



Sseries



Yseries



R2series



WR2series



A quiet, gentle breeze brings real air-conditioning comfort.

CITY MULTI meets a wide range of air conditioning needs



Benefits of City Multi

For Property Owners

- ¥Can be adapted to meet various installation situations in a building
- ¥Creates added value to a building
- ¥Provides advanced space efficiency at an acceptable price

Benefits of City Multi

For Contractors /Consultants

- ¥Easy to incorporate in design
- ¥Adds value in a variety of ways

Benefits of City Multi

For Installers

- ¥Easy Installation
- ¥Easy Maintenance

Benefits of City Multi

For Users

- ¥Can be operated to suit your needs
- ¥Comfortable air conditioning which will improve productivity










INDEX

OUTLINE OF CITY MULTI	4
-----------------------	---

S SERIES	7
Y SERIES	8
R2 SERIES	9
WR2 SERIES	10

FEATURES	11
----------	----

 Flexible and Adaptable	11
 Low Running Cost	13
 Simple to Install	15
 Space Saving	17
 Comfortable	18
 Reliability and Easy Maintenance	19
 Environmentally Friendly	20

ADVANCED TECHNOLOGY	21
---------------------	----

SYSTEM CONTROLLER	22
-------------------	----

OUTLINE OF BUILDING MANAGEMENT SYSTEM	22
LOCAL REMOTE CONTROLLER	24
MELANS SERIES	26
LMAP	27
SPECIFICATION	28

INDOOR UNITS	29
--------------	----

PLFY-VKM/VAM-A	30
PLFY-NLMD	32
PMFY-VBM-A	33
PDFY-VM-A	34
PEFY-VML-A	35
PEFY-VMH-A	36
PCFY-VGM-A	37
PKFY-VAM/VGM/VFM-A	38
PFFY-VLEM/VLRM-A	39

LOSSNAY	40
---------	----

SPECIFICATION	41
---------------	----

OUTDOOR UNITS	42
INDOOR UNITS	45



CITY MULTI

Mitsubishi Electric City Multi Series
Toward a new era of air-conditioning

OUTDOOR UNITS



Power Supply:

TM ; TMU ; M-B-BM :3-phase, 208-220V,60Hz
VM:1-phase, 208-220V,60Hz

CITY MULTI



Y-series heating or cooling switchable types

Standard VRF (Variable Refrigerant Flow)



S-series heating or cooling switchable types

Small capacity VRF (Variable Refrigerant Flow)



PUHY-TM
80 000 BTU
100 000 BTU



PUMY- 50 000 BTU



R2 series air-cooled 2-pipe simultaneous operation heating and cooling models
A world only and first simultaneous heating and cooling Two-Pipe system



Heat source unit water-cooled Two-Pipe simultaneous operation heating and cooling models
A world only and first water-cooled simultaneous heating and cooling Two-Pipe system



PURY-TMU
80 000 BTU
100 000 BTU



PQRY-M-B-BM
80 000 BTU
100 000 BTU

(Available on request)

CONTROL SYSTEM



INDOOR UNITS = VARIATION!

The air conditioning management system that uses the advanced M-NET transfer system

Mitsubishi's unique high speed, large capacity data control system allows the integration of control and management, greatly increases indoor air quality and reduces power consumption by linking all devices.

In addition, each of the different kinds of appliances in a commercial building's CITY MULTI air conditioning system and the building's management system can be connected thanks to open networking with a resultant reduction in the amount of construction required.

Specification.....p.22-28



PAR-20MAA

PAR-F27MEA

PAC-SC32PTA



PAC-SE51CRA



PAR-FL31MA



PAR-FA31MA



PAC-SC30GRA



PAC-SF41SCA



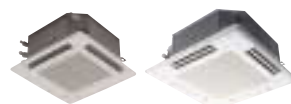
MJ-180A



MJ-103MTRA

A wide selection from 13 types with 66 models

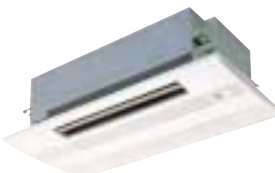
Mitsubishi's wide selection allows you to choose the appliances that will meet all of your requirements for indoor and outdoor unit layout, air conditioning form and environment.



PLFY-VKM/VAM-A
.....p.30



PLFY-NLMD
.....p.32



PMFY-VBM-A
.....p.33



PDFY-VM-A
.....p.34



PEFY-VML-A
.....p.35



PEFY-VMH-A
.....p.36



PCFY-VGM-A
.....p.37



PKFY-VAM/VGM/VFM-A
.....p.38



PFFY-VLEM-A
.....p.39



PFFY-VLRM-A
.....p.39

New PRODUCT

CITY MULTI NEW Y/R2 OUTDOOR UNIT

PUMY-VM PU(H)Y-TM PURY-TMU PQRY-M-B-BM



Upgraded Y series standard models (8HP and 10HP) and R2 series two-pipe Heat Recovery models are now available. Both new models employ the new inverter (IPM) technology and new structure to offer an industry-leading COP and significantly reduced noise.

**Newly Designed
Heat Exchanger**

**New Inverter
Module**

Increased Performance and Reliability

1

Improved Stability of low ambient temperature cooling operation

Adoption of a heat exchanger capacity control enables a higher condensing temperature and supply of a sub-cooled refrigerant for more highly stabilized operation. (optional)

2

Noise Reduction

Adoption of an Intelligent Power Module (IPM) inverter minimizes operation noise.

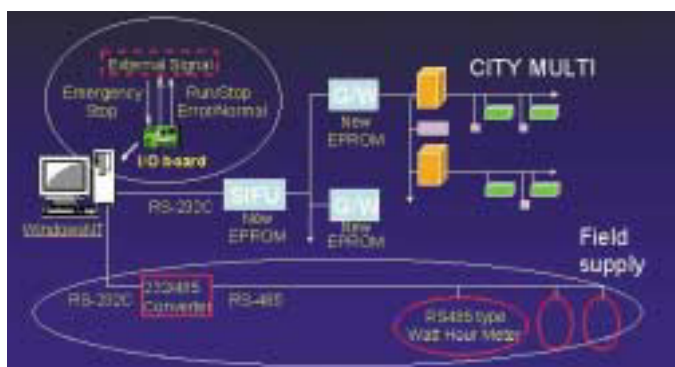
BTU	PUH(R)Y	
80 000	57dB (A)	
100 000	58dB (A)	

3

Increase Flexibility

Maximum Y system pipe length from the first branch has been extended from 30 meters to 40 meters.

NEW SYSTEM controller MJ-310E

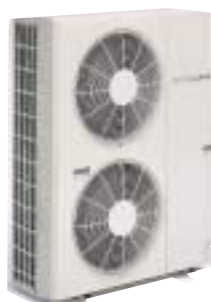


Item	Outline
Addition of charging function	Apportions air-conditioning running charges
Addition of external input/output	Watt-hour meter input, air-conditioner status output, fire alarm stop input functions



CITY MULTI S SERIES

The all-in-one air conditioning solution for large residences or offices with multiple rooms.



Optional



Mitsubishi Electric's Multi-S series is exceptionally well suited for houses with large living rooms and multiple bedrooms or children's rooms. This is because different types of indoor units can be selected, and a maximum of 8 indoor units can be connected to a single outdoor unit.

Furthermore, if the total piping length is less than 50m, there is no need to add extra refrigerants. This system offers excellent cost savings and is very suited for small office applications.

Large Residents

Small Offices



Number of Connectable Indoor Units

50 000 BTU max. 8

Total Capacity of Connectable Indoor Units

50%-130%

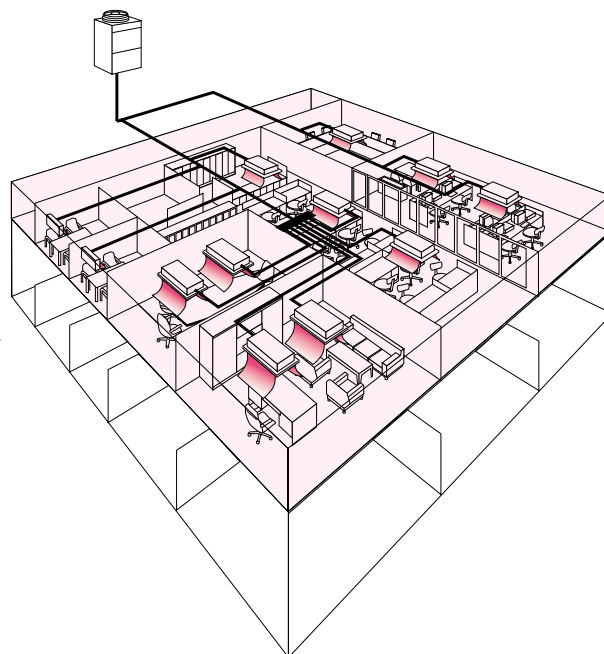
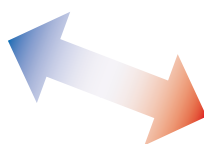
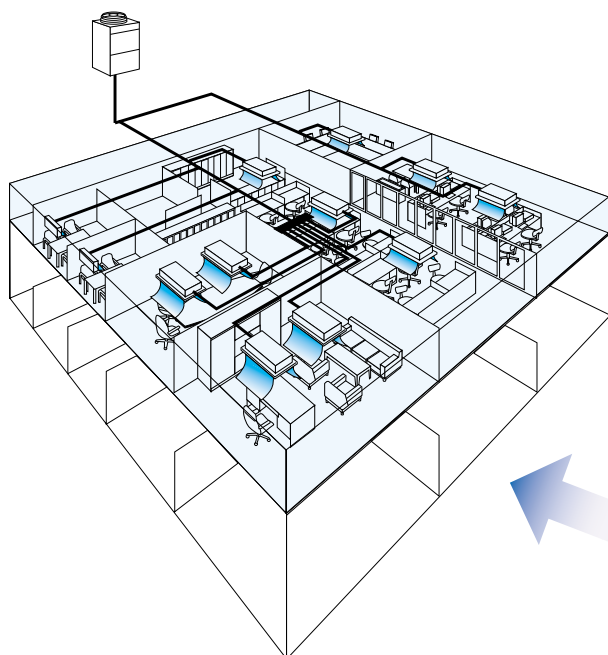


CITY MULTI Y SERIES

Powerful and flexible standard series for free switching between heating and cooling.



Flexibility is the key with the CITY MULTI Y. A wide line-up of indoor units in combination with a flexible piping system conforms to any layout. Depending on Capacity, 13 to 20 indoor units, can be connected to maximize your design options. This enables easy air conditioning of areas requiring individual control. As with other members of the CITY MULTI series, the CITY MULTI Y can be easily operated through a Central Controller.



This cooling only type is also available.
80 000 Btu & 100 000 Btu

Number of Connectable Indoor Units

80 000 Btu max. **13**

100 000 Btu max. **16**

Total Capacity of Connectable Indoor Units

50% - 130%



CITY MULTI R2 SERIES

**A world only and first simultaneous heating / cooling
2-pipe system the most cost effective.**



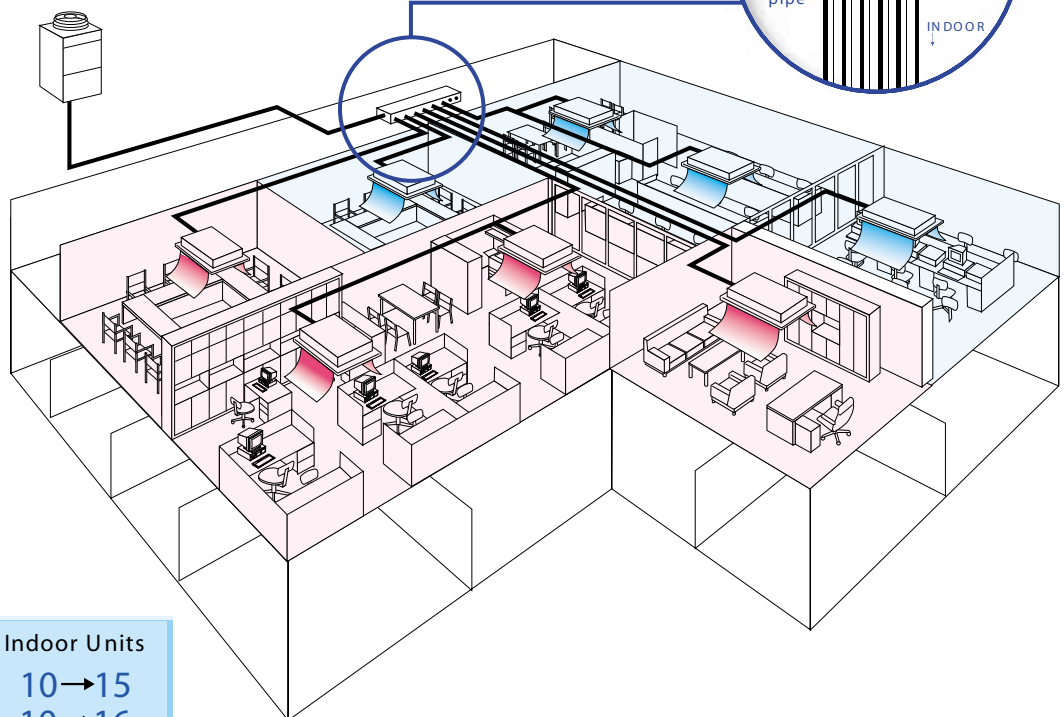
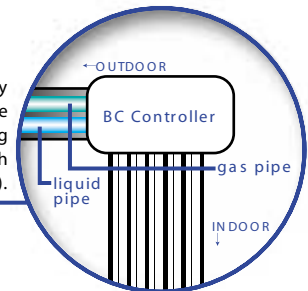
80 000 Btu
100 000 Btu



The R2 system provides simultaneous cooling and heating. With the BC Controller connecting several indoor units to one outdoor unit using only two pipes and energy-saving heat recovery operation, economy and efficiency are guaranteed. Smooth auto-switching (heating/cooling) based on a set temperature realizes convenient operation and a comfortable environment.



Innovative BC controller: Key components which make simultaneous cooling and heating possible (4,5,6,8,10,13,16 branch models are available).



Number of Connectable Indoor Units

80 000 Btu. max. 10→15
100 000 Btu. max. 10→16

Total Capacity of Connectable Indoor Units

50% - 150%

Heating



Cooling





AVAILABLE ON REQUEST

CITY MULTI WR2 SERIES

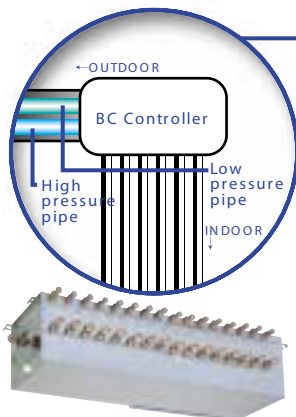
Advanced water heat source unit enjoying the benefits of R2 series.



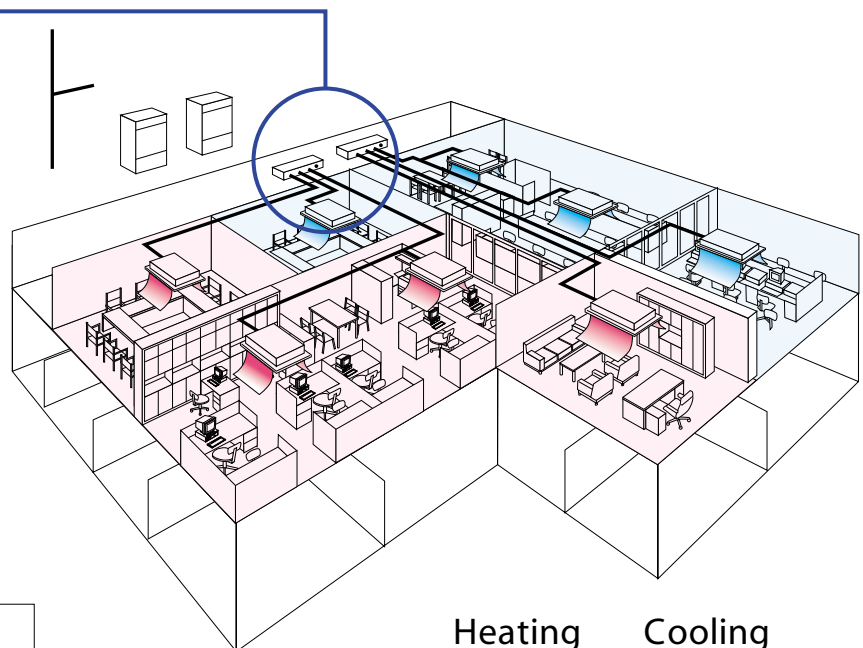
80 000 Btu & 100 000 Btu



The advantages of a water heat source system have been added to the air heat source CITY MULTI series, making it suitable for wider range of applications in high rises, frigid climates, coastal areas, etc. The series' newly developed water condenser achieves high COP while maintaining low ambient conditions, for enhanced performance. The refrigerant circuit features the same world first 2-pipe simultaneous heating-cooling system is used in the R2 series. Two-fold heat recovery is possible in the refrigerant and water circuits.



Innovative BC controller: Key components which make simultaneous cooling and heating possible (4,5,6,8,10,13,16 branch models are available).



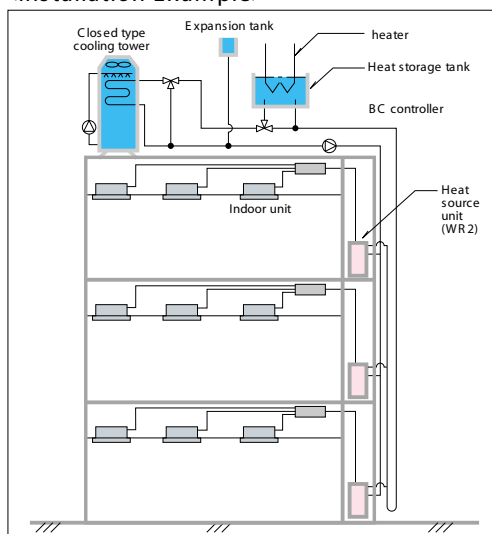
Heating



Cooling



<Installation Example>



Number of Connectable Indoor Units

80 000 Btu → max. 10→15
100 000 Btu → max. 10→16

Total Capacity of Connectable Indoor Units
50% - 150%

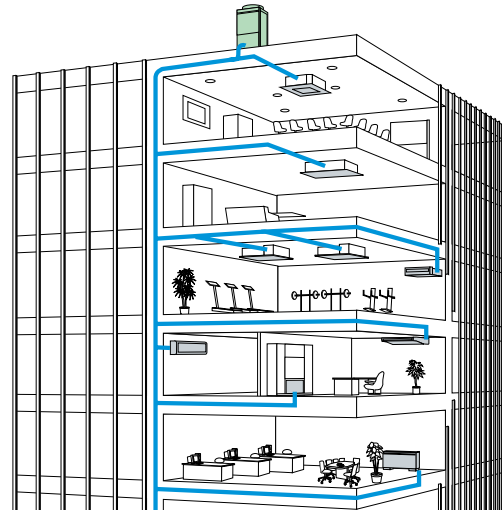
FEATURES



Flexible and Adaptable

Design Flexibility

The variety provided by the 4 series and 7 models in the outdoor and 12 types and 66 models in the indoor range increases design flexibility.



Connect up to 16 indoor units to one outdoor unit. Outdoor units are modular making it ideal for use in large buildings.

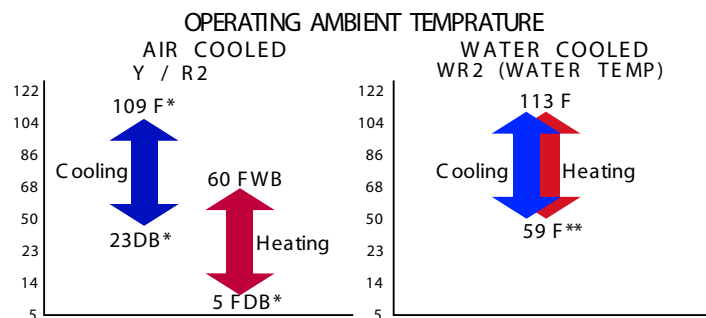
The 100 000 BTU Y series with a standard maximum of 16 connectable indoor air conditioners. The R2 series offers an increase in capacity of indoor units, up to 50% over the capacity of the outdoor unit.

Series	Model name	Btu	Number of Connectable Indoor Units	Connectable Indoor Units Capacity
S Series	PUMY-125VM	49 600	1 to 8	50-130%
Heat pump Y Series	PUHY-200TM	79 400	1 to 13	50-130%
	PUHY-250TM	99 300	1 to 16	
Cooling Only Y Series	PUY-200TM	79 400	1 to 13	50-130%
	PUY-250TM	99 300	1 to 16	
R2/WR2 Series	PURY-200TMU	20,000	1 to 15	50-150%
	PURY-250TMU	25,000	1 to 16	
	PQRY-200M-B-BM	20,000	1 to 15	
	PQRY-250M-B-BM	25,000	1 to 16	

Wide Operation Range

Capable of operating up to an outside temperature of 109 °F when cooling or 5°F when heating
WR2 operates over a wide range of water temperatures - from 59 to 113 °F.

(Low ambient option available on request)



* 50F ~109FDB, when the outdoor unit is installed in a lower position than the indoor models.
** 59F ~113FDB, when the heat source unit is connected to more than 130% of indoor unit capacity.

Direct Expansion Format for excess refrigerant pipes

S Series

Refrigerant Piping Restrictions			MODEL 125
Total length.....	Maximum	320'	
Greatest length.....	Maximum	224'	
Greatest length after first branch.....	Maximum	96'	
Top-bottom differentials between units			
Indoor/outdoor [outdoor higher].....	Maximum	96'	
Indoor/outdoor [outdoor lower].....	Maximum	64'	
Indoor/indoor.....	Maximum	38.4'	

Y Series

Refrigerant Piping Restrictions		
Total length.....	Maximum	704'
Greatest length.....	Maximum	320'
Greatest length [equivalent length].....	Maximum	400'
Greatest length after first branch.....	Maximum	128"
Top-bottom differentials between units		
Indoor/outdoor [outdoor higher].....	Maximum	160'
Indoor/outdoor [outdoor lower].....	Maximum	128'*
Indoor/indoor.....	Maximum	48'm

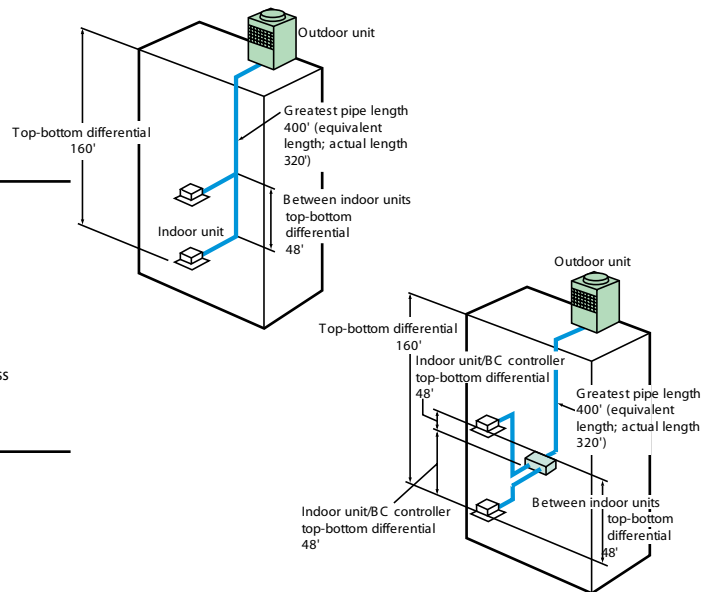
*Note: When cooling operation is performed when the outdoor temp. is 50 F or lower 12.8' or less

R2/ WR2 Series

Refrigerant Piping Restrictions		
Total length.....	Maximum	704'
Greatest length.....	Maximum	320' (288')
Greatest length [equivalent length].....	Maximum	400' (368')
Between outdoor unit and BC controller.....	Maximum	224' (192')
Between BC controller and indoor unit.....	Maximum	96'
Top-bottom differentials between units		
Indoor/outdoor [outdoor higher].....	Maximum	160'
Indoor/outdoor [outdoor lower].....	Maximum	128'
Indoor/BC controller.....	Maximum	48'*
Indoor/indoor.....	Maximum	48'*

Note: Figures in parentheses are for when the total indoor unit capacity is 131-150% of outdoor unit capacity.

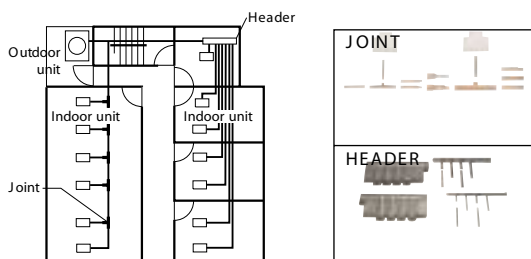
*Maximum 10m for indoor units with model numbers 125 or higher.



Flexible piping makes designing easy. The layout can be altered simply.

Choose Line, Header, or Combination Branching

- Use Line piping for longer, open spaces.
- Use header piping for subdivided spaces.
- Combine line and header branching for mixed environments.

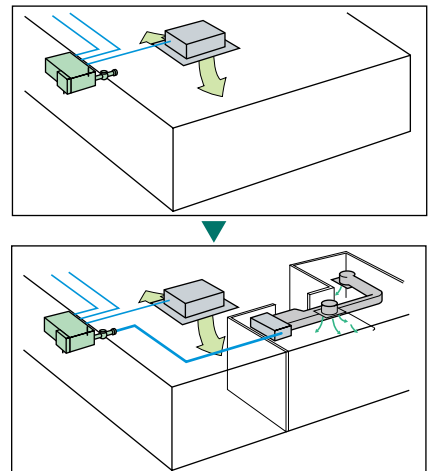


Note: Outdoor unit horse power is selected according to the lower flow indoor unit's total capacity and number of branches.

Changes to layout as a result of refurbishing, etc. and the addition of extra indoor units is easy

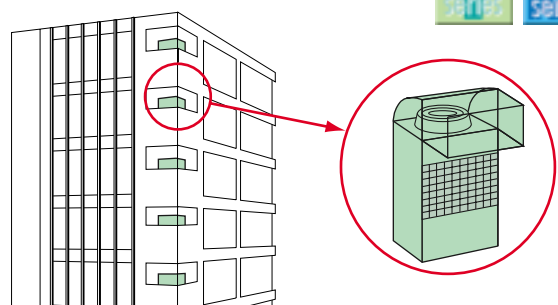
Description	Model	Applicable capacity
Joint (2 branches)	CMY-Y62-C-E	25 - 125
Joint (4 branches)	CMY-Y64-C	20 - 125
Joint (8 branches)	CMY-Y68	20 - 125
Multi distribution piping on outdoor unit (5 branches)	CMY-S65	20 - 80

Type	Model	Total capacity of indoor unit
JOINT	CMY-Y1025-F	160 or below
	CMY-Y102L-F	161-330
	CMY-Y302-F	631 or above
HEADER	CMY-Y104-F	4 branches
	CMY-Y107-F	7 branches
	CMY-Y1010-F	10 branches



High External Static Pressure

External static pressure of 0.120"water type is available on request (Refer to the figure on the right).



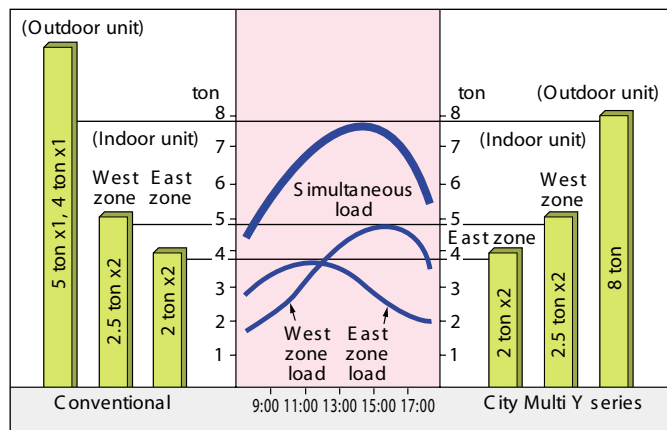


Low Running Cost

Linear Inverter Provides Optimal Capacity Control

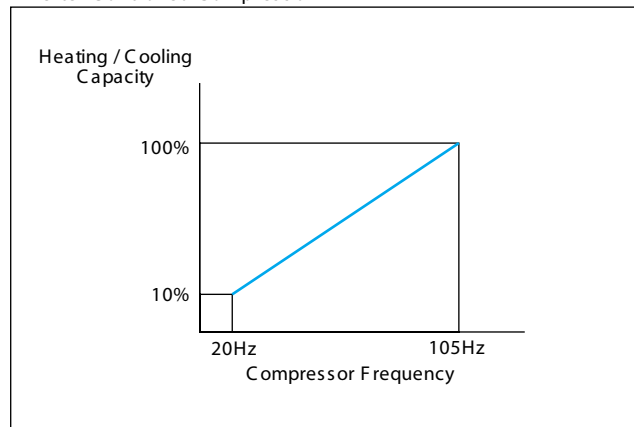
Inverter Control Reduces Capacity Requirements

- Outdoor unit capacity can be smaller than total indoor unit capacity when indoor units have varying peak times.
- Maintains comfort condition at lower cost.



An inverter is used to control capacity in response to the air conditioning load, which changes constantly over time and according to the zone involved. This enables the units to deliver superior performance in terms of both comfort and running costs. Moreover, Mitsubishi Electric has developed an original single inverter compressor which helps to save energy by eliminating the switching loss that occurs when multiple compressors are used. The linear inverter thus provides just the right solutions for meeting the requirements of diverse load variations.

Inverter Controlled Compressor



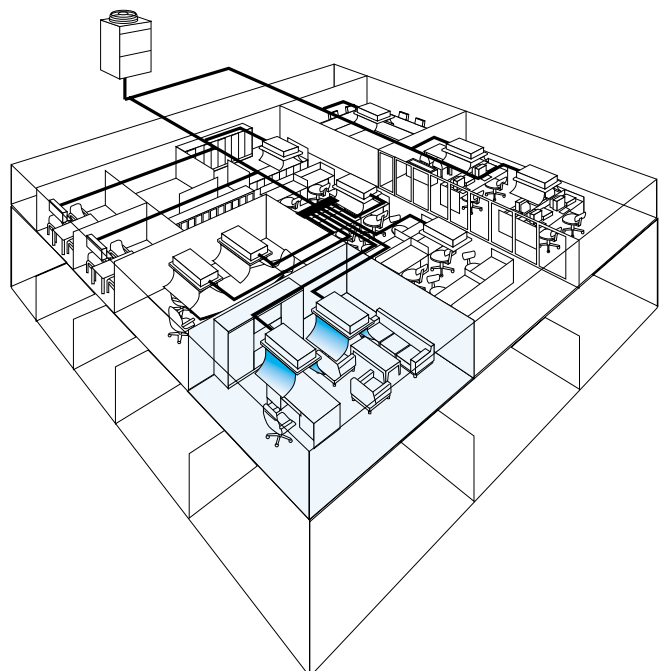
Optimized control of compressor frequencies in relation to the cooling-heating load results in minimal energy costs.

Individual Control

The CITY MULTI series includes both outdoor units with enhanced capacity control by inverter and indoor units with individual operation on a room-by-room or area basis. Selective air conditioning in only the rooms or areas where it is needed maximizes the cost savings.

Indoor unit capacity control by LEV (linear expansion valve)
LEV function : open/close (on/off)
25 % to 100 % capacity control.

Outdoor capacity control : Inverter (down to 8% in 86 steps)



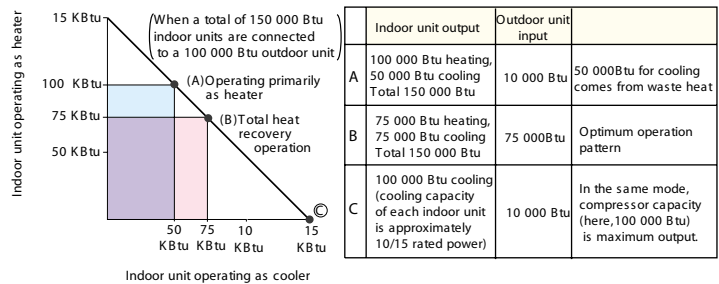
Simultaneous Heating / Cooling (Heat Recovery System) Brings Energy Savings



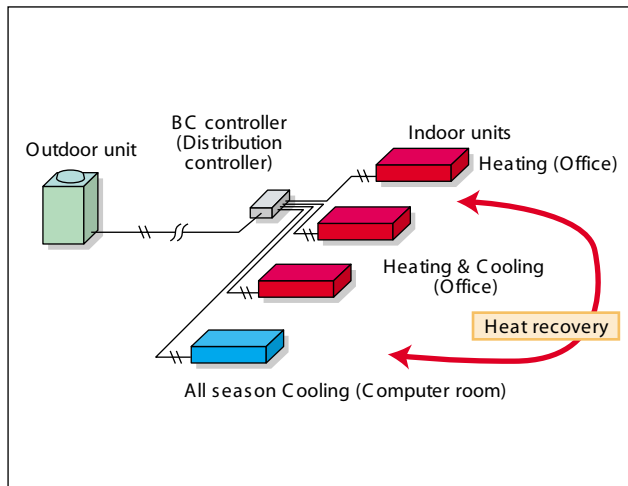
With the same refrigerant circuit, waste heat generated in the cooling mode is recovered for heating operation. When in the heating mode, endothermic transfers are made to cooling operations. The result is highly efficient energy saving. The waste heat recovery system in the refrigerant system increases savings the more heating and cooling are used simultaneously.

Heat recovery through the water system is also possible in addition to that provided by the refrigerant system in the WR2 water cooled system.

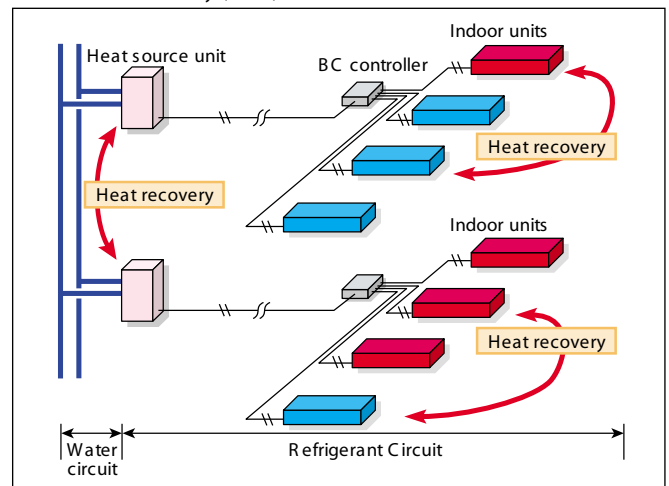
Operating Patterns of the CITY MULTI R2 WR2 System



Two-pipe simultaneous cooling / heating system (R2)



Double heat recovery (WR2)

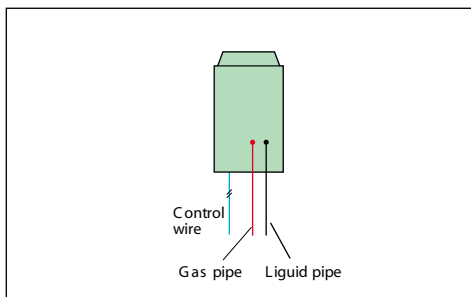




Simple to Install

The Installation of Piping and Control wiring for All Units are Extremely simple.

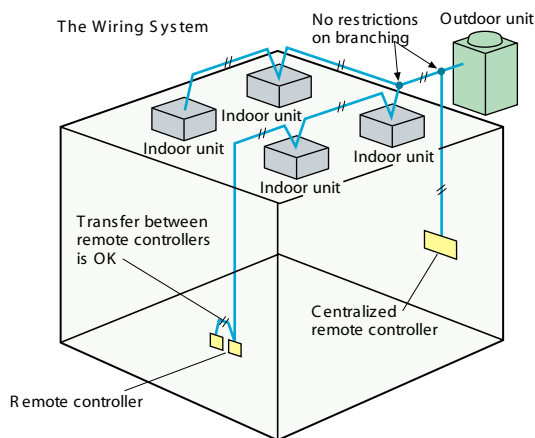
Only 2 refrigerant pipes and 2 wire communication required.



Simple to Install and Cost Effective Communications Network

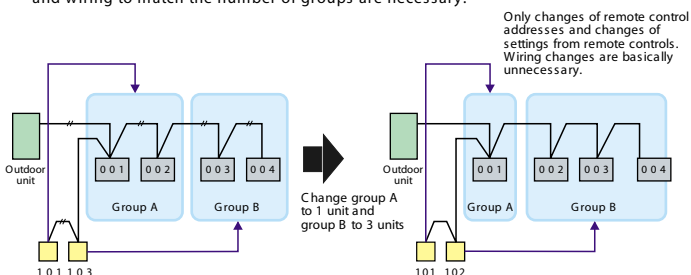
A two wire non-polarised transmission line allows for the simple and fool proof connection of each indoor unit and remote controller to the network.

With the additional benefit of being able to install each remote controller anywhere on the network, the electrical installation can be kept to a minimum and hence cost savings achieved.



Example of Batch Changes

*1 When the number of group is changed, remote control installation and wiring to match the number of groups are necessary.



CITY MULTI M-NET control system enable to change the grouping without any wiring installation

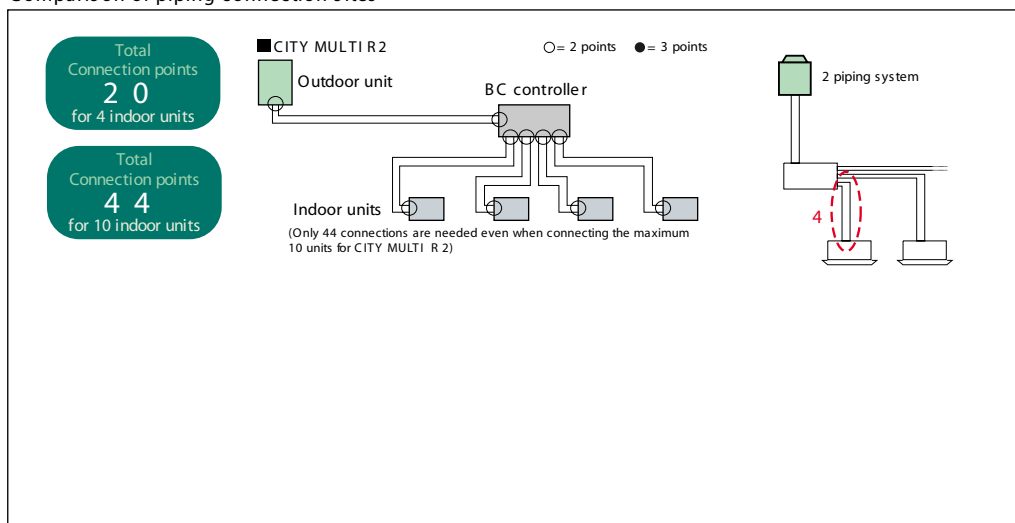
World's First and Only Two-Pipe Simultaneous Heating and Cooling System Greatly Enhances Piping Efficiency.



Our unique heating and cooling circuit system combines the "R2 refrigerant circuits" with fuzzy logic to allow for simultaneous cooling and heating using only 2 pipes: one for high pressure and one for low pressure.

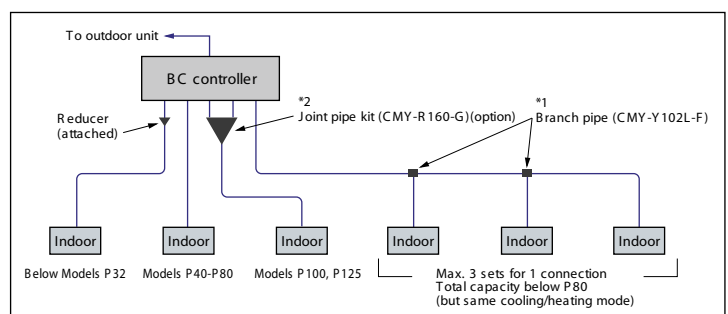
This enables individual indoor units to function in heating or cooling mode' Less Space is required for pipes, and a reduction in construction time and cost is one of the many benefits,

Comparison of piping connection sites



Installing the BC Controller

Up to 16 units can be connected to the BC controller with a single outdoor unit using a single refrigerant circuit. Moreover, the indoor units can be connected within the range of 50-150% of the outdoor unit's capacity (in cases where the refrigerant line extension is 90m or less).





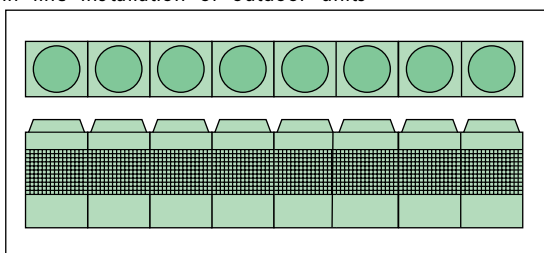
Space Saving

New Model Outdoor Unit Has One of the Smallest Installation Footprints in the Industry

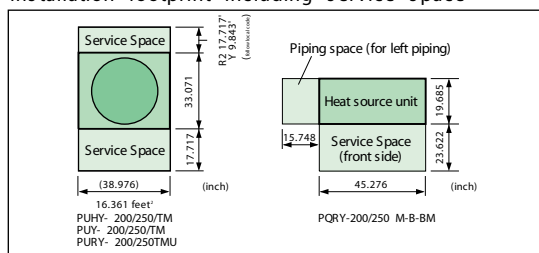
The installation space for each outdoor unit, including service space, has been reduced to 16.36 Sq. feet (80 000 & 100 000Btu), one of the smallest in the industry. Moreover, the units are among the lightest now available, with weights of only 240kg (529 Lb) and 255kg (562 Lb) for the 80 000 and 100 000 Btu respectively. As a result, they take

up relatively little space and easy to transport. An added advantage is the top-flow construction, which allows outdoor units to be installed together in a single area regardless of the series, saving even more space when multiple units are involved.

In line installation of outdoor units



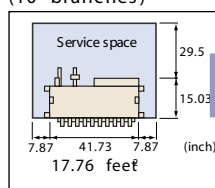
Installation footprint including service space



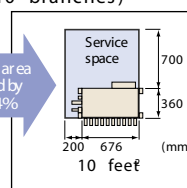
The BC Controller for Heat Recovery System (R2 / WR2) Has Been Made More Compact.

Innovation leads to a more compact, lighter model. A 13-16 branch connection model allows the industry first Heat Recovery System with 16 indoor units connectable. (15 units connectable to 80000 BTU model)

Previous BC Controller (10 branches)



New BC Controller (10 branches)



Installation area decreased by about 44%

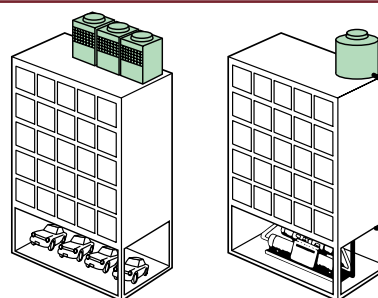


- Cubic volume 57% decrease
- Weight 41% decrease (10 branches).
- With product height of 11.42' installation flexibility greatly increased.

Branches	Conventional (CMB-P-D-V)	
	Dimension (H X W X D:inch)	Weight (lb)
4	13 X 25.35 X 108.25	112
5	13 X 15.15 X 108.25	121
6	13 X 28.74 X 193.3	130
8	13 X 35.69 X 17.99	147
10	13 X 141.73 X 17.9	165
13	Not Available	
16	Not Available	

Branches	New (CMB-NU-F)	
	Dimension (H X W X D:inch)	Weight (lb)
4	11.4X 26.614X 14.17	63
5	11.4X 26.614X 14.17	70
6	11.4X 26.614X 14.17	75
8	11.4X 26.614X 14.17	86
10	11.4X 26.614X 14.17	97
13	11.4X 44.33X 14.17	119
16	11.4X 44.33X 14.17	134

Machine Rooms are No Longer Necessary. The Enhanced, Efficient Use of Space Has Been Made Possible.

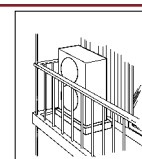


Extremely compact outdoor unit

This allows for easier positioning, provides extra flexibility during installation, and makes Mitsubishi Electric's outdoor unit highly suited for residential applications.

Multi-S outdoor unit 50 000Btu

	Multi-S
Area (feet²)	3.87
Volume (feet³)	16.244
External dimensions (HxWxD)(Inch)	H50.39 x W47.24 x D13.8





Comfortable

Superior Quality Air-conditioning Creates a Healthy, Comfortable Environment

High quality diversified air conditioning matches the requirements of each room, creating a pleasant environment which increases individual productivity.

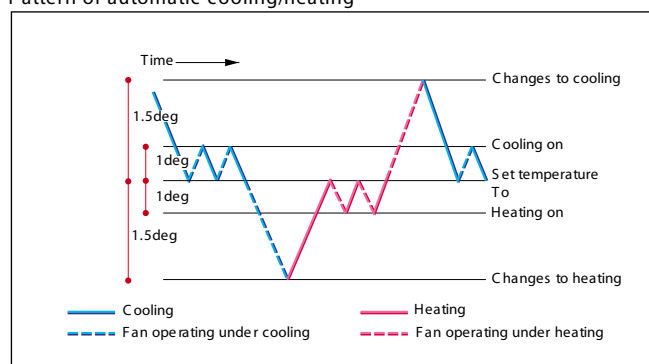
R2 Delivers High-Precision Temperature Control and Simultaneous Heating / Cooling



Switch Between Heating and Cooling Automatically.

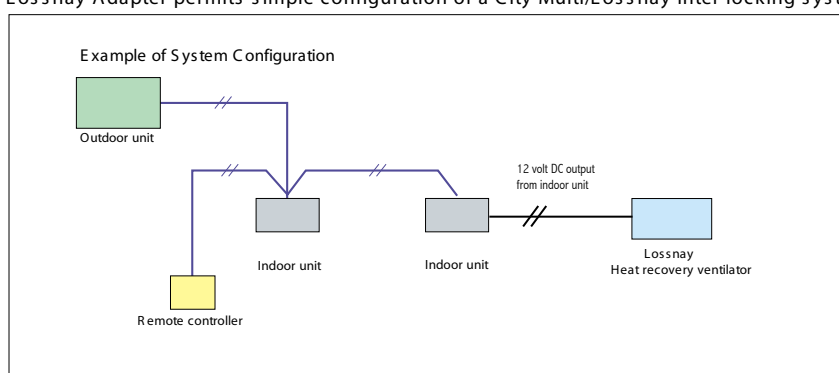
In the R2 and WR2 series, stable temperature control in individual rooms can be had with the automode setting that eliminates bothersome heating and cooling adjustments.

Pattern of automatic cooling/heating



Lossnay enthalpic heat recovery ventilators can easily be coupled to a CITY MULTI Air-Conditioning system, this ensures healthy environments at low operating costs

Lossnay Adapter permits simple configuration of a City Multi/Lossnay inter locking system



Noise Reduction

Adoption of an Intelligent Power Module (IPM) inverter minimizes operation noise.

	PUH(R)Y
80 000 Btu	56dB (A)
100 000 Btu	57dB (A)



Reliability and Easy Maintenance

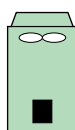
Unit Reliability Enhanced by Various Sensors Provided as Standard

In addition to auto sensing which provides information on important operating factors like pressure and temperature, the units are equipped with accumulator level sensors as standard. System reliability is further

improved by functions that provide various kinds of useful data, which lead to finding yardsticks for refrigerant recharge timing and long-term information on running performance.

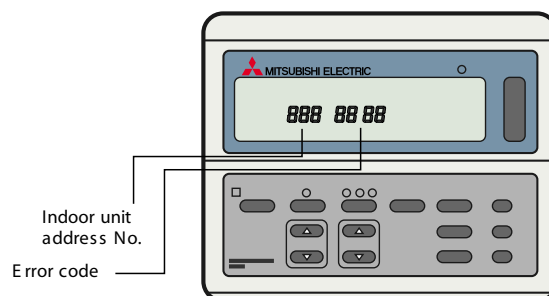
Fewer Parts are Required with our Unique 80 000 and 100 000 Btu Inverter Scroll Compressor and Large Fan

Inverter Scroll Compressor ■



Self-Diagnostic Function Detects Faults and Remote Controller Displays Easy-to-Understand Error Codes

A microcomputer constantly monitors operation to keep the units running smoothly. Should problems occur, the temperature display changes to an auto-diagnosis display that shows the inspection mode and the unit address alternately.



Four-Digit Display Provides Outdoor Unit Service Information for Easier Serviceability

The outdoor units 4-digit display speeds up the servicing process considerably by providing a fault history and allowing linear monitoring (displays over 250 items of information).



Equipped with Easy-to-Use Advanced Windows®-Based Maintenance Tools

These tools collect data on the system's operating status and provide an easy-to-understand display of status information for quick, easy and reliable servicing. In addition, error codes and the error history are output to the display and can be monitored remotely by modem.



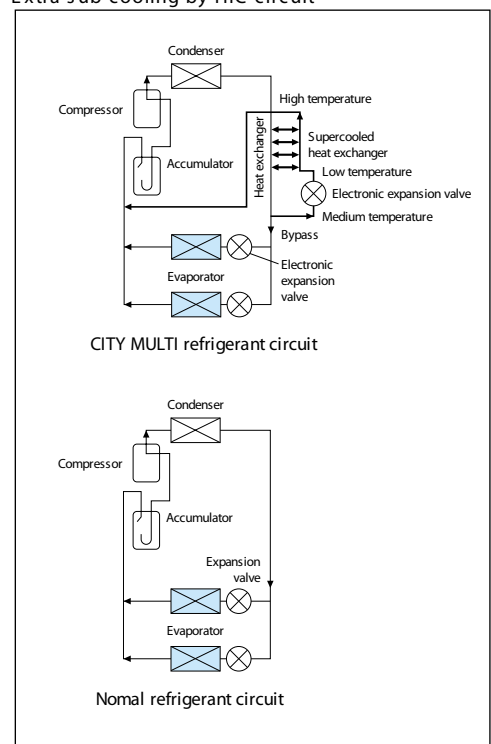


Environmentally Friendly

Mitsubishi Electric's Original HIC Circuit (Heat Interchange Circuit) Maximizes Stability and Reduces Refrigerant Amount

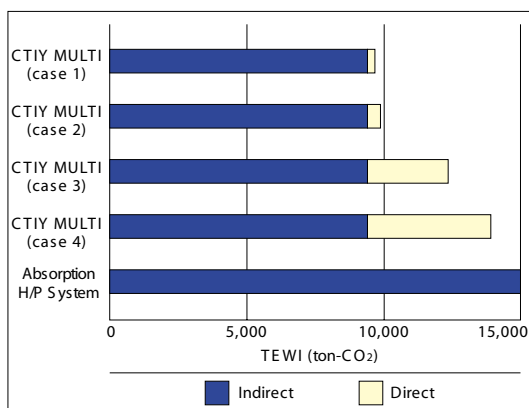
Extra sub-cooling by HIC reduces refrigerant while ensuring safety and efficiency.
(Pre-charged refrigerant is available for 80 000 Btu (21 pounds) and 100 000 Btu (22 pounds) only. Additional charging required for extended piping length.)
This reduction in refrigerant flow contributes to a reduction in pressure losses.

Extra sub-cooling by HIC circuit



CITY MULTI R2 System Shows Superb Quality for Total Environmental Warming Impact (TEWI)

CO₂ Emission Output Comparison: Natural Gas Absorption Heat Pump System and R2 System



Conditions

- Office building.
- * Required cooling/heating load is shown as Fig 1.
- * The air conditioning time is assumed to be 10 hrs/day, 25 days/month with continuous operation for 13 years.
- * CO₂ emission rate is 106g-c/kW-hr in electrical energy and 49g-c/kW-hr in natural gas.
- * Calculating cases of direct TEWI are referred as Fig2.

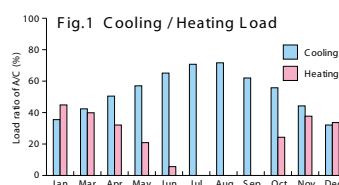


Fig.2 Calculating cases of direct TEWI

	Pipe length	End-of life recovery rate
Case 1	64'	95 %
Case 2	224'	95 %
Case 3	224'	Non recovery
Case 4	224'	Non recovery

ADVANCED TECHNOLOGY

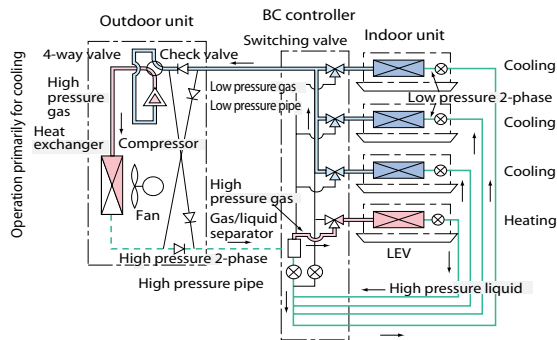
The World's First and Only "2-Pipe" Heat Recovery System



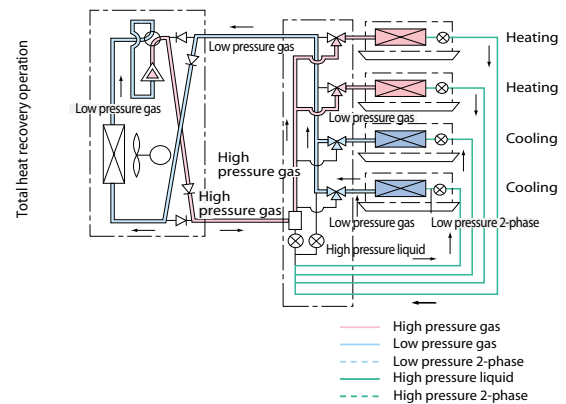
The Innovative BC Controller Which Makes a 2-pipe System Possible

BC Controller Operation

Operation primarily for cooling



Total heat recovery operation



New Blocking Technology and Refrigerant Circuits Give Powerful Performance and Simple piping Structure



Newly Developed Solenoid Valve / Check Valve Block

Increased reliability comes from a simple piping configuration. The new blocking approach leads to reduced pressure loss, lighter outdoor units and simpler refrigerant piping.



Solenoid valve block

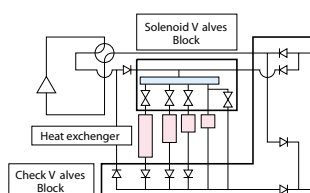


Check valve block

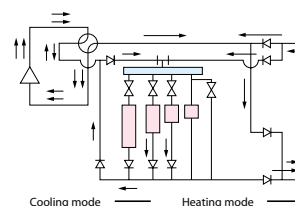
Heat Exchanger Refrigerant Flow Runs Opposite to Airflow

Redesign of the refrigerant circuit means that the flow of the refrigerant in the outdoor unit's heat exchanger is "one way" whether during heating or cooling. Refrigerant flow consistently runs opposite to airflow guaranteeing high performance.

R2 outdoor units and refrigerant circuit



R2 outdoor unit refrigerant flow

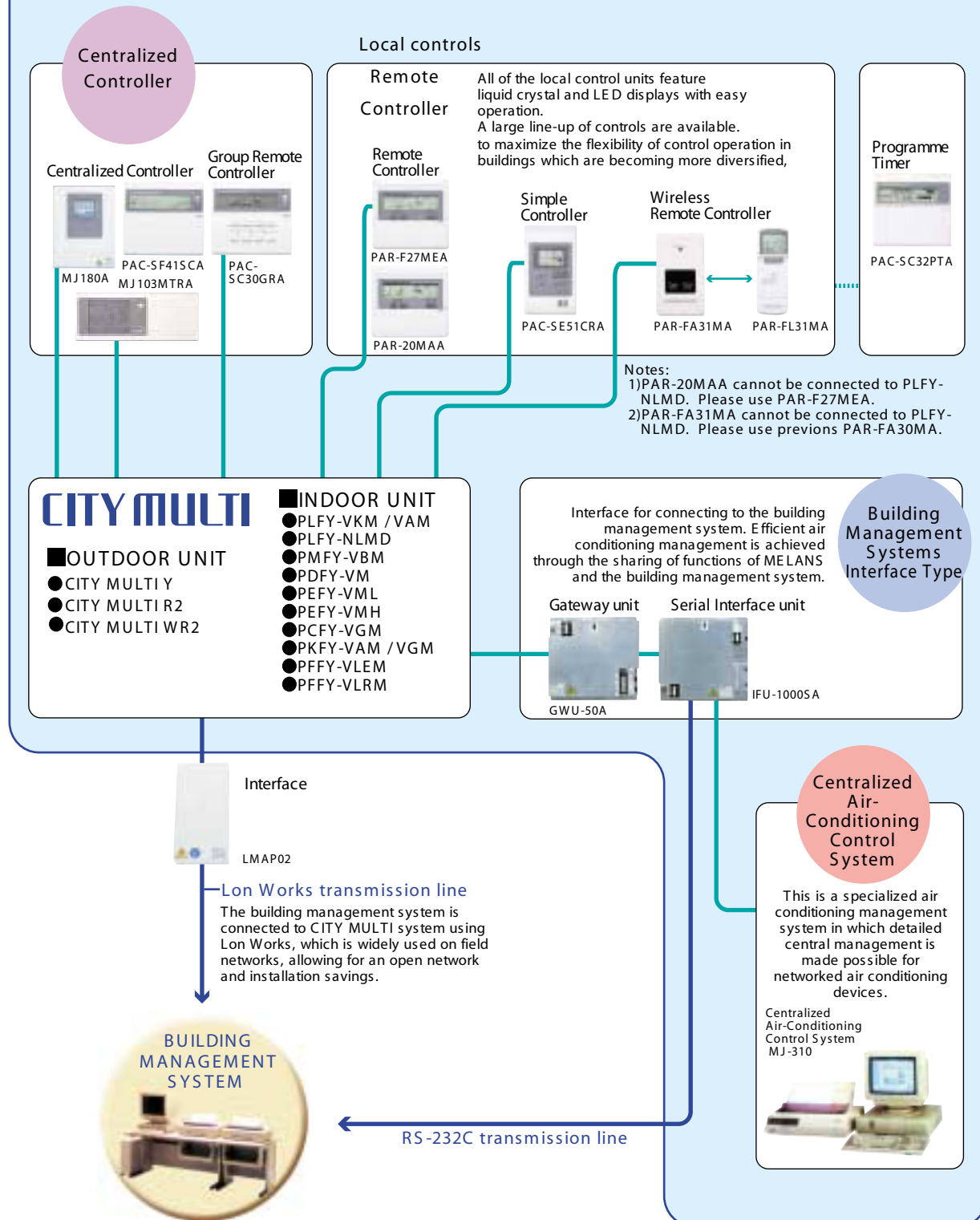


SYSTEM CONTROLLER

High speed - large volume communication control makes for a super-flexible management system

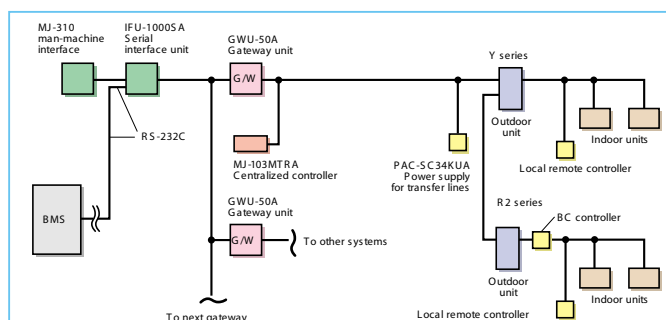
MELANS

This control system matches the air conditioning management task at hand, and even allows for separate control from local remote control to units for large-scale air conditioning facilities in buildings. Connected to the building management system through an interface, the air conditioning can be controlled from a building management system.



Wide Range of Peripheral Equipment Allows Connection with BMS (Building Management Systems) and Other Diverse System Configurations

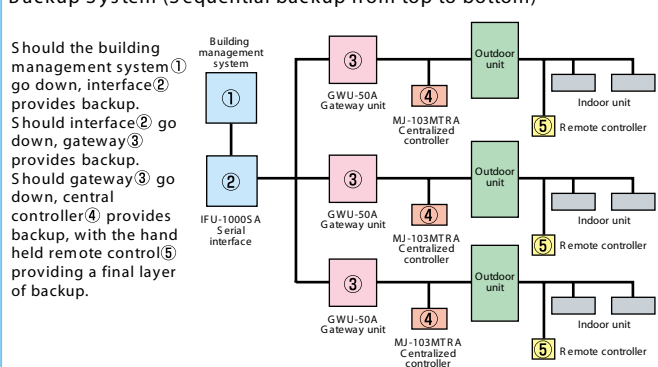
* Hardware for the man-machine interface is at the discretion of the customer.



Risk Dispersion Concepts Boost Reliability

M-NET control incorporates the latest thinking in risk dispersion so that the backup functions of the MELANS control system can take over. Should the building management system or the MJ-300 air conditioning management system go down, air conditioning functions are maintained.

Backup System (Sequential backup from top to bottom)



Grouping

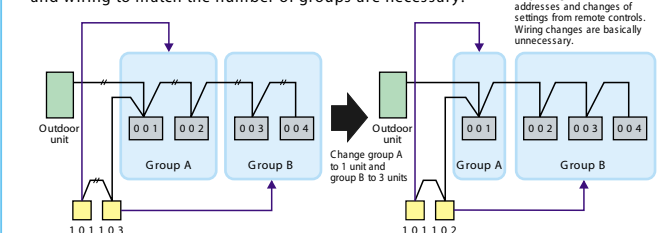
The free plan system makes it easy to make groups of changes can be made using either the local remote controllers or the centralized controllers. There is no need to change indoor unit addresses or alter wiring.

Thermostat Sensor Built into Remote Controllers

Along with the standard remote controllers, the compact remote controllers have built-in room thermostats which can be switched with the thermostat in the main unit.

Example of Batch Changes

*1 When the number of group is changed, remote control installation and wiring to match the number of groups are necessary. Only changes of remote control



M-NET

M-NET: Mitsubishi's unique high speed, large volume communications control system

Migration wiring system for non-polar 2-line system signal lines

Achieves high-speed data transmission. In addition, up to 50 units can be connected per system and even large buildings can be easily accommodated simply by increasing the number of systems. Moreover, limitations regarding line construction have been greatly reduced.

Flexibility in linking operations from local to centralized

Settings for linked operation are made from either the hand-held remote control unit or from the central controller. Control lines between units are connected using non-polar 2-line system signal lines allowing for easy construction.

Display of error codes when malfunctions occur

When trouble in a unit occurs, the description of the problem will be displayed with an error code on the local remote control unit and on the system controller. In addition, the history of the problem will be recorded from the system controller to increase the efficiency of servicing.

SYSTEM CONTROLLER

WIRELESS REMOTE CONTROLLER PAR-FL31MA / PAR-FA31MA



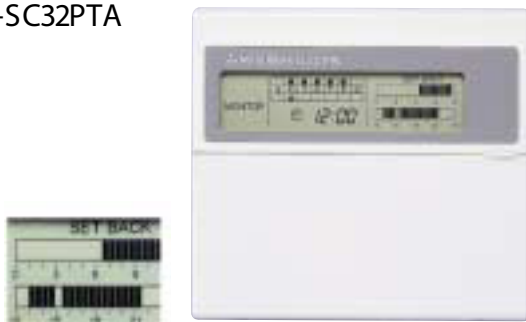
PAR-FL31MA



PAR-FA31MA
(PAR-FA30MA for PLFY-NLMD)

- Wireless construction supports multi - systems in buildings.
 - No need to configure addresses for group operation.
 - Lit LED keeps you informed of operation - blinking even gives you the error code via the number of blinks.
 - Can be used with the MA remote controller.
- *When used in group configurations, wiring between indoor units is required.
*Use with M-NET remote controllers (PAR-F27MEA, simple, and Lossnay units) in the same group is not possible.

PROGRAMME TIMER PAC-SC32PTA



- "Setback*" operation can also be selected at the same time, eliminating unnecessary air conditioning costs, in addition to the regular management of operating time.
 - On / Off management at 30-minute intervals allows you to achieve precision optimal scheduling.
 - Either the PAR-20MAA, PAR-F27MEA or the PAC-SC30GRA can function as a set.
- *Choose from 1°C, 2°C, 4°C, 6°C, or 8°C for "setback operation".

CENTRALIZED REMOTE CONTROLLER

GROUP REMOTE CONTROLLER PAC-SC30GRA



- A single group remote controller controls the start / stop operation of all groups for up to 8 groups (maximum of 16 units) at the touch of a switch.
 - Detailed settings for each group are also possible.
 - By using group remote controller you can easily turn units on and off without bothering with individual remote controllers.
 - Wiring is simple with non-polar 2-line signal lines. Connections for the host controller use the same wiring.
- Supports multiple systems that use different refrigerants. Independent and / or continuous operation of ventilation devices is also possible.
- By setting up the group remote controller in the building superintendent's office, indoor and outdoor transmission lines for multiple indoor units can be connected without power supply transmission units. Savings in wiring and construction costs are achieved regardless of the site.
- *Controlling only Lossnay groups using group remote controller is not possible.
*Control of ordinary interfaces and those with multiple connection points by the group remote controller is not possible.
*Control of K control devices using the group remote controller is not possible.
*In connecting to central management transmission lines, a power supply unit for the transfer line is necessary.

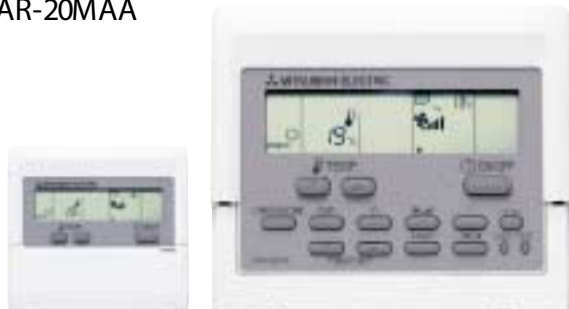
SYSTEM REMOTE CONTROLLER PAC-SF41SCA



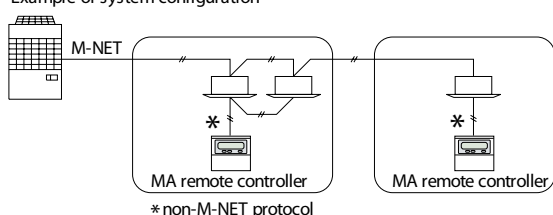
- Capable of controlling 32 groups/50 units of air conditioners.
 - The operation status can be determined immediately on the liquid crystal screen.
 - A simple remote control unit, with limited basic operations.
- The remote control unit performs only a few basic operations: [ON / OFF], [Operation mode selection], [Temperature setting] and [Prohibition of user's operation], so anybody can easily use it.
- Operation modes which it is not desired to have operated from the user's remote control units can be set to be controllable only from the system remote control unit (operation mode limitation function).
- Lossnay independent operation is possible.
- Similarly to a concentrated controller and multi-panel controller, grouping of Lossnay only is possible. In addition, "Automatic ventilation," "Normal ventilation" and "Thermal ventilation" can be selected from the system remote control.
- Operation modes that can be selected can be limited according to the season.
 - By setting up the group remote controller in the building superintendent's office, indoor and outdoor transmission lines for multiple indoor units can be connected without power supply transmission units. Savings in wiring and construction costs are achieved regardless of the site.

LOCAL CONTROLLER

REMOTE CONTROLLER PAR-20MAA



Example of system configuration

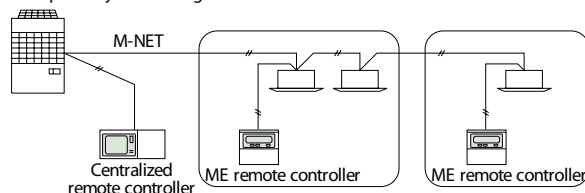


- Easy to read, easy to operate icon display
- Temperature selection
 - LCD display in 1°C units
- Room air temperature display
 - Displays temperature between 8°C and 39°C.
- Outlet angle display
 - Displays the angle of blowing between 20° and 70° (Only for cassette model PL and PK. Ceiling mounted models display the air volume ratio.)
- Auto-diagnosis display
 - A microcomputer constantly monitors operation to keep the units running smoothly. Should problems occur, the temperature setting display changes to an auto-diagnosis display that shows the inspection mode and the unit address alternately.
- Standardized remote controllers for all indoor units
- All wiring is simply done with non-polarized two-wire signal lines
- Room thermometer is built into the remote controller
- No address setting.
- Capable of connecting 32 controllers without a power supply unit.
- Not applicable for PLFY-NLMD(2-way cassette).

REMOTE CONTROLLER PAR-F27MEA



Example of system configuration



- Easy to read, easy to operate icon display
- Temperature selection
 - LCD display in 1°C units
- Room air temperature display
 - Displays temperature between 8°C and 39°C.
- Outlet angle display
 - Displays the angle of blowing between 20° and 70° (Only for cassette model PL and PK. Ceiling mounted models display the air volume ratio.)
- Auto-diagnosis display
 - A microcomputer constantly monitors operation to keep the units running smoothly. Should problems occur, the temperature setting display changes to an auto-diagnosis display that shows the inspection mode and the unit address alternately.
- Standardized remote controllers for all indoor units
- All wiring is simply done with non-polarized two-wire signal lines
- Room thermometer is built into the remote controller
- Daily timer
 - Repeated ON / OFF timer every day.
- Auto OFF timer
 - 0:30, 1:30, 2:00...4:00 one touch timer.
- Function lock
 - All functions or all functions except ON / OFF can be selected.
- Limit setting of room temperature.
 - ex.(cooling):19°C~30°C → 24°C~30°C
- PAR-F27MEA-US-E:Fahrenheit display is also available.

SIMPLE CONTROLLER PAC-SE51CRA



- To simplify operation of the system, the range of controls has been limited to START/STOP, room temperature and fan speed
 - The only wiring required is cross-over wiring based on two-wire signal lines
 - Room temperature sensors are built-in. The indoor unit can be replaced with body thermostats
 - Easy to read, easy to operate icon display
 - Temperature selection
 - Can operate all types of indoor units
 - Standardized remote controllers for all indoor units
- * Since this system has no operation mode switching, test operation, self-diagnosis or linked setting functions, it should always be used in conjunction with the PAR-F27MEA or other centralized controller.

Centralized Controller

MELANS MJ-103MTRA

Group status display light

A yellow light starts flashing as soon as a problem occurs in the air-conditioner. The location of the problem is easily determined by checking the operation monitoring screen.

Type of display lights

ON : One or more indoor units are operating.
OFF : All indoor units are stopped.
Flashing : A malfunction has occurred on one or more indoor units.



LCD display screen

Allows operations to be performed using an interactive menu-driven screen interface with text displayed on screen.

Group start / stop switch

Press this switch to start or stop a group operation. It can be used with the computer lid closed if there are no fine tuning adjustments.



Timer settings screen
Call the group to be scheduled to the screen and enter the start and stop times.



Operation monitoring screen
Displays the operating status for individual indoor units or groups.
● Highlighted display: ON
● Normal display: OFF
● Flashing: Malfunction

● Air-Conditioning Can Be Scheduled

A weekly schedule can be set up that turns air-conditioning on and off to match the tenant's business hours. It is also possible to set only the off time to prevent the system being left on by accident when operation is extended for overtime or the like. Three patterns can be scheduled for a single group for different days of the week.

● Operation Can Be Monitored On-Screen

The operating status of indoor units can be monitored on the central controller screen. The location and nature of errors can be displayed on screen, as can the history of past errors.

● Remote Control Can Be Disabled

The tenant's remote control can be disabled for all basic operations except setting the fan speed. This can help keep operation energy efficient by preventing excessive air-conditioning during summer. (Can be disabled for groups individually.)

● No Additional Wiring to Indoor Units Required

All wiring required for the MJ-103MTRA is handled by two wires to the outdoor unit and a connection to the central controller. The easy-installation MELANS system is used, so no additional wiring work is needed for indoor units.

This makes creating air-conditioning system a snap.

● Central Controller Can Be Installed Anywhere

The wiring distance between indoor units and central controller can be up to 500m, allowing great freedom in installing both the central controller and the indoor air-conditioners.

● Group Units From the Central Controller

Groups can be created entirely from the central controller. Should the air-conditioning system be changed by partitions in future, there is no need to change the address setting and wiring of indoor or outdoor units.

*Separate PAC-SC34KUA power supply unit is necessary.

MELANS MJ-180A

● Centralized control system up to 200 indoor units

Standard system controls 100 indoor units. Can be expanded to 200 units by using 2 gateway units.

● Improved ease of operation

All functions accessible through simple operations. Graphic user interface (GUI) with LCD touch-key system. Air-conditioning equipment displayed as icons.

● Integrated operation for all units possible

● Linkage to superior systems via external inputs/outputs (interface signals)

Emergency stop input
Error output



MELANS MJ-310E



Item	Outline
Addition of charging function	It is function which apportions air-conditioning running charges
Addition of external input/output	Watt-hour meter input, air-conditioner status output, fire alarm stop input functions

- Each gate way system can join up to 50 units, with up to 1,000 units connectable by adding systems, so it easily handles large building systems
- Fewer wiring limitations than ever before
- Main features of the MJ-310 system ; energy savings and greater efficiency for advanced air conditioning management

Interactively operate, set, and monitor the system using a mouse and an easy-to read screen. Makes advanced air conditioning management simpler and more efficient by facilitating everything from temperature control to monitoring to retrieval of maintenance information.

● Auto diagnosis log management function

The auto diagnosis log management function makes maintenance faster and more straightforward. The log shows the location, time of occurrence, and nature of any malfunctions, enabling speedy response.

● Set year-long schedules for each tenant

The number of on/off settings (in one minute units) is unlimited and different settings can be used for each day of the week, so schedule can be managed on a weekly basis. After schedules are set, air conditioners can be turned on and off automatically by commands from the man-machine interface that follow the scheduled settings. Special schedules can also be set for specific days, such as different holidays for different tenants.

● Use the main-machine interface to enable or disable local operation for greater flexibility in centralized control

Operations through the local remote controllers of each air conditioner can be disabled item by item at the host man-machine interface. This enables integrated management for all rooms from the manager's office.

Error (malfunction) log screen (Example)



Screen for monitoring the status of groups



Screen for maintenance schedule



Open Systems Create More Opportunities

Building management wants to be able to select equipment confident that it will connect easily to the building management system. Additionally, a system that minimizes connections will maximize performance. Mitsubishi Electric brings open-system advances to building management that include remote control of its MULTI air conditioning systems for buildings through LON WORKS®.

LMAP
LMAP 02-E

Protocol converter
between LON WORKS®
and M-NET

LON WORKS®

LMAP

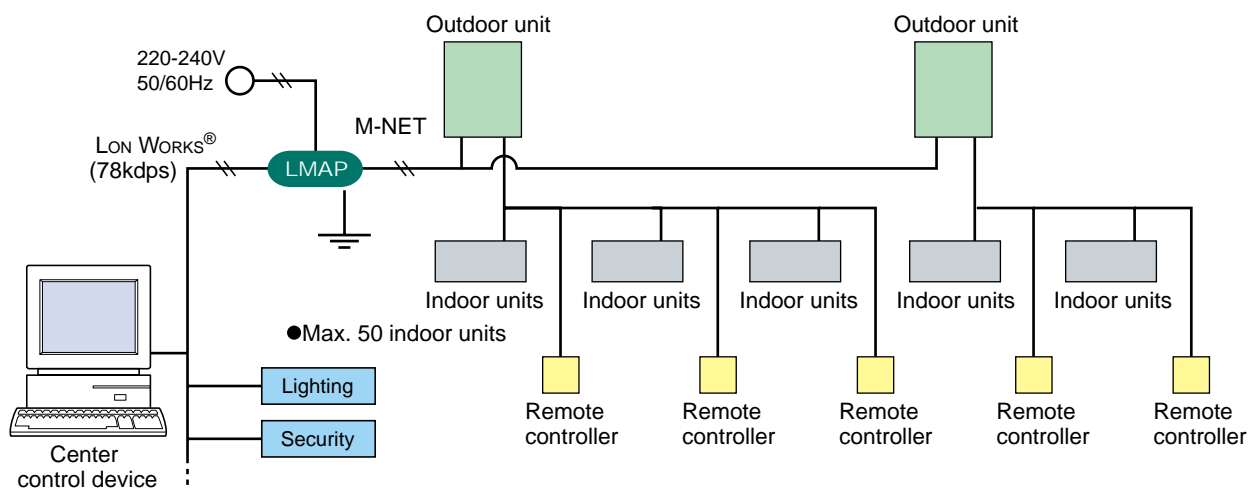
M-NET

CITY MULTI System

Example of System Configuration

System design made simple through integration of various devices into a total control configuration.

CITY MULTI



LON WORKS®

The building management system is connected to the CITY MULTI air conditioning system using LON WORKS®, which is widely used on field networks, allowing for an open network and savings in construction to face.

LON, LON WORKS® and the Echelon logo are trademarks of Echelon Corporation registered in the United States and other countries.

SYSTEM CONTROLLER











Integrated Communications Control with Mitsubishi's Unique Transmission Network(MNET)

Model		Hand Held								Centralized			Open Interface type
		MA Remote controller	ME Remote controller	Simple remote controller	Wireless remote controller	Programme timer	Group remote controller	System remote controller					
		PAR-20MAA	PAR-F27MEA	PAC-SE51CRA	PAR-FL31MA	PAC-SC32PTA	PAC-SC30GRA	PAC-SF41SCA	MJ-103MTRA	MJ-180A	MJ-310	LMAP02-E	
No. of units controllable (Groups (G) /units)		1G/16units	1G/16units	1G/16units	1G/16units	1unit	8G/16units	32G/50units	50G/50units	100G/100units 200G/200units	1000G/1000units	50G/50units	
Operation	Start / Stop	○	○	○	○	×	◎	◎	◎	◎	◎	□	
	Operation mode	○	○	×	○	×	◎	◎	◎	◎	◎	□	
	Temperature setting	○	○	○	○	×	◎	◎	◎	◎	◎	□	
	Permit / Prohibit direction	×	×	×	×	×	×	◎	◎	◎	◎	△	
	Fan speed	○	○	○	○	×	◎	×	◎	○	○	□	
	Air flow direction	○	○	×	○	×	◎	×	◎	○	○	×	
Monitoring	Status	○	○	○	○	×	◎	◎	◎	◎	◎	□	
	Error flashing	○	○	○	○	×	○	○	○	○	○	□	
	Error content	○	○	○	×	×	○	○	○	○	○	×	
	Filter sign	○	○	×	×	×	○	○	○	○	○	△	
	Operating hour	×	×	×	×	×	×	×	×	×	×	△	
	Operation mode	○	○	○	○	×	○	○	○	○	○	□	
	Setting temperature	○	○	○	○	×	○	○	○	○	○	□	
	Indoor temperature (intake)	○	○	×	×	×	○	×	○	×	○	□	
	Permit / Prohibit for receiving	○	○	○	○	×	○	○	○	○	○	△	
	Fan speed	○	○	○	○	×	○	×	○	○	○	□	
	Air flow direction	○	○	×	○	×	○	×	○	○	○	×	
Scheduling	Weekly	×/○ ^{*1}	×/○ ^{*1}	×	×	○	×/◎ ^{*1}	×/◎ ^{*1}	○	○	○	□	
	Annual (Designated day setting)	×	×	×	×	×	×	×	×	○	○	□	
	One day	×	×	×	×	×	×	×	×	×	○	□	
	Times of stops / Starts per day	1/1/48 ^{*1}	1/1 ^{*2} /48 ^{*1}	×	1/1	48	×/48 ^{*1}	×/48 ^{*1}	3/3	6	10	□	
	Times of stops / Starts per week	×	×	×	×	336	×/336 ^{*1}	×/336 ^{*1}	21/21	42	70	□	
	Auto off timer	×	○	×	×	×	×	×	×	×	×	□	
	Minimum setting unit (minutes)	10/30 ^{*1}	10/30 ^{*1}	×	10	30	×/30 ^{*1}	×/30 ^{*1}	10	1	1	□	
Recording	Error history	×	×	×	×	×	○	×	○	○	○	□	
	Daily / Monthly reports	×	×	×	×	×	×	×	×	×	○	□	
Control and management	Set temperature range limit	×	○	×	×	×	×	×	×	×	×	□	
	Auto lock	×	○	×	×	×	×	×	×	×	×	□	
	Ventilation (group / interlocked)	×/○	×/○	×	×	×	×/○	○/○	○	○/×	○/×	□	
	Group setting	× ^{*3}	○	○	×	×	○	○	○	○	○	□	
	Block setting	×	×	×	×	×	×	×	×	×	×	□	

◎: Each group / Batched ○: Each group □: Depend on the Building management system △: Please inquire ×: Not available : Not used

*1: When PAC-SC32PTA is connected. *2: The daily timer setting is also possible. *3: Set by wiring.

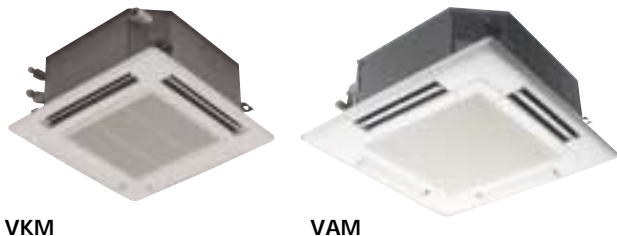
INDOOR UNIT CAPACITIES BY MODEL NUMBER

	Ceiling Cassette Type (4-Way Airflow) PLFY-VKM VAM	Ceiling Cassette Type (2-Way Airflow) PLFY-NLMD	Ceiling Cassette Type (1-Way Airflow) PMFY-VBM	Ceiling Concealed Type PDFY-VM	Ceiling Concealed Type (Low Static Pressure) PEFY-VML	Ceiling Concealed Type (High Static Pressure) PEFY-VMH	Ceiling Suspended Type PCFY-VGM	Wall Mounted Type PKFY-VAM VGM VFM	Floor Standing Exposed Type PFFY-VLEM	Floor Standing Concealed Type PFFY-VLRM
model number										
(P)20		●	●	●	●			● (VAM)	●	●
7900 Btu										
(P)25		●	●	●	●			● (VAM)	●	●
9900 Btu										
(P)32	● (VKM)	●	●	●	●			● (VGM)	●	●
12500 Btu										
(P)40	● (VKM)	●	●	●		●	●	● (VGM)	●	●
15900 Btu										
(P)50	● (VKM)	●		●		●		● (VGM)	●	●
19800 Btu										
(P)63	● (VKM)	●		●		●	●	● (VFM)	●	●
25000 Btu										
(P)71				●		●				
28200 Btu										
(P)80	● (VAM)	●		●		●				
31700 Btu										
(P)100	● (VAM)	●		●		●	●	● (VFM)		
39700 Btu										
(P)125	● (VAM)	●		●		●	●			
49600 Btu										
(P)140						●				
55600 Btu										
(P)200						●				
79000 Btu										
(P)250						●				
99000 Btu										

INDOOR UNIT

CEILING CASSETTE TYPE 4-WAY AIRFLOW PLFY-VKM/VAM

The new power cassette VAM offers 72 different airflow patterns, making it ideal for applications with ceilings up to 4.2 meters in height.



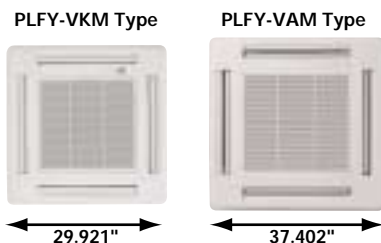
VKM

VAM

Easy Installation

Only two panel sizes—perfectly suited to various installation configurations

Only two panel sizes are available, 29.921" for the compact VKM and 37.402" for the power cassette VAM. The VKM is lightweight and compact—only 44 lb and 25.984 in depth for easy installation.



PLFY-VKM Type

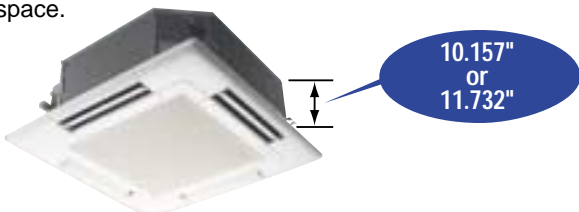
PLFY-VAM Type

29.921"

37.402"

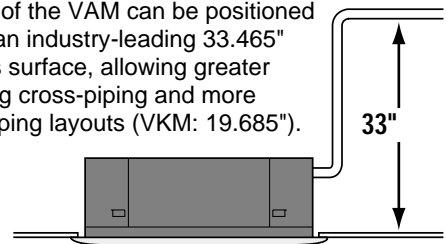
Unit height of only 10.157" and 11.732"—great for low-ceiling space situations

The new power cassette VAM has a unit height of only 10.157" or 11.732", depending on the model, to realize neat installation in low-ceiling situations with very limited space.



Drain water pipe lifted to 33" (power cassette VAM) — No.1 in the industry!

The drain piping of the VAM can be positioned anywhere up to an industry-leading 33.465" from the ceiling's surface, allowing greater freedom with long cross-piping and more versatility with piping layouts (VKM: 19.685").



Handy corner-pocket design simplifies maintenance and installation (power cassette VAM)

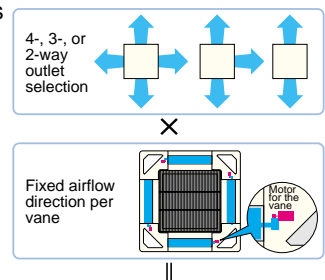
By using the handy corner pockets equipped on four corners of the grille, maintenance work such as drain pan cleaning and height adjustment can be accomplished without removing the grille. It is also easier to adjust the ceiling height of the indoor unit during installation.



Superb Features

First in the industry to offer 72 airflow patterns (power cassette VAM)

The 72 different airflow patterns provide the best solution for varying room layouts and air-conditioning requirements. For extra versatility, you can also select from two-, three- or four-way outlets. What's more, the addition of separate motors to the individual vanes enables manual control that-together with remote control vane settings-make possible highly customized and flexible airflow patterns.

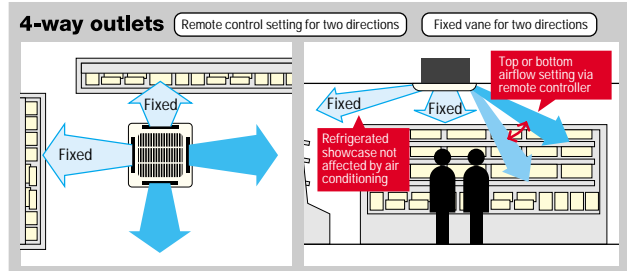


72 airflow patterns

*Optional air outlet shutter plate is necessary for two- or three-way airflow settings. The noise level may increase during two- or three-way airflow setup.

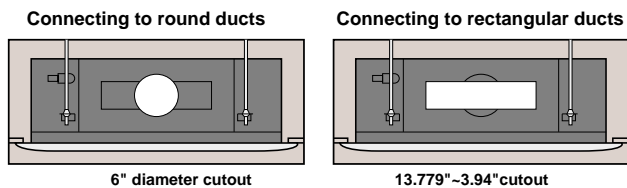
For Retail Outlets (i.e. Grocery Shops)

These units are ideal for maintaining constant temperatures in environments that have equipment such as refrigerate showcases. Individual vane angle adjustment enables precise airflow control to specific areas of the store to reduce unnecessary air conditioning of areas such as refrigerated showcases.



Compatible with both round and square ducts (power cassette VAM)

For easy connection to branch ducts, knockout holes are designed to fit both round and square ducts. Matching the shape of the duct fringe provides more flexibility during installation.

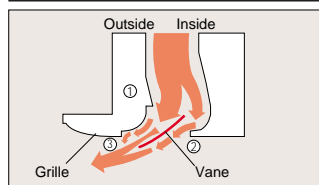


Smudge-free airflow prevents soiling of the ceiling surface (power cassette VAM & compact cassette VKM)

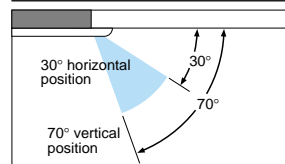
Mitsubishi Electric has developed a new airflow control mechanism where a projection inside the air passage distributes air evenly over the vane's upper and lower surface while two additional projections at the air outlet's exit adjust the angle of the airflow. This helps to prevent indoor air from rising, stopping it from hitting the surface of the ceiling to reduce the likelihood of soiling from smudging and condensation.



Smudging and the new airflow control mechanism



Wider airflow setting reduces annoying drafts



Smudging: When cooled air is expelled horizontally, it tends to cling to the surface of the ceiling. This cools the surface down and causes condensation, which attracts dust from the room's interior to soil the ceiling's surface.

Bristle-free vane can be cleaned simply (power cassette VAM & compact cassette VKM)

The unique suction mechanism prevents indoor air from rising to eliminate condensation on the vane and make bristles unnecessary.

Push-open grill for easier filter cleaning (compact cassette VKM)

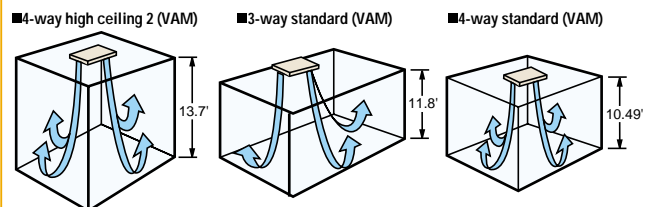
Since the grill opens smoothly and automatically at the push of a button, dust and dirt adhering to the filter is not scattered about, making the filter cleaning process simpler and faster.



Outstanding Specifications

Wide-flow air outlet delivers a comforting breeze

The airflow of the VAM power cassette is powerful enough to warm atrium-type ceilings up to 13.7' in height. The compact VKM type also utilizes wide-zooming flow for a comforting airflow in any situation.



Specifications according to ceiling height and number of vents

	Compact Cassette VKM		Power Cassette VAM		
	Standard	High ceiling	Standard	High ceiling 1	High ceiling 2
4-way	8.6'	9.6'	10.2'	11.5'	13.44'
3-way	9.6'	10.5'	11.5'	12.8'	13.44'
2-way	—	—	12.8'	6.4'	—

Functional and appealing vane shutter (power cassette VAM)

When the air conditioner is not operating, the vane shutter closes automatically to conceal the air outlet and create an aesthetically appealing flat surface.*

*This feature will not activate when the vane is set at fixed position.

During operation



When turned off



Direct intake of fresh exterior air

Indoor air quality is significantly enhanced by the direct intake of fresh exterior air. An optional multi-function casement is also available for the intake of a larger volume of air.

CEILING CASSETTE TYPE 2-WAY AIRFLOW

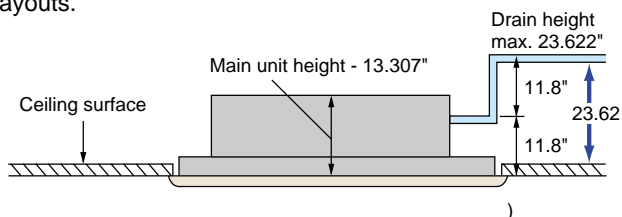
PLFY-NLMD

With a height of
only 13.307"
this is one of the
slimmest indoor units
on the market.



Equipped with drain water lift-up mechanism as standard

The drain can be positioned anywhere up to 23.622" from the ceiling's surface, providing greater freedom with long cross-piping and allowing more versatility with piping layouts.



Lighter main unit means easier installation

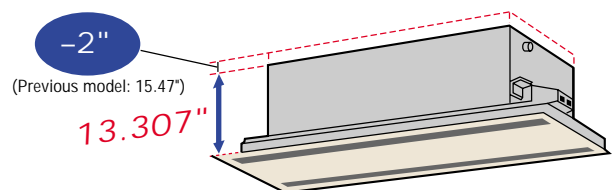
The weight of the main unit has been dramatically cut by the use of resinous materials for the fan casing and by reducing the number of sheet metal parts, greatly facilitating the installation process.

NLMD	Capacity	20	25	32	40	50	63	80	100	125
	Weight	53	53	55	74	77	86	90	123	123

(unit:lb)

Slimmest body in the industry - only 13.307" high

The main unit is 2.165" lower in height than conventional units, making it ideal in cases where there is relatively little ceiling space and for replacing existing older units.



The slimline body is highly suitable for installation in narrow ceiling spaces and for replacing obsolete air-conditioning equipment in older buildings. The main unit is only 13.307" high, 2.165" lower than conventional models.

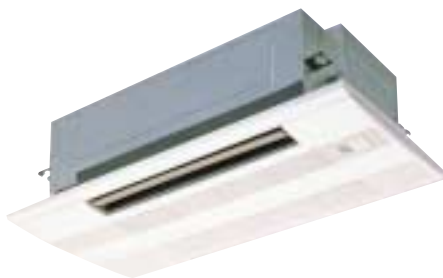
Terminal block on outside of main unit makes wiring easier

Newly designed decorative panel with air flow switching and swing functions a standard feature

CEILING CASSETTE TYPE
1-WAY AIRFLOW

PMFY-VBM

Compact and
lightweight body
perfect for limited
ceiling space
applications.



Compact size for smooth installation and maintenance

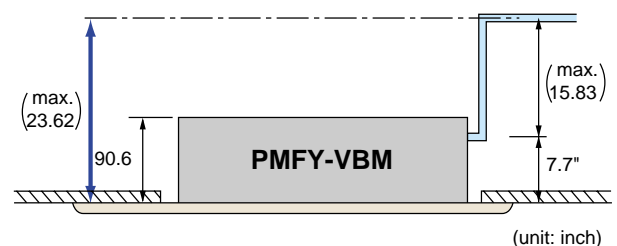
Unit body size has been standardized for all models at 33.62" for easier installation. Body weight is also only 31 lb for the main unit and 6.6 lb for the panel, making this unit one of the lightest in the industry.

Quiet operation

Newly developed airflow control technology reduces noise level to only 27dB (P20VBM) for industry-leading quiet operation.

Drain lift-up mechanism

The drain can be positioned anywhere up to 25.98" from the ceiling's surface.



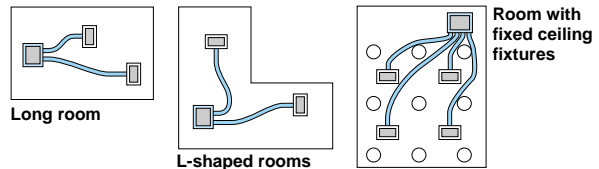
CEILING CONCEALED TYPE

PDFY-VM

Achieving creative air conditioning design through a rich array of system materials.



Flexible installation for a variety of layouts

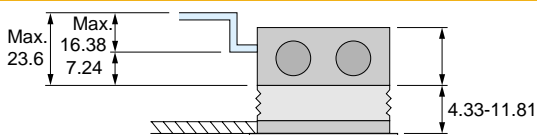


Air outlet side compatible with a variety of ducts (optional)

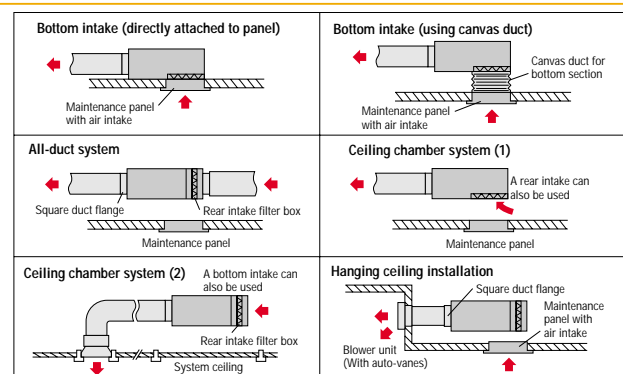
Adjustable setting of external static pressure to meet system configuration and installation conditions

Static pressure settings can be increased to adjust to all kinds of ducts as well as functional upgrade option (high performance filter etc). An increase from the standard 0.201" to 0.4" water is possible to cope with various layout configurations.

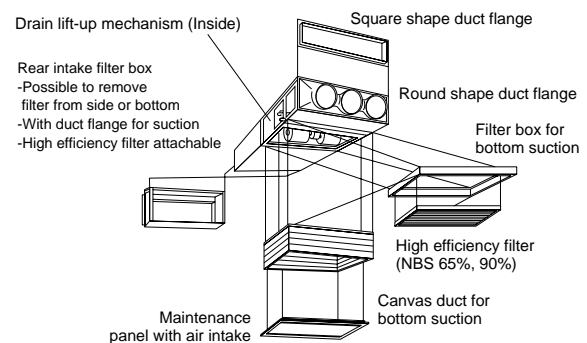
Slim 11.614" main unit with optional drain up mechanism ensures up to 23.622" of lift



Multiple installation patterns for assorted applications and locations



Various kinds of optional parts can be attached



CEILING CONCEALED TYPE

PEFY-VML

Increased design flexibility for hotel and residential use from an ultra low height body.



Low static pressure (0.02"water) meets an application requiring direct air flow

Changeable air flow rate (3 stage low-middle-high)

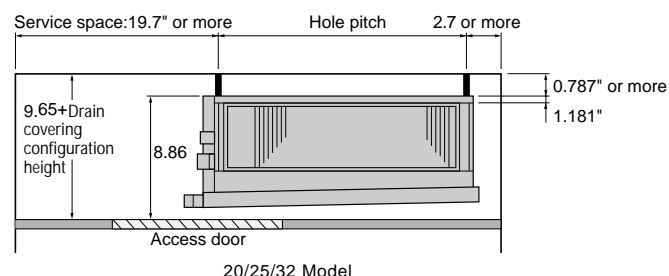
Flexible installation by rear or bottom return air inlet.

Filter is attached as standard.

Ultra low height unit with 8.86" high

Can be installed easily in tight spaces, such as ceiling cavities or drop-ceilings.

Notes: Drain lift-up pump not applicable.



Reduced noise thanks to the use of newly designed centrifugal fan

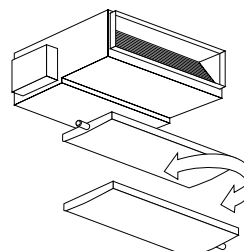
Noise level table (Standard static pressure 220V)

Noise Level	Capacity		dB(A)		
	Fan Speed		P20	P25	P32
		High	36	36	40
		Mid	33	33	35
		Low	29	29	32

Note: In the case of bottom inlet, the operating noise is louder than in the case of rear inlet.

Drainage lines may be connected on either the right or left side.

Perfect for use in hotels and other places where line placement is a problem.



CEILING CONCEALED TYPE

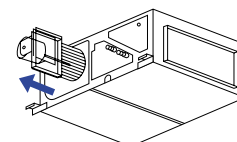
PEFY-VMH

Increased design flexibility from sufficient external static pressure allow authentic duct air-conditioning with an elegant interior layout.



One-side maintenance

All maintenance to the unit, including fan inspection and fan motor removal, can be conducted from the inspection opening on one side.



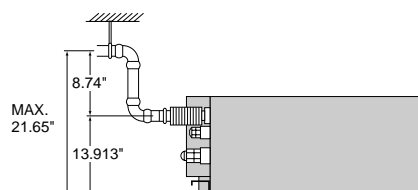
Max. external static pressure 0.803"water

The additional external static pressure capacity provides flexibility for duct extension, branching and air outlet configuration.

		P40	P50	P63	P71	P80	P100	P125	P140	P200	P250
External static pressure "water)	220V	0.201 / 0.401 / 0.803									

Drain up mechanism (option) ensures up to 21.65" of lift

The introduction of an upper drain mechanism allows the drain connection to be raised as high as 21,654", allowing more freedom in piping layout design and reducing horizontal piping requirements.



Reduced noise thanks to the use of newly designed centrifugal fan

Noise level table (Standard static pressure 220V) dB(A)

Noise Level	Capacity	P40	P50	P63	P71	P80	P100	P125	P140
Fan Speed	High	34	34	38	39	41	42	42	42
	Low	27	27	32	32	35	34	34	34

Duct can be connected to intake side. Suction chamber is included as standard

CEILING SUSPENDED TYPE

PCFY-VGM

Designed for ultra-quiet operation and easy maintenance, provides exceptionally comfortable air-conditioning.



Keeps airflow at optimum level according to ceiling height

The most suitable airflow can be selected for ceilings up to 138" high, enhancing air-conditioning efficiency and comfort.

	Standard	High ceiling
Ceiling height	8.6'	11.2'

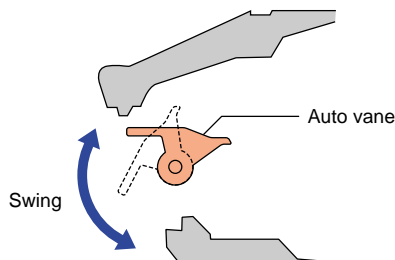
Extra slim, extra stylish

Sleek and slim with stylishly curved lines, the PCFY series blends right into any interior. It also features a single air outlet which allows the auto vane to act as a shutter when the unit is turned off.



Auto vane distributes air evenly

The auto vane swings up and down automatically to distribute air more evenly to every corner of the room.

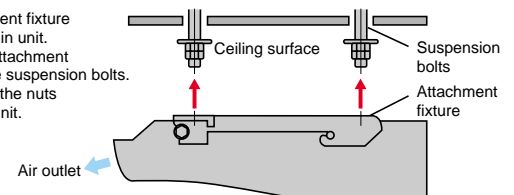


Greatly simplified installation

The new direct suspension system eliminates the task of removing the attachment fixture from the main unit, greatly shortening installation time.

Direct suspension with attachment fixture attached

1. Leave attachment fixture attached to main unit.
2. Suspend the attachment fixture from the suspension bolts.
3. Simply tighten the nuts to secure the unit.



*A one-touch suspension is also available: simply suspend the main unit from the attachment fitting after securing the latter to the ceiling.

Drain piping can be connected in one of two directions, to the left or the right of the unit

WALL MOUNTED TYPE PKFY-VAM/VGM

Elegant Design and
Compact Dimensions
Ideal for Offices,
Stores and Residential
Uses.



PKFY-VAM



PKFY-VGM



PKFY-VFM

Capacity range

Capacity	P20	P25	P32	P40	P50	P63	P100
VAM	●	●					
VGM			●	●	●		
VFM						●	●

Compact design with 39" width

(PKFY-VGM)

Width reduced by 20% to a compact 39"

Extra compactness has been achieved thanks to a 20%(10.236") reduction in which compared with previous models.

Compact 11.614" high body fits snugly in even limited spaces (PKFY-VAM)

Lightweight 18.73 lb unit easy to transport and install (PKFY-VAM)

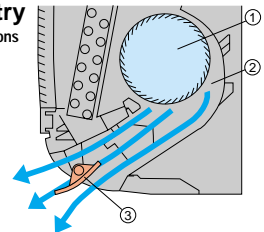
Auto-flap shutter enhances good looks

Quiet operation (PKFY-VGM)

Among the quietest in the industry

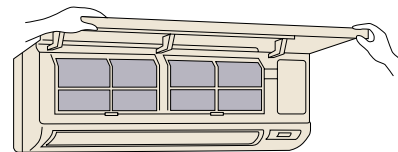
Airflow passage configuration that assures quiet operations

- ①The unit incorporates a random pitch cycling fan. By changing fan intervals reduction in airflow. Optimal design of the airflow passage gives a shorted fan diameter and allows a highly compact installation.
- ②Thanks to a highly practical casing configuration, airflow generated by the fan is distributed uniformly.
- ③Due to careful positioning of the vertical vane axis, air is blown evenly from the fan. This prevents mixing with secondary air, and also suppresses condensation.



Front grille opens out - easy filter cleaning (PKFY-VGM)

In room air conditioning style, the grille opens out allowing the filter to be removed. The filter and open grille can therefore be thoroughly and easily cleaned.



Front grille opens out

Front power supply box for easier wiring even after installation

The front power supply box allows electrical wiring work to be done after the indoor unit has been installed. For easier installation, all the screws required for securing the indoor unit to the wall are accessible from the front of the unit.

5-way piping provides more flexibility in selecting installation sites

All piping including drainage can be connected from the rear, right, base, and left of the unit, providing much greater flexibility out piping and selecting installation site.

FLOOR STANDING TYPE

PFFY-VLEM/VLRM

Floor-mounted
"Low-Boy" type
makes effective use of
perimeter space.



Exposed type
PFFY-VLEM



Concealed type
PFFY-VLRM

Compact unit provides simple, effective air-conditioning in perimeter zones

Only 8.66" deep, these units are easy to install in peripheral spaces, yet offer highly efficient air-conditioning performance.

"Electronics Dry" function removes humidity

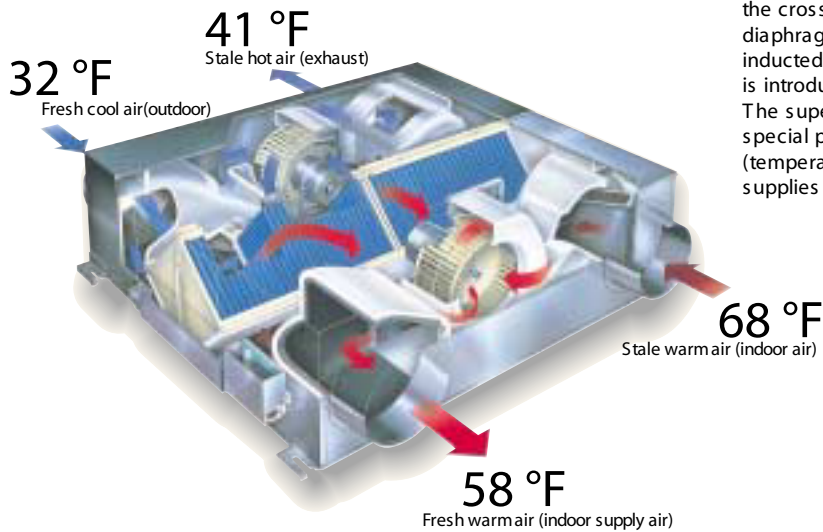
This function keeps humidity at the optimum level in response to changes in room temperature, preventing over-cooling and dehumidifying the air to keep it fresh and invigorating.

Remote controller can be incorporated into main unit



The Ventilation System for Enhanced Air Quality - Lossnay

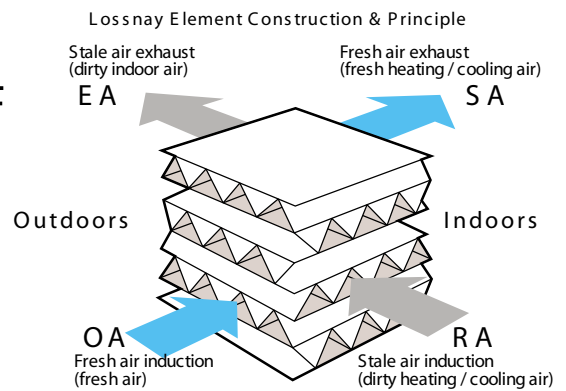
Combine with Lossnay Ventilation System Enhanced Air Quality.
Unified Control System Allows Greater Design Freedom.



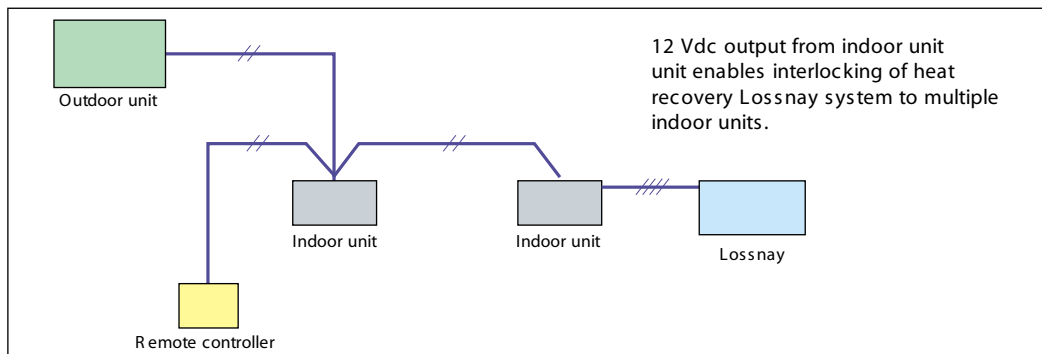
Heat-Exchange Efficiency Obtainable Only with Lossnay.

The secret to the unmatched comfort provided Lossnay core is the cross-flow, plate-fin structure off the heat-exchange unit. A diaphragm made of a specially processed paper fully separates inducted and exhausted air supplies, ensuring that only fresh air is introduced to the indoor environment.

The superior heat-transfer and moisture permeability of the special paper assure highly effective total heat exchange (temperature and humidity) when inducted ? and exhausted air supplies cross in the Lossnay core.



Lossnay Adapter permits simple configuration of a City Multi / Lossnay interlocking system.



Please contact your closest Mitsubishi Electric Distributer for model information and selection)



SPECIFICATION

OUTDOOR UNIT



PUMY-VM Specifications

Model			PUMY-125VM
Power source			Single-phase, 208-220V, 60Hz
Cooling capacity		kW	14.0
		BTU/h	49,600
Heating capacity		kW	14,000
		BTU/h	55,600
Power input	Cooling	kW	6.43
	Heating	kW	6.10 / 6.03
Current	Cooling	A	33.6
	Heating	A	31.5
Fan	Type		Propeller fan x 2
	Airflow rate	CFM	3178
	Motor output	kW	0.06 + 0.06
Compressor	Type		Hermetic
	Motor output	KW	3.5
Refrigerant / Lubricant			R22 / MS32 (N-1)
External finish (Munsell No.)			Molten-gvanized steel plate with polyester coating ivory <Munsell 5Y8 / 1 >
External dimensions			H x W x D Inch 50.394 x 40.157 x 13.780 (+1.181)
Protection devices	High pressure protection		High pressure sensor 426 PSI
	Compressor / Fan		Inner thermostat
	Inverter		Over current protection, Overheat protection
Refrigerant piping diameter	Liquid / Gas	Inch	3/8" / 3/4"
	Total capacity		50~130% of outdoor unit capacity
Indoor unit	Model / Quantity		Model 20~125 / 1~8 units
Noise level		dB (A)	54
Net weight		Pound	287
Operating temperature range	Heating		Indoor : 59 FWB -FWB~75 Outdoor : 23 FDB~115FDB
	Cooling		Indoor : 59FDB~81 FDB Outdoor : 5 FWB59.9FWB

Note : a Cooling / Heating capacity indicates the maximum value at operation under the following condition.

Cooling : Indoor : 81FDB / 67CWB, Outdoor: 95FDB Heating : Indoor: 68 FDB Outdoor : 45 FDB /43FWB Pipe length : 24.6' Height difference : 0'

b Works not included : Installation / foundation work, electrical connection work, duct work, insulation work, power source switch and other items not specified in this specification.



PU(H)Y-TM Specifications

Model name			PUY-200TM	PUY-250TM	PUHY-200TM	PUHY-250TM		
Item			Cooling	Cooling	Cooling	Heating	Cooling	Heating
Capacity								
		kW	23.3	29.1	23.3	26.0	29.1	32.6
		BTU/h	79,400	99,300	79,400	88,900	99,300	111,200
Power source			3~208-220V 60Hz					
Power input		kW	8.97	11.3	8.97	8.12	11.3	10.5
Current		A	26.1	32.5	26.1	23.6	32.5	30.6
Fan	Type x Quantity		Propeller fan x 1					
	Airflow rate		CFM 6533					
	Motor output		kW 0.350					
Compressor	Type		Hermetic					
	Motor output		kW 5.5	7.5	5.5		7.5	
	Crankcase heater		kW 0.045					
Refrigerant / Lubricant			R22/MS32(N-1)					
External finish			Steel plate painting with polyester powder <MUNSELL 5Y8/1 or similar>					
External dimension		Inch	67.5(H)x38.976(W)x33.071(L)					
Protection devices	High pressure protection		426 PSI					
	Compressor / Fan		Over current protection / Thermal switch					
	Inverter		DC bus current protection, thermal switch					
Refrigerant piping diameter		Inch	1/2" Flare / 1 1/8" Flange	1/2" Flare / 1 1/8" Flange	1/2" Flare / 1 1/8" Flange		1/2" Flare / 1 1/8" Flange	
Indoor unit	Total capacity		50~130% of outdoor unit capacity					
	Model / Quantity		Model 20~250 / 1~13	Model 20~250 / 1~16	Model 20~250 / 1~13		Model 20~250 / 1~16	
Noise level		dB<A>	57	58	57		58	
Net weight		Pounds	485	518	496		529	
Operating temperature range	Cooling		Indoor:59FWB~75FWB Outdoor:23FDB~109 FDB *3					
	Heating		Indoor:59FDB~81FDB			Outdoor:5	FWB~60	FWB

Note : *1. Cooling / heating capacity indicates the maximum value at operation under the following condition.

Cooling Indoor : 81CFDB /67 FWB Outdoor :95FDB Heating Indoor : 70F DB Outdoor : 45 FDB / 43 FWB Pipe length : 16' , Height difference : 0'

*2. Works not included : Installation / foundation work, electrical connection work, duct work, insulation work, power source switch and other items not specified in this specification.

*3. 50FDB~109 FDB with outdoor unit at lower position

OUTDOOR UNIT



PURY-TMU Specifications

Model name			PURY-200TMU		PURY-250TMU	
Item			Cooling	Heating	Cooling	Heating
Capacity						
		BTU	79,400	88,900	99,300	111,200
Power source			208-220 / 3 / 60Hz			
Power input		kW	TBA	TBA	TBA	TBA
Current		A	TBA	TBA	TBA	TBA
Fan	Type x Quantity		Propeller fan x 1			
	Airflow rate	cfm	6533			
	Motor output	kW	0.38			
Compressor	Type		Hermetic			
	Motor output	kW	5.5		7.5	
	Crankcase heater	kW	0.062(240V)			
Refrigerant / Lubricant			R-22 /MS 32(N-1)			
External finish			Steel plate painting with polyester powder <MUNSELL 5Y8 / 1 or similar>			
External dimensions		inch	67.52 (H) x39.976 (W) x 33.709 (L)			
Protection devices	High pressure protection		427 PSI			
	Compressor / Fan		Overcurrent protection / Thermal switch			
	Inverter		DC bus current protection, thermal switch			
Refrigerant piping diameter	High press. / Low press.	inch	3/4" Flare / 1 1/8" Flange		3/4" Flare / 1 1/8" Flange	
Indoor unit	Total capacity		50~150% of outdoor unit capacity			
	Model / Quantity		Model 20~250 / 1~15		Model 20~250 / 1~16	
Noise level		dB (A)	56		57	
Net weight		Pounds	531		544	
Operating temperature range	Cooling		Indoor : 59FWB~75FWB / Outdoor :23FDB~109CDB			
	Heating		Indoor : 59FDB~81FDB / Outdoor : 5 FWB 60 FWB			
			*23FDB / 21FWB~70FDB / 60 FWB with cooling / heating mixed operation.			

Note : a Cooling / Heating capacity indicates the maximum value at operation under the following condition.

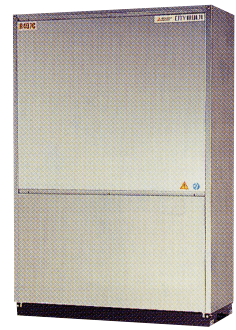
Cooling : Indoor : 81FDB / 67 FWB, Outdoor: 95 FDB Heating : Indoor: 70 FDB Outdoor : 45 FDB / 43 FWB Pipe length : 16', Height difference : 0'

b Works not included : Installation / foundation work, electrical connection work, duct work, insulation work, power source switch and other items not specified in this specification.

OUTDOOR UNIT



Available on request



PQRY-M-B-BM Specifications

Model name			PQRY-200M-B-BM		PQRY-P250M-B-BM	
Item			Cooling	Heating	Cooling	Heating
Capacity						
		kW	23.3	26.0	29.1	32.6
		BTU	79,400	88,900	99,300	111,200
Power source			3 pase 208-220v 60Hz			
Power input		kW	6.75	6.65	8.80	8.45
Current		A	20.81	20.50	27.14	26.06
Compressor	Type		Hermetic			
	Motor output	kW	5.5		7.5	
	Crankcase heater	kW	0.045		0.045	
Heat exchanger	Type		Double coil		Double coil	
	Water volume in coil	gallon	2.77		3.43	
Circulating water	Volume	g/h	1024		1302	
	Pressure drop	Psi	55		69	
Refrigerant / Lubricant			R 22/MS 32(N-1)			
External finish			Steel plate acrylic paint			
External dimensions		inch	65.748(H) x 45.276(W) x 19.69(L)			
Protection devices	High pressure protection		426 psi			
	Compressor		Overcurrent relay			
	Inverter		DC bus current protection, thermal switch			
Refrigerant piping diameter		High / Low pressure	3/4" Flare / 1 1/8"Flange		3/4" Flare / 1 1/8" Flange	
Indoor unit	Total capacity		50 - 150% of heat source unit capacity			
	Model / Quantity		Model 20 - 140 / 1 - 15		Model 20 - 140 / 1 - 16	
Noise level		dB(A)	53		54	
Net weight		Pounds	590		612	
Operating temperature range		Cooling	Indoor : 59FWB-75FWB Water : 50F-113F			
		Heating	Indoor : 59FDB-81FDB Water : 50F-113 F			

Note : 1 Cooling / Heating capacity indicates the maximum value at operation under the following condition.

Cooling : Indoor :81 °FDB / 67FWB, Water temperature : 86F Heating : Indoor : 70FDB Water temperature : 68F Pipe length : 16', Height difference : 0'

2 When the total capacity of indoor units exceeds 130% of heat source units capacity, the operating temperature range of circulating water is 59F~113 F.

3 The ambient temperature of heat source unit has to be kept below 104F (dry bulb).

The ambient relative humidity of heat source unit has to be kept below 80%.

4 This unit can not be installed in the outdoor. (No protection against the weather.)



BC CONTROLLER

CMB Specifications

Model name			CMB-104NU-F	CMB-105NU-F	CMB-106NU-F	CMB-108NU-F	CMB-1010NU-F	CMB-1013NU-F	CMB-1016NU-F	
Number of branch			4	5	6	8	10	13	16	
Power source			208 - 220V 60Hz							
Power input		kW	0.068	0.083	0.098	0.128	0.158	0.203	0.248	
Starting Current		A	0.31	0.38	0.45	0.58	0.72	0.93	1.13	
External finish			Galvanized steel plate (Lower part drain pan painting N1.5)							
Indoor unit capacity connectable to 1 branch			Model 80 or smaller Use optional joint pipe combining 2 branches when the total unit capacity exceeds 81. Use the reducer (standard accessory) when the indoor unit Model 40 or smaller is connected.							
External dimension		inch	11.417(H)x14.173(W)x26.614(D)						11.417(H)x14.174(W)x44.33(D)	
Refrigerant piping diameter	To outdoor unit	High press. pipe	3/4" Flare							
		Low press. pipe	1 " Flange 1 1/8" Brazed							
	To outdoor unit	Liquid pipe	3/8" Flare (1/4" with attached reducer used,1/2" with optional joint pipe used)							
		Gas pipe	5/8" Flare (1/2" with attached reducer used,3/4" with optional joint pipe used)							
Drain pipe			0.787							
Net weight		pound	64	70	75	86	97	119	134	
Accessories			Flange (with insulation) Drain connection pipe (with flexible hose and insulation) Reducer							

Note : Works not included : Installation / foundation work, electrical connection work, duct work, insulation work, power source switch, and other items are not specified in this specification.
Specifications may be subject to change.

Optional Equipment (for BC Controller)

BC Controller Model	Junction pipe kit	Branch pipe
CMB-104NU-F	CMY-R 160-F	CMY-Y102S-F
CMB-105NU-F		
CMB-106NU-F		
CMB-108NU-F		
CMB-1010NU-F		
CMB-1013NU-F		
CMB-1016NU-F		

OPTIONAL PARTS FOR OUTDOOR UNITS

Description	Model	Remarks
High static pressure motor(Available on request)	PAC-KBU02MT-F	MAX. 0.012"WATER

Description	Model	Total capacity of indoor unit
Branch pipe (Joint)	CMY-Y102S-F	160 or below
	CMY-Y102L-F	161-330
Branch pipe (Header)	CMY-Y104-F	For 4 branches
	CMY-Y107-F	For 7 branches
	CMY-Y1010-F	For 10 branches

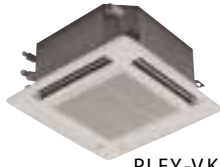
Note : Indoor unit capacities
The capacity of an indoor unit is the same as the number used for its type identification.

PUMY-125VM

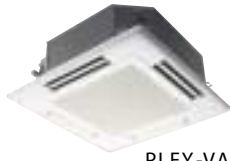
Description	Model	Appllicable capacity
Joint (2 branches)	CMY-Y62-C-E	25 - 125
Joint (4 branches)	CMY-Y64-C	20 - 125
Joint (8 branches)	CMY-Y68	20 - 125
Multi distribution piping on outdoor unit (5 branches)	CMY-S 65	20 - 80

INDOOR UNIT

SPECIFICATION



PLFY-VKM



PLFY-VAM

PLFY-VKM /VAM Specifications

Model name			PLFY-P32VKM-A	PLFY-P40VKM-A	PLFY-P50VKM-A	PLFY-P63VKM-A	PLFY-P80VAM-A	PLFY-P100VAM-A	PLFY-P125VAM-A
Power source			208-220V / 1 / 60Hz						
Cooling capacity									
		kW *2	3.6	4.5	5.6	7.1	9.0	11.2	14.0
		BTU *1	12,500	15,900	19,800	25,000	31,700	39,700	49,600
Heating capacity									
		kW *2	4.0	5.0	6.3	8.0	10.0	12.5	16.0
		BTU *1	14,100	17,900	22,200	28,200	35,700	44,400	55,600
Power consumption	Cooling	kW	0.13		0.14	0.15	0.18	0.30	0.34
	Heating	kW	0.13		0.14	0.15	0.18	0.30	0.34
Current	Cooling	A	0.60		0.64	0.68	0.86	1.43	1.64
	Heating	A	0.60		0.64	0.68	0.86	1.43	1.64
External finish (Munsell No.)			Panel : 0.70Y 8.59 / 0.97						
Dimensions *3	Height	inch	11.732 <1.181>					10.157 <1.181>	
	Width	inch	25.984 <29.92>				33.071 <37.402>		
	Depth	inch	25.984 <29.92>				33.071 <37.402>		
Net weight *3		lb	42 <8.157>			44 <8.157>	52.911 <11>	66 <11>	66 <11>
Heat exchanger			Cross fin (Aluminum plate fin and copper tube)						
Fan	Type		Turbo fan x 1						
	Airflow rate *3 (Low - Mid2 - Mid1 - High)	cfm	459 - 494 - 512 - 529		459 - 512 - 529 - 565	494 - 529 - 565 - 600	565 - 635 - 706 - 776	706 - 812 - 918 - 988	776 - 882 - 988 - 1059
	External static pressure	"water	0						
Motor	Type		Single phase induction motor						
	Output	kW	0.030				0.070	0.120	
Air filter			PP Honey comb						
Refrigerant	Gas (Flare)	inch	1/2"		5/8"			3/4"	
pipe dimensions	Liquid (Flare)	inch	1/4"		3/8"				
Drain pipe dimension		inch	0.984						
Noise level (Low - Mid2 - Mid1 - High) *2		dB (A)	31 - 32.5 - 34 - 35		32 - 34 - 35.5 - 37	35 - 36.5 - 38 - 39	30 - 32 - 35 - 37	33 - 36 - 39 - 41	35 - 38 - 41 - 43

Note : *1 Cooling / Heating capacity indicates the maximum value at operation under the following condition.

Cooling : Indoor 81FDB / 67 FWB, Outdoor 95FDB Heating : Indoor 70FDB, Outdoor 45FDB / 43 FWB

*2 Cooling / Heating capacity indicates the maximum value at operation under the following condition.

Cooling : Indoor 81FDB / 66FWB, Outdoor 95FDB Heating : Indoor 68FDB, Outdoor 45FDB / 43FWB

*3 External dimension / net weight are shown in (unit / panel), and airflow rate / noise level are in (low - middle2 - middle1 - high).

INDOOR UNIT



PLFY-NLMD Specifications

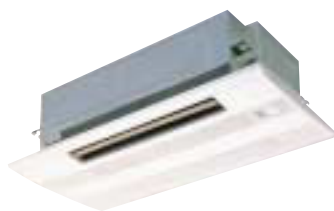
Model name			PLFY-20NLMD	PLFY-25NLMD	PLFY-32NLMD	PLFY-40NLMD	PLFY-50NLMD
Power source			208-220V / 1 / 60Hz				
Cooling capacity		kW *1	2.3	2.9	3.7	4.7	5.8
		BTU *1	7,900	9,900	12,500	15,900	19,800
Heating capacity		kW *1	2.6	3.3	4.1	5.2	6.5
		BTU *1	8,900	11,100	14,100	17,900	22,200
Power consumption	Cooling	kW	0.10		0.11	0.17	
	Heating	kW	0.09		0.10	0.16	
Current	Cooling	A	0.50		0.54	0.88	
	Heating	A	0.45		0.48	0.83	
External finish (Munsell No.)			Unit : Galvanized steel plate Panel : (0.70Y 8.59 / 0.97)				
Dimensions *2	Height	inch	13.307 <0.315>			39.685 <51.181>	
	Width	inch	30.236 <41.732>				
	Depth	inch	23.858 <26.378>				
Net weight *2		lb	52.9 <15.43>		55.1 <15.43>	73.855 <17.6>	77.162 <17.6>
Heat exchanger			Cross fin (Aluminum plate fin and copper tube)				
Fan	Type		Sirocco fan x 1			Sirocco fan x 2	
	Airflow rate (Low - Mid2 - Mid1 - High)	cfm	211 - 229 - 257 - 282		229 - 247 - 275 - 300	317 - 370 - 406 - 441	353 - 388 - 423 - 459
	External static pressure	" water	0				
Motor	Type		Single phase induction motor				
	Output	kW	0.033			0.075	
Air filter			Synthetic fiber unwoven cloth filter (long life)				
Refrigerant pipe dimensions	Gas (Flare)	inch	1/2"				5/8"
	Liquid (Flare)	inch	1/4"				3/8"
Drain pipe dimension		inch	VP -0.984				
Noise level (Low - Mid2 - Mid1 - High)		dB (A)	30 - 32 - 35 - 37		31 - 33 - 36 - 38	31 - 34 - 36 - 38	34 - 36 - 38 - 40

Model name			PLFY-63NLMD	PLFY-80NLMD	PLFY-100NLMD	PLFY-125NLMD
Power source			208-220V 60Hz			
Cooling capacity						
		kW *1	7.3	9.3	11.6	14.5
		BTU *1	25,000	31,700	39,700	49,600
Heating capacity						
		kW *1	8.3	10.5	13.0	16.3
		BTU *1	28,200	35,700	44,400	55,600
Power consumption	Cooling	kW	0.20	0.21	0.34	0.35
	Heating	kW	0.19	0.20	0.33	0.34
Current	Cooling	A	1.00	1.08	1.83	1.85
	Heating	A	0.94	1.02	1.76	1.78
External finish (Munsell No.)			Unit: Galvanized steel plate Panel : (0.70Y 8.59 / 0.97)			
Dimensions *2		Height	inch	13.307 <0.315>		
		Width	inch	53.465 <67.961>		70.079 <78.74>
		Depth	inch	23.858 <38.189>		
Net weight *2		lb	86 <22>		123 <25>	
Heat exchanger			Cross fin (Aluminum plate fin and copper tube)			
Fan	Type		Sirocco fan x 2		Sirocco fan x 4	
	Airflow rate (Low - Mid2 - Mid1 - High)	cfm	459- 494 - 565 - 635	529 - 600 - 670 - 741	741 - 812- 918 - 1024	847 - 953 - 1059 - 1165
	External static pressure	" water	0			
Motor	Type		Single phase induction motor			
	Output	kW	0.078		0.078 x 2	
Air filter			Synthetic fiber unwoven cloth filter (long life)			
Refrigerant pipe dimensions	Gas (Flare)	inch	5/8"		3/4"	
	Liquid (Flare)	inch	3/8"			
Drain pipe dimension		inch	VP -0.984			
Noise level (Low - Mid2 - Mid1 - High)		dB (A)	34 - 36 - 39 - 41	38 - 40 - 43 - 45	39 - 41 - 43 - 45	42 - 44 - 46 - 48

Note : *1 Cooling / Heating capacity indicates the maximum value at operation under the following condition.

Cooling : Indoor 81FDB / 67 FWB, Outdoor 95FDB Heating : Indoor 70F DB, Outdoor 45 FDB/ 43FWB

*2 The figure in < > indicates panel



SPECIFICATION

PMFY-VBM Specifications

Model name			PMFY-P20VBM-A	PMFY-P25VBM-A	PMFY-P32VBM-A	PMFY-P40VBM-A
Power source			208-220V / 1 / 60Hz			
Cooling capacity		kW *2	2.2	2.8	3.6	4.5
		Btu/h *1	7,900	9,900	12,500	15,900
Heating capacity		kW *2	2.5	3.2	4.0	5.0
		Btu/h *1	8,900	11,100	14,100	17,900
Power consumption	Cooling	kW	0.042	0.044		0.054
	Heating	kW	0.042	0.044		0.054
Current	Cooling	A	0.20	0.21		0.26
	Heating	A	0.20	0.21		0.26
External finish			Panel : 0.98Y8.99 / 0.63			
Dimensions *3	Height	inch	9.055 <1.181>			
	Width	inch	33.6<39.37>			
	Depth	inch	15.551 <18.504>			
Net weight *3		lb	31 <6.6>			
Heat exchanger			Cross fin (Aluminum plate fin and copper tube)			
Fan	Type		Line flow fan x 1			
	Airflow rate (Low - Mid2 - Mid1 - High)	cfm	229 - 253 - 282 - 306	257 - 282 -303 - 327		271 -306 - 342 - 377
	External static pressure	" water	0			
Motor	Type		DC brushless motor			
	Output	kW	0.028			
Air filter			PP Honeycomb fabric			
Refrigerant pipe dimensions	Gas (Flare)	inch	1/2"			
	Liquid (Flare)	inch	1/4"			
Drain pipe dimension			VP - 0.787			
Noise level (Low - Mid2 - Mid1 - High)		dB (A)	27 - 30 - 33 - 35	32 - 34 - 36 - 37		33 - 35 - 37 - 39

Note : *1 Cooling / Heating capacity indicates the maximum value at operation under the following condition.

Cooling : Indoor 8°FDB / 67°FWB, Outdoor 95°FDB Heating : Indoor 70°FDB, Outdoor 45°FDB / 43°FWB

*2 Cooling / Heating capacity indicates the maximum value at operation under the following condition.

Cooling : Indoor 8°FDB / 66°FWB, Outdoor 95°FDB Heating : Indoor 68°FDB, Outdoor 45°FDB / 43°FWB

*3 External dimension / net weight are shown in (unit / panel), and airflow rate / noise level are in (low - middle2- middle1 - high).

INDOOR UNIT



PDFY-VM Specifications

Model name			PDFY-P20VM-A	PDFY-P25VM-A	PDFY-P32VM-A	PDFY-P40VM-A	PDFY-P50VM-A
Power source			208-220V/ 1 / 60Hz				
Cooling capacity							
		kW *2	2.2	2.8	3.6	4.5	5.6
		BTU *1	7,900	9,900	12,500	15,900	19,800
Heating capacity							
		kW *2	2.5	3.2	4.0	5.0	6.3
		BTU *1	8,900	11,100	14,100	17,900	22,200
Power consumption	Cooling	kW	0.12			0.15	
	Heating	kW	0.12			0.15	
Current	Cooling	A	0.58			0.71	
	Heating	A	0.58			0.71	
External finish (Munsell No.)			Galvanizing				
Dimensions	Height	inch	11.614				
	Width	inch	27.953			37.795	
	Depth	inch	28.937				
Net weight		lb	56		60	71	75
Heat exchanger			Cross fin (Aluminum plate fin and copper tube)				
Fan	Type		Sirocco fan x 1			Sirocco fan x 2	
	Airflow rate (Low - Mid2 - Mid1 - High)	cfm	211 - 229 - 264 - 300			352 -388 - 440 - 494	
	External static pressure *3	" water	0.152 / 0.201 / 0.401				
Motor	Type		Single phase induction motor				
	Output *4	kW	0.075 (at 240V)				
Air filter *5			Synthetic fiber unwoven cloth filter (long life)				
Refrigerant pipe dimensions	Gas (Flare)	inch	1/2"				5/8"
	Liquid (Flare)	inch	1/4"				3/8"
Drain pipe dimension		inch	Outer diameter 32 (VP - 25)				
Noise level (Low - Mid2 - Mid1 - High)		dB (A)	28 - 30 - 33 - 36			34 - 36 - 37 - 39	

Model name			PDFY-P63VM-A	PDFY-P71VM-A	PDFY-P80VM-A	PDFY-P100VM-A	PDFY-P125VM-A
Power source			208-220V / 1 / 60Hz				
Cooling capacity							
		kW *2	7.1	8.0	9.0	11.2	14.0
		BTU *1	25,000	28,200	31,700	39,700	49,600
Heating capacity							
		kW *2	8.0	9.0	10.0	12.5	16.0
		BTU *1	28,200	31,700	35,700	44,400	55,600
Power consumption	Cooling	kW	0.17	0.18	0.21	0.29	0.39
	Heating	kW	0.17	0.18	0.21	0.29	0.39
Current	Cooling	A	0.82	0.88	1.01	1.36	1.84
	Heating	A	0.82	0.88	1.01	1.36	1.84
External finish (Munsell No.)			Galvanizing				
Dimensions	Height	inch	11.614			13.189	
	Width	inch	45.669			59.449	
	Depth	inch	28.937			30.512	
Net weight		lb	86			114.6	
Heat exchanger			Cross fin (Aluminum plate fin and copper tube)				
Fan	Type		Sirocco fan x 2				
	Airflow rate (Low - Mid2 - Mid1 - High)	cfm	441 - 494 - 565 - 635	475 - 546 - 616 - 687	467 - 581 - 652 - 740	687 - 986 (Low - High)	845 - 1197 (Low - High)
	External static pressure *3	" water	0.120 / 0.201 / 0.402			0.201 / 0.402 / 0.522	
Motor	Type		Single phase induction motor				
	Output *4	kW	0.078			0.140	0.190
Air filter *5			Synthetic fiber unwoven cloth filter (long life)				
Refrigerant pipe dimensions	Gas (Flare)	inch	15.88			19.05	
	Liquid (Flare)	inch	9.52				
Drain pipe dimension		inch	Outer diameter 1.260 (VP - 9.843)				
Noise level (Low - Mid2 - Mid1 - High)		dB (A)	30 - 34 - 36 - 39	32 - 35 - 37 - 40	34 - 37 - 40 - 42	34 - 42 (37 - 44) *6	40 - 45 (42 - 46) *6

Note : *1 Cooling / Heating capacity indicates the maximum value at operation under the following condition.

Cooling : Indoor 81 FDB / 67 FWB, Outdoor 95FDB Heating : Indoor 70FDB, Outdoor 45 FDB / 43 FWB

*2 Cooling / Heating capacity indicates the maximum value at operation under the following condition.

Cooling : Indoor 81FDB / 66FWB, Outdoor 95FDB Heating : Indoor 68 FDB, Outdoor 45 FDB / 43 FWB

*3 The external static pressure is set to 0.201" water at factory shipment.

*4 The specifications for Models 20 - 80 are listed at a external static pressure of 0.201"water, while the value for Models 100 - 125 are at an external static pressure of 0.522

*5 Be sure to apply the air filter near the air inlet grille, and make the air inlet ductwork length 33.465" or more.



PEFY-VML



PEFY-VMH

PEFY-VML / VMH Specifications

Model name			PEFY-P20VML-A	PEFY-P25VML-A	PEFY-P32VML-A	PEFY-P40VMH-A	PEFY-P50VMH-A	PEFY-P63VMH-A	PEFY-P71VMH-A	PEFY-P80VMH-A		
Power source			208-220v / 1 / 60Hz									
Cooling capacity												
		kW *2	2.2	2.8	3.6	4.5	5.6	7.1	8.0	9.0		
		BTU *1	7,900	9,900	12,500	15,900	19,800	25,000	28,200	31,700		
Heating capacity												
		kW *2	2.5	3.2	4.0	5.0	6.3	8.0	9.0	10.0		
		BTU *1	8,900	11,100	14,100	17,900	22,200	28,200	31,700	35,700		
Power consumption	Cooling	kW	0.06		0.09	0.23		0.30	0.33	0.40		
	Heating	kW	0.06		0.09	0.23		0.30	0.33	0.40		
Current	Cooling	A	0.28		0.42	1.06		1.38	1.51	1.83		
	Heating	A	0.28		0.42	1.06		1.38	11.51	1.83		
External finish (Munsell No.)			Galvanized steel plate									
Dimensions	Height	inch	8.858			14.961						
	Width	inch	28.346			29.528		39.37				
	Depth	inch	21.654			35.433						
Net weight		lb	39.7			97	99		110			
Heat exchanger			Cross fin (aluminum plate fin and copper tube)									
Fan	Type		Sirocco fan x 1									
	Airflow rate (Low - High)	cfm	190 - 229 - 278		211 - 264 - 334	352 - 494		475 - 670	546 - 775	635 - 882		
	External static pressure *3	"water	0.020			(0.201), (0.401), (0.802) (at 220V)						
Motor	Type		1-phase induction motor									
	Output		kW	0.023	0.023	0.032	0.08	0.08	0.12	0.14	0.18	
Air filter			PP Honeycomb			Option : (Long life : Synthec fiber unwoven cloth filter)						
Refrigerant pipe dimensions	Gas	inch	1/2" (Brazing)			1/2" (Flare)	5/8" (Flare)					
	Liquid	inch	1/4" (Brazing)			1/4" (Flare)	3/8" (Flare)					
Drain pipe dimension		inch	R 1 (External thread)			32 (1-1/4 inch)						
Noise level *3	VML (Low - Mid - High)		dB (A)	29 - 33 - 36		30 - 35 - 40		27 - 34		32 - 38	32 - 39	35 - 41
	VMH (Low - High)											

Model name			PEFY-P100VMH-A	PEFY-P125VMH-A	PEFY-P140VMH-A	PEFY-P200VMH-A	PEFY-P250VMH-A
Power source			208-220v / 1 / 60Hz			3N~380 - 415V 50 / 60Hz	
Cooling capacity							
		kW *2	11.2	14.0	16.0	22.4	28.0
		BTU *1	39,700	49,600	55,600	79,000	99,000
Heating capacity							
		kW *2	12.5	16.0	18.0	25.0	31.5
		BTU *1	44,400	55,600	63,400	89,000	111,000
Power consumption	Cooling	kW	0.58		0.59	0.99 / 1.14	1.23 / 1.41
	Heating	kW	0.58		0.59	0.99 / 1.14	1.23 / 1.41
Current	Cooling	A	2.66		2.70	1.62 / 1.86	2.0 / 2.3
	Heating	A	2.66		2.70	1.62 / 1.86	2.0 / 2.3
External finish (Munsell No.)			Galvanized steel plate				
Dimensions	Height	inch	14.961			18.504	
	Width	inch	47.244			49.213	
	Depth	inch	35.433			44.094	
Net weight		lb	154			220	
Heat exchanger			Cross fin (aluminum plate fin and copper tube)				
Fan	Type		Sirocco fan x 2				
	Airflow rate (Low - High)	cfm	933 -1338		986 - 1409	2043	2563
	External static pressure *3	" water	(0.201), (0.401), (0.402) (at 220V)			0.441/0.883 (at 380V)	
Motor	Type		1 - phase induction motor			3 - phase induction motor	
	Output	kW	0.26			0.76	1.08
Air filter			Option : (Long life : Synthetic fiber unwoven cloth filter)				
Refrigerant pipe dimensions	Gas	inch	3/4" (Flare)			1" (Brazing)	1 1/8" (Brazing)
	Liquid	inch	3/8" (Flare)			1/2" (Brazing)	
Drain pipe dimension		inch	(1-1/4 inch)				
Noise level (Low - High) *3	220V	dB (A)	34 - 42			45 (at 380V)	52 (at 380V)
						47 (at 400, 415V)	54 (at 400, 415V)

Note : *1 Cooling / Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 81FDB / 67 °FWB, Outdoor 95FDB Heating : Indoor 70FDB, Outdoor 45 FDB / 43FWB
*2 Cooling / Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 81FDB / 66FWB, Outdoor 95FDB Heating : Indoor 70FDB, Outdoor 45FDB / 43FWB

INDOOR UNIT



PCFY-VGM



PKFY-VAM



PCFY-VGM



PKFY-VFM

PCFY-VGM Specifications

Model name			PCFY-P40VGM-A	PCFY-P63VGM-A	PCFY-P100VGM-A	PCFY-P125VGM-A
Power source			208-220V / 1 / 60Hz			
Cooling capacity						
		kW *2	4.5	7.1	11.2	14.0
		BTU *1	15,900	25,000	39,700	49,600
Heating capacity						
		kW *2	5.0	8.0	12.5	16.0
		BTU *1	17,900	28,200	44,400	55,600
Power consumption	Cooling	kW	0.10	0.13	0.16	0.24
	Heating	kW	0.10	0.13	0.16	0.24
Current	Cooling	A	0.46	0.60	0.73	1.10
	Heating	A	0.46	0.60	0.73	1.10
External finish (Munsell No.)			(0.70Y 8.59 / 0.97)			
Dimensions	Height	inch	8.268		10.630	
	Width	inch	39.97	51.575		49.606
	Depth	inch	27			
Net weight		lb	60	75	82	95
Heat exchanger			Cross fin (Aluminum plate fin and copper tube)			
Fan	Type		Sirocco fan x 2		Sirocco fan x 3	
	Airflow rate (Low - Mid2 - Mid1 - High)	cfm	282 - 353 - 388 - 423	423- 493 - 565 - 635	635 - 706 - 812 - 882	91 - 986 - 1127 - 1128
	External static pressure	" Water	0			
Motor	Type		Single phase induction motor			
	Output	kW	0.054	0.070	0.090	0.150
Air filter			PP Honeycomb (long life)			
Refrigerant pipe dimensions	Gas (Flare)	inch	1/2"	5/8"	3/4"	
	Liquid (Flare)	inch	1/4"	3/8"		
Drain pipe dimension		inch	VP - 0.984			
Noise level (Low - Mid2 - Mid1 - High)		dB (A)	29 - 33 - 36 - 38	32 - 34 - 37 - 39	36 - 38 - 41 - 43	37 - 39 - 42 - 44

Note : *1 Cooling / Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 81FDB / 67 °FWB, Outdoor 95FDB Heating : Indoor 70FDB, Outdoor 45FDB / 43 °FWB
*2 Cooling / Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 81FDB / 66°F WB, Outdoor 95 FDB Heating : Indoor 70 FDB, Outdoor 45 FDB / 43 °FWB
*3 Airflow rate / noise level are in (low - middle2 - middle1 - high).

PKFY-VAM / VGM Specifications

Model name			PKFY-P20VAM-A	PKFY-P25VAM-A	PKFY-P32VGM-A	PKFY-P40VGM-A	PKFY-P50VGM-A	PKFY-P63VFM-A	PKFY-P100VFM-A	
Power source			208-220V / 1 / 60Hz							
Cooling capacity										
		kW *2	2.2	2.8	3.6	4.5	5.6	7.1	11.2	
		BTU *1	7,900	9,900	12,500	15,900	19,800	25,000	39,700	
Heating capacity										
		kW *2	2.5	3.2	4.0	5.0	6.3	8.0	12.5	
		BTU *1	8,900	11,100	14,100	17,900	22,200	28,200	44,400	
Power consumption	Cooling	kW	0.04			0.07		0.09	0.11	
	Heating	kW	0.04			0.07		0.09	0.11	
Current	Cooling	A	0.20			0.32		0.43	0.52	
	Heating	A	0.20			0.32		0.43	0.52	
External finish (Munsell No.)			Plastic (2.60Y 8.66 / 0.69)			Plastic <PS, ABS> white (0.70Y 8.59 / 0.97)		Plastic, white : <3.4Y 7.7 / 0.8>		
Dimensions	Height	inch	11.614			13.386				
	Width	inch	32.087			38.976		55.118	66.142	
	Depth	inch	6.220			9.252				
Net weight		lb	18.7			35		53	62	
Heat exchanger			Cross fin (Aluminum plate fin and copper tube)							
Fan	Type		Line flow fan x 1					Line flow fan x 2		
	Airflow rate (Low - Mid2 - Mid1 - High)	cfm	172 - 183 - 197 - 207			282 - 334 - 370 - 406		317 - 353 - 388 - 423	529 - 706	776 - 986
	External static pressure	" water	0							
Motor	Type		Single phase induction motor							
	Output	kW	0.017			0.030		0.04	0.07	
Air filter			PP Honeycomb (long life)					PP Honeycomb fabric		
Refrigerant pipe dimensions	Gas (Flare)	inch	1/2"				5/8"		3/4"	
	Liquid (Flare)	inch	1/4"				3/8"			
Drain pipe dimension		inch	VP - 0.630			VP - 0.787				
Noise level (Low - Mid2 - Mid1 - High)		dB (A)	32 - 33 - 35 - 36			33 - 36 - 38 - 41		34 - 37 - 40 - 43	39 - 45	41 - 46

Note : *1 Cooling / Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 81FDB / 67 °FWB, Outdoor 95 FDB Heating : Indoor 70FDB, Outdoor 45 FDB / 43 °FWB
*2 Cooling / Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 81FDB / 66°F WB, Outdoor 95 FDB Heating : Indoor 68FDB, Outdoor 45 FDB / 43 °FWB
*3 Airflow rate / noise level are in (low - middle2 - middle1 - high).



PFFY-VLEM



PFFY-VLRM

SPECIFICATION

PFFY-VLEM Specifications

Model name			PFFY-P20VLEM-A	PFFY-P25VLEM-A	PFFY-P32VLEM-A	PFFY-P40VLEM-A	PFFY-P50VLEM-A	PFFY-P63VLEM-A
Power source			208-230V 60Hz					
Cooling capacity								
		kW *2	2.2	2.8	3.6	4.5	5.6	7.1
		BTU *1	7,900	9,900	12,500	15,900	19,800	25,000
Heating capacity								
		kW *2	2.5	3.2	4.0	5.0	6.3	8.0
		BTU *1	8,900	11,100	14,100	17,900	22,200	28,200
Power consumption	Cooling	kW	0.06		0.07	0.075	0.09	0.11
	Heating	kW	0.06		0.07	0.075	0.09	0.11
Current	Cooling	A	0.25		0.30	0.33	0.41	0.47
	Heating	A	0.25		0.30	0.33	0.41	0.47
External finish (Munsell No.)			Acrylic paint (5Y8/1)					
Dimensions	Height	inch	24.803					
	Width	inch	41.339		46		55.512	
	Depth	inch	8.661					
Net weight		lb	51		55	57	66	70.5
Heat exchanger			Cross fin (Aluminum plate fin and copper tube)					
Fan	Type		Sirocco fan x 1		Sirocco fan x 2			
	Airflow rate (Low - High)	cfm	193 - 229		247 - 317	317 - 388	423 - 494	423 - 543
	External static pressure	" water	0					
Motor	Type		Single phase induction motor					
	Output	kW	0.02		0.03	0.035		0.045
Air filter			PP Honeycomb fabric (washable)					
Refrigerant pipe dimensions	Gas (Flare)	inch	1/2"				5/8"	
	Liquid (Flare)	inch	1/4"				3/8"	
Drain pipe dimension		inch	Accessory hose 1.063 (top end : 0.787)					
Noise level (Low - High)		*4 dB (A)	34 - 40		35 - 40	38 - 43		40 - 46

Note : *1 Cooling / Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 81FDB / 67 °FWB, Outdoor 95FDB Heating : Indoor 70FDB, Outdoor 45 FDB / 45 °FWB
*2 Cooling / Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 81FDB / 66°FWB, Outdoor 95FDB Heating : Indoor 68 FDB, Outdoor 45 FDB / 43°FWB

PFFY-VLRM Specifications

Model name			PFFY-P20VLRM-A	PFFY-P25VLRM-A	PFFY-P32VLRM-A	PFFY-P40VLRM-A	PFFY-P50VLRM-A	PFFY-P63VLRM-A	
Power source			208-230V / 1 / 60Hz						
Cooling capacity								6,300	
		kW *2	2.2	2.8	3.6	4.5	5.6	7.1	
		BTU *1	7,900	9,900	12,500	15,900	19,800	25,000	
Heating capacity								7,100	
		kW *2	2.5	3.2	4.0	5.0	6.3	8.0	
		BTU *1	8,900	11,100	14,100	17,900	22,200	28,200	
Power consumption	Cooling	kW	0.06		0.07	0.075	0.09	0.11	
	Heating	kW	0.06		0.07	0.075	0.09	0.11	
Current	Cooling	A	0.25		0.30	0.33	0.41	0.47	
	Heating	A	0.25		0.30	0.33	0.41	0.47	
External finish (Munsell No.)			Galvanized steel plate						
Dimensions		Height	inch		25.157				
		Width	inch		34.882		39.606		49.055
		Depth	inch		8.661				
Net weight		lb	41		44	46	55	59	
Heat exchanger			Cross fin (Aluminum plate fin and copper tube)						
Fan	Type		Sirocco fan x 1			Sirocco fan x 2			
	Airflow rate (Low - High)	cfm	194 - 229			247- 317	317 - 388	423 - 494	423 - 546
	External static pressure	" water	0						
Motor	Type		Single phase induction motor						
	Output	kW	0.02		0.03	0.035		0.045	
Air filter			PP Honeycomb fabric (washable)						
Refrigerant pipe dimensions	Gas (Flare)	inch	1/2"				5/8"		
	Liquid (Flare)	inch	1/4"				3/8"		
Drain pipe dimension		inch	Accessory hose 1.063 (top end : 0.787)						
Noise level (Low - High)		*4 dB (A)	34 - 40		35 - 40	38 - 43		40 - 46	

Note : *1 Cooling / Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 81FDB / 67 °FWB, Outdoor 95FDB Heating : Indoor 70FDB, Outdoor 45 FDB / 43 °FWB
*2 Cooling / Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 81FDB / 66°FWB, Outdoor 95FDB Heating : Indoor 68 FDB, Outdoor 45 FDB / 43 °FWB
*3 Airflow rate / noise level are in (low - high).
*4 This value applies to a measurement point with a size of 39.37" x 39.37", at 240 V / 50 Hz.
When 230 V / 220 V is used, the noise value is reduced by approximately 1/2 dB (A). When a size of 39.37" x 39.37" is used, the noise value is reduced by approximately 3 dB (A).

OPTIONAL PARTS FOR INDOOR UNITS

4-way cassette type (PLFY-VKM / VAM)

Description	Model	Applicable capacity	
		Power cassette VAM	Compact cassette VKM
Decoration panel	PLP-2.5KB	—	P32, P40, P50, P63
	PLP-6AA	P80, P100, P125	—
Wide panel	PAC-SE06WP-E	—	P32, P40, P50, P63
Space panel	PAC-SE01AS-E	—	P32, P40, P50, P63
Multi-function casement	PAC-SE21TM-E	—	P32, P40, P50, P63
	PAC-SG03TM-E	P80, P100, P125	—
High-efficiency filter element	PAC-SE13KF-E	—	P32, P40, P50, P63
	PAC-SG01KF	P80, P100, P125	—
Air outlet shutter plate (1 set)	PAC-SF38SP-E (40 pcs.)	—	P32, P40, P50, P63
	PAC-SG06SP-E (20 pcs.)	P80, P100, P125	—

2-way cassette type (PLFY-NLMD)

Description	Model	Applicable capacity
Decoration panel	CMP-32LW-F	20, 25, 32
	CMP-40LW-F	40, 50
	CMP-63LW-F	63, 80
	CMP-125LW-F	100, 125

1-way cassette type(PMFY-VBM)

Description	Model	Applicable capacity
Decoration panel	PMP-40BM	P20, P25, P32, P40

Ceiling concealed type (PEFY-VML / VMH)

Description	Model	Applicable capacity		Remarks
		PEFY-VML	PEFY-VMH	
Drain lift-up mechanism	PAC-KE04DM-F	—	PEFY-P_-A Models	Standard Filter is attached
	PAC-KE32LAF-F	P20, P25, P32	—	
Long life filter	PAC-KE86LAF	—	P40, P50, P63	
	PAC-KE88LAF	—	P71, P80	
	PAC-KE89LAF	—	P100, P125, P140	
	PAC-KE85LAF	—	P200, P250	
Filter box	PAC-KE63TB-F	—	P40, P50, P63	Necessary when long life filter is used
	PAC-KE80TB-F	—	P71, P80	
	PAC-KE140TB-F	—	P100, P125, P140	
	PAC-KE250TB-F	—	P200, P250	

Ceiling concealed type (PDFY-VM)

Description	Model	Applicable capacity	Remarks
Drain lift-up mechanism	PAC-KD02DM-F	PDFY-P_-A Models	
Square shape duct flange	PAC-KD32KDF-F	P20, P25, P32	
	PAC-KD50KDF-F	P40, P50	
	PAC-KD80KDF-F	P63, P71, P80	
	PAC-KD125KDF-F	P100, P125	
Round shape duct flange	PAC-KD32EDF-F	P20, P25, P32	
	PAC-KD50EDF-F	P40, P50	
	PAC-KD80EDF-F	P63, P71, P80	
	PAC-KD125EDF-F	P100, P125	
Filter box for rear suction	PAC-KD80RTB	P20, P25, P32	Necessary when air intake duct or high efficiency filter is used at the rear of the indoor unit
	PAC-KD81RTB	P40, P50	
	PAC-KD83RTB	P63, P71, P80	
	PAC-KD84RTB	P100, P125	
Canvas duct for bottom suction	PAC-KD32DF-F	P20, P25, P32	
	PAC-KD50DF-F	P40, P50	
	PAC-KD80DF-F	P63, P71, P80	
	PAC-KD125DF-F	P100, P125	

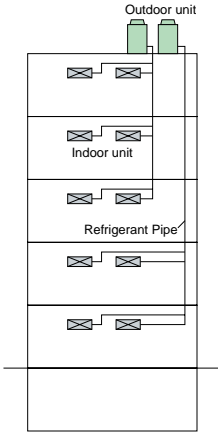
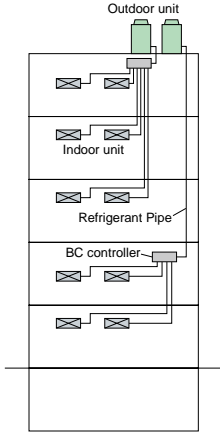
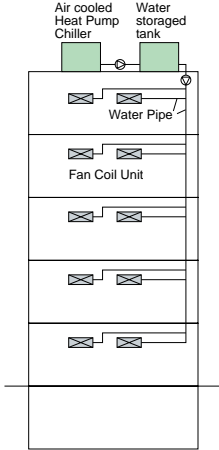
Description	Model	Applicable capacity	Remarks
Filter box for bottom suction	PAC-KD70TB	P20, P25, P32	Necessary when efficiency filter is used at the bottom of the indoor unit
	PAC-KD71TB	P40, P50	
	PAC-KD73TB	P63, P71, P80	
	PAC-KD74TB	P100, P125	
High efficiency filter 65%	PAC-KD30AF	P20, P25, P32	
	PAC-KD31AF	P40, P50	
	PAC-KD33AF	P63, P71, P80	
	PAC-KD34AF	P100, P125	
High efficiency filter 90%	PAC-KD40AF	P20, P25, P32	
	PAC-KD41AF	P40, P50	
	PAC-KD43AF	P63, P71, P80	
	PAC-KD44AF	P100, P125	
Maintenance panel with air intake	CMP-J36DSW	P20, P25, P32	
	CMP-J56DSW	P40, P50	
	CMP-J90DSW	P63, P71, P80	
	CMP-J160DSW	P100, P125	

Ceiling suspended type (PCFY-VGM)

Description	Model	Applicable capacity
High efficiency filter	PAC-SE80KF-E	P40
	PAC-SE81KF-E	P63, P100
	PAC-SE82KF-E	P125
Drain lift-up mechanism	PAC-SE84DM-E	P40
	PAC-SE85DM-E	P63
	PAC-SE86DM-E	P100, P125

COMPARISON TABLE

Comparison of the Features of Typical Air Conditioning Systems

System		Package system Air heat source, multi-unit air conditioner City Multi Y	Package system Water-cooled, compact heat-pump unit City Multi R2	Fan coil unit system Air Cooled Heat Pump Chiller, Two-pipe system
Item				
System outline				
Heat source unit		CITY MULTI Y series	CITY MULTI R2 series	Chiller system : Air cooled
Operation and Comfort	Individual use (at night, holiday)	A	A	C
	Individual temperature control	A	A	A
	Quiet (outdoor)	A	A	C
	Quiet (indoor)	A	A	A
	Start quickly (Warming up)	A	A	C (Water storage tank)
Management and Architecture	Risk dispersion	A	A	C
	Maintenance water quality and pipe corrosion	A	A	C
	The possibility of water leakage in the room	A	A	C
	Machine room for heat source unit	A	A	C
	The limitation of piping length	B	B	A
Initial cost	Equipment	C	C	B
Running cost	System controller	A	A	B - C
	Pump	A	A	B - C
	Fan	A	A	A
	The exchanging loss between refrigerant and water	A	A	C
	Heat recovery	C	A	C (when 4pipes : A)
	Running cost when a partial load	A	A	B - C
Environment	Add cost for future increasing A / C load	A	A	C
	TEWI	A	A	C
Environment	Bacteria pollution	A	A	A

A : Good B : Normal C : Weak

