## **OGENERAL**





FUJITSU GENERAL LIMITED











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www.zagzoog.com

## **FUJITSU GENERAL LIMITED**

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## **FUJITSU GENERAL Way**

**Our Mission** 

## Living together for our future

Through innovation and technology, we deliver a brighter future with the peace of mind to our customers and societies around the world.

#### **Our Philosophy**

#### Act Spontaneously

We embrace new challenges by investing in ourselves for personal growth, and through continuous creativity with a spontaneous attitude.

#### Develop Our Team

We respect and value our people, and optimize their abilities through fostering culture and diversity, and utilizing a collaborative effort focused on communication.

#### Value Integrity

To achieve our goals, we always act with integrity and shared ethics.

THE REAL PROPERTY. THE REAL PROPERTY.

B H IS

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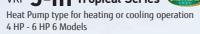
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#### VRF OUTDOOR UNITS

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#### VRF J-III Tropical Series

For **SMALL** BUILDING



- Single phase: 4 HP to 6 HP/3 models
   3 phase: 4 HP to 6 HP/3 models



#### VRF V- Tropical Series Production by order

Heat Pump Modular type for heating or cooling operation 8 HP - 48 HP 32 Models

- Space saving combination: 8 HP to 48 HP/21 models
- Energy efficiency combination: 20 HP to 42 HP/11 models

#### VRF INDOOR UNITS

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## **OUR HISTORY**

Overseas Air Conditioning Business since 1971 VRF Business since 2001

FUJITSU GENERAL's VRF 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.



#### For Commercial Use

10HP / Heat recovery & Heat pump

#### 2003

10HP / Heat recovery 8,10HP / Heat pump & Cooling



2007

8 to 42HP / Heat pump



2009

High efficiency and Compact design model Extensive lineup from 8HP to 48HP in 2HP increment / Heat pump



VRF **V-**

High efficiency and Compact design model 8 to 48HP / Heat Recovery



VRF VR-II

2013

Tropical spec model Extensive lineup from 8HP to 42HP in 2HP increment / Heat pump



VRF V-II

2015

High efficiency and large capacity model. Extensive lineup from 8HP to 54HP in 2HP increment / Heat pump



VRF **V-**

2016

Tropical spec model Extensive lineup from 8HP to 54HP in 2HP increment / Heat pump



VRF V-III



## For Residential & Light Commercial Use

2004

Small VRF Series is released. 6HP / Heat



High efficiency and small capacity model 4HP to 6HP / Heat pump

VRF V



VRF J-

2014

High efficiency and compact design model



VRF J-IIS

High efficiency and small capacity model



VRF J-

2017

Tropical spec model High efficiency and compact design model 4HP to 6HP / Heat pump



VRF J-III

2017

High efficiency and compact design model 10HP to 12HP / Heat pump



VRF J-IIIL

1936 Established as Yaou Shouten Ltd. - 2017

1936

Established as Yaou Shouten Ltd.

Air conditioner exports to Middle East.

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.



**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.



Use of 100% inverter driven DC compressors.

**DC Inverter Compressors** 



## **WORLDWIDE LOCATIONS**

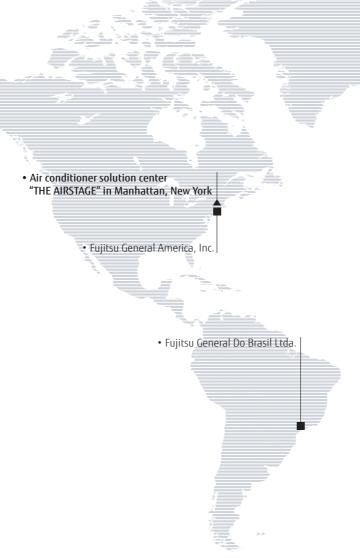
Under a system of five bases in Europe, the Middle East, Asia and Oceania, North and South America, and Japan, the company promotes Globalization from a worldwide perspective while emphasizing the actual conditions in each region.



JAPAN Head Office



Technology research building (Japan)



Overseas Sales Companies



Fujitsu General Sales & Trading (Shanghai) Co., Ltd.



Fujitsu General (Taiwan) Co., Ltd. (Taiwan)



Fujitsu General (EURO) GmbH Fujitsu General Air Conditioning Fujitsu General (Italia) S.p.A (UK) Ltd. (U.K.)



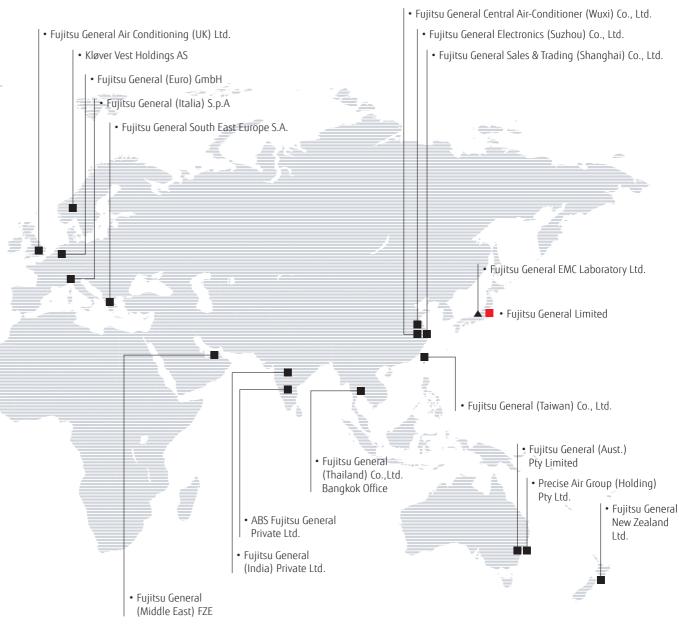
Fujitsu General (Thailand) Co.,Ltd. Fujitsu General Electronics (Suzhou) Co., Ltd.



Fujitsu General South East Europe S.A. (Greece)



Fujitsu General (India) Private Ltd. (India)





Fujitsu General (Aust.) Pty Ltd. (Australia)



Precise Air Group (Holding) Pty Ltd. (Australia)



Fujitsu General New Zealand Ltd. (New Zealand)



Fujitsu General (Middle East) FZE (U.A.E.)



ABS Fujitsu General Private Ltd. (India)



Fujitsu General Do Brasil Ltda. (Brasil)



Fujitsu General America, Inc. (U.S.A.)



Kløver Vest Holdings AS (Norway)



CENTER "THE AIRSTAGE" (U.S.A.)

## **GLOBAL BUSINESS ACTIVITIES**

We have been recognized for our activities in advertising, human resource development and customer service, as well as for our community-based social contribution activities in each region, winning numerous awards and achieving a high level of customer satisfaction.

#### North and South Americas







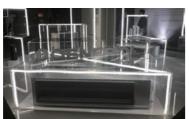


## Middle East









New product seminar in UAE

### Europe











## Asia











## Oceania







#### International authoritative design awards



The NEWS Dealer Design Awards



HVAC & PLUMBING) in Reader's Choice Awards "CLIMATIZACAO" division



TOP OF MIND 2016 First prize in Superbrands is the world's "MARCA DE EQUIPAMENTO DE AR-CONDICIONADO" category of of branding.



largest independent arbiter



The iF Product Design Award is given annually by iF International Forum Design GmbH for industrial products from around the world.



The Plus X Award is the world's largest innovation award for technology. sports and lifestyle.



reddot winner 2020

A product design competition that has been held since 1955. Products that win the award are given the "Red Dot" seal, a sign of international recognition of quality.



One of the famous design award in the world. Designs are judged on innovation and aesthetics, as well as their benefit to users, clients/brands, and society.



ProductReview.com.au's annual awards are selected from products and services that have been well-rated by the ProductReview community.



the 'Most Trusted Brand – Air Conditioning Category 5 Years



China State Engineering Luban



and is given once a year to items of outstanding design.

## PROJECT REFERENCES

# Introduced in over 50 countries worldwide

Highly popular for their excellent quality, energy efficiency, and ease of installation, Fujitsu General's products are installed in a wide range of buildings around the world, including high-rise office buildings, stores, hotels, public facilities, schools, hospitals, and residences.















- 1 Shop in Europe
- 2 Factory in Europe
- 3 School in Asia
- 4 Hospital in Asia
- 5 Office in Asia
- 6 Shop in Oceania7 Office in Oceania
- 8 School in the Middle East
- 9 Public facility in the United States









- 10 Public Square in Asia
- III Hotel in Asia
- 12 Hotel in Asia
- 13 Public facility in Asia
  14 Apartment in Oceania
- 15 Apartment in Oceania
- 16 Hotel in the Middle East
- 17 Hotel in the Middle East















- 18 Villa in the Africa
- PResidence in Oceania
  Residence in the United States
- 21 Villa in the Middle East





## **GLOBAL DEVELOPMENT & PRODUCTION BASES**

R&D centers are set up in five countries of Japan, Europe, Asia, China and North America in the world. We pursue the environmental property and comfort to meet each area needs.



#### Overseas manufacturing companies



Fujitsu General (Shanghai) Co., Ltd. (China)



F.G.L.S. Electric Co., Ltd. (China)



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



Fujitsu General Electronics Ltd. (Japan)



FGA (Thailand) Co., Ltd. (Thailand)



TCFG Compressor (Thailand) Co., Ltd. (Thailand)

## • Fujitsu General Air Conditioning R&D (Thailand) Co., Ltd.

- Fujitsu General (Thailand) Co., Ltd. Factory-2



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

Factory-2



Fujitsu General Electronics Ltd.

Fujitsu General Limited



Fujitsu General Air Conditioning R&D (Thailand) Co., Ltd. (Thailand)

difference testing tower (Japan)

JAPAN Head office, R&D center and 60 m height

## HIGH-QUALITY DEVELOPMENT & PRODUCTION

## Advanced Research Facilities and Equipment

#### Performance tests



#### Airflow measurement room

Measure the airflow of air conditioners, from compact room air conditioner models to variable refrigerant flow (VRF)



Measure the temperature, humidity, and airflow at the inlet and outlet of the air conditioner to evaluate its cooling and heating capacity.



#### Silent room

Measure the operating sounds of air conditioners on walls and ceilings with reduced sound reflection.

# **FACILITIES**

## of Japan's leading manufacturers with R&D centers in Japan. The

Fujitsu General is one

## research and development conducted in these facilities contributes to providing our customers with the highest quality and performance.

#### Reliability tests



Verify product performance in cooling and heating operations under various temperature and humidity conditions.



Check whether the performance of the air conditioner can be the actual housing environment.



Check if the electrical box of the outdoor unit is protected from sustained under the conditions of strong wind and rain, such as during a typhoon.

## **Product Quality Assurance**

Certification of ISO 9001

North America

Sales subsidiary (1

and ISO 14001

The Group's 5 overseas production

are individually certified with ISO

subsidiaries have been certified with

The Group's 11 overseas sales

subsidiaries

9001 and ISO 14001.

ISO 14001 since 2012.

All Fujitsu General plants are ISO 9001 certified and operate under a unified quality control system. We deliver to customers all over the world high-quality products that have passed stringent quality inspections.

#### Receiving inspection

We require all our parts suppliers to submit test reports to ensure that all parts we receive from them meet our quality standards. Our in-house test department inspects incoming parts to ensure their compliance with RoHS as required by the EU. We also conduct 100% inspection of main parts to prevent defective parts from making it to assembly lines.

#### Quality inspection of products

inspections in all production processes performed in our plants. To keep the quality of our products high, inspectors check their quality from start to finish on production lines.

## Receiving inspections analyze the workers' Assembly **Product quality inspections** · Withstand voltage testin · Finished products Packing Completed products individual inspection

Shipping

Vibration and drop

Sales subsidiaries (3)

Head office

• Manufacturing subsidiaries (2)

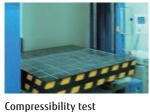
Operational check

The Middle East

Parts & Materials

Sales subsidiary (1)

#### Transportation and Handling Tests





Vibration test



## Testing laboratory

Fujitsu General EMC Laboratory Limited







#### 60-m Height Difference testing tower

Tests oil circulation in a compressor for

Technology research

in Japan Head office

buildina



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# **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.







## Target Property



#### **LIGHT COMMERCIAL**

For Small offices, Hotels, School, Shops and Restaurant 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.





# APARTMENT, VILLA

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

## **APARTMENT**





Medium Static Pressure Duct

## Small space air conditioning

#### Space saving

Slim duct type with 198 mm height. This can be installed in narrow ceiling space



Slim Duct



conditioning in a family room



## Small space air conditioning

Various ranges of low capacity indoor units to suit small space



Comfortable dining air conditioning with powerful airflow

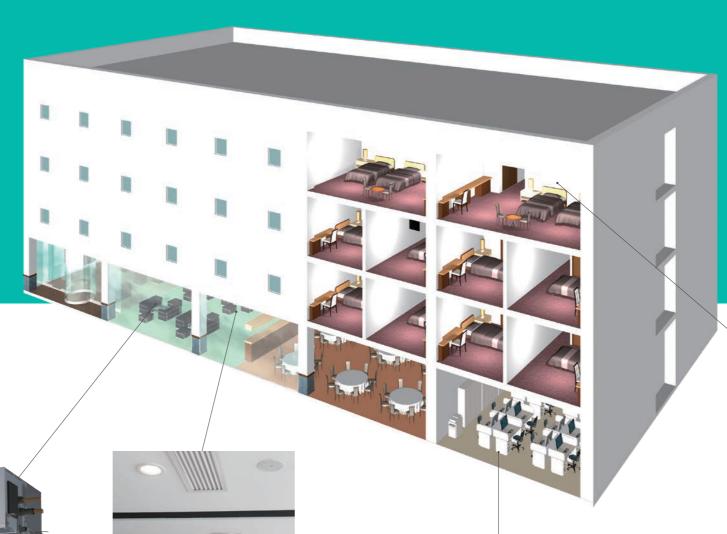


Large Wall Mounted

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# HOTELS

Fujitsu General provides perfect total air conditioning systems that take into account comfort, energy saving, external appearance, safety and easy installation for small low-rise hotels.



## Large space air conditioning in the reception and lobby

Ultra-large duct type single split system suitable for large spaces with high ceilings



## Simple Remote Controller with sophisticated design

Suitable for hotels or offices as it is easily operated with no complex functions.

Large LCD screen & simple operation buttons White colored backlight on monitor enable easy operation in dark.



## Ventilation of the whole hotel supported

Outdoor air processing is essential in hotel spaces with a high degree of airtightness. The DX Kit can link up with air conditioners to ensure sufficient

This system can be expanded.





## Centralized control of air conditioning in shared spaces

Air conditioning in shared spaces such as lobbies and hallways is controlled centrally. Temperature and operating conditions can be managed without the adjustment by guests.



## Guest room air conditioning with excellent comfort, energy saving and easy installation

#### Space saving

Slim duct type with 198 mm height. This can be installed in narrow ceiling space easily.





#### Card key switch available

Using the card key prevents you from forgetting to switch off the air conditioner.



Use of an external connect switch

#### Comfortable airflow that switches up and down air directions

The Auto Louver Grille Kit achieves comfortable airflow by adjusting the air direction.



Auto Louver Grille Kit

# **SCHOOL**

Fujitsu General provides the optimal number of connected indoor units for mid-sized educational institutions. The degree of freedom of the installation location selection is improved with a compact design that minimizes the installation area. Even one outdoor unit can cover the entire school building.



Central Remote Controller UTY-DCGGZ3

# Central remote controller with improved operability

Controls the temperature of each room easily, and manages and sets the operation control for a week. Energy-saving management by setting upper and lower temperature limits and operating prohibitions.



# Control and monitoring

You can operate the main unit from your desk. Non-administrators can also operate the air conditioners with a computer, smartphone or tablet PC.

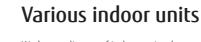


iOS, Android and/or Windows





Smartphone



Wall Mounted

Cassette Circular Flow

We have a lineup of indoor units that can also support complex applications – from normal classrooms to special classrooms and auditoriums. Air conditioners can be also added easily.



## Comfortable room air conditioning without airflow feeling

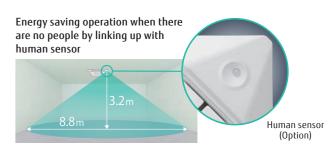
Circular Airflow Cassette blows out in all directions without temperature unevenness



Individual airflow direction control to prevent people from being exposed to airflow





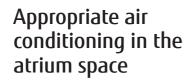


# RESTAURANT, SHOPS

Fujitsu General provides perfect total air conditioning systems that offer smooth support by tenant, by purpose and by customer visit frequency in shops and restaurants with multiple lighting and a high density of customers.

## **RESTAURANT**





Appropriate air conditioning of the high ceiling and glass-sided atrium space with a large duct system

High Static Pressure Duct





For ambiences with dim lightings

# Color variations by two panels

Both black and white panels are available for Cassette type. Black panel is suitable for the dark place such as a restaurant with atmosphere. White panel is usually used at bright areas such as offices. (Available to single split and VRF indoor units)





## Uniform temperature air conditioning

Achieve a comfortable air conditioning spread to every corner of the room by circular flow & wide vertical airflow.





#### Commercial

# LARGE BUILDING

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



## 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





## VRF **V-III** Tropical Series

#### 8 HP - 48 HP 32 Models

- Space saving combination: 8 HP to 48 HP/21 models
- Energy efficiency combination: 20 HP to 42 HP/ 11 models



# Centralized control of both air

conditioning and lighting

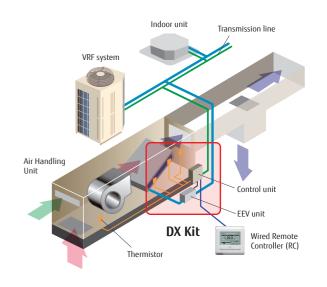
It is possible to perform centralized control to stop the operation of lighting and ventilation equipment in addition to air conditioner. This is useful in energy saving management over the whole building.



## VRF system Fujitsu General's DX Kit enable other manufacture's air handling

Ventilation(AHU) linked with

units (AHU) to be incorporated into a Fujitsu VRF system. Possible to control comfortable air conditioning and ventilation.



## Difference in height Up to 110 m

The height difference between the outdoor unit and the indoor unit is usually 50 m for the V-III Series, but by installing the pressure sensor kit it is possible to expand it

to 110 m.

(\*This product can be used connected only V-III tropical Series 1



Pressure Sensor Kit

## Unique Circular Flow design

New Cassette type realizes Circular Flow to blow large airflow in 360° direction by mounting high performance DC fan motor, new turbo fan and unique seamless airflow louver design.



Ø7 mm high density heat exchanger

High efficient turbo fan

Seamless airflow louver

# **VRF CORE TECHNOLOGY**

HIGH ENERGY EFFICIENCY
HIGH RELIABILITY
DESIGN FLEXIBILITY
MORE COMFORT
EASY INSTALLATION
EASY SERVICE & MAINTENANCE

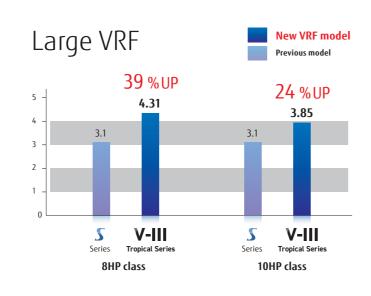


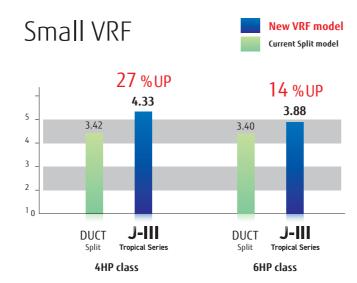


## Highly Energy Efficiency

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



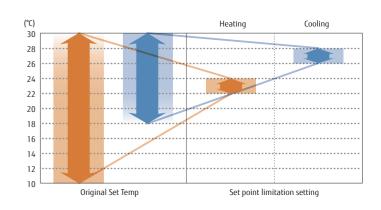




## Operation Performance is Efficiently Controlled.

## Room temperature set point limitation

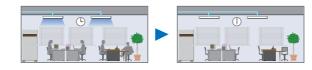
The minimum and maximum temperature ranges can be limited, which provide further energy saving while maintaining the comfort of the occupants.

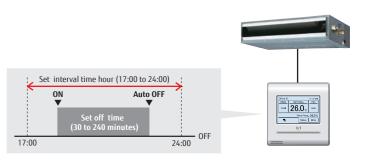


#### Auto-off timer

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.

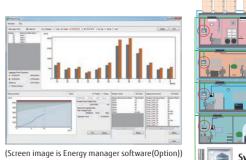


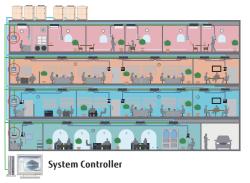


#### **Energy saving management**

A variety energy saving operations can be set and managed depending on the season, weather, and time period.

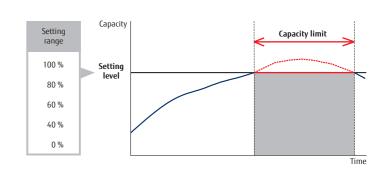
Excellent energy saving operation is performed by using System Controller.





#### **Capacity limit operation**

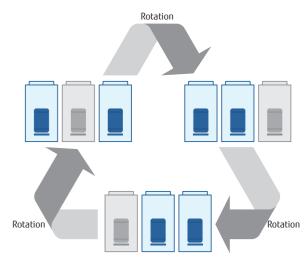
Operation capacity can be set in 5 steps for rated capability. The power consumption at peak is cut down and the maximum load is suppressed.





#### Life-extending operation

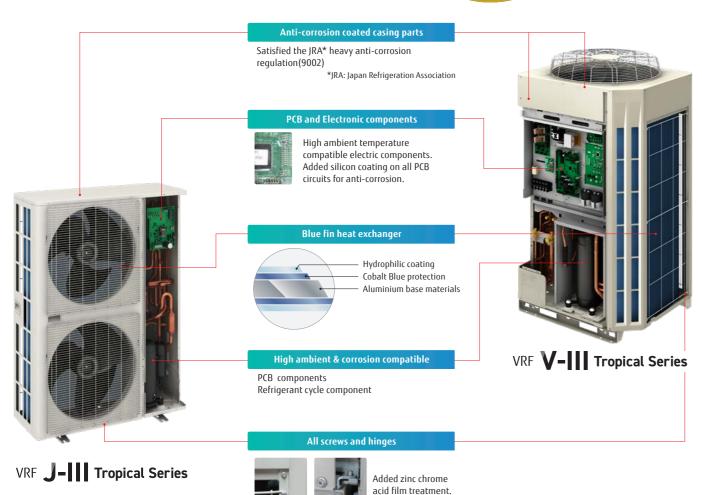
Outdoor unit rotational operation The compressor starting order is rotated so that the running time is shared.



The start and stop timings are alternated among connected compressors.

## Heavy anti-corrosion treatment design **Legisla**

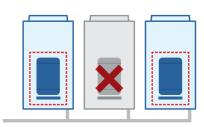




#### **Backup operation**

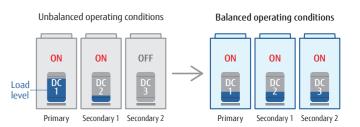
If one compressor fails, backup operation will be performed by the remaining compressors\*.

NOTE: Need to change the Outdoor unit setting in order to perform the Backup



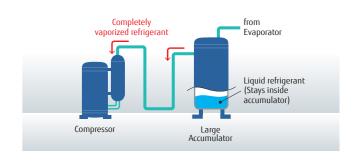
#### Advanced refrigerant control

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.



#### 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.



#### 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.

#### Oil Recovery operation

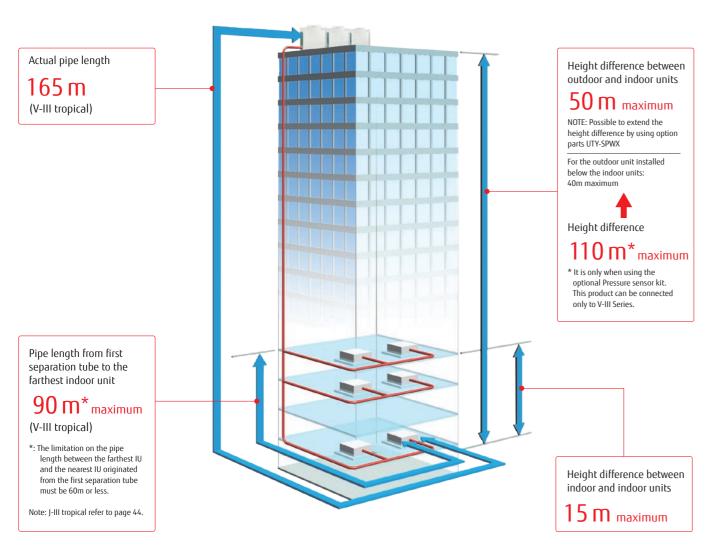
Periodic oil recovery operation is done automatically in order to feed back oil from the indoor unit to compressor.

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

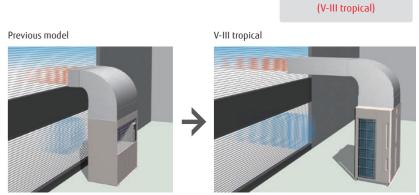
Total pipe length  $1,000\,$  m maximum



#### High static pressure

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

# Powerful discharge air prevents a short-circuit.



82 Pa

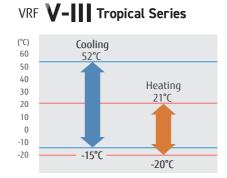
Large diameter fan and DC motor has been utilized allowing an external static pressure of 82Pa. This is approximately 2.6 times greater than the previous model.

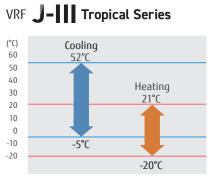
#### High capacity connection



### High ambient operation design 🏣

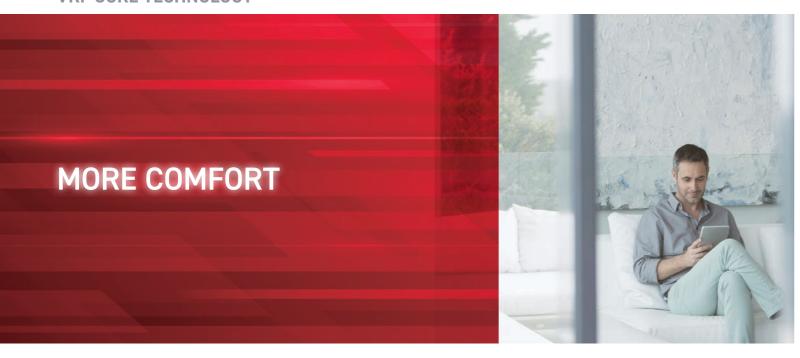
Installation in extreme temperature conditions is possible due to an increase in operational range.





<sup>\*.</sup> Note : When a multiple outdoor unit connection is used, operating range is from -5°C to 52°C in cooling.

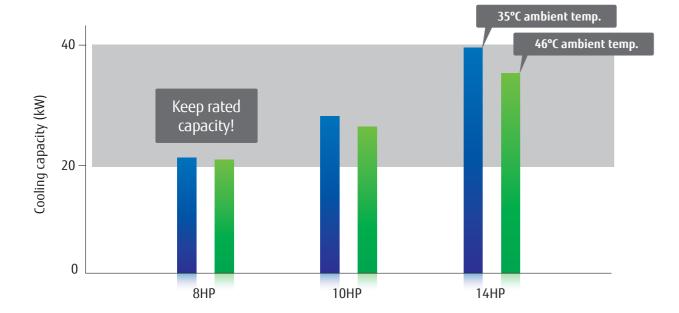
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## Powerful cooling capacity design Topical



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



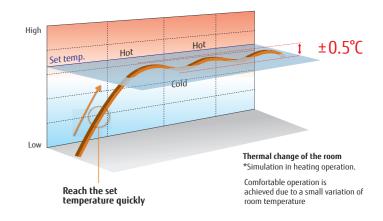
## Touch Panel Wired Remote Controller

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.



#### 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°C.

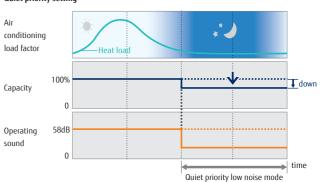


#### **Quiet operation**

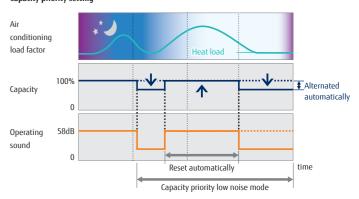
#### Low noise mode

Two low noise modes can be selected automatically by guiet 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



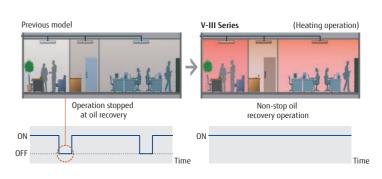
#### Capacity priority setting



#### 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.

\*: VRF VR-II Series is not available





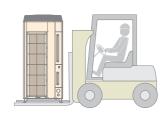
## Easily transported

#### A lifting strap can be hooked onto an outdoor unit

Design of outdoor unit allows for lifting straps to be used



#### Transportable by forklift The outdoor unit can be lifted and transported by forklift.

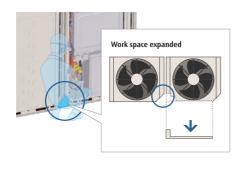


#### Fits into a small elevator.



## Easy access

The removable L-shaped front panel provides more room for installation and service work. Multiple installations can be performed easily and efficiently even in tight spaces.





Front access reduces installation intervals

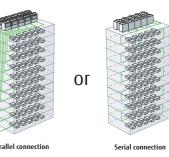
## Flexible piping connection

Piping and wiring can be accessed from the front, left, right, and



#### Simple wiring work

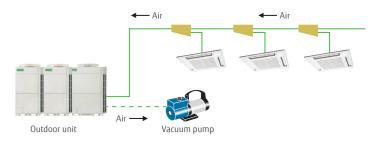
Installation of the wiring systems is made easier as the communication wiring can be installed continuously between the indoor and outdoor.



not available on a serially connected

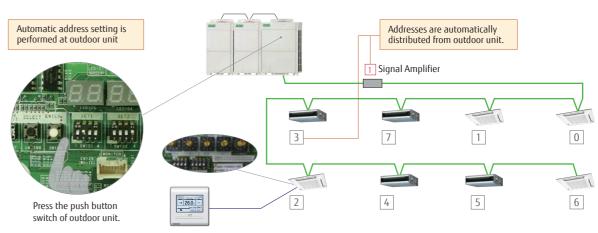
#### Easy evacuation - using vacuum mode function

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.

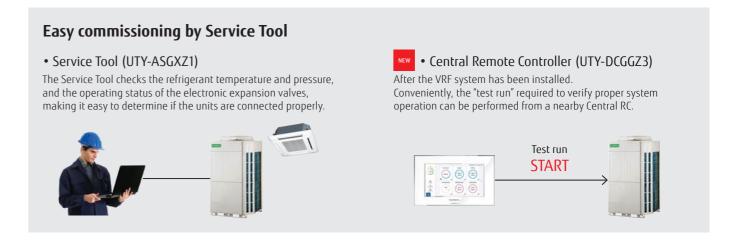


#### **Automatic address setting**

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



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



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## 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 selfdiagnostics.



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



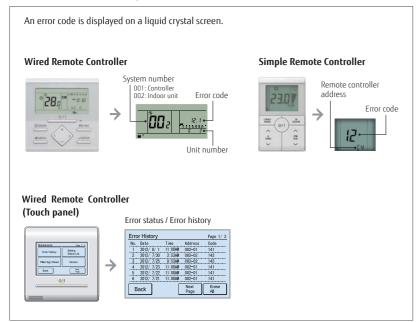
#### 7-segment LED

- Operation mode status
- Discharge temperature/Pressure status Compressor operation indication
- Address/type/number of outdoor unit

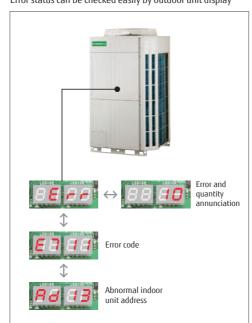
Movable PCB panel Easier for maintenance work behind the PCB



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



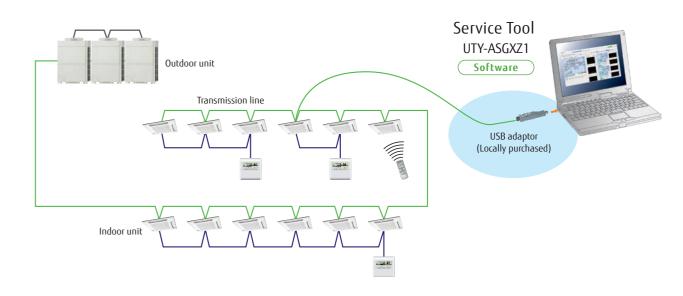
Error status can be checked easily by outdoor unit display



#### **Error diagnosis by Service Tool**

#### **Connection to Service Tool**

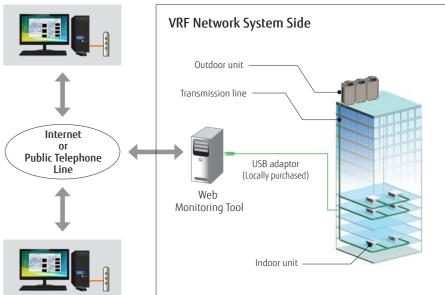
- Detail operation status and recent error history can be checked and analyzed by using the Service Tool.
- Last 5 min. operation memory can be also be recorded.



#### 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



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# **VRF OUTDOOR UNITS**

VRF LINE-UP
HEAT PUMP TYPE J-III TROPICAL Series
HEAT PUMP TYPE V-III TROPICAL Series



## **VRF LINE-UP**

Fujitsu General provides multi air conditioning systems for buildings VRF 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
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
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
VRF <b>_J-    T</b> ropical Serie:	High Efficiency (Single phase)	AJH040LBTAHN	AJH045LBTAHN	AJH054LBTAHN																					
VRF <b>J-   </b> Tropical Series Heat Pump	High Efficiency (3 phase)	AJH040LETAHN	AJH045LETAHN	AJH054LETAHN																					
VRF <b>V-    Tropical Series</b> Heat Pump	Space saving				AJS072LNTCH	AJS090LNTCH	AJS108LNTCH	AJS126LNTCH	AJS144LNTCH		AJS180LNTCH	AJS198LNTCH		AJS234LNTCH	AJS252LNTCHA	AJS270LNTCH		AJS306LNTCHA		AJS342LNTCHA	AJS360LNTCH	AJS378LNTCH			AJS432LNTCH
	High Efficiency								AJS144LNTCHH	AJS162LNTCHH	AJS180LNTCHH		AJS216LNTCHH	AJS234LNTCHH		AJS270LNTCHH				AJS342LNTCHH	AJS360LNTCHH	AJS378LNTCHH	AJS396LNTCHH	AJS414LNTCHH	



## 





## System Outline

#### **High Energy Efficiency**

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

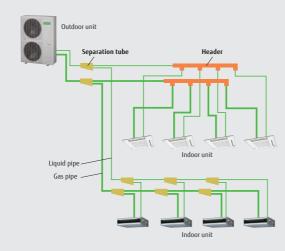
## Flexible systems for small- and medium-size buildings air conditioning

Space saving design and long piping design allow for flexible installation on the roofs or balconies of smalland medium-size buildings.

Multiple indoor units of various capacities and types can be connected.

#### System configuration example

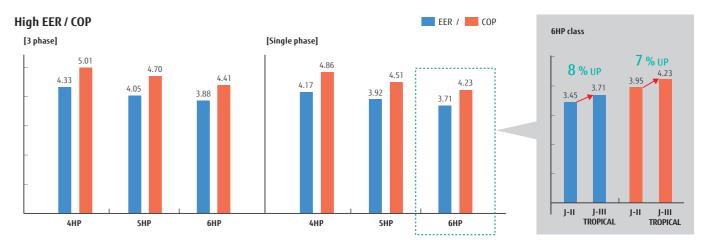
- This system is used for small and medium-sized buildings. 1 refrigerant system is used for each outdoor unit.
- Connection of multiple indoor units using separation tubes and headers.



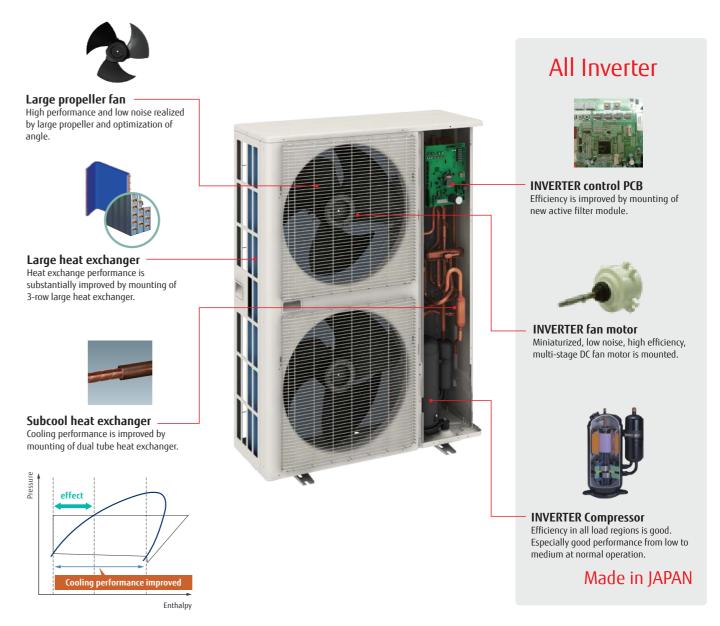
#### **Features**

#### **Energy efficiency**

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



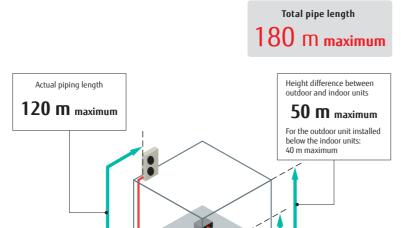
#### Advanced high efficiency technology



#### Long piping capability

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



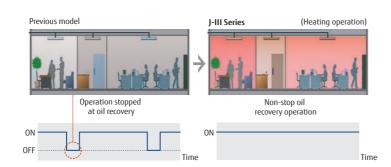


Piping length from first separation tube to the farthest indoor unit

40 m maximum

## 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.

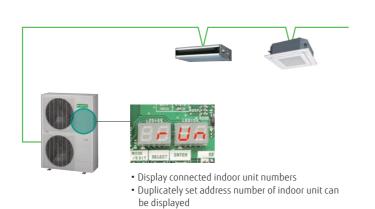


Height difference between

15 m maximum

#### **Easier Installation**

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



#### Specifications

						4							
Rating Capacity rar	nge	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 Connect	able Indoor Unit		1-7	1-8	1-9	1-7	1-8	1-9					
Power source			Sir	ngle phase, 220-240V, 60	)Hz		3 phase, 380-415V, 60Hz						
Tome: Source	Cooling(T1/T3)		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	kW	13.6	16.0	18.0	13.6	16.0	18.0					
Capacity	Cooling(T1/T3)	0. 1	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	Btu/h	46,000	54,500	61,000	46,000	54,500	61,000					
	Cooling(T1/T3)		2.90/3.47	3.57/3.77	4.18/3.92	2.79/3.30	3.46/3.57	3.99/3.71					
Input power	Heating	kW	2.80	3.55	4.26	2.71	3.40	4.08					
Maximum Connectable  Power source  Capacity  Connectable  Connectable	Cooling(T1/T3)		12.7/15.2	15.7/16.6	18.4/17.2	5.2/6.2	6.6/6.6	7.7/6.9					
Current	Heating	A	12.3	15.6	18.7	5.0	6.5	7.8					
EER	Cl:(T1/T2)	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					
EER	Cooling(T1/T3)	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					
COD	HN	W/W	4.86	4.51	4.23	5.01	4.70	4.41					
COP	Heating	Btu/h/W	16.45	15.35	14.30	17.00	16.00	14.95					
Air flow 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	Cooling	dB (A)	50	51	53	50	51	53					
level .	Heating	UB (A)	52	53	55	52	53	55					
	Height		1,334	1,334	1,334	1,334	1,334	1,334					
Net Dimensions	Width	mm	970	970	970	970	970	970					
	Depth	] [	370	370	370	370	370	370					
Net Weight		kg	120	120	120	120	120	120					
Refrigerant		Туре	R410A	R410A	R410A	R410A	R410A	R410A					
	Liquid	mm	9.52	9.52	9.52	9.52	9.52	9.52					
diameter	Gas	"""	15.88	15.88	19.05	15.88	15.88	19.05					
Operating range	Cooling	°CDB	-5 to 52	-5 to 52	-5 to 52	-5 to 52	-5 to 52	-5 to 52					
operacing range	Heating	1 (10)	-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: 7.5 m. Height difference between outdoor and indoor unit: 0 m.

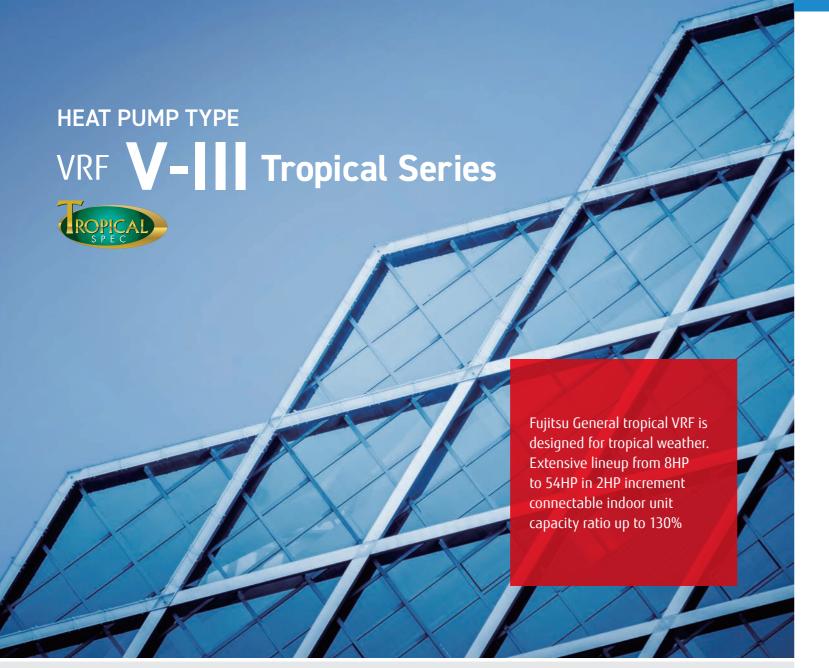
#### Dimensions

Models: AJH040LBTAHN / AJH045LBTAHN / AJH054LBTAHN / AJH040LETAHN / AJH045LETAHN / AJH054LETAHN

Terminal blocks (Pow Ø28 (Cable port) Ø28 (Cable port) Pipe port ï28 (Cable port) 65 Ø28 (Cable port)
Pipe port Detail A

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(Unit:mm)



## System Outline

## High ambient operation design

Possible to operate cooling up to 52°C outdoor temperature



## Powerful cooling capacity design

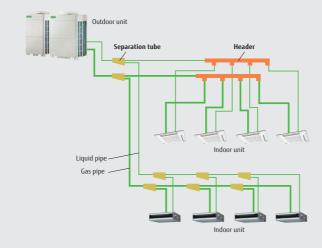
Keeping high cooling power at even high ambient temperature

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

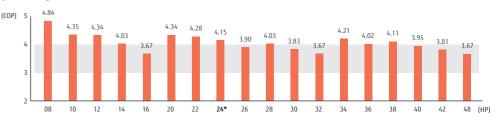


#### **Features**

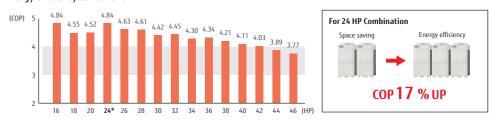
#### **Energy efficiency**

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.

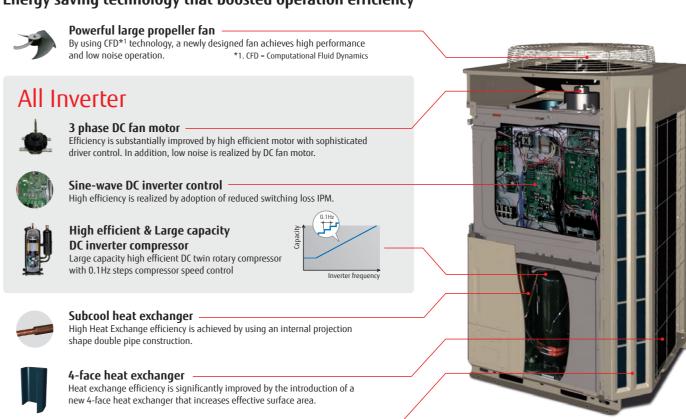
#### Space saving combination



#### Energy efficiency combination



#### Energy saving technology that boosted operation efficiency

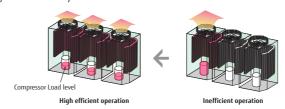


#### Advanced energy saving control

#### Multiple outdoor operation control

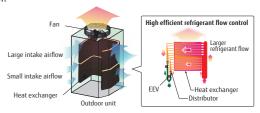
This control method operates all compressors at part load and distributes refrigerant to all heat exchangers to improve the overall system efficiency.

Front intake port (corner cut air inhaling structure)



#### 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.



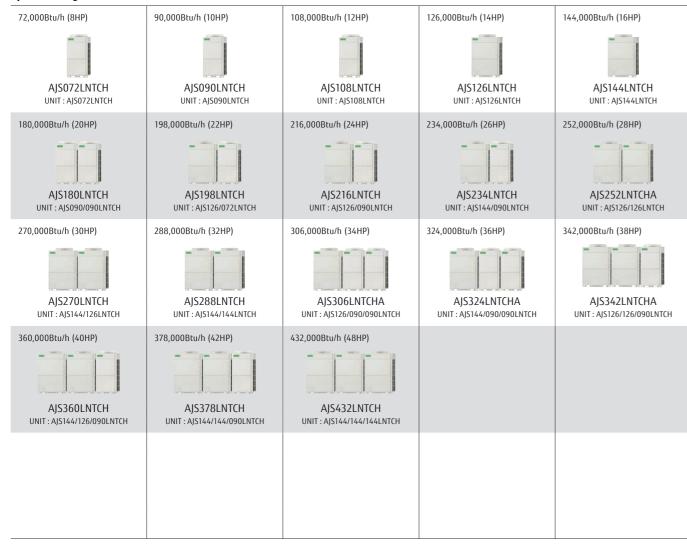
• Combinations other than the followings are not recommended.

## 8,10HP:AJS072LNTCH/AJS090LNTCH 12,14,16HP:AJS108LNTCH/AJS126LNTCH/AJS144LNTCH

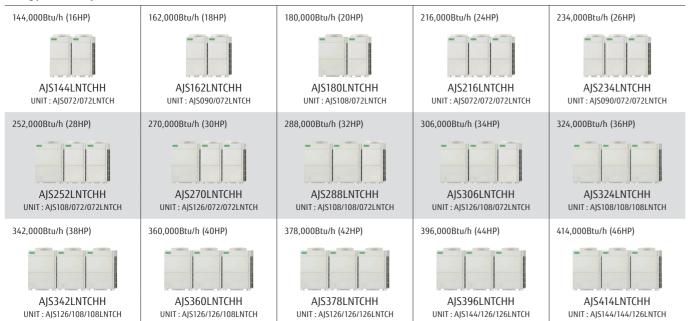
A C

## V-III Tropical Series Company

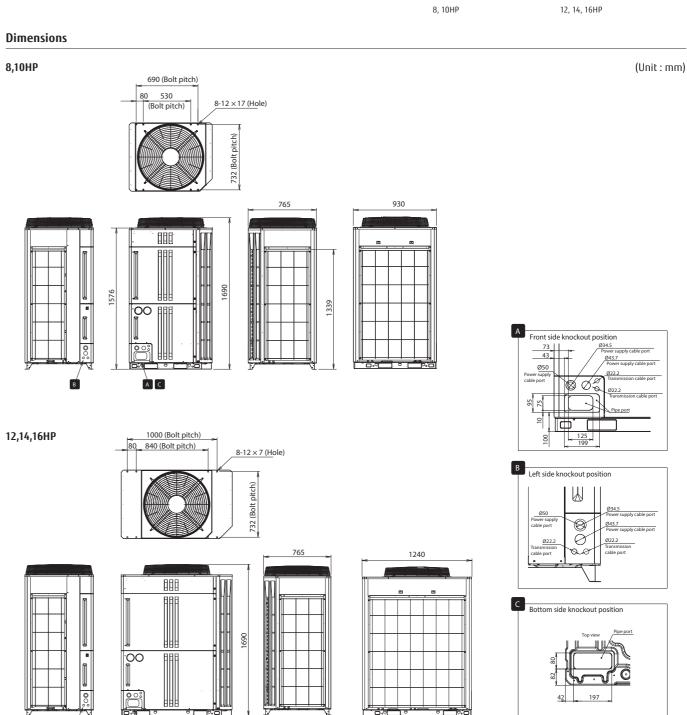
#### Space saving combinations



#### **Energy efficiency combinations**









#### **Space Saving Combination**

			HP	8	10	12	14	16	20	22	24	26	28	30	32	34	36	38	40	42	48
Rating Capac	ity range	L	Btu/h	72,000	90,000	108,000	126,000	144,000	180,000	198,000	216,000	234,000	252,000	270,000	288,000	306,000	324,000	342,000	360,000	378,000	432,000
			Ton	6.0	7.5	9.0	10.5	12.0	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0	31.5	36.0
Model name				AJS072LNTCH	AJS090LNTCH	AJS108LNTCH	AJS126LNTCH	AJS144LNTCH	AJS180LNTCH	AJS198LNTCH	AJS216LNTCH	AJS234LNTCH	AJS252LNTCHA	AJS270LNTCH	AJS288LNTCH	AJS306LNTCHA	AJS324LNTCHA	AJS342LNTCHA	AJS360LNTCH	AJS378LNTCH	AJS432LNTCH
Unit 1				AJS072LNTCH	AJS090LNTCH	AJS108LNTCH	AJS126LNTCH	AJS144LNTCH	AJS090LNTCH	AJS126LNTCH	AJS126LNTCH	AJS144LNTCH	AJS126LNTCH	AJS144LNTCH	AJS144LNTCH	AJS126LNTCH	AJS144LNTCH	AJS126LNTCH	AJS144LNTCH	AJS144LNTCH	AJS144LNTCH
Unit 2									AJS090LNTCH	AJS072LNTCH	AJS090LNTCH	AJS090LNTCH	AJS126LNTCH	AJS126LNTCH	AJS144LNTCH	AJS090LNTCH	AJS090LNTCH	AJS126LNTCH	AJS126LNTCH	AJS144LNTCH	AJS144LNTCH
Unit 3																AJS090LNTCH	AJS090LNTCH	AJS090LNTCH	AJS090LNTCH	AJS090LNTCH	AJS144LNTCH
	nnectable Indoor			13	16	19	23	26	33	36	40	43	47	50	53	55	55	55	55	55	55
Indoor unit co	nnectable capacity	Cooling	kW	11.2-29.1	14-36.4	16.8-43.5	20-52	22.5-58.5	28-72.8	31.2-81.1	34-88.4	36.5-94.9	40-104	42.5-110.5	45-117	48-124.8	50.5-131.3	54-140.4	56.5-146.9	59-153.4	67.5-175.5
Power source	2						3 phase, 38	0-415V, 60Hz								3 phase, 38	0-415V, 60Hz				
		Cooling	kW	22.4	28.0	33.5	40.0	45.0	56.0	62.4	68.0	73.0	80.0	85.0	90.0	96.0	101.0	108.0	113.0	118.0	135.0
	Capacity	Heating	KVV	25.0	31.5	37.5	45.0	50.0	63.0	70.0	76.5	81.5	90.0	95.0	100.0	108.0	113.0	121.5	126.5	131.5	150.0
	Capacity	Cooling	Btu/h	76000	95000	114000	135000	152000	190000	211000	230000	247000	270000	287000	304000	325000	342000	365000	382000	399000	456000
		Heating	Dtanii	85000	107000	127000	152000	170000	214000	237000	259000	277000	304000	322000	340000	366000	384000	411000	429000	447000	510000
	Input power	Cooling	kW	5.20	7.28	8.96	10.96	13.01	14.56	16.16	18.24	20.29	21.92	23.97	26.02	25.52	27.57	29.20	31.25	33.30	39.03
T1	input power	Heating	KVV	5.17	7.25	8.65	11.17	13.63	14.50	16.34	18.42	20.88	22.34	24.80	27.26	25.67	28.13	29.59	32.05	34.51	40.89
condition	Current	Cooling	Α	9.2	12.0	15.0	17.7	20.7	-	-	-	<u> </u>	-	-	-	-	-	-	-	-	-
		Heating		9.2	12.2	14.6	18.2	21.5	-	-	-	-	-	-	-	-	-	-	-	-	-
	EER	Cooling	W/W	4.31	3.85	3.74	3.65	3.46	3.85	3.86	3.73	3.60	3.65	3.55	3.46	3.76	3.66	3.70	3.62	3.54	3.46
	COP	Heating		4.84	4.35	4.34	4.03	3.67	4.34	4.28	4.15	3.90	4.03	3.83	3.67	4.21	4.02	4.11	3.95	3.81	3.67
	EER	Cooling	Btu/h/W	14.60	13.00	12.70	12.30	11.65	13.05	13.06	12.61	12.17	12.32	11.97	11.68	12.74	12.40	12.50	12.22	11.98	11.68
	COP	Heating		16.40	14.75	14.65	13.60	12.45	14.76	14.50	14.06	13.27	13.61	12.98	12.47	14.26	13.65	13.89	13.39	12.95	12.47
	Capacity		kW	20.2	25.2	28.5	32	35.1	50.4	52.2	57.2	60.3	64.0	67.1	70.2	82.4	85.5	89.2	92.3	95.4	105.3
		-	Btu/h	68000	86000	97000	109000	119000	172000	177000	195000	205000	218000	228000	238000	281000	291000	304000	314000	324000	357000
T3 condition	Input power	Cooling	kW	6.73	9.20	9.34	10.70	11.82	18.40	17.43	19.90	21.02	21.40	22.52	23.64	29.10	30.22	30.60	31.72	32.84	35.46
Condition	Current		A	10.8	14.5	14.7	16.9	18.6	- 27/	-	2.87	2.87	- 2.00	- 2.00	- 2.07	- 2.02	- 2.02	- 2.02	- 2.01	- 2.00	2.97
	EER	-	W/W Btu/h/W	3.00 10.10	2.74 9.30	3.05 10.35	2.99 10.15	2.97	2.74 9.35	2.99 10.15	9.80	9.75	2.99	2.98 10.12	2.97	2.83 9.66	2.83 9.63	2.92 9.93	2.91 9.90	2.90 9.87	10.07
Power factor			%	90	92	92	92	92	-	-	-	5.73	-	-	-	3.00	3.03		5.50	-	-
Air flow rate	1	High	m³/h	11100	11100	13000	13000	13700	11100×2	13000+11100	13000+11100	13700+11100	13000×2	13700+13000	13700×2	13000+11100×2	13700+11100×2	13000×2+11100	13700+13000+11100	13700×2+11100	13700×3
		Cooling		56	58	57	60	62	61	61	62	63	63	64	65	64	65	64	65	66	67
Sound pressu	ıre level	Heating	dB (A)	58	59	60	62	64	62	63	64	65	65	66	67	65	66	66	67	68	69
Maximum ex	ternal static pres	sure	Pa	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82
Compressor r	motor output		kW	7.5	7.5	11	11	11	7.5×2	11.0+7.5	11.0+7.5	11.0+7.5	11.0×2	11.0×2	11.0×2	11.0+7.5×2	11.0+7.5×2	11.0×2+7.5	11.0×2+7.5	11.0×2+7.5	11.0×3
Heat exchan	ger 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
		Height		1690	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690
Dimensions		Width	mm	930	930	1240	1240	1240	930×2	1240+930	1240+930	1240+930	1240×2	1240×2	1240×2	1240+930×2	1240+930×2	1240×2+930	1240×2+930	1240×2+930	1240×3
		Depth		765	765	765	765	765	765	765	765	765	765	765	765	765	765	765	765	765	765
Weight			kg	255	255	279	279	279	255×2	279+255	279+255	279+255	279×2	279×2	279×2	279+255×2	279+255×2	279×2+255	279×2+255	279×2+255	279×3
Pofrigorant		Туре		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Refrigerant		Charge	kg	11.7	11.7	11.8	11.8	11.8	11.7×2	11.8+11.7	11.8+11.7	11.8+11.7	11.8×2	11.8×2	11.8×2	11.8+11.7×2	11.8+11.7×2	11.8+11.7×2	11.8+11.7×2	11.8+11.7×2	11.8×3
Connection	oipe diameter	Liquid	mm	12.70	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	19.05	19.05
connection p	ipe diameter	Discharge Gas	111111	22.22	22.22	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
Operating ra	nge	Cooling	*CDB	-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
operating ra	gc	Heating	CDD	-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**

			HP	16	18	20	24	26	28	30	32	34	36	38	40	42	44	46
latina Canacil			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
lating Capacit	ty range		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	378,000	33.0	34.5
Nodel name			1011	AIS144LNTCHH	AJS162LNTCHH	AIS180LNTCHH	AJS216LNTCHH	AJS234LNTCHH	AIS252LNTCHH	AJS270LNTCHH	AIS288LNTCHH	AIS306LNT		AJS342LNTCHH	AIS360LNTCHH	AIS378LNTCHH	AIS396LNTCHH	AJS414LNTCHH
nit 1				AJS072LNTCH	AJS090LNTCH	AJS108LNTCH	AJS072LNTCH	AJS090LNTCH	AIS108LNTCH	AJS126LNTCH	AJS108LNTCH	AJS126LNT		AJS126LNTCH	AJS126LNTCH	AJS126LNTCH	AIS144LNTCH	AJS144LNTCH
nit 2				AJS072LNTCH	AJS072LNTCH	AJS072LNTCH	AJS072LNTCH	AJS072LNTCH	AISO72LNTCH	AJS072LNTCH	AJS108LNTCH	AJS120EN1		AIS108LNTCH	AJS126LNTCH	AJS126LNTCH	AJS126LNTCH	AIS144LNTCH
nit 3				7,50722111611	7,50722.1116.11	7,50722.111611	AJS072LNTCH	AJS072LNTCH	AJS072LNTCH	AJS072LNTCH	AJS072LNTCH	AJS072LNT		AJS108LNTCH	AJS108LNTCH	AJS126LNTCH	AJS126LNTCH	AJS126LNTCH
	nectable Indoo	or Unit		26	29	33	39	43	46	50	52	55	55	55	55	55	55	55
	nectable capacity		kW	22.4-58.2	25-65	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
		,, ,		1			200 (45) (60)								2 1 200 (45)( 60)			
ower source	1	C It	1	44.0	F0./		3 phase, 380-415V, 60H		70.2	0/0	00.7	05.0	100 5	107.0	3 phase, 380-415V, 60H		125	120.0
		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	130.0
	Capacity	Heating		50	56.5	62.5 190000	75.0	81.5	87.5	95.0	100.0	107.5	112.5	120.0	127.5	135.0	140	145.0
		Cooling	Btu/h	152000 170000	171000 192000	212000	228000 255000	247000 277000	266000 297000	287000 322000	304000 339000	325000 364000	342000 381000	363000 406000	384000 431000	405000 456000	422000 474000	439000 492000
		,		170000	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
1	Input power	Cooling	kW	10.4	12.48	13.82	15.60	17.59	18.99	21.50	22.47	24.99	25.95	28.47	30.99	33.51	35.97	38.43
ndition		Cooling		- 10.34	12.42	13.02	-	-	-	- 21.31	-	24.55	- 23.93	20.47	- 30.33	- 33.31	- 33.37	- 30.43
multion	Current	Heating	A	-	-	-	-	-	-	-	-				-	-	-	-
	EER	Cooling		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		14.62	13.70	13.42	14.62	13.97	13.74	13.44	13.15	12.94	12.72	12.57	12.44	12.32	12.08	11.87
	COP	Heating	Btu/h/W	16.44	15.46	15.34	16.44	15.75	15.64	14.97	15.09	14.57	14.68	14.26	13.91	13.61	13.18	12.80
		ricuting	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
	Capacity		Btu/h	136000	154000	165000	204000	222000	233000	245000	262000	274000	291000	303000	315000	327000	337000	347000
3	Input power	1	kW	13.46	15.93	16.07	20.19	22.66	22.80	24.16	25.41	26.77	28.02	29.38	30.74	32.10	33.22	34.34
ndition	Current	Cooling	A	-	-	-	-	-	-	-	-	20.77	-	-		-		-
		1	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		Btu/h/W	10.1	9.67	10.27	10.10	9.80	10.22	10.14	10.31	10.24	10.39	10.31	10.25	10.19	10.14	10.10
wer factor	1		%	-	-	-	-	-	-	-	-	-	- 10.55	-	-	-	-	-
r flow 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+11	13000×3	13000×3	13000×3	13000×3	13700+13000×2	13700×2+13000
		Cooling		59	60	60	61	62	61	63	61	63	62	63	64	65	66	66
und pressur	e level	Heating	dB (A)	61	62	62	63	63	64	65	64	65	65	66	66	67	68	68
aximum exte	ernal static pre	ssure	Pa	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82
mpressor m	otor 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.	11.0×3	11.0×3	11.0×3	11.0×3	11.0×3	11.0×3
eat exchange	er 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
		Height		1690	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690	1690
nensions		Width	mm	930×2	930×2	1240+930	930×3	930×3	1240+930×2	1240+930×2	1240×2+930	1240×2+9	0 1240×3	1240×3	1240×3	1240×3	1240×3	1240×3
		Depth	1	765	765	765	765	765	765	765	765	765	765	765	765	765	765	765
ight			kg	252×2	255×2	279+255	255×3	255×3	279+255×2	279+255×2	279×2+255	279×2+25	5 279×3	279×3	279×3	279×3	275×3	279×3
		Туј	pe	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
frigerant		Charge	kg	11.7×2	11.7×2	11.8+11.7	11.7×3	11.7×3	11.8+11.7×2	11.8+11.7×2	11.8×2+11.7	11.8×2+11	7 11.8×3	11.8×3	11.8×3	11.8×3	11.8×3	11.8×3
		Liquid		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
nnection pi	pe diameter	Discharge 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
		Cooling	*cnn	-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
perating ran	ge	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 2	-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: 7.5 m. Height difference between outdoor and indoor unit: 0 m.

# **VRF INDOOR UNITS**

INDOOR UNITS LINE-UP

**Compact Cassette** 

**Circular Flow Cassette** 

Slim Duct / Slim Concealed Floor

Medium Static Pressure Duct

**High Static Pressure Duct** 

Large Airflow Duct

Floor / Ceiling

Ceiling

Wall Mounted (EEV Internal)



## **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. 10 types, 55 models, Capacity range from 7,000 Btu/h to 96,000 Btu/h

### Indoor units range

Capacity range	В	u/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
capacity range		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
	Compact Cassette															
			AUXB09GATH	AUXB12GATH	AUXB14GATH	AUXB18GATH	AUXB24GATH									
Cassette	(Slim	/pe)														
Cussette	Circular Flow					AUXM018GTAH	AUXM024GTAH									
	(Large	/pe)														
						AUXK018GTAH	AUXK024GTAH	AUXK030GTAH	AUXK034GTAH	AUXK036GTAH	AUXK045GTAH	AUXK054GTAH				
	Slim Duct (With drain pump)															
		ARXD07GATH	ARXD09GATH	ARXD12GATH	ARXD14GATH	ARXD18GATH	ARXD24GATH									
	Medium Static Pressure Duct						0000	5555		5555	0000					
							ARXA24GBTH	ARXA30GBTH		ARXA36GBTH	ARXA45GBTH					
Duct																
	High Static Pressure Duct									ARXC36GBTH				ARXC72GBTH*1	ARXC90GBTH*1	ARXC96GATH*1
	Tilgii Static Flessure Ducc															
											ADVECTS ATT		ADVICED ATUAL			
											ARKC45GATH		ARKC60GATH*1			
	Large Airflow Duct															
						ARXN18GATH*2	ARXN24GATH*2	ARXN30GATH*2	ARXN34GATH*2	ARXN36GATH*2	ARXN45GATH*2					
	Floor (Same as Ceiling models)															
Floor				ABHA12GATH	ABHA14GATH	ABHA18GATH	ABHA24GATH									
	Slim Concealed Floor (Same as Slim Duct models)															
		ARXD07GATH	ARXD09GATH	ARXD12GATH	ARXD14GATH	ARXD18GATH	ARXD24GATH									
Ceiling	Ceiling															
				ABHA12GATH	ABHA14GATH	ABHA18GATH	ABHA24GATH	ABHA30GATH		ABHA36GATH	ABHA45GATH	ABHA54GATH				
Wall Mounted	Wall Mounted															
		ASHA07GATH	ASHA09GATH	ASHA12GATH	ASHA14GATH	ASHA18GATH	ASHA24GATH	ASHA30GATH								

\*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.



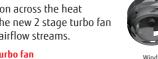




#### 2-stage turbo fan

#### 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.







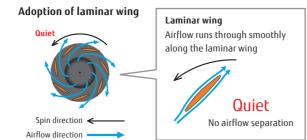
In the case of a previous fan, the air outlet range was narrow as the airflow moved to the motor side which meant the velocity of air



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

Designed by CFD-analysis (fluid) simulations

**Quiet quality** 



#### Improvement of the airflow distribution



#### 1. Maintenance of fan motor and fan

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

A : Fan motor C: Bell-mouth D: Panel

B: 2-stage turbo fan

#### 2. Air filter: standard equipment

#### 3. 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 3.0 m (12/14/18/24).

Model code	The maximum height from floor to ceiling (m)							
Model Code	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 24,000 Btu model in the compact cassette category (Easy installation by taking off ceiling panel of 600 x 600 size)



#### Model: AUXB09GATH / AUXB12GATH / AUXB14GATH AUXB18GATH / AUXB24GATH



#### Specifications

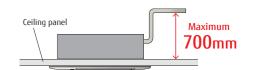
Model name Power source		AUXB09GATH	AUXB12GATH	AUXB14GATH	AUXB18GATH	AUXB24GATH		
		Single phase, 220-240V,						
Cib.	Cooling	kW	2.8	3.6	4.5	5.6	7.1	
Capacity	Heating	KVV	3.2	4.1	5.0	6.3	8.0	
Input power		W	25	29	35	36	84	
	High		550 (153)	600 (167)	680 (189)	710 (197)	1,030 (286)	
Airflow rate	Med	m <sup>3</sup> /h (I/s)	450 (125)	530 (147)	590 (164)	580 (161)	830 (231)	
	Low	(113)	350 (97)	350 (97) 390 (108) 390 (108)		400 (111)	450 (125)	
	High		35	37	38	41	50	
Sound pressure level	Med	dB (A)	30	34	34	35	44	
icvei	Low		25	27	27	27	30	
Dimensions (H	< W × D)	mm	245 × 570 × 570	245 × 570 × 570	245 × 570 × 570	245 × 570 × 570	245 × 570 × 570	
Weight		kg(lbs)	15 (33)	15 (33)	15 (33)	17 (37)	17 (37)	
Connection	Liquid (Flare)		6.35	6.35	6.35	9.52	9.52	
pipe diameter	Gas (Flare)	mm	12.70	12.70	12.70	15.88	15.88	
Drain hose diam	neter (I.D./O.D.)				25 / 32			
	Model na	me			UTG-UFGC-W			
Cassette Grille	Dimensions (H×W×D)	mm		·	50 × 700 × 700		·	
	Weight	kg(lbs)			2.6 (6)		·	

Note : Specifications are based on the following conditions.

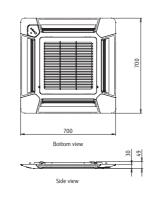
Cooling: Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB. Heating: Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB. Pipe length: 7.5 m; Height difference between outdoor unit and indoor unit: 0 m. Voltage: 230 [V].

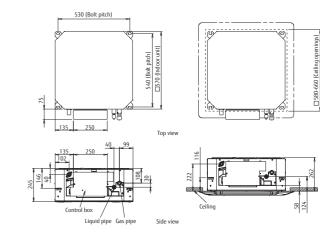
#### Optional parts

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



#### Dimensions (Unit: mm)





60 OGENERAL **OGENERAL** 61

## Cassette Slim/Large type Circular Flow

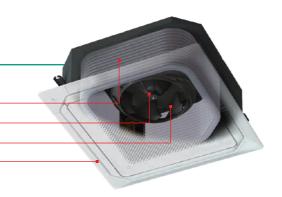




#### **Unique Circular Flow design**

New Cassette type realizes Circular Flow to blow large airflow in 360° direction by mounting high performance DC fan motor, new turbo fan and unique seamless airflow louver design.

Ø7 mm high density heat exchanger High efficient turbo fan Seamless airflow louver



#### Uniform temperature air conditioning

Achieve a comfortable air conditioning spread to every corner of the room by circular flow & wide vertical airflow.





#### Individual louver control

Each louver can be set individually by Touch Panel Wired Remote Controller to enjoy the comfort of different directional airflows according to various room layouts.

\* Touch Panel Wired RC (UTY-RNRGZ5) and Central Remote Controller(UTY-DCGGZ2) only



Comfortable air conditioning by preventing direct blowing of cold air and by providing swinging air flow simultaneously.



Efficient air conditioning based on the room layout

#### Occupancy sensor increases more energy saving

Energy saving operation starts automatically by detecting the motion of a person. 2 modes of save operation mode and stop mode can be selected.

\* Touch Panel Wired RC (UTY-RNRGZ5) and Central Remote Controller(UTY-DCGGZ2) only



Human sensor (Optional)

#### 2 modes can be selected



Power is saved while people are away.



Operation stops after people go out.

Model: (Slim type)

(Large type) AUXK018GTAH / AUXK024GTAH / AUXK030GTAH AUXK034GTAH / AUXK036GTAH / AUXK045GTAH AUXK054GTAH

AUXM018GTAH / AUXM024GTAH



AUXK018/024/030/034/03/045/054GTAH

#### **Specifications**

Model name			AUXM018 GTAH	AUXM024 GTAH	AUXK018 GTAH	AUXK024 GTAH	AUXK030 GTAH	AUXK034 GTAH	AUXK036 GTAH	AUXK045 GTAH	AUXK054 GTAH		
Power source				Single phase, 220-240V, 60Hz									
Canacibu	Cooling	kW	5.6	7.1	5.6	7.1	9.0	10.0	11.2	12.5	14.0		
Capacity	Heating	KVV	6.3	8.0	6.3	8.0	10.0	11.2	12.5	14.0	16.0		
Input power		W	20	25	40	40	47	47	61	89	116		
	High		1,050	1,120	1,420	1,420	1,440	1,440	1,620	1,820	2,040		
	Med-High		930	1,050	1,360	1,360	1,440	1,440	1,500	1,590	1,800		
Airflow rate	Med	m3/h	900	930	1,300	1,300	1,340	1,340	1,400	1,500	1,590		
Allilow late	Med-Low	1112/11	870	900	1,270	1,270	1,300	1,300	1,340	1,400	1,440		
	Low		810	870	1,200	1,200	1,280	1,280	1,280	1,300	1,300		
	Quiet		780	780	1,150	1,150	1,150	1,150	1,150	1,150	1,150		
	High		33	35	38	38	39	39	41	44	47		
	Med-High		32	33	37	37	38	38	40	42	45		
Sound pressure	Med	dB	31	32	36	36	37	37	38	40	42		
level	Med-Low	(A)	30	31	35	35	36	36	37	38	39		
	Low		29	30	34	34	35	35	36	36	36		
	Quiet		28	28	33	33	33	33	33	33	33		
Dimensions (H ×	W × D)	mm	246×840×840	246×840×840	288×840×840	288×840×840	288×840×840	288×840×840	288×840×840	288×840×840	288×840×840		
Weight		kg	24.0	24.5	26.5	26.5	29.5	29.5	29.5	29.5	29.5		
Connection	Liquid (Flare)		6.35	9.52	6.35	9.52	9.52	9.52	9.52	9.52	9.52		
pipe diameter	Gas (Flare)	mm	12.70	15.88	12.70	15.88	15.88	15.88	15.88	15.88	15.88		
Drain hose diam	eter (I.D./O.D.)						25 / 32						
	Model na	me				UTG-	UKGD-W/UTG-UK	GA-B					
Cassette Grille	Dimensions (H×W×D)	mm					53×950×950						
	Weight	kg					6.0						

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].

When AUX\*018GTAH is connected to the outdoor unit other than J-IIIL, pipe diameter should be Ø9.52/Ø15.88 (Liq/Gas)

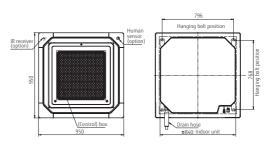
When AUXK036GTAH is connected to the outdoor unit other than J-IIIL, gas pipe diameter

#### Optional parts

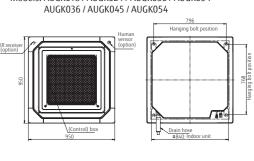
Human Sensor Kit:	UTY-SHZXC	Cassette Grille:	UTG-UKGD-W	Air Outlet Shutter Plate:	UTR-YDZK
Wide Panel:	UTG-AKXA-W		UTG-UKGA-B	Insulation Kit for High Humidity:	UTZ-KXRA
Panel Snacer:	IITG-RKXA-W	IR Receiver Unit-	LITY-I RHXD		

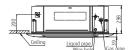
Dimensions (Unit: mm)

#### Models: AUGM018 / AUGM024



## Models: AUGK018 / AUGK024 / AUGK030 / AUGK034





62 OGENERAL **OGENERAL** 63

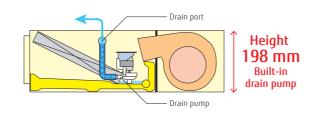
## Slim Duct/ Slim Concealed Floor (With drain pump)





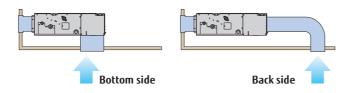
#### Slim design

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



#### Air-intake

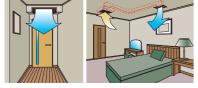
Air intake direction can be selected to match the installation site.



#### Flexible installation

Ceiling concealed







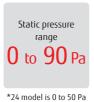




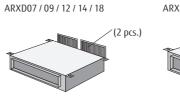
#### Selectable with a wide range of static pressure

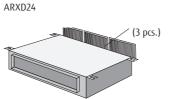
By using DC fan motor, it is possible to change of static pressure range 0 to 90 Pa. The change of static pressure range is possible by remote controller.





## Filter (Accessory)





#### Model: ARXD07GATH / ARXD09GATH / ARXD12GATH ARXD14GATH / ARXD18GATH / ARXD24GATH



ARXD07/09/12/14GATH









#### Specifications

Model name			ARXD07GATH	ARXD09GATH	ARXD12GATH	ARXD14GATH	ARXD18GATH	ARXD24GATH			
Power source			Single phase, 220-240V, 60Hz								
Canadiby	Cooling	kW	2.2	2.8	3.6	4.5	5.6	7.1			
Capacity	Heating	KVV	2.8	3.2	4.0	5.0	6.3	8.0			
Input power		W	44	50	54	92	83	122			
	High		550 (153)	600 (167)	600 (167)	800 (222)	940 (261)	1,330 (369)			
Airflow rate	Med	m <sup>3</sup> /h (I/s)	490 (136)	550 (153)	510 (142)	710 (197)	840 (233)	1,240 (344)			
	Low	(1,3)	440 (122)	480 (133)	450 (125)	610 (169)	750 (208)	1,100 (306)			
Static pressure r	ange	Pa	0 to 90	0 to 90	0 to 90	0 to 90	0 to 90	0 to 50			
Standard static	oressure	Pa	25	25	25	25	25	25			
	High		28	29	30	34	34	35			
Sound pressure level	Med	dB (A)	25	26	27	32	32	32			
icvei	Low	0.0	22	24	24	28	28	29			
Dimensions (H >	W × 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	Liquid (Flare)		6.35	6.35	6.35	6.35	9.52	9.52			
pipe diameter	Gas (Flare)	mm	12.70	12.70	12.70	12.70	15.88	15.88			
Drain hose diameter (I.D./O.D.)				25	/ 32						

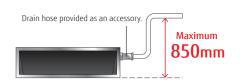
Note : Specifications are based on the following conditions.

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].

Auto louvre grille kit: UTD-GXTA-W (for ARXD07 - 14)

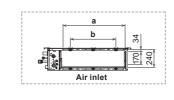
UTD-GXTB-W (for ARXD18)

UTD-GXTC-W (for ARXD24) Remote Sensor Unit: UTY-XSZX IR Receiver Unit: UTB-YWC

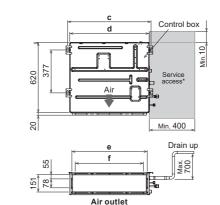


#### Dimensions (Unit: mm)

Optional parts

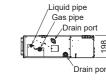






	ARXD07-14 GATH	ARXD18 GATH	ARXD24 GATH
а	574	774	974
b	P200×2=400	P200×3=600	P200x4=800
С	734	934	1,134
d	700	900	1,100
е	650	850	1,050
f	P100×6=600	P100×8=800	P100×10=1,000

\*The design of the service access depends on the installation method. Refer to the installation manual for more information.



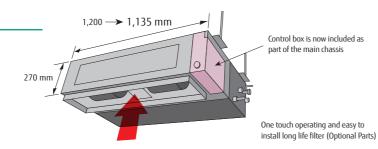
# Medium Static Pressure Duct





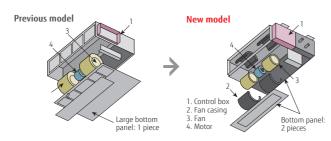
#### Slim & Compact design

The slim and compact design of the indoor unit, with the control box mounted on the side of the unit, allows installation in narrow spaces.



#### Easy maintenance

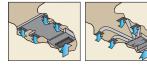
See below for the case of rear suction type

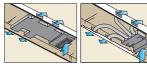


Structural improvement is attained by making the bottom panel two pieces, front and rear. The internal fan casing is also manufactured in two pieces, namely upper and lower. The maintenance of the motor and fan can be easily carried out by removing the rear panel and the lower part of the casing while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

#### **Installation styles**

#### **Embedded** in Ceiling





#### Two-direction drain piping



#### Easy setting by using remote controller

The change of static pressure range is possible by remote controller

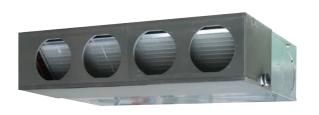


#### Selectable with a wide range of static pressure

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



#### Model: ARXA24GBTH / ARXA30GBTH ARXA36GBTH / ARXA45GBTH



#### Specifications

Model name		ARXA24GBTH	ARXA30GBTH	ARXA36GBTH	ARXA45GBTH				
Power source			Single phase, 220-240V, 60Hz						
Canacitu	Cooling	kW	7.1	9.0	11.2	12.5			
Capacity	Heating	KW	8.0	10.0	12.5	14.0			
Input power		W	94	108	194	240			
	High		1,280 (356)	1,410 (392)	1,840 (511)	1,970 (547)			
Airflow rate	Med	m <sup>3</sup> /h (I/s)	990 (275)	1,280 (356)	1,600 (444)	1,860 (517)			
	Low	(1/3)	840 (233)	1,150 (319)	1,470 (408)	1,640 (456)			
Static pressure r	ange	Pa	30 to 150	30 to 150	30 to 150	30 to 150			
Standard static	pressure	Pa	100	100	100	100			
	High		31	34	37	41			
Sound pressure level	Med	dB (A)	27	32	35	38			
icvei	Low	] ('') [	23	29	33	36			
Dimensions (H	« W × 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	Liquid (Flare)		9.52	9.52	9.52	9.52			
pipe diameter	Gas (Flare)	mm	15.88	15.88	19.05	19.05			
Drain hose diameter (I.D./O.D.)		1	25/32						

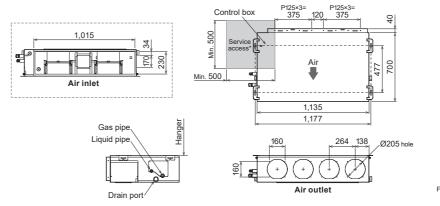
Note: Specifications are based on the following conditions.

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].

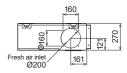
#### Optional parts

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

#### Dimensions (Unit: mm)



\*The design of the service access depends on the installation method. Refer to the installation manual for more information.



# High Static Pressure Duct





#### Static pressure selection

By using DC fan motor, it is possible to change static pressure range from 0 to 200 Pa (ARXC36) / 300 Pa (ARXC72 / 90 / 96).











Maximum

300 Pa



(ARXC36 type)

(ARXC72 / 90 type)

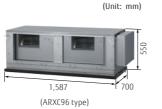
(ARXC96 type)

#### Easy installation (Compact size & Lightweight)

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



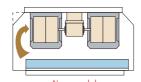




#### Low noise

#### Models: ARXC36

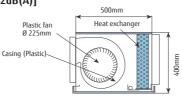
Cutting off the corners of the conventional indoor unit front panel and fan casing, has enabled less turbulent air flow. Low noise is realized by adopting a plastic case and a plastic fan.



(ARXC36GBTH)

#### ARXC36GBTH: Plastic fan [42dB(A)]

\* Model : Material (At 100 Pa: Actual noise measurement value)



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

Improved motor efficiency from previous model.





#### Model: ARXC36GBTH

#### ARXC72GBTH / ARXC90GBTH ARXC96GATH







Specifications

Model name Power source			ARXC36GBTH	ARXC72GBTH	ARXC90GBTH	ARXC96GATH							
			Single phase, 220-240V, 60Hz										
Canacitu	Cooling	kW	11.2	22.4	25.0	28.0							
Capacity	Heating	KVV	12.5	25.0	28.0	31.5							
Input power		W	207	681	819	838							
	High	2.1	1,990 (553)	3,900 (1,083)	4,300 (1,195)	4,850 (1,347)							
Airflow rate	Med	m <sup>3</sup> /h (I/s)	1,680 (467)	3,300 (917)	4,000 (1,111)	4,250 (1,181)							
	Low	(1/3)	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 p	ressure	rd	100	150	150	150							
	High		42	47	48	48							
Sound pressure level	Med	dB (A)					dB (A)			36	43	46	45
	Low	(-1)	32	40	44	42							
Dimensions (H ×	W × 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	Liquid		9.52 (Flare)	12.70 (Brazing)	12.70 (Brazing)	12.70 (Brazing)							
pipe diameter	Gas	mm	19.05 (Flare)	22.22 (Brazing)	22.22 (Brazing)	22.22 (Brazing)							
Drain hose diameter (I.D./O.D.)			25/32										

Note: Specifications are based on the following conditions.

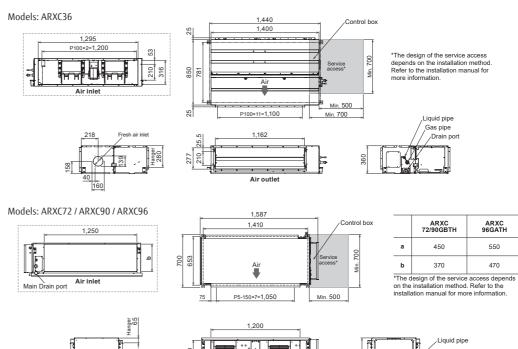
Cooling: Indoor temperature of 27\*CDB / 19\*CWB, and outdoor temperature of 35\*CDB / 24\*CWB. Heating: Indoor temperature of 20\*CDB / (15\*CWB), and outdoor temperature of 7\*CDB / 6\*CWB.

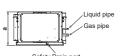
Pipe length: 7.5 m; Height difference between outdoor unit and indoor unit: 0 m. Voltage: 230 [V].

#### Optional parts

Long-Life Filter: UTD-LF60KA (For ARXC36) Remote Sensor Unit: UTY-XSZX IR Receiver Unit: UTB-YWC

#### Dimensions (Unit: mm)











## Easy installation (Compact size & Lightweight)

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



#### Static pressure selection

Models: ARKC45 / ARKC60

2 Types of static pressure mode are selectable.

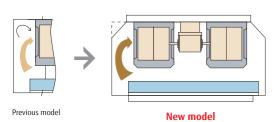




#### Low noise

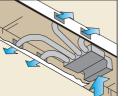
Models: ARKC45 / ARKC60

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.



#### **Installation styles**





(Unit: mm)

Model: ARXC45GATH / ARXC60GATH



#### Specifications

Model name			ARKC45GATH	ARKC60GATH				
Power source			Single phase, 220-240V, 60Hz					
Caracita	Cooling	kW	12.5	18.0				
Capacity	Heating	KW	14.0	20.0				
Input power		W	715	730				
	High		3,500 (972)	3,500 (972)				
Airflow rate	Med	m <sup>3</sup> /h (I/s)	3,000 (833)	3,000 (833)				
	Low	(1/3)	2,460 (683)	2,460 (683)				
Static pressure r	range	Pa	100 to 250	100 to 250				
Standard static	pressure	Pa	100	100				
	High		49	49				
Sound pressure level	Med	dB (A)	45	45				
icvei	Low	] ('') [	42	42				
Dimensions (H	× W × D)	mm	400 × 1,050 × 500	400 × 1,050 × 500				
Weight		kg(lbs)	46 (101)	46 (101)				
Connection	Liquid (Flare)		9.52 (Flare)	9.52 (Flare)				
pipe diameter	Gas (Flare)	mm	19.05 (Flare)	19.05 (Flare)				
Drain hose diameter (I.D./O.D.)		1	25	/ 32				

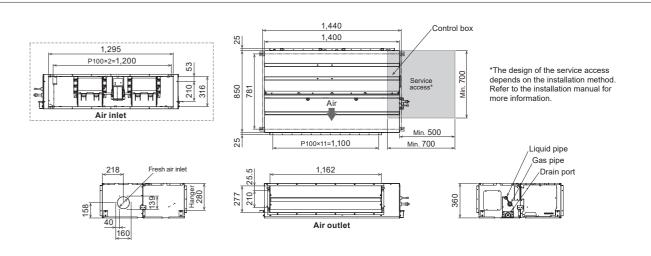
Note : Specifications are based on the following conditions.

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].

#### Optional parts

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

#### Dimensions (Unit: mm)



# Large Airflow Duct





# Large airflow volume

It can be installed in places such as early replacement of air required by large airflow volume.





# Selectable with a wide range of static pressure

Static pressure range 50 to 250 Pa

Static pressure 50 to 300 Pa

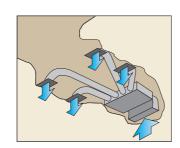
(36 / 45 class)

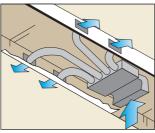


(30 / 34class)



# Installation styles





#### Model: ARXN18GATH / ARXN24GATH / ARXN30GATH ARXN34GATH / ARXN36GATH / ARXN45GATH



#### Specifications

Model name			ARXN18GATH	ARXN24GATH	ARXN30GATH	ARXN34GATH	ARXN36GATH	ARXN45GATH	
Power source					Single phase, 2	220-240V, 50Hz		'	
C	Cooling	kW	5.6	7.1	9.0	10.0	11.2	12.5	
Capacity	Heating	KW	6.3	8.0	10.0	11.2	12.5	14.0	
Input power		W	154	205	306	432	572	572	
	High		2,280 (633)	2,640 (733)	3,200 (889)	3,720 (1,033)	4,120 (1,145)	4,120 (1,145)	
Airflow rate	Med	m <sup>3</sup> /h (I/s)	-	-	-	_	-	-	
	Low	(1/3)	-	=	-	-	-	-	
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	Pa	50	50	50	50	60	60	
	High		35	37	40	43	45	45	
Sound pressure level	Med	dB (A)	-	=	-	-	-	-	
icvei	Low	] (")	-	-	_	_	-	-	
Dimensions (H	< W × 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	Liquid (Flare)		9.52	9.52	9.52	9.52	9.52	9.52	
pipe diameter	Gas (Flare)	mm	15.88	15.88	15.88	15.88	19.05	19.05	
Drain hose diam	neter (I.D./O.D.)	1 1	25/32						

Note: Specifications are based on the following conditions.

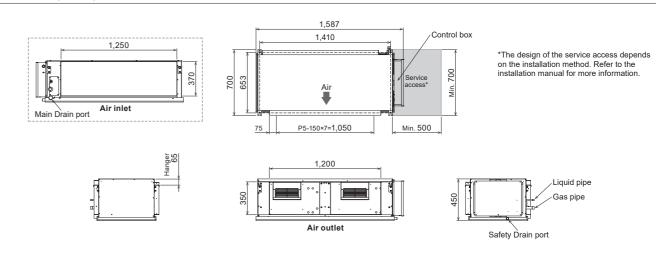
Cooling: Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB. Heating: Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB. Pipe length: 7.5 m; Height difference between outdoor unit and indoor unit: 0 m. Voltage: 230 [V].

Large Airflow Duct can be connected to V-III Series only.

#### Optional parts

Remote Sensor Unit: UTY-XSZX

### Dimensions (Unit: mm)







### 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.





# High power DC fan motor

- High powerWide rotation range
- High efficiency



# Compact design

Symmetrical, slim and compact design.



#### Model: ABHA12GATH / ABHA14GATH ABHA18GATH / ABHA24GATH







#### Specifications

Model name			ABHA12GATH	ABHA14GATH	ABHA18GATH	ABHA24GATH		
Power source			'	Single phase, 2	220-240V, 60Hz			
Cib.	Cooling	kW	3.6	4.5	5.6	7.1		
Capacity Heating	Heating	KW	4.0	5.0	6.3	8.0		
Input power		W	30	42	74	99		
	High	2.1	660 (183)	780 (216)	1,000 (277)	1,000 (277)		
Airflow rate		m <sup>3</sup> /h (I/s)	570 (158)	640 (177)	720 (199)	820 (227)		
	Low	(1/3)	490 (136)	550 (152)	580 (161)	680 (188)		
	High		36	40	46	47		
Sound pressure level	Med	dB (A)	32	36	39	42		
cvci	Low	(,,	28	34	35	37		
Dimensions (H >	W × 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	Liquid (Flare)		6.35	6.35	9.52	9.52		
pipe diameter	Gas (Flare)	mm	12.70	12.70	15.88	15.88		
Drain hose diameter (I.D./O.D.)			25/32					

Note: Specifications are based on the following conditions.

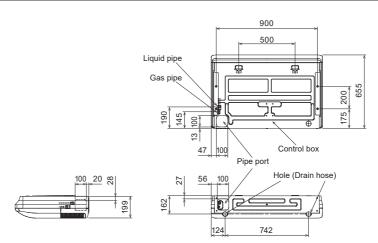
Cooling: Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.

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].

#### Optional parts

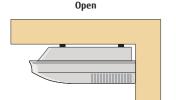
### Dimensions (Unit: mm)





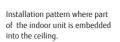


# Installation



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

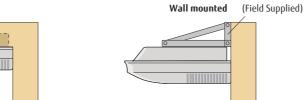
# Concealed



Long airflow

Long Airflow ensures comfort to

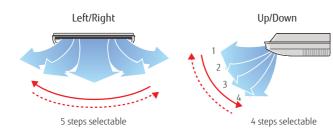
every corner of a large room.



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

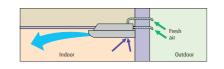


# High power DC fan motor

- High power
- Wide rotation range
- High efficiency



#### Fresh air intake Slim & Compact design





#### Model: ABHA30GATH / ABHA36GATH ABHA45GATH / ABHA54GATH



#### Specifications

Model name			ABHA30GATH	ABHA36GATH	ABHA45GATH	ABHA54GATH				
Power source			<u>'</u>	Single phase, 220-240V, 60Hz						
Cib.	Cooling	Law	9.0	11.2	12.5	14.0				
Capacity Heating	Heating	kW	10.0	12.5	14.0	16.0				
Input power		W	66	85	131	180				
	High		1,630 (452)	1,690 (469)	2,010 (558)	2,270 (629)				
Airflow rate	Med	m <sup>3</sup> /h (I/s)	1,370 (379)	1,400 (389)	1,600 (444)	1,780 (493)				
	Low	(1/3)	1,140 (316)	1,170 (325)	1,230 (342)	1,280 (355)				
	High		42	45	48	51				
Sound pressure level	Med	dB (A)	38	38	42	45				
icvei	Low	(//)	33	34	35	36				
Dimensions (H >	W × 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	Liquid (Flare)		9.52	9.52	9.52	9.52				
pipe diameter	Gas (Flare)	mm	15.88	19.05	19.05	19.05				
Drain hose diameter (I.D./O.D.)		Ī	25/32							

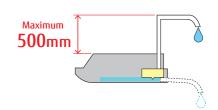
Note : Specifications are based on the following conditions.

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.

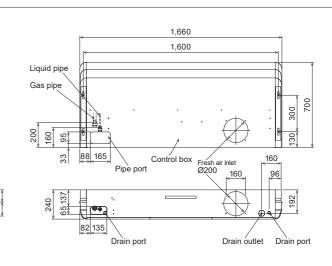
Pipe length: 7.5 m; Height difference between outdoor unit and indoor unit: 0 m. Voltage: 230 [V].

#### Optional parts

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



#### Dimensions (Unit: mm)









#### Filter features

High performance filter provides high quality air conditioning



### Long-life\* Ion Deodorization Filter

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

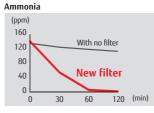
(\*The filter can be used for approx. 3 years if it is washed under water to restore its surface action when it is dirty.)

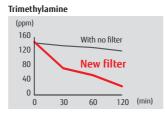


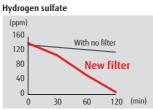
#### Apple-catechin Filter

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

#### Deodorizing effect (Odor reduction rate)





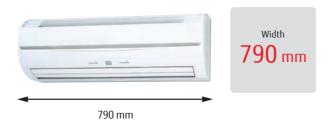


High performance filters have been thoroughly tested by the Environmental Sanitary Inspection Center using an advanced Deodorization Test.

### Compact size

#### Powerful output even compact design

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



# High power DC fan motor

- High power
- Wide rotation range
- High efficiency





### Easy maintenance

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



#### Model: (EEV internal) ÀSHA07GATH / ASHA09GATH ASHA12GATH / ASHA14GATH



#### Specifications

Model name			ASHA07GATH	ASHA09GATH	ASHA12GATH	ASHA14GATH			
Power source				Single phase, 2	20-240V, 60Hz				
Cib.	Cooling	kW	2.2	2.8	3.6	4.5			
Capacity	Heating	KVV	2.8	3.2	4.1	5.0			
Input power		W	17	18	22	34			
	High		490 (136)	500 (139)	560 (156)	670 (186)			
Airflow rate		m <sup>3</sup> /h (I/s)	450 (125)	450 (125)	480 (133)	490 (136)			
	Low	(1/3)	370/420* <sup>1</sup> (103/117* <sup>1</sup> )	370/420* <sup>1</sup> (103/117* <sup>1</sup> )	420 (117)	420 (117)			
	High		35	36	39	44			
Sound pressure level	Med	dB (A)	33	33	35	37			
icvei	Low	(//)	27 / 31* <sup>1</sup>	27 / 31*1	31	32			
Dimensions (H >	W × D)	mm	275 × 790 × 215	275 × 790 × 215	275 × 790 × 215	275 × 790 × 215			
Weight		kg(lbs)	9 (20)	9 (20)	9 (20)	9 (20)			
Connection	Liquid (Flare)		6.35	6.35	6.35	6.35			
pipe diameter	Gas (Flare)	mm	12.70	12.70	12.70	12.70			
Drain hose diameter (I.D./O.D.)				13.8 / 15.8 to 16.7					

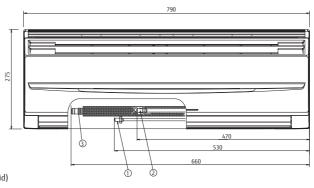
Note: Specifications are based on the following conditions.

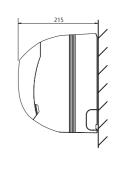
Cooling: Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB. Heating: Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB. Pipe length: 7.5 m; Height difference between outdoor unit and indoor unit: 0 m. Voltage: 230 [V].

\*1 : This value is under cooling operation.

#### Optional parts

#### Dimensions (Unit: mm)





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

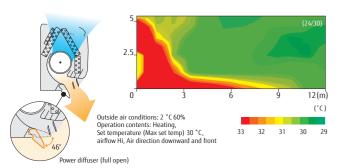
# **Wall-mounted** type



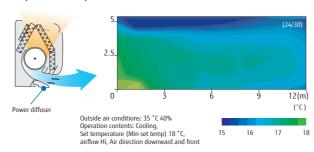


# More comfort airflow by adopting power diffuser

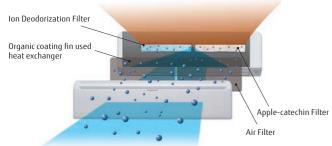
"Vertical airflow" provides powerful floor level heating



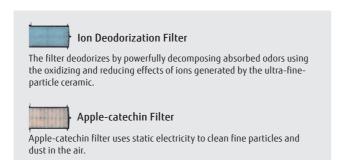
"Horizontal airflow" does not blow cool air directly at the occupants in the room



# Air conditioner filter features

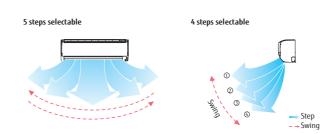


High quality air conditioning by incorporation of high performance filter.



# Double auto swing

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



#### Model: ASHA18GATH / ASHA24GATH / ASHA30GATH



#### Specifications

Model name			ASHA18GATH	ASHA24GATH	ASHA30GATH		
Power source				Single phase, 220-240V, 60Hz			
Cib.	Cooling	LAM	5.6	7.1	8.0		
Capacity Heating	Heating	kW	6.3	8.0	9.0		
Input power		W	32	60	91		
	High		840 (233)	1,100 (305)	1,240 (343)		
Airflow rate	Med	m <sup>3</sup> /h (I/s)	770 (213)	910 (252)	980 (271)		
	Low	(1/5)	690 (191)	730 (202)	770 (213)		
_	High	_	41	48	52		
Sound pressure level	Med	dB (A)	39	43	45		
ievei	Low	(^)	35	35	35		
Dimensions (H >	« W × D)	mm	320 × 998 × 228	320 × 998 × 228	320 × 998 × 228		
Weight		kg(lbs)	15 (33)	15 (33)	15 (33)		
Connection	Liquid (Flare)		9.52	9.52	9.52		
pipe diameter	Gas (Flare)	mm	15.88	15.88	15.88		
Drain hose diameter (I.D./O.D.)			12 / 16				

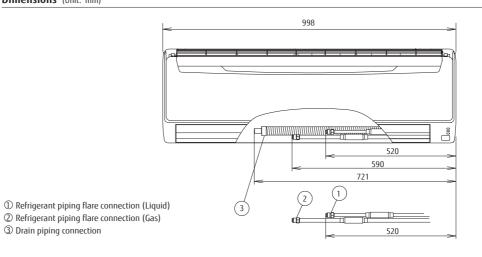
Note: Specifications are based on the following conditions.

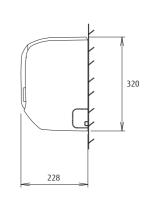
Cooling: Indoor temperature of 27\*CDB / 19\*CWB, and outdoor temperature of 35\*CDB / 24\*CWB. Heating: Indoor temperature of 20\*CDB / (15\*CWB), and outdoor temperature of 7\*CDB / 6\*CWB. Pipe length: 7.5 m; Height difference between outdoor unit and indoor unit: 0 m. Voltage: 230 [V].

#### Optional parts

#### Dimensions (Unit: mm)

③ Drain piping connection





# **VRF CONTROL SYSTEMS**

BEST CONTROL SOLUTION FOR EACH PROPERTY
CONTROL SYSTEM OVERVIEW

**COMPARISON TABLE OF CONTROLLERS** 

Individual Controller

Centralized Controller

Converter / Adaptor



# User friendly control system provides individual control to centralized control

The VRF 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.

# **BEST CONTROL SOLUTION FOR EACH PROPERTY**

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

### SHOP

Туре	Individual Control	Centraliz	ed Control		Integrating Control (Interface)	
	2864			•	<b>&gt;</b>	<b>&gt;</b>
	Wired Remote Controller	Central Remote Controller	System Controller	Network Converter for LonWorks®	MODBUS® Converter	KNX® Convertor
	UTY-RNRGZ5, UTY-RLRG UTY-RCRGZ1, UTY-RCRGZ1K	UTY-DCGGZ3	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 lead lag operation etc.)			•			
Remote Management			•			
Manage multiple sites			•			
Monitor energy consumption			•			
Control third party products			•			
Integrate FGL A/C into BMS				•	•	•

### HOTEL

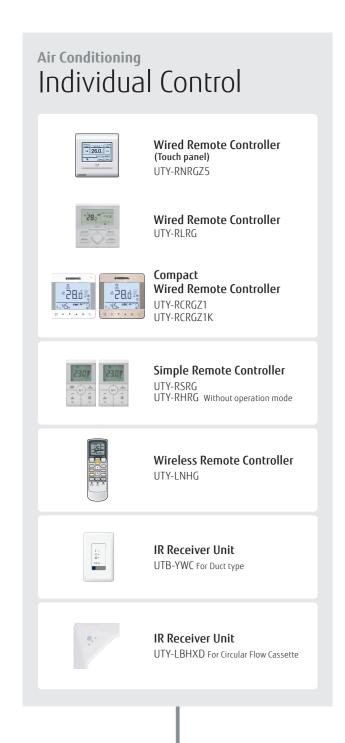
Туре		lividual ontrol		Centralize	ed Control		Integra	ating Control (Int	erface)	
- Table 1	-2801 -2801	86 86				•	-	<b>&gt;</b>	-	
	Wired Remote Controller	Simple Remote Controller	Wireless Remote Controller	Central Remote Controller	System Controller	BACnet® Gateway	Network Converter for LonWorks®	MODBUS® Converter	KNX® Convertor	External Switch Controller
	UTY-RNRGZ5, UTY-RLRG UTY-RCRGZ1, UTY-RCRGZ1K	UTY-RSRG, UTY-RHRG	UTY-LNHG	UTY-DCGGZ3	UTY-APGXZ1, UTY-ALGXZ1	UTY-ABGXZ1, UTY-VBGX	UTY-VLGX		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 lead lag operation etc.)					•	•				
Monitor energy consumption					•					
Control third party products					•					
Integrate FGL A/C into BMS						•	•	•	•	
Interlock with window contact										•
Interlock with key-card										•

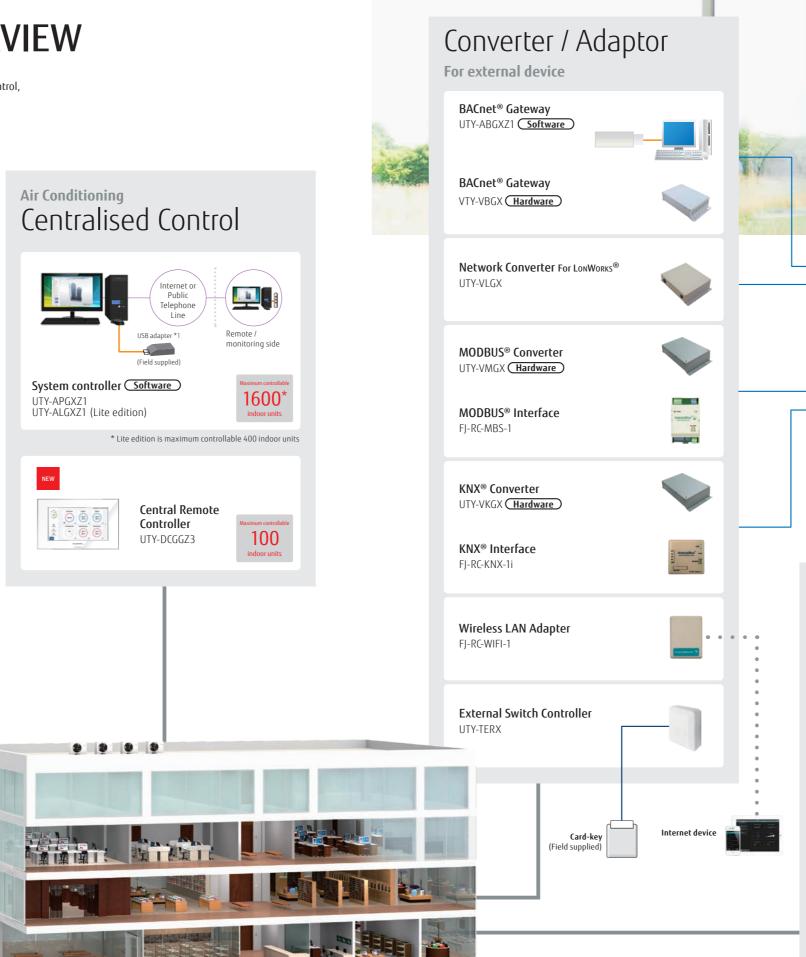
### OFFICE

Туре		lividual ontrol		Centraliza	ed Control		Integr	ating Control (Int	erface)	
	12884 12884			1048		•	•	-	-	
	Wired Remote Controller	Simple Remote Controller	Wireless Remote Controller	Central Remote Controller	System Controller	BACnet® Gateway	Network Converter for LonWorks®	MODBUS® Converter	KNX® Convertor	External Switch Controller
Chin	UTY-RNRGZ5, UTY-RLRG UTY-RCRGZ1, UTY-RCRGZ1K	UTY-RSRG, UTY-RHRG	UTY-LNHG	UTY-DCGGZ3	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 lead lag 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.





BMS / BAS\*2 BMS, Home automation system \*1. USB Adaptor: Echelon™ U10 USB Network Interface \*2. BMS/BAS: Building Management System/Building Automation System Converter / Adaptor For system expansion Network Converter Single split (DC power supply) UTY-VTGX Network Converter Single split (AC power supply) UTY-VTGXV Signal Amplifier UTY-VSGXZ1 Thermostat Converter UTY-TTRXZ1

# **COMPARISON TABLE OF CONTROLLERS**

	ltem		- Total	-ĈBd-	**************************************				1.00		
No.   No.						Simple Remote Controller	Simple Remote Controller*1				
Management   1	Model name	· · · · · · · · · · · · · · · · · · ·	UTY-RLRG	UTY-RCRGZ1	UTY-RCRGZ1			UTY-LNHG	UTY-DCGGZ3	UTY-ALGXZ1	
	Max. controllable remote controller groups	1	1	1	1	1	1	1	100	400	1600
March   Marc	Max. controllable indoor units	16	16	1	1	16	16	16	100	400	1600
Mathematical Control of the Contro	Max. controllable groups	-	-	-	-	-	-	-	50	400	1600
Page	On / Off	•	•	•	•	•	•	•	•	•	•
Manuscriptor   Property   Prope	Operation mode setting	•	•	•	•	•	-	•	•	•	•
Part	Fan speed setting	•	•	•	•	•	•	•	•	•	•
Part	Room temp. setting	•	•	•	•	•	•	•	•	•	•
Page 10   Page	Room temp. set point limitation	•	•	-	_	•	•	-	•	•	•
Part of the control by straining   Part of the co	Test operation	•	•	•	•	•	•	•	-	-	=
Maritable for server	Up/down air direction flap setting	•	•	•	•	•	•	•	•	•	•
Management   Man	Right/left air direction flap setting	•	•	•	•	-	_	•	•	•	•
Management	Individual louver control	•	-	•	•	-	_	-	●* <sup>4</sup>	-	-
Manual	Group setting	-	_	_	-	-	_	-	•	•	•
Section association	RC prohibition	_	_	_	_	-	_	-	•	•	•
Note the processing	Anti freeze setting	•	_	•	•	<del>-</del>	_	_	•	•	•
Control production	4	•	•	_	_	<del>-</del>	_	_	_	_	=
Manus transference cannot   Manus		•	•	•	•	<del>-</del>	_	•	•	•	•
Norm		•	_	_	_	=	_	_	•	•	•
Page		•	•	•	•	•	•	_	•	•	•
Page		•	•	•	•	•	•	_	•	•	•
Dot of the week		•	•	+	_	_	_	•	•	•	•
Former   F		•	•	_	_		_	_	•	•	•
Address contains	· ·				•	•	•	_	•	•	•
Non-neity   Non-		•			•	•		_	_	•	•
Multi-language	Ф								•* <sup>3</sup>		●* <sup>3</sup>
Notice Copyonish	<u></u>		_		_	_		_	•	•	•
Name registration			+		_		+	_			•
Backlight			+	+			+				
A										_	
Period   Week   Week	-		+	+							
Period   Week   Week			+								
Schedule timer   Consideration   Schedule timer   Consideration   Considerat											
Times per day	Schedule timer On/off, Temp, Mode,										
Sleep timer	Times per day										
Program timer	On/off timer	•	•	• (OFF only)	(OFF only)	_	-	•	=	=	=
Auto off timer	Sleep timer	-	-	-	-	=	-	•	-	-	=
Day of	Program timer	_	-	-	-	_	-	•	-	-	-
Min. unit of timer setting (Minutes)			•	-	-	_	-		•	-	-
Flatus monitoring system	Day off	•	•	_	-	=	-	-	•	•	•
Flectricity charge apportionment	Min. unit of timer setting (Minutes)	10 • 30	30	_	-		-	5	10	10	10
First history	Status monitoring system	-	-	-	-	_	-	-	•	•	•
Emergency stop	Electricity charge apportionment	-	-	-	-		-	-	-	0	•
Remote management         -	Error history	•	•	_	-			_	•	•	•
Energy saving management	Emergency stop	_	_	-	_		_	_	●*²	-	=
Energy saving management	Remote management							-	•	0	•
Key lock Child lock Child lock Password setting Password setting Password setting		-	_	-	-		-	_	_	0	0
Rey lock Child lock Child lock Child lock Password setting Password setting Password setting	E-mail notification for malfunction	-	-	-	-	_	-	-	•	•	•
Low noise mode •	Key lock			-	-		-	-		1	
	Low noise mode	-	-	_	-		-	-	-	•	•

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

<sup>\*1 &</sup>quot;Operation mode" setting is not available for this model.
\*3 This function is available only when using wired remote controller.
\*4 Equipped only with individual air volume batch reset.

<sup>\*5</sup> UTY-DCGGZ3 only

# Wired remote controller (with touch panel)



16 indoor units **I** group

# 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

# High performance and compact size

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



### Accurate and comfortable control

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

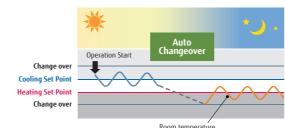


# Various energy saving control

#### **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 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

# Auto OFF 1 hour Normal Time Over Time

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

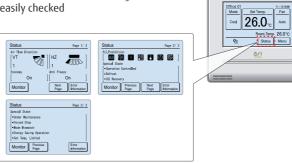
2 schedules Weekly Timer Set Temperature Auto Return Set Temperature Upper and Lower Limit Setting

#### Features: Wired remote controller (with touch panel)

# Various energy saving control

#### 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.



### Backlight

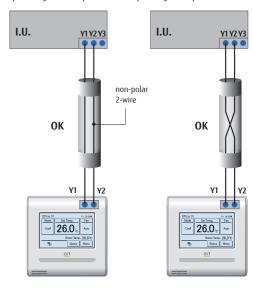
- Backlight enable easy operation in a darkened room.
- For the lighting time of Backlight, 30 or 60 seconds can be set.
- Backlight activates while the buttons are operated and goes off 30 or 60 seconds after the operation stops.



# Simplified installation

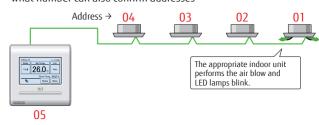
#### Uses non-polar 2-wire type

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



#### **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



# Easy Maintenance

#### **Error History Display**

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



Specifications								
Model name		UTY-RNRGZ5						
Power Supply		DC 12V						
Dimensions (H x W x D)	mm	120 × 120 × 20.4						
Weight	g	220						

DC12V is supplied by indoor unit.

# Wired remote controller



16 indoor units **I** group

- 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

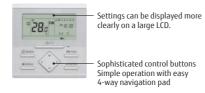
### High performance and compact size

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



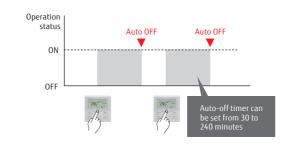
# Visually intuitive operation

- The operation mode, set temperature, and fan speed are shown prominently on the top screen.
- Each function to be set is indicated by an icon.
- The control guide makes it simple and straightforward to operate a remote controller.



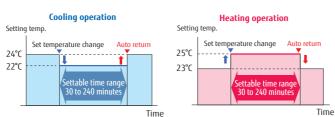
#### Auto-off timer

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



#### 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.



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

## DC12V is supplied by indoor unit.

# Compact wired remote controller UTY-RCRGZ1 / UTY-RCRGZ1K



UTY-RCRGZ1



UTY-RCRGZ1K

Up to I indoor units Up to I group

- Simple design to match the stylish interior
- Easy to install: Body of controller is designed to fit in European standard junction box
- Can be operated both by wireless and wired remote controller.

# Large screen and simple display

- Although the size is compact, the screen is large
- Large letters makes it easy to see
- Operation is simple and easy-to-understand



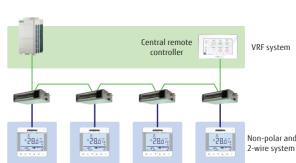




# System overview

#### VRF connection

One indoor unit and one remote controller are connected in one non-polar and 2-wire remote controller system.



Compact Wired Remote Controller

#### • RAC (Room air conditioner) connection

One indoor unit and one remote controller are connected in one non-polar and 2-wire remote controller system.



Compact Wired

Specifications									
Model name		UTY-RCRGZ1 UTY-RCRGZ1K							
Power Supply		DC 12V							
Dimensions (H x W x D)	mm	$86 \times 86 \times 44$							
Weight	g	135							

# Simple remote controller

UTY-RSRG / UTY-RHRG (without operation mode)





UTY-RSRG

UTY-RHRG (Without operation mode)

16 indoor units
Up to
1 group

# 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

### Corresponding to various applications

#### Vertical louver control:

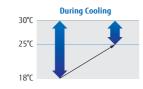
Vertical airflow direction can be adjusted for Duct types with auto louver and Cassette types, which are installed in hotels and conference rooms, can be adjusted.

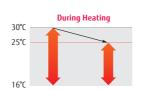




#### • Room temperature set point limitation:

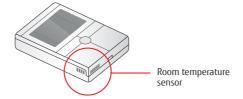
The Simple Remote Controller can manage to energy saving operation in small buildings without the central control unit.





#### • Built in room temperature sensor:

The Simple Remote Controller detects actual room temperature and controls room climate accuracy.



#### Specifications

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

# Wireless remote controller

UTY-I NHG



16 indoor units
1 group
Up to
4 different daily timers

## Simple and sophisticated operations with a choice of 4 daily timers

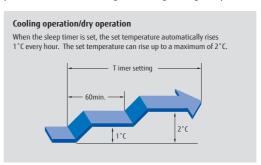
• A single controller controls up to 16 indoor units.

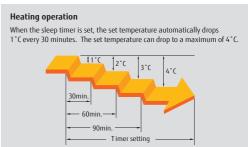
### **Built-in daily timer**

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.

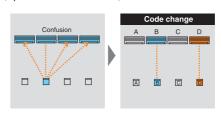
**Sleep timer:** The sleep timer function automatically corrects the set temperature according to the time setting to prevent excessive cooling or heating during sleep hours.





# Easy installation and operation

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

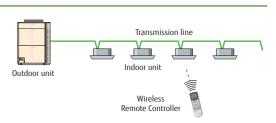


Wide and precise



# Address setting

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



#### Specifications

Specifications					
Model name		UTY-LNHG			
Power Supply		1.5V (R03 / LR03 / AAA) × 2			
Dimensions (H x W x D)	mm	170 × 56 × 19			
Weight	q	85			

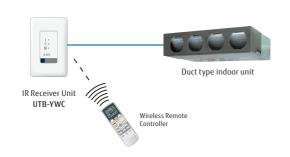
# IR receiver unit for duct type

# Duct type\* indoor units can be controlled with Wireless Remote Controller

\*Only Large Airflow Duct cannot 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.

# Wiring connection



#### Specifications

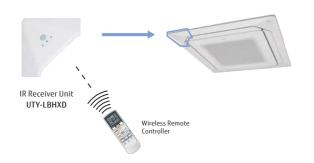
< Wireless Remote Controller >

Model name		UTB-YWC
Power Supply		1.5 V (R03/LR03/AAA)
Dimensions (H x W x D)	mm	170 × 56 × 19
Weight	g	85
< IR Reciver Unit>		
Battery		DC 5V
Dimensions (H x W x D)	mm	145 × 90 × 30
Weight	g	150

# IR receiver unit for Cassette

Cassette type indoor unit can be controlled with Wireless Remote Controller

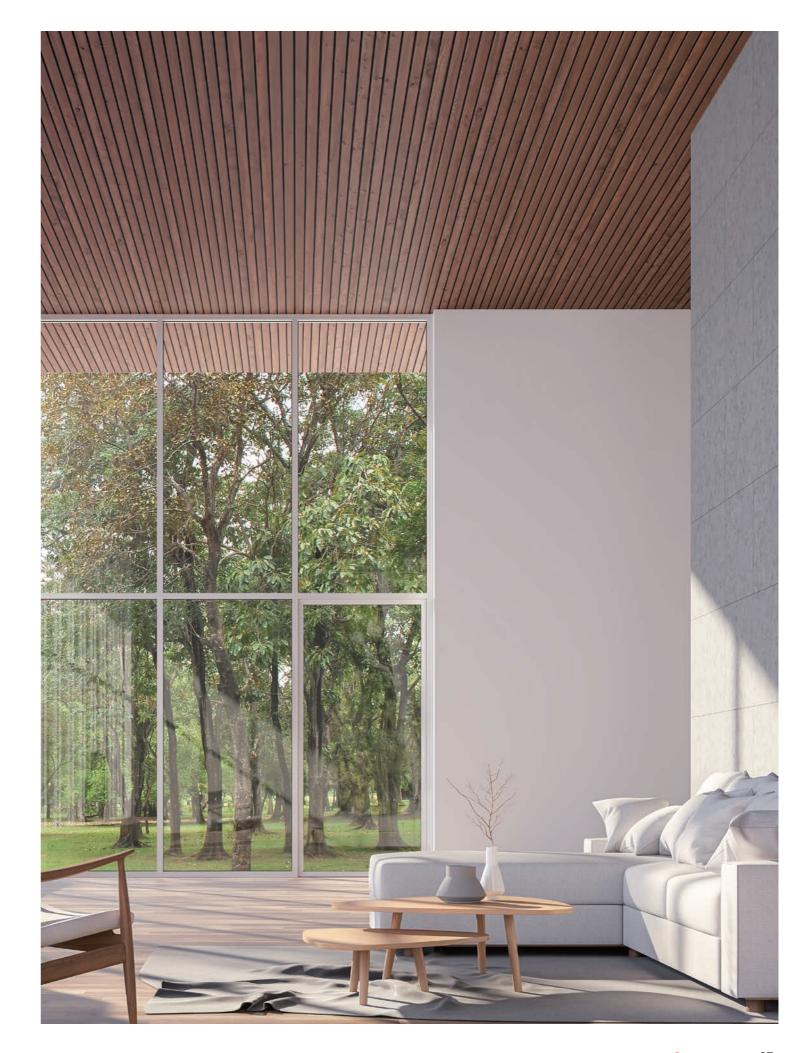
# Wiring connection



#### Specifications

< Wireless Remote Controller >

Model name		UTY-LBHXD		
Power Supply		1.5 V (R03/LR03/AAA)		
Dimensions (H x W x D)	mm	170 × 56 × 19		
Weight	g	85		
< IR Reciver Unit>				
Battery		DC 5V		
Dimensions (H x W x D)	mm	193.9 × 193.9 × 31.2		
Weight	g	140		



**OGENERAL** 97 96 OGENERAL

# Central remote controller



100 indoor units 50 groups

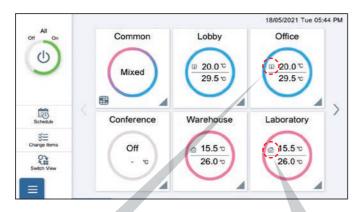
### For tenants in small to midsize commercial premises

- Individual control and monitoring of up to 100 indoor units
- 7.0inch TFT color screen
- Visually intuitive operation
- Room temperature display by indoor unit sensor & remote controller sensor
- 50 Remote Controller Groups Display & remote controller group rename
- Supports 14 languages: Chinese (Simplified/Traditional), Dutch, English, French, German, Greek, Italian, Polish, Portuguese, Russian, Spanish, Turkish, and Thai (Remote Management only)

### **Easy Management**

#### Air conditioning management by detecting room temperatures of each room

The room temperature detected with indoor unit sensor or remote controller sensor can be displayed. New model can detect the room temperature by indoor units sensors even if wired remote controllers are not connected to the indoor units.







#### 50 Remote Controller Groups Display

The group display and the 50 remote controller groups display can be switched easily. Users can choose which display is better, depending on the situation.

#### **Group Display**





50 Remote Controller Groups Display

Manage & Monitor by each Groups

Manage & Monitor by 50 Remote Controller Groups

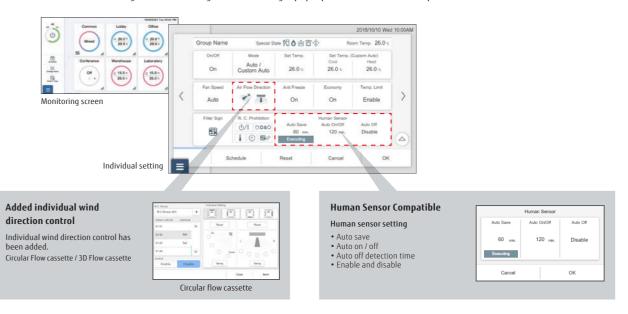
#### **Remote Controller Groups Rename**

The remote controller group names can be changed. Users can know easily where the air conditioning is located by changing the remote controller group names.



# Features: Central Remote Controller

- Easy intuitive operation from the touch panel display.
- All functions can be accessed through the monitoring screen showing a pop-up window for detailed operation.



### Remote Management

#### Remote monitoring / Remote operation

New central remote controller can control your tenant's air conditioner anytime and anywhere.

When the central remote controller manages the indoor units of some tenants, air conditioning of each tenants can be managed separately

#### Increased the Number of Accounts



### Trouble support function

#### Display error details

Display descriptive explanation when an error occurs



#### Sensor value monitoring function

Monitor sensor data of indoor unit / outdoor unit, send mail

#### Notify room temperature by email\*

Notify by e-mail when the temperature around the air conditioner is too high or too low

\*:This function is available only when using wired remote controller.

# Remote Management

### Annual schedule

- An annual schedule can be arranged for each remote controller group or user-defined group.
- · Allows for the programming of special settings for weekends, holidays, and store closings throughout the year.





#### low noise schedule

Low noise operation of outdoor units can be scheduled.



Automatic return to set temperature

A function that automatically returns the changed temperature to its original value over time.

#### Cancifications

Specifications	specifications					
Model name		UTY-DCGGZ3				
Power Supply		100-240 V 50 / 60 Hz				
Dimensions (H x W x D)	mm	134.6 × 216.2 × 37.9				
Weight	a	800				

# System controller

UTY-APGXZ1 Software

4 VRF network systems

400 outdoor units

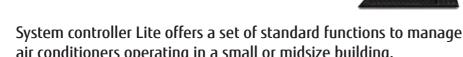
1,600 indoor units

System controller enables advanced integrated monitoring and control of VRF network systems operating in small to large buildings.

- Up to 1,600 indoor units and 400 outdoor units on up to 4 VRF network systems can be controlled.
- To accommodate facility management needs, the system controller offers—in addition to precise air conditioning control—remote central control, electricity charge apportionment, schedule management, and energy-saving options for VRF network systems.
- Supports 7 languages: Chinese, English, French, German, Polish, Russian, and Spanish.

# System controller lite

UTY-ALGXZ1 Software



1 VRF network systems 100 outdoor units

400 indoor units

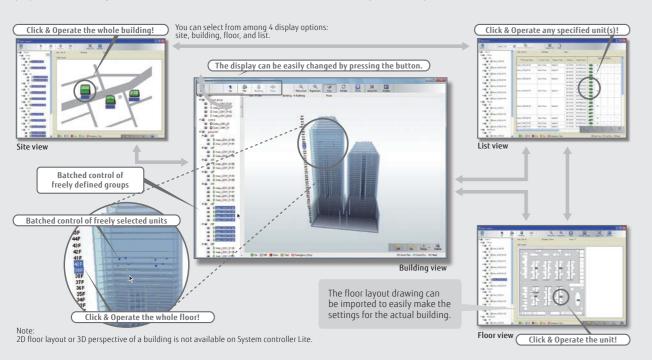
air conditioners operating in a small or midsize building.

- Up to 400 indoor units and 100 outdoor units on a VRF network system can be controlled.
- In addition to precise air conditioning control, a variety of applications are available as options to offer a wider range of control.
- Supports 7 languages: Chinese, English, French, German, Polish, Russian, and Spanish.

# Visually intuitive 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.

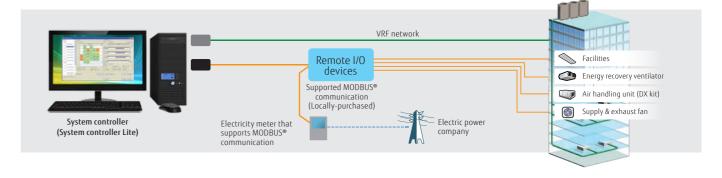


Features: System controller / System controller lite

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

Standard for System Controller Option for System controller Lite UTY-PLGXX2

When a MODBUS® adapter (locally available) is connected to a computer, electrical equipment and devices supported by MODBUS® can be monitored and controlled centrally from the computer. The central control can reduce wasted energy throughout an entire building resulting from a failure to turn equipment off during or after work, as well as reduce the need for on-site patrols.



# Wide-ranging operation and data management

Standard System controller and System controller Lite

#### Schedule management

- An annual schedule can be arranged for each remote controller group or user-defined group.
- ON/OFF, operation mode, remote controller prohibition, and temperature settings can be programmed for up to 143 times per day at 10-minute intervals and for up to 101 configurations for each remote controller group.
- Settings can be programmed for a period that spans midnight.
- Allows for the programming of special settings for weekends, holidays, and store closings throughout the year.
- Low noise operation of outdoor units can be scheduled.



#### Wide-ranging control of indoor and outdoor units

- The operation status and mode of each indoor unit are displayed.
- Turn on and off each indoor unit and switch its operation mode.
- Setting temperature range limitation
- Low noise setting of outdoor units

#### Remote controller prohibition

Prohibits the operation mode, temperature setting, or ON/OFF of an indoor unit.

#### Error alert and e-mail notice

When something goes wrong, an error message is shown in a popup on a computer display with a chime, and an e-mail notice is sent. Errors of the past one year are logged and can be reviewed.

#### Operation and control history

A history of operation status and control can be maintained and retrieved

#### Importing and exporting databases

Only an administrator is authorized to import and export registration, layout, and image data.

### Automatic clock adjustment

Time can be set for all controllers in batch automatically.

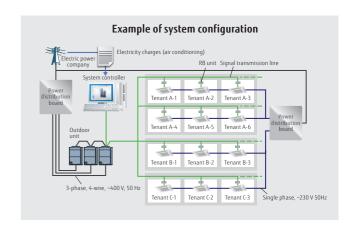
# **Electricity charge apportionment**

Standard on System controller Option System controller Lite UTY-PLGXA2

#### Electricity charge apportionment method

This is a method to calculate monthly energy costs to be allocated to each tenant based on the amount of energy used by their air conditioners. The first step is to determine exactly how much energy is consumed by air conditioners in each tenant space. The second step is to divide the total energy charge billed by an electric power company based on the amount of energy used by each tenant to determine the energy cost to be allocated to each of them. (See figure on right)

The calculation takes into consideration such factors as the number of unused rooms and nighttime electricity rate, which are shown in detail on an energy cost allocation schedule.



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#### Features: System controller / System controller lite

### Remote monitoring management

Standard on System controller

Option System controller Lite UTY-PLGXR2

The System controller can be used on site or remotely over networks for remote central control.

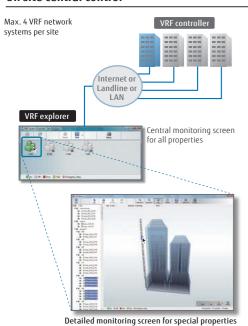
The System controller requires 2 software programs working together: The VRF controller runs on site and communicates with the VRF system;

The VRF explorer, which runs at a remote location, provides a user interface and communicates with the VRF controller.

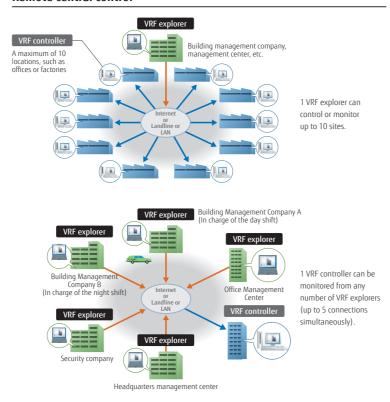
The VRF controller and the VRF explorer run on a single computer or on different computers connected on a network.

A computer running VRF explorer can centrally control up to 10 VRF system sites having up to 20 buildings each.

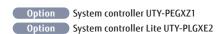
#### On site central control



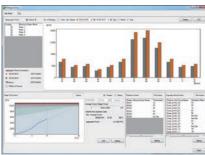
#### Remote central control



### **Energy-saving management**



A variety of energy-saving options can be selected depending on the season, weather, and time of day. Excellent energy-saving operation is performed while keeping users comfortable.



Main screen for energy-saving management

Energy saving graph data: This chart compares the energy consumption for the current month with the previous month and with the same month of the previous year to keep track of the energy-saving performance.

#### Indoor unit rotation

Indoor units can be automatically rotated to operate within a group in accordance with a predetermined annual schedule to reduce power consumption while keeping users comfortable. The operation stoppage rate can be selected for an indoor unit.

#### Peak-cut mode

The system controller monitors the connected power meter and controls the energy to maintain the target power consumption set for each time period by changing the set temperature of the indoor units or turning off the thermostat so as to keep the users comfortable. Indoor units to be controlled can be grouped in many ways, and the control level can be set for each group.

#### Capacity saving for outdoor unit

The upper limit on the capacity of an outdoor unit can be adjusted to reduce power consumption during a hot summer or cold winter by averaging out the power-saving performance of each refrigerant system. The upper limit on capacity can be set at 50% of the rated capacity or more.

#### **Summary of functions**

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Specifications  Max. number of outd Max. number of outd Max. number of outd Max. number of indox Max. number of indox Max. number of indox Max. number of indox Max. number of floors pe Number of floors pe Number of floors pe Number of floors pe Specification of		UTY-APGXZ1	Option UTY-PEGXZ1	UTY-ALGXZ1	Option UTY-PLGXR2	Option UTY-PLGXA2	Option UTY-PLGXE2	Option UTY-PLGXX2
ispecifications     Max. number of outdoor	of VRF networks supported	4	_	1	_	_	_	_
Max. number of indo Max. number of indo Max. number of out Multiple site display Number of floors pe Numbe	of indoor unit and remote controller groups per VRF network	400	-	400	-	-	-	_
Max. number of out Multiple site display Number of Boulding Number of Floors pe Sumber	of outdoor units per VRF network	100	-	100	_	_	_	_
Multiple site display Number of floors pe Numb	of indoor units and remote controller groups per System controller	1600	-	400	-	-	_	_
Number of Building Number of Boors pe Number of Boo	of outdoor units per System controller	400		100	-	-	-	_
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• •: Available -: Not available

#### Computer requirements

The specifications required for the computer are shown in the table below:

The specification	is required for the computer are shown in the table below:			
	System controller System controller Lite			
Operating system	Microsoft® Windows® 7 Home Premium (32-bit or 64-bit) SP1, Windows® 7 Professio     Microsoft® Windows® 8.1 (32-bit or 64-bit), Windows® 8.1 Pro (32-bit or 64-bit)     Microsoft® Windows® 10 Home (32-bit or 64-bit), Windows® 10 Pro (32-bit or 64-bit) Supports 7 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], Window;® 8.1, and Windows® 10)			
HDD	40 GB or more of free space			
Displayed items	1024 × 768 or higher resolution			
Interfaces	Ethernet port (for getting access to the internet using LAN) or a modem (for getting access to the internet via landline)     Up to 6 USB ports (Only required for a server computer working as a VRF controller)     Maximum of 2 USB ports are required to connect to a White-USB-key/WibuKey     Up to 4 USB ports required to connect to an Echelon® U10 USB network interface     Maximum number of required USB ports depends on the applicable system configuration.	•Ethernet port (for getting access to the internet using LAN) or a modem (for getting access to the internet via landline) •Up to 6 USB ports (Only required for a server computer working as a VRF controller)  - Maximum of 4 USB ports are required to connect to a White-USB-key/WibuKey - 1 USB port is required for an Ec;; helon® U10 USB Network interface * The maximum number of required USB ports depends on the applicable system configuration.		
Graphic accelerator	Microsoft® DirectX® 9.0c compatible			
Software	Adobe® Acrobat Reader® 9.0 or later			

<sup>•</sup> Echelon® U10 USB Network interface – TP/FT-10 Channel (Model name: 75010R) (Required for each VRF Network)

#### PACKING LIST>

VPACKING LIST								
	For System	controller		For System controller Lite				
Туре		Option	System co; ntroller	Option				
	System controller	Energy manager	Lite	Remote access	Electricity charge apportionment	Energy saving	Centralized 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	

<sup>\*1:</sup> 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 a WHITE-USB-KEY. However, a WHITE-USB-KEY is not required for remote VRF explorer software.

# BACnet® gateway



White-USB-key (Software Protection Key)

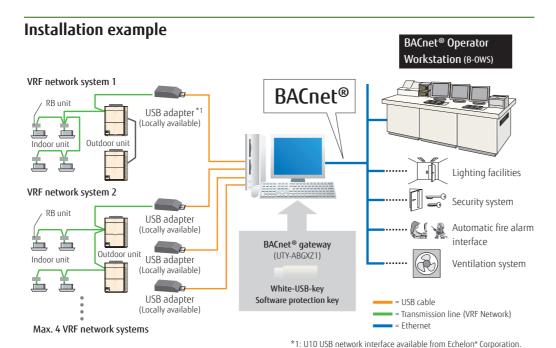


4 VRF network systems

400 outdoor units

1,600 indoor units

- 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-135-2014) 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.



#### **Specifications**

	UTY-ABGXZ1		
Microsoft® Windows® 7 Home Premium (32-bit or 64-bit) SP1, Windows® 7 Professional (32-bit or 64-bit) SP1     Microsoft® Windows® 8.1 (32-bit or 64-bit), Windows® 8.1 Pro (32-bit or 64-bit)     Microsoft® Windows® 10 Home (32-bit or 64-bit), Windows® 10 Pro (32-bit or 64-bit)     [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		
Ethernet port (for getting access to the Internet using LAN)     USB ports (Maximum of 5 ports)     1 USB port is required for WHITE-USB-KEY/WibuKey connection     Maximum of 4 USB ports are required for Echelon™ U10 USB Network Interface     * 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=""></packing>		
Name and shape	Quantity	Application
WHITE-USB-KEY	1	Includes the software and manuals, license for BACnet™ Gateway.







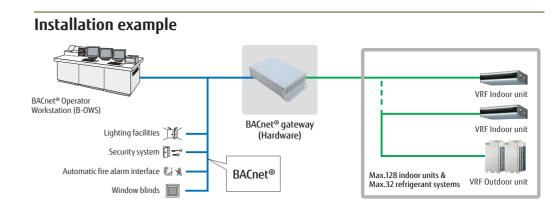
VRF network systems

32 refrigerant systems

128 indoor units

# BACnet® gateway

- 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-135-2012) application specific controller (B-ASC).
- Compatible with BACnet®/IP over Ethernet.



#### **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 etwork	4

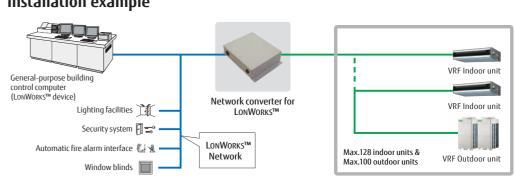
Model name		UTY-VBGX
Power Supply		100-240V 50/60Hz, single phase
Power Consumption	W	4.6 (max)
Dimensions (H x W x D)	mm	59.6 × 270.4 × 176
Weight	g	1,200

# Network converter for LONWORKS™ 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®
- Up to 128 Indoor units can be connected to one Network Converter for LONWORKS®

# Installation example



#### Specifications

Model name		UTY-VLGX
Power Supply		208-240V 50/60Hz, Single phase
Power Consumption	W	4.5
Dimensions (H x W x 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 (It attaches at the terminal of a network.)

# MODBUS® convertor for VRF

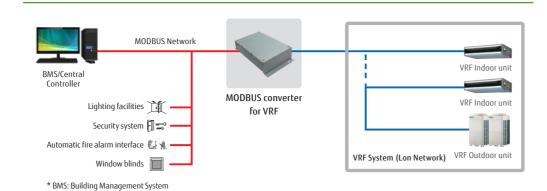
UTY-VMGX (Hardware)



 $\begin{array}{l} {\overset{\text{Up to}}{9}} \text{ units per VRF system} \\ 100 \text{ outdoor units} \\ 128 \text{ indoor units} \\ \end{array}$ 

# The MODOBUS Converter 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 Converter
- The MODBUS Converter permits central monitoring and control of air conditioners from BMS or Central Controller.



#### Specifications

Model name		UTY-VMGX		
Power Supply		220-240V 50/60Hz		
Input power	W	Max. 2		
Dimensions (H x W x D)	mm	54 × 260 × 150		
Weight	a	1.100		

# **MODBUS®** Interface

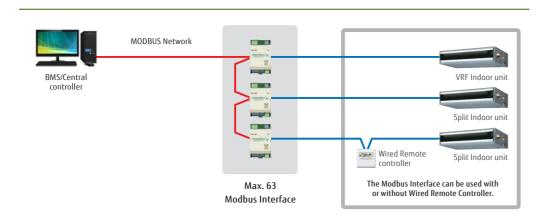
IITV-VKCX



1 indoor unit

# 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.



#### Specifications

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

# KNX® converter for VRF



home controller via KNX network.

It is possible to control the VRF system from central /

- 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.





#### **Specifications**

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

# KNX® Interface

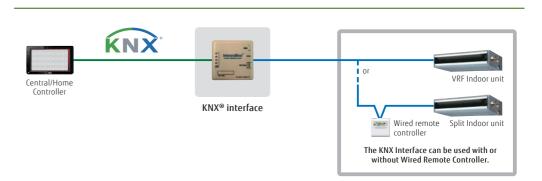
FJ-RC-KNX-1i



1 indoor unit

# 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



#### Specifications

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

106 OGENEROL 107

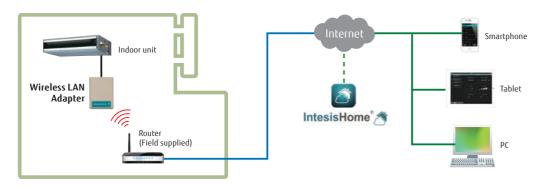
# **Wireless LAN Adapter**



1 Single indoor unit



- 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



#### 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



## **Notifications and History**

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

# 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

#### Specifications

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

# **Network converter**

UTY-VTGX / UTY-VTGXV



DC power supply type



16 single indoor units

1 group

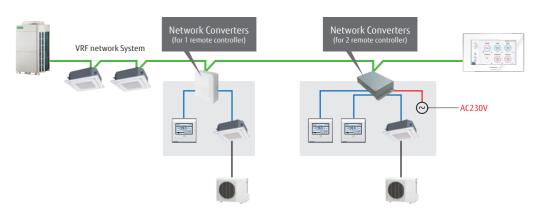
100 Network Converters

# Compact remote controller provides access to basic functions

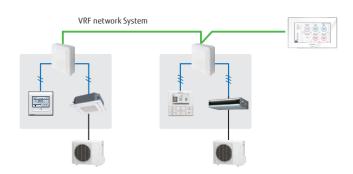
- The network converters are required when connecting single split system to VRF network system.
- Compact and light weight design
- Connectable to both types of 2-wire and 3-wire remote controllers

# Installation example

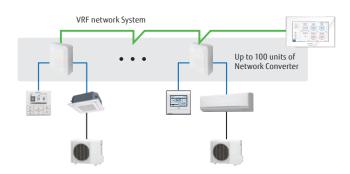
- 2 types of 1 remote controller type and 2 remote controllers type are available.
- Power supply (AC220-240V, 50/60Hz) is required for 2 remote controllers type.



• 2-wire and 3-wire type of the wired remote controller can be connectable.



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



#### Specifications

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	q	250		1,100	

# **External switch controller**

**UTY-TERX** 



1 group

- 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.
- The set temperature can be specified at two points for cooling and heating individually (4 points).

### 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.

			A THE
Cooling/Dry	+2° <b>C</b> *Max. 30°C	SAVE!	AUTO RESTART
,	12 C Mdx. 30 C		
Set temp. ——			
Heating			
Set temp.	<b>-4°C</b> *Max. 16℃	<b>—</b>	
Normal o	peration	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 x W x D)	mm	140 × 117 × 43	
Weight	g	250	

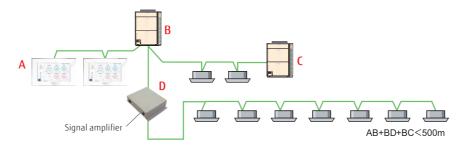
DC12V is supplied by indoor unit.

# 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.

# Installation example



#### **Specifications**

5,500			
Model name		UTY-VSGXZ1	
Power Supply		208-240V 50/60Hz, Single phase	
Input power	W 4.5		
Dimensions (H x W x D)	mm	67 × 288 × 211	
Weight	q	1,500	

# **Thermostat Converter**

UTY-TTRX7

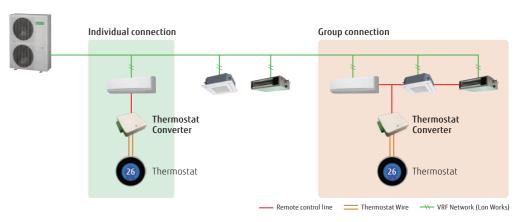


 $^{\text{Up to}}$  16 indoor unit

# Control air conditioner using third party thermostat

Thermostat converter can control Fujitsu General products using a third party thermostat.
 Up to 16 indoor unit can be connected with one thermostat converter.

# Installation example



### **Function**

	ON/OFF
	Operation mode
Air Conditioning Control	Room Temperature
	Fan Speed
	Delay OFF



\*These function are displayed on the converter's PCB board.

# Specifications

Specifications							
Model name		UTY-TTRXZ1					
Max. Connectable Indoor Unit	t	16					
Input power (Max.) W		0.6					
Dimensions (H x W x D)	mm	27 × 86.7 × 86.7					
Weight	q	220					

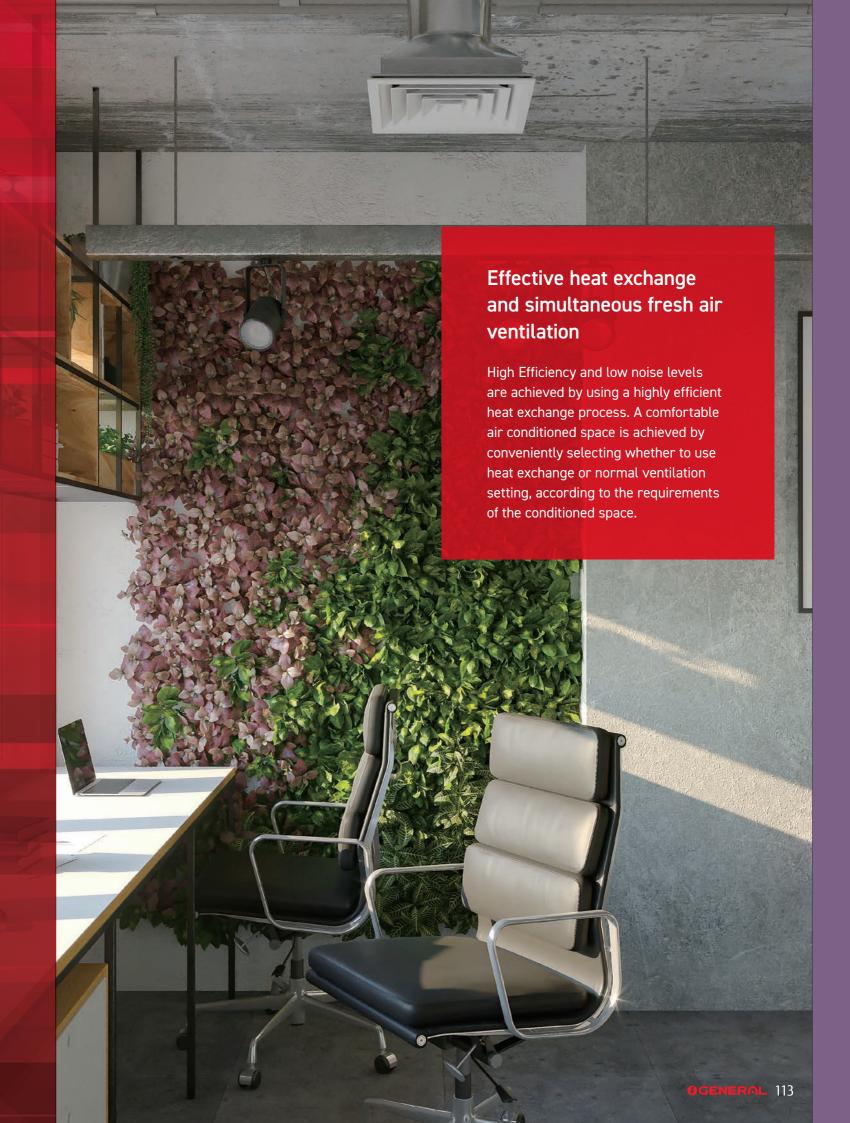
# **VENTILATION**

# Outdoor-air Processing Unit range

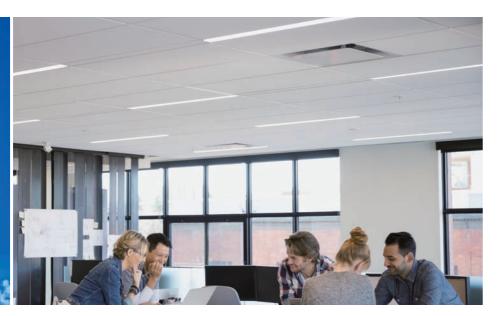
Airflow rate (m³/h)	1080	1680	2100
Model code	054	072	096
Outdoor-air Processing Unit			
	ARXH054GTAH	ARXH072GTAH	ARXH096GTAH

# DX Kit

for Air Handling Unit or Fresh Air Handling Unit application



# Outdoor-air Processing Unit

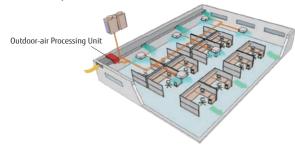


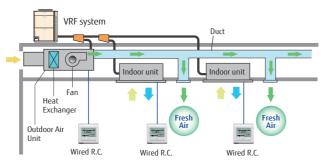


# One VRF system can provide air conditioning and air supply at the same time.

Outdoor-air Processing 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

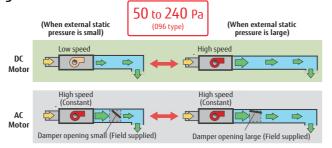




\* Make sure the connected capacity is within the range of 50% to 100% of the outdoor unit capacity. In addition, if there are mixed connections with indoor units, make the Outdoor-air Processing Unit connection capacity 30% or less of the outdoor unit capacity.

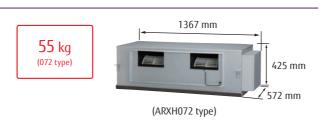
# High energy savings and flexible duct design by using DC motor

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



# 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.



### **Various Controller**

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

#### **Individual Controller**



#### **Central Controller**



<sup>\*</sup> The temperature setting is discharged air temperature setting. The air volume is set to a constant speed.

#### Model: ARXH054GTAH / ARXH072GTAH / ARXH096GTAH

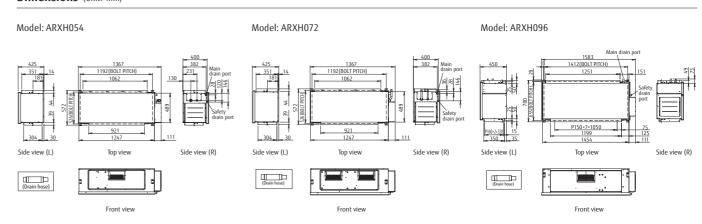


#### Specifications

Rated flow rate			1000 m³/h	1500 m³/h	2000 m³/h		
Model name			ARXH054GTAH	ARXH072GTAH	ARXH096GTAH		
Power source		V/Ø/Hz		220-240V, 50Hz			
Capacity	Cooling	kW	14.0	22.4	28.0		
Capacity	Heating	KVV	8.9	13.9	17.4		
Input power	Cooling	w	179	292	370		
	Heating	VV	179	292	370		
Airflow rate		m³/h	1,080	1,680	2,100		
Static Pressure	Static Pressure Standard (range)		185 (50-185)	200 (50-200)	200 (50-240)		
Sound Pressure	Level	dB(A)	42	44	47		
Dimensions (H >	W × D)	mm	425 × 1,367 × 572	425 × 1,367 × 572	450 × 1,583 × 700		
Weight		kg	48	55	71		
Connection	Small				9.52	12.70	12.70
pipe diameter	Large	mm	19.05	22.22	22.22		
Operating	Cooling	°CDB	5 to 43	5 to 43	5 to 43		
range	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°CDB / 28°CWB.
Heating: Outdoor temperature of 0°CDB / -2.9°CWB.
Pipe length: 7.5 m Voltage: 230 [V].

#### Dimensions (Unit: mm)

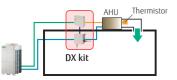




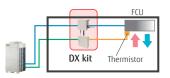




# Multiple temperature sensors optimally control the air handling unit and fan coil unit.

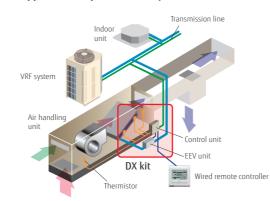


When connected to an Air handling unit, the temperature of supply air is controlled by a discharge air sensor.



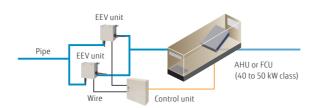
When connected to a fan coil unit, the room temperature is controlled by the

#### Application as part of a VRF system



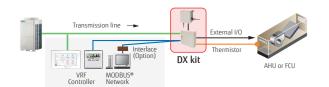
# Supports a wide range of capacity classes

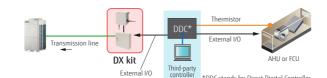
- Two EEV units can be connected in parallel to large-capacity units of up to 20 HP (50 kW). (UTP-LX180A separation tube required)
- Connectable capacity range: 5 kW to 50 kW



### A variety of controls to match the application

• Central control using our VRF controllers or central management controllers





# **Summary of functions**

#### 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 requirements**

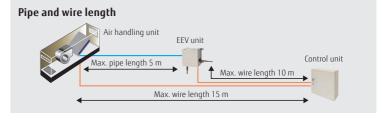
- Connectable VRF Series : All VRF
- Connectable DX Kit system capacity range: 50 to 100 % of the outdoor unit capacity
- Connectable DX Kit system capacity range with indoor units : 30 % or less of the outdoor unit capacity
- Max. wiring length from control unit: 10 m
- Max. piping length between EEV unit and indoor unit: 5 m
- Outdoor installation : Control unit (IP54 class) and EEV unit can be installed at an outdoor space.

# Connectable capacity Single connection 50 to 100% of outdoor unit capacity Within 30% of total capacity 50 to 100% of outdoor unit capacity

#### [For 2EEV units connection (option)]

• Separation Tube : UTP-LX180A





Control unit: UTY-VDGX EEV unit: UTP-VX30A/UTP-VX60A/UTP-VX90A



#### Specifications

Specificat	precincations													
EEV unit				UTP-VX30A		UTP-VX60A			UTP-VX90A		UTP-VX90A×2			
Power source	V/Ø/Hz		230/1/50											
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)	8.0 (7.2-9.0)	10.0 (9.1-11.1)	12.5 (11.2-13.2)	14.0 (13.3-18.0)	22.4 (18.1-23.7)	25.0 (23.8-28.0)	40.0 (28.1-44.7)	50.4 (44.8-50.4)		
	Heating		6.3 (5.7-6.7)	7.1 (6.8-8.0)	9.0 (8.1-10.0)	11.2 (10.1-12.4)	14.0 (12.5-15.0)	16.0 (15.1-20.0)	25.0 (20.1-26.5)	28.0 (26.6-31.5)	45.0 (31.6-49.9)	56.5 (50.0-56.5)		
Airflow Rate(Re	eference 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	9.52	9.52	9.52	9.52	9.52	9.52	12.70	12.70	12.70	12.70		

Control unit		UTY-VDGX
Power source	V/Ø/Hz	230/1/50
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].

# **VRF OPTION**

Pressure Sensor Kit

Auto Louver Grille Kit

CONTROL SYSTEM LIST

OPTIONAL PARTS LIST

OPTIONAL PARTS

FUNCTION LIST

SEPARATION TUBE etc.

Diverse building air conditioning control functions can be controlled easily by VRF options. Various kinds of optional parts are provided such as controllers, adaptors and converters to meet the needs of every user. **OGENERAL** 119

# Pressure sensor kit

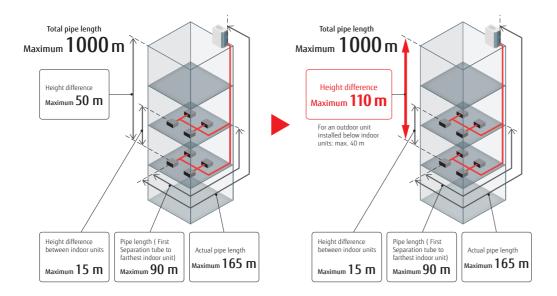
UTY-SPWX

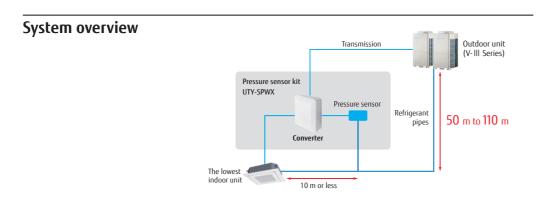


# **Design Flexibility**

The height difference between the outdoor unit and the indoor unit is usually 50 m for the V-III Series, but by installing the pressure sensor kit it is possible to expand it to 110 m.

(\*This product can be used connected only V-III series. Also, it is possible to use only the outdoor unit that outdoor unit software is compatible with this product. The software for outdoor unit will be changed since production lot in January 2018.)





### Pressure sensor kit

Pressure sensor kit (Converter)	Refrigerant pressure sensor	Joint pipe

#### Specifications

Model name		UTY-SPWX						
Power Supply		DC16-9						
Dimensions (H x W x D) mm		140 × 117 × 43						
Weight	g	200						

# Auto louver grille kit UTD-GXTA-W/UTD-GXTB-W/UTD-GXTC-W

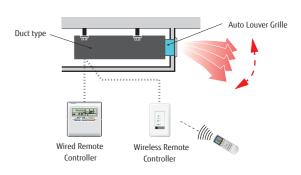


The optional clean-looking flat Auto louver grille kit blends into any interior and provides a comfortable airflow

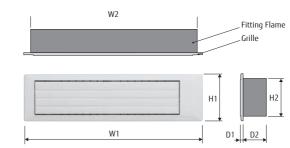


### Flexible Control

- 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.



#### **Dimensions**



					U	nit: 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 Indo	oor Unit		ARXD07/09/12/14GATH	ARXD18GATH	ARXD24GATH						
Power source				Connecting with Control box of indoor unit							
Fixing of Auto L	ouver Grille			Screw fixing to Flange or Square Duct							
Extension Square Duct Limit 1.0m (Max. duct length between indoor unit and Grille)											
Dimensions (H	× W × D)	mm	180 × 683 × (84+9)	180 × 683 × (84+9) 180 × 883 × (84+9)							
	Net	lua.	2.0	2.5	3.0						
Weight	Gross	kg	3.0 3.5		4.0						
Color				White							
Louver Motor			Stepping Motor								
Accessories			Fitting Flame, etc.								
	Cooling	°C		18 to 32							
Operating	Cooling	% RH		80% or less							
range	Heating	°C	16 to 30								

<sup>\*:</sup> The Auto Louver Grille Kit can also be installed to ARGD07/09/12/14/18/24GATH revision code B models. Please refer to the Design & Technical manual for "revision code " details.

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# **CONTROL SYSTEM LIST**

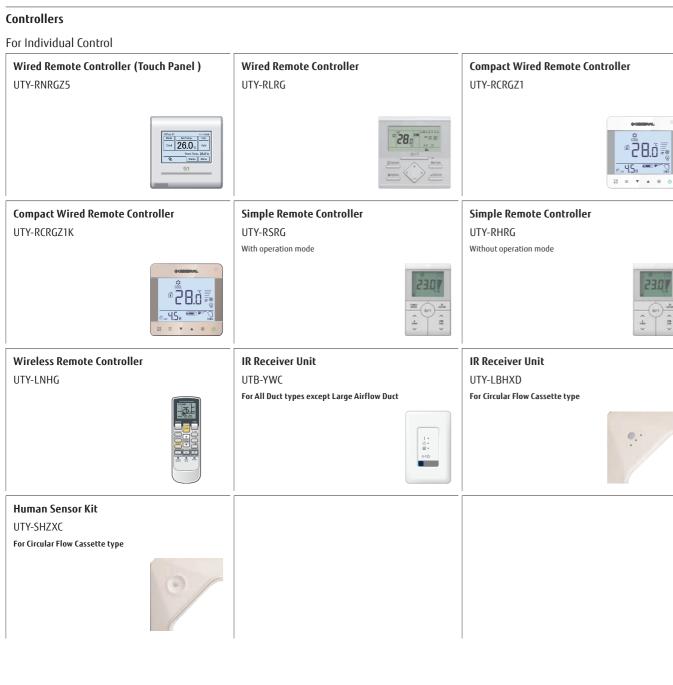
Controllers / In	terface			Indoor unit					Indoo	unit				
			Cassette		Du Slim		Dı		Ceiling / Floor	Ceiling		lounted		
Туре		4-way Compact	Circu	lar Flow	Slim (With drain pump)	Medium Static Pressure	High Stati	ic Pressure	<u> </u>		-	-		
		AUXB 09/12/14/18/24 GATH	AUXM018/024GTAH	AUXK 018/024/030/034/ 036/045/054 GTAH	ARXD 07/09/12/14/18/24 GATH	ARXA 24/30/36/45 GBTH	ARXC36/72/90GBTH, ARXC96GATH	ARKC45/60GATH	ABHA 12/14/18/24 GATH	ABHA 30/36/45/54 GATH	ASHA 07/09/12/14 GATH	ASHA 18/24/30 GATH		
Controller  Wired Remote Controller	-220.			UTY-RNRGZ5					UTY-R1					
Controller	78.7 July 100 100 100 100 100 100 100 100 100 10			UTY-RLRG			UTY-RLRG							
Compact Wired Remote Controller	**************************************			● UTY-RCRGZ1, UTY-RCRGZ1K			UTY-RCRGZ1, UTY-RCRGZ1K							
Simple Remote Controller	2-wire type 3-wire type		UTY-R	esrg, uty-rhrg, uty-rskg, ut	Y-RHKG				UTY-RSRG, UTY-RHRG,					
Wireless Remote Controller				UTY-LNHG			UTY-LNHG							
Central Remote Controller	# (B)			UTY-DCGGZ3					UTY-D					
System Controller, System Controller Lite	-			UTY-APGXZ1, UTY-ALGXZ1					UTY-APGXZ1,					
IR Receiver Unit	1			● LBHXD	UTB-	YWC	UTB-	-YWC						
BACnet Gateway	10			UTY-ABGXZ1, UTY-VBGX			UTY-ABGXZ1, UTY-VBGX							
Network Converter for LONWORKS				UTY-VLGX			UTY-VLGX							
MODBUS Converter				UTY-VMGX			UTY-VMGX							
MODBUS Interface	Table 1	FJ-RC-MBS-1			FJ-RC-1	MBS-1	FJ-RC-I (ARKC45/60GATH, J	MBS-1 ARXC96GATH only)		FJ-RC	• -MBS-1			
KNX Convertor			UTY-VKGX						UTY-\	KGX				
KNX Interface		FJ-RC-KNX-1i			FJ-RC-k	KNX-1i	FJ-RC-I (ARKC45/60GATH, J	NX-1i ARXC96GATH only)		FJ-RC	• -KNX-1i			
Wireless LAN Interface		FJ-RC-WIFI-1			FJ-RC-V	WIFI-1	FJ-RC- (ARKC45/60GATH, A	WIFI-1 ARXC96GATH only)			• -WIFI-1			
External Switch Controller				UTY-TERX					UTY-1	ERX				
Network Converter for single split	DC Power AC Power Supply Type			UTY-VTGX, UTY-VTGXV					UTY-VTGX,	JTY-VTGXV				
Thermostat Converter	0			UTY-TTRXZ1					UTY-TTRXZ1					

# **OPTIONAL PARTS LIST**

### Others

Otners				Indoor with					le de				0
			Cassette	Indoor unit	Di	uct	Di	uct		or unit	Wall M	ounted	Outdoor unit V-III
		4-way Compact	Circula	ar Flow	Slim (With drain pump)	Medium Static Pressure	High Stati	ic Pressure	Ceiling / Floor	Ceiling	-	-	V-III Tropical
Туре		AUXB 09/12/14/18/24 GATH	AUXM018/024GTAH	AUXK 018/024/030/034/ 036/045/054 GTAH	ARXD 07/09/12/14/18/24 GATH	ARXA 24/30/36/45 GBTH	ARXC36/72/90GBTH, ARXC96GATH	ARKC 45/60GATH	ABHA 12/14/18/24 GATH	ABHA 30/36/45/54 GATH	ASHA 07/09/12/14 GATH	ASHA 18/24/30 GATH	AJS 072/090/ 108/126/144 LNTCH
Others Human Sensor Kit	0		UTY-S	SHZXC									
Remote Sensor Unit	New amenity space can be offered by installing the Remote sensor.				UTY-	XSZX	● UTZ-PX1NBA						
Cassette Grille	UTG-UKGD-W UTG-UKGA-B	UTG-UFGC-W	UTG-UKGD-W UTG-UKGA-B										
Auto Louver Grille Kit					UTD-GXTA-W UTD-GXTB-W(18) UTD-GXTC-W(24)								
Long Life Filter						UTD-LF25NA	UTD-LF60K	• A(36/45/60)					
Flange	0-					UTD-SF045T UTD-RF204				● UTD-RF204			
Drain Pump Unit	48					● UTZ-PX1NBA				● UTR-DPB24T			
Wide Panel	Indoor unit 950 600 Panel 600 (mm)			KXA-W									
Panel Spacer	(mm) 242 Panel spacer		UTG-B	KXA-W									
Air Outlet Shutter Plate	For Compact Cassette For Cassette	● UTR-YDZB	UTR-	● UTR-YDZK									
Insulation for High Humidity	For Compact Cassette type / Cassette type	UTZ-KXGC	UTZ-KXRA										
Pressure Sensor Kit for V-III Series*	18												UTY-SPWX

# **OPTIONAL PARTS**





#### Converters / Adaptors

For External device / System expansion



BACnet® Gateway (Hardware) **Network Converter** for LonWorks® UTY-VBGX UTY-VLGX



MODBUS® Converter Hardware UTY-VMGX



MODBUS® Interface FJ-RC-MBS-1



KNX® Convertor for VRF Hardware UTY-VKGX



KNX® Interface FJ-RC-KNX-1i



Wireless LAN Interface

FJ-RC-WIFI-1



**Network Converter** for single split

UTY-VTGX DC power supply type



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



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

Thermostat Converter



**External Switch Controller** 

UTY-TERX



Signal Amplifier UTY-VSGXZ1

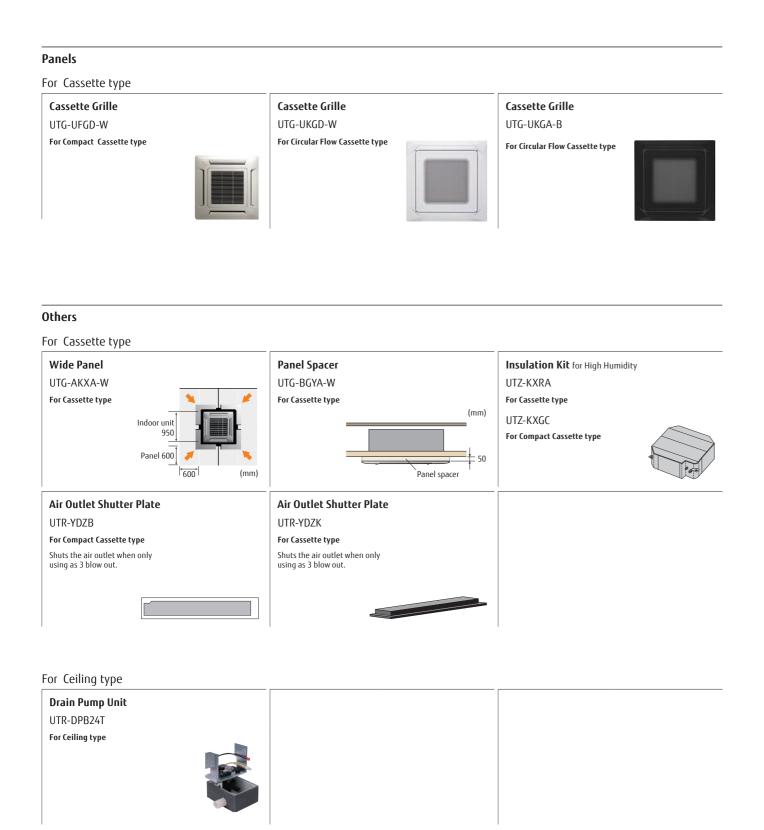
UTY-TTRXZ1

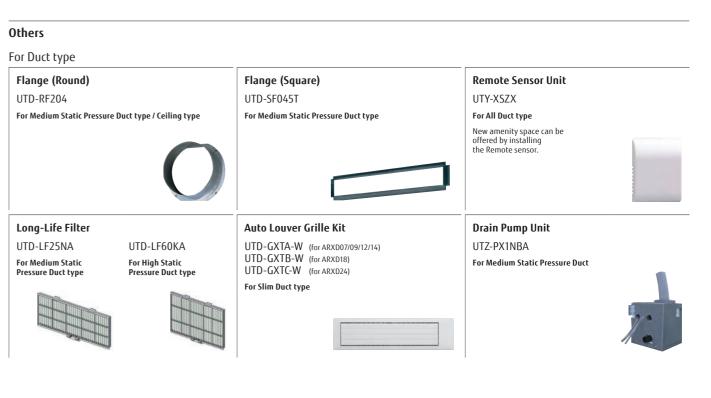


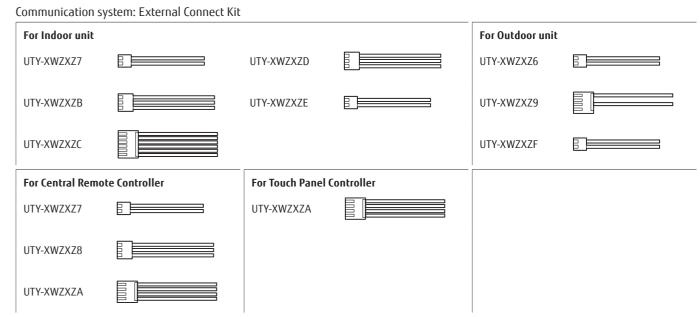
Pressure Sensor Kit for V-III tropical Series\* UTY-SPWX



# **OPTIONAL PARTS**





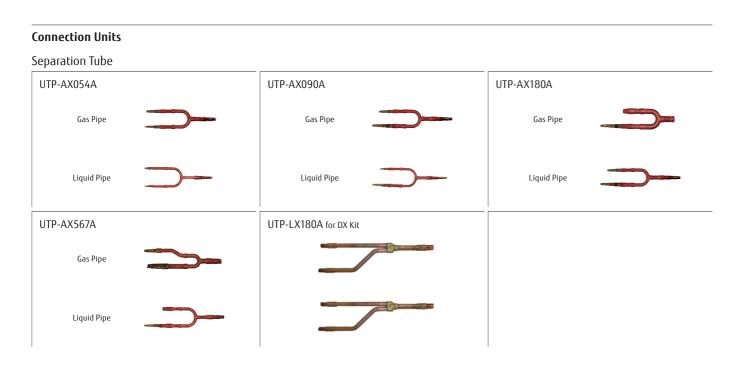


# **FUNCTION LIST**

					Indoor unit					Indo	or unit		Outdoor unit		Controller
	-		Cassette		Clim		uct		 Ceiling / Floor	Ceiling	Wall M	lounted	J-III	V-III	Central Remote
		4-way Compact	Circul	ar Flow	Slim (With drain pump)	Medium Static Pressure	High Static Pressure	High Static Pressure	Ceiling / Floor	Cenning			Tropical	Tropical	Controller
Туре		AUXB 09/12/14/18/24 GATH	AUXM 018/024GTAH	AUXK 018/024/030/034/ 036/045/054 GTAH	ARXD 07/09/12/14/18/24 GATH	ARXA 24/30/36/45 GBTH	ARXC36/72/90GBTH, ARXC96GATH	ARKC45/60GATH	ABHA 12/14/18/24 GATH	ABHA 30/36/45/54 GATH	ASHA 07/09/12/14 GATH	ASHA 18/24/30 GATH	AJH 040/045/054 LBTAHN, AJH 040/045/054 LETAHN	AJS 072/090/ 108/126/144 LNTCH	UTY-DCGGZ2
Input	Operation / Stop				●UTY-XWZXZD ○UTY-XWZXZB					●UTY-	XWZXZD XWZXZB				
	All On / All Off														●UTY-XWZXZ7 ○UTY-XWZXZ8
	Group Stop													●UTY-XWZXZ6	
	Forced Stop				●UTY-XWZXZD ○UTY-XWZXZB					●UTY-	XWZXZD XWZXZB				
	Emergency Stop				●UTY-XWZXZD ○UTY-XWZXZB						XWZXZD XWZXZB			●UTY-XWZXZ6	●UTY-XWZXZ7 ○UTY-XWZXZ8
	Forced Thermostat off				●UTY-XWZXZE ○UTY-XWZXZ7						XWZXZE XWZXZ7				
	Low Noise Mode Operation													●UTY-XWZXZ6	
	Cooling/ Heating Priority														
	Outdoor Unit Operation Peak Control													●UTY-XWZXZ6	
	Power Usage Information from Electricity Meter													● UTY-XWZXZF	
Output	Operation Status				●UTY-XWZXZC					●UTY-	XWZXZC			OUTY-XWZXZ6	OUTY-XWZXZA
	Error Status				●UTY-XWZXZC					●UTY-	XWZXZC			OUTY-XWZXZ6	OUTY-XWZXZA
	Indoor Unit Fun Operation Status				●UTY-XWZXZC					●UTY-XWZXZC					
	Auxiliary Heater Output					●UTY-	XWZXZC								
	Base Heater													●UTY-XWZXZ9	

•: Dry Contact O: Apply Voltage

# SEPARATION TUBE etc.



### Header



#### Outdoor Unit Branch Kit



# Specifications

### Separation Tube

Model name		UTP-AX054A	UTP-AX090A	UTP-AX180A	A UTP-AX567A
Total cooling capacity of indoor unit	kW	19.6 or less	28.0 or less	56.1 or more	
Model name		UTP-BX090A	UT	P-BX180A	UTP-BX567A
Total cooling capacity of indoor unit	kW	28.0 or less	28	1 to 56.0	56.1 or more

### Header

Model name	3-6 Branches	UTR-H0906L	UTR-H1806L UTR-H1808L			
Model Hallie	3-8 Branches	UTR-H0908L				
Total cooling capacity of	indoor unit kW	28.0 or less	28.1 to 56.0			
Madalassas	3-6 Branches	UTP-J0906A	UTP-J1806A			

Model name	3-6 Branches	UTP-J0906A	UTP-J1806A
model fiallie	3-8 Branches	UTP-J0908A	UTP-J1808A
Total cooling capacity of	indoor unit kW	28.0 or less	28.1 to 56.0

#### Outdoor unit Branch kit

Model name		UTP-CX567A (for V-III Tropical)
Model name	2 outdoor units	1
	3 outdoor units	2

### Reducer kit

Model name	UTP-NX18A	UTP-NX54A
Applicable Model	AUXK018GTAH AUXM018GTAH AUGK018GTAH AUGM018GTAH	AUXK036/045/054GTAH AUXM036/045/054GTAH

# SUPPORT

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

Support

HVAC system design 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 (Room air conditioner, Packaged air conditioner, 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												•			•	•



# 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.

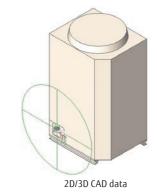


### **Technical information**

We provide equipment selection software that facilitates the design of air conditioning systems by providing performance data for the units and estimation for model selection.

#### Features

- Design & Technical manuals
- Model selection & estimation
- Certification data
- 2D/3D CAD data



### **Product information**

Information on new models is provided in the form of documents and movies in a timely manner for release, readily downloadable from the private section of our website. Contact your Fujitsu General representative for access information.

#### Features

- Product news
- · Brochures & manuals
- Promotional movies



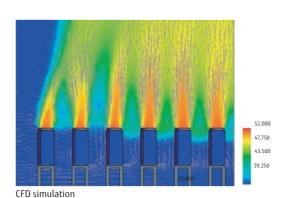
https://www.fujitsu-general.com/g-eu/support/downloads/vrf/

# Technical support

Technical support is offered at every stage, from design through to installation, to assist in optimizing air conditioning solutions.

#### **Features**

- CFD simulation
- Guidelines
- Commissioning support





Commissioning support

















Fujitsu General regularly provides professional product, technical and service training at its training facilities worldwide. These research facilities also support the development of human resources with advanced technical skills.

#### Features

- Designing VRF systems
- On-site training for control systems

- Head office training center in Japan
- 2 Training center in China
- 3 Asia training center in Singapore
- 4 Europe training center in the United Kingdom
- 5 Europe training center in Germany
- 6 America training center in the United States
- 7 Middle East training center in the UAE
- 8 Oceania training center in Australia

# HVAC system design support tool

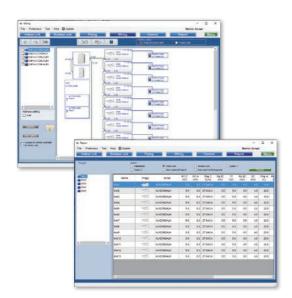
Put the charts and pens away and design your projects on your computer with ease using the Design Simulator.

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

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.

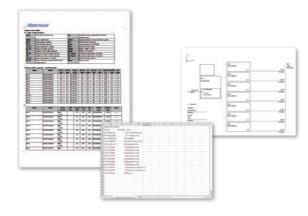


# **Design simulator**



# Automatically create model selection information

- The required performance, type, and temperature conditions for each indoor unit are entered and then dragged and dropped onto the outdoor unit to automatically set each unit.
- Creates piping and wiring diagrams automatically to facilitate branching, grouping, and option settings.
- The additional refrigerant charging is automatically calculated when the pipe length is entered.
- Easy configuration of remote controller groups, central controller, and
- The equipment list including the equipment information is created automatically.



# Outputs in the format that matches the application

You can export your project information in a number of industry standard file formats.

- · Word format (rtf) (doc)
- Excel format (csv)
- Acrobat format (pdf)
- 2D CAD data (DXF)

# Requests latest history Replies with latest history FTP server side

# Update your Design simulator

The database can be updated easily online with the AutoUpdate function using FTP.

# BIM Building information modeling

# BIM files of Fujitsu General's products are available on

Fujitsu General is releasing BIM files of our products on the BIMobject® website BIMobject.com.

#### Outline of BIMobject®

BIMobject® is a game changer for the construction industry, offering development, maintenance, and syndication of objects on the world's largest BIM platform.

#### **About BIM files**

- BIM files can be viewed in Autodesk Revit® 2018 version or later.
- In each BIM file, the location of the connectors for the refrigerant and drain
- Each BIM file includes several family types.
- A catalog and specification sheet is available in Revit file format for each product.









#### RFA (Revit data)

A data format available for BIM-designed projects

# Data content

- Shape (Size)
- Drain direction
- Pipe direction
- Power supply location • It contains information about
- the above specifications.



Type catalog with product specifications

#### DWG

a standard data format used for Autodesk products



Intermediate data commonly available in CAD products

# Data content

· Shape (Size





\*To learn more about how to use BIM files, refer to the instructional video on each product page. youtu.be/wfL-hwFQ7dM

# 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.



# Easy maintenance & monitoring

# Designed for easy maintenance

The operating status of the air conditioner and detailed trouble conditions are displayed on the 7-segment indicator lamp on the outdoor unit printed circuit board (PCB) and on the screen of the remote controller.

Check the status of the unit quickly for a prompt response.

- Display the operation mode at the time.
- Discharge temperature and pressure
- Compressor operation status
- "Address/Type/Number" of the outdoor unit
- Error code

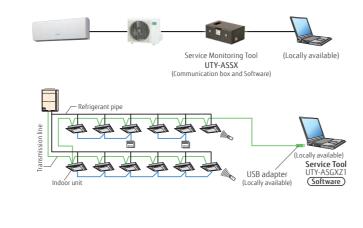
# Error diagnosis by Service tool

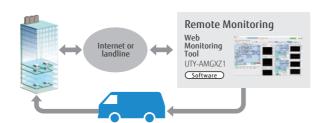
Connect Service tool to check the status details of units, from single split to VRF, on a computer screen. Check the errors quickly for prompt countermeasures.

- Operating status/control
- Monitoring operating conditions
- Monitoring sensor data
- Indicating trend graphs
- Error history
- Indicating refrigerant circuit diagrams (for VRF)

# Remote monitoring

VRF system operating status and trouble status details can be monitored remotely at any time via the internet. Prompt coordination is available with service personnel.





# Mobile troubleshooting App for iOS and Android ™ devices

We will release an App for troubleshooting tools for iPhone, iPod touch and other Apple devices, and Android products for Fujitsu General air conditioners (Room air conditioner/ Packaged air conditioners VRF and ATW, "AIRSTAGE Mobile", and R32 calculation of allowable refrigerant capacity)

Use Error Code Check, Troubleshooting, and Sensor Check to understand the status of your air conditioner.

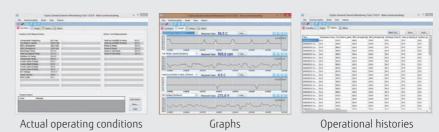




# Service monitoring tool for Single split, Multi-split & Air to water



- A quick overview of the temperature sensor readings and the electronic expansion valves (EEVs), fans, compressors and other control components
- It is not always easy to read the temperature sensor and know the status of the control components. So let the Service monitoring tool judge them.
- · Visualizes protected operations
- Troubleshoots intermittent problems effectively
- Provides proof of normal operation to customers during periodical maintenance



Dimensions ( $H \times W \times D$ ) (mm) Weight (g)

# Service tool

#### UTY-ASGXZ1

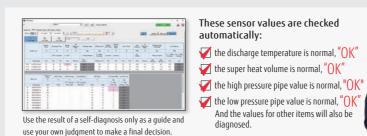
## Extensive monitoring and analysis functions that make installation and maintenance easier

- The operation status of the system can be monitored and analyzed to detect any malfunctions.
- Data on the operation status of the system can be stored on a computer to allow for remote access.
- Up to 400 indoor units in a single VRF network system can be controlled and monitored for a large building or hotel.
- This software can be connected to any point of transmission line with a USB adapter (locally available).
- \* Saved data can be displayed offline. Note that the data saved by the following software applications cannot be displayed.
- UTR-YSTB/UTR-YSTC (Service tool)
- UTR-YMSA (Web monitoring tool)

# Automatic operation check for refrigeration cycles

Once installed, the Service tool automatically checks for refrigeration cycles. The self-diagnosis function determines whether each sensor value is normal, which reduces the need for manual checks. The result of a diagnosis can be provided in a report.





# Remote technical support and maintenance

On-site check screen can be shared between on-site staff and a service technician in a remote location. When a service technician visits the site for troubleshooting, the system's operation status can be shared in real time with a remote service center for assistance. On-site staff can have an online chat with a remote service center to get further assistance.

#### Trend charts

Previous-generation application could display only 3 sets of data from sensors. However, the current generation of the service tool displays multiple charts simultaneously so that refrigeration cycles can be monitored and checked in greater detail.





#### Computer requirements

	UTY-ASGXZ1					
Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1     Microsoft® Windows® 8.1 Pro (32-bit or 64-bit)     Microsoft® Windows® 10 Pro (32-bit or 64-bit)						
СРИ	1 GHz or higher					
Memory  • 1 GB or more (for Windows® 7 [32-bit], Windows® 8.1 [32-bit], and Windows® 10 [32-bit])  • 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					
Screen resolution	1366 × 768 pixels or higher					
Interface	USB port for U10 USB Network interface and software protection key					
Software	are Internet Explorer® 11 or Microsoft Edge					

#### **Packing list**

Name	Quantity	Application
White-USB-key (Software protection key)	1	Software protection key to be connected to a USB port on a Service tool-installed computer. This software runs only on a computer with WibuKey.

<sup>•</sup>Computer requirements

# Web monitoring tool

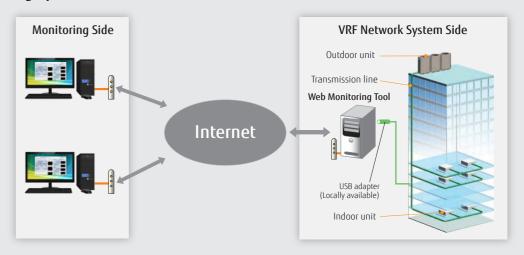
#### UTY-AMGX

# Features

- Troubleshooting is performed by monitoring each air conditioning unit remotely during a periodical system check.
- An error notification is automatically transmitted to several locations via the internet\*1.
- Requires either a dedicated internet connection or landline to operate.
- The occurrence of an error can be confirmed through an error alert and equipment status information obtained from a remote location.
- Monitoring data can be downloaded in a remote location. These data can be accessed and displayed even when the service tool is in offline mode.
- Can be viewed on the monitoring computer's Web browser without installing any special software.

\*1: Internet e-mail access required.

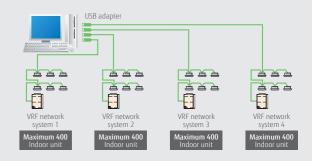
### **Web Monitoring System**



### Supporting up to 4 VRF network systems

Up to 4 USB adapters can be connected to a computer, enabling the monitoring of up to 1,600 indoor units.

Suitable for use in a large building or hotel.



#### Computer requirements

composer requi	iputer requirements						
	UTY-AMGXZ1						
Operating system	Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1     Microsoft® Windows® 8.1 Pro (32-bit or 64-bit)     Microsoft® Windows® 10 Pro (32-bit or 64-bit)						
CPU	1 GHz or higher						
Memory	• 1 GB or more (for Windows® 7 [32-bit], Windows® 8.1 [32-bit], and Windows® 10 [32-bit]) • 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						
Screen resolution	1366 × 768 pixels or higher						
Interface	USB ports (one for U10 USB Network interface and up to 4 ports for software protection keys) Interface for remote connection: Landline: Modem is required. Internet using LAN: Ethernet port is required.						
Software	Internet Explorer® 11 or Microsoft Edge						

#### Packing list

acking inst							
Name	Quantity	Application					
White-USB-key (Software protection key)	1	Software protection key to be connected to a USB port on a Service tool-installed computer. This software runs only on a computer with WibuKey.					

<sup>•</sup>Computer requiremen

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

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