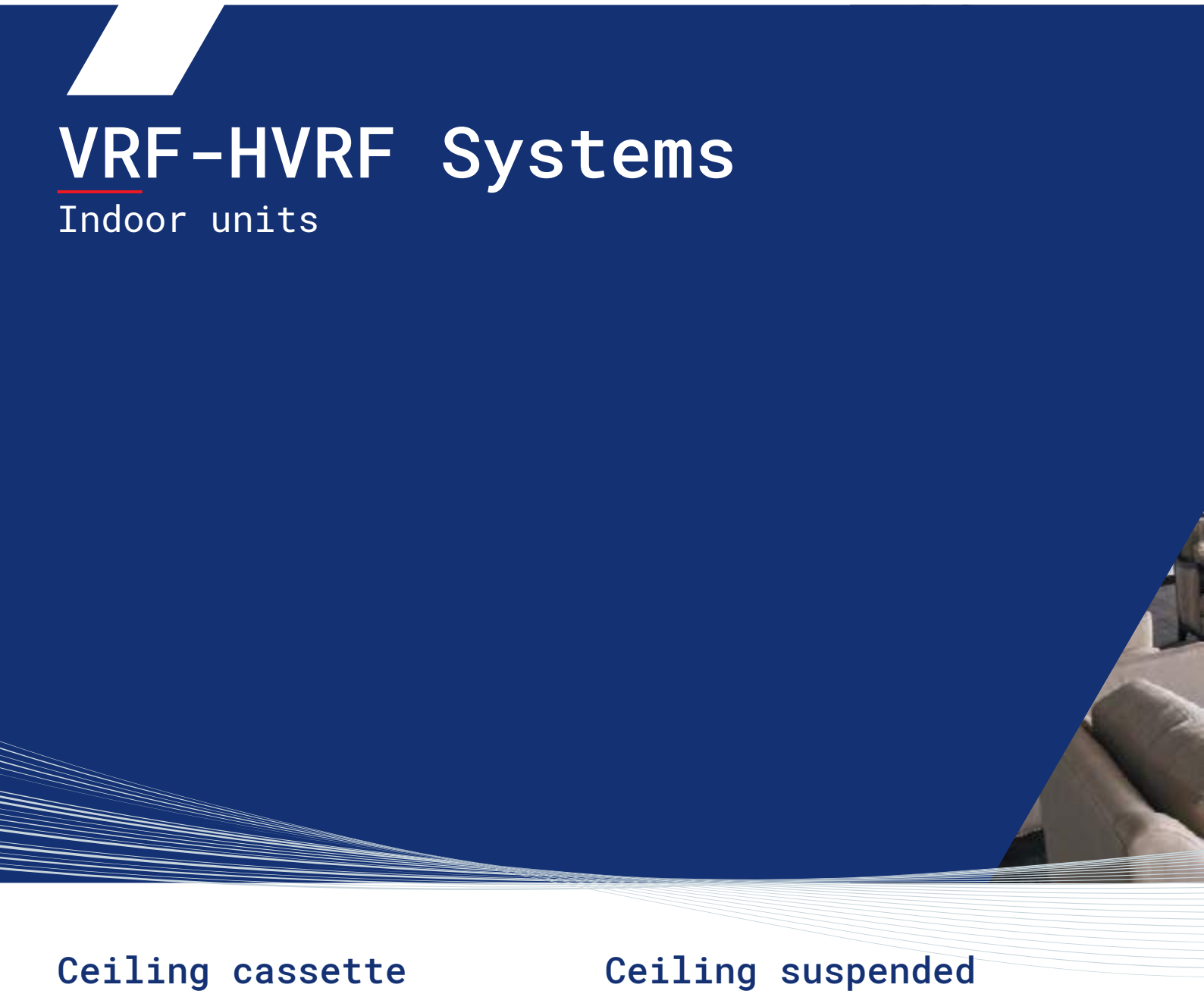
VRF-HVRF Systems

Indoor units



Ceiling cassette

Ceiling concealed

Ceiling suspended

Wall mounted

Floor standing

Type		Model		P10	P15	P20	P25	P32
				1.2 kW*1	1.7 kW*1	2.2 kW*1	2.8 kW*1	3.6 kW*1
Ceiling cassette	4 way flow	PLFY-P VFM-E1			•	•	•	•
		PLFY-P VEM-E				•	•	•
Ceiling concealed indoor units	Middle-high static pressure	PEFY-P VMS1-E			•	•	•	•
	Middle-high static pressure	PEFY-P VMA-E2 PEFY-P VMA-E3 NEW				•	•	•
	High static pressure	PEFY-P VMHS-E						
	High static pressure	PEFY-P VMHS-E						
Ceiling Suspended Indoor units		PCFY-P VKM-E						
Wall mounted indoor units		PKFY-P VLM NEW		•	•	•	•	•
		PKFY-P VBM			•	•	•	
		PKFY-P VHM						•
		PKFY-P VKM						
	Wall mounted design with LEV-KIT	LEV KIT MSZ-EF			•	•	•	•
		LEV KIT MSZ-LN					•	•
Floor standing indoor units	Floor standing indoor units with LEV-KIT	LEV KIT CON MFZ-KJ						
		PFFY-P VKM-E				•	•	•
		PFFY-P VLEM-E				•	•	•
	Concealed type	PFFY-P VCM-E NEW				•	•	•

*Nominal cooling capacity

	P40	P50	P63	P71	P80	P100	P125	P140	P200	P250
	4.5 kW*1	5.6 kW*1	7.1 kW*1	8.0 kW*1	9.0 kW*1	11.2 kW*1	14.0 kW*1	16.0 kW*1	22.4 kW*1	28.0 kW*1
	•	•								
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	•	•								
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	•	•	•							
	•	•	•							

Key Technologies

Mitsubishi Electric innovation allowed the development of functions and technologies at the service of comfort and energy efficiency.

Style

"Pure white" colour

This is the colour adopted by Mitsubishi Electric for many of its indoor units. It is a colour suitable for virtually all interior spaces.

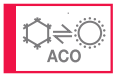
Automatic vane

The vane adjusts automatically to the optimum angle in relation to operating mode and output air temperature.

Functions

Timer

Annual, weekly, daily or simplified timer functions may be used to switch the unit on and off as desired.



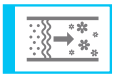
Automatic mode switching

The indoor unit automatically (AUTO) switches operating mode (COOL/HEAT) in relation to the temperature setting.

Ultra silent

These indoor units produce extraordinarily low sound pressure levels.

Air quality

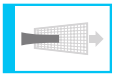


Deodorizing filter

The bad smells present in the environment are captured from the deodorizing filter and then be eliminated by the technology plasma. Extremely low deodorization time makes this function even more effective against the odors of animals or of cooking.

Outdoor air intake

The air quality in the indoor space may be improved using the outdoor fresh air intake.

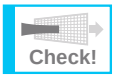


Standard filter

A honeycomb or synthetic fibre filter with high dust holding capacity.

Long-life filter

The special surface of the long-life filter requires less maintenance than a conventional filter.



"Dirty filters" indicator signal

Filter usage is monitored to indicate when maintenance is necessary.

Air purifyng filter

The filter has a large capture area and deodourise the circulating air.

Air distribution

Vane positions

Number of possible positions for the air deflector vane.

Swing vane

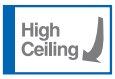
A continuous swinging motion of the vane ensures that air is distributed ideally throughout the room.

Fan speed

Number of fan speeds available.

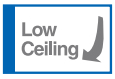
Automatic fan

La velocità del ventilatore viene regolata in automatico per soddisfare il grado di comfort richiesto.



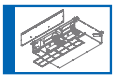
High ceiling

For installations on high ceilings, the air flow may be augmented to improve air distribution.



Low ceiling

For installations on low ceilings, the air flow may be reduced to prevent unpleasant draughts.



Air intake on underside

As an option during installation, the unit may be configured with the air intake on the underside.

Installation and maintenance

Condensate drain pump

The condensate drain pump facilitates installation.

Self-diagnostic

A self-diagnostic system makes troubleshooting and correcting malfunctions easier by recording a log of faults.

Special functions

Auto-restart

The auto restart function may be used to configure the indoor units to restart automatically after a power outage, minimising interruptions in the operation of the system to maintain thermal comfort levels in the air conditioned spaces. This function must be enabled as an option as it is not enabled by default. A choice of two automatic start configurations is available:

- restart only the indoor units which were on before the power outage;
- restart all indoor units, irrespective of on/off state before the power outage.

Stratification compensation

The automatic heat stratification compensation function in HEAT mode is implemented by adjusting the ambient temperature read by a probe on the indoor unit, to obtain a value that more closely reflects the true temperature of the air conditioned space.
An offset of -4°C is applied, so that, for instance, if the inlet temperature measured is 24°C, the system automatically displays an adjusted value of 20°C, which should more closely reflect the true ambient temperature. The Mitsubishi Electric CITY MULTI VRF system bases the thermal power actually delivered on this value.
The stratification compensation function is available on all Mitsubishi Electric indoor unit types with the exception of floor-standing units and certain specific cases (such as with units with underside air intakes), and may be disabled on request.

Low temperature cooling

This function extends the operating temperature range in cooling mode to offer a lowest settable temperature of 14°C. Where the ability to cool to temperatures lower than the standard lowest comfort value of 19°C (typically for sports centres, laboratories etc.) is necessary, the settable temperature range in cooling mode may be extended to offer a lowest temperature of 14°C on the following models:
This function may be enabled during installation and is available on the following models:

- PLFY-P VLMD - 2-way cassette
- PEFY-P VMR - Ducted
- PEFY-P VMS1(L) - Ducted
- PEFY-P VMA - Ducted
- PEFY-P VMH - Ducted
- PEFY-P VMHS - Ducted
- PFFY-P VLEM - Floor-standing
- PFFY-P VLRM - Built-in floor unit
- PFFY-P VLRMM - Built-in floor unit

The indoor unit fan is run at a higher speed in this configuration (except with the SMALL Y model outdoor unit of the PUMY series).

		Cassette						
								
		PLFY-P VFM-E1	PLFY-P VEM-E	PEFY-P VMS1-E	PEFY-P VMA-E(2)(3)	PEFY-P VMHS-E	PEFY-P VMHS-E	PCFY-P VKM-E
Style	Pure White	•	•					•
	AUTO VANE	•	•					•
Functions		•	•	•	•	•	•	•
	ACO	•	•	•	•	•	•	•
	Ultra Silent	•	•	•				
Air quality	Fresh-air Intake	•	•					•
			•					
	Long life	•	•					•
	Catechin							
	Check!	•	•					•
	Air Purifying							
Air distribution		5	5					5
	SWING	•	•					•
		3	4	3	3	2	3	4
	AUTO	•	•	•			•	•
	High Ceiling	•	•					•
	Low Ceiling	•	•					•
					•			
Install. and mainten.	Drain Lift Up	•	•	•*	•	•*	•*	
	Self Diagnosis	•	•	•	•	•	•	•
Special functions	Auto Restart	•	•	•	•	•	•	•
	Offset -4°	•	•	•	•	•	•	•
	Low Temp Cooling			•	•	•	•	

*Optional

	Wall mounted						Floor standing			
										
	PKFY-P VBM-E	PKFY-P VHM-E	PKFY-P VKM-E	PKFY-P VLM	LEV KIT MSZ-EF	LEV KIT MSZ-LN	LEV KIT MFZ-KJ	PFFY-P VKM-E	PFFY-P VLEM-E	PFFY-P VCM-E
	•	•	•	•			•	•		
	•	•	•	•	•	•	•	•		
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	4	5	4	5	5	5	4	4		
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PLFY-P VFM-E1

INDOOR UNITS - 4-way cassette 600x600

CITY MULTI

Ideal for...

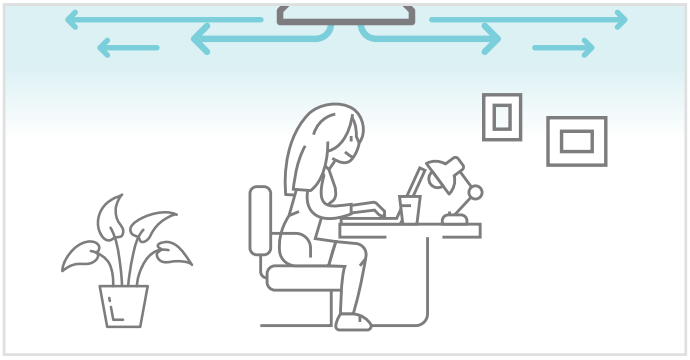
The **straight-line shape** introduced has resulted in a stylish and modern square design. Its high affinity ensures the ability to blend in seamlessly with any interior. The indoor unit is an ideal match for office or store use.

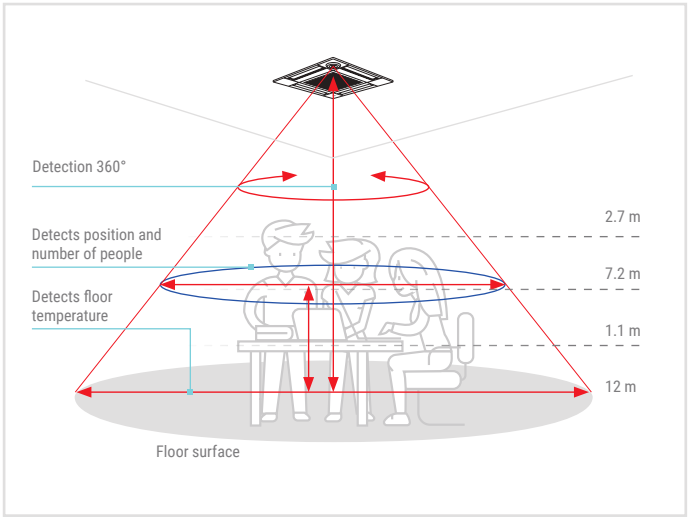
3D i-see Sensor

New advanced 3D i-see sensor detects people's position and number. Once a person is detected, the angle of the vane is automatically adjusted. Each vane can be indenpendently set to "Direct Airflow" or "Indirect Airflow" according to taste.
The 3D i-see Sensor detects the number of people in the room and adjusts the power accordingly. This makes automatic power-saving operation possible in places where the number of people changes frequently.
Additionally, when the area is continuously unoccupied, the system switches to a more enhanced power-saving mode. Depending on the setting, it can also stop the operation.

Horizontal flow

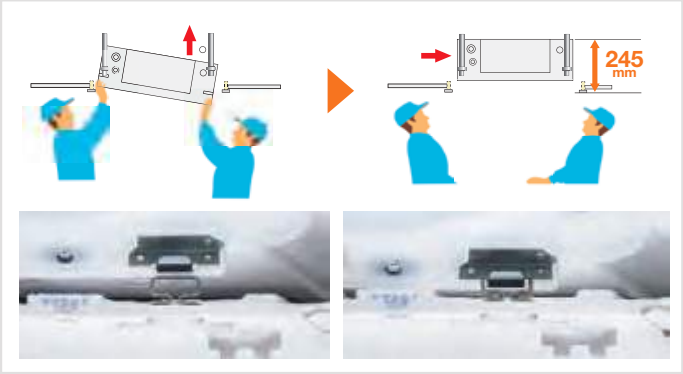
The new airflow control completely eliminates that uncomfortable drafty-feeling with the introduction of a **horizontal airflow** that spreads across the ceiling, maximizing the Coanda effect. Furthermore, 5 patterns for vane position (on previous VCM was 4) and individual settable vane and ways ensure higher comfort. The ideal airflow for offices and restaurants.





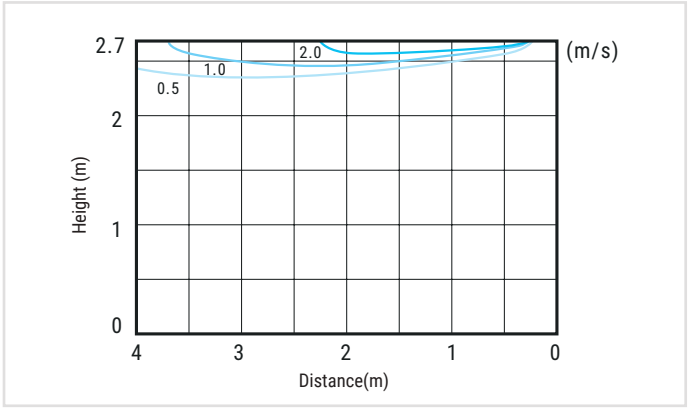
Simplified installation

The height above ceiling of 245 mm is top class in the industry.
The height above ceiling of 245 mm enables fitting into narrow ceiling space. Installation is simple, even when the ceiling spaces are narrow to make the ceilings higher. Light weight (max 15kg) and temporary hanging hooks for grille allow to make installation easier and quicker.



Panel and control

The unit is supplied with SLP-2FAL panel which includes signal receiver. Is available as optional the SLP-2FALM panel combined with the new PAR-SL100A-E wireless remote control with weekly timer, backlight, temperature setting in 0.5 °C steps and individual control of the 4 deflectors.



Key Technologies

DC Inverter · Pure White · AUTO VANE · ACO · Ultra Silent · Fresh-air intake · Long life · Check! · SWING · Drain Lift Up · Self Diagnosis · Auto Restart · Offset -4°

Technical specifications

MODEL			PLFY-P15VFM-E1	PLFY-P20VFM-E1	PLFY-P25VFM-E1	PLFY-P32VFM-E1	PLFY-P40VFM-E1	PLFY-P50VFM-E1
Default panel			SLP-2FAL					
Power			Single phase, 220-240V 50Hz					
Capacity in cooling mode*1		kW	1.7	2.2	2.8	3.6	4.5	5.6
		Btu/h	5800	7500	9600	12300	15400	19100
Capacity in heating mode*1		kW	1.9	2.5	3.2	4	5	6.3
		Btu/h	6500	8500	10900	13600	17100	21500
Power consumption	Cooling	kW	0.02	0.02	0.02	0.02	0.03	0.04
	Heating	kW	0.02	0.02	0.02	0.02	0.03	0.04
Current	Cooling	A	0.19	0.21	0.22	0.23	0.28	0.4
	Heating	A	0.14	0.16	0.17	0.18	0.23	0.35
External finish	Unit		Galvanised steel sheet with uncoated thermal insulation					
	Grille		Pure White					
Dimensions AxLxP	Unit	mm	245x570x570	245x570x570	245x570x570	245x570x570	245x570x570	245x570x570
	Grille	mm	10x625x625	10x625x625	10x625x625	10x625x625	10x625x625	10x625x625
Net weight	Unit	kg	14	14	14	15	15	15
	Grille	kg	3	3	3	3	3	3
Heat exchanger			Cross fins					
Fan	Type x Quantity		3D Turbo fan x 1					
	Air flow*2	m³/min	6.5 - 7.5 - 8	6.5 - 7.5 - 8.5	6.5 - 8 - 9	7 - 8 - 9.5	7.5 - 9 - 11	9 - 11 - 13
	Ext. Static pressure	Pa	0	0	0	0	0	0
Air filter			Polypropylen honeycomb (long life)					
Refrigerant pipe diameter	Gas (swaged)	mm	12.7	12.7	12.7	12.7	12.7	12.7
	Liquid (swaged)	mm	6.35	6.35	6.35	6.35	6.35	6.35
Sound pressure*2*3		dB(A)	26 - 28 - 30	26 - 29 - 31	26 - 30 - 33	26 - 30 - 34	28 - 33 - 39	33 - 39 - 43

* Default panel. SLP-2FAL panel is equipped by Signal reicever
*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 Air flow/noise levels given for operation in low-medium-high modes.
*3 Measured in anechoic chamber with 230V mains power.

Optional parts	DESCRIPTION
PAC-SF1ME-E	Corner 3D I-see Sensor for PLFY-P VFM-E1

PLFY-P VEM-E

INDOOR UNITS - 4-way cassette 900x900

CITY MULTI

Ideal for...

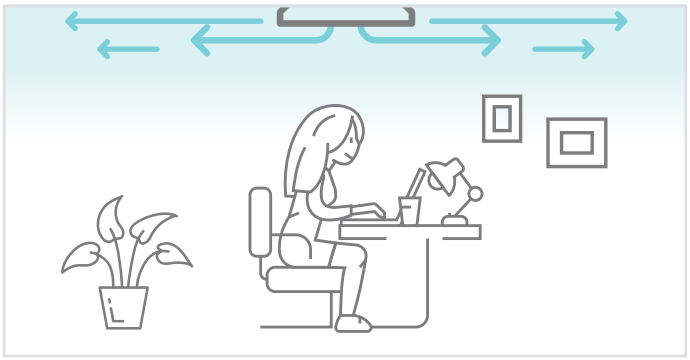
New design of 4-way cassette VEM model suits most commercial applications thanks to its elegance and syle. Its peculiar features are horizontal flow function, individually settable vanes and possibility to install 3D i-see sensor for top environment comfort control.

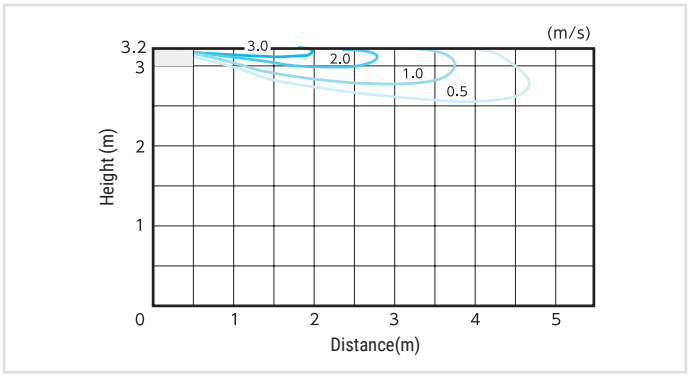
3D i-see sensor: Temperature sensor

3D i-see sensor is able to detect temperature distribution inside the room, making it possible to direct airflow to those areas which generally receive less air, making them more uncomfortable (too cold or too hot) for users.

Horizontal flow

This new indoor unit is capable of handling five vane positions, making it possible to achieve horizontal flow that spreads across the ceiling, maximizing the Coanda effect. This allows to avoid, if needed, direct airflow to users in the room, which can sometimes be uncomfortable.





Key Technologies

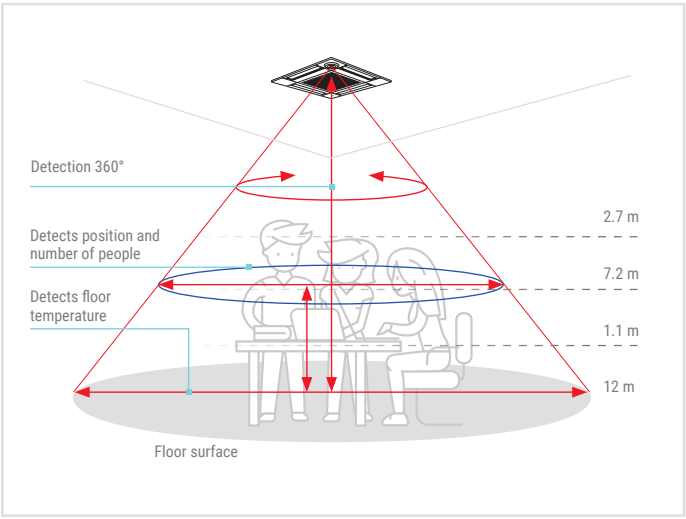
DC Inverter | Pure White | AUTO VANE | ACO | Ultra Silent | Fresh-air intake | Long life | Check! | SWING | Drain Lift Up | Self Diagnosis | Auto Restart | Offset -4°

3D i-see sensor: Direct/Indirect flow function

Optional 3D i-see sensor allows to detect and count users in the environment and their position. User can set either Direct or Indirect flow to occupied areas, with single control on four vanes.

3D i-see sensor: Energy saving

3D i-see sensor features allow to optimize comfort conditions and at the same time achieve energy saving. Thanks to the occupancy sensor the unit is able to automatically handle and reduce power output accordingly to users actually being present in the room or in certain areas of it. This feature is particularly helpful in those environments in which occupancy varies significantly during the day.



Panel and control

The unit is supplied with PLP-6EA panel which does not include signal receiver. This component (PAR-SE9FA-E) can be installed as a corner accessory, as well as 3D i-See Sensor (PAC-SE1ME-E). The unit is compatible with all wired MA and ME remote controls and, if equipped with signal receiver, wireless remote controls. New PAR-SL100 A-E is compatible with PLFY-P VEM, and presents numerous new features, such as weekly timer, backlit display, 0,5°C temperature setting and monitoring, as well as functions for 3D i-see sensor.

Wireless signal receivee (PAR-SE9FA-E)

3D i-see sensor (PAC-SE1ME-E)

Simplified installation

Thanks to new temporary panel supports maintenance and installation operation are now easier for field technicians.

Also, panel weight has been reduced by 20% thanks to a new design.

A simple loosening of support screws allows the removal of the control box and corner accessories.

Technical specifications

MODEL			PLFY-P20VEM-E	PLFY-P25VEM-E	PLFY-P32VEM-E	PLFY-P40VEM-E	PLFY-P50VEM-E
Power			A single phase, 220-240V 50Hz / a single phase, 200V 60Hz				
Capacity in cooling mode*1		kW	2.2	2.8	3.6	4.5	5.6
		Btu/h	7500	9600	12300	15400	19100
Capacity in heating mode*1		kW	2.5	3.2	4.0	5.0	6.3
		Btu/h	8500	10900	13600	17100	21500
Power consumption	Cooling	kW	0.03	0.03	0.03	0.03	0.03
	Heating	kW	0.03	0.03	0.03	0.03	0.03
Current	Cooling	A	0.31	0.31	0.32	0.32	0.32
	Heating	A	0.24	0.24	0.25	0.25	0.25
External finish (Munsel No.)	Unit		Galvanized steel plate				
	Grille		Nr. Munsel (1.0Y/9.2/0.2) (Bianco)				
Dimensions (HxLxW)	Unit	mm	258x840x840	258x840x840	258x840x840	258x840x840	258x840x840
	Grille	mm	40x950x950	40x950x950	40x950x950	40x950x950	40x950x950
Net weight	Unit	kg	19	19	19	19	19
	Grille	kg	5	5	5	5	5
Heat exchanger			Cross fin (Al/Cu)				
Fan	Type x Quantity		Turbo fan x 1				
	Air flow*2	m^3/min	12-13-14-15	12-13-14-15	13-14-15-16	13-14-15-17	13-14-16-18
		l/s	200-217-233-250	200-217-233-250	217-233-250-267	217-233-250-283	217-233-267-300
	Static ext.l pressure	Pa	0	0	0	0	0
Motor	Type		DC Motor				
	Power output	kW	0.050	0.050	0.050	0.050	0.050
Air filter			Polypropilene honeycomb fabric				
Refrigerant pipe diameter	Gas (swaged)	mm	Ø 12.7	Ø 12.7	Ø 12.7	Ø 12.7	Ø 12.7
	Liquid (swaged)	mm	Ø 6.35	Ø 6.35	Ø 6.35	Ø 6.35	Ø 6.35
Local drain pipe diameter	Grille		O.D.32	O.D.32	O.D.32	O.D.32	O.D.32
Sound pressure*2*3		dB(A)	24-26-27-29	24-26-27-29	26-27-29-31	26-27-29-31	26-27-29-31

Technical specifications

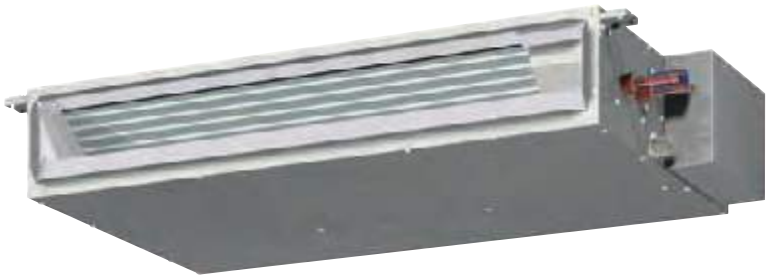
MODEL			PLFY-P63VEM-E	PLFY-P80VEM-E	PLFY-P100VEM-E	PLFY-P125VEM-E
Power			A single phase, 220-240V 50Hz / a single phase, 200V 60Hz			
Capacity in cooling mode*1		kW	7.1	9.0	11.2	14.0
		Btu/h	24200	30700	38200	47800
Capacity in heating mode*1		kW	8.0	10.0	12.5	16.0
		Btu/h	27300	34100	42700	54600
Power consumption	Cooling	kW	0.03	0.05	0.07	0.11
	Heating	kW	0.03	0.05	0.07	0.11
Current	Cooling	A	0.36	0.50	0.67	1.06
	Heating	A	0.29	0.43	0.60	0.99
External finish (Munsel No.)	Unit		Galvanized steel plate			
	Grille		Nr. Munsel (1.0Y/9.2/0.2) (Bianco)			
Dimensions (HxLxW)	Unit	mm	258x840x840	258x840x840	298x840x840	298x840x840
	Grille	mm	40x950x950	40x950x950	40x950x950	40x950x950
Net weight	Unit	kg	21	21	24	24
	Grille	kg	5	5	5	5
Heat exchanger			Cross fin (Al/Cu)			
Fan	Type x Quantity		Turbo fan x 1			
	Air flow*2	m^3/min	14-15-16-18	14-17-20-23	20-23-26-29	22-26-30-35
		l/s	233-250-267-300	233-283-333-383	333-383433-483	367-433-500-583
	Static ext.l pressure	Pa	0	0	0	0
Motor	Type		DC Motor			
	Power output	kW	0.050	0.050	0.120	0.120
Air filter			Polypropilene honeycomb fabric			
Refrigerant pipe diameter	Gas (swaged)	mm	Ø 15.88	Ø 15.88	Ø 15.88	Ø 15.88
	Liquid (swaged)	mm	Ø 9.52	Ø 9.52	Ø 9.52	Ø 9.52
Local drain pipe diameter	Grille		O.D.32	O.D.32	O.D.32	O.D.32
Sound pressure*2*3		dB(A)	28-29-30-32	28-31-34-37	34-37-39-41	35-39-42-45

*1 Cooling/Heating capacity is the maximum value measured in the following conditions.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) BS. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 High-mid1-mid2-low setting
*3 Measured in anechoic chamber with 230V power supply.

Optional parts	DESCRIPTION
PAC-SE1ME-E	Corner 3D I-see Sensor for PLFY-P VEM-E
PLP-6EALM	Panel with wireless remote controller

PEFY-P VMS1-E

INDOOR UNITS - Ceiling concealed medium to low static pressure



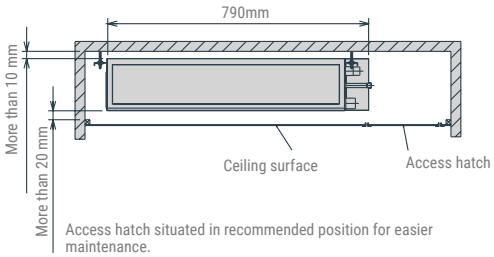
CITY MULTI

Ideal for...

This **ultra-slim 200 mm** unit offers extraordinary flexibility and is particularly suitable for use in rooms where low noise and compact vertical dimensions are essential.

Ultra-slim

These units are extremely thin, at just 200 mm in height.
Extremely compact width and lengths of:
7790 mm for P15 and P32 models
990 mm for P40 and P50 models
1190 mm for P63 models
May be installed easily in cramped spaces such as ceiling recesses or double ceilings.



Condensate lift pump

The VMS1 is equipped with a condensate lift pump as standard.

Adjustable static pressure

L'unità è adatta per diverse applicazioni, grazie alle sue 4 impostazioni di presWith 4 selectable static pressure settings (5, 15, 25 and 50Pa), this unit is ideal for a variety of different applications.

Adjustable air flow

Three different fan speed settings - "low", "medium" and "high" – ensure the desired levels of comfort.

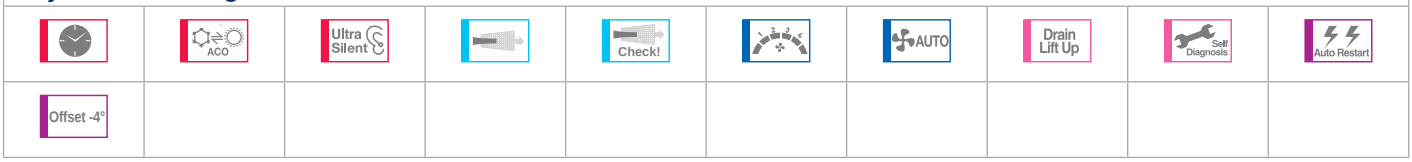
Low noise

The new design of the centrifugal fan and coil reduces noise levels.

Noise level dB(A)

Capacity		P15	P20	P25	P32	P40	P50	P63
Fan speed	High	28			32	33	35	36
	Medium	24			27	30	32	33
	Low	22			24	28	30	30

Key Technologies



Technical specifications

MODEL			PEFY-P15VMS1-E	PEFY-P20VMS1-E	PEFY-P25VMS1-E	PEFY-P32VMS1-E	PEFY-P40VMS1-E	PEFY-P50VMS1-E	PEFY-P63VMS1-E
Power			A single-phase, 220-240V 50Hz / a 1 fase, 220-240V 60Hz						
Capacity in cooling mode*1		kW	1.7	2.2	2.8	3.6	4.5	5.6	7.1
		Btu/h	5800	7500	9600	12300	15400	19100	24200
Capacity in heating mode*1		kW	1.9	2.5	3.2	4.0	5.0	6.3	8.0
		Btu/h	6500	8500	10900	13600	17100	21500	27300
Power consumption	Cooling	kW	0.05 [0.03]	0.05 [0.03]	0.06 [0.04]	0.07 [0.05]	0.07 [0.05]	0.09 [0.07]	0.09 [0.07]
	Heating	kW	0.03 [0.03]	0.03 [0.03]	0.04 [0.04]	0.05 [0.05]	0.05 [0.05]	0.07 [0.07]	0.07 [0.07]
Current	Cooling	A	0.42 [0.31]	0.47 [0.36]	0.50 [0.39]	0.50 [0.39]	0.56 [0.45]	0.67 [0.56]	0.72 [0.61]
	Heating	A	0.31 [0.31]	0.36 [0.36]	0.39 [0.39]	0.39 [0.39]	0.45 [0.45]	0.56 [0.56]	0.61 [0.61]
External finish			Galvanised						
Dimensions HxLxW		mm	200x790x700	200x790x700	200x790x700	200x790x700	200x990x700	200x990x700	200x1190x700
Net weight		kg	19 [18]	19 [18]	19 [18]	20 [19]	24 [23]	24 [23]	28 [27]
Heat exchanger			Cross fins (sheet aluminium fins and copper piping)						
Fan	Type x Quantity		Ventilatore Sirocco x 2				Ventilatore Sirocco x 3		Ventil. Sirocco x 4
	Air flow (low-medium-high)	m^3/min	5-6-7	5.5-6.5-8	5.5-7-9	6-8-10	8-9.5-11	9.5-11-13	12-14-16.5
	Static external press	Pa	5-15-35-50	5-15-35-50	5-15-35-50	5-15-35-50	5-15-35-50	5-15-35-50	5-15-35-50
Motor	Type		Brushless DC motor						
	Power output	kW	0.096	0.096	0.096	0.096	0.096	0.096	0.096
Air filter			Polypropylene honeycomb fabric (washable)						
Refrigerant pipe diameter	Gas (swaged)	mm	ø12.7 brazed	ø12.7 brazed	ø12.7 brazed	ø12.7 brazed	ø12.7 brazed	ø12.7 brazed	ø15.88 brazed
	Liquid (swaged)	mm	ø6.35 brazed	ø6.35 brazed	ø6.35 brazed	ø6.35 brazed	ø6.35 brazed	ø6.35 brazed	ø9.52 brazed
Local drain pipe diameter			O.D. 32	O.D. 32	O.D. 32	O.D. 32	O.D. 32	O.D. 32	O.D. 32
Sound pressure (low-medium-high)		dB(A)	22-24-28	23-25-29	24-26-30	24-27-32	28-30-33	30-32-35	30-33-36

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C DB/19°C WB, outdoor 35°C DB.
Heating: indoor 20°C DB (68°F DB), outdoor 7°C DB (45°F DB/43°F WB). Pipe length: 7.5 m (24-9/16 feet).
Height difference: 0 m (0 feet).
*2 Static external pressure is set to 15 Pa by default.
*3 [ ] in case of PEFY-P15-63VMS1L-E.

PEFY-P VMA-E2

INDOOR UNITS - Ceiling concealed medium to high static pressure

CITY MULTI

Ideal for...

Featuring very precise ambient temperature control, the VMA series ducted unit offers **unparalleled energy efficiency.**

Static pressure

Static external pressure is adjustable to suit the system configuration and installation conditions. The static pressure may be modified to cater for all types of ducting and to allow for functional upgrades such as installing high performance filters, etc. To cater for different layouts and configurations, the static pressure is adjustable within a range from 35Pa to 150 Pa*.
* Default setting 50Pa.

Compact unit

The entire VMA series offers extraordinarily compact dimensions: measuring just 250 mm in height, this the perfect solution for installation in cramped spaces.

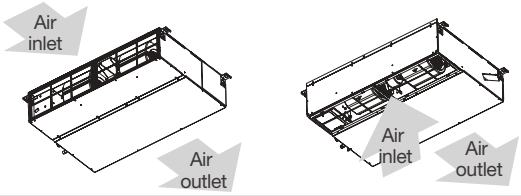
Condensate lift pump

The VMA is equipped with a condensate lift pump.

The optional condensate lift pump makes it possible to place the drain connection up to 700 mm above the unit.

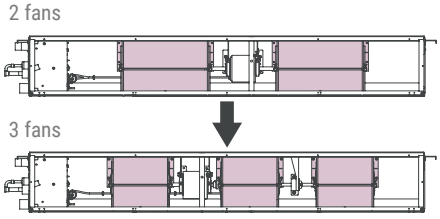
Air inlet direction can easily be changed

By only switching the closing board and air filter, the inlet layout can be altered from the rear inlet. (At the time of factory shipment: rear inlet)

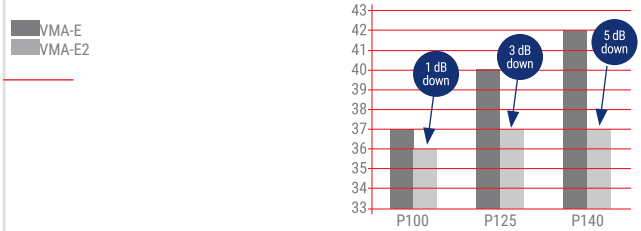


Reduced noise by changing the fan structure (for PEFY-P100/125/140VMA-E2)

Reduced noise by increasing the number of fans from two to three (P100/125/140).



*SPL comparison at Hi fan speed setting
*Sound pressure levels in the figure are obtained at air flow rate of 50 Pa.
*Measured in anechoic room with a 2 m air inlet duct and 2 m air outlet attached to the unit and 1.5 m below the unit.



Key Technologies





Technical specifications

MODEL			PEFY-P20VMA-E2	PEFY-P25VMA-E2	PEFY-P32VMA-E2	PEFY-P40VMA-E2	PEFY-P50VMA-E2	PEFY-P63VMA-E2
Power			A single-phase, 220-230-240VAC 50Hz					
Capacity in cooling mode *1		kW	2.2	2.8	3.6	4.5	5.6	7.1
		Btu/h	7500	9600	12300	15400	19100	24200
Capacity in heating mode*1		kW	2.5	3.2	4.0	5.0	6.3	8.0
		Btu/h	8500	10900	13600	17100	21500	27300
Power consumption	Cooling	kW	0.037	0.037	0.045	0.062	0.085	0.071
	Heating	kW	0.035	0.035	0.043	0.060	0.083	0.069
Current	Cooling	A	0.35	0.35	0.37	0.45	0.55	0.45
	Heating	A	0.35	0.35	0.37	0.45	0.55	0.45
External finish			Galvanized steel plate					
Dimensions HxLxW		mm	250x700x732	250x700x732	250x700x732	250x900x732	250x900x732	250x1100x732
Net weight		kg	22	22	22	26	26	31
Heat exchanger			Cross fin (Aluminum fin and copper tube)					
Fan	Type x Quantity		Sirocco x 1	Sirocco x 1	Sirocco x 1	Sirocco x 1	Sirocco x 1	Sirocco x 2
	Air flow (low-medium-high)	m^3/min	6.0-7.5-8.5	6.0-7.5-8.5	7.5-9.0-10.5	10.0-12.0-14.0	12.0-14.5-17.0	13.5-16.0-19.0
		l/s	100-125-142	100-125-142	125-150-175	167-200-233	200-242-283	225-267-317
		cfm	212-265-300	212-265-300	265-318-371	353-424-494	424-512-600	477-565-671
	Static external press	Pa	35/50/70/100/150	35/50/70/100/150	35/50/70/100/150	35/50/70/100/150	35/50/70/100/150	35/50/70/100/150
Motor	Type		DC Motor					
	Power output	kW	0.085	0.085	0.085	0.085	0.085	0.121
Air filter			Polypropylene honeycomb fabric (washable)					
Refrigerant pipe diameter	Gas (swaged)	mm	ø6.35	ø6.35	ø6.35	ø6.35	ø6.35	ø9.52
	Liquid (swaged)	mm	ø12.7	ø12.7	ø12.7	ø12.7	ø12.7	ø15.88
Local drain pipe diameter			O.D. 32 (1-1/4)	O.D. 32 (1-1/4)	O.D. 32 (1-1/4)	O.D. 32 (1-1/4)	O.D. 32 (1-1/4)	O.D. 32 (1-1/4)
Sound pressure (low-medium-high)*2		dB(A)	26-27-28	26-27-28	28-30-34	28-30-34	28-31-35	29-32-35

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 Measured in anechoic chamber with 230V mains power.

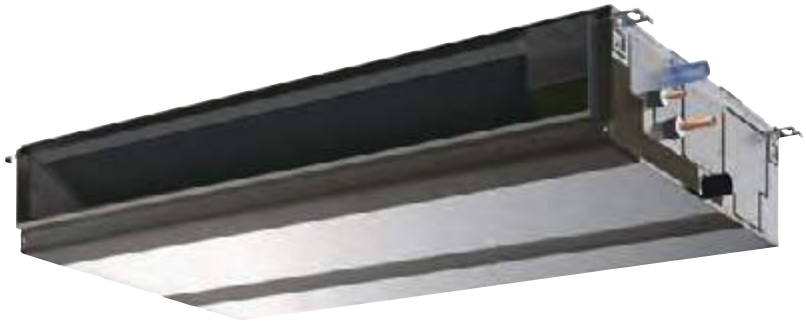
Technical specifications

MODEL			PEFY-P71VMA-E2	PEFY-P80VMA-E2	PEFY-P100VMA-E2	PEFY-P125VMA-E2	PEFY-P140VMA-E2
Power			A single-phase, 220-230-240VAC 50Hz				
Capacity in cooling mode *1		kW	8.0	9.0	11.2	14.0	16.0
		Btu/h	27300	30700	38200	47800	54600
Capacity in heating mode*1		kW	9.0	10.0	12.5	16.0	18.0
		Btu/h	30700	34100	42700	54600	61400
Power consumption	Cooling	kW	0.085	0.085	0.146	0.202	0.216
	Heating	kW	0.083	0.083	0.144	0.200	0.214
Current	Cooling	A	0.60	0.60	0.95	1.29	1.47
	Heating	A	0.60	0.60	0.95	1.29	1.47
External finish			Galvanized steel plate				
Dimensions HxLxW		mm	250x1100x732	250x1100x732	250x1400x732	250x1400x732	250x1600x732
Net weight		kg	31	31	39	39	43
Heat exchanger			Cross fin (Aluminum fin and copper tube)				
Fan	Type x Quantity		Sirocco x 2	Sirocco x 2	Sirocco x 3	Sirocco x 3	Sirocco x 3
	Air flow (low-medium-high)	m^3/min	14.5-18.0-21.0	14.5-18.0-21.0	23.0-28.0-32.0	28.0-34.0-37.0	29.5-35.5-40.0
		l/s	242-300-350	242-300-350	383-467-533	467-567-617	492-592-667
		cfm	512-636-742	512-636-742	812-989-1130	989-1201-1306	1042-1254-1412
	Static external press	Pa	40/50/70/100/150	40/50/70/100/150	40/50/70/100/150	40/50/70/100/150	40/50/70/100/150
Motor	Type		DC Motor				
	Power output	kW	0.121	0.121	0.300	0.300	0.300
Air filter			Polypropylene honeycomb fabric (washable)				
Refrigerant pipe diameter	Gas (swaged)	mm	ø9.52	ø9.52	ø9.52	ø9.52	ø9.52
	Liquid (swaged)	mm	ø15.88	ø15.88	ø15.88	ø15.88	ø15.88
Local drain pipe diameter			O.D. 32 (1-1/4)	O.D. 32 (1-1/4)	O.D. 32 (1-1/4)	O.D. 32 (1-1/4)	O.D. 32 (1-1/4)
Sound pressure (low-medium-high)*2		dB(A)	29-32-34	29-32-34	31-35-38	35-39-40	32-36-40

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 Measured in anechoic chamber with 230V mains power.

PEFY-P VMA-E3 NEW

INDOOR UNITS - Ceiling concealed medium to high static pressure



CITY MULTI

Ideal for...

Featuring very precise ambient temperature control, the VMA series ducted unit offers **unparalleled energy efficiency.**

Static pressure

Static external pressure is adjustable to suit the system configuration and installation conditions. The static pressure may be modified to cater for all types of ducting and to allow for functional upgrades such as installing high performance filters, etc. To cater for different layouts and configurations, the static pressure is adjustable within a range from 35Pa to 150 Pa.

Compact unit

The entire VMA series offers extraordinarily compact dimensions: measuring just 250 mm in height, this the perfect solution for installation in cramped spaces.

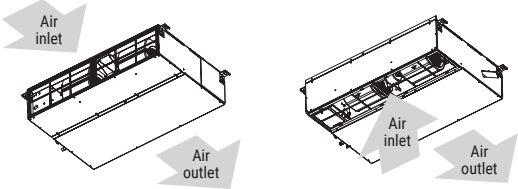
Condensate lift pump

The VMA is equipped with a condensate lift pump.

The optional condensate lift pump makes it possible to place the drain connection up to 700 mm above the unit.

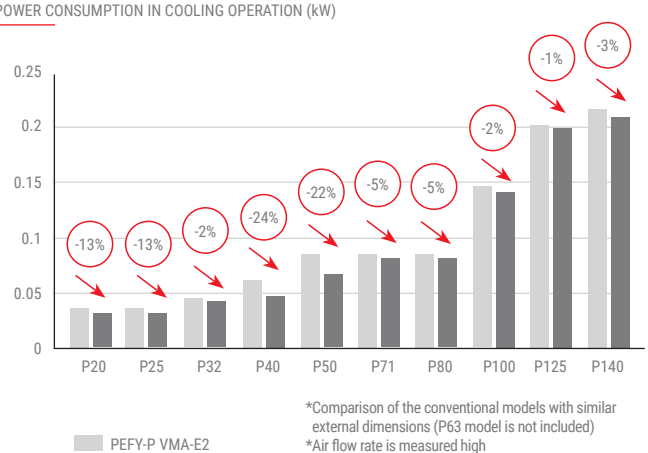
Air inlet direction can easily be changed

By only switching the closing board and air filter, the inlet layout can be altered from the rear inlet. (At the time of factory shipment: rear inlet)



Less power consumption

Improved air pathway inside the fan casing provides smooth air flow for more efficient operation. Additionally, the new higher-efficiency motor reduces energy consumption.



Key Technologies





Technical specifications

MODEL			PEFY-P20VMA-E3	PEFY-P25VMA-E3	PEFY-P32VMA-E3	PEFY-P40VMA-E3
Power			1-phase 220-230-240 V 50 Hz			
Capacity in cooling mode *1		kW	2.2	2.8	3.6	4.5
		Btu/h	7,500	9,600	12,300	15,400
Capacity in heating mode*1		kW	2.5	3.2	4.0	5.0
		Btu/h	8,500	10,900	13,600	17,100
Power consumption	Cooling	kW	0.032	0.032	0.044	0.047
	Heating	kW	0.030	0.030	0.042	0.045
Current	Cooling	A	0.25	0.25	0.34	0.37
	Heating	A	0.25	0.25	0.34	0.37
External finish			Galvanized steel plate			
Dimensions HxLxW		mm	250 x 700 x 732	250 x 700 x 732	250 x 700 x 732	250 x 900 x 732
Net weight		kg	21	21	21	25
Heat exchanger			Cross fin (Aluminum fin and copper tube)			
Fan	Type x Quantity		Sirocco x 1	Sirocco x 1	Sirocco x 1	Sirocco x 2
	Air flow (low-medium-high)	m^3/min	6.0 - 7.5 - 8.5	6.0 - 7.5 - 8.5	7.5 - 9.0 - 10.5	10.0 - 12.0 - 14.0
		l/s	100 - 125 - 142	100 - 125 - 142	125 - 150 - 175	167 - 200 - 233
		cfm	212 - 265 - 300	212 - 265 - 300	265 - 318 - 371	353 - 424 - 494
	External static press *2	Pa	35 - <50> - <70> - <100> - <150>	35 - <50> - <70> - <100> - <150>	35 - <50> - <70> - <100> - <150>	35 - <50> - <70> - <100> - <150>
Motor	Type		DC Motor			
	Power output	kW	0.085	0.085	0.085	0.121
Air filter			Polypropylene honeycomb fabric (washable)			
Refrigerant pipe diameter	Gas (brazed)	mm	12.7	12.7	12.7	12.7
	Liquid (brazed)	mm	6.35	6.35	6.35	6.35
Local drain pipe diameter			O.D.32 (1-1/4")	O.D.32 (1-1/4")	O.D.32 (1-1/4")	O.D.32 (1-1/4")
Sound pressure (low-medium-high)*3		dB(A)	21 - 25 - 27	21 - 25 - 27	23 - 27 - 30	23 - 28 - 31

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 The factory setting of airflow mode and external static pressure mode is shown without < >.
*3 Measured in anechoic chamber with 230V mains power and at the factory setting of external static pressure.

Technical specifications

MODEL			PEFY-P50VMA-E3	PEFY-P63VMA-E3	PEFY-P71VMA-E3	PEFY-P80VMA-E3
Power			1-phase 220-230-240 V 50 Hz			
Capacity in cooling mode *1		kW	5.6	7.1	8.0	9.0
		Btu/h	19,100	24,200	27,300	30,700
Capacity in heating mode*1		kW	6.3	8.0	9.0	10.0
		Btu/h	21,500	27,300	30,700	34,100
Power consumption	Cooling	kW	0.066	0.087	0.080	0.080
	Heating	kW	0.064	0.085	0.078	0.078
Current	Cooling	A	0.51	0.66	0.57	0.57
	Heating	A	0.51	0.66	0.57	0.57
External finish			Galvanized steel plate			
Dimensions HxLxW		mm	250 x 900 x 732	250 x 900 x 732	250 x 1,100 x 732	250 x 1,100 x 732
Net weight		kg	25	27	30	30
Heat exchanger			Cross fin (Aluminum fin and copper tube)			
Fan	Type x Quantity		Sirocco x 2	Sirocco x 2	Sirocco x 2	Sirocco x 2
	Air flow (low-medium-high)	m^3/min	12.0 - 14.5 - 17.0	13.5 - 16.0 - 19.0	14.5 - 18.0 - 21.0	14.5 - 18.0 - 21.0
		l/s	200 - 242 - 283	225 - 267 - 317	242 - 300 - 350	242 - 300 - 350
		cfm	424 - 512 - 600	477 - 565 - 671	512 - 636 - 742	512 - 636 - 742
	External static press*2	Pa	35 - <50> - <70> - <100> - <150>	35 - <50> - <70> - <100> - <150>	40 - <50> - <70> - <100> - <150>	40 - <50> - <70> - <100> - <150>
Motor	Type		DC Motor			
	Power output	kW	0.121	0.121	0.121	0.121
Air filter			Polypropylene honeycomb fabric (washable)			
Refrigerant pipe diameter	Gas (brazed)	mm	12.7	15.88	15.88	15.88
	Liquid (brazed)	mm	6.35	9.52	9.52	9.52
Local drain pipe diameter			O.D.32 (1-1/4")	O.D.32 (1-1/4")	O.D.32 (1-1/4")	O.D.32 (1-1/4")
Sound pressure (low-medium-high)*3		dB(A)	24 - 31 - 34	27 - 31 - 35	25 - 31 - 34	25 - 31 - 34

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 The factory setting of airflow mode and external static pressure mode is shown without < >.
*3 Measured in anechoic chamber with 230V mains power

Technical specifications

MODEL			PEFY-P100VMA-E3	PEFY-P125VMA-E3	PEFY-P140VMA-E3
Power			1-phase 220-230-240 V 50 Hz		
Capacity in cooling mode *1		kW	11.2	14.0	16.0
		Btu/h	38,200	47,800	54,600
Capacity in heating mode*1		kW	12.5	16.0	18.0
		Btu/h	42,700	54,600	61,400
Power consumption	Cooling	kW	0.142	0.199	0.208
	Heating	kW	0.140	0.197	0.206
Current	Cooling	A	0.97	1.23	1.34
	Heating	A	0.97	1.23	1.34
External finish			Galvanized steel plate		
Dimensions HxLxW		mm	250 x 1,400 x 732	250 x 1,400 x 732	250 x 1,600 x 732
Net weight		kg	37	38	42
Heat exchanger			Cross fin (Aluminum fin and copper tube)		
Fan	Type x Quantity		Sirocco x 3	Sirocco x 3	Sirocco x 3
	Air flow (low-medium-high)	m^3/min	23.0 - 28.0 - 32.0	28.0 - 34.0 - 37.0	29.5 - 35.5 - 40.0
		l/s	383 - 467 - 533	467 - 567 - 617	492 - 592 - 667
		cfm	812 - 989 - 1,130	989 - 1,201 - 1,306	1,042 - 1,254 - 1,412
	External static press*2	Pa	40 - <50> - <70> - <100> - <150>	40 - <50> - <70> - <100> - <150>	40 - <50> - <70> - <100> - <150>
Motor	Type		DC Motor		
	Power output	kW	0.300	0.300	0.300
Air filter			Polypropylene honeycomb fabric (washable)		
Refrigerant pipe diameter	Gas (swaged)	mm	15.88	15.88	15.88
	Liquid (swaged)	mm	9.52	9.52	9.52
Local drain pipe diameter			O.D.32 (1-1/4")	O.D.32 (1-1/4")	O.D.32 (1-1/4")
Sound pressure (low-medium-high)*3		dB(A)	30 - 35 - 38	34 - 38 - 40	33 - 37 - 40

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 The factory setting of airflow mode and external static pressure mode is shown without < >.
*3 Measured in anechoic chamber with 230V mains power

PEFY-P VMHS-E

INDOOR UNITS - Ceiling concealed medium to high static pressure

CITY MULTI

Four levels of external static pressure settings

Although the conventional models only had three levels of external static pressure, the new models offer four levels of external static pressure. The additional external static pressure capacity provides flexibility for duct extension, branching and air outlet configuration.

PEFY-P VMHS-E	P40	P50	P63	P71	P80	P100	P125	P140
External static pressure (Pa)	50-<100>-<150>-<200>							

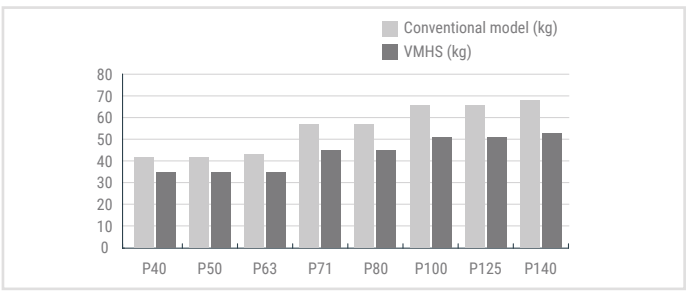
The factory setting of external static pressure is shown without < >.
Refer to "Fan characteristics curves", according to the external static pressure, in DATA BOOK for the usable range of air flow rate.

Three fan speeds (Low/Mid/High) to choose from

The conventional models had two levels of fan speed, the new models offer three levels of fan speed (Low/Mid/High). Combined with a wider selection of external static pressure levels, the new models offer optimal operation settings to suit the air-conditioning load of an Installation space.

Reduction weight

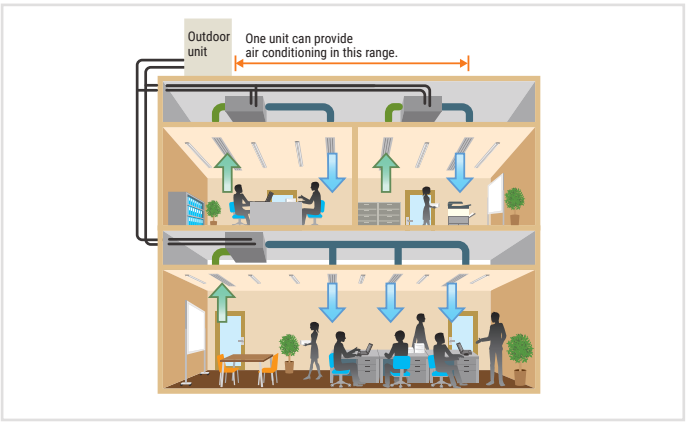
Downsizing of the motor helped reduce unit weight, offering easier installation.



The use of DC motor

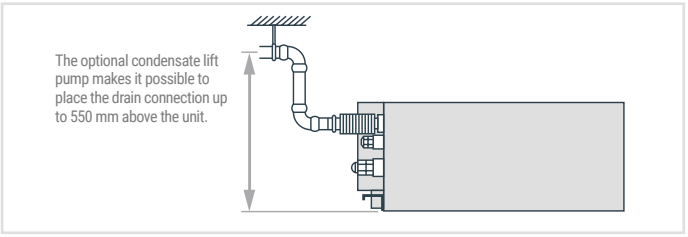
The new models are equipped with high-efficiency DC motors as compared to the AC motors on older models, which reduced power consumption. On the P80 models, power consumption is reduced by 59%*.

*Comparison made at 50 Hz, 220 V, 100 Pa Low fan speed



Optional drain pump

Use of high-efficiency DC motor for the drain pump motor on the new models reduces power consumption by 90%, in comparison to that on the conventional models. The pump head height of 550 mm provides for greater piping design flexibility.



Key Technologies

DC Inverter | ACO | AUTO | Drain Lift Up | Self Diagnosis | Auto Restart | Offset -4° | Low Temp Cooling

Technical specifications

MODEL			PEFY-P40VMHS-E	PEFY-P50VMHS-E	PEFY-P63VMHS-E	PEFY-P71VMHS-E	PEFY-P80VMHS-E	PEFY-P100VMHS-E	PEFY-P125VMHS-E	PEFY-P140VMHS-E
Power			A single-phase, 220-230-240V 50/60 Hz							
Capacity in cooling mode *1		kW	4,5	5,6	7,1	8,0	9,0	11,2	14,0	16,0
		Btu/h	15,400	19,100	24,200	27,300	30,700	38,200	47,800	54,600
Capacity in heating mode*1		kW	5,0	6,3	8,0	9,0	10,0	12,5	16,0	18,0
		Btu/h	17,100	21,500	27,300	30,700	34,100	42,700	54,600	61,400
Power consumption	Cooling	kW	0,055	0,055	0,090	0,075	0,090	0,160	0,160	0,190
	Heating	kW	0,055	0,055	0,090	0,075	0,090	0,160	0,160	0,190
Current	Cooling	A	0,41-0,39-0,38	0,41-0,39-0,38	0,64-0,62-0,59	0,54-0,52-0,50	0,63-0,61-0,58	1,05-1,01-0,96	1,05-1,01-0,96	1,24-1,19-1,14
	Heating	A	0,41-0,39-0,38	0,41-0,39-0,38	0,64-0,62-0,59	0,54-0,52-0,50	0,63-0,61-0,58	1,05-1,01-0,96	1,05-1,01-0,96	1,24-1,19-1,14
External finish			Galvanized							
Dimensions HxLxW		mm	380x745x900	380x745x900	380x745x900	380x1030x900	380x1030x900	380x1195x900	380x1195x900	380x1195x900
Net weight		kg	35	35	35	45	45	51	51	53
Heat exchanger			Cross fins (aluminium fins and copper piping)							
Fan	Type x Quantity		Sirocco x 1	Sirocco x 1	Sirocco x 1	Sirocco x 2	Sirocco x 2	Sirocco x 2	Sirocco x 2	Sirocco x 2
	Air flow (low-medium-high)	m^3/min	10,0-12,0-14,0	10,0-12,0-14,0	13,5-16,0-19,0	15,5-18,0-22,0	18,0-21,5-25,0	26,5-32,0-38,0	26,5-32,0-38,0	28,0-34,0-40,0
		l/s	167-200-233	167-200-233	225-267-317	258-300-367	300-358-417	442-533-633	442-533-633	467-567-667
		cfm	353-424-494	353-424-494	477-565-671	547-636-777	636-759-883	936-1130-1342	936-1130-1342	989-1201-1412
	Static external press	Pa	50 - 100 -150 - 200	50 - 100 -150 - 200	50 - 100 -150 - 200	50 - 100 -150 - 200	50 - 100 -150 - 200	50 - 100 -150 - 200	50 - 100 -150 - 200	50 - 100 -150 - 200
Motor	Type		Motor DC							
	Power output	kW	0,121	0,121	0,121	0,244	0,244	0,375	0,375	0,375
Air filter			-	-	-	-	-	-	-	-
Refrigerant pipe diameter	Gas (swaged)	mm	12,7	12,7	15,88	15,88	15,88	15,88	15,88	15,88
	Liquid (swaged)	mm	6,35	6,35	9,52	9,52	9,52	9,52	9,52	9,52
Local drain pipe diameter			O.D 32	O.D 32	O.D 32	O.D 32	O.D 32	O.D 32	O.D 32	O.D 32
Sound pressure (low-medium-high)*2		dB(A)	20-23-27	20-23-27	24-27-32	24-26-30	25-27-30	27-31-34	27-31-34	27-32-36

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given:
Cooling: 27°C DB / 19°C WB, outdoor 35°C DB.
Heating: 27°C DB, outdoor 7°C DB / 6°C WB.
*2 Static pressure is set to 50 Pa by default.
*3 Measured in anechoic chamber.

PEFY-P VMHS-E

INDOOR UNITS - Middle-high static pressure

CITY MULTI

Ideal for...

The new VMHS series: improved **installation flexibility** and superior performance.

DC Inverter motor

The new VMHS ducted indoor units are equipped with a single-phase DC Inverter electric motor, a solution that offers more precise electronic control and less noise.

Remotely settable static overpressure

The static overpressure may be modified from a remote control.
In addition to a dip switch on the unit, the PAR-40MAA remote control may also be used to modify static external pressure, making installation significantly simpler.
A choice of up to five different settings is available: 50, 100, 150, 200 or 250 Pa.

Automatic fan speed adjustment

The automatic fan speed adjustment mode ensures fast, comfortable heating as soon as heating mode is activated. Automatic fan speed control is included in the three standard modes “Low”, “Medium” and “High”, and ensures faster, comfortable air conditioning by increasing the air flow speed on activation and then reducing speed once stable comfort levels are attained.

Quieter

The VMHS series is 15% quieter than the previous VMH model.

Key Technologies

DC Inverter		ACO		AUTO	Drain Lift Up	Self Diagnosis	Auto Restart	Offset -4°	Low Temp Cooling

Technical specifications

MODEL			PEFY-P200VMHS-E	PEFY-P250VMHS-E
Power			A single-phase, 220-240V, 50Hz	
Capacity in cooling mode *1		kW	22.4	28.0
		Btu/h	76,000	95,500
Capacity in heating mode*1		kW	25.0	31.5
		Btu/h	72,300	90,400
Power consumption	Cooling	kW	0.63/0.63/0.63	0.82/0.82/0.82
	Heating	kW	0.63/0.63/0.63	0.82/0.82/0.82
Current	Cooling	A	3.47/3.32/3.18	4.72/4.43/4.14
	Heating	A	3.47/3.32/3.18	4.72/4.43/4.14
External finish			Galvanised	
Dimensions HxLxW		mm	470 x 1250 x 1120	470 x 1250 x 1120
Net weight		kg	97	100
Heat exchanger			Cross Fin	
Fan	Type x Quantity		Scirocco x 2	
	Air flow (low-medium-high)	m^3/min	50-61-72	58-71-84
	Static external press*2	Pa	(50)/(100)/150/(200)/(250)	
Motor	Type		Single-phase induction motor	
	Power output	kW	0.87	0.87
Air filter			-	-
Refrigerant pipe diameter	Gas (swaged)	mm	19.05	22.2
	Liquid (swaged)	mm	9.52	9.52
Local drain pipe diameter			32	32
Sound pressure (low-medium-high)*3		dB(A)	36-39-43	39-42-46

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given:
Cooling: 27°C DB / 19°C WB, outdoor 35°C DB.
Heating: 27°C DB, outdoor 7°C DB / 6°C WB.
*2 Static pressure is set to 150 Pa by default.
*3 Measured in anechoic chamber.

PCFY-P VKM-E

INDOOR UNITS - Ceiling-suspended

CITY MULTI

Ideal for...

Designed and built for quiet operation and simple maintenance, these units deliver efficient, comfortable air conditioning performance.

Optimised air flow

Air flow speed is optimised for the height of the ceiling. The ideal air flow setting may be selected for ceilings up to 4.2m in height, maximising both air conditioning efficacy and comfort.

Extremely simple installation

With the direct mount system, it is not necessary to remove the mounting from the main unit, cutting installation times.
The condensate drain pipes may be connected on the left or right of the unit.

Automatic fan speed adjustment

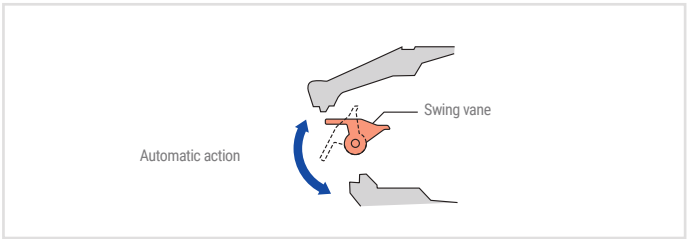
As well as the 4 manual fan speed settings, the PCFY series may also be set to automatically adjust fan speed in relation to ambient conditions: the fan speed is always set to the highest setting when the unit is switched on, to reach the desired conditions more quickly, and is reduced automatically near the setpoint for stable comfort.

Extra slim

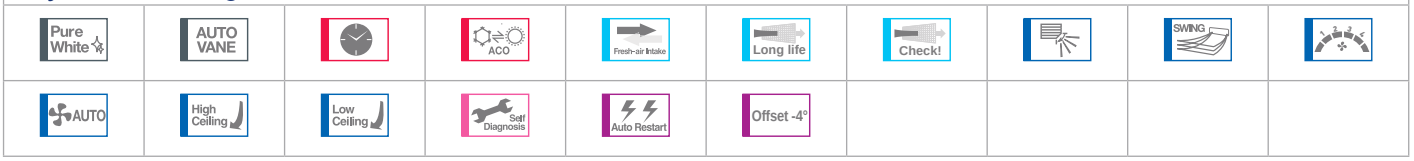
Extremely slim and with elegant curves, the PCFY series is perfectly suited to any interior. The unit also features a single air outlet, meaning that the automatic swing vane also doubles as a shutter when the unit is off.

Automatic swing vane

The automatic swing vane mode distributes air more uniformly.
The vane swings upwards and downwards automatically to distribute air effectively into every corner of the room.



Key Technologies



Technical specifications

MODEL			PCFY-P40VKM-E	PCFY-P63VKM-E	PCFY-P100VKM-E	PCFY-P125VKM-E
Power			A single-phase, 220-230-240VAC 50Hz			
Capacity in cooling mode*1		kW	4.5	7.1	11.2	14.0
		Btu/h	15400	24200	38200	47800
Capacity in heating mode*1		kW	5.0	8.0	12.5	16.0
		Btu/h	17100	27300	42700	54600
Power consumption	Cooling	kW	0.04	0.05	0.09	0.11
	Heating	kW	0.04	0.05	0.09	0.11
Current	Cooling	A	0.28	0.33	0.65	0.76
	Heating	A	0.28	0.33	0.65	0.76
External finish			Munsell 6.4Y 8.9/ 0.4			
Dimensions HxLxW		mm	230x960x680	230x1280x680	230x1600x680	230x1600x680
Net weight		kg	24	32	36	38
Heat exchanger			Cross fins (aluminium fins and copper piping)			
Fan	Type x Quantity		Sirocco x 2	Sirocco x 3	Sirocco x 4	Sirocco x 4
	Air flow (low-medium-high)	m^3/min	10-11-12-13	14-15-16-18	21-24-26-28	21-24-27-31
		l/s	167-183-200-217	233-250-267-300	350-400-433-467	350-400-450-517
		cfm	353-388-424-459	494-530-565-636	742-847-918-989	742-847-953-1095
	Static external press	Pa	0	0	0	0
Motor	Type		Single-phase DC motor			
	Power output	kW	0.090	0.095	0.160	0.160
Air filter			Polypropylene honeycomb fabric (long life)			
Refrigerant pipe diameter	Gas (swaged)	mm	ø12.7	ø15.88	ø15.88 / ø19.05 (compatibile)	ø15.88 / ø19.05 (compatibile)
	Liquid (swaged)	mm	ø6.35	ø9.52	ø9.52	ø9.52
Local drain pipe diameter			O.D. 26 (1)	O.D. 26 (1)	O.D. 26 (1)	O.D. 26 (1)
Sound pressure (low-medium-high)*2		dB(A)	29-32-34-36	31-33-35-37	36-38-41-43	36-39-42-44

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 Air flow/noise levels given for operation in low-medium1-medium2-high modes.
*3 Measured in anechoic chamber.

PKFY-P VLM NEW

INDOOR UNITS - Wall-mounted

CITY MULTI

New design

A sharp and simple form that combines beauty and function. The simple square design harmonizes beautifully with the straight lines created by the intersection of the walls, floor and ceiling of the space. With a new white body color, it is the ideal solution for residential applications, offices and large stores.

New line-up

New exclusive P10 model is added in wall mounted lineup. P10 size allows to respond to the needs of narrow spaces conditioning them finely. In addition, miniaturization of conventional P32 model has been realized. It contributes to space saving of installation area.

Capacity	P10	P15	P20	P25	P32	P40	P50	P63	P100
VLM	NEW	•	•	•	•	•	•		

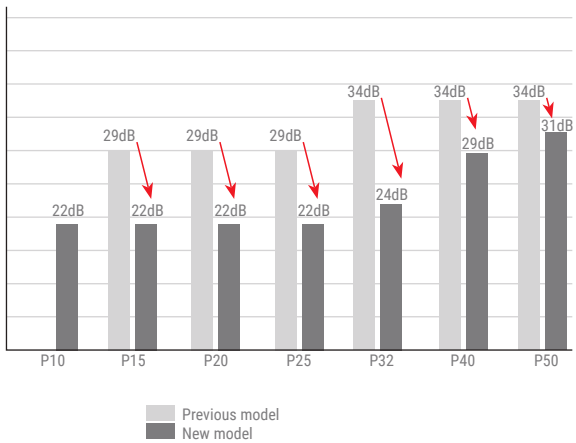
Horizontal airflow

The vane angle can be set to five steps, including the one that allows horizontal air flow, reducing the feeling of draft. Besides, 4 steps of air speed are available.

Quietness...

The noise level has been significantly reduced compared to the conventional model by reviewing the unit structure and improving the line flow fan.

PKFY-P VLM SPL (Lo)



Key Technologies

Pure White | AUTO VANE | ACO | Check! | SWING | AUTO | Self Diagnosis | Auto Restart | Offset -4°

Technical specifications

MODEL			PKFY-P10VLM-E	PKFY-P15VLM-E	PKFY-P20VLM-E	PKFY-P25VLM-E	PKFY-P32VLM-E	PKFY-P40VLM-E	PKFY-P50VLM-E
Power			A single-phase, 220-240V 50Hz, A single-phase, 220-230V 60Hz						
Capacity in cooling mode*1		kW	1.2	1.7	2.2	2.8	3.6	4.5	5.6
		Btu/h	4100	5800	7500	9600	12300	15400	19100
Capacity in heating mode*1		kW	1.4	1.9	2.5	3.2	4.0	5.0	6.3
		Btu/h	4800	6500	8500	10900	13600	17100	21500
Power consumption	Cooling	kW	0.02	0.02	0.02	0.03	0.04	0.04	0.05
	Heating	kW	0.01	0.01	0.01	0.02	0.03	0.03	0.04
Current	Cooling	A	0.20	0.20	0.20	0.25	0.35	0.35	0.45
	Heating	A	0.15	0.15	0.15	0.20	0.30	0.30	0.40
External finish			Plastic (0.7PB 9.2/0,4)						
Dimensions HxLxW		mm	299 x 773 x 237					299 x 898 x 237	
Net weight		kg	11 (25)					13 (29)	
Heat exchanger			Cross fin (Aluminium fin and copper tube)						
Fan	Type x Quantity		Line flow fan x 1						
	Air flow *2	m^3/min	3.3-3.5-3.8-4.2	4.0-4.2-4.4-4.7	4.0-4.4-4.9-5.4	4.0-4.6-5.4-6.7	4.3-5.4-6.9-8.4	6.3-7.4-8.6-10.0	6.8-8.3-10.2-12.4
		l/s	55-58-63-70	67-70-73-78	67-73-82-90	67-77-90-112	72-90-115-140	105-123-143-167	113-138-170-207
		cfm	117-124-134-148	141-148-155-166	141-155-173-191	141-162-191-237	152-191-244-297	222-261-304-353	240-293-360-438
	Static external press	Pa	0 (0)						
Motor	Type		DC motor						
	Power output	kW	0.03						
Air filter			PP Honeycomb						
Refrigerant pipe diameter	Gas (swaged)	mm	ø 12.7 (ø1/2)						
	Liquid (swaged)	mm	ø 6.35 (ø1/4)						
Local drain pipe diameter			I.D. 16 (5/8)						
Sound pressure *2 *3		dB(A)	22-24-26-28	22-24-26-28	22-26-29-31	22-27-31-35	24-31-37-41	29-34-37-40	31-36-41-46

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 Air flow/noise levels given for operation in low-medium1-medium2-high modes.
*3 Measured in anechoic chamber.

PKFY-P VB(H)(K)M-E

INDOOR UNITS - Wall-mounted

PKFY-P VBM

PKFY-P VHM

PKFY-P VKM

CITY MULTI

Ideal for...

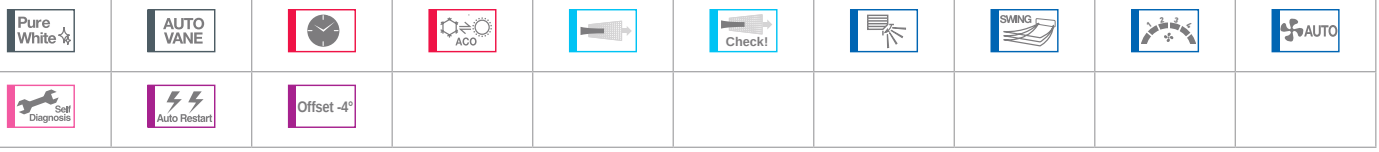
An elegant design with simple, clean lines, compact dimensions and a distinctly recognisable family look: **the ideal solution for residential applications, offices and large stores.**

Smooth front panel with pure white finish

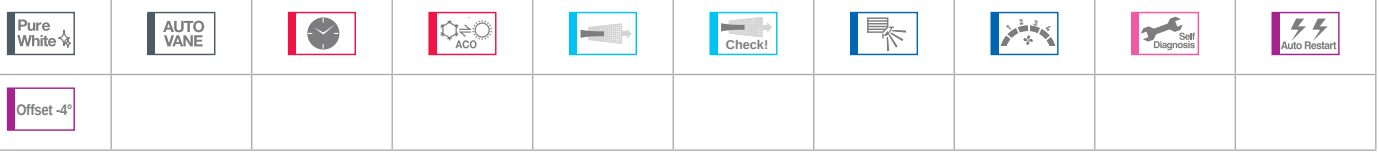
All the models of the PKFY series now feature a smooth front panel instead of the mesh used on the previous version. The units themselves are now finished in pure white instead of standard appliance white to fit in perfectly with the style of practically any interior space.

Capacity	P15	P20	P25	P32	P40	P50	P63	P100
VBM	•	•	•					
VHM				•	•	•		
VKM							•	•

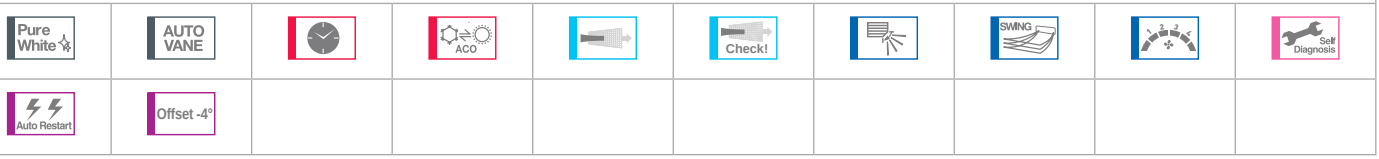
Key Technologies VHM (P32-P50)



Key Technologies VBM (P15-P25)



Key Technologies VKM (P63-P100)



Technical specifications

MODEL			PKFY-P15VBM-E	PKFY-P20VBM-E	PKFY-P25VBM-E	PKFY-P32VHM-E	PKFY-P40VHM-E
Power			A single-phase, 220-230-240VAC 50Hz				
Capacity in cooling mode*1		kW	1.7	2.2	2.8	3.6	4.5
		Btu/h	5800	7500	9600	15400	15400
Capacity in heating mode*1		kW	1.9	2.5	3.2	4.0	5.0
		Btu/h	6500	8500	10900	13600	17100
Power consumption	Cooling	kW	0.04	0.04	0.04	0.04	0.04
	Heating	kW	0.04	0.04	0.04	0.04	0.04
Current	Cooling	A	0.20	0.20	0.20	0.40	0.40
	Heating	A	0.20	0.20	0.20	0.30	0.30
External finish			Munsell plastic 1.0Y 9.2/0.2				
Dimensions HxLxW		mm	2295x815x225	2295x815x225	2295x815x225	295x898x249	295x898x249
Net weight		kg	10	10	10	13	13
Heat exchanger			Cross fins (aluminium fins and copper piping)				
Fan	Type x Quantity		Linear flow fan x 1				
	Air flow (low-medium-high)	m^3/min	4.9-5.0-5.2-5.3	4.9-5.2-5.6-5.9	4.9-5.2-5.6-5.9	9-10-11	9-10.5-11.5
		l/s	82-83-87-88	82-87-93-98	82-87-93-98	150-167-183	150-175-192
		cfm	173-177-184-187	173-184-198-208	173-184-198-208	318-353-388	318-371-406
	Static external press	Pa	0	0	0	0	0
Motor	Type		Single-phase induction motor			Motor DC	
	Power output	kW	0.017	0.017	0.017	0.030	0.030
Air filter			Polypropylene honeycomb fabric (washable)				
Refrigerant pipe diameter	Gas (swaged)	mm	ø12.7	ø12.7	ø12.7	ø12.7	ø12.7
	Liquid (swaged)	mm	ø6.35	ø6.35	ø6.35	ø6.35	ø6.35
Local drain pipe diameter			I.D. 16 (5/8)	I.D. 16 (5/8)	I.D. 16 (5/8)	I.D. 16 (5/8)	I.D. 16 (5/8)
Sound pressure (low-medium-high)*2		dB(A)	29-31-32-33	29-31-34-36	29-31-34-36	34-37-41	34-38-41

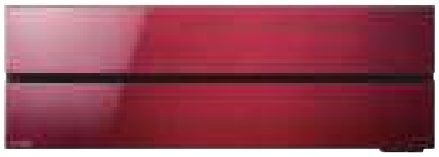
Technical specifications

MODEL			PKFY-P50VHM-E	PKFY-P63VKM-E	PKFY-P100VKM-E
Power			A single-phase, 220-230-240VAC 50Hz		
Capacity in cooling mode*1		kW	5.6	7.1	11.2
		Btu/h	19100	24200	38200
Capacity in heating mode*1		kW	6.3	8.0	12.5
		Btu/h	21500	27300	42600
Power consumption	Cooling	kW	0.04	0.05	0.08
	Heating	kW	0.03	0.04	0.07
Current	Cooling	A	0.40	0.37	0.58
	Heating	A	0.30	0.30	0.51
External finish			Munsell plastic 1.0Y 9.2/0.2		
Dimensions HxLxW		mm	295x898x249	365x1170x295	365x1170x295
Net weight		kg	13	21	21
Heat exchanger			Cross fins (aluminium fins and copper piping)		
Fan	Type x Quantity		Linear flow fan x 1		
	Air flow (low-medium-high)	m^3/min	9-10.5-12	16-20	20-26
		l/s	150-175-200	267-333	333-433
		cfm	318-371-424	565-706	706-918
	Static external press	Pa	0	0	0
Motor	Type		Motor DC		
	Power output	kW	0.030	0.056	0.056
Air filter			Polypropylene honeycomb fabric (washable)		
Refrigerant pipe diameter	Gas (swaged)	mm	ø12.7	ø15.88	ø15.88 / 19.05
	Liquid (swaged)	mm	ø6.35	ø9.52	ø9.52
Local drain pipe diameter			I.D. 16 (5/8)	I.D. 16 (5/8)	I.D. 16 (5/8)
Sound pressure (low-medium-high)*2		dB(A)	34-39-43	39-45	41-49

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 Air flow/noise levels given for operation in low-medium1-medium2-high modes, in low-medium-high modes or in low-high modes, depending on model.
Measured in anechoic chamber.

PAC-LV11-E

INDOOR UNITS - Wall-mounted design indoor unit LEV Kit



CITY MULTI

Ideal for...

The new LEV Kit may be used to connect both standard VRF indoor units and Residential line indoor units in the same CITY MULTI VRF system.

The new LEV Kit makes it possible to connect stylish residential indoor units, with looks that are perfectly suited for large installations in applications such as residential buildings and hotels, where design is a decisive factor in the choice of indoor units.

Easy installation and maintenance

The new LEV Kit is easy to install in double ceilings or dedicated niches not only because of its compact size (183 mm H x 355 mm L x 142 mm W), but also and especially because it can be installed vertically or horizontally with no condensate drain.
Additionally, a maximum permissible piping length of 15 m between indoor units and the LEV Kit offers the freedom to install the kit in the most effective position possible.

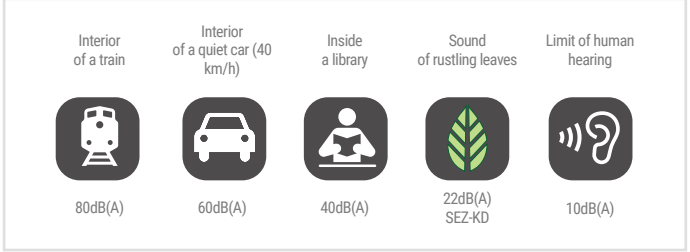
Residential indoor units

The following residential indoor units may be connected to the LEV Kit:

Residential indoor units	15	18	20	22	25	35	42	50
MSZ-LN					•	•		•
MSZ-EF_VG (NEW)		•		•	•	•	•	•
MSZ-EF_VE		•		•	•	•	•	•
MSZ-SF	•		•		•	•	•	•

Unparalleled comfort and air quality

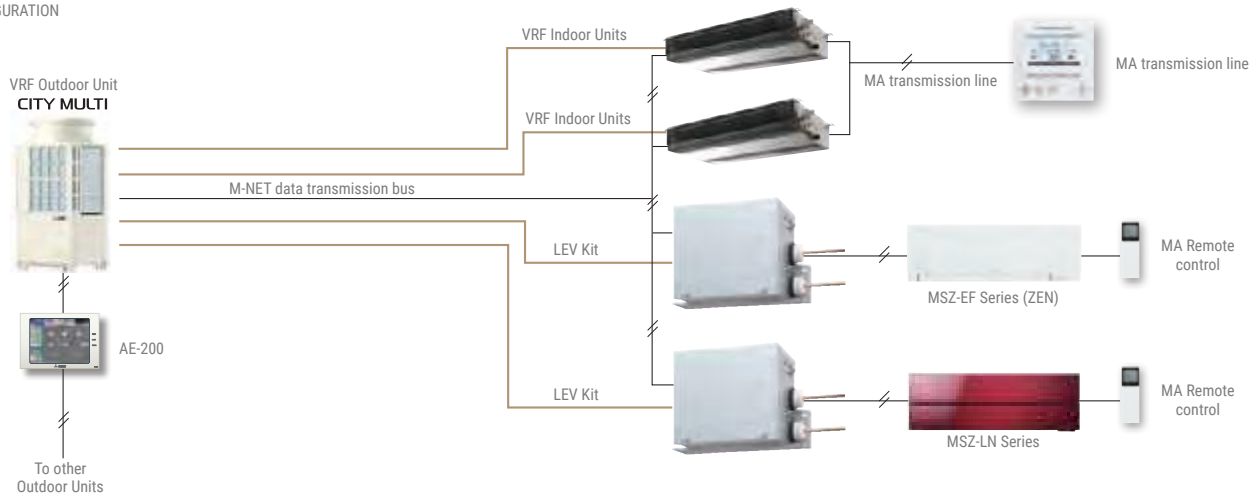
The quality of an environment also depends on perceived noise levels. Mitsubishi Electric air conditioners connected to a VRF CITY MULTI system using the LEV Kit offer the highest levels of acoustic comfort available today on the market.



The residential indoor units also contribute to higher air quality levels with the superior filtration power of air filters with nanoplatinum treatment.

Key Technologies


SYSTEM CONFIGURATION



Technical specifications

MODEL			PAC-LV11-E
Power			A single-phase, 220-240VAC 50Hz
Compatible Family series residential indoor units			MSZ-EF, MSZ-LN, MSZ-SF, MSZ-KJ
Number of branches			1 way
Maximum distance between indoor unit and LEV Kit		m	15
Compatible CITY MULTI outdoor units			Small Y Line - Small Y Compact Line - Y Lines (Ecostandard/ Standard Efficiency/High Efficiency) - Y Line Zubadan (YHM) - Y Line Replace Multi (YJM), R2 Lines (Standard Efficiency/High Efficiency) - R2 Line Replace Multi (YJM), WY Line (YHM) - WR2 Line (YHM)
Dimensions (HxLxW)		mm	180x355x142
Net weight		kg	3.5
Condensate drain			Not necessary
Installation			Vertical Horizontal
Refrigeration pipe diameter	Liquid	mm	6.35 (brazed)
	Gas	mm	-
Compatible remote controls			Standard: Remote control included with optional residential indoor units (purchased separately): 1. MA wired remote control interfaced via MAC-397IF board (optional, for installation in indoor units - purchased separately). 2. ME wired remote control, interfaced via LEV Kit terminal board.

PAC-LV11-E

INDOOR UNITS - Floor standing design LEV Kit

CITY MULTI

Ideal for...

The new LEV Kit may be used to connect both standard VRF indoor units and Residential line indoor units in the same VRF CITY MULTI system.

Easy installation and maintenance

The new LEV Kit is easy to install in double ceilings or dedicated niches not only because of its compact size (183 mm H x 355 mm L x 142 mm W), but also and especially because it can be installed vertically or horizontally with no condensate drain. Additionally, a maximum permissible piping length of 15 m between indoor units and the LEV Kit offers the freedom to install the kit in the most effective position possible.

Unparalleled comfort and air quality

The quality of an environment also depends on perceived noise levels. Mitsubishi Electric air conditioners connected to a VRF CITY MULTI system using the LEV Kit offer the highest levels of acoustic comfort available today on the market.

Residential indoor units

The following variants of the MFZ-KJ floor-standing residential indoor units may now be connected with the LEV Kit:

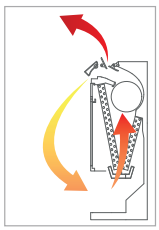
Residential indoor units	25	35	50
MFZ-KJ 	•	•	•

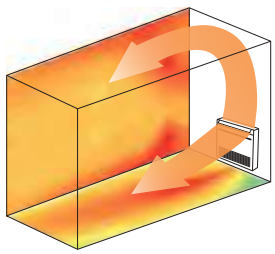
Multi-flow vane

The air delivery vent has three deflector vanes, each with a specifically designed profile to optimise the outgoing air flow and maximise comfort in both cooling and heating mode.

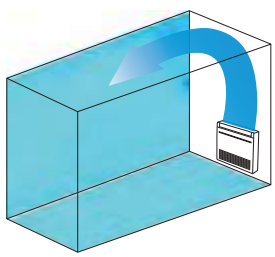
HEATING

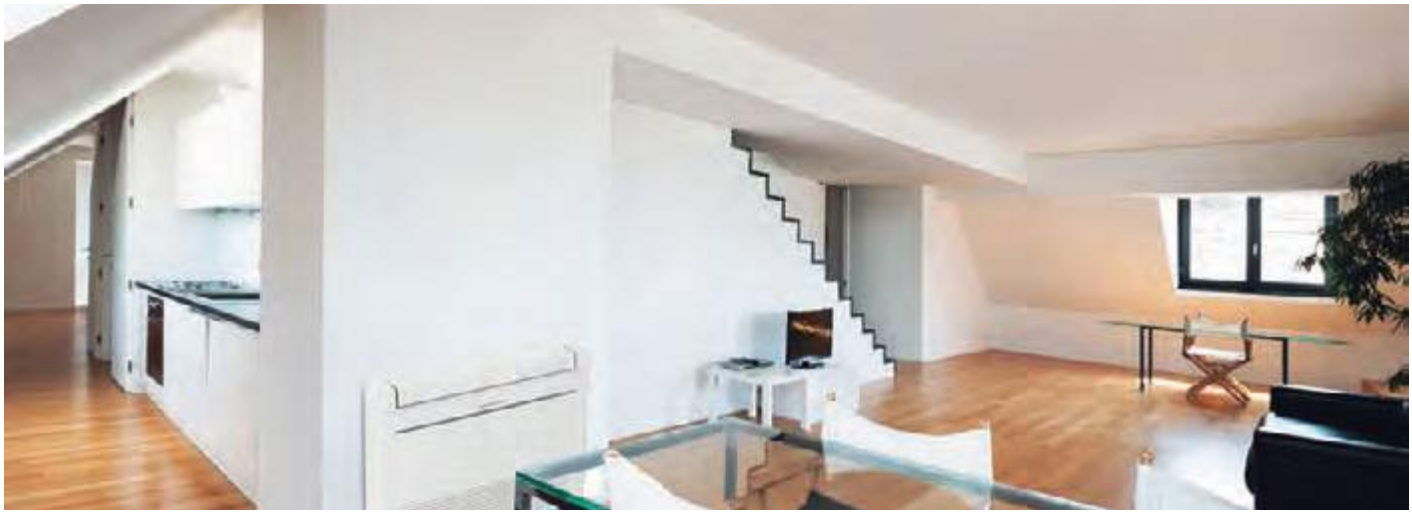
RAPID HEATING
At start-up, part of the heated air is directed downwards, near the inlet air so that it is dragged inside the unit and allows the temperature of the outlet air to be raised more quickly. The output flow direction can be set freely





COOLING

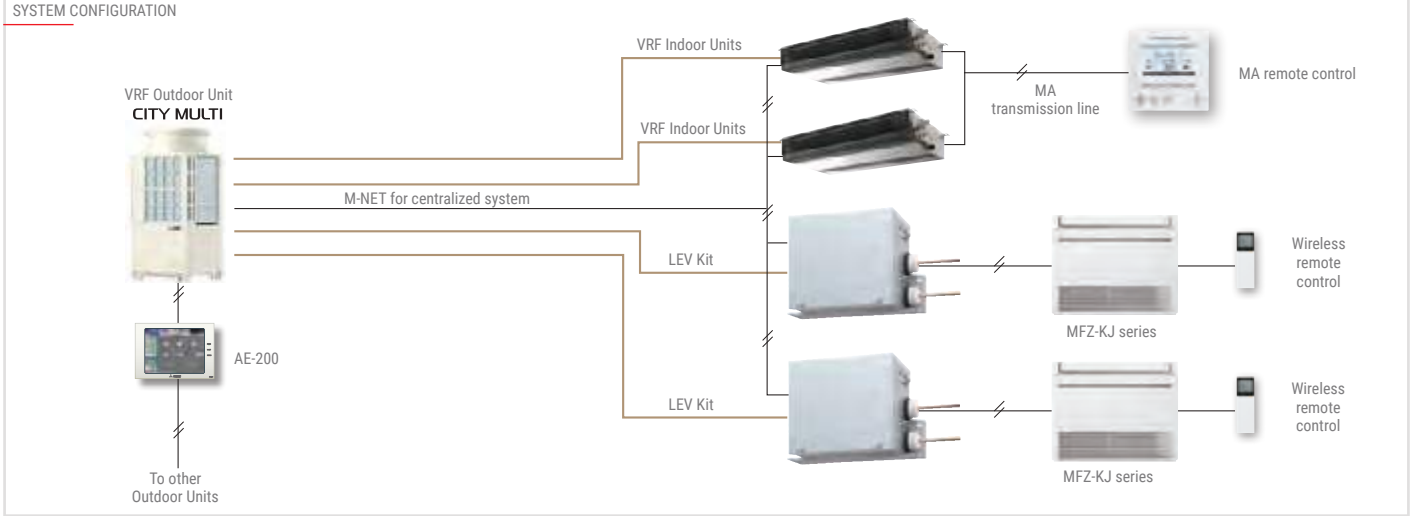




Key Technologies

Pure White	AUTO VANE		ACO	Anti-allergy Enzyme	Nano Platinum	SWING	AUTO	Self Diagnosis	Auto Restart
Low Temp Cooling									

SYSTEM CONFIGURATION



Technical specifications

MODEL			PAC-LV11-E
Power			A single-phase, 220-240VAC 50Hz
Compatible Family series residential indoor units			MFZ-KJ
Number of branches			1 way
Maximum distance between indoor unit and LEV Kit		m	15
Compatible CITY MULTI outdoor units			Small Y Line - Small Y Compact Line - Y Lines (Ecostandard/ Standard Efficiency/High Efficiency) - Y Line Zubadan (YHM) - Y Line Replace Multi (YJM), R2 Lines (Standard Efficiency/High Efficiency) - R2 Line Replace Multi (YJM), WY Line (YHM) - WR2 Line (YHM)
Dimensions (HxLxW)		mm	180x355x142
Net weight		kg	3.5
Condensate drain			Not necessary
Installation			Vertical Horizontal
Refrigeration pipe diameter	Liquid	mm	6.35 (brazed)
	Gas	mm	-
Compatible remote controls			Standard: Remote control included with optional residential indoor units (purchased separately): 1. MA wired remote control interfaced via MAC-397IF board (optional, for installation in indoor units - purchased separately). 2. ME wired remote control, interfaced via LEV Kit terminal board.

PFFY-P VKM-E

INDOOR UNITS - Design floor-standing unit

CITY MULTI

Ideal for...

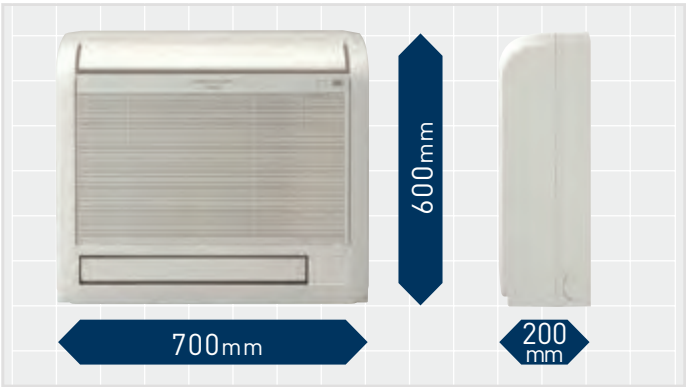
A high performance floor-standing air conditioner unit with an **elegant design** for lounges, bedrooms or offices where style is imperative.

Sophisticated design

A floor-standing air conditioner unit by Mitsubishi Electric boasting an innovative design and combining simple, linear lines with a wide choice of functions. Conceived to leave the walls free, a unit that delivers comfortable cooling performance in summer and pleasant heat in winter. The gloss pure white finish lends the unit a premium look suitable for any interior space. Both the upper and lower air vents are closed when the air conditioner is switched off, giving the unit an elegantly stylish feel. A beautifully stylish and innovative air conditioner from Mitsubishi that suits your most elegant interior spaces to perfection.

Slim but powerful

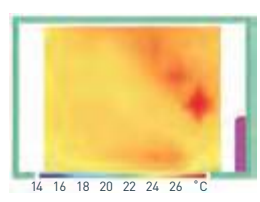
The slimline housing of the unit expresses the essence of compactness. The ideal size for a lounge, bedroom and many other rooms. The front panel is removable and washable, making the unit extremely simple to clean. Cleaning your air conditioner simply and regularly will keep it looking great and working perfectly for maximum energy efficiency.



Ideal air distribution

Air is distributed powerfully and effectively via the upper and lower air vents, ensuring a comfortable temperature throughout the room. The angle of the upper vent is settable into 5 different positions (+ swing and automatic modes) from a remote control, while 4 different air speed settings are available. Setting the vane to an almost vertical position prevents undesirable draughts, for even greater comfort.

The air delivered from the upper and lower vents is controlled for optimum comfort and distributed evenly into every corner of the room. In heating mode, the warm air flow is controlled intelligently to reach floor level, making cold feet a thing of the past!



Key Technologies

Pure White | AUTO VANE | ACO | Catechin | Check! | SWING | Self Diagnosis | Auto Restart

Technical specifications

MODEL			PFFY-P20VKM-E	PFFY-P25VKM-E	PFFY-P32VKM-E	PFFY-P40VKM-E
Power			A single-phase, 220-240V 50Hz			
Capacity in cooling mode*1		kW	2.2	2.8	3.6	4.5
		Btu/h	7500	9600	12300	15400
Capacity in heating mode*1		kW	2.5	3.2	4.0	5.0
		Btu/h	8500	10900	13600	17100
Power consumption	Cooling	kW	0.025	0.025	0.025	0.028
	Heating	kW	0.025	0.025	0.025	0.028
Current	Cooling	A	0.20	0.20	0.20	0.24
	Heating	A	0.20	0.20	0.20	0.24
External finish			Plastic (pure white)			
Dimensions HxLxW		mm	600x700x200	600x700x200	600x700x200	600x700x200
Net weight		kg	15	15	15	15
Heat exchanger			Cross fins (aluminium fins and copper piping)			
Fan	Type x Quantity		Linear flow fan x 2			
	Air flow (low-medium-high-extra high)	m^3/min	5.9-6.8-7.6-8.7	6.1-7.0-8.0-9.1	6.1-7.0-8.0-9.1	8.0-9.0-9.5-10.7
	Static external pres.	Pa	0	0	0	0
Motor	Type		DC motor			
	Power output	kW	0.03x2	0.03x2	0.03x2	0.03x2
Air filter			Polypropylene honeycomb fabric (catechin filter)			
Refrigerant pipe diameter	Gas (swaged)	mm	ø12.7	ø12.7	ø12.7	ø12.7
	Liquid (swaged)	mm	ø6.35	ø6.35	ø6.35	ø6.35
Local drain pipe diameter			D.I. 16 (PVC pipe connectable to VP-16)			
Sound pressure (low-medium-high)*2		dB(A)	27-31-34-37	28-32-35-38	28-32-35-38	35-38-42-44

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 Measured in anechoic chamber.

PFFY-P VLEM-E

INDOOR UNITS - Floor standing unit

CITY MULTI

Ideal for...

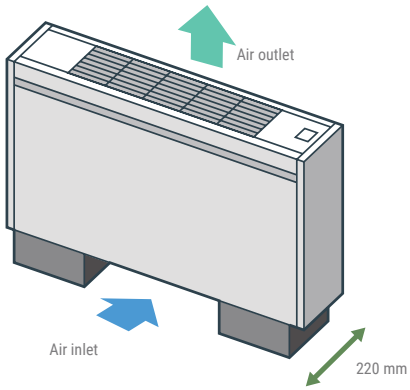
A free floor standing **unit ideal for perimeter zones**. A compact unit for easy conditioning even in the perimeter area. The 220mm deep body (8-11 / 16in.)
Can be easily installed in the perimeter area to achieve effective conditioning in this area as well.

Compact unit

A compact unit offering a simple solution for conditioning perimeter zones. The compact unit, measuring just 220 mm in depth (8-11/16"), is easily installable in perimeter areas to ensure effective conditioning performance in these zones too.

Cooling dehumidification function

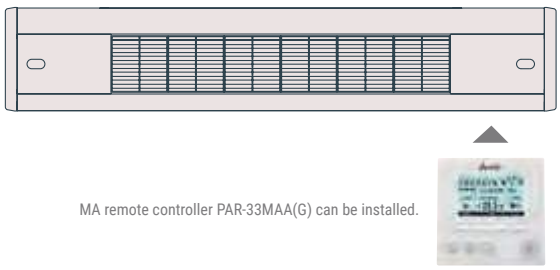
The electronic dehumidifier function uses cooling to dehumidify the air. The compact unit, measuring just 220 mm in depth, is easily installable in perimeter areas to ensure effective conditioning performance in these zones too.



Characteristics of PFFY-P VLEM-E

- Standardised design with simple lines.
- Suitable for all spaces, from offices and shops to hospitals.
- May be equipped with a water vapour impermeable membrane humidifier system.
- Features a specific concealed housing for stowing a remote control unit out of sight.

REMOTE CONTROLLER CAN BE BUILT-IN



MA remote controller PAR-33MAA(G) can be installed.

Key Technologies





Technical specifications

MODEL			PFFY-P20VLEM-E	PFFY-P25VLEM-E	PFFY-P32VLEM-E	PFFY-P40VLEM-E	PFFY-P50VLEM-E	PFFY-P63VLEM-E
Power			A single-phase, 220-240V, 50Hz / a single-phase, 208-230V, 60Hz					
Capacity in cooling mode*1		kW	2.2	2.8	3.6	4.5	5.6	7.1
		Btu/h	7500	9600	12300	15400	19100	24200
Capacity in heating mode*1		kW	2.5	3.2	4.0	5.0	6.3	8.0
		Btu/h	8500	10900	13600	17100	21500	27300
Power consumption	Cooling	kW	0.04 / 0.06	0.04 / 0.06	0.06 / 0.07	0.065 / 0.075	0.085 / 0.09	0.1 / 0.11
	Heating	kW	0.04 / 0.06	0.04 / 0.06	0.06 / 0.07	0.065 / 0.075	0.085 / 0.09	0.1 / 0.11
Current	Cooling	A	0.19 / 0.25	0.19 / 0.25	0.29 / 0.30	0.32 / 0.33	0.40 / 0.41	0.46 / 0.47
	Heating	A	0.19 / 0.25	0.19 / 0.25	0.29 / 0.30	0.32 / 0.33	0.40 / 0.41	0.46 / 0.47
External finish			Acrylic paint (5Y 8/1)					
Dimensions HxLxW		mm	630x1050x220	630x1050x220	630x1170x220	630x1170x220	630x1410x220	630x1410x220
Net weight		kg	23	23	25	26	30	32
Heat exchanger			Cross fins (aluminium fins and copper piping)					
Fan	Type x Quantity		Scirocco x 1	Scirocco x 1	Scirocco x 1	Scirocco x 2	Scirocco x 2	Scirocco x 2
	Air flow	m^3/min	5.5-6.5	5.5-6.5	7.0-9.0	9.0-11.0	12.0-14.0	12.0-15.5
		l/s	92-108	92-108	117-150	150-183	200-233	200-258
		cfm	194-230	194-230	247-318	318-388	424-494	424-547
	Static external pres.	Pa	0	0	0	0	0	0
Motor	Type		Single-phase induction motor					
	Power output	kW	0.015	0.015	0.018	0.030	0.035	0.050
Air filter			Polypropylene honeycomb fabric (washable)					
Refrigerant pipe diameter	Gas (swaged)	mm	ø12.7	ø12.7	ø12.7	ø12.7	ø12.7	ø15.88
	Liquid (swaged)	mm	ø6.35	ø6.35	ø6.35	ø6.35	ø6.35	ø9.52
Local drain pipe diameter			D.I. 26 (1) <Accessory pipe O.D. 27 (upper end: O.D. 20)>					
Sound pressure*2*3*4		dB(A)	34-40	34-40	35-40	38-43		40-46

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB.
*2 Air flow/noise levels given for operation in low-high modes.
*3 Measurement point: 1m x 1m, Power: 240V AC/50Hz:
1dB(A) less with 230V AC/50Hz.
2dB(A) less with 220V AC/50Hz.
3dB(A) less with measurement point at 1.5 m x 1.5 m.
*4 Measured in anechoic chamber.

PFFY-P VCM-E NEW

INDOOR UNITS - Floor standing concealed

CITY MULTI

Ideal for...

Built-in floor units: simplified installation for effective air **conditioning performance**.

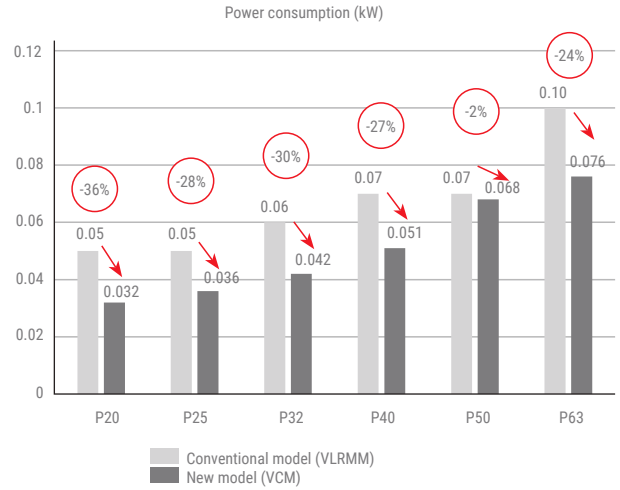
Flexible air-flow and external static pressure setting

The VCM series may be configured with a choice of four different static external pressure settings: 0, 10, 40 and 60 Pa. Besides airflow rate can be selected from 3 patterns (Low-Mid-High).

Reduced power consumption and noise

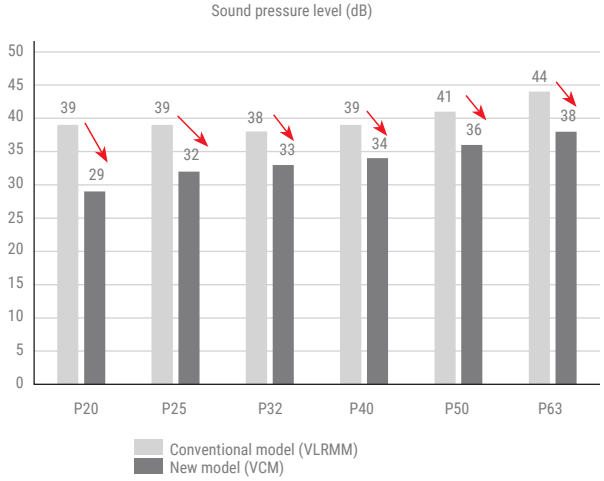
New structure realizes smoother airflow to reduce pressure loss in air pathway. The combination of an improved air pathway structure and components contributes to reduce power consumption and operation noise.

REDUCTION IN POWER CONSUMPTION



*Measurement condition (External static pressure: 40Pa Fan speed: High)
*The unit consumes the same power in both cooling and heating modes.

REDUCTION IN NOISE



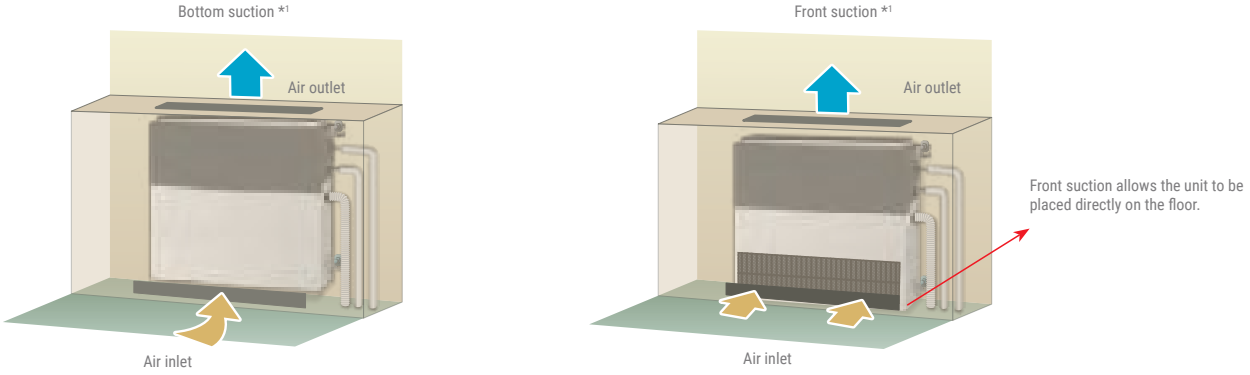
* The sound pressure level in operation is measured at 1.5 m apart from the front side and bottom side of the unit in anechoic room.

Key Technologies VCM

	ACO		Check!			Self Diagnosis	Auto Restart	Low Temp Cooling	

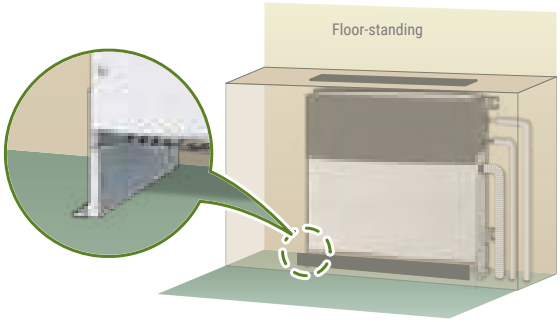
FLEXIBLE INSTALLATION

Selectable air inlet pattern
It is selectable bottom suction or front suction by changing panel, fan guard and filter.



*1 Select a site where the flow of supply and air is not blocked. This unit cannot be placed directly on the floor with bottom suction.
*2 Unit with front suction makes noise than that with bottom suction. It is recommended that the bottom suction to be selected when installing the units in rooms that should be quiet, such as bedrooms.

Floor-standing with legs
The unit can be placed on the floor with the supplied legs.



*Height of unit (with legs) is 690 mm.

Technical specifications

MODEL			PFFY-P20VCM-E	PFFY-P25VCM-E	PFFY-P32VCM-E	PFFY-P40VCM-E	PFFY-P50VCM-E	PFFY-P63VCM-E
Power			A single-phase, 220-240V, 50Hz / a single-phase, 208-230V, 60Hz					
Capacity in cooling mode*1		kW	2.2	2.8	3.6	4.5	5.6	7.1
		Btu/h	7,500	9,600	12,300	15,400	19,100	24,200
Capacity in heating mode*1		kW	2.5	3.2	4.0	5.0	6.3	8.0
		Btu/h	8,500	10,900	13,600	17,100	21,500	27,300
Power consumption*2	Cooling	kW	0.022	0.026	0.031	0.038	0.052	0.058
	Heating	kW	0.022	0.026	0.031	0.038	0.052	0.058
Current*2	Cooling	A	0.25	0.30	0.34	0.38	0.50	0.49
	Heating	A	0.25	0.30	0.34	0.38	0.50	0.49
External finish			Galvanized steel plate					
Dimensions HxLxW*3		mm	615(690)x700x200	615(690)x700x200	615(690)x700x200	615(690)x900x200	615(690)x900x200	615(690)x1,100x200
Net weight		kg	18	18	18.5	22.5	22.5	25.5
Heat exchanger			Cross fin (aluminium fin and copper piping)					
Fan	Type x Quantity		Sirocco x 2	Sirocco x 2	Sirocco x 2	Sirocco x 3	Sirocco x 3	Sirocco x 4
	Air flow		(Low-Mid-High)					
		m^3/min	5.5-6.0-7.0	5.5-6.5-8.0	5.5-7.0-8.5	8.0-9.5-11.0	10.0-11.5-13.5	12.0-14.0-16.5
		l/s	83-100-117	92-108-133	92-117-142	133-158-183	167-192-225	200-233-275
		cfm	177-212-247	194-230-282	194-247-300	282-335-388	353-406-477	424-494-583
	Static external pres.	Pa	<0> - 10 - <40> - <60>	<0> - 10 - <40> - <60>	<0> - 10 - <40> - <60>	<0> - 10 - <40> - <60>	<0> - 10 - <40> - <60>	<0> - 10 - <40> - <60>
Motor	Type		DC motor					
	Power output	kW	0.096	0.096	0.096	0.096	0.096	0.096
Air filter			Polypropylene honeycomb fabric (washable)					
Refrigerant pipe diameter	Gas (brazed)	mm	ø12.7	ø12.7	ø12.7	ø12.7	ø12.7	ø15.88
	Liquid (brazed)	mm	ø6.35	ø6.35	ø6.35	ø6.35	ø6.35	ø9.52
Field drainpipe diameter			O.D. 32 (1-1/4)					
Sound pressure*2		dB(A)	21-23-26	22-25-29	23-26-30	25-27-30	28-31-34	28-32-35

*1 For heating/cooling capacity, the maximum value with the unit operating in the following conditions is given.
Cooling: indoor 27°C (81°F) DB/19°C (66°F) WB, outdoor 35°C (95°F) DB. Heating: indoor 20°C (68°F) DB, outdoor 7°C (45°F) DB/6°C (43°F) WB.
*2 The values are measured at the factory setting of external static pressure (10 Pa).
*3 The values in ( ) show the height of unit with leg.

HVRF System

Hybrid heat recovery system

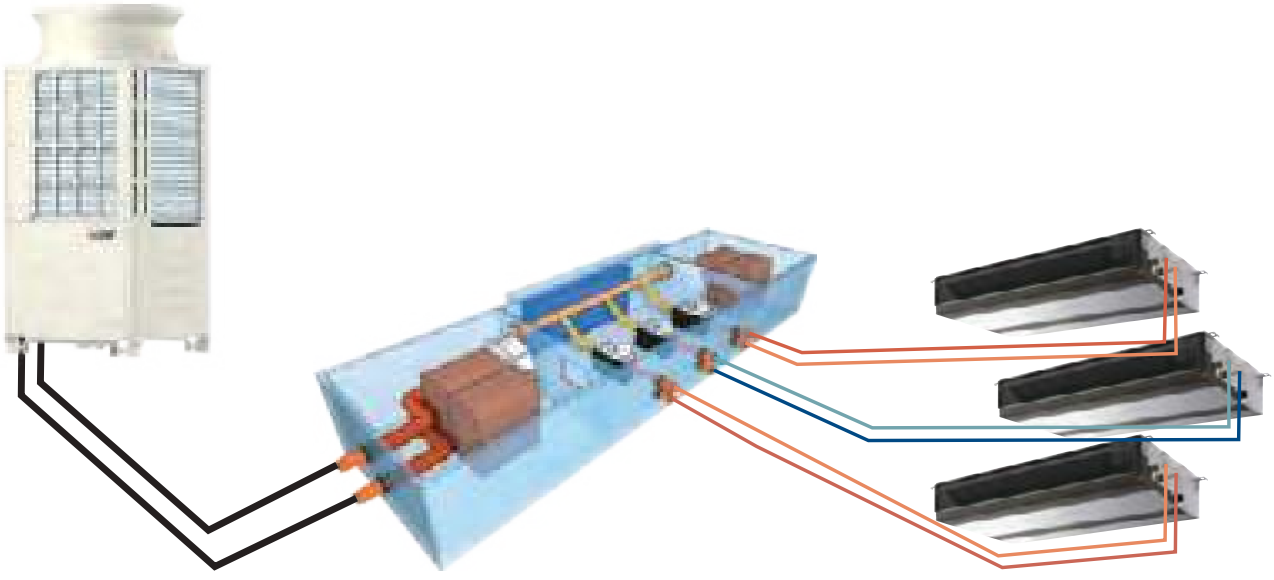
Piping restrictions

HYBRID
CITY MULTI

HVRF System

Hybrid heat recovery system

WHAT'S HYBRID VRF?



HYBRID City Multi

Mitsubishi Electric technologic innovation

HYBRID City Multi is the first and only R2 derived system capable of granting high air confort together with the benefits of direct expansion variable refrigerant flow technology.

Why HYBRID VRF?

HVRF is an heat recovery system

(simultaneous heating and cooling) joining the Mitsubishi Electric City Multi family using, for the first time, water to transport heating and cooling power to the environment. Built and assembled in the same factory as our VRF units thereby carrying its distinctive DNA in terms of technology, efficiency and reliability.

Hybrid BC controller

Simultaneous heating/cooling with heat recovery

Our new Hybrid City Multi (HVRF) is the first ever two pipe system combining the benefits of direct expansion with the typical confort granted by hydronic systems. The technology is based on the heat recovery City Multi R2 by Mitsubishi Electric. It is composed by an outdoor unit R2 series and the new Hybrid Branch Controller (HBC), which allows to use refrigerant gas and water as heat carriers, together with indoor units suitably designed for hydronic use.

Lower R410 gas concentration inside the building

The use of hydronic distribution allows to overcome the limits on indoor gas concentration imposed by current strict regularory system

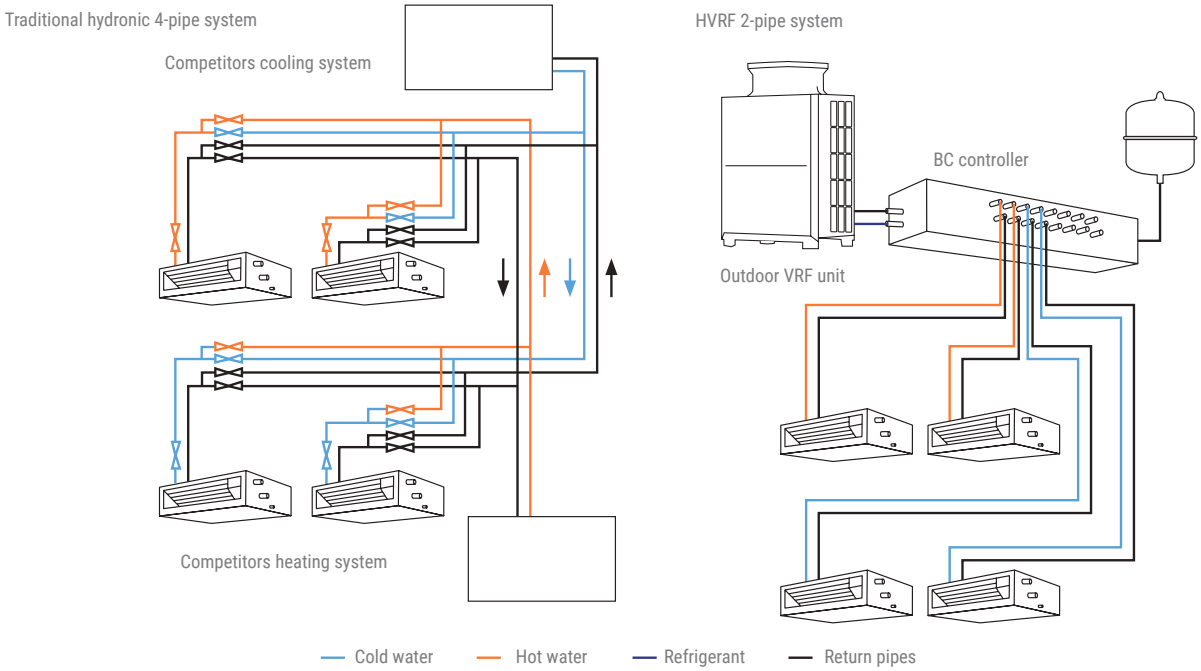
(UNI EN 378). This is possible thanks to the use of refrigerant gas only in the part of the plant which develops from the outdoor unit to the HBC. Using water fed indoor units it is possible to reduce the refrigerant load of the system up to 45% compared to a traditional VRF system.

Two pipe system

Traditional hydronic systems use 4 pipes in order to produce simultaneous heating and cooling.

Mitsubishi Electric HVRF is a 2 pipe system instead, reducing components needed (pumps, tanks, valves) and connection-points between pipes and units, thus lowering the risk of refrigerant loss and the need of maintenance.

COMPARISON BETWEEN CONNECTION-POINTS



Key Technologies

Hybrid heat recovery system

High SHF (Sensible Heat Factor) cooling

Thanks to Hybrid City Multi technology it is possibile to design systems with typical VRF simplicity and higher confort thanks to the use of water as heat carrier. Mitsubishi Electric water-fed indoor units grant a really stable temperature control, with higher Sensible Heat Factor (SHF) than traditional direct expantion systems.

Reduced defrost and transitory time

Using water as heat carrier also gives an additional advantage during heating periods, reducing defrost time. Thanks to water thermal inertia it is possible to resume releasing heat to the environment just after a defrost cycle, minimizing the system turn-off periods.

Silent functioning with water cooled units

Indoor units of the Hybrid City Multi are equipped with water-fed heat exchangers. The lack of LEV valve in the units grants a very silet functioning regime, particularly suited for “sensible” environments such as libraries, schools, bedrooms.

Modular system for fractionate and progressive installation

Hybrid City Multy system is particularly suited for designs which require partial installation or applications catatterized by fractionated realization schedule. This often occurs in real-estate of commercial/residential buildings intended for different type of users, which are often sold/realized separately.

HYBRID CITY MULTI

Pump regulation based of required load

Hybrid City Multi gathers all needed regulation and distribution functions typical of traditional hydronic systems. Thanks to two inverter circulation pumps the HVRF is able to regulate the water flow fed to the indoor units based on the heat load required.

M-NET control system

As part of the City Multi family, the Hybrid VRF is compatible with VRF control and comunication system M-Net. This allows the HVRF to benefit from M-NET Power, which grants the system to be able to work regularly even during electric blackout of one or more indoor units. This is particularly useful and effective in plants shared between different users.

Integrated valves, pumps, heat exchangers and control system

The innovative Hybrid Branch Controller is the first to use refrigerant gas and water as heat carriers thanks to special plate heat exchangers. All the needed components for regulation and distribution of water are already installed inside the unit. Two separate heat exchangers give the possibility of producing hot and cold water simultaneously. Thanks to supply and return flow headers, regulation valves and two inverter pumps the controller is able to andle, without any external support, hydronic distribution based on series of complex data collected form the system itself.

Accessories and safety features

During HVRF installation the following features are needed:

- Copper or multilayer pipes, 20mm diameter
- Expantion tank linked to the HBC
- Water feeding line with non-return valve, isolation valve, strainer, pressure reducer
- Condensate extraction line
- Electric power line 220V

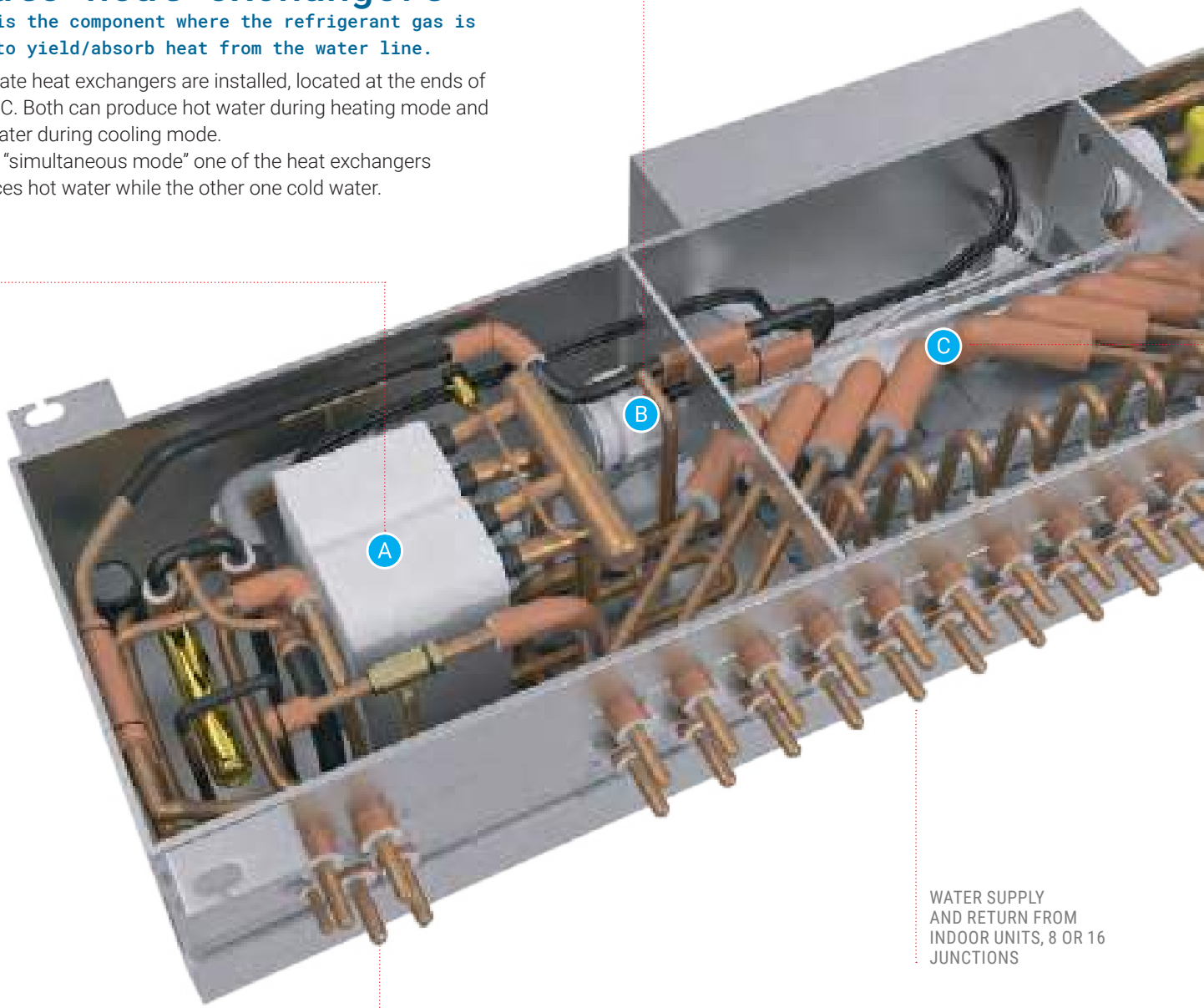
Hybrid Branch Controller (HBC)

The heart of Hybrid VRF

Plate heat exchangers

This is the component where the refrigerant gas is able to yield/absorb heat from the water line.

Two plate heat exchangers are installed, located at the ends of the HBC. Both can produce hot water during heating mode and cold water during cooling mode.
During “simultaneous mode” one of the heat exchangers produces hot water while the other one cold water.



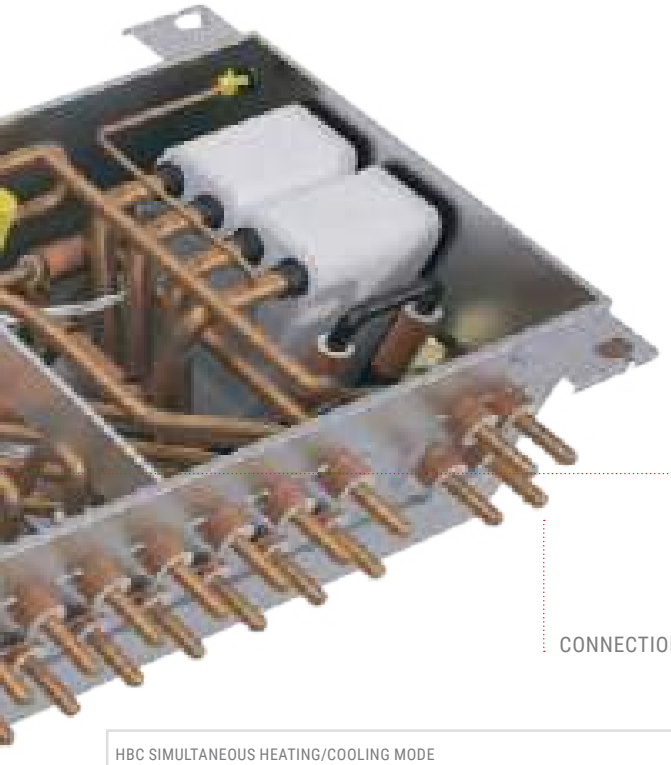
WATER SUPPLY
AND RETURN FROM
INDOOR UNITS, 8 OR 16
JUNCTIONS

REFRIGERANT PIPES
TO OUTDOOR UNIT,
EXPANTION VESSEL
(FIELD SUPPLIED)
AND WATER FEEDING LINE
(FIELD SUPPLIED)

Pumps

Both plate heat exchangers are equipped with inverter DC pumps.

The pumps allow circulation of water between HBC and the indoor units. The flow rate is controlled by a valves block.



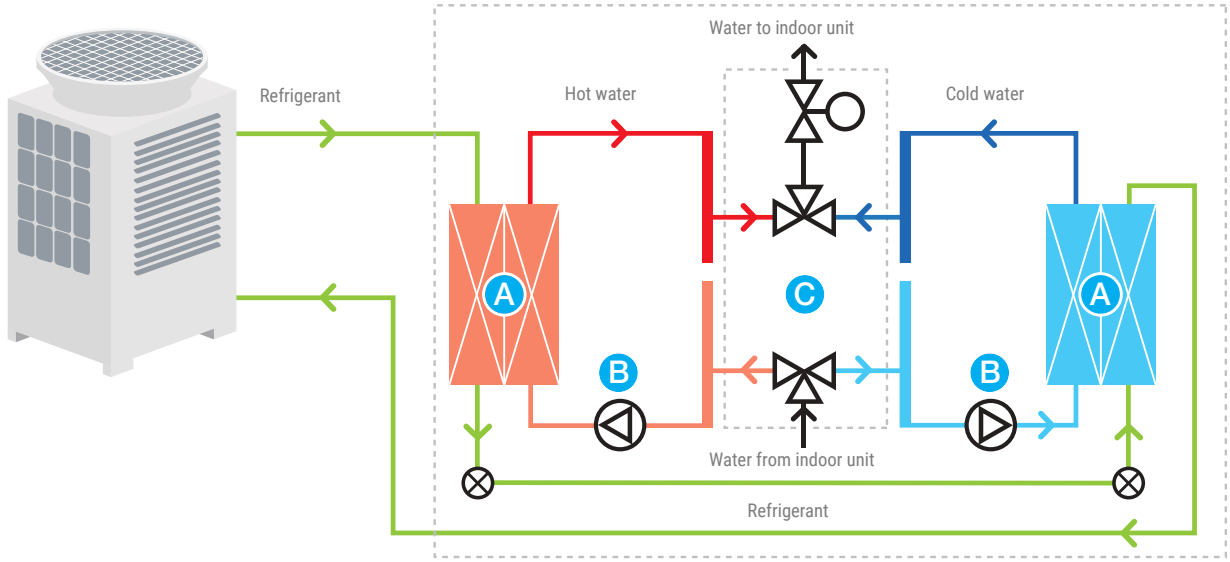
Valves Block

A set of valves is connected to supply and return pipes of each indoor unit.

This valves block has two tasks: firstly it selects the hot or cold water header and then it regulates the flow fed to the indoor units based on the thermal power required.

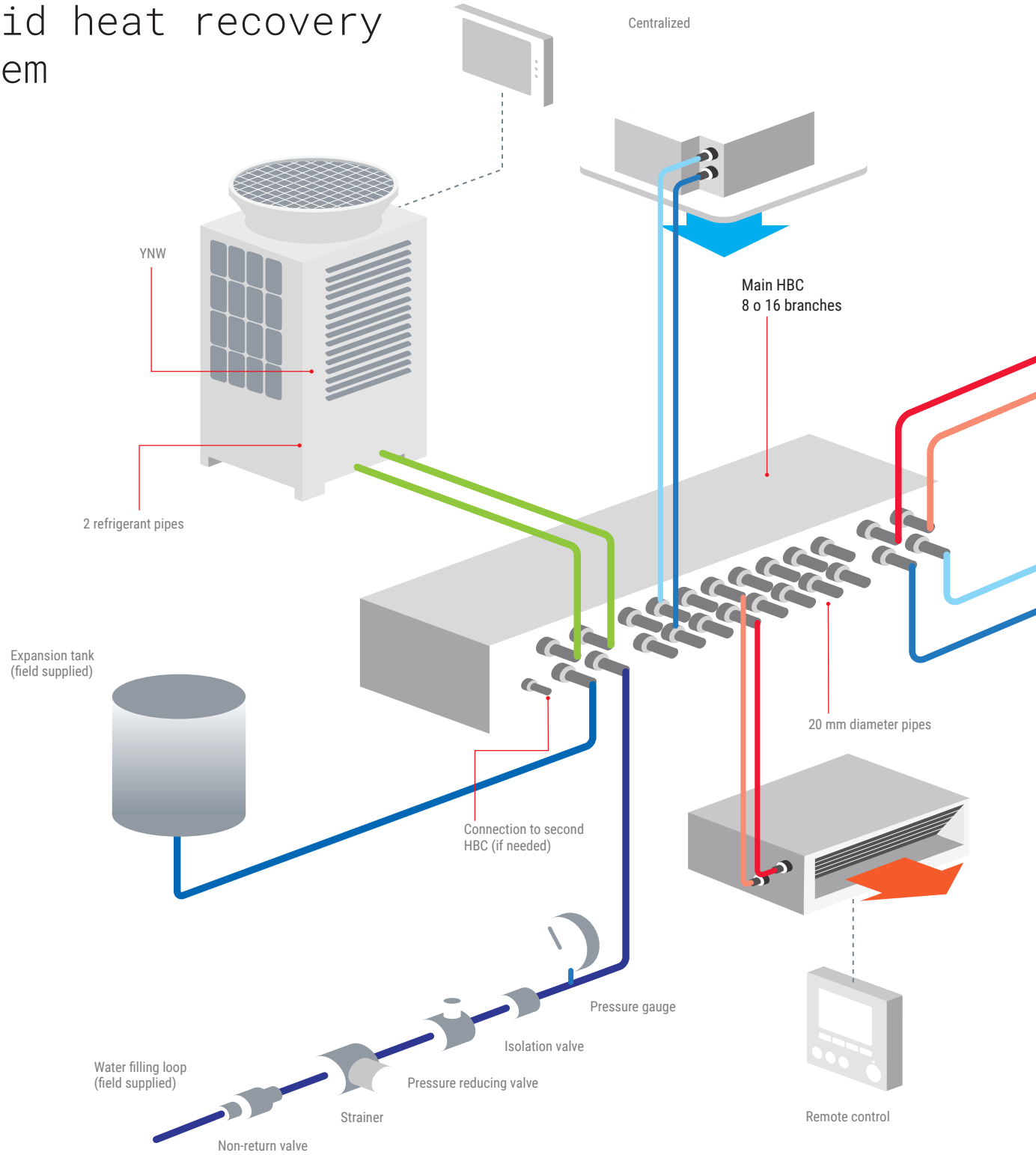
CONNECTION TO SUB HBC

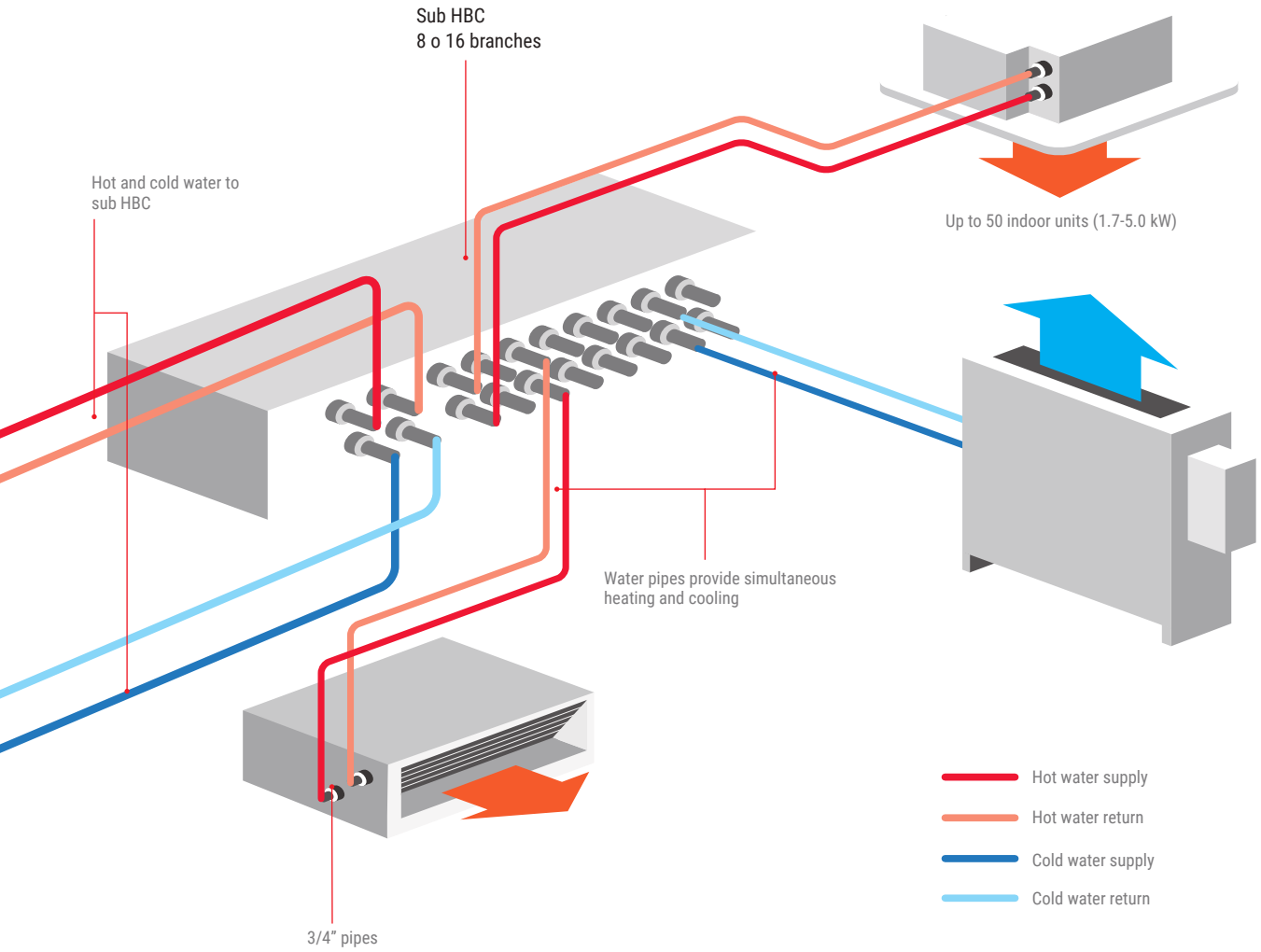
HBC SIMULTANEOUS HEATING/COOLING MODE



System architecture

Hybrid heat recovery system





Outdoor unit PURY/PQRY	FIRST MAIN HBC	FIRST SUB HBC	SECOND MAIN HBC	SECOND SUB HBC
P200	•	•*	X	X
P250	•	•*	X	X
P300	•	•*	•*	•*
P350	•	•*	•*	•*
P400	•	•*	•	•*
P450	•	•*	•	•*
P500	•	•*	•	•*

*Optional

System application and components

Hybrid heat recovery system

Ideal for...

Hybrid City Multi system has been developed to fit high standards of efficiency and confort in modern building architecture (office, hotel, hospitals...)

Office

Modern office building industry offers the challenge of being able to combine high efficiency systems, respectful of today strict energy law, and sundry thermal loads deriving from PCs, printers, servers and people, requiring heating, cooling and air treatment. Hybrid City Multi is able to satisfy all these needs, granting a modern solution for an excelent work environment.

Hotel

High confort and reliability are a priority in hotel business applications. Thanks to water fed indoor units, supply air temperature to the environment is particulary mild, granting higher confort. By means of a remote control the guest is able to chose either heating or cooling indipendently from other guests' choice.

The use of water also makes for an easier design, avoiding gas concentation limits even in small environments.

HYBRID | IN OFFICE

HYBRID | IN HOTEL

Outdoor units

Outdoor units for HVRF Hybrid CITY MULTI are air condensed R2 (YNW) and water condensed WR2 (YLM), same as for traditional VRF CITY MULTI.

Capacity	8 HP	10 HP	12 HP	14 HP	16 HP	18 HP	20 HP
R2	PURY-P200YNW-A	PURY-P250YNW-A	PURY-P300YNW-A	PURY-P350YNW-A	PURY-P400YNW-A	PURY-P450YNW-A	PURY-P500YNW-A
R2 High Eff.	PURY-EP200YNW-A	PURY-EP250YNW-A	PURY-EP300YNW-A	PURY-EP350YNW-A	PURY-EP400YNW-A	PURY-EP450YNW-A	PURY-EP500YNW-A
WR2	PQRY-P200YLM-A(1)	PQRY-P250YLM-A(1)	PQRY-P300YLM-A(1)	PQRY-P350YLM-A(1)	PQRY-P400YLM-A(1)	PQRY-P450YLM-A(1)	PQRY-P500YLM-A(1)

HBC Distributor

The HBC distributor links the outdoor to the indoor units and allows heat exchange between water and refrigerant. Energy efficient inverter pumps already installed in the component can push water flow up to 60m away to the last indoor unit.

Model	CMB-W(P)(M)108V-(GA1)(AA)	CMB-W(P)(M)108V-(GB1)(AB)	CMB-W(P)(M)1016V-(GA1)(AA)	CMB-W(P)(M)1016V-(GB1)(AB)
Branches	8	8 (sub) (without pumps and heat exchangers)	16	16 (sub) (without pumps and heat exchangers)

CMB-W(P)(M)1016V-(GA1)(AA)

Indoor Units

Indoor units are specifically designed for HYBRID City Multi.

PEFY-WP-VMS1-E

PEFY-WP-VMA-E

PLFY-WP-VBM-E

PLFY-WP VFM-E1

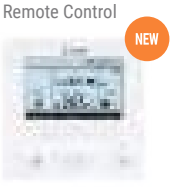
PFFY-WP-VLRMM-E

Model/size	WP10	WP15	WP20	WP25	WP32	WP40	WP50	WP63	WP71	WP80	WP100	WP125
PEFY-WP VMS1-E	•	•	•	•	•	•	•					
PEFY-WP VMA-E			•	•	•	•	•	•	•	•	•	•
PLFY-WP VBM-E					•	•	•					
PFFY-WP VLRMM-E			•	•	•	•	•					
PLFY-WP VFM-E	•	•	•	•	•							
Capacity	1.2 kW	1.7 kW	2.2 kW	2.8 kW	3.6 kW	4.5 kW	5.6 kW	7.1 kW	8.0 kW	9.0 kW	11.2 kW	14.0 kW

Control Systems

Mitsubishi Electric M-Net Bus allows a continous data exchange between all system components, in order to reach a optimal functioning regime.

Remote Control



PAR-40MAA

PAR-U02MEDA-J

PAR-CT01MAA-SB

PAR-CT01MAA-PB

Web Server Centralized

AE-200E

Cloud Remote Management System

REMOTE MONITORING INTERFACE

R2 Line

HEAT RECOVERY OUTDOOR UNIT

Technical specifications

MODEL				PURY-P200YNW-A (-BS)	PURY-P250YNW-A (-BS)	PURY-P300YNW-A (-BS)	PURY-P300YNW-A (-BS) X2 HBC	PURY-P350YNW-A (-BS)	PURY-P350YNW-A (-BS) X2 HBC
HP				8	10	12	12	14	14
Power Supply	Tensione/Freq./Phases		V/Hz/n°	3 phase 380-400-415V 50Hz					
Cooling	Nominal capacity*1		kW	22.4	28.0	33.5	33.5	40.0	40.0
	Power input		kW	7.00	9.92	13.34	11.31	17.93	14.59
	EER	Outdoor unit		5.05	4.69	4.44	4.44	3.98	3.98
		System*1		3.20	2.82	2.51	2.96	2.23	2.74
	Temperature operating fields	Indoor BU	°C	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0
		Outdoor BS	°C	-5.0~52.0	-5.0~52.0	-5.0~52.0	-5.0~52.0	-5.0~52.0	-5.0~52.0
Heating	Nominal capacity*2		kW	25.0	31.5	37.5	37.5	45.0	45.0
	Power input		kW	7.08	10.06	12.71	11.94	15.51	14.35
	COP	Outdoor unit		5.30	5.19	4.47	4.47	4.21	4.21
		System		3.53	3.13	2.95	3.14	2.90	3.13
	Temperature operating fields	Indoor BU	°C	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0
		Outdoor BS	°C	-20.0~15.5	-20.0~15.5	-20.0~15.5	-20.0~15.5	-20.0~15.5	-20.0~15.5
Sound pressure*3			dB(A)	59.0/59.0	60.5/61.0	61.0/67.0	61.0/67.0	62.5/64.0	62.5/64.0
Connectable int. units.	Model/Quantity			WP10~WP125/1~30	WP10~WP125/1~37	WP10~WP125/2~45	WP10~WP125/2~45	WP10~WP125/2~50	WP10~WP125/2~50
Ø refrigerant pipe	Liquid/Gas		mm	15.88/19.05	19.05/22.2	19.05/22.2	19.05/22.2	19.05/28.58	19.05/28.58
External dimensions (HxLxD)			mm	1858 x 920 x 740	1858 x 920 x 740	1858 x 920 x 740	1858 x 920 x 740	1858 x 1240 x 740	1858 x 1240 x 740
Net weight			kg	229	229	231	231	273	273
Refr. charge R410A/CO_2 Eq			kg/Tons	5.2/10.86	5.2/10.86	5.2/10.86	5.2/10.86	8/16.70	8/16.70

Technical specifications

MODEL				PURY-P400YNW-A (-BS)	PURY-P450YNW-A (-BS)	PURY-P500YNW-A (-BS)
HP				16	18	20
Power Supply	Tensione/Freq./Fasi		V/Hz/n°	3 phase 380-400-415V 50Hz		
Cooling	Nominal capacity*1		kW	45	50.0	56.0
	Power input		kW	16.65	17.92	22.67
	EER	Outdoor unit		3.88	4.04	4.40
		System*1		2.70	2.79	2.47
	Temperature operating fields	Indoor BU	°C	15.0~24.0	15.0~24.0	15.0~24.0
		Outdoor BS	°C	-5.0~52.0	-5.0~52.0	-5.0~52.0
Heating	Nominal capacity*2		kW	45.0	56.0	58.0
	Power input		kW	13.39	17.39	17.53
	COP	Outdoor unit		3.66	4.15	4.12
		System		3.36	3.22	3.30
	Temperature operating fields	Indoor BU	°C	15.0~27.0	15.0~27.0	15.0~27.0
		Outdoor BS	°C	-20.0~15.5	-20.0~15.5	-20.0~15.5
Sound pressure*3			dB(A)	65.0/69.0	65.5/70.0	63.5/64.5
Connectable int. units.	Model/Quantity			WP10~WP125/2~50	WP10~WP125/2~50	WP10~WP125/2~50
Ø refrigerant pipe	Liquid/Gas		mm	22.2/28.58	22.2/28.58	22.2/28.58
External dimensions (HxLxD)			mm	1858 x 1240 x 740	1858 x 1240 x 740	1858 x 1750 x 740
Net weight			kg	273	293	337
Refr. charge R410A/CO_2 Eq			kg/Tons	8/16.70	10.8/22.55	10.8/22.55

*Without removable support feet, A=1798 mm.
*1 Rated cooling conditions: Indoor 27°C BS / 19°C BU. Outdoor 35°C BS. Pipe length 7.5 m, level difference 0 m.
*2 Rated heating conditions: Indoor 20°C BS. External 7°C BS / 6°C BU. Pipe length 7.5 m, level difference 0 m.
*3 Values measured in anechoic chamber. Cooling / Heating
*4 GWP of HFC R410A equal to 2088 according to regulation 517 / 2014

R2 High Efficiency Line

HEAT RECOVERY OUTDOOR UNIT

Technical specifications

MODEL				PURY-EP200YNW-A	PURY-EP250YNW-A	PURY-EP300YNW-A	PURY-EP300YNW-A x2 HBC	PURY-EP350YNW-A	PURY-EP350YNW-A X2 HBC
HP				8	10	12	12	14	14
Power Supply			n°/V/Hz	3-phase 380-400-415V 50Hz					
Cooling	Nominal capacity*1		kW	22.4	28.0	33.5	33.5	40.0	40.0
	Power input		kW	6.27	8.77	12.05	10.24	17.16	13.98
	EER	Outdoor unit	kW	5.29	4.98	4.53	4.53	4.54	4.54
		System*1		3.57	3.19	2.78	3.27	2.33	2.86
	Temperature operating fields	Indoor WB	°C	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0
		Outdoor DB	°C	-5.0~52.0	-5.0~52.0	-5.0~52.0	-5.0~52.0	-5.0~52.0	-5.0~52.0
Heating	Nominal capacity*2		kW	25.0	31.5	37.5	37.5	45.0	45.0
	Power input		kW	6.92	9.84	11.71	11.22	15.38	14.28
	COP	Outdoor unit		5.47	5.26	4.48	4.48	4.39	4.39
		System		3.61	3.2	3.20	3.37	2.92	3.15
	Temperature operating fields	Indoor DB	°C	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0
		Outdoor WB	°C	-20.0~15.5	-20.0~15.5	-20.0~15.5	-20.0~15.5	-20.0~15.5	-20.0~15.5
Sound pressure*3			dB(A)	59/59	60/61	61/67	61/67	62.5/64	62.5/64
Connectable int. Units				50~150% of outdoor unit capacity	50~150% of outdoor unit capacity	50~150% of outdoor unit capacity	50~150% of outdoor unit capacity	50~150% of outdoor unit capacity	50~150% of outdoor unit capacity
	N. Connectable Units			WP10~WP125/1~30	WP10~WP125/1~37	WP10~WP125/2~45	WP10~WP125/2~45	WP10~WP125/2~50	WP10~WP125/2~50
Ext. Diam. Refr. Pipes	Liquid/Gas			15.88/19.05	19.05/22.2	19.05/22.2	19.05/22.2	19.05/28.58	19.05/28.58
External dimensions (HxWxD)			mm	1858 x 920 x 740	1858 x 920 x 740	1858 x 920 x 740	1858 x 1240 x 740	1710 x 1220 x 740	1710 x 1220 x 740
Net weight			kg	234	236	236	279	260	260
Refr. charge			kg	5.2	5.2	5.2	8	9.3	9.3

Technical specifications

MODEL				PURY-EP400YNW-A	PURY-EP450YNW-A	PURY-EP500YNW-A
HP				16	18	20
Power Supply			n°/V/Hz	3-phase 380-400-415V 50Hz		
Cooling	Nominal capacity*1		kW	45.0	50.0	56.0
	Power input		kW	13.88	16.83	21.22
	EER	Outdoor unit	kW	3.97	4.66	4.41
		System*1		3.24	2.97	2.63
	Temperature operating fields	Indoor WB	°C	15.0~24.0	15.0~24.0	15.0~24.0
		Outdoor DB	°C	-5.0~52.0	-5.0~52.0	-5.0~52.0
Heating	Nominal capacity*2		kW	50.0	56.0	63.0
	Power input		kW	14.12	16.86	21.67
	COP	Outdoor unit		3.85	4.26	4.43
		System		3.54	3.32	2.9
	Temperature operating fields	Indoor DB	°C	15.0~27.0	15.0~27.0	15.0~27.0
		Outdoor WB	°C	-20.0~15.5	-20.0~15.5	-20.0~15.5
Sound pressure*3			dB(A)	65/69	65.5/70	63.5/64.5
Connectable int. Units				50~150% of outdoor unit capacity	50~150% of outdoor unit capacity	50~150% of outdoor unit capacity
	N. Connectable Units			WP10~WP125/2~50	WP10~WP125/2~50	WP10~WP125/2~50
Ext. Diam. Refr. Pipes	Liquid/Gas			22.2/28.58	22.2/28.58	22.2/28.58
External dimensions (HxWxD)			mm	1858 x 1240 x 740	1858 x 1240 x 740	18580 x 1750 x 740
Net weight			kg	282	306	345
Refr. charge			kg	8	10.8	10.8

*Without removable support feet, A=1798 mm.

*1 Rated cooling conditions: Indoor 27°C BS / 19°C BU. Outdoor 35°C BS. Pipe length 7.5 m, level difference 0 m.

*2 Rated heating conditions: Indoor 20°C BS. External 7°C BS / 6°C BU. Pipe length 7.5 m, level difference 0 m.

*3 Values measured in anechoic chamber. Cooling / Heating

*4 GWP of HFC R410A equal to 2088 according to regulation 517 / 2014

WR2 Line

WATER CONDENSED HEAT RECOVERY OUTDOOR UNIT

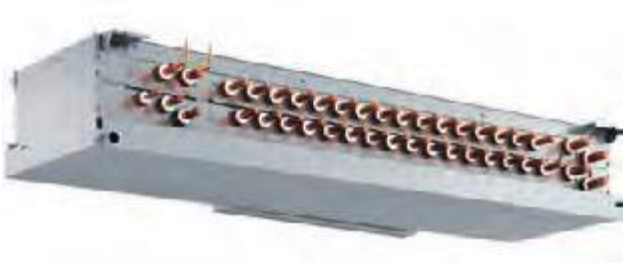
Technical specifications

MODEL				PQRY-P200YLM-A(1)	PQRY-P250YLM-A(1)	PQRY-P300YLM-A(1)	PQRY-P300YLM-A(1) X2 HBC	PQRY-P350YLM-A(1)	PQRY-P350YLM-A(1) X2 HBC
HP				8	10	12	12	14	14
Power Supply	Tensione/Freq./Phases		V/Hz/n°	3 phase 380-400-415V 50Hz					
Cooling	Nominal capacity		kW	22.4	28.0	33.5	33.5	40.0	40.0
	Power input		kW	3.71	4.90	6.04	6.04	7.14	7.14
	EER	Outdoor unit		6.03	5.71	5.54	5.54	5.60	5.60
		System*1		5.64	5.14	4.43	4.99	4.00	4.58
	Temperature operating fields	Indoor BU	°C	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0	15.0~24.0
		Outdoor BS	°C	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0
Heating	Nominal capacity		kW	25.0	31.5	37.5	37.5	45.0	45.0
	Power input		kW	3.97	5.08	6.25	6.25	7.53	7.53
	COP	Outdoor unit		6.29	6.20	6.0	6.0	5.97	5.97
		System		6.18	5.82	5.25	5.52	5.07	5.45
	Temperature operating fields	Indoor BU	°C	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0	15.0~27.0
		Outdoor BS	°C	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0	10.0~45.0
Sound pressure			dB(A)	46	48	54	54	52	52
Unità int. collegabili				50~150% of outdoor unit capacity	50~150% of outdoor unit capacity	50~150% of outdoor unit capacity	50~150% of outdoor unit capacity	50~150% of outdoor unit capacity	50~150% of outdoor unit capacity
	Connectable int. units			2~20	3~25	3~30	3~30	4~35	4~35
Ø est. attacchi refr.	Liquid/Gas		mm	15.88/19.05	19.05/22.2	19.05/22.2	19.05/22.2	22.2/28.58	22.2/28.58
Water circuit	Norm flow rate		m^3/h	5.76	5.76	5.76	5.76	7.20	7.20
	Water flow rate range		m^3/h	3.0-7.2	3.0-7.2	3.0-7.2	3.0-7.2	4.5-11.6	4.5-11.6
	Pressure drop		kPa	24	24	24	24	44	44
	Heat exch. volume		l	5	5	5	5	5	5
External dimensions (HxLxD)			mm	1100 x 880 x 550	1100 x 880 x 550	1100 x 880 x 550	1100 x 880 x 550	1450 x 880 x 550	1450 x 880 x 550
Net weight			kg	172	172	172	172	216	216
Refr. charge R410A*2/CO_2 Eq			kg/Tons	5/10.44	5/10.44	5/10.44	5/10.44	6/12.53	6/12.53

MODEL				PQRY-P400YLM-A(1)	PQRY-P450YLM-A(1)	PQRY-P500YLM-A(1)
HP				16	18	20
Power Supply	Tensione/Freq./Phases		V/Hz/n°	3 phase 380-400-415V 50Hz		
Cooling	Nominal capacity		kW	45.0	50.0	56.0
	Power input		kW	8.03	9.29	11.17
	EER	Outdoor unit		5.60	5.38	5.01
		System*1		4.47	4.14	3.84
	Temperature operating fields	Indoor BU	°C	15.0~24.0	15.0~24.0	15.0~24.0
		Outdoor BS	°C	10.0~45.0	10.0~45.0	10.0~45.0
Heating	Nominal capacity		kW	50.0	56.0	63.0
	Power input		kW	8.37	9.79	11.43
	COP	Outdoor unit		5.97	5.72	5.51
		System		5.29	5.04	4.82
	Temperature operating fields	Indoor BU	°C	15.0~27.0	15.0~27.0	15.0~27.0
		Outdoor BS	°C	10.0~45.0	10.0~45.0	10.0~45.0
Sound pressure			dB(A)	52	54	54
Unità int. collegabili				50~150% of outdoor unit capacity	50~150% of outdoor unit capacity	50~150% of outdoor unit capacity
	Connectable int. units			4~40	5~45	5~50
Ø est. attacchi refr.	Liquid/Gas		mm	22.2/28.58	22.2/28.58	22.2/28.58
Water circuit	Norm flow rate		m^3/h	7.20	7.20	7.20
	Water flow rate range		m^3/h	4.5-11.6	4.5-11.6	4.5-11.6
	Pressure drop		kPa	44	44	44
	Heat exch. volume		l	5	5	5
External dimensions (HxLxD)			mm	1450 x 880 x 550	1450 x 880 x 550	1450 x 880 x 550
Net weight			kg	216	216	216
Refr. charge R410A*2/CO_2 Eq			kg/Tons	6/12.53	6/12.53	6/12.53

*1 System COP and EER do not refer just to the outdoor unit but include water production (Outdoor unit + HBC) and water distribution coefficients (HBC + Indoor units)
*2 GWP of HFC R410A equal to 2088 according to regulation 517 / 2014

Main HBC Controller

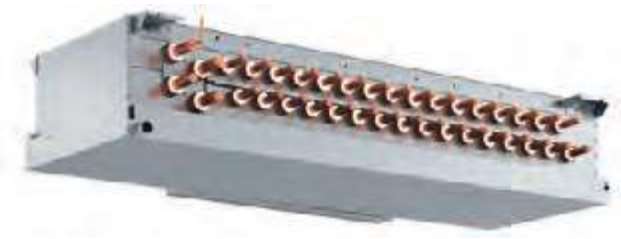


Technical specifications

MODEL			CMB-W(P)(M)108V-(GA1)(AA)	CMB-W(P)(M)1016V-(GA1)(AA)
Number of branches			8 (22mm OD pipe)	16 (22mm OD pipe)
Net weight		kg	86	98
Weight with water		kg	96	111
Dimensions	Width	mm	1520	1800
	Depth	mm	630	630
	Height	mm	300	300
Power supply			220-240V, 50Hz	220-240V, 50Hz
Phase			1	1
Power input		kW	0.46	0.46
Current		A	2.83	2.83

HBC Main are to be used exclusively with outdoor units PURY-(E)P200-500YLM/YNW, PQRY-P200-500YLM and HVRF indoor units (PEFY-WP, PFFY-WP, PLFY-WP).
One HBC Main can be used with PURY-(E)P200-350, PQRY-P200-350
Two HBC Main can be used with PURY-(E)P300-500, PQRY-P300-500

Sub HBC Controller



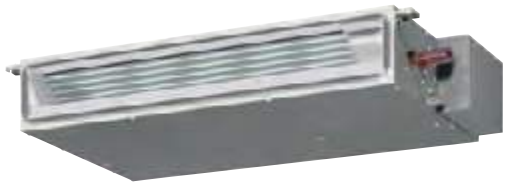
Technical specifications

MODEL			CMB-W(P)(M)108V-(GB1)(AB)	CMB-W(P)(M)1016V-(GB1)(AB)
Number of branches			8 (22mm OD pipe)	16 (22mm OD pipe)
Net weight		kg	44	53
Weight with water		kg	49	62
Dimensions	Width	mm	1520	1520
	Depth	mm	630	630
	Height	mm	300	300
Power supply			220-240V 50Hz	220-240V, 50Hz
Phase			1	1
Power input		kW	0.01	0.01
Current		A	0.05	0.05

Sub HBC are to be associated with Main HBC, which are to be used with outdoor units PURY-(E)P200-500YLM/YNW, PQRY-P200-500YLM and HVRF indoor units (PEFY-WP, PFFY-WP, PLFY-WP).

PEFY-WP-VMS1-E

CEILING CONCEALED MEDIUM TO LOW STATIC PRESSURE



Technical specifications

MODEL			PEFY-WP10VMS1-E	PEFY-WP15VMS1-E	PEFY-WP20VMS1-E	PEFY-WP25VMS1-E	PEFY-WP32VMS1-E	PEFY-WP40VMS1-E	PEFY-WP50VMS1-E
Power Supply			1 phase 220-240V, 50Hz						
Cooling capacity		kW	1.2	1.7	2.2	2.8	3.6	4.5	5.6
		Btu/h	4100	5800	7500	9600	12300	15400	19100
Heating capacity		kW	1.4	1.9	2.5	3.2	4.0	5.0	6.3
		Btu/h	4800	6500	8500	10500	13600	17100	21500
Power input	Cooling	kW	0.03	0.05	0.05	0.06	0.07	0.09	0.09
	Heating	kW	0.03	0.03	0.03	0.04	0.05	0.07	0.07
Current	Cooling	A	0.21	0.44	0.49	0.51	0.61	0.73	0.77
	Heating	A	0.21	0.33	0.38	0.4	0.5	0.62	0.66
External finish			Galvanized steel plate						
Dimensions	HxLxD	mm	200x790x700	200x790x700	200x790x700	200x790x700	200x990x700	200x1190x700	200x1190x700
Net weight		kg	19	19	20	20	25	25	27
Heat exhanger			Cross fin (Al fin and Cu pipe)						
Fan	Type x n.		Sirocco Fan x 2	Sirocco Fan x 2	Sirocco Fan x 2	Sirocco Fan x 2	Sirocco Fan x 3	Sirocco Fan x 3	Sirocco Fan x 3
	Air flow (low-mid-high)	m^3/min	4-4.5-5	5-6-7	5.5-6.5-8	5.5-7-9	8-9-11	9.5-11-13	12-14-16.5
	Ex Static pressure	Pa	5-15-35-50	5-15-35-50	5-15-35-50	5-15-35-50	5-15-35-50	5-15-35-50	5-15-35-50
Motor	Type		Motor DC						
	Power output	kW	0.096	0.096	0.096	0.096	0.096	0.096	0.096
Air filter			PP honeycomb fabric						
Water pipe diameter	Inlet/Outlet		Rc 3/4 screw						
Local drain pipe diameter			O.D. 32	O.D. 32	O.D. 32	O.D. 32	O.D. 32	O.D. 32	O.D. 32
Sound pressure (low-mid-high)	Measured in anechoic chamber	dB(A)	20-23-25	22-24-28	23-25-29	23-26-30	28-30-33	30-32-35	30-33-36

PEFY-WP-VMA-E

CEILING CONCEALED MEDIUM TO HIGH STATIC PRESSURE

Technical specifications

MODEL			PEFY-WP20VMA-E	PEFY-WP25VMA-E	PEFY-WP32VMA-E	PEFY-WP40VMA-E	PEFY-WP50VMA-E	PEFY-WP63VMA-E	PEFY-WP71VMA-E	PEFY-WP80VMA-E	PEFY-WP100VMA-E	PEFY-WP125VMA-E
Power Supply			1 phase 220-240V, 50Hz									
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1	8.0	9.0	11.2	14.0
		Btu/h	7500	9600	12300	15400	19100	24200	27300	30700	38200	47800
Heating capacity		kW	2.4	3.1	4.1	5.1	6.3	8.0	9.0	10.0	12.5	16.0
		Btu/h	8500	10900	13600	17100	21500	27300	30700	34100	42700	54600
Power input	Cooling	kW	0.07	0.09	0.11	0.14	0.14	0.14	0.24	0.24	0.24	0.36
	Heating	kW	0.05	0.07	0.09	0.12	0.12	0.12	0.22	0.22	0.22	0.34
Current	Cooling	A	0.55	0.64	0.74	1.15	1.15	1.15	1.47	1.47	1.47	2.21
	Heating	A	0.44	0.53	0.63	1.04	1.04	1.04	1.36	1.36	1.36	2.10
External finish			Galvanized steel plate									
Dimensions	HxLxD	mm	250x700x732	250x900x732	250x900x732	250x1100x732	250x1100x732	250x1100x732	250x1400x732	250x1400x732	250x1400x732	250x1600x732
Net weight		kg	21	26	26	31	31	31	40	40	40	42
Heat exhanger			Cross fin (Al fin and Cu pipe)									
Fan	Type x n.		Sirocco Fan x 1	Sirocco Fan x 1	Sirocco Fan x 1	Sirocco Fan x 2	Sirocco Fan x 2	Sirocco Fan x 2	Sirocco Fan x 2	Sirocco Fan x 2	Sirocco Fan x 2	Sirocco Fan x 2
	Air flow (low-mid-high)	m^3/min	7.5-9-10-5	10-12-14	12-14.5-17	14.5-18-21	14.5-18-21	14.5-18-21	23-28-33	23-28-33	23-28-33	29.5-35.5-42
	Ex Static pressure	Pa	35-50-70-100-150	35-50-70-100-150	35-50-70-100-150	35-50-70-100-150	35-50-70-100-150	35-50-70-100-150	35-50-70-100-150	35-50-70-100-150	35-50-70-100-150	35-50-70-100-150
Motor	Type		Motor DC									
	Power output	kW	0.085	0.085	0.085	0.121	0.121	0.121	0.244	0.244	0.244	0.244
Air filter			PP honeycomb fabric									
Water pipe diameter	Inlet/Outlet		Rc 3/4 screw	Rc 3/4 screw	Rc 3/4 screw	Rc 3/4 screw	Rc 3/4 screw	Rc 1-1/4 screw	Rc 1-1/4 screw	Rc 1-1/4 screw	Rc 1-1/4 screw	Rc 1-1/4 screw
Local drain pipe diameter			OD 32	OD 32	OD 32	OD 32	OD 32	OD 32	OD 32	OD 32	OD 32	OD 32
Sound pressure (low-mid-high)	Measured in anechoic chamber	dB(A)	23-26-29	23-27-30	25-29-32	26-29-34	26-29-34	26-29-34	28-33-37	28-33-37	28-33-37	32-36-40

Heating/cooling capacity is the maximum functioning value in the following condition. Cooling: indoor 27°C DB/19°C WB (81°F DB/66°F WB), outdoor 35°C DB (95°F DB). Heating : indoor 20°C DB (68°F DB), outdoor 7°C DB (45°F DB/42°F WB). Pipe length: 7,5 m (24-9/16 feet). Height difference: 0 m (0 feet).
Factory setting for outdoor static pressure is 15 Pa for PEFY-WP-VMS1-E and 50 Pa for PEFY-WP-VMA-E.
HVRF indoor units can only be connected to CMB-W(P)(M) HBC (HVRF) and outdoor units PURY-(E)P-YLM/YNW or PQRY-P-YLM. Screw connection to indoor units 3/4".

PLFY-WP-VBM-E

4-WAY CASSETTE

Technical specifications

MODEL			PLFY-WP32VBM-E	PLFY-WP40VBM-E	PLFY-WP50VBM-E
Power Supply			1 phase 220-240V, 50Hz		
Cooling capacity		kW	3.6	4.5	5.6
		Btu/h	12300	15400	19100
Heating capacity		kW	4	5	6.3
		Btu/h	13600	17100	21500
Power input	Cooling	kW	0.04	0.04	0.05
	Heating	kW	0.03	0.03	0.04
Current	Cooling	A	0.35	0.35	0.45
	Heating	A	0.28	0.28	0.38
External finish			Galvanized steel plate		
Dimensions	HxLxD	mm	258x840x840	258x840x840	258x840x840
Net weight		kg	22	22	22
Heat exhanger			Cross fin (Al fin and Cu pipe)		
Fan	Type x n.		Turbo fan x 1		
	Air flow (low-mid-high)	m^3/min	13-14-15-16	13-14-15-16	13-14-17-19
	Ex Static pressure	Pa	0	0	0
Motor	Type		Motor DC		
	Power output	kW	0.05	0.05	0.05
Air filter			PP honeycomb fabric		
Water pipe diameter	Inlet/Outlet		Rc 3/4 screw		
Local drain pipe diameter			OD 32	OD 32	OD 32
Sound pressure (low-mid-high)	Measured in anechoic chamber	dB(A)	27-29-30-31	27-29-30-31	27-30-32-34

PLFY-WP-VFM-E

4-WAY CASSETTE COMPACT

Technical specifications

MODEL			PLFY-WP10VFM-E	PLFY-WP15VFM-E	PLFY-WP20VFM-E	PLFY-WP25VFM-E	PLFY-WP32VFM-E
Power Supply			1 phase 220-240V, 50/60Hz				
Cooling capacity		kW	1,2	1,7	2,2	2,8	3,6
		Btu/h	4100	5800	7500	9600	12300
Heating capacity		kW	1,4	1,9	2,5	3,2	4
		Btu/h	4800	6500	8500	10900	13600
Power input	Cooling	kW	0,02	0,02	0,02	0,03	0,04
	Heating	kW	0,02	0,02	0,02	0,02	0,04
Current	Cooling	A	0,18	0,19	0,22	0,24	0,38
	Heating	A	0,13	0,14	0,17	0,19	0,33
External finish			Galvanized steel plate				
Dimensions	HxLxD	mm	208x570x570	208x570x570	208x570x570	208x570x570	208x570x570
Net weight		kg	13	13	14	14	14
Heat exhanger			Cross fin (Al fin and Cu pipe)				
Fan	Type x n.		Turbo fan x 1				
	Air flow (low-mid-high)	m^3/min	6,0-6,5-7,0	6,0-7,0-8,0	6,5-7,0-8,0	6,5-7,5-9,0	6,5-9,0-12
	Ex Static pressure	Pa	0	0	0	0	0
Motor	Type		Motor DC				
	Power output	kW	0.05	0.05	0.05	0.05	0.05
Air filter			PP honeycomb fabric				
Water pipe diameter	Inlet/Outlet		Rc 3/4 screw				
Local drain pipe diameter			OD 32	OD 32	OD 32	OD 32	OD 32
Sound pressure (low-mid-high)	Measured in anechoic chamber	dB(A)	25-26-27	25-26-29	27-29-31	27-30-34	27-33-41

*[1] Heating/cooling capacity is the maximum functioning value in the following condition. Cooling: indoor 27°C DB/19°C WB (81°F DB/66°F WB), outdoor 35°C DB (95°F DB). Heating : indoor 20°C DB (68°F DB), outdoor 7°C DB (45°F DB/42°F WB). Pipe length: 7,5 m (24-9/16 feet). Height difference: 0 m (0 feet).
HVRF indoor units can only be connected to CMB-W(P)(M) HBC (HVRF) and outdoor units PURY-(E)P-YLM/YNW or PQRY-P-YLM. Screw connection to indoor units 3/4".

PFFY-WP-VLRMM-E

FLOOR STANDING CONCEALED

Technical specifications

MODEL			PFFY-WP20VLRMM-E	PFFY-WP25VLRMM-E	PFFY-WP32VLRMM-E	PFFY-WP40VLRMM-E	PFFY-WP50VLRMM-E
Power Supply			1 phase 220-240V, 50Hz				
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6
		Btu/h	7500	9600	12300	15400	19100
Heating capacity		kW	2.5	3.2	4.0	5.0	6.3
		Btu/h	8500	10900	13600	17100	21500
Power input	Cooling	kW	0.04	0.04	0.05	0.05	0.07
	Heating	kW	0.04	0.04	0.05	0.05	0.07
Current	Cooling	A	0.35	0.35	0.47	0.47	0.65
	Heating	A	0.35	0.35	0.47	0.47	0.65
External finish			Galvanized steel plate				
Dimensions	HxLxD	mm	639x886x220	639x1006x220	639x1006x220	639x1246x220	639x1246x220
Net weight		kg	22	25	25	29	29
Heat exhanger			Cross fin (Al fin and Cu pipe)				
Fan	Type x n.		Sirocco fan x 1	Sirocco fan x 2	Sirocco fan x 2	Sirocco fan x 2	Sirocco fan x 2
	Air flow (low-mid-high)	m^3/min	4.5-5-6	6-7-8	7.5-9-10.5	8-10-11.5	10.5-13-15
	Ex Static pressure	Pa	20-40-60	20-40-60	20-40-60	20-40-60	20-40-60
Motor	Type		Motor DC				
	Power output	kW	0.096	0.096	0.096	0.096	0.096
Air filter			PP honeycomb fabric				
Water pipe diameter	Inlet/Outlet		Rc 3/4 screw				
Local drain pipe diameter			ID 26	ID 26	ID 26	ID 26	ID 26
Sound pressure (low-mid-high)	Measured in anechoic chamber	dB(A)	31-33-38	31-33-38	31-35-38	34-37-40	37-42-45

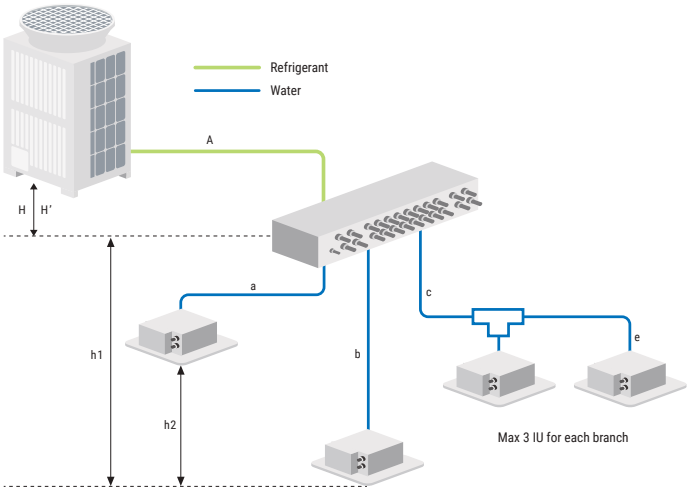
*[1] Heating/cooling capacity is the maximum functioning value in the following condition. Cooling: indoor 27°C DB/19°C WB (81°F DB/66°F WB), outdoor 35°C DB (95°F DB). Heating : indoor 20°C DB (68°F DB), outdoor 7°C DB (45°F DB/42°F WB). Pipe length: 7,5 m (24-9/16 feet). Height difference: 0 m (0 feet).
*[2] Factory setting for outdoor static pressure is 20 Pa for PFFY-WP-VLRMM-E.
HVRF indoor units can only be connected to CMB-W(P)(M) HBC (HVRF) and outdoor units PURY-(E)P-YLM/YNW or PQRY-P-YLM. Screw connection to indoor units 3/4".

Piping restrictions

Hybrid heat recovery system

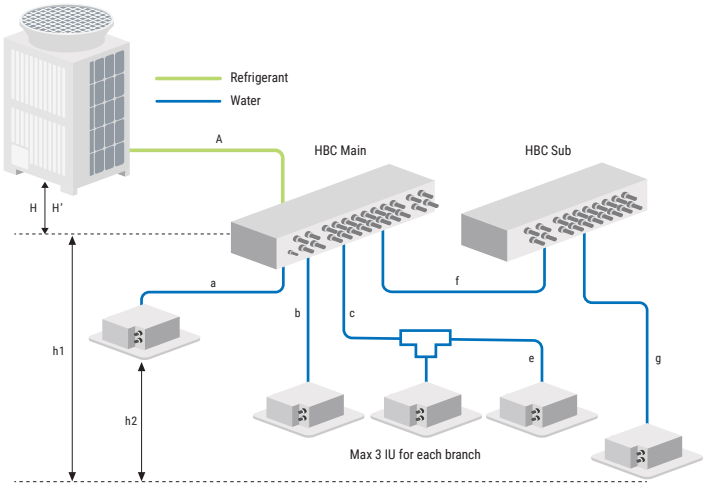
1 HBC Main

	Picture reference	Maximum lenght (m)
Effective length between outdoor unit and HBC Main	A	110
Effective length between HBC and indoor unit	b	60
Vertical difference between OU and HBC (OU in higher position)	H	50
Vertical difference between OU and HBC (OU in lower position)	H'	40
Vertical difference between IU and HBC	h1	15
Vertical difference between indoor units	h2	15



1 HBC Main e 1 HBC Sub*

	Picture reference	Maximum lenght (m)
Effective length between outdoor unit and HBC Main	A	110
Effective length between HBC and indoor unit	f+g	60
Vertical difference between OU and HBC (OU in higher position)	H	50
Vertical difference between OU and HBC (OU in lower position)	H'	40
Vertical difference between IU and HBC	h1	15
Vertical difference between indoor units	h2	15



2 HBC Main e 1 HBC Sub*

	Picture reference	Maximum lenght (m)
Effective length between outdoor unit and HBC Main	A+B	110
Effective length between HBC and indoor unit	b e (g + h)	60
Vertical difference between OU and HBC (OU in higher position)	H	50
Vertical difference between OU and HBC (OU in lower position)	H'	40
Vertical difference between indoor unit and HBC	h1	15
Vertical difference between indoor units	h2	15
Vertical difference between HBC main and HBC sub.	h3	15
Length between HBC Main and HBC Main	C	40