Refrigerant R410A

INVERTER

AIRSTAGE™ *V-II*

Variable Refrigerant Flow System

Multi Air Conditioning System for Buildings

Large Capacity Multi VRF System
DC Inverter Control Compressor
Long Piping System Design
High Efficiency Refrigerant R410A

Refrigerant R410A

INVERTER

AIRSTAGE™ V-II

Variable Refrigerant Flow System

8, 10, 12HP

Newly designed compact outdoor unit

Smart and cutting edge design

Extensive lineup from 8HP to 48HP in 2HP increment

Connectable indoor unit capacity ratio up to 150%

DIMENSIONS: H 1,690 X W 930 X D 765 (mm)

High Efficiency Operating System

EER/COP has been significantly improved by unique inverter technology and refrigerant control technology.

Installation Flexibility

Total pipe length of 1,000m and 150m actual pipe length. From small to large buildings, any application can be supported.

14, 16HP

DIMENSIONS: H 1,690 X W 1,240 X D 765 (mm)

CONTENTS

Compact Design

The outdoor unit size has been significantly reduced by optimizing of equipment. This allows for a reduction in the required installation area floor space.

User Friendly Central Control

Diverse building air conditioning control functions can be controlled easily by central Airconditioning control.
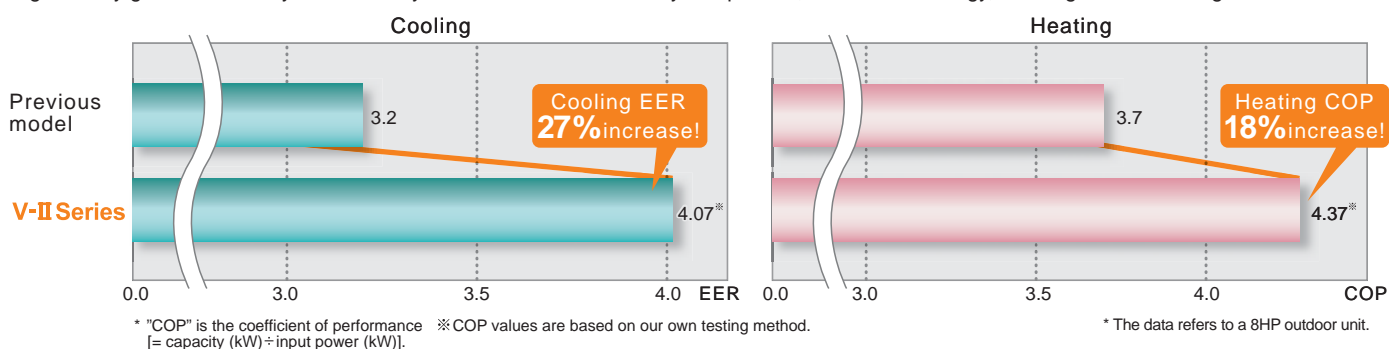
High Efficiency Operation

Advanced system considers high efficiency operation

High Efficiency

■ Significantly improved EER/COP

Significantly greater efficiency is realized by the use of a DC twin rotary compressor, inverter technology, and large heat exchanger.

Cooling

Previous model: 3.2

V-II Series: 4.07$^※$

Cooling EER **27%** increase!

0.0 3.0 3.5 4.0 EER

* "COP" is the coefficient of performance [= capacity (kW) ÷ input power (kW)].
※ COP values are based on our own testing method.

Heating

Previous model: 3.7

V-II Series: 4.37$^※$

Heating COP **18%** increase!

0.0 3.0 3.5 4.0 COP

* The data refers to a 8HP outdoor unit.

■ Energy saving technology that boosted operation efficiency

Power consumption has been reduced by 25% compared to previous models by using a compact and high performance DC fan motor.

High efficiency operation is realized by using a sine wave DC inverter control.

Significantly greater efficiency is realized by use of a large capacity DC twin rotary compressor with substantially increased refrigerant intake and compression efficiency.

Heat exchange efficiency is significantly improved by the introduction of a new 4-face heat exchanger that increases effective surface area.

Previous model → V-II Series

Surface area **1.7** times!

In multiple outdoor unit installations, the unique front intake design improves airflow into the Heat Exchanger.

Energy efficiency combination

■ Choice of space saving or energy efficiency combinations

	[Space saving combination]		[Energy efficiency combination]	
[For 16HP]	16HP	→	8HP 8HP	**18% energy saving !**
[For 24HP]	12HP 12HP	→	8HP 8HP 8HP	**12% energy saving !**
[For 28HP]	16HP 12HP	→	12HP 8HP 8HP	**10% energy saving !**

(Comparison of Average COP)

Various energy saving features

■ Economy operation

Economy operation can be set by remote controller.
The temperature setting is offset automatically over a certain period of time.

Heating Set Temperature
↓ MAX. -4°C
Economy operation Control Temperature

Set Temp.
Down Down Down Down
Economy operation

Economy operation Control Temperature
↑ MAX. +2°C
Cooling Set Temperature

Set Temp.
Economy operation
Up Up
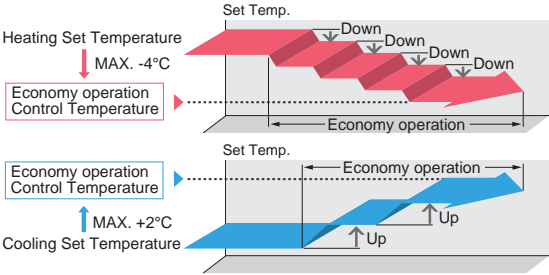
■ Room temperature set point limitation

The minimum and maximum temperature range can be set giving further energy saving while considering the comfort of the occupants.

Operation setting (System Controller)
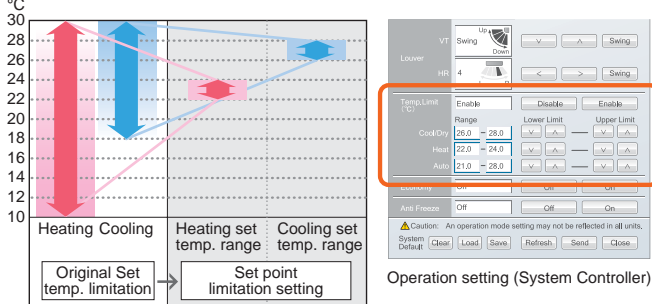
■ Capacity shift operation

When the heat load is minimal, capacity can be reduced according to surrounding conditions.

Capacity
Target standard capacity
Capacity shift operation
Time
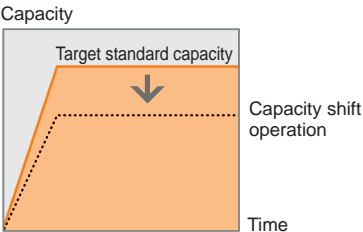
■ Auto-off timer

Each remote controller is equipped with an OFF timer function that automatically stops operation when a fixed time has elapsed from the start of operation. This prevents wasteful operation. (NB Except simple remote controller)

Design Versatility

V-II systems can be applied to a wide variety of Building applications due to the reduced outdoor unit size and piping length capabilities

Flexible and easy piping design

Overall piping length 1,000m

World's top class overall piping length of 1,000m allows for application in a wide variety buildings.

Total pipe length
1,000m max.

Height difference between outdoor and indoor units
50m max.

For the outdoor unit stated below : 40m max.

Actual pipe length
150m max.

Pipe length from first separation tube to the farthest indoor unit
60m max.

Height difference between indoor and indoor units
15m max.
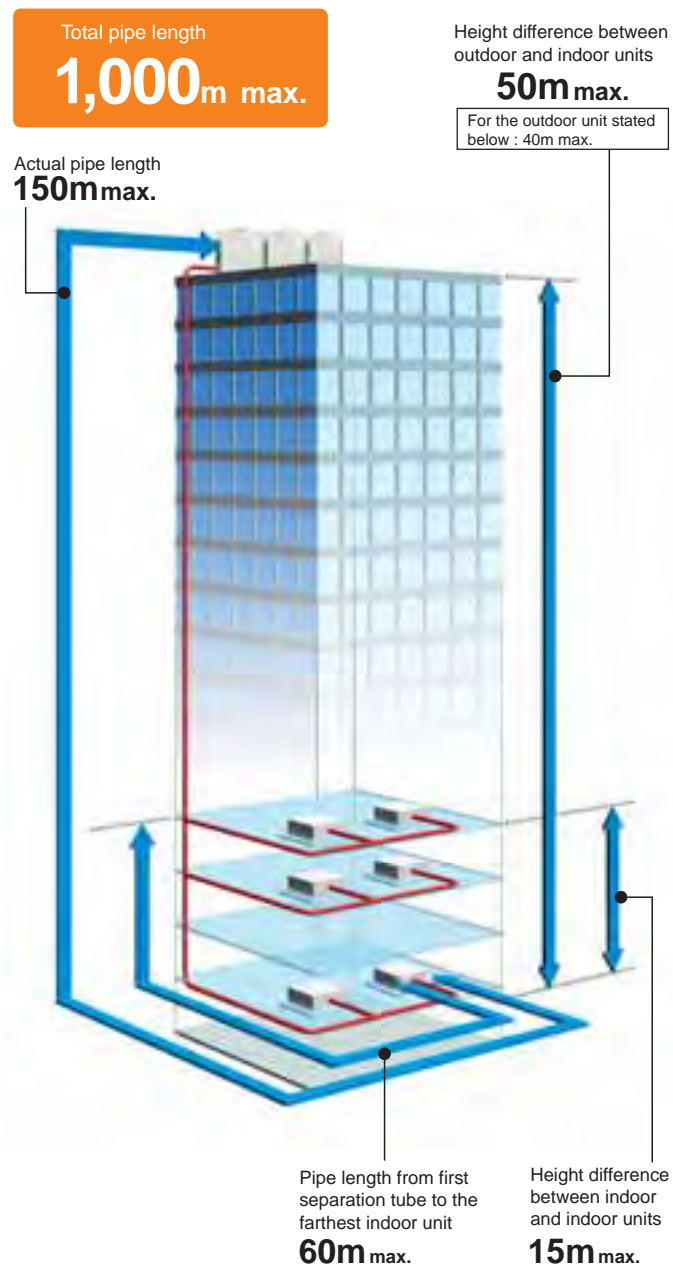
High static pressure of 80Pa

The outdoor unit can have a condenser hood easily connected with a static pressure of 80Pa standard. This allows outdoor units to be installed within plant rooms in high rise buildings.

Powerful discharge with an external static pressure of 80Pa.

Previous model

V-II Series

80Pa as standard

Large diameter fan and DC motor has been utilized allowing an external static pressure of 80Pa. This is approximately 2.6 times greater than the previous model.

Installation Example

■ Space saving and compact size

Compact size has been achieved by significantly reducing the width of the outdoor units compared to previous models.

Previous model	**10HP**	V-II Series	**10 HP**

28% reduction

1,300 → 930

Previous model	**16HP (8HP X 2)**	V-II Series	**16 HP**

52% reduction

2,600 → 1,240

For 160HP

Previous model
16HP(8HP×2)×10=160HP

38.0m²

V-II Series
16HP×10=160HP

16.2m²

57% space saving
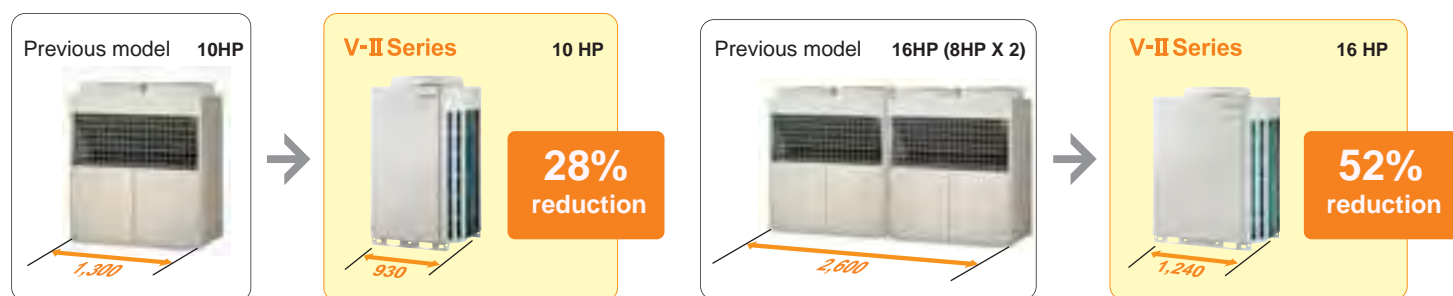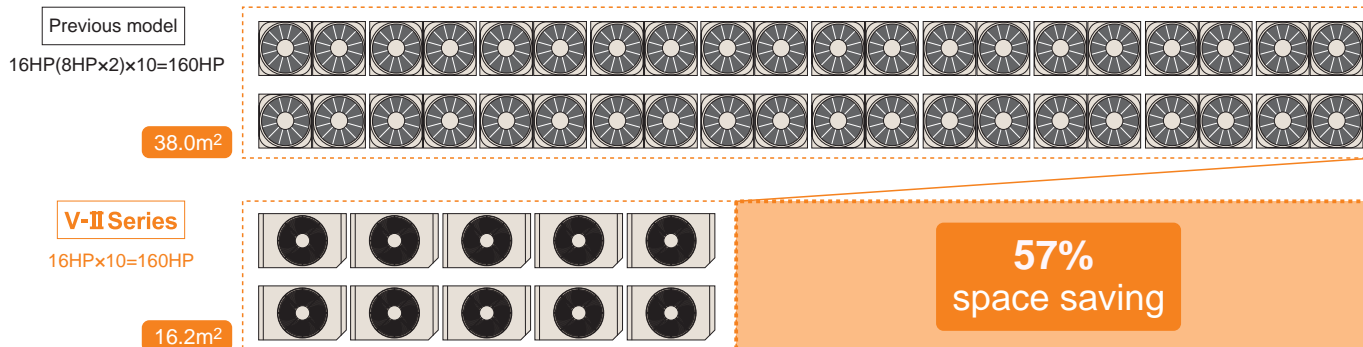
■ Wide operating range

Installation in extreme temperature conditions is possible due to an increase in operational range.

Cooling : -15°C~46°C
Heating : -20°C~21°C

(°C)

Cooling
50
46°C
40
30
Heating
20
21°C
10
*1
0
-15°C area Operation possible in cooling.
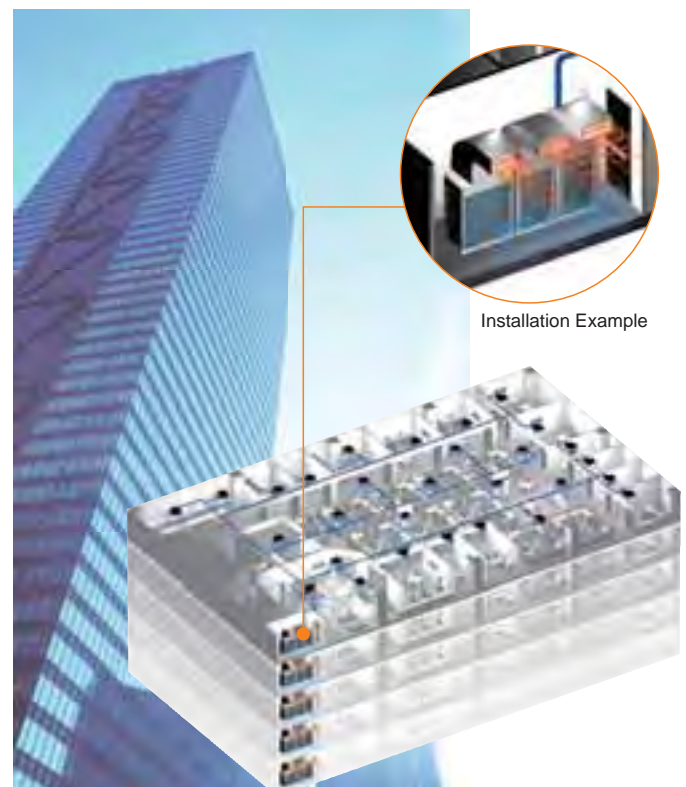-20°C area Operation possible in heating.
-10
-15°C
-20
-20°C
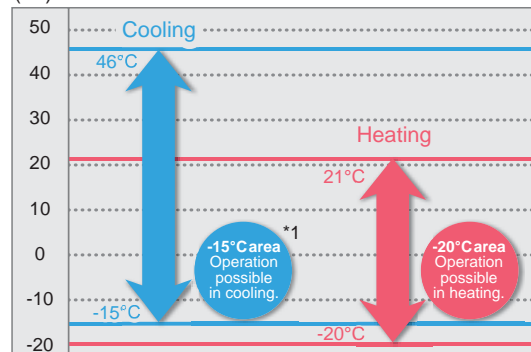
*1 Note : When a multiple outdoor unit connection is used, operating range is from -5°C to 46°C in cooling.

■ Various combinations

Various combination from 8HP to 48HP with 2HP increments. 11 types, 49 models of indoor units can be selected ranging from 2.2kW to 25kW in capacity. A maximum of 150% indoor unit connectable capacity.

Connectable indoor unit capacity
Ratio up to 150 %

Connectable indoor unit number
up to 48

Wide variation of indoor units
11 types, 49 models
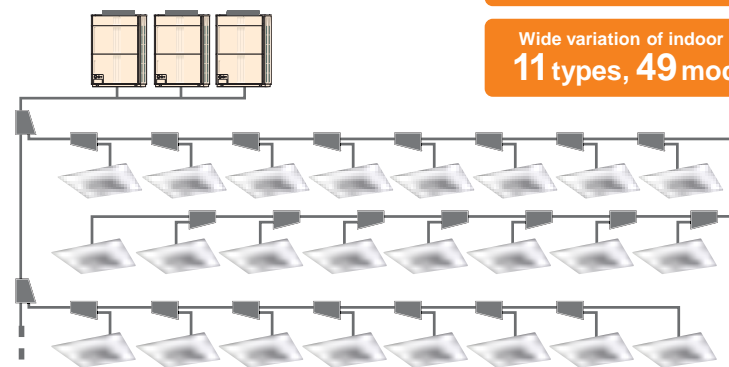
Note : when indoor unit connected capacity is greater than 100%, individual indoor units will operate at a slightly lower capacity when maximum capacity is required.

High Reliability

High reliability considering long-term safety and confidence

Longer lasting units

■ Outdoor unit operation rotation

The compressor starting order is rotated
so that the running time is shared.

Rotation
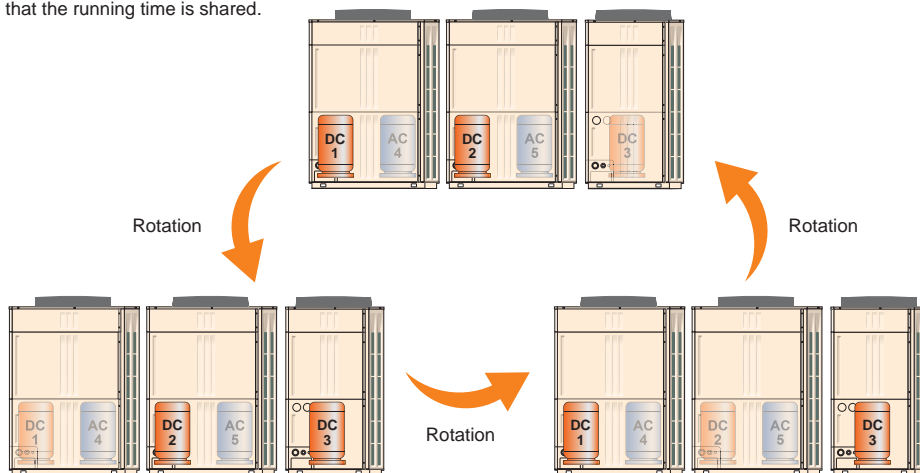
Rotation

Rotation

Note : The inverter compressors start in priority.
        Rotate operation is alternated by the start / stop timing of the compressors

Continuous operation

■ Backup operation

If one of two compressors malfunctions, it will not affect the operation of
the remaining outdoor units.

Outdoor Units

If one of compressor fails, emergency operation
will be performed by the remaining compressors.
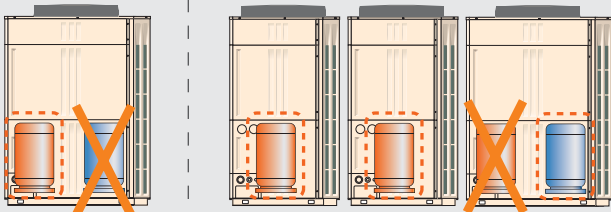
Indoor Units

Indoor unit continuous operation

Each indoor unit is controlled individually on the system
network. This allows all indoor units to continue to operate
unaffected even if an error should occur at any indoor unit's on
the VRF system.

Failure
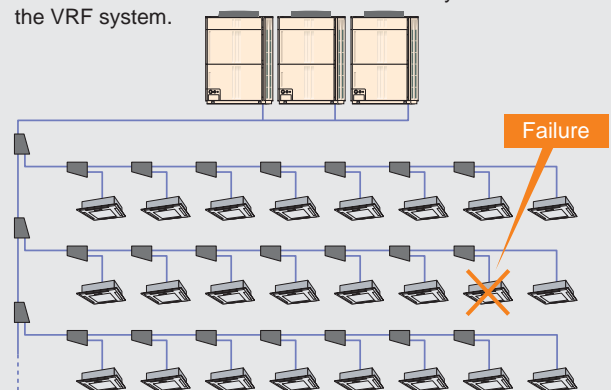
Corrosion treatment

■ Adoption of blue fin heat exchanger

Corrosion resistant of the heat exchanger has been improved by the introduction of blue fin treatment to the outdoor unit's heat exchanger.

Blue fin heat exchanger

Cobalt Blue protection
Standard chromate protection
Aluminium base material
Hydrophilic coating
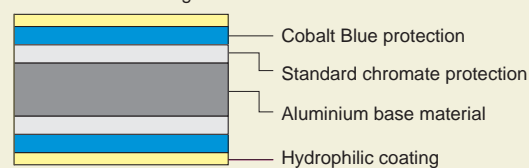
Remote monitoring

■ Remote monitoring over the internet

The Web Monitoring system allows you view system operation at all times over the internet ensuring trouble free operation.

Monitoring Side

VRF System Side

Internet
or
Public Telephone Line

Outdoor unit

Transmission line

Web Monitoring Tool

USB adaptor
(Field supplied)

Indoor unit
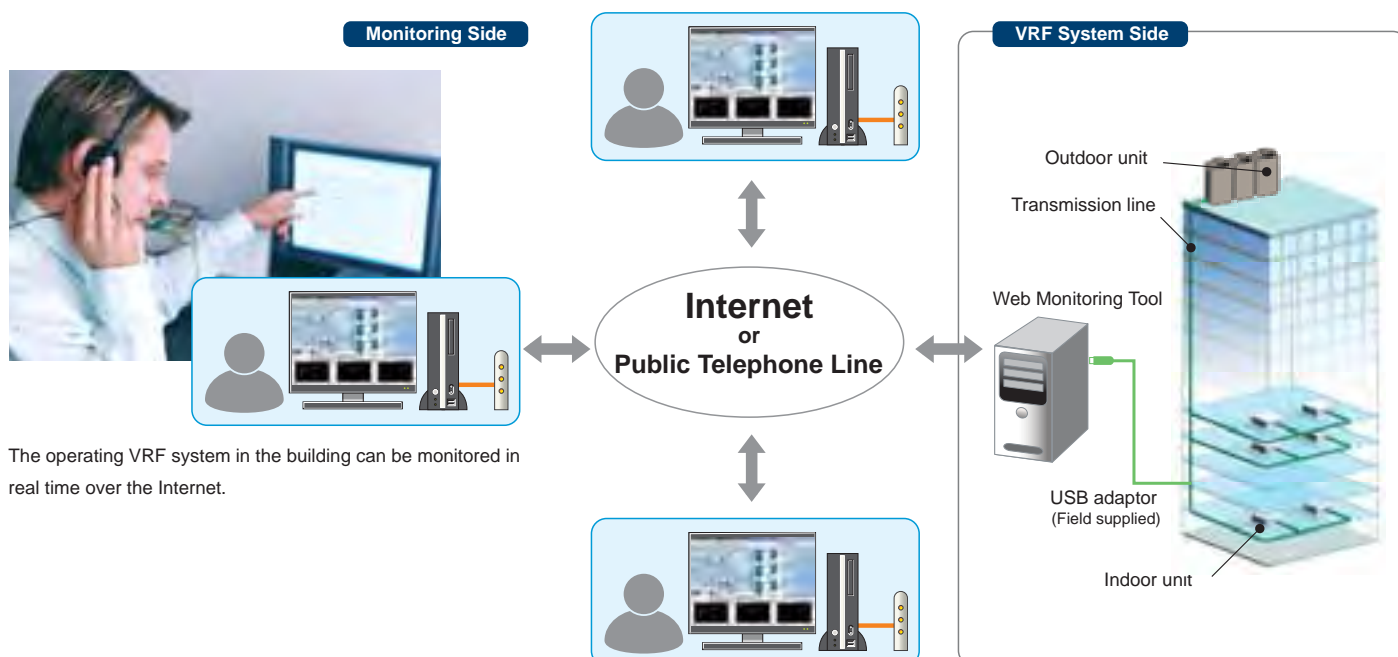
The operating VRF system in the building can be monitored in real time over the Internet.

Easy Installation

From transportation of the product to address setting for commissioning, significant improvements have been made which reduce the cost of installation.

Easily transported

■ Light weight

20% weight reduction
(Than Previous model)

Note: In the case of 14HP

■ Easily craned into position using lifting belt hooks

Design of outdoor unit allows for lifting straps to be used
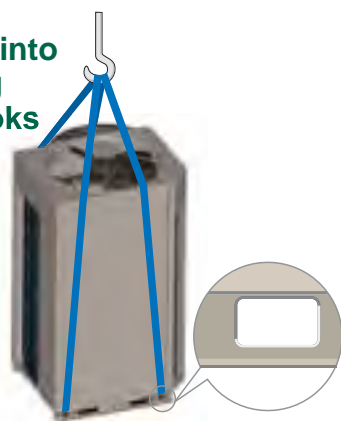
■ Can be transported in a small elevator

■ Transporting by forklift
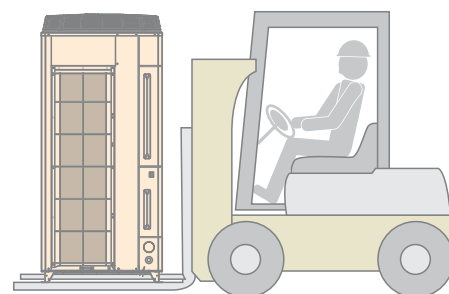
Transport with forklift is possible.

Simple wiring & piping work

■ Simple signal line connection

Installation is made easier as the communications wiring can be connected continuously to any component.

Up to maximum length 3,600m

V-II Series
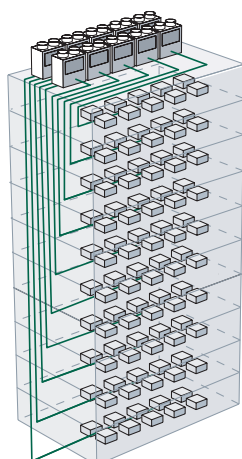
Other wiring method → Simple wiring method
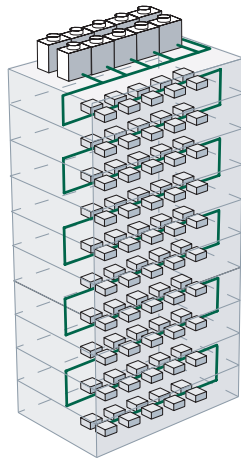
Note: In a multiple refrigerant system installation,
Automatic addressing sequence cannot be initiated

■ Easy piping connection

The need for a oil equalization pipe as required on the previous model has been removed. The installation costs have been reduced by employing a Simple 2 pipe connection
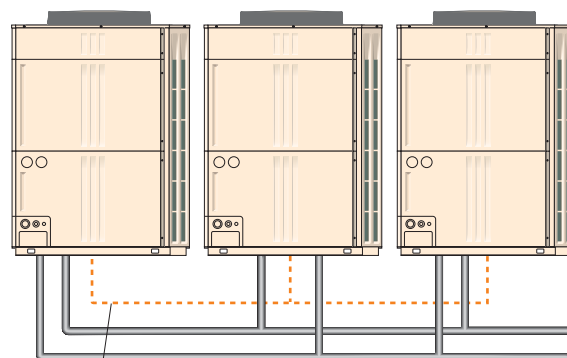
Eliminating oil equalization pipe

Easy setting operation

■ Automatic address setting

The address of each indoor unit can be automatically set by button switch of outdoor unit.

Press the pushbutton switch of outdoor unit.

Automatic address setting is performed at outdoor unit

Addresses are automatically distributed from outdoor unit.

| 3 | 8 | 1 | 0 |

| 2 | 4 | 5 | 6 |

Manual address setting from indoor unit and remote controller is also possible.
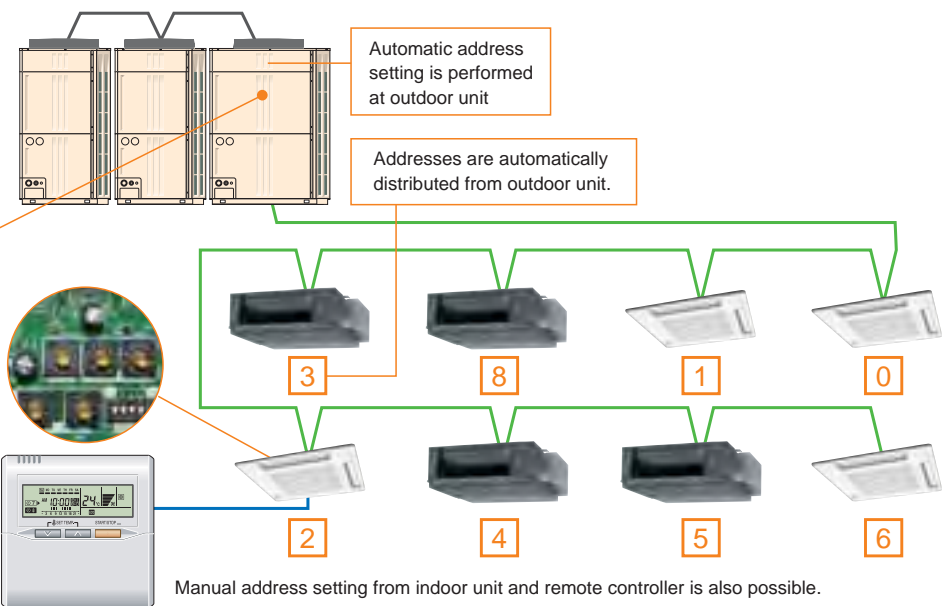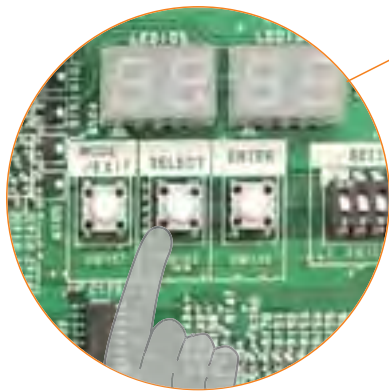
Easy maintenance

■ Easy access

By adopting a L-Shape front panel that can be removed, the work space for installation and service has been significantly expanded by this new design. For multiple installations, work is performed easily and efficiently even in a narrow space.

Expansion of work space
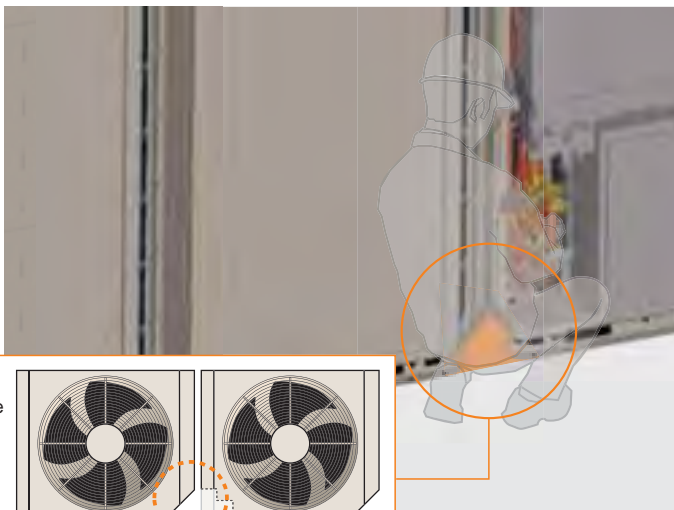
■ Four way piping connection

Piping and wiring are available to the front, left and right, and bottom.

Four way connection
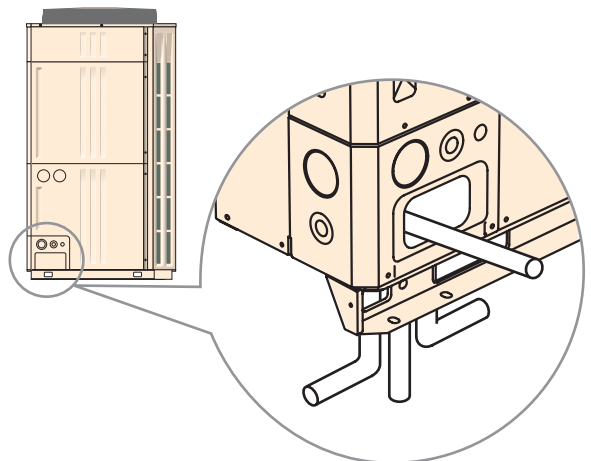
Comfort and Convenience

Low noise, easy operational settings, and comfortable temperature adjustment allows for V-II systems to be used in building air conditioning applications.

Quiet operation

■ Low noise mode

Two low noise modes can be selected automatically by quiet priority setting and capacity priority setting depending on the usage environment and outside temperature load.

Quiet priority setting

Air conditioning load factor
Heat load
Capacity 100% — 0
down
58dB Operating sound — 0
Quiet priority low noise mode
(time)

Capacity priority setting

Heat load
Capacity 100% — 0
Alternated automatically
58dB — 0
Reset automatically
Capacity priority low noise mode
(time)
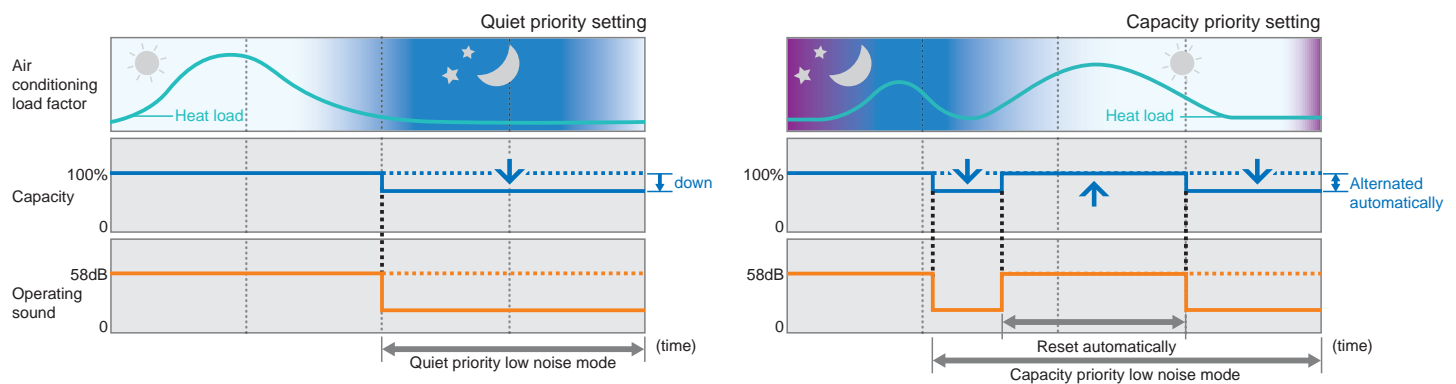
■ Low noise design

Compressor noise has been significantly reduced by shielding the compressor compartment.

Compressor compartment
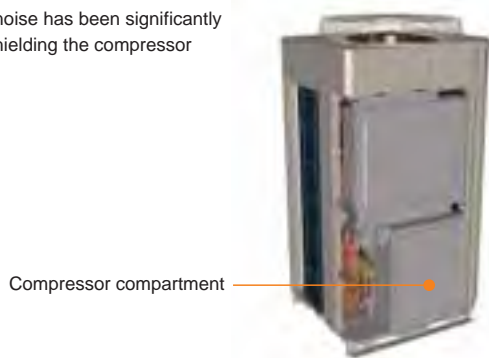
■ Indoor unit

Low noise indoor unit lineup

Compact Duct

Compact Cassette

Low Static Pressure Duct

Compact Wall Mounted

Auto changeover function

■ Selectable auto changeover function

Auto changeover setting allows for the product to easily switch between Cooling and heating modes regardless of the operation mode of other indoor units. This can be done via specific indoor unit remote controller and/or by an external input control. This ensures comfortable operation all year round.

Command for operational mode switching is controlled by one of the following options.

1 selected from the following:

1 Various remote controllers connected to indoor unit

2 External input terminal of outdoor unit

3 System controller

Switching to cooling and heating mode by specific remote controller in the main room, etc.
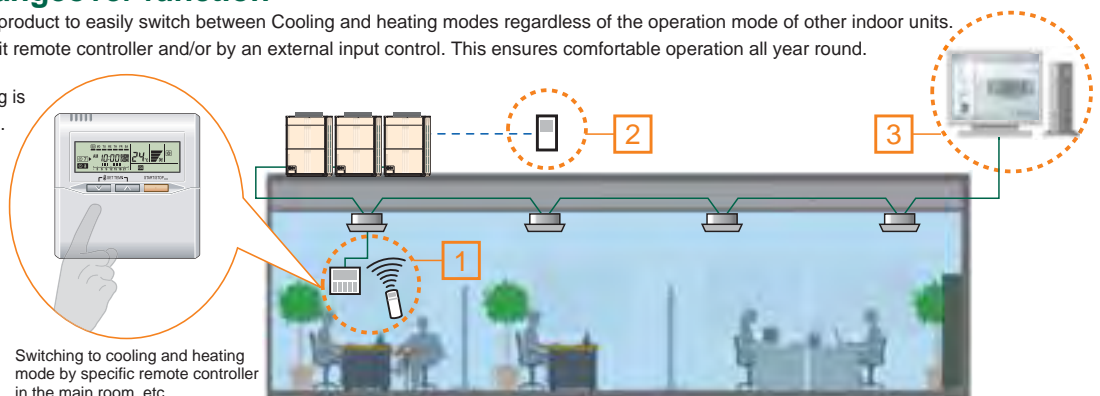
Comfortable, convenient control

■ Precision refrigerant flow control

Precision and Smooth refrigerant flow control is achieved by using a DC Inverter control in conjunction with individual indoor unit electronic expansion valve control.

This allows for a high precision comfortable temperature control of ±0.5°C.

Thermal change of the room
*Simulation in heating operation.

High
Set temp.
Hot
Hot
Cold
Low

±0.5°C

Reach the set temperature quickly

Comfortable operation is achieved due to a small variation of room temperature
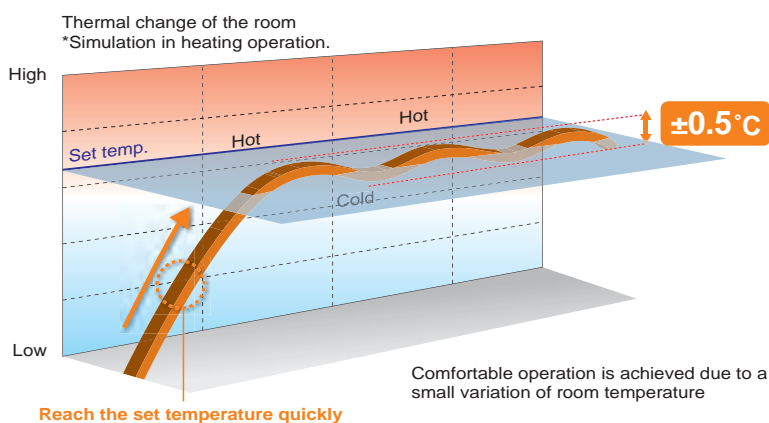
■ Individual Air Conditioning Control

The desired temperature conditions of each room are met due to the Individual thermostat control of each indoor unit.

Room A 24°C	Room B 18°C
Room C 27°C	Room D OFF	Room E 23°C
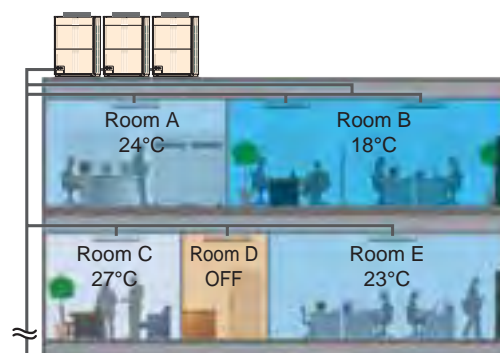
■ Simple central management function

7.5 inch large LCD
Touch Panel Controller
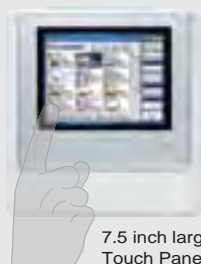
Simple central control operation .... Simple operation by icon display and color touch screen

Yearly schedule function .... Daily starting & stopping and temperature setting are managed.

Clock setting function .... The clock of each individual controller is periodically corrected.

Schedule screen

Non-stop oil recovery operation

A comfortable room condition is maintained during oil recovery mode because the product continues to operate without stopping the cooling or heating operation.

Previous model

V-II Series
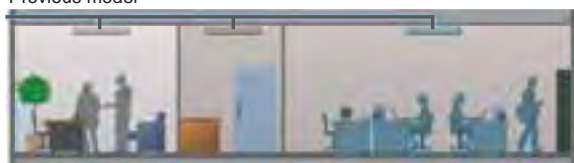
(Heating operation)

Operation stopped at oil recovery

ON
OFF
Time

Non-stop oil recovery operation

ON
Time
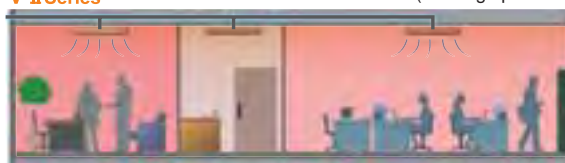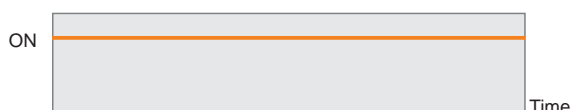
Easy Service & Maintenance

Designed for Quick Service response,
Easy maintenance and Troubleshooting

Design for easy service and maintenance

■ **Inspection and replacement of main parts is easier due to innovative construction and an LED operational display.**

Consolidated electrical components make maintenance easy

Easy-to-read 7-segment LED display which explains operational and trouble status

Movable PCB panel that allows for easier maintenance work behind the PCB

Maintenance of electrical components, valves, and compressor parts from the front is possible.

Split front panel allows for maintenance from top or bottom of the outdoor unit

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■ **Error status can be checked easily via the indoor unit wired controller**

An error code is displayed on a liquid crystal screen.

Wired Remote Controller
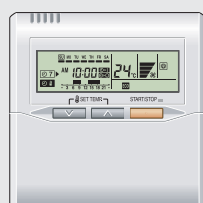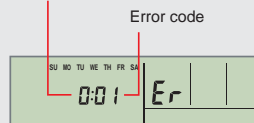
Faulty unit number
(Remote controller address)

Error code

Simple Remote Controller

Faulty unit number
(Remote controller address)

Error code
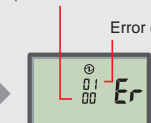
Emergency stop function

■ Emergency stop

Emergency alarm can be received by indoor, outdoor units or Touch Panel Controller when they received it, all units will be stopped.

Note:
In case of received Emergency alarm by Indoor/outdoor unit: All units connected within same refrigerant system will be stopped.
Touch Panel Controller: all unit connected within VRF network system with Touch Panel Controller will be stopped.

Touch Panel Controller

Emergency stop function

Emergency stop function

Emergency stop function
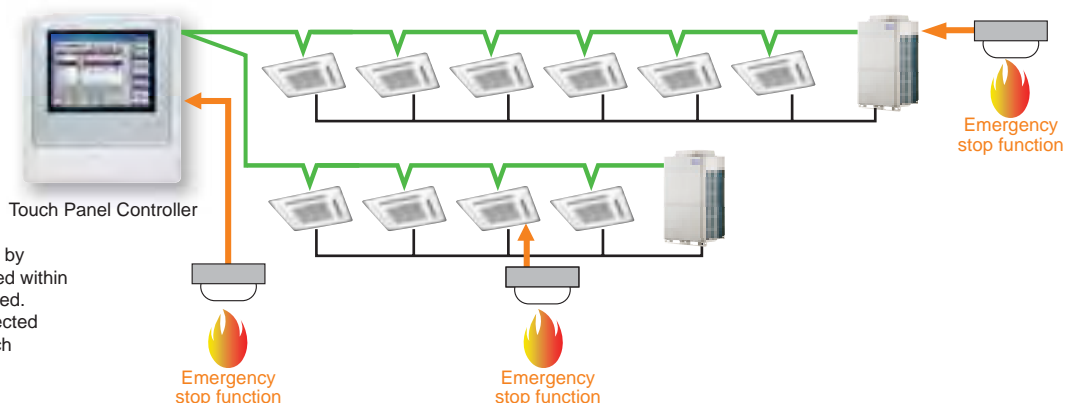
Continuous operation during maintenance

■ Non-stop operation

When servicing a specific indoor unit, maintenance can be performed even without turning off the other indoor units.

ON   OFF   ON   ON   ON   ON
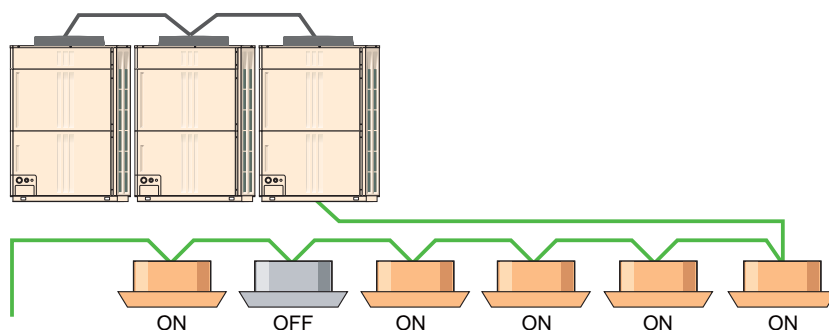
Prompt trouble diagnosis

■ Trouble diagnosis by Service Tool

Suitable maintenance is possible by analysis of the operation data.
Connection anywhere in the VRF network is easy.

Service Tool [Software]

Outdoor unit

Transmission line

Intdoor unit

USB adaptor
(Field supplied)

Easy to carry out with USB adaptor
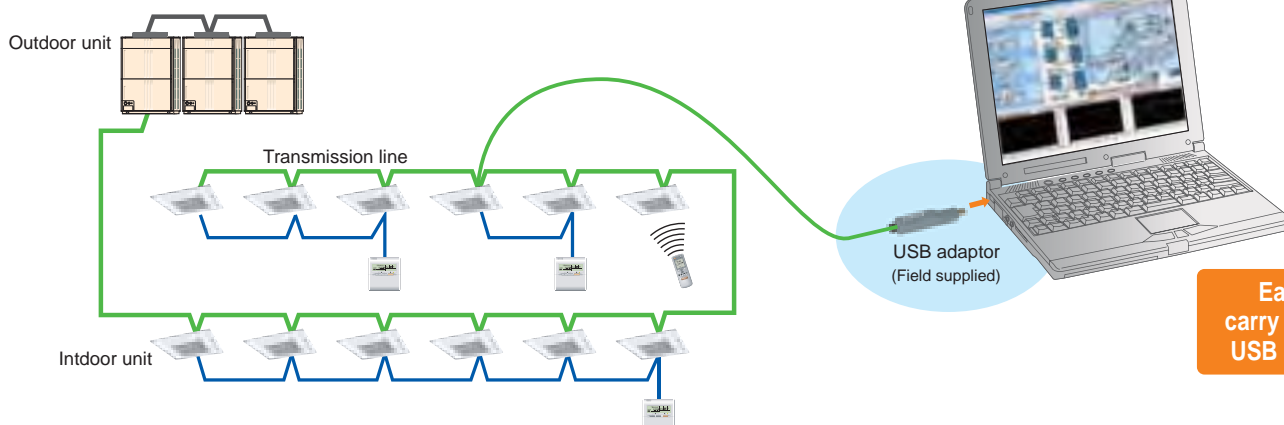
Outdoor Units Lineup

- Extensive line up from 8HP to 48HP in 2HP increments
- Space saving combination and Energy efficiecy combination available, which can be selected to suit any air conditioning needs
- Combinations other than the followings are not recommended.

■ Space saving combination

22.4kW (8HP) AJ∗A72LALH UNIT : AJ∗A72LALH	**28.0kW (10HP)** AJ∗A90LALH UNIT : AJ∗A90LALH	**33.5kW (12HP)** AJ∗108LALH UNIT : AJ∗108LALH
40.0kW (14HP) AJ∗126LALH UNIT : AJ∗126LALH	**45.0kW (16HP)** AJ∗144LALH UNIT : AJ∗144LALH	**50.4kW (18HP)** AJ∗162LALH UNIT : AJ∗A90/A72LALH
55.9kW (20HP) AJ∗180LALH UNIT : AJ∗108/A72LALH	**61.5kW (22HP)** AJ∗198LALH UNIT : AJ∗108/A90LALH	**67.0kW (24HP)** AJ∗216LALH UNIT : AJ∗108/108LALH
73.5kW (26HP) AJ∗234LALH UNIT : AJ∗126/108LALH	**78.5kW (28HP)** AJ∗252LALH UNIT : AJ∗144/108LALH	**85.0kW (30HP)** AJ∗270LALH UNIT : AJ∗144/126LALH
90.0kW (32HP) AJ∗288LALH UNIT : AJ∗144/144LALH	**95.0kW (34HP)** AJ∗306LALH UNIT : AJ∗108/108/A90LALH	**100.5kW (36HP)** AJ∗324LALH UNIT : AJ∗108/108/108LALH
107.0kW (38HP) AJ∗342LALH UNIT : AJ∗126/108/108LALH	**112.0kW (40HP)** AJ∗360LALH UNIT : AJ∗144/108/108LALH	**118.5kW (42HP)** AJ∗378LALH UNIT : AJ∗144/126/108LALH
123.5kW (44HP) AJ∗396LALH UNIT : AJ∗144/144/108LALH	**130.0kW (46HP)** AJ∗414LALH UNIT : AJ∗144/144/126LALH	**135.0kW (48HP)** AJ∗432LALH UNIT : AJ∗144/144/144LALH
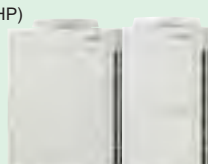
AJ∗ : AJY(FUJITSU), AJH(GENERAL)

■ Energy efficiency combination

44.8kW (16HP) AJ*144LALHH UNIT : AJ*A72/A72LALH	**62.4kW (22HP)** AJ*198LALHH UNIT : AJ*126/A72LALH	**67.2kW (24HP)** AJ*216LALHH UNIT : AJ*A72/A72/A72LALH
72.8kW (26HP) AJ*234LALHH UNIT : AJ*A90/A72/A72LALH	**78.3kW (28HP)** AJ*252LALHH UNIT : AJ*108/A72/A72LALH	**84.8kW (30HP)** AJ*270LALHH UNIT : AJ*126/A72/A72LALH
89.8kW (32HP) AJ*288LALHH UNIT : AJ*108/108/A72LALH	**95.9kW (34HP)** AJ*306LALHH UNIT : AJ*126/108/A72LALH	**102.4kW (36HP)** AJ*324LALHH UNIT : AJ*126/126/A72LALH
113.5kW (40HP) AJ*360LALHH UNIT : AJ*126/126/A108LALH	**120.0kW (42HP)** AJ*378LALHH UNIT : AJ*126/126/126LALH	**125.0kW (44HP)** AJ*396LALHH UNIT : AJ*144/126/126LALH

Innovative Technology
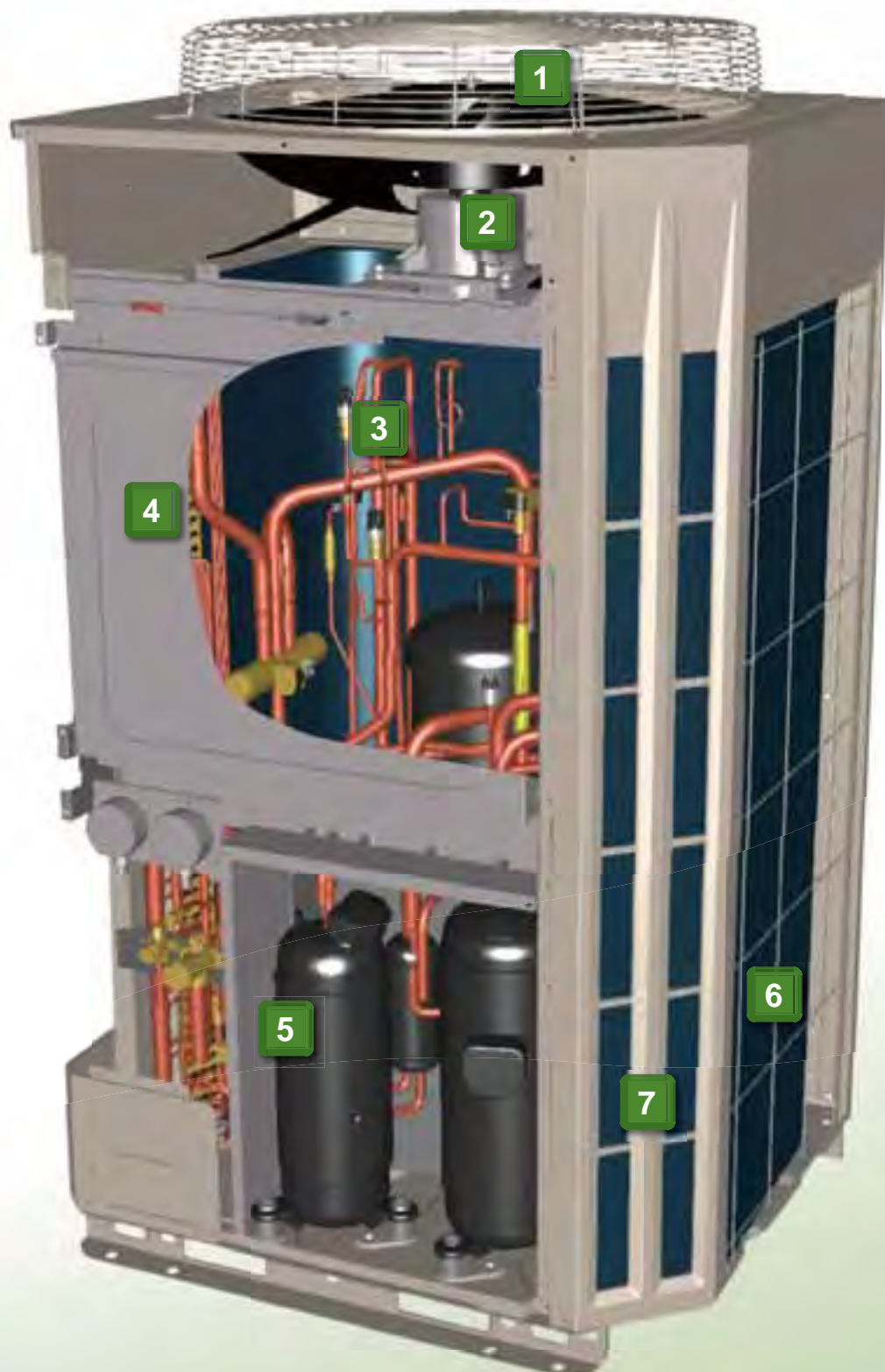
1 **Powerful large propeller fan**

By using CFD*[1] technology, A newly designed fan achieves high performance and low noise operation.

2 **DC fan motor**

Airflow rate-Input power

Input power(W)

Approx. 25% reduction

Previous model 2 x AC motors

V-II Series DC motor

0

0   Airflow rate(m³/h)

High Performance and High Efficiency has been realized by using a small DC fan motor which has reduced power consumption by 25% when compared with the previous model.

3 **Subcool heat exchanger**

From outdoor unit main heat exchanger

To indoor units

Subcool heat exchanger

EEV2
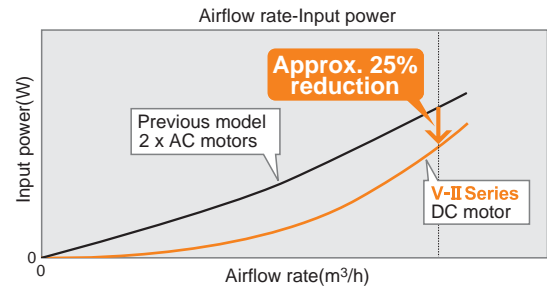
To accumulator
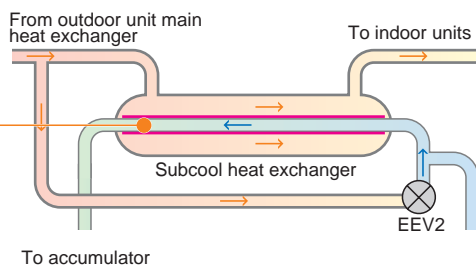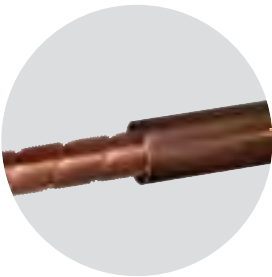
High Heat Exchange efficiency is achieved by using a internal projection shape double pipe construction.

4 **Sine wave DC inverter control**

A DC Sine wave inverter control has been used which allows for a high efficiency and high energy saving operation. Inverter losses are significantly reduced by newly adopted IPM and original motor control.

5 **DC twin rotary compressor**

A high performance, low noise, large capacity DC twin rotary compressor is used. Each part is optimized with intake and compression efficiency increased to the maximum extent. In addition, high performance and high quality is maintained by using a double accumulator.

6 **Heat exchanger**
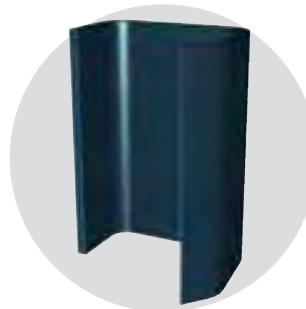
Reduced compact size and energy saving has been realised by utilizing a ø7mm high density piping design with a unique enclosing shape. This new coil design allows for a increase of approximately 1.7 times heat exchanger volume when compared with the previous model.

7 **Front intake port (omnidirectional intake)**

AIR INTAKE
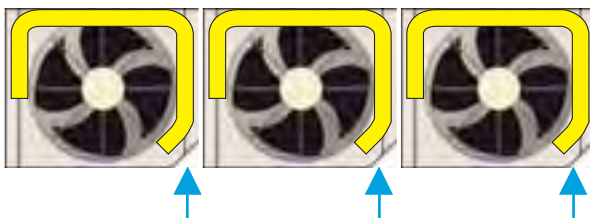
Front intake port is designed to prevent decreasing airflow when multiple outdoor units are installed.

*1: CFD = Computational Fluid Dynamics

Specifications

Space saving combination

Rating Capacity range		HP	8	10	12	14	16	18	20	22	24
Set Model			AJ*A72LALH	AJ*A90LALH	AJ*108LALH	AJ*126LALH	AJ*144LALH	AJ*162LALH	AJ*180LALH	AJ*198LALH	AJ*216LALH
Unit 1 Unit 2 Unit 3			AJ*A72LALH	AJ*A90LALH	AJ*108LALH	AJ*126LALH	AJ*144LALH	AJ*A90LALH AJ*A72LALH	AJ*108LALH AJ*A72LALH	AJ*108LALH AJ*A90LALH	AJ*108LALH AJ*108LALH
Maximum Connectable Indoor Unit*1			15	16	17	21	24	32	32	32	35
Indoor unit connectable capacity	Cooling	kW	11.2-33.6	14.0-42.0	16.8-50.2	20.0-60.0	22.4-67.2	25.2-75.6	28.0-83.9	30.8-92.3	33.5-100.5
Power source											
Capacity	Cooling	kW	22.4	28.0	33.5	40.0	45.0	50.4	55.9	61.5	67.0
	Heating		25.0	31.5	37.5	45.0	50.0	56.5	62.5	69.0	75.0
Input power	Cooling	kW	5.51	7.73	9.62	11.53	14.17	13.24	15.13	17.35	19.24
	Heating		5.72	7.83	9.28	11.45	12.60	13.55	15.00	17.11	18.56
EER	Cooling	W/W	4.07	3.62	3.48	3.47	3.18	3.81	3.69	3.54	3.48
COP	Heating		4.37	4.02	4.04	3.93	3.97	4.17	4.17	4.03	4.04
Airflow rate	High	m³/h	11,100	11,100	11,100	13,000	13,000	11,100 x 2	11,100 x 2	11,100 x 2	11,100 x 2
Sound pressure level*2	Cooling	dB (A)	56	58	58	60	61	60	60	61	61
	Heating		58	59	60	61	61	62	62	63	63
Maximum external static pressure		Pa	80	80	80	80	80	80	80	80	80
Compressor motor output		kW	3.9	3.9	3.9 + 4.5	3.9 + 4.5	3.9 + 4.5	3.9 x 2	3.9 x 2 + 4.5	3.9 x 2 + 4.5	3.9 x 2 + 4.5 x 2
Heat exchanger fin			Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin
Dimensions	Height	mm	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690
	Width	mm	930	930	930	1,240	1,240	930 x2	930 x 2	930 x 2	930 x 2
	Depth	mm	765	765	765	765	765	765	765	765	765
Weight		kg	220	220	275	296	296	220+220	275+220	275+220	275+275
Refrigerant charge		kg	11.2	11.2	11.8	11.8	11.8	11.2 x 2	11.8 + 11.2	11.8 + 11.2	11.8 x 2
Connection pipe diameter	Liquid	mm	12.70	12.70	12.70	12.70	12.70	15.88	15.88	15.88	15.88
	Gas		22.20	22.20	28.58	28.58	28.58	28.58	28.58	34.92	34.92
Operation temperature range	Cooling	°C	-15 to 46	-15 to 46	-15 to 46	-15 to 46	-15 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46
	Heating		-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21

Energy efficiency combination

Rating Capacity range		HP	16	22	24	26	28	30
Set Model			AJ*144LALHH	AJ*198LALHH	AJ*216LALHH	AJ*234LALHH	AJ*252LALHH	AJ*270LALHH
Unit 1 Unit 2 Unit 3			AJ*A72LALH AJ*A72LALH	AJ*126LALH AJ*A72LALH	AJ*A72LALH AJ*A72LALH AJ*A72LALH	AJ*A90LALH AJ*A72LALH AJ*A72LALH	AJ*108LALH AJ*A72LALH AJ*A72LALH	AJ*126LALH AJ*A72LALH AJ*A72LALH
Maximum Connectable Indoor Unit*1			30	33	36	39	42	45
Indoor unit connectable capacity	Cooling	kW	22.4-67.2	31.2-93.6	33.6-100.8	36.4-109.2	39.2-117.4	42.4-127.2
Power source								
Capacity	Cooling	kW	44.8	62.4	67.2	72.8	78.3	84.8
	Heating		50.0	70.0	75.0	81.5	87.5	95.0
Input power	Cooling	kW	11.02	17.04	16.53	18.75	20.64	22.55
	Heating		11.44	17.17	17.16	19.27	20.72	22.89
EER	Cooling	W/W	4.07	3.66	4.07	3.88	3.79	3.76
COP	Heating		4.37	4.08	4.37	4.23	4.22	4.15
Airflow rate	High	m³/h	11,100 x 2	13,000 + 11,100	11,100 x 3	11,100 x 3	11,100 x 3	13,000+11,000 x 2
Sound pressure level*2	Cooling	dB (A)	59	61	61	62	62	63
	Heating		59	62	61	62	63	63
Maximum external static pressure		Pa	80	80	80	80	80	80
Compressor motor output		kW	3.9 x 2	3.9 x 2+4.5	3.9 x 3	3.9 x 3	3.9 x 3+4.5	3.9 x 3+4.5
Heat exchanger fin			Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin
Dimensions	Height	mm	1,690	1,690	1,690	1,690	1,690	1,690
	Width	mm	930 x 2	930+1,240	930 x 3	930 x 3	930 x 3	930 x 2+1,240
	Depth	mm	765	765	765	765	765	765
Weight		kg	220+220	296+220	220+220+220	220+220+220	275+220+220	296+220+220
Refrigerant charge		kg	11.2 x 2	11.8 +11.2	11.2 x 3	11.2 x 3	11.8 + 11.2 x 2	11.8+11.2 x 2
Connection pipe diameter	Liquid	mm	12.70	15.88	15.88	15.88	15.88	19.05
	Gas		28.58	34.92	34.92	34.92	34.92	34.92
Operation temperature range	Cooling	°C	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46
	Heating		-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21

AJ* : AJY(FUJITSU), AJH(GENERAL)

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.
Heating : Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.
When cooling operation will be conducted at outdoor air temperature below -5°C,
the outdoor unit must be installed in a position that is higher than or equal to those of indoor units.

*1 Minimum connectable indoor unit number is 2.
However ARXC72 and ARXC90 can be used signal connection.
*2 The noise value is the value when measured in an anechoic room.
When measured in the actual installed state, surrounding noise and reflections are received and the measured value is usually larger than the indicated value.

26	28	30	32	34	36	38	40	42	44	46	48
AJ*234LALH	AJ*252LALH	AJ*270LALH	AJ*288LALH	AJ*306LALH	AJ*324LALH	AJ*342LALH	AJ*360LALH	AJ*378LALH	AJ*396LALH	AJ*414LALH	AJ*432LALH
AJ*126LALH AJ*108LALH	AJ*144LALH AJ*108LALH	AJ*144LALH AJ*126LALH	AJ*144LALH AJ*144LALH	AJ*108LALH AJ*108LALH AJ*A90LALH	AJ*108LALH AJ*108LALH AJ*108LALH	AJ*126LALH AJ*108LALH AJ*108LALH	AJ*144LALH AJ*108LALH AJ*108LALH	AJ*144LALH AJ*126LALH AJ*108LALH	AJ*144LALH AJ*144LALH AJ*108LALH	AJ*144LALH AJ*144LALH AJ*126LALH	AJ*144LALH AJ*144LALH AJ*144LALH
39	42	45	48	48	48	48	48	48	48	48	48
36.8-110.3	39.3-117.8	42.5-127.5	45.0-135.0	47.5-142.5	50.3-150.8	53.5-160.5	56.0-168.0	59.3-177.8	61.8-185.3	65.0-195.0	67.5-202.5
3-phase 4 wire, 400 V, 50Hz											
73.5	78.5	85.0	90.0	95.0	100.5	107.0	112.0	118.5	123.5	130.0	135.0
82.5	87.5	95.0	100.0	106.5	112.5	120.0	125.0	132.5	137.5	145.0	150.0
21.15	23.79	25.70	28.34	26.97	28.86	30.77	33.41	35.32	37.96	39.87	42.51
20.73	21.88	24.05	25.20	26.39	27.84	30.01	31.16	33.33	34.48	36.65	37.80
3.48	3.30	3.31	3.18	3.52	3.48	3.48	3.35	3.36	3.25	3.26	3.18
3.98	4.00	3.95	3.97	4.04	4.04	4.00	4.01	3.98	3.99	3.96	3.97
13,000+11,100	13,000+11,100	13,000 x 2	13,000 x 2	11,100 x 3	11,100 x 3	13,000+11,100x2	13,000+11,100x2	13,000x2+11,100	13,000x2+11,100	13,000 x 3	13,000 x 3
62	63	64	64	63	63	64	64	65	65	65	66
64	64	64	64	64	65	65	65	65	65	66	66
80	80	80	80	80	80	80	80	80	80	80	80
3.9 x 2 + 4.5 x 2	3.9 x 2 + 4.5 x 2	3.9 x 2 + 4.5 x 2	3.9 x 2 + 4.5 x 2	3.9 x 3 + 4.5 x 2	3.9 x 3 + 4.5 x 3	3.9 x 3 + 4.5 x 3	3.9 x 3 + 4.5 x 3	3.9 x 3 + 4.5 x 3	3.9 x 3 + 4.5 x 3	3.9 x 3 + 4.5 x 3	3.9 x 3 + 4.5 x 3
Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin
1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690
930+1,240	930+1,240	1,240 x 2	1,240 x 2	930 x 3	930 x 3	930 x 2 + 1,240	930 x 2 + 1,240	930 + 1,240 x 2	930 + 1,240 x 2	1,240 x 3	1,240 x 3
765	765	765	765	765	765	765	765	765	765	765	765
296+275	296+275	296+296	296+296	275+275+220	275+275+275	296+275+275	296+275+275	296+296+275	296+296+275	296+296+296	296+296+296
11.8 x 2	11.8 x 2	11.8 x 2	11.8 x 2	11.8 x 2 + 11.2	11.8 x 3	11.8 x 3	11.8 x 3	11.8 x 3	11.8 x 3	11.8 x 3	11.8 x 3
15.88	15.88	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05
34.92	34.92	34.92	34.92	34.92	41.27	41.27	41.27	41.27	41.27	41.27	41.27
-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46
-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21

32	34	36	40	42	44
AJ*288LALHH	AJ*306LALHH	AJ*324LALHH	AJ*360LALHH	AJ*378LALHH	AJ*396LALHH
AJ*108LALH AJ*108LALH AJ*A72LALH	AJ*126LALH AJ*108LALH AJ*A72LALH	AJ*126LALH AJ*126LALH AJ*A72LALH	AJ*126LALH AJ*126LALH AJ*A108LALH	AJ*126LALH AJ*126LALH AJ*126LALH	AJ*144LALH AJ*126LALH AJ*126LALH
48	48	48	48	48	48
44.7-134.1	48.0-143.8	51.2-153.6	56.8-170.2	60.0-180.0	62.5-187.5
3-phase 4 wire, 400 V, 50Hz					
89.4	95.9	102.4	113.5	120.0	125.0
100.0	107.5	115.0	127.5	135.0	140.0
24.75	26.66	28.57	32.68	34.59	37.23
24.28	26.45	28.62	32.18	34.35	35.50
3.61	3.60	3.58	3.47	3.47	3.36
4.12	4.06	4.02	3.96	3.93	3.94
11,100 x 3	13,000+11,100 x 2	13,000 x 2+11,100	13,000 x 2+11,100	13,000 x 3	13,000 x 3
62	63	64	64	65	65
64	64	65	65	66	66
80	80	80	80	80	80
3.9 x 3+4.5 x 2	3.9 x 3+4.5 x 2	3.9 x 3+4.5 x 2	3.9 x 3+4.5 x 3	3.9 x 3+4.5 x 3	3.9 x 3+4.5 x 3
Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin
1,690	1,690	1,690	1,690	1,690	1,690
930 x 3	930 x 2+1,240	930+1,240 x 2	930+1,240 x 2	1,240 x 3	1,240 x 3
765	765	765	765	765	765
275+275+220	296+275+220	296+296+220	296+296+275	296+296+296	296+296+296
11.8 x 2+11.2	11.8 x 2+11.2	11.8 x 2+11.2	11.8 x 3	11.8 x 3	11.8 x 3
19.05	19.05	19.05	19.05	19.05	19.05
34.92	34.92	41.27	41.27	41.27	41.27
-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46
-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21

Dimensions

8, 10, 12HP

AJ*A72LALH
AJ*A90LALH
AJ*108LALH

690 (Bolt pitch)

8-12×17 (Hole)

80 530 (Bolt pitch)

(Unit : mm)

732 (Bolt pitch)

765

1690

652.5

B

A   C

930

A
Front side knockout position

73

53

ø43.7
Power supply cable port

ø22.2
Transmission cable port

ø22.2
Transmission cable port

95

75

Pipe port

10

100

125

179

B
Left side knockout position

ø61.3431
Power supply cable port

ø43.7
Power supply cable port

ø22.2
Transmission cable port
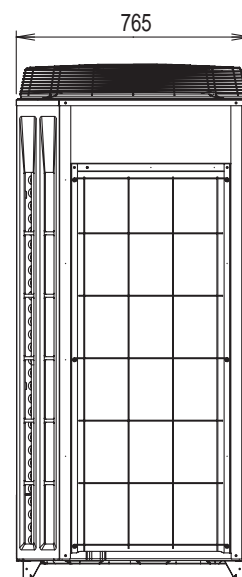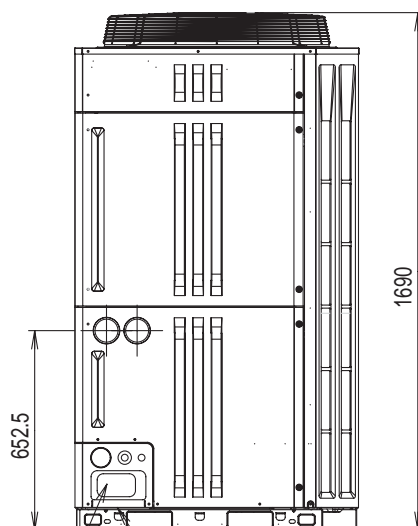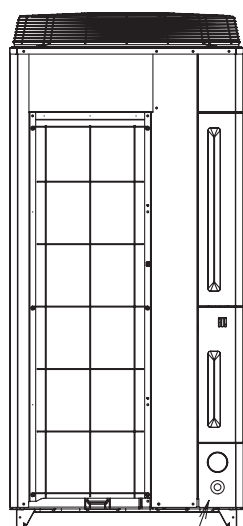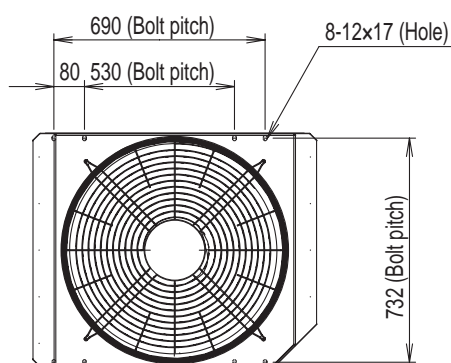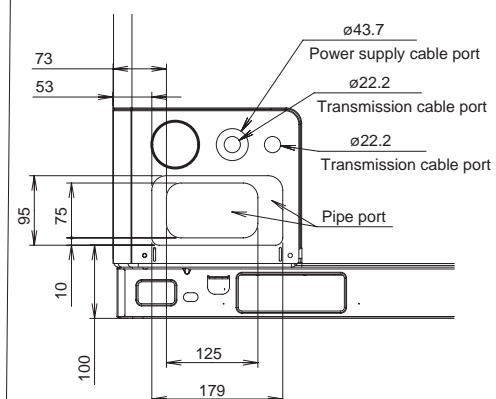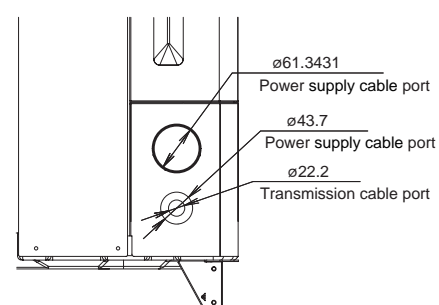
14, 16HP

AJ∗126LALH
AJ∗144LALH

(Unit : mm)

1000 (Bolt pitch)
80
840 (Bolt pitch)
8-12x7 (Hole)
732 (Bolt pitch)

765

1690

1240
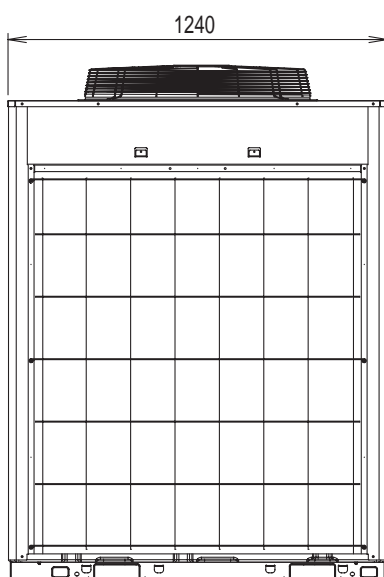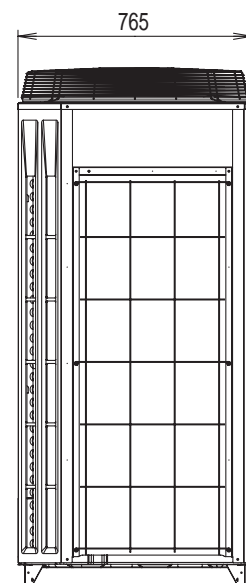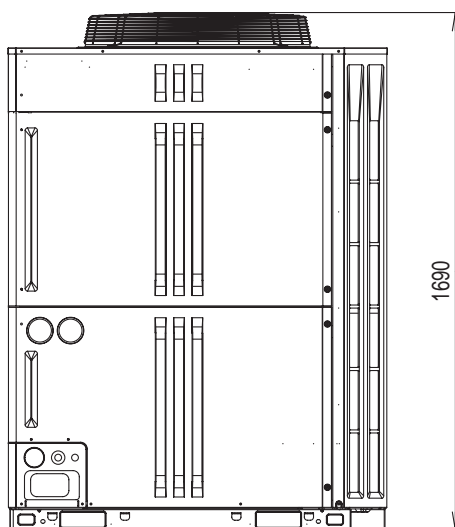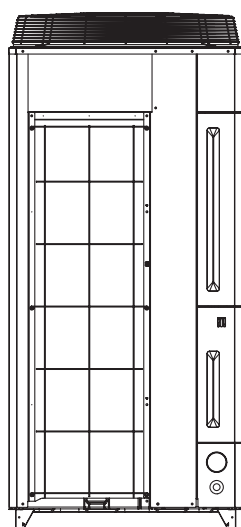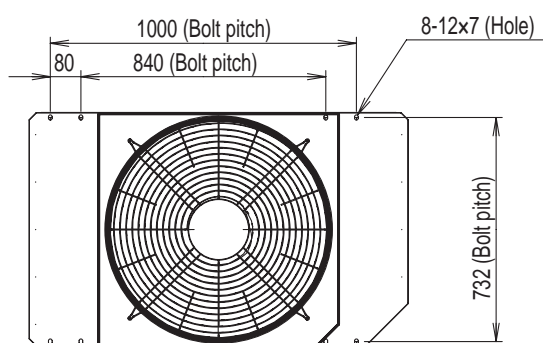
C
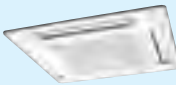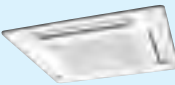
Bottom side knockout position

Top view

Pipe port

80
82
42
190
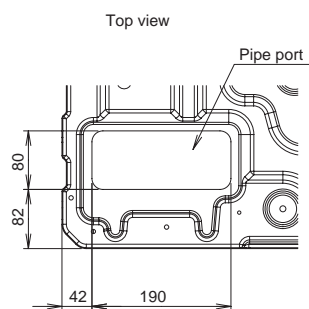
Indoor Unit Lineup

11 Types, 49 Models, Capacity range from 2.2kW to 25.0kW

Comprehensive range of indoor units of variety design and capacity ranges available which can be selected to suit any air conditioning needs.

Rating Capacity Range (kW)	2.2	2.8	3.6	4.5	5.6	7.1
Model code	7	9	12	14	18	24
Compact Cassette P26	AUXB07LALH	AUXB09LALH	AUXB12LALH	AUXB14LALH	AUXB18LALH	AUXB24LALH
Cassette P28					AUXD18LALH	AUXD24LALH
Compact Duct P30	ARXB07LALH	ARXB09LALH	ARXB12LALH	ARXB14LALH	ARXB18LALH	
Low Static Pressure Duct P32						ARXB24LATH
Duct P32						ARXA24LATH
High Static Pressure Duct P34						
Floor / Ceiling P36			AB∗A12LATH	AB∗A14LATH	AB∗A18LATH	AB∗A24LATH
Ceiling P38						
Compact Wall Mounted (EEV internal) P40	AS∗A07LACH	AS∗A09LACH	AS∗A12LACH	AS∗A14LACH		
Compact Wall Mounted (EEV external) P40	AS∗E07LACH	AS∗E09LACH	AS∗E12LACH	AS∗E14LACH		
Wall Mounted P42					AS∗A18LATH	AS∗A24LATH

With this model connection of EV kit is necessary.

The indoor units above cannot be connected to the S or V Series.
AB∗ : ABY(FUJITSU), ABH(GENERAL)   AS∗ : ASY(FUJITSU), ASH(GENERAL)

9.0	11.2	12.5	14.0	18.0	22.4	25.0
30	36	45	54	60	72	90
AUXA30LALH	AUXA36LALH	AUXA45LALH	AUXA54LALH			
ARXB30LATH	ARXB36LATH	ARXB45LATH				
ARXA30LATH	ARXA36LATH	ARXA45LATH				
	ARXC36LATH	ARXC45LATH		ARXC60LATH	ARXC72LATH	ARXC90LATH
AB∗A30LATH	AB∗A36LATH	AB∗A45LATH	AB∗A54LATH			
AS∗A30LATH						

Compact Cassette

Compact size panel design
that fits standard ceiling panel (600x600mm)

Models

AUXB07LALH
AUXB09LALH
AUXB12LALH
AUXB14LALH
AUXB18LALH
AUXB24LALH

2-stage turbo fan

High efficiency design by 2 stage structure

Wind velocity

Fast

Slow

Previous turbo fan

In the case of a conventional fan, the air outlet range was narrow as the airflow moved to the motor side which meant the velocity of air passing through the heat exchanger was uneven.

2-stage turbo fan

A evenly spread air distribution across the heat exchanger is possible due to the new 2 stage turbo fan which produces two separate airflow streams.

1-stage
+
2-stage

Heat exchange efficiency:

20%UP

Quiet quality

Optimization of wing form (laminar wing type) and wing number (7 blades each)

Designed by CFD-analysis (fluid) simulations

Laminar wing

Airflow runs through smoothly along the laminar wing

No airflow separation

Quiet

Quiet

Adoption of laminar wing

Spin direction ← Airflow direction →
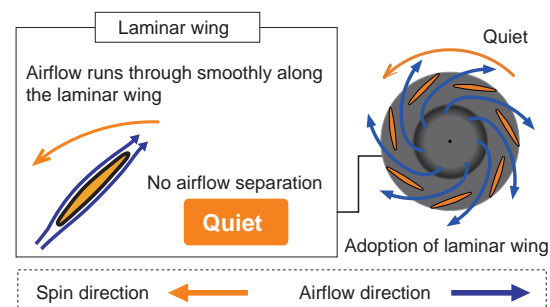
Specifications

Model name			AUXB07LALH	AUXB09LALH	AUXB12LALH	AUXB14LALH	AUXB18LALH	AUXB24LALH
Power source			230V~50Hz					
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6	7.1
	Heating		2.8	3.2	4.1	5.0	6.3	8.0
Input power		W	25	25	29	35	36	84
Airflow rate	High	m³/h	540	550	600	680	710	1,030
	Med		450	450	530	590	580	830
	Low		350	350	390	390	400	450
Sound pressure level	High	dB(A)	34	35	37	38	41	50
	Med		30	30	34	34	35	44
	Low		25	25	27	27	27	30
Dimensions (H x W x D)		mm	245 x 570 x 570					
Weight		kg	15				17	
Connection pipe diameter	Liquid (Flare)	mm	ø6.35				ø9.52	
	Gas (Flare)		ø12.70				ø15.88	
	Drain		ø25 (I.D) ; ø32 (O.D.)					
Grille(option)	Model name		UTG-UF*C-W					
	Dimensions (H x W x D)	mm	50 x 700 x 700					
	Weight	kg	2.6					

F* : FY (FUJITSU) ; FG(GENERAL)
Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 27˚CDB / 19˚CWB, and outdoor temperature of 35˚CDB / 24˚CWB.
Heating : Indoor temperature of 20˚CDB / (15˚CWB), and outdoor temperature of 7˚CDB / 6˚CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.
Voltage : 230 [V].

Easy maintenance

① **Maintenance of fan motor and fan**
Maintenance of the fan motor and fan can be done easily after taking off the panel as the bell mouth of the fan can be removed easily.

A : Fan motor **B : 2-stage turbo fan**
C : Bell-mouth **D : Panel**

② **Long life filter**
: standard equipment

③ **Adaptation of transparent drainage parts**
During installation, maintenance and operation, the drain pump and kit can be checked easily.
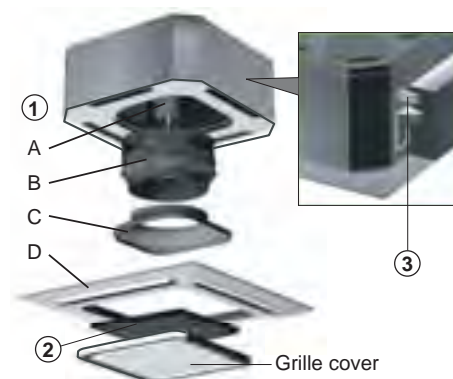
Compact design

Worlds first 24,000Btu model in the compact cassette category

(Easy installation by taking off ceiling panel of 600 x 600 size)

Previous model
830
830
24 type

→

New model
570
570
590
590
24 type

High lift drain pump

700mm
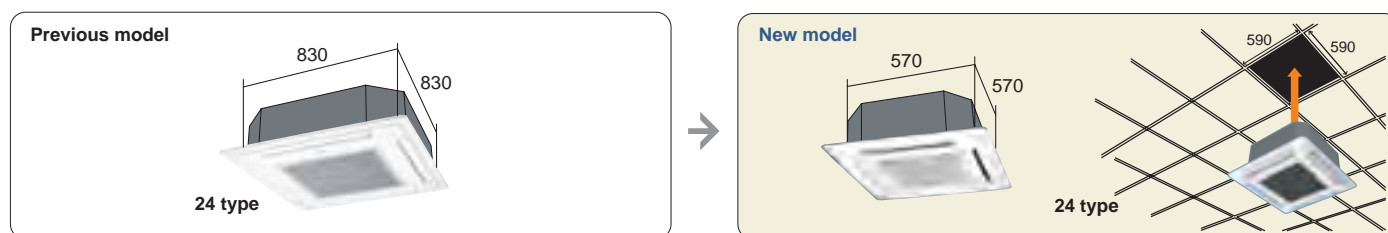
Optional parts

Air Outlet Shutter Plate   UTR-YDZB

Dimensions

Models: AUXB07 / AUXB09 / AUXB12 / AUXB14 / AUXB18 / AUXB24
(Unit : mm)

700
700
Bottom view

30
49
Side view

530(Bolt pitch)
540(Bolt pitch)
□570(Indoor unit)
75
135
250
Top view

□580-660(Ceiling openings)

40   99
135   250
102
108
30
245
146
40
Control box
Liquid pipe Gas pipe

116
222
Ceiling
58
124
262
Side view
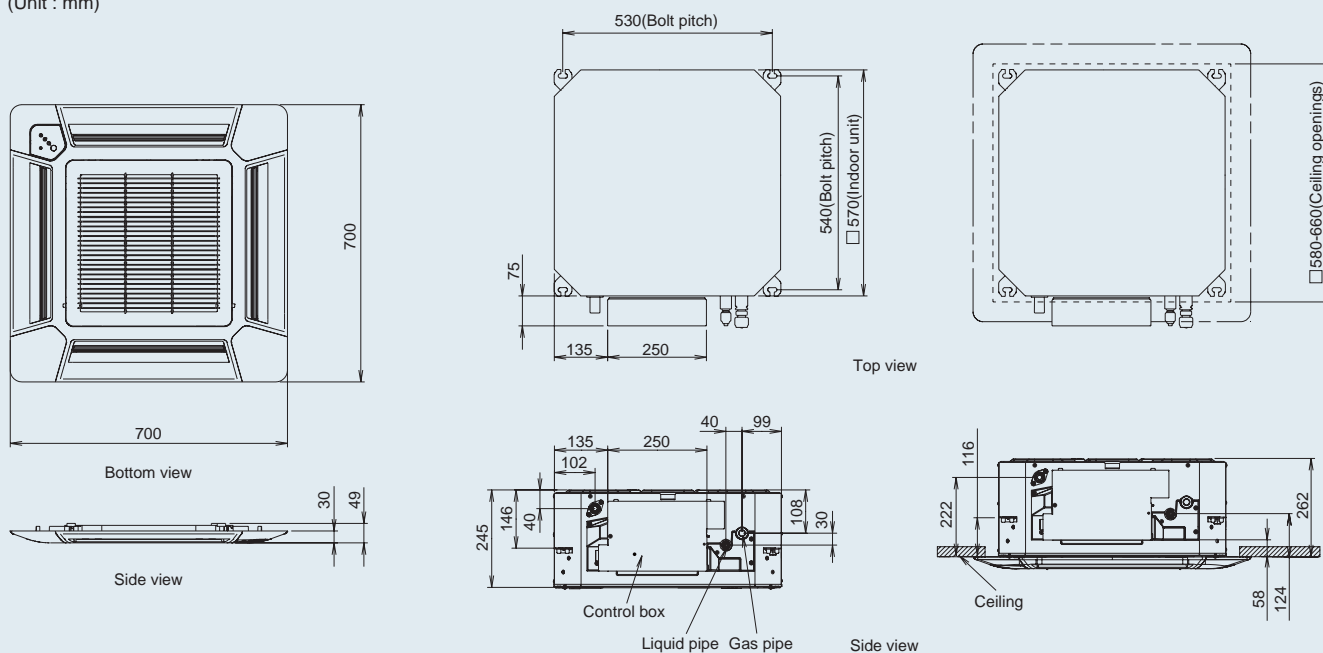
Cassette

Powerful, wide airflow and quiet operation

Models

AUXD18LALH
AUXD24LALH
AUXA30LALH
AUXA36LALH
AUXA45LALH
AUXA54LALH

High efficiency turbo fan with 3-dimensional blade

Previous turbo fan

Air passing through the heat exchanger was uneven and the air would only flow close to the ceiling.

450mm

Heat exchanger
< Motor side >

Uneven airflow

Separation phenomenon of airflow causes noise

Conventional blade

New turbo fan

High efficiency airflow distribution has been achieved by the introduction of a 3 dimensional blade which increases the air passing over the heat exchanger.

500mm

Heat exchanger
< Motor side >

Quiet

No airflow separation

3-dimensional blade

Wind velocity
Fast
Slow

→ : Spin direction   → : Airflow direction   : Turbulent flow noise

Specifications

Model name			AUXD18LALH	AUXD24LALH	AUXA30LALH	AUXA36LALH	AUXA45LALH	AUXA54LALH
Power source			230V~,50Hz					
Capacity	Cooling	kW	5.6	7.1	9.0	11.2	12.5	14.0
	Heating		6.3	8.0	10.0	12.5	14.0	16.0
Input power		W	39	46	59	80	99	119
Airflow rate	High	m³/h	1,150	1,280	1,600	1,800	1,900	2,000
	Med		940	1,040	1,300	1,300	1,370	1,370
	Low		870	870	1,000	1,000	1,000	1,000
Sound pressure level	High	dB(A)	36	38	40	44	46	47
	Med		30	33	38	38	39	39
	Low		29	29	31	31	31	31
Dimensions (H x W x D)		mm	246 x 840 x 840		288 x 840 x 840			
Weight		kg	23		27			
Connection pipe diameter	Liquid (Flare)	mm	ø9.52					
	Gas (Flare)		ø15.88			ø19.05		
	Drain		ø25 (I.D.) ; ø32 (O.D.)					
Grille (option)	Model name		UTG-UG✱A-W					
	Dimensions (H x W x D)	mm	50 x 950 x 950					
	Weight	kg	5.5					

G✱ : GY(FUJITSU) ; GG(GENERAL)
Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 27˚CDB / 19˚CWB, and outdoor temperature of 35˚CDB / 24˚CWB.
Heating : Indoor temperature of 20˚CDB / (15˚CWB), and outdoor temperature of 7˚CDB / 6˚CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.
Voltage : 230 [V].

Improvement of the airflow distribution

Previous louvre

As the airflow follows the ceiling it does not allow the airflow to be widely distributed.

Bottom view

Front part
Ceiling
Rear part
louvre

Temperature irregularity happens

New louvre

The louvre design distributes air leaving a space between the chassis and the ceiling allowing far and wide air flow distribution.

Bottom view

Front part
Ceiling
Rear part
Round louvre

Much less temperature irregularity happens by spreading airflow widely

---

Adjustment of hanger position is possible after installation

Detachable Grille corner

Adjustment can be done just taking off the corner part

One way aperture installation

Previous model

New model

Several way apertures

Parallel apertures

High lift drain pump

Ceiling panel

850mm
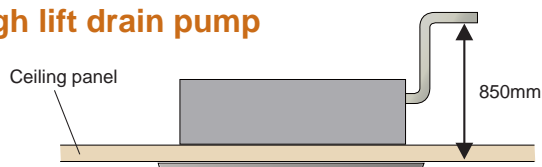
Optional Parts

- IR Receiver Kit   UTY-LRH∗B1
- Air Outlet Shutter Plate   UTR-YDZC
- Panel Spacer   UTG-BGYA-W
- Wide Panel   UTG-AGYA-W

H∗: HY(FUJITSU); HG(GENERAL)

Dimensions

Models: AUXD18LALH / AUXD24LALH (Slim type)
        AUXA30LALH / AUXA36LALH / AUXA45LALH / AUXA54LALH

(Unit : mm)
(   ) : AUXD18 / AUXD24

950
950
Bottom view

796 (Bolt pitch)
699 (Bolt pitch)
842 (indoor unit)

890 (Ceiling openings)
Top view

358
338
278
Drain pipe
98(56)
133
118(76)
158(116)
288(246)
Liquid pipe   Gas pipe
Side view
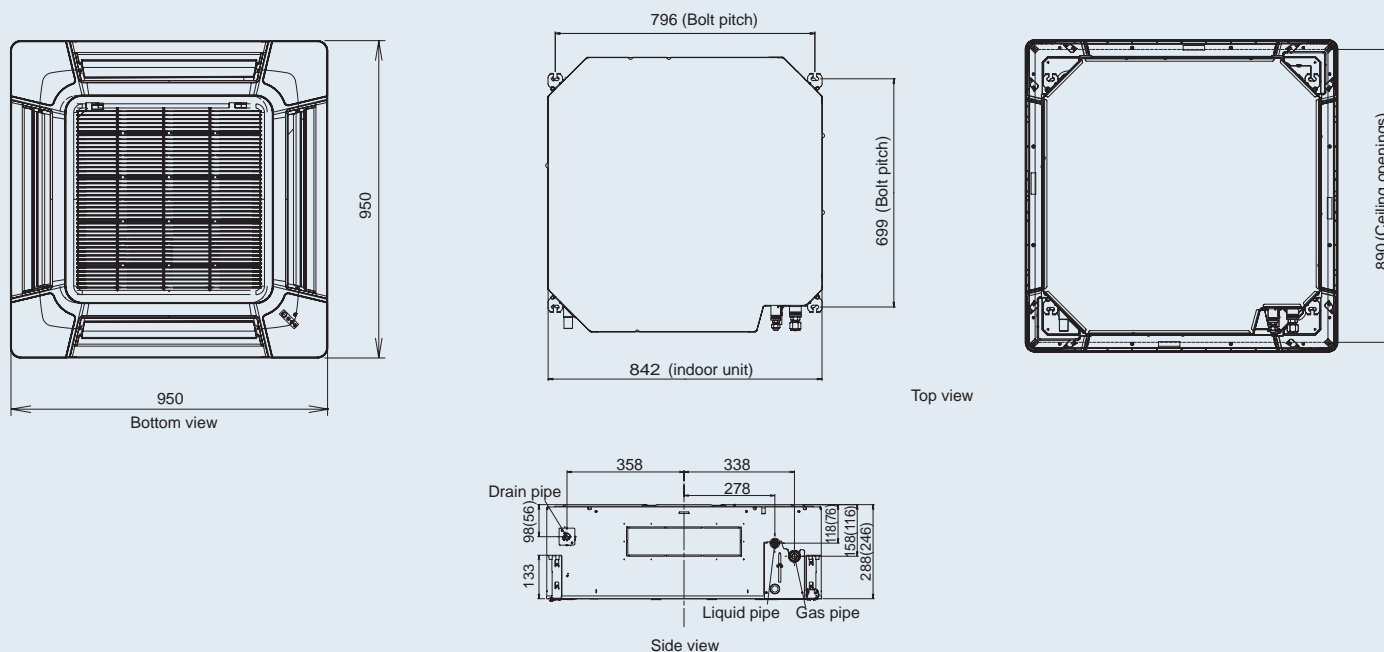
Compact Duct

Small and compact indoor unit suitable
for many applications

Models

ARXB07LALH
ARXB09LALH

Models

ARXB12LALH
ARXB14LALH
ARXB18LALH

Low noise level

A low noise level has been achieved for each capacity

Model		7	9	12	14	18
Static pressure (Normal/Max.)	Pa	0 / 50				
Noise level (Low speed)	dB(A)	24	27	25	30	30

low static pressure mode   normal mode

Airflow

Airflow drop prevention

Low noise realized

Static pressure (Pa)
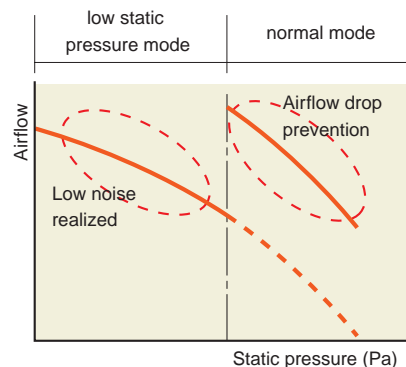
Specifications

Model name			ARXB07LALH	ARXB09LALH	ARXB12LALH	ARXB14LALH	ARXB18LALH
Power source			230V ~, 50Hz				
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6
	Heating		2.8	3.2	4.1	5.0	6.3
Input power		W	46	55	63	90	96
Airflow rate	High	m³/h	370	440	590	800	890
	Med		310	370	500	750	810
	Low		280	340	450	700	730
Static pressure range		Pa	0 to 50	0 to 50	0 to 50	0 to 50	0 to 50
Standard static pressure			25	25	25	25	25
Sound pressure level	High	dB(A)	29	31	30	33	36
	Med		26	29	28	32	34
	Low		24	27	25	30	30
Dimensions (H x W x D)		mm	217 x 663 x 595		217 x 953 x 595		
Weight		kg	18		25		
Connection pipe diameter	Liquid (Flare)	mm	ø6.35			ø9.52	
	Gas (Flare)		ø12.70			ø15.88	
	Drain		ø25 (I.D.) ; ø32 (O.D.)				

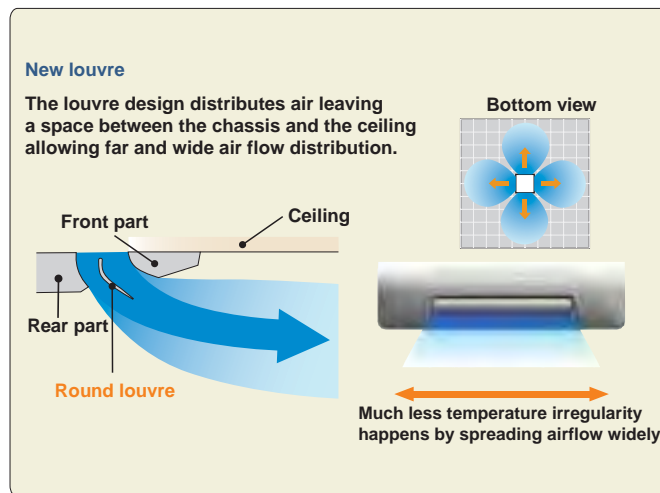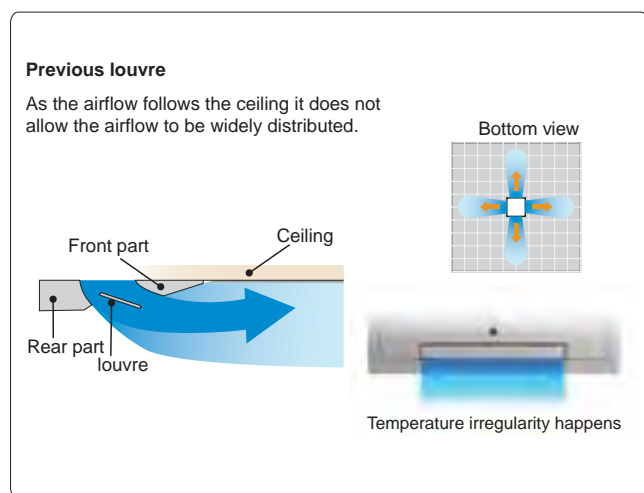Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 27˚CDB / 19˚CWB, and outdoor temperature of 35˚CDB / 24˚CWB.
Heating : Indoor temperature of 20˚CDB / (15˚CWB), and outdoor temperature of 7˚CDB / 6˚CWB.
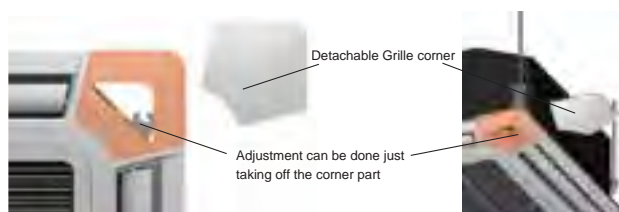Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.

Compact design

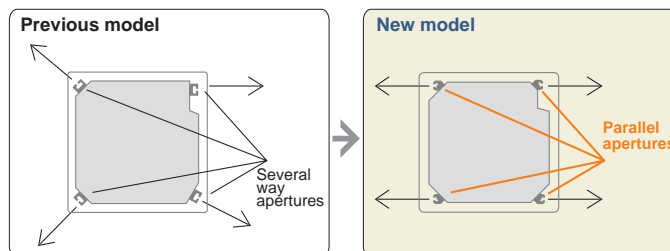Ultra-slim duct air conditioner for easy installation

217
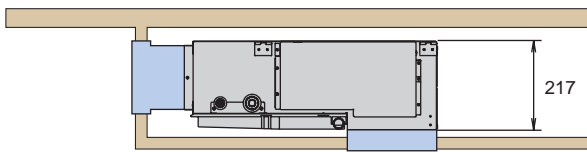
Slim size (217mm) allows installation even where the space behind the ceiling is narrow.

Two-direction drain piping

Duct indoor unit

Two-direction drain piping
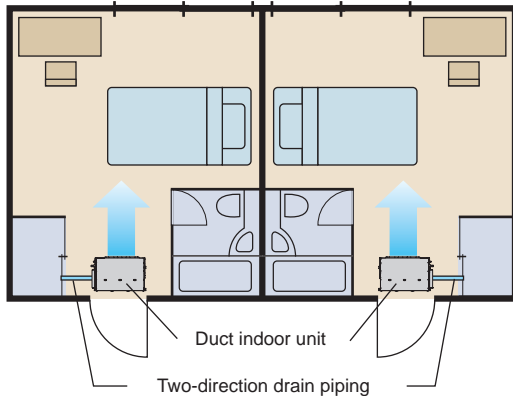
Air-intake

Air intake direction can be selected to match the installation site.

Bottom side

Back side

Flexible installation

Ceiling concealed

Floor concealed
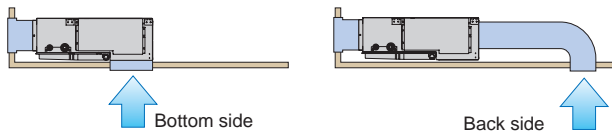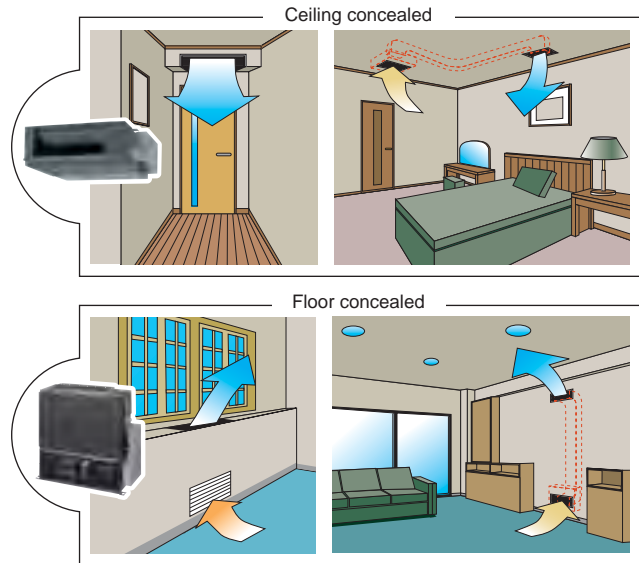
Filter (Accessory)

ARXB07 / ARXB09
Filter (2pcs.)
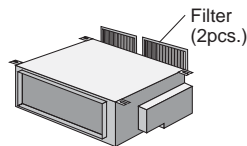
ARXB12 / ARXB14 / ARXB18
Filter (3pcs.)

Optional parts

Remote Sensor Unit   UTD-RS100
IR Receiver Unit   UTB-*WB
Drain Pump Unit   UTZ-PX1BBA
*WB : YWB(FUJITSU) , GWB(GENERAL)

Dimensions

Models: ARXB07 / ARXB09 / ARXB12 / ARXB14 / ARXB18

*Service accessibility must be allowed for when installing the product.
Please consult the installation manual for the necessary service access size.
(Unit : mm)
(   ) : AR7 / AR9
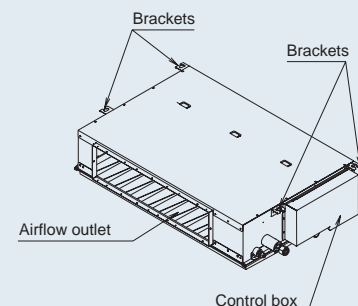
886 (596)
(Bolt pitch)
Control box

595
390 (Bolt pitch)
166
20
24
850 (560)
47
85

953 (663)
94 (50)
600 (400)
10
217
150

886 (596)
167

217
194
587
344
65 75
150

① ② ③

① Refrigerant piping flare connection (Gas)
② Refrigerant piping flare connection (Liquid)
③ Drain piping connection

Brackets
Brackets
Airflow outlet
Control box

Low Static Pressure Duct

Indoor units suitable for quiet rooms such as a hotel or a bedroom

Models

ARXB24LATH
ARXB30LATH
ARXB36LATH
ARXB45LATH

Duct

Slim Compact design allows for easy installation in narrow ceiling spaces up to 270mm

Models

ARXA24LATH
ARXA30LATH
ARXA36LATH
ARXA45LATH

Slim & Compact design

In the case of bottom return air connection, not only does the ndoor unit design allow for installation in a narrow ceiling space of up to 270mm, Further space savings have been achieved by mounting the electrical control box internally inside the chassis.

1,200 → 1,135mm

270mm

Control box is now included as part of the main chassis

One touch operating and easy to install long life filter (Optional Parts)
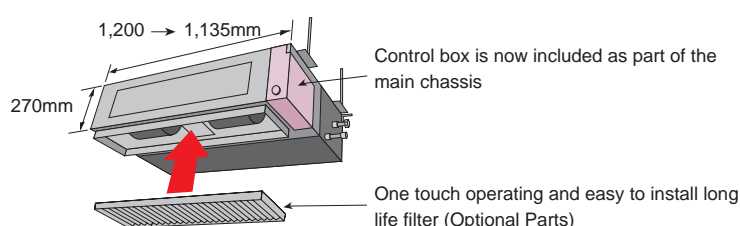
Specifications

Model name			ARXB24LATH	ARXB30LATH	ARXB36LATH	ARXB45LATH	ARXA24LATH	ARXA30LATH	ARXA36LATH	ARXA45LATH
Power source			230V ~, 50Hz				230V ~, 50Hz			
Capacity	Cooling	kW	7.1	9.0	11.2	12.5	7.1	9.0	11.2	12.5
	Heating		8.0	10.0	12.5	14.0	8.0	10.0	12.5	14.0
Input power		W	145	198	253	338	190	188	312	312
Airflow rate	High	m³/h	1,100	1,410	1,710	1,970	1,280	1,280	1,720	1,720
	Med		920	1,280	1,600	1,790	1,210	1,210	1,670	1,670
	Low		810	1,150	1,470	1,670	1,130	1,130	1,600	1,600
Static pressure range		Pa	0 to 80	0 to 80	0 to 80	0 to 80	30 to 150	30 to 150	30 to 150	30 to 150
Standard static pressure			40	50	50	60	100	100	100	100
Sound pressure level	High	dB(A)	31	34	37	41	38	40	43	43
	Med		27	32	35	38	36	38	41	41
	Low		25	29	33	36	34	36	39	39
Dimensions (H x W x D)		mm	270x1,135x700				270x1,135x700			
Weight		kg	43	45			43	45		
Connection pipe diameter	Liquid (Flare)	mm	ø9.52				ø9.52			
	Gas (Flare)		ø15.88		ø19.05		ø15.88		ø19.05	
	Drain		ø25 (I.D.) ; ø32 (O.D.)				ø25 (I.D.) ; ø32 (O.D.)			

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.
Heating : Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.

Line-up of low-noise and high-power models, compatible with a wide range of static pressure

Airflow

Duct type

Low Static Pressure
Duct type
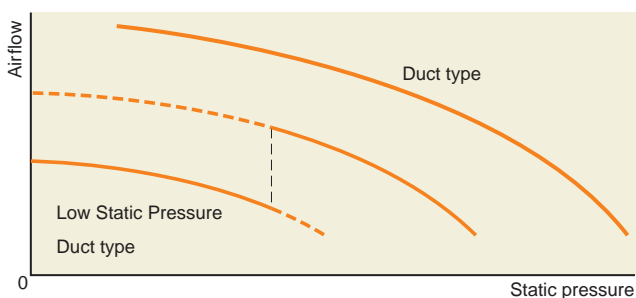
0   Static pressure

Low Static Pressure Duct type

Optimum model for hotels or bedrooms

An ultra low-noise model that achieves a quiet interior. Perfect for hotels or bedrooms with limited air duct installation space. Two different levels can be selected according to the static pressure range.

25dB

ARXB24
Low
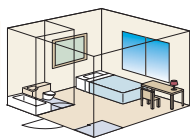
Duct type

Powerful model with a flexible design

With a powerful motor, appropriate for a wide range of static pressure. Flexible air duct installation is possible in a large space such as an office.

Max. 150Pa

Two-direction drain piping

Duct indoor unit

Two-direction drain piping
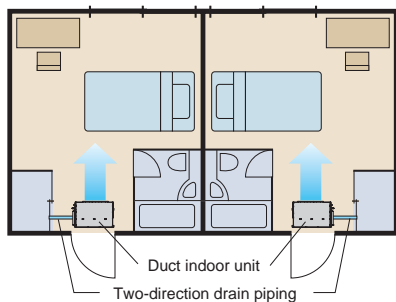
Easy maintenance

See below for the case of rear suction type

Previous model   New model

1.Control box
2.Fan casing
3.Fan
4.Motor

Large bottom panel: 1 piece

Bottom panel: 2 pieces
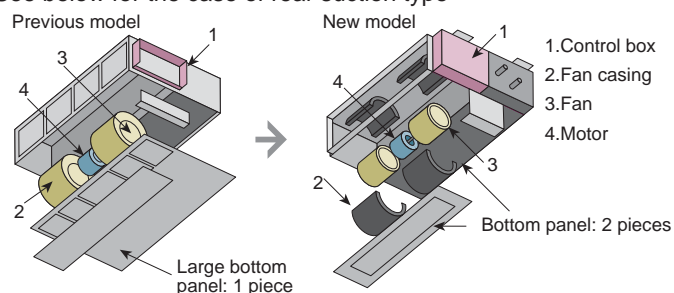
Structural improvement is attained by making the bottom panel two pieces, front and rear. The internal fan casing is also manufactured in two pieces, namely upper and lower. The maintenance of the motor and fan can be easily carried out by removing the rear panel and the lower part of the casing while leaving the main chassis installed.

Installation styles

Embedded in Ceiling
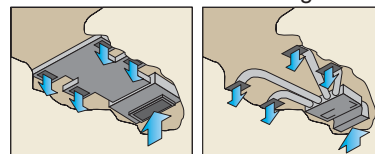
Hanging from Ceiling
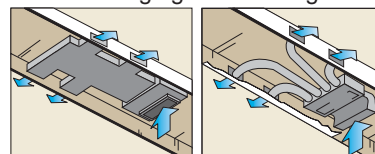
Optional parts

Remote Sensor Unit	UTD-RS100
Long Life Filter	UTD-LF25NA
Flange (Square)	UTD-SF045T
Flange (Round)	UTD-RF204
IR Receiver Unit	UTB-*WB
Drain Pump Unit	UTZ-PX1NBA

*WB : YWB(FUJITSU) , GWB(GENERAL)
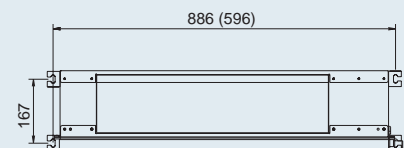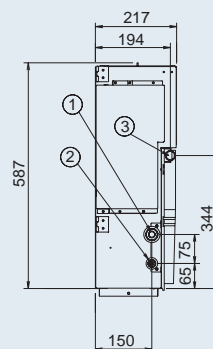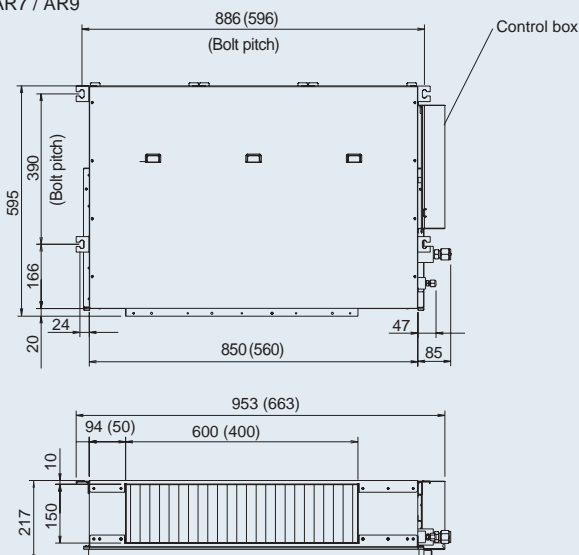
Dimensions

Models: ARXB24 / ARXB30 / ARXB36 / ARXB45
            ARXA24 / ARXA30 / ARXA36 / ARXA45
*Service accessibility must be allowed for when installing the product.
Please consult the installation manual for the necessary service access size.
(Unit : mm)

138   264   264   264

138

82

75

ø205 hole

Front view

270
32

240

ø200 (knock out hole)

161

P.C.D. ø225

121

Side view (L)

1177(Bolt pitch)

Outlet

447(Bolt pitch)

173

1015
1135

700

107

Top view

114
66
32

168

240
281

240
270

Side view (R)

Rear view
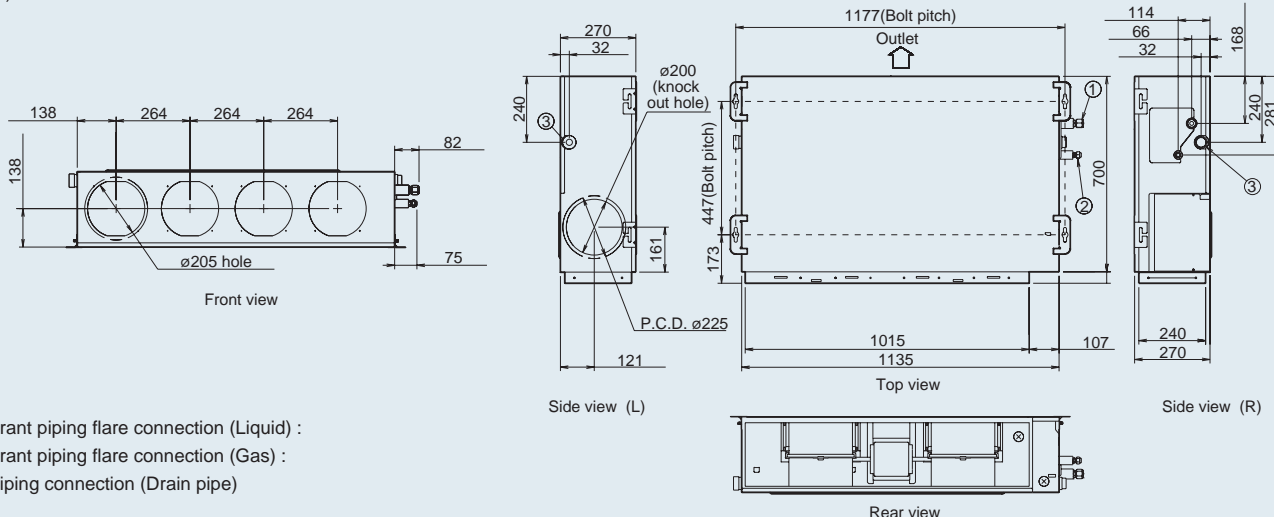
① Refrigerant piping flare connection (Liquid) :
② Refrigerant piping flare connection (Gas) :
③ Drain piping connection (Drain pipe) :

33

High Static Pressure Duct

These indoor units allow for high airflow quantities

Models

ARXC36LATH
ARXC45LATH
ARXC60LATH

Models

ARXC72LATH
ARXC90LATH

Specifications

| Model name			ARXC36LATH	ARXC45LATH	ARXC60LATH	ARXC72LATH	ARXC90LATH
Power source			230 V ~, 50Hz				
Capacity	Cooling	kW	11.2	12.5	18.0	22.4	25.0
	Heating		12.5	14.0	20.0	25.0	28.0
Input power		W	405	427	427	1,110	1,250
Airflow rate	High	m³/h	2,600	3,500	3,500	3,900	4,300
	Med		1,950	3,000	3,000	3,300	4,000
	Low		1,450	2,460	2,460	3,000	3,500
Static pressure range		Pa	100 to 200	100 to 250	100 to 250	50 to 300	100 to 300
Standard static pressure			100	100	100	260	250
Sound pressure level	High	dB(A)	45	49	49	51	53
	Med		38	45	45	48	51
	Low		32	42	42	45	49
Dimensions (H x W x D)		mm	400 x 1,050 x 500			450 x 1,550 x 700	
Weight		kg	45	47		82	82
Connection pipe diameter	Liquid	mm	ø9.52 (Flare)			ø12.70 (Brazing)	
	Gas		ø19.05 (Flare)			ø22.22(Brazing)	
	Drain		ø25 (I.D.) ; ø32 (O.D.)				

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 27˚CDB / 19˚CWB, and outdoor temperature of 35˚CDB / 24˚CWB.
Heating : Indoor temperature of 20˚CDB / (15˚CWB), and outdoor temperature of 7˚CDB / 6˚CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.

Easy installation (Compact size & Lightweight)

Models : ARXC36

A compact size and lightweight indoor unit has been developed by reducing the basic chassis and the overall material weight.

Volume 47.5% down

Weight 40% down

(unit: mm)

1,250 | 800

400

Previous model : 75kg

1,050 | 500

400

New model : 45kg (ARXC36LATH)
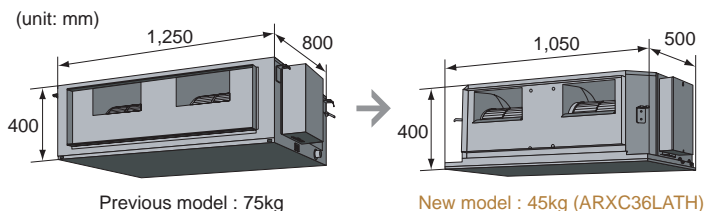
Low noise

Models : ARXC36 / ARXC45 / ARXC60

Cutting off the corners of the conventional indoor unit front panel and fan casing, has enabled less turbulent air flow. Low noise is realized by adopting a plastic case and a plastic fan.

Previous model

New model (ARXC36LATH)

800mm
Metal fan (ø240mm)
Heat exchanger
400mm
Casing (Metal Sheet)
Previous model :
Metal fan [53.1dB(A)]

500mm
Plastic fan ø225mm
Heat exchanger
400mm
Casing (Plastic)
New model :
Plastic fan [45dB(A)] (ARXC36LATH)

* Model : Material
(At 100Pa : Actual noise measurement value)
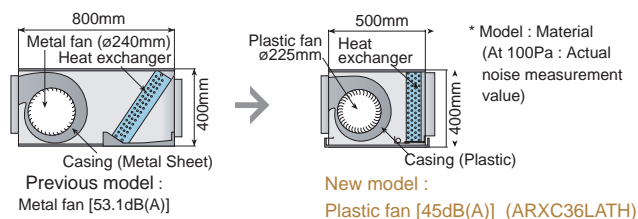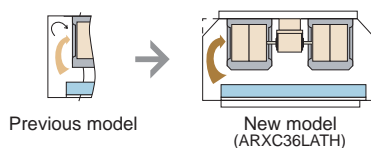
Static pressure selection : ARXC72/ARXC90

Max. 300Pa
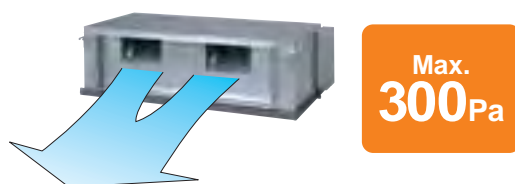
2 Types of static pressure mode are selectable.

High Static Pressure Duct (ARXC72)

Airflow

Normal mode | High static pressure mode

0

Static pressure (Pa)
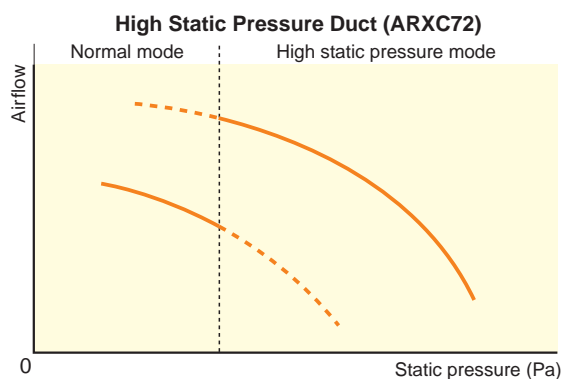
The adoption of a single phase fan motor allows 3 steps fan speed control

Optional parts

Long-Life Filter   UTD-LF60KA (For ARXC36 / 45 / 60)
IR Receiver Unit   UTB-∗WB
∗WB : YWB(FUJITSU) , GWB(GENERAL)

Dimensions

Models: ARXC36 / ARXC45 / ARXC60
(Unit : mm)

Rear view

88

71

400
324 | 14

295
Side view (L)

1,080(Bolt pitch)
1,000
862
500(Bolt pitch)
585
851
1,050
85
Top view

371
356
208
108
41
123
139
① ② ③ ④
Side view (R)

Front view

① Refrigerant piping flare connection (Liquid)
② Refrigerant piping flare connection (Gas)
③ Drain piping connection
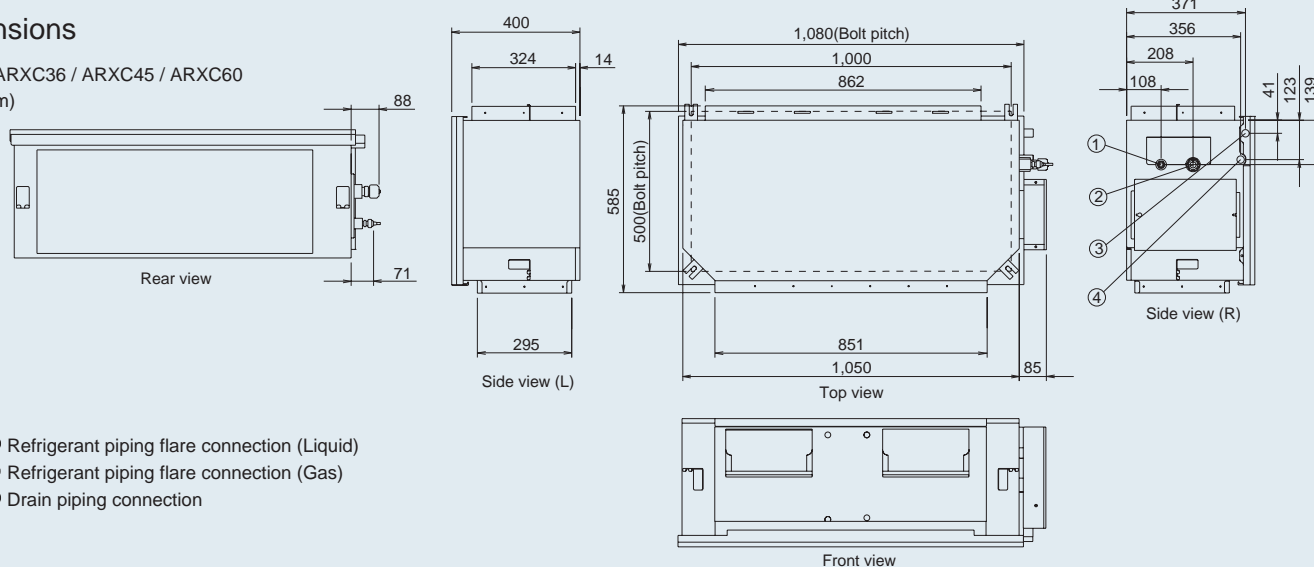
Models: ARXC72 / ARXC90
(Unit : mm)

1,550
660
713 (MAX)
1,410
Top view

Front view

450

700
600

Side view
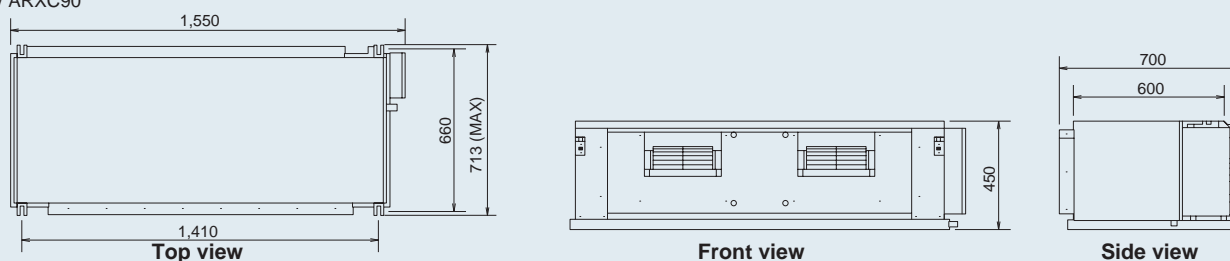
Floor / Ceiling

The slim and lightweight design allows the unit to be
suspended from the ceiling or installed on the floor.
This type suits many room designs

Models

AB∗A12LATH
AB∗A14LATH
AB∗A18LATH
AB∗A24LATH

Flexible installation

Example for floor installation

Floor console

Example for ceiling installation

Under ceiling

Specifications

Model name			AB∗A12LATH	AB∗A14LATH	AB∗A18LATH	AB∗A24LATH
Power source			230V ~, 50Hz			
Capacity	Cooling	kW	3.6	4.0	5.6	7.1
	Heating		4.1	4.5	6.3	8.0
Input power		W	57	57	88	88
Airflow rate	High	m³/h	600	600	780	880
	Med		500	500	650	740
	Low		480	480	550	630
Sound pressure level	High	dB(A)	40	40	46	48
	Med		37	37	41.5	44
	Low		34	34	37	40
Dimensions (H x W x D)		mm	199 x 990 x 655			
Weight		kg	28			
Connection pipe diameter	Liquid (Flare)	mm	ø6.35		ø9.52	
	Gas (Flare)		ø12.70		ø15.88	
	Drain		ø25 (I.D.) ; ø32 (O.D.)			

AB∗: ABY(FUJITSU), ABH(GENERAL)
Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 27˚CDB / 19˚CWB, and outdoor temperature of 35˚CDB / 24˚CWB.
Heating : Indoor temperature of 20˚CDB / (15˚CWB), and outdoor temperature of 7˚CDB / 6˚CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.
Voltage : 230 [V].

Double auto swing

A combination of up/down and right/left directional swing allows three-dimensional air direction control.

RIGHT and LEFT SWING

1 2 3 4 5

UP and DOWN SWING

1
2
3
4
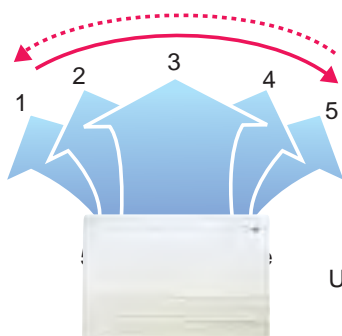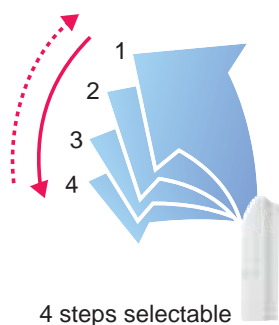
4 steps selectable

Super vane

Double Louvre Super vane with newly developed special configuration boosts airflow sending cool air quickly to every corner of the room.

Auto-closing louvre

When operation is stopped, the louvres will automatically close. (This function is available on all non-ducted models.)

Compact design

Symmetrical, slim and compact design.

655

990

199
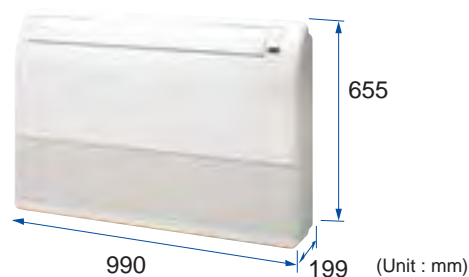
(Unit : mm)

Dimensions

Models: AB*A12 / AB*A14 / AB*A18 / AB*A24
(Unit : mm)
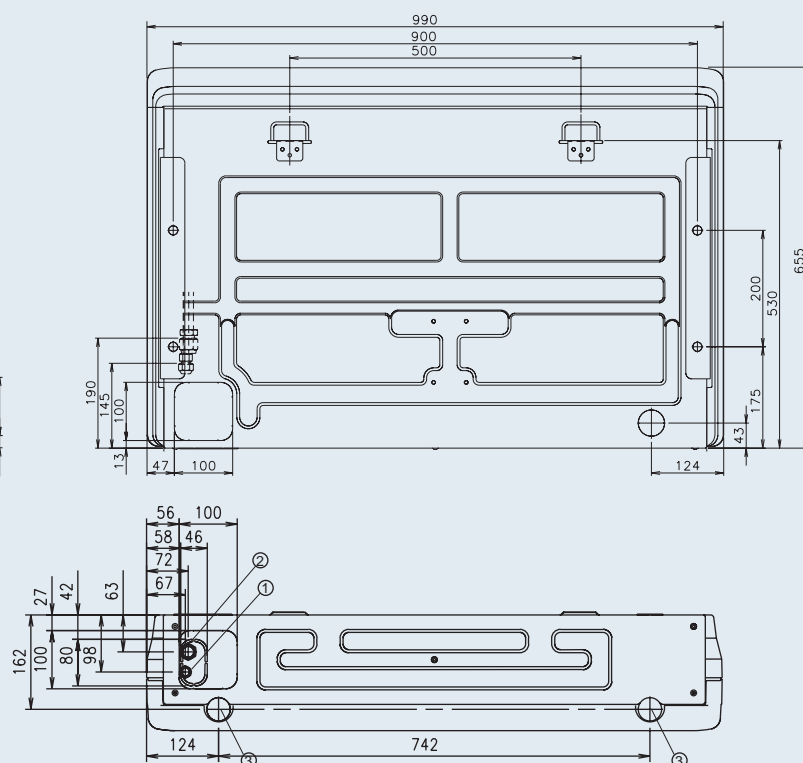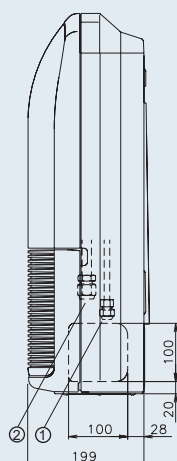
990
900
500
655
200
530
175
43
124

190
145
100
13
47 100

100
20
100
28
199

56 100
58 46
72
67
27 42 63
162 100 80 98
124 742

① Refrigerant piping flare connection (Liquid)
② Refrigerant piping flare connection (Gas)
③ Drain piping connection

Ceiling

Easily concealed in any installation

Models

AB∗A30LATH
AB∗A36LATH
AB∗A45LATH
AB∗A54LATH

Installation

Open
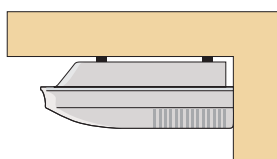
General installation pattern which suspends the indoor unit from the ceiling.

Concealed
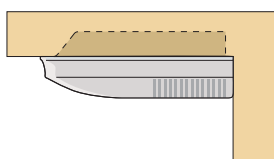
Installation pattern where part of the indoor unit is embedded into the ceiling.

Wall mounted
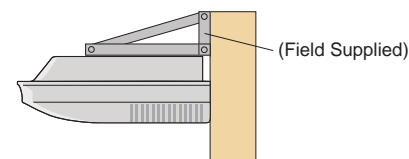
(Field Supplied)

Installation which fixes the indoor unit to the wall by the use of wall brackets (Field supplied). This type of installation can be used when the ceiling space is insufficient.

Specifications

Model name			AB∗A30LATH	AB∗A36LATH	AB∗A45LATH	AB∗A54LATH
Power source			230V ~, 50Hz			
Capacity	Cooling	kW	9.0	11.2	12.5	14.0
	Heating		10.0	12.5	14.0	16.0
Input power		W	124	144	160	180
Airflow rate	High	m³/h	1,450	1,660	1,850	2,200
	Med		1,280	1,500	1,660	2,000
	Low		980	1,270	1,430	1,800
Sound pressure level	High	dB(A)	42	45	48	52
	Med		39	42	46	50
	Low		35	37	41	46
Dimensions (H x W x D)		mm	240 x 1,660 x 700			
Weight		kg	48			
Connection pipe diameter	Liquid (Flare)	mm	ø9.52			
	Gas (Flare)		ø15.88	ø19.05		
	Drain		ø25 (I.D.) ; ø32 (O.D.)			

AB∗: ABY(FUJITSU), ABH(GENERAL)
Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 27˚CDB / 19˚CWB, and outdoor temperature of 35˚CDB / 24˚CWB.
Heating : Indoor temperature of 20˚CDB / (15˚CWB), and outdoor temperature of 7˚CDB / 6˚CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.
Voltage : 230 [V].

Double auto swing and wide airflow

Auto airflow direction and auto swing

Right and left

5 steps selectable

Up and down

1
2
3
4

4 steps selectable
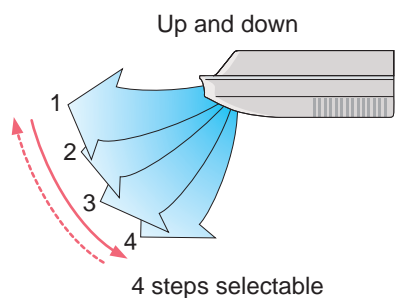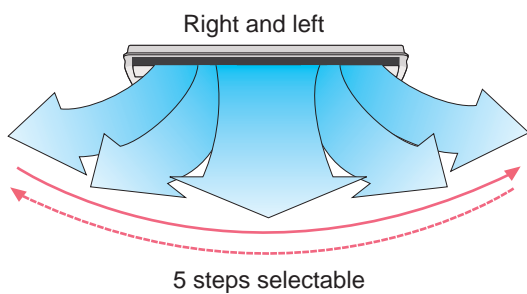
Long Airflow

Long Airflow ensures comfort to every corner of a large room.

Long distance air-flow

Slim & Compact design

240

Condensate lift-up mechanism (Option)

Optional drain lift-up mechanism allows flexible installation.

Max. 500mm

Fresh air intake

Fresh air

Indoor

Outdoor
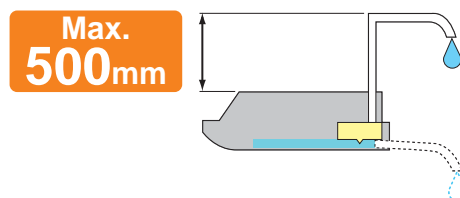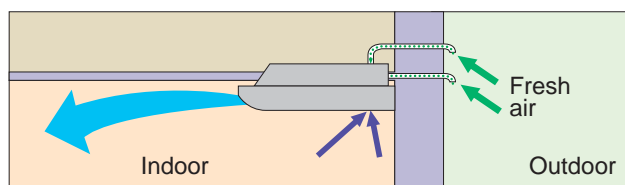
Long-life filter

High Efficiency long-life filter doubles the life of the filter compared to standard filters.

Optional parts

Drain Pump Unit   UTR-DPB24T

Dimensions

Models: AB*A30 / AB*A36 / AB*A45 / AB*A54
(Unit : mm)
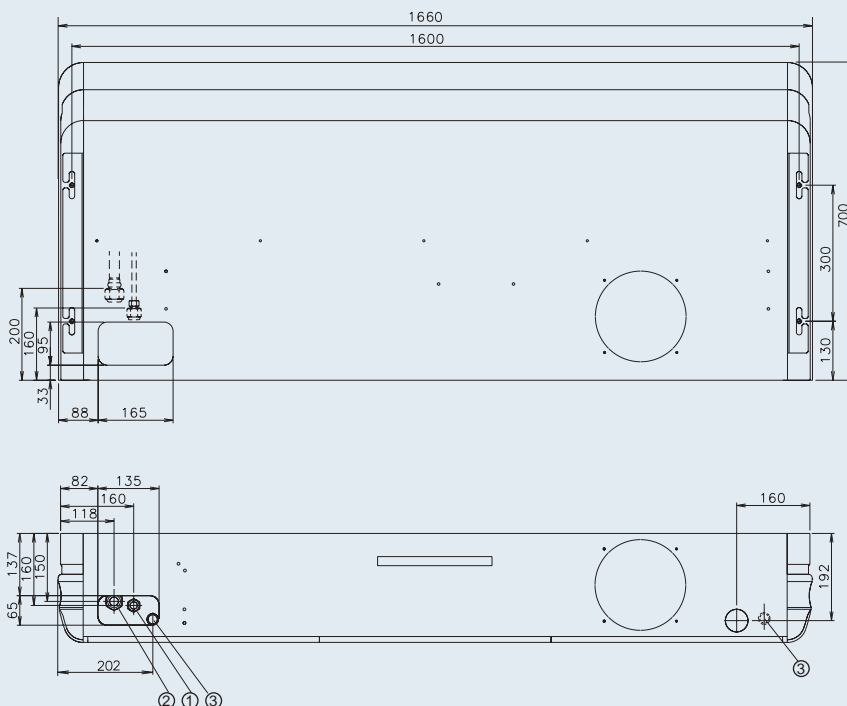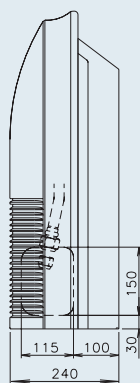
1660
1600
700
300
130
200
160
95
33
88
165
150
115
100
30
240
82
135
160
118
137
160
150
65
202
192
160

① Refrigerant piping flare connection (Liquid)
② Refrigerant piping flare connection (Gas)
③ Drain piping connection

② ① ③

Compact Wall Mounted

Compact and Stylish design indoor

Models

(EEV internal model)   (EEV external model)

AS*A07LACH   AS*E07LACH
AS*A09LACH   AS*E09LACH
AS*A12LACH   AS*E12LACH
AS*A14LACH   AS*E14LACH

Filter features

Dirty Air

Ion deodorization filter

Apple-catechin filter

High quality air conditioning by incorporation of high performance filter.

Clean Air

Apple-catechin filter

Fine dust, invisible mold spores, and harmful microorganisms are absorbed onto the filter by static electricity, and further growth is inhibited and deactivated by the polyphenol ingredient extracted from apples.

Long-life* Ion deodorization filter

The filter deodorizes by powerfully decomposing absorbed odors using the oxidizing and reducing effects of ions generated by the ultra-fine-particle ceramic.

* The filter can be used for approx. 3 years if it is washed under water to restore its surface action when it is dirty.

Deodorizing effect (Odor reduction rate)

Ammonia
(ppm)
160
120 With no filter
80
40 New filter
0
0   30   60   120 (min)

Trimethylamine
(ppm)
160
120 With no filter
80
40 New filter
0
0   30   60   120 (min)

Hydrogen sulfate
(ppm)
160
120 With no filter
80
40 New filter
0
0   30   60   120 (min)
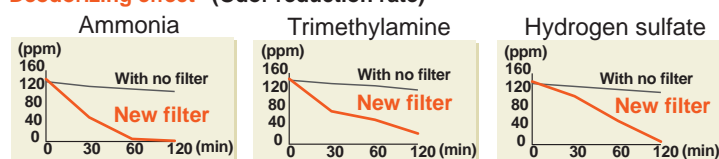
Testing organization : Environmental Sanitary Inspection Center   Test method : Deodorization Test

Specifications

Model name			AS*A07LACH	AS*A09LACH	AS*A12LACH	AS*A14LACH	AS*E07LACH	AS*E09LACH	AS*E12LACH	AS*E14LACH
Power source			230V ~, 50Hz				230V ~, 50Hz			
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	2.2	2.8	3.6	4.5
	Heating		2.8	3.2	4.1	5.0	2.8	3.2	4.1	5.0
Input power		W	16	16	19	30	15	16	20	28
Airflow rate	High	m³/h	490	500	560	670	490	500	560	680
	Med		450	450	480	490	450	450	480	490
	Low		370	370	420	420	370	370	420	420
Sound pressure level	High	dB(A)	35	36	39	44	34	35	38	43
	Med		33	33	35	37	32	32	34	35
	Low		27	27	31	32	26	26	30	30
Dimensions (H x W x D)		mm	275 x 790 x 215				275 x 790 x 215			
Weight		kg	9				9			
Connection pipe diameter	Liquid (Flare)	mm	ø6.35				ø6.35			
	Gas (Flare)		ø12.70				ø12.70			
	Drain		ø13.8(I.D.) ; ø15.8-ø16.7(O.D.)				ø13.8(I.D.) ; ø15.8-ø16.7(O.D.)			
EV Kit (option)			-				UTR-EV09XB		UTR-EV14XB	

AS*: ASY(FUJITSU), ASH(GENERAL)
Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 27˚CDB / 19˚CWB, and outdoor temperature of 35˚CDB / 24˚CWB.
Heating : Indoor temperature of 20˚CDB / (15˚CWB), and outdoor temperature of 7˚CDB / 6˚CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.
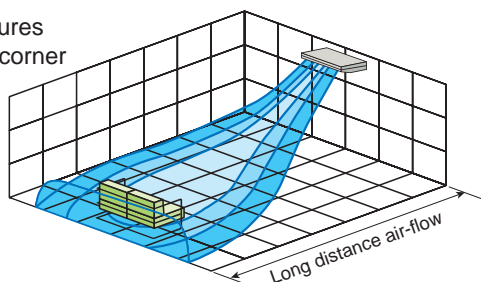Voltage : 230 [V].

Low noise

27 dB

(AS07/09)

Indoor unit

EV kit
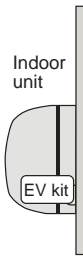
Electronic Expansion valves are built-in allowing for easy installation.

For installation to places that require additional low noise, select the external electronic expansion valve type.

Auto swing louvre

The Auto Swing Louvre function ensures that the air direction corresponds to the mode selected.

Cooling : 2-step (① - ②) *1
Heating : 4-step (① - ④)

→ Step
--→ Swing

Swing

①
②
③
④
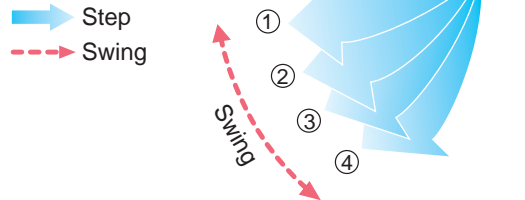
*1 When doing 3-4 louvre-setting positions in cooling operation, it returns to the 2 louvre-setting position automatically 30 minutes later.

Compact size

Powerful output even compact design

Though the indoor unit is compact, it features a large, high pressure cross fan (90mm diameter) in a centre mounted configuration and a Lambda type heat exchanger to provide plenty of power.

Width 790mm

Symmetrical design

Symmetrical, clean design that suits all interiors.

Easy maintenance

Easy maintenance has been realized as the front panel can removed for easy access.

Open panel

New Style High Power DC fan motor

•High power
•Wide rotation range
•High efficiency
•Compact size

Wired control compatible

Wired and Wireless Remote Controller are acceptable.

Wired Remote Controller

Simple Remote Controller

Dimensions

Models: AS∗A07 / AS∗A09 / AS∗A12 / AS∗A14
        AS∗E07 / AS∗E09 / AS∗E12 / AS∗E14

(Unit : mm)

790
275
215
470
530
660
① ②
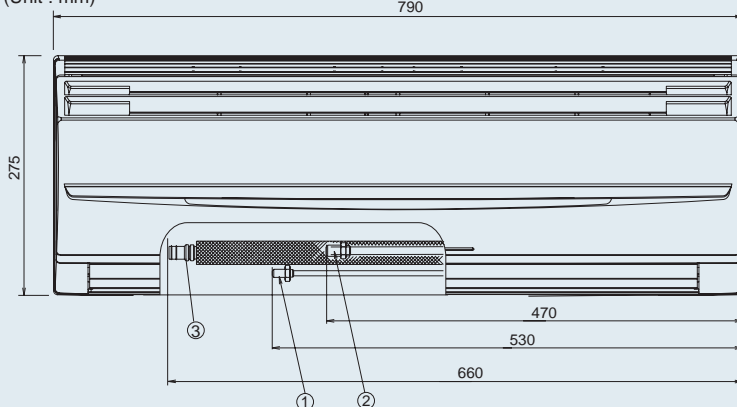
① Refrigerant pipe flare connection (Liquid)
② Refrigerant pipe flare connection (Gas)
③ Drain piping connection
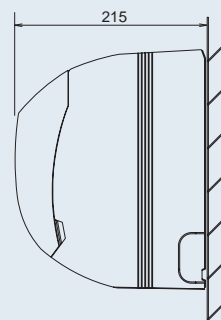
EV kit (UTR-EV09XB/ UTR-EV14XB) Optional parts:

65
416
222
32
19
65
97
121
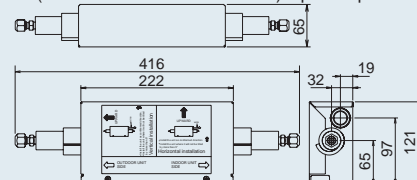
Wall Mounted

Double auto swing louver provides pleasant air flow to every corner of the room

Models

AS✳A18LATH
AS✳A24LATH
AS✳A30LATH

Powerful output in spite of small size

Though the indoor unit is compact, it features a large, high pressure cross fan (107mm diameter) in a center mounted configuration and a lambda type heat exchanger to provide plenty of power. The extra long diffuser provides a wide outflow opening for air. This ensures a large air outflow volume over a wide area to cool or heat all areas of the room.

Specifications

Model name			AS✳A18LATH	AS✳A24LATH	AS✳A30LATH
Power source			230V ~, 50Hz		
Capacity	Cooling	kW	5.6	7.1	8.0
	Heating		6.3	8.0	8.8
Input power		W	63	74	73
Airflow rate	High	m³/h	870	940	980
	Med		700	720	870
	Low		540	600	750
Sound pressure level	High	dB(A)	43	45	45
	Med		37	39	42
	Low		30	33	39
Dimensions (H x W x D)		mm	320 x 1,120 x 220		
Weight		kg	16		
Connection pipe diameter	Liquid (Flare)	mm	ø9.52		
	Gas (Flare)		ø15.88		
	Drain		ø12 (I.D.) ; ø16 (O.D.)		

AS✳: ASY(FUJITSU), ASH(GENERAL)
Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 27˚CDB / 19˚CWB, and outdoor temperature of 35˚CDB / 24˚CWB.
Heating : Indoor temperature of 20˚CDB / (15˚CWB), and outdoor temperature of 7˚CDB / 6˚CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.
Voltage : 230 [V].

Multi airflow

Large independently driven power diffuser used
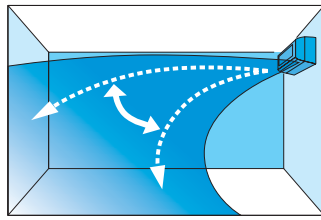
Cooling

Horizontal concentration and other air direction control
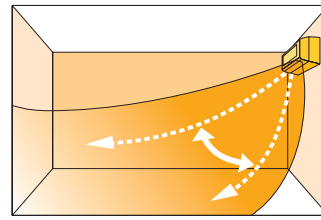
Steps
Swing

Power diffuser

Large independently driven power diffuser

Heating

Wide down flow
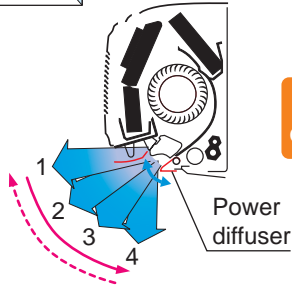
Steps
Swing
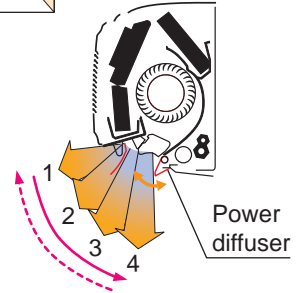
Power diffuser

Low noise

•High efficiency fan construction ⇒ ø7mm Lambda type evaporator improves the airflow path
•Large independently driven power diffuser
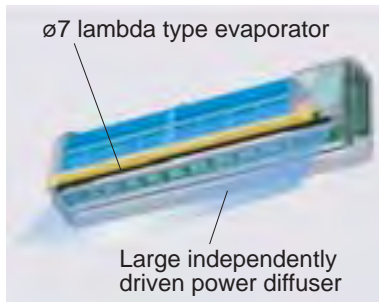
Low noise 30dB (AS18)

ø7 lambda type evaporator

Large independently driven power diffuser

Easy installation

Expanded work space at bottom of casing increases piping space by 15%.
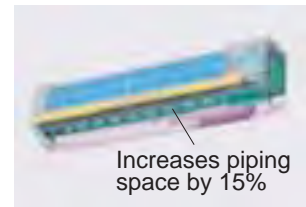
Increases piping space by 15%

Others

•Double auto swing
•2-way draining route

Dimensions

Models: AS*A18 / AS*A24 / AS*A30
(Unit : mm)
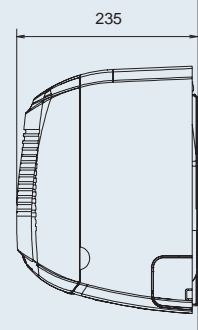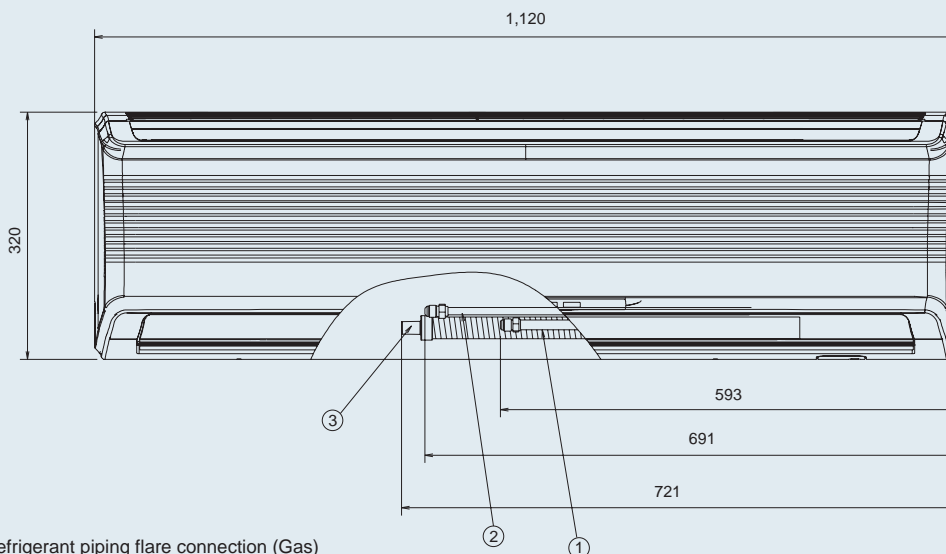
1,120

320

235

593

691

721

① Refrigerant piping flare connection (Gas)
② Refrigerant piping flare connection (Liquid)
③ Drain piping connection

Control System

The V-II system supports every users needs by offering a variety of Control systems, including individual control, central control and building management control options.

System Diagram

Building Management

Air Conditioning Central Control

System Controller (Software)

UTY-APGX

Internet or Public Telephone Line

USB Adaptor*2

(Field supplied)

Remote/Monitoring side

Touch Panel Controller

UTY-DTG∗

G∗:GY(FUJITSU)
　　GG(GENERAL)

Group Remote Controller

UTY-CGG∗

G∗:GY(FUJITSU)
　　GG(GENERAL)

Network Convertor
(UTY-VGGX)

BACnet® Gateway (Software) [Future release]

UTY-ABGX

USB Adaptor*2

(Field supplied)

Network Convertor (BMS / LONWORKS®) [Future release]

UTY-VLGX

General-purpose Building Control Computer

Connectable to various sized BMS/BAS*1

or

Web Monitoring Tool (Software)

UTY-AMGX

Internet or Public Telephone Line

(VRF system side)

USB Adaptor*2

(Field supplied)

(Monitoring side)

*1. BMS/BAS: Building Management System / Building Automation System
*2. USB Adaptor is U10 USB Network Interface of Echelon® Corporation.

The device above cannot be connected to the S or V series. (Except System Controller)

Air Conditioning Individual Control

Wired Remote Controller

UTY-RNK∗

K∗:KY(FUJITSU),KYT(FUJITSU)
   KG(GENERAL)

Simple Remote Controller

UTY-RSK∗

K∗:KY(FUJITSU),KYT(FUJITSU)
   KG(GENERAL)

Simple Remote Controller

UTY-RHK∗

K∗:KY(FUJITSU),KYT(FUJITSU)
   KG(GENERAL)

Wireless Remote Controller

UTY-LNH∗

H∗:HY(FUJITSU)
   HG(GENERAL)

System

Outdoor unit

Indoor unit
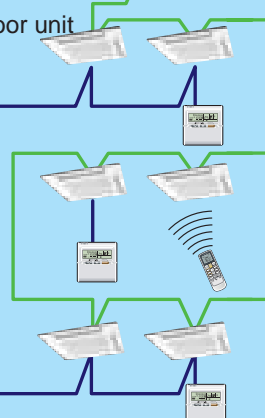
Signal Amplifier
UTY-VSGX

IR Receiver Unit
UTB-∗WB

∗W:YW(FUJITSU)
   GW(GENERAL)

IR Receiver Kit
UTY-LRH∗B1

∗B:YB(FUJITSU)
   GB(GENERAL)

Card-key

External Switch Controller
UTY-TEKX

(Field supplied)

Service Tool (Software)
UTY-ASGX

USB Adaptor∗2
(Field supplied)

For single split

Network Convertor
UTY-VGGX
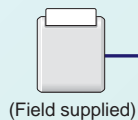
── Transmission line (VRF Network)	── LONWORKS Network
── Module link	── Ethernet
── Remote controller line	── Signal line(Single split system)
── USB cable	── Group Remote Controller line

Wiring System

·Wiring construction of the control system is made of power source wiring, transmission wiring and remote controller wiring.
·Total wiring length (total length of transmission line) can be extended up to 3,600m (by using signal amplifiers).

Max. Connectable	Max. Connectable	Max. Transmission line length
100 outdoor units	**400** indoor units	**3,600m**

System Controller UTY-APGX
·Maximum 1,600 indoor units can be controlled.
·Air conditioning control
·Operation monitoring
·Status monitoring system
·Electricity charge calculation

USB adaptor

NW1
NW2
NW3
NW4

Internet or Public Telephone Line

(Remote / Monitoring side)

(Remote / Monitoring side)

Refrigerant system 1   Refrigerant system 2

Network Convertor UTY-VGGX

Touch Panel Controller
One Touch Panel Controller can control up to 400 groups / 400 indoor units.

Group Remote Controller
Maximum 8 remote controller groups can be controlled

Building Management System

BACnet® [Future release]

BACnet® Gateway UTY-ABGX

USB adaptor

BACnet®

BACnet® Operator Workstation (B-OWS)

Network Convertor UTY-VLGX

LonWorks® [Future release]

LonWorks® Network

Remote controller line
Maximum 16 units can be controlled

IR Receiver Kit
Cassette type indoor unit can be controlled with Wireless Remote Controller

IR Receiver Unit
Duct type indoor unit can be controlled with Wireless Remote Controller.

System without remote controller
Together with Touch Panel Controller, it is possible to build non remote controller system.

Card key

2 Remote Controllers
Indoor unit can be controlled from both remote controllers.

External Switch Controller
Indoor units can be controlled by combining with Card-key switch such as hotel room.

Transmission line
line is non-polar 2-conductor.

Signal Amplifier UTY-VSGX

Network Convertor UTY-VGGX

Network Convertor UTY-VGGX

Web Monitoring Tool
Trouble free operation at all times by remote monitoring system.

Web Monitoring Tool UTY-AMGX

USB adaptor

(VRF system side)

Service Tool UTY-ASGX

Big multi system

Single system

Service Tool
Extensive monitoring and analysis functions for installation and maintenance.

Internet or Public Telephone Line

(Monitoring side)

(Monitoring side)

(Monitoring side)

USB adaptor

Combination of individual remote controller

Wired, Simple and Wireless Remote Controllers can be used jointly.

Outdoor unit
Touch Panel Controller
Simple Remote Controller
Transmission line

Indoor unit (Cassette)
Group Remote Controller
Wireless Remote Controller
Module link

Indoor unit (Duct)
Wired Remote Controller
External Switch Controller
Remote controller line

System Controller
Simple Remote Controller
IR Receiver unit
USB cable

LonWorks® Network

Ethernet

Signal line (single system)

Group Remote controller line

Transmission line (VRF Network)
LONWORKS Network
Module link
Ethernet
Remote controller line
Signal line(Single split system)
USB cable
Group Remote Controller line

Comparison table of Controllers

Item		Wired Remote Controller	Simple Remote Controller	Simple*1 Remote Controller	Wireless Remote Controller	Group Remote Controller	Touch Panel Controller	System Controller (Software)
Model name		UTY-RNKY UTY-RHKYT UTY-RNKG	UTY-RSKY UTY-RSKYT UTY-RSKG	UTY-RHKY UTY-RHKYT UTY-RHKG	UTY-LNHY UTY-LNHG	UTY-CGGY UTY-CGGG	UTY-DTGY UTY-DTGG	UTY-APGX
Max. controllable remote controller groups		1	1	1	1	8	400	1600
Max. controllable indoor units		16	16	16	16	96	400	1600
Max. controllable groups		–	–	–	–	–	400	1600
Air conditioning control function	On / Off	●	●	●	●	●	●	●
	Operating mode setting	●	●	–	●	●	●	●
	Fan speed setting	●	●	●	●	●	●	●
	Room temp. setting	●	●	●	●	●	●	●
	Room temp. set point limitation	–	–	–	●	–	●	●
	Test operation	●	●	–	●	–	●	–
	Up/down air direction flap setting	●	–	–	●	–	●	●
	Right/left air direction flap setting	●	–	–	●	–	●	●
	Group setting	–	–	–	●	–	●	●
	RC prohibition	–	–	–	–	–	●	●
	Anti freeze setting	–	–	–	–	–	●	●
	Economy mode setting	●	–	–	●	–	●	●
Display	Failure	●	●	●	–	●	●	●
	Defrosting	●	●	●	●	–	●	●
	Current time	●	–	–	●	●	●	●
	Day of week	●	–	–	–	●	●	●
	R.C. prohibition	●	●	●	–	–	●	●
	Cooling/heating priority	●	●	●	–	●	●	●
	Address display	●	●	●	–	●	●	●
Timer	System schedule timer	–	–	–	–	–	●	●
	On/off per day	–	–	–	–	–	20	72
	On/off per week	–	–	–	–	–	140	504
	Weekly timer	●	–	–	–	●	–	–
	On/off per day	2	–	–	–	2	–	–
	On/off per week	14	–	–	●	14	–	–
	On/off timer	●	–	–	●	–	–	–
	Sleep timer	–	–	–	●	–	–	–
	Program timer	–	–	–	●	–	–	–
	Day off	●	–	–	–	–	●	●
Control	Min. unit of timer setting(Minutes)	30	–	–	5	10	10	10
	Status monitoring system	–	–	–	–	–	●	●
	Electricity charge calculation	–	–	–	–	–	–	●
	Error history	●	●	●	–	●	●	●
	Emergency stop	–	–	–	–	–	●*2	–
	Control via internet	–	–	–	–	–	–	●
	E-mail notiffication for malfunction	–	–	–	–	–	–	●

*1 "Master control" setting is not available for this model.
*2 This function is available only through external input. control.

Wired Remote Controller

UTY-RNK*

The room temperature can be controlled by detecting the temperature accurately from the built-in sensor

•Simple operation with Built-in Weekly / Daily Timer.
•Control up to 16 indoor units.
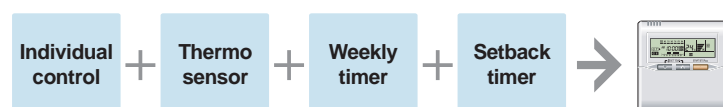•Up to 2 wired remote controllers can be connected to a single indoor unit.

Max. controllable
16
indoor units
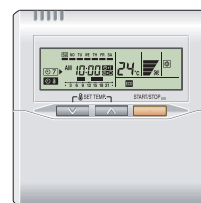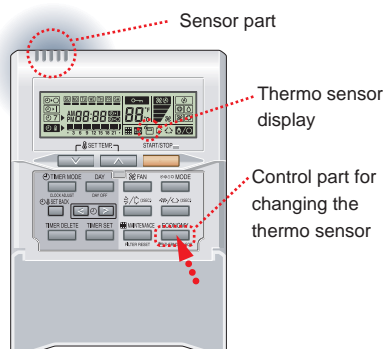
Functions

Powerful features and compact size

This Wired Remote Controller incorporates four primary functions into a single unit.

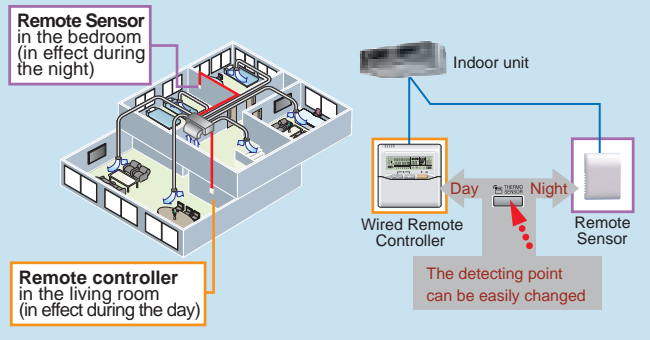| Individual control | + | Thermo sensor | + | Weekly timer | + | Setback timer | → |

Accurate and comfortable

Indoor temperature can be detected accurately by the inclusion of a thermo sensor in the body of the wired controller.
This new wired remote controller and the optional remote sensor allows flexibility in sensor location, suitable for all requirements.

Sensor part

Thermo sensor display

Control part for changing the thermo sensor

Example of changing sensor

Remote Sensor
in the bedroom
(in effect during the night)

Remote controller
in the living room
(in effect during the day)

Indoor unit

Day   Night

Wired Remote Controller

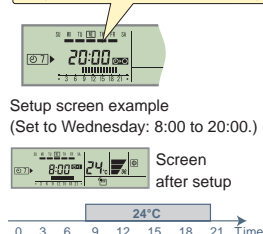Remote Sensor

The detecting point can be easily changed

Displayed temperature is set temperature.

Built-in timers

Weekly timer :
Possible to set ON/OFF time to operate twice each day of the week.

Easy-to-understand time bar display

Setup screen example
(Set to Wednesday: 8:00 to 20:00.)

Screen after setup

24°C
0 3 6 9 12 15 18 21 Time

Setback timer :
Possible to set temperature for two times spans and for each day of the week.

Setup screen example
(Set from Sunday to Saturday: 12:00 to 15:00, 28°C.)

28°C
0 3 6 9 12 15 18 21 Time

At "Weekly timer" + "Set back timer" setup

24°C →28°C→ 24°C

24°C   28°C
0 3 6 9 12 15 18 21 Time

Diagnosis check function

Two methods are available for determining the cause of failure in the event of a malfunction occurs:

•**Malfunction diagnosis function**
•**Error history (Last 16 error codes can be accessed)**

Simple installation

Components are compatible with standard switch boxes. Flat back surface allows to be installed wherever it is needed.

European mounting box   JIS built-in box
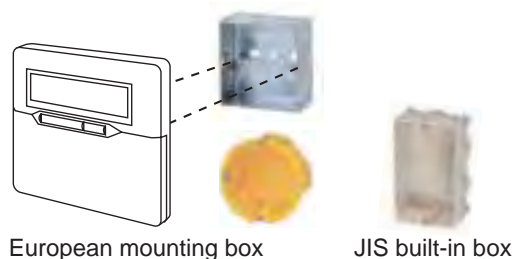
Specifications

Model name	UTY-RNK*
Power Supply	DC 12V
Dimensions (H x W x D) (mm)	120 x 120 x 17
Weight (g)	160

DC12V is supplied by the indoor unit.

K* : KY(FUJITSU), KYT(FUJITSU), KG(GENERAL)

Simple Remote Controller

UTY-RSK∗
UTY-RHK∗ (Without master control)

Compact remote controller provides access to basic functions

•Up to 16 indoor units can be controlled with one remote controller.
•Suitable for hotels or offices as it is easily operated with no complex functions.

Max. controllable
16
indoor units

UTY-RSK∗

UTY-RHK∗
Without master control

Functions

User-friendly operation

•Provides access to basic operations, such as Start / Stop, Fan control, Master control switching, and Room temperature setting.
•A large On / Off button is provided in the centre of the remote controller for easy operation.
•Can be used jointly with other individual control unit.
•Following an error display, diagnostics can be carried out on the controller.

Background light

•Background light enables easy operation in a darkened room.
•Background light activates during all button operations, and lasts 10 seconds in operating mode and 5 seconds in stop mode after a button is pressed.
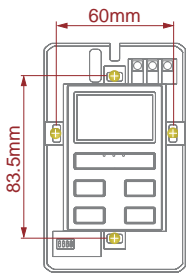
Simple installation

Can be mounted on the European Mounting Box (Installation dimension: 60mm) or the JIS Built-in Box (Installation dimension: 83.5mm).

60mm

83.5mm
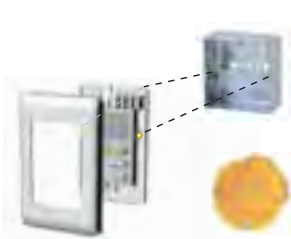
European switch box   JIS built-in box

Functions

Operation	UTY-RSK∗	UTY-RHK∗
On / Off	●	●
Fan control	●	●
Master control	●	── *1
Room temp. setting	●	●

*1: "Master control" setting is not available.
It is recommend to use together with other type controller.

Specifications

Model name	UTY-RSK∗	UTY-RHK∗
Power Supply	DC 12V	
Dimensions (H x W x D) (mm)	120 x 75 x 14	
Weight (g)	90 (100 : UTY-RSKYT)	90 (100 : UTY-RHKYT)

DC12V is supplied by the indoor unit.

K∗ : KY(FUJITSU), KYT(FUJITSU), KG(GENERAL)

Wireless Remote Controller

UTY-LNH∗

Simple and sophisticated operations
with a choice of 4 daily timers

• A single controller controls up to 16 indoor units.

Max. controllable
16
indoor units

Selectable
4
**daily timers**

Functions

Built-in daily timer

Select from 4 different timer programs : On / Off / Program / Sleep
Program timer : The program timer operates the ON and OFF timer once within a 24 hour period.
Sleep timer : The sleep timer function automatically corrects the set temperature according to the time setting to prevent excessive cooling or heating during sleep hours.

Cooling operation/dry operation

When the sleep timer is set, the set temperature automatically rises 1˚C every hour. The set temperature can rise up to a maximum of 2˚C.
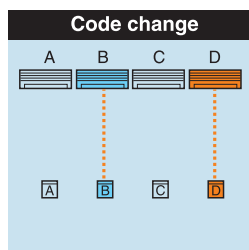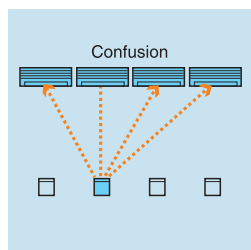
Timer setting
60min.
1˚C
2˚C
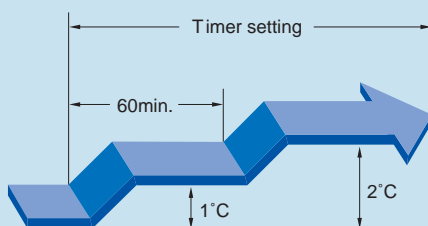
Heating operation

When the sleep timer is set, the set temperature automatically drops 1˚C every 30 minutes. The set temperature can drop to a max. of 4˚C.
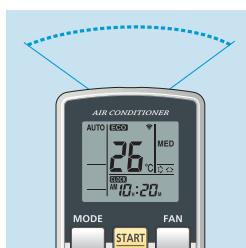
1˚C 2˚C 3˚C 4˚C
30min.
60min.
90min.
Timer setting
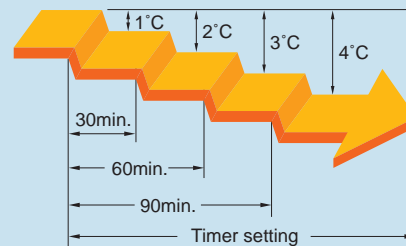
Easy installation and operation

• Code selector switch prevents indoor unit mix-up. (Up to 4 codes can be set.)

Confusion

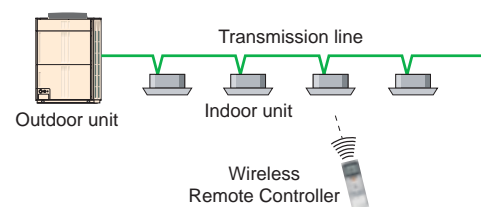**Code change**

A B C D

A B C D

•Wide and precise transmitting range.

System addressing

• During installation work, system addressing can be performed using the Wireless Remote Controller, thus eliminating manual switch setting.

Transmission line
Outdoor unit
Indoor unit
Wireless Remote Controller

Specifications

Model name	UTY-LNH∗
Battery	1.5V (R03 / LR03 / AAA) x 2
Dimensions (H x W x D) (mm)	158 x 56 x 20
Weight (g)	70

H∗ : HY(FUJITSU), HG(GENERAL)

IR Receiver Unit

UTB-*WB

Necessary to control for all duct type by Wireless Remote Controller
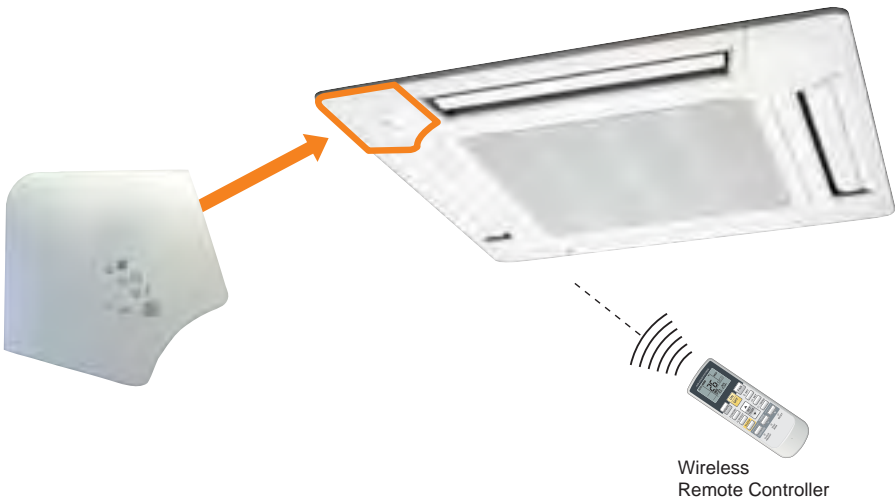

Wiring connection

Duct Type Indoor Unit

IR Receiver Unit

Wireless Remote Controller
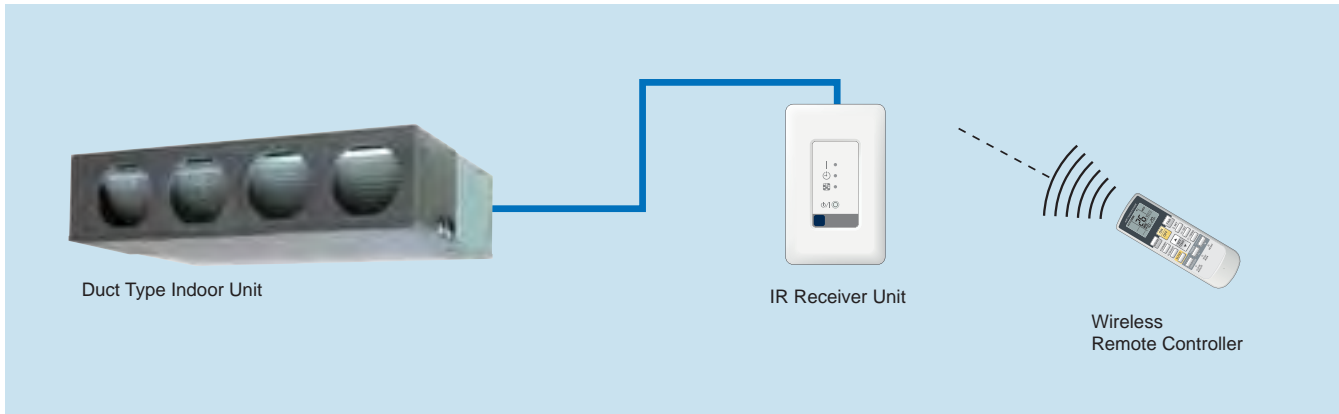
Specifications

Model name	UTB-*WB
Dimensions (H x W x D) (mm)	122 x 60 x 26.5
Weight (g)	150

*WB : YWB(FUJITSU), GWB(GENERAL)

IR Receiver Kit

UTY-LRH*B1

Cassette type indoor unit can be controlled with Wireless Remote Controller

Wireless Remote Controller

Specifications

Model name	UTY-LRH*B1
Dimensions (H x W x D) (mm)	213.8 x 213.8x 25.7
Weight (g)	140

H* : HY(FUJITSU), HG(GENERAL)

Group Remote Controller

UTY-CGG*

Max. controllable
8
remote controller groups

Max. connectable
64
group R.C. in a VRF network system
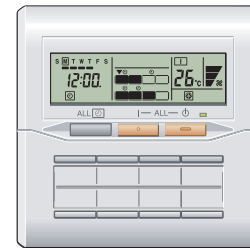
Group control of indoor units with simple operation

- Up to 8 remote controller groups can be controlled by one Group Remote Controller.
- Up to 64 Group Remote Controllers can be connected in one VRF network system.
- Network Convertor (UTY-VGGX) is required to connect Group Remote Controllers to a VRF network system.
  (Network Convertor allows up to 4 Group Remote Controllers)

Functions

High performance and compact size

ON / OFF, Operating mode, Room temperature and Fan speed setting can be controlled / monitored centrally or individually.

Central control + **ON/OFF control** + **Weekly timer** →

Control up to 8 remote controller groups

- Single Group Remote Controller controls and monitors up to 8 remote controller groups.

**Office & hotel building (Small class)**
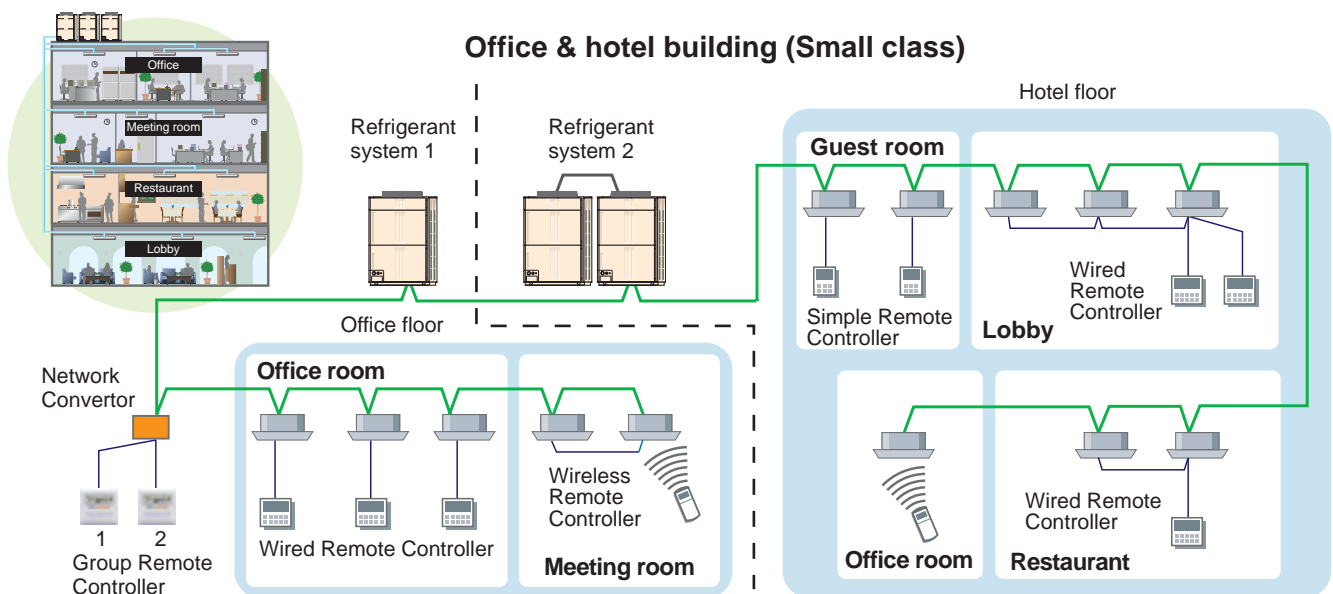
Group Remote Controller 1: To control office floor and hotel floor (8 remote controller groups).
Group Remote Controller 2: To control hotel floor (5 remote controller groups).

Built-in weekly timers

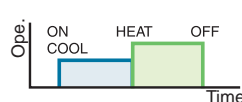The weekly timer is provided as a standard function.
1. The timer can be set up for up to 4 times per day. (On / Off, operating mode, set temperature)
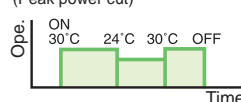2. Allows separate settings for each day of the week.

ON / OFF switching
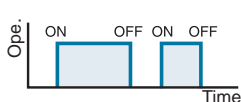
Air conditioning ON/OFF setting corresponding to air conditioning specification needs is possible.
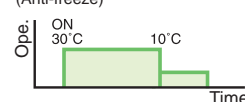
Cooling / Heating switching

Switching between the cooling mode and heating mode can be set by time.
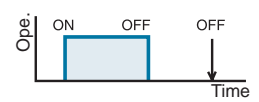
Temperature switching (Peak power cut)

Since peak power cut is performed in a planned way, setting which changes the room temperature linked with time is possible.

Temperature switching (Anti-freeze)

Low temperature heating operation can be set to prevent freezing in cold regions at night, etc.

Stop setting

Indoor unit stop setting at operation end time is possible.

G* : GY(FUJITSU), GG(GENERAL)

Useful functions

1 Timer setting at all the connected indoor units is possible by centralized timer on the front panel.

ALL TIMER Button

Press the ALL TIMER button to turn the timer operation on or off for all indoor units.

3 The indoor unit can be quickly turned on and off by ON / OFF button of each indoor unit on the front of the door.
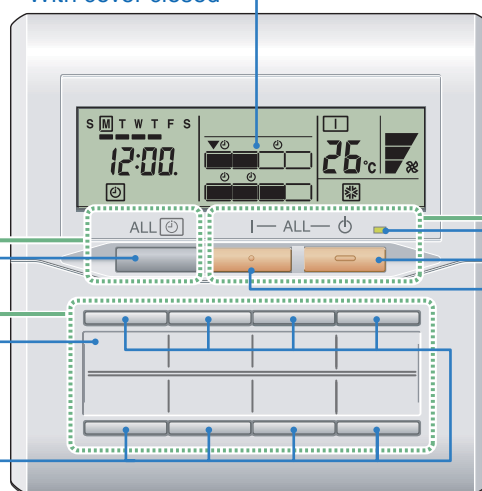
Indoor Unit Name Labels

Write the names of the indoor units on the included labels and attach them.

ON / OFF Button

Press the ON / OFF button to turn the corresponding indoor unit on or off.

With cover closed

Indoor Unit Operation Indicators

Timer setting at all the connected indoor units is possible by centralized timer on the front panel.

■ : On   □ : Off
⊙ : Timer operation   ▼ : Selection

2 All the connected indoor units can be turned on / off simultaneously by centralized ON/OFF button on the front of the cover.

Operation Lamp

This is on if any of the indoor units is operating. This flashes if any of the indoor units has malfunction(s).

ALL OFF Button

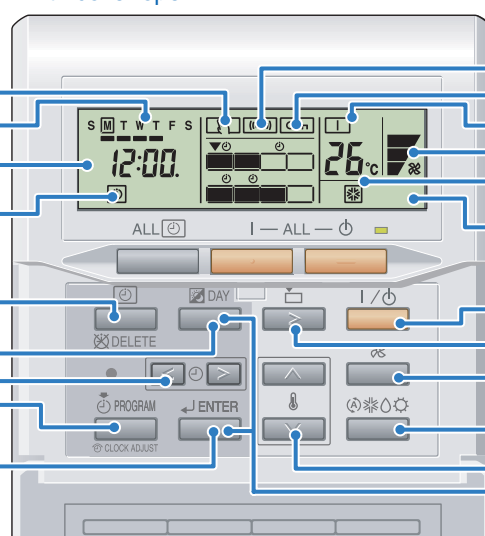Press the ALL OFF button to turn off all of the indoor units.

ALL ON Button

Press the ALL ON button to turn on all of the indoor units.

With cover open

Timer and Clock Display and setting

- Setting Display
- Day Display
- Timer and Clock Display
- Timer Mode Display
- Timer Mode (DELETE) Button
- DAY Button
- Set Time Button
- PROGRAM (CLOCK ADJUST) Button
- ENTER Button

Displaying the Status and Controlling indoor units

- Transmission Display
- Operation Lock Display
- ON / OFF Display
- Fan Speed Display
- Set Temperature Display
- Operation Mode Display
- ON / OFF Button
- Select Button
- Fan Control Button
- Master Control Button *1, *2, *3
- Set Temperature Button
- Child Lock Function

*1 : "AUTOⒶ" is not available for a heat pump model unless it is set up for the master indoor unit.

*2 : "FAN❆" is not available for a heat pump model

*3 : "HEAT☼" is not available for a cooling only model

Specifications

Model name	UTY-CGG✻
Power Supply	DC 12V
Dimensions (H x W x D) (mm)	120 x 120 x 17
Weight (g)	200

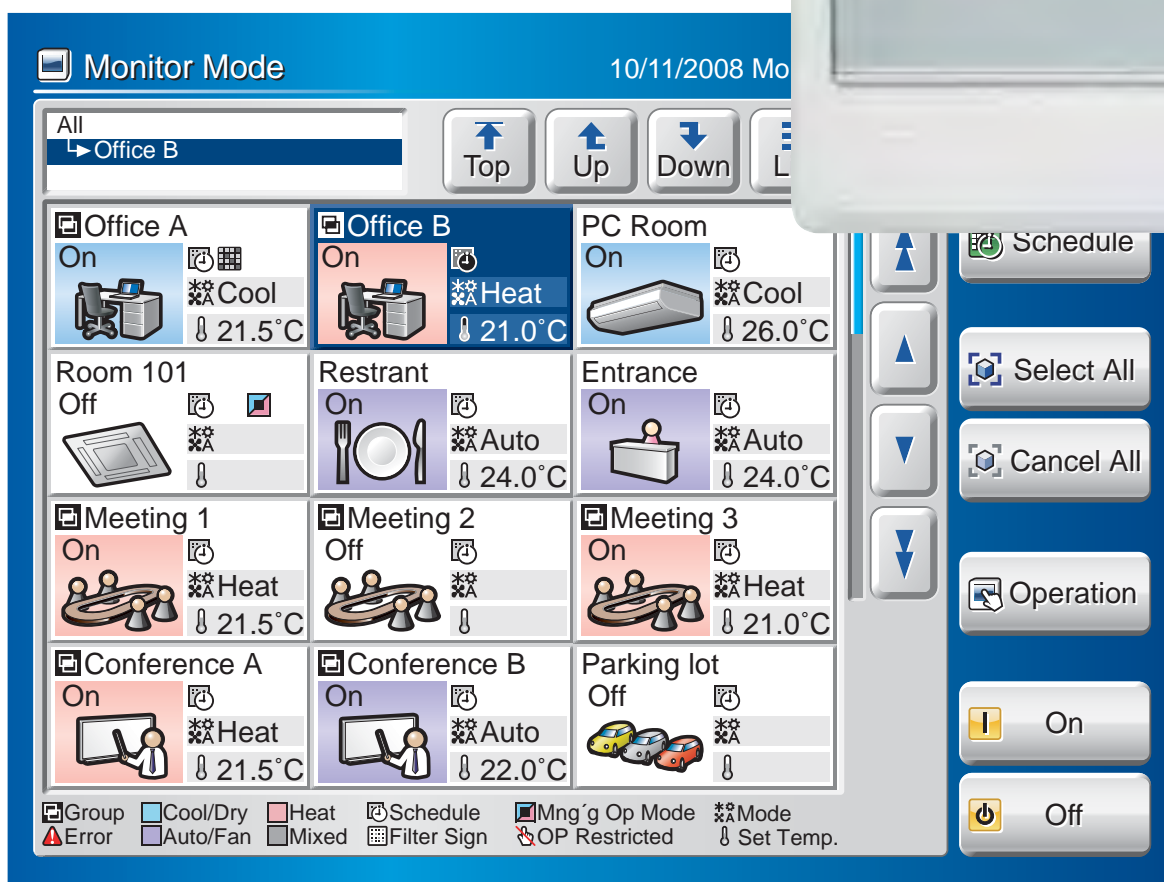DC12V is supplied by a network converter.

Touch Panel Controller

UTY-DTG∗

7.5 inch screen	High visibility and easy operation via high resolution 7.5 inch TFT-LCD touch panel screen
Stylish design	Stylish shape and design to suit all applications

Monitor Mode — 10/11/2008 Mo...

Office A	Office B	PC Room
On — Cool 21.5˚C	On — Heat 21.0˚C	On — Cool 26.0˚C
Room 101 Off	Restrant On — Auto 24.0˚C	Entrance On — Auto 24.0˚C
Meeting 1 On — Heat 21.5˚C	Meeting 2 Off	Meeting 3 On — Heat 21.0˚C
Conference A On — Heat 21.5˚C	Conference B On — Auto 22.0˚C	Parking lot Off

All → Office B

Top | Up | Down

Schedule | Select All | Cancel All | Operation | On | Off

Group | Cool/Dry | Heat | Schedule | Mng´g Op Mode | Mode
Error | Auto/Fan | Mixed | Filter Sign | OP Restricted | Set Temp.

Real size screen image

Easy operation

- Large and wide-angled LCD is easily viewable even at a distance
- Easy-to-understand icon-driven Graphical User Interface (GUI)
- Wide range of simple-to-understand icons
- Operation can be selected using your finger or the dedicated touch pen by pressing the appropriate on-screen icon
- Up-to-date status display
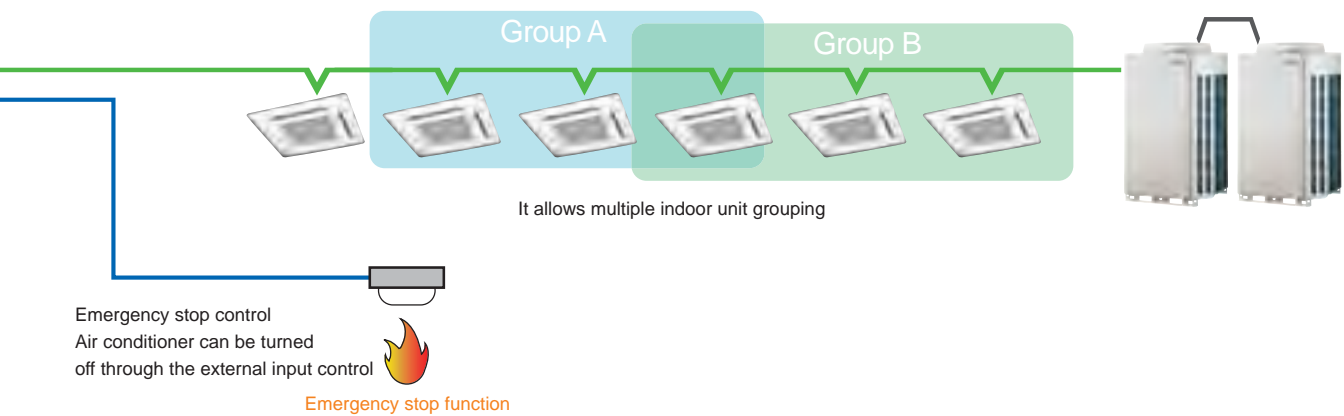- Background color identifies current control operation Blue for monitoring, green for operational control

Easy maintenance

- Flat touch screen is easily cleaned
- Non-glare coating on touch panel controller minimizes fingerprint marking
- Easy-to-remove front cover

G∗ : GY(FUJITSU), GG(GENERAL)

Up to 400 indoor units can be controlled

Group A

Group B

It allows multiple indoor unit grouping

Emergency stop control
Air conditioner can be turned
off through the external input control

Emergency stop function

Versatility

Data transfer available
by USB

• CSV format data edited by PC can be
imported to Touch Panel Controller.

Function

• Up to 400 indoor units can be controlled
• It allows multiple indoor units grouping
• Schedule timer function is standard(20 patterns per day)

• Emergency stop function(through the external input control)
• Temperature upper and lower limit setting
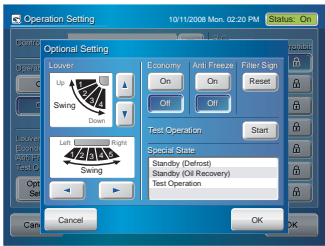• The clock of each indoor unit correct setting

Individual control

Flexible grouping

Schedule control

Indoor units operation monitoring

Easy installation

Touch Panel Controller is easily mounted to the wall
Flat back surface allows to be installed wherever it is needed.

• Correctable mechanism for tilting (horizontal)
after the installation of the body

No additional component is required
for installation

• There is no need for the installation space of
power supply adaptor and transmission
adaptor etc.

Specifications

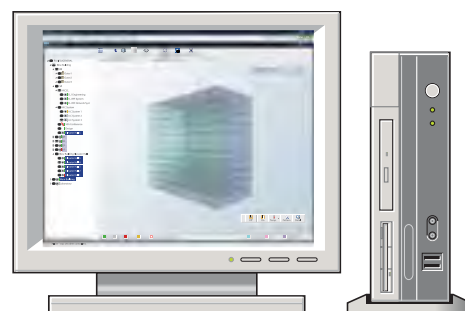| Model name	UTY-DTG∗
Power Supply	100-240V 50/60Hz
Dimensions (H x W x D) (mm)	260 x 246 x 54
Weight (g)	2,150
Interface	USB 2.0

System Controller

UTY-APGX

This system realizes the advanced general monitoring & control of VRF system from small scale buildings to large scale buildings.

Max. controllable **4** VRF system

Max. controllable **400** outdoor units

Max. controllable **1,600** indoor units

- Up to a maximum of 4 network systems, 1600 indoor units, and 400 outdoor units can be controlled.
- Supports VRF S series, V series and V-II series.
- In addition to air conditioning precision control function, central remote control, electricity charge calculation, schedule management, and energy saving functions are strengthened and building manager and owner needs are met.

Functions

Remote centralized control

System controller may be used on site or remotely over various networks for remote central control. System controller requires 2 softwares working together. Server program runs in the background and communicate with VRF System. Client program provides user interface and communicate with the Server. Server and client program may run in a single PC or in different PCs separated by network.

By using client software, one PC can perform central control and web control of 10 VRF system sites with max. 20 buildings per site.

On site central control

Max. 4 network system per site

Server & Client
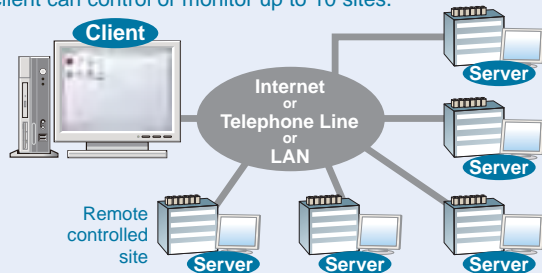
USB adaptor

USB Port
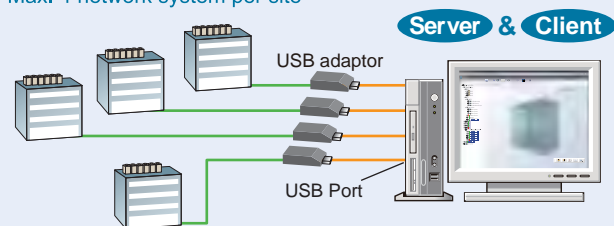
1 network system

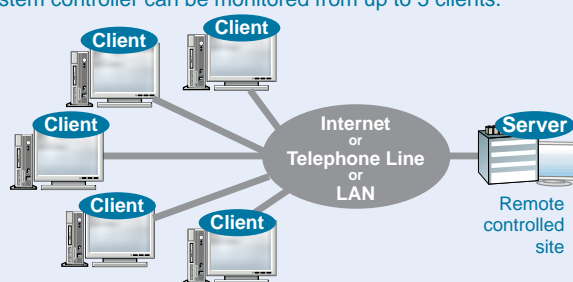| Max. controllable		Max. transmission line length
400 Indoor units	100 Outdor units	3,600m

Remote central control

1 client can control or monitor up to 10 sites.

1 system controller can be monitored from up to 5 clients.

Client

Internet or Telephone Line or LAN

Server

Server

Remote controlled site

Server

Server

Server

Client

Client

Client

Client

Client

Client

Internet or Telephone Line or LAN

Server

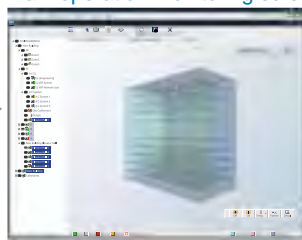Remote controlled site

User friendly view and operation

Monitoring located site
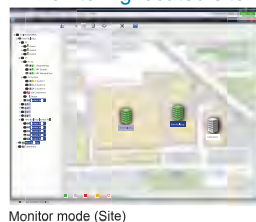
Monitor mode (Site)

Main operation monitoring screen

Monitor mode (Building)

- Provides graphical view of units layout as site , building and floor layout just as they are located in the actual sites.
- Unit status may be monitored at a glance, selecting the appropriate view that just fit your purpose.
- Control may also be performed from various views as individual unit or as a whole site, building or a whole floor.
- User defined groups, that are neatly arrange as tree view, easy to find, monitor and operate.
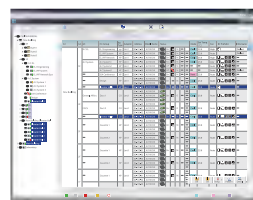
Air conditioning control
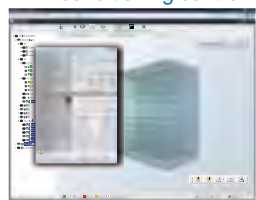
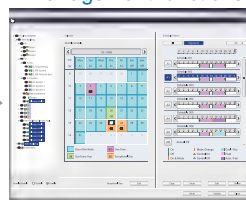Operation setting

Operation monitoring of each site
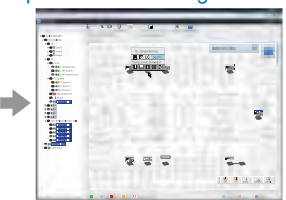
Monitor mode (Floor)

Monitor mode (List)

Management functions

Schedule setting

Electricity charge calculation

• Total electricity charge, billed for multiple indoor units connected to the charge meter for air conditioning, is apportioned according to the accumulated operation time and indoor unit capacity.
• Allows accounting for special rates (e.g., for night or weekend use).
• Calculations can be printed as final bills format.
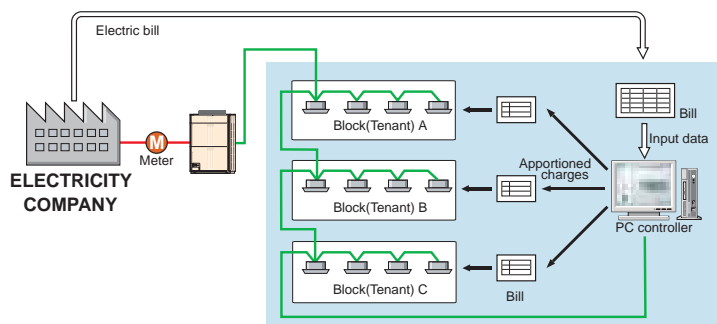
Note: This electrical power apportioning calculation is not official.
When issued to the user as a bill, it must be explained to the user in advance.

Schedule control

• Annual schedules can be set for each remote controller group / user defined group.
• Start / stop, operating mode, remote controller prohibition, and temperature settings can be recorded up to 143 times per day at 10 minute intervals for up to 101 configurations for each remote controller group.
• Settings can be made for periods straddling midnight.
• Allows programming of special settings for holidays, including public holidays, for a complete year.
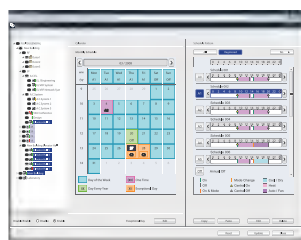
Schedule Control

Error display

Error is notified with popup message, audible sound and e-mail real time when error occurs. Error for the past 1 year are iogged and can be reviewed later.

Operating & control record

Displays the history of operation status and control.

Operation Record

Diverse control of indoor units

· Indoor unit operation state, operation mode, etc. are displayed
· Indoor unit start/stop and operation mode switching
· Temperature setting, Remote Controller prohibition.

Energy saving function

Energy saving operation considering comfort by economy setting, upper/lower limit temperature setting, etc.

OPERATING CONDITIONS

The following chart shows the detail requirement for an AT compatible personal computer to run System Controller.
Applies for both server and client software.

| Personal Computer		AT compatible machine that runs Microsoft® Windows®
	Operating System	Microsoft® Windows® Vista Home Premium, Business, Ultimate Edition
		Microsoft® Windows® XP Professional with Service Pack2 or later
	CPU	Intel® Pentium® / Celeron 2GHz (Server), 1GHz (Client) or higher
	HDD	40GB or more of free space (5GB for Client PC)
	Memory	1GB or more
	Display	1024 x 768 dots or more. 15 inch or higher size is preferable.
	Interface	USB port is required for each of the followings for Server PC; -Wibu Key (Software protection key) - Echelon® U10 USB Network Interface (Required for each VRF Network) Ethernet port is required for remote connection using internet.
Other Software Required		Adobe® Acrobat® reader 4.0 or later
Accelerator		Requires the internal graphics accelerator be compatible with Microsoft® DirectX® 9.0 or later.

<PACKING LIST>

Item	Q'ty	Application
CD-ROM	1	Includes the software for System Controller. Both server and client software is included.
Wibu Key (Soft ware protection key)	1	Software protection key to be inserted in a USB slot running System Controller. System Controller may only run on a PC with Wibu Key. Remote client software does not require Wibu Key.

Personal computer must be field supplied.
U10 USB Network Interface must be field supplied. Contact EchelonR Corporation or its local sales representative for detail.
Product Name : U10 USB Network Interface - TP/FT-10 Channel   Model Number: 75010R
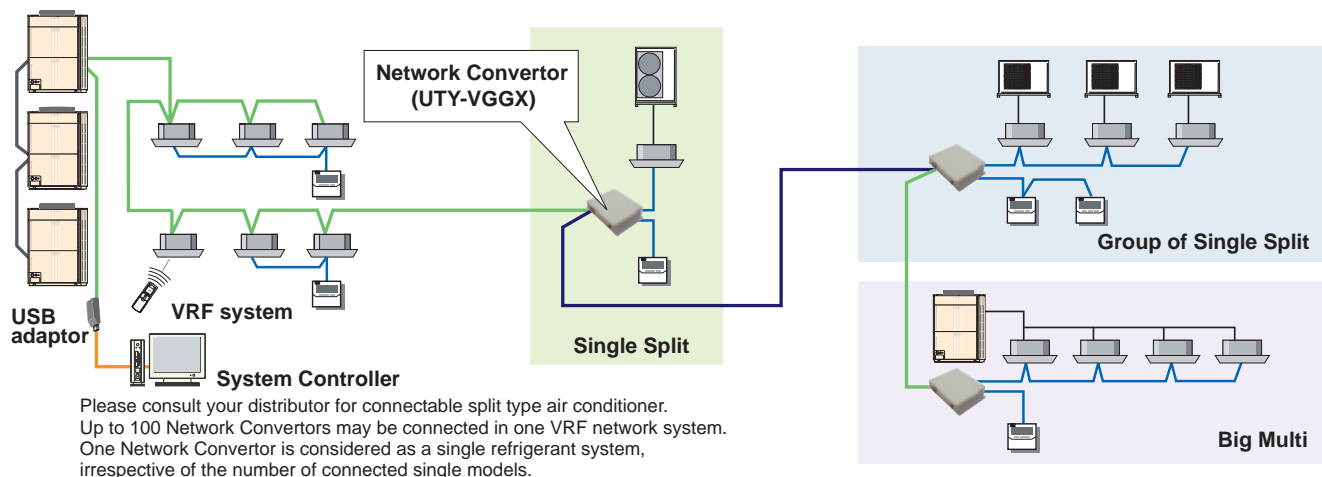
Network Convertor

UTY-VGGX

- This Network Convertor is to be used for connecting single split system or Group Remote Controller (UTY-CGGY/ UTY-CGGG) with the VRF system.
- Please select the function by switching the dip switch during the installation.
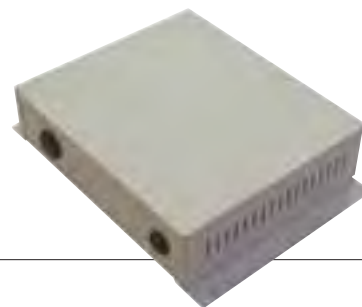
Used for connecting single split system

- Split type systems can be centrally controlled from Touch Panel Controller or System Controller through connection to the VRF's network convertor.
- On / Off Control, Master control, Room temperature and Fan speed setting via the Network Convertor are available.
- One Network Convertor can be used to connect and control up to 16 single units.

USB adaptor

VRF system

System Controller

Network Convertor (UTY-VGGX)

Single Split

Group of Single Split

Big Multi

Please consult your distributor for connectable split type air conditioner.
Up to 100 Network Convertors may be connected in one VRF network system.
One Network Convertor is considered as a single refrigerant system, irrespective of the number of connected single models.

Used for connecting Group Remote Controller

- 4 Group Remort Controllers can be connected to a single Network Convertor (UTY-VGGX).

Max. connectable Network Convertor
16 units

VRF system

Network Convertor (UTY-VGGX)

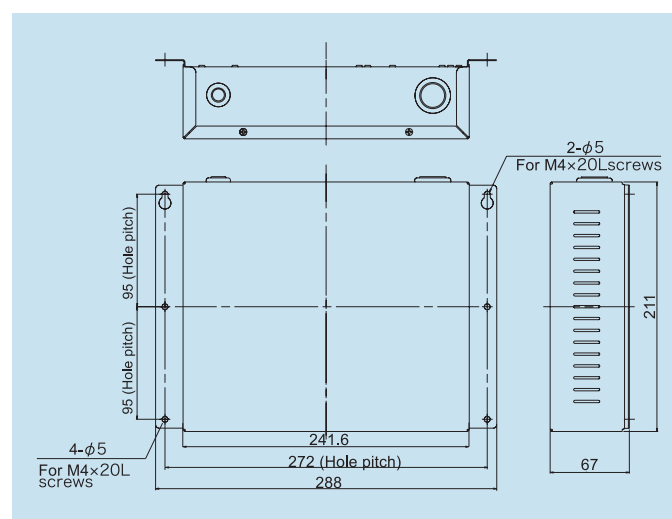**Group Remote Controller UTY-CGGY / UTY-CGGG**
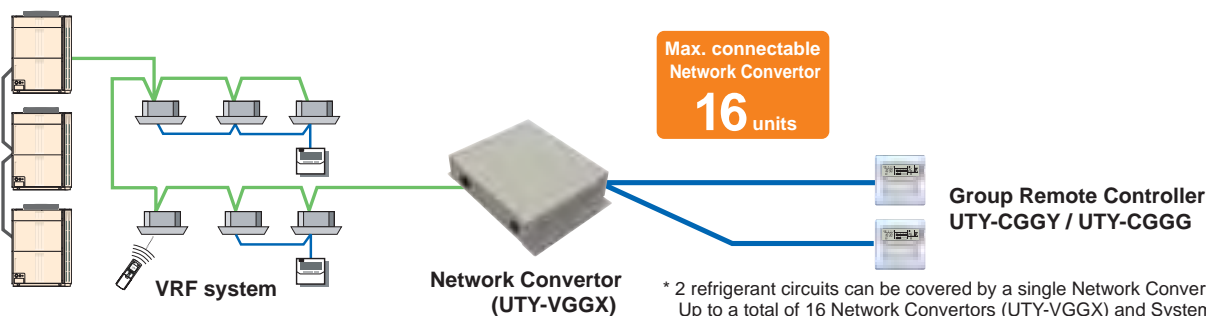
* 2 refrigerant circuits can be covered by a single Network Convertor (UTY-VGGX) . Up to a total of 16 Network Convertors (UTY-VGGX) and System Controller adaptors can be connected in a single VRF system.

Specifications

Model name	UTY-VGGX
Power Supply	220-240V 50/60Hz
Power Consumption (W)	6.5
Dimensions (H x W x D) (mm)	67 x 288 x 211
Weight (g)	1,500

Dimensions

2-φ5
For M4×20Lscrews

95 (Hole pitch)
95 (Hole pitch)

241.6
272 (Hole pitch)
288

4-φ5
For M4×20L screws

211
67

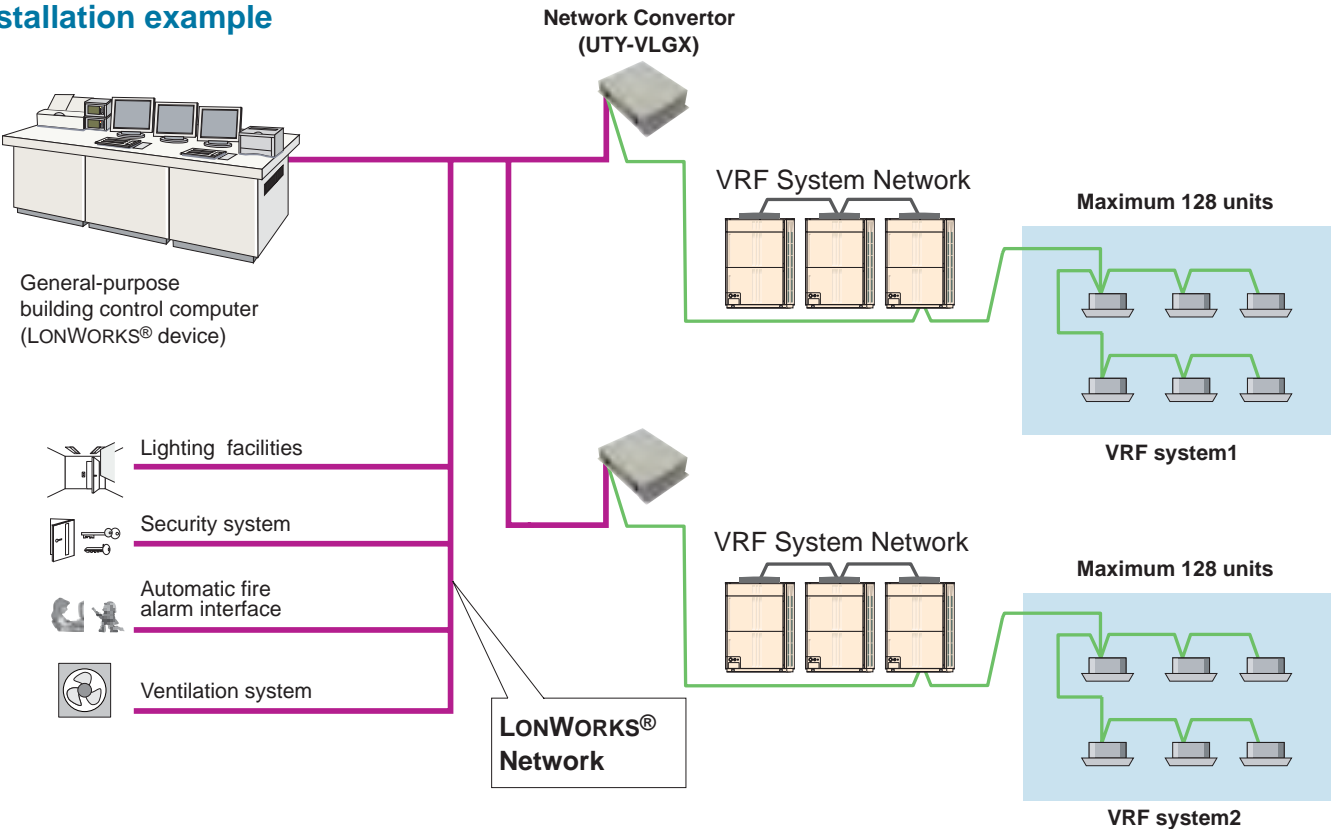# Network Convertor for LONWORKS® (Future Release)

UTY-VLGX

Max. controllable 128 units indoor units

• For connection between VRF system and a LONWORKS® open network for management of small to medium-sized BMS and VRF systems.
• The UTY-VLGX permits central monitoring and control of a VRF system from a BMS through a LONWORKS® interface.
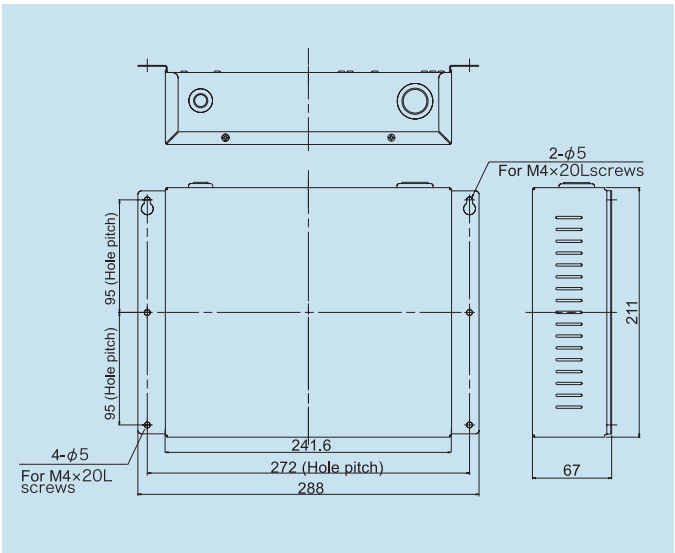• Up to 128 Indoor units can be connected to one Network Convertor for LONWORKS®

Installation example

Network Convertor
(UTY-VLGX)

VRF System Network

Maximum 128 units

VRF system1

General-purpose
building control computer
(LONWORKS® device)

Lighting facilities

Security system

Automatic fire
alarm interface

Ventilation system

LONWORKS®
Network

VRF System Network

Maximum 128 units

VRF system2

Specifications

Model name	UTY-VLGX
Power Supply	220-240V 50/60Hz
Power Consumption (W)	4.5
Dimensions (H x W x D) (mm)	67 x 288 x 211
Weight (g)	1,500

Transmission specifications (BMS side)

Transmission speed	78kbps
Transceiver	FTT-10A
Transmission way form	Free topology
Termined resistor	None (It attaches at the terminal of a network.)

Dimensions

95 (Hole pitch)
95 (Hole pitch)
4-φ5
For M4×20L screws
241.6
272 (Hole pitch)
288
2-φ5
For M4×20Lscrews
211
67

BACnet® Gateway — Software (Future Release)

UTY-ABGX

Max. controllable	Max. controllable	Max. controllable
4	**400**	**1,600**
VRF system	outdoor units	indoor units

CD-ROM (Software)

Software Protection Key
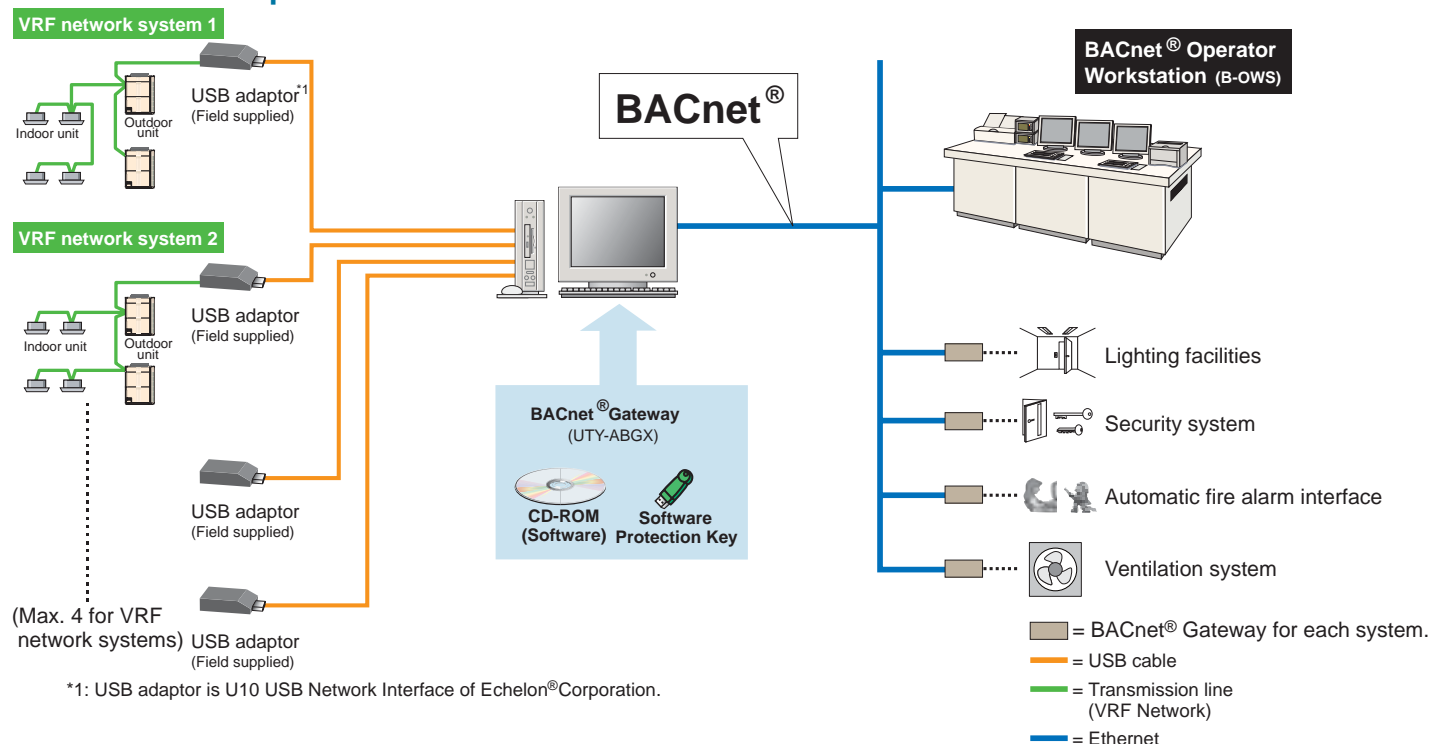
- The VRF system can be incorporated into a Building Management System.
- Enables central control of up to 1,600 indoor units through BACnet®, a global standard for open networks.
- Conforms to ANSI / ASHRAE Standards® 135-2001 BACnet® Application Specific Controller (B-ASC) BACnet® / IP over Ethernet.
- Connects up to 4 VRF systems (1,600 indoor units / 400 outdoor units) per gateway.
- Ideal for applications in high rise buildings and hotels, etc.

Installation example

VRF network system 1

USB adaptor*1 (Field supplied)

Indoor unit   Outdoor unit

VRF network system 2

USB adaptor (Field supplied)

Indoor unit   Outdoor unit

USB adaptor (Field supplied)

(Max. 4 for VRF network systems) USB adaptor (Field supplied)

*1: USB adaptor is U10 USB Network Interface of Echelon®Corporation.

BACnet®

BACnet® Gateway (UTY-ABGX)

CD-ROM (Software)   Software Protection Key

BACnet® Operator Workstation (B-OWS)

Lighting facilities

Security system

Automatic fire alarm interface

Ventilation system

= BACnet® Gateway for each system.
= USB cable
= Transmission line (VRF Network)
= Ethernet

Requirements of PC for this software

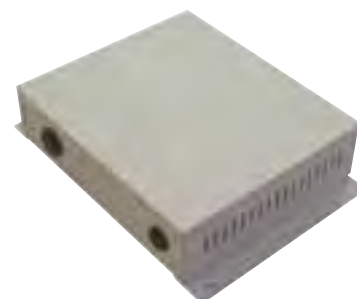| Personal Computer		AT compatible machine that runs Microsoft® Windows®
	Operating System	Microsoft® Windows® Vista Home Premium, Business, Ultimate Edition Microsoft® Windows® XP Professional with Service Pack2 or later
	CPU	Intel® Pentium® / Celeron 2GHz or higher
	Memory	1GB (Vista) , 512MB (XP) or more
	Display	1024 x 768 dots or more
	Interface	USB port is required for each of the followings; -Wibu Key (Software protection key) - Echelon® U10 USB Network Interface (Required for each VRF Network) Ethernet port is required
Other Software Required		Adobe® Acrobat® reader 4.0 or later

<PACKING LIST>
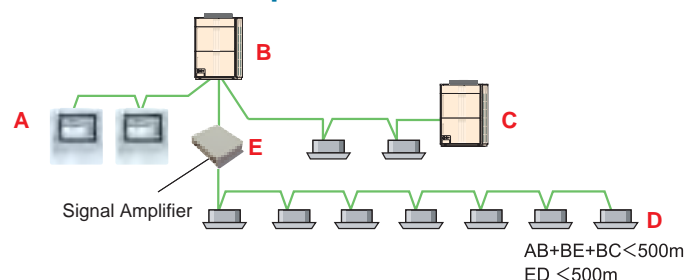
Packing List	CD-ROM / Wibu Key

Signal Amplifier

UTY-VSGX

• Transmission Line length can be extended up to 3,600m with multiple Signal Amplifiers.

• Up to 8 signal amplifiers can be installed in a VRF network system.

• A signal amplifier is required,

(1) When the total wiring length of the transmission line exceeds 500m.

(2) When the total number of units on the transmission line exceeds 64.

Installation example

A
B
C
D
E

Signal Amplifier

AB+BE+BC＜500m
ED ＜500m

Dimensions

2-φ5
For M4×20Lscrews

95 (Hole pitch)
95 (Hole pitch)

4-φ5
For M4×20L screws

241.6
272 (Hole pitch)
288

211

67

Specifications

Model name	UTY-VSGX
Power Supply	220-240V 50/60Hz
Power Consumption (W)	4.5
Dimensions (H X W X D) (mm)	67 X 288 X 211
Weight (g)	1,500
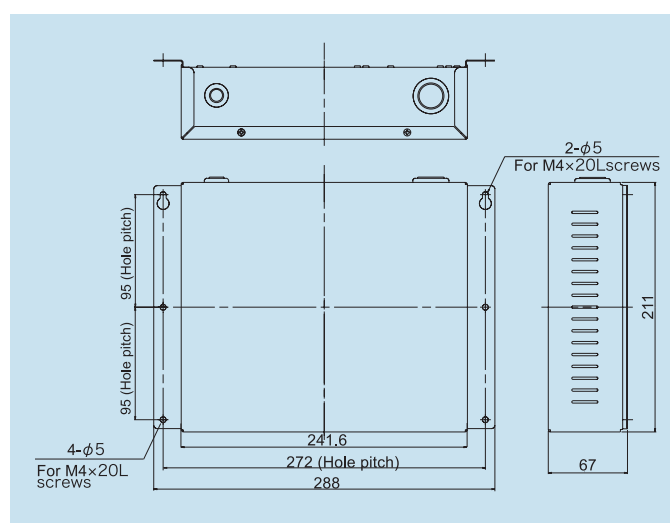
External Switch Controller

UTY-TEKX

Air conditioner switching can be controlled by connecting other sensor switches

• In combination with a field supply Card-Key Switch or other sensor, the External Switch Controller allows control of the ON / OFF, Room temperature, Fan speed and Master control functions. This makes this product suitable for installations such as hotel rooms.

• Card-key or other sensor switches are available as a field supplied parts.
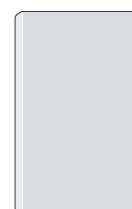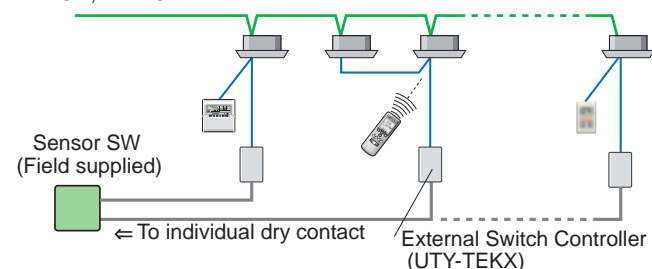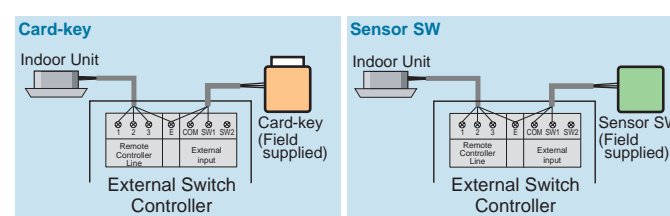
Installation example

• Auto mode operation, which switches the cooling and the heating automatically, is enabled by using the sensor switch and External Switch Controller.
  Note: All indoor units will operate in the same mode.

Room temp.
T1
Cooling
T2
Heating
Time

Note 1.
Please choose a thermosensor switch which can be set up for T1 and T2.

Note 2.
The remote controller's operation is prior to the auto mode operation.

T1 = ON, T2 = OFF

Sensor SW
(Field supplied)

⇐ To individual dry contact

External Switch Controller
(UTY-TEKX)

Electrical wiring

Card-key

Indoor Unit

1 2 3 E COM SW1 SW2
Remote Controller Line   External input

External Switch Controller

Card-key
(Field supplied)

Sensor SW

Indoor Unit

1 2 3 E COM SW1 SW2
Remote Controller Line   External input

External Switch Controller

Sensor SW
(Field supplied)

Specifications

Model name	UTY-TEKX
Power Supply	DC 12V
Dimensions (H x W x D) (mm)	120 x 75 x 30
Weight (g)	90

DC12V is supplied by the indoor unit.

Service Tool (Software)

UTY-ASGX

Extensive monitoring and analysis functions for installation
and maintenance

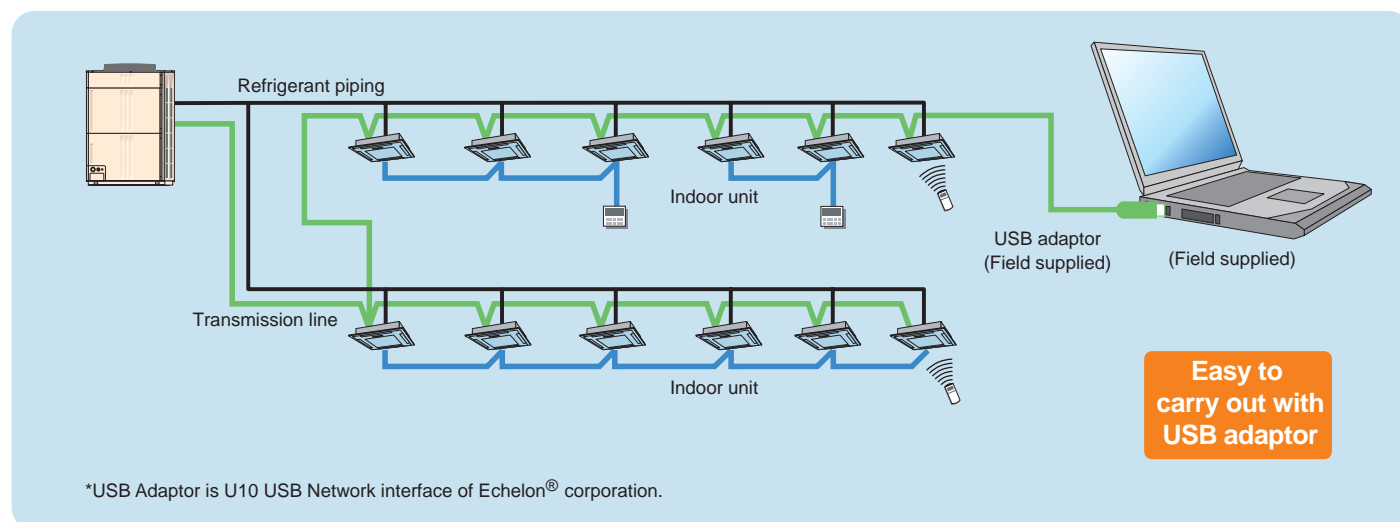| Max. Monitor and controll	Max. Monitor and controll
100 outdoor units	**400** indoor units

•Operation status can be checked and analyzed to detect even the smallest abnormalities.
•Storage of data on system operation status on a PC allows access even from off site.
•Up to 400 indoor units (a single VRF system) can be controlled and monitored for large scale buildings or hotels.
•This software can be connected to any point of transmission line with USB adaptor (field supplied)

Wiring connection

Refrigerant piping

Indoor unit

USB adaptor
(Field supplied)   (Field supplied)

Transmission line

Indoor unit

Easy to carry out with USB adaptor

*USB Adaptor is U10 USB Network interface of Echelon® corporation.

Functions

Equipment Detail (Diagram)
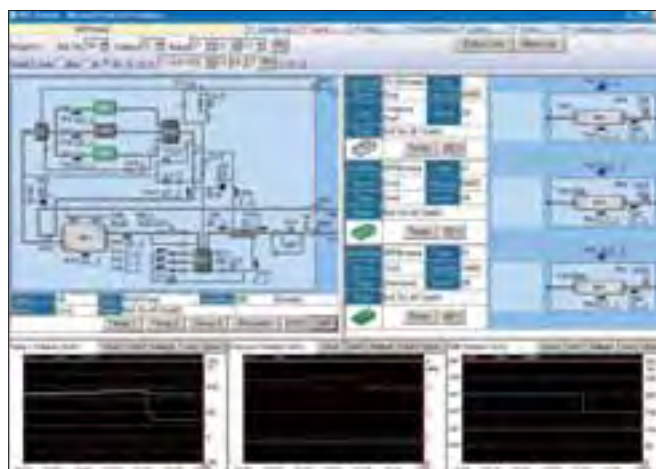
Displays the detail information for sensor values, electrical components
etc. for the specified units in schematic. The information here can be
used along with the detail information in list form, to check the operation
status of units and make detail analysis on the cause, in case an error
occurs.

Equipment Detail (List)

Displays the detail information for sensor values, electrical components
etc. of units in a specified refrigerant system in list form.
The information here can be used along with the detail information in
diagram form, to check the operation status of units and make detail
analysis on the cause, in case an error occurs.

Error History

Displays the error information for each unit. The error information can sequentially be displayed up to 50 items as they occur starting with the latest error.

System List

Displays the overall operation status of all or specified units in the system in a list form.

Remote File Download

Operation and error history data can be downloaded. Only the required data may be downloaded specifying the refrigerant system, unit and time range.

Commissioning Tool

Test run commands can be executed with this tool.
During test running, the outdoor unit / indoor unit sensor data can be saved (commissioning log data).
After the end of test running, this data can be exported in CSV file format.

Requirements of PC for this software

Personal Computer		AT compatible machine that runs Microsoft® Windows®
	Operating System	Microsoft® Windows® 2000 Professional (English version / Service pack4 or later)
		Microsoft® Windows® XP Professional (English version / Service pack2 or later)
		Microsoft® Windows® Vista Home Premium, Business, Ultimate Edition. (English version)
	CPU	Intel® Pentium® / Celeron®, AMD Athlon™ / Duron™ 1GHz or higher
	HDD	4.1 GB or more of free space
	Memory	1GB (Vista) , 512 MB (XP/2000) or more
	Interface	USB port is required for each of the following ; -Wibu Key(Software protection key) -Echelon® U10 USB Network Interface(Required for each VRF Network)
Software		Internet Explorer 6.0 or later / Adobe® Acrobat® Reader 4.0 or later
Hardware		USB Adaptor is U10 USB Network interface of Echelon® corporation.

<PACKING LIST>

Packing List	CD-ROM / Wibu Key

Personal computer must be field supplied.
U10 USB Network Interface must be field supplied. Contact EchelonR Corporation or its local sales representative for detail.
Product Name : U10 USB Network Interface - TP/FT-10 Channel   Model Number: 75010R

Web Monitoring Tool Software

UTY-AMGX

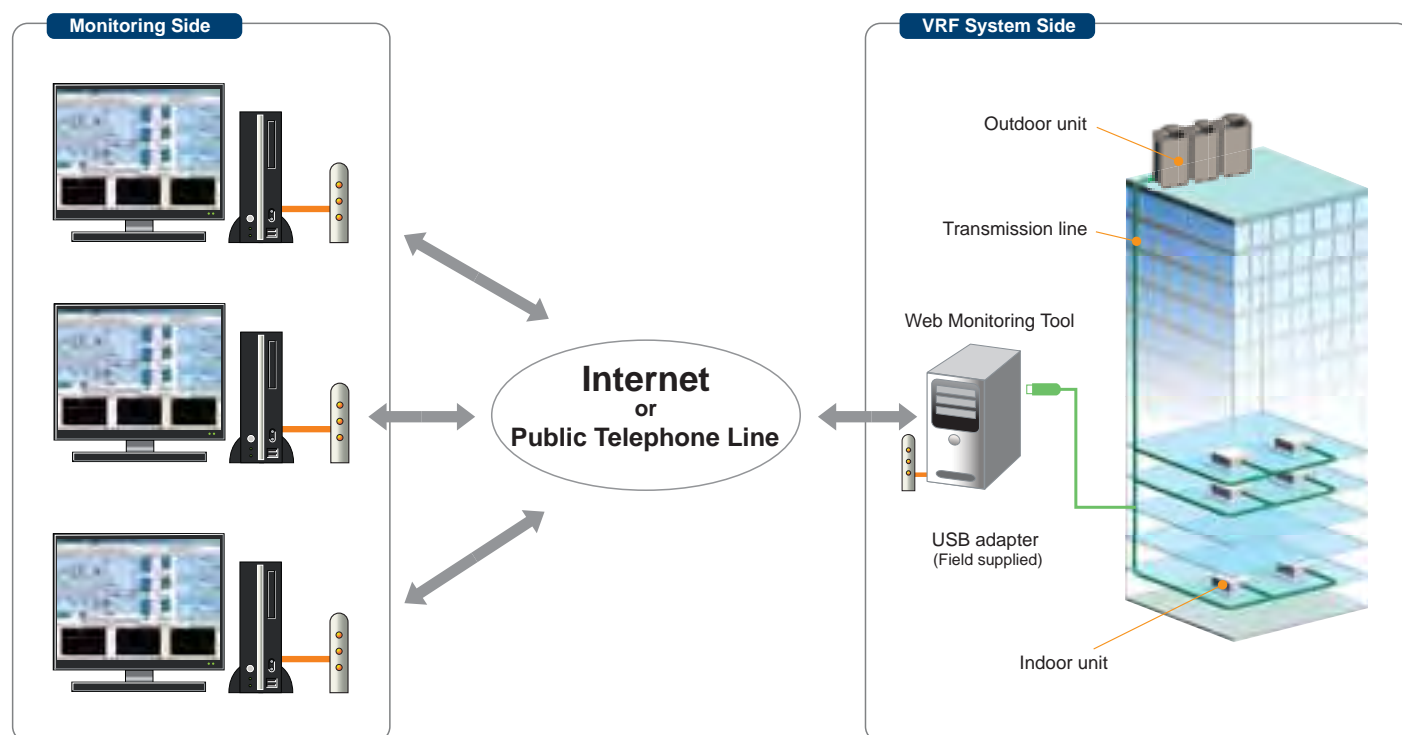**4** VRF system can be supported

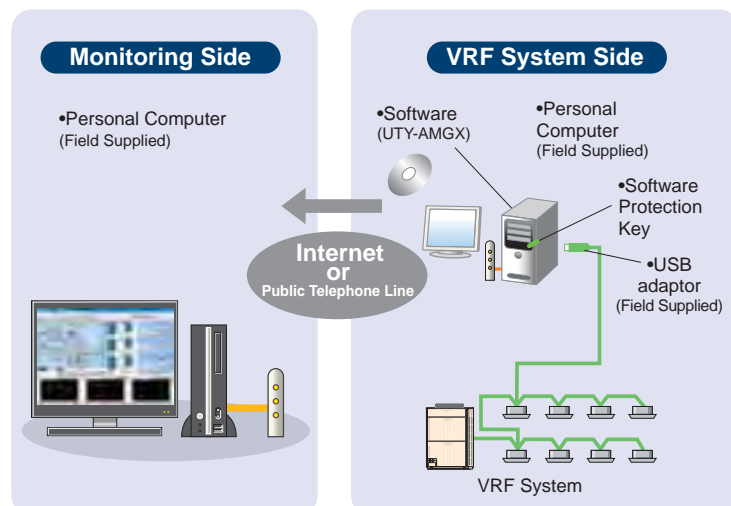**1600** Indoor unit can be monitored

Product features

- Troubleshooting is performed by monitoring each air conditioning unit remotely during periodical system checks.
- Error notification can be automatically transmitted to several locations using the internet[1].
- Requires either a dedicated internet connection* or public telephone line.
- Determination of an error occurrence can be made through error warnings and equipment status information obtained from a remote location.
- The monitoring data in a remote side can be optionally downloaded. And, this data can be displayed in offline mode of the service tool.
- Monitoring side computer is not required to install special software, requires only general web browser.

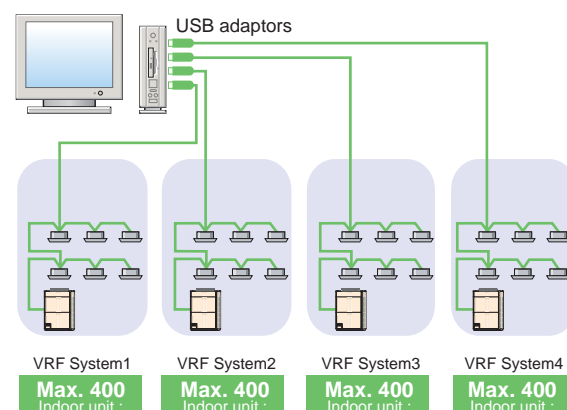* 1:USB of internet mail system required.

Web Monitoring System

Monitoring Side

VRF System Side

Outdoor unit

Transmission line

Web Monitoring Tool

USB adapter (Field supplied)

Indoor unit

Internet or **Public Telephone Line**

System components

Monitoring Side
- Personal Computer (Field Supplied)

VRF System Side
- Software (UTY-AMGX)
- Personal Computer (Field Supplied)
- Software Protection Key
- USB adaptor (Field Supplied)

Internet or Public Telephone Line

VRF System

Support 4 VRF system

- USB adaptor (max. 4 adaptors per PC) permit, monitoring of up to 1,600 indoor units.

Suitable for large-scale buildings or hotels.

USB adaptors

VRF System1 — Max. 400 Indoor unit :
VRF System2 — Max. 400 Indoor unit :
VRF System3 — Max. 400 Indoor unit :
VRF System4 — Max. 400 Indoor unit :

Comparison table

No.	Item	Service Tool UTY-ASGX	Web Monitoring Tool UTY-AMGX	
			Monitoring Side	VRF System Side
1	Interchangeability of equipment	●	●	●
2	Indication of equipment list	●	●	●
3	Operation control	●	―	●
4	Indication of refrigerant circuit diagram	●	●	●
5	Commissioning tool	●	―	●
6	Monitoring of equipment information	●	●	●
7	Monitoring of operating condition	●	●	●
8	Monitoring of sensor data	●	●	●
9	Storage and CSV output of operating history (sensor data)	●	●	●
10	Indication of trend graph	●	●	●
11	Printing of trend graph	●	●	●
12	Monitoring and screen display of abnormalities	●	●	●
13	E-mail automatic transmission of abnormalities	―	―	●*1
14	Setting for user level	―	―	●

*1   Available only during a connection to the Internet.

Requirements of PC for this software

Personal Computer		AT compatible machine that runs Microsoft® Windows®
	Operating System	Microsoft® Windows® 2000 Professional (English version / Service pack4 or later)
		Microsoft® Windows® XP Professional (English version / Service pack2 or later)
		Microsoft® Windows® Vista Home Premium, Business, Ultimate Edition. (English version)
	CPU	Intel® Pentium® / Celeron®, AMD Athlon™ / Duron™ 1GHz or higher
	HDD	4.1 GB or more of free space
	Memory	1GB or more
	Interface	USB port is required for each of the following ; -Wibu Key(Software protection key) -Echelon® U10 USB Network Interface(Required for each VRF Network) Ethernet port is required for remote connection using internet.
Software		Internet Explorer 6.0 or later / Adobe® Acrobat® Reader 4.0 or later
Hardware		USB Adaptor is U10 USB Network interface of Echelon® corporation.

<PACKING LIST>

Packing List	CD-ROM / Wibu Key

Personal computer must be field supplied.
U10 USB Network Interface must be field supplied. Contact EchelonR Corporation or its local sales representative for detail.
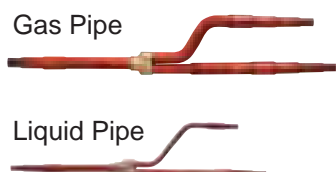Product Name : U10 USB Network Interface - TP/FT-10 Channel   Model Number: 75010R
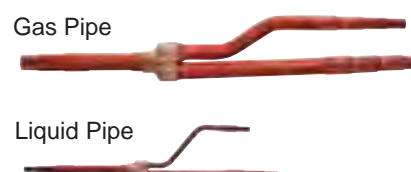
Optional Parts
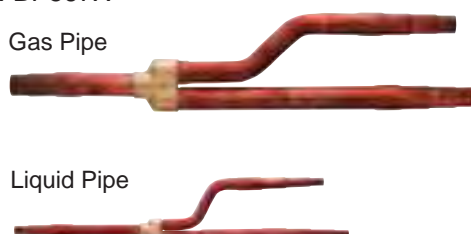
Connection Tube
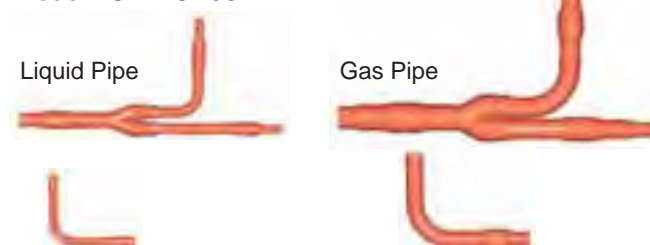
Separation Tube
Model : UTR-BP090X

Gas Pipe

Liquid Pipe

Separation Tube
Model : UTR-BP180X

Gas Pipe

Liquid Pipe

Separation Tube
Model : UTR-BP567X

Gas Pipe

Liquid Pipe

Outdoor Unit Branch kit
Model : UTR-CP567X

Liquid Pipe

Gas Pipe

Header
Model : UTR-H0906L
        UTR-H1806L

Gas Pipe

Liquid Pipe
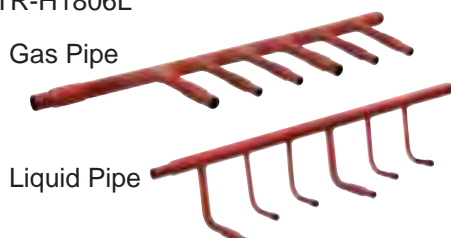
Header
Model : UTR-H0908L
        UTR-H1808L

Gas Pipe

Liquid Pipe
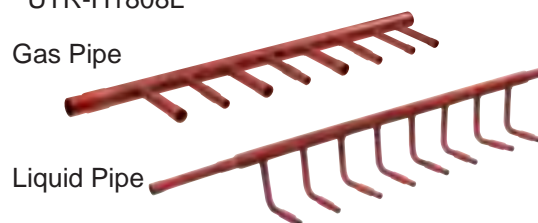
Outdoor unit Branch kit

Model name		UTR-CP567X
Number of Outdoor unit	2 outdoor units	1
	3 outdoor units	2

Separation Tube

Model name	UTR-BP090X	UTR-BP180X	UTR-BP567X
Total model code of indoor unit	90 or less	91 to 180	181 or more

Header

Model name	6 Branches	UTR-H0906L	UTR-H1806L
	8 Branches	UTR-H0908L	UTR-H1808L
Total model code of indoor unit		90 or less	91 to 180

EV Kit

Model name	UTR-EV09XB	UTR-EV14XB
Application Model	AS*E07LACH	AS*E12LACH
	AS*E09LACH	AS*E14LACH

AS* : ASY(FUJITSU), ASH(GENERAL)

Others

Flange (Round)
Model : UTD-RF204
For Low Static Pressure Duct type / Duct type

Flange (Square)
Model : UTD-SF045T
For Low Static Pressure Duct type / Duct type

Long-Life Filter
Model : UTD-LF25NA
For Low Static Pressure Duct type/Duct type

Long-Life Filter
Model : UTD-LF60KA
For High Static Pressure Duct type

Drain Pump Unit
Model : UTZ-PX1BBA
For Compact Duct type

Model : UTZ-PX1NBA
For Low Static Pressure
Duct type and Duct yype

IR Receiver Unit
Model : UTB-YWB
Model : UTB-GWB
For All Duct type

Remote Sensor Unit
Model : UTD-RS100
New amenity space can be
offered by installing
the Remote sensor in the
remote controller.

For All Duct type

Drain Pump Unit
Model : UTR-DPB24T
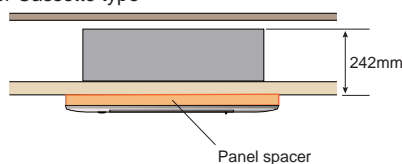For Ceiling type

Wide Panel
Model : UTG-AGYA-W
For Cassette type

Indoor unit 950
Panel 600
600 (mm)
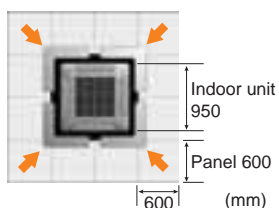
Panel Spacer
Model : UTG-BGYA-W
For Cassette type

242mm

Panel spacer

IR Receiver Kit
Model : UTY-LRHYB1
UTY-LRHGB1
For Cassette type

Air Outlet Shutter Plate
Model : UTR-YDZB
Shuts the air outlet when only using as 2 or 3 blow out.
For Cassette type

Air Outlet Shutter Plate
Model : UTR-YDZC
Shuts the air outlet when only using as 2 or 3 blow out.
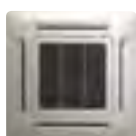For Cassette type

Grille Kit
Model : UTG-UFYC-W
Model : UTG-UFGC-W
For Compact Cassette type

Grille Kit
Model : UTG-UGYA-W
Model : UTG-UGGA-W
For Cassette type

EV Kit
Model code < 09 : UTR-EV09XB
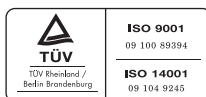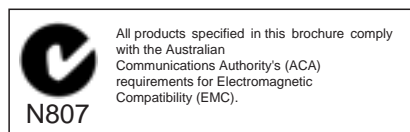Model code ≧ 12 : UTR-EV14XB
For Compact Wall Mounted type

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