

Multi Air Conditioning System for Buildings

Large Capacity Multi VRF System DC Inverter Control Compressor Long Piping System Design High Efficiency Refrigerant R410A





FUJITSU GENERAL LIMITED

All for Comfort

Smart and cutting edge design Extensive lineup from 8HP to 48HP in 2HP increment Connectable indoor unit capacity ratio up to 150%



High Efficiency Operating System

EER/COP has been significantly improved by unique inverter technology and refrigerant control technology.



Installation Flexibility

Total pipe length of 1,000m and 150m actual pipe length. From small to large buildings, any application can be supported.



Compact Design

The outdoor unit size has been significantly reduced by optimizing of equipment. This allows for a reduction in the required installation area floor space.



User Friendly Central Control

Diverse building air conditioning control functions can be controlled easily by central air conditioning control.



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Advanced system considers high efficiency operation

High Efficiency Operation



Energy saving technology that boosted operation efficiency



Powerful large propeller fan By using CFD¹¹ technology, A newly designed fan achieves high performance and low noise operation.

*1. CFD = Computational Fluid Dynamics

DC fan motor —

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



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



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



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



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





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

Significantly improved EER/COP



Energy efficiency combination



Various energy saving features

Room temperature set point limitation

The minimum and maximum temperature range can be set giving further energy saving while considering the comfort of the occupants.

Auto-off timer

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

te controller)

Peak cut operation

Operation capacity can be set in 4 steps for rated capability. The power consumption at peak is cut down and the maximum load is suppressed.

°C 30 28 26 24 22 20 18 16 14 12 10 Cooling set temp. range Heating Cooling Heating set temp. range Original Set temp. limitation Set point limitation setting



Operation setting (System Controller)





Heating Set Temperature MAX. -4°C Economy operation Control Temperature Control Temperature MAX. +2°C Cooling Set Temperature

Economy operation

Economy operation can be set by remote controller. The temperature setting is offset automatically over a certain period of time. V-II systems can be applied to a wide variety of Building applications due to the reduced outdoor unit size and piping length capabilities

Design Versatility



Overall piping length 1,000m

World's top class overall piping length of 1,000m allows for application in a wide variety buildings.

High static pressure of 80Pa

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

Powerful discharge with an external static pressure of 80Pa.

Previous model





Large diameter fan and DC motor has been utilized allowing an external static pressure of 80Pa. This is approximately 2.6 times greater than the previous model.





*1. Note : When there is 1 outdoor unit, the maximum is 700m.

Space saving and compact size

Compact size has been achieved by significantly reducing the width of the outdoor units compared to previous models.





High capacity connection

Various combination from 8HP to 48HP with 2HP increments. 12 types, 55 models of indoor units can be selected ranging from 2.2kW to 25kW in capacity. A maximum of 150% indoor unit connectable capacity.



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

Wide operating range

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

Cooling : -15°C~46°C Heating : -20°C~21°C



*2. Note : When a multiple outdoor unit connection is used, operating range is from -5°C to 46°C in cooling. High reliability considering long-term safety and confidence

High Reliability

Life-extending operation

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







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

Backup operation

If one of two compressors malfunctions, it will not affect the operation of the remaining outdoor units.

Outdoor Units

If one of compressor fails, backup operation will be performed by the remaining compressors as emergency.*1

Indoor unit continuous operation

Each indoor unit is controlled individually on the system network. This allows all indoor units to continue to operate unaffected even if an error should occur at any indoor unit's on the VRF network system.

*1 Note: Backup operation may not be possible depending on the combination and trouble state.



Adoption of blue fin heat exchanger

Corrosion resistant of the heat exchanger has been improved by the introduction of blue fin treatment to the outdoor unit's heat exchanger.







Remote monitoring

The Web Monitoring system allows you view system operation at all times over the internet ensuring trouble free operation.



FEATURES

From transportation of the product to address setting for commissioning, significant improvements have been made which reduce the cost of installation.

Easy Installation



Easily transported

Light weight



Note: In the case of 14HP

Easily craned using lifting belt hooks

Design of outdoor unit allows for lifting straps to be used



Can be transported in a small elevator



Transporting by forklift

Transport with forklift is possible.



Easy piping connection

The need for a oil equalization pipe as required on the previous model has been removed. The installation costs have been reduced by employing a simple 2 pipe connection



Eliminating oil equalization pipe

Up to maximum length **3,600**m V-II series

Simple signal line connection

Installation is made easier as the communication wiring can be connected continuously to any component.



Other wiring method Simple wiring method

Note: In a multiple refrigerant system installation, Automatic addressing sequence cannot be initiated

Easy access

By adopting a L-Shape front panel that can be removed, the work space for installation and service has been significantly expanded by this new design. For multiple installations, work is performed easily and efficiently even in a narrow space.



Expansion of work space



Four way piping connection

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



Automatic address setting

The address of each indoor unit can be automatically set by button switch of outdoor unit.



Press the pushbutton switch of outdoor unit.

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

FEATURES

Low noise, easy operational settings, and comfortable temperature adjustment allows for V-II systems to be used in building air conditioning applications.

Comfort and Convenience



Quiet operation

Low noise mode

Two low noise modes can be selected automatically by quiet priority setting and capacity priority setting depending on the usage environment and outside temperature load.



Low noise design

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



Auto changeover function

Auto changeover setting allows for the product to easily switch between cooling and heating modes regardless of the operation mode of other indoor units. This can be done via specific indoor unit with wired remote controller. This ensures comfortable operation all year round.



Switching to cooling and heating mode by specific remote controller in the main room, etc.



Precision refrigerant flow control

Precision and Smooth refrigerant flow control is achieved by using a DC Inverter control in conjunction with individual indoor unit electronic expansion valve control. This allows for a high precision comfortable temperature control of $\pm 0.5^{\circ}$ C.



Reach the set temperature quickly

Thermal change of the room *Simulation in heating operation.

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

Individual air conditioning control

The desired temperature conditions of each room are met due to the Individual thermostat control of each indoor unit.



Simple central control operation Simple operation by icon display and color touch screen

Yearly schedule function Daily starting & stopping and temperature setting are managed.

Clock setting function The clock of each individual controller is periodically corrected.



Non-stop oil recovery operation

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



Simple central management function

7.5 inch large LCD

Touch Panel Controller

Designed for Quick Service response, Easy maintenance and Troubleshooting

Easy Service & Maintenance





Design for easy service and maintenance

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



Consolidated electrical components make maintenance easy Movable PCB panel that allows for easier maintenance work behind the PCB

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



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



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

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

Wired Remote Controller



An error code is displayed on a liquid crystal screen.



Emergency stop function

Emergency alarm can be received by indoor, outdoor units or Touch Panel Controller when they received it, all units will be stopped.

Note: In case of received Emergency alarm by Indoor / outdoor unit : All units connected within same refrigerant system will be stopped.

Touch Panel Controller : all unit connected within VRF





Continuous operation during maintenance

Non-stop operation

When servicing a specific indoor unit, maintenance can be performed even without turning off the other indoor units.



Trouble diagnosis by Service Tool

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



Equipment Detail (Diagram)



Equipment Detail (List)

7 7475	-	113	111
No. of Concession, Name	1201		-

Outdoor Units Lineup

Space saving combination



Energy efficiency combination



- Extensive line up from 8HP to 48HP in 2HP increments
- Space saving combination and Energy efficiecy combination available, which can be selected to suit any air conditioning needs
 Combinations other than the followings are not recommended.





Specifications

Space saving combination

Rating Capacity range	н	Р	8	10	12	14	16	18	20	22	24
Model name			AJ*A72LALH	AJ*A90LALH	AJ*108LALH	AJ*126LALH	AJ*144LALH	AJ*162LALH	AJ*180LALH	AJ*198LALH	AJ*216LALH
Unit 1 Unit 2 Unit 3			AJ*A72LALH	AJ*A90LALH	AJ*108LALH	AJ*126LALH	AJ*144LALH	AJ*A90LALH AJ*A72LALH	AJ*108LALH AJ*A72LALH	AJ*108LALH AJ*A90LALH	AJ*108LALH AJ*108LALH
Maximum Connectable Indoor	Unit*1		15	16	17	21	24	32	32	32	35
Indoor unit connectable capacity	Cooling	kW	11.2-33.6	14.0-42.0	16.8-50.2	20.0-60.0	22.4-67.2	25.2-75.6	28.0-83.9	30.8-92.3	33.5-100.5
Power source						3-pha	se 4 wire, 400 V,	50Hz			
Canacity	Cooling	K/M	22.4	28.0	33.5	40.0	45.0	50.4	55.9	61.5	67.0
Capacity	Heating	KVV	25.0	31.5	37.5	45.0	50.0	56.5	62.5	69.0	75.0
logut nour	Cooling	100/	5.51	7.73	9.62	11.53	14.17	13.24	15.13	17.35	19.24
Input power	Heating	KVV	5.72	7.83	9.28	11.45	12.60	13.55	15.00	17.11	18.56
EER	Cooling	14/04/	4.07	3.62	3.48	3.47	3.18	3.81	3.69	3.54	3.48
COP	Heating	VV/VV	4.37	4.02	4.04	3.93	3.97	4.17	4.17	4.03	4.04
Air flow rate	High	m³/h	11,100	11,100	11,100	13,000	13,000	11,100 x 2	11,100 x 2	11,100 x 2	11,100 x 2
Sound	Cooling	dB	56	58	58	60	61	60	60	61	61
pressure level*2	Heating	(A)	58	59	60	61	61	62	62	63	63
Maximum external static pressure	Pa		80	80	80	80	80	80	80	80	80
Compressor motor output	kW		3.9	3.9	3.9 + 4.5	3.9 + 4.5	3.9 + 4.5	3.9 x 2	3.9 x 2 + 4.5	3.9 x 2 + 4.5	3.9 x 2 + 4.5 x 2
Heat exchanger fin			Blue fin	Blue fin	Blue fin	Blue fin	Blue fin				
	Height	mm	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690
Dimensions	Width	mm	930	930	930	1,240	1,240	930 x 2	930 x 2	930 x 2	930 x 2
	Depth	mm	765	765	765	765	765	765	765	765	765
Weight	kg		220	220	275	296	296	220 + 220	275 + 220	275 + 220	275 + 275
Refrigerant charge	kg		11.2	11.2	11.8	11.8	11.8	11.2 x 2	11.8 + 11.2	11.8 + 11.2	11.8 x 2
Connection	Liquid	mm	12.70	12.70	12.70	12.70	12.70	15.88	15.88	15.88	15.88
pipe diameter	Gas		22.20	22.20	28.58	28.58	28.58	28.58	28.58	34.92	34.92
Operation	Cooling	°C	-15 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46				
range	Heating		-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21				

Energy efficiency combination

Rating Capacity range	н	Р	16	22	24	26	28	30
Model name			AJ*144LALHH	AJ*198LALHH	AJ*216LALHH	AJ*234LALHH	AJ*252LALHH	AJ*270LALHH
Unit 1 Unit 2 Unit 3			AJ*A72LALH AJ*A72LALH	AJ*126LALH AJ*A72LALH	AJ*A72LALH AJ*A90LALH AJ*A72LALH AJ*A72LALH AJ*A72LALH AJ*A72LALH		AJ*108LALH AJ*A72LALH AJ*A72LALH	AJ*126LALH AJ*A72LALH AJ*A72LALH
Maximum Connectable Indoor	Unit*1		30	33	36	39	42	45
Indoor unit connectable capacity	Cooling	kW	22.4-67.2	31.2-93.6	33.6-100.8	36.4-109.2	39.2-117.4	42.4-127.2
Power source					3-phase 4 wir	e, 400 V, 50Hz		
Capacity	Cooling	k/M	44.8	62.4	67.2	72.8	78.3	84.8
Capacity	Heating		50.0	70.0	75.0	81.5	87.5	95.0
Input power	Cooling	kW	11.02	17.04	16.53	18.75	20.64	22.55
input power	Heating		11.44	17.17	17.16	19.27	20.72	22.89
EER	Cooling	10//00/	4.07	3.66	4.07	3.88	3.79	3.76
COP	Heating	VV/VV	4.37	4.08	4.37	4.23	4.22	4.15
Air flow rate	High	m³/h	11,100 x 2	13,000 + 11,100	11,100 x 3	11,100 x 3	11,100 x 3	13,000 + 11,000 x 2
Sound	Cooling	dB	59	61	61	62	62	63
pressure level*2	Heating	(A)	59	62	61	62	63	63
Maximum external static pressure	Pa		80	80	80	80	80	80
Compressor motor output	kW		3.9 x 2	3.9 x 2 + 4.5	3.9 x 3	3.9 x 3	3.9 x 3 + 4.5	3.9 x 3 + 4.5
Heat exchanger fin			Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin
	Height	mm	1,690	1,690	1,690	1,690	1,690	1,690
Dimensions	Width	mm	930 x 2	930 + 1,240	930 x 3	930 x 3	930 x 3	930 x 2 + 1,240
	Depth	mm	765	765	765	765	765	765
Weight	kg		220 + 220	296 + 220	220 + 220 + 220	220 + 220 + 220	275 + 220 + 220	296 + 220 + 220
Refrigerant charge	kg		11.2 x 2	11.8 + 11.2	11.2 x 3	11.2 x 3	11.8 + 11.2 x 2	11.8 + 11.2 x 2
Connection	Liquid		12.70	15.88	15.88	15.88	15.88	19.05
pipe diameter	Gas		28.58	34.92	34.92	34.92	34.92	34.92
Operation	Cooling	°C	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46
range	Heating	C	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21

AJ* : AJY(FUJITSU), AJH(GENERAL)

Note : Specifications are based on the following conditions. Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB. Heating : Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.

Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m. When cooling operation will be conducted at outdoor air temperature below -5°C, the outdoor unit must be installed in a position that is higher than or equal to those of indoor units.

26	28	30	32	34	36	38	40	42	44	46	48
									1		11
AJ*234LALH	AJ*252LALH	AJ*270LALH	AJ*288LALH	AJ*306LALH	AJ*324LALH	AJ*342LALH	AJ*360LALH	AJ*378LALH	AJ*396LALH	AJ*414LALH	AJ*432LALH
AJ*126LALH AJ*108LALH	AJ*144LALH AJ*108LALH	AJ*144LALH AJ*126LALH	AJ*144LALH AJ*144LALH	AJ*108LALH AJ*108LALH AJ*A90LALH	AJ*108LALH AJ*108LALH AJ*108LALH	AJ*126LALH AJ*108LALH AJ*108LALH	AJ*144LALH AJ*108LALH AJ*108LALH	AJ*144LALH AJ*126LALH AJ*108LALH	AJ*144LALH AJ*144LALH AJ*108LALH	AJ*144LALH AJ*144LALH AJ*126LALH	AJ*144LALH AJ*144LALH AJ*144LALH
39	42	45	48	48	48	48	48	48	48	48	48
36.8-110.3	39.3-117.8	42.5-127.5	45.0-135.0	47.5-142.5	50.3-150.8	53.5-160.5	56.0-168.0	59.3-177.8	61.8-185.3	65.0-195.0	67.5-202.5
					3-phase 4 wir	e, 400 V, 50Hz					
73.5	78.5	85.0	90.0	95.0	100.5	107.0	112.0	118.5	123.5	130.0	135.0
82.5	87.5	95.0	100.0	106.5	112.5	120.0	125.0	132.5	137.5	145.0	150.0
21.15	23.79	25.70	28.34	26.97	28.86	30.77	33.41	35.32	37.96	39.87	42.51
20.73	21.88	24.05	25.20	26.39	27.84	30.01	31.16	33.33	34.48	36.65	37.80
3.48	3.30	3.31	3.18	3.52	3.48	3.48	3.35	3.36	3.25	3.26	3.18
3.98	4.00	3.95	3.97	4.04	4.04	4.00	4.01	3.98	3.99	3.96	3.97
13,000 + 11,100	13,000 + 11,100	13,000 x 2	13,000 x 2	11,100 x 3	11,100 x 3	13,000 + 11,100 × 2	13,000 + 11,100 × 2	13,000 × 2 + 11,100	13,000 × 2 + 11,100	13,000 x 3	13,000 x 3
62	63	64	64	63	63	64	64	65	65	65	66
64	64	64	64	64	65	65	65	65	65	66	66
80	80	80	80	80	80	80	80	80	80	80	80
3.9 x 2 + 4.5 x 2	3.9 x 3 + 4.5 x 2	3.9 x 3 + 4.5 x 3									
Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin				
1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690
930 + 1,240	930 + 1,240	1,240 x 2	1,240 x 2	930 x 3	930 x 3	930 x 2 + 1,240	930 x 2 + 1,240	930 + 1,240 x 2	930 + 1,240 x 2	1,240 x 3	1,240 x 3
765	765	765	765	765	765	765	765	765	765	765	765
296 + 275	296 + 275	296 + 296	296 + 296	275 + 275 + 220	275 + 275 + 275	296 + 275 + 275	296 + 275 + 275	296 + 296 + 275	296 + 296 + 275	296 + 296 + 296	296 + 296 + 296
11.8 x 2	11.8 x 2	11.8 x 2	11.8 x 2	11.8 x 2 + 11.2	11.8 x 3						
15.88	15.88	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05
34.92	34.92	34.92	34.92	34.92	41.27	41.27	41.27	41.27	41.27	41.27	41.27
-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46				
-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21				

32	34	36	40	42	44
111					
AJ*288LALHH	AJ*306LALHH	AJ*324LALHH	AJ*360LALHH	AJ*378LALHH	AJ*396LALHH
AJ*108LALH	AJ*126LALH	AJ*126LALH	AJ*126LALH	AJ*126LALH	AJ*144LALH
AJ*108LALH	AJ*108LALH	AJ*126LALH	AJ*126LALH	AJ*126LALH	AJ*126LALH
AJ*A72LALH	AJ*A72LALH	AJ*A72LALH	AJ*108LALH	AJ*126LALH	AJ*126LALH
48	48	48	48	48	48
44.7-134.1	48.0-143.8	51.2-153.6	56.8-170.2	60.0-180.0	62.5-187.5
		3-phase 4 wir	e, 400 V, 50Hz		
89.4	95.9	102.4	113.5	120.0	125.0
100.0	107.5	115.0	127.5	135.0	140.0
24.75	26.66	28.57	32.68	34.59	37.23
24.28	26.45	28.62	32.18	34.35	35.50
3.61	3.60	3.58	3.47	3.47	3.36
4.12	4.06	4.02	3.96	3.93	3.94
11,100 x 3	13,000 + 11,100 x 2	13,000 x 2 + 11,100	13,000 x 2 + 11,100	13,000 x 3	13,000 x 3
62	63	64	64	65	65
64	64	65	65	66	66
80	80	80	80	80	80
3.9 × 3 + 4.5 × 2	3.9 x 3 + 4.5 x 2	3.9 x 3 + 4.5 x 2	3.9 x 3 + 4.5 x 3	3.9 x 3 + 4.5 x 3	3.9 x 3 + 4.5 x 3
Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin
1,690	1,690	1,690	1,690	1,690	1,690
930 × 3	930 x 2 + 1,240	930 + 1,240 x 2	930 + 1,240 x 2	1,240 x 3	1,240 x 3
765	765	765	765	765	765
275 + 275 + 220	296 + 275 + 220	296 + 296 + 220	296 + 296 + 275	296 + 296 + 296	296 + 296 + 296
11.8 × 2 + 11.2	11.8 x 2 + 11.2	11.8 x 2 + 11.2	11.8 x 3	11.8 x 3	11.8 x 3
19.05	19.05	19.05	19.05	19.05	19.05
34.92	34.92	41.27	41.27	41.27	41.27
-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46
-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21

*1 Minimum connectable indoor unit number is 2. However ARXC72 and ARXC90 can be used signal connection. *2 The noise value is the value when measured in an anechoic room. When measured in the actual installed state, surrounding noise and reflections are received and the measured value is usually larger than the indicated value.

Dimensions

8, 10, 12HP

AJ*A72LALH / AJ*A90LALH / AJ*108LALH

(Unit : mm)



AJ* : AJY(FUJITSU), AJH(GENERAL)

14, 16HP

AJ*126LALH / AJ*144LALH

(Unit : mm)













Indoor Unit Lineup

12 Types, 55 Models, Capacity range from 2.2kW to 25.0kW

Capacity range (kW)	2.2	2.8	3.6	4.5	5.6
Model code	7	9	12	14	18
Compact Cassette	AUXB07LALH	AUXB09LALH	AUXB12LALH	AUXB14LALH	AUXB18LALH
Cassette					AUXD18LALH
Compact Duct	ARXB07LALH	ARXB09LALH	ARXB12LALH	ARXB14LALH	ARXB18LALH
Slim Duct NEW (Drain pump internal)	NEW ARXD07LATH	NEW ARXD09LATH	NEW ARXD12LATH	NEW ARXD14LATH	NEW ARXD18LATH
Low Static Pressure Duct					
Duct					
High Static Pressure Duct					
Floor / Ceiling			AB*A12LBTH	AB*A14LBTH	AB*A18LBTH
Ceiling					
Compact Wall Mounted (EEV internal)	AS*A07LACH	AS*A09LACH	AS*A12LACH	AS*A14LACH	
Compact Wall Mounted (EEV external)	AS*E07LACH Wit	AS*E09LACH h this model, connect	AS*E12LACH	AS*E14LACH	
Wall Mounted					NEW AS*A18LACH

AB* : ABY(FUJITSU), ABH(GENERAL) AS* : ASY(FUJITSU), ASH(GENERAL)

Comprehensive range of indoor units of variety design and capacity ranges available which can be selected to suit any air conditioning needs.

7.1	9.0	11.2	12.5	14.0	18.0	22.4	25.0
24	30	36	45	54	60	72	90
AUXB24LALH							
AUXD24LALH	AUXA30LALH	AUXA36LALH	AUXA45LALH	AUXA54LALH			
NEW ARXD24LATH							
ARXB24LATH	ARXB30LATH	ARXB36LATH	ARXB45LATH				
ARXA24LATH	ARXA30LATH	ARXA36LATH	ARXA45LATH				
		ARXC36LATH	ARXC45LATH		ARXC60LATH	ARXC72LATH	ARXC90LATH
NEW AB*A24LBTH							
	NEW AB*A30LBTH	NEW AB*A36LBTH	NEW AB*A45LBTH	AB*A54LBTH			
NEW AS*A24LACH	NEW AS*A30LACH						

Compact Cassette

Models AUXB07LALH AUXB09LALH



Compact size panel design that fits standard ceiling panel (600x600mm)

2-stage turbo fan

High efficiency design by 2 stage structure

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





Previous turbo fan

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



Quiet quality

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

Adoption of laminar wing



Specifications

Model name				AUXB07LALH	AUXB09LALH	AUXB12LALH	AUXB14LALH	AUXB18LALH	AUXB24LALH	
Power source				230V ~, 50Hz						
Capacity		Cooling	<i>L\\\</i>	2.2	2.8	3.6	4.5	5.6	7.1	
		Heating		2.8	3.2	4.1	5.0	6.3	8.0	
Input power			W	25	25	29	35	36	84	
Airflow rate		High		540	550	600	680	710	1,030	
		Med	m³/h	450	450	530	590	580	830	
		Low		350	350	390	390	400	450	
Sound pressure level		High		34	35	37	38	41	50	
		Med	dB(A)	30	30	34	34	35	44	
		Low		25	25	27	27	27	30	
Dimensions (H	H x W x D)		mm	245 x 570 x 570						
Weight			kg		15 17					
Connection		Liquid (Flare)			ø6	.35		ø9	.52	
pipe diameter		Gas (Flare)	mm		ø12	2.70		ø15	5.88	
		Drain				ø25 (I.D) ;	ø32 (O.D.)			
Grille(option)	Model na	ime		UTG-UF*C-W						
	Dimensio	ons (H x W x D)	mm	50 x 700 x 700						
	Weight		kg			2.	6			

 $\label{eq:F} F^*:FY \ (FUJITSU) \ ; \ FG(GENERAL) \\ Note : \ Specifications \ are \ based \ on \ the \ following \ conditions.$

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

Improvement of the airflow distribution



Maintenance of fan motor and fan

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

A : Fan motor B : 2-stage turbo fan

C : Bell-mouth D : Panel

2 Long life filter : standard equipment

Adaptation of transparent drainage parts
 During installation, maintenance and operation,

the drain pump and kit can be checked easily.

Compact design

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



High lift drain pump



High ceiling mode

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

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

Optional parts

Air Outlet Shutter Plate :UTR-YDZBInsulation Kit for High Humidity :UTZ-KXGCFresh Air Intake Kit :UTZ-VXAA

Dimensions (Unit : mm)

Models: AUXB07 / AUXB09 / AUXB12 / AUXB14 / AUXB18 / AUXB24









Cassette

Models AUXD18LALH AUXD24LALH AUXA30LALH AUXA36LALH AUXA45LALH AUXA54LALH

Powerful, wide airflow and quiet operation



High efficiency turbo fan with 3-dimensional blade

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

Air passing through the heat exchanger was uneven and the air would only flow close to the ceiling. 500mm 450mm 3-dimensional blade Previous blade ----Heat exchanger Heat exchanger < Motor side Separation < Motor side > phenomenon of airflow Wind velocity Quiet Fas causes noise No airflow separation Uneven airflow · : Spin direction : Airflow direction • • • • • • • : Turbulent flow noise <

Previous turbo fan

Specifications

Model name				AUXD18LALH	AUXD24LALH	AUXA30LALH	AUXA36LALH	AUXA45LALH	AUXA54LALH	
Power source						230V ~	-, 50Hz			
Capacity		Cooling	L\\\/	5.6	7.1	9.0	11.2	12.5	14.0	
		Heating	KVV	6.3	8.0	10.0	12.5	14.0	16.0	
Input power			W	39	46	59	80	99	119	
Airflow rate		High		1,150	1,280	1,600	1,800	1,900	2,000	
		Med	m³/h	940	1,040	1,300	1,300	1,370	1,370	
		Low		870	870	1,100	1,100	1,100	1,100	
Sound pressure level		High		36	38	40	44	46	47	
		Med	dB(A)	30	33	38	38	39	39	
		Low		29	29	33	33	33	33	
Dimensions (H	H x W x D)		mm	246 x 84	40 x 840		288 x 840 x 840			
Weight			kg	2	3		2	7		
Connection		Liquid (Flare)				ø9	.52			
pipe diameter		Gas (Flare)	mm		ø15.88			ø19.05		
		Drain				ø25 (l.D.) ;	ø32 (O.D.)			
Grille(option)	Model na	me				UTG-U	IG*A-W			
Dimensions (H x W x D) m			mm			50 x 95	i0 x 950			
	Weight		kg			5	.5			

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

Improvement of the airflow distribution

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





Much less temperature irregularity happens by spreading airflow widely

Adjustment of hanger position is possible after installation



One way aperture installation



High lift drain pump



High ceiling mode

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

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

Optional parts

IR Receiver Kit :UTY-LRH*B1Air Outlet Shutter Plate :UTR-YDZCPanel Spacer :UTG-BGYA-WInsulation Kit for High Humidity :UTZ-KXGA / UTZ-KXGBWide Panel :UTG-AGYA-WFresh Air Intake Kit :UTZ-VXGAH*: HY(FUJITSU), HG(GENERAL)UTZ-VXGA

Dimensions (Unit:mm) (): AUXD18 / AUXD24

Models: AUXD18LALH / AUXD24LALH (Slim type) AUXA30LALH / AUXA36LALH / AUXA45LALH / AUXA54LALH



(Ceiling openings)

890

Compact Duct

Models

ARXB07LALH ARXB09LALH ARXB12LALH ARXB14LALH ARXB18LALH







ARXB12LALH ARXB14LALH ARXB18LALH

Small and compact indoor unit suitable for many applications

Low noise level

A low noise level has been achieved for each capacity

Model	7	9	12	14	18	
Static pressure range	Ра			0 to 50		
Noise level (Low speed)	dB(A)	24	27	25	30	30



Static pressure (Pa)

Specifications

Model name			ARXB07LALH	ARXB09LALH	ARXB12LALH	ARXB14LALH	ARXB18LALH		
Power source					230V ~, 50Hz				
Capacity	Cooling	L/M	2.2	2.8	3.6	4.5	5.6		
	Heating		2.8	3.2	4.0	5.0	6.3		
Input power		W	46	55	63	90	96		
Airflow rate	High		370	440	590	800	890		
	Med	m³/h	310	370	500	750	810		
	Low]	280	340	450	700	730		
Static pressure range		De	0 to 50	0 to 50	0 to 50	0 to 50	0 to 50		
Standard static pressure		Ра	25	25	25	25	25		
Sound pressure level	High		29	31	30	33	36		
	Med	dB(A)	26	29	28	32	34		
	Low]	24	27	25	30	30		
Dimensions (H x W x D)		mm	217 x 66	63 x 595		217 x 953 x 595			
Weight		kg	1	8	25				
Connection	Liquid (Flare)			ø6	.35	ø9.52			
pipe diameter	Gas (Flare)	mm		ø12.70					
	Drain			ø25 (I.D.) ; ø32 (O.D.)					

Note : Specifications are based on the following conditions. Cooling : Indoo

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

Compact design

Ultra-slim duct air conditioner for easy installation



Slim size (217mm) allows installation even where the space behind the ceiling is narrow.

Two-direction drain piping



Air-intake

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



Flexible installation



Optional parts

Remote Sensor Unit : UTD-RS100 IR Receiver Unit : Drain Pump Unit : *WB : YWB, TWB

UTB-*WB UTZ-PX1BBA

886 (596)

Dimensions (Unit:mm) (): AR7 / AR9

Models: ARXB07 / ARXB09 / ARXB12 / ARXB14 / ARXB18

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





Refrigerant piping flare connection (Gas)

2 Refrigerant piping flare connection (Liquid)

③ Drain piping connection

Slim Duct

Models (Drain pump internal model)

ARXD07LATH ARXD09LATH **ARXD12LATH ARXD14LATH ARXD18LATH ARXD24LATH**



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



Slim design

This model is slim design, it can install at the place where a ceiling is narrow.



Specifications

Model name			ARXD07LATH	ARXD09LATH	ARXD12LATH	ARXD14LATH	ARXD18LATH	ARXD24LATH	
Power source			230V ~, 50Hz						
Capacity	Cooling	100/	2.2	2.8	3.6	4.5	5.6	7.1	
	Heating	KVV	2.8	3.2	4.0	5.0	6.3	8.0	
Input power		W	44	50	54	92	83	122	
Airflow rate	High		550	600	600	800	940	1,330	
	Med	m³/h	490	550	510	710	840	1,240	
	Low]	440	480	450	610	750	1,100	
Static pressure range		Do	0 to 90	0 to 90	0 to 90	0 to 90	0 to 90	0 to 50	
Standard static pressure	9	Pa	25	25	25	25	25	25	
Sound pressure level	High		28	29	30	34	34	35	
	Med	dB(A)	25	26	27	32	32	32	
	Low]	22	24	24	28	28	29	
Dimensions (H x W x D)		mm		198 x 7	00 x 620		198 x 900 x 620	198 x 1,100 x 620	
Weight		kg	1	8	1	9	23	27	
Connection	Liquid (Flare)			ø6		ø9	.52		
pipe diameter	Gas (Flare)	mm		ø1:	2.70		ø15	5.88	
	Drain		ø22 (I.D.) ; ø26 (O.D.) : VP20						

Note : Specifications are based on the following conditions.

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



Dimensions (Unit : mm)

Models: ARXD07LATH / ARXD09LATH / ARXD12LATH / ARXD14LATH / ARXD18LATH / ARXD24LATH

*Service accessibility must be allowed for when installing the product.

Please consult the installation manual for the necessary service access size.



	ARXD07-14LATH	ARXD18LATH	ARXD24LATH
Α	700	900	1100
В	650	850	1050
С	734	934	1134
D	650	850	1050
Е	P100x6=600	P100x8=800	P100x10=1000
F	18xØ5	22xØ5	26xØ5
G	574	774	974

Low Static Pressure Duct / Duct

Models [Low Static Pressure Duct] ARXB24LATH ARXB30LATH ARXB36LATH ARXB45LATH

Indoor units suitable for quiet rooms such as a hotel or a bedroom

Models [Duct] ARXA24LATH ARXA30LATH ARXA36LATH ARXA45LATH

Slim Compact design allows for easy installation in narrow ceiling spaces up to 270mm



Slim & Compact design

In the case of bottom return air connection, not only does the ndoor unit design allow for installation in a narrow ceiling space of up to 270mm, Further space savings have been achieved by mounting the electrical control box internally inside the chassis.



Control box is now included as part of the main chassis

One touch operating and easy to install long life filter (Optional Parts)

Specifications

Model name			ARXB24LATH	ARXB30LATH	ARXB36LATH	ARXB45LATH	ARXA24LATH	ARXA30LATH	ARXA36LATH	ARXA45LATH
Power source			230V ~, 50Hz					230V ~, 50Hz		
Capacity	Cooling		7.1	9.0	11.2	12.5	7.1	9.0	11.2	12.5
	Heating	KVV	8.0	10.0	12.5	14.0	8.0	10.0	12.5	14.0
Input power		W	145	198	253	338	190	188	312	312
Airflow rate	High		1,100	1,410	1,710	1,970	1,280	1,280	1,720	1,720
	Med	m³/h	920	1,280	1,600	1,790	1,210	1,210	1,670	1,670
	Low		810	1,150	1,470	1,670	1,130	1,130	1,600	1,600
Static pressure range		De	0 to 80	0 to 80	0 to 80	0 to 80	30 to 150	30 to 150	30 to 150	30 to 150
Standard static pressure	е	Fa	40	50	50	60	100	100	100	100
Sound pressure level	High		31	34	37	41	38	40	43	43
	Med	dB(A)	27	32	35	38	36	38	41	41
	Low		25	29	33	36	34	36	39	39
Dimensions (H x W x D)	1	mm		270 x 1,1	35 x 700			270 x 1,1	135 x 700	
Weight		kg	43		45		43		45	
Connection Liquid (Flare)				ø9	.52			ø9	.52	
pipe diameter	Gas (Flare)	mm	ø15	5.88	ø19	.05	ø15.88		ø19.05	
	Drain			ø25 (I.D.) ;	ø32 (O.D.)			ø25 (I.D.) ;	ø32 (O.D.)	

Note : Specifications are based on the following conditions.

 $\label{eq:cooling: Indoor temperature of 27^{CDB / 19^{CWB}, and outdoor temperature of 35^{CDB / 24^{CWB}.} \\ Heating: Indoor temperature of 20^{CDB / (15^{CWB}), and outdoor temperature of 7^{CDB / 6^{CWB}.} \\ Pipe length: 7.5 m; Height difference between outdoor unit and indoor unit: 0 m. \\ \end{tabular}$

Line-up of low-noise and high-power models, compatible with a wide range of static pressure



Low Static Pressure Duct type Optimum model for hotels or bedrooms

Duct type Powerful model with a flexible design

An ultra low-noise model that achieves a quiet interior. Perfect for hotels or bedrooms with limited air duct installation space. Two different levels can be selected according to the static pressure range. With a powerful motor, appropriate for a wide range of static pressure. Flexible air duct installation is possible in a large space such as an office.





Two-direction drain piping



Easy maintenance

See below for the case of rear suction type



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

Installation styles

Embedded in Ceiling



Hanging from Ceiling



Optional parts

Remote Sensor Unit : UTD-RS100 Long Life Filter : UTD-LF25NA Flange (Square) : UTD-SF045T *WB : YWB, TWB Flange (Round) : UTD-RF204 IR Receiver Uni : UTB-*WB Drain Pump Unit : UTZ-PX1NBA

Dimensions (Unit : mm)

Models: ARXB24 / ARXB30 / ARXB36 / ARXB45 ARXA24 / ARXA30 / ARXA36 / ARXA45

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



High Static Pressure Duct

Models ARXC36LATH ARXC45LATH ARXC60LATH ARXC72LATH ARXC90LATH

These indoor units allow for high airflow quantities



ARXC36LATH ARXC45LATH ARXC60LATH



ARXC72LATH ARXC90LATH

Specifications

Model name			ARXC36LATH	ARXC45LATH	ARXC60LATH	ARXC72LATH	ARXC90LATH	
Power source				·	230V ~, 50Hz			
Capacity	Cooling	k)0/	11.2	12.5	18.0	22.4	25.0	
	Heating		12.5	14.0	20.0	25.0	28.0	
Input power		W	405	427	427	1,110	1,250	
Airflow rate	High		2,600	3,500	3,500	3,900	4,300	
	Med	m³/h	1,950	3,000	3,000	3,300	4,000	
	Low		1,450	2,460	2,460	3,000	3,500	
Static pressure range		Pa	100 to 200	100 to 250	100 to 250	50 to 300	100 to 300	
Standard static pressure		Fa	100	100	100	260	250	
Sound pressure level	High		45	49	49	51	53	
	Med	dB(A)	38	45	45	48	51	
	Low		32	42	42	45	49	
Dimensions (H x W x D)		mm		400 x 1,050 x 500	450 x 1,550 x 700			
Weight		kg	45	4	7	82	85	
Connection	Liquid			ø9.52 (Flare)	ø12.70 ((Brazing)		
pipe diameter	Gas	mm		ø19.05 (Flare)		ø22.22 (Brazing)		
	Drain				ø25 (I.D.) ; ø32 (O.D.)			

Note : Specifications are based on the following conditions.

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

Easy installation (Compact size & Lightweight) Models : ARXC36

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





ARXC36LATH: 45kg (unit: mm)

Low noise

Models : ARXC36 / ARXC45 / ARXC60

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



ARXC36LATH : Plastic fan [45dB(A)] * Model : Material (At 100Pa : Actual noise measurement value)



Static pressure selection Models : ARXC72 / ARXC90

2 Types of static pressure mode are selectable.



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



Long-Life Filter : UTD-LF60KA (For ARXC36 / 45 / 60) IR Receiver Unit : UTB-*WB *WB : YWB, TWB



35

Floor / Ceiling

Models AB*A12LBTH AB*A14LBTH AB*A18LBTH AB*A24LBTH



The slim and lightweight design allows the unit to be suspended from the ceiling or installed on the floor. This type suits many room designs

Flexible installation

Example for floor installation

Floor console



Example for ceiling installation

Under ceiling



Specifications

Model name			AB*A12LBTH	AB*A14LBTH	AB*A18LBTH	AB*A24LBTH		
Power source				230V ~	~, 50Hz			
Capacity	Cooling	F/V/	3.6	4.5	5.6	7.1		
	Heating		4.0	5.0	6.3	8.0		
Input power		W	30	42	74	99		
Airflow rate	High		660	780	1,000	1,000		
	Med	m³/h	570	640	720	820		
	Low		490	550	580	680		
Sound pressure level	High		36	40	46	47		
	Med	dB(A)	32	36	39	42		
	Low		28	34	35	37		
Dimensions (H x W x D)		mm		199 x 990 x 655				
Weight		kg	25		27			
Connection	Liquid (Flare)		ø6	.35	ø9	.52		
pipe diameter	Gas (Flare)	mm	ø12	2.70	ø15.88			
	Drain			ø25 (I.D.) ;	ø32 (O.D.)			

AB*: ABY(FUJITSU), ABH(GENERAL)

Note : Specifications are based on the following conditions.

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

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



Super vane

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

Auto-closing louvre

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

Compact design

Symmetrical, slim and compact design.

990

High power DC fan motor

- High power
- Wide rotatition range
- High efficiency





Dimensions (Unit : mm)

Models: AB*A12 / AB*A14 / AB*A18 / AB*A24



Refrigerant piping flare connection (Liquid)
 Refrigerant piping flare connection (Gas)

③ Drain piping connection

Ceiling

Models AB*A30LBTH AB*A36LBTH AB*A45LBTH AB*A54LBTH



Easily concealed in any installation

Installation



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

Concealed



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

Wall mounted



Installation which fixes the indoor unit to the wall by the use of wall brackets (Field supplied). This type of installation can be used when the ceiling space is insufficient.

Specifications

Model name		AB*A30LBTH	AB*A36LBTH	AB*A45LBTH	AB*A54LBTH			
Power source			230V ~, 50Hz					
Capacity	Cooling	L\\/	9.0	11.2	12.5	14.0		
	Heating	NVV	10.0	12.5	14.0	16.0		
Input power		W	66	85	131	180		
Airflow rate	High		1,630	1,690	2,010	2,270		
	Med	m³/h	1,370	1,400	1,600	1,780		
	Low		1,140	1,170	1,230	1,280		
Sound pressure level	High		42	45	48	51		
	Med	dB(A)	38	38	42	45		
	Low]	33	34	35	36		
Dimensions (H x W x D) mm		mm	240 x 1,660 x 700					
Weight kg		kg	47	47 48				
Connection	Liquid (Flare)		ø9.52		ø9.52			
pipe diameter	pipe diameter Gas (Flare)		ø15.88		ø19.05			
	Drain		ø25 (I.D.) ; ø32 (O.D.)					

AB*: ABY(FUJITSU), ABH(GENERAL)

Note : Specifications are based on the following conditions. Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.

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

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

Voltage : 230 [V].

Double auto swing and wide airflow

Auto airflow direction and auto swing



4 steps selectable

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

Dimensions (Unit : mm)



Slim & Hight **Compact design** 240mm

Condensate lift-up mechanism (Option)

Optional drain lift-up mechanism allows flexible installation.



Fresh air intake



High power DC fan motor

- High power
- Wide rotatition range
- High efficiency



Long-life filter

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

Optional parts

Drain Pump Unit : UTR-DPB24T

Models: AB*A30 / AB*A36 / AB*A45 / AB*A54 1660 1600 00 20 100 _115 165 240 135 160 160 • ① Refrigerant piping flare connection (Liquid) 2 Refrigerant piping flare connection (Gas) 3 Drain piping connection

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Compact Wall Mounted

Models (EEV internal model)

Models (EEV external model)

AS A07LACH AS*A09LACH AS*A12LACH AS*A14LACH AS*E07LACH AS*E09LACH AS*E12LACH AS*E14LACH

Compact and Stylish design indoor



High quality air conditioning by incorporation of high performance filter.



Long-life* lon Deodorization Filter

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

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



Apple-catechin Filter

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

Deodorizing effect (Odor reduction rate)



(ppm) 160 120 80 40 0 0 30 60 120 (min)

Trimethylamine

Testing organization : Environmental Sanitary Inspection Center Test method : Deodorization Test

Specifications

Model name			AS*A07LACH	AS*A09LACH	AS*A12LACH	AS*A14LACH	AS*E07LACH	AS*E09LACH	AS*E12LACH	AS*E14LACH
Power source				230V ~	, 50Hz		230V ~, 50Hz			
Capacity	Cooling	L/\//	2.2	2.8	3.6	4.5	2.2	2.8	3.6	4.5
	Heating	KVV	2.8	3.2	4.1	5.0	2.8	3.2	4.1	5.0
Input power		W	16	16	19	30	15	16	20	28
Airflow rate	High		490	500	560	670	490	500	560	680
	Med	m³/h	450	450	480	490	450	450	480	490
	Low]	370	370	420	420	370	370	420	420
Sound pressure level	High		35	36	39	44	34	35	38	43
	Med	dB(A)	33	33	35	37	32	32	34	35
	Low]	27	27	31	32	26	26	30	30
Dimensions (H x W x D)		mm	275 x 790 x 215				275 x 790 x 215			
Weight		kg		ę	9		9			
Connection	Liquid (Flare)			ø6.35			ø6.35			
pipe diameter	Gas (Flare)	mm		ø12	2.70		ø12.70			
	Drain	1		ø13.8(I.D.) ; ø15.8-ø16.7(O.D.)			ø13.8(I.D.) ; ø15.8-ø16.7(O.D.)			
EV Kit (option)	·			-	-		UTR-E	V09XB	UTR-E	V14XB

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

Low noise

Electronic Expansion valves are built-in allowing for easy installation.

For installation to places that require additional low noise, select the external electronic expansion valve type.



Compact size

Powerful output even compact design

^{Width} 790mm

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

Symmetrical design

Symmetrical, clean design that suits all interiors.

New style high power DC fan motor

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



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

Swing

3

(4)

Step

Swing

Easy maintenance

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



Wired control compatible

Wired and Wireless Remote Controller are acceptable.





Wired Remote Controller Simple Remote Controller

Dimensions (Unit : mm)

Models: AS*A07 / AS*A09 / AS*A12 / AS*A14 AS*E07 / AS*E09 / AS*E12 / AS*E14



Refrigerant pipe flare connection (Liquid)
 Refrigerant pipe flare connection (Gas)

3 Drain piping connection





Wall Mounted

Models AS*A18LACH AS*A24LACH AS*A30LACH



Simple & Elegant Appearance Design

Compact & Slim design

By using DC fan motor, compact design is realized.



Specifications

Model name			AS*A18LACH	AS*A24LACH	AS*A30LACH			
Power source			230V ~, 50Hz					
Capacity	Cooling	L\A/	5.6	7.1	8.0			
	Heating	NVV	6.3	8.0	9.0			
Input power		W	35	64	91			
	High		840	1,100	1,240			
Airflow rate	Med	m³/h	770	910	980			
	Low		690	730	770			
	High		41	48	52			
Sound pressure level	Med	dB(A)	39	43	45			
	Low		35	35	35			
Dimensions (H x W x D)		mm		320 x 998 x 228				
Weight		kg	15					
Connection	Liquid (Flare)			ø9.52				
pipe diameter	Gas (Flare)	mm		ø15.88				
	Drain			ø12 (I.D.) ; ø16 (O.D.)				

AS*: ASY(FUJITSU), ASH(GENERAL) Note : Specifications are based on the following conditions. Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB. Heating : Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.

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

Voltage : 230 [V].

"Vertical airflow" provides powerful floor level heating



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



Easy maintenance

Simplification of drain pan cleaning improves maintenance-ability.

Dimensions (Unit : mm)

Models: AS*A18 / AS*A24 / AS*A30





Antibacterial deodorizing pre-filter with special ceramic powder



Long-life* lon Deodorization Filter

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

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



Using different filters at both sides

Apple-catechin Filter

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



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

③ Drain hose connection

Control System Diagram



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



Wiring system

Wiring construction of the control system is made of power source wiring, transmission wiring and remote controller wiring.
Total wiring length (total length of transmission line) can be extended up to 3,600m (by using signal amplifiers).



Group Remote Controller line



Controller

Remote Controller

unit

Wired, Simple and Wireless Remote Controllers can be used jointly.

Comparison table of Controllers

	Item		Wired Remote	Simple Remote	Simple Remote ¹	Wireless Remote Controller	Group Remote	Touch Panel Controller	System Controller (Software)
	Model name		UTY-RNKY UTY-RHKYT UTY-RNKG	UTY-RSKY UTY-RSKYT UTY-RSKG	UTY-RHKY UTY-RHKYT UTY-RHKG	UTY-LNHY UTY-LNHG	UTY-CGGY UTY-CGGG	UTY-DTGY UTY-DTGG	UTY-APGX
Max	c. controllable remote cont	troller groups	1	1	1	1	8	400	1600
Max	c. controllable indoor units		16	16	16	16	96	400	1600
Max	c. controllable groups		_	_	_	-	_	400	1600
	On / Off		•	•	•	•	•	٠	•
_	Operation mode setting		•	•	-	•		•	•
tior	Fan speed setting		•	•	•	•		•	•
Iunc	Room temp. setting		•	•	•	•	•	•	•
rol	Room temp. set point lim	nitation	-	_	_	_	_	•	•
cont	Test operation		•	•	_	•	-	•	-
ng .	Up/down air direction fla	p setting		_	_	•	_	•	•
tioni	Right/left air direction flap setting		•	_	_	•	_	•	•
ndit	Group setting		_	_	_	_	_		
r co	RC prohibition		_	_	_	_	_	•	•
Ā	Anti freeze setting		-	_	_	_	_	•	•
	Economy mode setting			_	_	•	_	•	•
	Failure		•	•	•	_	•	•	•
	Defrosting		•	•	•	-	-	•	•
ž	S Current time		•	-	_	•	•	•	•
spla	Day of week		•	-	-	-	•	•	•
ā	R.C. prohibition		•	•	•	-	_	•	•
	Cooling/heating priority		•	•	•	-	•	•	•
	Address display		•	•	•	-		•	•
	System schedule timer		-	_	_	-	_	•	•
		On/off per day	-	-	-	-	-	20	72
		On/off per week	-	-	-	-	-	140	504
	Weekly timer			_	_	_		_	-
ler		On/off per day	2	-	-	-	2	-	-
Tim		On/off per week	14	_	_	_	14	_	-
	On/off timer		•	_	_	•	_	_	_
	Sleep timer		_	_	_	•	_	_	-
	Program timer		-	-	_	•	_	-	-
	Day off		•	_	_	_	_	٠	•
	Min. unit of timer setting (Minutes)		30	_	_	5	10	10	10
	Status monitoring system		-	-	-	-	_	٠	•
	Electricity charge calcula	ition	_	_	_	_	_	_	•
trol	Error history		•	•	•	_	•	•	•
Con	Emergency stop		-	-	-	-	-	• *2	-
	Control via internet		-	-	-	-	_	-	•
	E-mail notiffication for ma	alfunction	-	-	-	-	-	-	•

*1 "Operation mode" setting is not available for this model. *2 This function is available only through external input. control.

Wired Remote Controller

UTY-RNK*

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

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



Powerful features and compact size

This Wired Remote Controller incorporates four primary functions into a single unit.



Accurate and comfortable

Indoor temperature can be detected accurately by the inclusion of a thermo sensor in the body of the wired controller. This new wired remote controller and the optional remote sensor allows flexibility in sensor location, suitable for all requirements.





Displayed temperature is set temperature.

Built-in timers

10:00 24. **7**. ®

.....

Weekly timer : Possible to set ON/OFF time to operate twice each day of the week.





Setback timer: Possible to set temperature for two times spans and for each day of the week.

Set	up	scr	een	exa	mple	•		
Set	fror	n S	und	ay t	o Sat	urda	ıy:	
12:	00 t	o 15	5:00	, 28	°C.			
					2	₿°C		_
-	~	-	-					E.

© ■ > <u>- - - - + + + + + + - -</u>

0 3 6 9 12 15 18 21 Time

At "Weekly timer" + "Set back timer" setup



 $24^{\circ}C \rightarrow 28^{\circ}C \rightarrow 24^{\circ}C$

Diagnosis check function

Two methods are available for determining the cause of failure in the event of a malfunction occurs:

- Malfunction diagnosis function
- Error history (Last 16 error codes can beaccessed)

Simple installation

Components are compatible with standard switch boxes. Flat back surface allows to be installed wherever it is needed.



European mounting box JIS built-in box

Specifications

Model name	UTY-RNK*
Power Supply	DC 12V
Dimensions (H x W x D) (mm)	120 x 120 x 17
Weight (g)	160

DC12V is supplied by the indoor unit. K* : KY(FUJITSU), KYT(FUJITSU), KG(GENERAL)



Easy-to-understand time bar display

©7**▶ 20:00**∞

Simple Remote Controller

UTY-RSK* UTY-RHK* (Without Operation mode)

Compact remote controller provides access to basic functions

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







UTY-RHK* Without Operation mode

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Functions

User-friendly operation

- Provides access to basic operations, such as Start / Stop, Fan control, Operation mode switching, and Room temperature setting.
- A large On / Off button is provided in the centre of the remote controller for easy operation.
- · Can be used jointly with other individual control unit.
- Following an error display, diagnostics can be carried out on the controller.

Simple installation

Can be mounted on the European Mounting Box (Installation dimension: 60mm) or the JIS Built-in Box (Installation dimension: 83.5mm).



European switch box



_	

Background light

- Background light enables easy operation in a darkened room.
- Background light activates during all button operations, and lasts 10 seconds in Operation mode and 5 seconds in stop mode after a button is pressed.



Max. controllable **16**

indoor units

Functions summary



*1: "Operation mode" setting is not available.

It is recommend to use together with other type controller.

Specifications

Model name	UTY-RSK*	UTY-RHK*			
Power Supply	DC 12V				
Dimensions (H x W x D) (mm)	120 x 75 x 14				
Weight (g)	90 (100 : UTY-RSKYT) 90 (100 : UTY-RHKYT)				

DC12V is supplied by the indoor unit. $\ \ K^{\star}$: KY(FUJITSU), KYT(FUJITSU), KG(GENERAL)

Wireless Remote Controller

UTY-LNH*

Simple and sophisticated operations with a choice of 4 daily timers

• A single controller controls up to 16 indoor units.





Functions

Built-in daily timer

Select from 4 different timer programs : On / Off / Program / Sleep

Program timer : The program timer operates the ON and OFF timer once within a 24 hour period.

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

Cooling operation/dry operation

When the sleep timer is set, the set temperature automatically rises $1^{\circ}C$ every hour. The set temperature can rise up to a maximum of $2^{\circ}C$.



Heating operation

When the sleep timer is set, the set temperature automatically drops 1°C every 30 minutes. The set temperature can drop to a max. of 4°C.



Easy installation and operation

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



Wide and precise



Address setting

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



Specifications

Model name	UTY-LNH*
Battery	1.5V (R03 / LR03 / AAA) x 2
Dimensions (H x W x D) (mm)	158 x 56 x 20
Weight (g)	70

H* : HY(FUJITSU), HG(GENERAL)

IR Receiver Unit

UTB-*WB

Necessary to control for all duct type by Wireless Remote Controller



Wiring connection







Wireless Remote Controller

Duct Type Indoor Unit

Specifications

Model name	UTB-*WB
Battery	DC 12V
Dimensions (H x W x D) (mm)	122 x 60 x 26.5
Weight (g)	150
*\//D · V\//D T\//D	

WB : YWB, TWB

IR Receiver Kit UTY-LRH*B1

Cassette type indoor unit can be controlled with Wireless Remote Controller



Remote Controller

Specifications

Model name	UTY-LRH*B1
Battery	DC 12V
Dimensions (H x W x D) (mm)	213.8 x 213.8x 25.7
Weight (g)	140
H* : HY(FUJITSU), HG(GENERAL)	-

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Group Remote Controller

Group control of indoor units with simple operation

- Up to 8 remote controller groups can be controlled by one Group Remote Controller.
- Up to 64 Group Remote Controllers can be connected in one VRF network system.
 Network Convertor (UTY-VGGX) is required to connect Group Remote Controllers to a VRF network system.

(Network Convertor allows up to 4 Group Remote Controllers)

Functions

High performance and compact size

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

Control up to 8 remote controller groups

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





Group Remote Controller To control office room, lounge, restaurant and lobby (8 remote controller grou Group Remote Controller 2

To control guest room and launge (7 remote controller groups)

Built-in weekly timers

The weekly timer is provided as a standard function.

- 1. The timer can be set up for up to 4 times per day. (On / Off, operating mode, set temperature)
- 2. Allows separate settings for each day of the week.

ON / OFF switching



Air conditioning ON/OFF setting corresponding to air conditioning specification needs is possible.



Cooling / Heating switching



Temperature switching (Peak power cut)

Ope.



Since peak power cut is performed in a planned way, setting which changes the room temperature linked with time is possible.

Temperature switching (Anti-freeze)





Stop setting



Indoor unit stop setting at operation end time is possible.





Weekly

timer



12:00

Central

control

26. 7



Useful functions



*1 : "AUTO (A)" is not available for a heat pump model unless it is set up for the master indoor unit.

- *2 : "FAN % " is not available for a heat pump model
- *3 : "HEAT ${\boldsymbol{\circlearrowright}}$ " is not available for a cooling only model

Specifications

Model name	UTY-CGG ⁺
Power Supply	DC 12V
Dimensions (H x W x D) (mm)	120 x 120 x 17
Weight (g)	200

DC12V is supplied by a network converter. G^* : GY(FUJITSU), GG(GENERAL)

Touch Panel Controller

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

- Large-sized 7.5-inch TFT color
- LCD Easy finger touch operation
- Stylish shape and design to suit all application
- No additional component is required for installation
- Up to 400 indoor units can be controlled
- Selectable 2 display types (Icon / List) in monitoring mode

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

Functions



Real size screen image

Easy operation

- Large and wide-angled LCD is easily viewable even at a distance
- Easy-to-understand icon-driven Graphical User Interface (GUI)
- Wide range of simple-to-understand icons



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

Easy maintenance

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







Up to 400 indoor units can be controlled



Function

- Up to 400 indoor units can be controlled
- It allows multiple indoor units grouping
- Schedule timer function is standard (20 patterns per day)
- Emergency stop function(through the external input control)
- Temperature upper and lower limit setting
- The clock of each indoor unit correct setting





Individual control



Schedule control

Automatic clock adjustment





Indoor units operation monitoring

Versatility

Emergency stop function

CSV format data edited by PC can be imported to Touch Panel Controller.



Easy installation

Touch Panel Controller is easily mounted to the wall Flat back surface allows to be installed wherever it is needed.

• Correctable mechanism for tilting (horizontal) after the installation of the body

No additional component is required for installation

• There is no need for the installation space of power supply adaptor and transmission adaptor etc.



Specifications

Model name	UTY-DTG*
Power Supply	100-240V 50/60Hz
Dimensions (H x W x D) (mm)	260 x 246 x 54
Weight (g)	2,150
Interface	USB 2.0

G* : GY(FUJITSU), GG(GENERAL)

System Controller Software

This system realizes the advanced general monitoring & control of VRF network system from small scale buildings to large scale buildings.

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





Functions

Remote centralized control

System Controller may be used on site or remotely over various networks for remote central control. System Controller requires 2 softwares working together. Server program runs in the background and communicate with VRF network system. Client program provides user interface and communicate with the Server. Server and client program may run in a single PC or in different PCs separated by network.

By using client software, one PC can perform central control and web control of 10 VRF network system sites with max. 20 buildings per site.



On site central control

Max. 4 VRF network systems per site



User friendly view and operation

- Provides graphical view of units layout as site, building and floor layout just as they are located in the actual sites.
- Unit status may be monitored at a glance, selecting the appropriate view that just fit your purpose.
- Control may also be performed from various views as individual unit or as a whole site, building or a whole floor.
- User defined groups, that are neatly arrange as tree view, easy to find, monitor and operate.



Electricity charge calculation

- Total electricity charge, billed for multiple indoor units connected to the charge meter for air conditioning, is apportioned according to the accumulated operation time and indoor unit capacity.
- Allows accounting for special rates (e. g., for night or weekend use).
- Calculations can be printed as final bills format.



Note: This electrical power apportioning calculation is not official.

When issued to the user as a bill, it must be explained to the user in advance.

Schedule control

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



Schedule Control

Error display

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



Operating & control record

Displays the history of operation status and control.



Operation Record

Diverse control of indoor units

- Indoor unit operation state, operation mode, etc. are displayed
- Indoor unit start/stop and operation mode switching
- Temperature setting, Remote Controller prohibition.

Energy saving function

Energy saving operation considering comfort by economy setting, upper / lower limit temperature setting, etc.



Operating Conditions

The following chart shows the detail requirement for an AT compatible personal computer to run System Controller. Applies for both server and client PC.

Personal Computer		AT compatible machine that runs Microsoft® Windows®
	Operating System	Microsoft® Windows Vista® Home Premium, Business Microsoft® Windows® XP Professional with Service Pack 2 or later *64-bit version of Windows® are not supported.
	CPU	Intel® Pentium® / Celeron 2 GHz (Server), 1 GHz (Client) or higher
	HDD	40 GB or more of free space (5 GB for Client PC)
	Memory	2 GB or more (Server), 1 GB or more (Client)
	Display	1024 x 768 dots or more. 15 inch or higher size is preferable.
	Interface	USB port is required for each of the followings for Server PC; • Wibu Key (Software protection key) • Echelon® U10 USB Network Interface (Required for each VRF Network) Ethernet port is required for remote connection using internet.
Accelerator		Requires the internal graphics accelerator be compatible with Microsoft $^{\otimes}$ DirectX $^{\otimes}$ 9.0
Other Software Requ	ired	Adobe® Reader® 9.0 or later

<PACKING LIST>

STAGRANO LIGTA		
Item	Q'ty	Application
CD-ROM	1	Includes the software for System Controller. Both server and client software is included.
Wibu Key (Software protection key)	1	Software protection key to be inserted in a USB slot running System Controller. System Controller may only run on a PC with Wibu Key. Remote client software does not require Wibu Key.

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

Network Convertor





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

Functions

Used for connecting single split system

- Split type systems can be centrally controlled from Touch Panel Controller or System Controller through connection to the VRF's network convertor.
- On / Off Control, Master control, Room temperature and Fan speed setting via the Network Convertor are available.
- One Network Convertor can be used to connect and control up to 16 single units.



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

Used for connecting Group Remote Controller

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



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

Specifications

Model name	UTY-VGGX					
Power Supply	220-240V 50/60Hz					
Power Consumption (W)	8.5					
Dimensions (H x W x D) (mm)	67 x 288 x 211					
Weight (g)	1,500					

Dimensions (Unit : mm)



Network Convertor for LONWORKS®



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



Specifications

Model name	UTY-VLGX
Power Supply	220-240V 50/60Hz
Power Consumption (W)	4.5
Dimensions (H x W x D) (mm)	67 x 288 x 211
Weight (g)	1,500

Transmission specifications (BMS side)

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

Dimensions (Unit : mm)



BACnet[®] Gateway Max. controllable Software **4** VRF network **UTY-ABGX** systems Max. controllable • The VRF network system can be incorporated into a Building Management System. 400 • Enables central control of up to 1,600 indoor units through BACnet®, a global standard for Outdoor units open networks. CD-ROM Software Conforms to ANSI / ASHRAE Standards® 135-2004 BACnet® Application Specific Controller (Software) Protection Key Max. controllable (B-ASC) BACnet® / IP over Ethernet. 1,600 Indoor units · Connects up to 4 VRF network systems (1,600 indoor units / 400 outdoor units) per gateway. · Ideal for applications in high rise buildings and hotels, etc.

Installation example



Requirements of PC for this software

Personal Computer		AT compatible machine that runs Microsoft® Windows®
	Operating System	Microsoft® Windows Vista® Home Premium, Business (English version) Microsoft® Windows® XP Professional (English version / Service Pack 3 or later) *64-bit version of Windows® are not supported.
	CPU	Intel® Pentium® / Celeron 2 GHz or higher
	HDD	40 GB or more of free space
	Memory	2 GB or more
	Display	1024 x 768 dots or more
	Interface	USB port is required for each of the followings; • Wibu Key (Software protection key) • Echelon® U10 USB Network Interface (Required for each VRF Network) Ethernet port is required
Other Software Requ	ired	Adobe® Reader® 9.0 or later
<packing list=""></packing>		

Packing List CD-ROM / Wibu Key

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

Signal Amplifier

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

Installation example



AB+BE+BC<500m ED <500m

Specifications

Model name	UTY-VSGX
Power Supply	220-240V 50/60Hz
Power Consumption (W)	4.5
Dimensions (H x W x D) (mm)	67 x 288 x 211
Weight (g)	1,500



Dimensions (Unit : mm)



External Switch Controller

UTY-TEKX

Air conditioner switching can be controlled by connecting other sensor switches

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

• Card-key or other sensor switches are available as a field supplied parts.

Installation example

Auto mode operation, which switches the cooling and the heating automatically, is enabled by using the sensor switch and External Switch Controller.

Note: All indoor units will operate in the same mode.



Electrical wiring



Specifications

Model name	UTY-TEKX
Power Supply	DC 12V
Dimensions (H x W x D) (mm)	120 x 75 x 30
Weight (g)	90

DC12V is supplied by the indoor unit.

Service Tool Software

Extensive monitoring and analysis functions for installation and maintenance.

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

Wiring connection







Functions

Equipment Detail (Diagram)

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



Equipment Detail (List)

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

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Error History



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

Remote File Download



Operation and error history data can be downloaded. Only the required data may be downloaded specifying the refrigerant system, unit and time range.

Requirements of PC for this software

Personal Computer AT compatible machine that runs Microsoft® Windows® Microsoft® Windows® 2000 Professional (English version / Service pack 4 or later) Microsoft® Windows® XP Professional (English version / Service pack 2 or later) Operating System Microsoft® Windows Vista® Home Premium, Business *64-bit version of Windows® are not supported. CPU Intel[®] Pentium[®] / Celeron[®], AMD Athlon[™] / Duron[™] 1 GHz or higher HDD 4.1 GB or more of free space Memory 1 GB (Vista), 512 MB (XP / 2000) or more Interface USB port is required for each of the following ; • Wibu Key (Software protection key) • Echelon® U10 USB Network Interface (Required for each VRF Network) Software Internet Explorer 6.0 or 7.0 / Adobe® Reader® 9.0 or later Hardware USB Adaptor is U10 USB Network interface of Echelon® corporation. <PACKING LIST> Packing List CD-ROM / Wibu Key

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

System List

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

Commissioning Tool

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Test run commands can be executed with this tool.

During test running, the outdoor unit / indoor unit sensor data can be saved (commissioning log data).

After the end of test running, this data can be exported in CSV file format

Web Monitoring Tool

Product features

- Troubleshooting is performed by monitoring each air conditioning unit remotely during periodical system checks.
- Error notification can be automatically transmitted to several locations using the internet*1.
- Requires either a dedicated internet connection* or public telephone line.
- Determination of an error occurrence can be made through error warnings and equipment status information obtained from a remote location.

Software

- The monitoring data in a remote side can be optionally downloaded. And, this data can be displayed in offline mode of the service tool.
- · Monitoring side computer is not required to install special software, requires only general web browser.
- * 1: USB of internet mail system required.

Web Monitoring System



System components



Support 4 VRF network systems

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

Suitable for large-scale buildings or hotels.





Comparison table

No	Item	Item Service Tool UTY-ASGX	Web Monitoring Tool UTY-AMGX	
			Monitoring Side	VRF System Side
1	Interchangeability of equipment	•	٠	•
2	Indication of equipment list	•	٠	•
3	Operation control	•		•
4	Indication of refrigerant circuit diagram	•	٠	•
5	Commissioning tool	•		•
6	Monitoring of equipment information	•	٠	•
7	Monitoring of operating condition	•	٠	•
8	Monitoring of sensor data	•	٠	•
9	Storage and CSV output of operating history (sensor data)	•	٠	•
10	Indication of trend graph	•	•	•
11	Printing of trend graph	•	•	•
12	Monitoring and screen display of abnormalities	٠	٠	•
13	E-mail automatic transmission of abnormalities			● ^{*1}
14	Setting for user level			•

*1. Available only during a connection to the Internet.

Requirements of PC for this software

Personal Computer		AT compatible machine that runs Microsoft® Windows®	
	Operating System	Microsoft [®] Windows [®] 2000 Professional (English version / Service pack 4 or later) Microsoft [®] Windows [®] XP Professional (English version / Service pack 2 or later) Microsoft [®] Windows Vista [®] Home Premium, Business *64-bit version of Windows [®] are not supported.	
	CPU	Intel [®] Pentium [®] / Celeron [®] , AMD AthIon [™] / Duron [™] 1 GHz or higher	
	HDD	4.1 GB or more of free space	
Memory		1 GB or more	
	Interface	USB port is required for each of the following ; • Wibu Key (Software protection key) • Echelon [®] U10 USB Network Interface (Required for each VRF Network) Ethernet port is required for remote connection using internet.	
Software		Internet Explorer 6.0 or 7.0 / Adobe® Reader® 9.0 or later	
Hardware		USB Adaptor is U10 USB Network interface of Echelon® corporation.	
<packing list=""></packing>			
Packing List		CD-ROM / Wibu Key	

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

Energy Recovery Ventilator

Models

UTZ-BX025A UTZ-BX035A UTZ-BX050A UTZ-BX080A UTZ-BD100A



Energy recovery ventilator unit offers maximum comfort and greater energy savings.



UTZ-BX080A

UTZ-BD100A

Heat exchange ventilation and normal ventilation

Heat exchange ventilation

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

Normal ventilation

This is used in the spring and autumn, when rooms are not cooled or heated, that is, when there is little difference between the indoor and outdoor air conditions. In addition, at night during the hot season, when the outside air temperature drops the outside air is drawn inside without heat exchang, alleviating the load on the air conditioning equipment.

Adopts a highly efficient counter-flow heat exchange element



Specifications

Rated flow rate				250 m³/h	350 m³/h	500 m³/h	800 m³/h	1000 m³/h
Model No.			UTZ-BX025A	UTZ-BX035A	UTZ-BX050A	UTZ-BX080A	UTZ-BD100A	
Powe	r source					220 - 240V, 50Hz		
	Input power	(Extra high) / High / Low	W	119 / 99 / 79	154 / 124 / 117	214 / 169 / 151	347 / 309 / 302	445 / 360 / 332
	Air flow rate	(Extra high) / High / Low	m³/h	250 / 250 / 170	350 / 350 / 280	500 / 500 / 370	800 / 800 / 650	1,000 / 1,000 / 810
5 E	External static pressure	(Extra high) / High / Low	Pa	90 / 80 / 37	95 / 65 / 42	105 / 70 / 38	140 / 110 / 70	90 / 55 / 35
HEAT EXCHAN VENTILATION	Temperature Exchange Efficiency	(Extra high) / High / Low	%	75 / 75 / 77	75 / 75 / 77	75 / 75 / 77	75 / 75 / 76	75 / 75 / 76
	Energy Exchange Efficiency Cooling	(Extra high) / High / Low	%	63 / 63 / 66	66 / 66 / 69	62 / 62 / 67	65 / 65 / 68	65 / 65 / 68
	Energy Exchange Efficiency Heat pump	(Extra high) / High / Low	%	70 / 70 / 73	69 / 69 / 71	67 / 67 / 71	71 / 71 / 74	71 / 71 / 73
	Sound pressure level	(Extra high) / High / Low	dB*	28 / 26 / 21	32 / 29 / 25	34 / 31 / 25	38 / 36.5 / 32	37.5 / 36 / 31
Z	Input power	(Extra high) / High / Low	W	119 / 98 / 79	151 / 119 / 113	210 / 161 / 145	337 / 300 / 297	438 / 358 / 329
ATIC	Air flow rate	(Extra high) / High / Low	m³/h	250 / 250 / 170	350 / 350 / 280	500 / 500 / 370	800 / 800 / 650	1,000 / 1,000 / 810
NTIL	External static pressure	(Extra high) / High / Low	Pa	90 / 80 / 37	95 / 65 / 42	105 / 70 / 38	140 / 110 / 70	90 / 55 / 35
ЯЯ	Sound pressure level	(Extra high) / High / Low	dB*	27 / 26.5 / 21.5	31 / 30 / 26	34 / 32 / 26.5	38.5 / 37 / 33	38 / 36.5 / 31.5
Dimensions (W × D × H) mm		mm	882 x 599 x 270	882 x 804 x 270	962 x 904 x 270	1,322 x 884 x 388	1,322 x 1,134 x 388	
Weight kg			kg	29	37	43	71	83
Outlet duct diameter mm			150	150	200	250	250	
Operation range °C			-10 to 40	-10 to 40	-10 to 40	-10 to 40	-10 to 40	
Maximum humidity %			%	85	85	85	85	85

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

Energy efficiency and ecology

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



Features of heat exchange element

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



(Cross-flow element)



(Counter-flow element)

Features of heat exchange element

Significantly reducing low pressure loss and noise allows low-noise operation of 32 dB (High) or less for models with a capacity of 500 m3/h or less, and 37.5 dB (High) for models with a capacity of 1,000 m³/h.

Long heat-exchanger service life

Cleaning reduced due to the special material heat exchanger. The nylon/polyester fibre filter offers high dust retention capacity.

Slim shape and easier installation

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



Reverse mountable direct air supply / exhaust system

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

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



Dimensions (Unit : mm)

Models: UTZ-BX025A / UTZ-BX035A / UTZ-BX050A / UTZ-BX080A / UTZ-BD100A



	UTZ-BX025A	UTZ-BX035A	UTZ-BX050A	UTZ-BX080A	UTZ-BD100A
A	810	810	890	1,250	1,250
В	599	804	904	884	1,134
С	315	480	500	428	678
D	142	162	202	228	228
E	600	600	600	600	600
F	655	860	960	940	1,190
G	19	19	19	19	19
H	270	270	270	388	388
1	135	145	145	194	194
J	159	159	159	218	218
K	882	882	962	1,322	1,322
L	414	414	414	612	612
M	95	95	107	85	85
N	219	219	246	258	258
0	144	144	194	242	242

Fujitsu General Supports Diverse VRF System Design

1. Quick model selection and design tool "Design Simulator" for VRF

Fujitsu General offers software which quickly performs model selection and creates material for model estimation in the VRF initial design stage. "Design Simulator" has functions which automatically select the proper model for the required capacity, automatically draft piping diagrams and wiring diagrams, and also automatically calculate the additional refrigerant charge amount, automatically generates the reports necessary for estimation. Operation is also easily performed by drag & drop and full-fledged model design estimates can be quickly made.

Features

- Automatic model selection of indoor unit and outdoor unit
- Simple drag & drop operation
- · Automatic generation of piping diagrams and wiring diagrams
- Automatic calculation of additional refrigerant charge amount
- Auto CAD Data (DXF), Revit Mep Data (RFA) export
- Automatic report generation (Word, Excel)
- Multi-language capability



2. 2D (DXF), 3D (RFA) contents data

Two kinds of model data, DXF data and RFA data, necessary in detailed design are offered.

These data can be procured from the Fujitsu General web site and **Design Simulator**



Optional Parts

Controllers

Wired Remote Controller UTY-RNK*	Simple Remote Controller UTY-RSK* With operation mode	Simple Remote Controller UTY-RHK* Without operation mode
Wireless Remote Controller UTY-LNH*	IR Receiver Unit UTB-YWB UTB-TWB	IR Receiver Kit UTY-LRHYB1 UTY-LRHGB1 For Cassette type
Group Remote Controller UTY-CGG*	Touch Panel Controller UTY-DTG*	System Controller Software UTY-APGX

K*: KY (FUJITSU), KYT (FUJITSU), KG (GENERAL) H*: HY (FUJITSU), HG (GENERAL) G*: GY (FUJITSU), GG (GENERAL)

Convertors / Adaptors				
Network Convertor UTY-VGGX	Network Convertor for LONWORKS® UTY-VLGX	BACnet® Gateway Software UTY-ABGX CD-ROM (Software) Software Protection Key		
Signal Amplifier UTY-VSGX	External Switch Controller UTY-TEKX			

Optional Parts

Connection Tube



Specifications

Outdoor unit Branch kit

Model name		UTR-CP567X
Number of Outdoor unit	2 outdoor units	1
	3 outdoor units	2

Separation Tube

Model name	UTR-BP090X	UTR-BP180X	UTR-BP567X
Total cooling capacity of indoor unit (kW)	28.0 or less	28.1 to 56.0	56.1 or more

Header

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

EV Kit

Model name	UTR-EV09XB	UTR-EV14XB
Application Model	AS*E07LACH AS*E09LACH	AS*E12LACH AS*E14LACH

AS* : ASY(FUJITSU), ASH(GENERAL)

Others		
Flange (Round) UTD-RF204	Flange (Square) UTD-SF045T	Long-Life Filter UTD-LF25NA
For Low Static Pressure Duct type / Duct type	For Low Static Pressure Duct type / Duct type	For Low Static Pressure Duct type / Duct type
Long-Life Filter UTD-LF60KA For High Static Pressure Duct type	Drain Pump Unit UTZ-PX1BBA For Compact Duct type UTZ-PX1NBA For Low Static Pressure Duct type / Duct type	Drain Pump Unit UTR-DPB24T For Ceiling type
Remote Sensor Unit	Wide Panel	Panel Spacer
For All Duct type New amenity space can be offered by installing the Remote sensor in the remote controller.	For Cassette type	For Cassette type
Air Outlet Shutter Plate	Air Outlet Shutter Plate	Insulation Kit for High Humidity
For Compact Cassette type Shuts the air outlet when only using as 3 blow out.	For Cassette type Shuts the air outlet when only using as 3 blow out.	UTZ-KXGB For Slim Cassette type UTZ-KXGC For Compact Cassette type
		Insulation Kit
Grille Kit		EV Kit
UTG-UFGC-W	UTG-UGGA-W	Model code ≥ 12 : UTR-EV14XB
For Compact Cassette type	For Cassette type	For Compact Wall Mounted type
Fresh Air Intake Kit	Fresh Air Intake Kit	
For Compact Cassette type	For Cassette type	

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Certified number : 00608Q21061R2M Certified number : 00609E20454R2M Fujitsu General Central Air-conditioner (Wuxi) Co., Ltd.



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