# Light Commercial & Commercial, Residential VRF

VRF systems provide air conditioning solutions that meet the requirements of a diverse range of buildings.

VRF systems provide air conditioning solutions for large residences as well as large commercial buildings.

V-002 VRF Series Overview V-004 VRF Outdoor Units Lineup V-006 Features

**VRF** Outdoor Units



VRF J Series Heat Pump for Small-capacity type V-020 VRF J-VS V-026 VRF J-IVS V-030 VRF J-IV V-034 VRF J-IVL



VRF V Series Heat Recovery Modular type V-040 VRF VR-IV

Heat Pump Modular type

V-050 VRF V-IV

#### **VRF INDOOR UNITS**

V-058 VRF Indoor Unit Lineup for J-VS V-066 VRF Indoor Unit Lineup for J-IVS, J-IV, J-IVL, VR-IV, V-IV





Light Commercial & Commercial, Residential



FUJITSU GENERAL (Euro) GmbH participates in the ECP program for VRF. Check ongoing validity of certificate: www.eurovent-certification.com

## FUJITSU GENERAL LIMITED

VRF

# VRF Series Overview

Recommended VRF products for various buildings

VRF



indoor units\* are connectable, making them ideal for hotels and educational facilities with many rooms.

- Slim Outdoor Unit
- Small room application
- Class-leading Low Operating Sound





- refrigerant system
- Annual cooling operation
- Accommodating changes in temperature difference



VRF

## **Design Simulator**

When installing air conditioning equipment in each room of a building, it is necessary to select an indoor unit suitable for the heat load in the room and derive an outdoor unit that can cover the capacity of all indoor units. In addition, remote controls and converters are selected according to how the customer will manage the air conditioner, and in some cases, a design combined with options may be required to comply with established standards. The "Design Simulator" can be used to facilitate the selection of such complex equipment and the output of system drawings and estimates. (Software for PC)



For more information



# VRF Outdoor Units Lineup

| Capaci<br>HP          | ty (kW)              | Refrigerant        | 12.1<br>4                 | 14.0<br>5                 | 15.1-15.5<br>6            | 22.4<br>8       | 28.0<br>10      | 33.5<br>12      | 40.0<br>14      | 45.0<br>16       | 50.0-50.4<br>18 | 55.9<br>20      | 61.5<br>22       |
|-----------------------|----------------------|--------------------|---------------------------|---------------------------|---------------------------|-----------------|-----------------|-----------------|-----------------|------------------|-----------------|-----------------|------------------|
| NEW                   |                      |                    |                           |                           |                           | 0               |                 | 12              |                 |                  |                 | 20              |                  |
|                       | S Series             | REFRIGERANT<br>R32 | 8                         | <b>R</b> )                | <b>R</b> 3                |                 |                 |                 |                 |                  |                 |                 |                  |
|                       |                      |                    | AJH040<br>KCTAH           | AJH045<br>KCTAH           | AJH054<br>KCTAH           |                 |                 |                 |                 |                  |                 |                 |                  |
|                       |                      |                    |                           |                           |                           |                 |                 |                 |                 |                  |                 |                 |                  |
| J-IV                  | 'S Series            | REDA               |                           |                           |                           |                 |                 |                 |                 |                  |                 |                 |                  |
| _                     |                      |                    | AJH040<br>LCLDH           | AJH045<br>LCLDH           | AJH054<br>LCLDH           |                 |                 |                 |                 |                  |                 |                 |                  |
|                       |                      |                    | 0                         | 0                         | 0                         |                 |                 |                 |                 |                  |                 |                 |                  |
| J-IV                  | Series               | R410A              | AJH040                    | AJH045                    | AJH054                    |                 |                 |                 |                 |                  |                 |                 |                  |
|                       |                      |                    | LBLDH,<br>AJH040<br>LELDH | LBLDH,<br>AJH045<br>LELDH | LBLDH,<br>AJH054<br>LELDH |                 |                 |                 |                 |                  |                 |                 |                  |
|                       |                      |                    |                           |                           |                           |                 |                 |                 |                 |                  |                 |                 |                  |
| J-IV                  | 'L Series            | RIDA               |                           |                           |                           | 6               | 6               | 6               |                 |                  |                 |                 |                  |
|                       | <b>C</b>             |                    |                           |                           |                           | AJH072<br>LELDH | AJH090<br>LELDH | AJH108<br>LELDH | AJH126<br>LELDH | AJH144<br>LELDH  | AJH162<br>LELDH |                 |                  |
| VR-                   | Space<br>Saving      |                    |                           |                           |                           |                 |                 | 1               |                 |                  | 11              |                 | 00               |
| VR-IV Series Heat     | Cot Ma dal           | RADA               |                           |                           |                           | AJH072          | AJH090          | AJH108          | AJH126          | AJH144           | AJH162          | AJH180          | AJH198           |
| s Heat                | Set Model            |                    |                           |                           |                           | GALDH           | GALDH           | GALDH           | GALDH           | GALDH            | GALDH           | GALDH           | GALDH            |
| : Recovery            | Efficiency           | R410A              |                           |                           |                           |                 |                 |                 |                 |                  |                 |                 |                  |
| ry                    | Set Model            |                    |                           |                           |                           |                 |                 |                 |                 | AJH144<br>GALDHH |                 |                 | AJH198<br>GALDHH |
|                       | Space<br>Saving      |                    |                           |                           |                           |                 |                 |                 |                 |                  | -               | -               |                  |
| V-IV                  |                      | RTDA               |                           |                           |                           |                 |                 |                 |                 |                  |                 |                 |                  |
| Series                | Set Model            |                    |                           |                           |                           | AJH072<br>LALDH | AJH090<br>LALDH | AJH108<br>LALDH | AJH126<br>LALDH | AJH144<br>LALDH  | AJH162<br>LALDH | AJH180<br>LALDH | AJH198<br>LALDH  |
| V-IV Series Heat Pump | Energy<br>Efficiency |                    |                           |                           |                           |                 |                 |                 |                 |                  |                 |                 |                  |
| np                    |                      | RIDA               |                           |                           |                           |                 |                 |                 |                 | AJH144           |                 | AJH180          |                  |
|                       | Set Model            |                    |                           |                           |                           |                 |                 |                 |                 | LALDHH           |                 | LALDHH          |                  |

| 67.0<br>24       | 73.5<br>26       | 78.5<br>28       | 85.0<br>30       | 90.0<br>32       | 95.0<br>34                             | 100.5<br>36      | 107.0<br>38      | 112.0<br>40      | 118.5<br>42      | 123.5<br>44      | 130.0<br>46     | 135.0<br>48     |
|------------------|------------------|------------------|------------------|------------------|--|------------------|------------------|------------------|------------------|------------------|-----------------|-----------------|
|                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                 |                 |
|                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                 |                 |
|                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                 |                 |
|                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                 |                 |
|                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                 |                 |
|                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                 |                 |
|                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                 |                 |
|                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                 |                 |
|                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                 |                 |
|                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                 |                 |
|                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                 |                 |
|                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                 |                 |
|                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                 |                 |
|                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                 |                 |
|                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                 |                 |
|                  |                  |                  |                  |                  | 111                                    |                  |                  |                  |                  |                  | 000             | 333             |
| 4.0047           | 4.0024           |                  | A 11/070         | A.U.200          |  |                  | A 11 10 40       |                  | A 111270         | 4.0007           | A 11 4 4 4      | A 111422        |
| AJH216<br>GALDH  | AJH234<br>GALDH  | AJH252<br>GALDH  | AJH270<br>GALDH  | AJH288<br>GALDH  | AJH306<br>GALDH                        | AJH324<br>GALDH  | AJH342<br>GALDH  | AJH360<br>GALDH  | AJH378<br>GALDH  | AJH396<br>GALDH  | AJH414<br>GALDH | AJH432<br>GALDH |
|                  |                  | 222              |                  | -                |  |                  |                  |                  |                  |                  |                 |                 |
|                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                 |                 |
| AJH216<br>GALDHH | AJH234<br>GALDHH | AJH252<br>GALDHH | AJH270<br>GALDHH | AJH288<br>GALDHH | AJH306<br>GALDHH                       | AJH324<br>GALDHH | AJH342<br>GALDHH | AJH360<br>GALDHH | AJH378<br>GALDHH | AJH396<br>GALDHH |                 |                 |
|                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                 |                 |
|                  |                  |                  |                  |                  |  |                  |                  |                  |                  |                  |                 |                 |
| AJH216           | AJH234           | AJH252           | AJH270           | AJH288           | AJH306                                 | AJH324           | AJH342           | AJH360           | AJH378           | AJH396           | AJH414          | AJH432          |
| LALDH            | LALDH            | LALDH            | LALDH            | LALDH            | LALDH                                  | LALDH            | LALDH            | LALDH            | LALDH            | LALDH            | LALDH           | LALDH           |
| 111              | 111              |                  |                  |                  |  |                  | 111              | 111              | 111              |                  |                 |                 |
|                  |                  | condendered      | construction t   |                  | ************************************** |                  |                  |                  | ðð               |                  |                 |                 |
| AJH216<br>LALDHH | AJH234<br>LALDHH | AJH252<br>LALDHH | AJH270<br>LALDHH | AJH288<br>LALDHH | AJH306<br>LALDHH                       | AJH324<br>LALDHH | AJH342<br>LALDHH | AJH360<br>LALDHH | AJH378<br>LALDHH | AJH396<br>LALDHH |                 |                 |



# High-efficiency

High-efficiency is achieved significantly by the use of a DC twinrotary compressor, inverter technology, and a large heat exchanger.





\* These specifications are determined by ducted combination.



# ALL High-efficiency design with top-class SEER/SCOP All the VRE Series, including the I-IVL Series, have D

All the VRF Series, including the J-IVL Series, have DC technology to achieve high-efficiency operation. This enhances the durability and reliability of the VRF Series.



J-IVL Series





J-IVS Series

2



1 DC fan motor

3 DC invertor

control

2 Large heat exchanger



4 Subcooling heat exchanger





1 3-phase DC fan motor



2 Large heat exchanger

<sup>3</sup> Sine-wave DC invertor control



4 Subcooling heat exchanger

## Efficient control of operation



### Setting temperature range limitation

Sets the minimum and maximum limits on room temperature to establish an optimum balance between energy-saving performance and a comfortable environment.





## Auto-off timer

The wired remote controller is equipped with an auto-off timer function that automatically stops operation after a fixed period of time has elapsed from the start of operation to avoid wasting energy. The function also allows you to set the interval for stopping operations.



## **Energy-saving** management

A variety of energy-saving operations can be set and managed depending on the season, climate, and time period. Excellent energy-saving operation using the system controller.

Screen image shows Energy Manager software (option)

System Controller



Operation capacity can be reduced in 5 steps from the rated capacity. This mode cuts down on peak power consumption and eases the maximum load on the unit.







## Intelligent refrigerant control

Fujitsu General is proposing outdoor units equipped with refrigerant control function. The refrigerant control operates with subtle control corresponding to the heat load of the room and offers a more comfortable environment. The refrigerant control can also provide increased energy savings.



#### Current refrigerant control

Thermostat-ON/OFF occurs frequently. → Frequent changes in room temperature interfere with comfort. The compressor starts and stops repeatedly, wasting energy.

#### New refrigerant control

The thermostat is turned on and off less frequently than under current control to maintain the room temperature at the target temperature. Compared to current control, the compressor will run longer, thus saving energy.



\* The improvements due to the control and the actual sine wave vary depending on the combination of the indoor unit and system operating conditions.



### Auto changeover

In Auto setting, the air conditioner switches between cooling and heating modes automatically according to the set temperature and the room temperature.



Auto changeover settings enable the indoor unit to easily switch between cooling and heating regardless of the operating mode of other indoor units. These settings can be made using a wired remote controller for a specific indoor unit. Provides a comfortable environment all year round.



## Precise control of refrigerant flow

The combination of DC inverter control and individual control of electronic expansion valves of an indoor unit enables precise and smooth control of the refrigerant flow. This means the room temperature can be set in increments of 0.5°C.



## Quiet operation



## **Quiet operation**

Two low noise modes can be switched over automatically between one in which low noise is prioritized over performance, and the other in which performance is prioritized over low noise, depending on the room temperature and outdoor temperature. This feature can be controlled by external input from the outdoor unit or a system controller.



## 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.



#### Switching room temperature sensing position NEW for improved heating comfort (Option)

The optional remote sensor kit (UTY-XSZXZ1) can be connected to the indoor unit to improve comfort by installing the unit at a height appropriate for the living environment.





ALL Cassette types





ALL Wall-mounted types



# High Reliability

## Outdoor unit rotation

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





The start and stop timings are alternated among connected compressors.

## **Backup operation**

If one compressor fails, the other compressors will initiate backup operation\*.

Note: Backup operation may not be possible depending on the cause of failure.



## Advanced refrigerant control

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



## 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.



## Blue fin heat exchanger

The anti-corrosion blue fin treatment is applied to the heat exchanger of the outdoor unit.





# Design Flexibility



3

# Class-leading compact design

An industry-leading compact outdoor unit with optimal airflow pattern design. (Up to 18 HP) VRF J Series Compact Outdoor Unit





## Long pipe design

Pipe design suitable for long and narrow office buildings with elevation differences and low-rise stores with long distances (VRF J-IVL Series)



VRF VR-IV Series & V-IV Series





# Max. allowable overall pipe length: 1,000 m

The class-leading pipe length of 1,000 m increases flexibility of installation in a wide variety of buildings.



## **High-capacity connection**

|      | Series  | Connectable indoor unit<br>capacity range | Connectable indoor units |
|------|---|---|--------------------------|
|      | VRF J-VS Series<br>Heat pump type                 | 50% to 130%                               | up to 13*5               |
|      | VRF J-IVS Series<br>Heat pump type                | 50% to 130%                               | up to 13*5               |
|      | VRF J-IV Series<br>Heat pump type                 | 50% to 150%                               | up to 14*5               |
| 8    | VRF J-IVL Series<br>14/16/18 HP<br>Heat pump type | 50% to 150%                               | up to 42*3               |
| 8    | VRF J-IVL Series<br>8/10/12 HP<br>Heat pump type  | 50% to 150%                               | up to 30*4               |
| 377  | VRF VR-IV Series<br>Heat Recovery Modular type    | 25%* <sup>5</sup> to 150%                 | up to 64                 |
| 1111 | VRF V-IV Series<br>Heat Pump Modular type         | 50% to 150%*2                             | up to 64                 |

<sup>\*2:</sup> The maximum capacity of the combination that includes the 18-HP outdoor

unit is below 150%. \*3: J-IVL Series 18-HP model only. \*4: J-IVL Series 12-HP model

only. \*5: 6-HP model only.



₩.

## Designed for low refrigerant charge

The optimal design of the indoor and outdoor units reduces the amount of refrigerant required and can be easily installed in a room as small as 15 m<sup>2</sup>.



## Various optional parts

- Fresh air intake kit to bring in fresh air
- Comfortable temperature control with a remote sensor
- DX kit links ventilation equipment and air handling units.





Fresh air intake kit

Control unit

## Low ambient operation

Our refrigeration cycle technology enables cooling operation even at -15°C.



Heating

21°C

-20°C

## Wide operating temperature range

All outdoor units have a wide operating temperature range and can operate in extreme temperature conditions.

- \*6: When multiple outdoor units are connected, their operating temperature range is from -5°C to 46°C in cooling.
- \*7: The operating range is -15°C to 46°C only for systems with all indoor units rated at 5.6 kW or more.

VRF VR-IV Series Heat Recovery Modular type



VRF V-IV Series Heat Pump Modular type





VRF J-VS & J-IVS & J-IV Series Heat pump type







## Easy access

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





Front access reduces installation intervals



## Flexible pipe connection

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



## ы) Simplified wiring work

The communication wiring can be installed seamlessly among indoor, outdoor, and RB units, which makes the installation of the wiring system easier.

## Vacuum mode function for easy evacuation

The vacuum mode function enables all expansion valves of an indoor unit to be opened fully, allowing for easier evacuation of air inside pipe lines and indoor units.



Air

– Air

Vacuum pump

## Maximum wiring length: Note: The automatic address

Parallel connection

setting is not available on a serially connected multiple refrigerant system.

Air



Outdoor unit

## Easy commissioning with Tools

### Service Tool (UTY-ASGXZ1)

The Service Tool checks the refrigerant temperature and pressure, and the operating status of the electronic expansion valves, making it easy to determine if the units are connected properly.



#### • Central Remote Controller (UTY-DCGGZ3) NEW

After the VRF system has been installed. Conveniently, the "test run" required to verify proper system operation can be performed from a nearby Central RC.



# Easy Service and Maintenance

## Designed for easy maintenance

A 7-segment indicator lamp panel provides detailed information on the function setting status, refrigerant temperature and pressure, compressor operation time, and other factors, facilitating self-diagnosis for each unit.



#### Easy-to-read 7-segment indicator lamp

Shows the following detailed operation and error status without need of any special tools.

#### Error status can be checked on an outdoor unit's display

• System operation mode

↕

88 88

88

**HB** 

- Discharge temperature and pressure
- Compressor operation status
- Address, type, and number of outdoor unit

Error and quantity

annunciation

Error code

Abnormal indoor unit address

#### **Movable PCB panel**

Enables easier access behind the PCB for maintenance work.





• Error status can easily be checked on an outdoor unit's display.

The error status can be checked via a wired remote controller for indoor units.

Error codes are displayed on an LCD screen.



## Error diagnosis by Service tool

## **Connection to Service tool**

- A detailed operation status and recent error history can be checked and analyzed using Service tool.
- The last 5 minutes of operation status can be recorded continuously.



## **Remote monitoring**

The Web Monitoring system enables the monitoring of the system's operation status at any time via the internet to ensure trouble-free operation. The operating VRF network system in the building can be monitored real time over the internet.



VRF

NEW



## Heat Pump for Small-capacity type

VRF **J-VS** 

#### System configuration example

- Suitable for air conditioning small and medium-size buildings. One refrigerant system is used for each outdoor unit.
- Multiple indoor units are connected with separation tubes and headers.





## J-VS

for SHOP

for LARGE APARTMENT

for **OFFICE** 

This product uses R32, a new environmentally friendly refrigerant. With TOP-class energy efficiency and compact design, it can be installed in a limited and narrow space without being conspicuous.

Sustainable (R32)

Small Body

**"5S"** leading to the optimal solution

aving CO2

Situational Piping Design

**S**ightliness installation

REFRIGERANT R32

## R32 refrigerant with reduced global warming potential

Outdoor unit

• Zero Ozone Depletion Potential (ODP\*1)

- High environmental properties
- High performance
- Economically efficient

<u>G</u>WP<sup>\*2</sup>



- \*1 ODP (Ozone Depleting Potential): a relative value that indicates the impact per unit weight of ozone-depleting substances released into the atmosphere when CFC-11 (trichlorofluoromethane, CCI3F) is fixed at 1.0
- \*2 GWP (Global Warming Potential): a measurement that indicates how much other greenhouse gases are capable of warming the Earth based on carbon dioxide This is the integrated value of radiant energy given to the Earth (i.e., the estimated impact on global warming) expressed as a ratio to CO2.

## Sustainable

## **European F-Gas Regulation Plan**

The European Union has tightened F-gas rules as part of European Green Deal policy, which aims for Europe climate neutral by 2050. The F-gas Regulation mainly includes

(1) Reducing the total volume of HFCs and phasing out HFC in 2050.

(2) The GWP limits for certain products are required to be strengthened.

Fujitsu General as one of its proactive efforts to preserve the global environment, we are working on technological development to achieve the best balance between refrigerants with lower GWP and energy efficiency of equipment adopting safety measures.

| 2029 Available at J-VS   | 2033   | 2035   | 2050  |
|--|--|--|---|
| Split AC & HP<br>Over 12 kW:<br>GWP 750 and above prohibited<br>12 kW or less:<br>GWP 150 and above prohibited | Split AC & HP<br>Over 12 kW:<br>GWP 150 and above prohibited | <b>Split AC &amp; HP</b><br>HFC use prohibited | an economy with<br><b>Net-ZerO</b> greenhouse<br>gas emissions. |

## Refrigerant saving design

Refrigerant saving design the compact indoor unit, piping design, and optimization of heat exchanger volume significantly reduce the system refrigerant volume.



## Enhanced disaster safety measures

The system is designed to meet the environmental safety requirements specified in the IEC 603352-40 standard for the use of R32 refrigerant. The environment requiring safety measures is determined by the size of the room in relation to the amount of refrigerant required. For example, if the system is designed for maximum pipe length and the refrigerant charge is 6 kg, safety measures are required for rooms of 15 m2 or less.

Shut off valve kit UTP-GX027A, UTP-GX060A Block the path to prevent refrigerant flow in the event of a refrigerant leakage.



VRF

## Saving CO2

## **TOP Class High Energy Saving**

The use of large heat exchanger and a highefficiency Rotary compressor achieves classleading SEER/SCOP in all models.

SEER SCOP \*045 model \*040 model



## **More Energy-Saving** compressor control

When the room temperature approaches the set temperature after the start of operation, the capacity required for the outdoor unit becomes lower. The minimum compressor speed at this time can now be controlled at a lower value than with conventional products, enabling more energy-efficient operation.



## Small Body



## Small, lightweight outdoor unit

The outdoor units in this series are much more compact than conventional outdoor units of comparable capacity. They can be installed on a balcony, fitting below the height of the railing. With a height of less than 1 m, they can be installed in tight spaces such as under windows.



Significantly low noise levels are achieved by the use of a DC twin-rotary compressor, inverter technology, and an advanced airflow pattern design.

## Situational Piping Design

## Long pipe length

Our advanced refrigerant control technology extends the maximum allowable length of refrigerant piping to 120 m. This provides high flexibility in system design.

Long piping lengths are achieved by installing a largecapacity accumulator. No liquid refrigerant is supplied to the compressor even when the required amount of refrigerant is charged in the long piping.





# Up to 13 indoor units\* can be connected

The combination of smaller but sufficiently powerful indoor units and a new outdoor unit with an optimized heat exchanging structure makes it possible to connect up to 13 indoor units, which is the best in its class. \*: 6 HP model

| Rating Capacity range (HP)   | 4    | 5    | 6    |
|------------------------------|------|------|------|
| Max. Connectable indoor unit | 1-11 | 1-12 | 1-13 |

## Sightliness installation

## External static pressure

External static pressure measures up to 30 Pa for 4/5/6 HP models.

Even if the outdoor unit is installed in a small space to hide it, the grille and duct airflow path required for exhaust air can be installed up to a static pressure value of 30 Pa.



## Cooling piping system

New Heat Rejection Technology Cooling piping system "Cooling piping system" is adopted toensure reliability in high outside air.

Even when the outdoor unit is installed in an environment where heat tends to stay (small space), the cooling system using refrigerant can reduce damage caused by heat from PCBs.



## J-VS

#### 4, 5, 6 HP: AJH040KCTAH / AJH045KCTAH / AJH054KCTAH



#### Specifications

| Rated capacity range   |                   |                | 4                       | 5                           | 6           |  |
|------------------------|-------------------|----------------|-------------------------|-----------------------------|-------------|--|
| Model name             |                   |                | АЈНО40КСТАН АЈНО45КСТАН |                             | AJH054KCTAH |  |
| Maximum connectable    | indoor units      |                | 1-11                    | 1-12                        | 1-13        |  |
| Power source           |                   |                |                         | Single phase, ~230 V, 50 Hz |             |  |
|                        | Cooling           |                | 12.1                    | 14.0                        | 15.1        |  |
| Capacity               | Nominal Heating   | kW             | 12.1                    | 14.0                        | 15.1        |  |
|                        | Max. Heating      |                | 13.6                    | 16.0                        | 16.5        |  |
|                        | Cooling           |                | 3.15                    | 3.82                        | 4.48        |  |
| nput power             | Nominal Heating   | kW             | 2.55                    | 2.91                        | 3.20        |  |
|                        | Max. Heating      |                | 3.09                    | 3.62                        | 3.90        |  |
| EER                    | Cooling           |                | 3.84                    | 3.66                        | 3.37        |  |
| COP                    | Nominal Heating   | W/W            | 4.74                    | 4.80                        | 4.71        |  |
| .OP                    | Max. Heating      | 1              | 4.40                    | 4.41                        | 4.22        |  |
| SEER                   | Coolin            | g              | 8.20                    | 8.27                        | 7.79        |  |
| SCOP                   | P Heating         |                | 5.37                    | 4.93                        | 4.82        |  |
| lc                     | Cooling           |                | 325.0                   | 328.0                       | 308.6       |  |
| <b>յ</b> հ             | Heating           | %              | 212.0                   | 194.0                       | 189.8       |  |
| Airflow rate           |                   | m³/h           | 4,240                   | 4,450                       | 4,450       |  |
| Sound pressure level/  | Cooling           | dB(A)          | 52 / 70                 | 53 / 71                     | 54 / 72     |  |
| Power level            | Heating           | UB(A)          | 54 / 71                 | 55 / 72                     | 56 / 73     |  |
| Heat exchanger fin     |                   |                | Blue fin                | Blue fin                    | Blue fin    |  |
|                        | Height            |                | 998                     | 998                         | 998         |  |
| Net Dimensions         | Width             | mm             | 940                     | 940                         | 940         |  |
|                        | Depth             | 1              | 320                     | 320                         | 320         |  |
| Weight                 |                   | kg             | 74                      | 74                          | 74          |  |
| Defeireret             | Type (Global Warm | ing Potential) | R32 (675)               | R32 (675)                   | R32 (675)   |  |
| Refrigerant            | Charge            | kg (CO2eq-T)   | 2.7 (1.823)             | 2.7 (1.823)                 | 2.7 (1.823) |  |
| Connection pipe        | Liquid            |                | 9.52                    | 9.52                        | 9.52        |  |
| diameter               | Gas               | mm             | 15.88                   | 15.88                       | 15.88       |  |
| Total pipe length      |                   |                | 120                     | 120                         | 120         |  |
| Max. height difference |                   | m              | 30                      | 30                          | 30          |  |
| Operating Range        | Cooling           | °C             | -5 to 46                | -5 to 46                    | -5 to 46    |  |
| Operating Range        | Heating           | - C            | -20 to 21               | -20 to 21                   | -20 to 21   |  |

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. The protective function may work when using it outside the operation range.

Dimensions

(Unit: mm)





## Heat Pump for Small-capacity type

VRF **J-IVS** 

#### System configuration example

- Suitable for air conditioning small and medium-size buildings. One refrigerant system is used for each outdoor unit.
- Multiple indoor units are connected with separation tubes and headers.





## New intelligent refrigerant control

Fujitsu General is proposing outdoor units equipped with refrigerant control function. The refrigerant control operates with suitable control corresponding to the heat load of the room and offers a more comfortable environment. The refrigerant control can also provide increased energy savings.



# New model (J-IVS)

\* The improvements due to the control and the actual sine wave vary depending on the combination of the indoor unit and system operating conditions.

## External static pressure

External static pressure measures up to 25 Pa for 4/5/6 HP models.



# VRF

## Advanced high-efficiency technology



## Easy to carry, easy to install



## Long pipe length

Our advanced refrigerant control technology extends the maximum allowable length of refrigerant piping to 80 m. This provides high flexibility in system design.

## Up to 13 indoor units\* can be connected

The combination of smaller but sufficiently powerful indoor units and a new outdoor unit with an optimized heat exchanging structure makes it possible to connect up to 13 indoor units, which is the best in its class. \*: 6 HP model

| Model                           | Currer | nt model | (J-IIS) | New  | model (J | I-IVS) |
|---------------------------------|--------|----------|---------|------|----------|--------|
| Rating Capacity<br>range (HP)   | 4      | 5        | 6       | 4    | 5        | 6      |
| Max. Connectable<br>indoor unit | 1-7    | 1-8      | 1-8     | 1-11 | 1-12     | 1-13   |

## Small, lightweight outdoor unit

The outdoor units in this series are much more compact than conventional outdoor units of comparable capacity. They can be installed on a balcony, fitting below the height of the railing. With a height of less than 1 m, they can be installed in tight spaces such as under windows.



#### Low noise design

Significantly low noise levels are achieved by the use of a DC twin-rotary compressor, inverter technology, and an advanced airflow pattern design.



## 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.



## **Easier installation**

Connection check function: Wiring connections and address settings can be checked thanks to the quick check run function.



 Displays the number of each connected indoor unit. • Displays the duplicate address number assigned to an indoor unit.



Time

# **J-IVS**

#### 4, 5, 6 HP: AJH040LCLDH / AJH045LCLDH / AJH054LCLDH



#### Specifications

| Rated capacity range HP  |                   |                | 4               | 5                           | 6             |      |      |
|--------------------------|-------------------|----------------|-----------------|-----------------------------|---------------|------|------|
| Model name               |                   |                | AJH040LCLDH     | AJH045LCLDH                 | AJH054LCLDH   |      |      |
| Maximum connectable      | indoor units      |                | 1-11 1-12       |                             | 1-13          |      |      |
| Power source             |                   |                |                 | Single phase, ~230 V, 50 Hz |               |      |      |
|                          | Cooling           |                | 12.1            | 14.0                        | 15.1          |      |      |
| Capacity                 | Nominal Heating   | kW             | 12.1            | 14.0                        | 15.1          |      |      |
|                          | Max. Heating      |                | 13.6            | 16.0                        | 16.5          |      |      |
|                          | Cooling           |                | 3.75            | 4.71                        | 5.55          |      |      |
| Input power              | Nominal Heating   | kW             | 3.22            | 3.77                        | 4.33          |      |      |
|                          | Max. Heating      |                | 3.99            | 5.04                        | 5.32          |      |      |
| EER                      | Cooling           |                | 3.22            | 2.97                        | 2.72          |      |      |
|                          | Nominal Heating   | W/W            | 3.75            | 3.71                        | 3.48          |      |      |
| COP                      | Max. Heating      |                | 3.40            | 3.17                        | 3.10          |      |      |
| SEER                     | Coolir            | g              | 5.83            | 5.58                        | 5.47          |      |      |
| SCOP                     | P Heating         |                | Heating         |                             | 3.82          | 3.96 | 3.99 |
| ης                       | Cooling           |                | 230.2           | 220.2                       | 215.8         |      |      |
| ηh                       | Heating %         |                | 149.8           | 155.4                       | 156.6         |      |      |
| Airflow rate             |                   | m³/h           | 4,240           | 4,400                       | 4,400         |      |      |
| Sound pressure level/    | Cooling           | 10(4)          | 53 / 67         | 53 / 69                     | 54 / 70       |      |      |
| Power level              | Heating           | dB(A)          | 54 / 68 56 / 69 |                             | 56 / 70       |      |      |
| Heat exchanger fin       |                   |                | Blue fin        | Blue fin                    | Blue fin      |      |      |
|                          | Height            |                | 998             | 998                         | 998           |      |      |
| Net Dimensions           | Width             | mm             | 970             | 970                         | 970           |      |      |
|                          | Depth             |                | 370             | 370                         | 370           |      |      |
| Weight                   |                   | kg             | 88              | 88                          | 88            |      |      |
| Defeiterent              | Type (Global Warm | ing Potential) | R410A (2,088)   | R410A (2,088)               | R410A (2,088) |      |      |
| Refrigerant              | Charge            | kg (CO2eq-T)   | 4.0 (8.4)       | 4.0 (8.4)                   | 4.0 (8.4)     |      |      |
| Connection pipe          | Liquid            |                | 9.52            | 9.52                        | 9.52          |      |      |
| diameter                 | Gas               | mm             | 15.88           | 15.88                       | 15.88         |      |      |
| Total pipe length        |                   |                | 80              | 80                          | 80            |      |      |
| Max. height difference m |                   | 111            | 30              | 30                          | 30            |      |      |
| Operating Dapage         | Cooling           | °C             | -5 to 46        | -5 to 46                    | -5 to 46      |      |      |
| Operating Range          | Heating           | - U            | -20 to 21       | -20 to 21                   | -20 to 21     |      |      |

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. The protective function may work when using it outside the operation range.

#### Dimensions

(Unit: mm)





Heat Pump for Small-capacity type

VRF **J-IV** 

#### System configuration example

- Suitable for air conditioning small and medium-size buildings. One refrigerant system is used for each outdoor unit.
- Multiple indoor units are connected with separation tubes and headers.





## New intelligent refrigerant control

Fujitsu General is proposing outdoor units equipped with refrigerant control function. The refrigerant control operates with suitable control corresponding to the heat load of the room and offers a more comfortable environment. The refrigerant control can also provide increased energy savings.



# New model (J-IV)

\* The improvements due to the control and the actual sine wave vary depending on the combination of the indoor unit and system operating conditions.

## External static pressure

External static pressure measures up to 30 Pa for 4/5/6 HP.



## Advanced high-efficiency technology



# Efficiency in actual operating conditions

The use of a large heat exchanger and a high-efficiency Scroll compressor achieves class-leading EER/COP (Max. Heating) in all models.

High EER/COP (Maximum Heating)



EER / 📕 COP (Maximum Heating)

## Long pipe length

Our advanced refrigerant control technology allows us to achieve a total refrigerant pipe length of 180 m. This provides high flexibility in system design.

# Up to 14 indoor units\* can be connected

The combination of smaller but sufficiently powerful indoor units and outdoor units with an optimized heat exchanging structure makes it possible to connect up to 14 indoor units, which is the best in its class. \*: 6 HP model

| Model                         | Currei | nt mode | el (J-III) New model (J-IV) |      |      |      |
|-------------------------------|--------|---------|-----------------------------|------|------|------|
| Rating Capacity<br>range (HP) | 4      | 5       | 6                           | 4    | 5    | 6    |
| Max. Connectable indoor unit  | 1-9    | 1-10    | 1-13                        | 1-11 | 1-12 | 1-14 |



## 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.



## **Easier installation**

**Connection check function**: Wiring connections and address settings can be checked thanks to the quick check run function.



#### 4,5,6HP: AJH040LBLDH / AJH045LBLDH / AJH054LBLDH AJH040LELDH [3-phase] / AJH045LELDH [3-phase] / AJH054LELDH [3-phase]



#### Specifications

| Rated capacity range             |                   | HP              | 4             | 5                   | 6             | 4                                 | 5             | 6             |  |
|----------------------------------|-------------------|-----------------|---------------|---------------------|---------------|-----------------------------------|---------------|---------------|--|
| Model name                       |                   |                 | AJH040LBLDH   | AJH045LBLDH         | AJH054LBLDH   | AJH040LELDH                       | AJH045LELDH   | AJH054LELDH   |  |
| Maximum connectable indoor units |                   |                 | 1-11          | 1-12                | 1-14          | 1-11                              | 1-12          | 1-14          |  |
| Power source                     |                   |                 | Sinc          | le phase, ~230 V, 5 | 0 Hz          | 3-phase, ~400 V, 50 Hz            |               |               |  |
|                                  | Cooling           |                 | 12.1          | 14.0                | 15.5          | 12.1                              | 14.0          | 15.5          |  |
| Capacity                         | Nominal Heating   | kW              | 12.1          | 14.0                | 15.5          | 12.1                              | 14.0          | 15.5          |  |
|                                  | Max. Heating      |                 | 13.6          | 16.0                | 18.0          | 13.6                              | 16.0          | 18.0          |  |
|                                  | Cooling           |                 | 3.44          | 4.15                | 4.96          | 3.44                              | 4.15          | 4.96          |  |
| Input power                      | Nominal Heating   | kW              | 3.14          | 3.60                | 4.17          | 3.14                              | 3.60          | 4.17          |  |
|                                  | Max. Heating      | 1               | 3.80          | 4.50                | 5.41          | 3.80                              | 4.50          | 5.41          |  |
| EER                              | Cooling           |                 | 3.51          | 3.37                | 3.12          | 3.51                              | 3.37          | 3.12          |  |
| COP                              | Nominal Heating   | W/W             | 3.85          | 3.88                | 3.71          | 3.85                              | 3.88          | 3.71          |  |
| COP                              | Max. Heating      |                 | 3.57          | 3.55                | 3.32          | 3.57                              | 3.55          | 3.32          |  |
| SEER                             | Coolir            | ig              | 6.50          | 6.30                | 6.08          | 6.50                              | 6.30          | 6.08          |  |
| SCOP                             | Heatir            | ng              | 3.83          | 3.93                | 3.94          | 3.83                              | 3.93          | 3.94          |  |
| ης                               | Cooling           | %               | 257.0         | 249.0               | 240.0         | 257.0                             | 249.0         | 240.0         |  |
| ηh                               | Heating           | ~ %             | 150.0         | 154.0               | 155.0         | 150.0                             | 154.0         | 155.0         |  |
| Airflow rate                     |                   | m³/h            | 6,200         | 6,600               | 7,000         | 6,200                             | 6,600         | 7,000         |  |
| Sound pressure level/            | Cooling           |                 | 50 / 65       | 52 / 66             | 53 / 67       | 50 / 65                           | 52 / 66       | 53 / 67       |  |
| Power level                      | Heating           | dB(A)           | 52 / 67       | 55 / 69             | 56 / 69       | 52 / 67                           | 55 / 69       | 56 / 69       |  |
| Heat exchanger fin               |                   |                 | Blue fin      | Blue fin            | Blue fin      | Blue fin                          | Blue fin      | Blue fin      |  |
|                                  | Height            |                 | 1,334         | 1,334               | 1,334         | 1,334                             | 1,334         | 1,334         |  |
| Net Dimensions                   | Width             | mm              | 970           | 970                 | 970           | 970                               | 970           | 970           |  |
|                                  | Depth             | 1 1             | 370           | 370                 | 370           | 370                               | 370           | 370           |  |
| Weight                           |                   | kg              | 117           | 117                 | 119           | 118                               | 119           | 119           |  |
| Defrigerent                      | Type (Global Warm | ning Potential) | R410A (2,088) | R410A (2,088)       | R410A (2,088) | R410A (2,088)                     | R410A (2,088) | R410A (2,088) |  |
| Refrigerant                      | Charge            | kg (CO2eq-T)    | 4.8 (10.0)    | 5.3 (11.1)          | 5.3 (11.1)    | 4.8 (10.0)                        | 5.3 (11.1)    | 5.3 (11.1)    |  |
| Connection pipe                  | Liquid            |                 | 9.52          | 9.52                | 9.52          | 9.52                              | 9.52          | 9.52          |  |
| diameter                         | Gas               | mm              | 15.88         | 15.88               | 19.05         | 15.88                             | 15.88         | 19.05         |  |
| Total pipe length                |                   |                 | 180           | 180                 | 180           | 180                               | 180           | 180           |  |
| Max. height difference m         |                   |                 | 50/40 (0      | Outdoor unit: Upper | r/Lower)      | 50/40 (Outdoor unit: Upper/Lower) |               |               |  |
| Operating Range                  | Cooling           | - °C            | -5 to 46      | -5 to 46            | -5 to 46      | -5 to 46                          | -5 to 46      | -5 to 46      |  |
| operating Kange                  | Heating           |                 | -20 to 21     | -20 to 21           | -20 to 21     | -20 to 21                         | -20 to 21     | -20 to 21     |  |

Note: Specifications are based on the following conditions. Cooling: 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. The protective function may work when using it outside the operation range.

#### Dimensions

(Unit: mm)





## Heat Pump for Small-capacity type

VRF J-IVL

### System configuration example

- Suitable for air conditioning small and medium-size buildings. One refrigerant system is used for each outdoor unit.
- Multiple indoor units are connected with separation tubes and headers.





## New intelligent refrigerant control

Fujitsu General is proposing outdoor units equipped with refrigerant control function. The refrigerant control operates with suitable control corresponding to the heat load of the room and offers a more comfortable environment. The refrigerant control can also provide increased energy savings.



# New model (J-IVL)

\* The improvements due to the control and the actual sine wave vary depending on the combination of the indoor unit and system operating conditions.

## External static pressure

External static pressure is available up to 60 Pa for 14/16/18 HP. (30 Pa for 8/10 HP, 40 Pa for 12 HP) Capacities are slightly decreased relative to the rated values during high static pressure operations.



## Advanced high-efficiency technology


Fujitsu General offers a perfect total air conditioning system for small office buildings with multiple small rooms, taking into consideration energy savings, low noise, comfortable air volume, usage and purpose, and centralized control.

# VRF J-IVL

1,690 mm

Current model VRF V Series outdoor unit 8/10 HP models

Slim & Compact design





VRF **J-IVL** 

8/10/12 HP models

mage: 8/10/12 HP models

1,428 mm

Space requirement

-26%! Compared with current 8/10 HP models

VRF

### Various installation methods





VRF V Series outdoor unit



VRF J Series outdoor unit

#### Installation Low noise level in consideration of nearby residents

Front air discharge type with a width of about 1,000 mm, allowing for flexible installation even in narrow spaces.





VRF V Series outdoor unit

## Narrow space behind building **Space saving**



VRF J Series outdoor unit

Small and thin, allowing for direct ground or wall mounting installations even in narrow alleys.







# ><u>888</u>

#### VRF J Series outdoor unit

# Installation on the back street of a building Flexible installation

Slim, low-body front air discharge meets the requirements for installation even in tight spaces. Installation flexibility without blocking the windows of buildings contributes to substantial space savings, even when multiple units are installed. The use of a large heat exchanger and a high-efficiency Scroll compressor achieves class-leading EER/COP (Max. Heating) in all models.



#### Long pipe length

Our advanced refrigerant control technology extends the maximum allowable length of refrigerant piping to 400 m. This provides high flexibility in system design.



# Up to 42 indoor units\* can be connected.

The combination of smaller but sufficiently powerful indoor units and a new outdoor unit with an optimized heat exchanging structure makes it possible to connect up to 42 indoor units, which is the best in its class. \*: 18 HP model



### Class-leading low operating sound

The top-class low operating noise makes it ideal for use in densely populated areas. These low operating sound models are ideal for installation in densely populated areas.

Sound Power Level 77 dB(A) 66 dB(A) -11 dB(A)

J-IVL (8 HP)

Current model (8 HP)

# **J-IVL**

#### 8,10,12 HP: AJH072LELDH / AJH090LELDH / AJH108LELDH 14,16,18 HP: AJH126LELDH / AJH144LELDH / AJH162LELDH





14, 16, 18 HP

#### Specifications

| Rated capacity range   |                   | HP              | 8             | 10            | 12               | 14                | 16            | 18            |
|------------------------|-------------------|-----------------|---------------|---------------|------------------|-------------------|---------------|---------------|
| Model name             |                   |                 | AJH072LELDH   | AJH090LELDH   | AJH108LELDH      | AJH126LELDH       | AJH144LELDH   | AJH162LELDH   |
| Maximum connectable    | indoor units      |                 | 1-20          | 1-25          | 1-30             | 1-36              | 1-40          | 1-42          |
| Power source           |                   |                 |               |               | 3-phase, ~       | 400V, 50Hz        |               |               |
|                        | Cooling           |                 | 22.4          | 28.0          | 33.5             | 40.0              | 45.0          | 50.0          |
| Capacity               | Nominal Heating   | kW              | 22.4          | 28.0          | 33.5             | 40.0              | 45.0          | 50.0          |
|                        | Max. Heating      |                 | 25.0          | 31.5          | 37.5             | 45.0              | 50.0          | 55.0          |
|                        | Cooling           |                 | 6.30          | 8.59          | 10.42            | 12.12             | 14.96         | 18.52         |
| Input power            | Nominal Heating   | kW              | 4.65          | 6.61          | 8.18             | 9.71              | 11.81         | 13.66         |
|                        | Max. Heating      |                 | 5.45          | 8.29          | 10.25            | 11.81             | 14.29         | 16.66         |
| EER                    | Cooling           |                 | 3.56          | 3.26          | 3.22             | 3.30              | 3.01          | 2.70          |
|                        | Nominal Heating   | W/W             | 4.82          | 4.24          | 4.10             | 4.12              | 3.81          | 3.66          |
| COP                    | Max. Heating      |                 | 4.56          | 3.80          | 3.66             | 3.81              | 3.50          | 3.30          |
| SEER                   | Coolin            | Ig              | 7.62          | 7.50          | 7.27             | 7.27              | 7.00          | 6.29          |
| SCOP                   | Heating           |                 | 3.89          | 3.61          | 3.63             | 3.53              | 3.51          | 3.54          |
| ης                     | Cooling           |                 | 301.8         | 297.0         | 287.8            | 287.8             | 277.0         | 248.6         |
| ηh                     | Heating           | %               | 152.6         | 141.4         | 142.2            | 138.2             | 137.4         | 138.6         |
| Airflow rate           |                   | m³/h            | 8,400         | 9,000         | 11,000/12,100    | 13,000            | 14,000        | 14,800/15,300 |
| Sound pressure level/  | Cooling           | 10(4)           | 52/66         | 54/69         | 59/73            | 62/75             | 64/77         | 65/79         |
| Power level            | Heating           | dB(A)           | 54/66         | 57/70         | 62/75            | 63/76             | 65/78         | 68/82         |
|                        | Height            |                 | 1,428         | 1,428         | 1,428            | 1,638             | 1,638         | 1,638         |
| Net Dimensions         | Width             | mm              | 1,080         | 1,080         | 1,080            | 1,080             | 1,080         | 1,080         |
|                        | Depth             |                 | 480           | 480           | 480              | 480               | 480           | 480           |
| Weight                 |                   | kg              | 170           | 177           | 178              | 213               | 213           | 217           |
| Defeireret             | Type (Global Warm | ning Potential) | R410A (2,088) | R410A (2,088) | R410A (2,088)    | R410A (2,088)     | R410A (2,088) | R410A (2,088) |
| Refrigerant            | Charge            | kg (CO2eq-T)    | 7.0 (14.6)    | 7.5 (15.7)    | 7.5 (15.7)       | 11.0 (23.0)       | 11.0 (23.0)   | 11.8 (24.6)   |
| Connection pipe        | Liquid            |                 | 9.52          | 9.52          | 12.70            | 12.70             | 12.70         | 12.70         |
| diameter               | Gas               | mm              | 19.05         | 22.20         | 28.58            | 28.58             | 28.58         | 28.58         |
| Total pipe length      | •                 |                 | 400           | 400           | 400              | 400               | 400           | 400           |
| Max. height difference |                   | m               |               |               | 50/40 (Outdoor u | nit: Upper/Lower) |               |               |
| 0 II D                 | Cooling           | <u></u>         | -15 to 46     | -15 to 46     | -15 to 46        | -5 to 46*         | -5 to 46*     | -5 to 46*     |
| Operating Range        | Heating           | C°              | -20 to 21     | -20 to 21     | -20 to 21        | -20 to 21         | -20 to 21     | -20 to 21     |

Note: Specifications are based on the following conditions. Cooling: 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. \* The cooling operation range of -15 to 46°C is allowed only when all of the indoor units connected to the system are higher than capacity of 5.6kW.





### Heat Recovery Modular type



#### Highly energy-efficient operation

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



Our heat recovery systems achieve high operating energy efficiency by drawing heat from the room

to be cooled and transferring it as energy for rooms that are to be heated.



### New intelligent refrigerant control

Fujitsu General is proposing outdoor units equipped with refrigerant control function. The refrigerant control operates with suitable control corresponding to the heat load of the room and offers a more comfortable environment. The refrigerant control can also provide increased energy savings.



# New model (VR-IV) oor unit reque ow capacity Adequate capacity The outdoor unit provides sufficient capacity to meet the demands of the indoor unit.

\* The improvements due to the control and the actual sine wave vary depending on the combination of the indoor unit and system operating conditions.

### Increase in the number of connectable indoor units

Capacity range of connectable indoor units

| New model (VR-IV)     | <b>25%</b> *to 150% |
|-----------------------|---------------------|
| Current model (VR-II) | 50% to 150%         |

: For modular type, 25% to 49.9% operation in the entire system is available. (by one unit operation)

Increased number of connectable indoor units and space saving combinations



### The energy-saving technology that boosted operation efficiency



Powerful large propeller fan The fan uses CFD\* technology to achieve both high performance and low noise operation. \*CFD: Computational Fluid Dynamics



3-phase DC fan motor The use of a DC fan motor with sophisticated driver control improves energy efficiency substantially. In addition, this motor operates guietly.



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



#### High-efficient, largecapacity DC twin-rotary compressor

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



VRF

Sine-wave DC inverter

High-efficiency is realized by the adoption of reduced

The 4-face heat exchanger surface area and significantly improves heat-exchanging

### Extended connection ratio (applicable to multiple tenants)

Especially useful when starting partial air conditioning in a building under construction Installation can be added flexibly for each tenant.



#### Stand-alone

Current model (VR-II) Example) 50% of 12HP minimum connected indoor unit capacity is required



Installation is possible even for tenants who have not yet started operations.

#### New model (VR-IV)

**Example)** 25% of 12HP minimum connected indoor unit capacity is required



Installation and commissioning can be added flexibly to meet the opening dates of other tenants.

#### Modular type

One outdoor unit operates effectively for the capacities of connectable indoor units in the entire system. (Each of the multiple outdoor units does not dare to operate at 25% capacity: any one of the outdoor units will operate at 50% and the remaining units will each output 0%, i.e., stop operating.)

**Example:** One 10HP outdoor unit performs 25% of the total 20HP outdoor units system.

One 10HP outdoor unit performs 50% of its capacity  $\rightarrow$  Two outdoor units do not perform 25% of the operation.



# **VR-IV**

# Additional installation is possible without changing the main pipe.

A main pipe of a diameter that can be used for the final system is installed at the beginning of the installation. Duplication of the work will be avoided as there is no need to change the main pipe as in the previous model.



#### All-inverter compressor



#### Efficiency in actual operating conditions

Class-leading high COP (Maximum) The use of our proprietary heat exchanger structure and high-efficiency DC twin-rotary compressors achieves the class-leading coefficient of performance (COP) in every combination.



\* These specifications are determined by Cassette combination. \*Multiple outdoor units are not certified by Eurovent.

#### Multiple outdoor operation control

When multiple outdoor units are connected, each compressor carries out sophisticated operation. Instead of operating one compressor at full load to distribute the refrigerant to one heat exchanger, all compressors operate at partial load to distribute the refrigerant to all heat exchangers, thereby improving the efficiency of the entire system.

Compressor Load level High-Efficiency Operation



Inefficient operation

#### Heat exchanger refrigerant control

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



Outdoor unit



An RB unit can be placed between the first branch and an indoor unit.
The maximum height difference between RB units is 15 m.

No RB Unit is required for cooling only use.

Flexible pipe connection

Flexible installation of RB unit

#### Small and slim design with a height of 198 mm makes it easy to install in tight spaces with height constraints.

- A drain pipe is not required.
- Different positions of a control box can be chosen to accommodate installation conditions.
- Series connection for simplified installation





An RB unit can be installed on either side of the control box.



on top of the control box to save space. \*: RB unit (single type)







RB units (Multi-split type/8-branch)

RB units (Multi-split type/12-branch)

#### Easy maintenance in tight spaces

Maintenance can be performed from the side.





The electrical box can be accessed and serviced by sliding down the front cover.

Parts can be accessed and replaced easily even in tight spaces inside the ceiling.



#### **Outdoor units lineup** • Combinations other than those listed below are not recommended.

#### Space saving combination

| 22.4kW (8HP)                              | 28.0kW (10HP)                             | 33.5kW (12HP)                             | 40.0kW (14HP)                             | 45.0kW (16HP)                             |
|---|---|---|---|---|
|   |   |   |   |   |
| AJH072GALDH<br>UNIT : AJH072GALDH         | AJH090GALDH<br>UNIT : AJH090GALDH         | AJH108GALDH<br>UNIT : AJH108GALDH         | AJH126GALDH<br>UNIT : AJH126GALDH         | AJH144GALDH<br>UNIT : AJH144GALDH         |
| 50.4kW (18HP)                             | 56.0kW (20HP)                             | 61.5kW (22HP)                             | 67.0kW (24HP)                             | 73.0kW (26HP)                             |
| UNIT : AJH090/072GALDH                    | UNIT : AJH090/090GALDH                    | UNIT : AJH108/090GALDH                    | UNIT : AJH108/108GALDH                    | UNIT : AJH144/090GALDH                    |
| 78.5kW (28HP)                             | 85.0kW (30HP)                             | 90.0kW (32HP)                             | 95.0kW (34HP)                             | 100.5kW (36HP)                            |
| AJH252GALDH                               | AJH270GALDH                               | AJH288GALDH                               | AJH306GALDH                               | AJH324GALDH                               |
| UNIT : AJH144/108GALDH                    | UNIT : AJH144/126GALDH                    | UNIT :AJH144/144GALDH                     | UNIT : AJH108/108/090GALDH                | UNIT : AJH108/108/108GALDH                |
| 106.5kW (38HP)                            | 112.0kW (40HP)                            | 118.0kW (42HP)                            | 123.5kW (44HP)                            | 130.0kW (46HP)                            |
|   |   |   |   |   |
| AJH342GALDH<br>UNIT : AJH144/108/090GALDH | AJH360GALDH<br>UNIT : AJH144/108/108GALDH | AJH378GALDH<br>UNIT : AJH144/144/090GALDH | AJH396GALDH<br>UNIT : AJH144/144/108GALDH | AJH414GALDH<br>UNIT : AJH144/144/126GALDH |
| 135.0kW (48HP)                            |   |   |   |   |
|   |   |   |   |   |
| AJH432GALDH<br>UNIT : AJH144/144/144GALDH |   |   |   |   |

Energy efficiency combination



## **VR-IV**

#### 8,10,12HP : AJH072GALDH / AJH090GALDH / AJH108GALDH 14,16HP : AJH126GALDH / AJH144GALDH



8, 10, 12 HP

14, 16 HP

#### Dimensions (Unit: mm)

690 (Bolt pitch) 8, 10, 12 HP <u>)</u> 530 (Bolt pitch) <u>8-12 × 17 (Ho</u>le) 732 (Bolt pitch) 930 765 1690 1576 1339 00 00 B A C 1000 (Bolt pitch) 840 (Bolt pitch) 14, 16 HP 80 <u>8-12 × 7 (H</u>ole) 732 (Bolt pitch) 765 1240 阳 1690

Ъ

00

00

В

A C

阳

#### A Front side knockout position 034.5 Power supply cable port 73 43 Ø43. Ø50 Power supply 10 Ø 95 125 00 B Left side knockout position $\mathbb{W}$ Ø34.5 Ø50 Power sup table port Ø43.7 Ø Ø Ø22.2 <u>Ø22.2</u> insmissi ble port na Bottom side knockout position

#### **Outdoor units specifications**

#### Space saving combination

| Rated capacity range        |                     | HP                                    | 8             | 10            | 12            | 14            | 16                  | 18                  | 20                    | 22                    | 24                    |
|-----------------------------|---------------------|---------------------------------------|---------------|---------------|---------------|---------------|---------------------|---------------------|-----------------------|-----------------------|-----------------------|
| Model name                  |                     |                                       | AJH072GALDH   | AJH090GALDH   | AJH108GALDH   | AJH126GALDH   | AJH144GALDH         | I AJH162GALDH       | AJH180GALDH           | AJH198GALDH           | AJH216GALDH           |
| Unit 1                      |                     |                                       | AJH072GALDH   | AJH090GALDH   | AJH108GALDH   | AJH126GALDH   | AJH144GALDH         | AJH090GALDH         | AJH090GALDH           | AJH108GALDH           | AJH108GALDH           |
| Unit 2                      |                     | /                                     | 1 '           | 1             | 1             | 1 '           | 1                   | AJH072GALDH         | AJH090GALDH           | AJH090GALDH           | AJH108GALDH           |
| Unit 3                      |                     | /                                     | /             | 1             | '             | 1             | 1                   | 1 '                 | '                     | 1                     |                       |
| Maximum connectable in      | ndoor units*1       |                                       | 17            | 21            | 26            | 30            | 34                  | 39                  | 43                    | 47                    | 52                    |
| Connectable capacity ran    | ige of indoor units | kW                                    | 5.6-33.6      | 7.0-42.0      | 8.4-50.2      | 10.0-60.0     | 11.3-67.5           | 12.6-75.6*3         | 14.0-84.0*3           | 15.4-92.2*3           | 16.8-100.5*3          |
| Power source                |                     |                                       |               |               |               | 3-pha         | ase, 4-wire, 400 V, | J, 50Hz             |                       |                       |                       |
|                             | Cooling             | ·                                     | 22.4          | 28.0          | 33.5          | 40.0          | 45.0                | 50.4                | 56.0                  | 61.5                  | 67.0                  |
| Capacity                    | Nominal Heating     | kW                                    | 22.4          | 28.0          | 33.5          | 40.0          | 42.0                | 50.4                | 56.0                  | 61.5                  | 67.0                  |
|                             | Max. Heating        | 1                                     | 25.0          | 31.5          | 37.5          | 45.0          | 48.0                | 56.5                | 63.0                  | 69.0                  | 75.0                  |
| ,                           | Cooling             | ,, ,                                  | 6.26          | 9.53          | 11.89         | 13.16         | 16.71               | 15.79               | 19.06                 | 21.42                 | 23.78                 |
| Input power                 | Nominal Heating     | kW                                    | 5.37          | 7.38          | 9.16          | 10.80         | 11.81               | 12.75               | 14.76                 | 16.54                 | 18.32                 |
|                             | Max. Heating        | 1 2                                   | 6.25          | 8.96          | 11.48         | 13.95         | 14.98               | 15.21               | 17.92                 | 20.44                 | 22.96                 |
| EER                         | Cooling             | ·                                     | 3.57          | 2.93          | 2.81          | 3.03          | 2.69                | 3.19                | 2.94                  | 2.87                  | 2.82                  |
|                             | Nominal Heating     | w/w                                   | 4.17          | 3.79          | 3.65          | 3.70          | 3.55                | 3.95                | 3.79                  | 3.72                  | 3.66                  |
| COP                         | Max. Heating        | 1                                     | 4.00          | 3.51          | 3.26          | 3.22          | 3.20                | 3.71                | 3.52                  | 3.38                  | 3.27                  |
| SEER                        | Cooling             | iq '                                  | 7.16          | 6.61          | 6.73          | 6.76          | 6.27                | 6.89                | 6.61                  | 6.67                  | 6.73                  |
| SCOP                        | Heatin              |                                       | 3.78          | 3.76          | 3.86          | 4.31          | 4.41                | 3.77                | 3.76                  | 3.81                  | 3.86                  |
| ης                          | Cooling             | <u> </u>                              | 283.0         | 261.0         | 266.0         | 267.0         | 248.0               | 272.0               | 261.0                 | 263.5                 | 266.0                 |
| ηh                          | Heating             | %                                     | 148.0         | 147.0         | 151.0         | 169.0         | 173.0               | 147.5               | 147.0                 | 149.0                 | 151.0                 |
| Air flow rate               | High                | m³/h                                  | 11,100        | 11,100        | 11,100        | 13,000        | 13,000              | 11,100×2            | 11,100×2              | 11,100×2              | 11,100×2              |
| Sound pressure level*2/     | -                   | 10(1)                                 | 56 / 77       | 58 / 78       | 59 / 79       | 60 / 82       | 61 / 82             | 60 / 81             | 61 / 81               | 62 / 82               | 62 / 82               |
| Power level                 | Heating             | dB(A)                                 | 58 / 79       | 59 / 79       | 63 / 82       | 62 / 83       | 63 / 83             | 62 / 82             | 62 / 82               | 64/84                 | 66 / 85               |
| Max. External static pres   | ssure               | Pa                                    | 80            | 80            | 80            | 80            | 80                  | 80                  | 80                    | 80                    | 80                    |
| Compressor motor output     | Jt                  | kW                                    | 7.5           | 7.5           | 7.5           | 11.0          | 11.0                | 7.5 × 2             | 7.5 × 2               | 7.5 × 2               | 7.5 × 2               |
| Heat exchanger fin          |                     | ,                                     | Blue fin            | Blue fin            | Blue fin              | Blue fin              | Blue fin              |
| ,                           | Height              | (/                                    | 1,690         | 1,690         | 1,690         | 1,690         | 1,690               | 1,690               | 1,690                 | 1,690                 | 1,690                 |
| Net Dimensions              | Width               | mm                                    | 930           | 930           | 930           | 1,240         | 1,240               | 930 × 2             | 930 × 2               | 930 × 2               | 930 × 2               |
| r                           | Depth               | 1                                     | 765           | 765           | 765           | 765           | 765                 | 765                 | 765                   | 765                   | 765                   |
| Weight                      |                     | kg                                    | 262           | 262           | 262           | 286           | 286                 | 262 × 2             | 262 × 2               | 262 × 2               | 262 × 2               |
| - e                         | Type (Global Warmi  | ing Potential)                        | R410A (2,088)       | R410A (2,088)       | R410A (2,088)         | R410A (2,088)         | R410A (2,088)         |
| Refrigerant                 | Charge              | kg (CO2eq-T)                          | 11.8 (24.6)   | 11.8 (24.6)   | 11.8 (24.6)   | 11.8 (24.6)   | 11.8 (24.6)         | 11.8 × 2 (24.6 × 2) | !)11.8 × 2 (24.6 × 2) | .)11.8 × 2 (24.6 × 2) | .)11.8 × 2 (24.6 × 2) |
|                             | Liquid              | /                                     | 12.70         | 12.70         | 12.70         | 12.70         | 12.70               | 15.88               | 15.88                 | 15.88                 | 15.88                 |
| Connection pipe<br>diameter | Discharge Gas       | mm                                    | 15.88         | 19.05         | 19.05         | 22.22         | 22.22               | 22.22               | 22.22                 | 28.58                 | 28.58                 |
| diameter                    | Suction Gas         | 1                                     | 22.22         | 22.22         | 28.58         | 28.58         | 28.58               | 28.58               | 28.58                 | 34.92                 | 34.92                 |
|                             | Cooling             | · · · · · · · · · · · · · · · · · · · | -10 to 46           | -10 to 46           | -10 to 46             | -10 to 46             | -10 to 46             |
| Operating Range             | Heating             | °CDB                                  | -20 to 21           | -20 to 21           | -20 to 21             | -20 to 21             | -20 to 21             |
| ,                           | Cooling/Heating     | 1                                     | -10 to 21           | -10 to 21           | -10 to 21             | -10 to 21             | -10 to 21             |

#### **Energy Efficiency Combination**

| Rated capacity range       | A                   |                   | 16                  | 22                     | 24                     | 26                     | 28                     | 30                     |
|----------------------------|---------------------|-------------------|---------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Model name                 |                     |                   | AJH144GALDHH        | AJH198GALDHH           | AJH216GALDHH           | AJH234GALDHH           | AJH252GALDHH           | AJH270GALDHH           |
| Unit 1                     |                     |                   | AJH072GALDH         | AJH126GALDH            | AJH072GALDH            | AJH090GALDH            | AJH090GALDH            | AJH090GALDH            |
| Unit 2                     |                     | l                 | AJH072GALDH         | AJH072GALDH            | AJH072GALDH            | AJH072GALDH            | AJH090GALDH            | AJH090GALDH            |
| Unit 3                     |                     |                   | 1 /                 | 1                      | AJH072GALDH            | AJH072GALDH            | AJH072GALDH            | AJH090GALDH            |
| Maximum connectable in     | ndoor units*1       |                   | 34                  | 47                     | 52                     | 56                     | 60                     | 64                     |
| Connectable capacity range |                     | kW                | 11.2-67.2*3         | 15.6-93.6*3            | 16.8-100.8*3           | 18.2-109.2*3           | 19.6-117.6*3           | 21.0-126.0*3           |
|                            |                     |                   |                     |                        |                        |                        |                        |                        |
| Power source               |                     | !                 | 4                   |                        |                        | re, 400 V, 50Hz        |                        |                        |
|                            | Cooling             | 1                 | 44.8                | 62.4                   | 67.2                   | 72.8                   | 78.4                   | 84.0                   |
| Capacity                   | Nominal Heating     | kW                | 44.8                | 62.4                   | 67.2                   | 72.8                   | 78.4                   | 84.0                   |
|                            | Max. Heating        | ()                | 50.0                | 70.0                   | 75.0                   | 81.5                   | 88.0                   | 94.5                   |
|                            | Cooling             | 1                 | 12.52               | 19.42                  | 18.78                  | 22.05                  | 25.32                  | 28.59                  |
| Input power                | Nominal Heating     | kW                | 10.74               | 16.17                  | 16.11                  | 18.12                  | 20.13                  | 22.14                  |
|                            | Max. Heating        | ۱ <u> </u>        | 12.50               | 20.20                  | 18.75                  | 21.46                  | 24.17                  | 26.88                  |
| EER                        | Cooling             | 1                 | 3.58                | 3.21                   | 3.58                   | 3.30                   | 3.10                   | 2.94                   |
| - 3.0                      | Nominal Heating     | w/w               | 4.17                | 3.86                   | 4.17                   | 4.02                   | 3.89                   | 3.79                   |
| COP                        | Max. Heating        | r F               | 4.00                | 3.47                   | 4.00                   | 3.80                   | 3.64                   | 3.52                   |
| SEER                       | Cooling             | ng                | 7.16                | 6.96                   | 7.16                   | 6.98                   | 6.79                   | 6.61                   |
| SCOP                       | Heating             |                   | 3.78                | 4.05                   | 3.78                   | 3.77                   | 3.77                   | 3.76                   |
| ης                         | Cooling             |                   | 283.0               | 275.0                  | 283.0                  | 275.7                  | 268.3                  | 261.0                  |
| ηh                         | Heating             | - %               | 148.0               | 158.5                  | 148.0                  | 147.7                  | 147.3                  | 147.0                  |
| Air flow rate              | High                | m³/h              | 11,100×2            | 13,000+11,100          | 11,100×3               | 11,100×3               | 11,100×3               | 11,100×3               |
| Sound pressure level*2/    | Cooling             |                   | 59 / 80             | 61 / 83                | 61 / 82                | 62 / 82                | 62 / 82                | 63 / 83                |
| Power level                | Heating             | dB(A)             | 61 / 82             | 63 / 84                | 63 / 84                | 63 / 84                | 63 / 84                | 64 / 84                |
| Max. External static press | 5                   | Pa                | 80                  | 80                     | 80                     | 80                     | 80                     | 80                     |
| Compressor motor output    |                     | kW                | 7.5 × 2             | 11.0 + 7.5             | 7.5 × 3                | 7.5 × 3                | 7.5 × 3                | 7.5 × 3                |
| Heat exchanger fin         |                     | +                 | Blue fin            | Blue fin               | Blue fin               | Blue fin               | Blue fin               | Blue fin               |
| field excitations          | Height              |                   | 1.690               | 1.690                  | 1,690                  | 1.690                  | 1,690                  | 1.690                  |
| Net Dimensions             | Width               |                   | 930 × 2             | 1,240 + 930            | 930 × 3                | 930 × 3                | 930 × 3                | 930 × 3                |
| Net billensions            | Depth               | 1                 | 765                 | 765                    | 765                    | 765                    | 765                    | 765                    |
| Weight                     | - Depair            | kg                | 262 × 2             | 286 + 262              | 262 × 3                | 262 × 3                | 262 × 3                | 262 × 3                |
| -                          | Type (Global Warmir | -                 | R410A (2,088)       | R410A (2,088)          | R410A (2,088)          | R410A (2,088)          | R410A (2,088)          | R410A (2,088)          |
| Refrigerant                | 21 1                | kg (CO2eq-T)      | 11.8 × 2 (24.6 × 2) | 11.8 × 2 (24.6 × 2)    | 11.8 × 3 (24.6 × 3)    | 11.8 × 3 (24.6 × 3)    | 11.8 × 3 (24.6 × 3)    | 11.8 × 3 (24.6 × 3)    |
|                            | Liquid              | 1                 | 12.70               | 15.88                  | 15.88                  | 15.88                  | 15.88                  | 19.05                  |
| Connection pipe            | Discharge Gas       | mm                | 22.22               | 28.58                  | 28.58                  | 28.58                  | 28.58                  | 28.58                  |
| diameter                   | Suction Gas         | t F               | 28.58               | 34.92                  | 34.92                  | 34.92                  | 34.92                  | 34.92                  |
|                            | Cooling             | $\longrightarrow$ | -10 to 46           | -10 to 46              | -10 to 46              | -10 to 46              | -10 to 46              | -10 to 46              |
| Operating Range            | Heating             | °CDB              | -10 to 48           | -10 to 48              | -10 to 48              | -10 to 48              | -10 to 48              | -10 to 40              |
| Operating Range            |                     | 1                 | -20 to 21           | -20 to 21<br>-10 to 21 | -20 to 21<br>-10 to 21 | -20 to 21<br>-10 to 21 | -20 to 21<br>-10 to 21 | -20 to 21<br>-10 to 21 |
|                            | Cooling/Heating     | I                 | -10 t0 21           | -101021                | -101021                | -10 L0 Z I             | -10 L0 Z I             | -10 to 21              |

Note: Specifications are based on the following conditions. Cooling: Indoor temperature of 27°CDB/9°CVB, and outdoor temperature of 35°CDB/24°CVB. Heating: Indoor temperature of 20°CDB/(15°CVB), and outdoor temperature of 7°CDB/6°CVB. Pipe length: 7.5 m; Height difference between outdoor unit and indoor unit: 0 m.

When cooling operation is be conducted at an outdoor air temperature below -5°C, the outdoor unit must be installed in a position that is higher than or equal to that of the indoor units. \* These specifications are determined by ducted combination. \* Multiple outdoor units are not certified by Eurovent.

# **VR-IV**

|    | 26            | 28            | 30            | 32            | 34                  | 36                  | 38                  | 40                  | 42                  | 44                  | 46                                    | 48            |
|----|---------------|---------------|---------------|---------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------------------------|---------------|
| A  | JH234GALDH    | AJH252GALDH   | AJH270GALDH   | AJH288GALDH   | AJH306GALDH         | AJH324GALDH         | AJH342GALDH         | AJH360GALDH         | AJH378GALDH         | AJH396GALDH         | AJH414GALDH                           | AJH432GALDH   |
| A  | AJH144GALDH   | AJH144GALDH   | AJH144GALDH   | AJH144GALDH   | AJH108GALDH         | AJH108GALDH         | AJH144GALDH         | AJH144GALDH         | AJH144GALDH         | AJH144GALDH         | AJH144GALDH                           | AJH144GALDH   |
| A  | JH090GALDH    | AJH108GALDH   | AJH126GALDH   | AJH144GALDH   | AJH108GALDH         | AJH108GALDH         | AJH108GALDH         | AJH108GALDH         | AJH144GALDH         | AJH144GALDH         | AJH144GALDH                           | AJH144GALDH   |
|    |               |               |               |               | AJH090GALDH         | AJH108GALDH         | AJH090GALDH         | AJH108GALDH         | AJH090GALDH         | AJH108GALDH         | AJH126GALDH                           | AJH144GALDH   |
|    | 56            | 60            | 64            | 64            | 64                  | 64                  | 64                  | 64                  | 64                  | 64                  | 64                                    | 64            |
|    | 18.3-109.5*3  | 19.7-117.7*3  | 21.3-127.5*3  | 22.5-135.0*3  | 23.8-142.5*3        | 25.2-150.7*3        | 26.7-159.7*3        | 28.0-168.0*3        | 29.5-177.0*3        | 30.9-185.2*3        | 32.5-195.0*3                          | 33.8-202.5*3  |
|    |               |               |               |               |                     | 3-phase A-wir       | e, 400 V, 50Hz      |                     |                     |                     |                                       |               |
|    | 73.0          | 78.5          | 85.0          | 90.0          | 95.0                | 100.5               | 106.5               | 112.0               | 118.0               | 123.5               | 130.0                                 | 135.0         |
|    | 70.0          | 75.5          | 82.0          | 84.0          | 95.0                | 100.5               | 103.5               | 109.0               | 112.0               | 117.5               | 124.0                                 | 126.0         |
|    | 79.5          | 85.5          | 93.0          | 96.0          | 106.5               | 112.5               | 117.0               | 123.0               | 127.5               | 133.5               | 141.0                                 | 144.0         |
|    | 26.24         | 28.60         | 29.87         | 33.42         | 33.31               | 35.67               | 38.13               | 40.49               | 42.95               | 45.31               | 46.58                                 | 50.13         |
|    | 19.19         | 20.97         | 22.61         | 23.62         | 25.70               | 27.48               | 28.35               | 30.13               | 31.00               | 32.78               | 34.42                                 | 35.43         |
|    | 23.94         | 26.46         | 28.93         | 29.96         | 31.92               | 34.44               | 35.42               | 37.94               | 38.92               | 41.44               | 43.91                                 | 44.94         |
|    | 2.78          | 2.74          | 2.85          | 2.69          | 2.85                | 2.82                | 2.79                | 2.77                | 2.75                | 2.73                | 2.79                                  | 2.69          |
|    | 3.65          | 3.60          | 3.63          | 3.56          | 3.70                | 3.66                | 3.65                | 3.62                | 3.61                | 3.58                | 3.60                                  | 3.56          |
|    | 3.32          | 3.23          | 3.21          | 3.20          | 3.34                | 3.27                | 3.30                | 3.24                | 3.28                | 3.22                | 3.21                                  | 3.20          |
|    | 6.44          | 6.50          | 6.52          | 6.27          | 6.69                | 6.73                | 6.54                | 6.58                | 6.38                | 6.42                | 6.43                                  | 6.27          |
|    | 4.09          | 4.14          | 4.36          | 4.41          | 3.83                | 3.86                | 4.01                | 4.04                | 4.19                | 4.23                | 4.38                                  | 4.41          |
|    | 254.5         | 257.0         | 257.5         | 248.0         | 264.3               | 266.0               | 258.3               | 260.0               | 252.3               | 254.0               | 254.3                                 | 248.0         |
|    | 160.0         | 162.0         | 171.0         | 173.0         | 149.7               | 151.0               | 157.0               | 158.3               | 164.3               | 165.7               | 171.7                                 | 173.0         |
|    | 13,000+11,100 | 13,000+11,100 | 13,000×2      | 13,000×2      | 11,100×3            | 11,100×3            | 13,000+11,100×2     | 13,000+11,100×2     | 13,000×2+11,100     | 13,000×2+11,100     | 13,000×3                              | 13,000×3      |
|    | 63 / 83       | 63 / 84       | 64 / 85       | 64 / 85       | 63 / 83             | 64/84               | 64 / 85             | 65 / 85             | 65 / 86             | 65 / 86             | 65 / 87                               | 66 / 87       |
|    | 64/84         | 66 / 86       | 66 / 86       | 66 / 86       | 67 / 86             | 68 / 87             | 67 / 86             | 68 / 87             | 67 / 87             | 68/ 87              | 67 / 88                               | 68/88         |
|    | 80            | 80            | 80            | 80            | 80                  | 80                  | 80                  | 80                  | 80                  | 80                  | 80                                    | 80            |
|    | 11.0 + 7.5    | 11.0 + 7.5    | 11.0 × 2      | 11.0 × 2      | 7.5 × 3             | 7.5 × 3             | 11.0+7.5 × 2        | 11.0 + 7.5 × 2      | 11.0 × 2 + 7.5      | 11.0 × 2 + 7.5      | 11.0 × 3                              | 11.0 × 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         |
|    | 1,240 + 930   | 1,240 + 930   | 1,240 × 2     | 1,240 × 2     | 930 × 3             | 930 × 3             | 1,240 + 930 × 2     | 1,240 + 930 × 2     | 1,240 × 2 + 930     | 1,240 × 2 + 930     | 1,240 × 3                             | 1,240 × 3     |
|    | 765           | 765           | 765           | 765           | 765                 | 765                 | 765                 | 765                 | 765                 | 765                 | 765                                   | 765           |
|    | 286 + 262     | 286 + 262     | 286 × 2       | 286 × 2       | 262 × 3             | 262 × 3             | 286 + 262 × 2       | 286 + 262 × 2       | 286 × 2 + 262       | 286 × 2 + 262       | 286 × 3                               | 286 × 3       |
|    | R410A (2,088)       | R410A (2,088)       | R410A (2,088)       | R410A (2,088)       | R410A (2,088)       | R410A (2,088)       | R410A (2,088)                         | R410A (2,088) |
| 11 | . ,           |               |               |               | 11.8 × 3 (24.6 × 3) | 11.8 × 3 (24.6 × 3) | 11.8 × 3 (24.6 × 3) | 11.8 × 3 (24.6 × 3) | 11.8 × 3 (24.6 × 3) | 11.8 × 3 (24.6 × 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         |
|    | 28.58         | 28.58         | 28.58         | 28.58         | 28.58               | 28.58               | 34.92               | 34.92               | 34.92               | 34.92               | 34.92                                 | 34.92         |
|    | 34.92         | 34.92         | 34.92         | 34.92         | 34.92               | 41.27               | 41.27               | 41.27               | 41.27               | 41.27               | 41.27                                 | 41.27         |
|    | -10 to 46           | -10 to 46           | -10 to 46           | -10 to 46           | -10 to 46           | -10 to 46           | -10 to 46                             | -10 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     |
|    | -10 to 21           | -10 to 21           | -10 to 21           | -10 to 21           | -10 to 21           | -10 to 21           | -10 to 21                             | -10 to 21     |

|   | 32                  | 34                  | 36                  | 38                         | 40                  | 42                  | 44                 |
|---|---------------------|---------------------|---------------------|----------------------------|---------------------|---------------------|--------------------|
|   | AJH288GALDHH        | AJH306GALDHH        | AJH324GALDHH        | AJH342GALDHH               | AJH360GALDHH        | AJH378GALDHH        | AJH396GALDHH       |
|   | AJH126GALDH         | AJH126GALDH         | AJH126GALDH         | AJH126GALDH                | AJH144GALDH         | AJH126GALDH         | AJH144GALDH        |
|   | AJH090GALDH         | AJH090GALDH         | AJH126GALDH         | AJH126GALDH                | AJH126GALDH         | AJH126GALDH         | AJH126GALDH        |
|   | AJH072GALDH         | AJH090GALDH         | AJH072GALDH         | AJH090GALDH                | AJH090GALDH         | AJH126GALDH         | AJH126GALDH        |
|   | 64                  | 64                  | 64                  | 64                         | 64                  | 64                  | 64                 |
|   | 22.6-135.6*3        | 24.0-144.0*3        | 25.6-153.6*3        | 27.0-162.0*3               | 28.3-169.5*3        | 30.0-180.0*3        | 31.3-187.5*3       |
|   |                     |                     | 3                   | -phase, 4-wire, 400 V, 50H | łz                  |                     |                    |
|   | 90.4                | 96.0                | 102.4               | 108.0                      | 113.0               | 120.0               | 125.0              |
|   | 90.4                | 96.0                | 102.4               | 108.0                      | 110.0               | 120.0               | 122.0              |
|   | 101.5               | 108.0               | 115.0               | 121.5                      | 124.5               | 135.0               | 138.0              |
|   | 28.95               | 32.22               | 32.58               | 35.85                      | 39.40               | 39.48               | 43.03              |
|   | 23.55               | 25.56               | 26.97               | 28.98                      | 29.99               | 32.40               | 33.41              |
|   | 29.16               | 31.87               | 34.15               | 36.86                      | 37.89               | 41.85               | 42.88              |
|   | 3.12                | 2.98                | 3.14                | 3.01                       | 2.87                | 3.04                | 2.90               |
|   | 3.84                | 3.76                | 3.80                | 3.73                       | 3.67                | 3.70                | 3.65               |
|   | 3.48                | 3.39                | 3.37                | 3.30                       | 3.29                | 3.23                | 3.22               |
|   | 6.84                | 6.66                | 6.89                | 6.71                       | 6.55                | 6.76                | 6.60               |
|   | 3.95                | 3.94                | 4.13                | 4.13                       | 4.16                | 4.31                | 4.34               |
| _ | 270.3               | 263.0               | 272.3               | 265.0                      | 258.7               | 267.0               | 260.7              |
|   | 154.7               | 154.3               | 162.0               | 161.7                      | 163.0               | 169.0               | 170.3              |
|   | 13,000+11,100×2     | 13,000+11,100×2     | 13,000×2+11,100     | 13,000×2+11,100            | 13,000×2+11,100     | 13,000×3            | 13,000×3           |
|   | 63 / 84             | 64/85               | 64 / 86             | 64 / 86                    | 65 / 86             | 65 / 87             | 65 / 87            |
|   | 65 / 86             | 65 / 86             | 66 / 87             | 66 / 87                    | 66 / 87             | 67 / 88             | 67 / 88            |
|   | 80                  | 80                  | 80                  | 80                         | 80                  | 80                  | 80                 |
|   | 11.0 + 7.5 × 2      | 11.0 + 7.5 × 2      | 11.0 × 2 + 7.5      | 11.0 × 2 + 7.5             | 11.0 × 2 + 7.5      | 11.0 × 3            | 11.0 × 3           |
|   | 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              |
|   | 1,240 + 930 × 2     | 1,240 + 930 × 2     | 1,240 × 2 + 930     | 1,240 × 2 + 930            | 1,240 × 2 + 930     | 1,240 × 3           | 1,240 × 3          |
|   | 765                 | 765                 | 765                 | 765                        | 765                 | 765                 | 765                |
|   | 286 + 262 × 2       | 286 + 262 × 2       | 286 × 2 + 262       | 286 × 2 + 262              | 286 × 2 + 262       | 286 × 3             | 286 × 3            |
|   | R410A (2,088)       | R410A (2,088)       | R410A (2,088)       | R410A (2,088)              | R410A (2,088)       | R410A (2,088)       | R410A (2,088)      |
|   | 11.8 × 3 (24.6 × 3) | 11.8 × 3 (24.6 × 3) | 11.8 × 3 (24.6 × 3) | 11.8 × 3 (24.6 × 3)        | 11.8 × 3 (24.6 × 3) | 11.8 × 3 (24.6 × 3) | 11.8 × 3 (24.6 × 3 |
|   | 19.05               | 19.05               | 19.05               | 19.05                      | 19.05               | 19.05               | 19.05              |
|   | 28.58               | 28.58               | 28.58               | 34.92                      | 34.92               | 34.92               | 34.92              |
| _ | 34.92               | 34.92               | 41.27               | 41.27                      | 41.27               | 41.27               | 41.27              |
|   | -10 to 46           | -10 to 46           | -10 to 46           | -10 to 46                  | -10 to 46           | -10 to 46           | -10 to 46          |
|   | -20 to 21           | -20 to 21           | -20 to 21           | -20 to 21                  | -20 to 21           | -20 to 21           | -20 to 21          |
|   | -10 to 21           | -10 to 21           | -10 to 21           | -10 to 21                  | -10 to 21           | -10 to 21           | -10 to 21          |

\*1: Minimum connectable indoor unit number is 2.
\*2: The noise level is the value measured in an anechoic room. When measured in an actual installation, the measured value is typically larger than the indicated value due to ambient noise and reflections.

\*3: If the capacity range of the connectable indoor units is between 25% and 49.9%, do not open the three-way valve except for the unit to be operated. In addition, do not connect the power line.



Heat Pump Modular type

VRF V-IV

#### System configuration example

- Suitable for air conditioning midsize and large buildings. Connecting each outdoor unit makes it possible to create a highcapacity system.
- Multiple indoor units are connected with separation tubes and headers.



### New intelligent refrigerant control

Fujitsu General is proposing outdoor units equipped with refrigerant control function. The refrigerant control operates with subtle control corresponding to the heat load of the room and offers a more comfortable environment. The refrigerant control can also provide increased energy savings.



\* The improvements due to the control and the actual sine wave vary depending on the combination of the indoor unit and system operating conditions.

### Efficiency in actual operating conditions

The use of our proprietary heat exchanger structure and high-efficiency DC twin-rotary compressors achieves the classleading coefficient of performance (COP) in every combination.







#### \* These specifications are determined by Cassette combination.

\*Multiple outdoor units are not certified by Eurovent.

### The energy-saving technology that boosted operation efficiency



#### Powerful large propeller fan

The fan uses CFD\* technology to achieve both high performance and low noise operation. \*CFD: Computational Fluid Dynamics

#### 3-phase DC fan motor

The use of a DC fan motor with sophisticated driver control improves energy efficiency substantially. In addition, low noise is realized by the DC fan motor

#### Sine-wave DC inverter control

High-efficiency is realized by the adoption of reduced switching loss IPM.

#### 4-face heat exchanger

The 4-face heat exchanger increases the effective surface area and significantly improves heat-exchanging efficiency.

#### Subcooloing heat exchanger

High heat exchange efficiency is achieved by using an internal projectionshape double-pipe construction.

High-efficient, large-capacity DC twin-rotary compressor Large-capacity high-efficient DC twin-rotary compressor with excellent intermediate capability.

#### Front intake port (Corner cut air inlet structure)

In multiple outdoor unit installations, the unique front intake design improves airflow into the heat exchanger.

Outdoor units lineup • Combinations other than those listed below are not recommended.

#### Space saving combination

| 22.4 kW (8 HP)                           | 28.0 kW (10 HP)                          | 33.5 kW (12 HP)                          | 40.0 kW (14 HP)                          | 45.0 kW (16 HP)                          |
|--|--|--|--|--|
|  |  |  |  |  |
| AJH072LALDH<br>UNIT: AJH072LALDH         | AJH090LALDH<br>UNIT: AJH090LALDH         | AJH108LALDH<br>UNIT: AJH108LALDH         | AJH126LALDH<br>UNIT: AJH126LALDH         | AJH144LALDH<br>UNIT: AJH144LALDH         |
| 50.4 kW (18 HP)                          | 56.0 kW (20 HP)                          | 62.4 kW (22 HP)                          | 68.0 kW (24 HP)                          | 73.0 kW (26 HP)                          |
| AJH162LALDH<br>UNIT: AJH090/072LALDH     | AJH180LALDH<br>UNIT: AJH090/090LALDH     | AJH198LALDH<br>UNIT: AJH126/072LALDH     | AJH216LALDH<br>UNIT: AJH126/090LALDH     | AJH234LALDH<br>UNIT: AJH144/090LALDH     |
| 78.5 kW (28 HP)                          | 85.0 kW (30 HP)                          | 90.0 kW (32 HP)                          | 95.4 kW(34 HP)                           | 101.0 kW (36 HP)                         |
|  |  |  |  |  |
| AJH252LALDH<br>UNIT: AJH144/108LALDH     | AJH270LALDH<br>UNIT: AJH144/126LALDH     | AJH288LALDH<br>UNIT: AJH144/144LALDH     | AJH306LALDH<br>UNIT: AJH144/090/072LALDH | AJH324LALDH<br>UNIT: AJH144/090/090LALDH |
| 106.5 kW (38 HP)                         | 113.0 kW (40 HP)                         | 118.0 kW (42 HP)                         | 123.5 kW (44 HP)                         | 130.0 kW (46 HP)                         |
|  |  |  |  |  |
| AJH342LALDH<br>UNIT: AJH144/108/090LALDH | AJH360LALDH<br>UNIT: AJH144/126/090LALDH | AJH378LALDH<br>UNIT: AJH144/144/090LALDH | AJH396LALDH<br>UNIT: AJH144/144/108LALDH | AJH414LALDH<br>UNIT: AJH144/144/126LALDH |
| 135.0 kW (48 HP)                         |  |  |  |  |
| AJH432LALDH<br>UNIT: AJH144/144/144LALDH |  |  |  |  |

#### Energy efficiency combination



V-IV

#### 8, 10 HP: AJH072LALDH / AJH090LALDH 12, 14, 16 HP: AJH108LALDH / AJH126LALDH / AJH144LALDH



8,10 HP

12, 14, 16 HP

#### Dimensions

(Unit: mm)



234.5 Power supply

Ø.

Ø34.5

Ø43.7

Ø22.2

197

coble per

#### **Outdoor unit specifications**

#### Space saving combination

| Rated capacity range       |                    | НР           | 8             | 10            | 12            | 14                 | 16                 | 18                     | 20                     | 22                           | 24                           |
|----------------------------|--------------------|--------------|---------------|---------------|---------------|--------------------|--------------------|------------------------|------------------------|------------------------------|------------------------------|
| Model name                 |                    |              |               | AJH090LALDH   | AJH108LALDH   | AJH126LALDH        |                    | AJH162LALDH            | AJH180LALDH            |                              |                              |
|                            |                    |              |               |               |               |                    |                    |                        |                        |                              |                              |
| Unit 1                     |                    |              | AJH072LALDH   | AJH090LALDH   | AJH108LALDH   | AJH126LALDH        | AJH144LALDH        | AJH090LALDH            | AJH090LALDH            |                              | AJH126LALDH                  |
| Unit 2<br>Unit 3           |                    |              | 4             | 1             | 1 '           | 1 '                | 1 '                | AJH072LALDH            | AJH090LALDH            | AJH072LALDH                  | AJH090LALDH                  |
|                            |                    |              | <u> </u>      | L'            | L'            | 1'                 | L'                 | 1′                     | <u> </u>               |                              |                              |
| Maximum connectable ind    |                    |              | 17            | 21            | 26            | 30                 | 34                 | 39                     | 43                     | 47                           | 52                           |
| Connectable capacity rang  | ge of indoor units | kW           | 11.2-33.6     | 14.0-42.0     | 16.8-50.2     | 20.0-60.0          | 22.5-67.5          | 25.2-75.6              | 28.0-84.0              | 31.2-93.6                    | 34.0-102.0                   |
| Power source               |                    |              |               |               |               | 3-pha <sup>,</sup> | se, 4-wire, ~400 V | √, 50 Hz               |                        |                              |                              |
|                            | Cooling            | · · · · ·    | 22.4          | 28.0          | 33.5          | 40.0               | 45.0               | 50.4                   | 56.0                   | 62.4                         | 68.0                         |
| Capacity                   | Nominal Heating    | kW           | 22.4          | 28.0          | 33.5          | 40.0               | 45.0               | 50.4                   | 56.0                   | 62.4                         | 68.0                         |
| capacity                   | Max. Heating       | 1            | 25.0          | 31.5          | 37.5          | 45.0               | 48.0               | 56.5                   | 63.0                   | 70.0                         | 76.5                         |
|                            | Cooling            |              | 5.95          | 9.06          | 9.54          | 13.18              | 16.74              | 15.01                  | 18.12                  | 19.13                        | 22.24                        |
| Input power                | Nominal Heating    | - kw         | 5.42          | 7.44          | 7.76          | 11.74              | 13.76              | 12.86                  | 14.88                  | 17.16                        | 19.18                        |
| inpac port.                | Max. Heating       | 1            | 6.26          | 8.98          | 9.48          | 14.00              | 15.02              | 15.24                  | 17.96                  | 20.26                        | 22.98                        |
| EER                        | Cooling            | ('           | 3.76          | 3.09          | 3.51          | 3.03               | 2.68               | 3.36                   | 3.09                   | 3.26                         | 3.06                         |
|                            | Nominal Heating    | - w/w        | 4.13          | 3.76          | 4.31          | 3.41               | 3.27               | 3.92                   | 3.76                   | 3.64                         | 3.55                         |
| COP                        | Max. Heating       | 1            | 3.99          | 3.50          | 3.95          | 3.21               | 3.19               | 3.71                   | 3.51                   | 3.46                         | 3.33                         |
| SEER                       | Cooline            | 00           | 7.09          | 6.56          | 7.33          | 6.67               | 6.18               | 6.83                   | 6.56                   | 6.64                         | 6.62                         |
| SCOP                       | Heatin             | 5            | 3.83          | 3.80          | 4.19          | 4.19               | 4.27               | 3.82                   | 3.80                   | 4.05                         | 4.00                         |
| ης                         | Cooling            | r i          | 281.0         | 259.0         | 290.0         | 264.0              | 244.0              | 270.0                  | 259.0                  | 262.5                        | 261.5                        |
| nh                         | Heating            | - %          | 150.0         | 149.0         | 165.0         | 165.0              | 168.0              | 149.5                  | 149.0                  | 159.0                        | 157.0                        |
| Air flow rate              | High               | m³/h         | 11,100        | 11,100        | 13,000        | 13,000             | 13,700             | 11,100×2               | 11,100 × 2             | 13,000 + 11,100              |                              |
| Sound pressure level*2/    | Cooling            |              | 58 / 79       | 58 / 79       | 58 / 81       | 62 / 84            | 63 / 86            | 61 / 82                | 61 / 82                | 63 / 85                      | 63 / 85                      |
| Power level                | Heating            | dB(A)        | 59 / 80       | 60 / 81       | 60 / 83       | 64 / 85            | 65 / 87            | 63 / 84                | 63 / 84                | 65 / 86                      | 65 / 86                      |
| Max. External static press | 5                  | Pa           | 82            | 82            | 82            | 82                 | 82                 | 82                     | 82                     | 82                           | 82                           |
| Compressor motor output    |                    | kW           | 7.5           | 7.5           | 11.0          | 11.0               | 11.0               | 7.5×2                  | 7.5 × 2                | 11.0 + 7.5                   | 11.0 + 7.5                   |
| Heat exchanger fin         |                    |              | Blue fin      | Blue fin      | Blue fin      | Blue fin           | Blue fin           | Blue fin               | Blue fin               | Blue fin                     | Blue fin                     |
| 1.642                      | Height             | ()           | 1,690         | 1,690         | 1,690         | 1,690              | 1,690              | 1,690                  | 1,690                  | 1,690                        | 1.690                        |
| Net Dimensions             | Width              | - mm         | 930           | 930           | 1,240         | 1,240              | 1,240              | 930 × 2                | 930 × 2                | 1,240 + 930                  | 1,240 + 930                  |
| Net binensiens             | Depth              | 1            | 765           | 765           | 765           | 765                | 765                | 765                    | 765                    | 765                          | 765                          |
| Weight                     |                    | kg           | 252           | 252           | 275           | 275                | 275                | 252 × 2                | 252 × 2                | 275 + 252                    | 275 + 252                    |
|                            | Type (Global Warmi |              | R410A (2,088) | R410A (2,088) | R410A (2,088) | R410A (2,088)      | R410A (2,088)      | R410A (2,088)          | R410A (2,088)          | R410A (2,088)                | R410A (2,088)                |
| Refrigerant                |                    | kg (CO2eq-T) | 11.7 (24.4)   | 11.7 (24.4)   | 11.8 (24.6)   | 11.8 (24.6)        | 11.8 (24.6)        | 11.7 × 2<br>(24.4 × 2) | 11.7 × 2<br>(24.4 × 2) | 11.8 + 11.7<br>(24.6 + 24.4) | 11.8 + 11.7<br>(24.6 + 24.4) |
| Connection pipe            | Liquid             | ('           | 12.70         | 12.70         | 12.70         | 12.70              | 12.70              | 15.88                  | 15.88                  | 15.88                        | 15.88                        |
| diameter                   | Gas                | - mm -       | 22.22         | 22.22         | 28.58         | 28.58              | 28.58              | 28.58                  | 28.58                  | 34.92                        | 34.92                        |
|                            | Cooling            |              | -15 to 46     | -15 to 46     | -15 to 46     | -15 to 46          | -15 to 46          | -5 to 46               | -5 to 46               | -5 to 46                     | -5 to 46                     |
| Operating Range            | Heating            | °CDB         | -20 to 21     | -20 to 21     | -20 to 21     | -20 to 21          | -20 to 21          | -20 to 21              | -20 to 21              | -20 to 21                    | -20 to 21                    |

#### **Energy Efficiency Combination**

| Rated capacity range       |                    | HP           | 16                         | 20                           | 24  | 26  | 28  | 30  |
|----------------------------|--------------------|--------------|----------------------------|------------------------------|---|---|---|---|
| Model name                 |                    |              | AJH144LALDHH               | AJH180LALDHH                 | AJH216LALDHH                              | AJH234LALDHH                              | AJH252LALDHH                              | AJH270LALDHH                              |
| Unit 1<br>Unit 2<br>Unit 3 |                    |              | AJH072LALDH<br>AJH072LALDH | AJH108LALDH<br>AJH072LALDH   | AJH072LALDH<br>AJH072LALDH<br>AJH072LALDH | AJH090LALDH<br>AJH072LALDH<br>AJH072LALDH | AJH108LALDH<br>AJH072LALDH<br>AJH072LALDH | AJH126LALDH<br>AJH072LALDH<br>AJH072LALDH |
| Maximum connectable in     | door units*1       |              | 34                         | 43                           | 52  | 56  | 60  | 64  |
| Connectable capacity ran   | ge of indoor units | kW           | 22.4-67.2                  | 28.0-83.8                    | 33.6-100.8                                | 36.4-109.2                                | 39.2-117.4                                | 42.4-127.2                                |
| Power source               |                    |              |                            |                              | 3-phase, 4-wire                           | e, ~400 V, 50 Hz                          |   |   |
|                            | Cooling            |              | 44.8                       | 55.9                         | 67.2                                      | 72.8                                      | 78.3                                      | 84.8                                      |
| Capacity                   | Nominal Heating    | kW           | 44.8                       | 55.9                         | 67.2                                      | 72.8                                      | 78.3                                      | 84.8                                      |
|                            | Max. Heating       |              | 50.0                       | 62.5                         | 75.0                                      | 81.5                                      | 87.5                                      | 95.0                                      |
|                            | Cooling            |              | 11.90                      | 15.49                        | 17.85                                     | 20.96                                     | 21.44                                     | 25.08                                     |
| Input power                | Nominal Heating    | kW           | 10.84                      | 13.18                        | 16.26                                     | 18.28                                     | 18.60                                     | 22.58                                     |
|                            | Max. Heating       |              | 12.52                      | 15.74                        | 18.78                                     | 21.50                                     | 22.00                                     | 26.52                                     |
| EER                        | Cooling            |              | 3.76                       | 3.61                         | 3.76                                      | 3.47                                      | 3.65                                      | 3.38                                      |
|                            | Nominal Heating    | w/w          | 4.13                       | 4.24                         | 4.13                                      | 3.98                                      | 4.21                                      | 3.76                                      |
| COP                        | Max. Heating       |              | 3.99                       | 3.97                         | 3.99                                      | 3.79                                      | 3.98                                      | 3.58                                      |
| SEER                       | Coolir             | ng           | 7.09                       | 7.21                         | 7.09                                      | 6.91                                      | 7.17                                      | 6.79                                      |
| SCOP                       | Heatir             | ng           | 3.83                       | 4.01                         | 3.83                                      | 3.82                                      | 3.95                                      | 3.98                                      |
| ης                         | Cooling            |              | 281.0                      | 285.5                        | 281.0                                     | 273.7                                     | 284.0                                     | 275.3                                     |
| ηh                         | Heating            | %            | 150.0                      | 157.5                        | 150.0                                     | 149.7                                     | 155.0                                     | 155.0                                     |
| Air flow rate              | High               | m³/h         | 11,100 × 2                 | 13,000 + 11,100              | 11,100 × 3                                | 11,000 × 3                                | 13,000 + 11,100 × 2                       | 13,000 + 11,100 × 2                       |
| Sound pressure level*2/    | Cooling            | 10 (4)       | 61 / 82                    | 61 / 83                      | 63 / 84                                   | 63 / 84                                   | 63 / 85                                   | 65 / 86                                   |
| Power level                | Heating            | dB(A)        | 62 / 83                    | 63 / 85                      | 64 / 85                                   | 64 / 85                                   | 64 / 86                                   | 66 / 87                                   |
| Max. External static press | sure               | Pa           | 82                         | 82                           | 82  | 82  | 82  | 82  |
| Compressor motor output    | t                  | kW           | 7.5 × 2                    | 11.0 + 7.5                   | 7.5 × 3                                   | 7.5 × 3                                   | 11.0 + 7.5 × 2                            | 11.0 + 7.5 × 2                            |
| Heat exchanger fin         |                    |              | Blue fin                   | Blue fin                     | Blue fin                                  | Blue fin                                  | Blue fin                                  | Blue fin                                  |
|                            | Height             |              | 1,690                      | 1,690                        | 1,690                                     | 1,690                                     | 1,690                                     | 1,690                                     |
| Net Dimensions             | Width              | mm           | 930 × 2                    | 1,240 + 930                  | 930 × 3                                   | 930 × 3                                   | 1,240 + 930 × 2                           | 1,240 + 930 × 2                           |
|                            | Depth              |              | 765                        | 765                          | 765                                       | 765                                       | 765                                       | 765                                       |
| Weight                     |                    | kg           | 252 × 2                    | 275 + 252                    | 252 × 3                                   | 252 × 3                                   | 275 + 252 × 2                             | 275 + 252 × 2                             |
|                            | Type (Global Warm  |              | R410A (2,088)              | R410A (2,088)                | R410A (2,088)                             | R410A (2,088)                             | R410A (2,088)                             | R410A (2,088)                             |
| Refrigerant                | Charge             | kg (CO2eq-T) | 11.7 × 2 (24.4 × 2)        | 11.8 + 11.7<br>(24.6 + 24.4) | 11.7 × 3 (24.4 × 3)                       | 11.7 × 3 (24.4 × 3)                       | 11.8 + 11.7 × 2<br>(24.6 + 24.4 × 2)      | 11.8 + 11.7 × 2<br>(24.6 + 24.4 × 2)      |
| Connection pipe            | Liquid             |              | 12.70                      | 15.88                        | 15.88                                     | 15.88                                     | 15.88                                     | 19.05                                     |
| diameter                   | Gas                | mm           | 28.58                      | 28.58                        | 34.92                                     | 34.92                                     | 34.92                                     | 34.92                                     |
|                            | Cooling            |              | -5 to 46                   | -5 to 46                     | -5 to 46                                  | -5 to 46                                  | -5 to 46                                  | -5 to 46                                  |
| Operating Range            | Heating            | °CDB         | -20 to 21                  | -20 to 21                    | -20 to 21                                 | -20 to 21                                 | -20 to 21                                 | -20 to 21                                 |

Note: Specifications are subject to the following conditions: Cooling: Indoor temperature of 27°CDB/J9°CWB, and outdoor temperature of 35°CDB/Z4°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 is be conducted at an outdoor air temperature below -5°C, the outdoor unit must be installed in a position that is higher than or equal to that of the indoor units. \*These specifications are determined by ducted combination. \*Multiple outdoor units are not certified by Eurovent.

## V-IV

| 26                          | 28                 | 30                     | 32                     | 34                                   | 36                                   | 38                                   | 40                                   | 42                                   | 44                     | 46                     | 48                     |
|-----------------------------|--------------------|------------------------|------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|------------------------|------------------------|------------------------|
| AJH234LAL                   | OH AJH252LALDH     | AJH270LALDH            | AJH288LALDH            | AJH306LALDH                          | AJH324LALDH                          | AJH342LALDH                          | AJH360LALDH                          | AJH378LALDH                          | AJH396LALDH            | AJH414LALDH            | AJH432LALDH            |
| AJH144LALD                  | H AJH144LALDH      | AJH144LALDH            | AJH144LALDH            | AJH144LALDH                          | AJH144LALDH                          | AJH144LALDH                          | AJH144LALDH                          | AJH144LALDH                          | AJH144LALDH            | AJH144LALDH            | AJH144LALDH            |
| AJH090LALD                  | DH AJH108LALDH     | AJH126LALDH            | AJH144LALDH            | AJH090LALDH                          | AJH090LALDH                          | AJH108LALDH                          | AJH126LALDH                          | AJH144LALDH                          | AJH144LALDH            | AJH144LALDH            | AJH144LALDH            |
|                             |                    |                        |                        | AJH072LALDH                          | AJH090LALDH                          | AJH090LALDH                          | AJH090LALDH                          | AJH090LALDH                          | AJH108LALDH            | AJH126LALDH            | AJH144LALDH            |
| 56                          | 60                 | 64                     | 64                     | 64                                   | 64                                   | 64                                   | 64                                   | 64                                   | 64                     | 64                     | 64                     |
| 36.5-109.5                  | 39.3-117.7         | 42.5-127.5             | 45.0-135.0             | 47.7-143.1                           | 50.5-151.5                           | 53.3-159.7                           | 56.5-169.5                           | 59.0-177.0                           | 61.8-185.2             | 65.0-195.0             | 67.5-202.5             |
|                             |                    |                        |                        |                                      | 2 phace 4 wir                        | e. ~400 V. 50 Hz                     |                                      |                                      |                        |                        |                        |
| 73.0                        | 78.5               | 85.0                   | 90.0                   | 95.4                                 | 101.0                                | 106.5                                | 113.0                                | 118.0                                | 123.5                  | 130.0                  | 135.0                  |
| 73.0                        | 78.5               | 85.0                   | 90.0                   | 95.4                                 | 101.0                                | 106.5                                | 113.0                                | 118.0                                | 123.5                  | 130.0                  | 135.0                  |
| 79.5                        | 85.5               | 93.0                   | 96.0                   | 104.5                                | 111.0                                | 117.0                                | 124.5                                | 127.5                                | 133.5                  | 141.0                  | 144.0                  |
| 25.80                       | 26.28              | 29.92                  | 33.48                  | 31.75                                | 34.86                                | 35.34                                | 38.98                                | 42.54                                | 43.02                  | 46.66                  | 50.22                  |
| 21.20                       | 21.52              | 25.50                  | 27.52                  | 26.62                                | 28.64                                | 28.96                                | 32.94                                | 34.96                                | 35.28                  | 39.26                  | 41.28                  |
| 24.00                       | 24.50              | 29.02                  | 30.04                  | 30.26                                | 32.98                                | 33.48                                | 38.00                                | 39.02                                | 39.52                  | 44.04                  | 45.06                  |
| 2.83                        | 2,99               | 2.84                   | 2.69                   | 3.00                                 | 2.90                                 | 3.01                                 | 2.90                                 | 2.77                                 | 2.87                   | 2.79                   | 2.69                   |
| 3.44                        | 3.65               | 3.33                   | 3.27                   | 3.58                                 | 3.53                                 | 3.68                                 | 3.43                                 | 3.38                                 | 3.50                   | 3.31                   | 3.27                   |
| 3.31                        | 3.49               | 3.20                   | 3.20                   | 3.45                                 | 3.37                                 | 3.49                                 | 3.28                                 | 3.27                                 | 3.38                   | 3.20                   | 3.20                   |
| 6.37                        | 6.76               | 6.43                   | 6.18                   | 6.61                                 | 6.43                                 | 6.69                                 | 6.47                                 | 6.31                                 | 6.56                   | 6.34                   | 6.18                   |
| 4.04                        | 4.23               | 4.23                   | 4.27                   | 3.97                                 | 3.96                                 | 4.09                                 | 4.09                                 | 4.11                                 | 4.24                   | 4.24                   | 4.27                   |
| 251.5                       | 267.0              | 254.0                  | 244.0                  | 261.3                                | 254.0                                | 264.3                                | 255.7                                | 249.0                                | 259.3                  | 250.7                  | 244.0                  |
| 158.5                       | 166.5              | 166.5                  | 168.0                  | 155.7                                | 155.3                                | 160.7                                | 160.7                                | 161.7                                | 167.0                  | 167.0                  | 168.0                  |
| 13,700 + 11,10              | 00 13,700 + 13,000 | 13,700 + 13,000        | 13,700 × 2             | 13,700+11,100×2                      | 13,700+11,100×2                      | 13,700+13,000+11,100                 | 13,700 + 13,000 + 11,100             | 13,700 × 2 + 11,100                  | 13,700×2+13,000        | 13,700×2+13,000        | 13,700 × 3             |
| 64 / 87                     | 64 / 87            | 66 / 88                | 66 / 89                | 65 / 87                              | 65 / 87                              | 65 / 88                              | 66 / 89                              | 67 / 89                              | 67 / 90                | 67 / 90                | 68 / 91                |
| 66 / 88                     | 66 / 88            | 68 / 89                | 68 / 90                | 67 / 89                              | 67 / 89                              | 67 / 89                              | 68 / 90                              | 69 / 91                              | 69 / 91                | 69 / 91                | 70 / 92                |
| 82                          | 82                 | 82                     | 82                     | 82                                   | 82                                   | 82                                   | 82                                   | 82                                   | 82                     | 82                     | 82                     |
| 11.0 + 7.5                  | 11.0×2             | 11.0 × 2               | 11.0 × 2               | 11.0+7.5×2                           | 11.0+7.5×2                           | 11.0 × 2 + 7.5                       | 11.0 × 2 + 7.5                       | 11.0 × 2 + 7.5                       | 11.0×3                 | 11.0×3                 | 11.0×3                 |
| Blue fin                    | Blue fin           | Blue fin               | Blue fin               | 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                  |
| 1,240 + 930                 | ) 1,240 × 2        | 1,240 × 2              | 1,240 × 2              | 1,240 + 930 × 2                      | 1,240 + 930 × 2                      | 1,240 × 2 + 930                      | 1,240 × 2 + 930                      | 1,240 × 2 + 930                      | 1,240 × 3              | 1,240 × 3              | 1,240 × 3              |
| 765                         | 765                | 765                    | 765                    | 765                                  | 765                                  | 765                                  | 765                                  | 765                                  | 765                    | 765                    | 765                    |
| 275 + 252                   | 275 × 2            | 275 × 2                | 275 × 2                | 275 + 252 × 2                        | 275 + 252 × 2                        | 275 × 2 + 252                        | 275 × 2 + 252                        | 275 × 2 + 252                        | 275 × 3                | 275 × 3                | 275 × 3                |
| R410A (2,08                 | 8) R410A (2,088)   | R410A (2,088)          | R410A (2,088)          | R410A (2,088)                        | R410A (2,088)                        | R410A (2,088)                        | R410A (2,088)                        | R410A (2,088)                        | R410A (2,088)          | R410A (2,088)          | R410A (2,088)          |
| 11.8 + 11.7<br>(24.6 + 24.4 |                    | 11.8 × 2<br>(24.6 × 2) | 11.8 × 2<br>(24.6 × 2) | 11.8 + 11.7 × 2<br>(24.6 + 24.4 × 2) | 11.8 + 11.7 × 2<br>(24.6 + 24.4 × 2) | 11.8 × 2 + 11.7<br>(24.6 × 2 + 24.4) | 11.8 × 2 + 11.7<br>(24.6 × 2 + 24.4) | 11.8 × 2 + 11.7<br>(24.6 × 2 + 24.4) | 11.8 × 3<br>(24.6 × 3) | 11.8 × 3<br>(24.6 × 3) | 11.8 × 3<br>(24.6 × 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                             | -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                            | -20 to 21                            | -20 to 21              | -20 to 21              | -20 to 21              |

| 32  | 34  | 36  | 38  | 40  | 42  | 44  |
|---|---|---|---|---|---|---|
| AJH288LALDHH                              | AJH306LALDHH                              | AJH324LALDHH                              | AJH342LALDHH                              | AJH360LALDHH                              | AJH378LALDHH                              | AJH396LALDHH                              |
| AJH108LALDH<br>AJH108LALDH<br>AJH072LALDH | AJH126LALDH<br>AJH108LALDH<br>AJH072LALDH | AJH108LALDH<br>AJH108LALDH<br>AJH108LALDH | AJH126LALDH<br>AJH108LALDH<br>AJH108LALDH | AJH126LALDH<br>AJH126LALDH<br>AJH108LALDH | AJH126LALDH<br>AJH126LALDH<br>AJH126LALDH | AJH144LALDH<br>AJH126LALDH<br>AJH126LALDH |
| 64  | 64  | 64  | 64  | 64  | 64  | 64  |
| 44.7-134.1                                | 48.0-143.8                                | 50.3-150.7                                | 53.5-160.5                                | 56.8-170.2                                | 60.0-180.0                                | 62.5-187.5                                |
|   |   | 3-  | phase, 4-wire, ~400 V, 50                 | Hz  |   |   |
| 89.4                                      | 95.9                                      | 100.5                                     | 107.0                                     | 113.5                                     | 120.0                                     | 125.0                                     |
| 89.4                                      | 95.9                                      | 100.5                                     | 107.0                                     | 113.5                                     | 120.0                                     | 125.0                                     |
| 100.0                                     | 107.5                                     | 112.5                                     | 120.0                                     | 127.5                                     | 135.0                                     | 138.0                                     |
| 25.03                                     | 28.67                                     | 28.62                                     | 32.26                                     | 35.90                                     | 39.54                                     | 43.10                                     |
| 20.94                                     | 24.92                                     | 23.28                                     | 27.26                                     | 31.24                                     | 35.22                                     | 37.24                                     |
| 25.22                                     | 29.74                                     | 28.44                                     | 32.96                                     | 37.48                                     | 42.00                                     | 43.02                                     |
| 3.57                                      | 3.34                                      | 3.51                                      | 3.32                                      | 3.16                                      | 3.03                                      | 2.90                                      |
| 4.27                                      | 3.85                                      | 4.32                                      | 3.93                                      | 3.63                                      | 3.41                                      | 3.36                                      |
| 3.97                                      | 3.61                                      | 3.96                                      | 3.64                                      | 3.40                                      | 3.21                                      | 3.21                                      |
| 7.25                                      | 7.03                                      | 7.33                                      | 7.11                                      | 6.89                                      | 6.67                                      | 6.51                                      |
| 4.07                                      | 4.07                                      | 4.19                                      | 4.19                                      | 4.19                                      | 4.19                                      | 4.22                                      |
| 287.0                                     | 278.3                                     | 290.0                                     | 281.3                                     | 272.7                                     | 264.0                                     | 257.3                                     |
| 160.0                                     | 160.0                                     | 165.0                                     | 165.0                                     | 165.0                                     | 165.0                                     | 166.0                                     |
| 13,000 × 2 + 11,100                       | 13,000 × 2 + 11,100                       | 13,000 × 3                                | 13,000 × 3                                | 13,000 × 3                                | 13,000 × 3                                | 13,700 + 13,000 ×                         |
| 63 / 85                                   | 65 / 87                                   | 63 / 86                                   | 65 / 87                                   | 66 / 88                                   | 67 / 89                                   | 67 / 90                                   |
| 64 / 87                                   | 66 / 88                                   | 65 / 88                                   | 67 / 89                                   | 68 / 89                                   | 69 / 90                                   | 69 / 91                                   |
| 82  | 82  | 82  | 82  | 82  | 82  | 82  |
| 11.0 × 2 + 7.5                            | 11.0 × 2 + 7.5                            | 11.0 × 3                                  | 11.0 × 3                                  | 11.0 × 3                                  | 11.0 × 3                                  | 11.0 × 3                                  |
| Blue fin                                  |
| 1,690                                     | 1,690                                     | 1,690                                     | 1,690                                     | 1,690                                     | 1,690                                     | 1,690                                     |
| 1,240 × 2 + 930                           | 1,240 × 2 + 930                           | 1,240 × 3                                 | 1,240 × 3                                 | 1,240 × 3                                 | 1,240 × 3                                 | 1,240 × 3                                 |
| 765                                       | 765                                       | 765                                       | 765                                       | 765                                       | 765                                       | 765                                       |
| 275 × 2 + 252                             | 275 × 2 + 252                             | 275 × 3                                   | 275 × 3                                   | 275 × 3                                   | 275 × 3                                   | 275 × 3                                   |
| R410A (2,088)                             |
| 11.8 × 2 + 11.7<br>(24.6 × 2 + 24.4)      | 11.8 × 2 + 11.7<br>(24.6 × 2 + 24.4)      | 11.8 × 3 (24.6 × 3)                       | 11.8 × 3 (24.6 × 3)                       | 11.8 × 3 (24.6 × 3)                       | 11.8 × 3 (24.6 × 3)                       | 11.8 × 3 (24.6 × 3                        |
| 19.05                                     | 19.05                                     | 19.05                                     | 19.05                                     | 19.05                                     | 19.05                                     | 19.05                                     |
| 34.92                                     | 34.92                                     | 41.27                                     | 41.27                                     | 41.27                                     | 41.27                                     | 41.27                                     |
| -5 to 46                                  |
| -20 to 21                                 |

\*1 Minimum connectable indoor unit number is 2. However, the ARXC72 and ARXC90 can be used with a signal connection.
\*2 The noise level is the value measured in an anechoic room.

When measured in an actual installation, the measured value is typically larger than the indicated value due to ambient noise and reflections. \* These specifications are determined by ducted combination.