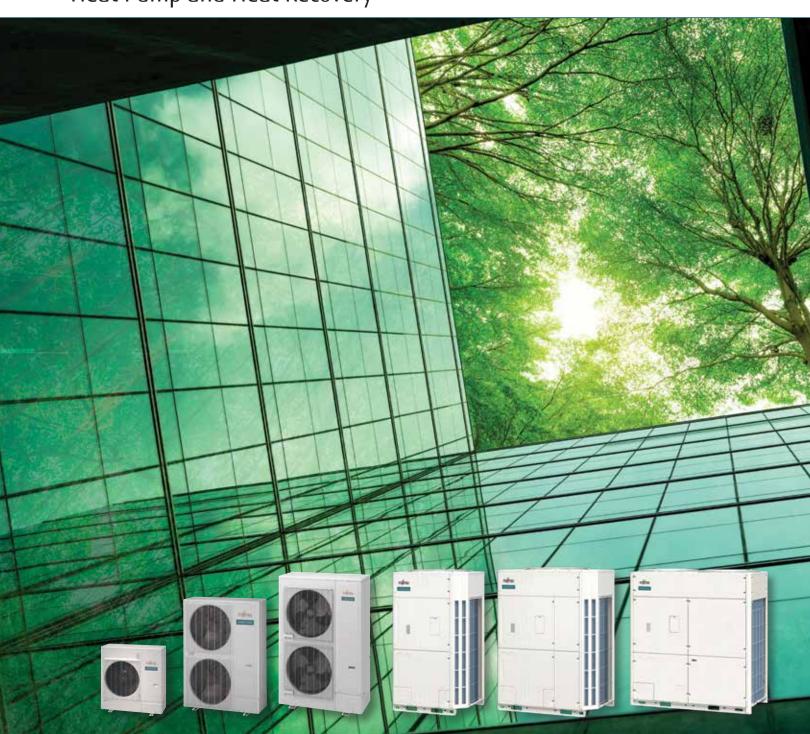
# **AIRSTAGE**



Variable Refrigerant Flow Systems

# AIRSTAGE VRF

Heat Pump and Heat Recovery



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# **AIRSTAGE**

# Variable Refrigerant Flow System

For Small and Large Buildings

- Extensive lineup from 3 to 36 tons

- Extensive lineup from 3 to 36 tons
  Connectable capacity ratio up to 150%
  58 different indoor units available in 13 styles
  Up to 64 indoor units for 24 Ton and larger systems
  Three outdoor V-Series units may be combined with Branch Kits to create up to 36-ton systems
  10-Year Parts and Compressor Warranty See Warranty Statement for
- Extensive training available for for Engineers, Architects, Contractors and Distributors

# High Efficiency & Reliability

**Outdoor Units** 



10 Ton

Three-phase

6, 8 Ton Three-phase 12, 14, 16 Ton Three-phase

## A World Leader in Heating and Cooling Solutions

## Support Team

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



# **Technical Support**

The Fujitsu support experience is top notch! We have highly trained and field-experienced technicians on staff as well as strategically placed, Regional Support Specialists (RSS) to provide local support. The service team works closely with Quality, Product, and R&D team members in the US and overseas for new product innovation and improvement.

Service department enhancements include:

- Enhanced VIP call routing / lower wait times.
- Mobile Technician app: troubleshoot error codes, thermistors and pressure sensors
- 24-hour response on <u>Servicehvac@fujitsugeneral.com</u>
- Zendesk guide for technical information
- Zendesk chat

# 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 197ft. (60m) height difference for testing systems for tall 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.

# R&D Center & Technology Research Buildings



North America Corporate HQ and Training Center Fujitsu General America (Pine Brook, NJ, USA)



AIRSTAGE Innovation and Learning Center (Addison, TX, USA)



AIRSTAGE Innovation and Learning Center West (Martinez, CA, USA)



JAPAN Head Office, R&D Center and 60 m Height Difference Testing Tower (Japan)

# Overseas Manufacturing Companies



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



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



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



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



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



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



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



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

## **OUR HISTORY**

Innovating in the HVAC industry since 1971 with ductless and VRF products. VRF Business since 2001.

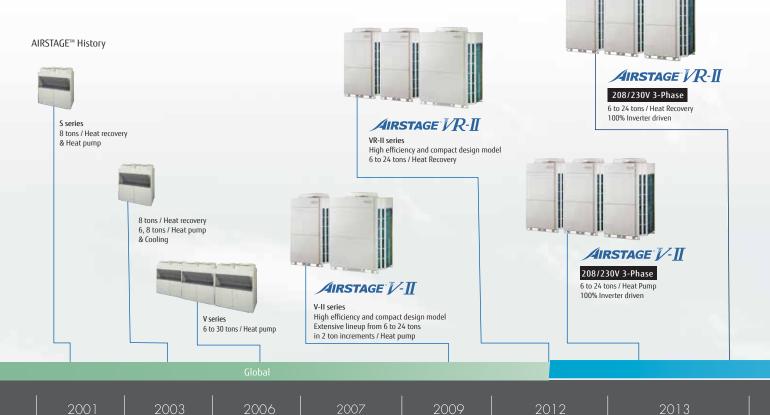
## **OUR MISSION**

### Living together for our future

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

FUJITSU GENERAL's VRF AIRSTAGE™ Series has been developed based on our long-term air-conditioning technology know-how and was first launched 22 years ago.
We have offered a series of products for all types of residential and commercial applications to meet the various market needs.





History of Environmental Measures

Certification Acquisition of

1998 : Fujitsu General (Shanghai) Co.,Ltd.

1999 : Fujitsu General (Thailand) co.,Ltd. 2002 : FGA(Thailand) Co.,Ltd.

2006: Fujitsu General Central Air-conditioner (Wuxi) co.,Ltd.

Green Initiatives

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



#### 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.









## AIRSTAGE VR-II

#### 460V 3-Phase

6 to 24 tons / Heat Recovery 100% Inverter driven



# AIRSTAGE J-IIS

#### 208/230V 1-Phase

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



# AIRSTAGE J-II

### 208/230V 1-Phase

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



# AIRSTAGE VI

Unified model - Heat Pump / Heat Recovery 6 to 36 tons



Global Rebrand

**AIRSTAGE** 

# AIRSTAGE J-[V

#### 208/230V 1-Phase

J-IV series

3, 4, 5 tons / Heat Pump Expanded heating operation range for cold climates, connect up to 15 indoor units



# AIRSTAGE J-IVS

#### 208/230V 1-Phase

J-IVS series

3, 4 tons / Heat Pump

Expanded heating operation range for cold climates, connect up to 12 indoor units

2023

Green Advancement Use of 100% inverter driven DC compressors.

INVERTER

5

# Light Commercial & Commercial, Residential

# VRF

AIRSTAGE™ VRF systems can be designed to create an air conditioning solution to suit most building requirements.

AIRSTAGE™ VRF systems can be designed to effectively provide an air conditioning solution from a large domestic residence to a large scale commercial building.

p. 8 Features

p. 22 VRF Outdoor Units Lineup

#### **VRF Outdoor Units**



AIRSTAGE™ J Series Heat Pump for Residential and Light Commercial Applications

p. 24 AIRSTAGE™ J-IV

p. 28 AIRSTAGE™ J-IVS p. 32 AIRSTAGE™ J-IIIL

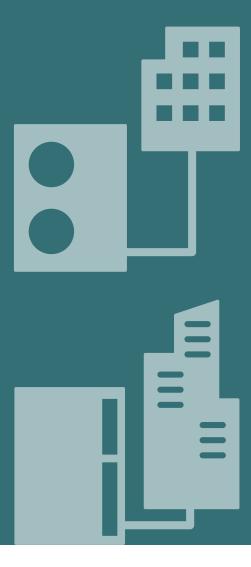


AIRSTAGE™ V Series Heat Pump/Heat Recovery for Light Commercial and Commercial Applications

p. 36 AIRSTAGE™ VU-V

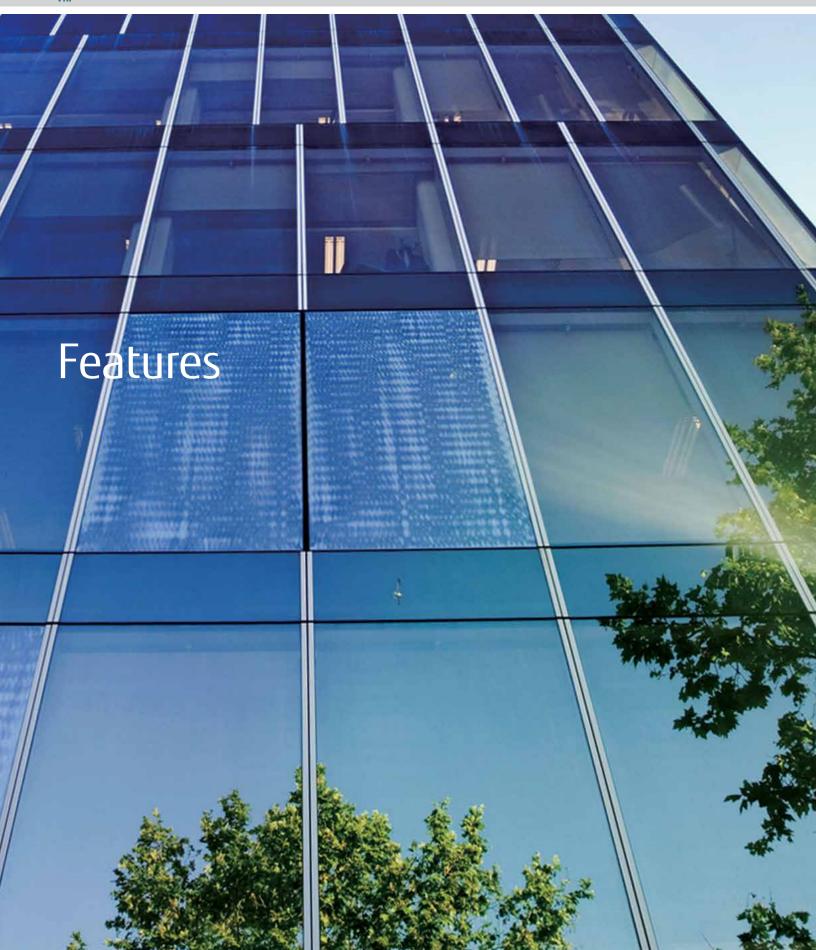
#### **VRF INDOOR UNITS**

p. 46 VRF Indoor Units







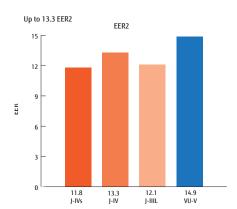


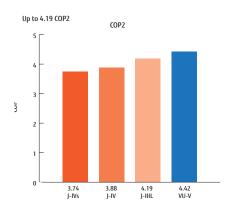
# **High** Efficiency

High system efficiency is achieved by using DC twin rotary compressor, scroll compressor, inverter technology, and large efficient heat exchanger.



DC twin rotary compressor







### High efficiency design with great SEER2, IEER and COP2 values

All VRF Series including J-IIIL Series utililze inverter technology to achieve high efficiency operation. This technology improves both the durability and reliability of the systems.



J-IIIL Series



J-IV Series



J-IVS Series



1 DC fan motor



3 DC inverter control



2 Large efficient heat exchanger



4 Subcool heat exchanger



VU-V-Series 12, 14, and 16 Ton



1 3-phase DC fan motor



3 Sine-wave DC invertor control



2 Energy efficient scroll compressor



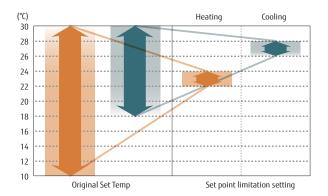
4 Subcool heat exchanger

# Operation Performance is Efficiently Controlled



### Room temperature set point limitation

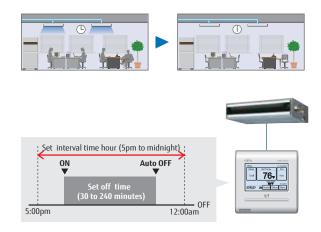
The minimum and maximum temperature set point ranges can be limited, which can provide further energy saving while maintaining the comfort of the occupants.





### Auto-off timer

The wired remote controller is equipped with an OFF timer function that automatically stops operation when a fixed time has elapsed from the start of operation. This can increase the energy efficiency. Furthermore the wired RVRU or RNRUZ\* remote controller can set up the interval of time in case operation stops.

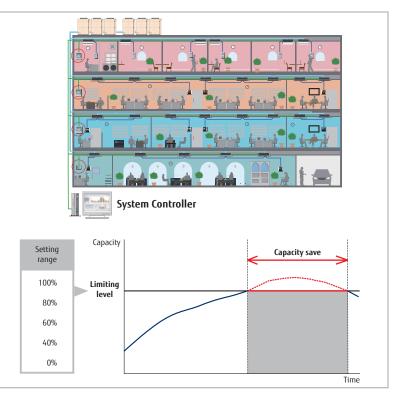


## **Energy saving management**

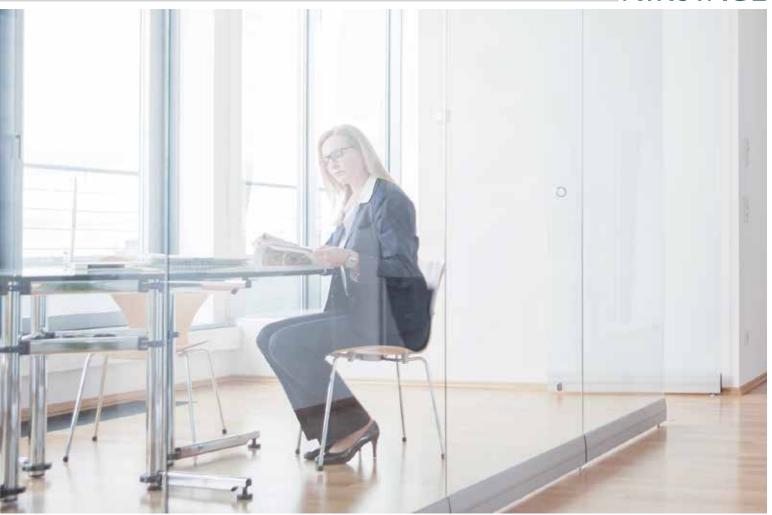
The system controller can be used to set a variety of different energy saving operations, depending on the season, weather, and occupant schedules.

## Capacity saving operation

Operation capacity can be adjusted based on capability and lowered power usage. The outdoor units can be set for capacity limiting through a BACnet gateway.



# **AIRSTAGE**





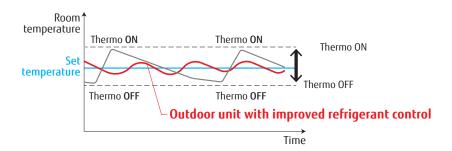
### Intelligent refrigerant control

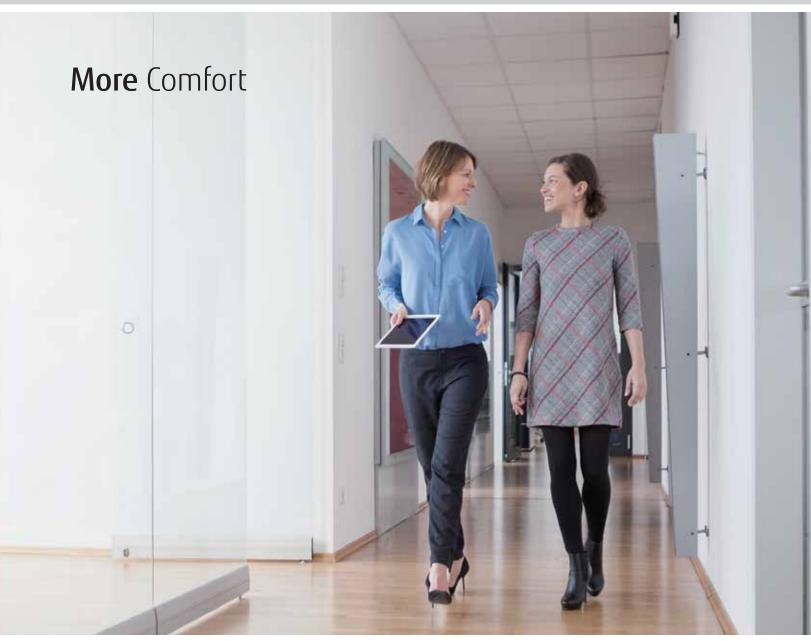
Fujitsu intelligent refrigerant control optimizes the comfort in each individual zone while providing reliable and energyefficient system operation.

The intelligent refrigerant control minimizes starting and stopping of the compressors while keeping the target zone temperatures. The control also maximizes energy efficiency by running the compressors longer times but at an optimized speed.



<sup>\*</sup> The improvement by the control and the actual sine wave varies by the combination of the indoor unit and system operating condition.

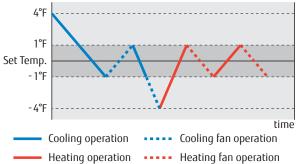




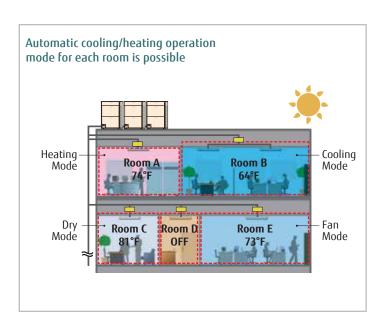


## Auto changeover function

In Auto setting mode in a Heat Recovery system, the cooling/heating mode is automatically switched in each room according to the set temperature and actual room temperature.

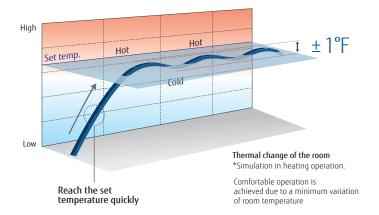


Auto changeover setting allows for each indoor unit to easily switch between cooling and heating regardless of the operation mode of other indoor units. This ensures optimized comfort all year round.



### Precision refrigerant flow control

Precise and smooth refrigerant flow control is achieved by using DC Inverter control in conjunction with individual indoor unit electronic expansion valve control. This allows high precision comfortable temperature control of ±1°F.

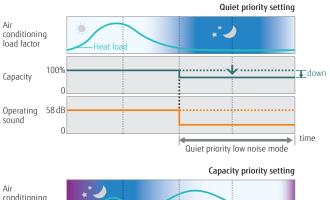


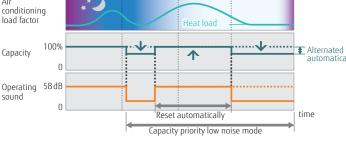
## Quiet operation



### Quiet operation

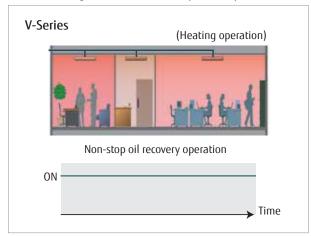
Two low noise modes can be selected automatically by quiet priority setting and capacity priority setting depending on the indoor environment and outside temperature load. This feature can be controlled via outdoor unit external input and/or system controller.





## Non-stop oil recovery operation

The system continues to operate and maintain a comfortable room condition even during the brief oil recovery mode operation.



## Low sound level design

All the indoor units in the AIRSTAGE system have a low sound level design. In low capacity operation the sound level can be as slow as 21dB(A).

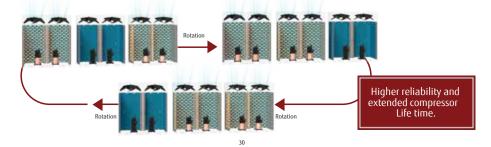


# **High** Reliability

#### Outdoor unit rotation

Continuation contents from the traditional mode

The compressor starting order is rotated to equalize the cumulative running time of each unit.



### Advanced refrigerant control

\* Continuation contents from the traditional model

Compressor control logic controls the inverter speed to balance the mass airflow rate of refrigerant in each outdoor unit.

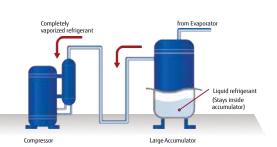


Compressor refrigerant volume control balancing refrigerant mass of the system.

#### Protection against liquid flowback

The use of a large accumulator means that refrigerant that has not been completely vaporized stays inside the accumulator to ensure no liquid refrigerant is fed into the compressor.

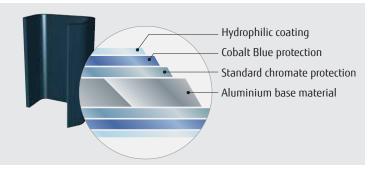




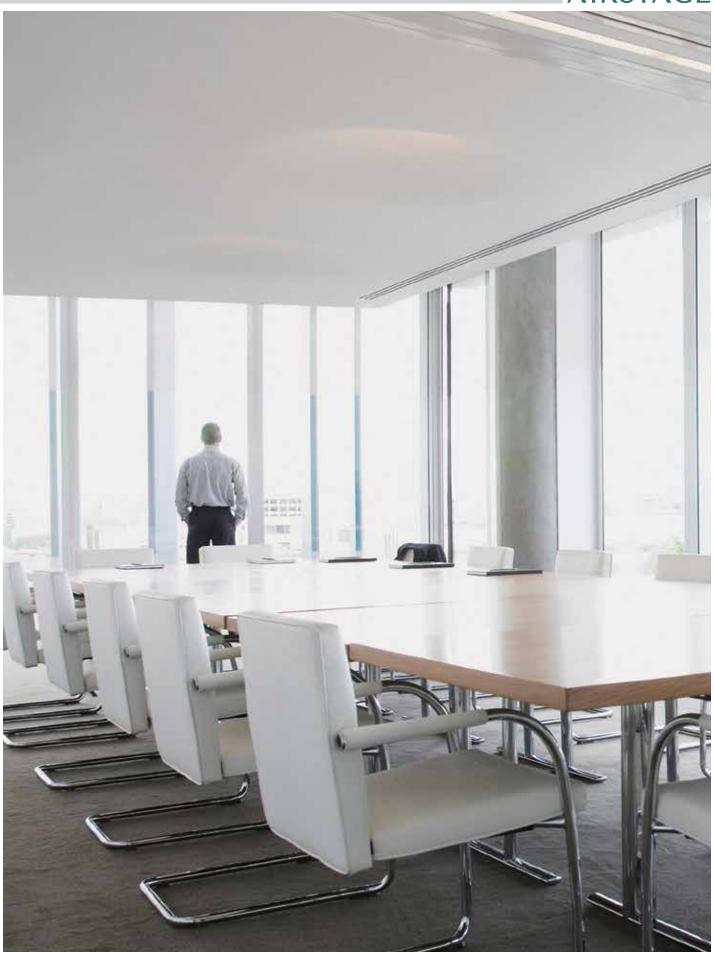
\* Continuation contents from the traditional model

## Blue fin heat exchanger

Blue fin coating of the outdoor unit heat exchanger ensures corrosion protection for harsh environments.



# **AIRSTAGE**



# **Design** Flexibility



## Efficient and compact design



Compact outdoor unit and optimized air flow pattern.

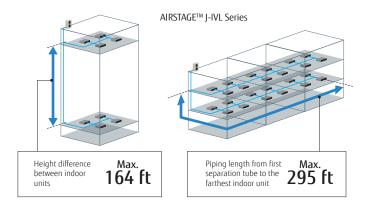


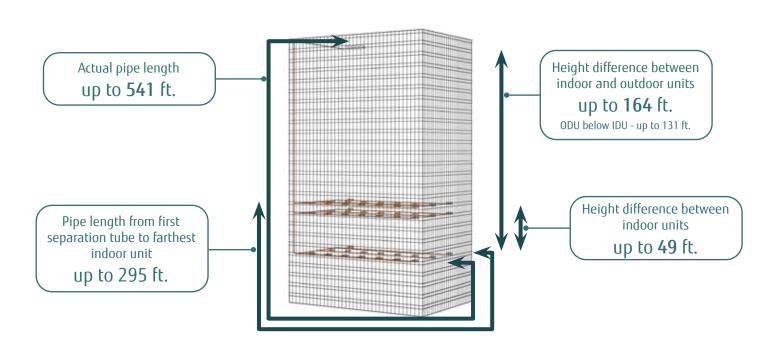


## Flexible piping design



Generous piping guidelines to enable the system to be used in a variety of applications.





### High capacity connection

Series	Connectable indoor unit total capacity range	Connectable indoor unit quantity	
J-IVs	50% to 130%	up to 12	
J-IV	50% to 150%	up to 15	
J-IIIL	50% to 150%	up to 30	
VU-V	25% to 150% ( select models)	up to 64	



# Designed for low refrigerant charge

Optimal design of indoor unit and outdoor unit reduces the refrigerant volume in a system to enable installation in small spaces while adhering to local codes.





## Optional parts

- Integrated outside air intake capabilities with optional air intake kits for most of the indoor units.
- Comfortable room temperature with advanced controls and remote sensor options.
- DX-Kit that enables seamless integration of non-VRF air handling units into the VRF system.







### Low ambient operation

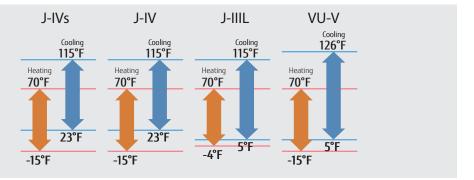
Improved refrigeration technology allows system operation in colder climates.





## Extended operating range

Extended operation range enables heating and cooling in colder climates.







## Easy access

The L-Shape front panel, that easily can be removed, increases the space for installation and service.





Front access for easy installation and service

## Flexible piping connection

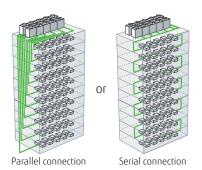
Piping and wiring are available through the front, left, right and bottom.





### Simple wiring work

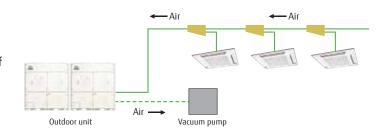
Installation of the wiring systems is made easier as the communication wiring can be installed continuously between the indoor, outdoor and RB units.



Up to maximum length 11,811 ft

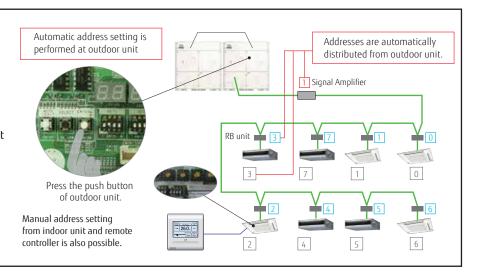
# Easy evacuation - using vacuum mode function

The vacuum mode function enables all expansion valves of indoor units to be fully opened, making the evacuation of the refrigerant circuit easy after installation.



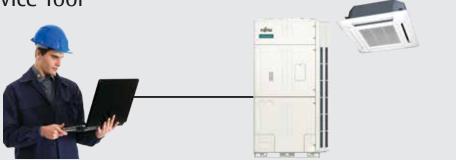
# Automatic address setting

Address setting of the indoor unit, RB unit and signal amplifier through the automatic function setting on the outdoor unit PCB.



# Easy diagnosing with Service Tool

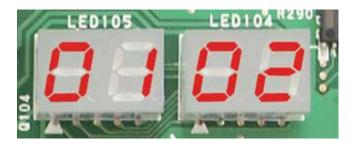
User friendly Service Tool that can show system conditions such as refrigerant temperatures and pressures, electronic expansion valve position, etc., makes it easy to verify proper system operation.



# Easy Service & Maintenance

# Designed for Easy Maintenance

7 segment LED displays makes it easy to verify operation details such as function setting status, refrigerant temperature, pressure, compressor operation time, etc.



### Easy to read 7-segment LED

# Operating status for Outdoor Unit can easily be checked on the display:

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



# Service and maintenance window

Service window provides ease of access to multi-functional display and buttons without removing any main front panels.

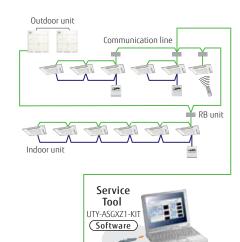




### Operation diagnosis by Service Tool

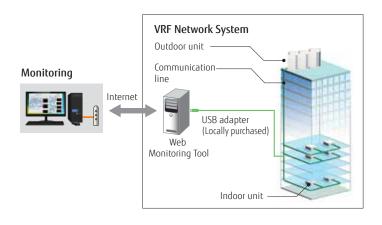
#### Connection to Service Tool

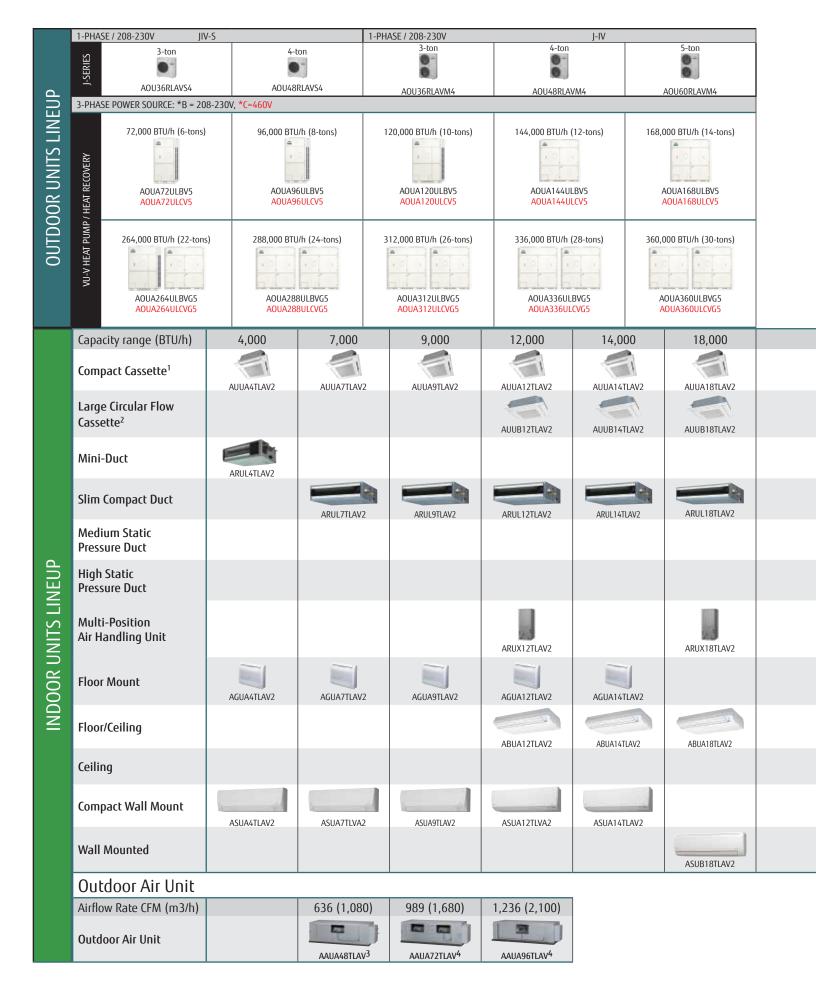
- Detailed operation status and recent operation history can be checked and analyzed by using the Service Tool.
- Operation status of the last 5 minutes stored in memory.



### Remote monitoring

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





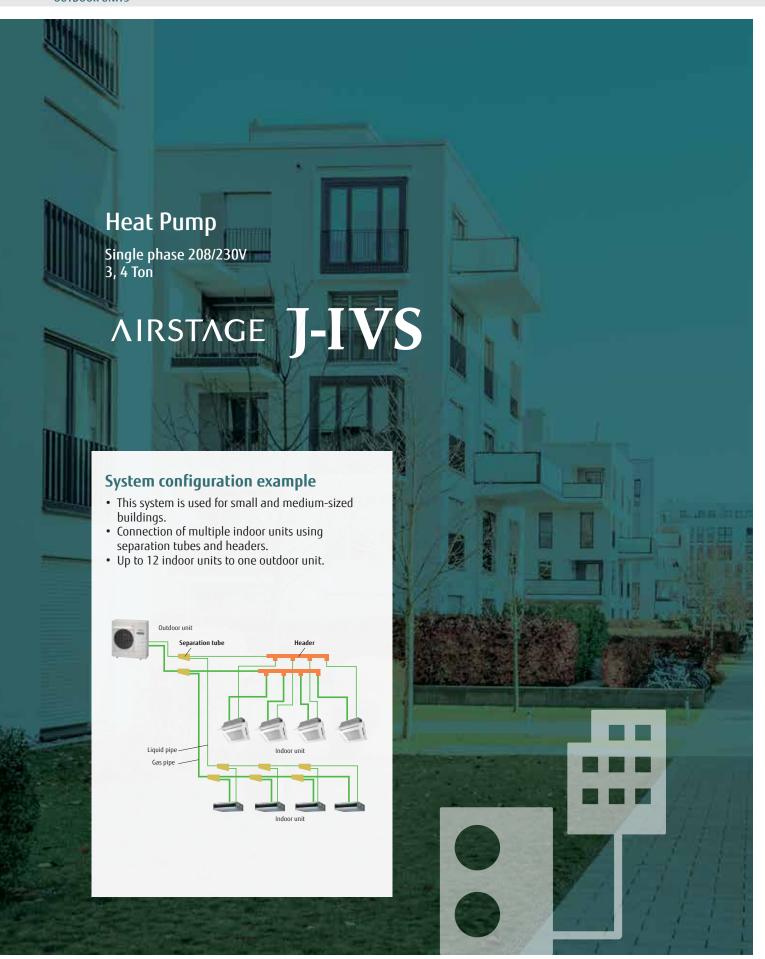
3-PHASE / 208-230V			J-IIIL					
6-to S31 A0U72			8-ton  8-ton AOU96RLAVL	10-ton AOU120RLAVL				
UTB 000,291  HEAT RECOVERY  OF THE ALIENT OF	2ULBV5	AC	000 BTU/h (18-tons)	AOUA240ULBVG5				
VU-V HEAT RECOVERY  VU-V HEAT RECOVERY  AUTOMOV	ULBVG5	AC	DUA408ULBVG5 OUA408ULCVG5	AOUA432ULBVG5	0 1			
24,000	30,000		36,000	48,000	6	50,000	72,000	96,000
AUUA24TLAV2								
AUUB24TLAV2	AUUB30TLAV2		AUUB36TLAV2	AUUB48TLAV2				
			7,0083018.102	7.0001012.02				
ARUM24TLAV2	ARUMTLAV2	li l	ARUM36TLAV2					
			ARUH36TLAV2	ARUH48TLAV2	-	JH60TLAV2	ARUH72TLAV2	ARUH96TLAV2
ARUX24TLAV2	ARUX30TLAV2	!	ARUX36TLAV2	ARUX48TLAV2	ARI	JX60TLAV2		
ABUA24TLAV2								
	ABUA30TLAV2	7	ABUA36TLAV2					

- 1. Compact Cassette Grille UTG-CCGVG sold separately. Must order one with each Compact Cassette.
  2. Cassette Grille UTG-LCGVCW (White) or UTG-LCGVCB (Black) sold separately. Must order one with each Cassette.
  3. J-Series compatibility is dependent on outdoor unit capacity.

ASUA36TLAV2

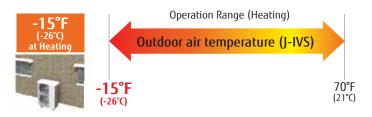
ASUA30TLAV2

ASUB24TLAV2

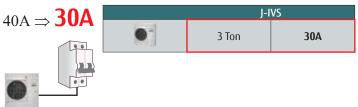




### **Expanded Heating Operation Range**



### **Optimized Breaker Size**

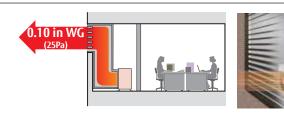


### Intelligent refrigerant control

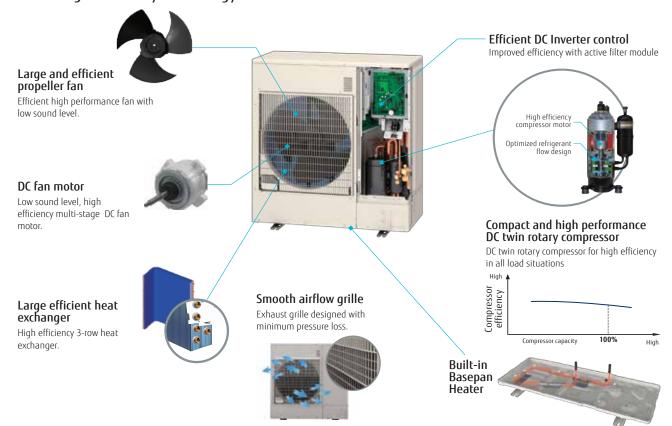
The intelligent refrigerant control provides improved comfort for people and energy-efficient operation.

### External static pressure

Increased installation flexibility with available external static pressure up to 0.10 in WG.



## Advanced high efficiency technology



### Easy to install

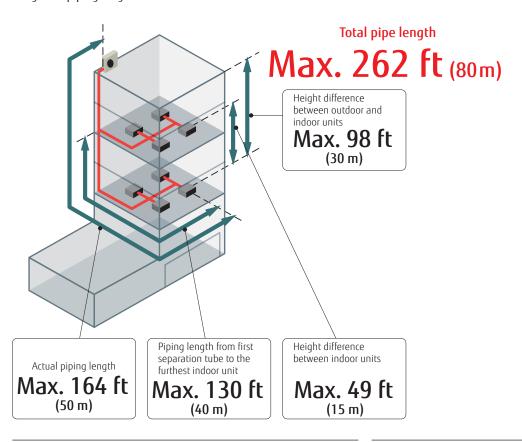
Low weight and small space requirements.

### Low sound level design

Low sound levels due to inverter DC twin rotary compressor and advanced air flow technology.

### Flexible piping

Fujitsu advanced refrigerant control technology allows a total refrigerant piping length of 262 ft.



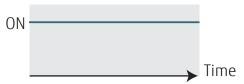
### Non-stop oil recovery operation

Room comfort is kept with continuous heating and cooling even during the brief oil return operation.

### J-IVS Series



Non-stop oil recovery operation



## Small and light weight outdoor unit

Very compact and light weight design. Can be installed on balcony, patio or below windows.



# Up to 12 Indoor Units can be connected to one system

Model
Nominal System Capacity (tons)
Connectable indoor units

J-IVS					
3	4				
1-9	1-12				



### AOU36RLAVS4, AOU48RLAVS4

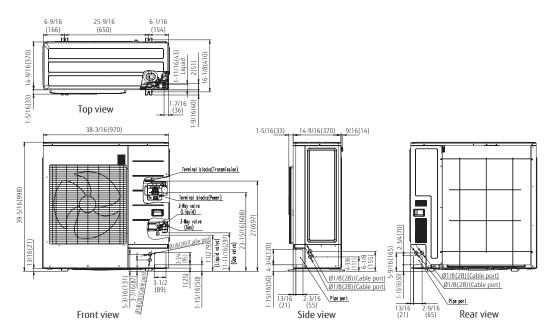


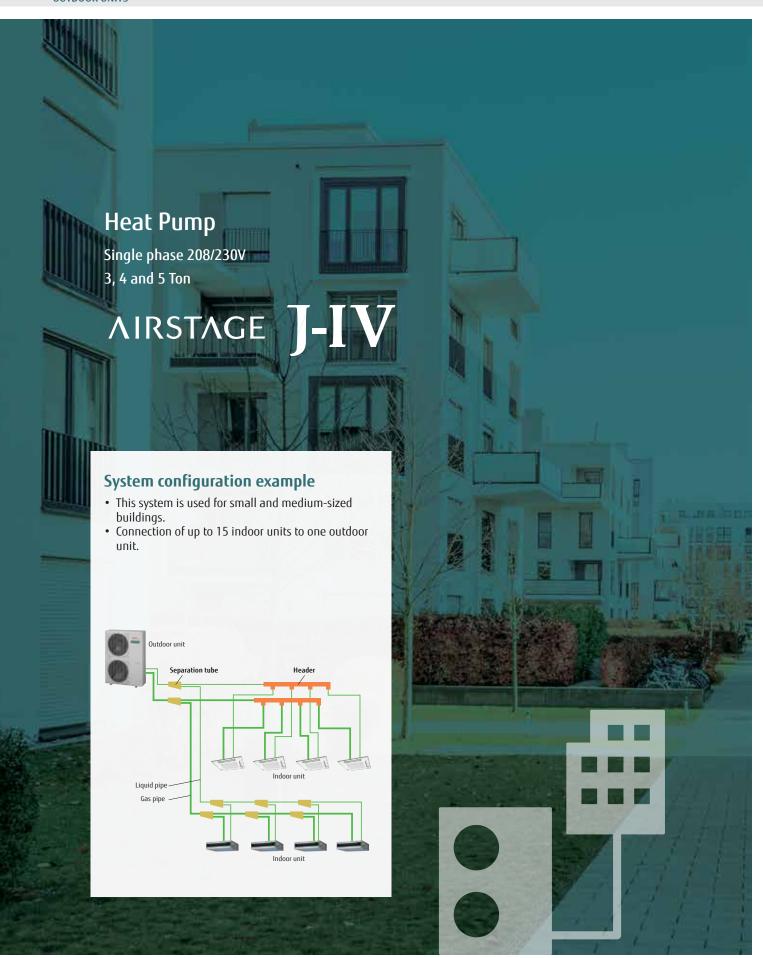
### Specifications

Nominal System Capacity		Ton(s)	3	4		
Model Name		AOU36RLAVS4	AOU48RLAVS4			
Indoor unit connectable capacity ra	atio	50% to 130%				
Maximum Connectable Indoor Unit	ts	1-9	1-12			
Power source		208 / 230 VAC, 1-Phase, 60Hz				
Cooling capacity	Capacity	Btu/h	36,000	48,000		
(Non-Ducted/Ducted)	EER   EER2	Btu/h/W	11.8 / 11.2   11.80 / 10.25	9.6 / 9.1   9.60 / 8.40		
	SEER   SEER2	=	19.7 / 17.4   20.5 / 15.5	18.8 / 16.9   20.4 / 14.7		
Heating capacity	Capacity	Btu/h	42,000	54,000		
(Non-Ducted/Ducted)	COP   COP2	W/W	3.74 / 3.56   3.74 / 2.80	3.54 / 3.36   3.54 / 3.08		
	HSPF   HSPF2	=	11.20 / 10.30   9.7 / 7.9	10.90 / 10.10   9.4 / 8.2		
Airflow rate	"Cooling *Heating(J-IV only)"	CFM (m3/h)	2,378 (4,040)	2,472 (4,200)		
Sound pressure level	Cooling / Heating	db(A)	52 / 54	53 / 55		
Dimensions	HxDxW	in. (mm)	39-5/16 x 38-3/16 x 14-	-9/16 (998 x 970 x 370)		
Weight		lbs.(kg)	196	196 (89)		
Connection pipe diameter	Liquid	in. (mm)	3/8 (	3/8 (9.52)		
	Gas		5/8 (1	5/8 (15.88)		
Max.total pipe length		ft. (m)	262 (80)			
Max.actual pipe length (OU to furt	hest IU)		164 (50)			
Max.height difference (OU:Upper /	Lower)		98 (30)	98 (30) / 98 (30)		
Operation range Cooling		°F (°C)	23 - 115	(-5 - 46)		
	Heating	°F (°C)	-15 - 70 (-26 - 21)			
Refrigerant type			R410A			
Maximum Circuit Breaker		А	30	40		
Minimum Circuit Ampacity (MCA)		A	29.7	33.4		

#### Dimensions

(Units: in (mm)







### **Expanded Heating Operation Range**



### Optimized breaker size

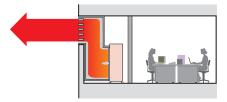


### Intelligent refrigerant control

The intelligent refrigerant control provides improved comfort for people and energy-efficient operation.

### External static pressure

Increased installation flexibility with available external static pressure up to 0.12 in WG.



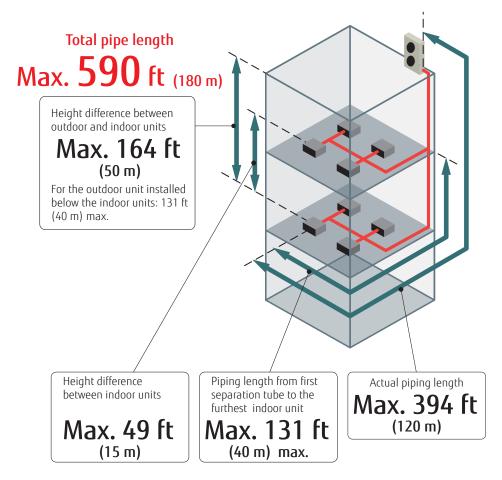


## Advanced high efficiency technology



### Flexible piping

Fujitsu advanced refrigerant control technology allows a total refrigerant piping length of 590 ft.



# Continous heating and cooling during oil return operation

Room comfort is kept with continuous heating and cooling even during the brief oil return operation.

### J-IV Series



Non-stop oil recovery operation



# Up to 15 indoor units can be connected in one system

Model	J-IV		
Nominal System Capacity (tons)	3	4	5
Number of connectable indoor units	1-9	1-12	1-15

# AIRSTAGE J-IV

## AOU36RLAVM4, AOU48RLAVM4, AOU60RLAVM4

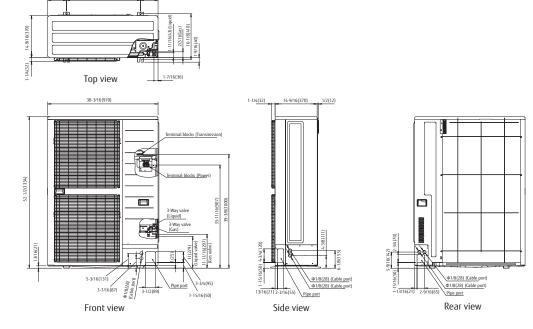


### Specifications

Nominal System Capacity			3	4	5	
Model Name		Ton(s)	AOU36RLAVM4	AOU48RLAVM4	AOU60RLAVM4	
Indoor unit connectable capacity ratio			50% to 150%			
Maximum Connectable Indoor Uni			1-9	1-12	1-15	
Power source	<del></del>			208 / 230 VAC, 1-Phase, 60Hz	1.0	
Cooling capacity	Capacity	Btu/h	36,000	48,000	60,000	
(Non-Ducted/Ducted)	EER   EER2	Btu/h/W	13.3 / 12.5   13.3 / 10.6	12.5 / 11.8   12.5 / 9.6	10.8 / 10.4   10.8 / 9.1	
	SEER   SEER2	-	19.0 / 17.0   19.2 / 15.5	19.8 / 18.1   20.4 / 15.6	18.5 / 16.5   19.5 / 14.7	
Heating capacity	Capacity	Btu/h	42,000	54,000	66,000	
(Non-Ducted/Ducted)	COP   COP2	W/W	3.82 / 3.86   3.82 / 2.82	3.88 / 3.64   3.88 / 3.60	3.64 / 3.60   3.64 / 3.30	
	HSPF   HSPF2	-	11.50 / 10.00   10.0 / 8.2	11.10 / 10.40   9.60 / 8.5	11.00 / 10.50   9.41 / 8.6	
Airflow rate	"Cooling *Heating(J-IV only)"	CFM (m3/h)	3,649 (6,200) *3,649 (6,200)	3,767 (6,400) *3,767 (6,400)	4,827 (8,200) *4,002 (6,800)	
Sound pressure level	Cooling / Heating	db(A)	50 / 52	51 / 53	57 / 57	
Dimensions HxDxW in. (mm		in. (mm)	52-1/2 × 38-3/16 × 14-9/16 (1,334 × 970 × 370)			
Weight		lbs.(kg)	262 (119)	265 (120)	271 (123)	
Connection pipe diameter	Liquid	in. (mm)	3/8 (9.52)			
	Gas		5/8 (1	15.88)	3/4 (19.05)	
Max.total pipe length		ft. (m)	590 (180)			
Max.actual pipe length (OU to fur	thest IU)		394 (120)			
Max.height difference (OU:Upper	/ Lower)		164 (50) / 131 (40)			
Operation range Cooling °F (°C)		°F (°C)	23 - 115 (-5 - 46)			
Heating °F (°C)			-15 - 70 (-26 - 21)			
Refrigerant type			R410A			
Maximum Circuit Breaker A			30 40			
Minimum Circuit Ampacity (MCA)		А	29	37.7		

### Dimensions

(Units: in (mm)





# Slim & Compact Design

The compact and slim design of the J-IIIL series makes it ideal for buildings with limited installation space.



### **Interior Installation**



### Quiet operation does not disturb residents

Low sound level operation enables installation in any environment.

### **Installation in Alleys**





AIRSTAGE™ J-Series outdoor unit



AIRSTAGE™ V-Series outdoor unit

### Space saving

Space-saving design to fit in tight areas on the ground, on patios/balconies or on the wall.

### **Curbside Installation**





AIRSTAGE™ J-Series outdoor units

Flexible installation



Traditional VRF top-discharge outdoor units

Slim and compact design enable outdoor units to be installed beneath windows

### Flexible system configuration

Up to 30 indoor units can be connected to one outdoor unit



J-IIIL Max. Connectable Indoor Units 10Ton : 30units

10Ton : 30units 8Ton : 24units

 $6 \\ Ton: 18 \\ units$ 

# 54 dB(A)

### Low sound level design

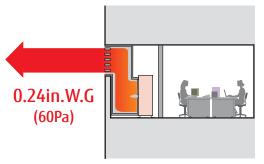
Low sound levels due to inverter DC twin rotary compressor and advanced air flow technology.

Sound levels as low as



### **High Static Pressure**

Increased installation flexibility with available external static pressure up to 0.24in. W.G (60Pa).





### Indoor unit and controller connectivity







Wall Mounted

Mini Duct

Compact Cassette

Compact Floor

JIII-L outdoor units can connect to:

- 14 types of indoor units 58 different models (Capacity ranges from 4,000 to 96,000 BTU/h)
- Wide range of control options









### **Installation Flexibility**

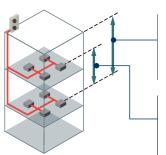
#### **Flexible Piping**

Fujitsu advanced refrigerant control technology allows a total refrigerant piping length of 1312 ft.

Total Piping Length

Max. 1,312 ft.

(400m)



Height difference between outdoor and indoor units

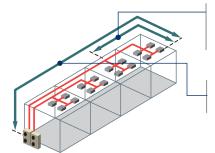
### Max. 164ft. (50m)

For the outdoor unit installed below the indoor units: 131ft. (40m) max.

Height difference between indoor units

Max. 164ft. (50m)

For latest generation of indoor units



Piping length from first separation tube to the farthest indoor unit

Max.295ft. (90m)

Actual piping length

Max.393ft. (120m)



## AOU72RLAVL, AOU96RLAVL, AOU120RLAVL



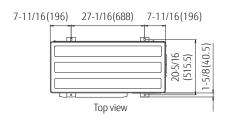
#### **Specifications**

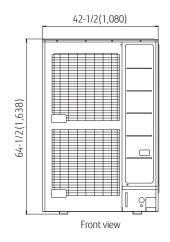
Nominal system capacity		Ton	6	8	10		
Model name			AOU72RLAVL	AOU96RLAVL	AOU120RLAVL		
Indoor unit connectable ca	apacity ratio			50% to 150%	·		
Maximum connectable inc	door unit		1-18	1-24	1-30		
Power source		Ø/V/Hz	208/230V, 3-Phase, 60Hz				
<i>c</i> "	Capacity	Btu/h	72,000	96,000	120,000		
Capacity (Non-Ducted/Ducted)	EER	Btu/h/W	12.1/11.9	11	.6/11.6		
(Non-Ducted/Ducted)	IEER	-	23.9/21.5	23.1/21.1	24.2/20.9		
Capacity	Capacity	Btu/h	81,000	108,000	135,000		
(Non-Ducted/Ducted)	COP at 47°F	W/W	4.19/4.01	3.87/3.66	3.77/3.64		
Airflow rate		CFM(m³/h)	5,298(9,000)	6,475(11,000)	7,653(13,000)		
Sound pressure level	Cooling/Heating	dB(A)	54/55	59/60	62/63		
	Height		64-1/2(1,638)				
Dimensions	Width	in.(mm) [	42-1/2(1,080) 18-7/8(480)				
	Depth						
Weight		lbs.(kg)	470(213)				
C	Liquid	:- /\	3/8(9.52)		1/2(12.70)		
Connection pipe diameter	Gas	in.(mm)	3/4(19.05)	7/8(22.20)	1-1/8(28.58)		
Max.Total pipe length		(t. /)	393(120)				
Max.height difference (Out	door Unit: Upper/Lower)	ft.(m)	164/131(50/40)				
0	Cooling	°E (°C)	5*1 to 115 (-15*1 to 46) 23*1,2 to 115 (-5*1,2 to				
Operation range Heating		°F(°C)	-4 to 70(-20 to 21)				
Refrigerant type			R410A				
Maximum Circuit Breaker A		А	40 50		50		
Minimum Circuit Ampacity (MCA) A			38	39	47		

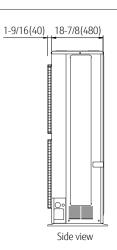
Note: Specifications are based on the following conditions: Cooling: Indoor temperature of  $80^{\circ}F$  ( $26.7^{\circ}C$ )DB /  $67^{\circ}F$  ( $19.4^{\circ}C$ ) WB, and outdoor temperature of  $95^{\circ}F$  ( $35^{\circ}C$ )DB /  $75^{\circ}F$  ( $23.9^{\circ}C$ )WB. Heating: Indoor temperature of  $70^{\circ}F$  ( $21.1^{\circ}C$ )DB /  $60^{\circ}F$  ( $15.6^{\circ}C$ )WB, and outdoor temperature of  $47^{\circ}F$  ( $8.3^{\circ}C$ )DB /  $43^{\circ}F$  ( $6.1^{\circ}C$ )WB. Pipe length:  $25^{\circ}F$ . ( $7.5^{\circ}m$ ), Height difference:  $0^{\circ}F$ . ( $0^{\circ}m$ ). ( $0^{\circ}M$ ) ( $0^{\circ}M$ )

#### Dimensions

(Units: in (mm)

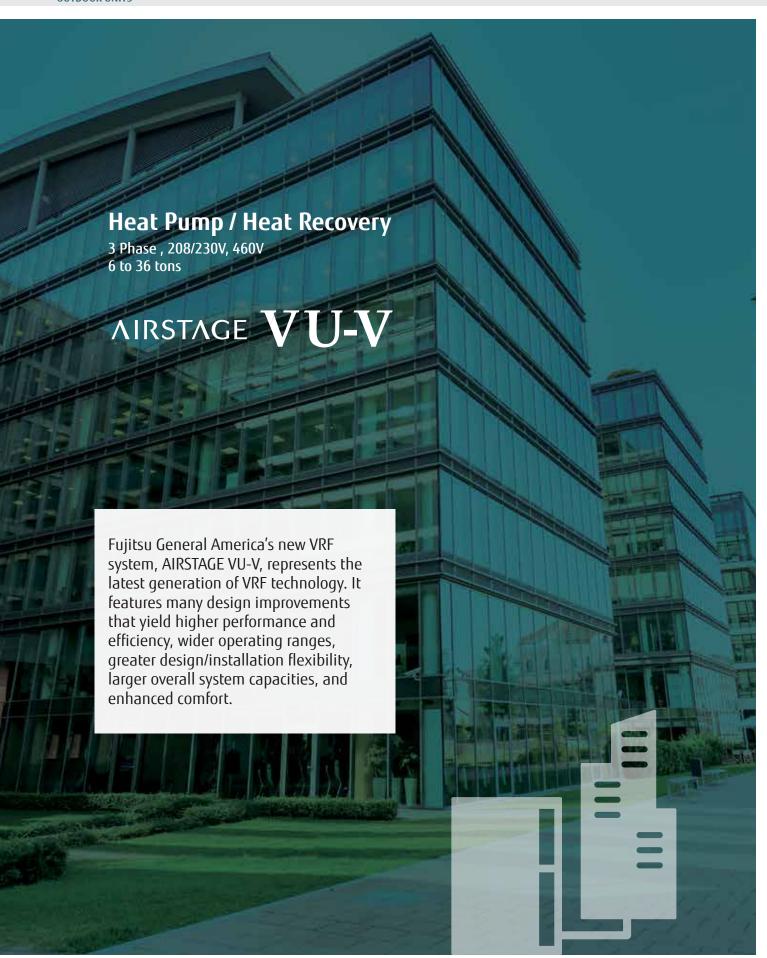






<sup>\*1</sup> When the outdoor unit is lower than the indoor unit, the temperature range is 23°F(-5°C).

<sup>\*2</sup> The cooling operation range of 5 to 115°F(-15 to 46°C) is allowed only when all of the indoor units connected to the system are higher than capacity of 18000Btu/h(5.6kW).





# Flexibility

## Extended system capacity range – up to 36 Tons

Increased outdoor unit capacities saves space and costs.

Tons	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
Number of ODU Modules	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3

### Increased number of connectable indoor units

Improved design flexibility for applications with many indoor units such as hotels and offices.

Up to 42 indoor units for 6 to 16 Ton systems

Up to 58 indoor units for 18 to 22 Ton systems

Up to **64** indoor units for **24** Ton and larger systems

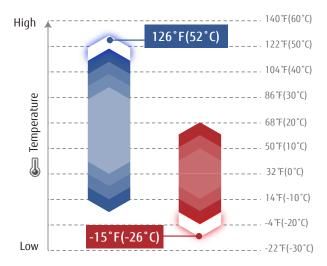






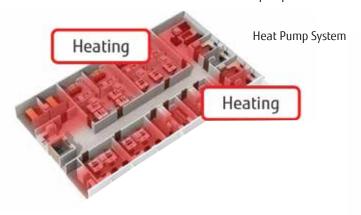
# Extended ambient air temperature operating range

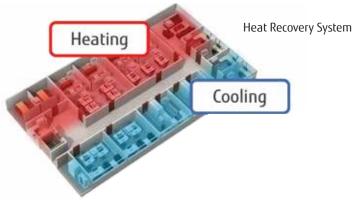
- Heating down to -15°F as standard and high heating capacities enables the system to be used in cold regions
- Increases system application and design flexibility



### Unified outdoor units

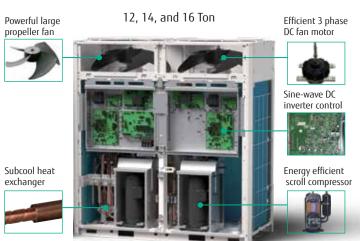
The same outdoor unit can be used for both heat pump and heat recovery applications.





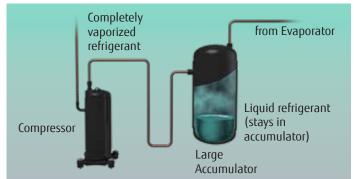
## Service friendly design

Easy front access to electrical compartments, inverter board, compressors, fans, and other important piping components.



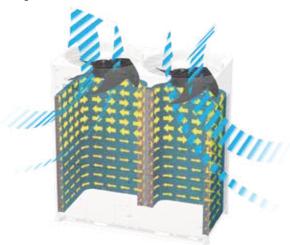
## Reliable and efficient operation

Large sized refrigerant accumulator to prevent liquid from entering the compressor.



### Refrigerant flow control

Refrigerant flow is automatically adjusted within the heat exchanger depending on airflow balance.



### Service and maintenance window

Service window provides ease of access to multi-functional display

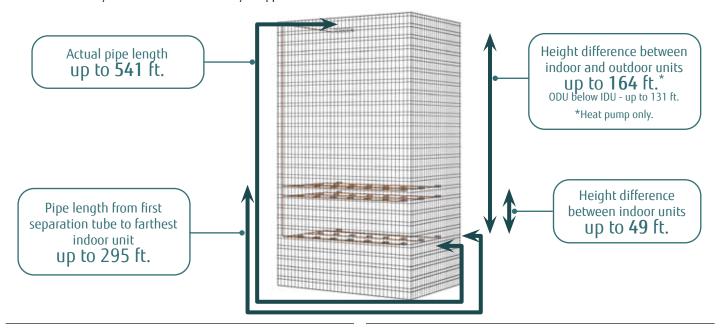
and buttons without removing any main front panels.





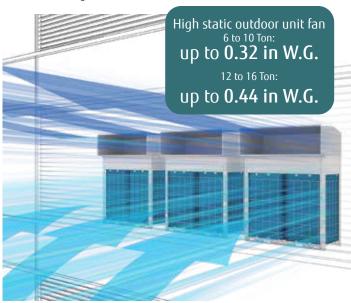
## Generous piping guidelines

Enables the VU-V system to be used in a variety of applications.



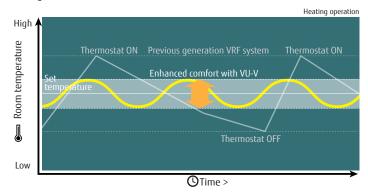
### High static outdoor unit fan

Facilitates installations with outdoor units installed in tight spaces, or inside a building.



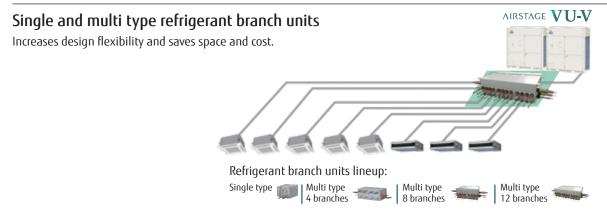
### Intelligent refrigerant control

Optimizes the refrigerant temperature to provide year-round energy savings and individual comfort in each zone.



## Continuous heating during defrost operation

Keeps the rooms served by a multi module system comfortable even during temporary defrost operation.



# Specifications for 208 / 230 / 460V

Nominal Tonage	Ton(s)	6	8	10	12	14	
Model Name	Units	AOUA72ULBV5 / AOUA72ULCV5	AOUA96ULBV5 / AOUA96ULCV5	AOUA120ULBV5 / AOUA120ULCV5	AOUA144ULBV5 / AOUA144ULCV5	AOUA168ULBV5 / AOUA168ULCV5	
Unit Group Configuration		1×(AOUA72ULBV5) / 1×(AOUA72ULCV5)	1×(AOUA96ULBV5) / 1×(AOUA96ULCV5)	1×(AOUA120ULBV5) / 1×(AOUA120ULCV5)	1×(AOUA144ULBV5) / 1×(AOUA144ULCV5)	1×(AOUA168ULBV5) / 1×(AOUA168ULCV5)	
Indoor Unit Total Capacity			25%* to 150%		50% to	150%	
Maximum Connectable Indoor Unit	'S	16	21	26			
CAPACITY				'			
Nominal Cooling Capacity	BTU/h [kW]	72,000 [21.1]	96,000 [28.1]	120,000 [35.2]	144,000 [42.2]	168,000 [49.2]	
Cooling Power Input (Nominal)	kW	4.46 / 5.17	6.70 / <mark>7.24</mark>	8.16 / 9.42	9.18 / 10.37	12.71 / 12.78	
Nominal Heating Capacity	BTU/h [kW]	81,000 [23.7]	108,000 [31.7]	135,000 [39.6]	162,000 [47.5]	188,000 [55.1]	
Heating Power Input (Nominal)	kW	4.95 / <mark>5.56</mark>	7.31 / <mark>7.52</mark>	9.93 / 9.63	10.73 / 10.92	13.60 / 13.55	
ELECTRIC							
Electrical Power Requirements			208 / 230 VAC	, 3-Phase, 60Hz / 460 VAC, 3	3-Phase, 60Hz		
Maximum Circuit Breaker	А	40 / 20	50 / <b>25</b>	60 / <mark>30</mark>	60 / 35	70 / <mark>40</mark>	
Minimum Circuit Ampacity (MCA)	Α	29.3 / 17.3	37.7 / <mark>21.9</mark>	43.9 / 24.9	49.8 / 29.8	59.8 / 34.8	
EFFICIENCY				'		•	
Cooling (Non-Ducted/Ducted)	EER	12.3 / 14.9	13.2 / 11.7	13.5 / 11.3	14.4 / 12.2	12.2 / 11.5	
Heating 17° (Non-Ducted/Ducted)	IEER	2.65 / 2.45	4.00 / 3.72	2.43 / 2.43	2.48 / 2.40	2.32 / 2.30	
Heating 47° (Non-Ducted/Ducted)	COP	3.77 / 4.42	2.5 2 / 2.46	3.69 / 3.65	4.07 / 3.82	3.78 / 3.61	
TEMPERATURE				,			
Operating Temp. Cooling (DB)	°F [°C]		14 to 1	26 [-10 to 52] / <mark>5 to 126 [-1</mark> !	5 to 52]		
Operating Temp. Heating (DB)	°F [°C]			-15 to 70 [-26 to 21]			
PIPE							
Pipe Connection: Liquid	in [mm]	3/8 [	9.52]	1/2	[12.70]	5/8 [15.88]	
Pipe Connection: Discharge Gas	in [mm]	3/4 [1	9.05]	3/4 [19.05]	7/8 [2	/8 [22.22]	
REFRIGERANT			•				
Refrigerant Type				R410A			
Refrigerant Charge	lbs [kg]		25.79 [11.70]		26.01	26.01 [11.8]	
FAN							
Fan Airflow Rate	CFM [m3/h]	6533 [1	11,100]	7652 [13,000]	2×(6533	[11,100])	
External Static Pressure (Max)	in.WG [Pa]		0.32 [80]		0.44	[110]	
Sound Pressure Levels (Clg/Htg)	dB (A)	57 / 58	59 / 59	61 / 62	59 / 61	61 / 64	
COMPRESSOR							
Compressor Type x Quantity			Scroll (inv) x 1		Scroll (	inv) x 2	
Compressor Motor Output	kW	4.7		6.2	4.7	+ 4.7	
Compressor Crankcase Heater	W	35	35 x 2	35 x 2	35	x 2	
DIMMENSIONS / WEIGHT							
Dim.Net (HxWxD)	in [mm]			66-9/16 × 48-13/16 × 30-1/8 [1,690 × 1240 × 765] /	66-9/16 × 63 × 30-1/8 [1,690 × 1,600 × 765]		
Net Weight	lbs [kg]	569 [258]	582 [264]	622 [282] / 582 [264]	930 [422] / 944 [428]	944 [428] / 1041 [472]	

<sup>\*</sup>Only applicable for Heat Recovery models. Heat Pump models starts at 50%





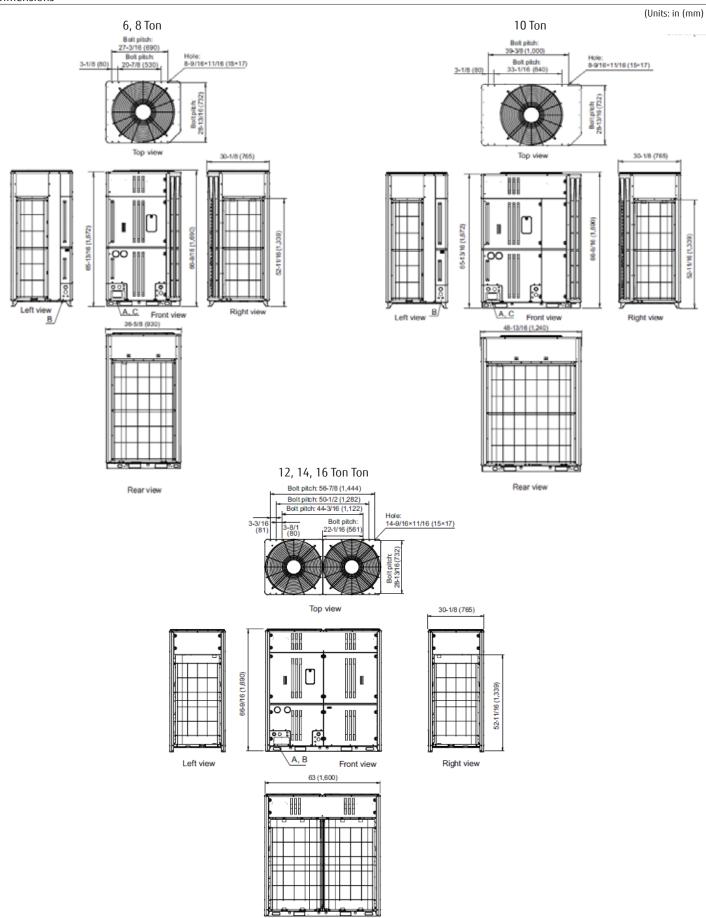
Nominal Tonage	Ton(s)	16	18	20	22	24	
Model Name	Units	AOUA192ULBV5 /	AOUA216ULBVG5 /	AOUA240ULBVG5 / AOU-	AOUA264ULBVG5 /	AOUA288ULBVG5 /	
		AOUA192ULCV5	AOUA216ULCVG5	A240ULCVG5	AOUA264ULCVG5	AOUA288ULCVG5	
Unit Group Configuration		1×(AOUA192ULBV5) /	1×(AOUA120ULBV5)	1×(AOUA120ULBV5)	1×(AOUA144ULBV5)	2×(AOUA144ULBV5)/	
		1×(AOUA192ULCV5)	1×(AOUA96ULBV5) /	1×(AOUA120ULBV5) /	1×(AOUA120ULBV5) /	2×(AOUA144ULCV5)	
			1×(AOUA120ULCV5)	1× (AOUA120ULCV5)	1×(AOUA144ULCV5)		
			1×(AOUA96ULCV5)	1×(AOUA120ULCV5)	1×(AOUA120ULCV5)		
Indoor Unit Total Capacity			I	50% to 150%			
Maximum Connectable Indoor Units	5	42	47	52	58	64	
CAPACITY	I amount stood		I	T			
Nominal Cooling Capacity	BTU/h [kW]	192,000 [56.2]	216,000 [63.3]	240,000 [70.3]	264,000 [77.4]	288,000 [84.4]	
Cooling Power Input (Nominal)	kW	16.31 / <mark>15. 62</mark>	18.41	20.48	20.92	27.46	
Nominal Heating Capacity	BTU/h [kW]	216,000 [63.3]	243,000 [71.2]	270,000 [79.1]	297,000 [87.0]	324,000 [95.0]	
Heating Power Input (Nominal)	kW	16.98 / <mark>16.15</mark>	19.16	21.9	22.92	25.99	
ELECTRIC							
Electrical Power Requirements			·	C, 3-Phase, 60Hz / 460 VAC, 3	· · · · · · · · · · · · · · · · · · ·		
Maximum Circuit Breaker	А	80 / <mark>50</mark>	110 / 55	(60) x 2 / (30) x 2	120 / <mark>65</mark>	120 / <mark>70</mark>	
Minimum Circuit Ampacity (MCA)	А	71 / 41.5	43.9 + 37.7 / 24.9 + 21.9	43.9 + 43.9 / 24.9 + 24.9	49.8 + 43.9 / 29.8 + 24.9	49.8 + 49.8 / 29.8 + 29.8	
EFFICIENCY							
Cooling (Non-Ducted/Ducted)	EER	11.0 / 10.9	10.9 / 10.9	10.9 / 10.9	11.7 / 11.2	9.8 / 10.0	
Heating 17° (Non-Ducted/Ducted)	IEER	2.16 / 2.23	2.35 / 2.35	2.36 / 2.36	2.31 / 2.31	2.16 / 2.16	
Heating 47° (Non-Ducted/Ducted)	COP	3.48 / 3.48	3.47 / 3.47	3.36 / 3.36	3.52 / 3.52	3.39 / 3.37	
TEMPERATURE							
Operating Temp. Cooling (DB)	°F [°C]		14 to 1	126[-10 to 52] / 5 to 126[-15	to 52]		
Operating Temp. Heating (DB)	°F [°C]			-15 to 70[-26 to 21]			
PIPE							
Pipe Connection: Liquid	in [mm]		5/8 [	15.88]		3/4 [19.05]	
Pipe Connection: Discharge Gas	in [mm]	7/8 [22.22]		1-1/8 [2	28.58]		
REFRIGERANT				·			
Refrigerant Type				R410A			
Refrigerant Charge	lbs [kg]	26.01 [11.8]	(25.79 [11.70]) +	(26.01 [11.80]) x 2	(26.01 [11.80]) x 2	(25.79 [11.70]) x 3	
	. 91		(26.01 [11.80])				
FAN							
Fan Airflow Rate	CFM [m3/h]	13,067 [22200]	14,185 [24,100]	(7652 [13,000]) x 2	20,719 [35,200]	(6533 [11,100]) x 3	
External Static Pressure (Max)	in.WG [Pa]	0.44 [110]	0.32 [80]	0.32 [80]	0.76[190]	0.44[110]	
Sound Pressure Levels (Clg/Htg)	dB (A)	65 / 67	63 / 64	64 / 65	63 / 65	62 / 64	
COMPRESSOR							
Compressor Type x Quantity			Scroll (inv) x 2		Scroll (inv) x 3	Scroll (inv) X 4	
Compressor Motor Output	kW	4.7 + 4.7	4.7 + 6.2	6.2 + 6.2	4.7 + 4.7 + 6.2	4.7 + 4.7 + 4.7 + 4.7	
Compressor Crankcase Heater	W	35 x 2	(35)	(2) x 2	(35 x 2) x 3	(35 x 2) x 4	
DIMMENSIONS / WEIGHT							
Dim.Net (HxWxD)	in [mm]	66-9/16 × 63 × 30-1/8 [1,690 × 1,600 × 765]	(66-9/16 × 48-13/16 × 30-1/8) + (66-9/16 × 36-5/8 × 30-1/8) [1,690 × 1,240 × 765] + [1,690 × 930 × 765]	(66-9/16 × 48-13/16 × 30-1/8) x 2 [1,690 × 1240 × 765] x 2	(66-9/16 × 63 × 30-1/8) + (66-9/16 × 48-13/16 × 30-1/8) [1,690 × 1,600 × 765] + [1,690 × 1,240 × 765]	(66-9/16 × 63 × 30-1/8) × 2 [1,690 × 1,600 × 765] × 2	
Net Weight	lbs [kg]	930 [422] / 944 [428]	1,191 [540] / 1,217 [552]	622 [282] x 2 / 635 [288] x 2	1,552 [704] / 1,579 [716]	930 {422] x 2 / 944 {428} x 2	



## **OUTDOOR UNITS**

# Specifications

Nominal Tonage	Ton(s)	26	28	30	32	34	36	
Model Name	Units	AOUA312ULBVG5 /	AOUA336ULBVG5 /	AOUA360ULBVG5 /	AOUA384ULBVG5 /	AOUA408ULBVG5 /	AOUA432ULBVG5 /	
		AOUA312ULCVG5	AOUA336ULCVG5	AOUA360ULCVG5	AOUA384ULCVG5	AOUA408ULCVG5	AOUA432ULCVG5	
Unit Group Configuration		1×(AOUA144ULBV5)	2×(AOUA168UL-	1×(AOUA192ULBV5)	2×(AOUA192UL-	2×(AOUA144ULBV5)	3×(AOUA144UL-	
		1×(AOUA168ULBV5) /	BV5)/	1×(AOUA168UL-	BV5)/	1×(AOUA120UL-	BV5)/	
		1×(AOUA144ULCV5) 1×(AOUA168ULCV5)	2×(AOUA168ULCV5)	BV5) / 1×(AOUA192ULCV5)	2×(AOUA192ULCV5)	BV5) / 2×(AOUA144ULCV5)	3×(AOUA144ULCV5)	
		1*(AUUATOOULCV3)		1×(AOUA168ULCV5)		1×(AOUA120ULCV5)		
Indoor Unit Total Capacity			I.	50% to	150%	. (	I.	
Maximum Connectable Indoor Units		64	64	64	64	64	64	
CAPACITY								
Nominal Cooling Capacity	BTU/h [kW]	312,000[91.4]	336,000[98.5]	360,000[105.5]	384,000[112.5]	408,000[119.6]	432,000[126.6]	
Cooling Power Input (Nominal)	kW	29.70	31.81	34.15	36.37	34.36	37.09	
Nominal Heating Capacity	BTU/h [kW]	351,000[102.9]	378,000[99.1]	405,000[118.7]	432,000[126.6]	459,000[134.5]	486,000[142.4]	
Heating Power Input (Nominal)	kW	27.02	28.46	29.0	29.72	32.38	32.57	
ELECTRIC	•							
Electrical Power Requirements			208 / 2	230 VAC, 3-Phase, 60H	z / 460 VAC, 3-Phase,	60Hz		
Maximum Circuit Breaker	А	130 / 70	140 / 80	150 / 90	160 / 100	180 / 100	180 / <mark>105</mark>	
Minimum Circuit Ampacity (MCA)	А	59.8 + 49.8 /	59.8 + 59.8 /	71.0 + 59.8 /	71.0 + 71.0 /	49.8 + 49.8 + 43.9 /	49.8 + 49.8 + 49.8 /	
, , , ,		34.8 + 29.8	34.8 + 34.8	41.5 + 34.8	41.5 + 41.5	29.8 + 29.8 + 24.9	29.8 + 29.8 + 29.8	
EFFICIENCY								
Cooling (Non-Ducted/Ducted)	ng (Non-Ducted/Ducted) EER 9.8 / 10.0					11.0 / 11.0	10.8 / 10.8	
Heating 17° (Non-Ducted/Ducted)	IEER		2.16 /	2.16		2.31 / 2.31	2.3 / 2.3	
Heating 47° (Non-Ducted/Ducted)	СОР		3.39 /	3.37		3.46 / 3.46	3.53/ 3.53	
TEMPERATURE								
Operating Temp. Cooling (DB)	°F [°C]			14 to 126 [-10 to 52] /				
Operating Temp. Heating (DB)	°F [°C]			-15 to 70 [	-26 to 21]			
PIPE								
Pipe Connection: Liquid	in [mm]			3/4 [19	9.05]			
Pipe Connection: Discharge Gas	in [mm]		1-1/8 [2	28.58]		1-3/8 [34.92]		
REFRIGERANT								
Refrigerant Type				R41	0A			
Refrigerant Charge	lbs [kg]		26.01 [11	1.80] x 2		26.01[1	1.80] x 3	
FAN								
Fan Airflow Rate	CFM [m3/h]		13,067 [22	<del></del>		33,786 [57,400]	13,067 [22,200] x 3	
External Static Pressure (Max)	in.WG [Pa]		T	0.44[				
Sound Pressure Levels (Clg/Htg)	dB (A)	63 / 66	64 / 67	66 / 69	68 / 70	63 / 64	64 / 65	
COMPRESSOR						C 11/: > =	6 11/: > 6	
Compressor Type x Quantity			Scroll (i			Scroll (inv) x 5	Scroll (inv) x 6	
Compressor Motor Output	kW		4.7 + 4.7 +	4./ + 4.7		4.7 + 4.7 + 4.7 + 4.7 + 6.2	4.7 + 4.7 + 4.7 + 4.7+ 4.7 + 4.7	
Compressor Crankcase Heater	W	[35 x 2] x 4					x 4	
DIMMENSIONS / WEIGHT			[33 % ]	=g · · ·				
Dim.Net (HxWxD)	in [mm]	I	66-9/16 × 63	× 30-1/8) x 2		(66-9/16 × 63 × 30-	(66-9/16 × 63 × 30-	
, ,	` '		[1,690 × 1,60			1/8) x 2	1/8) x 3	
						(66-9/16 × 48-13/16 × 30-1/8)	[1,690 × 1,600 × 765] x 3	
		I				[1,690 × 1,600 ×	,031 x 3	
						765] x 2		
Net Weight	lbs [kg]		930 [42	21 v 2 /		765] x 2 [1,690 x 1,240 x 765] 2482[1,126] /	930 [422] x 3 /	



Rear view

# VRF INDOOR UNITS

The Fujitsu AIRSTAGE indoor unit range is one of the widest on the market, offering 13 stylish and elegant indoor unit types in 58 different models. All designed to blend into any environment, maximize comfort, minimize operating sound and simplify installation and servicing.

- p. 46 Compact Cassette
- p. 48 Large Circular Flow Cassette
- p. 50 Slim Compact Duck
- p. 52 Medium Static Pressure Duct
- p. 54 High Static Pressure Duct (ARUH36, 48, 60)
- p. 56 High Static Pressure Duct (ARUH72, 96)
- p. 58 Multi-Position Air Handling Unit
- p. 60 Floor Mount
- p. 62 Floor/Ceiling
- p. 64 Ceiling
- p. 66 Compact Wall Mounted
- p. 68 Wall Mountec
- p. 70 DX-Kit



# AIRSTAGE



# Compact Cassette

AUUA4TLAV2 AUUA14TLAV2 AUUA7TLAV2 AUUA18TLAV2 AUUA9TLAV2 AUUA24TLAV2

AUUA12TLAV2



Compact size panel design that fits in a standard 24" square ceiling panel (600 x 600mm)

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

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

# 2-stage turbo fan

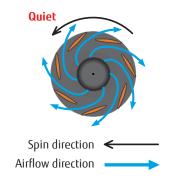
### 2-stage fan design for high efficiency

High efficiency heat transfer due to 2 stage turbo fan with dual airflow for even air distribution across the heat exchanger.



### Quiet

Optimized fan blade design for low noise and high performance



### Specifications

Model			AUUA4TLAV2	AUUA7TLAV2	AUUA9TLAV2	AUUA12TLAV2	AUUA14TLAV2	AUUA18TLAV2	AUUA24TLAV2		
Power source			1 Phase ~ 208/230V 60Hz								
	Carlia	BTU/h	4,000	7,500	9,500	12,000	14,000	18,000	24,000		
Connection	Cooling	kW	1.2	2.2	2.8	3.5	4.1	5.3	7.0		
Capacity	Haakia a	BTU/h	4,400	9,500	10,900	13,500	15,600	20,000	27,000		
	Heating	kW	1.3	2.8	3.2	4.0	4.6	5.9	7.9		
Input power		W	23	25	25	29	35	36	84		
	High	CELL	312 (530)	318 (540)	324 (550)	353 (600)	400 (680)	418 (710)	606 (1,030)		
Airflow rate	Med	CFM (m <sup>3</sup> /h)	265 (450) / 247 (420)	265 (450)	265 (450)	312 (530)	347 (590)	341 (580)	489 (830)		
	Low		206 (350) / 177 (300)	206 (350)	206 (350)	230 (390)	230 (390)	235 (400)	265 (450)		
<u> </u>	High	dB (A)	34	34	35	37	38	41	50		
Sound pressure level	Med		30 / 28	30	30	34	34	35	44		
ievei	Low	(A)	25 / 21	25	25	27	27	27	30		
Dimensions (H ×	W × D)	in.(mm)		9-5/8 × 22-7/16 × 22-7/16 (245 × 570 × 570)							
Weight		lbs.(kg)	32 (14.5)	33 (15)	33 (15)	33 (15)	33 (15)	37 (17)	37 (17)		
Connection	Liquid (Flare)		1/4 (6.35)	1/4 (6.35)	1/4 (6.35)	1/4 (6.35)	1/4 (6.35)	3/8 (9.52)	3/8 (9.52)		
pipe diameter	Gas (Flare)	in.(mm)	3/8 (9.52)	1/2 (12.70)	1/2 (12.70)	1/2 (12.70)	1/2 (12.70)	5/8 (15.88)	5/8 (15.88)		
Drain hose diameter (I.D./O.U.)						3/4 / 1-1/16					
Consider	Model name		UTG-CCGVG								
Cassette	Dimensions (H×W×D)	in.(mm)			1-15/16 × 24	-7/16 × 24-7/16 (49 × 62	.0 × 620)				
Grille	Weight	lbs.(kg)				5.1(2.3)					

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.

## Optimized airflow distribution



### • Easy maintenance of fan and motor

Access and maintenance of the fan and motor can easily be done removing a panel. Both fan and motor can easily be removed for repair or replacement.

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

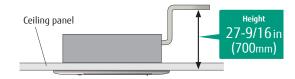
### Air filter

Standard equipment

### 3 Transparent condensate drain parts

During installation, maintenance and operation, the condensate drain pump can easily be inspected.

## High lift pump



Built-in condensate drain pump

### High ceiling mode

AUUA12/14/18/24TLAV2 models only -The compact cassette can be installed up to a height of 9'10-1/8" ft. (3.0m)

BTU/h	Max height from floor to ceiling (ft.(m))						
BIU/II	Standard mode	High ceiling mode					
4,000	8'10-5/16"(2.7)	-					
7,000	8'10-5/16"(2.7)	-					
9,000	8'10-5/16"(2.7)	-					
12,000	8'10-5/16"(2.7)	9'10-1/8"(3.0)					
14,000	8'10-5/16"(2.7)	9'10-1/8"(3.0)					
18,000	8'10-5/16"(2.7)	9'10-1/8"(3.0)					
24,000	8'10-5/16"(2.7)	9'10-1/8"(3.0)					

## Compact design

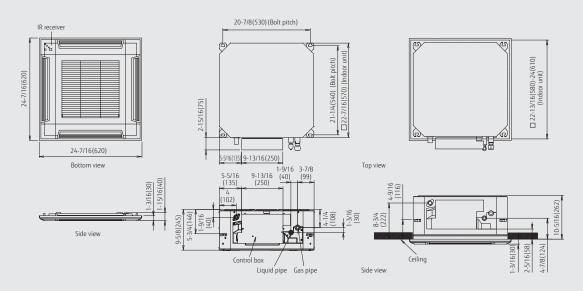
Industry leading 24,000 BTU/h model in the compact cassette category Fits standard 24" ceiling grid.



# **Optional Accessories**

Kagami Wired Remote Control	UTY-RVRU
Wired Remote Control (Touch Panel)	UTY-RNRUZ*
Simple Remote Control	UTY-RSRY, UTY-RHRY
Wireless Remote Control	UTY-LNHU
Wi-Fi Interface Module	UTY-TFSXJ4
Air Outlet Shutter Plate	UTR-YDZB
Fresh Air Intake Kit	UTZ-VXAA
Insulation Kit for High Humidity	UTZ-KXGC

Dimensions (Unit: In (mm))



# Large Circular Flow Cassette

AUUB12TLAV2 (reduced height)

AUUB14TLAV2 (reduced height)

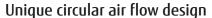
AUUB18TLAV2 (reduced height)

AUUB24TLAV2 (reduced height)

AUUB30TLAV2 (reduced height)

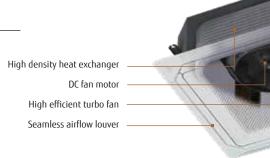
AUUB36TLAV2

AUUB48TLAV2



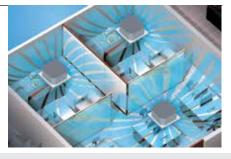
Unique seamless airflow louver design with 360° air exhaust for even and comfortable temperatures anywhere in the room.





# 360° louvers for efficient air distribution

Circular air exhaust allows conditioned air to reach all areas of the room.



# **Integral Condensate Pump**

Lift of up to 33 in.



### Specifications

				ı						
Model name			AUUB12TLAV2	AUUB14TLAV2	AUUB18TLAV2	AUUB24TLAV2	AUUB30TLAV2	AUUB36TLAV2	AUUB48TLAV2	
Power Source				1 P	1 Phase - 208 / 230 V ~ 60 Hz					
	Cooling	BTU/h	12,000	14,000	18,000	24,000	30,000	36,000	48,000	
Canadhi	Cooling	kW	3.5	4.1	5.3	7.0	8.8	10.6	14.1	
Capacity	Heating	BTU/h	13,500	15,600	20,000	27,000	34,000	40,000	54,000	
	Heating	kW	4.0	4.6	5.9	7.9	10.0	11.7	15.8	
Input Power		W	20	20	20	25	49	61	116	
	High		618 (1,050)	618 (1,050)	618 (1,050)	659 (1,120)	865 (1,470)	954 (1,620)	1,201 (2,040)	
	Med-Hi		547 (930)	547 (930)	547 (930)	618 (1,050)	683 (1,160)	883 (1,500)	1,059 (1,800)	
Airflow rate	Med	CFM	530 (900)	530 (900)	530 (900)	547 (930)	630 (1,070)	824 (1,400)	936 (1,590)	
Allilow late	Lo-Hi Low	(m <sup>3</sup> /h)	512 (870)	512 (870)	512 (870)	530 (900)	547 (930)	789 (1,340)	848 (1,440)	
			477 (810)	477 (810)	477 (810)	512 (870)	530 (900)	753 (1,280)	765 (1,300)	
	Quiet		459 (780)	459 (780)	459 (780)	459 (780)	459 (780)	677 (1,150)	677 (1,150)	
	High		33	33	33	35	40	41	47	
	Med-Hi		32	32	32	33	36	40	45	
Sound pressure	Med	dB(A)	31	31	31	32	34	38	42	
level	Lo-Hi	UD(A)	30	30	30	31	32	37	39	
	Low		29	29	29	30	31	35	36	
	Quiet		28	28	28	28	28	33	33	
Dimensions (H	x W x D)	in.(mm)		9-11/16 × 3	3-1/16 × 33-1/16 (246	× 840 × 840)		11-5/16 × 33-1/16 × 33	-1/16 (288 × 840 × 840)	
Weight		lbs.(kg)	53 (24)	53 (24)	53 (24)	54 (24.5)	54 (24.5)	65 (29.5)	65 (29.5)	
Connection	Liquid (Flare)	in.(mm)	1/4 (6.35)	1/4 (6.35)	1/4 (6.35)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)	
_pipe diameter	Gas (Flare)	111.(111111)	1/2 (12.70)	1/2 (12.70)	1/2 (12.70)	5/8 (15.88)	5/8 (15.88)	5/8 (15.88)	5/8 (15.88)	
Condensate Drain hose diameter (I.D./O.D.) in.				3/4 / 1-1/16			3/4/	1-1/16		
Model name				U	TG-LCGVCW / UTG-LCGV	CB		UTG-LCGVCW	/ UTG-LCGVCB	
Cassette Grille	Dimensions (H×W×D)	in.(mm)		2-1/16 × 3	37-3/8 × 37-3/8 (53 × 9	950 × 950)		2-1/16 × 37-3/8 × 37-3/8 (53 × 950 × 950)		
	Weight	lbs.(kg)	13.0 (6.0)	13.0 (6.0)	13.0 (6.0)	13.0 (6.0)	13.0 (6.0)	13.0 (6.0)	13.0 (6.0)	

Note: Specifications are based on the following conditions: Built-in protective functions may limit capacity or shut off unit is operated outside of unit design operating temperature ranges. 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) (Outdoor unit - indoor unit).

### Individual louver control

Individually controlled louvers for comfortable air distribution in any room configuration. Compatible remotes and central controllers are: Kagami Wired RC (UTY-RVRU) / Touch Panel Wired RC (UTY-RNRUZ\*) / AIRSTAGE Edge Controller (UTY-DSGYZ2) / Central Remote Controller (UTY-DCGYZ2) / System Controller (UTY-APGXZ1) / System Controller Lite (UTY-ALGXZ1).



Louvers adjust air flow direction for constant comfort for people in the room.

# Occupancy/human sensor setting (optional)

Saves energy by automatically turning off the unit if the room is unoccupied.

### 2 modes can be selected.

# Auto saving

**Auto OFF** 

Power is saved while no one is around

Operation is stopped while no one is around

\*Human Sensor feature control is available through Kagami Wired RC (UTY-RVRU) and Touch Panel Wired RC (UTY-RNRUZ\*).



### Quiet operation with 6 fan speed control

With 6 fan speeds to choose from, circular flow cassette models operate at whisper quiet sound levels.





<sup>\*</sup> Compatible Remote Controllers: UTY-RVRU / UTY-RNRUZ\* / UTY-RSRY / UTY-RHRY / UTY-DSGYZ2 UTY-DCGYZ2 / UTY-ALGXZ1 / UTY-APGXZ1

## **Optional Accessories**

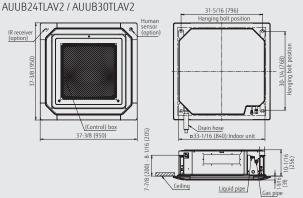
Kagami Wired Remote Control	UTY-RVRU
Wired Remote Control (Touch Panel)	
Simple Remote Control	UTY-RSRY, UTY-RHRY
IR Receiver	UTB-LBHXD
Wireless Remote Controller	UTY-LNHU
Wi-Fi Interface Module	UTY-TFSXJ4

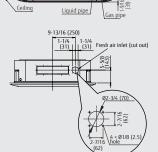
Human Sensor Kit	UTY-SHZXC
Air Outlet Shutter Plate	UTR-YDZK
Wide Panel	UTG-AKXA-W
Panel Spacer	UTG-BKXA-W
Insulation Kit For High Humidity - 18-24k	
Insulation Kit For High Humidity - 30-36-48k	UTZ-KXGA

Dimensions (Unit: In (mm))

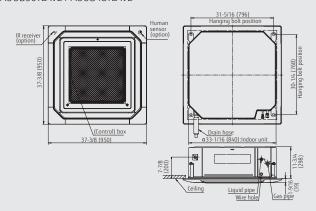
### Models:

AUUB12TLAV2 / AUUB14TLAV2 /AUUB18TLAV2 /





### AUUB36TLAV2 / AUUB48TLAV2



# Slim Compact Duct

ARUL4TLAV2 MINI ARUL7TLAV2 SLIM ARUL9TLAV2 SLIM

ARUL12TLAV2 SLIM

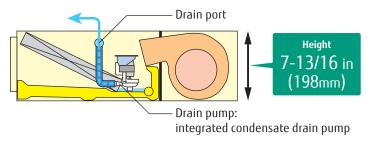
ARUL14TLAV2 SLIM

ARUL18TLAV2 SLIM

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

### Slim design

Slim and compact design for flexibility to be installed in narrow spaces.







### Flexible installation

Can be mounted horizontally or vertically and deliver up to 0.36 in. WG static pressure for flexibility to fit many different application needs. Note: mini duct (ARUL4TLAV2 is horizontal installation only.

### Ceiling concealed















### Specifications

Model name			ARUL4TLAV2	ARUL7TLAV2	ARUL9TLAV2	ARUL12TLAV2	ARUL14TLAV2	ARUL18TLAV2		
Power source			1 Phase ~ 208/230V 60Hz							
	Cooling	BTU/h	4,000	7,500	9,500	12,000	14,000	18,000		
Canaciby	Cooling	kW	1.2	2.2	2.8	3.5	4.1	5.3		
Capacity	Haakin a	BTU/h	4,400	9,500	10,900	13,500	15,600	20,000		
	Heating	kW	1.3	2.8	3.2	4.0	4.6	5.9		
Input power		W	26	44	50	54	92	83		
High	High	CENA	271 (460)	324 (550)	353 (600)	353 (600)	471 (800)	553 (940)		
Airflow rate	Med CFM (m³/h)	247 (420)	288 (490)	324 (550)	300 (510)	418 (710)	494 (840)			
	Low	(111-711)	218 (370)	258 (440)	283 (480)	265 (450)	359 (610)	441 (750)		
Static pressure range		in.WG	0 to 0.12 (0 to 30)	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 p	ressure	(Pa)	0.04 (10)	0.10 (25)	0.10 (25)	0.10 (25)	0.10 (25)	0.10 (25)		
C	High	JD.	25	28	29	30	34	34		
Sound pressure level	Med	dB (A)	23	25	26	27	32	32		
ievei	Low	(^,	21	22	24	24	28	28		
Dimensions (H × W × D) in.(		in.(mm)	7-13/16 × 27-9/16 × 17-11/16 (198 x 700 x 450)		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)	32 (14.5)	37 (17)	37 (17)	40 (18)	40 (18)	49 (22)		
Connection	Liquid (Flare)		1/4 (6.35)	1/4 (6.35)	1/4 (6.35)	1/4 (6.35)	1/4 (6.35)	3/8 (9.52)		
pipe diameter	Gas (Flare)	in.(mm)	3/8 (9.52)	1/2 (12.70)	1/2 (12.70)	1/2 (12.70)	1/2 (12.70)	5/8 (15.88)		
Drain hose diam	eter (I.D./O.U.)				3/4 /	1-1/16				

Note: Specifications are based on the following conditions.

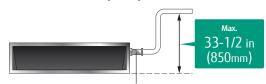
Cooling : Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB, and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB. Heating : Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB, and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.

Pipe length: 25ft.(7.5 m), Height difference: 0ft.(0 m) (Outdoor unit - Indoor unit).

Built-in protective functions may limit capacity or shut off unit if unit is operated outside of unit design operating temperature ranges.



# Condensate drain pump (Standard)



## Selectable external static pressure

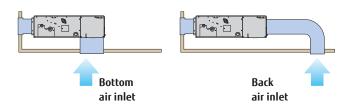
External static pressure can be selected from 0 up to 0.36 in. WG with remote controller.



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

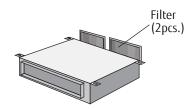
### Air inlet

Flexible with alternative air inlets to fit any layout.

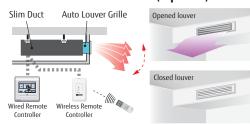


### Filter (Included)

ARUL7 / 9 / 12 / 14 / 18 Minimum Height Requirement 9-3/4"



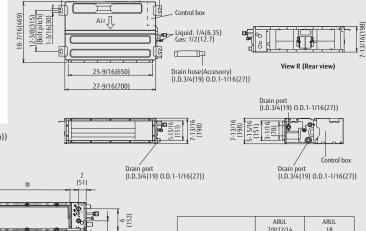
## Auto Louver Grille Kit (Option)

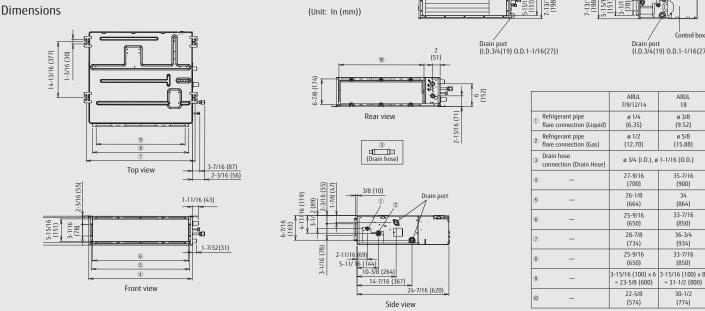


- Operation with indoor unit
- Up and Down auto swing
- Auto-closing louver

### **Optional Accessories**

29-5/8(752) (Bolt pitch)





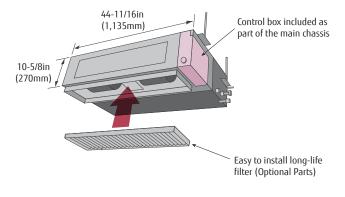
# Medium Static Pressure Duct

ARUM24TLAV2 ARUM30TLAV2 ARUM36TLAV2



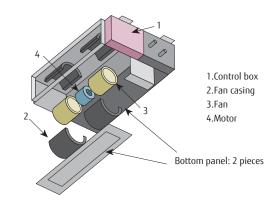
# Slim & Compact design

Compact, slim height, and integrated control box makes the indoor unit suitable for applications where the height is limited.



# Easy maintenance

Maintenance friendly design with easy access to motor and fan by quickly removing two bottom panels on the indoor unit.



### Specifications

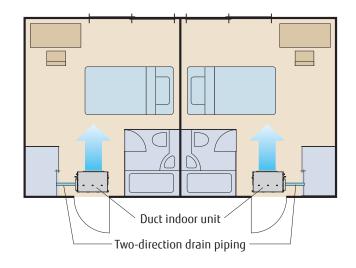
Model name			ARUM24TLAV2	ARUM24TLAV2 ARUM30TLAV2					
Power source			1 Phase ~ 208/230V 60Hz						
	C 1:	BTU/h	24,000	30,000	36,000				
ć ::	Cooling	kW	7.0	8.8	10.6				
Capacity		BTU/h	27,000	34,000	40,000				
	Heating	kW	7.9	10.0	11.7				
Input power		W	125	190	222				
Airflow rate N	High	CEAA	859 (1,460)	1,042 (1,770)	1,112 (1,890)				
	Med	CFM (m³/h)	724 (1,230)	812 (1,380)	895 (1,520)				
	Low	(111-711)	589 (1,000)	589 (1,000)	677 (1,150)				
Static pressure ra	inge	in.WG	0 to 0.60 (0 to 150)	0 to 0.60 (0 to 150)	0 to 0.60 (0 to 150)				
Standard static p	ressure	(Pa)	0.16 (40)	0.16 (40)	0.16 (40)				
	High	In.	36	40	41				
Sound pressure level	Med	dB (A)	31	33	35				
ievei	Low	(^)	28	28	29				
Dimensions (H ×	W × D)	in.(mm)		10-5/16 × 44-11/16 × 27-9/16 (270 × 1,135 × 700)					
Weight		lbs.(kg)	86 (39)	86 (39)	86 (39)				
Connection	Liquid (Flare)	in (mm)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)				
pipe diameter	Gas (Flare)	in.(mm)	5/8 (15.88)	5/8 (15.88)	3/4 (19.05)				
Condensate Drai	Condensate Drain hose diameter (I.D./O.U.)			3/4" / 1-1/16"					

Note: Specifications are based on the following conditions.

Cooling: Indoor temperature of  $80^{\circ}$ (26.7°C)DB/67°F(19.4°C)WB, and outdoor temperature of  $95.0^{\circ}$ F(35°C)DB/75°F(23.9°C)WB. Heating: Indoor temperature of  $70^{\circ}$ F(21.1°C)DB/60°F(15.6°C)WB, and outdoor temperature of  $47^{\circ}$ F(8.3°C)DB/43°F(6.1°C)WB. Pipe length:  $25^{\circ}$ ft. (7.5 m), Height difference:  $0^{\circ}$ ft. (0 m) (Outdoor unit - Indoor unit).

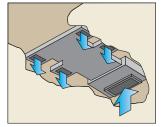
Built-in protective functions may limit capacity or shut off unit if unit is operated outside of unit design operating temperature ranges.

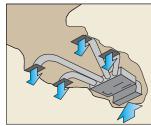
# Two-direction condensate drain piping



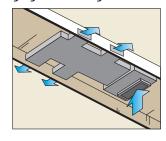
# Installation styles

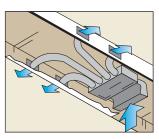
### **Embedded in Ceiling**





**Hanging from Ceiling** 





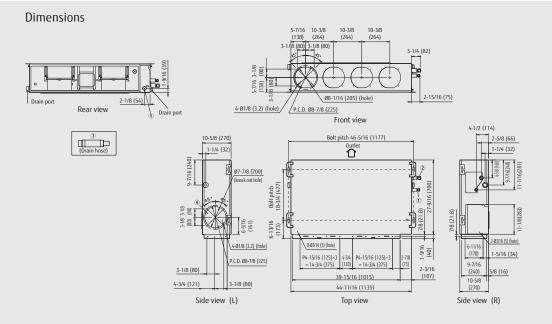
# High efficiency DC fan motors



# **Optional Accessories**

Drain Pump Unit (Externally mounted)	UTZ-PU1NBA
Long Life Filter*	UTD-LF25NA
Flange (Square)	UTD-SF045T
Flange (Round)	UTD-RF204
IR Receiver	UTB-TRHX
Wireless Remote Controller	UTY-LNHU
Remote Sensor Unit	UTY-XSZX

<sup>\*</sup>Note, Medium Static Pressure Duct models do not include a standard filter.



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

(Unit: In (mm))

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

# ARUH36TLAV2 ARUH48TLAV2 ARUH60TLAV2

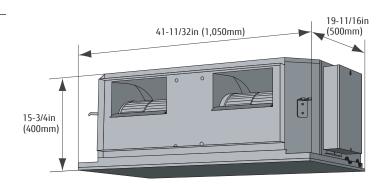
High Static Pressure Ducted Indoor units with powerful capabilities of up to 1 in. WG external static pressure.

improved ductwork and filtration flexibility with high CFM and ESP capabilities.



# Compact size for flexible installation

Comes with secondary drain pan installed and insulated!



### Specifications

Model name			ARUH36TLAV2	ARUH48TLAV2	ARUH60TLAV2				
Power source				1 Phase ~ 208/230V 60Hz					
	C!:	BTU/h	36,000	48,000	60,000				
Consider	Cooling	kW	10.6	14.1	17.6				
Capacity	Haakia a	BTU/h	40,000	54,000	67,000				
	Heating	kW	11.7	15.8	19.6				
Input power		W	496	752	806				
	High	CEM	1,324 (2,250)	1,766 (3,000)	1,972 (3,350)				
Airflow rate	Med	CFM (m³/h)	1,030 (1,750)	1,589 (2,700)	1,678 (2,850)				
	Low	(111-711)	824 (1,400)	1,354 (2,300)	1,501 (2,550)				
Static pressure range		in.WG	0.40 to 0.80 (100 to 200)	0.40 to 1.00 (100 to 250)	0.40 to 1.00 (100 to 250)				
Standard static p	ressure	(Pa)	0.40 (100)	0.40 (100)	0.40 (100)				
ć 1	High	In.	43	47	48				
Sound pressure level	Med	dB (A)	37	43	44				
ievei	Low	(A)	32	40	41				
Dimensions (H ×	W × D)	in.(mm)		15-3/4 × 41-5/16 × 19-11/16 (400 × 1,050 × 500)					
Weight		lbs.(kg)	97 (44)	101 (46)	101 (46)				
Connection	Liquid (Flare)	in (mm)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)				
pipe diameter	Gas (Flare)	in.(mm)	3/4 (19.05)	3/4 (19.05)	3/4 (19.05)				
Condensate Drain hose diameter (I.D./O.U				3/4" / 1-1/16"	_				

Note: Specifications are based on the following conditions.

Cooling: Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB, and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.

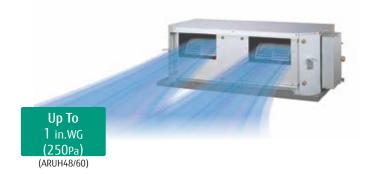
Heating: Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB, and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.

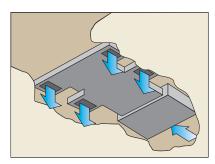
Pipe length: 25ft.(7.5 m), Height difference: 0ft.(0 m) (Outdoor unit - Indoor unit).

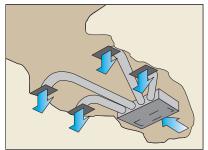
Built-in protective functions may limit capacity or shut off unit if unit is operated outside of unit design operating temperature ranges.



# High static pressure design



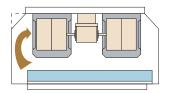


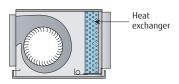


# Quiet operation

### Indoor unit

Optimized unit chassis design reduces internal air turbulence and lowers the sound levels.



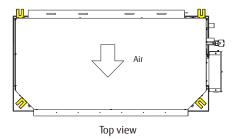


# **Optional Accessories**

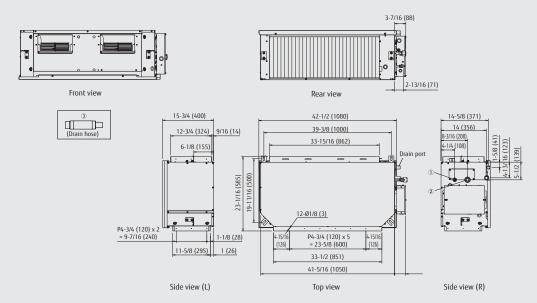
Long-Life Filter*	UTD-LF60KA
IR Receiver	
Wireless Remote Controller	UTY-LNHU
Remote Sensor Unit	UTY-XSZX
*Note High Static Proceure Duct models do not include a stan	dard filtor

\*Note, High Static Pressure Duct models do not include a standard filte

# **Integral Mounting Brackets**



Dimensions (Unit: In (mm))



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

# High Static Pressure Duct (6, 8 ton)

# ARUH72TLAV2 ARUH96TLAV2

High capacity and High Static Pressure Ducted Indoor units with powerful capabilities of up to 1.2in. WG external static pressure. Improved ductwork and filtration flexibility with high CFM and ESP capabilities.







Comes with secondary drain pan installed and insulated!

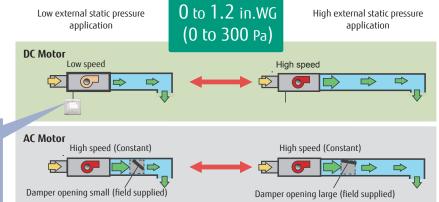
### Specifications

Model name			ARUH72TLAV2	ARUH96TLAV2			
Power source			1 Phase ~ 208	/230V 60Hz			
	c 1:	BTU/h	72,000	96,000			
Capacity	Cooling	kW	21.1	28.1			
		BTU/h	81,000	108,000			
	Heating	kW	23.7	31.7			
Input power		W	618	31.7 838 2855 (4850) 2502 (4250) 2119 (3600)			
	High		2296 (3900)	2855 (4850)			
Airflow rate	l Mod	CFM (m <sup>3</sup> /h)	1942 (3300)	2502 (4250)			
	Low	(111 /11)	1766 (3000)	2119 (3600)			
Static pressure range in.WG		in.WG	0 to 1.2 (0 to 300)	0 to 1.2 (0 to 300)			
Standard static pressure		(Pa)	0.6 (150)	0.6 (150)			
	High		47	48			
Sound pressure level		dB (A)	43	45			
icvei	Low (A)		40	42			
Dimensions (H × W × D)		s (H × W × D) in.(mm) 17-11/16 × 62-1/2 × 27-9/16 (450 × 1587 × 700)		21-5/8 × 62-1/2 × 27-9/16 (550 × 1587 × 700)			
Weight		lbs.(kg)	203 (92)	231(105)			
Connection	Liquid (Flare)	in (mm)	1/2 (12.70)	1/2 (12.70)			
pipe diameter	Gas (Flare)	in.(mm)	7/8 (22.22)	7/8 (22.22)			
Condensate Drain	n hose diameter (I	I.D./O.U.)	3/4" / 1-	1/16"			



# DC fan motor for energy efficiency and design flexibility

With an adjustable static pressure range up to 1.2 in.WG and efficient DC fan motor, the High Static Pressure ducted indoor units are designed for flexibility and efficiency.







## Easy service & maintenance

**Dimensions** 

Each fan motor can be removed individually, if required, for easy service.



FRONT VIEW

# **Optional Accessories**

FRONT VIEW

ARUH72TLAV1 ARUH96TLAV MAIN DRAIN POR 3-3/16(81) 62-1/2(1587) 21-5/8(550) P5-7/8(150)×7=41-5/16(1050) 47-1/4(1200) P5-7/8(150)×7=41-5/16(1050) SIDE VIEW (R) 9/16(15) 9/16(15) 47-1/4(1200) 57-1/16(1450) 4-15/16(125) 4-5/8(117) AIR FLOW SIDE VIEW (L) ■ AIR FLOW (Drain hose)

(Unit: In (mm))

# Multi-Position Air Handling Unit

Static Pressure Range

**0.1 to 0.8 in.W.G** (25 to 200Pa)

ARUX12TLAV2 ARUX36TLAV2 ARUX18TLAV2 ARUX48TLAV2 ARUX24TLAV2 ARUX60TLAV2

ARUX30TLAV2



ARUX12TLAV2 ARUX18TLAV2 ARUX24TLAV2



ARUX30TLAV2 ARUX36TLAV2

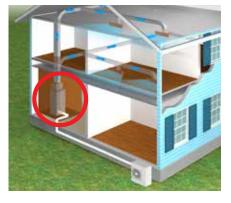


ARUX48TLAV2 ARUX60TLAV2

## Flexible Installation and Wide Static Pressure Range

Flexible and compact design to suit most light commercial and residential applications.

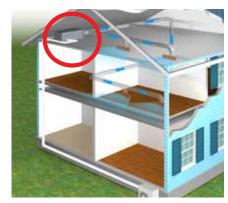
At 43" tall and only 17-1/2" wide for up to 2 tons, the unit can be installed in tight closet spaces.



UP FLOW
Installed in
basement or in
a narrow closet,
distributing
conditioned air to
the rooms.

# Optimum Temperature Control Using Backup Heater (Optional)

Control operation of auxiliary heaters depending on the difference between room temperature and set temperature to maintain optimum comfort. Order heater kits from your local Fujitsu distributor. See table below for sizing.

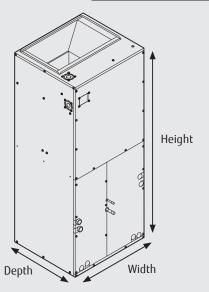


HORIZONTAL LEFT / RIGHT AIRFLOW Installed horizontally in the attic, with overhead distribution of conditioned air to the rooms.

**Dimensions** 

	ARUX12-18-24TLAV2	ARUX30-36TLAV2	ARUX48-60TLAV2
Height	43 in. (1,092 mm)	48 in. (1,219 mm)	58.75 in. (1,492 mm)
Width	17.5 in. (444 mm)	21 in. (533 mm)	24.5 in. (622 mm)
Depth	21 in. (533 mm)	21 in. (533 mm)	21.75 in. (533 mm)

(Unit: In (mm))



		· ·					
Ton	Indoor unit	Heater model name	VOLTS	kW	Heater AMPS	Minimum circuit ampacity	Maximum fuse or HACR circuit breaker
1	ARUX12TLAV2	UTZ-EU02MSA	240	2	8.33	10.5	15
'	ARUXTZTLAVZ	UTZ-EU04MSA2	240	4	8.4/8.4	10.5	15/15 *
1.5	ARUX18TLAV2	UTZ-EU03MSA	240	3	12.5	15.7	20
1.5	ARUATOTLAVZ	UTZ-EU06MSA2	240	6	12.5/12.5	15.7/15.7	20/20 *
		UTZ-EU02MSA	240	2	8.4	10.5	15
2	ARUX24TLAV2	UTZ-EU04MSA	240	4	16.7	20.9	25
		UTZ-EU08MSA2	240	8	16.7/16.7	20.9/20.9	25/25 *
	ARUX30TLAV2	UTZ-EU03MMA	240	3	12.5	15.7	20
2.5		UTZ-EU05MMA	240	5	20.9	26.1	30
		UTZ-EU10MMA2	240	10	20.9/20.9	26.1/26.1	30/30
		UTZ-EU03MMA	240	3	12.5	15.7	20
3	ARUX36TLAV2	UTZ-EU06MMA	240	6	25.0	31.3	35
		UTZ-EU12MMA2	240	12	25.0/25.0	31.3/31.3	40/40
		UTZ-EU05MLA	240	5	20.9	26.1	30
4	ARUX48TLAV2	UTZ-EU08MLA	240	8	33.4	41.7	45
		UTZ-EU16MLA2	240	16	33.4/33.4	41.7/41.7	45/45
		UTZ-EU05MLA	240	5	20.9	26.1	30
5	ARUX60TLAV2	UTZ-EU10MLA	240	10	41.7	52.1	60
		UTZ-EU20MLA2	240	20	41.7/41.7	52.1/52.1	60/60

<sup>\*</sup> Locally purchased

### **Options**

Compatible with a variety of controller options, such as individual controller, central controller and building management controller.

Kagami Wirod Pomoto Control	LITY DVDII
Kagami Wired Remote Control	
Wired Remote Controller	UTY-RNRUZ5
Simple Remote Controller	UTY-RHRY
Wireless Remote Controller / IR Receiver	UTY-LNHU / UTY-TRHX
Wireless LAN Adapter	UTY-TFSXJ4
External Switch Controller	UTY-TERX
AIRSTAGE Edge Controller	UTY-DSGYZ2
Central Remote Controller	
System Controller	UTY-APGXZ1
System Controller Lite	UTY-ALGXZ1
Service Tool	
Web Monitoring Tool	UTY-AMGXZ1
Remote Sensor Unit	UTY-XSZX
MODBUS Converter	UTY-VMSX / UTY-VMGX

BACnet® Gateway	FUJ-VRF-8025/8125 (AIM)
	UTY-VBGX (Hardware)
	UTY-ABGXZ1 (Software)
External Power Supply Unit	UTZ-GXXA
Thermostat Converter	UTY-TTRXZ1 / TTRXZ1-KIT
Network Converter	UTY-VTGX (DC power supply)
	UTY-VGGXZ1 (AC power supply)
Highrise 360 Kit	UTY-SPWX
Network Converter for LONWORKS®	UTY-VLGX
Signal Amplifier	UTY-VSGXZ1
External Connect Kit	UTY-XWZXZB / UTY-XWZXZD
	UTY-XWZXZ7 / UTY-XWZXZE
	UTY-XWZXZC / UTY-XWZXZK

### Specifications

Model name					ARUX12TLAV2	ARUX18TLAV2	ARUX24TLAV2	ARUX30TLAV2	ARUX36TLAV2	ARUX48TLAV2	ARUX60TLAV2	
Power supply					1 phase ~ 208/230 V 60 Hz							
Available voltage range					187–253 V							
6.11				Btu/h	12,000	18,000	24,000	30,000	36,000	48,000	60,000	
C		Cooling	J	kW	3.5	5.3	7.0	8.8	10.6	14.1	17.6	
Capacity He			_	Btu/h	13,500	20,000	27,000	34,000	40,000	54,000	67,000	
		Heatin	g	kW	4.0	5.9	7.9	10.0	11.7	15.8	19.6	
Input pov	ver			W	77	99	148	180	241	322	521	
Static pre	essure rar	nge		inWG (Pa)			0.1	10 to 0.80 (25 to 20	00)			
Standard	static pro	essure		inWG (Pa)				0.50 (125)				
			HIGH		350 (595)	500 (850)	650 (1,104)	880 (1,495)	1,050 (1,784)	1,400 (2,379)	1,700 (2,888)	
	Airflow	rate	MED	CFM (m3/h)	320 (544)	450 (765)	590 (1,002)	800 (1,359)	950 (1,614)	1,260 (2,141)	1,550 (2,633)	
Fan			LOW		290 (493)	400 (680)	510 (866)	730 (1,240)	850 (1,444)	1,130 (1,920)	1,340 (2,277)	
Type ×		Q'ty						Sirocco × 1				
	Motor	output		W		249		37	73	50	50	
			HIGH		37	38	40	42	44	46	48	
Sound pr	essure le	vel*	MED	dB (A)	35	36	37	40	42	44	46	
			LOW		33	34	34	38	40	42	42	
		Length		in (mm)	16 (406)	16 (406)	16 (406)	16 (406)	16 (406)	17-1/2 (446)	17-1/2 (446)	
		Fin pito	:h	FPI	16	16	16	14	14	14	14	
		Rows ×	Stages		4 × 14	2 × 18	2 × 18	3 × 22	3 × 22	3 × 30	4× 30	
Heat excl	hanger	Face area		ft2 (m2)	2.6 (0.24)	3.3(0.31)	3.3(0.31)	4.0 (0.38)	4.0 (0.38)	6.0 (0.56)	6.0 (0.56)	
type		Pipe type (Material)		rial)	Grooved H-pin (Copper)							
				iiai)	Louver (Aluminum)							
		Fin Type (Material)					Louver (Aluminum	)				
		1 111	Surface treatment									
Enclosure	0	Materia	al		Painted galvanized steel sheet							
LIICIOSUIC	-	Color			Gray							
Dimensio	ons (H ×	Net		in (mm)		43 × 17-1/2 × 21 (1,092 × 444 × 533)		48 × 21 × 21 (1,219 × 533 × 533)		58-3/4 × 24-1/2 × 21-3/4 (1,492 × 622 × 552)		
W × D)		Gross		_ ''' (''''')		(1,092 × 444 × 533) 45 × 19-3/4 × 26-3/4 (1,143 × 502 × 679)			52 × 23 × 26-3/4 (1,321 × 584 × 679)			
		Net			100 (45.4)	102 (46.3)	102 (46.3)	126 (57.2)	126 (57.2)	172 (78.0)	181 (82.1)	
Weight		Gross		lb (kg)	111 (50.3)	113 (51.3)	113 (51.3)	139 (63.0)	139 (63.0)	187 (84.8)	196 (88.9)	
		Liquid			Ø 1/4 (6.35)	Ø 1/4 (6.35)	Ø 1/4 (6.35)	Ø 3/8 (9.52)	Ø 3/8 (9.52)	Ø 3/8 (9.52)	Ø 3/8 (9.52)	
Connection		Gas		in (mm)	Ø 1/2 (12.70)	Ø 1/2 (12.70)	Ø 1/2 (12.70)	Ø 5/8 (15.88)	Ø 5/8 (15.88)	Ø 5/8 (15.88)	Ø 5/8 (15.88)	
diameter			tion met	hod		()	( ( ( )	Brazing	2.2 (12.20)		( )	
Drain hos	se	,,,,,,,,		in (mm)				I.D.: Ø 3/4 (19.05)				
Drain nose in (mm)				111 (111111)				וכט. שטו				

- Specifications are based on the following conditions:

   Cooling: Indoor temperature of 80 °FDB/67 °FWB (26.7 °CDB/19.4 °CWB), and outdoor temperature of 95 °FDB/75 °FWB
- Heating: Indoor temperature of 70 °FDB/60 °FWB (21.1 °CDB/15.6 °CWB), and outdoor temperature of 47 °FDB/43 °FWB (8.3 °CDB/6.1 °CWB).
   Pipe length: 25 ft (7.5 m), Height difference: 0 ft (0 m). (Between outdoor unit and indoor unit.)

Protective function might work when using it outside the operation range. \*: Sound pressure level:

- Measured values in manufacturer's anechoic chamber.
- Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

# Floor Mount

AGUA4TLAV2 AGUA7TLAV2 AGUA9TLAV2 AGUA12TLAV2 AGUA14TLAV2



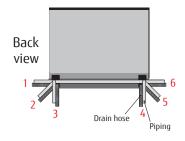
### **Dual Fans and Wide Airflow**

Individual vertical airflow by 2 fans for optimized air distribution and comfort in the entire room.

# Flexible Piping Connection

Flexible installation with 6 positions for condensate drain hose and piping to choose from: right, left, side and down positions.





Specifications

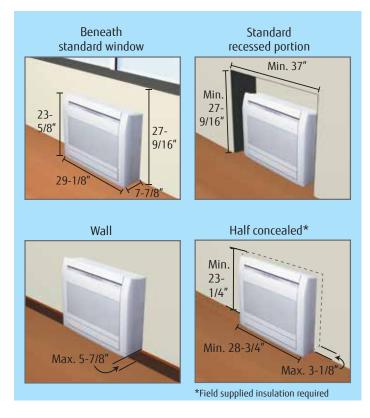
Power Source							
Cooling         kW         1.2         2.2         2.8         3.5           Heating         BTU/h         4,400         9,500         10,900         13,500           Input Power         W         1.2 1/14         16         17         22           Max. Operating Current         A         0.19 / 0.22         0.24         0.25         0.30           High         Med-Hi         224 (380) / 253 (430)*         277 (470)         294 (500)         347 (590)           Med-Hi         CFM         188 (320)         230 (390)         235 (400)         277 (470)           Lo-Hi         (m³/h)         182 (310)         212 (360)         212 (360)         247 (420)           Lo-W         165 (280)         194 (330)         194 (330)         230 (390)           Sound pressure level         High         A         35/36*         37         38         42           Bed         10-Hi         33         35         36         39           Sound pressure level         Lo-Hi         30         31         31         35           Lo-Hi         Lo-Hi         30         31         31         35	1 Phase - 208 / 230V ~ 60Hz						
Capacity         RW         1.2         2.2         2.8         3.5	14,000						
Heating   Heat	4.1						
Input Power   W	15,600						
Max. Operating Current         A         0.19 / 0.22         0.24         0.25         0.30           Airflow rate         High Med-Hi         A         0.19 / 0.22         0.24         0.25         0.30           Airflow rate         Med-Hi         A         224 (380) / 253 (430)*         277 (470)         294 (500)         347 (590)           Med         Med         CFM         (188 (320)         230 (390)         235 (400)         277 (470)           Lo-Hi         (m³/h)         182 (310)         212 (360)         212 (360)         247 (420)           Med - Hi         165 (280)         194 (330)         194 (330)         230 (390)           124 (210)         159 (270)         159 (270)         200 (340)           Med - Hi         35/36*         37         38         42           33         35         36         39           10-Hi         30         31         31         37           30         31         31         35           28         29         29         33	4.6						
High Med-Hi         Z24 (380) / 253 (430)*         277 (470)         294 (500)         347 (590)           Med Hi         CFM (m³/h)         188 (320)         230 (390)         235 (400)         277 (470)           Lo-Hi         (m³/h)         188 (320)         230 (390)         235 (400)         277 (470)           Low         182 (310)         212 (360)         212 (360)         247 (420)           Ouiet         165 (280)         194 (330)         194 (330)         230 (390)           High Med-Hi         35/36*         37         38         42           Med-Hi         33         35         36         39           Med Med-Hi         31         33         34         37           Jo-Hi         48(A)         31         33         34         37           Jo-Hi         20-Hi         30         31         31         35           Jo-Hi         20-Hi         28         29         29         33	29						
Airflow rate  Med Hi  Med CFM Lo-Hi Lo-Hi Low Quiet  Med-Hi  Med-Hi  Low  Airflow rate  Med-Hi  Low  Airflow rate  Med-Hi  Low  Med Lo-Hi Low  Airflow rate  Med-Hi  Sound pressure level  Med Lo-Hi Low  Med Med Lo-Hi Low  Med Med Airflow rate  Airflow rat	0.38						
Med Lo-Hi         CFM Lo-Hi         188 (320)         230 (390)         235 (400)         277 (470)           Lo-Hi         (m³/h)         182 (310)         212 (360)         212 (360)         247 (420)           Low         165 (280)         194 (330)         194 (330)         230 (390)           Just         124 (210)         159 (270)         159 (270)         200 (340)           Med-Hi         33         35         36         39           Med         31         33         34         37           Jo-Hi         40H(A)         30         31         31         35           Lo-W         28         29         29         33	394 (670)						
Airmow rate Lo-Hi Low Low Quiet  High Med-Hi Lo-Hi LoHi Low Lob-Hi LoHi Lob-Hi Lob-Hi Low Lob-Hi Lob-Hi Lob-Hi Low Lob-Hi Low Lob-Hi Lob-Hi Low Lob-Hi Low Lob-Hi Lob-Hi Low Lob-Hi Low Lob-Hi Low Lob-Hi Low Lob-Hi Low Lob-Hi Low Lob-Hi Lob-H	347 (590)						
Lo-Hi   Low   High   182 (310)   212 (360)   212 (360)   247 (420)	306 (520)						
Quiet         124 (210)         159 (270)         159 (270)         200 (340)           Sound pressure level         High Med-Hi         35/36*         37         38         42           Med Hi         33         35         36         39           Lo-Hi         30         31         31         37           Low         28         29         29         33	265 (450)						
High Med-Hi       Med Hi     33     35     36     39       Med     31     33     35     36     39       Lo-Hi     30     31     31     35       Low     28     29     29     33	230 (390)						
Med-Hi       Med     33     35     36     39       Lo-Hi     31     33     34     37       Low     30     31     31     35       28     29     29     33	200 (340)						
Med     4       Lo-Hi     31     33     34     37       Low     30     31     31     35       28     29     29     33	46						
Lo-Hi         dB(A)         30         31         31         35           Low         28         29         29         33	42						
LO-HI 30 31 31 35 Low 28 29 29 33	39						
	36						
	33						
Quiet 22 22 22 30	30						
Dimensions (H x W x D) in.(mm) 23-5/8 × 29-1/8 × 7-7/8 (600 × 740 × 200)							
Weight   Ibs.(kg)   33 (15)   33 (15)   33 (15)   33 (15)	33 (15)						
Capacitics also dispute Liquid (Flare) 1/4 (6.35) 1/4 (6.35) 1/4 (6.35) 1/4 (6.35) 1/4 (6.35)	1/4 (6.35)						
Connection pipe diameter Gas (Flare) in.(mm) 3/8 (9.52) 3/8 (9.52) 1/2 (12.70)	1/2 (12.70)						
Condensate Drain hose diameter (I.D./O.D.) in. 9/16 / 5/8 to 11/16							

Note: Specifications are based on the following conditions: Built-in protective functions may limit capacity or shut off unit if unit is operated outside of unit design operating temperature ranges. Cooling: Indoor temperature of 80°F(26.7°C)DB/60°F(19.4°C)WB; and outdoor temperature of 90°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) (Outdoor unit - indoor unit).

\*Cooling operation / heating operation.

# **AIRSTAGE**

Quiet





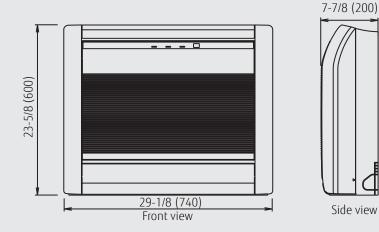
# Flexible and Easy Installation

At less than 24" high and 30" wide, floor mount models fit easily under a standard window and can replace a traditional radiator twice its size while producing more capacity.

# **Optional Accessories**

Kagami Wired Remote Control	UTY-RVRU
Wired Remote Controller	
Simple Remote Controller	UTY-RSRY, UTY-RHRY
Wireless Remote Controller	
Half Concealed Kit	UTR-STA

Dimensions (Unit: In (mm))



# Floor / Ceiling

ABUA12TLAV2 ABUA14TLAV2 ABUA18TLAV2 ABUA24TLAV2

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



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

### Flexible installation

### **Example of floor installation**



### **Example of ceiling installation**



### Specifications

Model name			ABUA12TLAV2	ABUA18TLAV2	ABUA24TLAV2					
Power source				1 Phase ~ 208/230V 60Hz						
	Carlia	BTU/h	12,000	14,000	18,000	24,000				
Consider	Cooling	kW	3.5	4.1	5.3	7.0				
Capacity	HN	BTU/h	13,500	15,600	20,000	27,000				
	Heating	kW	4.0	4.6	5.9	7.9				
Input power		W	30	42	74	99				
	High	CFM (m <sup>3</sup> /h)		388 (660)	459 (780)	589 (1,000)	589 (1,000)			
Airflow rate	Med		336 (570)	377 (640)	424 (720)	483 (820)				
	Low	(111-711)	288 (490)	324 (550)	341 (580)	400 (680)				
	High		36	40	46	47				
Sound pressure level	Med	dB (A)	32	36	39	42				
evei	Low	(^)	28	34	35	37				
Dimensions (H ×	W × D)	in.(mm)		7-13/16 × 39 × 25-13/16 (199 × 990 × 655)						
Weight		lbs.(kg)	56 (25)	57 (26)	57 (26)	60 (27)				
Connection	Liquid (Flare)	in (mm)	1/4 (6.35)	1/4 (6.35)	3/8 (9.52)	3/8 (9.52)				
pipe diameter	Gas (Flare)	in.(mm)	1/2 (12.70)	1/2 (12.70)	5/8 (15.88)	5/8 (15.88)				
ondensate Drai	n hose diameter (	I.D./O.U.)	-	3/4" / 1-1/16"						

Note : Specifications are based on the following conditions.

Cooling: Indoor temperature of 80°F(26.7°C)DB/67°F(19.4°C)WB, and outdoor temperature of 95.0°F(35°C)DB/75°F(23.9°C)WB.

 $Heating: Indoor \ temperature \ of \ 70^{\circ}F(21.1^{\circ}C)DB/60^{\circ}F(15.6^{\circ}C)WB, and \ outdoor \ temperature \ of \ 47^{\circ}F(8.3^{\circ}C)DB/43^{\circ}F(6.1^{\circ}C)WB.$ 

Pipe length: 25ft.(7.5 m), Height difference: 0ft.(0 m) (Outdoor unit - Indoor unit).

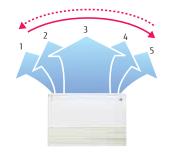
Built-in protective functions may limit capacity or shut off unit if unit is operated outside of unit design operating temperature ranges.

# Flexible four-way louver swing

Combination of up/down and right/left directional louver swing provides excellent air distribution especially in large spaces.

### RIGHT and LEFT SWING

### UP and DOWN SWING





# Efficient and powerful DC fan motor

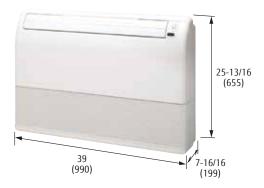
# **Auto-closing louver**

When operation is stopped, the louvers will automatically close.

# Compact design

Symmetric, slim and compact design.

Unit: in (mm)

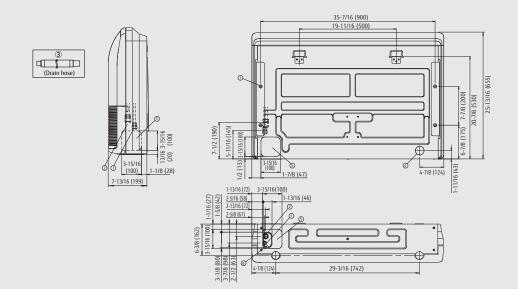


# **Optional Accessories**

Wireless Remote Controller......UTY-LNHU



Dimensions (Unit: In (mm))



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

# Ceiling

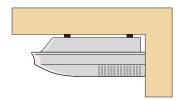
# ABUA30TLAV2 ABUA36TLAV2

Slim and elegant design makes the ceiling-suspended indoor unit a great fit for any light commercial applications such as retail stores, restaurants, conference rooms. Optimized air openings provide a comfortable air flow and low sound levels.

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

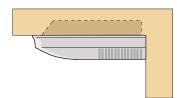
### Installation





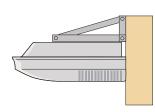
Standard installation with unit suspended from the ceiling.

### Concealed



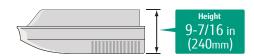
Partially recessed installation.

### Wall mounted



Efficient air distribution with long throw ensures comfort even in large rooms.

# Slim & Compact design



# Efficient and powerful DC fan motor



### Specifications

Model name			ABUA30TLAV2	ABUA36TLAV2			
Power source			1 Phase ~ 208/230V 60Hz				
	Cooling	BTU/h	30,000	36,000			
Committee	Cooling	kW	8.8	10.6			
Capacity	Heating	BTU/h	34,000	40,000			
	Heating	kW	10.0	11.7			
Input power		W	85	85			
	High		859 (1,630)	995 (1,690)			
Airflow rate	Med	CFM (m³/h)	806 (1,370)	824 (1,400)			
	Low	(111 /11)	671 (1,140)	689 (1,170)			
	High		42	45			
Sound pressure level	Med	dB (A)	38	38			
ievei	Low	(A)	33	34			
Dimensions (H ×	W × D)	in.(mm)	9-7/16 × 65-3/8 × 27 -9/1	6 (240 × 1,660 × 700)			
Weight		lbs.(kg)	101 (46)	106 (48)			
Connection	Liquid (Flare)	:- ()	3/8 (9.52)	3/8 (9.52)			
pipe diameter	Gas (Flare)	in.(mm)	5/8 (15.88)	3/4 (19.05)			
Condensate Drai	n hose diameter (	I.D./O.U.)	3/4" / 1-	3/4" / 1-1/16"			

Note: Specifications are based on the following conditions.

 $Cooling: Indoor \ temperature \ of \ 80^{\circ}F(26.7^{\circ}C)DB/67^{\circ}F(19.4^{\circ}C)WB, and \ outdoor \ temperature \ of \ 95.0^{\circ}F(35^{\circ}C)DB/75^{\circ}F(23.9^{\circ}C)WB.$ 

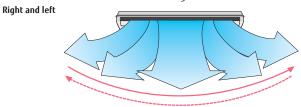
Heating: Indoor temperature of 70°F(21.1°C)DB/60°F(15.6°C)WB, and outdoor temperature of 47°F(8.3°C)DB/43°F(6.1°C)WB.

Pipe length: 25ft.(7.5 m), Height difference: 0ft.(0 m) (Outdoor unit - Indoor unit).

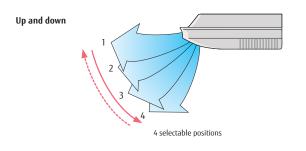
Built-in protective functions may limit capacity or shut off unit if unit is operated outside of unit design operating temperature ranges.

# Four-way louver swing

Auto airflow direction and auto swing

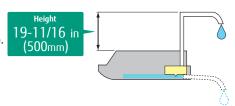


5 selectable positions

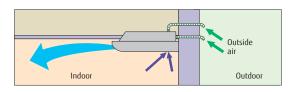


# Condensate drain pump (Optional)

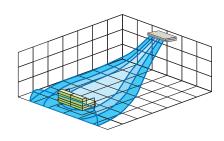
Installation flexibility with optional condensate drain pump.



### Outside air intake



### Efficient air distribution



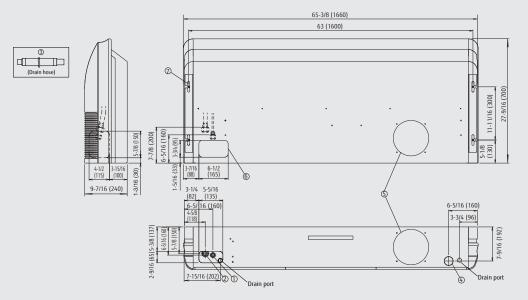
### Air filter

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

## **Optional Accessories**

Wireless Remote Control......UTY-LNHU
Drain Pump Unit......UTZ-PU1EBA / UTR-DPB24T
Flange.....UTD-RF204

Dimensions (Unit: In (mm))



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

# Compact Wall Mounted

ASUA4TLAV2 ASUA7TLVA2 ASUA9TLAV2 ASUA12TLVA2 ASUA14TLAV2



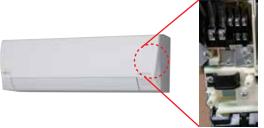


4/7/9,000 BTU/h

12/14,000 BTU/h

## **Easy Installation**

Wiring can be easily connected by opening the front panel and wire cover.



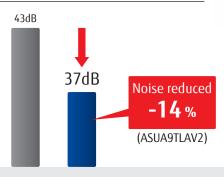
## High density heat exchanger

Increased heat transfer efficiency with thin tube technology.



# **Quiet operation**

Improved airflow pattern reduces noise significantly.





### Specifications

Model name			ASUA4TLAV2	ASUA7TLVA2	ASUA9TLAV2	ASUA12TLVA2	ASUA14TLAV2			
Power Source			1 Phase - 208 / 230V ~ 60Hz							
	6 1:	BTU/h	4,000	7,500	9,500	12,000	14,000			
Consider	Cooling	kW	1.2	2.2	2.8	3.5	4.2			
Capacity	Heating	BTU/h	4,400	9,500	10,900	13,500	15,600			
	Heating	kW	1.3	2.8	3.2	4.0	4.6			
Input Power		W	13	19	34	25	36			
	High		253 (430)	324 (550)	424 (720)	406 (690)	471 (800)			
	Med-Hi		247 (420)	271 (460)	336 (570)	359 (610)	436 (740)			
Airflow rate	Med	CFM	230 (390)	247 (420)	294 (500)	330 (560)	400 (680)			
Allilow rate	Lo-Hi	(m <sup>3</sup> /h)	224 (380)	230 (390)	241 (410)	312 (530)	359 (610)			
	Low		212 (360)	212 (360)	212 (360)	277 (470)	324 (550)			
	Quiet		194 (330)	194 (330)	194 (330)	194 (330)	194 (330)			
	High		31	35	43	40	44			
	Med-Hi		30	32	38	37	42			
Sound pressure	Med	dB(A)	28	30	34	35	40			
level	Lo-Hi	UD(A)	26	27	29	33	37			
	Low		24	24	24	30	34			
	Quiet		22	22	22	24	24			
Dimensions (H x W x D) in.(mm)		in.(mm)	10-5/1	6 × 32-5/16 × 8-1/8 (262 × 820	) × 206)	10-9/16 × 33-1/	16 × 8 (268 × 840 × 203)			
Weight		lbs.(kg)	17 (7.5)	17 (7.5)	17 (7.5)	20 (9)	20 (9)			
Connection pipe	Liquid (Flare)	in.(mm)	Ø1/4 (6.35)	1/4 (6.35)	1/4 (6.35)	1/4 (6.35)	1/4 (6.35)			
diameter	Gas (Flare)		Ø3/8 (9.52)	3/8 (9.52)	3/8 (9.52)	1/2 (12.70)	1/2 (12.70)			
Condensate Drain	hose diameter (I.D.	/0.D.) in.			9/16 / 5/8 to 11/16					

Note: Specifications are based on the following conditions: Built-in protective functions may limit capacity or shut off unit if unit is operated outside of unit design operating temperature ranges. 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) (Outdoor unit - indoor unit).

\*Cooling / Heating

### **6-speed fan control** (ASUA4TLAV2 only)

With 6 fan speeds to choose from, these wall mounted models operate as quietly as 22 dB(A).





Six-speed fan control available through the following Remotes and Controllers: UTY-RVRU / UTY-RNRUZ\* / UTY-RSRY / UTY-RHRY / UTY-DSGYZ2 / UTY-DCGYZ2 / UTY-ALGXZ1 / UTY-APGXZ1

### Comfortable airflow

# Models ASUA12/14TLAV2 UNIQUE POWER DIFFUSER

### Heating

Vertical airflow provides powerful floor level heating





### Cooling

Horizontal airflow does not supply cool air directly at the occupants in the room.

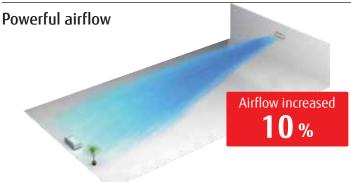


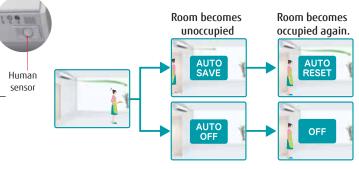


# Occupancy / Human sensor function

Models ASUA12/14TLAV2

The energy saving occupancy function can, via the optional Wired Remote Controller, be set to turn off the unit or change to power saving mode when a room becomes unoccupied.





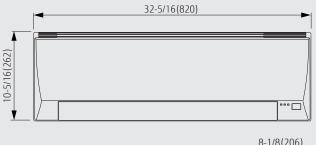
## **Optional Accessories**

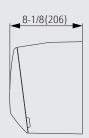
Kagami Wired Remote Control .......UTY-RVRU
Wired Remote Control (Touch Panel): .....UTY-RNRUZ\*
Simple Remote Control: ......UTY-RSRY, UTY-RHRY
Wireless Remote Control: ......UTY-LNHU

### Dimensions

### Models:

ASUA4TLAV2 / ASUA7TLAV2 / ASUA9TLAV2





### Models: ASUA12TLAV2/ASUA14TLAV2





(Unit: In (mm))

# Wall Mounted

ASUB18TLAV2 ASUB24TLAV2 ASUA30TLAV2 ASUA36TLAV2

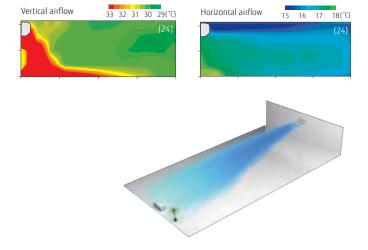




18/24,000 BTU/h 30/36,000 BTU/h

### Comfortable air distribution

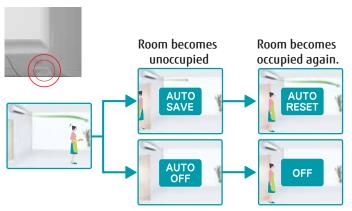
Power diffuser (ASUB18/24TLAV2)



## Occupancy / Human sensor setting

### Models ASUB30/36TLAV2 only

The energy saving occupancy function can, via the optional Wired Remote Controller, be set to turn off the unit or change to power saving mode when a room becomes unoccupied.



### Specifications

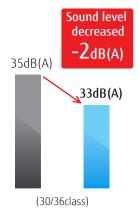
Model name			ASUB18TLAV2	ASUB24TLAV2	ASUA30TLAV2	ASUA36TLAV2		
Power Source				1 Phase - 208 /	230V ~ 60Hz			
	Cooling	BTU/h	18,000	24,000	30,000	34,000		
Canaciba	Cooling	kW	5.3	7.0	8.8	10.0		
Capacity	Heating	BTU/h	20,000	20,000 27,000		38,000		
	Heating	kW	5.9	7.9	10.0	11.2		
Input Power		W	32	60	74	103		
	High		494 (840)	647 (1,100)	848 (1,440)	954 (1,620) / 895 (1,520)*		
	Med-Hi		-	-	706 (1,200)	765 (1,300)		
Airflow rate	Med	CFM	453 (770)	536 (910)	618 (1,050)	659 (1,120)		
Allilow rate	Lo-Hi	(m <sup>3</sup> /h)	-	-	553 (940)	577 (980)		
	Low		406 (690)	430 (730)	524 (890)	524 (890)		
	Quiet		-	-	412 (700)	412 (700)		
	High		41	48	53	55 / 54 *		
	Med-Hi		-	<del>-</del>	49	51		
Sound pressure	Med	dB(A)	39	43	45	47		
level	Lo-Hi	UD(A)	-	-	42	43		
	Low		35	35	39	39		
	Quiet		-	=	33	33		
Dimensions (H x W x D) in.		in.(mm)	12-5/8 × 39-5/16 × 9-3/8 (320 × 998 × 238)		13-3/8 × 45-1/4 × 11 (340 × 1,150 × 280)			
Weight	Weight		33 (15)	33 (15)	40 (18)	40 (18)		
Connection pipe	Liquid (Flare)	in.(mm)	1/4 (6.35)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)		
diameter	Gas (Flare)	111.(111111)	1/2 (12.70)	5/8 (15.88)	5/8 (15.88)	5/8 (15.88)		
Drain hose diame	eter (I.D./O.D.)	in.(mm)		9/16 / 5/8 t	to 11/16			
			les Balles e e form					

Note: Specifications are based on the following conditions: Built-in protective functions may limit capacity or shut off unit if unit is operated outside of unit design operating temperature ranges. 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) (Outdoor unit - indoor unit).

\*Cooling / Heating

# 6-speed fan control

With 6 fan speeds to choose from, the ASUB30TLAV2 and ASUB36TLAV2 models operate as quietly as 33 dB(A).







\* Compatible Remote Controllers: UTY-RVRU / UTY-RNRUZ-Series / UTY-RSRY / UTY-RHRY / UTY-DSGYZ2 / UTY-DCGYZ2 / UTY-ALGXZ1 / UTY-APGXZ1

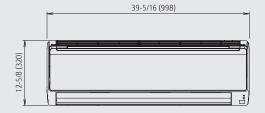
# **Optional Accessories**

Kagami Wired Remote Control	UTY-RVRU
Wired Remote Control (Touch Panel)	
Simple Remote Control	UTY-RSRY, UTY-RHRY
Wireless Remote Control	UTY-LNHU

Dimensions (Unit: In (mm))

9-3/8 (238)

### Models: ASUB18TLAV2 / ASUB24TLAV2







# DX-Kit for air handling applications

UTP-VU30A

UTP-VU60A

UTP-VU90A

**UTY-VDGU** 

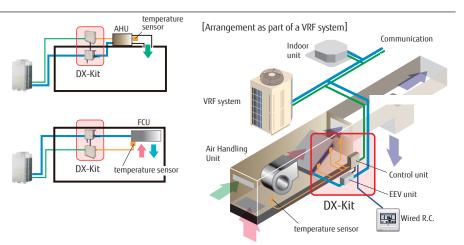


Fujitsu's DX-Kit enables a 3rd party Air Handling Unit to be fully integrated into an AIRSTAGE VRF system. This enables the benefits of advanced inverter compressor technology to extend to standard air handling equipment.

The DX-Kit offers a seamless integration and optimized design flexibility while making installation and commissioning efficient.

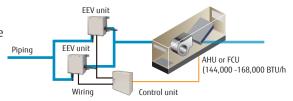
# Different control strategies for optimized control of air handling & fan coil units

- When connecting to an air handling unit, the supply air temperature can be controlled by the air discharge sensor.
- When connecting to a fan coil unit, the room temperature can be controlled by the return air temperature sensor.



# Supports wide range of capacities

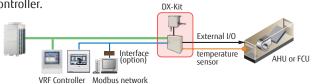
- Connectable capacity range: 18,000 BTU/h to 168,000 BTU/h.
- 2 EEV units can be connected in parallel for up to 168,000 BTU/h large capacity units.



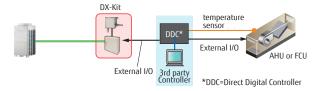
### Variety of controls to match the application

Central control using VRF controllers or central management (BMS) controller.

 DY-Kith



Central control from external 3rd party controller



# Summary of input/output functions

### Inputs

- ON/OFF
- Set temperature
- · Capacity demand
- Heating / Cooling operation mode
- Fault information

### Outputs

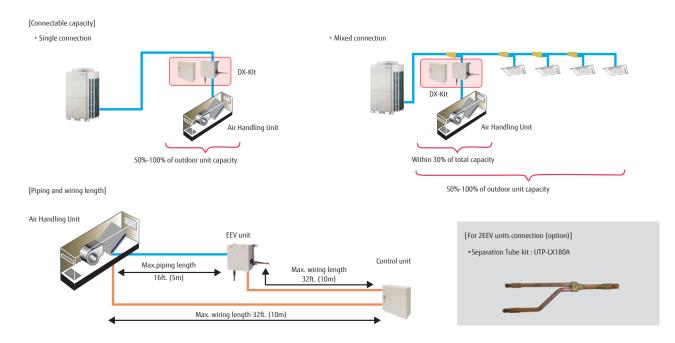
- · ON/OFF indication
- Fan ON/OFF indication
- Thermo ON/OFF indication
- Defrost indication
- Fault indication

### Modbus control

 Possible to control via Modbus interface for integration into a BMS system.

### DX-Kit system design parameters

- Connectable VRF series: J-IIIL, J-IV, J-IVS, VU-V
- Connectable DX-Kit system capacity range: 50 to 100% of the outdoor unit capacity
- Connectable DX-Kit system capacity range with indoor units: 30% or less of the outdoor unit capacity
- Max wiring length from control unit: 32ft. (10m)
- Max piping length between EEV unit and indoor unit: 16ft. (5m)
- Control unit and EEV unit can be installed outdoors.



### Specifications

EEV Unit			UTP-VU30A UTP-VU60A				UTP-VU90A		UTP-VU90A×2				
Connectable capacity BTU/h			18,000	24,000	30,000	36,000	48,000	60,000	72,000	96,000	144,000	168,000	
ć	Cooling	BTU/h	18,000	24,000	30,000	36,000	48,000	60,000	72,000	96,000	144,000	168,000	
Capacity	Heating	БТО/П	20,000	27,000	34,000	40,000	54,000	67,000	81,000	108,000	162,000	188,000	
Airflow Rate(Reference value)		CFM (m3/h)	624 (1,060)	706 (1,200)	895 (1,520)	941 (1,600)	1,177 (2,000)	1,318 (2,240)	2,095 (3,560)	2,354 (4,000)	3,767 (6,400)	4,709 (8,000)	
Dimensions (H×W×D) in.(mm)				6-5/16 x 8-11/16 x 3-9/16 (160 × 220 × 90)							6-5/16 x 8-11/16 x 3-9/16 (160 × 220 × 90 )× 2		
Weight		lbs.(kg)				4.4 (	[2.0)				4.4 (2	4.4 (2.0) × 2	
Connection pipe diameter (Liquid)	'' In Imm)   M3/8 (9.57)   M3/8 (9.57)   M1/7 (17.71)					12.70)							
Control box							UTY-V	/DGU					
Power source	V/Ø/Hz 208-230 / 1 / 60												
Dimensions (H×W×D)		in.(mm)	15-3/4 x 15-3/4 x 4-3/4 (400 × 400 × 120)										
Weight		lbs.(kg)		·		·	22.0	10.0)	·	•	•	•	

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.(7.5 m) Voltage: 230 [V]

# Effective heat exchange and simultaneous outside air ventilation

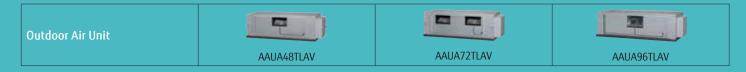
High Efficiency and low noise levels are achieved by using a highly efficient heat exchanger design. A comfortable air conditioned space is achieved by conveniently selecting whether to use heat exchange or normal ventilation setting, according to the requirements of the conditioned space.

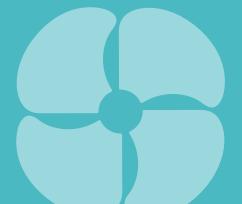
# **VENTILATION**

### **VENTILATION Lineup**

- p. 73 Outdoor Air Unit
- p. 75 HRV / FRV Solutions

## Lineup





## Outdoor Air Unit

### AAUA48TLAV AAUA72TLAV AAUA96TLAV





AAUA48

AAUA72

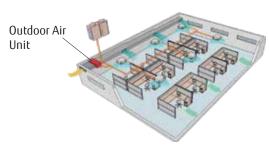
The outdoor air unit provides a zoned and decentralized solution to bringing in conditioned outside air to the space.

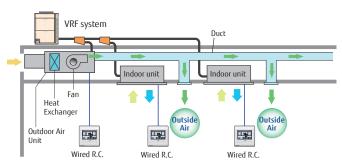
Both outside air treatment and space conditioning is provided from one flexible and efficient VRF system.



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







\* See Product Documentation for detailed design guidelines.

Model name			AAUA48TLAV	AAUA72TLAV	AAUA96TLAV		
Power source			1 Phase ~ 208/230V 60Hz				
	Cooling	BTU/h	48,000	72,000	96,000		
Capacity	Heating	BIU/N	30,000	47,000	59,000		
Input power	Cooling/Heating	W	179	292	370		
Airtlow rato		CFM (m³/h)	636 (1,080)	989 (1,680)	1,236 (2,100)		
Static pressure range in.W		in.WG	0.20 to 0.74 (50 to 184)	0.20 to 0.80 (50 to 200)	0.20 to 0.96 (50 to 239)		
Standard static pressure (Pa		(Pa)	0.74 (184)	0.80 (200)	0.80 (200)		
Sound pressure level dl		dB (A)	42	44	47		
Dimensions (H ×	W × D)	in. (mm)	16-3/4×53-13/16×22-1/2 (425×1,367×572)	16-3/4×53-13/16×22-1/2 (425×1,367×572)	17-11/16×62-5/16×27-9/16 (450×1,583×700)		
Weight		lbs.(kg)	108 (49)	123 (56)	159 (72)		
Connection Pipe Diameter (Small / Large)		in. (mm)	Ø3/8 / Ø3/4 (Ø9.52 / Ø19.05)	Ø1/2 / Ø7/8 (Ø12.70 / Ø22.22)	Ø1/2 / Ø7/8 (Ø12.70 / Ø22.22)		
Occation Decad	Cooling	°FDB	41 to 109 (5 to 43)	41 to 109 (5 to 43)	41 to 109 (5 to 43)		
Operation Range	Heating	(°CDB)	19 to 70 (-7 to 21)	19 to 70 (-7 to 21)	19 to 70 (-7 to 21)		
Refrigerant			R410A	R410A	R410A		

Note: Specifications are based on the following conditions.

Cooling: Outdoor temperature of 91°FDB (33°CDB) / 82°FWB (28°CWB). Heating: Outdoor temperature of 32°FDB (0°CDB) / 27°FWB (-2.9°CWB).

Pipe length : 25ft. (7.5 m)

### Outdoor Air Unit (continued)

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

- DC fan motor with permanent magnet technology for energy efficient operation.
- External static pressure capabilities of up to 0.96" W.G. allows for flexibility with duct work and filtration choices.



#### **Various Controllers**

Design flexibility with many optional controllers, such as individual remote controls, central controllers and building management systems.

#### Remote Controls

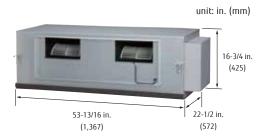


#### Central Controller

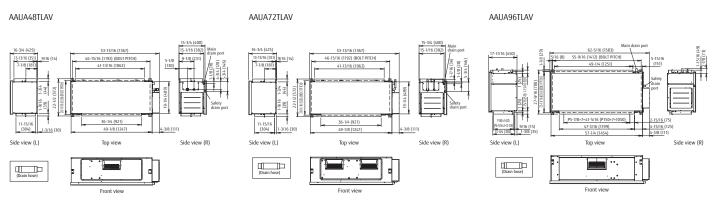


#### Efficient compact design

 Compact and low profile design reduces the required installation space and can eliminate mechanical rooms or separate mounting spaces associated with traditional outdoor air systems.



#### **Optional Accessories**



## HRV / ERV Solutions

#### Improved comfort and health in buildings

When the Ventacity HRV/ERV system is connected to optional sensors, it will optimize ventilation, providing just the right amount of outside air when and where needed for maximum health and comfort. The combination of zoned heating and cooling from AIRSTAGE systems with outside air from Ventacity's HRV/ERV systems provides a healthy environment for building occupants, translating into higher building value.

#### **High Efficiency**

The AIRSTAGE VRF system - which includes a variety of Building Management System controls - combined with a Ventacity HRV/ERV system makes an intelligent, ultra-efficient solution for buildings, offering tremendous Energy Use Intensity (EUI) reductions and savings in the building's annual energy use per unit area.

#### **Specifications**

Specifications		Indoor Mount	Above Drop	Above Drop	Above Drop	Above Drop	Roof Top Mounted	Roof Top Mounted	
		Ductless	Ceiling Ventilator	Ceiling Ventilator	Ceiling Ventilator	Ceiling Ventilator	Ducted	Ducted	
MODEL NAME		VS500SQh / VS500SQe	VS250 CMh/e	VS400 CMh/e	VS900 CMh/e	VS1200 CMh/e	VS1000RT/RTe	VS3000RT/RTe	
Ventilation Flow - Max	cfm	539	309	467	992	1492	1,020 cfm	3,300 cfm	
Ventilation Flow - Typical	cfm	117 to 500	60 to 270	120 to 480	200 to 900	300 to 1200	180 to 1,000 cfm	750 to 3,000 cfm	
Ventilation Type				Heat Recove	ery Ventilator (HRV) / En	nergy Recovery Ventilator	(ERV)		
Heat Exchanger			Counterflow Aluminum Static Plate / Counterflow Polymer Static Plate						
Heat Recover - Max	%	90 / 83	86.1/79.2	86.1/79.2	86.1/79.2	86.1/77.9	92 / 85	90 / 85	
Temperature Range	Temperature Range °F		41 to 104	41 to 104	41 to 104	41 to 104	-13 to 140	-13 to 122	
Modes		CAV, DCV, Economizer	CAV, DCV, VAV, BMS. Economizer				CAV, DCV, VAV, BMS, Economizer		
MECHANICAL									
Weight	lbs.	280 / 288	165	210	375	540	618 / 662	1654 / 1720	
Dimensions	in.	84.3 x 44 x 17.9	46.9 x 12.2 x 30.7	55.1 x 12.2 x 42.5	66.9 x 15.4 x 54.5	78.7 x 18.5 x 67.3	63.6 x 35.2 x 52.5	86.3 x 48.3 x 73.5	
OA Filter (2" or 4") MERV13	in.	15.16 x 16 x 3.75	11.2 x 9.25 x 3.78	17.9 x 9.25 x 3.78	23.03 x 12.2 x 3.78	29.53 x 15.55 x 3.78	17.5 x 28 x 3.75	51 x 26.5 x 3.75	
RA Filter (2") MERV8	in.	10.6 x 16.7 x 2	11.2 x 9.25 x 3.78	17.9 x 9.25 x 3.78	23.03 x 12.2 x 3.78	23.03 x 12.2 x 3.78	16.5 x 28 x 17.5	51 x 25.25 x 3.75	
ELECTRICAL									
Power Supply	kW	5.1	1.78	3.29	6.26	7.9	7	20.2	
Voltage		240 VAC, 1-Phase, 60Hz	208-240 VAC	208-240 VAC	208-240 VAC	208-240 VAC	240 VAC, 1-Phase, 60Hz or 208/240 VAC, 3-Phase, 60Hz	"208/240 VAC, 3-Phase, 60Hz or 480 VAC, 3-Phase, 60Hz"	
De-Ice Preheater	kW	2.1	1.51	2.93	5.3	6.9	6	16.3	
Maximum Power - 1 Fan	W	322	125	170	470	503	500	1,900	

#### **Ductless**

The VS500SQ is a ductless HRV/ERV for decentralized applications. The VS500SQ optimizes for energy efficiency and healthy indoor air quality, while offering ultra-quiet operation and no drafts.



Top Applications: Classrooms, offices and conference rooms.

#### Ventilator

VS-CM Series HRVs & ERVs for installation above drop ceilings. Operates at much higher energy efficiency (up to 93%) which saves much more energy and significantly lowers operating costs. Four capacities to choose from.

#### Ducted

VS1000RT and VS3000RT make up a line of Smart Ventilation™ Management systems with a rugged design for easy rooftop or mechanical room installation that optimize healthy indoor air quality while minimizing building energy usage. Top Applications: New and existing retail

spaces, offices, restaurants, schools, public spaces and multifamily residential buildings.

#### Passive House certified

The VS1000RT is the first Passive House, UL, CSA Certified counterflow heat recovery ventilation (HRV) product in North America.



# CONTROL SYSTEMS OPTIONAL PARTS & ACCESSORIES

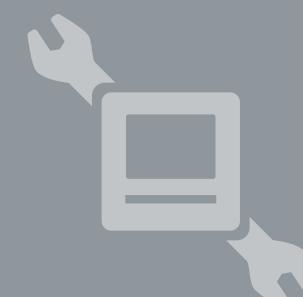


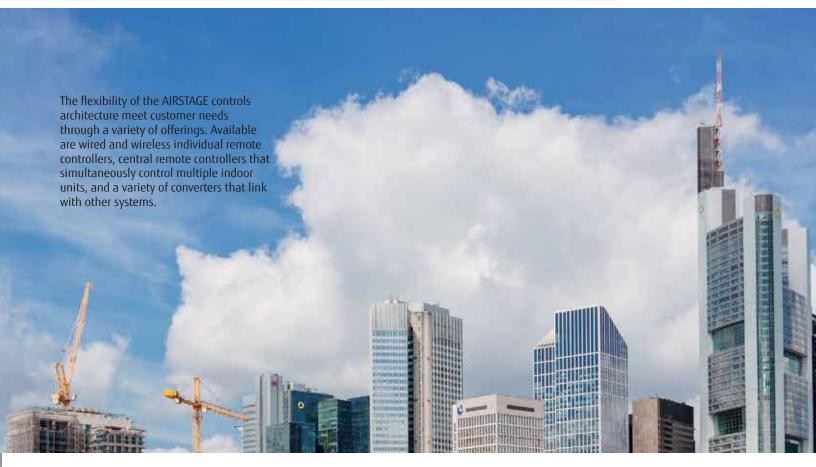
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**CONTROL SYSTEMS** 



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AIRSTAGE Cloud & Edge Controller

#### **BMS GATEWAYS**

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#### **OPTIONAL PARTS & ACCESSORIES**



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Hirise 360 Kit p. 118

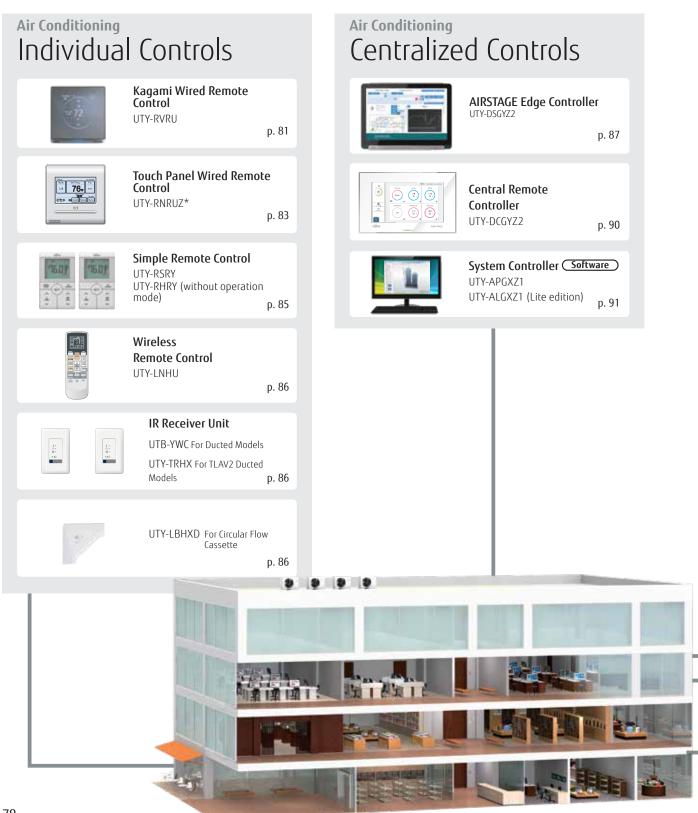




## Control System Overview

#### For VRF

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



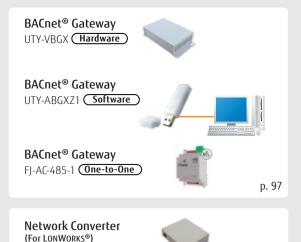
### **AIRSTAGE**

## **BMS Gateways**

For external control via Building Management Systems (BMS) or Home Automation Systems (HAS)

AIRSTAGE Integration Manager™ powered by Niagara FUJ-VRF-8025 FUJ-VRF-8125

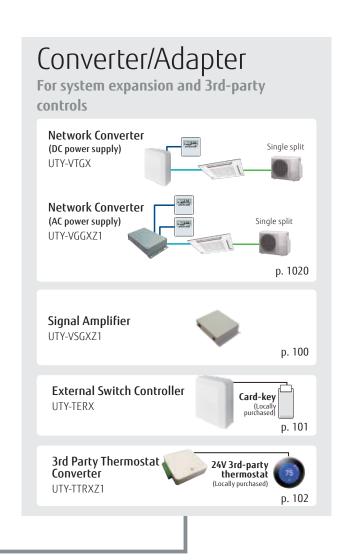












				Z	one Controlle	ers		Central Controllers				WI-FI Interface	
			The state of the s	78.					9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	, h	[8]		
			Kagami Remote Control	Touch Remote Control	Simple Remote Control *1	Simple Remote Control	Wireless Remote Control	AIRSTAGE Edge Controller	Central Remote Controller	System Controller	System Controller Lite	AIRSTAGE Mobile	UART (Intesis AC Cloud Control)
_	el name controllable remo	to control groups	UTY-RVRU 1	UTY-RNRUZ*	UTY-RHRY 1	UTY-RSRY 1	UTY-LNHU 1	UTY-DSGYZ2 128	100	UTY-APGXZ1 1600	UTY-ALGXZ1 400	UTY-TFSXJ4	FJ-AC-WIFI-1
	controllable indoo		16	16	16	16	16	128	100	1600	400	1	1
	controllable group		_	_	_	_	16	128	16	1600	400	<u> </u>	_
Mexi	On / Off		• *3	• *3			•	•	•	•	•		
	Operation mode	settina	•	•	_					•	•	•	
	Fan speed setting						•		•	•	•		
	Temp. setpoint se		•	•	•	•	•		•	•	•		•
Control Ffunction	Room temp. setp	oint limitation	•	•	•	•	-	•	•	•	•	-	•
func	Test operation		•	•	•	•	•	•	•	-	-	-	-
- For	Vert. Airflow Dir.	/ Swing setting	•	•	•	•	•	•	•	•	•	•	•
Cont	Horiz. Airflow Dir.		•	•	-	-	•	•	•	•	•	•	•
guin	Individual louver	control	•	•	-	-	-	•	-	-	-	-	-
Air Conditioning	Group setting		-	-	_	-	-	•	•	•	•		-
Cond	RC prohibition		-	-	-	-	-	•	•	•	•	-	-
Air	Anti freeze settin	-	-	-	_	_	_	•	-	-	•		_
	Set temp. auto re Away setting	tuiii			_	_	_		_	_			_
	Economy mode s	ettina	•		_	_	•		•	•	•	•	_
	Occupancy/Huma		_	_	_	_	_		_				_
	Error	an sensor setting					_		•	•	•		•
	Defrosting						_			•	•		_
	Current time				_	_	•		•	•	•	_	_
	Day of week	,	•	•	-	_	_	•	-	•	•	-	_
	RC prohibition		•	•			-	•		•	•	•	_
	Cooling/heating	priority	•	•	•	•	-		•	•	•	-	_
>	Address display		•	•	•	•	-	•	•	•	•	-	_
Display	Room temp		•	•	•	•	-		-	-	-	•	•
	Multi language		•	•	-	-	-	•	•	•	•	•	•
		ime setting (Summer)	•	•	-	-	-	•	•	•	•	-	_
	Time zone setting		-	-	-	-	-	•	-	-	-	•	•
	Name registratio	n	•	•	-	-	-	•	•	•	•		•
	Backlight		•	•	•	•	-	• *7	•	-	-	-	-
		3D building display	-	-	-	-	-	-	-	•		-	-
	Service Tool funct	Period	Week	Week		_		• *8 Week / Year	Week	Year	Vees	- Week	- Vons
	Schedule timer	On/Off, Temp, Mode:			_	_	_		week	real	Year	week	Year
	On/Off timer	Events per day	8 *3, *4	8 *3, *4	_	_	-	Unlimited —	20	144	144	-	10
ē	Sleep timer			_	_	_	•	_	_				_
Timer	Program timer		_	_	_	_	•	_	_	_			_
	Auto off timer				_	_	_		_	_	_	_	_
	Day off				-	-	-			•	•	-	-
		r setting (Minutes)	10-30	10-30	_	-	5	1	10	10	10	-	-
	Status monitorin		-	-	-	-	-		•	•	•	•	•
	Electricity charge		-	-	-	-	-	•	-	•	٥	-	-
_	Error history		•	•	-	-	-	•	•	•	•	•	•
Control	Emergency stop		-	-	-	-	-	•	• *2	-	-	-	-
3	Remote manager	ment	-	-	-	-	-	•	-	•	۰	•	•
	Energy saving ma	anagement	-	-	-	-	-	•	-	۰	۰	•	-
	Low noise mode		-	-	-	-	-		-	-	-		-
BMS		us communication			-	-	-	•	-	۰	۰	-	-
	Error / event noti		-	-	_	-	-	Email, SMS	-	•	•	• *5	• *5
UO.	Multi user access	levels	-	-	-	-	-	•	-	•	•	•	•
Administration	Key lock		• Child Lock	• Child Lock	_	-	_	• Password Setting	• Password Setting	• Password Setting	• Password Setting	• Password Setting	• Password Setting
Adr	Refrigerant Cycle	Monitor *6	-	-	_	_	_ _	•	_ 	_ _	_ _	-	-
*1 "0		etting is not available for t	L:			the second second							

<sup>\*1 &</sup>quot;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 \*5 Notification of errors, operating mode changes, and temperature alarms \*6 Monitoring functions similar to Service Tool \*7 Seven levels of brightness

<sup>-</sup> : Not supported yet  $\phantom{x} \bullet$  : Supported  $\phantom{x} \circ$  : Optional function

## Kagami Wired Remote Control

(2-wire): UTY-RVRU

## **KACAMI**RROR

## Simple, clean design that harmonizes with the space

The new UTY-RVRU Kagami Controller is a touch enabled, intuitive and stylish-looking controller, compatible with 2-Wire H, J, and V-Series indoor units.





#### **Features**

- Sleek, minimalist design that harmonizes with the space
- Large, easy to read, anti-fingerprint touch screen with auto dimming
- Simple, intuitive operation, with only the necessary functions and minimal screen transitions - swipe left/right to select settings, up/ down to adjust settings
- Initial setup and function settings via BLE connection to Remo Set app on smart device, or manually on the controller
- Easily transfer settings between controllers, reducing install time
- Custom logo import and display and masking of settings for hotels
- Control and monitoring for commonly used functions, including:
  - On/Off, Operation Mode, Fan Speed, and Air Flow Direction
  - Room temperature display with temperature correction
  - · Current time display, adjusts for Daylight Savings
  - · Auto-Off and Weekly Timers
  - Custom Auto (dual setpoint) function
  - Away / Eco Away setting
  - Economy / Energy Saving Fan / Optimum Start operation
  - Emergency Heat control
  - · Filter Status and Reset
  - · Anti-Freeze operation
  - Economy / Energy Saving Fan / Optimum Start operation
  - · Error display and history
  - Refrigerant Cycle Monitor of select sensor values
  - Test Run function
- Password and child lock protection
- · Multi-language (English, Chinese, French, German, Spanish,
- Russian, Polish, Italian, Greek, Portuguese, Turkish and Dutch)
- Energy Star Compliant
- Meets California 2022 Title 24 requirements
- Retains and displays HVAC contractor contact info for support
- 90-day warranty

#### Intuitive menu operation

Swipe left/right to choose a setting, and up/down to change values.

Temp. Setting



Operation Mode



Airflow Setting



#### Determine operating status at a glance

Subtle color-coded LED displays current operation mode, even when controller is idle.







Blue: Cooling

Red: Heating

Green: Dry

White: Fan

#### **Logo Display for Hotels**

KAGAMI can be customized with logos from hotels or other properties. Images are sent via BLE\* connection where data is saved on the flash ROM built into each controller.



## Limited Visibility of Settings for Hotels

KAGAMI features a function that enables hotels and other clients to "hide" settings from the displays so that their guests cannot change system settings.

Settings are possible through the smartphone app via BLE\* connection to the remote controllers. (Settings can also be adjusted manually on the remote controllers as usual.)

\*BLE: Bluetooth Low Energy









The design goal was to create a controller that is considered interior décor. This was achieved through the use of mirrors, glass, and layered elements that produce a frosted clear panel that appears to float. The end result, KAGAMI, feels as if it is one with the wall.

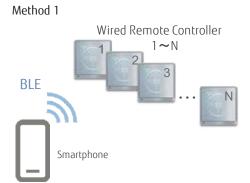
### KAGAMI Wired Remote Control UTY-RVRU (continued)

#### Installation/Maintenance

#### **Smartphone Application**

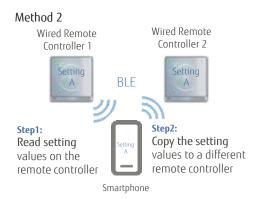
To improve workability, our smartphone app now enables users to make initial settings of the remote controllers and adjust function settings of the indoor unit via  $BLE^{*1}$  connection.

Settings can also be adjusted manually on the remote controllers as usual.



Send the setting values entered by the smartphone to the remote  ${\sf controller}^{*2}$ 

- \*1 BLE: Bluetooth Low Energy
- \*2 Smartphone: Wired Remote Controller = 1 : 1



Read the setting values of a different remote controller and send a copy of them\*2

Step1: Read setting values on the remote controller

Step2: Copy the setting values to a different remote controller

#### **Support Functions**

#### **Display Contractor Contact Information**

The remote controllers can retain and display HVAC contractor contact information. Contact information can be sent from the smartphone app to the remote controllers via BLE\*.

\*BLE: Bluetooth Low Energy

#### Refrigerant Cycle Monitor

Wired Remote Controller (Touch Panel) will support the display of certain sensor values for maintenance and service support.

#### Remo Set App (free download)

Set up your new Kagami controller via Bluetooth from your smartphone (or directly at the controller).

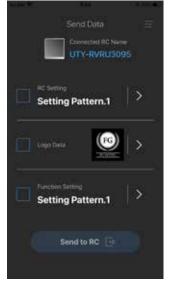
#### Features:

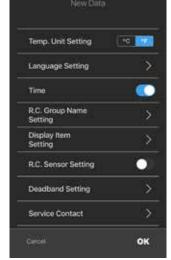
- Initial configuration
- Function setting
- Custom logo import
- Copy settings between controllers











Main Screen

Setting Screen

Model name	UTY-RVRU
Power source	DC 12V
Dimensions (H x W x D) (in. (mm))	4-13/16 × 4-9/16 × 1 (121.5 × 116 × 26)
Weight (oz.(g))	7.94 (225)



## Touch Panel Wired Remote Control

(2-wire): UTY-RNRUZ\*

## User friendly operation with high-definition large STN-LCD touch screen

- Built-in temperature sensor
- Built-in weekly/Daily timer(ON/OFF(Occupied/Unoccupied),Temp.)
- Backlight with ambient sensor adjusts to the room's light level
- Room temperature display
- Temperature set point limitation
- Multi-language (English, Chinese, French, German, Spanish, Russian, Polish, Italian, Greek, Portuguese, Turkish and Dutch)

#### High performance and compact size

• Flexible remote controller with individual control mode and various energy saving controls functions.



#### Accurate and comfortable control

 Built in air temperature sensor for accurate control and display of indoor air temperature.



#### Backlight

- Backlight enables easy operation in a dark room.
- Choose to have the backlight display stay on for 30 or 60 seconds.







#### Various energy saving settings

#### **Auto OFF Timer**

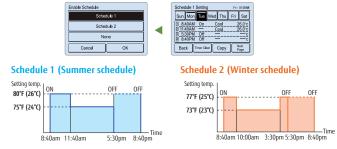
- The indoor unit automatically turns off after a set time has passed.
- The time interval for which auto off works can be set.

Ex) At interval time hour (5:00pm to midnight) to prevent forgetting to turn off



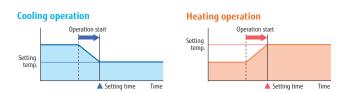
#### 2 schedules Weekly Timer

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



#### **Optimum start function**

 Provides configurable operation start to get the space to set temperature before scheduled time.

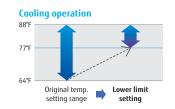


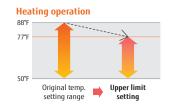
#### Set Temperature Auto Return

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

#### Set Temperature Upper and Lower Limit Setting

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



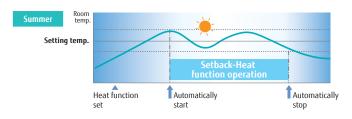


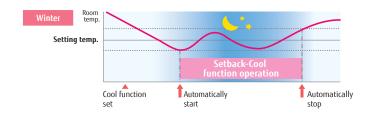
## Touch Panel Wired Remote Control UTY-RNRUZ\* (continued)

#### Additional functions

#### Away mode

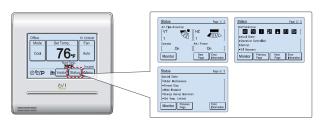
• Cooling / Heating is automatically started when the room temperature reaches a setting temperature even if the indoor unit is off.





#### Displays setting status and limitations

The remote controller settings can be easily checked





#### Child lock

• Lock / unlock method: Push the ON/OFF button on the screen (4 seconds)



#### Daylight savings time (Summer Time)

Provides Daylight Savings adjustment option.



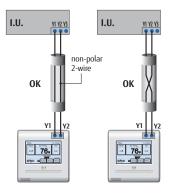
#### Name registration

• Easy identification of Indoor units using the user programmed names.

#### Monitor of EEV pulses from within the controller

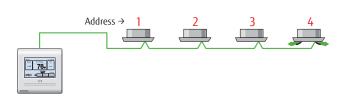
#### Simplified installation

Easy to install using non-polar 2-wire communication cable



#### Auto Address Setting/Setting Position Notification

Auto addressing for reliable and quick installation



#### Easy Maintenance

Operation history saved in the controller



Model name	UTY-RNRUZ*
Power source	DC 12V
Dimensions (H x W x D) (in. (mm))	4-3/4 × 4-3/4 × 11/16 (120 x 120 x 20.4)
Weight (oz.(g))	8 (220)



## Simple Remote Control

(2-wire) UTY-RSRY / UTY-RHRY (Without operation mode) (3-wire) UTY-RSKU / UTY-RHKU (Without operation mode)

## Compact wired remote control unit provides access to basic functions

- Built-in temperature sensor
- · Backlit display
- Simple functions make the controller perfect for hotels, schools, etc.







Without operation mode

#### Room temperature set point limitation

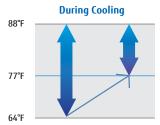
Equipped with set point limitation option for energy efficiency.

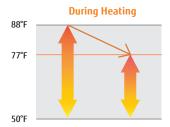
#### Vertical louver control

Offers vertical louver control for ducted and cassette units.











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

## Wireless Remote Control

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

• One remote can control up to 16 indoor units.

#### Accurate and comfortable

**Select from 4 different timer programs:** On / Off / Program / Sleep **Program timer:** The program timer operates the ON and OFF timer once within a 24 hour period.

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

#### Easy installation and operation

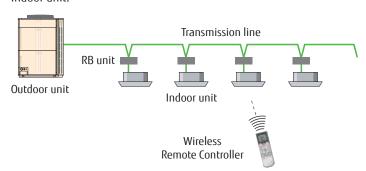
- Code selector switch prevents indoor unit mix-up. (Up to 4 codes can be set.)
- Reliable transmitting over long range.
- IR Built-in receiver is standard in compact cassette, ceiling/floor, and wall mounted indoor units.





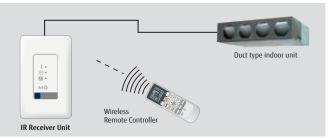
#### Address setting

During installation, address setting can easily be done using the Wireless Remote Control, thus eliminating manual setting inside the Indoor unit.



IR Receiver Unit: UTB-YWC (for VRF ducted models)
IR Receiver Unit: UTY-TRHX (for TLAV2 ducted models)

Required for controlling ducted indoor unit via a Wireless Remote Control



# IR Receiver Unit: UTY-LBHXD Circular Flow Cassette type indoor unit can be controlled with Wireless Remote Control. IR Beceiver Unit Receiver Unit: UTY-LBHXD Wireless Remote Controller Wireless Remote Controller

## AIRSTAGE Cloud Platform (ASCP) and AIRSTAGE Edge Controller (ASEC)

UTY-DSGYZ2

## Multiple system management via the AIRSTAGE Cloud platform subscription

#### Better solutions for HVAC management and maintenance

The highly versatile AIRSTAGE Cloud platform enables effective and efficient management and maintenance of heating, ventilation, and air conditioning systems. It can be accessed through the AIRSTAGE Edge Controller or a web browser. Note that the AIRSTAGE Edge Controller must be connected to the internet at all times.



## Manage HVAC systems for multiple properties

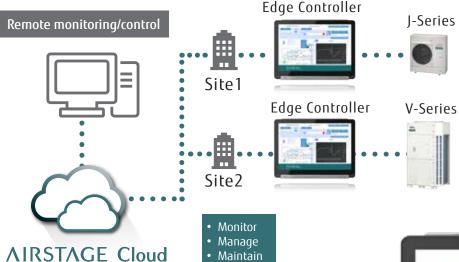
Streamline HVAC management and reduce operating cost Manage energy usage

Efficiently maintain a comfortable room environment Enable remote monitoring and maintenance

Improve maintainability and serviceability New features will be continuously implemented by overthe-air system updates

#### System Overview

The AIRSTAGE Cloud delivers greater value in operation and life-cycle management of HVAC systems.



#### AIRSTAGE Edge Controller (ASEC)

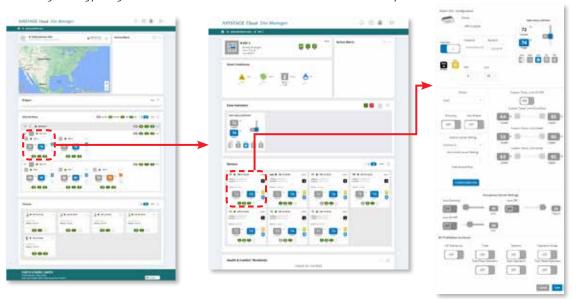
- Stylish look
- Easy-to-read 10.1 inch TFT color wide screen
- Intuitive operation
- Multiple languages supported (English, French, Spanish German, Russian and Polish currently supported; additional languages coming.)



### AIRSTAGE Cloud and AIRSTAGE Edge Controller (continued)

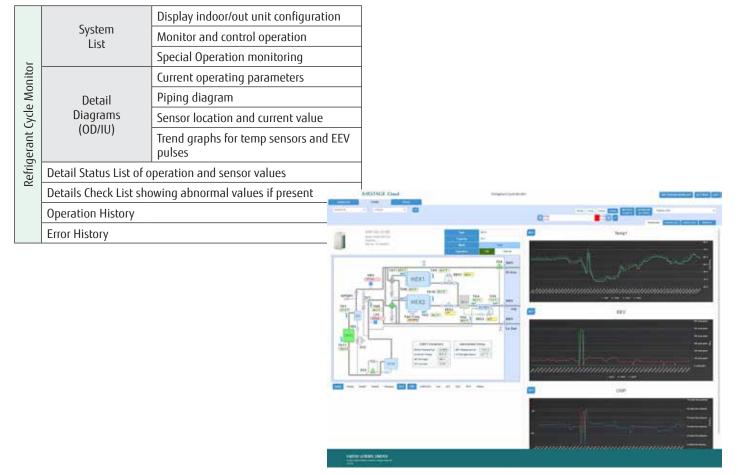
#### Features - Site Manager (SM)

- Manage HVAC systems for multiple properties Show location map and information about HVAC systems under management
- Streamline HVAC management and reduce operating cost
- At-a-glance monitoring dashboard Display an HVAC system's operation status and energy usage for each site, group, and system in a dashboard format
- · Manage energy usage Maintain comfortable room environments efficiently



The AIRSTAGE Cloud enables centralized management of HVAC systems operating in multiple properties and plots the property locations on a map. Screen layout and content subject to change as features are added and improved.

#### Features - Refrigerant Cycle Monitor (RCM)



#### **Features**

All functions are available only when connected to the AIRSTAGE Cloud server

CIOUG	server •: Su	pported O: Optional function
Mode	el name	AIRSTAGE Edge Controller
Mode	el number	UTY-DSGYZ2
Max.	controllable remote controller groups	128
Max.	controllable indoor units	128
Max.	controllable zones	128
	On / Off	•
	Operation mode setting	•
_	Fan speed setting	•
tion	Room temp. setting	•
JUN	Room temp. set point limitation	•
Air conditioning control function	Test operation	•
onti	Up/down airflow direction setting	•
o bu	Left/right airflow direction setting	•
o ji	Individual louver control	•
diti	Zone (Group) setting	•
CO	RC prohibition	•
Air	Anti freeze setting	•
	Economy mode setting	•
	Human sensor control	•
	Custom Auto setting	•
	Error display and management	•
	Defrosting	•
	RC prohibition	•
	Cooling/heating priority	•
	Address display	•
ay	Room temp.	•
spl	Multi language	6 languages supported *2
۵	Summer time	•
	Name registration	•
	Backlight	7 brightness levels
	2D floor layout	<b>●</b> *1
	Password lock	•
	Marid Man (attaileastion)	
	World Map (site location)	•
	Schodulo	● Weekly,Yearly
	Schedule Times On/Off, Temp., Mode, Times	● Weekly,Yearly
ler	Schedule Timer Period On/Off, Temp., Mode, Times per day, Low noise*1	Weekly,Yearly
Timer	Schedule Timer Period On/Off, Temp., Mode, Times per day, Low noise*1  Program timer	Weekly,Yearly
	Schedule Timer Period On/Off, Temp., Mode, Times per day, Low noise*1  Program timer Auto off timer	Weekly,Yearly  •
	Schedule Timer Period On/Off, Temp., Mode, Times per day, Low noise*1  Program timer Auto off timer Day off	•
	Schedule Timer  Period On/Off, Temp., Mode, Times per day, Low noise*1  Program timer Auto off timer Day off Min. unit of timer setting (Minutes)	Weekly, Yearly  1
	Schedule Timer  Period On/Off, Temp., Mode, Times per day, Low noise*1  Program timer Auto off timer Day off Min. unit of timer setting (Minutes) Status monitoring system	1
	Schedule Timer Period On/Off, Temp., Mode, Times per day, Low noise*1  Program timer  Auto off timer  Day off  Min. unit of timer setting (Minutes)  Status monitoring system  Electricity charge apportionment	•
Ē	Schedule Timer Period On/Off, Temp., Mode, Times per day, Low noise*1  Program timer Auto off timer Day off Min. unit of timer setting (Minutes) Status monitoring system Electricity charge apportionment Emergency stop	1
Ē	Schedule Timer Period On/Off, Temp., Mode, Times per day, Low noise*1  Program timer Auto off timer Day off Min. unit of timer setting (Minutes) Status monitoring system Electricity charge apportionment Emergency stop Remote management	1
	Schedule Timer Period On/Off, Temp., Mode, Times per day, Low noise*1  Program timer Auto off timer Day off Min. unit of timer setting (Minutes) Status monitoring system Electricity charge apportionment Emergency stop Remote management Zone control	• • • • • • • • • • • • • • • • • • •
Ē	Schedule Timer Period On/Off, Temp., Mode, Times per day, Low noise*1  Program timer Auto off timer Day off Min. unit of timer setting (Minutes) Status monitoring system Electricity charge apportionment Emergency stop Remote management	1
Ē	Schedule Timer Period On/Off, Temp., Mode, Times per day, Low noise*1  Program timer  Auto off timer  Day off Min. unit of timer setting (Minutes)  Status monitoring system  Electricity charge apportionment  Emergency stop  Remote management  Zone control  Low noise mode  Remote maintenance	• • • • • • • • • • • • • • • • • • •
Control	Schedule Timer  Schedule Timer  Program timer  Auto off timer  Day off  Min. unit of timer setting (Minutes)  Status monitoring system  Electricity charge apportionment  Emergency stop  Remote management  Zone control  Low noise mode  Remote maintenance  Energy management	• • • • • • • • • • • • • • • • • • •
Control	Schedule Timer  Schedule Timer  Period On/Off, Temp., Mode, Times per day, Low noise*1  Program timer  Auto off timer Day off Min. unit of timer setting (Minutes)  Status monitoring system  Electricity charge apportionment  Emergency stop  Remote management  Zone control  Low noise mode  Remote maintenance  Energy management  Operation	• • • • • • • • • • • • • • • • • • •
History Control Tim	Schedule Timer  Schedule Timer  Program timer  Auto off timer  Day off  Min. unit of timer setting (Minutes)  Status monitoring system  Electricity charge apportionment  Emergency stop  Remote management  Zone control  Low noise mode  Remote maintenance  Energy management	• • • • • • • • • • • • • • • • • • •
History Control Tim	Schedule Timer  Schedule Timer  Period On/Off, Temp., Mode, Times per day, Low noise*1  Program timer  Auto off timer Day off Min. unit of timer setting (Minutes)  Status monitoring system  Electricity charge apportionment  Emergency stop  Remote management  Zone control  Low noise mode  Remote maintenance  Energy management  Operation	• • • • • • • • • • • • • • • • • • •
Control	Schedule Timer  Schedule Timer  Program timer  Auto off timer  Day off  Min. unit of timer setting (Minutes)  Status monitoring system  Electricity charge apportionment  Emergency stop  Remote management  Zone control  Low noise mode  Remote maintenance  Energy management  Operation  Error	• • • • • • • • • • • • • • • • • • •

<sup>\*1 :</sup> Future release.

#### **Specifications**

Item		AIRSTAGE Edge Controller		
Power supply		1φ 100~240VAC 50/60Hz		
Dimensions (H × V	V × D) (inch[mm])	7-43/64×10-9/32×2-31/64 [195×261×63]		
Weight (lbs[g])		4 [1,900]		
Monitor		10.1" TFT LED-backlit LCD 1280 x 800 pixels 24bit color		
Touch panel		Capacitive touch panel		
	LAN	10BASE-T / 100BASE-TX RJ45 x 2ch		
Communication	Wireless LAN	IEEE802.11 b/g/n 2.4GHz		
Communication	Others	Modbus RTU x 1ch, AIRSTAGE transmission line x 1ch		
External I/O	Input	4ch (Dry contact or Apply voltage)		
External I/O	Output	2ch		
LED		x 1 (Power indication)		
Switch		x 1 (Shut down/Menu )		
Buzzer		Piezo buzzer (3 volume levels)		

#### **Dimensions**Unit: inch [mm]



#### **Subscription Program**

Required Hardware: ASEC Controller; one per system
Site Manager: Monthly plan price is per AIRSTAGE Edge Controller
Refrigerant Cycle Manager: Monthly plan price is per Site Manager
See info sheet for more details:



<sup>\*2 :</sup> Additional language support will be coming.

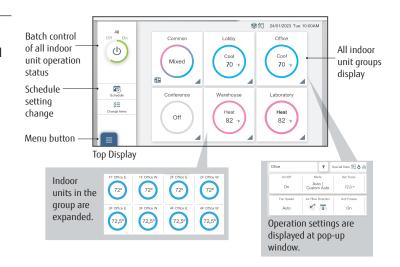
## Central Remote Controller UTY-DCGYZ2

#### For small- and medium-sized buildings

- Individual control and monitor of 100 indoor units and max. 50 groups
- 7.0inch TFT color screen for high visibility and easy operation
- Supports max.23 different languages
- 12 different languages. (English, Spanish, German, French, Italian, Russian, Portuguese, Turkish, Polish, Greek, Dutch, Chinese)
- Additional language can be integrated by creative language database. \*(Bulgarian, Czech, Danish, Estonian, Finnish, Croatian, Hungarian, Romanian, Slovak, Slovenian, Swedish)

#### Easy operation

- Central remote controller with intuitive operation via touch panel operation
- All functions accessed from the top screen



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FUÏTSU

AIRSTAGE

#### Trouble support function

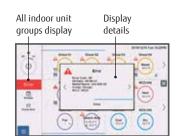
 Displays operation status details and explanations

#### Sensor value monitoring function

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

#### Notify room temperature by email

Notify by email when the temperature around the air conditioner is out of defined range



#### Remote monitoring / Remote operation

Central remote controller can control tenant's air conditioner anytime and anywhere.

#### Example

- · Control / Monitoring Fujitsu air conditioner
- · Operation status notification by email

Access to group names



Specifications.	
Model name`	UTY-DCGYZ2
Power Supply	100-240 V 50/60 Hz
Dimensions (H x W x D) (in.(mm))	5-5/16 × 8-1/2 × 1-1/2 (134.6 × 216.1 × 37.9)
Weight (lbs. (g))	1-21/32 (750)



## System Controller Software

#### UTY-APGXZ1

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

- Up to 4 VRF network systems, 1600 indoor units, and 400 outdoor units can be controlled.
- In addition to air conditioning precision control function, central remote control, electricity charge calculation, schedule management, and energy saving functions are available to meet different needs.





Max. controllable

1,600
indoor units

## System Controller Lite Software

#### UTY-ALGXZ1

## System Controller Lite is designed for small and medium size buildings

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



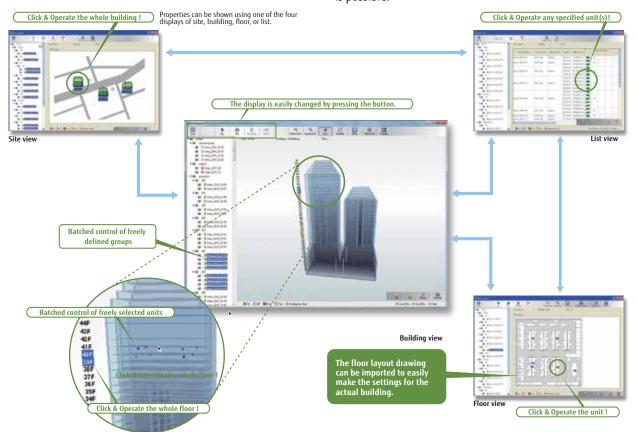
Max. controllable
1
VRF network system
Max. controllable
100
outdoor units

Max. controllable
400
indoor units

#### User friendly view and operation

• The building can be viewed and controlled in a 3D click-able perspective view: Four different views are available – site, building, floor, or list view.

 Flexibility to define groups for group control: Indoor units can be freely grouped for simple control from a BMS tree menu. Grouping by hierarchal structure, such as by section, division or department is possible.



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

### System Controller and System Controller Light (continued) Software

#### Control of 3rd party devices via Modbus Standard for System Controller Option for System Controller Lite: UTY-PLGXX2 When Modbus Adapter (locally purchased) is connected to system controller PC, the devices connected to the Modbus can be centrally controlled. Supported Modbus communication Energy recovery ventilator system (Field supply) Outdoor air unit system Remote I/O Supply & Exhaust fan VRF Network Signal Line Electricity Electric power System Controller (System Controller Lite)

#### Operation management & Data management

#### Schedule management

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

#### Control of indoor unit

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

#### Remote control block

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

#### Automatic clock adjustment

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

#### Operation status display & email notification

Operation changes provide popup messages, audible sound and emails. Events for the past year are logged for later review.

#### Database import/export

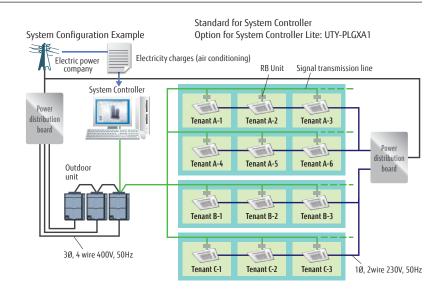
Imports/exports registration data, layout data, and image data. Only accessible by administrator.

#### Operating & control record

Displays the history of operation status and control.

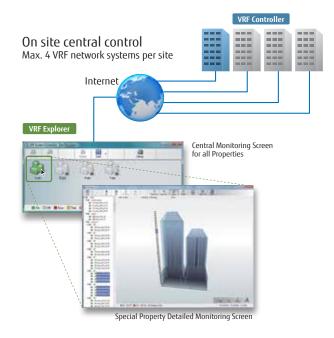
#### Electricity charge allocation

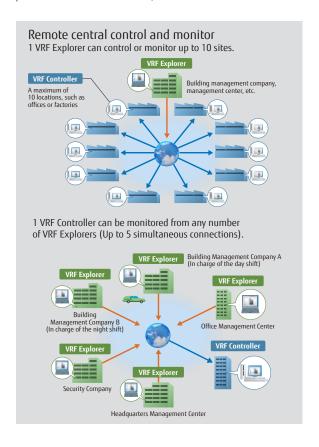
Allocation of monthly cost per tenant for HVAC. The Electricity Charge allocation function determines the share of the total utility bill for each of the tenants. See figure. The detailed calculation takes into consideration unused rooms, nighttime electricity charges, etc.



#### Remote management (Standard for System Controller: UTY-PEGXZ1, Option for System Controller Lite: UTY-PLGXR2)

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





Below are additional options for System Controller: UTY-PEGXZ1 and System Controller Lite: UTY-PLGXR2

#### Energy saving management

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

energy saving operation is performed while keeping users comfortable.

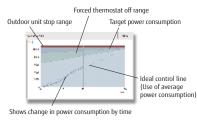
Energy saving graph data:
This graph compares the electricity
consumption with the previous month
and previous year to make it easy to
analyze the energy saving effect.



Energy Saving Management Main Screen

#### **Peak limit operation**

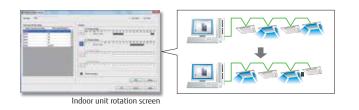
To control power consumption and load shedding, the system can be programmed to change the indoor unit set temperature, turn the indoor unit thermostat off, or adjust other parameters to carefully control the amount of power



consumed while maintaining comfort.

#### Indoor unit rotation operation

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



#### **Outdoor Unit Capacity Save**

The function 'Outdoor Unit Capacity Save', switches the outdoor unit capability upper limit to suppress power consumption during hot summers and cold winters by averaging the power saving effect of each refrigerant system. Function can be applied for 50% or more of the upper capacity limit.



#### Functions summary

			System	controller	System controller lite					
Function	Туре		UTY-APGXZ1	Option UTY-PEGXZ1	UTY-ALGXZ1	Option UTY-PLGXR2	Option UTY-PLGXA2	Option UTY-PLGXE2	Option UTY-PLGXX2	
	Max. VRF networks	supported	4	- UTI-TEG/AZT	1					
	Max. indoor unit / remote controller groups per VRF network		400	_	400	_	_	_	_	
/stem	Max. outdoor units per System controller		100	-	100	-	-	-	_	
oecification	Max. indoor units	remote controller groups per System controller	1600	-	400	-	-	-	_	
		s per System controller	400	-	100	-	-	-	_	
	Multi site display		10	-	10	-	-	-	-	
	Number of building / 1 site Number of floor per 1 site		20	-	-	-	_	-	_	
			200	_	_	_	_	_	_	
Site	Number of floor pe		50	-	-	-	_	-	-	
pervision	3D graphical layou		•	-	-	-	-	-	-	
pervision	2D graphical layou	t view	•	-	-	-	-	-	-	
	List display		•	-	•	-	-	-	-	
	Tree display		•	-	•	-	-	-	-	
	Group display		•	-	•	-	-	-	-	
TOT	Error notification		•	-	•	-	-	-	-	
anagement	Audible alarm		•	-	•	-	-	-	-	
	Error email notification	HUOH	•	-	•	_	-	-	-	
istory	Operation history						_	_		
istory	Control history		•		•	_	_		_	
	Control History	On/Off	•		•		_			
		Operation mode			•	_	_		_	
		Room temperature				_			_	
		Fan speed			•	_	_	1	<u> </u>	
	Individual	Air flow direction		_	•	_	_	_		
	control	Economy mode		_	•	_	_	_		
	Control	Room temperature set point limitation		_	•	-	_	_	_	
peration		Test operation		_	•	_	_	_	_	
ontrol		Antifreeze		_	•	_	_	_	_	
		Outdoor unit low noise setting			•					
	In dividual	Remote control prohibition setting	•	-	•	-	-	-	-	
	Individual management	Temperature upper and lower limit setting	•	-	•	-	-	-	-	
		Filter sign reset	•	-	•	_	-	_	_	
	Out	Memory operation	•	_	•	_	_	_	_	
	Other	Pattern operation	•	_	•	-	-	_	_	
	Annual Schedule		•	-	•	-	-	-	-	
	Special day setting		•	-	•	-	-	-	-	
	On /off per day		72	-	72	-	_	-	_	
chedule	On / off per week		504	-	504	-	-	-	-	
	Day off		•	-	•	-	_	-	_	
	Min. unit of timer:		10	-	10	-	-	-	-	
	Low noise mode W		•	-	•	-	-	-	-	
	Remote monitorin		•	-	-	•	-	-	-	
emote	Remote operation		•	-	-	•	-	-	-	
anagemment	Remote function so		•	-	-	•	-	-	_	
	Web Remote Contr	oller	•	-	-	•	-	_		
	Apportionment chi	arge/bill calculation	•	-	-	-	•	-	-	
ectricity	Tenant (block) sett	apportionment setting	•	-		_	•	_		
narge .		apportionment setting imption allotment setting	•		_	_	•		_	
portionment		ion at cooling and heating	-	• *			•			
	Electricity meter su			•		_	•			
	Indoor unit rotatio		_	•			-	-	<del>-</del>	
	Peak cut control	0	-	•		_	_	•		
nergy	Outdoor unit capa	rity save	_	•		_	_	•	I -	
iving	Record of energy saving operation		_	•	_	_	_	•		
anagement	Energy saving info		-	•	-	-	-	•	_	
agemene	Power consumptio		_	•	_	_	_	•		
	Electricity meter su			•		_	_	•	_	
xternal Device	Monitor	pporce	•	-	_	_	_	-	•	
ontrol	Control			_	_	-	_	_	•	
	Database import/e	thork		_	•	_	_	_		
thers	Automatic clock ac			_	•	-	_	_	<u> </u>	
-	Multi language		7 languages	_	7 languages	_	_	_	_	

#### Computer system requirements:

Model name	System Controller	System Controller Lite					
Operating system	Microsoft Windows 7 Home Premium (32-bit or 64-bit)	Microsoft Windows 7 Home Premium (32-bit or 64-bit) SP1     Microsoft Windows 7 Professional (32-bit or 64-bit) SP1					
	Microsoft Windows 8.1 (32-bit or 64-bit)	<ul> <li>Microsoft Windows 8.1 (32-bit or 64-bit)</li> <li>Microsoft Windows 8.1 Pro (32-bit or 64-bit)</li> </ul>					
Operating system	Microsoft Windows 10 Home (32-bit or 64)	4-bit) • Microsoft Windows 10 Pro (32-bit or 64-bit)					
Supported languages:	Supported languages: English, Chinese	e, French, German, Russian, Spanish, and Polish					
CPU		Intel® CoreTM i3 2 GHz or higher					
Memory	<ul> <li>2 GB or more (for Windows Vista® and Windows® 7 [32-bit])</li> </ul>	<ul> <li>4 GB or more (for Windows® 7 [64-bit], Windows® 8.1, and Windows® 10)</li> </ul>					
HDD	40 GB or	40 GB or more of free space					
Display	1024 x 768	or higher resolution					
	Ethernet port (for getting access to the Internet using LAN) or Modem (for	Ethernet port (for getting access to the Internet using LAN) or Modem (for getting)					
	getting access to the Internet using public telephone line)	access to the Internet using public telephone line)					
	USB ports (Maximum of 5 ports) (Required only for the server PC that works as	USB ports (Maximum of 2 ports) (Required only for the server PC that works as					
Interface	VRF controller)	controller)					
interiace	<ul> <li>Maximum of 1 USB ports are required for WHITE-USB-KEY connection</li> </ul>	– 1 USB port is required for WHITE-USB-KEY connection					
	- Maximum of 4 USB ports are required for Echelon U10 USB Network Interface	- 1 USB port is required for Echelon U10 USB Network Interface					
	NOTE: Maximum number of required USB ports depends on the applicable system	NOTE: Maximum number of required USB ports depends on the applicable system					
	configuration.	configuration.					
Graphic accelerator	Microsoft® Di	rectX® 9.0c compatible					
Software	Adobe® R	Reader® 9.0 or later					

<sup>Personal computer that satisfies the following system requirements

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

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

<sup>:</sup> Available. –: Not available.

\*:Power calculation application software is necessary, please contact the local Fujitsu representative.

Software protection key to be inserted in a USB slot running System Controller or System Controller Lite.

System Controller or System Controller Lite may only run on a PC with WHITE-USB-KEY. However, WHITE-USB-KEY is not required for remote VRF Explorer software.

## AIRSTAGE Integration Manager™

niagara framework\*

FUJ-VRF-8025 FUJ-VRF-8125



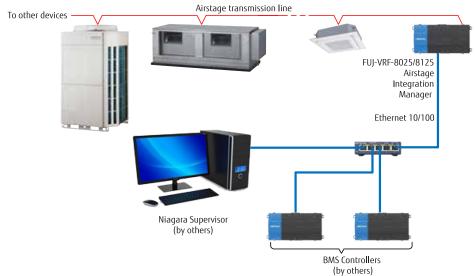
Bundle includes: JACE 8000, Lon adapter, VRF driver for up to 25 or 125 total ODU + IDU, power adapter, 5 years software maintenance

Fujitsu is proud to announce an all-new hardware platform optimized for the Niagara Framework by Tridium Inc. – the AIRSTAGE Integration Manager™ (powered by Niagara). This "next-generation" controller is a dramatic evolution in integrating AIRSTAGE systems worldwide, featuring a new global design that functions with legacy systems and has the ability to scale for future needs.

The AIRSTAGE Integration Manager™ (powered by Niagara) is a compact controller and integration platform for connecting AIRSTAGE equipment and devices to any commercial Building Management System (BMS). The AIRSTAGE Integration Manager controller not only provides seamless BMS integration, it includes a guided configuration tool, basic monitoring and control functions, an alarm console, and cloud-based access (through a standard web browser via Ethernet or wireless LAN, or remote over the internet).

The licensing model for the AIRSTAGE Integration Manager controller is simple, and features native AIRSTAGE and standard open-protocol drivers, including BACnet, LonWorks, and Modbus. Optional IO and field bus expansion modules provide ultimate flexibility and expandability. The AIRSTAGE Integration Manager controller operates with Niagara 4, the latest version of the Niagara Framework, for optimum performance. In larger facilities, multi-building applications and large-scale control system integrations, Niagara 4 Supervisors can be used with AIRSTAGE Integration Manager controllers to aggregate information, including alarms and historical and real-time data, to create a single unified application.

#### System Diagram:



#### Efficient Global Design

The new, modular design of the AIRSTAGE Integration Manager controller makes it easy to install, integrate and deploy. Tool-less installation with expansion capability reduces installation complexity and improves flexibility. Systems integrators can focus on engineering solutions, not assembling components.

#### **Key Features**

**Intuitive User Interface** - Configuration and control software is custom-designed for AIRSTAGE systems. No experience with the Niagara platform is necessary. Users can easily check system status by glancing at the front panel LEDs to diagnose network issues.

**Global Capacity Licensing and Upgrade Capability** - The controller is purchased pre-licensed for 25 or 125 AIRSTAGE devices (indoor + outdoor units). Device license upgrades, in increments of 50, can be purchased in the future as your needs grow.

**Modular Design For Easy Installation And Expansion** - The LonWorks® module for AIRSTAGE connection is included. Up to 4 option modules directly attach to the controller for on board IO or additional communications ports, including types for LonWorks®,

RS232 and RS485 networks. Controller and option modules are designed for easy mounting on a 35mm-wide DIN rail.

**Global Power Compatibility** - 24VAC or 24VDC power source. 120/24V power supply with adapter plugs included.

5-year Software Maintenance Agreement Included - Your Niagara software is protected with free updates to the latest Niagara versions. No need to worry about security patches or compatibility with other Niagara devices.

### AIRSTAGE Integration Manager (continued)

#### Hardware specifications

TI AM3352: 1000MHz ARM® Cortex™-A8

1GB DDR3 SDRAM

Removable micro-SD card with 4GB flash total storage/2GB user storage

USB type A connector

Back-up and restore support

- (2) isolated RS-485 with selectable bias and termination
- (1) LonWorks FTT-10A expansion module included (for connection to AIRSTAGE transmission line)
- (2) 10/100MB Ethernet ports

Secure boot

Supply requirements: 24VAC rated at 24VA minimum, or 24VDC rated at 1A (24W) minimum; a 120/24V wall adapter is included

Runs Niagara 4: 4.10

Real-time clock

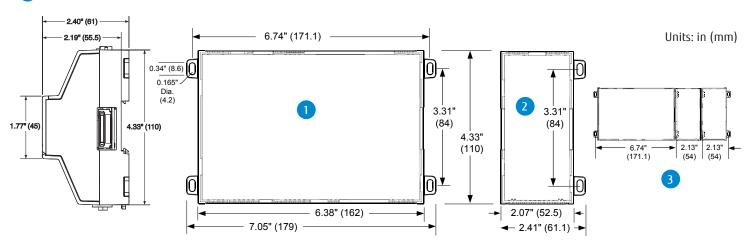
**Batteryless** 

Niagara Analytics 2.1 is compatible with Niagara 4.4 and 4.6

Real-time clock

#### JACE® 8000 controller Mounting & Dimensions

- JACE 8000 controller. Allow at least 1.5" (38mm) clearance around all sides
- Expansion module. Up to four (4) may be used. See "Expansion Module and IO Configurations"
- 3 Distances between center of tabs from one unit to another unit



Compatible with (DIN43880) enclosures Suitable for mounting to a panel or to an EN50022 standard 35mm rail

	Compatible models	V-II / VR-II/ J-IVS / J-IV / J-IIIL	
	Max. number of units	up to 125 OU+IU per JACE	
VRF	Max. number of VRF networks	1 per Lon adapter, up to 4 Lon adapters per JACE, depends on the license used	
	Interface	JACE 8000: Lon adapter PC: Ethernet 10/100Mb port	
Nicasa	Version	Niagara 4.9	
Niagara	Max. Points	about 20,000, depends on the license used	



## BACnet® Gateway (Hardware)

#### BACnet® Gateway connects a VRF system to a BMS via BACnet® IP.

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

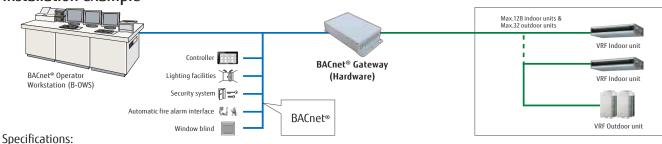


128

indoor units



#### Installation example



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

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

## BACnet® Gateway











#### BACnet® Gateway connects a VRF system to a BMS via BACnet® IP.

- Up to 1600 indoor units with 4 VRF network systems (a maximum of 400 indoor units & 100 outdoor units for one network system) can be connected to one BACnet® Gateway.
- Compatible with BACnet® (ANSI / ASHRAE-135-2012) application specific controller (B-ASC).
- Compatible with BACnet®/IP over Ethernet.
- Scheduling function, Alarm & Event functions as well as as Electricity Charge allocation function is provided in BACnet® Gateway.
- Requires dedicated PC with Windows 7, 8, or 10 (32-bit or 64-bit); Ethernet adapter; up to 5 available USB ports: 1 USB port is required for WHITE-USB-KEY connection; maximum of 4 USB ports are required for Echelon® U10 USB LonWorks Adapter.
- Windows PC and Echelon adapter are field-supplied items.
- Supports 7 different languages: English, Chinese, French, German, Spanish, Russian, Polish.

## BACnet® Gateway

FJ-AC-485-1 One-to\_One

#### Connects one VRF indoor unit to a BMS via BACnet MSTP.

- Connects to the AIRSTAGE indoor unit's UART port (CN65) with a supplied interface cable.
- Compatible with the BACnet MSTP protocol over RS485
- Simple configuration from onboard DIP switches (no software tools required).
- Simultaneous control of the indoor unit by a Fujitsu remote controller and the BMS.
- Total control and monitoring of the AC unit from the BMS using the indoor unit's internal variables including dual heat/cool setpoints, run time counter, error indication and more





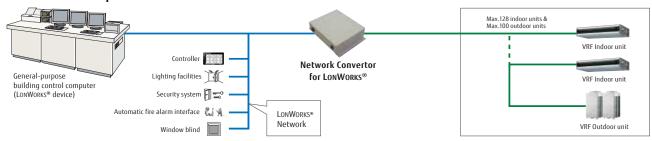
## Network Converter for LONWORKS® UTY-VLGX

## Connects VRF network system to a BMS network via LONWORKS® open network.

- Easy-to-use PC-based configuration software
- The UTY-VLGX enables central monitoring and control of a VRF network system from a BMS through a LONWORKS® FTT-10A interface.
- Up to 128 Indoor units can be connected to one Network Converter for LONWORKS®



#### Installation example



#### Specifications

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

#### Transmission specifications (BMS side)

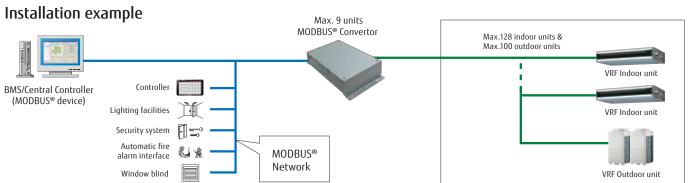
Transmission speed	78 kbps	
Transceiver	FT-X1 (Echelon® Corporation)	
Transmission way form	Free topology	
Terminal resistor	None (It attaches at the terminal of a network.)	

## MODBUS® Converter

#### **UTY-VMGX**

VRF System can be integrated with a building management system supported by MODBUS® RTU





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

## Wi-Fi Interface Modules

#### UTY-TFSXJ4

for indoor units with UART port; uses AIRSTAGE Mobile app



#### FJ-AC-WIFI-1

for indoor units with UART port; uses AC Cloud Control App







#### FJ-RC-WIFI-1NA

for 3-wire indoor units; uses AC Cloud Control App



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

#### AIRSTAGE Mobile

#### Control, simplified

Clean interface enables effortless system management.

AIRSTAGE Mobile unique features:

- The air conditioner and the app can also be connected for direct control without a wireless access point
- Outdoor and Room Temperature display
- Group functions for monitoring and on/off control of the group
- User access levels
- Specialty functions, if available on your system, include: Economy, Energy Saving Fan, Occupancy, Powerful, and Outdoor Unit Low Noise



Home screen



Mode change



Fan speed change



Weekly timer

#### AIRSTAGE Mobile app and adapter

Compatible V-Series, J-Series models: All TLAV2 models.

Control your Fujitsu AIRSTAGE VRF indoor unit from anywhere over Wi-Fi, using a smartphone, tablet or PC^ via the Internet.

#### How does it work?

- The indoor units are controlled from an intuitive, user-friendly interface.
- A wired device installed near each unit controls its operation and communicates over Wi-fi to the Internet router.
- A server in the cloud manages the whole process.

## Features (AIRSTAGE Mobile app and AC Cloud Control app)

- Manages the VRF indoor unit using the iOS or Android app.
- Programming of the indoor unit operation schedule.
- Offers access to several indoor unit settings including Mode, Temperature Set Point, Fan Speed, and much more.
- Room Temperature Display.
- Offers early startup function to bring the space to desired set point prior to being occupied.
- Offers delayed setback after leaving.
- Provides instant alarm notifications.
- · Operation status reporting, available in several languages
- Over-the-air updates



## Network Converters

UTY-VTGX (DC power supply)
UTY-VGGXZ1 (AC power supply)

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

# Max. controllable 16 single indoor units Max. controllable 100 Network Converters





DC power supply

UTY-VGGXZ1

AC power supply

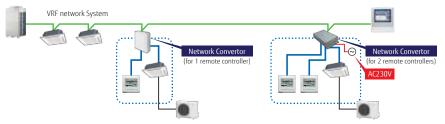
#### Installation example

- The converters are required when connecting single split units to the VRF communication network system. Both VRF system and single splits can be managed using the VRF central controller.
- See Network Converter submittal for Halcyon indoor unit model compatibility.

#### Specifications

Model name	UTY-VTGX		UY-VGGXZ1
Power Supply	polar 3-wire DC12V	non-polar 2-wire DC12V	220-240 V 50/60 Hz
Input power (W)	Max. 2		Max. 3
Dimensions (H x W x D) (in.(mm))	4-5/8 × 5-1/2 × 1-9/16 (117 × 140 × 40)		2 × 10 × 6 (54 × 260 × 150)
Weight (oz.(g))	9 (250)		38.8 (1,100)

#### Single split with VRF



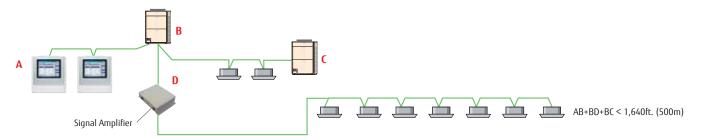
## Signal Amplifier

#### UTY-VSGXZ1

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



#### Installation example



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



## External Switch Controller UTY-TERX

## Air conditioner operation can be controlled by connecting external sensor switches

 Very suitable for hotel rooms and similar. Input from external devices such as card-keys, temperature sensors, occupancy sensors, etc. can be used to control ON/OFF, Room temperature, Fan speed and other Master control functions.

## Flexibility with possibility to set different temperatures for cooling and heating

Occupancy sensors can be used to setback temperature and fan speed when room is unoccupied. These setbacks are reverted when room becomes occupied again.



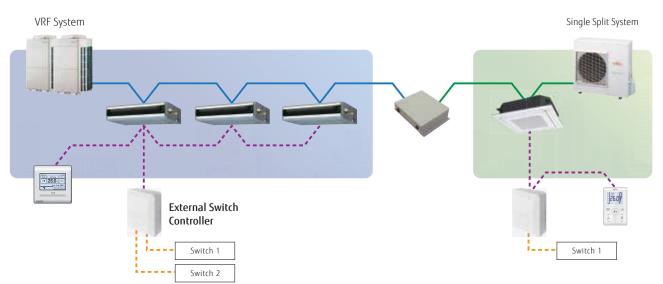
	1	SAVE!	AUTO
Cooling/Dry	Judgment (Over 20 min.)		+4°F *Max. 86°F
Set temp.			
Heating			
Set temp.			-8°F *Max. 61°F
Normal c	peration	Saving operatio	Normal operation

#### **Functions**

On/Off	•
Off	•
Room temperature setting	•

Fan speed setting	•
Operation mode setting	•
Prohibition setting	•

#### System overview



#### Specifications

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

DC12V is supplied by the indoor unit.

## 3rd Party Thermostat Interface uty-ttrxz1, ttrxz1-kit

## The Thermostat Interface enables 3rd party conventional or smart thermostats to be used in the AIRSTAGE VRF system



#### TTRXZ1-KIT

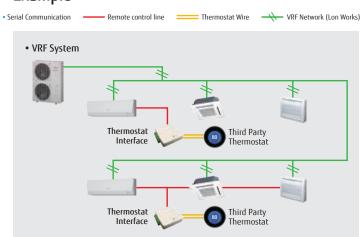
Includes the most commonly used parts needed to install a UTY-TTRXZ1 Third Party Thermostat Interface. TTRXZ1-KIT Includes:

- (1) UTY-TTRXZ1 Third Party Thermostat Interface
- (1) VPL24-210V Transformer
- (1) UTY-WIFI Plug

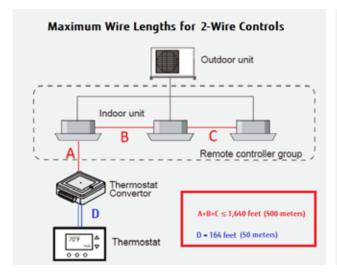
#### **UTY-TTRXZ1 Functions**

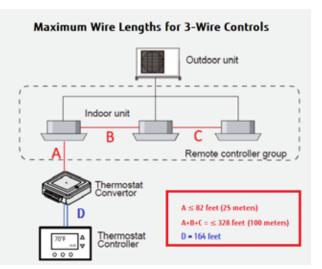
Unit Control Features	ON/OFF			
	Temperature Setpoint (from 3rd party thermostat)			
	One- or Two-stage Heating/Cooling			
	Heating/Cooling Response Adjustment			
	Delay OFF Adjustment			
	Fan Speed			
Service/Maintenance	Error notification via LED lights			

#### Example

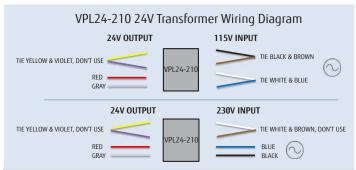


#### Maximum Wire Lengths





#### 24V transformer (sold separately or included in TTRXZ1-KIT)



UTY-TTRXZ1 comes pre-set for 2-wire controls. For 3-wire systems, remember to change "Set 1" to 3-wire mode.

Model Name	UTY-TTRXZ1
Max. Connectable Indoor Units	16
Input Power Max.	0.6 W
Dimensions (H×D×W)	1-1/16 × 3-7/16 × 3-7/16 in. (27 × 86.7 × 86.7 mm)
Weight	7.8 in. (220 g)



## Service Tool Kit

UTY-ASGXZ1-KIT Software

UTY-ASGXZ1-KIT = UTY-ASGXZ1 + Echelon Adapter 75010R-U10

Monitor and control up to 400 indoor units

Monitor and control up to 100 outdoor units



## Extensive monitoring and analysis functions installation, maintenance, and system status analysis

- Operation status can be checked and analyzed in detail
- Offer secure remote monitoring and control
- Storage of data on system operation status on a PC allows remote access.
- Up to 400 indoor units (a single VRF network system) can be controlled and monitored for largescale buildings or hotels
- · This software can be connected to any point of transmission line with included Echelon USB adapter

#### Automatic operation check

Time saving automatic selfdiagnosis of system operation with detailed report of status and condition.



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

Whether each sensor value is normal is judged automatically.

Discharge temperature normal value OK

Super heat volume normal value OK

High pressure pipe normal value OK

Low pressure pipe normal value OK



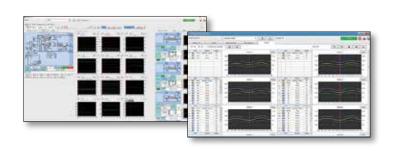
#### Remote technical support & maintenance

Efficient tech support with online chat function, on-site check screen that can be shared remotely or in real time on site.

#### Multiple trend graph display and comparison

- Multiple graphs can be displayed in Service Tool as required
- Two offline data files can be viewed and compared simultaneously





#### Personal computer system requirements:

Model name	UTY-ASGXZ1-KIT			
	Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1			
Operating system	• Microsoft® Windows® 8.1 Pro (32-bit or 64-bit)			
	Microsoft® Windows® 10 Pro (32-bit or 64-bit)	Microsoft® Windows® 10 Pro (32-bit or 64-bit)		
CPU	1 GHz or higher	1 GHz or higher		
Memory	• 1 GB or more (for Windows Vista®, Windows® 7 [32-bit], Windows® 8.1 [32-bit], and Windows® 10 [32-bit])			
	• 2 GB or more (for Windows® 7 [64-bit], Windows® 8.1 [64-bit], and Windows® 10 [64-bit])			
HDD	40 GB or more of free space	40 GB or more of free space		
Display	1366 x 768 or higher resolution			
Interface	• 2 USB ports			
	- 1 USB port is required for software protection key connection			
	- 1 USB port is required for Echelon® U10 USB Network Interface			
Software	Internet Explorer® 11 or Microsoft Edge / Adobe® Reader® 9.0 or later			

Software protection key to be connected to USB port on the Service Tool-installed PC.

Application

• Personal computer that satisfies the following system requirements

Quantity

Packing List

WHITE-USB-KEY

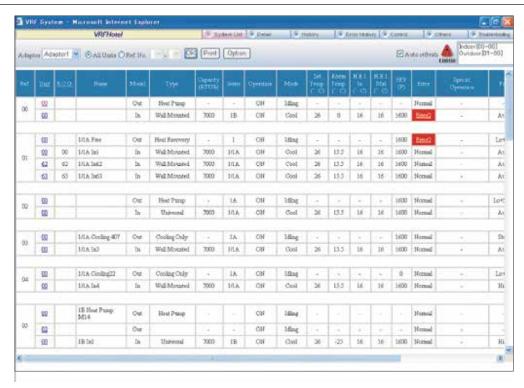
(Software protection key)

These products runs only on a PC with WibuKey.

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

### Service Tool UTY-ASGXZ1-KIT (continued)

#### **Functions**



#### 1) System List

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

#### 2) Equipment Detail (Diagram)

Displays detail information for sensor values, electrical components etc. for specified units in schematic. Information can be used to check operation status of units and make detail analysis.

#### 3) Equipment Detail (List)

Displays the detail information for sensor values, electrical components etc. of units in a specified refrigerant system.

#### 4) Operation History

Record of indoor units or outdoor unit operation. The displayed operation history can be printed or saved to a CSV file.

#### 5) Error History

Displays the information for each unit. The information can sequentially be displayed up to 50 items.

#### 6) Remote File Download

Operation history for specified system, units and times can be downloaded.

#### 7) Commissioning Tool

During a test run, the outdoor unit/indoor unit sensor data can be saved for completing the commissioning report. When test concludes, 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 is displayed.

#### 12) Central Adjustment

Limitations on individual indoor units can be adjusted 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

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

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

#### 15) Time Guard Information

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



## Web Monitoring Tool

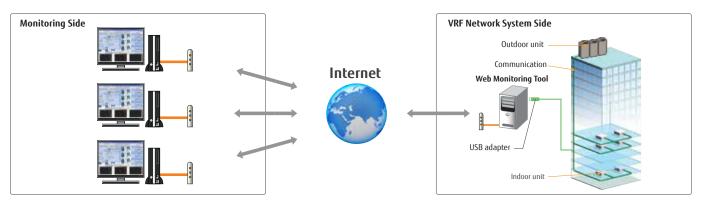
#### UTY-AMGXZ1 Software

#### **Product features**

- Enables remote monitoring and troubleshooting
- Remote operation status notification via dedicated internet connection
- No special software needed to view data remotely, requires only general web browser.

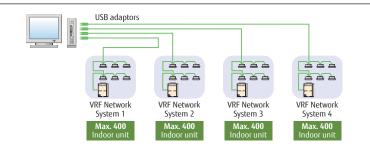


#### Web Monitoring System



#### Support 4 VRF network systems

Monitoring of up to 1,600 indoor units via USB adapter. Suitable for large-scale buildings or hotels.



#### Personal computer system requirements:

Model name		UTY-AMGXZ1	
Operating system		Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1	
		Microsoft® Windows® 8.1 Pro (32-bit or 64-bit)	
		Microsoft® Windows® 10 Pro (32-bit or 64-bit)	
CPU 1 GHz or higher		1 GHz or higher	
Memory		• 1 GB or more (for Windows Vista®, Windows® 7 [32-bit], Windows® 8.1 [32-bit], and Windows® 10 [32-bit])	
		• 2 GB or more (for Windows® 7 [64-bit], Windows® 8.1 [64-bit], and Windows® 10 [64-bit])	
HDD 40		40 GB or more of free space	
Display 1366 x 7		1366 x 768 or higher resolution	
Interface		USB port (for 10 USB Network Interface Max.4, Software protection key)	
		Either of the following interface is required for remote connection:	
		- Internet using LAN: Ethement port is required	
Software		Internet Explorer® 11 or Microsoft Edge / Adobe® Reader® 9.0 or later	
Packing list	Quantity	Application	
WHITE-USB-KEY (Software	1	Software protection key to be connected to USB port on the Service Tool-installed PC.  These products runs only on a PC with WibuKey.	

•Personal computer that meet the following system requirements

These products runs only on a PC with WibuKey.

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

## Design Simulator

#### Easy equipment selection, complete selection output, reliable project management

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

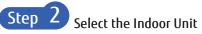






Select the model

Choose the model for each system.



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.







Select the Outdoor Unit

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

#### Piping Length / Step Piping Diagram

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



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



Select BMS Gateways and

**Central Controllers** Choose additional devices to meet the needs of the







Report Output

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

Design Simulator can be customized for any geographic location.

Setting

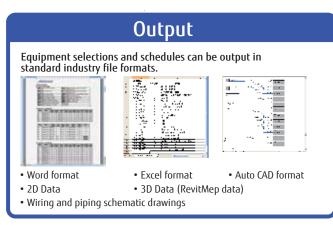
- Units (US conventional / Metric)
- · Language Setting
- Custom Database Function
- Output Settings

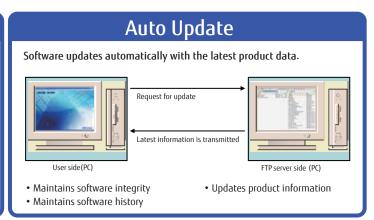
#### project.

Step

## Design Simulator (continued)

Name of software	Design Simulator		
	Design Simulator	Ver 3.6.4.01 (PG)	
	DB	Ver 2021.07.27(DB)	
Latest Version	Design Simulator Installation	Ver1.0.5.01(PG)	
ratest version	DB	Ver 2021.07.27(DB)	
	Design Simulator Drawing	Ver 0.1.4.01 (PG)	
	DB	Ver 2021.07.27(DB)	
Personal Computer	Compatible machine that runs Microsoft® 8.1/10		
Copyright holder	FUJITSU GENERAL LIMITED		
	Hardware	CPU: Intel® CoreTM i3 2GHz or higher	
		Memory: 2GB or more (Windows® 8.1/10 32-bit) 4GB or more (Windows® 8.1/10 64-bit)	
		HDD: 10GB or more of free space	
System requirements	Display	1024 x 768 or higher resolution	
System requirements	Software	Internet Explorer® 11.0	
		Adobe® Reader® 10.0 or later	
		Microsoft® Word 2010/2013/2016/2019PDF Output Microsoft® Word,Excel 2010/2013/2016/2019	
		Microsoft® .NET Framework4.6.1 or Higher	





## Building Information Modeling (BIM)

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

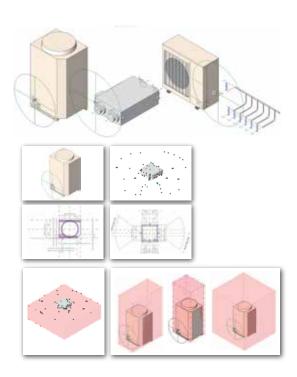
Required software:

Autodesk® Revit® series software:

- Autodesk® Revit® Architecture
- Autodesk® Revit® MEP
- Autodesk® Revit® Structure Data format:
- RFA

#### Product parameter

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



## Cypetherm Fujitsu with EnergyPlus™



#### Intuitive AIRSTAGE Energy Modeling

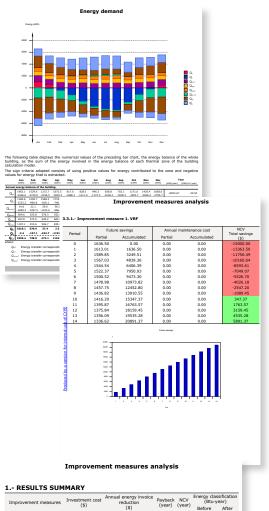
This software allows you to model and simulate HVAC energy demand and consumption in the building with AIRSTAGE and compare with other commonly used HVAC equipment. Estimate potential energy savings and ROI values.

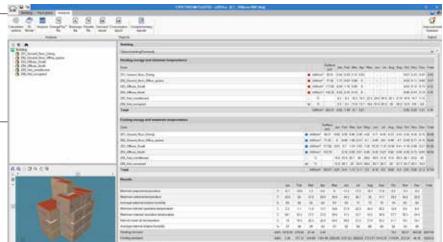
#### **Easy Modeling**

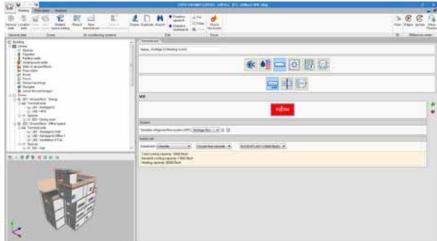
- Easy Wizard for Modeling
- 200 plus US cities included for weather data
- Default values selected based on building types

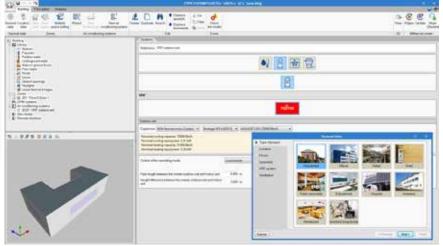
#### Simple Reports

- Simple Energy Demand/Consumption reports
- Comparison with existing/alternative HVAC system
- · ROI, NCV number









**AIRSTAGE** 



# Optional Accessories Overview

## **Optional Accessories**

# For Cassette



#### Human Sensor Kit

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



Cassette Grille

Flexibility to match various interiors with extensive cassette grille lineup.



UTG-LCGVCB

For Circular Flow Cassette





Outside Air Intake Kit

Outside air can be brought in via the indoor unit by external fan connected to the kit.



UTZ-KXGA for Cassette AUUB30.36 UTZ-KXGB for Cassette AUUB18,24 UTZ-KXGC for Compact Cassette AUUA7 thur AUUA24



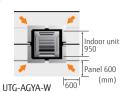
# Insulation for High Humidity

Optional Insulation kit can be used to avoid condensation in high humidity installation locations.



#### Air Outlet Shutter Plate

If required, a shutter plate can be field installed to make the cassette into a 3-way cassette.



#### Wide Panel

Optional Wide Panel can be used to fill space around cassette.





#### Panel Spacer

If required, Panel Spacer can be used to fill vertical space between ceiling and the cassette.

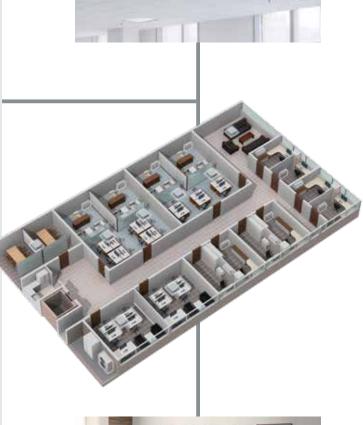
# **Optional Controls**

# For Ducted Indoor Units





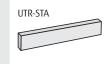
Communicating zoning system featuring proportional, modulating dampers and smart controllers.





# **Optional Accessories**

# For Floor



#### Half Concealed Kit

Kit can be used to partly cover floor type indoor units when mounted by a wall.

# **Optional Controls**

# For Indoor Units

p. 118



#### Highrise 360 Kit

Kit increases the max height difference between outdoor and indoor unit.





## **Optional Accessories**

# For Duct & Ceiling



Auto Louver Grille Kit Elegant Grille kit for comfortable air distribution.

p. 114



# Remote Sensor Unit

Remote sensor for localized temperature sensing and increased comfort.



#### Long Life Filter

Efficient Long Life air filter for reduced service requirements.

UTD-LF25NA UTD-LF60KA

UTD-SF045T



#### Flange

Adapter Flange for connection of air ducts.





#### Condensate Drain Pump



#### **Connection Parts**



#### External Connect Kit & Set

Wire Connection kit for connection of external devices to Indoor unit.



#### **Pipe Connection Units**

For branch connections in VRF systems with multiple indoor units.



#### **External Power Supply Unit**

Can protect the units in the system even if some powers of indoor units are shut down in the system.



# For Outdoor Unit

p. 115



#### Wind Baffles

Prevent fan stoppage against high wind



#### **Snow Hood**

Prevent snow accumulation inside outdoor unit



#### Hail Guard

Protection of outdoor unit coil from hail

# **REQUIRED for all AIRSTAGE system installations**

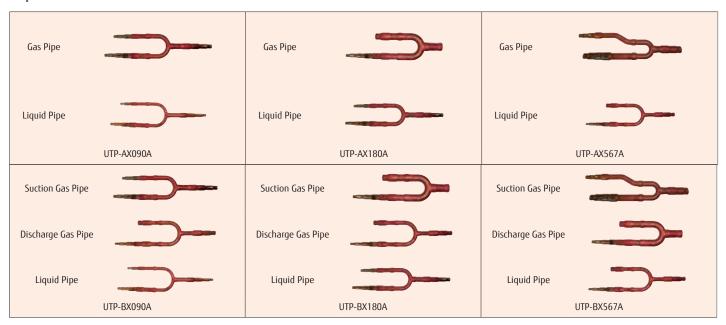
**VRF Communication Cable** 

LonWorks® Cable K00250LW (250 ft) K00500LW (500 ft)



# Piping Accessories

# **Separation Tubes**

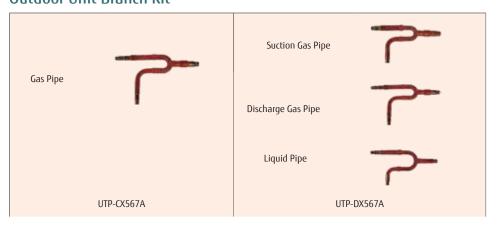


#### Specifications

## **Separation Tube**

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

# **Outdoor Unit Branch Kit**

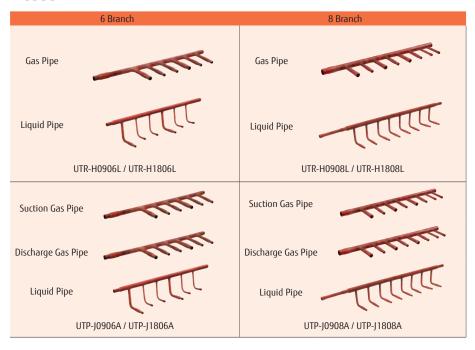


#### Specifications

#### **Outdoor Unit Branch kit**

Model name		UTP-CX567A (for VU-V)	UTP-DX567A (for VU-V)		
Number of Outdoor 12	2 outdoor units	1			
Number of Outdoor unit	3 outdoor units	2	2		

# Header



#### Specifications Header

Model name	3-6 Branches	UTR-H0906L	UTR-H1806L	
model name	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	3-6 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	

## **RB** Unit



Single type
UTP-RU01DH
Single Type RBU - 27,000
BTU or less
UTP-RU01EH
Single Type RBU - 60,000

BTU or less UTP-RU01FH Single Type RBU - 96,000 BTU or less



UTP-RU04EH Multi Type RBU - 191,000 BTU or less (60,000 BTU or less per branch)



UTP-RU08DH 8 Branch RBU Unit - 245,000 BTU or less (27,000 BTU or less per branch)



12 Branch RBU Unit - 324,000 BTU or less (27,000 BTU or less per branch)

#### Specifications RB Unit

Туре	Single type			Multi type			
Model name		UTP-RU01DH	UTP-RU01EH	UTP-RU01FH	UTP-RU04EH	UTP-RU08DH	UTP-RU12DH
Power source		Single phase 230V, 50Hz			Single phase 230V, 50Hz	Single phas	e 230V, 60Hz
Input power	W	28	28	41	110	226	339
Number of branches		1	1	1	4	8	12
Maximum capacity of connectable indoor units (Q)	kBTU/h	Q ≤ 28	Q ≤ 60	Q ≤ 96	Q ≤ 191*1	Q≤ 245,000	Q≤ 324,000
Maximum capacity of connectable indoor units per branch (Q)	kBTU/h	Q ≦ 27	Q ≤ 60	Q ≤ 96	Q ≦ 96	Q≤ 27,000	Q≤ 27,000
Max number of connectable indoor units per branch		3	8	8	8	6	6
Dimensions (H×W×D)	in. (mm)	7-13/16 × 1	1-3/4 × 10-9/16 (198 ×	298 × 268)	10-1/4 × 25-7/8 × 16-7/8 (260 × 658 × 428)	11-3/4 x 26 x 24-5/16 (298 x 660 x 618)	11-3/4 x 39 x 24-5/16 (298 x 990 x 618)

<sup>\*1:</sup> In case of two RB units connected in series ( total 8-branches ), maximum capacity of connectable indoor units is up to 191kBTU/h

# Auto Louver Grille Kit (Option)

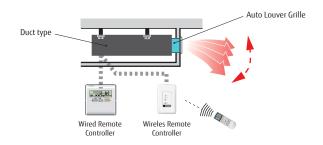
Models
UTD-GXSA-W / UTD-GXTA-W
UTD-GXSB-W



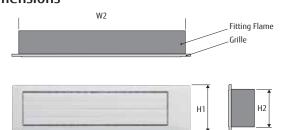


# Flexible Control

- Convenient control of Auto Louver kit from remote controller of indoor unit.
- Can be used for vertical auto swing or fixed louvers. 4 convenient louver angle settings.
- Louvers close automatically when indoor unit is not in operattion.



# **Dimensions**



						Unit: In.
Model Name	W1	W2	H1	H2	D1	D2
UTD-GXSA-W / UTD-GXTA-W	26-7/8	25-3/8	7-1/16	5-13/16	3/8	3-5/16
UTD-GXSB-W	34-3/4	33-1/4	70	3 13/10	3.0	3 37.10

#### Specifications

Model name			UTD-GXSA-W / UTD-GXTA-W UTD-GXSB-W					
Applicable Indoor Unit			UTD-GXSA-W: ARUL7/9/12/14TLAV2   UTD-GXTA-W: ARUL4TLAV2 ARUL18TLAV					
Power Supply			Connecting with Cont	trol box of indoor unit				
Fixing of Auto	Louver Grille	!	Screw fixing to Fla	nge or Square Duct				
Extension Squ	Jare Duct Lim	it	39-3/8" (Max. duct length be	etween indoor unit and grille)				
Net Dimensio	n	inch	7-1/16x26-7/8x(3-5/16+3/8)	7-1/16x34-3/4x(3-5/16+3/8)				
$(H \times W \times D)$		(mm)	[180x683x(84+9)]	[180x883x(84+9)]				
Weight	Net	lb.	4.4 (2.0)	5.6 (2.5)				
weight	Gross	(kg)	6.7 (3.0)	7.8 (3.5)				
Color			Wh	White				
Louver Motor			Steppin	g Motor				
Accessories			Fitting Flame, etc.					
Operation	Cooling	°F (°C)	64 to 90 (18 to 32)					
Operation	Cooling	% RH	80% or less					
range	Heating	°F (°C)	50 to 86	(10 to 30)				

# Wind Baffles, Snow Hoods, Hail Guards

## **Protect Your Investment**

Wind Baffles ensure continued operation during high wind conditions, especially with roof-mounted units. Wind Baffles prevent nuisance stoppage of outdoor unit.

#### **Features**

- Solid & sturdy design for durability and reduced vibrations
- Same color as outdoor air unit for better aesthetics
- Easy installation

			,
Model	Wind Baffle	Model	Wind Baffle
AOU36RLAVS	AOU36RLAVM		
AOU48RLAVS	UTZ-DUWBUA	AOU48RLAVM	
AOU36RLAVS4	UIZ-DUWBUA	AOU60RLAVM	UTZ-DUWBTA
AOU48RLAVS4		AOU36RLAVM4	UIZ-DUWBIA
		AOU48RLAVM4	
1		AOU60RLAVM4	



Actual product color may be different from the colors shown here.

Specifications and design are subject to change without notice.

Model	Wind Baffle
AOU72RLAVL	UTZ-DUWBRA
AOU96RLAVL	(Models include 2
AOU120RLAVL	UTZ-DUWBUA
	units)



**NOTE**: Wind baffles do not extend low ambient cooling capacities. Please refer to Application Bulletin AH20201101A for best practices regarding wind baffle usage.



**Snow Hoods** protect your outdoor equipment from poor performance due to accumulation of snow.



Model	C					ow Hood	
Model	Group	UTZ-DUSHUA	UTZ-DUSHTA	UTZ-DUSHRA	UTZ-DUSHVTA	UTZ-DUSHVUA	UTZ-DUSH1VLA/UTZ-DUSH2VLA/UTZ-DUSH3VLA
AOU36RLAVS4	- 11	1					
AOU48RLAVS4	U	1					
AOU36RLAVM4			1				
AOU48RLAVM4	T		1				
AOU60RLAVM4			1				
AOU72RLAVL				1			
AOU96RLAVL	R			1			
AOU120RLAVL				1			
AOUA72-96ULBV5/ULCV5	VT				1		
AOUA120ULBV5/ULCV5	VU					1	
AOUA144-192ULBV5/ULCV5	VL						1 / 1 / 2 ( includes 1 top, 1 rear, 2 side)

Hail Guards protect your outdoor unit coil from hail damage.





Model Group Hail Guard							
Model	Group	UTZ-DUHGUA	UTZ-DUHGTA	UTZ-DUHGRA	UTZ-DUHGVTA	UTZ-DUHGVUA	UTZ-DUHGVLA
AOU36RLAVS4	U	1					
AOU48RLAVS4	U	1					
AOU36RLAVM4			1				
AOU48RLAVM4	T		1				
AOU60RLAVM4			1				
AOU72RLAVL				1			
AOU96RLAVL	R			1			
AOU120RLAVL				1			
AOUA72-96ULBV5/ULCV5	VT				1		
AOUA120ULBV5/ULCV5	VU					1	
AOUA144-192ULBV5/ULCV5	VL						1

# Airzone

# Compatible with most AIRSTAGE 2-wire and 3-wire single zone systems.

Airzone is an intelligent, communicating zoning system for AIRSTAGE ducted indoor units featuring proportional modulating dampers and smart controllers. Additional ductless and ducted single zone systems may be integrated for total HVAC control.

#### How does it work?

All Airzone dampers and optional Zone Modules are connected by a 4-wire cable for power and communication. Dampers are positioned to provide optimum airflow into a zone based on demand monitored through zone controllers. The indoor unit fan is adjusted to meet the instantaneous total demand of all calling zones.





Airzone VAF Wired Blueface Controller White



Airzone VAF Control Board with Fujitsu UART Communication Region 2



Airzone Webserver Hub



Airzone VAF 8" Wired Intelligent Round Damper



Airzone VAF 8" Wireless Intelligent Round Damper

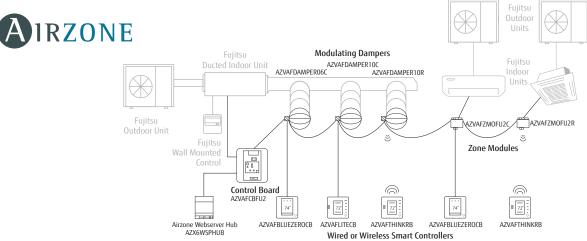
#### **Benefits**

- An Airzone system can provide optimum airflow into each zone, thus reducing excess equipment capacity.
- Provides ideal temperature control of each zone in your home or office
- Built in communication gateways maximize Fujitsu Heat Pump inverter efficiency.
- Integrate single zone systems with the ducted, modulating damper system.
- Modulating dampers and proportional fan control eliminates the need for a bypass duct!
- Flexible selection of individual damper sizes and controllers to fit a wide range of applications.
- With the Webserver Hub, you can control your Airzone VAF system and the serving AIRSTAGE unit through the Airzone Cloud, and integrate your system to a BMS using BACnet.

#### **Features**

- Control and monitor up to 10 individual zones.
- Adjustable minimum and maximum damper positions.
- Control of optional auxiliary heat of the ducted, zoned unit.
- Principal controller provides simple, single point temperature management of ALL zones!
- Selection of wired and wireless controllers.
- Wired and wireless dampers available. Size ranges from 6" to 14" in diameter.
- Flexible control of up to 10 hydronic zones is possible, as either primary or auxiliary heat.
- Dry Contact Inputs from occupancy sensor and window switch to open/close individual damper.

# Connection Diagram





Airzone, cont'd.



PRODUCT OFFERING					
FAMILY	REFERENCE VAF	DESCRIPTION			
6 1 11 1	AZVAFCB2FU2	AIRZONE VAF CONTROL BOARD WITH FUJITSU UART COMMUNICATION REGION 2			
Control board	AZVAFCB2FUJ	AIRZONE VAF CONTROL BOARD WITH FUJITSU 3 WIRES COMMUNICATION REGION 2			
	AZVAFBLUEZEROCB	AIRZONE VAF WIRED BLUEFACE PRINCIPAL CONTROLLER WHITE			
C II	AZVAFTHINKRB	AIRZONE VAF WIRELESS THINK CONTROLLER WHITE			
Controllers	AZVAFLITECB	AIRZONE VAF WIRED LITE CONTROLLER WHITE			
	AZVAFLITERB	AIRZONE VAF WIRELESS LITE CONTROLLER WHITE			
	AZVAFZMOFU2C	AIRZONE VAF WIRED ZONE MODULE WITH FUJITSU UART COMMUNICATION			
	AZVAFZMOFUJC	AIRZONE VAF WIRED ZONE MODULE WITH FUJITSU 3 WIRES COMMUNICATION			
	AZVAFZMOFU2R	AIRZONE VAF WIRELESS ZONE MODULE WITH FUJITSU UART COMMUNICATION			
	AZVAFZMOFUJR	AIRZONE VAF WIRELESS ZONE MODULE WITH FUJITSU 3 WIRES COMMUNICATION			
	AZVAFDAMPER06C	AIRZONE VAF 6" WIRED INTELLIGENT ROUND DAMPER			
	AZVAFDAMPER08C	AIRZONE VAF 8" WIRED INTELLIGENT ROUND DAMPER			
	AZVAFDAMPER10C	AIRZONE VAF 10" WIRED INTELLIGENT ROUND DAMPER			
Zone modules	AZVAFDAMPER12C	AIRZONE VAF 12" WIRED INTELLIGENT ROUND DAMPER			
Zone modules	AZVAFDAMPER14C	AIRZONE VAF 14" WIRED INTELLIGENT ROUND DAMPER			
	AZVAFDAMPER06R	AIRZONE VAF 6" WIRELESS INTELLIGENT ROUND DAMPER			
	AZVAFDAMPER08R	AIRZONE VAF 8" WIRELESS INTELLIGENT ROUND DAMPER			
	AZVAFDAMPER10R	AIRZONE VAF 10" WIRELESS INTELLIGENT ROUND DAMPER			
	AZVAFDAMPER12R	AIRZONE VAF 12" WIRELESS INTELLIGENT ROUND DAMPER			
	AZVAFDAMPER14R	AIRZONE VAF 14" WIRELESS INTELLIGENT ROUND DAMPER			
	AZVAFZMRADC	AIRZONE VAF WIRED ZONE MODULE ONLY RADIANT			
	AZVAFZMRADR	AIRZONE VAF WIRELESS ZONE MODULE ONLY RADIANT			
Zone-supplemental heating	AZVAF5OUTPUTS	AIRZONE VAF RELAY RADIANT HEAT CONTROL MODULE			
	AZVAF10KPROBE	AIRZONE VAF 10 KOHM NTC THERMISTOR			
Accesories	AZVAFPOWER	AIRZONE VAF ADDITIONAL 12V POWER SUPPLY			
	AZX6WSPHUB	AIRZONE WEBSERVER HUB			
	AZVAFDAMPERZMC	AIRZONE VAF SPARE DAMPER WIRED ZONE MODULE			
Spare parts	AZVAFDAMPERZMR	AIRZONE VAF SPARE DAMPER WIRELESS ZONE MODULE			
	AZVAFDAMPERACT	AIRZONE VAF SPARE DAMPER ACTUATOR			

# Highrise 360 Kit (for VU-V Series\*)

# Design flexibility

Pipe length (First

separation tube to

farthest indoor unit)

295ft max.

(90m)

The Highrise 360 kit increases the 164ft max height difference between outdoor unit and indoor unit to 360ft, when outdoor unit is located above the indoor units. Total pipe length 3,280ft max. (1,000m) Total pipe length 3,280ft max. (1,000m) Height difference 360ft max. Actual pipe length Actual pipe length (110m) **541** ft max. 541ft max. Height difference For the outdoor unit installed (165m) (165m) 164ft max. above the indoor units: (50m) 131ft max. (40m)

Height difference

49ft max.

(15m)

between indoor units

Pipe length (First

separation tube to

farthest indoor unit)

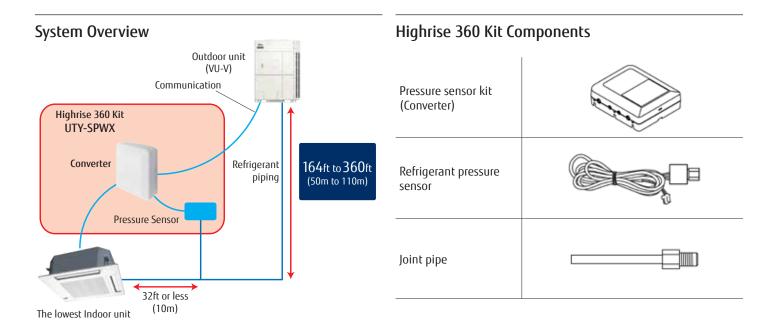
295ft max.

Height difference

49ft max.

(15m)

between indoor units



<sup>\*</sup> NOTE: Heat pump options only

# **Applications**

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

Note: VRF Heat Recovery system provides simultaneous Heating and Cooling.

## Medical and Healthcare Facilities

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

#### Individual Control

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

#### Maintenance

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







# **Central Control**

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

#### Clean Air

VRF systems can use ductless indoor units reducing the time and expense of maintain a ducted HVAC system and minimizing the risk of spreading duct-borne molds and bacteria.

# **Healthier Facility**

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

## **Optional**

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

See AIRSTAGE VRF case studies on our site at www.fujitsugeneral.com/us/commercial/benefits/ app-and-solutions.html

# Vertical Farming or Grow Houses - Controlled Environmental Agriculture (CEA)

Recently VRF has been applied to CEA to effectively control the indoor environment for vertical farming.

Fujitsu AIRSTAGE VRF Systems eliminate short cycling and ensure consistent temperature control for optimal grow operations.



## **Central Control**

VRF Central Controls keep HVAC Technicians out of the Production Rooms, enhancing biosecurity.

With Internet access, systems can be monitored and controlled remotely. System performance is assessed in real time, offering retro-commissioning opportunities that keep them operating at peak performance.



#### **Healthier Facility**

Indoor Unit Fan Coils can be located in Production Rooms, avoiding contamination risk associated with packaged equipment located outdoors.



#### **Efficient**

Variable speed inverter-driven compressors adjust performance to match the different stages of plant growth, eliminating short cycling that leads to premature equipment failure and undesirable spikes in temperature and humidity.



#### **Flexible**

Systems are modular, allowing for a wide range of capacities.

See AIRSTAGE VRF case studies on our site at <a href="https://www.fujitsugeneral.com/us/commercial/benefits/app-and-solutions.html">www.fujitsugeneral.com/us/commercial/benefits/app-and-solutions.html</a>
or on our **You Tube** channel FujitsuGeneral\_USA

# Educational and Religious Facilities

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

# **Healthier Facility**

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

#### Central Control

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









# Zoning

Save energy by heating and cooling only 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**

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

See AIRSTAGE VRF case studies on our site at www.fujitsugeneral.com/us/commercial/benefits/ app-and-solutions.html

or on our You Tube channel FujitsuGeneral\_USA

# Office Buildings and Retail Spaces

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

#### **Flexible**

As tenants and office configurations change, VRF system configurations can also be modified to meet the needs of new tenants.

# Zoning

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







#### Ease Of Installation

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

#### Quiet

Indoor units and outdoor units are quiet which creates a pleasant and productive work environment.

#### Control

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

#### Comfort

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

# **Optional**

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

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or on our You Tube channel FujitsuGeneral\_USA

# Multi-Tenant Dwellings

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

# Quality

By delivering quiet, efficient, and individual heating and cooling VRF improves the quality and the environment of multitenant buildings.

# **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 Allocation feature, landlords can easily bill each tenant for the share 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 remotely.

#### Quiet

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

# **Optional**

Subtenant billing and Energy Charge apportionment.

See AIRSTAGE VRF case studies on our site at www.fujitsugeneral.com/us/commercial/benefits/app-and-solutions.html

# Fujitsu Commercial Financing

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

# The Fujitsu Commercial Financing program is just as efficient and smart:

# Quick, efficient approval process

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

# Solutions available for most projects

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

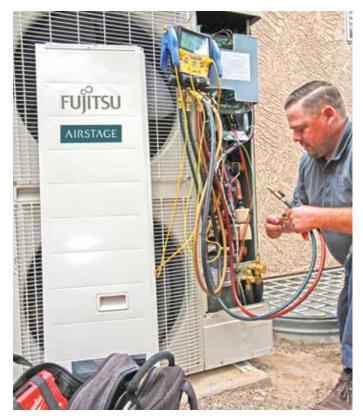
# Take advantage of convenient quote options:

<u>FujitsuGeneralFinancing.com</u>

1-800-606-0049

#### For More Information:

Marlin Capital Solutions 800-606-0049



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





# Things to know before you buy a FUJITSU system

# Complete System Warranty

Standard warranties vary depending on model:



Fujitsu AIRSTAGE V-Series and AIRSTAGE J-Series (J-IIIL) systems come standard with a 2-Year Compressor / 1-Year Parts warranty.



Fujitsu AIRSTAGE J-IV and J-IVS Series systems come standard with a 7-Year Compressor / 5-Year Parts warranty.

Extended warranties include:



10-Year Parts / Compressor warranty for qualified Fujitsu AIRSTAGE V and



12-Year Parts / Compressor warranty for qualified AIRSTAGE J-Series Systems installed in a residential location by an Elite Contractor.

For full details, see AIRSTAGE Warranty Statements.

#### **Trademarks**

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#### Non-Internet Retail Policy

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

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

# Things To Know Before You Install a FUJITSU System

#### Warning

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

# **Heat Pump Disclaimer**

In most climates a heat pump will handle all of your heating needs. However, this system sometimes requires some other additional source of heat to satisfy heating requirements in the coldest environments. All of Fujitsu's heat pumps use inverter

technology and as such offer a wider operating range and more heat capacity than a standard heat pump but will not provide adequate heating if improperly sized or operated outside of its operating range. Specifications vary by model; please consult your contractor before choosing a heat pump as your only source of heat. Systems will maintain temperature up to  $\pm 1/4$  degrees relative to set temperature. To increase energy efficiency on multi-type systems, you should turn off the evaporators when heating or cooling is not needed.

#### Disclaimer

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

# Certifications

#### IS<sub>0</sub>

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



- ISO14001

# AHRI Energy Guide® Program (U.S.)

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





## **ASTM**

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

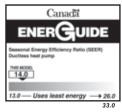
# RoHS Compliant

Fujitsu participates in the RoHS Directive, which is the Restriction of Hazardous Substances in electrical and electronic equipment. It is an EU directive intended to protect the environment by forcing manufacturers to



eliminate or severely curtail the use of cadmium, hexavalent chromium, and lead in all products from automobiles to consumer electronics.

# HRAI EnerGuide® Program (Canada)





- · Specifications and design are subject to change without notice for future improvement. For further details, please check with an authorized distributor.
- "AIRSTAGE" is a worldwide trademark of FUJITSU GENERAL LIMITED and is a registered trademark in Japan and other countries or areas.
- Other company and product names mentioned herein may be registered trademarks, trademarks or trade names of their respective owners.
   Actual product color may be different from the colors shown in this printed material.
- Internet sales are strictly prohibited and unauthorized. Any HVAC systems purchased on the Internet, from an online retailer or any similar e-tailing website, OR where the original factory serial numbers of the display have been removed, defaced, or replaced in any way WILL NOT BE COVERED BY WARRANTY.



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