

ITALFRUON

REFRIGERATION UNITS
COMMERCIAL RANGE

2020 catalogue

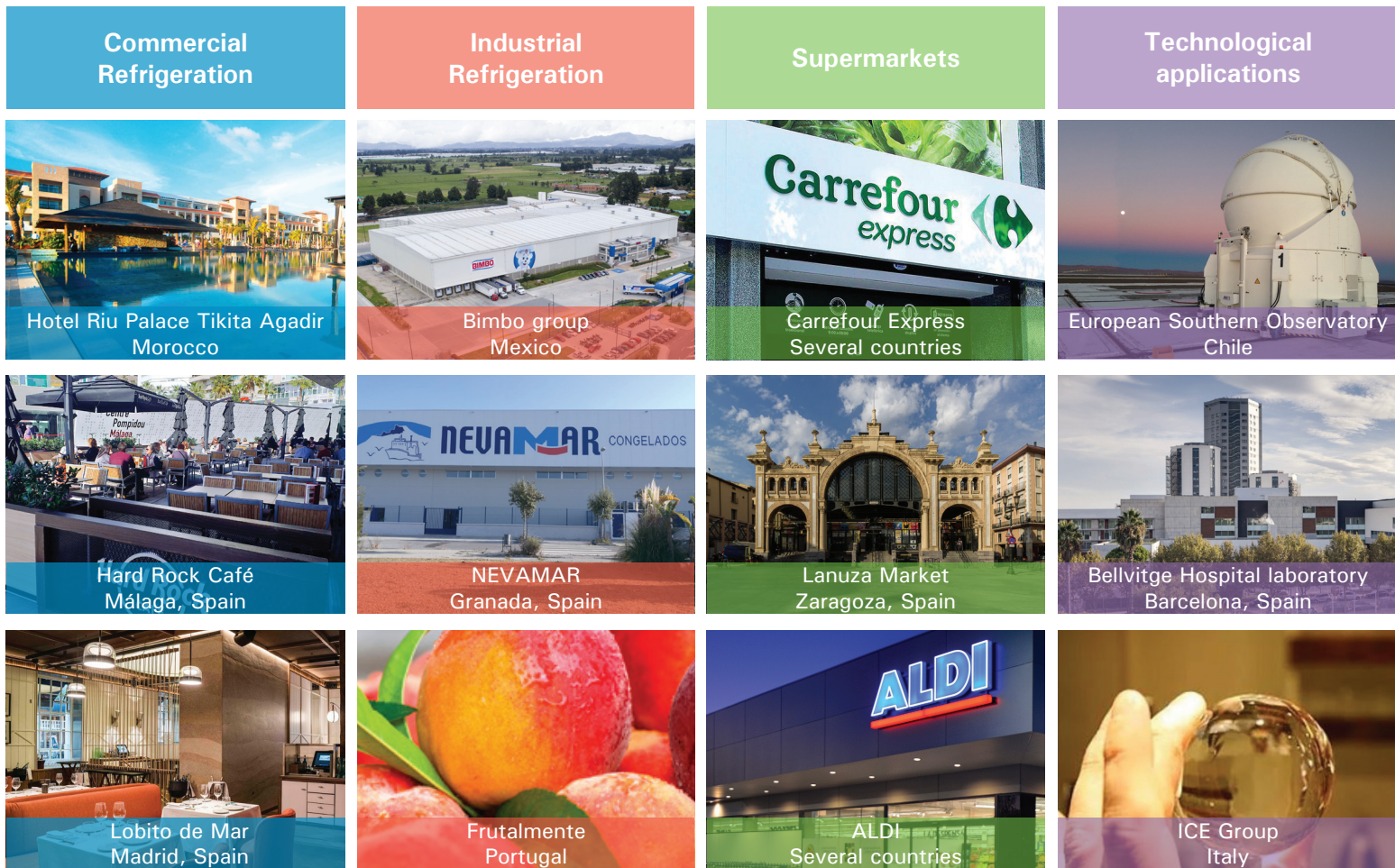


INTARCON is a Spain-based company dedicated to designing, manufacturing, marketing and servicing a full range of refrigeration equipment for commercial and industrial sectors.

Our mission at INTARCON is to develop and offer the market a wide range of innovative solutions for the most reliable, efficient and sustainable operation of refrigeration facilities.

The INTARCON team has over 30 years of valuable experience in the fields of refrigeration, air conditioning and related thermal appliances, focusing our effort on the creation and development of a wide range of innovative refrigeration solutions.

Currently, INTARCON has supplied more than 40 000 units and systems to more than 40 countries all over the world by means of a sales and service network in more than 30 countries.



TÜVRheinland®
ISO 9001:2015



CE marking



RoHS 2011/65/UE



ErP ecodesign
2015/1095/UE

2020 edition

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Sales network



Headquarters

P.I. Los Santos, Bulevar de Los Santos 34
Po. Box 410
14900 Lucena (Córdoba, Spain)
+34 957 50 92 93

International sales

commercial@intarcon.com

Service

service@intarcon.com

International sales

Europe Germany | Belgium | France | Italy | Malta | Netherlands | Portugal | United Kingdom | Switzerland | Turkey

Middle East Pakistan

Africa Equatorial Africa | Angola | Algeria | Cape Verde | Côte d'Ivoire | Morocco | Mozambique | Tunisia

Asia India

America Argentina | Bolivia | Canada | Chile | Colombia | Ecuador | Mexico | Panama | Paraguay | Peru | Dominican Republic | Uruguay | Venezuela



Technical Service

INTARCON has a team of highly qualified professionals to support the client in the installation, in the supervision of the optimal functioning of the equipment or commissioning of the refrigeration installation.

Technical Support

INTARCON offers a Technical Support service to the installer, which allows us to resolve customer concerns or possible incidents in the installation, so that the equipment works optimally.



Commercial product range

Monoblock



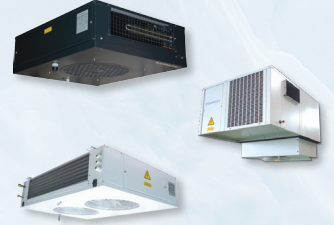
- * Slim monoblocks for wall or door mounting of small cold rooms.
- * Self-contained and roof-top monoblock unit for wall-mount or ceiling panel installation with R-290.
- * Easy installation directly on the ceiling or wall of the cold room.
- * Centrifugal version for ducted outlet of hot condenser air.

Split system



- * Split system for small and medium sized cold rooms.
- * Refrigerant preloaded.
- * Tropicalised design for high ambient temperature up to 45/50 °C.
- * Centrifugal version for ducted outlet of hot condenser air.

Special applications



- * Units with refrigerant preload included.
- * Units for meat preservation and maturation.
- * Units for high humidity applications.
- * Units for the conservation of wine in cellars.

Condensing unit



- * Tropicalised design for high ambient temperature up to 45/50 °C.
- * Electromechanical, electronic and multiservice version.
- * Condensing units with low speed fans.
- * Centrifugal version for ducted outlet of hot condenser air.

intarloop System (water loop)



- * Tropicalised design for high ambient temperature up to 45 °C.
- * R-134a or R-449A reduced refrigerant load.
- * Double acoustic soundproofing.
- * Indirect condensation by a water circuit.

Hidronic system



- * Reduced R-134a refrigerant load.
- * Tropicalised design for high ambient temperature up to 50 °C.
- * Operation with propylene glycol.
- * Integrated electric board and hydraulic group.

Industrial product range

Industrial monoblocks



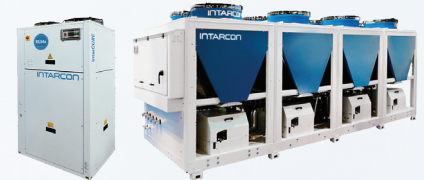
- * Hermetic piston and scroll compressors.
- * High, medium, negative temperature, high relative humidity and bi-temperature.
- * Easy installation.
- * Tropicalized design for ambient temperature up to 45 °C.

Evaporating units and air coolers



- * Easy installation.
- * Evaporating units equipped with regulation and control valves and electronic control panel.
- * Fin steps of 4, 5, 6, 7 and 10 mm.
- * High, medium, negative temperature and deep freezing.

Compact air-cooled DX plants



- * Axial or centrifugal condensation
Axial version with V condenser.
- * Hermetic piston, scroll and semi-hermetic compressors.
- * Centrifugal turbine for conduction of condensation air flow as optional.
- * Tropicalized design for ambient temperature up to 45 °C.

NH₃ chillers



- * Semi-hermetic screw compressor with permanent magnets motor.
- * Operation with glycol water or brine.
- * Stainless steel hydraulic circuit.
- * Tropicalized V-shaped microchannel condensation coil with axial variable speed EC fans.

Air-cooled glycol chillers



- * Hydraulic group included.
- * Operation with glycol water or brine.
- * Hermetic piston, scroll and semi-hermetic compressors.
- * Tropicalized design for ambient temperature up to 45 °C.

CO₂ refrigeration system



- * Subcritical CO₂ cascade system with double suction.
- * CO₂ distribution for medium and negative temperature.
- * High performance even in hot climates.
- * Built-in with standard market components.

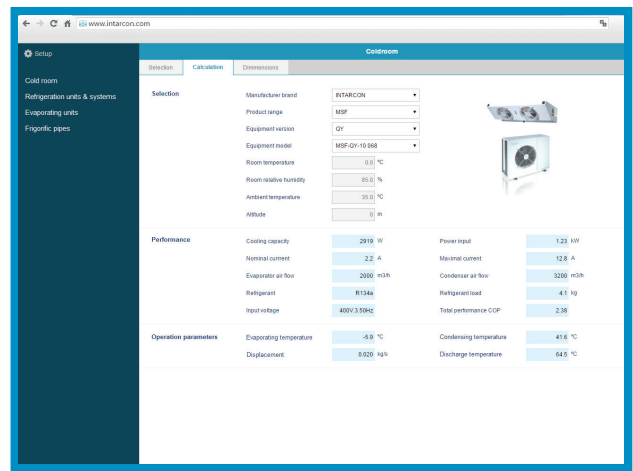
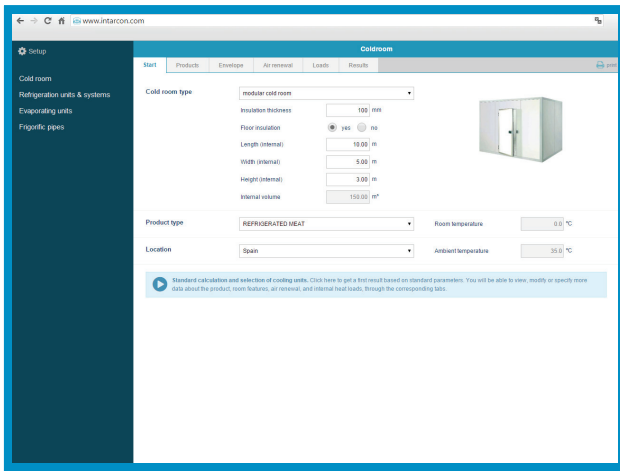
Software

For a more accurate calculation we recommend the use of our on-line cold room calculator, available on our web site: www.intarcon.com

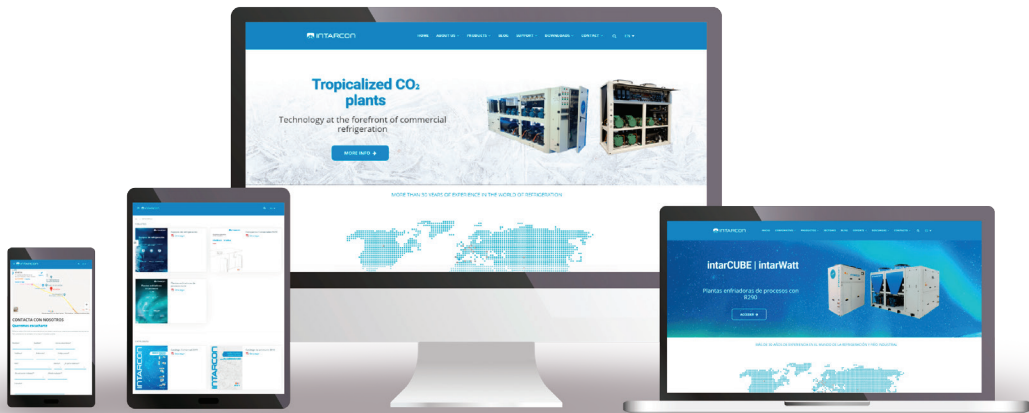


Refrigeration calculator for cold room sizing and selection of cooling units.

By entering basic design data, such as cold room type, application, dimensions and insulation thickness, you will get a quick estimation based on other standard assumptions. You will also be able to customise your calculation by entering further data and to select the most suitable refrigeration unit according to your needs.



www.intarcon.calcooling.com

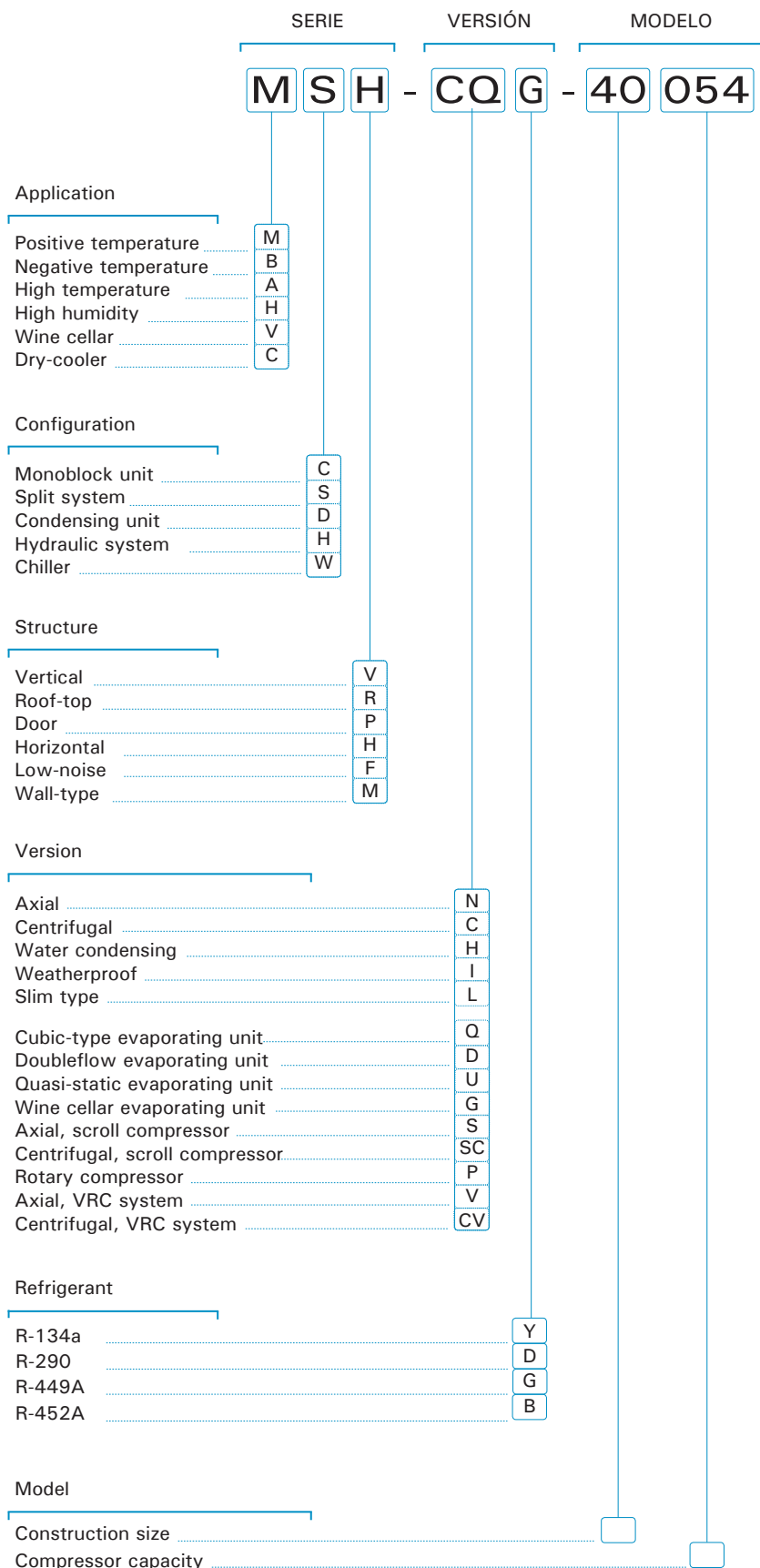


www.intarcon.com



Product codification

INTARCON units are identified unequivocally according to the following criteria in their nomenclature:



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intarloop system

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Cold room calculation

Quick calculation of the needs

The chart below shows recommended cooling needs for high temperature process rooms and cold rooms at positive and negative temperature according to the calculation basis.

Recommended cooling needs for process handling rooms and cold storage rooms (W)					
Cold room volume (m ³)	HIGH TEMPERATURE (+12 °C)		POSITIVE TEMPERATURE (0 °C)		NEGATIVE TEMPERATURE (-20 °C)
	No floor panel		Floor panel	No floor panel	Insulation 100 mm
	Insulation 80 mm	Without insulation	Insulation 80 mm		
5			800	1 100	850
10	1 200	2 300	1 100	1 700	1 200
15	1 500	3 000	1 500	2 300	1 500
20	1 800	3 700	1 900	2 800	1 800
25	2 100	4 300	2 200	3 300	2 100
30	2 500	4 800	2 600	3 800	2 400
40	3 100	6 100	3 200	4 700	2 900
50	3 600	7 000	3 800	5 300	3 300
70	4 800	9 000	5 000	6 800	4 200
100	5 600	11 000	6 000	8 000	5 000
125	6 800	12 000	7 000	9 500	5 800
150	8 000	12 500	8 000	10 500	6 700
175	9 000	14 500	9 000	12 000	7 500
200	10 500	16 000	10 000	13 000	8 500
225	11 500	17 500	11 000	14 000	9 200
250	12 500	19 000	12 000	15 000	10 000

Correction of unit capacity

Cooling capacity indicated in this catalogue are based on the cooling performance of the unit with 35 °C ambient temperature.

To obtain cooling capacity of the unit under other ambient temperature values it is recommended to apply the following correction factors:

		Ambient temperature	20 °C	25 °C	30 °C	35 °C	40 °C	45 °C
POSIT. TEMP.	F _a : Cooling capacity factor		1.23	1.15	1.08	1.00	0.92	0.84
	F _b : Input power factor		0.81	0.88	0.94	1.00	1.07	1.13
NEGAT. TEMP.	F _a : Cooling capacity factor		1.33	1.22	1.11	1.00	0.89	0.77
	F _b : Input power factor		0.85	0.91	0.96	1.00	1.03	1.05

$$\text{Cooling capacity} = F_a \times \text{Cooling capacity}_{|35^\circ\text{C}}$$

$$\text{Input power} = F_b \times \text{Input power}_{|35^\circ\text{C}}$$

$$\text{Cooling capacity}_{|35^\circ\text{C}} = \frac{\text{Cooling load}_{\text{corrected}}}{F_a}$$

Correction of refrigeration needs

To obtain the corrected cooling load for a cold room with special characteristics, the application of a series of correction factors is proposed, based on the following:

$$\text{Cool. load corrected} = \text{Cool. load} \times F_1 \times F_2 \times F_3 \times F_4$$

Where correction factors adopt the following values:

F1: Ambient temperature

The following correction factors can be used to obtain the cooling load at an ambient temperature other than the calculation temperature of 35 °C.

- Ambient temperature of 40 °C: **F1 = 1.05**
- Ambient temperature of 45 °C: **F1 = 1.10**

F2: Breathing of fruit and vegetable products

The ripening process of fruit and vegetable products in positive temperature storage produces a considerable amount of heat. This breathing heat can represent, depending on the type of product, up to 50 % additional cooling load.

For indicative purposes, we suggest a factor:

$$\mathbf{F_2 = 1.25}$$

F3: High product turnover rate

The cooling capacities indicated in the table have been obtained with a conventional product rotation, according to calculation basis. A high product turnover of twice the rotation rate considered can represent up to an additional 50 % of refrigeration needs.

$$\mathbf{F_3 = 1.50}$$

F4: Reduced insulation thickness

An insulation thickness less than the recommended values implies a small increase in the cooling load. By way of indication, the reduction in insulation thickness by 20 mm yields the following factors:

$$20 \text{ mm insulation reduction: } \mathbf{F_4 = 1.10}$$

Calculation example

Calculation of an 80 m³ apple conservation cold room, isolated with an 80 mm thickness refrigeration panel, with uninsulated floor:

1. From the values in the table, the reference refrigeration load for 80 m³ is interpolated.

$$\text{Cooling load} = 7\,200 \text{ W}$$

2. The correction factor for the heat of respiration of fruit and vegetable products is applied: F₂ = 1.25

$$\text{Cooling load}_{\text{corrected}} = \text{Cool. load} \times 1.25 = 9\,000 \text{ W}$$

Cooling needs calculation basis for cooling needs

Cooling needs shown for each cold room volume in product technical features charts in this catalogue have been calculated according to the following assumptions:

- Ambient temperature: 35 °C.
- Product load density: 250 kg / m³.
- Daily rotation rate depending on cold room volume: 10 % (V ≤ 100 m³); 8 % (100 m³ < V).
- Product specific heat:
 - Positive temperature: 3.2 kJ / (kg·K)
 - Negative temperature: 1.8 kJ / (kg·K)
- Product inlet temperature: 25 °C (PT) and -5 °C (NT)
- Insulation panel: Injected polyurethane with 40 kg / m³ density and 0.025 W / (m·K) conductivity, 80 mm (PT) and 100 mm (NT).
- 18 hours compressor operation time.

R-290
R-134a
R-449A
R-452A

Other refrigerant by request



monoblocks

Monoblocks

intartop

Roof-top monoblock units for ceiling installation for small-size cold rooms for positive or negative temperature.

Available in axial and centrifugal versions, with direct mounting on the roof of the cold room.

- ❄ Simple installation on cold room ceiling.
- ❄ Centrifugal version for ducted outlet of hot condensing air.

intarblock

Self-contained and door monoblock units for wall-mount installation in small cold rooms for positive and negative temperature.

Available in axial and centrifugal versions, with direct mounting on the panel or door of the cold room.

- ❄ Easy direct installation on the wall of the cold room, or on the door with air curtain (optional).
- ❄ Centrifugal version for ducted outlet of hot condensing air.
- ❄ Available weatherproof version.

intarblock R-290



Design

This new range of **monoblock** units incorporates the latest technology components in a very compact size that integrates into the wall panel of the cold room.

Its slim design allows for maximum storage space, and its lightweight structure minimizes thermal bridges and cold losses.

High energy efficiency



In addition to the excellent thermodynamic performance of the **R-290** refrigerant, these monoblock units integrate low-consumption components, such as electronic fans, LED lighting, or high-efficiency compressors.



Environmental sustainability

R-290 or propane is a hydrocarbon commonly used in domestic refrigeration and small commercial refrigeration applications. Thanks to its low environmental impact and excellent thermodynamic properties, **R-290** is the best choice in small cold stores.

Security and reliability



INTARCON monoblock units meet all safety requirements, they have a negligible **R-290** refrigerant charge, and feature explosion-proof components and pressure and temperature limiting devices.

- ❄ Compact units of R-290 reduced load, less than 200 g.
- ❄ Tropicalised design for ambient temperature up to 45 °C.
- ❄ Thermostatic expansion valve.
- ❄ Defrost by hot gas with temperature control.

Propane

Propane or R-290 is a hydrocarbon used as a refrigerant in small commercial refrigeration units. It has a low environmental impact and excellent thermodynamic properties.

- Global-warming potential (GWP) = 3
- Boiling point at 1.013 bar (°C): -42.10
- Temperature slip (°C): 0
- Safety classification: A3. Not toxic but extremely flammable.
- RSIF RD552 / 2019 and the International Electrotechnical Committee IEC 60335 allow the use of up to 500 g on compact commercial refrigeration units.

Control pad

XW60LH electronic control, as standard on our commercial propane and door monoblock units, is an advanced small size controller, which includes the following functions:



- Temperature control with maximum and minimum temperature recording.
- Quick cooling function "Jet Cool".
- Night operation mode.
- 4 output relays for: compressor, fan, defrost and light.
- 3 temperature NTC probes for cold room, defrost and condensation.

Built-in cold room LED light

High efficiency cold room LED light, built-in in the unit that is automatically activated when the cold room door is opened.

Installation



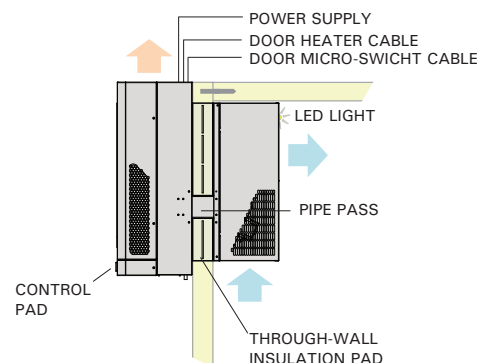
Description

Self-contained slim monoblock units for wall-mount installation in small cold rooms for positive and negative temperature.

Features

- 230 V-I-50 Hz power supply.
- R-290 refrigerant load, below 200 g.
- Hermetic reciprocating compressor.
- EC motor fans.
- High pressure switch.
- Thermostatic expansion valve.
- Hot gas defrost.
- Stainless steel drain pan.
- Evaporation of condensed water.
- Cold room LED light and door micro-switch cable.
- Removable through-wall insulation pad included.
- Door heater cable (only for BCV series).
- Multifunctional electronic control.

Installation scheme



230 V-I-50 Hz | Positive temperature | R-290

Series / Model	Compressor		Cooling capacity according to cold room temperature ⁽¹⁾				Input power (kW)	Max. current (A)	Evap. airflow (m³/h)	Refrigerant load (kg)	Weight (kg)	SPL dB(A) ⁽²⁾	Price (€)		
	HP	Power supply	0 °C	5 °C	10 °C										
R-290 MCV-LD-0 009	1/3	230 V-I	635	5	740	7	850	12	0,40	3,5	300	< 0,10	38	29	1 732
	1/2	230 V-I	1 050	9	1 220	15	1 410	27	0,52	3,3	500	< 0,10	56	29	2 085
	3/4	230 V-I	1 340	14	1 560	21	1 780	36	0,68	4,3	500	< 0,15	57	31	2 325
	2	230 V-I	1 824	21	2 170	34	2 540	58	0,94	5,9	950	< 0,15	86	35	2 950
	2 1/2	230 V-I	2 215	27	2 618	43	2 960	70	1,31	9,0	950	< 0,20	86	35	3 700

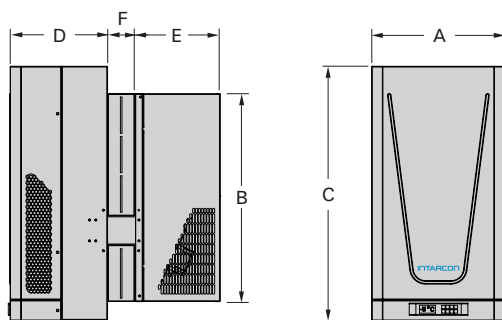
230 V-I-50 Hz | Negative temperature | R-290

Series / Model	Compressor		Cooling capacity according to cold room temperature ⁽¹⁾				Input power (kW)	Max. current (A)	Evap. airflow (m³/h)	Refrigerant load (kg)	Weight (kg)	SPL dB(A) ⁽²⁾	Price (€)		
	HP	Power supply	-25 °C	-20 °C	-15 °C										
R-290 BCV-LD-0 014	3/4	230 V-I	370	1	440	2	520	4	0,38	2,93	300	< 0,10	38	29	2 056
	3/4	230 V-I	540	2	660	5	790	8	0,48	3,61	500	< 0,10	57	29	2 285
	1 1/4	230 V-I	770	4	920	9	1 090	15	0,73	6,10	500	< 0,15	64	31	2 516
	1 1/2	230 V-I	985	7	1 210	14	1 470	25	0,97	12,69	950	< 0,20	86	34	2 700

Options

- Evaporator coil epoxy anti-corrosion treatment. + 6 %

Dimensions

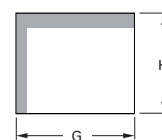


Dimensions (mm)	A	B	C	D	E	F
series 0	420	596	803	237	182	111
series 1	420	656	803	307	245	111
series 2	620	676	764	343	285	130

⁽¹⁾ Nominal performances refer to operation with cold room temperatures of 0 °C (PT) and -20 °C (NT) ambient temperature of 35 °C. Estimated cold room volume according to conditions of the calculation bases (page 8).

⁽²⁾ Sound pressure in dB (A) in open field at 10 m from the unit.

Mounting frames



PLUG-IN FLAME

Dimensions (mm)	G	H
series 0	400	600
series 1	400	660
series 2	600	680

intartop R-290



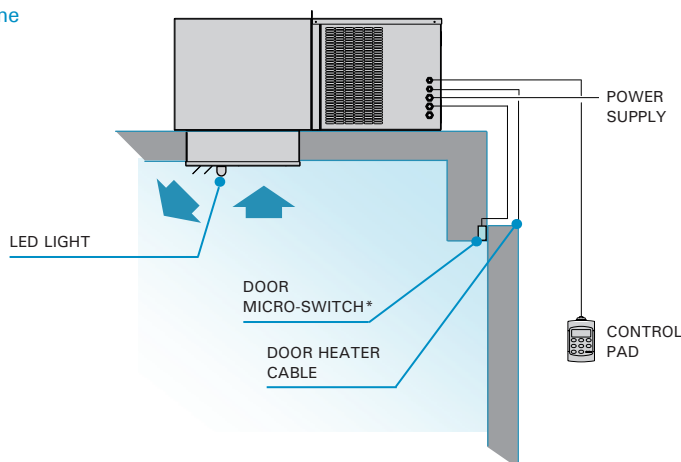
Description

Roof-top monoblock units for small-size chiller and freezer cold rooms, for ceiling panel installation.

Features

- 230 V-I-50 Hz power supply.
- R-290 refrigerant load, below 200 g.
- Hermetic reciprocating compressor.
- High pressure switch.
- Thermostatic expansion valve.
- MCB protection.
- Hot gas defrost.
- Stainless steel drain pan.
- Evaporation of condensed water.
- Cold room LED light and door micro-switch cable.
- Door heater cable (only for BCV series).
- Evaporator case made in sandwich panel, with 50 mm polyurethane insulation, internally covered in steel sheet.
- Multifunction electronic control.

Installation scheme



* Door heater cable only in negative temperature series.

- ❄ Compact units of R-290 reduced load, less than 200 g.
- ❄ Tropicalised design for ambient temperature up to 45 °C.
- ❄ Thermostatic expansion valve.
- ❄ Defrost by hot gas with temperature control.

Propane

Propane or R-290 is a hydrocarbon used as a refrigerant in small commercial refrigeration units. It has a low environmental impact and excellent thermodynamic properties.

- Global-warming potential (GWP) = 3
- Boiling point at 1.013 bar (°C): -42.10
- Temperature slip (°C): 0
- Safety classification: A3. Not toxic but extremely flammable.
- RSIF RD552 / 2019 and the International Electrotechnical Committee IEC 60335 allow the use of up to 500 g on compact commercial refrigeration units.

Control pad

intarblock units feature XWING electronic control as standard.



- Built-in control keyboard with digital display.
- Temperature control with maximum and minimum temperature value recording.
- Fast-freezing function and night operation mode.

Built-in cold room LED light

High efficiency cold room LED light, built-in in the unit that is automatically activated when the cold room door is opened.

Installation



230 V-I-50 Hz | Positive temperature | R-290

Series / Model	Compressor		Cooling capacity according to cold room temperature ⁽¹⁾						Input power (kW)	Max. current (A)	Evap. airflow (m³/h)	Refrigerant load (kg)	Weight (kg)	SPL dB(A) ⁽²⁾	Price (€)
	HP	Power supply	0 °C		5 °C		10 °C								
			W	m³	W	m³	W	m³							
MCR-ND-0 009	1/3	230 V-I	670	5	780	7	900	12	0,39	3,6	300	<0,10	63	29	1 825
MCR-ND-1 012	1/2	230 V-I	1 060	9	1 240	15	1 435	27	0,53	3,4	600	<0,10	73	29	2 215
MCR-ND-1 017	3/4	230 V-I	1 370	14	1 585	21	1 815	36	0,68	4,5	600	<0,15	73	31	2 470
MCR-ND-2 026	2	230 V-I	1 850	21	2 200	34	2 577	58	0,98	5,9	1 150	<0,15	96	35	3 300
MCR-ND-2 034	2 1/2	230 V-I	2 240	27	2 650	43	2 995	70	1,35	9,0	1 150	<0,20	96	35	4 150

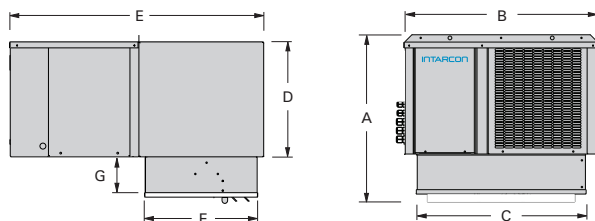
230 V-I-50 Hz | Negative temperature | R-290

Series / Model	Compressor		Cooling capacity according to cold room temperature ⁽¹⁾						Input power (kW)	Max. current (A)	Evap. airflow (m³/h)	Refrigerant load (kg)	Weight (kg)	SPL dB(A) ⁽²⁾	Price (€)
	HP	Power supply	-25 °C		-20 °C		-15 °C								
			W	m³	W	m³	W	m³							
BCR-ND-0 014	3/4	230 V-I	385	1	460	2	550	4	0,39	3,3	300	<0,10	65	29	2 150
BCR-ND-1 017	3/4	230 V-I	540	2	660	5	800	8	0,49	3,5	600	<0,10	73	29	2 415
BCR-ND-1 028	1 1/4	230 V-I	770	4	925	9	1 100	15	0,73	6,0	600	<0,15	80	31	2 645
BCR-ND-2 034	1 1/2	230 V-I	985	7	1 215	14	1 475	25	0,99	9,3	1 150	<0,20	96	34	3 250

Options

- Evaporator coil epoxy anti-corrosion treatment. + 6 %

Dimensions

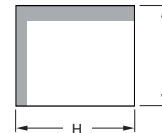


Dimensions (mm)	A	B	C	D	E	F	G
series 0	480	600	430	330	790	375	100
series 1	580	660	585	385	850	380	135
series 2	665	830	755	470	850	380	135

⁽¹⁾ Nominal performances refer to operation with cold room temperatures of 0 °C (PT) and -20 °C (NT) ambient temperature of 35 °C. Recommended cold room volume for cold room with ground and insulation 80 mm (PT) or 100 mm (NT), density of merchandise of 250 kg / m³ with a daily rotation of product of 10 % to input temperature of 25 °C (PT) and -15 °C (NT).

⁽²⁾ Sound pressure in dB (A) in open field at 10 m from the unit.

Mounting frames



CEILING FRAME

Dimensions (mm)	H	I
series 0	435	380
series 1	590	385
series 2	760	385

door intarblock



- ❄ Tropicalised design for high ambient temperature up to 45 °C.
- ❄ Air curtain (optional).
- ❄ Defrost by hot gas with temperature control.
- ❄ Refrigerant load lower than 1 kg.
- ❄ Units exempt from leak checks.

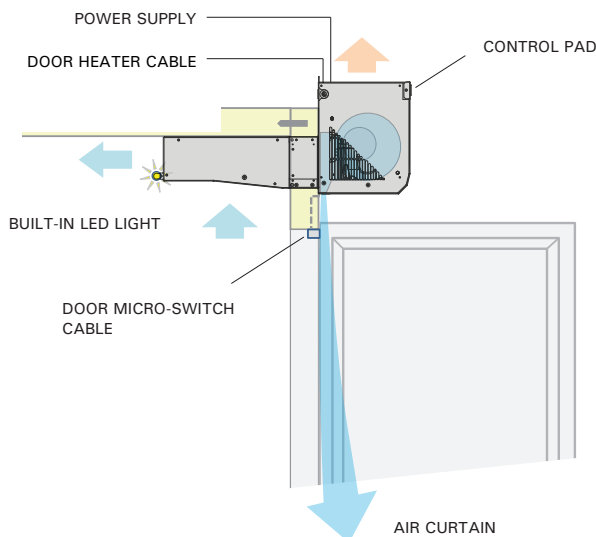
Description

Monoblock for refrigeration and freezing cold rooms, for assembly in the door panel of the cold room with optional air curtain built-in on the unit.

Features

- 230 V-I-50 Hz power supply.
- R-134a / R-449A refrigerant load, below 1 kg.
- Hermetic reciprocating compressor.
- High and low pressure switches.
- Thermostatic expansion valve.
- MCB protection.
- Hot gas defrost.
- Stainless steel drain pan.
- Evaporation of condensed water.
- Cold room LED light and door micro-switch cable.
- Door heater cable (only for BCP series).
- Multifunction electronic control.

Installation scheme with air curtain (optional)



Air curtain (optional)

Door monoblock can incorporate an air curtain built-in into the unit, especially dimensioned for doors of 1800 mm high and up to 800 mm. It has an adjustable speed centrifugal fan, door switch and linear diffuser.

Air curtain creates an invisible barrier to prevent the loss of cold inside the cold room, which is activated during the opening of the door, and prevents the entry of hot air and the loss of cold air, with an efficiency greater than 50 %.

- Centrifugal fan.
- Longitudinal air diffuser.
- Automatic activation with door opening.

Control pad

XW60LH electronic control, as standard on our commercial propane and door monoblock units, is an advanced small size controller, which includes the following functions:



- Temperature control with maximum and minimum temperature recording.
- Quick cooling function "Jet Cool".
- Night operation mode.
- 4 output relays for: compressor, fan, defrost and light.
- 3 temperature NTC probes for cold room, defrost and condensation.

Built-in cold room LED light

High efficiency cold room LED light, built-in in the unit that is automatically activated when the cold room door is opened.

Installation



230 V-I-50 Hz | Positive temperature | R-134a

Series / Model	Compressor		Cooling capacity according to cold room temperature ⁽¹⁾						Input power (kW)	Max. current (A)	Evap. airflow (m ³ /h)	Refrigerant load (kg)	Weight (kg)	SPL dB(A) ⁽²⁾	Price (€)	Price with air curtain (€)	
	HP	Power supply	0 °C		5 °C		10 °C										
R-134a	MCP-NY-0 010	3/8	230 V-I	580	4	695	7	820	12	0,47	4,57	300	< 1,0	61	29	1 685	2 605
	MCP-NY-0 015	1/2	230 V-I	760	7	890	10	1 030	15	0,61	5,57	300	< 1,0	66	29	1 899	2 819
	MCP-NY-1 015	1/2	230 V-I	880	8	1 055	12	1 250	21	0,68	5,84	600	< 1,0	72	29	2 099	3 019
	MCP-NY-1 026	3/4	230 V-I	1 180	11	1 435	18	1 710	28	0,91	9,54	600	< 1,0	79	29	2 398	3 318
	MCP-NY-1 033	1	230 V-I	1 490	17	1 760	26	2 070	40	1,03	9,68	600	< 1,0	83	29	2 694	3 614

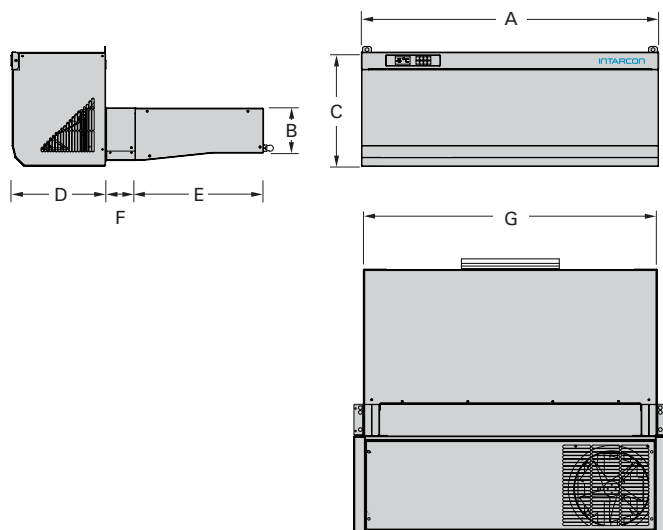
230 V-I-50 Hz | Negative temperature | R-449A

Series / Model	Compressor		Cooling capacity according to cold room temperature ⁽¹⁾						Input power (kW)	Max. current (A)	Evap. airflow (m ³ /h)	Refrigerant load (kg)	Weight (kg)	SPL dB(A) ⁽²⁾	Price (€)	Price with air curtain (€)	
	HP	Power supply	-25 °C		-20 °C		-15 °C										
R-449A	BCP-NG-0 018	5/8	230 V-I	390	1	490	2	585	3	0,67	7,17	300	< 1,0	67	29	2 154	3 074
	BCP-NG-1 026	3/4	230 V-I	640	3	810	7	960	10	1,00	8,64	600	< 1,0	74	31	2 516	3 436
	BCP-NG-1 034	1 1/4	230 V-I	790	4	950	10	1 120	12	1,27	11,08	600	< 1,0	80	29	2 672	3 592

Options

- Evaporator coil epoxy anti-corrosion treatment. + 6 %
- Change to R-452A refrigerant for negative temperature. + 2 %

Dimensions



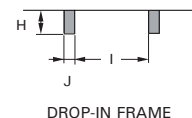
Dimensions (mm)	A	B	C	D	E	F	G
series 0	1 005	152	380	315	450	80	940
series 1	1 005	152	380	315	450	80	940

⁽¹⁾ Nominal performances refer to operation with cold room temperatures of 0 °C (PT) and -20 °C (NT) ambient temperature of 35 °C. Recommended cold room volume for cold room with ground and insulation 80 mm (PT) or 100 mm (NT), density of merchandise of 250 kg / m³ with a daily rotation of product of 10 % to input temperature of 25 °C (PT) and -15 °C (NT).

⁽²⁾ Units with refrigerant load less than 5 tons of CO₂ equivalent (3.8 kg of R-134a or R-449A) exempt from leak checking Regulation (EU) No 517/2014.

⁽³⁾ Sound pressure in dB (A) in open field at 10 m from the unit.

Mounting frame



Dimensions (mm)	H	I	J
series 0	185	828	58
series 1	185	828	58

intartop



Description

Roof-top monoblock units for small-size chiller and freezer cold rooms, for ceiling panel installation.

Features

- 230 V-I-50 Hz or 400 V-III-50 Hz power supply.
- R-134a / R-449A refrigerant load, below 1.5 kg.
- Hermetic reciprocating compressor.
- High and low pressure switches.
- Thermostatic expansion valve.
- MCB protection.
- Hot gas defrost.
- Stainless steel drain pan.
- Evaporation of condensed water.
- Cold room light and door micro-switch cable.
- Door heater cable (only for BCR series).
- Evaporator case made in sandwich panel, with 50 mm polyurethane insulation, internally covered in steel sheet.
- Multifunction electronic control.

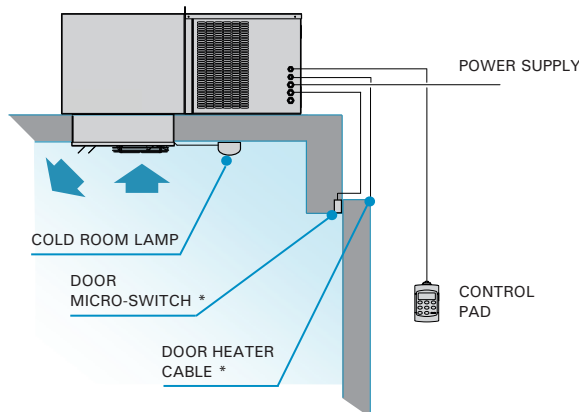
CR-N series

Roof-top monoblock refrigeration units, with axial condensing fans, for ceiling panel installation.

CR-C series

Centrifugal version units featuring a centrifugal motor fan for a ducted outlet of condenser's hot air.

Installation scheme



* Door heater cable only in negative temperature series.
* Door micro-switch not included.

- ❄ Tropicalised design for high ambient temperature up to 45 °C.
- ❄ Thermostatic expansion valve.
- ❄ Hot gas defrost.
- ❄ Refrigerant load lower than 1.5 kg.
- ❄ Units exempt from leak checks.

Control pad

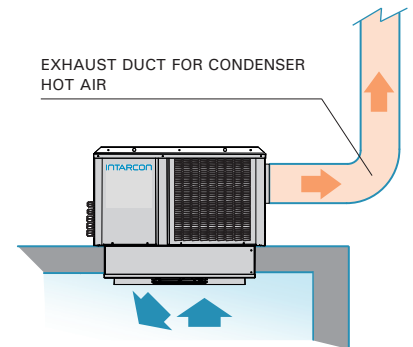
intartop units feature XWING electronic control as standard.



- Built-in control keyboard with digital display.
- Temperature control with maximum and minimum temperature value recording.
- Fast-freezing function and night operation mode.

Centrifugal Version

intartop centrifugal units feature a centrifugal motor fan to duct the hot condensation airflow outdoors.



Installation



230 V-I-50 Hz | Positive temperature | R-134a

Axial version Series / Model	Compressor		Cooling capacity according to cold room temperature ⁽¹⁾						Input power (kW)	Max. current (A)	Evap. airflow. (m³/h)	Refrig. load (kg) ⁽²⁾	Weight (kg)	SPL dB(A) ⁽³⁾	Price (€)
	HP	Power supply	0 °C		5 °C		10 °C								
			W	m³	W	m³	W	m³							
MCR-NY-0 010	3/8	230 V-I	605	4.0	751	7.0	902	12	0.43	4.5	300	< 1.0	62	30	1 605
MCR-NY-0 015	1/2	230 V-I	788	6.1	956	10	1 134	18	0.53	5.5	300	< 1.0	65	30	1 836
MCR-NY-1 015	1/2	230 V-I	999	8.2	1 231	12	1 490	23	0.58	5.6	600	< 1.0	73	28	1 955
MCR-NY-1 026	3/4	230 V-I	1 265	12	1 549	19	1 853	30	0.93	9.3	600	< 1.0	82	34	2 384
MCR-NY-1 033	1	230 V-I	1 502	16	1 817	26	2 153	41	1.05	9.5	600	< 1.0	83	34	2 692
MCR-NY-2 033	1	230 V-I	1 911	24	2 363	37	2 846	61	1.21	10.3	1 150	< 1.5	98	35	3 060
MCR-NY-2 053	1 1/2	230 V-I *	2 352	33	2 882	50	3 455	75	1.67	12.9	1 150	< 1.5	99	39	3 626
MCR-NY-2 074	2	230 V-I *	2 940	40	3 560	60	4 211	90	1.83	16.9	1 150	< 1.5	110	41	4 014

Centrifugal version Series / Model	Conden. airflow (m³/h)	ASP (mmca) ⁽⁴⁾	Price (€)
MCR-CY-0 010	375	8	1 817
MCR-CY-0 015	375	8	2 079
MCR-CY-1 015	575	8	2 215
MCR-CY-1 026	575	8	2 700
MCR-CY-1 033	575	8	3 048
MCR-CY-2 033	1 000	12	3 468
MCR-CY-2 053	1 000	12	4 109
MCR-CY-2 074	1 000	12	4 548

230 V-I-50 Hz | Negative temperature | R-449A

Axial version Series / Model	Compressor		Cooling capacity according to cold room temperature ⁽¹⁾						Input power (kW)	Max. current (A)	Evap. airflow. (m³/h)	Refrig. load (kg) ⁽²⁾	Weight (kg)	SPL dB(A) ⁽³⁾	Price (€)
	HP	Power supply	-25 °C		-20 °C		-15 °C								
			W	m³	W	m³	W	m³							
BCR-NG-0 018	5/8	230 V-I	418	0.6	525	1.5	638	2.8	0.59	4.7	300	< 0.5	65	33	2 066
BCR-NG-1 026	3/4	230 V-I	562	2.0	736	4.1	907	7.7	0.84	8.5	600	< 1.0	84	38	2 408
BCR-NG-1 034	1 1/4	230 V-I	703	3.2	892	5.8	1 060	10	1.05	11.0	600	< 1.0	84	40	2 537
BCR-NG-2 034	1 1/4	230 V-I	775	3.8	1 102	7.8	1 406	14	1.11	11.5	1 150	< 1.0	135	41	2 883
BCR-NG-2 054	1 3/4	230 V-I *	1 137	6.9	1 463	13	1 803	22	1.56	17.5	1 150	< 1.0	145	42	3 234
BCR-NG-2 074	2 1/2	230 V-I *	1 377	11	1 689	17	2 098	30	1.83	25.5	1 150	< 1.0	145	43	3 652

Centrifugal version Series / Model	Conden. airflow (m³/h)	ASP (mmca) ⁽⁴⁾	Price (€)
BCR-CG-0 018	375	8	2 308
BCR-CG-1 026	575	8	2 697
BCR-CG-1 034	575	8	2 831
BCR-CG-2 034	1 000	12	3 300
BCR-CG-2 054	1 000	12	3 664
BCR-CG-2 074	1 000	12	4 100

Options

- Change to 400 V-III-50 Hz power supply. + 5 %
- Door micro-switch. + 50 €
- Non-return damper (centrifugal version). + 25 €
- Adaptation of air discharge to circular duct. + 100 €
- Vertical discharge (centrifugal version).
- Evaporator coil epoxy anti-corrosion treatment. + 6 %
- Change to R-452A refrigerant for negative temperature. + 2 %

⁽¹⁾ Nominal performances refer to operation with cold room temperatures of 0 °C (PT) and -20 °C (NT) ambient temperature of 35 °C. Estimated cold room volume according to conditions of the calculation bases (page 8).

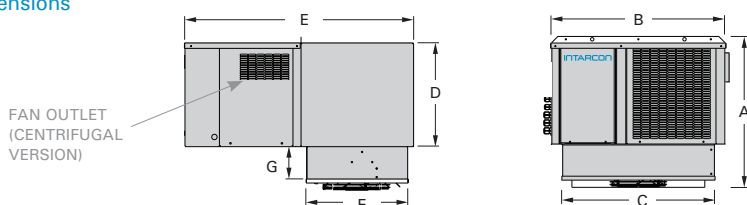
⁽²⁾ Units with refrigerant load less than 5 tons of CO₂ equivalent (3.8 kg of R-134a or R-449A) exempt from leak checking Regulation (EU) No 517/2014.

⁽³⁾ Sound pressure in dB (A) in open field at 10 m from the unit.

⁽⁴⁾ Available Static Pressure of condensation.

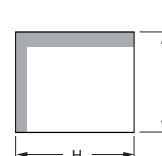
* Units available with 400 V-III-50 Hz power supply.

Dimensions



Dimensions (mm)	A	B	C	D	E	F	G	Fan outlet	Hopper
series 0	480	600	430	330	790	375	100	185 x 115	Ø 200
series 1	574	665	582	385	850	379	135	185 x 115	Ø 200
series 2	677	835	756	469	850	379	135	230 x 130	Ø 200

Mounting frames



Dimensions (mm)	H	I
series 0	435	380
series 1	590	385
series 2	760	385

CEILING FRAME

Exhaust duct

Recommended size for 20 m long steel, PVC or fiberglass ducts (each elbow at 90° equals 5 m in length). For flexible or semi-flexible ducts use a larger size:

- series 0: 200 x 150 mm.
- series 1: 200 x 200 mm.
- series 2: 250 x 150 mm.

intarblock



Description

Self-contained monoblock units for wall-mount installation in small cold rooms at positive and negative temperature.

Features

- 230 V-I-50 Hz or 400 V-III-50 Hz power supply.
- R-134a / R-449A refrigerant load, below 2 kg.
- Hermetic reciprocating compressor.
- High and low pressure switches.
- Thermostatic expansion valve.
- MCB protection.
- Hot gas defrost.
- Stainless steel drain pan.
- Evaporation of condensed water.
- Cold room lamp and door micro-switch cable.
- Door heater cable (only for BCV series).
- Removable through-wall insulation pad included.
- Multifunction electronic control.

CV-N series

Monoblock units ready for quick installation through cold room wall with plug-in or drop-in mounting.

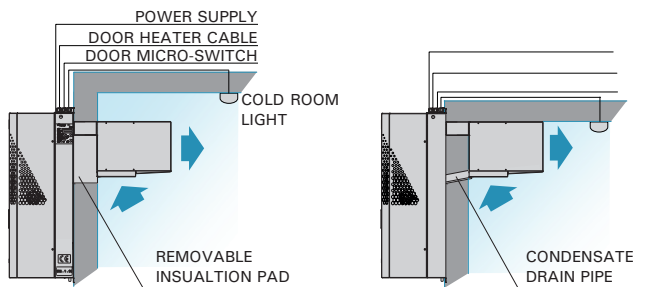
CV-C series

Centrifugal version units featuring a centrifugal motor fan for ducted outlet of condenser hot air.

CV-I series

Weatherproof monoblock units for outdoors installations.

Installation scheme



Plug-in frame mounting

A removable insulation pad is included for direct installation through a hole in the cold room wall.

Drop-in mounting (except for series 0)

After cutting a channel for tube passage in the wall panel, the unit can be dropped in before assembling the ceiling panel.

- ❄ Tropicalised design for high ambient temperature up to 45 °C.
- ❄ Thermostatic expansion valve.
- ❄ Hot gas defrost.
- ❄ Refrigerant load lower than 2 kg.
- ❄ Units exempt from leak checks.

Control pad

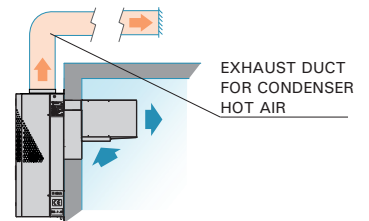
intarblock units feature XWING electronic control as standard.



- Built-in control keyboard with digital display.
- Temperature control with maximum and minimum temperature value recording.
- Fast-freezing function and night operation mode.

Centrifugal Version

intarblock centrifugal units feature a centrifugal motor fan to duct hot condensation airflow outdoors.



Exhaust duct

Recommended size for 20 m long steel, PVC or fiberglass ducts (each elbow at 90° equals 5 m in length). For flexible or semi-flexible ducts use a larger size.

- series 0: 200 x 150 mm.
- series 1: 200 x 200 mm.
- series 2: Ø 200 or 250 x 150 mm.
- series 3: Ø 250 or 300 x 200 mm.

Installation



230 V-I-50 Hz / 400 V-III-50 Hz | Positive temperature | R-134a

Axial version Series / Model	Compressor HP Power supply		Cooling capacity according to cold room temperature ⁽¹⁾						Input power (kW)	Max. current (A)	Evap. airflow (m ³ /h)	Refrig. load (kg) ⁽²⁾	Weight (kg)	SPL dB(A) ⁽³⁾	Price (€)
			0 °C		5 °C		10 °C								
			W	m ³	W	m ³	W	m ³							
MCV-NY-0 010	3/8	230 V-I	610	4.0	758	7.0	907	12	0.43	4.5	300	<1.0	36	28	1 489
MCV-NY-0 015	1/2	230 V-I	794	6.0	961	10	1 139	18	0.53	5.5	300	<1.0	38	29	1 720
MCV-NY-1 015	1/2	230 V-I	972	8.0	1 199	14	1 453	23	0.57	5.6	500	<1.0	60	29	1 897
MCV-NY-1 026	3/4	230 V-I	1 281	12	1 565	19	1 859	30	0.81	9.3	500	<1.0	69	34	2 116
MCV-NY-1 033	1	230 V-I	1 454	14	1 743	25	2 037	41	0.92	9.5	500	<1.0	70	34	2 236
MCV-NY-2 033	1	230 V-I	1 790	19	2 163	36	2 573	57	1.09	10.3	950	<1.5	88	35	2 754
MCV-NY-2 053	1 1/2	230 V-I *	2 153	24	2 609	41	3 103	72	1.46	12.9	950	<1.5	89	39	3 085
MCV-NY-3 053	1 1/2	230 V-I *	2 489	29	3 103	53	3 743	83	1.51	13.1	1 300	<2.0	117	38	3 564
MCV-NY-3 074	2	230 V-I *	3 239	40	3 938	70	4 667	97	1.89	17.1	1 300	<2.0	114	41	3 871
MCV-NY-3 108	5	400 V-III	3 927	51	4 725	110	5 539	130	2.48	18.6	1 300	<2.0	116	43	4 122

Centrifugal version Series / Model	Conden. airflow (m ³ /h)	ASP (mmca) ⁽⁴⁾	Price (€)
MCV-CY-0 010	375	8	1 689
MCV-CY-0 015	375	8	1 948
MCV-CY-1 015	575	8	2 149
MCV-CY-1 026	575	8	2 399
MCV-CY-1 033	575	8	2 533
MCV-CY-2 033	950	13	3 120
MCV-CY-2 053	950	13	3 494
MCV-CY-3 053	1150	8	4 184
MCV-CY-3 074	1150	8	4 545
MCV-CY-3 108	1150	8	4 839

230 V-I-50 Hz / 400 V-III-50 Hz | Negative temperature | R-449A

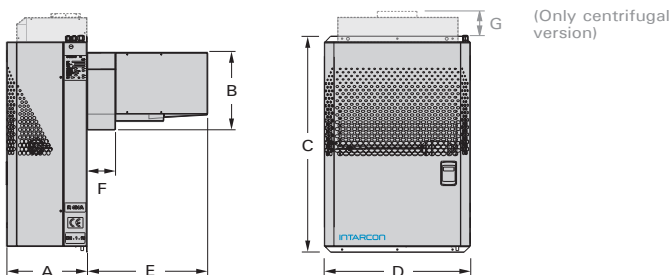
Axial version Series / Model	Compressor HP Power supply		Cooling capacity according to cold room temperature ⁽¹⁾						Input power (kW)	Max. current (A)	Evap. airflow (m ³ /h)	Refrig. load (kg) ⁽²⁾	Weight (kg)	SPL dB(A) ⁽³⁾	Price (€)
			-25 °C		-20 °C		-15 °C								
			W	m ³	W	m ³	W	m ³							
BCV-NG-0 018	5/8	230 V-I	382	0.6	486	1.5	596	2.8	0.50	4.7	300	<0.5	38	33	2 004
BCV-NG-1 026	3/4	230 V-I	550	2.1	721	4.3	888	7.6	0.84	8.5	550	<1.0	60	38	2 311
BCV-NG-1 034	1 1/4	230 V-I	697	3.2	882	6.1	1 047	10	1.05	11.0	550	<1.0	60	40	2 375
BCV-NG-2 034	1 1/4	230 V-I	793	3.8	1 049	7.7	1 341	14	1.11	11.9	950	<1.0	89	41	2 536
BCV-NG-2 054	1 3/4	230 V-I *	963	5.6	1 367	12	1 690	21	1.56	17.9	950	<1.0	102	42	2 894
BCV-NG-2 074	2 1/2	230 V-I *	1 339	10	1 635	17	2 026	28	1.84	25.9	950	<1.0	102	43	3 172
BCV-NG-3 074	2 1/2	230 V-I *	1 549	11	1 950	21	2 423	35	2.17	26.0	1 300	<1.5	131	43	3 546
BCV-NG-3 086	3	400 V-III	1 875	14	2 291	28	2 737	48	2.13	10.4	1 300	<1.5	117	40	3 701
BCV-NG-3 096	3 1/2	400 V-III	2 022	18	2 492	32	2 942	54	2.39	12.1	1 300	<1.5	129	50	3 936

Centrifugal version Series / Model	Conden. airflow (m ³ /h)	ASP (mmca) ⁽⁴⁾	Price (€)
BCV-CG-0 018	375	8	2 238
BCV-CG-1 026	575	8	2 577
BCV-CG-1 034	575	8	2 636
BCV-CG-2 034	950	13	2 922
BCV-CG-2 054	950	13	3 288
BCV-CG-2 074	950	13	3 568
BCV-CG-3 074	1 150	8	4 132
BCV-CG-3 086	1 150	8	4 292
BCV-CG-3 096	1 150	8	4 535

Options

- Change to 400 V-III-50 Hz power supply. + 5 %
- Door micro-switch. + 50 €
- Non-return damper (centrifugal version). + 25 €
- Adaptation of air discharge to circular duct. + 100 €
- Evaporator coil epoxy anti-corrosion treatment. + 6 %
- Change to R-452A refrigerant for negative temperature. + 2 %

Dimensions



Dimensions (mm)	A	B	C	D	E	F	G	Fan outlet
series 0	306	510	683	420	250	50	90	185 x 115
series 1	340	330	880	400	514	122	42	185 x 115
series 2	340	330	920	620	514	122	140	230 x 130
series 3	365	470	940	735	514	122	50	2x 185 x 115

⁽¹⁾ Nominal performances refer to operation with cold room temperatures of 0 °C (PT) and -20 °C (NT) ambient temperature of 35 °C. Estimated cold room volume according to conditions of the calculation bases (page 8).

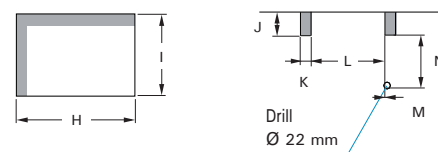
⁽²⁾ Units with refrigerant load less than 5 tons of CO₂ equivalent (3.8 kg of R-134a or R-449A) exempt from leak checking Regulation (EU) No 517/2014.

⁽³⁾ Sound pressure in dB (A) in open field at 10 m from the unit.

⁽⁴⁾ Available Static Pressure of condensation.

* Units available with 400 V-III-50 Hz power supply.

Mounting frame



Dimensions	H	I	J	K	L	M	N
series 0	405	515			n/a		
series 1	380	335	75	41	295	13	233
series 2	600	335	75	36	523	13	233
series 3	710	475	75	41	611	22	356

230 V-I-50 Hz / 400 V-III-50 Hz | Positive temperature | R-452A

Series / Model	Compressor		Cooling capacity according to cold room temperature ⁽¹⁾								Input power (kW)	Max. current (A)	Evap. airflow (m³/h)	Conden. airflow (m³/h)	Refrig. load (kg)	Weight (kg)	SPL dB(A) ⁽²⁾	Price (€)
	HP	Power supply	-5 °C		0 °C		5 °C		10 °C									
			W	m³	W	m³	W	m³	W	m³								
MCV-IB-1 010	3/8	230 V-I	630	3.5	799	6.4	966	11	1 157	19	0.65	5.5	500	575	< 1.0	59	32	2 338
MCV-IB-1 012	1/2	230 V-I	767	4.9	930	8.2	1 118	14	1 317	23	0.67	6.5	500	575	< 1.0	60	30	2 412
MCV-IB-1 014	1/2	230 V-I	893	6.3	1 077	10	1 270	16	1 485	27	0.80	7.1	500	575	< 1.0	60	32	2 489
MCV-IB-1 016	5/8	230 V-I	985	7.4	1 184	12	1 386	19	1 615	30	0.87	8.0	500	575	< 1.0	69	34	2 564
MCV-IB-1 018	3/4	230 V-I	1 138	9.3	1 347	14	1 570	22	1 806	35	1.02	9.3	500	575	< 1.0	70	35	2 692
MCV-IB-1 024	1	230 V-I	1 207	10	1 468	16	1 739	25	2 039	41	1.18	12.3	500	575	< 1.0	70	35	2 844
MCV-IB-2 024	1	230 V-I	1 554	14	1 917	23	2 296	36	2 726	57	1.36	11.9	950	950	< 1.0	88	36	3 502
MCV-IB-2 026	1 1/4	230 V-I *	1 795	17	2 149	26	2 526	40	2 945	63	1.47	12.3	950	950	< 1.0	89	38	3 707
MCV-IB-2 034	1 1/2	230 V-I *	1 996	20	2 391	31	2 801	46	3 247	72	1.95	16.9	950	950	< 1.5	89	40	3 910
MCV-IB-3 034	1 1/2	230 V-I *	2 230	23	2 690	35	3 200	53	3 730	83	2.07	17.1	1 300	1 250	< 2.0	117	39	4 282
MCV-IB-3 038	1 3/4	400 V-III	2 500	27	3 020	41	3 580	62	4 220	97	1.97	7.9	1 300	1 250	< 1.5	114	40	4 652

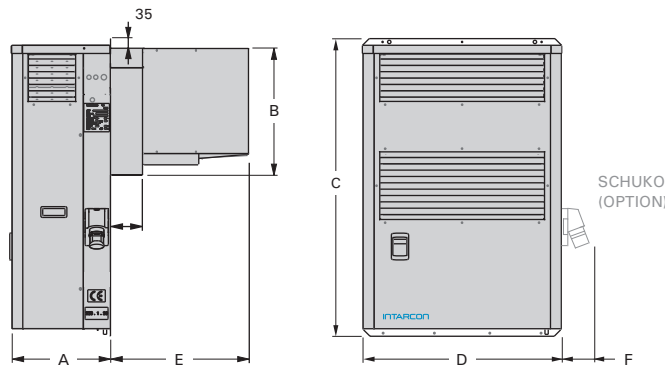
230 V-I-50 Hz / 400 V-III-50 Hz | Negative temperature | R-452A

Series / Model	Compressor		Cooling capacity according to cold room temperature ⁽¹⁾						Input power (kW)	Max. current (A)	Evap. airflow (m³/h)	Conden. airflow (m³/h)	Refrig. load (kg)	Weight (kg)	SPL dB(A) ⁽²⁾	Price (€)
	HP	Power supply	-25 °C		-20 °C		-15 °C									
			W	m³	W	m³	W	m³								
BCV-IB-1 018	5/8	230 V-I	383	1.0	489	2.0	655	4.4	0.67	7.3	500	575	< 0.5	59	33	2 973
BCV-IB-1 026	3/4	230 V-I	548	2.1	720	4.3	877	7.6	0.91	8.5	500	575	< 1.0	60	38	3 034
BCV-IB-1 034	1 1/4	230 V-I	668	3.2	866	6.1	1 023	10	1.14	11.0	500	575	< 1.0	60	40	3 115
BCV-IB-2 034	1 1/4	230 V-I	793	3.8	1 048	7.7	1 297	14	1.19	11.9	950	950	< 1.0	89	41	3 327
BCV-IB-2 054	1 3/4	230 V-I *	963	5.6	1 349	12	1 655	21	1.69	17.9	950	950	< 1.0	102	42	3 798
BCV-IB-2 074	2 1/2	230 V-I *	1 338	10	1 633	17	1 963	28	2.01	25.9	950	950	< 1.0	102	43	4 161
BCV-IB-3 074	2 1/2	230 V-I *	1 430	11	1 930	21	2 320	35	2.38	26.0	1 300	1 250	< 1.5	131	43	4 652
BCV-IB-3 086	3	400 V-III	1 630	14	2 270	28	2 810	48	2.32	10.4	1 300	1 250	< 1.5	117	40	4 856
BCV-IB-3 096	3 1/2	400 V-III	1 890	18	2 460	32	3 040	54	2.64	12.1	1 300	1 250	< 1.5	129	50	5 166

Options

- Change to 400 V-III-50 Hz power supply. + 5 %
- Door micro-switch. + 50 €
- Condenser coil polyurethane anti-corrosion treatment. + 4 %
- Evaporator coil epoxy anti-corrosion treatment. + 6 %
- Male and female schuko electrical connector base. + 60 €
- Low voltage protection (monophase models). + 150 €
- Low voltage protection and phase sequence protection (three-phase models). + 200 €

Dimensions



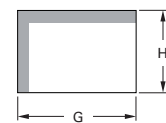
Dimensions (mm)	A	B	C	D	E	F
series 1	340	330	1 060	400	514	115
series 2	340	330	1 100	620	514	115
series 3	365	470	1 100	735	514	115
series 3 096	365	470	1 215	735	514	115

⁽¹⁾ Nominal performances refer to operation with cold room temperatures of 0 °C (PT) and -20 °C (NT) ambient temperature of 35 °C. Estimated cold room volume according to conditions of the calculation bases (page 8).

⁽²⁾ Maximum sound level of the condenser referred to the acoustic pressure level in dB (A), measured in the open field at 10 m distance in the axial version.

* Units available with 400 V-III-50 Hz power supply.

Mounting frame



PLUG-IN FRAME

Dimensions (mm)	G	H
series 1	380	335
series 2	600	335
series 3	710	475

Installations scheme



R-134a
R-449A

Other refrigerants
by request



split systems

Split systems

intarsplit

Split system with a condensing unit in horizontal construction, with axial or centrifugal fan, and a low profile or cubic type evaporator unit.

- * Tropicalised design for high ambient temperature up to 45 °C as standard.
- * Thermostatic expansion valve.
- * Centrifugal versions for ducted outlet of hot condenser air.

Sigilus

Units consisting of a silent condensing unit for outdoor installation and a low profile or cubic type evaporator unit.

Thanks to their triple acoustic treatment, Sigilus condensing units are among the quietest equipment in their class, and thanks to their tropicalized design, they can operate under extreme conditions.

- * Tropicalised design for high ambient temperature up to 50 °C as standard.
- * Low noise condensing units with low speed fans.
- * Thermostatic expansion valve.

intarsplit



Description

Split systems for small and medium size cold rooms at positive and negative temperature, composed by a condensing unit in horizontal construction and a slim-type, cubic-type or double-flow evaporating unit.

Features

- 230 V-I-50 Hz or 400 V-III-50 Hz power supply.
- Minimal R-134a / R-449A refrigerant load.
- Hermetic reciprocating compressor (noise insulation in 3-phases models).
- High and low pressure switches.
- Liquid receiver.
- Refrigerant preload for 10 m of piping.
- Thermostatic expansion valve.
- Electrical heater defrost (except ASH series).
- Stainless steel drain pan.
- Flare-type connections with service valves up to 3/8"-3/4".
- 10 m of electrical connections included (except for series 4 and 40 to 54).
- MCB protection.
- Multifunction electronic control with remote keyboard and digital regulation of condensing pressure.
- Liquid injection system for negative temperature models with R-449A.

SH-N and SH-C series

Split systems with axial or centrifugal condensing unit and slim-type evaporating unit.

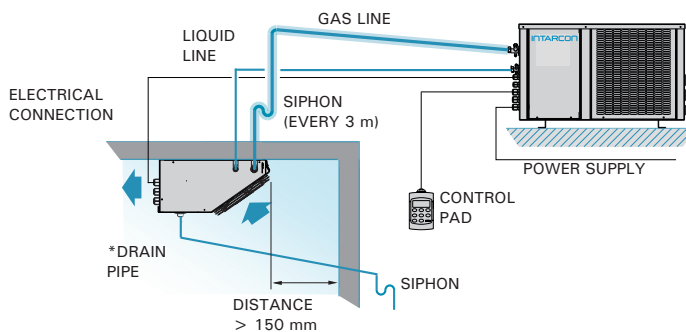
SH-Q and SH-CQ series

Split systems with axial or centrifugal condensing unit and cubic evaporating unit.

SH-D and SH-CD series

Split systems with axial or centrifugal condensing unit and double-flow evaporating unit.

Installation scheme



Maximum vertical distance between units of 15 m if the condensing unit is placed at a higher level than the evaporating unit, and 6 m otherwise.

*20 % minimum slope of draining pipe for negative temperature models.

- ❄ Factory-tested systems with no need for on-site tests.
- ❄ Tropicalised design for high ambient temperature up to 45 °C.
- ❄ Built-in thermostatic expansion valve.
- ❄ Refrigerant preloaded.
- ❄ Units exempt from leak checks.

Control pad

intarsplit systems feature XM670K electronic control as standard.



- Remote control keyboard with digital display.
- Temperature control with maximum and minimum temperature value recording.
- Fast-freezing function and night operation mode.

Digital condensing control

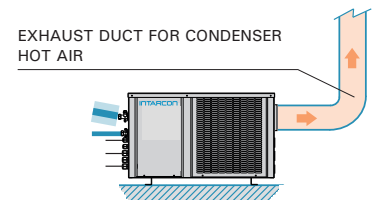
Standard intarsplit series, it protects the unit against occasional low ambient temperatures. For prolonged operations with negative temperature outside it is recommended to install the proportional condensation control (optional in series 3 and 33 onwards).

Crankcase Heater (optional)

The inclusion of the optional crankcase heater is recommended in all outdoor units.

Centrifugal version

The units of the centrifugal intarsplit series incorporates a centrifugal turbine that allows the condensation hot air to be transported outside by means of air ducts.



Electrical interconnections

For the interconnection of the condenser and evaporator units, the following cable sections must be provided for a length of 10 m (except series 4, 43 and 44).

Fan voltage	230 V-I-50 Hz	400 V-III-50 Hz
Fan series	0 - 3	3 - 4
Probes	4 x 1 mm ²	
Maneuver	2 x 1.5 mm ²	
Defrost	2 x 1.5 mm ² + T	4 x 1.5 mm ² + T
Thermostat	2 x 1 mm ²	
Switch door*	2 x 1 mm ² (+ 2 x 1 mm ² in NT)	
Cold room light*	2 x 1 mm ² + T	

* Optional not included. To know electrical interconnections of each model: see technical manual.

230 V-I-50 Hz / 400 V-III-50 Hz | Positive temperature | R-134a / R-449A

Axial version	Compressor		Cooling capacity according to cold room temperature ⁽¹⁾						Input power (kW)	Max. current (A)	Evap. airflow (m³/h)	Liq-Gas Cooling Connection	Refrig. load (kg) ⁽²⁾	Weight (kg)	SPL dB(A) ⁽³⁾	Price (€)	
			0 °C		5 °C		10 °C										
			W	m³	W	m³	W	m³									
Series / Model	HP	Power supply															
R-134a	MSH-NY-00 010	3/8	230 V-I	643	5.1	788	8.5	945	13	0.46	4.6	300	1/4"-3/8"	< 1.5	37+12	31	2 047
	MSH-NY-00 015	1/2	230 V-I	832	7.2	1 010	10	1 193	19	0.56	5.6	300	1/4"-3/8"	< 1.5	40+12	29	2 217
	MSH-NY-11 015	1/2	230 V-I	988	8.2	1 220	12	1 474	23	0.58	5.6	550	1/4"-1/2"	< 1.5	41+16	30	2 344
	MSH-NY-11 026	3/4	230 V-I	1 250	12	1 533	18	1 827	30	0.82	9.3	550	1/4"-1/2"	< 1.5	48+16	34	3 027
	MSH-NY-11 033	1	230 V-I	1 481	16	1 790	24	2 116	41	0.93	9.5	550	1/4"-1/2"	< 1.5	50+16	34	3 257
	MSH-NY-22 033	1	230 V-I	1 922	23	2 368	36	2 846	60	1.06	10.0	1 050	1/4"-5/8"	< 2.0	53+24	35	3 634
	MSH-NY-22 053	1 1/2	230 V-I *	2 363	31	2 882	48	3 455	73	1.45	12.6	1 050	1/4"-5/8"	< 2.0	63+24	39	4 028
	MSH-NY-33 053	1 1/2	230 V-I *	2 688	40	3 318	63	4 069	100	1.55	13.2	1 725	1/4"-3/4"	< 3.5	82+45	39	4 210
	MSH-NY-33 074	2	230 V-I *	3 518	47	4 347	71	5 198	110	1.93	17.2	1 725	1/4"-3/4"	< 3.5	84+45	39	4 537
	MSH-NY-43 086	4	400 V-III	4 379	66	5 366	100	6 421	165	2.39	14.9	1 725	3/8"-7/8"	< 5.0	107+55	49	5 290
R-449A	MSH-NY-44 108	5	400 V-III	5 628	88	6 888	140	8 274	220	3.05	19.2	3 100	3/8"-7/8"	< 5.0	109+55	50	5 870
	MSH-NY-44 136	6 1/2	400 V-III	6 862	115	8 311	170	9 881	260	3.77	23.2	3 100	3/8"-1 1/8"	< 5.5	112+55	50	7 340
	MSH-NG-0 008	1/3	230 V-I	758	5.1	900	8.5	1 071	13	0.47	5.1	300	1/4"-3/8"	< 1.5	38+12	32	1 929
	MSH-NG-0 010	3/8	230 V-I	893	6.1	1 042	10	1 223	15	0.58	4.8	300	1/4"-3/8"	< 1.5	40+12	30	2 089
	MSH-NG-0 012	1/2	230 V-I	980	7.2	1 135	12	1 324	19	0.65	5.6	300	1/4"-3/8"	< 1.5	41+12	32	2 208
	MSH-NG-1 014	1/2	230 V-I	1 100	10	1 313	16	1 564	26	0.79	6.7	550	1/4"-1/2"	< 1.5	44+16	32	2 477
	MSH-NG-1 016	5/8	230 V-I	1 216	12	1 451	18	1 734	30	0.85	7.6	550	1/4"-1/2"	< 1.5	53+16	34	2 639
	MSH-NG-1 018	3/4	230 V-I	1 404	14	1 653	22	1 954	35	1.00	8.9	550	1/4"-1/2"	< 1.5	54+16	35	2 854
	MSH-NG-1 024	1	230 V-I	1 528	16	1 811	24	2 140	41	1.01	11.1	550	1/4"-1/2"	< 1.5	54+16	35	3 070
	MSH-NG-2 024	1	230 V-I	2 020	23	2 424	36	2 896	60	1.27	11.6	1 050	1/4"-1/2"	< 1.5	65+24	36	3 424
R-449A	MSH-NG-2 026	1 1/4	230 V-I *	2 230	26	2 640	41	3 131	64	1.36	12.0	1 050	1/4"-1/2"	< 1.5	66+24	38	3 586
	MSH-NG-2 034	1 1/2	230 V-I *	2 543	31	2 985	48	3 516	73	1.80	16.6	1 050	1/4"-5/8"	< 1.5	66+24	40	3 748
	MSH-NG-3 034	1 1/2	230 V-I *	3 091	40	3 674	63	4 364	100	1.67	17.0	1 725	1/4"-5/8"	< 3.5	74+45	39	3 930
	MSH-NG-3 038	1 3/4	400 V-III	3 459	47	4 060	71	4 786	110	1.53	7.8	1 725	1/4"-5/8"	< 4.0	71+45	40	4 195
	MSH-NG-4 048	2	400 V-III	4 494	66	5 350	98	6 358	155	2.61	10.5	1 725	3/8"-3/4"	< 5.5	95+45	41	4 867
	MSH-NG-4 054	2 1/2	400 V-III	4 949	74	5 847	110	6 916	170	2.80	11.0	1 725	3/8"-3/4"	< 5.5	96+45	41	5 202

Centrifugal version	Conden. airflow (m³/h)	ASP (mmca) ⁽⁴⁾	Price (€)
Series / Model			
MSH-CY-00 010	375	8	2 271
MSH-CY-00 015	375	8	2 461
MSH-CY-11 015	575	8	2 599
MSH-CY-11 026	575	8	3 361
MSH-CY-11 033	575	8	3 616
MSH-CY-22 033	1 000	12	4 032
MSH-CY-22 053	1 000	12	4 472
MSH-CY-33 053	1 500	14	4 674
MSH-CY-33 074	1 500	14	5 037
MSH-CY-43 086	3 500	10	5 870
MSH-CY-44 108	3 500	10	6 518
MSH-CY-44 136	3 500	10	8 149
MSH-CG-0 008	375	8	2 120
MSH-CG-0 010	375	8	2 298
MSH-CG-0 012	375	8	2 429
MSH-CG-1 014	575	8	2 743
MSH-CG-1 016	575	8	2 915
MSH-CG-1 018	575	8	3 144
MSH-CG-1 024	575	8	3 406
MSH-CG-2 024	1 000	12	3 785
MSH-CG-2 026	1 000	12	3 992
MSH-CG-2 034	1 000	12	4 164
MSH-CG-3 034	1 500	14	4 360
MSH-CG-3 038	1 500	14	4 649
MSH-CG-4 048	3 500	10	5 386
MSH-CG-4 054	3 500	10	5 734

230 V-I-50 Hz / 400 V-III-50 Hz | Negative temperature | R-449A

Axial version	Compressor		Cooling capacity according to cold room temperature ⁽¹⁾						Input power (kW)	Max. current (A)	Evap. airflow (m³/h)	Liq-Gas Cooling Connection	Refrig. load (kg) ⁽²⁾	Weight (kg)	SPL dB(A) ⁽³⁾	Price (€)	
			-25 °C		-20 °C		-15 °C										
			W	m³	W	m³	W	m³									
Series / Model	HP	Power supply															
R-449A	BSH-NG-0 018	5/8	230 V-I	422	0.9	537	1.8	658	3.9	0.60	4.8	300	1/4"-1/2"	< 1.5	41+12	33	2 432
	BSH-NG-1 026	3/4	230 V-I	559	2.1	711	4.2	900	7.3	0.84	8.7	550	1/4"-1/2"	< 2.5	55+16	38	2 593
	BSH-NG-1 034	1 1/4	230 V-I	622	3.0	858	5.9	1 038	10	1.05	11.2	550	1/4"-1/2"	< 2.5	56+16	40	2 888
	BSH-NG-2 034	1 1/4	230 V-I	815	4.0	1 056	8.0	1 377	14	1.18	11.5	1 050	1/4"-1/2"	< 2.5	66+24	41	3 173
	BSH-NG-2 054	1 3/4	230 V-I *	1 074	6.4	1 393	13	1 749	22	1.63	17.5	1 050	1/4"-5/8"	< 2.5	79+24	42	3 611
	BSH-NG-2 074	2 1/2	230 V-I *	1 300	10	1 692	17	2 070	29	1.94	25.5	1 050	1/4"-5/8"	< 2.5	79+24	43	4 214
	BSH-NG-3 074	2 1/2	230 V-I *	1 649	15	2 163	25	2 699	41	1.94	26.3	1 725	1/4"-5/8"	< 3.5	87+45	43	4 388
	BSH-NG-3 086	3	400 V-III	2 081	19	2 542	32	3 037	52	1.88	9.4	1 725	1/4"-5/8"	< 3.5	87+45	40	4 589
	BSH-NG-3 096	3 1/2	400 V-III	2 046	23	2 745	37	3 435	62	2.18	12.4	1 725	1/4"-3/4"	< 3.5	85+45	50	4 706
	BSH-NG-4 108	4 1/4	400 V-III	2 851	34	3 588	55	4 378	94	3.18	15.5	1 725	3/8"-7/8"	< 5.5	107+45	51	6 236
BSH-NG-4 136	5	400 V-III	3 289	42	4 064	67	4 895	110	4.37	17.4	1 725	3/8"-7/8"	< 5.5	107+45	46	6 968	

Centrifugal version	Conden. airflow (m³/h)	ASP (mmca) ⁽⁴⁾	Price (€)
Series / Model			
BSH-CG-0 018	375	8	2 625
BSH-CG-1 026	575	8	2 787
BSH-CG-1 034	575	8	3 099
BSH-CG-2 034	1 000	12	3 392
BSH-CG-2 054	1 000	12	3 884
BSH-CG-2 074	1 000	12	4 512
BSH-CG-3 074	1 500	14	4 739
BSH-CG-3 086	1 500	14	4 944
BSH-CG-3 096	1 500	14	5 310
BSH-CG-4 108	3 500	10	6 816
BSH-CG-4 136	3 500	10	7 587

Options

- Change to 400 V-III-50 Hz power supply. + 5 %
- Crankcase heater. + 60 €
- Proportional control of condensing pressure:
axial version (N): series 3/33 and 4/43/44 + 250 €
centrifugal version (C): series 4/43/44 + 400 €
- Vertical airflow (centrifugal version).
- Rectangular to circular exhaust air adaptor. + 100 €
- Built-in oil separator. + 590 €
- Anti-corrosion evaporator coil coating. + 6 %
- Anti-corrosion condenser coil coating. + 4 %
- Larger sized multifunction electronic control. + 150 €

⁽¹⁾ Nominal performances refer to operation with cold room temperatures of 0 °C (PT) and -20 °C (NT) ambient temperature of 35 °C. Estimated cold room volume according to conditions of the calculation bases (page 8).

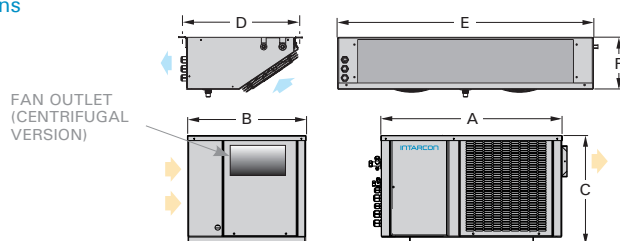
⁽²⁾ Units with refrigerant load less than 5 tons of CO₂ equivalent (3.8 kg of R-134a or R-449A) exempt from leak checking Regulation (EU) No 517/2014.

⁽³⁾ Sound pressure in dB (A) in open field at 10 m from the unit.

⁽⁴⁾ Available Static Pressure of condensation.

* Units available with 400 V-III-50 Hz power supply.

Dimensions



Dimensions (mm)	A	B	C	D	E	F	Evaporator fan	Fan outlet
series 0 and 00	600	395	355	400	520	150	1x Ø 172	185 x 115
series 1 and 11	665	435	416	430	600	200	1x Ø 200	185 x 115
series 2 and 22	835	435	500	430	950	200	2x Ø 200	230 x 130
series 3 and 33	925	580	515	508	1 650	200	3x Ø 254	236 x 266
series 4 and 43	1 000	615	585	508	1 650	200	3x Ø 254	305 x 266
series 44	1 000	615	585	544	2 020	265	4x Ø 300	305 x 266

230 V-I-50 Hz / 400 V-III-50 Hz | **Positive temperature** | R-134a / R-449A

Axial version	Compressor	Cooling capacity according to cold room temperature ⁽¹⁾						Input power (kW)	Max. current (A)	Evap. airflow (m ³ /h)	Liq-Gas Cooling Connection	Refrig. load (kg) ⁽²⁾	Weight (kg)	SPL dB(A) ⁽³⁾	Price (€)		
		0 °C		5 °C		10 °C											
		W	m ³	W	m ³	W	m ³										
R-134a	MSH-QY-30 068	3 1/2	400 V-III	3 854	54	4 646	59	5 513	84	2.00	12.0	2 100	1/4"-3/4"	< 4.0	74+43	48	4 943
	MSH-QY-40 086	4	400 V-III	4 431	63	5 418	68	6 500	100	2.35	14.3	2 100	3/8"-7/8"	< 5.0	107+43	49	5 778
	MSH-QY-41 108	5	400 V-III	5 324	71	6 500	80	7 775	110	2.77	17.3	2 700	3/8"-7/8"	< 5.0	109+56	50	6 418
	MSH-QY-42 136	6 1/2	400 V-III	7 235	110	8 773	180	10 474	280	3.85	22.0	4 150	3/8"-1 1/8"	< 5.0	112+72	50	8 022
	MSH-QY-53 171	8	400 V-III	7 830	135	9 535	185	11 520	300	4.25	24.1	5 200	3/8"-1 1/8"	< 5.5	162+89	50	9 302
	MSH-QY-53 215	10	400 V-III	9 450	175	11 435	230	13 740	350	5.01	30.5	6 200	3/8"-1 1/8"	< 5.5	166+94	49	10 232
	MSH-QY-54 271	13	400 V-III	12 400	240	14 760	320	17 420	400	7.13	40.2	8 300	1/2"-1 3/8"	< 5.5	171+118	48	11 977
R-449A	MSH-QG-30 034	1 1/2	230 V-I *	3 409	39	4 054	62	4 797	99	1.61	16.3	2 100	1/4"-5/8"	< 3.5	74+43	39	4 325
	MSH-QG-30 038	1 3/4	400 V-III	3 647	46	4 301	70	5 063	110	1.79	7.1	2 100	1/4"-5/8"	< 3.5	71+43	40	4 461
	MSH-QG-40 048	2	400 V-III	4 752	67	5 559	99	6 554	159	2.42	9.8	2 100	3/8"-3/4"	< 4.5	95+43	41	5 217
	MSH-QG-40 054	2 1/2	400 V-III	5 203	76	6 060	113	7 106	178	2.61	10.3	2 100	3/8"-3/4"	< 5.0	96+43	41	5 563
	MSH-QG-41 060	3	400 V-III	6 049	86	7 038	128	8 260	198	3.07	11.3	2 700	1/2"-3/4"	< 5.0	97+56	38	6 028
	MSH-QG-41 068	3 1/2	400 V-III	6 545	113	7 581	163	8 866	253	3.44	12.3	2 700	1/2"-3/4"	< 5.0	98+56	39	7 244
	MSH-QG-52 086	4	400 V-III	8 056	125	9 542	185	11 320	315	3.87	15.0	4 150	1/2"-7/8"	< 5.0	135+72	49	8 626
	MSH-QG-52 108	5	400 V-III	9 386	160	11 011	220	12 991	375	4.90	18.0	4 150	1/2"-7/8"	< 7.0	157+72	47	8 991
	MSH-QG-53 136	6 1/2	400 V-III	11 894	190	13 856	260	16 173	430	6.67	21.0	6 200	1/2"-1 1/8"	< 9.0	140+94	46	9 727

Centrifugal version	Conden. airflow (m ³ /h)	ASP (mmca) ⁽⁴⁾	Price (€)
MSH-CQY-30 068	1 500	14	5 484
MSH-CQY-40 086	3 500	10	6 411
MSH-CQY-41 108	3 500	10	7 124
MSH-CQY-42 136	3 500	10	8 905
MSH-CQY-53 171	3 600	10	10 254
MSH-CQY-53 215	3 600	10	11 248
MSH-CQY-54 271	3 600	10	13 234
MSH-CQG-30 034	1 500	14	4 739
MSH-CQG-30 038	1 500	14	4 880
MSH-CQG-40 048	3 500	10	5 644
MSH-CQG-40 054	3 500	10	5 996
MSH-CQG-41 060	3 500	10	6 468
MSH-CQG-41 068	3 500	10	7 701
MSH-CQG-52 086	3 600	12	9 090
MSH-CQG-52 108	3 600	12	9 455
MSH-CQG-53 136	3 600	12	10 191

230 V-I-50 Hz / 400 V-III-50 Hz | **Negative temperature** | R-449A

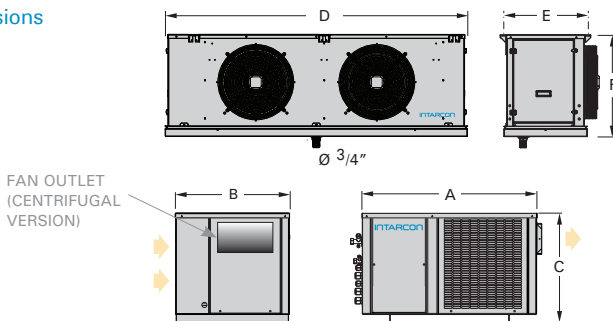
Axial version	Compressor	Cooling capacity according to cold room temperature ⁽¹⁾						Input power (kW)	Max. current (A)	Evap. airflow (m ³ /h)	Liq-Gas Cooling Connection	Refrig. load (kg) ⁽²⁾	Weight (kg)	SPL dB(A) ⁽³⁾	Price (€)		
		-25 °C		-20 °C		-15 °C											
		W	m ³	W	m ³	W	m ³										
R-449A	BSH-QG-30 074	2 1/2	230 V-I *	2 023	15	2 559	25	3 121	41	2.14	25.1	2 100	1/4"-5/8"	< 3.5	87+43	43	4 815
	BSH-QG-30 086	3	400 V-III	2 201	19	2 695	32	3 226	52	2.05	9.5	2 100	1/4"-5/8"	< 3.5	73+43	40	5 029
	BSH-QG-30 096	3 1/2	400 V-III	2 354	22	2 925	36	3 533	61	2.34	11.2	2 100	1/4"-3/4"	< 3.5	85+43	50	5 250
	BSH-QG-41 108	4 1/4	400 V-III	2 988	34	3 799	58	4 656	99	2.94	14.4	2 700	3/8"-7/8"	< 5.0	107+56	51	6 841
	BSH-QG-42 136	5	400 V-III	4 205	51	5 119	85	6 092	144	4.16	17.3	4 150	3/8"-7/8"	< 5.0	107+72	46	8 165
	BSH-QG-53 215	7 1/2	400 V-III	5 692	80	7 300	120	8 976	200	6.08	25.0	5 200	1/2"-1 1/8"	< 7.0	166+89	49	10 684
	BSH-QG-53 271	10	400 V-III	7 329	110	9 048	150	10 877	220	7.71	30.0	6 200	1/2"-1 1/8"	< 7.5	166+94	49	11 257

Centrifugal version	Conden. airflow (m ³ /h)	ASP (mmca) ⁽⁴⁾	Price (€)
BSH-CQG-30 074	1 500	14	5 084
BSH-CQG-30 086	1 500	14	5 295
BSH-CQG-30 096	1 500	14	5 732
BSH-CQG-41 108	3 500	10	7 313
BSH-CQG-42 136	3 500	10	8 657
BSH-CQG-53 215	3 600	12	11 177
BSH-CQG-53 271	3 600	12	11 749

Options

- Change to 400 V-III-50 Hz power supply. + 5 %
- Crankcase heater. + 60 €
- Proportional control of condensing pressure:
axial version (Q): + 250 €
centrifugal version (CQ): series 40/41/42/52/53/54 + 400 €
- Vertical airflow (centrifugal version).
- Rectangular to circular exhaust air adaptor. + 100 €
- Built-in oil separator. + 590 €
- Anti-corrosion evaporator coil coating. + 6 %
- Anti-corrosion condenser coil coating. + 4 %
- Larger sized multifunction electronic control. + 150 €

Dimensions



Dimensions (mm)	A	B	C	D	E	F	Evaporator fan	Fan outlet
series 30	925	580	515	881	455	553	1x Ø 350	236 x 266
series 40	1 000	615	585	881	455	553	1x Ø 350	305 x 266
series 41	1 000	615	585	1 231	455	553	1x Ø 350	305 x 266
series 42	1 000	615	585	1 531	455	553	2x Ø 350	305 x 266
series 52	1 290	755	656	1 531	455	553	2x Ø 350	305 x 266
MSH-QY-53 171 BSH-QG-53 215	1 290	755	656	1 531	455	553	2x Ø 350	305 x 266
series 53	1 290	755	656	1 932	455	553	3x Ø 350	305 x 266
series 54	1 290	755	656	2 432	455	553	4x Ø 350	305 x 266

⁽¹⁾ Nominal performances refer to operation with cold room temperatures of 0 °C (PT) and -20 °C (NT) ambient temperature of 35 °C. Estimated cold room volume according to conditions of the calculation bases (page 8).

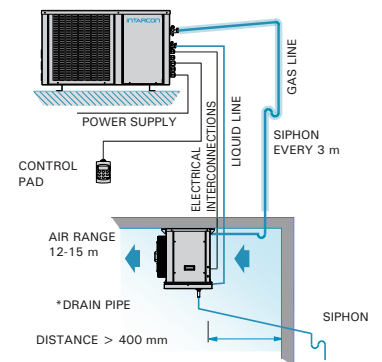
⁽²⁾ Units with refrigerant load less than 5 tons of CO₂ equivalent (3.8 kg of R-134a or R-449A) exempt from leak checking Regulation (EU) No 517/2014.

⁽³⁾ Sound pressure in dB (A) in open field at 10 m from the unit.

⁽⁴⁾ Available Static Pressure of condensation.

* Units available with 400 V-III-50 Hz power supply.

Installation scheme



* Minimum slope of the drain pipe of 20 % in negative temperature models.

Electrical interconnections

For the interconnection of the condenser and evaporator units, the following cable sections must be provided for a length of 10 m (except series 43 to 54). Voltage 400 V-III-50 Hz.

Fan series	0 - 1	3 - 4
Probes	4 x 1 mm ²	
Maneuver	3 x 1 mm ²	
Defrost	4 x 1.5 mm ² + T	4 x 2.5 mm ² + T
Thermostat	2 x 1 mm ²	
Switch door*	2 x 1 mm ² (+ 2 x 1 mm ² in BT)	
Cold room light*	2 x 1 mm ² + T	

* Optional not included. To know electrical interconnections of each model: see technical manual.

230 V-I-50 Hz / 400 V-III-50 Hz | High temperature | R-134a / R-449A

Axial version	Compressor	Cooling capacity according to cold room temperature ⁽¹⁾						Input power (kW)	Max. current (A)	Evap. airflow (m³/h)	Liq-Gas Cooling Connection	Refrig. load (kg) ⁽²⁾	Weight (kg)	SPL dB(A) ⁽³⁾	Price (€)	Centrifugal version	Conden. airflow (m³/h)	ASP (mmca) ⁽⁴⁾	Price (€)	
		9 °C		12 °C		15 °C														
		W	m³	W	m³	W	m³													
ASH-DY-11 015	1/2	230 V-I	1 555	14	1 733	19	1 928	26	0.75	5.9	1 100	1/4"-1/2"	< 2.0	48+32	27	3 060	ASH-CDY-11 015	575	8	3 394
ASH-DY-11 026	3/4	230 V-I	1 985	18	2 221	24	2 462	33	0.99	9.6	1 100	1/4"-1/2"	< 2.0	51+32	33	3 308	ASH-CDY-11 026	575	8	3 672
ASH-DY-11 033	1	230 V-I	2 378	22	2 636	29	2 903	40	1.37	9.8	1 100	1/4"-5/8"	< 2.0	51+32	34	3 713	ASH-CDY-11 033	575	8	4 122
ASH-DY-22 033	1	230 V-I	2 961	28	3 329	38	3 717	51	1.30	10.7	1 800	1/4"-5/8"	< 2.5	54+45	34	4 076	ASH-CDY-22 033	1 000	12	4 523
ASH-DY-22 053	1 1/2	230 V-I*	3 738	35	4 169	48	4 625	63	2.04	13.3	1 800	3/8"-3/4"	< 2.5	55+45	39	4 744	ASH-CDY-22 053	1 000	12	5 266
ASH-DY-33 053	1 1/2	230 V-I*	4 211	42	4 709	56	5 234	76	2.05	13.6	3 150	3/8"-3/4"	< 4.0	74+65	39	5 022	ASH-CDY-33 053	1 500	14	5 577
ASH-DY-33 074	2	230 V-I*	5 502	58	6 148	77	6 830	104	2.74	17.6	3 150	3/8"-3/4"	< 4.0	71+65	39	5 977	ASH-CDY-33 074	1 500	14	6 631
ASH-DY-43 086	4	400 V-III	7 124	74	8 001	98	8 915	131	3.16	15.4	3 150	3/8"-7/8"	< 6.5	107+65	41	6 681	ASH-CDY-43 086	3 500	10	7 417
ASH-DY-43 108	5	400 V-III	8 216	85	9 177	111	10 206	148	3.76	18.4	3 150	3/8"-7/8"	< 6.0	109+65	43	7 332	ASH-CDY-43 108	3 500	10	8 139
ASH-DY-44 108	5	400 V-III	8 873	92	9 954	121	11 062	160	4.08	18.4	5 700	3/8"-7/8"	< 6.0	112+70	43	8 035	ASH-CDY-44 108	3 500	10	8 919
ASH-DY-44 136	6 1/2	400 V-III	10 988	114	12 206	148	13 498	195	4.57	22.4	5 700	1/2"-1 1/8"	< 6.0	112+70	45	8 839	ASH-CDY-44 136	3 500	10	9 811
ASH-DG-1 010	3/8	230 V-I	1 237	10	1 341	14	1 455	19	0.77	5.2	1 100	1/4"-3/8"	< 2.5	42+32	32	2 804	ASH-CDG-1 010	575	8	3 169
ASH-DG-1 012	1/2	230 V-I	1 419	12	1 535	16	1 664	22	0.82	6.2	1 100	1/4"-3/8"	< 2.5	43+32	28	2 923	ASH-CDG-1 012	575	8	3 304
ASH-DG-2 014	1/2	230 V-I	1 829	16	1 965	22	2 109	29	0.95	7.4	1 100	1/4"-1/2"	< 3.0	45+32	32	3 045	ASH-CDG-2 014	1 000	12	3 438
ASH-DG-2 016	5/8	230 V-I	2 014	18	2 169	24	2 338	33	1.03	8.3	1 100	1/4"-1/2"	< 3.0	54+32	34	3 163	ASH-CDG-2 016	1 000	12	3 563
ASH-DG-2 018	3/4	230 V-I	2 309	22	2 481	28	2 675	38	1.23	9.6	1 100	1/4"-1/2"	< 3.0	55+32	35	3 343	ASH-CDG-2 018	1 000	12	3 748
ASH-DG-2 024	1	230 V-I	2 988	27	3 228	36	3 480	47	1.61	11.8	1 800	3/8"-5/8"	< 3.0	55+45	36	3 759	ASH-CDG-2 024	1 000	12	4 178
ASH-DG-3 026	1 1/4	230 V-I*	3 434	33	3 709	42	3 996	57	1.76	11.7	1 800	3/8"-5/8"	< 3.5	74+45	38	4 033	ASH-CDG-3 026	1 500	14	4 523
ASH-DG-3 034	1 1/2	230 V-I*	4 376	41	4 692	54	5 048	72	2.26	16.5	1 800	3/8"-5/8"	< 4.0	74+45	41	4 535	ASH-CDG-3 034	1 850	14	5 035
ASH-DG-3 038	1 3/4	400 V-III	5 011	47	5 356	62	5 733	85	2.15	7.3	1 800	3/8"-5/8"	< 4.0	71+45	40	5 157	ASH-CDG-3 038	1 850	14	5 679
ASH-DG-4 048	2	400 V-III	6 667	66	7 151	86	7 673	115	2.98	10.2	3 150	1/2"-3/4"	< 5.5	95+65	41	5 686	ASH-CDG-4 048	3 500	10	6 224
ASH-DG-4 054	2 1/2	400 V-III	7 362	73	7 875	95	8 446	125	3.23	10.7	3 150	1/2"-3/4"	< 5.5	96+65	41	6 034	ASH-CDG-4 054	3 500	10	6 573
ASH-DG-4 060	3	400 V-III	8 369	82	8 974	105	9 614	140	3.96	12.2	3 800	1/2"-7/8"	< 6.0	97+65	35	6 620	ASH-CDG-4 060	3 500	10	7 159
ASH-DG-4 068	3 1/2	400 V-III	9 113	89	9 753	115	10 442	150	4.47	13.2	3 800	1/2"-7/8"	< 6.0	98+65	39	7 255	ASH-CDG-4 068	3 500	10	7 796

Options

- Change to 400 V-III-50 Hz power supply. + 5 %
- Crankcase heater. + 60 €
- Proportional control of condensing pressure: axial version (D): series 3/33 and 4/43/44 + 250 €
centrifugal version (CD): series 4/43/44 + 400 €
- Vertical airflow (centrifugal version).
- Rectangular to circular exhaust air adaptor. + 100 €
- Built-in oil separator. + 590 €
- Anti-corrosion evaporator coil coating. + 6 %
- Anti-corrosion condensator coil coating. + 4 %
- Condensed water pump. + 120 €
- Larger sized multifunction electronic control. + 150 €

⁽¹⁾ Nominal performances refer to operation with cold room temperatures of 12 °C (HT) ambient temperature of 35 °C. Estimated cold room volume according to conditions of the calculation bases (page 8).

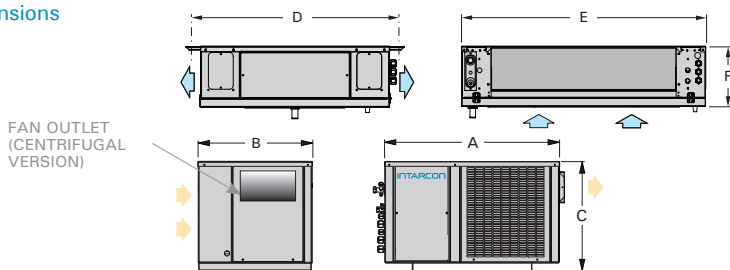
⁽²⁾ Units with refrigerant load less than 5 tons of CO₂ equivalent (3.8 kg of R-134a or R-449A) exempt from leak checking Regulation (EU) No 517/2014.

⁽³⁾ Sound pressure in dB (A) in open field at 10 m from the unit.

⁽⁴⁾ Available Static Pressure of condensation.

* Units available with 400 V-III-50 Hz power supply.

Dimensions



Dimensions (mm)	A	B	C	D	E	F	Evaporator fan	Fan outlet
series 11	665	435	416	798	706	245	1x Ø 360	185 x 115
series 22	835	435	500	798	1 056	245	2x Ø 360	230 x 130
series 33	925	580	515	798	1 756	245	2x Ø 360	305 x 266
series 43	1 000	615	585	798	1 756	245	3x Ø 360	305 x 266
series 44	1 000	615	585	888	2 156	295	3x Ø 450	305 x 266
series 1	665	435	416	798	706	245	1x Ø 360	185 x 115
ASH-DG 2 014 to 2 018	835	435	500	798	706	245	1x Ø 360	230 x 130
ASH-DG 2 024	835	435	500	798	1 056	245	2x Ø 360	230 x 130
series 3	925	580	515	798	1 056	245	2x Ø 360	236 x 266
series 4	1 000	615	585	798	1 756	245	3x Ø 360	305 x 266

Exhaust duct

Recommended size for 20 m long steel, PVC or fiberglass ducts (each elbow at 90° equals 5 m in length). For flexible or semi-flexible ducts use a larger size.

- series 0: 200 x 150 mm.
- series 1: 200 x 200 mm.
- series 2: 250 x 150 mm.
- series 3: 200 x 300 mm.
- series 4 and 5: 350 x 400 mm.

Electrical interconnections

For the interconnection of the condenser and evaporator units, the following cable sections must be provided for a length of 10 m (except series 4, 43 and 44).

Fan voltage	230 V-I-50 Hz	400 V-III-50 Hz
Fan series	1 - 2	3 - 4 - 5
Probes	4 x 1 mm ²	
Maneuver	2 x 1 mm ² + T	3 x 1 mm ² + T 5 x 1 mm ² + T
Defrost	-	
Thermostat	2 x 1 mm ²	
Switch door*	2 x 1 mm ² (+ 2 x 1 mm ² in NT)	
Cold room light*	2 x 1 mm ² + T	

* Optional not included.

To know electrical interconnections of each model: see technical manual.

Sigilus



Description

Split systems for small and medium size cold rooms at positive and negative temperature, composed of a low-noise condensing unit and a slim-type, cubic-type or double flow evaporating unit.

Features

- 230 V-I-50 Hz or 400 V-III-50 Hz power supply.
- Minimal R-134a / R-449A refrigerant load.
- Hermetic reciprocating compressor with double noise insulation, discharge muffler (for models 1 HP or more) and crankcase heater.
- Large surface L-shape condensing coil (straight for series O and 1).
- Low-speed and low-noise condensing motor fans.
- Proportional control of condensing pressure (as option for -N version).
- High and low pressure switches.
- Liquid receiver with refrigerant preload for 10 m of pipe.
- Evaporating unit: slim-type (-N version) or cubic-type (-Q version).
- Built-in thermostatic expansion and solenoid valves.
- Electrical heater defrost (except ASF series).
- Stainless steel drain pan.
- Flare-type connections (up to 1/2"-3/4") and service valves.
- MCB protection.
- Multifunctional electronic control with remote keyboard.
- Liquid injection system for negative temperature models with R-449A.

SF-N series

Split with Sigilus condensing unit and slim-type evaporator.

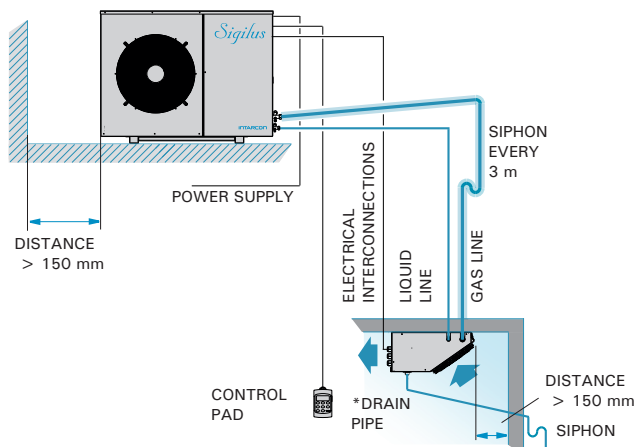
SF-Q series

Split with Sigilus condensing unit and cubic evaporator.

SF-D series

Split with Sigilus condensing unit and double-flow evaporator.

Installation scheme



Maximum vertical distance between units of 15 m if the condensing unit is placed at a higher level than the evaporating unit, and 6 m otherwise.

* 20 % minimum slope for drain tube for negative temperature models.

- ❄ Factory-tested systems with no need for on-site tests.
- ❄ Low-noise condensing unit.
- ❄ Tropicalised design for high ambient temperature up to 50 °C.
- ❄ Built-in thermostatic expansion valve.
- ❄ Proportional control of condensing pressure (optional in series NG and NY).
- ❄ Refrigerant preloaded.
- ❄ Units exempt from leak checks.

Control pad

Sigilus split systems feature XM670K electronic control as standard.



- Remote control keyboard with digital display.
- Temperature control with maximum and minimum temperature value recording.
- Fast-freezing function and night operation mode.

Triple noise insulation

Sigilus units feature triple noise insulation:

- Noise insulated compressor compartment, separated from the airflow.
- Hermetic reciprocating compressor with insulation cover (three-phase models) and discharge muffler.
- Low-noise and low-speed fan on shock absorbing structure.

Proportional control of condensing pressure

Proportional control of condensing pressure, for prolonged operation at under low ambient temperature, standard for Sigilus series (option for -N Versions).

Electrical interconnections

For the interconnection of the condenser and evaporator units, the following cable sections must be provided for a length of 10 m (hoses not included):

Fan voltage	230 V-I-50 Hz	400 V-III-50 Hz
Fan series	0 - 3	3 - 4
Probes	4 x 1 mm ²	
Maneuver	2 x 1.5 mm ²	
Defrost	2 x 1.5 mm ² + T	4 x 1.5 mm ² + T
Thermostat	2 x 1 mm ²	
Switch door*	2 x 1 mm ² (+ 2 x 1 mm ² in NT)	
Cold room light*	2 x 1 mm ² + T	

* Optional not included. To know electrical interconnections of each model: see technical manual.

230 V-I-50 Hz / 400 V-III-50 Hz | Positive temperature | R-134a / R-449A

Series / Model	Compressor		Cooling capacity according to cold room temperature ⁽¹⁾								Input power (kW)	Max. current (A)	Fan evap.	Evap. airflow (m ³ /h)	Conden. airflow (m ³ /h)	Liq-Gas Cooling Connection	Refrig. load (kg) ⁽²⁾	Weight (kg)	SPL dB(A) ⁽³⁾	Price (€)
	HP	Power supply	-5 °C		0 °C		5 °C		10 °C											
			W	m ³	W	m ³	W	m ³	W	m ³										
MSF-NY-00 010	3/8	230 V-I	497	2.9	637	5.0	788	8.8	945	13	0.41	4.2	1x Ø 172	300	350	1/4"-3/8"	< 1.5	46+12	20	2 229
MSF-NY-00 015	1/2	230 V-I	653	3.6	832	7.4	1 004	11	1 188	16	0.51	5.2	1x Ø 172	300	350	1/4"-3/8"	< 1.5	49+12	19	2 458
MSF-NY-11 015	1/2	230 V-I	805	4.7	1 031	10	1 296	14	1 582	28	0.56	5.6	1x Ø 200	550	1 700	1/4"-1/2"	< 2.0	57+16	19	2 572
MSF-NY-11 026	3/4	230 V-I	1 076	9.0	1 412	16	1 738	25	2 084	40	0.80	9.2	1x Ø 200	550	1 700	1/4"-1/2"	< 2.0	65+16	22	3 125
MSF-NY-12 033	1	230 V-I	1 475	13	1 859	20	2 289	35	2 741	57	1.02	9.7	2x Ø 200	1 050	1 700	1/4"-5/8"	< 2.0	67+24	22	3 905
MSF-NY-12 053	1 1/2	230 V-I *	1 811	22	2 347	33	2 872	50	3 439	79	1.42	12.3	2x Ø 200	1 050	1 700	1/4"-5/8"	< 2.0	77+24	27	4 579
MSF-NY-13 074	2	230 V-I *	2 772	30	3 528	50	4 363	76	5 229	125	1.94	17.2	3x Ø 254	1 725	1 700	1/4"-3/4"	< 3.5	79+45	28	4 987
MSF-NY-23 086	4	400 V-III	3 355	39	4 384	65	5 376	108	6 437	160	2.18	14.1	3x Ø 254	1 725	3 700	3/8"-7/8"	< 4.5	96+45	39	5 445
MSF-NY-24 108	5	400 V-III	4 347	58	5 649	90	6 920	138	8 316	220	2.83	18.2	4x Ø 300	3 100	3 700	3/8"-7/8"	< 5.0	98+45	37	6 401
MSF-NY-24 136	6 1/2	400 V-III	5 486	75	6 899	110	8 363	150	9 949	280	3.55	22.2	4x Ø 300	3 100	3 700	3/8"-1 1/8"	< 5.5	101+55	36	8 000
MSF-NY-34 171	8	400 V-III	6 080	88	7 613	130	9 240	200	10 978	350	4.16	25.2	4x Ø 300	3 100	4 000	3/8"-1 1/8"	< 5.5	140+55	36	9 118
MSF-NG-0 008	1/3	230 V-I	611	2.9	759	5.0	915	8.8	1 103	13	0.43	5.1	1x Ø 172	300	350	1/4"-3/8"	< 1.5	47+12	20	2 100
MSF-NG-0 010	3/8	230 V-I	739	3.6	894	6.1	1 056	10	1 254	15	0.53	4.8	1x Ø 172	300	350	1/4"-3/8"	< 1.5	49+12	21	2 315
MSF-NG-0 012	1/2	230 V-I	818	4.7	981	7.4	1 153	12	1 358	21	0.63	5.6	1x Ø 172	300	350	1/4"-3/8"	< 1.5	50+12	20	2 423
MSF-NG-1 014	1/2	230 V-I	882	8.0	1 095	12	1 322	20	1 585	34	0.77	6.5	1x Ø 200	550	1 700	1/4"-1/2"	< 2.0	59+16	20	2 702
MSF-NG-1 016	5/8	230 V-I	972	10	1 210	15	1 462	24	1 759	40	0.81	7.4	1x Ø 200	550	1 700	1/4"-1/2"	< 2.0	67+16	23	2 945
MSF-NG-1 018	3/4	230 V-I	1 397	12	1 649	19	1 915	28	2 245	45	0.94	8.7	1x Ø 200	550	1 700	1/4"-1/2"	< 2.0	68+16	24	3 273
MSF-NG-2 024	1	230 V-I	1 513	14	1 958	22	2 420	35	2 958	57	1.26	11.1	2x Ø 200	1 050	1 700	1/4"-1/2"	< 2.5	82+24	24	3 680
MSF-NG-2 026	1 1/4	230 V-I *	1 712	16	2 147	25	2 611	39	3 157	64	1.44	11.5	2x Ø 200	1 050	1 700	1/4"-1/2"	< 2.5	83+24	27	3 845
MSF-NG-2 034	1 1/2	230 V-I *	2 120	21	2 606	33	3 117	50	3 730	79	1.83	16.1	2x Ø 200	1 050	1 700	1/4"-5/8"	< 2.5	83+24	29	4 074
MSF-NG-3 038	1 3/4	400 V-III	2 770	29	3 394	46	4 078	71	4 894	112	1.89	8.1	3x Ø 254	1 725	3 200	1/4"-5/8"	< 3.0	82+45	30	4 524
MSF-NG-4 048	2	400 V-III	3 368	39	4 231	62	5 158	92	6 225	145	2.34	9.6	3x Ø 254	1 725	3 700	3/8"-3/4"	< 4.5	84+45	30	4 916
MSF-NG-4 054	2 1/2	400 V-III	3 792	47	4 671	70	5 640	105	6 780	160	2.54	10.1	3x Ø 254	1 725	3 700	3/8"-3/4"	< 5.5	85+45	30	5 251

230 V-I-50 Hz / 400 V-III-50 Hz | Negative temperature | R-449A

Series / Model	Compressor		Cooling capacity according to cold room temperature ⁽¹⁾						Input power (kW)	Max. current (A)	Fan evap.	Evap. airflow (m ³ /h)	Conden. airflow (m ³ /h)	Liq-Gas Cooling Connection	Refrig. load (kg) ⁽²⁾	Weight (kg)	SPL dB(A) ⁽³⁾	Price (€)
	HP	Power supply	-25 °C		-20 °C		-15 °C											
			W	m ³	W	m ³	W	m ³										
BSF-NG-0 018	5/8	230 V-I	486	1.1	613	2.3	749	4.1	0.50	4.7	1x Ø 172	300	350	1/4"-1/2"	< 1.5	50+12	25	2 720
BSF-NG-1 026	3/4	230 V-I	763	3.2	952	7.0	1 155	13	0.82	8.5	1x Ø 200	550	1 700	1/4"-1/2"	< 2.0	67+16	27	3 311
BSF-NG-2 034	1 1/4	230 V-I	930	3.9	1 107	8.1	1 437	15	1.18	11.3	2x Ø 200	1 050	1 700	1/4"-1/2"	< 2.0	83+16	30	3 514
BSF-NG-2 054	1 3/4	230 V-I *	1 186	6.8	1 385	13	1 779	23	1.58	17.3	2x Ø 200	1 050	1 700	1/4"-5/8"	< 2.5	93+24	32	4 103
BSF-NG-2 074	2 1/2	230 V-I *	1 412	12	1 786	20	2 200	32	1.83	25.3	2x Ø 200	1 050	1 700	1/4"-5/8"	< 2.5	93+24	33	4 322
BSF-NG-3 074	2 1/2	230 V-I *	1 676	15	2 168	25	2 680	41	1.94	26.2	3x Ø 254	1 725	1 700	1/4"-5/8"	< 3.0	93+45	33	4 635
BSF-NG-3 086	3	400 V-III	1 995	16	2 490	32	3 014	52	2.21	10.9	3x Ø 254	1 725	3 200	1/4"-5/8"	< 3.5	84+45	27	5 192
BSF-NG-4 096	3 1/2	400 V-III	2 139	19	2 670	39	3 523	68	2.48	12.0	3x Ø 254	1 725	3 700	3/8"-3/4"	< 5.0	97+45	40	6 181
BSF-NG-4 108	4 1/4	400 V-III	2 463	29	3 276	50	4 118	78	2.82	14.6	3x Ø 254	1 725	3 700	3/8"-7/8"	< 5.0	97+45	38	6 692
BSF-NG-4 136	5	400 V-III	2 949	37	3 775	61	4 648	100	3.64	16.8	3x Ø 254	1 725	3 700	3/8"-7/8"	< 5.0	100+45	34	7 220

Options

- Change to 400 V-III-50 Hz power supply. + 5 %
- Proportional control of condensing pressure through fan speed variation (except series O). + 250 €
- Coil protection grille. + 90 €
- Built-in oil separator. + 590 €
- Anti-corrosion evaporator coil coating. + 6 %
- Anti-corrosion condenser coil coating. + 4 %
- Larger sized multifunction electronic control. + 150 €

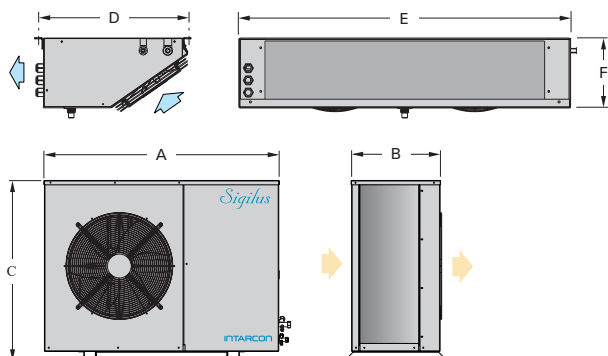
⁽¹⁾ Nominal performances refer to operation with cold room temperatures of 0 °C (PT) and -20 °C (NT) ambient temperature of 35 °C. Estimated cold room volume according to conditions of the calculation bases (page 8).

⁽²⁾ Units with refrigerant load less than 5 tons of CO₂ equivalent (3.8 kg of R-134a or R-449A) exempt from leak checking Regulation (EU) No 517/2014.

⁽³⁾ Sound pressure in dB (A) in open field at 10 m from the unit.

* Units available with 400 V-III-50 Hz power supply.

Dimensions



Dimensions (mm)	A	B	C	D	E	F	Evaporator fans
series 0 and 00	670	308	440	400	520	150	1x Ø 172
series 1 and 11	1 030	375	580	430	600	200	1x Ø 200
series 2 and 12	1 030	375	580	430	950	200	2x Ø 200
series 3 and 13	1 030	375	580	508	1 650	200	3x Ø 254
series 4 and 23	1 080	415	830	508	1 650	200	3x Ø 254
series 24	1 080	415	830	544	2 020	265	4x Ø 300
series 34	1 150	480	1 100	544	2 020	265	4x Ø 300

230 V-I-50 Hz / 400 V-III-50 Hz | Positive temperature | R-134a | R-449A

Series / Model	Compressor		Cooling capacity according to cold room temperature ⁽¹⁾								Input power (kW)	Max. current (A)	Fan evap.	Evap. airflow (m ³ /h)	Conden. airflow (m ³ /h)	Liq-Gas Cooling Connection	Refrig. load (kg) ⁽²⁾	Weight (kg)	SPL dB(A) ⁽³⁾	Price (€)	
	HP	Power supply	-5 °C				10 °C														
			W	m ³	W	m ³	W	m ³	W	m ³											
R-134a	MSF-QY-10 068	3 1/2	400 V-III	3 281	42	4 106	60	4 998	69	5 985	110	1.98	12.8	1x Ø 350	2 100	3 200	1/4"-3/4"	< 4.0	82+43	36	5 856
	MSF-QY-20 086	4	400 V-III	3 523	45	4 442	65	5 429	75	6 515	120	2.19	14.8	1x Ø 350	2 100	3 700	3/8"-7/8"	< 4.5	96+43	39	6 338
	MSF-QY-21 108	5	400 V-III	4 226	58	5 334	81	6 521	130	7 807	210	2.56	16.3	1x Ø 350	2 700	3 700	3/8"-7/8"	< 5.0	98+56	37	6 911
	MSF-QY-22 136	6 1/2	400 V-III	5 749	80	7 277	120	8 831	186	10 553	290	3.63	21.1	2x Ø 350	4 150	3 700	3/8"-1 1/8"	< 5.0	101+72	36	8 330
	MSF-QY-33 171	8	400 V-III	6 746	100	8 484	172	10 295	197	12 306	354	4.42	24.1	2x Ø 350	5 200	4 000	3/8"-1 1/8"	< 7.0	140+89	39	9 494
	MSF-QY-33 215	10	400 V-III	8 426	130	10 563	241	12 857	268	15 419	440	5.24	30.5	3x Ø 350	6 200	6 500	3/8"-1 1/8"	< 7.5	147+94	35	10 450
R-449A	MSF-QY-34 271	13	400 V-III	11 099	165	13 776	256	16 622	346	19 777	550	7.19	40.2	4x Ø 350	8 300	6 500	1/2"-1 3/8"	< 8.5	152+118	35	13 234
	MSF-QG-10 038	1 3/4	400 V-III	3 280	31	3 919	48	4 625	75	5 472	120	1.77	7.4	1x Ø 350	2 100	3 200	1/4"-5/8"	< 3.0	82+43	30	5 238
	MSF-QG-20 048	2	400 V-III	3 964	43	4 736	63	5 572	95	6 605	150	2.21	8.8	1x Ø 350	2 100	3 700	3/8"-3/4"	< 5.0	84+43	30	5 667
	MSF-QG-20 054	2 1/2	400 V-III	4 395	48	5 197	72	6 078	110	7 158	170	2.38	9.4	1x Ø 350	2 100	3 700	3/8"-3/4"	< 5.0	85+43	30	5 912
	MSF-QG-21 060	3	400 V-III	5 081	61	6 032	89	7 055	130	8 328	200	2.84	10.4	1x Ø 350	2 700	3 700	3/8"-3/4"	< 5.0	88+56	29	6 448
	MSF-QG-21 068	3 1/2	400 V-III	5 519	78	6 528	110	7 601	160	8 942	250	3.21	11.4	1x Ø 350	2 700	3 700	3/8"-3/4"	< 7.0	88+56	29	7 450
	MSF-QG-32 086	4	400 V-III	6 787	91	8 180	130	9 707	190	11 545	300	4.13	13.6	2x Ø 350	4 150	4 000	1/2"-7/8"	< 7.0	115+72	39	8 490
	MSF-QG-32 108	5	400 V-III	8 623	125	10 181	175	11 880	255	13 969	400	5.05	16.7	2x Ø 350	4 150	6 500	1/2"-7/8"	< 7.0	120+72	37	9 345
MSF-QG-43 136	6 1/2	400 V-III	11 105	160	13 146	220	15 399	320	18 145	500	6.63	21.5	3x Ø 350	6 200	7 000	1/2"-1 1/8"	< 10.0	135+89	36	11 115	
MSF-QG-44 160	8	400 V-III	11 597	170	14 009	230	16 660	340	19 806	530	7.59	26.0	4x Ø 350	8 300	7 000	5/8"-1 1/8"	< 10.0	157+118	45	13 047	

230 V-I-50 Hz / 400 V-III-50 Hz | Negative temperature | R-449A

Series / Model	Compressor		Cooling capacity according to cold room temperature ⁽¹⁾						Input power (kW)	Max. current (A)	Fan evap.	Evap. airflow (m ³ /h)	Conden. airflow (m ³ /h)	Liq-Gas Cooling Connection	Refrig. load (kg) ⁽²⁾	Weight (kg)	SPL dB(A) ⁽³⁾	Price (€)	
	HP	Power supply	-25 °C		-20 °C		-15 °C												
			W	m ³	W	m ³	W	m ³											
R-449A	BSF-QG-10 074	2 1/2	230 V-I *	2 052	15	2 562	25	3 015	44	2.13	25.1	1x Ø 350	2 100	1 700	1/4"-5/8"	< 3.0	93+43	33	5 235
	BSF-QG-10 086	3	400 V-III	2 302	17	2 837	32	3 410	56	2.06	9.8	1x Ø 350	2 100	3 200	1/4"-5/8"	< 3.0	84+43	27	5 819
	BSF-QG-20 096	3 1/2	400 V-III	2 456	20	3 135	43	3 881	74	2.39	11.5	1x Ø 350	2 100	3 700	1/4"-3/4"	< 4.0	97+43	40	6 989
	BSF-QG-21 108	4 1/4	400 V-III	3 023	28	3 883	50	4 772	86	2.76	13.5	1x Ø 350	2 700	3 700	1/4"-7/8"	< 5.0	97+56	38	7 524
	BSF-QG-22 136	5	400 V-III	4 159	53	5 116	83	6 146	130	4.02	16.4	2x Ø 350	4 150	3 700	3/8"-1 1/8"	< 5.0	97+72	34	8 950
	BSF-QG-33 215	7 1/2	400 V-III	5 970	80	7 605	130	9 334	200	5.63	25.8	3x Ø 350	6 200	6 500	1/2"-1 1/8"	< 7.5	147+94	40	11 312
	BSF-QG-34 271	10	400 V-III	8 005	120	9 839	185	11 798	230	7.15	28.2	4x Ø 350	8 300	6 500	1/2"-1 3/8"	< 8.5	147+118	40	12 670

Options

- Change to 400 V-III-50 Hz power supply. + 5 %
- Coil protection grille. + 90 €
- Built-in oil separator. + 590 €
- Anti-corrosion evaporator coil coating. + 6 %
- Anti-corrosion condensator coil coating. + 4 %
- Larger sized multifunction electronic control. + 150 €

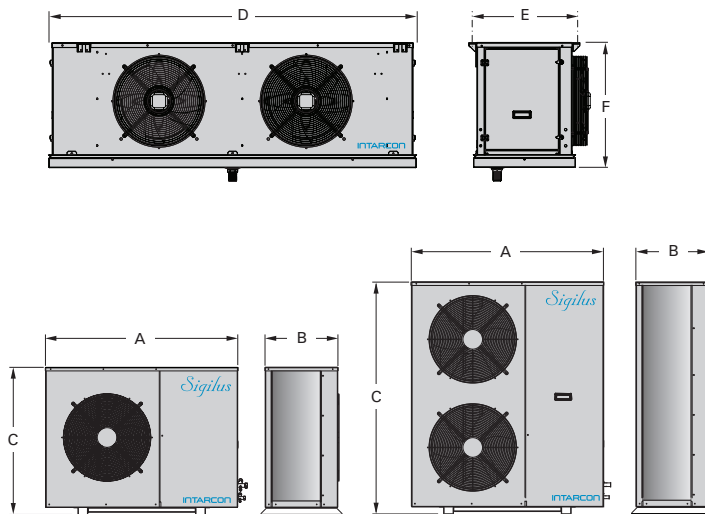
⁽¹⁾ Nominal performances refer to operation with cold room temperatures of 0 °C (PT) and -20 °C (NT) ambient temperature of 35 °C. Estimated cold room volume according to conditions of the calculation bases (page 8).

⁽²⁾ Units with refrigerant load less than 5 tons of CO₂ equivalent (3.8 kg of R-134a or R-449A) exempt from leak checking Regulation (EU) No 517/2014.

⁽³⁾ Sound pressure in dB (A) in open field at 10 m from the unit.

* Units available with 400 V-III-50 Hz power supply.

Dimensions



Electrical interconnections

For the interconnection of the condenser and evaporator units, the following cable sections must be provided for a length of 10 m (except series 43 and 44).

Fan voltage		400 V-III-50 Hz	
Fan series	0 - 1	3 - 4	
Probes	4 x 1 mm ²		
Maneuver	3 x 1 mm ²		
Defrost	4 x 1.5 mm ² + T	4 x 2.5 mm ² + T	
Thermostat	2 x 1 mm ²		
Switch door*	2 x 1 mm ² (+ 2 x 1 mm ² in NT)		
Cold room light*	2 x 1 mm ² + T		

* Optional not included. To know electrical interconnections of each model: see technical manual.

Dimensions (mm)	A	B	C	D	E	F
series 10	1 030	375	580	881	455	553
series 20	1 080	415	830	881	455	553
series 21	1 080	415	830	1 231	455	553
series 22	1 080	415	830	1 531	455	553
series 32	1 150	480	1 100	1 531	455	553
series 33	1 150	480	1 100	1 932	455	553
series 34	1 150	480	1 100	2 432	455	553
series 43	1 150	480	1 350	1 932	455	553
series 44	1 150	480	1 350	2432	455	553

230 V-I-50 Hz / 400 V-III-50 Hz | High temperature | R-134a / R-449A

Series / Model	Compressor		Cooling capacity according to cold room temperature ⁽¹⁾						Input power (kW)	Max. current (A)	Evap. airflow (m³/h)	Condens. airflow (m³/h)	Liq-Gas Cooling Connection	Refrig. load (kg) ⁽²⁾	Weight (kg)	SPL dB(A) ⁽³⁾	Price (€)	
	HP	Power supply	+ 9 °C		+ 12 °C		+ 15 °C											
			W	m³	W	m³	W	m³										
R-134a	ASF-DY-11 015	1/2	230 V-I	1 687	16	1 922	21	2 160	29	0.69	4.7	1 100	1 700	1/4"-1/2"	< 2.5	57+32	20	3 537
	ASF-DY-11 026	3/4	230 V-I	2 342	23	2 678	30	2 977	41	1.05	8.4	1 100	1 700	1/4"-1/2"	< 2.5	65+32	22	3 790
	ASF-DY-12 033	1	230 V-I	2 840	27	3 176	36	3 533	48	1.33	10.4	1 800	1 700	1/4"-5/8"	< 3.0	67+45	22	4 265
	ASF-DY-13 053	1 1/2	230 V-I *	4 226	42	4 730	56	5 271	72	2.04	13.6	3 150	1 700	3/8"-3/4"	< 4.0	77+65	27	5 362
	ASF-DY-13 074	2	230 V-I *	6 053	62	6 825	83	7 634	112	2.61	17.6	3 150	3 200	3/8"-3/4"	< 4.5	79+65	28	6 233
	ASF-DY-23 086	4	400 V-III	7 151	75	8 033	99	8 957	131	2.90	14.4	3 150	3 700	3/8"-7/8"	< 5.0	96+65	39	6 841
	ASF-DY-24 108	5	400 V-III	8 936	99	10 028	122	11 146	165	3.80	17.5	5 700	3 700	3/8"-7/8"	< 5.5	98+70	37	7 585
	ASF-DY-24 136	6 1/2	400 V-III	11 093	128	12 332	168	13 645	224	5.00	21.2	5 700	3 700	1/2"-1 1/8"	< 6.0	98+70	36	9 684
	ASF-DY-34 171	8	400 V-III	13 424	146	14 989	186	16 669	251	5.88	25.2	5 700	6 500	1/2"-1 1/8"	< 6.0	120+70	40	11 517
ASF-DY-44 215	10	400 V-III	15 771	171	17 593	218	19 546	294	6.61	30.2	5 700	7 000	1/2"-1 3/8"	< 9.5	120+70	40	12 667	
R-449A	ASF-DG-1 016	5/8	230 V-I	2 161	19	2 387	25	2 635	35	0.99	7.5	1 100	1 700	1/4"-1/2"	< 2.5	67+32	23	3 380
	ASF-DG-1 018	3/4	230 V-I	2 462	23	2 709	30	2 961	42	1.18	8.8	1 100	1 700	1/4"-1/2"	< 2.5	68+32	24	3 623
	ASF-DG-1 024	1	230 V-I	3 225	29	3 539	39	3 879	51	1.53	11.3	1 800	1 700	3/8"-5/8"	< 3.5	82+45	24	4 077
	ASF-DG-1 026	1 1/4	230 V-I *	3 709	35	4 078	46	4 466	63	1.75	12.0	1 800	3 200	3/8"-5/8"	< 3.5	83+45	27	4 261
	ASF-DG-1 034	1 1/2	230 V-I *	4 607	43	5 046	58	5 494	77	2.24	16.6	1 800	3 200	3/8"-5/8"	< 3.5	83+45	29	4 839
	ASF-DG-1 038	1 3/4	400 V-III	5 393	52	5 885	68	6 410	91	2.20	7.8	3 150	3 200	3/8"-5/8"	< 4.0	82+65	30	5 368
	ASF-DG-2 048	2	400 V-III	6 722	67	7 343	87	7 962	115	2.76	9.3	3 150	3 700	1/2"-3/4"	< 5.0	84+65	30	5 944
	ASF-DG-2 054	2 1/2	400 V-III	7 447	75	8 113	97	8 793	130	3.00	9.8	3 150	3 700	1/2"-3/4"	< 5.5	85+65	30	6 176
	ASF-DG-3 060	3	400 V-III	8 824	94	9 673	115	10 551	155	3.60	11.9	3 150	6 500	1/2"-7/8"	< 6.0	88+65	29	6 847
	ASF-DG-3 068	3 1/2	400 V-III	9 662	98	10 578	125	11 512	165	4.19	12.9	3 150	6 500	1/2"-7/8"	< 6.0	88+65	29	8 071
ASF-DG-4 086	4	400 V-III	11 687	120	12 829	155	14 001	205	4.90	15.2	5 700	7 000	5/8"-1 1/8"	< 9.0	115+70	39	9 419	
ASF-DG-4 108	5	400 V-III	14 416	150	15 702	190	17 068	255	6.40	18.2	5 700	7 000	5/8"-1 1/8"	< 8.5	120+70	37	10 398	

Options

- Change to 400 V-III-50 Hz power supply. + 5 %
- Proportional control of condensing pressure through fan speed variation (already included in series 2/23 and above). + 250 €
- Coil protection grille. + 90 €
- Built-in oil separator. + 590 €
- Anti-corrosion evaporator coil coating. + 6 %
- Anti-corrosion condenser coil coating. + 4 %
- Condensed water pump. + 120 €
- Larger sized multifunction electronic control. + 150 €

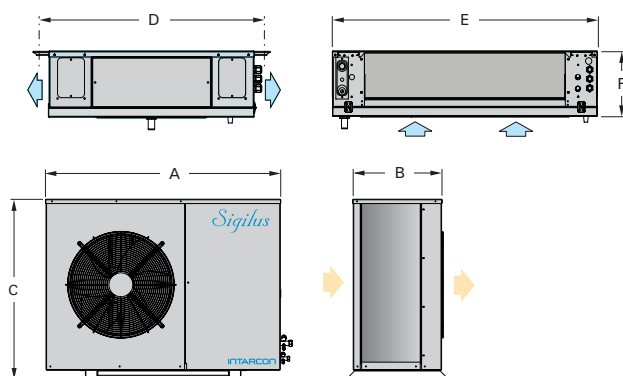
⁽¹⁾ Nominal performances refer to operation with cold room temperatures of 12 °C (HT) ambient temperature of 35 °C. Estimated cold room volume according to conditions of the calculation bases (page 8).

⁽²⁾ Units with refrigerant load less than 5 tons of CO₂ equivalent (3.8 kg of R-134a or R-449A) exempt from leak checking Regulation (EU) No 517/2014.

⁽³⁾ Sound pressure in dB (A) in open field at 10 m from the unit.

* Units available with 400 V-III-50 Hz power supply.

Dimensions



Dimensions (mm)		A	B	C	D	E	F	Evaporator fans
R-134a	series 11	1 030	375	580	798	706	245	1x Ø 360
	series 12	1 030	375	580	798	1 056	245	2x Ø 360
	series 13	1 030	375	580	798	1 756	245	3x Ø 360
	series 23	1 080	415	830	798	1 756	245	3x Ø 360
	series 24	1 080	415	830	888	2 156	295	3x Ø 450
	series 34	1 150	480	1 100	888	2 156	295	3x Ø 450
	series 44	1 150	480	1 350	888	2 156	295	3x Ø 450
R-449A	ASF-DG-1 016 and 1 018	1 030	375	580	798	706	245	1x Ø 360
	ASF-DG-1 024 to 1 034	1 030	375	580	798	1 056	245	2x Ø 360
	ASF-DG-1 038	1 030	375	580	798	1 756	245	3x Ø 360
	series 2	1 080	415	830	798	1 756	245	3x Ø 360
	series 3	1 150	480	1 100	798	1 756	245	3x Ø 360
series 4	1 150	480	1 350	888	2 156	295	3x Ø 450	

Electrical interconnections

For the interconnection of the condenser and evaporator units, the following cable sections must be provided for a length of 10 m (except series 4 and 44).

Fan voltage	230 V-I-50 Hz	400 V-III-50 Hz	
Fan series	1 - 2	3	4 - 5
Probes	4 x 1 mm ²		
Maneuver	2 x 1 mm ² + T	3 x 1 mm ² + T	5 x 1 mm ² + T
Defrost	-		
Thermostat	2 x 1 mm ²		
Switch door*	2 x 1 mm ² (+ 2 x 1 mm ² in NT)		
Cold room light*	2 x 1 mm ² + T		

* Optional not included. To know electrical interconnections of each model: see technical manual.

System for meat preservation and maturation



- ❄️ Quasi-static double-flow evaporating unit for very low air speed, specially designed for meat preservation.
- ❄️ Factory-tested systems with no need for on-site tests.
- ❄️ Refrigerant preloaded.
- ❄️ Units exempt from leak checks.

Description

Split refrigeration systems for positive temperature applications, featuring a quasi-static evaporating unit with double airflow, and an axial low-noise or centrifugal condensing unit.

Features

- 230 V-I-50 Hz or 400 V-III-50 Hz power supply.
- R-134a / R-449A minimal refrigerant load.
- Hermetic reciprocating compressor.
- Quasi-static evaporating unit with double airflow and axial motor fans at very low speed.
- High and low pressure switches.
- Built-in solenoid valve.
- Built-in thermostatic expansion valve.
- Electrical heater defrost.
- Stainless steel drain pan.
- Flare-type connections (up to 1/2"-3/4") and service valves.
- MCB protection.
- Liquid receiver.
- Refrigerant preload for 10 m piping.
- Multifunction electronic control with remote keyboard and digital regulation of condensing pressure.

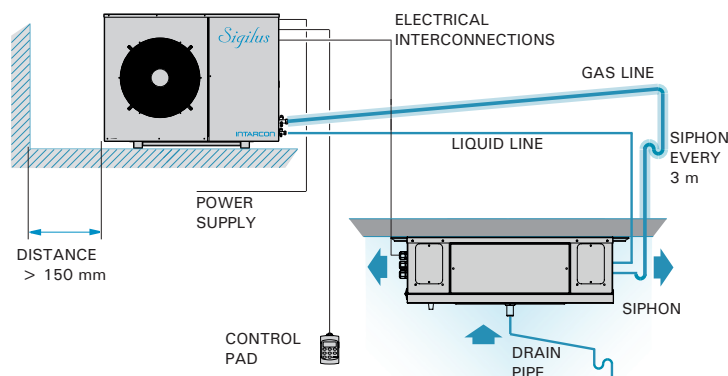
MSF-U series

Split systems with low-noise condensing unit and quasi-static double-flow evaporating unit.

MSH-CU series

Split systems with centrifugal condensing unit and quasi-static double-flow evaporating unit.

Installation scheme



Maximum vertical distance between units of 15 m if the condensing unit is placed at a higher level than the evaporating unit, and 6 m otherwise.

Meat preservation

Quasi-static split systems are specifically recommended for unpacked meat preservation in cold rooms at temperature around 0 °C.

Double airflow evaporating units feature fans operating at a minimum speed to emulate the natural air convection inside the cold room, just as in a static evaporating unit.

Minimum air speed prevents moisture loss from the stored goods and keeps the correct level of humidity inside the cold room to prevent bacterial growth on the meat surface.



Meat maturation (optional)

Maturation of meat requires the control of the relative humidity of the cold room in a certain range.

Units for maturation of meat, are configured for cold rooms in the environment of 0 °C and in the range of 40 % to 95 % of relative humidity.

These unit incorporate an advanced electronic regulation to control of the temperature and humidity inside the cold room, with dehumidification and humidification and functions with steam humidification of 3 kg / h capacity, consisting of: steam lances integrated in the evaporator unit, a submerged electrode generating cylinder with feed and water purge valves, and electronic relative humidity controller in the cold room.



Crankcase heater

As standard on Sigilus MSF units and optional on MSH series. Its inclusion in outdoor units is recommended.

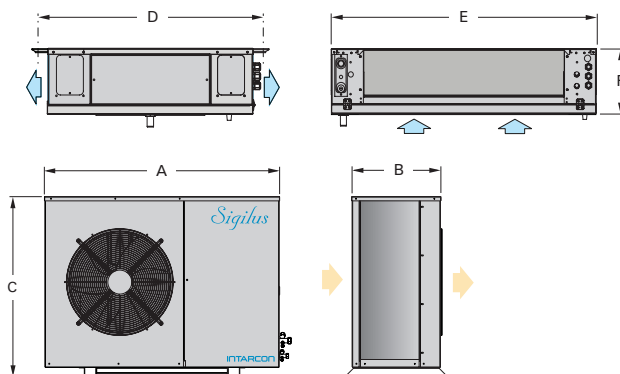
230 V-I-50 Hz / 400 V-III-50 Hz | Positive temperature - Meat preservation and maturation | R-134a / R-449A

Series / Model	Compressor		Cooling capacity according to cold room temperature ⁽¹⁾						Input power (kW)	Max. current (A)	Evap. airflow (m³/h)	Condens. airflow (m³/h)	Liq-Gas Cooling Connection	Refriger. load (kg) ⁽²⁾	Weight (kg)	SPL dB(A) ⁽³⁾	Price (€)		
	HP	Power supply	-5 °C		+0 °C		+5 °C											+10 °C	
			W	m³	W	m³	W	m³										W	m³
MSF-UY-11 026	3/4	230 V-I	1 145	7.6	1 449	15	1 785	24	2 153	41	0.83	9.4	600	1 700	1/4"-1/2"	< 2.0	65+32	22	3 592
MSF-UY-12 033	1	230 V-I	1 428	12	1 764	20	2 147	34	2 562	53	0.96	10.0	700	1 700	1/4"-5/8"	< 3.0	67+45	22	4 280
MSF-UY-13 053	1 1/2	230 V-I *	2 100	22	2 657	30	3 255	56	3 938	86	1.50	12.6	1 325	1 700	1/4"-3/4"	< 3.5	77+65	27	5 349
MSF-UY-13 074	2	230 V-I *	2 741	30	3 434	48	4 190	74	5 009	120	1.86	16.9	1 325	1 700	1/4"-3/4"	< 4.5	79+65	28	6 113
MSF-UY-23 086	4	400 V-III	3 308	40	4 158	62	5 114	99	6 132	154	2.08	13.4	1 325	3 700	3/8"-7/8"	< 5.5	96+65	39	6 555
MSF-UY-24 108	5	400 V-III	4 431	54	5 576	87	6 825	134	8 243	209	2.74	16.9	2 600	3 700	3/8"-7/8"	< 7.5	98+65	37	7 489
MSF-UY-24 136	6 1/2	400 V-III	5 444	72	6 815	108	8 306	162	10 038	268	3.44	20.9	2 600	3 700	3/8"-1 1/8"	< 7.5	101+65	36	8 408
MSF-UY-34 171	8	400 V-III	11 151	153	7 539	123	9 293	181	11 146	299	4.06	23.9	2 600	4 000	3/8"-1 1/8"	< 8.0	140+65	40	9 963
MSF-UG-1 016	5/8	230 V-I	1 215	9.5	1 483	15	1 772	25	2 101	40	0.89	7.5	600	1 700	1/4"-1/2"	< 2.5	67+32	23	3 417
MSF-UG-1 018	3/4	230 V-I	1 421	12	1 720	19	2 050	30	2 410	48	1.03	8.8	600	1 700	1/4"-1/2"	< 2.5	68+32	24	3 926
MSF-UG-1 024	1	230 V-I	1 648	15	1 998	24	2 390	37	2 812	59	1.19	11.0	700	1 700	3/8"-5/8"	< 3.5	82+43	24	4 216
MSF-UG-1 034	1 1/2	230 V-I *	2 235	23	2 699	35	3 193	54	3 739	84	1.84	16.0	700	1 700	3/8"-5/8"	< 3.5	83+43	29	4 807
MSF-UG-1 038	1 3/4	400 V-III	2 833	31	3 451	47	4 130	72	4 882	115	1.85	7.4	1 325	3 200	3/8"-5/8"	< 4.5	82+63	30	5 517
MSF-UG-2 054	2 1/2	400 V-III	3 784	47	4 600	70	5 447	105	6 426	160	2.38	9.4	1 325	3 700	3/8"-3/4"	< 5.5	85+63	30	6 110
MSF-UG-2 068	3 1/2	400 V-III	4 825	64	5 794	93	6 834	135	8 017	205	3.35	11.4	1 325	3 700	1/2"-3/4"	< 7.0	88+63	29	7 554
MSF-UG-3 086	4	400 V-III	6 027	83	7 257	120	8 579	175	10 060	270	4.23	13.9	2 600	4 000	1/2"-7/8"	< 7.0	115+66	39	8 951

Options

- Change to 400 V-III-50 Hz power supply. + 5 %
- Proportional control of condensing pressure through fan speed variation (already included in series 2/23 and above). + 250 €
- Coil protection grille. + 90 €
- Built-in oil separator. + 590 €
- Condenser coil polyurethane anti-corrosion treatment. + 4 %
- Control for maturation of meat with humidification and dehumidification functions. By request
 - Touch screen display. By request

Dimensions



Dimensions (mm)		A	B	C	D	E	F	Evaporator fans
R-134a	series 11	1 030	373	577	798	706	245	1x Ø 360
	series 12	1 030	373	577	798	1 056	245	1x Ø 360
	series 13	1 030	373	577	798	1 756	245	2x Ø 360
	series 23	1 080	410	827	798	1 756	245	2x Ø 360
	series 24	1 080	410	827	888	2 156	295	2x Ø 450
	series 34	1 150	481	1 097	888	2 156	295	2x Ø 450
R-449A	MSF-UG-1 016 and 1 018	1 030	373	577	798	706	245	1x Ø 360
	MSF-UG-1 024 and 1 034	1 030	373	577	798	1 056	245	1x Ø 360
	MSF-UG-1 038	1 030	373	577	798	1 756	245	2x Ø 360
	MSF-UG-2 054 and 2 068	1 080	410	827	798	1 756	245	2x Ø 360
	MSF-UG-3 086	1 150	481	1 097	888	2 156	295	2x Ø 450

⁽¹⁾ Nominal performances refer to operation with cold room temperatures of 0 °C and ambient temperature of 35 °C. Estimated cold room volume according to conditions of the calculation bases (page 8).

⁽²⁾ Units with refrigerant load less than 5 tons of CO₂ equivalent (3.8 kg of R-134a or R-449A) exempt from leak checking Regulation (EU) No 517/2014.

⁽³⁾ Sound pressure in dB (A) in open field at 10 m from the unit.

* Units available with 400 V-III-50 Hz power supply.

Centrifugal version (MSH-CU series)

Quasi-static split systems are also available with centrifugal condensing units.

Series / Model	HP	Cooling capacity		Price (€)
		0 °C / 35 °C W	m³	
MSH-CUY-11 026	3/4	1 281	12	3 374
MSH-CUY-11 033	1	1 517	15	4 103
MSH-CUY-22 033	1	1 811	22	4 382
MSH-CUY-22 053	1 1/2	2 174	28	4 834
MSH-CUY-33 053	1 1/2	2 657	35	5 298
MSH-CUY-33 074	2	3 402	47	5 930
MSH-CUY-43 086	4	4 153	70	6 996
MSH-CUY-43 108	5	5 219	84	7 643
MSH-CUY-44 108	5	5 555	89	8 229
MSH-CUY-44 136	6 1/2	6 773	108	10 202
MSH-CUG-1 016	5/8	1 349	13	3 209
MSH-CUG-1 018	3/4	1 545	16	3 903
MSH-CUG-2 024	1	1 978	23	4 169
MSH-CUG-2 034	1 1/2	2 627	34	4 760
MSH-CUG-3 038	1 3/4	3 265	44	5 355
MSH-CUG-4 054	2 1/4	4 590	69	6 284
MSH-CUG-4 068	3 1/2	5 783	93	7 391

Condensing units features as in pages 23 to 24.

Electrical interconnections

For the interconnection of the condenser and evaporator units, the following cable sections must be provided for a length of 10 m.

Fan voltage	230 V-I-50 Hz	400 V-III-50 Hz	
Fan series	1 - 2	3	4 - 5
Probes	4 x 1 mm ²		
Maneuver	2 x 1 mm ²	3 x 1 mm ²	5 x 1 mm ²
Defrost	2 x 1.5 mm ² + T		
Thermostat	2 x 1 mm ²		
Switch door*	2 x 1 mm ²		
Cold room light*	2 x 1 mm ² + T		

* Optional not included. To know electrical interconnections of each model: see technical manual.

split systems

High humidity



Description

Split refrigeration systems for high relative humidity applications in a positive temperature range, featuring an evaporating unit with double airflow, and a low-noise or centrifugal condensing unit.

Features

- 230 V-I-50 Hz or 400 V-III-50 Hz power supply.
- Minimal R-134a / R-449A refrigerant load.
- Hermetic reciprocating compressor.
- High and low pressure switches.
- Evaporating unit designed for humidity control between 60 % and 95 %*.
- Built-in solenoid and thermostatic expansion valves.
- Air defrost.
- Stainless steel drain pan.
- Flare-type connections (up to 1/2"-3/4") with service valves.
- MCB protection.
- Liquid receiver.
- Refrigerant preload for 10 m piping.
- Multifunction electronic control with temperature and humidity control and remote keyboard.

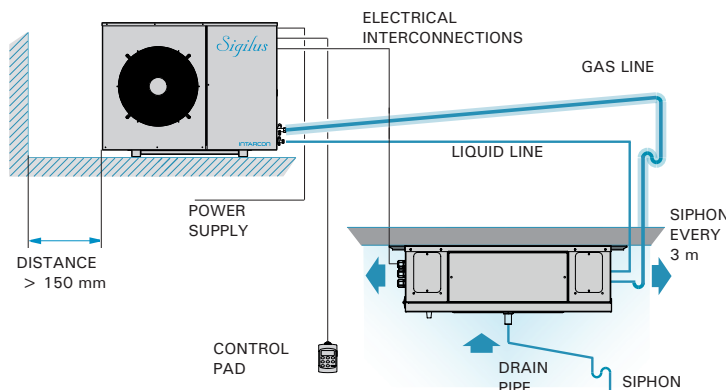
HSF-D series

Split systems with low-noise condensing unit and high humidity double-flow evaporating unit.

HSH-CD series

Split systems with centrifugal condensing unit and high humidity double-flow evaporating unit.

Installation scheme



Maximum vertical distance between units of 15 m if the condensing unit is placed at a higher level than the evaporating unit, and 6 m otherwise.

- ❄ Low-profile double-flow evaporating unit, oversized for high relative humidity applications.
- ❄ Passive humidity control (humidity regulation between 60 and 95 %). *
- ❄ Factory-tested systems with no need for on-site tests.
- ❄ Refrigerant preloaded.
- ❄ Units exempt from leak checks.

Conservation at controlled relative humidity

The preservation of certain products, such as fruits, vegetables or cut flowers, requires control of the relative humidity in the cold room within a certain range.

These unit adjusted for high relative humidity are especially suitable for fruit and vegetable products preservation cold room.

The evaporators have a double air discharge through oversized coils to obtain up to a high level of relative humidity inside the chamber at around 95 %, avoiding loss of humidity and weight of the product.

Electronic temperature and humidity control

The unit incorporates an advanced electronic regulation for the control of the temperature and humidity inside the cold room.

- Multifunction remote digital control with temperature and relative humidity display.
- Relative humidity control in the regulation range from 60 % to 95 %*.
- Optionally, active humidification kits with steam lances and dehumidification and stove kits are integrated.

* The humidity regulation in the cold room is carried out passively, acting on the evaporator flow, without water vapor. The actual range of humidity regulation depends largely on the conditions of the cold room, absolute outside humidity and type of product.

Electrical interconnections

For the interconnection of the condenser and evaporator units, the following cable sections must be provided for a length of 10 m.

Fan voltage	230 V-I-50 Hz	400 V-III-50 Hz
Fan series	2 - 3	4
Probes	4 x 1 mm ²	
Maneuver	3 x 1 mm ²	5 x 1 mm ²
Thermostat	2 x 1 mm ²	

* Electrical maneuver interconnections for the HSF-DY-14 074 to 24 136 models and HSF-DG-3 086. To know electrical interconnections of each model: see technical manual.

230 V-I-50 Hz / 400 V-III-50 Hz | Positive temperature - Humidity control | R-134a / R-449A

Series / Model	Compressor		Cooling capacity according to cold room temperature ⁽¹⁾				Input power (kW)	Max. current (A)	Evap. airflow (m³/h)	Conden. airflow (m³/h)	Liq-Gas Cooling Connection	Refrig. load (kg) ⁽²⁾	Weight (kg)	SPL dB(A) ⁽³⁾	Price (€)
	HP	Power supply	5 °C RH 95 % W	5 °C RH 95 % m³	10 °C RH 95 % W	10 °C RH 95 % m³									
HSF-DY-12 015	1/2	230 V-I	1 544	22	1 906	38	0.74	6.5	1 800	1 700	1/4"-1/2"	< 2.0	57+32	20	3 665
HSF-DY-12 026	3/4	230 V-I	2 116	32	2 594	53	1.06	10.2	1 800	1 700	1/4"-1/2"	< 2.0	65+32	22	3 959
HSF-DY-13 033	1	230 V-I	2 620	43	3 192	73	1.30	11.0	3 150	1 700	1/4"-1/2"	< 2.5	67+45	22	4 871
HSF-DY-13 053	1 1/2	230 V-I *	3 486	64	4 237	103	1.90	13.6	3 150	1 700	1/4"-5/8"	< 3.0	77+65	27	5 800
HSF-DY-14 074	2	230 V-I *	4 977	91	6 090	148	2.57	17.7	5 700	1 700	1/4"-3/4"	< 5.0	79+65	28	6 815
HSF-DY-24 086	4	400 V-III	6 773	134	8 311	217	2.87	14.5	5 700	3 700	3/8"-7/8"	< 6.0	96+65	39	7 540
HSF-DY-24 108	5	400 V-III	7 865	158	9 713	263	3.40	17.5	5 700	3 700	3/8"-7/8"	< 6.0	98+65	37	8 261
HSF-DY-24 136	6 1/2	400 V-III	9 870	202	11 960	331	4.44	21.5	5 700	3 700	3/8"-1 1/8"	< 6.5	101+70	36	10 856
HSF-DG-1 014	1/2	230 V-I	1 801	25	2 112	41	0.85	6.6	1 100	1 700	1/4"-1/2"	< 2.0	59+32	20	3 534
HSF-DG-1 016	5/8	230 V-I	2 015	29	2 378	47	0.93	7.5	1 100	1 700	1/4"-1/2"	< 2.0	67+32	23	3 816
HSF-DG-1 018	3/4	230 V-I	2 582	38	3 036	62	1.22	9.1	1 800	1 700	1/4"-1/2"	< 2.0	68+45	24	4 543
HSF-DG-1 024	1	230 V-I	2 945	46	3 478	75	1.40	11.3	1 800	1 700	3/8"-5/8"	< 3.5	82+45	24	4 851
HSF-DG-1 026	1 1/4	230 V-I *	3 289	54	3 849	86	1.53	16.3	1 800	1 700	3/8"-5/8"	< 3.5	83+45	27	5 085
HSF-DG-1 034	1 1/2	230 V-I *	3 734	64	4 361	100	2.09	5.9	1 800	1 700	3/8"-5/8"	< 3.5	83+45	29	5 480
HSF-DG-1 038	1 3/4	400 V-III	4 905	85	5 760	135	2.02	7.8	3 150	3 200	3/8"-5/8"	< 4.0	82+65	30	6 237
HSF-DG-2 048	2	400 V-III	6 170	115	7 244	175	2.53	7.9	3 150	3 700	3/8"-3/4"	< 5.0	84+65	30	6 631
HSF-DG-2 054	2 1/2	400 V-III	6 852	130	7 997	200	2.77	9.8	3 150	3 700	3/8"-3/4"	< 5.0	85+65	30	6 868
HSF-DG-2 060	3	400 V-III	7 844	150	9 122	230	3.28	11.3	3 800	3 700	3/8"-3/4"	< 5.0	88+65	29	7 524
HSF-DG-2 068	3 1/2	400 V-III	8 576	165	9 934	260	3.77	12.3	3 800	3 700	1/2"-3/4"	< 5.0	88+65	29	8 403
HSF-DG-3 086	4	400 V-III	10 308	200	12 124	320	4.74	14.5	5 700	4 000	1/2"-7/8"	< 9.0	115+70	39	9 887

Options

- Change to 400 V-III-50 Hz power supply. + 5 %
- Proportional control of condensing pressure through fan speed variation (already included in series 2/22 and above). + 250 €
- Coil protection grille. + 90 €
- Built-in active humidification kit. By request
- Dehumidification and heating kit. By request
- Built-in oil separator. + 590 €
- Anti-corrosion evaporator coil coating. + 6 %
- Anti-corrosion condensator coil coating. + 4 %

⁽¹⁾ Nominal performances refer to operation with cold room temperatures of 5 °C, with a relative humidity cold room of 95 %, and ambient temperature of 35 °C. Estimated cold room volume according to conditions of the calculation bases (page 8).

⁽²⁾ Units with refrigerant load less than 5 tons of CO₂ equivalent (3.8 kg of R-134a or R-449A) exempt from leak checking Regulation (EU) No 517/2014.

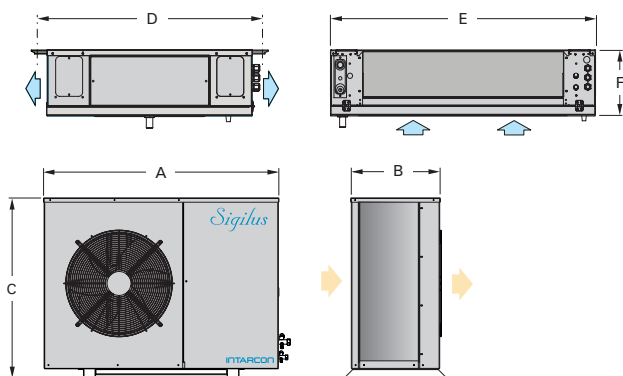
⁽³⁾ Sound pressure in dB (A) in open field at 10 m from the unit.

* Units available with 400 V-III-50 Hz power supply.

Centrifugal version (HSH-CD series)

High humidity split systems are also available with centrifugal condensing units.

Dimensions



Dimensions (mm)		A	B	C	D	E	F	Evaporator fans
R-134a	series 12	1 030	375	580	798	1 056	245	2x Ø 360
	series 13	1 030	375	580	798	1 756	245	3x Ø 360
	series 14	1 030	375	580	888	2 156	295	3x Ø 450
	series 24	1 080	415	830	888	2 156	295	3x Ø 450
R-449A	HSF-DG-1 014 and 1 016	1 030	375	580	798	706	245	1x Ø 360
	HSF-DG-1 018 to 1 034	1 030	375	580	798	1 056	245	2x Ø 360
	HSF-DG-1 038	1 030	375	580	798	1 756	245	3x Ø 360
	HSF-DG-2 048 to 2 068	1 080	415	830	798	1 756	245	3x Ø 360
	HSF-DG-3 086	1 150	480	1 100	888	2 156	295	3x Ø 450

Series / Model	HP	Cooling capacity		Price (€)
		5 °C HR 95 % W	m³	
HSH-CDY-12 015	1/2	1 415	21	3 496
HSH-CDY-12 026	3/4	1 859	28	4 015
HSH-CDY-12 033	1	2 242	32	4 410
HSH-CDY-23 033	1	2 746	45	4 700
HSH-CDY-23 053	1 1/2	3 507	64	5 175
HSH-CDY-23 074	2	4 526	82	6 434
HSH-CDY-34 074	2	5 140	93	6 765
HSH-CDY-44 086	4	6 741	134	7 532
HSH-CDY-44 108	5	7 817	158	8 199
HSH-CDY-44 136	6 1/2	9 791	200	10 166
HSH-CDG-1 014	1/2	1 399	20	3 372
HSH-CDG-1 016	5/8	1 608	22	3 493
HSH-CDG-2 018	3/4	2 510	38	4 254
HSH-CDG-2 024	1	2 902	46	4 532
HSH-CDG-2 026	1 1/4	3 242	54	4 713
HSH-CDG-3 034	1 1/2	4 056	71	5 147
HSH-CDG-3 038	1 3/4	4 360	77	5 889
HSH-CDG-3 048	2	6 160	116	6 496
HSH-CDG-4 054	2 1/4	6 833	132	6 860
HSH-CDG-4 060	3	7 652	149	7 467
HSH-CDG-4 068	3 1/2	8 371	164	8 014

Condensing units features as in pages 23 to 24.

Wine cellar



Description

Wine cellar refrigeration split systems with low-noise axial or centrifugal condensing unit and double-flow low-profile evaporating unit with heating function, humidification / dehumidification system and condensed water pump.

Applications

- Bottled wine preservation.
- Cigar and tobacco preservation.
- Refrigeration at high temperature with humidity control.
- Preservation of wine in barrels.
- Cheese curing.
- Mini drying rooms.

VSF-G series

Wine cellar split systems with low-noise condensing unit.

VSH-CG series

Wine cellar split systems with centrifugal condensing unit.

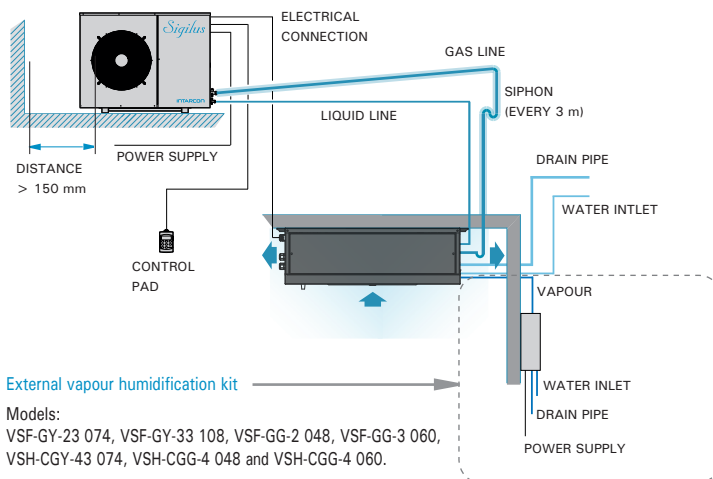
VCR-N series

Wine cellar roof-top monoblock with axial fan.

VCR-C series

Wine cellar roof-top monoblock with centrifugal fan.

Split systems installation scheme



External vapour humidification kit
 Models:
 VSF-GY-23 074, VSF-GY-33 108, VSF-GG-2 048, VSF-GG-3 060,
 VSH-CGY-43 074, VSH-CGG-4 048 and VSH-CGG-4 060.

Maximum vertical distance between units of 15 m if the condensing unit is placed at a higher level than the evaporating unit, and 6 m otherwise.

- ❄ Specifically designed for wine preservation in cellars.
- ❄ Active humidity control.
- ❄ Active heating system.
- ❄ Factory-tested systems with no need for on-site tests.
- ❄ Refrigerant preloaded included.
- ❄ Units exempt from leak checks.

Conservation of bottled wine

Bottled wine requires temperature and humidity controlled conditions that optimally conserve the product while avoiding both cork drying and label moldiness.

The wine treatment unit guarantees optimal conditions for the preservation of bottled wine.



Wine conservation in barrel

In the conservation of wine in barrels, the relative humidity inside the cellar is of great importance, which must be adjusted so that there is no transfer of water vapor between the environment of the cellar and the interior of the barrel, avoiding thus wine wastage or water absorption by the content.



External vapour humidification kit

Vapour humidification with 3 kg/h capacity, consisting of: vapour lances integrated in the evaporator unit, a submerged electrode generating cylinder with feed valves and water purge valves.



Electrical interconnections

For the interconnection of the condenser and evaporator units, the following cable sections must be provided for a length of 10 m (except series 43 and 44).

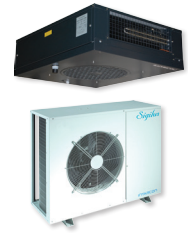
Fan voltage	230 V-I-50 Hz	400 V-III-50 Hz
Fan series	0 - 2	3
Probes	4 x 1 mm ²	
Maneuver	10 x 1 mm ²	
Heating resistance	2 x 2.5 mm ²	4 x 1.5 mm ²
Thermostat	2 x 1 mm ²	

To know electrical interconnections of each model: see technical manual.

VSF-G / VSH-CG series

Features

- 230 V-I-50 Hz or 400 V-III-50 Hz power supply.
- Minimal R-134a / R-449A refrigerant load.
- Hermetic reciprocating compressor.
- Double-flow low-profile evaporating unit with heaters and active humidification / dehumidification system, and evaporation anti-corrosion coated coil.
- Air defrost; air filter.
- Built-in solenoid and thermostatic expansion valves.
- Stainless steel drain pan and condensed water pump.
- Flare-type cooling connections (up to 1/2"-3/4) and service valves.
- Liquid receiver and refrigerant preload for 10 m piping.
- Proportional condensation control (series VSF 1/2/3 and VSH 4/43) and all/nothing condensation control (VSF 0 series, VSH 2/22 and 3/33 series).
- Multifunction electronic dual control of temperature and humidity with remote keyboard and digital regulation of condensing temperature; MCB protection.



VSF-G series



VSH-CG series

230 V-I-50 Hz / 400 V-III-50 Hz | Positive temperature - Wine cellar | R-134a / R-449A

Series / Model	Compressor		Cellar volume (m ³)		Cooling capacity 15 °C 70 % RH (W) ⁽¹⁾	Heating capacity (W)	Input power (kW) ⁽²⁾	Input power (kW) ⁽³⁾	Max. current (A)	Evap. airflow (m ³ /h)	Conden. airflow (m ³ /h)	Liq-Gas Cooling Connection	Refrig. load (kg) ⁽⁴⁾	Weight (kg)	SPL dB(A) ⁽⁵⁾	Price (€)	
	HP	Power supply	Without insulation	Insulation													
R-134a	VSF-GY-00 010	3/8	230 V-I	11	37	1 242	1 000	1.52	0.52	8.8	500	350	1/4"-3/8"	< 1.5	46+30	20	5 057
	VSF-GY-10 015	1/2	230 V-I	20	53	1 820	1 000	1.67	0.67	10.1	500	1 700	1/4"-1/2"	< 2.0	57+30	21	5 764
	VSF-GY-11 033	1	230 V-I	47	100	3 281	1 500	2.76	1.26	16.3	1 100	1 700	1/4"-5/8"	< 2.5	67+42	22	6 939
	VSF-GY-12 053	1 1/2	230 V-I *	74	168	4 683	3 000	4.93	1.93	26.1	1 800	3 200	3/8"-3/4"	< 3.5	77+52	27	8 593
	VSF-GY-23 074 ^(K)	2	230 V-I *	149	297	7 497	6 000	8.60	2.60	43.7	3 150	3 700	3/8"-3/4"	< 5.0	79+75	28	11 333
	VSF-GY-33 108 ^(K)	5	400 V-III	224	444	9 944	6 000	9.50	3.50	26.1	3 150	4 000	3/8"-7/8"	< 6.0	98+75	30	13 016
R-449A	VSF-GG-0 008	1/3	230 V-I	10	35	1 227	1 000	1.16	0.48	8.4	500	350	1/4"-3/8"	< 1.5	48+30	20	4 767
	VSF-GG-1 014	1/2	230 V-I	24	60	2 134	1 500	2.55	1.05	13.5	1 100	1 700	1/4"-1/2"	< 2.5	59+42	20	5 431
	VSF-GG-1 024	1	230 V-I	47	100	3 388	3 000	4.81	1.81	24.9	1 800	1 700	3/8"-5/8"	< 3.5	82+52	24	6 539
	VSF-GG-1 034	1 1/2	230 V-I *	75	170	4 944	3 000	5.55	2.55	29.9	1 800	3 200	3/8"-5/8"	< 3.5	83+52	29	7 648
	VSF-GG-2 048 ^(K)	2	400 V-III	151	300	7 830	6 000	9.19	3.19	17.9	3 150	3 700	1/2"-3/4"	< 5.5	84+75	30	10 136
	VSF-GG-3 060 ^(K)	3	400 V-III	221	450	10 490	6 000	10.87	4.87	19.5	5 200	6 500	1/2"-7/8"	< 6.5	88+75	29	11 583

Options

- Change to 400 V-III-50 Hz power supply. + 5 %
- Proportional control of condensing pressure through fan speed variation (already included in VSF series 1/2/3 and VSH 4/43). + 250 €
- Built-in oil separator. + 590 €
- Condenser coil polyurethane anti-corrosion treatment. + 4 %
- Coil protection grille. + 90 €

⁽¹⁾ Nominal performances refer to operation with cold room temperatures of 15 °C (PT) with relative humidity cold room of 70 % and ambient temperature of 35 °C. Volume of cold room for the hotel industry estimated without insulation and warehouse volume estimated with 30 mm insulation.

⁽²⁾ Input power in deshumidification mode.

⁽³⁾ Input power in refrigeration mode.

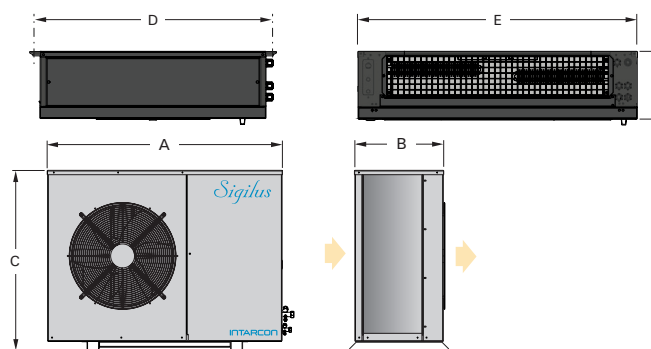
⁽⁴⁾ Units with refrigerant load less than 5 tons of CO₂ equivalent (3.8 kg of R-134a or R-449A) exempt from leak checking Regulation (EU) No 517/2014.

⁽⁵⁾ Sound pressure in dB (A) in open field at 10 m from the unit.

* Units available with 400 V-III-50 Hz power supply.

^(K) Standard models with external vapour humidification kit.

Dimensions



Dimensions (mm)	A	B	C	D	E	F	Evaporator fans
series 0 and 00	670	308	440	764	627	205	1x Ø 254
VSF-GY-10 015	1 030	375	580	764	627	205	1x Ø 254
series 11 and VSF-GG-1 014	1 030	375	580	886	706	255	1x Ø 360
series 12 and VSF-GG-1 024 and 1 034	1 030	375	580	886	1 056	255	2x Ø 360
series 2 and 23	1 080	415	830	886	1 756	255	3x Ø 360
series 3 and 33	1 150	480	1 100	886	1 756	255	3x Ø 360

Centrifugal version (VSH-CG series)

Wine cellar split systems are also available with centrifugal condensing unit.

Series / Model	CV	Conden. airflow (m ³ /h)	ASP (mmca) ⁽⁶⁾	Price (€)	
R-134a	VSH-CGY-10 010	3/8	575	8	4 610
	VSH-CGY-21 015	1/2	1 000	12	5 764
	VSH-CGY-22 033	1	1 000	12	6 939
	VSH-CGY-33 053	1 1/2	1 500	14	8 593
	VSH-CGY-43 074	2	3 500	10	11 333
R-449A	VSH-CGG-2 014	1/2	1 000	12	5 431
	VSH-CGG-2 024	1	1 000	12	6 539
	VSH-CGG-3 034	1 1/2	1 500	14	7 648
VSH-CGG-4 048 ^(K)	2	3 500	10	10 136	
VSH-CGG-4 060 ^(K)	3	3 500	10	11 583	

⁽⁶⁾ Available Static Pressure of condensation. Condensing units features as in pages 23 to 24.

VCR-N / VCR-C series

Features

- R-134a refrigerant load, below 1,5 kg.
- Hermetic reciprocating compressor.
- High and low pressure switches.
- Air defrost.
- Heating resistors, humidification / dehumidification system.
- Evaporation coils with anti-corrosion coating.
- Water purge system.
- Thermostatic expansion valves.
- Evaporation drawer of 50 mm sandwich panel made of polyurethane foam, internally coated with pre-lacquered steel plate.
- Multifunction electronic dual control of temperature and humidity with remote keyboard and digital regulation of condensing temperature.



VCR-N series



VCR-C series

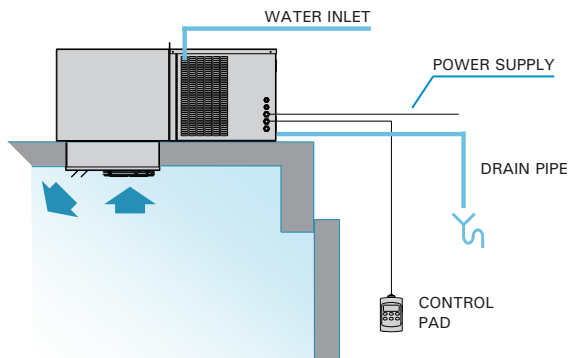
230 V-I-50 Hz | Positive temperature | R-134a

Series / Model	Compressor		Cellar volume (m ³)		Cooling capacity 15 °C 70 % RH (W) ⁽¹⁾	Heating capacity (W)	Input power (kW)	Max. current (A)	Evap. airflow (m ³ /h)	Conden. airflow (m ³ /h)	Refrig. load (kg) ⁽²⁾	Weight (kg)	SPL dB(A) ⁽³⁾	Price (€)
	HP	Power supply	Without insulation	Insulation										
VCR-NY-1 010	3/8	230 V-I	15	34	1 269	1 000	1.55	8.9	600	575	< 1.0	73	30	4 414
VCR-NY-2 015	1/2	230 V-I	25	63	2 020	1 000	1.83	10.8	1 150	1 000	< 1.5	88	31	4 753
VCR-NY-2 033	1	230 V-I	42	95	3 203	2 000	3.37	19.0	1 150	1 000	< 1.5	98	35	5 715

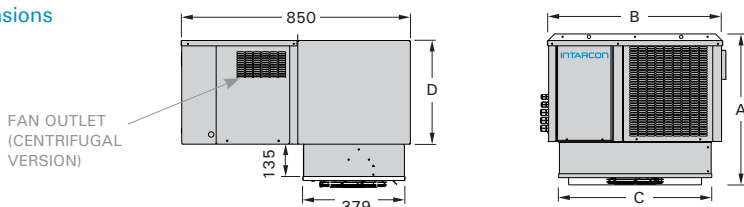
Options

- Non-return discharge gate (VCR-C series). + 25 €
- Adaptation of air discharge to circular duct. + 100 €
- Vertical airflow (centrifugal version).

Monoblock installation scheme



Dimensions



Dimensions (mm)	A	B	C	D	Fan outlet	Hopper
series 1	574	665	582	385	185 x 115	Ø 200
series 2	677	835	756	469	230 x 130	Ø 200

⁽¹⁾ Nominal performances refer to operation with cold room temperatures of 15 °C (PT) with relative humidity cold room of 70 % and ambient temperature of 35 °C. Volume of cold room for the hotel industry estimated without insulation and warehouse volume estimated with 30 mm insulation.

⁽²⁾ Units with refrigerant load less than 5 tons of CO₂ equivalent (3.8 kg of R-134a or R-449A) exempt from leak checking Regulation (EU) No 517/2014.

⁽³⁾ Sound pressure in dB (A) in open field at 10 m from the unit.

Centrifugal version (VCR-C series)

Wine cellar split systems are also available with centrifugal condensation unit.

Series / Model	HP	Conden. airflow (m ³ /h)	ASP (mmca) ⁽⁴⁾	Price (€)
VCR-CY-1 010	3/8	575	8	4 639
VCR-CY-2 015	1/2	1 000	8	5 093
VCR-CY-2 033	1	1 000	12	6 223

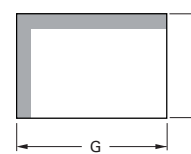
⁽⁴⁾ Available Static Pressure of condensation.

Exhaust duct

Recommended size for 20 m long steel, PVC or fiberglass ducts (each elbow at 90° equals 5 m in length). For flexible or semi-flexible ducts use a larger size.

- series 1: 200 x 200 mm.
- series 2: 250 x 150 mm.

Mounting frame



CEILING FRAME

Dimensions (mm)	G	H
series 1	588	385
series 2	762	385

R-134a
R-449A

Other refrigerants
by request



Condensing units

Sigilus

Low-noise condensing units for outdoor installation. Thanks to their triple acoustic treatment, Sigilus condensing units are among the quietest equipment in their class, and thanks to their tropicalized design, they can operate under extreme temperatures.

- * Tropicalised design for high ambient temperature up to 50 °C.
- * Low-noise units with low speed fans.
- * Condensing units for one or more services.

intarbox

Condensing units in horizontal construction, axial for outdoor installation, and equipped with centrifugal turbine for the conducted extraction of hot condensation air, for indoor installation.

- * Tropicalised design for high ambient temperature up to 45 °C.
- * Condensing units for one or more services.





Description

Air-cooled packaged condensing units in a low-noise axial construction in mechanical, electronic and multiservice versions.

Features

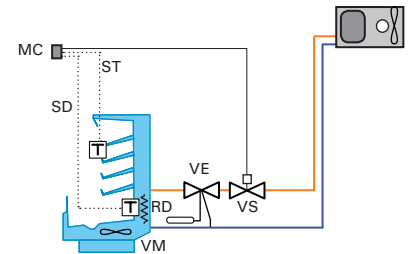
- R-134a / R-449A refrigerant, other refrigerants by request.
- Reciprocating hermetic compressor, acoustically insulated, with discharge muffler, mounted on shock absorbers, with internal klixon and crankcase heater.
- Large surface condenser coil, copper pipes and aluminum fins, tropicalised for ambient temperature up to 50 °C.
- Low speed axial motor fan.
- Refrigeration circuit equipped with high and low pressure switches, ceramic filter and sight gauge.
- Digital control of condensation pressure with the optional electrical board, and all-nothing condensation control in condensers without electrical panel.
- Proportional control of condensing pressure through fan speed variation (included from MDF-NY-2086, MDF-NG-1038 models).
- Full control and power board with compressor and motor fan protection.
- Electronic regulation with control pad (version -N with optional electrical board).
- Built-in oil separator (version -V).
- Liquid injection system for negative temperature models with R-449A.

Versions

- **Version -N**
 Without electrical board. Is designed for on/off operation depending on the suction pressure (pump-down).
 With electrical board as an option. Electronic controller to manage the condensing unit and the evaporator built-in solenoid valve as an option.
- **Version -V. Multiservice with VRC system.** The multiservice version features VRC system to adjust the refrigerant flow to the demand of the evaporators, keeping the pressure constant in suction the line. The VRC system is composed of a set of pressure and temperature regulation valves to progressively modulate cooling capacity from 100 % to 10 % of its nominal capacity, while reducing energy consumption and preventing compressor overheating.

- ❄ **Low-noise condensing unit designed for extreme ambient temperatures up to 50 °C.**
- ❄ **Unit for one service: With low pressure control. With electronic controller for evaporator.**
- ❄ **Multiservice version with VRC cooling capacity modulation system.**

Example installation of the version -N without electrical board



- MC: CONTROL PAD
- MV: MOTOR FAN
- RD: DEFROST HEATER
- ST: THERMOSTAT PROBE
- SD: DEFROST PROBE
- VE: EXPANSION VALVE
- VS: SOLENOID VALVE

Built-in oil separator (optional)

Sigilus condensing units connected to a single evaporator usually not require an oil separator. This is recommended for long pipe lengths (> 30 m) being necessary for a suitable circuit design to ensure oil return.

Proportional condensation control

Sigilus condensing units incorporate proportional condensation control by varying speed for prolonged running times at low ambient temperature.

Triple noise insulation

Sigilus units incorporate triple noise insulation as standard:

- Insulated compressor compartment separated from air flow.
- Acoustic compressor jacket (three-phase models) and discharge muffler.
- Low-noise and low-speed fans, mounted on shock absorbers.

230 V-I-50 Hz / 400 V-III-50 Hz | Positive temperature | Hermetic compressor | R-134a / R-449A

Serie / Model	Compressor		Cooling capacity EN 13215 (W) ⁽¹⁾ Evap. T° -10 °C	Cooling capacity (W) ⁽²⁾ Average evaporation temperature				Input power (kW)	(COP) SEPR ⁽³⁾	Max. current (A)	Fan ø mm	Evap. airflow (m³/h)	Liq-Gas Cooling Connection	Weight (kg)	SPL dB(A) ⁽⁴⁾	Price without electronic control (€)	
	HP	Power supply		0 °C	-5 °C	-10 °C	-15 °C										
				0 °C	-5 °C	-10 °C	-15 °C										
R-134a	MDF-NY-0 010	3/8	230 V-I	590	870	700	560	430	0.33	(1.75)	4.0	Ø 200	350	1/4"-3/8"	50	17	1 492
	MDF-NY-0 015	1/2	230 V-I	830	1 200	970	770	610	0.46	(1.73)	5.0	Ø 200	350	1/4"-3/8"	52	22	1 592
	MDF-NY-1 015	1/2	230 V-I	890	1 380	1 100	860	650	0.49	(1.78)	5.0	Ø 360	1 700	1/4"-1/2"	66	22	1 681
	MDF-NY-1 026	3/4	230 V-I	1 370	2 140	1 700	1 310	970	0.71	(1.89)	9.0	Ø 360	1 700	1/4"-1/2"	74	19	1 793
	MDF-NY-1 033	1	230 V-I	1 780	2 680	2 150	1 680	1 250	0.82	(2.10)	9.0	Ø 360	1 700	1/4"-5/8"	76	23	2 039
	MDF-NY-1 053	1 1/2	230 V-I *	2 450	3 900	3 060	2 320	1 720	1.22	(1.96)	12.0	Ø 360	1 700	1/4"-3/4"	88	28	2 418
	MDF-NY-1 074	2	230 V-I *	3 510	5 260	4 200	3 260	2 470	1.60	(2.11)	16.0	Ø 360	1 700	1/4"-3/4"	90	35	3 044
	MDF-NY-2 086	4	400 V-III	4 380	6 670	5 260	4 050	3 030	1.81	(2.32)	13.0	Ø 450	3 600	3/8"-7/8"	98	39	3 417
	MDF-NY-2 108	5	400 V-III	5 370	8 060	6 370	4 900	3 740	2.20	3.25	16.0	Ø 450	3 600	3/8"-7/8"	100	36	3 620
	MDF-NY-2 136	6 1/2	400 V-III	6 850	10 180	8 250	6 500	5 040	2.99	2.89	19.0	Ø 450	3 600	3/8"-1 1/8"	103	35	4 152
R-449A	MDF-NG-0 008	1/3	230 V-I	620	980	810	650	510	0.37	(1.72)	4.0	Ø 200	350	1/4"-3/8"	51	20	1 405
	MDF-NG-0 010	3/8	230 V-I	800	1 230	1 020	820	650	0.48	(1.72)	5.0	Ø 200	350	1/4"-3/8"	51	24	1 500
	MDF-NG-0 012	1/2	230 V-I	950	1 420	1 180	960	770	0.56	(1.73)	6.0	Ø 200	350	1/4"-3/8"	51	24	1 585
	MDF-NG-1 014	1/2	230 V-I	1 160	1 920	1 560	1 240	960	0.68	(1.74)	6.0	Ø 360	1 700	1/4"-1/2"	66	25	1 689
	MDF-NG-1 016	5/8	230 V-I	1 320	2 250	1 820	1 440	1 080	0.76	(1.80)	7.0	Ø 360	1 700	1/4"-1/2"	76	25	1 825
	MDF-NG-1 018	3/4	230 V-I	1 650	2 690	2 190	1 750	1 360	0.92	(1.87)	8.0	Ø 360	1 700	1/4"-1/2"	76	25	1 921
	MDF-NG-1 024	1	230 V-I	2 110	3 560	2 890	2 280	1 720	1.06	(2.07)	12.0	Ø 360	1 700	3/8"-5/8"	78	25	2 105
	MDF-NG-1 026	1 1/4	230 V-I *	2 370	3 870	3 160	2 530	1 950	1.18	(2.08)	13.0	Ø 360	1 700	3/8"-5/8"	78	25	2 152
	MDF-NG-1 034	1 1/2	230 V-I *	3 060	4 860	3 980	3 200	2 500	1.66	(1.90)	16.0	Ø 360	1 700	3/8"-5/8"	78	27	2 225
	MDF-NG-1 038 ⁽⁵⁾	1 3/4	400 V-III	3 360	5 870	4 740	3 720	2 830	1.60	(2.15)	7.0	Ø 450	3 200	3/8"-5/8"	81	30	2 709
	MDF-NG-2 048 ⁽⁵⁾	2	400 V-III	4 360	6 990	5 670	4 530	3 530	1.98	(2.26)	8.0	Ø 450	3 600	3/8"-3/4"	85	27	3 042
	MDF-NG-2 054 ⁽⁵⁾	2 1/2	400 V-III	4 840	7 860	6 420	5 160	4 070	2.18	(2.34)	9.0	Ø 450	3 600	3/8"-3/4"	86	27	3 221
	MDF-NG-2 060 ⁽⁵⁾	3	400 V-III	5 800	8 850	7 290	5 900	4 700	2.59	3.24	10.0	Ø 450	3 600	3/8"-3/4"	87	27	3 515
	MDF-NG-2 068 ⁽⁵⁾	3 1/2	400 V-III	6 550	9 810	8 150	6 630	5 300	2.97	3.10	10.0	Ø 450	3 600	1/2"-3/4"	88	26	3 694

230 V-I-50 Hz / 400 V-III-50 Hz | Negative temperature | Hermetic compressor | R-449A

Serie / Model	Compressor		Cooling capacity EN 13215 (W) ⁽¹⁾ Evap. T° -35 °C	Cooling capacity (W) ⁽²⁾ Average evaporation temperature			Input power (kW)	(COP) SEPR ⁽³⁾	Max. current (A)	Fan ø mm	Evap. airflow (m³/h)	Liq-Gas Cooling Connection	Weight (kg)	SPL dB(A) ⁽⁴⁾	Price without electronic control (€)	
	HP	Power supply		-25 °C	-30 °C	-35 °C										
				-25 °C	-30 °C	-35 °C										
R-449A	BDF-NG-0 018	5/8	230 V-I	370	800	600	420	0.44	(0.96)	6.0	Ø 200	350	1/4"-1/2"	61	17	1 957
	BDF-NG-1 026	3/4	230 V-I	590	1 310	950	670	0.69	(0.96)	9.0	Ø 360	1 700	1/4"-1/2"	67	18	2 373
	BDF-NG-1 034	1 1/4	230 V-I	780	1 720	1 260	880	0.93	(0.95)	10.0	Ø 360	1 700	3/8"-5/8"	83	20	2 695
	BDF-NG-1 054	1 3/4	400 V-III	1 060	2 470	1 790	1 220	1.20	(1.01)	6.0	Ø 360	1 700	3/8"-5/8"	93	27	3 104
	BDF-NG-1 074	2 1/2	400 V-III	1 390	3 210	2 390	1 630	1.51	(1.08)	7.0	Ø 360	1 700	3/8"-5/8"	93	30	3 163
	BDF-NG-1 086	3	400 V-III	1 490	3 250	2 430	1 740	1.48	(1.18)	9.0	Ø 450	3 200	3/8"-5/8"	83	27	3 573
	BDF-NG-2 096	3 1/2	400 V-III	1 800	4 130	2 990	2 020	1.67	(1.18)	11.0	Ø 450	3 600	3/8"-3/4"	98	40	4 188
	BDF-NG-2 108	4	400 V-III	2 240	4 790	3 560	2 470	2.05	1.67	13.0	Ø 450	3 600	3/8"-7/8"	98	38	4 482
	BDF-NG-2 136	5	400 V-III	2 950	5 970	4 490	3 230	2.72	1.60	15.0	Ø 450	3 600	3/8"-7/8"	98	33	4 774
	BDF-NG-3 215	7 1/2	400 V-III	4 500	9 300	6 970	4 940	4.03	1.68	24.0	2x Ø 450	6 500	1/2"-1 1/8"	149	40	6 034
	BDF-NG-3 271	10	400 V-III	6 380	11 960	9 160	6 760	5.36	1.70	28.0	2x Ø 450	6 500	1/2"-1 1/8"	149	40	6 297

Options

- Change to 400 V-III-50 Hz power supply. + 8 %
- Built-in oil separator (already included in -V version). + 590 €
- Built-in solenoid valve (except -V version). + 145 €
- Anti-corrosion coil coating. + 8 %
- Coil protection grille. + 90 €
- Proportional condensation control by fan speed variation (models from 1015 up to 1074 with R-134a, and models from 1014 up to 1034 in PT with R-449A, and from 1026 up to 1074 in NT with R-449A). + 250 €
- Control and power panel with electronic control unit for management of condenser and evaporator. + 5 %
 - Larger sized multifunction electronic control. + 150 €

Version

- V version - VRC system (with oil separator). Table models with (V). + 1 000 €

⁽¹⁾ Conditions based on UNE-EN 13215: ambient temp. 32 °C, evap. temp. -10 °C (PT) and -35 °C (NT), 20 °C of suction temperature, refrigerant R-449A.

⁽²⁾ Cooling capacity in nominal conditions: evaporating temp -10°C (PT) and -35 °C (NT), ambient temperature of 32 °C, overheating 10 K, refrigerant R-449A.

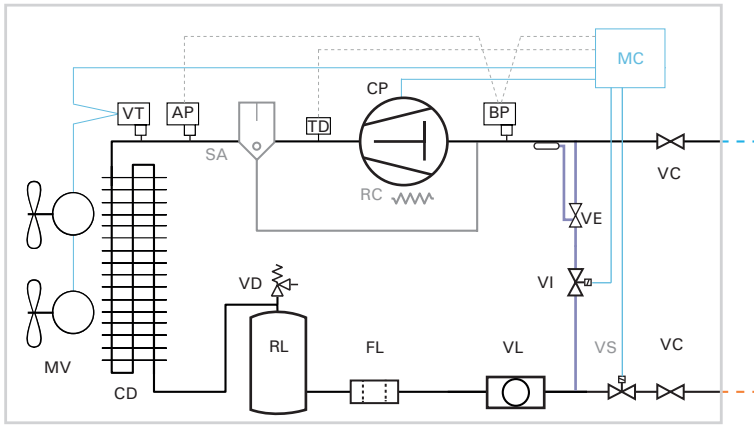
⁽³⁾ COP / SEPR: Coefficient of Performance according to Ecodesign Directive 2015/1095/EU.

⁽⁴⁾ Sound pressure in dB (A) in open field at 10 m from the unit.

⁽⁵⁾ Model that allow VRC system.

* Units available with 400 V-III-50 Hz power supply.

Refrigeration scheme



ADDITIONAL -N VERSION WITH ELECTRONIC MICROCONTROLLER
 MC: ELECTRONIC MICROCONTROLLER

COMPONENTS

- AP: HIGH PRESSURE SWITCH
- BP: LOW PRESSURE SWITCH
- CD: CONDENSER
- CP: COMPRESSOR
- FL: DRYING FILTER
- MV: MOTOR FAN
- RL: LIQUID RECEIVER
- RC: CRANKCASE HEATER
- VC: SERVICE VALVE
- VD: SECURITY VALVE (for models with 1 HP or more)
- VL: SIGHT GAUGE
- VT: VOLTAGE REGULATOR

OPTIONAL

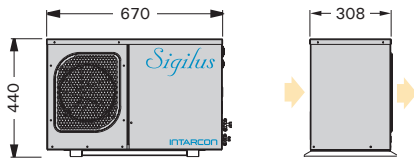
- SA: OIL SEPARATOR
- VS: SOLENOID VALVE

LIQUID INJECTION SYSTEM (ONLY BDF)

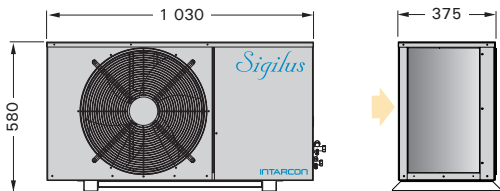
- TD: DISCHARGE THERMOSTAT
- VE: THERMOSTATIC EXPANSION VALVE
- VI: LIQUID SOLENOID VALVE

Dimensions DF

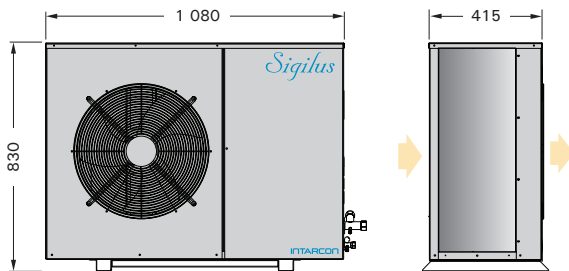
Series 0



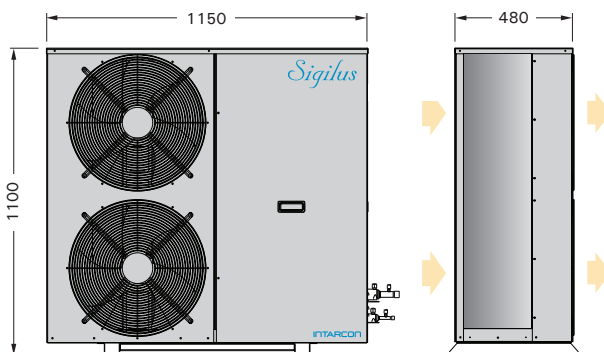
Series 1



Series 2



Series 3



MDH-N and BDH-N with electrical board as an option

Sigilus condensing units in their electronic version incorporate an advanced electronic controller for the management of the condensing unit and the evaporator, being able to optionally integrate the solenoid valve.



- Multifunction remote digital control.
- Electronic board integrated in the condensing unit for 6 control relays for: compressor, condensing fan, evaporator fan, defrost, light and alarm.
- Possibility of interconnection and synchronization of up to 8 devices by LAN, managed from a single control.

intarbox



Description

Air-cooled packaged condensing units at positive or negative temperature, in horizontal construction with an alternative hermetic compressor, and low speed axial or centrifugal motor fan.

Features

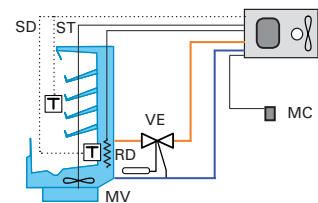
- R-134a / R-449A, other refrigerants by request.
- Hermetic reciprocating compressor mounted on shock absorbers, with discharge muffler and internal klixon.
- High performance condensing coil in copper pipes and aluminium fins.
- Centrifugal motor fan with available static pressure for a ducted outlet of condenser hot air (centrifugal version).
- Refrigeration circuit equipped with HP and LP switches, filter dryer, liquid receiver and sight gauge.
- Digital control of condensation pressure with the optional electrical board, and all-nothing condensation control with condensers without electrical panel.
- Proportional control of condensing pressure through fan speed variation (included in MDH series 4).
- Full control and power board with compressor and motor fan protection.
- Electronic regulation with evaporator control pad (version -N with optional electrical board).
- Built-in oil separator (version -V).
- Liquid injection system for negative temperature models with R-449A.

Versions

- **Version -N:** Without electrical board. Designed for on/off operation depending on the suction pressure (pump-down).
With electrical board as an option. Electronic controller to manage the condensing unit and the evaporator built-in solenoid valve as an option.
- **Version -V. Multiservice with VRC system.** The multiservice version features VRC system to adjust the refrigerant flow to the demand of the evaporators, keeping the pressure constant in suction the line. The VRC system is composed of a set of pressure and temperature regulation valves to progressively modulate cooling capacity from 100 % to 10 % of its nominal capacity, while reducing energy consumption and preventing compressor overheating.

- ❄️ **Designed for ambient temperature up to 45 °C.**
- ❄️ **Unit for one service:**
With low pressure control.
With electronic controller for evaporator.
- ❄️ **Multiservice version with VRC cooling capacity modulation system.**

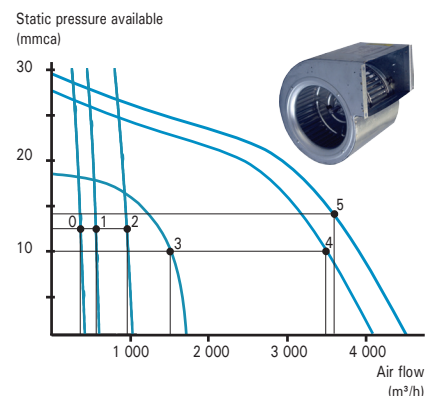
Example installation of the version -N without electrical board



- MC: CONTROL PAD
MV: MOTOR FAN
RD: DEFROST HEATER
ST: THERMOSTAT PROBE
SD: DEFROST PROBE
VE: THERMOSTATIC EXPANSION VALVE
VS: SOLENOIDE VALVE

Centrifugal fan (centrifugal version)

intarbox condensing units feature centrifugal motor fans for a ducted outlet of condenser hot air.



Exhaust duct

Recommended size for 20 m long steel, PVC or fiberglass ducts (each elbow equals 5 m length). For flexible or semi-flexible ducts use a larger size.

- series 0: 200 x 150 mm.
- series 1: 200 x 200 mm.
- series 2: 250 x 150 mm.
- series 3: 200 x 300 mm.
- series 4: 350 x 400 mm.
- series 5: 350 x 400 mm.

230 V-I-50 Hz / 400 V-III-50 Hz | **Positive temperature** | Hermetic compressor | **R-134a / R-449A**

Axial version		Compressor		Cooling capacity EN 13215 (W) ⁽¹⁾ Evap. T° -10 °C	Cooling capacity (W) ⁽²⁾				Input power (kW)	(COP) SEPR ⁽³⁾	Max. current (A)	Liq-Gas Cooling Connection	Weight (kg)	SPL dB(A) ⁽⁴⁾	Price without electronic control (€)	Centrifugal version			
Series / Model	HP	Power supply	Evaporation temperature				Series / Model	Air flow (m³/h) ⁽⁵⁾								P.E.D. (mmca) ⁽⁵⁾	Price without electronic control (€)		
			0 °C		-5 °C	-10 °C												-15 °C	
R-134a	MDH-NY-0 010	3/8	230 V-I	590	880	710	560	430	0,37	(1,54)	4,0	1/4"-3/8"	37	23	1 210	MDH-CY-0 010	375	8	1 386
	MDH-NY-0 015	1/2	230 V-I	830	1 210	980	780	600	0,51	(1,58)	5,0	1/4"-3/8"	40	30	1 328	MDH-CY-0 015	375	8	1 563
	MDH-NY-1 015	1/2	230 V-I	870	1 290	1 040	820	625	0,50	(1,69)	5,0	1/4"-1/2"	41	30	1 384	MDH-CY-1 015	575	8	1 668
	MDH-NY-1 026	3/4	230 V-I	1 270	1 890	1 520	1 190	920	0,72	(1,72)	9,0	1/4"-1/2"	48	26	1 650	MDH-CY-1 026	575	8	1 782
	MDH-NY-1 033	1	230 V-I	1 630	2 310	1 880	1 500	1 170	0,84	(1,87)	9,0	1/4"-1/2"	50	31	1 699	MDH-CY-1 033	575	8	2 100
	MDH-NY-2 053	1 1/2	230 V-I *	2 250	3 470	2 760	2 120	1 560	1,25	(1,77)	12,0	1/4"-5/8"	63	37	2 162	MDH-CY-2 053	1 000	12	2 556
	MDH-NY-3 074	2	230 V-I *	3 410	5 080	4 080	3 180	2 390	1,61	(2,06)	16,0	1/4"-3/4"	84	44	2 651	MDH-CY-3 074	1 500	14	2 921
	MDH-NY-4 086 ⁽⁶⁾	4	400 V-III	4 310	6 620	5 240	4 040	3 040	1,97	(2,13)	14,0	3/8"-7/8"	107	48	3 160	MDH-CY-4 086 ⁽⁶⁾	3 500	10	4 005
	MDH-NY-4 108 ⁽⁶⁾	5	400 V-III	5 260	7 920	6 350	4 910	3 690	2,39	2,88	17,0	3/8"-7/8"	109	45	3 527	MDH-CY-4 108 ⁽⁶⁾	3 500	10	4 371
	MDH-NY-4 136 ⁽⁶⁾	6 1/2	400 V-III	6 700	9 570	7 810	6 210	4 730	3,24	2,59	20,0	3/8"-1 1/8"	112	44	3 857	MDH-CY-4 136 ⁽⁶⁾	3 500	10	4 702
R-449A	MDH-NG-0 008	1/3	230 V-I	620	990	810	650	510	0,42	(1,53)	4,0	1/4"-3/8"	46	28	1 117	MDH-CG-0 008	375	8	1 274
	MDH-NG-0 010	3/8	230 V-I	800	1 250	1 030	830	660	0,52	(1,57)	5,0	1/4"-3/8"	46	33	1 152	MDH-CG-0 010	375	8	1 414
	MDH-NG-0 012	1/2	230 V-I	950	1 435	1 190	980	780	0,60	(1,61)	6,0	1/4"-3/8"	46	33	1 207	MDH-CG-0 012	375	8	1 512
	MDH-NG-1 014	1/2	230 V-I	1 150	1 770	1 460	1 190	950	0,69	(1,69)	6,0	1/4"-1/2"	50	33	1 313	MDH-CG-1 014	575	8	1 572
	MDH-NG-1 016	5/8	230 V-I	1 290	2 020	1 660	1 340	1 040	0,78	(1,71)	7,0	1/4"-1/2"	60	33	1 459	MDH-CG-1 016	575	8	1 679
	MDH-NG-1 018	3/4	230 V-I	1 560	2 360	1 960	1 600	1 270	0,94	(1,72)	8,0	1/4"-1/2"	60	33	1 534	MDH-CG-1 018	575	8	1 843
	MDH-NG-2 024	1	230 V-I	2 070	3 270	2 680	2 150	1 680	1,10	(1,93)	12,0	3/8"-5/8"	60	33	1 685	MDH-CG-2 024	1 000	12	2 114
	MDH-NG-2 026	1 1/4	230 V-I *	2 300	3 550	2 930	2 370	1 870	1,24	(1,91)	13,0	3/8"-5/8"	61	34	1 710	MDH-CG-2 026	1 000	12	2 276
	MDH-NG-2 034	1 1/2	230 V-I *	2 870	4 300	3 590	2 920	2 310	1,73	(1,71)	16,0	3/8"-5/8"	61	36	1 761	MDH-CG-2 034	1 000	12	2 384
	MDH-NG-3 038 ^{(6)*}	1 3/4	400 V-III	3 270	4 970	4 100	3 310	2 610	1,56	(2,12)	6,0	3/8"-5/8"	78	39	2 225	MDH-CG-3 038 ^{(6)*}	1 500	14	3 070
	MDH-NG-4 048 ⁽⁶⁾	2	400 V-III	4 330	6 850	5 580	4 460	3 490	2,14	(2,08)	13,0	3/8"-3/4"	95	36	2 721	MDH-CG-4 048 ⁽⁶⁾	3 500	10	3 565
	MDH-NG-4 054 ⁽⁶⁾	2 1/2	400 V-III	4 970	7 660	6 300	5 070	4 010	2,38	(2,14)	14,0	3/8"-3/4"	96	36	3 045	MDH-CG-4 054 ⁽⁶⁾	3 500	10	3 890
	MDH-NG-4 060 ⁽⁶⁾	3	400 V-III	5 720	8 590	7 130	5 800	4 620	2,84	2,98	15,0	3/8"-3/4"	97	35	3 420	MDH-CG-4 060 ⁽⁶⁾	3 500	10	4 324
	MDH-NG-4 068 ⁽⁶⁾	3 1/2	400 V-III	6 450	9 490	7 920	6 500	5 210	3,26	2,87	15,0	1/2"-3/4"	98	35	3 521	MDH-CG-4 068 ⁽⁶⁾	3 500	10	4 811

230 V-I-50 Hz / 400 V-III-50 Hz | **Negative temperature** | Hermetic compressor | **R-449A**

Axial version		Compressor		Cooling capacity EN 13215 (W) ⁽¹⁾ Evap. T° -35 °C	Cooling capacity (W) ⁽²⁾			Input power (kW)	(COP) SEPR ⁽³⁾	Max. current (A)	Liq-Gas Cooling Connection	Weight (kg)	SPL dB(A) ⁽⁴⁾	Price without electronic control (€)	Centrifugal version			
Series / Model	HP	Power supply	Average evaporation temperature			Series / Model	Air flow (m³/h) ⁽⁵⁾								P.E.D. (mmca) ⁽⁵⁾	Price without electronic control (€)		
			-25 °C		-30 °C												-35 °C	
R-449A	BDH-NG-1 026	3/4	230 V-I	590	1 220	930	670	0,69	(0,96)	9,0	1/4"-1/2"	51	28	1 788	BDH-CG-1 026	575	8	1 945
	BDH-NG-1 034	1 1/4	230 V-I	780	1 520	1 170	860	0,92	(0,95)	10,0	1/4"-1/2"	52	32	1 846	BDH-CG-1 034	575	8	1 991
	BDH-NG-2 054	1 3/4	400 V-III	1 050	2 280	1 720	1 210	1,24	(0,98)	7,0	3/8"-5/8"	54	40	2 402	BDH-CG-2 054	1 000	12	2 579
	BDH-NG-2 074	2 1/2	400 V-III	1 380	2 870	2 170	1 560	1,52	(1,05)	8,0	3/8"-5/8"	75	40	2 461	BDH-CG-2 074	1 000	12	2 636
	BDH-NG-3 086	3	400 V-III	1 520	3 050	2 330	1 710	1,45	(1,08)	8,8	3/8"-5/8"	75	32	3 134	BDH-CG-3 086	1 500	14	3 310
	BDH-NG-3 096	3 1/2	400 V-III	2 080	3 663	2 733	1 940	1,69	(1,15)	11	3/8"-3/4"	88	49	3 489	BDH-CG-3 096	1 500	14	3 796
	BDH-NG-4 108	4	400 V-III	2 240	4 690	3 500	2 470	2,15	1,62	14,0	3/8"-7/8"	117	43	4 451	BDH-CG-4 108	3 500	10	4 803
	BDH-NG-5 136	5	400 V-III	2 950	6 080	4 560	3 230	2,83	1,61	16,0	3/8"-1 1/8"	152	32	5 974	BDH-CG-5 136	3 600	10	6 385
	BDH-NG-5 215	7 1/2	400 V-III	4 500	8 870	6 670	4 820	4,07	1,60	24,0	1/2"-1 1/8"	183	43	6 365	BDH-CG-5 215	3 600	10	6 794

Options

- Change to 400 V-III-50 Hz power supply. + 8 €
- Proportional control of condensing pressure through fan speed variation (series 1, 2 and 3). + 250 €
- Built-in oil separator (already included in -V version). + 590 €
- Crankcase heater. + 60 €
- Built-in solenoid valve (except for V version). + 145 €
- Anti-corrosion coil coating. + 8 €
- Non-return damper (centrifugal version). + 25 €
- Adaptation of air discharge to circular duct. + 100 €
- Vertical discharge (centrifugal version).
- Control and power panel with electronic control unit for management of condenser and evaporator. + 5 %
 - Larger sized multifunction electronic control. + 150 €

⁽¹⁾ Conditions based on UNE-EN 13215: ambient temp. 32 °C, evap. temp. -10 °C (PT) and -35 °C (NT), 20 °C of suction temperature, refrigerant R-449A.

⁽²⁾ Cooling capacity in nominal conditions: evaporating temp -10°C (PT) and -35 °C (NT), ambient temperature of 32 °C, overheating 10 K, refrigerant R-449A.

⁽³⁾ COP / SEPR: Coefficient of Performance according to Ecodesign Directive 2015/1095/EU.

⁽⁴⁾ Sound pressure in dB (A) in open field at 10 m from the unit.

⁽⁶⁾ Model that allow VRC system.

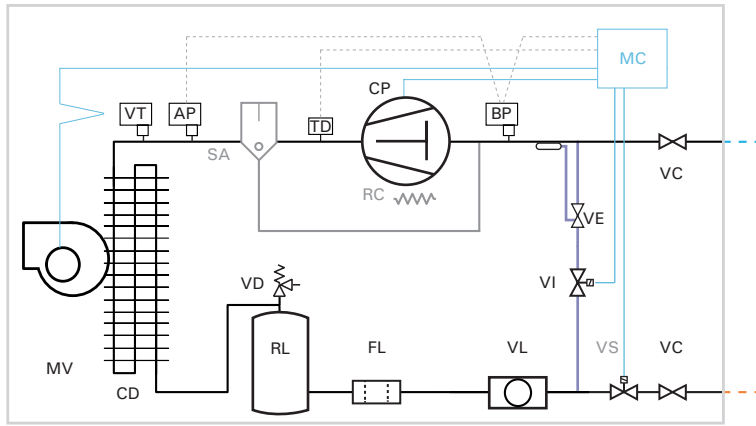
^{(6)*} Requires proportional control of condensing pressure.

* Units available with 400 V-III-50 Hz power supply.

Version

- **V version** - VRC system (with oil separator). Table models with (V). + 1 000 €

Refrigeration scheme
(DH - Centrifugal)



ADDITIONAL IN VERSION -N WITH ELECTRONIC MICROCONTROLLER (MDH-C AND BDH-C)
MC: ELECTRONIC MICROCONTROLLER

COMPONENTS

- CD: CONDENSER
- CP: COMPRESSOR
- FL: DRYING FILTER
- MV: MOTOR FAN
- RL: LIQUID RECEIVER
- VL: SIGHT GAUGE
- VC: SERVICE VALVE 3 WAYS (up to connections 3/4")
- VD: SECURITY VALVE

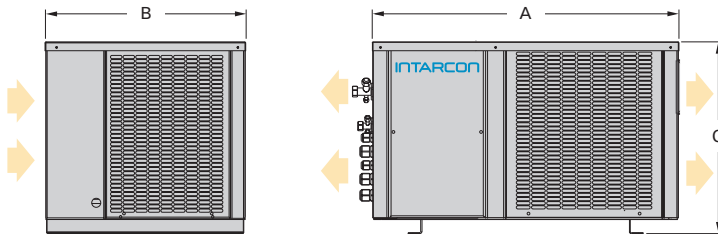
OPTIONAL

- RC: CRANKCASE HEATER
- SA: OIL SEPARATOR
- VS: SOLENOID VALVE

LIQUID INJECTION SYSTEM (ONLY BDH)

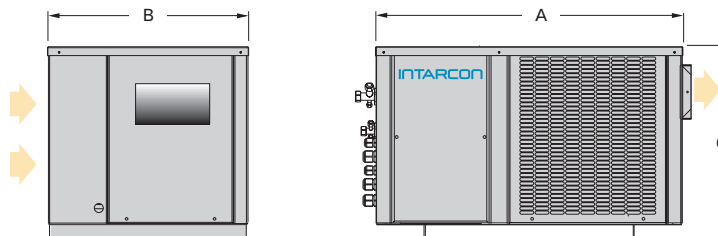
- TD: DISCHARGE THERMOSTAT
- VE: THERMOSTATIC EXPANSION VALVE
- VI: LIQUID SOLENOID VALVE

Dimensions
(DH - Axial)



Dimensions (mm)	A	B	C
series 0	600	395	355
series 1	665	435	416
series 2	835	435	500
series 3	925	580	515
series 4	1 000	615	585
series 5	1 290	755	656

Dimensions
(DH - Centrifugal)



Dimensions (mm)	A	B	C	Fan outlet	Hopper
series 0	600	395	355	185 x 115	Ø 200
series 1	665	435	416	185 x 115	Ø 200
series 2	835	435	500	230 x 130	Ø 200
series 3	925	580	515	236 x 266	Ø 300
series 4	1 000	615	585	305 x 266	Ø 400
series 5	1 290	755	656	305 x 266	Ø 400

MDH-N and BDH-N with electrical board as an option

Intarbox condensing units in their electronic version incorporate an advanced electronic controller for the management of the condensing unit and the evaporator, being able to optionally integrate the solenoid valve.



- Multifunction remote digital control.
- Electronic board integrated in the condensing unit for 6 control relays for: compressor, condensing fan, evaporator fan, defrost, light and alarm.
- Possibility of interconnection and synchronization of up to 8 devices by LAN, managed from a single control.

Variable Refrigerant Capacity

VRC system

Description

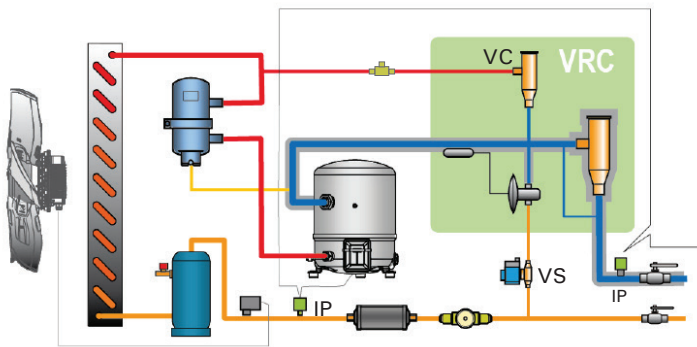
Multiservice version, featuring VRC system (Variable Refrigerant Capacity), of refrigeration capacity regulation, applicable to hermetic alternative compressors, consisting of:

- Suction pressure valve (VP).
- By-pass pressure valve (VC).
- Thermostatic expansion valve for liquid injection (VE).
- Pressure control switch (IP).
- Built-in oil separator.

Multiservice versions of condensing units:

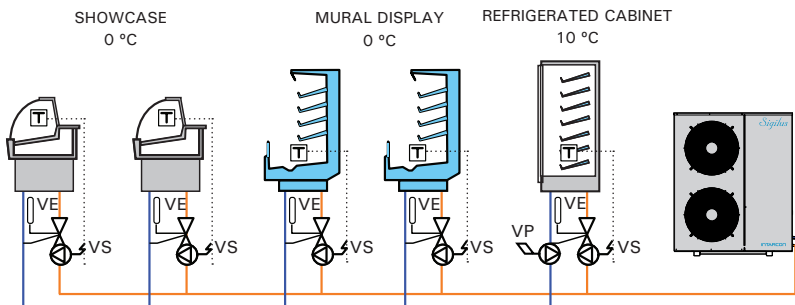
- Horizontal axial or centrifugal version for several services
intarbox-multi: series MDH-CV/-V.
- Low-noise axial for several services
Sigilus-multi: series MDF-V.

Scheme



Example of installation

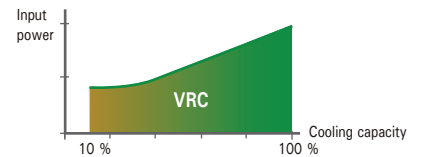
Units specifically designed for the centralisation of cooling production of several evaporators.



The VRC system is composed of a set of pressure and temperature valves capable of progressive variation of a compressor's cooling capacity between 100 % and 10 % of this rated power, at the same time the system reduces electrical input power and protects the compressor, maintaining its compression ratio within security margins, eliminating the risk of overheating.

VRC system: Variable Refrigerant Capacity

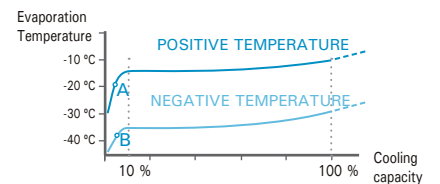
The VRC system applied to a reciprocating hermetic compressor adjusts the flow of refrigerant to the evaporator unit's demand by maintaining constant pressure in the suction line.



The VRC system is characterized by:

- Consisting exclusively of high reliability mechanical components.
- Keeps the evaporation pressure constant.
- Protects the compressor against the risk of engine overheating.
- Maintains the compression ratio of the compressor within the safety limits.

Condensing units equipped with the VRC system allow centralizing the refrigeration production of a set of services, maintaining constant the pressure and temperature of the refrigerant in the evaporators.



The VRC system can be easily regulated to set a minimum evaporation pressure. The factory setting provides the following minimum evaporation temperatures:

- Positive temperature unit: -13 °C
- Negative temperature unit: -35 °C

With demand below 10 % of the nominal power, the characteristic of the evaporation pressure curve falls towards the minimum value admitted by the compressor, disconnecting the low pressure switch (points A and B) and stopping the compressor.

In this way, the multi-service condensing units are designed for low-pressure stop / start control (drop down or pump down).

Alternatively, the compressor running stop can be done through an external open / closed contact.

R-134a
R-449A

Other refrigerants
by request



intarloop system

Water-cooled condensing units

Water-cooled condensing units for positive temperature refrigeration, with very compact size and quiet operation, designed for on-wall or floor installation.

- ❄ Tropicalised design for ambient temperature up to 45 °C as standard.
- ❄ Minimal R-134a or R-449A refrigerant load.

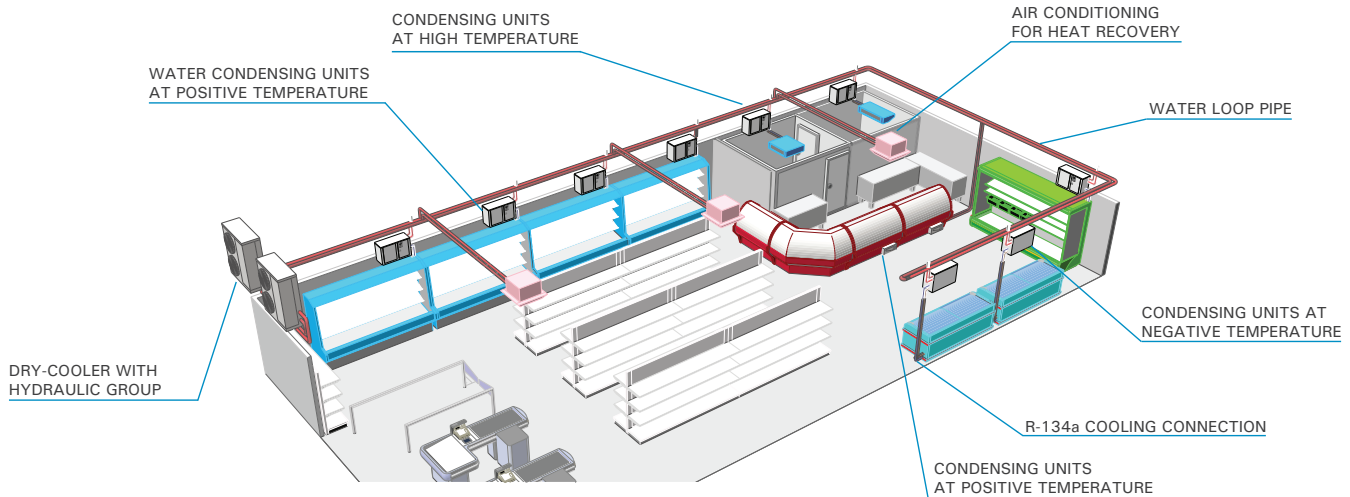
Drycooler with built-in hydraulic group

Drycoolers with built-in hydraulic group, in a low-noise construction, designed for heat dissipation of the refrigeration equipment condensation water loop.

- ❄ Tropicalised design for ambient temperature up to 45 °C as standard.
- ❄ Double noise insulation.

intarloop system

intarloop is a commercial refrigeration system, consisting of: DX cooling units distributed, with indirect condensation by a water circuit; and one or more units in parallel air-cooler connected to the condensation heat dissipation.



Ecology

Distributed cooling production allows to reduce and fractionate the load of HFC refrigerant in the installation, so that the risk of leakage is reduced.

Safety

Decentralization of the cooling production contributes a greater operation security of the installation, that guarantees a high availability of the system when faced with the isolated failure of a single unit.

The installation of a double air-cooler or dry-cooler in parallel, provides a greater operational security.

The condensation water loop contains only closed-circuit water working at low hydraulic pressure.

Simple intallations

Intarloop system is very easy to install, thanks to its condensed water units pre-charged with refrigerant, and air-coolers or dry-coolers with inbuilt hydraulic unit/circuit.

Precision

Distributed cooling production allows adaptation of working temperatures to the needs of each service, thus obtaining an adequate degree of humidity for the best preservation of each product, and optimizing the performance of the systems.

Energy saving

Condensing units incorporate high-efficiency scroll compressors with R-134a or R-449A refrigerant for positive temperature, and R-449A for negative temperature.

Air-coolers or dry-coolers incorporate hydraulic group with electronic pump of variable flow, that adapts its functioning speed to the demand of the installation. Motor fans are equipped with speed regulators to reduce their consumption in low ambient temperatures or low load.

Versatility

Intarloop system is applicable both in new installations and in existing centralized direct expansion facilities, where the update of refrigeration plant is desired. In fact, existing refrigerating displays are usable and easily converted to new refrigerants.

Easy and flexible installation

Refrigeration units are supplied with service valves and factory precharge with refrigerant and preloaded with service keys. The water loop can be made with polypropylene pipe without insulation, with service valves in each refrigeration unit, thus providing great flexibility in modifying the installation.

Tropicalised design

Unlike other systems on the market, the intarloop system is designed to work properly even with extreme ambient temperatures of up to 45 °C, with condensation water temperatures of up to 55 °C, and without the need to incorporate additional cooling equipment.



Description

intarloop is a supermarket refrigeration system, consisting of: DX cooling units distributed, with indirect condensation by a water circuit; and one or more air-cooler units in parallel connected to the condenser heat dissipator.

Different cooling units are located next to the service or evaporator incorporating the electrical panel and evaporator control and reducing refrigerant charge of R-134a and R-449A.

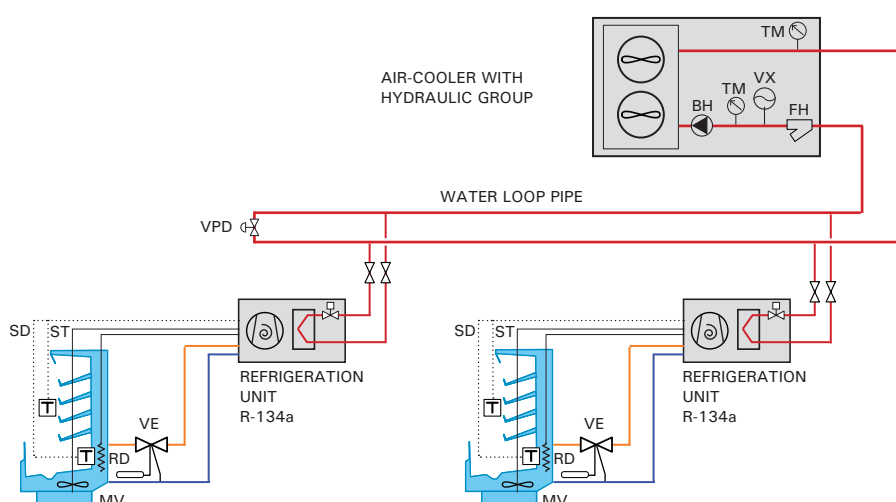
Condensation heat is removed by indirect circuit water and is recovered in the drycooler units incorporated in the hydraulic unit.

Drycooler installed in multiple units in parallel provides greater reliability.

Air-cooler and drycooler refrigeration units are low-noise, with compressor soundproofing and sound absorbing coating.

The system is designed to operate under high ambient temperatures in summer up to 45 °C, and condensation heat recovery for heating in winter.

Installation scheme intarloop system

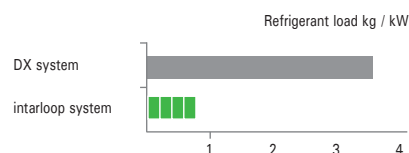


- BH: HYDRAULIC PUMP
- FH: HYDRAULIC MESH FILTER
- MV: MOTOR FAN
- RD: DEFROST HEATER
- SD: DEFROST PROBE
- ST: THERMOSTAT PROBE
- TM: THERMOMANOMETER
- VE: EXPANSION VALVE
- VX: BUFFER TANK
- VPD: DIFFERENTIAL PRESSURE VALVE

- ❄ Indirect condensation by a water circuit.
- ❄ Low noise level.
- ❄ Simple installation.
- ❄ Reduced refrigerant load.
- ❄ According to F-Gas.

Reduced refrigerant charge no risk of leakage

Compared to DX centralised systems, intarloop system reduces the refrigerant charge in the system to a quarter, and splits the refrigerant charge in several independent circuits, minimising the risk of leaks in the system.



Ecological installation

The practical elimination of leaks of greenhouse refrigerants in the installation considerably reduces the direct impact on atmospheric heating.

The installation thus complies with the limitations of the European F-Gas regulation for 2022.

Easy and flexible installation

Refrigeration units are supplied with service valves and factory precharge with refrigerant and preloaded with service keys. The water loop can be made with polypropylene pipe without insulation, with service valves in each refrigeration unit, thus providing great flexibility in modifying the installation.



Low noise system

The refrigeration units, installed inside the premises, have a very low sound level thanks to a double acoustic soundproofing of the compressor and the refrigerator compartment.

The air-cooled units, designed for outdoor use, incorporate low speed fans and soundproofing compartment of the circulating pump.

Low-noise compressors

Scroll compressors Copeland, are characterized by their great robustness and reliability of operation, and being cooled exclusively by the refrigerant gas, allow effective soundproofing.

intarloop system

intarloop water-cooled condensing units



Description

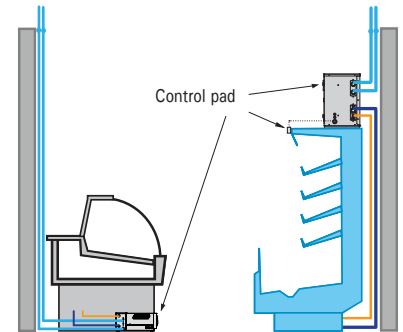
Water-cooled condensing units for positive temperature refrigeration, with very compact size and quiet operation, designed for on-wall or floor installation.

Features

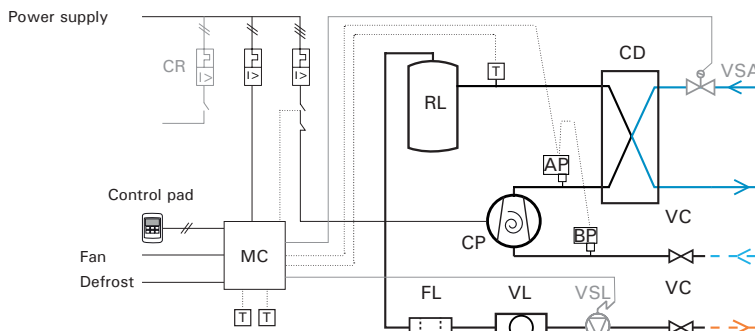
- 230 V-I-50 Hz or 400 V-III-50 Hz power supply.
- Casing in pre-painted galvanized steel sheet, with noise insulation, with removable front panel for access to the compressor and the electrical panel.
- Acoustically insulated Scroll compressor, mounted on shock absorbers.
- Rotary compressor (MDM-P / BDM-P).
- Frigorific circuit with stainless steel brazed plates heat exchanger, ceramic dryer filter, sight glass, HP and LP and services valves.
- Hydraulic condensation circuit made of copper pipe with threaded connections.
- Electrical control panel with differential thermomagnetic protection.
- Liquid injection system for negative temperature models with R-449A.

On-wall, furniture or floor installation

Intarloop series motor condensers can be installed on the furniture, on the floor or anchored in the wall.



Refrigeration and electrical sheme



- AP: HIGH PRESSURE SWITCH
 - BP: LOW PRESSURE SWITCH
 - CD: HEAT EXCHANGER
 - CP: COMPRESSOR
 - FL: FILTER
 - MC: MICROCONTROLLER
 - RL: LIQUID VESSEL
 - T: PROBE
 - VC: SHUT-OFF VALVE
 - VL: SIGHT GAUGE
- OPTIONAL
- CR: DEFROST CONTACTOR
 - VSA: WATER SOLENOID VALVE
 - VSL: LIQUID SOLENOID VALVE

OPTIONAL WITH ELECTRONIC CONTROL
MC: ELECTRONIC MICROCONTROLLER

Rotary compressors

Hermetic rotary compressors provide greater reliability, lower noise and maximum design flexibility.



Very quiet compressors

Scroll compressors Copeland, are characterized by their great robustness and reliability of operation, and being cooled exclusively by the refrigerant gas, allow effective soundproofing.



Calculation of hydraulic connections

Visit our easy and intuitive online software to calculate the hydraulic pipes of the system.

<https://intarcon.calcooling.com/>

Options

- Change to 230 V-I-50 Hz power supply. + 8 %
- Electronic control for evaporator and compressor with temperature probes and control suitable for local or remote control. + 5 %
- Refrigerant preload for 5 m piping. + 8 %
- Liquid solenoid valve. + 145 €
- Water solenoid valve. + 145 €
- Hot gas defrost. By request

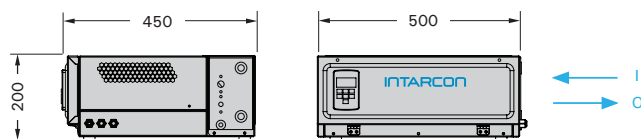
230 V-I-50 Hz | Positive temperature | Rotary compressor | R-134a

Series / Model	Compressor			Cooling capacity (W) ⁽¹⁾				Input power (kW)*	Max. current (A)	Condensing flow (l/h)	Hydraulic connection	Pressure drop (m.c.a)	Liq-Gas cooling connection	Weight (kg)	SPL dB(A) ⁽²⁾	Price without electronic control (€)
	Model	Power supply	Evaporation temperature													
			0 °C	-5 °C	-10 °C											
R-134a 1x Rotary	MDM-PY-0 005	HGA-4450Y	230 V-I	820	690	570	0.4	4	150	3/4"	0.5	3/16"-3/8"	20	12	1 321	
	MDM-PY-0 007	HGA-4476Y	230 V-I	1 220	1 020	850	0.5	5	250	3/4"	0.5	3/16"-1/2"	25	21	1 605	
R-449A 1x Rotary	MDM-PG-0 006	HGA-4467Z	230 V-I	1 190	960	765	0.5	4	200	3/4"	0.5	3/16"-3/8"	22	24	1 330	
	MDM-PG-0 010	HGA-4512Z	230 V-I	2 000	1 610	1 290	0.8	7	350	3/4"	0.5	1/4"-1/2"	27	30	1 662	

230 V-I-50 Hz | Negative temperature | Rotary compressor | R-449A

Series / Model	Compressor			Cooling capacity (W) ⁽¹⁾				Input power (kW)*	Max. current (A)	Condensing flow (l/h)	Hydraulic connection	Pressure drop (m.c.a)	Liq-Gas cooling connection	Weight (kg)	SPL dB(A) ⁽²⁾	Price without electronic control (€)
	Model	Power supply	Evaporation temperature													
			-20 °C	-25 °C	-30 °C	-35 °C										
1x	BDM-PG-0 004	HGA-2446Z	230 V-I	890	680	510	370	0.5	3	150	1/2"	0.5	3/16"-1/2"	23	21	1 979

Dimensions



⁽¹⁾ Conditions based on UNE-EN 13215: evap. temp. -10 °C (PT) and -30 °C (NT), water temperature of 40 °C, 10 K superheating and 3 K subcooling.
⁽²⁾ Sound pressure in dB (A) in open field at 1 m from the unit.

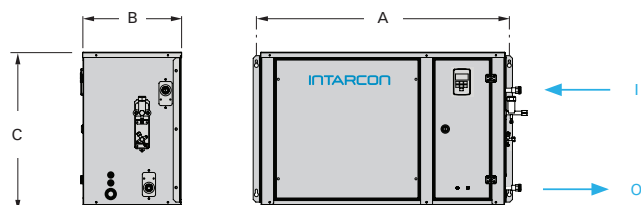
400 V-III-50 Hz | Positive temperature | Scroll compressor | R-134a / R-449A

Series / Model	Compressor			Cooling capacity (W) ⁽¹⁾				Input power (kW)*	Max. current (A)	Condensing flow (l/h)	Hydraulic connection	Pressure drop (m.c.a)	Liq-Gas cooling connection	Weight (kg)	SPL dB(A) ⁽²⁾	Price without electronic control (€)
	HP	Model	Power supply	Evaporation temperature												
				0 °C	-5 °C	-10 °C										
R-134a 1x Scroll	MDM-SY-1 009	1 1/4	ZS09	400 V-III *	1 840	1 540	1 270	0.7	3	350	3/4"	0.5	1/4"-5/8"	34	40	2 516
	MDM-SY-1 015	2	ZB15	400 V-III *	2 810	2 350	1 940	1.1	5	500	3/4"	0.5	1/4"-5/8"	43	37	3 171
	MDM-SY-1 021	3	ZB21	400 V-III *	4 200	3 500	2 890	1.5	7	750	3/4"	0.5	1/4"-3/4"	53	40	3 531
	MDM-SY-1 029	4	ZB29	400 V-III	5 200	4 340	3 590	2.0	10	950	1"	0.5	3/8"-7/8"	68	53	4 357
	MDM-SY-1 038	5	ZB38	400 V-III	7 060	5 890	4 860	2.5	13	1 250	1"	0.5	3/8"-7/8"	68	53	4 357
	MDM-SY-1 045	6	ZB45	400 V-III	8 250	6 890	5 700	2.9	13	1 500	1"	0.5	3/8"-1 1/8"	70	43	4 596
R-449A 1x Scroll	MDM-SY-1 057	8	ZB57	400 V-III	10 500	8 760	7 240	4.1	16	1 950	1 1/4"	0.5	3/8"-1 1/8"	75	50	5 309
	MDM-SG-1 009	1 1/4	ZS09	400 V-III *	2 790	2 250	1 840	1.2	2	500	1"	0.5	1/4"-5/8"	34	44	2 711
	MDM-SG-1 015	2	ZB15	400 V-III *	4 320	3 640	3 050	1.7	5	800	1"	0.5	3/8"-5/8"	43	37	3 020
	MDM-SG-1 021	3	ZB21	400 V-III *	6 330	5 340	4 460	2.4	7	1 200	1"	0.5	3/8"-3/4"	53	40	3 363
	MDM-SG-1 029	4	ZB29	400 V-III	7 787	6 580	5 510	3.1	10	1 500	1/4"	0.5	3/8"-7/8"	53	40	3 789
	MDM-SG-1 038	5	ZB38	400 V-III	10 500	8 870	7 430	3.9	13	1 950	1/4"	0.5	3/8"-7/8"	68	53	4 150
MDM-SG-1 045	6	ZB45	400 V-III	13 100	11 200	9 420	5.6	13	2 500	1/4"	0.5	3/8"-1 1/8"	70	43	4 539	

400 V-III-50 Hz | Negative temperature | Scroll compressor | R-449A

Series / Model	Compressor			Cooling capacity (W) ⁽¹⁾				Input power (kW)*	Max. current (A)	Condensing flow (l/h)	Hydraulic connection	Pressure drop (m.c.a)	Liq-Gas cooling connection	Weight (kg)	SPL dB(A) ⁽²⁾	Price without electronic control (€)	
	HP	Model	Power supply	Evaporation temperature													
				-20 °C	-25 °C	-30 °C	-35 °C										
R-449A 1x Scroll	BDM-SG-1 006	2	ZF06	400 V-III *	2 240	1 840	1 500	1 210	1.6	5	550	3/4"	0.5	1/4"-5/8"	45	39	3 943
	BDM-SG-1 009	3	ZF09	400 V-III	3 120	2 560	2 080	1 660	2.0	6	700	3/4"	0.5	3/8"-3/4"	54	44	4 513
	BDM-SG-1 011	3 1/2	ZF11	400 V-III	3 843	3 180	2 580	2 070	2.4	8	850	3/4"	0.5	3/8"-3/4"	55	45	4 701
	BDM-SG-2 013	4	ZF13	400 V-III	4 320	3 560	2 900	2 340	2.7	9	950	1"	0.5	3/8"-7/8"	55	47	4 866
	BDM-SG-2 015	5	ZF15	400 V-III	5 400	4 440	3 600	2 890	3.5	10	1 200	1"	0.5	3/8"-7/8"	73	47	5 334
	BDM-SG-2 018	6	ZF18	400 V-III	6 460	5 300	4 300	3 450	4.1	14	1 500	1"	0.5	3/8"-1 1/8"	78	47	5 887
	BDM-SG-2 025	8	ZF25	400 V-III	8 060	6 640	5 390	4 330	4.5	16	1 750	1 1/4"	0.5	3/8"-1 1/8"	78	47	7 026

Dimensions



Dimensions (mm)	A	B	C
series 1	830	355	530
series 2	942	355	600

* 230 V-I-50 Hz power supply also available on these models.
⁽¹⁾ Conditions based on UNE-EN 13215: evap. temp. -10 °C (PT) and -30 °C (NT), water temperature of 40 °C, 10 K superheating and 3 K subcooling.
⁽²⁾ Sound pressure in dB (A) in open field at 1 m from the unit.

intarloop drycooler with built-in hydraulic group

CWF series



Description

Drycoolers with built-in hydraulic group, in a low-noise construction, designed for heat dissipation of the refrigeration equipment condensation water loop.

Features

- Low speed axial fans, with dynamically balanced blades, supported by air nozzle and external protection grilles.
- High efficiency water coils with copper pipes and aluminum fins.
- Hydraulic group with variable flow electronic pump, expansion valve, security valve, filter, thermomanometres and auto-fill valve included.
- Threaded hydraulic connections.
- Electric power panel with protection of hydraulic pump, fan motor and speed regulator.

Tropicalised design

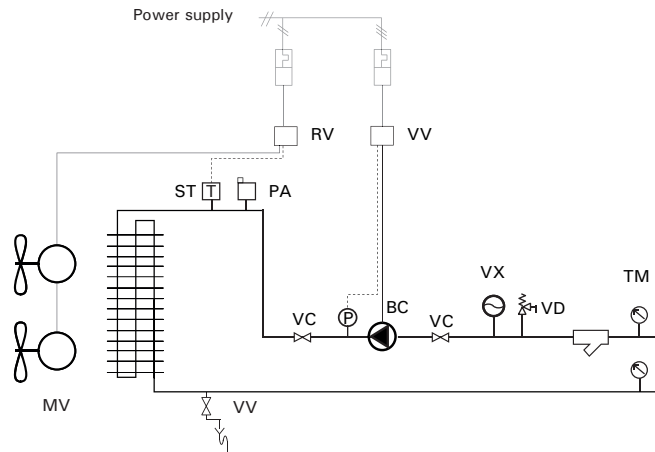
intarloop drycoolers have a large area L-shaped coil for effective heat exchange that allows for operation with high ambient temperatures.

Double soundproofing

Air-coolers in hydraulic unit incorporate a double soundproofing:

- Soundproof compartment and separate air flow circulation pump.
- Low speed and noise fans, on antivibration structure.

Hydraulic and electrical scheme



- BC: CIRCULATION PUMP
- FM: MESH FILTER
- MV: MOTOR FAN
- PA: AIR VENT
- P: PRESSURE SENSOR
- RV: SPEED REGULATOR
- ST: TEMPERATURE PROBE
- TM: THERMOMANOMETER
- VC: SERVICE VALVE
- VD: SECURITY VALVE
- VV: DRAIN VALVE
- VX: EXPANSION TANK

230 V-I-50 Hz | Positive temperature | Water

Series / Model	Power supply	Exchange capacity (W) ⁽¹⁾	Air Flow (m³/h)	Fan (nx ø mm)	Condensing flow (l/h)	Input power (kW)	Max. current (A)	Available water column (m.c.a.)	Hydraulic connection	Weight (kg)	SPL dB(A) ⁽²⁾	Price (€)
Water CWF-2	230 V-I	6 000	3 700	Ø 450	1 000	0.53	8.6	6	1"	81	26	3 599
CWF-3	230 V-I	10 000	6 500	2x Ø 450	1 700	0.68	9.3	6	1"	100	29	4 851
CWF-4	230 V-I	11 500	7 000	2x Ø 450	2 000	0.68	9.3	6	1 1/4"	113	29	5 278
CWF-6	230 V-I	20 000	13 000	4x Ø 450	3 400	1.10	10.5	6	1 1/2"	160	29	8 873
CWF-8	230 V-I	23 000	14 800	4x Ø 450	4 000	1.10	10.5	6	1 1/2"	185	29	11 803

Options

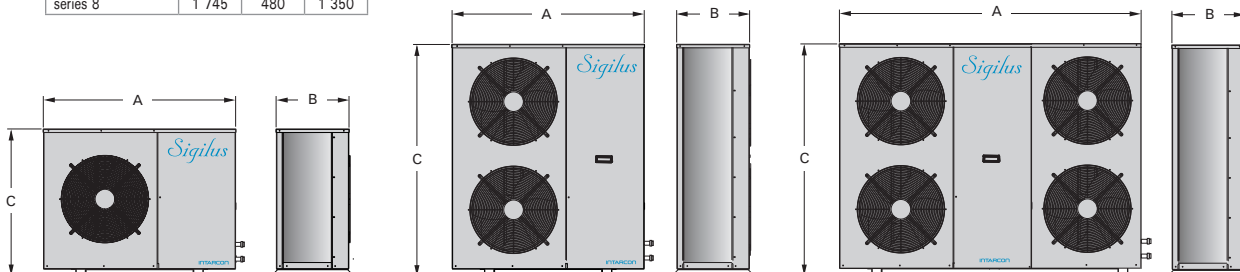
- Condenser coil polyurethane anti-corrosion treatment. + 8 %
- Coil protection grille:
Series 2 to 4: + 90 €
Series 6 and 8: + 160 €

⁽¹⁾ Thermal power of exchange for 35 °C temperature of air, and 45 °C / 40 °C temperature inlet/outlet of water.

⁽²⁾ Sound pressure in dB (A) in open field at 10 m from the unit.

Dimensions

Dimensions (mm)	A	B	C
series 2	1 080	415	830
series 3	1 150	480	1 100
series 4	1 150	480	1 350
series 6	1 745	480	1 100
series 8	1 745	480	1 350



R-134a

Glycol water



Hydronic systems with glycol chiller

Indirect cooling systems for cold rooms at positive and high temperature consisting of an air condensed glycol chiller plus an air cooler unit with glycol as secondary fluid.

- ❄ Operating with propylene glycol.
- ❄ R-134a low refrigerant charge.
- ❄ Control board and hydraulic group.
- ❄ Tropicalised design for ambient temperature up to 50 °C.
- ❄ Electronic control with additional remote control.

Hydronic systems



Description

Hydronic cooling equipment for cold rooms are indirect cooling systems consisting of an air condensed glycol chiller plus an air cooler unit with glycol as secondary fluid, built-in a common control board with electronic regulation.

Features

Refrigeration unit:

- Self-supporting glycol chiller casing built in galvanized steel sheet and polyester paint coating.
- Hermetic reciprocating compressor insulated with acoustic jacket, discharge muffler, mounted on shock absorbers, with internal klixon.
- Condensing coil in L, with copper pipes and aluminium fins, tropicalised for ambient temperature up to 50 °C.
- Low-speed condensing motor fans, with internal electronic protection, mounted on nozzles, dynamically balanced blades and external protection grille.
- Proportional control of condensing pressure (three-phase models).
- Stainless steel plate heat exchanger.
- R-134a cooling circuit, equipped with HP and LP switches, filter dryer and thermostatic expansion valve.
- Hydraulic group with glycol circulation pump, expansion tank, safety valve, strainer, air vent and filling valve.
- Electronic control board with electronic control for cold room set point temperature, glycol water temperature, defrost cycles, compressor protection and anti-ice protection.

Air cooler:

- Air cooler with glycol water, self-supporting casing built in galvanized steel sheet and polyester paint coating.
- High performance cooling coil, built in copper pipes and aluminium fins.
- High-flow axial motor fans.
- Bottom cover with removable defrost drain pan in stainless steel.
- Air defrost for high temperature and electrical defrost for positive temperature.

- ❄️ Glycol indirect cooling system.
- ❄️ Circuit free of refrigerant leaks.
- ❄️ Easy installation on polyethylene pipe.

Electronic regulation

Hydronic equipment is equipped with electronic regulation for the joint management of the system:

- Cold room temperature control, with maximum and minimum temperature registration.
- Refrigerant circuit control with compressor protection and high and low pressure limiters.
- Secondary circuit control with circulating pump management, control of water inlet and outlet temperatures and frost protection.
- Air cooler control with automatic defrost cycle management.
- Control command for remote wiring with temperature display.

R-134a + glycol water

Hydronic systems use a solution of propylene glycol as a secondary refrigerant, and ecological R-134a as refrigerant fluid in a compact circuit with very low refrigerant charge.

Propylene glycol 35 %:

- Food-safe compatibility.
- Innocuous to the environment.
- In liquid state under pressure and ambient temperature.
- Thermophysical properties similar to water.
- Freezing temperature: -18 °C.
- Biodegradable.
- Economical.



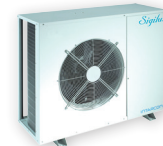
Hydraulic connection

This type of connection benefits from the following advantages:

- Easy installation and assembly.
- Low working pressure at 1 kg / cm².
- Circuit without risk of refrigerant leaks.
- Economical installation.
- Quick start-up and easy maintenance.

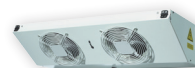
230 V-I-50 / 400 V-III-50 Hz | High temperature | Hermetic reciprocating compressor | R-134a

Series / Model	Compressor			Cooling capacity (W)			Input power (kW) ⁽¹⁾	Max. current (A)	Air blower		Hydraulic connection	Weight (kg)	SPL dB(A) ⁽²⁾	Price (€)
	HP	Power supply	Model	Cold room temperature (°C)					Fan n° x ø mm	Air flow (m³/h)				
				15 °C	10 °C	5 °C								
AHF-DY-51 033	1	230 V-I	CAJ4511Y	2 535	2 180	1 890	1.1	11	1x Ø 360	1100	3/4"	77 + 32	22	4 324
AHF-DY-51 053	1 1/2	230 V-I	FH4518Y	2 975	2 560	2 250	1.4	14	1x Ø 360	1100	3/4"	92 + 32	27	4 831
AHF-DY-52 074	2	230 V-I	FH4525Y	3 980	3 500	3 040	1.8	18	2x Ø 360	1800	3/4"	95 + 45	28	5 308
AHF-DY-62 086	4	400 V-III	MTZ-50	5 270	4 600	4 090	2.3	14	2x Ø 360	1800	1"	115 + 45	39	6 806
AHF-DY-63 108	5	400 V-III	MTZ-64	6 580	5 790	5 040	2.8	18	3x Ø 360	3150	1"	118 + 65	37	7 616
AHF-DY-63 136	6 1/2	400 V-III	MTZ-80	8 350	7 360	6 420	3.5	21	3x Ø 360	3150	1"	119 + 65	36	7 729
AHF-DY-74 171	8	400 V-III	MTZ-100	10 900	9 560	8 410	4.2	25	2x Ø 450	4000	1 1/4"	144 + 70	40	9 649
AHF-DY-75 215	10	400 V-III	MTZ-125	12 900	11 400	10 000	5.5	30	3x Ø 450	5700	1 1/4"	145 + 77	40	10 817
AHF-DY-75 271	13	400 V-III	MTZ-160	14 800	13 000	11 500	6.7	40	3x Ø 450	5700	1 1/4"	148 + 77	40	11 909



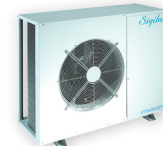
230 V-I-50 / 400 V-III-50 Hz | Positive temperature | Hermetic reciprocating compressor | R-134a

Series / Model	Compressor			Cooling capacity (W)			Input power (kW) ⁽¹⁾	Max. current (A)	Air blower		Hydraulic connection	Weight (kg)	SPL dB(A) ⁽²⁾	Price (€)
	HP	Power supply	Model	Cold room temperature (°C)					Fan n° x ø mm	Air flow (m³/h)				
				10 °C	5 °C	0 °C								
MHF-NY-52 026	3/4	230 V-I	CAJ4492Y	1 380	1 200	1 030	0.9	9	2x Ø 200	1 050	3/4"	78 + 24	22	3 808
MHF-NY-53 033	1	230 V-I	CAJ4511Y	2 260	1 940	1 650	1.3	10.0	3x Ø 254	2 350	3/4"	77 + 45	22	4 405
MHF-NY-53 053	1 1/2	230 V-I	FH4518Y	2 680	2 290	1 980	1.6	13	3x Ø 254	2 350	3/4"	92 + 45	27	4 911
MHF-NY-54 074	2	230 V-I	FH4525Y	3 510	3 060	2 620	2.0	18	4x Ø 300	3 100	3/4"	95 + 55	28	5 531
MHF-NY-64 086	4	400 V-III	MTZ-50	4 640	4 120	3 420	2.5	15	4x Ø 300	3 100	1"	115 + 55	39	7 030



230 V-I-50 / 400 V-III-50 Hz | Positive temperature | Hermetic reciprocating compressor | R-134a

Series / Model	Compressor			Cooling capacity (W)			Input power (kW) ⁽¹⁾	Max. current (A)	Air blower		Hydraulic connection	Weight (kg)	SPL dB(A) ⁽²⁾	Price (€)
	HP	Power supply	Model	Cold room temperature (°C)					Fan n° x ø mm	Air flow (m³/h)				
				10 °C	5 °C	0 °C								
MHF-DY-52 033	1	230 V-I	CAJ4511Y	2 280	1 950	1 650	1.2	10	2x Ø 360	2 100	3/4"	77 + 45	22	4 850
MHF-DY-52 053	1 1/2	230 V-I	FH4518Y	2 700	2 310	1 990	1.5	14	2x Ø 360	2 100	3/4"	92 + 45	27	5 357
MHF-DY-53 074	2	230 V-I	FH4525Y	3 630	3 160	2 710	2.0	18	3x Ø 360	3 600	3/4"	95 + 65	28	5 987
MHF-DY-63 086	4	400 V-III	MTZ-50	4 840	4 180	3 630	2.4	14	3x Ø 360	3 600	1"	115 + 65	39	7 486
MHF-DY-63 108	5	400 V-III	MTZ-64	5 510	4 900	4 140	2.7	18	3x Ø 360	3 600	1"	118 + 65	37	7 799
MHF-DY-64 136	6 1/2	400 V-III	MTZ-80	7 590	6 610	5 770	3.7	21	2x Ø 450	4 650	1"	119 + 70	36	8 996
MHF-DY-75 171	8	400 V-III	MTZ-100	9 300	7 970	7 010	4.4	25	3x Ø 450	6 200	1 1/4"	144 + 77	40	10 164
MHF-DY-75 215	10	400 V-III	MTZ-125	10 600	9 490	8 070	5.4	30	3x Ø 450	6 200	1 1/4"	145 + 77	40	11 132



230 V-I-50 / 400 V-III-50 Hz | Positive temperature | Hermetic reciprocating compressor | R-134a

Series / Model	Compressor			Cooling capacity (W)			Input power (kW) ⁽¹⁾	Max. current (A)	Air blower		Hydraulic connection	Weight (kg)	SPL dB(A) ⁽²⁾	Price (€)
	HP	Power supply	Model	Cold room temperature (°C)					Fan n° x ø mm	Air flow (m³/h)				
				10 °C	5 °C	0 °C								
MHF-QY-51 074	2	230 V-I	FH4525Y	3 450	3 000	2 620	2.1	18	1x Ø 350	2 350	3/4"	95 + 56	28	5 200
MHF-QY-61 086	4	400 V-III	MTZ-50	4 520	3 910	3 340	2.4	13	1x Ø 350	2 350	1"	115 + 56	39	6 699
MHF-QY-62 108	5	400 V-III	MTZ-64	5 500	4 890	4 140	2.9	15	2x Ø 350	4 150	1"	118 + 72	37	7 550
MHF-QY-62 136	6 1/2	400 V-III	MTZ-80	6 870	6 020	5 210	3.7	17	2x Ø 350	4 150	1"	119 + 72	36	7 664
MHF-QY-73 171	8	400 V-III	MTZ-100	8 810	7 900	6 640	4.5	22	2x Ø 350	4 700	1 1/4"	144 + 89	40	8 962
MHF-QY-73 215	10	400 V-III	MTZ-125	10 300	9 030	7 840	5.4	31	3x Ø 350	6 200	1 1/4"	145 + 94	40	10 137
MHF-QY-74 271	13	400 V-III	MTZ-160	12 300	10 700	9 500	7.1	41	4x Ø 350	8 300	1 1/4"	148 + 118	40	11 889



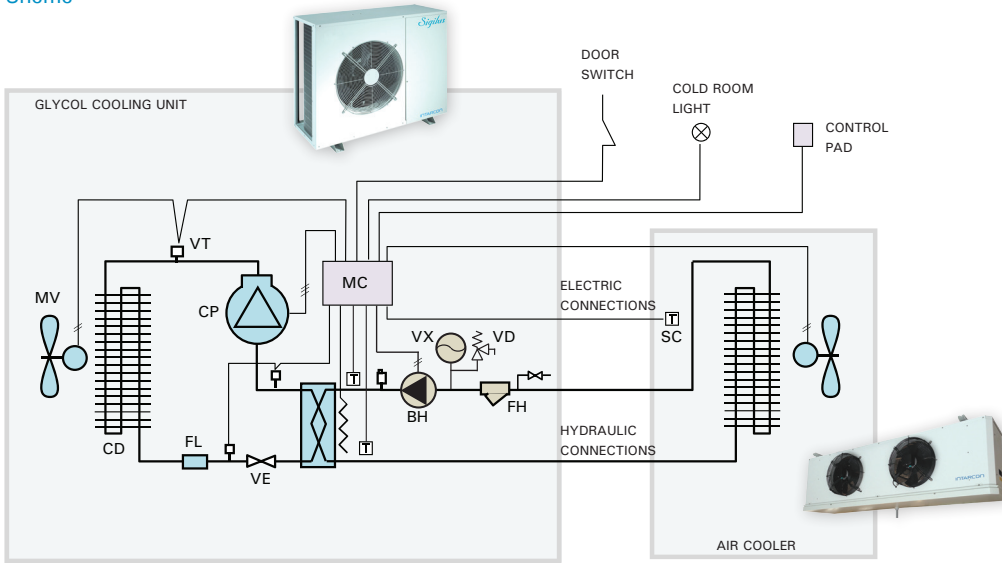
Options

- Change to 400 V-III-50 Hz power supply. + 8 %
- Proportional control of condensing pressure (single-phase models). + 250 €
- Evaporator coil epoxy anti-corrosion treatment. + 6 %
- Condenser coil polyurethane anti-corrosion treatment. + 4 %
- Coil protection grille. + 90 €
- Refrigerant R-290. By request

⁽¹⁾ Rated data refer to cold room operation temperature of 10 °C (HT) and 0 °C (PT) with a propylene glycol concentration of 25 % and 35 % respectively for an ambient temperature of 35 °C.

⁽²⁾ Sound pressure in dB (A) in open field at 10 m from the unit.

Scheme



- BH: HYDRAULIC PUMP
- CD: CONDENSER
- CP: COMPRESSOR
- FH: HYDRAULIC FILTER
- FL: FILTER
- MC: MICROCONTROLLER
- MV: MOTOR FAN
- SC: TEMPERATURE PROBE
- VD: SECURITY VALVE
- VE: EXPANSION VALVE
- VT: VOLTAGE REGULATOR
- VX: BUFFER TANK

Installation recommendations

Threaded connections are recommended, and a minimum elastomeric insulation with 25 mm shell, protected from the weather in the sections located outside.

A concentration of 35 % propylene glycol is recommended for medium temperature cold rooms, and 25 % for high temperature cold rooms.

A filling pressure of 2,5 bar is recommended to compensate for fluid contraction.

Installing the air cooler drain with PVC pipe is recommended with a minimum slope of 10 %, and install a trap on the outside of the cold room.

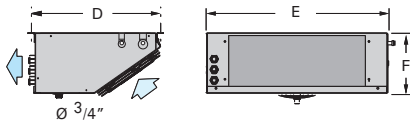
Calculation of hydraulic connections

Visit our easy and intuitive online software to calculate the hydraulic pipes of the system.

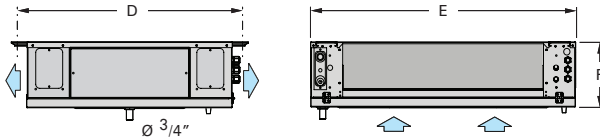
<https://intarcon.calcooling.com/>

Dimensions

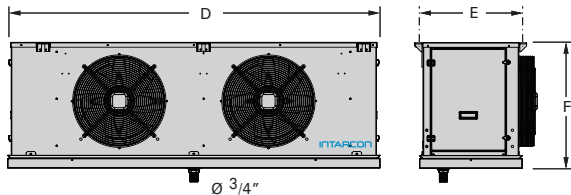
Air cooler -NY



Air cooler -DY



Air cooler -QY



Version NY

Dimensions (mm)	D	E	F
series 52	430	950	200
series 53	508	1 650	200
series 54, 64	508	2 020	265

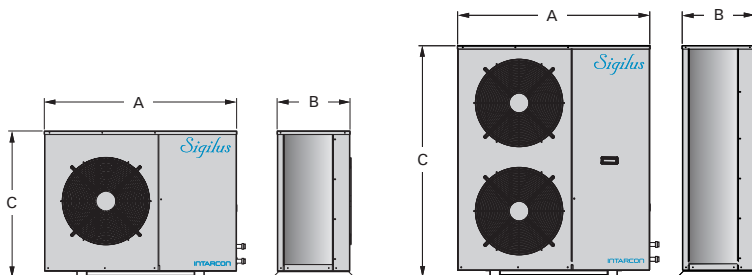
Version DY

Dimensions (mm)	D	E	F
series 51	798	706	245
series 52, 62	798	1 056	245
series 53, 63	798	1 756	245
series 64, 74, 75	888	2 156	295

Version QY

Dimensions (mm)	D	E	F
series 51, 61	1 231	455	553
series 62	1 531	455	553
series 73	1 932	455	553
series 84	2 432	455	553

Cooling unit



Dimensions (mm)	A	B	C
series 51-54	1 480	460	580
series 61-64	1 480	460	830
series 73-75	1 600	580	1 100
series 84-85	1 600	587	1 350

Electronic control

INTARCON units are equipped with the following electronic controllers:

Features / Electronic control	XW60LH	XW270K	XH240K	XM670K
Cold room temperature control	●	●	●	●
Cold room relative humidity control	-	-	●	-
Recording of maximum and minimum temperatures	●	●	●	●
Control of the evaporator motor fans	●	●	●	●
Defrost control with temperature probe	●	●	-	●
Maximum number of compressors to control	1	2	1	2
Digital control of condensing temperature	-	●	-	●
Proportional control of condensing temperature	-	●	-	●
Door opening temperature control	●	●	●	●
External alarm	-	●	-	●
Fast cooling cycle	●	●	-	●
Night operating mode	●	●	-	●
Control parameters programmable by keyboard or programming key	●	●	●	●
Self-diagnosis functions	-	-	-	●
Maneuver to stop with gas collection (pump-down)	-	-	-	●
No. of probes	3 x NTC	3 x NTC	1 x NTC / 1 x 4-20 mA	4 x NTC / 1 x 4-20 mA

Complete features of electronic controllers available at: www.intarcon.com

XW60LH

Standard control of:

- CV-L / CP



XW270K

Standard control of:

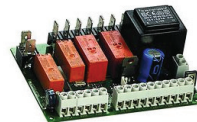
- CR / CV (except CV-L)



XH240K

Standard control of:

- HSF / VSF / VSH / VCR



XM670K

Standard control of:

- SH / SF / DH / DF / DM / HF



Optional

VISOTOUCH - VTIPG

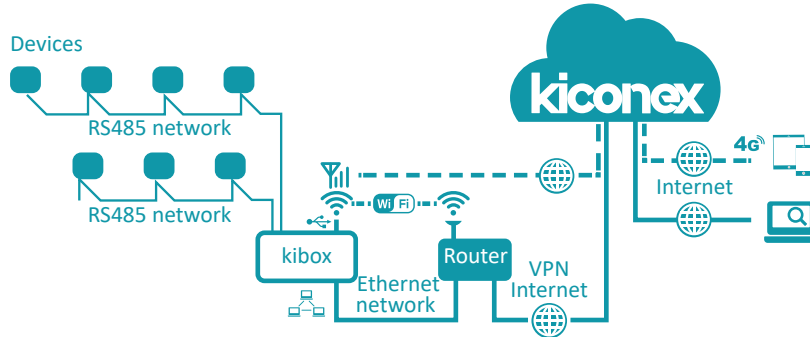
Touch screen display designed to work with electronic regulation available for our commercial refrigeration units:

- Supplied with metal box for wall mounting.
- Extremely versatile and suitable.
- 4.3" size touch screen color display.
- Designed to make Dixell controllers user interface even easier, more complete, and intuitive.
- High connectivity level through LAN and USB ports.

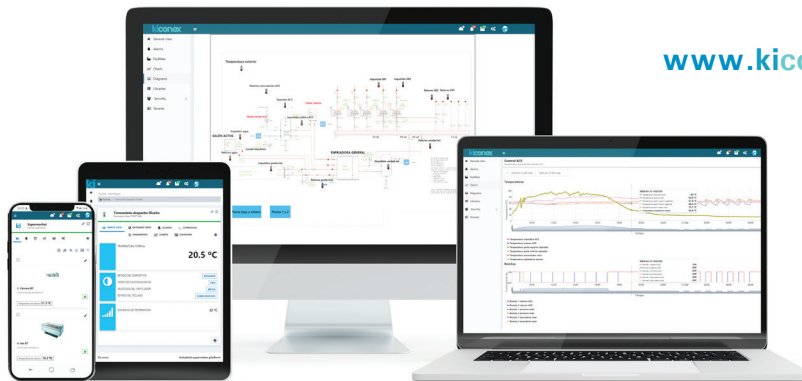


VISOTOUCH - VTIPG

kiconex is an industry 4.0 system applied to refrigeration and air conditioning installations, which equips units and installations with hyperconnectivity to the internet with data storage and cloud computing, with the following functionality:



- Integration in a single centralized control platform of all the devices of the installation from different manufacturers and with different communication protocols via serial bus or IP.
- Plug & Play installation with 3G / 4G connectivity, Wifi, Ethernet.
- Responsive web for access from PC or mobile devices.
- Real-time remote monitoring and management of the operation of the units, with drawing, chart and diagrams of the installation principle.
- Storage of temperature history, reading of probes and operating status, with multivariable graphs.
- Management of alarms and warnings at different levels.
- Intelligent programming of setpoints and equipment operating states.
- Management of multiple users with different levels of access.
- Big Data analysis and optimization of the operation of the installation.
- Documentary management of the facility



www.kiconex.com



kiconex service packages

We propose three service packages depending on the size of the installation to be controlled and the functions and features available.

	Standard	Professional	Premium
Data History	3 month	1 year	3 years
Equipment configuration	●	●	●
Online update	●	●	●
Alarm display	●	●	●
Alarm management	-	●	●
No. of users	1	3	5
Development libraries	-	1	5
Devices Configuration	-	●	●
Diagrams Design (Layouts)	●	●	●
Graphics Design	-	●	●
Documentation display	●	●	●
Documentation management	-	-	●
Installation optimization report	-	-	●
Big Data Analysis	-	-	●
Smart Programming	-	●	●

Kibox control module

To interconnect the installation with the cloud, we propose several control modules depending on the number of devices.

kiconex	Devices
2	2
8	8
16	16
32	32
64	64
96	96
128	128



Options

- GSM 3G / 4G modem + antenna.
- GSM 3G / 4G modem.
- GSM modem connexion.
- WIFI modem.
- kiconex wire: 100 m.
- Webcam.
- Data acquisition module (probes, digital inputs, transducers, etc).

Package dimensions

Series	Model	Standard packaging (road transport)						Reinforced packaging (marine transport)						
		Package dimensions (mm)			Package dimensions (mm)			Package dimensions (mm)			Package dimensions (mm)			
		Length	Width	Height	Length	Width	Height	Length	Width	Height	Longitud	Anchura	Altura	
Monoblock	intartop	CR - 0	860	665	640	-	-	-	900	705	700	-	-	-
		CR - 1	920	820	725	-	-	-	960	860	785	-	-	-
		CR - 2	980	920	810	-	-	-	1 020	960	870	-	-	-
		CP - 0/1	1070	940	590	-	-	-	1 110	980	650	-	-	-
		CV - L - 0	620	435	990	-	-	-	660	475	1 050	-	-	-
		CV - L - 1	765	435	990	-	-	-	805	475	1 050	-	-	-
	intablock	CV - 0	600	450	840	-	-	-	640	490	900	-	-	-
		CV - 1	900	435	1 020	-	-	-	940	475	1 080	-	-	-
		CV - 2	900	650	1 050	-	-	-	940	690	1 110	-	-	-
		CV - 3	895	760	1 080	-	-	-	935	800	1 140	-	-	-
		CV - I - 1	900	430	1 195	-	-	-	940	470	1 255	-	-	-
		CV - I - 2	900	650	1 360	-	-	-	940	690	1 420	-	-	-
Split system	intaspit	CV - I - 3	890	760	1 390	-	-	-	930	800	1 450	-	-	-
		SH-N - 0/00	720	480	750	-	-	-	760	520	810	-	-	-
		SH-N - 1/11	805	510	820	-	-	-	845	550	880	-	-	-
		SH-N - 2/22	1 080	550	900	-	-	-	1 120	590	960	-	-	-
		SH-N - 3/33	1 035	670	700	1 790	595	400	1 075	710	760	1 830	635	460
		SH-N - 4/43/44	1 165	690	740	1 790	595	400	1 205	730	800	1 830	635	460
		SH-N - 44	1 165	690	740	2 170	650	440	1 205	730	800	2 210	690	500
		SH-Q - 30	1 035	670	700	930	650	770	1 075	710	760	970	690	830
		SH-Q - 40	1 165	690	740	930	650	770	1 205	730	800	970	690	830
		SH-Q - 41	1 165	690	740	1 270	650	740	1 205	730	800	1 310	690	800
		SH-Q - 42	1 165	690	740	1 660	650	740	1 205	730	800	1 700	690	800
		SH-Q - 52	1 475	815	820	1 660	650	740	1 515	855	880	1 700	690	800
		SH-Q - 53	1 475	815	820	1 970	650	740	1 515	855	880	2 010	690	800
		SH-Q - 54	1 475	815	820	2 670	650	840	1 515	855	880	2 710	690	900
		SH-D - 1/11	850	830	980	-	-	-	890	870	1 040	-	-	-
		SH-D - 2014 a 2018	995	820	980	-	-	-	1 035	860	1 040	-	-	-
	SH-D - 2/22	995	820	1 220	-	-	-	1 035	860	1 280	-	-	-	
	SH-D - 3/33	1 035	670	700	1 790	910	500	1 075	710	760	1 830	950	560	
	SH-D - 4/43	1 165	690	740	1 790	910	500	1 205	730	800	1 830	950	560	
	SH-D - 44	1 165	690	740	2 190	1 000	550	1 205	730	800	2 230	1 040	610	
	SF-N - 0/00	730	500	835	-	-	-	770	540	895	-	-	-	
	SF-N - 1/11/2/12	1 170	520	990	-	-	-	1 210	560	1 050	-	-	-	
	SF-N - 3/13	1 160	445	730	1790	595	400	1 200	485	790	-	-	-	
	SF-N - 4/23	1 220	480	970	1790	595	400	1 260	520	1 030	1 830	635	460	
	SF-N - 24	1 220	480	970	2170	650	440	1 260	520	1 030	2 210	690	500	
	SF-N - 34	1 310	550	1 270	2 670	650	840	1 350	590	1 310	2 710	690	900	
	SF-Q - 10	1 160	445	730	930	650	770	1 200	485	790	970	690	830	
	SF-Q - 20	1 220	480	970	930	650	770	1 260	520	1 030	970	690	830	
	SF-Q - 21	1 220	480	970	1 270	650	740	1 260	520	1 030	1 310	690	800	
	SF-Q - 22	1 220	480	970	1 660	650	740	1 260	520	1 030	-	-	-	
	SF-Q - 32	1 310	550	1 250	1 660	650	740	1 350	590	1 310	-	-	-	
	SF-Q - 33	1 310	550	1 250	1 970	650	740	1 350	590	1 310	-	-	-	
SF-Q - 34	1 310	550	1 250	2 670	650	840	1 350	590	1 310	-	-	-		
SF-Q - 43	1 340	580	1 500	1 970	650	740	1 380	620	1 560	-	-	-		
SF-Q - 44	1 340	580	1 500	2 670	650	840	1 380	620	1 560	-	-	-		
SF-D - 1024 a 1018/11	1 160	775	910	-	-	-	1 200	815	970	-	-	-		
SF-D - 1024 a 1034/12	1 160	750	1 220	-	-	-	1 200	790	1 280	-	-	-		
SF-D - 1038/13	1 160	445	730	1 790	910	550	1 200	485	790	1 830	950	610		
SF-D - 14	1 160	445	730	2 190	1 000	550	1 200	485	790	2 230	1 040	610		
SF-D - 2/23	1 220	480	970	1 790	910	500	1 260	520	1 030	1 830	950	560		
SF-D - 24	1 220	480	970	2 190	1 000	550	1 260	520	1 030	2 230	1 040	610		
SF-D - 3	1 310	550	1 250	1 790	910	500	1 350	590	1 310	1 830	950	560		
SF-D - 34	1 310	550	1 250	2 190	1 000	550	1 350	590	1 310	2 230	1 040	610		
SF-D - 4/44	1 340	580	1 500	2 190	1 000	550	1 380	620	1 560	2 230	1 040	610		
VSF / VSH - 0/00	870	700	800	-	-	-	910	740	860	-	-	-		
VSF / VSH - 10	1 160	750	800	-	-	-	1 200	790	860	-	-	-		
VSF / VSH - 11/1014	1 160	750	890	-	-	-	1 200	790	950	-	-	-		
VSF / VSH - 12/1024/1034	1 160	750	1 220	-	-	-	1 200	790	1 280	-	-	-		
VSF / VSH - 2/23	1 220	480	970	1 790	975	395	1 260	520	1 030	1 830	1 015	455		
VSF / VSH - 3/33	1 310	550	1 250	1 790	975	395	1 350	590	1 310	1 830	1 015	455		
intartop system	DM - 0	600	500	380	-	-	-	640	540	440	-	-	-	
	DM - 1	1 000	420	680	-	-	-	1 040	460	740	-	-	-	
	DM - 2	1 170	450	760	-	-	-	1 210	490	820	-	-	-	
	CWF - 2	1 220	480	970	-	-	-	1 260	520	1 030	-	-	-	
	CWF - 3	1 310	550	1 250	-	-	-	1 350	590	1 310	-	-	-	
	CWF - 4	1 340	580	1 500	-	-	-	1 380	620	1 560	-	-	-	
	CWF - 6	1 900	580	1 250	-	-	-	1 940	620	1 310	-	-	-	
	CWF - 8	1 900	580	1 500	-	-	-	1 940	620	1 560	-	-	-	

Series	Model	Standard packaging (road transport)						Reinforced packaging (marine transport)						
		Package dimensions (mm)			Package dimensions (mm)			Package dimensions (mm)			Package dimensions (mm)			
		Length	Width	Height	Length	Width	Height	Length	Width	Height	Length	Width	Height	
Condensing units	intarbox	DH - 0	720	480	500	-	-	-	760	520	560	-	-	-
		DH - 1	810	510	560	-	-	-	850	550	620	-	-	-
		DH - 2	995	515	650	-	-	-	1 035	555	710	-	-	-
		DH - 3	1 035	670	700	-	-	-	1 075	710	760	-	-	-
		DH - 4	1 165	690	740	-	-	-	1 205	730	800	-	-	-
	Stiglus	DH - 5	1 475	815	820	-	-	-	1 515	855	880	-	-	-
		DF - 0	730	365	565	-	-	-	770	405	625	-	-	-
		DF - 1	1 160	445	730	-	-	-	1 200	485	790	-	-	-
		DF - 2	1 220	480	970	-	-	-	1 260	520	1 030	-	-	-
Hydronic system	DF - 3	1 310	550	1 250	-	-	-	1 350	590	1 310	-	-	-	
	HF-DY - 51	1 680	580	720	775	870	425	1 720	620	780	815	910	485	
	HF-DY - 52	1 680	580	720	1 100	910	450	1 720	620	780	1 140	950	510	
	HF-DY - 62	1 680	580	970	1 100	910	450	1 720	620	1 030	1 140	950	510	
	HF-DY - 63	1 680	580	970	1 790	910	500	1 720	620	1 030	1 830	950	560	
	HF-DY - 74/75	1 800	660	1 260	2 190	1 000	550	1 840	700	1 320	2 230	1 040	610	
	HF-DY - 85	1 800	660	1 510	2 190	1 050	550	1 840	700	1 570	2 230	1 090	610	
	HF-DY - 53	1 680	580	720	1 970	910	500	1 720	620	780	2 010	950	560	
	HF-DY - 64	1 680	580	970	2 190	1 000	550	1 720	620	1 030	2 230	1 040	610	
	HF-NY - 52	1 680	580	720	1 090	520	400	1 720	620	780	1 130	560	460	
	HF-NY - 53	1 680	580	720	1 790	595	400	1 720	620	780	1 830	635	460	
	HF-NY - 54	1 680	580	720	2 170	650	440	1 720	620	780	2 210	690	500	
	HF-NY - 64	1 680	580	970	2 170	650	440	1 720	620	1 030	2 210	690	500	
	HF-QY - 51	1 680	580	720	1 270	650	740	1 720	620	780	1 310	690	800	
	HF-QY - 61	1 680	580	970	1 270	650	736	1 720	620	1 030	1 310	690	796	
	HF-QY - 62	1 680	580	970	1 660	650	740	1 720	620	1 030	1 700	690	800	
HF-QY - 73	1 800	660	1 260	1 970	650	736	1 840	700	1 320	2 010	690	796		
HF-QY - 84	1 800	660	1 510	2 670	650	840	1 840	700	1 570	2 710	690	900		

Sales terms

Except in case of agreement with INTARCON, the following general sales terms prevail.

Price

The prices indicated in this list, except for typographical errors, are retail prices with cash payment, do not include VAT or indirect taxes, and will remain in force during the period of validity of this catalogue or until a new edition.

Installation

The buyer admits that INTARCON's products are capital goods for integration in a refrigeration installation. To that effect, the buyer assumes obedience to any applicable law and to guarantee the quality of the installation, which, in any case, is to be done by an authorised installer.

Orders

The orders are to be placed in writing and to be confirmed by the seller through a pro-forma invoice indicating the shipping date. The seller reserves the right to refuse an order. Once manufacturing has started no annulation will be accepted.

Packaging

Prices include standard packaging for road transport, not suitable for overseas transport.

Delivery

Delivery of INTARCON goods is according to FCA INTARCON (PI Los Santos, 14900 Lucena - Spain) according to Incoterms 2010 of the ICC. The only accepted delivery claims are those received in written on the delivering note within 24 hours from the delivery.

Refunds

No refunds will be accepted without prior authorisation from the manufacturer and, in any case, an amount no less than 10 % of the purchasing price will be deducted as a return cost.

Technical-features

The information and features in this catalogue are given as an indication, technical data can be changed with no prior communication, and should be confirmed when placing an order.

Warranty

The seller guarantees the product against any manufacturing default for 12 months from delivering date.

During the warranty period the manufacturer will cover the repair of the product in its facilities, the replacement of the product or the supply of spare parts for defective components, which is less burdensome and technically feasible. The cost and taxes on the refrigerant are expressly excluded from the warranty coverage when it has not been supplied by the manufacturer in hermetically sealed appliances.

The warranty does not cover on-site labour for the replacement of the product or spare parts, nor the indirect damages or consequential losses that may be attributed to the malfunction of the product. Specifically, the manufacturer may not be responsible for the Tax on Fluorinated Gases stipulated in Law 16/2013, emitted into the atmosphere as a result of a leakage of a refrigeration unit subject to a tightness and resistance test by the refrigeration installer and a periodic leak control according to Regulations 517-2014 on F-Gas and Safety for Refrigeration Installations, RD 138/2011.

Payment

Unless agreement with the manufacturer, the payment of the invoices will be in cash. The seller of the goods reserves the right to block delivery of the orders in the case that any risk in payment is perceived.

Lawsuits

INTARCON's product trade is ruled by Spanish laws. Any conflict or argument is to be submitted to the judgment of the Córdoba Chamber of Commerce. In case of disagreement, both parties will relinquish to any jurisdiction to which may pertain and they will submit to the Court of Lucena (Córdoba) Spain.

www.intarcon.com



Industrias de Tecnologías Aplicadas de Refrigeración y Conservación, S.L.
CIF B14779136
P.I. Los Santos, Bulevar de Los Santos 34 | 14900 Lucena (Córdoba) - Spain
+34 957 50 92 93 commercial@intarcon.com