

#### **Quality Management System Certificate**





#### Certified to ISO 9001: 2008 anasonic HA Air-Conditioning (M)

Certified to ISO 9001: 2008

Panasonic Home Appliances Air-Conditioning (Guangzhou) Co., Ltd. Registration Number: 01209Q20645R5L





#### **Environmental Management System Certificate**



Certified to ISO 14001: 2004 Panasonic HA Air-Conditioning (M) Sdn.Bhd. Cert. No.: MY-ER 0112

Certified to ISO 14001: 2004

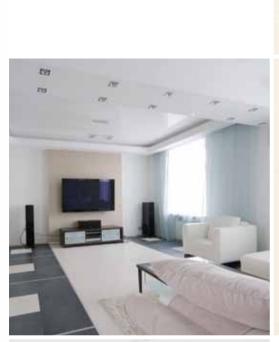
Panasonic Home Appliances Air-Conditioning (Guangzhou) Co., Ltd. Registration Number: 02107E10411R3L

- Specifications are subject to change without notice for further improvement.
   The contents of this catalog are effective as of March, 2010.
   Due to printing considerations, the actual colors may vary slightly from those shown.

# **Panasonic**

AC-FSM-10

# **Panasonic**





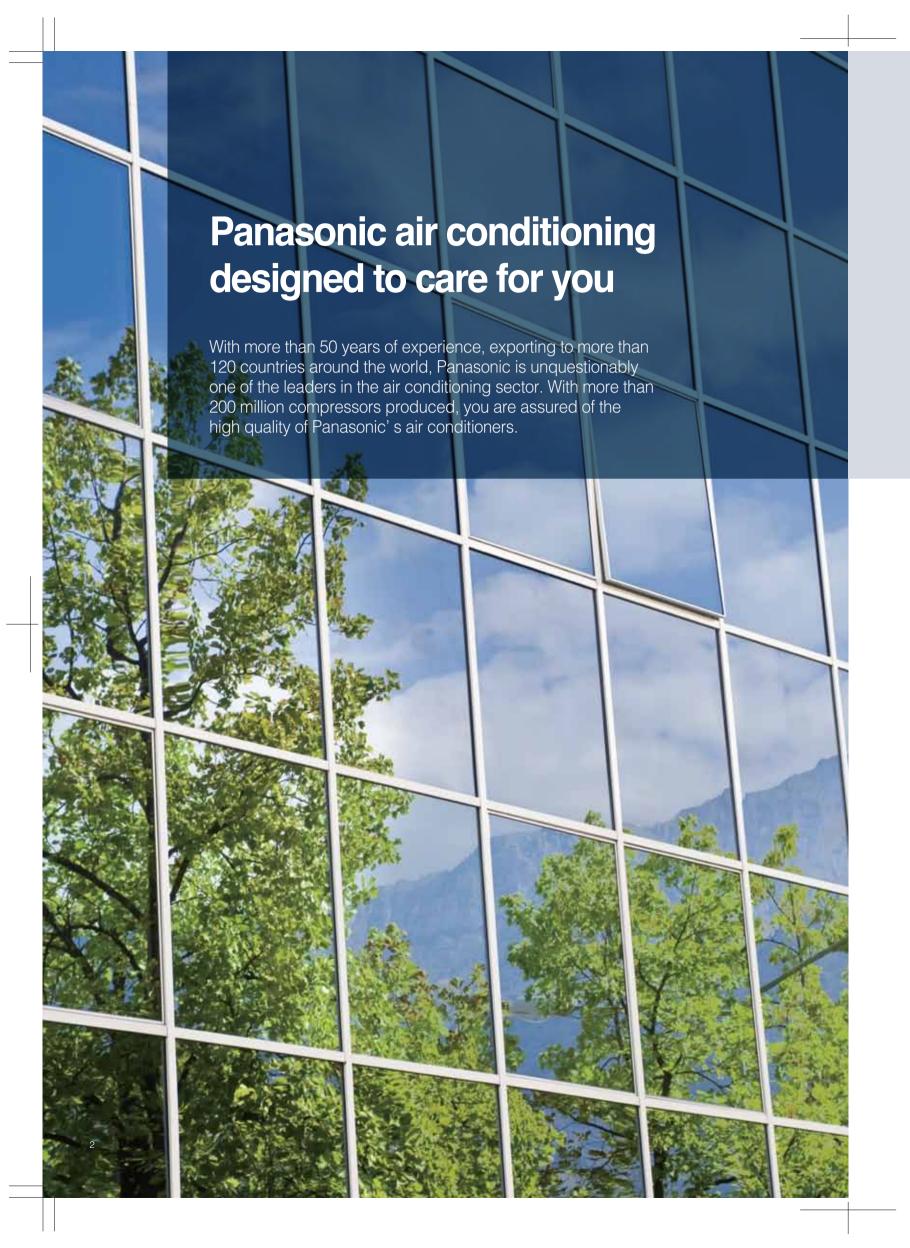














### **Japan Design and Global Operations**

The FS Multi (Mini-VRF) was designed at the Panasonic Air-Conditioning Division Headquarters in Japan.

A diverse network of production and R&D facilities, Panasonic delivers innovative products incorporating cutting-edge technologies that set the standard for air conditioners worldwide. As a global business continuing to provide truly international products, Panasonic's activities transcend borders.

### **Environmentally Conscious**

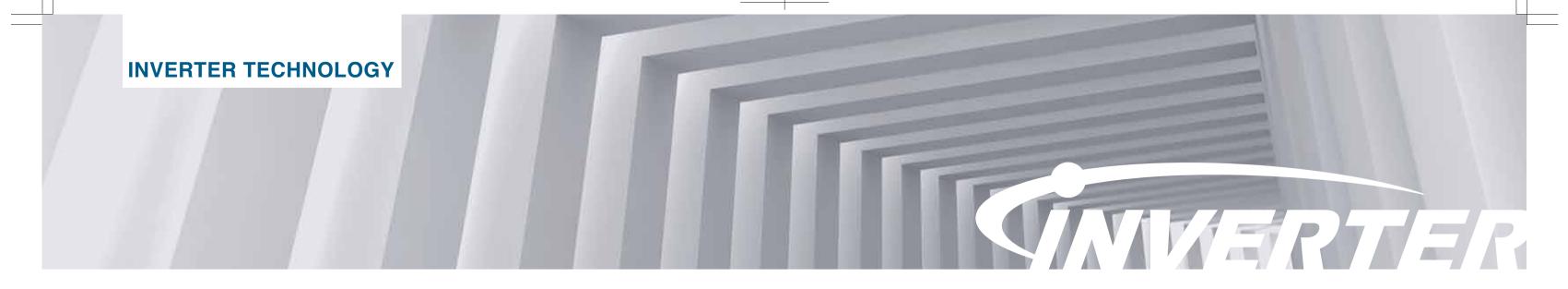
#### **RoHS Directive Compatible**

The RoHS Directive came into force in July 2006. The Directive prohibits the launching of new electrical and electronic equipment in which levels of lead, cadmium, mercury, hexavalent chromium and polybromobipheny [PBB] and polybromodipheny ether [PBDE] type flame retardants exceed those permitted. All Panasonic's VRF products comply with this european regulation.

#### **Reducing CO2 Emissions**

The Panasonic Group set out a plan to reduce CO2 emissions at production sites worldwide by 300,000 tons by fiscal 2009.

In line with this goal, the Panasonic Air-Conditioning Division Factories established a program forecast to reduce total CO2 emissions by 18% in fiscal 2009 (compared to fiscal 2005). Through improved manufacturing efficiency, the introduction of design and processing innovations and a wide range of other measures, we are moving ahead to achieve more efficient use of energy.



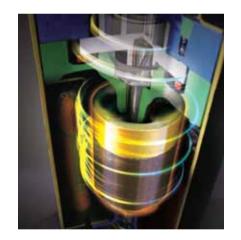
# **Advanced Inverter Technology-Less Energy and More Comfort**



By finely controlling compression rotation to match the room temperature and conditions of use, inverter technology maximizes the motor performance. Panasonic's advanced inverter technology provides fine control over a wide range of rotation speeds to assure exceptionally efficient operation and comfort.

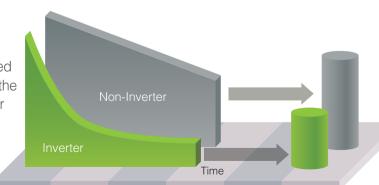
#### How can an inverter save energy?

The inverter constantly adjusts compressor rotation speed to provide optimum performance at all times. This extremely precise operation enables quick cooling and heating while reducing power consumption.



#### The key lies in the inverter's smart control

Non-inverter models always operate at a fixed power level before stopping when the cooling or heating load is reached and then restarting a little later. This simple operation results in a lot of wasted energy. By comparison, after reaching the reguired load, an inverter air conditioner continues operating with minimum power to avoid unnecessary electricity consumption.



Electricity Consumption Comparison

### **VRF Air Conditioning**

The FS Multi is a variable refrigerant flow (VRF) system that uses a single outdoor unit to independently control multiple indoor units. By communicating with the indoor units, the outdoor unit controls the flow of refrigerant to each one of them to match their cooling or heating loads. This enables independent operation of each of the indoor units, with inverter control providing optimum energy-saving operation. Air conditioning in multiple rooms by a single outdoor unit also means much less construction and a big improvement in the appearance of buildings. And a wide range of indoor models is



# FS MULTI ESS MULT ESS MULT

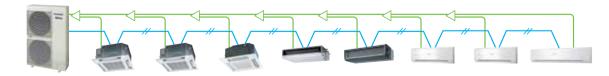
### **FS Multi Advantages**

FS Multi's cutting edge VRF technology is perfectly suited to small or medium-sized areas, with single-phase power sources, together with advanced Inverter technology, opening up previously unimagined possibilities in the world of air conditioning.

Air conditioned spaces can now take on a new dimension. If you have bought a new property, residence, offices or commercial space which is still in the construction phase, or if you are refurbishing, Panasonic offers you the chance to enjoy FS Multi air conditioning.

- Total freedom of choice. Up to 26 different indoor unit models. Allows you to choose the best option depending on architectural needs and decoration criteria.
- Three outdoor unit ratings: (11.2, 14.0, 15.5kW / 38,000, 48,000 and 53,000 Btu)., single-phase.
- Inverter technology with R410A refrigerant, "greater comfort and economy with lower consumption"
- Greatest space reduction. A single outdoor unit feeds up to 8 indoor units (at 14kW and 15.5kW.
- Ease of installation. Thanks to the reduced dimensions of the outdoor unit it can be taken to the roof of the building in the lift.

#### System Example



System / kW	11.2	14	15.5	Refrigerant pipe
Connectable Indoor Unit	6	8	8	



#### **High-story Apartments**

Enabling air conditioning in multiple rooms with a single outdoor unit, the FS Multi system offers an effective solution to today's demand for aesthetically pleasing appartments. The indoor units are also available in designs providing an ideal match for modern living environments.



#### Homes

Since a layout using long piping is possible, a single outdoor unit can be used even for multi-story residences. And there's a range of indoor unit designs to choose from to complement different interiors.

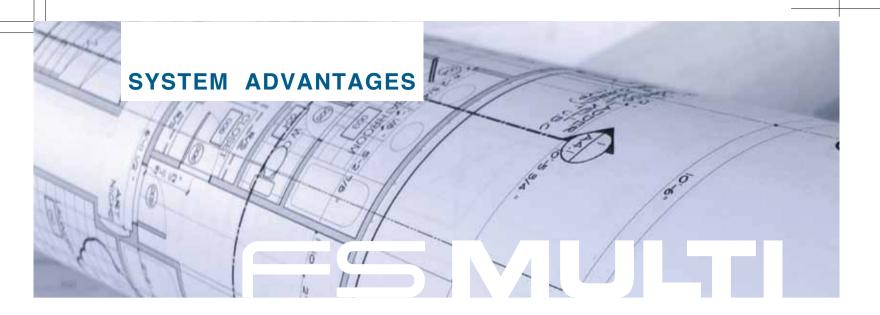






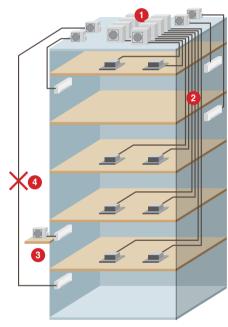
#### Offices, Shops and Boutiques

As well as being ideal for new buildings, the FS Multi system offers space-saving benefits when refurbishing and renovating existing spaces. What's more, independent air conditioning reduces energy wasted in unused offices, and much neater pipe layout is possible than with a single split system. Using the Weekly Timer also enables setting for the optimum energy-saving operation in offices and commercial facilities. And there are options enabling demand control and digital connection compatibility to meet the needs of business applications.



The FS Multi system solves the air conditioning design and construction problems that arise due to pipes at different heights and the location of the installation site. Exceptional installation flexibility makes installation easy and maintains the attractive appearance of buildings.

#### Single Split



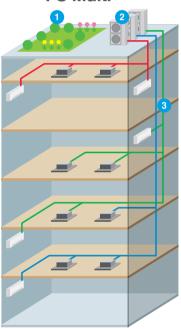
#### **Frequent Single Split System Problems**

- 1 Requires many outdoor units and large installation space. So it spoils the building's appearance, and the building's strength must be assessed.
- 2 Requires many pipe shafts.



- 3 Pipes are short so outdoor units have to be installed on wall surfaces.
- 4 Insufficient pipe length makes installation impossible.

#### FS Multi



#### FS Multi System Solution

Piping can be minimized to reduce the load on the building. Pipe installation time can be minimized. Exceptional installation flexibility.

- 1 Minimum number of outdoor units thanks to multi system. Roofton space can be used effectively.
- 2 Outdoor units can be installed in one location to maintain the building's appearance.
- 3 Pipe shafts can be located together in one place.



#### When installation space is limited

A single compact FS Multi system outdoor unit enables air conditioning in multiple rooms, solving the problems of narrow or limited installation space.







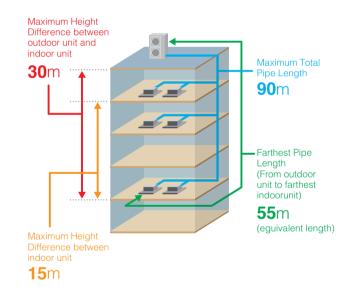
# **Installation Flexibility**

#### **Refrigerant Charge-free System**

The FS Multi is a refrigerant charge-free system that does not require a charge of additional refrigerant even when using a full pipe length of up to 90m. This dramatically shortens the installation time required for charging with additional refrigerant, weight measurement and pressure judgment. It also eliminates charge amount calculation and there's less chance of a cooling capacity shortage due to an incorrect amount of refrigerant being used or other errors.

#### Pipes of Up to 90 M

The total length of the pipe between a system's indoor and outdoor units can be extended up to 90 metres, with a height difference of up to 30 metres. These ample limits make it possible to place the outdoor unit on the roof. The maximum height difference between indoor units in the same system may be up to 15 metres, thus covering 4 or 5 floors in the same system.



#### **Space-Saving Design**

Improvement of the outdoor unit's fan has reduced the size of the unit to enable installation in a smaller space. Without sacrificing quietness, also higher efficiency is attained. More freedom in installation contributes to the easy piping and facilitates installation. It will lead to the reduction in installation cost.





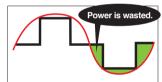
# **Energy Saving Inverter**

All models of Panasonic's FS Multi series are equipped with DC inverter compressor technology for higher EER operation. The new design attains quiet and efficient operation whilst reducing running costs.

#### **Hyper Wave Inverter**

Panasonic's experience in the development of inverters is realised in the creation of Hyper Wave technology. This control of the inverter demonstrates the optimum compressor torque. The FS Multi series quickly cools or warms the room to the set temperature and maintains a comfortable condition, whilst ensuring energy efficiency and savings.

#### Our conventional inverter



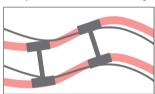
The current waveform deviates from the motor voltage waveform, so power is

#### **Hyper Wave Inverter**

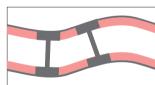


The current waveform closely matches the motor voltage waveform, so power consumption is reduced.

#### Compare this to a car rounding a corner.



Power is wasted when the car swings off course.



When the car stays right on course, there's no power loss.

# INVERTER



- 1 Hyper Wave Inverter
- 2 DC Inverter Compressor
- 3 Large Diagonal Air Flow Fan

### Panasonic's Original High-Performance Compressor

It's the compressor at the heart of an air conditioner that determines reliability and efficiency.

The FS Multi features Panasonic's original high-performance compressor to assure outstanding performance and quality.

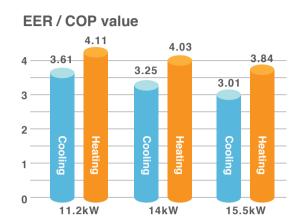
#### **High-Efficiency Compressor**

Using of a powerful neodymium (rare-metal) magnet for a motor allowed us to make the motor more compact. The winding rotor motor of less magnetic field distortion attains higher efficiency.



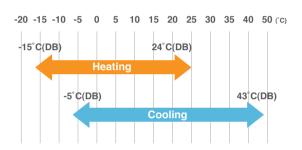
#### **Energy Saving**

Quality features translate into energy savings thanks to greater energy efficiency. This efficiency is due to the fact that each room is individually controlled and only the rooms that require air-conditioning are heated or cooled. Moreover, thanks to Inverter technology, the level of air conditioning can be adjusted precisely depending on each room's condition.



#### **Broad Operating Range**

The cooling function will remain stable indoors even when the temperature out-side rises to 43  $^{\circ}$ C, thus meeting users' different needs. Moreover, the Heating function operates from -15  $^{\circ}$ C to 24  $^{\circ}$ C.



#### **Quiet Operation**

A host of silencing technologies achieves super-quiet operation. We've also improved operating efficiency and reduced energy consumption.



Noise-Suppressing Winglet Fan

#### **Cooling Only Model Setting**

- The unit designed for cooling only can be set by the JP wire on the outdoor unit PC board.
- After setting this mode, the FS Multi system cools only.

# Outdoor Unit Quiet Operation Mode

The Quiet Operation mode of the outdoor unit can be selected by remote control. There are three mode settings that reduce the noise level by up to 6dB(A). (When the Quiet Operation mode is selected, cooling and heating capacity are reduced.)

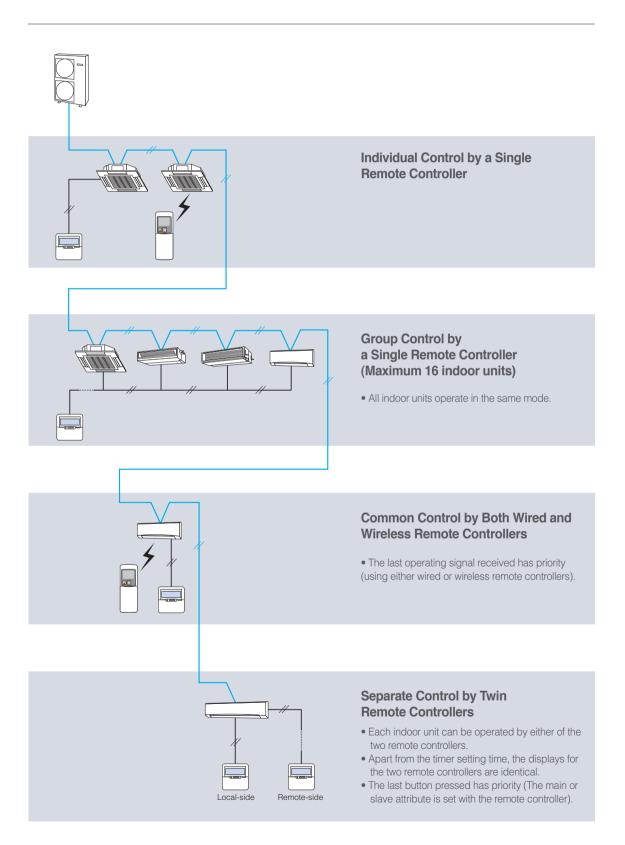
#### Example at 11.2kW model at cooling operation

Reference	Capacity index*	Sound pressure dB(A)
Normal mode	100	52
LV1	80	50
LV2	72	48
LV3	62	46

<sup>\*</sup> The indexes are nominal capacity operation reference values

# INDIVIDUAL CONTROL SYSTEMS

Unlike conventional air conditioning systems, the VRF system is applied separately to each room. So, this system is ideal for areas with fluctuation in traffic. Moreover, you can have precise control over each of the rooms to achieve exact conditions. Individual control makes this system more cost-effective and efficient.



#### **Wired Remote Controller**

#### CZ-RT1

- Remote controller with LCD and self-diagnosis
- Constant monitoring of the system with fault detection
- Weekly timer function
- Maintenance time and cost reduction





#### **OPERATING BUTTONS**

- ON/OFF
- Real time daily timer
- Weekly timer: 6 actions per day (total 42) Programme temperature or temperature
- Temperature adjustment
- **MONITOR**
- Adjusting air direction Operating mode • Selection of operating mode • Centralised control indicator
- Fan speed control Demand control indicator Restart filter
  - Operation priority indicator Group control indicator
    - Selected temperature

• Air direction

- Clock
- Day of the week indicator
- Inspection/operating test • Fan speed
- Air filter
- Defrost/hot start indicator
- Error mode display

#### Weekly Timer

Weekly timer setting (each day of a week) is available to control the air conditioner. Max. 6 settings/day and 42 settings/week can be executed. The setting temperature can be also programmed for optimal comfort.

#### **Examples of setting weekly timer**

#### Shop with regular holidays

Example: Closed Saturday afternoon

and all day Sunday. Mon-Fri On 9:00, Off 18:00

On 9:00, Off

# 12:00

Sat

Not set settings for every day of the weel

#### The number of persons varies depending on time zones.

Ventilation interlink

Set a lower temperature at lunch time when a lot of persons may visit.

#### On 12:00 23°C On 14:00 28°C

be set at the same time.

#### Not to forget to switch OFF

To prevent forgetting to switch

#### Mon-Fri Off 20:00

shut-off operation

How to set



\*Simple Timer Mode Using the 24-hour On/Off timer, the

#### 2 Ventilation Interlink

When the external device such as a ventilator is connected to the indoor unit, switch ON/OFF of the ventilator can be controlled by the wired remote control. Either link-ventilation or independent-ventilation is selectable.



### **Shielded Cable for Wired Remote Controller**

#### CZ-CCEI

This shielded cable is required when cable longer than 10 m is needed to connect a wired remote controller and an indoor unit \*1. For easy connection of the remote controller, there is a wired remote controller connector on one end of the cable.

\*1 Conforms to the EMC standard

# CONTROLLERS AND ADAPTERS

#### **Wireless Remote Controller**

# Reverse Cycle Models CZ-RWS1 Cooling Only Models CZ-RWC1

- Remote controller with LCD and self-diagnosis
- Error code recognition
- Maintenance time and cost reduction
- Real time daily timer

#### **OPERATING BUTTONS**

- ON/OFF
- Activate/deactivate programmer
- Real time daily timerTemperature adjustment
- Air direction
- Operating mode
- Fan speed controlRestart filter
- Inspection of error code





#### **MONITOR**

- Operating mode
- Temperature selected
- Air direction
- Time programmingError code display
- Fan speed
- Clock

#### **Wireless Controller Receiver**

# for Cassette type CZ-RWRU1



# for Duct type CZ-RWRM1



Wireless receivers for wall-mounted and 60x60 Cassette types are equipped as standard.

#### **Cooling/Heating Controller for the Outdoor Unit**

#### CZ-RD1

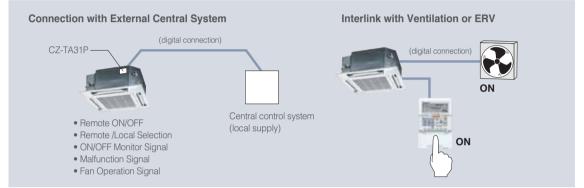
Enables the cooling, heating and ventilating operating mode for each outdoor unit. Allows the operating mode to be changed for several outdoor units at the same time by means of a single remote control.



# Interface Adapter for External Signals CZ-TA31P\*

- By connecting to the indoor unit, a separately sold ventilator can be controlled.
- Remote operation control of the indoor unit is enabled (ON/OFF control).
- The operating condition of the indoor unit (malfunctions, operating status) can be externally outout.
- Control in linkage with a Energy Recovery Ventilators (ERV) and the like is possible



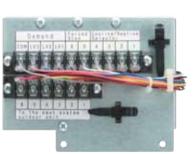


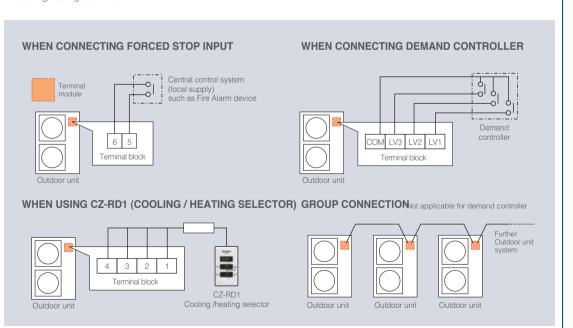
\*CZ-TA31P NOT applicable for wall-mounted indoor unit

# **Terminal Module** (Equipped as Standard on the Outdoor Unit)

Control terminal to be connected with outside devices or CZ-RD1 controller.

- Used to receive forced stop digital signal from local procured central control system.
   Used to receive demand control signal from local procured central control system.
- Used to receive demand control signal from local procured central control s
   (Demand control for energy saving with 3-level selection)
- Required to connect with CZ-RD1 cooling/heating controller.
- Group control of several FS Multi systems for forced stop and CZ-RD1 cooling/heating controller.





# COMBINATION TABLE

The FS Multi system attains maximum indoor unit connection capacity of up to 130% in the unit's connection range, depending on the outdoor and indoor models selected. In the case of a 6HP outdoor unit (15.5kW/53,000Btu/h), connection is possible with a maximum indoor unit range of 15.15kW. So for a reasonable investment, the FS Multi system provides an ideal air conditioning solution for locations where full cooling/heating is not always required.

#### **COMBINATION TABLE**

COMBINATION TABLE									
Reference	Outdoor unit System cooling capacity	Maximum indoor unit	Standard combination capacity*	Maximum combination capacity	Minimum combination capacity				
U-4LA1E5	11.2kW/ 38,200 Btu/h	6	11.2kW	14.56kW	5.6kW				
U-5LA1E5	14.0kW/ 47,800 Btu/h	8	14.0kW	18.20kW	7.0kW				
U-6LA1E5	15.5kW/ 52,900 Btu/h	8	15.5kW	20.15kW	7.75kW				
			100%	130%	50%				

<sup>\*</sup>Standard combination capacity is the system's maximum cooling capacity.

#### **COMBINATION EXAMPLE**

Correct									
	Reference	Quantity	Capacity	Minimum combination capacity	Maximum combination capacity				
Outdoor	U-6LA1E5	1	15.5 kW*	7.75 kW	20.15 kW				
Indoor	S-22KA1E5	1	2.2 kW	-	-				
	S-36KA1E5	2	(3.6×2)7.2 kW	-	-				
	S-22NA1E5	1	2.2 kW	-	-				
	S-28NA1E5	3	(2.8×3)8.4 kW	-	-				
otal indo	or capacity	7	20.0 kW(129%)						

Incorrect									
	Reference	Quantity	Capacity	Minimum combination capacity	Maximum combination capacity				
Outdoor	U-6LA1E5	1	15.5 kW*	7.75 kW	20.15 kW				
Indoor	S-22KA1E5	1	2.2 kW	-	-				
	S-36KA1E5	2	(3.6×2)7.2 kW	-	-				
	S-45KA1E5	1	4.5 kW	-	-				
	S-22NA1E5	1	2.2 kW	-	-				
	S-28NA1E5	3	(2.8×3)8.4 kW						
otal indo	or capacity	8	24.5 kW(158%)						

<sup>\*</sup>Standard combination capacity is the system's maximum cooling capacity.

#### **Branch Pipe**

#### **R410A BRANCHES**

The use of branch piping combined with expansion valves mounted in VRF indoor unit considerably reduces the imbalance of the refrigerant liquid flow between indoor units despite the smaller piping diameter. The joints for these pipes have been designed to reduce installation time, as they are easy to fit. Finally, the branch pipes optimise refrigerant flow.

\*Only genuine Panasonic branch pipes must be used.

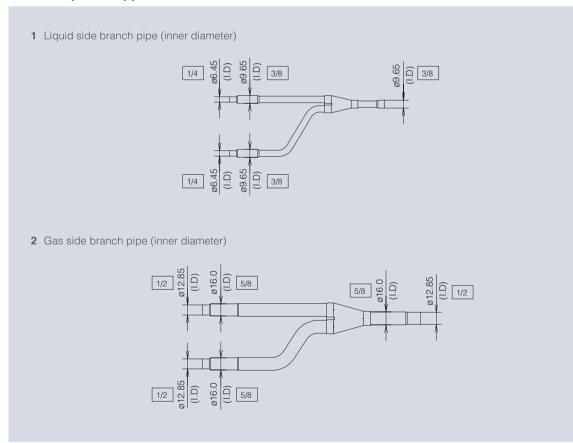
#### **CZ-P155BK1**





Applicable to all types of FS Multi indoor and outdoor units.

#### **Details of parts supplied**







#### **Control Flexibility**

- Cooling Only Model Setting (by jumper line cut)
- Power Save Mode
- Outdoor Unit Silent Operation Mode
- Auto Restart

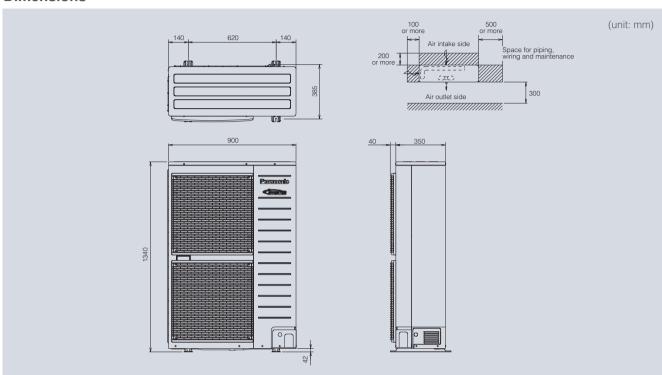
# Field Service & Maintenance

- Pump Down Operation
- Cooling Operation TESTRUN
- Heating Operation TESTRUN
- Automatic Adress Resetting
- Self Diagonsis Function (LED display)

#### Digital Input/Output

- Cooling/Heating Selector
- Demand Control Input (LV1/LV2/LV3)
- Forced STOP Input

#### **Dimensions**



#### Specification

Power (kW)				11.2kW	14kW	15.5kW
Model number				U-4LA1E5	U-5LA1E5	U-6LA1E5
Power Source			phase	1ø	1ø	1ø
			V	240	240	240
			Hz	50Hz	50Hz	50Hz
Cooling	Capacity		kW [Btu/h]	11.20 [38,200]	14.00 [47,800]	15.50 [52,900]
	Power Input		W	3,100	4,310	5,150
	EER		W/W [Btu/h]	3.61 [ 12.32 ]	3.25 [ 11.09 ]	3.01 [ 10.27 ]
	Current		А	13.60	19.00	22.50
	Air Volume		Litre/s	1,533	1,583	1,633
	Sound Pressure Level	Hi/Lo	dB [A]	52/-	53/-	55/-
	Sound Power Level	Hi/Lo	dB	70/-	71/-	73/-
	Operating Range	Min Max.	°C	-5°C - 43°C	-5°C - 43°C	-5°C - 43°C
Heating	Capacity		kW [ Btu/h]	12.50 [42,700]	16.00 [54,600]	18.00 [61,400]
Ü	Power Input		W	3,040	3,970	4,690
	COP	COP		4.11 [ 14.04 ]	4.03 [ 13.75 ]	3.84 [ 13.09 ]
	Current	Current		13.40	17.40	20.50
	Air Volume		Litre/s	1,533	1,583	1,633
	Sound Pressure Level	Hi/Lo	dB [A]	54/-	55/-	57/-
	Sound Power Level	Hi/Lo	dB	71/-	72/-	74/-
	Operating Range	Min Max.	°C	-15°C - 24°C	-15°C - 24°C	-15°C - 24°C
Connectable	Total Cappacity				50~130% of Outdoor Unit Capacity	
Indoor Unit	Model/Qty		unit	S-22 ~ S-90 /2 - 6	S-22 ~ S-90 /2 - 8	S-22 ~ S-90 /2 - 8
Moisture Removal	Volume		L/h [Pt/h]	6.8 [14.3]	9.0 [18.9]	10.3 [21.6]
Dimensions		H×W×D	mm	1,340×900×350(+40)*1	1,340×900×350(+40)*1	1,340×900×350(+40)*1
			[inch]	52-3/4×35-7/16×13-25/32(+1-9/16)	52-3/4×35-7/16×13-25/32(+1-9/16)	52-3/4×35-7/16×13-25/32(+1-9/16)
Net Weight			kg [lb]	115 [253]	123 [271]	123 [271]
Piping Connection		Liquid Side	mm [inch]	ø9.52 [3/8]	ø9.52 [3/8]	ø9.52 [3/8]
		Gas Side	mm [inch]	15.88 [5/8]	15.88 [5/8]	15.88 [5/8]
Maximum Total Pip	oing Length	Min Max.	m [ft]	20 - 90 [65.6 - 295.2]	20 - 90 [65.6 - 295.2]	20 - 90 [65.6 - 295.2]
Height Difference	(Maximum)	Max	m [ft]	30 [98.4]	30 [98.4]	30 [98.4]
Max Chargeless L	ength	Max	m [ft]	90 [295.2]	90 [295.2]	90 [295.2]
Refrigerant				R410A / 7kg	R410A / 8kg	R410A / 8kg

<sup>\*1</sup> Add 40mm for discharge grille.

Rating Conditions	Cooling	Heating
Inside air temperature	27ºC DB/19ºC WB	20ºC DB
Outside air temperature	35°C DB/24°C WB	7°C DB/6°C WB

# FS MULTI PRODUCT LINEUP

#### Indoor Unit

Capacity	Cooling Heating	refrigerant	2.2kW/7,500Btu/h 2.5kW/8,500Btu/h	2.8kW/9,600Btu/h 3.2kW/10,900Btu/h	3.2kW/10,900Btu/h 3.6kW/12,300Btu/h	3.6kW/12,300Btu/h 4.2kW/14,300Btu/h	4.5kW/15,400Btu/h 5.1kW/17,400Btu/h	5.6kW/19,100Btu/h 6.4kW/21,800Btu/h	6.3kW/21,500Btu/h 7.1kW/24,200Btu/h	7.1kW/24,200Btu/h 8.0kW/27,300Btu/h	9.0kW/30,700Btu/h 10.0kW/34,100Btu/h
Wall-Mounted	I Туре	R410A	S-22KA1E5	S-28KA1E5		S-36KA1E5	S-45KA1E5	S-56KA1E5	S-63KA1E5	S-71KA1E5	
Cassette Type	e	R410A							S-63UA1E5	S-71UA1E5	S-90UA1E5
60x 60 Casse	ette Type	R410A	S-22YA1E5	S-28YA1E5		S-36YA1E5	S-45YA1E5	S-56YA1E5			
Low-Silhouetto		R410A	S-22NA1E5	S-28NA1E5	S-32NA1E5	S-36NA1E5	S-45NA1E5	S-56NA1E5			
Low-Silhouetto (Mid static pre		R410A					S-45MA1E5	S-56MA1E5	S-63MA1E5	S-71MA1E5	S-90MA1E5

Power (kW)			11.2kW	14kW	15.5kW
Capacity	Cooling Heating	refrigerant	11.2kW/38,200Btu/h 12.5kW/42,700Btu/h	14.0kW/47,800Btu/h 16.0kW/54,600Btu/h	15.5kW/52,900Btu/h 18.0kW/61,400Btu/h
Outdoor Unit		R410A	U-4LA1E5	U-5LA1E5	U-6LA1E5



# **Wall-Mounted Type**

**Eco Inspired Design.**Cool, Stylish and Energy-Saving





S-22KA1E5



S-56KA1E5 Wide model

FS Multi wall-mounted type air conditioners have been designed in a beautiful and stylish way. The fresh new horizontal curved form characterizes the air conditioner's new design. The gentle curve at the center stylishly conceals the complex high-performance mechanisms inside, while thin ends emphasize the air conditioner's slim style. This allows it to blend into the wall in an attractive manner, and to add harmony to virtually any room interior.



# Wall-Mounted Type



#### Flexible Installation

Panasonic wall mounted model, compact and stylish design, is installable in a very limited space, without the feeling of pressure, it can integrate into your stylish room interiors.

#### **Effective Long-life Filter**

This long-life filter can trap dust mites, tobacco smoke, and other common pollutants effectively. When it has caught certain airborne particles, the clean-indicator will remind you to clean. You can remove the filter quickly with a simple one step operation, after cleaning, it can be replaced back.

# Self Diagnosis Function with 7-Seg Code Display





#### Optional Accessories

SUPER alleru-buster filter - 10-year filter life

CZ-SA16P

Replacement: every 10 years

#### **Features**

#### **Control Flexibility**

- 24-Hours ON/OFF Real Setting Timer
- Weekly Timer (Wired Only)
- Group Control by Single Remote Controller
- Outdoor Unit Silent Operation Mode
- Indoor Unit Thermistor Switching (Wired Only)
- Timer Output

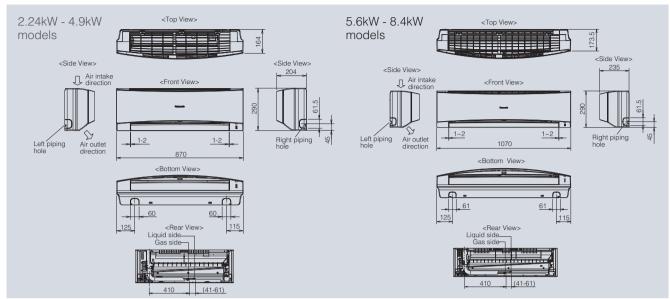
#### Comfort

- Filter Sign
- Hot Start Control
- Filter
   Super alleru-buster fi
- Super alleru-buster filter (optional/10-year lifetime)

#### Field Service & Maintenance

- Indoor Unit Address Setting
- Outdoor Unit Address Setting
- Automatic Adress Resetting for Group Control (Wired Only)
- Indoor Unit Test Run Mode
- Emergency Operation (Infrared Only)
- Self Diagnosis Function
   Self Diagnosis Paperdo (M.)
- Self Diagnosis Records (Wired Only)

#### **Dimensions**



#### Specification

Power (kV	V)		2.24kW	2.8kW	4.2kW	4.9kW
Indoor			S-22KA1E5	S-28KA1E5	S-36KA1E5	S-45KA1E5
Power So	urce	phase	1ø	1ø	1ø	1ø
		V	240	240	240	240
		Hz	50Hz	50Hz	50Hz	50Hz
Cooling	Capacity	kW [Btu/h]	2.20 [7,500]	2.80 [9,600]	3.60 [12,300]	4.50 [15,400]
	Power Input	W	25	27	30	35
	Current	А	0.25	0.30	0.35	0.40
	Air Volume Hi	Litre/s	158	162	182	188
	Sound Pressure Level Hi/Lo	dB [A]	38/33	39/33	42/34	43/35
	Sound Power Level Hi/Lo	dB	53/48	54/48	57/49	58/50
Heating	Capacity	kW [Btu/h]	2.50 [8,500]	3.20 [10,900]	4.20 [14,300]	5.10 [17,400]
	Power Input	W	25	27	30	35
	Current	А	0.25	0.30	0.35	0.40
	Air Volume Hi	Litre/s	172	182	193	202
	Sound Pressure Level Hi/Lo	dB [A]	38/33	39/33	42/34	43/35
	Sound Power Level Hi/Lo	dB	53/48	54/48	57/49	58/50
Moisture F	Removal Volume	L/h [Pt/h]	1.3 [2.7]	1.6 [3.4]	2.1 [4.4]	2.5 [5.3]
Dimension	ns	mm	290×870×204	290×870×204	290×870×204	290×870×204
(H×W×D)		inch	11-7/16×34-9/32 ×8-1/16	11-7/16×34-9/32 ×8-1/16	11-7/16×34-9/32 ×8-1/16	11-7/16×34-9/32 ×8-1/16
Net Weigh	nt	kg [lb]	9 [20]	9 [20]	9 [20]	9 [20]
Piping Co	nnection Liquid Side	mm [inch]	ø6.35 [1/4]	ø6.35 [1/4]	ø6.35 [1/4]	ø6.35 [1/4]
	Gas Side	mm [inch]	ø12.7 [1/2]	ø12.7 [1/2]	ø12.7 [1/2]	ø12.7 [1/2]

Power (kW)				5.6kW	7kW	8.4kW
Indoor				S-56KA1E5	S-63KA1E5	S-71KA1E5
Power Source			phase	1ø	1ø	1ø
			V	240	240	240
			Hz	50Hz	50Hz	50Hz
Cooling Capa	acity		kW [Btu/h]	5.60 [19,100]	6.30 [21,500]	7.10 [24,200]
Powe	er Input		W	45	50	55
Curre	ent		A	0.40	0.45	0.50
Air V	olume	Hi	Litre/s	255	267	290
Sour	nd Pressure Level	Hi/Lo	dB [A]	44/38	46/39	48/40
Sour	nd Power Level	Hi/Lo	dB	59/53	61/54	63/55
Heating Capa	acity		kW [Btu/h]	6.40 [21,800]	7.10 [24,200]	8.00 [27,300]
Powe	er Input		W	45	50	55
Curre	ent		A	0.40	0.45	0.50
Air V	olume	Hi	Litre/s	278	285	305
Sour	nd Pressure Level	Hi/Lo	dB [A]	44/38	46/39	48/40
Sour	nd Power Level	Hi/Lo	dB	59/53	61/54	63/55
Moisture Remova	l Volume		L/h [Pt/h]	3.2 [6.7]	3.6 [7.6]	4.2 [8.8]
Dimensions			mm	290×1,070×235	290×1,070×235	290×1,070×235
(H×W×D)			inch	11-7/16×42-5/32 ×9-9/32	11-7/16×42-5/32 ×9-9/32	11-7/16×42-5/32 ×9-9/32
Net Weight			kg [lb]	11 [24]	12 [26]	12 [26]
Piping Connection	n Liquid Side		mm [inch]	ø6.35 [1/4]	ø6.35 [1/4]	ø9.52 [3/8]
	Gas Side		mm [inch]	ø12.7 [1/2]	ø12.7 [1/2]	ø15.88 [5/8]

Rating Conditions	Cooling	Heating
Inside air temperature	27ºC DB/19ºC WB	20ºC DB
Outside air temperature	35%C DR/24%C W/B	79C DB/69C WB

Before installing in quiet room such as a bedroom, please consult with an authorized distributor.

<sup>\*</sup>Wired: Wired Remote Controller / Infrared: Infrared Remote Controller For more detail, see the feature comparisons of P34-35

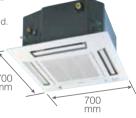
# Cassette (60x60) Type



#### 4-Way Airflow Comfort with Elegant, Compact Panel

#### **Compact Design Allows Space Saving!**

The panel is a compact 70x70cm so it can be installed even in a small room where space is limited. The ceiling opening is reguired 65x65cm.



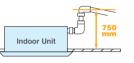
#### **Self Diagnosis Function** with 7-Seg Code Display

When air conditioner has trouble, the indicator and 7-seg code displays on the panel making it easier for service technicians to diagnose problems.



#### Only 260mm Thin and 750 mm **Drain-Up Mechanism**





With only 260mm high body, fitting easily in ceiling spaces and tight spots.

The internal pump allows the drain line to be elevated up to 750 mm above the base of the

#### **Anti-Mould Long-Life Air Filter**







#### **Optional Accessories**



alleru-buster filter CZ-SA13P

placement: every 3 years

#### **Features**

#### **Control Flexibility**

- 24-Hours ON/OFF Real Setting Timer
- Weekly Timer (Wired Only)
- Group Control by Single Remote Controller • Outdoor Unit Silent Operation Mode
- Indoor Unit Thermistor Switching (Wired Only)
- Ventilation Unit Control (Wired Only) • Timer Output
- Digital Input/Output Contact - with CZ-TA31P (Optional)

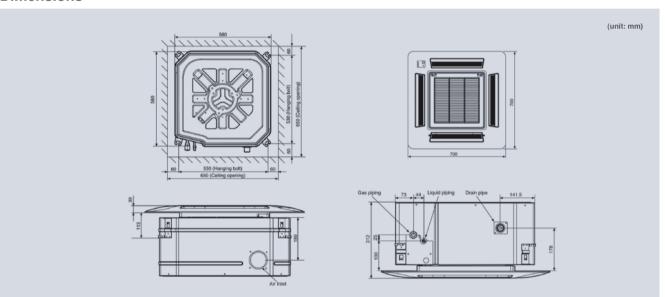
#### Comfort

- Filter Sign
- Hot Start Control Filter
- Super alleru-buster filter
- (optional/3-year lifetime)
- Fresh air inlet

#### Field Service & Maintenance

- Indoor Unit Address Setting
- Outdoor Unit Address Setting
- Automatic Address Resetting for Group Control (Wired Only) • Indoor Unit Test Run Mode
- Emergency Operation (Infrared Only)
- Self Diagnosis Function
- Self Diagnosis Records (Wired Only)

#### **Dimensions**



#### **Specification**

Power (kW)				2.24kW	2.8kW	4.2kW	4.9kW	5.6kW
Indoor				S-22YA1E5	S-28YA1E5	S-36YA1E5	S-45YA1E5	S-56YA1E5
Panel				CZ-KPY1	CZ-KPY1	CZ-KPY1	CZ-KPY1	CZ-KPY1
Power Source	е		phase	1ø	1ø	1ø	1ø	1ø
			V	240	240	240	240	240
			Hz	50Hz	50Hz	50Hz	50Hz	50Hz
Cooling	Capacity		kW [Btu/h]	2.20 [7,500]	2.80 [9,600]	3.60 [12,300]	4.50 [15,400]	5.60 [19,100]
	Power Input		W	35	35	40	40	45
	Current		А	0.30	0.30	0.35	0.35	0.35
	Air Volume	Hi	Litre/s	138	143	150	155	165
	Sound Pressure Leve	l Hi/Lo	dB [A]	36/33	37/33	38/34	39/35	40/36
	Sound Power Level	Hi/Lo	dB	51/48	52/48	53/49	54/50	55/51
Heating	Capacity		kW [Btu/h]	2.50 [8,500]	3.20 [10,900]	4.20 [14,300]	5.10 [17,400]	6.40 [21,800]
	Power Input		W	35	35	40	40	45
	Current		А	0.30	0.30	0.35	0.35	0.35
	Air Volume	Hi	Litre/s	155	160	165	172	177
	Sound Pressure Leve	l Hi/Lo	dB [A]	36/33	37/33	38/34	39/35	40/36
	Sound Power Level	Hi/Lo	dB	51/48	52/48	53/49	54/50	55/51
Moisture Ren	noval Volume		L/h [Pt/h]	1.3 [2.7]	1.6 [3.4]	2.1 [4.4]	2.5 [5.3]	3.2 [6.7]
Dimensions	•	Indoor unit	mm	260×575×575	260×575×575	260×575×575	260×575×575	260×575×575
(H×W×D)			inch	10-1/4×22-21/32 ×22-21/32	10-1/4×22-21/32 ×22-21/32	10-1/4×22-21/32 ×22-21/32	10-1/4×22-21/32 ×22-21/32	101/4×22-21/32 ×22-21/32
		Panel	mm	51x700x700	51x700x700	51x700x700	51x700x700	51x700x700
Net Weight			kg [lb]	18 [40]	18 [40]	18 [40]	18 [40]	18 [40]
Piping Conne	ection	Liquid Side	mm [inch]	ø6.35 [1/4]	ø6.35 [1/4]	ø6.35 [1/4]	ø6.35 [1/4]	ø6.35 [1/4]
		Gas Side	mm [inch]	ø12.7 [1/2]	ø12.7 [1/2]	ø12.7 [1/2]	ø12.7 [1/2]	ø12.7 [1/2]

Rating Conditions	Cooling	Heating
Inside air temperature	27ºC DB/19ºC WB	20°C DB
Outside air temperature	35°C DB/24°C WB	7ºC DB/6ºC WB

\*Wired: Wired Remote Controller / Infrared: Infrared Remote Controller For more detail, see the feature comparisons of P34-35

# Cassette Type



#### 4-Way Airflow Comfort with Elegant, Compact Panel

#### Only 240mm Thin and 750 mm **Drain-Up Mechanism**



and tight spots.

With only 240mm high body, fitting easily in ceiling spaces

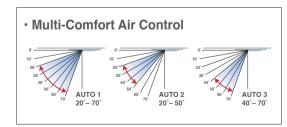
The internal pump allows the drain line to be elevated up to 750 mm above the base of the unit.

#### **Elegant Panel, 4-direction Blow**

The thin and delicate body can be totally hidden in the ceiling, only leaving its elegant panel outside to decorate your room. The 4-direction blow can deliver airflows evenly throughout the room, eliminating the temperature difference.



#### **Three Airflow Patterns for Extra Comfort**



#### **Self Diagnosis Function with** 7-Seg Code Display

When air conditioner has trouble, the indicator and 7-seg code displays on the panel making it easier for service technicians to diagnose problems.



#### **Flexible Piping Layout**

Drainpipe and refrigerant pipe distributed on the different sides of the unit, giving more flexibility of piping layout. Its excellent inside heat-protection material effectively avoids frost and water-leakage, and reduces the damage possibility in the transportation.



#### **Anti-Mould Long-Life Air Filter**





#### **Innovative Design Creates Extra Quiet Operation**



**Additional Sound Deadening** Adopting sound deadening aterial inside, improving the

#### **Features**

#### **Control Flexibility**

- 24-Hours ON/OFF Real Setting Timer
- Weekly Timer (Wired Only)
- Group Control by Single Remote Controller
- Outdoor Unit Silent Operation Mode
- Indoor Unit Thermistor Switching (Wired
- Ventilation Unit Control (Wired Only)
- Timer Output
- Digital Input/Output Contact - with CZ-TA31P (Optional)

#### Comfort

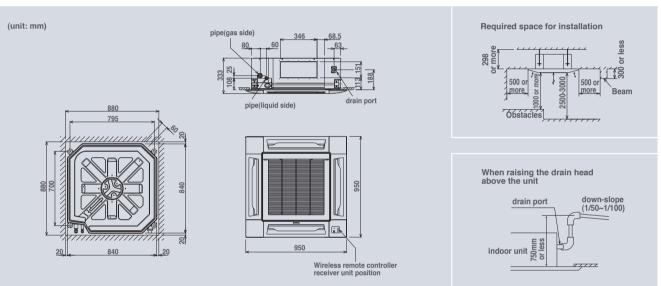
- Filter Sign
- Hot Start Control Filter
- Satellite Duct
- Fresh Air Inlet

#### Field Service & Maintenance

- Indoor Unit Address Setting
- Outdoor Unit Address Setting
- Automatic Address Resetting for Group Control (Wired Only)
- Indoor Unit Test Run Mode
- Emergency Operation (Infrared Only)
- Self Diagnosis Function
- Self Diagnosis Records (Wired Only)

\*Wired: Wired Remote Controller / Infrared: Infrared Remote Controller For more detail, see the feature comparisons of P34-35

#### **Dimensions**



#### **Specification**

Power (kW	)			7kW	8.4kW	9.8kW
Indoor				S-63UA1E5	S-71UA1E5	S-90UA1E5
Panel				CZ-BT03P	CZ-BT03P	CZ-BT03P
Power Sou	rce		phase	1ø	1ø	1ø
			V	240	240	240
			Hz	50Hz	50Hz	50Hz
Cooling	Capacity		kW [Btu/h]	6.30 [21,500]	7.10 [24,200]	9.00 [30,700]
	Power Input		W	115	120	120
	Current		А	0.55	0.60	0.60
	Air Volume	Hi	Litre/s	350	367	367
	Sound Pressure Level	Hi/Lo	dB [A]	41/36	42/37	42/37
	Sound Power Level Hi/Lo		dB	56/51	57/52	57/52
Heating	Capacity		kW [Btu/h]	7.10 [24,200]	8.00 [27,300]	10.00 [34,100]
	Power Input		W	115	120	120
	Current		Α	0.55	0.60	0.60
	Air Volume	Air Volume Hi		350	367	367
	Sound Pressure Level	Hi/Lo	dB [A]	41/36	42/37	42/37
	Sound Power Level	Hi/Lo	dB	56/51	57/52	57/52
Moisture R	emoval Volume		L/h [Pt/h]	3.6 [7.6]	4.2 [8.8]	5.4 [11.3]
Dimensions	3	Indoor unit	mm	246×840×840	246×840×840	246×840×840
$(H\times W\times D)$		inch		9-11/16×33-1/16×33/1/16	9-11/16×33-1/16×33/1/16	9-11/16×33-1/16×33/1/16
		Panel	mm	45x950x950	45x950x950	45x950x950
Net Weight			kg [lb]	26 [57]	26 [57]	26 [57]
Piping Con	nection	Liquid Side	mm [inch]	ø6.35 [1/4]	ø9.52 [3/8]	ø9.52 [3/8]
		Gas Side	mm [inch]	ø12.7 [1/2]	ø15.88 [5/8]	ø15.88 [5/8]

Rating Conditions	Cooling	Heating
Inside air temperature	27°C DB/19°C WB	20ºC DB
Outside air temperature	35°C DR/24°C WR	7°C DR/6°C WR

# Low-Silhouette Duct Type

(Low Static Pressure Type)





#### **Ultra-thin, Duct-type Indoor Unit**

The slim design of this ultra-thin, duct-type indoor unit is especially suited for rooms with partially or minimally dropped ceilings. Its space-saving design contributes to a brighter and more spacious living environment.

#### Ultra-thin 20 cm Design: Fits in Even Where Ceiling Height is Limited.

Even where ceiling height is limited, the indoor units effectively fit in and provide a more spacious feel in most dropped ceiling situations.

Occupying only 20 cm of vertical space and projecting only 55 cm, the unit can be installed in semi-dropped ceiling situations, thus helping to create spacious and comfortable surroundings.

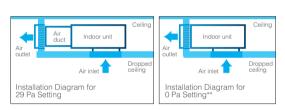


Dropped Ceiling Effect

#### **Built-in Selectable Static Pressure Settings**

Our ultra thin duct-type indoor units have two static pressure settings: 0 Pa and 29 Pa. In situations without ducting, the 0 Pa\* static pressure setting is applicable. Where ducting is present, set the unit to 29 Pa\* static

\*0 Pa is the default setting: 29 Pa must be selected if required.



#### **Thoroughly Considered Connecting** Flange Design.

The addition of air duct connecting flanges on the indoor unit enables easy connection to short air ducts. Thus flange design both greatly simplifies installation and makes it easy to effectively seal the air duct.

#### **Features**

#### **Control Flexibility**

- 24-Hours ON/OFF Real Setting Timer
- Weekly Timer (Wired Only)
- Group Control by Single Remote Controller
- Outdoor Unit Silent Operation Mode
- Indoor Unit Thermistor Switching (Wired Only) Ventilation Unit Control (Wired Only)
- Timer Output
- Digital Input/Output Contact - with CZ-TA31P (Optional)

#### Comfortability

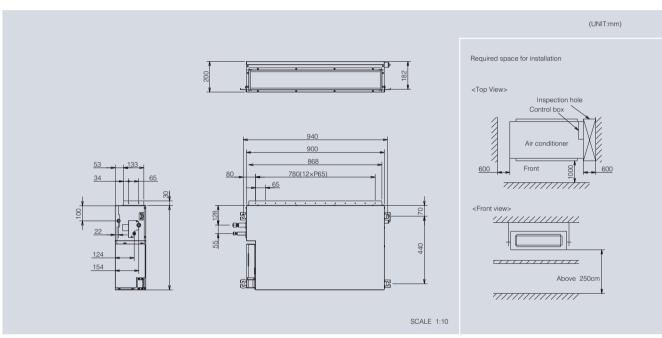
- Filter Sign • Indoor Unit Address Setting Hot Start Control
  - Outdoor Unit Address Setting
  - Automatic Address Resetting for Group Control (Wired Only)

Field Service & Maintenance

- Indoor Unit Test Run Mode
- Emergency Operation (Infrared Only) Self Diagnosis Function
- Self Diagnosis Records (Wired Only)

\*Wired: Wired Remote Controller / Infrared: Infrared Remote Controller For more detail, see the feature comparisons of P34-35

#### **Dimensions**



#### **Specification**

Power (kW)				2.24kW	2.8kW	3.5kW	4.2kW	4.9kW	5.6kW
Indoor				S-22NA1E5	S-28NA1E5	S-32NA1E5	S-36NA1E5	S-45NA1E5	S-56NA1E5
Power Source			phase	1ø	1ø	1ø	1ø	1ø	1ø
			V	240	240	240	240	240	240
			Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz
Cooling Car	pacity		kW [Btu/h]	2.20 [7,500]	2.80 [9,600]	3.20 [10,900]	3.60 [12,300]	4.50 [15,400]	5.60 [19,100]
Pov	wer Input		W	80	85	90	90	100	110
Cur	rrent		A	0.45	0.50	0.50	0.50	0.55	0.55
Air '	Volume	Hi	Litre/s	167	183	183	183	200	208
Sou	und Pressure Level**	Hi/Lo	dB [A]	36/31	37/31	38/32	38/32	39/33	39/33
Sou	und Power Level**	Hi/Lo	dB	51/46	52/46	53/47	53/47	54/48	54/48
Heating Cap	Capacity		kW[ Btu/h]	2.50 [8,500]	3.20 [10,900]	3.60 [12,300]	4.20 [14,300]	5.10 [17,400]	6.40 [21,800]
Pov	wer Input		W	80	85	90	90	100	110
Cur	rrent		А	0.45	0.50	0.50	0.50	0.55	0.55
Air '	Volume	Hi	Litre/s	167	183	183	183	200	208
Sou	und Pressure Level**	Hi/Lo	dB [A]	36/31	37/31	38/32	38/32	39/33	39/33
Sou	und Power Level**	Hi/Lo	dB	51/46	52/46	53/47	53/47	54/48	54/48
Noisture Removal Vo	olume		L/h [Pt/h]	1.3 [2.7]	1.6 [3.4]	1.8 [3.8]	2.1 [4.4]	2.5 [5.3]	3.2 [6.7]
xternal Static Pressi	sure *1		Pa [mmAq]	0/29 [0/3]	0/29 [0/3]	0/29 [0/3]	0/29 [0/3]	0/29 [0/3]	0/29 [0/3]
Dimensions		H×W×D	mm	200×900×550	200×900×550	200×900×550	200×900×550	200×900×550	200×900×550
			inch	7-7/8×35-7/16 ×21-21/32	7-7/8×35-7/16 ×21-21/32	7-7/8×35-7/16 ×21-21/32	7-7/8×35-7/16 ×21-21/32	7-7/8×35-7/16 ×21-21/32	7-7/8×35-7/16 ×21-21/32
Net Weight			kg[lb]	21 [46]	21 [46]	22 [48]	22 [48]	22 [48]	22 [48]
Piping Connection		Liquid Side	mm [inch]	ø6.35 [1/4]					
		Gas Side	mm [inch]	12.7 [1/2]	12.7 [1/2]	12.7 [1/2]	12.7 [1/2]	12.7 [1/2]	12.7 [1/2]

Rating Conditions	Cooling	Heating
Inside air temperature	27°C DB/19°C WB	20°C DB
Outside air temperature	35°C DB/24°C WB	7ºC DB/6ºC WB

<sup>\*\*</sup>Noise levels are for rear return air only, bottom return air setting may

# **Duct Type**

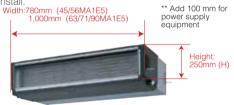
(Mid Static Pressure Type)



#### Offers Maximum Installation Flexibility with Slim, Lightweight Design

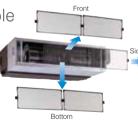
#### Compact, Lightweight Design for Easy Installation

Thin and only 250mm\* high, with a slim width. This compact unit fits easily in limited spaces. The lightweight and small size also make it easier to transport



#### 3-Way Removable Air Filter

The air filter can be slide in-out in three directions even after duct installation for easier maintenance.

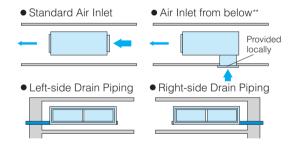


#### Versatile Air Inlet and Drain Installation

The mounting locations for the air inlet and drain outlet can be changed as desired for easy, flexible system layout and installation.

#### Static Pressure Selection

The static pressure is selectable from 5 or 7 mmAg according to the condition of the duct. For short ducts, the lower pressure of 5 mmAq provides efficient operation.



#### **Features**

#### **Control Flexibility**

- 24-Hours ON/OFF Real Setting Timer
- Weekly Timer (Wired Only)
- Group Control by Single Remote Controller • Outdoor Unit Silent Operation Mode
- Indoor Unit Thermistor Switching (Wired Only)
- Ventilation Unit Control (Wired Only)
- Timer Output
- Digital Input/Output Contact
- with CZ-TA31P (Optional)

\*Wired: Wired Remote Controller / Infrared: Infrared Remote Controller

Filter SignHot Start Control

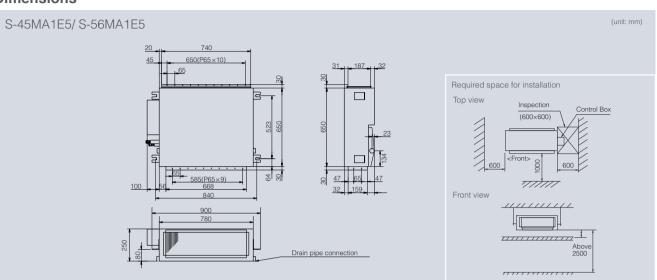
Filter

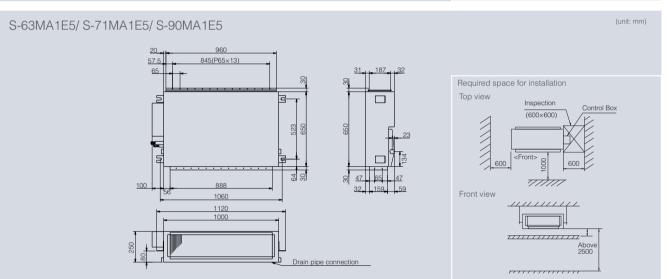
#### Comfortability **Field Service & Maintenance**

- Indoor Unit Address Setting
  - Outdoor Unit Address Setting
  - Automatic Address Resetting for Group Control (Wired Only)
  - Indoor Unit Test Run Mode
  - Emergency Operation (Infrared Only)
  - Self Diagnosis Function • Self Diagnosis Records (Wired Only)

\*\*Noise levels are for rear return air only, bottom return air setting may

#### **Dimensions**





#### **Specification**

Power (kW)				4.9kW	5.6kW	7kW	8.4kW	9.8kW
ndoor				S-45MA1E5	S-56MA1E5	S-63MA1E5	S-71MA1E5	S-90MA1E5
Power Source	9		phase	1ø	1ø	1ø	1ø	1ø
			V	240	240	240	240	240
			Hz	50Hz	50Hz	50Hz	50Hz	50Hz
Cooling	Capacity		kW [Btu/h]	4.50 [15,400]	5.60 [19,100]	6.30 [21,500]	7.10 [24,200]	9.00 [30,700]
	Power Input		W	145	145	145	145	185
	Current		А	0.65	0.65	0.65	0.65	0.85
	Air Volume	Hi	Litre/s	250	250	283	283	317
-	Sound Pressure Level**	Hi/Lo	dB [A]	42/36	42/36	43/37	43/37	44/38
	Sound Power Level**	Hi/Lo	dB	57/51	57/51	58/52	58/52	59/53
Heating	Capacity		kW[ Btu/h]	5.10 [17,400]	6.40 [21,800]	7.10 [24,200]	8.00 [27,300]	10.00 [34,100]
	Power Input		W	145	145	145	145	185
	Current		А	0.65	0.65	0.65	0.65	0.85
	Air Volume	Hi	Litre/s	250	250	283	283	317
-	Sound Pressure Level**	Hi/Lo	dB [A]	42/36	42/36	43/37	43/37	44/38
	Sound Power Level**	Hi/Lo	dB	57/51	57/51	58/52	58/52	59/53
Moisture Rem	noval Volume		L/h [Pt/h]	2.5 [5.3]	3.2 [6.7]	3.6 [7.6]	4.2 [8.8]	5.4 [11.3]
External Station	c Pressure *1		Pa [mmAq]	49/69 [5/7]	49/69 [5/7]	49/69 [5/7]	49/69 [5/7]	49/69 [5/7]
Dimensions		H×W×D	mm	250×780(+100)*2×650	250×780(+100)*2×650	250×1,000(+100)*2×650	250×1,000(+100)*2×650	250×1,000(+100)*2×650
			inch	9-27/32×30-23/32(+3-15/16) ×25-19/32	9-27/32×30-23/32(+3-15/16 ×25-19/32	9-27/32×39-3/8(+3-15/16) ×25-19/32	9-27/32×39-3/8(+3-15/16) ×25-19/32	9-27/32×39-3/8(+3-15/16) ×25-19/32
Net Weight			kg [lb]	28 [62]	28 [62]	32 [71]	32 [71]	32 [71]
Piping Conne	ction	Liquid Side	mm [inch]	ø6.35 [1/4]	ø6.35 [1/4]	ø6.35 [1/4]	ø9.52 [3/8]	ø9.52 [3/8]
		Gas Side	mm [inch]	12.7 [1/2]	12.7 [1/2]	12.7 [1/2]	15.88 [5/8]	15.88 [5/8]

<sup>\*1</sup> The external static pressure is set to 49pa at factory default setting. \*2 Add 100mm for piping port. \*\*Noise levels are for rear return air only, bottom return air setting may increase noise slightly.

Rating Conditions	Cooling	Heating
Inside air temperature	27ºC DB/19ºC WB	20ºC DB
Outside air temperature	35°C DB/24°C WB	7ºC DB/6ºC WB

# Feature Comparison

#### Indoor Unit

Model	Model Indoor Unit		lounted	60X60 C	assette	Cass	ette		Duct tic Pressure)		uct c Pressure)
Feature	Remote Controller	Wired Remote Controller	Infrared Remote Controller								
Control Flexibility	24-Hours ON/OFF Real Setting Timer	•	•	•	•	•	•	•	•	•	•
	Weekly Timer (6-Pattern/Max. 42-Pattern with Temp Setting)	•	_	•	_	•	_	•	_	•	_
	Group Control by Single Remote Controller	•	•	•	•	•	•	•	•	•	•
	Outdoor Unit Silent Operation Mode (3-Level)	•	•	•	•	•	•	•	•	•	•
	Indoor Unit Thermistor Switching (Indoor Unit or RC)	•	_	•	-	•	_	•	_	•	_
	Ventilation Unit Control		_	•	_	•	_	•	_	•	_
	Timer Output		•		•		•		•	(	•
	Digital Input/Output Contact		_	with C	Z-TA31P						
Comfortability	Filter Sign	•	•	•	•	•	•	•	•	•	•
	Mildew-Proofing Drain Pan		_		•		•		_		_
	Hot Start Control		•		•		•		•		•
	Filter		•		•		•		•		_
	Super alleru-buster filter	CZ-SA16	P (10 years)	CZ-SA13	P (3 years)		_		_		_
Field Service& Maintenance	Indoor Unit Address Setting	•	•	•	•	•	•	•	•	•	•
	Outdoor Unit Address Setting	•	•	•	•	•	•	•	•	•	•
	Automatic Adress Resetting for Group Control	•	_	•	_	•	_	•	_	•	_
	Indoor Unit Test Run Mode	•	•	•	•	•	•	•	•	•	•
	Emergency Operation	_	•	_	•	_	•	_	•	_	•
	Self Diagonsis Function	•	•	•	•	•	•	•	•	•	•
	Self Diagonsis Records	•	_	•	_	•	_	•	_	•	_

#### Outdoor Unit

Control Flexibility	"Cooling Only" Model Setting (Locked)	•
	Power Save Mode	•
	Outdoor Unit Silent Operation Mode (3-Level)	•
	Auto Restart	•
Field Service& Maintenance	Pump Down Operation	•
	Cooling Operation TESTRUN	•
	Heating Operation TESTRUN	•
	Automatic Adress Resetting	•
	Self Diagonsis Function	●(LED display)
Digital Input/Output	Cooling/Heating Selector	•
	Demand Control Input (LV1/LV2/LV3)	•
	Forced Stop Input	•

