



CPID

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Klimatix is the 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 customer.

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

Precision Air Conditioner

Direct self expansion with remote condenser

CPID

Capacity of 18 kW,
26kW and 40 kW





Application

Air conditioning for critical mission Data Centers, UPS Rooms and communication centers.

Benefits

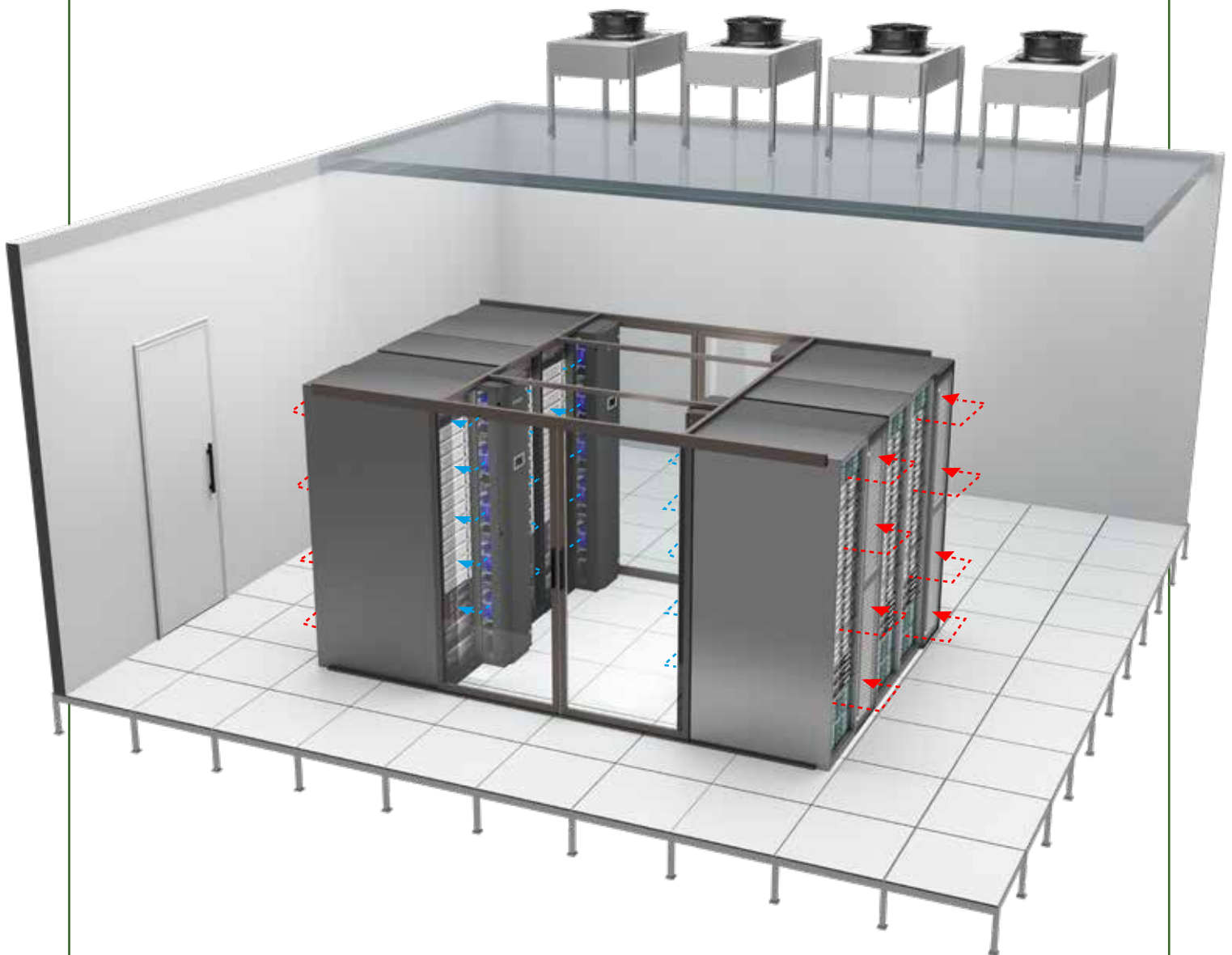
- Reliable operation 24/7
- Very high energy efficiency
- Equipment for installation between racks
- Precise temperature and humidity control
- Independent insufflation temperature control
- Options of rack lengths of 1,000 mm and 1,200 mm
- Inverter Compressor with capacity control from 30 to 100%
- Ideal technology for great thermal load variations
- Low noise and automatic fan speed adjustment
- Colored HMI touchscreen with user-friendly interface
- Wide range of optional configurations
- High performance EC fans
- Robust build

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CPID | Inrow precision air conditioner

System
designed for
high efficiency



-----> Return
-----> Air Supply

Nomenclature - CPID

CP I - D - LF - 18 - URI - 380 *

Precision Air Conditioner

I: In-row

D: Direct Expansion

1st Digit { L: Lateral flow
F: Displacement

2nd Digit { P: Standard structure
E: Extended structure

Nominal Capacity : 18, 26, 40 kw

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

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

3rd Digit { I: Inverter Compressor

Configurations:

/M: Air filter M5
/S: SNMP Communication
/N: BACNET Communication
/I: Flooded floor sensor

*: Special frequency: 50Hz

Standard Voltage of the CPID

3-phase, 220 V, 60 Hz

3-phase, 380 V, 60 Hz

3-phase, 440 V, 60 Hz

Special Voltage – E.g.: 400 V, 480 V etc.



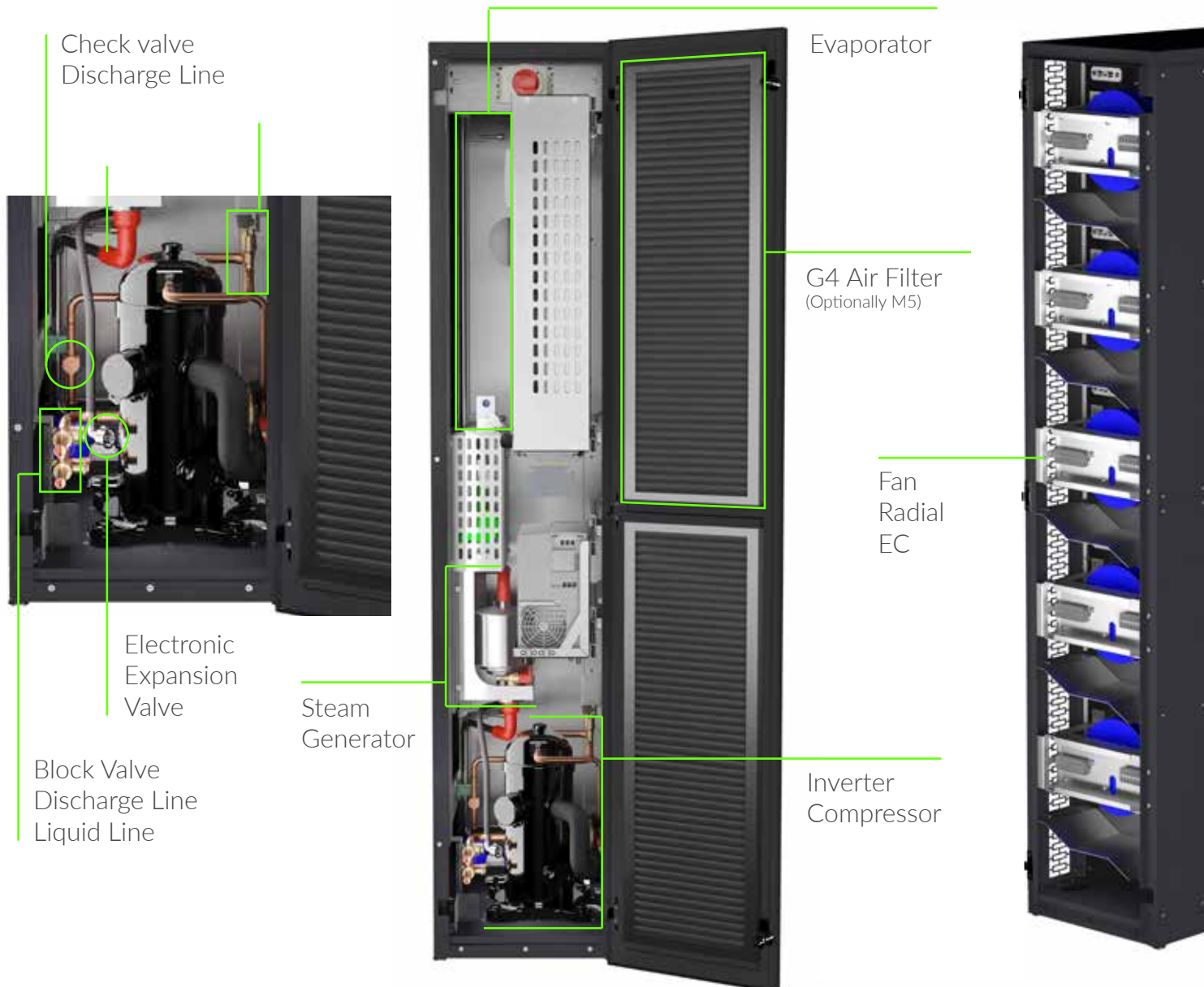
Technical Description

The air conditioners of the CPID line are equipment intended for application in critical mission environments with high sensible heat factor and high load density racks for temperature, relative humidity and air quality control of racks, where air flow is directed especially to the region where they are installed, allowing control by insufflation temperature directly to the cooling points, and can operate with insufflation temperatures of 20°C to 25°C and return between 30°C and 35°C.

Designed for continuous operation, reliable

and long-lasting operation. With control of precise temperature and humidity control, low power consumption, and low noise level. Optimized airflow by applying CFD tools for maximum efficiency, low power consumption and fans with EC-technology motor.

They can be supplied in lateral airflow configuration with the option of closing on one side (zone air conditioning, focusing on the rack region) or on the front (perimeter air conditioning, focusing on the room temperature)



• Control Technology

Three models with nominal capacities of 18, 26, and 40 kW

Network communication with up to 254 devices grouped into air conditioning zones with 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.

Air flow configuration in three zones or by average through air temperature differential monitoring.

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

A cooling circuit with a scroll compressor inverts, allowing an adjustment from 30% to 100% of the installed capacity in the equipment.

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.

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

Class G4 filtering according to NBR16101 and differential pressure switch for dirty filter indication and automatic flow rate adjustment to compensate clogging.

Optionals Configurations

REHEATING

Electric with resistances made of AI51304 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.

FILTER

Class M5 filter according to NBR 16101.

COMMUNICATION

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

WET FLOOR SENSOR

Alarm for the presence of moisture on the floor.



Technical Data

	Description	Unit	Model			
			CPID- 18	CPID- 26	CPID - 40	
Operating conditions	Evaporator unit					
	Total capacity (1)	kW	17,9	28,0	38,1	
	Sensible capacity	kW	17,9	28,0	38,1	
	Useful capacity	kW	17,2	27,4	37,0	
	Efficiency EER (CPID)	-	3,577	4,136	4,091	
	Efficiency EER (CPID + CR)	-	3,011	3,418	3,344	
	Sensible heat factor	-	1,00	1,00	1,00	
	Direction of air insufflation	-	Side / Front			
	Nominal flow rate	m ³ /h	4500	6000	7750	
	Maximum static pressure available	Pa	70	100	100	
	Specific fan power (SFP)	W/(m ³ /s)	512	407	488	
	Cooling circuits		1	1	1	
	Filtering class	-	G4			
	Sound pressure (2)	dBA	57	59	65	
	Dimensional	Refrigerant load (5)	kg	1,3	2,4	3,0
Width		mm	400	500	600	
Depth		mm	1200	1200	1200	
Height		mm	1975	1975	1975	
Occupied area		m ²	0,48	0,60	0,72	
Weight		kg	370	420	490	
Maintenance			Front / Rear			
Maintenance access		mm	900			
Inlet connection diameter		in	1/2	5/8	5/8	
Outlet connection diameter		in	5/8	3/4	7/8	
Operation Conditions	Remote condenser		CR-25	CR-35	CR-60	
	Direction of air insufflation	-	Vertical / Horizontal		Vertical	
	Nominal flow rate	m ³ /h	7000	9000	16500	
	Maximum static pressure available	Pa	10	10	10	
	Specific fan power (SFP)	W/(m ³ /s)	484	570	454	
	Sound pressure (2)	dBA	62	67	66	
	Refrigerant load (5)	kg	0,9	0,9	1,9	
	Dimensional	Width	mm	1450	1750	1920
		Depth	mm	910	820	850
		Height	mm	1190	1160	1060
Weight		kg	60	75	95	
Maintenance		-	Front / Rear / Side			
Maintenance access		mm	600			
Refrigerated plant installation	Inlet connection diameter	in	5/8	3/4	7/8	
	Outlet connection diameter	in	1/2	5/8	5/8	
	Maximum equivalent length (4)	m	30			
	Max. level difference (evaporator below condenser) (4)	m	17			
Power rating	Max. level difference (evaporator above condenser) (4)	m	5			
	Nominal power (1) (3)	kW	5,9	8,2	11,4	
	Maximum power (3)	kW	8,1	14,2	20,0	
	Reheating resistor	kW	4,5	9,0	9,0	
	Umidificador	kW	2,25	2,25	2,25	

(1) Return temperature 35°C, relative humidity 30% and atmospheric pressure 101.3kPa; Ambient temperature 35°C; Leq. 20 meters

(2) Sound pressure at 2 meters from the source

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

(4) Other measurements consult manufacturer

(5) Condensing temperature 45°C and sub-cooling 5°C

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

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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!



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