



Unit cooler

March -2024



946 a 12.600 Kcal/h
1.100 a 14.644 W



946 a 12.600 Kcal/h
1.100 a 14.644 W

Unit cooler
Low profile



For chambers up to 4m high

Benefits

Revolution in the Mi line with excellent performance and innovations that facilitate operation, maintenance and installation, with a clean and harmonious look.

What's new?

- Innovative design with access without the need for tools
- Front panel with mechanical spring hinges, for complete access to sanitize the fin block and the pan, as well as the motor-fans and electrical connections
- Hinged side covers allow quick access to refrigeration controls and electrical panel
- Front opening without the need for tools
- Articulated and removable drain pan for its perfect sanitation and also of the fin block, speeding up this operation
- Access to defrost resistors from the front and back of the equipment for quick inspection and maintenance
- Water drain connection in the back to maximize chamber space, provides a clean and harmonious installation

Values the application

- **Food**
convenience stores, supermarkets, cafeterias, bars, restaurants, bakeries, butcheries, ice cream parlors, industrial kitchens, among others
- **Pharmaceuticals**
preservation of vaccines, blood bank, medicines and supplies
- **Hospital**
Chamber of organs and waste rooms
- **Industrial**
Chemical and automotive industry, paints and varnishes, flammables, beverages, meat and fish processing

Values the installation

- Lightweight, robust and highly reliable, it guarantees amazing results
- Modern and harmonic look, silent and with ease for a fast and safe sanitation, with good finish and high energy efficiency, values the project, installation and operation in all refrigeration facilities
- Models equipped with electronic motors drastically reduce electrical power consumption
- Designed to eliminate areas that can accumulate dirt, it allows installation flush with the ceiling
- Built with the experience of more than 600,000 evaporators of the Mi line produced and in operation in the market

Values the operation

- Developed to operate in freezing and conservation mode
- Tool-free access to all parts and without loose pieces. Adjustment of the expansion valve, pressure verification, access to the motor-fans and the panel with standardized electrical assemblies with spring contact.
- Maximizes the operation time and ensures the temperature of the refrigerated environment at all time
- Patented airflow directional grid optimize the distribution of cooled air throughout the room
- With a balance between power and defrost time, it ensures a fast and perfect defrost, without significantly affect in the temperature of the refrigerated environment.

Values the maintenance

- Easy access to all equipment compartments, with no need for tools and without loose parts, designed for the ease of the refrigeration operator.
- For pressure verification, thermostatic valve adjustment, electrical connectors control, defrost resistors control, equipment sanitization, or even for component replacement, the easier, the faster will be the execution, with benefits to the professional, the cooled material, system safety and installation productivity



Exclusive advantages

- Exclusive ventilation set (motor - grid - fixing brackets)
- Front, side and bottom opening. Completely hinged without loose parts, and no need to use tool
- Easy access to the electrical panel and expansion valve
- Hinged and removable pan: more convenience in maintenance and sanitation
- Drain at the back for easy installation. Version with electric defrost comes with a drain resistor.
- Resistance replacement without the need to remove the tray and disconnect the drain

Features

- Recommended for chambers up to 4m high
- Air flow rectifier grid provides a 12 meters air reach
Tubos de cobre e Aletas de alumínio
- 6 mm in between fins spacing
- Direct expansion with SAE1/2" screw nut inlet connection
- Smooth plain aluminum cabinet
- AC motors
- Thermal protector and drain resistor in version with electric defrost
- Air and electric defrost
- String technology electrical connectors: quick installation, vibration-proof and maintenance-free
- Non-metallic components in ANTI-FLAME materials

Optional

- 1 or 2 speed electronic motors
- Cabinet and pan with electrostatic painting
- Stainless steel casing
- Expansion valve and solenoid
- Stainless steel tubes and aluminum fins
- Gas defrosting with hot gas or mixed (hot gas and electric on the pan)
- Exclusive Mcoat protection against harsh environments



Values the investment

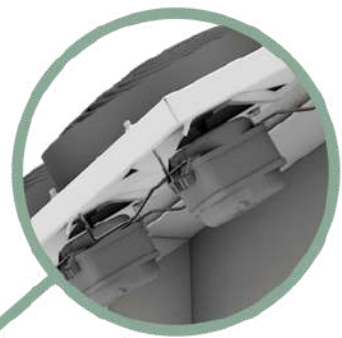
With a modern design harmonized with the environment, the highly energy-efficient MI generation GS2 Unit Cooler was conceived with a focus on performance, high quality, safety and convenience for operation, using the best concepts and practices of sustainability throughout the entire value chain

Vantagens Exclusivas

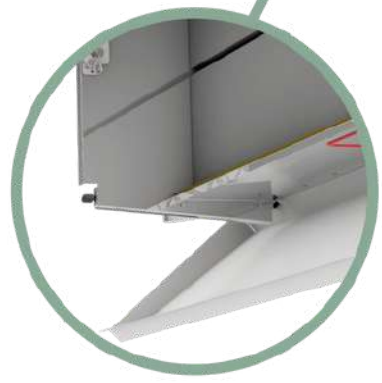
Front, side and bottom opening. Completely hinged without loose parts, and no need to use tools



Option of WEG motor-fans developed for MIPAL



Drain at the back of the equipment making a more harmonious installation. In versions with electric defrost it already comes with the drain resistor

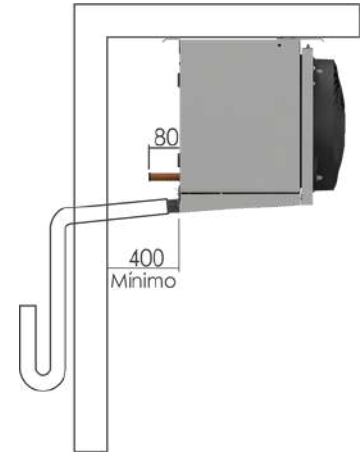
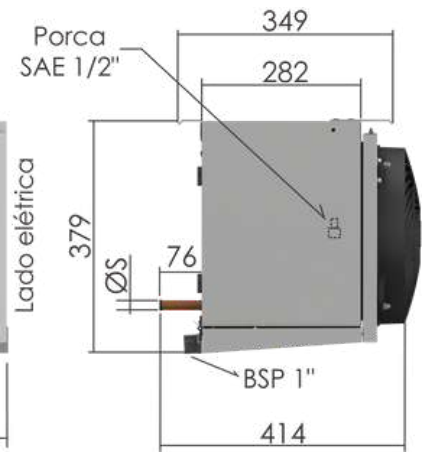
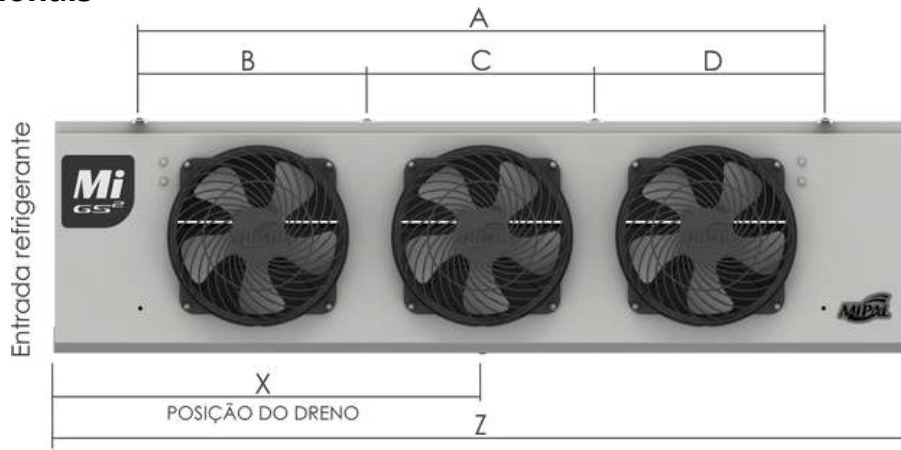


Hinged and removable pan. More convenience in maintenance: sanitization and removal of resistors from the front or back of the equipment



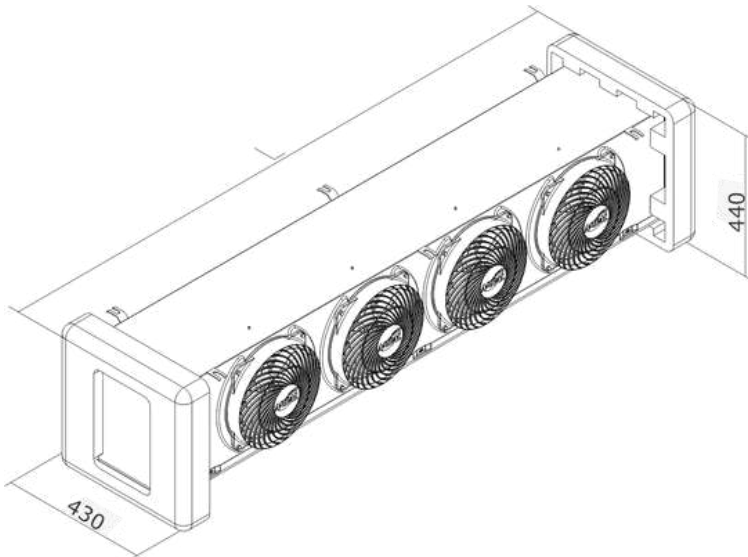
Easy access to the electrical panel

Dimensionals



Models		Dimensionals (mm)							Weight (kg)
		A	B	C	D	Z	X	S	
13	1	385	-	-	-	669	334	1/2"	7.98
15	1	385	-	-	-	669	334	1/2"	8.1
18	2	748	-	-	-	1031	515	1/2"	13.5
25	2	748	-	-	-	1031	515	5/8"	13.5
31	2	748	-	-	-	1031	515	5/8"	15.5
38	3	1111	-	-	-	1389	694	5/8"	18.8
46	3	1111	-	-	-	1389	694	7/8"	20.6
51	4	1474	726	-	748	1748	875	7/8"	24.8
62	4	1474	726	-	748	1748	875	1 1/8"	26.1
78	5	1837	726	363	748	2117	1058	1 1/8"	34.4
94	6	2200	1089	-	1111	2476	1239	1 1/8"	40
110	7	2563	726	1089	748	2840	1459	1 1/4"	48.2
125	8	2926	1089	726	1111	3200	1601	1 1/4"	54.3

Packaging



Models		(mm)	Weight(Kg)
		L	Bruto
13	1	704	9.2
15	1	704	9.8
18	2	1067	14.7
25	2	1067	14.6
31	2	1067	16.3
38	3	1430	20.7
46	3	1430	22
51	4	1793	26
62	4	1793	27.9
78	5	2156	36.4
94	6	2519	42.2
110	7	2882	50.1
125	8	3245	56.3

Flecha de Ar



Rectifying air flow grid (Patented)

12 meters

Range of the Air with a final velocity of 0.25 m/s. The final velocity is obtained under open field conditions. The air range cannot be considered as an absolute value, due to many factors that influence this distance

Capacities • AC and electronic motor-fans

Models	Kcal/h										Watts							
	Evaporation temperatures																	
	-31 °F -35 °C	-22 °F -30 °C	-13 °F -25 °C	-4 °F -20 °C	5 °F -15 °C	14 °F -10 °C	23 °F -5 °C	32 °F 0 °C	41 °F 5 °C	-31 °F -35 °C	-22 °F -30 °C	-13 °F -25 °C	-4 °F -20 °C	5 °F -15 °C	14 °F -10 °C	23 °F -5 °C	32 °F 0 °C	41 °F 5 °C
13	946	983	1015	1047	1077	1107	1141	1231	1284	1100	1143	1180	1217	1252	1287	1326	1431	1493
15	1186	1232	1272	1312	1350	1387	1430	1543	1610	1379	1432	1479	1525	1569	1612	1662	1794	1871
18	1350	1403	1448	1494	1537	1579	1628	1757	1832	1569	1631	1683	1736	1786	1836	1892	2042	2130
25	1892	1966	2029	2093	2153	2213	2281	2462	2567	2199	2285	2358	2432	2502	2572	2651	2861	2984
31	2317	2407	2485	2562	2636	2710	2793	3014	3144	2692	2797	2888	2978	3064	3149	3246	3503	3654
38	2837	2947	3042	3138	3228	3318	3420	3691	3849	3297	3425	3536	3647	3751	3856	3975	4289	4474
46	3463	3598	3714	3830	3940	4051	4175	4505	4699	4025	4182	4317	4452	4580	4708	4852	5236	5462
51	3782	3930	4057	4184	4304	4424	4560	4921	5133	4396	4567	4715	4862	5002	5142	5300	5719	5965
62	4630	4810	4966	5121	5268	5416	5582	6024	6283	5381	5591	5771	5952	6123	6294	6487	7001	7302
78	5797	6023	6217	6412	6596	6781	6989	7542	7867	6737	7000	7226	7452	7666	7881	8123	8766	9143
94	6930	7200	7433	7665	7886	8106	8355	9016	9404	8054	8368	8638	8909	9165	9421	9710	10479	10930
110	8103	8419	8691	8962	9220	9478	9769	10542	10996	9417	9784	10100	10416	10716	11015	11354	12252	12779
125	9285	9647	9958	10270	10565	10860	11194	12080	12600	10791	11212	11574	11936	12279	12622	13010	14039	14644

Capacidades (DT=10,8°F / DT1=6°K)

(*) Same capacities for 50Hz and 60Hz. Capacity in R-22.

Dt1: Difference between the air inlet temperature at the evaporator and the refrigerant's evaporation temperature.


°K=Kelvin °F=Fahrenheit

The air inlet temperature at the evaporator is considered to be approximately the chamber temperature.

Fator de correção para refrigerante

R22	R134A	R404A	R407C	R410A
1	1,01	0,983	0,98	0,95

Características elétricas • Motoventilador AC

Models		HP	Flow rate m³/h	V dm³	C Kg	AC Engine			Electrical Resistance		
						Noise dBA	1 ~ 220V		W	1~ 220V	3~ 220V
							W	A		A	A
13	1	1	1000 m³/h	1.6	0.33	44.3	60	0.45	2 x 600	5.5	5,5d
15	1	1 ½	1000 m³/h	2.2	0.44	44.3	60	0.45	2 x 600	5.5	5,5d
18	2	1 ½	2000 m³/h	2	0.39	47.3	120	0.9	2 x 1200	10.9	10,9d
25	2	2	2000 m³/h	2.9	0.59	47.3	120	0.9	2 x 1200	10.9	10,9d
31	2	2 ½	2000 m³/h	3.9	0.78	47.5	120	0.9	2 x 1200	10.9	10,9d
38	3	3	3000 m³/h	4.2	0.85	49.3	180	1.35	3 x 1200	16.4	9.5
46	3	4	3000 m³/h	5.6	1.13	49.5	180	1.35	3 x 1200	16.4	9.5
51	4	5	4000 m³/h	5.5	1.11	50.3	240	1.8	3 x 1600	21.8	12.6
62	4	5 ½	4000 m³/h	7.4	1.47	50.5	240	1.8	3 x 1600	21.8	12.6
78	5	6 ½	5000 m³/h	9.1	1.82	51.5	300	2.25	3 x 2000	27.3	15.8
94	6	7 ½	6000 m³/h	10.8	2.16	52.5	360	2.7	3 x 2400	32.7	18.9
110	7	9	7000 m³/h	12.5	2.51	53.5	420	3.15	3 x 2800	38.2	22.1
125	8	10	8000 m³/h	14.3	2.85	54.5	480	3.6	3 x 3200	43.6	25.2

Connector resistant to temperature variations, vibration and shock. Spring-loaded technology reduces the time for electrical installations without the need for special tools. Standardized electrical assembly


(*) Same capacities for 50Hz and 60Hz. Capacity in R-22.

Dt1: Difference between the air inlet temperature at the evaporator and the refrigerant's evaporation temperature.

°K=Kelvin °F=Fahrenheit

The air inlet temperature at the evaporator is considered to be approximately the chamber temperature.

Electrical characteristics • AC and electronic motor-fans

Models		1 Speed				2 Speeds				
		Flow rate m ³ /h	Noise dBa	Power W	Current A	Flow Rate m ³ /h - V1	Flow Rate m ³ /h - V2	Noise dBa	Power W	Current A
13	1	1000	44.3	24	0.2	1000	800	44.3	32	0.24
15	1	1000	44.3	24	0.2	1000	800	44.3	32	0.24
18	2	2000	47.3	48	0.4	2000	1600	47.3	64	0.48
25	2	2000	47.3	48	0.4	2000	1600	47.3	64	0.48
31	2	2000	47.5	48	0.4	2000	1600	47.5	64	0.48
38	3	3000	49.3	72	0.6	3000	2400	49.3	96	0.72
46	3	3000	49.5	72	0.6	3000	2400	49.5	96	0.72
51	4	4000	50.3	96	0.8	4000	3200	50.3	128	0.96
62	4	4000	50.5	96	0.8	4000	3200	50.5	128	0.96
78	5	5000	51.5	120	1	5000	4000	51.5	160	1.2
94	6	6000	52.5	144	1.2	6000	4800	52.5	192	1.44
110	7	7000	53.5	168	1.4	7000	5600	53.5	224	1.68
125	8	8000	54.5	192	1.6	8000	6400	54.5	256	1.92

Connector resistant to temperature variations, vibration and shock. Spring-loaded technology reduces the time for electrical installations without the need for special tools. Standardized electrical assembly


Legendas

V = Internal Volume

C = Approximate Refrigerant Charge

m³/h = Air Flow Rate measured at a density of 1.2 m³/kg

Electrical characteristics • Resistors

Models		Defrost resistances			Drain resistances
		Total W	1~ 220V	3~ 220V	
			A	A	W
13	1	2x600	5.5	5,5d	60
15	1	2x600	5.5	5,5d	60
18	2	2x1200	10.9	10,9d	60
25	2	2x1200	10.9	10,9d	60
31	2	2x1200	10.9	10,9d	60
38	3	3x1200	16.4	9.5	60
46	3	3x1200	16.4	9.5	60
51	4	3x1600	21.8	12.6	60
62	4	3x1600	21.8	12.6	60
78	5	3x2000	27.3	15.8	60
94	6	3x2400	32.7	18.9	60
110	7	3x2800	38.2	22.1	60
125	8	3x3200	43.6	25.2	60

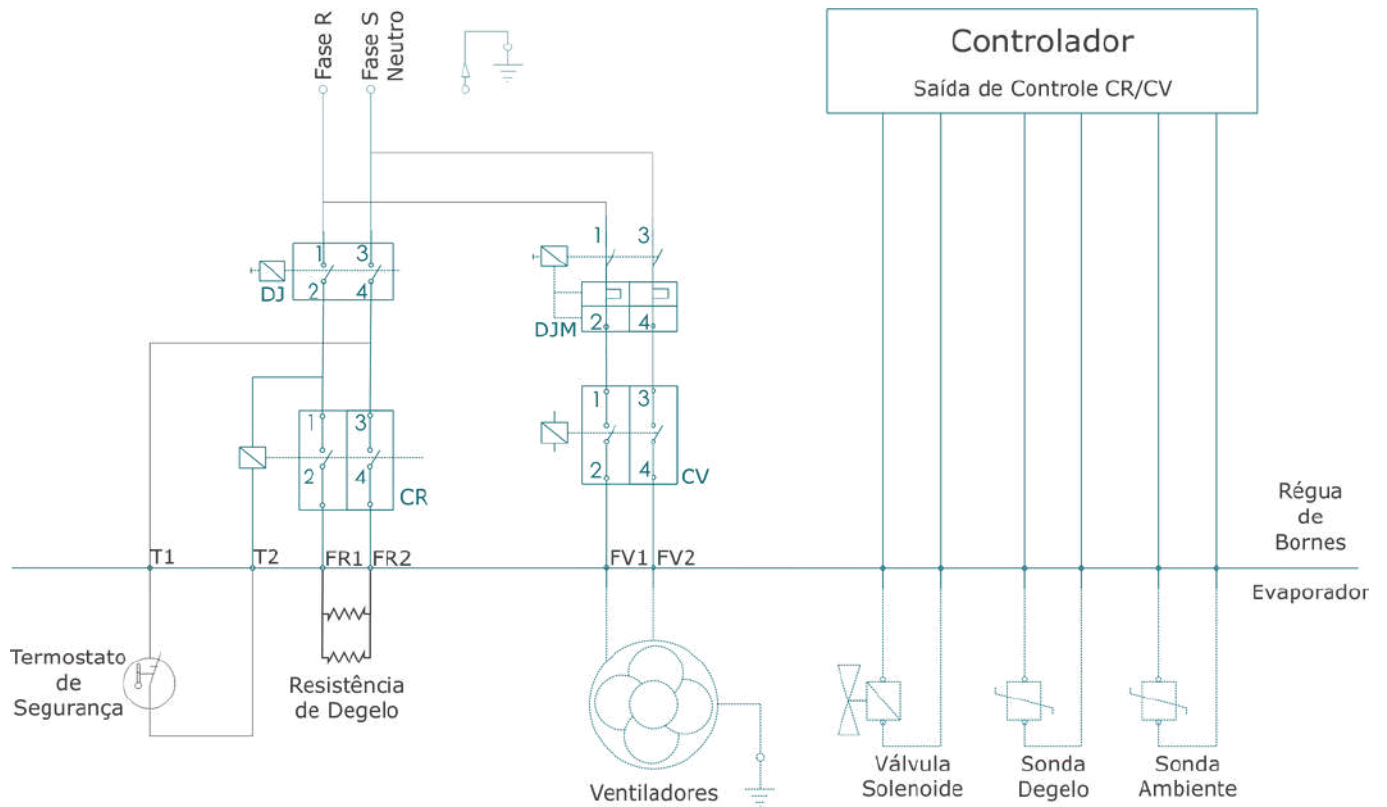
d = Unbalanced consumption

How to buy

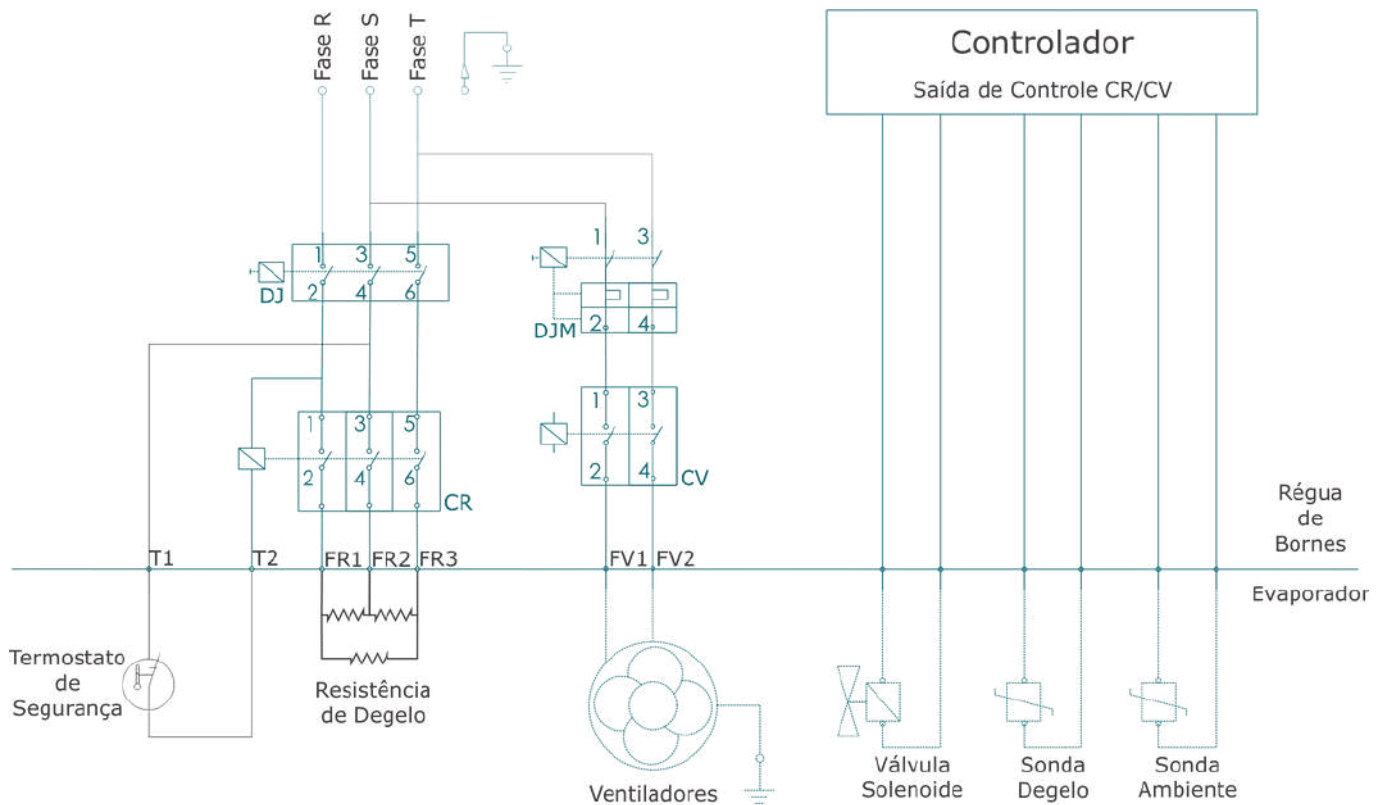
Models	Description	Available Options
GS2		Low profile Unit cooler
G	Espaçamento entre aletas	G • 6mm
E	Defrost	<ul style="list-style-type: none"> A • Air E • Electric in the core and pan F • Electric in the pan G • Hot gas in the core and pan H • Hot gas and electric in the pan I • Hot gas in the core
0013	Models	0013 a 0125
C	Tubos	C • Cobre
A	Connections	A • Direct expansion screw nut connection (SAE)
00	Accessories	<ul style="list-style-type: none"> 00 • Without accessories 01 • Expansion valve 02 • Solenoid valve 03 • Drain resistor 04 • Double insulated pan
		<p>Combinations</p> <ul style="list-style-type: none"> 15 • 02 + 04 10 • 01 + 02 + 03 16 • 03 + 04 11 • 01 + 02 17 • 01 + 02 + 03 + 04 12 • 02 + 03 18 • 01 + 02 + 04 13 • 01 + 03 19 • 02 + 03 + 04 14 • 01 + 04 20 • 01 + 03 + 04
A	Finishing	<ul style="list-style-type: none"> A Aluminum casing B Aluminum casing and fins N1 protection C Aluminum casing and fins N2 protection D Aluminum casing with epoxy white painting E Aluminum casing with epoxy white painting and fins N1 protection F Aluminum casing with epoxy white painting and fins N2 protection
MEC	Motor-fan:	<ul style="list-style-type: none"> MAC AC MEC EC electronic M1V 1 speed electronic (ECM or IQ) M2V 2 speeds electronic (ECQ ou ESM)
G	Voltage and Frequency	<ul style="list-style-type: none"> G • 230V/1F/50Hz N • 230V/1F/60Hz
3	Packaging	<ul style="list-style-type: none"> 1 • Crate 2 • Wooden box 3 • EPE + PVC Film

Electrical Diagram

Defrost 1ph 220V 50/60Hz • Fan 1ph 220V 50/60Hz (1 and 2 fan engines)



Defrost 3ph 220V 50/60Hz • Fan 1ph 220V 50/60Hz (3 to 8 fan engines)



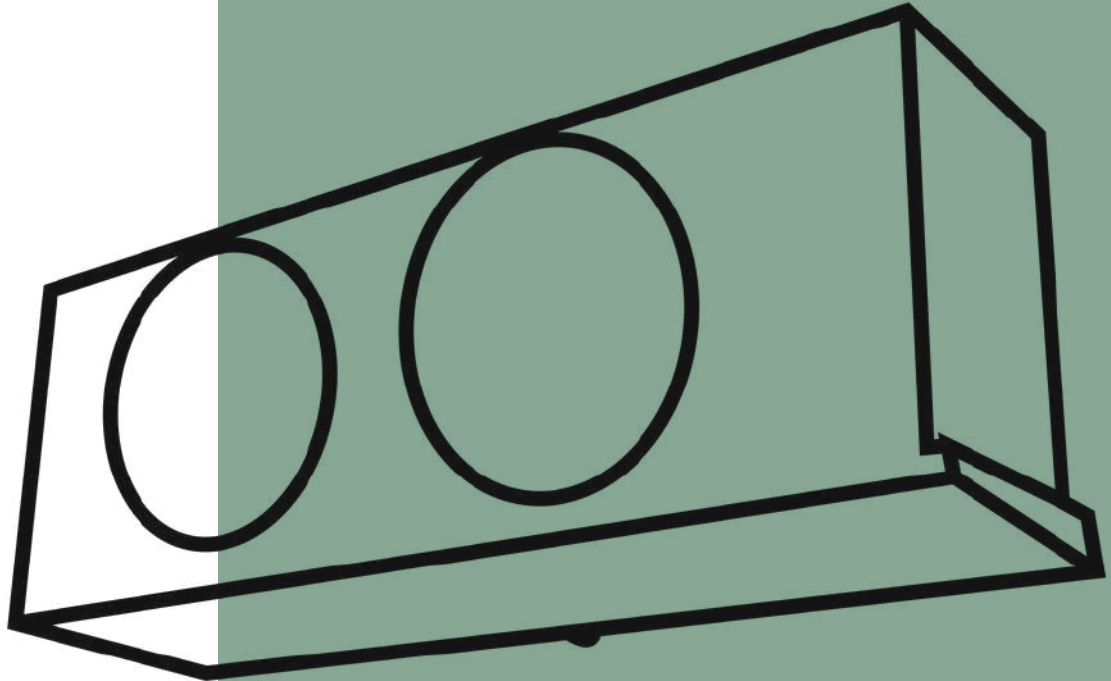
- CR Resistor Contactor
- CV Fan Contactor
- CJ Circuit Breaker
- DJM Engine Circuit Breaker

Attention

- When dimensioning installation components, refer to the catalog data table
- In case of change factory power, contact Mipal engineering
- The safety thermostat must be connected in series with the contactor coil
- Always use the ground wire



Acesso a vídeos e materiais complementares do produto




 mipal.com.br


 [mipal_evaporadores](https://www.instagram.com/mipal_evaporadores)

 [mipaloficial](https://www.facebook.com/mipaloficial)

 [mipal](https://www.youtube.com/mipal)

 [mipal](https://www.linkedin.com/mipal)

 +55 11 4409-0515

 11 97617-5467

Av. Engenheiro Afonso Botti, 240
Pinhal • Cabreúva • 13315-000

MIPAL
Technology and Trust

A Mipal reserva-se o direito de alterar os dados apresentados neste catálogo sem prévio aviso.
As fotos apresentadas neste catálogo são meramente ilustrativas