

# Tranquility® Water-To-Water (TMW) Series

## Submittal Data

Models TMW036-340 60Hz - HFC-410A



LC402

Rev.: August 15, 2024



ClimateMaster works continually to improve its products. As a result, the design and specifications of each product at the time of order may be changed without notice and may not be as described herein. Please contact ClimateMaster's Customer Service Department at 1-405-745-6000 for specific information on the current design and specifications. Statements and other information contained herein are not express warranties and do not form the basis of any bargain between the parties, but are merely ClimateMaster's opinion or commendation of its products. The latest version of this document is available at [climatemaster.com](http://climatemaster.com). © ClimateMaster, Inc. All rights reserved 2009

# TMW Water-To-Water Series



	Introduction	3
	Features, Options and Accessories	4
	iGate® 2 Communicating Controls Powered by CXM2	5
	iGate® 2 Communicating Controls Powered by DXM2.5	6
	iGate® 2 Communicating (AWC) Thermostat	7
	myUplink – Web and Mobile Interface	8
	Selection Procedure	9
	TMW Series Nomenclature	11
	Performance Data – AHRI/ASHRAE/ISO 13256-2	12
	Performance Data – Selection Notes	13
	Performance Data – TMW036 (60Hz I-P) - Cooling	14
	Performance Data – TMW036 (60Hz I-P) - Heating	16
	Performance Data – TMW060 (60Hz I-P) - Cooling	18
	Performance Data – TMW060 (60Hz I-P) - Heating	20
	Performance Data – TMW120 (60Hz I-P) - Cooling	22
	Performance Data – TMW120 (60Hz I-P) - Heating	24
	Performance Data – TMW170 (60Hz I-P) - Cooling	26
	Performance Data – TMW170 (60Hz I-P) - Heating	27
	Performance Data – TMW340 (60Hz I-P) - Cooling	29
	Performance Data – TMW340 (60Hz I-P) - Heating	31
	Antifreeze Correction Table	33
	Physical & Electrical Data	35
	Dimensional Data – TMW036 - 120	36
	Dimensional Data – TMW170 & 340	37
	TMW Series Wiring Diagram Matrix	38
	Engineering Specifications	39
	Performance Sheet	44
	Revision History	46

Document page number is shown next to part number (e.g. LC402 - 3 = page 3). Since not all pages are typically used in the submittals process, the page number in the lower right corner can still be used (page \_\_\_\_ of \_\_\_\_).

ClimateMaster works continually to improve its products. As a result, the design and specifications of each product at the time of order may be changed without notice and may not be as described herein. Please contact ClimateMaster's Customer Service Department at 1-405-745-6000 for specific information on the current design and specifications. Statements and other information contained herein are not express warranties and do not form the basis of any bargain between the parties, but are merely ClimateMaster's opinion or commendation of its products. The latest version of this document is available at [climatemaster.com](http://climatemaster.com). © ClimateMaster, Inc. All rights reserved 2009

## THE TRANQUILITY® MODULAR WATER-TO-WATER (TMW) SERIES

---

The Tranquility® Modular Water-to-Water (TMW) Series offers high efficiency and high capacity with advanced features, quiet operation and application flexibility at competitive prices. As ClimateMaster's largest water-to-water unit, the TMW Series can be used for radiant floor heating, snow/ice melt, chilled water for fan coils, industrial process control, potable hot water generation\*, hot/chilled water for make-up air, and many other types of HVAC and industrial applications that require cost effective heated or chilled water.

The Tranquility® Modular Water-to-Water (TMW) Series exceeds ASHRAE 90.1 efficiencies, and also uses EarthPure® (HFC-410A) zero ozone depletion refrigerant, making it an extremely environmentally-friendly option. The unit is eligible for additional LEED® (Leadership in Energy and Environmental Design) points because of the "green" technology design.

Available in 3 to 28 ton capacities (10.6 kW and 100 kW), the TMW Series provides high capacity in a small footprint, which saves mechanical room space. The TMW Series has an extended range refrigerant circuit (refrigerant and water circuit insulation is standard), capable of ground loop (geothermal) applications as well as water loop (boiler-tower) applications. Standard features are many. Microprocessor controls, galvanized steel cabinet, polyester powder coat paint and TXV refrigerant metering device are just some of the features of the flexible TMW Series. The uniquely-designed coaxial heat exchangers are designed for many years of reliable operation.

ClimateMaster's dual-isolated compressor mounting and heavy gauge steel cabinet helps make the TMW Series the quietest large capacity water-to-water unit on the market. Scroll compressor(s) operate quietly, and provide part load operation (models 120 and 340) for capacity control. Options such as DDC controls and UltraQuiet sound attenuation package allow customized design solutions. For ease of installation and service, access to the refrigeration service and electrical control panel is located at the front of the unit, allowing units to be installed side-by-side for large capacity applications (see below).

The TMW Series water-to-water heat pumps are designed to meet the challenges of today's HVAC demands with a high efficiency, high value solution.

# Features, Options and Accessories

## FEATURES

- Size 036, 060, 120, 170 & 340
- Copeland scroll compressor(s)
- Dual independent refrigeration circuits on size 340
- Exclusive single side service access (front of unit) allows multiple units to be installed side-by-side for large capacity installations
- Top water connections, staggered for ease of manifolding multiple units
- Exceeds ASHRAE 90.1 efficiencies
- Heavy gauge galvanized steel construction with polyester powder coat paint and stainless steel front access panels
- Insulated compressor compartment
- Small footprint
- TXV metering devices
- iGate® 2 Communicating Controls Powered by CXM2
  - Multiple communication pathways,
    - o Cloud-based connectivity via iGate 2 Wi-Fi communicating color touch screen thermostat for remote monitoring, access, and diagnosis. Including the new functionality for contractors/building engineers to monitor and make mass changes on multi-unit systems
    - o Connect directly to the system with use of a handheld service tool
  - Provides real-time unit operating conditions
  - Reduces start-up, commissioning, and service time by removing the need for hard tooling to take temperature measurements
  - Captures operating conditions in the event of a safety shutdown
- Compressor “run” and “fault” lights on the front of the cabinet
- Six safeties standard

\* Requires field supplied secondary heat exchanger.

## OPTIONS

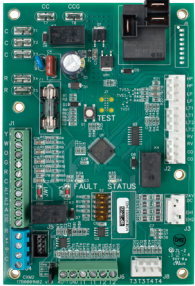
- Extended range insulation for geothermal applications
- BACnet, Modbus and Johnson N2 compatibility options for DDC controls
- Options include UltraQuiet sound attenuation package and cupro-nickel heat exchanger(s)

## ACCESSORIES

- Wi-Fi communicating color touch screen thermostat for single zone in-floor radiant heating applications
- Wide variety of thermostat options for single zone in-floor radiant heating applications
- Various length braided hose kits with optional water valves, PT plugs, blow-down valve, flow limiting, and strainer options
- Externally mounted manual and motorized water valves
- DDC (MPC) controls

# iGate<sup>®</sup> 2 Communicating Controls Powered by CXM2

## iGate<sup>®</sup> 2 Communication – Cloud connected, web-enabled information gateway to monitor, control, and diagnose your system



The Tranquility<sup>®</sup> Modular Water-to-Water (TMW) Series is equipped with industry-first, iGate<sup>®</sup> 2 communication information gateway that allows users to interact with their water-source system in easy to read clear language.

**Monitor/Configure** – Installers can configure from the myUplink PRO website, mobile app, iGate 2

Communicating (AWC) Thermostat, or diagnostic tool, including: Unit family, size, accessory configuration, and demand reduction (optional, to limit unit operation during peak times). Users can look up the current system status: temperature sensor readings and operational status of the blower.

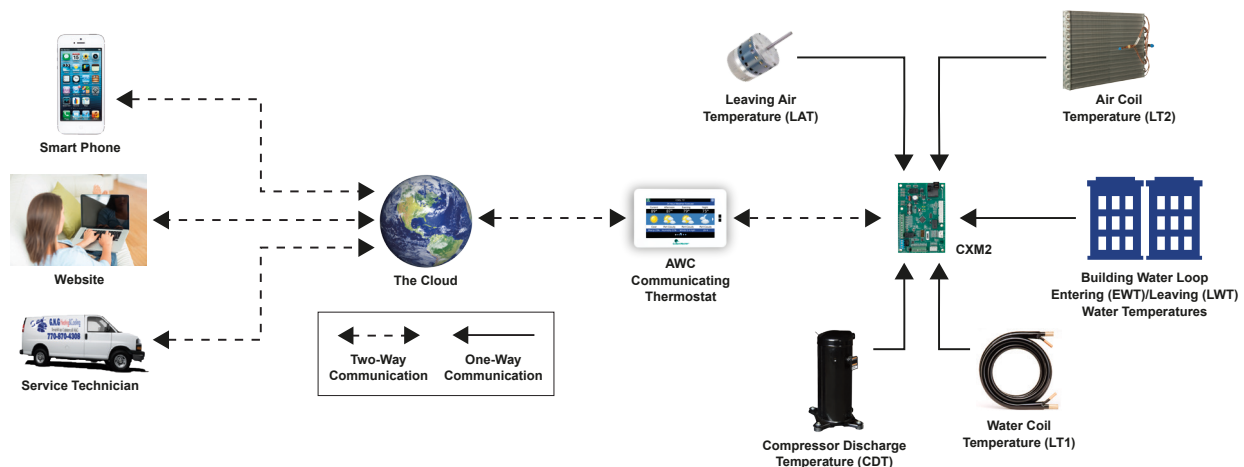
**Precise Control** – The new CXM2 board enables intelligent, 2-way communication between the CXM2 board and smart components like the communicating thermostat and diagnostic tool. The advanced CXM2 board uses information received from the temperature sensors to precisely control operation to deliver high efficiency, reliability and increased comfort.

**Diagnostics** – iGate 2 takes diagnosing water source heat pump units to a next level of simplicity, by providing a dashboard of system and fault information, in clear language, on the AWC Communicating Thermostat, handheld service tool and the web portal/mobile app on the internet.

iGate 2 Thermostat Service Warnings notify the homeowner and contractor of a fault and displays fault descriptions by app notifications/email with possible causes. Additionally, the current system status can be viewed graphically on the web portal and mobile app.

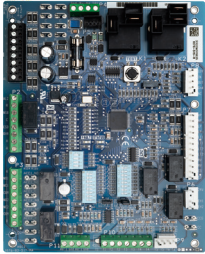
In iGate 2 Service Mode, the service personnel can access fault description, possible causes and most importantly, the conditions (temp, flow, i/o conditions, configuration) at the time of the fault. Manual Operation mode allows the service personnel to manually command operation for any of the thermostat outputs, blower speed, to help troubleshoot specific components. This operation can either be conducted at the unit with a communicating thermostat/diagnostic tool or remotely with mobile app/website when the AWC Communicating Thermostat controls are used.

With an iGate 2 communicating system, users and contractors have a web-enabled gateway to system information never before available and exclusive to ClimateMaster products.



# iGate® 2 Communicating Controls Powered by DXM2.5

## iGate® 2 Communication – Cloud connected, web-enabled information gateway to monitor, control, and diagnose your system



The Tranquility® Modular Water-to-Water (TMW) Series is equipped with industry-first, iGate® 2 communication information gateway that allows users to interact with their water-source system in easy to read clear language AND delivers improved reliability/efficiency by precisely controlling smart components.

**Monitor/Configure** – Installers can configure from the myUplink PRO website, mobile app, iGate 2 Communicating AWC Thermostat, or diagnostic tool, including: Airflow, unit family, size, accessory configuration, and demand reduction (optional, to limit unit operation during peak times). Users can look up the current system status: temperature sensor readings and operational status of the blower.

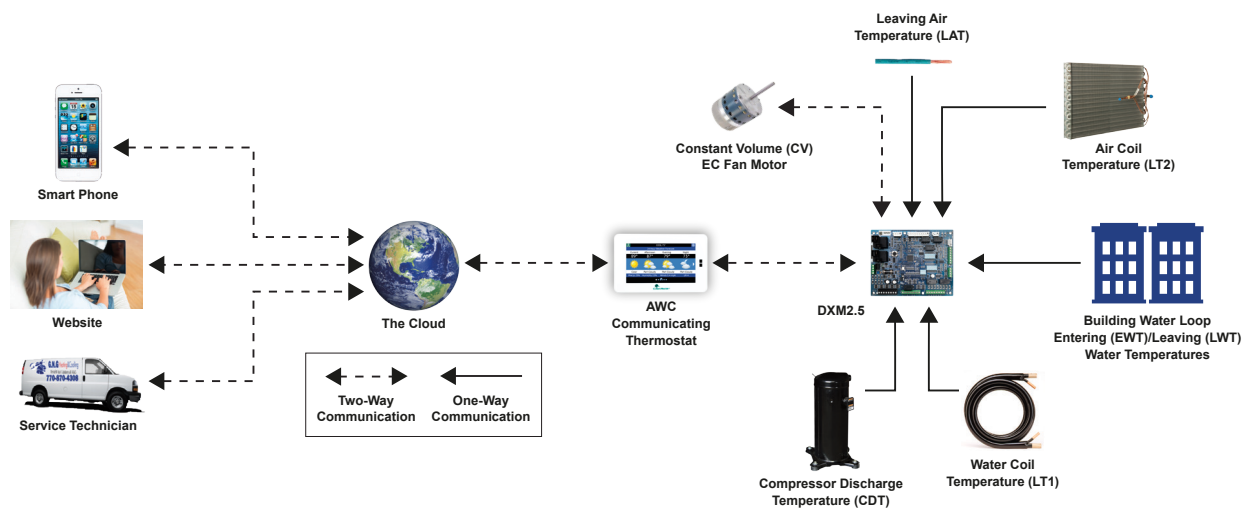
**Precise Control** – The new DXM2.5 board enables intelligent, 2-way communication between the DXM2.5 board and smart components like the communicating thermostat/diagnostic tool and constant volume (CV) EC fan motor. The advanced DXM2.5 board uses information received from the smart components and temperature sensors to precisely control operation of the variable speed CV EC fan motor to deliver higher efficiency, reliability and increased comfort.

**Diagnostics** – iGate 2 takes diagnosing water source heat pump units to a next level of simplicity, by providing a dashboard of system and fault information, in clear language, on the AWC Communicating Thermostat, handheld service tool and the web portal/mobile app on the internet.

iGate 2 Thermostat Service Warnings notify the homeowner and contractor of a fault and displays fault descriptions by app notifications/email with possible causes. Additionally, the current system status can be viewed graphically on the web portal and mobile app.

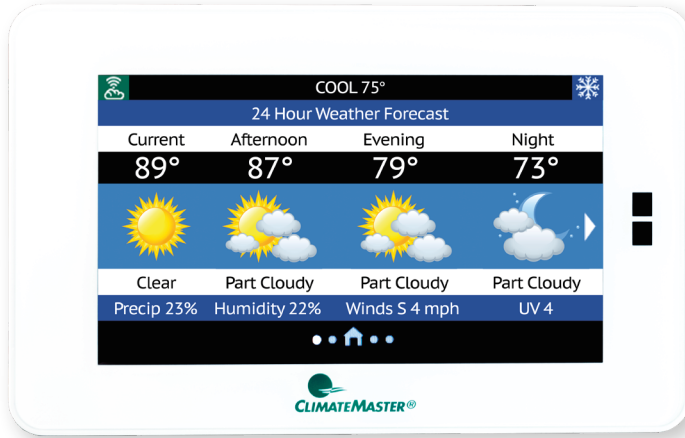
In iGate 2 Service Mode, the service personnel can access fault description, possible causes and most importantly, the conditions (temp, flow, i/o conditions, configuration) at the time of the fault. Manual Operation mode allows the service personnel to manually command operation for any of the thermostat outputs, blower speed, to help troubleshoot specific components. This operation can either be conducted at the unit with a communicating thermostat/diagnostic tool or remotely with mobile app/website when the AWC Communicating Thermostat controls are used.

With an iGate 2 communicating system, users and contractors have a web-enabled gateway to system information never before available and exclusive to ClimateMaster products.



# iGate® 2 Communicating (AWC) Thermostat

## iGate® 2 Communication – Cloud connected, web-enabled information gateway to monitor, control, and diagnose your system



The iGate® 2 Communicating (AWC) Thermostat is innovating the future of comfort technology, one building at a time. The inspired design of the touch screen interface allows you to see real-time data for the efficiency and health of your system, with early warnings for potential system faults. The cloud based information gateway allows technicians to remotely diagnose system issues before occupants even know there is a problem. Control and monitor the system in your home or business from anywhere in the world with an easy to use app on your phone.

## Features with Efficiency in Mind



### Touch Screen Interface

A brilliantly customizable touch screen monitor for simple control.



### Seamless Integration

Between your iGate® 2 Communicating (AWC) Thermostat and Tranquility comfort system.



### (Mobile) Remote System Control

Control temperature and schedule from anywhere in the world.



### Early Fault Warnings

Alerts you and your contractor of potential system faults in the future.



### Remote Diagnostics

Enable the contractor to remotely diagnose system issues, adjust system settings, and reset faults.



### Real-Time Operations Data & System Schematics

Access simply via the myUplink Pro Account and web portal to view system diagrams with current operating temperatures.

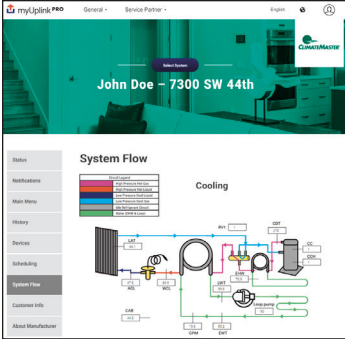


### Revenue Stream

HVAC professionals can offer owners service contracts with remote monitoring and diagnosis capabilities without the large expense of a building management system.



## HVAC Professional | User Experience



The iGate® 2 is more than just a smart thermostat for your residential or commercial customer, it's a business opportunity. Our new thermostat works with your customers' Tranquility comfort systems to provide the most efficient link between their system and

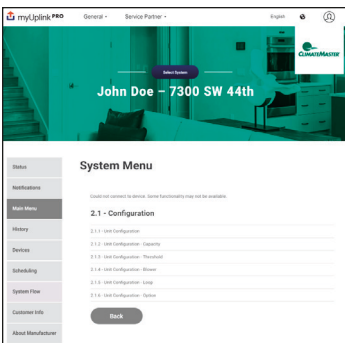
your services. The customization of monitoring from the myUplink PRO web portal or phone app account allows for continuous system monitoring, analysis, repair recognition, and early warnings for potential system faults that are sent to you and your customer.



### Benefits

- Remote login from anywhere, anytime from any internet connected device
- View system fault history with possible root causes
- Information is available for contractors to troubleshoot and diagnosis systems remotely
- Secure internet connection keeps homeowner information private
- Access thermostat(s) through Android and iPhone mobile apps

## Homeowner | User Experience



The iGate® 2 combines a Wi-Fi thermostat and advanced unit controls to communicate the systems operation information to the cloud. From any internet connected device or smart phone, homeowners can control and monitor their systems from anywhere in the

world. iGate 2 offers homeowners peace of mind their systems are operating at peak performance with advanced operational performance issue notifications. HVAC professionals get notifications when systems are operating out of range. They can log in remotely to check system faults, review current operating conditions, and diagnosis issues remotely. This gives the HVAC technician the upper hand when showing up to perform service, saving time which in turn saves money.



### Benefits

- Communicates personal settings and reminders through the iGate 2 communication system
- Easy-to-use, full-color, high-resolution interface
- Sleek, intuitive button control
- Secure internet connection keeps your information private
- Contains unit model, serial number and your HVAC professionals contact information
- System monitoring automatically contacts HVAC system providers when service is needed



# Selection Procedure

## Reference Calculations

HEATING	
$LWT = EWT - \frac{HE}{GPM \times Constant}$	
$LAT = EAT + \frac{HC}{CFM \times 1.08}$	

COOLING	
$LWT = EWT + \frac{HR}{GPM \times Constant}$	$LC = TC - SC$
$LAT (DB) = EAT (DB) - \frac{SC}{CFM \times 1.08}$	$S/T = \frac{SC}{TC}$

Constant = 500 for water, 485 for antifreeze

## Conversion Table - to convert inch-pound (English) to S-I (Metric)

Airflow	Water Flow	Est Static Pressure	Water Pressure Drop
Airflow (L/s) = CFM x 0.472	Water Flow (L/s) = gpm x 0.0631	ESP (Pa) = ESP (in of wg) x 249	PD (kPa) = PD (ft of hd) x 2.99

## Legend and Glossary of Abbreviations

Abbreviations	Descriptions
Btuh	Btu (British Thermal Unit) per hour
CDT	Compressor discharge temperature
CFM	Airflow, cubic feet per minute
COP	Coefficient of performance = Btuh output/Btuh input
CT ECM	Electronic commutated constant torque fan motor
CV ECM	Electronic commutated constant volume fan motor
DB	Dry bulb temperature, °F
EAT	Entering air temperature
EER	Energy efficient ratio = Btuh output/Watt input
ESP	External static pressure, inches w.g.
EWT	Entering water temperature
FPT	Female pipe thread
GPM	Water flow in U.S., gallons per minute
HC	Air heating capacity, Btuh
HE	Total heat of extraction, Btuh
HR	Total heat of rejection, Btuh
HWC	Hot water generator (desuperheater) capacity, MBtuh
kW	Total power unit input, kilowatts
LAT	Leaving air temperature, °F
LC	Latent cooling capacity, Btuh
LOC	Loss of charge
LWT	Leaving water temperature, °F
MBtuh	1,000 Btu per hour
MPT	Male pipe thread
MWV	Motorized water valve
PSC	Permanent split capacitor
RDS	Refrigerant Detection System
SC	Sensible cooling capacity, Btuh
S/T	Sensible to total cooling ratio
TC	Total cooling capacity, Btuh
TD or delta T	Temperature differential
VFD	Variable frequency drive
WB	Wet bulb temperature, °F
WPD	Waterside pressure drop, psi or feet of head
WSE	Waterside economizer

ClimateMaster works continually to improve its products. As a result, the design and specifications of each product at the time of order may be changed without notice and may not be as described herein. Please contact ClimateMaster's Customer Service Department at 1-405-745-6000 for specific information on the current design and specifications. Statements and other information contained herein are not express warranties and do not form the basis of any bargain between the parties, but are merely ClimateMaster's opinion or commendation of its products. The latest version of this document is available at [climatemaster.com](http://climatemaster.com). © ClimateMaster, Inc. All rights reserved 2009

# Selection Procedure

- Step 1** Determine the actual heating and/or cooling loads at the applicable source (building loop) water temperature/flow rate and load water temperature/flow rate. The source heat exchanger is the condenser in cooling/evaporator in heating; the load heat exchanger is the evaporator in cooling/condenser in heating.
  
- Step 2** Obtain the following design parameters: Entering source/load water temperature, source/load water flow rate in GPM and water flow pressure drop. Water flow rate is generally between 2.25 and 3.00 GPM/ton for closed loop (boiler/tower and geothermal) systems, and between 1.5 and 2.0 GPM/ton for open loop (well water) systems. Unit water pressure drop should be kept as close as possible to each other to make water balancing easier. Go to the appropriate tables and find the proper indicated water flow and water temperature.
  
- Step 3** Determine application requirements. Water-to-water applications are almost always designed for a particular installation, which will change how the data tables are used for unit selection. For example, a water-to-water unit used for radiant floor heating on a geothermal closed loop is significantly different in unit selection from a water-to-water unit on a boiler/tower application used for generating chilled water for fan coil units. It is especially important to note that the load water flow rate must be maintained above minimum flow rates as shown in the data tables for proper refrigerant circuit operation and unit longevity. For example, most radiant floor applications require buffer (storage) tanks because the flow rate through the floor is usually lower than the minimum flow rate for the water-to-water unit. Therefore, selection of the heat pump is dependent upon maintaining a certain tank temperature and unit load flow rate. There would be a pump between the heat pump and the buffer tank, and a pump(s) between the buffer tank and radiant floor to maintain design flow rate on both sides.
  
- Step 4** Enter tables at the design source water temperature and flow rate. Choose the appropriate load water temperature and flow rate. Read the total heating or cooling capacities (Note: interpolation is permissible; extrapolation is not).
  
- Step 5** If the units selected are not within 10% of the load calculations, then review what effect changing the GPM and water temperature would have on the capacities. If the desired capacity cannot be achieved, select the next larger or smaller unit and repeat the procedure.

## Example Equipment Selection for Heating

### Step 1 Load Determination:

Assume we have determined that the application will be heating only (radiant floor) for a large commercial warehouse, and that the appropriate heating load at design conditions is as follows:

Total heating ..... 210,000 BTUH

### Step 2 Design Conditions:

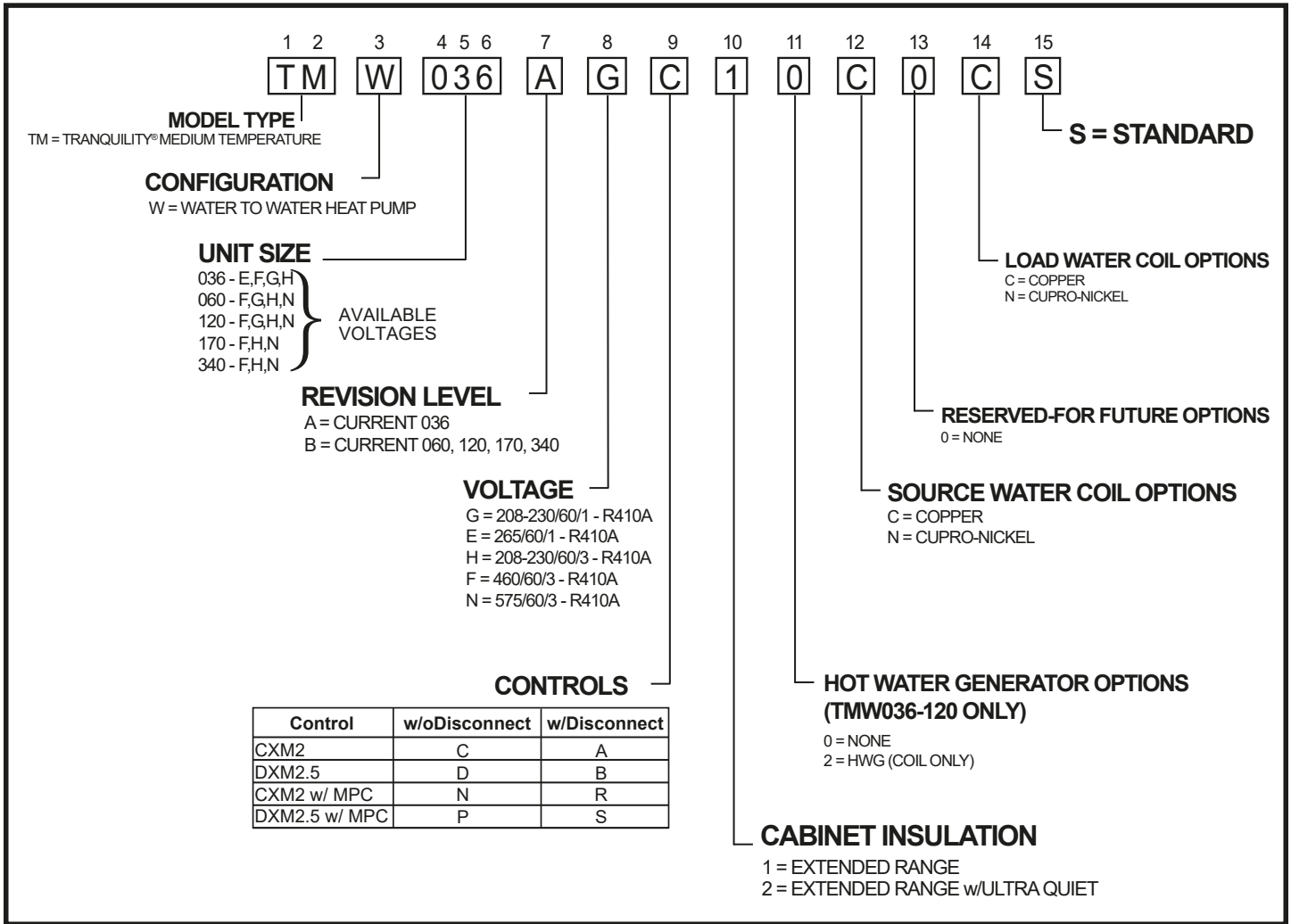
- Entering source temperature.....30°F (geothermal closed loop)
  
- Source flow rate ..... 53 GPM
  
- Entering load temperature..... 100°F
  
- Load flow rate ..... 53 GPM

### Steps 3, 4, 5 HP Selection:

We enter the tables at design source water temperature and flow rate, and select the appropriate load water temperature and flow rate. A TMW340 at design conditions supplies 211,100 BTUH, which meets the design heating load requirement.

ClimateMaster works continually to improve its products. As a result, the design and specifications of each product at the time of order may be changed without notice and may not be as described herein. Please contact ClimateMaster's Customer Service Department at 1-405-745-6000 for specific information on the current design and specifications. Statements and other information contained herein are not express warranties and do not form the basis of any bargain between the parties, but are merely ClimateMaster's opinion or commendation of its products. The latest version of this document is available at [climatemaster.com](http://climatemaster.com). © ClimateMaster, Inc. All rights reserved 2009

# TMW Series Nomenclature



# Performance Data – AHRI/ASHRAE/ISO 13256-2

## TMW036-340 Performance Data AHRI/ASHRAE/ISO 13256-2 English (I-P) Units

Model	Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
	Cooling		Heating		Cooling		Heating		Cooling		Heating	
	Indoor 53.6°F Outdoor 86°F		Indoor 104°F Outdoor 68°F		Indoor 53.6°F Outdoor 59°F		Indoor 104°F Outdoor 50°F		Indoor 53.6°F Outdoor 77°F		Indoor 104°F Outdoor 32°F	
	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP
TMW036	32,300	14.60	43,100	4.90	36,200	23.10	35,300	4.00	33,300	16.40	27,400	3.10
TMW060	52,800	14.00	72,700	4.60	56,600	20.30	60,300	3.80	55,600	15.10	48,500	2.90
TMW120	105,600	13.80	145,400	4.50	113,200	20.10	120,600	3.70	111,200	15.00	97,000	2.90
TMW170	123,500	13.30	164,600	4.30	138,400	19.30	136,200	3.70	130,300	15.30	108,600	2.90
TMW340	253,500	13.60	336,000	4.40	282,000	19.60	277,000	3.70	266,600	15.60	220,000	3.00

All TMW036 ratings @ 9GPM load w/9GPM source.  
 All TMW060 ratings @ 15GPM load w/15GPM source.  
 All TMW120 ratings @ 30GPM load w/30GPM source.  
 All TMW170 ratings @ 35GPM load w/35GPM source.  
 All TMW340 ratings @ 70GPM load w/70GPM source.  
 All ratings based upon operation at lower voltage of dual voltage rated models.

## TMW036-340 Performance Data AHRI/ASHRAE/ISO 13256-2 Metric (S-I) Units

Model	Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
	Cooling		Heating		Cooling		Heating		Cooling		Heating	
	Indoor 12°C Outdoor 30°C		Indoor 40°C Outdoor 20°C		Indoor 12°C Outdoor 15°C		Indoor 40°C Outdoor 10°C		Indoor 12°C Outdoor 25°C		Indoor 40°C Outdoor 0°C	
	Capacity kW	EER W/W	Capacity kW	COP	Capacity kW	EER W/W	Capacity kW	COP	Capacity kW	EER W/W	Capacity kW	COP
TMW036	9.47	4.28	12.64	4.90	10.62	6.77	10.35	4.00	9.77	4.81	8.04	3.10
TMW060	15.48	4.10	21.32	4.60	16.60	5.95	17.68	3.80	16.31	4.43	14.22	2.90
TMW120	30.97	4.04	42.64	4.50	33.20	5.89	35.37	3.70	32.61	4.40	28.45	2.90
TMW170	36.22	3.90	48.27	4.30	40.59	5.66	39.94	3.70	38.21	4.49	31.85	2.90
TMW340	74.34	3.99	98.53	4.40	82.70	5.75	81.23	3.70	78.18	4.57	64.52	3.00

All TMW036 ratings @ 0.57 l/s load w/ 0.57 l/s source.  
 All TMW060 ratings @ 0.95 l/s load w/0.95 l/s source.  
 All TMW120 ratings @ 1.89 l/s load w/1.89 l/s source.  
 All TMW170 ratings @ 2.21 l/s load w/2.21 l/s source.  
 All TMW340 ratings @ 4.42 l/s load w/4.42 l/s source.  
 All ratings based upon operation at lower voltage of dual voltage rated models.

## Performance Data – Selection Notes

For operation in the shaded area when water is used in lieu of an antifreeze solution, the LWT (Leaving Water Temperature) must be calculated. Flow must be maintained to a level such that the LWT is maintained above 40°F [4.4°C] when the JW3 jumper is not clipped (see example below). Otherwise, appropriate levels of a proper antifreeze should be used in systems with leaving water temperatures of 40°F [4.4°C] or below and the JW3 jumper should be clipped. This is due to the potential of the refrigerant temperature being as low as 32°F [0°C] with 40°F [4.4°C] LWT, which may lead to a nuisance cutout due to the activation of the Low Temperature Protection. JW3 should never be clipped for standard range equipment or systems without antifreeze.

### Example:

At 50°F EWT (Entering Water Temperature) and 1.5 gpm/ton, a 3 ton unit has a HE of 22,500 Btuh. To calculate LWT, rearrange the formula for HE as follows:  
 $HE = TD \times GPM \times 500$ , where HE = Heat of Extraction (Btuh);  
 TD = temperature difference (EWT - LWT) and GPM = U.S. Gallons per Minute.

$$TD = HE / (GPM \times 500)$$

$$TD = 22,500 / (1.5 \times 500)$$

$$TD = 10^\circ\text{F}$$

$$\text{LWT} = \text{EWT} - \text{TD}$$

$$\text{LWT} = 50 - 10 = 40^\circ\text{F}$$

In this example, as long as the EWT does not fall below 50°F, the system will operate as designed. For EWTs below 50°F, higher flow rates will be required (open loop systems, for example, require at least 2 gpm/ton when EWT is below 50°F).

Flow 70.0 GPM											
LWT °F	COP	WPD		HC Mb-tuh	Power KW	HE Mb-tuh	LWT °F	COP	WPD		
		PSI	FT						PSI	FT	
68.0	4.6	3.44	7.94	219.6	13.67	172.9	66.3	4.7	6.18	14.28	
67.4	3.4	3.15	7.28	200.7	16.95	142.9	85.7	3.5	5.67	13.09	
68.5	4.5	3.44	7.94	229.8	13.72	183.0	66.6	4.9	6.18	14.28	
67.7	3.5	3.15	7.28	209.4	17.01	151.4	86.0	3.6	5.67	13.09	
68.3	4.6	3.44	7.94	235.0	13.75	188.1	66.7	5.0	6.18	14.28	
68.7	3.6	3.15	7.28	213.8	17.03	155.7	86.1	3.7	5.67	13.09	
69.0	5.1	3.44	7.94	251.4	14.84	200.7	67.2	5.0	6.18	14.28	
68.4	3.8	3.15	7.28	229.8	17.14	171.3	86.6	3.9	5.67	13.09	
69.6	3.0	2.89	6.68	208.9	19.61	142.0	106.0	3.1	5.32	12.28	
69.0	5.0	3.44	7.94	262.2	14.85	211.5	67.5	5.2	6.18	14.28	
68.8	4.0	3.15	7.28	239.6	17.21	180.8	86.8	4.1	5.67	13.09	
108.0	3.1	2.89	6.68	217.2	19.68	150.0	106.2	3.2	5.32	12.28	
69.8	5.1	3.44	7.94	267.6	14.85	216.9	67.6	5.3	6.18	14.28	
69.9	4.0	3.15	7.28	244.5	17.25	185.6	87.0	4.2	5.67	13.09	
3.2	2.89	6.68	221.3	19.72	154.1	106.3	3.3	5.32	12.28		
6.6	3.44	7.94	277.2	14.86	226.5	67.9	5.5	6.18	14.28		
3.15	7.28	257.1	17.35	197.9	87.3	4.3	5.67				
6.68	236.8	19.85	169.1	106.8	3.5	5.67					
288.4	14.87	237.7	68.2	5.0	6.18	14.28					

## Performance Data – TMW036 (60 Hz I-P) - Cooling

Source				LOAD																					
EWT °F	Flow			EWT °F	Flow 4.5 GPM					WPD		Flow 6.75 GPM					WPD		Flow 9GPM					WPD	
	GPM	WPD PSI	WPD FT		TC Mbtuh	Power KW	HR Mbtuh	LWT °F	EER	PSI	FT	TC Mbtuh	Power KW	HR Mbtuh	LWT °F	EER	PSI	FT	TC Mbtuh	Power KW	HR Mbtuh	LWT °F	EER	PSI	FT
50	4.5	1.3	3.1	50	32.5	1.49	37.6	35.6	21.8	0.6	1.4	34.5	1.52	39.7	34.7	22.7	1.4	3.2	35.3	1.52	40.5	34.3	23.2	2.6	5.9
				60	36.8	1.53	42.0	43.6	24.1	0.5	1.2	38.4	1.54	43.6	42.9	24.9	1.3	3.1	39.2	1.55	44.5	42.6	25.3	2.5	5.8
				70	40.4	1.55	45.7	52.0	26.0	0.5	1.1	41.6	1.56	47.0	51.5	26.6	1.3	2.9	42.4	1.57	47.8	51.2	27.0	2.4	5.6
				80	43.2	1.57	48.6	60.8	27.5	0.4	0.9	44.2	1.58	49.6	60.3	28.0	1.2	2.8	44.8	1.59	50.3	60.1	28.1	2.3	5.4
				90	45.1	1.58	50.5	69.9	28.6	0.3	0.8	46.2	1.60	51.7	69.5	28.9	1.1	2.6	46.6	1.61	52.1	69.3	28.9	2.2	5.1
	6.75	3.4	7.8	50	32.9	1.41	37.7	40.3	23.3	0.6	1.4	34.9	1.44	39.8	39.7	24.2	1.4	3.2	35.8	1.44	40.7	39.4	24.8	2.6	5.9
				60	37.3	1.45	42.2	49.0	25.7	0.5	1.2	38.9	1.46	43.9	48.5	26.6	1.3	3.1	39.7	1.47	44.7	48.2	27.1	2.5	5.8
				70	40.9	1.47	46.0	57.9	27.8	0.5	1.1	42.2	1.48	47.2	57.5	28.4	1.3	2.9	42.9	1.49	48.0	57.3	28.8	2.4	5.6
				80	43.8	1.49	48.9	67.0	29.4	0.4	0.9	44.8	1.50	49.9	66.7	29.9	1.2	2.8	45.4	1.51	50.6	66.5	30.0	2.3	5.4
				90	45.7	1.50	50.8	76.5	30.5	0.3	0.8	Operation not recommended													
	9	6.0	13.9	50	33.3	1.33	37.8	42.6	25.1	0.6	1.4	35.4	1.35	40.0	42.1	26.1	1.4	3.2	36.2	1.35	40.9	41.9	26.8	2.6	5.9
				60	37.8	1.36	42.4	51.6	27.8	0.5	1.2	39.4	1.37	44.0	51.3	28.7	1.3	3.1	40.2	1.38	44.9	51.1	29.2	2.5	5.8
70				41.5	1.38	46.2	60.8	30.0	0.5	1.1	42.7	1.39	47.5	60.5	30.7	1.3	2.9	43.5	1.40	48.3	60.3	31.1	2.4	5.6	
80				44.3	1.40	49.1	70.1	31.7	0.4	0.9	45.4	1.41	50.2	69.9	32.3	1.2	2.8	46.0	1.42	50.8	69.8	32.5	2.3	5.4	
90				46.3	1.41	51.1	79.7	33.0	0.3	0.8	Operation not recommended														
70	4.5	1.0	2.3	50	30.1	1.96	36.8	36.6	15.3	0.6	1.4	32.1	1.95	38.8	35.7	16.4	1.4	3.2	33.0	1.98	39.7	35.3	16.7	2.6	5.9
				60	34.1	1.98	40.9	44.8	17.2	0.5	1.2	37.6	1.96	44.3	43.3	19.2	1.3	3.1	36.6	1.96	43.3	43.7	18.7	2.5	5.8
				70	39.0	2.01	45.9	52.7	19.4	0.5	1.1	41.7	1.98	48.5	51.5	21.0	1.3	2.9	39.9	2.00	46.7	52.3	19.9	2.4	5.6
				80	42.7	2.03	49.7	61.0	21.1	0.4	1.0	45.4	2.01	52.3	59.8	22.5	1.2	2.8	42.9	2.04	49.8	60.9	21.1	2.3	5.4
				90	46.2	2.05	53.2	69.5	22.5	0.3	0.8	Operation not recommended													
	6.75	2.8	6.5	50	30.5	1.86	36.8	41.0	16.4	0.6	1.4	32.5	1.85	38.8	40.4	17.5	1.4	3.2	33.4	1.87	39.8	40.1	17.8	2.6	5.9
				60	34.6	1.88	41.0	49.8	18.4	0.5	1.2	38.1	1.86	44.4	48.7	20.4	1.3	3.1	37.1	1.86	43.4	49.0	19.9	2.5	5.8
				70	39.5	1.90	46.0	58.3	20.8	0.5	1.1	42.3	1.88	48.7	57.5	22.4	1.3	2.9	40.4	1.90	46.9	58.0	21.3	2.4	5.6
				80	43.3	1.93	49.9	67.2	22.5	0.4	0.9	46.0	1.91	52.5	66.4	24.1	1.2	2.8	43.4	1.93	50.0	67.1	22.5	2.3	5.4
				90	46.8	1.95	53.4	76.1	24.0	0.3	0.8	Operation not recommended													
	9	5.1	11.9	50	30.8	1.74	36.8	43.1	17.7	0.6	1.4	32.9	1.74	38.8	42.7	19.0	1.4	3.2	33.8	1.76	39.8	42.5	19.3	2.6	5.9
				60	35.0	1.76	41.0	52.2	19.9	0.5	1.2	38.6	1.75	44.5	51.4	22.1	1.3	3.1	37.5	1.74	43.5	51.7	21.5	2.5	5.8
70				40.0	1.78	46.1	61.1	22.4	0.5	1.1	42.8	1.77	48.8	60.5	24.2	1.3	2.9	40.9	1.78	47.0	60.9	23.0	2.4	5.6	
80				43.8	1.81	50.0	70.3	24.3	0.4	0.9	46.6	1.79	52.7	69.6	26.0	1.2	2.8	44.0	1.81	50.2	70.2	24.3	2.3	5.4	
90				47.4	1.83	53.6	79.5	26.0	0.3	0.8	Operation not recommended														
90	4.5	0.8	1.8	50	27.0	2.55	35.7	38.0	10.6	0.6	1.4	28.9	2.59	37.7	37.2	11.1	1.4	3.2	29.7	2.57	38.4	36.8	11.5	2.6	5.9
				60	31.1	2.58	39.9	46.2	12.1	0.5	1.2	34.0	2.60	42.8	44.9	13.1	1.3	3.1	33.6	2.56	42.3	45.1	13.1	2.5	5.8
				70	36.2	2.60	45.1	53.9	13.9	0.5	1.1	38.9	2.62	47.8	52.7	14.9	1.3	2.9	37.4	2.59	46.2	53.4	14.4	2.4	5.6
				80	40.5	2.62	49.4	62.0	15.5	0.4	0.9	42.9	2.65	52.0	60.9	16.2	1.2	2.8	41.1	2.63	50.0	61.7	15.6	2.3	5.4
				90	44.2	2.64	53.2	70.4	16.7	0.3	0.8	Operation not recommended													
	6.75	2.4	5.4	50	27.3	2.42	35.6	41.9	11.3	0.6	1.4	29.3	2.46	37.7	41.3	11.9	1.4	3.2	30.0	2.44	38.4	41.1	12.3	2.6	5.9
				60	31.5	2.44	39.8	50.7	12.9	0.5	1.2	34.4	2.46	42.8	49.8	14.0	1.3	3.1	34.0	2.43	42.3	49.9	14.0	2.5	5.8
				70	36.7	2.47	45.1	59.1	14.9	0.5	1.1	39.4	2.48	47.9	58.3	15.9	1.3	2.9	37.8	2.46	46.2	58.8	15.4	2.4	5.6
				80	41.0	2.49	49.5	67.9	16.5	0.4	0.9	43.5	2.51	52.1	67.1	17.3	1.2	2.8	41.6	2.50	50.1	67.7	16.7	2.3	5.4
				90	44.7	2.50	53.3	76.7	17.9	0.3	0.8	Operation not recommended													
	9	4.5	10.3	50	27.7	2.27	35.4	43.8	12.2	0.6	1.4	29.6	2.31	37.5	43.4	12.9	1.4	3.2	30.4	2.29	38.2	43.2	13.3	2.6	5.9
				60	31.9	2.29	39.7	52.9	13.9	0.5	1.2	34.8	2.31	42.7	52.3	15.1	1.3	3.1	34.4	2.28	42.2	52.3	15.1	2.5	5.8
70				37.2	2.31	45.1	61.7	16.1	0.5	1.1	39.9	2.33	47.8	61.1	17.1	1.3	2.9	38.3	2.31	46.2	61.5	16.6	2.4	5.6	
80				41.5	2.33	49.5	70.8	17.8	0.4	0.9	44.0	2.35	52.1	70.2	18.7	1.2	2.8	42.1	2.34	50.1	70.6	18.0	2.3	5.4	
90				45.3	2.35	53.3	79.9	19.3	0.3	0.8	Operation not recommended														

Interpolation is permissible; extrapolation is not.  
 All performance is based upon the lower voltage of dual voltage rated units.  
 Performance stated is at the rated power supply; performance may vary as the power supply varies from the rated.  
 Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.  
 Operation below 60°F EWT requires optional insulated water/refrigerant circuit.  
 See performance correction tables for operating conditions other than those listed above.  
 See Performance Data Selection Notes for operation in the shaded areas. Operation in shaded areas requires antifreeze.

Table Continued on Next Page

# Performance Data – TMW036 (60 Hz I-P) - Cooling

Table Continued from Previous Page

Source				LOAD																							
EWT °F	Flow			EWT °F	Flow 4.5 GPM				WPD		Flow 6.75 GPM				WPD		Flow 9GPM				WPD						
	GPM	WPD PSI	WPD FT		TC Mbtuh	Power KW	HR Mbtuh	LWT °F	EER	PSI	FT	TC Mbtuh	Power KW	HR Mbtuh	LWT °F	EER	PSI	FT	TC Mbtuh	Power KW	HR Mbtuh	LWT °F	EER	PSI	FT		
110	4.5	0.6	1.4	50	23.3	3.27	34.4	39.7	7.1	0.6	1.4	24.9	3.33	36.2	38.9	7.5	1.4	3.2	25.3	3.33	36.7	38.7	7.6	2.6	5.9		
				60	27.7	3.30	39.0	47.7	8.4	0.5	1.2	29.4	3.33	40.8	46.9	8.8	1.3	3.1	30.2	3.33	41.6	46.6	9.1	2.5	5.8		
				70	32.1	3.33	43.5	55.7	9.6	0.5	1.1	33.9	3.34	45.3	54.9	10.2	1.3	2.9	34.9	3.35	46.3	54.5	10.4	2.4	5.6		
				80	36.4	3.34	47.8	63.8	10.9	0.4	0.9	38.4	3.36	49.8	63.0	11.4	1.2	2.8	39.4	3.37	50.9	62.5	11.7	2.3	5.4		
	6.75	2.0	4.7	50	23.5	3.10	34.1	43.0	7.6	0.6	1.4	25.2	3.16	36.0	42.5	8.0	1.4	3.2	25.7	3.16	36.4	42.4	8.1	2.6	5.9		
				60	28.1	3.14	38.8	51.7	9.0	0.5	1.2	29.8	3.16	40.6	51.2	9.4	1.3	3.1	30.6	3.16	41.4	50.9	9.7	2.5	5.8		
				70	32.5	3.16	43.3	60.4	10.3	0.5	1.1	34.3	3.17	45.1	59.8	10.8	1.3	2.9	35.3	3.18	46.2	59.5	11.1	2.4	5.6		
				80	36.9	3.17	47.7	69.1	11.6	0.4	0.9	38.8	3.19	49.7	68.5	12.2	1.2	2.8	39.9	3.20	50.8	68.2	12.5	2.3	5.4		
	9	4.0	9.2	50	23.8	2.91	33.8	44.7	8.2	0.6	1.4	25.5	2.96	35.6	44.3	8.6	1.4	3.2	26.0	2.96	36.1	44.2	8.8	2.6	5.9		
				60	28.4	2.94	38.5	53.7	9.7	0.5	1.2	30.2	2.96	40.3	53.3	10.2	1.3	3.1	31.0	2.97	41.1	53.1	10.4	2.5	5.8		
				70	32.9	2.96	43.0	62.7	11.1	0.5	1.1	34.8	2.97	44.9	62.3	11.7	1.3	2.9	35.8	2.98	45.9	62.1	12.0	2.4	5.6		
				80	37.4	2.97	47.5	71.7	12.6	0.4	0.9	39.3	2.99	49.5	71.3	13.1	1.2	2.8	40.4	3.00	50.6	71.0	13.5	2.3	5.4		
120	6.75	1.9	4.4	50	20.7	3.55	32.8	43.9	5.8	0.6	1.4	22.1	3.60	34.4	43.4	6.1	1.4	3.2	22.5	3.61	34.9	43.3	6.2	2.6	5.9		
				60	25.3	3.59	37.6	52.5	7.1	0.5	1.2	26.9	3.61	39.2	52.0	7.5	1.3	3.1	27.6	3.62	39.9	51.8	7.6	2.5	5.8		
				70	30.0	3.60	42.3	61.1	8.3	0.5	1.1	31.7	3.61	44.0	60.6	8.8	1.3	2.9	32.6	3.63	45.0	60.3	9.0	2.4	5.6		
				80	34.4	3.61	46.8	69.8	9.5	0.4	0.9	36.2	3.64	48.6	69.3	9.9	1.2	2.8	37.2	3.65	49.7	69.0	10.2	2.3	5.4		
	9	3.8	8.8	50	21.0	3.39	32.6	45.3	6.2	0.6	1.4	22.5	3.45	34.2	45.0	6.5	1.4	3.2	22.9	3.45	34.7	44.9	6.6	2.6	5.9		
				60	25.7	3.43	37.4	54.3	7.5	0.5	1.2	27.3	3.45	39.1	53.9	7.9	1.3	3.1	28.0	3.46	39.8	53.8	8.1	2.5	5.8		
				70	30.5	3.45	42.2	63.2	8.8	0.5	1.1	32.2	3.46	44.0	62.8	9.3	1.3	2.9	33.1	3.47	44.9	62.6	9.5	2.4	5.6		
				80	35.2	3.46	47.1	72.1	10.1	0.4	0.9	37.1	3.47	49.9	72.5	10.8	1.2	2.8	38.1	3.48	50.8	72.2	11.1	2.3	5.4		

Interpolation is permissible; extrapolation is not.  
 All performance is based upon the lower voltage of dual voltage rated units.  
 Performance stated is at the rated power supply; performance may vary as the power supply varies from the rated.  
 Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.  
 Operation below 60°F EWT requires optional insulated water/refrigerant circuit.  
 See performance correction tables for operating conditions other than those listed above.  
 See Performance Data Selection Notes for operation in the shaded areas. Operation in shaded areas requires antifreeze.

# Performance Data – TMW036 (60 Hz I-P) - Heating

SOURCE				LOAD																					
EWT °F	Flow			EWT °F	Flow 4.5 GPM							Flow 6.8 GPM							Flow 9.0 GPM						
	GPM	WPD			HC Mbtuh	Power KW	HE Mbtuh	LWT °F	COP	WPD		HC Mbtuh	Power KW	HE Mbtuh	LWT °F	COP	WPD		HC Mbtuh	Power KW	HE Mbtuh	LWT °F	COP	WPD	
		PSI	FT							PSI	FT						PSI	FT						PSI	FT
20	9.0	7.7	17.9	60	26.1	1.53	20.9	71.6	5.0	0.5	1.2	26.4	1.45	21.5	67.8	5.3	1.3	3.1	26.5	1.41	21.7	65.9	5.5	2.5	5.8
				80	25.7	1.96	19.0	91.4	3.8	0.4	0.9	25.9	1.86	19.6	87.7	4.1	1.2	2.8	25.9	1.81	19.8	85.8	4.2	2.3	5.4
				100	25.0	2.56	16.3	111.1	2.9	0.3	0.7	25.0	2.42	16.7	107.4	3.0	1.1	2.5	24.9	2.36	16.9	105.5	3.1	2.1	4.9
30	4.5	1.7	4.0	60	27.1	1.54	21.9	72.1	5.2	0.5	1.2	27.5	1.45	22.5	68.1	5.5	1.3	3.1	27.6	1.42	22.7	66.1	5.7	2.5	5.8
				80	26.7	1.97	20.0	91.9	4.0	0.4	0.9	27.0	1.86	20.6	88.0	4.2	1.2	2.8	27.0	1.81	20.8	86.0	4.4	2.3	5.4
				100	26.1	2.56	17.3	111.6	3.0	0.3	0.7	26.1	2.43	17.8	107.7	3.2	1.1	2.5	26.0	2.36	18.0	105.8	3.2	2.1	4.9
				120	25.1	3.32	13.8	131.2	2.2	0.2	0.5	24.9	3.14	14.2	127.4	2.3	0.9	2.1	24.7	3.06	14.3	125.5	2.4	1.8	4.3
	6.8	4.1	9.4	60	28.4	1.54	23.2	72.6	5.4	0.5	1.2	28.8	1.46	23.8	68.5	5.8	1.3	3.1	28.9	1.42	24.1	66.4	6.0	2.5	5.8
				80	27.9	1.97	21.2	92.4	4.2	0.4	0.9	28.2	1.87	21.8	88.4	4.4	1.2	2.8	28.2	1.82	22.0	86.3	4.6	2.3	5.4
				100	27.1	2.57	18.3	112.0	3.1	0.3	0.7	27.2	2.43	18.9	108.0	3.3	1.1	2.5	27.1	2.37	19.0	106.0	3.4	2.1	4.9
				120	25.9	3.33	14.6	131.5	2.3	0.2	0.5	25.7	3.15	15.0	127.6	2.4	0.9	2.1	25.6	3.07	15.1	125.7	2.4	1.8	4.3
	9.0	7.1	16.4	60	29.2	1.54	23.9	73.0	5.5	0.5	1.2	29.6	1.46	24.6	68.8	5.9	1.3	3.1	29.7	1.42	24.8	66.6	6.1	2.5	5.8
				80	28.6	1.98	21.9	92.7	4.2	0.4	0.9	28.9	1.87	22.5	88.6	4.5	1.2	2.8	28.9	1.82	22.7	86.4	4.7	2.3	5.4
				100	27.7	2.58	18.9	112.3	3.2	0.3	0.7	27.8	2.44	19.5	108.2	3.3	1.1	2.5	27.7	2.37	19.6	106.2	3.4	2.1	4.9
				120	26.4	3.34	15.0	131.7	2.3	0.2	0.5	26.2	3.16	15.4	127.8	2.4	0.9	2.1	26.1	3.08	15.6	125.8	2.5	1.8	4.3
40	4.5	1.5	3.5	60	30.7	1.41	25.9	71.5	6.4	0.5	1.2	31.2	1.33	26.7	67.9	6.9	1.3	3.1	31.3	1.30	26.9	66.0	7.1	2.5	5.8
				80	30.6	1.81	24.4	90.8	4.9	0.4	0.9	31.0	1.72	25.1	87.4	5.3	1.2	2.8	31.1	1.67	25.3	85.6	5.4	2.3	5.4
				100	29.9	2.39	21.7	109.7	3.7	0.3	0.7	30.1	2.27	22.4	106.6	3.9	1.1	2.5	30.1	2.21	22.6	105.0	4.0	2.1	4.9
				120	28.8	3.17	18.0	128.0	2.7	0.2	0.5	28.7	3.00	18.5	125.5	2.8	0.9	2.1	28.6	2.92	18.6	124.1	2.9	1.8	4.3
	6.8	3.7	8.6	60	32.6	1.48	27.5	72.2	6.4	0.5	1.2	33.1	1.40	28.3	68.4	6.9	1.3	3.1	33.3	1.37	28.6	66.4	7.1	2.5	5.8
				80	32.1	1.90	25.6	91.4	4.9	0.4	0.9	32.5	1.80	26.3	87.8	5.3	1.2	2.8	32.6	1.75	26.6	85.9	5.4	2.3	5.4
				100	31.1	2.49	22.6	110.0	3.7	0.3	0.7	31.3	2.36	23.3	106.9	3.9	1.1	2.5	31.3	2.30	23.5	105.2	4.0	2.1	4.9
				120	29.7	3.26	18.6	128.3	2.7	0.2	0.5	29.7	3.09	19.1	125.7	2.8	0.9	2.1	29.6	3.01	19.3	124.3	2.9	1.8	4.3
	9.0	6.5	15.1	60	34.5	1.55	29.2	73.0	6.5	0.5	1.2	35.0	1.47	30.0	68.9	7.0	1.3	3.1	35.2	1.43	30.3	66.7	7.2	2.5	5.8
				80	33.6	1.99	26.8	91.9	4.9	0.4	0.9	34.0	1.89	27.6	88.2	5.3	1.2	2.8	34.1	1.84	27.8	86.2	5.4	2.3	5.4
				100	32.3	2.59	23.5	110.4	3.7	0.3	0.7	32.5	2.45	24.2	107.2	3.9	1.1	2.5	32.5	2.39	24.4	105.4	4.0	2.1	4.9
				120	30.7	3.36	19.2	128.5	2.7	0.2	0.5	30.6	3.18	19.8	125.9	2.8	0.9	2.1	30.5	3.09	20.0	124.4	2.9	1.8	4.3
50	4.5	1.3	3.1	60	35.9	1.55	30.6	76.0	6.8	0.5	1.2	36.5	1.47	31.5	70.8	7.3	1.3	3.1	36.7	1.43	31.8	68.2	7.5	2.5	5.8
				80	35.0	2.00	28.2	95.6	5.1	0.4	0.9	35.5	1.89	29.0	90.5	5.5	1.2	2.8	35.6	1.84	29.3	87.9	5.7	2.3	5.4
				100	33.8	2.60	24.9	115.0	3.8	0.3	0.7	34.0	2.46	25.6	110.1	4.1	1.1	2.5	34.0	2.39	25.9	107.6	4.2	2.1	4.9
				120	32.2	3.36	20.7	134.3	2.8	0.2	0.5	32.1	3.18	21.3	129.5	3.0	0.9	2.1	32.1	3.09	21.5	127.1	3.0	1.8	4.3
				130	<b>Operation not recommended</b>					31.1	3.59	18.8	139.2	2.5	0.8	1.9	30.9	3.50	19.0	136.9	2.6	1.7	3.9		
	6.75	3.4	7.8	60	37.7	1.56	32.4	76.8	7.1	0.5	1.2	38.4	1.48	33.3	71.4	7.6	1.3	3.1	38.5	1.44	33.6	68.6	7.9	2.5	5.8
				80	36.6	2.00	29.8	96.3	5.4	0.4	0.9	37.1	1.89	30.7	91.0	5.7	1.2	2.8	37.3	1.84	31.0	88.3	5.9	2.3	5.4
				100	35.2	2.60	26.3	115.6	4.0	0.3	0.7	35.5	2.46	27.1	110.5	4.2	1.1	2.5	35.5	2.40	27.3	107.9	4.3	2.1	4.9
				120	33.4	3.37	21.9	134.8	2.9	0.2	0.5	33.4	3.19	22.5	129.9	3.1	0.9	2.1	33.3	3.10	22.7	127.4	3.1	1.8	4.3
	9.0	6.0	13.9	60	38.6	1.56	33.3	77.2	7.2	0.5	1.2	39.3	1.48	34.3	71.7	7.8	1.3	3.1	39.5	1.44	34.6	68.8	8.0	2.5	5.8
				80	37.5	2.01	30.7	96.7	5.5	0.4	0.9	38.0	1.90	31.6	91.3	5.9	1.2	2.8	38.2	1.85	31.9	88.5	6.1	2.3	5.4
				100	36.0	2.61	27.1	116.0	4.0	0.3	0.7	36.3	2.47	27.9	110.8	4.3	1.1	2.5	36.3	2.40	28.1	108.1	4.4	2.1	4.9
120				34.0	3.37	22.5	135.1	3.0	0.2	0.5	34.1	3.19	23.2	130.1	3.1	0.9	2.1	34.0	3.11	23.4	127.6	3.2	1.8	4.3	
130				<b>Operation not recommended</b>					32.8	3.61	20.5	139.7	2.7	0.8	1.9	32.6	3.52	20.6	137.3	2.7	1.7	3.9			

Interpolation is permissible; extrapolation is not.  
 All performance is based upon the lower voltage of dual voltage rated units.  
 Performance stated is at the rated power supply; performance may vary as the power supply varies from the rated.  
 Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.  
 Operation below 60°F EWT requires optional insulated water/refrigerant circuit.  
 See performance correction tables for operating conditions other than those listed above.  
 See Performance Data Selection Notes for operation in the shaded areas. Operation in shaded areas requires antifreeze.

Table Continued on Next Page







# Performance Data – TMW060 (60 Hz I-P) - Cooling

Table Continued from Previous Page

SOURCE				LOAD																					
EWT °F	Flow			EWT °F	Flow 7.5 GPM						Flow 11.25 GPM						Flow 15.0 GPM								
	GPM	WPD			TC Mbtuh	Power kW	HR Mbtuh	LWT °F	EER	WPD		TC Mbtuh	Power kW	HR Mbtuh	LWT °F	EER	WPD		TC Mbtuh	Power kW	HR Mbtuh	LWT °F	EER	WPD	
PSI		FT	PSI	FT						PSI	FT						PSI	FT							
110	7.5	0.8	1.8	50	39.8	4.46	55.0	39.9	8.9	1.4	3.3	41.3	4.50	56.7	42.5	9.2	3.5	8.0	41.7	4.55	57.3	44.1	9.2	4.7	10.9
				60	45.8	4.54	61.3	48.2	10.1	1.4	3.2	47.5	4.58	63.1	51.2	10.4	3.3	7.7	48.0	4.63	63.8	53.2	10.4	4.5	10.4
				70	51.8	4.62	67.5	56.4	11.2	1.3	3.0	53.7	4.66	69.6	60.0	11.5	3.2	7.4	54.3	4.71	70.4	62.4	11.5	4.3	10.0
				80	56.4	4.69	72.4	64.9	12.0	1.2	2.9	58.5	4.74	74.7	69.0	12.3	3.1	7.1	59.1	4.79	75.5	71.7	12.3	4.2	9.8
	90	61.0	4.77	77.3	73.4	12.8	1.2	2.7	63.3	4.82	79.7	78.0	13.1	3.0	6.9	64.0	4.87	80.6	81.1	13.1	4.2	9.6			
	11.25	2.4	5.6	50	40.6	4.50	56.0	39.9	9.0	1.4	3.3	42.2	4.55	57.7	42.4	9.3	3.5	8.0	42.6	4.60	58.3	44.1	9.3	4.8	11.0
				60	47.3	4.58	62.9	48.1	10.3	1.4	3.2	49.0	4.63	64.8	51.2	10.6	3.3	7.7	49.6	4.68	65.5	53.2	10.6	4.6	10.5
				70	53.9	4.66	69.8	56.3	11.6	1.3	3.0	55.9	4.71	72.0	59.9	11.9	3.2	7.4	56.5	4.76	72.7	62.2	11.9	4.4	10.1
				80	57.9	4.74	74.0	64.7	12.2	1.2	2.9	60.0	4.79	76.4	68.8	12.5	3.1	7.1	60.7	4.84	77.2	71.5	12.5	4.2	9.8
	90	61.8	4.82	78.3	73.1	12.8	1.2	2.7	64.1	4.87	80.8	77.7	13.2	3.0	6.9	64.8	4.92	81.6	80.8	13.2	4.1	9.5			
	15.0	4.6	10.7	50	41.5	4.55	57.1	39.4	9.1	1.4	3.3	42.3	4.60	58.0	42.4	9.2	3.5	8.0	43.8	4.64	59.7	44.0	9.4	4.7	10.8
				60	47.6	4.63	63.4	47.4	10.3	1.4	3.2	48.5	4.68	64.5	51.1	10.4	3.3	7.7	50.7	4.72	66.8	53.1	10.7	4.5	10.5
70				53.7	4.71	69.8	55.3	11.4	1.3	3.0	54.7	4.76	70.9	59.9	11.5	3.2	7.4	57.6	4.80	74.0	62.2	12.0	4.4	10.2	
80				58.3	4.79	74.6	64.2	12.2	1.2	2.9	59.7	4.84	76.2	68.7	12.3	3.1	7.1	61.7	4.89	78.4	71.4	12.6	4.3	9.8	
90	62.8	4.87	79.4	73.0	12.9	1.2	2.7	64.8	4.92	81.6	77.6	13.2	3.0	6.9	65.8	4.97	82.8	80.7	13.2	4.1	9.5				
120	7.5	0.7	1.7	50	37.0	5.04	54.2	40.3	7.3	1.4	3.3	38.5	5.09	55.9	43.2	7.6	3.5	8.0	39.3	5.14	56.8	44.7	7.6	4.7	10.9
				60	42.7	5.13	60.2	48.6	8.3	1.4	3.2	44.4	5.18	62.1	52.0	8.6	3.3	7.7	45.3	5.23	63.2	53.8	8.7	4.5	10.5
				70	48.4	5.21	66.2	56.9	9.3	1.3	3.0	50.4	5.27	68.3	60.8	9.6	3.2	7.4	51.4	5.32	69.5	62.9	9.7	4.3	10.0
				80	53.0	5.31	71.1	65.2	10.0	1.2	2.9	55.1	5.36	73.4	69.7	10.3	3.1	7.1	56.2	5.42	74.7	72.1	10.4	4.2	9.7
	90	57.5	5.40	76.0	73.5	10.6	1.2	2.7	59.9	5.46	78.5	78.6	11.0	3.0	6.9	61.1	5.51	79.9	81.3	11.1	4.1	9.4			
	11.25	2.4	5.5	50	37.2	5.09	54.6	40.3	7.3	1.4	3.3	38.8	5.14	56.3	43.1	7.5	3.5	8.0	39.6	5.19	57.3	44.6	7.6	4.8	11.1
				60	43.2	5.18	60.8	48.5	8.3	1.4	3.2	44.9	5.23	62.8	51.9	8.6	3.3	7.7	45.8	5.28	63.8	53.7	8.7	4.6	10.6
				70	49.1	5.27	67.0	56.7	9.3	1.3	3.0	51.1	5.32	69.2	60.6	9.6	3.2	7.4	52.1	5.37	70.4	62.7	9.7	4.4	10.1
				80	53.6	5.36	71.9	65.0	10.0	1.2	2.9	55.8	5.42	74.3	69.6	10.3	3.1	7.1	57.0	5.47	75.6	72.0	10.4	4.2	9.8
	90	58.2	5.46	76.9	73.4	10.7	1.2	2.7	60.6	5.51	79.4	78.5	11.0	3.0	6.9	61.8	5.57	80.9	81.3	11.1	4.1	9.5			
	15.0	4.5	10.3	50	38.5	5.14	56.0	40.0	7.5	1.4	3.3	40.1	5.19	57.8	42.9	7.7	3.5	8.0	40.8	5.25	58.7	44.5	7.8	4.7	11.0
				60	44.4	5.23	62.2	48.2	8.5	1.4	3.2	46.4	5.28	64.4	51.7	8.8	3.3	7.7	47.3	5.34	65.5	53.6	8.9	4.6	10.5
70				50.3	5.32	68.4	56.5	9.5	1.3	3.0	52.7	5.37	71.1	60.5	9.8	3.2	7.4	53.8	5.43	72.3	62.6	9.9	4.4	10.1	
80				54.9	5.42	73.4	64.9	10.1	1.2	2.9	57.5	5.47	76.2	69.5	10.5	3.1	7.1	58.6	5.53	77.5	71.9	10.6	4.2	9.8	
90	59.6	5.51	78.4	73.3	10.8	1.2	2.7	62.3	5.57	81.3	78.5	11.2	3.0	6.9	63.4	5.63	82.6	81.2	11.3	4.1	9.5				

Interpolation is permissible; extrapolation is not.  
 All performance is based upon the lower voltage of dual voltage rated units.  
 Performance stated is at the rated power supply; performance may vary as the power supply varies from the rated.  
 Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.  
 Operation below 60°F EWT requires optional insulated water/refrigerant circuit.  
 See performance correction tables for operating conditions other than those listed above.  
 See Performance Data Selection Notes for operation in the shaded areas. Operation in shaded areas requires antifreeze.







# Performance Data – TMW120 (60 Hz I-P) - Cooling

Table Continued from Previous Page

SOURCE				LOAD																					
EWT °F	Flow			EWT °F	Flow 15.0 GPM						Flow 22.5 GPM						Flow 30.0 GPM								
	GPM	WPD			TC Mbtuh	Power kW	HR Mbtuh	LWT °F	EER	WPD		TC Mbtuh	Power kW	HR Mbtuh	LWT °F	EER	WPD		TC Mbtuh	Power kW	HR Mbtuh	LWT °F	EER	WPD	
		PSI	FT						PSI	FT						PSI	FT						PSI	FT	
110	15.0	0.8	2.0	50	79.6	8.92	110.0	39.9	8.9	1.6	3.7	82.6	9.01	113.3	42.5	9.2	3.8	8.8	83.5	9.10	114.5	44.1	9.2	6.8	15.7
				60	91.6	9.08	122.6	48.2	10.1	1.5	3.5	95.0	9.17	126.3	51.2	10.4	3.7	8.4	96.1	9.26	127.6	53.2	10.4	6.6	15.2
				70	103.6	9.23	135.1	56.4	11.2	1.4	3.3	107.4	9.32	139.3	60.0	11.5	3.5	8.1	108.6	9.42	140.8	62.4	11.5	6.4	14.7
				80	112.8	9.39	144.8	64.9	12.0	1.4	3.2	117.0	9.48	149.4	69.0	12.3	3.4	7.9	118.3	9.58	151.0	71.7	12.3	6.2	14.3
				90	122.0	9.55	154.6	73.4	12.8	1.3	3.0	126.6	9.64	159.5	78.0	13.1	3.3	7.6	128.0	9.74	161.2	81.1	13.1	6.0	13.9
	22.5	2.7	6.2	50	81.3	9.01	112.0	39.9	9.0	1.6	3.7	84.3	9.10	115.4	42.4	9.3	3.8	8.8	85.2	9.19	116.6	44.1	9.3	6.8	15.7
				60	94.5	9.17	125.8	48.1	10.3	1.5	3.5	98.0	9.26	129.6	51.2	10.6	3.7	8.4	99.1	9.35	131.0	53.2	10.6	6.6	15.2
				70	107.8	9.32	139.6	56.3	11.6	1.4	3.3	111.8	9.42	143.9	59.9	11.9	3.5	8.1	113.0	9.51	145.5	62.2	11.9	6.4	14.7
				80	115.7	9.48	148.1	64.7	12.2	1.4	3.2	120.0	9.58	152.7	68.8	12.5	3.4	7.9	121.3	9.68	154.4	71.5	12.5	6.2	14.3
				90	123.7	9.64	156.6	73.1	12.8	1.3	3.0	128.3	9.74	161.5	77.7	13.2	3.3	7.6	129.7	9.84	163.3	80.8	13.2	6.0	13.9
	30.0	5.1	11.7	50	83.1	9.10	114.1	39.4	9.1	1.6	3.7	84.7	9.19	116.1	42.4	9.2	3.8	8.8	87.6	9.28	119.3	44.0	9.4	6.8	15.7
				60	95.2	9.26	126.8	47.4	10.3	1.5	3.5	97.0	9.35	128.9	51.1	10.4	3.7	8.4	101.4	9.45	133.7	53.1	10.7	6.6	15.2
				70	107.4	9.42	139.5	55.3	11.4	1.4	3.3	109.3	9.51	141.8	59.9	11.5	3.5	8.1	115.2	9.61	148.0	62.2	12.0	6.4	14.7
				80	116.5	9.58	149.2	64.2	12.2	1.4	3.2	119.5	9.68	152.5	68.7	12.3	3.4	7.9	123.4	9.77	156.8	71.4	12.6	6.2	14.3
				90	125.6	9.74	158.9	73.0	12.9	1.3	3.0	129.6	9.84	163.1	77.6	13.2	3.3	7.6	131.7	9.94	165.6	80.7	13.2	6.0	13.9
120	15.0	0.8	1.8	50	74.0	10.08	108.4	40.3	7.3	1.6	3.7	77.0	10.18	111.8	43.2	7.6	3.8	8.8	78.6	10.28	113.7	44.7	7.6	6.8	15.7
				60	85.4	10.25	120.4	48.6	8.3	1.5	3.5	88.9	10.36	124.2	52.0	8.6	3.7	8.4	90.7	10.46	126.4	53.8	8.7	6.6	15.2
				70	96.8	10.42	132.4	56.9	9.3	1.4	3.3	100.8	10.53	136.7	60.8	9.6	3.5	8.1	102.8	10.64	139.1	62.9	9.7	6.4	14.7
				80	105.9	10.62	142.1	65.2	10.0	1.4	3.2	110.2	10.72	146.8	69.7	10.3	3.4	7.9	112.5	10.83	149.4	72.1	10.4	6.2	14.3
				90	115.1	10.81	151.9	73.5	10.6	1.3	3.0	119.7	10.92	157.0	78.6	11.0	3.3	7.6	122.2	11.03	159.8	81.3	11.1	6.0	13.9
	22.5	2.6	6.0	50	74.5	10.18	109.2	40.3	7.3	1.6	3.7	77.5	10.28	112.6	43.1	7.5	3.8	8.8	79.1	10.39	114.6	44.6	7.6	6.8	15.7
				60	86.3	10.36	121.6	48.5	8.3	1.5	3.5	89.8	10.46	125.5	51.9	8.6	3.7	8.4	91.6	10.57	127.7	53.7	8.7	6.6	15.2
				70	98.1	10.53	134.0	56.7	9.3	1.4	3.3	102.1	10.64	138.4	60.6	9.6	3.5	8.1	104.2	10.74	140.8	62.7	9.7	6.4	14.7
				80	107.3	10.72	143.9	65.0	10.0	1.4	3.2	111.7	10.83	148.6	69.6	10.3	3.4	7.9	113.9	10.94	151.3	72.0	10.4	6.2	14.3
				90	116.5	10.92	153.7	73.4	10.7	1.3	3.0	121.2	11.03	158.9	78.5	11.0	3.3	7.6	123.7	11.14	161.7	81.3	11.1	6.0	13.9
	30.0	4.9	11.3	50	76.9	10.28	112.0	40.0	7.5	1.6	3.7	80.2	10.39	115.7	42.9	7.7	3.8	8.8	81.7	10.49	117.5	44.5	7.8	6.8	15.7
				60	88.8	10.46	124.4	48.2	8.5	1.5	3.5	92.8	10.57	128.9	51.7	8.8	3.7	8.4	94.6	10.67	131.0	53.6	8.9	6.6	15.2
				70	100.6	10.64	136.9	56.5	9.5	1.4	3.3	105.5	10.74	142.1	60.5	9.8	3.5	8.1	107.6	10.85	144.6	62.6	9.9	6.4	14.7
				80	109.9	10.83	146.8	64.9	10.1	1.4	3.2	115.1	10.94	152.4	69.5	10.5	3.4	7.9	117.2	11.05	154.9	71.9	10.6	6.2	14.3
				90	119.2	11.03	156.8	73.3	10.8	1.3	3.0	124.7	11.14	162.7	78.5	11.2	3.3	7.6	126.9	11.25	165.3	81.2	11.3	6.0	13.9

Interpolation is permissible; extrapolation is not.  
 All performance is based upon the lower voltage of dual voltage rated units.  
 Performance stated is at the rated power supply; performance may vary as the power supply varies from the rated.  
 Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.  
 Operation below 60°F EWT requires optional insulated water/refrigerant circuit.  
 See performance correction tables for operating conditions other than those listed above.  
 See Performance Data Selection Notes for operation in the shaded areas. Operation in shaded areas requires antifreeze.





# Performance Data – TMW120 (60 Hz I-P) - Heating

Table Continued from Previous Page

SOURCE				LOAD																							
EWT °F	Flow			EWT °F	Flow 15.0 GPM						Flow 22.5 GPM						Flow 30.0 GPM										
	GPM	WPD			HC Mbtuh	Power kW	HE Mbtuh	LWT °F	COP	WPD	HC Mbtuh	Power kW	HE Mbtuh	LWT °F	COP	WPD	HC Mbtuh	Power kW	HE Mbtuh	LWT °F	COP	WPD					
		PSI	FT						PSI	FT					PSI	FT					PSI	FT					
70	15.0	1.2	2.7	60	137.2	5.62	118.0	80.1	7.2	1.5	3.5	138.1	5.51	119.3	72.6	7.3	3.3	7.7	138.9	5.40	120.5	69.2	7.5	6.0	13.8		
				80	139.6	7.21	115.0	100.0	5.7	1.4	3.2	140.3	7.07	116.2	92.8	5.8	3.1	7.1	141.1	6.93	117.4	89.4	6.0	5.6	13.0		
				100	138.3	9.01	107.3	119.5	4.5	1.3	2.9	138.8	8.92	108.4	112.6	4.6	2.9	6.7	139.4	8.74	109.6	109.3	4.7	5.3	12.3		
				120	133.3	11.27	94.9	138.5	3.5	1.2	2.7	133.6	11.05	95.9	132.0	3.5	2.8	6.4	133.9	10.83	96.9	128.9	3.6	5.1	11.7		
					Operation not recommended																130.0	12.02	88.9	138.6	3.2	5.0	11.5
	22.5	3.3	7.6	60	141.5	5.68	122.1	80.7	7.3	1.5	3.5	142.3	5.57	123.3	73.2	7.5	3.3	7.7	143.2	5.46	124.6	69.7	7.7	6.0	13.8		
				80	145.0	7.29	120.1	100.5	5.8	1.4	3.2	145.7	7.14	121.4	93.3	6.0	3.1	7.1	146.5	7.00	122.6	89.9	6.1	5.6	13.0		
				100	144.1	9.22	112.7	119.9	4.6	1.3	2.9	144.7	9.03	113.9	113.1	4.7	2.9	6.7	145.2	8.85	115.0	109.7	4.8	5.3	12.3		
				120	138.9	11.46	99.7	139.0	3.5	1.2	2.7	139.1	11.24	100.8	132.4	3.6	2.8	6.4	139.4	11.01	101.8	129.3	3.7	5.1	11.7		
					Operation not recommended																136.1	12.15	94.6	138.9	3.3	5.0	11.5
	30.0	6.1	14.1	60	146.9	5.74	127.3	80.9	7.5	1.5	3.5	147.8	5.62	128.6	73.4	7.7	3.3	7.7	148.7	5.50	129.9	70.0	7.9	6.0	13.8		
				80	150.8	7.36	125.7	100.7	6.0	1.4	3.2	151.6	7.21	126.9	93.5	6.2	3.1	7.1	152.3	7.07	128.2	90.1	6.3	5.6	13.0		
100				150.1	9.33	118.3	120.2	4.7	1.3	2.9	150.7	9.15	119.5	113.3	4.8	2.9	6.7	151.3	8.97	120.7	109.9	4.9	5.3	12.3			
120				144.9	11.66	105.1	139.2	3.6	1.2	2.7	145.2	11.43	106.2	132.7	3.7	2.8	6.4	145.5	11.20	107.3	129.5	3.8	5.1	11.7			
				Operation not recommended																140.8	12.27	98.9	139.2	3.4	5.0	11.5	
80	15.0	1.1	2.5	60	144.7	5.73	125.2	81.7	7.4	1.5	3.5	145.6	5.62	126.5	73.5	7.6	3.3	7.7	146.5	5.51	127.8	69.8	7.8	6.0	13.8		
				80	149.6	7.34	124.6	101.8	6.0	1.4	3.2	150.4	7.19	125.9	93.9	6.1	3.1	7.1	151.2	7.05	127.2	90.2	6.3	5.6	13.0		
				100	149.3	9.21	117.9	121.4	4.8	1.3	2.9	149.9	9.03	119.1	113.8	4.9	2.9	6.7	150.6	8.85	120.4	110.2	5.0	5.3	12.3		
				120	143.8	11.35	105.1	140.4	3.7	1.2	2.7	144.2	11.13	106.2	133.2	3.8	2.8	6.4	144.5	10.91	107.3	129.8	3.9	5.1	11.7		
					Operation not recommended																139.8	12.00	98.9	139.4	3.4	5.0	11.5
	22.5	3.1	7.1	60	147.5	5.79	127.7	82.3	7.5	1.5	3.5	148.4	5.67	129.0	74.1	7.7	3.3	7.7	149.3	5.56	130.3	70.3	7.9	6.0	13.8		
				80	154.7	7.41	129.4	102.3	6.1	1.4	3.2	155.5	7.26	130.7	94.3	6.3	3.1	7.1	156.3	7.12	132.0	90.6	6.4	5.6	13.0		
				100	155.4	9.34	123.5	121.8	4.9	1.3	2.9	156.0	9.16	124.8	114.2	5.0	2.9	6.7	156.7	8.97	126.1	110.6	5.1	5.3	12.3		
				120	149.7	11.59	110.2	140.7	3.8	1.2	2.7	150.1	11.35	111.3	133.5	3.9	2.8	6.4	150.4	11.13	112.5	130.1	4.0	5.1	11.7		
					Operation not recommended																146.2	12.13	104.9	139.7	3.5	5.0	11.5
	30.0	5.8	13.4	60	153.9	8.85	133.9	82.4	7.7	1.5	3.5	154.8	5.73	135.3	74.2	7.9	3.3	7.7	155.8	5.62	136.6	70.4	8.1	6.0	13.8		
				80	161.5	7.49	135.9	102.5	6.3	1.4	3.2	162.3	7.34	137.3	94.5	6.5	3.1	7.1	163.2	7.19	138.7	90.8	6.7	5.6	13.0		
100				162.7	9.48	130.3	122.0	5.0	1.3	2.9	163.3	9.29	131.6	114.4	5.2	2.9	6.7	164.0	9.10	133.0	110.8	5.3	5.3	12.3			
120				157.4	11.82	117.1	141.0	3.9	1.2	2.7	157.8	11.59	118.3	133.8	4.0	2.8	6.4	158.2	11.36	119.4	130.4	4.1	5.1	11.7			
				Operation not recommended																152.5	12.25	110.7	139.9	3.6	5.0	11.5	

Interpolation is permissible; extrapolation is not.  
 All performance is based upon the lower voltage of dual voltage rated units.  
 Performance stated is at the rated power supply; performance may vary as the power supply varies from the rated.  
 Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.  
 Operation below 60°F EWT requires optional insulated water/refrigerant circuit.  
 See performance correction tables for operating conditions other than those listed above.  
 See Performance Data Selection Notes for operation in the shaded areas. Operation in shaded areas requires antifreeze.





# Performance Data – TMW170 (60 Hz I-P) - Heating

Table Continued from Previous Page

SOURCE				LOAD																					
EWT °F	Flow			EWT °F	Flow 18.0 GPM						Flow 27.0 GPM						Flow 35.0 GPM								
	GPM	WPD			HC Mbtuh	Power KW	HE Mbtuh	LWT °F	COP	WPD	HC Mbtuh	Power KW	HE Mbtuh	LWT °F	COP	WPD	HC Mbtuh	Power KW	HE Mbtuh	LWT °F	COP	WPD			
		PSI	FT						PSI	FT				PSI	FT					PSI	FT				
60	18.0	0.30	0.69	60	149.8	7.18	125.3	77.1	6.1	0.30	0.69	154.9	7.17	130.5	71.7	6.3	1.59	3.67	161.3	7.45	135.9	69.2	6.3	3.13	7.23
				80	143.8	8.91	113.4	96.4	4.7	0.15	0.35	148.4	8.91	118.0	91.2	4.9	1.42	3.28	153.2	8.90	122.9	88.8	5.1	2.87	6.63
				100	136.1	10.20	101.3	115.6	3.9	0.09	0.21	140.1	10.20	105.3	110.6	4.0	1.28	2.96	144.4	10.19	109.6	108.3	4.2	2.65	6.12
				120	132.2	12.69	88.9	135.1	3.1	0.07	0.16	135.8	12.69	92.5	130.2	3.1	1.19	2.75	139.5	12.68	96.3	128.0	3.2	2.50	5.78
	27.0	1.59	3.67	60	154.5	7.22	129.9	77.7	6.3	0.30	0.69	161.0	7.48	135.4	72.1	6.3	1.59	3.67	166.8	7.45	141.3	69.5	6.6	3.13	7.23
				80	148.5	8.97	117.9	97.0	4.9	0.15	0.35	153.5	8.97	122.9	91.6	5.0	1.42	3.28	158.8	8.96	128.2	89.1	5.2	2.87	6.63
				100	140.7	10.26	105.7	116.1	4.0	0.09	0.21	145.2	10.26	110.2	111.0	4.1	1.28	2.96	149.8	10.25	114.9	108.6	4.3	2.65	6.12
				120	136.2	12.74	92.7	135.6	3.1	0.07	0.16	140.0	12.73	96.6	130.6	3.2	1.19	2.75	144.2	12.73	100.7	128.2	3.3	2.50	5.78
	35.0	3.13	7.23	60	156.8	7.25	132.0	77.9	6.3	0.30	0.69	163.3	7.48	137.8	72.3	6.4	1.59	3.67	169.3	7.45	143.9	69.7	6.7	3.13	7.23
				80	150.8	9.00	120.1	97.2	4.9	0.15	0.35	156.0	9.00	125.3	91.8	5.1	1.42	3.28	161.5	8.99	130.8	89.2	5.3	2.87	6.63
				100	147.1	10.29	112.0	116.8	4.2	0.09	0.21	147.6	10.29	112.5	111.1	4.2	1.28	2.96	152.6	10.28	117.5	108.7	4.3	2.65	6.12
				120	138.1	12.76	94.6	135.8	3.2	0.07	0.16	142.1	12.76	98.6	130.7	3.3	1.19	2.75	146.5	12.75	103.0	128.4	3.4	2.50	5.78
70	18.0	0.17	0.39	60	158.9	7.27	134.1	78.2	6.4	0.30	0.69	164.4	7.27	139.6	72.4	6.6	1.59	3.67	171.0	7.45	145.5	69.8	6.7	3.13	7.23
				80	153.8	9.04	123.0	97.6	5.0	0.15	0.35	158.8	9.03	128.0	92.0	5.2	1.42	3.28	164.1	9.02	133.4	89.4	5.3	2.87	6.63
				100	147.2	10.35	111.9	116.8	4.2	0.09	0.21	151.7	10.34	116.4	111.4	4.3	1.28	2.96	156.4	10.33	121.2	108.9	4.4	2.65	6.12
				120	142.9	12.82	99.2	136.3	3.3	0.07	0.16	146.9	12.81	103.2	131.1	3.4	1.19	2.75	151.1	12.80	107.5	128.6	3.5	2.50	5.78
	27.0	1.49	3.44	60	163.3	7.33	138.3	78.7	6.5	0.30	0.69	169.8	7.49	144.3	72.8	6.6	1.59	3.67	176.1	7.46	150.6	70.1	6.9	3.13	7.23
				80	158.4	9.10	127.3	98.1	5.1	0.15	0.35	163.8	9.01	132.8	92.4	5.3	1.42	3.28	169.6	9.09	138.6	89.7	5.5	2.87	6.63
				100	152.0	10.41	116.5	117.4	4.3	0.09	0.21	156.9	10.41	121.4	111.8	4.4	1.28	2.96	162.1	10.40	126.6	109.3	4.6	2.65	6.12
				120	146.9	12.87	103.0	136.8	3.3	0.07	0.16	151.3	12.86	107.4	131.4	3.4	1.19	2.75	155.9	12.86	112.1	128.9	3.6	2.50	5.78
	35.0	2.98	6.88	60	165.4	7.36	140.3	78.9	6.6	0.30	0.69	172.0	7.49	146.4	73.0	6.7	1.59	3.67	178.5	7.46	153.0	70.2	7.0	3.13	7.23
				80	160.6	9.14	129.4	98.4	5.2	0.15	0.35	166.2	9.13	135.1	92.5	5.3	1.42	3.28	172.2	9.13	141.1	89.8	5.5	2.87	6.63
				100	158.9	10.44	123.2	118.2	4.5	0.09	0.21	159.5	10.44	123.8	112.0	4.5	1.28	2.96	164.9	10.44	129.3	109.4	4.6	2.65	6.12
				120	148.9	12.90	104.9	137.0	3.4	0.07	0.16	153.4	12.89	109.5	131.6	3.5	1.19	2.75	158.3	12.89	114.3	129.0	3.6	2.50	5.78

Interpolation is permissible; extrapolation is not.  
 All performance is based upon the lower voltage of dual voltage rated units.  
 Performance stated is at the rated power supply; performance may vary as the power supply varies from the rated.  
 Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.  
 Operation below 60°F EWT requires optional insulated water/refrigerant circuit.  
 See performance correction tables for operating conditions other than those listed above.  
 See Performance Data Selection Notes for operation in the shaded areas. Operation in shaded areas requires antifreeze.



# Performance Data – TMW340 (60 Hz I-P) - Cooling

Table Continued from Previous Page

SOURCE				LOAD																									
EWT °F	Flow			EWT °F	Flow 35.0 GPM						Flow 53.0 GPM						Flow 70.0 GPM												
	GPM	WPD			TC Mbtuh	Power kW	HR Mbtuh	LWT °F	EER	WPD		TC Mbtuh	Power kW	HR Mbtuh	LWT °F	EER	WPD		TC Mbtuh	Power kW	HR Mbtuh	LWT °F	EER	WPD					
		PSI	FT																										
110	35.0	0.79	1.82	50	178.7	22.84	256.6	39.8	7.2	1.19	2.75	191.9	22.99	270.4	42.8	8.3	3.59	8.30	198.8	23.07	277.5	44.3	8.6	6.50	15.02				
				60	213.9	23.25	293.2	47.8	8.6	1.10	2.53	229.0	23.42	308.9	51.4	9.8	3.44	7.94	236.6	23.51	316.8	53.2	10.1	6.18	14.28				
				70	246.8	23.64	327.4	55.9	9.9	1.01	2.34	261.3	23.81	342.6	60.1	11.0	3.29	7.60	267.9	23.89	349.4	62.3	11.2	5.91	13.64				
				80	273.2	23.95	354.9	64.4	11.0	0.94	2.17	<b>Operation not recommended</b>																	
				90																									
	53.0	2.77	6.40	50	189.2	21.95	264.1	39.2	8.0	1.19	2.75	202.5	22.05	277.7	42.4	9.2	3.59	8.30	209.3	22.10	284.7	44.0	9.5	6.50	15.02				
				60	222.5	22.19	298.2	47.3	9.4	1.10	2.53	237.0	22.30	313.1	51.1	10.6	3.44	7.94	244.3	22.35	320.6	53.0	10.9	6.18	14.28				
				70	253.3	22.41	329.8	55.5	10.8	1.01	2.34	268.0	22.52	344.8	59.9	11.9	3.29	7.60	275.0	22.57	352.0	62.1	12.2	5.91	13.64				
				80	280.4	22.61	357.6	64.0	11.9	0.94	2.17	293.5	22.71	371.0	68.9	12.9	3.15	7.28	299.3	22.75	376.9	71.4	13.2	5.67	13.09				
				90	302.0	22.77	379.7	72.7	12.9	0.88	2.03	311.6	22.85	389.5	78.2	13.6	3.02	6.97	315.2	22.87	393.3	81.0	13.8	5.47	12.64				
	70.0	5.20	12.02	50	193.7	21.53	267.2	38.9	8.4	1.19	2.75	207.2	21.60	280.9	42.2	9.6	3.59	8.30	214.1	21.63	287.9	43.9	9.9	6.50	15.02				
				60	226.6	21.70	300.6	47.1	9.8	1.10	2.53	241.1	21.78	315.4	50.9	11.1	3.44	7.94	248.4	21.81	322.8	52.9	11.4	6.18	14.28				
				70	256.9	21.86	331.5	55.3	11.2	1.01	2.34	271.6	21.94	346.5	59.7	12.4	3.29	7.60	278.8	21.98	353.8	62.0	12.7	5.91	13.64				
				80	284.0	22.01	359.1	63.8	12.4	0.94	2.17	297.9	22.08	373.3	68.8	13.5	3.15	7.28	304.4	22.12	379.8	71.3	13.8	5.67	13.09				
				90	307.1	22.13	382.6	72.5	13.5	0.88	2.03	318.9	22.19	394.6	78.0	14.4	3.02	6.97	324.0	22.22	399.8	80.7	14.6	5.47	12.64				

Interpolation is permissible; extrapolation is not.  
 All performance is based upon the lower voltage of dual voltage rated units.  
 Performance stated is at the rated power supply; performance may vary as the power supply varies from the rated.  
 Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.  
 Operation below 60°F EWT requires optional insulated water/refrigerant circuit.  
 See performance correction tables for operating conditions other than those listed above.  
 See Performance Data Selection Notes for operation in the shaded areas. Operation in shaded areas requires antifreeze.



# Performance Data – TMW340 (60 Hz I-P) - Heating

Table Continued from Previous Page

SOURCE				LOAD																									
EWT °F	Flow			EWT °F	Flow 35.0 GPM						Flow 53.0 GPM						Flow 70.0 GPM												
	GPM	WPD			HC Mbtuh	Power KW	HE Mbtuh	LWT °F	COP	WPD		HC Mbtuh	Power KW	HE Mbtuh	LWT °F	COP	WPD		HC Mbtuh	Power KW	HE Mbtuh	LWT °F	COP	WPD					
		PSI	FT						PSI	FT					PSI	FT						PSI	FT					PSI	FT
60	35.0	1.01	2.53	60	299.6	14.35	250.7	77.1	6.1	1.01	2.53	309.8	14.34	260.9	71.7	6.3	3.44	7.94	322.6	14.89	271.8	69.2	6.3	6.18	14.28				
				80	287.6	17.83	226.8	96.4	4.7	0.94	2.17	296.8	17.82	236.0	91.2	4.9	3.15	7.28	306.5	17.80	245.7	88.8	5.1	5.67	13.09				
				100	272.2	20.41	202.6	115.6	3.9	0.83	1.91	280.3	20.39	210.7	110.6	4.0	2.89	6.68	288.8	20.38	219.3	108.3	4.2	5.32	12.28				
				120	264.5	25.39	177.8	135.1	3.1	0.76	1.75	271.6	25.38	185.0	130.2	3.1	2.66	6.15	279.1	25.36	192.5	128.0	3.2	5.13	11.86				
	53.0	3.44	7.94	60	309.1	14.45	259.8	77.7	6.3	1.01	2.53	321.9	14.97	270.9	72.1	6.3	3.44	7.94	333.5	14.90	282.7	69.5	6.6	6.18	14.28				
				80	297.0	17.94	235.8	97.0	4.9	0.94	2.17	307.0	17.93	245.8	91.6	5.0	3.15	7.28	317.6	17.92	256.4	89.1	5.2	5.67	13.09				
				100	281.5	20.52	211.4	116.1	4.0	0.83	1.91	290.3	20.51	220.3	111.0	4.1	2.89	6.68	299.7	20.50	229.7	108.6	4.3	5.32	12.28				
				120	272.3	25.47	185.4	135.6	3.1	0.76	1.75	280.1	25.46	193.2	130.6	3.2	2.66	6.15	288.3	25.46	201.5	128.2	3.3	5.13	11.86				
	70.0	6.18	14.28	60	313.5	14.50	264.1	77.9	6.3	1.01	2.53	326.6	14.97	275.6	72.3	6.4	3.44	7.94	338.7	14.90	287.8	69.7	6.7	6.18	14.28				
				80	301.5	18.00	240.1	97.2	4.9	0.94	2.17	311.9	17.99	250.5	91.8	5.1	3.15	7.28	323.0	17.98	261.6	89.2	5.3	5.67	13.09				
				100	294.2	20.58	224.0	116.8	4.2	0.83	1.91	295.3	20.57	225.1	111.1	4.2	2.89	6.68	305.1	20.57	234.9	108.7	4.3	5.32	12.28				
				120	276.2	25.52	189.1	135.8	3.2	0.76	1.75	284.3	25.51	197.2	130.7	3.3	2.66	6.15	292.9	25.50	205.9	128.4	3.4	5.13	11.86				
70	35.0	1.01	2.34	60	317.8	14.55	268.2	78.2	6.4	1.01	2.53	328.9	14.53	279.3	72.4	6.6	3.44	7.94	342.0	14.91	291.1	69.8	6.7	6.18	14.28				
				80	307.6	18.08	245.9	97.6	5.0	0.94	2.17	317.6	18.06	256.0	92.0	5.2	3.15	7.28	328.3	18.05	266.7	89.4	5.3	5.67	13.09				
				100	294.4	20.69	223.8	116.8	4.2	0.83	1.91	303.4	20.68	232.8	111.4	4.3	2.89	6.68	312.9	20.66	242.4	108.9	4.4	5.32	12.28				
				120	285.8	25.63	198.3	136.3	3.3	0.76	1.75	293.8	25.62	206.4	131.1	3.4	2.66	6.15	302.3	25.61	214.9	128.6	3.5	5.13	11.86				
	53.0	3.29	7.60	60	326.7	14.66	276.6	78.7	6.5	1.01	2.53	339.7	14.98	288.6	72.8	6.6	3.44	7.94	352.2	14.91	301.3	70.1	6.9	6.18	14.28				
				80	316.8	18.21	254.7	98.1	5.1	0.94	2.17	327.7	18.20	265.6	92.4	5.3	3.15	7.28	339.2	18.18	277.2	89.7	5.5	5.67	13.09				
				100	304.0	20.83	232.9	117.4	4.3	0.83	1.91	313.8	20.82	242.8	111.8	4.4	2.89	6.68	324.2	20.80	253.2	109.3	4.6	5.32	12.28				
				120	293.9	25.74	206.1	136.8	3.3	0.76	1.75	302.6	25.73	214.8	131.4	3.4	2.66	6.15	311.9	25.72	224.1	128.9	3.6	5.13	11.86				
	70.0	5.91	13.64	60	330.8	14.72	280.6	78.9	6.6	1.01	2.53	344.0	14.99	292.9	73.0	6.7	3.44	7.94	356.9	14.92	306.0	70.2	7.0	6.18	14.28				
				80	321.2	18.27	258.8	98.4	5.2	0.94	2.17	332.4	18.26	270.1	92.5	5.3	3.15	7.28	344.4	18.25	282.1	89.8	5.5	5.67	13.09				
				100	317.7	20.89	246.4	118.2	4.5	0.83	1.91	318.9	20.89	247.7	112.0	4.5	2.89	6.68	329.8	20.88	258.6	109.4	4.6	5.32	12.28				
				120	297.8	25.79	209.8	137.0	3.4	0.76	1.75	306.9	25.79	218.9	131.6	3.5	2.66	6.15	316.5	25.78	228.6	129.0	3.6	5.13	11.86				

Interpolation is permissible; extrapolation is not.  
 All performance is based upon the lower voltage of dual voltage rated units.  
 Performance stated is at the rated power supply; performance may vary as the power supply varies from the rated.  
 Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.  
 Operation below 60°F EWT requires optional insulated water/refrigerant circuit.  
 See performance correction tables for operating conditions other than those listed above.  
 See Performance Data Selection Notes for operation in the shaded areas. Operation in shaded areas requires antifreeze.



# Antifreeze Correction Table

EWT	Antifreeze Type	Antifreeze %	Cooling			Heating		WPD
			Total Cap	Sensible Cap	Watts	Total Cap	Watts	
90	Water	0%	1.000	1.000	1.000	1.000	1.000	1.000
	Ethanol	5%	0.998	0.998	1.002	0.996	0.999	1.025
		10%	0.996	0.996	1.003	0.991	0.997	1.048
		15%	0.994	0.994	1.005	0.987	0.996	1.098
		20%	0.991	0.991	1.006	0.982	0.994	1.142
		25%	0.986	0.986	1.009	0.972	0.991	1.207
		30%	0.981	0.981	1.012	0.962	0.988	1.265
		35%	0.977	0.977	1.015	0.953	0.985	1.312
		40%	0.972	0.972	1.018	0.943	0.982	1.370
		45%	0.966	0.966	1.023	0.931	0.978	1.431
		50%	0.959	0.959	1.027	0.918	0.974	1.494
	Ethylene Glycol	5%	0.998	0.998	1.002	0.996	0.999	1.021
		10%	0.996	0.996	1.003	0.991	0.997	1.040
		15%	0.994	0.994	1.004	0.987	0.996	1.079
		20%	0.991	0.991	1.005	0.982	0.995	1.114
		25%	0.988	0.988	1.008	0.976	0.993	1.146
		30%	0.985	0.985	1.010	0.969	0.990	1.175
		35%	0.982	0.982	1.012	0.963	0.988	1.208
		40%	0.979	0.979	1.014	0.956	0.986	1.243
		45%	0.976	0.976	1.016	0.950	0.984	1.278
		50%	0.972	0.972	1.018	0.943	0.982	1.314
	Methanol	5%	0.997	0.997	1.002	0.993	0.998	1.039
		10%	0.993	0.993	1.004	0.986	0.996	1.075
		15%	0.990	0.990	1.007	0.979	0.994	1.116
		20%	0.986	0.986	1.009	0.972	0.991	1.154
		25%	0.982	0.982	1.012	0.964	0.989	1.189
		30%	0.978	0.978	1.014	0.955	0.986	1.221
		35%	0.974	0.974	1.017	0.947	0.984	1.267
		40%	0.970	0.970	1.020	0.939	0.981	1.310
		45%	0.966	0.966	1.023	0.930	0.978	1.353
		50%	0.961	0.961	1.026	0.920	0.975	1.398
	Propylene Glycol	5%	0.995	0.995	1.003	0.990	0.997	1.065
		10%	0.990	0.990	1.006	0.980	0.994	1.119
		15%	0.986	0.986	1.009	0.971	0.991	1.152
		20%	0.981	0.981	1.012	0.962	0.988	1.182
		25%	0.978	0.978	1.014	0.956	0.986	1.227
		30%	0.975	0.975	1.016	0.950	0.984	1.267
		35%	0.972	0.972	1.018	0.944	0.982	1.312
		40%	0.969	0.969	1.020	0.938	0.980	1.356
		45%	0.965	0.965	1.023	0.929	0.977	1.402
		50%	0.960	0.960	1.026	0.919	0.974	1.450

Table Continued on Next Page

# Antifreeze Correction Table

Table Continued from Previous Page

EWT	Antifreeze Type	Antifreeze %	Cooling			Heating		WPD
			Total Cap	Sensible Cap	Watts	Total Cap	Watts	
30	Water	0%	1.000	1.000	1.000	1.000	1.000	1.000
	Ethanol	5%	0.991	0.991	1.006	0.981	0.994	1.140
		10%	0.981	0.981	1.012	0.961	0.988	1.242
		15%	0.973	0.973	1.018	0.944	0.983	1.295
		20%	0.964	0.964	1.024	0.927	0.977	1.343
		25%	0.959	0.959	1.028	0.917	0.974	1.363
		30%	0.954	0.954	1.031	0.907	0.970	1.383
		35%	0.949	0.949	1.035	0.897	0.967	1.468
		40%	0.944	0.944	1.038	0.887	0.964	1.523
		45%	0.940	0.940	1.041	0.880	0.962	1.580
		50%	0.936	0.936	1.043	0.872	0.959	1.639
	Ethylene Glycol	5%	0.997	0.997	1.002	0.993	0.998	1.040
		10%	0.993	0.993	1.004	0.986	0.996	1.075
		15%	0.990	0.990	1.006	0.980	0.994	1.122
		20%	0.987	0.987	1.008	0.973	0.992	1.163
		25%	0.983	0.983	1.011	0.966	0.990	1.195
		30%	0.979	0.979	1.013	0.958	0.987	1.225
		35%	0.976	0.976	1.016	0.951	0.985	1.279
		40%	0.972	0.972	1.018	0.943	0.982	1.324
		45%	0.969	0.969	1.021	0.937	0.980	1.371
		50%	0.966	0.966	1.023	0.930	0.978	1.419
	Methanol	5%	0.995	0.995	1.004	0.989	0.997	1.069
		10%	0.989	0.989	1.007	0.978	0.993	1.127
		15%	0.984	0.984	1.011	0.968	0.990	1.164
		20%	0.979	0.979	1.014	0.957	0.986	1.197
		25%	0.975	0.975	1.017	0.949	0.984	1.216
		30%	0.971	0.971	1.019	0.941	0.981	1.235
		35%	0.967	0.967	1.022	0.933	0.979	1.286
		40%	0.963	0.963	1.025	0.924	0.976	1.323
		45%	0.959	0.959	1.028	0.917	0.974	1.360
		50%	0.955	0.955	1.030	0.910	0.971	1.399
	Propylene Glycol	5%	0.995	0.995	1.004	0.989	0.997	1.071
		10%	0.989	0.989	1.007	0.978	0.993	1.130
		15%	0.985	0.985	1.010	0.968	0.990	1.206
		20%	0.980	0.980	1.013	0.958	0.987	1.270
		25%	0.974	0.974	1.017	0.947	0.983	1.359
		30%	0.968	0.968	1.021	0.935	0.979	1.433
		35%	0.963	0.963	1.025	0.924	0.976	1.522
		40%	0.957	0.957	1.029	0.913	0.972	1.614
		45%	0.949	0.949	1.034	0.898	0.967	1.712
		50%	0.941	0.941	1.039	0.882	0.962	1.816

# Physical & Electrical Data

## Physical Data

Model	TMW036	TMW060	TMW120	TMW170	TMW340
Compressor (qty)	Scroll (1)		Scroll (2)	Scroll (1)	Scroll (2)
Factory Charge R410A (lbs) [kg] / Circuit	4.5 [2.04]	5.5 [2.49]	5.5 [2.49]	14.9 [6.75]	14.9 [6.75]
Indoor / Load Water connection sizes FPT (in)	3/4"	1"	1-1/2"	2"	
Outdoor / Source Water connection Size FPT (in)	3/4"	1"	1-1/2"	2"	
HWG Water In/Out IPT (in)	1/2"			N/A	
Weight - Operating (lbs) [kg]	348 [158]	360 [163]	726 [329]	790 [358]	1330 [603]
Weight - Shipping (lbs) [kg]	373 [169]	385 [175]	770 [349]	800 [363]	1340 [608]
<b>Water Volume (Source)</b>					
Gallons (Lliters)	0.96 (3.64)	1.33 (5.04)	2.65 (10.02)	3.50 (13.27)	6.72 (25.44)

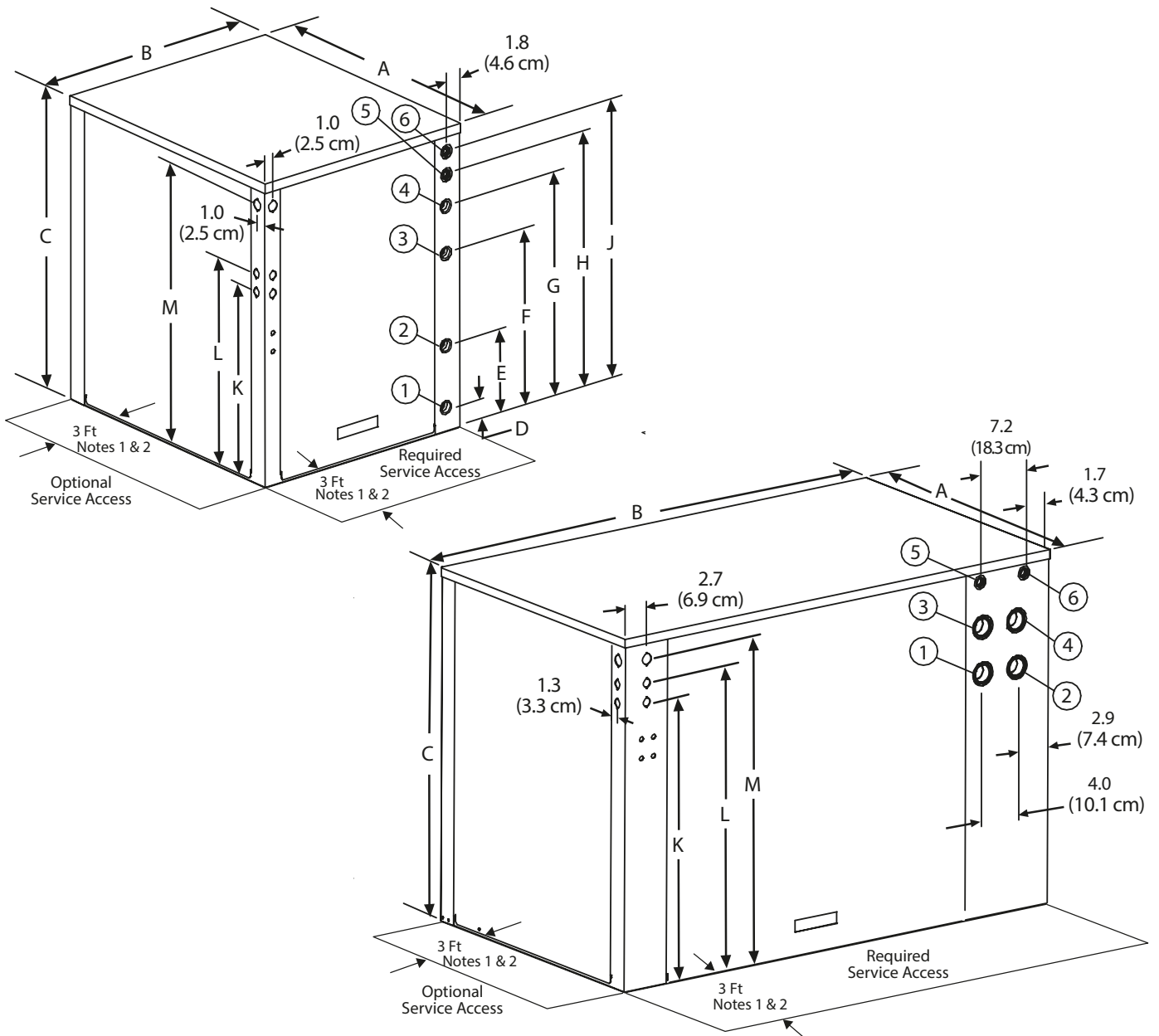
Dual isolated compressor mounting  
Balanced port expansion valve (TXV)  
Compressor on (green) and fault (red) light

Unit Maximum Water Working Pressure	
Options	Max Working Pressure PSIG [kPa]
Base Unit	300 [2,068]

## TMW Electrical Data

Model	Voltage Code	Volatge	Voltage Min/Max	Compressor			Total Unit FLA	Min Circuit Amps	SCCR rms Symmetrical	SCCR Volts Maximum	Max Fuse/HACR
				Qty	RLA	LRA					
TMW036	G	208-230/60/1	187/254	1	16.7	79	16.7	20.8	5	600	35
	E	265/60/1	239/292	1	13.5	72	13.5	16.8	5	600	30
	H	208-230/60/3	187/254	1	10.4	73	10.4	13.1	5	600	20
	F	460/60/3	414/506	1	5.8	38	5.8	7.2	5	600	15
	N	575/60/3	518/633	1	3.8	36.5	3.8	4.7	5	600	15
TMW060	G	208-230/60/1	187/254	1	26.3	134	26.3	32.9	5	600	50
	H	208-230/60/3	187/254	1	15.6	110	15.6	19.5	5	600	35
	F	460/60/3	414/506	1	7.8	52	7.8	9.8	5	600	15
TMW120	G	208-230/60/1	187/254	2	26.3	134	52.6	59.2	5	600	80
	H	208-230/60/3	187/254	2	15.6	110	31.2	35.1	5	600	50
	F	460/60/3	414/506	2	7.8	52	15.6	17.6	5	600	25
TMW170	H	208-230/60/3	187/254	1	53.6	245	53.6	67.0	5	600	110
	F	460/60/3	414/506	1	20.7	125	20.7	25.9	5	600	45
	N	575/60/3	518/633	1	16.4	100	16.4	20.5	5	600	35
TMW340	H	208-230/60/3	187/254	2	53.6	245	107.2	120.6	5	600	150
	F	460/60/3	414/506	2	20.7	125	41.4	46.6	5	600	60
	N	575/60/3	518/633	2	16.4	100	32.8	36.9	5	600	50

# Dimensional Data – TMW036-120



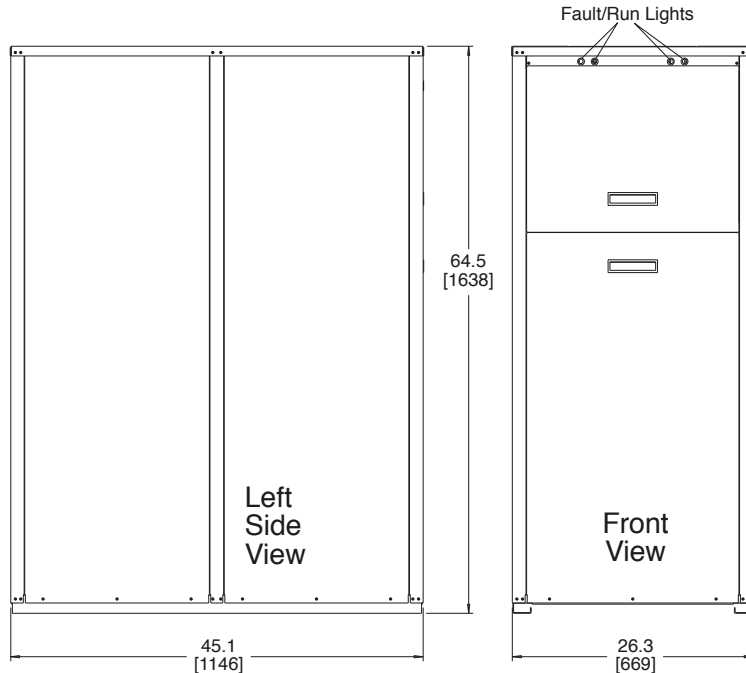
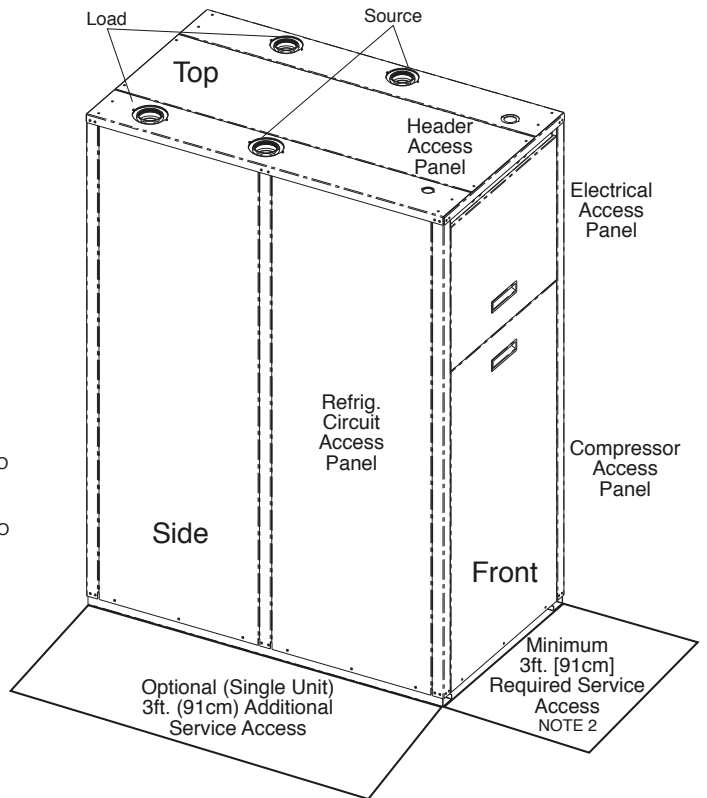
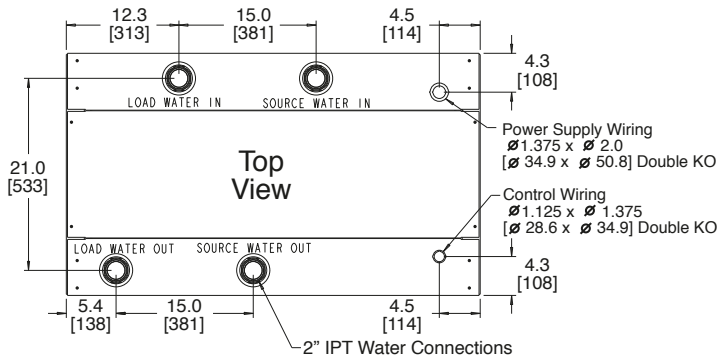
- Notes: 1. Dimensions shown in inches and [millimeters].  
 2. For multiple units placed side by side, allow sufficient space front or back to remove unit.

Water to Water	Overall Cabinet			Water Connections						Electric Access Plugs			
				1	2	3	4	5	6				
	A Depth	B Width	C Height	D Source (Outdoor) Water In	E Source (Outdoor) Water Out	F Load (Indoor) Water In	G Load (Indoor) Water Out	H HWG Return In	J HWG Water Out	K Low Voltage	L External Pump	M Power Supply	
036-060	in.	30.6	25.4	33	2.7	9.4	19.4	24.5	27.9	30.4	20.9	22.9	30.9
	cm.	77.8	64.5	83.8	6.9	23.9	49.3	62.2	70.9	77.2	53.1	58.2	78.5
120	in.	30.6	52.9	37	25.2	25.2	30.1	30.1	34.9	34.9	30.5	32.5	35
	cm.	77.8	134.4	94	64.0	64.0	76.5	76.5	88.6	88.6	77.5	82.6	88.9

HACR circuit breaker in USA only

ClimateMaster works continually to improve its products. As a result, the design and specifications of each product at the time of order may be changed without notice and may not be as described herein. Please contact ClimateMaster's Customer Service Department at 1-405-745-6000 for specific information on the current design and specifications. Statements and other information contained herein are not express warranties and do not form the basis of any bargain between the parties, but are merely ClimateMaster's opinion or commendation of its products. The latest version of this document is available at [climatemaster.com](http://climatemaster.com). © ClimateMaster, Inc. All rights reserved 2009

# Dimensional Data – TMW170 & 340



- Notes:
1. Dimensions shown in inches and [millimeters].
  2. For multiple units placed side by side, allow sufficient space front or back to remove unit.

# TMW Series Wiring Diagram Matrix

All current diagrams can be located online at [climatemaster.com](http://climatemaster.com). Click 'Commercial Professional'.

1. Click 'Products' in the main navigation
2. Select 'Small Packaged Units'
3. Select the TMW product series
4. Click the Wire Diagrams tab in the middle of the page
5. Select your voltage and controls

Unit Controller	Voltage	Size			
		TMW036-060	TMW170	TMW120	TMW340
CXM2	208-230/60/1, 265/60/1	96B0401N52		96B0401N58	
	208-230/60/3, 460/60/3, 575/60/3	96B0401N53	96B0401N61	96B0401N59	96B0401N69
AUX WD CXM2 w/MPC	All	96B0146N14	96B0401N76	96B0146N16	96B0401N76
DXM2.5	208-230/60/1, 265/60/1	96B0402N38		96B0402N41	
	208-230/60/3, 460/60/3, 575/60/3	96B0402N39	96B0402N44	96B0402N42	96B0402N50
AUX WD DXM2.5 w/MPC	All	96B0146N14	96B0402N56	96B0146N16	96B0402N56

# Tranquility® Water-To-Water (TMW) Series 60 Hz Engineering Specifications – Page 1

## General:

Furnish and install ClimateMaster "TMW" Water-Source Heat Pumps as indicated on the plans. Equipment shall be completely assembled, piped and internally wired. Capacities and characteristics as listed in the schedule and the specifications that follow.

Units shall be supplied completely factory built capable of operating over an entering water temperature range from 20° to 120°F (-6.7° to 48.9°C) as standard. All equipment listed in this section must be rated in accordance with Air-Conditioning, Heating and Refrigeration Institute/International Standards Organization (AHRI/ISO 13256-2). All equipment must be tested, investigated, and determined to comply with the requirements of the standards for Heating and Cooling Equipment UL-1995 for the United States and CAN/CSA-C22.2 NO.236 for Canada, by Intertek Testing Laboratories (ETL). The units shall have AHRI/ISO and ETL-US-C labels.

All units shall pass a factory acceptance test. The quality control system shall automatically perform the factory acceptance test via computer. A detailed report card from the factory acceptance test shall ship with each unit. **(Note: If unit fails the factory acceptance test it shall not be allowed to ship. Unit serial number will be recorded by factory acceptance test and furnished on report card for ease of unit warranty status.)**

## Basic Construction:

All units must have multiple removable panels for serviceability of compressor compartment. **Units having only one access panel shall not be acceptable.** All units must have front access for side by side installations.

The heat pumps shall be fabricated from heavy gauge galvanized steel with powder coat paint finish. Both sides of the steel shall be painted for added protection. All interior surfaces shall be lined with 1/2 inch (12.7 mm) thick, 1-1/2 lb/ft<sup>3</sup> (24 kg/m<sup>3</sup>) acoustic type glass fiber insulation. Insulation placement shall be designed in a manner that will eliminate any exposed edges.

Standard cabinet panel insulation must meet NFPA 90A requirements, air erosion and mold growth limits of UL-181, stringent fungal resistance test per ASTM-C1071 and ASTM G21, and shall meet zero level bacteria growth per ASTM G22. **Unit insulation must meet these stringent requirements or unit(s) will not be accepted.**

Cabinets shall have separate holes and knockouts for entrance of line voltage and low voltage control wiring. All factory-installed wiring passing through factory knockouts and openings shall be protected from sheet metal edges at openings by plastic ferrules. Supply and return water connections shall be copper FPT fittings. **Contractor shall be responsible for any extra costs involved in the installation of units that do not have this feature.** Contractor must ensure that units can be easily removed for servicing and coordinate locations of electrical conduit and lights with the electrical contractor.

Unit(s) shall have exterior indicator lights showing, 1) compressor operation (on/off) and 2) unit "fault" status. Contractor shall be responsible for providing control circuitry and indicator lights for units not providing this feature.

**Option: UltraQuiet package - Size 036, 060, 120 include sound attenuating insulation on unit base pan and all removable panels plus a refrigerant line muffler. Size 170 and 340 have a sound blanket on each compressor.**

## Refrigerant Circuit:

Units shall have sealed, isolated refrigerant circuit(s), each including a high efficiency scroll compressor designed for heat pump operation, a thermostatic expansion valve for refrigerant metering, a reversing valve, load and source coaxial (tube in tube) refrigerant to water heat exchangers, and safety controls including a high pressure switch, low pressure switch (loss of charge), and low water temperature sensors. Access fittings shall be factory installed on high and low pressure refrigerant lines to facilitate field service. Activation of any safety device shall prevent compressor operation via a microprocessor lockout circuit. **Units with brazed plate heat exchangers will not be accepted.**

ClimateMaster works continually to improve its products. As a result, the design and specifications of each product at the time of order may be changed without notice and may not be as described herein. Please contact ClimateMaster's Customer Service Department at 1-405-745-6000 for specific information on the current design and specifications. Statements and other information contained herein are not express warranties and do not form the basis of any bargain between the parties, but are merely ClimateMaster's opinion or commendation of its products. The latest version of this document is available at [climatemaster.com](http://climatemaster.com). © ClimateMaster, Inc. All rights reserved 2009

# Tranquility® Water-To-Water (TMW) Series 60 Hz Engineering Specifications – Page 2

Unit shall be supplied with extended range insulation, which adds closed cell insulation to internal water lines, and provides insulation on suction side refrigeration tubing including refrigerant to water heat exchangers.

Hermetic compressors shall be internally sprung. The compressors shall have a dual level vibration isolation system. The compressors will be mounted on specially engineered sound-tested EPDM vibration isolation grommets to a large heavy gauge compressor mounting plate, which is then isolated from the cabinet base with rubber grommets for maximized vibration attenuation. Compressors shall have thermal overload protection.

Refrigerant to water heat exchangers shall be of copper inner water tube and steel refrigerant outer tube design, rated to withstand 625 PSIG (4309 kPa) working refrigerant pressure and 450 PSIG (3101 kPa) working water pressure. The refrigerant to water heat exchanger shall be “electro-coated” with a low cure cathodic epoxy material a minimum of 0.4 mils thick (0.4 – 1.5 mils range) on all surfaces. The black colored coating shall provide a minimum of 1000 hours salt spray protection per ASTM B117-97 on all external steel and copper tubing. The material shall be formulated without the inclusion of any heavy metals and shall exhibit a pencil hardness of 2H (ASTM D3363-92A), crosshatch adhesion of 4B-5B (ASTM D3359-95), and impact resistance of 160 in-lbs (184 kg-cm) direct (ASTM D2794-93). **For all models except 170 & 340, which are powder coated.**

**Option: The unit will be supplied with cupro-nickel coaxial water to refrigerant heat exchanger (specify source and/or load heat exchanger).**

## Electrical:

A control box shall be located within the unit compressor compartment and shall contain a 75VA transformer, 24 volt activated, 3 pole compressor contactor, terminal block for thermostat wiring and solid-state controller for complete unit operation. Reversing valve wiring shall be routed through this electronic controller. Units shall be name-plated for use with time delay fuses or HACR circuit breakers. Unit controls shall be 24 Volt and provide heating or cooling as required by the remote aquastat / sensor. Units with two compressors (120 and 340) shall have a solid-state time delay relay and random start to prevent both compressors from starting simultaneously.

## Enhanced Solid State Control System (CXM2):

Units shall have a solid-state control system. Units utilizing electro-mechanical control shall not be acceptable. The control system microprocessor board shall be specifically designed to protect against building electrical system noise contamination, EMI, and RFI interference. The control system shall interface with a heat pump type thermostat. The control system shall have the following features:

- a. Anti-short cycle time delay on compressor operation.
- b. Random start on power up mode.
- c. Low voltage protection.
- d. High voltage protection.
- e. Unit shutdown on high or low refrigerant pressures.
- f. Unit shutdown on low water temperature.
- g. Option to reset unit at thermostat or disconnect.
- h. Automatic intelligent reset. Unit shall automatically reset the unit 5 minutes after trip if the fault has cleared. If a fault occurs 3 times sequentially without thermostat meeting temperature, then lockout requiring manual reset will occur.
- i. Ability to defeat time delays for servicing.
- j. The low-pressure switch shall not be monitored for the first 120 seconds after a compressor start command to prevent nuisance safety trips.
- k. 24V output to cycle a motorized water valve or other device with compressor contactor.
- l. Unit Performance Sentinel (UPS). The UPS warns when the heat pump is running inefficiently.
- m. Water coil low temperature sensing (selectable for water or anti-freeze).

ClimateMaster works continually to improve its products. As a result, the design and specifications of each product at the time of order may be changed without notice and may not be as described herein. Please contact ClimateMaster's Customer Service Department at 1-405-745-6000 for specific information on the current design and specifications. Statements and other information contained herein are not express warranties and do not form the basis of any bargain between the parties, but are merely ClimateMaster's opinion or commendation of its products. The latest version of this document is available at [climatemaster.com](http://climatemaster.com). © ClimateMaster, Inc. All rights reserved 2009



# Tranquility® Water-To-Water (TMW) Series 60 Hz Engineering Specifications – Page 3

- n. Air coil low temperature sensing.
- o. Minimized reversing valve operation (Unit control logic shall only switch the reversing valve when cooling is demanded for the first time. The reversing valve shall be held in this position until the first call for heating, ensuring quiet operation and increased valve life).
- p. Emergency shutdown contacts.
- q. Entering and leaving water temperature sensing.
- r. Leaving air temperature sensing.
- s. Compressor discharge temperature sensing.

**NOTE: Units not providing the 8 safety protections of anti-short cycle, low voltage, high voltage, high refrigerant pressure, low pressure (loss of charge), air coil low temperature cut-out, water coil low temperature cut-out, and condensate overflow protections will not be accepted.**

When CXM2 is connected to AWC99U01 thermostat or handheld service tool, the installer/service technician can; check DIP switch S2 settings; run operation modes manually; check all physical inputs from thermostat and refrigerant pressure switches status, (Y1, Y2, W, O, G, H, ESD, NSB, OR, HP switch, and LOC switch); current or at time of fault the following temperatures - water coil (LT1), compressor discharge, leaving air, leaving water, entering water and control voltage; record last five faults, list possible reasons, and clear faults. When the AWC99U01 communicating thermostat is used this same functionality can be viewed and adjusted remotely in the web portal or mobile app. **Systems not providing remote access, diagnosis, and adjustment functionality will not be accepted.**

## Option: Enhanced Solid State Control System (DXM2.5)

This control system is a communicating controller.

Control shall have the above-mentioned features of the CXM2 control system along with the following expanded features:

- a. Removable thermostat connector.
- b. Night setback control.
- c. Random start on return from night setback.
- d. Override temperature control with 2-hour timer for room occupant to override setback temperature at the thermostat.
- e. Dry contact night setback output for digital night setback thermostats.
- f. Ability to work with heat pump or heat/cool (Y, W) type thermostats.
- g. Ability to work with heat pump thermostats using O or B reversing valve control.
- h. Boilerless system heat control at low loop water temperature.
- i. Ability to allow up to 3 units to be controlled by one thermostat.
- j. Relay to operate an external damper.
- k. Relay to start system pump.
- l. 75 VA control transformer. Control transformer shall have load side short circuit and overload protection via a built-in circuit breaker.

**NOTE: Units not providing the 7 safety protections of anti-short cycle, low voltage, high voltage, high refrigerant pressure, low pressure (loss of charge), air coil low temperature cut-out, and water coil low temperature cut-out**

When DXM2.5 is connected to AWC99U01 communicating thermostat or handheld service tool, the installer/service technician can; check and set CFM; check DIP switch S1, S2, and S3 settings; run operation modes manually; check all physical inputs from thermostat and refrigerant pressure switches status, (Y1, Y2, W, O, G, H, ESD, NSB, OR, HP switch, and LOC switch); current or at time of fault the following temperatures - water coil (LT1), air coil (LT2), compressor discharge, leaving air, leaving water, entering water and control voltage; record last five faults, list possible reasons, and clear faults. When the AWC99U01 communicating thermostat is used this same functionality can be viewed and adjusted remotely with the only portal or mobile app. **Systems not providing remote access,**

ClimateMaster works continually to improve its products. As a result, the design and specifications of each product at the time of order may be changed without notice and may not be as described herein. Please contact ClimateMaster's Customer Service Department at 1-405-745-6000 for specific information on the current design and specifications. Statements and other information contained herein are not express warranties and do not form the basis of any bargain between the parties, but are merely ClimateMaster's opinion or commendation of its products. The latest version of this document is available at [climatemaster.com](http://climatemaster.com). © ClimateMaster, Inc. All rights reserved 2009

# Tranquility® Water-To-Water (TMW) Series 60 Hz Engineering Specifications – Page 4

diagnosis, and adjustment functionality will not be accepted.

## Option: MPC (Multiple Protocol Control) interface system

Units shall have all the features listed above (either CXM2 or DXM2.5) and the control board will be supplied with a Multiple Protocol interface board. Available protocols are BACnet MS/TP, Modbus, or Johnson Controls N2. The choice of protocol shall be field selectable/changeable via the use of a simple selector switch. Protocol selection shall not require any additional programming or special external hardware or software tools. This will permit all units to be daisy chain connected by a 2-wire twisted pair shielded cable. The following points must be available at a central or remote computer location:

- a. Source leaving water temperature
- b. Load leaving water temperature
- c. Command of space temperature setpoint
- d. Cooling status
- e. Heating status
- f. Low temperature sensor alarm
- g. Low pressure sensor alarm
- h. High pressure switch alarm
- i. Hi/low voltage alarm
- j. Unoccupied/occupied command
- k. Cooling command
- l. Heating command
- m. Fault reset command
- n. Itemized fault code revealing reason for specific shutdown fault (any one of 7)

This option also provides the upgraded 75VA control transformer with load side short circuit and overload protection via a built in circuit breaker.

## Warranty:

ClimateMaster shall warranty equipment for a period of 12 months from start up or 18 months from shipping (which ever occurs first).

**Option: Extended 4-year compressor warranty covers compressor for a total of 5 years.**

**Option: Extended 4-year refrigeration circuit warranty covers coils, reversing valve, expansion valve and compressor for a total of 5 years.**

**Option: Extended 4-year control board warranty covers the CXM2/DXM2.5 control board for a total of 5 years.**

## FIELD INSTALLED OPTIONS

### Hose Kits:

All units shall be connected with hoses. The hoses shall be 2 feet (61 cm) long, braided stainless steel; fire rated hoses complete with adapters. Only fire rated hoses will be accepted.

# Tranquility® Water-To-Water (TMW) Series 60 Hz Engineering Specifications – Page 5

## Valves:

The following valves are available and will be shipped loose:

- a. Ball valve; bronze material, standard port full flow design, FPT connections.
- b. Ball valve with memory stop and PT port.
- c. “Y” strainer with blowdown valve; bronze material, FPT connections.
- d. Motorized water valve; slow acting, 24v, FPT connections.

## Hose Kit Assemblies:

The following assemblies ship with the valves already assembled to the hose described:

- a. Supply and return hoses having ball valve with PT port.
- b. Supply hose having ball valve with PT port; return hose having automatic flow regulator valve with PT ports, and ball valve.
- c. Supply hose having “Y” strainer with blowdown valve, and ball valve with PT port; return hose having automatic flow regulator with PT ports, and ball valve.
- d. Supply hose having “Y” strainer with blowdown valve, and ball valve with PT port; return hose having ball valve with PT port.

**NOTICE! This product specification document is furnished as a means to copy and paste ClimateMaster product information into project specification. It is not intended to be a complete list of product requirements. This document is an excerpt from the product submittal and must not be used without consulting the complete product submittal. For complete product installation and application requirements, please consult the complete product submittal. ClimateMaster is not responsible for misuse of this document or a failure to adequately review specific requirements in the product submittal.**

# Performance Sheet

## ENGINEERING GUIDE - I-P UNITS

Unit Designation: \_\_\_\_\_

Job Name: \_\_\_\_\_

Architect: \_\_\_\_\_

Engineer: \_\_\_\_\_

Contractor: \_\_\_\_\_

### PERFORMANCE DATA

Cooling Capacity: \_\_\_\_\_ Btuh

EER: \_\_\_\_\_

Heating Capacity: \_\_\_\_\_ Btuh

COP: \_\_\_\_\_

Ambient Air Temp: \_\_\_\_\_ °F

Source Entering Water Temp (Clg): \_\_\_\_\_ °F

Source Leaving Water Temp (Clg): \_\_\_\_\_ °F

Load Entering Water Temp (Clg): \_\_\_\_\_ °F

Load Leaving Water Temp (Clg): \_\_\_\_\_ °F

Source Entering Water Temp (Htg): \_\_\_\_\_ °F

Source Leaving Water Temp (Htg): \_\_\_\_\_ °F

Load Entering Water Temp (Htg): \_\_\_\_\_ °F

Load Leaving Water Temp (Htg): \_\_\_\_\_ °F

Operating Weight: \_\_\_\_\_ (lb)

### ELECTRICAL DATA

Power Supply: \_\_\_\_\_ Volts

\_\_\_\_\_ Phase \_\_\_\_\_ Hz

Minimum Circuit Ampacity: \_\_\_\_\_

Maximum Overcurrent Protection: \_\_\_\_\_

## ENGINEERING GUIDE - S-I UNITS

Unit Designation: \_\_\_\_\_

Job Name: \_\_\_\_\_

Architect: \_\_\_\_\_

Engineer: \_\_\_\_\_

Contractor: \_\_\_\_\_

### PERFORMANCE DATA

Cooling Capacity: \_\_\_\_\_ kW

EER: \_\_\_\_\_

Heating Capacity: \_\_\_\_\_ kW

COP: \_\_\_\_\_

Ambient Air Temp: \_\_\_\_\_ °C

Source Entering Water Temp (Clg): \_\_\_\_\_ °C

Source Leaving Water Temp (Clg): \_\_\_\_\_ °C

Load Entering Water Temp (Clg): \_\_\_\_\_ °C

Load Leaving Water Temp (Clg): \_\_\_\_\_ °C

Source Entering Water Temp (Htg): \_\_\_\_\_ °C

Source Leaving Water Temp (Htg): \_\_\_\_\_ °C

Load Entering Water Temp (Htg): \_\_\_\_\_ °C

Load Leaving Water Temp (Htg): \_\_\_\_\_ °C

Operating Weight: \_\_\_\_\_ (kg)

### ELECTRICAL DATA

Power Supply: \_\_\_\_\_ Volts

\_\_\_\_\_ Phase \_\_\_\_\_ Hz

Minimum Circuit Ampacity: \_\_\_\_\_

Maximum Overcurrent Protection: \_\_\_\_\_

ClimateMaster works continually to improve its products. As a result, the design and specifications of each product at the time of order may be changed without notice and may not be as described herein. Please contact ClimateMaster's Customer Service Department at 1-405-745-6000 for specific information on the current design and specifications. Statements and other information contained herein are not express warranties and do not form the basis of any bargain between the parties, but are merely ClimateMaster's opinion or commendation of its products. The latest version of this document is available at [climatemaster.com](http://climatemaster.com). © ClimateMaster, Inc. All rights reserved 2009

# Notes

# Revision History

Date:	Item:	Action:
08/15/24	Performance Data	036 Cooling: Aligned header units with other tables
02/28/23	All	Transitioned from CXM to CXM2 and DXM2 to DXM2.5 unit controls. Introduced AWC Wi-Fi cloud connected color touch screen thermostat
09/29/21	All	Removed LON controls
03/08/21	Pg. 30	Updated Electrical Data Table
10/12/20	Edits to specification verbiage	Updated page 41
07/20/20	Pgs. 9, 13, 17	Updated "Cooling" Performance tables
07/16/20	Pg. 29, 30,33-39, 45	Updated note on Electrical Data, Added sizes and notes to Dimensional Drawing, Reorganized Wire Diagram pages, updated Performance Sheet
06/11/20	Physical and Electrical Data, pg. 29	Updated
06/02/20	All	Updated format/font
11/15/16	Document Design Update	Updated
03/17/16	Pages 28 and 38	Edit 036-120 Dimensional Data and test run text
10/15/15	Wiring Diagram Matrix	Updated
02/26/13	AHRI Table	Size 120 Updated
02/04/13	TMW060 Htg/Clg Performance Data	Updated WPD and ELWT
01/11/12	Engineering Specifications	Removed references to air flow, air temperature
11/14/11	TMW170 & 340 Dimensional Data	Updated
08/09/11	Unit Maximum Working Water Pressure	Updated to Reflect New Safeties
08/03/11	Engineering Specifications	Added Digital Night Setback with Pump Restart (DXM w/ ATP32U03/04)
05/20/11	Performance Data	Updated
04/26/11	Performance Data	Updated Heating Table for TMW60, TMW120, & 340
04/07/11	Engineering Specification NOTICE	Updated
2/11/11	Performance Data Selection Notes	Updated
02/07/11	Performance Data	Updated Heating Table for TMW036, TMW120
02/03/11	Series Nomenclature	Updated Revision Level
01/03/11	Format - All Pages	Updated
11/30/10	Electrical Table	Updated
10/21/10	Load Coil Option "V"	Removed
10/21/10	Engineering Specifications	Updated
09/28/10	Engineering Specifications	Updated
07/26/10	Wiring Diagrams	Updated
06/11/10	Format - All Pages	Updated
06/11/10	Engineering Specifications	Updated



A NIBE GROUP MEMBER

7300 S.W. 44th Street  
 Oklahoma City, OK 73179  
 Phone: 405-745-6000  
 climatemaster.com