

C O U R E T A C

60 HZ

Catalogue_2019

- Commercial Range -

REFRIGERATION UNITS



Commercial monoblocks



- ✿ Tropicalized design for high ambient temperature up to 45°C
- ✿ Thermostatic expansion valve
- ✿ Hot gas defrosting
- ✿ Refrigerant load lower than 2,5 kg
- ✿ Refrigeration units with centrifugal or axial condensing

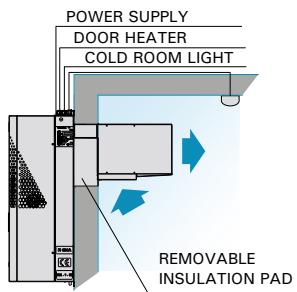
Description

Wall-mounting and roof-top monoblock units for small-size chiller and freezer cold rooms at positive and negative temperature, for their installation on the wall or roof.

Features

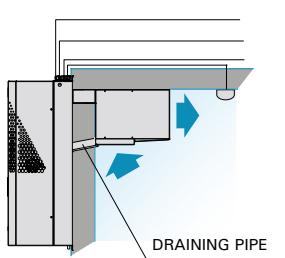
- R-404A refrigerant load, below 2,5 kg.
- Hermetic reciprocating compressors.
- High and low pressure switches.
- Thermostatic expansion valve (except for MCV and MCR up to 2026 featuring capillary expansion).
- Hot gas defrosting.
- Stainless steel draining tray.
- Condensed water evaporation.
- Cold room light and door micro-switch cable.
- Door heater cable (only for BCR series).
- Removable insulation pad included (CV).Evaporator case made in sandwich panel, with 50 mm polyurethane insulation, internally covered in steel sheet (CR).
- Multifunctional electronic control.

Installation schemes



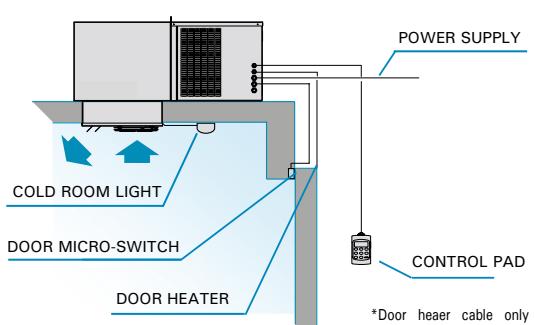
Plug-in mounting

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



Drop-in mounting

Just by making a frame in the cold room wall for drop-in mounting, to install the unit before placing the cold room roof panel.



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

Installation scheme



Control pad

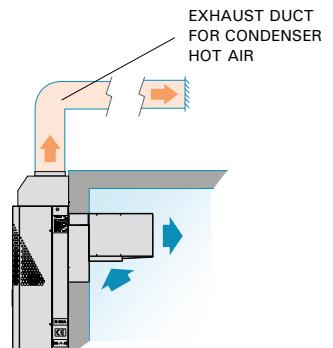
Monoblock units feature XWING electronic control as standard.



- Temperature control with maximum and minimum temperature value recording.
- Fast-freezing function (Jet cool).
- Night operation mode.

Centrifugal version

Centrifugal monoblocks units feature a centrifugal motor-fan to duct outdoors the hot condensing air.



Technical features

60Hz, R-404A

Rooftop monoblock units

POSITIVE TEMPERATURE	Compressor		Cooling capacity			Nominal input power (kW)	Evap. air flow (m³/h)	Cond. air flow (m³/h)	Weight (kg)	SPL dB(A)*					
	HP	Power supply	0 °C / 35 °C ambient												
			W	BTU/h	m³										
MCR-NF-1012+B2	1/2	115V - I	850	2.900	8,5	0,73	600	575	73	29					
MCR-NF-1018+B2	3/4	115V - I	1.250	4.265	14	0,94	600	575	82	34					
MCR-NF-1024+B2	1	115V - I	1.375	4.692	16	1,24	600	575	83	35					
MCR-NF-2024+B2	1	115V - I	2.115	7.217	24	1,40	1.150	1.150	98	36					
MCR-NF-2026+B2	1 1/4	115V - I	2.325	7.933	27	1,42	1.150	1.150	99	38					
MCR-NF-2034+B1	1 1/2	220V - I	2.555	8.718	33	1,95	1.150	1.150	99	40					
NEGATIVE TEMPERATURE			-20 °C / 35 °C ambient												
	W	BTU/h	m³												
BCR-NF-1034+B2	1 1/4	115V - I	845	2.883	5,8	1,11	600	575	84	40					
BCR-NF-2034+B2	1 1/4	115V - I	1.435	4.896	7,8	1,22	1.150	1.150	135	41					
BCR-NF-2074+B1	2 1/2	220V - I	1.660	5.664	17	2,17	1.150	1.150	145	43					

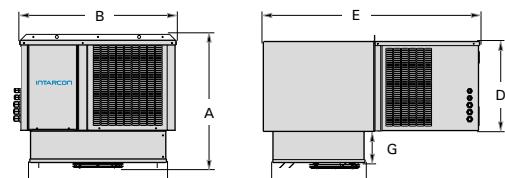
Wall monoblock units

POSITIVE TEMPERATURE	Compressor		Cooling capacity			Nominal input power (kW)	Evap. air flow (m³/h)	Cond. air flow (m³/h)	Weight (kg)	SPL dB(A)*					
	HP	Power supply	0 °C / 35 °C ambient												
			W	BTU/h	m³										
MCV-NF-1012+B2	1/2	115V - I	840	2.866	8,2	0,73	550	575	60	30					
MCV-NF-1018+B2	3/4	115V - I	1.360	4.641	14	0,94	550	575	69	34					
MCV-NF-1024+B2	1	115V - I	1.550	5.289	16	1,24	550	575	70	35					
MCV-NF-2024+B2	1	115V - I	1.965	6.705	23	1,40	1.050	1.000	88	36					
MCV-NF-2026+B2	1 1/4	115V - I	2.205	7.524	26	1,45	1.050	1.000	89	38					
MCV-NF-2034+B1	1 1/2	220V - I	2.470	8.428	31	1,65	1.050	1.000	89	40					
MCV-NF-3034+B1	1 1/2	220V - I	2.755	9.400	35	1,74	1.400	1.350	117	39					
MCV-NF-3038+B1	1 3/4	220V - I	3.095	10.561	41	2,31	1.400	1.350	114	40					
NEGATIVE TEMPERATURE			-20 °C / 35 °C ambient												
	W	BTU/h	m³												
BCV-NF-1034+B2	1 1/4	115V-I	830	2.832	6,1	1,11	550	575	60	40					
BCV-NF-2034+B2	1 1/4	115V-I	995	3.395	7,7	1,22	1.050	1.000	89	41					
BCV-NF-2074+B1	2 1/2	220V-I	1.550	5.289	17	2,17	1.050	1.000	102	43					
BCV-NF-3074+B1	2 1/2	220V-I	1.905	6.500	21	2,36	1.400	1.350	131	43					
BCV-NF-3086+B1	3	220V-I	2.220	7.575	28	2,96	1.400	1.350	117	40					
BCV-NF-3096+B3	3 1/2	220V-III*	2.610	8.906	32	2,49	1.400	1.350	129	50					

As an option

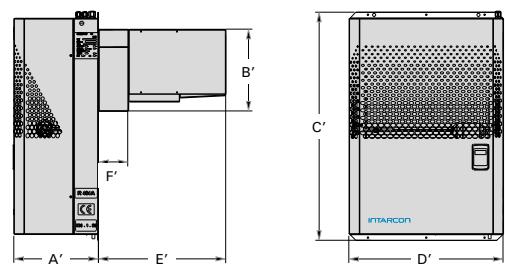
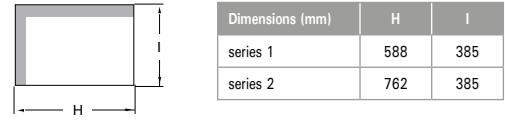
- Expansion valve (MCV / MCR 1012 to 2026).
- Door micro-switch.
- Protection system for voltage drop (mono-phase version).
- Protection system for voltage drop and phase failure (tri-phase version).
- Change to 460V-III-60 Hz (+B4 code) in models with *.

Dimensions



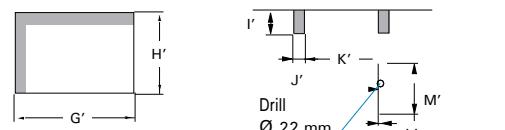
Dimensions (mm)	A	B	C	D	E	F	G
series 1	574	665	582	385	850	379	135
series 2	677	835	756	469	850	379	135

PLUG-IN FRAME



Dimensions (mm)	A'	B'	C'	D'	E'	F'
series 1	340	330	880	400	514	122
series 2	340	330	920	620	514	122
series 3	365	470	920	735	514	122

PLUG-IN FRAME



Dimensions (mm)	G'	H'	I'	J'	K'	L'	M'
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

Bases for calculating cooling needs

Nominal technical features shown in the tables are related to operation at cold room temperature of 0°C (positive temperature), -20°C (negative temperature), and ambient temperature of 35°C.

SPL: Sound pressure level shown in dB(A) on open field at 10 m from the source.

Centrifugal split units



- ✿ Factory-tested systems with no need for on-site tests
- ✿ Tropicalized design for high ambient temperature up to 45°C
- ✿ Inbuilt thermostatic expansion valve
- ✿ Fast freezing function
- ✿ Axial or centrifugal condensing units versions

Description

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

Features

- Minimal R-404A refrigerant load.
- Hermetic reciprocating compressor (noise insulation in 3-phases models).
- High and low pressure switches.
- Refrigerant preload for 15m piping.
- Inbuilt thermostatic expansion valve and solenoid valve.
- Electrical heater defrosting (CF and QF models) or air defrosting (CDF models).
- Stainless steel draining tray.
- Flare-type cooling connections (except for 3/8"-7/8" and 1/2" 7/8") with service valves.
- 10 metres electrical wiring included (except for series 4).
- MCB protection.
- Multifunctional electronic control with remote keyboard and digital regulation of condensing pressure.

SH-CF series

Centrifugal condensing unit and low-profile evaporating unit.

SH-CQF series

Centrifugal condensing unit and cubic evaporating unit.

SH-CDF series

Centrifugal condensing unit and double flow evaporating unit.

SH-NF series

Axial condensing unit and low-profile evaporating unit.

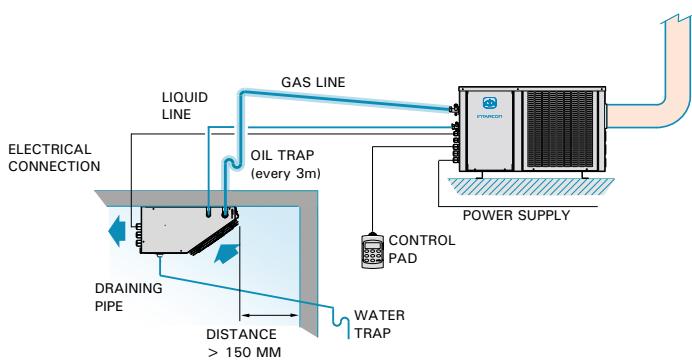
SH-QF series

Axial condensing unit and cubic evaporating unit.

SH-DF series

Axial condensing unit and double-flow evaporating unit.

Installation scheme



Maximum vertical distance between units of 15 metres in case the condensing unit is placed in a higher level than the evaporating unit, and 6 metres otherwise.

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

Control pad

Monoblock units feature XWING electronic control as standard.



- Remote control keyboard with digital display.
- Temperature control with maximum and minimum temperature value recording.
- Fast-freezing function (Jet cool) and Night operation mode.

Axial fan version

Split systems can be equipped with an axial condensing unit, for installations where ducting outdoors the hot condensing air is not required.

Digital control of condensing pressure

As standard, it protects the unit from outdoor negative temperatures. For operating under long-lasting outdoor negative temperatures is recommended to install the proportional control of condensing pressure (as an option in CF-4,CQF-4, CDF-4, NF-3, NF-4, QF, DF-3 y DF-4 series).

Crankcase heater (as an option)

It is recommended to include a crankcase heater in outdoors installed units.

Electrical connections

Split units feature as standard 10 metres electrical wiring (except for series 4).

Voltage	115V - I - 60Hz 230V - I - 60Hz	220V - III - 60Hz 460V - III - 60Hz
Probes	4x 1 mm ²	
Electrical control	2x 1 mm ² + T	3x 1 mm ²
Defrosting	2x 1,5 mm ² + T	3x 1,5 mm ² + T
Thermostat	2x 1 mm ²	
Door switch*	2x 1 mm ² (+ 2x 1 mm ² baja temp)	
Cold room light*	2x 1 mm ² + T	

* not included

Technical features

60Hz, R-404A

Centrifugal or axial condensing unit and low profile evaporating unit

POSITIVE TEMPERATURE	Compressor		Cooling capacity			Nominal input power (kW)	Evap. air flow (m³/h)	Cond. air flow (m³/h)	Cooling connections Liq - Gas	Weight (kg)	SPL dB(A)*						
	HP	Power supply	0 °C / 35 °C ambient														
			W	BTU/h	m³												
MSH-CF-1018+B2	3/4	115V-I	1.340	4.572	14	0,94	550	575	1/4"-1 1/2"	53+16	34						
MSH-CF-1024+B2	1	115V-I	1.545	5.272	18	1,24	550	575	1/4"-1 1/2"	54+16	35						
MSH-CF-2024+B2	1	115V-I	2.025	6.910	22	1,40	1.050	1.150	3/8"-5/8"	65+24	36						
MSH-CF-2026+B2	1 1/4	115V-I	2.235	7.626	26	1,42	1.050	1.150	3/8"-5/8"	66+24	38						
MSH-CF-2034+B1	1 1/2	220V-I	2.465	8.411	28	1,65	1.050	1.150	3/8"-5/8"	66+24	40						
MSH-CF-3034+B1	1 1/2	220V-I	3.040	10.373	36	1,74	2.325	1.500	3/8"-5/8"	74+45	39						
MSH-CF-3038+B1	1 3/4	220V-I	3.425	11.687	45	2,31	2.325	1.500	3/8"-5/8"	71+45	40						
MSH-CF-4048+B3	2	220V-III*	4.420	15.082	66	2,69	2.325	3.500	3/8"-3/4"	95+45	41						
NEGATIVE TEMPERATURE			-20 °C / 35 °C ambient														
	W	BTU/h	m³														
BSH-CF-1034+B2	1 1/4	115V-I	820	2.798	4,5	1,11	550	575	1/4"-1 1/2"	56+16	40						
BSH-CF-2034+B2	1 1/4	115V-I	1.035	3.532	5,5	1,22	1.050	1.150	3/8"-5/8"	66+24	41						
BSH-CF-2074+B1	2 1/2	220V-I	1.600	5.459	10	2,17	1.050	1.150	3/8"-5/8"	79+24	43						
BSH-CF-3074+B1	2 1/2	220V-I	2.070	7.063	18	2,36	2.325	1.500	3/8"-5/8"	87+45	43						
BSH-CF-3086+B1	3	220V-I	2.450	8.360	30	2,96	2.325	1.500	3/8"-5/8"	87+45	40						
BSH-CF-3096+B3	3 1/2	220V-III*	2.900	9.895	37	2,35	2.325	1.500	3/8"-3/4"	85+45	50						
BSH-CF-4136+B3	5	220V-III*	4.120	14.058	67	4,76	2.325	3.500	3/8"-7/8"	107+45	46						

Centrifugal or axial condensing units and cubic evaporating unit

POSITIVE TEMPERATURE	Compressor		Cooling capacity			Nominal input power (kW)	Evap. air flow (m³/h)	Cond. air flow (m³/h)	Cooling connections Liq - Gas	Weight (kg)	SPL dB(A)*						
	HP	Power supply	0 °C / 35 °C ambient														
			W	BTU/h	m³												
MSH-CQF-40048+B3	2	220V-III*	4.625	15.781	56	2,14	2.000	3.500	3/8"-3/4"	95+43	41						
MSH-CQF-41060+B3	3	220V-III*	5.855	19.978	91	3,13	2.125	3.500	1/2"-3/4"	97+56	38						
NEGATIVE TEMPERATURE			-20 °C / 35 °C ambient														
	W	BTU/h	m³														
BSH-CQF-30096+B3	3 1/2	220V-III*	3.075	10.492	45	2,56	2.000	1.500	3/8"-3/4"	85+43	50						
BSH-CQF-42136+B3	5	220V-III*	4.360	14.877	65	3,35	4.000	3.500	3/8"-7/8"	107+72	46						

Centrifugal or axial condensing unit and double flow evaporating unit

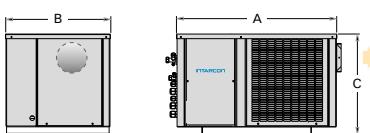
HIGH TEMPERATURE	Compressor		Cooling capacity			Nominal input power (kW)	Evap. air flow (m³/h)	Cond. air flow (m³/h)	Cooling connections Liq - Gas	Weight (kg)	SPL dB(A)*						
	HP	Power supply	0 °C / 35 °C ambient														
			W	BTU/h	m³												
ASH-CDF-2018+B2	3/4	115V-I	2.450	8.360	25	1,00	1.200	1.150	1/4"-1 1/2"	55+32	35						
ASH-CDF-2024+B2	1	115V-I	2.800	9.554	39	1,56	2.400	1.150	3/8"-5/8"	55+45	36						
ASH-CDF-3026+B2	1 1/4	115V-I	3.300	11.260	46	1,78	2.400	1.500	3/8"-5/8"	74+45	38						
ASH-CDF-3034+B1	1 1/2	220V-I	4.165	14.212	58	2,29	2.400	1.850	3/8"-5/8"	74+45	41						
ASH-CDF-3038+B1	1 3/4	220V-I	5.255	17.931	68	2,25	2.400	1.850	3/8"-5/8"	71+45	40						
ASH-CDF-4048+B3	2	220V-III*	6.565	22.401	87	2,82	2.400	3.500	1/2"-3/4"	95+65	41						
ASH-CDF-4060+B3	3	220V-III*	8.855	30.215	115	3,79	5.100	3.500	1/2"-7/8"	97+65	37						

As an option

- Proportional control of condensing pressure (CF-4, CQF-4, CDF-4, NF-3, NF-4, QF, DF-3 and DF-4 series)
- EC fans in the evaporator (CF and CQF series)
- Protection system for voltage drop (mono-phase version).
- Protection system for voltage drop and phase failure (tri-phase version).
- Inbuilt condensed pump (only for ASH-CDF series)
- Change to 460V-III-60 Hz (+B4 code) in models with *.

Dimensions

Condensing unit

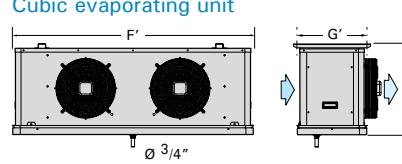


Dimensions (mm)	A	B	C	D	E
series 1	665	435	416	Ø 150	
series 2	835	435	500	Ø 150	
series 3	925	580	515	236	266
series 4	1000	615	585	305	266

Low-profile evaporating unit



Cubic evaporating unit



Dimensions (mm)	F'	G'	H'	Evaporator fans
series 30	882	465	575	1x Ø 350
series 40	882	465	575	2x Ø 350
series 41	1232	465	575	1x Ø 350
series 42	1534	465	575	2x Ø 350

Bases for calculating cooling needs

Nominal technical features shown in the tables are related to operation at cold room temperature of 12°C (high temperature), 0°C (positive temperature), -20°C (negative temperature), and ambient temperature of 35°C

SPL: Sound pressure level shown in dB(A) on open field at 10 m from the source.

Low-noise split units

Sigilus



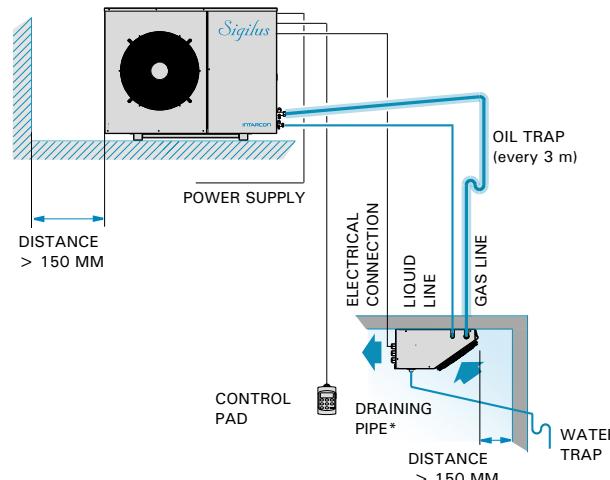
Description

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

Features

- Minimum R-404A refrigerant load.
- Hermetic reciprocating compressor.
- Compressor with double noise insulation.
- L-shape large surface condensing coil (straight for series 1).
- Low-speed and low-noise condensing motor-fans.
- Proportional control of condensing pressure (as an option in NF versions).
- High and low pressure switches.
- Discharge muffler (from 1 HP models) and crankcase heater.
- Liquid receiver, with refrigerant preload for 15m piping.
- Low profile evaporating unit (NF series), cubic type (QF series) or double flow (DF series).
- Inbuilt thermostatic expansion valve and solenoid valve.
- Electrical defrosting (NF and QF series) or air defrosting (DF series).
- Stainless steel draining tray.
- Flare-type cooling connections (except for 3/8"- 7/8") and service valves.
- MCB protection.
- Multifunctional electronic control with remote keyboard and digital condensing control.

Installation scheme



Maximum vertical distance between units of 15 metres in case the condensing unit is placed in a higher level than the evaporating unit, and 6 metres otherwise.
* 20% minimum inclination of draining pipe for negative temperature models.

- ✿ Factory-tested systems with no need for on-site tests
- ✿ Low-noise condensing unit
- ✿ Tropicalized design for ambient temperatures up to 50°C
- ✿ Thermostatic expansion valve
- ✿ Proportional control of condensing pressure (as an option for NF and DF1 series)

Control pad

Sigilus low-noise split units feature XWING electronic control as standard.



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

Triple acoustic insulation

Sigilus condensing units feature a triple acoustic insulation:

- Insulated compressor and separated from air flow.
- Insulated hermetic compressor and discharge muffler.
- Low-noise and low-speed fans mounted on shock-absorbers.

Proportional control of condensing pressure

As standard, **Sigilus** series feature a proportional control of condensing pressure through a fan speed variator for operating under outdoor negative temperatures (as an option for NF and DF-1 series).

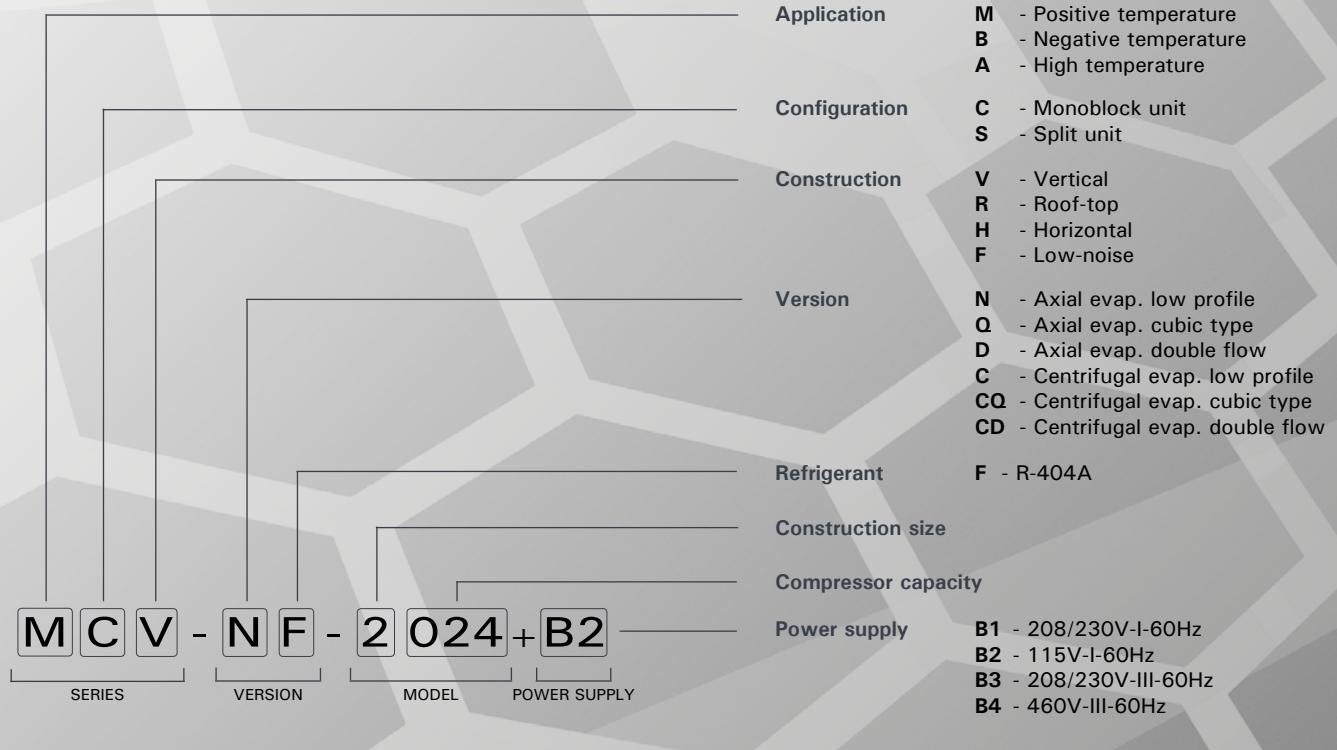
Electrical connections

To connect the condensing and evaporating unit, the following cable section need to be taken into account:

Voltage	115V - I - 60Hz 230V - I - 60Hz	220V - III - 60Hz 460V - III - 60Hz
Probes		4x 1 mm ²
Electrical control	2x 1 mm ² +	3x 1 mm ²
Defrosting	2x 1,5 mm ² + T	3x 1,5 mm ² + T
Thermostat		2x 1 mm ²
Door switch*	2x 1 mm ² (+ 2x 1 mm ² baja temp)	
Cold room light*		2x 1 mm ² + T

* optional not included

Codification



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