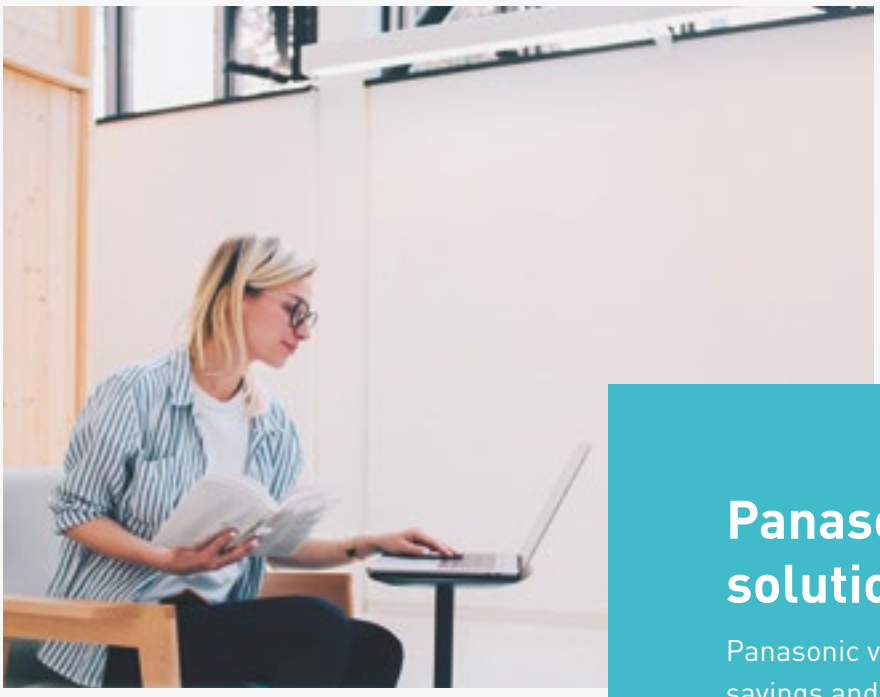
Panasonic

VENTILATION
2025 / 2026

PANASONIC TOTAL SOLUTION

heating & cooling solutions



Panasonic ventilation solutions

Panasonic ventilation solutions for maximum savings and easy integration.

Air handling unit kit

AHU connection kits connect outdoor units to air handling systems.
Combines air conditioning and fresh air in just one solution.
Application: Hotels, offices, server rooms or all large buildings where air quality control, such as humidity control and fresh air, is needed.

AHU connection kit PAH3M-1 for PACi NX (2,5 - 23,2 kW*).

· Durable metal casing (IP 65) allows external installation
· 0-10 V demand control
· CONEX Bluetooth® control built-in (CZ-RTC6BL)
· Panasonic H&C Control App via Bluetooth®
· Easy integration to BMS

* Nominal cooling capacity.

PACi

AHU connection kit MAH4M for ECOi 2-Pipe (16 - 96 kW*).

· Space-saving compact casing
· 0-10 V demand control
· Built-in controller for daily functions and service levels
· Direct Modbus communication without an additional interface
· Easy integration to BMS
· Accurate control with a pressure transducer

* Nominal cooling capacity.

ECOi EX / ECOi

AHU connection kit MAH3M for ECOi and ECO G (14 - 224 kW*).

· Durable metal casing (IP 65) allows external installation
· 0-10 V demand control
· CONEX Bluetooth® control built-in (CZ-RTC6BL)
· Panasonic H&C Control App via Bluetooth®
· Easy integration to BMS

* Nominal cooling capacity.

ECOi EX / ECOi / ECO G

AHU connection kit line-up.

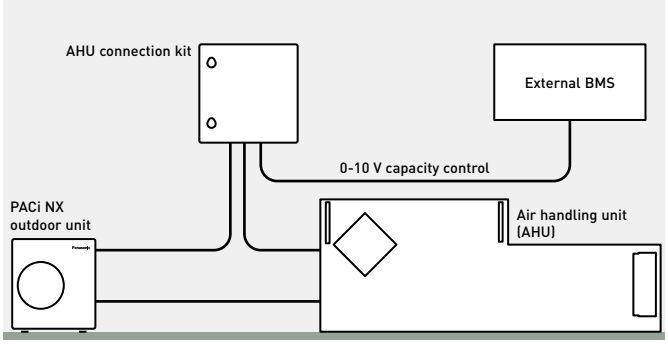
AHU connection kit	Reference	Casing	Controller	0–10 V demand control	Compatible outdoor units
PAH3M-1	PAW-280PAH3M-1	Durable metal casing (IP 65)	CONEX Bluetooth® control (CZ-RTC6BL)	Yes	PACi NX
MAH4M	PAW-P+100MAH4M	Durable metal casing (IP 65)	Built-in c.pCO controller	Yes	Mini ECOi and ECOi EX 2-Pipe
MAH3M	PAW-160MAH3M PAW-280MAH3M PAW-560MAH3M	Durable metal casing (IP 65)	CONEX Bluetooth® control (CZ-RTC6BL)	Yes	Mini ECOi, all ECOi EX and all ECO G

AHU connection kit PAH3M-1 for PACi NX

Compatible with R32 or R410A outdoor units.
The Panasonic AHU connection kits offer a wealth of connectivity possibilities, integrating easily into many systems.

Besides the advantages in terms of indoor air quality, air conditioning offers also an energy saving potential. For example, uncontrolled ventilation through open windows leads to large amounts of heat being lost to the outside during the heating season or gained from the outside during the cooling season. Whereas, combining heat recovery with air conditioning can allow for a high level of comfort whilst reducing the overall operating costs of running air conditioning alone.
The larger area of the comfort range, the better the energy saving opportunities.

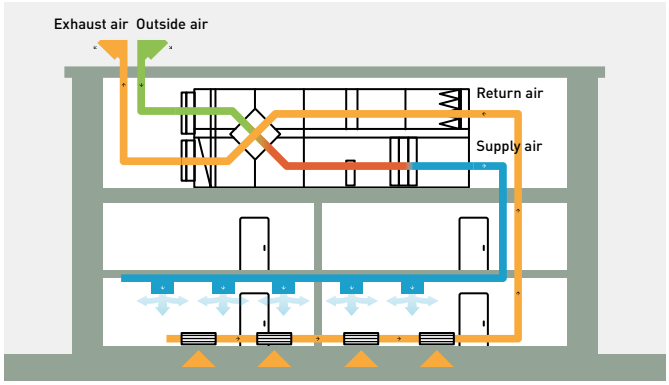
System example with AHU connection kit PAH3M-1 and PACi NX outdoor unit



Demand control on the outdoor unit managed by external 0-10 V signal.

- AHU connection kit contains: IP 65 box with PCBs and terminal connections mounted inside, expansion valve and sensors
- Heat exchanger, fan and fan motor to be mounted in the AHU itself are field supplied

Main components of mechanical ventilation systems



- Air handling unit (AHU)
- Air ducts
- Air distribution elements

Control options

Control option 1.
- The system's control is simple: control of actual suction temperature vs. set point
- Control works in the same way as that of any indoor unit
- Fan signal issued by the PCB (OFF while defrosting, for instance)

Control option 2.
- System control by a 0-10 V control working from an external BMS that manages the set point for temperature or capacity. Enhances efficiency by adjusting capacity and enhances comfort as well
- All signals as standard

0-10 V control

With the 0-10 V demand control the capacity of the outdoor unit can be controlled by 20 steps.

Input voltage* (V)	0	1,0	1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5	7,0	7,5	8,0	8,5	9,0	9,5
Demand (% of nominal current)	No cut [1]	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	No limit / Full capacity [2]
Indoor unit start / stop	Stop [1]	Start																	

1) No cut / stop: AHU system / indoor unit is completely switched OFF.
2) No limit: No restrictions applied by BMS to AHU system / indoor unit performance (equivalent to "full-load operation" of AHU system / indoor unit).

AHU connection kit.

PCB, power trans, terminal block.

Thermistor x2 (refrigerant: E1, E2).

Thermistor (air: TA; 1 sensor).

Wired remote controller.
CZ-RTC6BL.

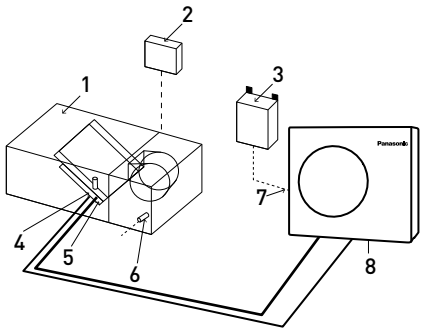
Optional controller.

Timer remote controller.
CZ-RTC5B.

AHU connection kit PAH3M-1 for PACi NX

CONEX Bluetooth® control built-in.
CZ-RTC6BL

PAW-280PAH3M-1			2,5 kW	3,6 kW	5,0 kW	6,0 kW	7,5 kW	10,0 kW	12,5 kW	14,0 kW	20,0 kW	25,0 kW
Dimension	H x W x D	mm	500 x 400 x 150	500 x 400 x 150	500 x 400 x 150	500 x 400 x 150	500 x 400 x 150	500 x 400 x 150	500 x 400 x 150	500 x 400 x 150	500 x 400 x 150	500 x 400 x 150
Net weight		kg	11,5	11,5	11,5	11,5	11,5	11,5	11,5	11,5	11,5	11,5
Piping diameter	Liquid	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	1/2 (12,70)
	Gas	Inch (mm)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)	1 (25,40)	1 (25,40)
Intake temperature of AHU connection kit	Cool Min ~ Max	°C DB	18 ~ 32	18 ~ 32	18 ~ 32	18 ~ 32	18 ~ 32	18 ~ 32	18 ~ 32	18 ~ 32	18 ~ 32	18 ~ 32
	Cool Min ~ Max	°C WB	14 ~ 25	14 ~ 25	14 ~ 25	14 ~ 25	14 ~ 25	14 ~ 25	14 ~ 25	14 ~ 25	—	—
	Heat Min ~ Max	°C	16 ~ 30	16 ~ 30	16 ~ 30	16 ~ 30	16 ~ 30	16 ~ 30	16 ~ 30	16 ~ 30	16 ~ 30	16 ~ 30
With PACi NX Elite												
Cooling capacity		kW	—	3,6	5,0	6,0	7,1	10,0	12,5	14,0	19,0	22,0
Heating capacity		kW	—	4,0	5,6	7,0	8,0	11,2	14,0	16,0	22,4	24,0
Air flow	Min / Max	m³/h	—	540/870	630/990	780/1320	780/1320	900/2160	1140/2280	1200/2400	2160/8000	2160/9000
Pipe length range		m	—	3 ~ 40	3 ~ 40	3 ~ 40	5 ~ 50	5 ~ 85	5 ~ 85	5 ~ 85	5 ~ 100	5 ~ 100
Elevation difference (in / out)	Max	m		30	30	30	30	30	30	30	30	30
Ambient temperature of outdoor unit	Cool Min ~ Max	°C	—	-15 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	-20 ~ +48	-20 ~ +48	-20 ~ +48	-15 ~ +52	-15 ~ +52
	Heat Min ~ Max	°C	—	-20 ~ +24	-20 ~ +24	-20 ~ +24	-20 ~ +24	-20 ~ +24	-20 ~ +24	-20 ~ +24	-20 ~ +35	-20 ~ +35
With PACi NX Standard												
Cooling capacity		kW	2,5	3,6	5,0	6,0	7,1	10,0	12,5	14,0	—	—
Heating capacity		kW	3,2	4,0	5,0	6,0	7,1	10,0	12,5	14,0	—	—
Air flow	Min / Max	m³/h	360 / 570	540/870	630/990	780/1320	780/1320	900/2160	1140/2280	1200/2400	—	—
Pipe length range		m	3 ~ 15	3 ~ 15	3 ~ 20	3 ~ 40	3 ~ 40	5 ~ 50	5 ~ 50	5 ~ 50	—	—
Elevation difference (in / out)	Max	m	30	30	30	30	30	30	30	30	—	—
Ambient temperature of outdoor unit	Cool Min ~ Max	°C	-10 ~ +43	-10 ~ +43	-10 ~ +43	-10 ~ +43	-10 ~ +43	-10 ~ +43	-10 ~ +43	-10 ~ +43	—	—
	Heat Min ~ Max	°C	-15 ~ +24	-15 ~ +24	-15 ~ +24	-15 ~ +24	-15 ~ +24	-15 ~ +24	-15 ~ +24	-15 ~ +24	—	—



System and regulations. System overview.

1 | AHU equipment (field supplied)
2 | AHU system controller (field supplied)
3 | AHU connection kit controller box (with control PCB)
4 | Thermistor for gas pipe (E2)
5 | Thermistor for liquid pipe (E1)
6 | Thermistor for suction air
7 | Inter-unit wiring
8 | Outdoor unit

	Air flow volume m³/min																																		
Outdoor unit	360	510	540	570	630	720	780	870	900	960	990	1.080	1.170	1.200	1.320	1.450	1.500	1.600	1.740	1.800	1.900	2.000	2.160	2.280	2.300	2.400	2.520	2.610	2.640	2.800	2.970	3.000	3.480	3.600
PACi NX Elite																																			
U-36PZH3E5																																			
U-50PZH3E5																																			
U-60PZH3E5																																			
U-71PZH4E5/8																																			
U-100PZH4E5/8																																			
U-125PZH4E5/8																																			
U-140PZH4E5/8																																			
PACi NX Standard																																			
U-25PZ3E5																																			
U-36PZ3E5																																			
U-50PZ3E5																																			
U-60PZ3E5																																			
U-71PZ3E5																																			
U-100PZ3E5/8																																			
U-125PZ3E5/8																																			
U-140PZ3E5/8																																			

Maximum allowed air volume flow under "Standard conditions".

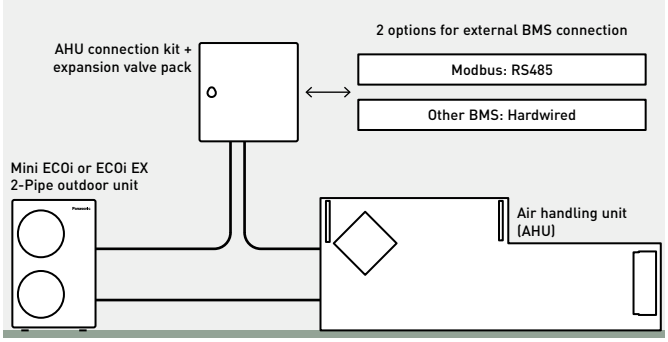
Higher maximum allowed air volume flow under "Special conditions" [1]: Maximum allowed air intake temperature at AHU DX coil heat exchanger in cooling mode is restricted to 30 °C DB.

1) Using an AHU unit with a higher maximum allowed air volume flow is subject to a restriction of the "Air intake temperature" to 30 °C DB (instead of 32 °C WB under standard conditions).

AHU connection kit MAH4M for ECOi 2-Pipe

System example with AHU connection kit MAH4M and Mini ECOi outdoor unit

- AHU connection kit in an IP 65 casing, contains PCBs and terminal connections mounted inside
- Select the size of the expansion valve pack based on the capacity
- Direct Modbus communication with a built-in Modbus S-Link interface
- The heat exchanger, fan, and fan motor to be mounted in the AHU are field-supplied



Demand control on the outdoor unit managed by external 0-10 V signal.

0-10 V control

With 0-10 V demand control, the outdoor unit capacity can be adjusted in each 5% demand step. Temperature set control (default discharge temperature control) is also available in each 0,5 K step.

Input voltage* (V)	0	1,0	1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5	7,0	7,5	8,0	8,5	9,0	9,5
Demand (% of nominal current)	No cut [1]	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	No limit / Full capacity [2]
Indoor unit start / stop	Stop [1]	Start																	

1) No cut / stop: AHU system / indoor unit is completely switched OFF.
2) No limit: No restrictions applied by BMS to AHU system / indoor unit performance (equivalent to "full-load operation" of AHU system / indoor unit).

Accessories highlights.

Remote control pack.
PAW-P+100PGNEPACK.
Graphic display remote control, managing both icons and international fonts.

EEV (Electric expansion valve) pack.
EEV controls refrigerant circuit superheat (or subcooling), directly managed by the c.pCO mini controller. Different sizes based on capacity.

EEV pack 1 ≤ 16,0 kW	PAW-P+116EEVPACK
EEV pack 2 ≤ 33,0 kW	PAW-P+133EEVPACK
EEV pack 3 ≤ 45,0 kW	PAW-P+145EEVPACK
EEV pack 4 ≤ 61,5 kW	PAW-P+156EEVPACK
EEV pack 5 ≤ 96,0 kW	PAW-P+174EEVPACK

* Example image.

AHU connection kit MAH4M for ECOi 2-Pipe

Space-saving compact casing.
Direct Modbus communication without the need for an additional interface.
Accurate control with a pressure transducer.

Built-in controller.

ECOi EX / ECOi

PAW-P+100MAH4M			6 HP	12 HP	16 HP	18 HP	20 HP	22 HP	24 HP	34 HP [1]
Cooling capacity	Nominal	kW	16,0	33,5	45,0	50,0	56,0	61,5	68,0	96,0
Heating capacity	Nominal	kW	17,0	37,5	50,0	56,0	63,0	69,0	76,5	108,0
Air flow	Min / Max	m³/h	1800 / 4400	2000 / 10000	3500 / 12000	5000 / 20000	5000 / 20000	5000 / 20000	6000 / 24000	8500 / 32000
Dimension	H x W x D	mm	300 x 400 x 150	300 x 400 x 150	300 x 400 x 150	300 x 400 x 150	300 x 400 x 150	300 x 400 x 150	300 x 400 x 150	300 x 400 x 150
Weight		kg	11	11	11	11	11	11	11	11
Pipe length range		m	10 ~ 100	10 ~ 100	10 ~ 100	10 ~ 100	10 ~ 100	10 ~ 100	10 ~ 100	10 ~ 100
Elevation difference (in / out)		m	10	10	10	10	10	10	10	10
Piping diameter ⩽ 90 m	Liquid	Inch (mm)	3/8 (9,52)	1/2 (12,70)	1/2 (12,70)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)	3/4 (19,05)
	Gas	Inch (mm)	5/8 (15,88)	1 (25,40)	1 1/8 (28,57)	1 1/8 (28,57)	1 1/8 (28,57)	1 1/8 (28,57)	1 1/8 (28,57)	1 1/4 (31,75)
Piping diameter > 90 m [2]	Liquid	Inch (mm)	—	5/8 (15,88)	5/8 (15,88)	3/4 (19,05)	3/4 (19,05)	3/4 (19,05)	3/4 (19,05)	7/8 (22,22)
	Gas	Inch (mm)	—	1 1/8 (28,57)	1 1/4 (31,75)	1-1/4 (31,75)	1 1/4 (31,75)	1 1/4 (31,75)	1 1/4 (31,75)	1 1/2 (38,10)

1) High-efficiency combination: U-10ME2E8 + 2×U-12ME2E8. 2) For R410A models only.

AHU connection kit / system combination					
Cooling capacity	Mini VRF		2-Pipe VRF	AHU connection kit	EEV pack
	Mini ECOi LZ2 Series (R32)	Mini ECOi LE Series (R410A)	ECOi EX ME2 Series		
4 ~ 6 HP	U-4LZ2E5(8) / U-5LZ2E5(8) / U-6LZ2E5(8)	U-4LE2E5(8) / U-5LE2E5(8) / U-6LE2E5(8)	—	PAW-P+100MAH4M	PAW-P+116EEVPACK
8 ~ 12 HP	U-8LZ2E8 / U-10LZ2E8	U-8LE1E8 / U-10LE1E8	U-8ME2E8 / U-10ME2E8 / U-12ME2E8	PAW-P+100MAH4M	PAW-P+133EEVPACK
14 ~ 18 HP	—	—	U-14ME2E8 / U-16ME2E8 / U-18ME2E8	PAW-P+100MAH4M	PAW-P+145EEVPACK
20 ~ 22 HP	—	—	20 HP (2×U-10ME2E8) 22 HP (U-10ME2E8 + U-12ME2E8)	PAW-P+100MAH4M	PAW-P+156EEVPACK
24 ~ 34 HP	—	—	24 HP (2×U-12ME2E8) 34 HP*	PAW-P+100MAH4M	PAW-P+174EEVPACK

* Multiple combinations available.

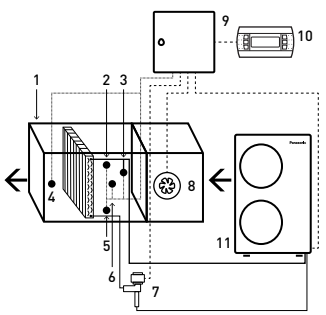
Accessories	
PAW-P+102SENSPACK	AHU connection kit sensor pack 1 (2 pcs of SENSOR PT1000 HT IP67 -50/250 CABLE 6 m PCK)
PAW-P+116EEVPACK	EEV pack 1 (1 pc of expansion valve ⩽ 16,0 kW (R410A / R32) and 1 pc of UNIPOLAR stator)
PAW-P+133EEVPACK	EEV pack 2 (1 pc of expansion valve ⩽ 33,0 kW (R410A / R32) and 1 pc of UNIPOLAR stator)
PAW-P+145EEVPACK	EEV pack 3 (1 pc of expansion valve ⩽ 45,0 kW (R410A / R32) and 1 pc of UNIPOLAR stator)

Accessories	
PAW-P+156EEVPACK	EEV pack 4 (1 pc of expansion valve ⩽ 61,5 kW (R410A / R32) and 1 pc of UNIPOLAR stator)
PAW-P+174EEVPACK	EEV pack 5 (1 pc of expansion valve ⩽ 96,0 kW (R410A / R32) and 1 pc of UNIPOLAR stator)
PAW-P+100PGNEPACK	Remote control pack (1 pc of PGNE 132 x 64 mm, mounting panel and 1 pc of cable L= 1,5 m, telephone connectors)

Technical focus

- Maximum capacity / system: 34 HP (96 kW*)
- Selectable expansion valve packs depending on the capacity
- DC 12 V outlet available without optional interface
- Maximum elevation difference indoor/outdoor unit: 10 m
- Elevation difference (indoor unit / indoor unit): 4 m
- In / out connection capacity ratio: 50~100%
- Maximum number of AHU connection kits: 1 unit
- Outdoor temperature range in heating: -20 ~ +15 °C
- Available temperature range for the suction air at AHU connection kit: cool: +18 ~ +32 °C / heat: +16 ~ +30 °C
- The system's set temperature can be selected either as the default setting discharge air temperature (supply room temperature) or the suction air set temperature (or room return air temperature)
- Accurate control with a pressure transducer
- Direct Modbus communication with a built-in Modbus S-Link interface
- Various technical parameters available with Modbus
- SG Ready fulfilled. Demand input can be set Thermostat OFF or 40 – 200% by the user
- Defrost operation signal, compressor status ON / OFF output
- Display an error message concerning drain water overflow
- Connectable with S-Link system. Special care for electrical noise may be necessary depending on the on-site system
- Fan control signal output to manage the air flow (ON / OFF)
- Alarm status monitoring output

* Nominal cooling capacity.



System and regulations. System overview.
1 | AHU Unit equipment (field supplied)
2 | Thermistor for gas pipe (E3)
3 | Pressure transductor
4 | Thermistor for discharge air (BL)
5 | Thermistor for liquid pipe (E1)
6 | Thermistor for suction air (TA)
7 | Expansion valve (accessorie part)
8 | Fan (field supplied)
9 | AHU connection kit controller box
10 | Optional remote controller
11 | Outdoor unit Mini ECOi and 2-Pipe ECOi EX

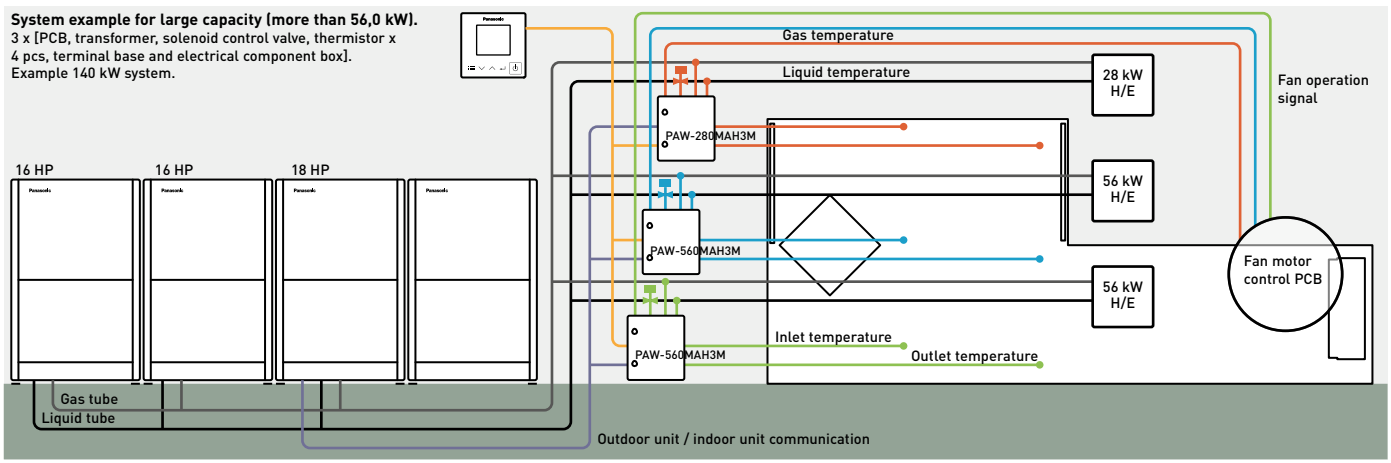
AHU connection kit MAH3M for ECOi and ECO G

With ECOi outdoor units

ECOi outdoor units shall be used for AHU connection kit. 3 models for VRF system: 5 HP (PAW-160MAH3M), 10 HP (PAW-280MAH3M) and 20 HP (PAW-560MAH3M).

With ECO G outdoor units

- One AHU connection kit may be used for one ECO G unit. Multiple AHU connection kits cannot be used
- Mixed with standard indoor units is not allowed
- Power specifications are single phase 220 V to 240 V



AHU connection kit MAH3M for ECOi and ECO G

CONEX Bluetooth® control built-in.
CZ-RTC6BL

ECOi EX / ECOi / ECO G

Model		PAW-	5 HP 160MAH3M	10 HP 280MAH3M	20 HP 560MAH3M	30 HP 280MAH3M 560MAH3M	40 HP 560MAH3M 560MAH3M	50 HP 560MAH3M 560MAH3M 280MAH3M	60 HP 560MAH3M 560MAH3M	70 HP 560MAH3M 560MAH3M 560MAH3M 280MAH3M	80 HP 560MAH3M 560MAH3M 560MAH3M 560MAH3M
Cooling capacity		kW	14,0	28,0	56,0	84,0	112,0	140,0	168,0	196,0	224,0
Heating capacity		kW	16,0	31,5	63,0	95,0	127,0	155,0	189,0	219,0	252,0
Air flow	Cool Min / Max	m³/h	1140 / 2598	3498 / 4998	7002 / 10002	10500 / 15000	13998 / 19998	17496 / 24996	21000 / 30000	35000 / 24000	40000 / 28000
Bypass factor recommended			0,9	0,9	0,9	0,9	0,9	0,9	0,9	0,9	0,9
Dimension	H x W x D	mm	500 x 400 x 150	500 x 400 x 150	500 x 400 x 150	500 x 400 x 150*	500 x 400 x 150*	500 x 400 x 150*	500 x 400 x 150*	500 x 400 x 150*	500 x 400 x 150*
Net weight		kg	11,5	11,5	11,5	11,5*	11,5*	11,5*	11,5*	11,5*	11,5*
Pipe length range		m	10 ~ 100	10 ~ 100	10 ~ 100	10 ~ 100	10 ~ 100	10 ~ 100	10 ~ 100	10 ~ 100	10 ~ 100
Elevation difference (in / out)	Max	m	10	10	10	10	10	10	10	10	10
Piping diameter	Liquid	Inch (mm)	3/8 (9,52)	3/8 (9,52)	5/8 (15,88)	3/4 (19,05)	3/4 (19,05)	3/4 (19,05)	3/4 (19,05)	7/8 (22,22)	7/8 (22,22)
	Gas	Inch (mm)	5/8 (15,88)	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)	1 5/8 (41,28)	1 3/4 (44,45)
Intake temperature of AHU connection kit	Cool Min ~ Max	°C DB	+18 ~ +32	+18 ~ +32	+18 ~ +32	+18 ~ +32	+18 ~ +32	+18 ~ +32	+18 ~ +32	+18 ~ +32	+18 ~ +32
	Cool Min ~ Max	°C WB	+13 ~ +23	+13 ~ +23	+13 ~ +23	+13 ~ +23	+13 ~ +23	+13 ~ +23	+13 ~ +23	+13 ~ +23	+13 ~ +23
	Heat Min ~ Max	°C	+16 ~ +30	+16 ~ +30	+16 ~ +30	+16 ~ +30	+16 ~ +30	+16 ~ +30	+16 ~ +30	+16 ~ +30	+16 ~ +30
Ambient temperature of outdoor unit	Cool Min ~ Max	°C	-10 ~ +43	-10 ~ +43	-10 ~ +43	-10 ~ +43	-10 ~ +43	-10 ~ +43	-10 ~ +43	-10 ~ +43	-10 ~ +43
	Heat Min ~ Max	°C	-20 ~ +15	-20 ~ +15	-20 ~ +15	-20 ~ +15	-20 ~ +15	-20 ~ +15	-20 ~ +15	-20 ~ +15	-20 ~ +15

*** The value applies to one unit of the AHU connection kit.**

AHU connection kit / system combination

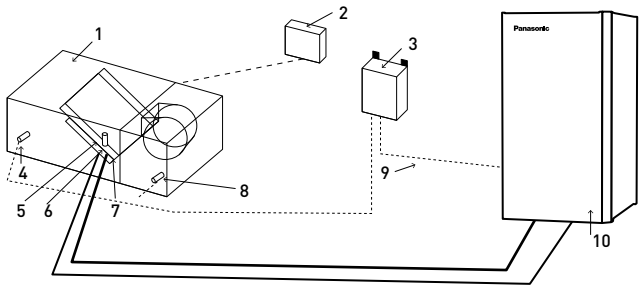
Capacity		ECOi Series			AHU kit			
5 HP	16 kW	Mini ECOi / ECOi EX ME2 Series			160MAH3M	—	—	—
10 HP	28 kW	U-8LZ2E8/U-10LZ2E8/ U-8LE1E8/U-10LE1E8/ U-10ME2E8	—	—	280MAH3M	—	—	—
20 HP	56 kW	U-20ME2E8	—	—	560MAH3M	—	—	—
30 HP	84 kW	U-16ME2E8	U-14ME2E8	—	560MAH3M	280MAH3M	—	—
40 HP	112 kW	U-20ME2E8	U-20ME2E8	—	560MAH3M	560MAH3M	—	—
50 HP	140 kW	U-18ME2E8	U-16ME2E8	U-16ME2E8	560MAH3M	560MAH3M	280MAH3M	—
60 HP	168 kW	U-20ME2E8	U-20ME2E8	U-20ME2E8	560MAH3M	560MAH3M	560MAH3M	—
70 HP	196 kW	U-20ME2E8	U-20ME2E8	U-20ME2E8	560MAH3M	560MAH3M	560MAH3M	280MAH3M
80 HP	224 kW	U-20ME2E8	U-20ME2E8	U-20ME2E8	560MAH3M	560MAH3M	560MAH3M	560MAH3M

Capacity		ECO G Series	AHU kit
5 HP	16 kW	All ECO G	160MAH3M
10 HP	28 kW	All ECO G	280MAH3M
20 HP	56 kW	U-20GE3E5	560MAH3M

Technical focus

- Maximum capacity / system: 80 HP (224 kW)
- Maximum piping length: 100 m (120 m equivalent)
- Elevation difference (indoor unit / indoor unit): 4 m
- In / out capacity ratio: 50~100%
- Maximum number of AHU connection kits: 4 units*
- Outdoor temperature range in heating: -20 ~ +15 °C
- Available temperature range for the suction air at AHU connection kit: cool: +18 ~ +32 °C / heat: +16 ~ +30 °C
- The systems is controlled by the suction air (or room return air) temperature (same as standard indoor unit)
- 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)
- 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)
- Demand control 40% to 120% (5% steps) by 0-10 V input signal
- Connectable with S-Link system. Special care for electrical noise may be necessary depending on the on-site system
- Fan control signal from the PCB can be used to control the air flow (high / mid / low and LL for Th-OFF). Need to change the fan control circuit wiring at field

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



System and regulations. System overview.
1 | AHU Unit equipment (field supplied)
2 | AHU Unit system controller (field supplied)
3 | AHU connection kit controller box (with control PCB)
4 | Thermistor for discharge air
5 | Electronic expansion valve
6 | Thermistor for gas pipe (E3)
7 | Thermistor for liquid pipe (E1)
8 | Thermistor for suction air
9 | Inter-unit wiring
10 | ECOi or ECOi G outdoor unit

Optional controller.

Timer remote controller.
CZ-RTC5B.

Advanced energy recovery ventilation - ZY Series

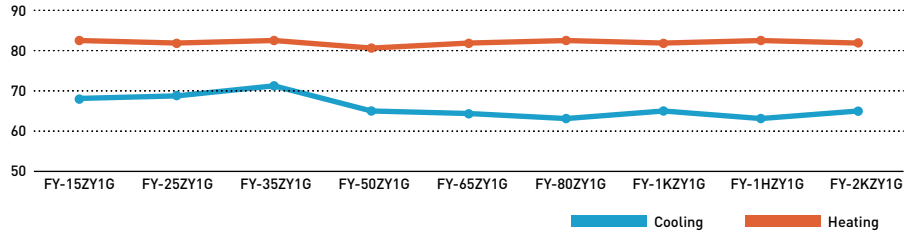
Indoor air quality (IAQ) is a key consideration for any business owner looking to create a healthy and comfortable environment. An energy recovery ventilator (ERV) provides balanced, energy-efficient ventilation by transferring heat and moisture between incoming fresh filtered air and outgoing stale air. In the winter, an ERV keeps heat and moisture inside the building. During hot, humid summer months, it maintains cool, dry indoor air.

Recovers up to 83% of the heat in the outgoing air

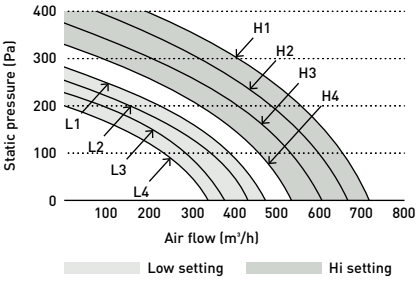
ZY Series achieves more than 80% of heat exchange efficiency in all the line-up [1]. The high recovery rate optimizes operation cost and can be considered as a sustainable solution.

1) Heating operation, H1 speed setting.

Heat exchange efficiency (%).



Ventilation volume setting PQ curve example.



Easy adjust for air volume balance

DC motors are equipped with independent control settings for air supply and exhaust. Air volume balance can be easily adjusted with 4 speeds settings for each Hi / Low operation.

Intuitive remote controller with RS485 connection

- Simple and clean screen with white back light panel
- RS485 terminal equipped to integrate with Building Management Systems
- Metal switch box is included in the package

Advanced energy recovery ventilation - ZY Series

· Extended 9 model line-up including 2000 m³/h model
· DC motors
· ESP up to 150 Pa
· F7 grade filter built-in as a standard
· Intuitive remote controller
· BMS integration with RS485

Rated flow rate			150 m³/h	250 m³/h	350 m³/h	500 m³/h	650 m³/h	800 m³/h	1000 m³/h	1500 m³/h	2000 m³/h
Indoor unit			**FV-15ZY1G**	**FV-25ZY1G**	**FV-35ZY1G**	**FV-50ZY1G**	**FV-65ZY1G**	**FV-80ZY1G**	**FV-1KZY1G**	**FV-1HZY1G**	**FV-2KZY1G**
Power supply	Voltage	V	220 - 240	220 - 240	220 - 240	220 - 240	220 - 240	220 - 240	220 - 240	220 - 240	220 - 240
	Phase		Single phase	Single phase	Single phase	Single phase	Single phase	Single phase	Single phase	Single phase	Single phase
	Frequency	Hz	50	50	50	50	50	50	50	50	50
Motor type			DC	DC	DC	DC	DC	DC	DC	DC	DC
ERV											
Air flow	Max	m³/h	150	250	350	500	650	800	1000	1500	2000
External static pressure	Max	Pa	100	120	140	130	150	150	150	130	130
Sound power 2)	Max	dB(A)	37	38	39	43	45	45	46	49	51
Input power	Max	W	76 ~ 84	106 ~ 117	141 ~ 155,5	180 ~ 198	420 ~ 462	470 ~ 517	550 ~ 605	940 ~ 1034	1100 ~ 1210
Heat exchange efficiency 3)											
Cooling	Max	%	68,0	69,0	71,0	65,0	64,0	63,0	65,0	63,0	65,0
Heating	Max	%	83,0	82,0	83,0	81,0	82,0	83,0	82,0	83,0	82,0
Enthalpy exchange efficiency											
Cooling	Max	%	66,0	66,0	67,0	62,5	62,5	63,5	63,0	63,5	63,0
Heating	Max	%	76,0	74,0	75,0	73,0	72,0	73,0	74,0	73,0	74,0
Adapter diameter		mm	100	150	150	200	200	250	250	250	250
Dimension	H x W x D	mm	289 x 610 x 860	289 x 735 x 860	331 x 874 x 968	331 x 1016 x 968	404 x 954 x 1008	404 x 1004 x 1224	404 x 1231 x 1224	808 x 1004 x 1224	808 x 1231 x 1224
Net weight		kg	23	27	37	40	48	60	64	119	142

1) Different dimensions depending on models. 2) Measurement of noise 1,5 m below the center of the main unit (anechoic chamber). 3) Heat exchange efficiency measurement standard JIS B 8628 (2003).
* JIS B 8628 (2017) is used in the measurement environment. * A remote controller is included.

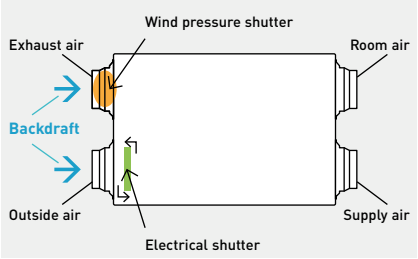
Accessories	
FV-FP15ZY1G	Replacement high efficiency filter for FV-15ZY1G
FV-FP25ZY1G	Replacement high efficiency filter for FV-25ZY1G
FV-FP35ZY1G	Replacement high efficiency filter for FV-35ZY1G
FV-FP50ZY1G	Replacement high efficiency filter for FV-50ZY1G

Accessories	
FV-FP65ZY1G	Replacement high efficiency filter for FV-65ZY1G
FV-FP80ZY1G	Replacement high efficiency filter for FV-80ZY1G and FV-1HZY1G 1)
FV-FP1KZY1G	Replacement high efficiency filter for FV-1KZY1G and FV-2KZY1G 1)
PAW-ERV-IAQCT	IAQ Controller

1) 2 sets of filters required for those models.

Highly efficient filter for better air supply

An effective EN F7 grade filter is built-in as a standard. Expected cleaning maintenance cycle is once per month, with an average of 4-6 months for replacement in high demand environments.



Backdraft shutters equipped as standard

A backdraft shutter prevents air flowing in the wrong direction when the ERV system is not in operation.
The shutter at OA (outside air intake) side is inter-locked with ON / OFF switch.
The shutter at EA (exhaust air outlet) side opens with the pressure generated by air stream then closes automatically.

ERV IAQ Controller.

NEW PAW-ERV-IAQCT
The IAQ Controller optimizes indoor air quality while reducing energy consumption. It also provides seamless control of auxiliary heaters, ensuring a comfortable and efficient environment. It is compatible with the ERV - ZY Series.

· **DCV (Demand-Controlled Ventilation):** Adjusts ERV airflow based on room or return air CO_2 levels, ensuring the right amount of fresh air
· **ERV Auto mode:** Automatically switches between heat recovery and bypass modes based on outdoor and indoor temperatures
· **Free Cooling:** Reduces AC cooling loads by using cool outdoor air, including night cooling based on a set schedule.

Dimension (H x W x D): 350 x 160 x 135 mm. Weight: 2,75 kg.


Internal image with the front cover removed.

Energy recovery ventilation with DX coil - HRPT Series for VRF

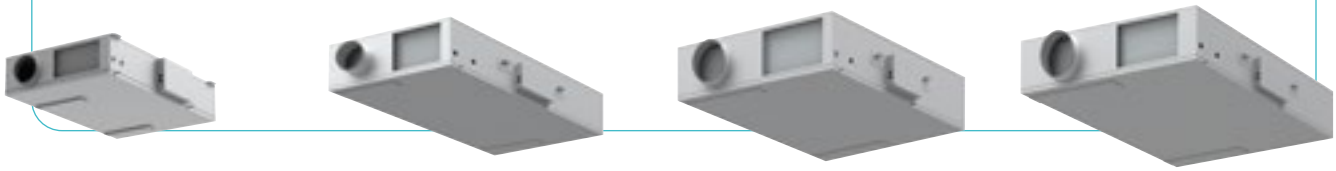
The HPRT Series is specifically designed for commercial applications or collective residential buildings, offering highly efficient heat recovery of up to 85,2%.
It's an ideal solution to achieve the highest energy certification for buildings in the tertiary, industrial and collective residential sectors including centralized condominium systems.

Highly efficient and flexible

The HRPT Series is a dual flow ventilation with an EC fan, ensuring high efficiency heat recovery (>85% η). The series includes five models with air flow rates from 480 to 1750 m³/h. Two types of polystyrene heat exchangers (high efficiency and sensible) are provided to meet a range of requirements.

HRPT Series line-up

High efficiency heat recovery >85% η



PAW-HRPT40HX | PAW-HRPT80HX | PAW-HRPT120HX | PAW-HRPT160/200HX

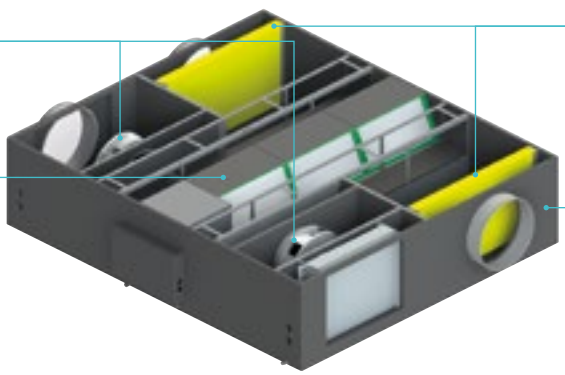
Air flow rate

480 m³/h | 800 m³/h | 1100 m³/h | 1500 / 1750 m³/h

Quality meets efficiency. Explore the HPRT Series

Reverse blade radial fans with low-consumption and low-noise electronic motor

Highly efficient polystyrene heat exchanger with counter-current flows and integrated bypass as standard



Two filters with low pressure drop: F7 (ePM1) on the fresh air and M5 (ePM10) on the ambient air

Structure with high thermal insulation

* Model shown: HRPT120.

Energy recovery ventilation with DX coil - HRPT Series · R32 / R410A

· Dual flow ventilation with EC fan, featuring high efficiency heat recovery (>85% η)
· 2 types of polystyrene heat exchanger (high efficiency and sensible) with counter-current flows and integrated bypass as standard
· Modbus connection available

COMPATIBLE WITH ALL PANASONIC CONNECTIVITY SOLUTIONS. FOR DETAILED INFORMATION GO TO THE CONTROL SYSTEMS SECTION

Indoor unit with high efficiency heat exchanger			PAW-HRPT40HX		PAW-HRPT80HX		PAW-HRPT120HX		PAW-HRPT160HX		PAW-HRPT200HX	
Power supply	Voltage	V	230		230		230		230		380	
	Phase		Single phase		Single phase		Single phase		Single phase		Three phase	
	Frequency	Hz	50		50		50		50		50	
Heat recovery ventilation [1]			**Cooling**	**Heating**	**Cooling**	**Heating**	**Cooling**	**Heating**	**Cooling**	**Heating**	**Cooling**	**Heating**
Temperature efficiency		%	63,4	76,7	60,0	73,5	61,4	75,0	62,2	76,0	59,4	73,2
Enthalpy efficiency		%	52,3	53,2	47,8	49,2	49,5	50,7	50,0	51,2	46,8	48,3
Weight		kg	70		120		135		150		180	

Indoor unit with sensible heat exchanger			PAW-HRPT40		PAW-HRPT80		PAW-HRPT120		PAW-HRPT160		PAW-HRPT200	
Power supply	Voltage	V	230		230		230		230		380	
	Phase		Single phase		Single phase		Single phase		Single phase		Three phase	
	Frequency	Hz	50		50		50		50		50	
Heat recovery ventilation [1]			**Cooling**	**Heating**	**Cooling**	**Heating**	**Cooling**	**Heating**	**Cooling**	**Heating**	**Cooling**	**Heating**
Temperature efficiency		%	84,6	84,9	84,3	84,7	84,8	85,2	84,7	85,1	83,8	84,2
Weight		kg	67		117		132		147		177	

Common data												
DX coil [2]			**Cooling**	**Heating**	**Cooling**	**Heating**	**Cooling**	**Heating**	**Cooling**	**Heating**	**Cooling**	**Heating**
Total / Sensible capacity		kW	3,0 / 2,4	3,2	6,0 / 4,1	6,2	8,0 / 5,5	8,3	10,0 / 7,1	11,0	12,5 / 8,6	12,8
Maximum input current		A	1,5		2,2		4,1		4,4		3,3	
Sound pressure @1 m / @3 m		dB(A)	41 / 35		51 / 43		42 / 36		49 / 41		57 / 49	
Air flow	High	m³/h	480		800		1100		1500		1750	
External static pressure	High	Pa	150		150		150		150		150	
Dimension	H x W x D	mm	283 x 975 x 1400		408 x 1180 x 1720		408 x 1580 x 1720		408 x 1980 x 1720		408 x 1980 x 1720	
Piping diameter	Liquid	Inch (mm)	1/4 (6,35)		3/8 (9,52)		3/8 (9,52)		3/8 (9,52)		3/8 (9,52)	
	Gas	Inch (mm)	1/2 (12,70)		5/8 (15,88)		5/8 (15,88)		5/8 (15,88)		5/8 (15,88)	

1) Data refers to the following conditions (UNI EN 13141-7): nominal air flow, external air 5 °C with 72% r. / expelled air 25 °C with 28% r. 2) Data refers to the following conditions: nominal air flow, cooling inlet coil summer 27 °C with 48% / heating inlet coil winter 20 °C with 50% r. * Image is for PAW-HRPT40.

Accessories	
CZ-RTC6W	CONEX wired remote controller (non-wireless), white
CZ-RTC6WBL	CONEX wired remote controller with Bluetooth®, white
CZ-RTC6	CONEX wired remote controller (non-wireless), black
CZ-RTC6BL	CONEX wired remote controller with Bluetooth®, black
CZ-RTC5B	Wired remote controller with Econavi function

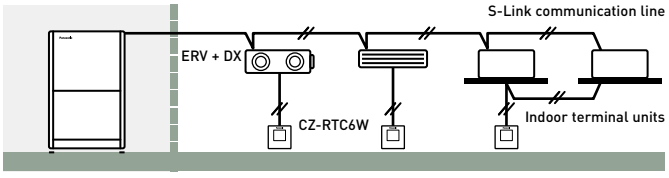
Accessories	
CZ-RWS3 + CZ-RWRC3	Infrared remote controller and receiver
PAW-RE2C4-MOD-WH	Room controller for hotel rooms, white
PAW-RE2C4-MOD-BK	Room controller for hotel rooms, black
PAW-RE2D4-WH	Display control for hotel rooms, white
PAW-RE2D4-BK	Display control for hotel rooms, black

Technical focus

· Dual flow ventilation with EC fan, featuring high efficiency heat recovery (>85% η)
· 5 model line-up is available with air flow rates of 480, 800, 1100, 1500 and 1750 m³/h
· 2 types of polystyrene heat exchanger (high efficiency and sensible) with counter-current flows and integrated bypass as standard
· Automatic defrosting of the exchanger
· Low consumption and EC motors with electronic speed control ensure high useful static pressure for circular inlet connection to air ducts
· Wide ambient temperature range up to +50 °C and down to -15 °C
· Modbus connection available

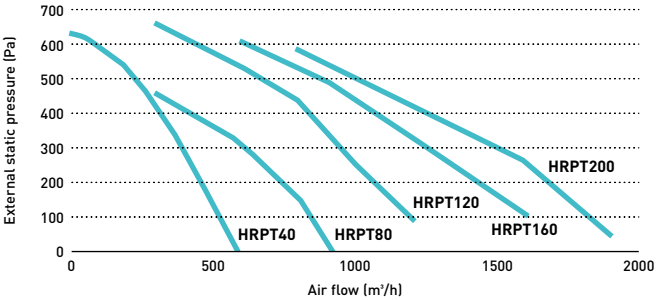
AUTOMATIC FAN | HUMIDITY CONTROL DRY | AUTOMATIC RESTART | BUILT-IN DRAIN PUMP | PANASONIC AC SMART CLOUD | BMS CONNECTIVITY

Interconnection to outdoor / indoor units



Aeraulic performance

EC motors with electronic speed control ensure high values of effective static pressure for ducting.



Electric air curtains

The Panasonic range of air curtains is designed for smooth operation and efficient performance. Air curtains produce a continuous stream of air blown from the top to the bottom of an open doorway and create a barrier that people and products can flow across, but air cannot.

Electric air curtain

1 Designed to maximize performance

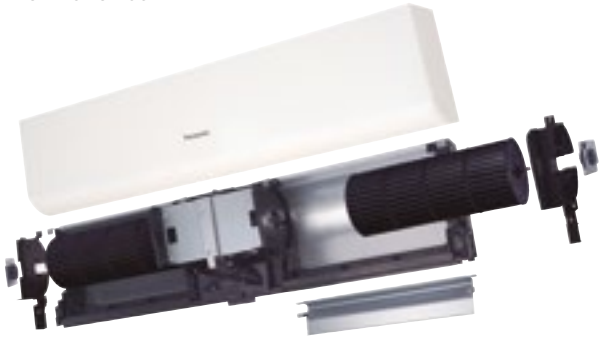
High air flow upgraded 145% compared to conventional model (in the case of FY-3009U1).

2 Comprehensive product line up

1,5 m wide model added in the line up.

3 Easier installation and maintenance

Simple structure for easy installation and maintenance.



			FY-3009U1	FY-3012U1	FY-3015U1
Width		mm	900	1200	1500
Voltage		V	220	220	220
Air flow	Hi / Lo	m³/h	1100/920	1400/1270	2000/1800
Consumption	Hi / Lo	W	76/70	94/85	131/110
Current	Hi / Lo	A	0,35/0,32	0,43/0,40	0,59/0,50
Air speed	Hi / Lo	m/s	10,50/8,50	9,50/8,00	10,50/9,50
Sound pressure	Hi / Lo	dB(A)	48,5/45,0	48,5/44,5	51,5/48,0
Dimension	H x W x D	mm	900 x 231,5 x 212	1200 x 231,5 x 212	1500 x 231,5 x 212
Net weight		kg	12,0	14,5	18,0

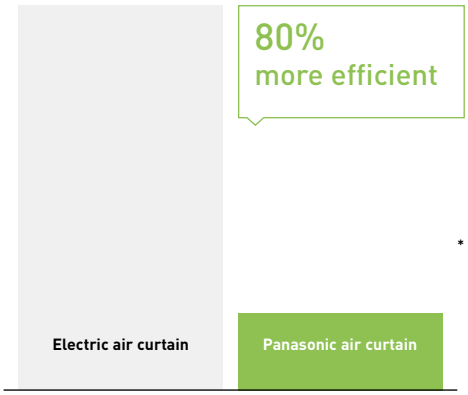
Electric air curtain with DX coil

Designed to improve energy efficiency, minimise heat loss from a building, and allow retailers to keep doors open to encourage customers, our air curtains are suitable for connection to both PACi NX and VRF Systems.

Highly efficient heating effect

The combined air stream, which has a desirable low air current induction factor (mixing factor), can carry the selected initial temperature effect over long distances, and will reach the floor area while still at room temperature. This is necessary to avoid cooling down the interior spaces.
Available in different lengths to suit requirements between 1 and 2,5 m, both air curtains have outlet grilles that can be adjusted to five different positions. The HS model can be installed up to a height of 3,0 m with the LS model up to 2,7 m. The outlet grilles can be easily adjusted into five positions to suit different installation requirements and the air filter can be accessed without the need for specialist tools.

Heating capacity comparison: Electrical air curtain / Panasonic air curtain.



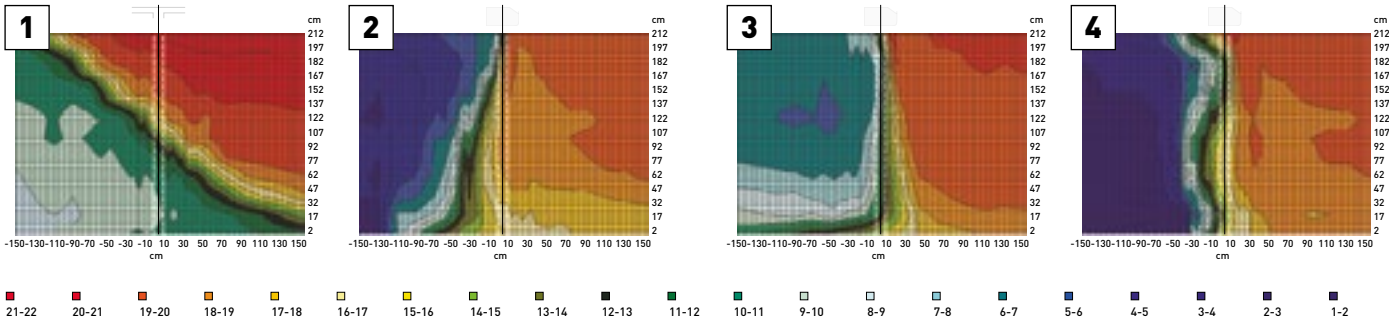
* With the U-100PZH2E5 on the PAW-20PAIRC-LS. Calculation method: Taking as consideration SCOP of the Panasonic combination of 6,0. If 100 is the energy needed for a air curtain, Panasonic air curtain will need 1/(1-6)*100=20.

- High performance with EC fan motor (40% lower running costs compared to a standard AC fan motor)
- Easy Cleaning and Servicing
- Can be connected to either Panasonic VRF or PACi NX systems
- Drain pump for cooling operation optional
- HS and LS models can be controlled via Panasonic's range of remote internet controls

The HS and LS models are ideal for connection to a ECOi or PACi NX system. With simple "Plug & Play" installation, both are fitted with an EC fan motor for a smooth operation and efficient performance. This fan guarantees 40% lower running cost than with a standard AC fan motor. Air curtains run approximately 12 hours per day at shops, and efficient performance contributes to energy savings.

Optimised air flow velocity

1 | Energy losses, no air curtain installed
2 | Too low velocity air curtain – air curtain not efficient
3 | Too high velocity air curtain – considerable turbulence, energy lost to the outside, air curtain not efficient
4 | Optimum results with the Frico air curtain connected to Panasonic VRF



Opening without air curtain.
In an unprotected opening the cold air flows out and the cold storage room becomes much too warm.

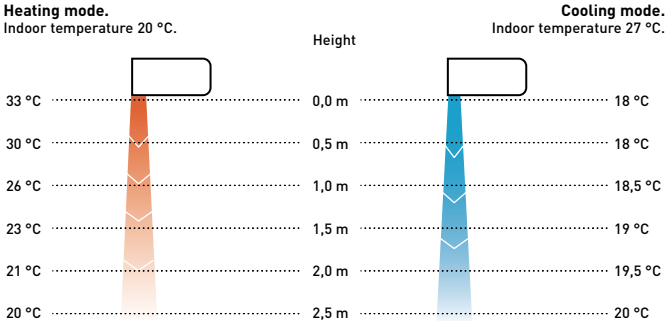
Opening with air curtain, wrong angle.
If the angle is too small the hot air is blown into the cold storage room.

Opening with air curtain, too high speed.
Excessive speed creates turbulence, which causes energy loss and increases the cold storage temperature.

Opening with correctly adjusted air curtain.
With a correctly set air curtain unit there is a sharp separation between the different temperature zones.

Intelligent operation

Our air curtains combine air flow and heating / cooling technology to ensure optimum comfort and energy efficiency whilst also creating an effective barrier between indoor and outdoor environments. Design and installation is key to achieving the correct height / temperature settings to achieve optimum performance. Our air curtains are designed to answer the demands of the retail, commercial and industrial markets.



Air curtain with DX coil, connected to PACi NX

Comfort: Easy redirection of air flow by means of manual deflector.

Ease of use: Speed selector (high and low) on the unit itself.

Easy installation and maintenance: Easy installation / Compact dimensions improve installation and positioning / Easy cleaning of grid without opening of the unit.

Outdoor unit capacity			7,1 kW	10,0 kW	14,0 kW	20,0 kW
Air outlet height 2,7 m			**PAW-10PAIRC-LS-1**	**PAW-15PAIRC-LS-1**	**PAW-20PAIRC-LS-1**	**PAW-25PAIRC-LS-1**
Cooling capacity [1]	Max	kW	6,1	9,7	13,0	17,0
Heating capacity [2]	Max	kW	7,9	12,0	15,0	19,0
Air flow	High	m³/h	1800	2700	3600	4500
Heat Exchanger	Volume	L	1,67	2,85	3,94	5,03
Electric consumption fan	230 V / 50 Hz	kW	0,30	0,50	0,60	0,80
Current	230 V / 50 Hz	A	2,10	3,10	4,10	5,10
Sound pressure [3]	Max	dB(A)	65	66	67	69
Air outlet height 3,0 m			**PAW-10PAIRC-HS-1**	**PAW-15PAIRC-HS-1**	**PAW-20PAIRC-HS-1**	**PAW-25PAIRC-HS-1**
Cooling capacity [1]	Max	kW	9,1	13,0	19,5	23,7
Heating capacity [2]	Max	kW	11,8	15,8	23,6	27,6
Air flow	High	m³/h	2700	3600	5400	6300
Heat Exchanger	Volume	L	1,67	2,85	3,94	5,12
Electric consumption fan	230 V / 50 Hz	kW	0,75	1,00	1,50	1,75
Current	230 V / 50 Hz	A	4,10	5,50	8,20	9,60
Sound pressure [3]	Max	dB(A)	66	67	68	68
Common data						
Dimension [4]	H x W x D	mm	260 (+140) x 1000 x 460	260 (+140) x 1500 x 460	260 (+140) x 2000 x 460	260 (+140) x 2500 x 460
Net weight	Air outlet height 2,7 m	kg	50	65	80	95
	Air outlet height 3,0 m	kg	55	65	85	110
Fan type			EC	EC	EC	EC
Piping diameter	Liquid / Gas	Inch (mm)	3/8 (9,52) / 5/8 (15,88)	3/8 (9,52) / 3/4 (19,05)	3/8 (9,52) / 7/8 (22,22)	3/8 (9,52) / 7/8 (22,22)
Door width		m	1,0	1,5	2,0	2,5
Refrigerant			R32	R32	R32	R32

LS / PACi NX outdoor combination*	PACi NX Elite			PACi NX Standard		
Operation until	**40 °C**	**35 °C**	**30 °C**	**40 °C**	**35 °C**	**30 °C**
PAW-10PAIRC-LS-1	U-100	U-100	U-50	U-100	U-100	U-60
PAW-15PAIRC-LS-1	U-200	U-100	U-100	—	U-100	U-100
PAW-20PAIRC-LS-1	U-200	U-140	U-100	—	—	U-100
PAW-25PAIRC-LS-1	U-250	U-200	U-125	—	—	U-125

HS / PACi NX outdoor combination*	PACi NX Elite			PACi NX Standard		
Operation until	**40 °C**	**35 °C**	**30 °C**	**40 °C**	**35 °C**	**30 °C**
PAW-10PAIRC-HS-1	U-200	U-100	U-100	—	U-100	U-100
PAW-15PAIRC-HS-1	U-200	U-200	U-100	—	U-200	U-100
PAW-20PAIRC-HS-1	—	U-250	U-200	—	U-250	—
PAW-25PAIRC-HS-1	—	U-250	U-200	—	U-250	—

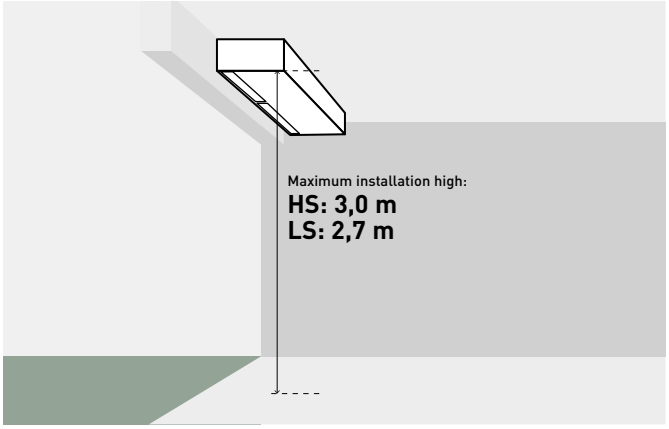
1) Cooling capacity DX coil, air temperature in / out +27 / +18 °C, R32 and R410. 2) Heating capacity condenser, air temperature in / out +20 / +33 °C, R32 and R410. In the case of lower outdoor temperatures, an outdoor model with higher capacity may be necessary. 3) Measured in distance up to 5,0 m, direction factor 2, absorbing surfaces 200 m², Min / Max air flow. 4) 140 mm is the height of an electrical box if it is installed on the top.

Technical focus

- Save up to 40% energy costs by use of the integrated EC fan technology (higher efficiency than conventional AC fan, soft start and longer motor duration)
- 4 length of air curtain LS and HS are available 1,0, 1,5, 2,0 and 2,5 m
- Installation height up to 3,0 m
- Outlet grilles can be adjusted in five positions, to suite different indoor and installation requirements
- Control with Panasonic remote control systems (optional)
- Direct integration to BMS via optional Panasonic interfaces
- Drip tray included in all DX air curtains
- Drain pump optional

How does it work?

Stale air from the room is taken in and ejected near the door. This creates a 'roll of air' that shields the door area, mixing with the colder incoming air. It then turns away from the door, back into the room and toward the intake screen, where it is partly drawn in again. This flow of air helps to create a barrier for heat loss yet at the same time refreshes room air



BMS CONNECTIVITY

Air curtain with DX coil, connected to VRF systems

Comfort: Easy redirection of air flow by means of manual deflector.

Ease of use: Speed selector (high and low) on the unit itself.

Easy installation and maintenance: Easy installation / Compact dimensions improve installation and positioning / Easy cleaning of grid without opening of the unit.

Outdoor unit capacity			**4 HP**	**4 HP**	**5 HP**	**8 HP**
Air outlet height 2,7 m			**PAW-10EAIRC-LS**	**PAW-15EAIRC-LS**	**PAW-20EAIRC-LS**	**PAW-25EAIRC-LS**
Cooling capacity [1]	Max	kW	6,1	9,7	13,0	17,0
Heating capacity [2]	Max	kW	7,9	12,0	15,0	19,0
Air flow	High	m³/h	1800	2700	3600	4500
Heat Exchanger	Volume	L	1,67	2,85	3,94	5,03
Electric consumption fan	230 V / 50 Hz	kW	0,30	0,50	0,60	0,80
Current	230 V / 50 Hz	A	2,10	3,10	4,10	5,10
Sound pressure [3]	Max	dB(A)	65	66	67	69
Air outlet height 3,0 m			**PAW-10EAIRC-HS**	**PAW-15EAIRC-HS**	**PAW-20EAIRC-HS**	**PAW-25EAIRC-HS**
Cooling capacity [1]	Max	kW	9,1	13,0	19,5	23,7
Heating capacity [2]	Max	kW	11,8	15,8	23,6	27,6
Air flow	High	m³/h	2700	3600	5400	6300
Heat Exchanger	Volume	L	1,67	2,85	3,94	5,12
Electric consumption fan	230 V / 50 Hz	kW	0,75	1,00	1,50	1,75
Current	230 V / 50 Hz	A	4,10	5,50	8,20	9,60
Sound pressure [3]	Max	dB(A)	66	67	68	68
Common data						
Dimension [4]	H x W x D	mm	260 (+140) x 1000 x 460	260 (+140) x 1500 x 460	260 (+140) x 2000 x 460	260 (+140) x 2500 x 460
Net weight	Air outlet height 2,7 m	kg	50	65	80	95
	Air outlet height 3,0 m	kg	55	65	85	110
Fan type			EC	EC	EC	EC
Piping diameter	Liquid / Gas	Inch (mm)	3/8 (9,52) / 5/8 (15,88)	3/8 (9,52) / 3/4 (19,05)	3/8 (9,52) / 7/8 (22,22)	3/8 (9,52) / 7/8 (22,22)
Door width		m	1,0	1,5	2,0	2,5
Refrigerant			R32 / R410A	R32 / R410A	R32 / R410A	R32 / R410A

LS / VRF outdoor combination			
Operation until	**40 °C**	**35 °C**	**30 °C**
PAW-1EAIRC-LS	U-4	U-4	U-4
PAW-15EAIRC-LS	U-6	U-5	U-4
PAW-20EAIRC-LS	U-8	U-6	U-4
PAW-25EAIRC-LS	U-8	U-8	U-5

HS / VRF outdoor combination			
Operation until	**40 °C**	**35 °C**	**30 °C**
PAW-10EAIRC-HS	U-6	U-5	U-4
PAW-15EAIRC-HS	U-8	U-6	U-4
PAW-20EAIRC-HS	U-8	U-8	U-8
PAW-25EAIRC-HS	U-12	U-10	U-8

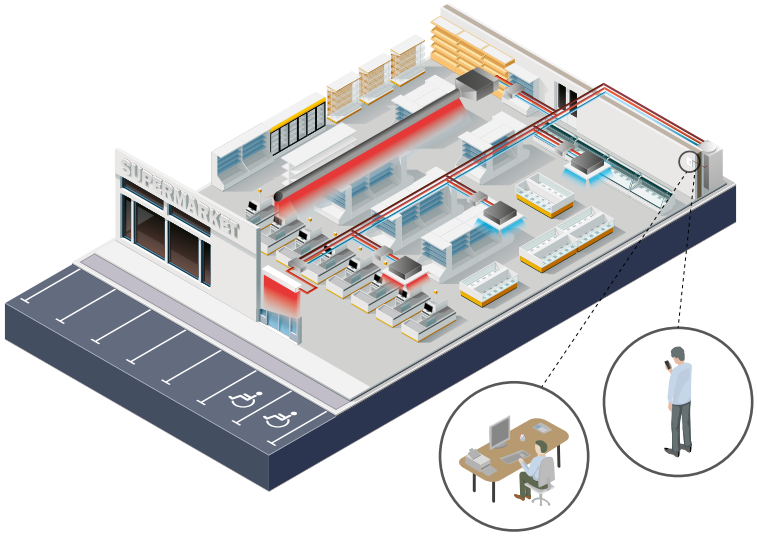
1) Cooling capacity DX coil, air temperature in / out +27 / +18 °C, R32 and R410. 2) Heating capacity condenser, air temperature in / out +20 / +33 °C, R32 and R410. In the case of lower outdoor temperatures, an outdoor model with higher capacity may be necessary. 3) Measured in distance up to 5,0 m, direction factor 2, absorbing surfaces 200 m², Min / Max air flow. 4) 140 mm is the height of an electrical box if it is installed on the top. * Also compatible with ECO G Series (GE3 and GF3) and Hybrid Serie.

Technical focus

- Compatible with R32 and R410A refrigerant
- Save up to 40% energy costs by use of the integrated EC fan technology (higher efficiency than conventional AC fan, soft start and longer motor duration)
- 4 length of air curtain LS and HS are available 1,0, 1,5, 2,0 and 2,5 m
- Installation height up to 3,0 m
- Outlet grilles can be adjusted in five positions, to suite different indoor and installation requirements
- Control with Panasonic remote control systems (optional)
- Direct integration to BMS via optional Panasonic interfaces
- Drip tray included in all DX air curtains
- Drain pump optional

Internet control

An app added to your tablet or smartphone or via the Internet allows you to control and manage the system remotely. There is also the option to integrate into existing BMS systems by using other Panasonic interfaces.



BMS CONNECTIVITY

Rating Conditions: Cooling Outdoor +35 °C DB Indoor +27 °C DB / +19 °C WB, Discharge temperature 16 °C. All combinations under rated conditions: Heating Outdoor +7 °C DB/+6 °C WB Indoor +20 °C DB. In case of lower outdoor temperatures a higher capacity outdoor unit model may be necessary. Specifications subject to change without notice. For detailed information about ErP, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

High pressure duct and 100% fresh air duct function for all ECOi and ECO G systems

The E2 range of ducted units offers improved design flexibility for extended duct layouts as a result of their increased external static pressures whilst reducing energy consumption, while providing fresh air to larger spaces.

E2 type high static pressure hide-away · R410A

High pressure duct and 100% fresh air duct function.

COMPATIBLE WITH ALL PANASONIC CONNECTIVITY SOLUTIONS. FOR DETAILED INFORMATION GO TO THE CONTROL SYSTEMS SECTION

Type			100% fresh air duct function (by using kit for 100% fresh air)				High pressure duct			
Indoor unit			S-224ME2E5		S-280ME2E5		S-224ME2E5		S-280ME2E5	
			Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity		kW	22,4	21,2	28,0	26,5	22,4	25,0	28,0	31,5
Input power		W	290,00	290,00	350,00	350,00	440,00	440,00	715,00	715,00
Current		A	1,85	1,85	2,20	2,20	2,45	2,45	3,95	3,95
Air flow	Hi/Med/Lo	m³/min	28,3/—/—		35,0/—/—		56,0/51,0/44,0		72,0/63,0/53,0	
External static pressure		Pa	200		200		140 (60 - 270) [1]		140 (72 - 270) [1]	
Sound pressure [2]	Hi/Med/Lo	dB(A)	43/—/—		44/—/—		45/43/41		49/47/43	
Sound power	Hi/Med/Lo	dB(A)	75/—/—		76/—/—		77/75/73		81/79/75	
Dimension	H x W x D	mm	479 x 1453 x 1205		479 x 1453 x 1205		479 x 1453 x 1205		479 x 1453 x 1205	
Net weight		kg	102		106		102		106	
Piping diameter	Liquid	Inch (mm)	3/8 (9,52)		3/8 (9,52)		3/8 (9,52)		3/8 (9,52)	
	Gas	Inch (mm)	3/4 (19,05)		7/8 (22,22)		3/4 (19,05)		7/8 (22,22)	

Rating conditions for 100% fresh air duct function: Cooling outdoor 33 °C DB / 28 °C WB. Heating outdoor 0 °C DB / -2,9 °C WB.
1) Available to select the setting by initial setup. 2) Values with 140 Pa setting. * No filter included. ** No compatible with 3-Pipe ECO G GF3.

Accessories	
CZ-RTC6W	CONEX wired remote controller (non-wireless), white
CZ-RTC6WBL	CONEX wired remote controller with Bluetooth®, white
CZ-RTC6	CONEX wired remote controller (non-wireless), black
CZ-RTC6BL	CONEX wired remote controller with Bluetooth®, black
CZ-RTC5B	Wired remote controller with Econavi function
CZ-RWS3 + CZ-RWRC3	Infrared remote controller and receiver

Accessories	
PAW-RE2C4-MOD-WH	Room controller for hotel rooms, white
PAW-RE2C4-MOD-BK	Room controller for hotel rooms, black
PAW-RE2D4-WH	Display control for hotel rooms, white
PAW-RE2D4-BK	Display control for hotel rooms, black
CZ-CENSC1	Econavi energy saving sensor

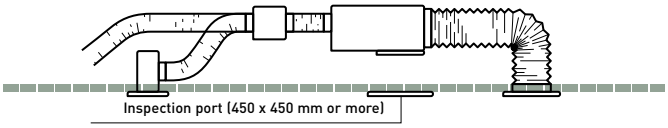
Technical focus

- No need of rap valves for standard operation
- 100% fresh air duct function*
- DC fan motor for more savings
- Complete flexibility for ductwork design
- Can be located wihtin a weatherproof housing for external installation
- Air OFF sensor avoids cold air dumping
- Configurable air temperature control

* Rap valves required, see 100% fresh air duct function below.

System example

An inspection port (450 x 450 mm or more) is required at the lower side of the indoor unit body (field supply).



100% fresh air duct function

The E2 duct with 100% fresh air duct function have exceptional discharge temperature.

	Discharge Range		
	Min	Max	Default
Cooling	15 °C	24 °C	18 °C
Heating	17 °C	45 °C	40 °C

Plenums

Air outlet plenum (suitable for rigid + flexible duct)		
	Number of exits with diameters	Model
S-224ME2E5	1 x 500 mm	CZ-TREMIESPW705
S-280ME2E5	1 x 500 mm	CZ-TREMIESPW706

Kit for 100% fresh air function

Kit for 2 way systems	
2x CZ-P160RVK2	Rap valve kit
2x CZ-CAPE2	3 way control PCB
CZ-P680BK2BM	Distribution joint kit
	1x remote controller

Kit for 3 way systems	
2x CZ-P160HR3	3 way valve kit
2x CZ-CAPE2	3 way control PCB
CZ-P680BH2BM	Distribution joint kit
	1x remote controller

28% ECONAVI · SELF-DIAGNOSING · AUTOMATIC FAN · HUMIDITY CONTROL DRY · AUTOMATIC RESTART · BUILT-IN DRAIN PUMP · OPTIONAL WI-FI · BMS CONNECTIVITY

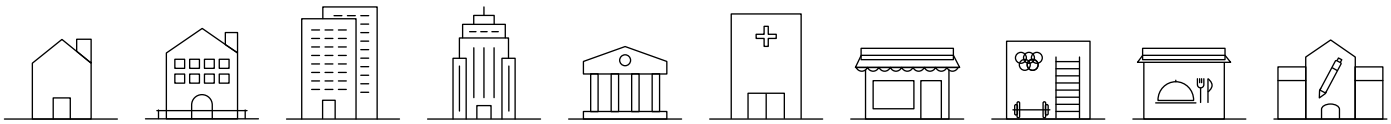
ECONAVI and INTERNET CONTROL: Optional.

Ceiling mounted air-e nanoe X Generator

Bringing nature's balance indoors with Panasonic's unique nanoe™ X technology built into the air-e.

Deodorises and inhibits certain bacteria, viruses, mould, pollens and allergens for better indoor air quality.

The air-e is a stand alone device which is an easy and simple choice to improve indoor air quality. It can be easily installed to various commercial projects including refurbishments.



The tested effects of nanoe™ X

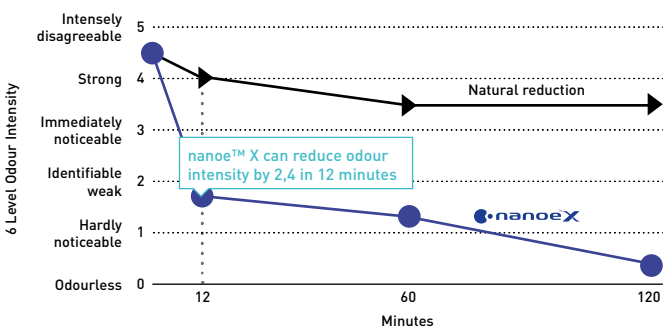
Bacteria and viruses.
SARS-CoV-2: 99,9% % inhibited [1].
Influenza virus H1N1 subtype: 99,9 % inhibited [2].

Odour.
nanoe X Generator can reduce cigarette smoke odour intensity by 2,4 levels in 12 minutes.

1) Novel coronavirus (SARS-CoV-2) > [Test organization] Texcell (France) [Test subject] Adhered novel coronavirus (SARS-CoV-2) [Test volume] 45 L enclosed box [Test result] Inhibited 99,9% in 2 hours [Test report] 1140-01 A1.
2) Adhered virus (Influenza virus H1N1 subtype) > [Test organization] Kitasato Research Center for Environmental Science [Test subject] Influenza virus (H1N1 subtype) [Test volume] 1000 L enclosed box [Test result] Inhibited 99,9% in 2 hours [Test report] 21_0084_1.
3) Deodorisation effect for adhering odour (cigarette smoke) > [Test organization] Panasonic Product Analysis Center [Test subject] Adhered cigarette smoke odour [Test volume] Approx. 24 m^3 laboratory [Test result] Odour intensity reduced 2,4 levels in 0,2 hours [Test report] 4AA33-160615-N04.

Performance of nanoe™ X might differ in real life environment and is only expected in the same room as where the unit is placed. The nanoe™ X performance varies depending on the room size, environment and usage and it may take several hours to reach the full effect. nanoe™ X is not a medical device.

Deodorisation effect for adhering odour (cigarette smoke) [3].



For further details and validation data, please refer to the following website.

Ceiling mounted air-e nanoe X Generator

· nanoe™ X technology
(Generator Mark 1: 4,8 trillion hydroxyl radicals/sec)
· Silent operation. Whisper quiet at 25,5 dB(A)*
· Low power consumption 4 W
· Easy installation
· Compact and modern design

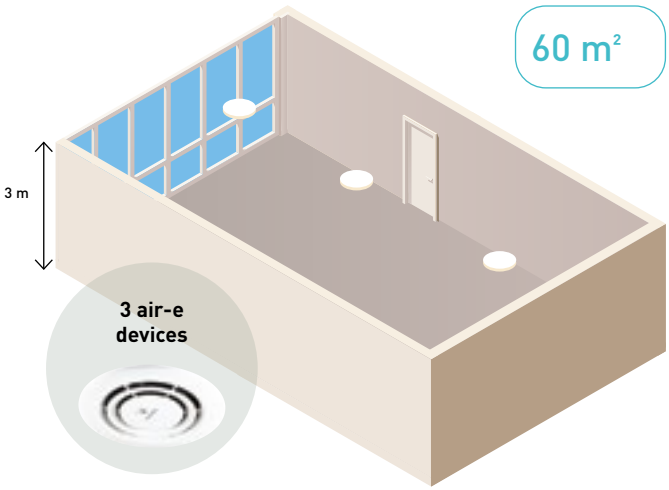
* 230 V.

Model			FV-15CSD1G		
Power supply	Voltage	V	220	230	240
	Frequency	Hz	50	50	50
Air flow		m³/h	15	16	17
		CFM	8,8	9,4	10,0
Consumption		W	4	4	4
Sound pressure		dB(A)	23,5	25,5	27,0
Net weight		kg		1,1	

* The value of air volume, power consumption and noise are specified at static pressure 0 Pa. The value of air volume is the mean value and a tolerance of +-10% is allowed. The value of noise level is a weighted average sound pressure level, the mean value is measured by Panasonic. A tolerance of +3 dB/-7 dB is allowed. The noise is measure at 1 m apart from the left, the front and below of the tested product. Conditions of generating nanoe™ X: room temperature: about 5 °C ~ 40 °C (dew point temperature more than 2 °C), relative humidity: about 30% ~ 85%. nanoe™ X is generated using the air in the room, and its amount is subject to the temperature and humidity in the air.

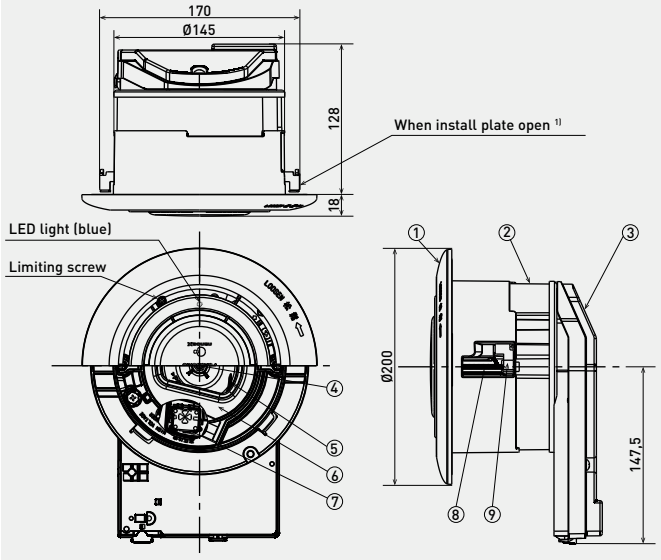
One device is suitable for around 20 m² (with a ceiling height 3 m)

Ex. 3 air-e devices are required for the room size 60 m².



Concentration simulator is ready

See how nanoe™ X fills space.



1: Louvre. 2: Frame. 3: Electric case assy. 4: Motor. 5: Fan. 6: Orifice assy. 7: nanoe™ X unit. 8: Install screw.
9: Install plate.
1) Initial position of install plate is closed.
Unit: mm

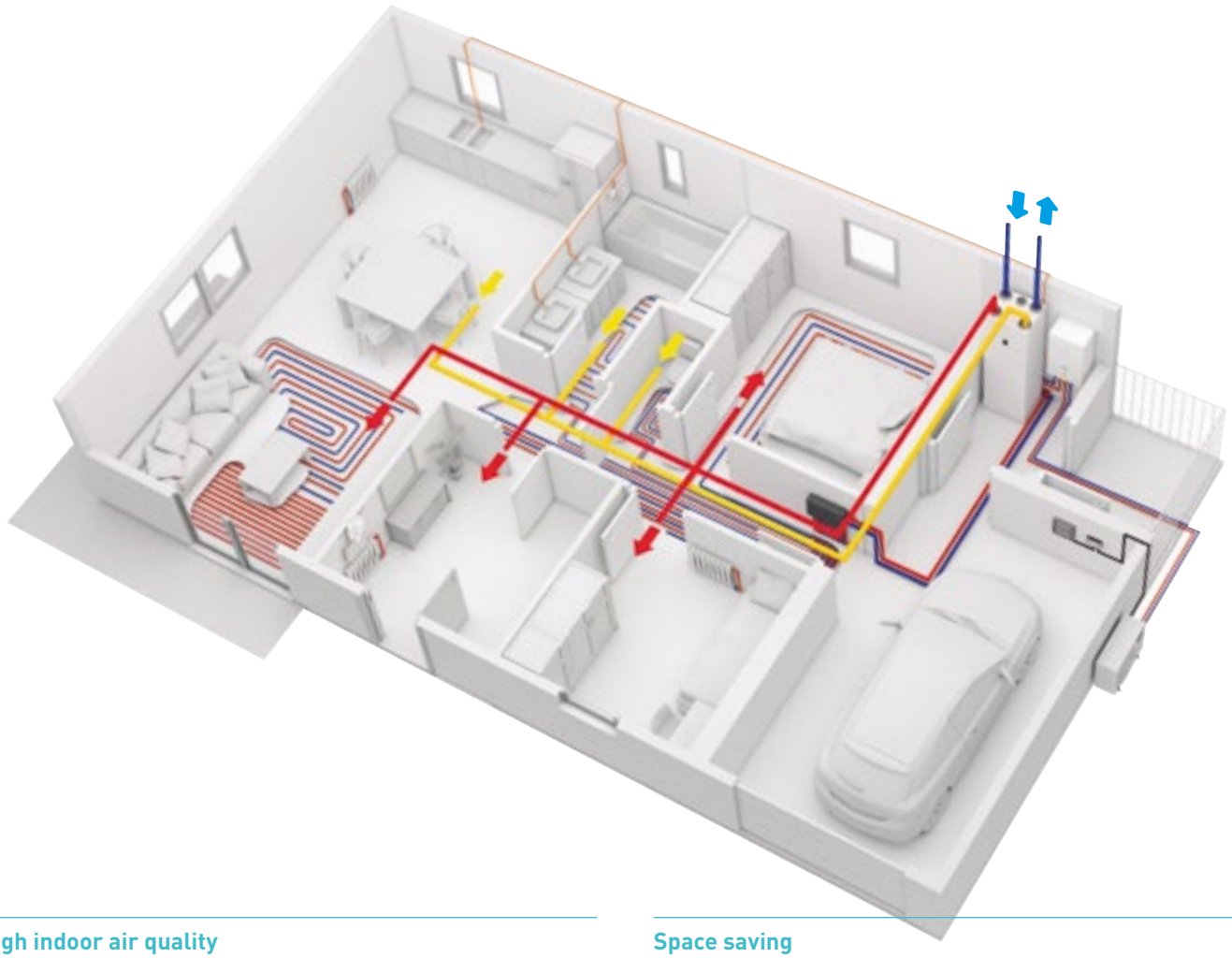
Projects with nanoe™ X.

Cabinet Dental. France.
The request by a customer to manage the indoor air quality in order to ensure irreproachable hygiene and odour control.

Mercat d'autors shop. Spain.
The nanoe™ X was chosen to ensure a cleaner air supply at a food market.

Heat recovery ventilation unit

The heat recovery ventilation unit is design not only to provide a good indoor air quality, but it is also designed to recover heat that would otherwise be lost throughout ventilation. These heat recovery ventilation systems are used to assist in the retention of heat.



High indoor air quality

The unit is designed to provide fresh filtered air into the home, while keeping a high thermal comfort.

Energy saving

Most of the energy from the exhausted air is used to precondition the incoming air, leading to lower heating requirements in the building.

Space saving

The compact ventilation unit can be installed over the DHW square tank or the Aquarea All in One Compact indoor unit for an space-saving solution.

Better user interface

The Residential ventilation unit and the Aquarea Heat Pumps can be controlled with one single user-friendly controller.

AQUAREA

Combine the Residential ventilation unit with Panasonic Aquarea for an space saving and highly efficient solution for heating, cooling, ventilation and DHW.

Heat Recovery Ventilation + Aquarea All in One Compact

Heat Recovery Ventilation + DHW Square Tank + Aquarea Mono-bloc

Heat Recovery Ventilation + DHW Square Tank + Aquarea Bi-bloc

* The unit can be mounted on a PAW-TA20C1E5C, on a WH-ADC0309J3E5C or installed on the wall (PAW-VEN-WBRK is needed).

Heat recovery ventilation unit

Model		PAW-A2W-VENTA-R	PAW-A2W-VENTA-L
Nominal air flow rate	m³/h	204 @ 50 Pa	
Maximum air flow rate	m³/h	292 @ 100 Pa	
SPF		1,24 @ 204 m³/h	
Heat exchanger rotor drive type		Variable speed	
Exchanger type		Rotating	
Heat recovery efficiency		84%	
Power supply	V / Hz	230 / 50 / Singe phase	
Power consumption	W	176	
Energy class, basic unit		**A**	
Energy class, unit with local control on demand		**A**	
Noise level	dB(A)	40	
Dimension (H x W x D)	mm	450 x 598 x 500	
Weight	kg	46	
Mounting position		Vertical	
Supply side		Right	Left
Duct connections	mm	DN125	
Filter class, supply air		F7/ePM1 60%	
Filter class, extract air		M5/ePM10 50%	
Minimum outdoor temperature	°C	-20	

*** Heat recovery efficiency according to EN 13141-7. ** Heat recovery ventilation unit is produced by Systemair.**

Accessories	
PAW-VEN-FLTKIT	Supply and extract filters kit
PAW-VEN-ACCPCB	Optional PCB for additional functions
PAW-VEN-DPL	HRV touch control panel. White frame (cable must be ordered separately)
PAW-VEN-CBLEXT12	Cable with plug for electrical connection between unit and control panel, type CE and CD (12 m)
PAW-VEN-DIVPLG	Twin plugs for installation of several control panels type CD ou CE for one unit

Accessories	
PAW-VEN-DPLBOX	HRV touch control panel wall-mounted kit
PAW-VEN-S-C02RH-W	CO_2 RH wall-mounted sensor
PAW-VEN-S-C02-W	CO_2 wall-mounted sensor
PAW-VEN-S-C02-D	CO_2 duct sensor
PAW-VEN-WBRK	Wall bracket kit for stand-alone installation on the wall
PAW-VEN-HTR06	Electrical duct heater 0,6 kW (includes relay)
PAW-VEN-HTR12	Electrical duct heater 1,2 kW (includes relay)

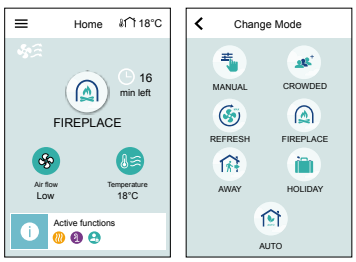
Main features of the residential ventilation unit

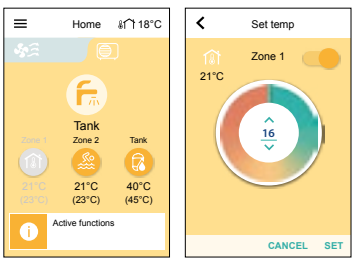
- Designed for areas up to approximately 140 m²
- High energy-efficiency rotary heat exchanger with EC - technology fans
- Moisture transfer function to minimize condensation in supply air during wintertime
- The built in humidity sensor in extract air can be used for demand control
- Control via touch display and Startup Wizard for easy commissioning
- Modbus communication via RS-485
- Option to control an Aquarea H Series onwards heat pump from PAW-A2W-VENTA control panel (PAW-AW-MBS-H and PAW-VEN-ACCPCB required)

Control user-friendly interface

All settings and features accessible via a control panel, integrated into the front cover. The option for connecting one or more external control panels is available.

- Color touch screen with a user-friendly interface
- MANUAL and AUTO mode or choose preferred settings from the pre-configured user modes
- If Aquarea H and J Series heat pumps are connected with PAW-A2W-VENTA, the heat pump control options appear on the home screen in a separate tab





Aquarea Vent - Counter flow ventilation

Aquarea Vent systems provide a continuous supply of fresh air, ensuring optimal indoor air quality and comfort. Ideal for single-family homes or apartments with low energy requirements, Panasonic's HRV systems combine high-efficiency heat recovery, quiet operation, and advanced air filtration with flexible installation options.

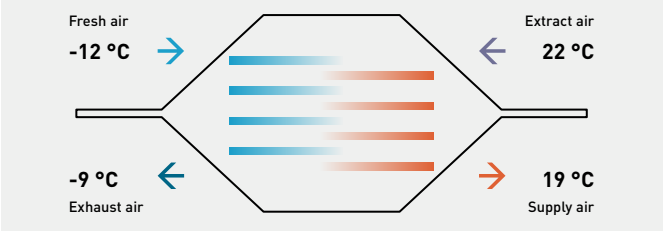
High-efficiency sensible heat recovery.

Highly efficient air renewal and filtration, with 80% ePM1 filters.

Integrated air quality, humidity and temperature sensors.

Remote control via Wi-Fi (optional).

Balanced ventilation



Counter flow ventilation units are equipped with two fans to supply and extract air. A cross-flow heat exchanger recovers the energy contained in the extracted air and transfers it to the supplied air. This significantly reduces the building's energy consumption, while at the same time keeping a good quality of the indoor air.

Aquarea Vent - Counter flow ventilation units

cool, temperate climate
CERTIFIED COMPONENT
Passive House Institute

PAW-VENTX10-15-20-25Z-1

PAW-VENTX20-30-40-50V-1

PAW-VENTX20-30-40-50H-1

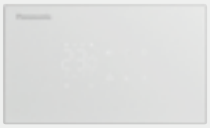
REFER TO PAGE 137 FOR THE COMPLETE LIST OF FILTERS AND ACCESSORIES FOR AIR DISTRIBUTION AND DIFFUSION SYSTEMS

Compact (Horizontal / Vertical mounting)		Air flow	Static pressure	Recovery efficiency	Energy class	Power supply	Power consumption	Sound power LWA	Dimensions / Net weight	Filter class	Duct connection
		Nominal / Max	Nominal / Max			Voltage / Phase / Frequency	Nominal		H x W x D		
		m³/h	Pa	%			W	dB(A)	mm / kg		mm
Universal mounting	P-VEN15XQAZE5	91 / 130	50 / 100	87	A	230 V / Single phase / 50 Hz	80	48	255 x 580 x 580 / 19	ePM1 80%	160
	P-VEN20XQAZE5	147 / 210	50 / 100	85	A	230 V / Single phase / 50 Hz	140	51	255 x 580 x 580 / 19	ePM1 80%	160
Horizontal mounting	P-VEN15XQAHE5	109 / 155	50 / 100	86	A	230 V / Single phase / 50 Hz	110	49	260 x 480 x 800 / 25	ePM1 80%	160
	P-VEN30XQAHE5	210 / 300	50 / 100	85	A	230 V / Single phase / 50 Hz	180	50	295 x 600 x 795 / 30	ePM1 70%	160
	P-VEN35XQAHE5	238 / 340	50 / 100	89	A	230 V / Single phase / 50 Hz	350	52	290 x 650 x 1150 / 38	ePM1 70%	160
	P-VEN45XQAHE5	288 / 455	50 / 100	88	A	230 V / Single phase / 50 Hz	420	56	290 x 1150 x 1150 / 40	ePM1 70%	160
Vertical mounting	P-VEN15XQAVE5	112 / 170	50 / 100	86	A	230 V / Single phase / 50 Hz	110	48	510 x 430 x 625 / 32	ePM1 80%	160
	P-VEN30XQAVE5	210 / 300	50 / 100	86	A	230 V / Single phase / 50 Hz	180	50	590 x 575 x 785 / 38	ePM1 70%	160
	P-VEN40XQAVE5	266 / 380	50 / 100	87	A	230 V / Single phase / 50 Hz	350	51	590 x 735 x 785 / 42	ePM1 70%	160
	P-VEN45XQAVE5	315 / 450	50 / 100	86	A	230 V / Single phase / 50 Hz	420	54	590 x 785 x 735 / 43	ePM1 70%	160

Control options.

Wall-mounted control with Modbus.
PCZ-AHRP0025

Wall-mounted control with integrated Wi-Fi for remote control via the Aquarea Home App.
PCZ-AHRP0026



- Integrated VOC - CO_2 air quality sensors
- Integrated humidity sensors
- Integrated temperature sensors
- Unit control and settings: Seasonal modes, temperature and fan speed ventilation settings
- Connectivity: Wi-Fi or Modbus

Vent PRO.

From selecting the right ventilation unit to planning the air distribution system and choosing the appropriate components, the Vent PRO guides you through every step to ensure the optimal solution for your project.

Access the tool via the 'Tools' section in the Panasonic Pro Club (www.panasonicproclub.com).

Remote control with Aquarea Home App

* Requires Wi-Fi control or Home Network Hub PCZ-ESW737.

Aquarea Home

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www.eggeassociats.net

Do not add or replace refrigerant other than the specified type. Manufacturer is not responsible for the damage and deterioration in safety due to usage of the other refrigerant.
The outdoor units in this catalogue contains fluorinated greenhouse gases with a GWP higher than 150.

Panasonic®

To find out how Panasonic cares for you, log on to: www.aircon.panasonic.eu

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