CPA
klimatix

Who are we?

We were born with the purpose of bringing innovative solutions to the HVAC market that go beyond the conventional.

Our heritage includes the tradition and expertise of the Mecalor Group, founded in 1960.

The technical experience accumulated over tdecades gives us solidity in the development of competitive, high-quality products.

Individualized service, from the quotation to after-sales service, is another consolidated differential of the new brand.

The pursuit of international excellence is a determining factor in the motivation of the team, which is eager to exceed your expectations. Be amazed by our dedication.

Welcome to Klimatix, where your project is a priority.

klimatix

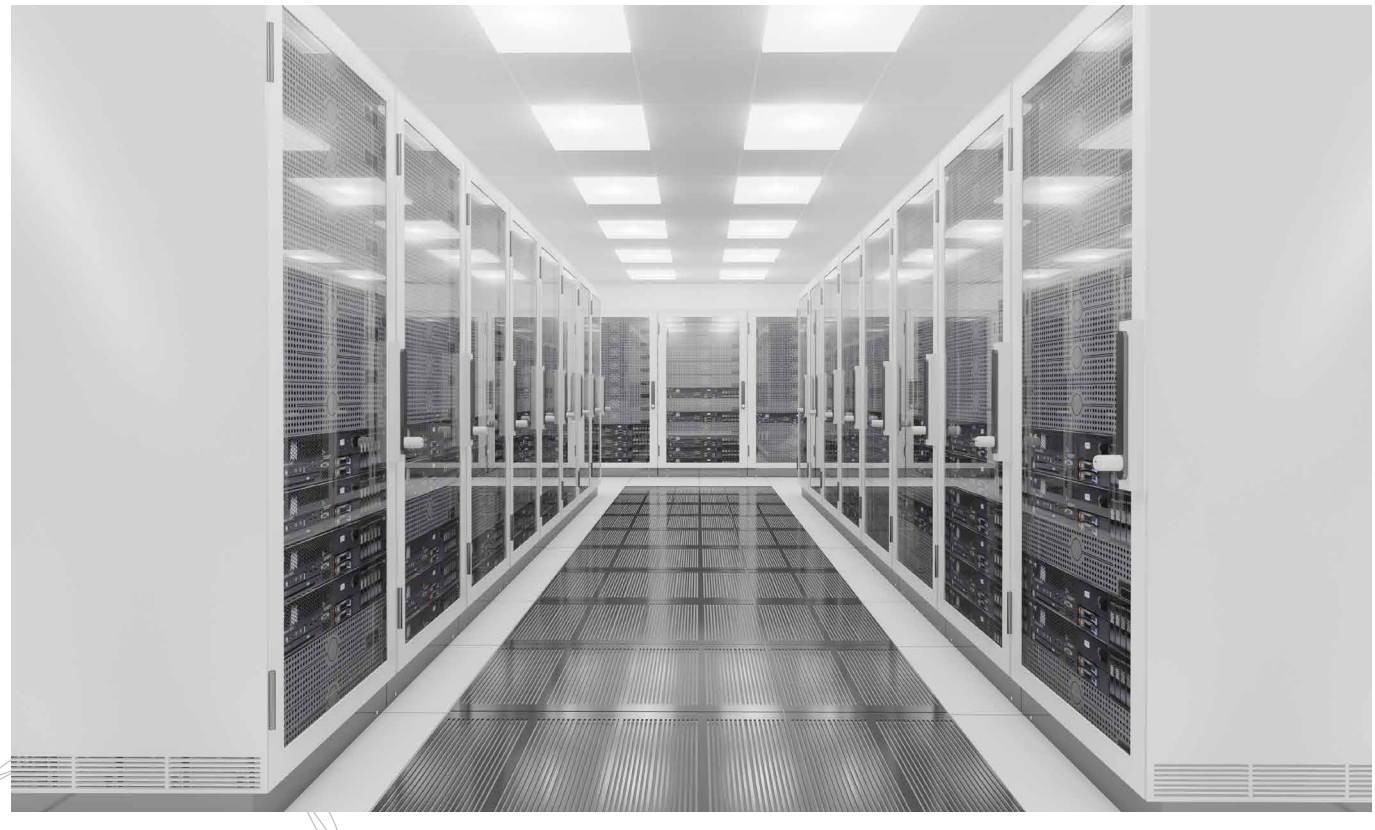
Schedule a visit to our plant.
contato@klimatix.com

Precision Air Conditioner

Direct self expansion with remote condenser

CPA

Capacity from 18 kW to 110 kW



Application

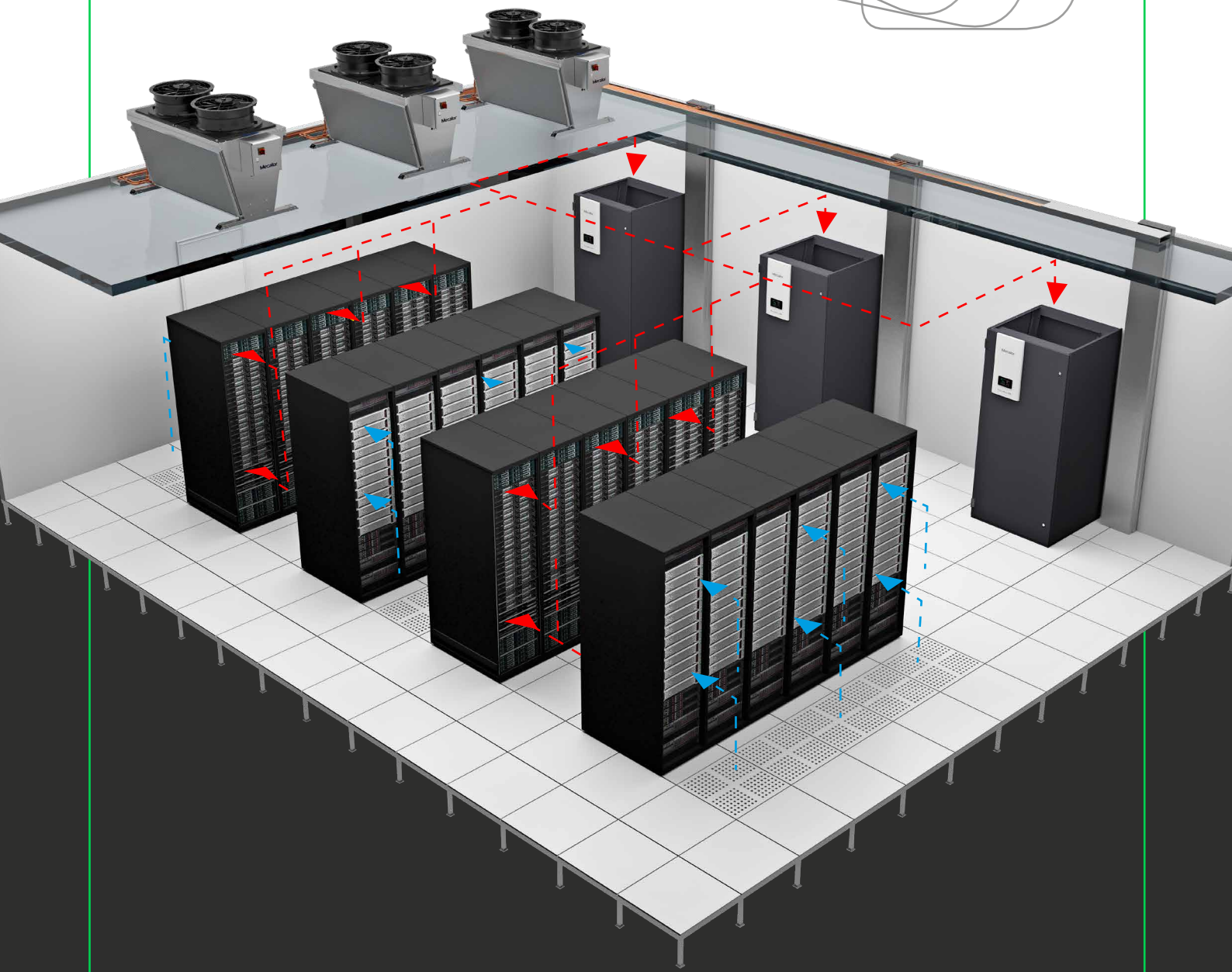
Small, medium and large data centers

Air conditioning for critical mission data centers, UPS rooms and communication centers.

Benefits

- Reliable operation 24/7
- Easy maintenance access
- Very high energy efficiency
- Precise temperature and humidity control
- Colored HMI touchscreen with user-friendly interface
- Ideal technology for great thermal load variations
- Low noise and automatic fan speed adjustment
- Wide range of optional configurations
- High availability rates (uptime)
- High performance EC fans
- Robust build

System designed for high efficiency



Nomenclature – CPA

CP A – D – 35 – URF – 380 *

Precision Air Conditioner

A: Direct Expansion

D: *Downflow*
F: *Displacement*
U: *Upflow*

Rated Capacity:
18, 26, 35, 50 ,70 or 100 kw

1st Digit
- 0: no humidifier
- U: humidifier (vapor generator)

2nd Digit
- 0: no electric reheating
- R: reheating (electrical resistance)

3rd Digit
- F: Fixed Compressor
- V: Compressor + Frequency inverter
- I: Inverter Compressor

Configurations:

/G: Hotgas By-pass capacity control
/M: Air filter M5
/D: Dual electric power supply
/S: SNMP Communication
/I: Flooded floor sensor
/P: Metal base for raised floor
/V: Damper
/O: Plenum discharge tank
/F: Metal base for raised floor with fan
/N: Bacnet Communication

*: Frequency of operation: 50Hz

Power Supply
3-phase, 220 V, 60 Hz
3-phase, 380 V, 60 Hz
3-phase, 440 V, 60 Hz

Technical Description

The air conditioners of the CPA line are equipment designed for application in mission-critical environments with high sensible heat factor for temperature, relative humidity and air quality control. Designed for continuous, reliable, and long-lasting operation. With control of precise temperature and humidity control, low power consumption, and low noise level.

Optimized airflow applying CFD tools for maximum efficiency, energy savings, and fans with EC technology motors.

They have several configurations available to adapt the equipment to the needs of each application.

• Control Technology

Six models with rated capacities of 18, 26, 35, 50, 70, and 100 kW and Downflow, Displacement, and Upflow air insufflation directions.

Network communication with up to 254 devices grouped into air conditioning zones with a maximum of 10 units.

Communication using Modbus TCP/IP and Modbus RTU protocols, which allows remote ccess to operating conditions, activation, parameterization, and checking the operating history. Optionally the SNMP or Bacnet protocols can be integrated.

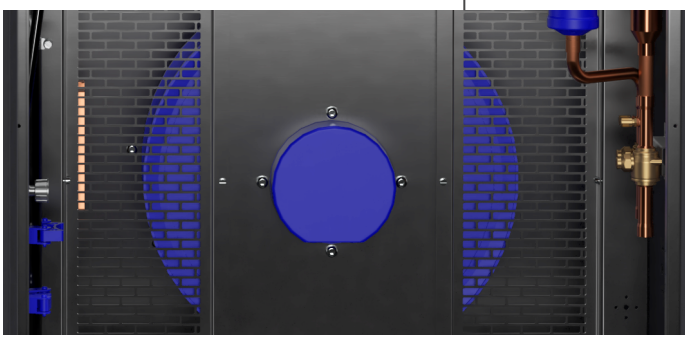
Control and monitoring of operating conditions by PLC and visualization of operating status, history, and parameterization by accessing the color touchscreen HMI positioned on the front cover.

Front access for maintenance of all equipment components.

Electrical panel incorporated into the cabinet with IP-40 protection grade.

• Ventilation

Radial fans with high efficiency EC type electric engine and proportional air flow control according to operating condition.



• Refrigeration

Setting the temperature control reference in the return, insufflation according to equipment configuration.

Operating temperature control between 20°C and 35°C and relative humidity between 30% and 70%.

One or two independent cooling circuits with scroll compressor.

Cooling circuit with block valves in the refrigerant inlet and outlet lines, liquid display, filter drier, check valve in the compressor discharge and electronic expansion valve.

Direct expansion with remote air condenser and refrigerant R410A.

• Others

Cabinet manufactured in galvanized carbon steel and electrostatic painting in color RAL 9005.

Side and rear covers are thermally insulated with elastomeric blanket and protected by metal plates.

Electrical components for sectioning, protection and activation of devices and engines assembled according to NBR 5410 in an assembly plate manufactured in galvanized carbon steel.

Filtering class G4 according to NBR16101 and differential pressure switch for indication of dirty filter and automatic adjustment of flow to compensate obstruction

Optional Configurations

REHEATING

Electric with one or two resistance zones made of AISI304 stainless steel, proportional control and safety thermostat.

HUMIDIFIER

Humidifier with immersed electrodes, plastic tank, filling and draining valves and proportional control of superheated vapor generation.

DAMPER

Motorized and installed on the top of the unit avoiding the return of the airflow through the equipment.

DISCHARGE PLENUM BOX

Used in the Upflow version with double deflection louvers for directing the air flow.

FILTER

Class M5 filter according to NBR 16101.

COMMUNICATION

SNMP, BACNET MS/TP, BACNET IP Protocols, others on request.

CAPACITY CONTROL

Hot Gas capacity control.

WET FLOOR SENSOR

Alarm for the presence of moisture on the floor

HIGH BASE

Used in equipment of the downflow type, manufactured in carbon steel and finished with black electrostatic paint in black RAL 9005. With deflector to direct the air flow and adjustable feet that allow leveling and height adjustment in +/- 30mm. Standard heights of 300mm, 400mm, 500mm, and 600mm.
Other measures on request.

VARIABLE COMPRESSOR

Fixed scroll compressor with frequency inverter with proportional capacity control from 50 to 100%.

INVERTER COMPRESSOR

Proportional capacity control between 30 and 100%.

Technical data

	Description	Unit	Model					
	Evaporator unit		**CPA - 18**	**CPA - 26**	**CPA - 35**	**CPA - 50**	**CPA - 70**	**CPA - 100**
Operating conditions	Total capacity (1)	kW	18.0	26.1	37.3	50.0	75.4	110.0
	Sensible capacity	kW	16.8	25.0	33.7	49.0	67.8	96.6
	Useful capacity	kW	15.8	23.5	32.0	46.1	64.4	91.9
	EER efficiency (CPA)	kW/kW	3.321	3.385	3.488	3.443	3.525	3.468
	EER efficiency (CPA + CR)	kW/kW	2.748	2.799	2.877	2.847	2.922	2.916
	Sensible heat factor	-	0.93	0.96	0.90	0.98	0.90	0.88
	Air supply direction	-	Down / Up flow / Displacement					
	Nominal flow rate	m^3/h	4750	7000	9000	14000	18000	25000
	Maximum static pressure available	Pa	200	250	250	250	250	250
	Specific fan power (SFP) (2)	$W/(m^3/s)$	781	751	682	751	682	680
	Cooling circuits	-	1	1	1	1	2	2
	Filtering class	-	G4					
	Downflow sound pressure (3)	dBA	65	65	61	68	64	65
	Upflow sound pressure (3)	dBA	67	67	63	70	66	67
	Refrigerant load (6)	kg	1.8	3.0	3.5	5.7	2 x 3.9	2 x 5.4
Dimensional	Width	mm	910	910	1060	1585	2115	2740
	Depth	mm	620	885	885	885	885	885
	Height	mm	2000	2000	2000	2000	2000	2000
	Occupied floor area	m^2	0.56	0.81	0.94	1.40	1.87	2.42
	Weight	kg	415	450	495	580	830	960
	Maintenance		Front					
	Maintenance access	mm	900					
	Inlet connection diameter	pol	1/2	5/8	5/8	3/4	2 x 5/8	2 x 3/4
	Outlet connection diameter	pol	5/8	3/4	7/8	7/8	2 x 7/8	2 x 7/8
	Remote condenser		**CR-25**	**CR-35**	**CR-60**	**CR-100**	**2 x CR-60**	**2 x CR-100**
Operating conditions	Direction of airflow and non-insufflation	-	Vertical / Horizontal		Vertical			
	Nominal flow rate	m^3/h	7000	9000	15500	21000	31000	42000
	Maximum static pressure available	Pa	10	10	10	10	10	10
	Specific fan power (SFP) (2)	$W/(m^3/s)$	484	570	483	489	483	489
	Sound pressure (3)	dBA	62	67	66	67	69	70
	Refrigerant load (6)	kg	0.9	0.93	1.87	2.34	2 x 1.87	2x 2.34
	Minimum room temperature	°C	-10					
	Maximum room temperature	°C	45					
Dimensional	Width	mm	1450	1750	1920	2450	2 x 1920	2 x 2450
	Depth	mm	910	820	850	915	2 x 850	2 x 2915
	Height	mm	1190	1160	1060	1025	2 x 1060	2 x 1025
	Weight	kg	60	75	95	130	2 x 95	2 x 130
	Maintenance	-	Frontal / Traseira / Lateral					
	Maintenance access	mm	600					
	Inlet connection diameter	in	5/8	3/4	7/8	7/8	2 * 7/8	2 * 7/8
	Outlet connection diameter	in	1/2	5/8	5/8	3/4	2 * 5/8	2 * 3/4
Refrigeration installation (5)	Maximum equivalent length (5)	m	30					
	Max. level difference (evaporator below condenser) (5)	m	17					
	Max. level difference (evaporator above condenser) (5)	m	5					
Power	Rated power (1) (4)	kW	6.6	9.3	13.0	17.6	25.8	37.7
	Maximum power (4)	kW	9.7	13.3	19.7	24.5	39.7	58.3
	Reheating resistor	kW	4.5	6.0	9.0	12.0	18.0	27.0
	Humidifier	kW	2.25	2.25	2.25	2.25	6	11.25

(1) Return temperature 24°C, relative humidity 45%, and atmospheric pressure 101.3kPa; Condensation temperature 45°C; Leq. 20 meters. For any other operating condition, please consult our Engineering department.

(2) Considering total power of the fans for maximum pressure loss of 250 Pa in the installation

(3) Sound pressure at 2 meters from the source

(4) Power in operation considering evaporator unit and remote condenser

(5) Consult our engineering department for other piping lengths

Technical Support

Our goal is to simplify your everyday life

We serve
all of
Latin America!

- Free lifetime support in the service channels
- Stock and supply of original parts
- Workshop car with high quality tools
- Punctuality in scheduled visits
- 90% of calls resolved over the phone
- Own team
- Monitoring of the visits in real time
- 80% of calls resolved on the first visit
- Qualified technicians with more than 15 years of experience

Customer satisfaction

We monitor the satisfaction of our customers from sale to the end of the equipment's useful life and take action whenever necessary, through our Active Listening Program.

We only rest when we deliver the best!

Gilmar Moreira
Technician since 1983
Weverton Santos
Technician since 2012

The information in this catalog is subject to change without prior notice. Version: May 2022

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