# GENERAL

R410A

50 HZ

AIRSTAGE™ TROPICAL SPEC

# VRF
Variable Refrigerant Flow System

# CATALOGUE
HEAT PUMP

for Middle East

FUJITSU GENERAL LIMITED

# CREATION
# OF COMFORT

The AIRSTAGE™ series provides high energy savings, comfort, and reliability to the end user. The design, installation, and servicing were developed based on the concepts of high flexibility and simplicity. We offer an abundant VRF system lineup to match regional and customer needs by providing the best combination from low to high capacities and from giving priority to conserving installation space to giving priority to high efficiency.

## CONTENTS

## For **LARGE** BUILDING

**Heat Pump Modular type** for heating or cooling operation

### AIRSTAGE™ V-III TROPICAL SPEC
Production by order

**8 HP - 54 HP 39 Models**
• Space saving combination: 8 HP to 54 HP/24 models
• Energy efficiency combination: 16 HP to 46 HP/15 models

P30~

**Heat Pump Modular type** for heating or cooling operation

### AIRSTAGE™ V-II TROPICAL SPEC

**8 HP - 42 HP 18 Models**
• Space saving combination: 8 HP to 42 HP/15 models
• Energy efficiency combination: 24 HP to 28 HP/3 models

P36~

## For **SMALL** BUILDING

**NEW**

**Heat Pump type** for heating or cooling operation

### AIRSTAGE™ J-III TROPICAL SPEC

**4 HP - 6 HP 6 Models**
• Single phase: 4 HP to 6 HP/3 models
• 3 phase: 4 HP to 6 HP/3 models

P42~

2 ●GENERAL

●GENERAL 3

# OUR SOLUTION FOR ALL PROPERTIES

Fujitsu General provides the best solutions suitable for properties.

## Solution Point

We provide Fujitsu General
total solutions
for the property unique needs.

Excellent
Energy Saving

Pleasant
Comfort

Easy
Installation

THE
TOTAL SOLUTION

High
Durability

Enhanced
Safety

## Target Property

### RESIDENTIAL & LIGHT COMMERCIAL
For Apartment,
Villa and Shops etc.

We offer comfortable and economical air conditioning systems focused on small to medium-sized buildings.

### COMMERCIAL
For Large Building

We provide single and modular type VRF systems designed for high efficiency, comfort, freedom of design, easy installation and high reliability.

# 2017 NEW PRODUCTS

## Small VRF AIRSTAGE™ J-III TROPICAL series

- 36 to 54KBTU class,1-phase & 3-phase 6 models
- Compact Design
- High energy efficiency with All Inverter Technology
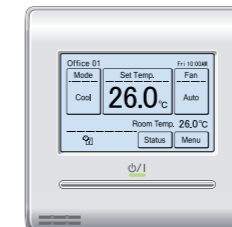- Flexible Design with Total Piping Design of 180m

**NEW**

**AIRSTAGE J-III**

**TROPICAL** series

## Individual Control

### Wired Remote Controller (Touch Panel)

- Easy-to-use and highly-functional controllers
- Maintains 2 separate set points for heating and cooling.
- Automatically changes mode between heating and cooling.

### Simple Remote Controller

- Up to 16 indoor units can be controlled
- Simple design to match the stylish interior.
- Large LCD screen & simple operation buttons
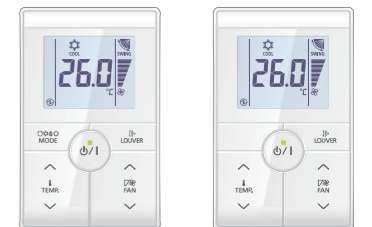
## Centralized Control

### Touch Panel Controller

- Up to 400 indoor units can be controlled
- Control and monitor Fujitsu's air conditioner via LAN or Internet.
- Easy maintenance & installation

### System Controller (Software)
### System Controller Lite (Software)

- Up to a maximum of 4 VRF network systems, 1600 indoor units, and 400 outdoor units can be controlled.*
- Simple BMS, 3rd party supported by Modbus communication can be controlled.

  *: System controller lite = Up to a maximum of 1 VRF network system, 400 indoor units, and 100 outdoor units can be controlled.

## Convertor / Adaptor

### Various Convertors

- 4 models of hardware and software are put on the market all together.

**BACnet®Gateway**

Software

Hardware

**KNX® Convertor**
For VRF
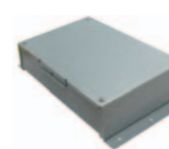
**External Switch Controller**

## Service & Maintenance Tool

### Service Tool & Web Monitoring Tool (Software)

- Extensive monitoring and analysis functions for installation and maintenance
- Troubleshooting is performed by monitoring each air conditioning unit remotely during periodical system checks.
- Automatic operation check for refrigeration cycle.

# APARTMENT, VILLA

Fujitsu General offers the small VRF system to match from large living rooms to bedrooms for apartment and villa.

**AIRSTAGE™ J-III** TROPICAL SPEC
**TROPICAL** series

## Space saving installation

**Space saving**
Mini duct type with 198 mm height and 450mm depth. This can be installed in narrow ceiling space easily.

Mini Duct

## APARTMENT
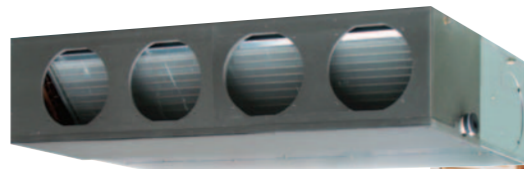
Medium Static Pressure Duct

**Large space air conditioning in the dining and living room**

**Comfortable dining air conditioning with powerful airflow**

Large Wall Mounted

**Easy operation and various energy saving control**
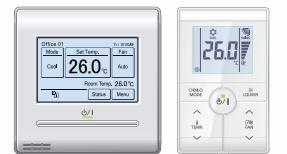
## VILLA

**Large space air conditioning in a family room**

High Static Pressure Duct

**Small space air conditioning**

Various ranges of low capacity indoor units to suit small space such as a guest room

Compact Wall Mounted

# LARGE BUILDING

Fujitsu General provides modular type VRF systems that seek high efficiency, comfort, design freedom, easy installation and reliability for skyscraper buildings.

## Ventilation(AHU) linked with VRF system

Fujitsu General's DX-Kit enable other manufacture's air handling units (AHU) to be incorporated into a Fujitsu VRF system.
Possible to control comfortable air conditioning and ventilation.

Indoor unit
Transmission line
VRF system
Air Handling Unit
Control unit
EEV unit
**DX-Kit**
Wired R.C.
Thermistor

## Individual air conditioning system for large buildings

VRF series lineup to meet various needs such as energy saving-orientated models and models compatible with a high outdoor air temperature of 52°C

### AIRSTAGE V-III
TROPICAL SPEC
**TROPICAL** series

**8 HP - 54 HP 39 Models**
• Space saving combination: 8 HP to 54 HP / 24 models
• Energy efficiency combination: 16 HP to 46 HP / 15 models

### AIRSTAGE V-II
TROPICAL SPEC
**TROPICAL** series

**8 HP - 42 HP 18 Models**
• Space saving combination: 8 HP to 42 HP / 15 models
• Energy efficiency combination: 24 HP to 28 HP / 3 models

## 4-way Flow Cassette

### Improvement of the airflow distribution

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**

### High ceiling mode

This cassette can be installed up to a height of 4.2m (36/45/54).

1m
2m
3m
4m

Standard mode
**3.2m**
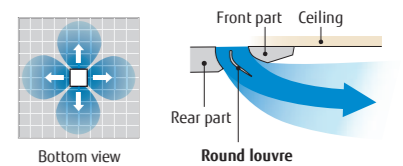
High ceiling mode
**4.2m**
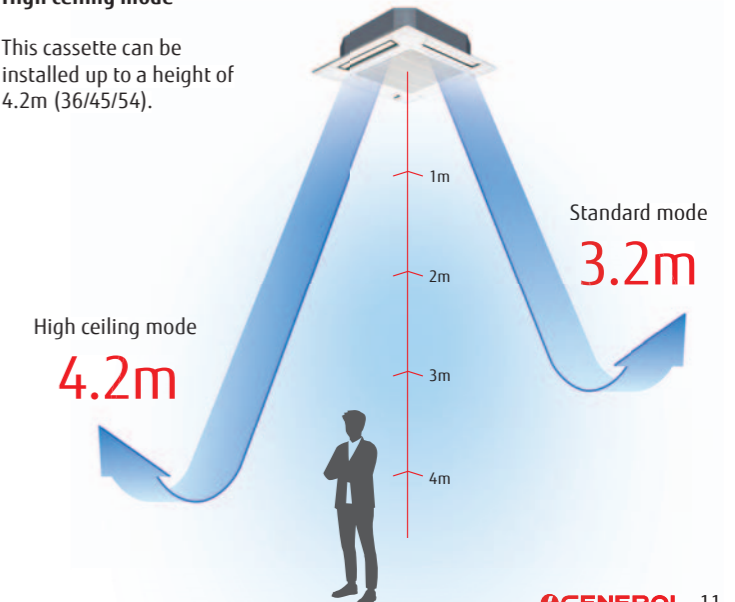
## Centralized control of both air conditioning and lighting

It is possible to perform centralized control to stop the operation of lighting and ventilation equipment in addition to air conditioner. This is useful in energy saving management over the whole building.

**N E W**
System Controller Lite

VRF indoor units

Facilities

Lightning        Ventilation        Energy Recovery Ventilator

**AIRSTAGE™ VRF SYSTEMS CAN BE DESIGNED TO CREATE AN AIR CONDITIONING SOLUTION TO SUIT MOST BUILDINGS REQUIREMENTS.**

Airstage VRF Systems can be designed to effectively provide an air conditioning solution from a large domestic residence through to a large scale commercial building.

# AIRSTAGE™ CORE TECHNOLOGY

**HIGH ENERGY EFFICIENCY**

**HIGH RELIABILITY**

**DESIGN FLEXIBILITY**

**MORE COMFORT**

**EASY INSTALLATION**

**EASY SERVICE & MAINTENANCE**

*AIRSTAGE*™

# HIGH ENERGY EFFICIENCY

## Highly Energy Efficiency

Significantly efficiency is improved by
using DC twin rotary compressor, inverter technology,
and large heat exchanger.

### Large VRF

**New VRF model**
**Previous model**

**39% UP**
4.31
3.1

**24% UP**
3.85
3.1

S series — V-III Tropical series
**8HP class**

S series — V-III Tropical series
**10HP class**

### Small VRF

**New VRF model**
**Current Split model**

**27% UP**
4.33
3.42

**14% UP**
3.88
3.40

DUCT Split — J-III Tropical series
**4HP class**

DUCT Split — J-III Tropical series
**6HP class**
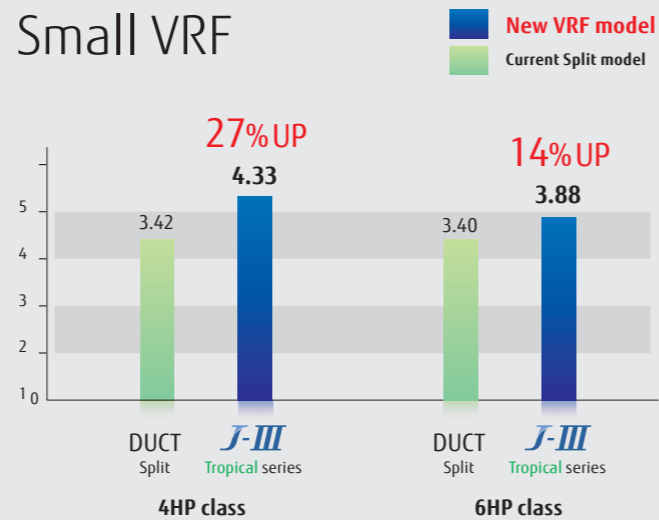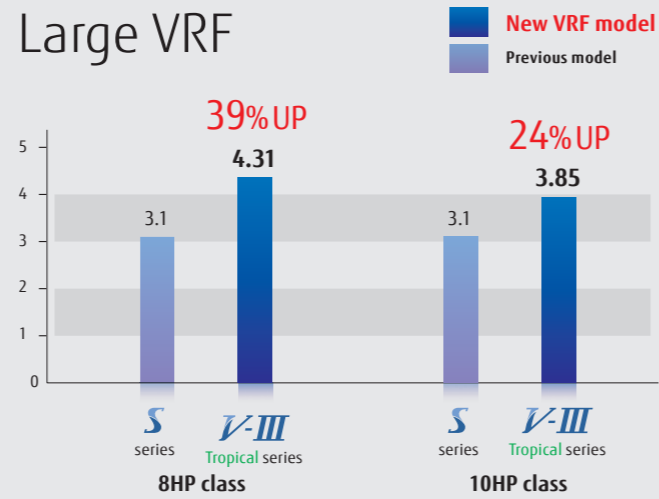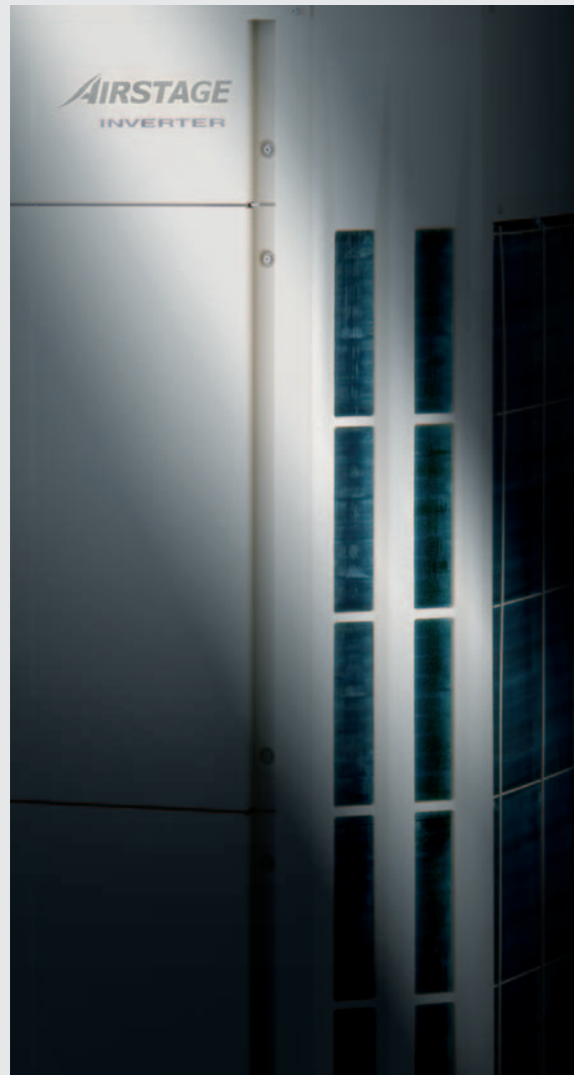
## Operation Performance is Efficiently Controlled.

### Room temperature set point limitation

The minimum and maximum temperature ranges can be limited, which provide further energy saving while maintaining the comfort of the occupants.

(°C)
Heating   Cooling
30
28
26
24
22
20
18
16
14
12
10

Original Set Temp        Set point limitation setting
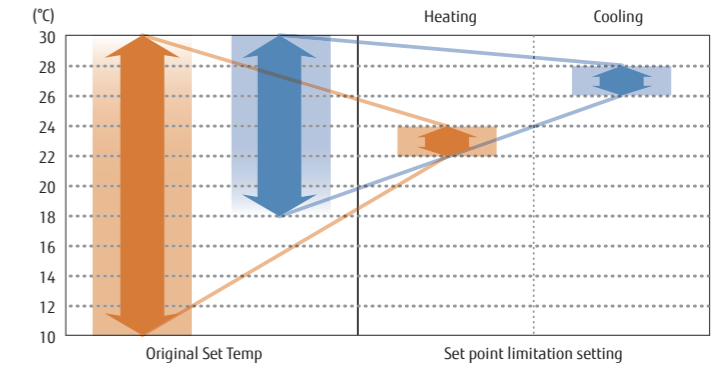
### Auto-off timer

New wired 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 waste of energy.
Furthermore a new wired remote controller can set up the interval of time in case operation stops.

Set  interval time hour (17:00 to 24:00)
ON          Auto OFF
Set off  time
(30 to 240 minutes)       OFF
17:00              24:00

26.0
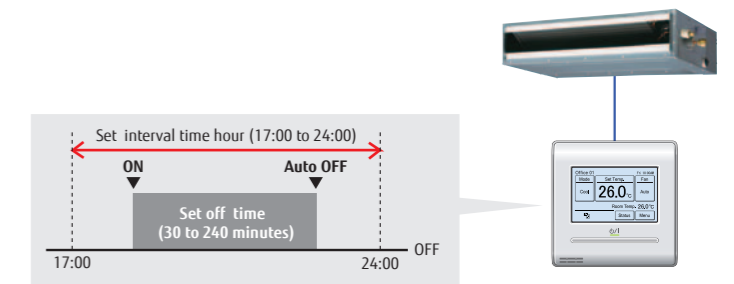
### Energy saving management

A variety energy saving operations can be set and managed depending on the season, weather, and time period.
Excellent energy saving operation is performed by using System Controller.

(Screen image is Energy manager software(Option))

**System Controller**
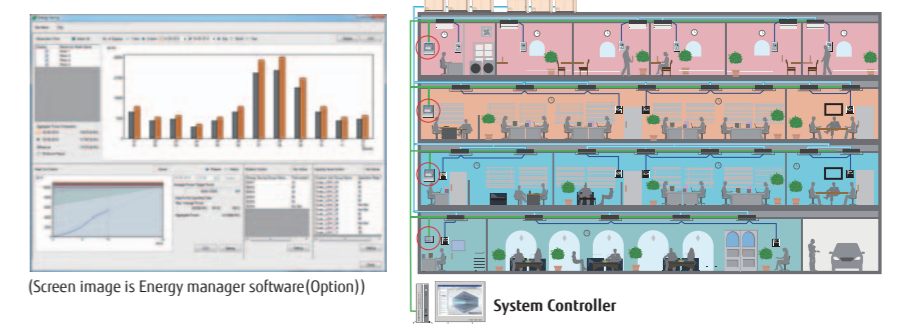
### Capacity save operation

Operation capacity can be set in 5 steps for rated capability.
The power consumption at peak is cut down and the maximum load is suppressed.

Setting range
100%
80%
60%
40%
0%

Setting level

Capacity
**Capacity save**

Time
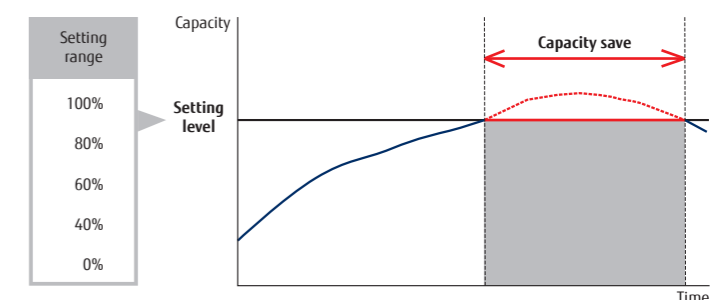
# HIGH RELIABILITY

## Heavy anti-corrosion treatment design

TROPICAL SPEC

### Anti-corrosion coated casing parts
Satisfied the JRA* heavy anti-corrosion regulation(4002)

*JRA: Japan Refrigeration Association

### PCB and Electronic components
High ambient temperature compatible electric components.
Added silicon coating on all PCB circuits for anti-corrosion.

### Blue fin heat exchanger
- Hydrophilic coating
- Cobalt Blue protection
- Aluminium base material
- Cobalt Blue protection
- Hydrophilic coating

### High ambient & corrosion compatible
PCB componets
Refrigerant cycle component

### All screws and hinges
Added zinc chrome acid film treatment.

AIRSTAGE™ V-III
TROPICAL series

AIRSTAGE™ V-II
TROPICAL series

AIRSTAGE™ J-III
TROPICAL series

**Take special notice of the following in order to enhance the anti-corrosion effect.**
- Keep the unit free of direct sea breeze as much as possible by installing a windshield plate or placing the unit on the leeward side of the building.
- Arrange the unit so that any salt attached to the enclosure can be washed away by rain.
- Any water left on the bottom of the outdoor unit can increase corrosion. To prevent interference with the water drain, be careful of the tilting angle of the unit.
- Wash the enclosure regularly with water to remove any salt attached.
- Repair any damages on the unit (i.e. scratches) caused during installation or maintenance.
- Check the condition of the unit regularly. (If necessary, retreat the unit for anti-corrosion or make parts replacements.)
- Make sure the drainage is secured at the foundation.

## Life-extending operation

### Outdoor unit rotational operation
The compressor starting order is rotated so that the running time is shared.

Rotation

Note: Rotational operation is alternated by the start / stop timing of the compressor.
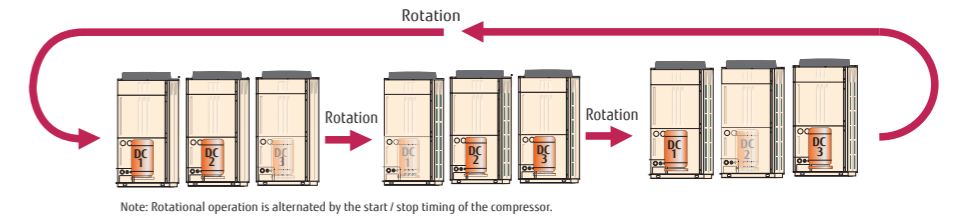
## Backup operation
If one compressor fails, backup operation will be performed by the remaining compressors*.

*: Note: Backup operation may not be possible depending on the trouble state.
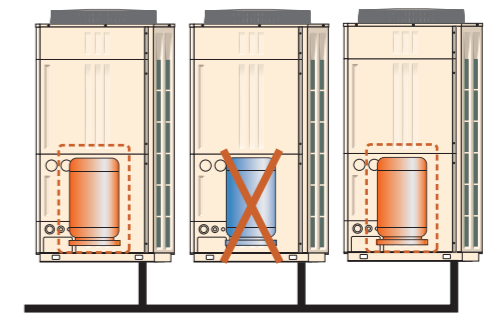
## Advanced refrigerant control
Innovative compressor control logic has been introduced in order to balance the refrigerant mass flow rate of each outdoor unit by controlling the inverter speed.

Master  Slave 1  Slave 2   Load level   Master  Slave 1  Slave 2

**Balance operation condition**    **Unbalance operation condition**
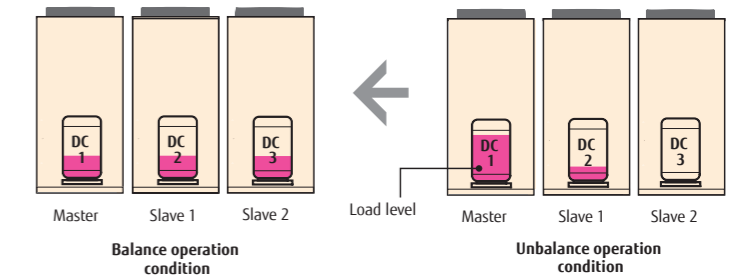
## Liquid flow back protection
By adopting a large sized accumulator, the not completely vapourised refrigerant stays inside of the accumulator to ensure no liquid refrigerant is being fed into the compressor.

Completely vapourised refrigerant

from Evapolator

Compressor

Large sized Accumulator

Liquid refrigerant (stays inside of accumulator)
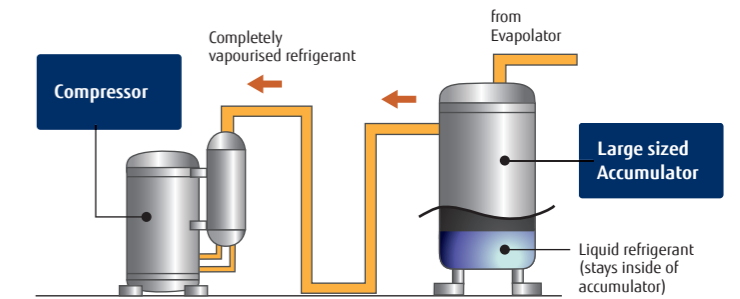
## Oil Recovery operation
Periodic oil recovery operation is done automatically in order to feed back oil from the indoor unit to compressor.

# DESIGN FLEXIBILITY

82 Pa (V-III tropical)
80 Pa (V-II tropical)

## Overall piping length 1,000m
(For V-II & V-III tropical)

**Total pipe length**
**1,000m** max.

Actual pipe length
**165m**
(V-III tropical)

**150m**
(V-II tropical)

Height difference between outdoor and indoor units
**50m** max.

For the outdoor unit installed below the indoor units:
40m max.

Pipe length from first separation tube to the farthest indoor unit

**90m*** max.
(V-III tropical)

**60m** max.
(V-II tropical)

*: The limitation on the pipe length between the farthest IU and the nearest IU originated from the first separation tube must be 60m or less.

Note: J-III tropical refer to page 44.

Height difference between indoor and indoor units
**15m** max.

## High static pressure

The outdoor unit can have a condenser hood easily connected with a static pressure of 80Pa to 82Pa. This allows outdoor units to be installed within plant rooms in high rise buildings.

Powerful discharge air prevents a short-circuit.

Previous model                V-III tropical , V-II tropical
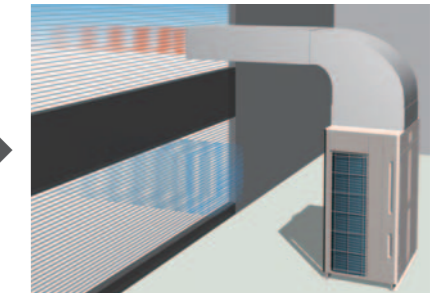
Large diameter fan and DC motor has been utilized allowing an external static pressure of 80Pa to 82Pa. This is approximately 2.6 times greater than the previous model.

## High capacity connection

**AIRSTAGE V-III** TROPICAL series

Connectable indoor unit capacity range
**50 % to 130 %**

Connectable indoor unit number
**up to 64**

8HP-54HP / 39models

**AIRSTAGE V-II** TROPICAL series

Connectable indoor unit capacity range
**50 % to 130 %**

Connectable indoor unit number
**up to 41**

8HP-42HP / 18models

**AIRSTAGE J-III** TROPICAL series

Connectable indoor unit capacity range
**50 % to 130 %**

Connectable indoor unit number
**up to 9**

4HP-6HP / 6models

## High ambient operation design

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

**AIRSTAGE V-III** TROPICAL series

| (°C) | |
|---|---|
| 60 | |
| 50 | |
| 40 | Cooling 52°C |
| 30 | Heating 21°C |
| 20 | |
| 10 | |
| 0 | |
| -10 | |
| -20 | -15°C  -20°C |

**AIRSTAGE V-II** TROPICAL series

| (°C) | |
|---|---|
| 60 | |
| 50 | |
| 40 | Cooling 52°C |
| 30 | Heating 21°C |
| 20 | |
| 10 | |
| 0 | |
| -10 | |
| -20 | -15°C  -20°C |

**AIRSTAGE J-III** TROPICAL series

| (°C) | |
|---|---|
| 60 | |
| 50 | |
| 40 | Cooling 52°C |
| 30 | Heating 21°C |
| 20 | |
| 10 | |
| 0 | |
| -10 | -5°C |
| -20 | -20°C |
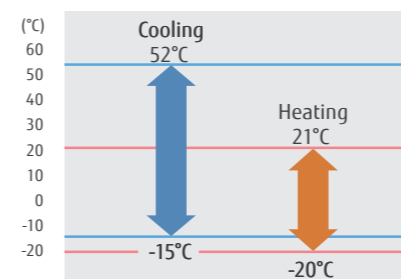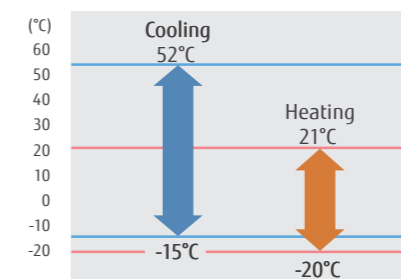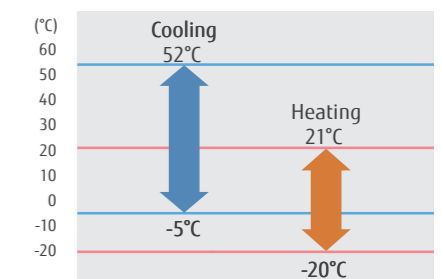
*. Note : When a multiple outdoor unit connection is used, operating range is from -5°C to 52°C in cooling.

# MORE COMFORT

## Powerful cooling capacity design

High cooling power has been realized by adopting large heat exchanger, high capacity DC inverter compressor, sub-cooler equipment, etc.

**35℃ ambient temp.**

**46℃ ambient temp.**

**Keep rated capacity!**

Cooling capacity (kW)

40

20

0

8HP    10HP    14HP
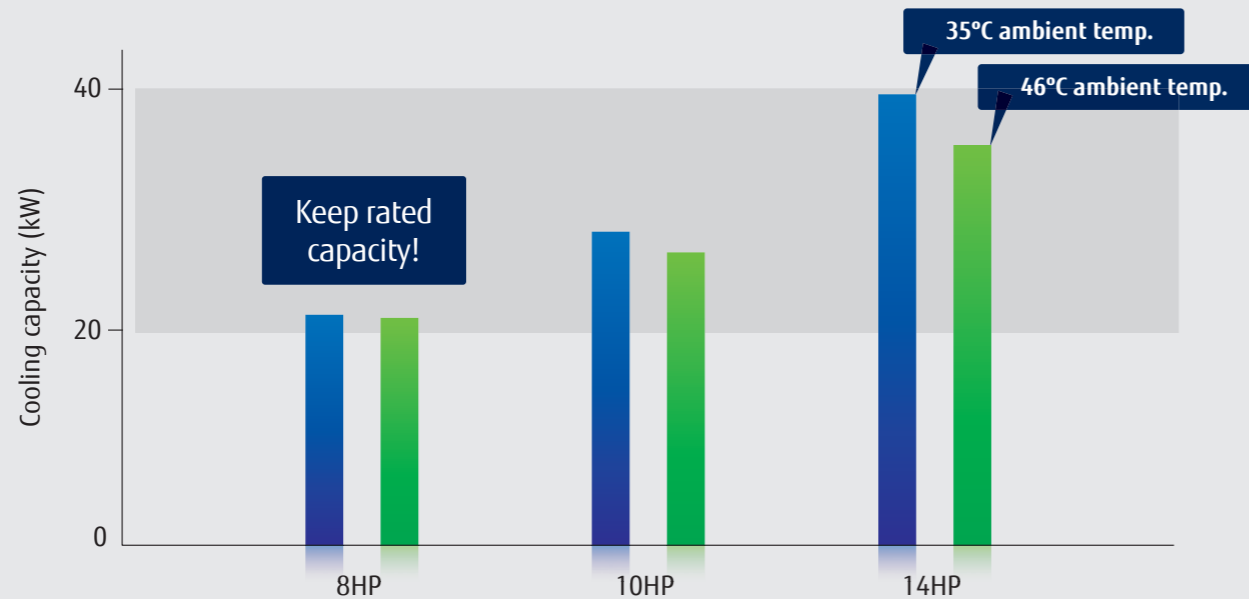
## Touch Panel Wired Remote Controller

The new wired remote controller has an easy to use LCD touch panel. This new controller has a back light function and can easily control the air conditioner which provides a better energy saving operation of the air conditioner.

Large-sized LCD touch panel screen

Backlight

Large ON/OFF button

Office 01                Fri 10:00AM
Mode    Set Temp.    Fan
Cool     26.0℃       Auto
Room Temp. 26.0℃
Status    Menu

Room temperature display

Setting status display

Multi support language
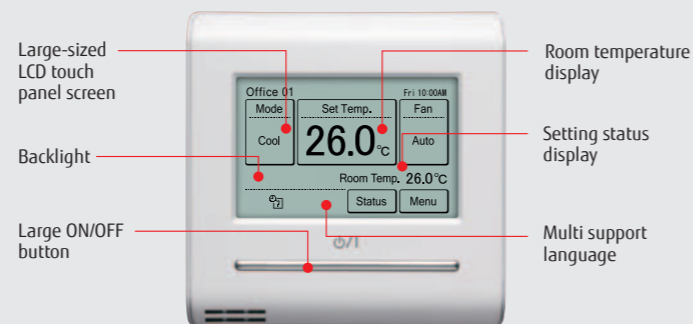
## Precision refrigerant flow control

Precise 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 high precision comfortable temperature control of ±0.5℃.

High

Low

Set temp.

Hot    Hot

Cold

±0.5℃

**Reach the set temperature quickly**

**Thermal change of the room**
*Simulation in heating operation.

Comfortable operation is achieved due to a small variation of room temperature
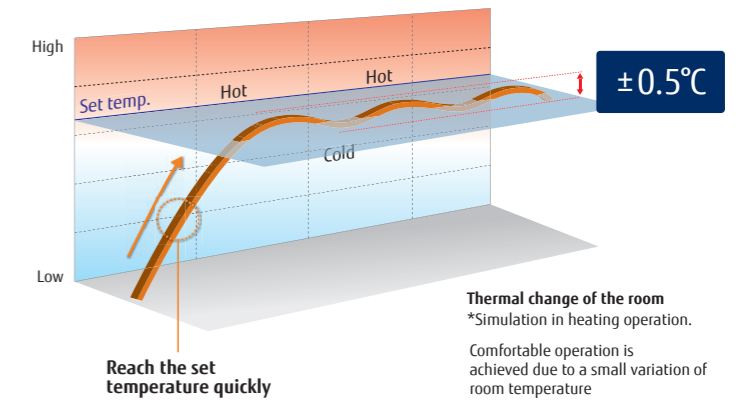
## Quiet operation

**Low noise mode**
Two low noise modes can be selected automatically by quiet priority setting and capacity priority setting depending on the indoor environment and outside temperature load. This feature can be controlled via outdoor unit external input and/or system controller.

**Quiet priority setting**
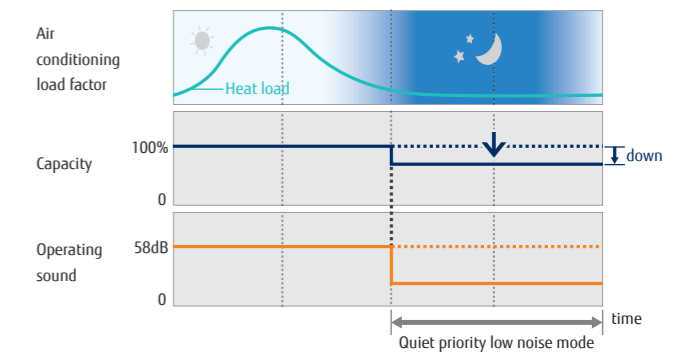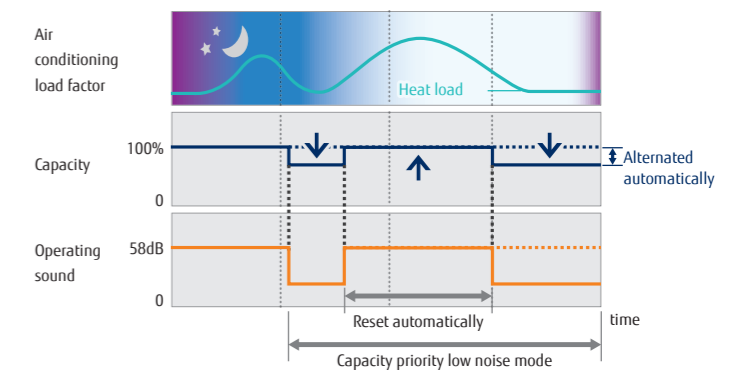
Air conditioning load factor

Heat load

Capacity

100%

0

down

Operating sound

58dB

0

time

Quiet priority low noise mode

**Capacity priority setting**

Air conditioning load factor

Heat load

Capacity

100%

0

Alternated automatically

Operating sound

58dB

0

Reset automatically    time

Capacity priority low noise mode

## 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.

*: AIRSTAGE VR-II series is not available.

Previous model

V-III series    (Heating operation)

Operation stopped at oil recovery

Non-stop oil recovery operation

ON

OFF

Time

ON

Time
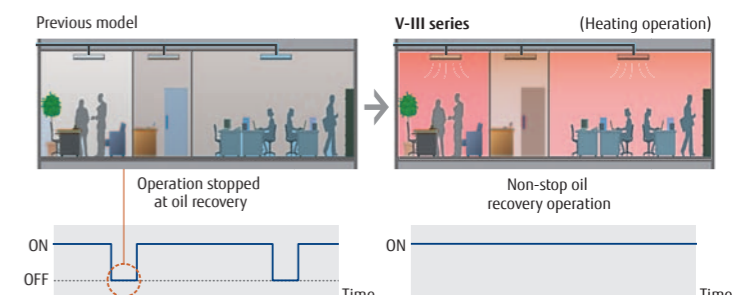
# EASY INSTALLATION

## Easily transported

**Easily craned using lifting belt hooks**
Design of outdoor unit allows for lifting straps to be used
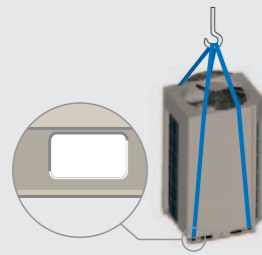
**Transporting by forklift**
Transport with forklift is possible.
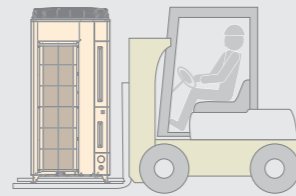
**Can be transported in a small elevator**
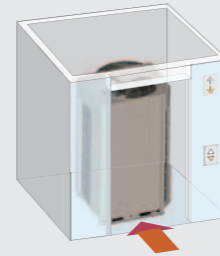
## Easy access

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

Reduced installation intervals by front access
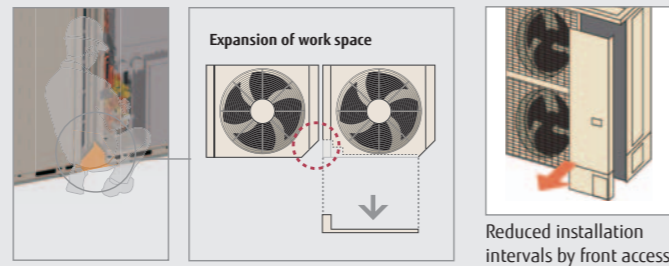
## Flexible piping connection

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

Flexible installation by 4 way pipe direction
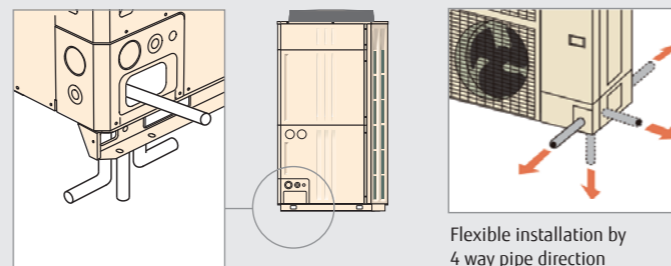
## Simple wiring work

Installation of the wiring systems is made easier as the communication wiring can be installed continuously between the indoor, outdoor and RB units.

or

Parallel connection          Serial connection
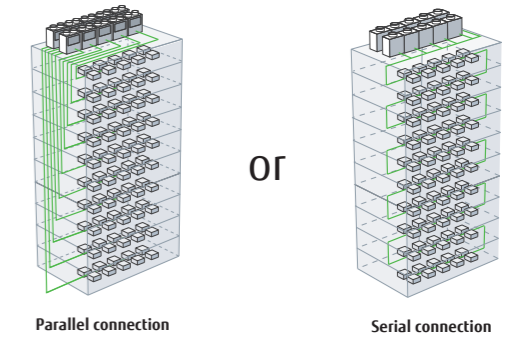
## Easy evacuation - using vacuum mode function

The vacuum mode function enables all expansion valves of indoor units to be fully opened, making it easy to evacuate all the air inside pipe lines and indoor units.

← Air          ← Air

Outdoor unit          Air →          Vacuum pump
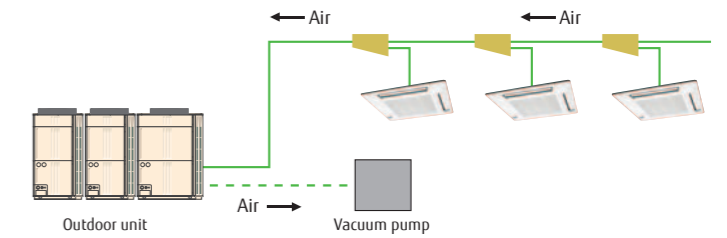
## Automatic address setting

The address of the indoor unit and signal amplifier can be set through the automatic function setting on the outdoor unit PCB.

Automatic address setting is performed at outdoor unit

Addresses are automatically distributed from outdoor unit.

Signal Amplifier

Press the push button switch of outdoor unit.

3    7    1    0

2    4    5    6

Manual address setting from indoor unit and remote controller is also possible.
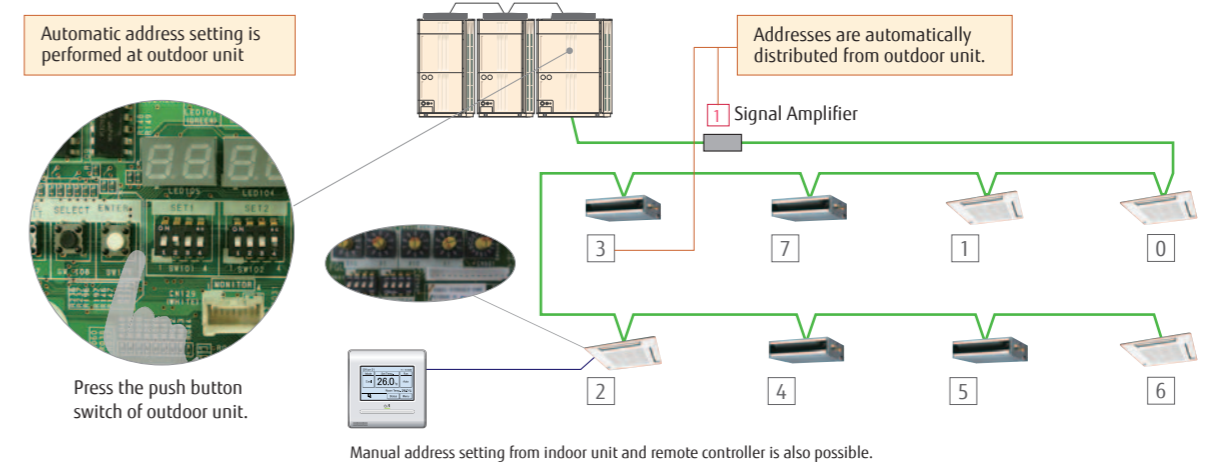
## Easy commissioning by Service Tool

Service tools can be used to check the refrigerant temperature, pressure, and the operating status of the electronic expansion valve, making it easy to determine whether the units are connected properly.

# EASY SERVICE & MAINTENANCE

## Design for Easy Maintenance

7 segment LED is used to make it easy to check the details about the function setting status, refrigerant temperature, pressure, compressor operation time, and other factors for each model to make it easy to perform self-diagnostics.

**Easy to read 7-segment LED :** Confirm detailed operational and error status without using any specific equipment.

**7-segment LED**
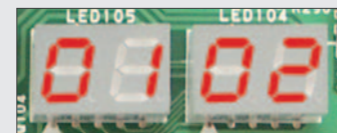
• Operation mode status
• Discharge temperature/Pressure status
• Compressor operation indication
• Address/type/number of outdoor unit

**Movable PCB panel**
Easier for maintenance work behind the PCB

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**

System number
001: Controller
002: Indoor unit      Error code

Unit number

**Simple Remote Controller**

Remote controller address

Error code

**Wired Remote Controller (Touch panel)**

Error status / Error history

| Error History | | | | Page 1/ 3 |
|---|---|---|---|---|
| No. | Date | Time | Address | Code |
| 1 | 2012/ 8/ 1 | 11:00AM | 002-01 | 141 |
| 2 | 2012/ 7/30 | 2:53AM | 002-02 | 143 |
| 3 | 2012/ 7/26 | 8:53AM | 002-02 | 143 |
| 4 | 2012/ 7/23 | 11:00AM | 002-01 | 141 |
| 5 | 2012/ 7/22 | 11:00AM | 002-01 | 141 |
| 6 | 2012/ 7/21 | 11:00AM | 002-01 | 141 |
| Back | | | Next Page | Erase All |

Error status can be cheked easily by outdoor unit display

Error and quantity annunciation

Error code

Abnormal indoor unit address

## Error diagnosis by Service Tool

**Connection to Service Tool**
• Detail operation status and recent error history can be checked and analyzed by using the Service Tool.
• Last 5 min. operation memory can be also be recorded.

Service Tool
**UTY-ASGXZ1**
Software

Outdoor unit

Transmission line

USB adaptor
(Locally purchased)

Indoor unit
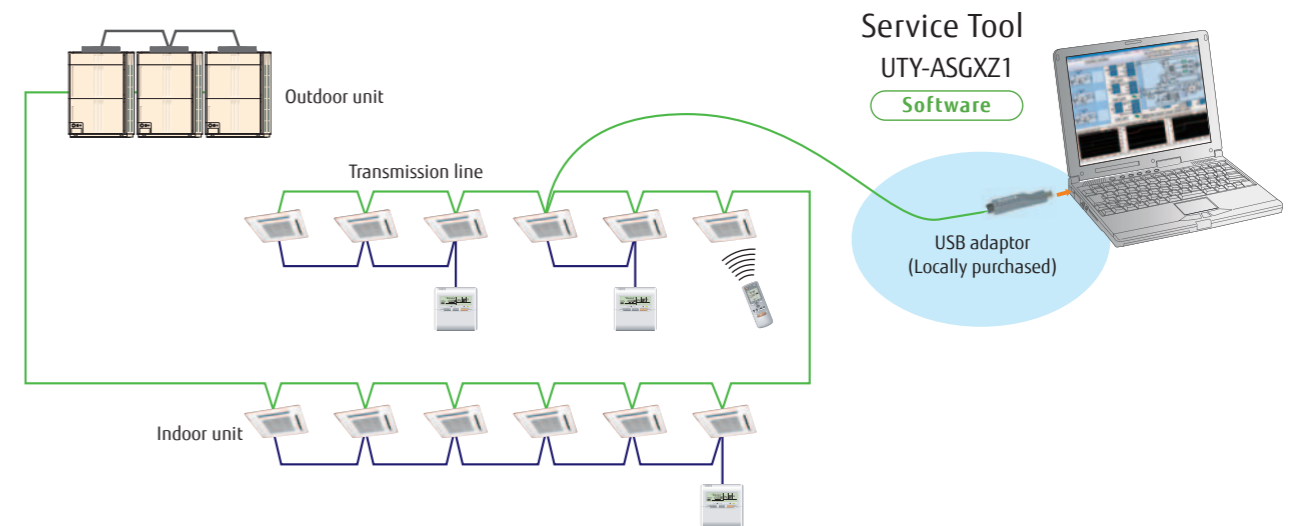
## Remote monitoring

The Web Monitoring system allows you to view system operation anytime over the internet, ensuring issue free operation.

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

**Monitoring Side**

Internet
or
Public Telephone
Line

**VRF Network System Side**

Outdoor unit

Transmission line

USB adaptor
(Locally purchased)

Web
Monitoring Tool
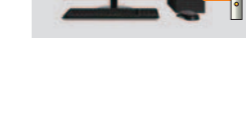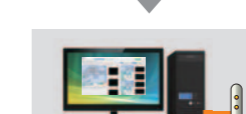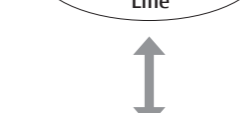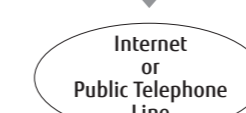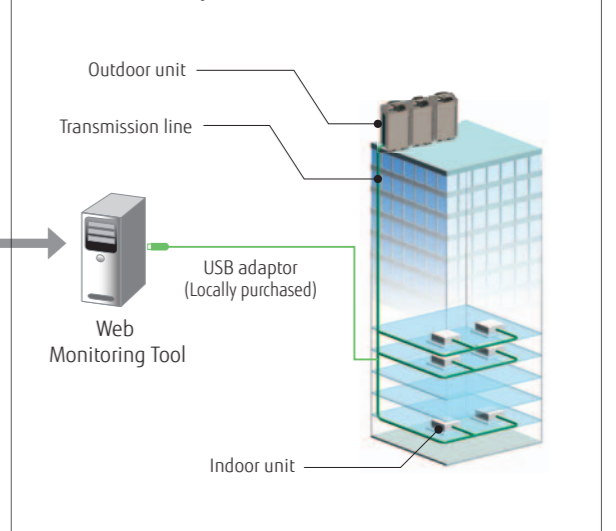
Indoor unit

# AIRSTAGE™ INVERTER

## AIRSTAGE™ SERIES

**The AIRSTAGE 3 Series has a total of 60 models to meet the environmental and building size requirements.**

The AIRSTAGE series outdoor units were developed with structural designs and advanced inverter technology to provide higher efficiency.
High durability technology has also been incorporated to ensure long-term use.

### AIRSTAGE™ LINE-UP

**HEAT PUMP TYPE AIRSTAGE V-III TROPICAL Series**

**HEAT PUMP TYPE AIRSTAGE V-II TROPICAL Series**

**HEAT PUMP TYPE AIRSTAGE J-III TROPICAL Series**

AIRSTAGE™

# AIRSTAGE™ LINE-UP

Fujitsu General provides multi air conditioning systems for buildings AIRSTAGE Series matched to the size and application of the property.

## Outdoor units range

| HP | 4 | 5 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 50 | 52 | 54 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BTU/h | 36,000 | 45,000 | 54,000 | 72,000 | 90,000 | 108,000 | 126,000 | 144,000 | 162,000 | 180,000 | 198,000 | 216,000 | 234,000 | 252,000 | 270,000 | 288,000 | 306,000 | 324,000 | 342,000 | 360,000 | 378,000 | 396,000 | 414,000 | 432,000 | 450,000 | 468,000 | 486,000 |
| Ton | 3.0 | 3.8 | 4.5 | 6.0 | 7.5 | 9.0 | 10.5 | 12.0 | 13.5 | 15.0 | 16.5 | 18.0 | 19.5 | 21.0 | 22.5 | 24.0 | 25.5 | 27.0 | 28.5 | 30.0 | 31.5 | 33.0 | 34.5 | 36.0 | 37.5 | 39.0 | 40.5 |

### AIRSTAGE V-III  TROPICAL series — Heat Pump

**Space saving**

| HP | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
|---|---|---|---|---|---|---|---|---|---|
| Model | AJH072LNLBH | AJH090LNLBH | AJH108LNLBH | AJH126LNLBH | AJH144LNLBH | AJH162LNLBH | AJH180LNLBH | AJH198LNLBH | AJH216LNLBH |

| HP | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 50 | 52 | 54 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model | AJH234LNLBH | AJH252LNLBH | AJH270LNLBH | AJH288LNLBH | AJH306LNLBH | AJH324LNLBH | AJH342LNLBH | AJH360LNLBH | AJH378LNLBH | AJH396LNLBH | AJH414LNLBH | AJH432LNLBH | AJH450LNLBH | AJH468LNLBH | AJH486LNLBH |

**High Efficiency**

| HP | 16 | 18 | 20 | 24 |
|---|---|---|---|---|
| Model | AJH144LNLBHH | AJH162LNLBHH | AJH180LNLBHH | AJH216LNLBHH |

| HP | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model | AJH234LNLBHH | AJH252LNLBHH | AJH270LNLBHH | AJH288LNLBHH | AJH306LNLBHH | AJH324LNLBHH | AJH342LNLBHH | AJH360LNLBHH | AJH378LNLBHH | AJH396LNLBHH | AJH414LNLBHH |

### AIRSTAGE V-II  TROPICAL series — Heat Pump

**Space saving**

| HP | 8 | 10 | 14 | 16 | 18 | 20 | 22 | 24 |
|---|---|---|---|---|---|---|---|---|
| Model | AJH072LNLAH | AJH090LNLAH | AJH126LNLAH | AJH144LNLAH | AJH162LNLAH | AJH180LNLAH | AJH198LNLAH | AJH216LNLAH |

| HP | 28 | 30 | 32 | 34 | 36 | 38 | 42 |
|---|---|---|---|---|---|---|---|
| Model | AJH252LNLAH | AJH270LNLAH | AJH288LNLAH | AJH306LNLAH | AJH324LNLAH | AJH342LNLAH | AJH378LNLAH |

**High Efficiency**

| HP | 24 | 26 | 28 |
|---|---|---|---|
| Model | AJH216LNLAHH | AJH234LNLAHH | AJH252LNLAHH |

### NEW  AIRSTAGE J-III  TROPICAL series — Heat Pump

**High Efficiency (Single phase)**

| HP | 4 | 5 | 6 |
|---|---|---|---|
| Model | AJH040LBTAHN | AJH045LBTAHN | AJH054LBTAHN |

**High Efficiency (3 phase)**

| HP | 4 | 5 | 6 |
|---|---|---|---|
| Model | AJH040LETAHN | AJH045LETAHN | AJH054LETAHN |

# HEAT PUMP TYPE

## AIRSTAGE™ V-III

### TROPICAL series

Fujitsu General tropical VRF is designed for tropical weather.
Extensive lineup from 8HP to 54HP in 2HP increment
Connectable indoor unit capacity ratio up to 130%

---

## System Outline

### High ambient operation design

Possible to operate cooling up to 52°C outdoor temperature

**52°C ambient**

Cooling operation range

| | | |
|---|---|---|
| 52 50 | 40 | 30 |

Outdoor temperature (°C)

### Powerful cooling capacity design

Keeping high cooling power at even high ambient temperature

Cooling capacity (kW)

- ■ 35°C ambient temp.
- ■ 46°C ambient temp.

8HP  10HP  14HP

### Anti-corrosion treatment design

All metalic and PCB components are protected against corrosion

### System configuration example

- This system is used for medium-sized and large buildings. Connecting each outdoor unit makes it possible to create a high-capacity system.
- Connection of multiple indoor units using separation tubes and headers.

Outdoor unit
Separation tube
Header
Liquid pipe
Gas pipe
Indoor unit
Indoor unit

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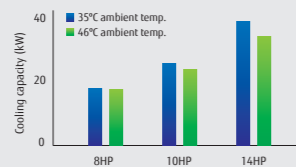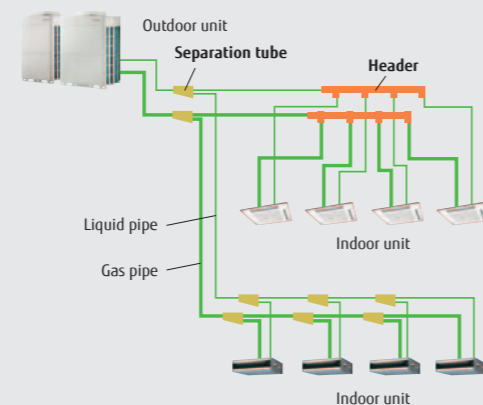
## Features

### Energy efficiency

Top class high COP is realized for all combinations by our unique heat exchanger structure, high efficient DC twin compressor, and other our own technologies.

**Space saving combination**

(COP)

| HP | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24* | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 50 | 52 | 54 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| COP | 4.84 | 4.35 | 4.34 | 4.03 | 3.67 | 3.67 | 4.34 | 4.28 | 4.15 | 3.90 | 3.90 | 3.83 | 3.67 | 3.67 | 3.67 | 4.02 | 3.95 | 3.81 | 3.81 | 3.81 | 3.67 | 3.67 | 3.67 | 3.67 |

**Energy efficiency combination**

(COP)

| HP | 16 | 18 | 20 | 24* | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 48 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| COP | 4.84 | 4.55 | 4.52 | 4.84 | 4.63 | 4.61 | 4.42 | 4.45 | 4.30 | 4.34 | 4.21 | 4.11 | 4.03 | 3.89 | 3.77 |

**For 24 HP Combination**

Space saving → Energy efficiency

**COP 17% UP**

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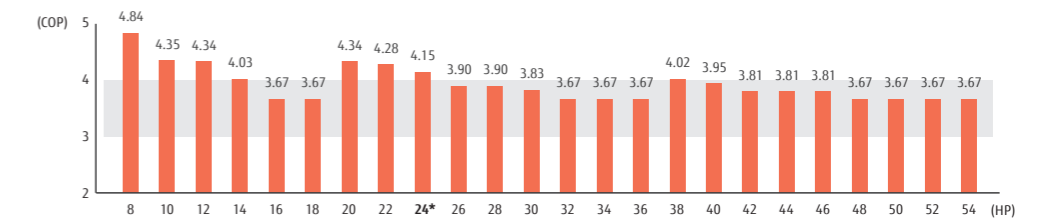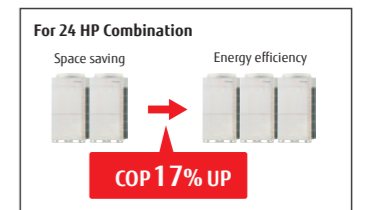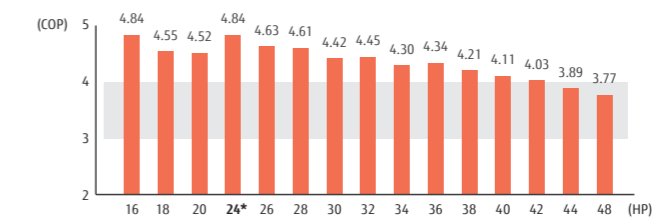
## Energy saving technology that boosted operation efficiency

### Powerful large propeller fan
By using CFD*1 technology, a newly designed fan achieves high performance and low noise operation.  *1. CFD = Computational Fluid Dynamics

## All Inverter

### 3 phase DC fan motor
Efficiency is substantially improved by high efficient motor with sophisticated driver control. In addition, low noise is realized by DC fan motor.

### Sine-wave DC inverter control
High efficiency is realized by adoption of reduced switching loss IPM.

### High efficient & Large capacity DC inverter compressor
Large capacity high efficient DC twin rotary compressor with 0.1Hz steps compressor speed control
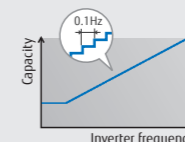
Capacity
0.1Hz
Inverter frequency

### Subcool heat exchanger
High Heat Exchange efficiency is achieved by using an internal projection shape double pipe construction.

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

### Front intake port (corner cut air inhaling structure)

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## Advanced energy saving control

### Multiple outdoor operation control
This control method operates all compressors at part load and distributes refrigerant to all heat exchangers to improve the overall system efficiency.

Compressor Load level
High efficient operation
Inefficient operation
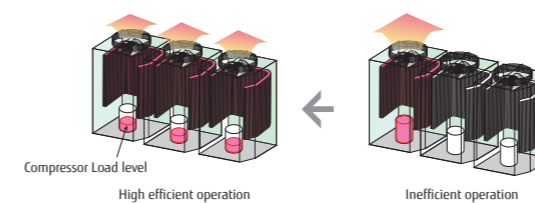
### Heat exchanger refrigerant control
The efficiency of the top and bottom heat exchanger in the outdoor unit has been improved by adopting an optimum refrigerant path control.

Fan
Large intake airflow
Small intake airflow
Heat exchanger
Outdoor unit

**High efficient refrigerant flow control**
Larger refrigerant flow
EEV
Heat exchanger Distributor

# Outdoor units lineup
• Combinations other than the followings are not recommended.

**AIRSTAGE V-III**
**TROPICAL series**

## Space saving combination

| 72,000 Btu/h (8HP) | 90,000 Btu/h (10HP) | 108,000 Btu/h (12HP) | 126,000 Btu/h (14HP) | 144,000 Btu/h (16HP) |
|---|---|---|---|---|
| AJH072LNLBH<br>UNIT : AJH072LNLBH | AJH090LNLBH<br>UNIT : AJH090LNLBH | AJH108LNLBH<br>UNIT : AJH108LNLBH | AJH126LNLBH<br>UNIT : AJH126LNLBH | AJH144LNLBH<br>UNIT : AJH144LNLBH |
| 162,000 Btu/h (18HP) | 180,000 Btu/h (20HP) | 198,000 Btu/h (22HP) | 216,000 Btu/h (24HP) | 234,000 Btu/h (26HP) |
| AJH162LNLBH<br>UNIT : AJH162LNLBH | AJH180LNLBH<br>UNIT : AJH090/090LNLBH | AJH198LNLBH<br>UNIT : AJH126/072LNLBH | AJH216LNLBH<br>UNIT : AJH126/090LNLBH | AJH234LNLBH<br>UNIT : AJH144/090LNLBH |
| 252,000 Btu/h (28HP) | 270,000 Btu/h (30HP) | 288,000 Btu/h (32HP) | 306,000 Btu/h (34HP) | 324,000 Btu/h (36HP) |
| AJH252LNLBH<br>UNIT : AJH162/090LNLBH | AJH270LNLBH<br>UNIT : AJH144/126LNLBH | AJH288LNLBH<br>UNIT : AJH144/144LNLBH | AJH306LNLBH<br>UNIT : AJH162/144LNLBH | AJH324LNLBH<br>UNIT : AJH162/162LNLBH |
| 342,000 Btu/h (38HP) | 360,000 Btu/h (40HP) | 378,000 Btu/h (42HP) | 396,000 Btu/h (44HP) | 414,000 Btu/h (46HP) |
| AJH342LNLBH<br>UNIT : AJH162/090/090LNLBH | AJH360LNLBH<br>UNIT : AJH144/126/090LNLBH | AJH378LNLBH<br>UNIT : AJH144/144/090LNLBH | AJH396LNLBH<br>UNIT : AJH162/144/090LNLBH | AJH414LNLBH<br>UNIT : AJH162/162/090LNLBH |
| 432,000 Btu/h (48HP) | 450,000 Btu/h (50HP) | 468,000 Btu/h (52HP) | 486,000 Btu/h (54HP) | |
| AJH432LNLBH<br>UNIT : AJH144/144/144LNLBH | AJH450LNLBH<br>UNIT : AJH162/144/144LNLBH | AJH468LNLBH<br>UNIT : AJH162/162/144LNLBH | AJH486LNLBH<br>UNIT : AJH162/162/162LNLBH | |

## Energy efficiency combination

| 144,000 Btu/h (16HP) | 162,000 Btu/h (18HP) | 180,000 Btu/h (20HP) | 216,000 Btu/h (24HP) | 234,000 Btu/h (26HP) |
|---|---|---|---|---|
| AJH144LNLBHH<br>UNIT : AJH072/072LNLBH | AJH162LNLBHH<br>UNIT : AJH090/072LNLBH | AJH180LNLBHH<br>UNIT : AJH108/072LNLBH | AJH216LNLBHH<br>UNIT : AJH072/072/072LNLBH | AJH234LNLBHH<br>UNIT : AJH090/072/072LNLBH |
| 252,000 Btu/h (28HP) | 270,000 Btu/h (30HP) | 288,000 Btu/h (32HP) | 306,000 Btu/h (34HP) | 324,000 Btu/h (36HP) |
| AJH252LNLBHH<br>UNIT : AJH108/072/072LNLBH | AJH270LNLBHH<br>UNIT : AJH126/072/072LNLBH | AJH288LNLBHH<br>UNIT : AJH108/108/072LNLBH | AJH306LNLBHH<br>UNIT : AJH126/108/072LNLBH | AJH324LNLBHH<br>UNIT : AJH108/108/108LNLBH |
| 342,000 Btu/h (38HP) | 360,000 Btu/h (40HP) | 378,000 Btu/h (42HP) | 396,000 Btu/h (44HP) | 414,000 Btu/h (46HP) |
| AJH342LNLBHH<br>UNIT : AJH126/108/108LNLBH | AJH360LNLBHH<br>UNIT : AJH126/126/108LNLBH | AJH378LNLBHH<br>UNIT : AJH126/126/126LNLBH | AJH396LNLBHH<br>UNIT : AJH144/126/126LNLBH | AJH414LNLBHH<br>UNIT : AJH144/144/126LNLBH |

## Dimensions

**8,10HP :** AJH072LNLBH / AJH090LNLBH

(Unit : mm)



690 (Bolt pitch) | 80 | 530 (Bolt pitch) | 8-12 × 17 (Hole) | 732 (Bolt pitch) | 765 | 930 | 1576 | 1690 | 1339

**12,14,16,18HP :** AJH108LNLBH / AJH126LNLBH / AJH144LNLBH / AJH162LNLBH

(Unit : mm)



1000 (Bolt pitch) | 80 | 840 (Bolt pitch) | 8-12×7 (Hole) | 732 (Bolt pitch) | 765 | 1240 | 1690

**A** Front side knockout position
Ø 34.5
Power supply cable port
Ø 43.7
Power supply cable port
Ø 50
Ø 22.2 Transmission cable port
Ø 22.2 Transmission cable port
Pipe port
73 | 43 | 95 | 75 | 10 | 100 | 125 | 199

**B** Left side knockout position
Ø 50
Power supply cable port
Ø 34.5
Power supply cable port
Ø 43.7
Power supply cable port
Ø 22.2 Transmission cable port
Ø 22.2 Transmission cable port

**C** Bottom side knockout position
Top view
Pipe port
82 | 80 | 42 | 197

# Space Saving Combination

| Rating Capacity range | | | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 50 | 52 | 54 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HP | | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 50 | 52 | 54 |
| | Btu/h | | 72,000 | 90,000 | 108,000 | 126,000 | 144,000 | 162,000 | 180,000 | 198,000 | 216,000 | 234,000 | 252,000 | 270,000 | 288,000 | 306,000 | 324,000 | 342,000 | 360,000 | 378,000 | 396,000 | 414,000 | 432,000 | 450,000 | 468,000 | 486,000 |
| | Ton | | 6.0 | 7.5 | 9.0 | 10.5 | 12.0 | 13.5 | 15.0 | 16.5 | 18.0 | 19.5 | 21.0 | 22.5 | 24.0 | 25.5 | 27.0 | 28.5 | 30.0 | 31.5 | 33.0 | 34.5 | 36.0 | 37.5 | 39.0 | 40.5 |
| Model name | | | AJH072LNLBH | AJH090LNLBH | AJH108LNLBH | AJH126LNLBH | AJH144NLNBH | AJH162LNLBH | AJH180LNLBH | AJH198LNLBH | AJH216LNLBH | AJH234LNLBH | AJH252LNLBH | AJH270LNLBH | AJH288LNLBH | AJH306LNLBH | AJH324LNLBH | AJH342LNLBH | AJH360LNLBH | AJH378LNLBH | AJH396LNLBH | AJH414LNLBH | AJH432LNLBH | AJH450LNLBH | AJH468LNLBH | AJH486LNLBH |
| Unit 1 | | | AJH072LNLBH | AJH090LNLBH | AJH108LNLBH | AJH126LNLBH | AJH144NLNBH | AJH162LNLBH | AJH090LNLBH | AJH126LNLBH | AJH126LNLBH | AJH144LNLBH | AJH162LNLBH | AJH144LNLBH | AJH144LNLBH | AJH162LNLBH | AJH162LNLBH | AJH162LNLBH | AJH144LNLBH | AJH144LNLBH | AJH162LNLBH | AJH162LNLBH | AJH144LNLBH | AJH162LNLBH | AJH162LNLBH | AJH162LNLBH |
| Unit 2 | | | | | | | | | AJH090LNLBH | AJH072LNLBH | AJH090LNLBH | AJH090LNLBH | AJH090LNLBH | AJH144LNLBH | AJH144LNLBH | AJH144LNLBH | AJH162LNLBH | AJH090LNLBH | AJH144LNLBH | AJH144LNLBH | AJH162LNLBH | AJH144LNLBH | AJH144LNLBH | AJH144LNLBH | AJH162LNLBH | AJH162LNLBH |
| Unit 3 | | | | | | | | | | | | | | | | | | AJH090LNLBH | AJH090LNLBH | AJH090LNLBH | AJH090LNLBH | AJH090LNLBH | AJH144LNLBH | AJH144LNLBH | AJH144LNLBH | AJH162LNLBH |
| Maximum Connectable Indoor Unit | | | 13 | 16 | 19 | 23 | 26 | 29 | 33 | 36 | 40 | 43 | 46 | 50 | 53 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| Indoor unit connectable capacity | Cooling | kW | 11.2-29.1 | 14-36.4 | 16.8-43.5 | 20-52 | 22.5-58.5 | 25-65 | 28-72.8 | 31.2-81.1 | 34-88.4 | 36.5-94.9 | 39-101.4 | 42.5-110.5 | 45-117 | 47.5-123.5 | 50-130 | 53-137.8 | 56.5-146.9 | 59-153.4 | 61.5-159.9 | 64-166.4 | 67.5-175.5 | 70-182 | 72.5-188.5 | 75-195 |
| Power source | | | 3-phase, ~380-415V, 50Hz | | | | | | | | | | | 3-phase, ~380-415V, 50Hz | | | | | | | | | | | | |
| T1 condition – Capacity | Cooling | kW | 22.4 | 28.0 | 33.5 | 40.0 | 45.0 | 50.0 | 56.0 | 62.4 | 68.0 | 73.0 | 78.0 | 85.0 | 90.0 | 95.0 | 100.0 | 106.0 | 113.0 | 118.0 | 123.0 | 128.0 | 135.0 | 140.0 | 145.0 | 150.0 |
| | Heating | kW | 25.0 | 31.5 | 37.5 | 45.0 | 50.0 | 50.0 | 63.0 | 70.0 | 76.5 | 81.5 | 81.5 | 95.0 | 100.0 | 100.0 | 100.0 | 113.0 | 126.5 | 131.5 | 131.5 | 131.5 | 150.0 | 150.0 | 150.0 | 150.0 |
| | Cooling | Btu/h | 76400 | 95500 | 114300 | 136500 | 153500 | 170600 | 191000 | 212900 | 232000 | 249000 | 266100 | 290000 | 307000 | 324100 | 341200 | 361600 | 385500 | 402500 | 419600 | 436700 | 460500 | 477600 | 494700 | 511800 |
| | Heating | Btu/h | 85300 | 107500 | 128000 | 153500 | 170600 | 170600 | 215000 | 238800 | 261000 | 278100 | 278100 | 324100 | 341200 | 341200 | 341200 | 385600 | 431600 | 448700 | 448700 | 448700 | 511800 | 511800 | 511800 | 511800 |
| T1 – Input power | Cooling | kW | 5.20 | 7.28 | 8.96 | 10.96 | 13.01 | 16.56 | 14.56 | 16.16 | 18.24 | 20.29 | 23.84 | 23.97 | 26.02 | 29.57 | 33.12 | 31.12 | 31.25 | 33.30 | 36.85 | 40.40 | 39.03 | 42.58 | 46.13 | 49.68 |
| | Heating | kW | 5.17 | 7.25 | 8.65 | 11.17 | 13.63 | 13.63 | 14.50 | 16.34 | 18.42 | 20.88 | 20.88 | 24.80 | 27.26 | 27.26 | 27.26 | 28.13 | 32.05 | 34.51 | 34.51 | 34.51 | 40.89 | 40.89 | 40.89 | 40.89 |
| T1 – Current | Cooling | A | 9.2 | 12.0 | 15.0 | 17.7 | 20.7 | 26.1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Heating | A | 9.2 | 12.2 | 14.6 | 18.2 | 21.5 | 21.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| EER | Cooling | W/W | 4.31 | 3.85 | 3.74 | 3.65 | 3.46 | 3.02 | 3.85 | 3.86 | 3.73 | 3.60 | 3.27 | 3.55 | 3.46 | 3.21 | 3.02 | 3.41 | 3.62 | 3.54 | 3.34 | 3.17 | 3.46 | 3.29 | 3.14 | 3.02 |
| COP | Heating | W/W | 4.84 | 4.35 | 4.34 | 4.03 | 3.67 | 3.67 | 4.34 | 4.28 | 4.15 | 3.90 | 3.90 | 3.83 | 3.67 | 3.67 | 3.67 | 4.02 | 3.95 | 3.81 | 3.81 | 3.81 | 3.67 | 3.67 | 3.67 | 3.67 |
| EER | Cooling | Btu/h/W | 14.7 | 13.1 | 12.8 | 12.5 | 11.8 | 10.3 | 13.1 | 13.2 | 12.7 | 12.3 | 11.2 | 12.1 | 11.8 | 11.0 | 10.3 | 11.6 | 12.3 | 12.1 | 11.4 | 10.8 | 11.8 | 11.2 | 10.7 | 10.3 |
| COP | Heating | Btu/h/W | 16.5 | 14.8 | 14.8 | 13.7 | 12.5 | 12.5 | 14.8 | 14.6 | 14.2 | 13.3 | 13.3 | 13.1 | 12.5 | 12.5 | 12.5 | 13.7 | 13.5 | 13.0 | 13.0 | 13.0 | 12.5 | 12.5 | 12.5 | 12.5 |
| T3 condition – Capacity | Cooling | kW | 20.2 | 25.2 | 28.5 | 32 | 35.1 | 35.2 | 50.4 | 52.2 | 57.2 | 60.3 | 60.4 | 67.1 | 70.2 | 70.3 | 70.4 | 85.6 | 92.3 | 95.4 | 95.4 | 95.6 | 105.3 | 105.4 | 105.5 | 105.6 |
| | Cooling | Btu/h | 68900 | 86000 | 97200 | 109200 | 119800 | 120100 | 172000 | 178100 | 195200 | 205800 | 206100 | 229000 | 239600 | 239900 | 240000 | 292100 | 315000 | 325600 | 325900 | 326200 | 359400 | 359700 | 360000 | 360300 |
| T3 – Input power | Cooling | kW | 6.73 | 9.20 | 9.34 | 10.70 | 11.82 | 12.35 | 18.39 | 17.44 | 19.90 | 21.02 | 21.55 | 22.52 | 23.64 | 24.17 | 24.70 | 30.75 | 31.72 | 32.83 | 33.37 | 33.90 | 35.45 | 35.99 | 36.52 | 37.05 |
| T3 – Current | Cooling | A | 10.8 | 14.5 | 14.7 | 16.9 | 18.6 | 19.2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| EER | Cooling | W/W | 3.00 | 2.74 | 3.05 | 2.99 | 2.97 | 2.85 | 2.74 | 2.99 | 2.87 | 2.87 | 2.80 | 2.98 | 2.97 | 2.91 | 2.85 | 2.78 | 2.91 | 2.91 | 2.86 | 2.82 | 2.97 | 2.93 | 2.89 | 2.85 |
| EER | Cooling | Btu/h/W | 10.23 | 9.35 | 10.40 | 10.20 | 10.14 | 9.72 | 9.35 | 10.21 | 9.81 | 9.79 | 9.56 | 10.17 | 10.14 | 9.93 | 9.72 | 9.50 | 9.93 | 9.92 | 9.77 | 9.62 | 10.14 | 10.00 | 9.86 | 9.72 |
| Power factor | | % | 90 | 92 | 92 | 92 | 92 | 93 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Airflow rate | High | m³/h | 11100 | 11100 | 13000 | 13000 | 13700 | 13700 | 11100×2 | 13000+11100 | 13000+11100 | 13700+11100 | 13700+11100 | 13700+13000 | 13700×2 | 13700×2 | 13700×2 | 13700+11100×2 | 13000+13000+11100 | 13700×2+11100 | 13700×2+11100 | 13700×2+11100 | 13700×3 | 13700×3 | 13700×3 | 13700×3 |
| Sound pressure level / Power level | Cooling | dB | 56 / 77 | 58 / 79 | 57 / 78 | 60 / 81 | 62 / 83 | 63 / 84 | 61 / 82 | 61 / 82 | 63 / 83 | 63 / 84 | 64 / 85 | 64 / 85 | 65 / 88 | 66 / 87 | 67 / 89 | 66 / 87 | 65 / 86 | 66 / 87 | 67 / 88 | 67 / 88 | 67 / 88 | 67 / 88 | 67 / 88 | 68 / 89 |
| | Heating | (A) | 58 / 80 | 59 / 81 | 60 / 83 | 62 / 84 | 64 / 86 | 64 / 86 | 62 / 84 | 63 / 85 | 64 / 86 | 65 / 87 | 65 / 87 | 66 / 88 | 67 / 89 | 67 / 89 | 67 / 89 | 66 / 88 | 67 / 89 | 68 / 90 | 68 / 90 | 68 / 90 | 69 / 91 | 69 / 91 | 69 / 91 | 69 / 91 |
| External static pressure (Max) | | Pa | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 |
| Compressor motor output | | kW | 7.5 | 7.5 | 11 | 11 | 11 | 11 | 7.5×2 | 11.0+7.5 | 11.0+7.5 | 11.0+7.5 | 11.0+7.5 | 11.0×2 | 11.0×2 | 11.0×2 | 11.0×2 | 11.0+7.5×2 | 11.0×2+7.5 | 11.0×2+7.5 | 11.0×2+7.5 | 11.0×2+7.5 | 11.0×3 | 11.0×3 | 11.0×3 | 11.0×3 |
| Heat exchanger fin | | | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin |
| Dimensions | Height | mm | 1690 | 1690 | 1690 | 1690 | 1690 | 1690 | 1690×2 | 1690×2 | 1690×2 | 1690×2 | 1690×2 | 1690×2 | 1690×2 | 1690×2 | 1690×2 | 1690×2 | 1690×3 | 1690×3 | 1690×3 | 1690×3 | 1690×3 | 1690×3 | 1690×3 | 1690×3 |
| | Width | mm | 930 | 930 | 1240 | 1240 | 1240 | 1240 | 930×2 | 1240+930 | 1240+930 | 1240+930 | 1240+930 | 1240×2 | 1240×2 | 1240×2 | 1240×2 | 1240×2 | 1240×930×2 | 1240×2+930 | 1240×2+930 | 1240×2+930 | 1240×3 | 1240×3 | 1240×3 | 1240×3 |
| | Depth | mm | 765 | 765 | 765 | 765 | 765 | 765 | 765×2 | 765×2 | 765×2 | 765×2 | 765×2 | 765×2 | 765×2 | 765×2 | 765×2 | 765×2 | 765×3 | 765×3 | 765×3 | 765×3 | 765×3 | 765×3 | 765×3 | 765×3 |
| Weight | | kg | 255 | 255 | 279 | 279 | 279 | 279 | 255×2 | 279+255 | 279+255 | 279+255 | 279+255 | 279×2 | 279×2 | 279×2 | 279×2 | 279×2 | 279×255×2 | 279×2+255 | 279×2+255 | 279×2+255 | 279×3 | 279×3 | 279×3 | 279×3 |
| Refrigerant | Type (Global Warming Potential) | | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) |
| | Charge | kg(CO2eq-T) | 11.7 (24.4) | 11.7 (24.4) | 11.8 (24.6) | 11.8 (24.6) | 11.8 (24.6) | 11.8 (24.6) | 11.7×2 (24.4×2) | 11.8+11.7 (24.6+24.4) | 11.8+11.7 (24.6+24.4) | 11.8+11.7 (24.6+24.4) | 11.8+11.7 (24.6+24.4) | 11.8×2 (24.6×2) | 11.8×2 (24.6×2) | 11.8×2 (24.6×2) | 11.8×2 (24.6×2) | 11.8+11.7×2 (24.6×2+24.4) | 11.8×2+11.7 (24.6×2+24.4) | 11.8×2+11.7 (24.6×2+24.4) | 11.8×2+11.7 (24.6×2+24.4) | 11.8×2+11.7 (24.6×2+24.4) | 11.8×3 (24.6×3) | 11.8×3 (24.6×3) | 11.8×3 (24.6×3) | 11.8×3 (24.6×3) |
| Connection pipe diameter | Liquid | mm | 12.70 | 12.70 | 12.70 | 12.70 | 12.70 | 15.88 | 15.88 | 15.88 | 15.88 | 15.88 | 15.88 | 19.05 | 19.05 | 19.05 | 19.05 | 19.05 | 19.05 | 19.05 | 19.05 | 19.05 | 19.05 | 19.05 | 19.05 | 19.05 |
| | Gas | mm | 22.22 | 22.22 | 28.58 | 28.58 | 28.58 | 28.58 | 28.58 | 34.92 | 34.92 | 34.92 | 34.92 | 34.92 | 34.92 | 34.92 | 41.27 | 41.27 | 41.27 | 41.27 | 41.27 | 41.27 | 41.27 | 41.27 | 41.27 | 41.27 |
| Operation range | Cooling | °CDB | -15 to 52 | -15 to 52 | -15 to 52 | -15 to 52 | -15 to 52 | -15 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 |
| | Heating | °CDB | -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 | -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 |

# Energy Efficiency Combination

| Rating Capacity range | | | 16 | 18 | 20 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HP | | 16 | 18 | 20 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 |
| | Btu/h | | 144,000 | 162,000 | 180,000 | 216,000 | 234,000 | 252,000 | 270,000 | 288,000 | 306,000 | 324,000 | 342,000 | 360,000 | 378,000 | 396,000 | 414,000 |
| | Ton | | 12.0 | 13.5 | 15.0 | 18.0 | 19.5 | 21.0 | 22.5 | 24.0 | 25.5 | 27.0 | 28.5 | 30.0 | 31.5 | 33.0 | 34.5 |
| Model name | | | AJH144LNLBHH | AJH162LNLBHH | AJH180LNLBHH | AJH216LNLBHH | AJH234LNLBHH | AJH252LNLBHH | AJH270LNLBHH | AJH288LNLBHH | AJH306LNLBHH | AJH324LNLBHH | AJH342LNLBHH | AJH360LNLBHH | AJH378LNLBHH | AJH396LNLBHH | AJH414LNLBHH |
| Unit 1 | | | AJH072LNLBH | AJH090LNLBH | AJH108LNLBH | AJH072LNLBH | AJH090LNLBH | AJH108LNLBH | AJH126LNLBH | AJH108LNLBH | AJH126LNLBH | AJH108LNLBH | AJH126LNLBH | AJH126LNLBH | AJH126LNLBH | AJH144LNLBH | AJH144LNLBH |
| Unit 2 | | | AJH072LNLBH | AJH072LNLBH | AJH072LNLBH | AJH072LNLBH | AJH072LNLBH | AJH072LNLBH | AJH072LNLBH | AJH108LNLBH | AJH108LNLBH | AJH108LNLBH | AJH108LNLBH | AJH108LNLBH | AJH126LNLBH | AJH126LNLBH | AJH126LNLBH |
| Unit 3 | | | | | | AJH072LNLBH | AJH072LNLBH | AJH072LNLBH | AJH072LNLBH | AJH072LNLBH | AJH072LNLBH | AJH108LNLBH | AJH108LNLBH | AJH126LNLBH | AJH126LNLBH | AJH126LNLBH | AJH144LNLBH |
| Maximum Connectable Indoor Unit | | | 26 | 29 | 33 | 39 | 43 | 46 | 50 | 52 | 55 | 55 | 55 | 55 | 55 | 55 | 55 |
| Indoor unit connectable capacity | Cooling | kW | 22.4-58.2 | 25.2-65.5 | 28-72.6 | 33.6-87.3 | 36.4-94.6 | 39.2-101.7 | 42.4-110.2 | 44.7-116.2 | 48-124.6 | 50.3-130.6 | 53.5-139.1 | 56.8-147.5 | 60-156 | 62.5-162.5 | 65-169 |
| Power source | | | 3-phase, ~380-415V, 50Hz | | | | | | | 3-phase, ~380-415V, 50Hz | | | | | | | |
| T1 condition – Capacity | Cooling | kW | 44.8 | 50.4 | 55.9 | 67.2 | 72.8 | 78.3 | 84.8 | 89.4 | 95.9 | 100.5 | 107.0 | 113.5 | 120.0 | 125.0 | 130.0 |
| | Heating | kW | 50.0 | 56.5 | 62.5 | 75.0 | 81.5 | 87.5 | 95.0 | 95.0 | 107.5 | 112.5 | 120.0 | 127.5 | 135.0 | 140.0 | 145.0 |
| | Cooling | Btu/h | 152800 | 171900 | 190700 | 229200 | 248300 | 267100 | 289300 | 305000 | 327200 | 342900 | 365100 | 387300 | 409500 | 426500 | 443500 |
| | Heating | Btu/h | 170600 | 192800 | 213300 | 255900 | 278100 | 298600 | 324100 | 341300 | 366800 | 384000 | 409500 | 435000 | 460500 | 477600 | 494700 |
| T1 – Input power | Cooling | kW | 10.40 | 12.48 | 14.16 | 15.60 | 17.68 | 19.36 | 21.36 | 23.12 | 25.12 | 26.88 | 28.88 | 30.88 | 32.88 | 34.93 | 36.98 |
| | Heating | kW | 10.34 | 12.42 | 13.82 | 15.51 | 17.59 | 18.99 | 21.51 | 22.47 | 24.99 | 25.95 | 28.47 | 30.99 | 33.51 | 35.97 | 38.43 |
| T1 – Current | Cooling | A | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Heating | A | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| EER | Cooling | W/W | 4.31 | 4.04 | 3.95 | 4.31 | 4.12 | 4.04 | 3.97 | 3.87 | 3.82 | 3.74 | 3.70 | 3.68 | 3.65 | 3.58 | 3.52 |
| COP | Heating | W/W | 4.84 | 4.55 | 4.52 | 4.84 | 4.63 | 4.61 | 4.42 | 4.45 | 4.30 | 4.34 | 4.21 | 4.11 | 4.03 | 3.89 | 3.77 |
| EER | Cooling | Btu/h/W | 14.7 | 13.8 | 13.5 | 14.7 | 14.0 | 13.8 | 13.5 | 13.2 | 13.0 | 12.8 | 12.6 | 12.5 | 12.5 | 12.2 | 12.0 |
| COP | Heating | Btu/h/W | 16.5 | 15.5 | 15.4 | 16.5 | 15.8 | 15.7 | 15.1 | 15.2 | 14.7 | 14.8 | 14.4 | 14.0 | 13.7 | 13.3 | 12.9 |
| T3 condition – Capacity | Cooling | kW | 40.4 | 45.4 | 48.7 | 60.6 | 65.6 | 68.9 | 72.4 | 77.2 | 80.7 | 85.5 | 89.0 | 92.5 | 96.0 | 99.1 | 102.2 |
| | Cooling | Btu/h | 137800 | 154900 | 166100 | 206700 | 223800 | 235000 | 247000 | 263300 | 275300 | 291600 | 303600 | 315600 | 327600 | 338200 | 348800 |
| T3 – Input power | Cooling | kW | 13.47 | 15.93 | 16.08 | 20.20 | 22.66 | 22.81 | 24.17 | 25.42 | 26.78 | 28.03 | 29.39 | 30.75 | 32.11 | 33.22 | 34.34 |
| T3 – Current | Cooling | A | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| EER | Cooling | W/W | 3.00 | 2.85 | 3.03 | 3.00 | 2.89 | 3.02 | 3.00 | 3.04 | 3.01 | 3.05 | 3.03 | 3.01 | 2.99 | 2.98 | 2.98 |
| EER | Cooling | Btu/h/W | 10.23 | 9.72 | 10.33 | 10.23 | 9.87 | 10.30 | 10.22 | 10.36 | 10.28 | 10.40 | 10.33 | 10.26 | 10.20 | 10.18 | 10.16 |
| Power factor | | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Airflow rate | High | m³/h | 11100×2 | 11100×2 | 13000+11100 | 11100×3 | 11100×3 | 13000+11100×2 | 13000+11100×2 | 13000×2+11100 | 13000×2+11100 | 13000×3 | 13000×3 | 13000×3 | 13000×3 | 13700+13000×2 | 13700×2+13000 |
| Sound pressure level / Power level | Cooling | dB | 59 / 80 | 60 / 81 | 60 / 81 | 61 / 82 | 62 / 83 | 61 / 82 | 63 / 84 | 61 / 82 | 63 / 84 | 63 / 83 | 64 / 84 | 64 / 85 | 65 / 86 | 66 / 87 | 66 / 87 |
| | Heating | (A) | 61 / 83 | 62 / 84 | 62 / 85 | 63 / 85 | 63 / 85 | 64 / 86 | 65 / 87 | 64 / 87 | 65 / 88 | 65 / 88 | 65 / 88 | 66 / 88 | 67 / 89 | 68 / 90 | 68 / 90 |
| External static pressure (Max) | | Pa | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 |
| Compressor motor output | | kW | 7.5×2 | 7.5×2 | 11.0+7.5 | 7.5×3 | 7.5×3 | 11.0+7.5×2 | 11.0+7.5×2 | 11.0×2+7.5 | 11.0×2+7.5 | 11.0×3 | 11.0×3 | 11.0×3 | 11.0×3 | 11.0×3 | 11.0×3 |
| Heat exchanger fin | | | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin |
| Dimensions | Height | mm | 1690×2 | 1690×2 | 1690×2 | 1690×3 | 1690×3 | 1690×3 | 1690×3 | 1690×3 | 1690×3 | 1690×3 | 1690×3 | 1690×3 | 1690×3 | 1690×3 | 1690×3 |
| | Width | mm | 1240×2 | 1240×2 | 1240+930 | 930×3 | 930×3 | 1240+930×2 | 1240+930×2 | 1240×2+930 | 1240×2+930 | 1240×3 | 1240×3 | 1240×3 | 1240×3 | 1240×3 | 1240×3 |
| | Depth | mm | 765×2 | 765×2 | 765×2 | 765×3 | 765×3 | 765×3 | 765×3 | 765×3 | 765×3 | 765×3 | 765×3 | 765×3 | 765×3 | 765×3 | 765×3 |
| Weight | | kg | 279×2 | 279×2 | 279+255 | 255×3 | 255×3 | 279+255×2 | 279+255×2 | 279×2+255 | 279×2+255 | 279×3 | 279×3 | 279×3 | 279×3 | 279×3 | 279×3 |
| Refrigerant | Type (Global Warming Potential) | | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088) |
| | Charge | kg(CO2eq-T) | 11.7×2 (24.4×2) | 11.7×2 (24.4×2) | 11.8+11.7 (24.6+24.4) | 11.7×3 (24.4×3) | 11.7×3 (24.4×3) | 11.8+11.7×2 (24.6+24.4×2) | 11.8+11.7×2 (24.6+24.4×2) | 11.8×2+11.7 (24.6×2+24.4) | 11.8×2+11.7 (24.6×2+24.4) | 11.8×3 (24.6×3) | 11.8×3 (24.6×3) | 11.8×3 (24.6×3) | 11.8×3 (24.6×3) | 11.8×3 (24.6×3) | 11.8×3 (24.6×3) |
| Connection pipe diameter | Liquid | mm | 12.70 | 15.88 | 15.88 | 15.88 | 15.88 | 15.88 | 19.05 | 19.05 | 19.05 | 19.05 | 19.05 | 19.05 | 19.05 | 19.05 | 19.05 |
| | Gas | mm | 28.58 | 28.58 | 28.58 | 34.92 | 34.92 | 34.92 | 34.92 | 34.92 | 34.92 | 41.27 | 41.27 | 41.27 | 41.27 | 41.27 | 41.27 |
| Operation range | Cooling | °CDB | -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 | -5 to 46 | -5 to 46 | -5 to 46 |
| | Heating | °CDB | -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 | -20 to 21 | -20 to 21 | -20 to 21 |

Note: Specifications are based on the following conditions.

Cooling(T1): Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB

Cooling(T3): Indoor temperature of 29°CDB / 19°CWB, and outdoor temperature of 46°CDB / 24°CWB

Heating: Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.

Pipe length: 7.5m. Height difference between outdoor and indoor unit: 0m.

# HEAT PUMP TYPE
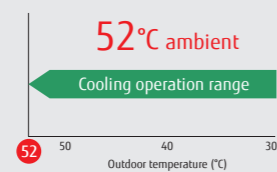
## AIRSTAGE™ V-II TROPICAL

### TROPICAL series

Fujitsu General tropical VRF is designed for tropical weather.
Extensive lineup from 8HP to 42HP in 2HP increment
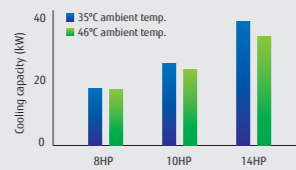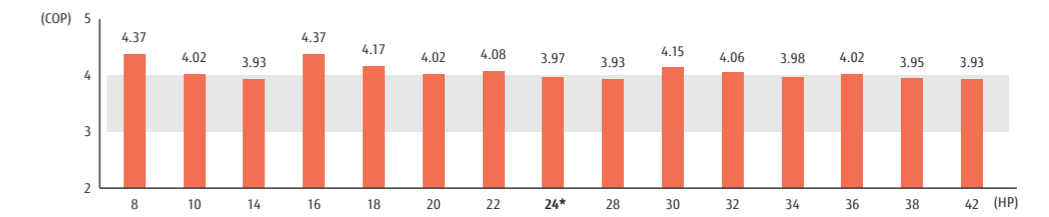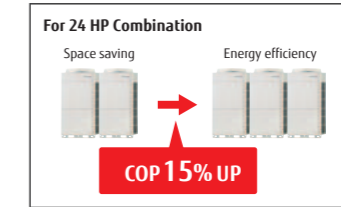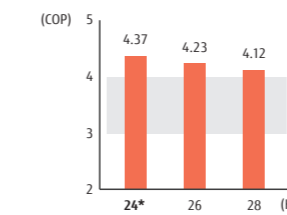Connectable indoor unit capacity ratio up to 130%

## Energy efficiency

Top class high COP is realized for all combinations by our unique heat exchanger structure, high efficient DC twin compressor, and other our own technologies.
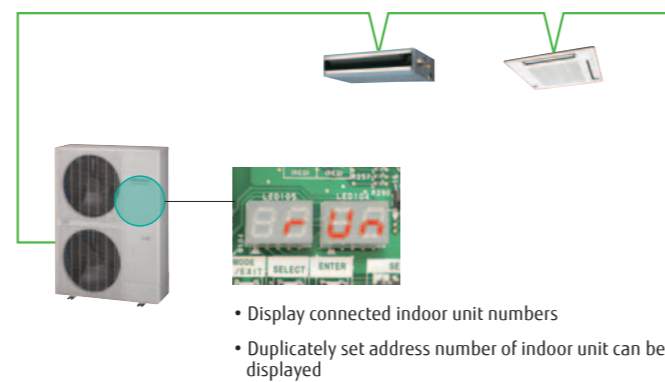
**Space saving combination**

(COP)

| HP | 8 | 10 | 14 | 16 | 18 | 20 | 22 | 24* | 28 | 30 | 32 | 34 | 36 | 38 | 42 |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| COP | 4.37 | 4.02 | 3.93 | 4.37 | 4.17 | 4.02 | 4.08 | 3.97 | 3.93 | 4.15 | 4.06 | 3.98 | 4.02 | 3.95 | 3.93 |

**Energy efficiency combination**

(COP)

| HP | 24* | 26 | 28 |
|----|-----|-----|-----|
| COP | 4.37 | 4.23 | 4.12 |

**For 24 HP Combination**

Space saving → Energy efficiency

**COP 15% UP**

## Energy saving technology that boosted operation efficiency

**Powerful large propeller fan**
By using CFD*1 technology, A newly designed fan achieves high performance and low noise operation.

*1. CFD = Computational Fluid Dynamics

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

**Subcool heat exchanger**
High Heat Exchange efficiency is achieved by using an internal projection shape double pipe construction.

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

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

**4-face heat exchanger**
Heat exchange efficiency is significantly improved by the introduction of a new 4-face heat exchanger that increases effective surface area.
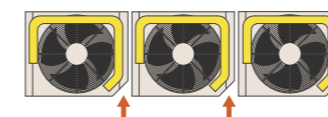
**Front intake port**
**(Corner cut air inhaling structure)**
In multiple outdoor unit installations, the unique front intake design improves airflow into the Heat Exchanger.

## System Outline

**High ambient operation design**

Possible to operate cooling up to 52°C outdoor temperature

**52°C ambient**

Cooling operation range

| 52 | 50 | 40 | 30 |

Outdoor temperature (°C)

**Powerful cooling capacity design**

Keeping high cooling power at even high ambient temperature

Cooling capacity (kW)
- 35°C ambient temp.
- 46°C ambient temp.

| 8HP | 10HP | 14HP |

**Anti-corrosion treatment design**

All metalic and PCB components are protected against corrosion

**System configuration example**

• This system is used for medium-sized and large buildings. Connecting each outdoor unit makes it possible to create a high-capacity system.
• Connection of multiple indoor units using separation tubes and headers.

Outdoor unit
Separation tube
Header
Liquid pipe
Indoor unit
Gas pipe
Indoor unit

# Outdoor units lineup
• Combinations other than the followings are not recommended.

AIRSTAGE V-II
TROPICAL series

## Space Saving Combination

| 72,000 Btu/h (8HP) | 90,000 Btu/h (10HP) | 126,000 Btu/h (14HP) | 144,000 Btu/h (16HP) | 162,000 Btu/h (18HP) |
|---|---|---|---|---|
| AJH072LNLAH UNIT : AJH072LNLAH | AJH090LNLAH UNIT : AJH090LNLAH | AJH126LNLAH UNIT : AJH126LNLAH | AJH144LNLAH UNIT : AJH072/072LNLAH | AJH162LNLAH UNIT : AJH090/072LNLAH |
| 180,000 Btu/h (20HP) | 198,000 Btu/h (22HP) | 216,000 Btu/h (24HP) | 252,000 Btu/h (28HP) | 270,000 Btu/h (30HP) |
| AJH180LNLAH UNIT : AJH090/090LNLAH | AJH198LNLAH UNIT : AJH126/072LNLAH | AJH216LNLAH UNIT : AJH126/090LNLAH | AJH252LNLAH UNIT : AJH126/126LNLAH | AJH270LNLAH UNIT : AJH126/072/072LNLAH |
| 288,000 Btu/h (32HP) | 306,000 Btu/h (34HP) | 324,000 Btu/h (36HP) | 342,000 Btu/h (38HP) | 378,000 Btu/h (42HP) |
| AJH288LNLAH UNIT : AJH126/090/072LNLAH | AJH306LNLAH UNIT : AJH126/090/090LNLAH | AJH324LNLAH UNIT : AJH126/126/072LNLAH | AJH342LNLAH UNIT : AJH126/126/090LNLAH | AJH378LNLAH UNIT : AJH126/126/126LNLAH |

## Energy efficiency combination

| 216,000 Btu/h (24HP) | 234,000 Btu/h (26HP) | 252,000 Btu/h (28HP) |
|---|---|---|
| AJH216LNLAHH UNIT : AJH072/072/072LNLAH | AJH234LNLAHH UNIT : AJH090/072/072LNLAH | AJH252LNLAHH UNIT : AJH090/090/072LNLAH |

## Dimensions

**8,10HP** : AJH072LNLAH / AJH090LNLAH

(Unit : mm)



690 (Bolt pitch)
80 530 (Bolt pitch)
8-12 × 17 (Hole)
732 (Bolt pitch)
765
930
1576
1690
1339

B    A C

**14HP** : AJH126LNLAH

(Unit : mm)



1000 (Bolt pitch)
80 840 (Bolt pitch)
8-12×7 (Hole)
732 (Bolt pitch)
765
1240
1690

B    A C

A  Front side knockout position
Ø 34.5
Power supply cable port
Ø 43.7
Power supply cable port
Ø 50
Power supply cable port
Ø 22.2 Transmission cable port
Ø 22.2 Transmission cable port
Pipe port
73
43
95
75
10
100
125
199

B  Left side knockout position
Ø 50 Power supply cable port
Ø 34.5 Power supply cable port
Ø 43.7 Power supply cable port
Ø 22.2 Transmission cable port
Ø 22.2 Transmission cable port

C  Bottom side knockout position
Top view
Pipe port
80
82
42
197

**AIRSTAGE V-II** **T**ROPICAL SPEC

**TROPICAL** series

## Space Saving Combination

| | | 8 | 10 | 14 | 16 | 18 | 20 | 22 | 24 | 28 | 30 | 32 | 34 | 36 | 38 | 42 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rating Capacity range | HP | | | | | | | | | | | | | | | |
| | Btu/h | 72,000 | 90,000 | 126,000 | 144,000 | 162,000 | 180,000 | 198,000 | 216,000 | 252,000 | 270,000 | 288,000 | 306,000 | 324,000 | 342,000 | 378,000 |
| | Ton | 6.0 | 7.5 | 10.5 | 12.0 | 13.5 | 15.0 | 16.5 | 18.0 | 21.0 | 22.5 | 24.0 | 25.5 | 27.0 | 28.5 | 31.5 |
| Model name | | AJH072LNLAH | AJH090LNLAH | AJH126LNLAH | AJH144LNLAH | AJH162LNLAH | AJH180LNLAH | AJH198LNLAH | AJH216LNLAH | AJH252LNLAH | AJH270LNLAH | AJH288LNLAH | AJH306LNLAH | AJH324LNLAH | AJH342LNLAH | AJH378LNLAH |
| Unit 1 | | AJH072LNLAH | AJH090LNLAH | AJH126LNLAH | AJH072LNLAH | AJH090LNLAH | AJH090LNLAH | AJH126LNLAH | AJH126LNLAH | AJH126LNLAH | AJH126LNLAH | AJH126LNLAH | AJH126LNLAH | AJH126LNLAH | AJH126LNLAH | AJH126LNLAH |
| Unit 2 | | | | | AJH072LNLAH | AJH072LNLAH | AJH090LNLAH | AJH072LNLAH | AJH090LNLAH | AJH126LNLAH | AJH126LNLAH | AJH126LNLAH | AJH126LNLAH | AJH126LNLAH | AJH126LNLAH | AJH126LNLAH |
| Unit 3 | | | | | | | | | | | AJH072LNLAH | AJH090LNLAH | AJH090LNLAH | AJH072LNLAH | AJH090LNLAH | AJH126LNLAH |
| Maximum Connectable Indoor Unit*[1] | | 13 | 13 | 18 | 26 | 26 | 26 | 28 | 31 | 36 | 39 | 41 | 41 | 41 | 41 | 41 |
| Indoor unit connectable capacity | kW | 11.2-29.1 | 14.0-36.4 | 20.0-52.0 | 22.4-58.2 | 25.2-65.5 | 28.0-72.8 | 31.2-71.1 | 34.0-88.4 | 40.0-104.0 | 42.4-110.2 | 45.2-117.5 | 48.0-124.8 | 51.2-133.1 | 54.0-140.4 | 60.0-156.0 |
| Power source | | 3-phase, ~380-415V, 50Hz | | | | | | | | | 3-phase, ~380-415V, 50Hz | | | | | |
| Capacity | Cooling(T1) kW | 22.4 | 28.0 | 40.0 | 44.8 | 50.4 | 56.0 | 62.4 | 68.0 | 80.0 | 84.8 | 90.4 | 96.0 | 102.4 | 108.0 | 120.0 |
| | Cooling(T3) kW | 22.4 | 24.3 | 30.7 | 44.8 | 46.7 | 48.6 | 53.1 | 55.0 | 61.4 | 75.5 | 77.4 | 79.3 | 83.8 | 85.7 | 92.1 |
| | Heating(T1) | 25.0 | 31.5 | 45.0 | 50.0 | 56.5 | 63.0 | 70.0 | 76.5 | 90.0 | 95.0 | 101.5 | 108.0 | 115.0 | 121.5 | 135.0 |
| Input power | Cooling(T1) kW | 5.51 | 7.73 | 11.53 | 11.02 | 13.24 | 15.46 | 17.04 | 19.26 | 23.06 | 22.55 | 24.77 | 26.99 | 28.57 | 30.79 | 34.59 |
| | Heating | 5.72 | 7.83 | 11.45 | 11.44 | 13.55 | 15.66 | 17.17 | 19.28 | 22.90 | 22.89 | 25.00 | 27.11 | 28.62 | 30.73 | 34.35 |
| EER | Cooling(T1) W/W | 4.07 | 3.62 | 3.47 | 4.07 | 3.81 | 3.62 | 3.66 | 3.53 | 3.47 | 3.76 | 3.65 | 3.56 | 3.58 | 3.51 | 3.46 |
| COP | Heating W/W | 4.37 | 4.02 | 3.93 | 4.37 | 4.17 | 4.02 | 4.08 | 3.97 | 3.93 | 4.15 | 4.06 | 3.98 | 4.02 | 3.95 | 3.93 |
| Airflow rate | m³/h | 11,100 | 11,100 | 13,000 | 11,100×2 | 11,100×2 | 11,100×2 | 13,000+11,100 | 13,000+11,100 | 13,000×2 | 13,000+11,100×2 | 13,000+11,100×2 | 13,000+11,100×2 | 13,000×2+11,100 | 13,000×2+11,100 | 13,000×3 |
| Sound pressure level*[2] | Cooling dB(A) | 56 | 58 | 60 | 59 | 60 | 61 | 61 | 62 | 63 | 63 | 63 | 64 | 64 | 64 | 65 |
| | Heating | 58 | 59 | 61 | 59 | 62 | 62 | 62 | 63 | 64 | 63 | 64 | 65 | 65 | 65 | 66 |
| Maximum external static pressure | Pa | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| Compresor motor output | kW | 3.9 | 3.9 | 3.9+4.5 | 3.9×2 | 3.9×2 | 3.9×2 | 3.9×2+4.5 | 3.9×2+4.5 | 3.9×2+4.5×2 | 3.9×3+4.5 | 3.9×3+4.5 | 3.9×3+4.5 | 3.9×3+4.5×2 | 3.9×3+4.5×2 | 3.9×3+4.5×3 |
| Heat exchanger fin | | Blue fin | Blue fin | Blue fin | Blue fin | Blue fin | Blue 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 | 1,690 | 1,690 | 1,690 | 1,690 | 1,690 | 1,690 |
| | Width | 930 | 930 | 1,240 | 930×2 | 930×2 | 930×2 | 1,240+930 | 1,240+930 | 1,240×2 | 1,240+930×2 | 1,240+930×2 | 1,240+930×2 | 1,240×2+930 | 1,240×2+930 | 1,240×3 |
| | Depth | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| Weight | kg | 220 | 220 | 303 | 220+220 | 220+220 | 220+220 | 303+220 | 303+220 | 303+303 | 303+220+220 | 303+220+220 | 303+220+220 | 303+303+220 | 303+303+220 | 303+303+303 |
| Refrigerant charge | kg | 11.2 | 11.2 | 11.8 | 11.2×2 | 11.2×2 | 11.2×2 | 11.8+11.2 | 11.8+11.2 | 11.8×2 | 11.8+11.2×2 | 11.8+11.2×2 | 11.8+11.2×2 | 11.8×2+11.2 | 11.8×2+11.2 | 11.8×3 |
| Connection pipe diameter | Liquid mm | 12.70 | 12.70 | 12.70 | 12.70 | 15.88 | 15.88 | 15.88 | 15.88 | 15.88 | 19.05 | 19.05 | 19.05 | 19.05 | 19.05 | 19.05 |
| | Gas | 22.22 | 22.22 | 28.58 | 28.58 | 28.58 | 28.58 | 34.92 | 34.92 | 34.92 | 34.92 | 34.92 | 34.92 | 41.27 | 41.27 | 41.27 |
| Operation temperature range | Cooling °CDB | -15 to 52 *1 | -15 to 52 *1 | -15 to 52 *1 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 |
| | 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 | -20 to 21 | -20 to 21 | -20 to 21 | -20 to 21 | -20 to 21 | -20 to 21 |

## Energy Efficiency Combination

| | | 24 | 26 | 28 |
|---|---|---|---|---|
| Rating Capacity range | HP | | | |
| | Btu/h | 216,000 | 234,000 | 252,000 |
| | Ton | 18.0 | 19.5 | 21.0 |
| Model name | | AJH216LNLAHH | AJH234LNLAHH | AJH252LNLAHH |
| Unit 1 | | AJH072LNLAH | AJH090LNLAH | AJH090LNLAH |
| Unit 2 | | AJH072LNLAH | AJH072LNLAH | AJH090LNLAH |
| Unit 3 | | AJH072LNLAH | AJH072LNLAH | AJH072LNLAH |
| Maximum Connectable Indoor Unit*[1] | | 39 | 39 | 39 |
| Indoor unit connectable capacity | kW | 33.6-87.4 | 36.4-94.6 | 39.2-101.9 |
| Power source | | 3-phase, ~380-415V, 50Hz | | |
| Capacity | Cooling(T1) kW | 67.2 | 72.8 | 78.4 |
| | Cooling(T3) kW | 67.2 | 69.1 | 71.0 |
| | Heating(T1) | 75.0 | 81.5 | 88.0 |
| Input power | Cooling(T1) kW | 16.53 | 18.75 | 20.97 |
| | Heating | 17.16 | 19.27 | 21.38 |
| EER | Cooling(T1) W/W | 4.07 | 3.88 | 3.74 |
| COP | Heating W/W | 4.37 | 4.23 | 4.12 |
| Airflow rate | m³/h | 11,100×3 | 11,100×3 | 11,100×3 |
| Sound pressure level*[2] | Cooling dB(A) | 61 | 62 | 62 |
| | Heating | 61 | 62 | 63 |
| Maximum external static pressure | Pa | 80 | 80 | 80 |
| Compresor motor output | kW | 3.9×3 | 3.9×3 | 3.9×3 |
| Heat exchanger fin | | Blue fin | Blue fin | Blue fin |
| Dimensions | Height mm | 1,690 | 1,690 | 1,690 |
| | Width | 930×3 | 930×3 | 930×3 |
| | Depth | 765 | 765 | 765 |
| Weight | kg | 220+220+220 | 220+220+220 | 220+220+220 |
| Refrigerant charge | kg | 11.2×3 | 11.2×3 | 11.2×3 |
| Connection pipe diameter | Liquid mm | 15.88 | 15.88 | 15.88 |
| | Gas | 34.92 | 34.92 | 34.92 |
| Operation temperature range | Cooling °CDB | -5 to 52 | -5 to 52 | -5 to 52 |
| | Heating | -20 to 21 | -20 to 21 | -20 to 21 |

Note : Specifications are based on the following conditions.

Cooling (T1) : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.

Cooling (T3) : Indoor temperature of 29°CDB / 19°CWB, and outdoor temperature of 46°CDB / 24°CWB.

Heating : Indoor temperature of 20°CDB /(15°CWB), and outdoor temperature of 7°CDB / 6°CWB.]

Pipe length : 7.5m. Height difference between outdoor unit and indoor unit : 0m.

*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.

# HEAT PUMP TYPE

**NEW AIRSTAGE™ J-III** **TROPICAL SPEC**

## TROPICAL series

Fujitsu General provides air conditioning systems
for a wide range of applications
from small office buildings and stores to large houses.

## Energy efficiency

Top class high COP is achieved for all models by large heat exchanger,
high efficient DC twin compressor, and our own technologies.

**High EER / COP**   ■ EER / ■ COP

**[3-phase]**

| 4HP | 5HP | 6HP |
|---|---|---|
| 4.33 / 5.01 | 4.05 / 4.70 | 3.88 / 4.41 |

**[Single phase]**

| 4HP | 5HP | 6HP |
|---|---|---|
| 4.17 / 4.86 | 3.92 / 4.51 | 3.71 / 4.23 |

**6HP class**

| | J-II | J-III TROPICAL | J-II | J-III TROPICAL |
|---|---|---|---|---|
| 8 % UP | 3.45 | 3.71 | | |
| 7 % UP | | | 3.95 | 4.23 |

## Advanced high efficiency technology

**Large propeller fan**
High performance and low noise realized
by large propeller and optimization of
angle.
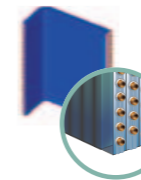
**Large heat exchanger**
Heat exchange performance is
substantially improved by mounting of
3-row large heat exchanger.

**Subcool heat exchanger**
Cooling performance is improved by
mounting of dual tube heat exchanger.

Pressure
**effect**
**Cooling performance improved**
Enthalpy
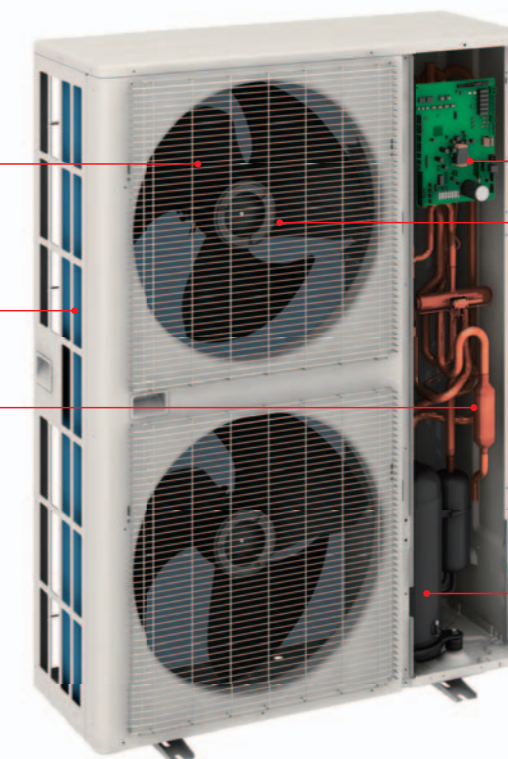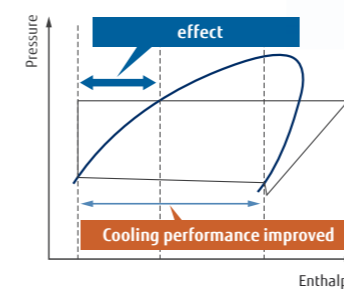
## All Inverter

**INVERTER control PCB**
Efficiency is improved by mounting of
new active filter module.

**INVERTER fan motor**
Miniaturized, low noise, high efficiency,
multi-stage DC fan motor is mounted.
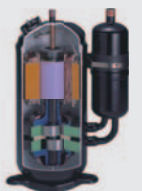
**INVERTER Compressor**
Efficiency in all load regions is good.
Especially good performance from low to
medium at normal operation.

## Made in JAPAN

## System Outline

### High Energy Efficiency

Heat pump inverter control is used to achieve an efficient
cooling and heating operation in any indoor unit
combination.

### Flexible systems for small- and medium-size buildings air conditioning

Space saving design and long piping design allow for flexible
installation on the roofs or balconies of small- and
medium-size buildings.
Multiple indoor units of various capacities and types can be
connected.

### System configuration example

• This system is used for small and medium-sized buildings.
  1 refrigerant system is used for each outdoor unit.
• Connection of multiple indoor units using separation tubes
  and headers.

Outdoor unit
Separation tube
Header
Liquid pipe
Gas pipe
Indoor unit
Indoor unit

# Long piping capability

Our advanced refrigerant control technology allows us to achieve a total refrigerant piping length of 180m. This opens up new possibilities in system design.

**Total pipe length**
**180m max.**



Actual piping length
**120m max.**

Height difference between outdoor and indoor units
**50m max.**

For the outdoor unit installed below the indoor units:
40 m max.

Piping length from first separation tube to the farthest indoor unit
**40m max.**

Height difference between indoor and indoor units
**15m max.**

# 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 / J-III series / (Heating operation)

Operation stopped at oil recovery

Non-stop oil recovery operation

ON
OFF
Time

ON
Time

# Easier Installation

Connection check function : Possible to confirm whether wiring connection and address setting are correct by a quick check run function.

• Display connected indoor unit numbers
• Duplicately set address number of indoor unit can be displayed

## Specifications

| Rating Capacity range | | HP | 4 | 5 | 6 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| | | Btu/h | 36,000 | 45,000 | 54,000 | 36,000 | 45,000 | 54,000 |
| | | Ton | 3.0 | 3.8 | 4.5 | 3.0 | 3.8 | 4.5 |
| Model name | | | AJH040LBTAHN | AJH045LBTAHN | AJH054LBTAHN | AJH040LETAHN | AJH045LETAHN | AJH054LETAHN |
| Maximum Connectable Indoor Unit | | | 1-7 | 1-8 | 1-9 | 1-7 | 1-8 | 1-9 |
| Power source | | | Single-phase, ~220-240V, 50Hz | | | 3-phase, ~380-415V, 50Hz | | |
| Capacity | Cooling(T1/T3) | kW | 12.1/10.3 | 14.0/11.1 | 15.5/11.5 | 12.1/10.3 | 14.0/11.1 | 15.5/11.5 |
| | Heating | | 13.6 | 16.0 | 18.0 | 13.6 | 16.0 | 18.0 |
| | Cooling(T1/T3) | Btu/h | 41,000/35,000 | 47,500/37,800 | 52,500/39,000 | 41,000/35,000 | 47,500/37,800 | 52,500/39,000 |
| | Heating | | 46,000 | 54,500 | 61,000 | 46,000 | 54,500 | 61,000 |
| Input power | Cooling(T1/T3) | kW | 2.90/3.47 | 3.57/3.77 | 4.18/3.92 | 2.79/3.30 | 3.46/3.57 | 3.99/3.71 |
| | Heating | | 2.80 | 3.55 | 4.26 | 2.71 | 3.40 | 4.08 |
| Current | Cooling(T1/T3) | A | 12.7/15.2 | 15.7/16.6 | 18.4/17.2 | 5.2/6.2 | 6.6/6.6 | 7.7/6.9 |
| | Heating | | 12.3 | 15.6 | 18.7 | 5.0 | 6.5 | 7.8 |
| EER | Cooling(T1/T3) | W/W | 4.17/2.97 | 3.92/2.95 | 3.71/2.94 | 4.33/3.13 | 4.05/3.11 | 3.88/3.10 |
| | | Btu/h/W | 14.15/10.10 | 13.30/10.05 | 12.60/9.95 | 14.70/10.60 | 13.75/10.60 | 13.15/10.50 |
| COP | Heating | W/W | 4.86 | 4.51 | 4.23 | 5.01 | 4.70 | 4.41 |
| | | Btu/h/W | 16.45 | 15.35 | 14.30 | 17.00 | 16.00 | 14.95 |
| Airflow rate | High | m³/h(l/s) | 6,200(1,722) | 6,400(1,778) | 6,900(1,916) | 6,200(1,722) | 6,400(1,778) | 6,900(1,916) |
| Sound pressure level | Cooling | dB(A) | 50 | 51 | 53 | 50 | 51 | 53 |
| | Heating | | 52 | 53 | 55 | 52 | 53 | 55 |
| Net Dimensions | Height | mm | 1,334 | 1,334 | 1,334 | 1,334 | 1,334 | 1,334 |
| | Width | | 970 | 970 | 970 | 970 | 970 | 970 |
| | Depth | | 370 | 370 | 370 | 370 | 370 | 370 |
| Net Weight | | kg | 120 | 120 | 120 | 120 | 120 | 120 |
| Refrigerant | | Type | R410A | R410A | R410A | R410A | R410A | R410A |
| Connection pipe diameter | Liquid | mm | 9.52 | 9.52 | 9.52 | 9.52 | 9.52 | 9.52 |
| | Gas | | 15.88 | 15.88 | 19.05 | 15.88 | 15.88 | 19.05 |
| Operation range | Cooling | °CDB | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 | -5 to 52 |
| | Heating | | -20 to 21 | -20 to 21 | -20 to 21 | -20 to 21 | -20 to 21 | -20 to 21 |

Note: Specifications are based on the following conditions.
Cooling(T1): Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB
Cooling(T3): Indoor temperature of 29°CDB / 19°CWB, and outdoor temperature of 46°CDB / 24°CWB
Heating: Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.
Pipe length: 7.5m. Height difference between outdoor and indoor unit: 0m.

## Dimensions

**Model :** AJH040LBTAHN / AJH045LBTAHN / AJH054LBTAHN / AJH040LETAHN / AJH045LETAHN / AJH054LETAHN          (Unit : mm)

The AIRSTAGE indoor units were developed to be highly efficient, compact, low noise and to have user friendly operation. With a variety of indoor units and capacities available, Fujitsu General has an indoor unit to match any requirement which is easy to install and maintain.

Further, a variety of options are available to achieve an air conditioning environment that is more desirable from the user's perspective.

# AIRSTAGE™ INDOOR UNITS

## INDOOR UNITS LINE-UP

4-way Flow Compact Cassette

4-way Flow Cassette

Mini Duct

Slim Duct / Slim Concealed Floor

Medium Static Pressure Duct

High Static Pressure Duct

Large Airflow Duct

Floor / Ceiling

Ceiling

Wall Mounted (EEV Internal / external)

**AIRSTAGE™**

# INDOOR UNITS LINE-UP

Comprehensive range of indoor units of variety design and capacity ranges available which can be selected to suit any air conditioning needs.
13 types, 99 models, Capacity range from 7,000 Btu/h to 96,000Btu/h

## Indoor units range

| Capacity range | | Btu/h | 7,000 | 9,000 | 12,000 | 14,000 | 18,000 | 24,000 | 30,000 | 34,000 | 36,000 | 45,000 | 54,000 | 60,000 | 72,000 | 90,000 | 96,000 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | kW | 2.2 | 2.8 | 3.6 | 4.5 | 5.6 | 7.1 | 9.0 | 10.0 | 11.2 | 12.5 | 14.0 | 18.0 | 22.4 | 25.0 | 28.0 |
| Cassette | 4-way Flow Compact | | AUXB07GALH AUXB07GATH | AUXB09GALH AUXB09GATH | AUXB12GALH AUXB12GATH | AUXB14GALH AUXB14GATH | AUXB18GALH AUXB18GATH | AUXB24GALH AUXB24GATH | | | | | | | | | |
| | 4-way Flow | (Slim type) | | | | | AUXD18GALH AUXD18GATH | AUXD24GALH AUXD24GATH | | | | | | | | | |
| | | (Large type) | | | | | AUXA18GALH | AUXA24GALH | AUXA30GALH AUXA30GATH | AUXA34GALH | AUXA36GALH AUXA36GATH | AUXA45GALH AUXA45GATH | AUXA54GALH AUXA54GATH | | | | |
| Duct | Mini Duct (With drain pump) | | ARXK07GCLH | ARXK09GCLH | ARXK12GCLH | ARXK14GCLH | ARXK18GCLH | ARXK24GCLH | | | | | | | | | |
| | Mini Duct (Without drain pump) | | ARXK07GALH | ARXK09GALH | ARXK12GALH | ARXK14GALH | ARXK18GALH | ARXK24GALH | | | | | | | | | |
| | Slim Duct (With drain pump) | | ARXD07GALH ARXD07GATH | ARXD09GALH ARXD09GATH | ARXD12GALH ARXD12GATH | ARXD14GALH ARXD14GATH | ARXD18GALH ARXD18GATH | ARXD24GALH ARXD24GATH | | | | | | | | | |
| | Medium Static Pressure Duct | | | | | | ARXA24GBLH ARXA24GBTH | | ARXA30GBLH ARXA24GBTH | | ARXA36GBLH ARXA36GBTH | ARXA45GBLH ARXA45GBTH | | | | | |
| | High Static Pressure Duct | | | | | | | | | | ARXC36GBTH | | | | ARXC72GBTH*1 | ARXC90GBTH*1 | ARXC96GATH*1 |
| | | | | | | | | | | | ARXC45GATH | | ARXC60GATH*1 | ARXC72GATH*1 | ARXC90GATH*1 | |
| | Large Airflow Duct | | | | | | ARXN18GATH*2 | ARXN24GATH*2 | ARXN30GATH*2 | ARXN34GATH*2 | ARXN36GATH*2 | ARXN45GATH*2 | | | | | |
| Floor | Floor (Same as Ceiling models) | | | | ABHA12GATH | ABHA14GATH | ABHA18GATH | ABHA24GATH | | | | | | | | | |
| | Slim Concealed Floor (Same as Slim Duct models) | | ARXD07GALH ARXD07GATH | ARXD09GALH ARXD09GATH | ARXD12GALH ARXD12GATH | ARXD14GALH ARXD14GATH | ARXD18GALH ARXD18GATH | ARXD24GALH ARXD24GATH | | | | | | | | | |
| Ceiling | Ceiling | | | | ABHA12GATH | ABHA14GATH | ABHA18GATH | ABHA24GATH | ABHA30GATH | | ABHA36GATH | ABHA45GATH | ABHA54GATH | | | | |
| Wall Mounted | Wall Mounted | | ASHA07GACH ASHA07GATH | ASHA09GACH ASHA09GATH | ASHA12GACH ASHA12GATH | ASHA14GACH ASHA14GATH | ASHA18GACH ASHA18GATH | ASHA24GACH ASHA24GATH | ASHA30GACH ASHA30GATH | | | | | | | | |
| | Wall Mounted (EEV external) | | ASHE07GACH | ASHE07GACH | ASHE07GACH | ASHE07GACH | With this model, connection of EV kit is necessary. | | | | | | | | | | |

*1:ARXC60/72/90/96 cannot be connected to J-III tropical series.     *2:Large Airflow Duct can be connected to V-III tropical series only.

# 4-way Flow Compact Cassette

**Models**
AUXB07GALH
AUXB09GALH
AUXB12GALH
AUXB14GALH
AUXB18GALH
AUXB24GALH

**Models**
AUXB07GATH
AUXB09GATH
AUXB12GATH
AUXB14GATH
AUXB18GATH
AUXB24GATH

**DC FAN**

## Feature

## 2-stage turbo fan

### High efficiency design by 2 stage structure

An 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 = 2-stage turbo fan

Heat exchange efficiency **20%UP**

Wind velocity
Fast
Slow
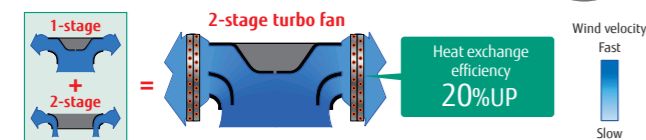
**Previous turbo fan**
In the case of a previous fan, the air outlet range was narrow as the airflow moved to the motor side which meant the velocity of air passing through the heat exchanger was uneven.

## Quiet quality

Optimization of wing form (laminar wing type) and wing number (7 blades each)
Designed by CFD-analysis (fluid) simulations

**Adoption of laminar wing**

Quiet

**Laminar wing**
Airflow runs through smoothly along the laminar wing

Quiet

No airflow separation

Spin direction
Airflow direction

## Improvement of the airflow distribution

A
B
C
D

❶
❷
❸

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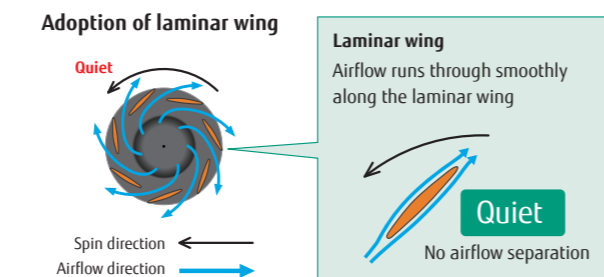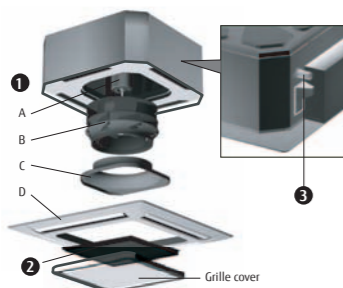
❶ **Maintenance of fan motor and fan**
Maintenance of the fan motor and fan can be done easily after taking off the panel as the bell mouth of the fan can be removed easily.

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

❷ **Air filter :** standard equipment

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

## High ceiling mode

The compact cassette can be installed up to a height of 3.0m (12/14/18/24).

| Model code | The maximum height from floor to ceiling (m) | |
|---|---|---|
| | Standard mode | High ceiling mode |
| 07 | 2.7 | — |
| 09 | 2.7 | — |
| 12 | 2.7 | 3.0 |
| 14 | 2.7 | 3.0 |
| 18 | 2.7 | 3.0 |
| 24 | 2.7 | 3.0 |

## Compact design

Worlds first 24,000Btu model in the compact cassette category
(Easy installation by taking off ceiling panel of 600 x 600 size)

570mm
570mm

## High lift drain pump

Ceiling panel

Max. **700mm**
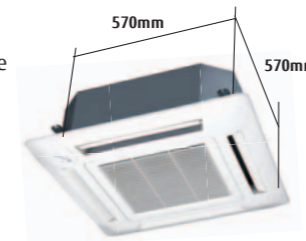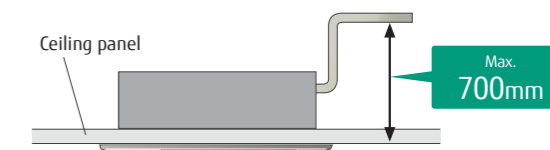
### Optional parts

Air Outlet Shutter Plate :    UTR-YDZB
Insulation Kit for High Humidity :   UTZ-KXGC

## Specifications

| Model name | | | AUXB07GALH AUXB07GATH | AUXB09GALH AUXB09GATH | AUXB12GALH AUXB12GATH | AUXB14GALH AUXB14GATH | AUXB18GALH AUXB18GATH | AUXB24GALH AUXB24GATH |
|---|---|---|---|---|---|---|---|---|
| Power source | | | Single-phase, ~220-240V, 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 (l/s) | 540 (150) | 550 (153) | 600 (167) | 680 (189) | 710 (197) | 1,030 (286) |
| | Med | | 450 (125) | 450 (125) | 530 (147) | 590 (164) | 580 (161) | 830 (231) |
| | Low | | 350 (97) | 350 (97) | 390 (108) | 390 (108) | 400 (111) | 450 (125) |
| 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 × 570 × 570 | 245 × 570 × 570 | 245 × 570 × 570 | 245 × 570 × 570 | 245 × 570 × 570 | 245 × 570 × 570 |
| Weight | | kg(lbs) | 15 (33) | 15 (33) | 15 (33) | 15 (33) | 17 (37) | 17 (37) |
| Connection pipe diameter | Liquid (Flare) | mm | 6.35 | 6.35 | 6.35 | 6.35 | 9.52 | 9.52 |
| | Gas (Flare) | | 12.70 | 12.70 | 12.70 | 12.70 | 15.88 | 15.88 |
| Drain hose diameter (I.D./O.U.) | | | 25 / 32 | | | | | |
| Cassette Grille | Model name | | UTG-UFGC-W | | | | | |
| | Dimensions (H×W×D) | mm | 50 × 700 × 700 | | | | | |
| | Weight | kg(lbs) | 2.6 (6) | | | | | |

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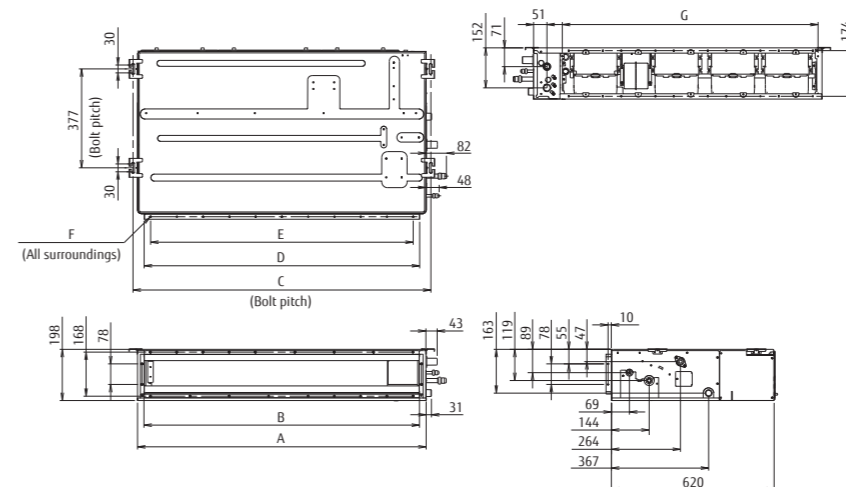Heating : Indoor temperature of 20˚CDB / (15˚CWB), and outdoor temperature of 7˚CDB / 6˚CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.  Voltage : 230 [V].

## Dimensions (Unit : mm)

700
700
Bottom view
Side view
30
49

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

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

□580-660 (Ceiling openings)
116
222
262
Ceiling
58
124

# 4-way Flow Cassette (Slim type)

**Models**
AUXD18GALH
AUXD24GALH

**Models**
AUXD18GATH
AUXD24GATH

**DC FAN**

## Feature

### High efficiency turbo fan with 3-dimensional blade

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

3-dimensional blade

Quiet

No airflow separation

Wind velocity
Fast
Slow

Heat exchanger
< Motor side >

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

450mm

Previous blade

Heat exchanger
< Motor side >

Separation phenomenon of airflow causes noise

Uneven airflow

: Spin direction    : Airflow direction    : Turbulent flow noise

### Improvement of the airflow distribution

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
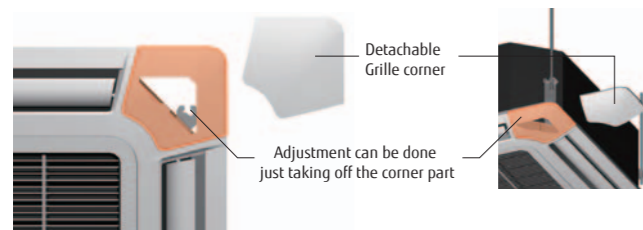
### High ceiling mode

This cassette can be installed up to a height of 3.5m.

| Model code | The maximum height from floor to ceiling (m) | |
|---|---|---|
| | Standard mode | High ceiling mode |
| 18 | 3.0 | 3.5 |
| 24 | 3.0 | 3.5 |

### One way installation
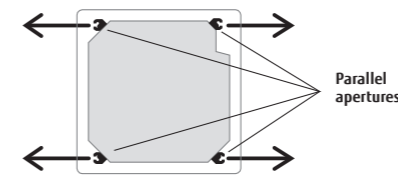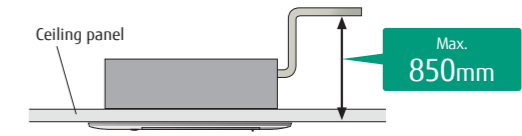
Parallel apertures

### High lift drain pump

Ceiling panel

Max. 850mm

### Optional parts

| | |
|---|---|
| IR Receiver Unit : | UTY-LRHGB1 |
| Air Outlet Shutter Plate : | UTR-YDZK |
| Panel Spacer : | UTG-BKXA-W |
| Insulation Kit for High Humidity : | UTZ-KXRA |
| Wide Panel : | UTG-AKXA-W |

### Specifications

| Model name | | | AUXD18GALH AUXD18GATH | AUXD24GALH AUXD24GATH |
|---|---|---|---|---|
| Power source | | | Single-phase, ~220-240V, 50Hz | |
| Capacity | Cooling | kW | 5.6 | 7.1 |
| | Heating | | 6.3 | 8.0 |
| Input power | | W | 39 | 46 |
| Airflow rate | High | m³/h (l/s) | 1,150 (319) | 1,280 (356) |
| | Med | | 940 (261) | 1,040 (289) |
| | Low | | 870 (242) | 870 (242) |
| Sound pressure level | High | dB(A) | 36 | 38 |
| | Med | | 30 | 33 |
| | Low | | 29 | 29 |
| Dimensions (H x W x D) | | mm | 246 × 840 × 840 | 246 × 840 × 840 |
| Weight | | kg(lbs) | 22 (48) | 22 (48) |
| Connection pipe diameter | Liquid (Flare) | mm | 9.52 | 9.52 |
| | Gas (Flare) | | 15.88 | 15.88 |
| Drain hose diameter (I.D./O.U.) | | | 25 / 32 | |
| Cassette Grille | Model name | | UTG-UGGA-W | |
| | Dimensions (HxWxD) | mm | 50 × 950 × 950 | |
| | Weight | kg(lbs) | 5.5 (12) | |

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].

### Dimensions (Unit : mm)

IR receiver (Option)
950
950
(Control) Box

796
Hanging bolt position
□ 840 : Indoor unit
607
699 Hanging bolt position
□ 860 to 910 Ceiling opening
420
358
Drain hose

142
Ceiling
142

358    278    60
40
200
10
246
44
140
Liquid pipe    Gas pipe
Wire hole

# 4-way Flow Cassette (Large type)

**Models**
AUXA18GALH
AUXA24GALH
AUXA30GALH
AUXA34GALH
AUXA36GALH
AUXA45GALH
AUXA54GALH

**Models**
AUXA30GATH
AUXA36GATH
AUXA45GATH
AUXA54GATH

**DC FAN**

## Feature

### High efficiency turbo fan with 3-dimensional blade

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

3-dimensional blade

Quiet

No airflow separation

Heat exchanger < Motor side >

Wind velocity
Fast
Slow

**Previous turbo fan**

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

450mm

Previous blade

Heat exchanger < Motor side >

Separation phenomenon of airflow causes noise

Uneven airflow

← : Spin direction     → : Airflow direction     ◦ ◦ ◦ ⑤ : Turbulent flow noise

### Improvement of the airflow distribution

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
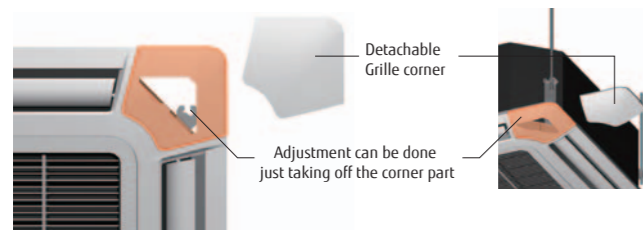
### High ceiling mode

This cassette can be installed up to a height of 4.2m (36/45/54).

| Model code | The maximum height from floor to ceiling (m) | |
|---|---|---|
| | Standard mode | High ceiling mode |
| 18 | 3.0 | 3.5 |
| 24 | 3.0 | 3.5 |
| 30 | 3.2 | 3.6 |
| 34 | 3.2 | 3.6 |
| 36 | 3.2 | 4.2 |
| 45 | 3.2 | 4.2 |
| 54 | 3.2 | 4.2 |

## One way installation
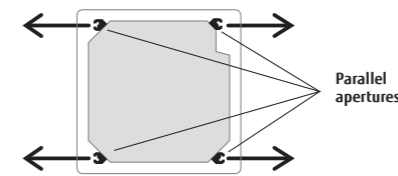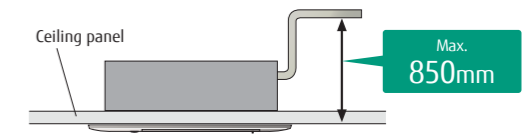
Parallel apertures

## High lift drain pump

Ceiling panel

Max. 850mm

### Optional parts

| | |
|---|---|
| IR Receiver Unit : | UTY-LRHGB1 |
| Air Outlet Shutter Plate : | UTR-YDZK |
| Panel Spacer : | UTG-BKXA-W |
| Insulation Kit for High Humidity : | UTZ-KXRA |
| Wide Panel : | UTG-AKXA-W |

## Specifications

| Model name | | | AUXA18GALH | AUXA24GALH | AUXA30GALH AUXA30GATH | AUXA34GALH | AUXA36GALH AUXA36GATH | AUXA45GALH AUXA45GATH | AUXA54GALH AUXA54GATH |
|---|---|---|---|---|---|---|---|---|---|
| Power source | | | Single-phase, ~220-240V, 50Hz | | | | | | |
| Capacity | Cooling | kW | 5.6 | 7.1 | 9.0 | 10.0 | 11.2 | 12.5 | 14.0 |
| | Heating | | 6.3 | 8.0 | 10.0 | 11.2 | 12.5 | 14.0 | 16.0 |
| Input power | | W | 51 | 51 | 59 | 77 | 80 | 99 | 119 |
| Airflow rate | High | m³/h (l/s) | 1,420 (394) | 1,420 (394) | 1,600 (444) | 1,750 (486) | 1,800 (500) | 1,900 (528) | 2,000 (556) |
| | Med | | 1,230 (342) | 1,230 (342) | 1,300 (361) | 1,300 (361) | 1,300 (361) | 1,370 (381) | 1,370 (381) |
| | Low | | 1,100/1,000*¹(306/278) | 1,100/1,000*¹(306/278) | 1,100 (306) | 1,100 (306) | 1,100 (306) | 1,100 (306) | 1,100 (306) |
| Sound pressure level | High | dB(A) | 40 | 40 | 40 | 43 | 44 | 46 | 47 |
| | Med | | 36 | 36 | 38 | 38 | 38 | 39 | 39 |
| | Low | | 33/31*¹ | 33/31*¹ | 33 | 33 | 33 | 33 | 33 |
| Dimensions (H x W x D) | | mm | 288 × 840 × 840 | 288 × 840 × 840 | 288 × 840 × 840 | 288 × 840 × 840 | 288 × 840 × 840 | 288 × 840 × 840 | 288 × 840 × 840 |
| Weight | | kg(lbs) | 27 (59) | 27 (59) | 27 (59) | 27 (59) | 27 (59) | 27 (59) | 27 (59) |
| Connection pipe diameter | Liquid (Flare) | mm | 9.52 | 9.52 | 9.52 | 9.52 | 9.52 | 9.52 | 9.52 |
| | Gas (Flare) | | 15.88 | 15.88 | 15.88 | 15.88 | 19.05 | 19.05 | 19.05 |
| Drain hose diameter (I.D./O.U.) | | | 25 / 32 | | | | | | |
| Cassette Grille | Model name | | UTG-UGGA-W | | | | | | |
| | Dimensions (HxWxD) | mm | 50 × 950 × 950 | | | | | | |
| | Weight | kg(lbs) | 5.5 (12) | | | | | | |

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].
*1: This value is "cooling operation / heating operation".

## Dimensions (Unit : mm)

IR receiver (Option)
950
950
(Control) Box

796
Hanging bolt position
□ 840 : Indoor unit
607
699 Hanging bolt position
□ 860 to 910 Ceiling opening
420
358
Drain hose

358    278    60
40
200
10
288
44    140
Liquid pipe    Gas pipe
Wire hole

142    Ceiling    142
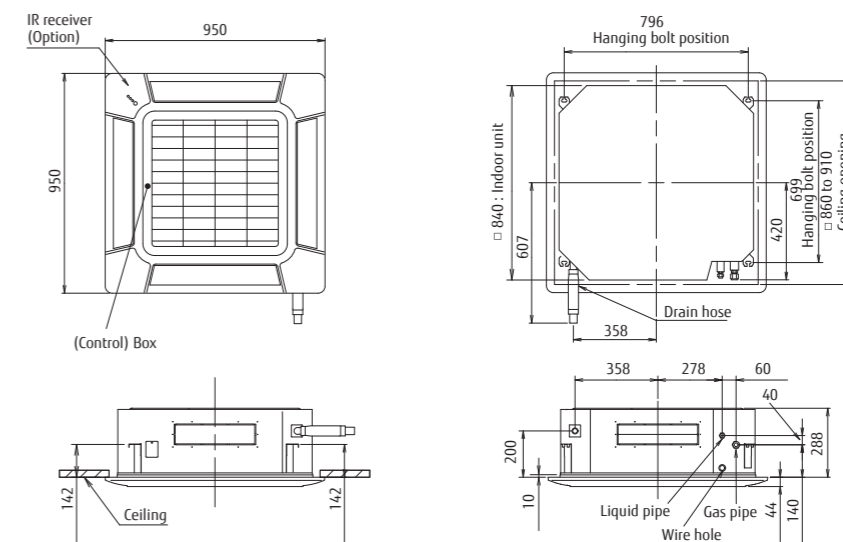
# Mini Duct

**Models** (With drain pump)
ARXK07GCLH
ARXK09GCLH
ARXK12GCLH
ARXK14GCLH
ARXK18GCLH
ARXK24GCLH
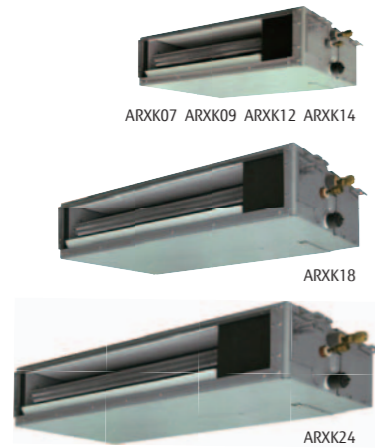
ARXK07 ARXK09 ARXK12 ARXK14

ARXK18

ARXK24

**Models** (Without drain pump)
ARXK07GALH
ARXK09GALH
ARXK12GALH
ARXK14GALH
ARXK18GALH
ARXK24GALH

ARXK07 ARXK09 ARXK12 ARXK14

ARXK18

ARXK24

**DC FAN**

## Feature

## Optimum design in harmony with interior decoration

Thin and short-depth body makes the clipped ceiling design simple.

198mm
223mm
450mm
600mm
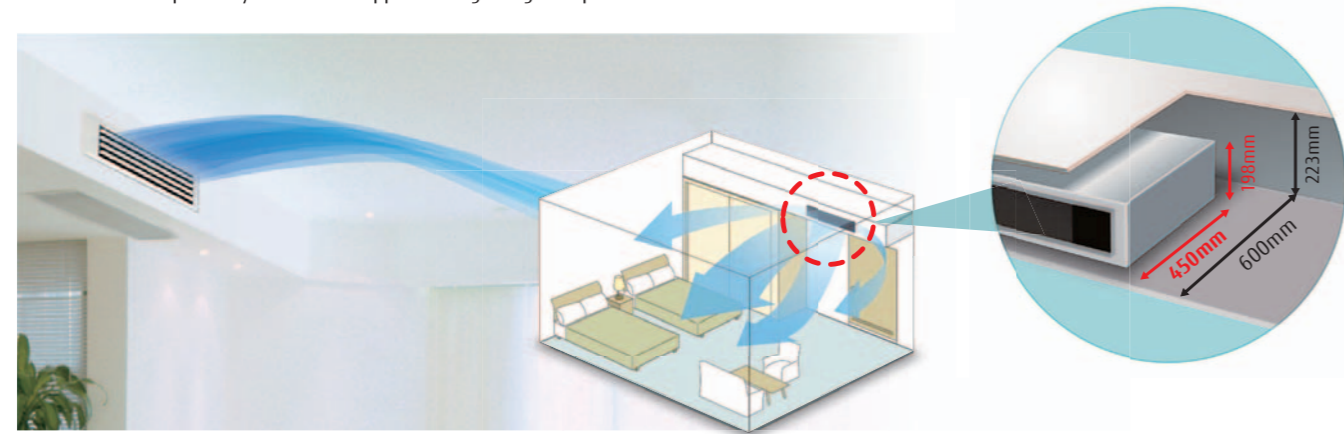
## Advanced performance by new shaped heat exchanger and airflow

Air blower is improved so that velocity distribution is optimum in accordance with the heat exchanger shape. Wide range and uniform airflow can be received due to heat exchanger.

Fan casing
V shaped heat exchanger
Optimum airflow path
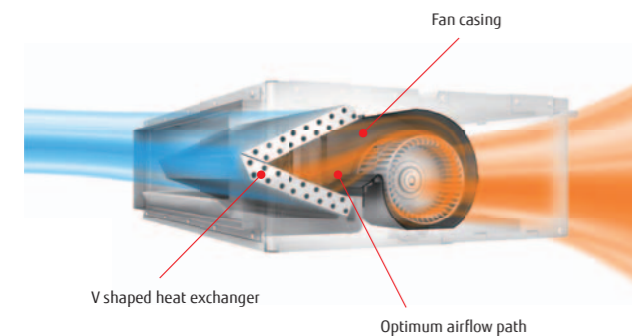
## Easy drain design even at narrow ceiling

**Models with drain pump:** Drainage to the distant drain port is possible.
**Models without drain pump:** Both sides drainage is possible.

**Models with drain pump**
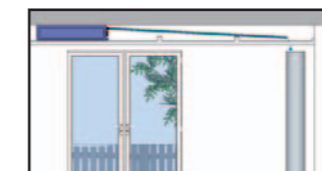
For models with drain pump, drain design is easy even at narrow ceiling.

**Models without drain pump**
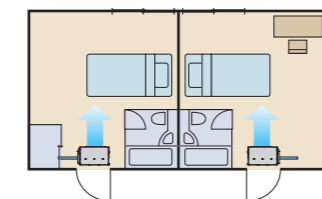
For models without drain pump, both sides drainage is possible and drain design is easy.

## 6-speed control*

Multistep airflow speed control allows this model to install in a quiet location.

Low noise
**21 dB(A)**
at 07 / 09 models

6-Step Speed

High
Med-H
Med
Med-L
Low
Quiet

* Compatible Remote Controller is as follows:
UTY-RNRGZ2 / UTY-RLRG / UTY-RSRG / UTY-RHRG / UTY-DCGG / UTY-DTGGZ1 / UTY-ALGX / UTY-APGX

## Optional parts

Remote Sensor Unit :     UTY-XSZX
IR Receiver Unit :     UTB-YWC
Auto Louver Grille Kit :     UTD-GXTA-W  (for ARXK07/09/12/14GCLH
ARXK07/09/12/14GALH)
UTD-GXTB-W (for ARXK18GCLH
ARXK18GALH)
UTD-GXTC-W (for ARXK24GCLH
ARXK24GALH)

## Specifications

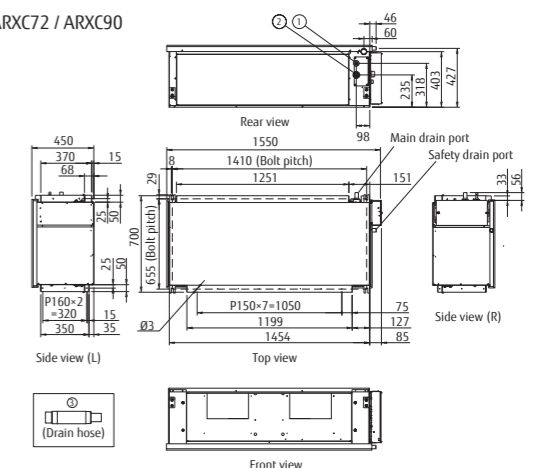| Model name | | | ARXK07GCLH ARXK07GALH | ARXK09GCLH ARXK09GALH | ARXK12GCLH ARXK12GALH | ARXK14GCLH ARXK14GALH | ARXK18GCLH ARXK18GALH | ARXK24GCLH ARXK24GALH |
|---|---|---|---|---|---|---|---|---|
| Power source | | | Single-phase, ~220-240V, 50Hz | | | | | |
| Capacity | Cooling | kW | 2.2 | 2.8 | 3.6 | 4.5 | 5.6 | 7.1 |
| | Heating | | 2.8 | 3.2 | 4.0 | 5.0 | 6.3 | 8.0 |
| Input power | GCLH / GALH | W | 28 / 21 | 28 / 21 | 35 / 28 | 66 / 59 | 73 / 66 | 80 / 73 |
| Airflow rate | High | m³/h (l/s) | 460 (128) | 460 (128) | 550 (153) | 760 (211) | 930 (258) | 1,160 (322) |
| | Me-Hi | | 440 (122) | 440 (122) | 520 (144) | 660 (183) | 840 (233) | 1,060 (294) |
| | Med | | 420 (117) | 420 (117) | 480 (133) | 560 (156) | 740 (206) | 960 (267) |
| | Me-Lo | | 400 (111) | 400 (111) | 450 (125) | 490 (136) | 640 (178) | 860 (239) |
| | Low | | 370 (103) | 370 (103) | 410 (114) | 410 (114) | 540 (150) | 750 (208) |
| | Quiet | | 340 (94) | 340 (94) | 340 (94) | 340 (94) | 470 (131) | 610 (169) |
| Static pressure range | | Pa | 0 to 30 | 0 to 30 | 0 to 30 | 0 to 50 | 0 to 50 | 0 to 50 |
| Standard static pressure | | | 10 | 10 | 10 | 15 | 15 | 15 |
| Sound pressure level | High | dB(A) | 26 | 26 | 29 | 34 | 33 | 32 |
| | Me-Hi | | 25 | 25 | 27 | 31 | 30 | 30 |
| | Med | | 24 | 24 | 26 | 28 | 28 | 28 |
| | Me-Lo | | 23 | 23 | 25 | 26 | 26 | 27 |
| | Low | | 22 | 22 | 24 | 24 | 24 | 25 |
| | Quiet | | 21 | 21 | 22 | 22 | 22 | 22 |
| Dimensions (H x W x D) | | kg(lbs) | 198 × 700 × 450 | 198 × 700 × 450 | 198 × 700 × 450 | 198 × 700 × 450 | 198 × 900 × 450 | 198 × 1,100 × 450 |
| Weight | GCLH / GALH | mm | 15.5 (34) / 15 (33) | 15.5 (34) / 15 (33) | 16 (35) / 15.5 (34) | 16 (35) / 15.5 (34) | 19 (42) / 18.5 (41) | 22.5 (50) / 22 (49) |
| Connection pipe diameter | Liquid (Flare) | mm | 6.35 | 6.35 | 6.35 | 6.35 | 9.52 | 9.52 |
| | Gas (Flare) | | 12.70 | 12.70 | 12.70 | 12.70 | 15.88 | 15.88 |
| Drain hose diameter (I.D./O.U.) | | | 25 / 32 | | | | | |

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].

## Dimensions  (Unit : mm)

*Models (With drain pump)
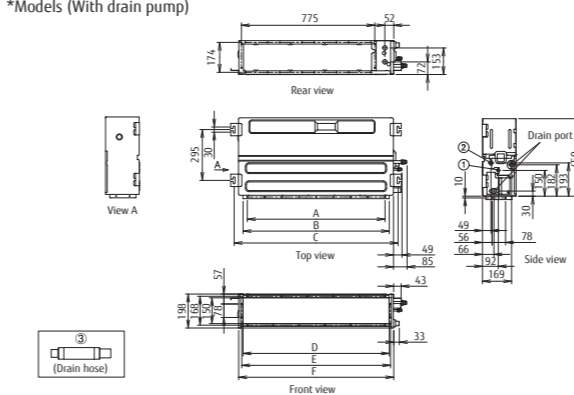
775
52
174
Rear view
295
View A
Drain port
Top view
Side view
A
B
198
57
③ (Drain hose)
Front view
D
E
43
33
49
85
169
78
92
66
56
49
30
10

① Refrigerant pipe flare connection (Liquid)
② Refrigerant pipe flare connection (Gas)
③ Drain hose connection

| | ARXK07-14 | ARXK18 | ARXK24 |
|---|---|---|---|
| A | P100+6=600 | P100+8=800 | P100+10=1000 |
| B | 650 | 850 | 1050 |
| C | 752 | 952 | 1152 |
| D | 650 | 850 | 1050 |
| E | 665 | 864 | 1064 |
| F | 700 | 900 | 1100 |

*Models (Without drain pump)
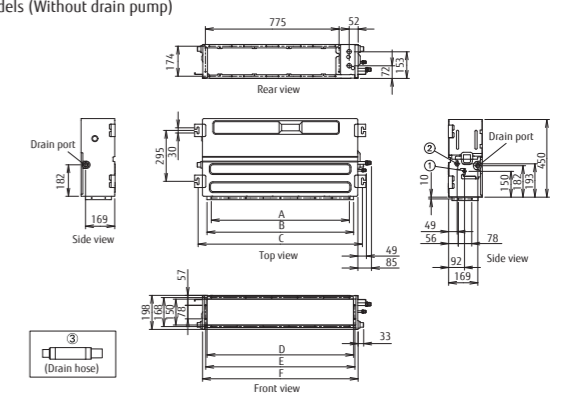
775
52
174
Rear view
295
Drain port
182
169
Side view
Top view
A
B
C
96
57
③ (Drain hose)
Front view
D
E
33
49
85
169
78
92
66
56
49
30
10

① Refrigerant pipe flare connection (Liquid)
② Refrigerant pipe flare connection (Gas)
③ Drain hose connection

| | ARXK07-14 | ARXK18 | ARXK24 |
|---|---|---|---|
| A | P100+6=600 | P100+8=800 | P100+10=1000 |
| B | 650 | 850 | 1050 |
| C | 752 | 952 | 1152 |
| D | 650 | 850 | 1050 |
| E | 665 | 864 | 1064 |
| F | 700 | 900 | 1100 |

# Slim Duct / Slim Concealed Floor

**Models**
ARXD07GALH
ARXD09GALH
ARXD12GALH
ARXD14GALH
ARXD18GALH
ARXD24GALH

**Models**
ARXD07GATH
ARXD09GATH
ARXD12GATH
ARXD14GATH
ARXD18GATH
ARXD24GATH

ARXD07 ARXD09 ARXD12 ARXD14

ARXD18

ARXD24

Slim Concealed Floor

**DC FAN**

## Feature

### Slim design

With a slim indoor design, this indoor can be installed in narrow ceiling spaces.

Drain port

Drain pump

**Height 198mm**

**Drain pump built-in**
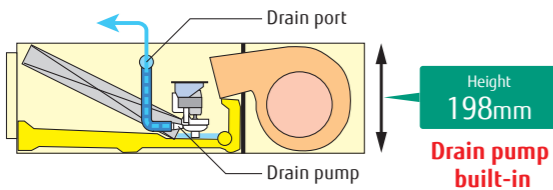
### Air-intake

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

Bottom side

Back side
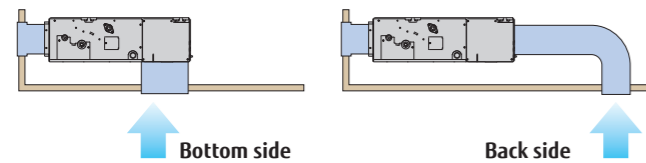
### Flexible installation

Ceiling concealed
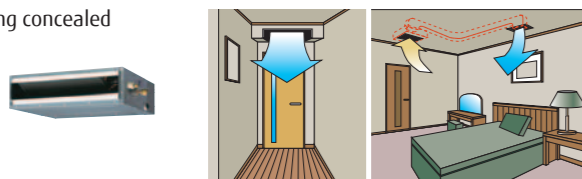
Floor concealed
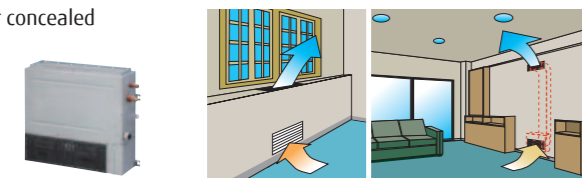
### Selectable with a wide range of static pressure

By using DC fan motor, it is possible to change of static pressure range 0 to 90Pa. The change of static pressure range is possible by remote controller.

**Static pressure range 0 to 90 Pa**

*24 model is 0 to 50Pa

### High lift drain pump

**Max. 850mm**

Drain hose is standard accessory

### Filter (Accessory)

ARXD07 / 09 / 12 / 14 / 18

Filter (2pcs.)

ARXD24

Filter (3pcs.)
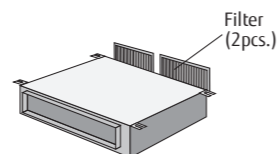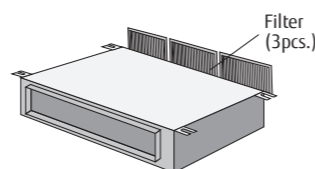
## Auto Louver Grille Kit (Option)

Simple flat Auto Louver will provide comfort airflow and harmonize with luxury interior.
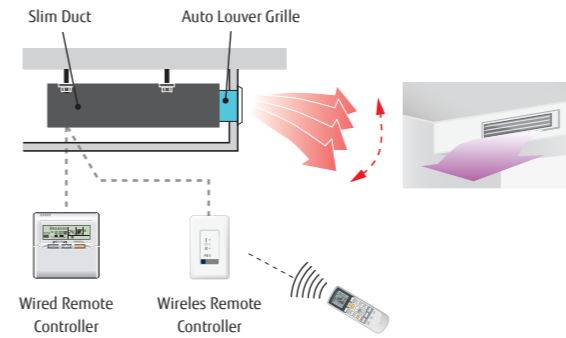
Slim Duct    Auto Louver Grille

Wired Remote Controller     Wireles Remote Controller

## Optional parts

| | |
|---|---|
| Remote Sensor Unit : | UTY-XSZX |
| IR Receiver Unit : | UTB-YWC |
| Auto Louver Grille Kit : | UTD-GXTA-W (for ARXD07/09/12/14GALH ARXD07/09/12/14GATH) |
| | UTD-GXTB-W (for ARXD18GALH ARXD18GATH) |
| | UTD-GXTC-W (for ARXD24GALH ARXD24GATH) |

## Specifications

| Model name | | | ARXD07GALH ARXD07GATH | ARXD09GALH ARXD09GATH | ARXD12GALH ARXD12GATH | ARXD14GALH ARXD14GATH | ARXD18GALH ARXD18GATH | ARXD24GALH ARXD24GATH |
|---|---|---|---|---|---|---|---|---|
| Power source | | | Single-phase, ~220-240V, 50Hz | | | | | |
| Capacity | Cooling | kW | 2.2 | 2.8 | 3.6 | 4.5 | 5.6 | 7.1 |
| | Heating | | 2.8 | 3.2 | 4.0 | 5.0 | 6.3 | 8.0 |
| Input power | | W | 44 | 50 | 54 | 92 | 83 | 122 |
| Airflow rate | High | m³/h (l/s) | 550 (153) | 600 (167) | 600 (167) | 800 (222) | 940 (261) | 1,330 (369) |
| | Med | | 490 (136) | 550 (153) | 510 (142) | 710 (197) | 840 (233) | 1,240 (344) |
| | Low | | 440 (122) | 480 (133) | 450 (125) | 610 (169) | 750 (208) | 1,100 (306) |
| Static pressure range | | Pa | 0 to 90 | 0 to 90 | 0 to 90 | 0 to 90 | 0 to 90 | 0 to 50 |
| Standard static pressure | | | 25 | 25 | 25 | 25 | 25 | 25 |
| Sound pressure level | High | dB(A) | 28 | 29 | 30 | 34 | 34 | 35 |
| | Med | | 25 | 26 | 27 | 32 | 32 | 32 |
| | Low | | 22 | 24 | 24 | 28 | 28 | 29 |
| Dimensions (H x W x D) | | mm | 198 × 700 × 620 | 198 × 700 × 620 | 198 × 700 × 620 | 198 × 700 × 620 | 198 × 900 × 620 | 198 × 1,100 × 620 |
| Weight | | kg(lbs) | 17 (37) | 17 (37) | 18 (40) | 18 (40) | 22 (48) | 26 (57) |
| Connection pipe diameter | Liquid (Flare) | mm | 6.35 | 6.35 | 6.35 | 6.35 | 9.52 | 9.52 |
| | Gas (Flare) | | 12.70 | 12.70 | 12.70 | 12.70 | 15.88 | 15.88 |
| Drain hose diameter (I.D./O.U.) | | | 25 / 32 | | | | | |

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.

## Dimensions (Unit : mm)

*Service accessibility must be allowed for when installing the product.
Please consult the installation manual for the necessary service access size.

| | ARXD07-14 | ARXD18 | ARXD24 |
|---|---|---|---|
| A | 700 | 900 | 1100 |
| B | 650 | 850 | 1050 |
| C | 734 | 934 | 1134 |
| D | 650 | 850 | 1050 |
| E | P100x6=600 | P100x8=800 | P100x10=1000 |
| F | 18xØ5 | 22xØ5 | 26xØ5 |
| G | 574 | 774 | 974 |

# Medium Static Pressure Duct

**Models**
ARXA24GBLH
ARXA30GBLH
ARXA36GBLH
ARXA45GBLH

**Models**
ARXA24GBTH
ARXA30GBTH
ARXA36GBTH
ARXA45GBTH

AC
FAN

## Feature

### Slim & Compact design

In the case of bottom return air connection, not only does the indoor 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)
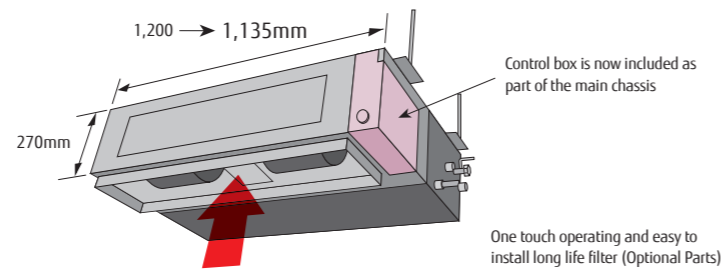
### Selectable with a wide range of static pressure

It is possible to change of static pressure range 0 to 150Pa.

Static pressure range
**0 to 150 Pa**

### Can be installed for various location

It can be installed in such locations as high-rise condominiums by low static pressure design.
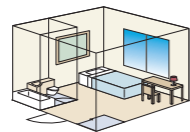
It can also be installed in wide spade when high static pressure is required, such as for offices.

### Easy maintenance

See below for the case of rear suction type

**Previous model**

Large bottom panel: 1 piece

**New model**

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

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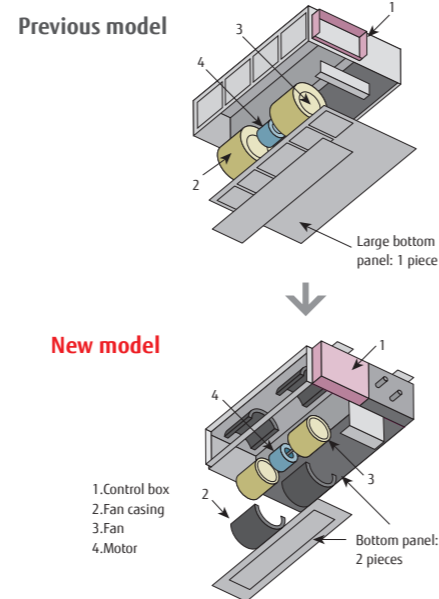
Structural improvement is attained by making the bottom panel two pieces, front and rear. The internal fan casing is also manufactured in two pieces, namely upper and lower. The maintenance of the motor and fan can be easily carried out by removing the rear panel and the lower part of the casing while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

### Easy setting by using remote controller

The change of static pressure range is possible by remote controller

## Two-direction drain piping

Duct indoor unit
Two-direction drain piping
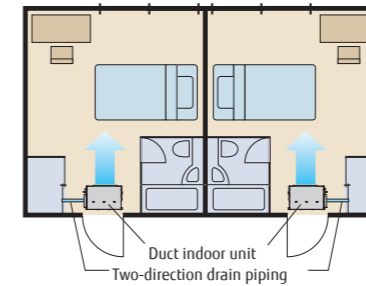
## Installation styles

**Embedded in Ceiling**
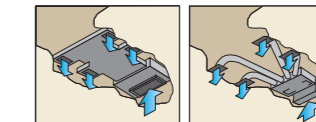
**Hanging from Ceiling**
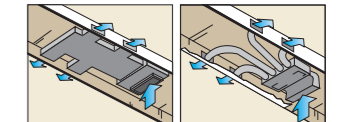
### Optional parts

| | |
|---|---|
| Remote Sensor Unit : UTY-XSZX | Flange (Round) : UTD-RF204 |
| Long Life Filter : UTD-LF25NA | IR Receiver Unit : UTB-YWC |
| Flange (Square) : UTD-SF045T | Drain Pump Unit : UTZ-PX1NBA |

## Specifications

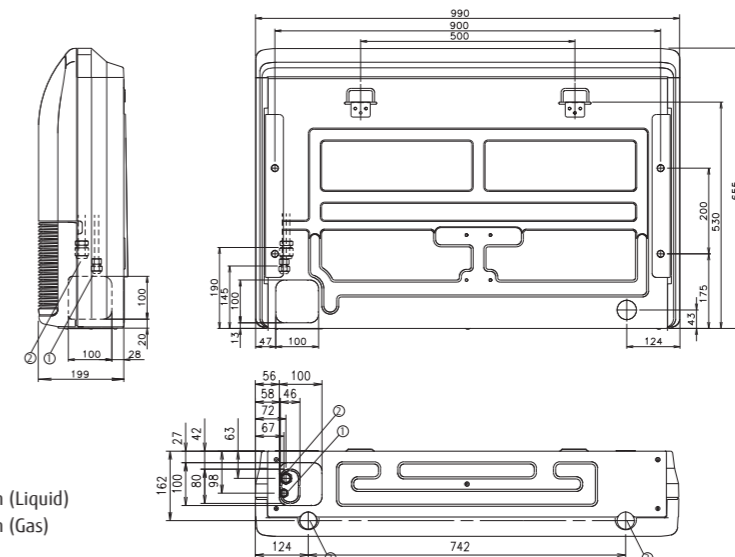| Model name | | | ARXA24GBLH ARXA24GBTH | ARXA30GBLH ARXA30GBTH | ARXA36GBLH ARXA36GBTH | ARXA45GBLH ARXA45GBTH |
|---|---|---|---|---|---|---|
| Power source | | | Single-phase, ~220-240V, 50Hz | | | |
| Capacity | Cooling | kW | 7.1 | 9.0 | 11.2 | 12.5 |
| | Heating | | 8.0 | 10.0 | 12.5 | 14.0 |
| Input power | | W | 190 | 188 | 312 | 312 |
| Airflow rate | High | m³/h (l/s) | 1,280 (356) | 1,280 (356) | 1,720 (478) | 1,720 (478) |
| | Med | | 1,210 (336) | 1,210 (336) | 1,670 (464) | 1,670 (464) |
| | Low | | 1,130 (314) | 1,130 (314) | 1,600 (444) | 1,600 (444) |
| Static pressure range | | Pa | 30 to 150 | 30 to 150 | 30 to 150 | 30 to 150 |
| Standard static pressure | | | 100 | 100 | 100 | 100 |
| Sound pressure level | High | dB(A) | 38 | 40 | 43 | 43 |
| | Med | | 36 | 38 | 41 | 41 |
| | Low | | 34 | 36 | 39 | 39 |
| Dimensions (H x W x D) | | mm | 270 × 1,135 × 700 | 270 × 1,135 × 700 | 270 × 1,135 × 700 | 270 × 1,135 × 700 |
| Weight | | kg(lbs) | 39 (86) | 42 (93) | 42 (93) | 42 (93) |
| Connection pipe diameter | Liquid (Flare) | mm | 9.52 | 9.52 | 9.52 | 9.52 |
| | Gas (Flare) | | 15.88 | 15.88 | 19.05 | 19.05 |
| Drain hose diameter (I.D./O.U.) | | | 25 / 32 | | | |

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.

### Dimensions (Unit : mm)

*Service accessibility must be allowed for when installing the product.
 Please consult the installation manual for the necessary service access size.

138  264  264  264  138  82
ø205 hole  75
Front view

270  32  240  ø200 (knock out hole)  161  447(Bolt pitch)  173  P.C.D. ø225  121  1015  1135  107
1177(Bolt pitch)  Outlet  700
Top view

114  66  32  168  240  281  240  270
Side view (L)  Side view (R)

Rear view

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

# High Static Pressure Duct

**Models**
ARXC36GBTH
ARXC72GBTH
ARXC90GBTH
ARXC96GATH

ARXC36

ARXC72    ARXC90

ARXC96

DC FAN

## Feature

### Static pressure selection

By using DC fan motor, it is possible to change static pressure range from 0 to 200Pa (ARXC36) / 300Pa (ARXC72/90/96).
The change of static pressure range is possible by function setting with wired / wireless remote controller.

[Pa]
200 or 300

0

[m³/h]

Air flow rate

### Low energy consumption by high efficiency DC fan motor

Improved motor efficiency from previous model.

(ARXC36 type)    (ARXC72 / 90 / 96 type)
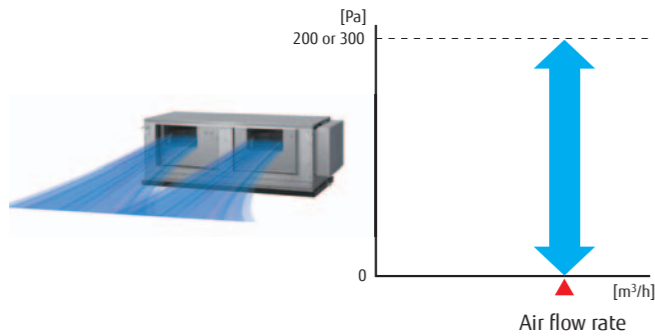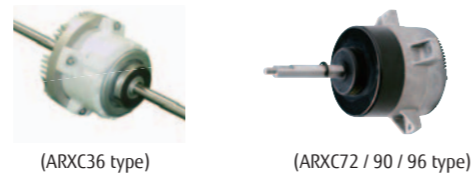
## Low noise

### Models : ARXC36

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.

Plastic fan Ø 225mm

500mm

Heat exchanger

400mm

Casing (Plastic)
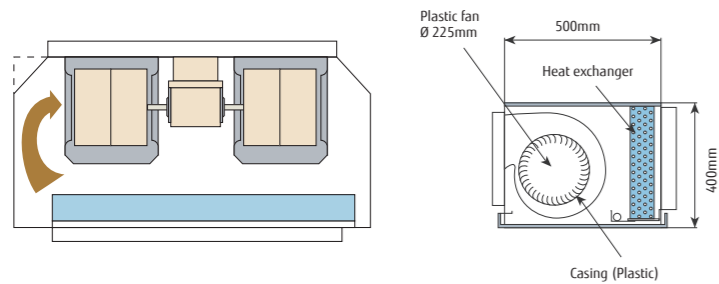
Med. noise level
**36 dB(A)**

(ARXC36 type)

## Easy installation
## (Compact size & Light weight)

(Unit:mm)

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

400

1,050    500

(ARXC36 type)

450

1,587    700

(ARXC72 / 90 type)

550

1,587    700

(ARXC96 type)
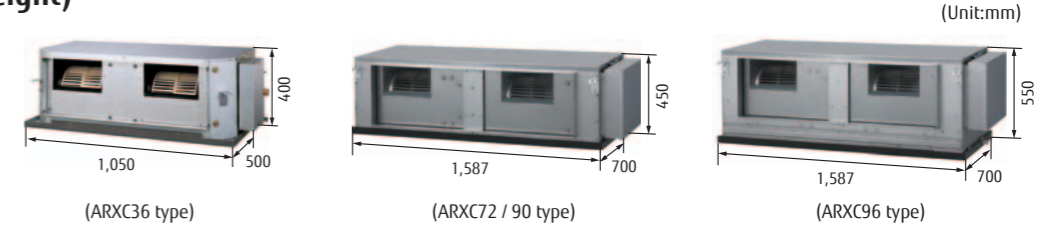
### Optional parts

Long-Life Filter :    UTD-LF60KA (For ARXC36GBTH)
IR Receiver Unit :    UTB-YWC
Remote Sensor Unit :    UTY-XSZX

## Specifications

| Model name | | | ARXC36GBTH | ARXC72GBTH | ARXC90GBTH | ARXC96GATH |
|---|---|---|---|---|---|---|
| Power source | | | Single-phase, ~220-240V, 50Hz | Single-phase, ~220-240V, 50Hz | | Single-phase, ~220-240V, 50Hz |
| Capacity | Cooling | kW | 11.2 | 22.4 | 25.0 | 28.0 |
| | Heating | | 12.5 | 25.0 | 28.0 | 31.5 |
| Input power | | W | 207 | 681 | 819 | 838 |
| Airflow rate | High | m³/h (l/s) | 1,990 (553) | 3,900 (1,083) | 4,300 (1,195) | 4,850 (1,347) |
| | Med | | 1,680 (467) | 3,300 (917) | 4,000 (1,111) | 4,250 (1,181) |
| | Low | | 1,330 (369) | 3,000 (833) | 3,500 (972) | 3,600 (1,000) |
| Static pressure range | | Pa | 0 to 200 | 0 to 300 | 0 to 300 | 0 to 300 |
| Standard static pressure | | | 100 | 150 | 150 | 150 |
| Sound pressure level | High | dB(A) | 42 | 47 | 48 | 48 |
| | Med | | 36 | 43 | 46 | 45 |
| | Low | | 32 | 40 | 44 | 42 |
| Dimensions (H x W x D) | | mm | 400 × 1,050 × 500 | 450 × 1,587 × 700 | 450 × 1,587 × 700 | 550 × 1,587 × 700 |
| Weight | | kg(lbs) | 40 (88) | 84(185) | 84(185) | 105(231) |
| Connection pipe diameter | Liquid | mm | 9.52 (Flare) | 12.70 (Brazing) | 12.70 (Brazing) | 12.70 (Brazing) |
| | Gas | | 19.05 (Flare) | 22.22 (Brazing) | 22.22 (Brazing) | 22.22 (Brazing) |
| Drain hose diameter (I.D./O.U.) | | | 25 / 32 | 25 / 32 | | 25 / 32 |

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.

## Dimensions (Unit : mm)

Models: ARXC36
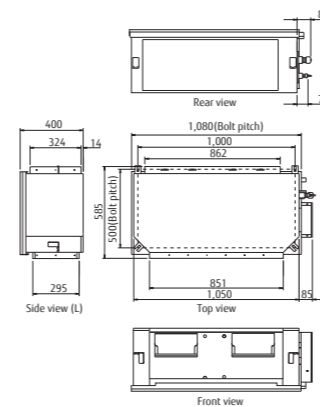
Models: ARXC72 / ARXC90
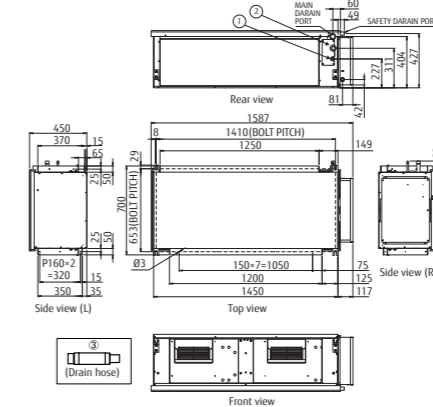
Models: ARXC96
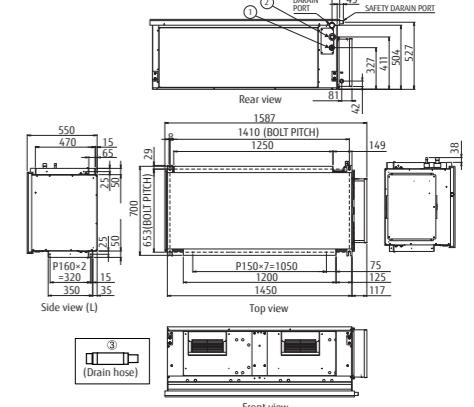
① Refrigerant piping flare connection (Liquid)
② Refrigerant piping flare connection (Gas)
③ Drain piping connection

① Refrigerant pipe flare connection (Liquid)
② Refrigerant pipe flare connection (Gas)
③ Drain hose

① Refrigerant pipe flare connection (Liquid)
② Refrigerant pipe flare connection (Gas)
③ Drain hose

# High Static Pressure Duct

**Models**
ARXC45GATH
ARXC60GATH
ARXC72GATH
ARXC90GATH

ARXC45   ARXC60          ARXC72   ARXC90

**AC**
**FAN**

## Feature

### Static pressure selection

**Models : ARXC72 / ARXC90**

2 Types of static pressure mode are selectable.

Max.
**300Pa**
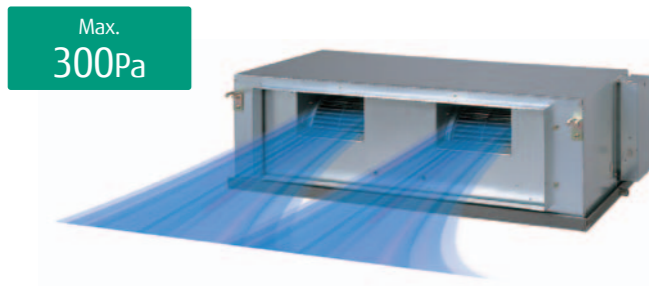
**High Static Pressure Duct (ARXC72)**

The adoption of a single phase fan motor allows
3 steps fan speed control

Normal mode        High static pressure mode

Air flow

0                                                    Static pressure (Pa)
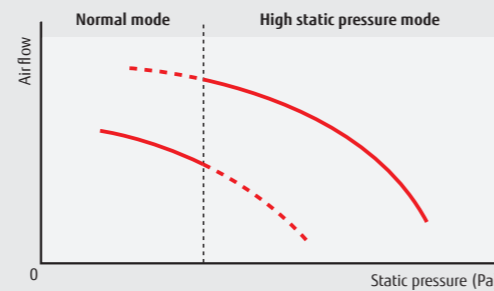
### Low noise

**Models : 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.

Plastic fan
Ø 225mm          500mm

Heat exchanger

400mm
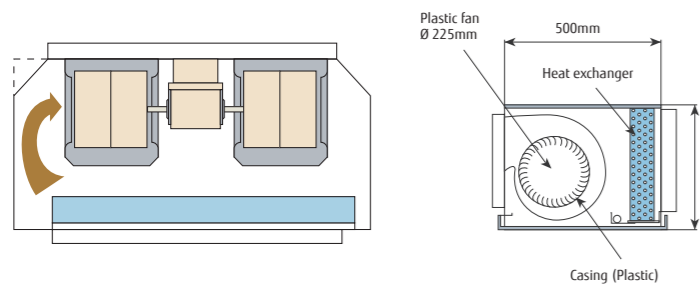
Med. noise level
**45 dB(A)**

(ARXC45 / 60 type)

Casing (Plastic)

## Easy installation
## (Compact size & Light weight)

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

(Unit: mm)

400                           450

1,050          500          1,550          700

(ARXC36 type)               (ARXC72 / 90 type)
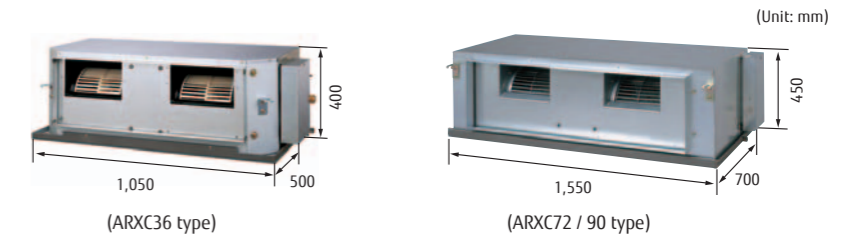
### Optional parts

Long-Life Filter :    UTD-LF60KA (For ARXC45/60GATH)
IR Receiver Unit :    UTB-YWC
Remote Sensor Unit :  UTY-XSZX

## Specifications

| Model name | | | ARXC45GATH | ARXC60GATH | ARXC72GATH | ARXC90GATH |
|---|---|---|---|---|---|---|
| Power source | | | Single-phase, ~220-240V, 50Hz | | Single-phase, ~220-240V, 50Hz | |
| Capacity | Cooling | kW | 12.5 | 18.0 | 22.4 | 25.0 |
| | Heating | | 14.0 | 20.0 | 25.0 | 28.0 |
| Input power | | W | 715 | 730 | 1,110 | 1,250 |
| Airflow rate | High | m³/h (l/s) | 3,500 (972) | 3,500 (972) | 3,900 (1,083) | 4,300 (1,195) |
| | Med | | 3,000 (833) | 3,000 (833) | 3,300 (917) | 4,000 (1,111) |
| | Low | | 2,460 (683) | 2,460 (683) | 3,000 (833) | 3,500 (972) |
| Static pressure range | | Pa | 100 to 250 | 100 to 250 | 50 to 300 | 100 to 300 |
| Standard static pressure | | | 100 | 100 | 260 | 250 |
| Sound pressure level | High | dB(A) | 49 | 49 | 51 | 53 |
| | Med | | 45 | 45 | 48 | 51 |
| | Low | | 42 | 42 | 45 | 49 |
| Dimensions (H x W x D) | | mm | 400 × 1,050 × 500 | 400 × 1,050 × 500 | 450 × 1,550 × 700 | 450 × 1,550 × 700 |
| Weight | | kg(lbs) | 46 (101) | 46 (101) | 83 (-) | 85(-) |
| Connection pipe diameter | Liquid | mm | 9.52 (Flare) | 9.52 (Flare) | 12.70 (Brazing) | 12.70 (Brazing) |
| | Gas | | 19.05 (Flare) | 19.05 (Flare) | 22.22 (Brazing) | 22.22 (Brazing) |
| Drain hose diameter (I.D./O.U.) | | | 25 / 32 | | 25 / 32 | |

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.

## Dimensions (Unit : mm)

Models: ARXC45 / ARXC60
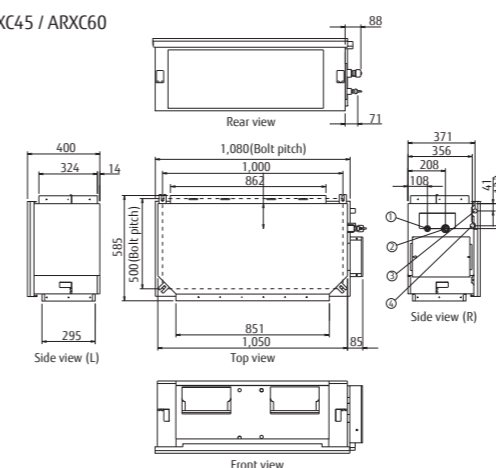
88
Rear view
71
400
324          14          1,080(Bolt pitch)          371
1,000          356
585          500(Bolt pitch)          208
862          108
851          Side view (R)
295          1,050
Side view (L)          Top view          85

Front view

Models: ARXC72 / ARXC90

② ①
46
60
Rear view          235
318          403
450          427
370          1550          98          Main drain port
68          1410 (Bolt pitch)          Safety drain port
655 (Bolt pitch)          1251          151
P160×2          P150×7=1050          75
=320          1199          127
350          1454          85
Side view (L)          Top view          Side view (R)

(Drain hose)
Front view

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

① Refrigerant pipe flare connection (Liquid)
② Refrigerant pipe flare connection (Gas)
③ Drain hose

# Large Airflow Duct

## Models
ARXN18GATH
ARXN24GATH
ARXN30GATH
ARXN34GATH
ARXN36GATH
ARXN45GATH

DC
FAN

## Feature

### Large airflow volume

It can be installed in places such as early replacement of air required by large airflow volume.
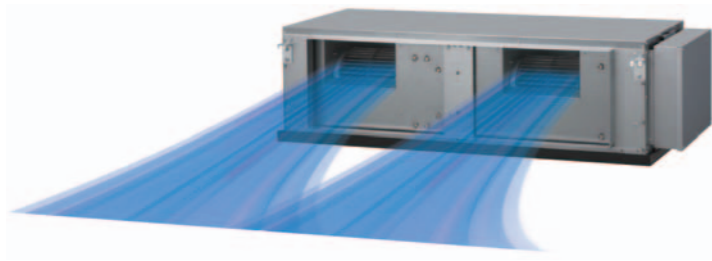
## Installation styles
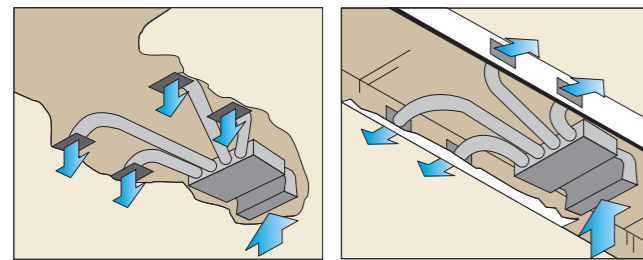
## Selectable with a wide range of static pressure

static pressure range
**50 to 250**Pa
(30 / 34class)

static pressure range
**50 to 300**Pa
(36 / 45class)

### Optional parts
Remote Sensor Unit : UTY-XSZX

## Specifications

| Model name | | | ARXN18GATH | ARXN24GATH | ARXN30GATH | ARXN34GATH | ARXN36GATH | ARXN45GATH |
|---|---|---|---|---|---|---|---|---|
| Power source | | | Single-phase, ~220-240V, 50Hz | | | | | |
| Capacity | Cooling | kW | 5.6 | 7.1 | 9.0 | 10.0 | 11.2 | 12.5 |
| | Heating | | 6.3 | 8.0 | 10.0 | 11.2 | 12.5 | 14.0 |
| Input power | | W | 154 | 205 | 306 | 432 | 572 | 572 |
| Airflow rate | High | m³/h (l/s) | 2,280 (633) | 2,640 (733) | 3,200 (889) | 3,720 (1,033) | 4,120 (1,145) | 4,120 (1,145) |
| | Med | | – | – | – | – | – | – |
| | Low | | – | – | – | – | – | – |
| Static pressure range | | Pa | 50 to 100 | 50 to 150 | 50 to 250 | 50 to 250 | 50 to 300 | 50 to 300 |
| Standard static pressure | | | 50 | 50 | 50 | 50 | 60 | 60 |
| Sound pressure level | High | dB(A) | 35 | 37 | 40 | 43 | 45 | 45 |
| | Med | | – | – | – | – | – | – |
| | Low | | – | – | – | – | – | – |
| Dimensions (H x W x D) | | mm | 450 × 1,587 × 700 | 450 × 1,587 × 700 | 450 × 1,587 × 700 | 450 × 1,587 × 700 | 450 × 1,587 × 700 | 450 × 1,587 × 700 |
| Weight | | kg(lbs) | 84 (185) | 84 (185) | 84 (185) | 84 (185) | 84 (185) | 84 (185) |
| Connection pipe diameter | Liquid (Flare) | mm | 9.52 | 9.52 | 9.52 | 9.52 | 9.52 | 9.52 |
| | Gas (Flare) | | 15.88 | 15.88 | 15.88 | 15.88 | 19.05 | 19.05 |
| Drain hose diameter (I.D./O.U.) | | | 25 / 32 | | | | | |

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].
* Large Airflow Duct can be connected to V-III series only.

## Dimensions (Unit : mm)

Rear view

Air Flow

Top view
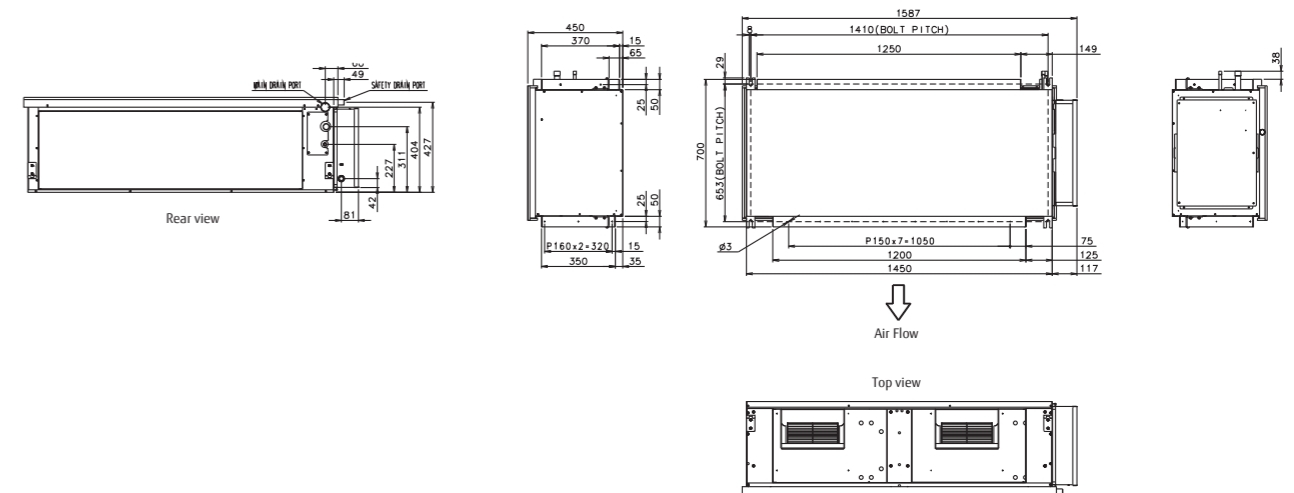
# Floor / Ceiling

## Models
ABHA12GATH
ABHA14GATH
ABHA18GATH
ABHA24GATH

**DC FAN**
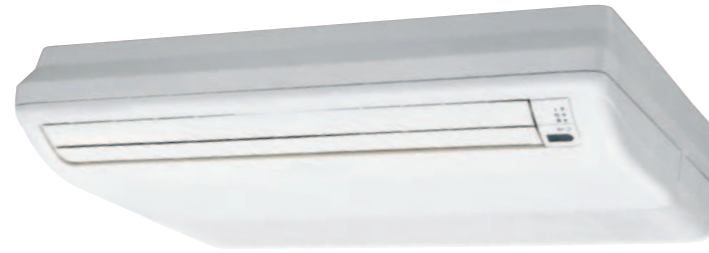
Floor standing

## Feature

## Flexible installation

### Example for floor installation
Floor console

### Example for ceiling installation
Under ceiling

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

RIGHT and LEFT SWING
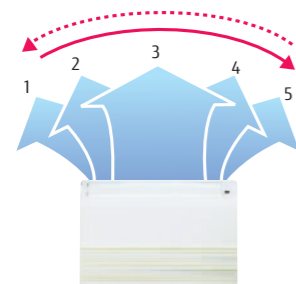
UP and DOWN SWING

4 steps selectable
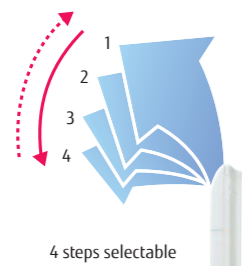
## High power DC fan motor
• High power
• Wide rotation range
• High efficiency
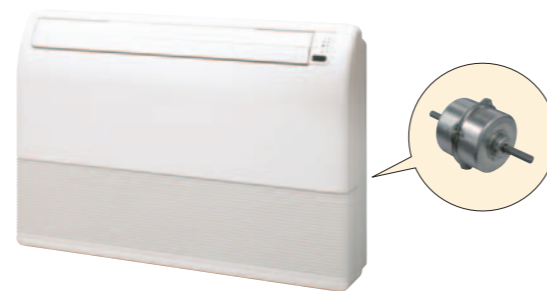
## Compact design
Symmetrical, slim and compact design.

(Unit : mm)

655

990    199

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

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

## Specifications

| Model name | | | ABHA12GATH | ABHA14GATH | ABHA18GATH | ABHA24GATH |
|---|---|---|---|---|---|---|
| Power source | | | Single-phase, ~220-240V, 50Hz | | | |
| Capacity | Cooling | kW | 3.6 | 4.5 | 5.6 | 7.1 |
| | Heating | | 4.0 | 5.0 | 6.3 | 8.0 |
| Input power | | W | 30 | 42 | 74 | 99 |
| Airflow rate | High | m³/h (l/s) | 660 (183) | 780 (216) | 1,000 (277) | 1,000 (277) |
| | Med | | 570 (158) | 640 (177) | 720 (199) | 820 (227) |
| | Low | | 490 (136) | 550 (152) | 580 (161) | 680 (188) |
| Sound pressure level | High | dB(A) | 36 | 40 | 46 | 47 |
| | Med | | 32 | 36 | 39 | 42 |
| | Low | | 28 | 34 | 35 | 37 |
| Dimensions (H x W x D) | | mm | 199 × 990 × 655 | 199 × 990 × 655 | 199 × 990 × 655 | 199 × 990 × 655 |
| Weight | | kg(lbs) | 25 (55) | 26 (57) | 26 (57) | 27 (59) |
| Connection pipe diameter | Liquid (Flare) | mm | 6.35 | 6.35 | 9.52 | 9.52 |
| | Gas (Flare) | | 12.70 | 12.70 | 15.88 | 15.88 |
| Drain hose diameter (I.D./O.U.) | | | 25 / 32 | | | |

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].

## Dimensions  (Unit : mm)

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

# Ceiling

### Models
**ABHA30GATH**
**ABHA36GATH**
**ABHA45GATH**
**ABHA54GATH**

**DC FAN**

## Feature

## Installation

| Open | Concealed | Wall mounted |
|------|-----------|--------------|
| | | (Field Supplied) |

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

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

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.

## Double auto swing and wide airflow

Auto airflow direction and auto swing

**Right and left**

5 steps selectable

**Up and down**

4 steps selectable
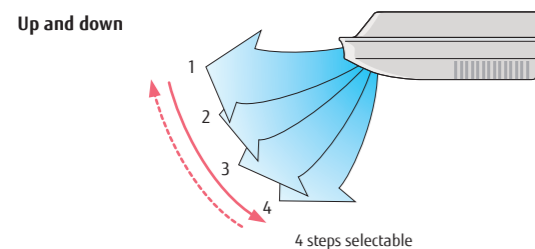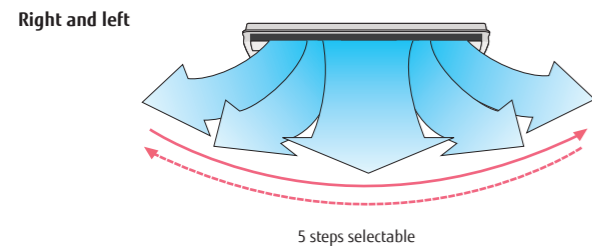
## Long airflow

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

Long distance air-flow
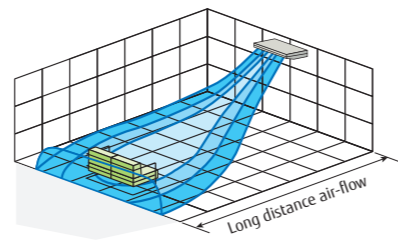
## High power DC fan motor

• High power    • Wide rotation range    • High efficiency

## Fresh air intake

Indoor      Fresh air

Outdoor
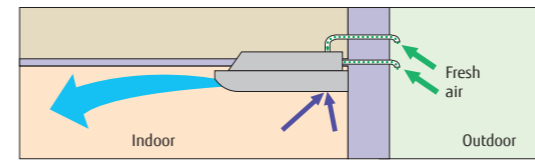
## Slim & Compact design

Hight **240mm**
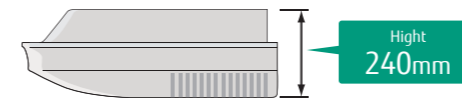
## High lift drain pump

Optional drain pump unit allows flexible installation design.

Max. **500mm**
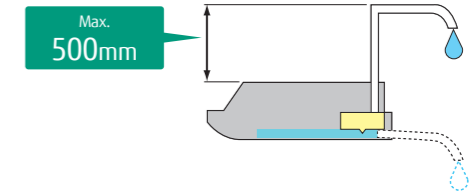
### Optional parts

Drain Pump Unit : UTR-DPB24T
Flange : UTD-RF204

## Specifications

| Model name | | | ABHA30GATH | ABHA36GATH | ABHA45GATH | ABHA54GATH |
|---|---|---|---|---|---|---|
| Power source | | | Single-phase, ~220-240V, 50Hz | | | |
| Capacity | Cooling | kW | 9.0 | 11.2 | 12.5 | 14.0 |
| | Heating | | 10.0 | 12.5 | 14.0 | 16.0 |
| Input power | | W | 66 | 85 | 131 | 180 |
| Airflow rate | High | m³/h (l/s) | 1,630 (452) | 1,690 (469) | 2,010 (558) | 2,270 (629) |
| | Med | | 1,370 (379) | 1,400 (389) | 1,600 (444) | 1,780 (493) |
| | Low | | 1,140 (316) | 1,170 (325) | 1,230 (342) | 1,280 (355) |
| Sound pressure level | High | dB(A) | 42 | 45 | 48 | 51 |
| | Med | | 38 | 38 | 42 | 45 |
| | Low | | 33 | 34 | 35 | 36 |
| Dimensions (H x W x D) | | mm | 240 × 1,660 × 700 | 240 × 1,660 × 700 | 240 × 1,660 × 700 | 240 × 1,660 × 700 |
| Weight | | kg(lbs) | 46 (101) | 48 (106) | 48 (106) | 48 (106) |
| Connection pipe diameter | Liquid (Flare) | mm | 9.52 | 9.52 | 9.52 | 9.52 |
| | Gas (Flare) | | 15.88 | 19.05 | 19.05 | 19.05 |
| Drain hose diameter (I.D./O.U.) | | | 25 / 32 | | | |

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].

## Dimensions  (Unit : mm)

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

# Wall Mounted

**Models** (EEV internal)
ASHA07GACH
ASHA09GACH
ASHA12GACH
ASHA14GACH

**Models** (EEV internal)
ASHA07GATH
ASHA09GATH
ASHA12GATH
ASHA14GATH

**Models** (EEV external)
ASHE07GACH
ASHE09GACH
ASHE12GACH
ASHE14GACH

**DC FAN**

## Feature

## Filter features

High quality air conditioning by incorporation of high performance filter.

**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.

**Apple-catechin Filter**

Apple-catechin filter uses static electricity to clean fine particles and dust in the air.

### 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 **New filter**
40
0
0  30  60  120  (min)

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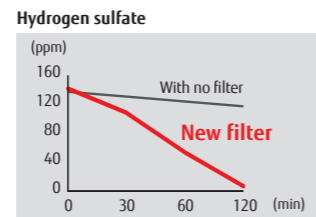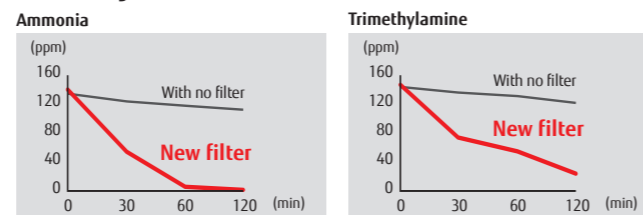
Testing organization :
Environmental Sanitary Inspection Center
Test method :
Deodorization Test

## Auto swing louvre

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

① ② ③ ④
Swing

→ Step
---→ Swing
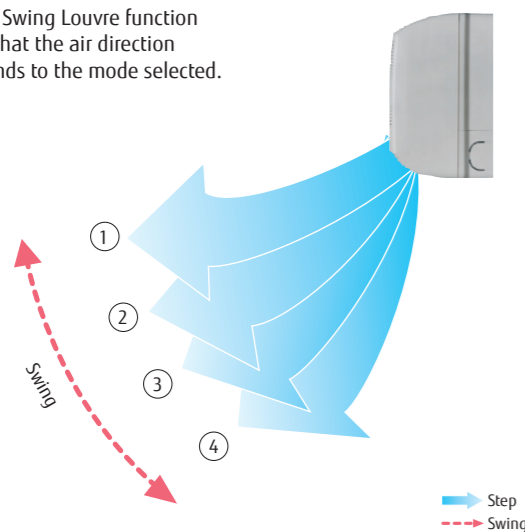
## Compact size

### 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**

790mm

## New style high power DC fan motor

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

## Easy maintenance

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

**Open panel**

## Symmetrical design

Symmetrical, clean design that suits all interiors.
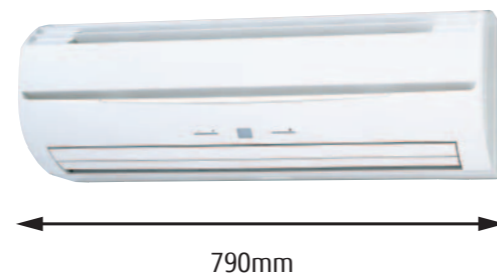
## Specifications

| Model name | | ASHA07GACH ASHA07GATH | ASHA09GACH ASHA09GATH | ASHA12GACH ASHA12GATH | ASHA14GACH ASHA14GATH | ASHE07GACH | ASHE09GACH | ASHE12GACH | ASHE14GACH |
|---|---|---|---|---|---|---|---|---|---|
| Power source | | Single-phase, ~220-240V, 50Hz | | | | Single-phase, ~220-240V, 50Hz | | | |
| Capacity | Cooling | 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 | 17 | 18 | 22 | 34 | 15 | 16 | 21 | 34 |
| Airflow rate | High | 490 (136) | 500 (139) | 560 (156) | 670 (186) | 490 (136) | 500 (139) | 560 (156) | 680 (189) |
| | Med | 450 (125) | 450 (125) | 480 (133) | 490 (136) | 450 (125) | 450 (125) | 480 (133) | 490 (136) |
| | Low | 370/420*1 (103/117*1) | 370/420*1 (103/117*1) | 420 (117) | 420 (117) | 370/420*1 (103/117*1) | 370/420*1 (103/117*1) | 420 (117) | 420 (117) |
| Sound pressure level | High | 35 | 36 | 39 | 44 | 34 | 35 | 38 | 43 |
| | Med | 33 | 33 | 35 | 37 | 32 | 32 | 34 | 35 |
| | Low | 27 / 31*1 | 27 / 31*1 | 31 | 32 | 26 / 30*1 | 26 / 30*1 | 30 | 30 |
| Dimensions (H x W x D) | mm | 275 × 790 × 215 | 275 × 790 × 215 | 275 × 790 × 215 | 275 × 790 × 215 | 275 × 790 × 215 | 275 × 790 × 215 | 275 × 790 × 215 | 275 × 790 × 215 |
| Weight | kg(lbs) | 9 (20) | 9 (20) | 9 (20) | 9 (20) | 9 (20) | 9 (20) | 9 (20) | 9 (20) |
| Connection pipe diameter | Liquid (Flare) | 6.35 | 6.35 | 6.35 | 6.35 | 6.35 | 6.35 | 6.35 | 6.35 |
| | Gas (Flare) | 12.70 | 12.70 | 12.70 | 12.70 | 12.70 | 12.70 | 12.70 | 12.70 |
| Drain hose diameter (I.D./O.U.) | | 13.8 / 15.8 to 16.7 | | | | 13.8 / 15.8 to 16.7 | | | |
| EV Kit (option) | | — | — | — | — | UTR-EV09XB | UTR-EV09XB | UTR-EV14XB | UTR-EV14XB |

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].
*1 : This value is under cooling operation.

## Dimensions (Unit : mm)
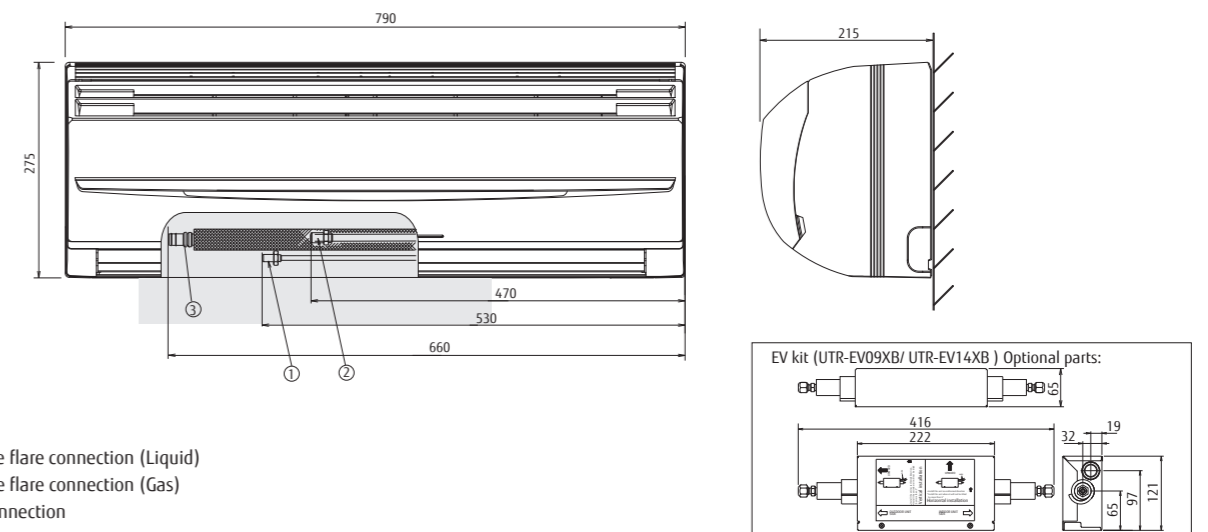
790
215
275
470
530
660

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

EV kit (UTR-EV09XB/ UTR-EV14XB ) Optional parts:
416
222
32  19
65 97 121

# Wall Mounted

**Models**
ASHA18GACH
ASHA24GACH
ASHA30GACH

**Models**
ASHA18GATH
ASHA24GATH
ASHA30GATH

**DC FAN**

## Compact & Slim design

By using DC fan motor, compact design is realized.

998mm

DC fan motor

## Easy maintenance

Simplification of drain pan cleaning improves maintenance-ability.

## Feature

### More comfort airflow by adopting power diffuser

**"Vertical airflow"**
**provides powerful floor level heating**

(24/30)

5
2.5
0        3        6        9        12(m)
(°C)

Power diffuser (full open)

46°

Outside air conditions: 2 °C 60%
Operation contents: Heating,
Set temperature (Max set temp) 30 °C,
airflow Hi, Air direction downward and front

33  32  31  30  29
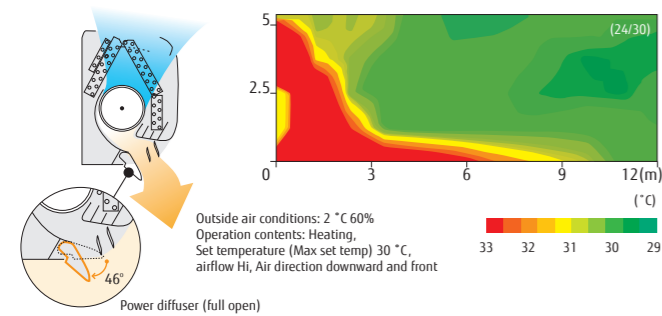
**"Horizontal airflow" does not blow cool air**
**directly at the occupants in the room**

Power diffuser

(24/30)

5
2.5
0        3        6        9        12(m)
(°C)

Outside air conditions: 35 °C 40%
Operation contents: Cooling,
Set temperature (Min set temp) 18 °C,
airflow Hi, Air direction downward and front

15  16  17  18
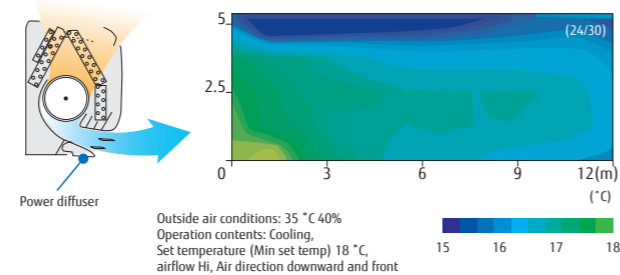
## Air conditioner filter features
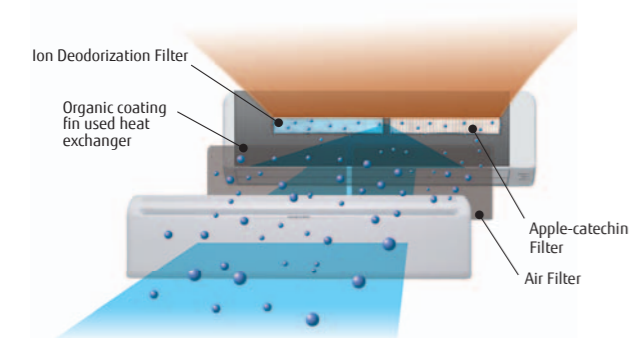
Ion Deodorization Filter

Organic coating fin used heat exchanger

Apple-catechin Filter

Air Filter

High quality air conditioning by incorporation of high performance filter.

**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.

**Apple-catechin Filter**

Apple-catechin filter uses static electricity to clean fine particles and dust in the air.

## Double auto swing

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

**5 steps selectable**

**4 steps selectable**

→ Step
--- Swing

① ② ③ ④

Swing

## Specifications

| Model name | | | ASHA18GACH ASHA18GATH | ASHA24GACH ASHA24GATH | ASHA30GACH ASHA30GATH |
|---|---|---|---|---|---|
| Power source | | | Single-phase, ~220-240V, 50Hz | | |
| Capacity | Cooling | kW | 5.6 | 7.1 | 8.0 |
| | Heating | | 6.3 | 8.0 | 9.0 |
| Input power | | W | 32 | 60 | 91 |
| Airflow rate | High | m³/h (l/s) | 840 (233) | 1,100 (305) | 1,240 (343) |
| | Med | | 770 (213) | 910 (252) | 980 (271) |
| | Low | | 690 (191) | 730 (202) | 770 (213) |
| Sound pressure level | High | dB(A) | 41 | 48 | 52 |
| | Med | | 39 | 43 | 45 |
| | Low | | 35 | 35 | 35 |
| Dimensions (H x W x D) | | mm | 320 × 998 × 228 | 320 × 998 × 228 | 320 × 998 × 228 |
| Weight | | kg(lbs) | 15 (33) | 15 (33) | 15 (33) |
| Connection pipe diameter | Liquid (Flare) | mm | 9.52 | 9.52 | 9.52 |
| | Gas (Flare) | | 15.88 | 15.88 | 15.88 |
| Drain hose diameter (I.D./O.U.) | | | 12 / 16 | | |

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].

## Dimensions (Unit : mm)

998
520
590
721
520
25
320
228

① Refrigerant piping flare connection (Liquid)
② Refrigerant piping flare connection (Gas)
③ Drain hose connection
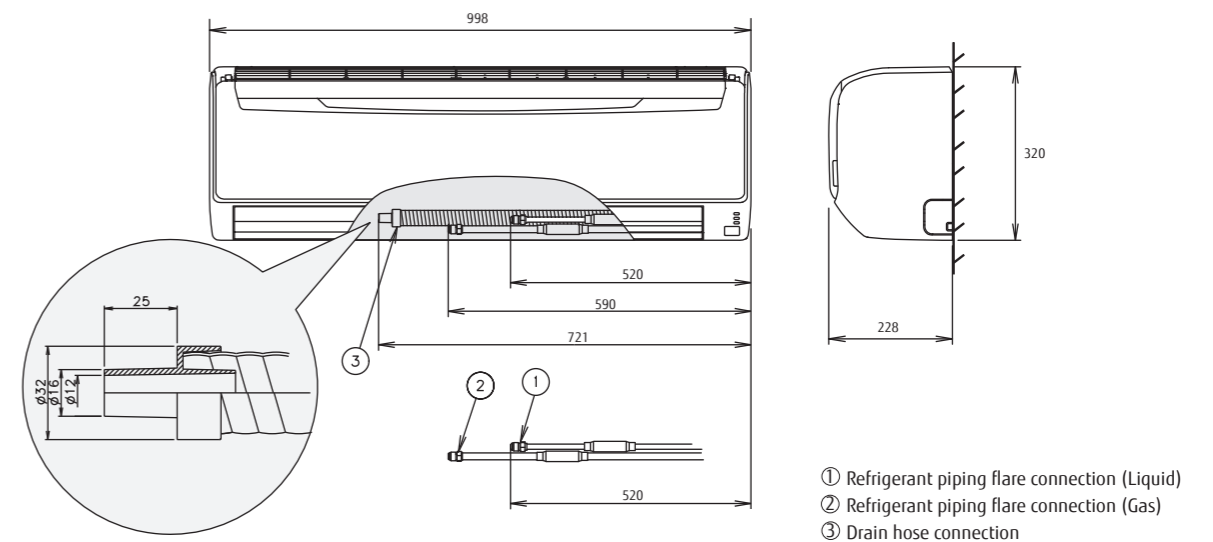
The AIRSTAGE control system can perform air conditioning control of individual room, centralized control by floor or by building, or centralized energy saving air conditioning control for large buildings.

A variety of air conditioning management schemes are available to match the application, such as linking with the building control system, linking with a single split models, and using various interfaces.

# AIRSTAGE™
# CONTROL SYSTEMS

Office 01     Fri 10:00AM

| Mode | Set Temp. | Fan |
| Cool | **26.0**°C | Auto |

Room Temp. 26.0°C

Status   Menu

⏻/I

**CONTROL SYSTEM**

**CONTROL SYSTEM OVERVIEW**

**INDIVIDUAL CONTROLLER**

**CENTRALIZED CONTROLLER**

**CONVERTOR / ADAPTOR**

*AIRSTAGE*™

# BEST CONTROL SOLUTION FOR EACH PROPERTY

Fujitsu General provides the best control solutions suitable for the various properties.

## SHOP

| Type | Individual Control | Centralized Control | | | | Integrating Control (Interface) | | |
|---|---|---|---|---|---|---|---|---|
| | Wired Remote Controller | Group Remote Controller | Central Remote Controller | Touch Panel Controller | System Controller | Network Convertor for LonWorks® | MODBUS® Convertor | KNX® Convertor |
| | UTY-RNRGZ2, UTY-RLRG | UTY-CGGG | UTY-DCGG | UTY-DTGGZ1 | UTY-APGXZ1, UTY-ALGXZ1 | UTY-VLGX | UTY-VMGX | UTY-VKGX |
| Automatic control of A/C (Schedule timer, Weekly timer etc.) | ● | ● | ● | ● | ● | | | |
| Limited control for staff (RC Prohibition, Room temp set point limitation etc.) | | ● | ● | ● | ● | ● | ● | ● |
| Group Control | | ● | ● | ● | ● | | | |
| Advanced Energy Saving (Peak cut, Indoor unit rotation operation etc.) | | | | | ● | | | |
| Remote Management | | | | ● | ● | | | |
| Manage multiple sites | | | | ● | ● | | | |
| Monitor energy consumption | | | | | ● | | | |
| Control third party products | | | | | ● | | | |
| Integrate FGL A/C into BMS | | | | | | ● | ● | ● |

## HOTEL

| Type | Individual Control | | | Centralized Control | | | | Integrating Control (Interface) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Wired Remote Controller | Simple Remote Controller | Wireless Remote Controller | Group Remote Controller | Central Remote Controller | Touch Panel Controller | System Controller | BACnet® Gateway | Network Convertor for LonWorks® | MODBUS® Convertor | KNX® Convertor | External Switch Controller |
| | UTY-RNRGZ2, UTY-RLRG | UTY-RSRG, UTY-RHRG | UTY-LNHG | UTY-CGGG | UTY-DCGG | UTY-DTGGZ1 | UTY-APGXZ1, UTY-ALGXZ1 | UTY-ABGXZ1, UTY-VBGX | UTY-VLGX | UTY-VMGX | UTY-VKGX | UTY-TERX |
| Local control for hotel guest | ● | ● | ● | | | | | | | | | |
| Centralized A/C control for common space | | | | ● | ● | ● | ● | ● | ● | ● | ● | |
| Limited control for hotel guests | | | | | ● | ● | ● | ● | ● | ● | ● | |
| Remote Management | | | | | | ● | ● | | | | | |
| Advanced Energy Saving (Peak cut, Indoor unit rotation operation etc.) | | | | | | | ● | ● | | | | |
| Monitor energy consumption | | | | | | | ● | | | | | |
| Control third party products | | | | | | | ● | | | | | |
| Integrate FGL A/C into BMS | | | | | | | | ● | ● | ● | ● | |
| Interlock with window contact | | | | | | | | | | | | ● |
| Interlock with key-card | | | | | | | | | | | | ● |

## OFFICE

| Type | Individual Control | | | Centralized Control | | | | Integrating Control (Interface) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Wired Remote Controller | Simple Remote Controller | Wireless Remote Controller | Group Remote Controller | Central Remote Controller | Touch Panel Controller | System Controller | BACnet® Gateway | Network Convertor for LonWorks® | MODBUS® Convertor | KNX® Convertor | External Switch Controller |
| | UTY-RNRGZ2, UTY-RLRG | UTY-RSRG, UTY-RHRG | UTY-LNHG | UTY-CGGG | UTY-DCGG | UTY-DTGGZ1 | UTY-APGXZ1, UTY-ALGXZ1 | UTY-ABGXZ1, UTY-VBGX | UTY-VLGX | UTY-VMGX | UTY-VKGX | UTY-TERX |
| Local control for office staff | ● | ● | ● | ● | ● | | | | | | | |
| Automatic control of A/C (Schedule timer, Weekly timer etc.) | ● | | ● | ● | ● | ● | ● | | | | | |
| Centralized A/C control for management | | | | ● | ● | ● | ● | ● | ● | ● | | |
| Limited control for office staff (RC Prohibition, Room temp set point limitation etc.) | | | | ● | ● | ● | ● | ● | ● | ● | | |
| Advanced Energy Saving (Peak cut, Indoor unit rotation operation etc.) | | | | | | | ● | ● | | | | |
| Remote Management | | | | | | | ● | ● | | | | |
| Energy Charge Apportionment | | | | | | | ● | ● | ● | | | |
| Monitor energy consumption | | | | | | | ● | | | | | |
| Control third party products | | | | | | | ● | | | | | |
| Integrate FGL A/C into BMS | | | | | | | | ● | ● | ● | ● | |
| Interlock with door contact | | | | | | | | | | | | ● |
| Interlock with human sensor for meeting room | | | | | | | | | | | | ● |

# CONTROL SYSTEM OVERVIEW

User's needs are supported by offering a variety of controls, such as individual control, central control and building management control options.

**For Light Commercial**
• Small VRF

**For Commercial**
• Large VRF

## Air Conditioning
## Individual Control

**NEW**
**Wired Remote Controller**
(Touch panel)
UTY-RNRGZ2

**Wired Remote Controller**
UTY-RNRG

**NEW**
**Simple Remote Controller**
UTY-RSRG
UTY-RHRG
Without operation mode

**Wireless Remote Controller**
UTY-LNHG
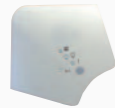
**IR Receiver Unit**
UTB-YWC For Duct type
UTY-LRHGB1 For Cassette type

For Duct    For Cassette

## Air Conditioning
## Centralized Control

Remote/Monitoring side

Internet or Public Telephone Line

USB Adaptor *1
(Field supplied)
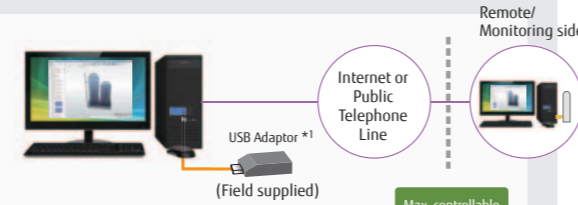
**NEW**
**System Controller** Software
UTY-APGXZ1 / UTY-ALGXZ1 (Lite edition)

Max. controllable
**1600***
Indoor units

*: Lite edition is max. controllable 400 indoor units

Remote/Monitoring side

Internet or Public Telephone Line

**NEW**
**Touch Panel Controller**
UTY-DTGGZ1

Max. controllable
**400**
Indoor units

**NEW**
**Central Remote Controller**
UTY-DCGG

Max. controllable
**100**
Indoor units

**Group Remote Controller**
UTY-CGGG

**Network Convertor**
UTY-VGGXZ1

Max. controllable
**8**
Remote Controller Groups

## Convertor / Adaptor
## For external device

**NEW**
**BACnet® Gateway**
UTY-ABGXZ1 Software

**NEW**
**BACnet® Gateway**
UTY-VBGX Hardware

**Network Convertor**
(BMS/LONWORKS®)
UTY-VLGX

**MODBUS® Convertor**
UTY-VMGX

**MODBUS® Interface**
FJ-RC-MBS-1

**NEW**
**KNX® Convertor** For VRF
UTY-VKGX

**KNX® Interface**
FJ-RC-KNX-1i

**Wireless LAN Interface**
FJ-RC-WIFI-1

**NEW**
**External Switch Controller**
UTY-TERX

**BMS/BAS** *2
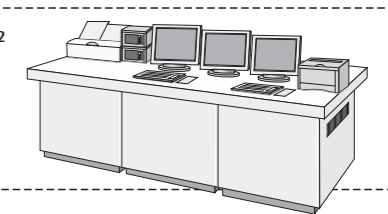
**BMS, Home automation system**

or

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

Card-key
(Field supplied)    Internet device

## Convertor / Adaptor
## For system expansion

**Network Convertor**
(DC power supply)
UTY-VTGX

Single split
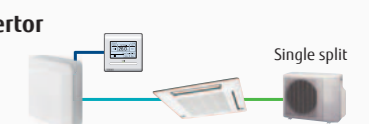
**Network Convertor**
(AC power supply)
UTY-VTGXV

Single split

**Network Convertor**
UTY-VGGXZ1

**Signal Amplifier**
UTY-VSGXZ1
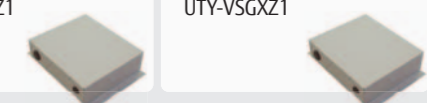
# COMPARISON TABLE OF CONTROLLERS

| Item | Wired Remote Controller (Touch panel) | Wired Remote Controller | Simple Remote Controller | Simple Remote Controller *1 | Wireless Remote Controller | Group Remote Controller | Central Remote Controller | Touch Panel Controller | System Controller Lite (Software) | System Controller (Software) |
|---|---|---|---|---|---|---|---|---|---|---|
| Model name | UTY-RNRGZ2 | UTY-RLRG | UTY-RSRG | UTY-RHRG | UTY-LNHG | UTY-CGGG | UTY-DCGG | UTY-DTGGZ1 | UTY-ALGXZ1 | UTY-APGXZ1 |
| Max. controllable remote controller groups | 1 | 1 | 1 | 1 | 1 | 8 | 100 | 400 | 400 | 1600 |
| Max. controllable indoor units | 16 | 16 | 16 | 16 | 16 | 128 | 100 | 400 | 400 | 1600 |
| Max. controllable groups | – | – | – | – | – | – | 16 | 400 | 400 | 1600 |
| **Air conditioning control function** | | | | | | | | | | |
| On / Off | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Operation 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 | ● | ● | – | – | ● | – | ● | ● | ● | ● |
| Individual louver control | ● | – | – | – | – | – | – | ● | – | – |
| Group setting | – | – | – | – | – | – | ● | ● | ● | ● |
| RC prohibition | – | – | – | – | – | – | ● | ● | ● | ● |
| Anti freeze setting | ● | – | – | – | – | – | ● | ● | ● | ● |
| Set temp. auto return | ● | ● | – | – | – | – | – | ● | – | – |
| Economy mode setting | ● | ● | – | – | ● | – | ● | ● | ● | ● |
| Human sensor control | ● | – | – | – | – | – | – | ● | ● | ● |
| **Display** | | | | | | | | | | |
| Error | ● | ● | ● | ● | – | ● | ● | ● | ● | ● |
| Defrosting | ● | ● | ● | ● | – | – | ● | ● | ● | ● |
| Current time | ● | ● | – | – | ● | ● | ● | ● | ● | ● |
| Day of week | ● | ● | – | – | – | ● | – | ● | ● | ● |
| R.C. prohibition | ● | ● | ● | ● | – | ● | ● | ● | ● | ● |
| Cooling/heating priority | ● | ● | ● | ● | – | ● | ● | ● | ● | ● |
| Address display | ● | ● | ● | ● | – | ● | ● | ● | ● | ● |
| Room temp | ● | – | ● | ● | – | – | – | ● | – | – |
| Multi language | ● | – | – | – | – | – | ● | ● | ● | ● |
| Summer time | ● | – | – | – | – | – | ● | ● | ● | ● |
| Name registration | ● | – | – | – | – | – | ● | ● | ● | ● |
| Backlight | ● | – | ● | ● | – | – | ● | ● | – | – |
| 2D floor layout / 3D building display | – | – | – | – | – | – | – | – | – | ● |
| **Timer** | | | | | | | | | | |
| Schedule timer — Period | Week | Week | – | – | – | Week | Week | Year | Year | Year |
| Schedule timer — On/off, Temp, Mode, Times per day | 8 | 4 | – | – | – | 4 | 20 | 20 | 144 | 144 |
| On/off timer | ● | ● | – | – | ● | – | – | – | – | – |
| Sleep timer | – | – | – | – | ● | – | – | – | – | – |
| Program timer | – | – | – | – | ● | – | – | – | – | – |
| Auto off timer | ● | ● | – | – | – | – | – | ● | – | – |
| Day off | ● | ● | – | – | – | – | ● | ● | ● | ● |
| Min. unit of timer setting (Minutes) | 10 • 30 | 30 | – | – | 5 | 10 | 10 | 10 | 10 | 10 |
| **Control** | | | | | | | | | | |
| Status monitoring system | – | – | – | – | – | – | ● | ● | ● | ● |
| Electricity charge apportionment | – | – | – | – | – | – | – | ○ | ○ | ● |
| Error history | ● | ● | – | – | – | ● | ● | ● | ● | ● |
| Emergency stop | – | – | – | – | – | – | ●*2 | ●*2 | – | – |
| Remote management | – | – | – | – | – | – | – | ● | ○ | ● |
| Energy saving management | – | – | – | – | – | – | – | – | ○ | ○ |
| E-mail notification for malfunction | – | – | – | – | – | – | – | ● | ● | ● |
| Key lock | ● Child lock | ● Child lock | – | – | – | ● Child lock | ● Password setting | ● Password setting | ● Password setting | ● Password setting |
| Low noise mode | – | – | – | – | – | – | – | ● | – | – |

*1 "Operation mode" setting is not available for this model.　*2 This function is available only through external input control.
●: Supported　　○: Optional function　　– : Not supported yet

# Wired Remote Controller (Touch Panel)

Max. controllable
**16**
indoor units

**NEW** **UTY-RNRGZ2**

Easy operation by high-definition large STN-LCD touch panel screen

- Easy finger touch operation with LCD panel
- Built-in weekly/Daily timer (ON/OFF, Temp., Mode)
- Backlight enables easy operation in a darkened room
- Room temperature display
- Control up to 16 indoor units
- Corresponds to 12 different languages (English, Chinese, French, German, Spanish, Russian, Polish, Italian, Greek, Portuguese, Turkish and Dutch)
- 2-wire type
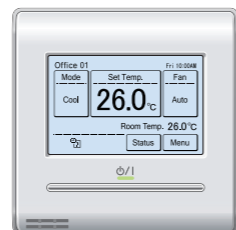
## Functions

### High performance and compact size

- In addition to the individual control, various energy saving controls can be realized using one remote controller only.

Individual control + Thermo sensor + Weekly timer + Auto off timer →

### Accurate and comfortable control

- Indoor temperature can be detected accurately by the inclusion of a thermo sensor in the body of the wired controller.
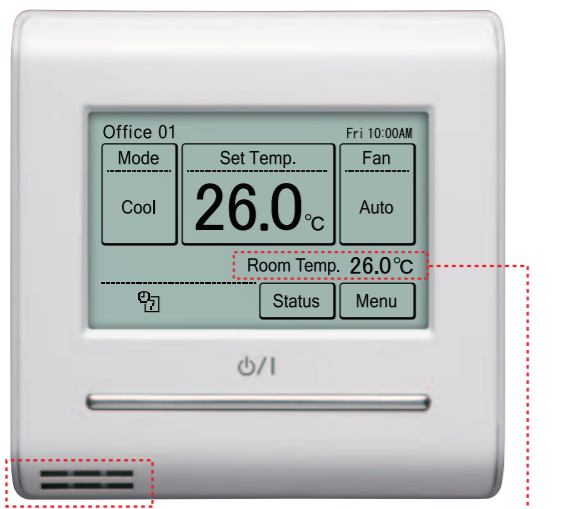
Room temperature sensor          Room temperature display

### Backlight

- Backlight enable easy operation in a darkened room.
- For the lighting time of Backlight, 30 or 60 seconds can be set.
- Backlight activates while the buttons are operated and goes off 30 or 60 seconds after the operation stops.
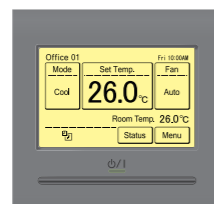
## Various convenient functions

### Displays setting status and Limitations

- The remote controller settings can be easily checked
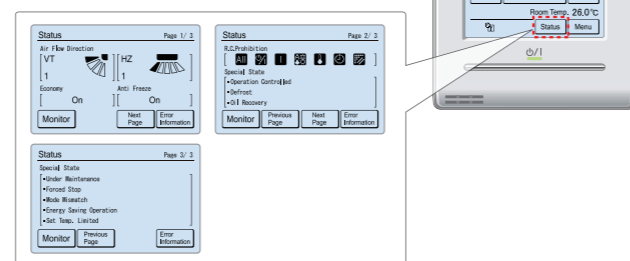
### Summer Time display

- This function can be set easily from Menu screen
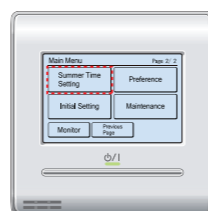
### Child lock

- Lock / unlock method: Push the ON/OFF button and the screen (4 seconds)

### Name Registration

- Remote controller names can be registered in the remote controller screen. This makes it easy to identify the indoor unit you want to control in the room.
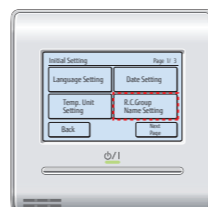
## Various energy saving control

### Custom Auto

- Maintains 2 separate set points for heating and cooling.
- Automatically changes mode between heating and cooling.

* This function is not available for some models.

Cooling set temp. 27°C, Heating set temp. 26°C

Auto Changeover

Operation Start

Change over
Cooling Set Point
Heating Set Point
Change over

Room temperature
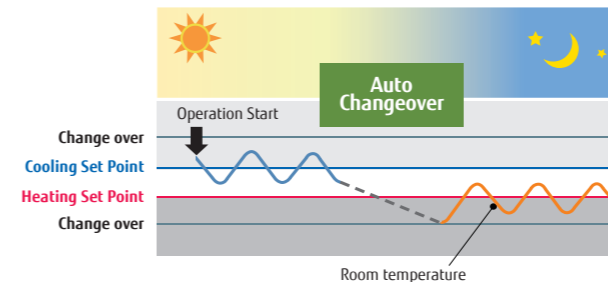
### Auto OFF timer

- The indoor unit automatically is turned off when it reaches to the preset operating time frame.
- The time frame of the "Auto off timer" can be flexibly scheduled.
- Can be set off time 30 to 240 minutes

Set interval time (17:00 to 24:00)

ON        OFF ON    Auto OFF    ON    Auto OFF

1 hour        1 hour

Normal Time        Over Time

8        17        24
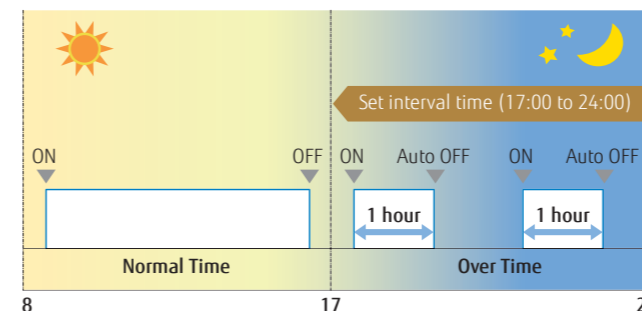
Ex.) At interval time hour (17:00 to 24:00) to prevent forgetting to turn off
Set off time : 1 hour

### 2 schedules Weekly Timer

- 2 schedules such as for the summer and winter can be set.
- 8 setting changeable per day of week (Setting items: On/Off, Temperature, Mode, Time)
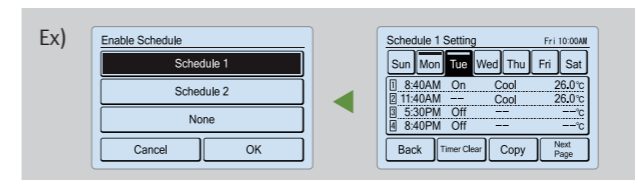
Ex)

### Set Temperature Auto Return

- The setting temperature automatically returns to the previous setting temperature.
- The time range in which the set temperature can be changed is 10 to 120 minutes.

### Set Temperature Upper and Lower Limit Setting

- The set temperature range can be set for each operation mode. (Cooling / Heating / Auto)

## Simplified installation

### Uses non-polar 2-wire type

- The faulty wiring can be prevented by using non-polar 2-wire.

I.U.    Y1 Y2 Y3          I.U.    Y1 Y2 Y3

non-polar 2-wire

OK          OK

Y1    Y2          Y1    Y2
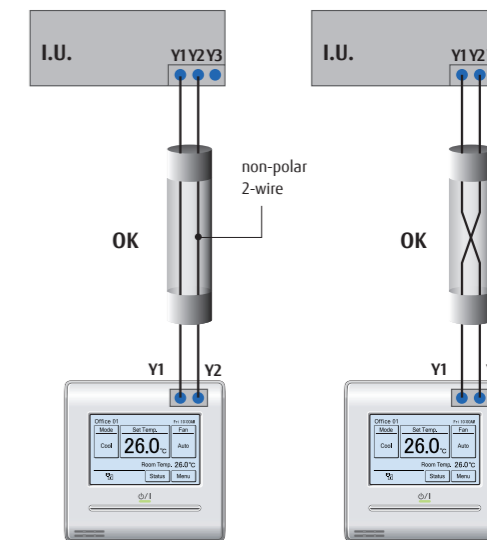
### Auto Address Setting/Setting Position Notification

- Reduce errors and install time compared with the current specification Rotary SW
- When will be set remote controller groups, can also be set automatically new Wired remote controller address
- After auto address setting of new wired remote controller groups, what number can also confirm addresses

Address →    04    03    02    01

The appropriate indoor unit performs the air blow and LED lamps blink.

05
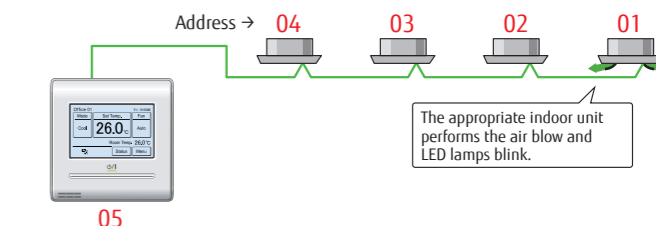
## Easy Maintenance

### Error History Display

- The errors that occur in the indoor unit or remote controller are saved as a history.
- A maximum of 32 error incidents can be saved.

## Specifications

| Model name | UTY-RNRGZ2 |
| --- | --- |
| Power Supply | DC 12V |
| Dimensions (H x W x D) (mm) | 120 x 120 x 20.4 |
| Weight (g) | 220 |

DC12V is supplied by indoor unit.
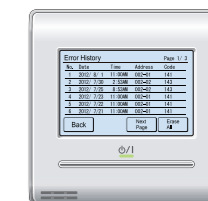
# Wired Remote Controller

Max. controllable
**16**
indoor units

## UTY-RLRG

- Various timer setup (ON / OFF / WEEKLY) are possible.
- The room temperature can be controlled by detecting the temperature accurately with Built-in thermo sensor.
- When a failure occurs, the error code is displayed.
- Error history. (Last 16 error codes can be accessed.)
- 2-wire type

## Functions

### High performance and compact size

In addition to the individual control, weekly timer, and various energy saving controls can be realized using only one remote controller.

| Individual control | + | Thermo sensor | + | Weekly timer | + | Auto OFF timer | → |

### High visibility and easy operation

- "Mode", "Set Temp", and "Fan" are displayed at large size on the top screen.
- Each function to be set is indicated by an icon.
- Control guide is displayed and operation is simple and straightforward.

Sophisticated control buttons
Simple operation with easy 4-way navigation pad

Set contents can be displayed clearer with large LCD.

### Auto-off timer

- The indoor unit automatically turns off after a set time has passed.

Operation status

Auto OFF    Auto OFF

ON

OFF

Auto-off timer can be set from 30 to 240 minutes

### Set temperature auto return

- The setting temperature automatically returns to the previously set temperature.
- The time range in which the set temperature can be changed is 30 to 240 minutes.

**Cooling operation**
Setting temp.
Set temperature change    Auto return
24℃
22℃
Settable time range 30 to 240 minutes
Time

**Heating operation**
Setting temp.
Set temperature change    Auto return
25℃
23℃
Settable time range 30 to 240 minutes
Time

### Weekly timer function

- Not only time setting On / Off, but also setting of the operation mode and set temperature can be set by Weekly timer function.

24℃

ON    OFF    ON    OFF

Working hour    Working hour

8:00    12:00 13:00    17:00

4 types (ON, OFF, ON, OFF) can be set on every day of the week in a week.

### Set temperature upper and lower limit setting

- The set temperature range can be set for each operation mode. (Cooling / Heating / Auto)

**During Cooling**
30℃
25℃
18℃
Original temp. setting range    Lower limit setting

**During Heating**
30℃
25℃
16℃
Original temp. setting range    Upper limit setting

## Specifications

| Model name | UTY-RLRG |
|---|---|
| Power Supply | DC 12V |
| Dimensions (H x W x D) (mm) | 120 x 120 x 17 |
| Weight (g) | 170 |

DC12V is supplied by indoor unit.

---

# Simple Remote Controller

Max. controllable
**16**
indoor units

**NEW** UTY-RSRG
**NEW** UTY-RHRG (Without Operation mode)

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.
- Stylish design: Simple design to match the stylish interior.
- Large LCD screen & simple operation buttons
- Backlight: White colored backlight on monitor enable easy operation in dark.
- 2-wire type

UTY-RSRG    UTY-RHRG
Without Operation mode

## Functions

### Corresponding to various applications

- **Vertical louver control:**
  Vertical air flow direction can be adjusted for Duct types with auto louver and Cassette types, which are installed in hotels and conference rooms, can be adjusted.

- **Room temperature set point limitation:**
  The Simple Remote Controller can manage to energy saving operation in small buildings without the central control unit.

**During Cooling**
30℃
25℃
18℃

**During Heating**
30℃
25℃
16℃
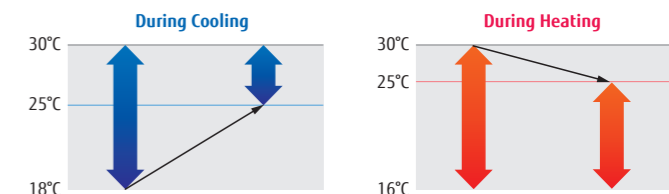
- **Built in room temperature sensor:**
  The Simple Remote Controller detects actual room temperature and controls room climate accuracy.

Room temperature sensor
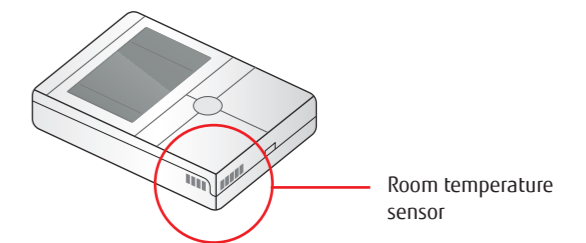
## Specifications

| Model name | UTY-RSRG | UTY-RHRG |
|---|---|---|
| Power Supply | DC 12V | |
| Dimensions (H x W x D) (mm) | 120 x 75 x 19.4 | |
| Weight (g) | 120 | |

DC12V is supplied by the indoor unit.

# Wireless Remote Controller

| Max. controllable |
| :---: |
| **16** |
| indoor units |

| Selectable |
| :---: |
| **4** |
| daily timers |

## UTY-LNHG

Simple and sophisticated operations
with a choice of 4 daily timers

• A single controller controls up to 16 indoor units.

## 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
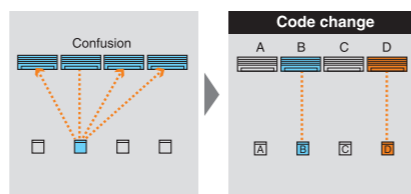
Wide and precise

### Address setting

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

Transmission line
Indoor unit
Outdoor unit
Wireless
Remote Controller

## Specifications

| Model name | UTY-LNHG |
| --- | --- |
| Power Supply | 1.5V (R03 / LR03 / AAA) x 2 |
| Dimensions (H x W x D) (mm) | 170 x 56 x 19 |
| Weight (g) | 85 |
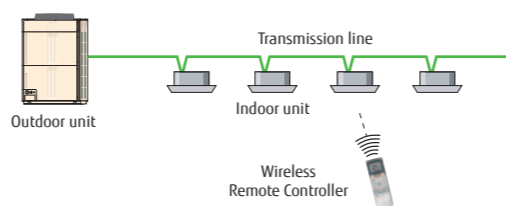
# IR Receiver Unit

## UTB-YWC

Necessary to control for all Duct types* by Wireless Remote Controller
*Only Large Airflow Duct can not be connected to IR Receiver Unit.

• 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.
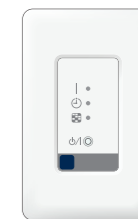
## Functions

### Wiring connection

Wireless
Remote Controller
IR Receiver Unit
Duct Type Indoor Unit
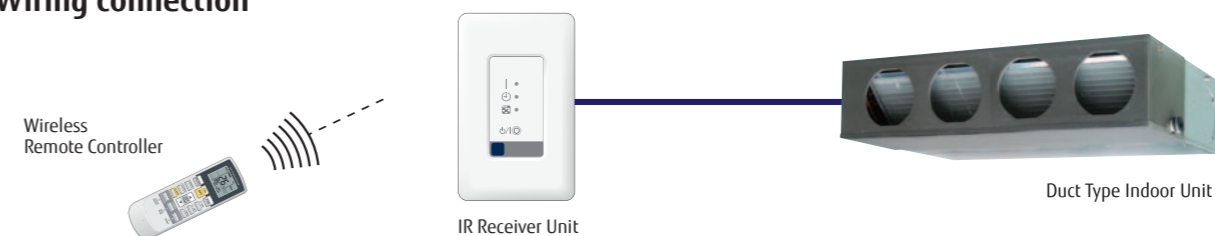
### Specifications

| Model name | UTB-YWC |
| --- | --- |
| Power Supply | DC 5V |
| Dimensions (H x W x D) (mm) | 145 x 90 x 30 |
| Weight (g) | 150 |

# IR Receiver Unit

## UTY-LRHGB1

Cassette type indoor unit can be controlled
with Wireless Remote Controller

## Functions

Wireless
Remote Controller
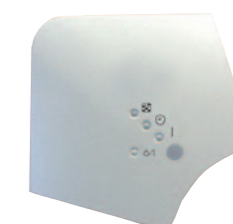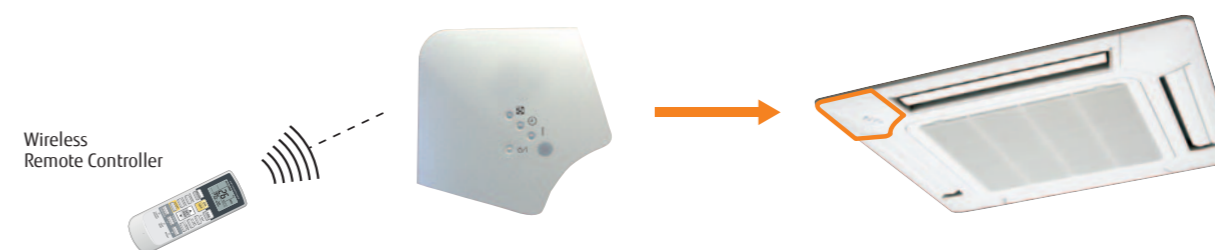
### Specifications

| Model name | UTY-LRHGB1 |
| --- | --- |
| Power Supply | DC 5V |
| Dimensions (H x W x D) (mm) | 193.9×193.9×31.2 |
| Weight (g) | 140 |

# Group Remote Controller

## UTY-CGGG

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-VGGXZ1) is required to connect Group Remote Controllers to a VRF network system.
  (Network Convertor allows up to 4 Group Remote Controllers)
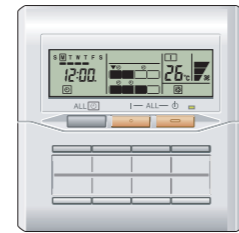
## Functions

### Control up to 8 remote controller groups

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

Refrigerant system 1
Refrigerant system 2

Hotel
Office & Lounge
Restaurant
Lobby

Guest room
Office room
Lounge
Restaurant
Lobby

Network Convertor

1  2
**Group Remote Controller**

Group Remote Controller 1:
To control office room, lounge, restaurant and lobby
(8 remote controller groups)

Group Remote Controller 2:
To control guest room and launge
(7 remote controller groups)
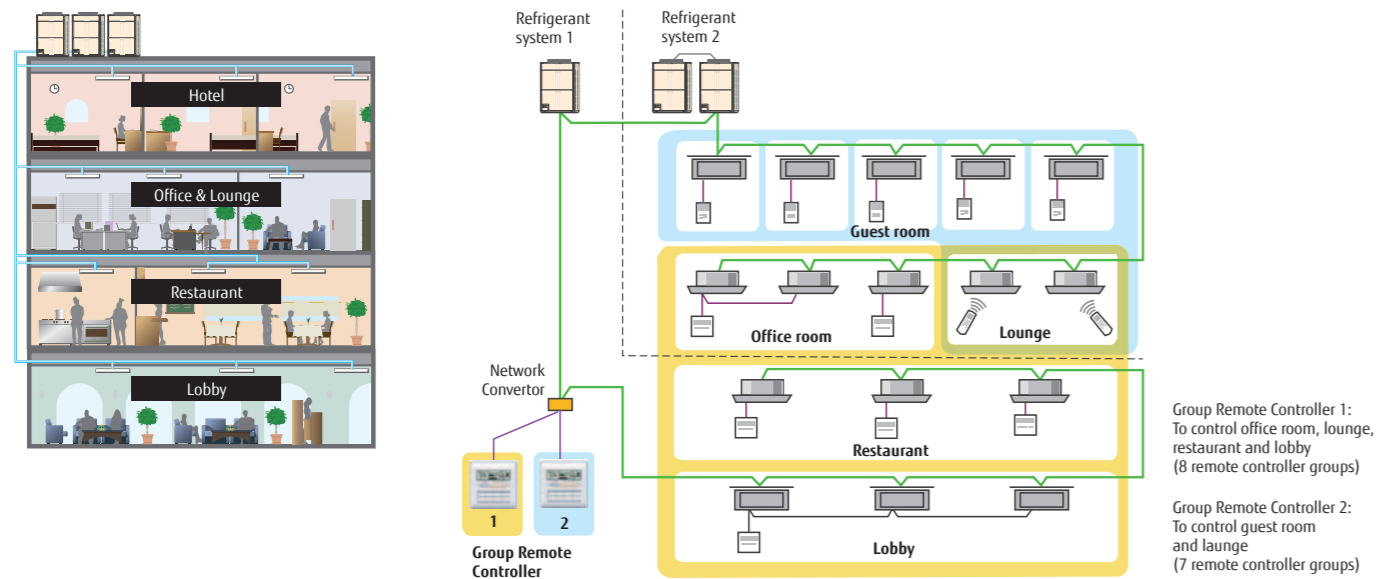
### High performance and compact size

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

Central control + ON/OFF control + Weekly timer →

### 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.

## Specifications

| Model name | UTY-CGGG |
|---|---|
| Power Supply | DC 12V |
| Dimensions (H x W x D) (mm) | 120 x 120 x 18 |
| Weight (g) | 200 |

DC12V is supplied by a network converter.

---

# Central Remote Controller

## UTY-DCGG

Central control of small- and medium-sized buildings and tenants. The operation status of all connected indoor units can be viewed at a glance on a large LCD monitor to simplify  individual control to batched control.

- Individual control  and monitor of 100 indoor units
- 5 inch TFT color screen
- User friendly view and easy operation
- External input / output contact
- Detachable power supply unit
- Corresponds to 7 different languages (English, Chinese, French, German, Spanish, Russian, Polish)

## Functions

### System overview

- It allows multiple indoor units grouping (Max.16 groups controlled)
- Interlock with external device

Group : Hallway
Group : 3F
Group : Division A
Group : Division B
Group : Division C
Group : 2F
Group : Tenant A
Group : Tenant B
Group : Tenant C

Emergency stop function
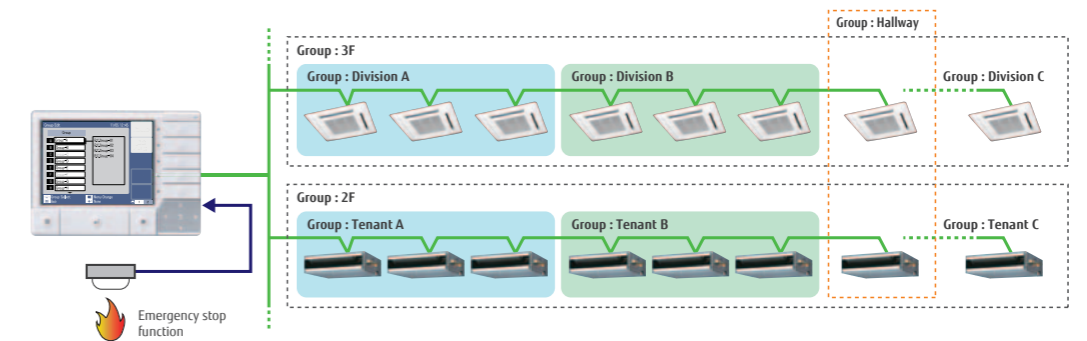
### Functions

- Diverse control of indoor units
- Remote controller prohibition (All, On / Off, Mode, Temp, Timer, Filter)
- Weekly timer
- Error history
- Automatic clock adjustment

### Easy Installation

- The control panel and power supply unit can be installed separately.
- For flexibility in installation, the Control panel can be built into the wall or fix on the wall.
- Automatic or manual indoor unit registration

Setting pattern 1
Power supply unit
Control panel
Wall
**Control panel + Power supply unit**

Setting pattern 2
Ceiling
Power supply unit
Control panel
Wall

Indoor unit registration
Indoor unit registration start
Indoor unit registration finish
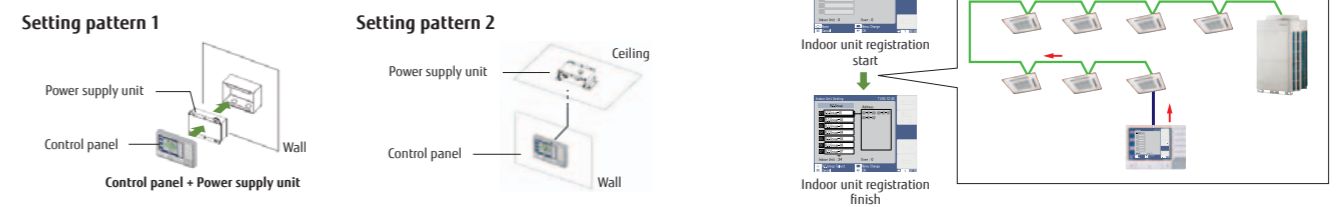
## Specifications

| Model name | UTY-CGGG | |
|---|---|---|
| | Control Panel | Power Supply Unit |
| Power Supply | DC 5 V | 100-240V, 50-60Hz, Single phase |
| Dimensions (H x W x D) (mm) | 120 x 162 x 25.7 | 99 x 135 x 39.2 |
| Weight (g) | 308 | 355 |
| <PACKING LIST> | | |
| Packing List | Control Panel / Power Supply Unit / Connecting cable, etc. | |

# Touch Panel Controller

| Max. controllable |
|---|
| **400** |
| Indoor units |

| Max. controllable |
|---|
| **100** |
| Outdoor units |

| Max. controllable |
|---|
| **400** |
| Groups |

NEW **UTY-DTGGZ1**

- Large-sized 7.5-inch TFT color
- LCD Easy finger touch operation
- Stylish shape and design to suit all application
- Up to 400 indoor units can be controlled
- Selectable 2 display types (Icon / List) in monitoring mode
- Supports 7 different-languages ,English, Chinese, French, German, Spanish, Russian, Polish.
- Mounted with LAN interface for remote control & operation, external input / output with emergency stop and batch ON / OFF

## Functions

### Control & monitoring from anywhere

- Control and monitor Fujitsu's air conditioner via LAN or Internet.
- Allow user or tenant to manage only assigned equipment by their PC or tablet from anywhere.
- Error contents are notified automatically by E-mail at error occurrence to handle the trouble promptly.

### Easy maintenance

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

### Easy installation

- Touch Panel Controller is easily mounted to the wall.
- Flat back surface allows to be installed wherever it is needed.
- No additional component is required for installation

### Up to 400 indoor units can be controlled

It allows multiple indoor unit grouping

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

Emergency stop function

## Control & monitoring from anywhere

- Control and monitor Fujitsu's air conditioner via LAN or Internet.
- Allow user or tenant to manage only assigned equipment by their PC or tablet from anywhere.
- Error contents are notified automatically by E-mail at error occurrence to handle the trouble promptly.

Operation status monitoring

Tablet

Error notification by E-mail

LAN or Internet

PC

Operation mode setting

VRF network system
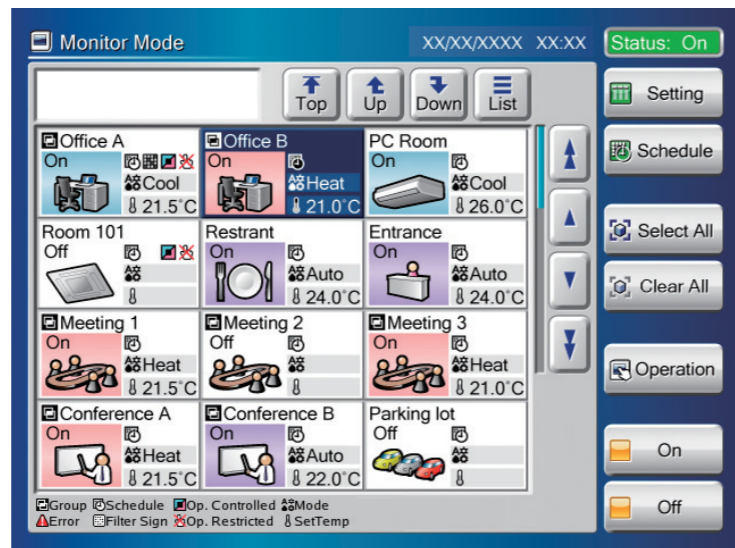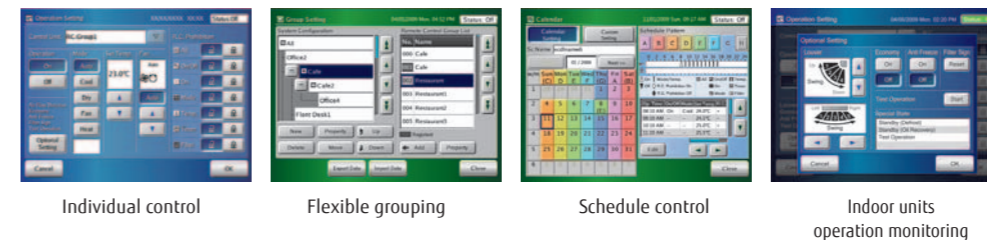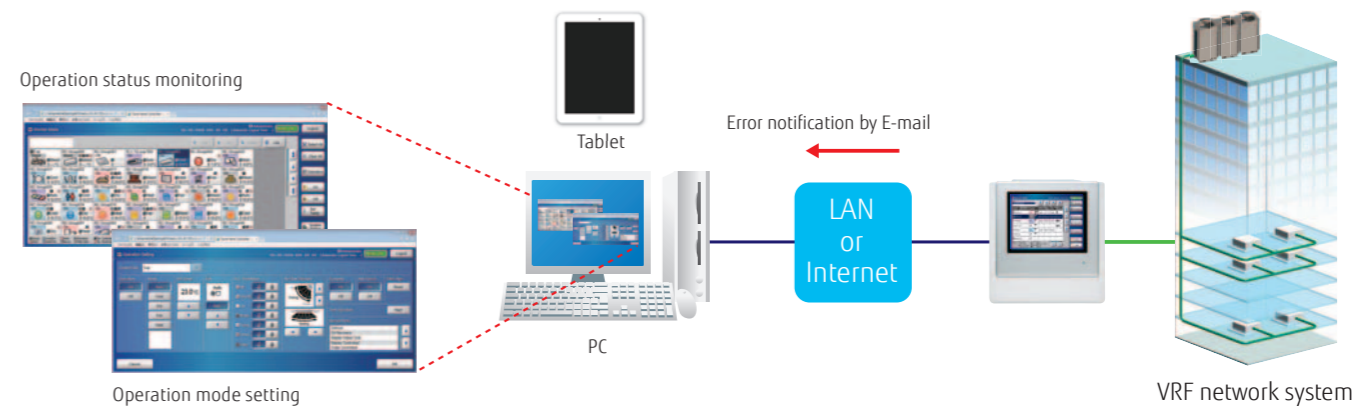
Not only operations but also detail settings such as schedule or group settings can be operated from remote locations.

Individual control    Flexible grouping    Schedule control    Indoor units operation monitoring

**Smart Phone**

| Model | Browser |
|---|---|
| Nexus 6P (Android 7.1.1) | Google Chrome 5.5 |
| iphone7 (iOS 10.1) | Safari 10 |

**Tablet**

| Model | Browser |
|---|---|
| ipad Pro 9.7inch (iOS 10.2.1) | Safari 10 |

## Flexible access permission for Point each level user.

Administrator can register multiple user to permit which indoor unit(s) and which function can access.

ON/OFF prohibition

Monitoring from web site

Operation ON

Administrator

Operation ON

Staff / Employee

## Additional languages function

Corresponds to 7 different languages, English, Chinese, French, German, Spanish, Russian, Polish as standard.

Additional language can be integrated on remote device by creating language database.

Additional language is displayed on only the remote device, and Touch Panel Controller cannot be added other languages.

Monitoring from web site

Write

Language data

7 Languages

7 Languages  +  NEW  Other languages
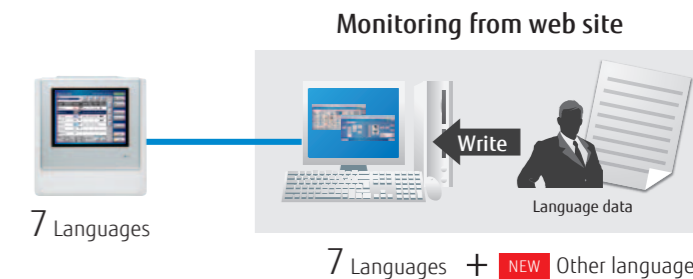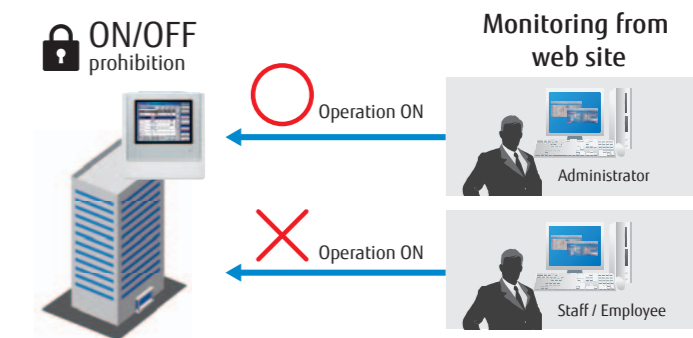
## Functions

### Electricity charge apportionment

Option   UTY-PTGXA

- Electricity charge apportionment can be performed easily for the power consumed when billing users for air conditioning power charges.

  - Apportionment charge/bill calculation
  - Tenant (block) setting
  - Common facilities apportionment setting
  - Rated power consumption allotment setting
  - Individual calculation at cooling and heating
  - Electricity meter supported

VRF network system

Electricity charges

Tenant A

Tenant B

Block (Tenant) A

Block (Tenant) B

LAN cable

Electricity meter

Electric power company

Signal line*
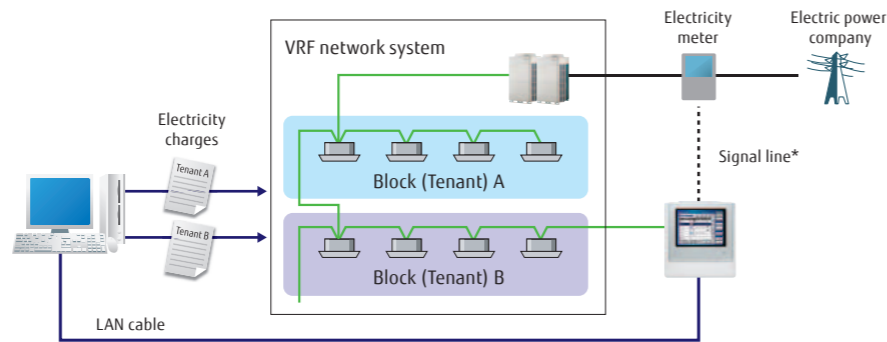
*: Electricity meter (1unit) can be connected to external input connector of the TPC unit.
In this case, electricity meter cannot be connected to outdoor unit simultaneously.

### Automatic summer time setting

**Providing function*2**
1) Schedule setting of summer time setting
  - It prevents the user from forgetting to set summer time. In addition, it reduces the time and labor of user.

**Automatic clock adjustment**
2) The time setting of each controller can be set in batch automatically.

10:00

26.0

26.0

26.0
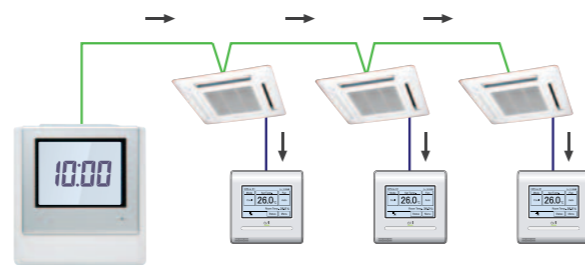
### Outdoor low noise operation

Users can choose from 4 low noise levels, depending on the installation environment.
The operaion time can be set using the timer.

Block (Tenant) A

Block (Tenant) B

**Quiet priority setting**

Air conditioning load factor

Heat load

Capacity

100%

0

↓down

Operating sound

58dB

0

time

Quiet priority low noise mode
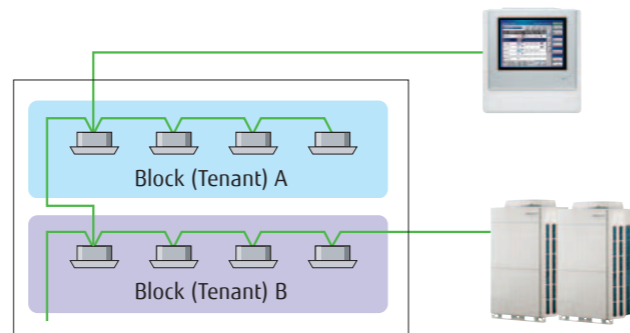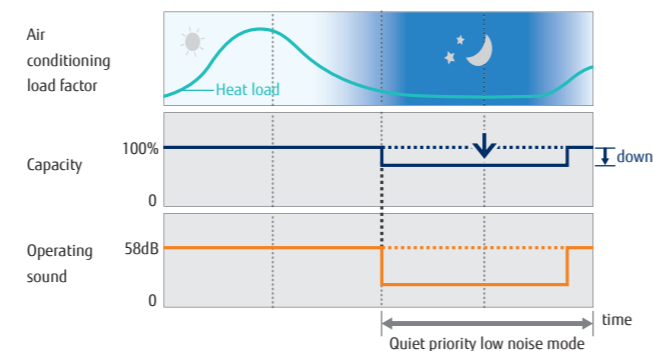
## FUNCTIONS SUMMARY

| | UTY-DTGGZ1 | Monitoring side |
|---|---|---|
| **Air conditioning control function** | | |
| On / Off | ● | ● |
| Operation 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 | ● | ● |
| Individual louver control | ●*1 | ● |
| Group setting | ● | ● |
| RC prohibition | ● | ● |
| Anti freeze setting | ● | ● |
| Set temp. auto return | — | ● |
| Various energy saving control | — | ● |
| Economy mode setting | ● | ● |
| Human sensor control | — | ● |
| **Display** | | |
| Error | ● | ● |
| Defrosting | ● | ● |
| Current time | ● | ● |
| Day of week | ● | ● |
| R.C. prohibition | ● | ● |
| Cooling/heating priority | ● | ● |
| Address display | ● | ● |
| Room temp | ● | ● |
| Multi language | ● | ● |
| Summer time | ● | ● |
| Time zone setting | ● | ● |
| Name registration | ● | ● |
| Backlight | ● | ● |
| Language setting | 7 | 7+other |

| | | UTY-DTGGZ1 | Monitoring side |
|---|---|---|---|
| **Timer** | | | |
| Schedule timer | Period | Year | Year |
| | On/off, Temp, Mode, Times per day | 20 | 20 |
| On/off timer | | — | — |
| Sleep timer | | — | — |
| Program timer | | — | — |
| Auto off timer | | — | ● |
| Day off | | ● | ● |
| Min. unit of timer setting (Minutes) | | 10 | 10 |
| **Control** | | | |
| Status monitoring system | | ● | ● |
| Electricity charge apportionment | | ○ | ○ |
| Error history | | ● | ● |
| Emergency stop | | ●*2 | ●*2 |
| Remote management | | — | ● |
| Energy saving management | | — | — |
| E-mail notification for malfunction | | — | ● |
| Key lock | | ● Password setting | — |
| Low noise mode | | ● | ● |

●: Supported   ○: Optional function   – : Not supported yet

*1 Only setting cancellation can be operated.
*2 This function is available only through external input control.

### Specifications

| Model name | UTY-DTGGZ1 |
|---|---|
| Power Supply | 100-240V 50/60Hz, Single phase |
| Dimensions (H x W x D) (mm) | 260 x 246 x 54 |
| Weight (g) | 2,150 |
| Interface | Transmission / LAN / USB / EXT IN / EXT OUT / Reset SW |

# System Controller  (Software)

**NEW UTY-APGXZ1**

System Controller realizes the advanced integrated monitoring & control of VRF network system from small scale buildings to large scale buildings.

• Up to a maximum of 4 VRF network systems, 1600 indoor units, and 400 outdoor units can be controlled.
• 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.

Max. controllable
**4**
VRF network systems

Max. controllable
**400**
Outdoor units

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

# System Controller Lite  (Software)

**NEW UTY-ALGXZ1**

System Controller Lite has standard functions sufficient for air conditioner management in small and medium scale buildings .

• Up to a maximum of 1 VRF network system, 400 indoor units, and 100 outdoor units can be controlled.
• In addition to air conditioning precision control function, a variety of management software is available as an option to give  customers  a wide range of choice.

Max. controllable
**1**
VRF network systems

Max. controllable
**100**
Outdoor units

Max. controllable
**400**
Indoor units

## Functions

### User friendly view and operation

• **Click & Operate :** The property is shown visually from the perspective most suitable for operation and operated accordingly (Click & Operate). You can select from among the 4 displays of site, building, floor, or list.

• **Freely define groups for batched control :** Indoor units can be freely grouped for simple batched control from a tree menu. Grouping by hierarchal structure, such as by section, division or department is possible.

Click & Operate the whole building !
Properties can be shown using one of the four displays of site, building, floor, or list.

Click & Operate any specified unit(s)!

The display is easily changed by pressing the button.

**Site view**

**List view**

Batched control of freely defined groups

Batched control of freely selected units

**Building view**

Note:
2D floor layout / 3D building display are not available for System Controller Lite.

Click & Operate the whole floor !

The floor layout drawing can be imported to easily make the settings for the actual building.

**Floor view**

Click & Operate the unit !

Batched control of freely selected units

## 3rd party devices connected by Modbus can be controlled.

(Standard) for System Controller
(Option) for System Controller Lite UTY-PLGXX2

When Modbus Adaptor (locally purchased) is connected to PC, the electric facilities supported by Modbus can be controlled centrally. Wasteful electricity charge by forgetting to turn off and patrol activities can be reduced in the entire building.

Supported Modbus communication (Field supply)

Remote I/O

Lighting facilities
Energy recovery ventilator system
Outdoor air unit system
Supply & Exhaust fan

VRF Network

Signal Line

System Controller (System Controller Lite)

Electricity meter

Electric power company
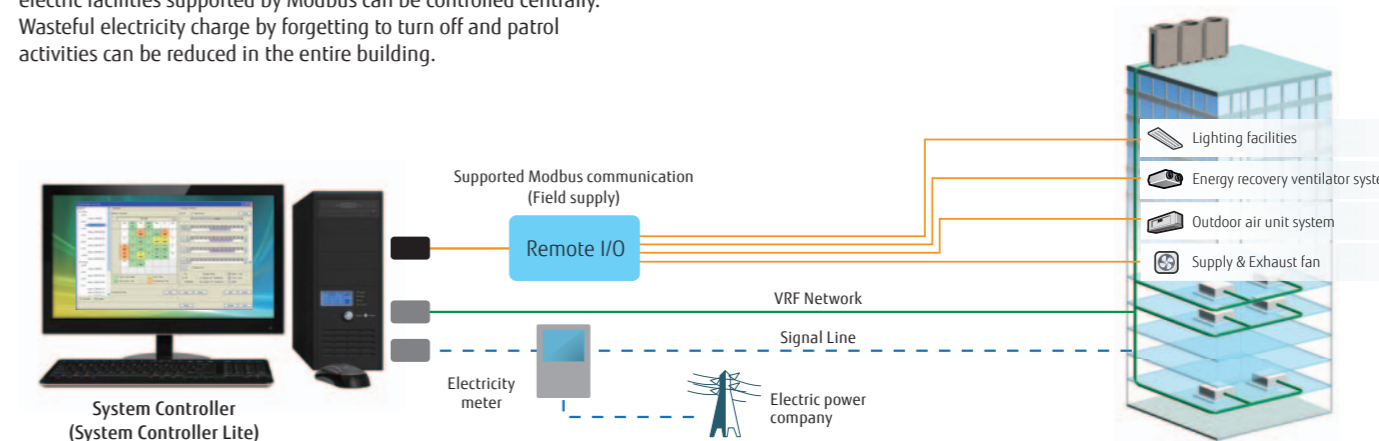
## Diverse operation management & Data management

### Schedule management
• 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 set 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.
• Low noise operation of outdoor unit can be scheduled.

### Diverse control of indoor and outdoor unit
• Indoor unit operation state, operation mode, etc. are displayed
• Indoor unit start / stop and operation mode switching
• Room temperature set point limitation

### Error display & E-mail notification
Error is notified with popup message, audible sound and E-mail real time when error occurs. Error for the past 1 year are logged and can be reviewed later.

### Remote controller prohibition
This prohibits changes to the operation mode, temperature, start/stop, etc.

### Data base import/export
Imports/exports registration data, layout data, and image data. Only the administrator can make this setting.

### Automatic clock adjustment
The time setting of each controller can be set in batch automatically.

### Operating & control record
Displays the history of operation status and control.

## Electricity charge apportionment

(Standard) for System Controller
(Option) for System Controller Lite UTY-PLGXA2

### Electricity charge apportionment calculation framework

Suppose you want to find the power consumed by the air conditioners of each tenant from the electricity charge for each month. With electricity charge apportionment function, used energy apportionment ratio will be provided, calculating in detail the energy consumed by the units used by each tenant. This information is then used to calculate the charges for the electricity consumed for air conditioning by each tenant from the total electricity charges in the bill from the electric power company. (See figure at right)
The detailed calculation takes into consideration such things as unused rooms and nighttime electricity charges and shows them in a charges calculation sheet.

**System Configuration Example**

Electric power company
Electricity charges (air conditioning)
RB Unit    Signal transmission line
System Controller

Power distribution board

Tenant A-1  Tenant A-2  Tenant A-3
Tenant A-4  Tenant A-5  Tenant A-6
Tenant B-1  Tenant B-2  Tenant B-3
Tenant C-1  Tenant C-2  Tenant C-3

Power distribution board

Outdoor unit

3Ø, 4 wire 400V, 50Hz                1Ø, 2wire 230V, 50Hz

## Functions

### Remote management

`Standard` for System Controller
`Option` for System Controller Lite UTY-PLGXR2

System Controller may be used on site or remotely over various networks for remote central control. System Controller requires 2 softwares working together. VRF Controller runs on site and communicate with VRF system. VRF Explorer runs remotely and provides user interface and communicate with the VRF Controller. VRF Controller and VRF Explorer program may run in a single PC or in different PCs separated by network. By using VRF Explorer software, one PC can perform central control of 10 VRF system sites with max. 20 buildings per site.

**On site central control**
Max. 4 VRF network systems per site

Central Monitoring Screen for all Properties

Special Property Detailed Monitoring Screen

**Remote central control**
1 VRF Explorer can control or monitor up to 10 sites.

Building management company, management center, etc.

VRF Controller
A maximum of 10 locations, such as offices or factories

1 VRF Controller can be monitored from any number of VRF Explorers (Up to 5 connections simultaneously).

Building Management Company A (In charge of the day shift)

Building Management Company B (In charge of the night shift)

Office Management Center

Security Company

Headquarters Management Center

### Energy saving management

`Option` for System Controller UTY-PEGX
`Option` for System Controller Lite UTY-PLGXE2

A variety of energy saving operations can be set and managed depending on the season, weather, and time period. Excellent energy saving operation is performed while keeping users comfortable.

Energy saving graph data:
This graph compares the electricity consumption with the previous month and previous year to make it easy to analyze the energy saving effect.

Energy Saving Management Main Screen

### Peak cut operation

A power meter is connected to detect the total power consumption while shifting the indoor unit set temperature, set the indoor unit forced thermostat off, and taking other measures to carefully control the power consumed while maintaining comfort and conducting control to maintain the target power consumption set for each time. The indoor units to be controlled can be freely grouped and the control level can be set.

Outdoor unit stop range
Forced thermostat off range
Target power consumption
Ideal control line (Use of average power consumption)
Shows change in power consumption by time

### Indoor unit rotation operation

The operation of indoor units can be automatically rotated within a group in accordance with the set annual schedule to reduce power consumption while maintaining comfort. The indoor unit operation stoppage rate can be selected.

Indoor unit rotation screen

### Outdoor unit capacity save

Outdoor unit capacity save switches the outdoor unit capability upper limit to suppress power consumption during hot summers and cold winters by averaging the power saving effect of each refrigerant system. You can select from 50% or more of the capacity upper limit.

Hot day of summer
Cold day of winter
Outdoor unit capacity control screen
Power consumption
Outdoor unit capacity upper limit
Time

## FUNCTIONS SUMMARY

| Function | Type | System controller UTY-APGXZ1 | (Option) UTY-PEGXZ1 | System controller lite UTY-ALGXZ1 | (Option) UTY-PLGXR2 | (Option) UTY-PLGXA2 | (Option) UTY-PLGXE2 | (Option) UTY-PLGXX2 |
|---|---|---|---|---|---|---|---|---|
| System specification | Max. VRF networks supported | 4 | - | 1 | - | - | - | - |
| | Max. indoor unit / remote controller groups per VRF network | 400 | - | 400 | - | - | - | - |
| | Max. outdoor units per System controller | 100 | - | 100 | - | - | - | - |
| | Max. indoor units / remote controller groups per System controller | 1600 | - | 400 | - | - | - | - |
| | Max. outdoor units per System controller | 400 | - | 100 | - | - | - | - |
| Site supervision | Multi site display | 10 | - | 10 | - | - | - | - |
| | Number of building / 1 site | 20 | - | - | - | - | - | - |
| | Number of floor per 1 site | 200 | - | - | - | - | - | - |
| | Number of floor per 1 building | 50 | - | - | - | - | - | - |
| | 3D graphical layout view | ● | - | - | - | - | - | - |
| | 2D graphical layout view | ● | - | - | - | - | - | - |
| | List display | ● | - | ● | - | - | - | - |
| | Tree display | ● | - | ● | - | - | - | - |
| | Group display | ● | - | ● | - | - | - | - |
| Error management | Error notification | ● | - | ● | - | - | - | - |
| | Audible alarm | ● | - | ● | - | - | - | - |
| | Error e-mail notification | ● | - | - | - | - | - | - |
| History | Error history | ● | - | ● | - | - | - | - |
| | Operation history | ● | - | ● | - | - | - | - |
| | Control history | ● | - | ● | - | - | - | - |
| Operation control | Individual control — On/Off | ● | - | ● | - | - | - | - |
| | Operation mode | ● | - | ● | - | - | - | - |
| | Room temperature | ● | - | ● | - | - | - | - |
| | Fan speed | ● | - | ● | - | - | - | - |
| | Air flow direction | ● | - | ● | - | - | - | - |
| | Economy mode | ● | - | ● | - | - | - | - |
| | Room temperature set point limitation | ● | - | ● | - | - | - | - |
| | Test operation | ● | - | ● | - | - | - | - |
| | Antifreeze | ● | - | ● | - | - | - | - |
| | Outdoor unit low noise setting | ● | - | ● | - | - | - | - |
| | Individual management — Remote control prohibition setting | ● | - | ● | - | - | - | - |
| | Temperature upper and lower limit setting | ● | - | ● | - | - | - | - |
| | Filter sign reset | ● | - | ● | - | - | - | - |
| | Other — Memory operation | ● | - | ● | - | - | - | - |
| | Pattern operation | ● | - | ● | - | - | - | - |
| Schedule | Annual Schedule | ● | - | ● | - | - | - | - |
| | Special day setting | ● | - | ● | - | - | - | - |
| | On /off per day | 72 | - | 72 | - | - | - | - |
| | On / off per week | 504 | - | 504 | - | - | - | - |
| | Day off | ● | - | ● | - | - | - | - |
| | Min. unit of timer setting (Minutes) | 10 | - | 10 | - | - | - | - |
| | Low noise mode Weekly schedule | ● | - | ● | - | - | - | - |
| Remote management | Remote monitoring | ● | - | - | ● | - | - | - |
| | Remote operation control | ● | - | - | ● | - | - | - |
| | Remote function setting | ● | - | - | ● | - | - | - |
| | Web Remote Controller | ● | - | - | ● | - | - | - |
| Electricity charge apportionment | Apportionment charge/bill calculation | ● | - | - | - | ● | - | - |
| | Tenant (block) setting | ● | - | - | - | ● | - | - |
| | Common facilities apportionment setting | ● | - | - | - | ● | - | - |
| | Rated power consumption allotment setting | ● | - | - | - | ● | - | - |
| | Individual calculation at cooling and heating | - | ●* | - | - | ● | - | - |
| | Electricity meter supported | - | ● | - | - | ● | - | - |
| Energy saving management | Indoor unit rotation | - | ● | - | - | - | ● | - |
| | Peak cut control | - | ● | - | - | - | ● | - |
| | Outdoor unit capacity save | - | ● | - | - | - | ● | - |
| | Record of energy saving operation | - | ● | - | - | - | ● | - |
| | Energy saving information | - | ● | - | - | - | ● | - |
| | Power consumption monitor | - | ● | - | - | - | ● | - |
| | Electricity meter supported | - | ● | - | - | - | ● | - |
| External Device Control | Monitor | ● | - | - | - | - | - | ● |
| | Control | ● | - | - | - | - | - | ● |
| Others | Database import/export | ● | - | ● | - | - | - | - |
| | Automatic clock adjustment | ● | - | ● | - | - | - | - |
| | Multi language | 7 languages | - | 7 languages | - | - | - | - |

●●: Available.  – : Not available.  *:Power calculation application software is necessary, please contact the local FGL representative.

### Personal computer system requirements

The required PC specifications are shown in the following table.

| | System Controller | System Controller Lite |
|---|---|---|
| Operating system | • Microsoft® Windows® 7 Home Premium (32-bit or 64-bit) SP1, Windows® 7 Professional (32-bit or 64-bit) SP1<br>• Microsoft® Windows® 8.1 (32-bit or 64-bit), Windows® 8.1 Pro (32-bit or 64-bit)<br>• Microsoft® Windows® 10 Home (32-bit or 64-bit), Windows® 10 Pro (32-bit or 64-bit)<br>[Supported languages] English, Chinese, French, German, Russian, Spanish, and Polish | |
| CPU | Intel® CoreTM i3 2 GHz or higher | |
| Memory | • 2 GB or more (for Windows® 7 [32-bit])    • 4 GB or more (for Windows® 7 [64-bit], Windows® 8.1, and Windows® 10) | |
| HDD | 40 GB or more of free space | |
| Display | 1024 x 768 or higher resolution | |
| Interface | •Ethernet port (for getting access to the Internet using LAN) or Modem (for getting access to the Internet using Public Telephone Line)<br>•USB ports (Maximum of 6 ports) (Required only for the Server PC that works as VRF Controller)<br>- Maximum of 2 USB ports are required for WHITE-USB-KEY/WibuKey connection<br>- Maximum of 4 USB ports are required for Echelon® U10 USB Network Interface<br>* Maximum number of required USB port depends on the applicable system configuration. | •Ethernet port (for getting access to the Internet using LAN) or Modem (for getting access to the Internet using Public Telephone Line)<br>•USB ports (Maximum of 6 ports) (Required only for the Server PC that works as VRF Controller)<br>- Maximum of 4 USB ports are required for WHITE-USB-KEY/WibuKey connection<br>- 1 USB port is required for Echelon® U10 USB Network Interface<br>* The maximum number of required USB port depends on the applicable system configuration. |
| Graphic accelerator | Microsoft® DirectX® 9.0c compatible | |
| Software | Adobe® Reader® 9.0 or later | |

• Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)re.

<Packing list>

| Type | For System controller | | | For System controller Lite | | | |
|---|---|---|---|---|---|---|---|
| | System controller | (Option) Energy manager | System Controller Lite | (Option) Remote access | Electricity charge apportionment | Energy saving | Central Control |
| Model name | UTY-APGXZ1 | UTY-PEGXZ1 | UTY-ALGXZ1 | UTY-PLGXR2 | UTY-PLGXA2 | UTY-PLGXE2 | UTY-PLGXX2 |
| WHITE-USB-KEY | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

*1: Software protection key to be inserted in a USB slot running System Controller or System Controller Lite.
System Controller or System Controller Lite may only run on a PC with WHITE-USB-KEY. However, WHITE-USB-KEY is not required for remote VRF Explorer software.

# BACnet® Gateway

| | |
|---|---|
| Max. controllable | **4** VRF network systems |
| Max. controllable | **400** Outdoor units |
| Max. controllable | **1,600** Indoor units |

**NEW** UTY-ABGXZ1

WHITE-USB-KEY
(Software Protection Key)

• It is possible to connect medium to large sized BMS to VRF network system via BACnet®, a global standard for open networks.
• A maximum of 1600 indoor units with 4 VRF network systems (a maximum of 400 indoor units & 100 outdoor units for one network system) can be connected to one BACnet® Gateway.
• It is possible to control or monitor VRF network system from BMS via BACnet® Gateway.
• Compatible with BACnet® (ANSI / ASHRAE-135-2012) application specific controller (B-ASC).
• Compatible with BACnet®/IP over Ethernet.
• Scheduling function, Alarm & Event functions as well as Electricity Change Apportionment function are provided in BACnet® Gateway.
• Connection between VRF network system to personal computer is possible via small U10 USB interface. However, both U10 USB interface & personal computer are field supplied items.
• Corresponds to 7 different languages, English, Chinese, French, German, Spanish, Russian, Polish.

## Functions

## Installation example

**VRF network system 1**

Indoor unit    Outdoor unit

**VRF network system 2**

Indoor unit    Outdoor unit

**Max. 4 VRF network systems**

USB adaptor*1
(Field supplied)

USB adaptor
(Field supplied)

USB adaptor
(Field supplied)

USB adaptor
(Field supplied)

**BACnet®**

**BACnet® Gateway**
(UTY-ABGXZ1)

**WHITE-USB-KEY**
**Software Protection Key**

**BACnet® Operator Workstation** (B-OWS)

Lighting facilities

Security system

Automatic fire alarm interface

Ventilation system

— = USB cable
— = Transmission line (VRF Network)
— = Ethernet
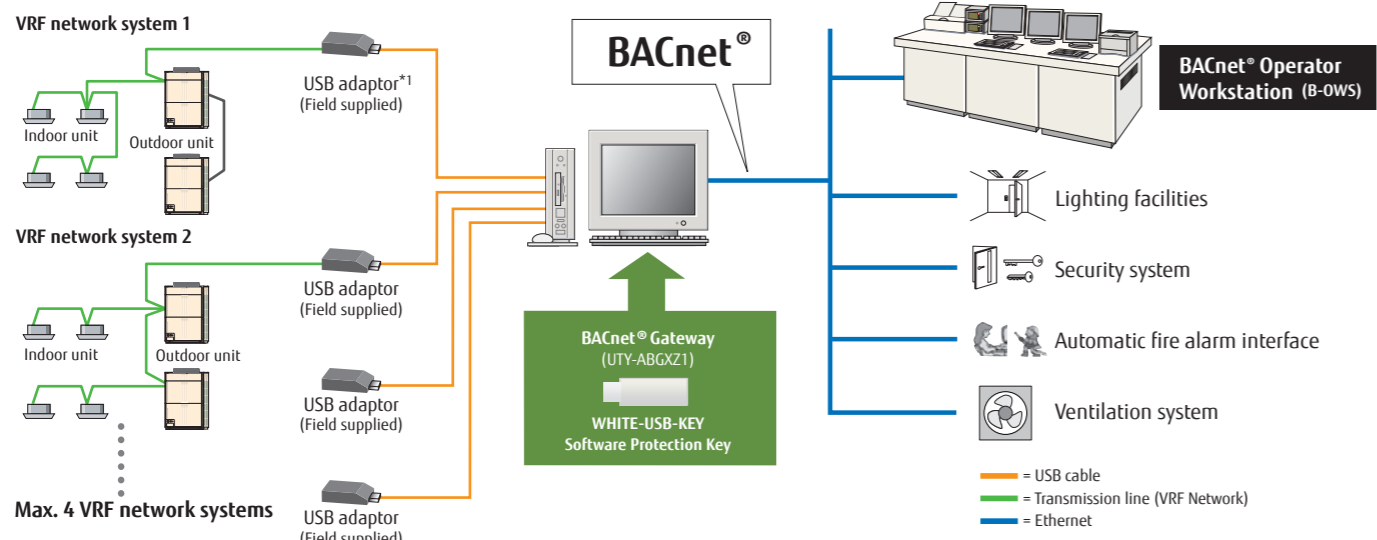
*1: USB adaptor is U10 USB Network Interface of Echelon® Corporation.

## Personal computer system requirements

| | UTY-ABGXZ1 |
|---|---|
| Operating system | • Microsoft® Windows® 7 Home Premium (32-bit or 64-bit) SP1, Windows® 7 Professional (32-bit or 64-bit) SP1<br>• Microsoft® Windows® 8.1 (32-bit or 64-bit), Windows® 8.1 Pro (32-bit or 64-bit)<br>• Microsoft® Windows® 10 Home (32-bit or 64-bit), Windows® 10 Pro (32-bit or 64-bit)<br>[Supported languages]<br>  English, Chinese, French, German, Russian, Spanish, and Polish |
| CPU | Intel® CoreTM i3 2 GHz or higher |
| Memory | • 2 GB or more (for Windows® 7 [32-bit])<br>• 4 GB or more (for Windows® 7 [64-bit], Windows® 8.1, and Windows® 10) |
| HDD | 40 GB or more of free space |
| Display | 1024 x 768 or higher resolution |
| Interface | • Ethernet port (for getting access to the Internet using LAN)<br>• USB ports (Maximum of 5 ports)<br>  - 1 USB port is required for WHITE-USB-KEY/WibuKey connection<br>  - Maximum of 4 USB ports are required for Echelon® U10 USB Network Interface<br>  * Maximum number of required USB ports depends on the applicable system configurations. |
| Software | Adobe® Reader® 9.0 or later |

• Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

**<Packing list>**

| Name and shape | Quantity | Application |
|---|---|---|
| WHITE-USB-KEY | 1 | Includes the software and manuals, license for BACnet® Gateway. |

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# BACnet® Gateway (Hardware)

| | |
|---|---|
| Max. controllable | **1** VRF network system |
| Max. controllable | **32** Refrigerant system |
| Max. controllable | **128** Indoor units |

**NEW** UTY-VBGX

• BACnet® Gateway enables to connect a BMS and FG VRF system.
• A maximum of 128 indoor units and 32 refrigerant system can be connected to a single BACnet® Gateway.
• Compatible with BACnet® (ANSI / ASHRAE-135-2010) application specific controller (B-ASC).
• Compatible with BACnet®/IP over Ethernet.

## Functions

## Installation example

BACnet® Operator
Workstation (B-OWS)

Controller
Lighting facilities
Security system
Automatic fire alarm interface
Windows bind

**BACnet®**

**BACnet® Gateway**
**(Hardware)**

Max.128 indoor units &
Max.32 refrigerant system

VRF Indoor unit

VRF Indoor unit

VRF Outdoor unit

## Specifications

| Model name | UTY-VBGX |
|---|---|
| Number of controllable indoor units | 128 |
| Number of controllable refrigerant system | 32 |
| Number of controllable VRF network | 1 |
| Number of connectable units / one VRF network | 4 |

| Model name | UTY-VBGX |
|---|---|
| Power Supply | 208-240V 50/60Hz, single phase |
| Power Consumption (W) | 4.6 (max) |
| Dimensions (H × W × D) (mm) | 59.6 ×270.4 × 176 |
| Weight (g) | 1,200 |

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# Network Convertor for LONWORKS®

| | |
|---|---|
| Max. controllable | **4** Units to BMS |
| Max. controllable | **100** Outdoor units |
| Max. controllable | **128** Indoor units |

## UTY-VLGX

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

## Functions

## Installation example

General-purpose
building control computer
(LONWORKS® device)

Controller
Lighting facilities
Security system
Automatic fire alarm interface
Windows bind

**LONWORKS®**
**Network**

**Network Convertor**
**for LONWORKS®**

Max.128 indoor units &
Max.100 outdoor units

VRF Indoor unit

VRF Indoor unit

VRF Outdoor unit

## Specifications

| Model name | UTY-VLGX |
|---|---|
| Power Supply | 208-240V 50/60Hz, Single phase |
| Power Consumption (W) | 4.5 |
| Dimensions (H × W × D) (mm) | 67 × 288 × 211 |
| Weight (g) | 1,500 |

## Transmission specifications (BMS side)

| Transmission speed | 78 kbps |
|---|---|
| Transceiver | FT-X1 (Echelon® Corporation) |
| Transmission way form | Free topology |
| Terminal resistor | None<br>(It attaches at the terminal of a network.) |

# MODBUS® Convertor

| | |
|---|---|
| Max. connectable | **9** units to one VRF |
| Max. controllable | **100** outdoor units |
| Selectable | **128** indoor units |

## UTY-VMGX

The MODOBUS Convertor allows a complete integration of air conditioners into MODBUS Networks.

• Compact and lightweight design     • Direct connection to MODBUS Network
• Up to 128 indoor units can be controlled in one MODBUS Convertor
• The MODBUS Convertor permits central monitoring and control of air conditioners from BMS or Central Controller.

### Functions

BMS/Central Controller

Controller
Lighting facilities
Security system
Automatic fire alarm interface

MODBUS Convertor for VRF

**VRF System (Lon Network)**

VRF Indoor unit     VRF Indoor unit

VRF Outdoor unit

* BMS : Bulding Management System          Windows bind

### Specifications

| Model name | UTY-VMGX |
|---|---|
| Power Supply | 220-240 V |
| Input power (W) | Max. 2 |
| Dimensions (H x W x D) (mm) | 54 × 260 × 150 |
| Weight (g) | 1,100 |

# MODBUS® Interface

## FJ-RC-MBS-1

The Modbus Interface allows a complete integration of air conditioners into Modbus Networks.

• Simple installation due to small  and compact size.
• No separate external power supply required.
• The Modbus Interface permits central monitoring and control of air conditioners from BMS, .

### Functions

**Modbus** Network

BMS/Central Controller

Max. 63
**Modbus** Interface

The Modbus Interface can be used with or without Wired Remote Controller.

VRF Indoor unit

VRF Indoor unit

Wired Remote Controller     Split Indoor unit
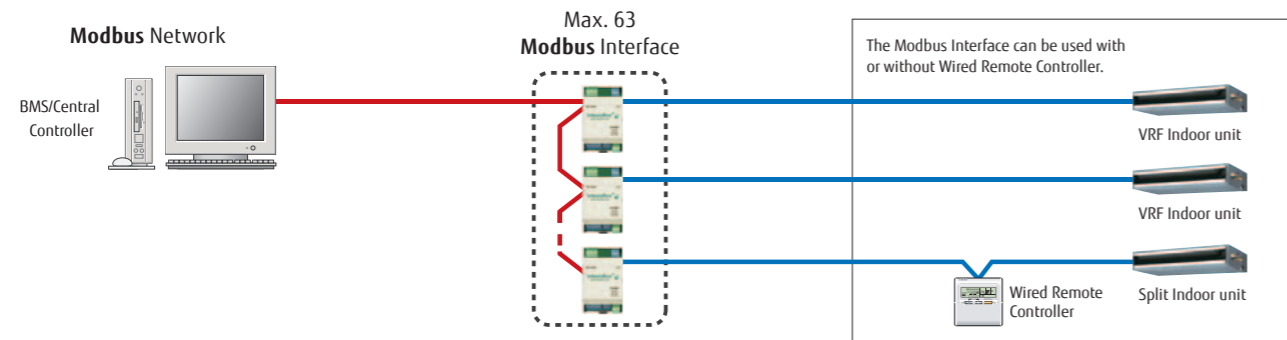
### Specifications

| Model name | FJ-RC-MBS-1 |
|---|---|
| Dimensions (H x W x D) (mm) | 93×53×58 |
| Weight (g) | 85 |

# KNX® Convertor (for VRF)

**NEW** UTY-VKGX

It is possible to control the VRF system from central / home controller via KNX network.

• New KNX Convertor enables to connect central/home controller and FG VRF system.
• A maximum of 128 indoor units and 100 outdoor units can be connected to single KNX Convertor.

### Functions

**KNX Convertor for VRF**     **VRF network**

Central / Home Controller

Registrable
**128** indoor units
**100** outdoor units
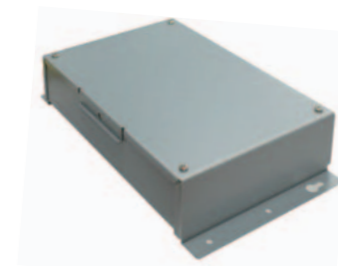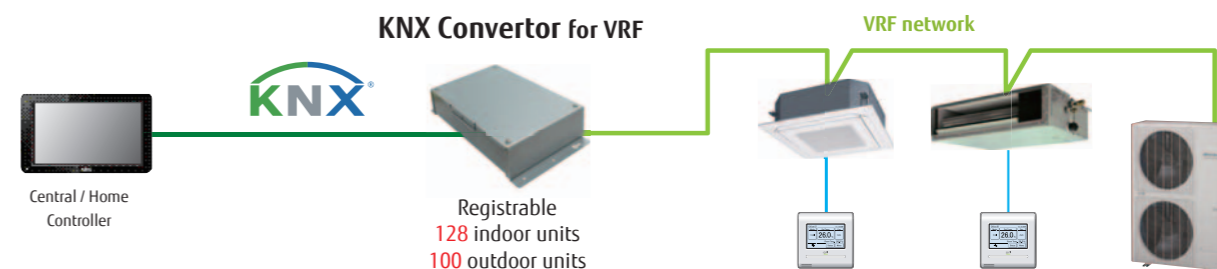
### Specifications

| Model name | UTY-VKGX |
|---|---|
| Power supply | 220-240 V 50/60 Hz |
| Power consumption  (W) | 1.5 |
| Dimensions (H × W × D) (mm) | 54 × 260 × 150 |
| Weight (g) | 1,200 |

# KNX® Interface

## FJ-RC-KNX-1i

The KNX Interface allows a complete integration of air conditioners with KNX Network systems.

• Simple installation due to small  and compact size.
• No separate external power supply required (just KNX bus power).
• Can be used for single indoor units and group controlled (up to 16) indoor units

### Functions

**KNX** Network

Home Controller
Lighting facilities
Security system
Automatic fire alarm interface
Windows bind

**KNX**

The KNX Interface can be used with or without Wired Remote Controller.

VRF Indoor unit

or

Wired Remote Controller     Split Indoor unit
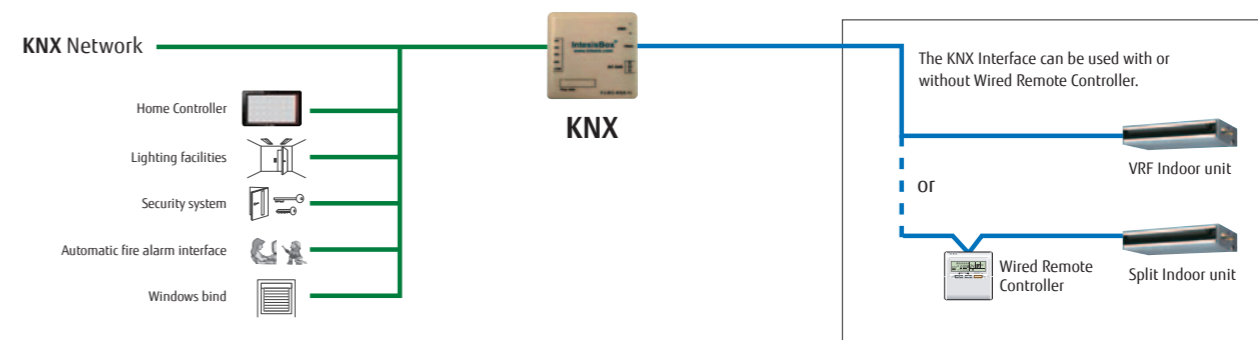
### Specifications

| Model name | FJ-RC-KNX-1i |
|---|---|
| Dimensions (H x W x D) (mm) | 70×70×28 |
| Weight (g) | 70 |

# Wireless LAN Interface IntesisHome

## FJ-RC-WIFI-1

- It is the most advanced solution to remotely manage an Air Conditioning system using all sort of mobile devices such as Smartphones, Tablets and PC
- No separate external power supply required
- Can be used for single indoor units and group controlled (up to 16) indoor units

### Functions

Indoor unit

**Wireless LAN Interface**

Internet

Smartphone

Router (Field supplied)

IntesisHome

Tablet

PC
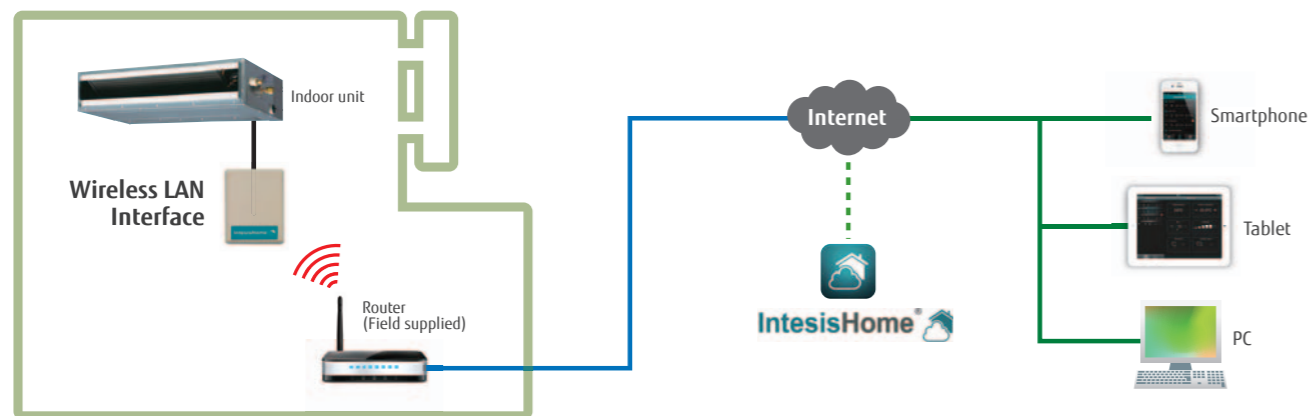
### Basic control

- Turning the units on and off
- Mode control (Heat, Cool, Dry, Auto, Fan)
- Fan speed setting
- Louver position (Airflow direction setting)
- Room temperature display
- Set temperature control
- Multi Language
- One Scene and Timer

(Application screen image)

### Advanced control (Optional functions)

- Climate working modes (ECO, Comfort, Powerful) (future release)
- Schedulable functionalities (ON/OFF, Modes, Set point temperature, Fan Speed, Louver position)
- Set temperature limitation (future release)
- Multiple Scenes & Timers and Calendar function

### Notifications and History

- Alerts e-mail notification (future release)
- Air conditioning malfunction alerts
- Connectivity monitoring and alerts
- History (future release)

### Specifications

| Model name | FJ-RC-WIFI-1 |
|---|---|
| Dimensions (H x W x D) (mm) | 108 × 70 × 28 |
| Weight (g) | 80 |

# Network Convertor

## UTY-VTGX  (DC power supply type)
## UTY-VTGXV  (AC power supply type)

- The network convertors are required when connecting single split system to VRF network system.
- Compact and light weight design
- Connectable to both types of 2-wire and 3-wire remote controllers

UTY-VTGX
DC power supply type
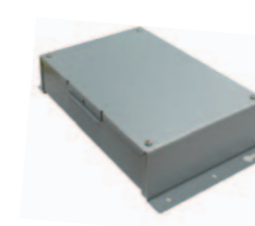
UTY-VTGXV
AC power supply type

### Functions

### Installation example

- 2 types of 1 remote controller type and 2 remote controllers type are available.
- Power supply (AC220-240V, 50/60Hz) is required for 2 remote controllers type.

VRF network System

Network Convertors
(for 1 remote controller)

Network Convertors
(for 2 remote controllers)

AC230V
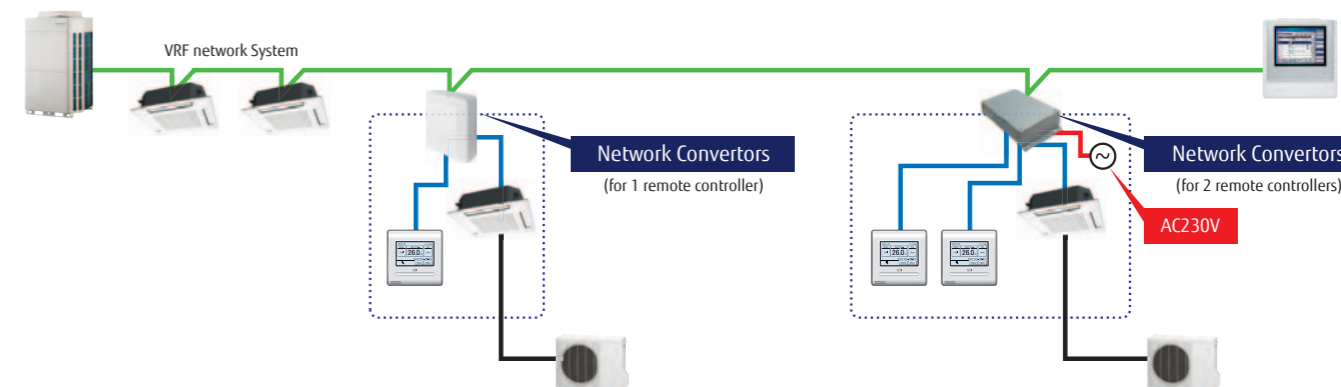
- 2-wire and 3-wire type of the wired remote controller can be connectable.
- Power supply (AC220-240V, 50/60Hz) is required for 2 remote controllers type.

- A central control can be provided for the single split systems. (Up to 100 units of Network Convertor is connectable in one VRF network system)

VRF network System

VRF network System

Up to 100 units of Network Converter
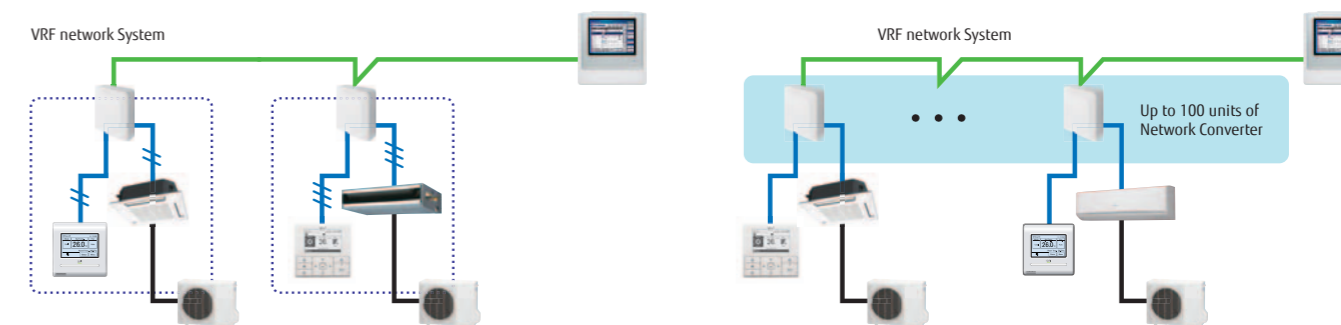
### Specifications

| Model name | UTY-VTGX | | UTY-VTGXV |
|---|---|---|---|
| Power Supply | polar 3-wire DC12V | non-polar 2-wire DC12V | 220-240V 50/60Hz, Single phase |
| Input power (W) | Max. 1.2 | | Max. 3 |
| Dimensions (H x W x D) (mm) | 140 × 117 × 43 | | 54 × 260 × 150 |
| Weight (g) | 250 | | 1,100 |

# Network Convertor

| Max. controllable |
| :-: |
| **16** |
| indoor units |

| Max. controllable |
| :-: |
| **4** |
| Group Remote Controllers |

## UTY-VGGXZ1

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

## Functions

### 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.

Network Convertor

Single Split

Group of Single Split

VRF network system

USB Adaptor

System Controller

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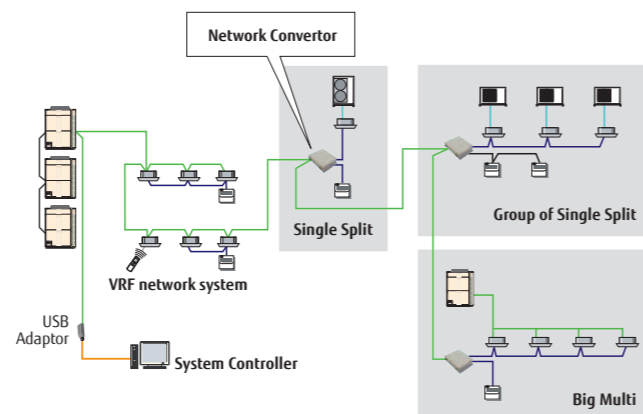
Please consult your distributor for connectable split type air conditioner.
Up to 100 Network Convertors may be connected in single VRF network system.
One Network Convertor is considered as a single refrigerant system, irrespective of the number of connected single models.

### Used for connecting Group Remote Controller

4 Group Remote Controllers can be connected to a single Network Convertor (UTY-VGGXZ1).

Group Remote Controller
UTY-CGGY
UTY-CGGG

Network Convertor
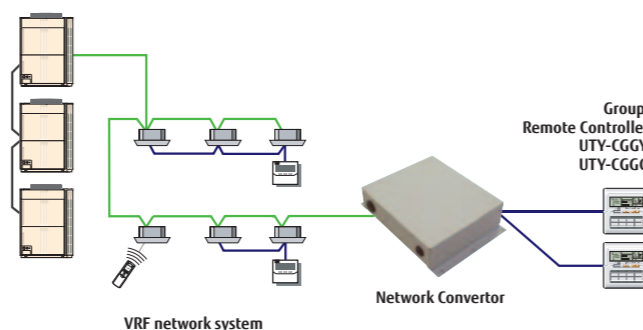
VRF network system

* 2 refrigerant circuits can be covered by a single Network Convertor (UTY-VGGXZ1) .
  Up to a total of 16 Network Convertors (UTY-VGGXZ1) and System Controller adaptors can be connected in a single VRF network system.

## Specifications

| Model name | UTY-VGGXZ1 |
| :-- | :-: |
| Power Supply | 208-240V  50/60Hz, Single phase |
| Power Consumption (W) | 8.5 |
| Dimensions (H x W x D) (mm) | 67 x 288 x 211 |
| Weight (g) | 1,500 |

# External Switch Controller

**NEW** UTY-TERX

• 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 locally purchased parts.
• 2-wire type
• The set temperature can be specified at two points for cooling and heating individually (4 points).

## Functions

### Installation example

Human sensor catches movements of people in a room, and operates with lower capacity when people come back to the room, it automatically returns to previous operation mode.

SAVE !   AUTO RESTART

| Cooling/Dry | +2℃ *Max. 30℃ |
| Set temp. | |
| Heating | |
| Set temp. | -4℃ *Max. 16℃ |

Normal operation   Saving operation   Normal operation
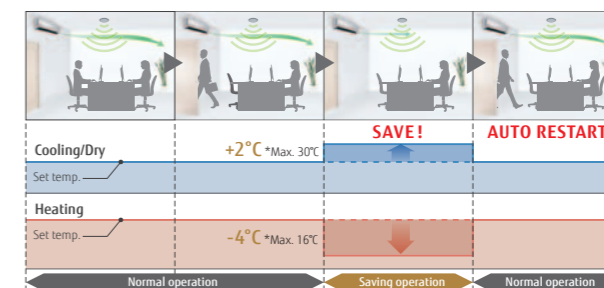
Human sensor equipment needs to be purchased locally. The above example indicated that a signal is sent to this External Switch Controller if human sensor does not detect for 20 minutes. Human sensor is not mounted on the External Switch Controller.

### Specifications

| Model name | UTY-TERX |
| :-- | :-: |
| Power Supply | DC 6.5-16V |
| Dimensions (H × W × D) (mm) | 140 × 117 × 43 |
| Weight (g) | 250 |

DC12V is supplied by the indoor unit.

# Signal Amplifier

## UTY-VSGXZ1

• Transmission Line length can be extended up to 3,600m with multiple Signal Amplifiers.
• Up to 40 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.

## Functions

### Installation example

A

B

C

D

Signal Amplifier

AB+BD+BC＜500m
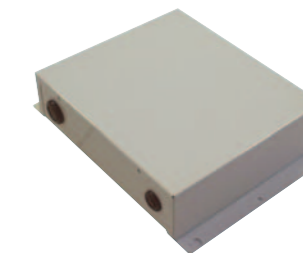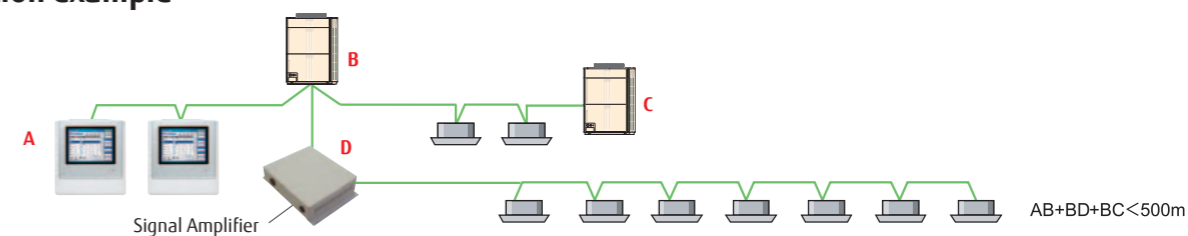
### Specifications

| Model name | UTY-VSGXZ1 |
| :-- | :-: |
| Power Supply | 208-240V  50/60Hz, Single phase |
| Power Consumption (W) | 4.5 |
| Dimensions (H × W × D) (mm) | 67 x 288 x 211 |
| Weight (g) | 1,500 |

# VENTILATION

## EFFECTIVE HEAT EXCHANGE AND SIMULTANEOUS FRESH AIR VENTILATION

High Efficiency and low noise levels are achieved by using a highly efficient heat exchange process. A comfortable air conditioned space is achieved by conveniently selecting whether to use heat exchange or normal ventilation setting, according to the requirements of the conditioned space.

### Energy Recovery Ventilator

### Outdoor Air Unit

### DX-Kit for airhandling applications

### Energy Recovery Ventilator range

| Airflow rate (m³/h) | 250 | 350 | 500 | 800 | 1000 |
|---|---|---|---|---|---|
| Model code | 025 | 035 | 050 | 080 | 100 |
| Energy Recovery Ventilator | UTZ-BD025B | UTZ-BD035B | UTZ-BD050B | UTZ-BD080B | UTZ-BD100B |

### Outdoor Air Unit range

| Airflow rate (m³/h) | 1080 | 1680 | 2100 |
|---|---|---|---|
| Model code | 054 | 072 | 096 |
| Outdoor Air Unit | ARXH054GTAH | ARXH072GTAH | ARXH096GTAH |

**AIRSTAGE™**

# Energy Recovery Ventilator

**Models**
**UTZ-BD025B**
**UTZ-BD035B**
**UTZ-BD050B**
**UTZ-BD080B**
**UTZ-BD100B**

UTZ-BD025B  UTZ-BD035B  UTZ-BD050B

UTZ-BD080B  UTZ-BD100B

## Feature

## Heat exchange ventilation and normal ventilation

**Heat exchange ventilation**
When a room is cooled or heated, the exhausted cooling / heating energy is recovered by heat-exchange ventilation.

**Normal ventilation**
The operation is used during periods when the room space requires no cooling or heating effect, i.e. when there is minimal temperature difference between the indoor and outdoor environments.

**Adopts a highly efficient counter-flow heat exchange element**

Exhaust air  Outside air  Heat exchanger

Room air  Supply air
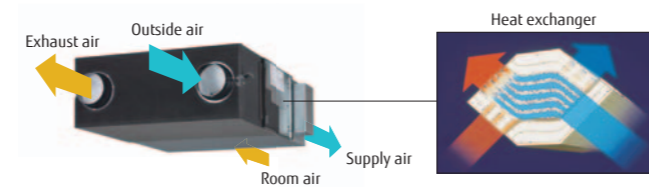
## Energy efficiency and ecology

Energy consumption is dramatically reduced by using a counterflow heat-exchange element. Air conditioning load is reduced by approximately 20%, resulting in significant energy savings. Recovers up to 77% of the heat in the outgoing air.

**20%**
Energy saving

**Features of heat exchange element**

With the cross-flow element, air moves in a straight line across the element. With the counter-flow element , air flows through the element for a longer time (longer distance) ,so the heat-exchange effect remains unchanged.
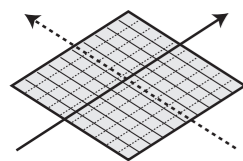
Other element
(Cross-flow element)
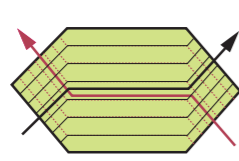
Fujitsu element
(Counter-flow element)

## Reverse mountable direct air supply / exhaust system

**Adoption of straight air supply / exhaust system:** Duct design is simplified because the air supply / exhaust ducts are straight.

**Since each unit can be mounted in reverse position, only one inspection hole is needed for two units:** Two units can share one inspection hole so duct work is easier and more flexible.

Room air  Supply air  Room air

Inspection cover

Straight unit

Reverse mounted unit

Inspection hatch

Exhaust air  Outside air  Exhaust air
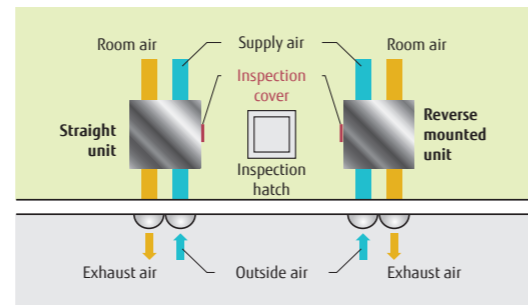
## Quiet operation

Significantly reducing low pressure loss and noise allows low-noise operation.

## Slim shape and easier installation

Counter-flow heat exchange element used for reduced noise and slimmer, more compact body shape.

Height **270**mm
UTZ-BD025B

Height **317**mm
UTZ-BD035B/BD050B

Height **388**mm
UTZ-BD080B/BD100B

## Extended range of an external static pressure

An external static pressure is improved by adopting a powerful fan motor.
This allows for application in a wide variety building.

### Specifications

(Tentative)

| | | | 250 m³/h | 350 m³/h | 500 m³/h | 800 m³/h | 1000 m³/h |
|---|---|---|---|---|---|---|---|
| Rated flow rate | | | 250 m³/h | 350 m³/h | 500 m³/h | 800 m³/h | 1000 m³/h |
| Model No. | | | UTZ-BD025B | UTZ-BD035B | UTZ-BD050B | UTZ-BD080B | UTZ-BD100B |
| Power source | | | Single-phase, ~220-240V, 50Hz | | | | |
| HEAT EXCHANGE VENTILATION | Input power | Extra high / High / Low | kW | 128 / 123 / 96 | 190 / 185 / 168 | 289 / 225 / 185 | 418 / 378 / 295 | 464 / 432 / 311 |
| | Air flow rate | Extra high / High / Low | m³/h | 250 / 250 / 190 | 350 / 350 / 240 | 500 / 500 / 440 | 800 / 800 / 630 | 1000 / 1000 / 700 |
| | External static pressure | Extra high / High / Low | Pa | 105 / 95 / 45 | 140 / 60 / 45 | 120 / 60 / 35 | 140 / 110 / 55 | 105 / 80 / 75 |
| | Temperature Exchange Efficiency | Extra high / High / Low | % | 75 / 75 / 77 | 75 / 75 / 78 | 75 / 75 / 76 | 75 / 75 / 76 | 75 / 75 / 79 |
| | Energy Exchange Efficiency Cooling | Extra high / High / Low | % | 63 / 63 / 65 | 66 / 66 / 71 | 62 / 62 / 64 | 65 / 65 / 68 | 65 / 65 / 70 |
| | Energy Exchange Efficiency Heat pump | Extra high / High / Low | % | 70 / 70 / 72 | 69 / 69 / 73 | 67 / 67 / 69 | 71 / 71 / 74 | 71 / 71 / 76 |
| | Sound pressure level | Extra high / High / Low | dB* | 31.5 / 30.5 / 26.5 | 33 / 31 / 25.5 | 37.5 / 35.5 / 32.5 | 37.5 / 37 / 34.5 | 38.5 / 37.5 / 34.5 |
| NORMAL VENTILATION | Input power | Extra high / High / Low | W | 128 / 123 / 96 | 190 / 185 / 168 | 289 / 225 / 185 | 418 / 378 / 295 | 464 / 432 / 311 |
| | Air flow rate | Extra high / High / Low | m³/h | 250 / 250 / 190 | 350 / 350 / 240 | 500 / 500 / 440 | 800 / 800 / 630 | 1000 / 1000 / 700 |
| | External static pressure | Extra high / High / Low | Pa | 105 / 95 / 45 | 140 / 60 / 45 | 120 / 60 / 35 | 140 / 110 / 55 | 105 / 80 / 75 |
| | Sound pressure level | Extra high / High / Low | dB* | 31.5 / 30.5 / 26.5 | 33 / 31 / 25.5 | 38.5 / 38 / 32.5 | 37.5 / 37 / 34.5 | 40.5 / 39.5 / 36.5 |
| Dimensions (W × D × H) | | mm | 882 x 599 x 270 | 1050 x 804 x 317 | 1090 x 904 x 317 | 1322 x 884 x 388 | 1322 x 1134 x 388 |
| Weight | | kg | 29 | 49 | 57 | 71 | 83 |
| Outlet duct diameter | | mm | 150 | 150 | 200 | 250 | 250 |
| Operation range | | °C | -10 ~ 40 | -10 ~ 40 | -10 ~ 40 | -10 ~ 40 | -10 ~ 40 |
| Maximum humidity | | % | 85 | 85 | 85 | 85 | 85 |

\* The noise level must be measured 1.5 m below the centre of the unit.

### Dimensions (Unit : mm)

A  G  H

D  EA

B  C

OA

E  F

Maintenance opening

Maintenance space

K  L

O  N  M  M
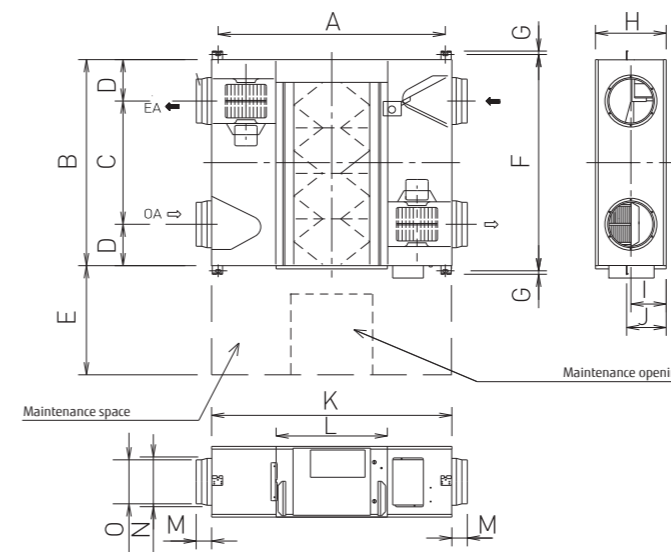
| | UTZ-BD025B | UTZ-BD035B | UTZ-BD050B | UTZ-BD080B | UTZ-BD100B |
|---|---|---|---|---|---|
| A | 810 | 978 | 1018 | 1250 | 1250 |
| B | 599 | 804 | 904 | 884 | 1134 |
| C | 315 | 580 | 640 | 428 | 678 |
| D | 142 | 112 | 132 | 228 | 228 |
| E | 600 | 600 | 600 | 600 | 600 |
| F | 655 | 860 | 960 | 940 | 1190 |
| G | 19 | 19 | 19 | 19 | 19 |
| H | 270 | 317 | 317 | 388 | 388 |
| I | 135 | 159 | 159 | 194 | 194 |
| J | 159 | 182 | 182 | 218 | 218 |
| K | 882 | 1050 | 1090 | 1322 | 1322 |
| L | 414 | 470 | 470 | 612 | 612 |
| M | 95 | 70 | 127 | 85 | 85 |
| N | 219 | 162 | 210 | 258 | 258 |
| O | 144 | 144 | 194 | 242 | 242 |

# Outdoor Air Unit

**Models**
ARXH054GTAH
ARXH072GTAH
ARXH096GTAH

ARXH054GTAH

ARXH072GTAH

ARXH096GTAH

## Feature

### One VRF system can provide air conditioning and air supply at the same time.

Outdoor Air Unit can be connected in a same VRF*[1] system as one of indoor unit series and can create fresh and comfortable air supply together from our high advanced technology.

*1. Connectable VRF series:J-IIS, J-II, V-II, V-II tropical, VR-II
In J-II series alone, OAU is prohibit to connect under the ambient temperature of 40℃ or higher.

Outdoor Air Unit

VRF system

Duct

Indoor unit  Indoor unit

Heat Exchanger  Fan

Outdoor Air Unit

Fresh Air  Fresh Air

Wired R.C.  Wired R.C.  Wired R.C.
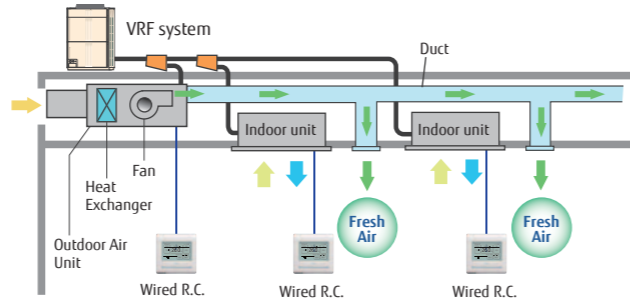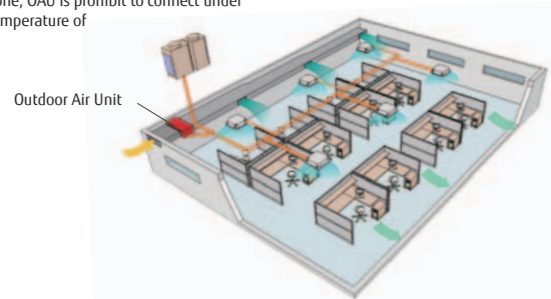
* Make sure the connected capacity is within the range of 50% to 100% of the outdoor unit capacity. In addition, if there are mixed connections with indoor units, make the Outdoor Air Unit connection capacity 30% or less of the outdoor unit capacity.

### High energy savings and flexible duct design by using DC motor

• Greatly reduces electricity consumption by adopting permanent magnet compared to when using an AC motor.

054 / 072 type   096 type
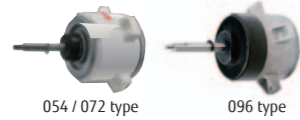
• Compared with AC motor, changing the speed makes it possible to respond flexibly to the external static pressure from 50 Pa to 240 Pa. Even if damper equipment is not used, static pressure can be adjusted and duct design is easy.
• Static pressure can be set easily using wired remote controller.

(When external static pressure is small)

50 to 240 Pa (096 type)

(When external static pressure is large)

**DC Motor**
Low speed   High speed

**AC Motor**
High speed (Constant)   High speed (Constant)
Damper opening small (Field supplied)   Damper opening large (Field supplied)
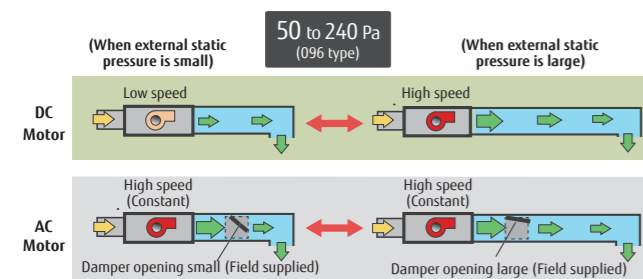
### Top class compact design

• Top class lightweight compact design at just 425 mm in height, 55 kg in weight for ARXH072 type. This unit can be installed easily even at narrow space.

1367 mm

**55 kg** (072 type)

425 mm

572 mm

(ARXH072 type)
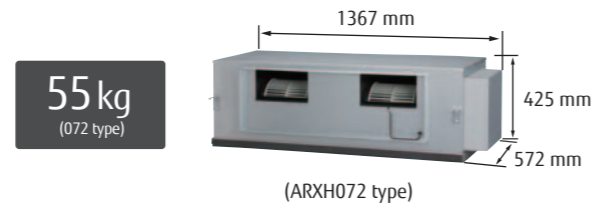
## Various Controller

Supplied variety of controllers as options, such as individual controller, central controller, and building management controller.

**Individual Controller**

Wireless Remote Controller   Simple Remote Controller   Wired Remote Controller   Wired Remote Controller (Touch Panel)
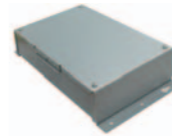
**Central Controller**

Group Remote Controller   Central Remote Controller   Touch Panel Controller   System Controller System Controller Lite (Software)

* The temperature setting is discharged air temperature setting.   The air volume is set to a constant speed.

## Specifications

| Rated flow rate | | | 1000 m³/h | 1500 m³/h | 2000 m³/h |
|---|---|---|---|---|---|
| Model No. | | | ARXH054GTAH | ARXH072GTAH | ARXH096GTAH |
| Power source | | | Single-phase, ~220-240V, 50Hz | Single-phase, ~220-240V, 50Hz | Single-phase, ~220-240V, 50Hz |
| Capacity | Cooling | kW | 14.0 | 22.4 | 28.0 |
| | Heating | | 8.9 | 13.9 | 17.4 |
| Input Power | Cooling / Heating | W | 179 | 292 | 370 |
| Airflow Rate | | m³/h | 1,080 | 1,680 | 2,100 |
| Static Pressure | Standard (range) | Pa | 185 (50-185) | 200 (50-200) | 200 (50-240) |
| Sound Pressure Level | | dB(A) | 42 | 44 | 47 |
| Dimensions (H x W x D) | | mm | 425×1,367×572 | 425×1,367×572 | 450×1,583×700 |
| Weight | | kg | 48 | 55 | 71 |
| Connection Pipe Diameter (Small / Large) | | mm | Ø9.52/Ø19.05 | Ø12.70/Ø22.22 | Ø12.70/Ø22.22 |
| Operation Range | Cooling | °CDB | 5 to 43 | 5 to 43 | 5 to 43 |
| | Heating | | -7 to 21 | -7 to 21 | -7 to 21 |
| Refrigerant | | | R410A | R410A | R410A |

Note : Specifications are based on the following conditions.
Cooling : Outdoor temperature of 33℃DB / 28℃WB.
Heating : Outdoor temperature of 0℃DB / -2.9℃WB.
Pipe length : 7.5 m   Voltage : 230 [V].

## Dimensions (Unit : mm)

ARXH054GTAH

425  1367 1192(BOLT PITCH) 1062  400 382 130 231 Main drain port

351 181 14

39 44 572 572(BOLT PITCH)

304 30  921 1247  111

Side view (L)   Top view   Side view (R)

Safety drain port

(Drain hose)

Front view

ARXH072GTAH

425  1367 1192(BOLT PITCH) 1062  400 382 Main drain port

351 181 14

39 44 572 572(BOLT PITCH)

304 30  921 1247  111

Side view (L)   Top view   Side view (R)

Safety drain port

(Drain hose)

Front view

ARXH096GTAH

450  1583 1412(BOLT PITCH) 1251  151 Main drain port

700

P150+7=1050 350 15 35  1199 1454  75 125 111

Side view (L)   Top view   Side view (R)

Safety drain port

(Drain hose)

Front view

# DX-Kit for air handling applications

## Models
**Control unit**

**UTY-VDGX**

**EEV unit**

**UTP-VX30A**
**UTP-VX60A**
**UTP-VX90A**

These kits enable other manufacturers air handling units (AHU) and fan coil units (FCU) to be incorporated into a Fujitsu VRF system or, be connected to a dedicated Fujitsu VRF outdoor unit as a 1:1 system to control outside air ventilation (AHU) or room temperature (FCU).

Control unit
UTY-VDGX

EEV unit
UTP-VX30A

EEV unit
UTP-VX60A

EEV unit
UTP-VX90A
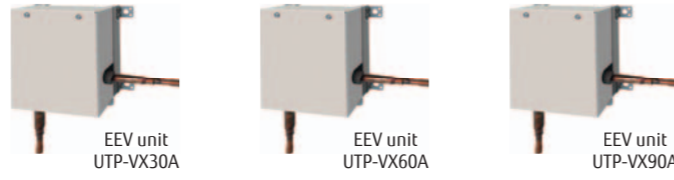
## Feature

### Multiple temperature sensors optimally control the air handling unit and fan coil unit.

AHU  Thermistor

**DX-Kit**
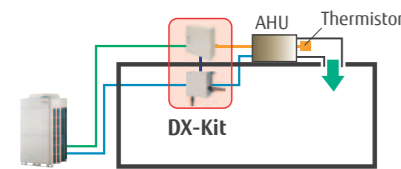
When connecting to an air handling unit, the supply air temperature is controlled by the discharge sensor.

FCU

**DX-Kit**  Thermistor
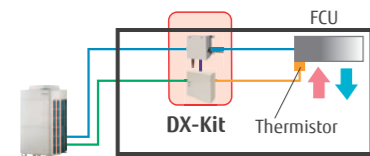
When connecting to a fan coil unit, the room temperature is controlled by the return air temperature sensor.

**Arrangement as part of a VRF system**

Transmission line

Indoor unit

VRF system

Air Handling Unit

Control unit

EEV unit

**DX-Kit**

Wired R.C.

Thermistor
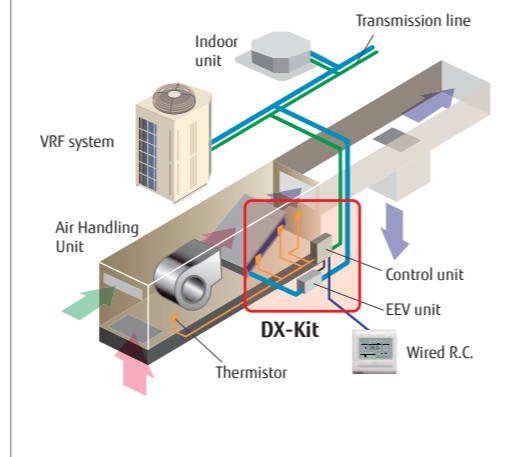
### Supports a wide range of capacity classes

- 2 EEV units can be connected in parallel and up to 20 HP (50 kW) large capacity units. (Separation Tube of UTP-LX180A is required.)
- Connectable capacity range: 5 kW to 50 kW

EEV unit

Piping

EEV unit

AHU or FCU
(40–50 kW class)

Wiring
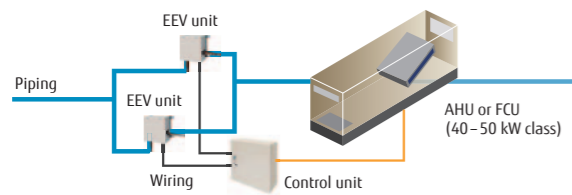
Control unit

### A variety of controls to match the application

- Central control using our VRF controllers or central management controllers

Transmission line

External I/O

Interface (Option)

**DX-Kit**

Thermistor

VRF Controller  Modbus network (Future release)

AHU or FCU
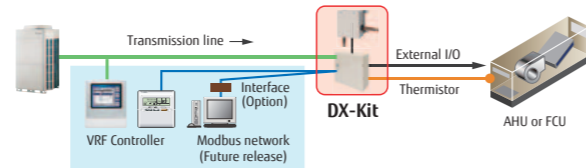
- Central control from external controllers

Transmission line

DDC*

Thermistor

External I/O

**DX-Kit**

3rd party Controller

AHU or FCU

External I/O

*DDC=Direct Digital Controller
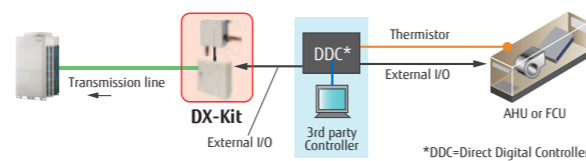
## Functions Summary

### Inputs
- ON/OFF
- Setting temperature
- Capacity demand
- Heating / Cooling operation mode
- Fault information

### Outputs
- ON/OFF indication
- Fan ON/OFF indication
- Thermo ON/OFF indication
- Defrost indication
- Fault indication

### Modbus Control
- Possible to control via a Modbus enabled BMS by using optional interface.

## Installation Limitation

- Connectable VRF series : All VRF
- Connectable DX-Kit system capacity range : 50 to 100% of the outdoor unit capacity
- Connectable DX-Kit system capacity range with indoor units : 30% or less of the outdoor unit capacity
- Max. wiring length from control unit : 10 m
- Max. piping length between EEV unit and indoor unit : 5 m
- Outdoor installation : Control unit (IP54 class) and EEV unit can be installed at an outdoor space.
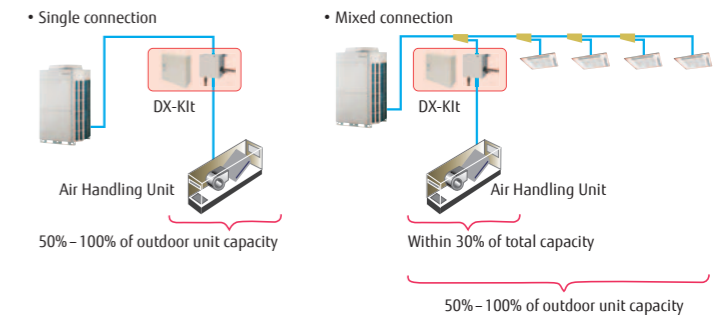
**[For 2EEV units connection (option)]**
- Separation Tube : UTP-LX180A

### Connectable capacity

- Single connection

DX-KIt

Air Handling Unit

50–100% of outdoor unit capacity

- Mixed connection

DX-KIt

Air Handling Unit

Within 30% of total capacity

50–100% of outdoor unit capacity

### Piping and wiring length

Air Handling Unit

EEV unit

Control unit

Max. piping length 5 m

Max. wiring length 10 m

Max. wiring length 10 m
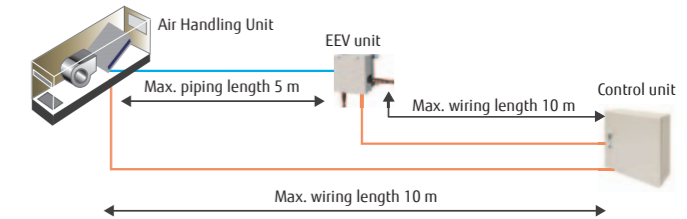
## Specifications

| EEV unit | | | UTP-VX30A | | | UTP-VX60A | | | UTP-VX90A | UTP-VX90A×2 |
|---|---|---|---|---|---|---|---|---|---|---|
| Power source | | | Single-phase, ~220-240V, 50Hz | | | | | | | |
| Connectable capacity class | kW | | 5.0 | 6.3 | 8.0 | 10.0 | 12.5 | 14.0 | 20.0 | 25.0 | 40.0 | 50.0 |
| Capacity | Cooling | kW | 5.6 (5.1-5.9) | 6.3 (6.0-7.1) | 8 (7.2-9.0) | 10 (9.1-11.1) | 12.5 (11.2-13.2) | 14 (13.3-18.0) | 22.4 (18.1-23.7) | 25 (23.8-28.0) | 40 (28.1-44.7) | 50.4 (44.8-50.4) |
| | Heating | kW | 6.3 (5.7-6.7) | 7.1 (6.8-8.0) | 9 (8.1-10.0) | 11.2 (10.1-12.4) | 14 (12.5-15.0) | 16 (15.1-20.0) | 25 (20.1-26.5) | 28 (26.6-31.5) | 45 (31.6-49.9) | 56.5 (50.0-56.5) |
| Airflow Rate(Reference value) | m³/h | | 1,060 | 1,200 | 1,520 | 1,600 | 2,000 | 2,240 | 3,560 | 4,000 | 6,400 | 8,000 |
| Dimensions (H×W×D) | mm | | 160 × 220 × 90 | | | | | | | | (160 × 220 × 90)× 2 |
| Weight | kg | | 2 | | | | | | | | 2 × 2 |
| Connection pipe diameter(Liquid) | mm | | Ø9.52 | | | | | | Ø12.70 | | |

| EEV unit | | UTY-VDGX |
|---|---|---|
| Power source | | Single-phase, ~220-240V, 50Hz |
| Dimensions (H×W×D) | mm | 400 × 400 × 120 |
| Weight | kg | 10 |

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   Voltage : 230 [V].

# AIRSTAGE™ OPTION

# Auto Louver Grille Kit (Option)

**Models**
**UTD-GXTA-W**
**UTD-GXTB-W**
**UTD-GXTC-W**

Closed louver

Opened louver
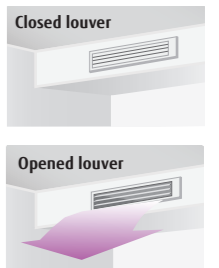
## Feature

### Flexible Control

● **Operation with indoor unit**
Auto Louver can be operated by synchronizing remote controller of indoor unit.

● **UP and Down auto swing**
• Auto airflow direction and auto swing
• 4 steps selectable

● **Auto-closing louver**
When operation of indoor unit is stopped, the louver will automatically close.

Duct type

Auto Louver Grille

Wired Remote Controller

Wireles Remote Controller

### Dimensions

W2

Fitting Flame
Grille

H1    H2

W1    D1  D2
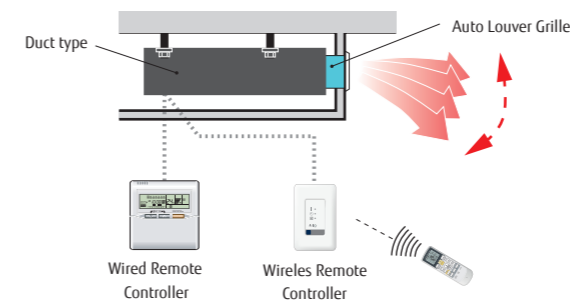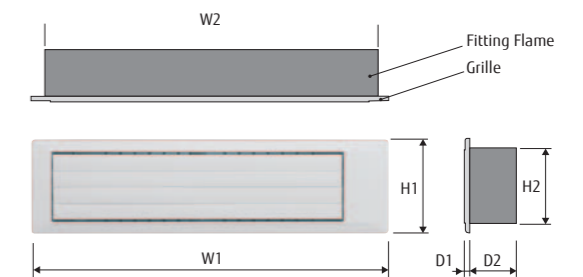
Unit: mm

| Model Name | W1 | W2 | H1 | H2 | D1 | D2 |
|---|---|---|---|---|---|---|
| UTD-GXTA-W | 683 | 645 | | | | |
| UTD-GXTB-W | 883 | 845 | 180 | 148 | 9 | 84 |
| UTD-GXTC-W | 1,083 | 1,045 | | | | |

## Specifications

| Model name | | | UTD-GXTA-W | UTD-GXTB-W | UTD-GXTC-W |
|---|---|---|---|---|---|
| Applicable Indoor Unit | | | ARXD07/09/12/14GALH<br>ARXD07/09/12/14GATH<br>ARXK07/09/12/14GCLH<br>ARXK07/09/12/14GALH | ARXD18GALH<br>ARXD18GATH<br>ARXK18GCLH<br>ARXK18GALH | ARXD24GALH<br>ARXD24GATH<br>ARXK24GCLH<br>ARXK24GALH |
| Power source | | | Connecting with Control box of indoor unit | | |
| Fixing of Auto Louver Grille | | | Screw fixing to Flange or Square Duct | | |
| Extension Square Duct Limit | | | 1.0m (Max. duct length between indoor unit and Grille) | | |
| Net Dimension<br>(H x W x D) | | mm<br>(inch) | 180x683x(84+9)<br>[7-3/32 x 26-7/8 x (3-5/16+11/32)] | 180 x 883 x (84+9)<br>[7-3/32 x 34-3/4 x (3-5/16+11/32)] | 180 x 1083 x (84+9)<br>[7-3/32 x 42-5/8 x (3-5/16+11/32)] |
| Weight | Net | kg<br>(lb.) | 2.0 (4.4) | 2.5 (5.6) | 3.0 (6.7) |
| | Gross | | 3.0 (6.7) | 3.5 (7.8) | 4.0 (8.9) |
| Color | | | White | | |
| Louver Motor | | | Stepping Motor | | |
| Accessories | | | Fitting Flame, etc. | | |
| Operation<br>Range | Cooling | °C (°F) | 18 to 32 (64 to 90) | | |
| | | % RH | 80% or less | | |
| | Heating | °C (°F) | 16 to 30 (60 to 88) | | |

*: The Auto Louver Grille Kit can also be installed to ARXD07/09/12/14/18/24LATH revision code B models.
Please refer to the Design & Technical manual for "revision code * details.

# OPTIONAL PARTS LIST

## Controllers / Interface

| | | Indoor unit | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cassette | | | Duct | | | | | | | Ceiling / Floor | Ceiling | Wall Mounted | | |
| | | 4-way Compact | 4-way (slim) | 4-way (Large) | Mini (With drain pump) | Mini (Without drain pump) | Slim (With drain pump) | Medium Static Pressure | High Static Pressure | | | | | — | EEV external | — |
| Type | | AUXB 07/09/12/14/18/24GALH AUXB 07/09/12/14/18/24GATH | AUXD 18/24 GALH AUXD 18/24 GATH | AUXA 18/24/30/34/36/45/54GALH AUXA 30/36/45/54 GATH | ARXK 07/09/12/14/18/24GCLH | ARXK 07/09/12/14/18/24GALH | ARXD 07/09/12/14/18/24GALH ARXD 07/09/12/14/18/24GATH | ARXA 24/30/36/45 GBLH ARXA 24/30/36/45 GBTH | ARXC 36/72/90 GBTH ARXC 96 GATH | ARXC 45/60/72/90 GATH | ABHA 12/14/18/24 GATH | ABHA 30/36/45/54 GATH | ASHA 07/09/12/14 GACH ASHA 07/09/12/14 GATH | ASHE 07/09/12/14 GACH | ASHA 18/24/30 GACH ASHA 18/24/30 GATH |

### Controllers

| Type | Part |
|---|---|
| Wired Remote Controller | UTY-RNRGZ2 |
| | UTY-RLRG |
| Simple Remote Controller | UTY-RSRG, UTY-RHRG, UTY-RSKG, UTY-RHKG |
| Wireless Remote Controller | UTY-LNHG |
| Group Remote Controller | UTY-CGGG + UTY-VGGXZ1 |
| Central Remote Controller | UTY-DCGG |
| Touch Panel Controller | UTY-DTGGZ1 |
| System Controller, System Controller Lite | UTY-APGXZ1, UTY-ALGXZ1 |

### Interface

| Type | Part |
|---|---|
| BACnet Gateway | UTY-ABGXZ1, UTY-VBGX |
| Network Convertor for LonWorks | UTY-VLGX |
| MODBUS Convertor | UTY-VMGX |
| MODBUS Interface | FJ-RC-MBS-1 / FJ-RC-MBS-1 / FJ-RC-MBS-1 (ARXC45/60/72/90GATH only) / FJ-RC-MBS-1 |
| KNX Convertor | UTY-VKGX |
| KNX Interface | FJ-RC-KNX-1i / FJ-RC-KNX-1i / FJ-RC-KNX-1i (ARXC45/60/72/90GATH only) / FJ-RC-KNX-1i |
| Wireless LAN Interface | FJ-RC-WIFI-1 / FJ-RC-WIFI-1 / FJ-RC-WIFI-1 (ARXC45/60/72/90GATH only) / FJ-RC-WIFI-1 |
| External Switch Controller | UTY-TERX |
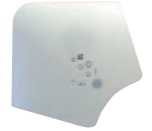
## Others

| | | Indoor unit | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cassette | | | Duct | | | | | | | Ceiling / Floor | Ceiling | Wall Mounted | | |
| | | 4-way Compact | 4-way (slim) | 4-way (Large) | Mini (With drain pump) | Mini (Without drain pump) | Slim (With drain pump) | Medium Static Pressure | High Static Pressure | | | | | — | EEV external | — |
| Type | | AUXB 07/09/12/14/18/24GALH AUXB 07/09/12/14/18/24GATH | AUXD 18/24 GALH AUXD 18/24 GATH | AUXA 18/24/30/34/36/45/54GALH AUXA 30/36/45/54 GATH | ARXK 07/09/12/14/18/24GCLH | ARXK 07/09/12/14/18/24GALH | ARXD 07/09/12/14/18/24GALH ARXD 07/09/12/14/18/24GATH | ARXA 24/30/36/45 GBLH ARXA 24/30/36/45 GBTH | ARXC 36/72/90 GBTH ARXC 96 GATH | ARXC 45/60/72/90 GATH | ABHA 12/14/18/24 GATH | ABHA 30/36/45/54 GATH | ASHA 07/09/12/14 GACH ASHA 07/09/12/14 GATH | ASHE 07/09/12/14 GACH | ASHA 18/24/30 GACH ASHA 18/24/30 GATH |

### Others

| Type | Part |
|---|---|
| IR Receiver Unit | UTY-LRHGB1 / UTB-YWC |
| Remote Sensor Unit | New amenity space can be offered by installing the Remote sensor. / UTY-XSZX |
| Cassette Grille | UTG-UFGD-W |
| | UTG-UGGA-W |
| Auto Louver Grille Kit | UTD-GXTA-W UTD-GXTB-W(18) UTD-GXTC-W(24) |
| Long Life Filter | UTD-LF25NA / UTD-LF60KA (36 / 45 / 60) |
| Flange | UTD-SF045T UTD-RF204 / UTD-RF204 |
| Drain Pump Unit | UTZ-PX1NBA / UTR-DPB24T |
| Wide Panel | UTG-AKXA-W UTG-AGYA-W |
| Panel Spacer | UTG-BKXA-W UTG-BGYA-W |
| Air Outlet Shutter Plate | For Compact Cassette / For Cassette / UTR-YDZB / UTR-YDZK |
| Insulation for High Humidity | For Compact Cassette type / Cassette type / UTZ-KXGC / UTZ-KXRA |

# OPTIONAL PARTS

## Controllers

### For Individual Control
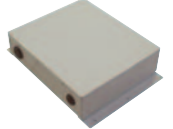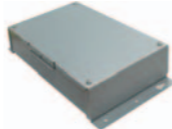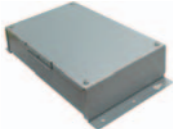
**Wired Remote Controller (Touch Panel )**
NEW UTY-RNRGZ2

**Wired Remote Controller**
UTY-RLRG

**Simple Remote Controller**
NEW UTY-RSRG
With operation mode

**Simple Remote Controller**
NEW UTY-RHRG
Without operation mode

**Wireless Remote Controller**
UTY-LNHG

**IR Receiver Unit**
UTB-YWC
For All Duct types except Large Airflow Duct

**IR Receiver Unit**
UTY-LRHGB1
For Cassette type

### For Centralized Control
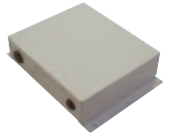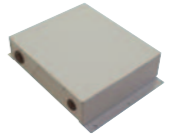
**Group Remote Controller**
UTY-CGGG

**Central Remote Controller**
UTY-DCGG

**Touch Panel Controller**
NEW UTY-DTGGZ1

Option
UTY-PTGXA

**System Controller Lite** Software
NEW UTY-ALGXZ1

Option
UTY-PLGXR2
UTY-PLGXA2
UTY-PLGXE2
UTY-PLGXX2

**System Controller** Software
NEW UTY-APGXZ1

Option
UTY-PEGXZ1

## Convertors / Adaptors

### For External device
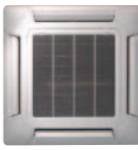
**BACnet® Gateway** Software
NEW UTY-ABGXZ1

WHITE-USB-KEY
(Software Protection Key)

**BACnet® Gateway** Hardware
NEW UTY-VBGX

**Network Convertor**
for LONWORKS®
UTY-VLGX

**MODBUS® Convertor**
for VRF
UTY-VMGX

**MODBUS® Interface**
FJ-RC-MBS-1

**KNX® Convertor**
for VRF
NEW UTY-VKGX

**KNX® Interface**
FJ-RC-KNX-1i

**Wireless LAN Interface**
FJ-RC-WIFI-1

### For System expansion

**Network Convertor**
for single split
UTY-VTGX
DC power supply type

**Network Convertor**
for single split
UTY-VTGXV
AC power supply type

**Network Convertor**
for Group Remote Controller
UTY-VGGXZ1

**External Switch Controller**
NEW UTY-TERX

**Signal Amplifier**
UTY-VSGXZ1

## Panels

### For Cassette type
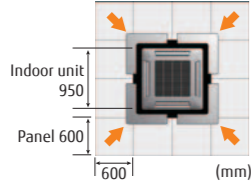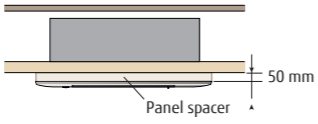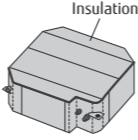
**Cassette Grille**
UTG-UFGC-W
For Compact Cassette type

**Cassette Grille**
UTG-UGGA-W
For Cassette type

# OPTIONAL PARTS
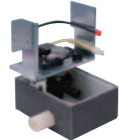
## For Duct type

**Flange (Round)**
UTD-RF204

**For Medium Static Pressure Duct type / Ceiling type**

**Flange (Square)**
UTD-SF045T

**For Medium Static Pressure Duct type**

**Remote Sensor Unit**
UTY-XSZX

**For All Duct type**

New amenity space can be offered by installing the Remote sensor.

**Long-Life Filter**
UTD-LF25NA

**For Medium Static Pressure Duct type**

UTD-LF60KA

**For High Static Pressure Duct type**

**Auto Louver Grille Kit**
UTD-GXTA-W (for ARXD07/09/12/14, ARXK07/09/12/14)
UTD-GXTB-W (for ARXD18, ARXK18)
UTD-GXTC-W (for ARXD24, ARXK24)

**For Slim Duct type / Mini Duct type**

**Drain Pump Unit**
UTZ-PX1NBA

**For Medium Static Pressure Duct type**

## For Cassette type
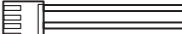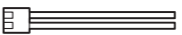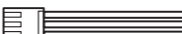
**Wide Panel**
UTG-AKXA-W

**For Cassette type**

Indoor unit 950
Panel 600
600 (mm)

**Panel Spacer**
UTG-BGYA-W

**For Cassette type**

50 mm
Panel spacer

**Insulation Kit for High Humidity**
UTZ-KXRA **For Cassette type**
UTZ-KXGC **For Compact Cassette type**

Insulation Kit

**Air Outlet Shutter Plate**
UTR-YDZB

**For Compact Cassette type**

Shuts the air outlet when only using as 3 blow out.

**Air Outlet Shutter Plate**
UTR-YDZK

**For Cassette type**

Shuts the air outlet when only using as 3 blow out.

## For Ceiling type

**Drain Pump Unit**
UTR-DPB24T

**For Ceiling type**

## Others

### Communication system: External Connect Kit

**For Indoor unit**

UTY-XWZXZ7
UTY-XWZXZB
UTY-XWZXZC

UTY-XWZXZD
UTY-XWZXZE

**For Outdoor unit**

UTY-XWZXZ6
UTY-XWZXZ9
UTY-XWZXZF

**For Central Remote Controller**

UTY-XWZXZ7
UTY-XWZXZ8
UTY-XWZXZA

**For Touch Panel Controller**

UTY-XWZXZA

### External Input and Output Function/External Connect Kit/Communication Kit

| | | Indoor unit | | | | | Outdoor unit | | Controller | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | Cassette | Duct | | | | V-III Tropical | V-II Tropical | Central Remote Controller | Touch Panel Controller |
| Type | | 4-way Compact, 4-way, | Mini Slim (With drain pump), Medium Static Pressure, High Static Pressure | Ceiling / Floor | Ceiling | Wall Mounted, Wall Mounted EEV external | AJH 072/090/108/ 126/144/162 LALBH | AJH 072/090/126 LNLAH | UTY-DCGG | UTY-DTGGZ1 |
| Input Function | Operation / Stop | | ● UTY-XWZXZD ○ UTY-XWZXZB | | | | | | | |
| | All On / All Off | | | | | | | | ● UTY-XWZXZ7 ○ UTY-XWZXZ8 | ● *2 ○ *2 |
| | Batch Stop | | | | | | ● UTY-XWZXZ6 | | | |
| | Forced Stop | | ● UTY-XWZXZD ○ UTY-XWZXZB | | | | | | | |
| | Emergency Stop | | ● UTY-XWZXZD ○ UTY-XWZXZB | | | | ● UTY-XWZXZ6 | | ● UTY-XWZXZ7 ○ UTY-XWZXZ8 | ● *2 ○ *2 |
| | Forced Thermostat off | | ● UTY-XWZXZE ○ UTY-XWZXZ7 | | | | | | | |
| | Low Noise Mode Operation | | | | | | ● UTY-XWZXZ6 | | | |
| | Cooling/ Heating Priority | | | | | | ● UTY-XWZXZ6 | | | |
| | Outdoor Unit Operation Peak Control | | | | | | ● UTY-XWZXZ6 | | | |
| | Power Usage Information from Electricity Meter | | | | | | ● UTY-XWZXZF | | | ● *2 ○ *2 |
| Output | Operation Status | | ● UTY-XWZXZC | | | | ○ UTY-XWZXZ6 | | | ○ UTY-XWZXZA |
| | Error Status | | ● UTY-XWZXZC | | | | ○ UTY-XWZXZ6 | | | ○ UTY-XWZXZA |
| | Indoor Unit Fun Operation Status | | ● UTY-XWZXZC | | | | | | | |
| | Auxiliary Heater Output | ● UTY-XWZXZC | | | | | | | | |
| | Base Heater | | | | | | ● UTY-XWZXZ9 | | | |

*2: Touch Panel Controller has these functions for Dry contact and Apply voltage, however, above External Connect Kit is not necessary because Touch Panel Controller has an external input terminal block.

● : Dry Contact     ○ : Apply Voltage
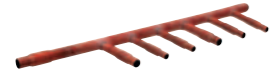
# OPTIONAL PARTS

## Connection Units

### Separation Tube

| UTP-AX054A | | UTP-AX090A | |
|---|---|---|---|
| Gas Pipe | Liquid Pipe | Gas Pipe | Liquid Pipe |

| UTP-AX180A | | UTP-AX567A | |
|---|---|---|---|
| Gas Pipe | Liquid Pipe | Gas Pipe | Liquid Pipe |

**UTP-LX180A**

**For DX-Kit**

### Header

| UTR-H0906L / UTR-H1806L | | UTR-H0908L / UTR-H1808L | |
|---|---|---|---|
| Gas Pipe | Liquid Pipe | Gas Pipe | Liquid Pipe |

### Outdoor Unit Branch Kit

| UTP-CX567A | |
|---|---|
| Gas Pipe | Liquid Pipe |

### EV Kit

Model code ≦ 09 : UTR-EV09XB
Model code ≧ 12 : UTR-EV14XB

**For Compact Wall Mounted type**

## Specifications

### Separation Tube

| Model name | UTP-AX054A | UTP-AX090A | UTP-AX180A | UTP-AX567A |
|---|---|---|---|---|
| Total cooling capacity of indoor unit (kW) | 19.6 or less | 28.0 or less | 28.1 to 56.0 | 56.1 or more |

### Header

| Model name | 3-6 Branches | UTR-H0906L | UTR-H1806L |
|---|---|---|---|
| | 3-8 Branches | UTR-H0908L | UTR-H1808L |
| Total cooling capacity of indoor unit (kW) | | 28.0 or less | 28.1 to 56.0 |

### Outdoor unit Branch kit

| Model name | | UTP-CX567A |
|---|---|---|
| Number of Outdoor unit | 2 outdoor units | 1 |
| | 3 outdoor units | 2 |

### EV Kit

| Model name | UTR-EV09XB | UTR-EV14XB |
|---|---|---|
| Application Model | ASHE07GACH ASHE09GA.CH | ASHE12GACH ASHE14GACH |

# ABOUT US

Since we began our air conditioning business in 1971,
our products have been popular around the world
and we continue to improve them.

OUR HISTORY

GLOBAL NETWORK

HIGH QUALITY DEVELOPMENT & PRODUCTION FACILITIES

PROJECT REFERENCE

# OUR HISTORY

**Overseas Air Conditioning Business since 1971**
**VRF Business since 2001**

FUJITSU GENERAL's VRF AIRSTAGE™ Series has been developed based on our long-term air-conditioning technology know-how and was first provided 14 years ago.
We have offered a series of products from large homes to large-scale buildings to meet the various market needs.

NEW

**AIRSTAGE J-III** TROPICAL
Tropical spec model
High efficiency and compact design model
4HP to 6HP / Heat pump

**1936**
Established as Yaou Shouten Ltd.

**1971**
Air conditioner exports to Middle East.

**2001**
10HP / Heat recovery & Heat pump
*AIRSTAGE S*

**2003**
10HP / Heat recovery 8,10HP / Heat pump & Cooling
*AIRSTAGE S*

**2004**
Small VRF series is released. 6HP / Heat pump
*AIRSTAGE J*

**2012**
High efficiency and Compact design model 8 to 48HP / Heat Recovery
*AIRSTAGE VR-II*

**2013**
Tropical spec model
Extensive lineup from 8HP to 42HP in 2HP increment / Heat pump
*AIRSTAGE V-II* TROPICAL

**2014**
High efficiency and compact design model 4HP to 6HP / Heat pump
*AIRSTAGE J-IIS*

**2007**
8 to 42HP / Heat pump
*AIRSTAGE V*

**2009**
High efficiency and Compact design model
Extensive lineup from 8HP to 48HP in 2HP increment / Heat pump
*AIRSTAGE V-II*

**2011**
High efficiency and small capacity model 4HP to 6HP / Heat pump
*AIRSTAGE J-II*

**2015**
High efficiency and large capacity model.
Extensive lineup from 8HP to 54HP in 2HP increment / Heat pump
*AIRSTAGE V-III*

**2016**
High efficiency and small capacity model 4HP to 6HP / Heat pump
*AIRSTAGE J-III*

**2016**
Tropical spec model
Extensive lineup from 8HP to 54HP in 2HP increment / Heat pump
*AIRSTAGE V-III* TROPICAL

**AIRSTAGE J-IIIL**
High efficiency and compact design model 10HP to 12HP / Heat pump

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AIRSTAGE™ History

**1936** Established as Yaou Shouten Ltd.

**2001-2011**

**2012-2016**

**2017**

**Certification Acquisition of**

# ISO14001

1998 : Fujitsu General (Shanghai) Co.,Ltd.
1999 : Fujitsu General (Thailand) co.,Ltd.
2002 : FGA (Thailand) Co.,Ltd.
2006 : Fujitsu General Central Air-conditioner (Wuxi) co.,Ltd.

**New Product Initiatives**
Fujitsu introduced inverter technology which used R410A refrigerant.

Refrigerant **R410A**

**RoHS Compliant**
Restriction of Hazardous Substances (ROHS) is an EU directive on the restriction of the use of certain hazardous substances in all consumer electrical and electronic equipment.

✓RoHS COMPLIANT

**DC Inverter Compressors**
Use of 100% inverter driven DC compressors.

ALL INVERTER

# GLOBAL NETWORK

Fujitsu General's air conditioning business has acquired a major share of the overseas market.
We have many production and sales facilities overseas, and we continue to develop and sell products
that are accepted around the world by their "easy-to-use and environmentally-friendly technology".

- Fujitsu General Air Conditioning (UK) Limited
- Fujitsu General (U.K.) Co., Limited

- Fujitsu General (Euro) GmbH

- Fujitsu General Central Air-conditioner (Wuxi) Co., Ltd.

- F.G.L.S Electric Co., Ltd.

- **Air conditioner solution center
  "THE AIRSTAGE" in Manhattan, New York**
- Fujitsu General America, Inc.

- Fujitsu General Limited
  — **R&D Center**

- Fujitsu General Orient International
  Electronics Sales (Shanghai) Co., Ltd.

- Fujitsu General (Shanghai) Co., Ltd.
  — **R&D Center**

- Fujitsu General (Taiwan) Co., Ltd.

- Fujitsu General Do Brasil Ltda.

- Fujitsu General (Aust.)
  Pty Limited

- Fujitsu General
  New Zealand
  Limited

**11** Overseas
Sales Companies **&**

**6** Overseas
Manufacturing Companies

**3** R&D Center

- ■ • Head Office
- ■ • Sales Companies
- ■ • Manufacturing Companies
- ■ • R&D Center

- Fujitsu General
  (Asia) Pte. Ltd.

- Fujitsu General
  (Middle East) FZE

- Fujitsu General (Thailand) Co., Ltd.
- Fujitsu General Engineering (Thailand) Co., Ltd.
  — **R&D Center**
- FGA (Thailand) Co., Ltd.
- TCFG Compressor (Thailand) Co., Ltd.

Fujitsu General (Shanghai) Co., Ltd.

F.G.L.S. Electric Co., Ltd.

Fujitsu General Central Air-conditioner
(Wuxi) Co., Ltd.

FGA (Thailand) Co., Ltd.

Fujitsu General (Thailand) Co., Ltd.
Fujitsu General Engineering (Thailand) Co., Ltd.

TCFG Compressor (Thailand) Co.,Ltd.

**R&D Center in Fujitsu General(Shanghai)**

**R&D Center in Fujitsu General Engineering(Thailand)**
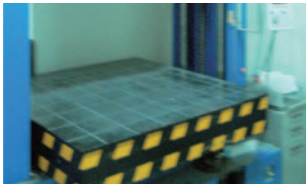
**JAPAN Head Office
R&D Center and 60 m Height Difference
Testing Tower**

FUJITSU GENERAL

FGL

# HIGH QUALITY DEVELOPMENT & PRODUCTION    FACILITIES

Fujitsu General is one of Japan's leading manufacturers with an R&D Center in Japan.
We provide customers with the highest quality and performance using these facilities.

## Advanced Research Facility and Equipment

**Performance Testing**

**Air Volume Measurement Room**
Measure air volumes of the air conditioners from compact RAC models to VRF.

**Calorimeter**
Measure the cooling/heating capacity by measuring the inlet and outlet temperatures, humidity, and air volume of the air conditioner.

**Silent Room**
Measure the operating sounds of air conditioners with the sound reflection-proof walls and ceiling.

**Reliability Testing**

**Constant Temperature Room**
Check on the product performance in cooling/heating operation under the various temperature and humidity conditions.

**Practical Test Room**
Check on whether the air conditioners performance under the actual house conditions is sustainable.

**Shower Test Room**
Check on whether the electrical box of the outdoor unit is protected by rain waters with typhoon like wind.

**Transportation & Handling**

**Compressibility testing**

**Vibration testing**

## Testing Laboratory

**Fujitsu General EMC Laboratory Limited**

**Practical Test Room**
Check on whether the air conditioners performance under the actual house conditions is sustainable.
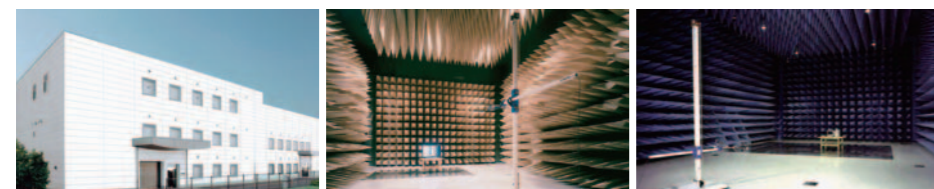
## ACQUISITION OF ISO 9001 AND ISO 14001

Each of overseas production bases (5 companies) has completed the acquisition of ISO 9001 and ISO 14001 individually.
In 2012, overseas sales bases (11 companies) acquired the certification of ISO 14001.

■ ISO 9001
■ ISO 14001
( ) Number of companies

**Europe**
Sales subsidiary (3)

**North America**
Sales subsidiary (1)

**Asia**
• Sales subsidiary (3)
• Manufacturing subsidiary (5)

**Middle East**
Sales subsidiary (1)

**Japan**
• Head office
• Manufacturing subsidiary (2)

**South America**
Sales subsidiary (1)

**Oceania**
Sales subsidiary (2)

## High Product Quality Assurance

All Fujitsu General factories have acquired ISO 9001, and have built a quality control system common around the world. High quality products are offered to all over the world based on stringent quality inspections.

**Receiving inspection**
Parts procurement requires a supplier's test report. European regulation RoHS inspection is also performed by special test department in-house. Total number inspection is performed especially on main parts to remove defectives.

**Stringent product quality inspection**
Stringent quality inspection is carried out at all production processes. High quality is maintained by stringent checks by inspectors and repetitive inspection.

**Parts & Material**

**Receiving inspections**
• Balancer inspection
• RoHS inspection
• Parts visual inspection
• Parts specifications inspection

**Assembly**

**Product quality inspections**
• Pressure resistance inspection
• Primary leak inspection
• Assembly visual inspection
• Heat run inspection
• Secondary leak inspection
• Insulation resistance inspection
• Withstand voltage inspection
• Abnormal sound inspection
• Insulation resistance inspection
• Withstand voltage inspection
• Completed product visual inspection

**Packing**

**Completed product inspection**
• Performance inspection
• Sampling inspection
• Visual inspection
• Water injection inspection
• Vibration drop test

**Shipping**

# PROJECT REFERENCE

Our product is popular because of its high quality, energy saving, and easy installation, and so has been installed in a wide range of building types including high-rise office buildings, stores, hotels, public facilities, schools, hospitals and residential.

## LIGHT COMMERCIAL

Office in Europe

Shop in Europe

Hotel in U.S.A.

Restaurant in Middle East

Shop in Oceania

Fujitsu General's Products has been installed in
### over 50 countries worldwide.

## COMMERCIAL

Office in Europe

Office in china

Factory in U.S.A.

## RESIDENTIAL

Residential in Europe

Residential in Middle East

Residential in Europe

Residential in Oceania

# SUPPORT

Our know-how supports you not only during the product release but also from guiding implementation to product maintenance.

AIRSTAGE™ SUPPORT

AIRSTAGE™ / RAC SUPPORT TOOL

QUICK SERVICE & MAINTENANCE

SERVICE TOOL

WEB MONITORING TOOL

| Category | Information Material | | | | | | | | | | | | Tool | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Product Sales Training Material | Product Technical Training Material | Product news | Brochures | Feature Promotion Movie | Operating Manual | Design & Technical Manual | Certificate Data | 2D CAD Data | 3D CAD (Revit) Data | Installation Manual | Service Manual | Design Simulator (RAC, PAC, VRF) | CFD Simulation | Service Tool / Web Monitoring Tool | Mobile Technician |
| Product Training | ● | ● | | | | | | | | | | | | | | |
| Product Information Seek | | | ● | ● | ● | ● | ● | | | | | | | | | |
| Technical Information Seek | | | | | | | ● | ● | | | | | | | | |
| Model Selection | | | | | | | ● | | | | | | ● | | | |
| Design | | | | | | | ● | | ● | ● | | | | | | |
| Verification | | | | | | | | | | | | | | ● | | |
| Installation | | | | | | | ● | | | | ● | | | | | |
| After sales and Service | | | | | | | | | | | | ● | | | ● | ● |

# AIRSTAGE™ SUPPORT

Fujitsu General provides a variety of product and technical information to engineers and consultants, and also conducts new product research and design support activities.
We provide a wide range of support to maintain high quality from design to installation.

## Training

Fujitsu General has many training facilities around the world that regularly conduct specialized product, technical, and service training. These research facilities also support the development of people with high technical capability.

**Features**
• Designing AIRSTAGE™ Systems
• Control System on-site training
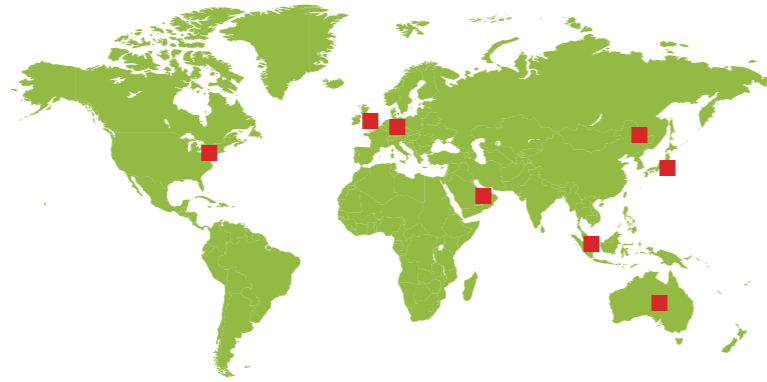



Head Office Training Center: Japan


Europe Training Center: Germany


Europe Training Center: U.K.


America Training Center: U.S.A.


China Training Center: China


Middle East Training Center: UAE


Asia Training Center: Singapore


Oceania Training Center: Australia

## Technical information

We provide information and tools that are useful for air conditioning system design, such as unit performance data and tools that make model selection and estimation easy.

**Features**
• Design & Technical Manual
• Model Selection & Estimation
• Certificate Data
• 2D/3D CAD Data
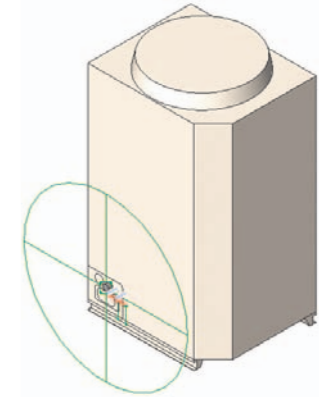


## Product information

New product information is provided in the form of documents and movies for every new model released. These can be downloaded from a private section of our website. To access this website, please contact your Fujitsu representative.

**Features**
• Product News
• Brochures & All Manuals
• Feature Promotion Movie



## Technical support

Technical support is provided at every stage from design to installation to assist in providing the most suitable air conditioning solution.

**Features**
• CFD Simulation
• Guide line
• Commissioning Support
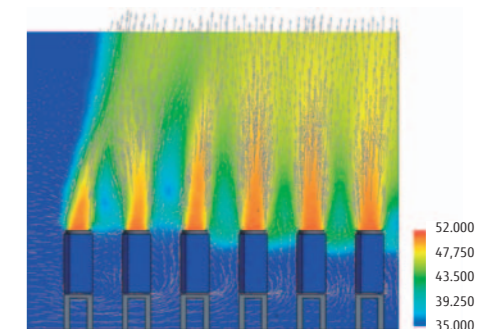

CFD Simulation


Commissioning Support

# AIRSTAGE™ / RAC SUPPORT TOOL

Put the charts and pens away and design your projects on your computer with ease using the Design Simulator.
Everything from selecting indoor and outdoor units, allocating controls and optional parts to designing the piping and wiring systems is made easier using the program's built-in features.
Once your project is designed take advantage of the Export functions to easily get materials lists, product specifications, refrigerant calculations and more - it'll even export to Word, Excel, or Acrobat formats, and group the relevant CAD data for your project.

## Design Simulator

### Automatically create model selection information

- Each unit can be automatically set by entering the required performance, type, and temperature conditions for each indoor unit and then dragging and dropping into the outdoor unit.
- Piping and wiring diagrams can be created automatically and it is easy to set branches, grouping, and options.
- The additional refrigerant charging amount is automatically calculated when the pipe length is entered.
- It is also easy to set the remote controller groups, central controller and converters.
- The equipment list including the equipment information is created automatically.
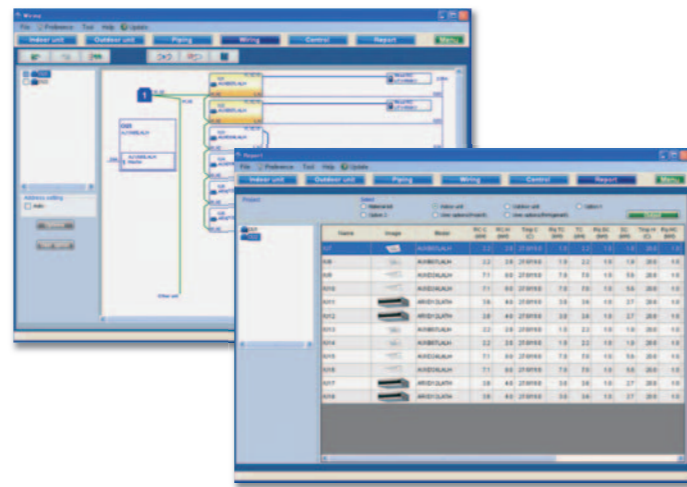
### Output the format that matches the application

The information specific to your project can be exported in a number of industry standard file formats.

- Word format (rtf)(doc)
- Excel format (csv)
- Acrobat format (pdf)
- Auto CAD format (DXF)
- 2D Data (DXF)
- 3D Data (RFA)
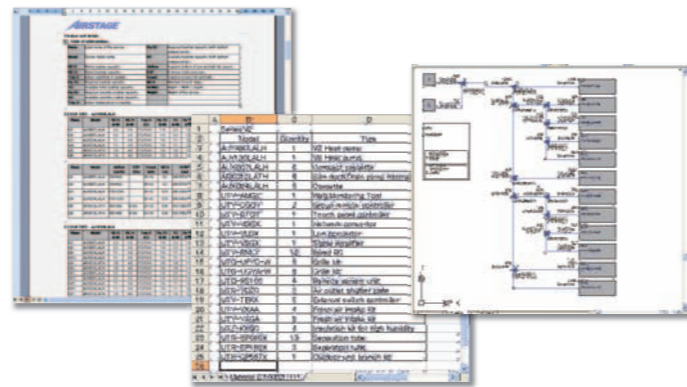
### Update your Design Simulator

Database can be easily updated online using AutoUpdate function through FTP.

Information on the latest history update is demanded.

Information on the latest history update replied.

User side(PC)　　　FTP server side (PC)
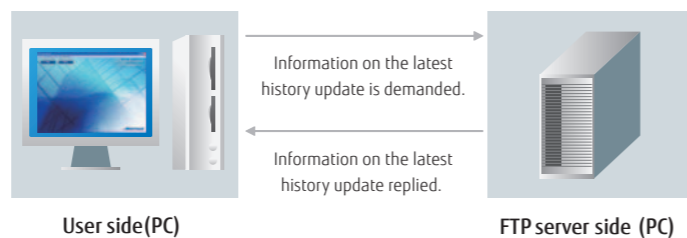
## BIM  Building Information Modeling

Fujitsu General provides the Building Information Modeling (BIM) object models and contents for our VRF system and some products to the architect, designer and contractor using Autodesk® Revit® technology from our Website and Autodesk® Seek Website, etc.

### 3D and 2D product data

We provide 3D data that closely resemble the actual product appearance. 2D CAD design operations are supported and 2D display is also provided. The data can also be output in other formats, such as DXF and DWG, which are used by other design CAD.
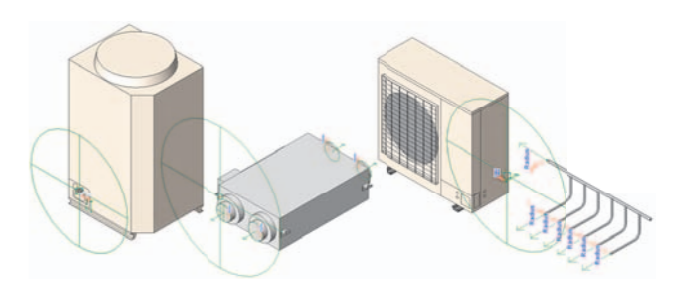
### Installation limitation

The equipment installation limitation range is shown. Installation requirements, such as distance from the wall, is automatically displayed to make it easy to produce highly reliable layout designs.
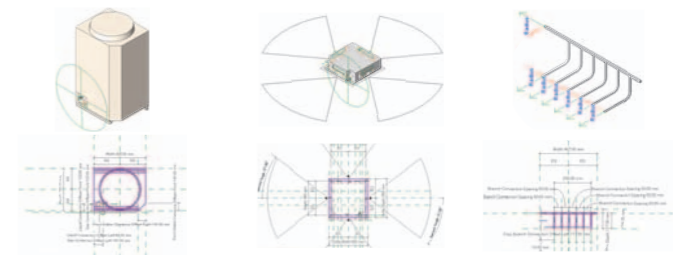
### Update your Design Simulator

Other information, such as symbols showing the airflow direction that are required for installation drawings, is built in and can be automatically reflected in 2D drawings. Installation drawings can be created easily.
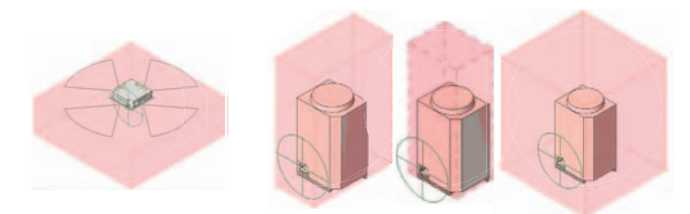
### Product specifications &  link information

Contains the basic information required for air conditioner design, including unit size, capacity, input power, noise, and airflow rate. These data can be procured from the Fujitsu General  Website, Design Simulator, and Autodesk® Seek Website.
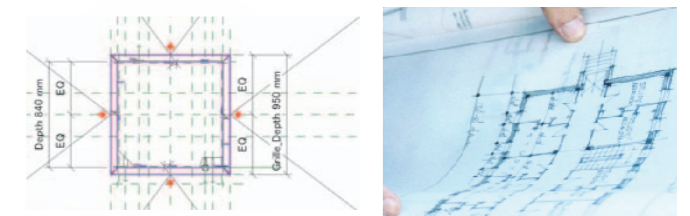
# QUICK SERVICE & MAINTENANCE

If trouble should occur in a unit or system, abundant support tools such as trouble code display at the product, Service Tool that allows checking of the detailed status of the entire system, and remote monitoring tool that uses the internet, etc. support quick service and maintenance anywhere and at any time.

## Mobile troubleshooting tool for iPhone & Android

We will release an App of troubleshooting tool for iPhone, iPod touch and other Apple products. This application is a trouble-shooting tool for Fujitsu General air conditioner (RAC/PAC, VRF)

It helps you to check air conditioner condition. Error code check, Troubleshooting, and Sensor check are available.

Mobile Technician  FREE

## Easy maintenance & monitoring

### Design for easy maintenance

Design for easy maintenance
The air conditioner operating status and trouble status of the detailed are displayed at the 7-segment of the outdoor unit PCB or on the remote controller screen.
The unit status can be checked rapidly and quick response is also possible.

• Operation mode status
• Discharge temperature/Pressure status
• Compressor operation indication
• Address/Type/Number of outdoor unit
• Error code.

7-segment LED

Wired Remote Controller (Touch panel)
Error status/Error history

Wired Remote Controller
System number
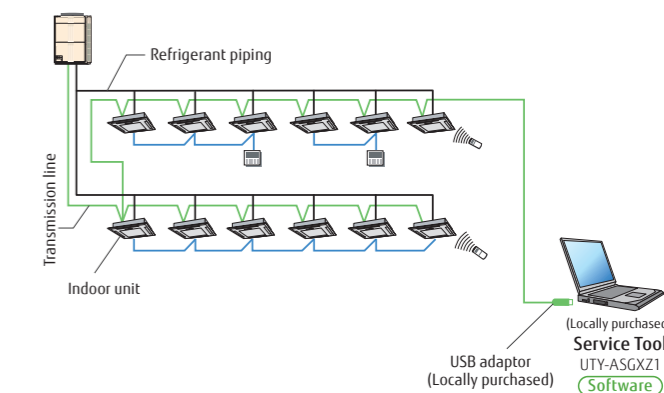001: Controller
002: Indoor unit  Error code
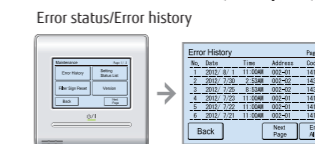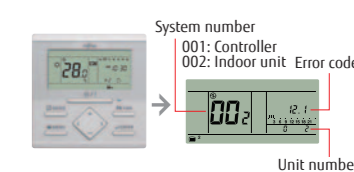
Unit number

### Error diagnosis by Service Tool

Error diagnosis by Service Tool
The unit status details for VRF system can be checked on PC screen by connecting Service Tool.
Quick countermeasures can be taken

• Operation status/control
• Monitoring operating condition
• Monitoring sensor data
• Indication of trend graph
• Error history
• Indication of refrigerant circuit diagram
• Automatic operation check for refrigeration cycle

Refrigerant piping

Transmission line

Indoor unit

(Locally purchased)
Service Tool
USB adaptor          UTY-ASGXZ1
(Locally purchased)    Software

### Remote monitoring

VRF system operating status and trouble status details can be constantly and remotely monitored over the Internet, etc.
Rapid cooperation with the service personnel are also possible.

Internet
or
Public Telephone
Line

Remote Monitoring
Web
Monitoring
Tool
UTY-AMGXZ1
Software
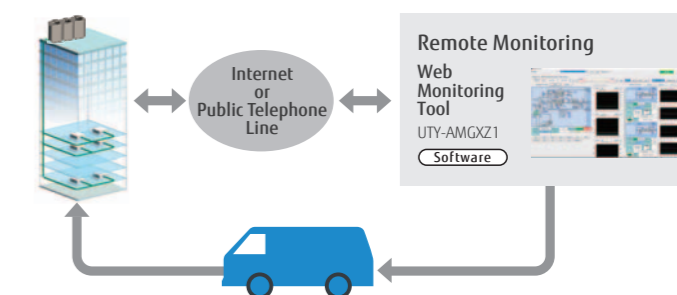
# SERVICE TOOL

**Extensive monitoring and analysis functions for installation and maintenance**
• 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 network 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 (locally purchased)

* The saved data can be displayed offline. However, the data saved by the following model cannot be displayed.
• UTR-YSTB/UTR-YSTC (Service Tool)
• UTR-YMSA (Web Monitoring Tool)

## Automatic operation check for refrigeration cycle

After product installation, operation check can be performed automatically. Self-diagnosis function automatically judges whether each sensor value is normal, so the operation check work can be reduced. The diagnosis can also be output as a report.

Whether each sensor value is normal is judged automatically.

☑ Discharge temperature normal value OK
☑ Super heat volume normal value OK
☑ High pressure pipe normal value OK
☑ Low pressure pipe normal value OK
...etc.

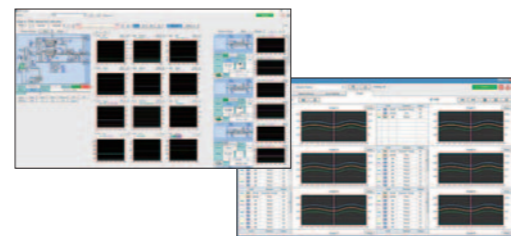[Note] Use only as a guide and judge for yourself finally.

## Remote technical support & maintenance

On-site check screen can be shared with the skilled person in a distant place. When visiting for troubleshooting on site, operation status can be shared in real time and get assistance easily. Online chat function helps to support on site staff.

Distant place

An error occurs at local system.

⚠ ERROR

Technical support

Installer / Administrator
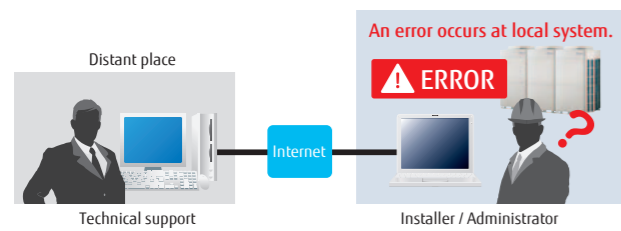
## Various trend graph display

Previously, only 3 kinds of each sensor value can be displayed. However, multiple graphs can be displayed in new Service Tool depending on the situation. The refrigeration cycle can be checked in detail.

### Personal computer system requirements

| | UTY-ASGXZ1 |
|---|---|
| Operating system | • Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1<br>• Microsoft® Windows® 8.1 Pro (32-bit or 64-bit)<br>• Microsoft® Windows® 10 Pro (32-bit or 64-bit) |
| CPU | 1 GHz or higher |
| Memory | • 1 GB or more (for Windows Vista®, Windows® 7 [32-bit], Windows® 8.1 [32-bit], and Windows® 10 [32-bit])<br>• 2 GB or more (for Windows® 7 [64-bit], Windows® 8.1 [64-bit], and Windows® 10 [64-bit]) |
| HDD | 40 GB or more of free space |
| Display | 1366 x 768 or higher resolution |
| Interface | • 2 USB ports<br>  - 1 USB port is required for software protection key connection<br>  - 1 USB port is required for Echelon® U10 USB Network Interface |
| Software | Internet Explorer® 11 or Microsoft Edge / Adobe® Reader® 9.0 or later |

• Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

<Packing list>

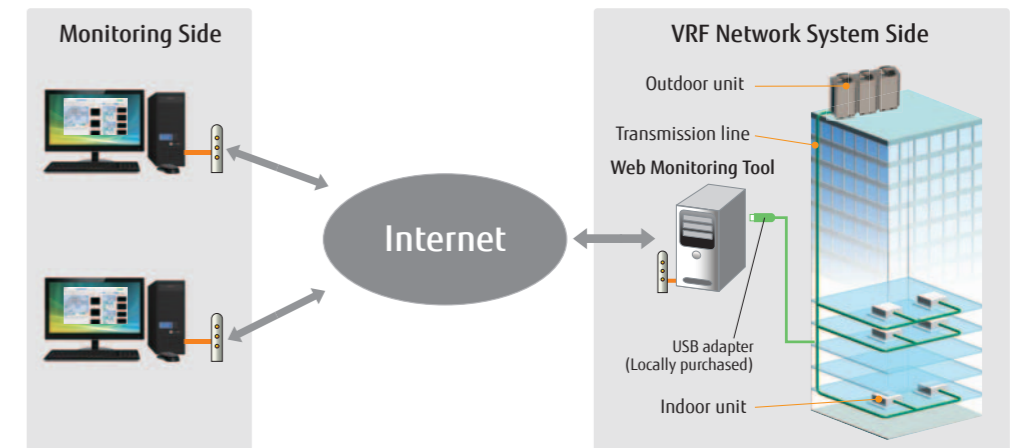| Name and shape | Quantity | Application |
|---|---|---|
| WHITE-USB-KEY<br>(Software protection key) | 1 | Software protection key to be connected to USB port on the Service Tool-installed PC.<br>These products run only on a PC with WibuKey. |

# WEB MONITORING TOOL

**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.
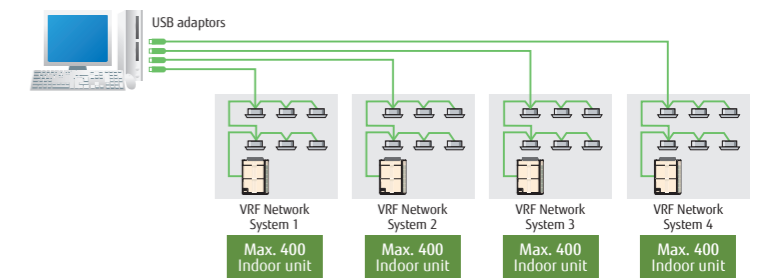
*1: Use of internet mail system required.

## Web Monitoring System

Monitoring Side

VRF Network System Side

Outdoor unit
Transmission line
Web Monitoring Tool

Internet

USB adapter (Locally purchased)

Indoor unit

## Support 4 VRF network systems

USB adaptor (max. 4 adaptors per PC) permit, monitoring of up to 1,600 indoor units.
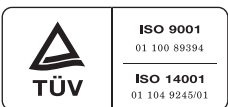Suitable for large-scale buildings or hotels.

USB adaptors

VRF Network System 1 — Max. 400 Indoor unit
VRF Network System 2 — Max. 400 Indoor unit
VRF Network System 3 — Max. 400 Indoor unit
VRF Network System 4 — Max. 400 Indoor unit

### Personal computer system requirements

| | UTY-AMGXZ1 |
|---|---|
| Operating system | • Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1<br>• Microsoft® Windows® 8.1 Pro (32-bit or 64-bit)<br>• Microsoft® Windows® 10 Pro (32-bit or 64-bit) |
| CPU | 1 GHz or higher |
| Memory | • 1 GB or more (for Windows Vista®, Windows® 7 [32-bit], Windows® 8.1 [32-bit], and Windows® 10 [32-bit])<br>• 2 GB or more (for Windows® 7 [64-bit], Windows® 8.1 [64-bit], and Windows® 10 [64-bit]) |
| HDD | 40 GB or more of free space |
| Display | 1366 x 768 or higher resolution |
| Interface | • USB port (for 10 USB Network Interface Max.4, Software protection key)<br>• Either of the following interface is required for remote connection:<br>  - Internet using LAN: Ethernet port is required |
| Software | Internet Explorer® 11 or Microsoft Edge / Adobe® Reader® 9.0 or later |

• Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

<Packing list>

| Name and shape | Quantity | Application |
|---|---|---|
| WHITE-USB-KEY<br>(Software protection key) | 1 | Software protection key to be connected to USB port on the Service Tool-installed PC.<br>These products run only on a PC with WibuKey. |

**ISO 9001**
01 100 89394

**ISO 14001**
01 104 9245/01

TÜV

ISO 9001
Certified number: 01 100 89394

ISO 14001
Certified number: 01 104 9245/01

Fujitsu General (Thailand) Co., Ltd.

TÜV
CERT

DIN EN ISO 9001
Certificate: 01 100 79269

ISO 14001
BUREAU VERITAS
Certification

UKAS
MANAGEMENT
SYSTEMS

ISO 9001
Certified number: 01 100 79269

ISO 14001
Certified number: CNBJ311153-UK

Fujitsu General (Shanghai) Co., Ltd.

CNAS
MANAGEMENT SYSTEM

IAF

ISO 9001
Certified number: 15914Q10065R4M

ISO 14001
Certified number: 15912E10022R3M

Fujitsu General Central Air-conditioner (Wuxi) Co., Ltd.

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• For further details, please check with our authorised dealer.
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• Other company and product names mentioned herein may be registered trademarks, trademarks or trade names of their respective owners.

• Actual products' colors may be different from the colors shown in this printed material.

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http://www.fujitsu-general.com/