

# Winery Chillers

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## 1.What Are Winery Chillers?

Winery chillers are a type of process chillers, which are also called low-temperature chillers that utilize propylene glycol (an organic anti-freeze agent) or a mix of propylene glycol and water to extract excess heat from the making wine process and dissipate it in a heat exchanger or cooling system.

Winery chillers are suited for mid to low-temperature operation between 40°F and 20°F(5°C and -7°C) . The most common types for wineries are known as glycol chillers. Propylene glycol is an anti-freeze agent capable of chilling products to very low temperatures.

We can also custom design and manufacture winery chillers to meet your specific needs.If you need a winery chiller for a different winery process? **Contact Us**—we're here to help.



*20HP Air Cooled Winery Chiller*

## 2.How Does A Brewery Chiller work ?

Winery chillers consist of closed-loop tubing attached to the heat exchanger of a winemaking equipment. Glycol, or a mixture of water and glycol (some wineries use a water/glycol ratio of 67% to 33%), flows through the circuit and cools the equipment by dissipating heat from the heat exchanger to maintain the desired temperature for the wine production.



*Winery Process*

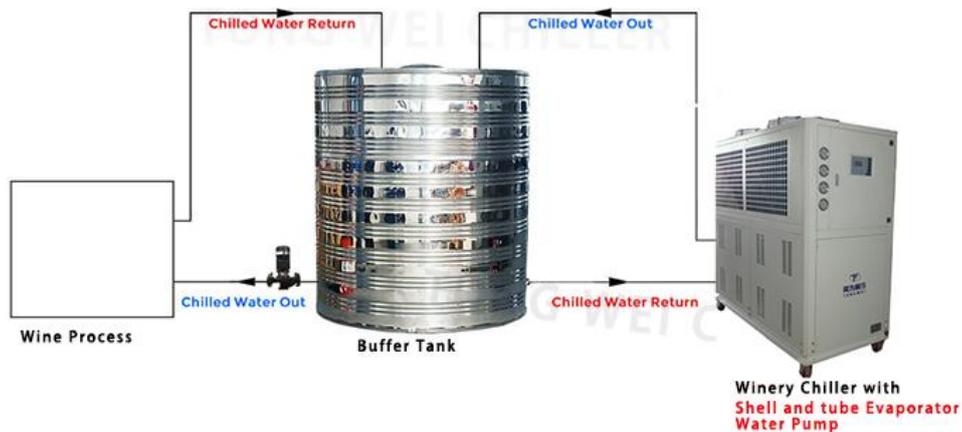
### 3.What's the Difference Between Air-cooled & Water-cooled

#### Winery chillers?

There are two types of winery chiller: one is **air-cooled winery chiller**, the other is **water-cooled winery chiller** ;

**Air-cooled winery chillers** use ambient air to dissipate heat from the wine processes. They are energy-efficient, space-saving, and less maintenance that helps save money.

**Water-cooled winery chillers** use water from an external water cooling tower to dissipate heat from the winery processes. These systems are longer lifespan, Relatively quiet, and more consistent cooling performance than the air-cooled winery chiller.



*Air-cooled winery Chiller Installation Drawing*



*Water-cooled Winery Chiller Installation Drawing*

**Contact us** for helping to choose the best winery chillers for your wine processes.

## 4.Our Winery Chillers

We offer industrial-grade air- and water-cooled glycol winery process chillers from 1/2 ton to 200 tons to cool all sizes in Wineries. Learn more about our scroll and screw chiller systems for wineries.

### Scroll Winery Chiller Systems

Our single-, dual-, and multi-circuit scroll winery process chillers are available with scroll compressor, an industry-leading and long-lasting solution.

- Air- and Water-cooled Scroll
- 1 - 60 hp (1KW- 200KW)
- Single-, dual-, or multi-circuit(Three or Four )
- Panasonic or Danfoss scroll Compressor



*20HP Air-Cooled Winery Chiller with Dual Circuit and Tank*

*40HP Water-Cooled Winery Chiller with Dual Circuit and Tank*

### Screw Winery Chiller Systems

Our dual- and tandem-circuit screw winery process chillers feature Hanbell or Bizter screw compressors for long-lasting performance and reliability.

- Air- and Water-cooled
- 60 - 300 hp (200KW-1500KW)
- Single or Dual-circuit



*70HP Air-Cooled Winery Screw Chiller*



*70HP Water-Cooled Winery Screw Chiller*

## 5.What Are The Main Components of Winery Chillers?

### 5.1 Compressor

The compressor is the key mover in winery chiller because it produces pressure variations to stir the refrigerant around.

From 1/2HP(1/2 Ton) to 60HP(50Ton) brewery chiller , which is with **Panasonic** or **Danfoss** brand **Scroll compressor** ,

Above 60HP(50 Ton) winery chiller , which is with **Hanbell** or **Bitzer** brand **Screw compressor** ,

These brand compressors are with high refrigeration efficiency,low noise ,energy saving,environmental protection and durability,safety and stability.



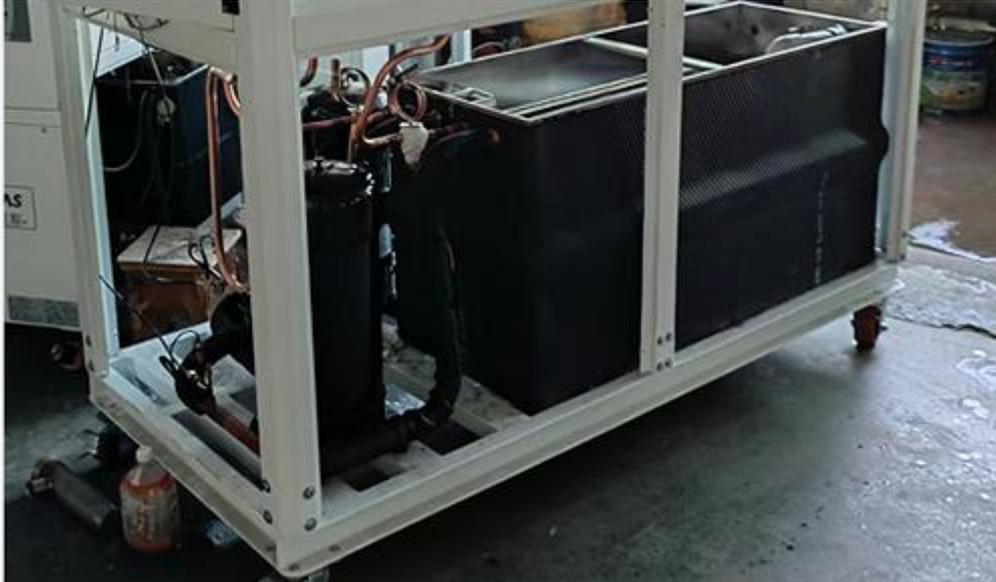
*Panasonic Compressor*



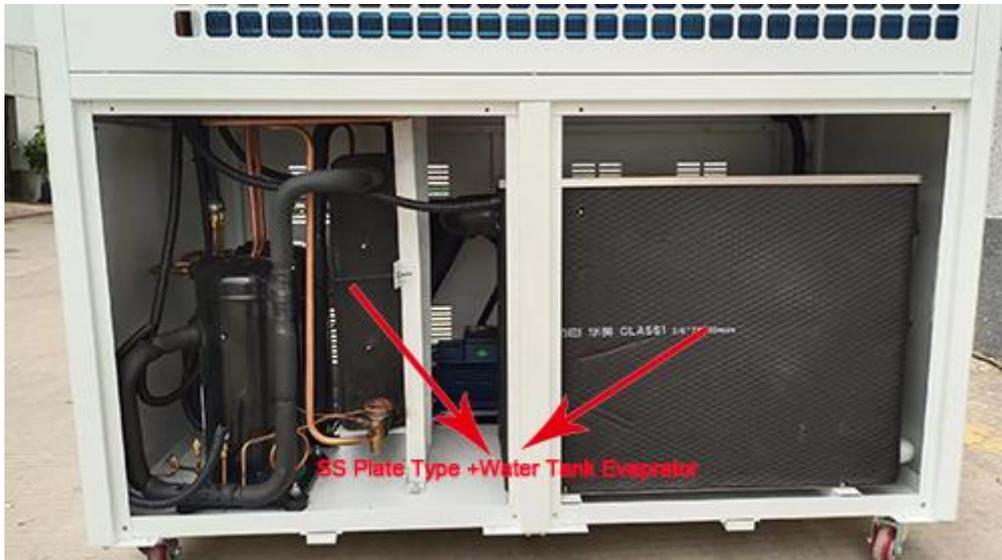
*Danfoss Compressor*

## 5.2 Evaporator

The evaporator is a crucial component of air-cooled winery chiller, as it is responsible for extracting heat from the liquid being cooled, it is located between the compressor and the expansion valve. There are three types of evaporators : **coil in water tank evaporator** , **shell and tube evaporator** , **304SS stainless steel plate type evaporator**.



*Coil in SS Water Tank Evaporator*



*SS Plate Type+ Water Tank Evaporator*



*Shell and Tube Evaporator*

### 5.3 Water Pump

The water pump is designed to increase the pressure and the flow of the chilled water in a closed space.



*Water Pump*



*High Pressure Water Pump*

#### 5.4 Condenser

The condenser for air-cooled winery chiller is equipped with efficient cross-seam fins and female threaded copper tubes for high heat exchange efficiency and good stability. Its function is to cool down the refrigerant steam released from the compressor into a liquid or gas-liquid mixture.



*Aluminum fin+fan Condenser for air -cooled winery chiller*

The condenser for water-cooled winery chiller is shell and tube, with the internal copper tubes employing an outer thread embossing process. This design effectively enhances the heat exchange efficiency between the refrigerant and water during the process. Compared to traditional smooth copper tubes, the outer thread embossing process increases the surface area of the copper tubes,

thereby expanding the contact area for heat exchange and improving the thermal conductivity of the condenser. This optimization design allows the condenser of the water-cooled chiller to transfer heat from the refrigerant to the water more rapidly and consistently, enabling the water to carry away the heat.



*Shell and tube Condenser for water-cooled winery chiller*

### 5.5 Controller Panel

Winery chillers use precision digital temperature controller, it RS485 communication port, which can do remote monitoring and control. Simple operation, low failure rate, high safety factor, easy installation.



## **6.Contact Us to Learn More About Our Winery Chillers**

Don't delay in making the best decision for your manufacturing business and your future by increasing your production capabilities with an winery chiller. Contact us today for more information on a winery chiller. Our professional team will help you with any questions you have on our winery chiller units. We look forward to hearing from you!