FUJITSU

AIRSTAGE™

Variable Refrigerant Flow Systems

Heat Pump

J-II 208/230V, 1-Phase

V-II 208/230V, 460V 3-Phase

Heat Recovery

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

FUJITSU GENERAL AMERICA, INC.

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
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 14 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

2001 | 2003 | 2006 | 2007 | 2009 | 2010

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

Heat Recovery type

20 models

AIRSTAGE™ VR-II

for 460V

6 to 24 tons / Heat Recovery
100% Inverter driven

Heat Pump type

19 models

AIRSTAGE™ V-II

for 460V

6 to 24 tons / Heat Pump
100% Inverter driven

AIRSTAGE™ J-II

J-II series

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

AIRSTAGE™ VR-II

for 208/230V

6 to 24 tons / Heat Recovery
100%Inverter driven

AIRSTAGE™ V-II

for 208/230V

6 to 24 tons / Heat Pump
100% Inverter driven

2012 | 2013 | 2014 | 2015

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 the country 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 their way.

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

6 Ton, 8 Ton 10 Ton

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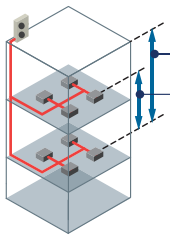
AIRSTAGE™

Design Versatility

Long piping length

Broad range of installation by long piping capability. J-II



Height difference between outdoor and indoor units

O.U. is higher than I.U.
164ft. (50m) max.

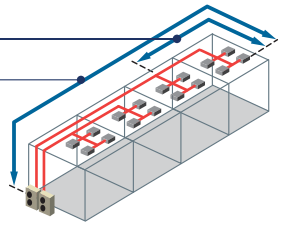
O.U. is lower than I.U.
131ft. (40m) max.

Height difference between indoor units
49ft. (15m) max.

Total Pipe Length
590 ft. (180m) max.

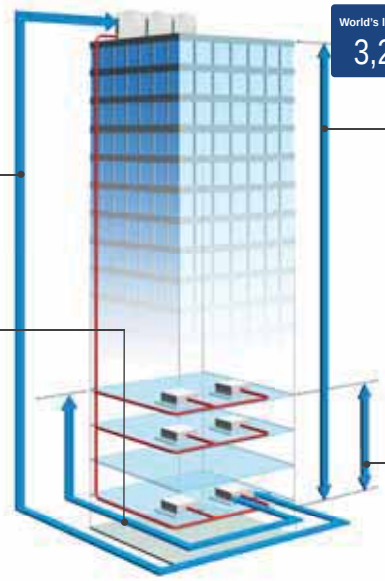
Piping length from first separation tube to the farthest indoor unit
131ft. (40m) max.

Actual piping length
393ft. (120m) max.



Overall piping length 3,280 ft.

V-II VR-II



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.

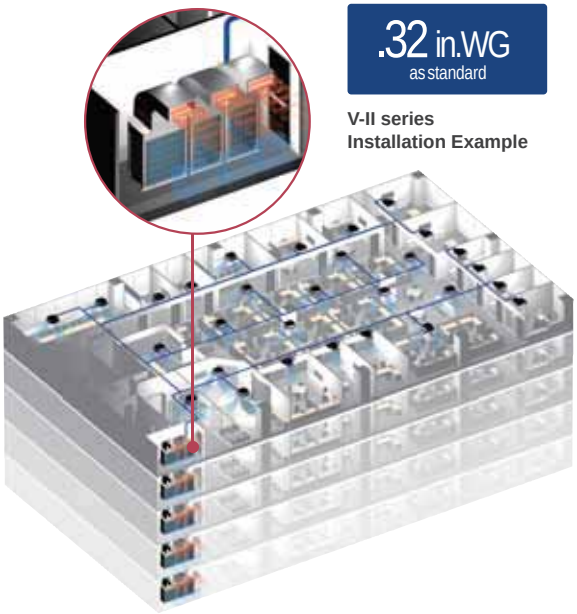
Height difference between outdoor and indoor units
164 ft. max.
For the outdoor unit installed below the indoor units: 131 ft. max.

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

High static pressure

V-II VR-II

The outdoor unit can have a condenser hood easily connected with a static pressure of .32 in.WG / 80Pa standard. This allows outdoor units to be installed within mechanical rooms in high rise buildings.



.32 in.WG as standard

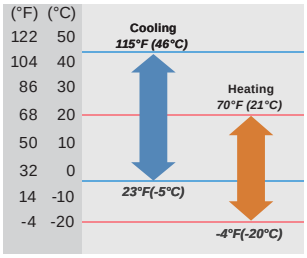
V-II series Installation Example

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

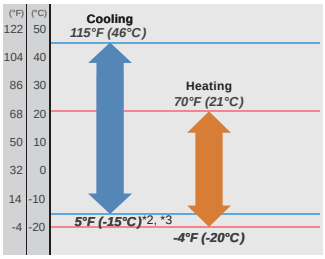
Wide operating range

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

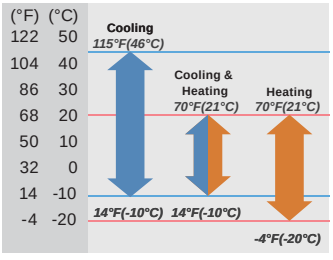
J-II Heat Pump type*1



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).

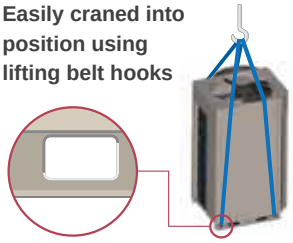
*3 When cooling operation will be required at outdoor air temperature below 23°F (-5°C), the outdoor unit must be installed higher than or equal to the elevation of the indoor units.

Easy Installation

Easily transported

J-II V-II VR-II

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.

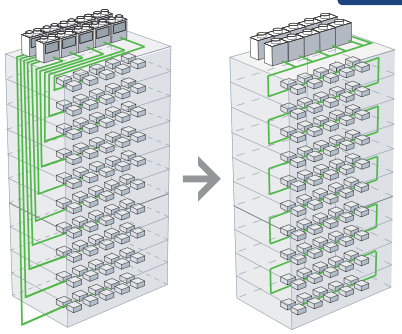
Can be transported in a small elevator

Simple signal line connection

J-II V-II VR-II

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-II

V-II VR-II

Number of connectable indoor units
3Ton : 1 to 6 units
4Ton : 1 to 8 units
5Ton : 1 to 9 units

Connectable indoor unit capacity range
50 % to 130 %

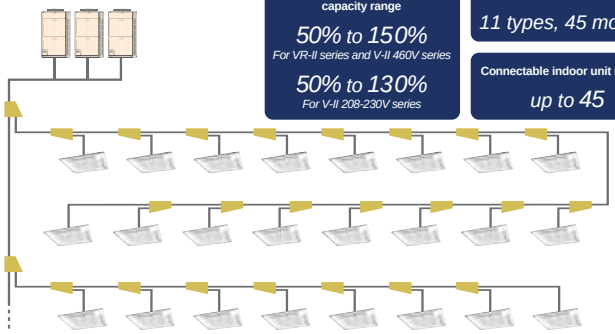
Compatible indoor unit
11 Types of Airstage indoor units
Ranging in size from 7 kBTU to 60 kBTU

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% or 130% indoor unit connectable capacity.

Connectable indoor unit capacity range
50% to 150%
For VR-II series and V-II 460V series
50% to 130%
For V-II 208-230V series

Wide variation indoor units
11 types, 45 models

Connectable indoor unit number
up to 45

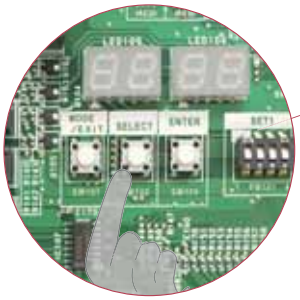


Note: When total indoor unit capacity is greater than 100%, individual indoor units will operate at a slightly lower capacity when maximum capacity is required.

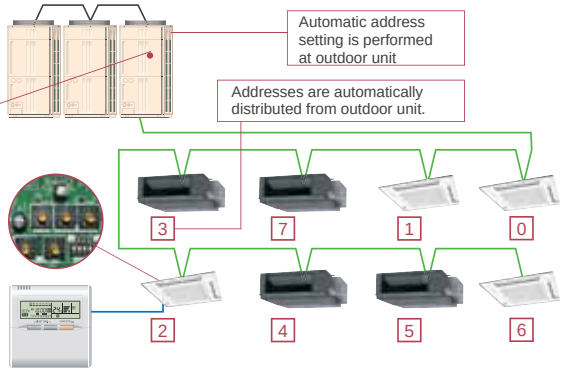
Automatic address setting

J-II V-II VR-II

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.

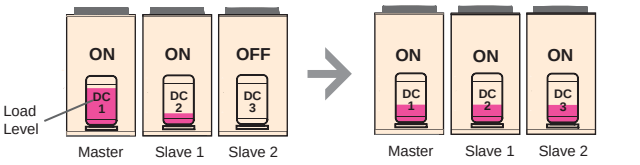
AIRSTAGE™

High Reliability

Refrigerant circulation control

V-II VR-II

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

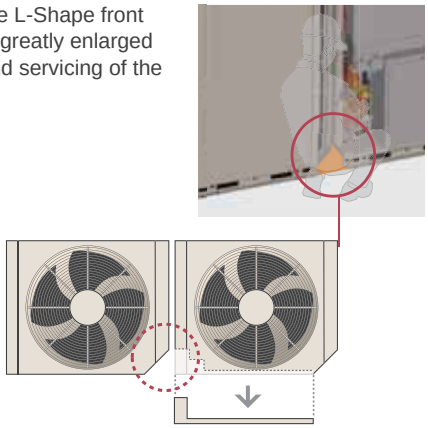


Unbalanced operation condition **Balanced operation condition**

Easy access

V-II VR-II

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

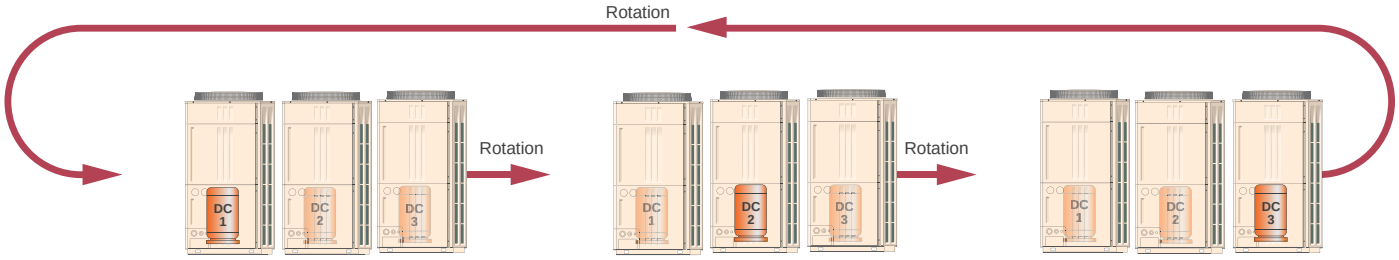


Life-extending operation

V-II VR-II

Lead outdoor unit rotation

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

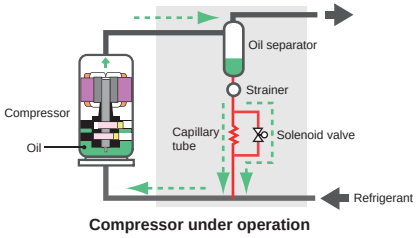


Note: The inverter compressors start in priority. Rotate operation is alternated by the start / stop timing of the compressors.

J-II V-II VR-II

Oil return design

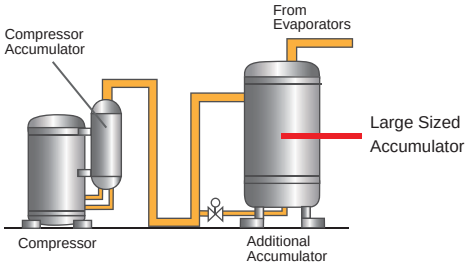
Individual oil separator and intelligent oil feedback operation logic are adopted. Oil return pipe of oil separator is connected directly to the compressor suction line through capillary and through solenoid valve.



Compressor under operation

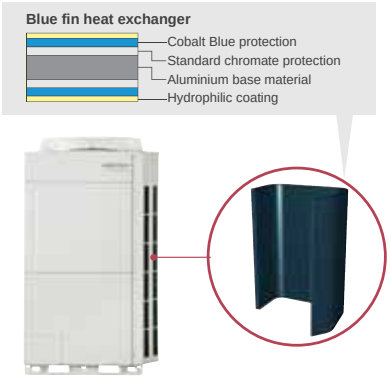
Liquid back flow protection

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.

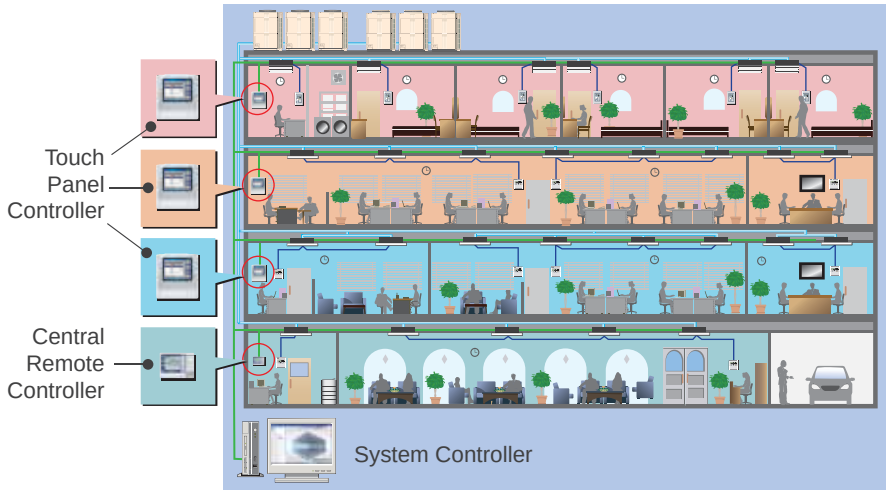


Comfort and Convenience

J-II V-II VR-II

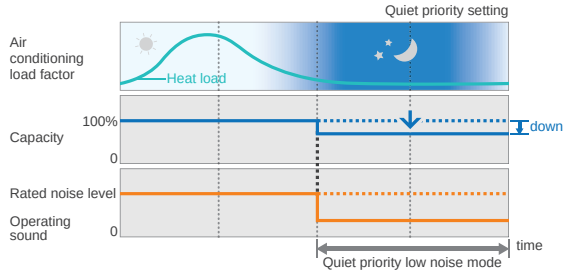
Centralized Control

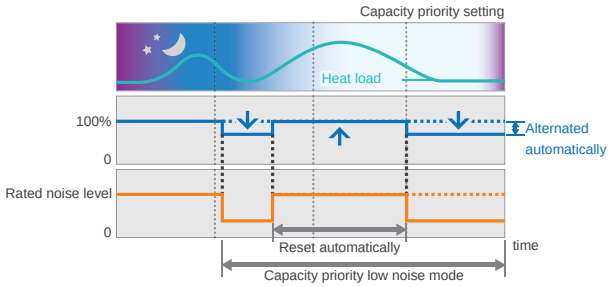
Fujitsu Airstage offers a variety of individual remotes and centralized controllers. Each provides users with a set of features to meet different needs.



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.



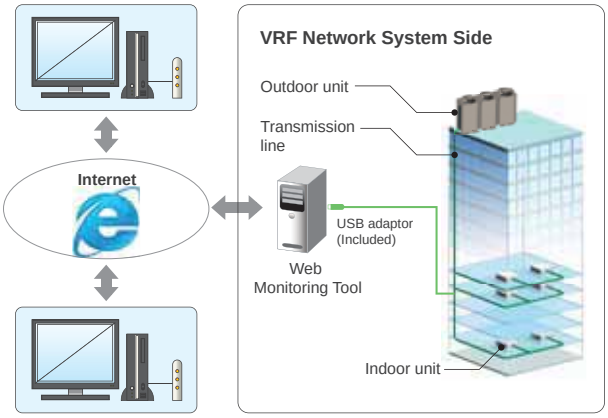


Low noise design:
Compressor noise has been significantly reduced by shielding the compressor compartment.

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.

AIRSTAGE™

Inverter Technology J-II V-II VR-II

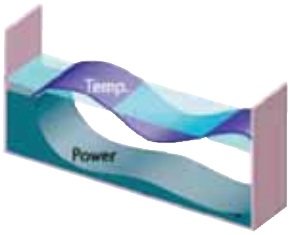
All inverter compressor

Constant Comfort and Energy Savings through Inverter Technology

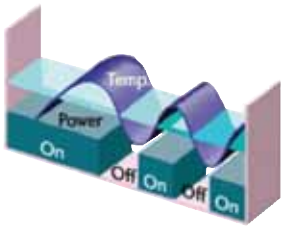
Airstage Outdoor Units include DC Inverter Control of compressors. Inverter control is like having cruise control for your heating and cooling system. DC twin rotary compressors only run as fast as they need to handle the cooling or heating demand. This provides smoother and more stable operation.

Inverter Benefits

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



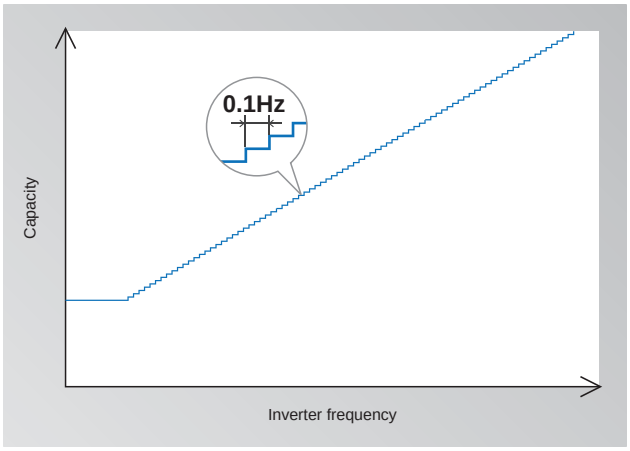
Inverter System



Conventional System

High efficiency compressor speed control

Comfortable space with small room temperature changes and little energy loss is created by 0.1Hz steps compressor speed control.



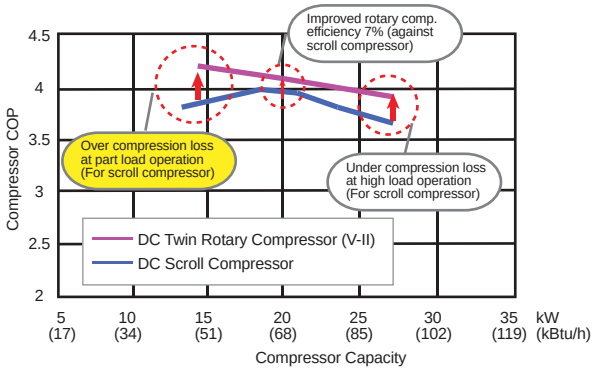
Large capacity DC inverter compressor

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.

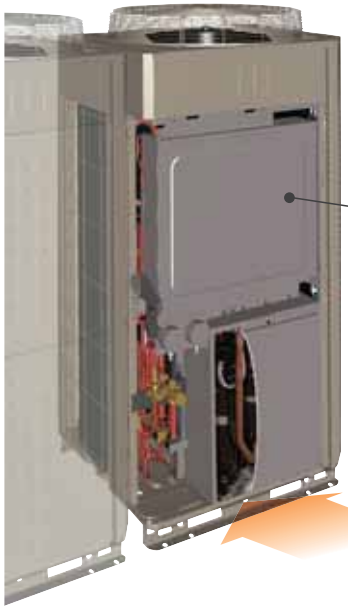


Easy Service & Maintenance

J-II V-II VR-II

Designed for easy service and maintenance

Inspection and replacement of main parts is easy 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.

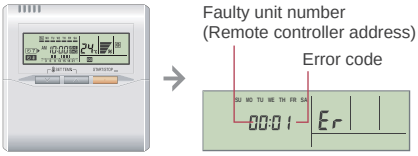
Easy-to-read 7-segment LED display which explains operational and trouble status

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

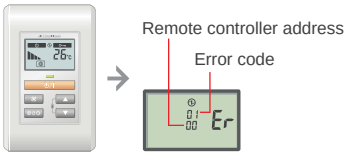
Error status can be checked easily via the indoor unit wired controller

An error code is displayed on a liquid crystal screen.

Wired Remote Controller

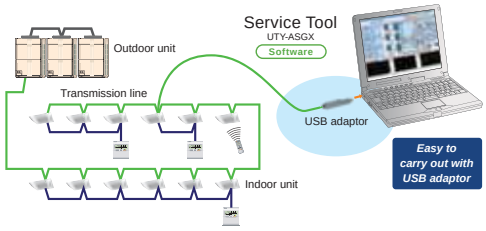


Simple Remote Controller



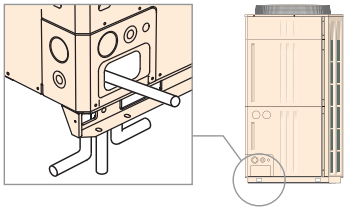
Trouble diagnosis by Service Tool

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



Flexible piping connection

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

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 units lineup

208-230V, 1-Phase

J-II Series

AOU36RLAVM	AOU48RLAVM	AOU60RLAVM

3-Phase Power Source: L**B**V = 208-230V, L**C**V = 460V

V-II Heat Pump

72,000 BTU (6 Tons) 21.1kW (8HP)	96,000 BTU (8 Tons) 28.1kW (10HP)	120,000 BTU (10 Tons) 35.2 kW (12HP)	144,000 BTU (12 Tons) 42.2kW (16HP)	168,000 BTU (14 Tons) 49.2kW (18HP)
AOUA72RLBV **AOUA72RLCV**	**AOUA96RLBV** **AOUA96RLCV**	**AOUA120RLCV**	**AOUA144RLBVG** **AOUA144RLCVG**	**AOUA168RLBVG** **AOUA168RLCVG**

VR-II Heat Recovery

72,000 BTU (6 Tons) 21.1kW (8HP)	96,000 BTU (8 Tons) 28.1kW (10HP)	120,000 BTU (10 Tons) 35.2 kW (12HP)	144,000 BTU (12 Tons) 42.2kW (16HP)	168,000 BTU (14 Tons) 49.2kW (18HP)
AOUA72TLBV **AOUA72TLCV**	**AOUA96TLBV** **AOUA96TLCV**	**AOUA120TLBV** **AOUA120TLCV**	**AOUA144TLBVG** **AOUA144TLCVG**	**AOUA168TLBVG** **AOUA168TLCVG**

Indoor units lineup

Capacity range (Btuh)	7,000	9,000	12,000	14,000	18,000
Compact Cassette[1]	AUUA7TLAV	AUUA9TLAV	AUUA12TLAV	AUUA14TLAV	AUUA18TLAV
Cassette[2]					AUUB18TLAV
Slim Compact Duct	ARUL7TLAV	ARUL9TLAV	ARUL12TLAV	ARUL14TLAV	ARUL18TLAV
Medium Static Pressure Duct					
High Static Pressure 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 BTU (16 Tons) 56.2kW (20HP) **AOUA192RLBVG** **AOUA192RLCVG**	216,000 BTU (18 Tons) 63.3kW (24HP) **AOUA216RLBVG** **AOUA216RLCVG**	240,000 BTU (20 Tons) 70.3kW (26HP) **AOUA240RLBVG** **AOUA240RLCVG**	264,000 BTU (22 Tons) 77.3kW (28HP) **AOUA264RLBVG** **AOUA264RLCVG**	288,000 (24 Tons) 84.3kW (30HP) **AOUA288RLBVG** **AOUA288RLCVG**
VR-II Heat Recovery	192,000 BTU (16 Tons) 56.2kW (20HP) **AOUA192TLBVG** **AOUA192TLCVG**	216,000 BTU (18 Tons) 63.3kW (24HP) **AOUA216TLBVG** **AOUA216TLCVG**	240,000 BTU (20 Tons) 70.3kW (26HP) **AOUA240TLBVG** **AOUA240TLCVG**	264,000 BTU (22 Tons) 77.3kW (28HP) **AOUA264TLBVG** **AOUA264TLCVG**	288,000 (24 Tons) 84.3kW (30HP) **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**	 **RUH96TLAV**
 ARUV24TLAV	 **ARUV30TLAV**	 **ARUV36TLAV**	 **ARUV48TLAV**	 **ARUV60TLAV**		
 ABUA24TLAV						
	 ABUA30TLAV	 **ABUA36TLAV**				
 ASUB24TLAV						

HEAT PUMP

AIRSTAGE™ J-II series

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

System Outline

High Energy Efficiency

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

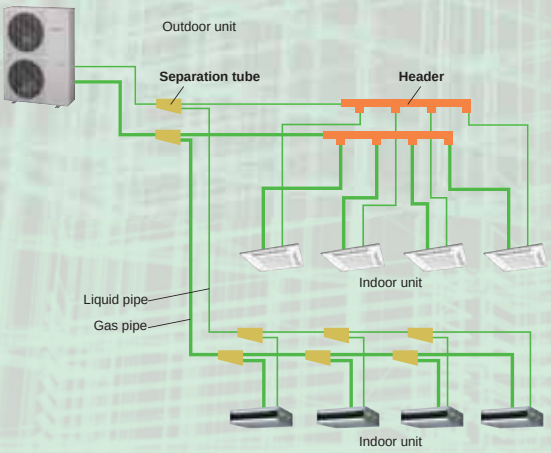
Flexible systems for small- and medium-size buildings air conditioning

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

Small Office

System configuration example

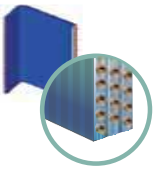
- This system is used for small and medium-sized buildings. 1 refrigerant system is used for each outdoor unit.
- Connection of multiple indoor units using separation tubes and headers.



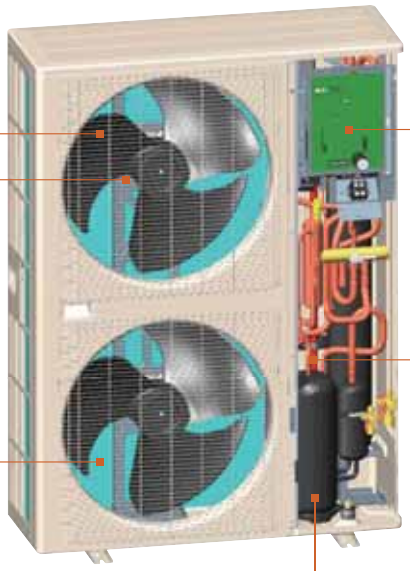
Advanced high efficiency technology

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

DC fan motor
Miniaturized, low noise, high efficiency, multi-stage DC fan motor is mounted.

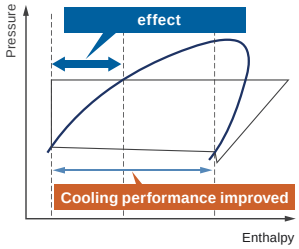


Large heat exchanger
Heat exchange performance is substantially improved by mounting of 3-row large heat exchanger.



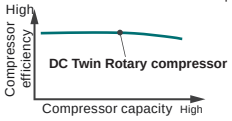
DC inverter control
Efficiency is improved by mounting of new active filter module.

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



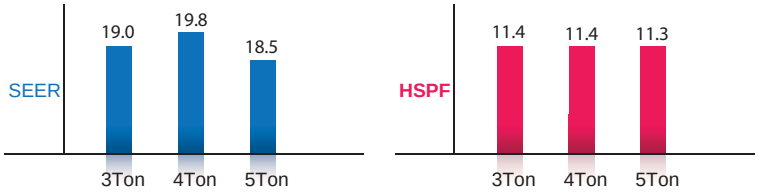
High efficiency compressor motor
Optimized refrigerant flow design
Highly accurate parts

DC twin rotary compressor
Efficiency in all load regions is good. Especially good performance from low to medium at normal operation.



Energy Efficiency

The J-II provides the highest efficiency for any single-phased VRF. * Non-Ducted



Optimum Comfort

Central Controller

Central Remote Controller

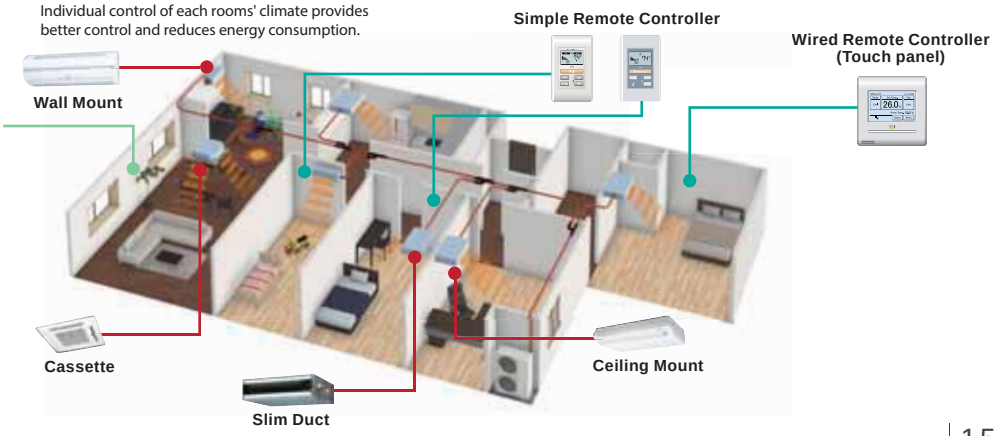
or

BMS system

Network converrtor for LonWorks®

BACnet® Gateway

Individual control of each rooms' climate provides better control and reduces energy consumption.



Specifications

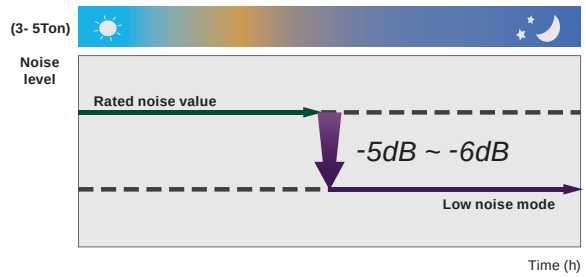
Nominal Tonage	Ton(s)	3	4	5
Model Name	**Units**	**AOU36RLAVM**	**AOU48RLAVM**	**AOU60RLAVM**
Unit Group Configuration		1X (AOU36RLAVM)	1X (AOU48RLAVM)	1X (AOU60RLAVM)
Indoor Unit Total Capacity		50% to 130%		
Maximum Connectable Indoor Units		6	8	9
CAPACITY				
Nominal Cooling Capacity	BTU/h [kW]	36,000 [10.55]	48,000 [14.07]	60,000 [17.58]
Cooling Power Input (Nominal)	kW	2.61	3.73	5.43
Nominal Heating Capacity	BTU/h [kW]	42,000 [12.31]	54,000 [15.83]	66,000 [19.34]
Heating Power Input (Nominal)	kW	3.13	3.97	5.17
ELECTRIC				
Electrical Power Requirements		208 / 230 VAC, 1-Phase, 60Hz		
Maximum Circuit Breaker	A	40		
Minimum Circuit Ampacity (MCA)	A	33	33	37
EFFICIENCY				
Cooling (Non-Ducted/Ducted)	EER	12.5 / 13.3	11.8 / 12.5	10.4 / 10.8
SEER (Ducted/Non Ducted)	SEER	17.0 / 19.0	18.1 / 19.8	16.5 / 18.5
HSPF (Ducted/Non Ducted)	HSPF	10.4 / 11.4	10.9 / 11.4	11.0 / 11.3
Heating 47° (Non-Ducted/Ducted)	COP	3.86 / 3.82	3.64 / 3.88	3.60 /3.64
TEMPERATURE				
Operating Temp. Cooling (DB)	°F [°C]	23 to 115 [-5 to 46]		
Operating Temp. Heating (DB)	°F [°C]	-4 to 70 [-20 to 21]		
PIPE				
Pipe Connection: Liquid	in [mm]	3/8 [9.52]	3/8 [9.52]	3/8 [9.52]
Pipe Connection: Discharge Gas	in [mm]	5/8 [15.88]	5/8 [15.88]	3/4 [19.05]
REFRIGERANT				
Refrigerant Type		R410A	R410A	R410A
Refrigerant Charge	lbs [kg]	10.6 [4.8]	11.7 [5.3]	11.7 [5.3]
FAN				
Fan Airflow Rate	CFM [m3/h]	3,649 [6,200]	3,767 [6,400]	4,827 [8,200]
Sound Pressure Levels (Cooling/Heating)	dB (A)	50 / 52	51 / 53	57/57
COMPRESSOR				
Compressor Type x Quantity		Rotary Inverter		
Compressor Motor Output	kW	3.75		
Compressor Crankcase Heater	W	25		
DIMMENSIONS / WEIGHT				
Dim.Net (HxWxD)	in [mm]	52-1/2 × 38-3/16 × 14-9/16 [1340 x 972 x 368]		
Net Weight	lbs [kg]	260 [118]		269 [122]

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)

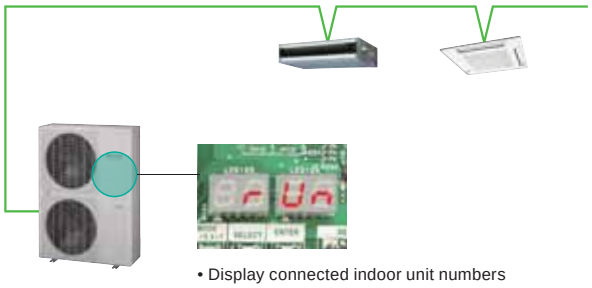
Low Noise Design

Low noise mode

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



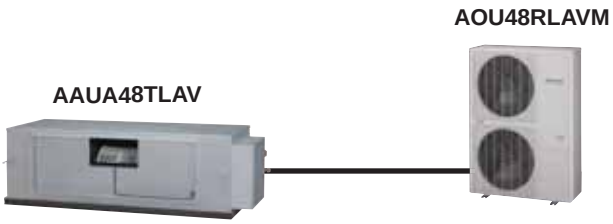
Connection Check Function



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

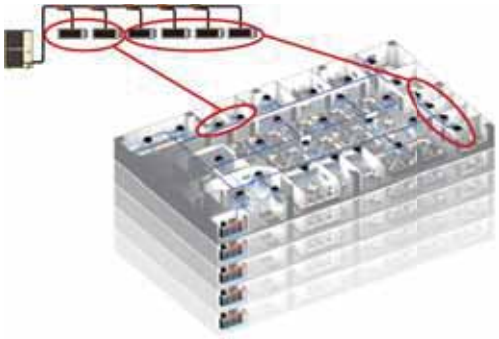
Connect to DOAS

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

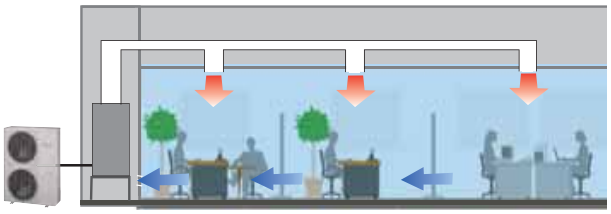


ASHRAE 15 and Refrigerant Concentration Limit

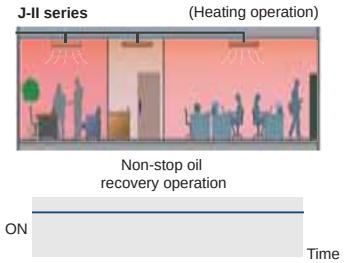
Combine all small spaces on smaller refrigerant circuits.



Easily Retrofits using Existing Ducts



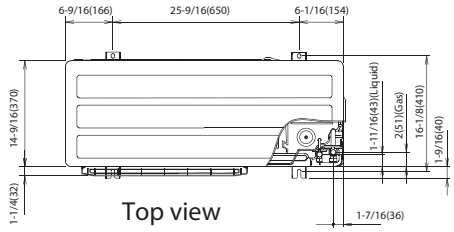
Non-stop Oil Recovery Operation

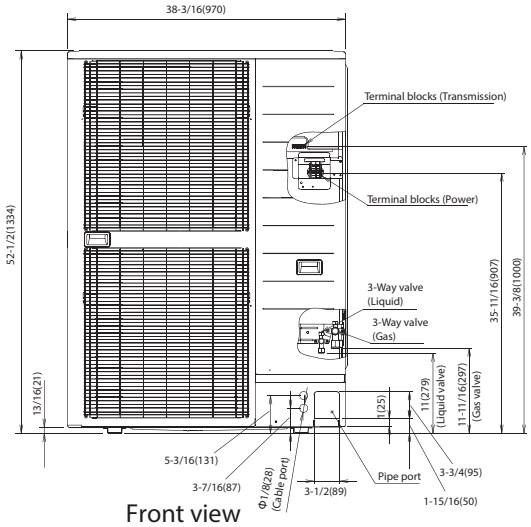


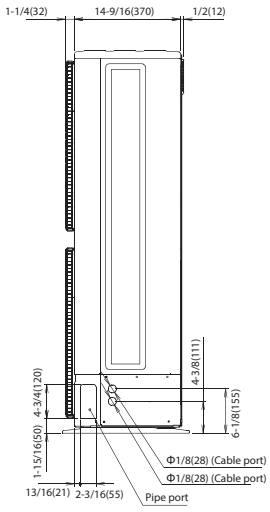
Dimensions

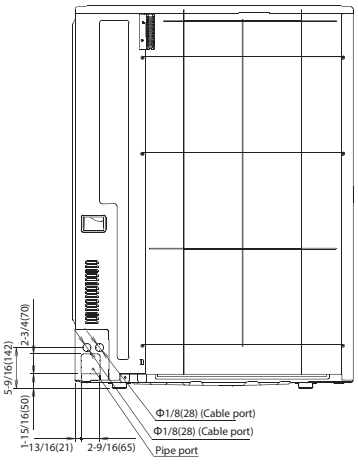
Models: AOU36RLAVM, AOU48RLAVM, AOU60RLAVM

(Unit : in. (mm))









HEAT PUMP

AIRSTAGE™ V-II series

Smart and cutting edge design
Extensive lineup from 6 to 24 Tons in 2 Ton increments
Connectable indoor unit capacity ratio up to 130%

System Outline

Annual cooling operation

Use annual cooling operation for rooms and other spaces that require constant temperature control throughout the year.

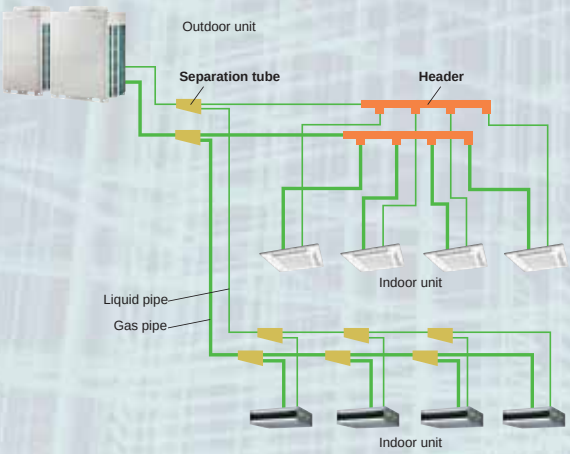
Easy installation and maintenance

Flexible communication method and piping connections make installation and maintenance easy even for large systems.

Large Office

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 boosted operation efficiency

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

*1. CFD = Computational Fluid Dynamics

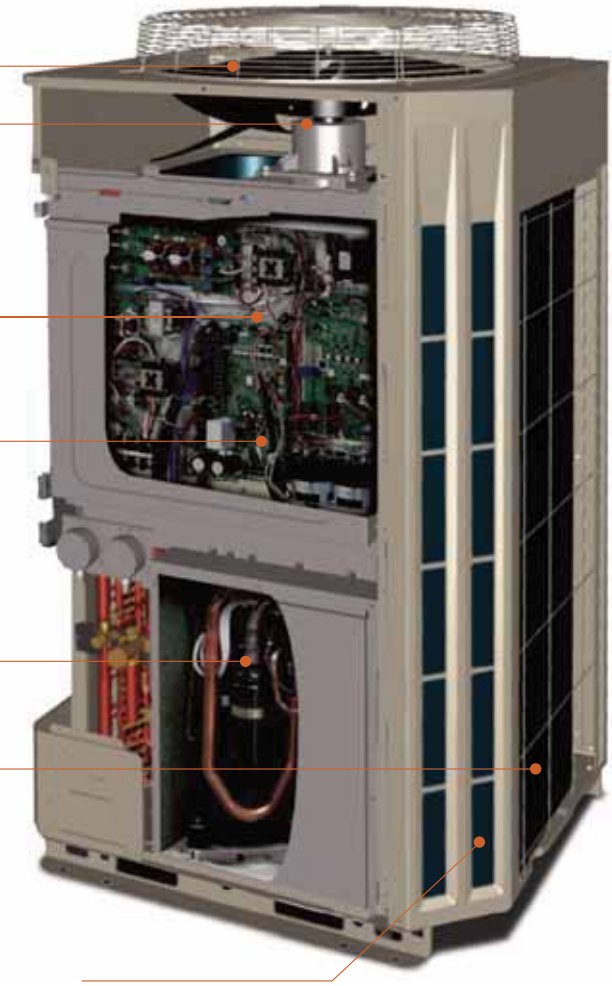
DC fan motor
Power consumption has been reduced by 25% compared to previous models by using a compact and high performance DC fan motor.

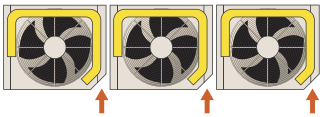
Subcool heat exchanger
High heat exchange efficiency is achieved by using an internal projection shape double pipe construction.

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

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

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



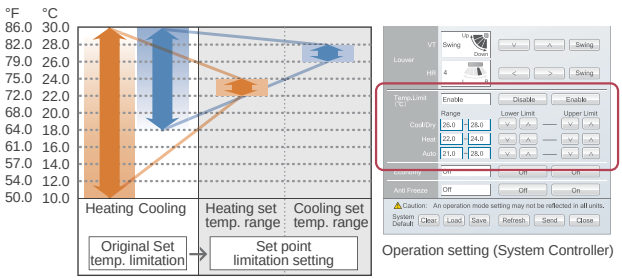


Front intake port
(corner cut includes air intake)

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

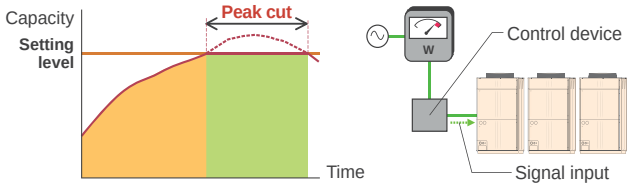
Room temperature set point limitation

The minimum and maximum temperature range can be set providing energy savings while considering the comfort of the occupants.



Peak cut operation

To reduce peak demand charges, this function sets a maximum value (maximum average power) for the entire air conditioning system during specified peak periods. Consumption is monitored using a field-installed power meter. During a Peak Cut condition, the heating or cooling delivered to each indoor unit will be adjusted by: shifting indoor set temperature, applying a forced off function to specified units, or by stopping the entire system.



AIRSTAGE™ V-II

Specifications

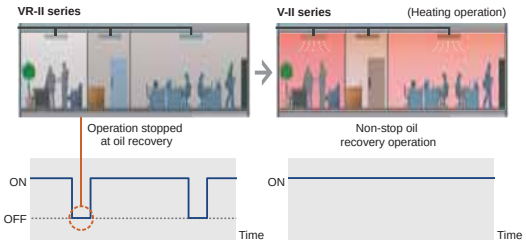
Nominal Tonage	Ton(s)	6	8	10	12
Model Name	Units	AOUA72RLBV / AOUA72RLCV	AOUA96RLBV / AOUA96RLCV	AOUA120RLCV	AOUA144RLBVG / AOUA144RLCVG
Unit Group Configuration		1X (AOUA72RLBV) / 1X (AOUA72RLCV)	1X (AOUA96RLBV) / 1X (AOUA96RLCV)	1X (AOUA120RLCV)	2X (AOUA72RLBV) / 2X (AOUA72RLCV)
Indoor Unit Total Capacity		50% to 130% / 50% to 150%			
Maximum Connectable Indoor Units		12 / 14	16	18	24 / 22
CAPACITY					
Nominal Cooling Capacity	BTU/h [kW]	72,000 [21.1]	96,000 [28.1]	120,000 [35.2]	144,000 [42.2]
Cooling Power Input (Nominal)	kW	5.38 / 5.37	7.64 / 7.67	9.86	10.8 / 11.8
Nominal Heating Capacity	BTU/h [kW]	81,000 [23.7]	108,000 [31.7]	135,000 [39.6]	162,000 [47.5]
Heating Power Input (Nominal)	kW	5.89 / 5.39	8.36 / 7.9	10.19	11.93 / 12.81
ELECTRIC					
Electrical Power Requirements		208 / 230 VAC, 3-Phase, 60Hz / 460 VAC, 3-Phase, 60Hz			
Maximum Circuit Breaker	A	50 / 25	50 / 25	30	2X(50/25)
Minimum Circuit Ampacity (MCA)	A	41 / 21	41 / 21	25	82 / 42
EFFICIENCY					
Cooling (Non-Ducted/Ducted)	EER	12.5 / 12.3	11.7 / 11.6 / 11.7 / 11.3	11.3 / 11.3	12.4 / 11 / 11.4 / 11.4
Cooling (Non-Ducted/Ducted)	IEER	21.7 / 18.2 / 24.1 / 20	20.8 / 17.8 / 23.6 / 20.2	23.8 / 20.1	19.5 / 14.6 / 22.2 / 20.4
Heating 47° (Non-Ducted/Ducted)	COP	3.76 / 3.64 / 4.06 / 3.64	3.55 / 3.47 / 3.72 / 3.6	3.61 / 3.49	3.68 / 3.46 / 3.44 / 3.44
TEMPERATURE					
Operating Temp. Cooling (DB)	°F [°C]	5 to 115 [-15 to 46]			23 to 115 [-5 to 46]
Operating Temp. Heating (DB)	°F [°C]	-4 to 70 [-20 to 21]			
PIPE					
Pipe Connection: Liquid	in [mm]	1/2 [12.70]			
Pipe Connection: Discharge Gas	in [mm]	7/8 [22.22]		1-1/8 [28.58]	
REFRIGERANT					
Refrigerant Type		R410A			
Refrigerant Charge	lbs [kg]	24.7 [11.2] / 25.79 [11.70]		26.01 [11.80]	2X(24.7[11.2] / 2X(25.79[11.70])
FAN					
Fan Airflow Rate	CFM [m3/h]	6533 [11,100]		7652 [13,000]	2X (6533 [11,100])
External Static Pressure (Max)	in.WG [Pa]	0.32 [80]			
Sound Pressure Levels (Cooling/Heating)	dB (A)	60/61 / 57/58	60/61 / 59/59	61 / 62	63/64 / 60/61
COMPRESSOR					
Compressor Type x Quantity		Rotary Inverter			2X Rotary Inverter
Compressor Motor Output	kW	3.9 / 7.5		11	2X3.9 / 2X7.5
Compressor Crankcase Heater	W	25 / 2X 35		2X35	2X25 / 2X(2X35)
DIMMENSIONS / WEIGHT					
Dim.Net (HxWxD)	in [mm]	66-9/16 x 36-5/8 x 30-1/8 [1,690 x 930 x 765]		66-9/16 × 48-13/16 ×30-1/8 [1,690 × 1240 × 765]	2X (66-9/16 x 36-5/8 x 30-1/8 [1,690 x 930 x 765])
Net Weight	lbs [kg]	490 [222] / 584 [265]		635 [288]	2X(490[222]) / 2X(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 (16.1°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.

Non-stop oil recovery operation

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

*: Not available on AIRSTAGE VR-II series.

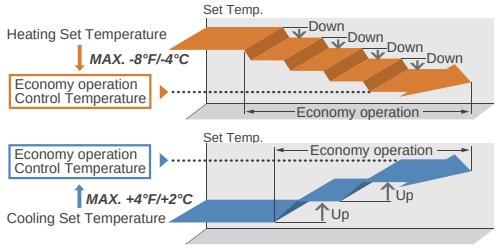


Off timer

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

Economy operation

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

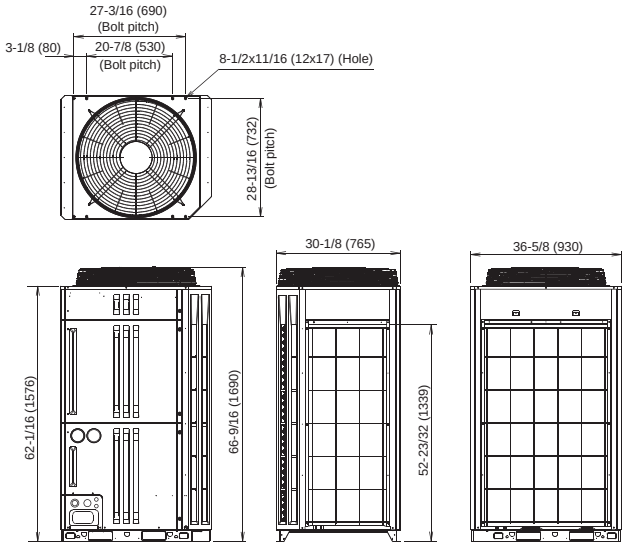


14	16	18	20	22	24
AOUA168RLBVG / AOUA168RLCVG	**AOUA192RLBVG / AOUA192RLCVG**	**AOUA216RLBVG / AOUA216RLCVG**	**AOUA240RLBVG / AOUA240RLCVG**	**AOUA264RLBVG / AOUA264RLCVG**	**AOUA288RLBVG / AOUA288RLBVG**
1X (AOUA72RLBV) + 1X (AOUA96RLBV) / 1X (AOUA72RLCV) + 1X (AOUA96RLCV)	2X (AOUA96RLBV) / 1X (AOUA72RLCV) + 1X (AOUA120RLCV)	3X (AOUA72RLBV) / 1X (AOUA96RLCV) + 1X (AOUA120RLCV)	2X (AOUA72RLBV) + 1X (AOUA96RLBV) / 2X (AOUA120RLCV)	1X (AOUA72RLBV) + 2X (AOUA96RLBV) / 1X (AOUA72RLCV) + 2X (AOUA96RLCV)	3X (AOUA96RLBV) / 3X (AOUA96RLCV)
50% to 130% / 50% to 150%					
29 / 26	31 / 30	32 / 34	35	42 / 41	45
168,000 [49.2]	184,000 [53.9] / 192,000 [56.2]	216,000 [63.3]	240,000 [70.3]	264,000 [77.4]	288,000 [84.4]
13.37 / 14.2	14.9 / 15.95	16.62 / 18.44	19.65 / 20.41	23.78 / 22.58	26.4 / 25.22
188,000 [55.1]	206,000 [60.4] / 216,000 [63.3]	242,000 [70.9] / 243,000 [71.2]	270,000 [79.1]	296,000 [86.8] / 297,000 [87.0]	324,000 [95]
14.27 / 14.05	15.79 / 14.91	17.67 / 19.03	20.83 / 21.86	23.24 / 23.36	26.13 / 26.23
208 / 230 VAC, 3-Phase, 60Hz / 460 VAC, 3-Phase, 60Hz					
2X(50/25)	2X(50) / 1X(25), 1X(30)	3X(50) / 1X(25), 1X(30)	3X(50) / 2X(30)	3X(50) / 3X(25)	3X(50) / 3X(25)
82 / 42	41 x 2 / 46	123 / 46	123 / 50	123 / 63	123 / 63
11.6 / 11.20 / 11 / 11	11.4 / 11.10 / 11.2 / 11.1	12 / 12 / 10.9 / 10.9	11.3 / 11.9 / 10.9 / 10.9	10.3 / 10.9 / 10.9 / 10.9	9.6 / 10 / 10.6 / 10.6
19.5 / 17.10 / 22.2 / 20	19.6 / 17.3 / 24.3 / 20.5	20.2 / 17.2 / 20 / 19.2	19.6 / 17.2 / 20.8 / 20.2	19 / 16.4 / 20.8 / 20.1	18 / 15.3 / 20.8 / 20.1
3.60 / 3.54 / 3.48 / 3.48	3.55 / 3.44 / 3.75 / 3.57	3.72 / 3.6 / 3.47 / 3.47	3.53 / 3.58 / 3.36 / 3.36	3.21 / 3.21 / 3.45 / 3.4	3.21 / 3.21 / 3.36 / 3.31
23 to 115 [-5 to 46]					
-4 to 70 [-20 to 21]					
5/8 [15.88]					3/4[19.05]
1-1/8 [28.58]		1-3/8 [34.92]			
R410A					
2X(24.7[11.2]/ 2X(25.79[11.70])	2X(24.7[11.2]) / 1X(25.79[11.70]) + 1X(26.01[11.80])	3X(24.7[11.2]) / 1X(25.79[11.70]) + 1X(26.01[11.80])	3X(24.7[11.2]) / 2X(26.01[11.80])	3X(24.7[11.2]) / 3X(25.79[11.70])	
2X (6533 [11,100])	2X(6533[11,100]) / 1X (6533 [11,100]) + 1X (7652 [13,000])	3X(6533[11,100]) / 1X (6533 [11,100]) + 1X (7652 [13,000])	3X(6533[11,100]) / 2X (7652 [13,000])	3X (6533 [11,100])	
0.32 [80]					
63/64 / 61 / 62	63/64 / 62 / 63	64/65 / 63/64	64/65	64/65 / 63/63	64/65 / 64/64
2X Rotary Inverter		3XRotary Inverter / 2XRotary Inverter		3X Rotary Inverter	
2X3.9 / 2X7.5	2X3.9 / 1X(7.5)+1X(11)	3X3.9 / 1X(7.5)+1X(11)	3X3.9 / 2X11	3X3.9 / 3X7.5	
2X25 / 2X(2X35)		3X25 / 2X(2X35)		3X25 / 3X(2X35)	
2X (66-9/16 x 36-5/8 x 30-1/8 [1,690 x 930 x 765])	2X(66-9/16 x 36-5/8 x 30-1/8 [1,690 x 930 x 765]) / 1X (66-9/16 x 36-5/8 x 30-1/8 [1,690 x 930 x 765]), 1X (66-9/16 × 48-13/16 ×30-1/8 [1,690 × 1240 × 765])	3X(66-9/16 x 36-5/8 x 30-1/8 [1,690 x 930 x 765]) / 1X (66-9/16 x 36-5/8 x 30-1/8 [1,690 x 930 x 765]), 1X (66-9/16 × 48-13/16 ×30-1/8 [1,690 × 1240 × 765])	3X(66-9/16 x 36-5/8 x 30-1/8 [1,690 x 930 x 765]) / 2X(66-9/16 × 48-13/16 ×30-1/8 [1,690 × 1240 × 765])	3X (66-9/16 x 36-5/8 x 30-1/8 [1,690 x 930 x 765])	
2X(490[222]) / 2X(584[265])	2X([490[222]) / 1X[584(265)] + 1X[635(288)]	3X([490[222]) / 3X(490[222])	3X([490[222]) / 2X(635[288])	3X([490[222]) / 3X(584[265])	

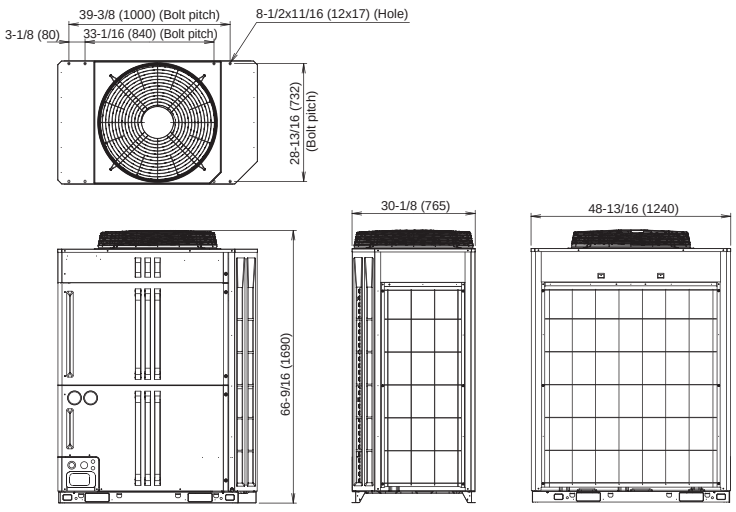
Dimensions

(Unit : in.(mm))

6, 8Tons (8, 10HP) : AOUA72RLBV / AOUA96RLBV
AOUA72RLCV / AOUA96RLCV



10Tons (12HP) : AOUA120RLCV



HEAT RECOVERY

AIRSTAGE™ VR-II series

Smart and cutting edge design
Extensive lineup from 6 to 24 Tons in 2 Ton increments
Connectable indoor unit capacity ratio up to 150%

System Outline

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 the rooms with large temperature differences, etc.

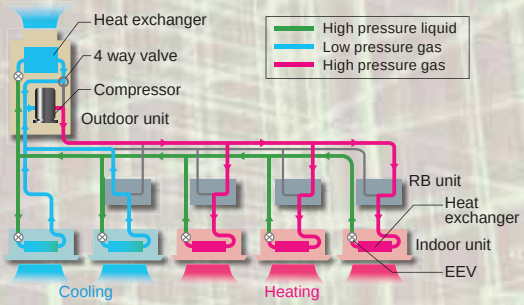
Annual cooling operation

Use annual cooling operation for the rooms and other spaces that require constant temperature control throughout the year.

Handles changes in temperature differences

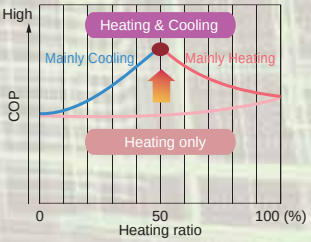
The operation mode can be freely changed when there are large temperature differences during the day, such as between seasons.

Large Building



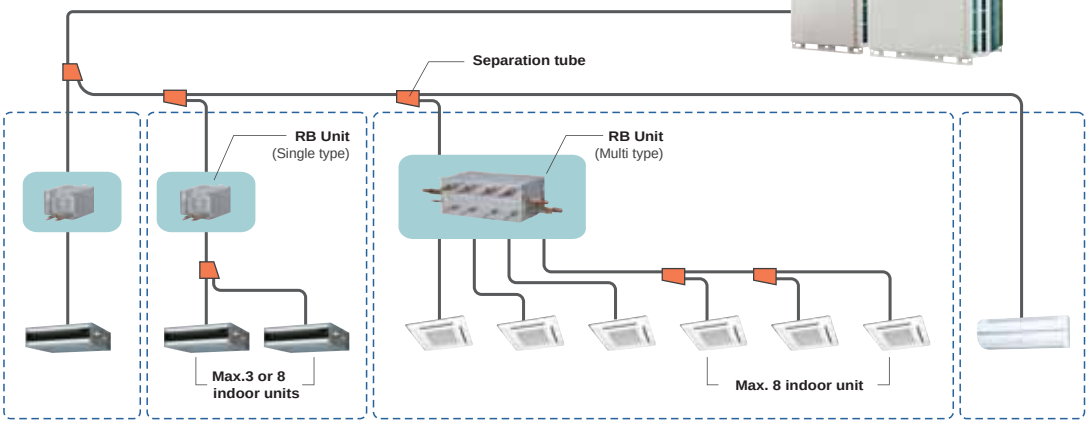
Our Heat recovery systems achieve high operating energy efficiency by drawing heat from the room to be cooled and transferring it as energy for rooms that are to be heated.

Energy saving of the operating systems has been improved as heating and cooling modes can be operated at the same time on the same air conditioning piping system.



Flexible piping connection

Refrigerant piping layout flexibility is made possible with the use of separation tubes and various RB Unit configurations.

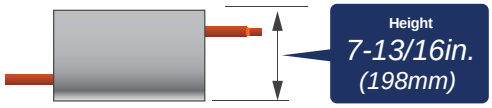


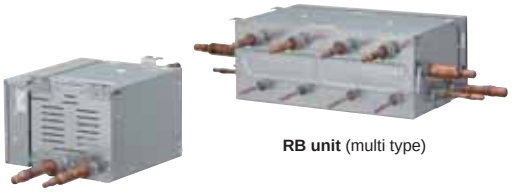
	Single connection	Group connection	Single connection	&	Group connection		No RB Unit required
Application	Cooling or heating	Cooling or heating	Cooling or heating	Cooling or heating	Cooling or heating	Cooling or heating	Cooling only

- 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).

Flexible installation of Refrigerant Branch (RB) unit

See specifications of RB units on Page 65.

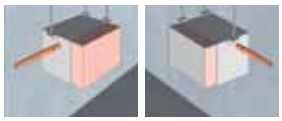




RB unit (multi type)

RB unit (single type)

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

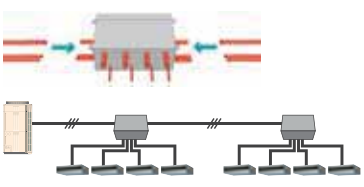


Installation possible from either side for freedom of the control box

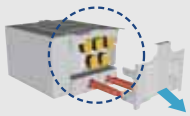
Installation possible on the upper-side for use in narrow space

Simple installation series connection design

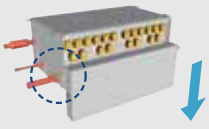
- 2-way connection
- Reducing overall piping length
- Up to 2 units can be connected in series.



Easy to maintain in a narrow space.

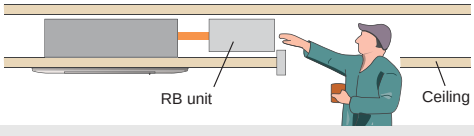


- Maintenance can be performed from the side.
- No top-access service needed.



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

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



AIRSTAGE™ VR-II

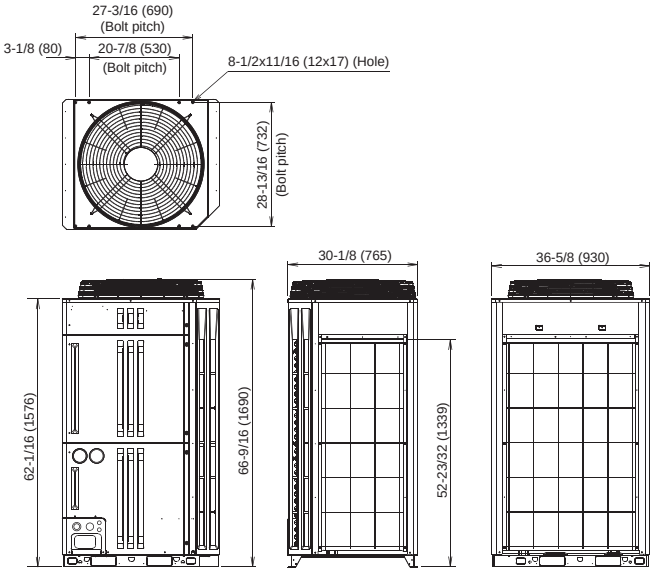
Specifications

Nominal Tonage	Ton(s)	6	8	10	12
Model Name	**Units**	**AOUA72TLBV / AOUA72TLCV**	**AOUA96TLBV / AOUA96TLCV**	**AOUA120TLBV / AOUA120TLCV**	**AOUA144TLBVG / AOUA144TLCVG**
Unit Group Configuration		1X (AOUA72TLBV) 1X (AOUA72TLCV)	1X (AOUA96TLBV) 1X (AOUA96TLCV)	1X (AOUA120TLBV) 1X (AOUA120TLCV)	2X (AOUA72TLBV) 2X (AOUA72TLCV)
Indoor Unit Total Capacity		50% to 150%			
Maximum Connectable Indoor Units		14	16	18	22
CAPACITY					
Nominal Cooling Capacity	BTU/h [kW]	72,000 [21.1]	96,000 [28.1]	120,000 [35.2]	144,000 [42.2]
Cooling Power Input (Nominal)	kW	5.31	7.56	9.75	11.69
Nominal Heating Capacity	BTU/h [kW]	81,000 [23.7]	108,000 [31.7]	135,000 [39.6]	162,000 [47.5]
Heating Power Input (Nominal)	kW	5.35	7.82	10.11	12.73
ELECTRIC					
Electrical Power Requirements		208 / 230 VAC, 3-Phase, 60Hz / 460 VAC, 3-Phase, 60Hz			
Maximum Circuit Breaker	A	50 / 25		60 / 30	2X (50) / 2X (25)
Minimum Circuit Ampacity (MCA)	A	41 / 21		50 / 25	82 / 42
EFFICIENCY					
Cooling (Non-Ducted/Ducted)	EER	12.5 / 12.3	11.7 / 11.3	11.3 / 11.3	11.4 / 11.4
Cooling (Non-Ducted/Ducted)	IEER	24.1 / 20	23.6 / 20.20	23.8 / 20.1	22.2 / 20.4
Heating 47° (Non-Ducted/Ducted)	COP	4.06 / 3.64	3.72 / 3.60	3.61 /3.49	3.44 / 3.44
SCHE (Non-Ducted/Ducted)	SCHE	30.1 / 24	26.5 / 25.5	25.4 / 25.8	22.2 / 22.2
TEMPERATURE					
Operating Temp. Cooling (DB)	°F [°C]	14 to 115 [-10 to 46]			
Operating Temp. Heating (DB)	°F [°C]	-4 to 70 [-20 to 21]			
PIPE					
Pipe Connection: Liquid	in [mm]	1/2 [12.70]			
Pipe Connection: Discharge Gas	in [mm]	5/8 [15.88]	3/4 [19.05]		7/8 [22.22]
Pipe Connection: Suction Gas	in [mm]	7/8 [22.22]		1-1/8 [28.58]	
REFRIGERANT					
Refrigerant Type		R410A			
Refrigerant Charge	lbs [kg]	26.01 [11.80]			2X (26.01 [11.80])
FAN					
Fan Airflow Rate	CFM [m3/h]	6533 [11,100]		7652 [13,000]	2X (6533 [11,100])
External Static Pressure (Max)	in.WG [Pa]	0.32 [80]			
Sound Pressure Levels (Cooling/Heating)	dB (A)	57 / 58	59 / 59	61 / 62	60 / 61
COMPRESSOR					
Compressor Type x Quantity		Rotary Inverter			2X Rotary Inverter
Compressor Motor Output	kW	7.5		11	2X 7.5
Compressor Crankcase Heater	W	2X 35			2X (2X 35)
DIMMENSIONS / WEIGHT					
Dim.Net (HxWxD)	in [mm]	66-9/16 x 36-5/8 x 30-1/8 [1,690 x 930 x 765]		66-9/16 × 48-13/16 ×30-1/8 [1,690 × 1,240 × 765]	2X (66-9/16 x 36-5/8 x 30-1/8 [1,690 x 930 x 765])
Net Weight	lbs [kg]	597 (271) / 609 (276)		639 (290) / 657 (298)	2X (597[271]) / 2X (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 (16.1°C) WB.
Pipe length : 25ft. (7.5 m); Height difference between outdoor unit and indoor unit : 0ft. (0 m).

Dimensions 6, 8Tons (8, 10HP) : AOUA72TLBV / AOUA96TLBV
AOUA72TLCV / AOUA96TLCV

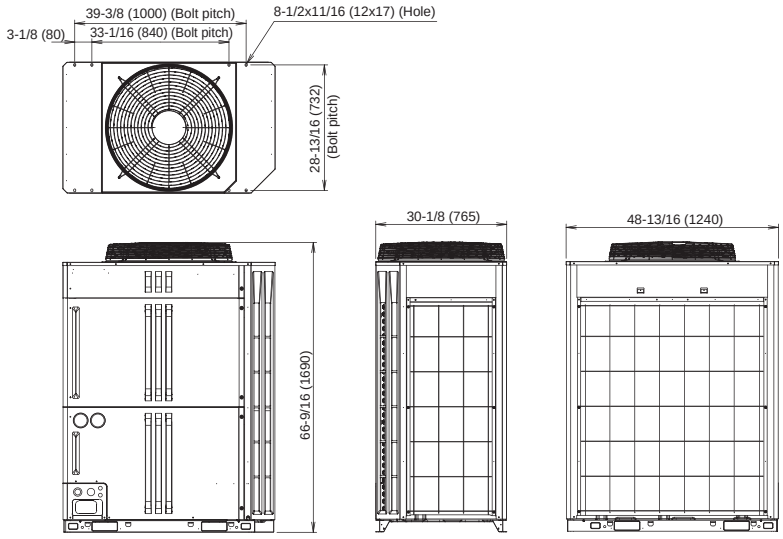
(Unit : in.(mm))



14	16	18	20	22	24
AOUA168TLBVG / AOUA168TLCVG	**AOUA192TLBVG / AOUA192TLCVG**	**AOUA216TLBVG / AOUA216TLCVG**	**AOUA240TLBVG / AOUA240TLCVG**	**AOUA264TLBVG / AOUA264TLCVG**	**AOUA288TLBVG / AOUA288TLCVG**
1X (AOUA72TLBV) + 1X (AOUA96TLBV) 1X (AOUA72TLCV) + 1X (AOUA96TLCV)	1X (AOUA72TLBV) + 1X (AOUA120TLBV) 1X (AOUA72TLCV) + 1X (AOUA120TLCV)	1X (AOUA96TLBV) + 1X (AOUA120TLBV) 1X (AOUA96TLCV) + 1X (AOUA120TLCV)	2X (AOUA120TLBV) 2X (AOUA120TLCV)	1X (AOUA72TLBV) + 2X (AOUA96TLBV) 1X (AOUA72TLCV) + 2X (AOUA96TLCV)	3X (AOUA96TLBV) 3X (AOUA96TLCV)
50% to 150%					
26	30	34	37	41	45
168,000 [49.2]	192,000 [56.2]	216,000 [63.3]	240,000 [70.3]	264,000 [77.4]	288,000 [84.4]
14.03	15.78	18.27	20.19	22.35	25
189,000 [55.1]	216,000 [63.3]	243,000 [71.2]	270,000 [79.1]	297,000 [86.8]	324,000 [95]
13.93	14.79	18.91	21.7	23.2	26.07
208 / 230 VAC, 3-Phase, 60Hz / 460 VAC, 3-Phase, 60Hz					
2X (50) / 2X (25)	1X (50) , 1X (60) / 1X (25) , 1X (30)		2X (60) / 2X (30)	3X (50) , 1X (60) / 3X (25)	3X (50) / 3X (25)
82 / 42	91 / 46		100 / 50	123 / 63	123 / 63
11 / 11	11.2 / 11.1	10.9 / 10.9	10.9 / 10.9	10.9 / 10.9	10.6 / 10.6
22.2 / 20	24.3 / 20.5	20 / 19.2	20.8 / 20.2	20.8 / 20.1	20.8 / 20.1
3.48 / 3.48	3.75 / 3.57	3.47 / 3.47	3.36 / 3.36	3.45 / 3.4	3.36 / 3.31
22 / 22	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]					
-4 to 70 [-20 to 21]					
5/8 [15.88]					3/4[19.05]
7/8 [22.22]		1-1/8 [28.58]			
1-1/8 [28.58]		1-3/8 [34.92]			
R410A					
2X (26.01 [11.80])				3X (26.01 [11.80])	
2X (6533 [11,100])	1X (6533 [11,100]) + 1X (7652 [13,000])		2X (7652 [13,000])	3X (6533 [11,100])	
0.32 [80]					
61 / 62	62 / 63	63 / 64	64 / 65	63 / 63	64 / 64
2X Rotary Inverter				3X Rotary Inverter	
2X 7.5	1X (7.5) + 1X (11)		2X 11	3X 7.5	
2X (2X 35)	2X (2X 35)			3X (2X 35)	
2X (66-9/16 x 36-5/8 x 30-1/8 [1,690 x 930 x 765])	1X (66-9/16 x 36-5/8 x 30-1/8 [1,690 x 930 x 765]), 1X (66-9/16 × 48-13/16 ×30-1/8 [1,690 × 1240 × 765])		2X (66-9/16 × 48-13/16 ×30-1/8 [1,690 × 1240 × 765])	3X (66-9/16 x 36-5/8 x 30-1/8 [1,690 x 930 x 765])	
2X (597 [271]) / 2X (609[276])	1X (597+639[271+290]) / 1X (609+657[276+298])		2X (639[290]) / 2X (657[298])	3X (597[271]) / 3X(609[276])	

10Tons (12HP) : AOUA120TLBV
AOUA120TLCV

(Unit : in.(mm))



Compact Cassette

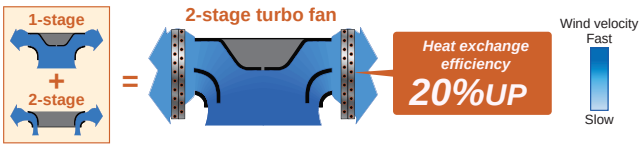
AUUA7TLAV
AUUA9TLAV
AUUA12TLAV
AUUA14TLAV
AUUA18TLAV
AUUA24TLAV

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

2-stage turbo fan

High efficiency design by 2 stage structure

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

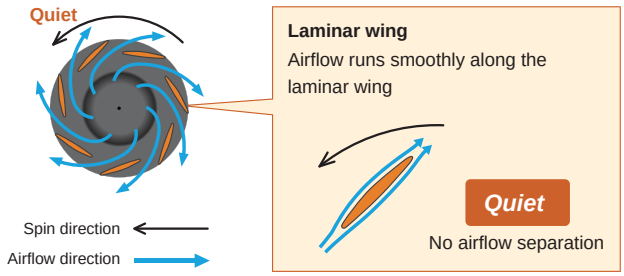


Quiet quality

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

Designed using Computational Fluid Dynamics (CFD) simulations.

Adoption of laminar wing

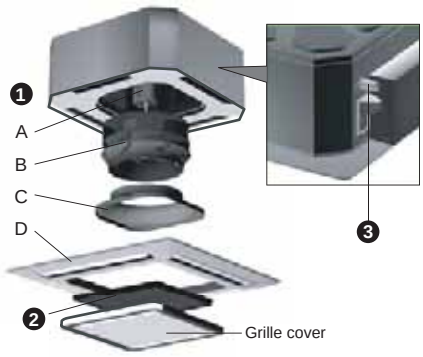


Specifications

Model name			AUUA7TLAV	AUUA9TLAV	AUUA12TLAV	AUUA14TLAV	AUUA18TLAV	AUUA24TLAV
Power source			Single phase, 208-230V , 60Hz					
Capacity	Cooling	Btu/h	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	Btu/h	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	25	25	29	35	36	84
Airflow rate	High	CFM (m³ / 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 x W x D)		in.(mm)	9-5/8 × 22-7/16 × 22-7/16 (245 × 570 × 570)					
Weight		lbs.(kg)	33 (15)				37 (17)	
Connection pipe diameter	Liquid (Flare)	in.(mm)	ø 1/4 (6.35)				ø 3/8 (9.52)	
	Gas (Flare)		ø 1/2 (12.70)				ø 5/8 (15.88)	
	Drain		ø 3/4 (19.05) [I.D] ; ø 1-1/16 (26.6) [O.D.] (Built-in condensate)					
Grille (sold separately)	Model name		UTG-CCGV					
	Dimensions (H x W x 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.

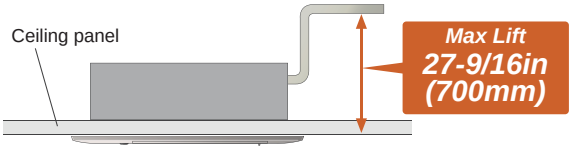
A : Fan motor B : 2-stage turbo fan
C : Bell-mouth D : Panel

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.

Condensate Drain Pump (Standard)



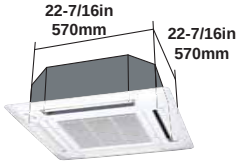
High ceiling mode

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**
7	8’ 10-5/16” (2.7)	–
9	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 24,000Btu model in the compact cassette category (Easy installation by taking off ceiling panel of 23-5/8 x 23-5/8in (600 x 600mm)



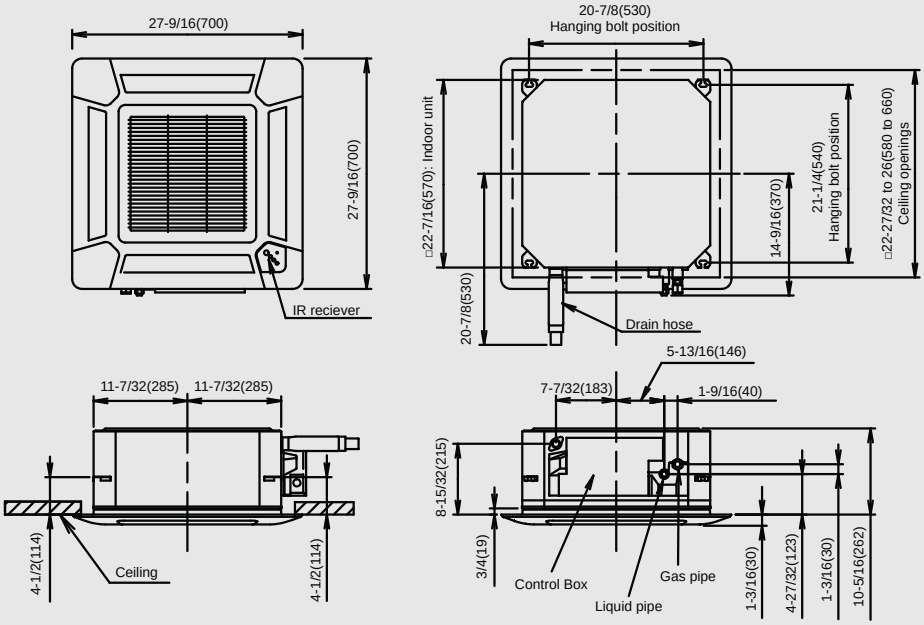
Optional parts

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

IR Receiver is standard for communicating with Optional Wireless Controller.

Dimensions Unit: In (mm)

Models: AUUA7 / AUUA9 / AUUA12 / AUUA14 / AUUA18 / AUUA24



AIRSTAGE™

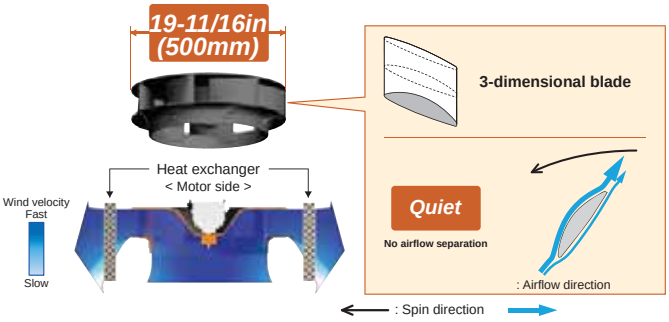
Cassette

AUUB18TLAV
AUUB24TLAV
AUUB30TLAV
AUUB36TLAV

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

High efficiency turbo fan with 3-dimensional blade

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

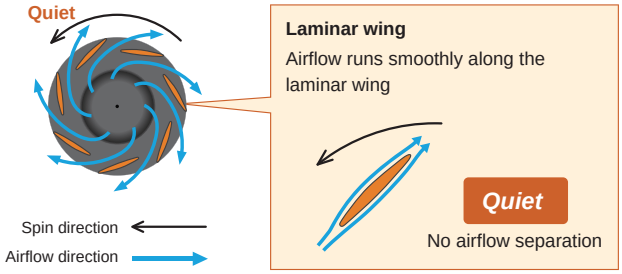


Quiet quality

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

Designed using Computational Fluid Dynamics (CFD) simulations

Adoption of laminar wing



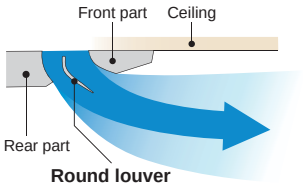
Specifications

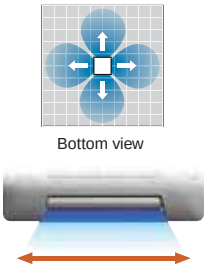
Model name			AUUB18TLAV	AUUB24TLAV	AUUB30TLAV	AUUB36TLAV
Power source			Single phase, 208-230V , 60Hz			
Capacity	Cooling	Btu/h	18,000	24,000	30,000	36,000
		kW	5.3	7.0	8.8	10.6
	Heating	Btu/h	20,000	27,000	34,000	40,000
		kW	5.9	7.9	10.0	11.7
Input power		W	39	46	59	80
Airflow rate	High	CFM (m³ / h)	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 x W x 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)		60 (27)	
Connection pipe diameter	Liquid (Flare)	in.(mm)	ø 3/8 (9.52)			
	Gas (Flare)		ø 5/8 (15.88)			ø 3/4 (19.05)
	Drain		ø 3/4 (19.05) [I.D.] ; ø 1-1/16 (26.6) [O.D.] (Built-in condensate)			
Grille (sold separately)	Model name		UTG-LCGV			
	Dimensions (H x W x 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.

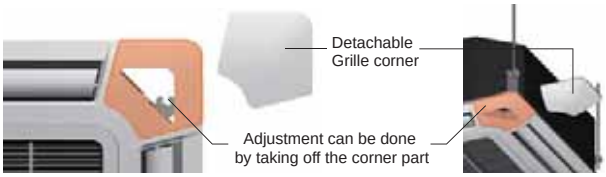
Improvement of the airflow distribution

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

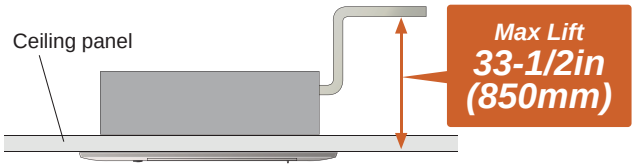




Hanger position can be adjusted after installation



Condensate Drain Pump (Standard)



High ceiling mode

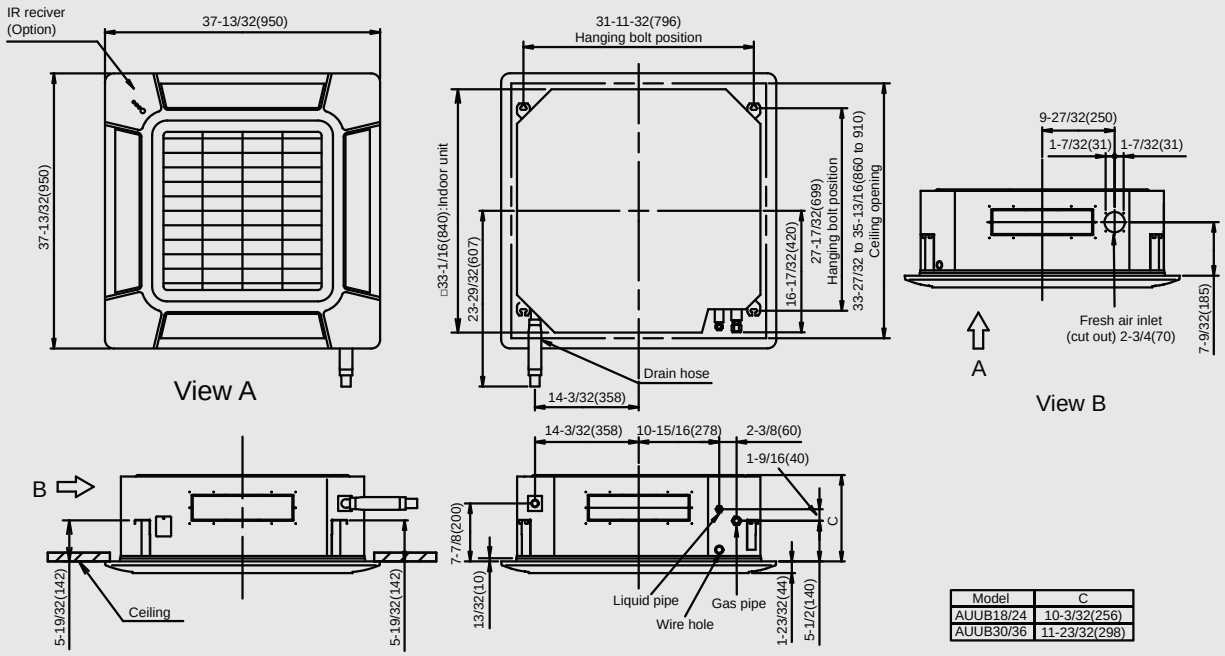
This cassette can be installed up to a height of 13’9”. (4.2m) (AUUB36).

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

Dimensions Unit: In (mm)



Model	C
AUUB18/24	10-3/32(256)
AUUB30/36	11-23/32(298)

Slim Compact Duct

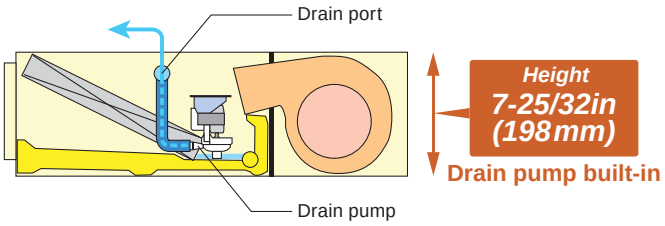
Models
(Drain pump internal model)

ARUL7TLAV
ARUL9TLAV
ARUL12TLAV
ARUL14TLAV
ARUL18TLAV

Slim design and wide range of
static pressure for flexible installation.

Slim design

This model has a slim design so it can be installed in narrow ceilings.

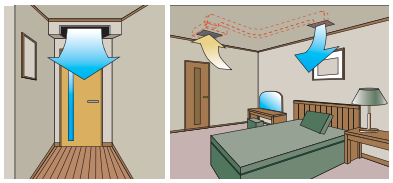


Note: Condensate drain pump cannot be used when unit is in vertical position.

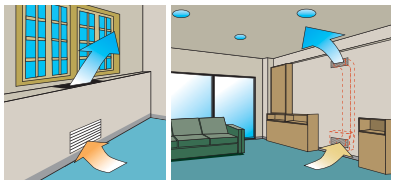
Flexible installation

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

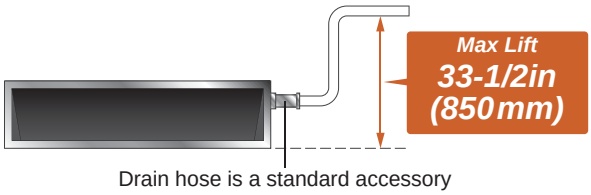


Specifications

Model name			ARUL7TLAV	ARUL9TLAV	ARUL12TLAV	ARUL14TLAV	ARUL18TLAV
Power source			Single phase, 208-230V , 60Hz				
Capacity	Cooling	Btu/h	7,500	9,500	12,000	14,000	18,000
		kW	2.2	2.8	3.5	4.1	5.3
	Heating	Btu/h	9,500	10,900	13,500	15,600	20,000
		kW	2.8	3.2	4.0	4.6	5.9
Input power		W	44	50	54	92	83
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 x W x 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)		40 (18)		49 (22)
Connection pipe diameter	Liquid (Flare)	in.(mm)	ø 1/4 (6.35)				ø 3/8 (9.52)
	Gas (Flare)		ø 1/2 (12.70)				ø 5/8 (15.88)
	Drain		ø 3/4 (19.05) [I.D.] ; ø 1-1/16 (26.6) [O.D.] (Built-in condensate)				

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 a standard accessory

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

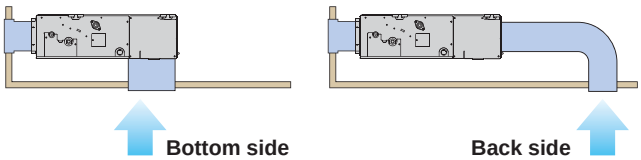
Selectable External Static Pressure

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

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

Air-intake

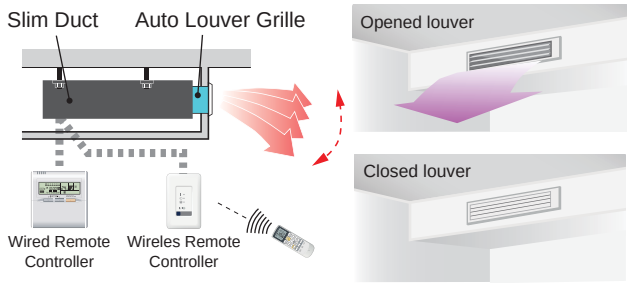
Air intake direction can be selected to match the installation site.



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 comfortable airflow and blend with any interior.

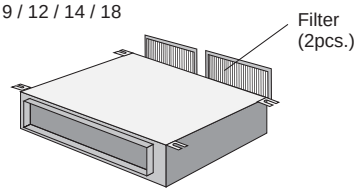


- Operation with indoor unit
- Up and down auto swing
- Auto-closing louver

See Page 59 for more details.

Filter (Included)

ARUL7 / 9 / 12 / 14 / 18



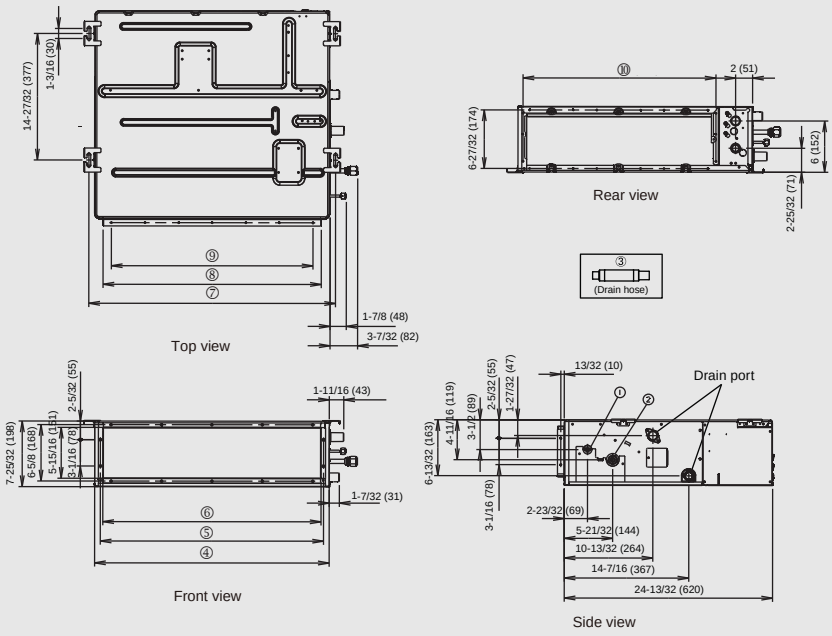
Minimum Height Requirement 9-3/4”

Optional parts

Remote Sensor Unit :	UTY-XSZX
IR Receiver Unit :	UTB-YWC
Auto Louver Grille Kit :	UTD-GXSA-W (for ARUL7/9/12/14RLAV)
	UTD-GXSB-W (for ARUL18RLAV)

Dimensions Unit: In (mm)

Models: ARUL7 / ARUL9 / ARUL12 / ARUL14 / ARUL18



			ARUL7, ARUL9, ARUL12, ARUL14	ARUL18
①	Refrigerant pipe flare connection	Liquid	ø 1/4 (6.35)	ø 3/8 (9.52)
②		Gas	ø 1/2 (12.70)	ø 5/8 (15.88)
③	Drain hose connection	Drain Hose	I.D. 31/32 (25), O.D. 1-1/4 (32)	
④	-		27-9/16 (700)	35-7/16 (900)
⑤	-		26-5/32 (664)	34-1/32 (864)
⑥	-		25-19/32 (650)	33-15/32 (850)
⑦	-		28-29/32 (734)	36-25/32 (934)
⑧	-		25-19/32 (650)	33-15/32 (850)
⑨	-		3-15/16 (100) x 6 = 23-5/8 (600)	3-15/16 (100) x 8 = 31-1/2 (800)
⑩	-		22-19/32 (574)	30-15/32 (774)

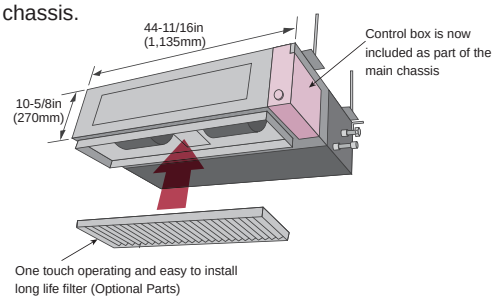
Medium Static Pressure Duct

ARUM24TLAV
ARUM30TLAV
ARUM36TLAV

Slim design allows for easy installation in tight locations as little as 10-5/8in (270mm) in height.

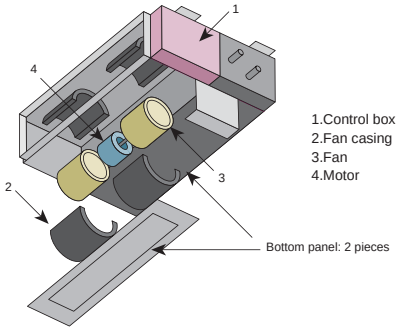
Slim & Compact design

In the case of bottom return air connection, not only does the indoor unit design allow for installation in a narrow ceiling space of up to 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.

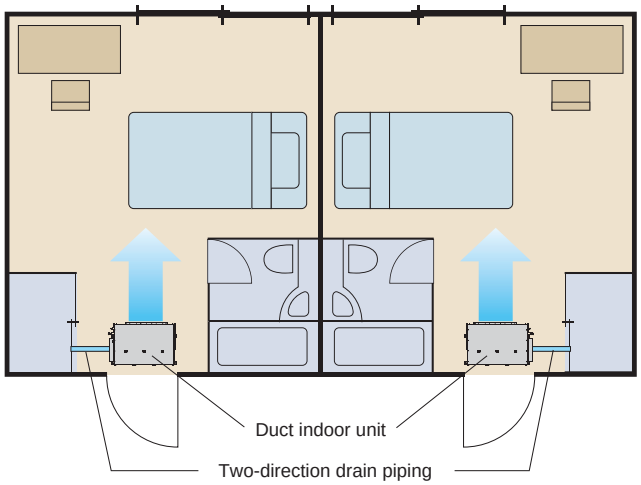


Specifications

Model name			ARUM24TLAV	ARUM30TLAV	ARUM36TLAV
Power source			1 Phase ~ 208/230V 60Hz		
Capacity	Cooling	Btu/h	24,000	30,000	36,000
		kW	7.0	8.8	10.6
	Heating	Btu/h	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)		
Standard static pressure			0.16 (40)		
Sound pressure level	High	dB(A)	36	40	41
	Med		31	33	35
	Low		28	28	29
Dimensions (H x W x D)		in.(mm)	10-5/16 × 44-11/16 × 27-9/16 (270 × 1,135 × 700)		
Weight		lbs.(kg)	86 (39)	86 (39)	86 (39)
Connection pipe diameter	Liquid (Flare)	in.(mm)	ø 3/8 (9.52)		
	Gas (Flare)		ø 5/8 (15.88)		ø 3/4 (19.05)
	Drain		ø 3/4 (19.05) [I.D.] ; ø 1-1/16 (26.6) [O.D.]		

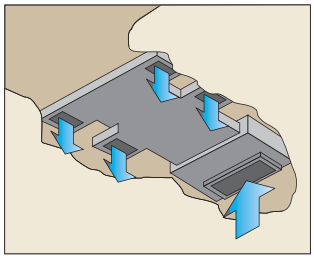
Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe 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.

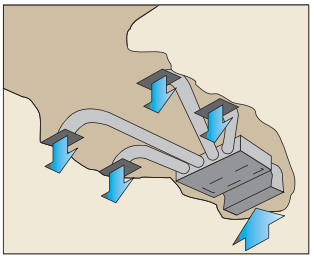
Two-direction drain piping



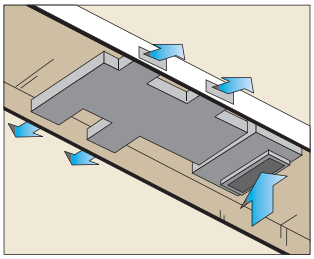
Installation styles

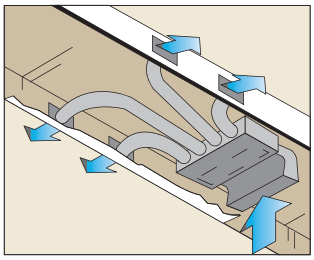
Embedded in Ceiling





Hanging from Ceiling





VR-II Models (TLAV) Use High Efficiency DC Fan Motors

Improved motor efficiency from previous model.

24 model

30/36 model

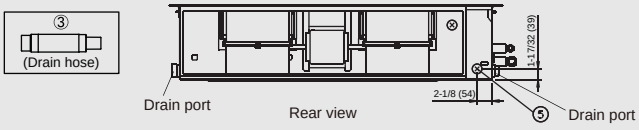
Optional parts

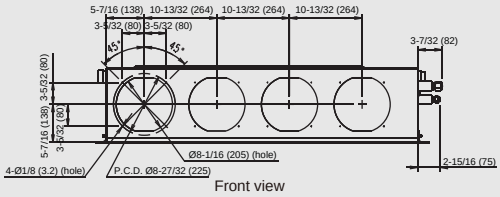
Remote Sensor Unit : (Temperature Sensor)	UTY-XSZX	Flange (Round) : (Set of 4)	UTD-RF204
Long Life Filter* :	UTD-LF25NA	IR Receiver Unit :	UTB-YWC
Flange (Rectangular) :	UTD-SF045T	Drain Pump Unit :	UTZ-PX1NBA

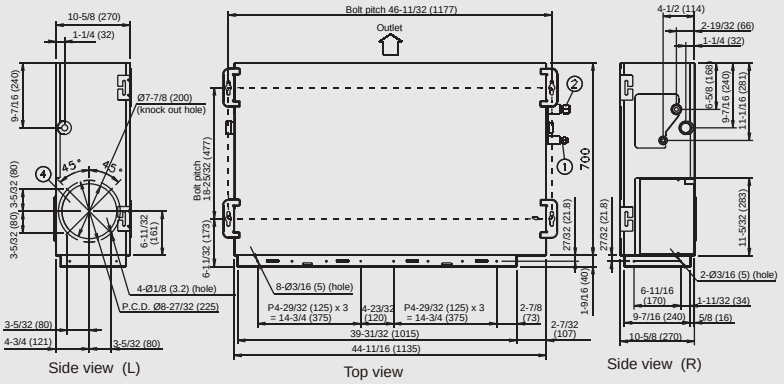
*Note, Duct models do not include a standard filter.

Dimensions Unit: In (mm)

Models: ARUM24 / ARUM30 / ARUM36







			ARUM24, ARUM30	ARUM36
①	Refrigerant pipe flare connection	Liquid	ø 3/8 (9.52)	ø 3/8 (9.52)
②		Gas	ø 5/8 (15.88)	ø 3/4 (19.05)
③	Drain hose connection	Drain Hose	I.D. 3/4 , O.D. 1-1/16	
④	-		7-7/8 (200)	
⑤	-		7/8 (23)	

AIRSTAGE™

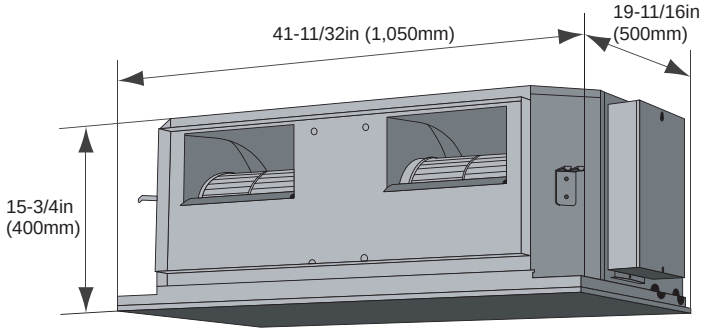
High Static Pressure Duct

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)

A compact and lightweight chassis has been developed to simplify installation and provide better flexibility for tight installation spaces.



97lb (44kg)

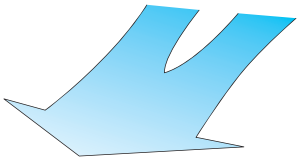
Specifications

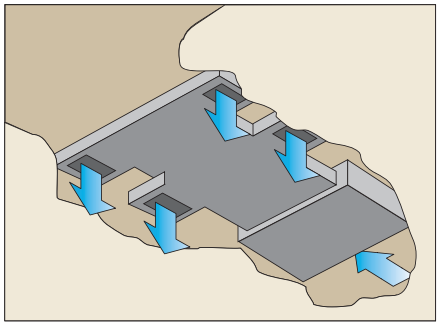
Model name			ARUH36TLAV	ARUH48TLAV	ARUH60TLAV
Power source			Single phase, 208-230V , 60Hz		
Capacity	Cooling	Btu/h	36,000	48,000	60,000
		kW	10.6	14.1	17.6
	Heating	Btu/h	40,000	54,000	67,000
		kW	11.7	15.8	19.6
Input power		W	496	752	806
Airflow rate	High	CFM m3/h	1,324 (2,250)	1,766 (3,000)	1,972 (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)	
Standard static pressure			0.40 (100)		
Sound pressure level	High	dB(A)	43	47	48
	Med		37	43	44
	Low		32	40	41
Dimensions (H x W x D)		in.(mm)	15-3/4 × 41-5/16 × 19-11/16 (400 × 1,050 × 500)		
Weight		lbs.(kg)	97 (44)	101 (46)	
Connection pipe diameter	Liquid (Flare)	in.(mm)	ø 3/8 (9.52)		
	Gas (Flare)		ø 3/4 (19.05)		
	Drain		ø 3/4 (19.05) [I.D.] ; ø 1-1/16 (26.6) [O.D.]		

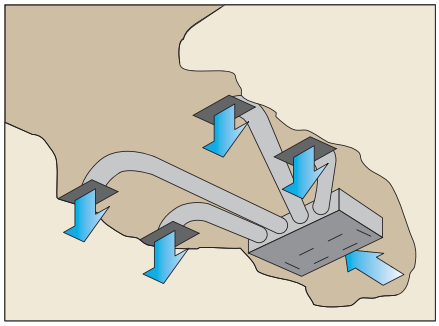
Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB,and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.
Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB,and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.
Pipe 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)



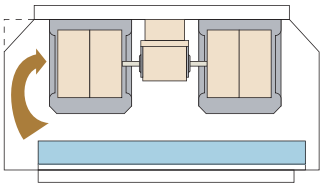


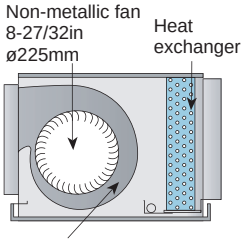


Low noise

Indoor unit

Efficient chassis design has enabled less turbulent air flow.
Non-metallic fan wheel and casing reduces fan noise.





Med. noise level
43dB(A)
(ARUH48)

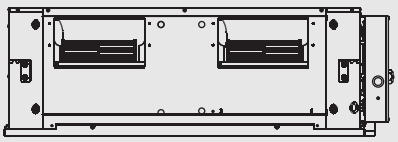
Optional parts

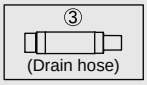
Long-Life Filter* :	UTD-LF60KA
IR Receiver Unit :	UTB-YWC
Remote Sensor Unit:	UTY-XSZX

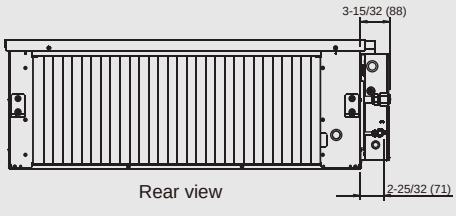
*Note, High Static Pressure Duct models do not include a standard filter.

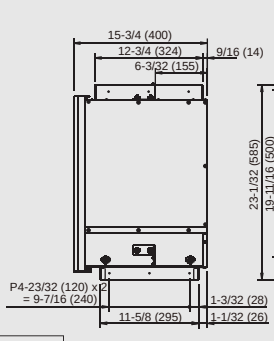
Dimensions Unit: In (mm)

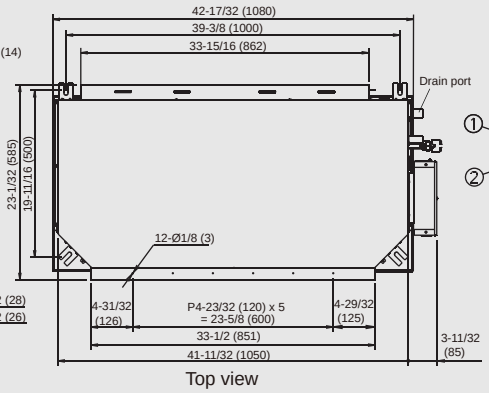
Models: ARUH36 / ARUH48 / ARUH60

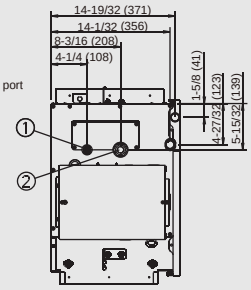

Front view




Rear view


Side view (L)


Top view


Side view (R)

			ARUH36, ARUH48, ARUH60
①	Refrigerant pipe flare connection	Liquid	ø 3/8 (9.52)
②		Gas	ø 3/4 (19.05)
③	Drain hose connection	Drain Hose	I.D. 31/32 (25) , O.D. 1-1/4 (32)

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

High Static Pressure Duct

ARUH72TLAV
ARUH96TLAV

ARUH72TLAV

ARUH96TLAV

One to One connection

One outdoor unit can connect one indoor unit - perfect for retail buildings, office buildings and even homes.

Connectable combination.

*Outdoor unit : AOUA72RL*V*
Indoor unit : ARUH72TLAV

*Outdoor unit : AOUA96RL*V*
Indoor unit : ARUH96TLAV

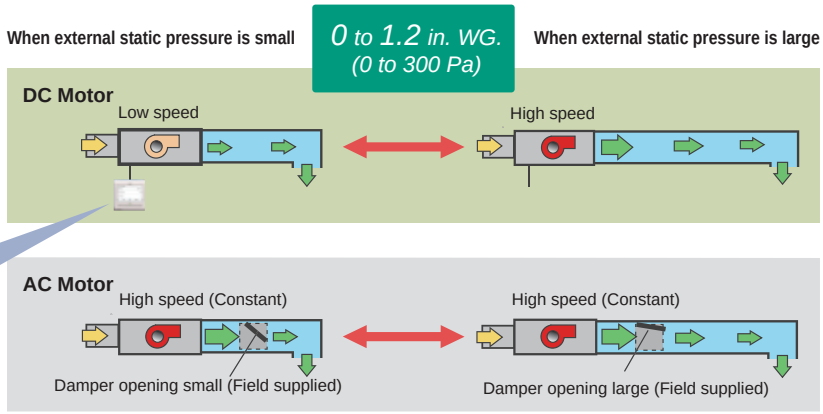
Specifications

Model name			ARUH72TLAV	ARUH96TLAV
Power source		V/ Ø/Hz	1 Phase ~ 208/230V 60Hz	
Cpacity	Cooling	Btu/h	72,000	96,000
		kW	21.1	28.1
	Heating	Btu/h	81,000	108,000
		kW	23.7	31.7
Input Power		W	618	838
Airflow Rate	High	CFM (m3/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)	Net	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	Net	lbs(kg)	203 (92)	231(105)
Connection pipe diameter	Liquid	in.(mm)	Ø1/2 (12.70)	
	Gas		Ø7/8 (22.22)	
	Drain hose		Ø3/4 (19.05) [I.D.]; Ø1-1/16 (26.6) [O.D]	

Energy Saving, Flexible Design Using a DC Motor

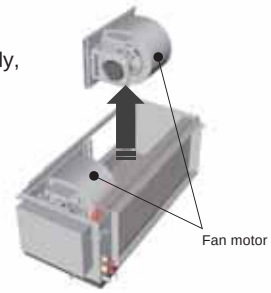
• Static pressure can be set from 0 to 1.2 in. WG (0 to 300Pa). Airflow can be adjusted to serve a variety of duct configurations. Static pressure can be set easily using the remote controller.

• High efficiency DC motors use less electricity and save money.



Easy service & maintenance

Left and right fan motors can be removed separately, simplifying service of the indoor unit.



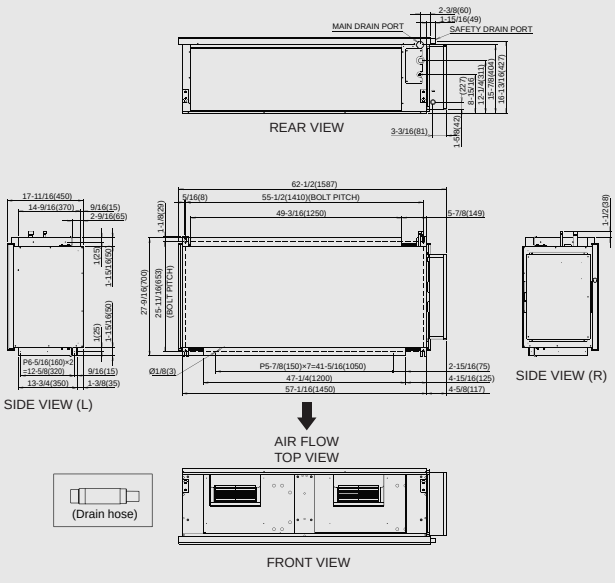
Optional parts

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

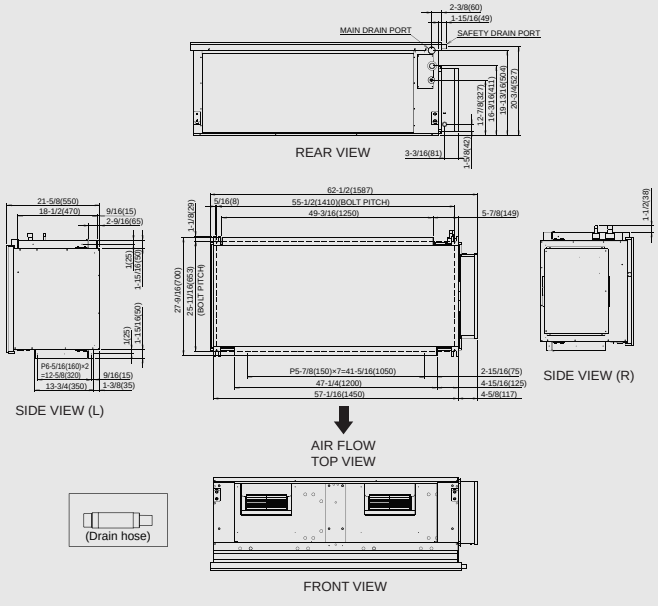
*Note, High Static Pressure Duct models do not include a standard filter.

Dimensions (Unit: In (mm))

Models: ARUH72TLAV



Models: ARUH96TLAV



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

AIRSTAGE™

Vertical Air Handler

Models

ARUV12TLAV
ARUV18TLAV
ARUV24TLAV
ARUV30TLAV
ARUV36TLAV
ARUV48TLAV
ARUV60TLAV

The Vertical Air Handler range of sizes is added to the Fujitsu VRF indoor line-up. These units are optimized to fit in narrow spaces.

ARUV12TLAV
ARUV18TLAV
ARUV24TLAV

ARUV30TLAV
ARUV36TLAV

ARUV48TLAV
ARUV60TLAV

Specifications

Model name			ARUV12TLAV	ARUV18TLAV	ARUV24TLAV	ARUV30TLAV	ARUV36TLAV	ARUV48TLAV	ARUV60TLAV
Power source		V/Ø/Hz	208-230 / 1 / 60	208-230 / 1 / 60	208-230 / 1 / 60	208-230 / 1 / 60	208-230 / 1 / 60	208-230 / 1 / 60	208-230 / 1 / 60
Capacity	Cooling	Btu/h	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	Btu/h	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	233	253	427	479	785
Airflow Rate	High	CFM (m3/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 0.7 (25 to 175)	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		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)	Net	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	Net	lbs(kg)	139 (63)	148 (67)	151 (69)	174 (79)	179 (81)	212 (96)	223 (101)
Connection pipe diameter	Liquid	in.(mm)	Ø1/4 (6.35)	Ø3/8 (9.52)	Ø3/8 (9.52)	Ø3/8 (9.52)	Ø3/8 (9.52)	Ø3/8 (9.52)	Ø3/8 (9.52)
	Gas		Ø1/2 (12.70)	Ø5/8 (15.88)	Ø5/8 (15.88)	Ø5/8 (15.88)	Ø3/4 (19.05)	Ø3/4 (19.05)	Ø3/4 (19.05)
	Drain hose		Ø3/4 (19.05) [I.D.]	Ø3/4 (19.05) [I.D.]	Ø3/4 (19.05) [I.D.]	Ø3/4 (19.05) [I.D.]	Ø3/4 (19.05) [I.D.]	Ø3/4 (19.05) [I.D.]	Ø3/4 (19.05) [I.D.]
Filter	MERV		3						
	Dimensions	in.(mm)	16 x 22-¼ x 1 (406 x 565 x 25)			20 x 22-¼ x 1 (508 x 565 x 25)		22 x 22 x 1 (559 x 559 x 25)	

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 200 Pa)

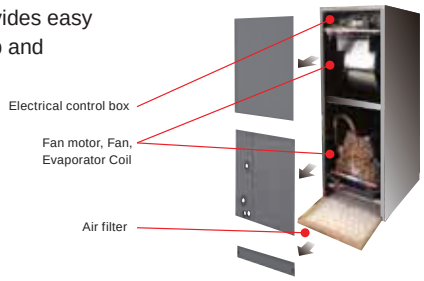
*Except ARUV12TLAV
(0.1 to 0.7 in.WG)
(25 to 175 Pa).

Makes the Fujitsu Airstage platform an even more flexible solution.

Capacity class (Btu/h)						
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
17-¾" x 23-¾"

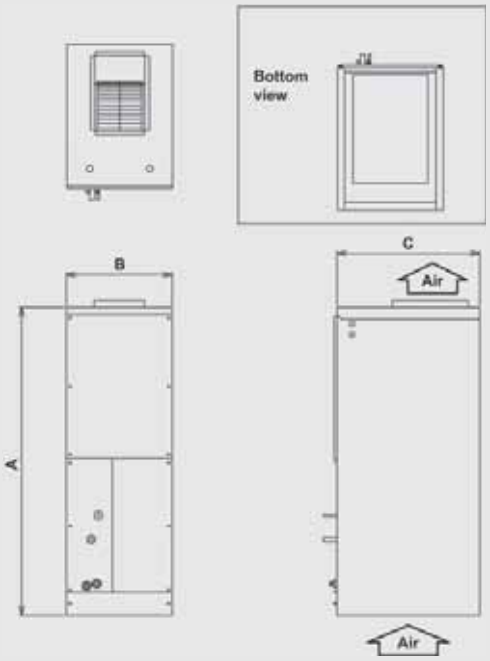
ARUV30, 36
22-¼" x 23-¾"

ARUV48, 60
25-⅛" x 23-¾"

Dimensions (Unit: In (mm))

Models: ARUV12TLAV
ARUV18TLAV
ARUV30TLAV
ARUV36TLAV
ARUV48TLAV
ARUV60TLAV

	ARUV12 / 18 / 24TLAV	ARUV30 / 36TLAV	ARUV48 / 60TLAV
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. This type suits many room designs.

Flexible installation

Example of floor installation

Floor console

Example of ceiling installation

Under ceiling

Specifications

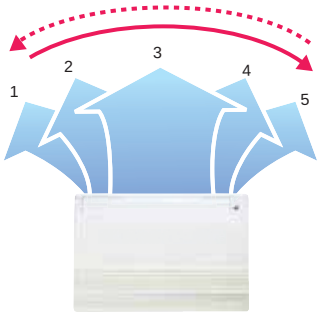
Model name			ABUA12TLAV	ABUA14TLAV	ABUA18TLAV	ABUA24TLAV
Power source			Single phase, 208-230V , 60Hz			
Capacity	Cooling	Btu/h	12,000	14,000	18,000	24,000
		kW	3.5	4.1	5.3	7.0
	Heating	Btu/h	13,500	15,600	20,000	27,000
		kW	4.0	4.6	5.9	7.9
Input power		W	30	42	74	99
Airflow rate	High	CFM (m^3 / h)	388 (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 x W x D)		in.(mm)	7-13/16 × 39 × 25-13/16 (199 × 990 × 655)			
Weight		lbs.(kg)	55 (25)	57 (26)		60 (27)
Connection pipe diameter	Liquid (Flare)	in.(mm)	ø 1/4 (6.35)		ø 3/8 (9.52)	
	Gas (Flare)		ø 1/2 (12.70)		ø 5/8 (15.88)	
	Drain		ø 3/4 (19.05) [I.D.] ; ø 1-1/16 (26.6) [O.D.]			

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.

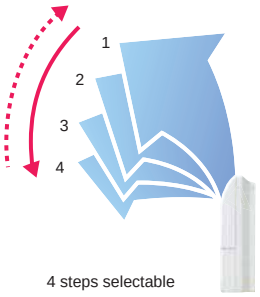
Double auto swing

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

RIGHT and LEFT SWING



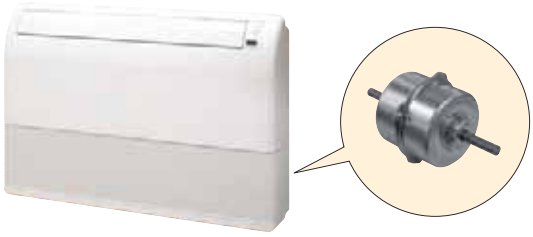
UP and DOWN SWING



4 steps selectable

High power DC fan motor

- High power
- Wide rotation range
- High efficiency



Super vane

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

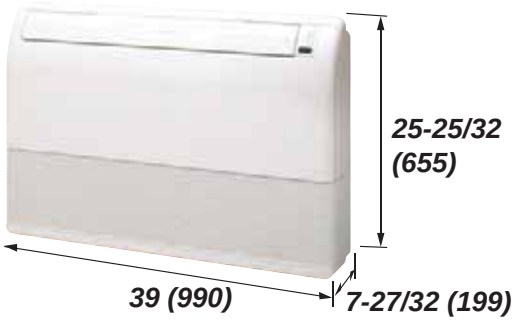
Auto-closing louver

When operation is stopped, the louvers will automatically close.

Compact design

Symmetrical, slim and compact design.

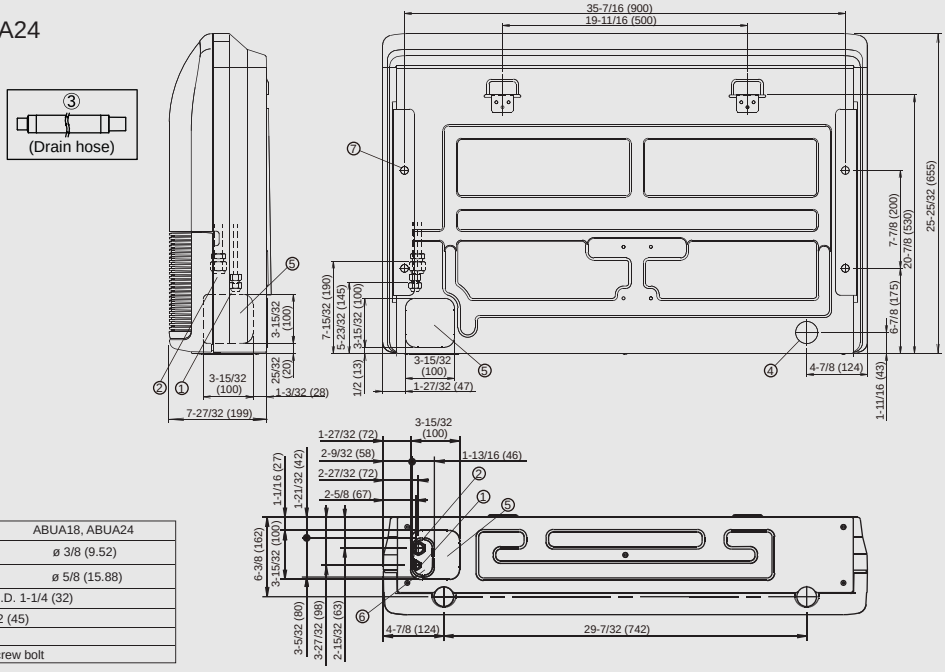
Unit : in (mm)



Note: IR Receiver is standard for communicating with Optional Wireless Controller.

Dimensions Unit: In (mm)

Models: ABUA12 / ABUA14 / ABUA18 / ABUA24



			ABUA12, ABUA14	ABUA18, ABUA24
①	Refrigerant pipe flare connection	Liquid	ø 1/4 (6.35)	ø 3/8 (9.52)
②		Gas	ø 1/2 (12.70)	ø 5/8 (15.88)
③	Drain hose connection	Drain Hose	I.D. 31/32 (25), O.D. 1-1/4 (32)	
④	Knock out hole	Drain Outlet	ø 1-25/32 (45)	
⑤⑥			-	
⑦	Hole for lifting bolt	-	Use M10 screw bolt	

AIRSTAGE™

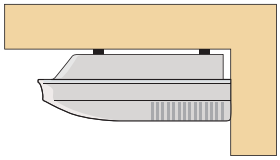
Ceiling

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.

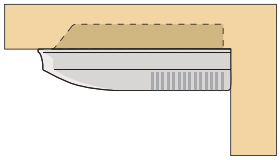
Installation

Open



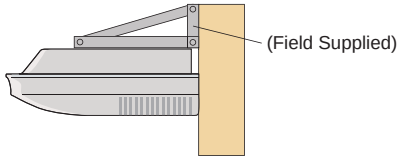
General installation pattern which suspends the indoor unit from the ceiling.

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.

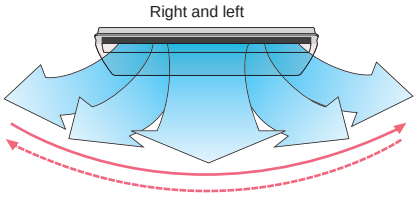
Specifications

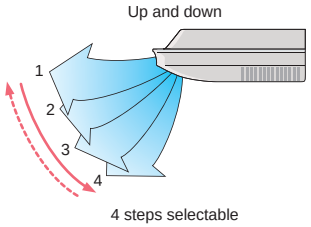
Model name			ABUA30TLAV	ABUA36TLAV
Power source			Single phase, 208-230V , 60Hz	
Capacity	Cooling	Btu/h	30,000	36,000
		kW	8.8	10.6
	Heating	Btu/h	34,000	40,000
		kW	10.0	11.7
Input power		W	66	85
Airflow rate	High	CFM (m^3/h)	959 (1,630)	995 (1,690)
	Med		806 (1,370)	824 (1,400)
	Low		671 (1,140)	689 (1,170)
Sound pressure level	High	dB(A)	42	45
	Med		38	38
	Low		33	34
Dimensions (H x W x 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)	ø 3/8 (9.52)	ø 3/8 (9.52)
	Gas (Flare)		ø 5/8 (15.88)	ø 3/4 (19.05)
	Drain		ø 3/4 (19.05) [I.D.] ; ø 1-1/16 (26.6) [O.D.]	

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.

Double auto swing and wide airflow

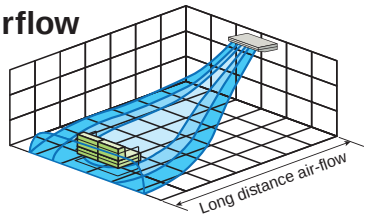
Auto airflow direction and auto swing





Quiet, powerful airflow

Powerful airflow ensures comfort to every corner of a large room.



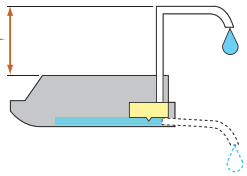
Slim & compact design

Height 9-7/16in (240mm)

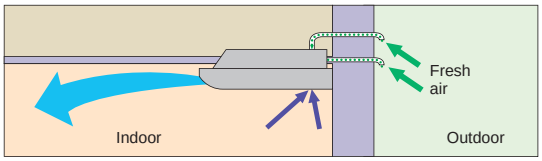
Condensate drain pump (Optional)

Optional drain lift-up mechanism allows flexible installation.

Max Lift 19-11/16in (500mm)

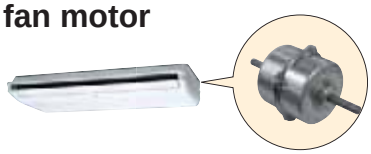


Fresh air intake



High power DC fan motor

- High power
- Wide rotation range
- High efficiency



Air filter

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

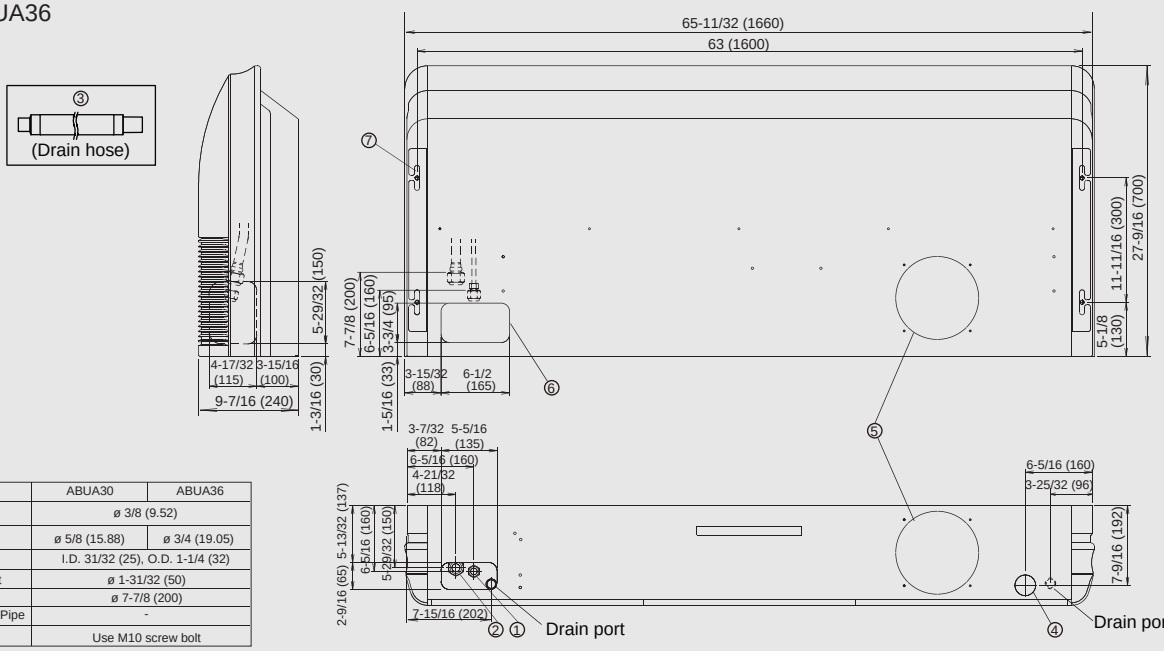
Optional parts

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

Note: IR Receiver is standard for communicating with Optional Wireless Controller.

Dimensions Unit: In (mm)

Models: ABUA30 / ABUA36



			ABUA30	ABUA36
①	Refrigerant pipe flare connection	Liquid	ø 3/8 (9.52)	
②		Gas	ø 5/8 (15.88)	ø 3/4 (19.05)
③	Drain hose connection	Drain Hose	I.D. 31/32 (25), O.D. 1-1/4 (32)	
④	Knock out hole	Drain Outlet	ø 1-31/32 (50)	
⑤		Fresh Air	ø 7-7/8 (200)	
⑥		Refrigerant Pipe	-	
⑦	Hole for lifting bolt	-	Use M10 screw bolt	

AIRSTAGE™

Compact Wall Mounted

ASUA7TLAV
ASUA9TLAV
ASUA12TLAV
ASUA14TLAV

Compact and stylish design

Filter features

High performance filters provide high quality air conditioning

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.

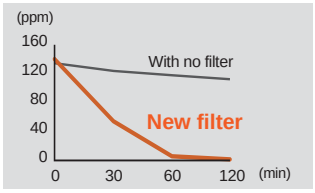
Apple-catechin Filter*2

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.

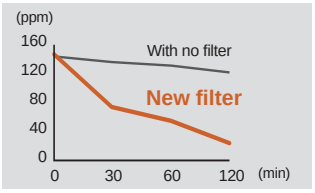
*1 The filter can be used for approx. 3 years if it is washed under water to restore its surface action when it is dirty.
*2 Both filters can be mounted on the same unit.

Deodorizing effect (Odor reduction rate)

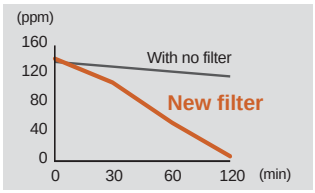
Ammonia



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			Single phase, 208-230V , 60Hz			
Capacity	Cooling	Btu/h	7,500	9,500	12,000	14,000
		kW	2.2	2.8	3.5	4.1
	Heating	Btu/h	9,500	10,900	13,500	15,600
		kW	2.8	3.2	4.0	4.6
Input power		W	17	18	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		247 / 218* (420 / 370)	247 / 218* (420 / 370*)	247 (420)	247 (420)
Sound pressure level	High	dB(A)	35	36	39	44
	Med		33	33	35	37
	Low		31 / 27*	31 / 27*	31	32
Dimensions (H x W x D)		in.(mm)	10-13/16 × 31-1/8 × 8-7/16 (275 × 790 × 215)			
Weight		lbs.(kg)	20 (9)			
Connection pipe diameter	Liquid (Flare)	in.(mm)	ø 1/4 (6.35)			
	Gas (Flare)		ø 1/2 (12.70)			
	Drain		ø 9/16 (13.8) [I.D.] ; ø 5/8 (15.8) - ø 11/16 (16.7) [O.D.]			

* Cooling / Heating Operation
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

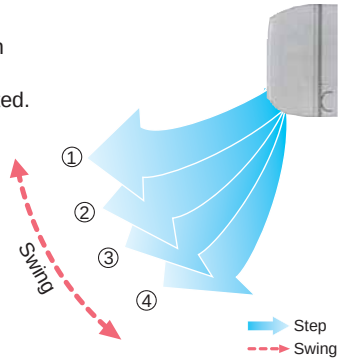
Powerful output in a compact design

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

Powerful, compact unit features a large, high pressure fan (3-1/2in./90mm diameter) in a center mounted configuration with a Lambda type heat exchanger.

Auto swing louver

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

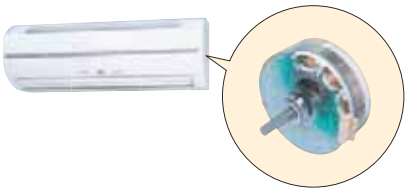


Symmetrical design

Symmetrical, clean design that suits all interiors.

High power DC fan motor

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



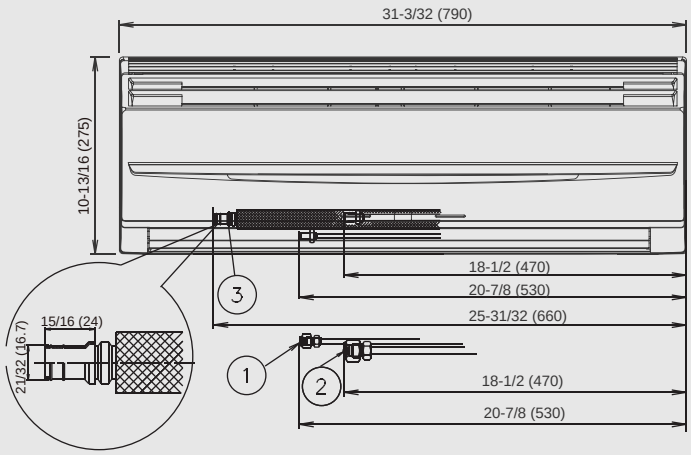
Easy maintenance

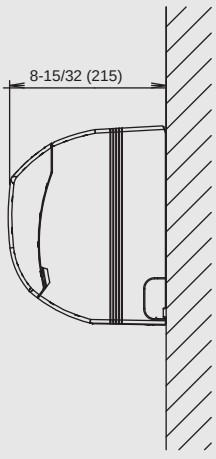
The front panel can be removed for easy access during maintenance.

Note: IR Receiver is standard for communicating with Optional Wireless Controller.

Dimensions Unit: In (mm)

Models: ASUA7 / ASUA9 / ASUA12 / ASUA14





			ASUA7, ASUA9, ASUA12, ASUA14
①	Refrigerant pipe flare connection	Liquid	ø 1/4 (6.35)
②		Gas	ø 1/2 (12.70)
③	Drain hose connection	Drain Hose	I.D. 17/32 (13.8), O.D. 5/8 to 21/32 (15.8-16.7) Drain hose: L=23-5/8 (600)

AIRSTAGE™

Wall Mounted

ASUB18TLAV
ASUB24TLAV

Compact & Slim design

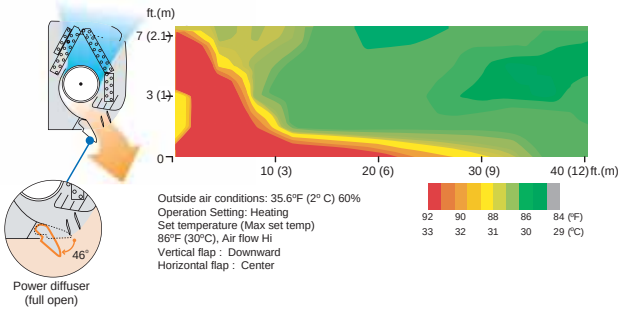
Stylish, slim and elegant, these popular wall mounted units are perfect for smaller rooms where a clean, aesthetic design is preferred. Variable speed DC fan motors deliver heating or cooling quietly and comfortably.

Specifications

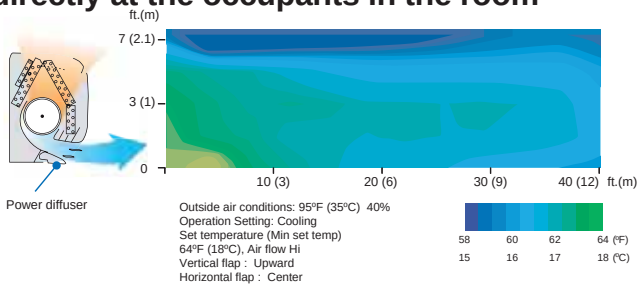
Model name			ASUB18TLAV	ASUB24TLAV
Power source			Single phase, 208-230V , 60Hz	
Capacity	Cooling	Btu/h	18,000	24,000
		kW	5.3	7.0
	Heating	Btu/h	20,000	27,000
		kW	5.9	7.9
Input power		W	32	60
Airflow rate	High	CFM (m^3 / h)	494 (840)	647 (1,100)
	Med		453 (770)	536 (910)
	Low		406 (690)	430 (730)
Sound pressure level	High	dB(A)	41	48
	Med		39	43
	Low		35	35
Dimensions (H x W x D)		in.(mm)	12-5/8 × 39-5/16 × 9 (320 × 998 × 228)	
Weight		lbs.(kg)	33 (15)	
Connection pipe diameter	Liquid (Flare)	in.(mm)	ø 3/8 (9.52)	
	Gas (Flare)		ø 5/8 (15.88)	
	Drain		ø 1/2 (12) [I.D.] ; ø 5/8 (16) [O.D.]	

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



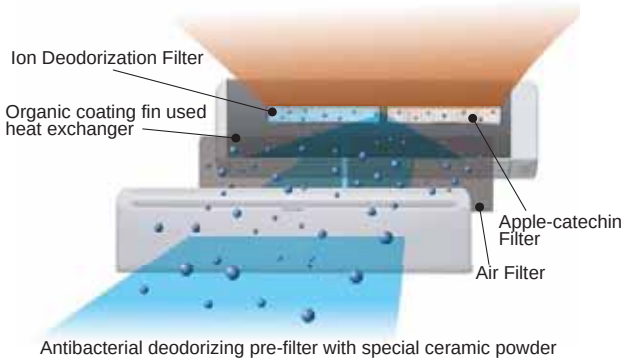
“Horizontal airflow” does not blow cool air directly at the occupants in the room



Easy maintenance

Simplification of drain pan cleaning improves maintenance-ability.

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

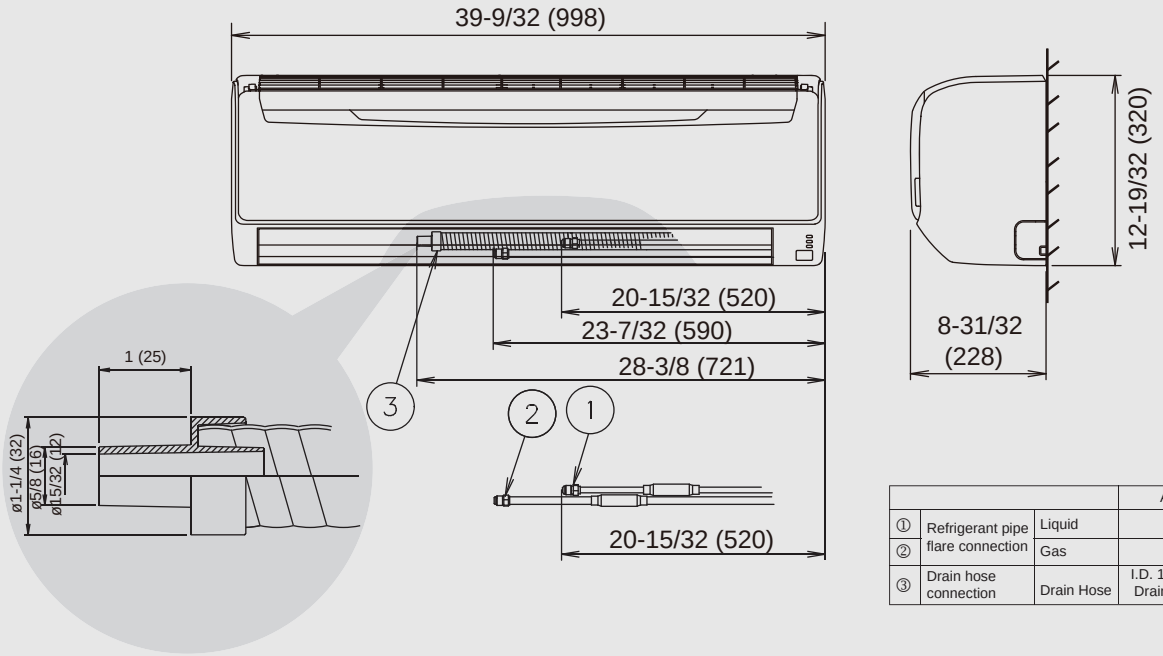
Fine dust, invisible mold spores, and harmful microorganisms are absorbed onto the filter by static electricity, and further growth is inhibited and deactivated by the polyphenol extracted from apples.

*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 Both filters can be mounted on the same unit.

Note: IR Receiver is standard for communicating with Optional Wireless Controller.

Dimensions Unit: In (mm)

Models: ASUB18 / ASUB24



			ASUB18, ASUB24
①	Refrigerant pipe flare connection	Liquid	ø 3/8 (9.52)
②		Gas	ø 5/8 (15.88)
③	Drain hose connection	Drain Hose	I.D. 15/32 (12), O.D. 5/8 (16) Drain hose: L=26-3/8 (670)

AIRSTAGE™

Outdoor Air Unit

Models

AAUA48TLAV
AAUA72TLAV
AAUA96TLAV

The 100% Outdoor Air Unit efficiently processes the outdoor air in cooling or heating to supply outdoor air for ventilation.

AAUA48TLAV

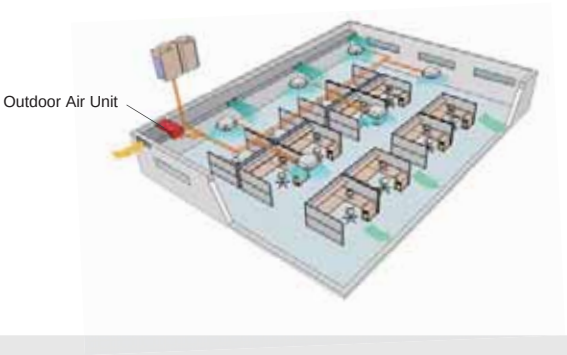
AAUA72TLAV

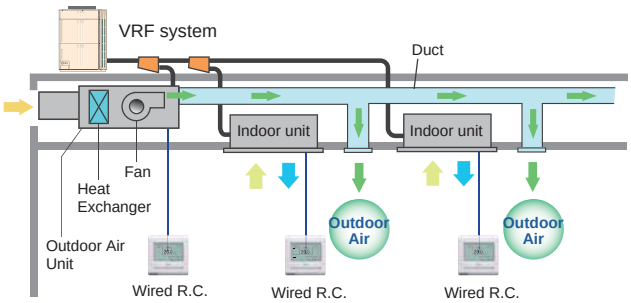
AAUA96TLAV

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

Outdoor Air Unit can be connected in the same VRF*1 system as other VRF indoor units and provides conditioned outdoor air for ventilation, using our highly advanced technology.

*1 V-II, VR-II





* Connected capacity must be between 50% to 100% of the outdoor unit capacity. When a system contains different types of indoor units, Outdoor Air Unit cannot be more than 30% of outdoor unit capacity.

Specifications

Model No.			AAUA48TLAV	AAUA72TLAV	AAUA96TLAV
Power source			208-230/1/60		
Capacity	Cooling	Btu/h	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)	0.20 to 0.74 (50 to 185)	0.20 to 0.80 (50 to 200)	0.20 to 0.96 (50 to 240)
Sound Pressure Level		dB (A)	42	44	47
Dimensions (H x W x D)		in. (mm)	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	Liquid	in. (mm)	Ø3/8 (9.52) (Flare)	Ø1/2 (12.70) (Brazing)	
	Gas (Flare)		Ø3/4 (19.05) (Flare)	Ø7/8 (22.22) (Brazing)	
	Drain Hose		Ø3/4 (19.05) [I.D.]; 1-1/16 (26.6) [O.D.]		
Operation Range	Cooling	ºFDB (ºCDB)	41 to 109 (5 to 43)		
	Heating		19 to 70 (-7 to 21)		
Refrigerant			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)

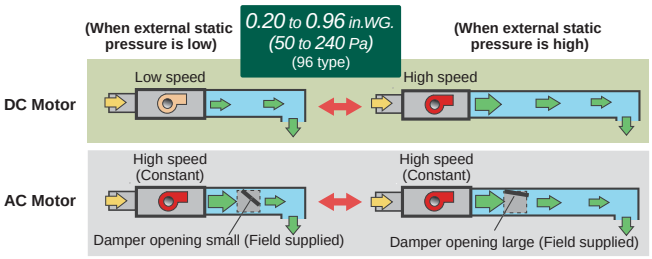
High energy savings and flexible duct design using a DC motor

- Using a permanent magnet motor greatly reduces electricity consumption compared to an AC motor.

48 / 72 type

96 type

- Compared with an AC motor, changing the speed allows it to respond flexibly to the external static pressure from 0.20 to 0.96 in. WG. (50Pa to 240Pa). Even if dampers are not used, static pressure can be adjusted and duct design is easy.
- Static pressure can be set easily using the wired remote controller.



Various Controllers

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

Individual Controllers

Wireless Remote Controller

Simple Remote Controller

Wired Remote Controller

Central Controllers

Central Remote Controller

Touch Panel Controller

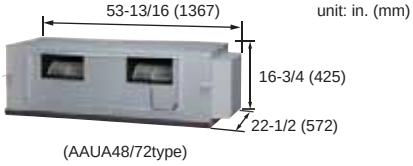
System Controller
System Controller Lite (Software)

The temperature setting is discharge 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 narrow spaces.

121 lbs.
(55kg)
(72 type)

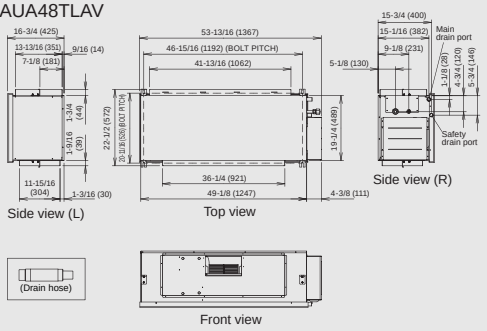


(AAUA48/72type)

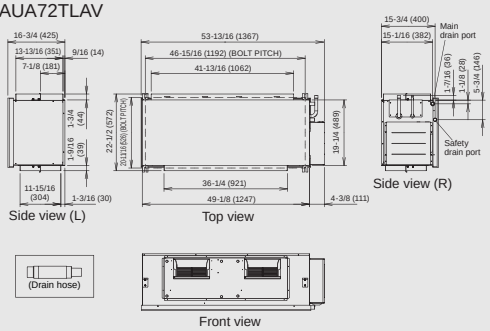
Dimensions (Unit: In (mm))

Models: AAUA48TLAV / AAUA72TLAV / AAUA96TLAV

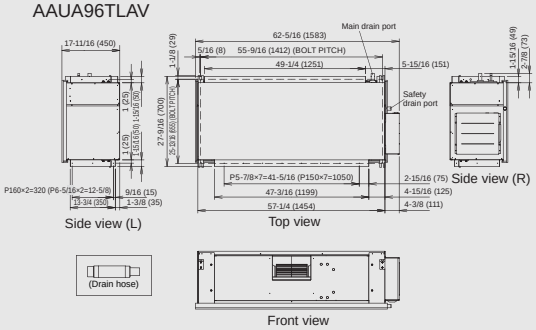
AAUA48TLAV



AAUA72TLAV



AAUA96TLAV



Comparison Table of Controllers

Item			Wired Remote Controller (Touch panel)	Wired Remote Controller	Simple Remote Controller	Simple Remote Controller*1	Wireless Remote Controller	Central Remote Controller	Touch Panel Controller	System Controller Lite (Software)	System Controller (Software)
Model name			UTY-RNRU	UTY-RNKU	UTY-RSKU	UTY-RHKU	UTY-LNHU	UTY-DCGY	UTY-DTGYZ1	UTY-ALGX	UTY-APGX
Max. controllable remote controller groups			1	1	1	1	1	100	400	400	1600
Max. controllable indoor units			16	16	16	16	16	100	400	400	1600
Max. controllable groups			–	–	–	–	–	16	400	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		●	●	–	–	●	●	●	●	●
	Group setting		–	–	–	–	–	●	●	●	●
	RC prohibition		–	–	–	–	–	●	●	●	●
	Anti freeze setting		●	–	–	–	–	●	●	●	●
	Away setting		●	–	–	–	–	–	–	–	–
	Economy mode setting		●	●	–	–	●	●	●	●	●
Display	Failure		●	●	●	●	–	●	●	●	●
	Defrosting		●	●	●	●	–	●	●	●	●
	Current time		●	●	–	–	●	●	●	●	●
	Day of week		●	●	–	–	–	–	●	●	●
	R.C. prohibition		●	●	●	●	–	●	●	●	●
	Cooling/heating priority		●	●	●	●	–	●	●	●	●
	Address display		●	●	●	●	–	●	●	●	●
	Room temp		●	–	–	–	–	–	–	–	–
	Multi language		●	–	–	–	–	●	●	●	●
	Daylight Savings Time (Summer time)		●	–	–	–	–	●	●	●	●
	Name registration		●	–	–	–	–	●	●	●	●
	Backlight		●	–	●	●	–	●	●	–	–
	2D floor layout / 3D building display		–	–	–	–	–	–	–	–	●
Timer	Schedule timer	Period	Week	Week	–	–	–	Week	Year	Year	Year
		On/Off, Temp, mode, times per day	8 *3*4	4	–	–	–	20	20	144	144
	On/off timer		–	●	–	–	●	–	–	–	–
	Sleep timer		–	–	–	–	●	–	–	–	–
	Program timer		–	–	–	–	●	–	–	–	–
	Auto off timer		●	–	–	–	–	–	–	–	–
	Day off		●	●	–	–	–	●	●	●	●
	Min. unit of timer setting (Minutes)		10・30	30	–	–	5	10	10	10	10
Control	Status monitoring system		–	–	–	–	–	●	●	●	●
	Electricity charge apportionment		–	–	–	–	–	–	○	○	●
	Error history		●	●	●	●	–	●	●	●	●
	Emergency stop		–	–	–	–	–	●*2	●*2	–	–
	Remote management		–	–	–	–	–	–	●	○	●
	Energy saving management		–	–	–	–	–	–	●	○	○
Internet	E-mail notification for malfunction		–	–	–	–	–	–		●	●
	Key lock		● Child lock	–	–	–	–	● Password setting	● Password setting	● Password setting	● Password setting

*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

Remote Controllers

Wired Remote (Touch Panel)

UTY-RNRU

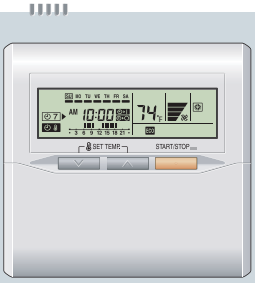
Max. controllable 16 indoor units

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

- Easy finger touch operation with LCD panel
- Built-in weekly/daily timer (ON/OFF, Temp., Occupied Status)
- Backlight enables easy operation in a darkened room
- Room temperature display
- Control up to 16 indoor units
- Auto changeover with dead band
- Setback Function (Away)
- Non polar two wire
- Corresponds to 7 different languages (English, Chinese, French, German, Spanish, Russian, Polish)

Wired Remote Controller

Max. controllable 16 indoor units



UTY-RNKU

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

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

Simple Remote Controller

Max. controllable 16 indoor units

UTY-RSKU

UTY-RHKU
Without ability to change operation mode

UTY-RSKU
UTY-RHKU (Without ability to change operation mode)

Compact remote controller provides access to basic functions

- Up to 16 indoor units can be controlled with one remote controller.
- Suitable for hotels or offices as it is easily operated with no complex functions.
- Backlit for easy operation in dark rooms.

Wireless Remote Controller

Max. controllable 16 indoor units

Selectable 4 daily timers

UTY-LNHU

UTY-LNHU

Simple and sophisticated operations with a choice of 4 daily timers

- A single controller controls up to 16 indoor units.

Built-in timers

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.

Central Controllers

Touch Panel Controller with Internet

UTY-DTGYZ1

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
- No external power supply is required
- 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.

Central Remote Controller

UTY-DCGY

Central control of small- and medium-sized buildings and tenants.

Max. controllable 100 Indoor units

Max. controllable 16 groups

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

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 affixed on the wall.

System Controller

Software

UTY-APGX

The System Controller's advanced integrated monitoring & control of VRF network system provides monitoring & control of small to large scale buildings.

- Up to a maximum of 4 VRF network systems, 1600* indoor units, and 400* outdoor units can be controlled.
- Functions include air conditioning control function, central remote control, schedule management, and energy saving function.
- Corresponds to 7 different languages: English, Chinese, French, German, Spanish, Russian, Polish.
- **Option:** UTY-PEGX Energy Manager

Computer not included.

Max. controllable 4 VRF network systems

Max. controllable 400* Outdoor units

Max. controllable 1,600* indoor units

- Remote Communication

USB Adapter included.

System Controller Lite

Software

UTY-ALGX

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

- A maximum of 1 VRF network system, 400* indoor units, and 100 outdoor units can be controlled.
- In addition to precision temperature control, a variety of management functions are also available, providing customers with a wide variety of choices.
- **Options:** UTY-PLGXR1 Remote Centralized Control
  UTY-PLGXA1 Electricity Charge Apportionment
  UTY-PLGXE1 Energy Saving Management

Computer not included.

Max. controllable 1 VRF network systems

Max. controllable 100 Outdoor units

Max. controllable 400* indoor units

- Optional Remote Communication

USB Adapter included.

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

BMS Communication Options

Network Converter for LONWORKS®

UTY-VLGX

Max. controllable 4 Units to BMS

Max. controllable 128 indoor units

- For connection between VRF network system and a LONWORKS® open network for management of small to medium-sized BMS.
- 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®

(UTY-VLGX)

BACnet® Gateway Software

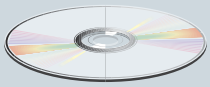
UTY-ABGX

Max. controllable 4 VRF network systems

Max. controllable 400 outdoor units

Max. controllable 1,600 indoor units

- The VRF network system can be incorporated into a Building Management System.
- Enables central control of up to 1,600 indoor units through BACnet®, a global standard for open networks.
- Conforms to ANSI / ASHRAE Standards® 135-2004 BACnet® Application Specific Controller (B-ASC) BACnet® / IP over Ethernet.
- Connects up to 4 VRF network systems (1,600 indoor units / 400 outdoor units) per gateway.
- Certified by BTL



CD-ROM (Software)

Software Protection Key

USB Adapter included.

Modbus Converter

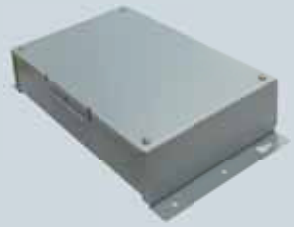
UTY-VMGX

Max. controllable 9 units to one BMS

Max. controllable 100 outdoor units

Max. controllable 128 indoor units

- Integrates Airstage VRF System with Modbus Building Management Systems.
- Up to 9 Modbus Converters can be connected to a single VRF communication network.
- Easily check for faulty wiring or addressing errors - indicates if problem is with BMS to Modbus Converter or with VRF to Modbus Converter.



Service & Monitoring

Service Tool Software

UTY-ASGX

Max. Monitor and control 400 indoor units

Max. Monitor and control 100 outdoor units

Extensive monitoring and analysis functions for installation and maintenance

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

Computer not included.

USB Adapter included.

Web Monitoring Tool Software

UTY-AMGX

USB Adapter included.

Max. controllable 4 VRF network systems

Monitor up to 1,600 indoor units

Product features

- Troubleshooting is performed by monitoring each system remotely during periodical system checks.
- Error notification can be automatically transmitted to several locations using the internet*1.
- 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 site can be optionally downloaded. And, this data can be displayed in offline mode of the service tool.
- Monitoring site computer is not required to install special software, requires only Internet Explorer.

*1: Use of internet mail system required.

Accessories

Network Converter for Halcyon Systems

UTY-VTGX

- Network Converters offer total solutions for multiple air-conditioning systems control.
- Connect mini-split indoor units to the VRF network.
- Powered by indoor unit and does not require separate power supply.

Max. controllable *16* single indoor units

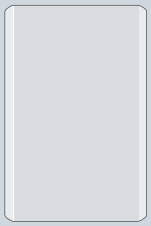
Max. controllable *100* Network Convertors

External Switch Controller

UTY-TEKX

Air conditioner switching can be controlled by connecting other sensor switches

- In combination with a field supplied 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 field supplied parts.

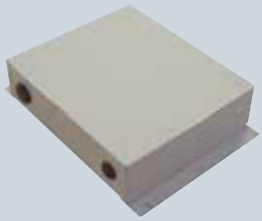


Signal Amplifier

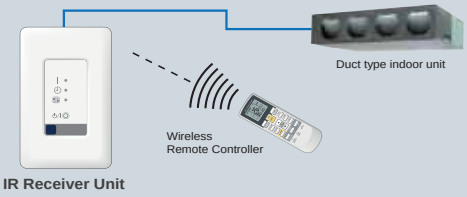
UTY-VSGXZ1, UTY-VSGX

- Transmission Line length can be extended up to 3,600m with multiple Signal Amplifiers.
- Up to 8 signal amplifiers can be installed in a VRF network system.
- A signal amplifier is required,

(1) When the total wiring length of the transnission line exceeds 500m.
(2) When the total number of units on the transnission line exceeds 64.



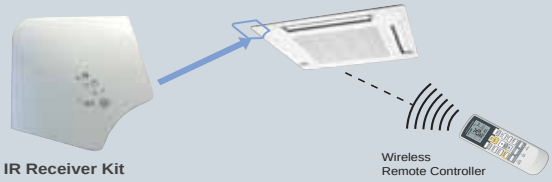
IR Receiver Unit



UTB-YWC

Necessary to control all duct type models by Wireless Remote Controller

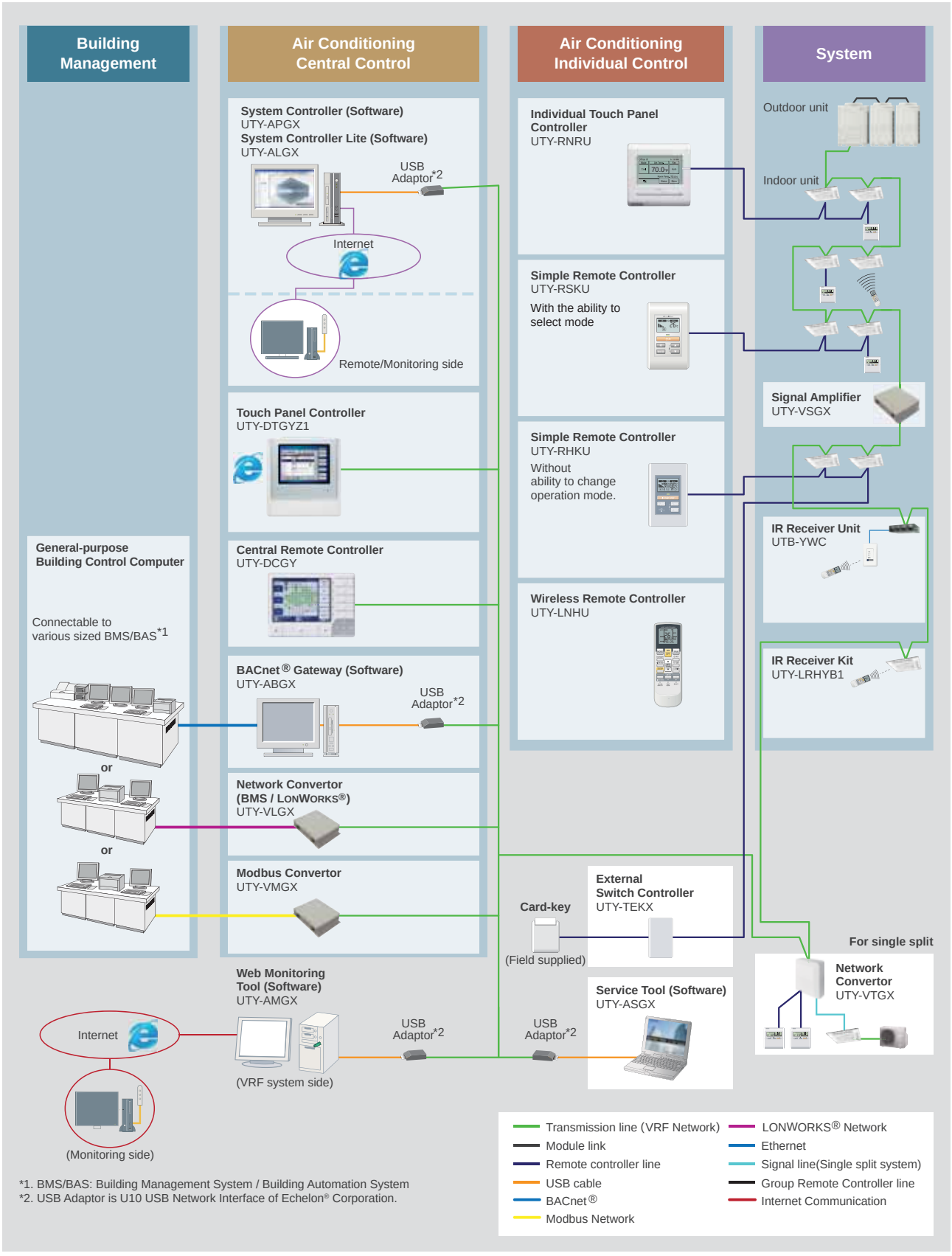
IR Receiver Kit



UTY-LRHYB1

Cassette type indoor unit can be controlled with Wireless Remote Controller

Control System Diagram



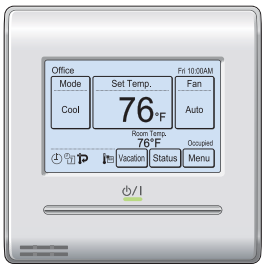
*1. BMS/BAS: Building Management System / Building Automation System
*2. USB Adaptor is U10 USB Network Interface of Echelon® Corporation.

AIRSTAGE™

Wired Remote Controller

(Touch Panel) **UTY-RNRU**

Easy operation touch panel screen



Max. controllable
16
indoor units

- Easy finger touch operation with LCD panel
- Built-in weekly/Daily timer(ON/OFF(Occupied/Unoccupied),Temp.)
- Backlight enables easy operation in a darkened room
- Room temperature display
- Control up to 16 indoor units
- Corresponds to 7 different languages (English, Chinese, French, German, Spanish, Russian, Polish)

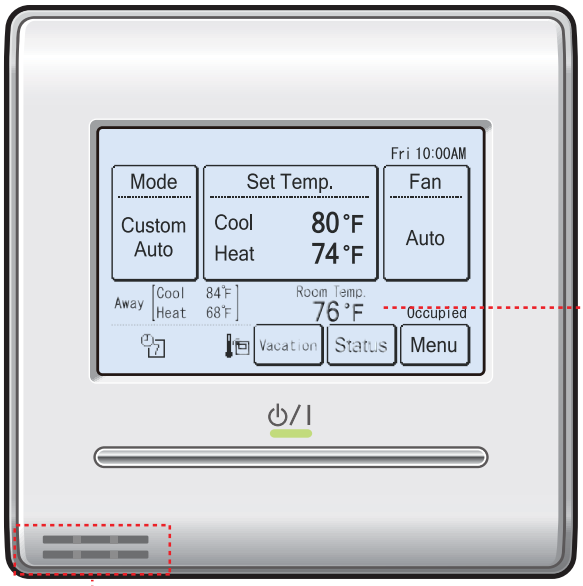
High performance and compact size

- 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.

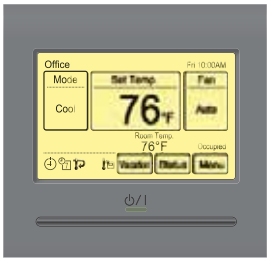


Room temperature sensor

Room temperature display

Backlight

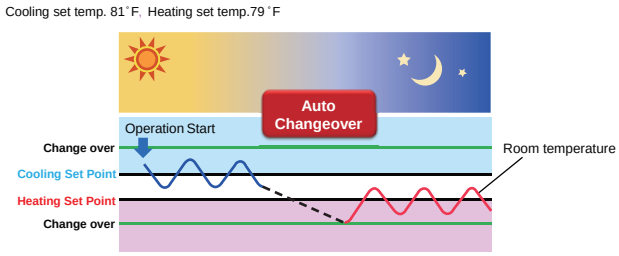
- Backlight enables easy operation in a room.
- Back-lighting time is adjustable from 30 to 60 seconds after last operation.



Various energy saving control

Custom Auto

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



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.

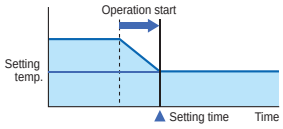
2 schedules Weekly Timer

- 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)

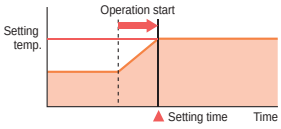
Optimum start function

- This setting brings the ambient space to the desired temperature set point before occupation time starts.

Cooling operation



Heating operation



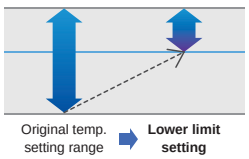
Set Temperature Auto Return

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

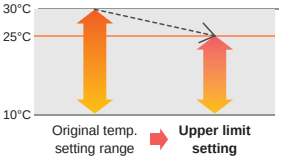
Set Temperature Upper and Lower Limit Setting

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

During Cooling



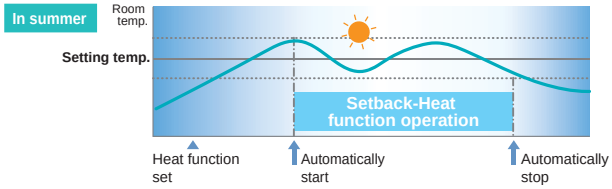
During Heating

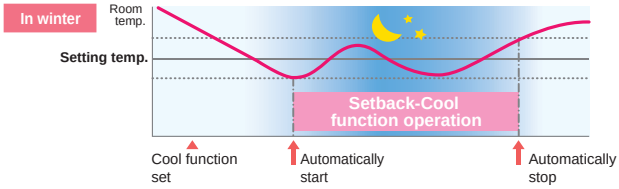


Various convenient functions

Away mode

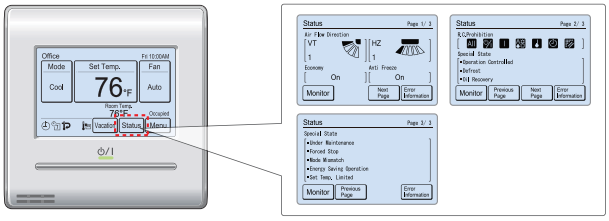
• To protect the building from excessive temperatures when away, with this feature cooling/heating will automatically start if the setback temperature was reached, even if the indoor unit was off.





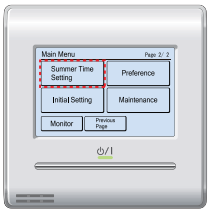
Displays setting status and Limitations

• The remote controller settings can be easily checked



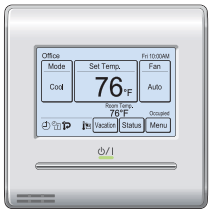
Child lock

• 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.



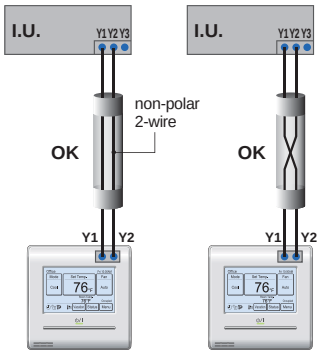
Name Registration

• Indoor unit names can be registered in the remote controller screen. This makes it easy to identify the indoor unit you want to control in the room.

Simplified installation

Uses non-polar 2-wire type

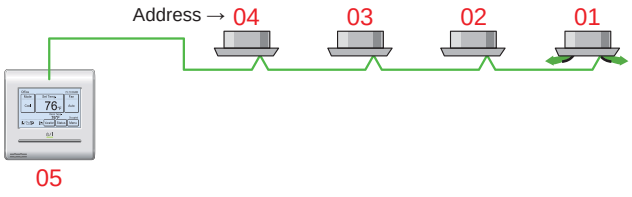
• The faulty wiring can be prevented by using non-polar 2-wire.



Auto Address Setting

• Reduce errors and install time compared with the current specification Rotary SW

• Both unit addressing and Group addressing can be automatically set.



Easy Maintenance

Error History Display

• The errors that occur in the indoor unit or remote controller are saved as a history.

• A maximum of 32 error incidents can be saved.

Specifications

Model name	UTY-RNRU
Power Supply	DC 12V
Dimensions (H x W x D) (in.(mm))	4-3/4 × 4-3/4 × 13/16 (120 x 120 x 20.4)
Weight (oz.(g))	8 (220)

DC12V is supplied by the indoor unit.

AIRSTAGE™

Central Remote Controller

UTY-DCGY

Max. controllable **100** Indoor units

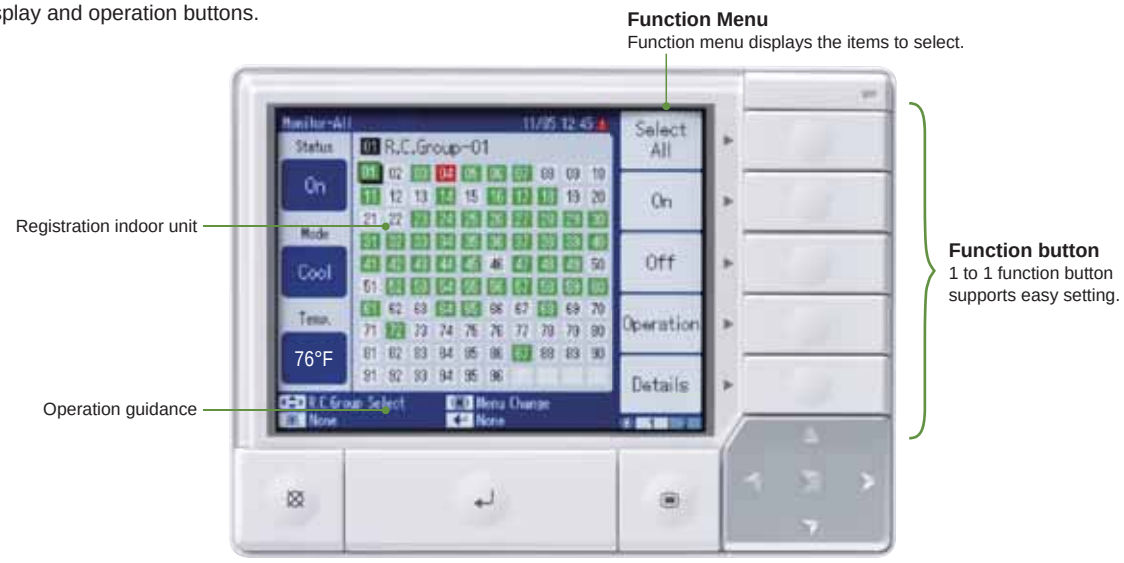
Max. controllable **16** groups

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

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

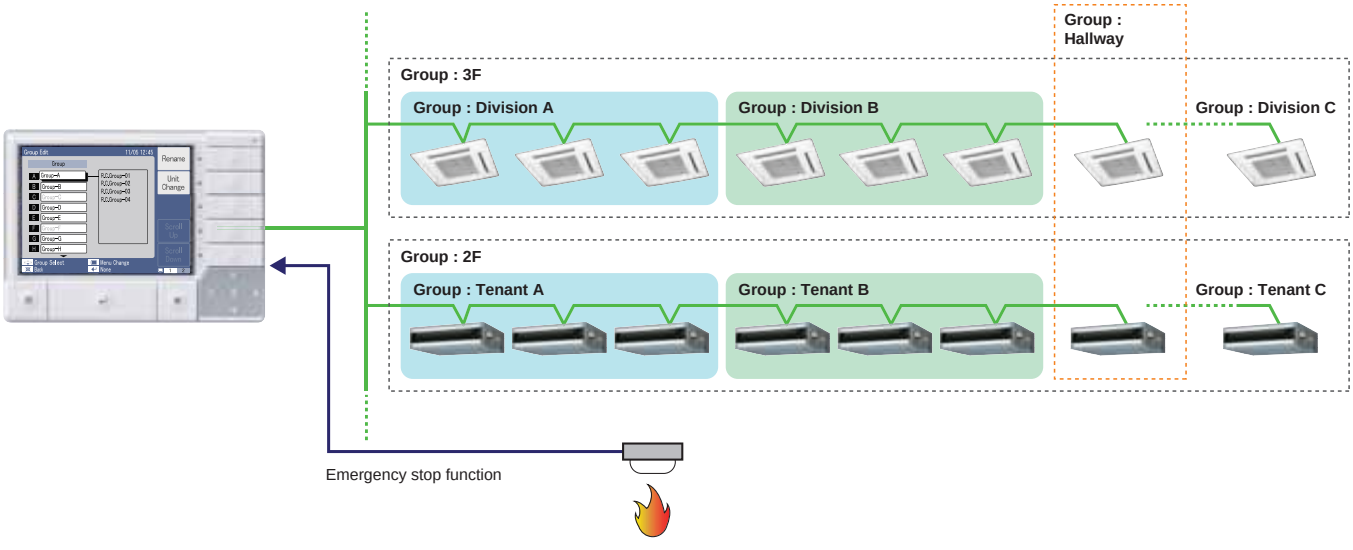
User friendly operation

Displays operation status of all indoor units.
Intuitive display and operation buttons.



System overview

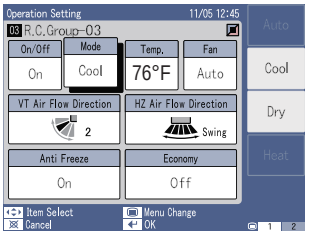
- It allows multiple indoor units grouping (Max.16 groups controlled)
- Interlock with external device



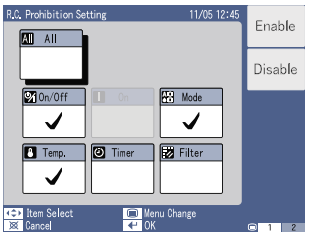
Functions

Diverse control of indoor units

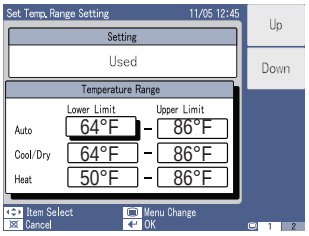
- Individual control (On / Off, Mode, set Temp, Fan speed, Economy operation, Antifreeze operation)



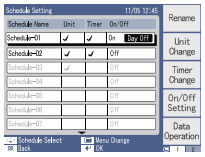
- **Remote controller prohibition (All, On / Off, Mode, Temp, Timer, Filter) :** R.C prohibition setting prohibits individual remote control operation from this controller

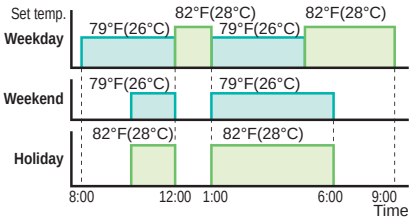


- Room temperature set point upper and lower limitation

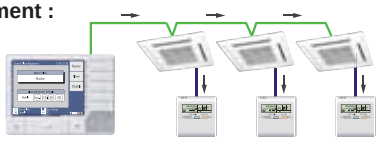


- **Weekly timer :** Weekly timer can set the timer by various combinations.



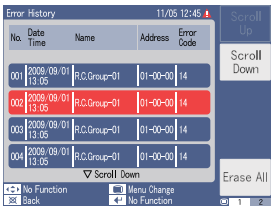


- **Automatic clock adjustment :** The time setting for all controllers on the system can be set simultaneously.



Error history

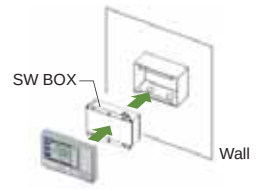
- Saves up to 200 error messages.
- Allows for accurate analysis and troubleshooting.



Easy Installation

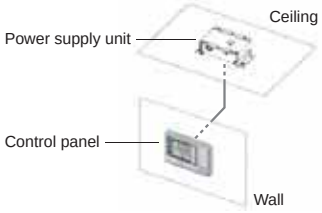
- The control panel and power supply unit can be installed separately.
- For installation flexibility the control panel can be built into the wall or installed on the wall.

Setting pattern 1

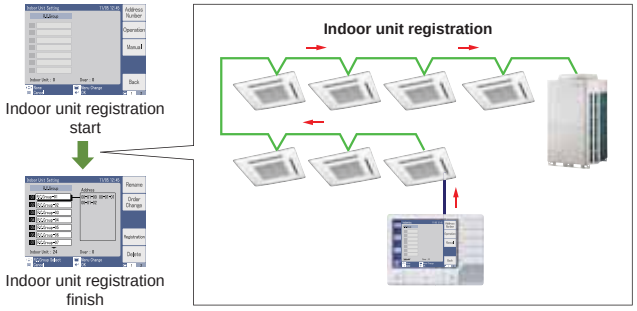


Control panel + Power supply unit

Setting pattern 2



- Automatic or manual indoor unit registration



Specifications

Model name	UTY-DCGY	
	Control Panel	Power Supply Unit
Power Supply	DC 5 V	100-240V, 50-60Hz, Single phase
Dimensions (H x W x D) in. (mm)	4-23/32 x 6-3/8 x 1 (120 x 162 x 26)	3-29/32 x 5-5/16 x 1-17/32 (99 x 135 x 39.2)
Weight oz. (g)	10.9 (308)	12.5 (355)

<PACKING LIST>

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

AIRSTAGE™

Touch Panel Controller with Internet

UTY-DTGYZ1

Max. controllable 400* Indoor units

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

- 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
- No external power supply is required
- 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 with more than 320 indoor units, consult the D&T manual for proper wiring and the use of signal amplifiers.

Functions

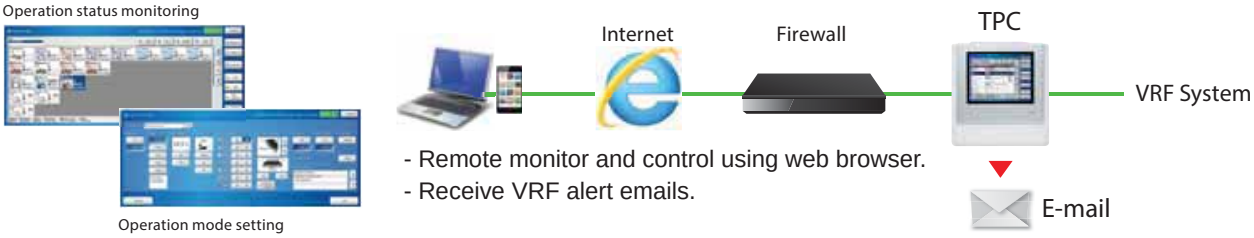
Actual screen size

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)

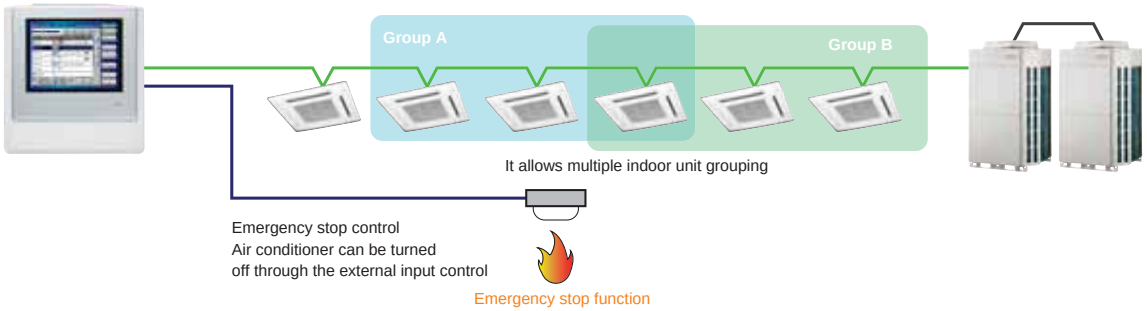
- Operation can be selected using your finger or the dedicated touch pen by pressing the appropriate on-screen icon
- Up-to-date status display
- Background color identifies current control operation; Blue for monitoring, green for operational control

Optional: Electricity charge apportionment

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

- UTY-PTGXA must be ordered separately

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

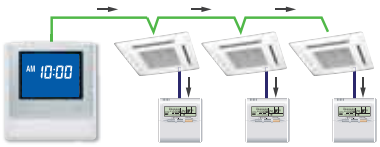
Flexible grouping

Schedule control

Indoor units operation monitoring

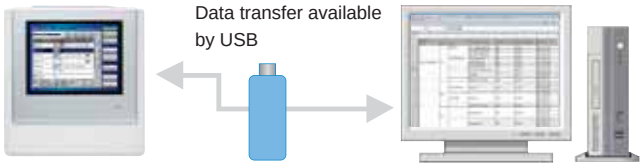
Automatic clock adjustment

The time setting of each controller 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 via 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

Model name	UTY-DTGYZ1
Power Supply	100-240V 50/60Hz Single phase
Dimensions (H x W x D) in. (mm)	10-1/4 (260) × 9-11/16 (246) × 2-1/8 (54)
Weight lbs. g (oz.)	2150 (12)
Interface	Ethernet, USB

AIRSTAGE™

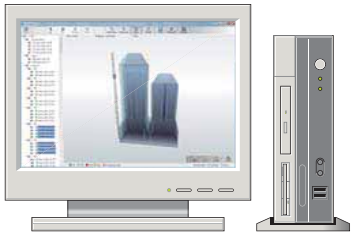
System Controller

Software

UTY-APGX

System Controller provides advanced monitoring & control of VRF network systems, locally or remotely over the Internet.

- Advanced functions and control from a single dedicated PC.
- Up to 4 VRF network systems (1600 indoor units, and 400 outdoor units) can be controlled from a single System Controller.
- Precision building air conditioning control.
- Additional Energy Saving options
- Built-in remote control and management over the Internet.



Max. controllable **4** VRF network systems

Max. controllable **400*** Outdoor units

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

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

System Controller Lite

Software

UTY-ALGX

System Controller Lite has standard functions sufficient for air conditioner management in small and medium scale buildings with optional remote Internet capability.

- Up to a maximum of 1 VRF network system, 400 indoor units, and 100 outdoor units can be controlled.
- In addition to air conditioning precision control function, a variety of management software is available as an option to give customoers a wide range of choice.
- Offers (Optional) remote control and management over the Internet.

Max. controllable **1** VRF network systems

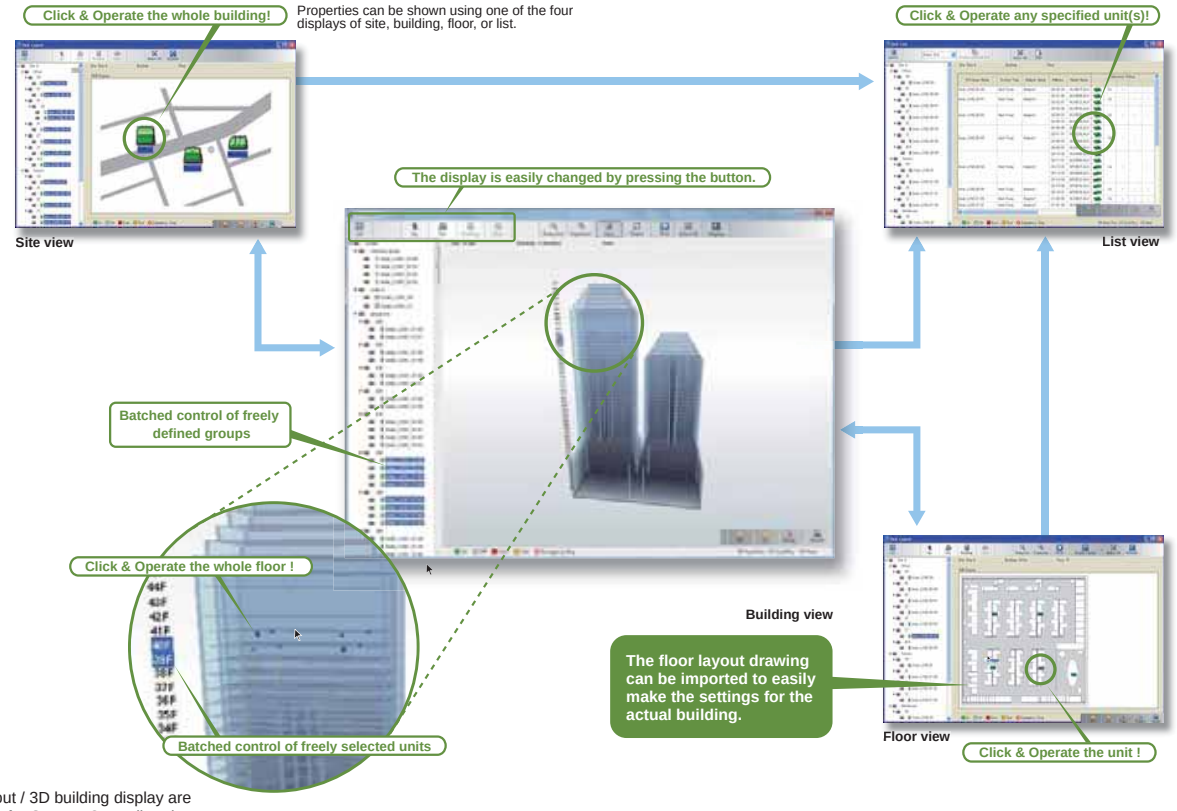
Max. controllable **100** Outdoor units

Max. controllable **400** indoor units

User friendly view and operation

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

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



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

Diverse operation management & Data management

Schedule management

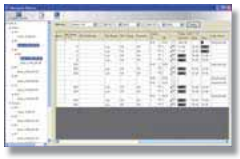
- Annual schedules can be set for each remote controller group / user defined group.
- Start / stop, operating mode, remote controller prohibition, and temperature settings can be set up to 143 times per day at 10 minute intervals for up to 101 configurations for each remote controller group.
- Settings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

Error display & E-mail notification

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

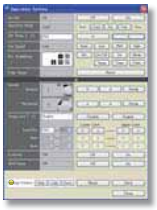
Operating & control record

Displays the history of operation status and control.



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



Data base import/export

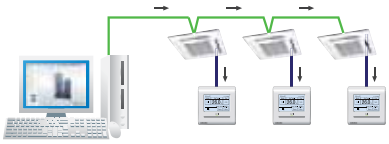
Imports/exports registration data, layout data, and image data. Only the administrator can make this setting.

Remote controller 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.

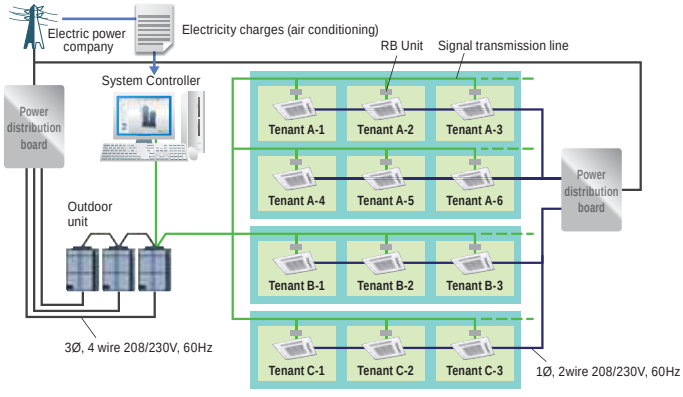


Electricity charge apportionment

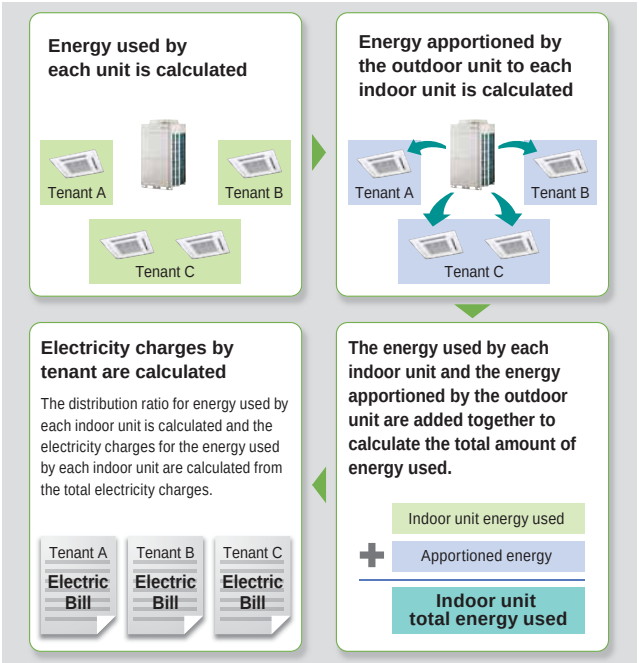
Electricity charge apportionment calculation framework

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



AIRSTAGE™

Software

System Controller and System Controller Lite (continued)

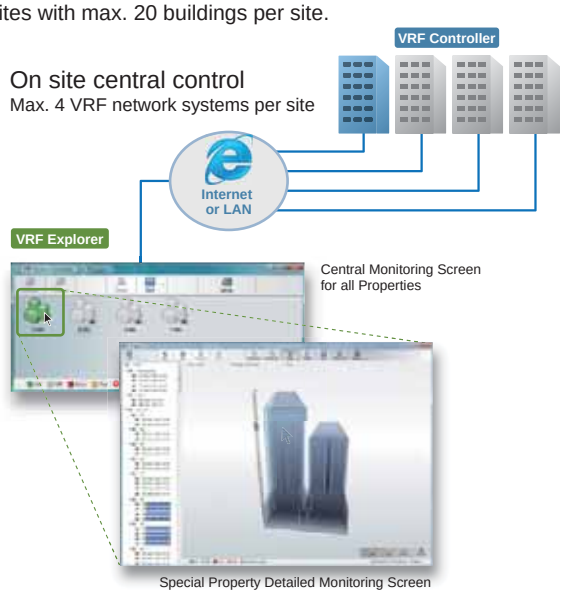
Remote management

Standard for System Controller
Option for System Controller Lite UTY-PLGXR1

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

On site central control

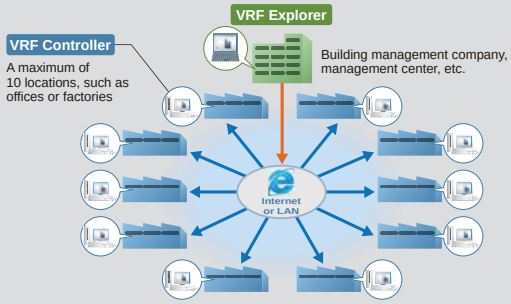
Max. 4 VRF network systems per site



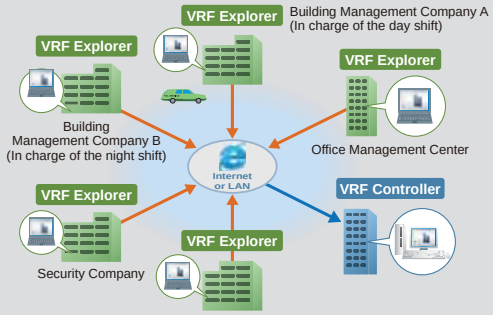
Special Property Detailed Monitoring Screen

Remote central control

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



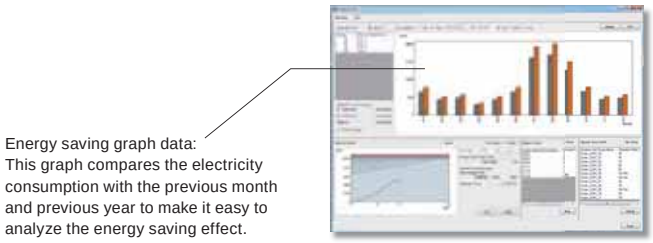
1 VRF Controller can be monitored from any number of VRF Explorers (Up to 5 connections simultaneously).



Energy saving management

Option for System Controller UTY-PEGX
Option for System Controller Lite UTY-PLGXE1

Several energy saving operations can be set and managed. Energy saving options can be used while keeping occupants comfortable.

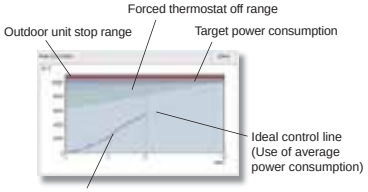


Energy saving graph data:
This graph compares the electricity consumption with the previous month and previous year to make it easy to analyze the energy saving effect.

Energy Saving Management Main Screen

Peak cut operation

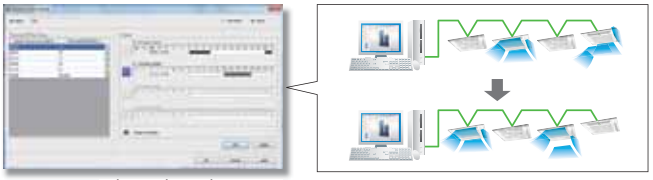
A power meter can be connected to detect the total power consumption of the system while using energy saving features to carefully control the power consumed. Shifting set temperature, indoor unit rotation and other features maintains comfort while conducting control options. Target power consumption for individual groups can be maintained.



Shows change in power consumption by time

Indoor unit rotation operation

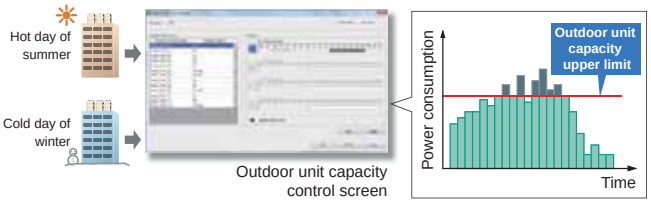
Operation of indoor units can be rotated to reduce power consumption while maintaining comfort. Rotation quantity and rate can be set.



Indoor unit rotation screen

Outdoor unit capacity save

Outdoor unit capacity save sets a limit for maximum power consumption for the system by limiting capacity. Can be set from 50% to 100%.



Outdoor unit capacity control screen

FUNCTIONS SUMMARY

Function	Type		System controller		System controller lite			
			UTY-APGX	Option UTY-PEGX	UTY-ALGX	Option UTY-PLGXR1	Option UTY-PLGXA1	Option UTY-PLGXE1
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	○	-	○	-	-	-
	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 over the Internet		○	-	-	○	-	-
	Remote operation control		○	-	-	○	-	-
	Remote function setting		○	-	-	○	-	-
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			○				○
Others	Database import/export		○	-	○	-	-	-
	Automatic clock adjustment		○	-	○	-	-	-
	Multi language		7 languages	-	7 languages	-	-	-

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

PERSONAL COMPUTER SPECIFICATIONS

Operating system	• Microsoft® Windows® XP SP3 (32-bit) Professional (*1) • Microsoft® Windows® Vista® SP2 (32-bit) Home Premium, Business (*2) • Microsoft® Windows® 7 SP1 (32/64-bit) Home Premium, Professional (*2) • Microsoft® Windows® 8 (32/64-bit) Windows 8, Windows 8 Pro (*2) [Supported languages] (*1) English only (*2) English, Chinese, French, German, Russian, Spanish, and Polish
CPU	Intel® Core™ i3 2GHz or higher
Memory	2GB or more (Windows® XP, Vista®, 7 32-bit), 4GB or more (Windows® 7 64-bit, Windows® 8)
HDD	40GB or more of free space
Display	1024 x 768 or higher resolution
Interface	USB port is required for each of the followings for Server PC ; • Wibu Key (Software protection key) • Echelon® U10 USB Network Interface (Required for each VRF Network) Ethernet port is required for remote connection using internet.
Accelerator	Requires the internal graphics accelerator be compatible with Microsoft® DirectX® 9.0 (for only System Controller)
Software required	Adobe® Reader® 9.0 or later

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

AIRSTAGE™

Service Tool Software

UTY-ASGX

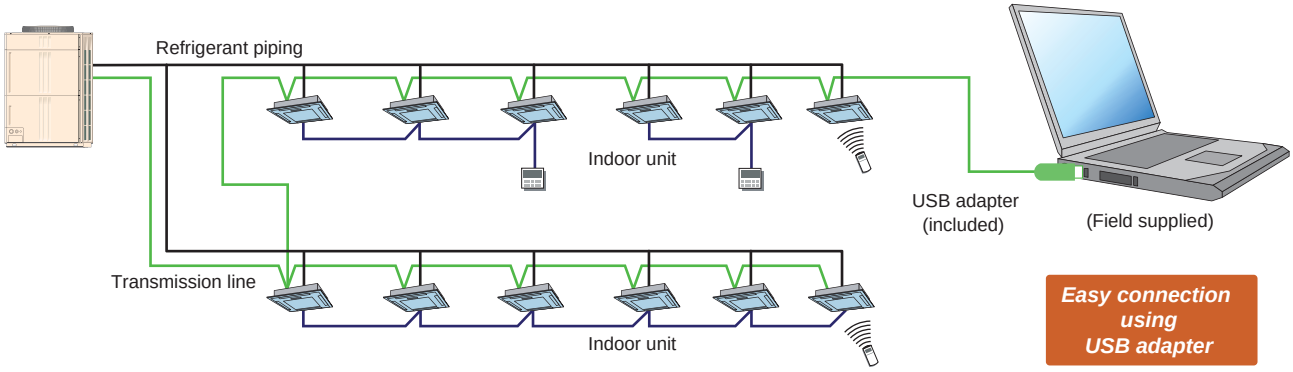
Control and Monitor Up To 100 Outdoor units

Control and Monitor Up To 400 Indoor units

Extensive monitoring and analysis functions for installation and maintenance.

- Operation status can be checked and analyzed to detect even the small abnormalities.
- Data collected and stored on site can be checked later, off-line, off-site for more detail analysis.
- One VRF network system with maximum number of up to 400 units can be monitored and controlled.
- Operation status and various sensor information can be monitored and checked real time in the form of list, refrigerant circuit diagram, graphs as well.
- Simple operation control functions are useful during maintenance.
- The recent error history can be retrieved from units on demand to perform analysis on the cause of the error, after connecting Service Tool to the VRF network system.
- Commissioning tool supports test runs, data storage for each unit and saving of data as CSV files, which may be formatted to create commissioning report.
- Connectable to any point of transmission line with USB adapter*1 (included)
- Connection between VRF network system to field-supplied personal computer is possible via small U10 USB interface.

Wiring connection



Easy connection using USB adapter

*USB Adapter is U10 USB Network interface of Echelon® Corporation.

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)

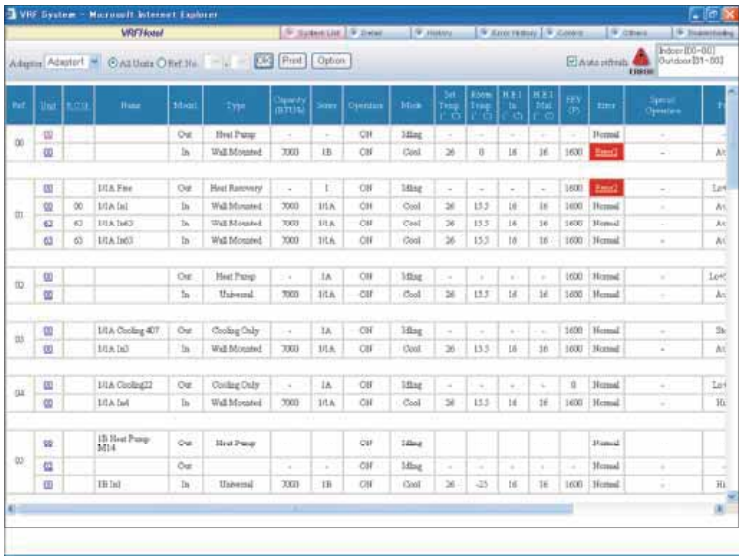
Displays the detail information for sensor values, electrical components etc. for the specified units in schematic. The information here can be used along with the detail information in list form, to check the operation status of units and make detail analysis on the cause, in case an error occurs.

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.

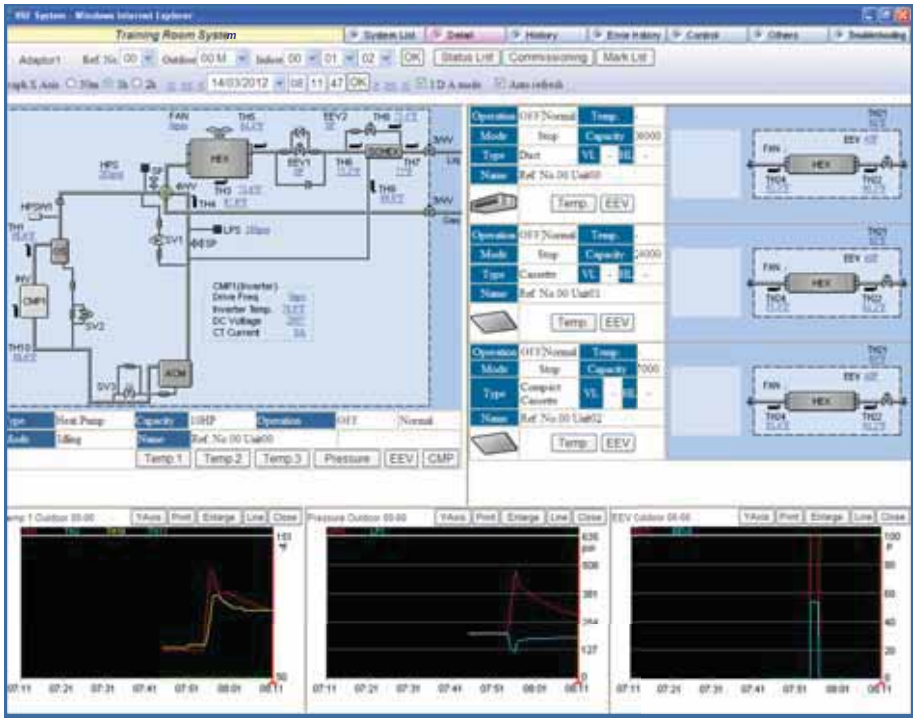
6) Remote File Download
Operation and error history can be downloaded. User can choose which data download by specifying the system, unit and time frame.

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.

PERSONAL COMPUTER SPECIFICATIONS

Operating System	AT compatible machine that runs Microsoft® Windows® Microsoft® Windows® XP Professional (English version / Service pack 3 or later) Microsoft® Windows® Vista® Home Premium, Business Edition (English version/Service pack 2 or later) Microsoft® Windows® 7 Professional (English version/Service pack 1 or later)
CPU	Intel® Pentium® / Celeron®, AMD Athlon™ / Duron™ 1 GHz or higher
HDD	10 GB or more of free space
Memory	1 GB (Vista, 7), 512 MB (XP) or more
Interface	USB port for U10 USB Network Interface and Software protection key.
Required Software	Internet Explorer 6.0 or 7.0 or 8.0 / Adobe® Reader® 9.0 or later
Required Hardware	CD-ROM drive
<PACKING LIST>	
Packing List	CD-ROM / Wibu Key, U10 USB Adapter

Personal computer must be field supplied.

Design Simulator

Easy Equipment Selection, Complete Selection Output, Reliable Project Management

Design Simulator makes it easy to select equipment for complex building air conditioning systems. The software output contains all important design data including: Equipment Schedule, Piping 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, designate the groups, 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

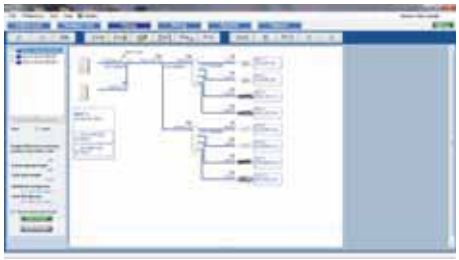
Choose the unit types and the conditions and the software will select the correct indoor unit. Indoor unit can also be selected manually.

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 / Controller Diagram

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

Step 6 Select Converters and Central Control

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

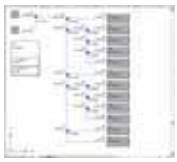
Specifications

Item	Function
Subject model	VRF J-II, V-II, VR-II, includes Outdoor Air Units
Preferences	Multiple language setting (Choose from 25 different languages)
	Multiple unit setting
	Project detail information setting
	Brand/User name setting
	User option setting
Model selection	Auto mode selection (Indoor unit/Outdoor unit/Piping/Wiring)
	Manual mode selection
	Optional parts selection
	Controller/Adapter/Convertor selection
Drawing	Auto drawing (Piping diagram/Wiring diagram)
	Auto product information display
Output data	Material list display
	Product detail display (Photo, Specifications, Options)
	Diagrams display (Piping/Wiring)
	Additional refrigerant volume (Input piping length)
	CAD data (2D-DXF, 3D-RFA)
Report format	Word (rtf)
	CSV
	DXF, RFA
Update	Auto update via internet
	Download the latest data from the Airstage Portal (portal.fujitsugeneral.com)

Note: 1. Specifications are subject to change without notice 2. New models will be added as they are introduced.

Output

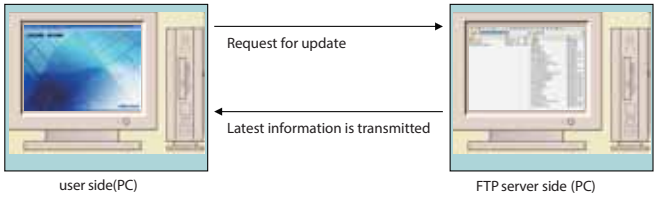
Equipment selections and schedules can be output in standard industry file formats.



- 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.

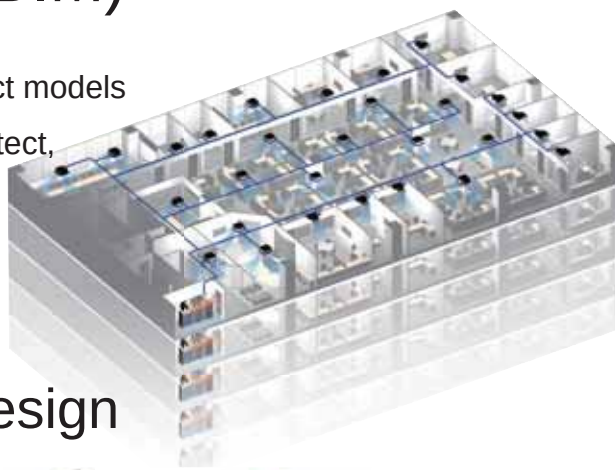


- Maintains software integrity
- Maintains software history
- Updates product information

AIRSTAGE™

Building Information Modeling (BIM)

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



BIM Object Models Ensure Proper Design

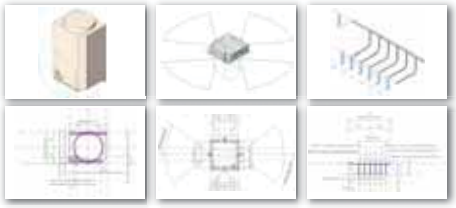
■ *Many products available*

We provide BIM data for indoor units, outdoor units, and accessories.
We will continue to create and provide products to support the global market.

Object models: VRF "AIRSTAGE™ V-II" /8 Rooms Multi "HFI"
Files : Indoor units 75 files / Outdoor units 22 files / Options 15 files

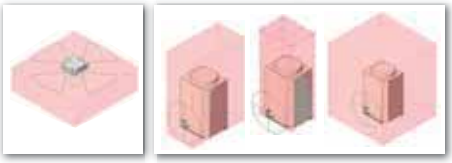
■ *3D and 2D product data*

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



■ *Installation limitation*

The equipment installation limitation range is shown. The distance range from the wall, etc., is automatically displayed to make it easy to provide highly reliable layout designs.



■ *Installation information*

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

■ *Product specifications & Link information*

Contains the basic information required for air conditioner design, including unit size, capacity, input power, noise, and airflow rate.

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

■ *Data volume*

Fujitsu Revit® files are small, requiring very little system resources.

■ *Required software*

Autodesk® Revit® series software
- Autodesk® Revit® Architecture
- Autodesk® Revit® MEP
- Autodesk® Revit® Structure

Data format
- RFA

Airstage Portal

portal.fujitsugeneral.com

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: Manuals, Literature, Design Simulator Software, Commissioning Forms, Troubleshooting Guides, Design & Technical Manuals and Online Training.

Additional features, such as the Airstage Project Manager, are available to Fujitsu Reps, Fujitsu Distributors and Fujitsu Sales Engineers. The Airstage Project Manager supports projects from the design stage through completion and ensures clear and effective communication between all Fujitsu team members.

The Airstage Project Manager applies technology to simplify project management and ensure a successful VRF installation.

A central place for project members to coordinate.

Who Has Access to the Portal?

- Engineers
- Contractors
- Fujitsu Distributors
- Independent Airstage Sales Reps
- Fujitsu Regional Sales Managers (RSMs)
- Fujitsu Sales Engineers (SEs)

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 Sales Team

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

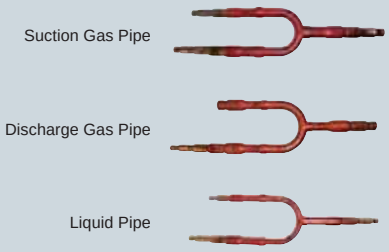
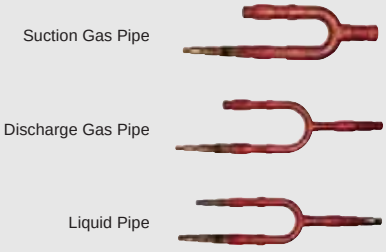
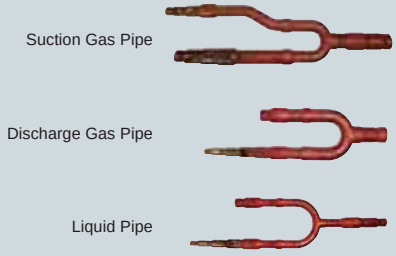
Warranty & Commissioning

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

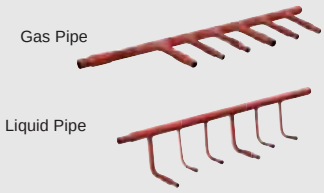
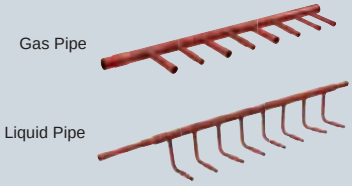
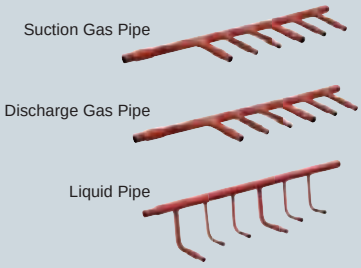
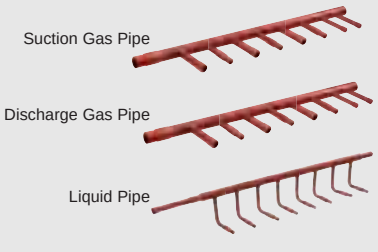
Optional Parts

Connection Units

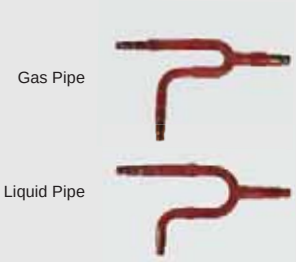
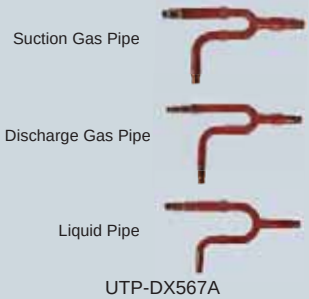
Separation Tube

X < 96.5 kBTU/h	96.5 kBTU/h< X < 193 kBTU/h	193 kBTU/h< X
UTP-AX090A	UTP-AX180A	UTP-AX567A
 UTP-BX090A	 UTP-BX180A	 UTP-BX567A

Header

6 Branch	8 Branch
 UTR-H0906L* UTR-H1806L**	 UTR-H0908L* UTR-H1808L**
 UTP-J0906A* UTP-J1806A**	 UTP-J0908A* UTP-J1808A**

Outdoor Unit Branch Kit

 UTP-CX567A
 UTP-DX567A

* X < 96.5 kBTU/h
** 96.5 kBTU/h < X < 193 kBTU/h

Specifications

Separation Tube

Model name (2 Pipe)	UTP-AX090A	UTP-AX180A	UTP-AX567A
Total cooling capacity of indoor unit (X)(kBtu/h)	X < 96.5	96.5 ≦ X < 193	193 ≦ X

Model name (3 Pipe)	UTP-BX090A	UTP-BX180A	UTP-BX567A
Total cooling capacity of indoor unit (X)(kBtu/h)	X < 96.5	96.5 ≦ X < 193	193 ≦ X

Header

Model name (2 Pipe)	3-6 Branches	UTR-H0906L	UTR-H1806L
	3-8 Branches	UTR-H0908L	UTR-H1808L
Total cooling capacity of indoor unit (X)(kBtu/h)		X < 96.5	96.5 ≦ X < 193

Model name (3 Pipe)	3-6 Branches	UTP-J0906A	UTP-J1806A
	3-8 Branches	UTP-J0908A	UTP-J1808A
Total cooling capacity of indoor unit (X)(kBtu/h)		X < 96.5	96.5 ≦ X < 193

Outdoor unit Branch kit

Model name		UTP-CX567A (for V-II)	UTP-DX567A (for VR-II)
Quantity Required	2 outdoor units	1	
	3 outdoor units	2	

RB Unit

Single type

UTP-RU01AH / UTP-RU01BH / UTP-RU01CH

Multi type

UTP-RU04BH

RB Unit

Type		Single type			Multi type
Model name		UTP-RU01AH	UTP-RU01BH	UTP-RU01CH	UTP-RU04BH
Power source		Single phase 230V, 60Hz			
Input power	W	28	28	41	110
Number of branches		1	1	1	4
Maximum capacity of connectable indoor units(Q)	kBtu/h	Q ≦ 27	Q ≦ 60	Q ≦ 96	Q ≦ 191 *1
Maximum capacity of connectable indoor units per branch(Q)	kBtu/h	Q ≦ 27	Q ≦ 60	Q ≦ 96	Q ≦ 60
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 191kBtu/h

Optional Parts

For Duct Models

Remote Sensor Unit

Accurate temperature is possible sensing room temperature using a remote sensor unit.

UTY-XSZX

IR Receiver Unit

UTB-YWC

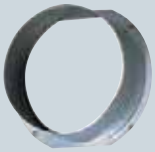
Auto Louver Grille Kit

For Slim duct type

UTD-GXSA-W (For 7/9/12/14 type)
UTD-GXSB-W (For 18 type)

Flange

Round



UTD-RF204
(Set of 4 pcs)

Rectangular

UTD-SF045T

Long-Life Filter

UTD-LF25NA

UTD-LF60KA

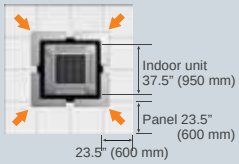
Drain Pump Unit

UTZ-PX1NBA

Type	Compatibility	Model Name
Flange (Round)	Duct Type (ARUM24-36)	UTD-RF204
Flange (Rectangular)	Duct Type (ARUM24-36)	UTD-SF045T
IR Receiver Unit	All Duct Type	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-GXSB-W
Remote Sensor Unit	All Duct Type	UTY-XSZX
Drain Pump Unit	Duct Type (ARUM24-36)	UTZ-PX1NBA

For Cassette Models

Wide Panel



UTG-AGYA-W

Air Outlet Shutter Plate

Closes the air outlet when 3 directional airflow is required.

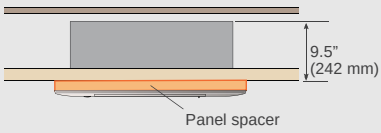
UTR-YDZC UTR-YDZB

Fresh Air Intake Kit

For Compact Cassette type For Cassette type

UTZ-VXAA UTZ-VXGA

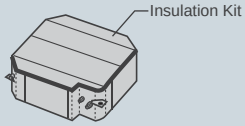
Panel Spacer



UTG-BGYA-W

Insulation Kit

For High Humidity



UTZ-KXGA / UTZ-KXGB / UTZ-KXGC

IR Receiver Kit

Wireless Remote Controller sold separately.

UTY-LRHYB1

Type	Compatibility	Model Name
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
Insulation Kit for High Humidity	Cassette Type (AUUB30-36)	UTZ-KXGA
	Cassette Type (AUUB18-24)	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.

For Ceiling Models

Drain Pump Unit

UTR-DPB24T

Type	Compatibility	Model Name
Drain Pump Unit	Ceiling Type (ABUA30-36)	UTR-DPB24T

For VRF Communication

LonWorks® Cable

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

Applications

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

To view our case studies, visit airstagevrf.com/applications.htm.

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 gives each patient or each room individual control of their room temperature.

■ 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.

CENTRAL CONTROL

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

■ RELIABLE PERFORMANCE

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.

■ 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.

■ INDIVIDUAL COMFORT

With VRF, each patient can have their own controller to set the room temperature for their maximum comfort.

■ OPTIONAL

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

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 HVAC system (as quiet as19 dB) creates a much better learning environment for students.

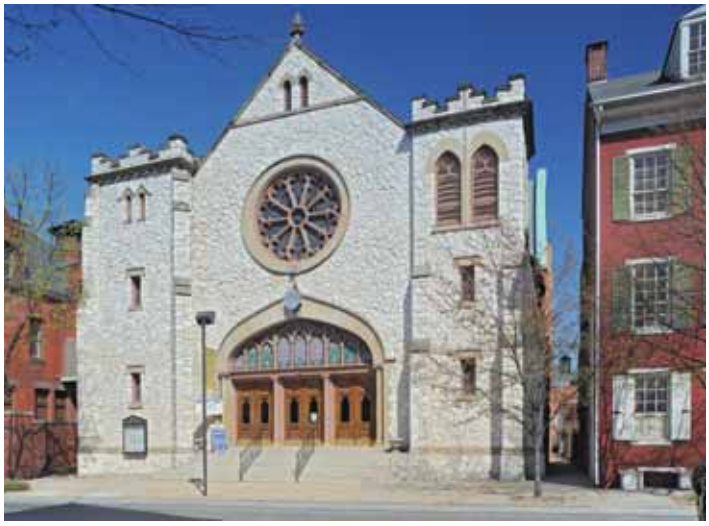
HEALTHIER FACILITY
VRF systems can be integrated with fresh air systems to ensure that air quality meets the needs of the teachers and students.

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

ZONING
Save energy by only heating or cooling the classrooms that are occupied. Set temperature can be 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.



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 multi-tenant 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 as quiet as 19dB ensures a quiet, comfortable living environment for all tenants.

■ OPTIONAL

Subtenant billing and Energy Charge apportionment.

To view our case studies, visit airstagevrf.com/applications.htm.

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.

QUIET
Indoor units (as quiet as 19dB) and outdoor units (less than 64dB) creates a pleasant work environment and reduces noise complaints.

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

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

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.

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.

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

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