)		5	9	13	18
Rated input power (W)		780	1550	2260	3200
Compressor		Sanyo inverter compressor			
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)	810	910	960	1030
	Height ±3 (mm)	710	920	950	950
Net weight (Kg)		71 KG	82 KG	105 KG	150 KG
Applicable volume	Cold room (2~8°C)	≤12m³	≤25m³	≤40m³	≤55m³
	Freezer room (-18°C)	≤7m³	≤15m³	≤25m³	≤35m³
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

Wall Mount Monoblock Refrigeration Unit

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

Model		ICD-BYTCR07EL	ICD-BYTCR10EL	ICD-BYTCR20EL	ICD-BYTCR30EL
Horsepower (HP)		0.7 HP	1 HP	2 HP	3 HP
Power supply		Single phase 220V/50Hz or 220V/60Hz			
Evap. Temp. Range (°C)		-35~-5°C			
Ambient temp. range (°C)		-7~43°C			
Refrigerant		R290			
Max. run current (A)		3	8	11	17
Rated input power (W)		540	680	1400	1980
Compressor		Sanyo inverter compressor			
Speed range		30~80Hz			
Defrost		Hot gas defrost			
Pressure control		High pressure switch/Low pressure switch			
Condenser fan motor	Power (W)	120	120	150	120
	QTY (PCS)	1	1	1	2
Evaporator fan motor	Power (W)	80	80	120	80
	QTY (PCS)	1	1	1	2
External dimension	Length ±3 (mm)	600	600	720	925
	Width ±3(mm)	810	810	910	960
	Height ±3 (mm)	710	710	920	950
Net weight (Kg)		69 Kg	69 Kg	80 Kg	100 Kg
Applicable volume	Cold room (2~8°C)	≤8m³	≤12m³	≤25m³	≤40m³
	Freezer room (-18°C)	≤4m³	≤7m³	≤15m³	≤25m³
Refrigeration capacity	Evap. Temp.(°C)	Refrigeration capacity: W Ambient temp.: 32°C Speed: 70Hz			
	-35°C	520	690	1410	1820
	-25°C	680	910	2100	2930
	-15°C	1180	1420	2760	4050
	-5°C	1500	2000	3890	6350

Top Mount Monoblock Refrigeration Unit

R404A R448A R449A R454C R455A

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

Model		ICD-BYTDN10EL	ICD-BYTDN20EL	ICD-BYTDN30EL
Horsepower (HP)		1 HP	2 HP	3 HP
Power supply		Single phase 220V/50Hz or 220V/60Hz		
Evap. Temp. Range (°C)		-35~-5°C		
Ambient temp. range (°C)		-7~43°C		
Refrigerant		R404A, R448A, R449A		
Max. run current (A)		5	9	13
Rated input power (W)		780	1550	2260
Compressor		Sanyo inverter compressor		
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	3	3
External dimension	Length ±3 (mm)	987	1187	1347
	Width ±3(mm)	522	577	607
	Height ±3 (mm)	590	590	590
Net weight (Kg)		71 KG	82 KG	105 KG
Applicable volume	Cold room (2~8°C)	≤12m³	≤25m³	≤40m³
	Freezer room (-18°C)	≤7m³	≤15m³	≤25m³
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

Top Mount Monoblock Refrigeration Unit

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

Model		ICD-BYTDR07EL	ICD-BYTDR10EL	ICD-BYTDR20EL	ICD-BYTDR30EL
Horsepower (HP)		0.7 HP	1 HP	2 HP	3 HP
Power supply		Single phase 220V/50Hz or 220V/60Hz			
Evap. Temp. Range (°C)		-35~-5°C			
Ambient temp. range (°C)		-7~43°C			
Refrigerant		R290			
Max. run current (A)		3	8	11	17
Rated input power (W)		540	680	1400	1980
Compressor		Sanyo inverter compressor			
Speed range		30~80Hz			
Defrost		Hot gas defrost			
Pressure control		High pressure switch/Low pressure switch			
Condenser fan motor	Power (W)	23	23	23	23
	QTY (PCS)	2	2	3	3
Evaporator fan motor	Power (W)	36	36	36	36
	QTY (PCS)	2	2	2	3
External dimension	Length ±3 (mm)	987	987	1187	1347
	Width ±3(mm)	522	522	577	607
	Height ±3 (mm)	590	590	590	590
Net weight (Kg)		69 KG	69 KG	80 KG	100 Kg
Applicable volume	Cold room (2~8°C)	≤8m³	≤12m³	≤25m³	≤40m³
	Freezer room (-18°C)	≤4m³	≤7m³	≤15m³	≤25m³
Refrigeration capacity	Evap. Temp.(°C)	Refrigeration capacity: W Ambient temp: 32°C Speed: 70Hz			
	-35°C	520	690	1410	1820
	-25°C	680	910	2100	2930
	-15°C	1180	1420	2760	4050
	-5°C	1500	2000	3890	6350

Top Mount Monoblock Refrigeration Unit

R404A R448A R449A R454C R455A

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

Model		ICD-BYTDDN10EL	ICD-BYTDDN20EL	ICD-BYTDDN30EL
Horsepower (HP)		1 HP	2 HP	3 HP
Power supply		Single phase 220V/50Hz or 220V/60Hz		
Evap. Temp. Range (°C)		-35~-5°C		
Ambient temp. range (°C)		-7~43°C		
Refrigerant		R404A		
Max. run current (A)		5	9	13
Rated input power (W)		780	1550	2260
Compressor		Sanyo inverter compressor		
Speed range		30~80Hz		
Defrost		Hot gas defrost		
Pressure control		High pressure switch/Low pressure switch		
Condenser fan motor	Power (W)	120	150	150
	QTY (PCS)	1	1	1
Evaporator fan motor	Power (W)	60	60	60
	QTY (PCS)	2	3	3
External dimension	Length ±3 (mm)	1190	1190	1190
	Width ±3(mm)	950	950	950
	Height ±3 (mm)	690	690	690
Net weight (Kg)		80 Kg	100 Kg	120 Kg
Applicable volume	Cold room (2~8°C)	≤12m³	≤25m³	≤40m³
	Freezer room (-18°C)	≤7m³	≤15m³	≤25m³
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

Top Mount Monoblock Refrigeration Unit

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

Model		ICD-BYTDDR07EL	ICD-BYTDDR10EL	ICD-BYTDDR20EL	ICD-BYTDDR30EL
Horsepower (HP)		0.7 HP	1 HP	2 HP	3 HP
Power supply		Single phase 220V/50Hz or 220V/60Hz			
Evap. Temp. Range (°C)		-35~-5°C			
Ambient temp. range (°C)		-7~43°C			
Refrigerant		R290			
Max. run current (A)		3	8	11	17
Rated input power (W)		540	680	1400	1980
Compressor		Sanyo inverter compressor			
Speed range		30~80Hz			
Defrost		Hot gas defrost			
Pressure control		High pressure switch/Low pressure switch			
Condenser fan motor	Power (W)	120	120	150	150
	QTY (PCS)	1	1	1	1
Evaporator fan motor	Power (W)	60	60	60	60
	QTY (PCS)	2	2	3	3
External dimension	Length ±3 (mm)	1190	1190	1190	1190
	Width ±3(mm)	950	950	950	950
	Height ±3 (mm)	690	690	690	690
Net weight (Kg)		80 Kg	80 Kg	100 Kg	120 Kg
Applicable volume	Cold room (2~8°C)	≤8m³	≤12m³	≤25m³	≤40m³
	Freezer room (-18°C)	≤4m³	≤7m³	≤15m³	≤25m³
Refrigeration capacity	Evap. Temp.(°C)	Refrigeration capacity: W Ambient temp: 32°C Speed: 70Hz			
	-35°C	520	690	1410	1820
	-25°C	680	910	2100	2930
	-15°C	1180	1420	2760	4050
	-5°C	1500	2000	3890	6350

Hot Gas Defrost System

The advanced hot gas defrost system

Introducing Intercold 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.

Intercold 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

Intercold 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 Model	Match evaporator model
2.5 HP	Single phase 220V/50Hz	ICD-SN25EL-R	IC-DD30-302E-R
3 HP	Single phase 220V/50Hz	ICD-SN30EL-R	IC-DD40-302E-R
2.5 HP	3 phase 380V/50Hz	ICD-SN25FL-R	IC-SD30-401F-R
3 HP	3 phase 380V/50Hz	ICD-SN30FL-R	IC-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 Model	Match evaporator model
4 HP	3 phase 380V/50Hz	ICD-SN40FL-R	IC-DD50-352F-R
5 HP	3 phase 380V/50Hz	ICD-SN50FL-R	IC-DD60-402F-R
6 HP	3 phase 380V/50Hz	ICD-SN60FL-R	IC-DD70-402F-R
8 HP	3 phase 380V/50Hz	ICD-SN80FL-R	IC-DD100-403F-R
10 HP	3 phase 380V/50Hz	ICD-SN100FL-R	IC-DD120-453F-R
12.5 HP	3 phase 380V/50Hz	ICD-SN125FL-R	IC-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 Model	Match evaporator model
3 HP	3 phase 380V/50Hz	ICD-GN30FLF-R	IC-DD50-352F-R
4 HP	3 phase 380V/50Hz	ICD-GN40FLF-R	IC-DD60-402F-R
5 HP	3 phase 380V/50Hz	ICD-GN50FLF-R	IC-DD70-402F-R
6 HP	3 phase 380V/50Hz	ICD-GN60FLF-R	IC-DD80-452F-R
7 HP	3 phase 380V/50Hz	ICD-GN70FLF-R	IC-DD100-403F-R
8 HP	3 phase 380V/50Hz	ICD-GN80FLF-R	IC-DD120-453F-R
10 HP	3 phase 380V/50Hz	ICD-GN100FLF-R	IC-DD150-503F-R
12 HP	3 phase 380V/50Hz	ICD-GN120FLF-R	IC-DD180-504F-R
15 HP	3 phase 380V/50Hz	ICD-GN150FLF-R	IC-DD220-504F-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

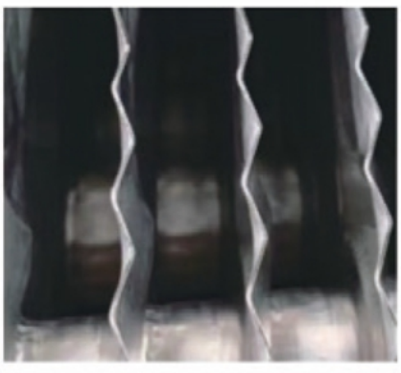
Horsepower	Power supply	Condensing unit Model	Match evaporator model
2 HP	Single phase 220V/50Hz	ICD-GN20EM-R	IC-DD30-302E-R
3 HP	Single phase 220V/50Hz	ICD-GN30EM-R	IC-DD40-302E-R
4 HP	3 phase 380V/50Hz	ICD-GN40FM-R	IC-DD50-352F-R
5 HP	3 phase 380V/50Hz	ICD-GN50FM-R	IC-DD60-402F-R
6 HP	3 phase 380V/50Hz	ICD-GN60FM-R	IC-DD70-402F-R
7 HP	3 phase 380V/50Hz	ICD-GN70FM-R	IC-DD80-452F-R
8 HP	3 phase 380V/50Hz	ICD-GN80FM-R	IC-DD100-403F-R
10 HP	3 phase 380V/50Hz	ICD-GN100FM-R	IC-DD120-453F-R
13 HP	3 phase 380V/50Hz	ICD-GN130FM-R	IC-DD150-503F-R
15 HP	3 phase 380V/50Hz	ICD-GN150FM-R	IC-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.



Cubic Air Cooler Evaporator

Fin pitch 6.0mm

Series	Model	Cooling Capacity (kW)		Fan motor parameter					Electric heater	
		Tc=0℃	Tc=-18℃	Voltage	Airflow	Power	Dia*QTY	Air throw	Voltage	Power
		DT=7K	DT=7K	V	m³/h	W	mm*PCS	m	V	W
SD series with single fan	IC-DD15-301E	3.5kW	2.3kW	220V	1200	65*1	300*1	6	220V	1700
	IC-SD30-401F	5.6kW	4kW	380V	3500	205*1	400*1	10	220V	1700
	IC-SD40-401F	6kW	5kW	380V	3500	205*1	400*1	10	220V	2620
	IC-SD60-451F	13kW	8kW	380V	6000	460*1	450*1	12	220V	4000
	IC-SD80-501F	16kW	10kW	380V	8000	750*1	500*1	15	220V	4900
D series with multi-fan	IC-DD30-302E	5.6kW	3.5kW	220V	2400	65/85*1	300*2	7	220V	2460
	IC-DD40-302E	6kW	4.5kW	220V	2400	65/85*1	300*2	7	220V	2940
	IC-DD50-352E/F	9kW	6kW	220/380V	4200	165*2	350*2	9	220V	4500
	IC-DD60-402F	13kW	8kW	380V	6000	205*2	400*2	12	220V	5300
	IC-DD70-402F	14kW	8.5kW	380V	6000	205*2	400*2	12	220V	6600
	IC-DD80-452F	16kW	10kW	380V	10800	370*2	450*2	14	220V	6600
	IC-DD100-403F	19kW	12.5kW	380V	11800	205*3	400*3	14	220V	7900
	IC-DD120-453F	25kW	15.5kW	380V	16200	370*3	450*3	16	220V	9700
	IC-DD150-503F	27kW	17.5kW	380V	18000	505*3	500*3	17	220V	9700
	IC-DD180-504F	34kW	22.5kW	380V	24000	505*4	500*4	18	220V	11500
	IC-DD220-504F	40kW	27.5kW	380V	32000	750*4	500*4	19	220V	11500
DD series with long air throw	IC-DD150-503FT	27kW	17.5kW	380V	18000	505*3	500*3	20	220V	9700
	IC-DD180-504FT	34kW	22.5kW	380V	24000	505*4	500*4	22	220V	11500
	IC-DD220-504FT	40kW	27.5kW	380V	32000	750*4	500*4	22	220V	11500

Fin pitch 9.0mm

Series	Model	Cooling Capacity (kW)	Fan motor parameter					Electric heater	
		Tc=-25°C	Voltage	Airflow	Power	Dia*QTY	Air throw	Voltage	Power
		DT=7K	V	m³/h	W	mm*PCS	m	V	W
DJ series with multi-fan	IC-DJ30-302E	2.4kW	220V	2400	65/85*1	300*1	7	220V	2460
	IC-DJ40-302E	2.7kW	220V	2400	65/85*1	300*1	7	220V	2940
	IC-DJ50-352E/F	4.2kW	220/380V	4200	165*2	350*2	9	220V	4500
	IC-DJ60-402F	6kW	380V	6000	205*2	400*2	12	220V	5300
	IC-DJ70-402F	6.5kW	380V	6000	205*2	400*2	12	220V	6600
	IC-DJ80-452F	7kW	380V	10800	370*2	450*2	14	220V	6600
	IC-DJ100-403F	8.5kW	380V	11800	205*3	400*3	14	220V	7900
	IC-DJ120-453F	11.5kW	380V	16200	370*3	450*3	16	220V	9700
	IC-DJ150-503F	13kW	380V	18000	505*3	500*3	17	220V	9700
	IC-DJ180-504F	16kW	380V	24000	505*4	500*4	18	220V	11500
	IC-DJ220-504F	17.8kW	380V	32000	750*4	500*4	19	220V	11500
DJ series with long air throw	IC-DJ150-503FT	13kW	380V	18000	505*3	500*3	20	220V	9700
	IC-DJ180-504FT	16kW	380V	24000	505*4	500*4	22	220V	11500
	IC-DJ220-504FT	17.8kW	380V	32000	750*4	500*4	22	220V	11500

> Application Cases

Dual Discharge Air Cooler Evaporator

Fin pitch 6.0mm

Series	Model	Cooling Capacity (kW)		Fan motor parameter					Electric heater	
		Tc=0°C	Tc=-18°C	Voltage	Airflow	Power	Dia*QTY	Air throw	Voltage	Power
		DT=7K	DT=7K	V	m³/h	W	mm*PCS	m	V	W
UD series dual discharge	IC-UD30-401F	5.6kW	3.5kW	380V	3500	220*1	400*1	7	220V	3270
	IC-UD40-401F	6kW	4.5kW	380V	3500	220*1	400*1	7	220V	3270
	IC-UD50-402F	9kW	6kW	380V	7000	220*2	400*2	7	220V	6760
	IC-UD60-402F	13kW	8kW	380V	7000	220*2	400*2	7	220V	6760
	IC-UD70-402F	14kW	8.5kW	380V	7000	220*2	400*2	7	220V	6760
	IC-UD80-403F	16kW	10kW	380V	10500	220*3	400*3	8	220V	9060
	IC-UD100-403F	19kW	12.5kW	380V	10500	220*3	400*3	8	220V	9060
	IC-UD120-404F	25kW	15.5kW	380V	14000	220*4	400*4	9	220V	11330
	IC-UD150-404F	27kW	17.5kW	380V	14000	220*4	400*4	9	220V	11330

Note: 220V dual discharge type air cooler evaporators are all available.

Slim Type Air Cooler Evaporator

Fin pitch 6.0mm

Series	Model	Cooling Capacity (kW)		Fan motor parameter					Electric heater	
		Tc=0°C	Tc=-18°C	Voltage	Airflow	Power	Dia*QTY	Air throw	Voltage	Power
		DT=7K	DT=7K	V	m³/h	W	mm*PCS	m	V	W
EA series slim type	IC-EA301E/CD	1.4kW	1.1kW	220V	1500	85*1	205*1	5	220V	1200
	IC-EA301E/DD	1.8kW	1.4kW	220V	1300	85*1	205*1	5	220V	1200
	IC-EA302E/CD	2.9kW	2.3kW	220V	3000	85*2	205*2	7	220V	2200
	IC-EA302E/DD	3.6kW	2.9kW	220V	2600	85*2	205*2	7	220V	2200
	IC-EA303E/CD	4.3kW	3.4kW	220V	4500	85*3	205*3	8	220V	3200
	IC-EA303E/DD	5.4kW	4.3kW	220V	3900	85*3	205*3	8	220V	3200
	IC-EA304E/CD	5.8kW	4.6kW	220V	6000	85*4	205*4	9	220V	4000
	IC-EA304E/DD	7.2kW	5.7kW	220V	5200	85*4	205*4	9	220V	4000

Dual Discharge Slim Type Air Cooler Evaporator

Fin pitch 6.0mm

Series	Model	Cooling Capacity (kW)		Fan motor parameter					Electric heater	
		Tc=0℃	Tc=-18℃	Voltage	Airflow	Power	Dia*QTY	Air throw	Voltage	Power
		DT=8K	DT=7K	V	m³/h	W	mm*PCS	m	V	W
EC series dual discharge slim type	IC-EC351F/CD	2.5kW	2.0kW	380V	2350	165*1	350*1	6	220V	2400
	IC-EC351F/DD	3.1kW	2.4kW	380V	2200	165*1	350*1	6	220V	2400
	IC-EC352F/CD	5.1kW	4.1kW	380V	4700	165*2	350*2	8	220V	4400
	IC-EC352F/DD	6.3 kW	5.0kW	380V	4400	165*2	350*2	8	220V	4400
	IC-EC353F/CD	7.6 kW	6.0kW	380V	7050	165*3	350*3	9	220V	6400
	IC-EC353F/DD	9.4 kW	7.5kW	380V	6600	165*3	350*3	9	220V	6400
	IC-EC354F/CD	10.1kW	8.0kW	380V	9400	165*4	350*4	10	220V	8000
	IC-EC354F/DD	12.5kW	10.0kW	380V	8800	165*4	350*4	10	220V	8000

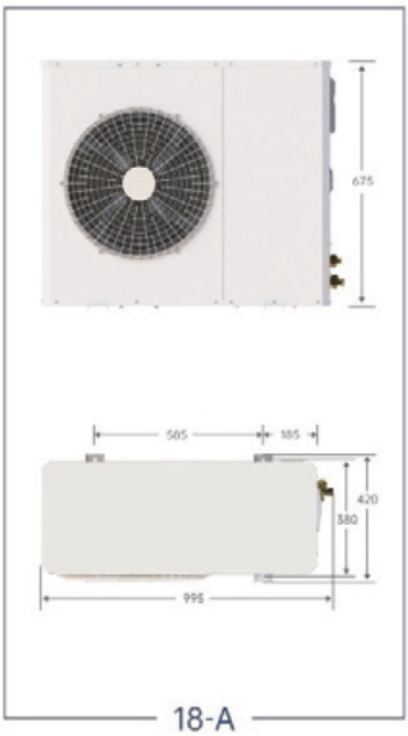
I. Product Overview

EC series double-side commercial air cooler is designed with ultra-thin structure, with air outlet from both sides and air inlet from below. It mainly used in food processing room or warehouse with short height.

This series of products has the following characteristics:

1. Casing: Made of aluminum magnesium plate sprayed with powder coating (Silver gray RAL9006), lightweight.
2. The side sheet of the heat exchanger is made of aluminum plate, which can effectively protect the copper tube and reduce the weight.
3. Double water plate design: The outer water plate is designed with overall hinge structure, which is convenient for operation; the inner water plate is designed with sink structure made of aluminum plate, and the condensation water or defrost water is directly discharged into the drain outlet of the outer water plate via specially designed trough.
4. Coil: Tube spacing 38.1X33 in triangle arrangement, with high high exchange efficiency.
5. Corrugated aluminum sheet made of hydrophilic aluminum foil, with the sheet spacing of 4mm and 6 mm to meet the requirements of different cold storage.
6. Fan: Specifications: Φ350, high-speed fan and low-speed fan design in line with requirements of different noises, operating temperature -30~60°C, quantity of fans 1~4.
7. Defrosting: The defrosting mode is electric heating. The stainless steel heating pipes are distributed in the coil fins and the inner water plate, which has good effect of defrosting.
8. The IP65 water proof junction box and water proof connectors are used, with better water proofing. The fan and the heating pipe are wired separately, with high reliability.
9. The outlet of the air cooler is equipped with a needle valve, which is convenient for users to test the pressure.
10. It is subjected to strict factory pressure test at pressure of 23bar.
11. The expansion valves and other parts can be pre-installed according to customer's needs.
12. It is compatible with R404A, R507A, R448A, R449A, R134A and other refrigerants.

Technical Drawings



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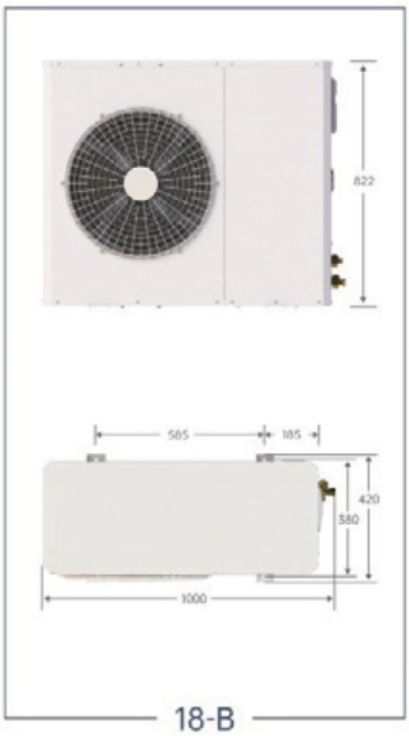

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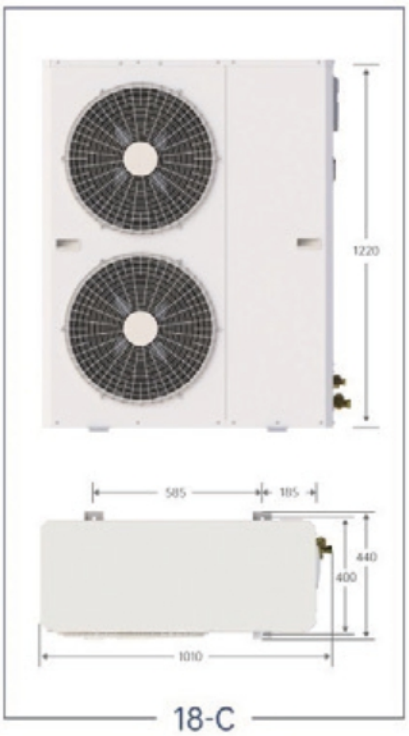

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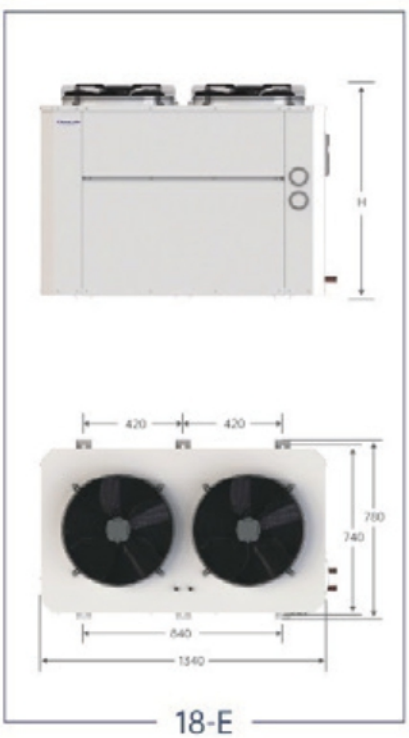
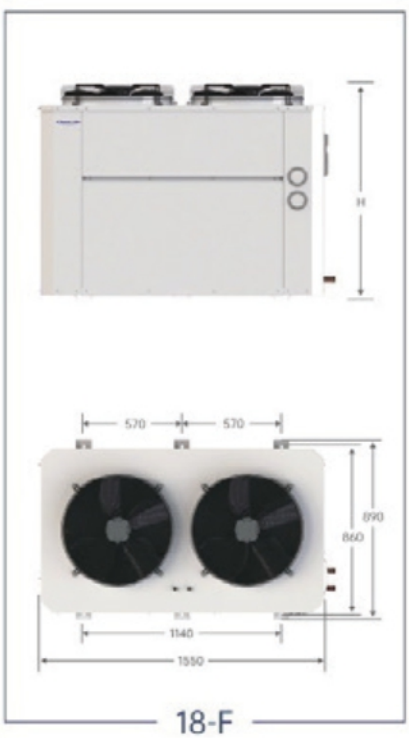
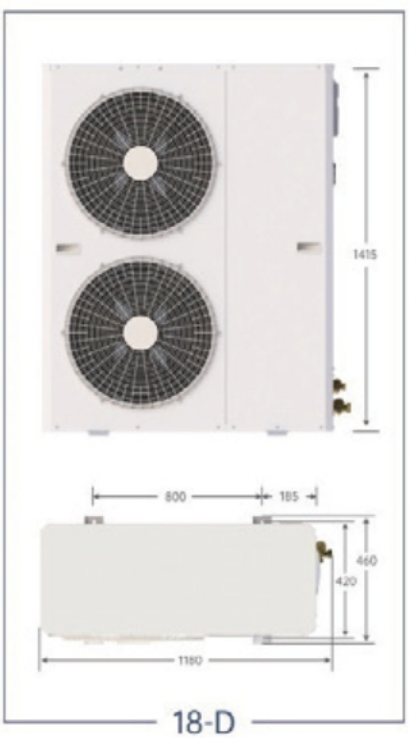


18-E



18-F



18-D

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