

# Discontinue

Circulated water cooling device, air cooling type

## HYW1000 Series

Appropriate for water tank cooling

- Cooling performance: 1.4 to 4.7kw



### Specifications

Descriptions		HYW1014	HYW1024	HYW1047
Capability	Cooling capacity kW (Ambient 32°C and liquid temperature 20°C)	1.2/1.4	2.2/2.4	4.3/4.7
	Ambient temperature range °C	5 to 40 (Note 2)		
	Use liquid temperature range °C	5 to 25		
	Temperature adjusting accuracy °C	± 1		
Electricity	Power supply	Single phase AC200V 50/60Hz	3 phase AC200V 50/60Hz	
	Power consumption (Note 1) kW	0.6/0.7	1.2/1.5	2.0/2.4
	Current (Note 1) A	3.1/3.5	4.4/4.7	6.8/7.6
	External signal	Operation, stop		
Particulars of system	Input	Mis-function		
	Output	Stainless steel plate type		
	Cooler	Stainless steel plate type		
	Pump	Stainless steel plate type		
Flow rate at lift 0m ℓ/min.	23/28	27/32	42/48	
Port size	water inlet and outlet Rc	1/2	3/4	
Dimensions	width X depth X height mm	460 X 340 X 420	560 X 340 X 470	600 X 400 X 640
Product mass	kg	35	47	60
Refrigerant		HCFC22		
Water tank capacity required (Note 3) ℓ		20	30	60
Min. flow rate (Note 4) ℓ/min.		7	12	24
Exhaust heat	kW	2.1/2.6	3.8/4.7	7.0/8.4

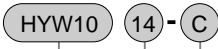
Note 1: At ambient temperature 32°C and liquid temperature 20°C.

Note 2: Use ambient temperature following type within ambient temperature; 5 to 30°C range.

Note 3: Water tank is to be the required water tank capacity and over. Absorbing and return ports are separated as far as possible, and stir water well.

Note 4: Use the product with min. flow rate and over to prevent freezing.

### How to order



Water cooling unit

A Cooling capacity Note 1

B Option

Symbol	Descriptions
A	Cooling capacity (50/60Hz)
14	1.2/1.4kW
24	2.2/2.4kW
47	4.3/4.7kW
B	Option
C	With caster
D	Ambient temperature following type

### ⚠ Note on model No. selection

Note 1: Cooling capacity applies when ambient temperature is 32°C and liquid temperature is 20°C.

Cooling capacity is indicated with kW.

Conversion method of kW and kcal/h kW X 860= kcal/h

[Example of model number]

### HYW1014-C

Model: Circulated water cooling device HYW1000 series

A Cooling capacity : 1.2/1.4kW

B Option : Caster attached



**Discontinue**

Ideal for water tank cooling

**HYW1000 Series**

**HYW1000 SERIES**

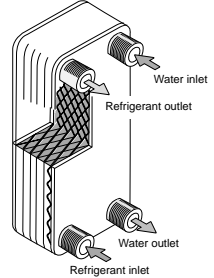
- Wire-cut EDM
- Cleaning equipment
- Printing machine



**Heat exchange efficiency has been increased with the plate heat exchanger.**

The plate heat exchanger's complete alternating structure efficiency exchanges heat efficiently.

The turbulence effect of wavy plates keeps water clean, and prevents sludge, etc., from adhering to the unit.



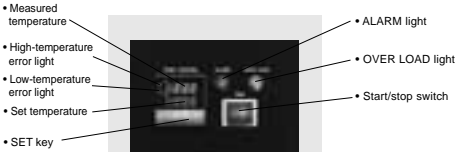
**Temperature control for every application**

Fixed temperature and ambient temperature following temperature control are available. Select the method that suits your application.

Each type is equipped with standard remote terminals for starting and stopping. Energy is saved by using the ON/OFF function to stop the compressor when the cooling water temperature reaches the set temperature.

**Fixed temperature (Standard)**

The cooling water temperature is set from 5°C to 25°C.



**Ambient temperature following (Option symbol: D)**

The cooling water temperature is set from -5°C to +5°C of ambient temperature.



**Convenient handle for transportation**

Convenient handles are added for transportation.



**Top vertical exhaust heat blow-off does not affect personnel or equipment in the area.**

**Push-in panel for easy opening and closing**

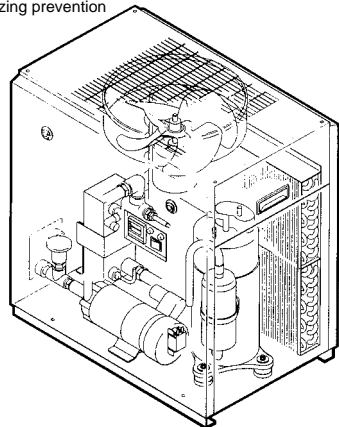
Front and back panels are easily opened and closed with a single touch. Removable panels do not get in the way during maintenance.

**A standard dust filter for condenser eliminates the need to clean the condenser.**

The dust filter is removed with a single touch and washed easily. Dust filter cleaning is indicated by the OVER LOAD light on the monitor.

**Safety measures**

- Overload display
- Prevention of motor damage by burning
- Alarm signal terminal
- Refrigerator damage prevention
- Freezing prevention



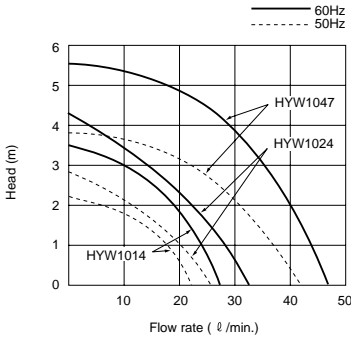
- Refrigerating type dryer
- Desiccant type dryer
- High polymer membrane dryer
- Air filter
- Automatic drain other
- F.R.L. (Module)
- F.R.L. (Separate)
- Small F.R.
- Precise R.
- Electro pneumatic R.
- Auxiliary
- Flow control valve
- Silencer
- Check valve / others
- Joint / tube
- Vacuum F.
- Vacuum R.
- Vacuum generator
- Vacuum auxiliary / pad
- Mechanical pressure SW
- Electronic pressure SW
- Electronic dif. pres. SW
- Starting / close contact conf. SW

- Pressure SW for coolant
- Flow sensor for air
- Total air system

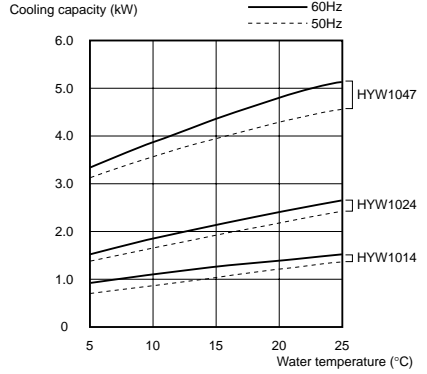
- Water cooling refrigerator
- Flow sensor for water

Water cooling unit related products  
Circulated water cooling device

## Water supply characteristic curve

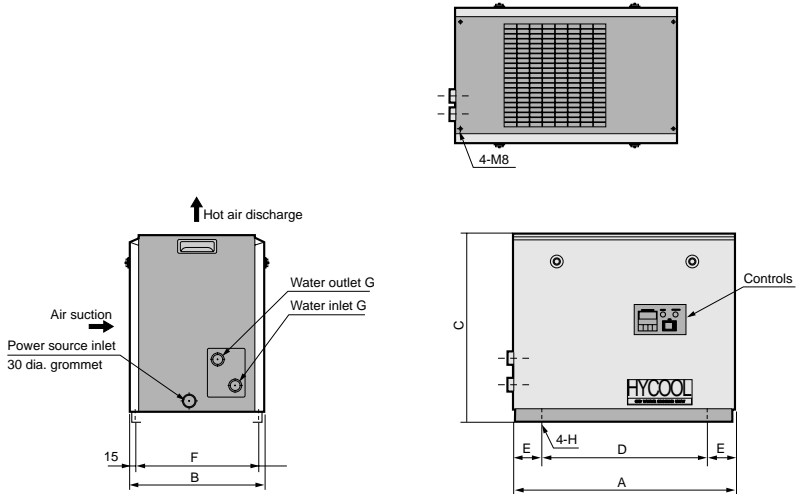


## Cooling performance curve



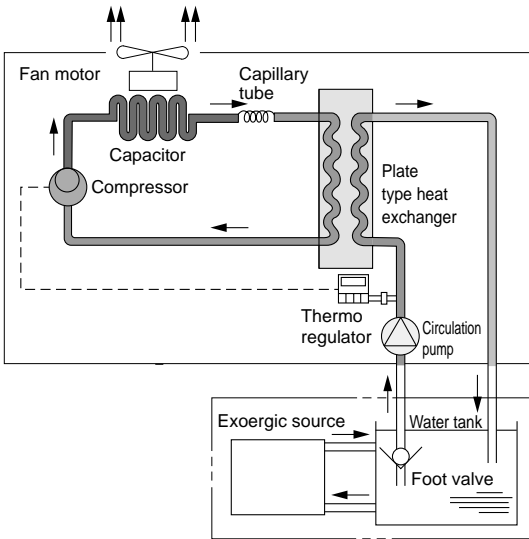
Conditions • Ambient temperature 32°C • Clean water

## Dimensions



Model no.	A	B	C	D	E	F	G	H
HYW1014	460	340	420	320	70	310	Rc 1/2	Hole for M6
HYW1024	560	340	470	420	70	310	Rc 3/4	Hole for M6
HYW1047	600	400	640	400	100	370	Rc 3/4	Hole for M8

#### Flow chart



Water in an external water tank is absorbed by an internal circulation pump, and is cooled by refrigerant (fleon) through heat exchanger, then is returned to the external water tank again as cooling water.

If temperature of circulating water is increased by exoergic source, detected by thermo sensor, in turn a compressor starts operation, then the water is cooled in heat exchanger. When lower set temperature is reached, the compressor stops. Repeating this cycle, water in external tank is maintained to the set temperature.

(For ambient temperature following type, differential between ambient temperature and water temperature in water tank is maintained to the set temperature.)

- Refrigerating type dryer
- Desiccant type dryer
- High polymer membrane dryer
- Air filter
- Automatic drain other
- F.R.L.L (Module)
- F.R.L.L (Separate)
- Small F.R.
- Precise R.
- Electro pneumatic R.
- Auxiliary
- Flow control valve
- Silencer
- Check valve / others
- Joint / tube
- Vacuum F.
- Vacuum R.
- Vacuum generator
- Vacuum auxiliary / pad
- Mechanical pressure SW
- Electronic pressure SW
- Electronic dif. pres. SW
- Steering / close contact conf. SW
- Pressure SW for coolant
- Flow sensor for air
- Total air system
- Water cooling refrigerator
- Flow sensor for water

**Discontinue**

Circulated water cooling device, air cooling type

# HYW3000 Series

Min. in the class, compact design

- Cooling performance: 6.2 to 39.1kw



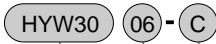
## Specifications

		HYW3006	HYW3010	HYW3016	HYW3023	HYW3027	HYW3033	
Capability	Cooling capacity (Ambient 32°C and liquid temperature 20°C) kW	5.2/6.2	8.3/9.5	14.1/16.2	21.3/23.3	24.3/27.4	30.2/32.6	
	Ambient temperature range °C	5 to 40						
	Use liquid temperature range °C	5 to 30						
	Outlet temperature precision °C	± 1						
Electricity	Power supply	3 phase AC200V 50/60Hz						
	Power consumption (Note 1) kW	4/5	5/6	7/9	10/13	14/17	18/22	
	Current (Note 1) A	14/17	17/20	25/30	41/45	49/59	64/72	
	External signal	Input: Operation, stop Output: Operation, mis-function						
Particulars of system	Cooler	Stainless steel plate type						
	Pump	Flow rate at lift 25m ℓ/min.			42/56		75/95	
	Water tank	Actual volume ℓ		50		70		
	Water inlet and outlet	Rc		1		1 1/4		
Port size	Water-supply port	Rc		1/2				
	Overflow, drain	Rc		3/4				
	Drain pan drain	Rc		1/2				
	Dimensions width X depth X height mm	960 X 600 X 1100		1200 X 600 X 1300		1200 X 600 X 1500		1960 X 840 X 1850
Product mass (water tank empty) kg	315		355		375		400	
Refrigerant	HCFC22						435	
Min. flow rate (Note 2) ℓ/min.	19		29		49		63	
Exhaust heat kW	10.5/11.6		4.5/17.8		24.1/29.2		35.5/40.7	
						86		95
						41.0/49.1		50.6/57.7

Note 1: At ambient temperature 32°C and liquid temperature 20°C.

Note 2: Inlet (return) temperature is to be 40°C or less. As reference, use the product with min. flow rate and over.

## How to order



Water cooling unit

**A** Cooling capacity Note 1

**B** Option Note 2

Symbol	Descriptions	
<b>A</b>	Cooling capacity	(50/60Hz)
06	5.2/6.2kW	
10	8.3/9.5kW	
16	14.1/16.2kW	
23	21.3/23.3kW	
27	24.3/27.4kW	
33	30.2/32.6kW	
<b>B</b>	Option	
C	With caster	

## ⚠ Note on model No. selection

Note 1: Cooling capacity applies when ambient temperature is 32°C and liquid temperature is 20°C.

Cooling capacity is indicated with kW.

Conversion method kW X 860= kcal/h of kW and kcal/h

Note 2: "C" is not selected for **A** cooling capacity "33" (30.2/32.6kW) type.

[Example of model number]

### HYW3006-C

Model: Circulated water cooling device HYW3000 series

**A** Cooling capacity : 5.2/6.2kW

**B** Option : Caster attached



**Discontinue**

Smallest, most compact in the class **HYW3000 Series**

**HYW3000 SERIES**

- YAG laser processing machine
- Analysis equipment
- Cleaning equipment
- Automatic packaging equipment
- Automatic soldering machine
- Printing machine



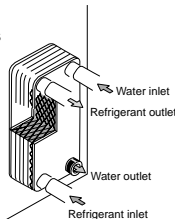
**Smallest non-crowding size in this class**

This operator-friendly size does not generate a feel of crowding. Work site space is saved and equipment downsized.

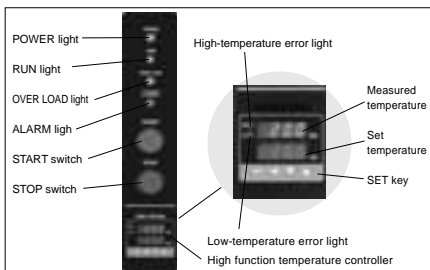
**High heat exchange efficiency is realized with a plate heat exchanger and water tank.**

The plate heat exchanger's complete alternating structure efficiently exchanges heat. Heat exchange efficiency has been further increased by structuring the plate heat exchanger as a unit installed in the water tank. This also reduces piping and eliminates the worry of water leaks.

This product is made highly durable by stainless steel used for main components, including the plate heat exchanger and water tank.



**The monitor's high function temperature controller provides daily control.**



The temperature is set by pressing a key. The color-coded temperature display shows set (red) and measured (green) temperatures. High and low water temperature alarms are indicated with lights, so water temperature status can be grasped at a glance. Remote terminals for starting and stopping are also provided as standard.

**Pump down circuit eliminates the need for the crankcase heater to be repeatedly energized.**

The pump down circuit does not leave refrigerant in the compressor when operation stops. The crankcase heater is eliminated because there is no worry of sleeping phenomenon during winter.

**A governor prevents restricted flow from causing outlet side pressure from rising abnormally.**

An automatic water supply function is incorporated so if the water rate is insufficient, water is automatically supplied from the tap connected to the water supply port.

**Easy opening and closing front and back panel.**

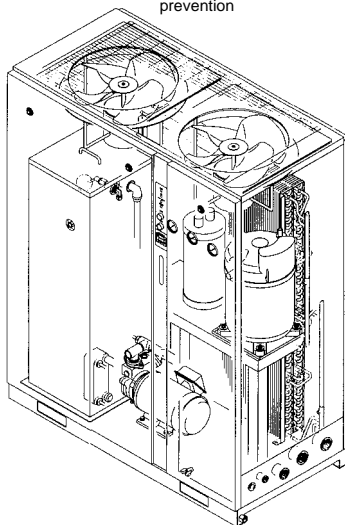
**A standard dust filter for the condenser eliminates the need to clean the condenser.**

The dust filter is removed with a single touch and washed easily. Dust filter cleaning is indicated by the OVER LOAD light on the monitor.



**Safety measures**

- Overload display
- Prevention of motor damage by burning
- Alarm signal terminal
- Refrigeration unit damage prevention
- Freezing prevention
- Electrical shock prevention
- Insufficient water prevention
- Frequency compressor start/stop prevention

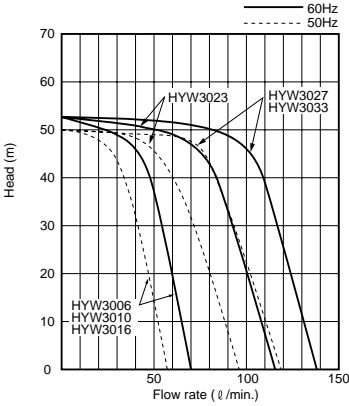


- Refrigerating type dryer
- Desiccant type dryer
- High polymer membrane dryer
- Air filter
- Automatic drain other
- F.R.L (Module)
- F.R.L (Separate)
- Small F.R.
- Precise R.
- Electro pneumatic R.
- Auxiliary
- Flow control valve
- Silencer
- Check valve / others
- Joint / tube
- Vacuum F.
- Vacuum R.
- Vacuum generator
- Vacuum auxiliary pad
- Mechanical pressure SW
- Electronic pressure SW
- Electronic dif. pres. SW
- Starting / close contact conf. SW
- Pressure SW for coolant
- Flow sensor for air
- Total air system

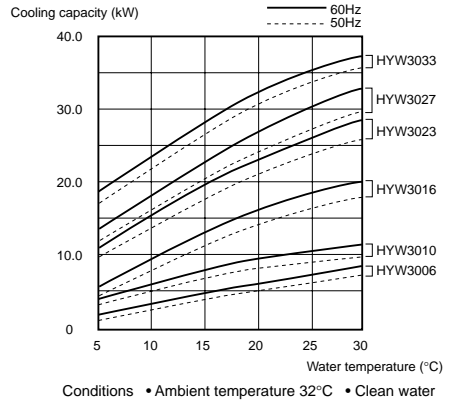
- Water cooling refrigerator
- Flow sensor for water

Water cooling unit related products  
Circulated water cooling device

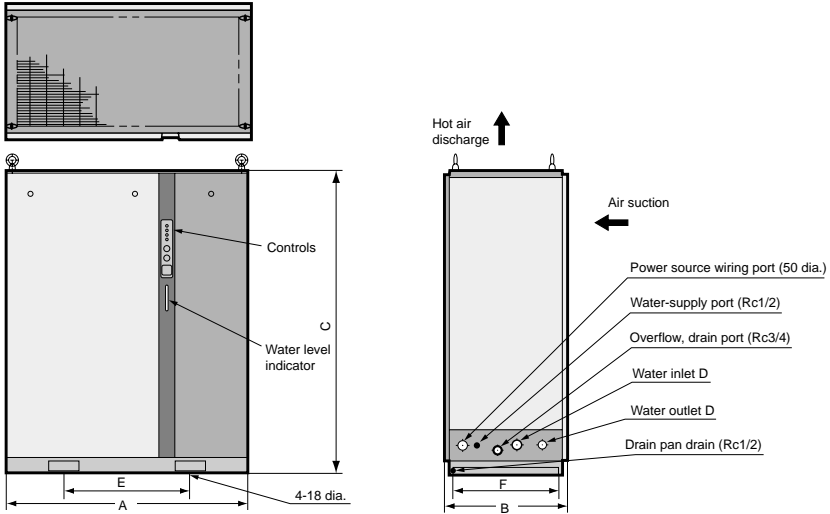
## Water supply characteristic curve



## Cooling performance curve

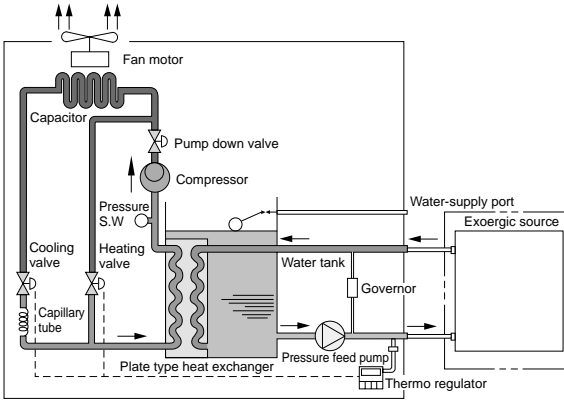


## Dimensions



Model no.	A	B	C	D	E	F
HYW3006	960	600	1100	Rc1	630	530
HYW3010	1200	600	1300	Rc1	630	530
HYW3016	1200	600	1300	Rc1	630	530
HYW3023	1200	600	1500	Rc1 <sup>1</sup> / <sub>4</sub>	630	530
HYW3027	1200	600	1500	Rc1 <sup>1</sup> / <sub>4</sub>	630	530
HYW3033	1960	840	1850	Rc1 <sup>1</sup> / <sub>2</sub>	790	770

#### Flow chart



Cooling water fed to outside by pressure feed pump is heated by exoergic source. Heated water passes through heat exchanger, and is cooled by refrigerant (fleon), then cooling water returns in water tank again. Controlling cooling and heating valves by thermo regulator, cooling water with constant temperature is fed out.

Refrigerating type dryer
Desiccant type dryer
High polymer membrane dryer
Air filter
Automatic drain other
F.R.L. (Module)
F.R.L. (Separate)
Small F.R.
Precise R.
Electro pneumatic R.
Auxiliary
Flow control valve
Silencer
Check valve / others
Joint / tube
Vacuum F.
Vacuum R.
Vacuum generator
Vacuum auxiliary / pad
Mechanical pressure SW
Electronic pressure SW
Electronic dif. pres. SW
Steering / close contact conf. SW
Pressure SW for coolant
Flow sensor for air
Total air system

Water cooling refrigerator  
Flow sensor for water

Water cooling unit related products  
Circulated water cooling device