

### Q18.1-REFRIGERATED CHILLER

Quantum Technology: Q18 REFRIGERATED CHILLER removes heat from a liquid via a refrigeration cycle. It is recommended for warmer climates/water cooled devices in non-air conditioned environments.



### TECHNICAL SPECIFICATIONS

- **Water flow** 5-20 L/min (different sizes possible, please contact Quantum personnel)
- **Water Temperature Drop  $\Delta T$**   $\approx$  10 Degrees Celsius (18 degrees Fahrenheit)
- **Required Electricity:** 230/1/50 (alternatives upon request)
- **Dimensions:** 55x31x31 (LxWxH) inches (about 1400 mm x 790 mm x 790 mm)
- **Weight:** 410 -650 lbs

### COMPONENTS

1. Compressor
2. Fan 2.1
3. Condensing Unit:

#### 4. Control system:

#### 5. Capacitor

## INSTALLATION

### 1. ELECTRICAL CONNECTION

The chiller needs to be connected to the electricity supply.

Type of connection: HARD WIRE

Parameter	230 Volt 50 Hz Model
Nominal Voltage	230 VAC
Operating voltage range	200-240 VAC
Frequency	50 Hz
Phase	1
Nominal input Power	4.5-20 kW
Maximum steady state	5.5-25 kW
Maximum current	24 A
Dedicated circuit breaker	30 A (40 A max)
Mains supply voltage fluctuations	Up to $\pm 5\%$ of the nominal voltage

### 2. WATER

The two water lines (chilled and warm return) need to be routed to the chiller.

The water hoses are 5/8" rubber hosing.

At the chiller end, the hose connections are plain garden hose fittings.

Supplied adapter 3/8" MPT.

Needs a supply of water to initially fill circuit.

The system is a close circuit, it needs standard maintenance.

NOTE: If level of water is low check for leaks.

### 3. MOUNTING

Mounting to the designed place.

Suggestion: screw down through flange resting on the site. 1/2" screw size. it needs minimum 4 screws.

#### **4. GENERAL**

The Chiller regulates its cooling capacity according to the heat load. The refrigerator cycle on/off with heat load.

NOTE: the water pump will need to keep running constantly.

#### **TEST REPORT WILL INCLUDE:**

- AIR-COOLED
- REMOTE
- WATER-COOLED
- WATER PUMP

Components listed above are tested prior to shipment.

**CONCLUSION: The system is operational.**