

## Air Cooled Chillers with Built-In Water Tank

Now Offering Japanese  
Quality at Affordable  
Prices!



AKL7500A-V

AKL5500A-V

ORION brings you chillers made with world-renowned Japanese quality.

# Japanese Quality Made in Thailand

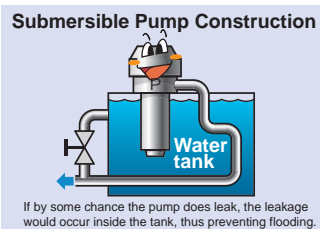
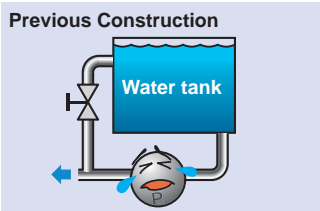
ORION chillers have a solid reputation and superior reliability among industrial chillers. Production has started in Thailand that inherits quality Japanese manufacturing. We aim to offer this quality along with improved affordability and speedier order fulfillment.

## Features

**+ 1**

### Japanese Design Ensures High Reliability

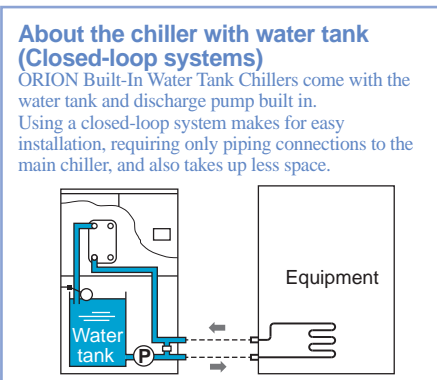
Our chiller is designed with a large water tank for convenient operation. We've adopted a immersion pump design which goes a long way to alleviate bigger troubles such as water leaks, etc. Of course, the primary components are identical to those used in our Japanese manufactured chillers.



**+ 3**

### Built-In Water Tank and Pump

The water tank and pump are built in, so you don't have to deal with troublesome wiring or piping.



**+ 2**

### Over 200,000 Units Shipped!

Orion has shipped over 200,000 chillers to satisfied customers not only in Japan, but all around the world.

**+ 5**

### Compact Design Makes Replacement a Snap!

A 22% reduction in size compared with our previous models. As the cooling and water pressure performance of these chillers are the same as with ORION's Japanese made models, they can be substituted as is.



Comparison of RKE5500A-V and AKL5500A-V

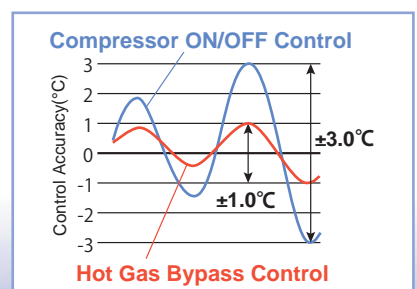
- \* 1. Size comparison with casters removed.
- \* 2. Note that installation related dimensions are not compatible.

**+ 4**

### Temperature Control Accuracy to $\pm 1.0^\circ\text{C}$ .

HB (Hot Gas Bypass) control gives control precision to  $\pm 1.0^\circ\text{C}$ .

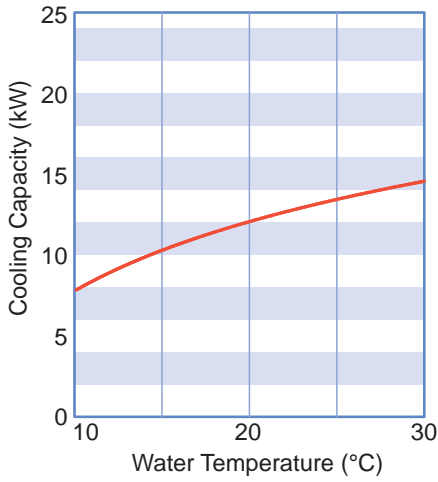
\* Excluding times of compressor on-off control or during times of changing load.



## Cooling Capacity Diagram

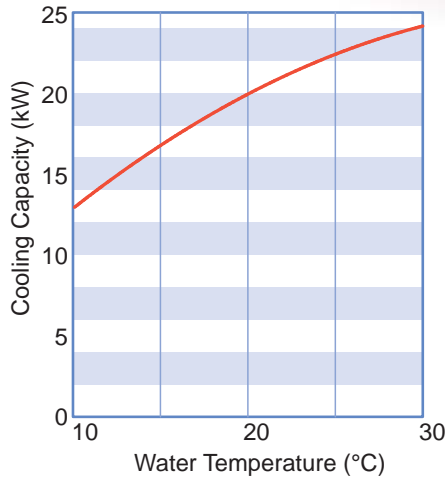
### [AKL3750A-V]

Chilled Liquid : Water Ambient Temperature : 32°C  
Flow Rate : 37L/min



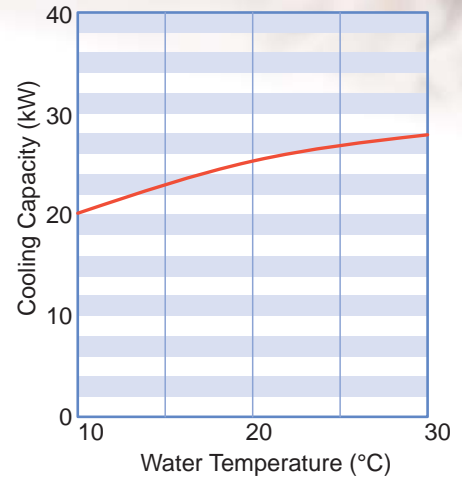
### [AKL5500A-V]

Chilled Liquid : Water Ambient Temperature : 32°C  
Flow Rate : 68L/min



### [AKL7500A-V]

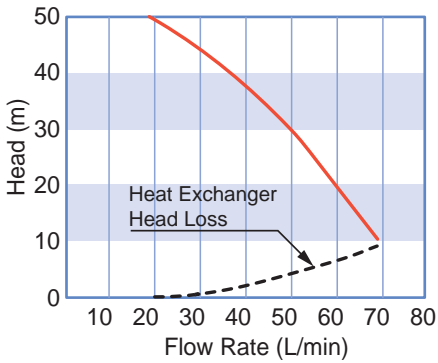
Chilled Liquid : Water Ambient Temperature : 32°C  
Flow Rate : 70L/min



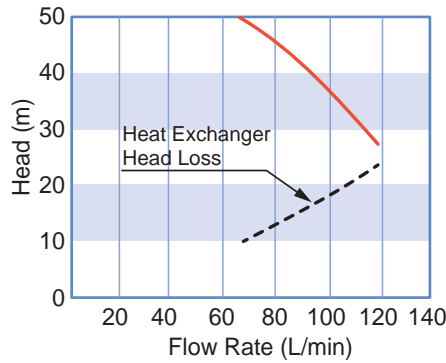
## Pump Characteristic Curves

\* Flow rate for stand-alone pump operation

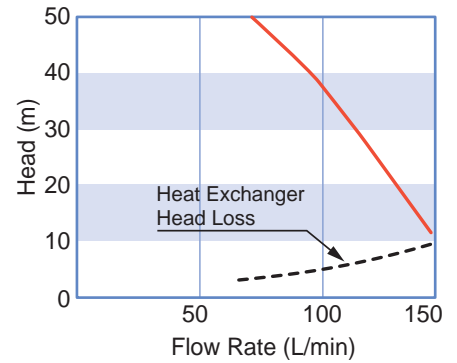
### [AKL3750A-V]



### [AKL5500A-V]



### [AKL7500A-V]



## Application Examples

### Welding Machine

Electrode and power supply cooling.



### Packaging Machinery

Cooling after heat sealing.



### Washing and cleaning machines

Concentrated cooling water supply for vapor cleaners.



### Die cooling

Can be used to supply cooling water when casting plastic or maintain even temperatures of metal molds.



### High Frequency Induction Heating Equipment

Heating coil cooling and high frequency power supply cooling.



### Laser

Cooling of diode laser oscillators and optical systems.

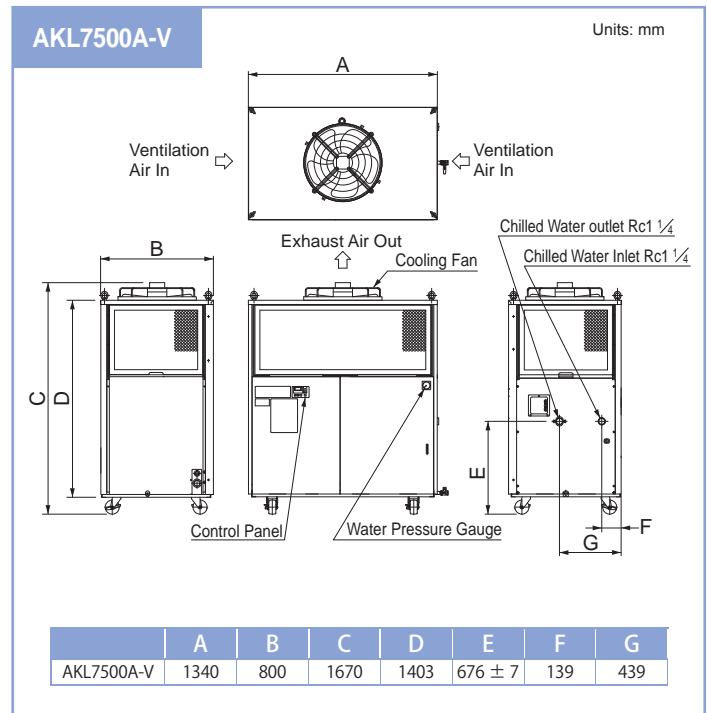
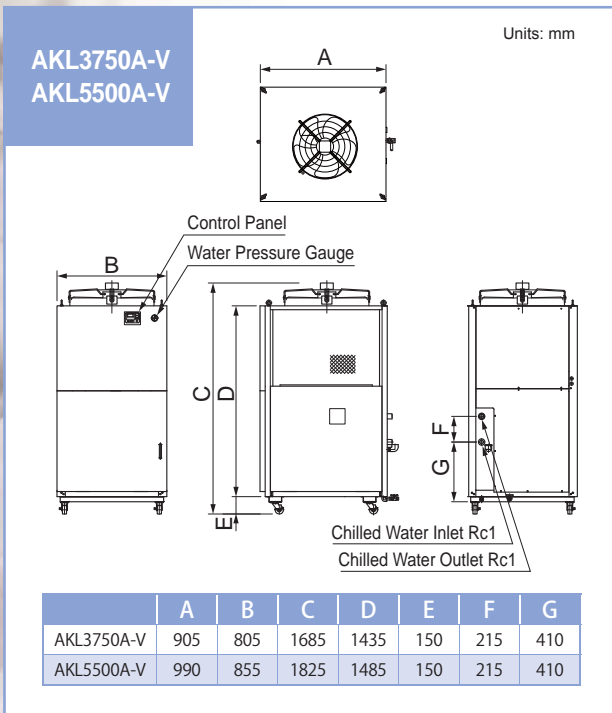


Specifications Chart

| Model                          |   | AKL3750A-V                     | AKL5500A-V                                       | AKL7500A-V                                  |  |  |
|--------------------------------|---|--------------------------------|--|---|--|--|
| Item                           |   |                                |  |   |  |  |
| Cooling Capacity * 1           | kW  | 12.0                           | 20.0   | 25.0  |  |  |
| Outside Dimensions (H × D × W) | mm  | 1685×905×805                   | 1825×990×855                                     | 1670×800×1340                               |  |  |
| Unit Mass (dry weight)         | kg  | 235                            | 285  | 345   |  |  |
| Chilled Water                  | Operable Ambient Temp. Range                    | 5 ~ 43                         |  | 5 ~ 38                                      |  |  |
|                                | Operable Liquid Temp. Range                     | 10 ~ 30                        |  |   |  |  |
|                                | Control Precision * 4                           | ±1.0°C or Lower                |  |   |  |  |
|                                | Operating Water Pressure                        | MPa                            | 0.10 ~ 0.50                                      | 0.28 ~ 0.50                                 | 0.10 ~ 0.50                                  |  |
|                                | Operating Flow Rate                             | L/min                          | 20 ~ 70  | 68 ~ 120                                    | 70 ~ 150                                     |  |
| Inlet and Outlet Port Size     |   | Rc1                            |  |   |  |  |
| Power Specifications           | Power Source * 2                                | V(Hz) Three-phase 380±10% (50) |  |   |  |  |
|                                | Power Consumption * 1                           | kW                             | 5.4  | 9.0   | 11.8   |  |
|                                | Electric Current * 1                            | A                              | 9.7  | 15.6  | 22.0   |  |
|                                | Power Capacity * 3                              | kVA                            | 8.1  | 12.4  | 18.0   |  |
| Equipment Details              | Compressor Fully sealed scroll type             |                                |  |   |  |  |
|                                | Condenser Fin and tube forced air cooling       |                                |  |   |  |  |
|                                | Operation Control Method Hot gas bypass control |                                |  |   |  |  |
|                                | Heat Exchanger                                  | Construction / Material        | Plate type heat exchanger / SUS316 (Brazing: Cu) |   |  |  |
|                                | Discharge Pump                                  | Construction / Output          | kW   | Multistage centrifugal immersion type / 1.1 | Multistage centrifugal immersion type / 1.46 | Multistage centrifugal immersion type / 1.46 |
|                                | Water Tank Capacity                             | L                              | Approx. 95                                       | Approx. 115                                 | Approx. 140                                  |  |
|                                | Refrigerant                                     |                                | R- 407C  | R- 410A                                     |  |  |

\* 1. Operating Conditions: Chilled water temp.: 20 °C, Ambient temp.: 32 °C. Cooling capacity is at least -5 % of listed figures. \* 2. Source voltage phase unbalance should be less than ±3 %. \* 3. The figure noted is when operating at the highest capacity in the normal operating range. \* 4. Continuous current load fluctuation within ±10 %, and with stable ambient temp. and power supply, etc. Does not include starting times or when the cooling load is too small, in which case the compressor may cycle on and off.

External Dimensions



Please feel free to contact the following representative:

Distributed by:



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This catalog contains product specifications as of November, 2017.

- Actual product colors may vary slightly from the pictures.
- The structure or specifications of products contained in this catalogue are subject to change without prior notice.