



**CPA**

**klimatix**



# klimatix

Klimatix is the HVAC Air-Conditioning products brand of Mecalor Group, comprising the manufacturing of chillers (liquid coolers) and precision air conditioners to serve data centers, industries, commercial buildings, shopping centers and hospitals.

A brand of global reach that was born with the tradition of more than 60 years in thermal engineering.

The mission of the Klimatix business division is to bring knowledge, technical competence, and technological innovation to the air-conditioning market, with cost-effective products, extraordinary after-sales service, and skilled application engineering to understand the needs of designers, installers, and customers.

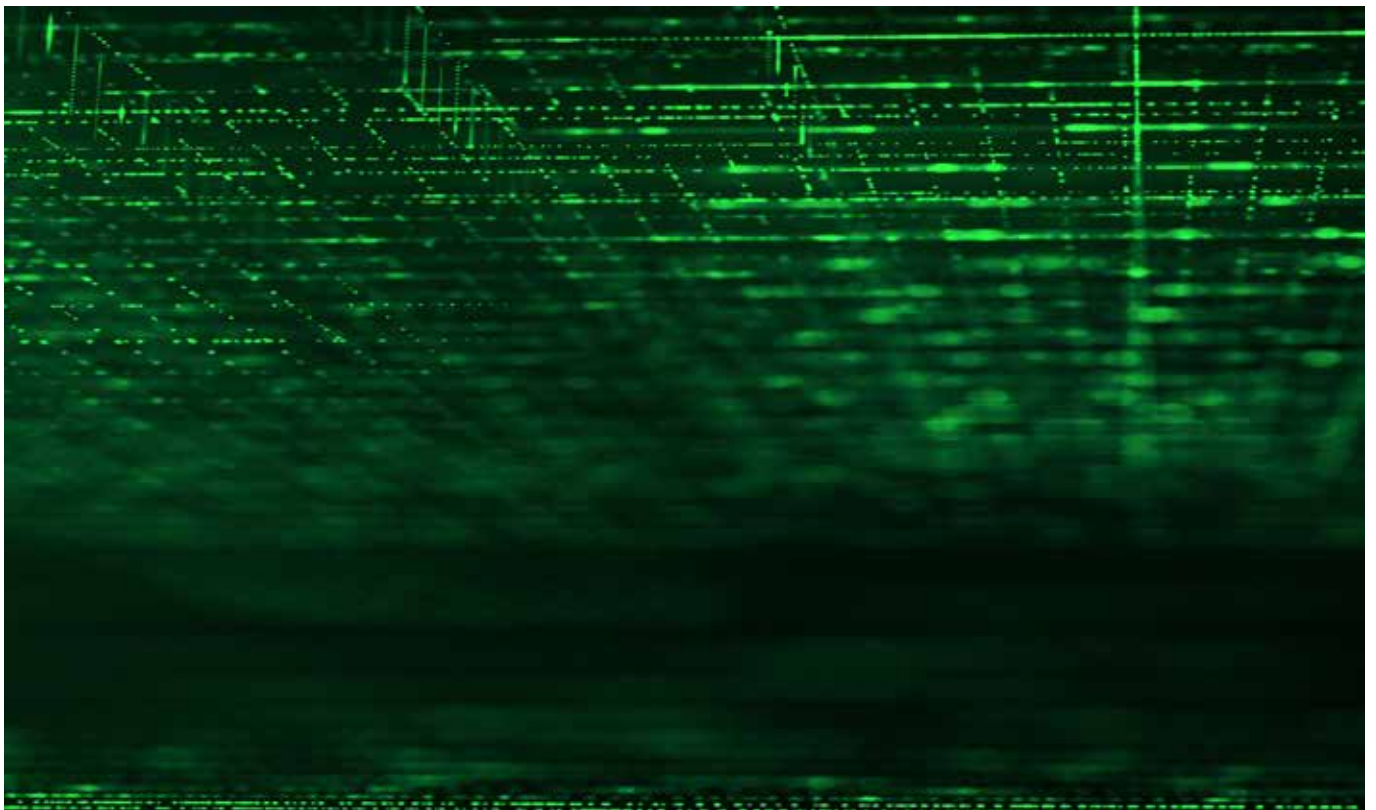
Schedule a visit to our plant.  
[contato@klimatix.com](mailto:contato@klimatix.com)

# Precision Air Conditioner

Direct self expansion with remote condenser

# CPA

Capacity of 18 kW to 110 kW





## Application

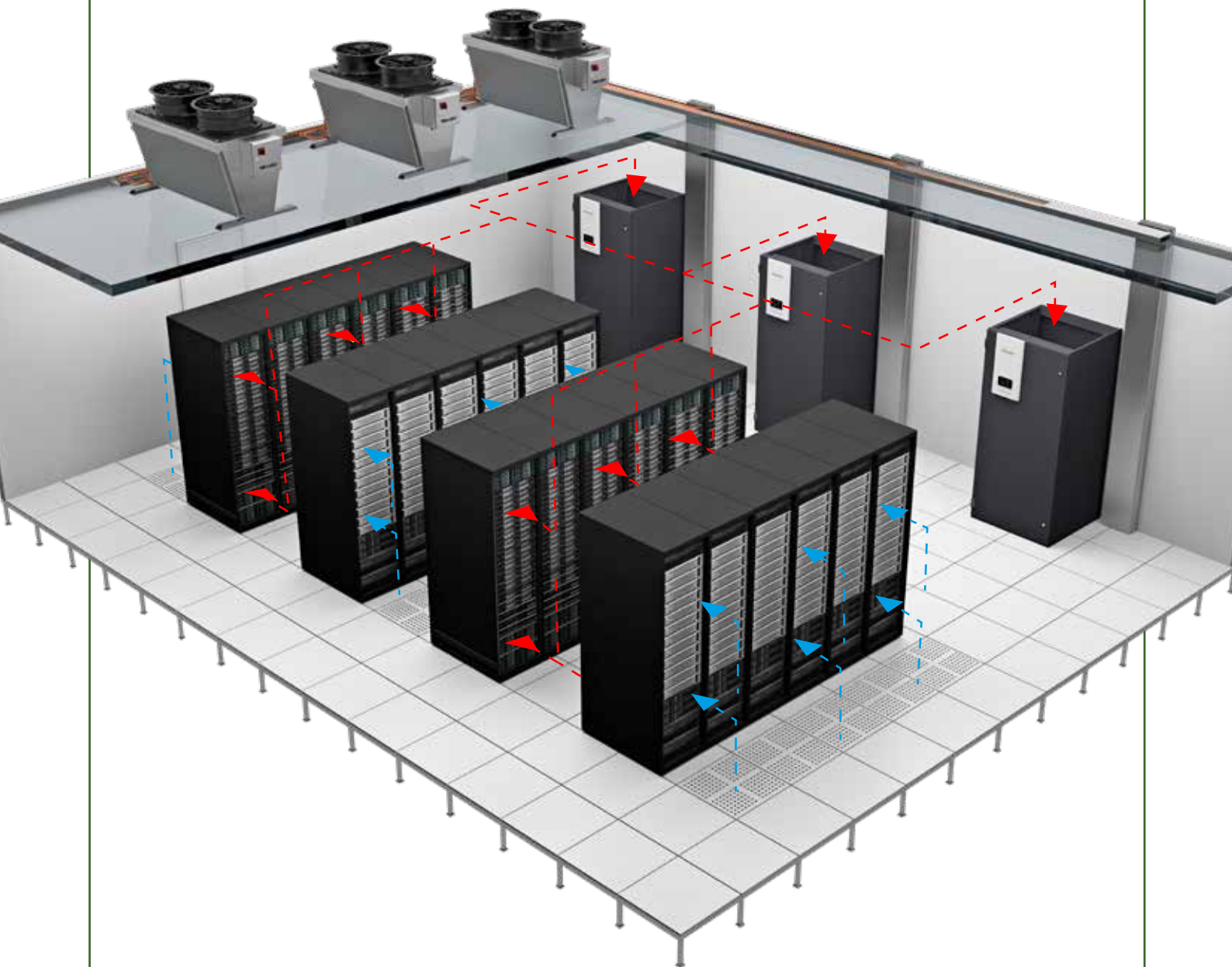
Small, medium and large data centers

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 touchscreen MMI 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



- Return
- Air Supply

# Nomenclature - CPA

CP A - D - 35 - URF - 380 \*

Precision Air Conditioner

A: Direct Expansion

D: Downflow

F: Displacement

U: Upflow

Nominal Capacity:

18, 26, 35, 50, 70 or 100 kw

1.° Digit { 0: no humidifier  
U: humidifier (steam generator)

2.° Digit { 0: no electric reheating  
R: reheating (electrical resistance)

3.° Digit { F: Fix 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

/R: Damper

/O: Plenum discharge tank

/F: Metal base for raised floor with fan

/N: Bacnet Communication

\*: Frequency: 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 precise control temperature and humidity control, low power consumption,

and low noise level. Optimized airflow by applying CFD tools for maximum efficiency, energy savings, and fans with EC-technology motor.

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



## • Control Technology

Six models with nominal 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 that allows remote access to operating conditions, activation, parameterization, and operating log verification. Optionally the SNMP or Bacnet protocols can be integrated.

Control and monitoring of the operating conditions performed by PLC and visualization of the operating status, logs, and parameterization by accessing the colored touchscreen MMI 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 motor and proportional air flow control according to operating condition.



## • Cooling

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

Control of operating temperature between 20°C to 35°C and relative humidity between 30 to 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 motors mounted 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 clogging.



# Optional Configurations

## REHEATING

Electric with one or two zones of resistances manufactured in stainless steel AISI304, proportional control and safety thermostat.

## HUMIDIFICATION

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.

## PLENUM DISCHARGE TANK

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

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

## INVERTER COMPRESSOR

Proportional capacity control between 30 and 100%.

# Technical Data

	Description	Model							
		Unit	CPA - 18	CPA - 26	CPA - 35	CPA - 50	CPA - 70	CPA - 100	
Operating conditions	<b>Evaporator unit</b>								
	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	
	Efficiency EER (CPA)	kW/kW	3,321	3,385	3,488	3,443	3,525	3,468	
	Efficiency EER (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	
	Direction of air insufflation	-	Down / Up flow / Displacement						
	Nominal flow rate	m <sup>3</sup> /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 <sup>3</sup> /s)	781	751	682	751	682	680	
	Cooling circuits	-	1	1	1	1	2	2	
	Filtering class	-	G4						
	Dimensional	Downflow sound pressure (3)	dB(A)	65	65	61	68	64	65
		Upflow sound pressure (3)	dB(A)	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	
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 <sup>2</sup>	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	
<b>Remote condenser</b>			<b>CR-25</b>	<b>CR-35</b>	<b>CR-60</b>	<b>CR-100</b>	<b>2 x CR-60</b>	<b>2 x CR-100</b>	
Operating conditions		Direction of airflow and not insufflation	-	Vertical / Horizontal		Vertical			
		Nominal flow rate	m <sup>3</sup> /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 <sup>3</sup> /s)	484	570	483	489	483	489	
	Sound pressure (3)	dB(A)	62	67	66	67	69	70	
	Refrigerant load (6)	kg	0,9	0,93	1,87	2,34	2 x 1,87	2 x 2,34	
	Minimum ambient temperature	°C	-10						
	Maximum room temperature	°C	45						
	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	-	Front / Rear / Side						
	Maintenance access	mm	600						
	Refrigerated plant installation (5)	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	
Maximum equivalent length (5)		m	30						
Max. level difference (evaporator below condenser) (5)		m	17						
Max. level difference (evaporator above condenser) (5)		m	5						
Potency		Nominal power (1) (4)	kW	6,6	9,3	13,0	17,6	25,8	37,7
		Maximum power (1) (4)	kW	9,7	13,3	19,7	24,5	39,7	58,3
		Reheating resistance	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 250Pa 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 objective is to simplify your day-to-day

We provide services  
**ALL OVER**  
Latin America!



Gilmar Moreira - Technician since 1983  
Weverton Santos - Technician since 2012

Own team

Monitoring of the visits in real time

80% of the calls solved in 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!**



**klimatix**

+55 11. 2188.1700  
[www.klimatix.com](http://www.klimatix.com)

The information in this catalog may be changed  
without prior notice. Version: May 2022.