

It takes an expert to give you
unmatched cooling.



Water Tank Chillers

Blue Star is India's largest air conditioning and refrigeration company with over 70 years of experience in the design, development, manufacture, sale and support of cutting-edge air conditioning and refrigeration solutions for both commercial and residential use.

It has offices across India, UAE, Malaysia, Qatar & Oman, 5 modern manufacturing facilities, around 2700 employees and a turnover of over (USD) \$680 Million. Alliances and partnerships with leaders in global technology have further enhanced Blue Star's capability in providing advanced cooling solutions for diverse needs.

The experience and knowledge gathered over seven decades, combined with alliances and partnerships with other global leaders in the field, have made Blue Star experts in the cooling industry today.

Blue Star's expertise results in the constant design and development of new and innovative products that suit the various and precise needs of users across the world.

One such product range is the Water Tank Chiller specially designed for the specific requirements of the Middle East markets. While the need for cool water in baths and kitchens is global, nowhere is it as pronounced as in the Middle East. Not only are the summers harsh almost all year round, making it necessary to cool the water in the overhead tank down, but the matured markets of the area seek sophisticated solutions that can provide cool water on demand, reliably and efficiently.

Blue Star's Water Tank Chillers are designed for both domestic and industrial use, and hence they can be used both in residential and commercial applications.



Global presence

Blue Star's international business consists of AC&R product exports to the Middle East, Africa, SAARC, ASEAN and Pacific Islands regions, with steady progress also being made in developing the other international markets too. In addition, the Company also participates in international projects managed by their joint ventures in Qatar, Oman and Malaysia.

New opportunities are being identified for AC&R products, MEP projects, after-sales service as well as system integration and agency businesses in global markets.

Hot outside. Cool water inside.



High ambient temperature can considerably heat up water making it unusable. Blue Star Water Tank chiller makes water usable by easily cooling it down even if the outside temperature is 52°C.



New range of Water Tank Chillers



Blue Star's new range of Water Tank Chillers provides cooled water efficiently, quickly and reliably, to both residential and commercial establishments.

As experts in the field, we understand the rigours that a cooling system undergoes when the ambient temperature shoots well over 50°C. Most systems wilt under these conditions and let you down when you need cool water the most. Not so with the robustly put-together Blue Star chillers.

Designed to operate efficiently even at 52°C ambients, and manufactured to global standards, Blue Star Water Tank Chillers ensure a constant and reliable supply of cool water.

Blue Star Water Tank Chillers are technically superior in many other ways too. Driven by Scroll, Rotary & Reciprocating compressors, they are energy-efficient and robust in construction. They use the eco-friendly R410A refrigerant in keeping with today's international needs to protect the Ozone layer. They incorporate plate type heat exchangers that are far superior to conventional systems that use copper tubes. Also the use of stainless steel or food grade PVC pipes ensures hygiene.

The range – consisting of Water Tank Chillers for large volume applications and Domestic Tank Chillers for residential use – is fully tested in state-of-the-art laboratories to validate performance.

Unmatched features

- Faster cooling
- Anti-corrosive hydrophobic coated fins for extended life
- Safe, hygienic cool water even at high ambients
- High corrosion resistance due to use of SS piping or food grade PVC pipe for hydronic system
- High-efficiency compressor
- Micro processor control
- Low noise and vibration
- Low maintenance
- Pure polyester powder-coated cabinet for UV protection
- Vertical discharge direct driven quieter and higher-efficiency fans
- Compact design and small footprint
- Stainless steel copper-brazed plate type heat exchanger
- System is pre-charged with oil and refrigerant
- Totally enclosed fan-cooled condenser fan motor
- Suitable up to 27 metre* head application

*Applicable for select models only



High-efficiency Scroll compressor

The high-efficiency compressor used in this range of chillers is green, efficient and reliable. Not only does it by its very nature exhibit high volumetric efficiency but it also comes with various safety features:

- An internal overload protection prevents excessive current and temperature caused by overloading, low refrigerant flow or phase loss.
- Internal reverse vent valves allow the refrigerant to circulate through a by-pass from the suction to the discharge when the compressor runs in reverse.
- Crankcase heaters prevent the absorption of liquid refrigerant by oil in the crankcase when the compressor is not running.
- Improved energy efficiency and sound levels.
- Quiet and efficient operation.



Sturdy Reciprocating Compressor

Blue Star uses sturdy Reciprocating compressors, in water chillers, which can withstand extremely high T3 ambient conditions with no tripping and longer durability.



High-efficiency Rotary Compressor

Blue Star also uses high energy-efficient Rotary compressors with a built-in accumulator for T3 conditions. The compressor is specially designed to deliver maximum cooling while using low energy, thereby helping you save on power bills.



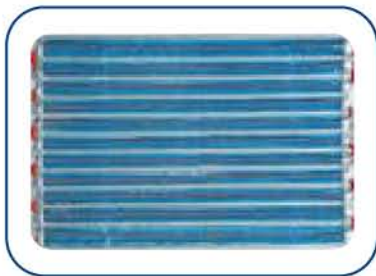
Circulating pumps

The motors and pumps in the Chiller system are close coupled in a convenient and compact design for quick installation at site. The centrifugal pumps provide accurate flow and pressure for different site applications. The pumps are fitted with maintenance-free mechanical seals. The motors used, coupled with the pumps, are totally enclosed fan cooled type which are suitable for a wider voltage range.



Condenser

The copper condenser is designed for high efficiency and provides excellent heat transfer and low air resistance. Special anti-corrosive aluminium fins with blue hydrophilic coating are used in the condenser to reduce corrosion, and to increase the life of the unit. The inner grooved copper tubes offer excellent heat transfer properties. The coil arrangement allows for smaller unit sizes while increasing the air suction area and enhancing the heat transfer efficiency of the refrigerant circuit.



Note - Pump for DWC models is an optional feature which is supplied from factory and is to be installed at the site

Condenser Fan/ Fan Motor

The sine-curved aluminium axial fans with their sickle-shaped blades and the manifold used in these condensers are designed to improve performance and reduce noise. Directly coupled to the electric motor, they come with overload protection and are supplied with safety guards.

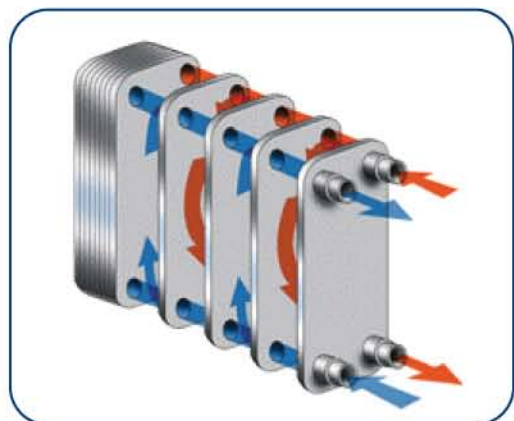


Evaporator (Plate Type Heat Exchanger)

The AISI 316 stainless-steel braze-welded plate evaporator used in these chillers is housed inside a closed insulating casing. Complete hydronic circuit includes stainless steel or food grade flexible pipe, water flow switch, ball valves and strainer.

Models with two refrigerant circuits are equipped with a 2-circuit exchanger which has a single water circuit. Using 2-circuit plate-type heat exchangers offers the following advantages:

- Higher COP/EER values
- Smaller amount of refrigerant in the circuit
- Smaller unit size and weight
- Easier maintenance



Each evaporator in such units is equipped with a temperature probe for control logic. The water circuit is provided with a flow switch and a probe for measuring inlet water temperature.

Controls & Safety Devices

The Blue Star range of Water Tank Chillers is provided with adequate controls and safety features:

- High pressure protection: High pressure switch protects the compressor and system against pressure in excess of the compressor operating envelope
- Low pressure protection: Low pressure switch protects the compressor against pressure lower than the compressor operating envelope. It is also used as an extra safety control to protect against the freeze-up of water in PHE
- Flow switch: Prevents system from operating during inadequate flow (Optional feature for DWC Model)
- Single phase/Phase reversal protection for scroll compressors: Protects compressor in case of phase reversal and phase imbalance
- Overload protection for pumps and condenser fan motor
- Microprocessor controller with BMS compatibility for 10-22TR units through RS485 connections, with MODBUS protocol
- In-built time delay for compressor and pump
- In-built run-time equalisation logic for multiple compressor units
- Complete Alarm Management
- Liquid injection for high discharge temperature protection
- System tubings are validated with the help of FEA tool: ANSYS mechanical



Pipes & Parts

- Refrigerant circuit pipes use refrigeration grade copper tubes which are thoroughly cleaned and internally dehydrated
- Pipes are welded using high silver content solder to ensure inners are not subjected to oxidation and pollution
- Refrigeration circuit includes drier-filter to remove moisture from refrigerant

R410A Water Tank Chiller

For commercial large-volume use



Blue Star Water Tank Chillers are ideal for use wherever a large quantity of cooled water is required. With cooling capacities ranging from 5 to 75 KW (1.5 to 22 TR), these chillers cater to the water cooling needs of large hotels, villas and office buildings.

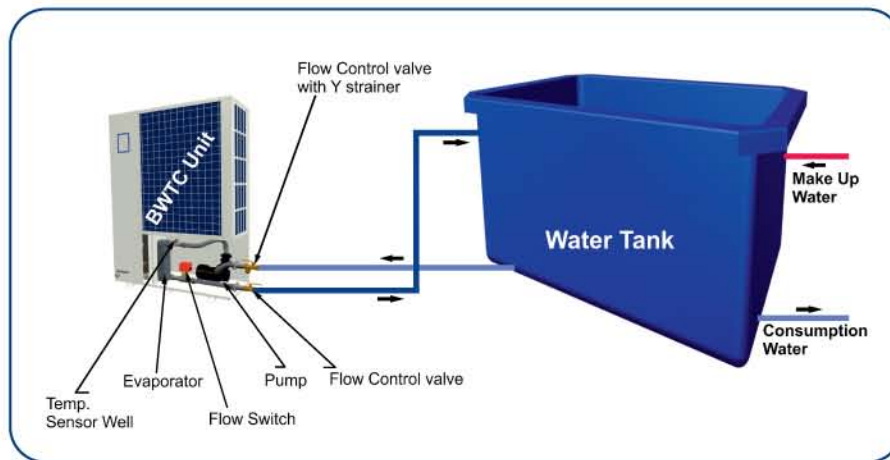
The Blue Star Water Tank Chiller is a plug-and-play solution that comes fully equipped with accessories like pumps, strainers and flow-switches. Placed generally on rooftops, this chiller cools water in the main reservoir tanks.

Attached to the main reservoir, the Blue Star Water Tank Chiller continuously cools water and maintains it at 28°C-30°C. This cooled water is then supplied to different outlets for various applications whenever required.

Blue Star Water Tank Chillers cool water effectively even during peak summers. If the tanks are also insulated externally, they can retain cold water temperature for long and save further energy.



Typical tank vs. Chiller positions layout



Technical Features



High-efficiency, eco-friendly refrigerant



5 & 7 KW (1.5 to 2 TR) models with Rotary compressor



13 to 75 KW (3.7 to 22 TR) with high-efficiency Scroll compressors



Plug-in type for faster installation



Service port and valves for ease of maintenance



Easy to operate through in-built microprocessor controller



Suitable up to 27 metre head.



Heavy Duty High Efficiency Centrifugal Pump



Qualified for energy requirement as per regulatory standards



Built-in hydronic system



Environment-friendly R410A refrigerant

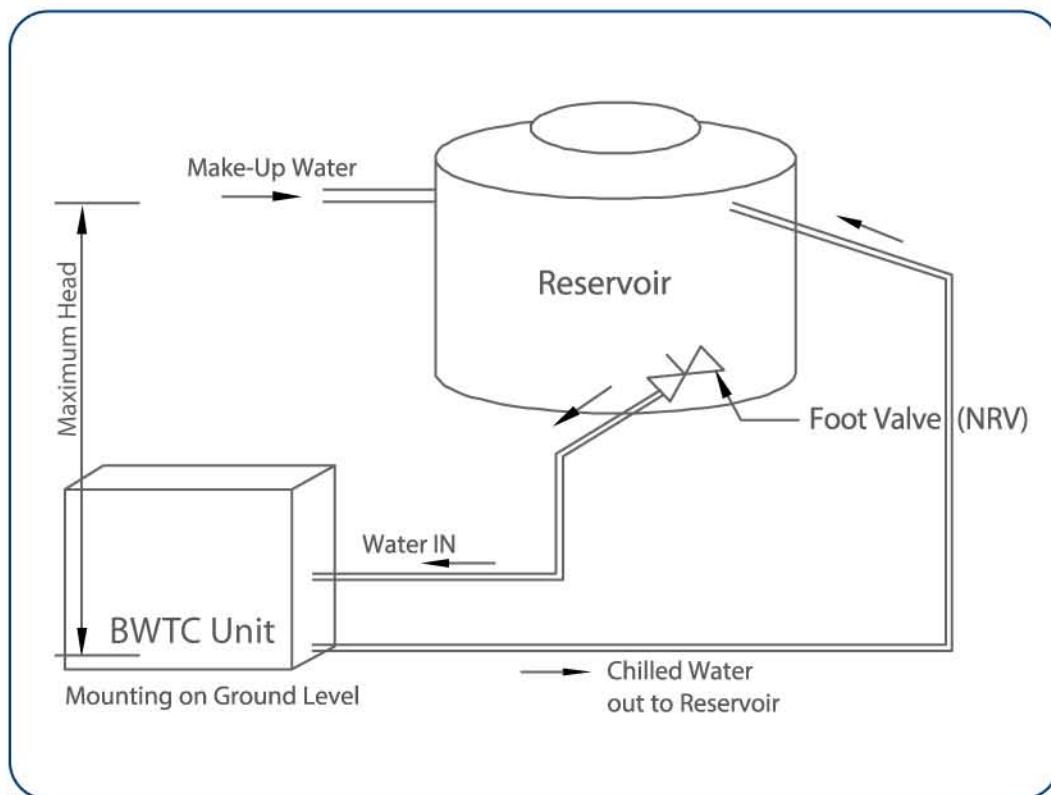


Overhead Tank Chiller

Overhead Tank Chillers are ideal for locations where a large quantity of cooled water is utilised. The nominal cooling capacity of these chillers varies from 10 to 24 KW (3 to 7 TR) and caters to the water cooling needs of large hotels, villas and buildings. Placed generally on rooftops, these chillers cool water in the main reservoir tanks and are essential during the harsh summers of the Middle East.

The Overhead Tank Chiller is a plug-and-play solution that comes fully equipped with accessories like pumps, strainers and flow-switches. Attached to the main reservoir, it continuously cools water and maintains it at 28°C - 30°C. This cooled water is then supplied to different outlets for various applications, whenever required.





Features:



Range: 10, 14 & 24 KW (3, 4 & 7 TR)



High-efficiency Reciprocating & Scroll compressor



Pure polyester powder coated cabinet for UV protection



Microprocessor controller with remote compatibility



Low noise and vibration



Compact design and smaller footprint



Anti-corrosive hydrophobic fins for extended life



Plug-in type for faster installation

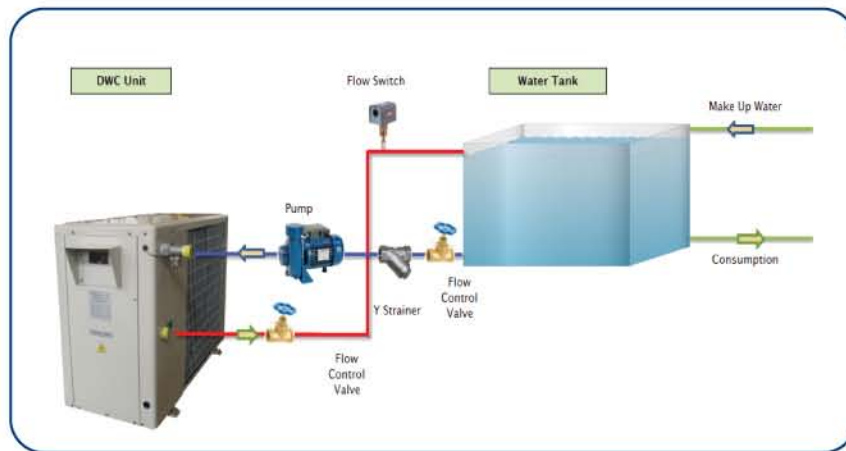
R22 Domestic Water Tank Chiller

For residential use

Blue Star Domestic Water Tank Chillers are ideal for use in residential apartments, homes and smaller establishments.

Connected directly to the main storage tank on the terrace, the Blue Star Domestic Water Chiller continuously cools the water in the tank and maintains it at 28-30°C. Designed to cool effectively even during harsh summer months, the system gives you cool water at all times of the year, and at all taps in your residence.

Setting up of a Domestic Water Tank Chiller is similar to that of a Commercial Water Tank Chiller. Accessories like pumps, strainers and flow-switches are provided separately as per requirement at each site.



Features



Range: 1.5, 2, 3 & 3.5TR



Extremely compact



Connects effortlessly to existing water treatment system



Anti-corrosive hydrophobic coated fins for extended life



Pure polyester powder coated cabinet for UV protection

R410A Water Tank Chiller

| Model No | | BWTC1-05Y1R3A | BWTC1-07Y1R3A | BWTC1-13S3R3A | BWTC1-16S3R3A | BWTC1-25S3R3A | BWTC2-35S3R3A | BWTC2-50S3R3A | BWTC2-75S3R3A |
|----------------------------------|---|--|---------------------------------|-------------------------------|-------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Performance Parameters | Nominal Capacity (KW) | 5 | 7 | 13 | 16 | 25 | 35 | 50 | 75 |
| | Nominal Capacity (TR) | 1.5 | 2 | 4 | 5 | 7.5 | 10 | 15 | 22 |
| | Tank Capacity (USG) | 1200 | 1600 | 3500 | 4000 | 6500 | 8200 | 13000 | 18500 |
| | Voltage / Frequency / Phase | 220-240 V/ 50 Hz/ 1 Ph ~ | | | 380-415 V/ 50 Hz/ 3 N ~ | | | | |
| | Cooling Capacity Rating (KW) @ 35°C Ambient | 4.92 | 6.54 | 13.85 | 16.17 | 26.02 | 33.05 | 51.68 | 74.54 |
| | Cooling Capacity Rating (TR) @ 35°C Ambient | 1.40 | 1.86 | 3.94 | 4.60 | 7.40 | 9.40 | 14.70 | 21.20 |
| | Cooling Capacity Rating (KW) @ 46°C Ambient | 4.01 | 5.31 | 11.15 | 13.15 | 21.13 | 26.83 | 42.23 | 60.65 |
| | Cooling Capacity Rating (TR) @ 46°C Ambient | 1.14 | 1.51 | 3.17 | 3.74 | 6.01 | 7.63 | 12.01 | 17.25 |
| | Rated Power Input (KW) @ 35°C Ambient | 1.93 | 2.53 | 5.52 | 6.3 | 10.02 | 11.47 | 19.36 | 29.25 |
| | Rated Power Input (KW) @ 46°C Ambient | 2.39 | 3.14 | 6.96 | 8.11 | 12.63 | 14.45 | 24.39 | 36.86 |
| | Rated Current (Amps) @ 35°C Ambient | 10.23 | 13.41 | 9.71 | 11.09 | 17.64 | 20.19 | 34.08 | 51.50 |
| | Rated Current (Amps) @ 46°C Ambient | 12.67 | 16.65 | 12.25 | 14.28 | 22.23 | 25.44 | 42.94 | 64.88 |
| | Incoming Cable Size | 2 Core x 2.5 mm ² Cu | 2 Core x 2.5 mm ² Cu | 4 Core x 4 mm ² Cu | 4 Core x 4 mm ² Cu | 4 Core x 10 mm ² Cu | 4 Core x 16 mm ² Cu | 4 Core x 25 mm ² Cu | 4 Core x 35 mm ² Cu |
| Evaporator | Type | Braze Plate Heat Exchanger | | | | | | | |
| | Quantity (Nos) | 1 | 1 | 1 | 1 | 1 | 1 (Dual) | 1 (Dual) | 1 (Dual) |
| | Construction material | AISI 316 stainless-steel | | | | | | | |
| Compressor | Type | Rotary | Rotary | Scroll | Scroll | Scroll | Scroll | Scroll | Scroll |
| | Quantity (Nos) | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| Condenser | Condenser Type | | | | | | | | |
| | Condenser Fins | Anti-corrosive hydrophobic coated aluminium Fins | | | | | | | |
| Condenser Fan & Motor | Fan blade Dia (Inch) | 20" | 20" | 24" | 24" | 26" | 26" | 26" | 26" |
| | Fan Motor Qty (Nos) | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| | Fan Motor Capacity (HP) | 0.25 | 0.25 | 0.5 | 0.5 | 0.75 | 0.75 | 0.75 | 0.75 |
| | Fan Motor Air Flow (CFM) | 2000 | 2000 | 4000 | 4000 | 9000 | 9000 | 18000 | 18000 |
| Chilled Water Pump | Type | Centrifugal | | | | | | | |
| | Construction material | Cast Iron | | | | | | | |
| | Rated Flow Rate (GPM) | 3.6 | 4.8 | 9.6 | 12 | 18 | 22.8 | 36 | 46.2 |
| | External Allowable Head (Metres) | | | | | | | | |
| Chilled water Pipe | Construction material | PVC | PVC | PVC | PVC | SS | SS | SS | SS |
| Chilled water connection | Inlet Connection (NB.) | 1" | 1" | 1" | 1" | 1" | 1 ¼" | 1 ¼" | 1 ¼" |
| | Outlet Connection (NB.) | 1" | 1" | 1" | 1" | 1" | 1 ¼" | 1 ¼" | 1 ¼" |
| Refrigerant & Ambient Operations | Refrigerant | R410A | | | | | | | |
| | Refrigerant Charge Qty (Kg) | 1.45 | 2.3 | 3.1 | 2.9 | 7.1 | 9.4 | 13.8 | 16.6 |
| | Max Ambient Temp Operation °C | 52°C | 52°C | 52°C | 52°C | 52°C | 52°C | 52°C | 52°C |
| Other Features | Controller | DWC-111 | DWC-111 | DWC-114 | DWC-114 | DWC-113 | DWC-112 | DWC-112 | DWC-112 |
| | Safety Devices | High pressure switch, Low pressure switch, Flow switch | | | | | | | |
| | Electrical Safety | Crankcase heater for Scroll Compressors, Contactor, Overload Relay | | | | | | | |
| Dimensions & Weight | Dimension (WxHxD) mm | 1285 x 1057 x 464 | 1285 x 1057 x 464 | 1285 x 1359 x 464 | 1285 x 1359 x 464 | 1222 x 1687 x 1128 | 1222 x 1687 x 1128 | 1222 x 1687 x 2245 | 1222 x 1687 x 2245 |
| | Net Weight (Kg) | 105 | 115 | 195 | 230 | 380 | 395 | 660 | 710 |

Rating Conditions:

*Performance Data as per UAES AHRI Standard 550/590

*The Capacity ratings are based on 12.22°C (54°F) chilled water inlet and 6.67°C (44°F) chilled water outlet for Cooler with 0.0001°F.ft².hr/ Btu fouling factor.

*Tank Capacity is calculated based on water inlet temp 40°C / water Outlet temp 30°C / Ambient temp 46°C/ Pull down time 16 Hours.

R22 Overhead Tank Chiller (BOTC)

| Model No | | BOTCS1010 | BOTCS1014 | BOTCS1024 |
|----------------------------------|---|---|-----------------------------------|---------------------------------|
| Performance Parameters | Nominal Capacity (KW) | 10 | 14 | 24 |
| | Nominal Capacity (TR) | 2.9 | 4 | 7 |
| | Tank Capacity (USG) | 2100 | 2900 | 4500 |
| | Voltage / Frequency / Phase | 380-415 V/ 50 Hz/ 3 N ~ | | |
| | Cooling Capacity Rating (KW) @ 35°C Ambient | 10 | 14 | 23.9 |
| | Cooling Capacity Rating (TR) @ 35°C Ambient | 2.84 | 3.98 | 6.80 |
| | Cooling Capacity Rating (KW) @ 46°C Ambient | 7.5 | 9.86 | 15.25 |
| | Cooling Capacity Rating (TR) @ 46°C Ambient | 2.13 | 2.80 | 4.34 |
| | Rated Power Input (KW) @ 35°C Ambient | 3.98 | 4.55 | 7.2 |
| | Rated Power Input (KW) @ 46°C Ambient | 4.26 | 5.6 | 9.25 |
| | Rated Current (Amps) @ 35°C Ambient | 7 | 8 | 13 |
| | Rated Current (Amps) @ 46°C Ambient | 9 | 10 | 16.30 |
| | Incoming Cable Size | 3.5Core x 2.5 mm ² Cu | 3.5 Core x 2.5 mm ² Cu | 3.5 Core x 4 mm ² Cu |
| Evaporator | Type | Brazed Plate Heat Exchanger | | |
| | Quantity (Nos) | 1 | 1 | 1 |
| | Construction material | Stainless Steel | Stainless Steel | Stainless Steel |
| Compressor | Type | Reciprocating | Scroll | Scroll |
| | Quantity (Nos) | 1 | 1 | 1 |
| Condenser | Condenser Type | FTHX (Aluminium Fin & Inner Grooved Copper Tube Heat Exchanger) | | |
| | Condenser Fins | Anti-corrosive hydrophobic coated aluminium Fins | | |
| Condenser Fan & Motor | Fan blade Dia (Inch) | 18" | 18" | 18" |
| | Fan Motor Qty (Nos) | 1 | 2 | 2 |
| | Fan Motor Capacity (HP) | 0.10 | 0.10 | 0.17 |
| | Fan Motor Air Flow (CFM) | 1600 | 3000 | 3200 |
| Chilled Water Pump | Type | Centrifugal , Monoblock | | |
| | Construction material | Cast Iron | | |
| | Rated Flow Rate - Min / Max (GPM) | 4 / 6 | 6 / 9 | 10 / 15 |
| | Minimum Allowable Pressure Head (Metres) | 25 | 39 | 29 |
| | Maximum Allowable Pressure Head (Metres) | 26 | 42 | 37 |
| Chilled water Pipe | Construction material | SS & Rubber Flexible pipe | | |
| Chilled water connection | Inlet Connection (NB.) | 1" | 1" | 1" |
| | Outlet Connection (NB.) | 1" | 1" | 1" |
| Refrigerant & Ambient Operations | Refrigerant | R22 | | |
| | Refrigerant Charge Qty | 2.7 | 3.6 | 4.7 |
| | Max Ambient Temp Operation °C | 52°C | 52°C | 52°C |
| Other Features | Controller | Microchiller | Microchiller | Microchiller |
| | Safety Devices | High Pressure switch, Low pressure switch, Flow switch, Antifreeze protection, Suction pressure regulating valve. | | |
| | Electrical Safety | Isolator switch Crankcase heater, Overload for pump, Circuit breaker for compressor (Single phase/Phase reverse protection only for scroll compressors) | | |
| Dimensions & Weight | Dimension (WxHxD) mm | 1240 x 1370 x 450 | 1240 x 1370 x 450 | 1240 x 1370 x 450 |
| | Net Weight (Kg) | 157 | 173 | 188 |

Rating Conditions:

*The ratings are based on 28°C leaving water temp. for Cooler and 35°C ambient temperature.

*Tank Capacity is calculated based on water inlet temp 40°C / water Outlet temp 30°C / Ambient temp 46°C/ Pull down time 16 Hours.

R22 Domestic Water Chiller (DWC)

| Model No | | DWCR1018 | DWCR1024 | DWCR1036 | DWCR1042 |
|----------------------------------|---|---|---------------------------------|---------------------------------|-----------------------------------|
| Performance Parameters | Nominal Capacity (KW) | 5 | 7 | 10.5 | 12 |
| | Nominal Capacity (TR) | 1.5 | 2 | 3 | 3.5 |
| | Tank Capacity (USG) | 1000 | 1500 | 2150 | 3000 |
| | Voltage / Frequency / Phase | 220-240 V/ 50 Hz/ 1 Ph ~ | | | 380-415 V/ 50 Hz/ 3 N ~ |
| | Cooling Capacity Rating (KW) @ 35°C Ambient | 4.44 | 5.71 | 8.73 | 11.46 |
| | Cooling Capacity Rating (TR) @ 35°C Ambient | 1.26 | 1.63 | 2.48 | 3.26 |
| | Cooling Capacity Rating (KW) @ 46°C Ambient | 3.58 | 4.66 | 7.34 | 9.64 |
| | Cooling Capacity Rating (TR) @ 46°C Ambient | 1.02 | 1.33 | 2.09 | 2.74 |
| | Rated Power Input (KW) @ 35°C Ambient | 1.8 | 2 | 2.6 | 3.2 |
| | Rated Power Input (KW) @ 46°C Ambient | 2 | 2.2 | 3.1 | 3.7 |
| | Rated Current (Amps) @ 35°C Ambient | 9.1 | 9.5 | 13.2 | 5.9 |
| | Rated Current (Amps) @ 46 °C Ambient | 9.7 | 10.5 | 15.3 | 6.5 |
| | Incoming Cable Size | 3 Core x 2.5 mm ² Cu | 3 Core x 2.5 mm ² Cu | 3 Core x 2.5 mm ² Cu | 3.5 Core x 2.5 mm ² Cu |
| Evaporator | Type | Brazed Plate Type Heat Exchanger | | | |
| | Quantity (Nos) | 1 | 1 | 1 | 1 |
| | Construction material | Stainless Steel | Stainless Steel | Stainless Steel | Stainless Steel |
| Compressor | Type | Reciprocating | Reciprocating | Reciprocating | Reciprocating |
| | Quantity (Nos) | 1 | 1 | 1 | 1 |
| Condenser | Condenser Type | FTHX (Aluminium Fin & Inner Grooved Copper Tube Heat Exchanger) | | | |
| | Condenser Fins | Anti-corrosive hydrophobic coated aluminium Fins | | | |
| Condenser Fan & Motor | Fan blade Dia (Inch) | 20" | 20" | 24" | 24" |
| | Fan Motor Qty (Nos) | 1 | 1 | 1 | 1 |
| | Fan Motor Capacity (HP) | 0.25 | 0.25 | 0.33 | 0.33 |
| | Fan Motor Air Flow (CFM) | 1 | 1 | 1 | 1 |
| Chilled Water Pump** | Type | Not included in the unit | | | |
| | Construction material | Not included in the unit | | | |
| | Rated Flow Rate (GPM) | Not included in the unit | | | |
| | External Allowable Head (Metres) | Not included in the unit | | | |
| Chilled water Pipe | Construction material | Not included in the unit | | | |
| Chilled water connection | Inlet Connection (NB.) | 1" | 1" | 1" | 1" |
| | Outlet Connection (NB.) | 1" | 1" | 1" | 1" |
| Refrigerant & Ambient Operations | Refrigerant type | R22 | | | |
| | Refrigerant Charge Qty (Kg) | 1.2 | 1.8 | 3.1 | 3.5 |
| | Max/ Min Ambient Temp Operation °C | 52 / 20 | 52 / 20 | 52 / 20 | 52 / 20 |
| Other Features | Controller | DWC-110 | DWC-110 | DWC-110 | DWC-110 |
| | Safety Devices | High Pressure switch, Low pressure switch, EWT Sensor, Inbuilt Motor Protection | | | |
| | Electrical Safety | Circuit breaker/Fuse for compressor, Time delay for compressor On/Off | | | |
| Dimensions & Weight | Dimension (WxHxD) mm | 1016 x 686 x 406 | 1016 x 686 x 406 | 1016 x 990 x 406 | 1016 x 990 x 406 |
| | Net Weight (Kg) | 75 | 82 | 92 | 102 |

Rating Conditions:

*The ratings are based on 28°C chilled water outlet and 35°C / 46°C ambient temperatures.

**Not included in the unit. Pump can be supplied as optional feature from factory.

R410A WATER TANK CHILLER - FLOW RATE (GPM) AT VARIOUS HEADS

| External Head in Metres | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 |
|-------------------------|------|------|------|------|------|------|------|------|------|
| BWTC1-05Y1R3A | 12.0 | 10.6 | 9.0 | 7.0 | 5.0 | | | | |
| BWTC1-07Y1R3A | 15.0 | 12.0 | 10.0 | 8.8 | 6.0 | | | | |
| BWTC1-13S3R3A | | 11.6 | 10.9 | 10.5 | 9.5 | 9.2 | 8.8 | 8.2 | 7.4 |
| BWTC1-16S3R3A | | 12.7 | 11.9 | 11.4 | 10.3 | 9.9 | 9.4 | 8.8 | 7.9 |
| BWTC1-25S3R3A | | | | 23.0 | 21.7 | 20.2 | 18.1 | 16.5 | 13.2 |
| BWTC2-35S3R3A | | | | 30.7 | 29.2 | 27.7 | 24.6 | 21.3 | 18.5 |
| BWTC2-50S3R3A | | | | 35.6 | 33.3 | 30.3 | 26.9 | 22.6 | |
| BWTC2-75S3R3A | | | | 55.5 | 46.5 | 35.9 | | | |

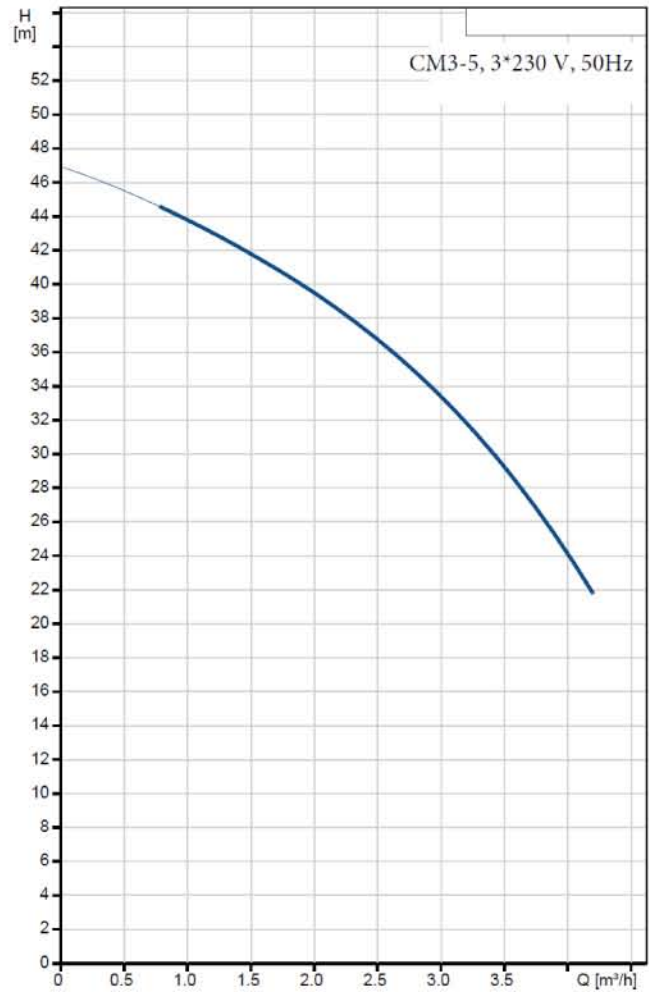
Notes

Interpolation of values can be performed, in case requirement falls in between the published values. Extrapolation is not an acceptable practice.
In case the actual head varies with above declared head, ball valve of supply/discharge line can be throttled to get the desired head.

EXAMPLE OF CAPACITY SELECTION CHART FOR R22 DOMESTIC WATER CHILLER (DWC)

| Selection | UOM | DWCR1018 | DWCR1024 | DWCR1036 | DWCR1042 |
|-----------------------------|---------|----------|----------|----------|----------|
| Tank Capacity | Gallons | 1000 | 1500 | 2500 | 3000 |
| Inlet Water Temperature | °C | 40 | 40 | 40 | 40 |
| Outlet Water Temperature | °C | 30 | 30 | 30 | 30 |
| Temperature Difference | °C | 10 | 10 | 10 | 10 |
| Tank Temperature Losses | % | 10% | 10% | 10% | 10% |
| Consumption Rate | Hours | 12 | 12 | 12 | 12 |
| Flow Rate | GPM | 1.4 | 2.1 | 2.8 | 4.2 |
| Cooling Load Requirement | TR | 1.0 | 1.6 | 2.1 | 3.1 |
| Chiller Capacity | KW | 3.7 | 5.5 | 7.3 | 11 |
| Initial Tank Pull Down Time | Hours | 13.2 | 13.2 | 13.2 | 13.2 |

Model : BOTCS1014 / BOTCS1024



Model : BOTCS1010

