

# Air-cooled Screw Chiller

## AZ(P)Y1 SERIES

Cooling & Heating



air

### Johnson Controls - Hitachi Air Conditioning

#### ADDRESS

New Pier Takeshiba South Tower  
1-16-1, Kaigan Minato-ku, Tokyo 105-0022, JAPAN  
Tel: +81-3-6721-5567  
[www.jci-hitachi.com](http://www.jci-hitachi.com)

HITACHI. CERTIFIED QUALITY

The specifications of this catalog may change without prior notice to allow Hitachi Cooling & Heating to incorporate the latest innovations for its customers. The information contained in this catalog is merely informative. Hitachi Cooling & Heating declines any responsibility in the broadest sense, for damage, direct or indirect, arising from the use and / or interpretation of the recommendations in this catalog.

**Find the products Hitachi Cooling & Heating with the best service and conditions at your Hitachi Distributor.**

AZ(P)Y1-C-1812

# OVERVIEW

## OPTIMIZE YOUR SOLUTION WITH HITACHI AIR COOLED CHILLER

Incorporating proprietary cutting edge technology, Hitachi's Air Cooled Chiller combines high efficiency performance and stable operation. New model chiller lineup featuring a G-type semi-hermetic twin-screw compressor using the environmentally-friendly R134a refrigerant.



**Air Conditioning at Office Buildings**

In addition to low noise, low vibration, high efficiency and high performance, the new models come with a user-friendly touch panel type liquid crystal screen display that allows you to check operation status at a glance and has a full range of control functions. As the perfect answer to user needs, Hitachi's chillers are designed to cover a broad range of applications from air conditioning of buildings to cooling of factories.



**Process Cooling at Factory**

## MAIN FEATURES

- 0 ozone depletion potential (ODP) HFC134a refrigerant
- R134a G-type twin-screw compressor
- High efficiency shell-and-tube flooded evaporator
- User-friendly touch LCD Panel

**Nominal capacity range:**  
 158~1602kW  
 45~456RT



# FEATURES

## ADOPTING HITACHI R134a SCREW COMPRESSOR

Since 1972 when we started manufacturing them, we have delivered more than 170,000 Hitachi twin-screw compressors to countries around the world where they continue to meet essential air conditioning needs.

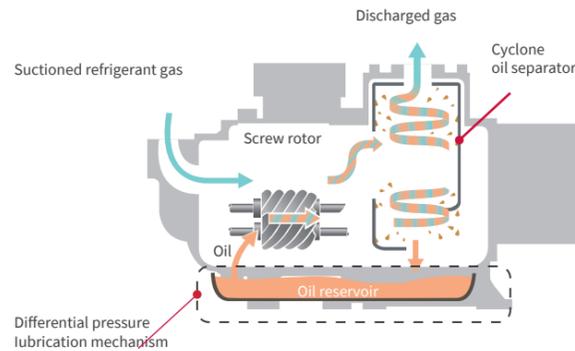
Our new air-cooled chillers adopt G-type semi-hermetic twin-screw compressors that only available to R134a refrigerant.

Powerful cooling capacity, low vibrations and low noise coupled with a simple compressor configuration have greatly enhanced reliability.

The cyclone oil separator they employ has been designed with extensive use of computer simulation. Thanks to these efforts, oil separation efficiency is greatly increased.

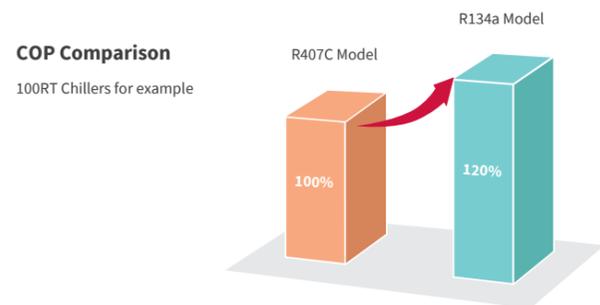


Operation Image



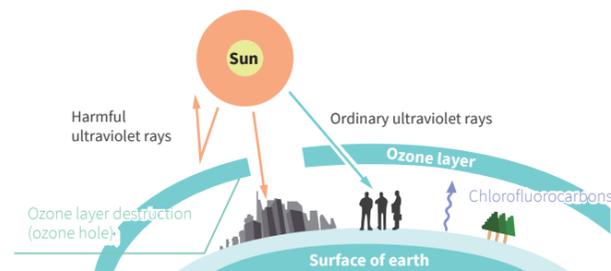
## BETTER PERFORMANCE AND ENERGY SAVING

Hitachi's new air-cooled chiller (AZ(P)Y1 Series) adopts more efficient semi-hermetic twin-screw compressor and better shell-and-tube dry type evaporator brings you significant energy saving experience under stable and durable operation.



## HFC134a, 0 ODP(OZONE DEPLETION POTENTIAL REFRIGERANT), ADOPTED

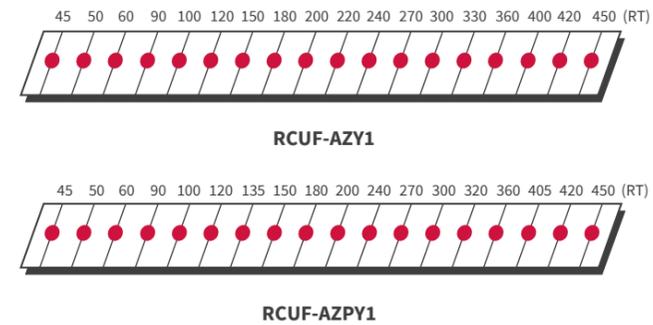
Chlorofluorocarbons(CFCs) in stratosphere are exposed to ultraviolet rays which decomposes them, and generates chlorine atoms. It is considered that chlorine atoms combine oxygen atoms destroying the ozone. Chlorine atoms, HFC134a does not destroy ozone in atmosphere.



# LINE-UP & CONTROL

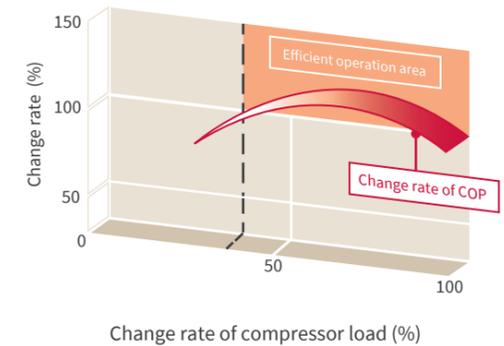
## WIDE LINE-UP

To meet the need of air conditioning systems for large facilities and the demand for higher capacity industrial cooling systems.



## ACCURATE CHILLER CONTROL

Intermediate efficiency improved



## MULTIPLE COMPRESSORS CONTROL

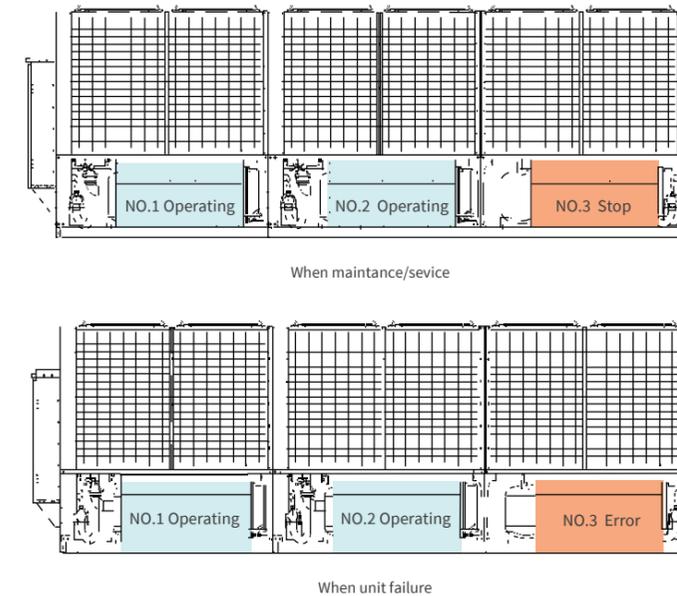
Hitachi air chiller units feature a modular.

8 units with the same model can be connected via H-LINK transmission, so as to realize the maximum capacity of 1464 RT.

Each module can be transported individually which enhance mobility and convenience of installation.

Besides refrigerant system of each module can operate, which makes maintenance easier.

If unexpected trouble occurs in one module, the remaining modules will operate as backup.



# INTELLIGENT CONTROL

## CLEAR USER-FRIENDLY LCD TOUCH CONSOLE

The display makes it easy to view the current operating status and simplify the setting procedure. Various parameters can be confirmed at a glance. Regardless of operating status, the console allows you to set a variety of operation modes. A warning log function makes it possible to recall the latest 10 recent warning events. The user interface is provided in both English and Chinese.



### Compressor Page



### Status Page



### Parameter Setting Page

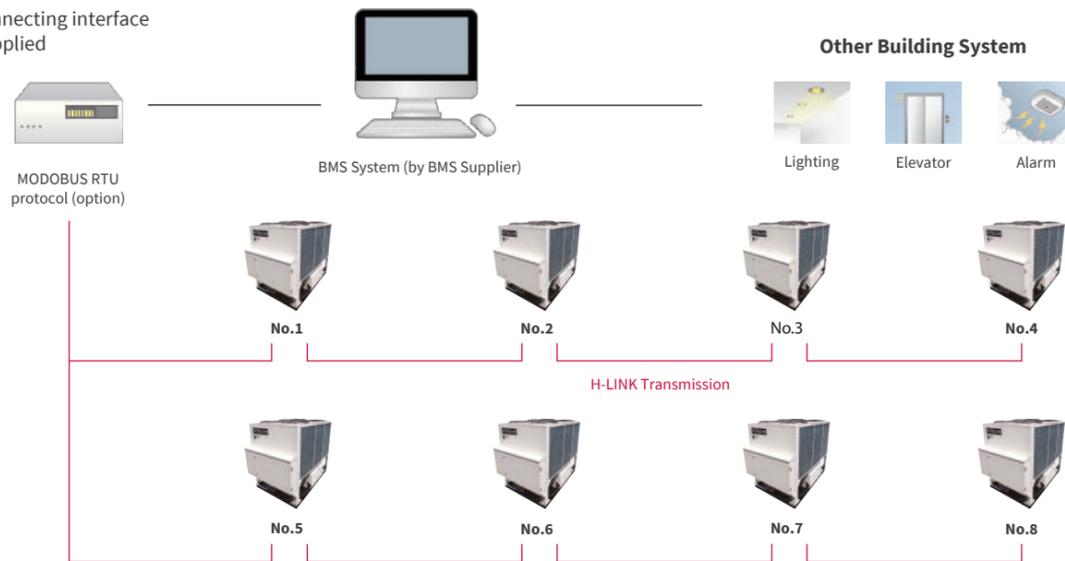


### Setting Page



## BUILDING MANAGEMENT SYSTEM (BMS)

A BMS-connecting interface can be supplied



Through H-LINK transmission, at most of 8 chillers of the same model can be connected to cascade a maximum volume of 1464 RT.

# SPECIFICATIONS

## AZY1 SERIES

| Model                    |  | RCUF45AZY1  | RCUF50AZY1 | RCUF60AZY1 | RCUF90AZY1 | RCUF100AZY1 | RCUF120AZY1 |       |
|--------------------------|--|---|------------|------------|------------|-------------|-------------|-------|
| Power Source             |  | Main (AC3φ) 380,415V/50Hz, Control (AC1φ) 220,240V/50Hz |            |            |            |             |             |       |
| Nominal cooling capacity | kW   | 158   | 175        | 215        | 316        | 351         | 440         |       |
|                          | USRT   | 45  | 50         | 61         | 90         | 100         | 125         |       |
| Power input              | kcal/h   | 135,880   | 150,500    | 184,900    | 271,760    | 301,860     | 378,400     |       |
|                          | kW   | 48.5  | 53.7       | 66.0       | 96.9       | 107.7       | 135.0       |       |
| Capacity control         |  | Continuous capacity control                             |            |            |            |             |             |       |
| Overall dimension        | %  | 100~25.0  |            |            |            |             |             |       |
|                          | Length   | mm  | 2,390      | 2,390      | 2,390      | 4,490       | 4,490       | 4,490 |
|                          | Width  | mm  | 2,060      | 2,060      | 2,060      | 2,060       | 2,060       | 2,060 |
| Net weight               | Height   | mm  | 2,120      | 2,120      | 2,120      | 2,160       | 2,160       | 2,160 |
|                          | kg   | 1,550   | 1,600      | 1,710      | 2,900      | 3,000       | 3,220       |       |
| Refrigerant              | Type   | R134a   |            |            |            |             |             |       |
|                          | Flow control   | Electronic expansive valve                              |            |            |            |             |             |       |
|                          | Number of circuits   | —   | 1          | 1          | 1          | 2           | 2           |       |
| Compressor               | Type   | Semi-Hermetic Screw Type(R134a only)                    |            |            |            |             |             |       |
|                          | Model  | —   | ASCCW50ZG  | ASCCW50ZG  | ASCCW60ZG  | ASCCW50ZG   | ASCCW60ZG   |       |
|                          | Quantity   | Set   | 1          | 1          | 1          | 2           | 2           |       |
| Condenser Fan motor      | Condenser fan  | Cross fin type  |            |            |            |             |             |       |
|                          | Power Input  | kW  | 1.1        | 1.1        | 1.1        | 1.1         | 1.1         |       |
|                          | Quantity   | —   | 4          | 4          | 4          | 8           | 8           |       |
| Evaporator               | —  | Shell-and-Tube type                                     |            |            |            |             |             |       |
|                          | Piping connections for water side heat exchanger   | Inlet   | DN80       | DN80       | DN80       | DN125       | DN125       |       |
| Safety devices           | Outlet   | DN80  | DN80       | DN80       | DN125      | DN125       | DN125       |       |
|                          | Three-Phase Over current Relay, High-Pressure Switch, High and Low-Pressure Control, Oil Heater, Internal Thermostat for Compressor Motor, Freeze Protection Control, Reverse Phase Protection Control, Discharge Gas Overheat Protection, Compressor frequent ON/OFF control and Pressure Relief Valve. |   |            |            |            |             |             |       |
| Shipping Dimensions      | Length   | mm  | 2,410      | 2,410      | 2,410      | 4,510       | 4,510       |       |
|                          | Width  | mm  | 2,080      | 2,080      | 2,080      | 2,080       | 2,080       |       |
|                          | Height   | mm  | 2,150      | 2,150      | 2,150      | 2,190       | 2,190       |       |
| Shipping weight          | kg   | 1,590   | 1,640      | 1,750      | 2,940      | 3,040       | 3,260       |       |

| Model                    |  | RCUF150AZY1   | RCUF180AZY1 | RCUF200AZY1 | RCUF220AZY1 | RCUF240AZY1          | RCUF270AZY1          |        |
|--------------------------|--|---|-------------|-------------|-------------|----------------------|----------------------|--------|
| Power Source             |  | Main (AC3φ) 380,415V/50Hz, Control (AC1φ) 220,240V/50Hz |             |             |             |                      |                      |        |
| Nominal cooling capacity | kW   | 530   | 645         | 702         | 791         | 880                  | 970                  |        |
|                          | USRT   | 151   | 183         | 200         | 225         | 250                  | 276                  |        |
| Power input              | kcal/h   | 455,800   | 554,700     | 603,720     | 680,260     | 756,800              | 834,200              |        |
|                          | kW   | 162.6   | 197.9       | 215.3       | 242.6       | 269.9                | 297.5                |        |
| Capacity control         |  | Continuous capacity control                             |             |             |             |                      |                      |        |
| Overall dimension        | %  | 100~25.0  |             |             |             |                      |                      |        |
|                          | Length   | mm  | 6,590       | 6,590       | 9,080       | 9,080                | 9,080                | 11,180 |
|                          | Width  | mm  | 2,060       | 2,060       | 2,060       | 2,060                | 2,060                | 2,060  |
| Net weight               | Height   | mm  | 2,200       | 2,200       | 2,160       | 2,160                | 2,160                | 2,200  |
|                          | kg   | 4,650   | 4,880       | 3,000×2     | 3,220+3,000 | 3,220×2              | 4,650+3,220          |        |
| Refrigerant              | Type   | R134a   |             |             |             |                      |                      |        |
|                          | Flow control   | Electronic expansive valve                              |             |             |             |                      |                      |        |
|                          | Number of circuits   | —   | 3           | 3           | 4           | 4                    | 5                    |        |
| Compressor               | Type   | Semi-Hermetic Screw Type(R134a only)                    |             |             |             |                      |                      |        |
|                          | Model  | —   | ASCCW50ZG   | ASCCW60ZG   | ASCCW50ZG   | ASCCW50ZG /ASCCW60ZG | ASCCW60ZG /ASCCW60ZG |        |
|                          | Quantity   | Set   | 3           | 3           | 4           | 2/2                  | 4                    | 3/2    |
| Condenser Fan motor      | Condenser fan  | Cross fin type  |             |             |             |                      |                      |        |
|                          | Power Input  | kW  | 1.1         | 1.1         | 1.1         | 1.1                  | 1.1                  |        |
|                          | Quantity   | —   | 12          | 12          | 16          | 16                   | 20                   |        |
| Evaporator               | —  | Shell-and-Tube type                                     |             |             |             |                      |                      |        |
|                          | Piping connections for water side heat exchanger   | Inlet   | DN125       | DN125       | DN125       | DN125                | DN125                |        |
| Safety devices           | Outlet   | DN125   | DN125       | DN125       | DN125       | DN125                | DN125                |        |
|                          | Three-Phase Over current Relay, High-Pressure Switch, High and Low-Pressure Control, Oil Heater, Internal Thermostat for Compressor Motor, Freeze Protection Control, Reverse Phase Protection Control, Discharge Gas Overheat Protection, Compressor frequent ON/OFF control and Pressure Relief Valve. |   |             |             |             |                      |                      |        |
| Shipping Dimensions      | Length   | mm  | 6,610       | 6,610       | 4,510×2     | 4,510×2              | 4,510×2              |        |
|                          | Width  | mm  | 2,080       | 2,080       | 2,080       | 2,080                | 2,080                |        |
|                          | Height   | mm  | 2,230       | 2,230       | 2,190       | 2,190                | 2,230                |        |
| Shipping weight          | kg   | 4,690   | 4,920       | 3,040×2     | 3,260+3,040 | 3,260×2              | 4,690+3,260          |        |

# SPECIFICATIONS

## AZY1 SERIES

| Model                    | RCUF300AZY1  | RCUF330AZY1                          | RCUF360AZY1           | RCUF400AZY1 | RCUF420AZY1   | RCUF450AZY1           |           |        |
|--------------------------|--|--------------------------------------|-----------------------|-------------|---------------|-----------------------|-----------|--------|
| Power Source             | Main (AC3φ) 380,415V/50Hz, Control (AC1φ) 220,240V/50Hz  |                                      |                       |             |               |                       |           |        |
| Nominal cooling capacity | kW   | 1,060                                | 1,175                 | 1,290       | 1,411         | 1,500                 | 1,590     |        |
|                          | USRT   | 301                                  | 334                   | 367         | 401           | 426                   | 452       |        |
|                          | kcal/h   | 911,600                              | 1,010,500             | 1,109,400   | 1,213,460     | 1,290,000             | 1,367,400 |        |
| Power input              | kW   | 325.2                                | 360.4                 | 395.7       | 432.8         | 460.1                 | 487.7     |        |
| Capacity control         | Continuous capacity control  |                                      |                       |             |               |                       |           |        |
| Overall dimension        | %  | 100-25,0                             | 100-25,0              | 100-25,0    | 100-25,0      | 100-25,0              | 100-25,0  |        |
|                          | Length   | mm                                   | 13,280                | 13,280      | 13,280        | 18,670                | 18,670    | 20,770 |
|                          | Width  | mm                                   | 2,060                 | 2,060       | 2,060         | 2,060                 | 2,060     | 2,060  |
| Net weight               | mm   | 2,200                                | 2,200                 | 2,200       | 2,200         | 2,200                 | 2,200     |        |
|                          | kg   | 4,650×2                              | 4,880×4,650           | 4,880×2     | 4,650×2+3,000 | 4,650×2+3,220         | 4,650×3   |        |
| Refrigerant              | Type   | R134a                                |                       |             |               |                       |           |        |
|                          | Flow control   | Electronic expansive valve           |                       |             |               |                       |           |        |
|                          | Number of circuits   | 6                                    | 6                     | 6           | 8             | 8                     | 9         |        |
| Compressor               | Type   | Semi-Hermetic Screw Type(R134a only) |                       |             |               |                       |           |        |
|                          | Model  | ASCCW50ZG                            | ASCCW50ZG / ASCCW60ZG | ASCCW60ZG   | ASCCW50ZG     | ASCCW50ZG / ASCCW60ZG | ASCCW50ZG |        |
|                          | Quantity   | Set 6                                | 3/3                   | 6           | 8             | 6/2                   | 9         |        |
| Condenser                | Cross fin type   |                                      |                       |             |               |                       |           |        |
| Fan motor                | Condenser fan  | Direct drive propeller fan           |                       |             |               |                       |           |        |
|                          | Power Input  | kW                                   | 1.1                   | 1.1         | 1.1           | 1.1                   | 1.1       | 1.1    |
|                          | Quantity   | 24                                   | 24                    | 24          | 32            | 32                    | 36        |        |
| Evaporator               | Shell-and-Tube type  |                                      |                       |             |               |                       |           |        |
|                          | Piping connections for water side heat exchanger   | Inlet                                | DN125                 | DN125       | DN125         | DN125                 | DN125     | DN125  |
|                          | Outlet   | DN125                                | DN125                 | DN125       | DN125         | DN125                 | DN125     |        |
| Safety devices           | Three-Phase Over current Relay, High-Pressure Switch, High and Low-Pressure Control, Oil Heater, Internal Thermostat for Compressor Motor, Freeze Protection Control, Reverse Phase Protection Control, Discharge Gas Overheat Protection, Compressor frequent ON/OFF control and Pressure Relief Valve. |                                      |                       |             |               |                       |           |        |
| Shipping Dimensions      | Length   | mm                                   | 6,610×2               | 6,610×2     | 6,610×2       | 6,610×2+4,510         | 6,610×3   |        |
|                          | Width  | mm                                   | 2,080                 | 2,080       | 2,080         | 2,080                 | 2,080     |        |
|                          | Height   | mm                                   | 2,230                 | 2,230       | 2,230         | 2,230                 | 2,230     |        |
| Shipping weight          | kg   | 4,690×2                              | 4,920×4,690           | 4,920×2     | 4,690×2+3,040 | 4,690×2+3,260         | 4,690×3   |        |

Notes:

- The nominal cooling capacities are based on GB/T 18430.1-2015(\*1)  
Chilled Water Outlet Temperature /Nominal water flow: 7 °C / 0.172 m<sup>3</sup> / (h·kW)  
Condenser Air Inlet Temperature:35 °C (DB)
- The units greater than 200AZY1 including 200AZY1 consist of two or three modules and are separately shipped.
- The common chilled water piping (Filed-Supplied) between each water cooler shall be directly connected at site.
- Water Flow  
1) RCUF200,240,300,360,450AZY1  
It is necessary to control the common water flow volume to each cooler.  
2) RCUF220,270,330,400,420AZY1  
Because the chilled water flow rate is different between No.1 No.2 and No.3 units,  
it is necessary to control the water flow volume of each unit with adjusting valves (Filed-Supplied).
- It is required to connect electrical control wires between No.1, No.2 and No.3 units for the unit greater than 200AZY1 including 200AZY1.

Working Range

| Item                                | Standard |
|-------------------------------------|----------|
| Chilled Water Outlet Temperature    | 5~15 °C  |
| Condenser Air Inlet Temperature(DB) | 5~43 °C  |

# SPECIFICATIONS

## AZPY1 SERIES

| Model                    | RCUF45AZPY1  | RCUF50AZPY1                          | RCUF60AZPY1                | RCUF90AZPY1 | RCUF100AZPY1 | RCUF120AZPY1 |           |       |
|--------------------------|--|--------------------------------------|----------------------------|-------------|--------------|--------------|-----------|-------|
| Power Source             | Main (AC3φ) 380,415V/50Hz, Control (AC1φ) 220,240V/50Hz  |                                      |                            |             |              |              |           |       |
| Nominal cooling capacity | kW   | 160                                  | 178                        | 215         | 320          | 356          | 430       |       |
|                          | USRT   | 45                                   | 51                         | 61          | 91           | 101          | 122       |       |
|                          | kcal/h   | 137,600                              | 153,080                    | 184,900     | 275,200      | 306,160      | 369,800   |       |
| Power input              | kW   | 45.6                                 | 50.7                       | 61.3        | 91.2         | 101.4        | 122.5     |       |
| Capacity control         | Continuous capacity control  |                                      |                            |             |              |              |           |       |
| Overall dimension        | %  | 100-25,0                             | 100-25,0                   | 100-25,0    | 100-25,0     | 100-25,0     | 100-25,0  |       |
|                          | Length   | mm                                   | 2,390                      | 2,390       | 3,300        | 4,490        | 4,490     | 6,310 |
|                          | Width  | mm                                   | 2,060                      | 2,060       | 2,060        | 2,060        | 2,060     | 2,060 |
| Net weight               | mm   | 2,120                                | 2,120                      | 2,120       | 2,160        | 2,160        | 2,200     |       |
|                          | kg   | 1,600                                | 1,700                      | 2,000       | 2,950        | 3,150        | 3,750     |       |
| Refrigerant              | Type   | R134a                                |                            |             |              |              |           |       |
|                          | Flow control   | Electronic expansive valve           |                            |             |              |              |           |       |
|                          | Number of circuits   | 1                                    | 1                          | 1           | 2            | 2            | 2         |       |
| Compressor               | Type   | Semi-Hermetic Screw Type(R134a only) |                            |             |              |              |           |       |
|                          | Model  | ASCCW50ZG                            | ASCCW50ZG                  | ASCCW60ZG   | ASCCW50ZG    | ASCCW50ZG    | ASCCW60ZG |       |
|                          | Quantity   | Set 1                                | 1                          | 1           | 2            | 2            | 2         |       |
| Condenser                | Cross fin type   |                                      |                            |             |              |              |           |       |
|                          | Fan motor  | Condenser fan                        | Direct drive propeller fan |             |              |              |           |       |
|                          |  | Power Input                          | kW                         | 1.1         | 1.1          | 1.1          | 1.1       | 1.1   |
|                          | Quantity   | 4                                    | 4                          | 6           | 8            | 8            | 12        |       |
| Evaporator               | Shell-and-Tube type  |                                      |                            |             |              |              |           |       |
|                          | Piping connections for water side heat exchanger   | Inlet                                | DN80                       | DN80        | DN80         | DN125        | DN125     | DN125 |
|                          | Outlet   | DN80                                 | DN80                       | DN80        | DN125        | DN125        | DN125     |       |
| Safety devices           | Three-Phase Over current Relay, High-Pressure Switch, High and Low-Pressure Control, Oil Heater, Internal Thermostat for Compressor Motor, Freeze Protection Control, Reverse Phase Protection Control, Discharge Gas Overheat Protection, Compressor frequent ON/OFF control and Pressure Relief Valve. |                                      |                            |             |              |              |           |       |
| Shipping Dimensions      | Length   | mm                                   | 2,410                      | 2,410       | 3,320        | 4,510        | 4,510     | 6,330 |
|                          | Width  | mm                                   | 2,080                      | 2,080       | 2,080        | 2,080        | 2,080     | 2,080 |
|                          | Height   | mm                                   | 2,150                      | 2,150       | 2,150        | 2,190        | 2,190     | 2,230 |
| Shipping weight          | kg   | 1,640                                | 1,740                      | 2,040       | 2,990        | 3,190        | 3,790     |       |

| Model                    | RCUF135AZPY1   | RCUF150AZPY1                         | RCUF180AZPY1               | RCUF200AZPY1 | RCUF240AZPY1 | RCUF270AZPY1 |           |         |
|--------------------------|--|--------------------------------------|----------------------------|--------------|--------------|--------------|-----------|---------|
| Power Source             | Main (AC3φ) 380,415V/50Hz, Control (AC1φ) 220,240V/50Hz  |                                      |                            |              |              |              |           |         |
| Nominal cooling capacity | kW   | 480                                  | 534                        | 640          | 712          | 860          | 960       |         |
|                          | USRT   | 136                                  | 152                        | 182          | 202          | 245          | 273       |         |
|                          | kcal/h   | 412,800                              | 459,240                    | 550,400      | 612,320      | 739,600      | 825,600   |         |
| Power input              | kW   | 136.8                                | 152.1                      | 182.3        | 202.8        | 245.0        | 273.5     |         |
| Capacity control         | Continuous capacity control  |                                      |                            |              |              |              |           |         |
| Overall dimension        | %  | 100-25,0                             | 100-25,0                   | 100-25,0     | 100-25,0     | 100-25,0     | 100-25,0  |         |
|                          | Length   | mm                                   | 6,590                      | 6,590        | 9,080        | 9,080        | 12,720    | 13,280  |
|                          | Width  | mm                                   | 2,060                      | 2,060        | 2,060        | 2,060        | 2,060     | 2,060   |
| Net weight               | mm   | 2,200                                | 2,200                      | 2,160        | 2,160        | 2,200        | 2,200     |         |
|                          | kg   | 4,500                                | 4,700                      | 2,950×2      | 3,150×2      | 3,750×2      | 4,500×2   |         |
| Refrigerant              | Type   | R134a                                |                            |              |              |              |           |         |
|                          | Flow control   | Electronic expansive valve           |                            |              |              |              |           |         |
|                          | Number of circuits   | 3                                    | 3                          | 4            | 4            | 4            | 6         |         |
| Compressor               | Type   | Semi-Hermetic Screw Type(R134a only) |                            |              |              |              |           |         |
|                          | Model  | ASCCW50ZG                            | ASCCW50ZG                  | ASCCW50ZG    | ASCCW50ZG    | ASCCW60ZG    | ASCCW50ZG |         |
|                          | Quantity   | Set 3                                | 3                          | 4            | 4            | 4            | 6         |         |
| Condenser                | Cross fin type   |                                      |                            |              |              |              |           |         |
|                          | Fan motor  | Condenser fan                        | Direct drive propeller fan |              |              |              |           |         |
|                          |  | Power Input                          | kW                         | 1.1          | 1.1          | 1.1          | 1.1       | 1.1     |
|                          | Quantity   | 12                                   | 12                         | 16           | 16           | 24           | 24        |         |
| Evaporator               | Shell-and-Tube type  |                                      |                            |              |              |              |           |         |
|                          | Piping connections for water side heat exchanger   | Inlet                                | DN125                      | DN125        | DN125        | DN125        | DN125     | DN125   |
|                          | Outlet   | DN125                                | DN125                      | DN125        | DN125        | DN125        | DN125     |         |
| Safety devices           | Three-Phase Over current Relay, High-Pressure Switch, High and Low-Pressure Control, Oil Heater, Internal Thermostat for Compressor Motor, Freeze Protection Control, Reverse Phase Protection Control, Discharge Gas Overheat Protection, Compressor frequent ON/OFF control and Pressure Relief Valve. |                                      |                            |              |              |              |           |         |
| Shipping Dimensions      | Length   | mm                                   | 6,610                      | 6,610        | 4,510×2      | 4,510×2      | 6,330×2   | 6,610×2 |
|                          | Width  | mm                                   | 2,080                      | 2,080        | 2,080        | 2,080        | 2,080     | 2,080   |
|                          | Height   | mm                                   | 2,230                      | 2,230        | 2,190        | 2,190        | 2,190     | 2,230   |
| Shipping weight          | kg   | 4,540                                | 4,740                      | 2,990×2      | 3,190×2      | 3,790×2      | 4,540×2   |         |

# SPECIFICATIONS

## AZPY1 SERIES

| Model                    |  | RCUF300AZPY1   | RCUF320AZPY1          | RCUF360AZPY1  | RCUF405AZPY1 | RCUF420AZPY1  | RCUF450AZPY1 |         |
|--------------------------|--|--|-----------------------|---------------|--------------|---------------|--------------|---------|
| Power Source             |  | Main (AC3φ) 380,415V/50Hz, Control (AC1φ) 220,240V/50Hz  |                       |               |              |               |              |         |
| Nominal cooling capacity | kW   | 1,068  | 1,142                 | 1,290         | 1,440        | 1,494         | 1,602        |         |
|                          | USRT   | 304  | 325                   | 367           | 409          | 425           | 456          |         |
| Power input              | kcal/h   | 918,480  | 982,120               | 1,109,400     | 1,238,400    | 1,284,840     | 1,377,720    |         |
|                          | kW   | 304.3  | 325.4                 | 367.5         | 410.3        | 425.6         | 456.4        |         |
| Capacity control         |  | Continuous capacity control  |                       |               |              |               |              |         |
| Overall dimension        | Length   | mm   | 13,280                | 16,290        | 19,930       | 20,770        | 20,770       | 20,770  |
|                          | Width  | mm   | 2,060                 | 2,060         | 2,060        | 2,060         | 2,060        | 2,060   |
|                          | Height   | mm   | 2,200                 | 2,200         | 2,200        | 2,200         | 2,200        | 2,200   |
| Net weight               | kg   | 4,700×2  | 3,150×2+3,750         | 3,750×3       | 4,500×3      | 4,700+4,500×2 | 4,700×3      |         |
| Refrigerant              | Type   | R134a  |                       |               |              |               |              |         |
|                          | Flow control                                     | Electronic expansive valve   |                       |               |              |               |              |         |
|                          | Number of circuits                               | 6  | 6                     | 6             | 9            | 9             | 9            |         |
| Compressor               | Type   | Semi-Hermetic Screw Type(R134a only)   |                       |               |              |               |              |         |
|                          | Model  | ASCCW50ZG  | ASCCW50ZG / ASCCW60ZG | ASCCW60ZG     | ASCCW50ZG    | ASCCW50ZG     | ASCCW50ZG    |         |
|                          | Quantity   | Set 6  | 4/2                   | 6             | 9            | 9             | 9            |         |
| Condenser                |  | Cross fin type   |                       |               |              |               |              |         |
| Fan motor                | Condenser fan                                    | Direct drive propeller fan   |                       |               |              |               |              |         |
|                          | Power Input                                      | kW   | 1.1                   | 1.1           | 1.1          | 1.1           | 1.1          | 1.1     |
|                          | Quantity   | 24   | 28                    | 36            | 36           | 36            | 36           |         |
| Evaporator               |  | Shell-and-Tube type  |                       |               |              |               |              |         |
|                          | Piping connections for water side heat exchanger | Inlet  | DN125                 | DN125         | DN125        | DN125         | DN125        | DN125   |
|                          | Outlet   | DN125  | DN125                 | DN125         | DN125        | DN125         | DN125        |         |
| Safety devices           |  | Three-Phase Over current Relay, High-Pressure Switch, High and Low-Pressure Control, Oil Heater, Internal Thermostat for Compressor Motor, Freeze Protection Control, Reverse Phase Protection Control, Discharge Gas Overheat Protection, Compressor frequent ON/OFF control and Pressure Relief Valve. |                       |               |              |               |              |         |
| Shipping Dimensions      | Length   | mm   | 6,610×2               | 4,510×2+6,330 | 6,330×3      | 6,610×3       | 6,610×3      | 6,610×3 |
|                          | Width  | mm   | 2,080                 | 2,080         | 2,080        | 2,080         | 2,080        | 2,080   |
|                          | Height   | mm   | 2,230                 | 2,230         | 2,230        | 2,230         | 2,230        | 2,230   |
| Shipping weight          | kg   | 4,740×2  | 3,190×2+3,790         | 3,790×3       | 4,540×3      | 4,740+4,540×2 | 4,740×3      |         |

**Notes:**

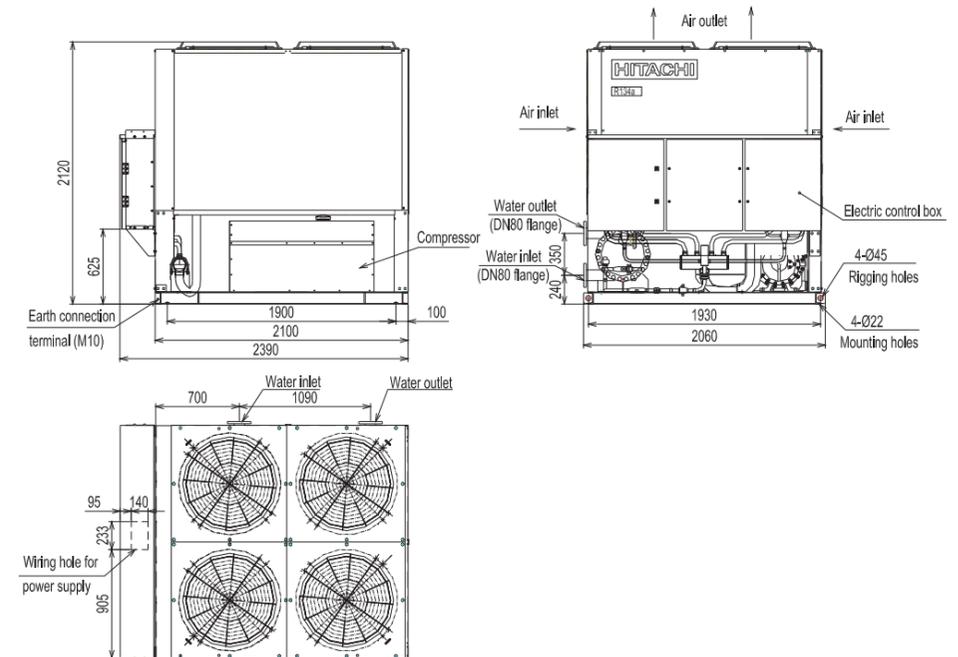
- The nominal cooling capacities are based on GB/T 18430.1-2015(\*1)  
Chilled Water Outlet Temperature /Nominal water flow: 7°C/0.172 m<sup>3</sup> / (h·kW)  
Condenser Air Inlet Temperature:35°C (DB)
- The units greater than 180AZPY1 including 180AZPY1 consist of two or three modules and are separately shipped.
- The common chilled water piping (Filed-Supplied) between each water cooler shall be directly connected at site.
- Water Flow  
1) RCUF180,200,240,270,300,360,405,450AZPY1  
It is necessary to control the common water flow volume to each cooler.  
2) RCUF320,420AZPY1  
Because the chilled water flow rate is different between No.1 No.2 and No.3 units,  
it is necessary to control the water flow volume of each unit with adjusting valves (Filed-Supplied).  
5.It is required to connect electrical control wires between No.1, No.2 and No.3 units for the unit greater than 180AZPY1 including 180AZPY1.

**Working Range**

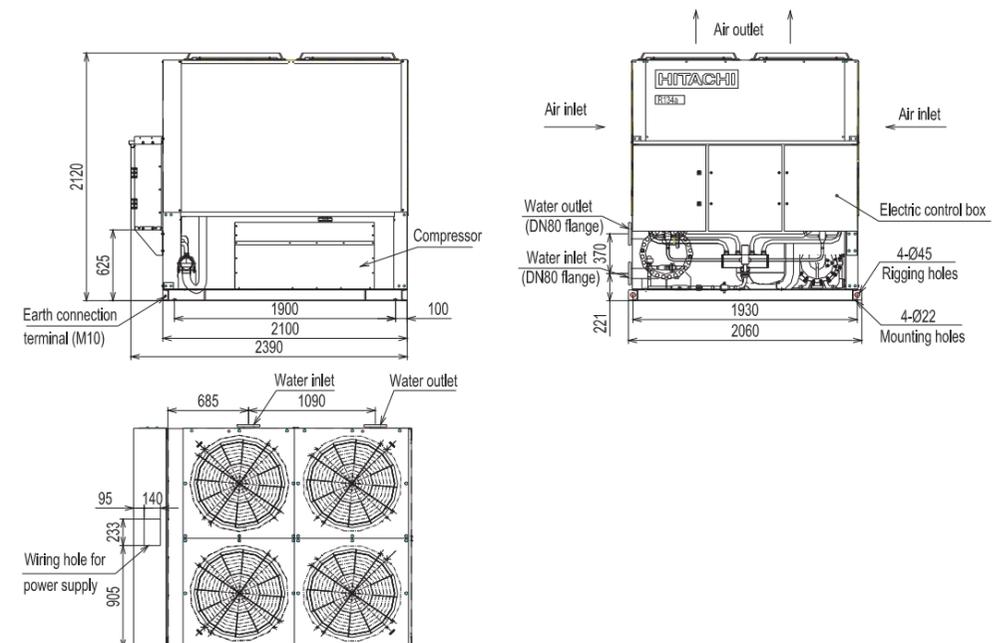
| Item                                | Standard |
|-------------------------------------|----------|
| Chilled Water Outlet Temperature    | 5~15 °C  |
| Condenser Air Inlet Temperature(DB) | 5~43 °C  |

# DIMENSIONS

## RCUF45AZY1 / RCUF50AZY1

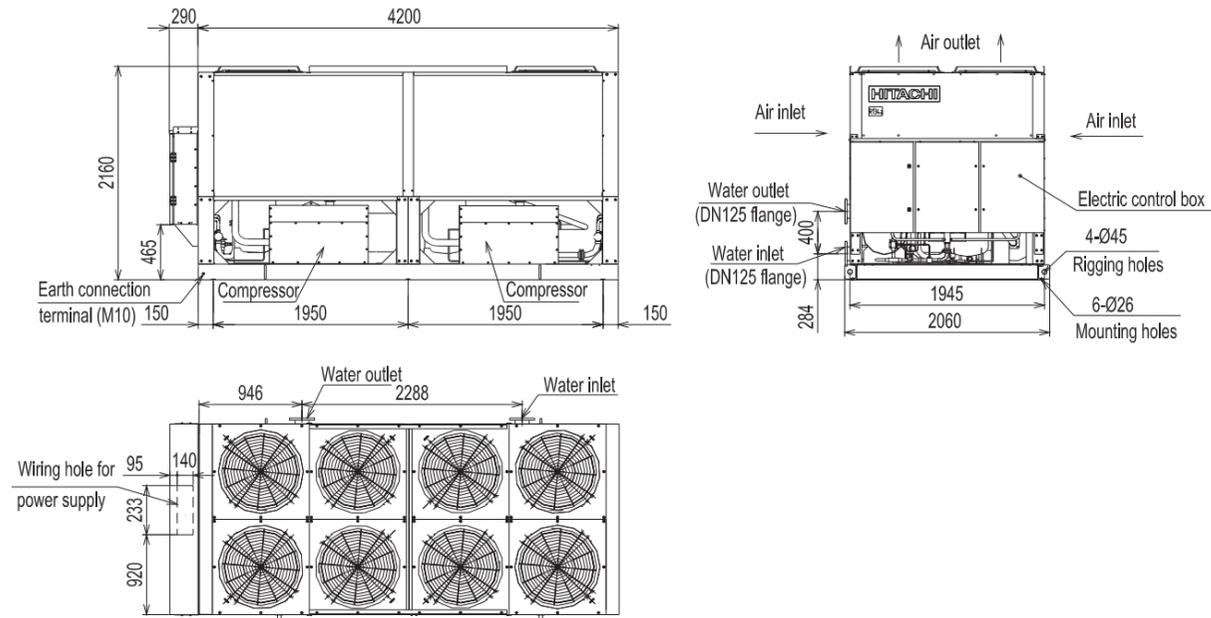


## RCUF45AZPY1 / RCUF50AZPY1 / RCUF60AZY1

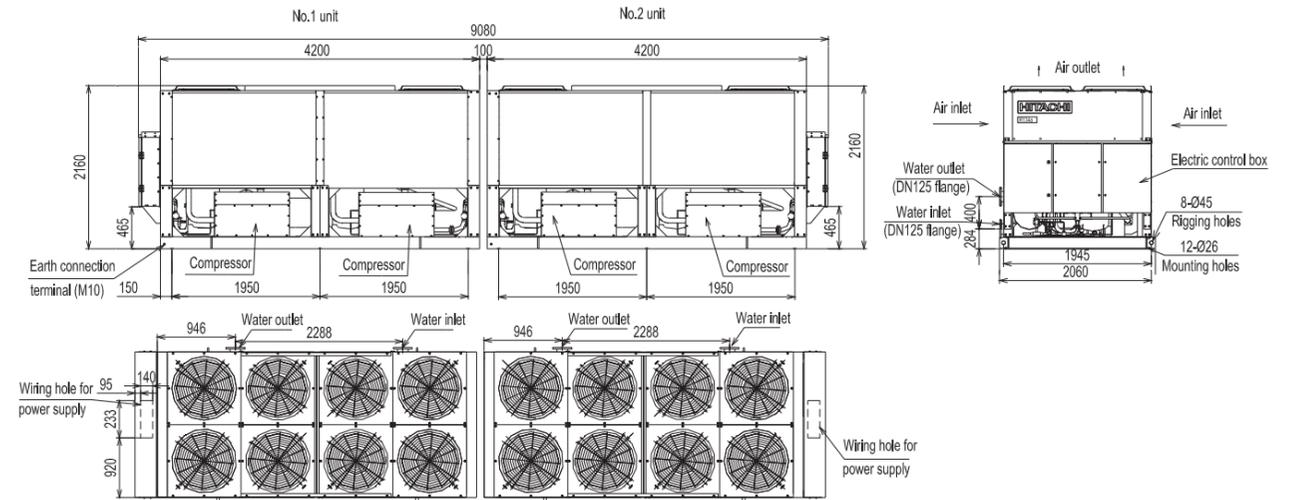


# DIMENSIONS

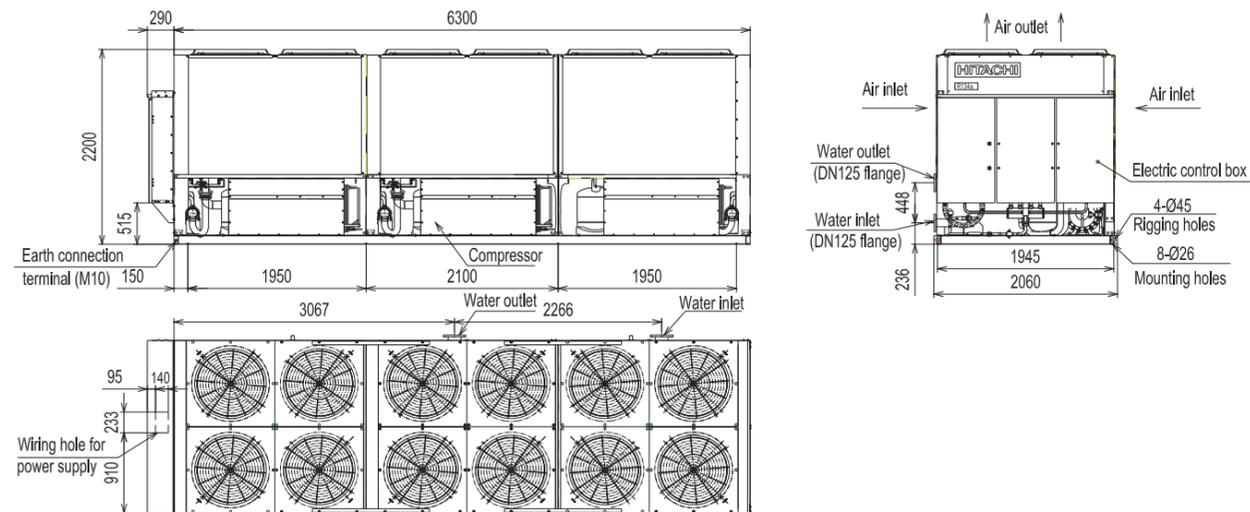
## RCUF90AZY1 / RCUF100AZY1 / RCUF120AZY1 RCUF90AZPY1 / RCUF100AZPY1



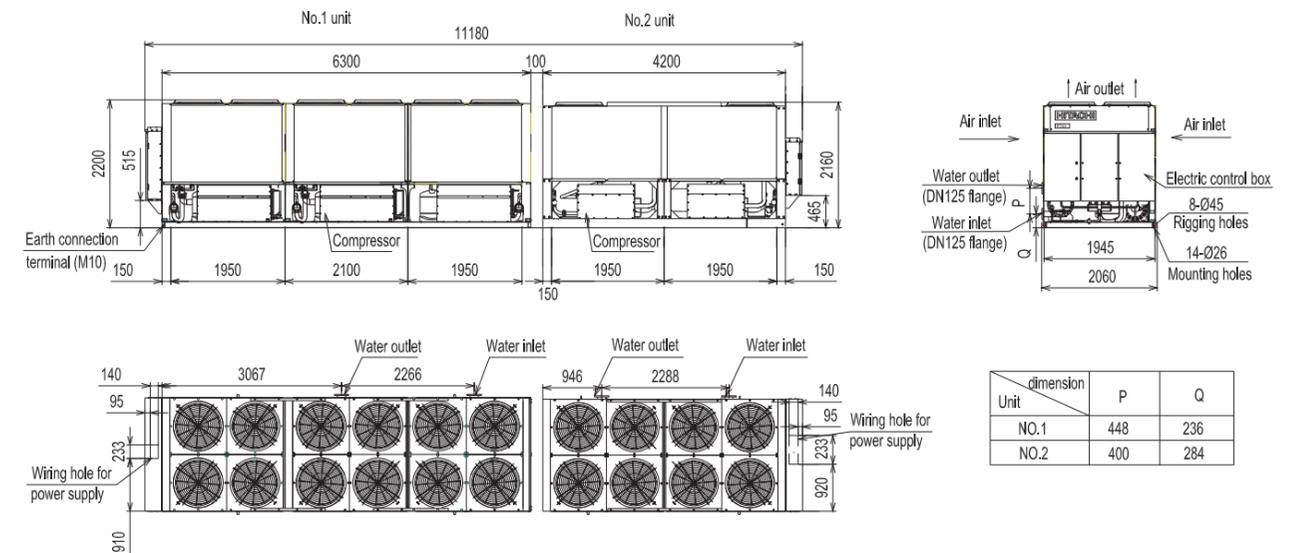
## RCUF200AZY1 / RCUF220AZY1 / RCUF240AZY1 RCUF180AZPY1 / RCUF200AZPY1



## RCUF150AZY1 / RCUF180AZY1 / RCUF135AZPY1 / RCUF150AZPY1

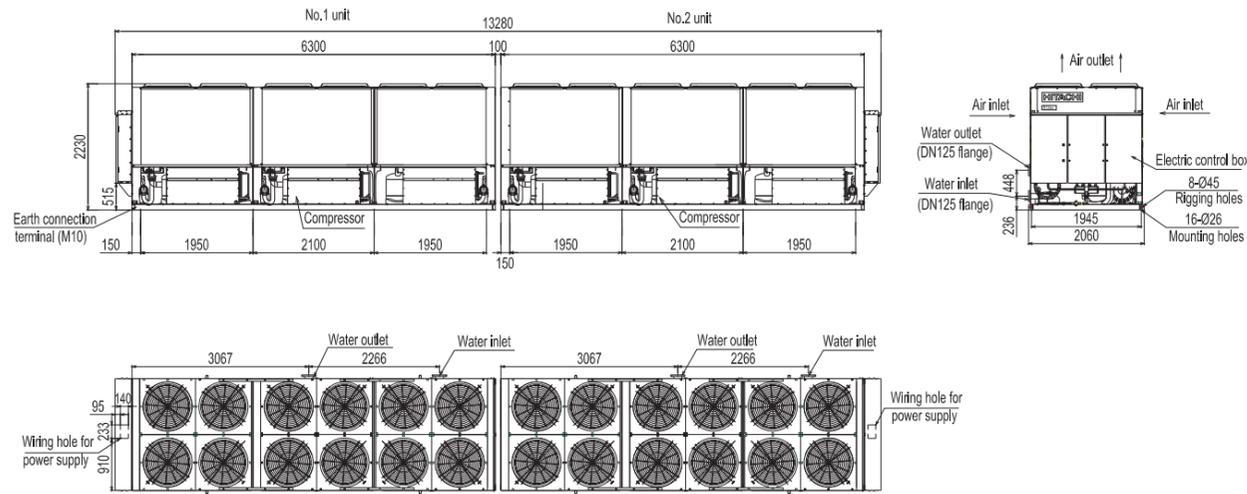


## RCUF270AZY1

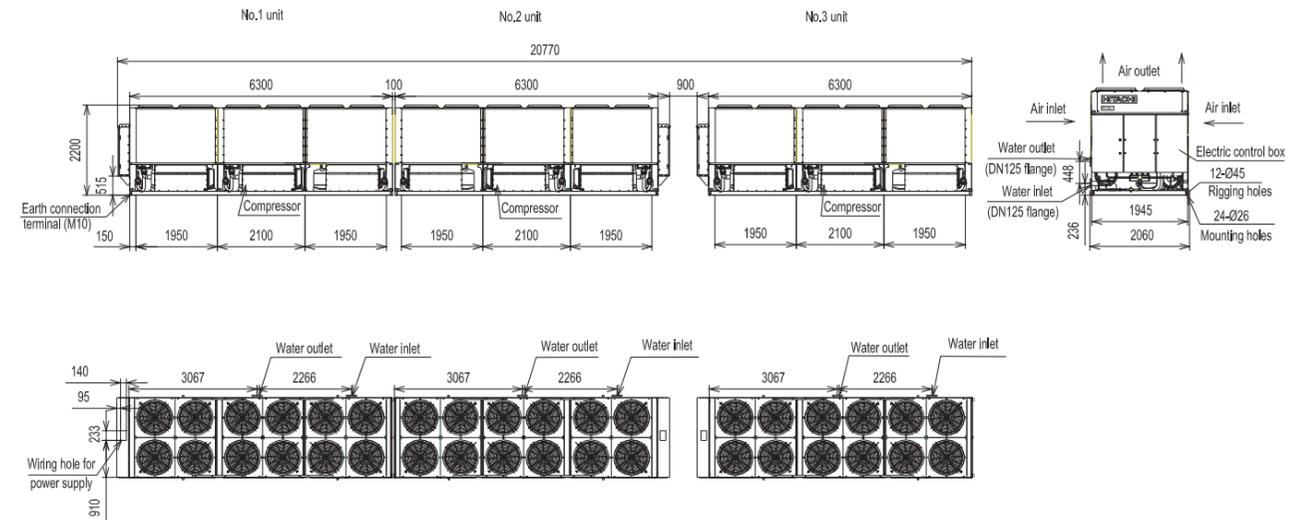


# DIMENSIONS

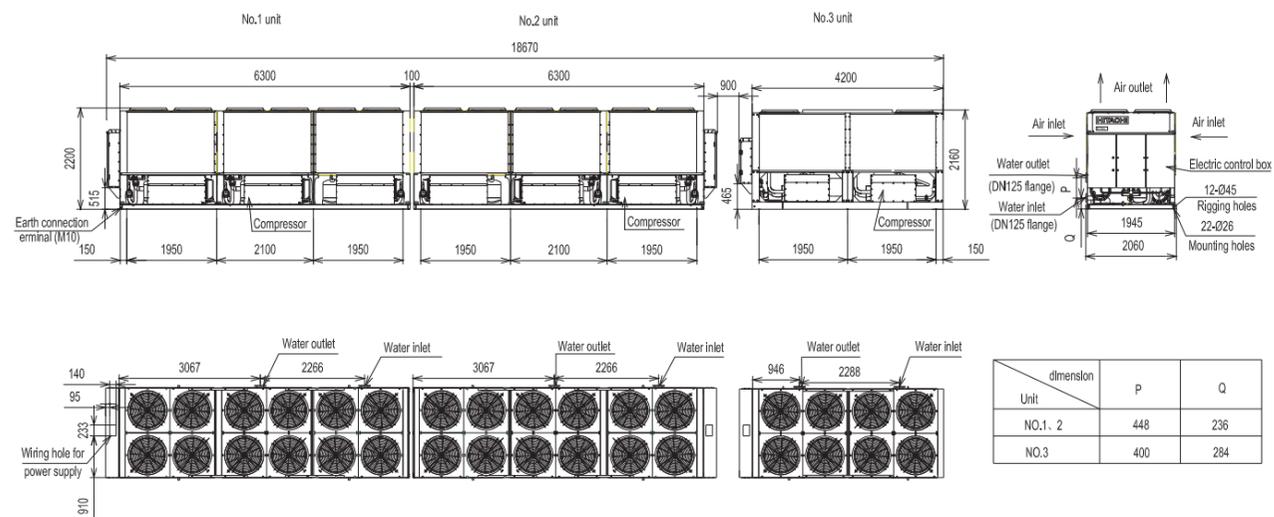
## RCUF300AZY1 / RCUF330AZY1 / RCUF360AZY1 RCUF270AZPY1 / RCUF300AZPY1



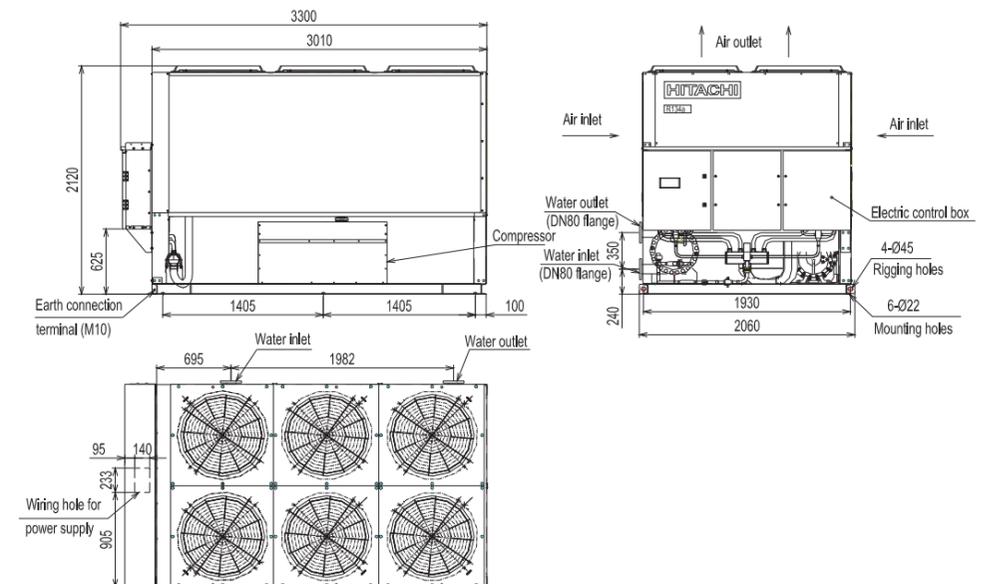
## RCUF450AZY1 / RCUF405AZPY1 / RCUF420AZPY1 / RCUF450AZPY1



## RCUF400AZY1 / RCUF420AZY1

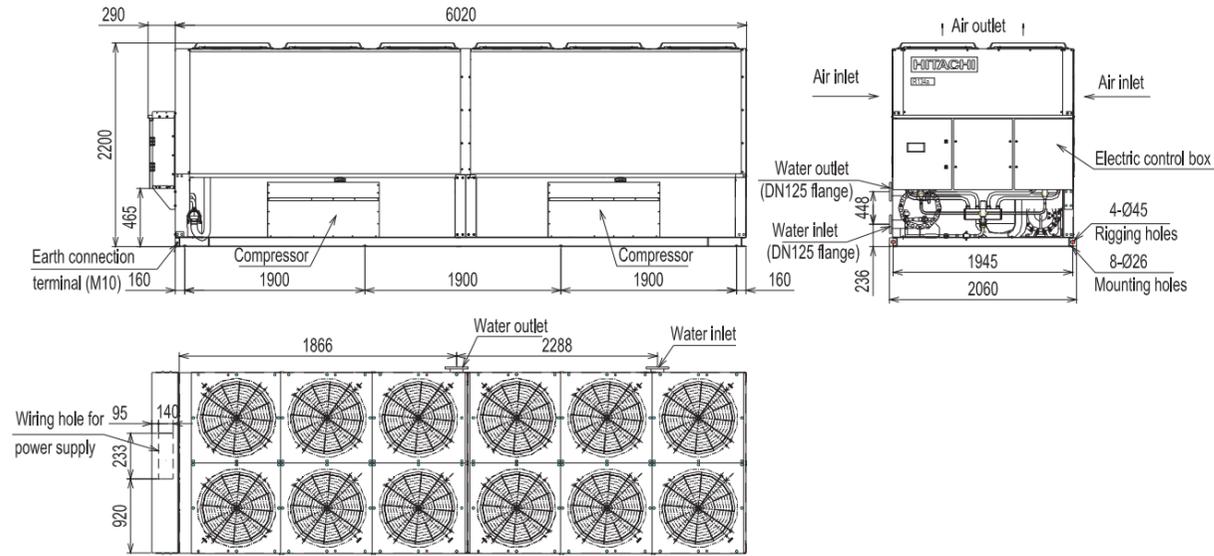


## RCUF60AZPY1

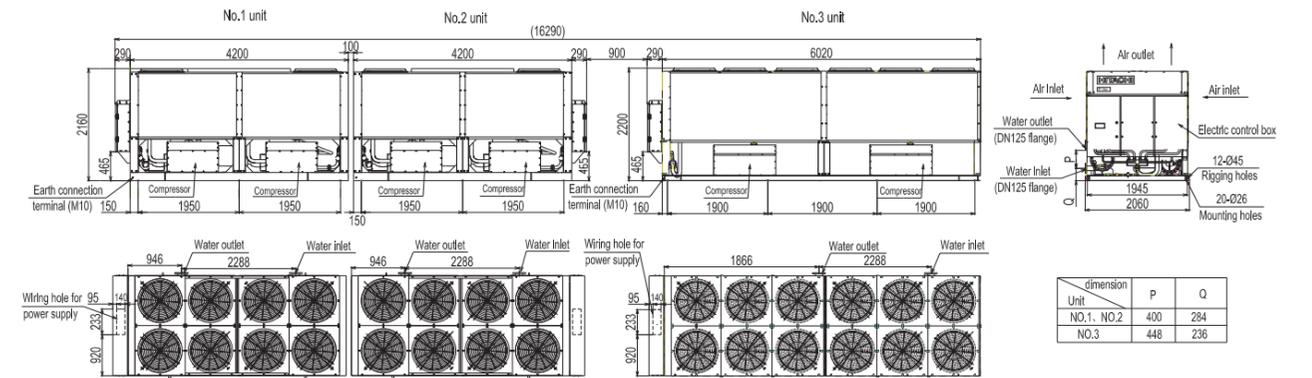


# DIMENSIONS

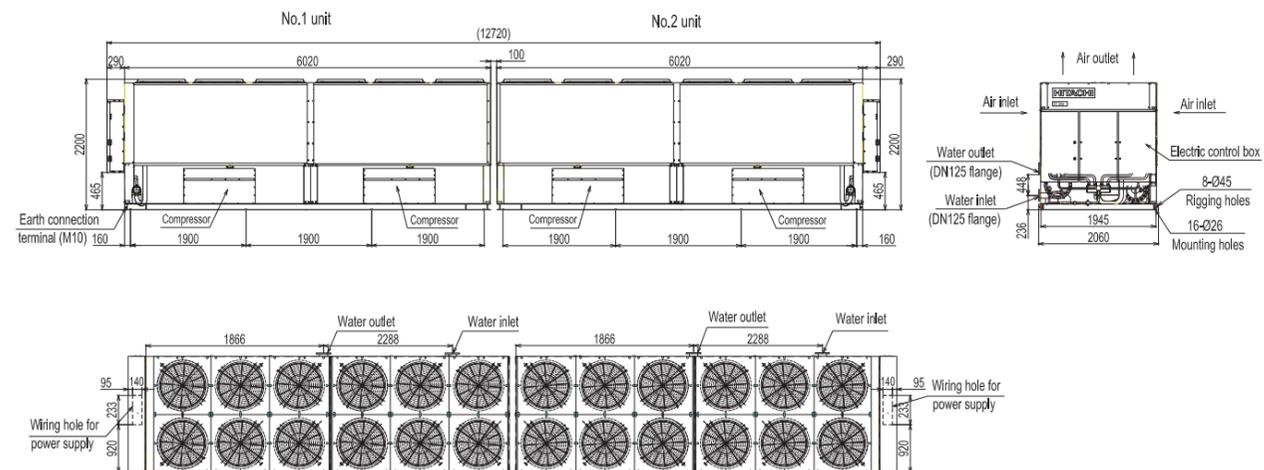
## RCUF120AZPY1



## RCUF120AZPY1



## RCUF240AZPY1



## RCUF360AZPY1

