FUJITSU

AIRSTAGE™

Variable Refrigerant Flow Systems

Heat Pump
J-IIS 208-230V / 1-Phase
J-II 208-230V / 1-Phase
V-II 208-230V, 460V / 3-Phase

Heat Recovery
VR-II 208-230V, 460 / 3-Phase

Creation of Comfort

Fujitsu General creates high-quality and environmentally-friendly products that provide a comfortable environment by using its continually improving air conditioning technology, innovation and creativity, which we started over 35 years ago.

High Quality Development and Production Environment

The Headquarters-JAPAN R&D Center is equipped with a wide range of testing equipment envisioning a variety of operating conditions. This includes a testing tower with a 198 ft. (60m) height difference for buildings.We provide high quality & reliable products that meet the customers' needs from all over the world through this advanced R&D center and 6 factories based in China and Thailand.

JAPAN R&D center and 198 ft. (60m) height testing tower (Kawasaki, Japan)
Central R&D center for global air conditioner development. Advanced products are developed and next generation technologies are researched.

FUJITSU GENERAL CENTRAL AIR-CONDITIONER(WUXI)CO.,LTD(China)
VRF Main factory. ISO9001 and ISO14001 certified. This factory has high quality and high reliability systems for manufacturing VRF systems.

FUJITSU GENERAL's VRF AIRSTAGE Series has been developed based on our long-term air conditioning technology know-how that was first introduced 16 years ago. Since then, the Airstage series has been serving the market's HVAC needs in applications ranging from large residential to commercial in addition to a large variety of other installations.

S series
8 tons / Heat recovery & Heat pump

8 tons / Heat recovery 6, 8 tons / Heat pump & Cooling

V series
6 to 30 tons / Heat pump

AIRSTAGE V-II

V-II series
High efficiency and compact design model
Extensive lineup from 6 to 24 tons in 2 ton increments / Heat pump

AIRSTAGE VR-II

VR-II series
High efficiency and compact design model
6 to 24 tons / Heat Recovery

AIRSTAGE™ History — Global

2001 | 2003 | 2006 | 2007 | 2009 | 2010

History of Environmental Measures

Certification Acquisition of
ISO14001

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

Green Initiatives
Fujitsu introduces inverter technology and the use of environmentally friendly R410A refrigerant.

Refrigerant R410A

RoHS Compliant
Restriction of Hazardous Substances is an EU directive intended to protect the environment by forcing manufacturers to use environmentally friendly materials in all consumer electronics.

RoHS COMPLIANT

AIRSTAGE™ VR-II

460V 3-Phase

6 to 24 tons / Heat Recovery
100% Inverter driven

AIRSTAGE™ V-II

460V 3-Phase

6 to 24 tons / Heat Pump
100% Inverter driven

AIRSTAGE™ VR-II

208/230V 3-Phase

6 to 24 tons / Heat Recovery
100% Inverter driven

AIRSTAGE™ V-II

208/230V 3-Phase

6 to 24 tons / Heat Pump
100% Inverter driven

AIRSTAGE™ J-IIS

208/230V 1-Phase

J-Series
High efficiency, small capacity model
3, 4 tons / Heat pump

AIRSTAGE™ J-II

208/230V 1-Phase

J-Series
High efficiency, small capacity model
3, 4 and 5 tons / Heat pump

North America

2012 | 2013 | 2014 | 2015 | 2017

Green Advancement
Use of 100% inverter driven
DC compressors.

INVERTER

A World Leader in Heating and Cooling Solutions

Support Team

Fujitsu features an expert team of Regional Sales Managers and Sales Engineers located around North America to provide customer support. Additionally, blended Rep Agencies support Plan and Spec Consulting Engineers, as well as wholesale distribution, to provide product knowledge and support. We pride ourselves in having one of the most educated and qualified teams in the HVAC industry.

Technical Support

The Fujitsu support experience is top notch and our highly trained technicians are equipped with the tools and resources to answer any question that may come your way. Fujitsu offers remote technical support, and when needed, can dispatch local support to solve field issues. **Our Tech support wait time is the lowest in the industry with the highest level of expertise and limited return calls.**

Wireless phone headsets provide mobility to techs so they can physically access any tools they may need to solve the problem.

Installed equipment allows techs to simulate situations contractors have in the field, making calls go faster and smoother.

Quality Control is pertinent to customer satisfaction. Every piece of equipment that is sent back to Fujitsu is tested and evaluated, bringing our failure rate to a record low .01%.

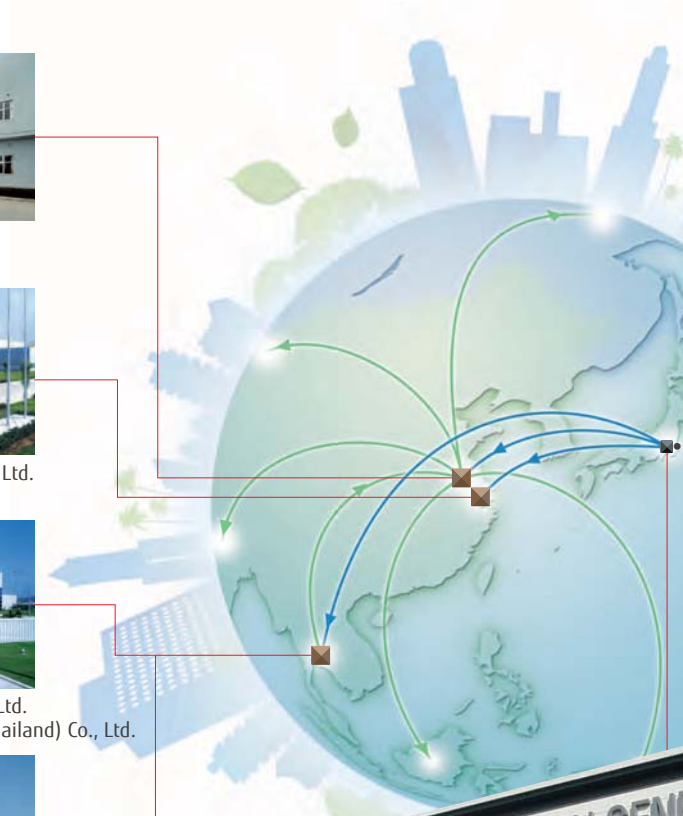
Research & Development

The Headquarters-R&D Center (Japan) is equipped with a wide range of testing equipment envisioning a variety of operating conditions. This includes a testing tower with a 198ft.(60m) height difference for buildings. We provide high quality & reliable products that meet the customers' needs from all over the world through this advanced R&D Center and 6 factories based in China and Thailand.

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

Fujitsu General (Shanghai) Co., Ltd.

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



Certifications Acquisition of ISO 9001 and ISO14001 in each factory

Fujitsu General Limited

R&D Center in JAPAN

AIRSTAGE™

Variable Refrigerant Flow System
For Small and Large Buildings

- Extensive lineup from 3 to 24 tons
- Connectable capacity ratio up to 150%
- 45 different indoor units available in 11 styles
- Up to 45 indoor units per one VRF system
- Three outdoor V-Series units may be combined with twinning kits to create up to 24 tons
- 10-Year Parts and Compressor Warranty. See Warranty Statement for details.
- Connect up to 36 tons of indoor units to a single VRF refrigerant circuit.
- Extensive training for Engineers, Architects, Contractors and Distributors

High Efficiency & Reliability

3, 4 and 5 tons

3, and 4 tons

6 Ton, 8 tons

10 Ton

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AIRSTAGE™

HIGH ENERGY EFFICIENCY

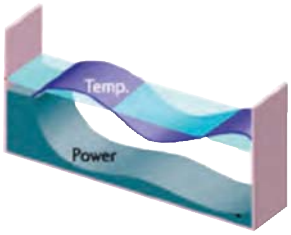
J-SERIES V-SERIES

All inverter compressor

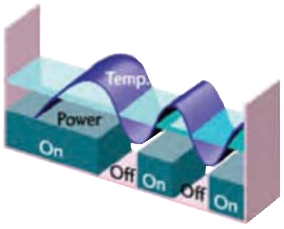
Airstage outdoor units are equipped with DC Inverter Control of compressors. Inverter control is like having cruise control for your heating and cooling system. DC twin rotary compressors only run as fast as they need to handle the cooling or heating demand. This provides smoother and more stable operation while improving comfort and reducing energy consumption.

Inverter Benefits

- Soft start resulting in low inrush current
- High efficiency operation
- Lower RPM = quieter operation
- Built in protections improve compressor life



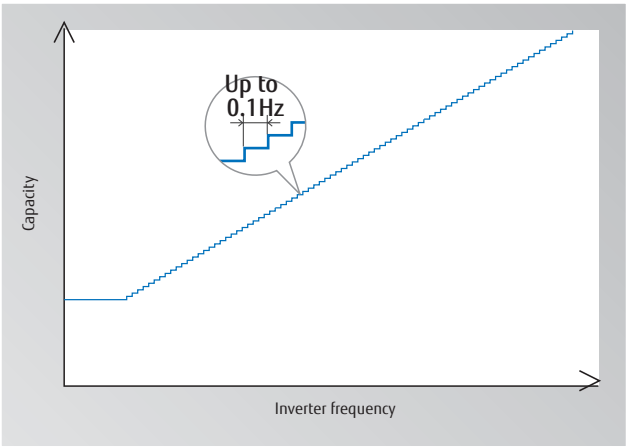
Inverter System



Conventional System

High efficiency compressor speed control

Provides comfort by making small temperature changes. This reduces energy usage by controlling the compressor speed in 1000 increments.



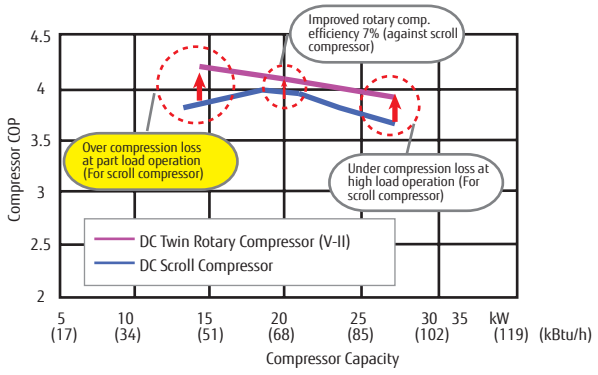
Large capacity DC inverter compressor

Large capacity high efficiency DC twin rotary compressor with excellent part load performance.

Single Twin Rotary Compressor

Some manufactures use scroll compressors, or multiple compressors consisting of one variable and one fixed. Using this older technology makes the outdoor unit heavier and more expensive.

Fujitsu uses twin rotary technology which is more efficient with up to 7% improved COP over older scroll compressors.

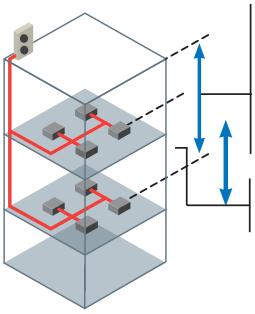


DESIGN VERSATILITY

Long piping length

Broad range of installation by long piping capability.

J-SERIES



Height difference between outdoor and indoor units:

J-II:
O.U. is higher than I.U. - **164ft.** (50m) max.

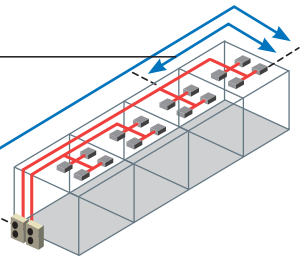
O.U. is lower than I.U. - **131ft.** (40m) max.

J-II S:
98ft. (30m) max.

Height difference between indoor units:

49ft. (15m) max.

Total Pipe Length:
J-II: **590 ft.** max.
J-IIS: **262 ft.** max.



Piping length from first separation tube to the farthest indoor unit:
131ft. (40m) max.

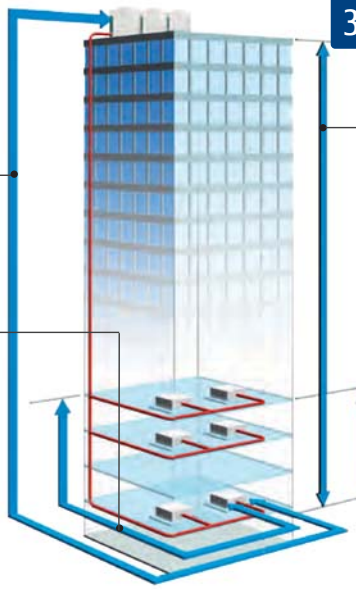
Actual piping length:
J-II: **393ft.** (120m) max.

J-II S: **164ft.** (50m) max.

V-SERIES

Overall piping length 3,280 ft.

World's longest total pipe length
3,280 ft. max.



Actual pipe length
541* ft. max.

*Airstage V-II 208/230V series is up to 492 ft.

Pipe length from first separation tube to the farthest indoor unit
196* ft. max.

*Airstage V-II 460V series is up to 295 ft.

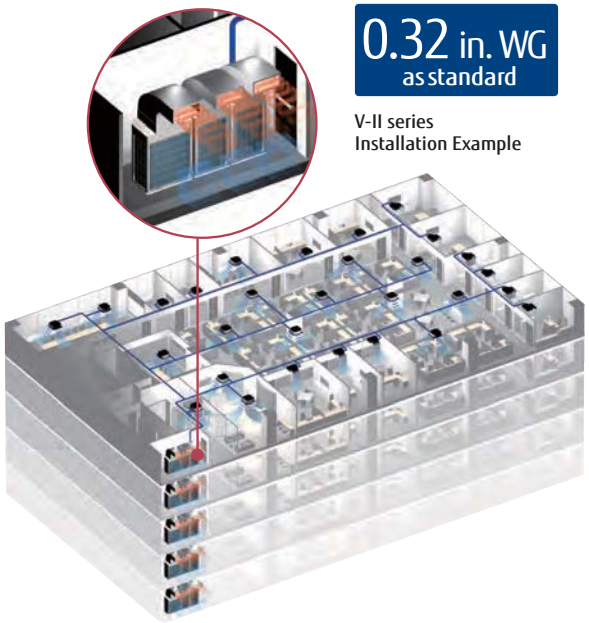
Height difference between outdoor and indoor units
164 ft. max.

For the outdoor unit installed below the indoor units: 131 ft. max.

Height difference between indoor and indoor units
49 ft. max.

High static pressure

Outdoor unit static pressure is adjustabke up to 0.32 in WG. This facilitates mechanical room and hood installations.



0.32 in. WG as standard

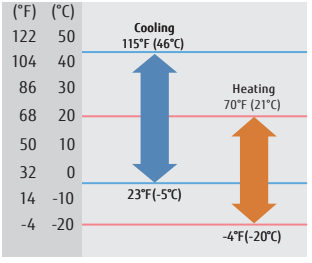
V-II series
Installation Example

High static pressure is achieved using large diameter fan and a DC motor.

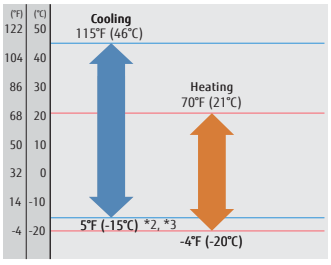
Wide operating range

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

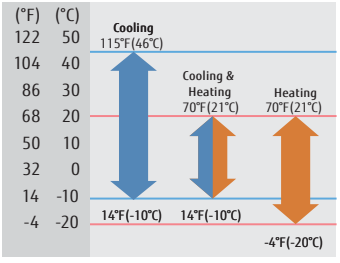
J-SERIES Heat Pump type *1



V-II Heat Pump type *1



VR-II Heat Recovery type



*1 VRF Heat Pump system operates in non-simultaneous heating or cooling.

*2 Operation range based on a single condensing unit; when multiple condensing units are used on a single refrigerant circuit (12 ton thru 24 ton) the cooling lower operating range is limited to 23°F (-5°C).

*3 When cooling operation will be required at outdoor air temperature below 23°F (-5°C), the outdoor unit must be installed higher than or equal to the elevation of the indoor units.

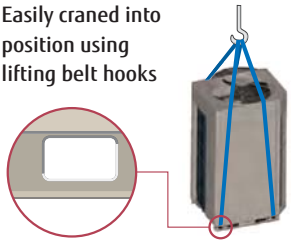
AIRSTAGE™

EASY INSTALLATION

Easily transported

J-SERIES V-SERIES

Easily craned into position using lifting belt hooks



Design of outdoor unit allows for lifting straps to be used

Slots in base of the unit allow for easy transportation by forklift.

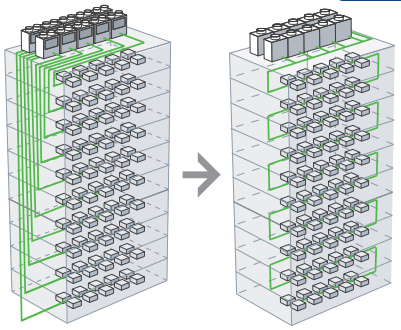
Can be transported in a small elevator

Simple signal line connection

J-SERIES V-SERIES

Communication wiring can be connected continuously to any component, making installation easier.

Up to maximum length 11,811 ft / 3,600 m



Other wiring method — Simple wiring method

High capacity connection

J-SERIES

Number of connectible indoor units
3Ton : 1 to 6 units
4Ton : 1 to 8 units
J-II: 5Ton : 1 to 9 units

Connectible indoor unit capacity range
50 % to 130 %

Compatible indoor unit
11 Types of Airstage indoor units ranging in size from 7 kBTU to 60 kBTU

V-SERIES

Various combinations from 6 Tons to 24 Tons with 45 indoor unit models, 11 types, can be selected. A minimum of 50% to a maximum of 150% indoor unit connectible capacity.

Connectible indoor unit capacity range
50% to 150%
For VR-II series and V-II 460V series

Wide variation indoor units
11 types, 45 models

Connectible indoor unit number
up to 45

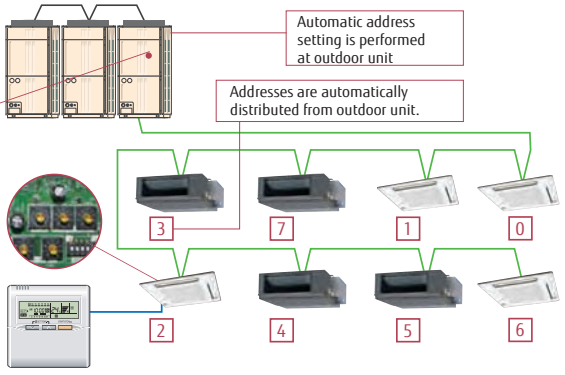
Note: When total indoor unit capacity is greater than 100%, individual indoor units will operate at a slightly lower capacity when maximum capacity is required.

Automatic address setting

J-SERIES V-SERIES

The address of each indoor unit can be automatically set by the touch of a button on the outdoor unit.

Press the pushbutton switch of outdoor unit.



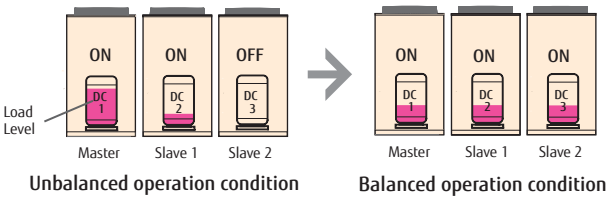
Manual address setting from indoor unit and remote controller is also possible.

HIGH RELIABILITY

Refrigerant circulation control

V-SERIES

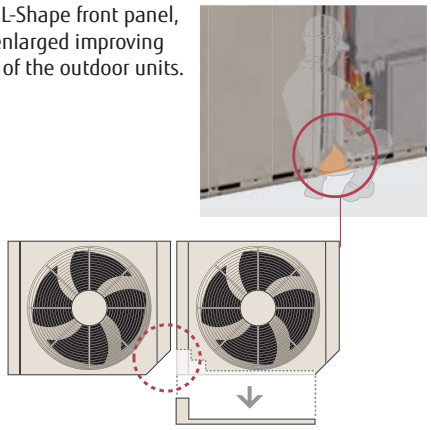
Innovative compressor control logic balances refrigerant flow rate of each outdoor unit by controlling inverter speed.



Easy access

V-SERIES

By adopting a removable L-Shape front panel, working space is greatly enlarged improving installation and servicing of the outdoor units.

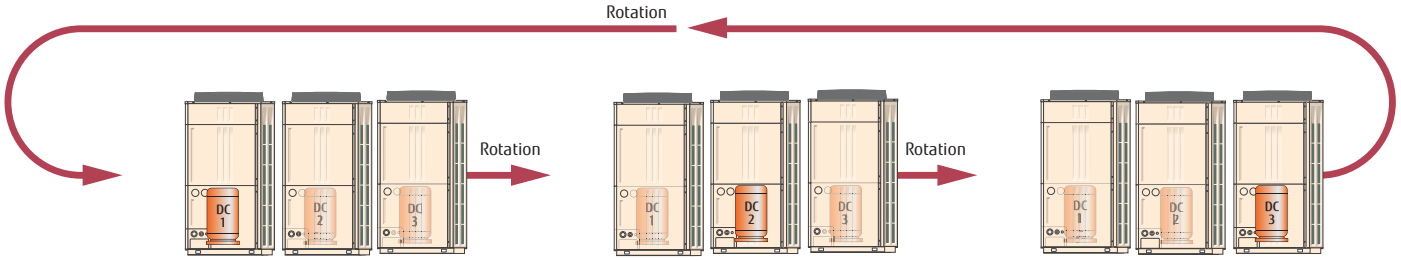


Life-extending operation

V-SERIES

Lead outdoor unit rotation

The rotation of the lead outdoor unit provides equal runtime for all units, extending equipment life.

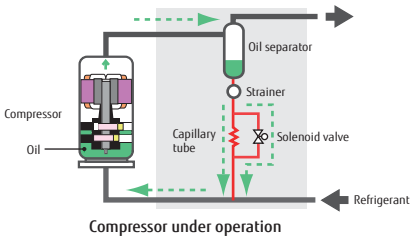


Note: The inverter compressors start in priority. Rotate operation is alternated by the start / stop timing of the compressors.

J-SERIES V-SERIES

Oil return design

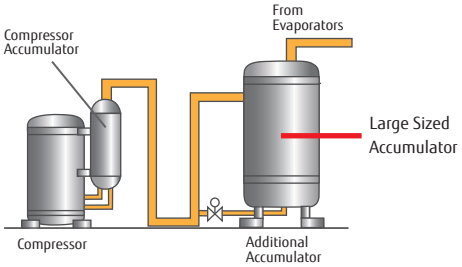
Individual oil separator and intelligent oil feedback operation logic are adopted. Oil return pipe of oil separator is connected directly to the compressor suction line through capillary and through solenoid valve.



Compressor under operation

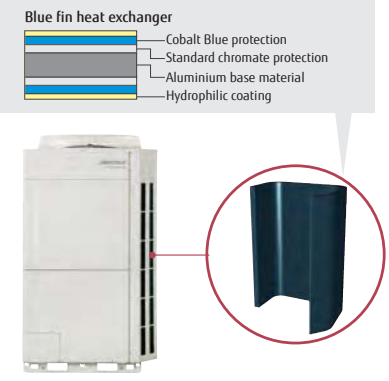
Liquid back-flow protection

By adopting a large sized accumulator, the refrigerant, which is not completely vaporized, is left inside the accumulator and only a stable supply of gas is fed from the accumulator.



Adoption of blue fin heat exchanger

Blue fin treatment to the outdoor unit's heat exchanger improves corrosion resistance.

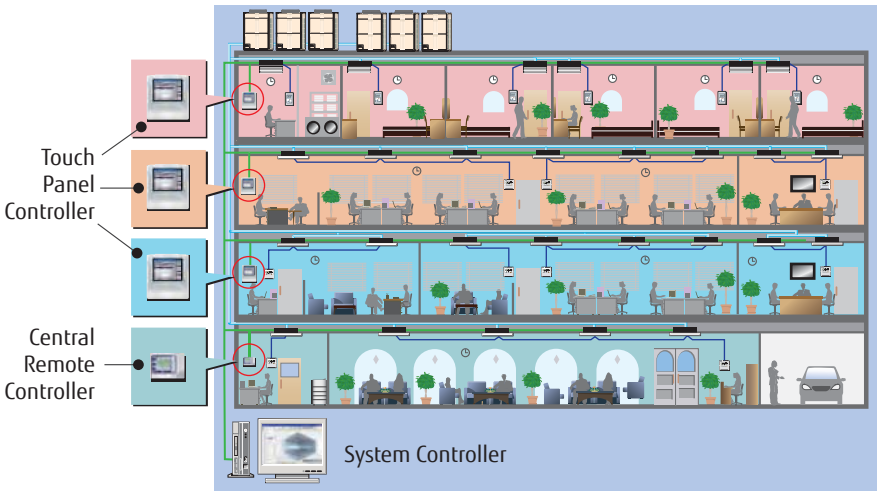


COMFORT AND CONVENIENCE

J-SERIES V-SERIES

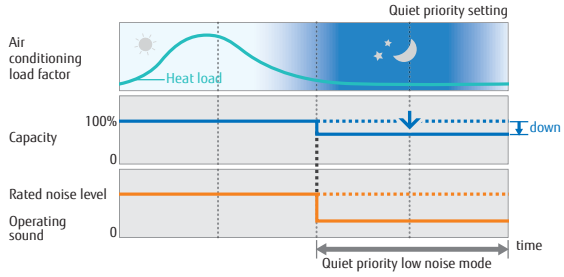
Centralized Control

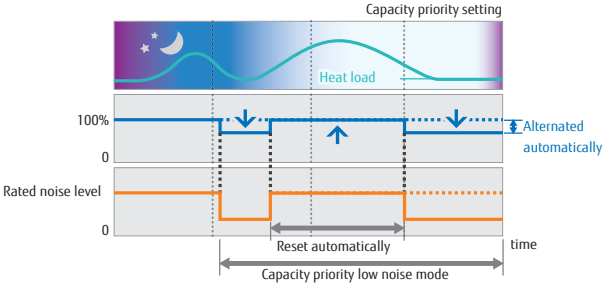
Fujitsu Airstage offers a variety of individual remotes and centralized controllers. Each provides users with a set of features to meet different needs.



Quiet operation

Low noise mode: Two low noise modes can be selected automatically using **quiet priority setting** or **capacity priority setting,** depending on the usage environment and outside temperature load.



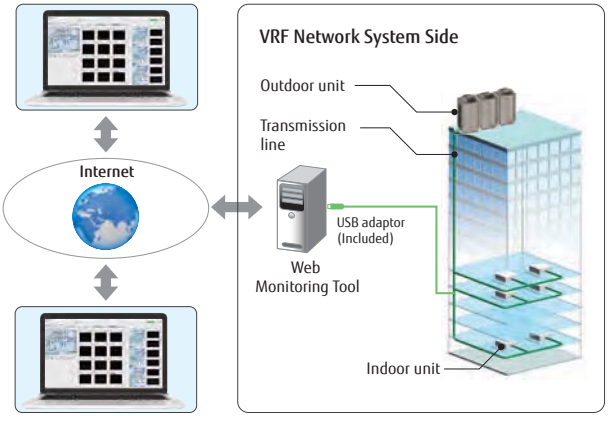


Low noise design: Compressor noise has been significantly reduced by shielding the compressor compartment.

Remote monitoring

Web Monitoring option brings remote Internet access to view system operation ensuring trouble free operation.

Monitoring Side



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

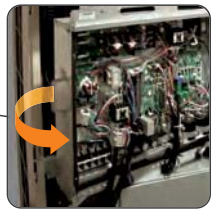
EASY SERVICE & MAINTENANCE

J-SERIES V-SERIES

Designed for easy service and maintenance

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

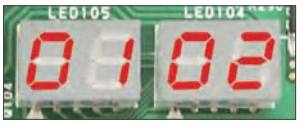
Consolidated electrical components make maintenance easy



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

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

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

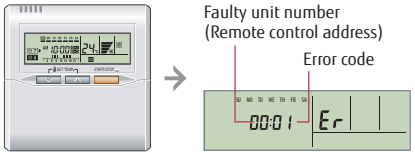


Split front panel allows for maintenance from top or bottom of the outdoor unit

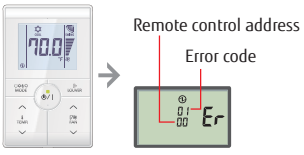
Error status can be checked easily via the indoor unit wired remote control

An error code is displayed on an LCD screen.

Wired Remote Control

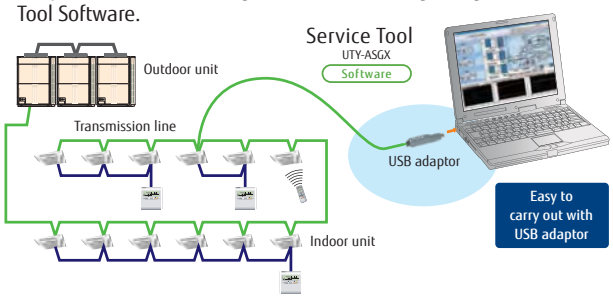


Simple Remote Control



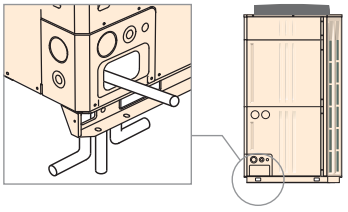
Troubleshooting using the Service Tool

Simplified troubleshooting and commissioning using Service Tool Software.



Flexible piping connection

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



Fujitsu Mobile Technician App

This free app is a handy, troubleshooting tool for heat pump and heat recovery systems. The app helps contractors troubleshoot error codes, thermistors and pressure sensors. It also includes a built-in flashlight. Fujitsu Mobile Technician is available as a troubleshooting system performance aid 24/7/365 and requires no phone call or waiting on hold.

ANDROID APP ON Google play

Available on the App Store

The Mobile Technician App requires iOS 6.0 or later and is compatible with iPhone, iPod touch and iPad, it's optimized for the iPhone 5. An Android version for 4.0 or later is also available through Google Play.

AIRSTAGE™

OUTDOOR UNTIS LINEUP

	1-PHASE / 208-230V JII-S		J-II		
J-SERIES	3 Ton	4 Ton	3 Ton	4 Ton	5 Ton
	AOU36RLAVS	AOU48RLAVS	AOU36RLAVM	AOU48RLAVM	AOU60RLAVM
3-PHASE POWER SOURCE: LBV = 208-230V, LCV =460V					
V-II HEAT PUMP	72,000 BTUh (6 tons) 21.1 kW (8HP)	96,000 BTUh (8 tons) 28.1 kW (10HP)	120,000 BTUh (10 tons) 35.2 kW (12HP)	144,000 BTUh (12 tons) 42.2 kW (16HP)	168,000 BTUh (14 tons) 49.2 kW (18HP)
	AOUA72RLBV1 AOUA72RLCV	AOUA96RLBV1 AOUA96RLCV	AOUA120RLBV1 AOUA129RLCV	AOU144RLBVG1 AOU144RLCVG	AOUA168RLBVG1 AOUA168RLCVG
VR-II HEAT RECOVERY	72,000 BTUh (6 tons) 21.1 kW (8HP)	96,000 BTUh (8 tons) 28.1 kW (10HP)	120,000 BTUh (10 tons) 35.2 kW (12HP)	144,000 BTUh (12 tons) 42.2 kW (16HP)	168,000 BTUh (14 tons) 49.2 kW (18HP)
	AOUA72TLBV AOUA72TLCV	AOUA96TLBV AOUA96TLCV	AOUA120TLBV AOUA129TLCV	AOU144TLBVG AOU144TLCVG	AOUA168TLBVG AOUA168TLCVG

INDOOR UNTIS LINEUP

Capacity range (BTUh)	7,000	9,000	12,000	14,000	18,000
Compact Cassette[1]	 AUUA7TLAV	 AUUA9TLAV	 AUUA12LAV	 AUUA14TLAV	 AUUA18TLAV
Cassette[2]					 AUUB18TLAV
Slim Compact Duct	 ARUL7TLAV	 ARUL9TLAV	 ARUL12TLAV	 ARUL14TLAV	 ARUL18TLAV
Medium Static Pressue Duct					
High Static Pressue Duct					
Vertical Air Handler Units			 ARUV12TLAV		 ARUV18TLAV
Floor/Ceiling			 ABUA12TLAV	 ABUA14TLAV	 ABUA18TLAV
Ceiling					
Compact Wall Mounted	 ASUA7TLAV	 ASUA9TLAV	 ASUA12TLAV	 ASUA14TLAV	
Wall Mounted					 ASUB18TLAV

Outdoor Air Unit

Airflow Rate (CFM m³/h))	636 (1,080)	989 (1,680)	1,236 (2,100)
Outdoor Air Unit	 AAUA48TLAV	 AAUA72TLAV	 AAUA96TLAV

1 Compact Cassette Grille UTG-CCGV sold separately. Must order one with each Compact Cassette.
2 Cassette Grille UTG-LCGV sold separately. Must order one with each Cassette.

V-II HEAT PUMP	192,000 BTUh (16 tons) 56.2 kW (20HP) AOUA192RLBVG1 AOUA192RLCVG	216,000 BTUh (18 tons) 63.3 kW (24HP) AOUA216RLBVG1 AOUA216RLCVG	240,000 BTUh (20 tons) 70.3 kW (26HP) AOUA240RLBVG1 AOUA240RLCVG	264,000 BTUh (22 tons) 77.3 kW (28HP) AOUA264RLBVG1 AOUA264RLCVG	288,000 BTUh (24 tons) 84.3 kW (28HP) AOUA288RLBVG1 AOUA288RLCVG
VR-II HEAT RECOVERY	192,000 BTUh (16 tons) 56.2 kW (20HP) AOUA192TLBVG AOUA192TLCVG	216,000 BTUh (18 tons) 63.3 kW (24HP) AOUA216TLBVG AOUA216TLCVG	240,000 BTUh (20 tons) 70.3 kW (26HP) AOUA240TLBVG AOUA240TLCVG	264,000 BTUh (22 tons) 77.3 kW (28HP) AOUA264TLBVG AOUA264TLCVG	288,000 BTUh (24 tons) 84.3 kW (28HP) AOUA288TLBVG AOUA288TLCVG

24,000	30,000	36,000	48,000	60,000	72,000	96,000
 AUUA24TLAV						
 AUUB24TLAV	 AUUB30TLAV	 AUUB36TLAV				
 ARUM24TLAV	 ARUM30TLAV	 ARUM36TLAV				
		 ARUH36TLAV	 ARUH48TLAV	 ARUH60TLAV	 ARUH72TLAV	 ARUH96TLAV
 ARUV24TLAV	 ARUV30TLAV	 ARUV36TLAV	 ARUV48TLAV	 ARUV60TLAV		
 ABUA24TLAV						
	 ABUA30TLAV	 ABUA36TLAV				
 ASUB24TLAV						

HEAT PUMP

AIRSTAGE™

J-IIS / J-II

For 208 /230V

Single Phase

The J-Series provides air conditioning systems for a wide range of applications from small office buildings and stores to large houses.

Connectable indoor unit capacity up to 130%.

A large number of J-Systems can be connected to a single VRF communication network offering a variety of central and remote communication and BMS options.

Applications

Small Commercial

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

Large Residential

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

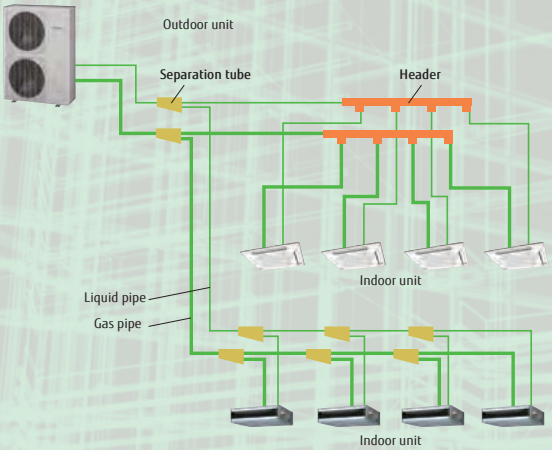
J-IIS OFFERS SPACE SAVING DESIGN

The compact size with a height of less than 3.3ft (1m) allows it to be installed under windows and in tight spaces

Small and light-weight outdoor unit

J-II SYSTEM CONFIGURATION EXAMPLE

- The J-II system offers a long pipe length of 590 ft. total.
- Connection of multiple indoor units using separation tubes and headers.

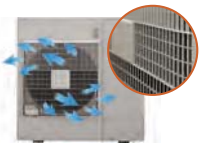


ADVANCED HIGH EFFICIENCY TECHNOLOGY

J-IIS

SMOOTH AIRFLOW GRILLE

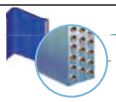
This grille was aerodynamically designed for good efficiency with little blow loss.



J-II

LARGE HEAT EXCHANGER

Heat exchange performance is substantially improved by by adding a 3rd row to the heat exchanger.



DC INVERTER CONTROL

Efficiency is improved by mounting of new active filter module.

HIGH EFFICIENCY DC FAN MOTOR

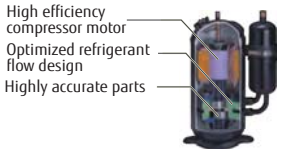
Using low noise dual DC fan motors offers better control and efficiency.

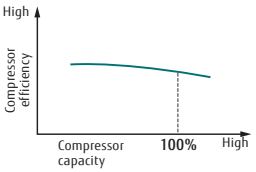
LARGE PROPELLER FAN

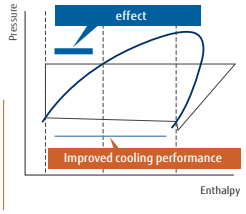
High performance and low noise realized by large propeller and optimization of angle.

HIGH EFFICIENCY DC TWIN ROTARY COMPRESSOR

DC twin rotary compressor provides great performance under all load conditions. Its performance is optimized for part-load operation.







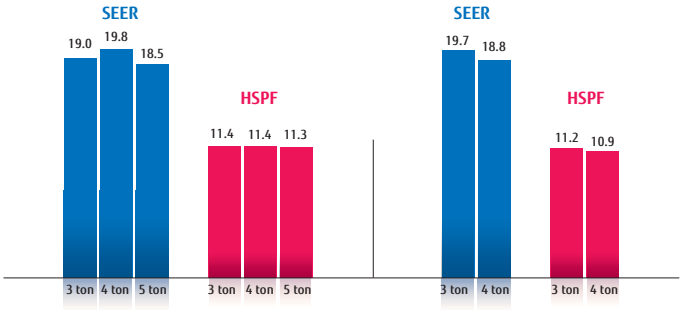
SUBCOOL HEAT EXCHANGER

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

ENERGY EFFICIENCY

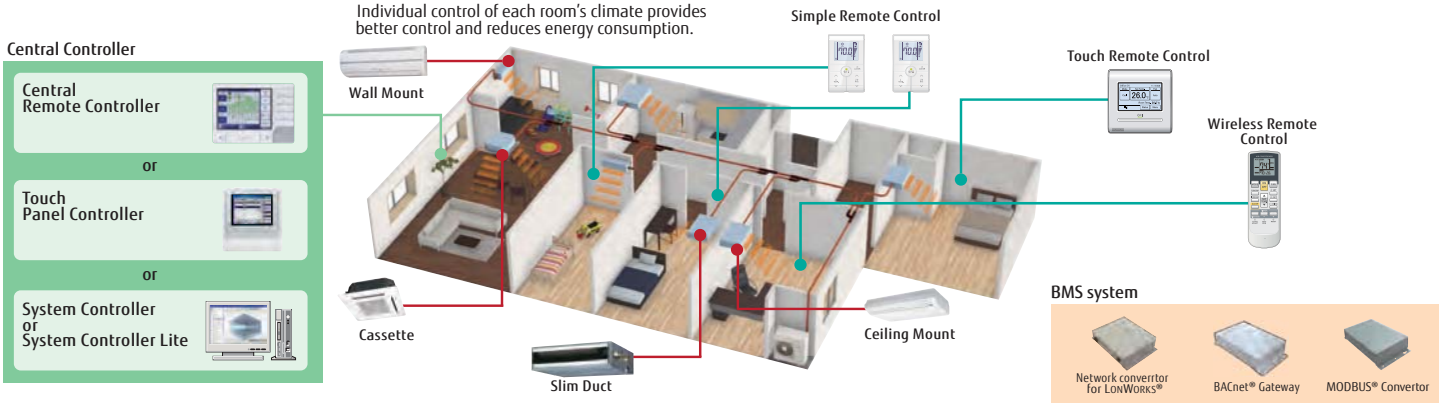
J-Series Systems provide the highest efficiency for any single-phased VRF. Figures shown based on non-ducted models.

J-II



J-IIS

OPTIMUM COMFORT



AIRSTAGE™

SPECIFICATIONS

			J-IIS		J-II		
Nominal system capacity		Ton	3	4	3	4	5
Model name			AOU36RLAVS	AOU48RLAVS	AOU36RLAVM	AOU48RLAVM	AOU60RLAVM
Indoor unit connectable capacity ratio			50% to 130%	50% to 130%		50% to 130%	
Maximum connectable indoor unit			1-6	1-8	1-6	1-8	1-9
Power source		V/Ø/Hz	1-Phase, 208 / 230V, 60Hz		1-Phase, 208 / 230V, 60Hz		
Cooling Capacity (Non-Ducted/Ducted)	Capacity	Btu/h	36,000	48,000	36,000	48,000	60,000
	EER	Btu/h/W	11.8 / 11.2	9.6 / 9.1	13.3 / 12.5	12.5 / 11.8	10.8 / 10.4
	SEER	Btu/h/W	19.7 / 17.4	18.8 / 16.9	19.0 / 17.0	19.8 / 18.1	18.5 / 16.5
Heating Capacity (Non-Ducted/Ducted)	Capacity	Btu/h	42,000	54,000	42,000	54,000	66,000
	COP	W/W	3.74 / 3.56	3.54 / 3.36	3.82 / 3.86	3.88 / 3.64	3.65 / 3.60
	HSPF	W/W	11.2 / 10.3	10.9 / 10.1	11.4 / 10.4	11.4 / 10.9	11.3 / 11.0
Airflow rate		CFM (m3/h)	2,378 (4,040)	2,472 (4,200)	3,649 (6,200)	3,767 (6,400)	4,827 (8,200)
Sound pressure level	Cooling/Heating	dB(A)	52 / 54	53 / 55	50 / 52	51 / 53	57 / 57
Dimensions	Height	in.(mm)	39-5/16 (998)		52-1/2 (1,334)		
	Width		38-3/16 (970)		38-3-16 (970)		
	Depth		14-9/16 (370)		14-9/16 (370)		
Weight		lbs.(kg)	190 (86)		260 (118)	260 (118)	269 (122)
Connection pipe diameter	Liquid	in.(mm)	3/8 (9.52)		3/8 (9.52)		
	Gas		5/8 (15.88)		5/8 (15.88)	5/8 (15.88)	3/4 (19.05)
Max.Total pipe length		ft.(m)	262 (80)		394 (120)		
Max.height difference (Outdoor Unit: Upper/Lower)		ft.(m)	98/98 (30/30)		164 / 131 (50/40)		
Operation range	Cooling	°F(℃)	23 to 115 (-5 to 46)		23 to 115 (-5 to 46)		
	Heating		-4 to 70 (-20 to 21)		-4 to 70 (-20 to 21)		
Refrigerant type			R410A		R410A		

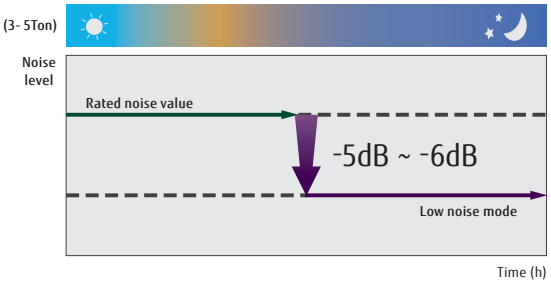
Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F (26.7°C)DB / 67°F (19.4°C)WB, and outdoor temperature of 95°F (35°C)DB / 75°F (23.9°C)WB.
Heating : Indoor temperature of 70°F (21.1°C)DB / 60°F (15.6°C)WB, and outdoor temperature of 47°F (8.3°C)DB / 43°F (6.1°C)WB.
Pipe length : 25ft. (7.5m), Height difference : 0ft. (0m). (0utdoor unit - indoor unit)

VRF Communication Cable is required. It is shown on pg. 79

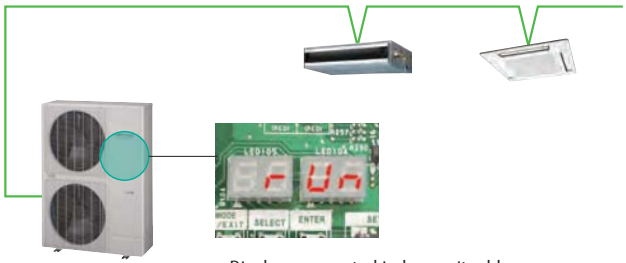
LOW NOISE DESIGN

Low noise mode

Outdoor unit can be switched to silent mode, depending on the installation environment.



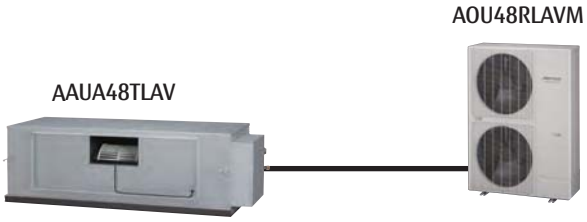
CONNECTION CHECK FUNCTION



- Displays connected indoor unit addresses
- Displays system connected capacity

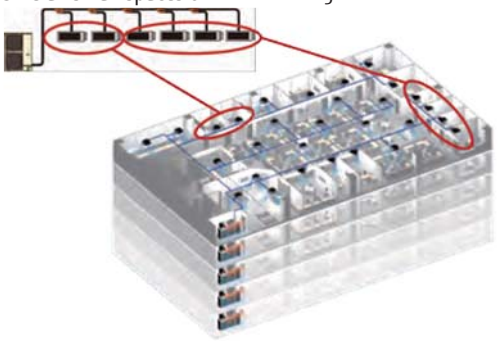
CONNECT TO DOAS

Use with DOAS to improve larger VRF system operation and increase overall building efficiency.

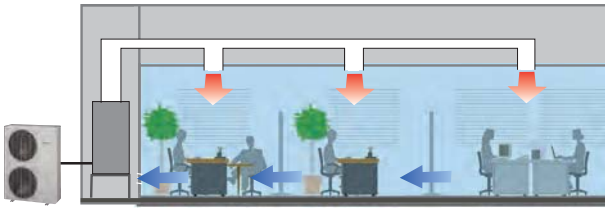


REFRIGERANT CONCENTRATION LIMIT REDUCTION (ASHRAE 15)

Combine all small spaces on smaller refrigerant circuits.



EASILY RETROFITS EXISTING DUCTS



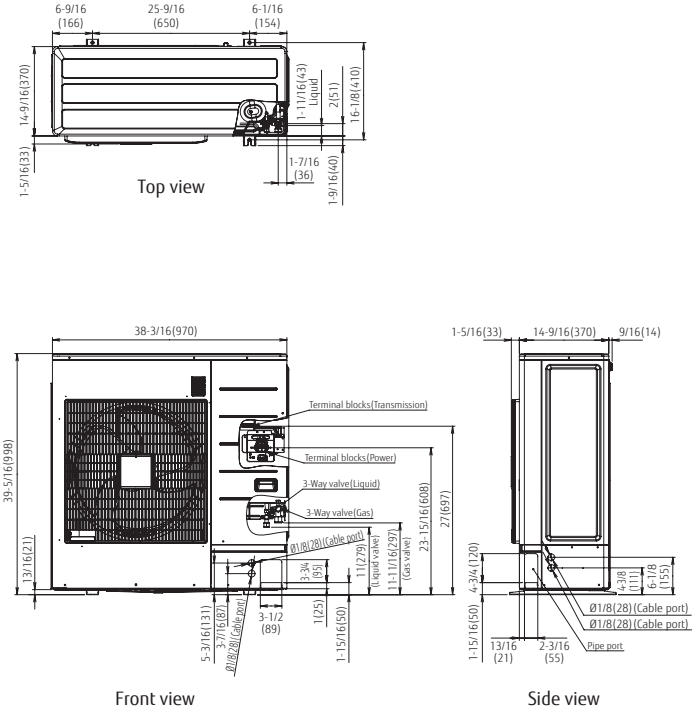
NON-STOP OIL RECOVERY OPERATION

J-II series (Heating operation)

Non-stop oil recovery operation

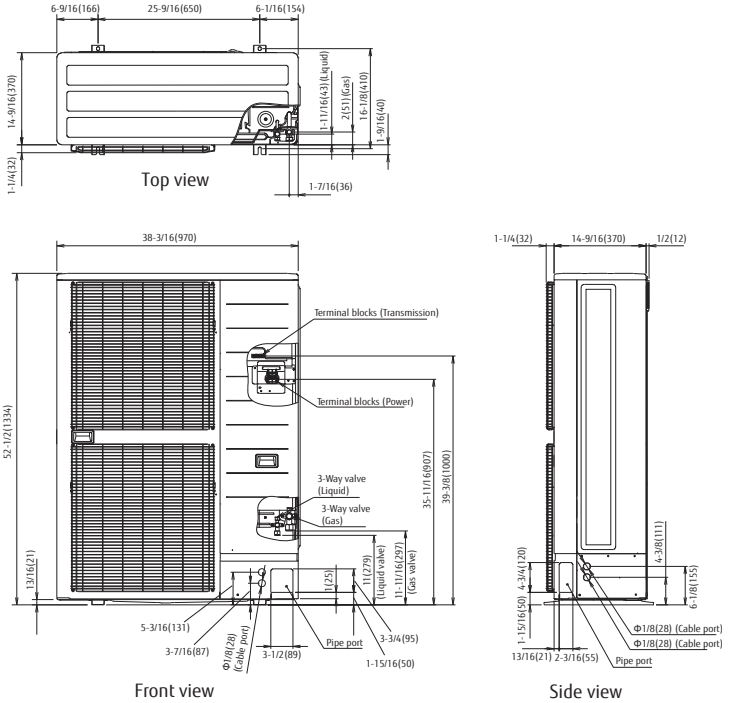
Dimensions

3, 4 tons: AOU36RLAVS / AOU48RLAVS



3, 4, 5 tons: AOU36RLAVM / AOU48RLAVM / AOU60RLAVM

(Unit : in. (mm))



HEAT PUMP

AIRSTAGE™ V-II series

For 208 /230V | For 460V

3 Phase

Smart and cutting edge design
Extensive lineup from 6 to 24tons in 2Ton increments
Connectable indoor unit capacity up to 150%
A large number of Airstage systems can be connected to a single VRF communication network offering a variety of central and remote communication and BMS options.

System Outline

Excellent energy savings

Heat pump inverter control improves system operation efficiency in part-load conditions when one or many indoor units are in operation.

Lower life-cycle cost

System operates with minimum energy usage. Only service the zones that need it, which allows for less required operating energy and maintenance.

Easy installation and maintenance

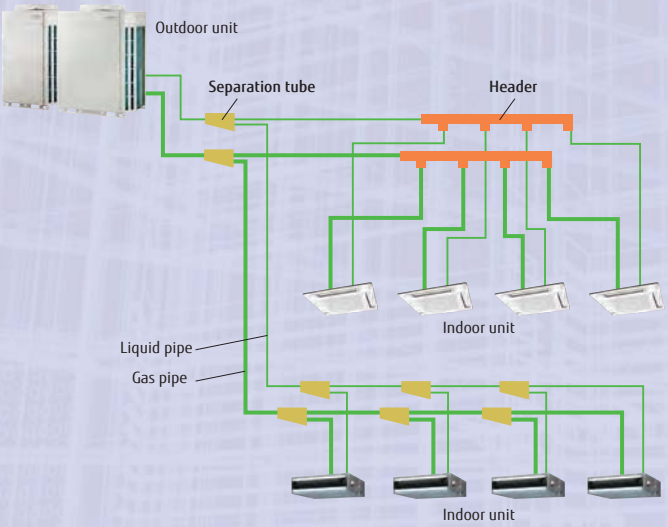
The flexible communication method and piping connections makes installation and maintenance easy even for large systems.

Large Office

SPECIFICATIONS

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.



ENERGY SAVING TECHNOLOGY THAT BOOSTS OPERATION EFFICIENCY

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

*1. CFD = Computational Fluid Dynamics

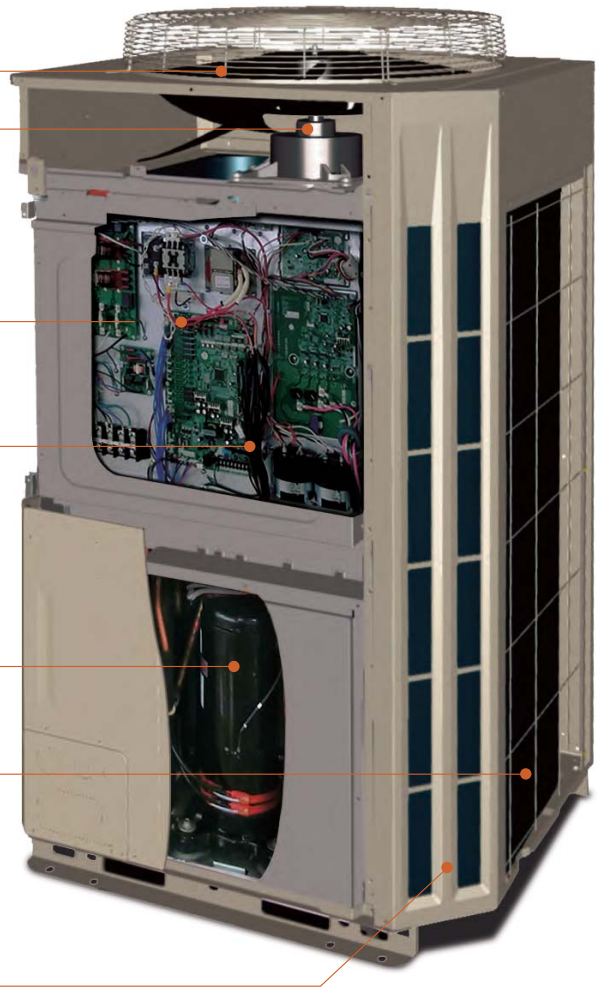
3 phase DC fan motor
Efficiency is substantially improved by high efficient motor with sophisticated driver control. In addition, low noise is realized by DC fan motor.

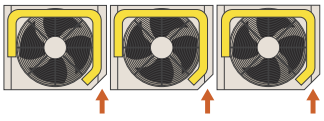
Subcool heat exchanger
High Heat Exchange efficiency is achieved by using an internal projection shape double pipe construction.

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

High efficient compressor
Large capacity DC inverter compressor
Large capacity high efficient DC twin rotary compressor with excellent intermediate capability.

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

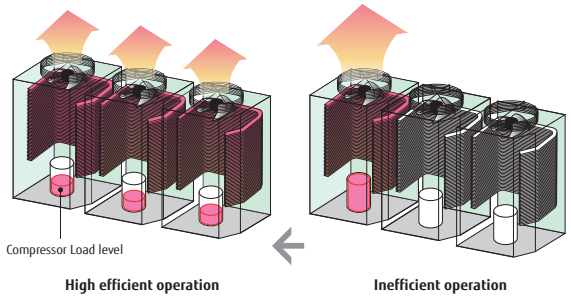




Front intake port
(corner cut air inhaling structure)
In multiple outdoor unit installations, the unique front intake design improves airflow into the Heat Exchanger.

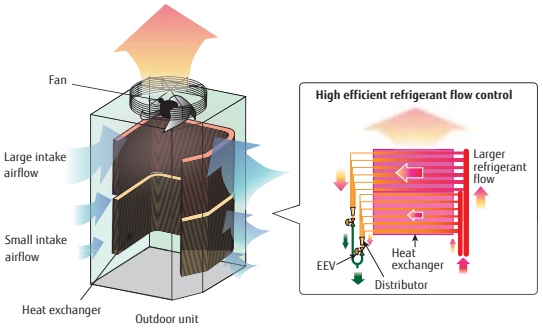
MULTIPLE OUTDOOR OPERATION CONTROL

When multiple outdoor units are connected a sophisticated operation is performed by each compressor. Rather than running one compressor at full load and distributing refrigerant to one heat exchanger, this control method operates all compressors at part load and distributes refrigerant to all of the heat exchangers which allows for the overall system efficiency to be improved.



HEAT EXCHANGER REFRIGERANT CONTROL

The heat exchanger in the outdoor unit is split into two parts (Top and Bottom). The efficiency of the heat exchanger has been improved by adopting an optimum refrigerant path control where the refrigerant is distributed more into the top heat exchanger as this is where there is a greater air flow intake.



AIRSTAGE™

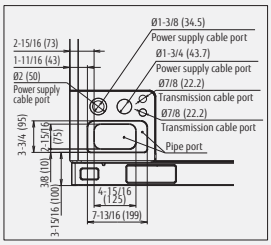
V-II Specifications for 208 / 230 / 460V

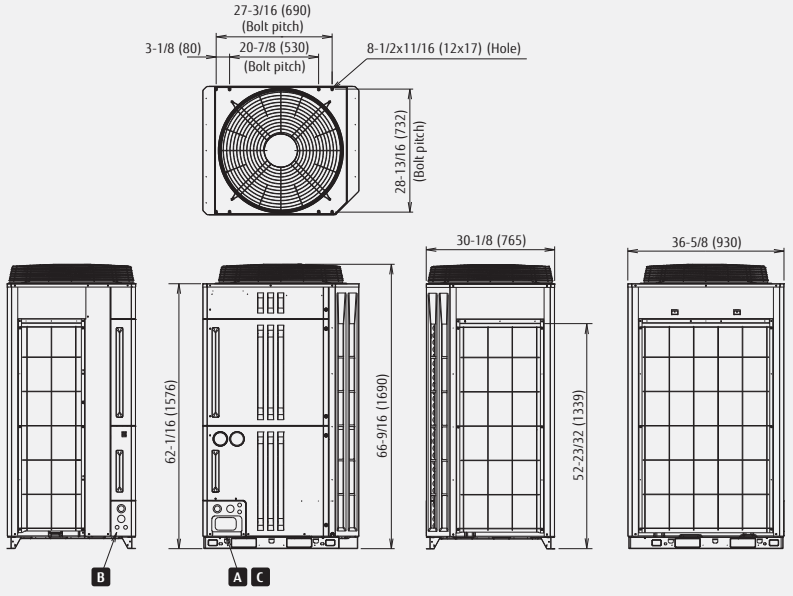
Nominal Tonage	Ton(s)	6	8	10	12	14
Model Name	Units	AOUA72RLBV1 / AOUA72RLCV	AOUA96RLBV1 / AOUA96RLCV	AOUA120RLBV1 / AOUA120RLCV	AOUA144RLBVG1 / AOUA144RLCVG	AOUA168RLBVG1 / AOUA168RLCVG
Unit Group Configuration		1×(AOUA72RLBV1) / 1×(AOUA72RLCV)	1×(AOUA96RLBV1) / 1×(AOUA96RLCV)	1×(AOUA120RLBV1) / 1×(AOUA120RLCV)	2×(AOUA72RLBV1) / 2×(AOUA72RLCV)	1×(AOUA72RLBV1) + 1×(AOUA96RLBV1) / 1×(AOUA96RLCV) + 1×(AOUA72RLCV)
Indoor Unit Total Capacity		50% to 150%				
Maximum Connectable Indoor Units		14	16	18	22	26
CAPACITY						
Nominal Cooling Capacity	BTUh [kW]	72,000 [21.1]	96,000 [28.1]	120,000 [35.2]	144,000 [42.2]	168,000 [49.2]
Cooling Power Input (Nominal)	kW	5.37 / 5.37	7.67 / 7.67	9.86 / 9.86	11.80 / 11.80	14.20 / 14.20
Nominal Heating Capacity	BTUh [kW]	81,000 [23.7]	108,000 [31.7]	135,000 [39.6]	162,000 [47.5]	188,000 [55.1]
Heating Power Input (Nominal)	kW	5.39 / 5.39	7.90 / 7.90	10.19 / 10.19	12.81 / 12.81	14.69
ELECTRIC						
Electrical Power Requirements		208 / 230 VAC, 3-Phase, 60Hz / 460 VAC, 3-Phase, 60Hz				
Maximum Circuit Breaker	A	50 / 25	50 / 25	60 / 30	2×(50/25)	2×(50/25)
Minimum Circuit Ampacity (MCA)	A	41 / 21	41 / 21	50 / 25	2X (41) / 2X (21)	2X (41) / 2X (21)
EFFICIENCY						
Cooling (Non-Ducted/Ducted)	EER	12.5 / 12.3	11.7 / 11.3	11.3 / 11.3	11.4 / 11.4	11.0 / 11.0
Cooling (Non-Ducted/Ducted)	IEER	24.1 / 20.0	23.6 / 20.2	23.8 / 20.1	22.2 / 20.4	22.2 / 20.0
Heating 47° (Non-Ducted/Ducted)	COP	4.06 / 3.64	3.72 / 3.60	3.61 / 3.49	3.44 / 3.44	3.48 / 3.48
TEMPERATURE						
Operating Temp. Cooling (DB)	°F [°C]	5 to 115 [-15 to 46]	5 to 115 [-15 to 46]	5 to 115 [-15 to 46]	23 to 115 [-5 to 46]	23 to 115 [-5 to 46]
Operating Temp. Heating (DB)	°F [°C]	-4 to 70 [-20 to 21]	-4 to 70 [-20 to 21]	-4 to 70 [-20 to 21]	-4 to 70 [-20 to 21]	-4 to 70 [-20 to 21]
PIPE						
Pipe Connection: Liquid	in [mm]	1/2 [12.70]	1/2 [12.70]	1/2 [12.70]	1/2 [12.70]	5/8 [15.88]
Pipe Connection: Discharge Gas	in [mm]	7/8 [22.22]	7/8 [22.22]	1-1/8 [28.58]	1-1/8 [28.58]	1-1/8 [28.58]
REFRIGERANT						
Refrigerant Type		R410A	R410A	R410A	R410A	R410A
Refrigerant Charge	lbs [kg]	25.79 [11.70]	25.79 [11.70]	26.01 [11.80]	2×(25.79[11.70])	2×(25.79[11.70])
FAN						
Fan Airflow Rate	CFM [m^3/h]	6533 [11,100]	6533 [11,100]	7652 [13,000]	2×(6533 [11,100])	2×(6533 [11,100])
External Static Pressure (Max)	in.WG [Pa]	0.32 [80]	0.32 [80]	0.32 [80]	0.32 [80]	0.32 [80]
Sound Pressure Levels (Cooling/Heating)	dB (A)	57/58	59/59	61 / 62	60/61	61/62
COMPRESSOR						
Compressor Type x Quantity		Rotary Inverter	Rotary Inverter	Rotary Inverter	2×Rotary Inverter	2×Rotary Inverter
Compressor Motor Output	kW	7.5	7.5	11.0	2×7.5	2×7.5
Compressor Crankcase Heater	W	2×35	2×35	2×35	2×(2×35)	2×(2×35)
DIMMENSIONS / WEIGHT						
Dim.Net (HxWxD)	in [mm]	66-9/16 × 36-5/8 × 30-1/8 [1,690 × 930 × 765]	66-9/16 × 36-5/8 × 30-1/8 [1,690 × 930 × 765]	66-9/16 × 48-13/16 ×30-1/8 [1,690 × 1240 × 765]	2 × (66-9/16 × 36-5/8 × 30-1/8 [1,690 × 930 × 765])	2 × (66-9/16 × 36-5/8 × 30-1/8 [1,690 × 930 × 765])
Net Weight	lbs [kg]	564 [256] / 584 [265]	564 [256] / 584 [265]	611 [277] / 635 [288]	2×(564[256]) / 2×(584[265])	2×(564[256]) / 2×(584[265])

SPECIFICATIONS

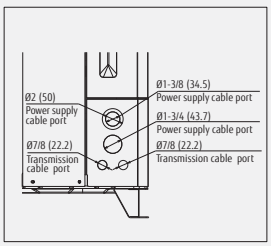
6, 8tons: AOUA72RLBV1 / AOUA96RLBV1
AOUA72RLCV / AOUA96RLCV

A Front side knockout position

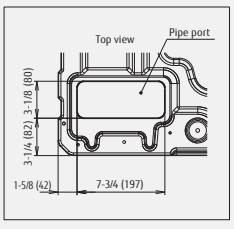




B Left side knockout position



C Bottom side knockout position



16	18	20	22	24
AOUA192RLBVG1 / AOUA192RLCVG	AOUA216RLBVG1 / AOUA216RLCVG	AOUA240RLBVG1 / AOUA240RLCVG	AOUA264RLBVG1 / AOUA264RLCVG	AOUA288RLBVG1 / AOUA288RLCVG
1×(AOUA120RLBV1) + 1×(AOUA72RLBV1) / 1×(AOUA120RLCV) + 1×(AOUA72RLCV)	1×(AOUA120RLBV1) + 1×(AOUA96RLBV1) / 1×(AOUA120RLCV) + 1×(AOUA96RLCV)	2×(AOUA120RLBV1) / 2×(AOUA120RLCV)	2×(AOUA96RLBV1) + 1×(AOUA72RLBV1) / 2×(AOUA96RLCV) + 1×(AOUA72RLCV)	3×(AOUA96RLBV1) / 3×(AOUA96RLCV)
50% to 150%				
30	34	37	41	45
192,000 [56.2]	216,000 [63.3]	240,000 [70.3]	264,000 [77.4]	288,000 [84.4]
16.04	18.47	20.45	22.58	25.27
216,000 [63.3]	243,000 [71.2]	270,000 [79.1]	297,000 [87.0]	324,000 [95.0]
15.65	19.07	21.9	23.41	26.28
208 / 230 VAC, 3-Phase, 60Hz / 460 VAC, 3-Phase, 60Hz				
1×(50),1×(60) / 1×(25), 1×(30)	1×(50),1×(60) / 1×(25), 1×(30)	2×(60) / 2×(30)	3×(50) / 3×(25)	3×(50) / 3×(25)
1X (41), 1X (50) / 1X (21), 1X (25)	1X (41), 1X (50) / 1X (21), 1X (25)	2X (50) / 2X (25)	3X (41) / 3X (21)	3X (41) / 3X (21)
11.2 / 11.1	10.9 / 10.9	10.9 / 10.9	10.9 / 10.9	10.6 / 10.6
24.3 / 20.5	20.0 / 19.2	20.8 / 20.2	20.8 / 20.1	20.8 / 20.1
3.75 / 3.57	3.47 / 3.47	3.36 / 3.36	3.45 / 3.40	3.36 / 3.31
23 to 115 [-5 to 46]	23 to 115 [-5 to 46]	23 to 115 [-5 to 46]	23 to 115 [-5 to 46]	23 to 115 [-5 to 46]
-4 to 70 [-20 to 21]	-4 to 70 [-20 to 21]	-4 to 70 [-20 to 21]	-4 to 70 [-20 to 21]	-4 to 70 [-20 to 21]
5/8 [15.88]	5/8 [15.88]	5/8 [15.88]	5/8 [15.88]	3/4 [19.05]
1-1/8 [28.58]	1-3/8 [34.92]	1-3/8 [34.92]	1-3/8 [34.92]	1-3/8 [34.92]
R410A	R410A	R410A	R410A	R410A
1×(25.79[11.70]) + 1×(26.01[11.80])	1×(25.79[11.70]) + 1×(26.01[11.80])	2×(26.01[11.80])	3×(25.79[11.70])	3×(25.79[11.70])
1×(6533 [11,100]) + 1×(7652 [13,000])	1×(6533 [11,100]) + 1×(7652 [13,000])	2×(7652 [13,000])	3×(6533 [11,100])	3×(6533 [11,100])
0.32 [80]	0.32 [80]	0.32 [80]	0.32 [80]	0.32 [80]
62/63	63/64	64/65	63/63	64/64
2×Rotary Inverter	2×Rotary Inverter	2×Rotary Inverter	3×Rotary Inverter	3×Rotary Inverter
1×(7.5)+1×(11.0)	1×(7.5)+1×(11.0)	2×11.0	3×7.5	3×7.5
2×(2×35)	2×(2×35)	2×(2×35)	3×(2×35)	3×(2×35)
1×(66-9/16 × 36-5/8 × 30-1/8 [1,690 × 930 × 765]), 1×(66-9/16 × 48-13/16 × 30-1/8 [1,690 × 1240 × 765])	1×(66-9/16 × 36-5/8 × 30-1/8 [1,690 × 930 × 765]), 1×(66-9/16 × 48-13/16 × 30-1/8 [1,690 × 1240 × 765])	2×(66-9/16 × 48-13/16 × 30-1/8 [1,690 × 1240 × 765])	3×(66-9/16 × 36-5/8 × 30-1/8 [1,690 × 930 × 765])	3×(66-9/16 × 36-5/8 × 30-1/8 [1,690 × 930 × 765])
564[256]+611[277] / 635[288]+584[265]	564[256]+611[277] / 635[288]+584[265]	2×([611[277]) / 2×(635[288])	3×([564[256]) / 3×(584[265])	3×([564[256]) / 3×(584[265])

Note :
Specifications are based on the following conditions.

Cooling :
Indoor temperature of 80°F (26.7°C) DB / 67°F (19.4°C) WB, and outdoor temperature of 95°F (35.0°C) DB / 75°F (23.9°C) WB.

Heating :
Indoor temperature of 70°F (21.1°C) DB / 60°F (15.6°C) WB, and outdoor temperature of 47°F (8.3°C) DB / 43°F (6.1°C) WB.

Pipe length :
25ft. (7.5 m); Height difference between outdoor unit and indoor unit : 0ft. (0 m).

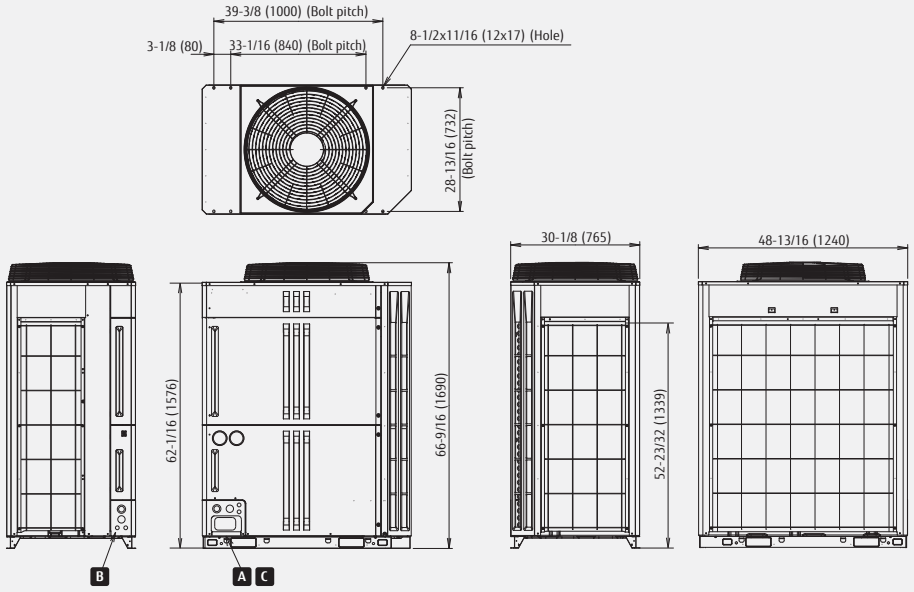
*1 Electrical data is only for outdoor unit.

VRF Communication Cable is required. It is shown on pg. 79

DIMENSIONS

10tons: AOUA120RLBV1
AOUA120RLCV

(UNIT: IN (MM))



HEAT RECOVERY

AIRSTAGE™ VR-II series

For 208 /230V | For 460V | 3 Phase

Smart, cutting edge design
Extensive lineup from 6 to 24 tons in 2Ton increments
Connectable indoor unit capacity up to 150%
A large number of Airstage systems can be connected to a single VRF communication network offering a variety of central and remote communication and BMS options.

Benefits

Simultaneous cooling and heating operation using 1 refrigerant system

Cooling and heating can be freely selected for each indoor unit to provide simultaneous cooling and heating in rooms with large temperature differences.

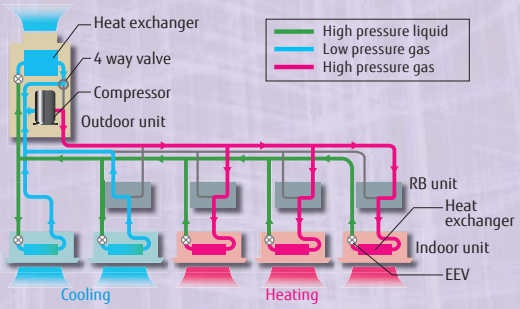
Lower life-cycle cost

System operates with minimum energy usage. Only service the zones that need it, which allows for less required operating energy and maintenance.

Handles changes in temperature differences

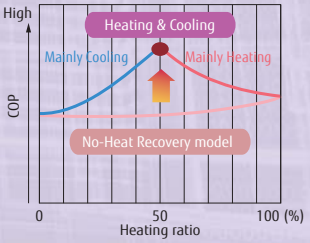
The operation mode can be freely changed when there are large temperature differences during the day, such as between seasons.

Large Building



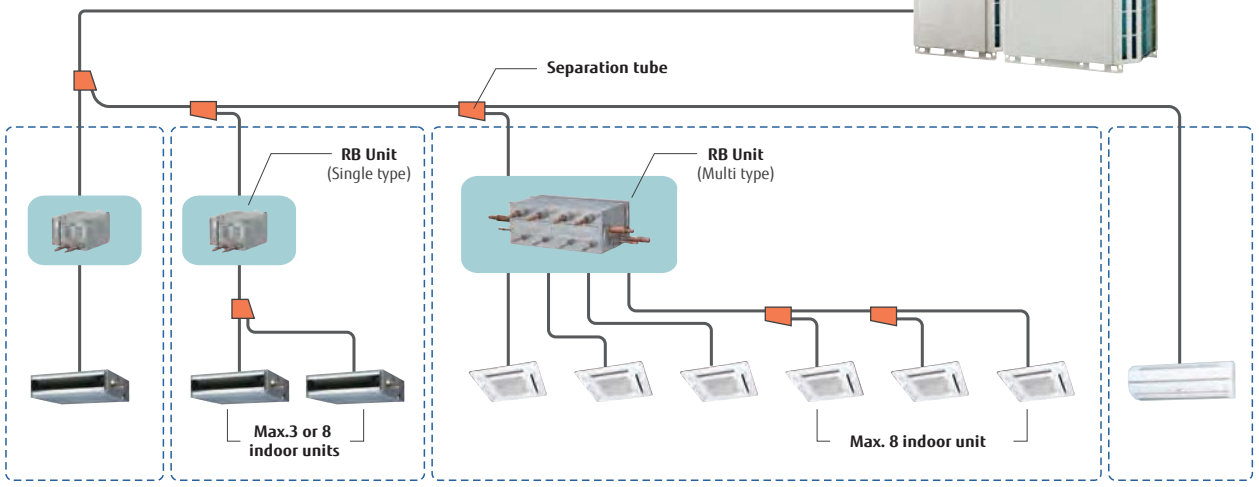
Our Heat recovery systems achieve high operating energy efficiency by drawing heat from the room to be cooled and transferring it as energy for rooms that are to be heated.

Energy savings have been improved as heating and cooling modes can be operated at the same time on the same air conditioning piping system.



FLEXIBLE PIPING CONNECTION

A more flexible refrigerant piping work is possible by the use of various piping and RB Unit connections, for adjustments to the floor layout and building structure.



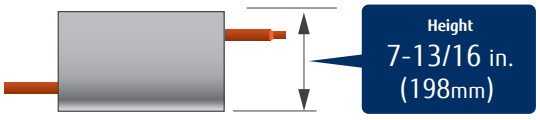
	Single connection	Group connection	Single connection & Group connection	RB Unit less connection*2
Application	Individual cooling and heating	Simultaneous cooling and heating	Individual cooling and heating / Simultaneous cooling and heating	Cooling only

- The RB unit can be freely positioned between the first branch and the indoor unit.
- The maximum height difference between RB units is 49ft.(15m).

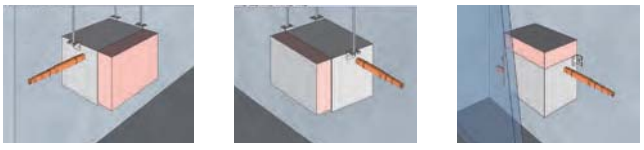
*2. RB Unit is not necessary for cooling only use.

FLEXIBLE INSTALLATION OF REFRIGERANT BRANCH (RB) UNIT

See specifications of RB units on pg 78.



- Small & slim design saves space
- A drain pipe is not required
- The control box position can be changed to meet the installation conditions



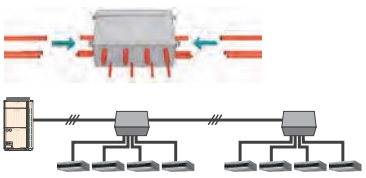
Single RBUs offer flexible installation orientation to accomodate space requirements.

RB unit (single type)

RB unit (multi type)

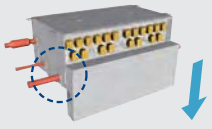
Simple installation series connection design

- 2-way connection
- Reducing overall piping length
- Up to 2 units can be connected in series.



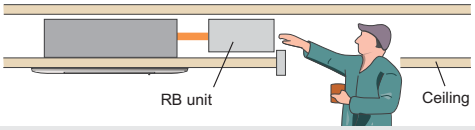
Easy to maintain in a narrow space.

- Maintenance can be performed from the side.
- No top-access service needed.



- Electronics enclosure can be temporarily slid down for service access.

- Parts can be replaced easily even in a narrow ceiling space.



AIRSTAGE™

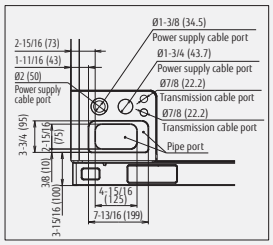
VR-II Specifications for 208 / 230 / 460V

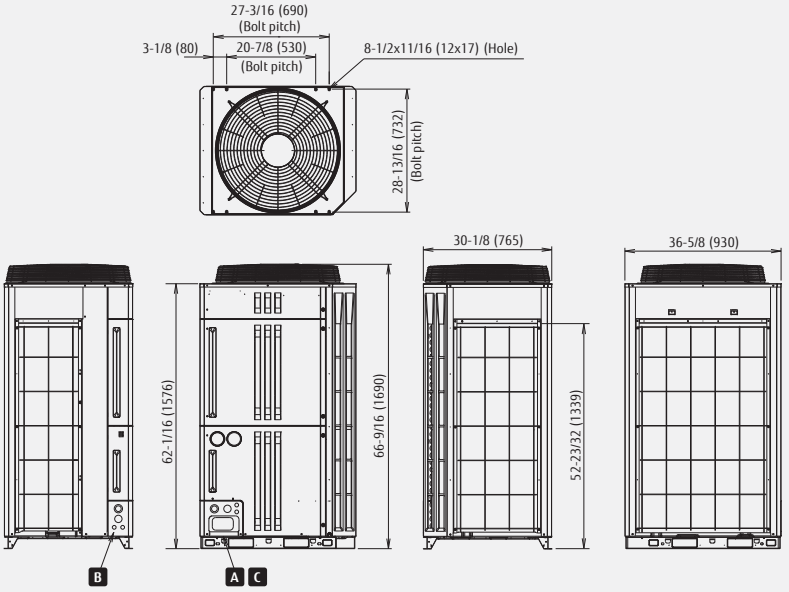
Nominal Tonage	Ton(s)	6	8	10	12	14
Model Name	Units	AOUA72 TLBV / AOUA72TLCV	AOUA96TLBV / AOUA96TLCV	AOUA12 0TLBV / AOUA120TLCV	AOUA144TLBVG / AOUA144TLCVG	AOUA168TLBVG / AOUA168TLCVG
Unit Group Configuration		1×(AOUA72TLBV) 1×(AOUA72TLCV)	1×(AOUA96TLBV) 1×(AOUA96TLCV)	1×(AOUA120TLBV) 1×(AOUA120TLCV)	2×(AOUA72TLBV) 2×(AOUA72TLCV)	1×(AOUA72TLBV) + 1×(AOUA96TLBV) 1×(AOUA72TLCV) + 1×(AOUA96TLCV)
Indoor Unit Total Capacity		50% to 150%				
Maximum Connectable Indoor Units		14	16	18	22	26
CAPACITY						
Nominal Cooling Capacity	BTUh [kW]	72,000 [21.1]	96,000 [28.1]	120,000 [35.2]	144,000 [42.2]	168,000 [49.2]
Cooling Power Input (Nominal)	kW	5.31	7.56	9.75	11.69	14.03
Nominal Heating Capacity	BTUh [kW]	81,000 [23.7]	108,000 [31.7]	135,000 [39.6]	162,000 [47.5]	188,000 [55.1]
Heating Power Input (Nominal)	kW	5.35	7.82	10.11	12.73	13.93
ELECTRIC						
Electrical Power Requirements		208 / 230 VAC, 3-Phase, 60Hz / 460 VAC, 3-Phase, 60Hz				
Maximum Circuit Breaker	A	50 / 25	50 / 25	60 / 30	2×(50) / 2×(25)	2×(50) / 2×(25)
Minimum Circuit Ampacity (MCA)	A	41 / 21	41 / 21	50 / 25	2X (41) / 2X (21)	2X (41) / 2X (21)
EFFICIENCY						
Cooling (Non-Ducted/Ducted)	EER	12.5 / 12.3	11.7 / 11.3	11.3 / 11.3	11.4 / 11.4	11 / 11
Cooling (Non-Ducted/Ducted)	IEER	24.1 / 20	23.6 / 20.20	23.8 / 20.1	22.2 / 20.4	22.2 / 20
Heating 47° (Non-Ducted/Ducted)	COP	4.06 / 3.64	3.72 / 3.60	3.61 /3.49	3.44 / 3.44	3.48 / 3.48
SCHE (Non-Ducted/Ducted)	SCHE	30.1 / 24.00	26.5 / 25.5	25.4 / 25.8	22.2 / 22.2	22 / 22
TEMPERATURE						
Operating Temp. Cooling (DB)	°F [°C]	14 to 115 [-10 to 46]	14 to 115 [-10 to 46]	14 to 115 [-10 to 46]	14 to 115 [-10 to 46]	14 to 115 [-10 to 46]
Operating Temp. Heating (DB)	°F [°C]	-4 to 70 [-20 to 21]	-4 to 70 [-20 to 21]	-4 to 70 [-20 to 21]	-4 to 70 [-20 to 21]	-4 to 70 [-20 to 21]
PIPE						
Pipe Connection: Liquid	in [mm]	1/2 [12.70]	1/2 [12.70]	1/2 [12.70]	1/2 [12.70]	5/8 [15.88]
Pipe Connection: Discharge Gas	in [mm]	5/8 [15.88]	3/4 [19.05]	3/4 [19.05]	7/8 [22.22]	7/8 [22.22]
Pipe Connec on: Suction Gas	in [mm]	7/8 [22.22]	7/8 [22.22]	1-1/8 [28.58]	1-1/8 [28.58]	1-1/8 [28.58]
REFRIGERANT						
Refrigerant Type		R410A	R410A	R410A	R410A	R410A
Refrigerant Charge	lbs [kg]	26.01 [11.80]	26.01 [11.80]	26.01 [11.80]	2×(26.01 [11.80])	2×(26.01 [11.80])
FAN						
Fan Airflow Rate	CFM [m^3/h]	6533 [11,100]	6533 [11,100]	7652 [13,000]	2×(6533 [11,100])	2×(6533 [11,100])
External Static Pressure (Max)	in.WG [Pa]	0.32 [80]	0.32 [80]	0.32 [80]	0.32 [80]	0.32 [80]
Sound Pressure Levels (Cooling/Heating)	dB (A)	57/58	59 / 59	61 / 62	60/61	61/62
COMPRESSOR						
Compressor Type x Quantity		Rotary Inverter	Rotary Inverter	Rotary Inverter	2×Rotary Inverter	2×Rotary Inverter
Compressor Motor Output	kW	7.5	7.5	11	2×7.5	2×7.5
Compressor Crankcase Heater	W	2×35	2×35	2×35	2×(2×35)	2×(2×35)
DIMMENSIONS / WEIGHT						
Dim.Net (HxWxD)	in [mm]	66-9/16 × 36-5/8 × 30-1/8 [1,690 × 930 × 765]	66-9/16 × 36-5/8 × 30-1/8 [1,690 × 930 × 765]	66-9/16 × 48-13/16 ×30-1/8 [1,690 × 1240 × 765]	2 × (66-9/16 × 36-5/8 × 30-1/8 [1,690 × 930 × 765])	2 × (66-9/16 × 36-5/8 × 30-1/8 [1,690 × 930 × 765])
Net Weight	lbs [kg]	597 [271] / 609 [276]	597 [271] / 609 [276]	639 [290] / 657 [298]	2X (597 [271]) / 2X (609 [276])	2X (597 [271]) / 2X (609 [276])

SPECIFICATIONS

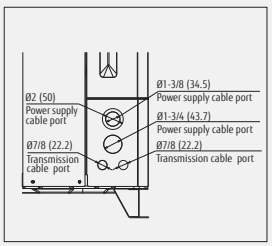
6, 8 tons: AOUA72RLBV1 / AOUA96RLBV1
AOUA72RLCV / AOUA96RLCV

A Front side knockout position

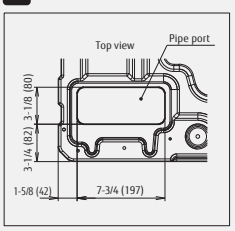




B Left side knockout position



C Bottom side knockout position



16	18	20	22	24
AOUA192TLBVG / AOUA192TLCVG	AOUA216TLBVG / AOUA216TLCVG	AOUA240TLBVG / AOUA240TLCVG	AOUA264TLBVG / AOUA264TLCVG	AOUA288TLBVG / AOUA288TLCVG
1×(AOUA72TLBV) + 1×(AOUA120TLBV) 1×(AOUA72TLCV) + 1×(AOUA120TLCV)	1×(AOUA96TLBV) + 1×(AOUA120TLBV) 1×(AOUA96TLCV) + 1×(AOUA120TLCV)	2×(AOUA120TLBV) 2×(AOUA120TLCV)	1×(AOUA72TLBV) + 2×(AOUA96TLBV) 1×(AOUA72TLCV) + 2×(AOUA96TLCV)	3×(AOUA96TLBV) 3×(AOUA96TLCV)
50% to 150%				
30	34	37	41	45
192,000 [56.2]	216,000 [63.3]	240,000 [70.3]	264,000 [77.4]	288,000 [84.4]
15.78	18.27	20.19	22.35	25
216,000 [63.3]	243,000 [71.2]	270,000 [79.1]	297,000 [87.0]	324,000 [95]
14.79	18.91	21.7	23.2	26.07
208 / 230 VAC, 3-Phase, 60Hz / 460 VAC, 3-Phase, 60Hz				
1×(50) , 1×(60) / 1×(25) , 1×(30)	1×(50) , 1×(60) / 1×(25) , 1×(30)	2×(60) / 2×(30)	2×(50) , 1×(60) / 3×(25)	3×(50) / 3×(25)
1X (41), 1X (50) / 1X (21), 1X (25)	1X (41), 1X (50) / 1X (21), 1X (25)	2X (50) / 2X (25)	3X (41) / 3X (21)	3X (41) / 3X (21)
11.2 / 11.1	10.9 / 10.9	10.9 / 10.9	10.9 / 10.9	10.6 / 10.6
24.3 / 20.5	20 / 19.2	20.8 / 20.2	20.8 / 20.1	20.8 / 20.1
3.75 / 3.57	3.47 / 3.47	3.36 / 3.36	3.45 / 3.4	3.36 / 3.31
27.1 / 25	25.2 / 25.2	23.7 / 23.7	22.0 / 22.0	22.0 / 22.0
14 to 115 [-10 to 46]	14 to 115 [-10 to 46]	14 to 115 [-10 to 46]	14 to 115 [-10 to 46]	14 to 115 [-10 to 46]
-4 to 70 [-20 to 21]	-4 to 70 [-20 to 21]	-4 to 70 [-20 to 21]	-4 to 70 [-20 to 21]	-4 to 70 [-20 to 21]
5/8 [15.88]	5/8 [15.88]	5/8 [15.88]	5/8 [15.88]	3/4[19.05]
7/8 [22.22]	1-1/8 [28.58]	1-1/8 [28.58]	1-1/8 [28.58]	1-1/8 [28.58]
1-1/8 [28.58]	1-3/8 [34.92]	1-3/8 [34.92]	1-3/8 [34.92]	1-3/8 [34.92]
R410A	R410A	R410A	R410A	R410A
2×(26.01 [11.80])	2×(26.01 [11.80])	2×(26.01 [11.80])	3×(26.01 [11.80])	3×(26.01 [11.80])
1×(6533 [11,100]) + 1×(7652 [13,000])	1×(6533 [11,100]) + 1×(7652 [13,000])	2×(7652 [13,000])	3×(6533 [11,100])	3×(6533 [11,100])
0.32 [80]	0.32 [80]	0.32 [80]	0.32 [80]	0.32 [80]
62 / 63	63/64	64/65	63/63	64/64
2×Rotary Inverter	2×Rotary Inverter	2×Rotary Inverter	3×Rotary Inverter	3×Rotary Inverter
1×(7.5) + 1×(11)	1×(7.5) + 1×(11)	2×(11)	3×7.5	3×7.5
2×(2×35)	2×(2×35)	2×(2×35)	3×(2×35)	3×(2×35)
1×(66-9/16 × 36-5/8 × 30-1/8 [1,690 × 930 × 765]), 1×(66-9/16 × 48-13/16 × 30-1/8 [1,690 × 1240 × 765])	1×(66-9/16 × 36-5/8 × 30-1/8 [1,690 × 930 × 765]), 1×(66-9/16 × 48-13/16 × 30-1/8 [1,690 × 1240 × 765])	2×(66-9/16 × 48-13/16 ×30-1/8 [1,690 × 1240 × 765])	3×(66-9/16 × 36-5/8 × 30-1/8 [1,690 × 930 × 765])	3×(66-9/16 × 36-5/8 × 30-1/8 [1,690 × 930 × 765])
1X (597 [271]), 1X (639 [290]) / 1X (609 [276]), 1X (657 [298])	1X (597 [271]), 1X (639 [290]) / 1X (609 [276]), 1X (657 [298])	2X (639 [290]) / 2X (657 [298])	3×(584 [265])3X (597 [271]) / 3X (609 [276])	3X (597 [271]) / 3X (609 [276])

Note :
Specifications are based on the following conditions.

Cooling :
Indoor temperature of 80°F (26.7°C) DB / 67°F (19.4°C) WB, and outdoor temperature of 95°F (35.0°C) DB / 75°F (23.9°C) WB.

Heating :
Indoor temperature of 70°F (21.1°C) DB / 60°F (15.6°C) WB, and outdoor temperature of 47°F (8.3°C) DB / 43°F (6.1°C) WB.

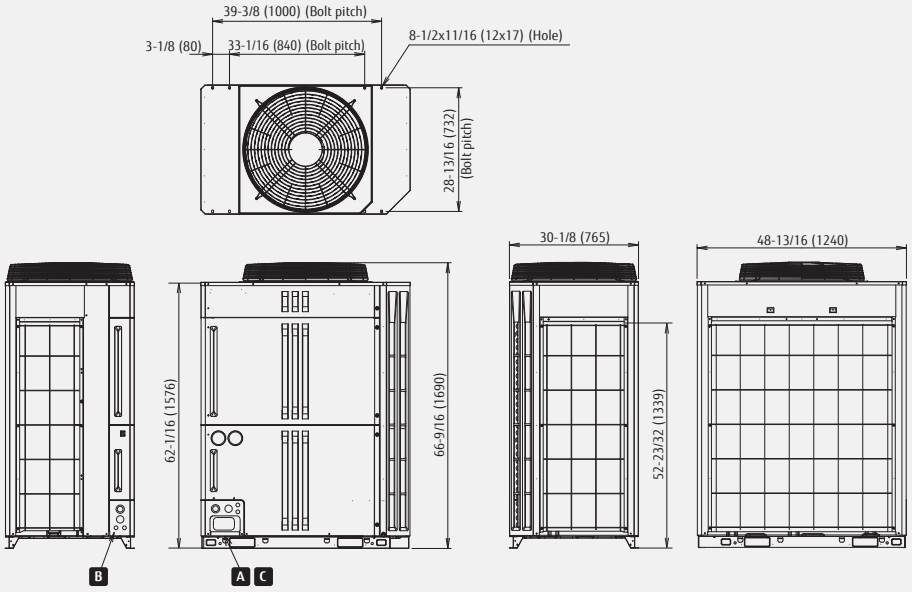
Pipe length :
25ft. (7.5 m); Height difference between outdoor unit and indoor unit : 0ft. (0 m).

*1 Electrical data is only for outdoor unit.

DIMENSIONS

10 tons: AOUA120RLBV1
AOUA120RLCV

(UNIT: IN (MM))



AIRSTAGE™

Compact Cassette

AUUA7TLAV AUUA14TLAV
AUUA9TLAV AUUA18TLAV
AUUA12TLAV AUUA24TLAV

Compact size panel design that fits in a standard ceiling panel 23-5/8 x 23-5/8in (600x600mm)

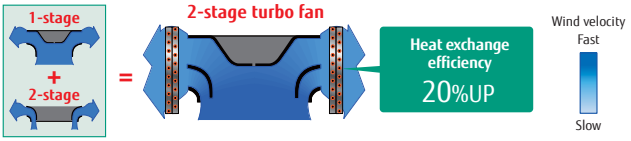
Note: IR Receiver is standard for communicating with optional Wireless Remote Control.

Compact Cassette Grille UTG-CCGV sold separately. Must order one with each compact cassette.

2-STAGE TURBO FAN

High efficiency design by 2 stage structure

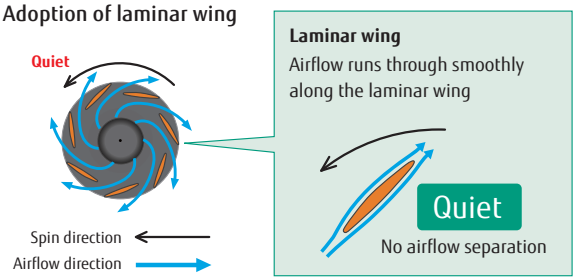
Evenly spread air distribution across the heat exchanger is possible due to the 2 stage turbo fan which produces two separate airflow streams.



QUIET QUALITY

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

Designed by Computational Fluid Dynamics (CFD) simulations

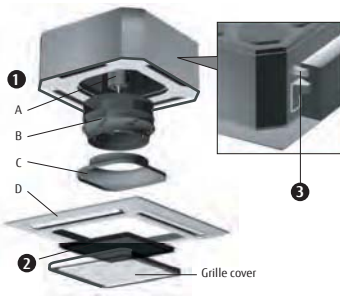


SPECIFICATIONS

Model name			AUUA7TLAV	AUUA9TLAV	AUUA12TLAV	AUUA14TLAV	AUUA18TLAV	AUUA24TLAV
Power source			1 Phase ~ 208/230V 60Hz					
Capacity	Cooling	BTUh	7,500	9,500	12,000	14,000	18,000	24,000
		kW	2.2	2.8	3.5	4.1	5.3	7.0
	Heating	BTUh	9,500	10,900	13,500	15,600	20,000	27,000
		kW	2.8	3.2	4.0	4.6	5.9	7.9
Input power		W	36	36	36	36	36	84
Airflow rate	High	CFM (m^3/h)	318 (540)	324 (550)	353 (600)	400 (680)	418 (710)	606 (1,030)
	Med		265 (450)	265 (450)	312 (530)	347 (590)	341 (580)	489 (830)
	Low		206 (350)	206 (350)	230 (390)	230 (390)	235 (400)	265 (450)
Sound pressure level	High	dB (A)	34	35	37	38	41	50
	Med		30	30	34	34	35	44
	Low		25	25	27	27	27	30
Dimensions (H × W × D)		in.(mm)	9-5/8 × 22-7/16 × 22-7/16 (245 × 570 × 570)					
Weight		lbs.(kg)	33 (15)	33 (15)	33 (15)	33 (15)	38 (17)	38 (17)
Connection pipe diameter	Liquid (Flare)	in.(mm)	1/4 (6.35)	1/4 (6.35)	1/4 (6.35)	1/4 (6.35)	3/8 (9.52)	3/8 (9.52)
	Gas (Flare)		1/2 (12.70)	1/2 (12.70)	1/2 (12.70)	1/2 (12.70)	5/8 (15.88)	5/8 (15.88)
Drain hose diameter (I.D./O.U.)			3/4 / 1-1/16					
Cassette Grille	Model name		UTG-CCGV					
	Dimensions (H×W×D)	in.(mm)	1-15/16 × 27-9/16 × 27-9/16 (50 × 700 × 700)					
	Weight	lbs.(kg)	6 (2.6)					

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
Built-in protective functions may limit capacity or shut off unit if unit is operated outside of unit design operating temperature ranges.

IMPROVEMENT OF AIRFLOW DISTRIBUTION



❶ Easy maintenance of fan and motor

Access and maintenance of the fan and motor can be accomplished by removing the panel. The fan and motor can be easily removed.
A : Fan motor B : 2-stage turbo fan
C : Bell-mouth D : Grille Panel

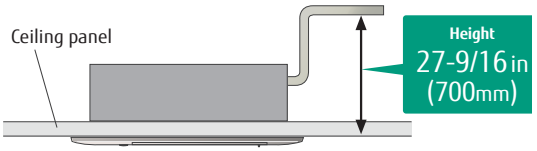
❷ Air filter

standard equipment

❸ Adaptation of transparent drainage parts

During installation, maintenance and operation, the drain pump and kit can be checked easily.

HIGH LIFT DRAIN PUMP



Built-in high-loft drain pump

HIGH CEILING MODE

The compact cassette can be installed up to a height of 9' 10-1/8"(3.0m) (AUUA12/14/18/24).

Model code	The maximum height from floor to ceiling ft.(m)	
	Standard mode	High ceiling mode
07	8' 10-5/16" (2.7)	—
09	8' 10-5/16" (2.7)	—
12	8' 10-5/16" (2.7)	9' 10-1/8" (3.0)
14	8' 10-5/16" (2.7)	9' 10-1/8" (3.0)
18	8' 10-5/16" (2.7)	9' 10-1/8" (3.0)
24	8' 10-5/16" (2.7)	9' 10-1/8" (3.0)

COMPACT DESIGN

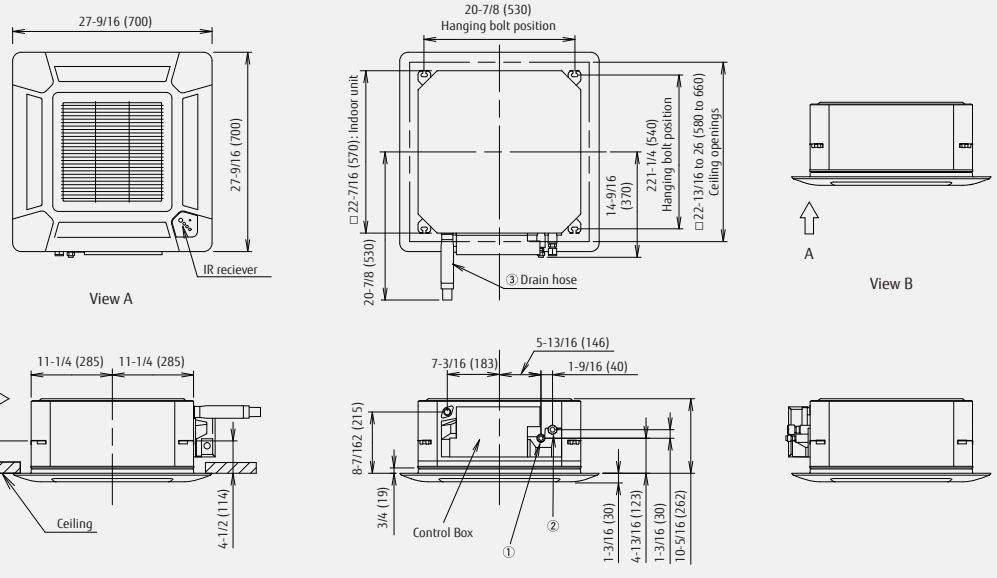
World's first 24,000 BTUh model in the compact cassette category (Easy installation by taking off ceiling panel of 23-5/8 x 23-5/8in (600 x 600mm)

OPTIONAL PARTS

Air Outlet Shutter Plate..... UTR-YDZB
Insulation Kit for High Humidity..... UTZ-KXGC
Fresh Air Intake Kit ..... UTZ-VXAA

DIMENSIONS

(UNIT: IN (MM))



	AUUA 7/9/12/14	AUUA 18/24
① Refrigerant pipe flare connection (Liquid)	ø 1/4 (6.35)	ø 3/8 (9.52)
② Refrigerant pipe flare connection (Gas)	ø 1/2 (12.70)	ø 5/8 (15.88)
③ Drain hose connection (Drain Hose)	ø 3/4 (I.D.), ø 1-1/16 (O.D.)	

Cassette

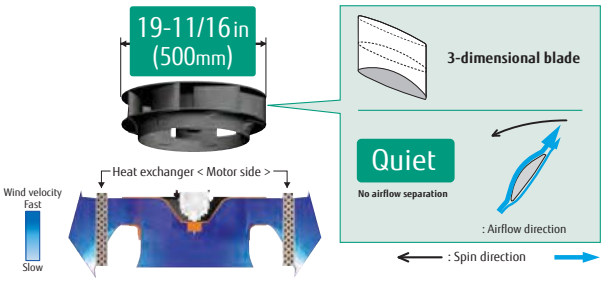
AUUB18TLAV
AUUB24TLAV
AUUB30TLAV
AUUB36TLAV

Powerful, wide airflow and quiet operation. Ability to use a branch duct off of the unit.

Cassette Grille UTG-LCGV sold separately. Must order one with each compact cassette.

HIGH EFFICIENCY TURBO FAN WITH 3-DIMENSIONAL BLADE

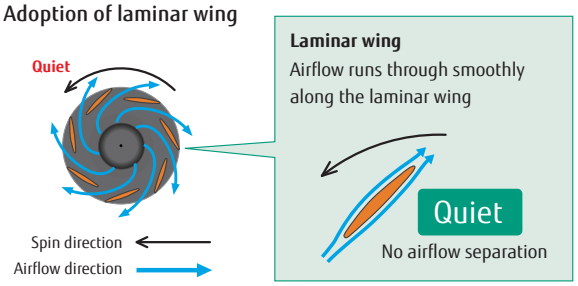
High efficiency airflow distribution has been achieved by improving the fan-blade design which increases the air passing over the heat exchanger.



QUIET

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

Designed by Computational Fluid Dynamics (CFD) simulations



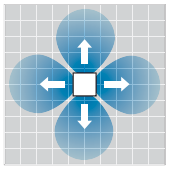
SPECIFICATIONS

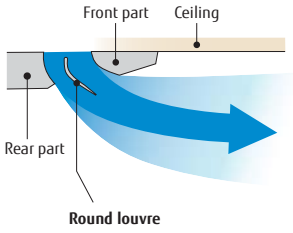
Model name			AUUB18TLAV	AUUB24TLAV	AUUB30TLAV	AUUB36TLAV
Power source			1 Phase ~ 208/230V 60Hz			
Capacity	Cooling	BTUh	18,000	24,000	30,000	36,000
		kW	5.3	7.0	8.8	10.6
	Heating	BTUh	20,000	27,000	34,000	40,000
		kW	5.9	7.9	10.0	11.7
Input power		W	39	46	80	80
Airflow rate	High	CFM (m^3/h)	677 (1,150)	753 (1,280)	942 (1,600)	1,059 (1,800)
	Med		553 (940)	612 (1,040)	765 (1,300)	765 (1,300)
	Low		512 (870)	512 (870)	647 (1,100)	647 (1,100)
Sound pressure level	High	dB (A)	36	38	40	44
	Med		30	33	38	38
	Low		29	29	33	33
Dimensions (H × W × D)		in.(mm)	9-11/16 × 33-1/16 × 33-1/16 (246 × 840 × 840)		11-5/16 × 33-1/16 × 33-1/16 (288 × 840 × 840)	
Weight		lbs.(kg)	49 (22)	49 (22)	60 (27)	60 (27)
Connection pipe diameter	Liquid (Flare)	in.(mm)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)
	Gas (Flare)		5/8 (15.88)	5/8 (15.88)	5/8 (15.88)	3/4 (19.05)
Drain hose diameter (I.D./O.U.)			3/4 / 1-1/16			
Cassette Grille	Model name		UTG-LCGV			
	Dimensions (H×W×D)	in.(mm)	1-15/16 × 37-3/8 × 37-3/8 (50 × 950 × 950)			
	Weight	lbs.(kg)	13 (5.5)			

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
Built-in protective functions may limit capacity or shut off unit if unit is operated outside of unit design operating temperature ranges.

IMPROVEMENT OF AIRFLOW DISTRIBUTION

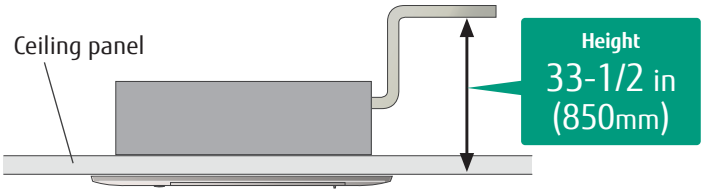
Aerodynamic louver design and dynamic motorized movement improves air distribution.





Much less temperature irregularity happens by spreading airflow widely

HIGH LIFT DRAIN PUMP



Built-in high-loft drain pump

ADJUSTABLE HANGER POSITION

HIGH CEILING MODE

This cassette can be installed up to a height of 13-3/4ft. (4.2m) (AUUA36).

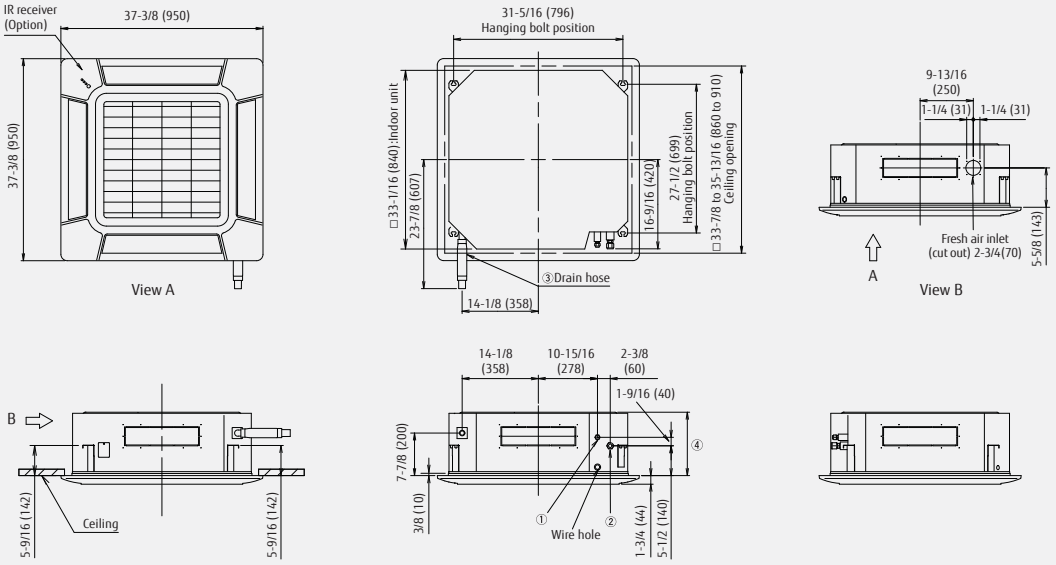
Model code	The maximum height from floor to ceiling ft. (m)	
	Standard mode	High ceiling mode
18	9′ 10-1/8″ (3.0)	11′ 6″ (3.5)
24	9′ 10-1/8″ (3.0)	11′ 6″ (3.5)
30	10′ 6″ (3.2)	11′ 9-3/4″ (3.6)
36	10′ 6″ (3.2)	13′ 9-3/8″ (4.2)

OPTIONAL PARTS

IR Receiver Kit UTY-LRHYB1
Air Outlet Shutter Plate ..... UTR-YDZC
Panel Spacer ..... UTG-BGYA-W
Insulation Kit for High Humidity ..... UTZ-KXGA / UTZ-KXGB
Wide Panel ..... UTG-AGYA-W
Fresh Air Intake Kit ..... UTZ-VXGA

DIMENSIONS

(UNIT: IN (MM))



		AUUB 18/24	AUUB 30	AUUB 36
①	Refrigerant pipe flare connection (Liquid)	ø 3/8 (9.52)	ø 3/8 (9.52)	ø 3/8 (9.52)
②	Refrigerant pipe flare connection (Gas)	ø 5/8 (15.88)	ø 5/8 (15.88)	ø 3/4 (19.05)
③	Drain hose connection (Drain Hose)	ø 3/4 (I.D.), ø 1-1/16 (O.D.)		
④	—	10-1/16 (256)	11-3/4 (298)	11-3/4 (298)

AIRSTAGE™

Slim Compact Duct

ARUL7TLAV
ARUL9TLAV
ARUL12TLAV
ARUL14TLAV
ARUL18TLAV

(Drain pump internal models)

Offers slim design, wide range of static pressure settings and flexible installation orientation.

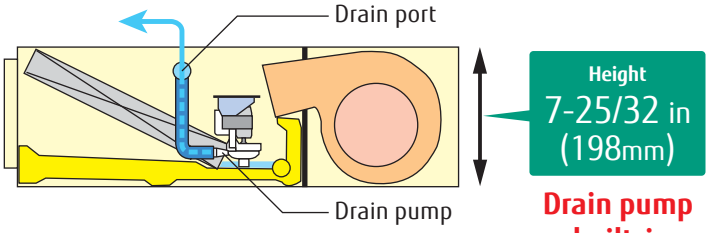
ARUL7 ARUL9 ARUL12 ARUL14

ARUL18

Shown with optional Auto Louver Grille Kit (UTD-GXSA-W, UTD-GXSB-W)

SLIM DESIGN

This model has a slim design so it can be installed in narrow ceilings with minimum height requirement.

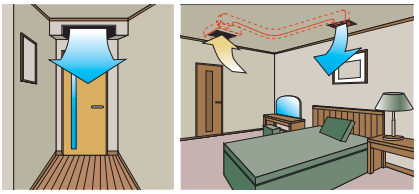


Note: Condensate drain pump cannot be used when unit is in a vertical position.

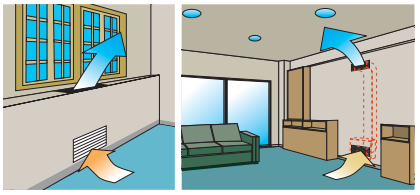
FLEXIBLE INSTALLATION

Slim Compact Duct units can be mounted horizontally or vertically and can deliver up to 0.36" external static pressure providing the power and flexibility to meet the needs of most applications.

Ceiling concealed



Floor concealed

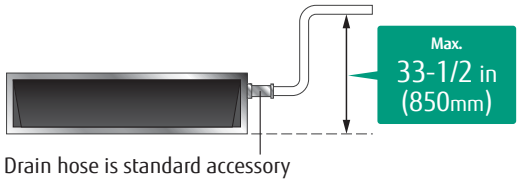


SPECIFICATIONS

Model name			ARUL7TLAV	ARUL9TLAV	ARUL12TLAV	ARUL14TLAV	ARUL18TLAV
Power source			1 Phase ~ 208/230V 60Hz				
Capacity	Cooling	BTUh	7,500	9,500	12,000	14,000	18,000
		kW	2.2	2.8	3.5	4.1	5.3
	Heating	BTUh	9,500	10,900	13,500	15,600	20,000
		kW	2.8	3.2	4.0	4.6	5.9
Input power		W	54	54	54	92	92
Airflow rate	High	CFM (m^3/h)	324 (550)	353 (600)	353 (600)	471 (800)	553 (940)
	Med		288 (490)	324 (550)	300 (510)	418 (710)	494 (840)
	Low		258 (440)	283 (480)	265 (450)	359 (610)	441 (750)
Static pressure range		in.WG (Pa)	0 to 0.36 (0 to 90)	0 to 0.36 (0 to 90)	0 to 0.36 (0 to 90)	0 to 0.36 (0 to 90)	0 to 0.36 (0 to 90)
Standard static pressure			0.10 (25)	0.10 (25)	0.10 (25)	0.10 (25)	0.10 (25)
Sound pressure level	High	dB (A)	28	29	30	34	34
	Med		25	26	27	32	32
	Low		22	24	24	28	28
Dimensions (H × W × D)		in.(mm)	7-13/16 × 27-9/16 × 24-7/16 (198 × 700 × 620)				7-13/16 × 35-7/16 × 24-7/16 (198 × 900 × 620)
Weight		lbs.(kg)	37 (17)	37 (17)	40 (18)	40 (18)	49 (22)
Connection pipe diameter	Liquid (Flare)	in.(mm)	1/4 (6.35)	1/4 (6.35)	1/4 (6.35)	1/4 (6.35)	3/8 (9.52)
	Gas (Flare)		1/2 (12.70)	1/2 (12.70)	1/2 (12.70)	1/2 (12.70)	5/8 (15.88)
Drain hose diameter (I.D./O.U.)			3/4 / 1-1/16				

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
Built-in protective functions may limit capacity or shut off unit if unit is operated outside of unit design operating temperature ranges.

CONDENSATE DRAIN PUMP (STANDARD)



Drain hose is standard accessory

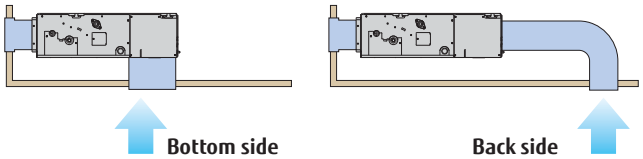
SELECTABLE EXTERNAL STATIC PRESSURE

The external static pressure can be selected for any value from 0 to 0.36in.WG. (0 to 90 Pa). Static pressure setting can be changed using the remote controller.

Static pressure range
0.1 to 0.36 in.WG (0 to 90Pa)

AIR-INTAKE

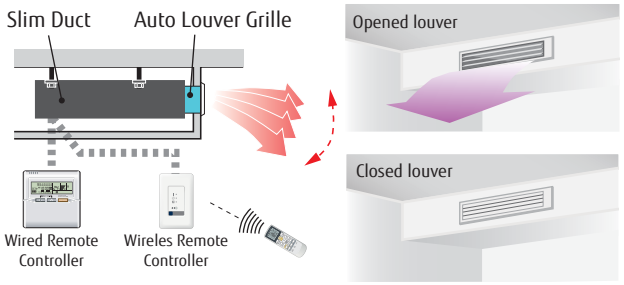
Air intake direction can be selected to match the installation site.



In locations where fan noise may be a concern, do not use bottom inlet without providing an elbow to prevent line of sight to the fan.

AUTO LOUVER GRILLE KIT (OPTION)

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

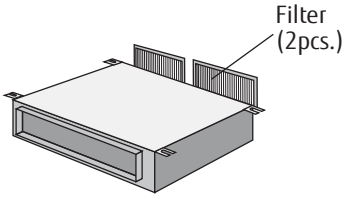


- Operation with indoor unit
- UP and Down auto swing
- Auto-closing louver

FILTER (INCLUDED)

ARUL7 / 9 / 12 / 14 / 18

Minimum Height Requirement 9-3/4"



OPTIONAL PARTS

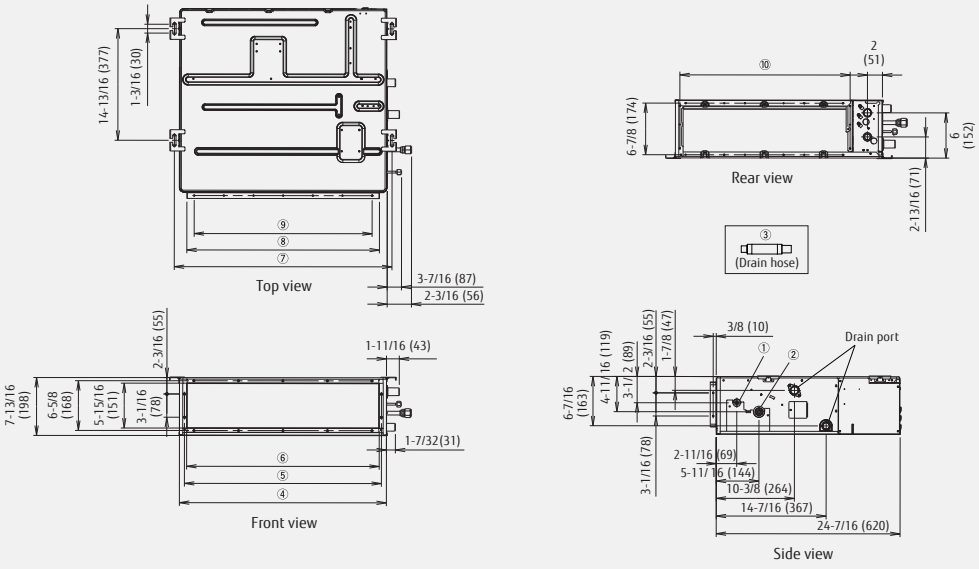
Auto Louver Grille Kit..... UTD-GXSA-W (for ARUL7/9/12/14TLAV)
UTD-GXSB-W (for ARUL18TLAV)

IR Receiver Unit..... UTB-YWC

Remote Sensor Unit..... UTY-XSZX

DIMENSIONS

(UNIT: IN (MM))



		ARUL 7/9/12/14	ARUL 18
①	Refrigerant pipe flare connection (Liquid)	ø 1/4 (6.35)	ø 3/8 (9.52)
②	Refrigerant pipe flare connection (Gas)	ø 1/2 (12.70)	ø 5/8 (15.88)
③	Drain hose connection (Drain Hose)	ø 3/4 (I.D.), ø 1-1/16 (O.D.)	
④	—	27-9/16 (700)	35-7/16 (900)
⑤	—	26-1/8 (664)	34 (864)
⑥	—	25-9/16 (650)	33-7/16 (850)
⑦	—	28-7/8 (734)	36-3/4 (934)
⑧	—	25-9/16 (650)	33-7/16 (850)
⑨	—	3-15/16 (100) x 6 = 23-5/8 (600)	3-15/16 (100) x 8 = 31-1/2 (800)
⑩	—	22-5/8 (574)	30-1/2 (774)

Economizer and filter box options are available through affiliated third party. Ask your local Fujitsu Airstage distributor for details.

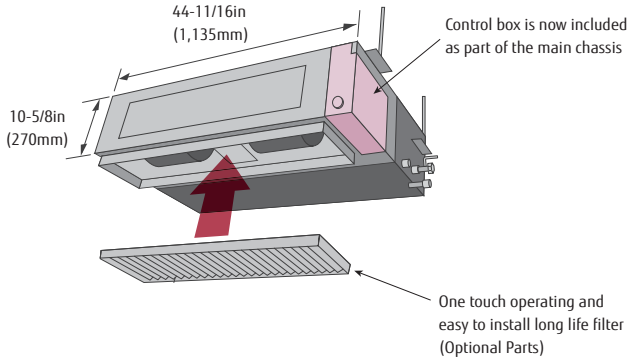
AIRSTAGE™

Medium Static Pressure Duct

ARUM24TLAV
ARUM30TLAV
ARUM36TLAV

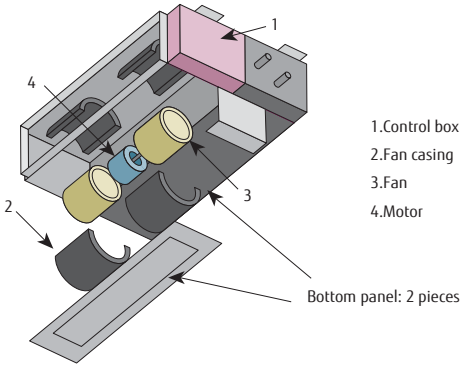
SLIM & COMPACT DESIGN

In the case of bottom return air connection, not only does the indoor unit design allow for installation in a narrow ceiling space of 10-5/8in (270mm), further space savings have been achieved by mounting the electrical control box internally inside the chassis.



EASY MAINTENANCE

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

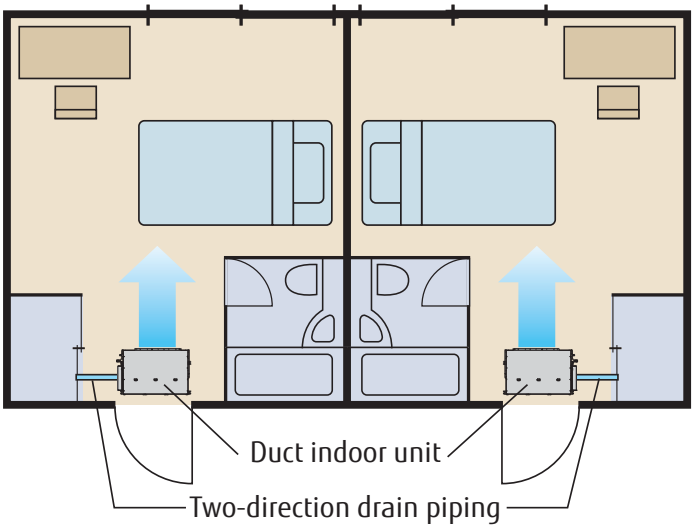


SPECIFICATIONS

Model			ARUM24TLAV	ARUM30TLAV	ARUM36TLAV
Power source			1 Phase ~ 208/230V 60Hz		
Capacity	Cooling	BTUh	24,000	30,000	36,000
		kW	7.0	8.8	10.6
	Heating	BTUh	27,000	34,000	40,000
		kW	7.9	10.0	11.7
Input power		W	125	190	222
Airflow rate	High	CFM (m^3/h)	859 (1,460)	1,042 (1,770)	1,112 (1,890)
	Med		724 (1,230)	812 (1,380)	895 (1,520)
	Low		589 (1,000)	589 (1,000)	677 (1,150)
Static pressure range		in.WG (Pa)	0 to 0.60 (0 to 150)	0 to 0.60 (0 to 150)	0 to 0.60 (0 to 150)
Standard static pressure			0.16 (40)	0.16 (40)	0.16 (40)
Sound pressure level	High	dB (A)	36	40	41
	Med		31	33	35
	Low		28	28	29
Dimensions (H × W × D)		in.(mm)	10-5/16 × 44-11/16 × 27-9/16 (270 × 1,135 × 700)		
Weight		lbs.(kg)	84 (38)	86 (39)	86 (39)
Connection pipe diameter	Liquid (Flare)	in.(mm)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)
	Gas (Flare)		5/8 (15.88)	5/8 (15.88)	3/4 (19.05)
Drain hose diameter (I.D./O.U.)			3/4 / 1-1/16		

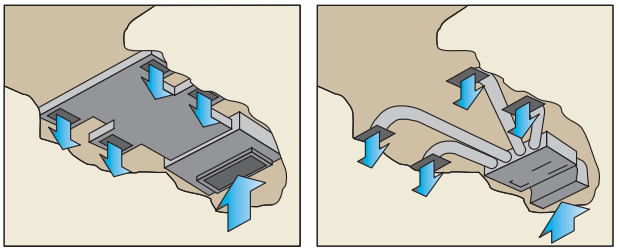
Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
Built-in protective functions may limit capacity or shut off unit if unit is operated outside of unit design operating temperature ranges.

TWO-DIRECTION DRAIN PIPING

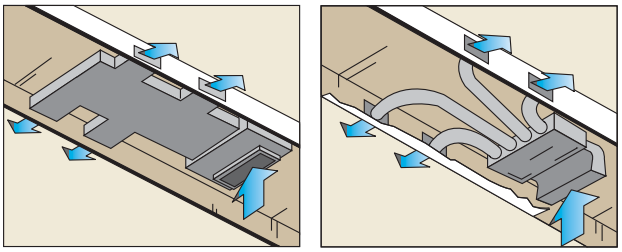


INSTALLATION STYLES

Embedded in Ceiling



Hanging from Ceiling



HIGH EFFICIENCY DC FAN MOTORS

Improved motor efficiency from previous model.

24 model

30/36 model

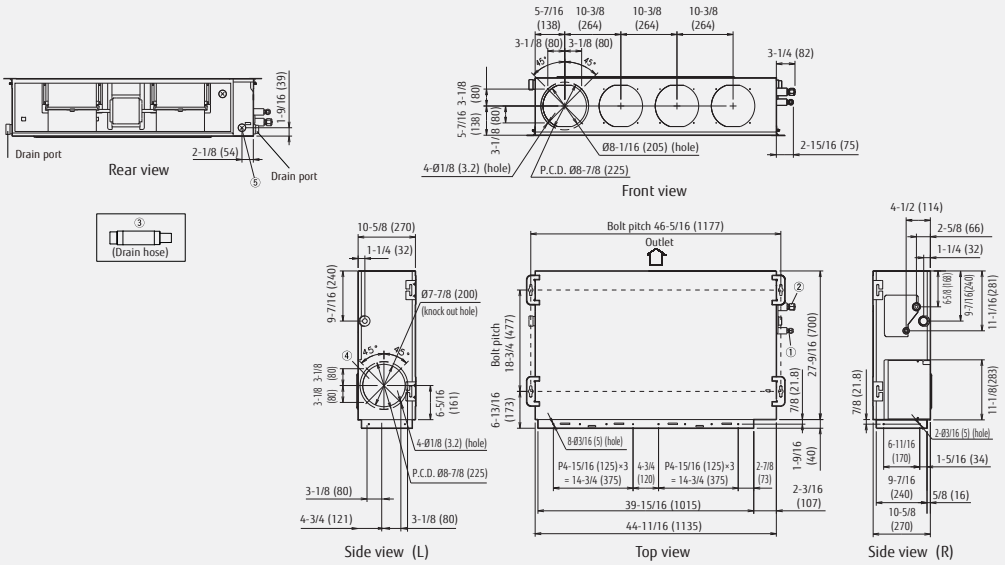
OPTIONAL PARTS

Drain Pump Unit.....UTZ-PU1NBA
Long Life Filter* UTD-LF25NA
Flange (Square) UTD-SF045T
Flange (Round) UTD-RF204
IR Receiver Unit.....UTB-YWC
Remote Sensor Unit.....UTY-XSZX

*Note, Medium Static Pressure Duct models do not include a standard filter.

DIMENSIONS

(UNIT: IN (MM))



		ARUM 24/30	ARUM 36
①	Refrigerant pipe flare connection (Liquid)	ø 3/8 (9.52)	ø 3/8 (9.52)
②	Refrigerant pipe flare connection (Gas)	ø 5/8 (15.88)	ø 3/4 (19.05)
③	Drain hose connection (Drain Hose)	ø 3/4 (I.D.), ø 1-1/16 (O.D.)	
④	Knock out hole (fresh air)	7-7/8 (200)	7-7/8 (200)
⑤	Hole for power cable	7/8 (23)	7/8 (23)

Economizer and filter box options are available through affiliated third party. Ask your local Fujitsu Airstage distributor for details.

AIRSTAGE™

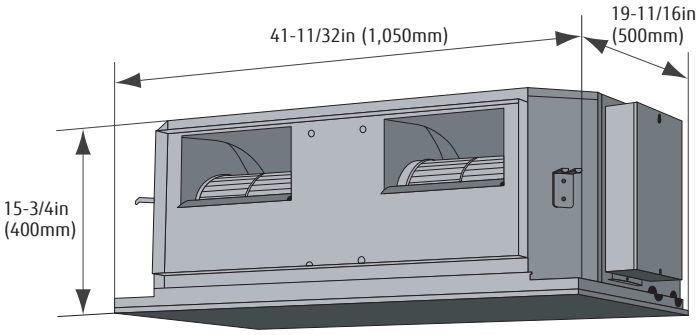
High Static Pressure Duct (3, 4, 5 ton)

ARUH36TLAV
ARUH48TLAV
ARUH60TLAV

High Static Pressure Ducted Units combine efficient casing design with non metallic fan wheels and casings to reduce noise levels; units are capable of delivering hot or cold air at static pressures up to 1 in.WG. These units are perfect for conditioning hard-to-reach areas and are able to meet the needs of many different types of applications.

EASY INSTALLATION (COMPACT SIZE & LIGHTWEIGHT)

Equipped with a compact and lightweight chassis to simplify installation and provide better flexibility for tight installation spaces.



97lb (44kg)

SPECIFICATIONS

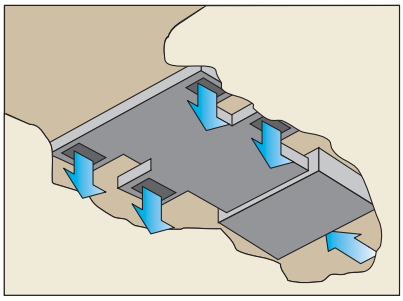
Model name			ARUH36TLAV	ARUH48TLAV	ARUH60TLAV
Power source			1 Phase ~ 208/230V 60Hz		
Capacity	Cooling	BTUh	36,000	48,000	60,000
		kW	10.6	14.1	17.6
	Heating	BTUh	40,000	54,000	67,000
		kW	11.7	15.8	19.6
Input power		W	496	752	806
Airflow rate	High	CFM (m^3/h)	1,324 (2,250)	1,766 (3,000)	1,972 (3,350)
	Med		1,030 (1,750)	1,589 (2,700)	1,678 (2,850)
	Low		824 (1,400)	1,354 (2,300)	1,501 (2,550)
Static pressure range		in.WG (Pa)	0.40 to 0.80 (100 to 200)	0.40 to 1.00 (100 to 250)	0.40 to 1.00 (100 to 250)
Standard static pressure			0.40 (100)	0.40 (100)	0.40 (100)
Sound pressure level	High	dB (A)	43	47	48
	Med		37	43	44
	Low		32	40	41
Dimensions (H × W × D)		in.(mm)	15-3/4 × 41-5/16 × 19-11/16 (400 × 1,050 × 500)		
Weight		lbs.(kg)	97 (44)	101 (46)	101 (46)
Connection pipe diameter	Liquid (Flare)	in.(mm)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)
	Gas (Flare)		3/4 (19.05)	3/4 (19.05)	3/4 (19.05)
Drain hose diameter (I.D./O.U.)			3/4 / 1-1/16		

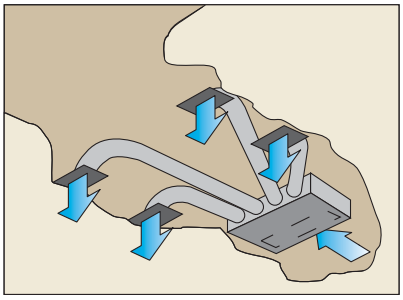
Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
Built-in protective functions may limit capacity or shut off unit if unit is operated outside of unit design operating temperature ranges.

HIGH STATIC PRESSURE DESIGN

Up To
1 in.WG
(250Pa)

(ARUH48/60)



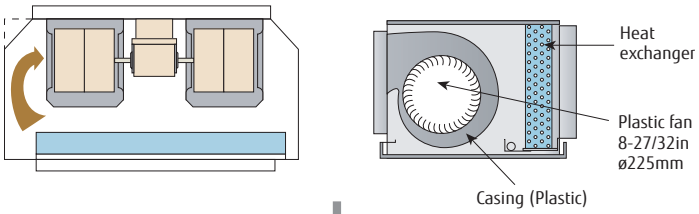


QUIET OPERATION

Indoor unit

Efficient chassis design reduces turbulance.

Non-metallic fan wheel and casing reduces fan noise.



Med. noise level
43dB(A)

(ARUH48)

OPTIONAL PARTS

Drain Pump Unit.....UTZ-PU1NBA

Long-Life Filter*.....UTD-LF60KA

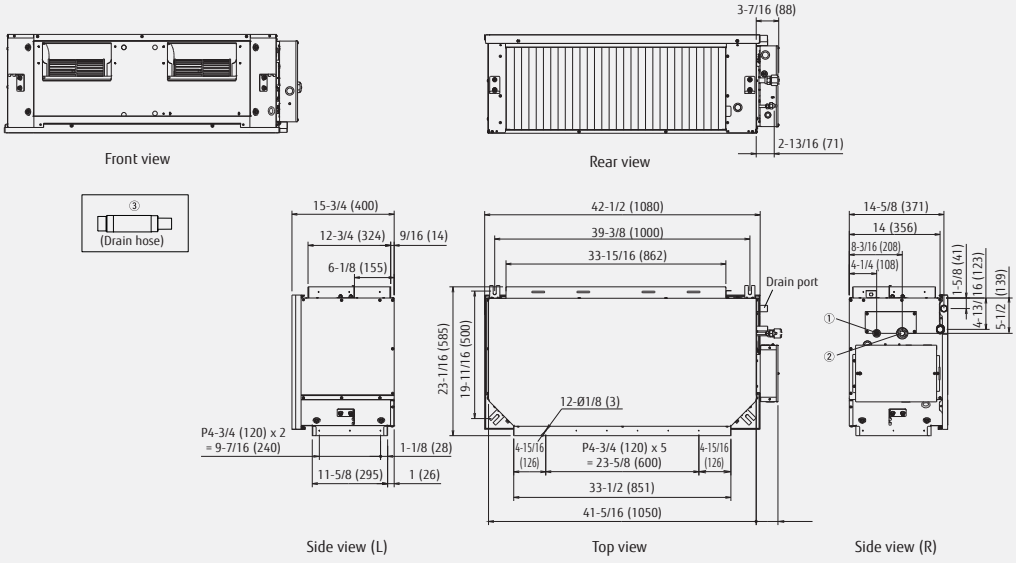
IR Receiver Unit.....UTB-YWC

Remote Sensor Unit.....UTY-XSZX

*Note, High Static Pressure Duct models do not include a standard filter.

DIMENSIONS

(UNIT: IN (MM))



	ARUH 36/48/60
① Refrigerant pipe flare connection (Liquid)	ø 3/8 (9.52)
② Refrigerant pipe flare connection (Gas)	ø 3/4 (19.05)
③ Drain hose connection (Drain Hose)	ø 3/4 (I.D.), ø 1-1/16 (O.D.)

Economizer and filter box options are available through affiliated third party. Ask your local Fujitsu Airstage distributor for details.

High Static Pressure Duct (6, 8 ton)

ARUH72TLAV1
ARUH96TLAV

ARUH72TLAV1

ARUH96TLAV

High static pressure ducted units combine efficient casing design and powerful DC blower fans to deliver efficient high static pressure up to 1.2 in.WG

*Connectable combination.

Outdoor unit :AOUA72RLAV
Indoor unit : ARUH72TLAV1

Outdoor unit : AOUA96RLAV
Indoor unit : ARUH96TLAV

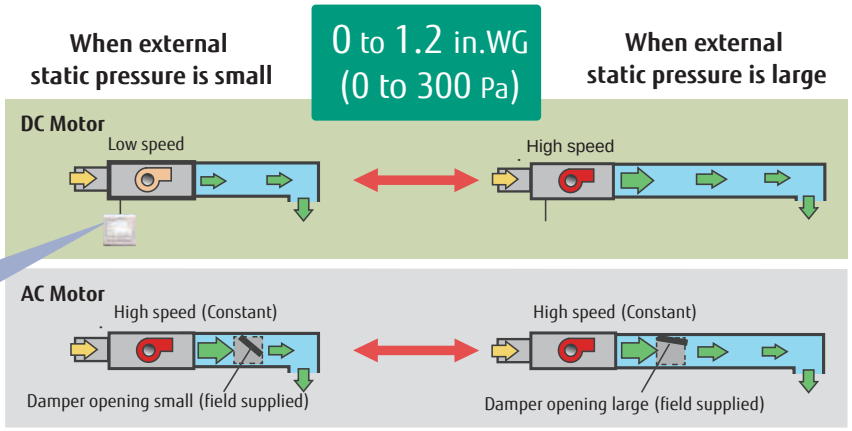
SPECIFICATIONS

Model name			ARUH72TLAV1	ARUH96TLAV
Power source			1 Phase ~ 208/230V 60Hz	
Capacity	Cooling	BTUh	72,000	96,000
		kW	21.1	28.1
	Heating	BTUh	81,000	108,000
		kW	23.7	31.7
Input power		W	618	838
Airflow rate	High	CFM (m^3/h)	2296 (3900)	2855 (4850)
	Med		1942 (3300)	2502 (4250)
	Low		1766 (3000)	2119 (3600)
Static pressure range		in.WG (Pa)	0 to 1.2 (0 to 300)	0 to 1.2 (0 to 300)
Standard static pressure			0.6 (150)	0.6 (150)
Sound pressure level	High	dB (A)	47	48
	Med		43	45
	Low		40	42
Dimensions (H × W × D)		in.(mm)	17-11/16 × 62-1/2 × 27-9/16 (450 × 1587 × 700)	21-5/8 × 62-1/2 × 27-9/16 (550 × 1587 × 700)
Weight		lbs.(kg)	203 (92)	231(105)
Connection pipe diameter	Liquid (Flare)	in.(mm)	1/2 (12.70)	1/2 (12.70)
	Gas (Flare)		7/8 (22.22)	7/8 (22.22)
Drain hose diameter (I.D./O.U.)			3/4 / 1-1/16	

HIGH ENERGY SAVING AND FLEXIBLE DESIGN BY USING DC MOTOR

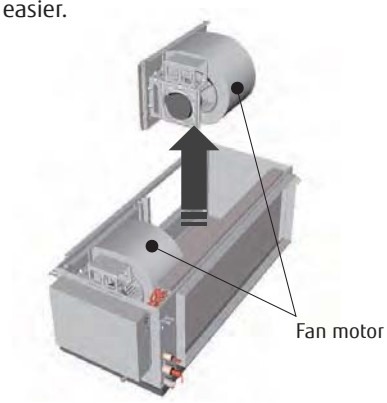
With its adjustable static pressure range from 0.0 to 1.2 in.WG, to its efficient DC fan motor, these high static pressure d ucted units are designed for flexibility and efficiency.

DC fan motor



EASY SERVICE & MAINTENANCE

Left and right fan motors can be removed separately which has made servicing of the indoor unit easier.



OPTIONAL PARTS

Drain Pump Unit.....UTZ-PU1NBA

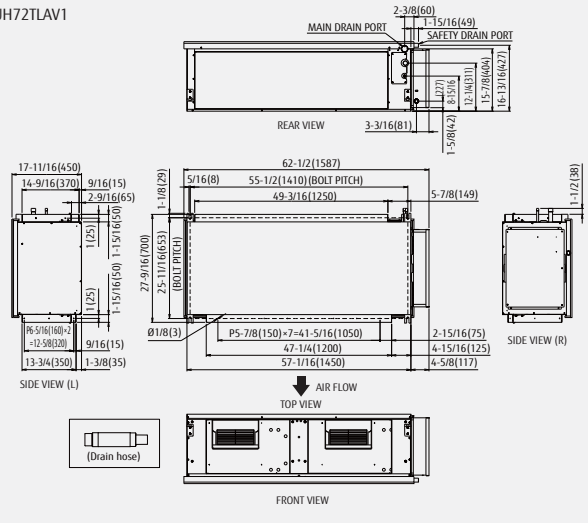
IR Receiver Unit .....UTB-YWC

Remote Sensor Unit.....UTY-XSZX

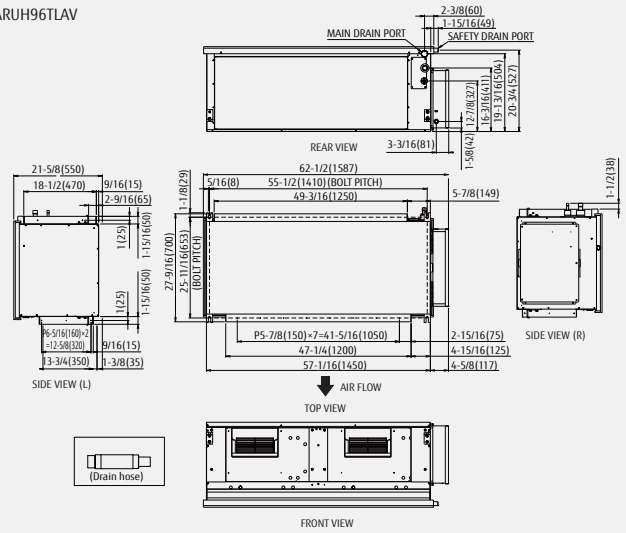
DIMENSIONS

(UNIT: IN (MM))

ARUH72TLAV1



ARUH96TLAV



Economizer and filter box options are available through affiliated third party. Ask your local Fujitsu Airstage distributor for details.

AIRSTAGE™

Vertical Air Handler

ARUV12TLAV
ARUV18TLAV
ARUV24TLAV
ARUV30TLAV
ARUV36TLAV
ARUV48TLAV
ARUV60TLAV

The Vertical Air Handler is optimized to fit in narrow spaces. It offers a large range of static pressure settings up to 0.8 in.WG.

ARUV12TLAV
ARUV18TLAV
ARUV24TLAV

ARUV30TLAV
ARUV36TLAV

ARUV48TLAV
ARUV60TLAV

OPTIONAL PARTS

Drain Pump Unit.....UTZ-PU1NBA
IR Receiver Unit.....UTB-YWC
Remote Sensor Unit.....UTY-XSZX

SPECIFICATIONS

Model name			ARUV12TLAV	ARUV18TLAV	ARUV24TLAV	ARUV30TLAV	ARUV36TLAV	ARUV48TLAV	ARUV60TLAV
Power source			1 Phase ~ 208/230V 60Hz						
Capacity	Cooling	BTUh	12,000	18,000	24,000	30,000	36,000	48,000	60,000
		kW	3.5	5.3	7.0	8.8	10.6	14.1	17.6
	Heating	BTUh	13,500	20,000	27,000	34,000	40,000	54,000	67,000
		kW	4.0	5.9	7.9	10.0	11.7	15.8	19.6
Input power		W	87	142	222	253	427	469	785
Airflow rate	High	CFM (m^3/h)	394 (670)	630 (1071)	862 (1464)	1092 (1855)	1372 (2331)	1531(2602)	2013(3420)
	Med		347 (590)	547 (930)	800 (1360)	942 (1600)	1271 (2160)	1407(2390)	1883(3200)
	Low		306 (520)	506 (860)	689 (1170)	818 (1390)	954 (1620)	1130(1920)	1542(2620)
Static pressure range		in.WG (Pa)	0.1 to 0.8 (25 to 200)	0.1 to 0.8 (25 to 200)	0.1 to 0.8 (25 to 200)	0.1 to 0.8 (25 to 200)	0.1 to 0.8 (25 to 200)	0.1 to 0.8 (25 to 200)	0.1 to 0.8 (25 to 200)
Standard static pressure			0.5 (125)	0.5 (125)	0.5 (125)	0.5 (125)	0.5 (125)	0.5 (125)	0.5 (125)
Sound pressure level	High	dB (A)	41	43	45	45	48	48	53
	Med		39	40	43	43	46	46	50
	Low		37	39	39	40	40	41	45
Dimensions (H × W × D)		in.(mm)	51 × 17-11/16 × 23-13/16 (1,295 × 450 × 605)			51 × 22-3/16 × 23-13/16 (1,295 × 564 × 605)		57-1/2 × 25-1/8 × 23-13/16 (1,461 × 638 × 605)	
Weight		lbs.(kg)	139 (63)	148 (67)	153 (69)	174 (79)	179 (81)	212 (96)	223 (101)
Connection pipe diameter	Liquid (Flare)	in.(mm)	1/4 (6.35)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)
	Gas (Flare)		1/2 (12.70)	5/8 (15.88)	5/8 (15.88)	5/8 (15.88)	3/4 (19.05)	3/4 (19.05)	3/4 (19.05)
Drain hose diameter (I.D.)			3/4 (19.05)	3/4 (19.05)	3/4 (19.05)	3/4 (19.05)	3/4 (19.05)	3/4 (19.05)	3/4 (19.05)

FLEXIBLE LINE-UP WITH WIDE CAPACITY RANGE AND HIGH STATIC PRESSURE

- Selectable capacities from 1 to 5 tons.
- Broad static pressure range for a wide range of applications.
- Durable powder-coated thick steel gauge cabinet.
- Acoustical and thermal insulation is upgraded from 1/2" to 1" thick to reduce heat loss.
- Equipped with standard MERV 3 filter.
- Easily retrofitted into existing installations.

Static pressure range
0.1 to 0.8 in.WG
(25 to 200Pa)

*Except ARUV12TLAV
0.1 to 0.7 in.WG
(25 to 175 Pa).

Makes the Fujitsu Airstage platform an even more flexible solution.

Capacity class (BTUh)						
12,000	18,000	24,000	30,000	36,000	48,000	60,000

FRONT ACCESSIBILITY

Front panel provides easy access for setup and maintenance.

SMALL FOOTPRINT

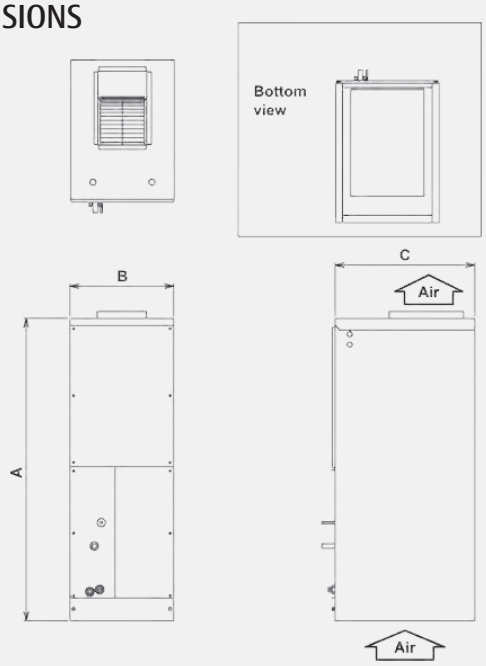
ARUV12,18,24
17-3/4" x 23-3/4"

ARUV30, 36
22-1/4" x 23-3/4"

ARUV48, 60
25-1/8" x 23-3/4"

DIMENSIONS

(UNIT: IN (MM))



	ARUV 12/18/24	ARUV 30/36	ARUV 48/60
A	51 (1,295)	51 (1,295)	57-1/2 (1,461)
B	17-11/16 (450)	22-3/16 (564)	25-1/2 (638)
C	23-13/16 (605)	23-13/16 (605)	23-13/16 (605)

AIRSTAGE™

Floor / Ceiling

ABUA12TLAV
ABUA14TLAV
ABUA18TLAV
ABUA24TLAV

The slim and lightweight design allows the unit to be suspended from the ceiling or installed on the floor, offering flexibility in design.

Note: IR Receiver is standard for communicating with optional Wireless Remote Control.

FLEXIBLE INSTALLATION

Example of floor installation

Floor console

EXAMPLE OF CEILING INSTALLATION

Under ceiling

SPECIFICATIONS

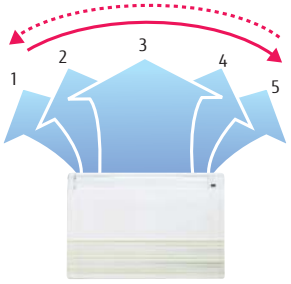
Model name			ABUA12TLAV	ABUA14TLAV	ABUA18TLAV	ABUA24TLAV
Power source			1 Phase ~ 208/230V 60Hz			
Capacity	Cooling	BTUh	12,000	14,000	18,000	24,000
		kW	3.5	4.1	5.3	7.0
	Heating	BTUh	13,500	15,600	20,000	27,000
		kW	4.0	4.6	5.9	7.9
Input power		W	42	42	74	99
Airflow rate	High	CFM (m^3/h)	388 (660)	459 (780)	589 (1,000)	589 (1,000)
	Med		336 (570)	377 (640)	424 (720)	483 (820)
	Low		288 (490)	324 (550)	341 (580)	400 (680)
Sound pressure level	High	dB (A)	36	40	46	47
	Med		32	36	39	42
	Low		28	34	35	37
Dimensions (H × W × D)		in.(mm)	7-13/16 × 39 × 25-13/16 (199 × 990 × 655)			
Weight		lbs.(kg)	56 (25)	57 (26)	57 (26)	60 (27)
Connection pipe diameter	Liquid (Flare)	in.(mm)	1/4 (6.35)	1/4 (6.35)	3/8 (9.52)	3/8 (9.52)
	Gas (Flare)		1/2 (12.70)	1/2 (12.70)	5/8 (15.88)	5/8 (15.88)
Drain hose diameter (I.D./O.U.)			3/4 / 1-1/16			

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
Built-in protective functions may limit capacity or shut off unit if unit is operated outside of unit design operating temperature ranges.

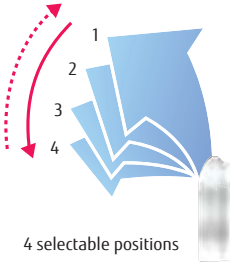
FOUR-WAY LOUVER SWING

A combination of up/down and right/left directional louver swing provides better air distribution in larger spaces.

RIGHT and LEFT SWING



UP and DOWN SWING



4 selectable positions

BETTER LOUVER DESIGN

Engineered louver design boosts airflow sending cool air quickly to every corner of the room.

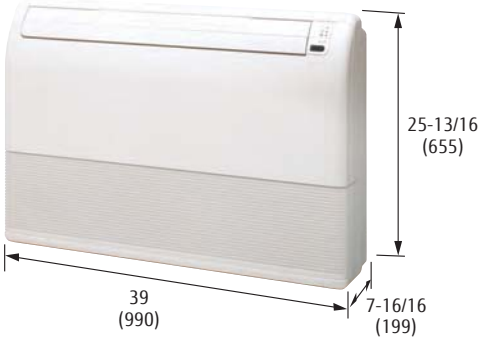
AUTO-CLOSING LOUVER

When operation is stopped, the louvers will automatically close.

COMPACT DESIGN

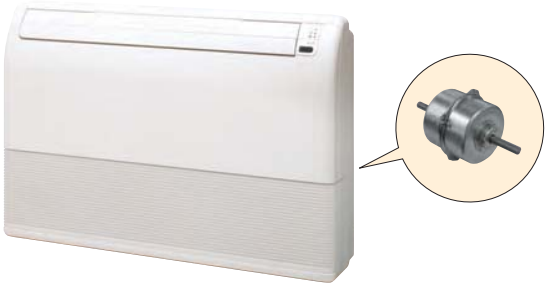
Symmetrical, slim and compact design.

Unit : in (mm)



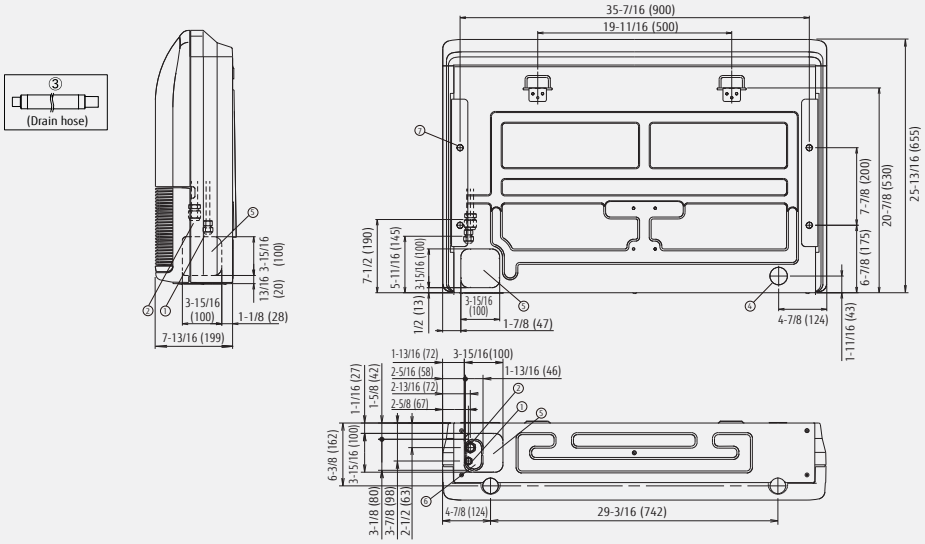
HIGH POWER DC FAN MOTOR

- High power
- High efficiency



DIMENSIONS

(UNIT: IN (MM))



		ABUA 12/14	ABUA 18/24
①	Refrigerant pipe flare connection (Liquid)	ø 1/4 (6.35)	ø 3/8 (9.52)
②	Refrigerant pipe flare connection (Gas)	ø 1/2 (12.70)	ø 5/8 (15.88)
③	Drain hose connection (Drain Hose)	ø 3/4 (I.D.), ø 1-1/16 (O.D.)	
④	Knock out hole (Drain Outlet)	ø 1-3/4 (45)	ø 1-3/4 (45)
⑤ ⑥	Knock out hole	—	—
⑦	Hole for lifting bolt	Use M10 screw bolt	

AIRSTAGE™

Ceiling

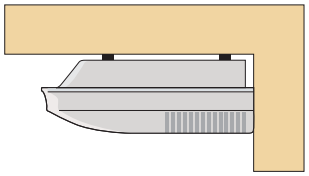
ABUA30TLAV
ABUA36TLAV

Powerful ceiling-hung indoor units are easy to install and can provide plenty of warm or cold air to a large space. Ceiling-hung units are the perfect solution for large spaces such as classrooms, restaurants, and kitchens.

Note: IR Receiver is standard for communicating with optional Wireless Remote Control.

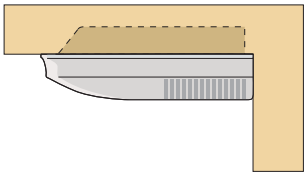
INSTALLATION

Open



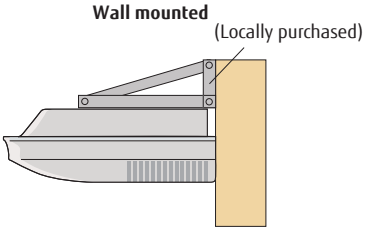
General installation pattern which suspends the indoor unit from the ceiling.

Concealed



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

Wall mounted



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.

SLIM & COMPACT DESIGN

HIGH POWER DC FAN MOTOR

- High power
- High efficiency

SPECIFICATIONS

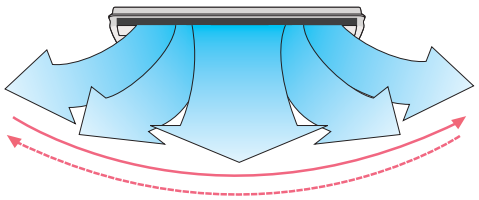
Model name			ABUA30TLAV	ABUA36TLAV
Power source			1 Phase ~ 208/230V 60Hz	
Capacity	Cooling	BTUh	30,000	36,000
		kW	8.8	10.6
	Heating	BTUh	34,000	40,000
		kW	10.0	11.7
Input power		W	85	85
Airflow rate	High	CFM (m^3/h)	859 (1,630)	995 (1,690)
	Med		806 (1,370)	824 (1,400)
	Low		671 (1,140)	689 (1,170)
Sound pressure level	High	dB (A)	42	45
	Med		38	38
	Low		33	34
Dimensions (H × W × D)		in.(mm)	9-7/16 × 65-3/8 × 27 -9/16 (240 × 1,660 × 700)	
Weight		lbs.(kg)	101 (46)	106 (48)
Connection pipe diameter	Liquid (Flare)	in.(mm)	3/8 (9.52)	3/8 (9.52)
	Gas (Flare)		5/8 (15.88)	3/4 (19.05)
Drain hose diameter (I.D./O.U.)			3/4 / 1-1/16	

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
Built-in protective functions may limit capacity or shut off unit if unit is operated outside of unit design operating temperature ranges.

FOUR-WAY LOUVER SWING

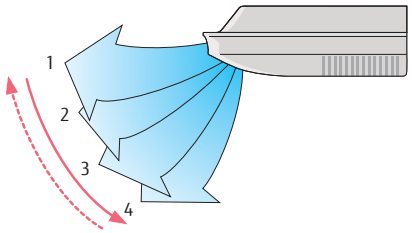
Auto airflow direction and auto swing

Right and left



5 selectable positions

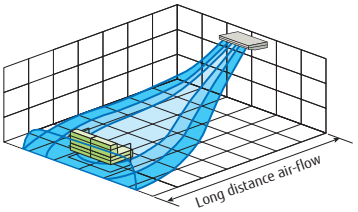
Up and down



4 selectable positions

LONG AIRFLOW

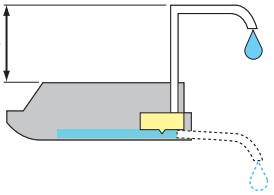
Long Airflow ensures comfort to every corner of a large room.



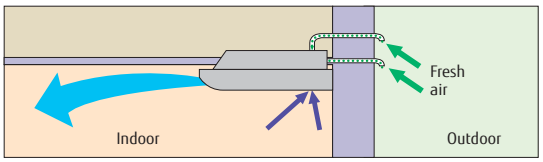
CONDENSATE DRAIN PUMP (OPTIONAL)

Optional drain lift-up mechanism allows flexible installation.

Height
19-11/16 in
(500mm)



FRESH AIR INTAKE



AIR FILTER

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

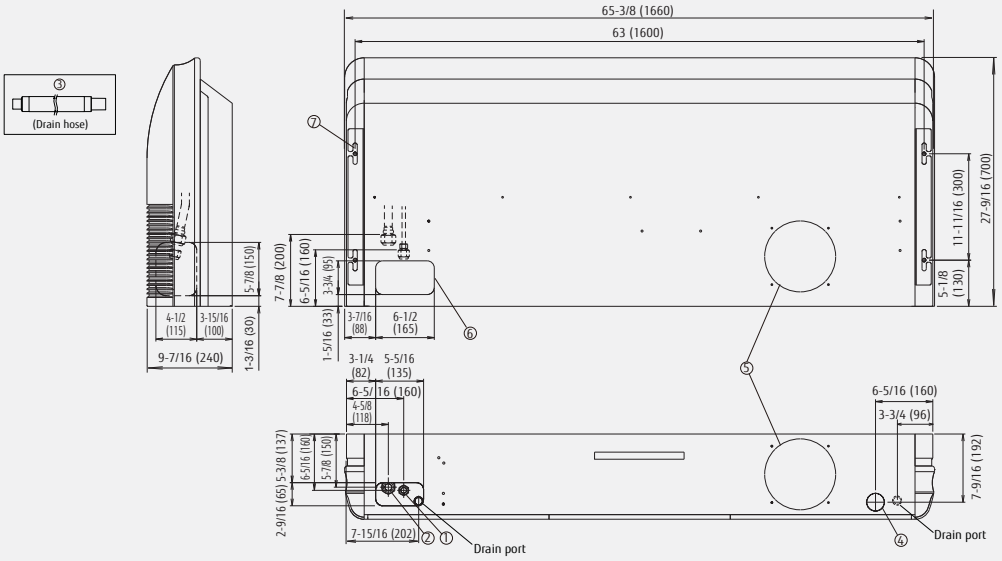
OPTIONAL PARTS

Drain Pump Unit..... UTZ-PU1EBA

Flange..... UTD-RF204

DIMENSIONS

(UNIT: IN (MM))



		ABUA 30	ABUA 36
①	Refrigerant pipe flare connection (Liquid)	ø 3/8 (9.52)	ø 3/8 (9.52)
②	Refrigerant pipe flare connection (Gas)	ø 5/8 (15.88)	ø 3/4 (19.05)
③	Drain hose connection (Drain Hose)	ø 3/4 (I.D.), ø 1-1/16 (O.D.)	
④	Knock out hole (Drain Outlet)	ø 1-15/16 (50)	ø 1-15/16 (50)
⑤	Knock out hole (Fresh Air)	ø 7-7/8 (200)	ø 7-7/8 (200)
⑥	Knock out hole (Refrigerant Pipe)	—	—
⑦	Hole for lifting bolt	Use M10 screw bolt	

AIRSTAGE™

Compact Wall Mounted

ASUA7TLAV
ASUA9TLAV
ASUA12TLAV
ASUA14TLAV

Compact (Only 8.5" inches deep) and stylish design.

Note: IR Receiver is standard for communicating with optional Wireless Remote Control.

FILTER FEATURES

High performance filter provides high quality heating and cooling.

Long-life* Ion Deodorization Filter

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

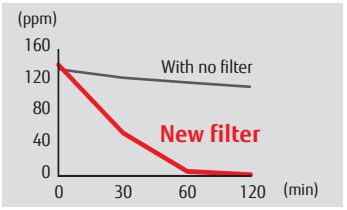
(*The filter can be used for approx. 3 years if it is washed under water to restore its surface action when it is dirty.)

Apple-catechin Filter

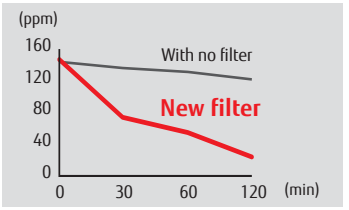
Fine dust, invisible mold spores, and harmful microorganisms are absorbed onto the filter by static electricity, and further growth is inhibited and deactivated by the polyphenol extracted from apples.

Deodorizing effect (Odor reduction rate)

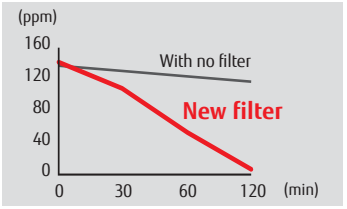
Ammonia



Trimethylamine



Hydrogen sulfate



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

SPECIFICATIONS

Model name			ASUA7TLAV	ASUA9TLAV	ASUA12TLAV	ASUA14TLAV
Power source			1 Phase ~ 208/230V 60Hz			
Capacity	Cooling	BTUh	7,500	9,500	12,000	14,000
		kW	2.2	2.8	3.5	4.1
	Heating	BTUh	9,500	10,900	13,500	15,600
		kW	2.8	3.2	4.0	4.6
Input power		W	22	22	22	34
Airflow rate	High	CFM (m^3/h)	288 (490)	294 (500)	330 (560)	394 (670)
	Med		265 (450)	265 (450)	283 (480)	288 (490)
	Low		218/247*1 (370/420*1)	218/247*1 (370/420*1)	247 (420)	247 (420)
Sound pressure level	High	dB (A)	35	36	39	44
	Med		33	33	35	37
	Low		27 /31*1	27 /31*1	31	32
Dimensions (H × W × D)		in.(mm)	10-13/16 × 31-1/8 × 8-7/16 (275 × 790 × 215)			
Weight		lbs.(kg)	20 (9)	20 (9)	20 (9)	20 (9)
Connection pipe diameter	Liquid (Flare)	in.(mm)	1/4 (6.35)	1/4 (6.35)	1/4 (6.35)	1/4 (6.35)
	Gas (Flare)		1/2 (12.70)	1/2 (12.70)	1/2 (12.70)	1/2 (12.70)
Drain hose diameter (I.D./O.U.)			9/16 (13.8) / 5/8 (15.8) - 11/16 (16.7)			

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
Built-in protective functions may limit capacity or shut off unit if unit is operated outside of unit design operating temperature ranges.

COMPACT SIZE

Powerful output in a compact design

Width
31-1/8 in.
(790mm)

Though the indoor unit is compact, it features a large, high pressure cross fan (3-1/2in./90mm diameter) in a center mounted configuration and a Lambda type heat exchanger to provide plenty of power.

SYMMETRICAL DESIGN

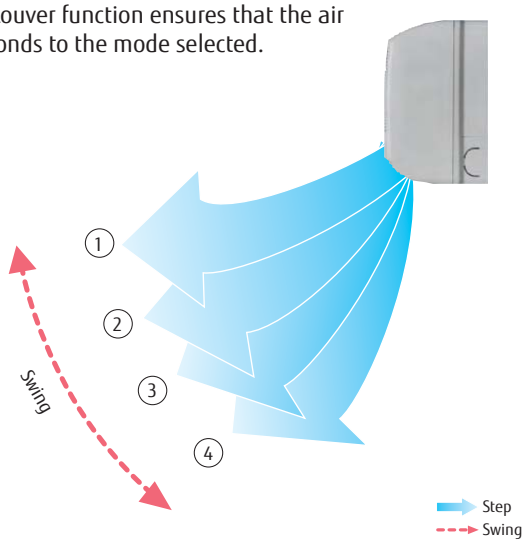
Symmetrical, clean design that suits all interiors.

HIGH POWER DC FAN MOTOR

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

AUTO SWING LOUVER

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



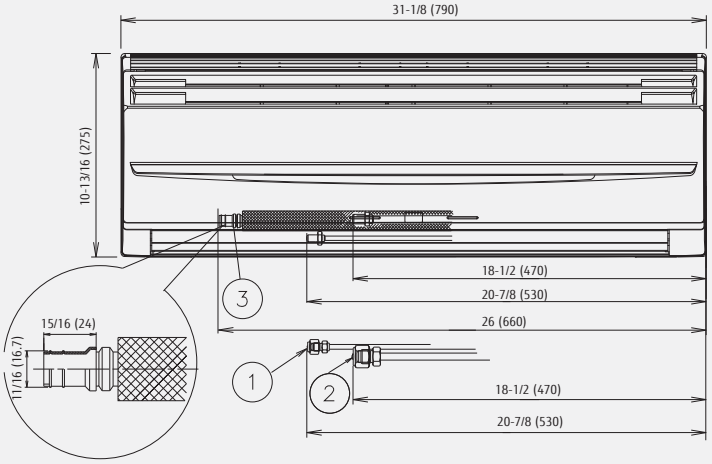
EASY MAINTENANCE

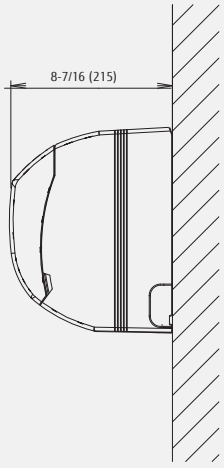
Maintenance is simple because the front panel can be removed for easy access.

Open panel

DIMENSIONS

(UNIT: IN (MM))





	ASUA 7/9/12/14
① Refrigerant pipe flare connection (Liquid)	ø 1/4 (6.35)
② Refrigerant pipe flare connection (Gas)	ø 1/2 (12.70)
③ Drain hose connection (Drain Hose)	ø 9/16 (I.D.), ø 5/8 to 11/16 (O.D.) [ø 13.8 (I.D.), ø 15.8 to 16.7 (O.D.)] Total length : 23-5/8 (600)

AIRSTAGE™

Wall Mounted

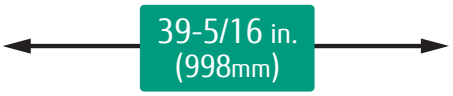
ASUB18TLAV
ASUB24TLAV

Note: IR Receiver is standard for communicating with optional Wireless Remote Control.

COMPACT & SLIM DESIGN

Stylish, slim and elegant, these popular wall mounted units are perfect for smaller rooms where a clean, aesthetic design is preferred. Variable speed DC fan motors deliver heating or cooling quietly and comfortably.

DC fan motor

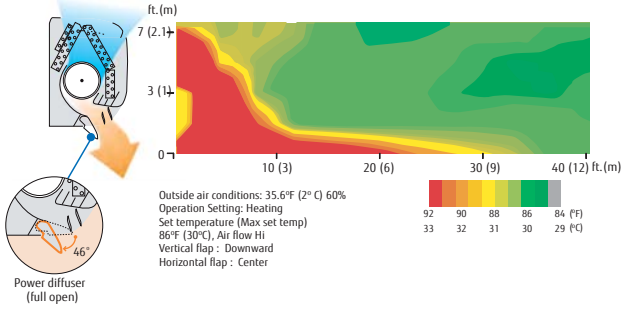


SPECIFICATIONS

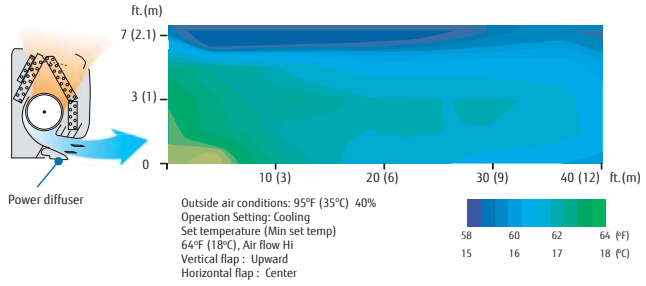
Model name			ASUB18TLAV	ASUB24TLAV
Power source			1 Phase ~ 208/230V 60Hz	
Capacity	Cooling	BTUh	18,000	24,000
		kW	5.3	7.0
	Heating	BTUh	20,000	24,000
		kW	5.9	7.9
Input power		W	32	60
Airflow rate	High	CFM (m^3/h)	494 (840)	647 (1,100)
	Med		453 (770)	536 (910)
	Low		406 (690)	430 (730)
Sound pressure level	High	dB (A)	41	48
	Med		39	43
	Low		35	35
Dimensions (H × W × D)		in.(mm)	12-5/8 × 39-5/16 × 9 (320 × 998 × 228)	
Weight		lbs.(kg)	33 (15)	33 (15)
Connection pipe diameter	Liquid (Flare)	in.(mm)	3/8 (9.52)	3/8 (9.52)
	Gas (Flare)		5/8 (15.88)	5/8 (15.88)
Drain hose diameter (I.D./O.U.)			1/2 (12) / 5/8 (16)	

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe length : 25ft.(7.5 m), Height difference : 0ft.(0 m) (Outdoor unit - Indoor unit).
Built-in protective functions may limit capacity or shut off unit if unit is operated outside of unit design operating temperature ranges.

"VERTICAL AIRFLOW" PROVIDES POWERFUL FLOOR LEVEL HEATING



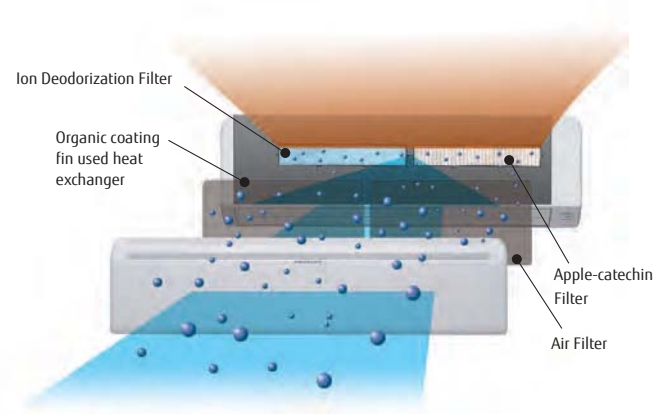
"HORIZONTAL AIRFLOW" DOES NOT BLOW COOL AIR DIRECTLY AT THE OCCUPANTS IN THE ROOM



EASY MAINTENANCE

Improved drain pan design simplifies cleaning and maintenance.

AIR CONDITIONER FILTER FEATURES



Antibacterial deodorizing pre-filter with special ceramic powder

Long-life*1 Ion Deodorization Filter

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

Apple-catechin Filter*2

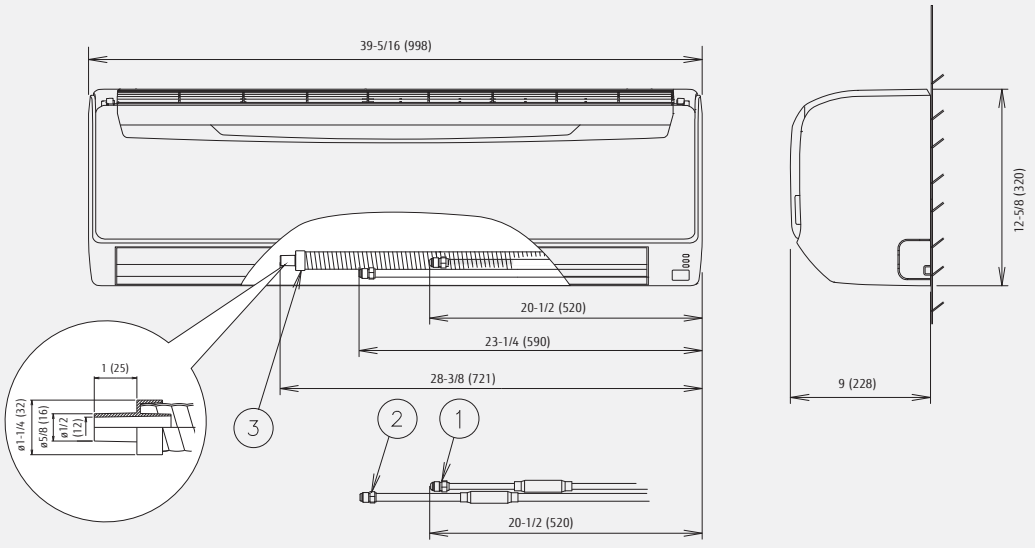
Fine dust, invisible mold spores, and harmful microorganisms are absorbed onto the filter by static electricity, and further growth is inhibited and deactivated by the polyphenol extracted from apples.

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

*2 Using different filters at both sides.

DIMENSIONS

(UNIT: IN (MM))



	ASUB 18/24
① Refrigerant pipe flare connection (Liquid)	ø 3/8 (9.52)
② Refrigerant pipe flare connection (Gas)	ø 5/8 (15.88)
③ Drain hose connection (Drain Hose)	ø 1/2 (I.D.) , ø 5/8 (O.D.) [ø 12 (I.D.) , ø 16 (O.D.)] Total length : 26-3/8 (670)

AIRSTAGE™

Outdoor Air Unit

AAUA48TLAV
AAUA72TLAV
AAUA96TLAV

AAUA48

AAUA72

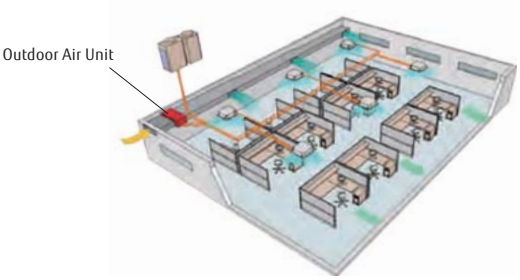
The 100% Outdoor Air Unit efficiently processes the outdoor air in cooling or heating to supply outdoor air to improve Indoor Air Quality (IAQ) for ventilation.

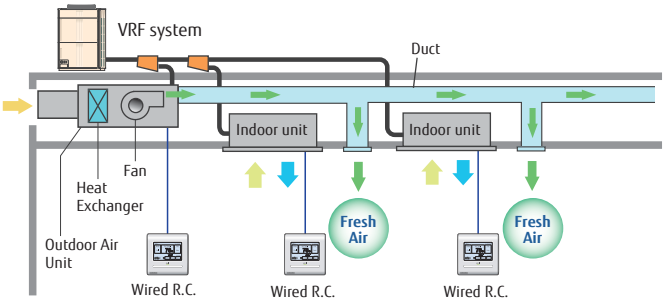
AAUA96

ONE VRF SYSTEM CAN PROVIDE AIR CONDITIONING AND AIR SUPPLY AT THE SAME TIME

Outdoor Air Unit can be connected to the VRF outdoor condenser as an indoor unit conditioning fresh outdoor air to comfort levels.

J-SERIES V-SERIES





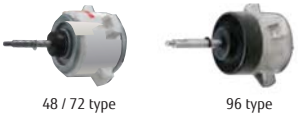
* Make sure the connected capacity is within the range of 50% to 100% of the outdoor unit capacity. In addition, if there are mixed connections with indoor units, make the Outdoor Air Unit connection capacity 30% or less of the outdoor unit capacity.

SPECIFICATIONS

Model name			AAUA48TLAV	AAUA72TLAV	AAUA96TLAV
Power source			1 Phase ~ 208/230V 60Hz		
Capacity	Cooling	BTUh	48,000	72,000	96,000
	Heating		30,000	47,000	59,000
Input power	Cooling/Heating	kW	179	292	370
Airflow rate		CFM (m^3/h)	636 (1,080)	989 (1,680)	1,236 (2,100)
Static Pressure	Standard (range)	in.WG (Pa)	0.74 (0.20 to 0.74)	0.80 (0.20 to 0.80)	0.80 (0.20 to 0.96)
Sound pressure level		dB (A)	42	44	47
Dimensions (H × W × D)		in. (mm)	16-3/4×53-13/16×22-1/2 (425×1,367×572)	16-3/4×53-13/16×22-1/2 (425×1,367×572)	17-11/16×62-5/16×27-9/16 (450×1,583×700)
Weight		lbs.(kg)	106 (48)	121 (55)	157 (71)
Connection Pipe Diameter (Small / Large)		in. (mm)	Ø3/8 / Ø3/4 (Ø9.52 / Ø19.05)	Ø1/2 / Ø7/8 (Ø12.70 / Ø22.22)	Ø1/2 / Ø7/8 (Ø12.70 / Ø22.22)
Operation Range	Cooling	°FDB (°CDB)	41 to 109 (5 to 43)	41 to 109 (5 to 43)	41 to 109 (5 to 43)
	Heating		19 to 70 (-7 to 21)	19 to 70 (-7 to 21)	19 to 70 (-7 to 21)
Refrigerant			R410A	R410A	R410A

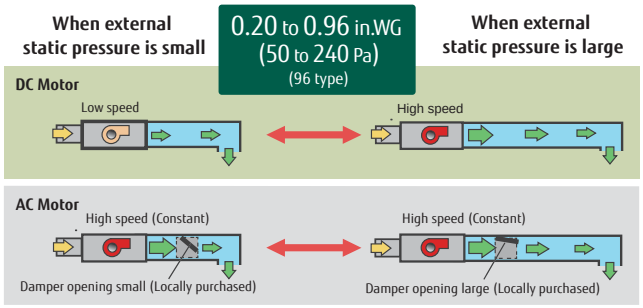
Note : Specifications are based on the following conditions.
Cooling : Outdoor temperature of 91°FDB (33°CDB) / 82°FWB (28°CWB).
Heating : Outdoor temperature of 32°FDB (0°CDB) / 27°FWB (-2.9°CWB).
Pipe length : 25ft. (7.5 m)

HIGH ENERGY SAVINGS AND FLEXIBLE DUCT DESIGN BY USING DC MOTOR



48 / 72 type　　96 type

- Greatly reduces electricity consumption by adopting permanent magnet compared to when using an AC motor.
- With its built in DC motor, changes to static pressure from 0.20 to 0.96 in.WG is simplified using wired remote control.



VARIOUS CONTROLLERS

There are a variety of optional controllers, such as individual remote controls, central controllers and building management systems.

Remote Controls

Wireless Remote Control　Simple Remote Control　Wired Remote Control　Touch Remote Control

Central Controller

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

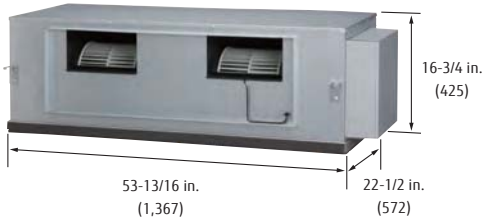
* The temperature setting is discharged air temperature setting.
The air volume is set to a constant speed.

TOP CLASS COMPACT DESIGN

- Top class lightweight compact design at just 53-13/16 in. (425mm) in height, 121 lbs. (55kg) in weight for AAUA72TLAV type. This unit can be installed easily even in a narrow space.

121 lbs. (55kg) (72type)

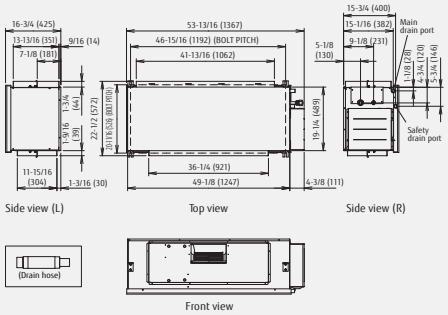
unit: in. (mm)



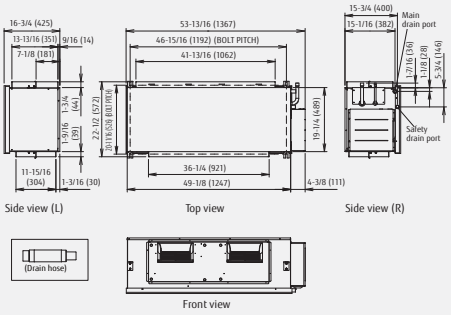
DIMENSIONS

(UNIT: IN (MM))

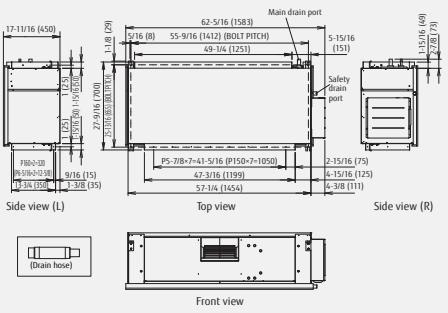
AAUA48TLAV



AAUA72TLAV



AAUA96TLAV



Control system overview

Remote Controls

Touch Remote Control
UTY-RNRUZ1

pg. 53

Wired Remote Control
UTY-RNKU

pg. 55

Simple Remote Control
UTY-RSRY
With
operation mode

pg. 55

Simple Remote Control
UTY-RHRY
Without
operation mode

pg. 55

Wireless Remote Control
UTY-LNHU

pg. 56

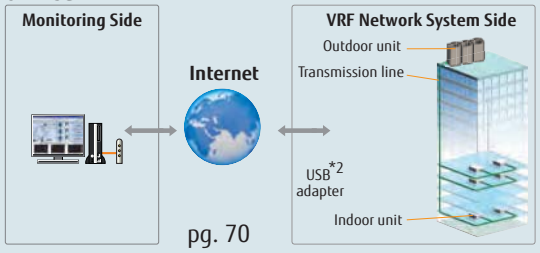
Wi-fi INterface Module
FJ-RC-WIFI-1NA

pg. 57

For
All AIRSTAGE™
series

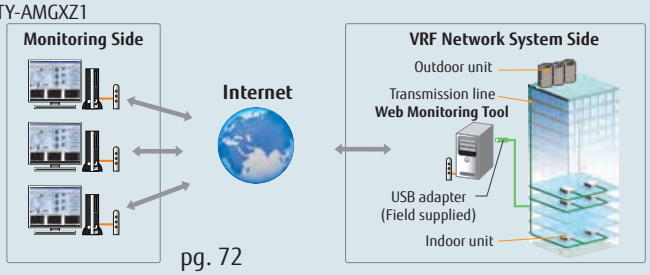
Service & Monitoring

Service Tool Software
UTY-ASGXZ1



pg. 70

Web Monitoring System Software
UTY-AMGXZ1



pg. 72

Central Controllers

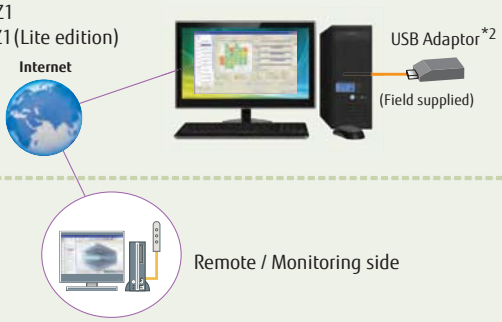
Touch Panel Controller
UTY-DTGYZ1

pg. 59

Central Remote Controller
UTY-DCGY

pg. 61

System Controller Software
UTY-APGXZ1
UTY-ALGXZ1 (Lite edition)



pg. 62

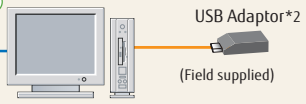
BMS/BAS *1

BMS Communication Options

BACnet® Gateway (Hardware)
UTY-VBGX

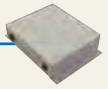
pg. 68

BACnet® Gateway Software
UTY-ABGXZ1



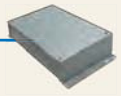
pg. 68

Network Convertor (BMS / LONWORKS®)
UTY-VLGX



pg. 69

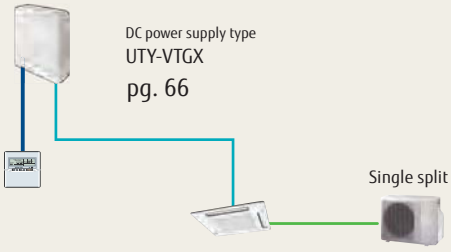
MODBUS® Convertor
UTY-VMGX



pg. 69

Accessories

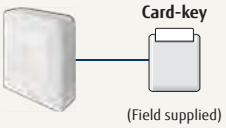
Network Convertor



Signal Amplifier
UTY-VSGXZ1

pg. 66

External Switch Controller
UTY-TERX



pg. 67

IR Receiver Unit
UTB-YWC

pg. 56

IR receiver Unit
UTY-LRHYB1

pg. 56

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

Comparison Table of Remotes & Controllers

Item			REMOTES						CONTROLLERS			
			Touch Remote Control	Wired Remote Control	Simple Remote Control	Simple Remote Control*1	Wireless Remote Control	Wi-fi Interface Module	Central Controller	Touch Panel Controller	System Controller Lite Software	System Controller Software
Model name			UTY-RNRUZ1	UTY-RNKU	UTY-RSRY	UTY-RHRY	UTY-LNHU	FJ-RC-WIFI-1NA	UTY-DCGY	UTY-DTGYZ1	UTY-ALGXZ1	UTY-APGXZ1
Max. controllable remote control groups			1	1	1	1	1	1	100	400	400	1600
Max. controllable indoor units			16	16	16	16	16	1	100	400	400	1600
Max. controllable groups			–	–	–	–	16	–	16	100	400	1600
Air conditioning control function	On / Off		● *3	●	●	●	●	●	●	●	●	●
	Operation mode setting		●	●	●	–	●	●	●	●	●	●
	Fan speed setting		●	●	●	●	●	●	●	●	●	●
	Room temp. setting		●	●	●	●	●	●	●	●	●	●
	Room temp. set point limitation		●	–	●	●	–	●	●	●	●	●
	Test operation		●	●	●	●	●	●	●	●	–	–
	Up/down air direction flap setting		●	●	●	●	●	●	●	●	●	●
	Right/left air direction flap setting		●	●	–	–	●	●	●	●	●	●
	Individual louver control		●	–	–	–	–	–	–	●	–	–
	Group setting		–	–	–	–	–	–	●	●	●	●
	RC prohibition		–	–	–	–	–	–	●	●	●	●
	Anti freeze setting		–	–	–	–	–	●	●	●	●	●
	Set temp. auto return		●	●	–	–	–	●	–	–	–	–
	Away setting		●	–	–	–	–	●	–	–	–	–
	Economy mode setting		●	●	–	–	●	●	●	●	●	●
	Occupancy sensor control		–	–	–	–	–	–	–	–	●	●
Display	Error		●	●	●	●	–	●	●	●	●	●
	Defrosting		●	●	●	●	–	●	●	●	●	●
	Current time		●	●	–	–	●	●	●	●	●	●
	Day of week		●	●	–	–	–	–	–	●	●	●
	R.C. prohibition		●	●	●	●	–	–	●	●	●	●
	Cooling/heating priority		●	●	●	●	–	●	●	●	●	●
	Address display		●	●	●	●	–	–	●	●	●	●
	Room temp		●	–	●	●	–	●	–	–	–	–
	Multi language		●	–	–	–	–	●	●	●	●	●
	Daylight Saving Time setting (Summer)		●	–	–	–	–	–	●	●	●	●
	Time zone setting		–	–	–	–	–	–	–	●	–	–
	Name registration		●	–	–	–	–	●	●	●	●	●
	Backlight		●	–	●	●	–	●	●	●	–	–
	2D floor layout / 3D building display		–	–	–	–	–	–	–	–	–	●
Timer	Schedule timer	Period	Week	Week	–	–	–	Unlimited	Week	Year	Year	Year
		On/Off, Temp, mode, times per day	8*3 *4	4	–	–	–	Unlimited	20	20	144	144
	On/off timer		–	●	–	–	●	●	–	–	–	–
	Sleep timer		–	–	–	–	●	●	–	–	–	–
	Program timer		–	–	–	–	●	●	–	–	–	–
	Auto off timer		●	–	–	–	–	●	–	–	–	–
	Day off		●	●	–	–	–	●	●	●	●	●
	Min. unit of timer setting (Minutes)		10 · 30	30	–	–	5	–	10	10	10	10
Control	Status monitoring system		–	–	–	–	–	–	●	●	●	●
	Electricity charge apportionment		–	–	–	–	–	–	–	–	○	●
	Error history		●	●	–	–	–	–	●	●	●	●
	Emergency stop		–	–	–	–	–	–	● *2	● *2	–	–
	Remote management		–	–	–	–	–	●	–	–	○	●
	Energy saving management		–	–	–	–	–	–	–	–	○	○
	Low noise mode		–	–	–	–	–	–	–	●	–	–
Internet	E-mail notification for malfunction		–	–	–	–	–	–	–	–	●	●
	Key lock		● Child lock	–	–	–	–	● Password setting	● Password setting	● Password setting	● Password setting	● Password setting
BMS	Third party Modbus communication		–	–	–	–	–	–	–	–	○	○

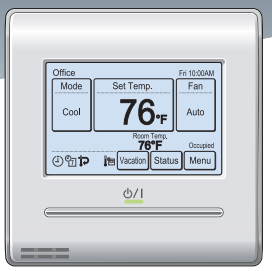
*1 "Operation mode" setting is not available for this model. *2 This function is available only through external input. control.
*3 On / Off (Occupied / Unoccupied) *4 Mode deleted

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

Touch Remote Control

(2-WIRE): UTY-RNRUZ1

Max. controllable 16 indoor units



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

- Built-in temperature sensor
- Built-in weekly/Daily timer(ON/OFF(Occupied/Unoccupied),Temp.)
- Backlight enables easy operation in a darkened room
- Room temperature display
- Administrator temperature set point limitation
- Corresponds to 12 different languages (English, Chinese, French, German, Spanish, Russian, Polish, Italian, Greek, Portuguese, Turkish and Dutch)

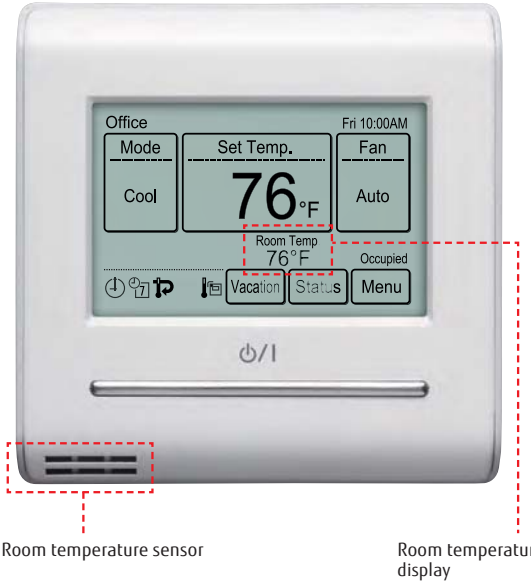
HIGH PERFORMANCE AND COMPACT SIZE

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

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

ACCURATE AND COMFORTABLE CONTROL

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

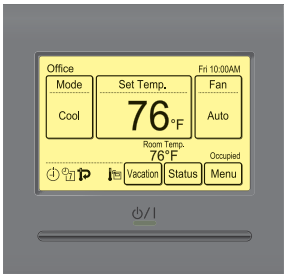


Room temperature sensor

Room temperature display

BACKLIGHT

- Backlight enables easy operation in a dark room.
- Backlight display time of 30 or 60 seconds can be set.

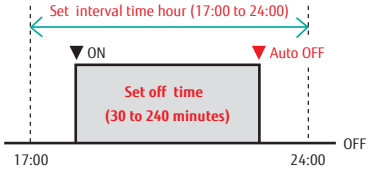


VARIOUS ENERGY SAVING SETTINGS

Auto OFF Timer

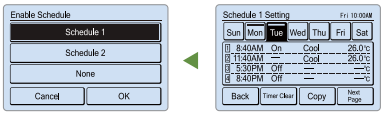
- The indoor unit automatically turns off after a set time has passed.
- The time interval for which auto off works can be set.

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

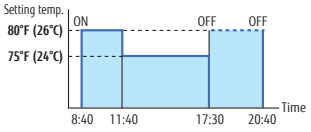


2 schedules Weekly Timer

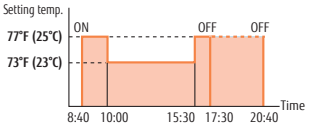
- 2 schedules such as for the summer and winter can be set.
- 8 setting changeable per day of week (Setting items: ON / OFF (Occupied/Unoccupied), Temperature, Time)



Schedule 1 (Summer schedule)



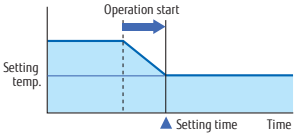
Schedule 2 (Winter schedule)



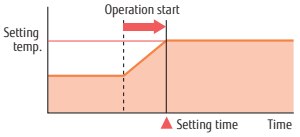
Optimum start function

- Provides configurable operation start (Boost) to get space to temperature before scheduled time.

Cooling operation



Heating operation



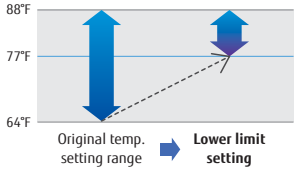
Set Temperature Auto Return

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

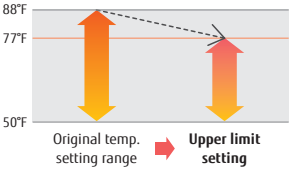
Set Temperature Upper and Lower Limit Setting

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

Cooling operation



Heating operation



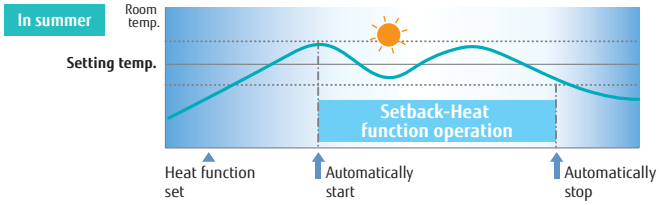
AIRSTAGE™

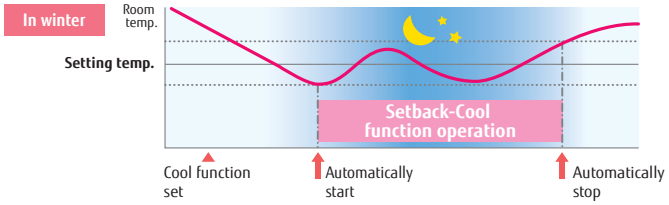
UTY-RNRUZ1 cont'd

ADDITIONAL FUNCTIONS

Away mode

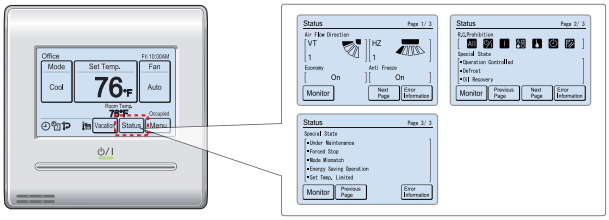
- Cooling / Heating is automatically started when the room temperature reaches a setting temperature even if the indoor unit is off.





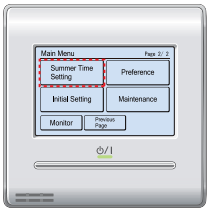
Displays setting status and Limitations

- The remote controller settings can be easily checked



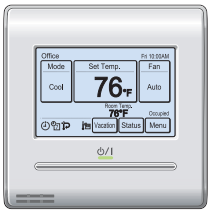
Child lock

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



Daylight savings time (Summer Time)

- Provides Daylight Savings adjustment option for regions that uses it.



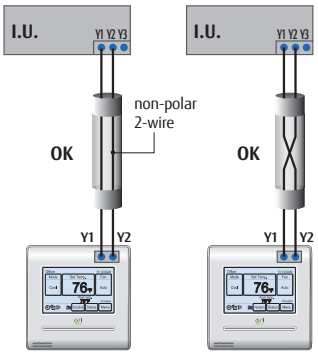
Name registration

- Indoor unit names can be registered in the remote control screen. This makes it easy to identify the indoor unit.

SIMPLIFIED INSTALLATION

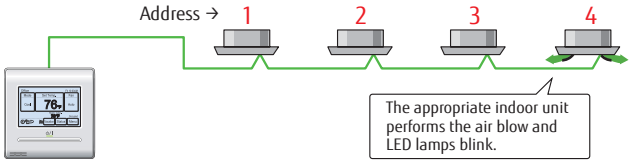
Uses non-polar 2-wire type

- 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 manual addressing



EASY MAINTENANCE

Error History Display

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

SPECIFICATIONS

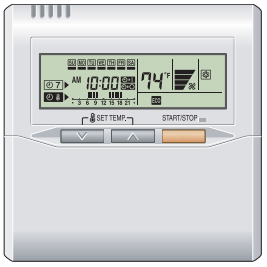
Model name	UTY-RNRUZ1
Power source	DC 12V
Input Power	4-3/4 × 4-3/4 × 13/16 (120 x 120 x 20.4)
Airflow Rate	8 (220)

DC12V is supplied by the indoor unit.

Wired Remote Control

(3-WIRE) UTY-RNKU

Max. controllable 16 indoor units



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

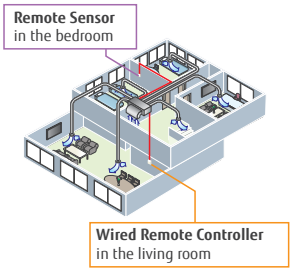
- Simple operation with Built-in Weekly / Daily Timer.
- Control up to 16 indoor units.
- Up to 2 wired remote controls can be connected to a single indoor unit.

ACCURATE AND COMFORTABLE

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

This wired remote controller and the optional remote sensor allows flexibility in sensor location, suitable for all requirements.

Example of changing sensor:



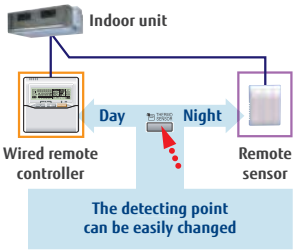
Displayed temperature is set temperature.

BUILT-IN TIMERS

A weekly timer with up to four different On/Off and temperature settings per day

SIMPLE INSTALLATION

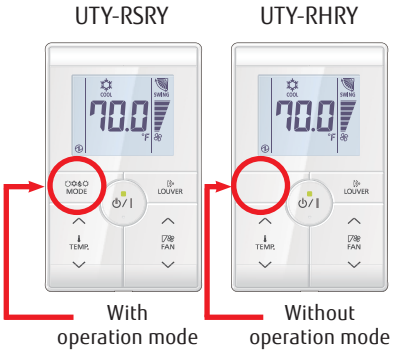
Designed for flush mount or usage of standard electric box.



Simple Remote Control

(2-WIRE) UTY-RSRY / UTY-RHRY (WITHOUT OPERATION MODE)

Max. controllable 16 indoor units

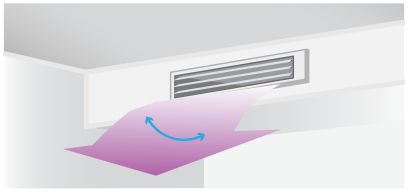


Compact wired remote control unit provides access to basic functions

- Built-in temperature sensor
- Backlit display
- Equipped with Remote control prohibition
- Suitable for hotels, classrooms or offices as it is easily operated with no complex functions.

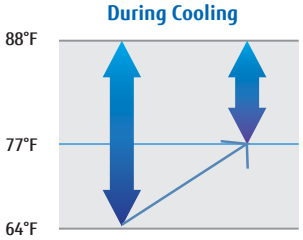
VERTICAL LOUVER CONTROL

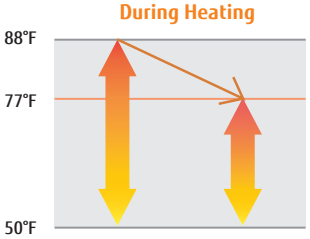
Offers vertical louver movement control for ducted and cassette units.



ROOM TEMPERATURE SET POINT LIMITATION

The Simple Remote Control can manage set point limitation in small buildings without the central controller requirement.





SPECIFICATIONS

Model name	UTY-RNKU	UTY-RSRY	UTY-RHRY
Power Supply	DC 12V	DC 12V	DC 12V
Dimensions (H x W x D) (in.(mm))	4-3/4 × 4-3/4 × 11/16 (120 × 120 × 18)	4-3/4 × 2-15/16 × 9/16 (120 × 75 × 14)	4-3/4 × 2-15/16 × 9/16 (120 × 75 × 14)
Weight (oz.(g))	6 (160)	4 (120)	4 (120)

DC12V is supplied by the indoor unit.

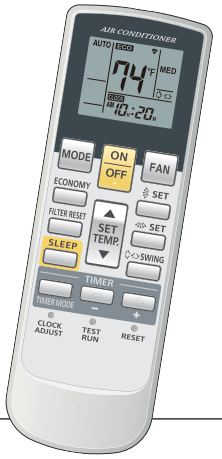
AIRSTAGE™

Wireless Remote Control

UTY-LNHU

Max. controllable 16 indoor units

Selectable 4 daily timers



Simple and sophisticated operations with a choice of 4 daily timers

- A single controller controls up to 16 indoor units.

ACCURATE AND COMFORTABLE

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.

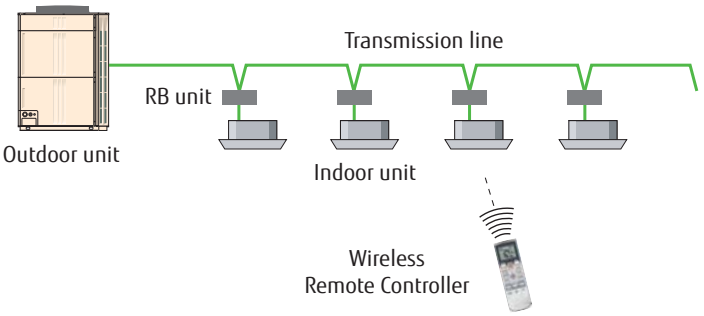
Sleep timer: The sleep timer function automatically corrects the set temperature according to the time setting to prevent excessive cooling or heating during sleep hours.

EASY INSTALLATION AND OPERATION

- Code selector switch prevents indoor unit mix-up. (Up to 4 codes can be set.)
- Wide and precise transmitting range.
- IR Built-in receiver is standard in compact cassette, ceiling/floor, and wall mounted indoor units.

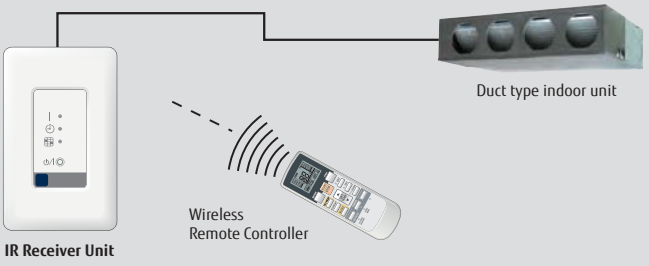
ADDRESS SETTING

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



IR RECEIVER UNIT : UTB-YWC

Necessary to control all duct types by Wireless Remote Control



IR RECEIVER UNIT : UTY-LRHYB1

Cassette type indoor unit can be controlled with Wireless Remote Control

Wi-fi Interface Module

FJ-RC-WIFI-1NA

For:
Cassettes
Ducted Units
Ceiling Mount
Floor/Ceiling Mount (Universal)
Wall Mounted

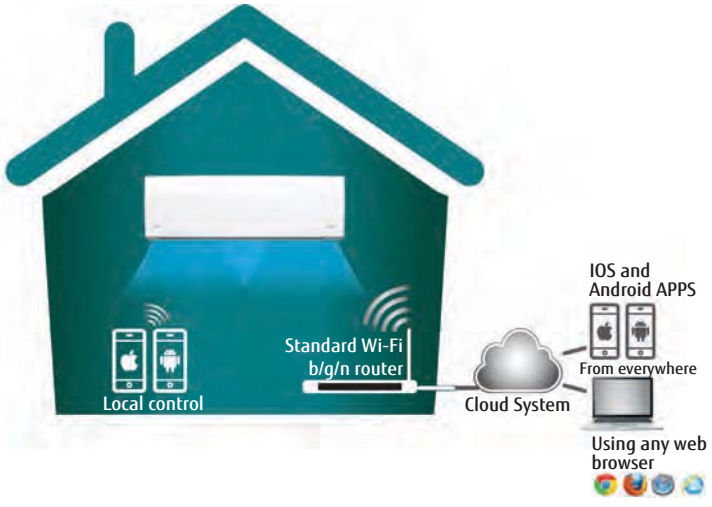
WI-FI INTERFACE FOR VRF

Control your fujitsu airstage VRF indoor unit from anywhere

Remotely manage your VRF indoor unit using a smartphone, tablet or PC via the Internet.

HOW DOES IT WORK?

- The indoor units are controlled from a webpage or using an iOS or Android APP in a very intuitive way.
- A wired device installed near each unit controls its operation and communicates over Wi-fi to the Internet router.
- A server in the cloud manages the whole process.



FEATURES

- Manages the VRF indoor unit using the iOS or Android app.
- Programs the indoor unit operation schedule.
- Offers access to several indoor unit settings including Mode, temperature set point, and much more.
- Offers early startup that brings the space to the desired set point before arriving.
- Also, offers delayed setback after leaving.
- Provides instant alarm notifications.
- Error reporting, available in several languages

AIRSTAGE™

FJ-RC-WIFI-1NA cont'd
COMPATIBILITY FOR WIRED WI-FI MODULE

Type	Indoor Unit Model	Required Parts
Compact Wall Mounted (ASUA)	7, 9, 12, 14RLAV	Plug model: K9707476019*
	7, 9, 12, 14TLAV	
Wall Mounted (ASUB)	18, 24RLAV	Plub model: K9709223017*
	18, 24TLAV	
Compact Cassette (AUUA)	7, 9, 12, 14, 18, 24RLAV	Built-in Low voltage terminal block
	7, 9, 12, 14, 18, 24TLAV	
Cassette (AUUB)	18, 24, 30, 36RLAV	
	18, 24, 30, 36TLAV	
Floor/Ceiling (ABUA)	12, 14, 18, 24RLAV	
	12, 14, 18, 24TLAV	
Ceiling (ABUA)	30, 36RLAV	
	30, 36TLAV	
Slim Duct (ARUL)	7, 9, 12, 14, 18RLAV	
	7, 9, 12, 14, 18TLAV	
Medium Static Pressure Duct (ARUM)	24, 30, 36RLAV	
	24, 30, 36TLAV	
High Static Pressure Duct (ARUH)	36, 48, 60RLAV	
	36, 48, 60, 72, 96TLAV	
Vertical Air Handler (ARUV)	12, 18, 24, 30, 36, 48, 60TLAV	

*Plug included with indoor wall mount units

TECHNICAL FEATURES

Enclosure UL Approval	ABS (UL 94HB)
Dimensions	2-3/4 x 4-1/4 x 1-1/8 (70 x 108 x 28)
Weight	0.17 lbs (80g)
Color	White
Power Supply	12V, 55mA Can be powered through indoor unit.
Mounting	Wall
LED indicators	1 x Device status
Operating Temperature	32°F ~ 104°F (0°C ~ 40°C)
Operating humidity	<93% HR, no condensation
RoHS conformity	Compliant with RoHS directive (2002/95/CE).
Certifications	CE confirmity to EMC directive (2004/108/EC) and Low-voltage directive (2006/95/EC) • EN 60950-1 • EN 301489-1 v1.8.1 • EN 301489-17 v2.1.1

Touch Panel Controller with Internet

UTY-DTGYZ1

High visibility and easy operation via high resolution 7.5 inch TFT-LCD touch panel screen

Max. controllable 400 indoor units

- Controls up to 400 indoor units*
- Provides Internet/LAN remote control and operation
- Indoor units can be grouped for batch monitoring and setting
- Schedules are programmable with up to 20 settings per day
- Easy-to-understand Graphical User Interface (GUI)
- Data can be transfered to USB for further analysis
- Does not require a 4X4 electric box. Mounts flush to the wall.
- Large-sized 7.5-inch no-glare TFT color touch screen
- Selectable 2 display types (Icon / List) in monitoring mode
- Supports 7 different-languages ,English, Chinese, French, German, Spanish, Russian, Polish.

* For Heat Recovery network systems the limit is 320 indoor units, consult the D&T manual for proper wiring and the use of signal amplifiers.

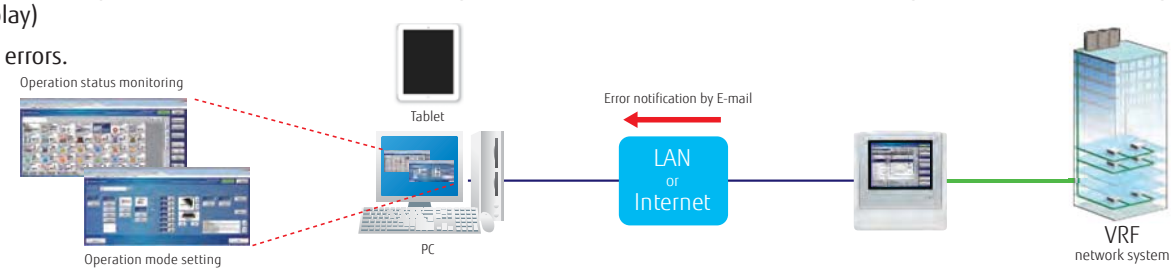
FUNCTIONS

EASY MAINTENANCE

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

REMOTE MONITORING AND OPERATION FUNCTIONS

- Internet/LAN remote monitoring and control of the VRF system using a web browser. (Operation status monitoring, Operation mode setting, and Error history display)
- Automatically emails errors.



EASY OPERATION

- Easy-to-understand icon-driven Graphical User Interface (GUI)

- Operation can be selected using your finger or the dedicated touch pen by pressing the appropriate on-screen icon
- Up-to-date status display
- Background color identifies current control operation; Blue for monitoring, green for operational control

OPTIONAL: ELECTRICITY CHARGE APPORTIONMENT

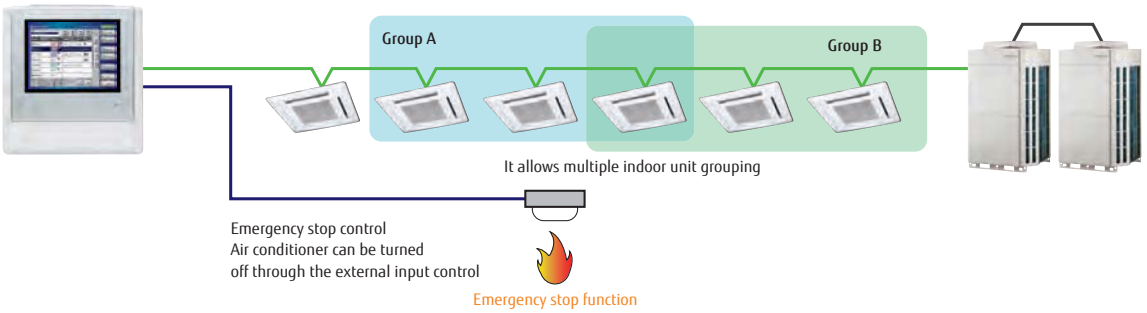
Electricity Charge Apportionment optional add-on USB drive can be added to help users be energy aware and help building owners apply sub-tenant billing.

- UTY-PTGXA must be ordered separately

AIRSTAGE™

UTY-DTGYZ1 cont'd

UP TO 400 INDOOR UNITS CAN BE CONTROLLED



FUNCTION

- Up to 400 indoor units can be controlled
- Multiple indoor units can be grouped and controlled
- Schedule timer function is standard (20 patterns per day)
- Emergency stop function(through the external input control)
- Temperature upper and lower limit setting

Individual control

Flexible grouping

Schedule control

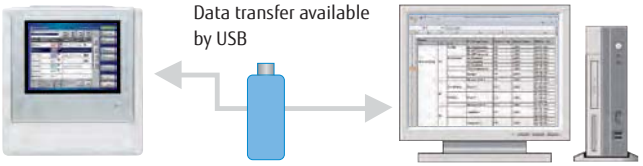
Indoor units operation monitoring

AUTOMATIC CLOCK ADJUSTMENT

The time setting of each remote control can be set in batch automatically.

VERSATILITY

- Emergency stop function: Air conditioner can be turned off through the external input control
- The stored data can be transferred to USB port
- CSV format data edited by PC can be imported to Touch Panel Controller.



EASY INSTALLATION

- Touch Panel Controller does not require mounting an additional power supply.
- No additional components are required for installation.

SPECIFICATIONS

Power Supply	100-240V 50/60Hz, Single phase
Dimensions (H x W x D) (in.(mm))	10-1/4 × 9-11/16 × 2-1/8 (260 × 246 × 54)
Weight (lbs.(g))	5 (2150)
Interface	Transmission / LAN / USB / EXT IN / EXT OUT / Reset SW

Central Controller

UTY-DCGY

Central Controller fits small- and medium-sized buildings and tenants.

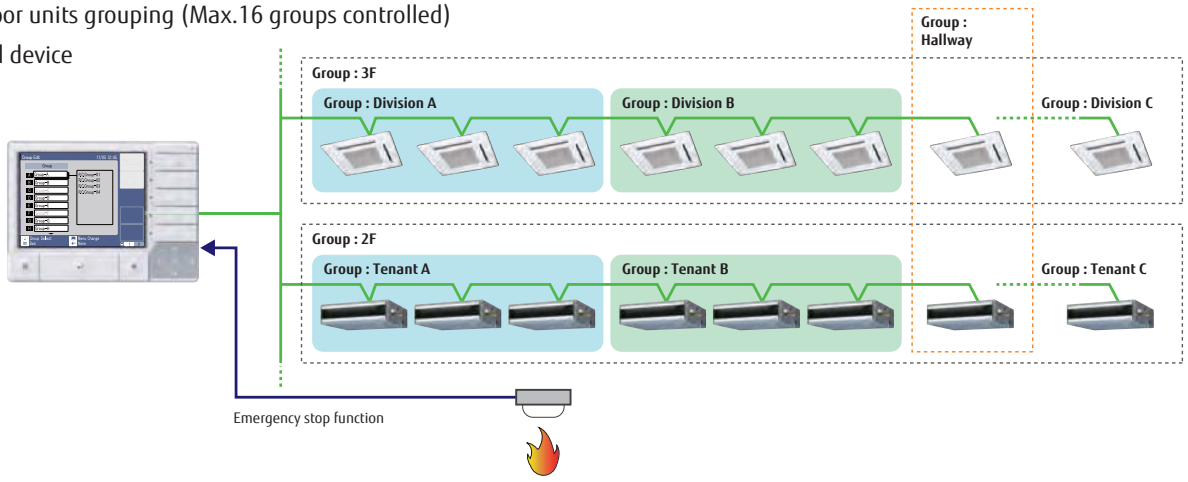
- Individual control and monitor of up to 100 indoor units
- 5 inch TFT color screen
- User friendly view and easy operation
- External input / output contact
- Detachable power supply unit
- Corresponds to 7 different languages like English, Chinese, French, German, Spanish, Russian, Polish.

Max. controllable **100** indoor units

Max. controllable **16** groups

SYSTEM OVERVIEW

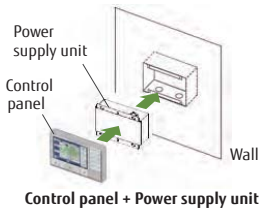
- It allows multiple indoor units grouping (Max.16 groups controlled)
- Interlock with external device



EASY INSTALLATION

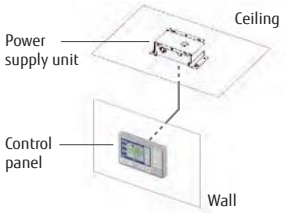
- The control panel and power supply unit can be installed separately.
- For flexibility in installation, the control panel can be built into the wall or flush mounted.

Setting pattern 1



Control panel + Power supply unit

Setting pattern 2



FUNCTIONS

- Diverse control of indoor units
- Automatic clock adjustment
- Weekly timer
- Error history

SPECIFICATIONS

	Control Panel	Power Supply Unit
Power Supply	DC 5V	100-240V, 50-60Hz, Single phase
Dimensions (H x W x D) (in.(mm))	4-3/4 × 6-3/8 × 1 (120 × 162 × 25.7)	3-7/8 × 5-5/16 × 1-9/16 (99 × 135 × 39.2)
Weight (oz.(g))	11 (308)	13 (355)

Packing List	Control Panel / Power Supply Unit / Connecting cable, etc.

System Controller

UTY-APGXZ1 Software

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

Max. controllable 4 VRF network systems

Max. controllable 400 outdoor units

Max. controllable 1,600 indoor units

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

System Controller Lite

UTY-ALGXZ1 Software

System Controller Lite is designed for small and medium scale buildings.

Max. controllable 1 VRF network systems

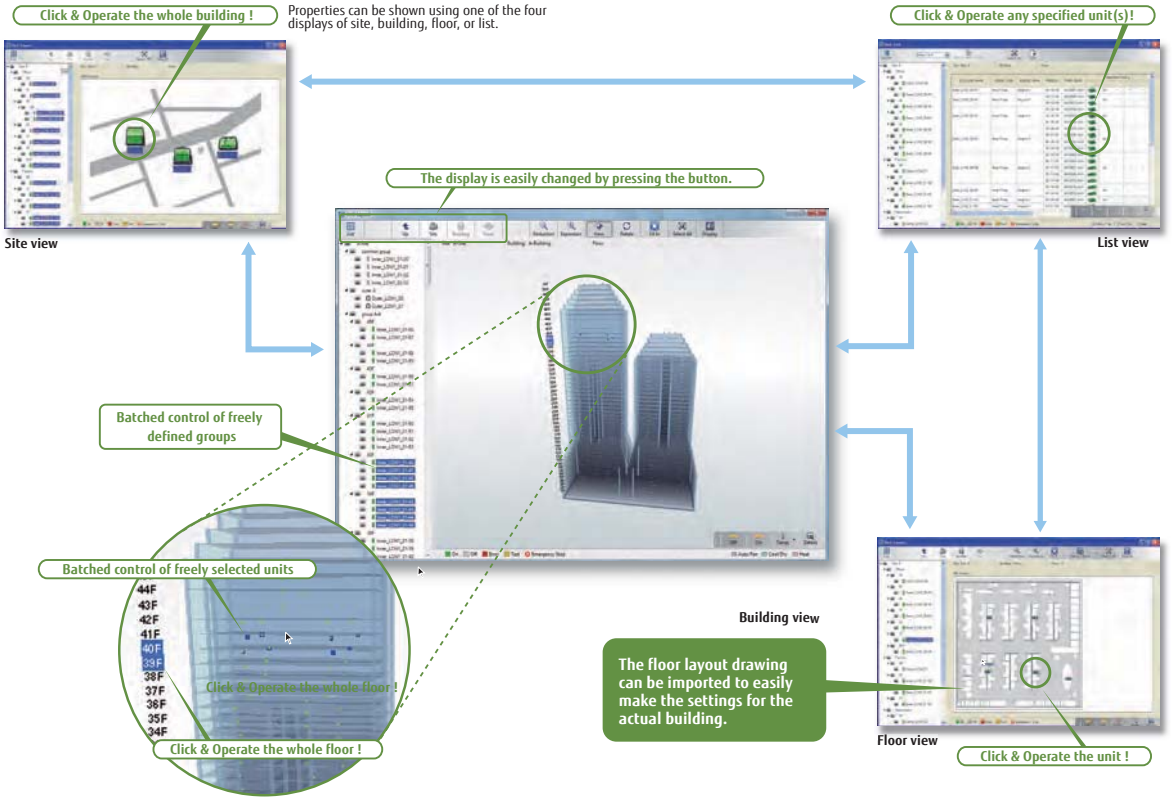
Max. controllable 100 outdoor units

Max. controllable 400 indoor units

- Controls up to a maximum of 1 VRF network system, 400 indoor units, and 100 outdoor units.
- In addition to air conditioning precision control function, a variety of management software add-ons are available as options to give customers a wide range of choice.

USER FRIENDLY VIEW AND OPERATION

- **Click & Operate** : The building can be viewed and controlled in a 3D click-able perspective view. Four different views are available: site, building, floor, or list view.
- **Freely define groups for batched control :** Indoor units can be freely grouped for simple batched control from a BMS tree menu. Grouping by hierarchal structure, such as by section, division or department is possible.

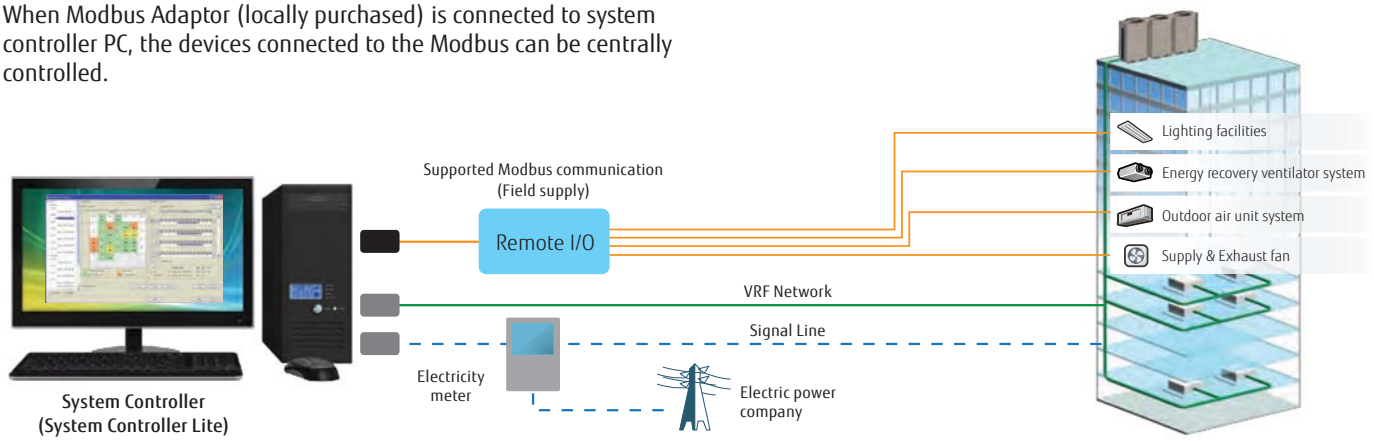


Note:
2D floor layout / 3D building display are not available for System Controller Lite.

3RD PARTY DEVICES CONNECTED BY MODBUS CAN BE CONTROLLED

When Modbus Adaptor (locally purchased) is connected to system controller PC, the devices connected to the Modbus can be centrally controlled.

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



DIVERSE OPERATION MANAGEMENT & DATA MANAGEMENT

Schedule management

- Annual schedules can be set for each remote control group / user defined group.
- Start / stop, operating mode, remote control prohibition, and temperature settings can be set up to 143 times per day at 10 minute intervals for up to 101 configurations for each remote controller group.
- Allows programming of special settings for holidays, including public holidays, for a complete year.
- Low noise operation of outdoor unit can be scheduled.

Diverse control of indoor unit

- Indoor unit operation state, operation mode, etc. are displayed
- Indoor unit start / stop and operation mode switching
- Room temperature set point limitation

Remote control prohibition

This prohibits changes to the operation mode, temperature, start/stop, etc.

Automatic clock adjustment

The time setting of each controller can be set in batch automatically.

Error display & E-mail notification

Errors provide popup messages, audible sound and e-mails. Errors for the past year are logged and can be reviewed later.

Database import/export

Imports/exports registration data, layout data, and image data.

Only the administrator can use this setting.

Operating & control record

Displays the history of operation status and control.

ELECTRICITY CHARGE APPORTIONMENT

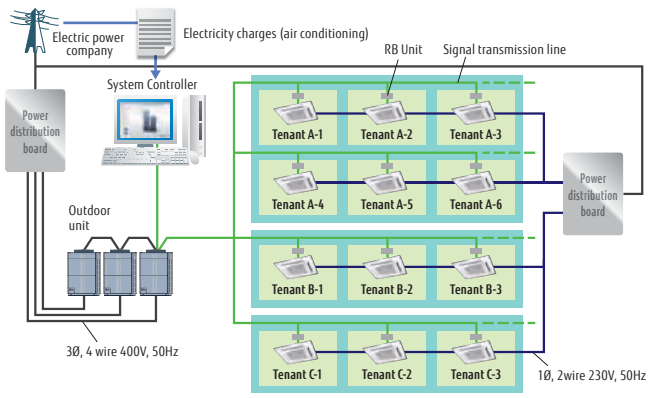
Electricity charge apportionment calculation framework

Suppose you want to find the power consumed by the air conditioners of each tenant from the electricity charge for each month. With Electricity Charge Apportionment function, used energy apportionment ratio will be provided, calculating in detail the energy consumed by the units used by each tenant. This information is then used to calculate the charges for the electricity consumed for air conditioning by each tenant from the total electricity charges in the bill from the electric power company. (See figure at right)

The detailed calculation takes into consideration such things as unused rooms and nighttime electricity charges and shows them in a charges calculation sheet.

System Configuration Example

Standard for System Controller
Option for System Controller Lite UTY-PLGXA1

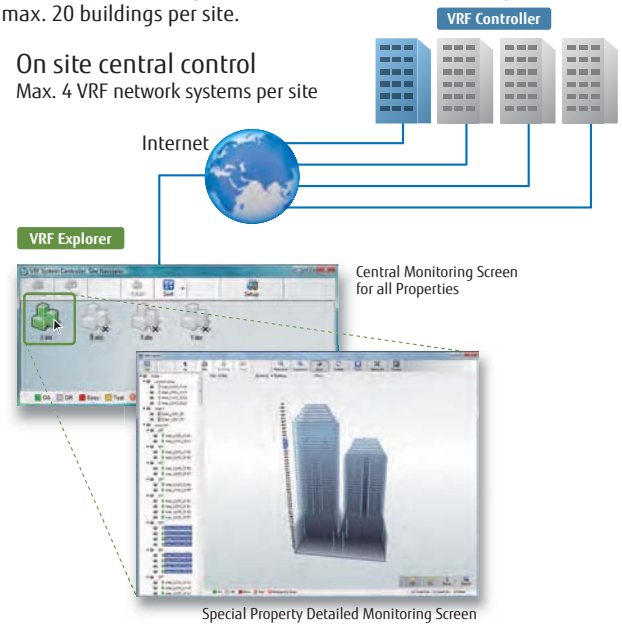


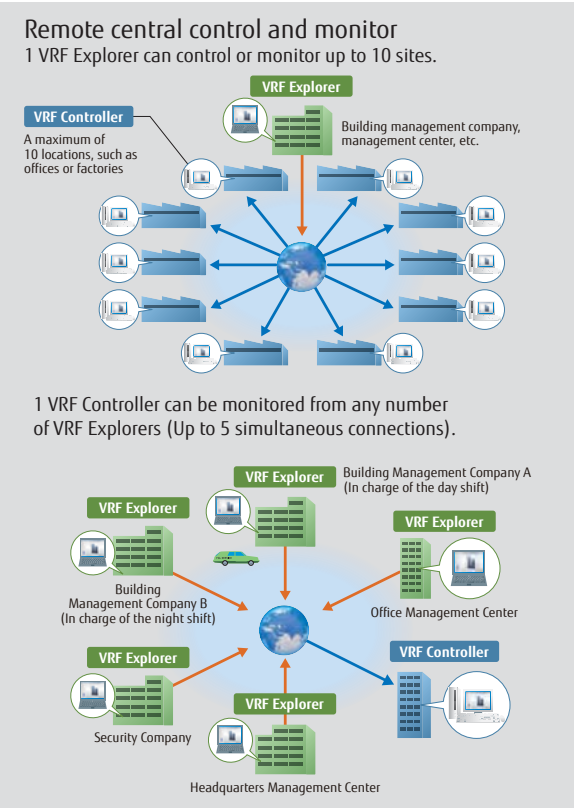
System Controller and System Controller Light (continued) Software

REMOTE MANAGEMENT

STANDARD FOR SYSTEM CONTROLLER UTY-PEGXZ1, OPTION FOR SYSTEM CONTROLLER LITE UTY-PLGXR2

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

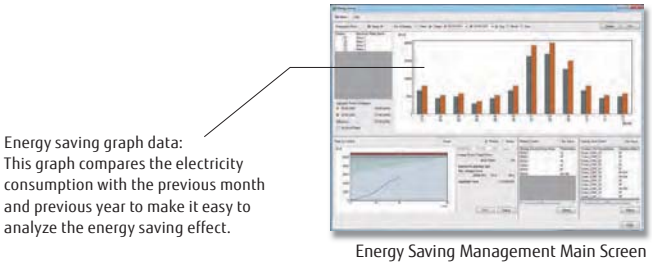




ENERGY SAVING MANAGEMENT

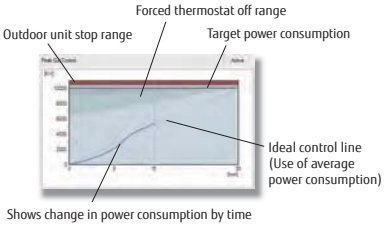
OPTION FOR SYSTEM CONTROLLER UTY-PEGXZ1 , OPTION FOR SYSTEM CONTROLLER LITE UTY-PLGXR2

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



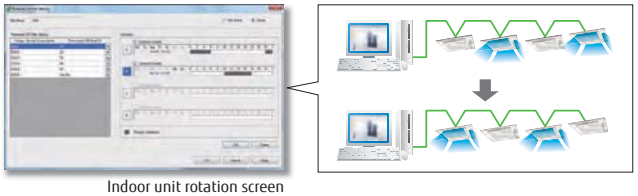
PEAK CUT OPERATION

To control power consumption and load shedding, the system can be programmed to change the indoor unit set temperature, turn the indoor unit thermostat off, or take other measures to carefully control the amount of power consumed while maintaining comfort.



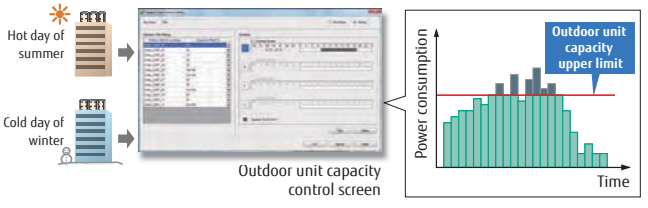
INDOOR UNIT ROTATION OPERATION

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



OUTDOOR UNIT CAPACITY SAVE

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



CENTRAL CONTROLLERS

FUNCTIONS SUMMARY

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

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

PERSONAL COMPUTER SYSTEM REQUIREMENTS

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

•Personal computer that satisfies the following system requirements
•Echelon® U10 USB Network Interface (Required for each VRF Network.)

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

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

Network Convertor

UTY-VTGX (DC power supply)

Network Convertors add Fujitsu mini-split control to the VRF communication network.

Max. controllable 16 single indoor units

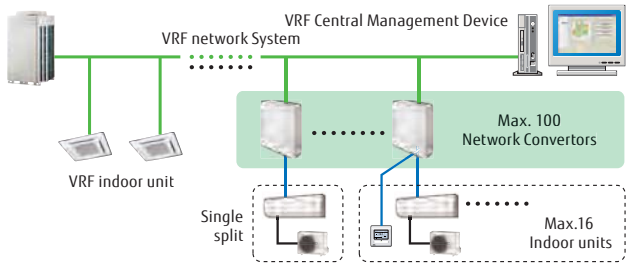
Max. controllable 100 Network Convertors

DC power supply

INSTALLATION EXAMPLE

- The convertors are required when connecting single split units to the VRF communication network system. Administrators can manage the VRF system including single split by VRF central controller.

Single split with VRF



* One controller can be connected to DC power supply type.

SPECIFICATIONS

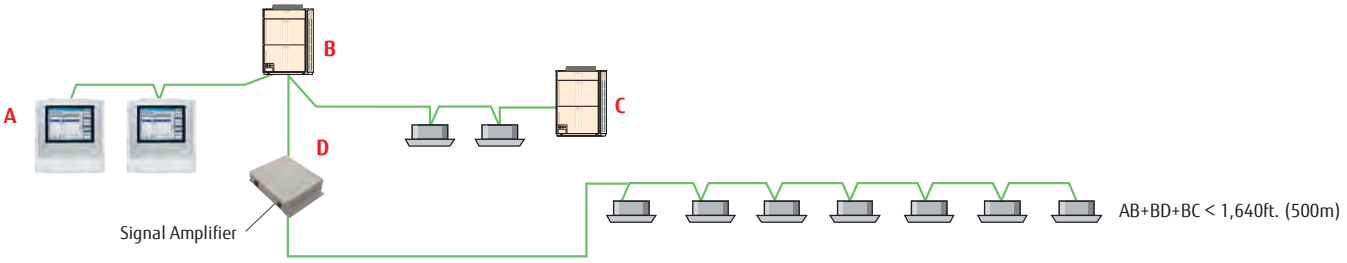
Model name	UTY-VTGX	
Power Supply	polar 3-wire DC12V	non-polar 2-wire DC12V
Input power (W)	Max. 2	
Dimensions (H x W x D) (in.(mm))	4-5/8 × 5-1/2 × 1-9/16 (117 × 140 × 40)	
Weight (lbs.oz.(g))	9 oz. (250)	

Signal Amplifier

UTY-VSGXZ1

- Transmission Line length can be extended up to 11,811ft. (3,600m) with multiple Signal Amplifiers.
- Up to 8 signal amplifiers can be installed in a single VRF communication network system.
- A signal amplifier is required,
  (1) When the total wiring length of the transmission line exceeds 1,640ft. (500m).
  (2) When the total number of units on the transmission line exceeds 64.

INSTALLATION EXAMPLE



SPECIFICATIONS

Model name	UTY-VSGXZ1
Power Supply	208-240V 50/60Hz, Single phase
Input power (W)	4.5
Dimensions (H x W x D) (in.(mm))	2-5/8 × 11-5/6 × 8-5/16 (67 × 288 × 211)
Weight (lbs.oz.(g))	3lbs. (1,500)

External Switch Controller

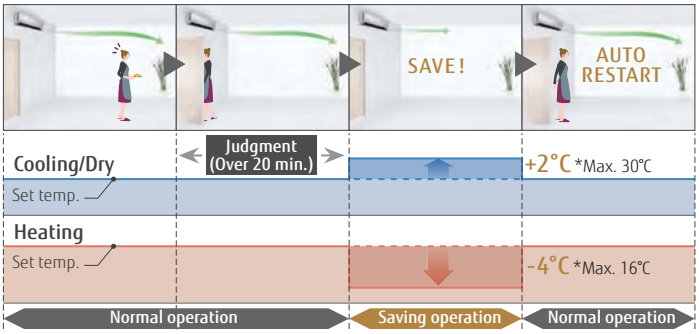
UTY-TERX

Air conditioner switching can be controlled by connecting other sensor switches

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

The set temperature can be specified for cooling and heating individually

Occupancy sensors can be used to setback temperature and fan speed when room is unoccupied. These setbacks are reverted when people come back to the room.



SPECIFICATIONS

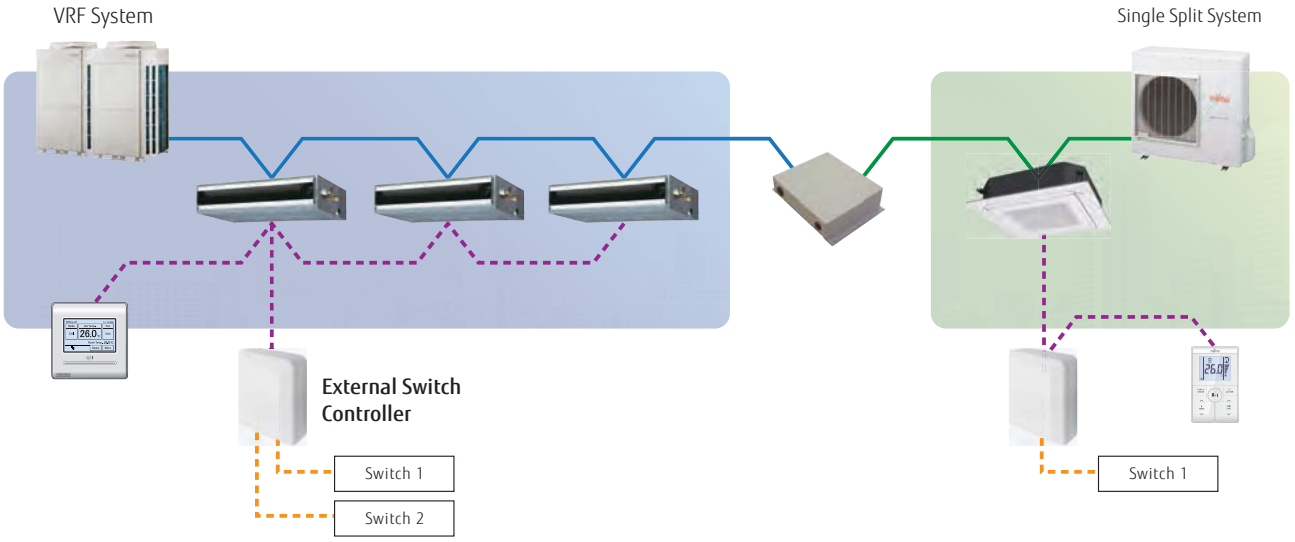
Model name	UTY-TERX
Power Supply	DC6.5 - 16V
Dimensions (H x W x D) (in.(mm))	1-11/16 × 5-1/2 × 4-5/8 (43 × 140 × 117)
Weight (lbs.oz.(g))	9 oz. (250)

DC12V is supplied by the indoor unit.

FUNCTIONS

On/Off	•	Fan speed setting	•
Off	•	Operation mode setting	•
Room temperature setting	•	Prohibition setting	•

SYSTEM OVERVIEW



BACnet® Gateway (Hardware)

UTY-VBGX

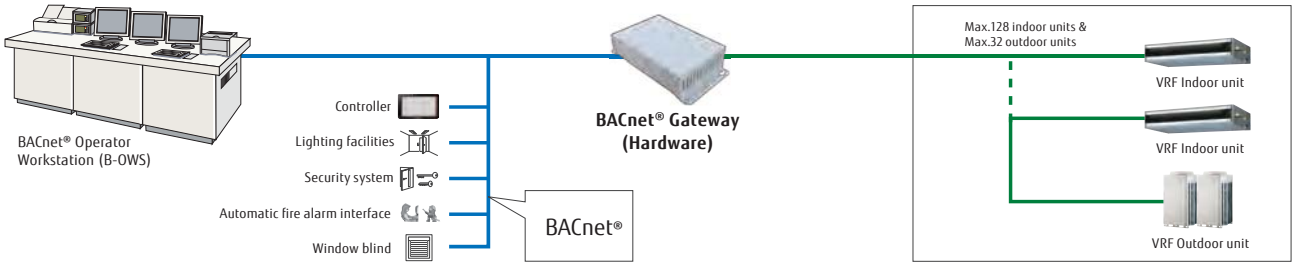
- BACnet® Gateway connects a VRF system to a BMS via BACnet® IP.
- A maximum of 128 indoor units and 32 refrigerant systems can be connected to a single BACnet® Gateway.
- Compatible with BACnet® (ANSI / ASHRAE-135-2012) application specific controller (B-ASC).
- Compatible with BACnet®/IP over Ethernet.

Max. controllable 1 VRF network systems

Max. controllable 32 outdoor units

Max. controllable 128 indoor units

INSTALLATION EXAMPLE



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 Gateways / one VRF network	4

Model name	UTY-VBGX
Power supply	208-240V 50/60Hz, single phase
Input power (W)	4
Dimensions (H x W x D) (in.(mm))	10-1/4 × 2-5/16 × 5-11/16 (260 × 59 × 145)
Weight (lbs.oz.(g))	39oz (6100)

BACnet® Gateway

UTY-ABGXZ1 Software

Max. controllable 4 VRF network systems

Max. controllable 400 outdoor units

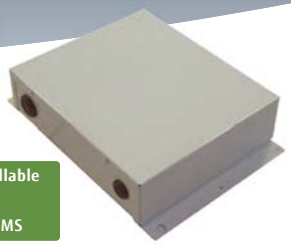
Max. controllable 1,600 indoor units

- Connect VRF network system to BMS via BACnet IP, 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.
- Compatible with BACnet® (ANSI / ASHRAE-135-2012) application specific controller (B-ASC).
- Compatible with BACnet®/IP over Ethernet.
- Scheduling function, Alarm & Event functions as well as Electricity Change Apportionment function are provided in BACnet® Gateway.
- Connection between VRF network system to personal computer is possible via small U10 USB interface. However, both U10 USB interface & personal computer are field supplied items.
- Corresponds to 7 different languages, English, Chinese, French, German, Spanish, Russian, Polish.

PERSONAL COMPUTER SYSTEM REQUIREMENTS

Model name	UTY-ABGXZ1
Operating system	• 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
Interface	• 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 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
Optical drive	DVD-ROM drive

Network Convertor for LONWORKS®



UTY-VLGX

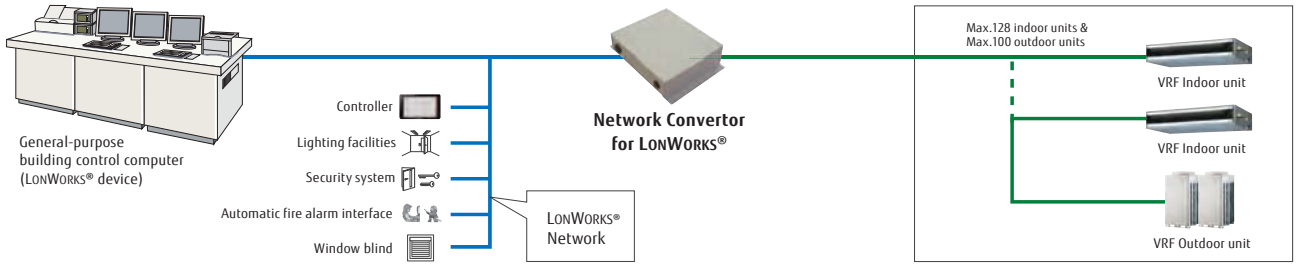
Max. controllable 4 Units to BMS

Max. controllable 100 outdoor units

Max. controllable 128 indoor units

- Connects VRF network system to a BMS network via LONWORKS® open network.
- The UTY-VLGX permits central monitoring and control of a VRF network system from a BMS through a LONWORKS® interface.
- Up to 128 Indoor units can be connected to one Network Convertor for LONWORKS®

INSTALLATION EXAMPLE



SPECIFICATIONS

Model name	UTY-VLGX
Power Supply	208-240V 50/60Hz, Single phase
Input power (W)	4.5
Dimensions (H x W x D) (in.(mm))	2-5/8 × 11-5/16 × 8-5/16 (67 × 288 × 211)
Weight (lbs.oz.(g))	3lbs. (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

UTY-VMGX

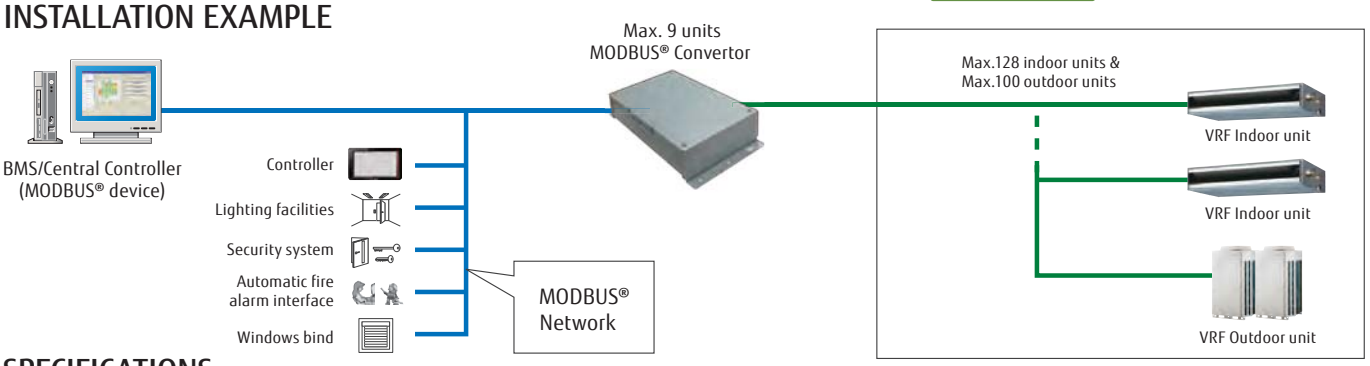
Max. controllable 9 units to one BMS

Max. controllable 100 outdoor units

Max. controllable 128 indoor units

VRF System can be integrated with the Building management system supported by MODBUS® RTU.

INSTALLATION EXAMPLE



SPECIFICATIONS

Power Supply	AC220/240V 50/60Hz AC208/230V 60Hz
Input power (W)	Max. 3
Dimensions (H x W x D) (in.(mm))	9-1/4 × 4-3/4 × 1-3/4 (235 × 120 × 45)
Weight (lbs.oz.(g))	39 oz. (1,100)

Service Tool

UTY-ASGXZ1 Software

Extensive monitoring and analysis functions for installation and maintenance

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

Max. Monitor and controll 400 indoor units

Max. Monitor and controll 100 outdoor units

* The saved data can be displayed offline.However, the data saved by the following model cannot be displayed.
- UTR-YSTB/UTR-YSTC (Service Tool)
- UTR-YMSA (Web Monitoring Tool)

AUTOMATIC OPERATION CHECK FOR REFRIGERATION CYCLE

After product installation, operation check can be performed automatically. Self-diagnosis function automatically judges whether each sensor value is normal, so the operation check work can be reduced. The diagnosis can also be output as a report.

[Note] Use only as a guide and judge for yourself finally.

Whether each sensor value is normal is judged automatically.

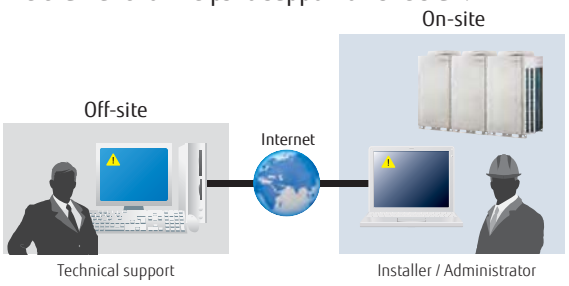
- ☑ Discharge temperature normal value OK
- ☑ Super heat volume normal value OK
- ☑ High pressure pipe normal value OK
- ☑ Low pressure pipe normal value OK

...etc.

REMOTE TECHNICAL SUPPORT & MAINTENANCE

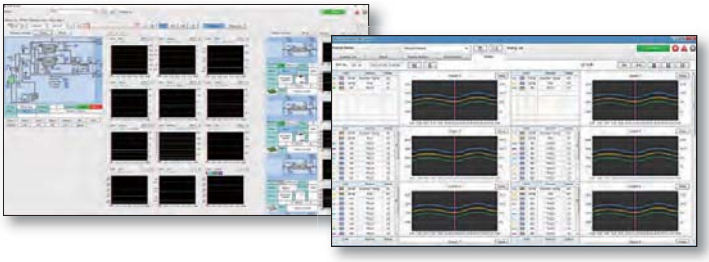
On-site check screen can be shared with the skilled person in a remote location. When visiting for troubleshooting on-site, operation status can be shared in real time and get assistance easily.

Online chat function helps to support on-site staff.



MULTIPLE TREND GRAPH DISPLAY AND COMPARISON

- Multiple graphs can be displayed in Service Tool depending on the situation.
- Up tp two offline data files can be viewed and compared simultaneously



PERSONAL COMPUTER SYSTEM REQUIREMENTS

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 Vista®, 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
Display	1366 x 768 or higher resolution
Interface	• 2 USB ports - 1 USB port is required for software protection key connection - 1 USB port is required for Echelon® U10 USB Network Interface
Software	Internet Explorer® 11 or Microsoft Edge / Adobe® Reader® 9.0 or later

Packing List	Quantity	Application
WHITE-USB-KEY (Software protection key)	1	Software protection key to be connected to USB port on the Service Tool-installed PC. These products runs only on a PC with WibuKey.

•Personal computer that satisfies the following system requirements
•Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

FUNCTIONS

1) System List

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

2) Equipment Detail (Diagram)

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

3) Equipment Detail (List)

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

4) Operation History

The indoor units or outdoor unit operation history can be recorded. The displayed operation history can be printed out and saved to a CSV file.

5) Error History

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

6) Remote File Download

Operation and error history can be downloaded. User can choose which data download by specifying the system, unit and time frame.

7) Commissioning Tool

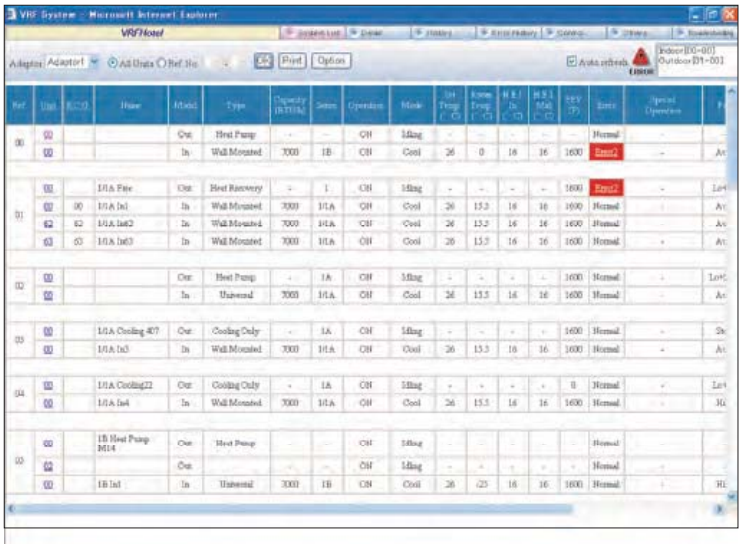
During a test run, the outdoor unit/indoor unit sensor data can be saved for completing the commissioning report. After the end of test running, this data can be exported in CSV file format.

8) Network Topology Analyzer

A list of units connected to the VRF system network is displayed in network segments in tree form.

9) Remote Setting

Setting of the indoor unit can be performed remotely.



10) System Time Setting

Time of day setting, for all controllers in a system, can be performed simultaneously.

11) Software Version

The software version of units are acquired and displayed.

12) Central Release

Limitations on individual indoor units can be released from the central controller (remote controller limit, temperature limit).

13) Model Name Writer

A custom model name can be given for an indoor unit.

14) Error Memory Reader

When an error occurs in an indoor unit, the system records the operation data before the error and saves to a CSV file.

Note: To perform “Error Memory Reading”, the Service Tool must be connected directly to the corresponding outdoor unit. Refer to the Operation Manual of the Service Tool for detail.

15) Time Guard Information

Data for determining maintenance schedule (integrated time for compressor, fan, etc.) for the indoor and outdoor units can be output to a CSV file.

Web Monitoring Tool

VRF network system can be supported indoor units
4

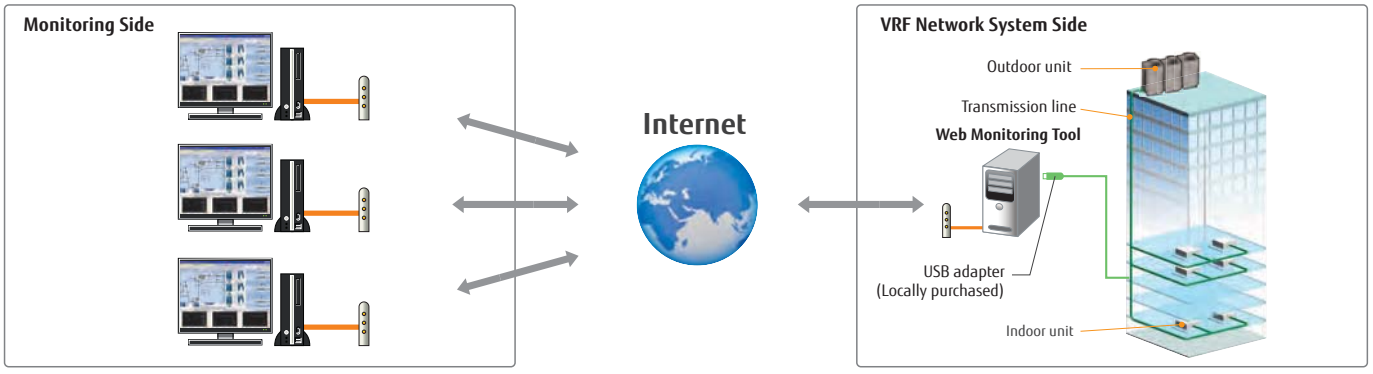
1,600
1,600 indoor units can be supported

UTY-AMGXZ1 Software

Product features

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

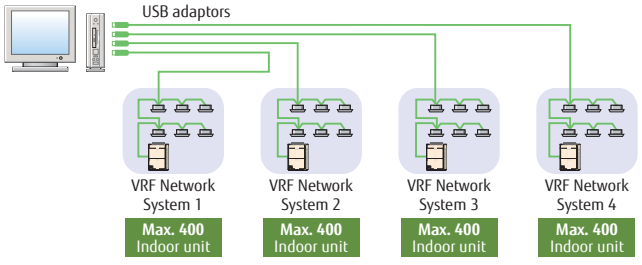
WEB MONITORING SYSTEM



SUPPORT 4 VRF NETWORK SYSTEMS

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

Suitable for large-scale buildings or hotels.



PERSONAL COMPUTER SYSTEM REQUIREMENTS

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 Vista®, 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
Display	1366 x 768 or higher resolution
Interface	• USB port (for 10 USB Network Interface Max.4, Software protection key) • Either of the following interface is required for remote connection: - Internet using LAN: Ethement port is required
Software	Internet Explorer® 11 or Microsoft Edge / Adobe® Reader® 9.0 or later

Packing list	Quantity	Application
WHITE-USB-KEY (Software protection key)	1	Software protection key to be connected to USB port on the Service Tool-installed PC. These products runs only on a PC with WibuKey.

•Personal computer that satisfies the following system requirements
•Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

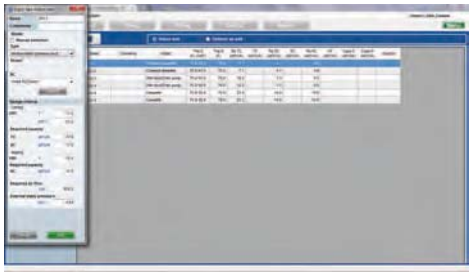
Design Simulator

EASY EQUIPMENT SELECTION, COMPLETE SELECTION OUTPUT, RELIABLE PROJECT MANAGEMENT

Design Simulator makes it easy to design and select equipment for complex building HVAC systems. The software output contains all important design data including: Equipment Schedule, Piping and Wiring Layout, etc. (all of the documentation needed to estimate a project.) Design Simulator simplifies the design process. To design a system, just select the indoor unit types for each system, and the software will automatically select the outdoor unit and create the piping and wiring diagram. Design Simulator also checks all of the equipment information to ensure proper installation.

Step 1 Select the model

Choose the model for each system.



Step 2 Select the Indoor Unit

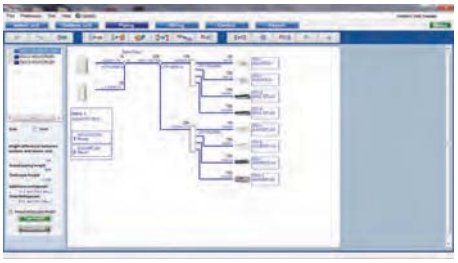
Choose the unit types and the conditions and the software will select the correct indoor unit. Indoor unit can also be selected manually.

Step 2b Select the Outdoor Air Unit

If desired, choose the "Outside Air Unit" option. Outside Air Units are selected based on required airflow.

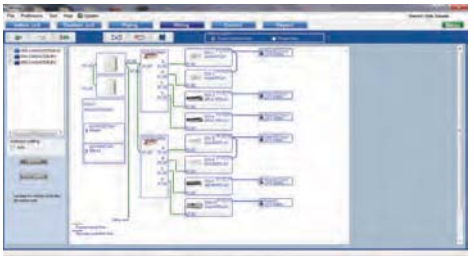
Step 3 Select the Outdoor Unit

Using the Drag & Drop function, connect the indoor unit to the appropriate outdoor unit.



Step 4 Piping Length / Piping Diagram

Piping diagram is created automatically. As piping lengths are entered, system automatically calculates refrigerant charge.

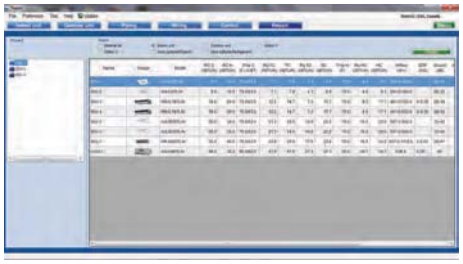


Step 5 Wiring / Remote Control Diagram

Automatically creates the wiring diagram. Simple grouping functions create a custom wiring diagram for the project.

Step 6 Select BMS Gateways and Central Controllers

Choose additional devices to meet the needs of the project.



Step 7 Report Output

Design Simulator creates a project output with all of the project schedules and schematic drawings.

Setting

Software can be customized for any geographic location.

- Units (US conventional / Metric)
- Language Setting
- Custom Database Function
- Output Settings

SOFTWARE REQUIREMENTS

Software	Design Simulator	
Operating System	Microsoft Windows Vista / 7 / 8	
System Requirements		CPU: Intel® Core™ i3 Processor 2GHz or higher
	Hardware	Memory: 2GB or more (Windows® XP, Windows Vista®, Windows® 7 32-bit)
		4GB or more (Windows® 7 64-bit), HDD: 10GB or more of free space
	Display	1024 x 768 dots or more
		Internet Explorer 7.0 or later
	Software	Acrobat Reader 9.0 or later
		Microsoft Word 2003 / 2007 / 2010

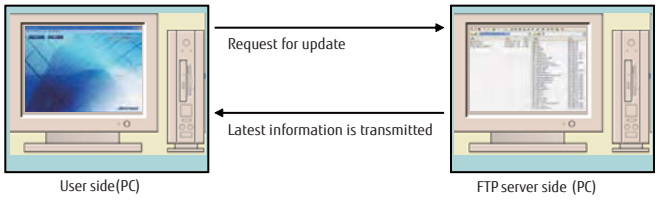
Output

Equipment selections and schedules can be output in standard industry file formats.

- Word format
- Excel format
- Auto CAD format
- 2D Data
- 3D Data (RevitMep data)
- Wiring and piping schematic drawings

Auto Update

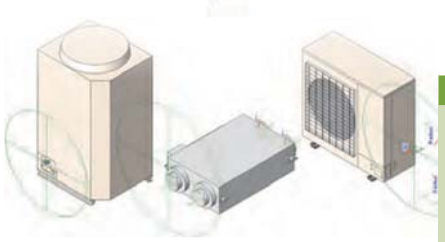
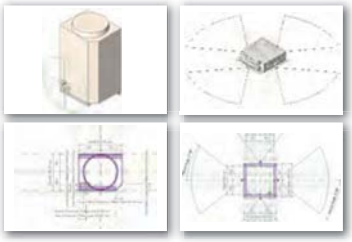
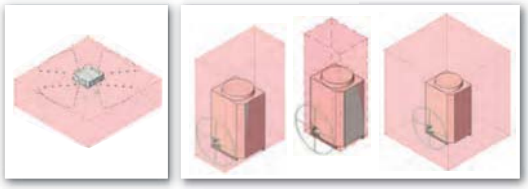
Software updates automatically with the latest product data.



- Maintains software integrity
- Maintains software history
- Updates product information

Building Information Modeling (BIM)

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

Product parameter
Power source
Input power
Capacity
Airflow rate
Sound pressure level
Dimensions
Weight
Connection pipe diameter
Refrigerant
Material/Color

REQUIRED SOFTWARE

Autodesk® Revit® series software

- Autodesk® Revit® Architecture
- Autodesk® Revit® MEP
- Autodesk® Revit® Structure

Data format

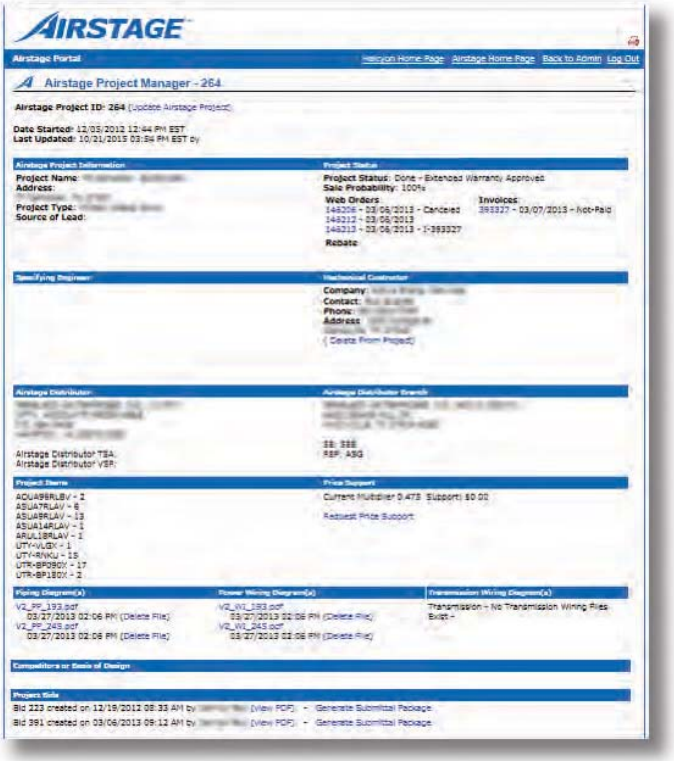
- RFA

Airstage Project Manager (APM)

For Distributors and Reps

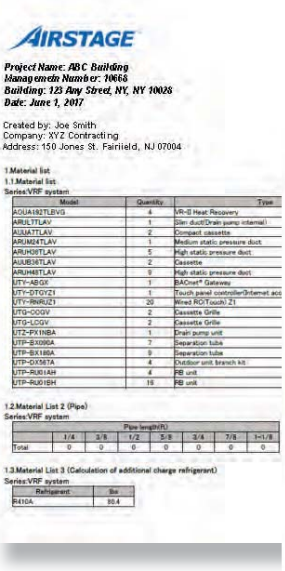
APPLIES TECHNOLOGY TO SIMPLIFY PROJECT MANAGEMENT AND ENSURE A SUCCESSFUL VRF INSTALLATION.

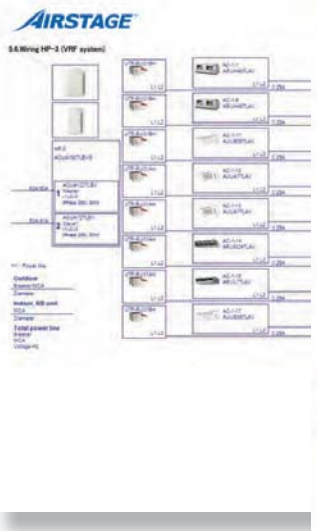
- Central Project Host for Sales Team
- Track all project status
- Upload project files and equipment list
- Automated quotes and Submittal packages creation
- Get price support and place orders
- Upload Commissioning documents
- Print Extended Warranty



THE APM INTEGRATES WITH THE DESIGN SIMULATOR

- Project users can generate Engineering Submittal Packages using only a few mouse clicks.
- Users can use this integration to create numerous customizable quotes.
- Purchasing can be easily managed through the quoting system.





AIRSTAGE™ Resources

Airstage Website (for building owners)

http://www.airstagevrf.com

A PLACE TO LEARN THE BASICS

Go to airstagevrf.com to learn more about Fujitsu's Airstage VRF products and programs such as:

- Basic Product Overview
- Specifications & Downloads
- Service & Support
- Locate a Contractor Distributor
- Contact Us
- Portal Login
- Case Studies
- Locate a Sales Rep

Airstage Portal (for Engineers and Contractors)

https://portal.fujitsugeneral.com

A CENTRAL PLACE FOR PROJECT MEMBERS TO COORDINATE

The Airstage Portal provides a single source for all information for Fujitsu Airstage VRF Systems. From the Airstage Portal, all registered users have access to a wealth of information including manuals, technical information, diagrams, online training and more.

Who has access to the Portal?

- Engineers
- Contractors
- Fujitsu Distributors/Personnel
- Independent Airstage Sales Reps

To create a Portal account, go to http://portal.fujitsugeneral.com and click on "Register Now".

AIRSTAGE PROJECT MANAGER (APM) ON THE FUJITSU PORTAL (for Reps and Distributors)

A PLACE TO SUPPORT PROJECTS ALL THE WAY TO COMPLETION

The APM ensures clear and effective communication between all members of the Fujitsu channel by applying technology to simplify project management and ensure a successful VRF installation. For access to the APM, contact your Airstage Rep. Here's what you can do inside the APM:

- Manage your Fujitsu Airstage projects large and small.
- Create a project and track its progress from the design stage, to quote generation, order processing and deliverytracking to submittal and commissioning.
- Import equipment schedules from the Fujitsu Design
- Simulator as well as piping and wiring diagrams.
- Request and manage job pricing.

What's on the Portal?
Tools for Engineers and Contractors

Information & Downloads
- Access to Literature Online
- Access to all Manuals
- Download Design Simulator

Technical Information
- Troubleshooting Guides
- Instructional Videos
- Frequently Asked Questions

Training
- Designing Airstage Systems
- Reinforce information covered in on-site training classes
- Learn about new and advanced Airstage features

Parts
- Parts Identification Diagrams

Tools for Fujitsu Partners

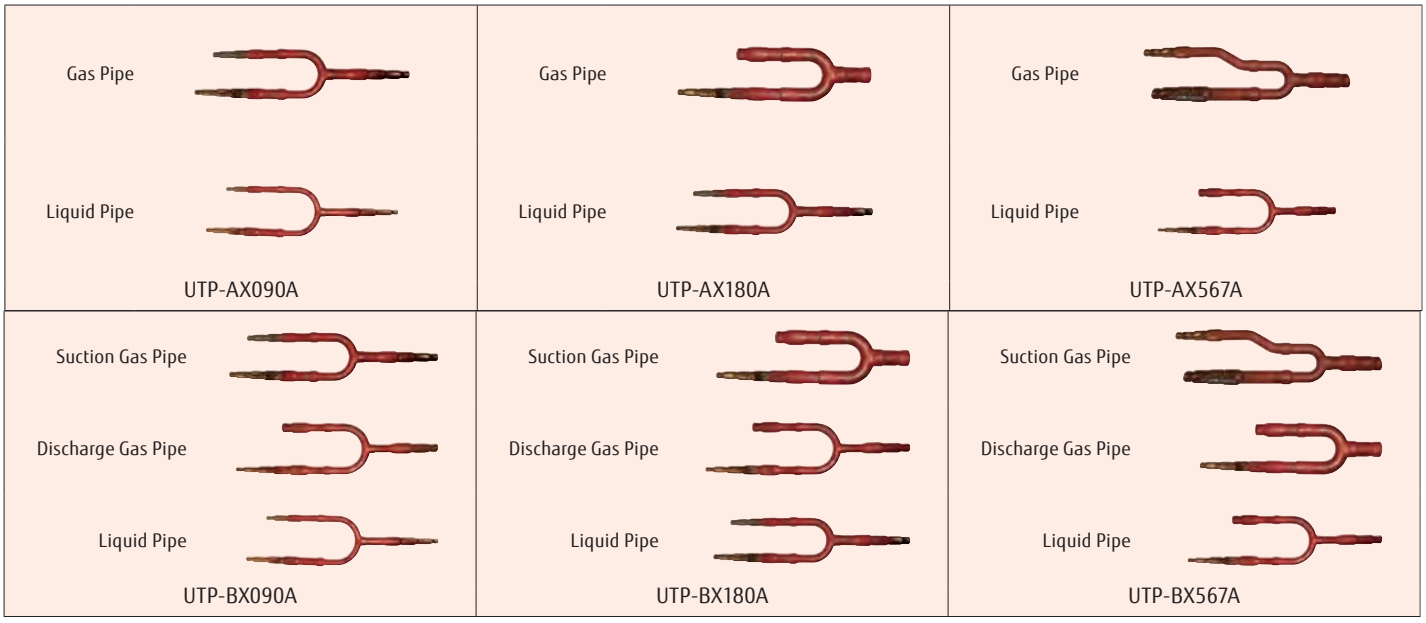
Maintain Projects
- Upload Design Simulator files
- Track project status

Submittals & Closeout Documentation
- Automatically generate submittals & closeout documents
- Commissioning Report and closeout documents are archived for future reference

Warranty & Commissioning
- Process warranty claims
- Submit Commissioning Report
- Print Extended Warranty Certificate

Piping Accessories

SEPARATION TUBES



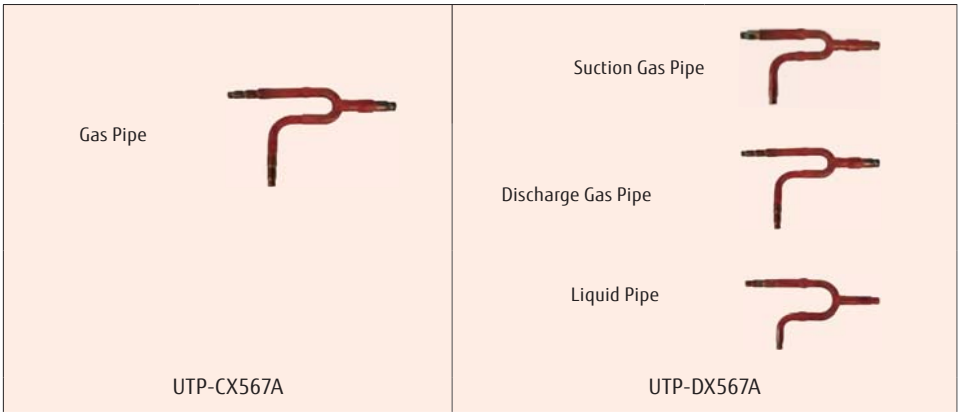
SPECIFICATIONS

Separation Tube

Model name	UTP-AX054A	UTP-AX090A	UTP-AX180A	UTP-AX567A
Total cooling capacity of indoor unit (X)(kBTUh)	X < 66.0	X < 96.5	96.5 ≦ X < 193	193 ≦ X

Model name	—	UTP-BX090A	UTP-BX180A	UTP-BX567A
Total cooling capacity of indoor unit (X)(kBTUh)	—	X < 96.5	96.5 ≦ X < 193	193 ≦ X

Outdoor Unit Branch Kit



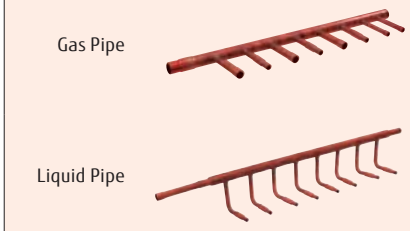
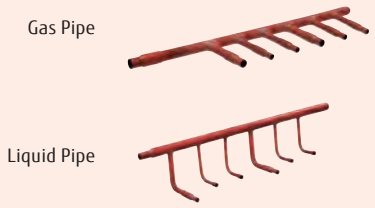
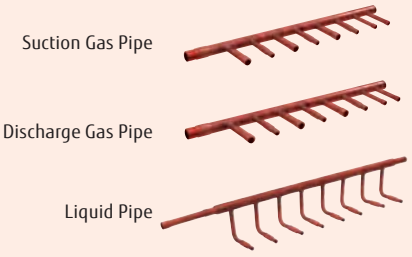
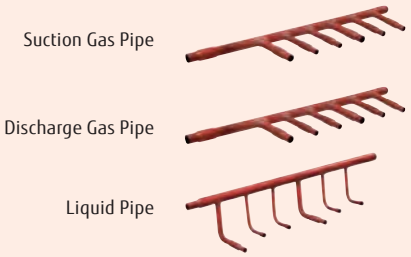
SPECIFICATIONS

Outdoor Unit Branch kit

Model name		UTP-CX567A (for V-II)	UTP-DX567A (for VR-II)
Number of Outdoor unit	2 outdoor units	1	
	3 outdoor units	2	

AIRSTAGE™

Header

8 Branch	6 Branch
 UTR-H0908L / UTR-H1808L	 UTR-H0906L / UTR-H1806L
 UTP-J0908A / UTP-J1808A	 UTP-BX090A

SPECIFICATIONS

Header

Model name	3-6 Branches	UTR-H0906L	UTR-H1806L
	3-8 Branches	UTR-H0908L	UTR-H1808L
Total cooling capacity of indoor unit (X)(kBTUh)		X < 96.5	96.5 ≤ X < 193

Model name	3-6 Branches	UTP-J0906A	UTP-J1806A
	3-8 Branches	UTP-J0908A	UTP-J1808A
Total cooling capacity of indoor unit (X)(kBTUh)		X < 96.5	96.5 ≤ X < 193

RB UNIT

Single type	Multi type	2 Connected Multi-RBU
UTP-RX01AH / UTP-RX01BH / UTP-RX01CH	UTP-RX04BH	

SPECIFICATIONS

RB Unit

Type		Single type			Multi type
Model name		RU01AH	RU01BH	RU01CH	RU04BH
Power source		Single phase 230V, 50Hz			
Input power	W	28	28	41	110
Number of branches		1	1	1	4
Maximum capacity of connectable indoor units (Q)	kBTUh	Q ≤ 28	Q ≤ 60	Q ≤ 96	Q ≤ 191*1
Maximum capacity of connectable indoor units per branch (Q)	kBTUh	Q ≤ 27	Q ≤ 60	Q ≤ 96	Q ≤ 96
Maximum number of connectable indoor units per branch		3	8	8	8
Dimensions (H×W×D)	in.(mm)	7-13/16 × 11-3/4 × 10-9/16 (198 × 298 × 268)			10-1/4 × 25-7/8 × 16-7/8 (260 × 658 × 428)

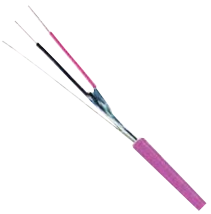
*1: In case of two RB units connected in series (total 8-branches), maximum capacity of connectable indoor units is up to 191kBTUh

VRF Communication Cable

For VRF Communication

LonWorks® Cable

K00250LW
K00500LW



Type	Compatibility	Model
250 ft. spool HVAB	All Airstage VRF Models	K00250LW
500 ft. spool HAVB	All Airstage VRF Models	K00500LW

Optional Accessories

For Duct Models

IR Receiver Unit

UTB-YWC

For All Duct types

See pg. 56

Remote Sensor Unit

UTY-XSZX

For All Duct types

Auto Louver Grille Kit

UTD-GXSA-W (for ARUL7/9/12/14TLAV)
UTD-GXSB-W (for ARUL18TLAV)

For Slim Duct type
See page 81 for details.

Flange (Round)

UTD-RF204

For Medium Static Pressure Duct type / Ceiling type

Flange (Square)

UTD-SF045T

For Medium Static Pressure Duct type

Long-Life Filter

UTD-LF25NA

For Medium Static Pressure Duct type

UTD-LF60KA

For High Static Pressure Duct type (ARUH36/48/60TLAV)

Drain Pump Unit

UTZ-PU1NBA

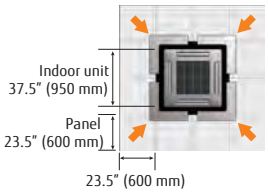
For Medium Static Pressure Duct type

Type	Compatability	Model Name
Flange (Round)	Duct Type (ARUM24-36)	UTD-RF204
Flange (Rectangular)	Duct Type (ARUM24-36)	UTD-SF045T
IR Receiver Unit	All Duct Types	UTB-YWC
Long-life Filter	High Static Duct Type (ARUH36-60)	UTD-LF60KA
	Duct Type (ARUM24-36)	UTD-LF25NA
Auto Louver Grille Kit	Slim Compact Duct (ARUL7-14)	UTD-GXSA-W
	Slim Compact Duct (ARUL18)	UTD-GSXB-W
Remote Sensor Unit	All Duct Types	UTY-XSZX
Drain Pump Unit	Duct Type (ARUM24-36)	UTZ-PX1NBA

Cassette Accessories

Wide Panel
UTG-AGYA-W

For Cassette type



Air Outlet Shutter Plate
UTR-YDZB

For Compact Cassette type

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

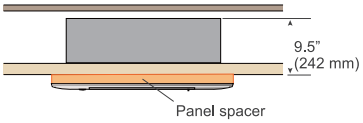
Air Outlet Shutter Plate
UTR-YDZC

For Cassette type

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

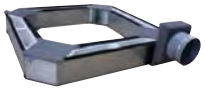
Panel Spacer
UTG-BGYA-W

For Cassette type



Fresh Air Intake Kit
UTZ-VXAA

For Compact Cassette type

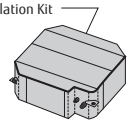


Fresh Air Intake Kit
UTZ-VXGA

For Cassette type

Insulation Kit for High Humidity

UTZ-KXGA For Cassette type
UTZ-KXGB For Slim Cassette type
UTZ-KXGC For Compact Cassette type



IR Receiver Unit
UTY-LRHYB1

For Cassette type

Type	Compatibility	Model
Wide Panel	Cassette Type (AUUB18-36)	UTG-AGYA-W
Air Outlet Shutter Plate	Cassette Type (AUUB18-36)	UTR-YDZC
	Compact Cassette Type (AUUA7-24)	UTR-YDZB
Fresh Air Intake Kit	Cassette Type (AUUB18-36)	UTZ-VXGA
	Compact Cassette Type (AUUA7-24)	UTZ-VXAA
Panel Spacer	Cassette Type (AUUB18-36)	UTG-BGYA-W
Insulation Kit for High Humidity	Cassette Type (AUUB30-36)	UTZ-KXGA
	Cassette Type (AUUB 18-24)	UTZ-KXGB
	Compact Cassette Type (AUUA7-24)	UTZ-KXGC
IR receiver Unit	Cassette Type (AUUB18-36)	UTY-LRHYB1

For economizer and filter box options, contact your Fujitsu Sales Engineer.

Ceiling Accessories

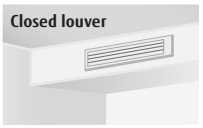
Drain Pump Unit
UTZ-PU1EBA

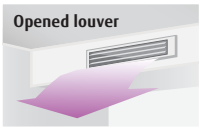
Type	Compatibility	Model
Drain Pump Unit	Ceiling type (ABUA30-36)	UTR-DTB24T

Auto Louver Grille Kit (Option)

Models
UTD-GXSA-W
UTD-GXSB-W

Available for Slim Ducted Indoor Units (page 30)

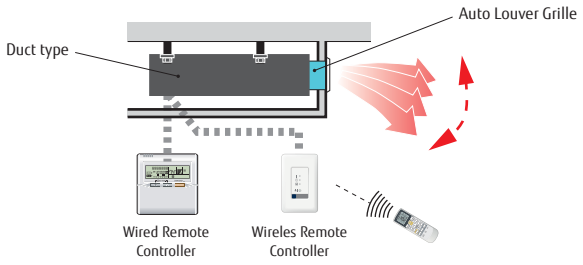




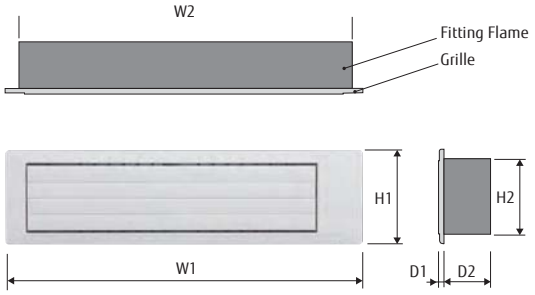
Feature

Flexible Control

- Operation with indoor unit
  Auto Louver can be controlled by remote controller of indoor unit.
- UP and Down auto swing
  - Fixed airflow or auto swing
  - 4 angle settings
- Auto-closing louver
  When operation of indoor unit is stopped, the louver will automatically close.



Dimensions



UTD-GXSA-W	26-7/8	25-3/8	7-1/16	5-13/16	3/8	3-5/16
UTD-GXSB-W	34-3/4	33-1/4				

Specifications

Model name			UTD-GXSA-W	UTD-GXSB-W
Applicable Indoor Unit			ARUL7/9/12/14TLAV	ARUL18TLAV
Power Supply			Connecting with Control box of indoor unit	
Fixing of Auto Louver Grille			Screw fixing to Flange or Square Duct	
Extension Square Duct Limit			39-3/8" (Max. duct length between indoor unit and grille)	
Net Dimension (H x W x D)		inch (mm)	7-1/16x26-7/8x(3-5/16+3/8) [180x683x(84+9)]	7-1/16x34-3/4x(3-5/16+3/8) [180x883x(84+9)]
Weight	Net	lb. (kg)	4.4 (2.0)	5.6 (2.5)
	Gross		6.7 (3.0)	7.8 (3.5)
Color			White	
Louver Motor			Stepping Motor	
Accessories			Fitting Flame, etc.	
Operation range	Cooling	°F (°C)	64 to 90 (18 to 32)	
		% RH	80% or less	
	Heating	°F (°C)	50 to 86 (10 to 30)	

Applications

There are many applications for Airstage VRF systems including such markets as education, healthcare, hospitality, utilities, office buildings, apartment buildings, condominiums, and restaurants.

Note: VRF Heat Recovery system provides simultaneous Heating and Cooling. System operates both Heating mode and Cooling mode.

MEDICAL AND HEALTHCARE FACILITIES

VRF gives each patient individual control of their room temperature. Central control ensures that air conditioning is only delivered to rooms that are occupied.

INDIVIDUAL CONTROL

VRF systems give each patient or each room individual control of their room temperature.

MAINTENANCE

Since each refrigerant circuit has the ability to operate independently, a properly designed VRF system can add a layer of security to a HVAC system. If an individual unit needs to be shut down for repairs, the rest of the system can operate normally.

CENTRAL CONTROL

Powerful central control ensures that heating and cooling are delivered to rooms that are occupied. This provides enormous savings for facilities with revolving occupancy.

CLEAN AIR

VRF systems can use ductless indoor units reducing the time and expense of maintaining a HVAC system and eliminating the risk of duct-borne molds and bacteria.

HEALTHIER FACILITY

VRF systems can be integrated with fresh air systems to ensure that air quality meets the needs of the occupants. VRF provides the most comfortable environment for all occupants.

OPTIONAL

Build Management System (BMS) using BACnet, LonWorks or Modbus.

See Airstage VRF case studies on our site at
www.airstagevrf.com/applications.htm
or on our YouTube channel FujitsuGeneral_USA

EDUCATIONAL AND RELIGIOUS FACILITIES

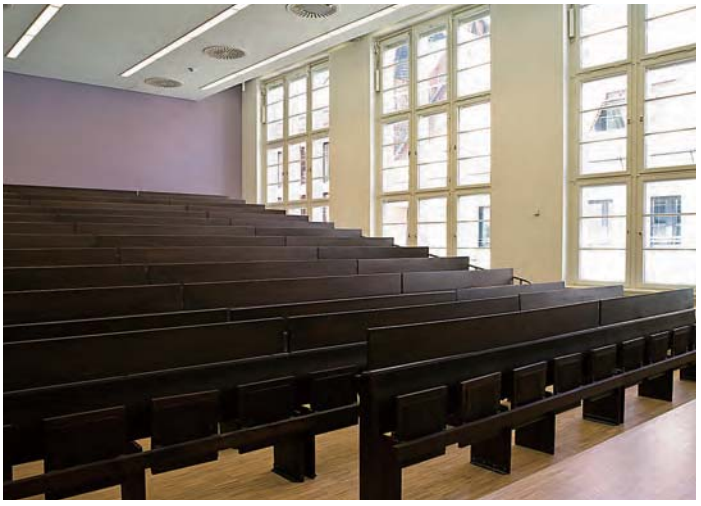
In a school, an investment in VRF is an investment in your community. VRF is more efficient than conventional systems, providing financial savings to the school for many years. Also, a quiet VRF system creates a much better learning environment for students.

HEALTHIER FACILITY

VRF systems can be integrated with fresh air systems to ensure that air quality meets the needs of the teachers and students.

CENTRAL CONTROL

Powerful central control can monitor and control individual schools, or an entire college campus, from a single location.



ZONING

Save energy by heating and cooling the classrooms that are occupied. Set temperature can pre-programmed to meet the energy budget for the school district.

COMFORT

VRF helps achieve a healthier, quieter, more comfortable and productive learning environment.

OPTIONAL

Build Management System (BMS) using BACnet, LonWorks or Modbus. Subtenant billing and Energy Charge apportionment.

See Airstage VRF case studies on our site at
www.airstagevrf.com/applications.htm
or on our YouTube channel FujitsuGeneral_USA

OFFICE BUILDINGS AND RETAIL SPACES

VRF provides a comfortable work environment for all employees. Zoning ensures that energy is only used to cool/heat occupied offices. Quiet indoor units and precise temperature control creates the most comfortable and productive work environment.

FLEXIBLE

As tenants and office configurations change, VRF system configurations can also be modified (within original design constraints) to meet the needs of new tenants.

ZONING

Save energy by only heating and cooling occupied offices. No more hot/cold calls since each zone or tenant has individual control of the set temperature.

EASE OF INSTALLATION

Can be installed in occupied office spaces with minimal disruption to occupants. Can even be installed without disrupting the existing HVAC system.

QUIET

Indoor units and outdoor units creates a pleasant work environment and reduces noise complaints.

CONTROL

Powerful controls options can manage and monitor entire building from a single location.

COMFORT

VRF provides a comfortable work environment for all employees. Quiet indoor units and precise temperature control creates the most comfortable and productive work environment.

OPTIONAL

Building Management System (BMS) using BACnet, LonWorks or Modbus. Subtenant billing and Energy Charge apportionment.

See Airstage VRF case studies on our site at
www.airstagevrf.com/applications.htm
or on our YouTube channel FujitsuGeneral_USA

MULTI-TENANT DWELLINGS

VRF improves the quality of multi-tenant buildings while reducing tenant complaints. High quality VRF systems let owners save on energy costs and reduced maintenance costs. With VRF, each tenant has individual control over the temperature setting for the comfort of their home.

QUALITY
By delivering quiet, efficient heating and cooling, VRF improves the quality of multitenant buildings and reduces tenant complaints.

ENERGY SAVINGS
Efficient VRF systems reduce the total energy costs for buildings over most other options. High quality systems reduce maintenance and service costs.

INDIVIDUAL BILLING
Using the Energy Charge Apportionment feature, landlords can easily bill each tenant for the percentage of total energy the individual tenant consumes.

INDIVIDUAL COMFORT
With VRF, each tenant can have their own controller to set their room temperature for their maximum comfort.

CONVENIENT CENTRAL CONTROL
Landlord can monitor and control all indoor units from a central location. Landlord can even troubleshoot or solve tenant complaints remotely.

QUIET
Indoor units ensures a quiet, comfortable living environment for all tenants.

OPTIONAL
Subtenant billing and Energy Charge apportionment.

See Airstage VRF case studies on our site at
www.airstagevrf.com/applications.htm
or on our YouTube channel FujitsuGeneral_USA

FUJITSU COMMERCIAL FINANCING

For any commercial HVAC installation, you can turn to Fujitsu with confidence for equipment that's not only readily available, but also thoughtfully engineered to install with ease and save energy on utility bills.

THE FUJITSU COMMERCIAL FINANCING PROGRAM IS JUST AS EFFICIENT AND SMART:

QUICK, EFFICIENT APPROVAL PROCESS

- No cost, recourse or credit check for contractors
- End user credit approvals in 2 – 6 hours
- Contractor paid within 24 – 48 hours of install
- Single point of contact, from beginning to end

SOLUTIONS AVAILABLE FOR MOST PROJECTS

- Commercial units eligible, as well as controls and installation
- Churches, nonprofits and non-building owners qualify

TAKE ADVANTAGE OF CONVENIENT QUOTE OPTIONS:

FujitsuGeneralFinancing.com

"Horizon Keystone Calculator" app for Android or iOS

1-800-606-0049

FOR MORE INFORMATION:

Horizon Keystone Financial
800-606-0049
Fujitsu@horizonkeystone.com

For residential installations, please inquire with your Distributor or Fujitsu Sales Engineer about consumer financing options.

THINGS TO KNOW BEFORE YOU BUY A FUJITSU SYSTEM

COMPLETE SYSTEM WARRANTY

Standard warranties vary depending on model:

All Fujitsu Airstage systems come standard with a 2-Year Compressor/1-Year Parts warranty.

Fujitsu Airstage systems that have been properly commissioned have a warranty of 10-Year Parts/10-Year Compressor. For more details, see Airstage Warranty Statement.

For full details, see Airstage Warranty Statement.

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Internet sales are strictly prohibited and unauthorized. Any HVAC systems purchased on the Internet, from an online retailer or any similar e-tailing website, OR where the original factory serial numbers of the display have been removed, defaced, or replaced in any way WILL NOT BE COVERED BY WARRANTY.

Note: Condensing units come pre-charged from factory. Additional refrigerant may be required, be sure to check installation manual for more details.

THINGS TO KNOW BEFORE YOU INSTALL A FUJITSU SYSTEM

WARNING

Always use a licensed installer or contractor to install this product. Do not try to install the product yourself. Improper installation can result in water or refrigerant leakage, electrical shock, fire or explosion. Use only parts and accessories supplied or specified by Fujitsu. Ask a licensed contractor to install parts and accessories. Use of unauthorized or improper installation of parts and accessories can result in injury or property damage. Read the installation manual carefully before using this product. The installation manual provides important safety instructions and warnings which should be followed closely. For any questions or concerns, please contact Fujitsu General America, Inc. Proper sizing and installation of equipment is critical to achieve optimal performance.

HEAT PUMP DISCLAIMER

In most climates a heat pump will handle all of your heating needs. However, this system sometimes requires some other additional source of heat to satisfy heating requirements in the coldest environments. All of Fujitsu's heat pumps use inverter technology and as such offer a wider operating range and more heat capacity than a standard heat pump but will not provide adequate heating if improperly sized or operated outside of its operating range. Specifications vary by model; please consult your contractor before choosing a heat pump as your only source of heat.
Systems will maintain temperature up to +/-4 degrees relative to set temperature. To increase energy efficiency on multi-type systems, you should turn off the evaporators when heating or cooling is not needed.

DISCLAIMER

Fujitsu's products are subject to continuous improvements. Fujitsu reserves the right to modify product design, specifications and information in this brochure without notice and without incurring any obligations.

CERTIFICATIONS

ISO

ISO14001 is the standard defined by the International Organization for Standardization (ISO) related to environmental management systems. Fujitsu General America, Inc. has been acknowledged by an internationally accredited compliance organization as having an appropriate program of environmental protection procedures and activities to meet the requirements of ISO14001. The air conditioners manufactured by Fujitsu have received ISO9001 series certification for quality assurance.

Intertek

- **ISO9001**
- **ISO14001**

ASTM

Our outdoor units shall withstand 1,000 hours of salt spray tested per procedure ASTM B117.

ROHS COMPLIANT

Fujitsu participates in the RoHS Directive, which is the Restriction of Hazardous Substances in electrical and electronic equipment. It is an EU directive intended protect the environment by forcing manufacturers to eliminate or severely curtail the use of cadmium, hexavalent chromium, and lead in all products from automobiles to consumer electronics.

AHRI ENERGY GUIDE® PROGRAM (U.S.)

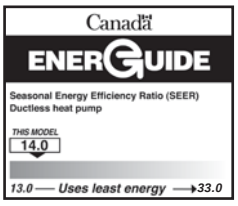
To view AHRI numbers or Energy Guide labels, please go to www.ahridirectory.org.

AHRI CERTIFIED® www.ahridirectory.org Variable Refrigerant Flow (VRF) Multi-Split AC and HP AHRI Standard 1230

AHRI CERTIFIED™ www.ahridirectory.org Unitary Small HP AHRI Standard 210/240

ENERGY STAR PARTNER

HRAI ENERGUIDE® PROGRAM (CANADA)



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- Internet sales are strictly prohibited and unauthorized. Any HVAC systems purchased on the Internet, from an online retailer or any similar e-tailing website, OR where the original factory serial numbers of the display have been removed, defaced, or replaced in any way WILL NOT BE COVERED BY WARRANTY.

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