MITSUBISHI ELECTRIC

SPLIT-TYPE AIR CONDITIONERS

Changes for the Better

Mitsubishi Electric Quality

New R410A

PUMY

CITY MULTI S series

up to 8* indoor units

?P100: up to 6 indoor units

PUMY-P100YHM
PUMY-P125YHM
PUMY-P140YHM

Energy Saving

TOP level in the industry
3.50 in cooling*/ 3.96 in heating*
*P100

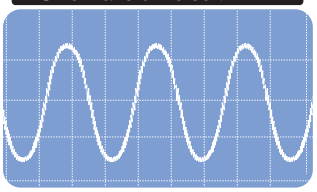
Vector-Wave Eco Inverter

This produces the most efficient waveform in response to varying compressor motor frequency. By improving operating efficiency from low to high speeds, annual electricity costs are reduced.

Smooth wave pattern

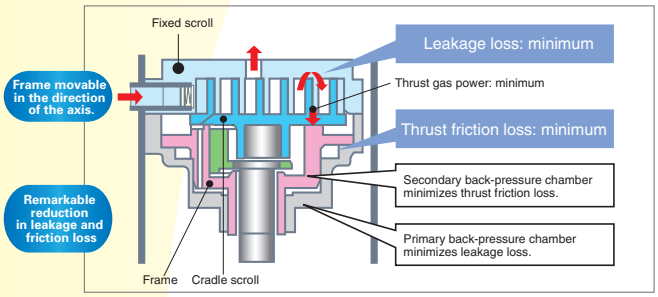
The inverter has been made compact by insert-moulding the circuit pattern in synthetic resin. To ensure quiet operation, soft PWM control is used to prevent the metallic whine associated with conventional inverters.

Sine-wave drive soft PWM



Highly Efficient DC Scroll Compressor

The highly efficient scroll compressor is equipped with a "Frame Compliance Mechanism" that allows movement in the axial direction of the frame supporting the cradle scroll. This greatly reduces both leakage and friction loss, ensuring very high efficiency throughout the speed range.



2002 JSRAE* TECHNOLOGY AWARD

* Japan Society of Refrigerating and Air Conditioning Engineers

DC Fan Motor

A high-efficiency DC motor drives the fan of the outdoor unit.
It offers up to 60% greater efficiency than an equivalent AC motor.

3 Phase Power Supply

Dramatic reduction of running current is realized by 3 phase power supply. The special technology is installed in the outdoor unit to comply with the Electro Magnetic Compatibility in Europe.

Harmonics Filter Technology

We have successfully complied with the EMC regulations (EN61000-3-2,Class-A) first in the industry in the category of 3 phase inverter driven air conditioners requiring less than 16A current input.

1st in the **Industry!**

converter circuit

Demand Control for Energy Saving

Suppressing the electricity consumption leads to further energy saving. By controlling the maximum operating frequency in response to external input, the electricity consumption can be controlled in two stages. In accordance with the installation environment, the stage of the electricity consumption can be selected to match your comfort condition.

Demand Control for Energy Saving ;
Effective in reduction of peak electricity*

* Contract demand

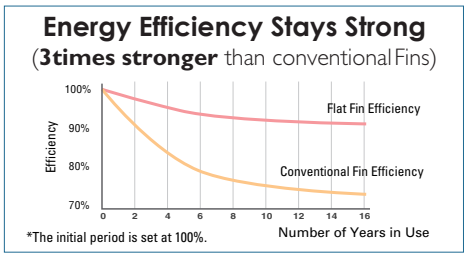
Demand control for energy saving

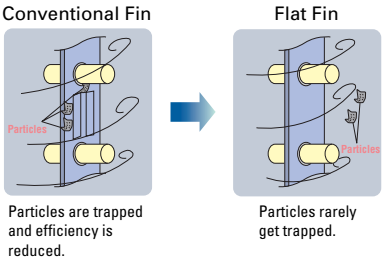
	Power consumption (Compared in rating)
Level 0	Not restricted (Demand OFF)
Level 1	Approx. 75%
Level 2	Approx. 50%
Level 3	0% (Forced compressor stop)

Anti-Corrosion Blue & Flat Fin

Thanks to the blue and flat fin preventing corrosion and clogging, the initial high energy efficiency is maintained throughout the unit's long lifespan.

Anti-corrosion Blue Fin
As standard, anti-corrosion blue fin is used for new PUMY.





Particles are trapped and efficiency is reduced.

Particles rarely get trapped.

Silent

Silent Operation - Top in the Industry

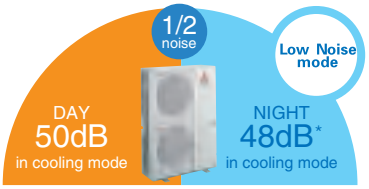
No.1 in the industry

Operation has been made very silent by improvements to the design of the fan blades and the grille shape. New PUMY is even more silent when outside temperatures drop as it automatically switches to the low noise mode to reduce operating noise by 2dB.

Outdoor unit noise level

	capacity	P100 (4HP)	P125 (5HP)	P140 (6HP)
Noise Level (cooling)	Normal	49dB(A)	50dB(A)	51dB(A)
	Low Noise mode	47dB(A)	48dB(A)	49dB(A)

Compact Configuration yet Providing Large Airflow with Low Noise



※ At outdoor temperature of 25°C
※ in case of PUMY-P125YHM

Low Noise Priority Function

A low noise priority function is also available by connecting a commercially available timer or a selector switch. When a signal is received from a timer or a switch, the unit runs in low noise priority mode.

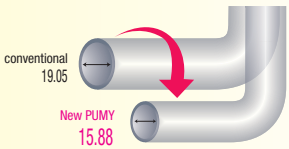
Reduction of Refrigerant Noise

Refrigerant condensed in the condenser of the outdoor unit is heat-exchanged with the low temperature refrigerant inside the accumulator, and subcooled. Doing this way, refrigerant will reach the LEV (Linear Expansion Valve) while keeping the optimum state.
This has enabled to reduce the refrigerant noise at the LEV section, and optimize the refrigerant distribution to each indoor unit, providing great effectiveness in the installation environment with a large piping loss (pressure loss) due to a long piping length or a large height difference.

Easy Installation,Easy Maintenance

Thinner Gas Pipe

The gas pipe diameter is reduced to 15.88mm for easier pipe works.



36 check codes for Easy maintenance

The "Self Diagnosis Function" facilitates the Servicing work although troubles are rare. On the outdoor PCB, 36 check codes can be displayed for accurate and prompt servicing.

?Check Code

check point	check code
High Pressure	1302
Discharge Temperature	1102
Heatsink Thermistor	4230
Drain Sensor	2503

System Control Wide Selection of Remote Controllers

MA REMOTE CONTROLLER

WEEKLY TIMER Function is newly available

PAR-21MAA

ME REMOTE CONTROLLER

PAR-F27MEA

SIMPLE CONTROLLER

PAC-SE51CRA

WIRELESS REMOTE CONTROLLER

PAR-FL31MA

PAR-FA31MA

PROGRAMME TIMER

PAC-YT32PTA

NEXT GENERATION CONTROLLER

1st in the industry With Web Server Functions!

G-50A

ON/OFF REMOTE CONTROLLER

PAC-YT40ANRA

GROUP REMOTE CONTROLLER

PAC-SC30GRA

and more!

System Designing

¡ Indoor unit selection

Outdoor unit	Indoor unit'stotal capacity	Indoor unit capacity	Connectable indoor unit q'ty
PUMY-P100YHM	50 ‘130 of the outdoor unit's capacity	min : P20 i2.2kw j max : P140 i16.0kw j	1 ‘6 unit (s)
PUMY-P125YHM			
PUMY-P140YHM			1 ‘8 unit (s)

The system of PUMY-P140YHM+P20 × 3 units +P63 × 2 units is not possible.

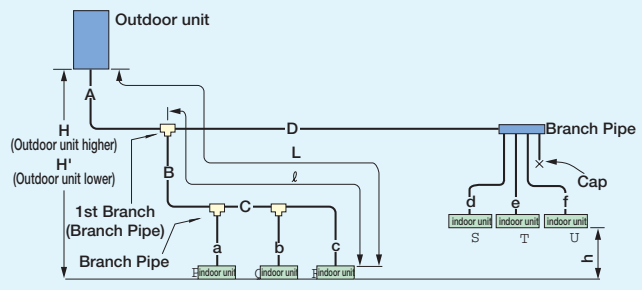
¡ Additional Refrigerant

If the total piping length exceeds 50m,

total length of 9.52 liquid pipe×0.06		total length of 6.35 liquid pipe×0.024		Refrigerant amoumt for outdoor unit	Additional Amount
□ (m)×0.06(kg/m)	{	□ (m)×0.024(kg/m)	|	3.0(kg)	(kg)

If total piping length is less than 50m, no additional charge is necessary. If the calculation results in a negative value, no additional charge is necessary.

¡ Restrictions on Piping Length



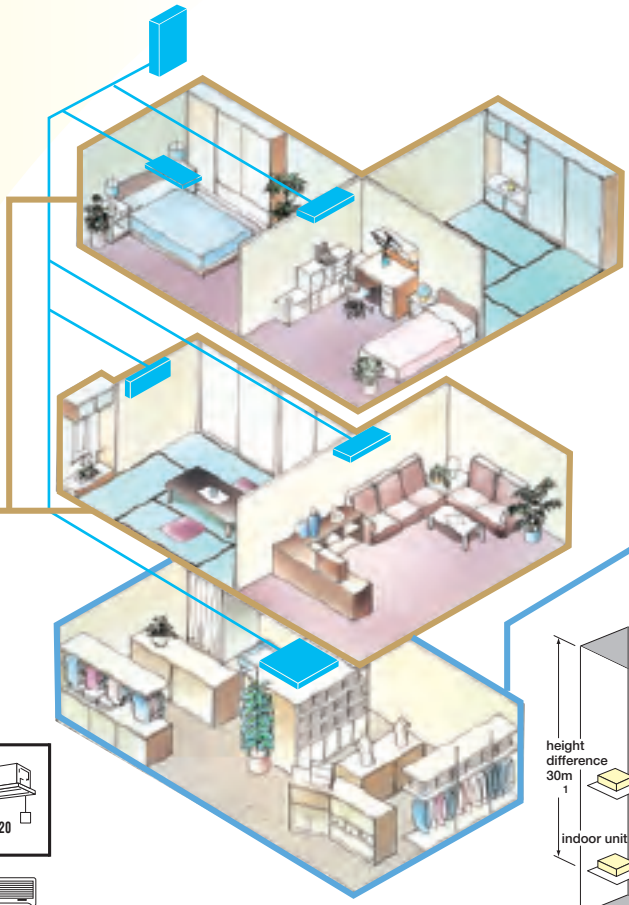
	Description		pipings	Permissible length
Piping Length	Total lengh		A ‰B ‹C ‹D ‹a ‹b ‹c ‹d ‹e ‹f	up to 120m
	Furthest		A ‰B ‹C ‹c or A ‹D ‹f	80m
	Furthest from the first branch		B ‹C ‹c or D ‹f	30m
Height Difference	Indoor - Outdoor	outdoor unit is higher	H	up to 30m
		outdoor unit is lower	H'	up to 20m
	Indoor - Indoor		h	up to 12m

New PUMY provides a quiet , highly efficient and flexible air conditioning system for all your needs.

Flexible in System Designing

Up to 8 indoor units can be connected.

Up to 8 indoor units can be operated individually. Any of 53 indoor models can be selected as far as the total capacity does not exceed 130% of the outdoor unit's capacity.



Villas

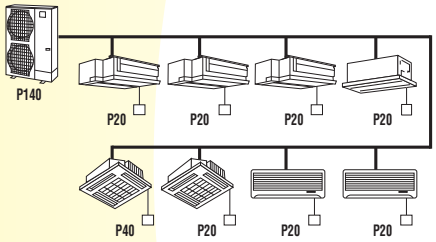
PUMY saves the outdoor installation space as it can be connected with up to 8 indoor units.

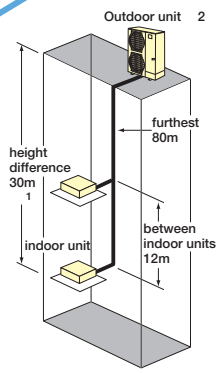
Shop & Office

PUMY enables the individual or the group operations of the indoor units.
No need to worry even when you refurbish you premises.

Re-wiring is required if PAR-21MAA is installed.

System Example





Piping Length Restrictions

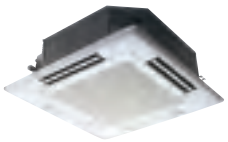
Total lengh : up to 120m
Furthest : 80m
Furthest from the first branch : 30m
Height difference :
If Outdoor unit is higher than indoor unit : up to 30m
If Outdoor unit is lower than indoor unit : up to 20m
Between indoor units : up to 12m

(1)If the outdoor units is installed lower than the indoor units, the maximum height difference is reduced to 20m.
(2)If the outdoor unit is installed where the strong wind

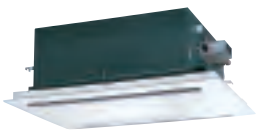
Even Wider Variety of Indoor Units

12 types / 53 models

PLFY-P20/25/32/40VCM-E



PLFY-P32/40/50/63/80/100/125VAM-E



PLFY-P20/25/32/40VLMD-E

PMFY-P20/25/32/40VBM-E

PFFY-P20/25/32/40/50/63VLEM-E

PFFY-P20/25/32/40/50/63VLRM-E

PEFY-P20/25/32VML-E

PEFY-P40/50/63/71/80/100/125/140VMH-E

PCFY-P40/63/100/125VGM-E

PKFY-P20/25VAM-E

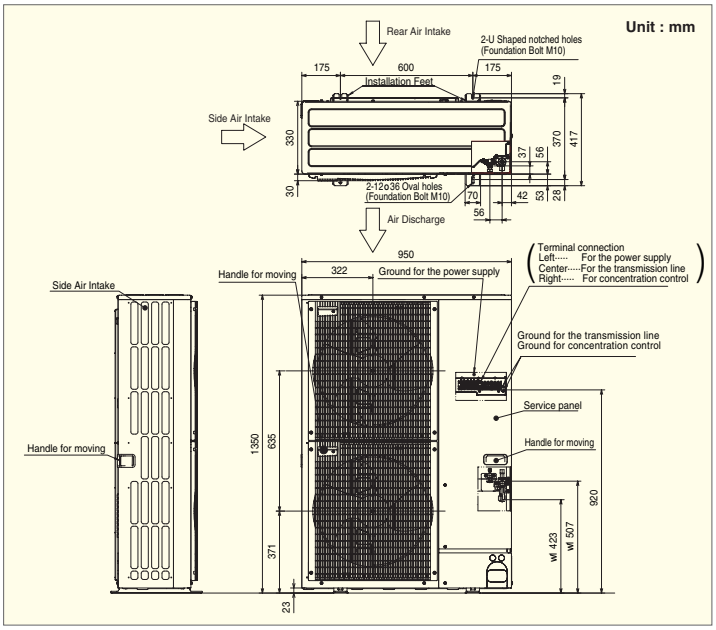
PKFY-P32/40/50VGM-E

PKFY-P63/100VFM-E

Specifications

		PUMY-P100YHM	PUMY-P125YHM	PUMY-P140YHM
Power Supply		@	3 phase ,50Hz ,380 ‘415V	
Breaker Size	A	16.00	16.00	16.00
Cooling Capacity	kW	11.20	14.00	15.50
Heating Capacity	kW	12.50	16.00	18.00
Input (Cooling)	kW	3.20	4.25	5.10
Input (Heating)	kW	3.16	4.27	5.25
EER (Cooling)		3.50	3.29	3.04
COP (Heating)		3.96	3.75	3.43
Connectable indoor units (Max.)		6 units	8 units	8 units
Max. Connectable Capacity	kW	14.5 i130 j	18.2 i130 j	20.15 (130%)
Sound level (Cooling / Heating)	dB(A	49 / 51	50 / 52	51 / 53
Dimensions (H×W×D j	j	1,350 × 950 × 330		
Weight	mm	142	142	142
Total Piping length (Max.)	kg	120		
Furthest	m	80		
Max. Height difference	m	30		
Chargeless length	m	50		
Piping diameter (Liquid / Gas)	m	9.52 (3/8 inch) / 15.88 (5/8 inch)		
Guranteed operation range (Cooling)	mm	-5 ‘ 46		
(Heating)		-12 ‘ 15		

Dimensions



Optional Parts

Model Name	Description
CMY-Y62-G-E	Branch Pipe (2 Branch)
CMY-Y64-G-E	Branch Pipe (4 Branch)
CMY-Y68-G-E	Branch Pipe (8 Branch)
PAC-SG61DS-E	Drain Socket
PAC-SG64DP-E	Centralized Drain Pan
PAC-SG73RJ-E	Joint Pipe (9.52 ? 12.7)
PAC-SG75RJ-E	Joint Pipe (15.88 ? 19.05)
PAC-SH63AG-E	Air Protect Guide (2 pcs required)

ISO 9001
Certificate Number 49385

ISO 14001
Certificate Number EC97J1132

Mitsubishi Electric Shizuoka Works acquired ISO9001 certification under Series 9000 of the International Standard Organization (ISO) based on a review of Quality warranties for the production of air conditioning equipment. The plant also acquired environmental management system standard ISO 14001 certification.

MITSUBISHI ELECTRIC CORPORATION
HEAD OFFICE: MITSUBISHI DENKI BLDG., 2-2-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN

EUROVENT CERTIFIED PERFORMANCE

CE

L-179-5-MD012-A SI-0509 Printed in Japan iMDOC j

New publication effective Sep 2005
Specifications subuject to change without notice