

AIR HANDLING UNIT KIT

NEW AHU KIT CONNECT VRF SYSTEM TO AIR HANDLING UNITS SYSTEMS, USING THE SAME REFRIGERANT CIRCUIT AS THE VRF SYSTEM.



Panasonic AHU Kit have large connectivity possibilities in order to be easily integrated.

Application: Hotels, offices, server rooms or all large buildings where air quality control such as humidity control and fresh air and is needed.

AHU CONNECTION KIT



PCB, Power trans, Terminal block



Remote control can be easily installed on the AHU Kit box. Remote control must be purchase separately.



Expansion valve



Thermistor x2 (Refrigerant: E1, E3)



Thermistor x2 (Air: Tf, Tb)

REMOTE CONTROLLER

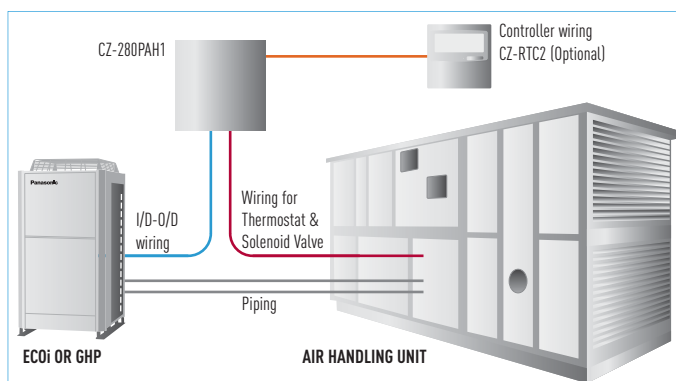


Standard wired remote controller. Optional

Possible Solution 1 by 1

Panasonic AHU Kit, 28 / 56 kW

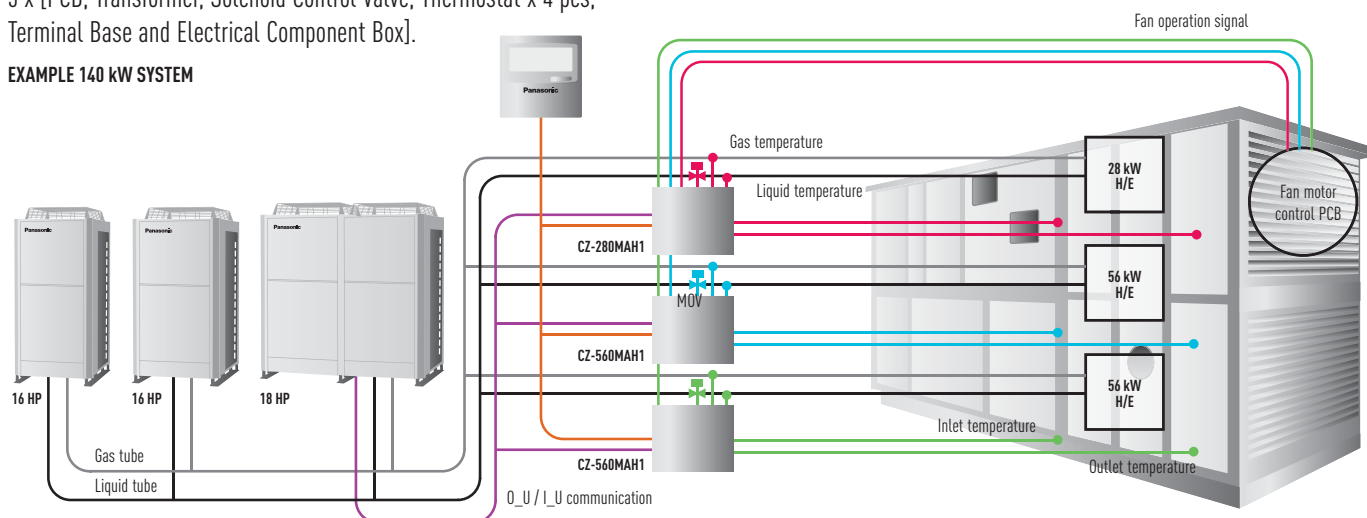
PCB, Transformer, Solenoid Control Valve, Thermostat x 4 pcs, Terminal Base and Electrical Component Box.



System example for big capacity (more than 56 kW)

3 x [PCB, Transformer, Solenoid Control Valve, Thermostat x 4 pcs, Terminal Base and Electrical Component Box].

EXAMPLE 140 kW SYSTEM



Optional parts: Following functions are available by using different type of control accessories:

CZ-RTC2 Wired remote controller

- Operation-ON/OFF
- Mode select
- Temperature setting

* Fan operation signal can be taken from the PCB.

CZ-T10 terminal

- Input signal= Operation ON/OFF
- Remote controller prohibition
- Output signal= Operating-ON status
- Alarm output (by DC12V)

PAW-OCT, DC12 V outlet. OPTION terminal

- Output signal= Cooling/Heating/Fan status
- Defrost
- Thermostat-ON

CZ-CAPBC2 Mini seri-para I/O unit

- Temperature setting by 0-10 V or 0-140 Ω input signal
- Room (inlet air) temp outlet by 4-20 mA
- Mode select or/and ON/OFF control
- Fan operation control
- Operation status output/ Alarm output

AHU CONNECTION KIT, 28 kW AND 56 kW FOR ECOi AND GHP

Heat exchanger, Fan & Fan motor to be mounted in AHU Kit shall be provided in the field.

AHU connection Kit can be connected this (field supplied) AHU Kit system. (Contents of kit:

Control PCB, expansion valve, sensors)

Application: Hotels, offices, server rooms or all large buildings where air quality control such as humidity control and fresh air and is needed.

AHU Kit combine air conditioning and fresh air in only one solution.

6N SERIES 2-PIPE ECOi OUTDOOR UNIT SHALL BE USED FOR AHU CONNECTION KIT.

2 models for VRF system: 10 HP (CZ-280MAH1) and 20 HP (CZ-560MAH1)

WITH GHP OUTDOOR UNITS:

- One AHU kit may be used for one GHP unit (2 way, 56 kW). Multiple AHU kits cannot be used.
- Mix connection with standard indoor units is not allowed.
- Power specifications are single-phase 220 V to 240 V.

MODEL		CZ-280MAH1	CZ-560MAH1	CZ-280MAH1 + CZ-560MAH1	CZ-560MAH1 + CZ-560MAH1	CZ-560MAH1 + CZ-560MAH1 + CZ-280MAH1	CZ-560MAH1 + CZ-560MAH1 + CZ-560MAH1
Nominal Cooling capacity @ 50hz	kW	28.0	56.0	84.0	112.0	140.0	168.0
Nominal Heating @ 50hz	kW	31.5	63.0	95.0	127.0	155.0	189.0
Horsepower	HP	10	20	30	40	50	60
Cooling Airflow High	m ³ /min	5,000	10,000	15,000	20,000	25,000	30,000
Cooling Airflow Low	m ³ /min	3,500	7,000	10,500	14,000	17,500	21,000
Heating Airflow High	m ³ /min						
Heating Airflow Low	m ³ /min						
Bypass Factor		0.9 (recommended)					
Fan Input Power		—	—	—	—	—	—
Total Cooling (incl. T-Heat exch.)	Nom (Min - Max)	—	—	—	—	—	—
Total Heating (incl. T-Heat exch.)	Nom (Min - Max)	—	—	—	—	—	—
Fuse Size	A	—	—	—	—	—	—
Running Current @ 230v		—	—	—	—	—	—
Input Power @ 230v							
Dimensions of the box (H x W x D)	mm	420 x 280 x 160					
Weight	Kg						
Sound pressure level on cooling mode (nominal)	dB(A)	—	—	—	—	—	—
Sound power level on cooling mode (nominal)		—	—	—	—	—	—
Piping length (min/max)	m	10/100	10/100	10/100	10/100	10/100	10/100
Installation height difference (max)	m	10	10	10	10	10	10
Pipe Diameters	Inch (mm)	3/8 (9.52)	5/8 (15.88)	3/4 (19.05)	3/4 (19.05)	3/4 (19.05)	3/4 (19.05)
	Inch (mm)	7/8 (22.22)	1 1/8 (28.58)	1 1/4 (31.75)	1 1/2 (38.15)	1 1/2 (38.15)	1 1/2 (38.15)
Intake temperature of AHU Kit (Min / Max)	°C	Cooling: 18 - 32DB (13 - 23 WB) / Heating: 16 - 30 DB					
Ambient temperature of outdoor unit (min / Max)	°C	Cooling: -5 - 43 DB / Heating: -15 - 15.5 WB					

AHU CONNECTION KIT / SYSTEM COMBINATION

CAPACITY (HP)	OUTDOOR UNIT COMBINATION			AHU KIT COMBINATION		
28 kW (10 HP)	U-10ME1E81			CZ-280MAH1		
56 kW (20 HP)	U-20ME1E81			CZ-560MAH1		
84 kW (30 HP)	U-16ME1E81	U-14ME1E81		CZ-560MAH1	CZ-280MAH1	
112 kW (40 HP)	U-20ME1E81	U-20ME1E81		CZ-560MAH1	CZ-560MAH1	
140 kW (50 HP)	U-18ME1E81	U-16ME1E81	U-16ME1E81	CZ-560MAH1	CZ-560MAH1	CZ-280MAH1
168 kW (60 HP)	U-20ME1E81	U-20ME1E81	U-20ME1E81	CZ-560MAH1	CZ-560MAH1	CZ-560MAH1
56 kW (20 HP)	U-20GE2E5			CZ-560MAH1		



OPTIONAL

Standard wired remote controller
CZ-RTC2



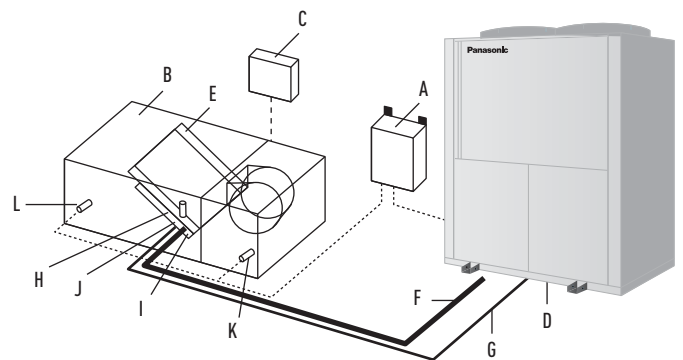
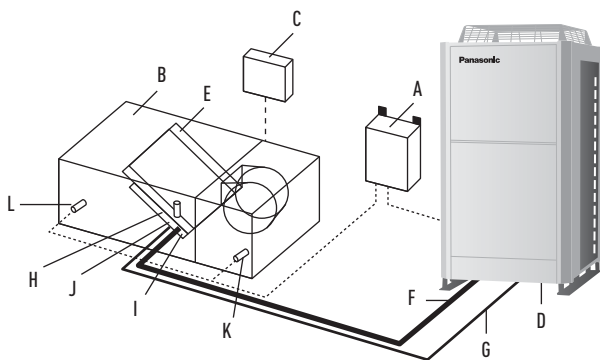
TECHNICAL ZOOM

- MAX. CAPACITY: 60HP (168 kW)
- MAX. PIPING LENGTH: 180 m
- MAX. TOTAL PIPING: 210 m
- ELEV. DIFF. (O_U-I_U): 50 m (O_U ABOVE)
- ELEV. DIFF. (I_U-I_U): 4 m
- IN/OUT CAPACITY RATIO: 50~100%
- MAX. I_U NUMBER: 2 UNITS*
- AVAILABLE TEMPERATURE RANGE IN HEATING: -15~15.5 °C
- AVAILABLE TEMPERATURE RANGE FOR THE SUCTION AIR AT AHU KIT: COOL: 15~24 °C / HEAT: 10~30 °C

* To be simultaneous operation controlled by one remote controller sensor.

CZ-280MAH1 // CZ-560MAH1

- The system controlled by the suction air (or return air from room) temperature as same as standard indoor unit. (Selectable mode: Automatic / Cooling / Heating / Fan / Dry (but same as Cool))
- The discharge air temperature is also controlled to prevent too-low air discharge in Cooling or too-high air discharge in Heating. (in case of VRF system)
- Demand control (Forcible thermostat-OFF control by operating current)
- Defrost operation signal, Thermo-ON/OFF states output
- Drain pump control (Drain-pump and the float switch to be supplied in local)
- External target temperature setting via Indoor/Outdoor signal interface is available with CZ-CAPBC2. (Ex. 0 - 10 V)
- Connectable with P-LINK system
Special care for the electrical noise may necessary depending on the system at site.)
- Fan control signal from the PCB can be used for control the air volume (High/Mid/Low and LL for Th-off)
Need to change the fan control circuit wiring at field.



SYSTEM & REGULATIONS. SYSTEM OVERVIEW

- A: AHU Kit controller box (with control PCB)
- B: AHU Kit equipment (Field supplied)
- C: AHU Kit system controller (Field supplied)

- D: Outdoor unit
- F: Gas piping (Field supplied)
- G: Liquid piping (Field supplied)
- H: Electronic expansion valve

- I: Thermistor for Gas pipe
- J: Thermistor for Liquid pipe
- K: Thermistor for Suction air
- L: Thermistor for Discharge air