

# GreenSource CDI series

## Model TW

### Residential Water to Water Heat Pump

Engineering  
Submittal  
Sheet



# BOSCH

#### Overview and Certifications



#### Standard Features, Factory Installed Options and Control Options

##### Standard Features

- ▶ **White Pre-Painted Sheet Metal Cabinets**
  - No visible screws
  - Appliance white for a clean - durable look
- ▶ **High Efficiency**
  - Up to 25.7 EER @ PL GWHP
  - Up to 21.3 EER @ FL GWHP
  - Compliant with Energy Start Tier 3
  - Scroll compressor(s)
  - Dual-stage refrigerant circuit
- ▶ **Remote Mounted Control RMC with Unit Protection Module UPM**
  - LCD Display - for Easy View of Unit Operation
  - Low Pressure Switch Protection
  - High Pressure Switch Protection
  - Alarm Output
  - Anti-Short Cycling
  - 5 minute Delay
  - Low Pressure Bypass at Start Up
  - Random Start of Unit
  - Brown Out Protection
  - Water Coil/Coaxial Coil/Condenser Freeze Protection
- ▶ **Insulation and Construction**
  - Dual density fiberglass insulation
  - Multi-density sound compressor blanket
  - Patent: Floating Base Pan
  - Front water connections (rear water connections on TW122)
  - Single point electrical connection
  - Insulated coaxial heat exchangers and refrigerant piping
- ▶ **Reliability - Durability - Serviceability**
  - Alert Communicating Circuit Board
  - Schrader access ports
  - High & low pressure switches
  - Lockout circuit
  - Unit protection module (UPM) standard in -CSC, -CSN models
  - Unit mounted controller (UMC) standard on -USC, -USN models
- ▶ **Standard Warranty**
  - 10 Year All Parts Limited Warranty
  - 10 Year Labor Limited Warranty

Standard Features, Factory Installed Options, and Control Options continued..

### Factory Installed Options

- ▶ **Cupro-nickel Coil:**
  - Recommended in conditions anticipating moderate scale formation or in brackish water (available on load-side and supply-side).
- ▶ **Domestic Hot Water Heat Recovery Package:**
  - Used to heat domestic hot water using excess heat from the hot compressed gas of the compressor.
- ▶ **Unit Mounted Controller UMC:**
  - Tactile touchpad and digital temperature display
  - LED display provides indication of unit operating mode and fault indication
  - Adjustable temperature set point and differential



UMC option removes Remote Mounted Control and Unit Protection Module.

- ▶ **EMS Relay**
- ▶ **Pump/Valve Relay**
- ▶ **Flow Proving Switch**
- ▶ **Comfort Alert**
- ▶ **DDC Control**

### Control Options

There are two main choices when designating controllability for the water-to-water models. There is either a factory installed unit mounted controller or a field supplied remote mounted controller. In deciding which to choose for the project, one factor to consider is if the project entails a building automation system with DDC, if this is the case, the remote mounted controller is mandatory. For further explanation the descriptions are to follow or contact the local sales office to receive a better understanding of the controllability choices.

- ▶ **Unit Mounted Controller (UMC):**

Designed to enhance the unit operation with more flexibility, accurate control and operating modes the unit mounted controller provides an increased level of comfort in the conditioned space together with solid-state reliability and ease of operation. Familiar functionality of our proven UPM module are incorporated into the unit mounted controller for unit protection. The unit mounted controller is available on all Bosch Thermotechnology water-to-water units except for remote controller/thermostat designation.

  - **Tactile Touchpad** for temperature and mode adjustment.
  - **Digital Display** of temperature in either degrees Fahrenheit or Celsius.
  - **LED Display** provides indication for unit operating mode and fault indication for high or low pressure lockout.
  - **Adjustable Temperature Set Point** from 60° F through 80° F (15.5° C through 26.7° C ).
  - **Adjustable Temperature Differential** between 1° F and 6° F (0.6° C and 3.3° C).
  - **Selectable Options:**
    - Manual/Automatic changeover
  - **Additional Features**
    - 5 minute anti short cycling delay
    - Random start
    - 90 second low pressure bypass timer prevents nuisance lockouts during cold winter start up
    - Intelligent reset allows the unit to automatically restart after 5 minutes if a fault is no longer active
- ▶ **Remote Mounted Control (RMC):**

This feature provides the flexibility to connect a variety of appropriate remote mounted controllers to a low voltage terminal strip within the water-to-water unit. All water-to-water models come with a water temperature thermistor internal to the unit mounted on the water lines.

### Standard Features, Factory Installed Options, and Control Options continued..

#### ► **Unit Protection Module (UPM)**

When selecting the remote mounted controller, the TW Models are built in the factory with a Unit Protection Module (UPM) that controls the unit operation and monitors the safety controls that protect the unit. The UPM interfaces with the appropriate controller. The main purpose of the UPM is to protect the compressor by monitoring the different states of switches and sensors. This module provides time delays and helps protect the unit against freezing of the water-to-water heat exchangers. This level of protection helps provide the peace of mind that comes with offering a Bosch product to the customer.

#### — **UPM Control Board Features:**

- **Anti-Short Cycle Timer** — 5 minute delay on break timer to prevent compressor short cycling.
- **Random Start** — Each controller has a unique random start delay ranging from 270 to 300 seconds after power is applied to the board. This will prevent the simultaneous start of multiple units after a power outage.
- **Low Pressure Bypass Timer** — The low pressure switch is bypassed for 120 seconds after a call for compressor operation to prevent nuisance low pressure lockouts during cold start-up in the heating mode.
- **Brownout/Surge/Power Interruption Protection**— Prevents compressor operation should the voltage drop below 10% of unit rated value. The unit will restart once the voltage is within tolerance and the random start has timed out.
- **Malfunction (Alarm) Output** — The controller has a set of contacts for remote fault indication. This can be either a steady output or can be set to pulse with the fault code. Two connections are available — one to provide a 24 volt output, the other to provide a dry contact.
- **Test Service Mode** — A dip switch setting is provided to reduce all time delay settings to 10 seconds maximum during troubleshooting for verification of unit operation.
- **LED Fault Indication** — Two LED indicators are provided as follows:
  - **Green:** Power LED indicates 18 – 30 VAC present at the board.
  - **Red:** Fault indicator with blink codes identifying the particular fault. This information is available via the malfunction (alarm) output contacts.

- **Intelligent Reset**—If a fault condition is initiated, the 5 minute delay on break time period is initiated and the unit will restart after this delay expires. The UPM is configurable for either 2 or 4 fault occurrences before going into a hard lockout. The selection is made through a dip switch setting on the board. If the fault condition still exists or reoccurs twice or four times within one hour, the unit will go into a hard lockout and requires a manual lockout reset.
- **Lockout Reset**—A hard lockout can be reset by turning the unit thermostat off and then back on or by shutting off unit power at the circuit breaker. The method of reset

#### ► **DDC Controls (Option)**

The optional Bosch factory mounted DDC Controller is preprogrammed and installed on the unit with the Unit Protection Module (UPM) to be job site ready. The unit will operate in a 100% stand-alone control mode or connect to a Building Automation System (BAS) using open protocols BACnet™, Modbus, N2 or LonWorks® (with an optional Lon card). Standalone DDC modules may be programmed by the Bosch BACview® controller only.

Water temperatures can be monitored from the central control computer and unit fault indication displayed.

Available inputs/outputs include:

- Leaving water temperature
- Override time remaining
- Night setback status
- Cooling set point
- Heating set point
- Status of all the alarms
- Occupied heating and cooling set points
- Command for occupied or unoccupied mode
- Command for override of the unoccupied mode (unit resorts to occupied set points)
- Set point adjustment

#### ► **Additional Features:**

- 75VA transformer
- TXV
- Dual freeze sensor (with RMC)
- Remote reset at thermostat
- Fault LED indication
- Four-way reversing valve
- Filter drier

A BACview® handheld diagnostic tool is available to allow local access to display and modify user defined properties without any computer software.

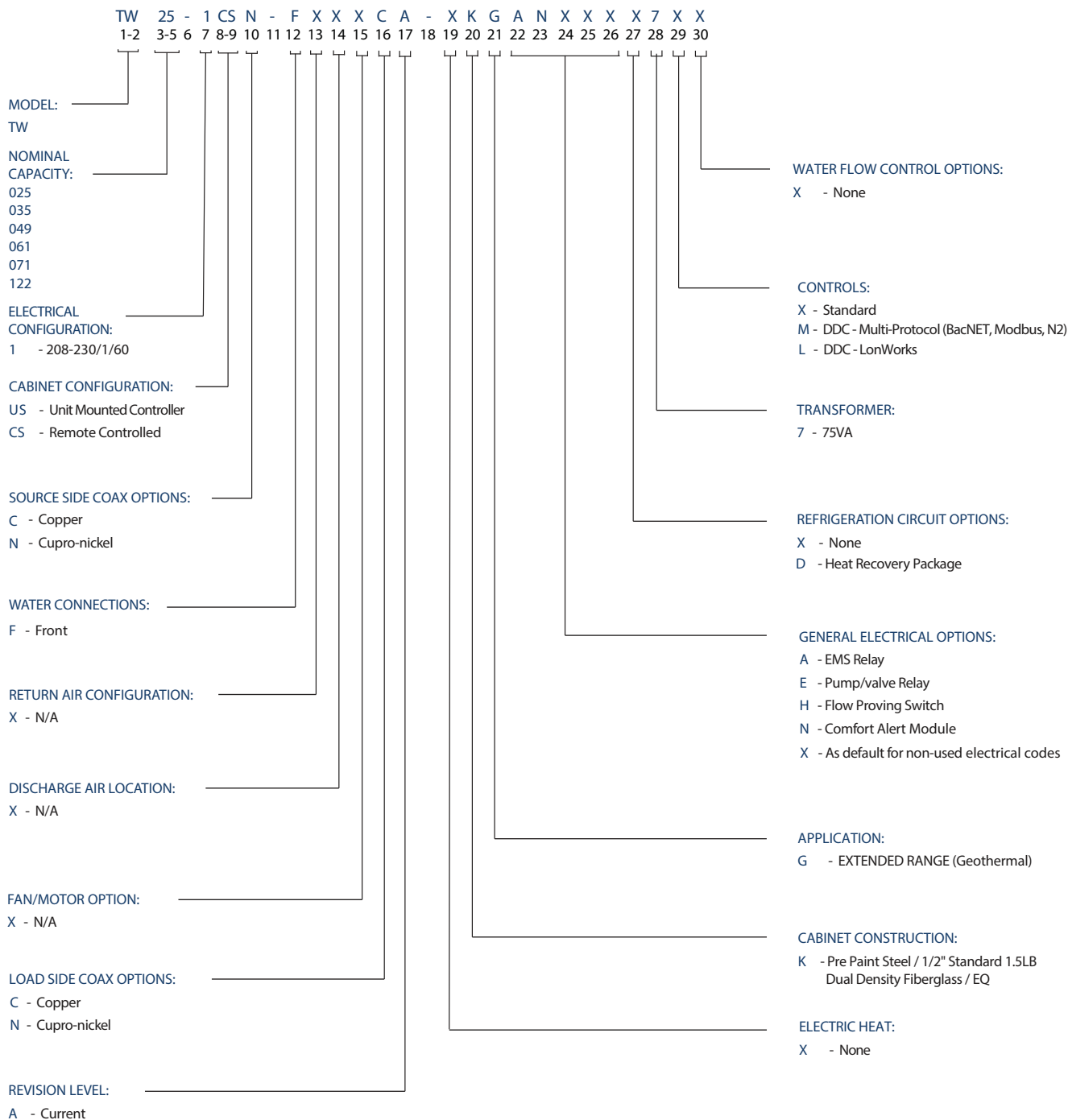
# GreenSource TW Series

## Residential Water to Water Heat Pumps



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### Model Nomenclature



# GreenSource TW Series

## Residential Water to Water Heat Pumps



Physical Data							
Description	Unit	TW025	TW035	TW049	TW061	TW071	TW122
Compressor Type (Qty)	—	Scroll (1)	Scroll (1)	Scroll (1)	Scroll (1)	Scroll (1)	Scroll (2)
Refrigeration Charge	Oz.	48	59	62	72	90	170
Max Water Working Pressure	PSIG/kPa	450/3100	450/3100	450/3100	450/3100	450/3100	450/3100
Load - Water Connection Size							
FPT	Inch	3/4	3/4	1.0	1.0	1.0	1-1/4
Coaxial Coil Volume	Gal	0.47	0.50	0.64	0.74	1.05	2.06
Source - Water Connection Size							
FPT	Inch	3/4	3/4	1.0	1.0	1.0	1-1/4
Coaxial Coil Volume	Gal	0.47	0.50	0.39	0.47	0.8	2.06
Cabinet							
Weight - Operating (lbs)	lbs	250	270	290	340	360	700
Weight - Shipping (lbs)	lbs	270	290	310	360	380	720

ASHRAE/AHRI/ISO 13256-1. English (I-P) Units													
Models	Load	Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
		Cooling 86 deg.F		Heating 68 deg.F		Cooling 59 deg.F		Heating 50 deg.F		Cooling 77 deg.F		Heating 32 deg.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
TW025	Full	21000	13.4	31000	4.4	24500	21.2	25000	3.5	22500	15.9	19500	3.0
	Partial	15500	14.7	22000	4.6	18500	25.7	17000	3.7	18000	22.1	15000	3.2
TW035	Full	29000	12.6	43000	4.3	34000	20.2	34000	3.5	30000	14.6	27000	3.0
	Partial	22500	14.5	31500	4.7	25000	24.8	25000	3.6	24000	20.6	22000	3.2
TW049	Full	39000	12.9	58000	4.1	45000	19.7	47000	3.5	41000	14.9	37500	3.0
	Partial	29000	13.9	42000	4.5	33500	23.6	34500	3.6	32500	20.1	30500	3.2
TW061	Full	49000	12.9	74500	4.2	55500	19.9	59500	3.5	51000	14.8	48000	3.0
	Partial	37000	13.7	55000	4.6	42500	23.3	41500	3.6	41000	19.8	38000	3.3
TW071	Full	57500	13.0	86500	4.2	64000	18.8	70000	3.4	60000	14.8	53500	3.0
	Partial	43500	13.3	65500	4.4	50500	21.8	52000	3.6	48500	18.7	44500	3.2
TW122	Full	114000	13.8	160800	4.6	130000	21.3	129500	3.8	119500	16.1	102500	3.0
	Partial	54900	12.3	78500	4.2	63500	19.0	63600	3.4	61000	16.7	56000	3.2

Electrical Data								
Models	Voltage Code	Rated Voltage	Voltage Min/Max	Compressor				
				QTY	RLA	LRA	Min Circuit Amps	Max Fuse/ HACR
TW025	1	208-230/60/1	197/253	1	11.7	58.3	14.6	25
TW035	1	208-230/60/1	197/253	1	15.3	83.0	19.1	30
TW049	1	208-230/60/1	197/253	1	21.2	104.0	26.5	45
TW061	1	208-230/60/1	197/253	1	27.1	152.9	33.9	60
TW071	1	208-230/60/2	197/254	1	29.7	179.2	37.1	60
TW122	1	208-230/60/1	197/253	2	28.3	178.0	63.7	90

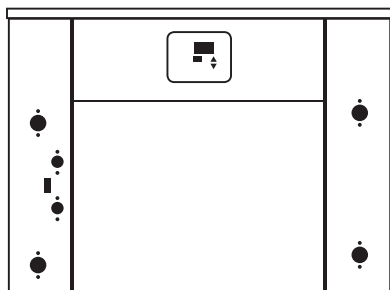
Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL



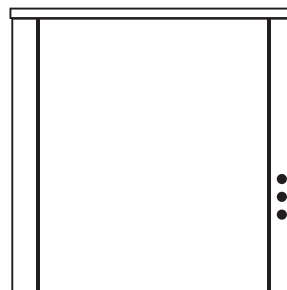
## Unit Configurations

### TW Model

Unit Front

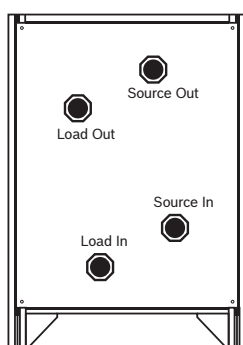


Left Side

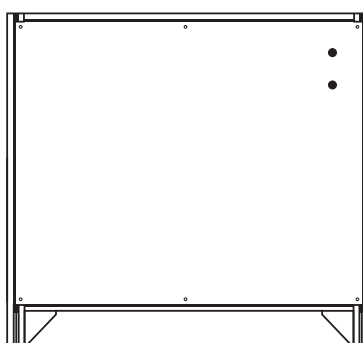


### TW Model 10 tons

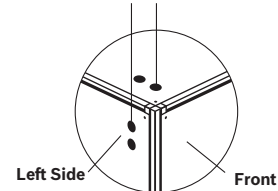
Unit Rear



Left Side

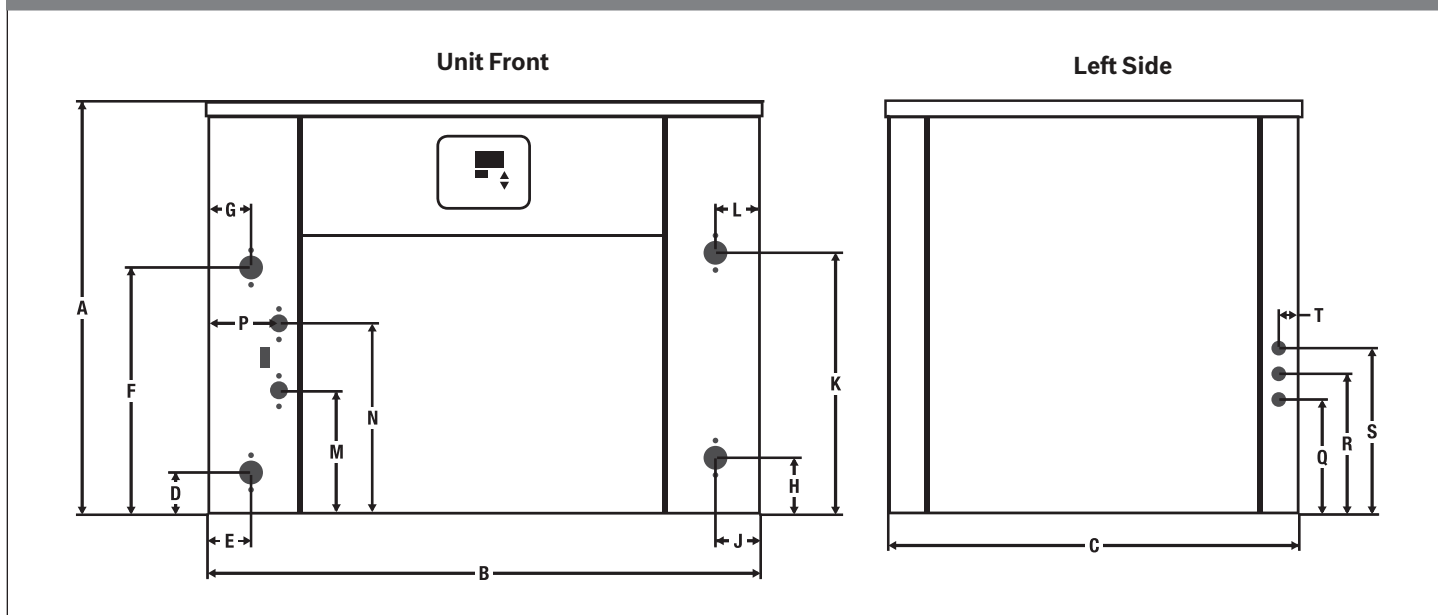


Electrical Connections





**TW025-071 Dimensions and Connections**



**TW025-071 Dimensions and Connections**

Model	A Height	B Width	C Depth	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	Water Conn.	HRP Conn.
TW025	24.12	32.5	24	2.7	2.5	13.7	2.5	3.25	1.95	14.25	1.95	7.15	11	4.25	6.55	8.05	9.55	1.25	3/4 FPT	1/2 FPT
TW035	24.12	32.5	24	2.3	2.3	14.3	2.35	3.7	2.55	15.7	2.55	7.15	11	4.25	6.55	8.05	9.55	1.25	3/4 FPT	1/2 FPT
TW049	24.12	32.5	24	2.3	2.6	14.3	2.65	3.7	2.65	15.7	2.65	7.15	11	4.25	6.55	8.05	9.55	1.25	1 FPT	1/2 FPT
TW061	24.12	32.5	24	2.3	2.6	14.3	2.65	3.2	2.65	15.2	2.65	7.15	11	4.25	6.55	8.05	9.55	1.25	1 FPT	1/2 FPT
TW071	24.12	32.5	24	3	2.25	17.25	2.25	3.25	2.25	17	2.25	7.15	11	4.25	6.55	8.05	9.55	1.25	1 FPT	1/2 FPT

**TW025-071 Overall Cabinet Dimensions**

Models	Units	Width	Depth	Height
TW025 - 071	in	32.5	24.0	24.1
	mm	825	610	613



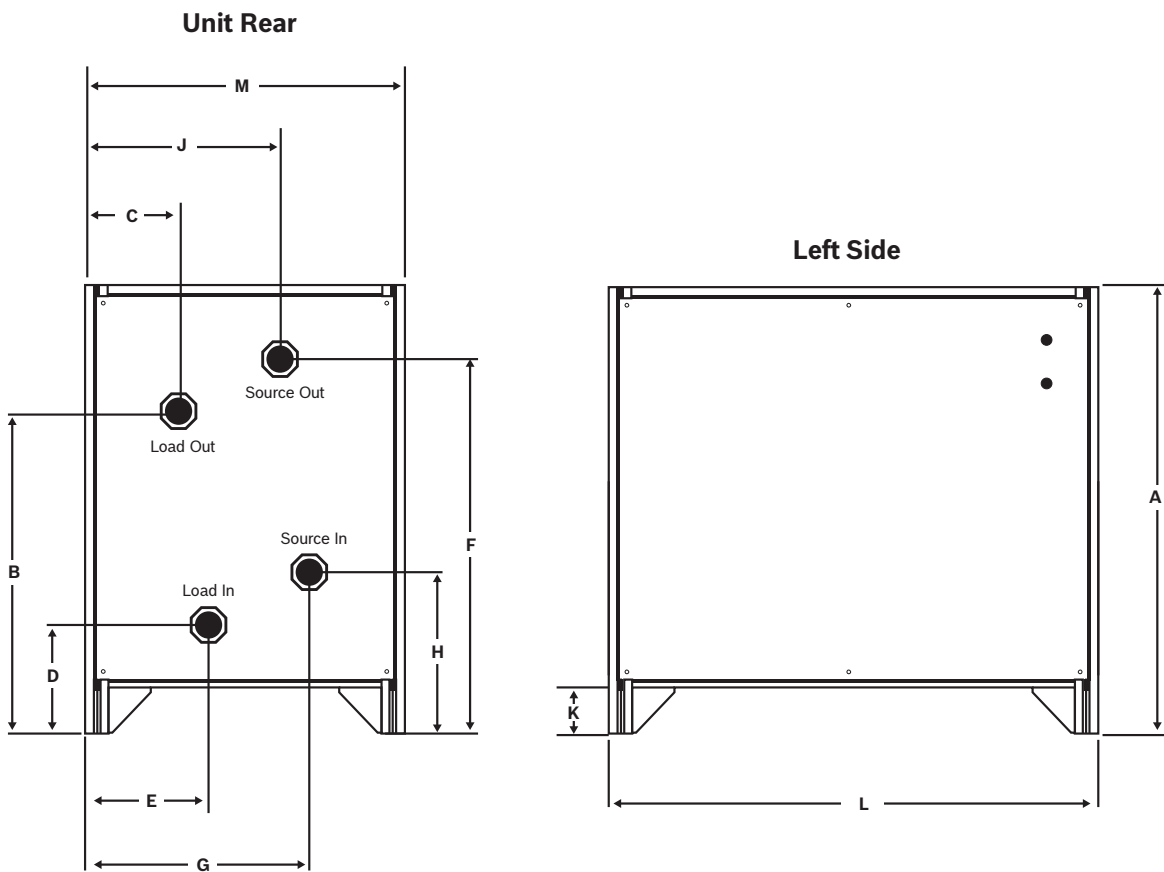
All dimensions within +/- 0.125".  
Specifications subject to change without notice.

# **Greensource** TW Series Residential Water to Water Heat Pumps



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## **TW122 Dimensions and Connections**



## **TW122 Dimensions and Connections**

Model	A	B	C	D	E	F	G	H	J	K	L	M	Water Conn.
TW122	37.5	27.62	7	8.38	9.25	33.5	20.75	13.5	17.5	3.5	46	28	1-1/4" FPT

## **TW122 Overall Cabinet Dimensions**

Models	Units	Width	Depth	Height
TW122	in	28.0	46.0	37.5
	mm	711	1168	953

**i** All dimensions within +/- 0.125".  
Specifications subject to change without notice.



# Greensource TW Series

## Residential Water to Water Heat Pumps



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### Unit Operating Limits

The water-to-water models are capable of operating over a wide range of conditions. For operation in a geothermal application or any other installation where the loop fluid temperature may drop below the ambient dew point, the extended range option is recommended. This consists of additional insulation on the piping to prevent condensation.

- ▶ Maximum and minimum fluid conditions are at unit rated flow rate.
- ▶ Maximum and minimum operating limits may not be combined. If one value is at either maximum or minimum, the other two should be at normal operating range.
- ▶ Entering fluid temperatures below 45°F in the heating mode require antifreeze.

To ensure that you get the optimal performance from your Bosch heat pump it is important that they be selected accurately to match your design conditions.

Prior to making equipment selections the zone conditions need to be determined. Bosch Thermotechnology Corp. recommends using a building load program to determine the heating and cooling loads.

This engineering submittal sheet provides water conditions that will meet most applications. The unit performance can be determined by referring to the extended performance data tables.

### Operating Limits – Cooling & Heating

Cooling	Source	Load
Minimum ambient air temperature °F	50	
Maximum ambient air temperature °F	110	
Minimum water coil entering fluid temperature °F	50	50
Water loop typical coil entering fluid range temperature °F	70-90	40-60
Maximum water coil entering fluid temperature °F	110	90
Heating	Source	Load
Minimum ambient air temperature °F	50	
Maximum ambient air temperature °F	110	
Minimum water coil entering fluid temperature °F	50	50
Water loop typical coil entering fluid range temperature °F	70-90	40-60
Maximum water coil entering fluid temperature °F	110	90

\*Antifreeze solution is required at these fluid temperatures.



Minimum / maximum limits are only for start up conditions. Only one parameter out of these three: entering source temperature, entering load temperature, or flow rate is permissible at minimum or maximum conditions at the same time. Refer to the extended performance data tables to determine allowable operating limits.

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## Residential Water to Water Heat Pumps



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Antifreeze Correction							
Antifreeze Type	Antifreeze %	Cooling			Heating		WPD Correction Factor EWT 30 °F
		Avg. Water Temp. 90 °F			Avg. Water Temp. 30 °F		
		Total Cap.	Sens. Cap	Power	Htg. Cap	Power	
Water	0	1.000	1.000	1.000	1.000	1.000	1.000
Propylene Glycol	5	0.997	0.997	1.004	0.989	0.997	1.060
	10	0.994	0.994	1.006	0.986	0.995	1.125
	15	0.990	0.990	1.009	0.978	0.988	1.190
	25	0.983	0.983	1.016	0.960	0.979	1.300
Methanol	5	0.997	0.997	1.003	0.990	0.997	1.060
	10	0.996	0.996	1.005	0.979	0.993	1.100
	15	0.994	0.994	1.008	0.970	0.990	1.140
Ethanol	5	0.998	0.998	1.002	0.981	0.994	1.160
	10	0.996	0.996	1.004	0.960	0.988	1.230
	15	0.992	0.992	1.006	0.944	0.983	1.280
	25	0.986	0.986	1.009	0.917	0.974	1.400
Ethylene Glycol	5	0.997	0.997	1.003	0.993	0.998	1.060
	10	0.995	0.995	1.004	0.986	0.996	1.120
	15	0.992	0.992	1.005	0.980	0.993	1.190
	25	0.988	0.988	1.009	0.970	0.990	1.330
	30	0.985	0.985	1.012	0.965	0.987	1.400

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## Residential Water to Water Heat Pumps



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### Waterside Pressure Drop

Model	GPM	Chilled Fluid Side (55°F)		Cond. Fluid Side (85°F)	
		Pressure Drop (PSIG)	Pressure Drop (ft of H2O)	Pressure Drop (PSIG)	Pressure Drop (ft of H2O)
TW025	3.0	0.56	1.30	0.51	1.18
	4.0	0.95	2.18	0.86	1.98
	5.0	1.41	3.26	1.28	2.95
	6.0	1.96	4.52	1.78	4.10
	8.0	3.29	7.59	2.98	6.88
TW035	4.5	1.85	4.26	1.67	3.86
	6.0	3.10	7.14	2.81	6.47
	7.5	4.63	10.68	4.19	9.67
	9.0	6.43	14.82	5.82	13.43
	12.0	10.78	24.88	9.77	22.54
TW049	6.0	1.10	2.54	1.00	2.30
	8.0	1.85	4.26	1.67	3.86
	10.0	2.76	6.37	2.50	5.77
	12.0	3.83	8.85	3.47	8.01
	16.0	6.44	14.85	5.83	13.45
TW061	7.5	1.41	3.24	1.27	2.94
	10.0	2.36	5.44	2.14	4.93
	12.5	3.53	8.13	3.19	7.37
	15.0	4.89	11.29	4.43	10.23
	20.0	8.21	18.95	7.44	17.17
TW071	9.0	2.01	4.65	1.83	4.23
	12.0	3.38	7.80	3.08	7.10
	15.0	5.05	11.65	4.60	10.60
	18.0	7.01	16.18	6.38	14.72
	24.0	11.77	27.15	10.71	24.71
TW122	18.0	2.36	5.5	2.05	4.7
	22.0	3.39	7.8	2.94	6.8
	26.0	4.58	10.6	3.97	9.2
	30.0	5.93	13.7	5.14	11.9
	34.0	7.43	17.1	6.44	14.8



All values based upon pure water at the indicated temperature.

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Capacity Data - TW025 – Part Load – Cooling																								
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	3 GPM							4.5 GPM							6 GPM						
				Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)
50	3	1.3 (0.6)	50	13.0	0.80	15.7	41.3	16.2	1.4	0.6	13.3	0.80	16.0	44.1	16.5	2.8	1.2	13.4	0.80	16.2	45.5	16.7	4.7	2.0
			60	14.9	0.81	17.7	50.0	18.5	1.3	0.6	15.3	0.81	18.1	53.2	18.9	2.7	1.2	15.5	0.81	18.2	54.8	19.1	4.6	2.0
			70	17.1	0.81	19.8	58.6	21.0	1.3	0.6	17.5	0.81	20.3	62.2	21.5	2.6	1.1	17.7	0.82	20.5	64.1	21.8	4.4	1.9
			80	19.4	0.82	22.2	67.1	23.6	1.2	0.5	19.9	0.82	22.7	71.1	24.3	2.6	1.1	20.2	0.82	23.0	73.3	24.6	4.3	1.9
			90	21.9	0.83	24.7	75.4	26.5	1.2	0.5	22.6	0.83	25.4	80.0	27.2	2.5	1.1	22.9	0.83	25.8	82.4	27.6	4.2	1.8
	4.5	2.4 (1.0)	50	13.1	0.78	15.7	41.3	16.7	1.4	0.6	13.3	0.78	16.0	44.1	17.0	2.8	1.2	13.5	0.78	16.2	45.5	17.2	4.7	2.0
			60	15.0	0.78	17.7	50.0	19.1	1.3	0.6	15.4	0.79	18.1	53.2	19.6	2.7	1.2	15.6	0.79	18.3	54.8	19.8	4.6	2.0
			70	17.2	0.79	19.9	58.5	21.8	1.3	0.6	17.6	0.79	20.3	62.2	22.4	2.6	1.1	17.9	0.79	20.6	64.0	22.7	4.4	1.9
			80	19.6	0.79	22.2	67.0	24.7	1.2	0.5	20.1	0.79	22.8	71.1	25.4	2.6	1.1	20.4	0.79	23.1	73.2	25.8	4.3	1.9
			90	22.1	0.79	24.8	75.3	27.8	1.2	0.5	22.8	0.80	25.5	79.9	28.7	2.5	1.1	23.2	0.80	25.9	82.3	29.1	4.2	1.8
	6	3.7 (1.6)	50	13.1	0.77	15.7	41.3	16.9	1.4	0.6	13.4	0.77	16.0	44.1	17.3	2.8	1.2	13.5	0.77	16.2	45.5	17.5	4.7	2.0
			60	15.1	0.77	17.7	50.0	19.5	1.3	0.6	15.4	0.77	18.1	53.1	19.9	2.7	1.2	15.6	0.77	18.3	54.8	20.2	4.6	2.0
			70	17.2	0.77	19.9	58.5	22.3	1.3	0.6	17.7	0.77	20.3	62.1	22.9	2.6	1.1	17.9	0.77	20.6	64.0	23.2	4.4	1.9
			80	19.6	0.78	22.3	66.9	25.3	1.2	0.5	20.2	0.78	22.8	71.0	26.0	2.6	1.1	20.5	0.78	23.1	73.2	26.4	4.3	1.9
			90	22.2	0.78	24.9	75.2	28.6	1.2	0.5	22.9	0.78	25.6	79.8	29.4	2.5	1.1	23.3	0.78	25.9	82.2	29.9	4.2	1.8
70	3	3.8 (1.6)	50	12.1	1.06	15.7	41.9	11.4	1.4	0.6	12.3	1.06	16.0	44.5	11.6	2.8	1.2	12.5	1.06	16.1	45.8	11.7	4.7	2.0
			60	13.9	1.07	17.5	50.8	13.0	1.3	0.6	14.2	1.07	17.8	53.7	13.2	2.7	1.2	14.3	1.07	18.0	55.2	13.4	4.6	2.0
			70	15.8	1.08	19.4	59.5	14.7	1.3	0.6	16.1	1.08	19.8	62.8	15.0	2.6	1.1	16.3	1.08	20.0	64.6	15.2	4.4	1.9
			80	17.9	1.08	21.6	68.1	16.5	1.2	0.5	18.3	1.08	22.0	71.9	16.9	2.6	1.1	18.6	1.09	22.3	73.8	17.1	4.3	1.9
			90	20.1	1.09	23.9	76.6	18.4	1.2	0.5	20.7	1.09	24.4	80.8	18.9	2.5	1.1	21.0	1.10	24.7	83.0	19.2	4.2	1.8
	4.5	1.2 (0.5)	50	12.2	1.04	15.8	41.9	11.7	1.4	0.6	12.4	1.04	16.0	44.5	12.0	2.8	1.2	12.6	1.04	16.1	45.8	12.1	4.7	2.0
			60	14.0	1.04	17.5	50.7	13.4	1.3	0.6	14.3	1.04	17.8	53.7	13.7	2.7	1.2	14.4	1.04	18.0	55.2	13.9	4.6	2.0
			70	15.9	1.04	19.5	59.4	15.3	1.3	0.6	16.3	1.05	19.9	62.8	15.6	2.6	1.1	16.5	1.05	20.1	64.5	15.8	4.4	1.9
			80	18.1	1.05	21.7	68.0	17.2	1.2	0.5	18.5	1.05	22.1	71.8	17.7	2.6	1.1	18.8	1.05	22.4	73.7	17.9	4.3	1.9
			90	20.4	1.05	24.0	76.4	19.3	1.2	0.5	21.0	1.06	24.6	80.7	19.9	2.5	1.1	21.3	1.06	24.9	82.9	20.1	4.2	1.8
	6	2.6 (1.1)	50	12.3	1.03	15.8	41.8	11.9	1.4	0.6	12.5	1.03	16.0	44.4	12.2	2.8	1.2	12.6	1.03	16.1	45.8	12.3	4.7	2.0
			60	14.0	1.03	17.6	50.6	13.7	1.3	0.6	14.3	1.03	17.9	53.6	14.0	2.7	1.2	14.5	1.03	18.0	55.2	14.1	4.6	2.0
			70	16.0	1.03	19.5	59.3	15.6	1.3	0.6	16.4	1.03	19.9	62.7	15.9	2.6	1.1	16.6	1.03	20.1	64.5	16.1	4.4	1.9
			80	18.2	1.03	21.7	67.9	17.6	1.2	0.5	18.6	1.03	22.2	71.7	18.0	2.6	1.1	18.9	1.03	22.4	73.7	18.3	4.3	1.9
			90	20.5	1.04	24.1	76.3	19.8	1.2	0.5	21.1	1.04	24.6	80.6	20.4	2.5	1.1	21.4	1.04	25.0	82.9	20.6	4.2	1.8
90	3	3.9 (1.7)	50	10.9	1.38	15.6	42.8	7.9	1.4	0.6	11.1	1.38	15.8	45.1	8.0	2.8	1.2	11.2	1.38	15.9	46.3	8.1	4.7	2.0
			60	12.4	1.38	17.2	51.7	9.0	1.3	0.6	12.7	1.38	17.4	54.4	9.2	2.7	1.2	12.8	1.38	17.5	55.7	9.3	4.6	2.0
			70	14.2	1.39	18.9	60.6	10.2	1.3	0.6	14.5	1.39	19.2	63.6	10.4	2.6	1.1	14.6	1.39	19.3	65.1	10.5	4.4	1.9
			80	16.1	1.39	20.8	69.3	11.5	1.2	0.5	16.4	1.40	21.2	72.7	11.8	2.6	1.1	16.6	1.40	21.4	74.5	11.9	4.3	1.9
			90	18.1	1.40	22.9	77.9	12.9	1.2	0.5	18.6	1.40	23.4	81.7	13.2	2.5	1.1	18.8	1.41	23.6	83.7	13.4	4.1	1.8
	4.5	2.7 (1.2)	50	11.0	1.35	15.6	42.7	8.2	1.4	0.6	11.2	1.35	15.8	45.0	8.3	2.8	1.2	11.3	1.35	15.9	46.2	8.4	4.7	2.0
			60	12.6	1.35	17.2	51.6	9.3	1.3	0.6	12.8	1.35	17.4	54.3	9.5	2.7	1.2	13.0	1.35	17.6	55.7	9.6	4.6	2.0
			70	14.3	1.35	19.0	60.4	10.6	1.3	0.6	14.6	1.35	19.3	63.5	10.8	2.6	1.1	14.8	1.35	19.4	65.1	11.0	4.4	1.9
			80	16.3	1.35	20.9	69.1	12.0	1.2	0.5	16.7	1.36	21.3	72.6	12.3	2.6	1.1	16.9	1.36	21.5	74.4	12.4	4.3	1.9
			90	18.4	1.36	23.0	77.7	13.5	1.2	0.5	18.9	1.36	23.5	81.6	13.9	2.5	1.1	19.1	1.36	23.7	83.6	14.0	4.1	1.8
	6	1.5 (0.6)	50	11.0	1.33	15.6	42.6	8.3	1.4	0.6	11.2	1.33	15.8	45.0	8.4	2.8	1.2	11.3	1.33	15.9	46.2	8.5	4.7	2.0
			60	12.7	1.33	17.2	51.6	9.5	1.3	0.6	12.9	1.33	17.5	54.3	9.7	2.7	1.2	13.0	1.33	17.6	55.7	9.8	4.6	2.0
			70	14.4	1.33	19.0	60.4	10.8	1.3	0.6	14.7	1.33	19.3	63.4	11.1	2.6	1.1	14.9	1.33	19.5	65.0	11.2	4.4	1.9
			80	16.4	1.34	20.9	69.1	12.3	1.2	0.5	16.8	1.34	21.3	72.5	12.6	2.6	1.1	17.0	1.34	21.5	74.3	12.7	4.3	1.9
			90	18.5	1.34	23.1	77.6	13.8	1.2	0.5	19.0	1.34	23.6	81.6	14.2	2.5	1.1	19.3	1.34	23.8	83.6	14.4	4.1	1.8
110	3	2.4 (1.0)	50	9.4	1.76	15.4	43.7	5.4	1.4	0.6	9.6	1.76	15.6	45.7	5.4	2.8	1.2	9.6	1.76	15.6	46.8	5.5	4.7	2.0
			60	10.8	1.76	16.8	52.8	6.2	1.3	0.6	11.0	1.76	17.0	55.1	6.3	2.7	1.2	11.1	1.76	17.1	56.3	6.3	4.6	2.0
			70	12.4	1.76	18.4	61.7	7.0	1.3	0.6	12.6	1.76	18.6	64.4	7.2	2.6	1.1	12.7	1.76	18.8	65.8	7.2	4.4	1.9
			80	14.1	1.77	20.1	70.6	8.0	1.2	0.5	14.4	1.77	20.4	73.6	8.1	2.6	1.1	14.5	1.77	20.6	75.2	8.2	4.3	1.8
			90	16.0	1.77	22.0	79.4	9.0	1.2	0.5	16.3	1.77	22.4	82.7	9.2	2.5	1.1	16.5	1.77	22.6	84.5	9.3	4.1	1.8
	4.5	4.1 (1.8)	50	9.6	1.72	15.4	43.6	5.6	1.4	0.6	9.7	1.72	15.6	45.7	5.6	2.8	1.2	9.8	1.72	15.7	46.7	5.7	4.7	2.0
			60	11.0	1.72	16.9	52.7	6.4	1.3	0.6	11.2	1.72	17.1	55.0	6.5	2.7	1.2	11.3	1.72	17.2	56.2	6.6	4.6	2.0
			70	12.6	1.72	18.4	61.6	7.3	1.3	0.6	12.8	1.72	18.7	64.3	7.5	2.6	1.1	12.9	1.72	18.8	65.7	7.5	4.4	1.9
			80	14.3	1.72	20.2	70.5	8.3	1.2	0.5	14.6	1.72	20.5	73.5	8.5	2.6	1.1	14.8	1.72	20.6	75.1	8.6	4.3	1.8
			90	16.2	1.72	22.1	79.2	9.4	1.2	0.5	16.6	1.72	22.5	82.6	9.6	2.5	1.1	16.8	1.72	22.7	84.4	9.7	4.1	1.8
			50	9.6	1.70	15.4	43.6	5.6	1.4	0.6	9.8	1.70	15.6	45.7	5.7	2.8	1.2	9.8	1.70	15.7	46.7	5.8	4.7	2.0
			60	11.1	1.70	16.9	52.6	6.5	1.3	0.6	11.3	1.70	17.1	55.0	6.6	2.7	1.2	11.4	1.70	17.2	56.2	6.7	4.6	2.0
			70	12.7	1.70	18.5	61.6	7.5	1.3	0.6	12.9	1.70	18.7	64.3	7.6	2.6	1.1	13.0	1.70	18.8	65.7	7.7	4.4	1.9
			80	14.4	1.70	20.2	70.4	8.5	1.2	0.5	14.7	1.70	20.5	73.4	8.7	2.6	1.1	14.9</						

# GreenSource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

Capacity Data - TW025 – Part Load – Heating																								
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	3 GPM							4.5 GPM							6 GPM						
				Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (PSI)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of water)	Pressure Drop (psi)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (psi)
30	3	0.6 (1.5)	60																					
			80	12.8	1.21	8.6	88.5	3.1	0.5	1.2	12.7	1.17	8.7	84.2	3.2	1.8	4.2	12.7	1.17	8.7	84.2	3.2	1.8	4.2
			100	12.9	1.56	7.6	108.6	2.4	0.5	1.1	12.9	1.51	7.7	104.3	2.5	1.7	4.0	12.9	1.51	7.7	104.3	2.5	1.7	4.0
			120	13.1	1.98	6.3	128.7	1.9	0.5	1.1	13.0	1.9	6.46	124.3	2.0	1.6	3.7	13.0	1.9	6.46	124.3	2.0	1.6	3.7
	4.5	1.3 (3.0)	60	12.7	0.92	9.6	68.5	4.0	0.6	1.3	12.7	0.89	9.6	64.2	4.2	1.9	4.5	12.7	0.89	9.6	64.2	4.2	1.9	4.5
			80	12.9	1.21	8.8	88.6	3.1	0.5	1.2	12.9	1.17	8.9	84.3	3.2	1.8	4.2	12.9	1.17	8.9	84.3	3.2	1.8	4.2
			100	13.0	1.56	7.7	108.6	2.4	0.5	1.1	13.0	1.51	7.8	104.3	2.5	1.7	4.0	13.0	1.51	7.8	104.3	2.5	1.7	4.0
			120	13.2	1.98	6.4	128.8	1.9	0.5	1.1	13.1	1.93	6.5	124.4	2.0	1.6	3.7	13.1	1.93	6.5	124.4	2.0	1.6	3.7
	6	2.2 (5.0)	60	12.8	0.92	9.6	68.5	4.1	0.6	1.3	12.7	0.89	9.7	64.2	4.2	1.9	4.5	12.7	0.89	9.7	64.2	4.2	1.9	4.5
			80	13.0	1.21	8.8	88.6	3.1	0.5	1.2	12.9	1.17	8.9	84.3	3.2	1.8	4.2	12.9	1.17	8.9	84.3	3.2	1.8	4.2
			100	13.0	1.56	7.7	108.7	2.5	0.5	1.1	13.0	1.51	7.8	104.3	2.5	1.7	4.0	13.0	1.51	7.8	104.3	2.5	1.7	4.0
			120	13.2	1.98	6.4	128.8	2.0	0.5	1.1	13.2	1.93	6.6	124.4	2.0	1.6	3.7	13.2	1.93	6.6	124.4	2.0	1.6	3.7
50	3	0.6 (1.4)	60	15.8	0.93	12.6	70.5	5.0	0.6	1.3	15.8	0.89	12.7	65.3	5.2	1.9	4.5	15.8	0.89	12.7	65.3	5.2	1.9	4.5
			80	15.7	1.21	11.5	90.4	3.8	0.5	1.2	15.7	1.17	11.7	85.2	3.9	1.8	4.2	15.7	1.17	11.7	85.2	3.9	1.8	4.2
			100	15.5	1.56	10.2	110.3	2.9	0.5	1.1	15.5	1.51	10.4	105.2	3.0	1.7	4.0	15.5	1.51	10.4	105.2	3.0	1.7	4.0
			120	15.4	1.98	8.7	130.3	2.3	0.5	1.1	15.4	1.92	8.9	125.1	2.4	1.6	3.7	15.4	1.92	8.9	125.1	2.4	1.6	3.7
	4.5	1.2 (2.8)	60	16.0	0.93	12.9	70.7	5.1	0.6	1.3	16.0	0.89	13.0	65.3	5.3	1.9	4.5	16.0	0.89	13.0	65.3	5.3	1.9	4.5
			80	15.9	1.21	11.7	90.6	3.8	0.5	1.2	15.9	1.17	11.9	85.3	4.0	1.8	4.2	15.9	1.17	11.9	85.3	4.0	1.8	4.2
			100	15.6	1.56	10.3	110.4	2.9	0.5	1.1	15.7	1.51	10.5	105.2	3.0	1.7	4.0	15.7	1.51	10.5	105.2	3.0	1.7	4.0
			120	15.6	1.98	8.8	130.4	2.3	0.5	1.1	15.5	1.92	9.0	125.2	2.4	1.6	3.7	15.5	1.92	9.0	125.2	2.4	1.6	3.7
	6	2.0 (4.7)	60	16.2	0.93	13.0	70.8	5.1	0.6	1.3	16.2	0.89	13.1	65.4	5.3	1.9	4.5	16.2	0.89	13.1	65.4	5.3	1.9	4.5
			80	16.0	1.21	11.8	90.7	3.9	0.5	1.2	16.0	1.17	12.0	85.3	4.0	1.8	4.2	16.0	1.17	12.0	85.3	4.0	1.8	4.2
			100	15.7	1.56	10.4	110.5	3.0	0.5	1.1	15.8	1.51	10.6	105.3	3.1	1.7	4.0	15.8	1.51	10.6	105.3	3.1	1.7	4.0
			120	15.6	1.98	8.9	130.4	2.3	0.5	1.1	15.6	1.92	9.1	125.2	2.4	1.6	3.7	15.6	1.92	9.1	125.2	2.4	1.6	3.7
70	3	0.6 (1.3)	60	19.7	0.94	16.5	73.1	6.1	0.6	1.3	19.7	0.90	16.7	66.6	6.5	1.9	4.5	19.7	0.90	16.7	66.6	6.5	1.9	4.5
			80	19.2	1.22	15.0	92.8	4.6	0.5	1.2	19.3	1.17	15.3	86.4	4.8	1.8	4.2	19.3	1.17	15.3	86.4	4.8	1.8	4.2
			100	18.6	1.57	13.3	112.4	3.5	0.5	1.1	18.7	1.51	13.6	106.2	3.6	1.7	3.9	18.7	1.51	13.6	106.2	3.6	1.7	3.9
			120	18.2	1.98	11.5	132.2	2.7	0.5	1.1	18.3	1.91	11.8	126.1	2.8	1.6	3.7	18.3	1.91	11.8	126.1	2.8	1.6	3.7
	4.5	1.1 (2.6)	60	20.1	0.94	16.9	73.4	6.3	0.6	1.3	20.2	0.90	17.1	66.7	6.6	1.9	4.5	20.2	0.90	17.1	66.7	6.6	1.9	4.5
			80	19.5	1.23	15.3	93.0	4.7	0.5	1.2	19.6	1.18	15.6	86.5	4.9	1.8	4.2	19.6	1.18	15.6	86.5	4.9	1.8	4.2
			100	18.9	1.57	13.6	112.6	3.5	0.5	1.1	19.0	1.51	13.8	106.3	3.7	1.7	3.9	19.0	1.51	13.8	106.3	3.7	1.7	3.9
			120	18.4	1.98	11.7	132.3	2.7	0.5	1.1	18.5	1.91	12.0	126.2	2.8	1.6	3.7	18.5	1.91	12.0	126.2	2.8	1.6	3.7
	6	1.9 (4.4)	60	20.3	0.94	17.1	73.5	6.3	0.6	1.3	20.4	0.90	17.3	66.8	6.7	1.9	4.5	20.4	0.90	17.3	66.8	6.7	1.9	4.5
			80	19.7	1.23	15.5	93.1	4.7	0.5	1.2	19.8	1.18	15.8	86.6	4.9	1.8	4.2	19.8	1.18	15.8	86.6	4.9	1.8	4.2
			100	19.0	1.57	13.7	112.7	3.6	0.5	1.1	19.1	1.51	14.0	106.4	3.7	1.7	3.9	19.1	1.51	14.0	106.4	3.7	1.7	3.9
			120	18.6	1.98	11.8	132.4	2.8	0.5	1.1	18.6	1.91	12.1	126.2	2.9	1.6	3.7	18.6	1.91	12.1	126.2	2.9	1.6	3.7
3	0.5 (1.2)	60	24.3	0.96	21.1	76.2	7.5	0.5	1.3	24.5	0.90	21.4	68.2	8.0	1.9	4.5	24.5	0.90	21.4	68.2	8.0	1.9	4.5	
		80	23.4	1.24	19.2	95.6	5.5	0.5	1.2	23.6	1.18	19.6	87.9	5.9	1.8	4.2	23.6	1.18	19.6	87.9	5.9	1.8	4.2	
		100	22.4	1.58	17.1	115.0	4.2	0.5	1.1	22.6	1.51	17.5	107.5	4.4	1.7	3.9	22.6	1.51	17.5	107.5	4.4	1.7	3.9	
		120	21.7	1.98	14.9	134.4	3.2	0.5	1.1	21.8	1.90	15.3	127.3	3.4	1.6	3.7	21.8	1.90	15.3	127.3	3.4	1.6	3.7	
4.5	1.1 (2.5)	60	24.9	0.96	21.7	76.6	7.6	0.5	1.3	25.1	0.90	22.1	68.4	8.2	1.9	4.5	25.1	0.90	22.1	68.4	8.2	1.9	4.5	
		80	23.9	1.24	19.7	95.9	5.6	0.5	1.2	24.1	1.18	20.1	88.0	6.0	1.8	4.2	24.1	1.18	20.1	88.0	6.0	1.8	4.2	
		100	22.8	1.58	17.5	115.2	4.2	0.5	1.1	23.0	1.51	17.9	107.7	4.5	1.7	3.9	23.0	1.51	17.9	107.7	4.5	1.7	3.9	
		120	22.0	1.98	15.2	134.7	3.2	0.5	1.1	22.1	1.90	15.6	127.4	3.4	1.6	3.7	22.1	1.90	15.6	127.4	3.4	1.6	3.7	
6	1.8 (4.1)	60	25.3	0.96	22.0	76.8	7.7	0.5	1.3	25.5	0.90	22.4	68.5	8.3	1.9	4.5	25.5	0.90	22.4	68.5	8.3	1.9	4.5	
		80	24.2	1.24	19.9	96.1	5.7	0.5	1.2	24.4	1.18	20.4	88.1	6.0	1.8	4.2	24.4	1.18	20.4	88.1	6.0	1.8	4.2	
		100	23.1	1.58	17.7	115.4	4.3	0.5	1.1	23.3	1.51	18.1	107.8	4.5	1.7	3.9	23.3	1.51	18.1	107.8	4.5	1.7	3.9	
		120	22.1	1.98	15.4	134.8	3.3	0.5	1.1	22.3	1.90	15.8	127.4	3.4	1.6	3.7	22.3	1.90	15.8	127.4	3.4	1.6	3.7	

- Extended Range - Anti-freeze required
- Interpolation is permissible. Not extrapolation
- Operation not recommended

- Tabulated unit performance does not include fan or pump power corrections required for AHRI/ ISO standard performance ratings.
- Unit performance may be interpolated. Extrapolation is not allowed.
- For conditions other than rating conditions provided, consult the BST selection software.
- Ratings below 40°F are with a methanol solution.

**DISCLAIMER:** The performance reported herein is based on testing by FHP. Variations in the installation and operational environment may alter performance. Bosch disclaims all warranties, express and implied, that the performance will be as reported, including the warranty of merchantability and fitness for purpose. In addition, continuous research and development may result in a change to an appliances design and specifications at the time of order, which Bosch may change without notice. Before purchase, confirm the design specifications of the appliance.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL

# Greensource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

Capacity Data - TW025 – Full Load – Cooling																											
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	3 GPM								4.5 GPM								6 GPM							
				Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)			
50	3	1.3 (0.6)	50	20.4	1.07	24.1	36.4	19.1	1.4	0.6	21.1	1.08	24.8	40.6	19.6	2.8	1.2	21.5	1.08	25.1	42.8	19.9	4.7	2.1			
			60	23.4	1.09	27.2	44.4	21.5	1.3	0.6	24.3	1.10	28.1	49.2	22.2	2.7	1.2	24.8	1.10	28.5	51.7	22.6	4.6	2.0			
			70	26.8	1.11	30.6	52.1	24.1	1.3	0.6	27.9	1.12	31.7	57.6	25.0	2.7	1.2	28.5	1.12	32.3	60.5	25.4	4.4	1.9			
			80	30.4	1.13	34.3	59.7	26.9	1.3	0.5	31.8	1.14	35.7	65.9	28.0	2.6	1.1	32.5	1.14	36.4	69.2	28.5	4.3	1.9			
			90	34.4	1.15	38.3	67.1	29.9	1.2	0.5																	
	4.5	2.4 (1.0)	50	20.6	1.04	24.1	36.3	19.8	1.4	0.6	21.3	1.05	24.8	40.5	20.4	2.8	1.2	21.7	1.05	25.2	42.8	20.7	4.7	2.1			
			60	23.7	1.06	27.3	44.2	22.4	1.3	0.6	24.6	1.06	28.2	49.1	23.1	2.7	1.2	25.0	1.06	28.7	51.7	23.5	4.6	2.0			
			70	27.1	1.07	30.7	52.0	25.2	1.3	0.6	28.2	1.08	31.9	57.5	26.2	2.7	1.2	28.8	1.08	32.5	60.4	26.7	4.4	1.9			
			80	30.8	1.08	34.5	59.5	28.4	1.3	0.5	32.2	1.09	35.9	65.7	29.6	2.6	1.1										
			90																								
	6	3.7 (1.6)	50	20.7	1.03	24.2	36.2	20.1	1.4	0.6	21.4	1.03	24.9	40.5	20.7	2.8	1.2	21.8	1.03	25.3	42.7	21.1	4.7	2.1			
			60	23.8	1.04	27.3	44.2	22.8	1.3	0.6	24.7	1.05	28.2	49.0	23.6	2.7	1.2	25.2	1.05	28.7	51.6	24.0	4.6	2.0			
			70	27.2	1.05	30.8	51.9	25.8	1.3	0.6	28.3	1.06	31.9	57.4	26.8	2.7	1.2	29.0	1.06	32.6	60.3	27.4	4.4	1.9			
			80	31.0	1.06	34.6	59.4	29.1	1.3	0.5																	
			90																								
70	3	3.8 (1.6)	50	18.9	1.34	23.5	37.4	14.1	1.4	0.6	19.5	1.35	24.1	41.3	14.5	2.8	1.2	19.8	1.35	24.5	43.4	14.7	4.7	2.1			
			60	21.8	1.37	26.4	45.5	15.9	1.3	0.6	22.5	1.37	27.2	50.0	16.4	2.7	1.2	22.9	1.38	27.6	52.4	16.7	4.6	2.0			
			70	24.9	1.39	29.7	53.4	17.9	1.3	0.6	25.8	1.40	30.6	58.5	18.4	2.7	1.2	26.4	1.41	31.2	61.2	18.7	4.4	1.9			
			80	28.3	1.43	33.2	61.1	19.8	1.3	0.5	29.5	1.44	34.4	66.9	20.5	2.6	1.1	30.1	1.44	35.0	70.0	20.9	4.3	1.9			
			90	32.0	1.46	37.0	68.7	21.8	1.2	0.5	33.4	1.48	38.5	75.1	22.6	2.5	1.1	34.2	1.49	39.3	78.6	23.0	4.2	1.8			
	4.5	1.2 (0.5)	50	19.2	1.30	23.6	37.2	14.7	1.4	0.6	19.8	1.31	24.2	41.2	15.1	2.8	1.2	20.1	1.31	24.6	43.3	15.4	4.7	2.1			
			60	22.1	1.32	26.6	45.3	16.7	1.3	0.6	22.8	1.32	27.4	49.9	17.2	2.7	1.2	23.3	1.33	27.8	52.2	17.5	4.6	2.0			
			70	25.2	1.34	29.8	53.2	18.8	1.3	0.6	26.2	1.35	30.8	58.3	19.5	2.7	1.2	26.8	1.35	31.4	61.1	19.8	4.4	1.9			
			80	28.7	1.36	33.4	60.8	21.1	1.3	0.5	30.0	1.37	34.6	66.7	21.8	2.6	1.1	30.6	1.38	35.3	69.8	22.2	4.3	1.9			
			90	32.5	1.39	37.3	68.3	23.4	1.2	0.5	34.0	1.40	38.8	74.9	24.3	2.5	1.1	34.9	1.41	39.7	78.4	24.7	4.2	1.8			
	6	2.6 (1.1)	50	19.3	1.28	23.6	37.2	15.0	1.4	0.6	19.9	1.29	24.3	41.2	15.5	2.8	1.2	20.2	1.29	24.6	43.3	15.7	4.7	2.1			
			60	22.2	1.30	26.6	45.2	17.1	1.3	0.6	23.0	1.30	27.4	49.8	17.7	2.7	1.2	23.4	1.30	27.9	52.2	18.0	4.6	2.0			
			70	25.4	1.31	29.9	53.1	19.3	1.3	0.6	26.4	1.32	30.9	58.3	20.0	2.7	1.2	27.0	1.32	31.5	61.0	20.4	4.4	1.9			
			80	28.9	1.33	33.5	60.7	21.7	1.3	0.5	30.2	1.34	34.8	66.6	22.5	2.6	1.1	30.9	1.34	35.5	69.7	23.0	4.3	1.9			
			90	32.8	1.36	37.4	68.1	24.2	1.2	0.5	34.3	1.37	39.0	74.7	25.1	2.5	1.1	35.2	1.37	39.9	78.3	25.7	4.2	1.8			
90	3	3.9 (1.7)	50	17.1	1.73	23.0	38.6	9.9	1.4	0.6	17.6	1.73	23.5	42.2	10.2	2.8	1.2	17.8	1.73	23.8	44.1	10.3	4.7	2.0			
			60	19.7	1.75	25.7	46.9	11.3	1.3	0.6	20.3	1.75	26.3	51.0	11.6	2.7	1.2	20.7	1.76	26.7	53.1	11.8	4.6	2.0			
			70	22.6	1.78	28.7	54.9	12.7	1.3	0.6	23.4	1.79	29.5	59.6	13.1	2.7	1.1	23.8	1.79	29.9	62.1	13.3	4.4	1.9			
			80	25.7	1.82	31.9	62.9	14.1	1.3	0.5	26.7	1.84	33.0	68.1	14.5	2.6	1.1	27.2	1.84	33.5	70.9	14.8	4.3	1.9			
			90	29.1	1.87	35.5	70.6	15.5	1.2	0.5																	
	4.5	2.7 (1.2)	50	17.3	1.67	23.0	38.4	10.4	1.4	0.6	17.9	1.67	23.6	42.1	10.7	2.8	1.2	18.1	1.67	23.8	44.0	10.8	4.7	2.0			
			60	20.0	1.69	25.8	46.6	11.9	1.3	0.6	20.7	1.69	26.5	50.8	12.2	2.7	1.2	21.0	1.69	26.8	53.0	12.4	4.6	2.0			
			70	23.0	1.71	28.8	54.7	13.4	1.3	0.6	23.8	1.72	29.7	59.4	13.9	2.7	1.1	24.3	1.72	30.1	61.9	14.1	4.4	1.9			
			80	26.2	1.74	32.1	62.5	15.0	1.3	0.5	27.2	1.75	33.2	67.9	15.5	2.6	1.1	27.8	1.76	33.8	70.7	15.8	4.3	1.9			
			90	29.7	1.79	35.8	70.2	16.6	1.2	0.5	31.0	1.80	37.1	76.2	17.2	2.5	1.1										
	6	1.5 (0.6)	50	17.5	1.64	23.1	38.4	10.6	1.4	0.6	18.0	1.65	23.6	42.0	10.9	2.8	1.2	18.3	1.65	23.9	43.9	11.1	4.7	2.0			
			60	20.2	1.66	25.8	46.5	12.2	1.3	0.6	20.9	1.66	26.5	50.7	12.6	2.7	1.2	21.2	1.66	26.9	52.9	12.8	4.6	2.0			
			70	23.2	1.68	28.9	54.5	13.8	1.3	0.6	24.0	1.68	29.8	59.3	14.3	2.7	1.1	24.5	1.69	30.2	61.8	14.5	4.4	1.9			
			80	26.4	1.70	32.3	62.4	15.5	1.3	0.5	27.5	1.71	33.4	67.8	16.0	2.6	1.1	28.1	1.72	33.9	70.6	16.3	4.3	1.9			
			90	30.0	1.74	36.0	70.0	17.2	1.2	0.5	31.3	1.76	37.3	76.1	17.8	2.5	1.1										
110	3	2.4 (1.0)	50	14.9	2.22	22.5	40.1	6.7	1.4	0.6	15.3	2.22	22.9	43.2	6.9	2.8	1.2	15.5	2.23	23.1	44.8	7.0	4.7	2.0			
			60	17.3	2.24	24.9	48.5	7.7	1.3	0.6	17.8	2.24	25.5	52.1	7.9	2.7	1.2	18.1	2.25	25.7	54.0	8.0	4.6	2.0			
			70	19.9	2.27	27.6	56.7	8.8	1.3	0.6	20.5	2.28	28.3	60.9	9.0	2.6	1.1	20.8	2.29	28.7	63.1	9.1	4.4	1.9			
			80	22.7	2.32	30.6	64.9	9.8	1.2	0.5	23.5	2.34	31.5	69.6	10.0	2.6	1.1	23.9	2.35	31.9	72.0	10.2	4.3	1.9			
			90	25.8	2.39	33.9	72.8	10.8	1.2	0.5																	
	4.5	4.0 (1.8)	50	15.2	2.15	22.6	39.9	7.1	1.4	0.6	15.6	2.15	23.0	43.1	7.2	2.8	1.2	15.8	2.15	23.2	44.7	7.3	4.7	2.0			
			60	17.7	2.16	25.0	48.2	8.2	1.3	0.6	18.2	2.17	25.6	51.9	8.4	2.7	1.2	18.5	2.17	25.9	53.8	8.5	4.6	2.0			
			70	20.3	2.19	27.8	56.4	9.3	1.3	0.6	21.0	2.20	28.5	60.7	9.6	2.6	1.1	21.3	2.20	28.9	62.9	9.7	4.4	1.9			
			80	23.3	2.23	30.9	64.5	10.4	1.2	0.5	24.1	2.24	31.7	69.3	10.7	2.6	1.1	24.5	2.25	32.2	71.8	10.9	4.3	1.9			
			90	26.4	2.28	34.2	72.4	11.6	1.2	0.5																	
			50	15.3	2.12	22.6	39.8	7.2	1.4	0.6	15.8	2.12	23.0	43.0	7.4	2.8	1.2	16.0	2.12	23.2	44.7	7.5	4.7	2.0			
			60	17.8	2.13	25.1	48.1	8.4	1.3	0.6	18.4	2.13	25.6	51.8	8.6	2.7	1.2	18.7	2.13	25.9	53.8	8.8	4.6	2.0			
			70	20.6	2.15	27.9	56.3	9.6	1.3	0.6	21.2	2.15	28.6	60.6	9.9	2.6	1.1	21.6	2.16	29.0	62.8	10.0	4.4	1.9			
			80	23.5	2.18	31.0	64.3	10.8	1.2	0.5	24.4	2.19	31.9	69.2	11.1	2.6	1.1	24.8	2.20	32.3	71.7	11.3	4.3	1.9			
			90	26.8	2.23	34.4	72.2	12.0	1.2	0.5	27.8	2.25	35.5	77.6	12.4	2.5	1.1	28.4	2.26	36.1	80.5	12.6	4.2	1.8			

# Greensource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

Capacity Data - TW025 - Full Load - Heating

Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	3 GPM							4.5 GPM							6 GPM						
				Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (PSI)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of water)	Pressure Drop (psi)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (psi)
30	3	0.6 (1.5)	60																					
			80	18.4	1.50	13.3	92.3	3.6	0.5	1.2	18.4	1.44	13.5	86.1	3.8	1.8	4.2	18.4	1.44	13.5	86.1	3.8	1.8	4.2
			100	18.3	1.96	11.6	112.2	2.7	0.5	1.1	18.3	1.88	11.9	106.1	2.9	1.7	3.9	18.3	1.88	11.9	106.1	2.9	1.7	3.9
			120	18.4	2.55	9.7	132.3	2.1	0.5	1.1	18.4	2.4	10.03	126.1	2.2	1.6	3.7	18.4	2.4	10.03	126.1	2.2	1.6	3.7
	4.5	1.3 (3.0)	60	19.0	1.16	15.0	72.7	4.8	0.6	1.3	19.0	1.11	15.2	66.3	5.0	1.9	4.5	19.0	1.11	15.2	66.3	5.0	1.9	4.5
			80	18.7	1.50	13.6	92.5	3.7	0.5	1.2	18.8	1.44	13.9	86.3	3.8	1.8	4.2	18.8	1.44	13.9	86.3	3.8	1.8	4.2
			100	18.6	1.96	11.9	112.4	2.8	0.5	1.1	18.6	1.88	12.2	106.2	2.9	1.7	3.9	18.6	1.88	12.2	106.2	2.9	1.7	3.9
			120	18.6	2.54	9.9	132.4	2.1	0.5	1.1	18.6	2.44	10.2	126.2	2.2	1.6	3.7	18.6	2.44	10.2	126.2	2.2	1.6	3.7
	6	2.2 (5.0)	60	19.2	1.16	15.2	72.8	4.9	0.6	1.3	19.2	1.11	15.4	66.4	5.1	1.9	4.5	19.2	1.11	15.4	66.4	5.1	1.9	4.5
			80	18.9	1.50	13.8	92.6	3.7	0.5	1.2	18.9	1.44	14.0	86.3	3.9	1.8	4.2	18.9	1.44	14.0	86.3	3.9	1.8	4.2
			100	18.7	1.96	12.0	112.5	2.8	0.5	1.1	18.7	1.88	12.3	106.2	2.9	1.7	3.9	18.7	1.88	12.3	106.2	2.9	1.7	3.9
			120	18.7	2.54	10.0	132.5	2.2	0.5	1.1	18.7	2.44	10.4	126.2	2.2	1.6	3.7	18.7	2.44	10.4	126.2	2.2	1.6	3.7
50	3	0.6 (1.4)	60	23.8	1.19	19.7	75.9	5.8	0.5	1.3	23.9	1.14	20.0	68.0	6.1	1.9	4.5	23.9	1.14	20.0	68.0	6.1	1.9	4.5
			80	23.2	1.52	18.1	95.5	4.5	0.5	1.2	23.4	1.45	18.4	87.8	4.7	1.8	4.2	23.4	1.45	18.4	87.8	4.7	1.8	4.2
			100	22.7	1.96	16.0	115.1	3.4	0.5	1.1	22.8	1.87	16.4	107.6	3.6	1.7	3.9	22.8	1.87	16.4	107.6	3.6	1.7	3.9
			120	22.3	2.52	13.7	134.9	2.6	0.5	1.1	22.4	2.40	14.2	127.5	2.7	1.6	3.7	22.4	2.40	14.2	127.5	2.7	1.6	3.7
	4.5	1.2 (2.8)	60	24.5	1.20	20.4	76.3	6.0	0.5	1.3	24.6	1.15	20.7	68.2	6.3	1.9	4.5	24.6	1.15	20.7	68.2	6.3	1.9	4.5
			80	23.8	1.53	18.6	95.9	4.6	0.5	1.2	23.9	1.45	19.0	88.0	4.8	1.8	4.2	23.9	1.45	19.0	88.0	4.8	1.8	4.2
			100	23.2	1.96	16.5	115.5	3.5	0.5	1.1	23.3	1.87	16.9	107.8	3.7	1.7	3.9	23.3	1.87	16.9	107.8	3.7	1.7	3.9
			120	22.7	2.52	14.1	135.1	2.6	0.5	1.1	22.7	2.40	14.5	127.6	2.8	1.6	3.7	22.7	2.40	14.5	127.6	2.8	1.6	3.7
	6	2.0 (4.7)	60	24.8	1.20	20.7	76.5	6.1	0.5	1.3	25.0	1.15	21.0	68.3	6.4	1.9	4.5	25.0	1.15	21.0	68.3	6.4	1.9	4.5
			80	24.1	1.53	18.9	96.1	4.6	0.5	1.2	24.2	1.45	19.3	88.1	4.9	1.8	4.2	24.2	1.45	19.3	88.1	4.9	1.8	4.2
			100	23.4	1.96	16.7	115.6	3.5	0.5	1.1	23.5	1.87	17.2	107.8	3.7	1.7	3.9	23.5	1.87	17.2	107.8	3.7	1.7	3.9
			120	22.8	2.52	14.2	135.2	2.7	0.5	1.1	22.9	2.40	14.7	127.6	2.8	1.6	3.7	22.9	2.40	14.7	127.6	2.8	1.6	3.7
70	3	0.6 (1.3)	60	30.1	1.24	25.9	80.1	7.1	0.5	1.3	30.4	1.17	26.4	70.1	7.6	1.9	4.4	30.4	1.17	26.4	70.1	7.6	1.9	4.4
			80	29.2	1.57	23.8	99.4	5.4	0.5	1.2	29.4	1.48	24.3	89.8	5.8	1.8	4.2	29.4	1.48	24.3	89.8	5.8	1.8	4.2
			100	28.1	2.01	21.3	118.8	4.1	0.5	1.1	28.4	1.90	21.9	109.5	4.4	1.7	3.9	28.4	1.90	21.9	109.5	4.4	1.7	3.9
			120								27.4	2.43	19.1	129.1	3.3	1.6	3.7	27.4	2.43	19.1	129.1	3.3	1.6	3.7
	4.5	1.1 (2.6)	60	31.2	1.25	26.9	80.8	7.3	0.5	1.3	31.4	1.18	27.4	70.5	7.8	1.9	4.4	31.4	1.18	27.4	70.5	7.8	1.9	4.4
			80	30.1	1.58	24.7	100.0	5.6	0.5	1.2	30.3	1.49	25.3	90.1	6.0	1.8	4.2	30.3	1.49	25.3	90.1	6.0	1.8	4.2
			100	28.9	2.02	22.0	119.3	4.2	0.5	1.1	29.2	1.90	22.7	109.7	4.5	1.7	3.9	29.2	1.90	22.7	109.7	4.5	1.7	3.9
			120								28.0	2.43	19.7	129.3	3.4	1.6	3.7	28.0	2.43	19.7	129.3	3.4	1.6	3.7
	6	1.9 (4.4)	60	31.7	1.25	27.5	81.2	7.4	0.5	1.3	32.0	1.18	28.0	70.7	8.0	1.9	4.4	32.0	1.18	28.0	70.7	8.0	1.9	4.4
			80	30.5	1.59	25.1	100.4	5.6	0.5	1.2	30.9	1.49	25.8	90.3	6.1	1.8	4.2	30.9	1.49	25.8	90.3	6.1	1.8	4.2
			100	29.3	2.03	22.4	119.5	4.2	0.5	1.1	29.6	1.91	23.1	109.9	4.5	1.7	3.9	29.6	1.91	23.1	109.9	4.5	1.7	3.9
			120								28.3	2.44	20.0	129.4	3.4	1.6	3.7	28.3	2.44	20.0	129.4	3.4	1.6	3.7
90	3	0.5 (1.2)	60	37.7	1.30	33.2	85.1	8.5	0.5	1.2	38.1	1.20	34.0	72.7	9.3	1.9	4.4	38.1	1.20	34.0	72.7	9.3	1.9	4.4
			80	36.2	1.66	30.6	104.2	6.4	0.5	1.2	36.7	1.54	31.5	92.2	7.0	1.8	4.2	36.7	1.54	31.5	92.2	7.0	1.8	4.2
			100	34.7	2.12	27.5	123.1	4.8	0.5	1.1	35.2	1.97	28.4	111.7	5.2	1.7	3.9	35.2	1.97	28.4	111.7	5.2	1.7	3.9
			120															33.6	2.52	25.0	131.2	3.9	1.6	3.7
	4.5	1.1 (2.5)	60	39.3	1.31	34.8	86.2	8.8	0.5	1.2	39.8	1.21	35.7	73.3	9.7	1.9	4.4	39.8	1.21	35.7	73.3	9.7	1.9	4.4
			80	37.6	1.68	31.9	105.1	6.6	0.5	1.2	38.2	1.55	32.9	92.7	7.2	1.8	4.2	38.2	1.55	32.9	92.7	7.2	1.8	4.2
			100																					
			120																					
	6	1.8 (4.1)	60																					
			80																					
			100																					
			120																					

- Extended Range - Anti-freeze required
- Interpolation is permissible. Not extrapolation
- Operation not recommended

- Tabulated unit performance does not include fan or pump power corrections required for AHRI/ ISO standard performance ratings.
- Unit performance may be interpolated. Extrapolation is not allowed.
- For conditions other than rating conditions provided, consult the BST selection software.
- Ratings below 40°F are with a methanol solution.

**DISCLAIMER:** The performance reported herein is based on testing by FHP. Variations in the installation and operational environment may alter performance. Bosch disclaims all warranties, express and implied, that the performance will be as reported, including the warranty of merchantability and fitness for purpose. In addition, continuous research and development may result in a change to an appliances design and specifications at the time of order, which Bosch may change without notice. Before purchase, confirm the design specifications of the appliance.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL



# Greensource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

Capacity Data - TW035 – Part Load – Cooling																									
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	4.5 GPM							6.75 GPM							9 GPM							
				Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	
50	4.5	2.7 (1.2)	50	19.6	1.08	23.3	41.3	18.1	2.8	1.2	20.1	1.08	23.7	44.1	18.6	5.8	2.5	20.3	1.08	24.0	45.5	18.8	9.8	4.2	
			60	22.9	1.06	26.5	49.8	21.5	2.7	1.2	23.5	1.06	27.1	53.0	22.2	5.7	2.5	23.8	1.06	27.4	54.7	22.5	9.5	4.1	
			70	26.6	1.04	30.1	58.2	25.5	2.7	1.2	27.4	1.03	30.9	61.9	26.5	5.5	2.4	27.8	1.03	31.3	63.8	26.9	9.2	4.0	
			80	30.6	1.01	34.0	66.4	30.4	2.6	1.1	31.6	1.00	35.0	70.6	31.7	5.3	2.3	32.1	0.99	35.5	72.9	32.4	8.9	3.8	
	90																								
	6.75	5.0 (2.1)	50	19.6	1.06	23.3	41.3	18.6	2.8	1.2	20.1	1.05	23.7	44.0	19.1	5.9	2.5	20.4	1.05	24.0	45.5	19.4	9.8	4.2	
			60	23.0	1.04	26.5	49.8	22.2	2.7	1.2	23.6	1.03	27.1	53.0	22.9	5.7	2.5	23.9	1.03	27.4	54.7	23.2	9.5	4.1	
			70	26.7	1.01	30.1	58.1	26.5	2.7	1.2	27.5	1.00	30.9	61.9	27.4	5.5	2.4	27.9	1.00	31.3	63.8	28.0	9.2	4.0	
			80	30.8	0.97	34.1	66.3	31.7	2.6	1.1	31.8	0.96	35.0	70.6	33.1	5.3	2.3	32.3	0.95	35.6	72.8	33.9	8.9	3.9	
	90																								
	9	7.7 (3.3)	50	19.7	1.04	23.2	41.3	18.8	2.8	1.2	20.2	1.04	23.7	44.0	19.3	5.9	2.5	20.4	1.04	24.0	45.5	19.6	9.8	4.2	
			60	23.0	1.02	26.5	49.8	22.5	2.7	1.2	23.6	1.02	27.1	53.0	23.2	5.7	2.5	24.0	1.02	27.4	54.7	23.6	9.5	4.1	
70			26.7	0.99	30.1	58.1	26.9	2.7	1.2	27.5	0.99	30.9	61.8	27.9	5.5	2.4	28.0	0.98	31.3	63.8	28.5	9.2	4.0		
80			30.8	0.95	34.1	66.3	32.3	2.6	1.1	31.9	0.94	35.1	70.6	33.8	5.3	2.3	32.4	0.94	35.6	72.8	34.6	8.9	3.9		
90																									
70	4.5	7.8 (3.4)	50	18.6	1.40	23.4	41.7	13.3	2.8	1.2	19.0	1.40	23.8	44.4	13.6	5.8	2.5	19.2	1.40	24.0	45.7	13.8	9.8	4.2	
			60	21.7	1.39	26.5	50.3	15.7	2.7	1.2	22.3	1.38	27.0	53.4	16.1	5.7	2.4	22.6	1.38	27.3	55.0	16.4	9.5	4.1	
			70	25.2	1.36	29.9	58.8	18.5	2.7	1.2	25.9	1.35	30.5	62.3	19.1	5.5	2.4	26.3	1.35	30.9	64.2	19.5	9.2	4.0	
			80	29.0	1.33	33.5	67.1	21.9	2.6	1.1	29.9	1.32	34.4	71.1	22.7	5.3	2.3	30.4	1.31	34.9	73.2	23.2	8.9	3.8	
	90	33.2	1.28	37.5	75.3	26.0	2.5	1.1																	
	6.75	2.5 (1.1)	50	18.7	1.37	23.4	41.7	13.7	2.8	1.2	19.1	1.37	23.8	44.3	14.0	5.8	2.5	19.4	1.37	24.0	45.7	14.2	9.8	4.2	
			60	21.9	1.35	26.5	50.3	16.2	2.7	1.2	22.4	1.35	27.0	53.3	16.7	5.7	2.4	22.7	1.34	27.3	54.9	16.9	9.5	4.1	
			70	25.4	1.32	29.9	58.7	19.2	2.7	1.2	26.1	1.31	30.6	62.3	19.9	5.5	2.4	26.5	1.31	31.0	64.1	20.2	9.2	4.0	
			80	29.2	1.28	33.6	67.0	22.8	2.6	1.1	30.2	1.27	34.5	71.1	23.7	5.3	2.3	30.6	1.26	35.0	73.2	24.2	8.9	3.8	
	90	33.5	1.23	37.7	75.1	27.2	2.5	1.1																	
	9	5.3 (2.3)	50	18.8	1.35	23.4	41.7	13.9	2.8	1.2	19.2	1.35	23.8	44.3	14.2	5.8	2.5	19.4	1.35	24.0	45.7	14.4	9.8	4.2	
			60	22.0	1.33	26.5	50.2	16.5	2.7	1.2	22.5	1.33	27.1	53.3	17.0	5.7	2.4	22.8	1.33	27.3	54.9	17.2	9.5	4.1	
70			25.5	1.30	29.9	58.7	19.6	2.7	1.2	26.2	1.29	30.6	62.2	20.2	5.5	2.4	26.6	1.29	31.0	64.1	20.6	9.2	4.0		
80			29.4	1.26	33.7	67.0	23.3	2.6	1.1	30.3	1.25	34.5	71.0	24.3	5.3	2.3	30.8	1.24	35.0	73.2	24.8	8.9	3.8		
90	33.6	1.20	37.7	75.1	27.9	2.5	1.1																		
4.5	8.1 (3.5)	50	17.0	1.82	23.2	42.5	9.3	2.8	1.2	17.3	1.82	23.6	44.9	9.5	5.8	2.5	17.5	1.82	23.7	46.1	9.6	9.8	4.2		
		60	20.0	1.81	26.1	51.1	11.1	2.7	1.2	20.4	1.80	26.6	53.9	11.3	5.7	2.4	20.7	1.80	26.8	55.4	11.5	9.5	4.1		
		70	23.2	1.78	29.3	59.7	13.1	2.7	1.1	23.8	1.77	29.9	62.9	13.4	5.5	2.4	24.2	1.77	30.2	64.6	13.7	9.2	4.0		
		80	26.8	1.74	32.8	68.1	15.4	2.6	1.1	27.6	1.73	33.5	71.8	15.9	5.3	2.3	28.0	1.73	33.9	73.8	16.2	8.9	3.8		
90																									
90	6.75	5.7 (2.5)	50	17.1	1.78	23.2	42.4	9.6	2.8	1.2	17.5	1.78	23.6	44.8	9.8	5.8	2.5	17.7	1.78	23.8	46.1	10.0	9.8	4.2	
			60	20.2	1.76	26.2	51.0	11.5	2.7	1.2	20.7	1.76	26.6	53.9	11.8	5.7	2.4	20.9	1.75	26.9	55.4	11.9	9.5	4.1	
			70	23.5	1.73	29.4	59.6	13.6	2.7	1.1	24.1	1.72	30.0	62.9	14.0	5.5	2.4	24.4	1.72	30.3	64.6	14.2	9.2	4.0	
			80	27.1	1.68	32.9	67.9	16.1	2.6	1.1	27.9	1.67	33.6	71.7	16.7	5.3	2.3	28.3	1.67	34.0	73.7	17.0	8.9	3.8	
	90																								
	9	3.1 (1.3)	50	17.2	1.76	23.2	42.3	9.8	2.8	1.2	17.6	1.76	23.6	44.8	10.0	5.8	2.5	17.8	1.76	23.8	46.0	10.1	9.8	4.2	
			60	20.3	1.74	26.2	51.0	11.7	2.7	1.2	20.8	1.73	26.7	53.8	12.0	5.7	2.4	21.0	1.73	26.9	55.3	12.2	9.5	4.1	
			70	23.6	1.70	29.4	59.5	13.9	2.7	1.1	24.2	1.70	30.0	62.8	14.3	5.5	2.4	24.6	1.69	30.3	64.5	14.5	9.2	4.0	
			80	27.3	1.66	32.9	67.9	16.5	2.6	1.1	28.1	1.65	33.7	71.7	17.1	5.3	2.3	28.5	1.64	34.1	73.7	17.4	8.9	3.8	
	90																								
	110	4.5	5.0 (2.2)	50	14.6	2.38	22.7	43.5	6.1	2.8	1.2	14.9	2.38	23.0	45.6	6.3	5.8	2.5	15.1	2.38	23.2	46.7	6.3	9.8	4.2
				60	17.5	2.36	25.5	52.2	7.4	2.7	1.2	17.8	2.36	25.9	54.7	7.6	5.6	2.4	18.0	2.36	26.1	56.0	7.7	9.5	4.1
70				20.5	2.33	28.5	60.9	8.8	2.6	1.1	21.1	2.33	29.0	63.8	9.1	5.5	2.4	21.3	2.32	29.2	65.3	9.2	9.2	4.0	
80				23.9	2.29	31.7	69.4	10.4	2.6	1.1	24.6	2.28	32.3	72.7	10.8	5.3	2.3	24.9	2.27	32.7	74.5	10.9	8.9	3.8	
90																									
6.75		8.4 (3.7)	50	14.8	2.33	22.8	43.4	6.4	2.8	1.2	15.2	2.33	23.1	45.5	6.5	5.8	2.5	15.3	2.32	23.2	46.6	6.6	9.8	4.2	
			60	17.7	2.30	25.6	52.1	7.7	2.7	1.2	18.1	2.30	26.0	54.6	7.9	5.6	2.4	18.3	2.30	26.2	55.9	8.0	9.5	4.1	
			70	20.9	2.27	28.6	60.7	9.2	2.6	1.1	21.4	2.26	29.1	63.7	9.5	5.5	2.4	21.7	2.26	29.4	65.2	9.6	9.2	4.0	
			80	24.3	2.22	31.9	69.2	11.0	2.6	1.1	25.0	2.21	32.5	72.6	11.3	5.3	2.3	25.3	2.20	32.8	74.4	11.5	8.9	3.8	
90																									
9		3.8 (1.6)	50	15.0	2.30	22.8	43.4	6.5	2.8	1.2	15.3	2.30	23.1	45.5	6.6	5.8	2.5	15.4	2.30	23.3	46.6	6.7	9.8	4.2	
			60	17.9	2.27	25.6	52.1	7.9	2.7	1.2	18.3	2.27	26.0	54.6	8.1	5.6	2.4	18.5	2.27	26.2	55.9	8.2	9.5	4.1	
	70		21.0	2.23	28.6	60.7	9.4	2.6	1.1	21.6	2.23	29.2	63.6	9.7	5.5	2.4	21.8	2.22	29.4	65.1	9.8	9.2	4.0		
	80		24.5	2.18	31.9	69.1	11.2	2.6	1.1	25.2	2.17	32.6	72.5	11.6	5.3	2.3	25.5	2.16	32.9	74.3	11.8	8.9	3.8		
90																									

- Extended Range - Anti-freeze required
- Interpolation is permissible. Not extrapolation
- Operation not recommended

- Tabulated unit performance does not include fan or pump power corrections required for AHRI/ ISO standard performance ratings.
- Unit performance may be interpolated. Extrapolation is not allowed.
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Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL



# Greensource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

Capacity Data - TW035 – Part Load – Heating																								
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	4.5 GPM							6.75 GPM							9 GPM						
				Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (PSI)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of water)	Pressure Drop (psi)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (psi)
30	4.5	1.3 (3.0)	60	17.9	1.25	13.7	68.0	4.2	1.2	2.7	17.9	1.21	13.7	64.0	4.3	4.0	9.3	17.9	1.21	13.7	64.0	4.3	4.0	9.3
			80	18.1	1.61	12.6	88.0	3.3	1.1	2.5	18.1	1.57	12.7	84.0	3.4	3.8	8.7	18.1	1.57	12.7	84.0	3.4	3.8	8.7
			100	17.9	2.10	10.8	108.0	2.5	1.0	2.3	18.0	2.04	11.0	104.0	2.6	3.6	8.2	18.0	2.04	11.0	104.0	2.6	3.6	8.2
			120	17.6	2.74	8.2	127.8	1.9	1.0	2.2	17.6	2.7	8.50	123.9	1.9	3.4	7.8	17.6	2.7	8.50	123.9	1.9	3.4	7.8
	6.75	2.7 (6.3)	60	18.2	1.24	13.9	68.1	4.3	1.2	2.7	18.1	1.21	14.0	64.0	4.4	4.0	9.3	18.1	1.21	14.0	64.0	4.4	4.0	9.3
			80	18.3	1.61	12.8	88.1	3.3	1.1	2.5	18.3	1.57	13.0	84.1	3.4	3.8	8.7	18.3	1.57	13.0	84.1	3.4	3.8	8.7
			100	18.1	2.10	11.0	108.1	2.5	1.0	2.3	18.2	2.04	11.2	104.0	2.6	3.6	8.2	18.2	2.04	11.2	104.0	2.6	3.6	8.2
			120	17.7	2.74	8.4	127.9	1.9	1.0	2.2	17.8	2.67	8.7	123.9	1.9	3.4	7.8	17.8	2.67	8.7	123.9	1.9	3.4	7.8
	9	4.5 (10.5)	60	18.3	1.24	14.1	68.1	4.3	1.2	2.7	18.3	1.21	14.1	64.1	4.4	4.0	9.3	18.3	1.21	14.1	64.1	4.4	4.0	9.3
			80	18.4	1.61	12.9	88.2	3.4	1.1	2.5	18.4	1.57	13.1	84.1	3.4	3.8	8.7	18.4	1.57	13.1	84.1	3.4	3.8	8.7
			100	18.2	2.10	11.1	108.1	2.5	1.0	2.3	18.3	2.04	11.3	104.1	2.6	3.6	8.2	18.3	2.04	11.3	104.1	2.6	3.6	8.2
			120	17.8	2.74	8.4	127.9	1.9	1.0	2.2	17.8	2.67	8.7	124.0	2.0	3.4	7.8	17.8	2.67	8.7	124.0	2.0	3.4	7.8
50	4.5	1.2 (2.8)	60	23.4	1.23	19.2	70.4	5.6	1.1	2.7	23.4	1.19	19.3	65.2	5.8	4.0	9.3	23.4	1.19	19.3	65.2	5.8	4.0	9.3
			80	23.3	1.60	17.9	90.4	4.3	1.1	2.5	23.3	1.54	18.1	85.2	4.4	3.8	8.7	23.3	1.54	18.1	85.2	4.4	3.8	8.7
			100	23.0	2.08	15.9	110.2	3.2	1.0	2.3	23.0	2.01	16.2	105.1	3.4	3.6	8.2	23.0	2.01	16.2	105.1	3.4	3.6	8.2
			120	22.4	2.72	13.1	130.0	2.4	1.0	2.2	22.5	2.63	13.5	125.0	2.5	3.4	7.8	22.5	2.63	13.5	125.0	2.5	3.4	7.8
	6.75	2.5 (5.8)	60	23.8	1.23	19.6	70.6	5.7	1.1	2.6	23.8	1.19	19.8	65.3	5.9	4.0	9.3	23.8	1.19	19.8	65.3	5.9	4.0	9.3
			80	23.7	1.59	18.3	90.5	4.4	1.1	2.5	23.7	1.54	18.5	85.3	4.5	3.8	8.7	23.7	1.54	18.5	85.3	4.5	3.8	8.7
			100	23.3	2.08	16.2	110.4	3.3	1.0	2.3	23.4	2.01	16.5	105.2	3.4	3.6	8.2	23.4	2.01	16.5	105.2	3.4	3.6	8.2
			120	22.7	2.72	13.4	130.1	2.4	1.0	2.2	22.8	2.63	13.8	125.1	2.5	3.4	7.8	22.8	2.63	13.8	125.1	2.5	3.4	7.8
	9	4.2 (9.8)	60	24.0	1.23	19.9	70.7	5.7	1.1	2.6	24.0	1.19	20.0	65.3	5.9	4.0	9.3	24.0	1.19	20.0	65.3	5.9	4.0	9.3
			80	23.9	1.59	18.5	90.6	4.4	1.1	2.5	24.0	1.54	18.7	85.3	4.6	3.8	8.7	24.0	1.54	18.7	85.3	4.6	3.8	8.7
			100	23.5	2.08	16.4	110.4	3.3	1.0	2.3	23.6	2.01	16.7	105.2	3.4	3.6	8.2	23.6	2.01	16.7	105.2	3.4	3.6	8.2
			120	22.8	2.72	13.5	130.1	2.5	1.0	2.2	22.9	2.63	13.9	125.1	2.6	3.4	7.8	22.9	2.63	13.9	125.1	2.6	3.4	7.8
70	4.5	1.1 (2.7)	60	30.0	1.19	26.0	73.3	7.4	1.1	2.6	30.1	1.14	26.2	66.7	7.7	4.0	9.3	30.1	1.14	26.2	66.7	7.7	4.0	9.3
			80	29.6	1.56	24.3	93.2	5.6	1.1	2.5	29.7	1.49	24.6	86.6	5.8	3.8	8.7	29.7	1.49	24.6	86.6	5.8	3.8	8.7
			100	28.9	2.04	22.0	112.9	4.2	1.0	2.3	29.1	1.95	22.4	106.5	4.4	3.5	8.2	29.1	1.95	22.4	106.5	4.4	3.5	8.2
			120	28.0	2.67	18.9	132.4	3.1	1.0	2.2	28.2	2.56	19.4	126.3	3.2	3.4	7.7	28.2	2.56	19.4	126.3	3.2	3.4	7.7
	6.75	2.4 (5.5)	60	30.8	1.18	26.7	73.7	7.6	1.1	2.6	30.8	1.13	26.9	66.8	8.0	4.0	9.3	30.8	1.13	26.9	66.8	8.0	4.0	9.3
			80	30.3	1.55	25.0	93.4	5.7	1.1	2.5	30.4	1.48	25.3	86.7	6.0	3.8	8.7	30.4	1.48	25.3	86.7	6.0	3.8	8.7
			100	29.5	2.03	22.5	113.1	4.3	1.0	2.3	29.6	1.94	23.0	106.6	4.5	3.5	8.2	29.6	1.94	23.0	106.6	4.5	3.5	8.2
			120	28.4	2.66	19.4	132.6	3.1	1.0	2.2	28.6	2.55	19.9	126.4	3.3	3.4	7.7	28.6	2.55	19.9	126.4	3.3	3.4	7.7
	9	4.0 (9.2)	60	31.1	1.18	27.1	73.8	7.7	1.1	2.6	31.2	1.13	27.4	66.9	8.1	4.0	9.3	31.2	1.13	27.4	66.9	8.1	4.0	9.3
			80	30.6	1.55	25.3	93.6	5.8	1.1	2.5	30.7	1.48	25.7	86.8	6.1	3.8	8.7	30.7	1.48	25.7	86.8	6.1	3.8	8.7
			100	29.8	2.03	22.8	113.2	4.3	1.0	2.3	29.9	1.94	23.3	106.6	4.5	3.5	8.2	29.9	1.94	23.3	106.6	4.5	3.5	8.2
			120	28.7	2.66	19.6	132.7	3.2	1.0	2.2	28.9	2.55	20.2	126.4	3.3	3.4	7.7	28.9	2.55	20.2	126.4	3.3	3.4	7.7
90	4.5	1.1 (2.5)	60	37.9	1.11	34.2	76.9	10.0	1.1	2.6	38.1	1.04	34.5	68.5	10.7	4.0	9.3	38.1	1.04	34.5	68.5	10.7	4.0	9.3
			80	37.0	1.47	32.0	96.5	7.4	1.1	2.5	37.3	1.39	32.5	88.3	7.9	3.8	8.7	37.3	1.39	32.5	88.3	7.9	3.8	8.7
			100																					
			120																					
	6.75	2.2 (5.1)	60	39.1	1.09	35.3	77.4	10.5	1.1	2.6	39.3	1.03	35.8	68.7	11.2	4.0	9.3	39.3	1.03	35.8	68.7	11.2	4.0	9.3
			80																					
			100																					
			120																					
	9	3.7 (8.6)	60								39.9	1.02	36.4	68.9	11.5	4.0	9.3	39.9	1.02	36.4	68.9	11.5	4.0	9.3
			80																					
			100																					
			120																					

- Extended Range - Anti-freeze required
- Interpolation is permissible. Not extrapolation
- Operation not recommended

- Tabulated unit performance does not include fan or pump power corrections required for AHRI/ ISO standard performance ratings.
- Unit performance may be interpolated. Extrapolation is not allowed.
- For conditions other than rating conditions provided, consult the BST selection software.
- Ratings below 40°F are with a methanol solution.

**DISCLAIMER:** The performance reported herein is based on testing by FHP. Variations in the installation and operational environment may alter performance. Bosch disclaims all warranties, express and implied, that the performance will be as reported, including the warranty of merchantability and fitness for purpose. In addition, continuous research and development may result in a change to an appliances design and specifications at the time of order, which Bosch may change without notice. Before purchase, confirm the design specifications of the appliance.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL

# Greensource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

Capacity Data - TW035 - Full Load - Cooling																											
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	4.5 GPM								6.75 GPM								9 GPM							
				Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)			
50	4.5	2.7 (1.2)	50	31.4	1.61	36.9	36.0	19.5	2.9	1.2	32.5	1.62	38.0	40.4	20.1	5.9	2.5	33.0	1.63	38.6	42.7	20.3	9.8	4.3			
			60	36.0	1.66	41.6	44.0	21.7	2.8	1.2	37.3	1.67	43.0	48.9	22.3	5.7	2.5	38.0	1.68	43.8	51.5	22.7	9.5	4.1			
			70	41.0	1.71	46.8	51.8	24.0	2.7	1.2	42.6	1.72	48.5	57.4	24.8	5.5	2.4	43.5	1.73	49.4	60.3	25.2	9.2	4.0			
			80	46.4	1.75	52.3	59.4	26.5	2.6	1.1	48.4	1.77	54.4	65.7	27.4	5.4	2.3	49.5	1.78	55.6	69.0	27.9	8.9	3.9			
			90	52.2	1.80	58.3	66.8	29.1	2.5	1.1	54.7	1.81	60.8	73.8	30.2	5.2	2.3										
	6.75	5.0 (2.1)	50	31.7	1.56	37.0	35.9	20.3	2.9	1.2	32.8	1.57	38.1	40.3	20.9	5.9	2.5	33.4	1.57	38.7	42.6	21.2	9.8	4.3			
			60	36.3	1.60	41.8	43.9	22.7	2.8	1.2	37.7	1.61	43.2	48.8	23.4	5.7	2.5	38.4	1.62	44.0	51.5	23.8	9.5	4.1			
			70	41.4	1.64	47.0	51.6	25.2	2.7	1.2	43.1	1.65	48.8	57.2	26.1	5.5	2.4	44.1	1.66	49.7	60.2	26.5	9.2	4.0			
			80	46.9	1.68	52.7	59.1	27.9	2.6	1.1	49.0	1.69	54.8	65.5	29.0	5.4	2.3	50.2	1.70	56.0	68.8	29.6	9.0	3.9			
			90																								
	9	7.7 (3.3)	50	31.8	1.53	37.1	35.9	20.7	2.9	1.2	32.9	1.54	38.2	40.2	21.3	5.9	2.5	33.5	1.55	38.8	42.6	21.6	9.8	4.3			
			60	36.5	1.57	41.9	43.8	23.2	2.8	1.2	37.9	1.58	43.3	48.8	23.9	5.7	2.5	38.7	1.59	44.1	51.4	24.3	9.5	4.1			
			70	41.6	1.61	47.1	51.5	25.9	2.7	1.2	43.4	1.62	48.9	57.1	26.8	5.5	2.4	44.3	1.63	49.9	60.2	27.3	9.2	4.0			
			80	47.2	1.64	52.8	59.0	28.7	2.6	1.1	49.4	1.65	55.0	65.4	29.8	5.4	2.3	50.5	1.66	56.2	68.8	30.4	9.0	3.9			
			90																								
70	4.5	7.8 (3.4)	50	29.2	2.01	36.0	37.0	14.5	2.9	1.2	30.1	2.02	37.0	41.1	14.9	5.9	2.5	30.6	2.03	37.5	43.2	15.1	9.8	4.3			
			60	33.4	2.06	40.5	45.1	16.2	2.8	1.2	34.6	2.08	41.7	49.7	16.7	5.7	2.5	35.2	2.09	42.3	52.2	16.9	9.5	4.1			
			70	38.1	2.12	45.3	53.1	18.0	2.7	1.2	39.5	2.13	46.8	58.3	18.5	5.5	2.4	40.3	2.14	47.6	61.0	18.8	9.2	4.0			
			80	43.2	2.17	50.6	60.8	19.9	2.6	1.1	44.9	2.19	52.4	66.7	20.5	5.4	2.3	45.9	2.20	53.4	69.8	20.9	8.9	3.9			
			90	48.6	2.22	56.2	68.4	21.9	2.5	1.1	50.8	2.24	58.4	75.0	22.7	5.2	2.2	51.9	2.25	59.6	78.5	23.1	8.7	3.8			
	6.75	2.5 (1.1)	50	29.5	1.95	36.1	36.9	15.1	2.9	1.2	30.4	1.96	37.1	41.0	15.5	5.9	2.5	30.9	1.97	37.7	43.1	15.7	9.8	4.3			
			60	33.9	2.00	40.7	45.0	17.0	2.8	1.2	35.1	2.01	41.9	49.6	17.5	5.7	2.5	35.7	2.01	42.6	52.1	17.7	9.5	4.1			
			70	38.6	2.04	45.6	52.8	18.9	2.7	1.2	40.1	2.05	47.1	58.1	19.5	5.5	2.4	40.9	2.06	48.0	60.9	19.9	9.2	4.0			
			80	43.8	2.08	50.9	60.5	21.0	2.6	1.1	45.6	2.10	52.8	66.5	21.7	5.4	2.3	46.6	2.11	53.8	69.6	22.2	8.9	3.9			
			90	49.4	2.12	56.7	68.0	23.3	2.5	1.1	51.7	2.14	59.0	74.7	24.2	5.2	2.3	52.9	2.15	60.2	78.2	24.6	8.7	3.8			
	9	5.3 (2.3)	50	29.6	1.92	36.2	36.8	15.4	2.9	1.2	30.6	1.93	37.2	40.9	15.8	5.9	2.5	31.1	1.94	37.7	43.1	16.1	9.8	4.3			
			60	34.1	1.96	40.8	44.9	17.3	2.8	1.2	35.3	1.97	42.0	49.5	17.9	5.7	2.5	35.9	1.98	42.7	52.0	18.1	9.5	4.1			
			70	38.9	2.00	45.7	52.7	19.4	2.7	1.2	40.4	2.02	47.3	58.0	20.0	5.5	2.4	41.2	2.02	48.1	60.8	20.4	9.2	4.0			
			80	44.1	2.04	51.1	60.4	21.6	2.6	1.1	46.0	2.05	53.0	66.4	22.4	5.4	2.3	47.0	2.06	54.1	69.5	22.8	8.9	3.9			
			90	49.8	2.08	56.9	67.9	24.0	2.5	1.1	52.1	2.09	59.2	74.6	24.9	5.2	2.3	53.4	2.10	60.5	78.1	25.5	8.7	3.8			
90	4.5	8.1 (3.5)	50	26.5	2.54	35.2	38.2	10.5	2.8	1.2	27.3	2.55	36.0	41.9	10.7	5.9	2.5	27.7	2.56	36.4	43.8	10.8	9.8	4.3			
			60	30.5	2.59	39.3	46.5	11.7	2.8	1.2	31.5	2.61	40.4	50.7	12.1	5.7	2.5	32.0	2.62	40.9	52.9	12.2	9.5	4.1			
			70	34.8	2.65	43.8	54.5	13.1	2.7	1.2	36.0	2.67	45.1	59.3	13.5	5.5	2.4	36.6	2.68	45.8	61.9	13.7	9.2	4.0			
			80	39.5	2.71	48.7	62.5	14.5	2.6	1.1	40.9	2.73	50.3	67.9	15.0	5.3	2.3	41.7	2.74	51.1	70.7	15.2	8.9	3.9			
			90	44.5	2.77	53.9	70.2	16.1	2.5	1.1	46.3	2.79	55.8	76.3	16.6	5.2	2.2										
	6.75	5.7 (2.5)	50	26.9	2.46	35.3	38.0	10.9	2.8	1.2	27.7	2.47	36.1	41.8	11.2	5.9	2.5	28.1	2.47	36.6	43.7	11.4	9.8	4.3			
			60	30.9	2.51	39.5	46.2	12.3	2.8	1.2	32.0	2.52	40.6	50.5	12.7	5.7	2.5	32.5	2.52	41.1	52.8	12.9	9.5	4.1			
			70	35.4	2.56	44.1	54.3	13.8	2.7	1.2	36.6	2.57	45.4	59.1	14.3	5.5	2.4	37.3	2.57	46.1	61.7	14.5	9.2	4.0			
			80	40.2	2.60	49.0	62.1	15.4	2.6	1.1	41.7	2.62	50.7	67.6	16.0	5.3	2.3	42.6	2.62	51.5	70.5	16.2	8.9	3.9			
			90	45.4	2.65	54.4	69.8	17.1	2.5	1.1	47.3	2.66	56.4	76.0	17.8	5.2	2.2										
	9	3.1 (1.3)	50	27.1	2.42	35.3	38.0	11.2	2.8	1.2	27.9	2.43	36.2	41.7	11.5	5.9	2.5	28.3	2.44	36.6	43.7	11.6	9.8	4.3			
			60	31.2	2.46	39.6	46.1	12.7	2.8	1.2	32.2	2.47	40.7	50.5	13.0	5.7	2.5	32.8	2.48	41.2	52.7	13.2	9.5	4.1			
70			35.7	2.51	44.2	54.2	14.2	2.7	1.2	36.9	2.52	45.5	59.1	14.7	5.5	2.4	37.6	2.52	46.3	61.6	14.9	9.2	4.0				
80			40.5	2.55	49.2	62.0	15.9	2.6	1.1	42.1	2.56	50.9	67.5	16.4	5.3	2.3	43.0	2.57	51.8	70.4	16.7	8.9	3.9				
90			45.8	2.59	54.6	69.6	17.7	2.5	1.1	47.8	2.60	56.6	75.8	18.4	5.2	2.2											
110	4.5	5.0 (2.2)	50	23.4	3.25	34.5	39.6	7.2	2.8	1.2	24.0	3.26	35.2	42.9	7.4	5.9	2.5	24.4	3.27	35.5	44.6	7.5	9.8	4.2			
			60	27.0	3.31	38.3	48.0	8.2	2.8	1.2	27.8	3.33	39.1	51.8	8.4	5.7	2.5	28.2	3.33	39.6	53.7	8.5	9.5	4.1			
			70	30.9	3.37	42.4	56.3	9.2	2.7	1.2	31.9	3.39	43.5	60.5	9.4	5.5	2.4	32.4	3.40	44.0	62.8	9.5	9.2	4.0			
			80	35.2	3.44	46.9	64.4	10.2	2.6	1.1	36.4	3.46	48.2	69.2	10.5	5.3	2.3	37.0	3.46	48.8	71.8	10.7	8.9	3.9			
			90	39.8	3.50	51.7	72.3	11.4	2.5	1.1																	
	6.75	8.4 (3.7)	50	23.8	3.15	34.6	39.4	7.6	2.8	1.2	24.5	3.16	35.3	42.7	7.8	5.9	2.5	24.8	3.16	35.6	44.5	7.9	9.8	4.2			
			60	27.5	3.20	38.5	47.8	8.6	2.8	1.2	28.4	3.21	39.3	51.6	8.8	5.7	2.5	28.8	3.21	39.8	53.6	9.0	9.5	4.1			
			70	31.6	3.25	42.7	56.0	9.7	2.7	1.2	32.6	3.26	43.7	60.3	10.0	5.5	2.4	33.2	3.26	44.3	62.6	10.2	9.2	4.0			
			80	36.0	3.30	47.2	64.0	10.9	2.6	1.1	37.2	3.31	48.5	69.0	11.3	5.3	2.3	37.9	3.32	49.2	71.6	11.4	8.9	3.9			
			90	40.7	3.34	52.1	71.9	12.2	2.5	1.1																	
	9	3.8 (1.6)	50	24.1	3.10	34.6	39.3	7.8	2.8	1.2	24.7	3.11	35.3	42.7	8.0	5.9	2.5	25.1	3.11	35.7	44.4	8.1	9.8	4.2			
			60	27.8	3.14	38.5	47.6	8.9	2.8	1.2	28.6	3.15	39.4	51.5	9.1	5.7	2.5	29.1	3.15	39.9	53.5	9.2	9.5	4.1			
			70	31.9	3.18	42.8	55.8	10.0	2.7	1.2	33.0	3.19	43.9	60.2	10.3	5.5	2.4	33.5	3.20	44.4	62.6	10.5	9.2	4.0			
			80	36.4	3.23	47.4	63.8	11.3	2.6	1.1	37.7	3.24	48.7	68.8	11.6	5.3	2.3	38.4	3.24	49.4	71.5	11.8	8.9	3.9			
			90	41.2	3.27	52.4	71.7	12.6	2.5	1.1																	

# Greensource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

Capacity Data - TW035 – Full Load – Heating																								
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	4.5 GPM							6.75 GPM							9 GPM						
				Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (PSI)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of water)	Pressure Drop (psi)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (psi)
30	4.5	1.3 (3.0)	60																					
			80	28.0	2.16	20.7	92.5	3.8	1.1	2.5	28.1	2.08	21.0	86.2	4.0	3.8	8.7	28.1	2.08	21.0	86.2	4.0	3.8	8.7
			100	27.8	2.77	18.4	112.4	2.9	1.0	2.3	27.9	2.66	18.8	106.2	3.1	3.5	8.2	27.9	2.66	18.8	106.2	3.1	3.5	8.2
	6.75	2.7 (6.3)	120	28.0	3.61	15.7	132.4	2.3	1.0	2.2	27.9	3.5	16.13	126.2	2.4	3.4	7.7	27.9	3.5	16.13	126.2	2.4	3.4	7.7
			60	29.1	1.71	23.2	72.9	5.0	1.1	2.6	29.1	1.65	23.5	66.5	5.2	4.0	9.3	29.1	1.65	23.5	66.5	5.2	4.0	9.3
			80	28.6	2.16	21.2	92.7	3.9	1.1	2.5	28.7	2.08	21.6	86.4	4.0	3.8	8.7	28.7	2.08	21.6	86.4	4.0	3.8	8.7
			100	28.3	2.77	18.8	112.6	3.0	1.0	2.3	28.3	2.66	19.2	106.3	3.1	3.5	8.2	28.3	2.66	19.2	106.3	3.1	3.5	8.2
	9	4.5 (10.5)	120	28.3	3.61	16.0	132.6	2.3	1.0	2.2	28.3	3.46	16.5	126.3	2.4	3.4	7.7	28.3	3.46	16.5	126.3	2.4	3.4	7.7
			60	29.4	1.71	23.5	73.1	5.0	1.1	2.6	29.5	1.65	23.8	66.6	5.2	4.0	9.3	29.5	1.65	23.8	66.6	5.2	4.0	9.3
			80	28.9	2.17	21.5	92.8	3.9	1.1	2.5	28.9	2.08	21.8	86.4	4.1	3.8	8.7	28.9	2.08	21.8	86.4	4.1	3.8	8.7
	4.5	1.2 (2.8)	100	28.5	2.78	19.0	112.7	3.0	1.0	2.3	28.6	2.67	19.5	106.3	3.1	3.5	8.2	28.6	2.67	19.5	106.3	3.1	3.5	8.2
			120	28.5	3.61	16.2	132.7	2.3	1.0	2.2	28.5	3.46	16.7	126.3	2.4	3.4	7.7	28.5	3.46	16.7	126.3	2.4	3.4	7.7
50	6.75	2.5 (5.8)	60	36.5	1.80	30.3	76.2	5.9	1.1	2.6	36.6	1.72	30.8	68.1	6.3	4.0	9.3	36.6	1.72	30.8	68.1	6.3	4.0	9.3
			80	35.6	2.26	27.9	95.8	4.6	1.1	2.5	35.8	2.15	28.4	87.9	4.9	3.8	8.7	35.8	2.15	28.4	87.9	4.9	3.8	8.7
			100	34.8	2.87	25.0	115.5	3.6	1.0	2.3	35.0	2.73	25.6	107.8	3.7	3.5	8.2	35.0	2.73	25.6	107.8	3.7	3.5	8.2
	9	4.2 (9.8)	120	34.3	3.70	21.7	135.2	2.7	1.0	2.2	34.4	3.52	22.4	127.6	2.9	3.3	7.7	34.4	3.52	22.4	127.6	2.9	3.3	7.7
			60	37.5	1.81	31.3	76.7	6.1	1.1	2.6	37.7	1.73	31.8	68.4	6.4	4.0	9.3	37.7	1.73	31.8	68.4	6.4	4.0	9.3
			80	36.5	2.27	28.8	96.2	4.7	1.1	2.5	36.7	2.16	29.3	88.2	5.0	3.8	8.7	36.7	2.16	29.3	88.2	5.0	3.8	8.7
	4.5	1.1 (2.7)	100	35.6	2.88	25.7	115.8	3.6	1.0	2.3	35.7	2.74	26.4	107.9	3.8	3.5	8.2	35.7	2.74	26.4	107.9	3.8	3.5	8.2
			120	34.9	3.71	22.2	135.5	2.8	1.0	2.2	35.0	3.53	22.9	127.8	2.9	3.3	7.7	35.0	3.53	22.9	127.8	2.9	3.3	7.7
	6.75	2.4 (5.5)	60	38.1	1.82	31.9	76.9	6.1	1.1	2.6	38.3	1.73	32.4	68.5	6.5	4.0	9.3	38.3	1.73	32.4	68.5	6.5	4.0	9.3
			80	37.0	2.27	29.2	96.4	4.8	1.1	2.5	37.2	2.17	29.8	88.3	5.0	3.8	8.7	37.2	2.17	29.8	88.3	5.0	3.8	8.7
			100	35.9	2.88	26.1	116.0	3.7	1.0	2.3	36.1	2.75	26.8	108.0	3.9	3.5	8.2	36.1	2.75	26.8	108.0	3.9	3.5	8.2
	9	4.2 (9.8)	120	35.2	3.72	22.5	135.6	2.8	1.0	2.2	35.3	3.53	23.2	127.8	2.9	3.3	7.7	35.3	3.53	23.2	127.8	2.9	3.3	7.7
70	4.5	1.1 (2.7)	60	46.1	1.90	39.6	80.5	7.1	1.1	2.6	46.4	1.80	40.3	70.3	7.6	4.0	9.2	46.4	1.80	40.3	70.3	7.6	4.0	9.2
			80	44.6	2.37	36.5	99.8	5.5	1.1	2.4	45.0	2.24	37.3	90.0	5.9	3.7	8.7	45.0	2.24	37.3	90.0	5.9	3.7	8.7
			100	43.1	2.99	32.9	119.2	4.2	1.0	2.3	43.5	2.82	33.8	109.7	4.5	3.5	8.1	43.5	2.82	33.8	109.7	4.5	3.5	8.1
	6.75	2.4 (5.5)	120								42.1	3.61	29.8	129.4	3.4	3.3	7.7	42.1	3.61	29.8	129.4	3.4	3.3	7.7
			60	47.7	1.92	41.1	81.2	7.3	1.1	2.6	48.1	1.81	41.9	70.7	7.8	4.0	9.2	48.1	1.81	41.9	70.7	7.8	4.0	9.2
			80	46.0	2.38	37.8	100.4	5.7	1.1	2.4	46.4	2.25	38.7	90.3	6.0	3.7	8.6	46.4	2.25	38.7	90.3	6.0	3.7	8.6
	9	4.0 (9.2)	100	44.3	3.00	34.0	119.7	4.3	1.0	2.3	44.7	2.83	35.0	109.9	4.6	3.5	8.1	44.7	2.83	35.0	109.9	4.6	3.5	8.1
			120								43.1	3.62	30.7	129.6	3.5	3.3	7.7	43.1	3.62	30.7	129.6	3.5	3.3	7.7
			60	48.5	1.92	42.0	81.6	7.4	1.1	2.6	49.0	1.82	42.8	70.9	7.9	4.0	9.2	49.0	1.82	42.8	70.9	7.9	4.0	9.2
	4.5	1.1 (2.5)	80	46.7	2.39	38.5	100.8	5.7	1.1	2.4	47.2	2.26	39.5	90.5	6.1	3.7	8.6	47.2	2.26	39.5	90.5	6.1	3.7	8.6
			100	44.9	3.01	34.6	119.9	4.4	1.0	2.3	45.3	2.84	35.7	110.1	4.7	3.5	8.1	45.3	2.84	35.7	110.1	4.7	3.5	8.1
			120								43.6	3.62	31.2	129.7	3.5	3.3	7.7	43.6	3.62	31.2	129.7	3.5	3.3	7.7
90	6.75	2.2 (5.1)	60	57.3	2.00	50.5	85.5	8.4	1.1	2.6	58.0	1.87	51.6	72.9	9.1	4.0	9.2	58.0	1.87	51.6	72.9	9.1	4.0	9.2
			80	55.1	2.48	46.6	104.5	6.5	1.1	2.4	55.8	2.31	47.9	92.4	7.1	3.7	8.6	55.8	2.31	47.9	92.4	7.1	3.7	8.6
			100	52.8	3.11	42.2	123.5	5.0	1.0	2.3	53.5	2.90	43.6	111.9	5.4	3.5	8.1	53.5	2.90	43.6	111.9	5.4	3.5	8.1
	9	3.7 (8.6)	120								51.3	3.69	38.7	131.4	4.1	3.3	7.7	51.3	3.69	38.7	131.4	4.1	3.3	7.7
			60	59.7	2.02	52.8	86.5	8.7	1.1	2.6	60.5	1.88	54.1	73.4	9.4	4.0	9.2	60.5	1.88	54.1	73.4	9.4	4.0	9.2
			80	57.1	2.50	48.6	105.4	6.7	1.1	2.4	58.0	2.33	50.0	92.9	7.3	3.7	8.6	58.0	2.33	50.0	92.9	7.3	3.7	8.6
	4.5	1.1 (2.5)	100								55.3	2.91	45.4	112.3	5.6	3.5	8.1	55.3	2.91	45.4	112.3	5.6	3.5	8.1
			120																					
			60	61.0	2.02	54.0	87.1	8.8	1.1	2.6	61.8	1.88	55.4	73.7	9.6	4.0	9.2	61.8	1.88	55.4	73.7	9.6	4.0	9.2
	6.75	2.2 (5.1)	80								59.1	2.33	51.2	93.1	7.4	3.7	8.6	59.1	2.33	51.2	93.1	7.4	3.7	8.6
			100																					
			120																					

- Extended Range - Anti-freeze required
- Interpolation is permissible. Not extrapolation
- Operation not recommended

- Tabulated unit performance does not include fan or pump power corrections required for AHRI/ ISO standard performance ratings.
- Unit performance may be interpolated. Extrapolation is not allowed.
- For conditions other than rating conditions provided, consult the BST selection software.
- Ratings below 40°F are with a methanol solution.

**DISCLAIMER:** The performance reported herein is based on testing by FHP. Variations in the installation and operational environment may alter performance. Bosch disclaims all warranties, express and implied, that the performance will be as reported, including the warranty of merchantability and fitness for purpose. In addition, continuous research and development may result in a change to an appliances design and specifications at the time of order, which Bosch may change without notice. Before purchase, confirm the design specifications of the appliance.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL

# GreenSource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

Capacity Data - TW049 – Part Load – Cooling																											
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	6 GPM								9 GPM								12 GPM							
				Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)			
50	6	3.1 (1.3)	50	27.3	1.41	32.1	40.9	19.4	3.2	1.4	27.9	1.40	32.7	43.8	19.9	6.6	2.8	28.3	1.40	33.1	45.3	20.2	11.0	4.8			
			60	31.8	1.39	36.5	49.4	23.0	3.1	1.3	32.7	1.38	37.4	52.7	23.7	6.4	2.8	33.2	1.38	37.9	54.5	24.1	10.6	4.6			
			70	36.9	1.36	41.5	57.7	27.2	3.0	1.3	38.0	1.35	42.6	61.6	28.2	6.2	2.7	38.6	1.34	43.2	63.6	28.7	10.3	4.5			
			80	42.4	1.31	46.9	65.9	32.4	2.9	1.3	43.9	1.30	48.3	70.2	33.8	6.0	2.6	44.7	1.29	49.1	72.6	34.6	10.0	4.3			
	9	5.6 (2.4)	50	27.4	1.37	32.1	40.9	20.0	3.2	1.4	28.1	1.37	32.7	43.8	20.5	6.6	2.8	28.4	1.37	33.1	45.3	20.8	11.0	4.8			
			60	32.0	1.35	36.6	49.3	23.8	3.1	1.3	32.9	1.34	37.5	52.7	24.5	6.4	2.8	33.4	1.34	37.9	54.4	24.9	10.6	4.6			
			70	37.1	1.31	41.6	57.6	28.3	3.0	1.3	38.3	1.30	42.7	61.5	29.4	6.2	2.7	38.9	1.30	43.3	63.5	30.0	10.3	4.5			
			80	42.8	1.26	47.1	65.7	33.9	2.9	1.3	44.2	1.25	48.5	70.2	35.5	6.0	2.6	45.0	1.24	49.3	72.5	36.4	10.0	4.3			
	12	8.6 (3.7)	50	27.4	1.35	32.1	40.9	20.3	3.2	1.4	28.1	1.35	32.7	43.7	20.8	6.6	2.8	28.5	1.35	33.1	45.3	21.1	11.0	4.8			
			60	32.1	1.33	36.6	49.3	24.2	3.1	1.3	33.0	1.32	37.5	52.7	25.0	6.4	2.8	33.4	1.32	37.9	54.4	25.4	10.6	4.6			
			70	37.2	1.29	41.6	57.6	28.9	3.0	1.3	38.4	1.28	42.7	61.5	30.1	6.2	2.7	39.0	1.27	43.4	63.5	30.7	10.3	4.5			
			80	42.9	1.23	47.1	65.7	34.8	2.9	1.3	44.4	1.22	48.6	70.1	36.4	6.0	2.6										
70	6	8.8 (3.8)	50	25.5	1.85	31.8	41.5	13.8	3.2	1.4	26.1	1.85	32.4	44.2	14.1	6.6	2.8	26.4	1.85	32.7	45.6	14.3	11.0	4.8			
			60	29.7	1.83	36.0	50.1	16.2	3.1	1.3	30.5	1.83	36.7	53.2	16.7	6.4	2.8	30.9	1.83	37.1	54.8	16.9	10.6	4.6			
			70	34.4	1.81	40.6	58.5	19.1	3.0	1.3	35.4	1.80	41.6	62.1	19.7	6.2	2.7	36.0	1.80	42.1	64.0	20.0	10.3	4.5			
			80	39.6	1.76	45.7	66.8	22.5	2.9	1.3	40.9	1.75	46.9	70.9	23.3	6.0	2.6	41.5	1.75	47.5	73.1	23.8	10.0	4.3			
	9	2.9 (1.2)	50	45.3	1.70	51.1	74.9	26.6	2.8	1.2	46.9	1.69	52.6	79.6	27.8	5.8	2.5	47.7	1.68	53.4	82.1	28.5	9.7	4.2			
			60	25.7	1.81	31.8	41.4	14.2	3.2	1.4	26.3	1.80	32.4	44.2	14.6	6.6	2.8	26.6	1.80	32.7	45.6	14.7	11.0	4.8			
			70	30.0	1.78	36.1	50.0	16.8	3.1	1.3	30.8	1.78	36.8	53.2	17.3	6.4	2.8	31.2	1.78	37.2	54.8	17.6	10.6	4.6			
			80	34.8	1.75	40.7	58.4	19.9	3.0	1.3	35.8	1.74	41.7	62.1	20.5	6.2	2.7	36.3	1.74	42.2	63.9	20.9	10.3	4.5			
	12	6.0 (2.6)	50	40.0	1.70	45.8	66.7	23.6	2.9	1.3	41.3	1.69	47.1	70.8	24.5	6.0	2.6	42.0	1.68	47.7	73.0	25.0	10.0	4.3			
			60	45.8	1.63	51.4	74.7	28.0	2.8	1.2	47.4	1.61	52.9	79.5	29.4	5.8	2.5	48.3	1.60	53.7	82.0	30.2	9.7	4.2			
			70	25.7	1.79	31.8	41.4	14.4	3.2	1.4	26.4	1.78	32.4	44.1	14.8	6.6	2.8	26.7	1.78	32.8	45.6	15.0	11.0	4.8			
			80	30.1	1.76	36.1	50.0	17.1	3.1	1.3	30.9	1.75	36.9	53.1	17.6	6.4	2.8	31.3	1.75	37.3	54.8	17.9	10.6	4.6			
90	6	9.1 (3.9)	50	34.9	1.72	40.8	58.4	20.3	3.0	1.3	35.9	1.71	41.8	62.0	21.0	6.2	2.7	36.5	1.71	42.3	63.9	21.4	10.3	4.5			
			60	40.2	1.67	45.9	66.6	24.1	2.9	1.3	41.5	1.65	47.2	70.8	25.1	6.0	2.6	42.2	1.65	47.8	73.0	25.7	10.0	4.3			
			70	46.1	1.60	51.5	74.6	28.8	2.8	1.2	47.7	1.58	53.1	79.4	30.3	5.8	2.5	48.6	1.56	53.9	81.9	31.1	9.7	4.2			
			80	52.8	2.44	31.1	42.4	9.3	3.2	1.4	23.3	2.44	31.6	44.8	9.5	6.6	2.8	23.5	2.44	31.9	46.1	9.6	11.0	4.8			
	9	6.4 (2.7)	50	26.8	2.43	35.1	51.1	11.0	3.1	1.3	27.4	2.42	35.7	53.9	11.3	6.3	2.7	27.8	2.42	36.0	55.4	11.5	10.6	4.6			
			60	31.2	2.40	39.4	59.6	13.0	3.0	1.3	32.0	2.39	40.2	62.9	13.4	6.1	2.7	32.4	2.39	40.6	64.6	13.6	10.3	4.5			
			70	36.0	2.36	44.0	68.0	15.3	2.9	1.3	37.0	2.34	45.0	71.8	15.8	6.0	2.6	37.6	2.34	45.6	73.7	16.1	10.0	4.3			
			80	41.2	2.30	49.1	76.3	18.0	2.8	1.2	42.6	2.28	50.3	80.5	18.7	5.8	2.5										
	12	3.4 (1.5)	50	23.0	2.38	31.2	42.3	9.7	3.2	1.4	23.6	2.38	31.7	44.8	9.9	6.6	2.8	23.8	2.38	31.9	46.0	10.0	11.0	4.8			
			60	27.1	2.36	35.2	51.0	11.5	3.1	1.3	27.8	2.36	35.8	53.8	11.8	6.4	2.7	28.1	2.35	36.1	55.3	11.9	10.6	4.6			
			70	31.6	2.33	39.5	59.5	13.6	3.0	1.3	32.4	2.32	40.3	62.8	14.0	6.2	2.7	32.9	2.31	40.8	64.5	14.2	10.3	4.5			
			80	36.5	2.27	44.2	67.8	16.0	2.9	1.3	37.6	2.26	45.3	71.7	16.6	6.0	2.6	38.1	2.25	45.8	73.6	16.9	10.0	4.3			
110	6	5.6 (2.4)	50	41.9	2.20	49.4	76.0	19.0	2.8	1.2	43.2	2.18	50.7	80.4	19.8	5.8	2.5	43.9	2.17	51.4	82.7	20.2	9.7	4.2			
			60	23.2	2.36	31.2	42.3	9.8	3.2	1.4	23.7	2.35	31.7	44.7	10.1	6.6	2.8	24.0	2.35	32.0	46.0	10.2	11.0	4.8			
			70	27.3	2.33	35.2	50.9	11.7	3.1	1.3	27.9	2.32	35.9	53.8	12.0	6.4	2.7	28.3	2.32	36.2	55.3	12.2	10.6	4.6			
			80	31.8	2.29	39.6	59.4	13.9	3.0	1.3	32.6	2.28	40.4	62.7	14.3	6.2	2.7	33.1	2.28	40.9	64.5	14.5	10.3	4.5			
	9	9.5 (4.1)	50	36.7	2.23	44.4	67.8	16.4	2.9	1.3	37.8	2.22	45.4	71.6	17.0	6.0	2.6	38.4	2.21	46.0	73.6	17.4	10.0	4.3			
			60	42.2	2.16	49.5	75.9	19.5	2.8	1.2	43.5	2.14	50.8	80.3	20.4	5.8	2.5	44.3	2.13	51.5	82.6	20.8	9.7	4.2			
			70	19.0	3.24	30.1	43.7	5.9	3.2	1.4	19.4	3.24	30.5	45.7	6.0	6.6	2.8	19.6	3.24	30.7	46.7	6.1	11.0	4.8			
			80	22.8	3.22	33.8	52.4	7.1	3.1	1.3	23.3	3.22	34.3	54.8	7.2	6.3	2.7	23.6	3.22	34.6	56.1	7.3	10.6	4.6			
	12	4.3 (1.9)	50	26.9	3.19	37.8	61.0	8.4	3.0	1.3	27.6	3.19	38.4	63.9	8.6	6.1	2.7	27.9	3.18	38.8	65.3	8.8	10.3	4.4			
			60	31.4	3.15	42.1	69.5	10.0	2.9	1.2	32.2	3.14	42.9	72.8	10.3	6.0	2.6	32.7	3.13	43.3	74.6	10.4	10.0	4.3			
			70	36.2	3.08	46.7	77.9	11.8	2.8	1.2																	
			80	19.4	3.16	30.2	43.5	6.1	3.2	1.4	19.8	3.16	30.6	45.6	6.3	6.6	2.8	20.0	3.16	30.8	46.7	6.3	11.0	4.8			
12	4.3 (1.9)	50	19.6	3.13	30.2	43.5	6.3	3.2	1.4	20.0	3.12	30.6	45.6	6.4	6.6	2.8	20.2	3.12	30.8	46.6	6.5	11.0	4.8				
		60	23.4	3.10	34.0	52.2	7.6	3.1	1.3	24.0	3.09	34.5	54.7	7.8	6.3	2.7	24.2	3.09	34.8	56.0	7.9	10.6	4.6				
		70	27.6	3.05	38.1	60.8	9.1	3.0	1.3	28.3	3.04	38.7	63.7	9.3	6.1	2.7	28.7	3.04	39.1	65.2	9.5	10.3	4.5				
		80	32.3	2.99	42.5	69.2	10.8	2.9	1.2	33.2	2.98	43.3	72.6	11.1	6.0	2.6	33.6	2.97	43.8	74.4	11.3	10.0	4.3				

# Greensource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

Capacity Data - TW049 – Part Load – Heating																								
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	6 GPM							9 GPM							12 GPM						
				Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (PSI)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of water)	Pressure Drop (psi)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (psi)
30	6	1.5 (3.4)	60																					
			80																					
			100	23.9	2.82	14.3	108.0	2.5	1.1	2.6	24.0	2.74	14.6	104.0	2.6	4.0	9.2	24.0	2.74	14.6	104.0	2.6	4.0	9.2
			120	23.0	3.75	10.2	127.7	1.8	1.1	2.5	23.1	3.6	10.65	123.9	1.9	3.8	8.7	23.1	3.6	10.65	123.9	1.9	3.8	8.7
	9	3.0 (7.0)	60																					
			80																					
			100	24.1	2.82	14.5	108.0	2.5	1.1	2.6	24.2	2.74	14.9	104.0	2.6	4.0	9.2	24.2	2.74	14.9	104.0	2.6	4.0	9.2
			120	23.2	3.75	10.4	127.7	1.8	1.1	2.5	23.3	3.65	10.8	123.9	1.9	3.8	8.7	23.3	3.65	10.8	123.9	1.9	3.8	8.7
	12	5.1 (11.8)	60																					
			80	24.9	2.14	17.6	88.3	3.4	1.2	2.8	24.9	2.08	17.9	84.2	3.5	4.2	9.8	24.9	2.08	17.9	84.2	3.5	4.2	9.8
			100	24.3	2.82	14.6	108.1	2.5	1.1	2.6	24.4	2.74	15.0	104.1	2.6	4.0	9.2	24.4	2.74	15.0	104.1	2.6	4.0	9.2
			120	23.3	3.75	10.5	127.8	1.8	1.1	2.5	23.4	3.65	10.9	123.9	1.9	3.8	8.7	23.4	3.65	10.9	123.9	1.9	3.8	8.7
50	6	1.4 (3.2)	60	32.0	1.61	26.5	70.7	5.8	1.3	3.0	32.0	1.56	26.7	65.3	6.0	4.5	10.5	32.0	1.56	26.7	65.3	6.0	4.5	10.5
			80	31.5	2.13	24.2	90.5	4.3	1.2	2.8	31.6	2.05	24.6	85.3	4.5	4.2	9.8	31.6	2.05	24.6	85.3	4.5	4.2	9.8
			100	30.6	2.81	21.0	110.2	3.2	1.1	2.6	30.8	2.71	21.5	105.1	3.3	4.0	9.2	30.8	2.71	21.5	105.1	3.3	4.0	9.2
			120	29.5	3.74	16.7	129.8	2.3	1.1	2.5	29.6	3.61	17.3	124.9	2.4	3.8	8.7	29.6	3.61	17.3	124.9	2.4	3.8	8.7
	9	2.8 (6.6)	60	32.6	1.61	27.1	70.9	5.9	1.3	3.0	32.6	1.55	27.3	65.4	6.2	4.5	10.5	32.6	1.55	27.3	65.4	6.2	4.5	10.5
			80	32.0	2.12	24.8	90.7	4.4	1.2	2.8	32.1	2.05	25.1	85.4	4.6	4.2	9.8	32.1	2.05	25.1	85.4	4.6	4.2	9.8
			100	31.1	2.81	21.5	110.4	3.2	1.1	2.6	31.2	2.71	22.0	105.2	3.4	4.0	9.2	31.2	2.71	22.0	105.2	3.4	4.0	9.2
			120	29.8	3.73	17.0	129.9	2.3	1.1	2.5	30.0	3.60	17.7	125.0	2.4	3.8	8.7	30.0	3.60	17.7	125.0	2.4	3.8	8.7
	12	4.8 (11.0)	60	32.9	1.61	27.4	71.0	6.0	1.3	3.0	33.0	1.55	27.7	65.5	6.2	4.5	10.4	33.0	1.55	27.7	65.5	6.2	4.5	10.4
			80	32.3	2.12	25.1	90.8	4.5	1.2	2.8	32.4	2.04	25.4	85.4	4.6	4.2	9.8	32.4	2.04	25.4	85.4	4.6	4.2	9.8
			100	31.3	2.81	21.7	110.4	3.3	1.1	2.6	31.5	2.71	22.2	105.2	3.4	4.0	9.2	31.5	2.71	22.2	105.2	3.4	4.0	9.2
			120	30.0	3.73	17.2	130.0	2.4	1.1	2.5	30.1	3.60	17.9	125.0	2.5	3.8	8.7	30.1	3.60	17.9	125.0	2.5	3.8	8.7
70	6	1.3 (3.0)	60	41.1	1.57	35.8	73.7	7.7	1.3	3.0	41.2	1.49	36.2	66.9	8.1	4.5	10.4	41.2	1.49	36.2	66.9	8.1	4.5	10.4
			80	40.0	2.08	32.9	93.3	5.6	1.2	2.8	40.2	1.98	33.5	86.7	5.9	4.2	9.8	40.2	1.98	33.5	86.7	5.9	4.2	9.8
			100	38.6	2.77	29.2	112.9	4.1	1.1	2.6	38.9	2.64	29.8	106.5	4.3	4.0	9.2	38.9	2.64	29.8	106.5	4.3	4.0	9.2
			120	36.9	3.68	24.3	132.3	2.9	1.1	2.5	37.2	3.52	25.2	126.2	3.1	3.8	8.7	37.2	3.52	25.2	126.2	3.1	3.8	8.7
	9	2.7 (6.1)	60	42.1	1.56	36.8	74.0	7.9	1.3	3.0	42.3	1.48	37.3	67.1	8.4	4.5	10.4	42.3	1.48	37.3	67.1	8.4	4.5	10.4
			80	40.9	2.07	33.8	93.6	5.8	1.2	2.8	41.1	1.98	34.4	86.9	6.1	4.2	9.8	41.1	1.98	34.4	86.9	6.1	4.2	9.8
			100	39.3	2.76	29.9	113.1	4.2	1.1	2.6	39.6	2.63	30.6	106.6	4.4	4.0	9.2	39.6	2.63	30.6	106.6	4.4	4.0	9.2
			120	37.5	3.68	24.9	132.5	3.0	1.1	2.5	37.8	3.52	25.8	126.3	3.1	3.8	8.7	37.8	3.52	25.8	126.3	3.1	3.8	8.7
	12	4.5 (10.3)	60	42.7	1.56	37.4	74.2	8.0	1.3	3.0	42.9	1.48	37.8	67.1	8.5	4.5	10.4	42.9	1.48	37.8	67.1	8.5	4.5	10.4
			80	41.4	2.07	34.3	93.8	5.9	1.2	2.8	41.6	1.97	34.9	86.9	6.2	4.2	9.8	41.6	1.97	34.9	86.9	6.2	4.2	9.8
			100	39.7	2.76	30.3	113.2	4.2	1.1	2.6	40.0	2.63	31.0	106.7	4.5	4.0	9.2	40.0	2.63	31.0	106.7	4.5	4.0	9.2
			120	37.7	3.67	25.2	132.6	3.0	1.1	2.5	38.1	3.51	26.1	126.3	3.2	3.8	8.7	38.1	3.51	26.1	126.3	3.2	3.8	8.7
90	6	1.2 (2.8)	60	52.0	1.47	47.0	77.3	10.4	1.3	2.9	52.4	1.37	47.7	68.7	11.2	4.5	10.4	52.4	1.37	47.7	68.7	11.2	4.5	10.4
			80	50.1	1.98	43.4	96.7	7.4	1.2	2.8	50.6	1.86	44.2	88.4	8.0	4.2	9.7	50.6	1.86	44.2	88.4	8.0	4.2	9.7
			100	47.9	2.66	38.9	116.0	5.3	1.1	2.6	48.4	2.51	39.9	108.1	5.7	4.0	9.2	48.4	2.51	39.9	108.1	5.7	4.0	9.2
			120																					
	9	2.5 (5.8)	60	53.6	1.45	48.7	77.9	10.9	1.3	2.9														
			80	51.5	1.96	44.8	97.2	7.7	1.2	2.8	52.0	1.84	45.7	88.7	8.3	4.2	9.7	52.0	1.84	45.7	88.7	8.3	4.2	9.7
			100	49.1	2.64	40.1	116.4	5.4	1.1	2.6	49.6	2.49	41.1	108.3	5.8	4.0	9.2	49.6	2.49	41.1	108.3	5.8	4.0	9.2
			120																					
	12	4.2 (9.7)	60	54.5	1.44	49.6	78.2	11.1	1.3	2.9														
			80	52.2	1.95	45.6	97.4	7.8	1.2	2.8	52.8	1.83	46.5	88.8	8.5	4.2	9.7	52.8	1.83	46.5	88.8	8.5	4.2	9.7
			100																					
			120																					

- Extended Range - Anti-freeze required
- Interpolation is permissible. Not extrapolation
- Operation not recommended

- Tabulated unit performance does not include fan or pump power corrections required for AHRI/ ISO standard performance ratings.
- Unit performance may be interpolated. Extrapolation is not allowed.
- For conditions other than rating conditions provided, consult the BST selection software.
- Ratings below 40°F are with a methanol solution.

**DISCLAIMER:** The performance reported herein is based on testing by FHP. Variations in the installation and operational environment may alter performance. Bosch disclaims all warranties, express and implied, that the performance will be as reported, including the warranty of merchantability and fitness for purpose. In addition, continuous research and development may result in a change to an appliances design and specifications at the time of order, which Bosch may change without notice. Before purchase, confirm the design specifications of the appliance.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL



# GreenSource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

Capacity Data - TW049 – Full Load – Cooling																											
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	6 GPM								9 GPM								12 GPM							
				Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)			
50	6	3.0 (1.3)	50	40.1	1.97	46.8	36.6	20.3	3.2	1.4	41.4	1.99	48.2	40.8	20.8	6.6	2.9	42.1	2.00	48.9	43.0	21.1	11.0	4.8			
			60	46.0	2.04	52.9	44.7	22.6	3.1	1.3	47.6	2.05	54.6	49.4	23.2	6.4	2.8	48.5	2.06	55.5	51.9	23.5	10.7	4.6			
			70	52.4	2.10	59.6	52.5	25.0	3.0	1.3	54.5	2.11	61.7	57.9	25.8	6.2	2.7	55.6	2.12	62.8	60.7	26.2	10.4	4.5			
			80	59.4	2.15	66.8	60.2	27.6	2.9	1.3	61.9	2.17	69.4	66.2	28.5	6.0	2.6	63.3	2.18	70.8	69.4	29.0	10.0	4.3			
	90	66.9	2.21	74.5	67.7	30.3	2.8	1.2																			
	9	5.5 (2.4)	50	40.4	1.91	47.0	36.5	21.2	3.2	1.4	41.8	1.92	48.3	40.7	21.8	6.6	2.9	42.5	1.93	49.1	42.9	22.1	11.0	4.8			
			60	46.5	1.96	53.1	44.5	23.7	3.1	1.3	48.2	1.98	54.9	49.3	24.4	6.4	2.8	49.1	1.98	55.8	51.8	24.7	10.7	4.6			
			70	53.0	2.01	59.9	52.3	26.3	3.0	1.3	55.1	2.03	62.1	57.7	27.2	6.2	2.7	56.3	2.04	63.2	60.6	27.6	10.4	4.5			
			80	60.1	2.06	67.2	60.0	29.1	2.9	1.3	62.8	2.08	69.9	66.1	30.2	6.0	2.6	64.2	2.09	71.3	69.3	30.7	10.0	4.3			
	90																										
	12	8.5 (3.7)	50	40.6	1.88	47.0	36.5	21.7	3.2	1.4	42.0	1.89	48.4	40.7	22.3	6.6	2.9	42.7	1.89	49.2	42.9	22.6	11.0	4.8			
			60	46.7	1.93	53.3	44.4	24.3	3.1	1.3	48.4	1.94	55.0	49.2	25.0	6.4	2.8	49.3	1.95	56.0	51.8	25.4	10.7	4.6			
70			53.3	1.97	60.1	52.2	27.0	3.0	1.3	55.5	1.99	62.3	57.7	27.9	6.2	2.7	56.6	2.00	63.5	60.6	28.4	10.4	4.5				
80			60.5	2.02	67.4	59.8	30.0	2.9	1.3	63.2	2.03	70.1	66.0	31.1	6.0	2.6	64.6	2.04	71.6	69.2	31.7	10.0	4.3				
90																											
70	6	8.7 (3.8)	50	37.0	2.48	45.5	37.7	14.9	3.2	1.4	38.2	2.49	46.7	41.5	15.3	6.6	2.9	38.8	2.50	47.3	43.5	15.5	11.0	4.8			
			60	42.6	2.54	51.2	45.8	16.8	3.1	1.3	44.0	2.56	52.7	50.2	17.2	6.4	2.8	44.8	2.56	53.5	52.5	17.5	10.7	4.6			
			70	48.6	2.60	57.5	53.8	18.7	3.0	1.3	50.4	2.62	59.3	58.8	19.3	6.2	2.7	51.4	2.63	60.3	61.4	19.6	10.3	4.5			
			80	55.2	2.66	64.3	61.6	20.8	2.9	1.3	57.4	2.67	66.5	67.2	21.5	6.0	2.6	58.6	2.68	67.7	70.2	21.8	10.0	4.3			
	90	62.3	2.71	71.5	69.2	23.0	2.8	1.2	65.0	2.73	74.3	75.6	23.8	5.8	2.5	66.4	2.74	75.8	78.9	24.3	9.7	4.2					
	9	2.8 (1.2)	50	37.4	2.41	45.6	37.5	15.5	3.2	1.4	38.6	2.42	46.9	41.4	15.9	6.6	2.9	39.2	2.43	47.5	43.5	16.1	11.0	4.8			
			60	43.1	2.46	51.5	45.6	17.5	3.1	1.3	44.6	2.48	53.0	50.1	18.0	6.4	2.8	45.4	2.48	53.8	52.4	18.3	10.7	4.6			
			70	49.3	2.51	57.8	53.6	19.6	3.0	1.3	51.1	2.53	59.7	58.6	20.2	6.2	2.7	52.1	2.54	60.8	61.3	20.6	10.3	4.5			
			80	56.0	2.56	64.7	61.3	21.9	2.9	1.3	58.3	2.58	67.1	67.0	22.6	6.0	2.6	59.5	2.58	68.3	70.1	23.0	10.0	4.3			
	90	63.3	2.60	72.1	68.9	24.3	2.8	1.2	66.1	2.62	75.0	75.3	25.2	5.8	2.5	67.6	2.62	76.6	78.7	25.8	9.7	4.2					
	12	6.0 (2.6)	50	37.6	2.38	45.7	37.5	15.8	3.2	1.4	38.8	2.39	47.0	41.4	16.2	6.6	2.9	39.4	2.39	47.6	43.4	16.5	11.0	4.8			
			60	43.3	2.43	51.6	45.6	17.9	3.1	1.3	44.8	2.44	53.2	50.0	18.4	6.4	2.8	45.6	2.44	54.0	52.4	18.7	10.7	4.6			
70			49.6	2.47	58.0	53.5	20.1	3.0	1.3	51.5	2.48	59.9	58.6	20.7	6.2	2.7	52.5	2.49	61.0	61.3	21.1	10.3	4.5				
80			56.4	2.51	65.0	61.2	22.4	2.9	1.3	58.7	2.53	67.3	67.0	23.2	6.0	2.6	60.0	2.53	68.6	70.0	23.7	10.0	4.3				
90	6	9.0 (3.9)	50	33.6	3.09	44.2	38.8	10.9	3.2	1.4	34.6	3.10	45.2	42.3	11.1	6.6	2.9	35.1	3.11	45.7	44.2	11.3	11.0	4.8			
			60	38.7	3.16	49.5	47.1	12.3	3.1	1.3	39.9	3.17	50.8	51.1	12.6	6.4	2.8	40.6	3.18	51.4	53.2	12.8	10.7	4.6			
			70	44.3	3.22	55.3	55.2	13.8	3.0	1.3	45.8	3.24	56.9	59.8	14.1	6.2	2.7	46.6	3.25	57.7	62.2	14.4	10.3	4.5			
			80	50.4	3.29	61.6	63.2	15.3	2.9	1.3	52.2	3.30	63.5	68.4	15.8	6.0	2.6	53.2	3.31	64.5	71.1	16.1	10.0	4.3			
	90	56.9	3.35	68.3	71.0	17.0	2.8	1.2	59.2	3.36	70.7	76.8	17.6	5.8	2.5	60.4	3.37	71.9	79.9	17.9	9.7	4.2					
	9	6.3 (2.7)	50	34.1	3.00	44.3	38.6	11.3	3.2	1.4	35.1	3.01	45.3	42.2	11.6	6.6	2.9	35.6	3.02	45.9	44.1	11.8	11.0	4.8			
			60	39.3	3.06	49.7	46.9	12.8	3.1	1.3	40.6	3.07	51.0	51.0	13.2	6.4	2.8	41.2	3.08	51.7	53.1	13.4	10.7	4.6			
			70	45.0	3.11	55.7	55.0	14.5	3.0	1.3	46.6	3.13	57.3	59.6	14.9	6.2	2.7	47.4	3.13	58.1	62.1	15.1	10.3	4.5			
			80	51.3	3.16	62.1	62.9	16.2	2.9	1.3	53.2	3.18	64.0	68.2	16.7	6.0	2.6	54.3	3.18	65.1	71.0	17.0	10.0	4.3			
	90	58.0	3.21	69.0	70.7	18.1	2.8	1.2	60.4	3.22	71.4	76.6	18.8	5.8	2.5	61.7	3.23	72.7	79.7	19.1	9.7	4.2					
	12	3.4 (1.5)	50	34.3	2.96	44.4	38.6	11.6	3.2	1.4	35.3	2.97	45.4	42.2	11.9	6.6	2.9	35.8	2.98	46.0	44.0	12.0	11.0	4.8			
			60	39.6	3.01	49.9	46.8	13.1	3.1	1.3	40.9	3.02	51.2	50.9	13.5	6.4	2.8	41.5	3.03	51.9	53.1	13.7	10.7	4.6			
70			45.4	3.06	55.8	54.9	14.8	3.0	1.3	47.0	3.07	57.5	59.6	15.3	6.2	2.7	47.8	3.08	58.3	62.0	15.5	10.3	4.5				
80			51.7	3.10	62.3	62.8	16.7	2.9	1.3	53.7	3.12	64.3	68.1	17.2	6.0	2.6	54.8	3.12	65.4	70.9	17.5	10.0	4.3				
90	58.6	3.14	69.3	70.5	18.6	2.8	1.2	61.0	3.15	71.8	76.4	19.4	5.8	2.5	62.3	3.16	73.1	79.6	19.7	9.7	4.2						
110	6	5.6 (2.4)	50	29.6	3.93	43.0	40.1	7.5	3.2	1.4	30.3	3.94	43.8	43.3	7.7	6.6	2.8	30.7	3.95	44.2	44.9	7.8	11.0	4.8			
			60	34.2	4.01	47.8	48.6	8.5	3.1	1.3	35.1	4.02	48.8	52.2	8.7	6.4	2.8	35.6	4.03	49.3	54.1	8.8	10.7	4.6			
			70	39.2	4.09	53.1	56.9	9.6	3.0	1.3	40.4	4.10	54.4	61.0	9.8	6.2	2.7	41.0	4.11	55.0	63.2	10.0	10.3	4.5			
			80	44.6	4.16	58.8	65.1	10.7	2.9	1.3	46.1	4.18	60.4	69.8	11.0	6.0	2.6	46.9	4.19	61.2	72.2	11.2	10.0	4.3			
	90	50.6	4.23	65.0	73.1	11.9	2.8	1.2																			
	9	9.4 (4.1)	50	30.1	3.81	43.1	40.0	7.9	3.2	1.4	30.9	3.82	43.9	43.1	8.1	6.6	2.8	31.3	3.83	44.4	44.8	8.2	11.0	4.8			
			60	34.8	3.88	48.0	48.4	9.0	3.1	1.3	35.8	3.89	49.1	52.0	9.2	6.4	2.8	36.3	3.89	49.6	53.9	9.3	10.7	4.6			
			70	40.0	3.94	53.4	56.7	10.2	3.0	1.3	41.3	3.95	54.7	60.8	10.4	6.2	2.7	41.9	3.96	55.4	63.0	10.6	10.3	4.5			
			80	45.7	4.00	59.3	64.8	11.4	2.9	1.3	47.2	4.01	60.9	69.5	11.8	6.0	2.6	48.1	4.02	61.8	72.0	12.0	10.0	4.3			
	90	51.8	4.05	65.6	72.7	12.8	2.8	1.2	53.8	4.06	67.6	78.1	13.2	5.8	2.5												
	12	4.2 (1.8)	50	30.4	3.75	43.2	39.9	8.1	3.2	1.4	31.2	3.76	44.0	43.1	8.3	6.6	2.8	31.6	3.77	44.4	44.7	8.4	11.0	4.8			
			60	35.2	3.81	48.2	48.3	9.2	3.1	1.3	36.2	3.82	49.2	52.0	9.5	6.4	2.8	36.7	3.83	49.8	53.9	9.6	10.7	4.6			
70			40.4	3.87	53.6	56.5	10.5	3.0	1.3	41.7	3.88	54.9	60.7	10.8	6.2	2.7	42.4	3.88	55.6	62.9	10.9	10.3	4.5				
80			46.2	3.92	59.5	64.6	11.8	2.9	1.3	47.8	3.93	61.2	69.4	12.2	6.0	2.6	48.6	3.93	62.1	71.9	12.4	10.0	4.3				
90	52.4	3.96	65.9	72.5	13.2	2.8	1.2	54.4	3.97	68.0	77.9	13.7	5.8	2.5													

- Extended Range - Anti-freeze required
- Interpolation is permissible. Not extrapolation
- Operation not recommended

- Tabulated unit performance does not include fan or pump power corrections required for AHRI/ ISO standard performance ratings.
- Unit performance may be interpolated. Extrapolation is not allowed.

# Greensource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

Capacity Data - TW049 – Full Load – Heating																								
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	6 GPM						9 GPM						12 GPM								
				Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (PSI)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of water)	Pressure Drop (psi)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (psi)
30	6	1.5 (3.4)	60																					
			80	35.1	2.64	26.1	91.7	3.9	1.2	2.8														
			100	34.6	3.33	23.3	111.5	3.1	1.1	2.6	34.7	3.21	23.7	105.8	3.2	4.0	9.2	34.7	3.21	23.7	105.8	3.2	4.0	9.2
			120	34.5	4.30	19.8	131.5	2.4	1.1	2.5	34.5	4.1	20.37	125.7	2.4	3.8	8.7	34.5	4.1	20.37	125.7	2.4	3.8	8.7
	9	3.0 (7.0)	60	36.5	2.11	29.3	72.2	5.1	1.3	3.0														
			80	35.8	2.65	26.7	91.9	4.0	1.2	2.8	35.9	2.56	27.1	86.0	4.1	4.2	9.8	35.9	2.56	27.1	86.0	4.1	4.2	9.8
			100	35.2	3.34	23.8	111.7	3.1	1.1	2.6	35.2	3.22	24.3	105.9	3.2	4.0	9.2	35.2	3.22	24.3	105.9	3.2	4.0	9.2
			120	34.9	4.31	20.2	131.6	2.4	1.1	2.5	34.9	4.14	20.8	125.8	2.5	3.8	8.7	34.9	4.14	20.8	125.8	2.5	3.8	8.7
	12	5.1 (11.8)	60	37.0	2.12	29.7	72.3	5.1	1.3	3.0														
			80	36.1	2.65	27.1	92.0	4.0	1.2	2.8	36.2	2.56	27.5	86.0	4.1	4.2	9.8	36.2	2.56	27.5	86.0	4.1	4.2	9.8
			100	35.5	3.34	24.1	111.8	3.1	1.1	2.6	35.5	3.22	24.5	105.9	3.2	4.0	9.2	35.5	3.22	24.5	105.9	3.2	4.0	9.2
			120	35.1	4.31	20.4	131.7	2.4	1.1	2.5	35.1	4.15	21.0	125.9	2.5	3.8	8.7	35.1	4.15	21.0	125.9	2.5	3.8	8.7
50	6	1.4 (3.2)	60	46.1	2.22	38.6	75.4	6.1	1.3	3.0	46.4	2.13	39.1	67.7	6.4	4.5	10.4	46.4	2.13	39.1	67.7	6.4	4.5	10.4
			80	44.8	2.76	35.4	94.9	4.8	1.2	2.8	45.1	2.65	36.0	87.5	5.0	4.2	9.8	45.1	2.65	36.0	87.5	5.0	4.2	9.8
			100	43.6	3.47	31.7	114.5	3.7	1.1	2.6	43.8	3.32	32.4	107.3	3.9	4.0	9.2	43.8	3.32	32.4	107.3	3.9	4.0	9.2
			120	42.5	4.47	27.2	134.2	2.8	1.1	2.5	42.6	4.27	28.1	127.1	2.9	3.8	8.7	42.6	4.27	28.1	127.1	2.9	3.8	8.7
	9	2.8 (6.6)	60	47.4	2.23	39.8	75.8	6.2	1.3	2.9	47.7	2.14	40.4	68.0	6.5	4.5	10.4	47.7	2.14	40.4	68.0	6.5	4.5	10.4
			80	45.9	2.78	36.4	95.3	4.8	1.2	2.8	46.2	2.66	37.1	87.7	5.1	4.2	9.8	46.2	2.66	37.1	87.7	5.1	4.2	9.8
			100	44.4	3.48	32.6	114.8	3.7	1.1	2.6	44.7	3.33	33.3	107.5	3.9	4.0	9.2	44.7	3.33	33.3	107.5	3.9	4.0	9.2
			120	43.1	4.49	27.8	134.4	2.8	1.1	2.5	43.4	4.28	28.8	127.2	3.0	3.8	8.7	43.4	4.28	28.8	127.2	3.0	3.8	8.7
	12	4.8 (11.0)	60	48.1	2.24	40.4	76.0	6.3	1.3	2.9	48.4	2.14	41.1	68.1	6.6	4.5	10.4	48.4	2.14	41.1	68.1	6.6	4.5	10.4
			80	46.5	2.78	37.0	95.5	4.9	1.2	2.8	46.8	2.67	37.7	87.8	5.1	4.2	9.8	46.8	2.67	37.7	87.8	5.1	4.2	9.8
			100	44.9	3.49	33.0	115.0	3.8	1.1	2.6	45.2	3.34	33.8	107.5	4.0	4.0	9.2	45.2	3.34	33.8	107.5	4.0	4.0	9.2
			120	43.5	4.49	28.2	134.5	2.8	1.1	2.5	43.7	4.28	29.1	127.3	3.0	3.8	8.7	43.7	4.28	29.1	127.3	3.0	3.8	8.7
70	6	1.3 (3.0)	60	58.6	2.34	50.6	79.5	7.3	1.3	2.9	59.1	2.22	51.5	69.8	7.8	4.5	10.4	59.1	2.22	51.5	69.8	7.8	4.5	10.4
			80	56.4	2.89	46.6	98.8	5.7	1.2	2.8	56.9	2.75	47.6	89.5	6.1	4.2	9.7	56.9	2.75	47.6	89.5	6.1	4.2	9.7
			100	54.2	3.62	41.9	118.1	4.4	1.1	2.6	54.7	3.43	43.0	109.1	4.7	4.0	9.2	54.7	3.43	43.0	109.1	4.7	4.0	9.2
			120								52.5	4.39	37.5	128.8	3.5	3.8	8.7	52.5	4.39	37.5	128.8	3.5	3.8	8.7
	9	2.7 (6.1)	60	60.5	2.36	52.5	80.2	7.5	1.3	2.9	61.1	2.23	53.5	70.2	8.0	4.5	10.4	61.1	2.23	53.5	70.2	8.0	4.5	10.4
			80	58.1	2.91	48.2	99.4	5.9	1.2	2.8	58.7	2.76	49.3	89.8	6.2	4.2	9.7	58.7	2.76	49.3	89.8	6.2	4.2	9.7
			100	55.6	3.63	43.2	118.5	4.5	1.1	2.6	56.2	3.44	44.5	109.4	4.8	4.0	9.2	56.2	3.44	44.5	109.4	4.8	4.0	9.2
			120								53.7	4.40	38.7	128.9	3.6	3.8	8.7	53.7	4.40	38.7	128.9	3.6	3.8	8.7
	12	4.5 (10.3)	60	61.6	2.37	53.5	80.5	7.6	1.3	2.9	62.2	2.24	54.6	70.4	8.1	4.5	10.4	62.2	2.24	54.6	70.4	8.1	4.5	10.4
			80	59.0	2.91	49.1	99.7	5.9	1.2	2.7	59.7	2.77	50.2	89.9	6.3	4.2	9.7	59.7	2.77	50.2	89.9	6.3	4.2	9.7
			100	56.4	3.64	43.9	118.8	4.5	1.1	2.6	57.0	3.45	45.2	109.5	4.8	4.0	9.2	57.0	3.45	45.2	109.5	4.8	4.0	9.2
			120								54.3	4.41	39.3	129.0	3.6	3.8	8.7	54.3	4.41	39.3	129.0	3.6	3.8	8.7
90	6	1.2 (2.8)	60	73.0	2.45	64.7	84.3	8.7	1.3	2.9	73.9	2.30	66.1	72.3	9.4	4.5	10.3	73.9	2.30	66.1	72.3	9.4	4.5	10.3
			80	70.0	3.00	59.7	103.3	6.8	1.2	2.7	70.9	2.83	61.2	91.8	7.4	4.2	9.7	70.9	2.83	61.2	91.8	7.4	4.2	9.7
			100	66.7	3.75	53.9	122.2	5.2	1.1	2.6	67.6	3.51	55.6	111.3	5.6	4.0	9.1	67.6	3.51	55.6	111.3	5.6	4.0	9.1
			120								64.2	4.49	48.9	130.7	4.2	3.7	8.6	64.2	4.49	48.9	130.7	4.2	3.7	8.6
	9	2.5 (5.8)	60	76.0	2.47	67.6	85.3	9.0	1.3	2.9	77.1	2.31	69.2	72.8	9.8	4.5	10.3	77.1	2.31	69.2	72.8	9.8	4.5	10.3
			80	72.5	3.02	62.2	104.2	7.0	1.2	2.7	73.6	2.84	63.9	92.3	7.6	4.2	9.7	73.6	2.84	63.9	92.3	7.6	4.2	9.7
			100	68.8	3.77	55.9	122.9	5.3	1.1	2.6	69.9	3.52	57.9	111.6	5.8	4.0	9.1	69.9	3.52	57.9	111.6	5.8	4.0	9.1
			120																					
	12	4.2 (9.7)	60	77.6	2.48	69.1	85.9	9.2	1.3	2.9														
			80	73.9	3.03	63.5	104.6	7.1	1.2	2.7	75.1	2.84	65.4	92.5	7.7	4.2	9.7	75.1	2.84	65.4	92.5	7.7	4.2	9.7
			100																					
			120																					

- Extended Range - Anti-freeze required
- Interpolation is permissible. Not extrapolation
- Operation not recommended

- Tabulated unit performance does not include fan or pump power corrections required for AHRI/ ISO standard performance ratings.
- Unit performance may be interpolated. Extrapolation is not allowed.
- For conditions other than rating conditions provided, consult the BST selection software.
- Ratings below 40°F are with a methanol solution.

**DISCLAIMER:** The performance reported herein is based on testing by FHP. Variations in the installation and operational environment may alter performance. Bosch disclaims all warranties, express and implied, that the performance will be as reported, including the warranty of merchantability and fitness for purpose. In addition, continuous research and development may result in a change to an appliances design and specifications at the time of order, which Bosch may change without notice. Before purchase, confirm the design specifications of the appliance.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL

# Greensource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

Capacity Data - TW061 – Part Load – Cooling																								
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	7.5 GPM							11.25 GPM							15 GPM						
				Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)
50	7.5	3.5 (1.5)	50	34.8	1.82	41.0	40.7	19.1	3.6	1.6	35.7	1.82	41.9	43.7	19.7	7.4	3.2	36.2	1.81	42.4	45.2	20.0	12.5	5.4
			60	40.9	1.77	47.0	49.1	23.1	3.5	1.5	42.1	1.76	48.1	52.5	23.9	7.2	3.1	42.8	1.76	48.8	54.3	24.3	12.1	5.2
			70	47.7	1.72	53.6	57.3	27.7	3.4	1.5	49.3	1.71	55.1	61.2	28.8	7.0	3.0	50.1	1.70	55.9	63.3	29.4	11.7	5.1
			80	55.1	1.66	60.8	65.3	33.1	3.3	1.4	57.1	1.65	62.7	69.9	34.6	6.8	2.9	58.1	1.64	63.7	72.2	35.4	11.3	4.9
			90																					
	11.25	6.3 (2.7)	50	35.1	1.77	41.1	40.6	19.8	3.6	1.6	36.0	1.76	42.0	43.6	20.5	7.4	3.2	36.5	1.76	42.5	45.1	20.8	12.5	5.4
			60	41.3	1.71	47.1	49.0	24.1	3.5	1.5	42.5	1.70	48.3	52.4	25.1	7.2	3.1	43.2	1.69	49.0	54.2	25.5	12.1	5.2
			70	48.2	1.64	53.8	57.1	29.3	3.4	1.5	49.8	1.63	55.4	61.1	30.6	7.0	3.0	50.7	1.62	56.2	63.2	31.3	11.7	5.1
			80	55.8	1.57	61.1	65.1	35.5	3.3	1.4	57.8	1.55	63.1	69.7	37.2	6.8	2.9	58.9	1.54	64.2	72.1	38.2	11.3	4.9
			90																					
	15	9.7 (4.2)	50	35.2	1.74	41.2	40.6	20.2	3.6	1.6	36.2	1.73	42.1	43.6	20.9	7.5	3.2	36.7	1.73	42.6	45.1	21.2	12.5	5.4
			60	41.5	1.68	47.2	48.9	24.7	3.5	1.5	42.8	1.66	48.4	52.4	25.7	7.2	3.1	43.4	1.66	49.1	54.2	26.2	12.1	5.2
			70	48.4	1.61	53.9	57.1	30.2	3.4	1.5	50.1	1.59	55.5	61.1	31.5	7.0	3.0	51.0	1.58	56.4	63.2	32.3	11.7	5.1
			80	56.1	1.53	61.3	65.0	36.7	3.3	1.4	58.2	1.51	63.3	69.7	38.6	6.8	2.9	59.3	1.49	64.4	72.1	39.7	11.3	4.9
			90																					
70	7.5	10.0 (4.3)	50	31.5	2.45	39.9	41.6	12.9	3.6	1.6	32.3	2.44	40.7	44.3	13.2	7.4	3.2	32.7	2.44	41.1	45.6	13.4	12.5	5.4
			60	37.2	2.42	45.5	50.1	15.4	3.5	1.5	38.3	2.41	46.5	53.2	15.9	7.2	3.1	38.8	2.41	47.0	54.8	16.1	12.1	5.2
			70	43.5	2.38	51.6	58.4	18.2	3.4	1.5	44.8	2.38	52.9	62.0	18.8	7.0	3.0	45.5	2.37	53.6	63.9	19.2	11.7	5.1
			80	50.3	2.35	58.3	66.6	21.4	3.3	1.4	51.9	2.34	59.9	70.8	22.2	6.8	2.9	52.8	2.34	60.8	73.0	22.6	11.3	4.9
			90	57.6	2.32	65.5	74.6	24.9	3.2	1.4	59.7	2.31	67.6	79.4	25.9	6.6	2.8							
	11.25	3.2 (1.4)	50	31.8	2.39	40.0	41.5	13.3	3.6	1.6	32.7	2.38	40.8	44.2	13.7	7.4	3.2	33.1	2.38	41.2	45.6	13.9	12.5	5.4
			60	37.6	2.35	45.6	50.0	16.0	3.5	1.5	38.7	2.34	46.7	53.1	16.5	7.2	3.1	39.2	2.34	47.2	54.8	16.8	12.1	5.2
			70	44.0	2.30	51.8	58.3	19.1	3.4	1.5	45.3	2.29	53.2	61.9	19.8	7.0	3.0	46.1	2.29	53.9	63.9	20.1	11.7	5.1
			80	50.9	2.26	58.6	66.4	22.6	3.3	1.4	52.6	2.25	60.3	70.6	23.4	6.8	2.9	53.5	2.24	61.2	72.9	23.9	11.3	4.9
			90	58.5	2.21	66.0	74.4	26.5	3.2	1.4	60.6	2.20	68.1	79.2	27.6	6.6	2.8	61.7	2.19	69.2	81.8	28.2	11.0	4.8
	15	6.8 (2.9)	50	32.0	2.36	40.0	41.5	13.6	3.6	1.6	32.8	2.35	40.8	44.2	13.9	7.4	3.2	33.2	2.35	41.3	45.6	14.1	12.5	5.4
			60	37.8	2.31	45.7	49.9	16.3	3.5	1.5	38.9	2.31	46.8	53.1	16.9	7.2	3.1	39.4	2.30	47.3	54.7	17.1	12.1	5.2
			70	44.2	2.26	52.0	58.2	19.5	3.4	1.5	45.6	2.25	53.3	61.9	20.2	7.0	3.0	46.3	2.25	54.0	63.8	20.6	11.7	5.1
			80	51.2	2.21	58.8	66.3	23.2	3.3	1.4	53.0	2.20	60.5	70.6	24.1	6.8	2.9	53.9	2.19	61.4	72.8	24.6	11.3	4.9
			90	58.9	2.15	66.2	74.3	27.3	3.2	1.4	61.0	2.14	68.3	79.1	28.5	6.6	2.8	62.2	2.13	69.5	81.7	29.2	11.0	4.8
	7.5	10.3 (4.4)	50	27.7	3.23	38.7	42.6	8.6	3.6	1.6	28.4	3.23	39.4	45.0	8.8	7.4	3.2	28.7	3.22	39.7	46.2	8.9	12.4	5.4
			60	33.1	3.20	44.0	51.2	10.3	3.5	1.5	33.9	3.20	44.8	54.0	10.6	7.2	3.1	34.4	3.20	45.3	55.4	10.8	12.0	5.2
			70	38.9	3.18	49.7	59.6	12.2	3.4	1.5	39.9	3.17	50.7	62.9	12.6	7.0	3.0	40.5	3.17	51.3	64.6	12.8	11.7	5.0
			80	45.1	3.15	55.8	68.0	14.3	3.3	1.4	46.4	3.15	57.2	71.7	14.8	6.8	2.9	47.2	3.14	57.9	73.7	15.0	11.3	4.9
			90	51.8	3.13	62.5	76.2	16.6	3.2	1.4	53.5	3.12	64.1	80.5	17.1	6.6	2.8							
			50	28.1	3.15	38.9	42.5	8.9	3.6	1.6	28.8	3.15	39.5	44.9	9.1	7.4	3.2	29.1	3.15	39.9	46.1	9.3	12.4	5.4
			60	33.5	3.12	44.2	51.1	10.8	3.5	1.5	34.4	3.11	45.0	53.9	11.1	7.2	3.1	34.8	3.11	45.4	55.4	11.2	12.0	5.2
			70	39.4	3.08	49.9	59.5	12.8	3.4	1.5	40.5	3.07	51.0	62.8	13.2	7.0	3.0	41.1	3.07	51.6	64.5	13.4	11.7	5.0
			80	45.8	3.04	56.2	67.8	15.1	3.3	1.4	47.2	3.03	57.5	71.6	15.6	6.8	2.9	47.9	3.03	58.3	73.6	15.8	11.3	4.9
			90	52.7	3.00	62.9	76.0	17.5	3.2	1.4	54.4	3.00	64.6	80.3	18.2	6.6	2.8							
	15	3.9 (1.7)	50	28.3	3.11	38.9	42.5	9.1	3.6	1.6	29.0	3.11	39.6	44.9	9.3	7.4	3.2	29.3	3.11	39.9	46.1	9.4	12.4	5.4
			60	33.7	3.07	44.2	51.0	11.0	3.5	1.5	34.6	3.07	45.1	53.8	11.3	7.2	3.1	35.1	3.06	45.5	55.3	11.5	12.0	5.2
			70	39.7	3.03	50.0	59.4	13.1	3.4	1.5	40.8	3.02	51.1	62.7	13.5	7.0	3.0	41.4	3.02	51.7	64.5	13.7	11.7	5.0
			80	46.1	2.99	56.3	67.7	15.4	3.3	1.4	47.6	2.98	57.7	71.5	16.0	6.8	2.9	48.3	2.97	58.5	73.6	16.3	11.3	4.9
			90	53.1	2.94	63.1	75.8	18.0	3.2	1.4	54.9	2.93	64.9	80.2	18.7	6.6	2.8							
7.5	6.4 (2.8)	50	22.6	4.28	37.2	44.0	5.3	3.6	1.6	23.2	4.27	37.7	45.9	5.4	7.4	3.2	23.4	4.27	38.0	46.9	5.5	12.4	5.4	
		60	27.7	4.24	42.2	52.6	6.5	3.5	1.5	28.4	4.24	42.8	55.0	6.7	7.2	3.1	28.7	4.23	43.2	56.2	6.8	12.0	5.2	
		70	33.1	4.21	47.5	61.2	7.9	3.4	1.5	34.0	4.20	48.3	64.0	8.1	7.0	3.0	34.4	4.20	48.7	65.4	8.2	11.6	5.0	
		80	38.9	4.18	53.1	69.6	9.3	3.3	1.4	39.9	4.17	54.2	72.9	9.6	6.7	2.9	40.5	4.17	54.7	74.6	9.7	11.3	4.9	
		90	45.0	4.15	59.2	78.0	10.8	3.2	1.4															
110	11.25	10.7 (4.6)	50	23.1	4.18	37.4	43.8	5.5	3.6	1.6	23.7	4.17	37.9	45.8	5.7	7.4	3.2	23.9	4.17	38.2	46.8	5.7	12.4	5.4
			60	28.3	4.13	42.4	52.5	6.9	3.5	1.5	29.0	4.12	43.0	54.8	7.0	7.2	3.1	29.3	4.12	43.4	56.1	7.1	12.0	5.2
			70	33.8	4.08	47.7	61.0	8.3	3.4	1.5	34.7	4.07	48.6	63.8	8.5	7.0	3.0	35.1	4.07	49.0	65.3	8.6	11.6	5.0
			80	39.7	4.04	53.5	69.4	9.8	3.3	1.4	40.8	4.03	54.6	72.7	10.1	6.7	2.9	41.4	4.03	55.1	74.5	10.3	11.3	4.9
			90	46.0	4.00	59.6	77.7	11.5	3.2	1.4														
	15	4.8 (2.1)	50	23.4	4.13	37.5	43.8	5.7	3.6	1.6	23.9	4.12	38.0	45.7	5.8	7.4	3.2	24.2	4.12	38.2	46.8	5.9	12.4	5.4
			60	28.6	4.07	42.5	52.4	7.0	3.5	1.5	29.3	4.07	43.1	54.8	7.2	7.2	3.1	29.6	4.06	43.5	56.0	7.3	12.0	5.2
			70	34.1	4.02	47.8	60.9	8.5	3.4	1.5	35.0	4.01	48.7	63.8	8.7	7.0	3.0	35.5	4.01	49.2	65.3	8.9	11.6	5.0
			80	40.1	3.97	53.6	69.3	10.1	3.3	1.4	41.2	3.96	54.7	72.7	10.4	6.7	2.9	41.8	3.96	55.3	74.4	10.6	11.3	4.9
			90	46.5	3.93	59.9	77.6	11.8	3.2	1.4														



# Greensource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

Capacity Data - TW061 – Part Load – Heating																								
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	7.5 GPM							11.25 GPM							15 GPM						
				Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (PSI)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of water)	Pressure Drop (psi)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (psi)
30	7.5	1.7 (3.8)	60																					
			80																					
			100																					
			120	27.4	5.04	10.2	127.3	1.6	1.2	2.8	27.6	4.9	10.87	123.7	1.6	4.3	9.9	27.6	4.9	10.87	123.7	1.6	4.3	9.9
	11.25	3.4 (7.9)	60																					
			80																					
			100																					
			120	27.6	5.04	10.4	127.4	1.6	1.2	2.8	27.8	4.90	11.1	123.7	1.7	4.3	9.9	27.8	4.90	11.1	123.7	1.7	4.3	9.9
	15	5.8 (13.3)	60																					
			80																					
			100	29.4	3.77	16.6	107.9	2.3	1.3	3.0	29.6	3.66	17.1	103.9	2.4	4.5	10.5	29.6	3.66	17.1	103.9	2.4	4.5	10.5
			120	27.7	5.04	10.5	127.4	1.6	1.2	2.8	27.9	4.90	11.2	123.7	1.7	4.3	9.9	27.9	4.90	11.2	123.7	1.7	4.3	9.9
50	7.5	1.6 (3.6)	60	40.4	2.12	33.2	70.8	5.6	1.5	3.4	40.6	2.04	33.6	65.4	5.8	5.1	11.8	40.6	2.04	33.6	65.4	5.8	5.1	11.8
			80	39.4	2.81	29.8	90.5	4.1	1.4	3.2	39.5	2.71	30.2	85.3	4.3	4.8	11.1	39.5	2.71	30.2	85.3	4.3	4.8	11.1
			100	38.1	3.71	25.4	110.1	3.0	1.3	3.0	38.2	3.58	26.0	105.1	3.1	4.5	10.4	38.2	3.58	26.0	105.1	3.1	4.5	10.4
			120	36.3	4.94	19.4	129.7	2.2	1.2	2.8	36.5	4.77	20.3	124.9	2.2	4.3	9.9	36.5	4.77	20.3	124.9	2.2	4.3	9.9
	11.25	3.2 (7.4)	60	41.3	2.12	34.0	71.0	5.7	1.5	3.4	41.4	2.03	34.5	65.5	6.0	5.1	11.8	41.4	2.03	34.5	65.5	6.0	5.1	11.8
			80	40.1	2.81	30.5	90.7	4.2	1.4	3.2	40.2	2.71	31.0	85.4	4.4	4.8	11.1	40.2	2.71	31.0	85.4	4.4	4.8	11.1
			100	38.6	3.71	26.0	110.3	3.1	1.3	3.0	38.8	3.58	26.6	105.2	3.2	4.5	10.4	38.8	3.58	26.6	105.2	3.2	4.5	10.4
			120	36.7	4.93	19.8	129.8	2.2	1.2	2.8	37.0	4.76	20.7	124.9	2.3	4.3	9.9	37.0	4.76	20.7	124.9	2.3	4.3	9.9
	15	5.4 (12.4)	60	41.7	2.12	34.5	71.1	5.8	1.5	3.4	41.9	2.03	35.0	65.6	6.1	5.1	11.8	41.9	2.03	35.0	65.6	6.1	5.1	11.8
			80	40.4	2.81	30.8	90.8	4.2	1.4	3.2	40.6	2.70	31.4	85.4	4.4	4.8	11.1	40.6	2.70	31.4	85.4	4.4	4.8	11.1
			100	38.9	3.71	26.3	110.4	3.1	1.3	3.0	39.1	3.57	26.9	105.2	3.2	4.5	10.4	39.1	3.57	26.9	105.2	3.2	4.5	10.4
			120	36.9	4.93	20.1	129.8	2.2	1.2	2.8	37.2	4.76	20.9	125.0	2.3	4.3	9.9	37.2	4.76	20.9	125.0	2.3	4.3	9.9
70	7.5	1.5 (3.4)	60	52.6	2.04	45.6	74.0	7.5	1.5	3.4	52.9	1.93	46.3	67.1	8.0	5.1	11.8	52.9	1.93	46.3	67.1	8.0	5.1	11.8
			80	50.7	2.76	41.3	93.5	5.4	1.4	3.1	51.0	2.63	42.0	86.8	5.7	4.8	11.1	51.0	2.63	42.0	86.8	5.7	4.8	11.1
			100	48.6	3.65	36.2	113.0	3.9	1.3	3.0	49.0	3.49	37.1	106.5	4.1	4.5	10.4	49.0	3.49	37.1	106.5	4.1	4.5	10.4
			120	46.1	4.85	29.6	132.3	2.8	1.2	2.8	46.6	4.64	30.8	126.2	2.9	4.3	9.9	46.6	4.64	30.8	126.2	2.9	4.3	9.9
	11.25	3.0 (7.0)	60	54.0	2.03	47.0	74.4	7.8	1.5	3.3	54.4	1.92	47.8	67.2	8.3	5.1	11.8	54.4	1.92	47.8	67.2	8.3	5.1	11.8
			80	51.8	2.75	42.5	93.8	5.5	1.4	3.1	52.2	2.62	43.3	87.0	5.8	4.8	11.1	52.2	2.62	43.3	87.0	5.8	4.8	11.1
			100	49.6	3.65	37.1	113.2	4.0	1.3	3.0	50.0	3.48	38.1	106.7	4.2	4.5	10.4	50.0	3.48	38.1	106.7	4.2	4.5	10.4
			120	46.9	4.84	30.3	132.5	2.8	1.2	2.8	47.3	4.63	31.5	126.3	3.0	4.3	9.9	47.3	4.63	31.5	126.3	3.0	4.3	9.9
	15	5.0 (11.7)	60	54.7	2.03	47.8	74.6	7.9	1.4	3.3	55.1	1.91	48.6	67.4	8.5	5.1	11.8	55.1	1.91	48.6	67.4	8.5	5.1	11.8
			80	52.5	2.75	43.1	94.0	5.6	1.4	3.1	52.9	2.61	44.0	87.0	5.9	4.8	11.1	52.9	2.61	44.0	87.0	5.9	4.8	11.1
			100	50.1	3.65	37.6	113.4	4.0	1.3	3.0	50.5	3.48	38.6	106.7	4.3	4.5	10.4	50.5	3.48	38.6	106.7	4.3	4.5	10.4
			120	47.2	4.84	30.7	132.6	2.9	1.2	2.8	47.7	4.62	32.0	126.4	3.0	4.3	9.9	47.7	4.62	32.0	126.4	3.0	4.3	9.9
90	7.5	1.4 (3.2)	60	67.1	1.96	60.4	77.9	10.1	1.4	3.3	67.8	1.80	61.6	69.0	11.1	5.1	11.8	67.8	1.80	61.6	69.0	11.1	5.1	11.8
			80	64.0	2.70	54.8	97.1	6.9	1.4	3.1	64.7	2.53	56.0	88.6	7.5	4.8	11.0	64.7	2.53	56.0	88.6	7.5	4.8	11.0
			100	60.9	3.61	48.6	116.2	4.9	1.3	2.9	61.5	3.40	49.9	108.2	5.3	4.5	10.4	61.5	3.40	49.9	108.2	5.3	4.5	10.4
			120								58.1	4.53	42.6	127.7	3.8	4.3	9.8	58.1	4.53	42.6	127.7	3.8	4.3	9.8
	11.25	2.8 (6.6)	60	69.3	1.94	62.6	78.5	10.4	1.4	3.3														
			80	65.9	2.70	56.7	97.6	7.2	1.4	3.1	66.6	2.52	58.0	88.9	7.7	4.8	11.0	66.6	2.52	58.0	88.9	7.7	4.8	11.0
			100																					
			120																					
	15	4.7 (11.0)	60	70.5	1.94	63.9	78.8	10.7	1.4	3.3														
			80																					
			100																					
			120																					

- Extended Range - Anti-freeze required
- Interpolation is permissible. Not extrapolation
- Operation not recommended

- Tabulated unit performance does not include fan or pump power corrections required for AHRI/ ISO standard performance ratings.
- Unit performance may be interpolated. Extrapolation is not allowed.
- For conditions other than rating conditions provided, consult the BST selection software.
- Ratings below 40°F are with a methanol solution.

**DISCLAIMER:** The performance reported herein is based on testing by FHP. Variations in the installation and operational environment may alter performance. Bosch disclaims all warranties, express and implied, that the performance will be as reported, including the warranty of merchantability and fitness for purpose. In addition, continuous research and development may result in a change to an appliances design and specifications at the time of order, which Bosch may change without notice. Before purchase, confirm the design specifications of the appliance.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL

# Greensource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

Capacity Data - TW061 – Full Load – Cooling																								
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	7.5 GPM							11.25 GPM							15 GPM						
				Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)
50	7.5	3.4 (1.5)	50	49.1	2.46	57.5	36.9	20.0	3.6	1.6	50.9	2.47	59.3	41.0	20.6	7.5	3.2	51.8	2.48	60.2	43.1	20.9	12.5	5.4
			60	57.0	2.52	65.6	44.8	22.6	3.5	1.5	59.1	2.54	67.8	49.5	23.3	7.2	3.1	60.3	2.55	69.0	52.0	23.7	12.1	5.2
			70	65.4	2.59	74.2	52.6	25.3	3.4	1.5	68.1	2.61	77.0	57.9	26.1	7.0	3.0	69.5	2.62	78.4	60.7	26.5	11.7	5.1
			80	74.3	2.67	83.4	60.2	27.9	3.3	1.4	77.5	2.70	86.7	66.2	28.8	6.8	3.0	79.3	2.71	88.5	69.4	29.2	11.4	4.9
	11.25	6.3 (2.7)	90	83.8	2.76	93.2	67.7	30.4	3.2	1.4	87.6	2.80	97.1	74.4	31.3	6.6	2.9							
			50	49.5	2.39	57.7	36.8	20.7	3.6	1.6	51.3	2.40	59.5	40.9	21.4	7.5	3.2	52.2	2.41	60.4	43.0	21.7	12.5	5.4
			60	57.5	2.44	65.8	44.7	23.6	3.5	1.5	59.7	2.45	68.1	49.4	24.4	7.2	3.1	60.9	2.46	69.3	51.9	24.8	12.1	5.2
			70	66.1	2.50	74.6	52.4	26.5	3.4	1.5	68.8	2.52	77.4	57.8	27.3	7.0	3.0	70.3	2.53	78.9	60.6	27.8	11.7	5.1
	15	9.7 (4.2)	80	75.2	2.57	84.0	59.9	29.3	3.3	1.4	78.5	2.59	87.4	66.0	30.3	6.8	3.0	80.3	2.61	89.2	69.3	30.8	11.4	4.9
			90																					
			50	49.7	2.35	57.7	36.7	21.1	3.6	1.6	51.5	2.36	59.6	40.8	21.8	7.5	3.2	52.5	2.37	60.5	43.0	22.1	12.5	5.4
			60	57.8	2.40	65.9	44.6	24.1	3.5	1.5	60.0	2.41	68.2	49.3	24.9	7.3	3.1	61.2	2.42	69.5	51.8	25.3	12.1	5.2
70	9.9 (4.3)	70	66.4	2.45	74.8	52.3	27.1	3.4	1.5	69.2	2.47	77.6	57.7	28.0	7.0	3.0	70.7	2.48	79.2	60.6	28.5	11.7	5.1	
		80	75.6	2.52	84.2	59.8	30.0	3.3	1.4	79.0	2.54	87.7	66.0	31.1	6.8	3.0	80.8	2.56	89.6	69.2	31.6	11.4	4.9	
		90																						
		50	45.8	3.10	56.3	37.8	14.7	3.6	1.6	47.2	3.12	57.9	41.6	15.2	7.5	3.2	48.0	3.12	58.7	43.6	15.4	12.5	5.4	
70	7.5	9.9 (4.3)	60	53.1	3.16	63.8	45.9	16.8	3.5	1.5	54.9	3.18	65.8	50.2	17.3	7.2	3.1	55.9	3.18	66.8	52.5	17.6	12.1	5.2
			70	60.9	3.23	71.9	53.8	18.9	3.4	1.5	63.2	3.25	74.3	58.8	19.5	7.0	3.0	64.4	3.26	75.5	61.4	19.8	11.7	5.1
			80	69.2	3.30	80.5	61.5	21.0	3.3	1.4	72.0	3.32	83.4	67.2	21.7	6.8	2.9	73.5	3.34	84.9	70.2	22.0	11.4	4.9
			90	78.0	3.38	89.6	69.2	23.1	3.2	1.4	81.3	3.42	93.0	75.5	23.8	6.6	2.9	83.1	3.44	94.8	78.9	24.2	11.0	4.8
	11.25	3.2 (1.4)	50	46.2	3.01	56.5	37.7	15.3	3.6	1.6	47.7	3.02	58.1	41.5	15.8	7.5	3.2	48.6	3.03	58.9	43.5	16.0	12.5	5.4
			60	53.7	3.06	64.1	45.7	17.5	3.5	1.5	55.6	3.07	66.1	50.1	18.1	7.2	3.1	56.6	3.08	67.1	52.4	18.4	12.1	5.2
			70	61.7	3.11	72.3	53.6	19.8	3.4	1.5	64.1	3.13	74.7	58.6	20.5	7.0	3.0	65.3	3.14	76.0	61.3	20.8	11.7	5.1
			80	70.2	3.17	81.0	61.3	22.2	3.3	1.4	73.1	3.19	84.0	67.0	22.9	6.8	2.9	74.7	3.20	85.6	70.0	23.3	11.4	4.9
	15	6.7 (2.9)	90	79.3	3.24	90.3	68.9	24.5	3.2	1.4	82.7	3.27	93.9	75.3	25.3	6.6	2.9	84.6	3.29	95.8	78.7	25.7	11.0	4.8
			50	46.4	2.97	56.6	37.6	15.6	3.6	1.6	48.0	2.98	58.2	41.5	16.1	7.5	3.2	48.8	2.98	59.0	43.5	16.4	12.5	5.4
			60	54.0	3.01	64.2	45.6	17.9	3.5	1.5	55.9	3.02	66.2	50.1	18.5	7.2	3.1	57.0	3.03	67.3	52.4	18.8	12.1	5.2
			70	62.1	3.05	72.5	53.4	20.3	3.4	1.5	64.5	3.07	75.0	58.5	21.0	7.0	3.0	65.8	3.08	76.3	61.2	21.4	11.7	5.1
90	7.5	10.2 (4.4)	80	70.7	3.11	81.3	61.1	22.8	3.3	1.4	73.7	3.13	84.3	66.9	23.6	6.8	2.9	75.3	3.14	86.0	70.0	24.0	11.4	4.9
			90	79.9	3.17	90.7	68.7	25.2	3.2	1.4	83.4	3.20	94.3	75.2	26.1	6.6	2.9	85.3	3.22	96.3	78.6	26.5	11.0	4.8
			50	41.6	3.95	55.0	38.9	10.5	3.6	1.6	42.8	3.96	56.3	42.4	10.8	7.5	3.2	43.4	3.97	57.0	44.2	10.9	12.5	5.4
			60	48.3	4.02	62.0	47.1	12.0	3.5	1.5	49.8	4.03	63.6	51.1	12.4	7.2	3.1	50.6	4.04	64.4	53.2	12.5	12.1	5.2
	11.25	7.2 (3.1)	70	55.5	4.08	69.4	55.2	13.6	3.4	1.5	57.4	4.10	71.4	59.8	14.0	7.0	3.0	58.4	4.11	72.4	62.2	14.2	11.7	5.1
			80	63.1	4.16	77.3	63.2	15.2	3.3	1.4	65.5	4.18	79.7	68.4	15.6	6.8	2.9	66.7	4.20	81.0	71.1	15.9	11.3	4.9
			90	71.3	4.24	85.7	71.0	16.8	3.2	1.4	74.0	4.27	88.6	76.8	17.3	6.6	2.9	75.5	4.29	90.1	79.9	17.6	11.0	4.8
			50	42.1	3.83	55.2	38.8	11.0	3.6	1.6	43.4	3.84	56.5	42.3	11.3	7.5	3.2	44.1	3.85	57.2	44.1	11.5	12.5	5.4
	15	3.9 (1.7)	60	49.0	3.88	62.2	46.9	12.6	3.5	1.5	50.6	3.89	63.9	51.0	13.0	7.2	3.1	51.5	3.90	64.8	53.1	13.2	12.1	5.2
			70	56.4	3.93	69.8	55.0	14.3	3.4	1.5	58.4	3.95	71.9	59.6	14.8	7.0	3.0	59.5	3.96	73.0	62.1	15.0	11.7	5.1
			80	64.3	3.99	77.9	62.9	16.1	3.3	1.4	66.7	4.01	80.4	68.1	16.6	6.8	2.9	68.0	4.02	81.7	70.9	16.9	11.4	4.9
			90	72.7	4.06	86.5	70.6	17.9	3.2	1.4	75.6	4.08	89.5	76.6	18.5	6.6	2.9	77.1	4.10	91.1	79.7	18.8	11.0	4.8
110	7.5	6.3 (2.7)	50	42.4	3.78	55.3	38.7	11.2	3.6	1.6	43.7	3.78	56.6	42.2	11.6	7.5	3.2	44.4	3.79	57.3	44.1	11.7	12.5	5.4
			60	49.3	3.82	62.4	46.8	12.9	3.5	1.5	51.0	3.83	64.0	50.9	13.3	7.2	3.1	51.9	3.83	64.9	53.1	13.5	12.1	5.2
			70	56.8	3.86	70.0	54.8	14.7	3.4	1.5	58.9	3.87	72.1	59.5	15.2	7.0	3.0	60.0	3.88	73.2	62.0	15.5	11.7	5.1
			80	64.8	3.91	78.2	62.7	16.6	3.3	1.4	67.3	3.93	80.7	68.0	17.2	6.8	2.9	68.7	3.93	82.1	70.8	17.5	11.4	4.9
	11.25	10.7 (4.6)	90	73.3	3.97	86.9	70.4	18.5	3.2	1.4	76.3	3.99	89.9	76.4	19.1	6.6	2.9	77.9	4.00	91.6	79.6	19.5	11.0	4.8
			50	36.3	5.08	53.7	40.3	7.1	3.6	1.6	37.3	5.10	54.7	43.4	7.3	7.5	3.2	37.8	5.10	55.2	45.0	7.4	12.5	5.4
			60	42.4	5.16	60.0	48.7	8.2	3.5	1.5	43.6	5.18	61.2	52.3	8.4	7.2	3.1	44.2	5.18	61.9	54.1	8.5	12.1	5.2
			70	48.9	5.24	66.8	57.0	9.3	3.4	1.5	50.4	5.26	68.3	61.0	9.6	7.0	3.0	51.2	5.27	69.2	63.2	9.7	11.7	5.1
	15	4.8 (2.1)	80	55.8	5.33	74.0	65.1	10.5	3.3	1.4	57.7	5.35	75.9	69.7	10.8	6.8	2.9	58.7	5.36	77.0	72.2	10.9	11.3	4.9
			90	63.2	5.42	81.7	73.1	11.7	3.2	1.4	65.4	5.44	84.0	78.4	12.0	6.6	2.8							
			50	37.0	4.93	53.8	40.1	7.5	3.6	1.6	38.0	4.94	54.9	43.2	7.7	7.5	3.2	38.6	4.94	55.4	44.9	7.8	12.5	5.4
			60	43.2	4.99	60.2	48.5	8.7	3.5	1.5	44.5	5.00	61.6	52.1	8.9	7.2	3.1	45.2	5.01	62.3	54.0	9.0	12.1	5.2
110	11.25	4.8 (2.1)	70	49.9	5.05	67.2	56.7	9.9	3.4	1.5	51.6	5.06	68.8	60.8	10.2	7.0	3.0	52.4	5.07	69.7	63.0	10.3	11.7	5.1
			80	57.1	5.11	74.6	64.8	11.2	3.3	1.4	59.1	5.12	76.6	69.5	11.5	6.8	2.9	60.2	5.13	77.7	72.0	11.7	11.3	4.9
			90	64.8	5.18	82.4	72.7	12.5	3.2	1.4	67.1	5.20	84.9	78.1	12.9	6.6	2.8							
			50	37.4	4.85	53.9	40.0	7.7	3.6	1.6	38.4	4.86	55.0	43.2	7.9	7.5	3.2	38.9	4.87	55.5	44.8	8.0	12.5	5.4
			60	43.6	4.90	60.4	48.4	8.9	3.5	1.5	45.0	4.91	61.7	52.0	9.2	7.2	3.1	45.7	4.92	62.4	53.9	9.3	12.1	5.2
			70	50.5	4.95	67.4	56.5	10.2	3.4	1.5	52.1	4.96	69.1	60.7	10.5	7.0	3.0	53.0	4.97	70.0	62.9	10.7	11.7	5.1
			80	57.8	5.00	74.9	64.6	11.6	3.3	1.4	59.8	5.02	76.9	69.4	11.9	6.8	2.9	60.9	5.02	78.0	71.9	12.1	11.3	

# Greensource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

Capacity Data - TW061 – Full Load – Heating																								
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	7.5 GPM						11.25 GPM						15 GPM								
				Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (PSI)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of water)	Pressure Drop (psi)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (psi)
30	7.5	1.7 (3.9)	60																					
			80																					
			100																					
			120	42.7	5.59	23.6	131.4	2.2	1.2	2.8	42.7	5.4	24.29	125.7	2.3	4.3	9.9	42.7	5.4	24.29	125.7	2.3	4.3	9.9
	11.25	3.5 (8.0)	60																					
			80																					
			100	43.5	4.34	28.7	111.6	2.9	1.3	3.0	43.6	4.18	29.3	105.8	3.1	4.5	10.4	43.6	4.18	29.3	105.8	3.1	4.5	10.4
			120	43.2	5.60	24.0	131.5	2.3	1.2	2.8	43.2	5.40	24.8	125.8	2.3	4.3	9.9	43.2	5.40	24.8	125.8	2.3	4.3	9.9
	15	5.8 (13.4)	60																					
			80																					
			100	43.9	4.35	29.0	111.7	3.0	1.3	3.0	43.9	4.19	29.6	105.9	3.1	4.5	10.4	43.9	4.19	29.6	105.9	3.1	4.5	10.4
			120	43.4	5.61	24.3	131.6	2.3	1.2	2.8	43.5	5.40	25.0	125.8	2.4	4.3	9.9	43.5	5.40	25.0	125.8	2.4	4.3	9.9
50	7.5	1.6 (3.6)	60	57.0	2.76	47.5	75.2	6.0	1.4	3.3	57.2	2.64	48.2	67.6	6.3	5.1	11.8	57.2	2.64	48.2	67.6	6.3	5.1	11.8
			80	55.7	3.50	43.8	94.9	4.7	1.4	3.1	55.9	3.34	44.5	87.5	4.9	4.8	11.1	55.9	3.34	44.5	87.5	4.9	4.8	11.1
			100	54.4	4.48	39.1	114.5	3.6	1.3	3.0	54.6	4.28	40.0	107.3	3.7	4.5	10.4	54.6	4.28	40.0	107.3	3.7	4.5	10.4
			120	53.0	5.78	33.3	134.1	2.7	1.2	2.8	53.2	5.52	34.4	127.1	2.8	4.3	9.8	53.2	5.52	34.4	127.1	2.8	4.3	9.8
	11.25	3.2 (7.5)	60	58.6	2.77	49.1	75.6	6.2	1.4	3.3	58.9	2.65	49.8	67.9	6.5	5.1	11.8	58.9	2.65	49.8	67.9	6.5	5.1	11.8
			80	57.1	3.51	45.1	95.2	4.8	1.4	3.1	57.4	3.35	46.0	87.7	5.0	4.8	11.1	57.4	3.35	46.0	87.7	5.0	4.8	11.1
			100	55.5	4.49	40.2	114.8	3.6	1.3	3.0	55.8	4.28	41.2	107.4	3.8	4.5	10.4	55.8	4.28	41.2	107.4	3.8	4.5	10.4
			120	53.9	5.79	34.1	134.4	2.7	1.2	2.8	54.2	5.53	35.3	127.2	2.9	4.3	9.8	54.2	5.53	35.3	127.2	2.9	4.3	9.8
	15	5.4 (12.5)	60	59.5	2.78	50.0	75.9	6.3	1.4	3.3	59.8	2.66	50.7	68.0	6.6	5.1	11.8	59.8	2.66	50.7	68.0	6.6	5.1	11.8
			80	57.8	3.52	45.9	95.4	4.8	1.4	3.1	58.2	3.36	46.7	87.8	5.1	4.8	11.0	58.2	3.36	46.7	87.8	5.1	4.8	11.0
			100	56.1	4.50	40.8	115.0	3.7	1.3	3.0	56.4	4.29	41.8	107.5	3.9	4.5	10.4	56.4	4.29	41.8	107.5	3.9	4.5	10.4
			120	54.3	5.80	34.5	134.5	2.7	1.2	2.8	54.7	5.54	35.8	127.3	2.9	4.3	9.8	54.7	5.54	35.8	127.3	2.9	4.3	9.8
70	7.5	1.5 (3.4)	60	73.1	2.88	63.3	79.5	7.4	1.4	3.3	73.7	2.73	64.3	69.8	7.9	5.1	11.8	73.7	2.73	64.3	69.8	7.9	5.1	11.8
			80	70.7	3.62	58.3	98.8	5.7	1.4	3.1	71.3	3.43	59.6	89.5	6.1	4.8	11.0	71.3	3.43	59.6	89.5	6.1	4.8	11.0
			100	68.1	4.62	52.3	118.2	4.3	1.3	2.9	68.7	4.36	53.8	109.2	4.6	4.5	10.4	68.7	4.36	53.8	109.2	4.6	4.5	10.4
			120								66.0	5.63	46.8	128.8	3.4	4.3	9.8	66.0	5.63	46.8	128.8	3.4	4.3	9.8
	11.25	3.0 (7.0)	60	75.6	2.90	65.7	80.2	7.6	1.4	3.3	76.3	2.75	66.9	70.2	8.1	5.1	11.7	76.3	2.75	66.9	70.2	8.1	5.1	11.7
			80	72.8	3.64	60.4	99.4	5.9	1.3	3.1	73.6	3.44	61.8	89.8	6.3	4.8	11.0	73.6	3.44	61.8	89.8	6.3	4.8	11.0
			100	69.9	4.64	54.0	118.6	4.4	1.3	2.9	70.6	4.38	55.7	109.4	4.7	4.5	10.4	70.6	4.38	55.7	109.4	4.7	4.5	10.4
			120								67.5	5.64	48.2	129.0	3.5	4.3	9.8	67.5	5.64	48.2	129.0	3.5	4.3	9.8
	15	5.1 (11.7)	60	77.0	2.92	67.1	80.5	7.7	1.4	3.3	77.8	2.76	68.3	70.4	8.3	5.1	11.7	77.8	2.76	68.3	70.4	8.3	5.1	11.7
			80	74.0	3.65	61.5	99.7	5.9	1.3	3.1	74.8	3.45	63.0	90.0	6.4	4.8	11.0	74.8	3.45	63.0	90.0	6.4	4.8	11.0
			100	70.8	4.65	55.0	118.9	4.5	1.3	2.9	71.6	4.38	56.6	109.5	4.8	4.5	10.4	71.6	4.38	56.6	109.5	4.8	4.5	10.4
			120								68.3	5.65	49.0	129.1	3.5	4.3	9.8	68.3	5.65	49.0	129.1	3.5	4.3	9.8
7.5	1.4 (3.2)	60	91.4	3.05	81.0	84.4	8.8	1.4	3.3	92.5	2.86	82.7	72.3	9.5	5.1	11.7	92.5	2.86	82.7	72.3	9.5	5.1	11.7	
		80	87.7	3.78	74.8	103.4	6.8	1.3	3.1	88.8	3.54	76.8	91.8	7.4	4.8	11.0	88.8	3.54	76.8	91.8	7.4	4.8	11.0	
		100	83.7	4.79	67.4	122.3	5.1	1.3	2.9	84.9	4.47	69.6	111.3	5.6	4.5	10.3	84.9	4.47	69.6	111.3	5.6	4.5	10.3	
		120								80.7	5.74	61.1	130.8	4.1	4.2	9.8	80.7	5.74	61.1	130.8	4.1	4.2	9.8	
11.25	2.9 (6.6)	60	95.1	3.08	84.6	85.4	9.0	1.4	3.3	96.4	2.89	86.5	72.9	9.8	5.1	11.7	96.4	2.89	86.5	72.9	9.8	5.1	11.7	
		80	90.8	3.81	77.8	104.2	7.0	1.3	3.1	92.2	3.56	80.0	92.3	7.6	4.7	11.0	92.2	3.56	80.0	92.3	7.6	4.7	11.0	
		100	86.3	4.82	69.9	123.0	5.3	1.3	2.9	87.7	4.49	72.3	111.7	5.7	4.5	10.3	87.7	4.49	72.3	111.7	5.7	4.5	10.3	
		120								82.9	5.76	63.3	131.1	4.2	4.2	9.8	82.9	5.76	63.3	131.1	4.2	4.2	9.8	
15	4.8 (11.0)	60	97.1	3.10	86.5	85.9	9.2	1.4	3.3	98.5	2.91	88.6	73.1	9.9	5.1	11.7	98.5	2.91	88.6	73.1	9.9	5.1	11.7	
		80	92.5	3.83	79.4	104.7	7.1	1.3	3.1	94.0	3.58	81.8	92.5	7.7	4.7	11.0	94.0	3.58	81.8	92.5	7.7	4.7	11.0	
		100	87.7	4.83	71.2	123.4	5.3	1.3	2.9	89.2	4.50	73.8	111.9	5.8	4.5	10.3	89.2	4.50	73.8	111.9	5.8	4.5	10.3	
		120																						

- Extended Range - Anti-freeze required
- Interpolation is permissible. Not extrapolation
- Operation not recommended

- Tabulated unit performance does not include fan or pump power corrections required for AHRI/ ISO standard performance ratings.
- Unit performance may be interpolated. Extrapolation is not allowed.
- For conditions other than rating conditions provided, consult the BST selection software.
- Ratings below 40°F are with a methanol solution.

**DISCLAIMER:** The performance reported herein is based on testing by FHP. Variations in the installation and operational environment may alter performance. Bosch disclaims all warranties, express and implied, that the performance will be as reported, including the warranty of merchantability and fitness for purpose. In addition, continuous research and development may result in a change to an appliances design and specifications at the time of order, which Bosch may change without notice. Before purchase, confirm the design specifications of the appliance.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL

# Greensource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

### Capacity Data - TW071 - Part Load - Cooling

Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	9 GPM							13.5 GPM							18 GPM						
				Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)
50	9	4.3 (1.9)	50	40.8	2.04	47.8	40.9	20.0	4.4	1.9	41.9	2.04	48.8	43.8	20.6	9.2	4.0	42.4	2.03	49.3	45.3	20.9	15.3	6.6
			60	47.7	2.00	54.6	49.4	23.8	4.3	1.9	49.1	2.00	55.9	52.7	24.6	8.9	3.8	49.8	2.00	56.6	54.5	25.0	14.9	6.4
			70	55.4	1.97	62.1	57.7	28.1	4.2	1.8	57.1	1.97	63.8	61.5	29.0	8.6	3.7	58.0	1.96	64.8	63.6	29.5	14.4	6.2
			80	63.9	1.95	70.5	65.8	32.7	4.0	1.8	66.0	1.95	72.7	70.2	33.9	8.3	3.6	67.2	1.94	73.8	72.5	34.6	13.9	6.0
	90																							
	13.5	7.8 (3.4)	50	41.1	1.98	47.8	40.9	20.8	4.4	1.9	42.1	1.97	48.8	43.8	21.4	9.2	4.0	42.7	1.97	49.4	45.3	21.7	15.3	6.6
			60	48.1	1.93	54.7	49.3	24.9	4.3	1.9	49.4	1.93	56.0	52.7	25.7	8.9	3.8	50.1	1.92	56.7	54.4	26.1	14.9	6.4
			70	55.8	1.89	62.3	57.6	29.5	4.2	1.8	57.6	1.89	64.0	61.5	30.5	8.6	3.7	58.5	1.88	64.9	63.5	31.1	14.4	6.2
			80	64.4	1.86	70.7	65.7	34.6	4.0	1.8	66.6	1.86	73.0	70.1	35.9	8.3	3.6	67.8	1.85	74.1	72.5	36.6	13.9	6.0
	90																							
	18	12.0 (5.2)	50	41.2	1.95	47.8	40.8	21.2	4.4	1.9	42.2	1.94	48.9	43.7	21.8	9.2	4.0	42.8	1.93	49.4	45.2	22.1	15.3	6.6
			60	48.2	1.90	54.7	49.3	25.4	4.3	1.9	49.6	1.89	56.0	52.7	26.2	8.9	3.8	50.3	1.89	56.7	54.4	26.7	14.9	6.4
70			56.0	1.85	62.4	57.6	30.2	4.2	1.8	57.8	1.85	64.1	61.4	31.3	8.6	3.7	58.7	1.84	65.0	63.5	31.9	14.4	6.2	
80			64.6	1.82	70.9	65.6	35.5	4.0	1.8	66.9	1.81	73.1	70.1	36.9	8.3	3.6	68.1	1.81	74.3	72.4	37.7	13.9	6.0	
90																								
70	9	12.3 (5.3)	50	37.9	2.79	47.4	41.6	13.6	4.4	1.9	38.8	2.78	48.3	44.3	13.9	9.2	4.0	39.3	2.78	48.7	45.6	14.1	15.3	6.6
			60	44.4	2.73	53.7	50.1	16.2	4.3	1.9	45.5	2.72	54.8	53.3	16.7	8.9	3.8	46.1	2.72	55.4	54.9	17.0	14.8	6.4
			70	51.5	2.68	60.7	58.6	19.2	4.2	1.8	53.0	2.67	62.1	62.1	19.8	8.6	3.7	53.8	2.67	62.9	64.0	20.2	14.4	6.2
			80	59.4	2.63	68.4	66.8	22.6	4.0	1.7	61.3	2.62	70.3	70.9	23.4	8.3	3.6	62.3	2.62	71.3	73.1	23.8	13.9	6.0
	13.5	4.0 (1.7)	50	38.2	2.72	47.5	41.5	14.0	4.4	1.9	39.1	2.71	48.3	44.2	14.4	9.2	4.0	39.6	2.71	48.8	45.6	14.6	15.3	6.6
			60	44.7	2.66	53.8	50.1	16.8	4.3	1.9	45.9	2.65	54.9	53.2	17.3	8.9	3.8	46.5	2.64	55.5	54.8	17.6	14.8	6.4
			70	52.0	2.60	60.9	58.4	20.0	4.2	1.8	53.5	2.59	62.3	62.1	20.7	8.6	3.7	54.3	2.58	63.1	64.0	21.1	14.4	6.2
			80	60.0	2.54	68.7	66.7	23.6	4.0	1.7	62.0	2.53	70.6	70.8	24.5	8.3	3.6	63.0	2.52	71.6	73.0	25.0	13.9	6.0
	90	68.8	2.50	77.3	74.7	27.6	3.9	1.7	71.3	2.49	79.8	79.4	28.7	8.1	3.5	72.6	2.48	81.1	81.9	29.3	13.5	5.9		
	18	8.4 (3.6)	50	38.3	2.69	47.5	41.5	14.3	4.4	1.9	39.2	2.68	48.4	44.2	14.7	9.2	4.0	39.7	2.67	48.8	45.6	14.9	15.3	6.6
			60	44.9	2.62	53.8	50.0	17.1	4.3	1.9	46.1	2.61	55.0	53.2	17.7	8.9	3.8	46.7	2.60	55.6	54.8	18.0	14.8	6.4
			70	52.2	2.55	60.9	58.4	20.4	4.2	1.8	53.8	2.54	62.5	62.0	21.2	8.6	3.7	54.6	2.54	63.3	63.9	21.5	14.4	6.2
			80	60.3	2.50	68.8	66.6	24.2	4.0	1.7	62.3	2.48	70.8	70.8	25.1	8.3	3.6	63.4	2.48	71.8	73.0	25.6	13.9	6.0
	9	12.6 (5.5)	50	39.2	2.45	77.6	74.6	28.3	3.9	1.7	71.7	2.44	80.0	79.4	29.4	8.1	3.5	73.0	2.43	81.3	81.9	30.1	13.5	5.9
			60	46.3	3.70	46.9	42.4	9.3	4.4	1.9	35.1	3.69	47.6	44.8	9.5	9.2	4.0	35.4	3.68	48.0	46.1	9.6	15.3	6.6
			70	40.3	3.62	52.6	51.0	11.1	4.3	1.9	41.2	3.60	53.5	53.9	11.5	8.9	3.8	41.8	3.60	54.0	55.4	11.6	14.8	6.4
			80	46.9	3.53	59.0	59.6	13.3	4.2	1.8	48.2	3.52	60.2	62.9	13.7	8.6	3.7	48.8	3.51	60.8	64.6	13.9	14.4	6.2
	13.5	8.9 (3.9)	50	54.2	3.46	66.0	67.9	15.7	4.0	1.7	55.8	3.44	67.6	71.7	16.2	8.3	3.6	56.7	3.44	68.4	73.7	16.5	13.9	6.0
			60	62.3	3.39	73.8	76.2	18.4	3.9	1.7	64.3	3.38	75.8	80.5	19.0	8.1	3.5							
			70	34.7	3.61	47.0	42.3	9.6	4.4	1.9	35.4	3.60	47.7	44.8	9.8	9.2	4.0	35.8	3.59	48.1	46.0	10.0	15.3	6.6
			80	40.7	3.52	52.7	51.0	11.6	4.3	1.9	41.7	3.50	53.7	53.8	11.9	8.9	3.8	42.2	3.50	54.2	55.3	12.1	14.8	6.4
	18	4.8 (2.1)	50	47.5	3.43	59.2	59.5	13.8	4.2	1.8	48.7	3.41	60.4	62.8	14.3	8.6	3.7	49.4	3.41	61.0	64.5	14.5	14.4	6.2
			60	54.9	3.35	66.3	67.8	16.4	4.0	1.7	56.6	3.33	67.9	71.6	17.0	8.3	3.6	57.4	3.32	68.8	73.6	17.3	13.9	6.0
			70	63.1	3.27	74.3	76.0	19.3	3.9	1.7	65.2	3.25	76.3	80.3	20.0	8.1	3.5							
80			34.8	3.57	47.0	42.3	9.8	4.4	1.9	35.6	3.55	47.7	44.7	10.0	9.2	4.0	36.0	3.55	48.1	46.0	10.1	15.3	6.6	
9	7.8 (3.4)	50	40.9	3.47	52.8	50.9	11.8	4.3	1.9	41.9	3.46	53.7	53.8	12.1	8.9	3.8	42.5	3.45	54.2	55.3	12.3	14.8	6.4	
		60	47.7	3.38	59.2	59.4	14.1	4.2	1.8	49.0	3.36	60.5	62.7	14.6	8.6	3.7	49.7	3.35	61.2	64.5	14.8	14.4	6.2	
		70	55.3	3.29	66.5	67.7	16.8	4.0	1.7	56.9	3.27	68.1	71.6	17.4	8.3	3.6	57.8	3.26	69.0	73.6	17.7	13.9	6.0	
		80	63.5	3.21	74.5	75.9	19.8	3.9	1.7	65.7	3.19	76.5	80.3	20.6	8.1	3.5								
90	9	7.8 (3.4)	50	30.0	4.92	46.8	43.3	6.1	4.4	1.9	30.6	4.90	47.3	45.5	6.2	9.1	4.0	30.9	4.90	47.6	46.6	6.3	15.3	6.6
			60	35.4	4.80	51.8	52.1	7.4	4.3	1.9	36.2	4.78	52.5	54.6	7.6	8.8	3.8	36.6	4.77	52.9	55.9	7.7	14.8	6.4
			70	41.5	4.68	57.4	60.8	8.9	4.1	1.8	42.5	4.67	58.4	63.7	9.1	8.6	3.7	43.0	4.66	58.9	65.2	9.2	14.3	6.2
			80	48.2	4.57	63.8	69.3	10.5	4.0	1.7	49.5	4.55	65.0	72.7	10.9	8.3	3.6	50.2	4.54	65.7	74.4	11.0	13.9	6.0
	90	55.6	4.47	70.8	77.7	12.4	3.9	1.7																
	13.5	13.2 (5.7)	50	30.4	4.79	46.8	43.2	6.3	4.4	1.9	31.0	4.78	47.3	45.4	6.5	9.1	4.0	31.3	4.77	47.6	46.5	6.6	15.3	6.6
			60	35.9	4.67	51.8	52.0	7.7	4.3	1.9	36.7	4.65	52.6	54.6	7.9	8.8	3.8	37.1	4.64	53.0	55.9	8.0	14.8	6.4
			70	42.1	4.54	57.6	60.6	9.3	4.1	1.8	43.1	4.52	58.6	63.6	9.5	8.6	3.7	43.7	4.51	59.1	65.1	9.7	14.3	6.2
			80	48.9	4.42	64.0	69.1	11.1	4.0	1.7	50.3	4.40	65.3	72.5	11.4	8.3	3.6	51.0	4.39	66.0	74.3	11.6	13.9	6.0
	90	56.5	4.31	71.2	77.4	13.1	3.9	1.7																
	18	6.0 (2.6)	50	30.6	4.74	46.8	43.2	6.5	4.4	1.9	31.2	4.72	47.3	45.4	6.6	9.1	4.0	31.5	4.71	47.6	46.5	6.7	15.3	6.6
			60	36.2	4.60	51.9	52.0	7.9	4.3	1.9	37.0	4.59	52.6	54.5	8.1	8.8	3.8	37.4	4.58	53.0	55.8	8.2	14.8	6.4
70			42.4	4.47	57.7	60.6	9.5	4.2	1.8	43.5	4.45	58.7	63.6	9.8	8.6	3.7	44.0	4.44	59.2	65.1	9.9	14.3	6.2	
80			49.3	4.35	64.2	69.0	11.3	4.0	1.7	50.7	4.32	65.5	72.5	11.7	8.3	3.6	51.4	4.31	66.1	74.3	11.9	13.9	6.0	
90	57.0	4.23	71.4	77.3	13.5	3.9	1.7																	

# Greensource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

Capacity Data - TW071 – Part Load – Heating																								
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	9 GPM							13.5 GPM							18 GPM						
				Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (PSI)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of water)	Pressure Drop (psi)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (psi)
30	9	2.0 (4.7)	60	36.8	2.51	28.2	68.2	4.3	1.8	4.2														
			80	37.2	3.36	25.8	88.3	3.2	1.7	3.9	37.2	3.26	26.0	84.1	3.3	5.9	13.7	37.2	3.26	26.0	84.1	3.3	5.9	13.7
			100	37.9	4.46	22.7	108.4	2.5	1.6	3.7	37.8	4.33	23.0	104.2	2.6	5.6	12.9	37.8	4.33	23.0	104.2	2.6	5.6	12.9
			120	39.2	5.96	18.9	128.7	1.9	1.5	3.5	39.0	5.8	19.32	124.3	2.0	5.3	12.2	39.0	5.8	19.32	124.3	2.0	5.3	12.2
	13.5	4.2 (9.8)	60	37.3	2.50	28.7	68.3	4.4	1.8	4.2														
			80	37.6	3.35	26.2	88.4	3.3	1.7	3.9	37.6	3.25	26.5	84.2	3.4	5.9	13.7	37.6	3.25	26.5	84.2	3.4	5.9	13.7
			100	38.2	4.45	23.0	108.5	2.5	1.6	3.7	38.1	4.32	23.4	104.2	2.6	5.6	12.9	38.1	4.32	23.4	104.2	2.6	5.6	12.9
			120	39.5	5.96	19.1	128.8	1.9	1.5	3.5	39.3	5.77	19.6	124.4	2.0	5.3	12.2	39.3	5.77	19.6	124.4	2.0	5.3	12.2
	18	7.1 (16.4)	60	37.5	2.50	29.0	68.3	4.4	1.8	4.2														
			80	37.9	3.35	26.4	88.4	3.3	1.7	3.9	37.8	3.25	26.7	84.2	3.4	5.9	13.7	37.8	3.25	26.7	84.2	3.4	5.9	13.7
			100	38.4	4.45	23.2	108.5	2.5	1.6	3.7	38.3	4.31	23.6	104.3	2.6	5.6	12.9	38.3	4.31	23.6	104.3	2.6	5.6	12.9
			120	39.6	5.95	19.3	128.8	1.9	1.5	3.5	39.4	5.76	19.7	124.4	2.0	5.3	12.2	39.4	5.76	19.7	124.4	2.0	5.3	12.2
50	9	1.9 (4.4)	60	47.7	2.41	39.5	70.6	5.8	1.8	4.2	47.7	2.31	39.8	65.3	6.1	6.3	14.6	47.7	2.31	39.8	65.3	6.1	6.3	14.6
			80	47.2	3.22	36.2	90.5	4.3	1.7	3.9	47.2	3.10	36.7	85.2	4.5	5.9	13.7	47.2	3.10	36.7	85.2	4.5	5.9	13.7
			100	46.8	4.26	32.3	110.4	3.2	1.6	3.7	46.8	4.11	32.8	105.2	3.3	5.6	12.8	46.8	4.11	32.8	105.2	3.3	5.6	12.8
			120	46.9	5.69	27.5	130.4	2.4	1.5	3.5	46.9	5.48	28.2	125.2	2.5	5.3	12.2	46.9	5.48	28.2	125.2	2.5	5.3	12.2
	13.5	4.0 (9.2)	60	48.6	2.40	40.4	70.8	5.9	1.8	4.1	48.7	2.30	40.8	65.4	6.2	6.3	14.6	48.7	2.30	40.8	65.4	6.2	6.3	14.6
			80	48.0	3.21	37.0	90.7	4.4	1.7	3.9	48.0	3.09	37.5	85.3	4.6	5.9	13.7	48.0	3.09	37.5	85.3	4.6	5.9	13.7
			100	47.4	4.25	32.9	110.5	3.3	1.6	3.7	47.5	4.09	33.5	105.3	3.4	5.6	12.8	47.5	4.09	33.5	105.3	3.4	5.6	12.8
			120	47.4	5.68	28.0	130.5	2.4	1.5	3.5	47.3	5.46	28.7	125.3	2.5	5.3	12.2	47.3	5.46	28.7	125.3	2.5	5.3	12.2
	18	6.6 (15.3)	60	49.1	2.40	40.9	70.9	6.0	1.8	4.1	49.2	2.30	41.3	65.5	6.3	6.3	14.6	49.2	2.30	41.3	65.5	6.3	6.3	14.6
			80	48.4	3.20	37.4	90.7	4.4	1.7	3.9	48.5	3.08	37.9	85.4	4.6	5.9	13.7	48.5	3.08	37.9	85.4	4.6	5.9	13.7
			100	47.7	4.24	33.3	110.6	3.3	1.6	3.7	47.8	4.08	33.9	105.3	3.4	5.6	12.8	47.8	4.08	33.9	105.3	3.4	5.6	12.8
			120	47.6	5.67	28.3	130.6	2.5	1.5	3.5	47.6	5.45	29.0	125.3	2.6	5.3	12.2	47.6	5.45	29.0	125.3	2.6	5.3	12.2
70	9	1.8 (4.2)	60	61.5	2.32	53.6	73.7	7.8	1.8	4.1	61.7	2.20	54.2	66.9	8.2	6.3	14.5	61.7	2.20	54.2	66.9	8.2	6.3	14.5
			80	59.8	3.08	49.3	93.3	5.7	1.7	3.9	60.1	2.94	50.1	86.7	6.0	5.9	13.6	60.1	2.94	50.1	86.7	6.0	5.9	13.6
			100	58.2	4.06	44.3	112.9	4.2	1.6	3.6	58.4	3.88	45.2	106.5	4.4	5.6	12.8	58.4	3.88	45.2	106.5	4.4	5.6	12.8
			120	56.9	5.42	38.4	132.6	3.1	1.5	3.5	57.0	5.17	39.4	126.3	3.2	5.3	12.1	57.0	5.17	39.4	126.3	3.2	5.3	12.1
	13.5	3.7 (8.6)	60	63.0	2.31	55.2	74.0	8.0	1.8	4.1	63.3	2.19	55.9	67.0	8.5	6.3	14.5	63.3	2.19	55.9	67.0	8.5	6.3	14.5
			80	61.2	3.07	50.7	93.6	5.8	1.7	3.9	61.5	2.93	51.5	86.8	6.2	5.9	13.6	61.5	2.93	51.5	86.8	6.2	5.9	13.6
			100	59.2	4.05	45.4	113.2	4.3	1.6	3.6	59.5	3.86	46.4	106.6	4.5	5.6	12.8	59.5	3.86	46.4	106.6	4.5	5.6	12.8
			120	57.7	5.40	39.3	132.8	3.1	1.5	3.5	57.9	5.15	40.3	126.4	3.3	5.3	12.1	57.9	5.15	40.3	126.4	3.3	5.3	12.1
	18	6.2 (14.4)	60	63.9	2.31	56.0	74.2	8.1	1.8	4.1	64.2	2.18	56.8	67.1	8.6	6.3	14.5	64.2	2.18	56.8	67.1	8.6	6.3	14.5
			80	61.9	3.06	51.4	93.7	5.9	1.7	3.9	62.2	2.92	52.3	86.9	6.2	5.9	13.6	62.2	2.92	52.3	86.9	6.2	5.9	13.6
			100	59.8	4.04	46.0	113.3	4.3	1.6	3.6	60.1	3.85	47.0	106.7	4.6	5.6	12.8	60.1	3.85	47.0	106.7	4.6	5.6	12.8
			120	58.1	5.39	39.8	132.9	3.2	1.5	3.5	58.4	5.14	40.8	126.5	3.3	5.3	12.1	58.4	5.14	40.8	126.5	3.3	5.3	12.1
90	9	1.7 (3.9)	60	78.4	2.26	70.7	77.4	10.2	1.8	4.1														
			80	75.4	2.97	65.3	96.8	7.4	1.7	3.9	76.0	2.80	66.5	88.4	7.9	5.9	13.6	76.0	2.80	66.5	88.4	7.9	5.9	13.6
			100	72.3	3.89	59.0	116.1	5.5	1.6	3.6	72.9	3.68	60.4	108.1	5.8	5.5	12.8	72.9	3.68	60.4	108.1	5.8	5.5	12.8
			120															70.0	4.88	53.3	127.8	4.2	5.2	12.1
	13.5	3.5 (8.1)	60	80.9	2.25	73.2	78.0	10.5	1.8	4.1														
			80	77.6	2.96	67.5	97.2	7.7	1.7	3.8	78.3	2.79	68.8	88.7	8.2	5.9	13.6	78.3	2.79	68.8	88.7	8.2	5.9	13.6
			100																					
			120																					
	18	5.8 (13.5)	60	82.3	2.25	74.6	78.3	10.7	1.8	4.1														
			80																					
			100																					
			120																					

- Extended Range - Anti-freeze required
- Interpolation is permissible. Not extrapolation
- Operation not recommended

- Tabulated unit performance does not include fan or pump power corrections required for AHRI/ ISO standard performance ratings.
- Unit performance may be interpolated. Extrapolation is not allowed.
- For conditions other than rating conditions provided, consult the BST selection software.
- Ratings below 40°F are with a methanol solution.

**DISCLAIMER:** The performance reported herein is based on testing by FHP. Variations in the installation and operational environment may alter performance. Bosch disclaims all warranties, express and implied, that the performance will be as reported, including the warranty of merchantability and fitness for purpose. In addition, continuous research and development may result in a change to an appliances design and specifications at the time of order, which Bosch may change without notice. Before purchase, confirm the design specifications of the appliance.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL



# GreenSource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

Capacity Data - TW071 – Full Load – Cooling																											
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	9 GPM								13.5 GPM								18 GPM							
				Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)			
50	9	4.2 (1.8)	50	55.9	3.03	66.2	37.6	18.4	4.5	1.9	57.7	3.04	68.1	41.4	19.0	9.2	4.0	58.7	3.05	69.1	43.5	19.3	15.4	6.7			
			60	64.9	3.09	75.5	45.6	21.0	4.3	1.9	67.3	3.11	78.0	50.0	21.7	8.9	3.9	68.6	3.12	79.3	52.4	22.0	14.9	6.5			
			70	74.9	3.16	85.7	53.3	23.7	4.2	1.8	78.0	3.18	88.9	58.4	24.5	8.6	3.7	79.7	3.19	90.6	61.1	24.9	14.4	6.3			
			80	85.9	3.24	96.9	60.9	26.5	4.1	1.8	89.7	3.27	100.9	66.7	27.4	8.4	3.6	91.8	3.29	103.0	69.8	27.9	14.0	6.1			
			90	97.7	3.33	109.1	68.3	29.3	4.0	1.7																	
	13.5	7.7 (3.3)	50	56.3	2.93	66.3	37.5	19.2	4.5	1.9	58.2	2.94	68.3	41.4	19.8	9.2	4.0	59.3	2.95	69.3	43.4	20.1	15.4	6.7			
			60	65.6	2.98	75.7	45.4	22.0	4.3	1.9	68.0	2.99	78.3	49.9	22.7	8.9	3.9	69.4	3.00	79.6	52.3	23.1	14.9	6.5			
			70	75.7	3.04	86.1	53.2	25.0	4.2	1.8	78.9	3.05	89.3	58.3	25.8	8.6	3.7	80.6	3.06	91.1	61.0	26.3	14.4	6.3			
			80	86.9	3.10	97.5	60.7	28.0	4.1	1.8	90.9	3.12	101.6	66.5	29.1	8.4	3.6	93.1	3.14	103.8	69.7	29.7	14.0	6.1			
			90																								
	18	11.9 (5.2)	50	56.6	2.88	66.4	37.4	19.6	4.5	1.9	58.5	2.89	68.4	41.3	20.2	9.2	4.0	59.5	2.90	69.4	43.4	20.6	15.4	6.7			
			60	65.9	2.93	75.8	45.4	22.5	4.3	1.9	68.4	2.94	78.4	49.9	23.3	8.9	3.9	69.7	2.94	79.8	52.3	23.7	14.9	6.5			
			70	76.1	2.97	86.3	53.1	25.6	4.2	1.8	79.4	2.99	89.6	58.2	26.6	8.6	3.7	81.1	3.00	91.3	61.0	27.1	14.4	6.3			
			80	87.4	3.03	97.8	60.6	28.9	4.1	1.8	91.5	3.05	101.9	66.4	30.0	8.4	3.6	93.7	3.06	104.1	69.6	30.6	14.0	6.1			
			90																								
70	9	12.2 (5.3)	50	51.7	3.84	64.8	38.5	13.5	4.5	1.9	53.3	3.85	66.4	42.1	13.8	9.2	4.0	54.1	3.86	67.3	44.0	14.0	15.4	6.7			
			60	60.1	3.90	73.4	46.6	15.4	4.3	1.9	62.2	3.92	75.5	50.8	15.9	8.9	3.9	63.3	3.93	76.7	53.0	16.1	14.9	6.4			
			70	69.4	3.98	83.0	54.6	17.5	4.2	1.8	72.1	4.00	85.7	59.3	18.0	8.6	3.7	73.5	4.01	87.2	61.8	18.3	14.4	6.2			
			80	79.6	4.06	93.5	62.3	19.6	4.1	1.8	82.9	4.09	96.9	67.7	20.3	8.4	3.6	84.7	4.10	98.7	70.6	20.7	14.0	6.1			
			90	90.7	4.15	104.9	69.8	21.9	4.0	1.7	94.8	4.19	109.1	76.0	22.7	8.1	3.5	97.0	4.21	111.4	79.2	23.1	13.6	5.9			
	13.5	4.0 (1.7)	50	52.2	3.74	65.0	38.4	14.0	4.5	1.9	53.9	3.75	66.6	42.0	14.4	9.2	4.0	54.7	3.75	67.5	43.9	14.6	15.4	6.7			
			60	60.8	3.79	73.7	46.5	16.0	4.3	1.9	62.9	3.80	75.9	50.7	16.6	8.9	3.9	64.1	3.81	77.1	52.9	16.8	14.9	6.4			
			70	70.3	3.85	83.4	54.4	18.3	4.2	1.8	73.1	3.86	86.2	59.2	18.9	8.6	3.7	74.5	3.87	87.7	61.7	19.3	14.4	6.2			
			80	80.8	3.91	94.1	62.1	20.7	4.1	1.8	84.2	3.93	97.6	67.5	21.4	8.4	3.6	86.1	3.94	99.5	70.4	21.8	14.0	6.1			
			90	92.1	3.98	105.7	69.5	23.1	4.0	1.7	96.4	4.01	110.1	75.7	24.0	8.1	3.5	98.8	4.03	112.5	79.0	24.5	13.6	5.9			
	18	8.3 (3.6)	50	52.5	3.69	65.1	38.3	14.2	4.5	1.9	54.1	3.70	66.8	42.0	14.7	9.2	4.0	55.0	3.70	67.7	43.9	14.9	15.4	6.7			
			60	61.2	3.73	73.9	46.4	16.4	4.3	1.9	63.3	3.74	76.1	50.6	16.9	8.9	3.9	64.5	3.75	77.3	52.8	17.2	14.9	6.4			
			70	70.8	3.78	83.7	54.3	18.7	4.2	1.8	73.6	3.79	86.5	59.1	19.4	8.6	3.7	75.1	3.80	88.0	61.7	19.7	14.4	6.2			
			80	81.3	3.83	94.4	61.9	21.2	4.1	1.8	84.9	3.85	98.0	67.4	22.0	8.4	3.6	86.8	3.86	100.0	70.4	22.5	14.0	6.1			
			90	92.9	3.90	106.2	69.4	23.8	4.0	1.7	97.3	3.92	110.6	75.6	24.8	8.1	3.5	99.7	3.94	113.1	78.9	25.3	13.6	5.9			
90	9	12.6 (5.5)	50	46.6	4.75	62.9	39.6	9.8	4.5	1.9	48.0	4.77	64.2	42.9	10.1	9.2	4.0	48.7	4.77	65.0	44.6	10.2	15.4	6.7			
			60	54.4	4.83	70.9	47.9	11.3	4.3	1.9	56.1	4.85	72.7	51.7	11.6	8.9	3.8	57.0	4.86	73.6	53.7	11.7	14.9	6.4			
			70	63.0	4.92	79.8	56.0	12.8	4.2	1.8	65.2	4.94	82.1	60.3	13.2	8.6	3.7	66.4	4.95	83.3	62.6	13.4	14.4	6.2			
			80	72.4	5.01	89.5	63.9	14.5	4.1	1.8	75.2	5.04	92.4	68.9	14.9	8.4	3.6	76.7	5.05	93.9	71.5	15.2	14.0	6.0			
			90	82.7	5.11	100.1	71.6	16.2	3.9	1.7	86.1	5.15	103.7	77.2	16.7	8.1	3.5	88.0	5.16	105.6	80.2	17.0	13.6	5.9			
	13.5	8.9 (3.8)	50	47.3	4.64	63.1	39.5	10.2	4.5	1.9	48.6	4.65	64.5	42.8	10.5	9.2	4.0	49.4	4.66	65.3	44.5	10.6	15.4	6.7			
			60	55.2	4.70	71.3	47.7	11.7	4.3	1.9	57.0	4.72	73.1	51.6	12.1	8.9	3.8	58.0	4.72	74.1	53.6	12.3	14.9	6.4			
			70	64.0	4.77	80.3	55.8	13.4	4.2	1.8	66.3	4.78	82.6	60.2	13.9	8.6	3.7	67.5	4.79	83.9	62.5	14.1	14.4	6.2			
			80	73.7	4.84	90.2	63.6	15.2	4.1	1.8	76.6	4.86	93.2	68.7	15.8	8.4	3.6	78.2	4.87	94.8	71.3	16.1	14.0	6.0			
			90	84.3	4.92	101.0	71.3	17.1	3.9	1.7	87.9	4.94	104.8	77.0	17.8	8.1	3.5	89.9	4.96	106.8	80.0	18.1	13.6	5.9			
	18	4.7 (2.1)	50	47.6	4.58	63.2	39.4	10.4	4.5	1.9	49.0	4.59	64.6	42.7	10.7	9.2	4.0	49.7	4.60	65.4	44.5	10.8	15.4	6.7			
			60	55.6	4.64	71.4	47.6	12.0	4.3	1.9	57.4	4.65	73.3	51.5	12.4	8.9	3.8	58.4	4.65	74.3	53.5	12.6	14.9	6.4			
			70	64.5	4.69	80.5	55.7	13.8	4.2	1.8	66.9	4.71	82.9	60.1	14.2	8.6	3.7	68.1	4.71	84.2	62.4	14.5	14.4	6.2			
			80	74.3	4.75	90.5	63.5	15.6	4.1	1.8	77.3	4.77	93.6	68.5	16.2	8.4	3.6	78.9	4.78	95.2	71.2	16.5	14.0	6.0			
			90	85.1	4.82	101.5	71.1	17.6	3.9	1.7	88.8	4.84	105.3	76.8	18.3	8.1	3.5	90.8	4.86	107.4	79.9	18.7	13.6	5.9			
9	7.8 (3.4)	50	40.7	5.87	60.7	41.0	6.9	4.4	1.9	41.7	5.89	61.8	43.8	7.1	9.2	4.0	42.2	5.89	62.4	45.3	7.2	15.3	6.6				
		60	47.7	5.97	68.1	49.4	8.0	4.3	1.9	49.1	5.99	69.5	52.7	8.2	8.9	3.8	49.8	6.00	70.3	54.5	8.3	14.9	6.4				
		70	55.5	6.08	76.3	57.7	9.1	4.2	1.8	57.3	6.10	78.1	61.5	9.4	8.6	3.7	58.2	6.11	79.1	63.5	9.5	14.4	6.2				
		80	64.1	6.19	85.3	65.7	10.4	4.0	1.8	66.4	6.21	87.6	70.2	10.7	8.3	3.6	67.6	6.23	88.8	72.5	10.9	13.9	6.0				
		90	73.5	6.30	95.1	73.7	11.7	3.9	1.7	76.4	6.34	98.0	78.7	12.0	8.1	3.5											
110	13.5	13.2 (5.7)	50	41.4	5.73	60.9	40.8	7.2	4.4	1.9	42.5	5.74	62.1	43.7	7.4	9.2	4.0	43.0	5.75	62.7	45.2	7.5	15.4	6.6			
			60	48.6	5.81	68.5	49.2	8.4	4.3	1.9	50.1	5.83	69.9	52.6	8.6	8.9	3.8	50.8	5.84	70.7	54.4	8.7	14.9	6.4			
			70	56.7	5.89	76.8	57.4	9.6	4.2	1.8	58.5	5.91	78.7	61.3	9.9	8.6	3.7	59.5	5.92	79.7	63.4	10.0	14.4	6.2			
			80	65.5	5.88	85.9	65.4	11.0	4.0	1.8	67.9	6.00	88.4	69.9	11.3	8.3	3.6	69.2	6.01	89.7	72.3	11.5	13.9	6.0			
			90	75.3	6.07	96.0	73.3	12.4	3.9	1.7	78.2	6.10	99.1	78.4	12.8	8.1	3.5										
	18	5.9 (2.6)	50	41.7	5.66	61.1	40.7	7.4	4.4	1.9	42.9	5.67	62.2	43.7	7.6	9.2	4.0	43.4	5.68	62.8	45.2	7.6	15.4	6.6			
			60	49.1	5.73	68.6	49.1	8.6	4.3	1.9	50.5	5.75	70.2	52.5	8.8	8.9	3.8	51.3	5.75	71.0	54.3	8.9	14.9	6.4			
			70	57.2	5.81	77.0	57.3	9.9	4.2	1.8	59.1	5.82	79.0	61.2	10.2	8.6	3.7	60.2	5.83	80.0	63.3	10.3	14.4	6.2			
			80	66.2	5.88	86.3	65.3	11.3	4.1	1.8	68.7	5.90	88.8	69.8	11.6	8.3	3.6	70.0	5.91	90.1	72.2	11.8	13.9	6.0			
			90	76.1	5.96	96.4	73.1	12.8	3.9	1.7	79.2	5.98	99.6	78.3	13.2	8.1											

# GreenSource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

Capacity Data - TW071 - Full Load - Heating

Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	9 GPM							13.5 GPM							18 GPM						
				Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (PSI)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of water)	Pressure Drop (psi)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (psi)
30	9	2.1 (4.8)	60																					
			80																					
			100																					
			120																					
	13.5	4.3 (9.8)	60																					
			80																					
			100	49.3	5.10	31.9	110.9	2.8	1.6	3.7	49.4	4.96	32.5	105.5	2.9	5.6	12.8	49.4	4.96	32.5	105.5	2.9	5.6	12.8
			120	47.9	6.30	26.4	130.6	2.2	1.5	3.5	48.1	6.12	27.2	125.3	2.3	5.3	12.1	48.1	6.12	27.2	125.3	2.3	5.3	12.1
	18	7.1 (16.4)	60	51.8	3.32	40.5	71.5	4.6	1.8	4.1	51.9	3.20	41.0	65.8	4.7	6.3	14.6	51.9	3.20	41.0	65.8	4.7	6.3	14.6
			80	50.9	4.14	36.8	91.3	3.6	1.7	3.9	51.0	4.02	37.3	85.7	3.7	5.9	13.6	51.0	4.02	37.3	85.7	3.7	5.9	13.6
			100	49.6	5.11	32.2	111.0	2.8	1.6	3.7	49.8	4.96	32.9	105.5	2.9	5.6	12.8	49.8	4.96	32.9	105.5	2.9	5.6	12.8
			120	48.2	6.30	26.7	130.7	2.2	1.5	3.5	48.4	6.12	27.5	125.4	2.3	5.3	12.1	48.4	6.12	27.5	125.4	2.3	5.3	12.1
50	9	1.9 (4.5)	60	65.5	3.43	53.9	74.6	5.6	1.8	4.1	65.8	3.28	54.6	67.3	5.9	6.3	14.5	65.8	3.28	54.6	67.3	5.9	6.3	14.5
			80	63.8	4.28	49.3	94.2	4.4	1.7	3.9	64.2	4.12	50.1	87.1	4.6	5.9	13.6	64.2	4.12	50.1	87.1	4.6	5.9	13.6
			100	61.8	5.28	43.8	113.7	3.4	1.6	3.6	62.2	5.09	44.8	106.9	3.6	5.5	12.8	62.2	5.09	44.8	106.9	3.6	5.5	12.8
			120	59.5	6.53	37.3	133.2	2.7	1.5	3.5	59.9	6.30	38.4	126.7	2.8	5.3	12.1	59.9	6.30	38.4	126.7	2.8	5.3	12.1
	13.5	4.0 (9.2)	60	67.3	3.44	55.6	75.0	5.7	1.8	4.1	67.6	3.29	56.4	67.5	6.0	6.3	14.5	67.6	3.29	56.4	67.5	6.0	6.3	14.5
			80	65.4	4.29	50.7	94.5	4.5	1.7	3.9	65.7	4.13	51.7	87.3	4.7	5.9	13.6	65.7	4.13	51.7	87.3	4.7	5.9	13.6
			100	63.0	5.30	45.0	114.0	3.5	1.6	3.6	63.5	5.10	46.0	107.1	3.6	5.5	12.8	63.5	5.10	46.0	107.1	3.6	5.5	12.8
			120	60.5	6.55	38.2	133.4	2.7	1.5	3.5	60.9	6.32	39.4	126.8	2.8	5.2	12.1	60.9	6.32	39.4	126.8	2.8	5.2	12.1
	18	6.7 (15.4)	60	68.3	3.45	56.5	75.2	5.8	1.8	4.1	68.6	3.29	57.4	67.6	6.1	6.3	14.5	68.6	3.29	57.4	67.6	6.1	6.3	14.5
			80	66.2	4.30	51.5	94.7	4.5	1.7	3.9	66.6	4.13	52.5	87.4	4.7	5.9	13.6	66.6	4.13	52.5	87.4	4.7	5.9	13.6
			100	63.7	5.30	45.6	114.2	3.5	1.6	3.6	64.1	5.11	46.7	107.1	3.7	5.5	12.8	64.1	5.11	46.7	107.1	3.7	5.5	12.8
			120	61.0	6.56	38.6	133.6	2.7	1.5	3.5	61.5	6.32	39.9	126.8	2.9	5.2	12.1	61.5	6.32	39.9	126.8	2.9	5.2	12.1
70	9	1.8 (4.2)	60	84.4	3.56	72.3	78.8	7.0	1.8	4.1	85.1	3.37	73.6	69.5	7.4	6.3	14.5	85.1	3.37	73.6	69.5	7.4	6.3	14.5
			80	81.4	4.43	66.3	98.1	5.4	1.7	3.8	82.2	4.22	67.8	89.1	5.7	5.9	13.6	82.2	4.22	67.8	89.1	5.7	5.9	13.6
			100	78.1	5.46	59.4	117.3	4.2	1.6	3.6	78.8	5.22	61.0	108.8	4.4	5.5	12.8	78.8	5.22	61.0	108.8	4.4	5.5	12.8
			120								75.2	6.47	53.2	128.4	3.4	5.2	12.1	75.2	6.47	53.2	128.4	3.4	5.2	12.1
	13.5	3.7 (8.6)	60	87.3	3.58	75.1	79.4	7.2	1.8	4.1	88.1	3.38	76.6	69.8	7.6	6.3	14.5	88.1	3.38	76.6	69.8	7.6	6.3	14.5
			80	83.9	4.45	68.7	98.6	5.5	1.7	3.8	84.8	4.23	70.3	89.4	5.9	5.9	13.6	84.8	4.23	70.3	89.4	5.9	5.9	13.6
			100	80.1	5.49	61.4	117.8	4.3	1.6	3.6	81.0	5.23	63.1	109.0	4.5	5.5	12.8	81.0	5.23	63.1	109.0	4.5	5.5	12.8
			120								77.0	6.48	54.8	128.6	3.5	5.2	12.1	77.0	6.48	54.8	128.6	3.5	5.2	12.1
	18	6.2 (14.4)	60	88.9	3.59	76.7	79.8	7.3	1.8	4.1	89.8	3.39	78.2	70.0	7.8	6.3	14.5	89.8	3.39	78.2	70.0	7.8	6.3	14.5
			80	85.3	4.46	70.1	98.9	5.6	1.7	3.8	86.2	4.24	71.7	89.6	6.0	5.9	13.6	86.2	4.24	71.7	89.6	6.0	5.9	13.6
			100	81.2	5.50	62.5	118.0	4.3	1.6	3.6	82.2	5.24	64.3	109.1	4.6	5.5	12.8	82.2	5.24	64.3	109.1	4.6	5.5	12.8
			120								77.9	6.49	55.7	128.7	3.5	5.2	12.1	77.9	6.49	55.7	128.7	3.5	5.2	12.1
90	9	1.7 (3.9)	60	107.1	3.73	94.3	83.8	8.4	1.8	4.1	108.3	3.49	96.4	72.0	9.1	6.2	14.4	108.3	3.49	96.4	72.0	9.1	6.2	14.4
			80	102.5	4.61	86.8	102.8	6.5	1.7	3.8	103.9	4.34	89.1	91.5	7.0	5.9	13.5	103.9	4.34	89.1	91.5	7.0	5.9	13.5
			100	97.6	5.67	78.3	121.7	5.0	1.6	3.6	99.0	5.36	80.7	111.0	5.4	5.5	12.7	99.0	5.36	80.7	111.0	5.4	5.5	12.7
			120								93.8	6.63	71.2	130.4	4.1	5.2	12.1	93.8	6.63	71.2	130.4	4.1	5.2	12.1
	13.5	3.5 (8.1)	60	111.6	3.77	98.8	84.8	8.7	1.8	4.1	113.1	3.52	101.1	72.6	9.4	6.2	14.4	113.1	3.52	101.1	72.6	9.4	6.2	14.4
			80	106.4	4.64	90.6	103.7	6.7	1.6	3.8	108.0	4.36	93.2	92.0	7.3	5.8	13.5	108.0	4.36	93.2	92.0	7.3	5.8	13.5
			100	100.9	5.71	81.4	122.4	5.2	1.6	3.6	102.5	5.38	84.1	111.4	5.6	5.5	12.7	102.5	5.38	84.1	111.4	5.6	5.5	12.7
			120								96.6	6.66	73.9	130.7	4.3	5.2	12.1	96.6	6.66	73.9	130.7	4.3	5.2	12.1
	18	5.9 (13.5)	60	114.1	3.79	101.2	85.4	8.8	1.8	4.1	115.8	3.53	103.7	72.9	9.6	6.2	14.4	115.8	3.53	103.7	72.9	9.6	6.2	14.4
			80	108.6	4.66	92.7	104.1	6.8	1.6	3.8	110.3	4.38	95.4	92.3	7.4	5.8	13.5	110.3	4.38	95.4	92.3	7.4	5.8	13.5
			100								104.4	5.39	86.0	111.6	5.7	5.5	12.7	104.4	5.39	86.0	111.6	5.7	5.5	12.7
			120																					

- Extended Range - Anti-freeze required
- Interpolation is permissible. Not extrapolation
- Operation not recommended

- Tabulated unit performance does not include fan or pump power corrections required for AHRI/ ISO standard performance ratings.
- Unit performance may be interpolated. Extrapolation is not allowed.
- For conditions other than rating conditions provided, consult the BST selection software.
- Ratings below 40°F are with a methanol solution.

**DISCLAIMER:** The performance reported herein is based on testing by FHP. Variations in the installation and operational environment may alter performance. Bosch disclaims all warranties, express and implied, that the performance will be as reported, including the warranty of merchantability and fitness for purpose. In addition, continuous research and development may result in a change to an appliances design and specifications at the time of order, which Bosch may change without notice. Before purchase, confirm the design specifications of the appliance.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL

# Greensource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

Capacity Data - TW122 – Part Load – Cooling																							
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	17.5 GPM								26.25 GPM								35 GPM			
				Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)		Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)		Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp
50	17.5	5.0 (2.2)	50	63.9	2.61	72.7	42.7	24.5	5.2	2.2		65.1	2.61	74.0	45.0	24.9	10.7	4.6		65.7	2.61	74.6	46.2
			60	74.2	2.62	83.2	51.5	28.3	5.0	2.2		75.8	2.62	84.8	54.2	28.9	10.4	4.5		76.7	2.62	85.6	55.6
			70	85.9	2.63	94.9	60.2	32.7	4.9	2.1		88.0	2.63	97.0	63.3	33.5	10.0	4.3		89.1	2.63	98.1	64.9
			80																				
	26.25	9.1 (4.0)	50	64.1	2.55	72.8	42.7	25.1	5.2	2.2		65.3	2.56	74.0	45.0	25.6	10.7	4.6		65.9	2.56	74.7	46.2
			60	74.5	2.56	83.2	51.5	29.1	5.0	2.2		76.1	2.56	84.9	54.2	29.7	10.4	4.5		77.0	2.56	85.7	55.6
			70	86.3	2.56	95.0	60.1	33.6	4.9	2.1		88.4	2.56	97.1	63.3	34.5	10.0	4.3		89.5	2.56	98.2	64.9
			80																				
	35	14.1 (6.1)	50	64.2	2.53	72.8	42.7	25.4	5.2	2.2		65.4	2.53	74.0	45.0	25.9	10.7	4.6		66.0	2.53	74.7	46.2
			60	74.6	2.53	83.3	51.5	29.5	5.0	2.2		76.3	2.53	84.9	54.2	30.1	10.4	4.5		77.1	2.53	85.8	55.6
			70	86.4	2.53	95.1	60.1	34.1	4.9	2.1		88.6	2.53	97.2	63.3	35.0	10.0	4.3		89.7	2.53	98.3	64.9
			80																				
70	17.5	14.4 (6.2)	50	60.1	3.40	71.7	43.1	17.7	5.2	2.2		61.2	3.40	72.8	45.3	18.0	10.7	4.6		61.7	3.40	73.3	46.5
			60	70.0	3.39	81.5	52.0	20.6	5.0	2.2		71.4	3.39	83.0	54.6	21.1	10.4	4.5		72.1	3.39	83.7	55.9
			70	81.0	3.38	92.5	60.7	24.0	4.9	2.1		82.9	3.38	94.4	63.7	24.6	10.0	4.3		83.9	3.37	95.4	65.2
			80	93.3	3.36	104.8	69.3	27.8	4.7	2.0		95.7	3.35	107.2	72.7	28.5	9.7	4.2					
	26.25	4.7 (2.0)	50	60.4	3.34	71.8	43.1	18.1	5.2	2.2		61.5	3.34	72.9	45.3	18.4	10.7	4.6		62.0	3.34	73.4	46.5
			60	70.3	3.33	81.7	52.0	21.1	5.0	2.2		71.8	3.32	83.1	54.5	21.6	10.4	4.5		72.6	3.32	83.9	55.9
			70	81.5	3.31	92.8	60.7	24.7	4.9	2.1		83.4	3.30	94.7	63.6	25.3	10.0	4.3		84.4	3.30	95.7	65.2
			80	94.0	3.28	105.2	69.3	28.7	4.7	2.0		96.4	3.27	107.6	72.7	29.5	9.7	4.2					
	35	9.8 (4.3)	50	60.5	3.31	71.8	43.1	18.3	5.2	2.2		61.6	3.31	72.9	45.3	18.6	10.7	4.6		62.2	3.31	73.5	46.4
			60	70.5	3.29	81.8	51.9	21.4	5.0	2.2		72.0	3.29	83.2	54.5	21.9	10.4	4.5		72.8	3.29	84.0	55.8
			70	81.8	3.27	92.9	60.7	25.0	4.9	2.1		83.7	3.27	94.8	63.6	25.6	10.0	4.3		84.7	3.26	95.8	65.2
			80	94.3	3.24	105.3	69.2	29.1	4.7	2.0		96.8	3.23	107.8	72.6	29.9	9.7	4.2					
90	17.5	14.8 (6.4)	50	54.9	4.38	69.8	43.7	12.5	5.2	2.2		55.8	4.38	70.7	45.7	12.7	10.7	4.6		56.3	4.38	71.2	46.8
			60	64.2	4.36	79.1	52.7	14.7	5.0	2.2		65.5	4.35	80.3	55.0	15.0	10.4	4.5		66.1	4.35	80.9	56.2
			70	74.6	4.33	89.4	61.5	17.2	4.9	2.1		76.2	4.32	91.0	64.2	17.6	10.0	4.3		77.1	4.32	91.8	65.6
			80	86.2	4.29	100.8	70.2	20.1	4.7	2.0													
	26.25	10.5 (4.5)	50	55.2	4.31	69.9	43.7	12.8	5.2	2.2		56.2	4.30	70.9	45.7	13.1	10.7	4.6		56.7	4.30	71.4	46.8
			60	64.7	4.27	79.3	52.6	15.1	5.0	2.2		66.0	4.27	80.5	55.0	15.5	10.4	4.5		66.6	4.27	81.2	56.2
			70	75.2	4.24	89.7	61.4	17.8	4.9	2.1		76.9	4.23	91.3	64.1	18.2	10.0	4.3		77.7	4.23	92.1	65.6
			80	86.9	4.19	101.2	70.1	20.8	4.7	2.0													
	35	5.6 (2.4)	50	55.4	4.27	70.0	43.7	13.0	5.2	2.2		56.4	4.27	71.0	45.7	13.2	10.7	4.6		56.9	4.26	71.5	46.7
			60	64.9	4.23	79.4	52.6	15.3	5.0	2.2		66.2	4.23	80.6	55.0	15.7	10.4	4.5		66.9	4.23	81.3	56.2
			70	75.5	4.19	89.8	61.4	18.0	4.9	2.1		77.2	4.18	91.5	64.1	18.5	10.0	4.3		78.1	4.18	92.3	65.5
			80	87.3	4.14	101.4	70.0	21.1	4.7	2.0													
110	17.5	9.2 (4.0)	50	48.2	5.69	67.6	44.5	8.5	5.2	2.2		49.0	5.69	68.4	46.3	8.6	10.7	4.6		49.4	5.69	68.8	47.2
			60	56.9	5.66	76.3	53.5	10.1	5.0	2.2		58.0	5.66	77.3	55.6	10.2	10.3	4.5		58.5	5.66	77.8	56.7
			70	66.6	5.63	85.8	62.4	11.8	4.8	2.1		68.0	5.62	87.2	64.8	12.1	10.0	4.3		68.7	5.62	87.8	66.1
			80																				
	26.25	15.5 (6.7)	50	48.7	5.60	67.7	44.4	8.7	5.2	2.2		49.5	5.59	68.5	46.2	8.8	10.7	4.6		49.9	5.59	68.9	47.2
			60	57.5	5.55	76.5	53.4	10.4	5.0	2.2		58.6	5.55	77.5	55.5	10.6	10.3	4.5		59.1	5.55	78.0	56.6
			70	67.4	5.50	86.1	62.3	12.2	4.8	2.1		68.7	5.50	87.5	64.8	12.5	10.0	4.3		69.4	5.49	88.2	66.0
			80																				
	35	7.0 (3.0)	50	48.9	5.55	67.8	44.4	8.8	5.2	2.2		49.7	5.54	68.6	46.2	9.0	10.7	4.6		50.1	5.54	69.0	47.1
			60	57.8	5.50	76.6	53.4	10.5	5.0	2.2		58.9	5.49	77.6	55.5	10.7	10.3	4.5		59.4	5.49	78.2	56.6
			70	67.7	5.44	86.3	62.3	12.4	4.8	2.1		69.1	5.44	87.6	64.7	12.7	10.0	4.3		69.8	5.43	88.3	66.0
			80																				

- Extended Range - Anti-freeze required
- Interpolation is permissible. Not extrapolation
- Operation not recommended

- Tabulated unit performance does not include fan or pump power corrections required for AHRI/ ISO standard performance ratings.
- Unit performance may be interpolated. Extrapolation is not allowed.
- For conditions other than rating conditions provided, consult the BST selection software.
- Ratings below 40°F are with a methanol solution.

**DISCLAIMER:** The performance reported herein is based on testing by FHP. Variations in the installation and operational environment may alter performance. Bosch disclaims all warranties, express and implied, that the performance will be as reported, including the warranty of merchantability and fitness for purpose. In addition, continuous research and development may result in a change to an appliances design and specifications at the time of order, which Bosch may change without notice. Before purchase, confirm the design specifications of the appliance.



# Greensource TW Series

## Residential Water to Water Heat Pumps



Capacity Data - TW122 – Part Load – Heating

Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	17.5 GPM							26.25 GPM							35 GPM						
				Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (PSI)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of water)	Pressure Drop (psi)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (psi)
30	17.5	2.4 (5.5)	60	55.2	2.98	45.0	66.3	5.4	2.1	4.9	55.2	2.92	45.3	63.2	5.6	7.4	17.1	55.2	2.92	45.3	63.2	5.6	7.4	17.1
			80	54.4	3.88	41.2	86.2	4.1	2.0	4.6	54.5	3.80	41.5	83.1	4.2	6.9	16.1	54.5	3.80	41.5	83.1	4.2	6.9	16.1
			100	53.1	5.02	36.0	106.1	3.1	1.9	4.3	53.2	4.92	36.4	103.0	3.2	6.5	15.1	53.2	4.92	36.4	103.0	3.2	6.5	15.1
			120	51.8	6.56	29.4	125.9	2.3	1.8	4.1	51.9	6.4	29.96	123.0	2.4	6.2	14.3	51.9	6.4	29.96	123.0	2.4	6.2	14.3
	26.25	5.0 (11.5)	60	55.9	2.98	45.7	66.4	5.5	2.1	4.9	55.9	2.92	46.0	63.2	5.6	7.4	17.1	55.9	2.92	46.0	63.2	5.6	7.4	17.1
			80	55.0	3.88	41.8	86.3	4.2	2.0	4.6	55.1	3.80	42.1	83.1	4.2	6.9	16.1	55.1	3.80	42.1	83.1	4.2	6.9	16.1
			100	53.6	5.02	36.5	106.1	3.1	1.9	4.3	53.7	4.92	36.9	103.1	3.2	6.5	15.1	53.7	4.92	36.9	103.1	3.2	6.5	15.1
			120	52.2	6.56	29.8	126.0	2.3	1.8	4.1	52.3	6.42	30.4	123.0	2.4	6.2	14.3	52.3	6.42	30.4	123.0	2.4	6.2	14.3
	35	8.3 (19.2)	60	56.2	2.98	46.0	66.4	5.5	2.1	4.9	56.3	2.92	46.3	63.2	5.7	7.4	17.1	56.3	2.92	46.3	63.2	5.7	7.4	17.1
			80	55.3	3.88	42.1	86.3	4.2	2.0	4.6	55.4	3.80	42.4	83.2	4.3	6.9	16.1	55.4	3.80	42.4	83.2	4.3	6.9	16.1
			100	53.9	5.02	36.7	106.2	3.1	1.9	4.3	54.0	4.92	37.2	103.1	3.2	6.5	15.1	54.0	4.92	37.2	103.1	3.2	6.5	15.1
			120	52.4	6.55	30.0	126.0	2.3	1.8	4.1	52.5	6.42	30.6	123.0	2.4	6.2	14.3	52.5	6.42	30.6	123.0	2.4	6.2	14.3
50	17.5	2.2 (5.2)	60	72.3	2.99	62.1	68.3	7.1	2.1	4.9	72.4	2.91	62.5	64.1	7.3	7.4	17.1	72.4	2.91	62.5	64.1	7.3	7.4	17.1
			80	70.8	3.86	57.6	88.1	5.4	2.0	4.6	71.0	3.76	58.2	84.1	5.5	6.9	16.0	71.0	3.76	58.2	84.1	5.5	6.9	16.0
			100	68.7	4.98	51.7	107.9	4.0	1.9	4.3	68.9	4.86	52.4	103.9	4.2	6.5	15.1	68.9	4.86	52.4	103.9	4.2	6.5	15.1
			120	66.5	6.52	44.3	127.6	3.0	1.8	4.1	66.7	6.35	45.0	123.8	3.1	6.2	14.3	66.7	6.35	45.0	123.8	3.1	6.2	14.3
	26.25	4.6 (10.7)	60	73.5	2.99	63.3	68.4	7.2	2.1	4.9	73.6	2.91	63.7	64.2	7.4	7.4	17.1	73.6	2.91	63.7	64.2	7.4	7.4	17.1
			80	71.8	3.86	58.7	88.2	5.5	2.0	4.6	72.0	3.76	59.2	84.1	5.6	6.9	16.0	72.0	3.76	59.2	84.1	5.6	6.9	16.0
			100	69.6	4.98	52.6	108.0	4.1	1.9	4.3	69.8	4.85	53.2	104.0	4.2	6.5	15.1	69.8	4.85	53.2	104.0	4.2	6.5	15.1
			120	67.2	6.52	45.0	127.7	3.0	1.8	4.1	67.4	6.35	45.8	123.9	3.1	6.2	14.3	67.4	6.35	45.8	123.9	3.1	6.2	14.3
	35	7.8 (17.9)	60	74.1	2.99	63.9	68.5	7.3	2.1	4.9	74.2	2.91	64.3	64.2	7.5	7.4	17.1	74.2	2.91	64.3	64.2	7.5	7.4	17.1
			80	72.3	3.86	59.2	88.3	5.5	2.0	4.6	72.6	3.76	59.7	84.1	5.7	6.9	16.0	72.6	3.76	59.7	84.1	5.7	6.9	16.0
			100	70.0	4.98	53.0	108.0	4.1	1.9	4.3	70.3	4.85	53.7	104.0	4.2	6.5	15.1	70.3	4.85	53.7	104.0	4.2	6.5	15.1
			120	67.6	6.52	45.3	127.7	3.0	1.8	4.1	67.8	6.35	46.1	123.9	3.1	6.2	14.3	67.8	6.35	46.1	123.9	3.1	6.2	14.3
70	17.5	2.1 (4.9)	60	93.8	2.99	83.6	70.7	9.2	2.1	4.9	94.1	2.89	84.3	65.4	9.6	7.4	17.1	94.1	2.89	84.3	65.4	9.6	7.4	17.1
			80	91.0	3.82	78.0	90.4	7.0	2.0	4.6	91.5	3.70	78.8	85.2	7.2	6.9	16.0	91.5	3.70	78.8	85.2	7.2	6.9	16.0
			100	87.6	4.92	70.8	110.0	5.2	1.9	4.3	88.1	4.77	71.8	105.0	5.4	6.5	15.1	88.1	4.77	71.8	105.0	5.4	6.5	15.1
			120	84.1	6.46	62.0	129.6	3.8	1.8	4.1	84.5	6.24	63.2	124.8	4.0	6.2	14.2	84.5	6.24	63.2	124.8	4.0	6.2	14.2
	26.25	4.3 (10.0)	60	95.8	2.99	85.6	70.9	9.4	2.1	4.9	96.2	2.89	86.3	65.5	9.8	7.4	17.1	96.2	2.89	86.3	65.5	9.8	7.4	17.1
			80	92.8	3.81	79.8	90.6	7.1	2.0	4.6	93.2	3.69	80.6	85.3	7.4	6.9	16.0	93.2	3.69	80.6	85.3	7.4	6.9	16.0
			100	89.1	4.92	72.3	110.2	5.3	1.9	4.3	89.6	4.76	73.3	105.1	5.5	6.5	15.1	89.6	4.76	73.3	105.1	5.5	6.5	15.1
			120	85.2	6.45	63.2	129.7	3.9	1.8	4.1	85.7	6.24	64.4	124.9	4.0	6.2	14.2	85.7	6.24	64.4	124.9	4.0	6.2	14.2
	35	7.3 (16.8)	60	96.8	2.99	86.7	71.1	9.5	2.1	4.9	97.2	2.88	87.4	65.6	9.9	7.4	17.1	97.2	2.88	87.4	65.6	9.9	7.4	17.1
			80	93.7	3.81	80.7	90.7	7.2	2.0	4.6	94.1	3.69	81.6	85.4	7.5	6.9	16.0	94.1	3.69	81.6	85.4	7.5	6.9	16.0
			100	89.8	4.92	73.1	110.3	5.4	1.9	4.3	90.4	4.75	74.1	105.2	5.6	6.5	15.0	90.4	4.75	74.1	105.2	5.6	6.5	15.0
			120	85.8	6.45	63.8	129.8	3.9	1.8	4.1	86.3	6.23	65.1	124.9	4.1	6.2	14.2	86.3	6.23	65.1	124.9	4.1	6.2	14.2

- Extended Range - Anti-freeze required
- Interpolation is permissible. Not extrapolation
- Operation not recommended

- Tabulated unit performance does not include fan or pump power corrections required for AHRI/ ISO standard performance ratings.
- Unit performance may be interpolated. Extrapolation is not allowed.
- For conditions other than rating conditions provided, consult the BST selection software.
- Ratings below 40°F are with a methanol solution.

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# Greensource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

Capacity Data - TW122 – Full Load – Cooling																											
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	17.5 GPM								26.25 GPM								35 GPM							
				Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)	Cooling Capacity (MBH)	Power, kW	Loop Rej/Add, MBH	Lvg Water Temp	EER	Pressure Drop (FOH)	Pressure Drop (PSI)			
50	17.5	5.0 (2.1)	50	119.9	5.51	138.7	36.3	21.8	5.2	2.3	124.1	5.52	142.9	40.5	22.5	10.8	4.7	126.4	5.53	145.2	42.8	22.9	18.1	7.8			
			60	138.4	5.56	157.4	44.2	24.9	5.1	2.2	143.8	5.58	162.8	49.0	25.8	10.5	4.5	146.7	5.58	165.7	51.6	26.3	17.5	7.6			
			70	158.8	5.61	178.0	51.8	28.3	4.9	2.1	165.7	5.63	184.9	57.4	29.4	10.1	4.4	169.5	5.64	188.7	60.3	30.1	16.9	7.3			
	26.25	9.0 (3.9)	50	120.7	5.30	138.8	36.2	22.8	5.2	2.3	125.0	5.31	143.1	40.5	23.5	10.8	4.7	127.3	5.32	145.4	42.7	23.9	18.1	7.8			
			60	139.4	5.34	157.6	44.1	26.1	5.1	2.2	144.9	5.35	163.1	49.0	27.1	10.5	4.5	147.9	5.35	166.2	51.5	27.6	17.5	7.6			
			70	160.1	5.37	178.4	51.7	29.8	4.9	2.1	167.2	5.38	185.5	57.3	31.1	10.1	4.4	171.0	5.38	189.4	60.2	31.8	16.9	7.3			
	35	14.0 (6.0)	50	121.1	5.20	138.8	36.2	23.3	5.2	2.3	125.4	5.21	143.2	40.4	24.1	10.8	4.7	127.7	5.21	145.5	42.7	24.5	18.1	7.8			
			60	139.9	5.23	157.7	44.0	26.8	5.1	2.2	145.4	5.23	163.3	48.9	27.8	10.5	4.5	148.5	5.24	166.3	51.5	28.3	17.5	7.6			
			70	160.7	5.25	178.7	51.6	30.6	4.9	2.1	167.9	5.25	185.8	57.2	32.0	10.1	4.4	171.8	5.26	189.7	60.2	32.7	16.9	7.3			
	70	17.5	14.3 (6.2)	50	112.4	7.15	136.9	37.1	15.7	5.2	2.3	116.2	7.16	140.6	41.1	16.2	10.8	4.7	118.2	7.16	142.7	43.2	16.5	18.0	7.8		
				60	130.1	7.18	154.6	45.1	18.1	5.1	2.2	134.9	7.18	159.4	49.7	18.8	10.4	4.5	137.5	7.19	162.0	52.1	19.1	17.5	7.6		
				70	149.5	7.20	174.1	52.9	20.8	4.9	2.1	155.7	7.20	180.2	58.1	21.6	10.1	4.4	159.0	7.20	183.6	60.9	22.1	16.9	7.3		
26.25		4.6 (2.0)	50	113.6	6.92	137.2	37.0	16.4	5.2	2.3	117.4	6.92	141.0	41.1	17.0	10.8	4.7	119.5	6.92	143.1	43.2	17.3	18.0	7.8			
			60	131.5	6.92	155.1	45.0	19.0	5.1	2.2	136.5	6.92	160.1	49.6	19.7	10.5	4.5	139.1	6.92	162.7	52.0	20.1	17.5	7.6			
			70	151.3	6.91	174.9	52.7	21.9	4.9	2.1	157.6	6.90	181.2	58.0	22.8	10.1	4.4	161.0	6.90	184.6	60.8	23.3	16.9	7.3			
35		9.7 (4.2)	50	114.1	6.81	137.3	37.0	16.8	5.2	2.3	118.0	6.80	141.2	41.0	17.3	10.8	4.7	120.1	6.80	143.3	43.1	17.7	18.0	7.8			
			60	132.2	6.79	155.3	44.9	19.5	5.1	2.2	137.2	6.79	160.4	49.5	20.2	10.5	4.5	139.9	6.78	163.1	52.0	20.6	17.5	7.6			
			70	152.1	6.77	175.2	52.6	22.5	4.9	2.1	158.5	6.76	181.6	57.9	23.5	10.1	4.4	162.0	6.76	185.1	60.7	24.0	16.9	7.3			
90		17.5	14.7 (6.4)	50	102.3	9.21	133.7	38.3	11.1	5.2	2.3	105.6	9.21	137.0	42.0	11.5	10.8	4.7	107.3	9.22	138.7	43.9	11.6	18.0	7.8		
				60	119.1	9.23	150.5	46.4	12.9	5.1	2.2	123.2	9.23	154.7	50.6	13.4	10.4	4.5	125.4	9.23	156.9	52.8	13.6	17.4	7.6		
				70	137.4	9.23	168.9	54.3	14.9	4.9	2.1	142.7	9.24	174.2	59.1	15.4	10.1	4.4	145.5	9.24	177.0	61.7	15.8	16.9	7.3		
	26.25	10.4 (4.5)	50	103.8	8.91	134.2	38.1	11.6	5.2	2.3	107.1	8.91	137.5	41.8	12.0	10.8	4.7	108.9	8.91	139.3	43.8	12.2	18.0	7.8			
			60	120.8	8.89	151.2	46.2	13.6	5.1	2.2	125.1	8.89	155.5	50.5	14.1	10.4	4.5	127.5	8.88	157.8	52.7	14.3	17.4	7.6			
			70	139.6	8.86	169.8	54.0	15.8	4.9	2.1	145.1	8.85	175.3	58.9	16.4	10.1	4.4	148.0	8.85	178.2	61.5	16.7	16.9	7.3			
	35	5.6 (2.4)	50	104.5	8.77	134.4	38.1	11.9	5.2	2.3	107.9	8.76	137.8	41.8	12.3	10.8	4.7	109.7	8.76	139.6	43.7	12.5	18.0	7.8			
			60	121.7	8.73	151.5	46.1	13.9	5.1	2.2	126.1	8.72	155.8	50.4	14.5	10.4	4.5	128.4	8.71	158.2	52.7	14.7	17.4	7.6			
			70	140.6	8.68	170.2	53.9	16.2	4.9	2.1	146.2	8.66	175.8	58.9	16.9	10.1	4.4	149.3	8.66	178.8	61.5	17.2	16.9	7.3			
	110	17.5	9.1 (3.9)	50	89.4	11.99	130.3	39.8	7.5	5.2	2.3	92.0	11.99	132.9	43.0	7.7	10.8	4.7	93.4	11.99	134.4	44.7	7.8	18.0	7.8		
				60	105.1	12.01	146.1	48.0	8.8	5.1	2.2	108.5	12.01	149.5	51.7	9.0	10.4	4.5	110.3	12.01	151.3	53.7	9.2	17.4	7.5		
				70	122.2	12.02	163.2	56.0	10.2	4.9	2.1	126.6	12.03	167.6	60.4	10.5	10.1	4.4	128.9	12.03	169.9	62.6	10.7	16.9	7.3		
26.25		15.4 (6.7)	50	91.1	11.59	130.7	39.6	7.9	5.2	2.3	93.9	11.59	133.5	42.8	8.1	10.8	4.7	95.4	11.58	134.9	44.5	8.2	18.0	7.8			
			60	107.2	11.56	146.7	47.7	9.3	5.1	2.2	110.8	11.56	150.2	51.6	9.6	10.4	4.5	112.7	11.55	152.1	53.6	9.8	17.4	7.5			
			70	124.8	11.53	164.1	55.7	10.8	4.9	2.1	129.4	11.51	168.7	60.1	11.2	10.1	4.4	131.8	11.51	171.1	62.5	11.5	16.9	7.3			
35		6.9 (3.0)	50	92.0	11.40	130.9	39.5	8.1	5.2	2.3	94.9	11.39	133.7	42.8	8.3	10.8	4.7	96.4	11.39	135.2	44.5	8.5	18.0	7.8			
			60	108.3	11.35	147.0	47.6	9.5	5.1	2.2	111.9	11.34	150.6	51.5	9.9	10.4	4.5	113.9	11.33	152.5	53.5	10.1	17.4	7.5			
			70	126.1	11.28	164.6	55.6	11.2	4.9	2.1	130.8	11.27	169.2	60.0	11.6	10.1	4.4	133.3	11.26	171.7	62.4	11.8	16.9	7.3			

- Extended Range - Anti-freeze required
- Interpolation is permissible. Not extrapolation
- Operation not recommended

- Tabulated unit performance does not include fan or pump power corrections required for AHRI/ ISO standard performance ratings.
- Unit performance may be interpolated. Extrapolation is not allowed.
- For conditions other than rating conditions provided, consult the BST selection software.
- Ratings below 40°F are with a methanol solution.

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# Greensource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

Capacity Data - TW122 – Full Load – Heating																								
Entering Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EWT	17.5 GPM							26.25 GPM							35 GPM						
				Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (PSI)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of water)	Pressure Drop (psi)	Heating Capacity, MBH	Power, kW	Heat Absorb, MBH	Lvg Water Temp	COP	Pressure Drop (ft of Water)	Pressure Drop (psi)
30	17.5	2.4 (5.6)	60	106.6	6.22	85.4	72.2	5.0	2.1	4.8	106.7	5.96	86.4	66.1	5.2	7.4	17.1	106.7	5.96	86.4	66.1	5.2	7.4	17.1
			80	105.2	8.06	77.7	92.0	3.8	2.0	4.5	105.5	7.76	79.0	86.0	4.0	6.9	16.0	105.5	7.76	79.0	86.0	4.0	6.9	16.0
			100	103.1	10.43	67.5	111.8	2.9	1.9	4.3	103.4	10.04	69.2	105.9	3.0	6.5	15.0	103.4	10.04	69.2	105.9	3.0	6.5	15.0
			120	101.1	13.64	54.6	131.6	2.2	1.8	4.1	101.4	13.1	56.64	125.8	2.3	6.2	14.2	101.4	13.1	56.64	125.8	2.3	6.2	14.2
	26.25	5.0 (11.5)	60	109.0	6.22	87.8	72.5	5.1	2.1	4.8	109.2	5.96	88.8	66.2	5.4	7.4	17.1	109.2	5.96	88.8	66.2	5.4	7.4	17.1
			80	107.3	8.07	79.8	92.3	3.9	2.0	4.5	107.7	7.76	81.2	86.2	4.1	6.9	16.0	107.7	7.76	81.2	86.2	4.1	6.9	16.0
			100	104.9	10.44	69.2	112.0	2.9	1.9	4.3	105.2	10.04	71.0	106.0	3.1	6.5	15.0	105.2	10.04	71.0	106.0	3.1	6.5	15.0
			120	102.5	13.65	56.0	131.7	2.2	1.8	4.1	102.8	13.11	58.1	125.9	2.3	6.2	14.2	102.8	13.11	58.1	125.9	2.3	6.2	14.2
	35	8.3 (19.3)	60	110.3	6.23	89.0	72.6	5.2	2.1	4.8	110.4	5.96	90.1	66.3	5.4	7.4	17.0	110.4	5.96	90.1	66.3	5.4	7.4	17.0
			80	108.4	8.07	80.9	92.4	3.9	2.0	4.5	108.8	7.76	82.3	86.2	4.1	6.9	16.0	108.8	7.76	82.3	86.2	4.1	6.9	16.0
			100	105.8	10.44	70.2	112.1	3.0	1.9	4.3	106.2	10.04	72.0	106.1	3.1	6.5	15.0	106.2	10.04	72.0	106.1	3.1	6.5	15.0
			120	103.3	13.65	56.7	131.8	2.2	1.8	4.1	103.6	13.11	58.9	125.9	2.3	6.2	14.2	103.6	13.11	58.9	125.9	2.3	6.2	14.2
50	17.5	2.3 (5.2)	60	138.0	6.30	116.5	75.8	6.4	2.1	4.8	138.3	5.98	117.9	67.9	6.8	7.4	17.0	138.3	5.98	117.9	67.9	6.8	7.4	17.0
			80	135.4	8.11	107.7	95.5	4.9	2.0	4.5	136.0	7.72	109.6	87.8	5.2	6.9	15.9	136.0	7.72	109.6	87.8	5.2	6.9	15.9
			100	132.0	10.49	96.2	115.1	3.7	1.8	4.3	132.7	9.98	98.6	107.6	3.9	6.5	15.0	132.7	9.98	98.6	107.6	3.9	6.5	15.0
			120	128.6	13.74	81.8	134.7	2.7	1.7	4.0	129.2	13.06	84.7	127.4	2.9	6.1	14.2	129.2	13.06	84.7	127.4	2.9	6.1	14.2
	26.25	4.7 (10.8)	60	142.0	6.31	120.5	76.2	6.6	2.1	4.8	142.4	5.98	122.0	68.1	7.0	7.4	17.0	142.4	5.98	122.0	68.1	7.0	7.4	17.0
			80	138.9	8.12	111.2	95.9	5.0	2.0	4.5	139.6	7.72	113.3	88.0	5.3	6.9	15.9	139.6	7.72	113.3	88.0	5.3	6.9	15.9
			100	135.0	10.49	99.2	115.4	3.8	1.8	4.3	135.8	9.97	101.7	107.8	4.0	6.5	15.0	135.8	9.97	101.7	107.8	4.0	6.5	15.0
			120	131.0	13.74	84.1	135.0	2.8	1.7	4.0	131.7	13.05	87.2	127.5	3.0	6.1	14.2	131.7	13.05	87.2	127.5	3.0	6.1	14.2
	35	7.8 (18.0)	60	144.2	6.31	122.6	76.5	6.7	2.1	4.8	144.7	5.98	124.2	68.3	7.1	7.4	17.0	144.7	5.98	124.2	68.3	7.1	7.4	17.0
			80	140.8	8.12	113.1	96.1	5.1	2.0	4.5	141.6	7.72	115.3	88.1	5.4	6.9	15.9	141.6	7.72	115.3	88.1	5.4	6.9	15.9
			100	136.6	10.50	100.7	115.6	3.8	1.8	4.3	137.4	9.97	103.4	107.9	4.0	6.5	15.0	137.4	9.97	103.4	107.9	4.0	6.5	15.0
			120	132.3	13.75	85.4	135.1	2.8	1.7	4.0	133.0	13.05	88.5	127.6	3.0	6.1	14.2	133.0	13.05	88.5	127.6	3.0	6.1	14.2
70	17.5	2.1 (4.9)	60	176.3	6.37	154.5	80.1	8.1	2.1	4.8	177.2	5.98	156.8	70.1	8.7	7.3	16.9	177.2	5.98	156.8	70.1	8.7	7.3	16.9
			80	171.6	8.14	143.8	99.6	6.2	1.9	4.5	172.9	7.66	146.7	89.9	6.6	6.9	15.9	172.9	7.66	146.7	89.9	6.6	6.9	15.9
			100	166.1	10.52	130.2	119.0	4.6	1.8	4.2	167.4	9.88	133.7	109.6	5.0	6.5	15.0	167.4	9.88	133.7	109.6	5.0	6.5	15.0
			120								161.7	12.94	117.6	129.2	3.7	6.1	14.2	161.7	12.94	117.6	129.2	3.7	6.1	14.2
	26.25	4.4 (10.1)	60	182.8	6.38	161.0	80.9	8.4	2.1	4.8	184.0	5.98	163.6	70.5	9.0	7.3	16.9	184.0	5.98	163.6	70.5	9.0	7.3	16.9
			80	177.3	8.14	149.5	100.3	6.4	1.9	4.5	178.8	7.64	152.8	90.2	6.9	6.9	15.9	178.8	7.64	152.8	90.2	6.9	6.9	15.9
			100	170.9	10.52	135.0	119.5	4.8	1.8	4.2	172.5	9.86	138.9	109.9	5.1	6.5	14.9	172.5	9.86	138.9	109.9	5.1	6.5	14.9
			120								165.9	12.92	121.8	129.5	3.8	6.1	14.2	165.9	12.92	121.8	129.5	3.8	6.1	14.2
	35	7.3 (16.9)	60	186.4	6.38	164.6	81.3	8.6	2.1	4.8	187.7	5.97	167.3	70.7	9.2	7.3	16.9	187.7	5.97	167.3	70.7	9.2	7.3	16.9
			80	180.4	8.14	152.6	100.6	6.5	1.9	4.5	182.1	7.64	156.0	90.4	7.0	6.9	15.9	182.1	7.64	156.0	90.4	7.0	6.9	15.9
			100	173.5	10.52	137.6	119.8	4.8	1.8	4.2	175.3	9.85	141.7	110.0	5.2	6.5	14.9	175.3	9.85	141.7	110.0	5.2	6.5	14.9
			120								168.1	12.91	124.0	129.6	3.8	6.1	14.2	168.1	12.91	124.0	129.6	3.8	6.1	14.2

- Extended Range - Anti-freeze required
- Interpolation is permissible. Not extrapolation
- Operation not recommended

- Tabulated unit performance does not include fan or pump power corrections required for AHRI/ ISO standard performance ratings.
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# GreenSource TW Series

## Residential Water to Water Heat Pumps



# BOSCH

### Cooling Mode Operating Pressures (PSIG)

Entering Load/Evap Temp. °F.	Entering Source Condenser Temperature Deg. °F					
	75 °F		85 °F		95 °F	
	Suction Pressure	Discharge Pressure	Suction Pressure	Discharge Pressure	Suction Pressure	Discharge Pressure
65	99-116	290-320	107-123	325-358	107-123	370-400
55	91-107	265-311	91-107	303-350	99-116	370-400
45	76-91	265-311	76-91	295-345	83-99	358-390



TW R410A Units.

### Heating Mode Operating Pressures (PSIG)

Entering Load Degree °F.	Entering Source	Suction Pressure	Discharge Pressure
70	40	68-83	255-290
	60	99-116	270-305
	80	130-145	290-325
90	40	76-91	350-380
	60	99-116	358-390
	80	30-165	370-400
110	40	76-91	455-480
	60	99-116	470-500
	80	139-165	480-575



TW R410A Units.



Above ratings are based on water flow rates stated in specification sheets. 2.4 GPM/ton on evaporator side and 10°F Δ T on condensor side when in the chiller mode. Boiler mode conditions are 2.4 GPM/ton on the source side and 10°F Δ T on load side. The values are typical and may vary between models.

### Guide Specifications

#### **TW025-122 Two-Stage, Water-to-Water Reverse Cycle Chillers and Low Temperature Boilers**

##### **General**

Units shall be ETL listed for safety on all models. Each unit shall be run tested at the factory, pallet-mounted and stretch-wrapped. The units shall be manufactured in an ISO 9001 certified facility, designed to operate with entering fluid temperatures between 20°F (-7°C) and 120°F (49°C) as manufactured by Bosch Thermotechnology in Fort Lauderdale, Florida. Refrigerant shall be R-410A.

##### **Casing and Cabinet**

The cabinet shall be fabricated from durable, high quality white prepainted galvanized steel. All interior surfaces are lined with ½" thick, 1.5lb/cu ft density micromat multi-density, coated fiberglass insulation for thermal insulation and acoustical attenuation. All units shall allow sufficient service access to replace the compressor without unit removal. The compressor shall be covered with a multi-density sound absorbing blanket and have a floating base pan to minimize noise transmission.

##### **Refrigeration Circuits**

All units shall contain a hermetically sealed refrigerant circuit including a two stage scroll compressor, bidirectional thermal expansion valve metering device, coaxial style fluid-to-refrigerant heat exchangers, refrigerant reversing valve and service ports. Compressor shall be high efficiency, two stage scroll type (except TW122 which contains single stage scroll compressors but has two refrigerant circuits), designed for heat pump duty, quiet operation and mounted on rubber vibration isolators. Compressor motors shall be equipped with overload protection. Refrigerant reversing valves shall be pilot operated sliding piston type with replaceable encapsulated magnetic coils energized only during the chiller cycle. The coaxial water-to-refrigerant heat exchanger shall be constructed of a convoluted copper (optional cupro-nickel) inner tube and steel outer tube with a designed refrigerant working pressure of 600 PSIG (4100kPa) and a designed water side working pressure of no less than 450 PSIG (3100 kPa). Due to their susceptibility to fouling, brazed plate heat exchangers are not acceptable. The fluid-to-refrigerant heat exchangers shall be insulated to prevent condensation at low fluid temperatures.

##### **Electrical**

Controls and safety devices will be factory wired and mounted within the unit. Controls shall include comfort alert module, compressor contactor, 24V transformer, reversing valve coil and solid state lockout controller (UPM) The UPM controller shall include the following features: Anti-short cycle time delay, random start, brown out/surge/power interruption protection, 120 second low pressure switch bypass timer, shutdown on high or low refrigerant pressure safety switch inputs, shutdown for the freezestat, 24 VAC alarm output for remote fault indication, unit reset at thermostat or disconnect, ability to defeat time delays for servicing and automatic intelligent reset. The UPM shall automatically reset after a safety shut down and restart the unit, if the cause of the shut down no longer exists, after the anti-short cycle and random start timers expire. Should a fault re-occur within 60 minutes after reset, then a permanent lockout will occur. A light emitting diode (LED) shall annunciate the following alarms: high refrigerant pressure, low refrigerant pressure and low water temperature. The LED will display each fault condition as soon as the fault occurs. If a permanent lockout occurs, then the fault LED will display the type of fault until the unit is reset. Safety devices include a low pressure cutout set a 40 PSIG (280 kPa) for loss of charge protection (freezestat and/or high discharge gas temperature sensor are not acceptable) and a high pressure cutout control set at 600 PSIG (4100 kPa). An optional energy management relay that allows unit control by an external source shall be factory installed. A terminal block with screw terminals shall be provided for control wiring.

##### **Piping**

Water piping connections shall be female pipe thread with a single set of source and load connections flush mounted to the unit cabinet.

##### **Heat Recovery Package**

208/230 volt units shall be equipped with an optional factory installed internal heat recovery kit for domestic hot water production. This kit shall include a vented, double walled coaxial water to refrigerant heat exchanger, circuit breaker protected circulating pump, high water temperature cutoff and a low refrigerant temperature cutoff.