

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.

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Precision Air Conditioner

Direct self expansion with remote condenser

CPA

Capacity from 18 kW to 110 kW





Application

Small, medium and large data centers

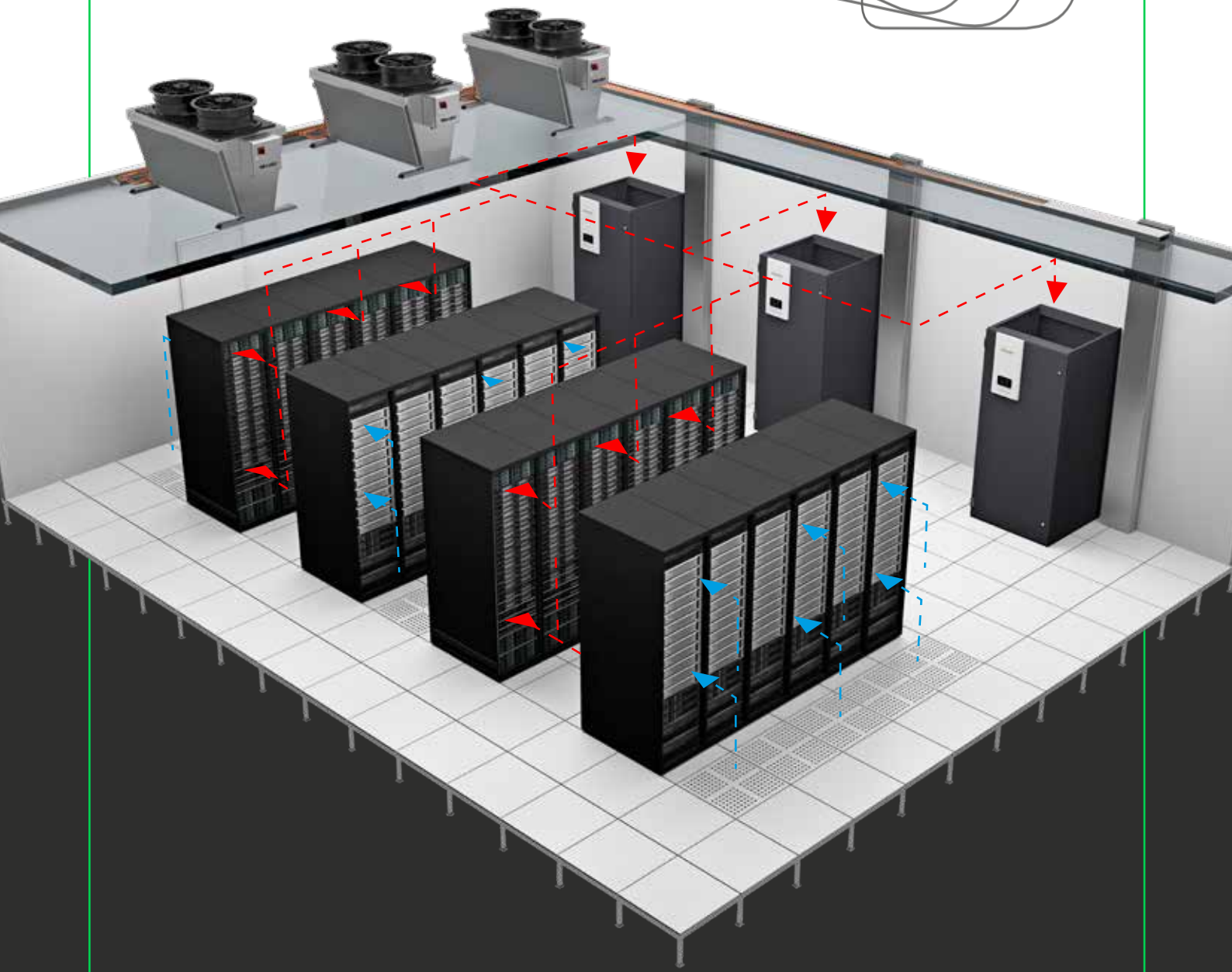
Mission-critical cooling for data centers, UPS rooms, communication centers, laboratories, research centers, cleanrooms, and telecommunications and broadcasting facilities.



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 * /C

Precision Air Conditioner

A: Direct Expansion

D: Downflow
F: Displacement
U: Upflow

Nominal Cooling Capacity
18, 26, 35, 50, 70 or 100 kW

1st Digit Humidification
0: Without humidifier
U: With humidifier (steam generator)

2nd Digit Reheating
0: Without reheating
R: Reheating (electric resistance heater)

3rd Digit Compressor Type
F: Fixed-speed compressor
V: Compressor with variable frequency drive (VFD)
I: Inverter compressor

Special Features

/C: Special construction
/E: Non-standard refrigerant
/G: Hot gas bypass
/M: M5 air filter
/D: Dual power supply
/S: SNMP communication
/I: Water leak detection sensor
/P: Metal base for raised floor installation
/V: Damper
/O: Discharge plenum box
/F: Fan base
/N: BACnet communication
/R: Dual electric reheating heaters

*:Special Operating Frequency 50Hz

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



Technical Description

The CPA series precision air conditioners are designed for mission-critical environments with high sensible heat loads, providing precise control of temperature, relative humidity, and air quality.

Engineered for continuous, reliable operation and a long service life, these units deliver precise temperature and humidity control, low energy consumption, and low noise levels.

Airflow is optimized using Computational Fluid Dynamics (CFD) tools to maximize efficiency and energy savings, while fans equipped with EC motors further enhance energy performance.

A wide range of configurations is available to meet the specific requirements of each application.



Illustrative image. Components and configurations may vary depending on the model and selected options.

Control Technology

Six models with nominal cooling capacities of 18, 26, 35, 50, 70, and 100 kW, available in Downflow, Displacement, and Upflow air discharge configurations.

Network communication supporting up to 254 units grouped into cooling zones, with a maximum of 10 units per zone.

PLC-based control with a 4.3-inch color touchscreen HMI, enabling operational monitoring, historical data access, and parameter configuration. Standard communication via Modbus TCP/IP and Modbus RTU, with optional integration through SNMP and BACnet protocols.

Front access for maintenance of all unit components.

Electrical panel integrated into the cabinet with an IP40 protection rating.

Ventilation

High-efficiency radial fans equipped with EC motors and proportional airflow control according to operating conditions.



Refrigeration

Operation with return air temperatures ranging from 18°C to 35°C, relative humidity between 40% and 60%, and outdoor ambient temperatures ranging from -10°C to 45°C.

Direct expansion refrigeration system with a remote air-cooled condenser and R410A refrigerant, featuring one or two independent refrigeration circuits equipped with Scroll compressors, shut-off valves, sight glasses, filter driers, compressor discharge check valves, and electronic expansion valves.

Others

Cabinet manufactured from galvanized carbon steel with an electrostatic powder coating in RAL 9005.

Side and rear panels thermally insulated with elastomeric foam and protected by metal sheets.

Electrical components for switching, protection, and operation of devices and motors, mounted in accordance with Brazilian standard NBR 5410 on a galvanized carbon steel mounting plate.

G4 filtration class in accordance with Brazilian standard NBR 16101, featuring a differential pressure switch for dirty filter indication and automatic airflow adjustment to compensate for obstructions.

Optional Configurations

M5 Air Filter

Provides finer air filtration, replacing the standard G4 filter

Hot Gas Bypass

Partially controls cooling capacity, contributing to temperature stability under low-load conditions.

Dual Power Supply

Allows integration with an external Automatic Transfer Switch (ATS), supplied by the customer, for automatic switching between power sources.

SNMP Communication

Possibilita a integração e o monitoramento do equipamento por sistemas de gerenciamento de rede.

BACnet Communication

Allows the precision air conditioner to be integrated into building automation and supervision systems via the BACnet protocol.

Water Leak Detection Sensor

Detects water accumulation on the floor, helping prevent operational issues.

Metal Base for Raised Floors

Facilitates equipment installation and leveling in raised-floor environments.

Motorized Damper

Automatically controls airflow, preventing air recirculation through inactive units.

Discharge Plenum Box

Directs airflow horizontally in units with Upflow air discharge configurations.

Fan Base

Allows the fan assembly to be positioned at the base of the unit, according to the selected configuration.

Electric Reheating

Adjusts air temperature after dehumidification, providing greater precision in environmental control.

Variable Capacity Compressor

Modulates cooling capacity according to thermal demand, improving energy efficiency.

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)	-	3,321	3,385	3,488	3,443	3,525	3,468
	EER efficiency (CPA + CR)	-	2,7	2,8	2,9	2,8	2,9	2,9
	Sensible heat ratio	-	0,93	0,96	0,90	0,98	0,90	0,88
	Air discharge direction	-	Downflow / Upflow / Displacement					
	Nominal airflow	m³/h	4750	7000	9000	14000	18000	25000
	Maximum available static pressure	Pa	200	250	250	250	250	250
	Radial fan diameter	mm	350	450	560	2 x 450	2 x 560	3 x 560
	Fan specific power (SFP) (2)	W/(m³/s)	781	751	682	751	682	680
	Refrigeration circuits	-	1	1	1	1	2	2
	Filtration class	-	G4					
	Sound pressure level – low flow (3)	dBA	65	65	61	68	64	65
	Sound pressure level – high flow (3)	dBA	67	67	63	70	66	67
Dimensions	Width	mm	910	910	1060	1585	2115	2740
	Depth	mm	620	885	885	885	885	885
	Height	mm	2000	2000	2000	2000	2000	2000
	Footprint area	m²	0,56	0,81	0,94	1,40	1,87	2,42
	Weight	kg	415	450	495	580	830	960
	Maintenance access	-	Frontal					
	Maintenance clearance	mm	900					
	Inlet connection diameter	in	1/2	5/8	5/8	5/8	2 x 5/8	2 x 5/8
	Outlet connection diameter	in	5/8	3/4	7/8	7/8	2 x 7/8	2 x 7/8
	Corresponding Remote Condenser		**CR-25**	**CR-35**	**CR-60**	**CR-100**	**2X CR-60**	**2X CR-100**
Operating conditions	Air discharge direction	-	Vertical / Horizontal		Vertical			
	Nominal airflow	m³/h	7000	10000	16000	20000	32000	40000
	Maximum available static pressure	Pa	10	10	10	10	10	10
	Fan specific power (SFP) (2)	W (m³/s)	484	513	468	513	468	513
	Sound pressure level (3)	dBA	62	67	66	67	69	70
Dimensional	Width	mm	1450	1750	1920	2450	2 x 1920	2 x 2450
	Depth	mm	910	820	850	915	2 x 850	2 x 915
	Height	mm	1190	1160	1060	1025	2 x 1060	2 x 1025
	Weight	kg	55	65	80	115	2 x 80	2 x 115
	Maintenance	-	Frontal / Traseira, Lateral					
	Maintenance access	mm	600					
	Inlet connection diameter	in	5/8”	3/4”	7/8”	7/8”	2 x 7/8”	2 x 7/8”
	Outlet connection diameter	in	1/2”	5/8”	5/8”	3/4”	2 x 5/8”	2 x 3/4”

	Description	Unit	Model					
	Evaporator Unit		CPA - 18	CPA - 26	CPA - 35	CPA - 50	CPA - 70	CPA - 100
Refrigeration Installation (5)	Maximum equivalent length (5)	m	30					
	Maximum elevation (evaporator below condenser) (5)	m	17					
	Maximum elevation (evaporator above condenser) (5)	m	5					
Electrical Power	Nominal 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 heater	kW	4,5	6,0	9,0	12,0	18,0	27,0
	Humidifier	kW	2,25	2,25	2,25	2,25	6,0	11,25

- Return air temperature 24 °C, relative humidity 45%, and atmospheric pressure 101.3 kPa; condenser temperature 45 °C.
- (2) Considering the total fan power for a maximum pressure drop of 250 Pa in the installation.
- (3) Sound pressure measured at a distance of 2 meters from the source.
- (4) Power in operation considering evaporator unit and remote condenser.
- (5) For other dimensions, consult the manufacturer.

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*Available for service in Brazil, Mexico, and Colombia.

The information in this catalog is subject to change without prior notice. Version: May 2026

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