

HITACHI

Flooded Type **Water-Cooled Chillers**

R134a



The High-Efficiency Water-Cooled Flooded Evaporator Chillers

The New Water-Cooled Flooded Evaporator chiller with improved efficiency and functionality by incorporating several advanced technology and features. This series with the world's best standard semi-hermetic screw compressors and newly designed shell and tube heat exchangers that have powerful cooling ability, low noise, low vibration, high efficiency and high reliability is the perfect answer to all your needs!



R134a

- Enhanced Line-up: from 143RT to 458RT
- High-performance Semi-hermetic Screw Compressors
- High efficiency shell & tubes flooded type evaporators
- High efficiency shell & tubes condensers
- Highly efficient external 3 stages oil separator, up to 99.96% oil separation

Hitachi Semi-Hermetic Screw Chillers Show a Remarkable Energy-Saving Effect & are Friendly to the Global Environment

Global Warming Prevention

Energy saving by higher-efficiency screw chillers

Global warming refers to the phenomenon of global rising in average atmospheric temperatures due to increased volume of CO₂ & methane as a result of burning fossil fuels such as petroleum and coal. The 1995 IPCC* Report predicted that if the emission of CO₂, etc. continued as it was, the atmospheric temperature would rise by as much as 2°C by the end of the 21st century and, as a result, the sea level would rise by approx. 50 cm from the present level. In such circumstances, it is even more important to save the energy consumed by air conditioners in order to cut CO₂ emission.

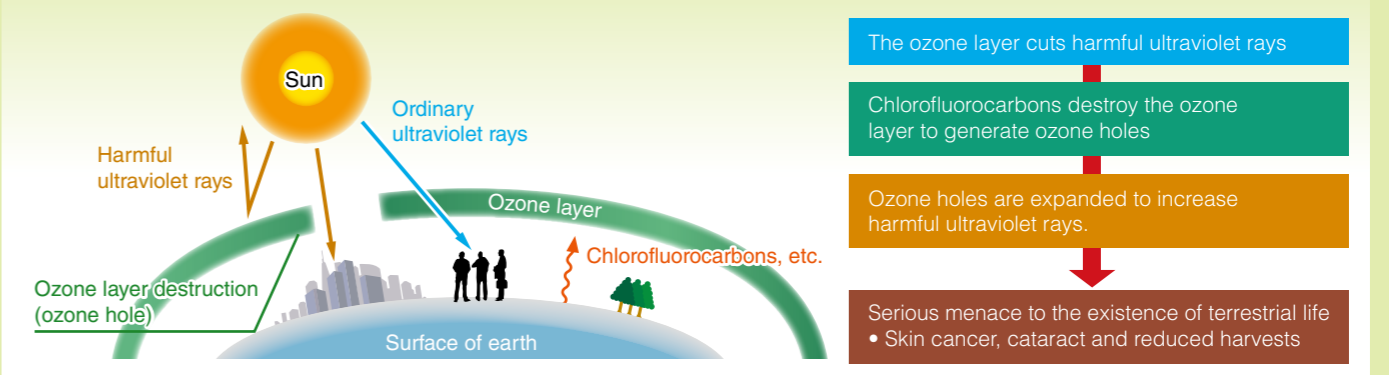
*IPCC: Intergovernmental Panel on Climate Change



Ozone Layer Protection

Use of HFC134a refrigerant has an ozone depletion potential of zero

Chlorofluorocarbons (CFCs) in the stratosphere are exposed to ultraviolet rays which decompose them, and generate chlorine atoms. It is thought that the chlorine atoms combine with oxygen atoms in ozone to destroy the ozone. Because HFC134a has no chlorine atoms, it does not destroy the ozone in the atmosphere.



Technical Features

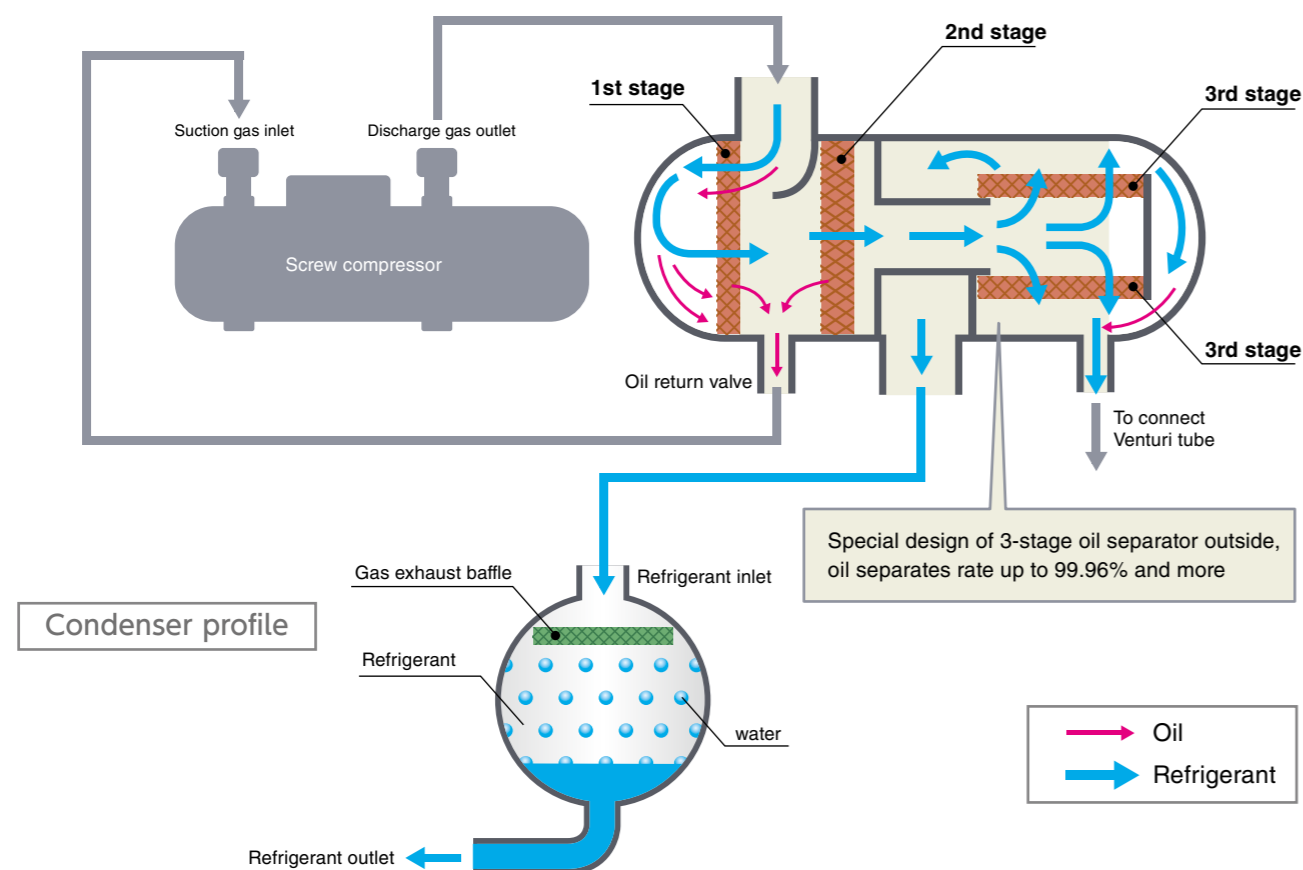
High COP

In the new model series, the power consumption is largely reduced over the current model series due to newly designed high-efficiency cooling system.



High efficiency oil separation

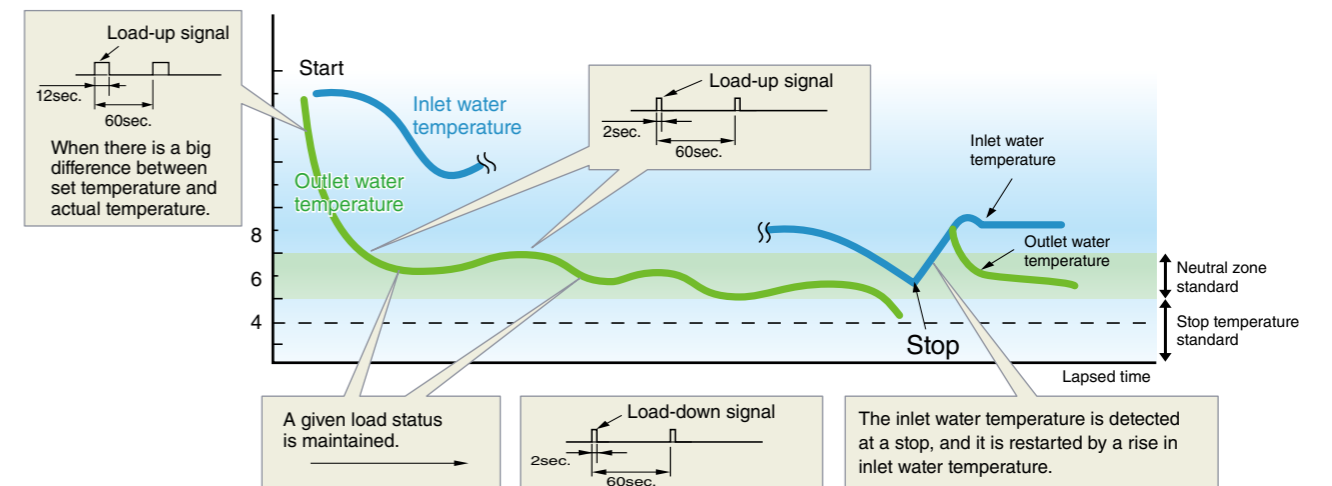
Design of external 3-stages oil separator



Precise Capacity Control Technology

Continuous Capacity Control

The temperature of the chilled water outlet can be kept at the set temperature $\pm 1^\circ\text{C}$ by continuous capacity control, so it is suitable for industrial use.



Excellent Control Function

Liquid Crystal Screen Display

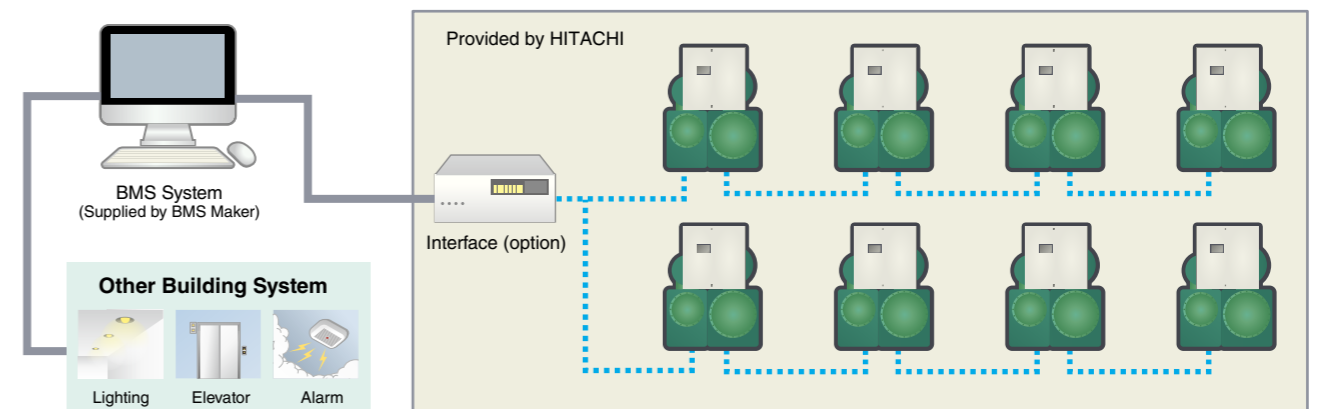
- Big colorful liquid crystal touch panel
- Message board function (for shift)
- Real time information
- Return to factory setting
- Time starting function



Image of Display

Building Management System (BMS)

A BMS-connecting interface can be supplied.



General Data

| Model Size | | | RCU140WFYZ-XB | RCU185WFYZ-XB | RCU230WFYZ-XB | | RCU280WFYZ-XB | RCU330WFYZ-XB | RCU370WFYZ-XB | RCU420WFYZ-XB | RCU460WFYZ-XB |
|------------------------------|--------------|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|---------------|---------------|
| Cooling Capacity Range | kW | | 503 | 654 | 805 | | 1006 | 1157 | 1308 | 1459 | 1610 |
| | RT | | 143 | 186 | 229 | | 286 | 329 | 372 | 415 | 458 |
| Capacity Control | - | | Continuous Capacity Control | | | | Continuous Capacity Control | | | | |
| | % | | 100~25, 0 | | | | 100~25, (12.5)*, 0 | | | | |
| Refrigerant | Refrigerant | - | R134a | | | | R134a | | | | |
| | Flow Control | - | Orifice Plate | | | | Orifice Plate | | | | |
| | Circuit Qty. | - | 1 | | | | 2 | | | | |
| Compressor | Type | - | Semi-Hermetic Twin Screw Compressor | | | | Semi-Hermetic Twin Screw Compressor | | | | |
| | Qty. | - | 1 | | | | 2 | | | | |
| Condenser | - | | Shell & Tube Type | | | | Shell & Tube Type | | | | |
| Evaporator | - | | Flooded Type | | | | Flooded Type | | | | |
| Safety Device | - | | Oil Temperature Sensor, Opto- electronic Oil Level Monitor, Overcurrent Relay, High Pressure Switch, High/Low Pressure Sensor, Oil Heater, Compressor Motor Internal Thermostat, Anti-Freeze Temperature Sensor, Phase-reverse Protector, Discharge Temperature Sensor, Safety Relief Valve and Water Pressure Differential Switch | | | | Oil Temperature Sensor, Opto- electronic Oil Level Monitor, Overcurrent Relay, High Pressure Switch, High/Low Pressure Sensor, Oil Heater, Compressor Motor Internal Thermostat, Anti-Freeze Temperature Sensor, Phase-reverse Protector, Discharge Temperature Sensor, Safety Relief Valve and Water Pressure Differential Switch | | | | |
| Condenser Piping Connection | Inlet | - | DN150 Flange | | | | DN150 Flange x 2 | | | | |
| | Outlet | - | DN150 Flange | | | | DN150 Flange x 2 | | | | |
| Evaporator Piping Connection | Inlet | - | DN150 Flange | | | | DN150 Flange x 2 | | | | |
| | Outlet | - | DN150 Flange | | | | DN150 Flange x 2 | | | | |
| Outer Dimensions | Length | mm | 2,997 | | | | 2,997 | | | | |
| | Width | mm | 1,469 | | | | 3,037 | | | | |
| | Height | mm | 1,951 | | | | 1,951 | | | | |
| Packing Dimensions | L x W x H | mm | 3,230 x 1,670 x 2,220 (Single Module) | | | | 3,230 x 1,670 x 2,220 (Single Module) | | | | |
| | Module Qty. | - | 1 | | | | 2 | | | | |
| Net Weight | kg | | 3,565 | 3,688 | 4,000 | | 7,130 | 7,253 | 7,376 | 7,688 | 8,000 |
| Packed Weight | kg | | 3,915 | 4,038 | 4,350 | | 7,830 | 7,953 | 8,076 | 8,388 | 8,700 |

Notes

- The nominal cooling capacities are based on the GB/T18430.1 Chilled Water Inlet / Outlet Temperature: 12/7°C Condenser Water Inlet / Outlet Temperature: 30/35°C
- Applicable Power Source:
Main Power Source (3φ) Control Power Supplies (1φ)
380V 50Hz 220V 50Hz
415V 50Hz 240V 50Hz

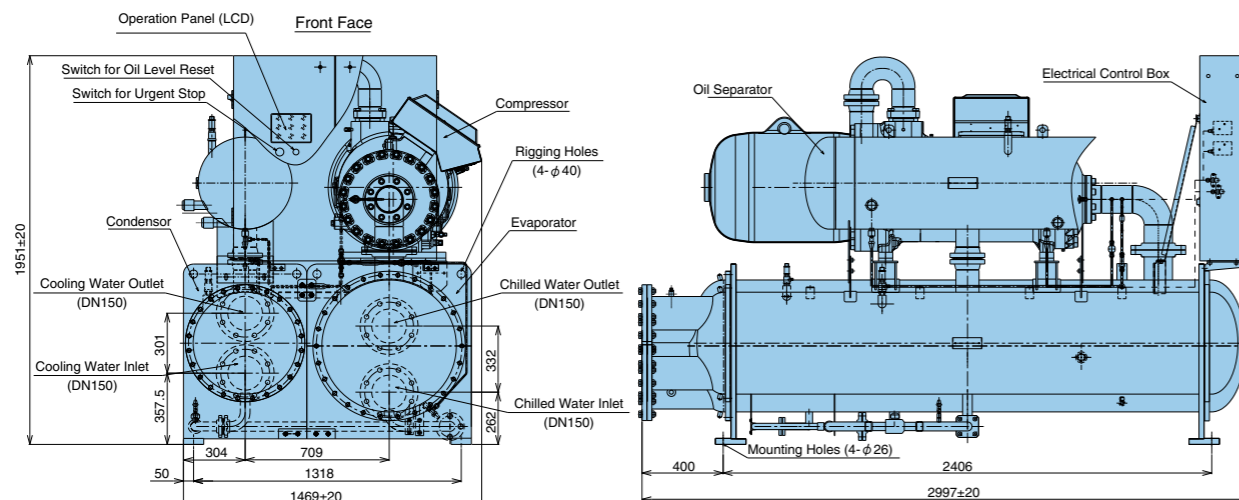
- Working Range:
Cooling Water Outlet Temperature: 22°C to 40°C
Chilled Water Outlet Temperature: 5°C to 13°C
- () marked with * is available by selection switch.

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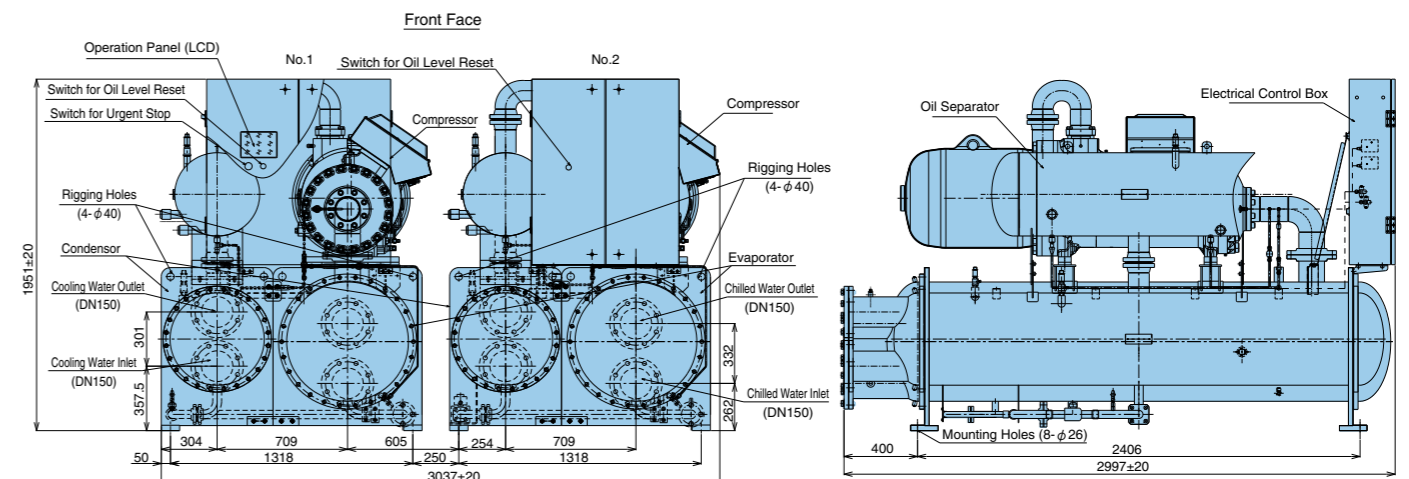
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Dimensional Data

RCU140 to 230WFYZ-XB



RCU280 to 460WFYZ-XB



Johnson Controls-Hitachi Air Conditioning

<http://www.jci-hitachi.com>

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