



TRANE®

Product Catalog

Series R™ Helical Rotary Liquid Chillers

*70-250 Tons Model RTWD Water-Cooled
70-200 Tons Model RTUD Condenserless*

Made in USA





Introduction

To meet a wide range of applications in the 70–250 ton water-cooled market, Trane is proud to introduce the model RTWD helical-rotary liquid chiller. To meet a wide range of applications in the 70-200 ton condenserless market, Trane is offering the RTUD condenserless chiller. The introduction of this next-generation chiller is an exciting step forward in application versatility, ease of installation, control precision, reliability, energy-efficiency, and operational cost-effectiveness. The new chiller is designed to deliver proven Series R performance, plus all the benefits of an advanced heat transfer design with two low-speed, direct-drive compressors.

Important Design Advances and New Features

- Higher full-load energy efficiency that meets ASHRAE 90.1 and reduces both operating and life-cycle costs.
- Variable evaporator flow compensation for improved control stability with energy saving variable flow applications.
- Single chiller time of day scheduling communication option for easier control of small jobs.
- Dual independent refrigerant circuits.
- HFC-134a optimized design.

The industrial-grade design of the Series R helical-rotary chiller is ideal for both industrial and commercial markets, in applications such as office buildings, hospitals, schools, retail buildings, and industrial facilities. The reliable compressors, wide operating temperature range, advanced controls, electronic expansion valve, short anti-recycle timers, and industry-leading efficiencies mean that this latest Trane Series R chiller is the perfect choice for tight temperature control in almost any application temperatures, and under widely varying loads.

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Features and Benefits

Reliability

- The Trane helical rotary compressor is a proven design resulting from years of research and thousands of test hours, including extensive testing under extraordinarily severe operating conditions.
- Trane is the world's largest manufacturer of large helical rotary compressors, with more than 240,000 compressors installed worldwide.
- Direct drive, low-speed compressors—a simple design with only four moving parts—provides maximum efficiency, high reliability, and low maintenance requirements.
- Suction gas-cooled motor stays at a uniformly low temperature for long motor life.
- Electronic expansion valve, with fewer moving parts than alternative valve designs, provides highly reliable operation.

High Performance

- Advanced design enables chilled water temperature control to $\pm 0.5^{\circ}\text{F}$ (0.28°C) for flow changes up to 10 percent per minute, plus handling of flow changes up to 30 percent per minute for variable flow applications.
- Two minute stop-to-start and five minute start-to-start anti-recycle timer allows tight chilled water temperature control in constant or transient low-load applications.
- High compressor lift capabilities for use with heat recovery and waterside heat pump applications allows highly efficient system design with minimal operational concerns.
- Tight water temperature control extends to operation of multiple chillers in parallel or series configurations, offering further system design flexibility for maximum efficiency.
- Optional LonTalk/Tracer Summit communications interface provides excellent, trouble-free inter operability.

Life Cycle Cost-Effectiveness

- Precise compressor rotor tip clearance ensures optimal efficiency.
- Condenser and evaporator tubes use the latest heat transfer technology for increased efficiency.
- Electronic expansion valve enables exceptionally tight temperature control and extremely low superheat, resulting in more efficient full-load and part-load operation than previously available.
- Chilled water reset based on return water temperature is standard.
- Electrical current-limiting is available as an option.

Application Versatility

- **Industrial/low temperature process cooling** – Excellent operating temperature range and precise control capabilities enable tight control with single chiller or series configuration.
- **Ice/thermal storage** – Specifiers and operators benefit from dual setpoint control and industry-leading temperature, efficiency, and control capabilities, plus outstanding support through partnership with Calmac, a strong Trane partner providing proven installation examples, templates, and references that minimize design time and energy costs.
- **Heat recovery** – Maximum condenser temperature exceeds those of previous technologies, providing hot water and tight control that minimizes operating costs for the chilled water plant and boiler/hot water heater, while also providing consistent dehumidification.
- **Water to water heat pump** – For multi-chiller systems where there is a base or year-round heating load the RTWD can be used as a water side heat pump by utilizing ground or surface water as a heat source. Leaving condenser temperature control option allows for the chiller to be used and controlled primarily for the heat produced in the condenser.
- **Dry Cooler** – Allows for use with a closed condenser loop system that minimizes the potential for cross-contamination of the condenser loop.
- **Variable primary flow** – Variable evaporator flow compensation allows multi-chiller systems to vary the flow of water throughout the entire system (from the evaporator through the cooling coils). This feature also provides additional system efficiency as the number of pumps and the flow rate in the system are reduced. Standard 2 pass or optional 3 pass evaporator allows for a wider range of flow capabilities.
- **Series chiller configuration** – For two-chiller systems all the system water passes through the evaporators and/or condensers of both chillers to take advantage of system efficiency gains due to thermodynamic staging as well as downsizing the upstream chiller.
- **EarthWise system** – Low flow and high temperature differential installations allow for reduced pump and cooling-tower energy by decreasing the amount of water flow pumped through the system. This results in downsizing of all HVAC and ancillary equipment which provides installation and operational savings.

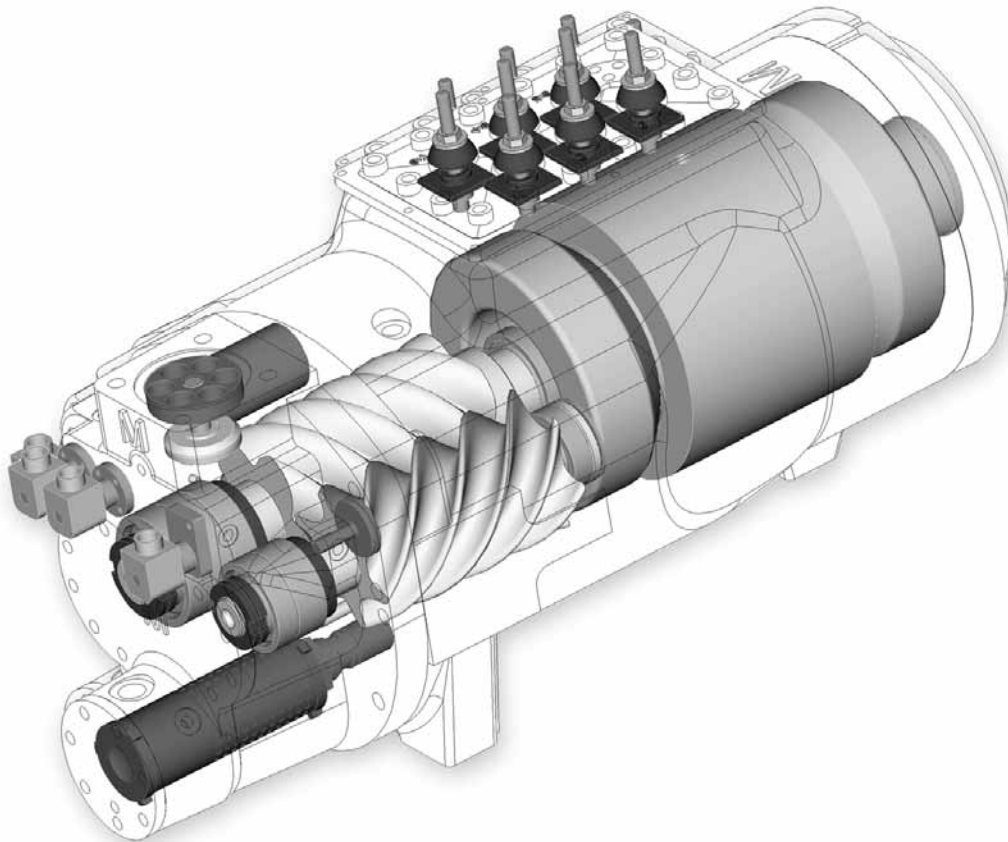
Simple, Economical Installation

- All units fit through standard double-width doors and most units fit through single width doors. Units are designed with bolt-together construction for disassembly to fit through smaller openings.
- Small footprint saves valuable equipment room space and alleviates access concerns for most retrofit jobs.
- Lightweight design simplifies rigging requirements, further reducing installation time requirements and costs.
- Full factory refrigerant and oil charges reduce required field labor, materials, and installation cost (RTWD). An optional nitrogen charge can reduce the time and labor for projects expecting dis-assembly.
- Optional integrated forklift channels on the unit base allow for easy movement of the chiller at the job site.
- Single or dual point power connection options simplify overall installation.
- Unit-mounted starter eliminates additional job site installation considerations and labor requirements.
- Trane CH530 controls easily interface with Tracer Summit™, LonTalk™, or BACnet™ building automation systems through single twisted-pair wire.
- Trane has conducted extensive factory testing during manufacturing, and also offers options for in-person and/or documented system performance verification.



Precision Control

- Microprocessor-based Trane CH530 controls monitor and maintain optimal operation of the chiller and its associated sensors, actuators, relays, and switches, all of which are factory-assembled and extensively tested.
- Easy interface with computers hosting LonTalk/Tracer Summit/BACnet building automation/energy management systems allows the operator to efficiently optimize comfort system performance and minimize operating costs.
- Proportional Integral Derivative (PID) control strategy ensures stable, efficient chilled water temperature, maintaining $\pm 1^{\circ}\text{F}$ (0.56°C) by reacting to instantaneous load changes.
- Adaptive Control™ attempts to maintain chiller operation under adverse conditions, when many other chillers might simply shut down. This is accomplished by unloading the compressor due to high condensing pressure, low suction pressure and/or overcurrent.
- EMC certification ensures trouble-free use of electronic devices around the chiller.
- Easy-to-use operator interface displays all operating and safety messages, with complete diagnostics information, on a easily readable panel with a scrolling touch-screen display.
- New variable evaporator flow compensation maintains improved control stability of the leaving water temperature.





Application Considerations

Condenser Water Temperatures

With the model RTWD chiller, condenser head pressure control is necessary only if the unit starts with entering condenser water temperatures below 55°F (12.8°C), or between 45°F (7.2°C) and 55°F (12.8°C), when a temperature increase of 1°F (0.56°C) per minute to 55°F (12.8°C) is not possible.

When the application requires startup temperatures below the prescribed minimums, a variety of system implementation options are available including the use of a 2- or 3-way valve or tower bypass to maintain the required system refrigerant differential pressure.

- To control a 2-way or 3-way valve, select the Condenser Regulating Valve Control option for the Trane CH530 controls. This option enables the CH530 controls to send a signal for opening and closing the valve as necessary to maintain chiller differential refrigerant pressure. The 2-way valves are available as a ship-with option.
- Tower bypass may also be a valid control method if the chiller temperature requirements can be maintained and the loop is small.

The minimum acceptable refrigerant pressure differential between condenser and evaporator is 25 psid (1.7 bars) at all load conditions in order to ensure adequate oil circulation. Condenser leaving water temperature must be 17°F (9.5°C) higher than evaporator leaving water temperature within 2 minutes of startup. A 25°F (13.9°C) temperature difference must be maintained thereafter [this differential requirement is lessened by 0.25°F (0.14°C) for every 1°F (0.56°C) that the condenser leaving water temperature is above 55°F (12.8°C)].

Trane Series R chillers start and operate successfully and reliably over a range of load conditions with controlled condenser pressure. Reducing the condenser water temperature is an effective method of lowering chiller power input required, but the ideal temperature for optimizing total system power consumption will depend on the overall system dynamics. From a system perspective, some improvements in chiller efficiency may be offset by the increased tower fan and pumping costs required to achieve the lower tower temperatures. Contact your local Trane systems solution provider for more information on optimizing system performance.

Variable Evaporator Flow and Short Evaporator Water Loops

Variable evaporator flow is an energy-saving design strategy which has quickly gained acceptance as advances in chiller and controls technology have made it possible. With its superior unloading compressor design and advanced Trane CH530 controls, the RTWD/RTUD has excellent capability to maintain leaving water temperature control within +/-0.5°F (0.28°C), even for systems with variable evaporator flow.

Some basic rules should be followed whenever using these system design and operational savings methods with the RTWD/RTUD. The proper location of the chilled water temperature control sensor is in the supply (outlet) water. This location allows the building to act as a buffer, and it assures a slowly changing return water temperature. If there is insufficient water volume in the system to provide an adequate buffer, temperature control can be lost, resulting in erratic system operation and excessive compressor cycling. To ensure consistent operation and tight temperature control, the chilled water loop should be at least two minutes. If this recommendation cannot be followed, and tight leaving water temperature control is necessary, a storage tank or larger header pipe should be installed to increase the volume of water in the system.

For variable primary flow applications, the rate of chilled water flow change should not exceed 10 percent of design per minute to maintain $\pm 0.5^{\circ}\text{F}$ (0.28°C) leaving evaporator temperature control. For applications in which system energy savings is most important and tight temperature control is classified as $\pm 2^{\circ}\text{F}$ (1.1°C), up to 30 percent change in flow per minute are possible. Flow rates should be maintained between the minimum and maximum allowed for any particular chiller configuration.

For applications designed to operate with changes in the water flow rate, the new evaporator water-flow compensation improves the ability of the chiller to respond to increasing or decreasing water flow. This new standard control feature works by varying the leaving evaporator temperature control gains in response to changes in evaporator water flow. By measuring the refrigerant flow in each circuit and using this value to calculate the resulting waterside temperature drop, the CH530 can estimate the water flow rate through the evaporator.

Series Chiller Arrangements

Another energy-saving strategy is to design the system around chillers arranged in series, on the evaporator, condenser, or both. It is possible to operate a pair of chillers more efficiently in a series chiller arrangement than in a parallel arrangement. It is also possible to achieve higher entering-to-leaving chiller differentials, which may, in turn, provide the opportunity for lower chilled water design temperature, lower design flow, and resulting installation and operational cost savings (including downsizing a chiller).

The Trane screw compressor also has excellent “lift” capabilities which afford an opportunity for savings on the evaporator and condenser water loops. Like series arrangements on the evaporator, series arrangements on the condenser may enable savings. This approach may allow reductions in pump and tower installation and operating costs.

Maximizing system efficiency requires that the designer balance performance considerations for all system components; the best approach may or may not involve multiple chillers, or series arrangement of the evaporators and/or condensers. This ideal balance of design integrity with installation and operating cost considerations should be researched by consulting a Trane systems solutions provider and applying the Trace™ building energy and economic analysis program.

Water-to-Water Heat Pump

The RTWD can be used as a water side heat pump by using ground or surface water as a heat source. Leaving condenser water control option provides the ability to control the heating setpoint. Local regulation concerning limitation on minimum/maximum rejected water temperature needs to be checked before using this method.

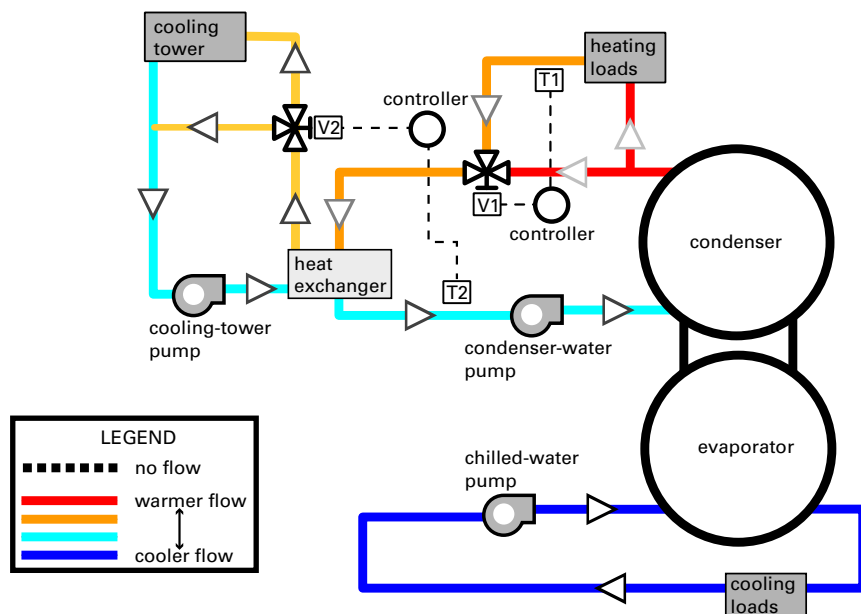
Dry Cooler

The RTWD can be used with dry coolers. Generally this application is selected to minimize the spread of airborne contaminants associated with open tower systems. In addition, other drawbacks of cooling towers are avoided: water consumption, production of vapor, need of water treatment, etc. Another benefit of dry coolers is the ability to operate in low ambient conditions. With the use of a third party heat exchanger this design can also be used to provide free cooling to the chilled water loop during cold weather.

Heat Recovery

At a time when energy costs are high and continue to rise, reducing energy usage has become increasingly important. By using a RTWD chiller with heat recovery, utilization of energy can be improved by using heat from the condenser that would otherwise be wasted.

The use of heat recovery should be considered in any building with simultaneous heating and cooling requirements or in facilities where heat can be stored and used at a later time. Buildings with high year-round internal cooling loads are excellent opportunities for heat recovery. Heat recovery can be accomplished with the RTWD by recovering heat from the water leaving the standard condenser and using it in conjunction with a third party heat exchanger.



Water Treatment

The use of untreated or improperly treated water in chillers may result in scaling, erosion, corrosion, and algae or slime buildup. It is recommended that the services of a qualified water treatment specialist be engaged to determine what treatment, if any, is advisable.

Water Pumps

Where noise limitation and vibration-free operation are important, Trane strongly encourages the use of 1750-rpm (60 Hz) [1450-rpm (50 Hz)] pumps. Specifying or using 3600-rpm (60 Hz) [3000-rpm (50 Hz)] condenser water and chilled water pumps must be avoided, because such pumps may operate with objectionable levels of noise and vibration. In addition, a low frequency beat may occur due to the slight difference in operating rpm between 3600-rpm (60 Hz) [3000-rpm (50 Hz)] water pumps and Series R chiller motors.

Note: The chilled water pump must not be used to stop the chiller.

Acoustic Considerations

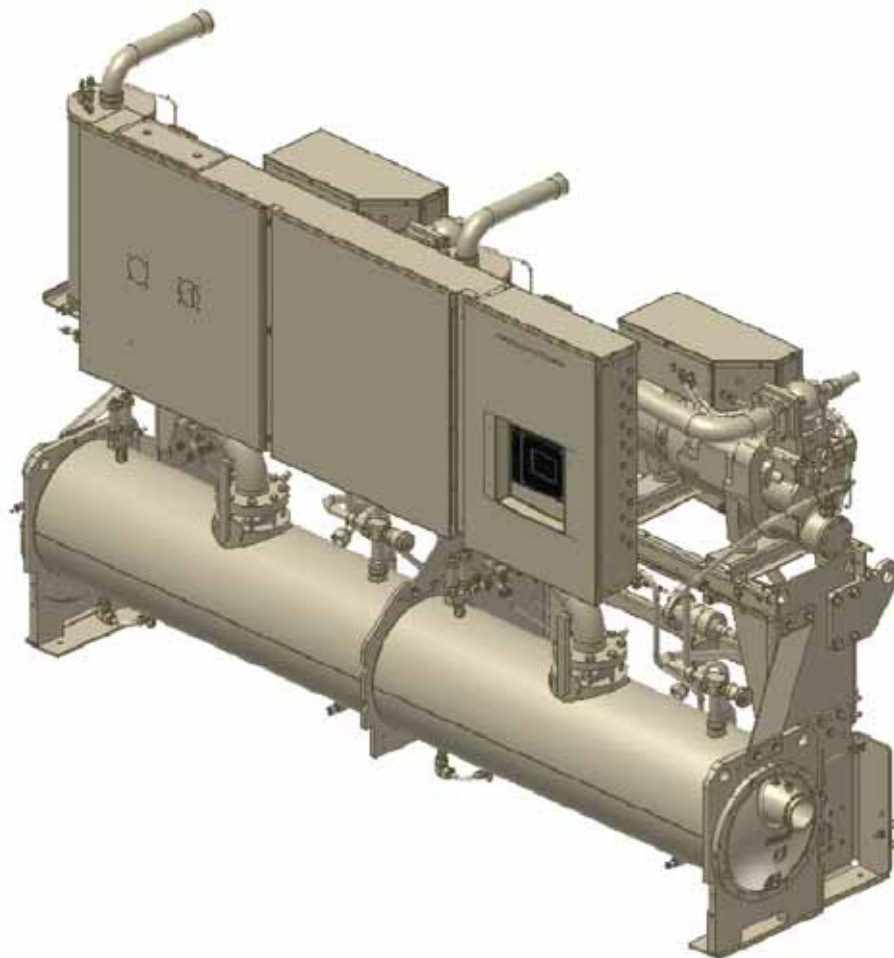
For chiller sound ratings, installation tips, and considerations on chiller location, pipe isolation, etc., refer to *the Water-Cooled Series R Chillers Sound Ratings and Installation Guide*.

Remote Condenser

The installation of a split system offers a good economic alternative to satisfy the chilled water demand for cooling a building, particularly in the case of new construction.

The choice of a complete Trane system, including the compressor chiller and the condenser offers the designer, installer and owner the advantages of an optimized selection and undivided responsibility for the design, the quality and the operation of the complete system.

Remote condensers should be located as close as possible to the chiller to ensure minimum pressure drops of discharge refrigerant. If non-Trane condensers are provided, a subcooling circuit must be provided in order to achieve cataloged performances.





Model Number Descriptions

Digits 01, 02, 03, 04 – Chiller Model

RTWD = Water-Cooled Series R™ Chiller
RTUD = Compressor Series R Chiller

Digit 05, 06, 07 – Unit Nominal Tonnage

060 = 60 Nominal Tons
070 = 70 Nominal Tons
080 = 80 Nominal Tons
090 = 90 Nominal Tons
100 = 100 Nominal Tons
110 = 110 Nominal Tons
120 = 120 Nominal Tons
130 = 130 Nominal Tons
140 = 140 Nominal Tons
150 = 150 Nominal Tons
160 = 160 Nominal Tons
180 = 180 Nominal Tons
200 = 200 Nominal Tons
220 = 220 Nominal Tons
250 = 250 Nominal Tons

Digit 08 – Unit Voltage

A = 200/60/3
B = 230/60/3
D = 380/60/3
E = 400/50/3
F = 460/60/3
G = 575/60/3

Digit 09 – Manufacturing Plant

2 = Pueblo, USA

Digit 10, 11 – Design Sequence

** = First Design, etc. increment when parts are affected for service purposes

Digits 12 – Unit Type

1 = Standard Efficiency/Performance
2 = High Efficiency/Performance
3 = Premium Efficiency/Performance

Digit 13 – Agency Listing

0 = No Agency Listing
A = UL Listed to US and Canadian Safety Standards

Digit 14 – Pressure Vessel Code

1 = ASME Pressure Vessel Code
3 = Chinese Code-Imported Pressure Vessel
S = Special

Digit 15 – Unit Application

A = Std Condenser <=95°F/35°C Entering Water Temperature
B = High Temperature Condenser >95°F/35°C Entering Water Temperature
C = Water-to-Water Heat Pump
D = Remote Condenser by Trane
E = Remote Condenser by Others

Digit 16 – Pressure Relief Valve

1 = Single Relief Valve
2 = Dual Relief Valve with 3-Way Isolation Valve

Digit 17 – Water Connection Type

A = Grooved Pipe Connection

Digit 18 – Evaporator Tubes

A = Internal and External Enhanced Evap Tube

Digit 19 – Number of Evap Passes

1 = 2 Pass Evaporator
2 = 3 Pass Evaporator

Digit 20 – Evaporator Water Side Pressure

A = 150 psi/10.5 bar Evaporator Water Pressure

Digit 21 – Evaporator Application

1 = Standard Cooling
2 = Low Temperature
3 = Ice Making

Digit 22 – Condenser Tubes

X = Remote Condenser
A = Enhanced Fin - Copper
B = Internally Enhanced 90/10 CuNi Fin

Digit 23 – Condenser Water Side Pressure

0 = Remote Condenser
1 = 150 psi/10.5 Bar Condenser Water Pressure

Digit 24 – Compressor Starter Type

Y = Wye-Delta Closed Transition Starter
X = Across-the-Line Starter

Digit 25 – Incoming Power Line Connection

1 = Single Point Power Connection
2 = Dual Point Power Connection

Digit 26 – Power Line Connection Type

A = Terminal Block Connection for Incoming Lines
B = Mechanical Disconnect Switch
D = Circuit Breaker
E = High Fault Rated Panel with Circuit Breaker

Digit 27 – Under/Over Voltage Protection

0 = No Under/Over Voltage Protection
1 = Under/Over Voltage Protection

Digit 28 – Unit Operator Interface

A = Dyna-View/English
B = Dyna-View/Spanish
C = Dyna-View/Spanish-Mexico
D = Dyna-View/French
E = Dyna-View/German
F = Dyna-View/Dutch
G = Dyna-View/Italian
H = Dyna-View/Japanese
J = Dyna-View/Portuguese-Portugal
K = Dyna-View/Portuguese-Brazil
L = Dyna-View/Korean
M = Dyna-View/Thai
N = Dyna-View/Simplified Chinese
P = Dyna-View/Traditional Chinese
R = Dyna-View/Russian
T = Dyna-View/Polish
U = Dyna-View/Czech
V = Dyna-View/Hungarian
W = Dyna-View/Greek
X = Dyna-View/Romanian
Y = Dyna-View/Swedish

Digit 29 – Remote Interface (Digital Comm)

0 = No Remote Digital Communication
1 = LonTalk/Tracer Summit Interface
2 = Time of Day Scheduling

Digit 30 – External Water & Current-Limit Setpoint

0 = No External Water & Current-Limit Setpoint
A = External Water & Current-Limit Setpoint - 4–20 mA
B = External Water & Current-Limit Setpoint - 2–10 Vdc

Digit 31 – Ice Making

0 = No Ice Making
A = Ice Making with Relay
B = Ice Making without Relay

Digit 32 – Programmable Relays

0 = No Programmable Relays
A = Programmable Relays

Digit 33 – Condenser Refrigerant Pressure Output Option

0 = No Condenser Refrigerant Output
1 = Condenser Water Control Output
2 = Condenser Pressure (%HPC) Output
3 = Differential Pressure Output

Digits 34 – Outdoor Air Temp Sensor

0 = No Outdoor Air Temp Sensor
A = Outdoor Air Temp Sensor-CWR/Low Ambient

Digit 35 – Condenser Leaving Hot Water Temp Control

0 = No Condenser Leaving Hot Water Temp Control
1 = Condenser Leaving Hot Water Temp Control

Digit 36 – Power Meter

0 = No Power Meter
P = Power Meter

Digit 37 – Motor Current Analog Output (%RLA)

0 = No Motor Current Analog Output
1 = Motor Current Analog Output

Digit 38 – A/C Fan Control

0 = No Fan Controls (RTWD)
A = Fan Control By Others
B = Integral Fan Controls

Digit 40 – Installation Accessories

0 = No Installation Accessories
A = Elastomeric Isolators
B = Flanged Water Connection Kit
C = Isolators & Flanged Water Connection Kit

Digit 41 – Flow Switch

0 = No Flow Switch
1 = 150 psi NEMA 1; Flow Switch x 1
2 = 150 psi NEMA 1; Flow Switch x 2
3 = 150 psi NEMA 4; Flow Switch x 1
4 = 150 psi NEMA 4; Flow Switch x 2

Digit 42 – 2-Way Water Regulating Valve

0 = No 2-Way Water Regulating Valve
A = 3" 150 psi/88.9 mm 10.5 bar 115 V
B = 3" 150 psi/88.9 mm 10.5 bar 220 V
C = 4" 150 psi/114.3 mm 10.5 bar 115 V
D = 4" 150 psi/114.3 mm 10.5 bar 220 V

Digit 44 – Insulation

0 = No Insulation
1 = Factory Insulation - All Cold Parts
2 = Insulation for High Humidity

Digit 45 – Factory Charge

0 = Full Factory Refrigerant Charge (R134a)
1 = Nitrogen Charge

Digit 46 – Base Rail Forklifting

0 = No Base Rail Forklifting
B = Base Rail Forklifting

Digit 47 – Label and Literature Language

B = Spanish
D = English
E = French
G = Chinese - Traditional

Digit 48 – Special

0 = None
S = Special

Digit 49 – 55

0 = None

Digit 56 – Shipping Package

0 = No Skid (Standard)
1 = Skid
2 = Shrink Wrap
3 = Skid + Shrink Wrap

Digit 59 – Performance Test Options

0 = No Performance Test
C = 1 Point Test with Report
D = 2 Point Test with Report
E = 3 Point Test with Report
F = 4 Point Test with Report
G = Witness 1 Point Test with Report
H = Witness 2 Point Test with Report
J = Witness 3 Point Test with Report
K = Witness 4 Point Test with Report



General Data

Table 1. General Data – RTWD – 60 Hz – standard efficiency

Size		80	90	100	110	120	130	140
Compressor								
	Quantity	2	2	2	2	2	2	2
Evaporator								
2 Pass Arrangement								
Water Conn. Size	NPS	4	4	4	4	5	5	5
	mm	100	100	100	100	125	125	125
Water Storage	(gal)	11.2	11.2	12.6	14.0	15.2	16.2	17.7
	(L)	42.2	42.2	47.6	53.0	57.4	61.5	66.8
Minimum Flow	(gpm)	77	77	89	101	101	110	122
	(L/s)	4.9	4.9	5.6	6.3	6.3	6.9	7.6
Maximum Flow	(gpm)	281	281	325	368	368	400	444
	(L/s)	17.8	17.8	20.5	23.2	23.2	25.3	28.0
3 Pass Arrangement								
Water Conn. Size	NPS	3	3	3	3	4	4	4
	mm	80	80	80	80	100	100	100
Water Storage	(gal)	11.2	11.2	12.6	14.0	15.2	16.2	17.7
	(L)	42.2	42.2	47.6	53.0	57.4	61.5	66.8
Minimum Flow	(gpm)	52	52	59	67	67	73	81
	(L/s)	3.2	3.2	3.7	4.2	4.2	4.6	5.1
Maximum Flow	(gpm)	187	187	216	244	244	266	295
	(L/s)	11.8	11.8	13.6	15.5	15.5	16.8	18.6
Condenser								
Water Conn. Size	NPS	5	5	5	5	5	5	5
	mm	125	125	125	125	125	125	125
Water Storage	(gal)	12.4	14.2	16.0	16.9	18.5	18.5	20.9
	(L)	46.8	53.6	60.4	63.8	70.1	70.1	79.2
Minimum Flow	(gpm)	83	99	115	124	135	135	156
	(L/s)	5.2	6.2	7.3	7.8	8.5	8.5	9.8
Maximum Flow	(gpm)	301	361	421	451	491	491	572
	(L/s)	19.0	22.8	26.6	28.5	31.0	31.0	36.1
General Unit								
Refrigerant Type		R-134a	R-134a	R-134a	R-134a	R-134a	R-134a	R-134a
# Refrig Circuits		2	2	2	2	2	2	2
Refrigerant Charge	(lb)	114.6/114.6	114.6/114.6	112.4/114.6	112.4/112.4	132.3/132.3	130.1/130.1	127.9/132.3
	(kg)	52/52	52/52	51/52	51/51	60/60	59/59	58/60
Oil Charge	(qt)	7.2/7.2	7.2/7.2	7.2/10.5	10.5/10.5	10.5/10.5	10.5/10.5	10.5/10.5
	(L)	6.8/6.8	6.8/6.8	6.8/9.9	9.9/9.9	9.9/9.9	9.9/9.9	9.9/9.9

1. Data containing information on two circuits is shown as circuit 1/circuit 2.
 2. Flow limits are for water only.

Table 2. General Data – RTWD – 60 Hz – high efficiency

Size		80	90	100	110	120	130
Compressor							
	Quantity	2	2	2	2	2	2
Evaporator							
2 Pass Arrangement							
Water Conn. Size	NPS	4	4	4	5	5	5
	mm	100	100	100	125	125	125
Water Storage	(gal)	9.8	11.9	12.8	15.3	16.4	17.3
	(L)	37.0	45.2	48.3	57.9	62.3	65.4
Minimum Flow	(gpm)	72	92	100	112	123	130
	(L/s)	4.5	5.8	6.3	7.0	7.7	8.2
Maximum Flow	(gpm)	263	336	364	409	448	476
	(L/s)	16.6	21.2	23.0	25.8	28.3	30.0
3 Pass Arrangement							
Water Conn. Size	NPS	3	3	3	4	4	4
	mm	80	80	80	100	100	100
Water Storage	(gal)	9.8	11.9	12.8	15.3	16.4	17.3
	(L)	37.0	45.2	48.3	57.9	62.3	65.4
Minimum Flow	(gpm)	48	61	67	75	82	87
	(L/s)	3.0	3.9	4.2	4.7	5.1	5.5
Maximum Flow	(gpm)	175	223	242	271	298	316
	(L/s)	11.1	14.1	15.3	17.2	18.8	20.0
Condenser							
Water Conn. Size	NPS	5	5	5	5	5	5
	mm	125	125	125	125	125	125
Water Storage	(gal)	11.9	12.7	14.9	16.6	17.2	18.0
	(L)	45.1	48.1	56.3	62.7	65.2	68.3
Minimum Flow	(gpm)	87	95	117	130	136	145
	(L/s)	5.5	6.0	7.4	8.1	8.6	9.1
Maximum Flow	(gpm)	317	347	427	473	498	528
	(L/s)	20.0	21.9	27.0	29.9	31.4	33.3
General Unit							
Refrigerant Type		R-134a	R-134a	R-134a	R-134a	R-134a	R-134a
# Refrig Circuits		2	2	2	2	2	2
Refrigerant Charge	(lb)	99.2/99.2	97/97	123.5/125.7	123.5/123.5	121.3/121.3	119/119
	(kg)	45/45	44/44	56/57	56/56	55/55	54/54
Oil Charge	(qt)	7.2/7.2	7.2/7.2	7.2/10.5	10.5/10.5	10.5/10.5	10.5/10.5
	(L)	6.8/6.8	6.8/6.8	6.8/9.9	9.9/9.9	9.9/9.9	9.9/9.9

1. Data containing information on two circuits is shown as circuit 1/circuit 2.
2. Flow limits are for water only.



General Data

Table 3. General Data – RTWD – 60 Hz – high efficiency (continued)

Size		150	160	180	200	220	250
Compressor							
Quantity		2	2	2	2	2	2
Evaporator							
2 Pass Arrangement							
Water Conn. Size	NPS	5	5	5	5	6	6
	mm	125	125	125	125	150	150
Water Storage	(gal)	19.2	20.3	22.3	24.2	28.6	31.8
	(L)	72.6	77.0	84.5	91.5	108.3	120.3
Minimum Flow	(gpm)	141	151	170	187	211	240
	(L/s)	8.9	9.5	10.7	11.8	13.3	15.1
Maximum Flow	(gpm)	515	554	621	683	772	879
	(L/s)	32.5	35.0	39.2	43.1	48.8	55.5
3 Pass Arrangement							
Water Conn. Size	NPS	4	4	4	4	4	4
	mm	100	100	100	100	100	100
Water Storage	(gal)	18.8	20.0	22.0	23.8	27.9	31.0
	(L)	71.2	75.6	83.2	90.1	105.5	117.5
Minimum Flow	(gpm)	94	101	113	124	141	160
	(L/s)	5.9	6.4	7.1	7.8	8.9	10.1
Maximum Flow	(gpm)	343	369	414	455	515	586
	(L/s)	21.7	23.3	26.2	28.7	32.5	37.0
Condenser							
Water Conn. Size	NPS	6	6	6	6	6	6
	mm	150	150	150	150	150	150
Water Storage	(gal)	21.6	22.9	24.6	26.2	31.1	39.2
	(L)	81.7	86.8	93.0	99.2	117.8	148.3
Minimum Flow	(gpm)	160	173	190	206	245	326
	(L/s)	10.1	10.9	12.0	13.0	15.4	20.5
Maximum Flow	(gpm)	583	634	694	754	895	1192
	(L/s)	36.8	40.0	43.8	47.6	56.5	75.3
General Unit							
Refrigerant Type		R-134a	R-134a	R-134a	R-134a	R-134a	R-134a
# Refrig Circuits		2	2	2	2	2	2
Refrigerant Charge	(lb)	134.5/143.3	141.1/141.1	138.9/138.9	136.7/136.7	178.6/185.2	180.8/180.8
	(kg)	61/65	64/64	63/63	62/62	81/84	82/82
Oil Charge	(qt)	10.5/12.4	12.4/12.4	12.4/12.4	12.4/12.4	12.4/12.4	12.4/12.4
	(L)	9.9/11.7	11.7/11.7	11.7/11.7	11.7/11.7	11.7/11.7	11.7/11.7

1. Data containing information on two circuits is shown as circuit 1/circuit 2.
2. Flow limits are for water only.

Table 4. General Data – RTWD – 60 Hz – premium efficiency

Size		150	160	180	200
Compressor					
	Quantity	2	2	2	2
Evaporator					
2 Pass Arrangement					
Water Conn. Size	NPS	6	6	6	6
	mm	150	150	150	150
Water Storage	(gal)	27.8	27.8	29.3	31.3
	(L)	105.1	105.1	110.9	118.3
Minimum Flow	(gpm)	175	175	187	202
	(L/s)	11.0	11.0	11.8	12.7
Maximum Flow	(gpm)	638	638	683	739
	(L/s)	40.3	40.3	43.1	46.7
3 Pass Arrangement					
Water Conn. Size	NPS	4	4	4	4
	mm	100	100	100	100
Water Storage	(gal)	27.1	27.1	28.6	30.6
	(L)	102.4	102.4	108.3	115.7
Minimum Flow	(gpm)	117	117	125	135
	(L/s)	7.3	7.3	7.8	8.5
Maximum Flow	(gpm)	425	425	455	492
	(L/s)	26.9	26.9	28.7	31.1
Condenser					
Water Conn. Size	NPS	6	6	6	6
	mm	150	150	150	150
Water Storage	(gal)	30.0	30.0	32.9	32.9
	(L)	113.4	113.4	124.4	124.4
Minimum Flow	(gpm)	206	206	231	231
	(L/s)	13.0	13.0	14.6	14.6
Maximum Flow	(gpm)	754	754	845	845
	(L/s)	47.6	47.6	53.3	53.3
General Unit					
Refrigerant Type		R-134a	R-134a	R-134a	R-134a
# Refrig Circuits		2	2	2	2
Refrigerant Charge	(lb)	174.2/183.0	183.0/183.0	180.8/180.8	178.6/178.6
	(kg)	79/83	83/83	82/82	81/81
Oil Charge	(qt)	10.5/12.4	12.4/12.4	12.4/12.4	12.4/12.4
	(L)	9.9/11.7	11.7/11.7	11.7/11.7	11.7/11.7

1. Data containing information on two circuits is shown as circuit 1/circuit 2.
2. Flow limits are for water only.



General Data

Table 5. General Data – RTUD – 60 Hz

Size		80	90	100	110	120	130
Compressor							
Quantity		2	2	2	2	2	2
Evaporator							
2 Pass Arrangement							
Water Conn. Size	NPS	4	4	4	5	5	5
	mm	100	100	100	125	125	125
Water Storage	(gal)	9.8	10.6	12.0	14.0	15.3	15.3
	(L)	37.1	40.2	45.3	53.0	58.0	58.0
Minimum Flow	(gpm)	77	79	91	99	111	111
	(L/s)	4.9	5.0	5.7	6.2	7.0	7.0
Maximum Flow	(gpm)	281	291	335	363	408	408
	(L/s)	17.7	21.2	23.0	25.8	28.3	30.0
3 Pass Arrangement							
Water Conn. Size	NPS	3	3	3	4	4	4
	mm	80	80	80	100	100	100
Water Storage	(gal)	9.5	10.3	11.6	13.7	15.1	15.1
	(L)	36.0	39.0	44.0	52.0	57.0	57.0
Minimum Flow	(gpm)	51	53	61	66	74	74
	(L/s)	3.2	3.3	3.8	4.2	4.7	4.7
Maximum Flow	(gpm)	187	194	224	242	272	272
	(L/s)	11.8	12.2	14.1	15.3	17.2	17.2
General Unit							
Refrigerant Type		R-134a	R-134a	R-134a	R-134a	R-134a	R-134a
# Refrig Circuits		2	2	2	2	2	2
Refrigerant Charge	(lb)	50/50	49/49	47/47	65/65	64/64	64/64
	(kg)	22.7/22.7	22.2/22.2	21.3/21.3	29.5/29.5	29.0/29.0	29.0/29.0
Oil Charge	(qt)	7.2/7.2	7.2/7.2	7.2/10.5	10.5/10.5	10.5/10.5	10.5/10.5
	(L)	6.8/6.8	6.8/6.8	6.8/9.9	9.9/9.9	9.9/9.9	9.9/9.9
Discharge Connection Diameter	(inch)	2.1	2.1	2.1	2.6	2.6	2.6
Liquid Connection Diameter	(inch)	1.1	1.1	1.1	1.4	1.4	1.4

1. Data containing information on two circuits is shown as circuit 1/circuit 2.
2. Flow limits are for water only.

Table 6. General Data – RTUD – 60 Hz (continued)

Size		150	160	180	200	220	250
Compressor							
Quantity		2	2	2	2	2	2
Evaporator							
2 Pass Arrangement							
Water Conn. Size	NPS	5	5	5	5	5	5
	mm	125	125	125	125	125	125
Water Storage	(gal)	16.5	19.2	19.2	20.3	22.3	24.2
	(L)	62.4	72.6	72.6	77.0	84.5	91.5
Minimum Flow	(gpm)	122	140	140	151	169	186
	(L/s)	7.7	8.8	8.8	9.5	10.7	11.7
Maximum Flow	(gpm)	447	514	514	553	620	681
	(L/s)	28.2	32.4	32.4	34.9	39.1	43.0
3 Pass Arrangement							
Water Conn. Size	NPS	4	4	4	4	4	4
	mm	100	100	100	100	100	100
Water Storage	(gal)	16.1	18.8	18.8	20.0	22.0	23.8
	(L)	61.0	71.2	71.2	75.6	83.2	90.1
Minimum Flow	(gpm)	81	94	94	100	112	124
	(L/s)	5.1	5.9	5.9	6.3	7.1	7.8
Maximum Flow	(gpm)	298	343	343	368	413	454
	(L/s)	18.8	21.6	21.6	23.2	26.1	28.6
General Unit							
Refrigerant Type		R-134a	R-134a	R-134a	R-134a	R-134a	R-134a
# Refrig Circuits		2	2	2	2	2	2
Recommended Refrigerant Charge ^{1, 3}	(lb)	62/62	66/66	66/66	66/66	63/63	61/61
	(kg)	28.1/28.1	29.9/29.9	29.9/29.9	29.9/29.9	28.6/28.6	27.7/27.7
Oil Charge ¹	(qt)	10.5/10.5	10.5/10.5	10.5/12.4	12.4/12.4	12.4/12.4	12.4/12.4
	(L)	9.9/9.9	9.9/9.9	9.9/11.7	11.7/11.7	11.7/11.7	11.7/11.7
Discharge Connection Diameter	(inch)	2.6	3.1	3.1	3.1	3.1	3.1
Liquid Connection Diameter	(inch)	1.4	1.4	1.4	1.4	1.4	1.6

1. Data containing information on two circuits is shown as circuit 1/circuit 2.

2. Flow limits are for water only.

3. Condenserless chiller is not factory charged, the refrigerant must be purchased and charged in the field.



General Data

Table 7. General Data – Condenser by Trane – 60 Hz

Size		80	90	100	110	120	130
Condenser							
Condenser Quantity		1	1	1	1	1	1
Fins/Inch		12	10	10	12	8	10
Coil Length	(inch)	162	216	216	216	270	270
	(mm)	4115	5486	5486	5486	6858	6858
Coil Width	(inch)	85	85	85	85	85	85
	(mm)	2159	2159	2159	2159	2159	2159
Number of Rows		3	3	4	4	4	4
Condenser Fans							
Fan Quantity		6	8	8	8	10	10
Diameter	(inch)	30	30	30	30	30	30
	(mm)	762	762	762	762	762	762
Nominal RPM	(rpm)	850	850	850	850	850	850
Air Flow	(cfm)	56,646	78,280	72,248	69,280	94,490	90,310
Tip Speed	(fpm)	6676	6676	6676	6676	6676	6676
Motor HP	(hp)	1.5	1.5	1.5	1.5	1.5	1.5
General							
Recommended Refrigerant Charge ¹	(lbs)	40/40	52/52	68/68	68/68	85/85	85/85
	(kg)	18.1/18.1	23.6/23.6	30.8/30.8	30.8/30.8	38.6/38.6	38.6/38.6
Discharge/Liquid Connection Diameters	(inch)	2.1	2.1	2.1	2.1	2.1	2.1
	(mm)	54	54	54	54	54	54

1. Data containing information on two circuits is shown as circuit 1/circuit 2.

2. Condenser is not factory charged, the refrigerant must be purchased and charged in the field.

Table 8. General Data – Condenser by Trane – 60 Hz (continued)

Size		150	160	180	200	220	250
Condenser							
Condenser Quantity		2	2	2	2	2	2
Fins/Inch ¹		8/12	12/12	12/8	8/8	8/10	10/10
Coil Length ¹	(inch)	162/162	162/162	162/216	216/216	216/216	216/216
		4115/4115	4115/4115	4115/5486	5486/5486	5486/5486	5486/5486
Coil Width ¹	(inch)	85/85	85/85	85/85	85/85	85/85	85/85
		2159/2159	2159/2159	2159/2159	2159/2159	2159/2159	2159/2159
Number of Rows		3/3	3/3	3/3	3/3	3/4	4/4
Condenser Fans							
Fan Quantity ¹		6/6	6/6	6/8	8/8	8/8	8/8
Diameter	(inch)	30	30	30	30	30	30
Nominal RPM	(rpm)	850	850	850	850	850	850
Air Flow ¹	(cfm)	60,954/ 56,646	56,646/ 56,646	56,646/ 81,272	81,272/ 81,272	81,272/ 72,248	72,248/ 72,248
Tip Speed	(fpm)	6676	6676	6676	6676	6676	6676
Motor HP	(hp)	1.5	1.5	1.5	1.5	1.5	1.5
General							
Recommended Refrigerant Charge ^{2, 3}	(lbs)	76/76	76/76	76/101	101/101	101/134	134/134
	(kg)	34.5/34.5	34.5/34.5	34.5/45.8	45.8/45.8	45.8/60.8	60.8/60.8
Discharge/Liquid Connection Diameters	(inch)	2.125	2.125	2.125	2.125	2.125	2.125
	(mm)	54	54	54	54	54	54

1. Data containing information on two condensers is shown as cond 1/cond 2.

2. Data containing information on two circuits is shown as circuit 1/circuit 2.

3. Condenser is not factory charged, the refrigerant must be purchased and charged in the field.



General Data

Table 9. General Data – RTWD – 50 Hz – standard efficiency

Size		70	80	90	100	110	120	130	140	150
Compressor										
Quantity		2	2	2	2	2	2	2	2	2
Evaporator										
2 Pass Arrangement										
Water Conn. Size	NPS	4	4	4	4	4	5	5	5	5
	(mm)	100	100	100	100	100	125	125	125	125
Water Storage	(gal)	11.2	12.6	14.0	14.0	14.0	16.2	17.7	17.7	19.1
	(L)	42.2	47.6	53.0	53.0	53.0	61.5	66.8	66.8	72.2
Minimum Flow	(gpm)	77	89	101	101	101	110	122	122	133
	(L/s)	4.9	5.6	6.3	6.3	6.3	6.9	7.6	7.6	8.4
Maximum Flow	(gpm)	281	324	368	368	368	400	444	444	487
	(L/s)	17.8	20.5	23.2	23.2	23.2	25.3	28.0	28.0	30.8
3 Pass Arrangement										
Water Conn. Size	NPS	3	3	3	3	3	4	4	4	4
	(mm)	80	80	80	80	80	100	100	100	100
Water Storage	(gal)	11.2	12.6	14.0	14.0	14.0	16.2	17.7	17.7	19.1
	(L)	42.2	47.6	53.0	53.0	53.0	61.5	66.8	66.8	72.2
Minimum Flow	(gpm)	52	59	67	67	67	73	81	81	89
	(L/s)	3.2	3.7	4.2	4.2	4.2	4.6	5.1	5.1	5.6
Maximum Flow	(gpm)	187	216	244	244	244	266	295	295	324
	(L/s)	11.8	13.6	15.5	15.5	15.5	16.8	18.6	18.6	20.5
Condenser										
Water Conn. Size	NPS	5	5	5	5	5	5	5	5	5
	(mm)	125	125	125	125	125	125	125	125	125
Water Storage	(gal)	12.4	14.2	16.0	16.9	16.9	18.5	20.9	20.9	22.4
	(L)	46.8	53.6	60.4	63.8	63.8	70.1	79.2	79.2	84.8
Minimum Flow	(gpm)	83	99	115	124	124	135	156	156	170
	(L/s)	5.2	6.2	7.3	7.8	7.8	8.5	9.8	9.8	10.7
Maximum Flow	(gpm)	301	361	421	451	451	491	571	571	622
	(L/s)	19.0	22.8	26.6	28.5	28.5	31.0	36.1	36.1	39.3
General Unit										
Refrigerant Type		R-134a	R-134a	R-134a	R-134a	R-134a	R-134a	R-134a	R-134a	R-134a
# Refrig Circuits		2	2	2	2	2	2	2	2	2
Refrigerant Charge	(lb)	114.6/ 114.6	112.4/ 112.4	110.2/ 110.2	110.2/ 112.4	112.4/ 112.4	130.1/ 130.1	127.9/ 127.9	127.9/ 132.3	130.1/ 130.1
	(kg)	52/52	51/51	50/50	50/51	51/51	59/59	58/58	58/60	59/59
Oil Charge	(qt)	7.2/7.2	7.2/7.2	7.2/7.2	7.2/10.5	10.5/10.5	10.5/10.5	10.5/10.5	10.5/10.5	10.5/10.5
	(L)	6.8/6.8	6.8/6.8	6.8/6.8	6.8/9.9	9.9/9.9	9.9/9.9	9.9/9.9	9.9/9.9	9.9/9.9

1. Data containing information on two circuits is shown as circuit 1/circuit 2.
2. Flow limits are for water only.

Table 10. General Data – RTWD – 50 Hz – high efficiency

Size		60	70	80	90	100	110	120
Compressor								
	Quantity	2	2	2	2	2	2	2
Evaporator								
2 Pass Arrangement								
Water Conn. Size	NPS	4	4	4	5	5	5	5
	(mm)	100	100	100	125	125	125	125
Water Storage	(gal)	9.8	10.6	11.9	15.3	15.3	16.4	17.3
	(L)	37.0	40.2	45.2	57.9	57.9	62.3	65.4
Minimum Flow	(gpm)	72	80	92	112	112	123	130
	(L/s)	4.5	5.0	5.8	7.0	7.0	7.7	8.2
Maximum Flow	(gpm)	263	291	336	408	408	448	476
	(L/s)	16.6	18.4	21.2	25.8	25.8	28.3	30.0
3 Pass Arrangement								
Water Conn. Size	NPS	3	3	3	4	4	4	4
	(mm)	80	80	80	100	100	100	100
Water Storage	(gal)	9.8	10.6	11.9	15.3	15.3	16.4	17.3
	(L)	37.0	40.2	45.2	57.9	57.9	62.3	65.4
Minimum Flow	(gpm)	48	53	61	75	75	82	87
	(L/s)	3.0	3.3	3.9	4.7	4.7	5.1	5.5
Maximum Flow	(gpm)	175	193	223	271	271	298	316
	(L/s)	11.1	12.2	14.1	17.2	17.2	18.8	20.0
Condenser								
Water Conn. Size	NPS	5	5	5	5	5	5	5
	(mm)	125	125	125	125	125	125	125
Water Storage	(gal)	11.9	11.9	13.8	15.3	16.6	16.6	18.0
	(L)	45.1	45.1	52.2	58.1	62.7	62.7	68.3
Minimum Flow	(gpm)	87	87	106	117	130	130	145
	(L/s)	5.5	5.5	6.7	7.4	8.1	8.1	9.1
Maximum Flow	(gpm)	317	317	387	427	473	473	528
	(L/s)	20.0	20.0	24.5	27.0	29.9	29.9	33.3
General Unit								
Refrigerant Type		R-134a	R-134a	R-134a	R-134a	R-134a	R-134a	R-134a
# Refrig Circuits		2	2	2	2	2	2	2
Refrigerant Charge	(lb)	99.2/99.2	99.2/99.2	97/97	121.3/121.3	121.3/123.5	121.3/121.3	119/119
	(kg)	45/45	45/45	44/44	55/55	55/56	55/55	54/54
Oil Charge	(qt)	7.2/7.2	7.2/7.2	7.2/7.2	7.2/7.2	7.2/10.5	10.5/10.5	10.5/10.5
	(L)	6.8/6.8	6.8/6.8	6.8/6.8	6.8/6.8	6.8/9.9	9.9/9.9	9.9/9.9

1. Data containing information on two circuits is shown as circuit 1/circuit 2.
2. Flow limits are for water only.



General Data

Table 11. General Data – RTWD – 50 Hz – high efficiency (continued)

Size		130	140	160	180	200	220	250
Compressor								
	Quantity	2	2	2	2	2	2	2
Evaporator								
2 Pass Arrangement								
Water Conn. Size	NPS	5	5	5	5	6	6	6
	(mm)	125	125	125	125	150	150	150
Water Storage	(gal)	19.2	20.3	22.3	24.2	28.6	29.9	31.8
	(L)	72.6	77.0	84.5	91.5	108.3	113.3	120.3
Minimum Flow	(gpm)	141	152	170	187	211	224	240
	(L/s)	8.9	9.5	10.7	11.8	13.3	14.1	15.1
Maximum Flow	(gpm)	515	554	621	683	773	817	879
	(L/s)	32.5	35.0	39.2	43.1	48.8	51.6	55.5
3 Pass Arrangement								
Water Conn. Size	NPS	4	4	4	4	4	4	4
	(mm)	100	100	100	100	100	100	100
Water Storage	(gal)	18.8	20.0	22.0	23.8	27.9	29.2	31.0
	(L)	71.2	75.6	83.2	90.1	105.5	110.5	117.5
Minimum Flow	(gpm)	94	101	114	125	141	149	160
	(L/s)	5.9	6.4	7.1	7.8	8.9	9.4	10.1
Maximum Flow	(gpm)	344	370	415	456	515	545	586
	(L/s)	21.7	23.3	26.2	28.7	32.5	34.4	37.0
Condenser								
Water Conn. Size	NPS	6	6	6	6	6	6	6
	(mm)	150	150	150	150	150	150	150
Water Storage	(gal)	21.6	22.9	24.6	26.2	31.1	31.1	35.2
	(L)	81.7	86.8	93.0	99.2	117.8	117.8	133.3
Minimum Flow	(gpm)	160	173	190	206	245	245	286
	(L/s)	10.0	10.9	12.0	13.0	15.4	15.4	18.0
Maximum Flow	(gpm)	583	634	694	755	895	895	1046
	(L/s)	36.8	40.0	43.8	47.6	56.5	56.5	66.1
General Unit								
Refrigerant Type		R-134a	R-134a	R-134a	R-134a	R-134a	R-134a	R-134a
# Refrig Circuits		2	2	2	2	2	2	2
Refrigerant Charge	(lb)	134.5/134.5	132.3/136.7	134.5/134.5	132.3/136.7	178.6/178.6	176.4/183.0	180.8/180.8
	(kg)	61/61	60/62	61/61	60/62	81/81	80/83	82/82
Oil Charge	(qt)	10.5/10.5	10.5/10.5	10.5/10.5	10.5/12.4	12.4/12.4	12.4/12.4	12.4/12.4
	(L)	9.9/9.9	9.9/9.9	9.9/9.9	9.9/11.7	11.7/11.7	11.7/11.7	11.7/11.7

1. Data containing information on two circuits is shown as circuit 1/circuit 2.
2. Flow limits are for water only.

Table 12. General Data – RTWD – 50 Hz – premium efficiency

Size		160	180	200
Compressor				
	Quantity	2	2	2
Evaporator				
2 Pass Arrangement				
Water Conn. Size	NPS	6	6	6
	(mm)	150	150	150
Water Storage	(gal)	29.3	31.3	31.8
	(L)	110.9	118.3	120.3
Minimum Flow	(gpm)	187	202	240
	(L/s)	11.8	12.7	15.1
Maximum Flow	(gpm)	683	739	879
	(L/s)	43.1	46.7	55.5
3 Pass Arrangement				
Water Conn. Size	NPS	4	4	4
	(mm)	100	100	100
Water Storage	(gal)	28.6	30.6	31.0
	(L)	108.3	115.7	117.5
Minimum Flow	(gpm)	125	135	160
	(L/s)	7.8	8.5	10.1
Maximum Flow	(gpm)	455	492	586
	(L/s)	28.7	31.1	37.0
Condenser				
Water Conn. Size	NPS	6	6	6
	(mm)	150	150	150
Water Storage	(gal)	30.0	34.5	39.2
	(L)	113.4	130.6	148.3
Minimum Flow	(gpm)	206	245	326
	(L/s)	13.0	15.4	20.5
Maximum Flow	(gpm)	754	895	1192
	(L/s)	47.6	56.5	75.3
General Unit				
Refrigerant Type		R-134a	R-134a	R-134a
# Refrig Circuits		2	2	2
Refrigerant Charge	(lb)	176.4/176.4	174.2/178.6	176.4/174.2
	(kg)	80/80	79/81	80/79
Oil Charge	(qt)	10.5/10.5	10.5/12.4	12.4/12.4
	(L)	9.9/9.9	9.9/11.7	11.7/11.7

1. Data containing information on two circuits is shown as circuit 1/circuit 2.
2. Flow limits are for water only.



Performance Data

Table 13. Performance Data - RTWD - 60 Hz - standard efficiency - I-P units

Evaporator Leaving Water Temp (°F)	Unit Size	Condenser Entering Water Temperature (°F)												
		75				85				95				
		Tons	kW	Input	EER	kW/ton	Tons	kW	Input	EER	kW/ton	Tons	kW	Input
40	80	75.6	49.6	18.2	0.661	70.8	56.0	15.1	0.796	65.7	63.4	12.4	0.971	
	90	86.4	56.5	18.2	0.659	81.3	63.7	15.2	0.789	75.9	72.2	12.6	0.956	
	100	98.8	65.1	18.1	0.663	93.0	73.8	15.0	0.798	86.7	83.9	12.3	0.973	
	110	112.0	73.8	18.1	0.662	105.2	83.8	15.0	0.800	98.1	95.6	12.3	0.979	
	120	122.7	79.6	18.4	0.652	115.3	90.2	15.3	0.786	107.5	102.7	12.5	0.959	
	130	130.5	85.0	18.3	0.654	122.7	96.3	15.2	0.788	114.4	109.5	12.5	0.960	
	140	142.5	93.3	18.2	0.658	134.0	105.5	15.2	0.790	125.1	119.8	12.5	0.961	
42	80	78.7	49.9	18.8	0.640	73.8	56.2	15.6	0.768	68.5	63.6	12.8	0.935	
	90	89.7	56.9	18.8	0.639	84.6	64.0	15.7	0.762	79.0	72.4	13.0	0.921	
	100	102.7	65.5	18.7	0.642	96.7	74.1	15.6	0.770	90.3	84.1	12.8	0.936	
	110	116.3	74.2	18.7	0.641	109.4	84.2	15.5	0.773	102.1	95.9	12.7	0.943	
	120	127.6	80.1	19.0	0.631	120.0	90.6	15.8	0.758	112.0	103.0	13.0	0.923	
	130	135.7	85.5	19.0	0.633	127.7	96.7	15.8	0.761	119.2	109.8	13.0	0.924	
	140	148.2	93.9	18.9	0.636	139.5	106.0	15.7	0.763	130.3	120.1	13.0	0.925	
44	80	81.8	50.3	19.4	0.620	76.7	56.6	16.2	0.742	71.3	63.8	13.3	0.901	
	90	93.2	57.3	19.4	0.620	87.9	64.4	16.3	0.737	82.2	72.6	13.5	0.888	
	100	106.6	66.0	19.3	0.622	100.5	74.4	16.1	0.745	93.9	84.3	13.3	0.902	
	110	120.8	74.7	19.3	0.621	113.7	84.5	16.1	0.747	106.3	96.1	13.2	0.908	
	120	132.6	80.6	19.6	0.611	124.9	91.1	16.4	0.733	116.6	103.4	13.5	0.890	
	130	141.0	86.1	19.6	0.614	132.8	97.2	16.3	0.735	124.2	110.2	13.5	0.891	
	140	154.1	94.6	19.5	0.616	145.2	106.6	16.3	0.737	135.7	120.5	13.5	0.891	

Performance Data

Table 13. Performance Data - RTWD - 60 Hz - standard efficiency - I-P units

Evaporator Leaving Water Temp (°F)	Unit Size	Condenser Entering Water Temperature (°F)											
		75				85				95			
		Tons	kW			Tons	kW			Tons	kW		
		Input	EER	kW/ton	Input	EER	kW/ton	Input	EER	kW/ton	Input	EER	kW/ton
46	80	85.0	50.7	20.0	0.601	79.8	56.9	16.7	0.718	74.2	64.1	13.8	0.869
	90	96.7	57.8	19.9	0.602	91.2	64.7	16.8	0.714	85.4	72.8	14.0	0.857
	100	110.7	66.4	19.9	0.604	104.4	74.8	16.7	0.721	97.6	84.6	13.8	0.871
	110	125.3	75.2	19.9	0.603	118.1	84.9	16.6	0.722	110.5	96.5	13.7	0.876
	120	137.7	81.2	20.2	0.593	129.8	91.6	16.9	0.709	121.4	103.8	14.0	0.858
	130	146.5	86.8	20.2	0.595	138.1	97.8	16.9	0.711	129.2	110.6	14.0	0.860
	140	160.1	95.3	20.1	0.598	150.9	107.2	16.8	0.713	141.2	120.9	14.0	0.859
48	80	88.2	51.1	20.6	0.584	82.9	57.2	17.3	0.695	77.2	64.4	14.3	0.839
	90	100.3	58.3	20.5	0.585	94.7	65.1	17.3	0.692	88.8	73.1	14.5	0.828
	100	114.8	66.9	20.5	0.587	108.3	75.2	17.2	0.698	101.5	85.0	14.3	0.841
	110	130.0	75.7	20.5	0.585	122.6	85.4	17.2	0.700	114.8	96.8	14.2	0.846
	120	143.0	81.9	20.8	0.576	134.8	92.2	17.5	0.687	126.3	104.2	14.5	0.829
	130	152.0	87.5	20.8	0.578	143.4	98.4	17.4	0.689	134.4	111.2	14.5	0.830
	140	166.2	96.1	20.7	0.580	156.8	107.8	17.4	0.690	146.8	121.4	14.5	0.830
50	80	91.5	51.5	21.1	0.568	86.1	57.6	17.8	0.674	80.3	64.7	14.8	0.811
	90	104.0	58.8	21.1	0.569	98.3	65.6	17.9	0.672	92.2	73.5	15.0	0.802
	100	119.0	67.5	21.0	0.570	112.4	75.7	17.7	0.677	105.4	85.3	14.8	0.813
	110	134.7	76.3	21.1	0.569	127.2	85.9	17.7	0.678	119.3	97.2	14.7	0.818
	120	148.3	82.6	21.4	0.560	140.0	92.8	18.0	0.666	131.2	104.7	15.0	0.801
	130	157.8	88.3	21.3	0.562	149.0	99.1	18.0	0.668	139.6	111.7	14.9	0.803
	140	172.5	96.9	21.3	0.564	162.9	108.5	17.9	0.669	152.6	122.0	15.0	0.802

1. Rated in accordance with AHRI Standard 550/590, based on evaporator temperature drop of 10°F, 3 gpm/ton on the condenser, evaporator fouling factor of 0.0001°F·ft²·h/Btu and condenser fouling factor of 0.00025°F·ft²·h/Btu.
2. Performance is based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors only.
5. EER – Energy Efficiency Ratio (Btu/W·h). Power inputs include compressors and control power.
6. Interpolation between points is permissible. Extrapolation is not permitted.



Performance Data

Table 14. Performance Data - RTWD - 60 Hz - high efficiency - I-P units

Evaporator Leaving Water Temp (°F)	Unit Size	Condenser Entering Water Temperature (°F)											
		75				85				95			
		Tons	kW input	EER	kW/ton	Tons	kW input	EER	kW/ton	Tons	kW input	EER	kW/ton
38	80	77.1	48.5	18.9	0.634	72.2	54.7	15.7	0.763	66.9	61.9	12.9	0.931
	90	89.9	56.0	19.1	0.627	84.5	63.0	16.0	0.750	78.7	71.2	13.2	0.910
	100	103.5	64.1	19.2	0.624	97.1	72.5	16.0	0.750	90.4	82.3	13.1	0.915
	110	117.3	72.3	19.4	0.620	110.0	82.0	16.0	0.749	102.3	93.4	13.1	0.917
	120	124.9	77.1	19.3	0.621	117.2	87.4	16.0	0.749	109.1	99.5	13.1	0.916
	130	132.6	81.7	19.4	0.619	124.6	92.5	16.1	0.746	116.1	105.3	13.2	0.911
	150	144.6	90.3	19.1	0.628	135.9	102.3	15.9	0.756	126.8	116.3	13.0	0.921
	160	157.7	98.3	19.2	0.626	148.4	111.2	16.0	0.752	138.4	126.4	13.1	0.916
	180	172.1	106.1	19.4	0.619	162.0	119.7	16.2	0.741	151.4	135.8	13.3	0.900
	200	187.0	113.8	19.7	0.610	176.3	128.1	16.5	0.729	165.0	145.1	13.6	0.882
	220	204.7	128.5	19.1	0.630	193.0	144.9	15.9	0.753	180.7	164.2	13.2	0.911
250	225.0	141.5	19.0	0.631	212.0	159.6	15.9	0.754	198.4	180.8	13.1	0.913	
40	80	80.3	48.8	19.6	0.613	75.3	54.9	16.3	0.735	69.8	62.1	13.4	0.895
	90	93.6	56.4	19.8	0.607	88.0	63.3	16.6	0.724	82.0	71.4	13.7	0.875
	100	107.8	64.5	19.9	0.603	101.2	72.8	16.6	0.723	94.3	82.5	13.7	0.879
	110	122.1	72.7	20.0	0.599	114.7	82.3	16.6	0.721	106.8	93.6	13.6	0.880
	120	130.0	77.5	20.0	0.599	122.2	87.7	16.6	0.721	113.9	99.7	13.7	0.879
	130	138.1	82.1	20.1	0.598	129.9	92.8	16.7	0.718	121.1	105.5	13.7	0.874
	150	150.5	90.8	19.8	0.606	141.6	102.6	16.5	0.727	132.2	116.5	13.6	0.884
	160	164.2	98.8	19.9	0.604	154.6	111.6	16.6	0.724	144.4	126.6	13.6	0.879
	180	179.1	106.7	20.1	0.598	168.8	120.2	16.8	0.714	157.9	136.1	13.9	0.865
	200	194.6	114.5	20.3	0.590	183.6	128.7	17.1	0.703	172.0	145.5	14.1	0.848
	220	213.0	129.3	19.7	0.609	201.0	145.5	16.5	0.726	188.4	164.6	13.7	0.876
250	234.2	142.4	19.7	0.610	220.9	160.2	16.5	0.727	206.9	181.2	13.7	0.878	
42	80	83.5	49.1	20.2	0.593	78.4	55.2	16.9	0.709	72.8	62.3	13.9	0.861
	90	97.3	56.9	20.4	0.588	91.6	63.7	17.2	0.699	85.5	71.6	14.2	0.842
	100	112.1	65.0	20.6	0.583	105.4	73.1	17.2	0.697	98.3	82.7	14.2	0.845
	110	127.0	73.2	20.7	0.580	119.4	82.6	17.3	0.695	111.4	93.8	14.2	0.846
	120	135.3	78.0	20.7	0.580	127.2	88.0	17.3	0.695	118.7	99.9	14.2	0.845
	130	143.7	82.6	20.8	0.578	135.3	93.2	17.3	0.692	126.3	105.7	14.3	0.840
	150	156.6	91.3	20.5	0.586	147.5	103.0	17.1	0.701	137.8	116.7	14.1	0.850
	160	170.8	99.4	20.5	0.584	161.0	112.0	17.2	0.698	150.5	126.8	14.2	0.845
	180	186.3	107.4	20.7	0.578	175.8	120.7	17.4	0.689	164.5	136.5	14.4	0.832
	200	202.4	115.3	21.0	0.572	191.1	129.3	17.7	0.679	179.2	146.0	14.7	0.817
	220	221.5	130.2	20.3	0.590	209.2	146.2	17.1	0.701	196.3	165.1	14.2	0.843
250	243.6	143.4	20.3	0.590	230.0	160.9	17.1	0.702	215.6	181.7	14.2	0.845	

Performance Data

Table 14. Performance Data - RTWD - 60 Hz - high efficiency - I-P units

Evaporator Leaving Water Temp (°F)	Unit Size	Condenser Entering Water Temperature (°F)											
		75				85				95			
		Tons	kW input	EER	kW/ton	Tons	kW input	EER	kW/ton	Tons	kW input	EER	kW/ton
44	80	86.9	49.5	20.9	0.574	81.6	55.5	17.5	0.685	75.9	62.5	14.5	0.829
	90	101.2	57.3	21.0	0.571	95.3	64.0	17.7	0.676	89.1	71.9	14.8	0.812
	100	116.6	65.5	21.2	0.565	109.8	73.5	17.8	0.673	102.5	83.0	14.8	0.813
	110	132.1	73.7	21.4	0.561	124.3	83.0	17.9	0.671	116.1	94.1	14.7	0.814
	120	140.7	78.5	21.4	0.561	132.5	88.4	17.9	0.671	123.8	100.2	14.8	0.813
	130	149.4	83.2	21.5	0.559	140.8	93.6	18.0	0.668	131.6	106.0	14.9	0.808
	150	162.8	91.9	21.2	0.567	153.5	103.4	17.7	0.677	143.6	117.0	14.7	0.818
	160	177.6	100.0	21.2	0.565	167.6	112.5	17.8	0.674	156.7	127.1	14.8	0.813
	180	193.7	108.1	21.4	0.560	182.9	121.3	18.0	0.665	171.4	136.9	15.0	0.801
	200	210.4	116.2	21.6	0.554	198.8	130.0	18.3	0.656	186.6	146.6	15.2	0.788
	220	230.2	131.2	21.0	0.572	217.6	147.0	17.7	0.677	204.3	165.7	14.8	0.813
250	253.2	144.4	21.0	0.572	239.2	161.8	17.7	0.678	224.5	182.3	14.8	0.814	
46	80	90.3	49.9	21.5	0.557	84.8	55.8	18.1	0.662	79.0	62.7	15.0	0.799
	90	105.2	57.9	21.7	0.554	99.1	64.5	18.3	0.654	92.7	72.2	15.3	0.783
	100	121.2	66.0	21.9	0.548	114.2	73.9	18.4	0.651	106.7	83.3	15.3	0.784
	110	137.2	74.3	22.1	0.544	129.3	83.5	18.5	0.649	120.9	94.4	15.3	0.785
	120	146.2	79.1	22.1	0.544	137.8	88.9	18.5	0.648	128.9	100.5	15.3	0.783
	130	155.3	83.8	22.1	0.542	146.5	94.1	18.6	0.645	137.1	106.3	15.4	0.778
	150	169.1	92.5	21.8	0.549	159.6	103.9	18.4	0.654	149.5	117.3	15.2	0.788
	160	184.5	100.6	21.9	0.548	174.3	113.0	18.4	0.651	163.1	127.4	15.3	0.783
	180	201.2	108.9	22.1	0.543	190.2	121.9	18.7	0.643	178.4	137.4	15.5	0.772
	200	218.6	117.2	22.3	0.538	206.7	130.8	18.9	0.635	194.2	147.2	15.8	0.760
	220	239.0	132.2	21.6	0.555	226.1	147.8	18.3	0.655	212.5	166.3	15.3	0.784
250	263.1	145.5	21.6	0.555	248.8	162.6	18.3	0.655	233.7	182.9	15.3	0.784	



Performance Data

Table 14. Performance Data - RTWD - 60 Hz - high efficiency - I-P units

Evaporator Leaving Water Temp (°F)	Unit Size	Condenser Entering Water Temperature (°F)											
		75				85				95			
		Tons	kW input	EER	kW/ton	Tons	kW input	EER	kW/ton	Tons	kW input	EER	kW/ton
48	80	93.7	50.3	22.2	0.541	88.2	56.1	18.7	0.641	82.2	63.0	15.6	0.771
	90	109.2	58.4	22.3	0.538	103.0	64.9	18.9	0.634	96.4	72.5	15.9	0.756
	100	125.9	66.5	22.6	0.532	118.7	74.4	19.0	0.630	111.1	83.6	15.9	0.756
	110	142.5	74.8	22.7	0.528	134.4	83.9	19.1	0.628	125.8	94.8	15.9	0.757
	120	151.8	79.7	22.7	0.528	143.3	89.4	19.1	0.627	134.2	100.9	15.9	0.755
	130	161.4	84.4	22.8	0.526	152.3	94.6	19.2	0.624	142.7	106.7	16.0	0.750
	150	175.6	93.2	22.5	0.533	165.9	104.5	19.0	0.632	155.5	117.7	15.8	0.759
	160	191.5	101.3	22.6	0.531	181.1	113.5	19.1	0.629	169.7	127.8	15.9	0.755
	180	208.9	109.7	22.8	0.527	197.6	122.6	19.3	0.623	185.5	137.9	16.1	0.745
	200	226.9	118.2	23.0	0.523	214.8	131.7	19.5	0.615	201.9	147.8	16.3	0.734
	220	248.1	133.3	22.3	0.539	234.9	148.7	18.9	0.635	221.0	167.0	15.8	0.758
250	273.2	146.8	22.3	0.539	258.5	163.6	18.9	0.635	243.0	183.6	15.8	0.757	
50	80	97.3	50.7	22.8	0.525	91.6	56.5	19.3	0.621	85.5	63.3	16.1	0.744
	90	113.3	59.0	22.9	0.524	107.0	65.4	19.5	0.615	100.3	72.9	16.4	0.731
	100	130.6	67.1	23.2	0.517	123.3	74.9	19.7	0.610	115.6	84.0	16.4	0.730
	110	147.8	75.5	23.4	0.513	139.6	84.5	19.7	0.608	130.9	95.2	16.4	0.731
	120	157.6	80.4	23.4	0.512	148.9	89.9	19.8	0.607	139.6	101.3	16.5	0.729
	130	167.6	85.1	23.5	0.510	158.3	95.2	19.9	0.604	148.4	107.1	16.6	0.724
	150	182.2	93.9	23.2	0.517	172.4	105.0	19.6	0.612	161.7	118.1	16.4	0.733
	160	198.7	102.0	23.3	0.515	188.1	114.1	19.7	0.609	176.4	128.2	16.5	0.729
	180	216.8	110.6	23.4	0.512	205.3	123.4	19.9	0.603	192.9	138.5	16.7	0.720
	200	235.5	119.3	23.6	0.508	223.1	132.6	20.1	0.596	209.9	148.6	16.9	0.710
	220	257.3	134.5	22.9	0.524	243.8	149.7	19.5	0.615	229.6	167.8	16.4	0.732
250	283.5	148.0	22.9	0.524	268.4	164.6	19.5	0.615	252.6	184.4	16.4	0.732	

1. Rated in accordance with AHRI Standard 550/590, based on evaporator temperature drop of 10°F, 3 gpm/ton on the condenser, evaporator fouling factor of 0.0001°F·ft²·h/Btu and condenser fouling factor of 0.00025°F·ft²·h/Btu.
2. Performance is based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors only.
5. EER – Energy Efficiency Ratio (Btu/W·h). Power inputs include compressors and control power.
6. Interpolation between points is permissible. Extrapolation is not permitted.

Table 15. Performance Data - RTWD - 60 Hz - premium efficiency - I-P units

Evaporator Leaving Water Temp (°F)	Unit Size	Condenser Entering Water Temperature (°F)											
		75				85				95			
		Tons	kW input	EER	kW/ton	Tons	kW input	EER	kW/ton	Tons	kW input	EER	kW/ton
38	150	149.9	88.3	20.3	0.592	140.7	99.9	16.8	0.713	131.0	113.5	13.8	0.870
	160	163.7	96.5	20.3	0.592	153.8	109.1	16.9	0.712	143.3	123.8	13.8	0.867
	180	178.0	104.2	20.4	0.588	167.4	117.4	17.1	0.704	156.2	133.1	14.0	0.854
	200	193.1	112.3	20.6	0.583	181.9	126.2	17.2	0.696	170.0	142.8	14.2	0.842
40	150	156.3	88.8	21.0	0.571	146.9	100.2	17.5	0.685	136.9	113.7	14.4	0.833
	160	170.6	97.1	21.0	0.571	160.5	109.4	17.5	0.684	149.6	124.0	14.4	0.831
	180	185.5	104.8	21.2	0.567	174.6	117.8	17.7	0.677	163.1	133.3	14.6	0.820
	200	201.2	113.1	21.3	0.564	189.6	126.8	17.9	0.671	177.5	143.2	14.8	0.809
42	150	162.9	89.4	21.8	0.551	153.3	100.6	18.2	0.659	143.0	113.9	15.0	0.799
	160	177.7	97.6	21.8	0.552	167.4	109.8	18.2	0.659	156.2	124.2	15.0	0.798
	180	193.1	105.5	21.9	0.548	182.1	118.3	18.4	0.652	170.2	133.7	15.2	0.787
	200	209.5	113.9	22.0	0.546	197.6	127.4	18.6	0.647	185.1	143.7	15.4	0.778
44	150	169.6	89.9	22.5	0.533	159.8	101.0	18.9	0.635	149.2	114.1	15.6	0.768
	160	185.0	98.2	22.5	0.533	174.4	110.3	18.9	0.635	162.9	124.4	15.7	0.766
	180	201.0	106.2	22.6	0.530	189.7	118.9	19.1	0.629	177.5	134.0	15.8	0.757
	200	218.1	114.8	22.7	0.528	205.8	128.2	19.2	0.625	193.0	144.2	16.0	0.749
46	150	176.5	90.6	23.3	0.515	166.4	101.5	19.6	0.612	155.6	114.4	16.3	0.738
	160	192.4	98.9	23.3	0.516	181.6	110.8	19.6	0.612	169.8	124.8	16.3	0.737
	180	209.1	107.0	23.4	0.514	197.5	119.6	19.8	0.607	185.0	134.5	16.5	0.729
	200	226.9	115.9	23.4	0.512	214.3	129.0	19.9	0.604	201.1	144.8	16.6	0.722
48	150	183.6	91.2	24.0	0.499	173.3	102.0	20.3	0.591	162.2	114.8	16.9	0.710
	160	200.0	99.6	24.0	0.500	189.0	111.3	20.3	0.591	176.9	125.1	16.9	0.709
	180	217.4	107.9	24.1	0.498	205.5	120.3	20.4	0.587	192.7	135.0	17.1	0.703
	200	235.9	116.9	24.1	0.498	223.0	129.9	20.5	0.584	209.4	145.5	17.2	0.697
50	150	190.8	92.0	24.8	0.484	180.3	102.6	21.0	0.571	168.9	115.2	17.5	0.684
	160	207.7	100.3	24.8	0.485	196.6	111.9	21.0	0.571	184.2	125.6	17.6	0.684
	180	225.8	108.8	24.8	0.484	213.7	121.0	21.1	0.568	200.6	135.6	17.7	0.678
	200	245.1	118.1	24.8	0.483	231.9	130.8	21.2	0.566	217.9	146.3	17.8	0.673

1. Rated in accordance with AHRI Standard 550/590, based on evaporator temperature drop of 10°F, 3 gpm/ton on the condenser, evaporator fouling factor of 0.0001°F·ft²·h/Btu and condenser fouling factor of 0.00025°F·ft²·h/Btu.
2. Performance is based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors only.
5. EER – Energy Efficiency Ratio (Btu/W·h). Power inputs include compressors and control power.
6. Interpolation between points is permissible. Extrapolation is not permitted.



Performance Data

Table 16. Part Load Performance – 60 Hz – standard efficiency – I-P units

Unit Size	% Load	Tons	kW	EER	kW/ton	IPLV	
						EER	kW/ton
80	100	76.7	57.0	16.2	0.742	21.6	0.557
	75	57.5	35.2	19.6	0.611		
	50	38.4	19.3	23.9	0.502		
	25	19.2	11.6	19.9	0.602		
90	100	87.9	64.8	16.3	0.737	21.5	0.558
	75	65.9	39.7	19.9	0.603		
	50	43.9	22.3	23.7	0.508		
	25	22.0	13.4	19.7	0.609		
100	100	100.5	74.8	16.1	0.745	21.6	0.554
	75	75.3	46.4	19.5	0.615		
	50	50.2	25.6	23.6	0.509		
	25	25.1	16.7	18.0	0.538		
110	100	113.8	84.9	16.1	0.747	21.3	0.563
	75	85.3	53.0	19.3	0.622		
	50	56.9	28.7	23.8	0.505		
	25	28.4	17.3	19.7	0.609		
120	100	124.8	91.5	16.4	0.733	21.8	0.551
	75	93.6	57.5	19.5	0.614		
	50	62.4	31.1	24.1	0.498		
	25	31.2	17.6	21.3	0.563		
130	100	132.8	97.6	16.3	0.735	21.3	0.564
	75	99.6	61.5	19.4	0.618		
	50	66.4	33.6	23.7	0.506		
	25	33.2	20.9	19.1	0.630		
140	100	145.2	107.0	16.3	0.737	21.5	0.558
	75	108.9	68.6	19.0	0.630		
	50	72.6	36.1	24.1	0.497		
	25	36.3	20.9	20.8	0.576		

1. Rated in accordance with AHRI Standard 550/590, based on evaporator temperature drop of 10°F, 3 gpm/ton on the condenser, evaporator fouling factor of 0.0001°F·ft²·h/Btu and condenser fouling factor of 0.00025°F·ft²·h/Btu.
2. Performance is based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors only.
5. EER – Energy Efficiency Ratio (Btu/W·h). Power inputs include compressors and control power.

Table 17. Part Load Performance – RTWD – 60 Hz – high efficiency – I-P units

Unit Size	% Load	Tons	kW	EER	kW/ton	IPLV	
						EER	kW/ton
80	100	81.6	55.9	17.5	0.685	23.3	0.515
	75	61.2	34.5	21.3	0.563		
	50	40.8	19.0	25.8	0.465		
	25	20.4	11.5	21.3	0.562		
90	100	95.3	64.4	17.8	0.676	23.5	0.511
	75	71.5	39.5	21.7	0.552		
	50	47.7	22.2	25.8	0.466		
	25	23.8	13.2	22.0	0.555		
100	100	109.8	73.9	17.8	0.673	24.1	0.497
	75	82.3	45.7	21.6	0.556		
	50	54.9	24.9	26.5	0.453		
	25	27.4	13.3	24.7	0.483		
110	100	124.3	83.4	17.9	0.671	23.7	0.506
	75	93.2	52.1	21.5	0.559		
	50	62.2	28.3	26.4	0.455		
	25	31.1	17.0	22.0	0.548		
120	100	132.5	88.8	17.9	0.671	23.6	0.508
	75	99.3	55.9	21.3	0.563		
	50	66.2	30.5	26.0	0.460		
	25	33.1	17.2	23.1	0.520		
130	100	140.8	94.0	18.0	0.668	23.4	0.514
	75	105.6	59.4	21.4	0.562		
	50	70.4	32.4	26.0	0.461		
	25	35.2	20.3	20.8	0.576		
150	100	153.5	103.8	17.7	0.677	23.1	0.519
	75	115.1	66.7	20.7	0.580		
	50	76.8	35.9	25.7	0.468		
	25	38.4	20.4	22.6	0.533		
160	100	167.6	112.9	17.8	0.674	22.9	0.523
	75	125.7	73.0	20.7	0.580		
	50	83.8	38.8	25.9	0.463		
	25	41.9	24.9	20.2	0.594		
180	100	182.9	121.7	18.0	0.666	23.5	0.511
	75	137.2	78.1	21.1	0.569		
	50	91.4	41.7	26.3	0.456		
	25	45.7	25.2	21.8	0.551		



Performance Data

Table 17. Part Load Performance – RTWD – 60 Hz – high efficiency – I-P units

Unit Size	% Load	Tons	kW	EER	kW/ton	IPLV	
						EER	kW/ton
200	100	198.8	130.4	18.3	0.656	23.5	0.511
	75	149.1	83.2	21.5	0.558		
	50	99.4	45.8	26.0	0.460		
	25	49.7	28.4	21.0	0.571		
220	100	217.6	147.4	17.7	0.677	22.8	0.527
	75	163.2	95.0	20.6	0.582		
	50	108.8	52.5	24.9	0.483		
	25	54.4	28.6	22.8	0.526		
250	100	239.3	162.2	17.7	0.678	22.6	0.531
	75	179.4	106.1	20.3	0.591		
	50	119.6	56.2	25.5	0.470		
	25	59.8	35.9	20.0	0.599		

1. Rated in accordance with AHRI Standard 550/590, based on evaporator temperature drop of 10°F, 3 gpm/ton on the condenser, evaporator fouling factor of 0.0001°F·ft²·h/Btu and condenser fouling factor of 0.00025°F·ft²·h/Btu.
2. Performance is based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors only.
5. EER – Energy Efficiency Ratio (Btu/W·h). Power inputs include compressors and control power.

Table 18. Part Load Performance – RTWD – 60 Hz – premium efficiency – I-P units

Unit Size	% Load	Tons	kW	EER	kW/ton	IPLV	
						EER	kW/ton
150	100	159.8	101.4	18.9	0.635	24.8	0.483
	75	119.8	65.1	22.1	0.543		
	50	79.9	34.4	27.9	0.430		
	25	39.9	20.3	23.6	0.509		
160	100	174.4	110.7	18.9	0.635	24.4	0.492
	75	130.8	71.5	22.0	0.547		
	50	87.2	37.9	27.6	0.434		
	25	43.6	24.7	21.2	0.566		
180	100	189.7	119.3	19.1	0.629	24.9	0.482
	75	142.3	76.5	22.3	0.538		
	50	94.8	40.5	28.1	0.427		
	25	47.4	25.2	22.6	0.530		
200	100	205.8	128.6	19.2	0.625	24.7	0.486
	75	154.4	81.9	22.6	0.531		
	50	102.9	44.9	27.5	0.437		
	25	51.5	28.2	21.9	0.547		

1. Rated in accordance with AHRI Standard 550/590, based on evaporator temperature drop of 10°F, 3 gpm/ton on the condenser, evaporator fouling factor of 0.0001°F·ft²·h/Btu and condenser fouling factor of 0.00025°F·ft²·h/Btu.
2. Performance is based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors only.
5. EER – Energy Efficiency Ratio (Btu/W·h). Power inputs include compressors and control power.

Table 19. Performance Data - RTWD - 60 Hz - standard efficiency - SI units

Evaporator Leaving Water Temperature (°C)	Unit Size	Condenser Entering Water Temperature (°C)								
		25			30			35		
		kW Cooling	kW input	COP	kW Cooling	kW input	COP	kW Cooling	kW input	COP
5	80	268.0	50.9	5.2	252.5	56.8	4.4	235.9	63.5	3.7
	90	306.2	58.0	5.2	289.8	64.7	4.5	272.4	72.3	3.7
	100	350.3	66.9	5.2	331.3	74.9	4.4	311.1	84.0	3.7
	110	396.8	75.8	5.2	375.0	85.1	4.4	352.0	95.7	3.7
	120	435.0	81.8	5.3	411.1	91.6	4.5	386.0	102.9	3.7
	130	462.6	87.3	5.3	437.4	97.7	4.5	410.9	109.6	3.7
	140	505.4	95.9	5.2	477.9	107.1	4.4	449.0	120.0	3.7
7	80	287.5	51.6	5.5	271.2	57.3	4.7	253.9	63.9	3.9
	90	327.8	58.8	5.5	310.6	65.2	4.7	292.5	72.6	4.0
	100	375.0	67.7	5.5	355.2	75.5	4.7	334.2	84.4	3.9
	110	424.8	76.6	5.5	402.1	85.7	4.7	378.2	96.2	3.9
	120	466.4	82.8	5.6	441.4	92.4	4.8	415.2	103.5	4.0
	130	496.0	88.4	5.6	469.6	98.6	4.7	441.9	110.3	4.0
	140	542.1	97.0	5.6	513.4	108.0	4.7	483.0	120.6	4.0
9	80	307.7	52.3	5.8	290.7	57.9	5.0	272.6	64.4	4.2
	90	350.2	59.6	5.8	332.3	65.9	5.0	313.4	73.2	4.3
	100	400.7	68.5	5.8	380.1	76.2	5.0	358.3	85.0	4.2
	110	453.8	77.6	5.8	430.3	86.5	5.0	405.5	96.8	4.2
	120	499.1	83.9	5.9	473.1	93.4	5.0	445.8	104.3	4.3
	130	530.8	89.6	5.9	503.3	99.7	5.0	474.4	111.2	4.3
	140	580.4	98.4	5.9	550.3	109.2	5.0	518.4	121.5	4.3

1. Rated in accordance with AHRI Standard 550/590, based on an evaporator temperature drop of 5.6°C, 0.054 L/s per kW on the condenser, evaporator fouling factor of 0.01761°K·m³/kW and condenser fouling of 0.044025°K·m³/kW.
2. Performance is based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors only.
5. COP=Coefficient of Performance. Power inputs include compressors and control power.
6. Interpolation between points is permissible. Extrapolation is not permitted.



Performance Data

Table 20. Performance Data - 60 Hz - RTWD - high efficiency - SI units

Evaporator Leaving Water Temperature (°C)	Unit Size	Condenser Entering Water Temperature (°C)								
		25			30			35		
		kW Cooling	kW input	COP	kW Cooling	kW input	COP	kW Cooling	kW input	COP
5	80	284.6	50.1	5.6	268.3	55.7	4.8	250.9	62.2	4.0
	90	331.9	57.9	5.7	313.8	64.2	4.9	294.6	71.5	4.1
	100	382.1	66.3	5.7	361.0	73.8	4.9	338.8	82.6	4.1
	110	432.9	74.7	5.8	408.9	83.5	4.9	383.6	93.7	4.1
	120	461.1	79.6	5.8	435.7	89.0	4.9	409.0	99.8	4.1
	130	489.8	84.4	5.8	463.1	94.2	4.9	435.1	105.6	4.1
	150	533.8	93.3	5.7	505.2	104.1	4.8	474.9	116.6	4.1
	160	582.6	101.5	5.7	551.6	113.2	4.9	518.4	126.7	4.1
	180	635.5	109.5	5.8	602.2	121.9	4.9	566.9	136.3	4.1
	200	690.5	117.5	5.9	654.8	130.5	5.0	617.5	145.7	4.2
	220	755.7	132.8	5.7	717.0	147.6	4.8	676.4	164.9	4.1
	250	830.9	146.2	5.7	788.0	162.5	4.8	743.0	181.4	4.1
7	80	305.5	50.7	6.0	288.4	56.2	5.1	270.2	62.6	4.3
	90	356.1	58.7	6.0	337.1	64.9	5.2	317.0	72.0	4.4
	100	410.2	67.1	6.1	388.1	74.5	5.2	364.9	83.1	4.4
	110	464.6	75.6	6.1	439.6	84.2	5.2	413.3	94.2	4.4
	120	494.9	80.5	6.1	468.5	89.7	5.2	440.7	100.3	4.4
	130	525.8	85.3	6.1	498.0	94.9	5.2	468.7	106.1	4.4
	150	572.8	94.2	6.1	542.9	104.8	5.2	511.2	117.1	4.4
	160	625.1	102.5	6.1	592.8	114.0	5.2	558.0	127.1	4.4
	180	681.7	110.8	6.1	647.0	122.9	5.2	610.1	137.0	4.4
	200	740.6	119.0	6.2	703.3	131.8	5.3	664.3	146.7	4.5
	220	810.1	134.4	6.0	769.7	148.9	5.2	727.2	165.9	4.4
	250	891.4	148.0	6.0	846.4	163.9	5.2	799.3	182.4	4.4
9	80	327.2	51.4	6.3	309.4	56.8	5.4	290.4	63.0	4.6
	90	381.3	59.7	6.3	361.5	65.7	5.5	340.5	72.6	4.7
	100	439.4	68.0	6.4	416.5	75.3	5.5	392.3	83.7	4.7
	110	497.4	76.6	6.5	471.6	85.0	5.5	444.3	94.8	4.7
	120	530.2	81.6	6.5	502.8	90.5	5.5	473.8	100.9	4.7
	130	563.5	86.4	6.5	534.5	95.8	5.6	503.9	106.7	4.7
	150	613.4	95.3	6.4	582.3	105.7	5.5	549.1	117.7	4.6
	160	669.2	103.7	6.4	635.7	114.9	5.5	599.3	127.8	4.7
	180	729.9	112.2	6.5	693.7	124.1	5.6	655.1	137.9	4.7
	200	792.9	120.8	6.5	753.9	133.3	5.6	713.1	147.9	4.8
	220	866.7	136.3	6.3	824.5	150.5	5.5	780.3	167.1	4.7
	250	954.3	150.0	6.3	907.3	165.6	5.5	858.1	183.7	4.7

1. Rated in accordance with AHRI Standard 550/590, based on an evaporator temperature drop of 5.6°C, 0.054 L/s per kW on the condenser, evaporator fouling factor of 0.01761°K·m²/kW and condenser fouling of 0.044025°K·m²/kW.
2. Performance is based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors only.
5. COP—Coefficient of Performance. Power inputs include compressors and control power.
6. Interpolation between points is permissible. Extrapolation is not permitted.

Table 21. Performance Data - RTWD - 60 Hz - premium efficiency - SI units

Evaporator Leaving Water Temperature (°C)	Unit Size	Condenser Entering Water Temperature (°C)								
		25			30			35		
		kW Cooling	kW input	COP	kW Cooling	kW input	COP	kW Cooling	kW input	COP
5	150	554.7	91.2	6.1	524.3	101.6	5.1	492.1	113.8	4.3
	160	605.5	99.6	6.1	572.8	111.0	5.1	537.8	124.1	4.3
	180	658.2	107.5	6.1	623.2	119.5	5.2	586.2	133.5	4.4
	200	714.2	116.0	6.1	676.7	128.6	5.2	637.6	143.4	4.4
7	150	597.0	92.2	6.5	565.3	102.4	5.5	531.4	114.2	4.6
	160	651.2	100.7	6.4	617.1	111.7	5.5	580.3	124.5	4.6
	180	707.7	108.8	6.5	671.1	120.5	5.6	632.2	134.2	4.7
	200	767.7	117.6	6.5	728.4	129.9	5.6	687.2	144.4	4.7
9	150	641.3	93.3	6.8	608.2	103.3	5.9	572.7	114.8	5.0
	160	698.7	101.8	6.8	663.4	112.7	5.9	624.9	125.2	5.0
	180	759.4	110.3	6.9	721.3	121.7	5.9	680.6	135.1	5.0
	200	823.9	119.4	6.9	782.6	131.4	5.9	739.4	145.6	5.1

1. Rated in accordance with AHRI Standard 550/590, based on an evaporator temperature drop of 5.6°C, 0.054 L/s per kW on the condenser, evaporator fouling factor of 0.01761°K·m²/kW and condenser fouling of 0.044025°K·m²/kW.
2. Performance is based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors only.
5. COP=Coefficient of Performance. Power inputs include compressors and control power.
6. Interpolation between points is permissible. Extrapolation is not permitted.



Performance Data

Table 22. Performance Data - RTUD - Trane Air-Cooled Condenser - 60 Hz - I-P units

Evaporator Leaving Water Temp (°F)	Unit Size	Condenser Entering Air Temperature (°F)														
		75			85			95			105			115		
		Tons	Input kW	EER	Tons	Input kW	EER	Tons	Input kW	EER	Tons	Input kW	EER	Tons	Input kW	EER
38	80	71.6	69.3	12.4	66.7	74.4	10.8	61.6	80.2	9.2	76.8	88.3	10.4	49.2	93.8	6.3
	90	86.5	83.2	12.5	81.0	88.9	10.9	75.2	95.6	9.4	93.6	105.6	10.6	61.3	111.2	6.6
	100	97.0	92.4	12.6	90.7	99.0	11.0	84.1	106.7	9.5	104.4	118.2	10.6	68.0	124.6	6.5
	110	108.4	103.0	12.6	101.2	110.5	11.0	93.7	119.2	9.4	116.1	132.5	10.5	75.0	139.4	6.5
	120	117.1	111.1	12.6	109.5	118.8	11.1	101.6	127.7	9.6	126.5	141.3	10.7	82.6	148.8	6.7
	130	124.7	116.7	12.8	116.8	124.8	11.2	108.5	134.3	9.7	135.1	148.3	10.9	88.9	156.8	6.8
	150	132.4	128.9	12.3	124.0	138.0	10.8	115.3	148.6	9.3	143.5	164.0	10.5	94.1	173.3	6.5
	160	142.8	137.4	12.5	134.0	147.1	10.9	124.9	158.5	9.5	155.7	175.1	10.7	102.5	185.0	6.6
	180	156.4	150.3	12.5	146.9	161.1	10.9	137.1	173.6	9.5	170.3	191.5	10.7	113.3	202.9	6.7
	200	171.5	163.9	12.6	161.2	175.7	11.0	150.5	189.3	9.5	186.6	208.7	10.7	125.2	221.4	6.8
	220	187.4	180.5	12.5	176.3	193.0	11.0	164.7	207.5	9.5	204.0	230.1	10.6	137.1	242.0	6.8
250	203.9	197.6	12.4	192.0	210.8	10.9	179.5	226.3	9.5	221.8	252.0	10.6	149.4	263.2	6.8	
40	80	74.3	70.5	12.6	69.9	75.6	11.0	64.1	81.5	9.4	57.9	88.0	7.9	51.4	95.2	6.5
	90	89.8	84.7	12.7	84.1	90.5	11.2	78.1	97.2	9.6	71.3	104.7	8.2	63.9	112.9	6.8
	100	100.6	94.1	12.8	94.1	100.8	11.2	87.3	108.5	9.7	79.4	117.1	8.1	70.9	126.6	6.7
	110	112.5	105	12.8	105.0	112.6	11.2	97.3	121.3	9.6	88.0	130.9	8.1	78.2	141.7	6.6
	120	121.5	113.2	12.9	113.7	120.9	11.3	105.6	129.8	9.8	96.3	139.9	8.3	86.1	151.1	6.8
	130	129.4	118.8	13.1	121.2	127.0	11.5	112.7	136.5	9.9	103.2	147.2	8.4	92.7	159.1	7.0
	150	137.4	131.2	12.6	128.8	140.4	11.0	119.8	151.0	9.5	109.3	162.9	8.1	98.1	176.0	6.7
	160	148.3	139.9	12.7	139.2	149.7	11.2	129.8	161.1	9.7	118.8	173.8	8.2	106.8	187.8	6.8
	180	162.3	153.0	12.7	152.5	163.9	11.2	142.4	176.4	9.7	130.7	190.4	8.2	118.1	205.9	6.9
	200	177.9	166.8	12.8	167.3	178.7	11.2	156.3	192.4	9.7	143.8	207.7	8.3	130.4	224.6	7.0
	220	194.4	183.9	12.7	182.9	196.5	11.2	171.0	211.1	9.7	157.3	227.5	8.3	142.6	245.8	7.0
250	211.5	201.6	12.6	199.2	214.8	11.1	186.3	230.3	9.7	171.4	247.8	8.3	155.4	267.4	7.0	
42	80	77.0	71.7	12.9	71.9	76.9	11.2	66.5	82.8	9.6	60.3	89.4	8.1	53.6	96.6	6.7
	90	93.1	86.2	13.0	87.2	92.1	11.4	81.1	98.8	9.9	74.1	106.3	8.4	66.6	114.6	7.0
	100	104.3	95.9	13.1	97.7	102.6	11.4	90.6	110.3	9.9	82.6	119.0	8.3	73.8	128.5	6.9
	110	116.6	107.1	13.1	108.9	114.7	11.4	100.9	123.4	9.8	91.5	113.2	8.2	81.4	144.0	6.8
	120	126.0	115.3	13.1	118.0	123.0	11.5	109.7	132.0	10.0	100.1	142.1	8.4	89.7	153.4	7.0
	130	134.2	121.0	13.3	125.8	129.2	11.7	117.1	138.8	10.1	107.2	149.6	8.6	96.6	161.6	7.2
	150	142.5	133.6	12.8	133.6	142.8	11.2	124.4	153.5	9.7	113.7	165.4	8.2	102.2	178.6	6.9
	160	153.8	142.5	13.0	144.5	152.4	11.4	134.8	163.8	9.9	123.5	176.5	8.4	111.3	190.6	7.0
	180	168.3	155.8	13.0	158.2	166.7	11.4	147.8	179.3	9.9	135.8	193.4	8.4	122.9	208.9	7.1
	200	184.4	169.8	13.0	173.4	181.8	11.5	162.1	195.5	10.0	149.4	210.9	8.5	135.6	227.9	7.1
	220	201.5	187.5	12.9	189.7	200.1	11.4	177.4	214.7	9.9	163.4	231.2	8.5	148.3	249.5	7.1
250	219.2	205.6	12.8	206.5	218.9	11.3	193.2	234.5	9.9	177.9	252.1	8.5	161.5	271.8	7.1	

Performance Data

Table 22. Performance Data - RTUD - Trane Air-Cooled Condenser - 60 Hz - I-P units

Evaporator Leaving Water Temp (°F)	Unit Size	Condenser Entering Air Temperature (°F)														
		75			85			95			105			115		
		Tons	Input kW	EER	Tons	Input kW	EER	Tons	Input kW	EER	Tons	Input kW	EER	Tons	Input kW	EER
44	80	79.8	73.0	13.1	74.5	78.2	11.4	69.1	84.2	9.8	62.6	90.8	8.3	55.8	98.0	6.8
	90	96.5	87.8	13.2	90.5	93.7	11.6	84.2	100.5	10.1	77.0	108.0	8.6	69.2	116.3	7.1
	100	108.1	97.7	13.3	101.2	104.4	11.6	94.0	112.2	10.0	85.7	120.9	8.5	76.8	130.5	7.1
	110	120.8	109.2	13.3	112.9	116.8	11.6	104.7	125.7	10.0	94.9	135.4	8.4	84.7	146.3	6.9
	120	130.6	117.5	13.3	122.4	125.3	11.7	113.8	134.3	10.2	104.0	144.5	8.6	93.4	155.8	7.2
	130	139.0	123.2	13.5	130.4	131.5	11.9	121.5	141.1	10.3	111.4	151.9	8.8	100.5	164.0	7.4
	150	147.7	136.0	13.0	138.6	145.3	11.4	129.0	156.1	9.9	118.1	168.0	8.4	106.3	181.3	7.0
	160	159.5	145.1	13.2	149.9	155.0	11.6	139.9	166.5	10.1	128.3	179.3	8.6	115.8	193.5	7.2
	180	174.4	158.6	13.2	164.0	169.6	11.6	153.3	182.2	10.1	141.0	196.4	8.6	127.8	212.0	7.2
	200	191.0	172.9	13.3	179.7	184.9	11.7	168.1	198.7	10.2	155.0	214.1	8.7	141.0	231.2	7.3
	220	208.7	191.1	13.1	196.5	203.7	11.6	183.9	218.5	10.1	169.5	235.0	8.7	154.1	253.4	7.3
	250	227.0	209.8	13.0	213.9	223.1	11.5	200.2	238.8	10.1	184.5	256.4	8.6	167.7	276.2	7.3
46	80	82.6	74.3	13.3	77.2	79.6	11.6	71.6	85.5	10.0	65.0	92.1	8.5	58.1	99.4	7.0
	90	99.9	89.4	13.4	93.7	95.3	11.8	87.3	102.1	10.3	79.9	109.7	8.7	72.0	118.1	7.3
	100	111.9	99.5	13.5	104.9	106.3	11.8	97.4	114.2	10.2	88.9	122.9	8.7	79.8	132.6	7.2
	110	125.0	111.4	13.5	116.9	119.0	11.8	108.4	127.9	10.2	98.5	137.7	8.6	88.0	148.6	7.1
	120	135.3	119.7	13.6	126.8	127.5	11.9	118.0	136.6	10.4	107.9	146.8	8.8	97.1	158.2	7.4
	130	144.0	125.5	13.8	135.2	133.8	12.1	125.9	143.4	10.5	115.6	154.4	9.0	104.5	166.5	7.5
	150	153.0	138.5	13.3	143.6	147.8	11.7	133.8	158.7	10.1	122.5	170.7	8.6	110.5	184.0	7.2
	160	165.2	147.8	13.4	155.4	157.8	11.8	145.0	169.3	10.3	133.1	182.2	8.8	120.3	196.4	7.4
	180	180.5	161.5	13.4	169.9	172.5	11.8	158.8	185.3	10.3	146.3	199.4	8.8	132.8	215.1	7.4
	200	197.7	176.1	13.5	186.1	188.1	11.9	174.2	202.0	10.3	160.7	217.5	8.9	146.4	234.6	7.5
	220	216.0	194.8	13.3	203.5	207.5	11.8	190.5	222.3	10.3	175.7	238.8	8.8	159.9	257.3	7.5
	250	234.9	214.1	13.2	221.4	227.4	11.7	207.3	243.1	10.2	191.1	260.8	8.8	174.0	280.7	7.4



Performance Data

Table 22. Performance Data - RTUD - Trane Air-Cooled Condenser - 60 Hz - I-P units

Evaporator Leaving Water Temp (°F)	Unit Size	Condenser Entering Air Temperature (°F)														
		75			85			95			105			115		
		Tons	kW Input	EER	Tons	kW Input	EER	Tons	kW Input	EER	Tons	kW Input	EER	Tons	kW Input	EER
48	80	85.5	75.7	13.6	79.9	80.9	11.9	74.2	86.9	10.2	67.5	93.6	8.7	60.4	100.9	7.2
	90	103.4	91.0	13.6	97.1	97.0	12.0	90.4	103.8	10.4	82.9	111.5	8.9	74.8	119.9	7.5
	100	115.8	101.4	13.7	108.6	108.3	12.0	100.9	116.2	10.4	92.2	124.9	8.9	82.9	134.6	7.4
	110	129.3	113.6	13.7	121.0	121.3	12.0	112.2	130.2	10.3	102.0	140.1	8.7	91.3	151.0	7.3
	120	140.1	122.0	13.8	131.3	129.8	12.1	122.2	138.9	10.6	111.9	149.2	9.0	100.9	160.6	7.5
	130	149.1	127.8	14.0	140.0	136.1	12.3	130.5	145.8	10.7	119.9	156.8	9.2	108.5	169.1	7.7
	150	158.3	141.0	13.5	148.7	150.4	11.9	138.6	161.3	10.3	127.1	173.4	8.8	114.8	186.8	7.4
	160	171.1	150.6	13.6	160.9	160.6	12.0	150.3	172.2	10.5	138.1	185.1	9.0	125.0	199.4	7.5
	180	186.8	164.5	13.6	175.9	175.6	12.0	164.5	188.3	10.5	151.6	202.6	9.0	137.8	218.3	7.6
	200	204.5	179.3	13.7	192.6	191.4	12.1	180.3	205.3	10.5	166.6	220.8	9.1	151.9	238.0	7.7
	220	223.5	198.6	13.5	210.6	211.3	12.0	197.2	226.1	10.5	182.0	242.7	9.0	165.9	261.3	7.6
250	243.0	218.4	13.4	229.1	231.8	11.9	214.5	247.5	10.4	197.9	265.3	9.0	180.3	285.2	7.6	
50	80	88.4	77.0	13.8	79.9	80.9	11.9	76.8	88.3	10.4	69.9	95.0	8.8	62.7	102.3	7.4
	90	107.0	92.7	13.9	97.1	97.0	12.0	93.6	105.6	10.6	85.9	113.2	9.1	77.6	121.7	7.7
	100	119.8	103.4	13.9	108.6	108.3	12.0	104.4	118.2	10.6	95.5	127.0	9.0	86.0	136.7	7.5
	110	133.7	115.9	13.8	121.0	121.3	12.0	116.1	132.5	10.5	105.7	142.4	8.9	94.8	153.5	7.4
	120	144.9	124.3	14.0	131.3	129.8	12.1	126.5	141.3	10.7	116.0	151.6	9.2	104.7	163.1	7.7
	130	154.2	130.1	14.2	140.0	136.1	12.3	135.1	148.3	10.9	124.2	159.3	9.4	112.6	171.7	7.9
	150	163.8	143.6	13.7	148.7	150.4	11.9	143.5	164.0	10.5	131.7	176.1	9.0	119.2	189.6	7.5
	160	177.0	153.4	13.8	160.9	160.6	12.0	155.7	175.1	10.7	143.1	188.0	9.1	129.7	202.3	7.7
	180	193.3	167.5	13.8	175.9	175.6	12.0	170.3	191.5	10.7	157.0	205.7	9.2	142.9	221.5	7.7
	200	211.5	182.6	13.9	192.6	191.4	12.1	186.6	208.7	10.7	172.5	224.2	9.2	156.3	239.5	7.8
	220	231.0	202.4	13.7	210.6	211.3	12.0	204.0	230.1	10.6	188.4	246.7	9.2	170.7	263.3	7.8
250	251.2	222.8	13.5	229.1	231.8	11.9	221.8	252.0	10.6	204.8	269.8	9.1	186.8	289.8	7.7	

1. Rated in accordance with AHRI Standard 550/590, based on evaporator temperature drop of 10°F, evaporator fouling factor of 0.0001°F·ft²·h/Btu, sea level altitude.
2. Performance is based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors and control power.
5. EER – Energy Efficiency Ratio (Btu/W·h). Power inputs include compressors and control power.
6. Interpolation between points is permissible. Extrapolation is not permitted.

Table 23. Part Load Performance – RTUD – Trane Air-Cooled Condenser – 60 Hz - I-P units

Unit Size	% Load	Tons	EER	IPLV	
				EER	kw/ton
RTUD 80	100	69.1	9.8	14.01	0.857
	75	51.8	12.6		
	50	34.5	15.7		
	25	17.3	12.9		
RTUD 90	100	84.2	10.1	13.98	0.858
	75	63.2	12.7		
	50	42.1	15.8		
	25	21.1	11.8		
RTUD 100	100	94.0	10.0	14.15	0.848
	75	70.5	12.7		
	50	47.0	15.9		
	25	21.1	11.8		
RTUD 110	100	104.7	10.0	13.95	0.860
	75	78.5	12.6		
	50	52.4	15.8		
	25	26.2	12.0		
RTUD 120	100	113.8	10.2	13.79	0.870
	75	85.4	12.6		
	50	56.9	16.7		
	25	28.5	11.1		
RTUD 130	100	121.5	10.3	13.91	0.863
	75	91.1	12.8		
	50	60.8	15.7		
	25	30.4	11.8		
RTUD 150	100	129.0	9.9	13.25	0.906
	75	96.8	12.1		
	50	64.6	14.7		
	25	32.3	12.0		



Performance Data

Table 23. Part Load Performance – RTUD – Trane Air-Cooled Condenser – 60 Hz - I-P units

Unit Size	% Load	Tons	EER	IPLV	
				EER	kw/ton
RTUD 160	100	139.9	10.1	13.53	0.887
	75	105.0	12.2		
	50	70.0	15.2		
	25	35.0	12.1		
RTUD 180	100	153.3	10.1	13.48	0.890
	75	115.1	12.4		
	50	76.7	14.9		
	25	38.3	12.3		
RTUD 200	100	168.1	10.2	13.57	0.884
	75	126.2	12.6		
	50	84.1	15.3		
	25	42.0	11.0		
RTUD 220	100	183.9	10.1	13.48	0.890
	75	137.9	12.5		
	50	92.0	15.1		
	25	46.0	11.1		
RTUD 250	100	200.2	10.1	13.46	0.892
	75	150.3	12.6		
	50	100.2	15.0		
	25	50.1	11.0		

1. Rated in accordance with AHRI Standard 550/590, based on evaporator temperature drop of 10°F, evaporator fouling factor of 0.0001 °F-ft²-h/Btu and Trane air-cooled condenser with an ambient air at 100% of 95°F.
2. Performance is based on 2 pass evaporator configuration.
3. EER - Energy Efficiency Ratio (Btu/W-h). Power inputs include compressors and control power.

Table 24. Performance Data - RTUD - Trane Air-Cooled Condenser - 60 Hz - SI units

Evaporator Leaving Water Temperature (°C)	Unit Size	Condenser Entering Water Temperature (°C)											
		30			35			40			45		
		kW Cooling	kW input	COP	kW Cooling	kW input	COP	kW Cooling	kW input	COP	kW Cooling	kW input	COP
5	80	245.8	76.8	3.2	229.2	82.1	2.8	209.6	88.0	2.4	189.2	94.4	2.0
	90	298.5	91.8	3.3	279.5	97.9	2.9	257.7	104.6	2.5	234.2	112.0	2.1
	100	334.0	102.3	3.3	312.2	109.3	2.9	287.3	117.1	2.5	260.2	125.5	2.1
	110	372.7	114.3	3.3	347.7	122.3	2.8	318.6	130.9	2.4	287.3	140.5	2.0
	120	404.0	122.7	3.3	378.0	130.8	2.9	348.1	139.9	2.5	316.1	149.8	2.1
	130	430.4	128.9	3.3	403.3	137.5	2.9	372.7	147.2	2.5	340.0	157.8	2.2
	150	457.4	142.5	3.2	428.6	152.2	2.8	395.6	162.8	2.4	360.0	174.5	2.1
	160	494.7	152.0	3.3	464.1	162.3	2.9	429.3	173.7	2.5	391.7	186.2	2.1
	180	541.8	166.3	3.3	509.1	177.7	2.9	472.2	190.3	2.5	432.1	204.1	2.1
	200	593.9	181.3	3.3	558.7	193.8	2.9	519.3	207.5	2.5	476.4	222.6	2.1
	220	649.8	199.5	3.3	611.43	212.7	2.9	567.8	227.5	2.5	521.4	243.7	2.1
250	707.1	218.1	3.2	665.9	232.2	2.9	618.5	247.9	2.5	567.8	265.3	2.1	
7	80	262.3	79.1	3.3	245.1	84.5	2.9	224.7	90.4	2.5	203.2	96.9	2.1
	90	318.6	94.7	3.4	298.5	100.9	3.0	276.0	107.6	2.6	251.4	115.1	2.2
	100	356.5	105.6	3.4	333.3	112.7	3.0	307.3	120.5	2.6	279.2	129.1	2.2
	110	397.7	118.2	3.4	371.3	126.2	2.9	340.4	135.0	2.5	308.0	144.6	2.1
	120	431.4	126.7	3.4	403.6	134.9	3.0	372.7	144.0	2.6	339.3	154.1	2.2
	130	459.5	132.9	3.5	431.1	141.7	3.0	399.1	151.4	2.6	365.0	162.2	2.3
	150	488.4	147.0	3.3	458.1	156.7	2.9	423.3	167.5	2.5	386.4	179.3	2.2
	160	528.1	156.8	3.4	496.1	167.2	3.0	459.5	178.7	2.6	420.2	191.3	2.2
	180	578.0	171.5	3.4	543.6	183.0	3.0	504.9	195.7	2.6	463.4	209.6	2.2
	200	633.2	187.0	3.4	596.3	199.5	3.0	554.8	213.3	2.6	510.5	228.5	2.2
	220	692.7	206.1	3.4	652.2	219.4	3.0	606.5	234.2	2.6	558.3	250.6	2.2
250	753.8	225.6	3.3	709.9	239.8	3.0	660.3	255.6	2.6	607.2	273.2	2.2	
9	80	279.5	81.5	3.4	261.2	87.0	3.0	240.1	92.9	2.6	218.0	99.4	2.2
	90	339.7	97.7	3.5	318.2	103.9	3.1	294.6	110.7	2.7	269.3	118.2	2.3
	100	379.7	109.1	3.5	355.1	116.3	3.1	328.0	124.1	2.6	298.5	132.8	2.3
	110	423.0	122.2	3.5	395.2	130.3	3.0	363.2	139.1	2.6	329.5	148.9	2.2
	120	459.5	130.8	3.5	430.7	139.1	3.1	398.0	148.3	2.7	363.2	158.4	2.3
	130	489.8	137.1	3.6	459.5	146.0	3.2	426.1	155.8	2.7	390.6	166.7	2.3
	150	520.4	151.6	3.4	488.4	161.4	3.0	451.8	172.3	2.6	413.5	184.2	2.2
	160	562.9	161.8	3.5	529.5	172.3	3.1	490.8	183.9	2.7	449.7	196.5	2.3
	180	615.7	176.9	3.5	579.4	188.5	3.1	538.7	201.2	2.7	495.4	215.2	2.3
	200	674.0	192.8	3.5	635.0	205.4	3.1	591.4	219.3	2.7	545.3	234.6	2.3
	220	737.0	212.9	3.5	694.4	226.3	3.1	646.6	241.2	2.7	596.0	257.7	2.3
250	801.7	233.5	3.4	755.2	247.7	3.1	702.9	263.6	2.7	647.7	281.3	2.3	

1. Rated in accordance with AHRI Standard 550/590, based on an evaporator temperature drop of 5°C, evaporator fouling factor of 0.01761°K·m³/kW and sea level altitude.
2. Performance is based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors and control power.
5. COP=Coefficient of Performance. Power inputs include compressors and control power.
6. Interpolation between points is permissible. Extrapolation is not permitted.



Performance Data

Table 25. Performance Data - RTUD - Condenser by Other's- 60 Hz - I-P units

Evaporator Leaving Water Temp (°F)	Unit Size	Saturated Condenser Temperature (°F)								
		105			125			145		
		Tons	kW Input	EER	Tons	kW Input	EER	Tons	kW Input	EER
38	80	71.5	60.5	14.2	61.2	72.8	10.1	48.0	88.7	6.5
	90	85.5	72.1	14.2	73.7	86.5	10.2	58.8	105.0	6.7
	100	96.0	81.5	14.1	82.7	97.7	10.2	65.4	118.8	6.6
	110	107.7	91.3	14.2	92.7	109.2	10.2	72.9	132.9	6.6
	120	115.3	97.3	14.2	99.3	116.4	10.2	78.9	141.5	6.7
	130	122.3	103.1	14.2	105.7	123.5	10.3	84.9	150.0	6.8
	150	132.3	115.5	14.2	114.8	133.3	10.3	92.7	161.8	6.9
	160	142.4	119.9	14.3	124.2	143.2	10.4	100.9	173.6	7.0
	180	155.9	129.7	14.4	136.3	155.4	10.5	111.8	188.9	7.1
	200	171.0	140.0	14.7	149.8	168.0	10.7	123.9	204.5	7.3
	220	186.5	157.0	14.3	163.6	186.8	10.5	135.3	225.9	7.2
	250	202.6	174.5	13.9	178.0	205.9	10.4	147.3	247.8	7.1
44	80	80.8	62.7	15.5	69.8	74.8	11.2	56.1	90.7	7.4
	90	96.4	74.9	15.5	83.8	89.2	11.3	68.2	107.8	7.6
	100	108.3	84.8	15.3	94.0	100.8	11.2	76.0	122.0	7.5
	110	121.7	95.1	15.3	105.4	112.8	11.2	84.8	136.4	7.5
	120	130.2	101.2	15.4	113.0	120.0	11.3	91.7	145.1	7.6
	130	138.0	107.0	15.5	120.2	127.1	11.3	98.4	153.8	7.7
	150	149.4	115.8	15.5	130.6	137.3	11.4	107.5	165.8	7.8
	160	160.9	124.6	15.5	141.2	147.5	11.5	116.9	177.9	7.9
	180	175.8	134.7	15.7	154.6	160.0	11.6	129.0	193.4	8.0
	200	192.6	145.3	15.9	169.7	172.9	11.8	142.6	209.2	8.2
	220	210.0	163.7	15.4	185.3	192.9	11.5	155.5	231.9	8.0
	250	228.0	182.7	15.0	201.4	213.3	11.3	169.0	254.9	8.0
50	80	90.8	65.0	16.8	79.0	77.0	12.3	64.7	92.8	8.4
	90	108.2	77.8	16.7	94.7	92.0	12.4	78.3	110.6	8.5
	100	121.6	88.3	16.5	106.2	104.1	12.2	87.4	125.1	8.4
	110	136.6	99.3	16.5	119.1	116.6	12.3	97.6	140.0	8.4
	120	146.2	105.4	16.6	127.7	123.9	12.4	105.4	148.9	8.5
	130	154.8	111.2	16.7	135.7	130.9	12.4	112.9	157.5	8.6
	150	167.8	120.5	16.7	147.6	141.5	12.5	123.3	169.9	8.7
	160	180.7	129.7	16.7	159.6	152.2	12.6	134.0	182.3	8.8
	180	197.1	140.1	16.9	174.4	165.0	12.7	147.5	198.0	8.9
	200	215.9	151.1	17.1	191.1	178.2	12.9	162.6	214.1	9.1
	220	235.3	171.1	16.5	208.6	199.5	12.5	177.2	238.0	8.9
	250	255.2	191.7	16.0	226.5	221.3	12.3	192.3	262.3	8.8

1. Rated in accordance with AHRI Standard 550/590, based on evaporator temperature drop of 10°F, evaporator fouling factor of 0.0001°F·ft²·h/Btu, sea level altitude. Based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors and control power.
5. EER – Energy Efficiency Ratio (Btu/W·h). Power inputs include compressors and control power.
6. Interpolation between points is permissible. Extrapolation is not permitted.

Table 26. Performance Data - RTUD - Condenser by Other's - 60 Hz - SI units

Evaporator Leaving Water Temperature (°C)	Unit Size	Saturated Condenser Temperature (°C)								
		40			50			60		
		kW Cooling	kW input	COP	kW Cooling	kW input	COP	kW Cooling	kW input	COP
5	80	266.2	61.0	4.4	232.8	71.7	3.3	192.3	85.4	2.3
	90	317.9	72.8	4.4	279.5	85.4	3.3	233.8	101.4	2.3
	100	356.9	82.4	4.3	314.0	96.5	3.3	260.9	114.6	2.3
	110	400.8	92.4	4.3	352.0	107.9	3.3	291.5	128.2	2.3
	120	429.0	98.4	4.4	377.3	114.9	3.3	314.3	136.4	2.3
	130	455.0	104.1	4.4	400.8	121.8	3.3	336.8	144.6	2.3
	150	492.2	112.6	4.4	435.3	131.5	3.3	367.1	156.0	2.4
	160	529.5	121.2	4.4	470.4	141.3	3.3	398.7	167.4	2.4
	180	579.1	131.0	4.4	515.5	153.3	3.4	439.9	182.0	2.4
	200	635.0	141.3	4.5	565.7	165.7	3.4	485.6	196.9	2.5
	220	692.3	159.0	4.4	617.8	184.7	3.3	530.2	218.2	2.4
250	751.7	177.1	4.2	671.9	204.1	3.3	576.3	239.8	2.4	
7	80	286.2	62.4	4.6	251.4	72.9	3.4	209.9	86.6	2.4
	90	341.1	74.5	4.6	301.3	87.0	3.5	254.2	103.0	2.5
	100	383.6	84.4	4.5	338.2	98.4	3.4	284.1	116.5	2.4
	110	430.7	94.8	4.5	379.4	110.1	3.4	317.1	130.3	2.4
	120	461.0	100.8	4.6	406.8	117.2	3.5	342.1	138.6	2.5
	130	488.4	106.5	4.6	432.1	124.0	3.5	366.0	146.8	2.5
	150	528.8	115.3	4.6	469.4	134.0	3.5	399.4	158.4	2.5
	160	569.2	124.1	4.6	507.0	144.0	3.5	433.5	170.0	2.6
	180	621.6	134.1	4.6	555.2	156.2	3.6	477.5	184.7	2.6
	200	681.1	144.6	4.7	608.6	168.7	3.6	526.0	199.8	2.6
	220	742.6	163.2	4.6	664.5	188.5	3.5	573.8	221.8	2.6
250	805.9	182.2	4.4	722.2	208.7	3.5	623.4	244.1	2.6	
9	80	307.0	63.8	4.8	270.4	74.2	3.6	228.2	87.8	2.6
	90	365.7	76.3	7.8	324.2	88.7	3.7	275.7	104.6	2.6
	100	411.0	86.5	4.8	363.9	100.3	3.6	308.0	118.4	2.6
	110	462.0	97.3	4.8	408.2	112.4	3.6	344.2	132.5	2.6
	120	494.4	103.3	4.8	437.7	119.5	3.7	371.3	140.8	2.6
	130	523.2	109.1	4.8	464.8	126.3	3.8	396.6	149.1	2.7
	150	567.1	118.1	4.8	505.3	136.6	3.7	432.8	160.8	2.7
	160	610.4	127.1	4.8	545.7	146.8	3.7	469.7	172.7	2.7
	180	666.3	137.4	4.9	596.7	159.1	3.8	516.2	187.5	2.8
	200	729.6	148.1	4.9	653.6	171.9	3.8	568.2	202.8	2.8
	220	795.3	167.6	4.7	713.4	192.5	3.7	619.5	225.5	2.8
250	862.5	187.6	4.6	774.9	213.6	3.6	672.6	248.6	2.7	

1. Based on an evaporator temperature drop of 5°C, evaporator fouling factor of 0.01761°K·m³/kW and sea level altitude, 10°C sub-cooling.
2. Performance is based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors and control power.
5. COP—Coefficient of Performance. Power inputs include compressors and control power.
6. Interpolation between points is permissible. Extrapolation is not permitted.



Performance Data

Table 27. Performance Data - RTWD - 50 Hz - standard efficiency - I-P units

Evaporator Leaving Water Temperature (°F)	Unit Size	Condenser Entering Water Temperature (°F)											
		75				85				95			
		Tons	kW Input	EER	kW/ton	Tons	kW Input	EER	kW/ton	Tons	kW Input	EER	kW/ton
40	70	72.5	46.5	18.6	0.646	68.0	52.7	15.4	0.780	63.2	59.9	12.6	0.955
	80	83.2	54.0	18.4	0.654	77.9	61.2	15.2	0.791	72.2	69.7	12.4	0.970
	90	94.6	61.3	18.4	0.652	88.5	69.4	15.2	0.789	82.0	79.0	12.4	0.968
	100	100.6	65.0	18.5	0.650	94.3	73.7	15.3	0.786	87.6	83.9	12.5	0.963
	110	106.6	69.0	18.4	0.651	100.1	78.4	15.3	0.787	93.2	89.2	12.5	0.962
	120	119.7	76.5	18.7	0.642	112.4	86.8	15.5	0.776	104.5	98.7	12.7	0.948
	130	130.1	82.0	18.9	0.634	122.2	93.1	15.7	0.766	113.7	106.0	12.8	0.935
	140	140.3	89.5	18.7	0.641	132.0	101.4	15.6	0.772	123.2	115.2	12.8	0.939
	150	152.4	96.1	18.9	0.633	143.5	108.6	15.8	0.759	134.3	123.2	13.0	0.921
42	70	75.4	46.8	19.2	0.625	70.8	52.9	15.9	0.753	65.8	60.2	13.0	0.920
	80	86.6	54.3	19.0	0.632	81.1	61.5	15.7	0.763	75.3	69.9	12.9	0.933
	90	98.4	61.7	19.0	0.631	92.2	69.8	15.8	0.761	85.5	79.2	12.9	0.931
	100	104.6	65.3	19.1	0.628	98.2	74.0	15.8	0.758	91.3	84.1	13.0	0.926
	110	110.9	69.3	19.1	0.629	104.2	78.6	15.8	0.759	97.0	89.4	13.0	0.925
	120	124.6	76.9	19.3	0.621	117.0	87.1	16.0	0.748	108.9	98.9	13.2	0.912
	130	135.3	82.5	19.6	0.613	127.2	93.5	16.3	0.738	118.5	106.1	13.4	0.899
	140	145.9	90.1	19.3	0.620	137.4	101.9	16.1	0.745	128.3	115.6	13.3	0.904
	150	158.5	96.8	19.6	0.613	149.4	109.2	16.4	0.733	139.9	123.7	13.5	0.887
44	70	78.4	47.1	19.8	0.606	73.6	53.2	16.5	0.728	68.6	60.4	13.5	0.887
	80	90.0	54.7	19.6	0.612	84.4	61.8	16.3	0.737	78.5	70.2	13.3	0.899
	90	102.2	62.1	19.6	0.611	95.9	70.1	16.3	0.735	89.1	79.5	13.4	0.897
	100	108.7	65.7	19.7	0.608	102.1	74.3	16.4	0.732	95.1	84.4	13.5	0.892
	110	115.2	69.7	19.7	0.608	108.3	78.9	16.4	0.732	101.0	89.6	13.5	0.891
	120	129.5	77.4	20.0	0.601	121.7	87.5	16.6	0.722	113.4	99.2	13.7	0.878
	130	140.7	83.0	20.2	0.593	132.3	93.8	16.9	0.712	123.4	106.3	13.9	0.865
	140	151.6	90.7	20.0	0.601	142.9	102.4	16.7	0.719	133.6	116.0	13.8	0.871
	150	164.8	97.5	20.2	0.594	155.5	109.8	16.9	0.709	145.7	124.3	14.0	0.856
46	70	81.4	47.4	20.4	0.587	76.5	53.5	17.0	0.705	71.3	60.7	14.0	0.856
	80	93.4	55.1	20.2	0.594	87.8	62.2	16.8	0.713	81.7	70.5	13.8	0.867
	90	106.2	62.5	20.3	0.593	99.7	70.5	16.9	0.711	92.8	79.8	13.9	0.865
	100	112.9	66.1	20.4	0.589	106.1	74.7	17.0	0.707	98.9	84.6	14.0	0.860
	110	119.6	70.1	20.4	0.589	112.6	79.2	17.0	0.708	105.0	89.9	14.0	0.859
	120	134.6	77.9	20.6	0.582	126.6	88.0	17.2	0.698	118.0	99.5	14.2	0.846
	130	146.1	83.5	20.9	0.574	137.6	94.2	17.5	0.688	128.4	106.6	14.4	0.833
	140	157.5	91.4	20.6	0.582	148.5	102.9	17.3	0.696	139.0	116.4	14.3	0.840
	150	171.3	98.3	20.8	0.576	161.7	110.5	17.5	0.686	151.6	124.9	14.5	0.826

Performance Data

Table 27. Performance Data - RTWD - 50 Hz - standard efficiency - I-P units

Evaporator Leaving Water Temperature (°F)	Unit Size	Condenser Entering Water Temperature (°F)											
		75				85				95			
		Tons	kW Input	EER	kW/ton	Tons	kW Input	EER	kW/ton	Tons	kW Input	EER	kW/ton
48	70	84.5	47.8	21.0	0.570	79.5	53.9	17.6	0.683	74.2	61.0	14.5	0.828
	80	97.0	55.5	20.8	0.576	91.2	62.5	17.4	0.690	85.0	70.8	14.3	0.838
	90	110.2	63.0	20.9	0.575	103.6	70.9	17.4	0.688	96.5	80.2	14.4	0.835
	100	117.1	66.6	21.0	0.572	110.2	75.0	17.5	0.684	102.9	84.9	14.5	0.830
	110	124.1	70.5	21.0	0.571	116.9	79.6	17.5	0.684	109.2	90.1	14.5	0.829
	120	139.8	78.5	21.3	0.564	131.6	88.4	17.8	0.675	122.8	99.9	14.7	0.817
	130	151.7	84.0	21.6	0.556	143.0	94.6	18.1	0.665	133.6	106.9	14.9	0.803
	140	163.6	92.0	21.2	0.565	154.3	103.5	17.8	0.673	144.6	116.9	14.8	0.811
	150	177.9	99.1	21.4	0.560	168.0	111.2	18.1	0.664	157.7	125.5	15.0	0.799
50	70	87.7	48.2	21.7	0.554	82.6	54.2	18.1	0.662	77.1	61.3	15.0	0.801
	80	100.6	55.9	21.4	0.560	94.7	62.9	17.9	0.669	88.3	71.1	14.8	0.810
	90	114.3	63.5	21.5	0.559	107.5	71.3	18.0	0.667	100.4	80.6	14.9	0.807
	100	121.5	67.0	21.6	0.555	114.4	75.4	18.1	0.663	106.9	85.3	15.0	0.802
	110	128.7	70.9	21.6	0.554	121.3	80.0	18.1	0.663	113.4	90.5	15.0	0.801
	120	145.1	79.1	21.9	0.548	136.7	88.9	18.4	0.654	127.6	100.3	15.2	0.789
	130	157.5	84.6	22.2	0.540	148.5	95.1	18.7	0.643	138.9	107.2	15.5	0.775
	140	169.7	92.8	21.9	0.549	160.3	104.2	18.4	0.652	150.2	117.4	15.3	0.784
	150	184.6	100.0	22.1	0.544	174.5	112.0	18.6	0.644	163.9	126.2	15.5	0.773

1. Rated in accordance with AHRI Standard 550/590, based on an evaporator temperature drop of 5.6°C, 3 gpm/ton on the condenser, evaporator fouling factor of 0.01761°K·m³/kW and condenser fouling of 0.044025°K·m³/kW.
2. Performance is based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors only.
5. COP—Coefficient of Performance. Power inputs include compressors and control power.
7. Interpolation between points is permissible. Extrapolation is not permitted.



Performance Data

Table 28. Performance Data - RTWD - 50 Hz - high efficiency - I-P units

Evaporator Leaving Water Temperature (°F)	Unit Size	Condenser Entering Water Temperature (°F)											
		75				85				95			
		Tons	kW Input	EER	kW/ton	Tons	kW input	EER	kW/ton	Tons	kW input	EER	kW/ton
38	60	63.0	38.7	19.4	0.620	58.8	43.9	15.9	0.753	54.4	50.0	13.0	0.926
	70	74.3	45.5	19.4	0.617	69.6	51.5	16.1	0.746	64.6	58.6	13.1	0.913
	80	85.2	52.9	19.2	0.625	79.7	59.9	15.9	0.756	73.8	68.1	12.9	0.928
	90	98.0	60.3	19.4	0.620	91.6	68.3	16.0	0.750	84.6	77.6	13.0	0.921
	100	104.6	63.8	19.5	0.614	97.8	72.3	16.1	0.743	90.7	82.3	13.2	0.912
	110	111.9	67.7	19.7	0.608	104.8	76.7	16.3	0.736	97.3	87.3	13.3	0.902
	120	121.2	73.8	19.6	0.612	113.6	83.8	16.2	0.741	105.6	95.4	13.2	0.907
	130	130.8	80.2	19.5	0.616	122.8	91.1	16.1	0.745	114.3	103.7	13.2	0.910
	140	142.2	86.9	19.5	0.614	133.7	98.4	16.2	0.739	124.7	111.8	13.3	0.900
	160	154.7	93.4	19.8	0.606	145.6	105.5	16.5	0.727	136.0	119.7	13.6	0.883
	180	170.5	104.1	19.6	0.613	160.3	117.8	16.3	0.738	149.6	133.9	13.4	0.898
	200	187.3	114.1	19.6	0.611	176.1	129.5	16.3	0.737	164.2	147.3	13.3	0.900
	220	204.8	126.7	19.3	0.621	192.9	142.5	16.2	0.741	180.3	161.0	13.4	0.895
250	223.8	138.3	19.4	0.620	211.2	154.2	16.4	0.732	197.9	173.1	13.7	0.877	
40	60	65.7	38.8	20.1	0.597	61.4	44.0	16.6	0.723	56.9	50.0	13.5	0.886
	70	77.4	45.8	20.1	0.596	72.6	51.7	16.7	0.718	67.4	58.8	13.7	0.878
	80	88.7	53.2	19.9	0.604	83.1	60.1	16.5	0.728	77.1	68.3	13.5	0.892
	90	102.1	60.7	20.0	0.599	95.5	68.6	16.6	0.722	88.4	77.8	13.6	0.884
	100	108.9	64.2	20.2	0.593	102.1	72.6	16.8	0.715	94.7	82.5	13.7	0.875
	110	116.6	68.0	20.5	0.586	109.3	77.0	17.0	0.708	101.6	87.5	13.9	0.865
	120	126.3	74.2	20.3	0.590	118.5	84.0	16.8	0.712	110.2	95.5	13.8	0.870
	130	136.2	80.6	20.2	0.595	128.0	91.3	16.7	0.717	119.3	103.8	13.7	0.874
	140	148.1	87.4	20.2	0.593	139.3	98.7	16.9	0.711	130.1	112.0	13.9	0.864
	160	161.1	94.0	20.5	0.586	151.8	105.9	17.1	0.700	141.9	120.0	14.1	0.848
	180	177.6	104.7	20.3	0.592	167.1	118.3	16.9	0.710	156.1	134.2	13.9	0.862
	200	195.1	114.7	20.3	0.590	183.6	129.9	16.9	0.710	171.4	147.5	13.9	0.863
	220	213.1	127.7	20.0	0.601	201.0	143.3	16.8	0.715	188.1	161.6	13.9	0.861
250	232.8	139.7	19.9	0.602	219.9	155.3	16.9	0.708	206.3	174.0	14.2	0.845	

Performance Data

Table 28. Performance Data - RTWD - 50 Hz - high efficiency - I-P units

Evaporator Leaving Water Temperature (°F)	Unit Size	Condenser Entering Water Temperature (°F)											
		75				85				95			
		Tons	kW Input	EER	kW/ton	Tons	kW input	EER	kW/ton	Tons	kW input	EER	kW/ton
42	60	68.4	39.0	20.8	0.576	64.1	44.2	17.3	0.695	59.5	50.1	14.1	0.849
	70	80.5	46.1	20.8	0.577	75.6	52.0	17.3	0.693	70.3	59.0	14.2	0.845
	80	92.3	53.5	20.5	0.584	86.6	60.4	17.1	0.702	80.4	68.5	14.0	0.857
	90	106.3	61.1	20.7	0.579	99.6	68.9	17.2	0.696	92.3	78.1	14.1	0.850
	100	113.4	64.6	21.0	0.573	106.4	72.9	17.4	0.689	98.8	82.7	14.3	0.840
	110	121.5	68.4	21.2	0.566	114.0	77.3	17.6	0.682	106.0	87.6	14.4	0.831
	120	131.5	74.5	21.1	0.570	123.5	84.3	17.5	0.686	115.0	95.6	14.4	0.835
	130	141.7	81.0	20.9	0.574	133.3	91.6	17.4	0.690	124.3	103.9	14.3	0.839
	140	154.1	87.8	21.0	0.573	145.1	99.1	17.5	0.686	135.6	112.3	14.4	0.831
	160	167.7	94.6	21.2	0.566	158.1	106.4	17.8	0.676	148.0	120.4	14.7	0.816
	180	184.9	105.3	21.0	0.572	174.1	118.8	17.5	0.684	162.8	134.6	14.5	0.829
	200	203.0	115.3	21.0	0.570	191.2	130.3	17.6	0.684	178.7	147.8	14.5	0.829
	220	221.7	128.7	20.6	0.583	209.2	144.1	17.4	0.691	196.0	162.2	14.5	0.829
250	242.0	141.1	20.5	0.585	228.8	156.5	17.5	0.686	214.9	174.9	14.7	0.816	
44	60	71.3	39.2	21.6	0.556	66.8	44.3	17.9	0.669	62.1	50.2	14.7	0.815
	70	83.8	46.4	21.5	0.559	78.7	52.3	17.9	0.670	73.3	59.2	14.7	0.814
	80	96.0	53.9	21.2	0.565	90.1	60.7	17.7	0.678	83.8	68.8	14.5	0.826
	90	110.6	61.6	21.4	0.560	103.7	69.2	17.9	0.672	96.3	78.3	14.7	0.817
	100	118.0	65.0	21.7	0.554	110.8	73.2	18.1	0.664	103.1	82.9	14.8	0.808
	110	126.4	68.8	21.9	0.547	118.7	77.6	18.3	0.657	110.5	87.9	15.0	0.799
	120	136.8	75.0	21.8	0.551	128.6	84.6	18.2	0.661	119.8	95.8	14.9	0.803
	130	147.4	81.4	21.6	0.555	138.8	91.9	18.0	0.665	129.5	104.1	14.9	0.807
	140	160.2	88.4	21.7	0.554	151.1	99.5	18.1	0.661	141.3	112.6	15.0	0.800
	160	174.5	95.3	21.9	0.548	164.6	106.9	18.4	0.652	154.2	120.8	15.3	0.786
	180	192.3	106.0	21.7	0.553	181.3	119.3	18.2	0.660	169.7	134.9	15.0	0.798
	200	211.1	116.0	21.8	0.551	199.0	130.8	18.2	0.659	186.3	148.2	15.0	0.798
	220	230.4	129.8	21.2	0.565	217.6	145.0	18.0	0.668	204.2	162.9	15.0	0.800
250	251.4	142.6	21.1	0.569	237.9	157.9	18.0	0.665	223.7	176.0	15.2	0.789	



Performance Data

Table 28. Performance Data - RTWD - 50 Hz - high efficiency - I-P units

Evaporator Leaving Water Temperature (°F)	Unit Size	Condenser Entering Water Temperature (°F)											
		75				85				95			
		Tons	kW Input	EER	kW/ton	Tons	kW input	EER	kW/ton	Tons	kW input	EER	kW/ton
46	60	74.1	39.5	22.3	0.538	69.6	44.5	18.6	0.645	64.8	50.3	15.3	0.783
	70	87.0	46.7	22.2	0.541	81.8	52.6	18.5	0.647	76.3	59.5	15.3	0.785
	80	99.8	54.3	21.9	0.548	93.7	61.0	18.3	0.655	87.3	69.1	15.1	0.796
	90	115.0	62.0	22.1	0.543	107.9	69.6	18.5	0.649	100.4	78.7	15.2	0.787
	100	122.7	65.4	22.4	0.536	115.3	73.6	18.7	0.641	107.4	83.2	15.4	0.778
	110	131.4	69.2	22.7	0.529	123.6	77.9	18.9	0.634	115.1	88.1	15.6	0.769
	120	142.2	75.4	22.5	0.533	133.9	84.9	18.8	0.638	124.8	96.0	15.5	0.773
	130	153.1	81.9	22.3	0.537	144.3	92.3	18.7	0.642	134.8	104.3	15.5	0.776
	140	166.5	88.9	22.4	0.536	157.1	100.0	18.8	0.639	147.1	112.9	15.6	0.770
	160	181.4	96.0	22.6	0.531	171.2	107.5	19.0	0.630	160.6	121.3	15.8	0.758
	180	200.0	106.7	22.4	0.536	188.6	119.9	18.8	0.638	176.7	135.4	15.6	0.768
	200	219.4	116.7	22.5	0.534	207.0	131.4	18.8	0.637	194.0	148.5	15.6	0.768
	220	239.3	131.0	21.9	0.549	226.2	146.0	18.5	0.647	212.5	163.7	15.5	0.772
	250	261.0	144.2	21.7	0.554	247.2	159.2	18.6	0.646	232.7	177.2	15.7	0.763
48	60	77.1	39.7	23.1	0.520	72.4	44.7	19.3	0.623	67.6	50.5	15.9	0.753
	70	90.4	47.1	22.8	0.525	85.1	52.9	19.2	0.627	79.4	59.8	15.8	0.758
	80	103.6	54.7	22.6	0.532	97.5	61.4	18.9	0.634	90.9	69.4	15.6	0.768
	90	119.4	62.5	22.8	0.527	112.3	70.0	19.1	0.627	104.6	79.0	15.8	0.759
	100	127.5	65.8	23.1	0.520	119.9	73.9	19.4	0.620	111.8	83.5	16.0	0.750
	110	136.6	69.6	23.4	0.513	128.6	78.3	19.6	0.612	119.9	88.4	16.2	0.741
	120	147.8	75.8	23.3	0.516	139.2	85.3	19.5	0.616	130.0	96.3	16.1	0.744
	130	159.0	82.3	23.1	0.520	150.0	92.6	19.4	0.620	140.3	104.5	16.0	0.748
	140	173.0	89.5	23.1	0.520	163.4	100.5	19.4	0.617	153.1	113.3	16.2	0.743
	160	188.5	96.7	23.3	0.515	178.1	108.2	19.7	0.610	167.2	121.9	16.4	0.731
	180	207.8	107.5	23.1	0.519	196.2	120.5	19.5	0.616	184.0	135.9	16.2	0.741
	200	227.8	117.5	23.2	0.517	215.2	132.0	19.5	0.615	201.8	149.0	16.2	0.740
	220	248.3	132.2	22.5	0.534	235.0	147.0	19.1	0.627	221.0	164.5	16.1	0.746
	250	270.8	145.9	22.2	0.540	256.7	160.7	19.1	0.628	241.8	178.4	16.2	0.739

Table 28. Performance Data - RTWD - 50 Hz - high efficiency - I-P units

Evaporator Leaving Water Temperature (°F)	Unit Size	Condenser Entering Water Temperature (°F)											
		75				85				95			
		Tons	kW Input	EER	kW/ton	Tons	kW input	EER	kW/ton	Tons	kW input	EER	kW/ton
50	60	80.1	39.9	23.8	0.504	75.3	44.9	20.0	0.601	70.4	50.6	16.5	0.726
	70	93.9	47.5	23.5	0.510	88.4	53.3	19.8	0.607	82.6	60.1	16.4	0.733
	80	107.5	55.1	23.2	0.516	101.3	61.8	19.5	0.614	94.5	69.7	16.2	0.741
	90	124.0	63.0	23.5	0.511	116.7	70.5	19.8	0.607	108.9	79.4	16.4	0.733
	100	132.4	66.3	23.8	0.504	124.7	74.4	20.0	0.600	116.4	83.8	16.6	0.723
	110	141.9	70.1	24.1	0.497	133.7	78.7	20.3	0.592	124.8	88.7	16.8	0.714
	120	153.5	76.3	24.0	0.500	144.7	85.7	20.2	0.595	135.2	96.6	16.7	0.717
	130	165.0	82.8	23.8	0.504	155.9	93.0	20.0	0.599	145.9	104.8	16.6	0.721
	140	179.6	90.2	23.8	0.504	169.7	101.0	20.1	0.597	159.2	113.7	16.7	0.717
	160	195.7	97.6	24.0	0.501	185.0	108.9	20.3	0.591	173.9	122.4	17.0	0.707
	180	215.8	108.3	23.8	0.504	203.9	121.2	20.1	0.596	191.4	136.4	16.8	0.715
	200	236.4	118.3	23.9	0.502	223.5	132.6	20.2	0.595	209.9	149.5	16.8	0.714
	220	257.6	133.4	23.1	0.519	244.0	148.1	19.7	0.609	229.6	165.4	16.6	0.722
	250	280.8	147.6	22.8	0.527	266.4	162.3	19.7	0.611	251.2	179.8	16.7	0.717

1. Rated in accordance with AHRI Standard 550/590, based on evaporator temperature drop of 10°F, 3 gpm/ton on the condenser, evaporator fouling factor of 0.0001°F·ft²·h/Btu and condenser fouling factor of 0.00025°F·ft²·h/Btu.
2. Performance is based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors only.
5. EER – Energy Efficiency Ratio (Btu/W·h). Power inputs include compressors and control power.
6. Interpolation between points is permissible. Extrapolation is not permitted.



Performance Data

Table 29. Performance Data - RTWD - 50 Hz - premium efficiency - I-P units

Leaving Water Temperature (°F)	Unit Size	Condenser Entering Water Temperature (°F)											
		75				85				95			
		Tons	kW input	EER	kW/ton	Tons	kW input	EER	kW/ton	Tons	kW input	EER	kW/ton
38	160	159.3	92.4	20.6	0.582	149.7	104.1	17.2	0.698	139.8	118.1	14.1	0.848
	180	175.6	102.4	20.5	0.586	164.9	115.8	17.0	0.705	153.7	131.6	14.0	0.859
	200	189.1	112.5	20.1	0.597	177.7	127.6	16.7	0.720	165.6	145.2	13.7	0.879
40	160	166.1	92.9	21.3	0.562	156.2	104.6	17.9	0.672	146.0	118.4	14.7	0.814
	180	183.1	103.0	21.3	0.565	172.1	116.2	17.7	0.678	160.6	131.9	14.6	0.824
	200	197.1	113.0	20.9	0.575	185.4	127.9	17.3	0.692	173.0	145.4	14.2	0.843
42	160	173.1	93.6	22.1	0.543	162.9	105.1	18.5	0.647	152.4	118.8	15.3	0.782
	180	190.8	103.6	22.0	0.545	179.5	116.7	18.4	0.652	167.7	132.2	15.2	0.791
	200	205.3	113.6	21.6	0.555	193.2	128.3	18.0	0.666	180.5	145.6	14.8	0.809
44	160	180.2	94.3	22.8	0.525	169.8	105.6	19.2	0.624	159.0	119.2	15.9	0.753
	180	198.7	104.3	22.8	0.527	187.1	117.2	19.1	0.629	174.9	132.5	15.8	0.760
	200	213.6	114.2	22.4	0.537	201.3	128.8	18.7	0.642	188.2	145.9	15.4	0.777
46	160	187.6	95.0	23.6	0.509	176.9	106.2	19.9	0.603	165.7	119.7	16.6	0.725
	180	206.8	105.0	23.5	0.510	194.9	117.8	19.8	0.606	182.4	132.9	16.4	0.731
	200	222.1	114.9	23.1	0.519	209.5	129.3	19.4	0.619	196.2	146.2	16.1	0.747
48	160	195.2	95.8	24.3	0.493	184.2	106.9	20.6	0.583	172.7	120.2	17.2	0.699
	180	215.2	105.8	24.3	0.494	202.9	118.4	20.5	0.585	190.1	133.4	17.1	0.704
	200	230.8	115.7	23.9	0.503	217.9	129.9	20.1	0.598	204.2	146.6	16.7	0.720
50	160	202.9	96.7	25.1	0.479	191.6	107.6	21.3	0.564	179.8	120.8	17.8	0.674
	180	223.7	106.7	25.1	0.479	211.2	119.1	21.2	0.566	198.0	133.9	17.7	0.678
	200	239.7	116.5	24.6	0.488	226.5	130.5	20.8	0.578	212.5	147.1	17.3	0.694

1. Rated in accordance with AHRI Standard 550/590, based on evaporator temperature drop of 10°F, 3 gpm/ton on the condenser, evaporator fouling factor of 0.0001°F·ft²·h/Btu and condenser fouling factor of 0.00025°F·ft²·h/Btu.
2. Performance is based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors only.
5. EER – Energy Efficiency Ratio (Btu/W·h). Power inputs include compressors and control power.
6. Interpolation between points is permissible. Extrapolation is not permitted.

Performance Data

Table 30. Part Load Performance – RTWD – 50 Hz – standard efficiency – I-P units

Unit Size	% Load	Tons	kW	EER	kW/ton	IPLV	
						EER	kW/ton
70	100	73.6	53.6	16.5	0.728	22.3	0.539
	75	55.2	32.3	20.5	0.585		
	50	36.8	18.1	24.4	0.492		
	25	18.4	10.5	21.0	0.568		
80	100	84.4	62.2	16.3	0.737	22.4	0.536
	75	63.3	37.8	20.1	0.597		
	50	42.2	21.0	24.1	0.497		
	25	21.1	10.5	24.1	0.495		
90	100	95.9	70.5	16.3	0.735	22.1	0.544
	75	71.9	43.1	20.0	0.599		
	50	48.0	23.7	24.3	0.494		
	25	24.0	13.5	21.3	0.564		
100	100	102.1	74.7	16.4	0.732	22.2	0.540
	75	76.6	45.9	20.0	0.600		
	50	51.0	25.2	24.3	0.493		
	25	25.5	13.6	22.5	0.534		
110	100	108.3	79.3	16.4	0.732	21.7	0.552
	75	81.2	49.2	19.8	0.605		
	50	54.2	27.0	24.1	0.499		
	25	27.1	16.3	20.0	0.600		
120	100	121.7	87.9	16.6	0.722	22.3	0.537
	75	91.3	54.9	20.0	0.601		
	50	60.9	29.6	24.7	0.486		
	25	30.4	16.3	22.4	0.536		
130	100	132.3	94.2	16.9	0.712	22.3	0.537
	75	99.3	59.3	20.1	0.597		
	50	66.2	31.7	25.1	0.479		
	25	33.1	19.5	20.4	0.591		
140	100	142.9	102.8	16.7	0.719	22.3	0.538
	75	107.2	64.0	20.1	0.597		
	50	71.4	34.7	24.7	0.486		
	25	35.7	19.8	21.6	0.555		
150	100	155.5	110.2	16.9	0.709	22.3	0.538
	75	116.6	68.2	20.5	0.585		
	50	77.7	37.9	24.6	0.488		
	25	38.9	22.7	20.6	0.585		

1. Rated in accordance with AHRI Standard 550/590, based on evaporator temperature drop of 10°F, 3 gpm/ton on the condenser, evaporator fouling factor of 0.0001°F·ft²·h/Btu and condenser fouling factor of 0.00025°F·ft²·h/Btu.
2. Performance is based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors only.
5. EER – Energy Efficiency Ratio (Btu/W·h). Power inputs include compressors and control power.



Performance Data

Table 31. Part Load Performance – RTWD – 50 Hz – high efficiency – I-P units

Unit Size	% Load	Tons	kW	EER	kW/ton	IPLV	
						EER	kW/ton
60	100	66.8	44.7	17.9	0.669	24.4	0.492
	75	50.1	27.3	22.1	0.544		
	50	33.4	14.8	27.1	0.442		
	25	16.7	8.8	22.8	0.527		
70	100	78.7	52.7	17.9	0.670	24.2	0.495
	75	59.0	31.7	22.3	0.538		
	50	39.3	17.8	26.5	0.453		
	25	19.7	10.2	23.2	0.519		
80	100	90.1	61.1	17.7	0.678	24.5	0.491
	75	67.6	37.1	21.9	0.549		
	50	45.0	20.4	26.5	0.452		
	25	22.5	10.3	26.2	0.457		
90	100	103.7	69.6	17.9	0.672	24.2	0.496
	75	77.8	42.4	22.0	0.546		
	50	51.8	23.4	26.6	0.451		
	25	25.9	13.3	23.4	0.514		
100	100	110.8	73.6	18.0	0.664	24.6	0.488
	75	83.1	45.2	22.1	0.544		
	50	55.4	24.5	27.1	0.443		
	25	27.7	13.5	24.6	0.486		
110	100	118.7	78.0	18.3	0.657	24.2	0.495
	75	89.0	48.3	22.1	0.542		
	50	59.3	26.5	26.8	0.447		
	25	29.7	15.9	22.4	0.536		
120	100	128.6	85.0	18.2	0.661	24.3	0.494
	75	96.5	53.0	21.8	0.550		
	50	64.3	28.8	26.8	0.448		
	25	32.2	16.0	24.2	0.496		
130	100	138.8	92.3	18.0	0.665	23.9	0.502
	75	104.1	58.0	21.5	0.558		
	50	69.4	31.0	26.8	0.446		
	25	34.7	19.1	21.8	0.552		
140	100	151.1	99.9	18.2	0.661	24.3	0.494
	75	113.3	62.3	21.8	0.550		
	50	75.5	33.6	27.0	0.444		
	25	37.8	19.3	23.5	0.512		
160	100	164.6	107.3	18.4	0.652	24.3	0.495
	75	123.4	66.4	22.3	0.538		
	50	82.3	37.0	26.7	0.450		
	25	41.2	22.0	22.5	0.536		

Table 31. Part Load Performance – RTWD – 50 Hz – high efficiency – I-P units

Unit Size	% Load	Tons	kW	EER	kW/ton	IPLV	
						EER	kW/ton
180	100	181.3	119.7	18.2	0.660	24.4	0.491
	75	136.0	74.8	21.8	0.550		
	50	90.7	40.3	27.0	0.445		
	25	45.3	22.2	24.5	0.490		
200	100	199.0	131.2	18.2	0.659	24.1	0.499
	75	149.3	82.6	21.7	0.553		
	50	99.5	44.2	27.0	0.445		
	25	49.8	27.5	21.7	0.552		
220	100	217.6	145.4	18.0	0.668	24.0	0.501
	75	163.2	89.6	21.9	0.549		
	50	108.8	49.8	26.2	0.458		
	25	54.4	27.9	23.4	0.513		
250	100	237.9	158.3	18.0	0.665	23.6	0.508
	75	178.4	96.1	22.3	0.539		
	50	118.9	56.3	25.3	0.473		
	25	59.5	32.0	22.3	0.538		

1. Rated in accordance with AHRI Standard 550/590, based on evaporator temperature drop of 10°F, 3 gpm/ton on the condenser, evaporator fouling factor of 0.0001°F·ft²·h/Btu and condenser fouling factor of 0.00025°F·ft²·h/Btu.
2. Performance is based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors only.
5. EER – Energy Efficiency Ratio (Btu/W·h). Power inputs include compressors and control power.

Table 32. Part Load Performance – RTWD – 50 Hz – premium efficiency – I-P units

Unit Size	% Load	Tons	kW	EER	kW/ton	IPLV	
						EER	kW/ton
160	100	169.8	106.0	19.2	0.624	25.4	0.473
	75	127.4	65.5	23.3	0.514		
	50	84.9	36.4	28.0	0.428		
	25	42.5	21.9	23.3	0.517		
180	100	187.1	117.6	19.1	0.629	25.8	0.465
	75	140.3	73.4	22.9	0.523		
	50	93.6	39.1	28.7	0.418		
	25	46.8	22.1	25.4	0.473		
200	100	201.3	129.2	18.7	0.642	24.7	0.486
	75	150.9	81.3	22.3	0.538		
	50	100.6	43.4	27.8	0.432		
	25	50.3	27.3	22.1	0.542		

1. Rated in accordance with AHRI Standard 550/590, based on evaporator temperature drop of 10°F, 3 gpm/ton on the condenser, evaporator fouling factor of 0.0001°F·ft²·h/Btu and condenser fouling factor of 0.00025°F·ft²·h/Btu.
2. Performance is based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors only.
5. EER – Energy Efficiency Ratio (Btu/W·h). Power inputs include compressors and control power.



Performance Data

Table 33. Performance Data - RTWD - 50 Hz - standard efficiency - SI units

Evaporator Leaving Water Temperature (°C)	Unit Size	Condenser Entering Water Temperature (°C)								
		25			30			35		
		kW Cooling	kW input	COP	kW Cooling	kW input	COP	kW Cooling	kW input	COP
5	70	257.1	47.8	5.3	242.4	53.5	4.5	226.9	60.0	3.8
	80	294.9	55.5	5.3	277.7	62.1	4.4	259.4	69.8	3.7
	90	335.2	63.0	5.3	315.6	70.5	4.5	294.5	79.1	3.7
	100	356.5	66.8	5.3	336.1	74.8	4.5	314.5	84.0	3.7
	110	377.9	70.9	5.3	356.8	79.5	4.5	334.5	89.3	3.7
	120	424.5	78.6	5.4	400.6	88.1	4.5	375.3	98.8	3.8
	130	461.1	84.3	5.4	435.5	94.5	4.6	408.4	106.0	3.8
	140	497.4	92.0	5.4	470.5	102.9	4.6	442.2	115.4	3.8
	150	540.6	98.8	5.5	511.9	110.2	4.6	482.1	123.5	3.9
7	70	275.6	48.3	5.7	260.3	54.0	4.8	244.1	60.5	4.0
	80	316.2	56.1	5.6	298.3	62.7	4.7	279.3	70.2	4.0
	90	359.4	63.7	5.6	339.0	71.1	4.7	317.2	79.6	4.0
	100	382.1	67.4	5.6	360.9	75.4	4.8	338.4	84.5	4.0
	110	405.0	71.5	5.6	382.9	80.0	4.8	359.5	89.7	4.0
	120	455.5	79.5	5.7	430.4	88.8	4.8	403.8	99.3	4.0
	130	494.7	85.2	5.8	467.9	95.1	4.9	439.3	106.4	4.1
	140	533.5	93.1	5.7	505.2	103.8	4.8	475.6	116.1	4.1
	150	580.0	100.0	5.8	549.9	111.3	4.9	518.6	124.4	4.2
9	70	294.9	49.0	6.0	278.9	54.6	5.1	262.0	61.0	4.3
	80	338.3	56.8	5.9	319.8	63.3	5.0	300.1	70.8	4.2
	90	384.4	64.5	5.9	363.3	71.8	5.0	340.8	80.2	4.2
	100	408.7	68.2	6.0	386.7	76.0	5.1	363.2	85.0	4.3
	110	433.2	72.2	6.0	410.1	80.6	5.1	385.5	90.2	4.3
	120	487.8	80.4	6.0	461.5	89.6	5.1	433.5	99.9	4.3
	130	529.7	86.1	6.1	501.6	95.8	5.2	471.6	106.9	4.4
	140	571.1	94.3	6.0	541.5	104.8	5.1	510.4	116.9	4.3
	150	621.0	101.4	6.1	589.5	112.6	5.2	556.7	125.6	4.4

1. Rated in accordance with AHRI Standard 550/590, based on an evaporator temperature drop of 5.6°C, 0.054 L/s per kW on the condenser, evaporator fouling factor of 0.01761°K·m²/kW and condenser fouling of 0.044025°K·m²/kW.
2. Performance is based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors only.
5. COP—Coefficient of Performance. Power inputs include compressors and control power.
6. Interpolation between points is permissible. Extrapolation is not permitted.

Table 34. Performance Data - RTWD - 50 Hz - high efficiency - SI units

Evaporator Leaving Water Temperature (°C)	Unit Size	Condenser Entering Water Temperature (°C)								
		25			30			35		
		kW Cooling	kW input	COP	kW Cooling	kW input	COP	kW Cooling	kW input	COP
5	60	232.9	39.9	5.8	219.1	44.7	4.9	204.7	50.1	4.1
	70	274.4	47.0	5.8	258.7	52.5	4.9	242.2	58.9	4.1
	80	314.4	54.6	5.7	296.2	61.0	4.8	276.8	68.4	4.0
	90	361.9	62.4	5.8	340.6	69.6	4.9	317.9	77.9	4.1
	100	386.3	65.9	5.8	363.9	73.6	4.9	340.3	82.5	4.1
	110	413.6	69.8	5.9	389.9	78.1	5.0	364.9	87.5	4.1
	120	447.9	76.2	5.8	422.7	85.2	4.9	395.9	95.5	4.1
	130	483.1	82.8	5.8	456.6	92.6	4.9	428.3	103.9	4.1
	140	525.3	89.7	5.8	497.0	100.1	4.9	467.2	112.2	4.2
	160	571.7	96.5	5.9	541.4	107.4	5.0	509.9	120.2	4.2
	180	630.1	107.5	5.8	596.2	120.0	5.0	560.8	134.4	4.2
	200	692.0	117.8	5.9	654.8	131.7	5.0	615.7	147.7	4.2
	220	756.1	131.1	5.8	716.8	145.4	4.9	675.4	161.9	4.2
250	826.0	143.3	5.7	784.3	157.7	5.0	740.7	174.4	4.2	
7	60	250.6	40.3	6.2	236.3	44.9	5.2	221.3	50.2	4.4
	70	294.5	47.6	6.1	278.2	53.0	5.2	260.9	59.3	4.4
	80	337.5	55.3	6.1	318.6	61.6	5.1	298.4	68.9	4.3
	90	388.8	63.1	6.1	366.6	70.2	5.2	343.1	78.4	4.4
	100	415.0	66.6	6.2	391.7	74.2	5.3	367.0	83.0	4.4
	110	444.6	70.5	6.3	419.8	78.6	5.3	393.5	87.9	4.5
	120	481.3	76.9	6.2	454.8	85.7	5.3	426.7	95.9	4.4
	130	518.5	83.5	6.2	490.7	93.2	5.2	461.1	104.1	4.4
	140	563.9	90.6	6.2	534.3	100.9	5.3	503.1	112.7	4.4
	160	614.1	97.6	6.3	582.3	108.4	5.4	549.2	121.0	4.5
	180	676.8	108.7	6.2	641.3	120.9	5.3	604.2	135.1	4.5
	200	742.8	119.0	6.2	704.0	132.6	5.3	663.2	148.3	4.5
	220	810.8	133.0	6.1	769.8	146.9	5.2	726.8	163.1	4.4
250	884.9	145.9	6.0	841.6	159.9	5.2	796.2	176.4	4.5	



Performance Data

Table 34. Performance Data - RTWD - 50 Hz - high efficiency - SI units

Evaporator Leaving Water Temperature (°C)	Unit Size	Condenser Entering Water Temperature (°C)								
		25			30			35		
		kW Cooling	kW input	COP	kW Cooling	kW input	COP	kW Cooling	kW input	COP
9	60	268.9	40.7	6.5	254.1	45.3	5.6	238.6	50.5	4.7
	70	315.6	48.2	6.5	298.5	53.6	5.5	280.4	59.8	4.7
	80	361.6	56.0	6.4	341.9	62.2	5.5	320.9	69.4	4.6
	90	416.7	64.0	6.5	393.8	70.9	5.5	369.4	79.0	4.7
	100	444.9	67.4	6.6	420.7	74.9	5.6	395.0	83.5	4.7
	110	476.9	71.3	6.7	451.0	79.3	5.7	423.5	88.4	4.8
	120	516.0	77.7	6.6	488.4	86.4	5.6	458.9	96.3	4.7
	130	555.3	84.3	6.6	526.4	93.8	5.6	495.4	104.5	4.7
	140	604.1	91.6	6.6	573.3	101.7	5.6	540.6	113.3	4.8
	160	658.2	98.9	6.6	625.0	109.5	5.7	590.3	121.9	4.8
	180	725.6	110.0	6.6	688.4	122.0	5.6	649.6	135.9	4.8
	200	795.6	120.3	6.6	755.2	133.6	5.6	712.8	149.0	4.8
	220	867.5	135.0	6.4	824.9	148.7	5.5	780.2	164.6	4.7
250	946.2	148.8	6.3	901.1	162.5	5.5	853.9	178.6	4.8	

1. Rated in accordance with AHRI Standard 550/590, based on an evaporator temperature drop of 5.6°C, 0.054 L/s per kW on the condenser, evaporator fouling factor of 0.01761°K·m³/kW and condenser fouling of 0.044025°K·m³/kW.
2. Performance is based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors only.
5. COP—Coefficient of Performance. Power inputs include compressors and control power.
6. Interpolation between points is permissible. Extrapolation is not permitted.

Table 35. Performance Data - RTWD - 50 Hz- premium efficiency - SI units

Evaporator Leaving Water Temperature (°C)	Unit Size	Condenser Entering Water Temperature (°C)								
		25			30			35		
		kW Cooling	kW input	COP	kW Cooling	kW input	COP	kW Cooling	kW input	COP
5	160	589.4	95.4	6.2	557.6	106.1	5.2	524.6	118.6	4.4
	180	649.7	105.7	6.1	614.2	117.9	5.2	577.1	132.0	4.4
	200	699.4	116.1	6.0	661.4	129.7	5.1	621.6	145.5	4.3
7	160	634.4	96.6	6.5	600.9	107.1	5.6	566.2	119.4	4.7
	180	699.3	106.9	6.5	662.0	118.8	5.6	623.1	132.6	4.7
	200	751.6	117.2	6.4	712.0	130.5	5.4	670.4	146.0	4.6
9	160	681.5	98.0	6.9	646.4	108.2	6.0	609.8	120.3	5.1
	180	751.3	108.2	6.9	712.1	119.8	5.9	671.3	133.4	5.0
	200	806.1	118.4	6.8	764.7	131.5	5.8	721.3	146.7	4.9

1. Rated in accordance with AHRI Standard 550/590, based on an evaporator temperature drop of 5.6°C, 0.054 L/s per kW on the condenser, evaporator fouling factor of 0.01761°K·m³/kW and condenser fouling of 0.044025°K·m³/kW.
2. Performance is based on 2 pass evaporator configuration.
3. Consult Trane representative for additional performance information.
4. kW input is for compressors only.
5. COP—Coefficient of Performance. Power inputs include compressors and control power.
6. Interpolation between points is permissible. Extrapolation is not permitted.

Controls

LCD Touch-Screen Display with Multi-Language Support

The standard DynaView display provided with the Trane CH530 control panel features an LCD touch-screen, allowing access to all operational inputs and outputs. This display supports many languages including: English, Chinese, Dutch, French, German, Italian, Japanese, Korean, Portuguese, Spanish, and Thai.

Display Features Include:

- LCD touch-screen with LED backlighting, for scrolling access to input and output operating information
- Single-screen, folder/tab-style display of all available information on individual components (evaporator, condenser, compressor, etc.)
- Manual override indication
- Password entry/lockout system to enable or disable display
- Automatic and immediate stop capabilities for standard or immediate manual shutdown
- Fast, easy access to available chiller data in tabbed format, including:
 - Modes of operation, including normal cooling and ice making
 - Water temperatures and setpoints
 - Loading and limiting status and setpoints
 - Average line current
 - Outdoor air temperature
 - Start/stop differential timers
 - Auto/Manual mode for EXV, slide valve, and head pressure control
 - Pump status and override
 - Chilled water reset settings
 - Optional external setpoints, including:
 - i. Chilled water
 - ii. Current-limit
 - iii. Condenser leaving hot water temperature setpoint
 - iv. Ice building
- Reports, listed on a single tabbed screen for easy access, including:
 - ASHRAE, containing all guideline 3 report information
 - Evaporator
 - Condenser
 - Compressor

- Evaporator, condenser, and compressor reports containing all operational information on individual components, including:
 - Water temperatures
 - Refrigerant pressures, temperatures, and approach
 - Oil pressure
 - Flow switch status
 - EXV position
 - Head pressure control command
 - Compressor starts and run-time
 - Line phase percent RLA, amps, and volts
- Alarm and diagnostic information, including:
 - Flashing alarms with touch-screen button of alarm condition
 - Scrollable list of last ten active diagnostics
 - Specific information on applicable diagnostic from list of over one-hundred
 - Automatic or manual resetting diagnostic types

LonTalk/Tracer Summit Interface

LonTalk (LCI-C) or Tracer Summit communications capabilities are available, with communication link via single twisted-pair wiring to factory-installed, tested communication board.

Required features:

- LonTalk/Tracer Summit Interface

Additional options that may be used:

- Ice making
- Chilled water temperature reset - outdoor air

External devices required:

- Trane Tracer system or LonTalk compatible system level interface.

Easy Operation and Maintenance

- Remote monitoring and control
- Displays both current operation conditions and scheduled automated control actions
- Concise reports assist in planning for preventative maintenance and verifying performance
- Alarm notification and diagnostic messages aid in quick and accurate troubleshooting

When integrated with a Tracer Summit building management system the total building operation can be optimized. With this system option, the full breadth of Trane's HVAC and controls experience are applied to offer solutions to many facility issues.

LonTalk Chiller Controls

LonTalk is a communications protocol developed by the Echelon™ Corporation. The LonMark™ association develops control profiles using the LonTalk communication protocol. LonTalk is a unit level communications protocol.

LonTalk Communications Interface for Chillers (LCI-C) provides a generic automation system with the LonMark chiller profile inputs/outputs. In addition to the standard points, Trane provides other commonly used network output variables for greater interoperability with any automation system. The complete reference list of Trane LonTalk points is available on the LonMark web site.

Trane controls or another vendor's system can use the predefined list of points with ease to give the operator a complete picture of how the system is running.

Tracer Summit

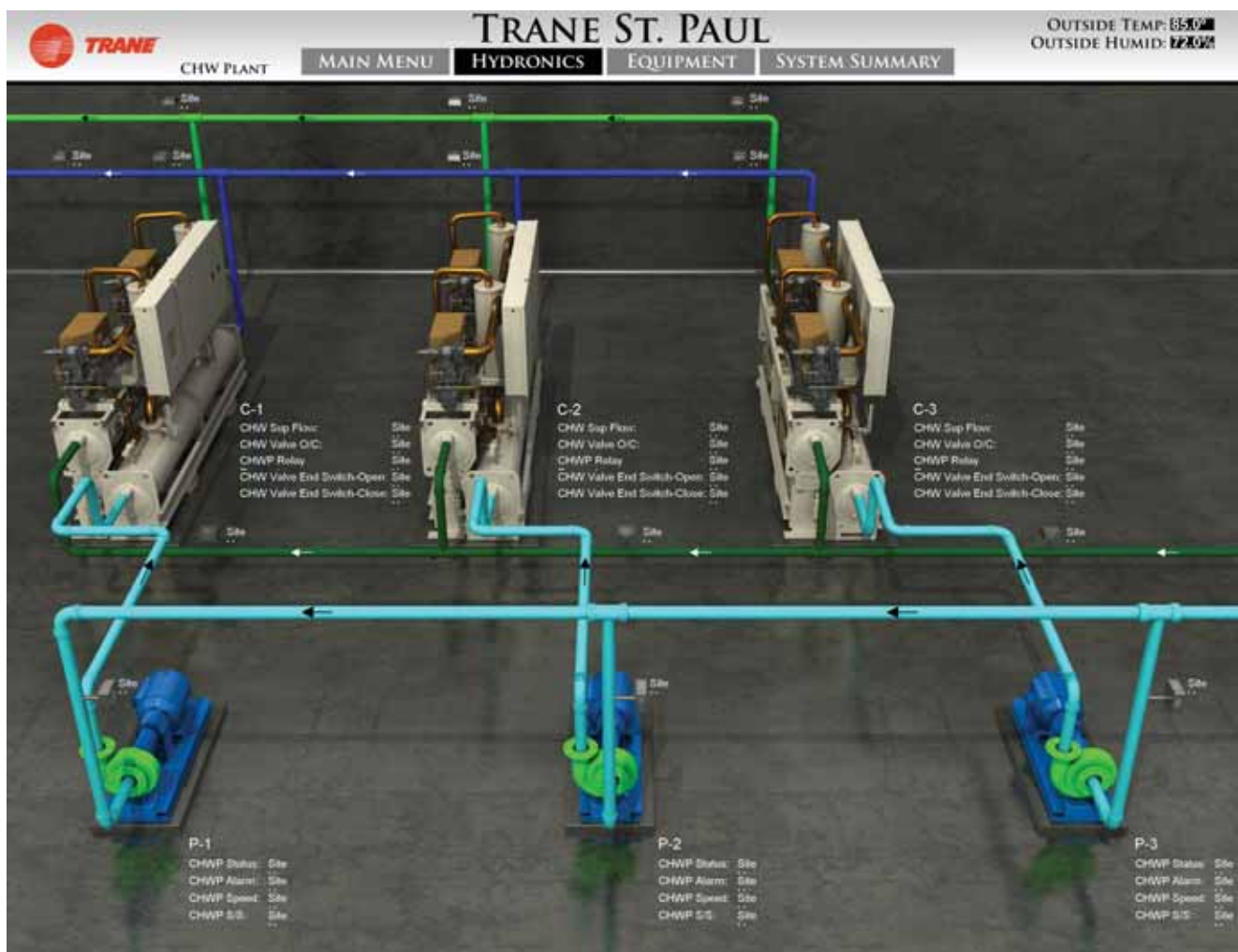
Trane's depth of experience in chillers and controls makes us a well-qualified choice for automation of chiller plants using water-cooled Series R chillers. The chiller plant control capabilities of the Trane Tracer Summit™ building automation system are unequalled in the industry. Our chiller plant automation software is fully pre-engineered and tested.

Energy Efficiency

- Sequences starting of chillers to optimize the overall chiller plant energy efficiency
- Individual chillers operate as base, peak, or swing based on capacity and efficiency
- Automatically rotates individual chiller operation to equalize runtime and wear between chillers.
- Evaluates and selects the lowest energy consumption alternative from an overall system perspective.

Regulatory Compliance Documentation

- Gathers information and generates the reports mandated in ASHRAE Guideline 3.



BACnet Communication Interface

BACnet communications capabilities are available, with communication link via single twisted-pair wiring.

Required features:

- BACnet Interface

Additional options that may be used:

- Ice making
- Chilled water temperature reset - outdoor air

External devices required:

- BACnet MS/TP network.

BACnet Chiller Controls

BACnet is an open standard communications protocol used by building automation systems. BACnet MS/TP uses RS-485 hardware. This device is a non-programmable communication module that connects directly to the CH530 chiller control.

Time of Day Scheduling

Time of day scheduling allows the customer to perform simple chiller scheduling without the need for a building automation system.

This feature allows the user to set 10 events in a 7 day time period. For each event the user can specify an activation time and the days of the week the event is active. Any setpoints available can be specified for each event, such as the leaving chilled water temperature (standard) and the current-limit setpoint (optional if ordered).

Required features:

- Time of day scheduling

Additional options that if ordered may be incorporated into the scheduling:

- External chilled water setpoint
- External current-limit setpoint
- Condenser leaving hot water temperature setpoint
- Ice making initiation

Hardwire Points

Remote devices wired from the control panel are another reliable method of providing auxiliary control to a building automation system. Inputs and outputs can be communicated via a typical 4–20 mA electrical signal, an equivalent 2–10 Vdc signal, or by utilizing contact closures.

Selectable options:

- External chilled water setpoint/External current-limit setpoint
- Ice making control
- Condenser leaving hot water temperature control
- Chilled water temperature reset
- Condenser pressure output
- Motor current analog output
- Programmable relays available outputs are: alarm-latching, alarm-auto reset, general alarm, warning, chiller limit mode, compressor running, head pressure relief request, and Tracer control

Electrical Data

Table 36. Electrical Data – RTWD – 60 Hz – standard efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Power Connections	Unit Wiring		Motor Data		
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTWD 80	200/60/3	1	216	300			
	200/60/3	2	122/118	200/200	94/94	276/276	912/912
	230/60/3	1	188	250			
	230/60/3	2	106/103	175/175	82/82	238/238	786/786
	380/60/3	1	115	150			
	380/60/3	2	65/63	110/110	50/50	138/138	456/456
	460/60/3	1	94	125			
	460/60/3	2	53/51	90/90	41/41	114/114	376/376
	575/60/3	1	76	100			
	575/60/3	2	43/41	70/70	33/33	93/93	308/308
RTWD 90	200/60/3	1	249	350			
	200/60/3	2	140/136	225/225	109/109	304/304	1003/1003
	230/60/3	1	217	300			
	230/60/3	2	122/119	200/200	95/95	262/262	866/866
	380/60/3	1	130	175			
	380/60/3	2	73/71	125/125	57/57	161/161	530/530
	460/60/3	1	110	150			
	460/60/3	2	62/60	100/100	48/48	131/131	433/433
	575/60/3	1	87	110			
	575/60/3	2	49/48	80/80	38/38	105/105	346/346
RTWD 100	200/60/3	1	291	400			
	200/60/3	2	140/178	225/300	109/142	304/355	1003/1137
	230/60/3	1	252	350			
	230/60/3	2	122/154	200/250	95/123	262/294	866/942
	380/60/3	1	153	225			
	380/60/3	2	73/94	125/150	57/75	161/177	530/566
	460/60/3	1	127	175			
	460/60/3	2	62/78	100/125	48/62	131/147	433/471
	575/60/3	1	102	150			
	575/60/3	2	49/63	80/110	38/50	105/118	346/377
RTWD 110	200/60/3	1	324	450			
	200/60/3	2	182/178	300/300	142/142	355/355	1137/1137
	230/60/3	1	280	400			
	230/60/3	2	157/154	250/250	123/123	294/294	942/942
	380/60/3	1	171	225			
	380/60/3	2	96/94	150/150	75/75	177/177	566/566
	460/60/3	1	141	200			
	460/60/3	2	80/78	125/125	62/62	147/147	471/471
	575/60/3	1	114	150			
	575/60/3	2	64/63	110/110	50/50	118/118	377/377



Electrical Data

Table 36. Electrical Data – RTWD – 60 Hz – standard efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Power Connections	Unit Wiring			Motor Data	
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTWD 120	200/60/3	1	356	500			
	200/60/3	2	182/210	300/350	142/168	355/419	1137/1368
	230/60/3	1	309	450			
	230/60/3	2	157/183	250/300	123/146	294/367	942/1200
	380/60/3	1	187	250			
	380/60/3	2	96/110	150/175	75/88	177/229	566/747
	460/60/3	1	155	225			
	460/60/3	2	79/91	125/150	62/73	147/184	471/600
	575/60/3	1	125	175			
	575/60/3	2	64/74	110/125	50/59	118/148	377/483
RTWD 130	200/60/3	1	382	500			
	200/60/3	2	214/210	350/350	168/168	419/419	1368/1368
	230/60/3	1	332	450			
	230/60/3	2	186/183	300/300	146/146	367/367	1200/1200
	380/60/3	1	200	250			
	380/60/3	2	112/110	200/175	88/88	229/229	747/747
	460/60/3	1	166	225			
	460/60/3	2	93/91	150/150	73/73	184/184	600/600
	575/60/3	1	134	175			
	575/60/3	2	75/74	125/125	59/59	148/148	483/483
RTWD 140	200/60/3	1	425	600			
	200/60/3	2	214/253	350/450	168/202	419/487	1368/1368
	230/60/3	1	368	500			
	230/60/3	2	186/219	300/350	146/175	367/427	1200/1314
	380/60/3	1	223	300			
	380/60/3	2	112/133	200/225	88/106	229/260	747/801
	460/60/3	1	185	250			
	460/60/3	2	93/110	150/175	73/88	184/212	600/652
	575/60/3	1	148	200			
	575/60/3	2	75/88	125/150	59/70	148/172	483/528

1. MCA—minimum circuit ampacity
2. MOP—maximum overcurrent protection
3. RLA—rated load amps are rated in accordance with UL Standard 1995.
4. LRA—locked rotor amps are based on full winding starts.
5. LRA YD—Locked Rotor Amps in Wye configuration. LRA XL—Locked Rotor Amps in the Delta configuration.
6. Local codes may take precedence.
7. Data containing information on two circuits shown as follows: circuit 1/circuit 2.
8. Standard condensing temperature option refers to entering condenser water temperatures 95°F (35°C) and below.

Table 37. Electrical Data – RTWD – 60 Hz – high efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Power Conns	Unit Wiring			Motor Data	
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTWD 80	200/60/3	1	211	300			
	200/60/3	2	119/115	200/200	92/92	276/276	912/912
	230/60/3	1	184	250			
	230/60/3	2	104/100	175/175	80/80	238/238	786/786
	380/60/3	1	112	150			
	380/60/3	2	63/61	110/110	49/49	138/138	456/456
	460/60/3	1	92	125			
	460/60/3	2	52/50	90/90	40/40	114/114	376/376
	575/60/3	1	73	100			
	575/60/3	2	32/32	93/93	32/32	93/93	308/308
RTWD 90	200/60/3	1	245	350			
	200/60/3	2	138/134	225/225	107/107	304/304	1003/1003
	230/60/3	1	213	300			
	230/60/3	2	120/116	200/200	93/93	262/262	866/866
	380/60/3	1	128	175			
	380/60/3	2	72/70	125/125	56/56	161/161	530/530
	460/60/3	1	108	150			
	460/60/3	2	61/59	100/100	47/47	131/131	433/433
	575/60/3	1	85	110			
	575/60/3	2	48/46	80/80	37/37	105/105	346/346
RTWD 100	200/60/3	1	284	400			
	200/60/3	2	138/173	225/300	107/138	304/355	1003/1137
	230/60/3	1	247	350			
	230/60/3	2	120/150	200/250	93/120	262/294	866/942
	380/60/3	1	149	200			
	380/60/3	2	72/91	125/150	56/73	161/177	530/566
	460/60/3	1	124	175			
	460/60/3	2	61/75	100/125	47/60	131/147	433/471
	575/60/3	1	98	125			
	575/60/3	2	48/60	80/100	37/48	105/118	346/377



Electrical Data

Table 37. Electrical Data – RTWD – 60 Hz – high efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Power Conns	Unit Wiring			Motor Data	
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTWD 110	200/60/3	1	315	450			
	200/60/3	2	177/173	300/300	138/138	355/355	1137/1137
	230/60/3	1	274	350			
	230/60/3	2	154/150	250/250	120/120	294/294	942/942
	380/60/3	1	166	225			
	380/60/3	2	93/91	150/150	73/73	177/177	566/566
	460/60/3	1	137	175			
	460/60/3	2	77/75	125/125	60/60	147/147	471/471
	575/60/3	1	109	150			
	575/60/3	2	61/60	100/100	48/48	118/118	377/377
RTWD 120	200/60/3	1	347	500			
	200/60/3	2	177/205	300/350	138/164	355/419	1137/1368
	230/60/3	1	302	400			
	230/60/3	2	154/179	250/300	120/143	294/367	942/1200
	380/60/3	1	184	250			
	380/60/3	2	93/109	150/175	73/87	177/229	566/747
	460/60/3	1	152	200			
	460/60/3	2	77/90	125/150	60/72	147/184	471/600
	575/60/3	1	121	175			
	575/60/3	2	61/71	100/125	48/57	118/148	377/483
RTWD 130	200/60/3	1	373	500			
	200/60/3	2	209/205	350/350	164/164	419/419	1368/1368
	230/60/3	1	325	450			
	230/60/3	2	182/179	300/300	143/143	367/367	1200/1200
	380/60/3	1	198	250			
	380/60/3	2	111/109	175/175	87/87	229/229	747/747
	460/60/3	1	164	225			
	460/60/3	2	92/90	150/150	72/72	184/184	600/600
	575/60/3	1	130	175			
	575/60/3	2	73/71	125/125	57/57	148/148	483/483

Table 37. Electrical Data – RTWD – 60 Hz – high efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Power Conns	Unit Wiring			Motor Data	
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTWD 150	200/60/3	1	414	600			
	200/60/3	2	210/245	350/400	164/196	419/487	1368/1498
	230/60/3	1	361	500			
	230/60/3	2	183/214	300/350	143/171	367/427	1200/1314
	380/60/3	1	218	300			
	380/60/3	2	111/129	175/225	87/103	229/260	747/801
	460/60/3	1	182	250			
	460/60/3	2	92/108	150/175	72/86	184/212	600/652
	575/60/3	1	145	200			
	575/60/3	2	73/87	125/150	57/69	148/172	483/528
RTWD 160	200/60/3	1	446	600			
	200/60/3	2	250/245	400/400	196/196	487/487	1498/1498
	230/60/3	1	389	500			
	230/60/3	2	218/214	350/350	171/171	427/427	1314/1314
	380/60/3	1	234	300			
	380/60/3	2	131/129	225/225	103/103	260/260	801/801
	460/60/3	1	196	250			
	460/60/3	2	110/108	175/175	86/86	212/212	652/652
	575/60/3	1	157	225			
	575/60/3	2	88/87	150/150	69/69	172/172	528/528
RTWD 180	200/60/3	1	484	700			
	200/60/3	2	250/284	400/500	196/227	487/600	1498/1845
	230/60/3	1	421	600			
	230/60/3	2	218/247	350/400	171/197	427/506	1314/1556
	380/60/3	1	256	350			
	380/60/3	2	131/150	225/250	103/120	260/316	801/973
	460/60/3	1	213	300			
	460/60/3	2	110/125	175/225	86/100	212/252	652/774
	575/60/3	1	171	250			
	575/60/3	2	88/100	150/175	69/80	172/205	528/631



Electrical Data

Table 37. Electrical Data – RTWD – 60 Hz – high efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Power Conns	Unit Wiring			Motor Data	
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTWD 200	200/60/3	1	515	700			
	200/60/3	2	288/284	500/500	227/227	600/600	1845/1845
	230/60/3	1	447	600			
	230/60/3	2	250/247	400/400	197/197	506/506	1556/1556
	380/60/3	1	273	350			
	380/60/3	2	153/150	250/250	120/120	316/316	973/973
	460/60/3	1	227	300			
	460/60/3	2	127/125	225/225	100/100	252/252	774/774
	575/60/3	1	182	250			
	575/60/3	2	102/100	175/175	80/80	205/205	631/631
RTWD 220	200/60/3	1	583	800			
	200/60/3	2	288/352	500/600	227/281	600/701	1845/2156
	230/60/3	1	509	700			
	230/60/3	2	250/308	400/500	197/246	506/571	1556/1756
	380/60/3	1	309	450			
	380/60/3	2	153/187	250/300	120/149	316/345	973/1060
	460/60/3	1	256	350			
	460/60/3	2	127/154	225/250	100/123	252/285	774/878
	575/60/3	1	204	300			
	575/60/3	2	102/123	175/200	80/98	205/229	631/705
RTWD 250	200/60/3	1	637	800			
	200/60/3	2	356/352	600/600	281/281	701/701	2156/2156
	230/60/3	1	558	800			
	230/60/3	2	312/308	500/500	246/246	571/571	1756/1756
	380/60/3	1	338	450			
	380/60/3	2	189/187	300/300	149/149	345/345	1060/1060
	460/60/3	1	279	400			
	460/60/3	2	156/154	250/250	123/123	285/285	878/878
	575/60/3	1	222	300			
	575/60/3	2	124/123	200/200	98/98	229/229	705/705

1. MCA—minimum circuit ampacity
2. MOP—maximum overcurrent protection
3. RLA—rated load amps are rated in accordance with UL Standard 1995.
4. LRA—locked rotor amps are based on full winding starts.
5. LRA YD—Locked Rotor Amps in Wye configuration. LRA XL—Locked Rotor Amps in the Delta configuration.
6. Local codes may take precedence.
7. Data containing information on two circuits shown as follows: circuit 1/circuit 2.
8. Standard condensing temperature option refers to entering condenser water temperatures 95°F (35°C) and below.

Table 38. Electrical Data – RTWD – 60 Hz – premium efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Power Conns	Unit Wiring			Motor Data	
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTWD 150	200/60/3	1	410	600			
	200/60/3	2	208/243	350/400	163/194	419/487	1368/1498
	230/60/3	1	360	500			
	230/60/3	2	183/213	300/350	143/170	367/427	1200/1314
	380/60/3	1	217	300			
	380/60/3	2	110/129	175/225	86/103	229/260	747/801
	460/60/3	1	180	250			
	460/60/3	2	91/107	150/175	71/85	184/212	600/652
	575/60/3	1	145	200			
	575/60/3	2	74/85	125/150	58/68	148/172	483/528
RTWD 160	200/60/3	1	441	600			
	200/60/3	2	247/243	400/400	194/194	487/487	1498/1498
	230/60/3	1	387	500			
	230/60/3	2	217/213	350/350	170/170	427/427	1314/1314
	380/60/3	1	234	300			
	380/60/3	2	131/129	225/225	103/103	260/260	801/801
	460/60/3	1	194	250			
	460/60/3	2	109/107	175/175	85/85	212/212	652/652
	575/60/3	1	155	200			
	575/60/3	2	87/85	150/150	68/68	172/172	528/528



Electrical Data

Table 38. Electrical Data – RTWD – 60 Hz – premium efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Power Conns	Unit Wiring			Motor Data	
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTWD 180	200/60/3	1	481	700			
	200/60/3	2	247/283	400/500	194/226	487/600	1498/1845
	230/60/3	1	420	600			
	230/60/3	2	217/247	350/400	170/197	427/506	1314/1556
	380/60/3	1	256	350			
	380/60/3	2	131/150	225/250	103/120	260/316	801/973
	460/60/3	1	212	300			
	460/60/3	2	109/125	175/225	85/100	212/252	652/774
	575/60/3	1	171	250			
	575/60/3	2	87/102	150/175	68/81	172/205	528/631
RTWD 200	200/60/3	1	513	700			
	200/60/3	2	287/283	500/500	226/226	600/600	1845/1845
	230/60/3	1	447	600			
	230/60/3	2	250/247	400/400	197/197	506/506	1556/1556
	380/60/3	1	273	350			
	380/60/3	2	153/150	250/250	120/120	316/316	973/973
	460/60/3	1	227	300			
	460/60/3	2	127/125	225/225	100/100	252/252	774/774
	575/60/3	1	184	250			
	575/60/3	2	103/102	175/175	81/81	205/205	631/631

1. MCA—minimum circuit ampacity
2. MOP—maximum overcurrent protection
3. RLA—rated load amps are rated in accordance with UL Standard 1995.
4. LRA—locked rotor amps are based on full winding starts.
5. LRA YD—Locked Rotor Amps in Wye configuration. LRA XL—Locked Rotor Amps in the Delta configuration.
6. Local codes may take precedence.
7. Data containing information on two circuits shown as follows: circuit 1/circuit 2.
8. Standard condensing temperature option refers to entering condenser water temperatures 95°F (35°C) and below.

Table 39. Electrical Data – RTWD – 60Hz – high efficiency – high condensing temperature

Unit ID	Rated Voltage	# Power Conns	Unit Wiring			Motor Data	
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTWD 80	200/60/3	1	263	350			
	200/60/3	2	148/144	250/250	115/115	276/276	912/912
	230/60/3	1	229	300			
	230/60/3	2	129/125	225/225	100/100	238/238	786/786
	380/60/3	1	139	200			
	380/60/3	2	78/76	125/125	61/61	138/138	456/456
	460/60/3	1	114	150			
	460/60/3	2	64/63	110/110	50/50	114/114	376/376
	575/60/3	1	91	125			
	575/60/3	2	51/50	90/90	40/40	93/93	308/308
RTWD 90	200/60/3	1	319	450			
	200/60/3	2	179/175	300/300	140/140	304/304	1003/1003
	230/60/3	1	278	400			
	230/60/3	2	156/153	250/250	122/122	262/262	866/866
	380/60/3	1	169	225			
	380/60/3	2	95/92	150/150	74/74	161/161	530/530
	460/60/3	1	139	200			
	460/60/3	2	78/76	125/125	61/61	131/131	433/433
	575/60/3	1	112	150			
	575/60/3	2	63/61	110/110	49/49	105/105	346/346
RTWD 100	200/60/3	1	364	500			
	200/60/3	2	179/220	300/350	140/176	304/355	1003/1137
	230/60/3	1	317	450			
	230/60/3	2	156/191	250/300	122/153	262/294	866/942
	380/60/3	1	192	250			
	380/60/3	2	95/116	150/200	74/93	161/177	530/566
	460/60/3	1	159	225			
	460/60/3	2	78/96	125/150	61/77	131/147	433/471
	575/60/3	1	127	175			
	575/60/3	2	63/76	110/125	49/61	105/118	346/377



Electrical Data

Table 39. Electrical Data – RTWD – 60Hz – high efficiency – high condensing temperature

Unit ID	Rated Voltage	# Power Conns	Unit Wiring			Motor Data	
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTWD 110	200/60/3	1	400	500			
	200/60/3	2	224/220	400/350	176/176	355/355	1137/1137
	230/60/3	1	348	500			
	230/60/3	2	195/191	300/300	153/153	294/294	942/942
	380/60/3	1	211	300			
	380/60/3	2	118/116	200/200	93/93	177/177	566/566
	460/60/3	1	175	250			
	460/60/3	2	98/96	175/150	77/77	147/147	471/471
	575/60/3	1	139	175			
	575/60/3	2	78/76	125/125	61/61	118/118	377/377
RTWD 120	200/60/3	1	436	600			
	200/60/3	2	224/256	400/450	176/205	355/419	1137/1368
	230/60/3	1	380	500			
	230/60/3	2	195/224	300/400	153/179	294/367	942/1200
	380/60/3	1	230	300			
	380/60/3	2	118/135	200/225	93/108	177/229	566/747
	460/60/3	1	191	250			
	460/60/3	2	98/113	175/200	77/90	147/184	471/600
	575/60/3	1	152	200			
	575/60/3	2	78/90	125/150	61/72	118/148	377/483
RTWD 130	200/60/3	1	N/A	N/A	N/A	N/A	N/A
	200/60/3	2	260/256	450/450	205/205	419/419	1368/1368
	230/60/3	1	406	500			
	230/60/3	2	227/224	400/400	179/179	367/367	1200/1200
	380/60/3	1	245	350			
	380/60/3	2	137/135	225/225	108/108	229/229	747/747
	460/60/3	1	204	250			
	460/60/3	2	114/113	200/200	90/90	184/184	600/600
	575/60/3	1	163	225			
	575/60/3	2	91/90	150/150	72/72	148/148	483/483

Table 39. Electrical Data – RTWD – 60Hz – high efficiency – high condensing temperature

Unit ID	Rated Voltage	# Power Conns	Unit Wiring			Motor Data	
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTWD 150	200/60/3	1	502	700			
	200/60/3	2	261/293	450/500	205/234	419/487	1368/1498
	230/60/3	1	438	600			
	230/60/3	2	228/255	400/450	179/204	367/427	1200/1314
	380/60/3	1	267	350			
	380/60/3	2	138/157	225/250	108/125	229/260	747/801
	460/60/3	1	220	300			
	460/60/3	2	115/128	200/225	90/102	184/212	600/652
	575/60/3	1	179	250			
	575/60/3	2	92/105	150/175	72/84	148/172	483/528
RTWD 160	200/60/3	1	531	700			
	200/60/3	2	297/293	500/500	234/234	487/487	1498/1498
	230/60/3	1	463	600			
	230/60/3	2	259/255	450/450	204/204	427/427	1314/1314
	380/60/3	1	284	400			
	380/60/3	2	159/157	250/250	125/125	260/260	801/801
	460/60/3	1	232	300			
	460/60/3	2	130/128	225/225	102/102	212/212	652/652
	575/60/3	1	191	250			
	575/60/3	2	107/105	175/175	84/84	172/172	528/528
RTWD 180	200/60/3	1	591	800			
	200/60/3	2	297/353	500/600	234/282	487/600	1498/1845
	230/60/3	1	512	700			
	230/60/3	2	259/304	450/500	204/243	427/506	1314/1556
	380/60/3	1	309	450			
	380/60/3	2	159/182	250/300	125/145	260/316	801/973
	460/60/3	1	253	350			
	460/60/3	2	130/149	225/250	102/119	212/252	652/774
	575/60/3	1	207	300			
	575/60/3	2	107/122	175/200	84/97	172/205	528/631



Electrical Data

Table 39. Electrical Data – RTWD – 60Hz – high efficiency – high condensing temperature

Unit ID	Rated Voltage	# Power Conns	Unit Wiring			Motor Data	
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTWD 200	200/60/3	1	639	800			
	200/60/3	2	357/353	600/600	282/282	600/600	1845/1845
	230/60/3	1	551	700			
	230/60/3	2	308/304	500/500	243/243	506/506	1556/1556
	380/60/3	1	329	450			
	380/60/3	2	184/182	300/300	145/145	316/316	973/973
	460/60/3	1	270	350			
	460/60/3	2	151/149	250/250	119/119	252/252	774/774
	575/60/3	1	220	300			
	575/60/3	2	123/122	200/200	97/97	205/205	631/631
RTWD 220	200/60/3	1	702	1000			
	200/60/3	2	357/415	600/700	282/332	600/701	1845/2156
	230/60/3	1	608	800			
	230/60/3	2	308/362	500/600	243/289	506/571	1556/1756
	380/60/3	1	373	500			
	380/60/3	2	184/225	300/400	145/180	316/345	973/1060
	460/60/3	1	303	400			
	460/60/3	2	151/182	250/300	119/145	252/285	774/878
	575/60/3	1	244	350			
	575/60/3	2	123/145	200/250	97/116	205/229	631/705
RTWD 250	200/60/3	1	752	1000			
	200/60/3	2	420/415	700/700	332/332	701/701	2156/2156
	230/60/3	1	654	800			
	230/60/3	2	365/362	600/600	289/289	571/571	1756/1756
	380/60/3	1	408	500			
	380/60/3	2	228/225	400/400	180/180	345/345	1060/1060
	460/60/3	1	329	450			
	460/60/3	2	184/182	300/300	145/145	285/285	878/878
	575/60/3	1	263	350			
	575/60/3	2	147/145	250/250	116/116	229/229	705/705

1. MCA—minimum circuit ampacity
2. MOP—maximum overcurrent protection
3. RLA—rated load amps are rated in accordance with UL Standard 1995.
4. LRA—locked rotor amps are based on full winding starts.
5. LRA YD—Locked Rotor Amps in Wye configuration. LRA XL—Locked Rotor Amps in the Delta configuration.
6. Local codes may take precedence.
7. Data containing information on two circuits shown as follows: circuit 1/circuit 2.
8. High condensing temperature option refers to entering condenser water temperatures above 95°F (35°C).

Table 40. Electrical Data – RTWD – 60Hz – premium efficiency – high condensing temperature

Unit ID	Rated Voltage	# Power Conns	Unit Wiring			Motor Data	
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTWD 150	200/60/3	1	498	700			
	200/60/3	2	252/295	400/500	198/236	419/487	1368/1498
	230/60/3	1	430	600			
	230/60/3	2	219/254	350/450	172/203	367/427	1200/1314
	380/60/3	1	266	350			
	380/60/3	2	138/155	225/250	108/124	229/260	747/801
	460/60/3	1	218	300			
	460/60/3	2	112/128	175/225	88/102	184/212	600/652
	575/60/3	1	178	250			
	575/60/3	2	91/105	150/175	71/84	148/172	483/528
RTWD 160	200/60/3	1	536	700			
	200/60/3	2	300/295	500/500	236/236	487/487	1498/1498
	230/60/3	1	461	600			
	230/60/3	2	258/254	450/450	203/203	427/427	1314/1314
	380/60/3	1	282	400			
	380/60/3	2	158/155	250/250	124/124	260/260	801/801
	460/60/3	1	232	300			
	460/60/3	2	130/128	225/225	102/102	212/212	652/652
	575/60/3	1	191	250			
	575/60/3	2	107/105	175/175	84/84	172/172	528/528



Electrical Data

Table 40. Electrical Data – RTWD – 60Hz – premium efficiency – high condensing temperature

Unit ID	Rated Voltage	# Power Conns	Unit Wiring			Motor Data	
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTWD 180	200/60/3	1	583	800			
	200/60/3	2	300/343	500/600	236/274	487/600	1498/1845
	230/60/3	1	511	700			
	230/60/3	2	258/304	450/500	203/243	427/506	1314/1556
	380/60/3	1	307	450			
	380/60/3	2	158/180	250/300	124/144	260/316	801/973
	460/60/3	1	253	350			
	460/60/3	2	130/149	225/250	102/119	212/252	652/774
	575/60/3	1	207	300			
	575/60/3	2	107/122	175/200	84/97	172/205	528/631
RTWD 200	200/60/3	1	621	800			
	200/60/3	2	347/343	600/600	274/274	600/600	1845/1845
	230/60/3	1	551	700			
	230/60/3	2	308/304	500/500	243/243	506/506	1556/1556
	380/60/3	1	327	450			
	380/60/3	2	183/180	300/300	144/144	316/316	973/973
	460/60/3	1	270	350			
	460/60/3	2	151/149	250/250	119/119	252/252	774/774
	575/60/3	1	220	300			
	575/60/3	2	123/122	200/200	97/97	205/205	631/631

1. MCA—minimum circuit ampacity
2. MOP—maximum overcurrent protection
3. RLA—rated load amps are rated in accordance with UL Standard 1995.
4. LRA—locked rotor amps are based on full winding starts.
5. LRA YD—Locked Rotor Amps in Wye configuration. LRA XL—Locked Rotor Amps in the Delta configuration.
6. Local codes may take precedence.
7. Data containing information on two circuits shown as follows: circuit 1/circuit 2.
8. High condensing temperature option refers to entering condenser water temperatures above 95°F (35°C).

Table 41. Electrical Data – RTUD – 60 Hz

Unit ID	Rated Voltage	# Power Conns	Unit Wiring		Motor Data		
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTUD 80	200/60/3	1	297	400			
	200/60/3	2	167/163	250/250	130/130	276/276	912/912
	230/60/3	1	261	350			
	230/60/3	2	147/143	250/250	114/114	238/238	786/786
	380/60/3	1	158	225			
	380/60/3	2	89/87	150/150	69/69	138/138	456/456
	460/60/3	1	131	175			
	460/60/3	2	74/72	125/125	57/57	114/114	376/376
	575/60/3	1	105	150			
	575/60/3	2	59/58	100/100	46/46	93/93	308/308
RTUD 90	200/60/3	1	353	500			
	200/60/3	2	198/194	350/300	155/155	304/304	1003/1003
	230/60/3	1	299	400			
	230/60/3	2	168/164	250/250	131/131	262/262	866/866
	380/60/3	1	185	250			
	380/60/3	2	104/102	175/175	81/81	161/161	530/530
	460/60/3	1	153	200			
	460/60/3	2	86/84	150/150	67/67	131/131	433/433
	575/60/3	1	123	175			
	575/60/3	2	69/68	110/110	54/54	105/105	346/346
RTUD 100	200/60/3	1	400	500			
	200/60/3	2	198/240	350/400	155/192	304/355	1003/1137
	230/60/3	1	344	500			
	230/60/3	2	168/209	250/350	131/167	262/294	866/942
	380/60/3	1	210	300			
	380/60/3	2	104/127	175/225	181/101	161/177	530/566
	460/60/3	1	174	250			
	460/60/3	2	86/105	150/175	67/84	131/147	433/471
	575/60/3	1	140	200			
	575/60/3	2	69/84	110/150	54/67	105/118	346/377



Electrical Data

Table 41. Electrical Data – RTUD – 60 Hz

Unit ID	Rated Voltage	# Power Conns	Unit Wiring			Motor Data	
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTUD 110	200/60/3	1	437	600			
	200/60/3	2	245/240	400/400	192/192	355/355	1137/1137
	230/60/3	1	380	500			
	230/60/3	2	213/209	350/350	167/167	294/294	942/942
	380/60/3	1	230	300			
	380/60/3	2	129/127	225/225	101/101	177/177	566/566
	460/60/3	1	191	250			
	460/60/3	2	107/105	175/175	84/84	147/147	471/471
	575/60/3	1	153	200			
	575/60/3	2	86/84	150/150	67/67	118/118	377/377
RTUD 120	200/60/3	1	447	600			
	200/60/3	2	245/250	400/450	192/200	355/419	1137/1368
	230/60/3	1	421	600			
	230/60/3	2	213/250	350/450	167/200	294/367	942/1200
	380/60/3	1	255	350			
	380/60/3	2	129/152	225/250	101/121	177/229	566/747
	460/60/3	1	211	300			
	460/60/3	2	107/125	175/225	84/100	147/184	471/600
	575/60/3	1	169	225			
	575/60/3	2	86/100	150/175	67/80	118/148	377/483
RTUD 130	200/60/3	1	455	600			
	200/60/3	2	255/250	450/450	200/200	419/419	1368/1368
	230/60/3	1	454	600			
	230/60/3	2	254/250	450/450	200/200	367/367	1200/1200
	380/60/3	1	275	350			
	380/60/3	2	154/152	250/250	121/121	229/229	747/747
	460/60/3	1	227	300			
	460/60/3	2	127/125	225/225	100/100	184/184	600/600
	575/60/3	1	182	250			
	575/60/3	2	102/100	175/175	80/80	148/148	483/483

Table 41. Electrical Data – RTUD – 60 Hz

Unit ID	Rated Voltage	# Power Conns	Unit Wiring		Motor Data		
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTUD 150	200/60/3	1	542	800			
	200/60/3	2	255/338	450/600	200/270	419/487	1368/1498
	230/60/3	1	498	700			
	230/60/3	2	254/294	450/500	200/235	367/427	1200/1314
	380/60/3	1	301	400			
	380/60/3	2	154/178	250/300	121/142	229/260	747/801
	460/60/3	1	250	350			
	460/60/3	2	127/148	225/250	100/118	184/212	600/652
	575/60/3	1	199	250			
	575/60/3	2	102/118	175/200	80/84	148/172	483/528
RTUD 160	200/60/3	1	612	800			
	200/60/3	2	342/338	600/600	270/270	487/487	1498/1498
	230/60/3	1	553	700			
	230/60/3	2	298/294	500/500	235/235	427/427	1314/1314
	380/60/3	1	322	450			
	380/60/3	2	180/178	300/300	142/142	260/260	801/801
	460/60/3	1	268	350			
	460/60/3	2	150/148	250/250	118/118	212/212	652/652
	575/60/3	1	213	300			
	575/60/3	2	119/118	200/200	94/94	172/172	528/528
RTUD 180	200/60/3	1	675	800			
	200/60/3	2	342/400	600/700	270/320	487/600	1498/1845
	230/60/3	1	587	800			
	230/60/3	2	298/348	500/600	235/278	427/506	1314/1556
	380/60/3	1	355	500			
	380/60/3	2	180/210	300/350	142/168	260/316	801/973
	460/60/3	1	284	400			
	460/60/3	2	150/164	250/250	118/131	212/252	652/774
	575/60/3	1	235	300			
	575/60/3	2	119/139	200/225	94/111	172/205	528/631



Electrical Data

Table 41. Electrical Data – RTUD – 60 Hz

Unit ID	Rated Voltage	# Power Conns	Unit Wiring			Motor Data	
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTUD 200	200/60/3	1	725	1000			
	200/60/3	2	405/400	700/700	320/320	600/600	1845/1845
	230/60/3	1	630	800			
	230/60/3	2	352/345	600/600	278/278	506/506	1556/1556
	380/60/3	1	381	500			
	380/60/3	2	213/210	350/350	168/168	316/316	973/973
	460/60/3	1	297	400			
	460/60/3	2	166/164	250/250	131/131	252/252	774/774
	575/60/3	1	252	350			
	575/60/3	2	141/139	250/225	111/111	205/205	631/631
RTUD 220	200/60/3	1	743	1000			
	200/60/3	2	405/419	700/700	320/335	600/701	1845/2156
	230/60/3	1	701	1000			
	230/60/3	2	352/419	600/700	278/335	506/571	1556/1756
	380/60/3	1	424	600			
	380/60/3	2	213/254	350/450	168/203	316/345	973/1060
	460/60/3	1	343	500			
	460/60/3	2	166/210	250/350	131/168	252/285	774/878
	575/60/3	1	277	400			
	575/60/3	2	141/164	250/250	111/131	205/229	631/705
RTUD 250	200/60/3	1	758	1000			
	200/60/3	2	423/419	700/700	335/335	701/701	2156/2156
	230/60/3	1	758	1000			
	230/60/3	2	423/419	700/700	335/335	571/571	1756/1756
	380/60/3	1	459	600			
	380/60/3	2	256/254	450/450	203/203	345/345	1060/1060
	460/60/3	1	380	500			
	460/60/3	2	212/210	350/350	168/168	285/285	878/878
	575/60/3	1	297	400			
	575/60/3	2	166/164	250/250	131/131	229/229	705/705

1. MCA—minimum circuit ampacity
2. MOP—maximum overcurrent protection
3. RLA—rated load amps are rated in accordance with UL Standard 1995.
4. LRA—locked rotor amps are based on full winding starts.
5. LRA YD—Locked Rotor Amps in Wye configuration. LRA XL—Locked Rotor Amps in the Delta configuration.
6. Local codes may take precedence.
7. Data containing information on two circuits shown as follows: circuit 1/circuit 2.
8. Standard condensing temperature option refers to entering condenser water temperatures 95°F (35°C) and below.

Table 42. Electrical Data – Trane Air-Cooled Condenser – 60 Hz

Unit ID	Rated Voltage	Ambient	Unit Wiring		
			Fan FLA	Fan MCA	Fan MOP
RTUD 80	208-230/60/3	Standard	6	37.5	40
	208-230/60/3	Low	6	37.5	40
	460/60/3	Standard	3	18.8	20
	460/60/3	Low	3	18.8	20
	575/60/3	Standard	2.5	15.6	15
	575/60/3	Low	2.5	16.8	15
RTUD 90	208-230/60/3	Standard	6	49.5	50
	208-230/60/3	Low	6	49.5	50
	460/60/3	Standard	3	24.8	25
	460/60/3	Low	3	24.8	25
	575/60/3	Standard	2.5	20.6	20
	575/60/3	Low	2.5	21.8	20
RTUD 100	208-230/60/3	Standard	6	49.5	50
	208-230/60/3	Low	6	49.5	50
	460/60/3	Standard	3	24.8	25
	460/60/3	Low	3	24.8	25
	575/60/3	Standard	2.5	20.6	20
	575/60/3	Low	2.5	21.8	20
RTUD 110	208-230/60/3	Standard	6	49.5	50
	208-230/60/3	Low	6	49.5	50
	460/60/3	Standard	3	24.8	25
	460/60/3	Low	3	24.8	25
	575/60/3	Standard	2.5	20.6	20
	575/60/3	Low	2.5	21.8	20
RTUD 120	208-230/60/3	Standard	6	61.5	60
	208-230/60/3	Low	6	61.5	60
	460/60/3	Standard	3	30.8	30
	460/60/3	Low	3	30.8	30
	575/60/3	Standard	2.5	18.8	25
	575/60/3	Low	2.5	24.8	25
RTUD 130	208-230/60/3	Standard	6	61.5	60
	208-230/60/3	Low	6	61.5	60
	460/60/3	Standard	3	30.8	30
	460/60/3	Low	3	30.8	30
	575/60/3	Standard	2.5	18.8	25
	575/60/3	Low	2.5	24.8	25



Electrical Data

Table 42. Electrical Data – Trane Air-Cooled Condenser – 60 Hz

Unit ID	Rated Voltage	Ambient	Unit Wiring		
			Fan FLA	Fan MCA	Fan MOP
RTUD 150	208-230/60/3	Standard	6	37.5	40
	208-230/60/3	Low	6	37.5	40
	460/60/3	Standard	3	18.8	20
	460/60/3	Low	3	18.8	20
	575/60/3	Standard	2.5	15.6	15
	575/60/3	Low	2.5	16.8	15
RTUD 160	208-230/60/3	Standard	6	37.5	40
	208-230/60/3	Low	6	37.5	40
	460/60/3	Standard	3	18.8	20
	460/60/3	Low	3	18.8	20
	575/60/3	Standard	2.5	15.6	15
	575/60/3	Low	2.5	16.8	15
RTUD 180	208-230/60/3	Standard	6	37.5/49.5	40/50
	208-230/60/3	Low	6	37.5/49.5	40/50
	460/60/3	Standard	3	18.8/24.8	20/25
	460/60/3	Low	3	18.8/24.8	20/25
	575/60/3	Standard	2.5	15.6/20.6	15/20
	575/60/3	Low	2.5	16.8/21.8	15/20
RTUD 200	208-230/60/3	Standard	6	49.5	50
	208-230/60/3	Low	6	49.5	50
	460/60/3	Standard	3	24.8	25
	460/60/3	Low	3	24.8	25
	575/60/3	Standard	2.5	20.6	20
	575/60/3	Low	2.5	21.8	20
RTUD 220	208-230/60/3	Standard	6	49.5	50
	208-230/60/3	Low	6	49.5	50
	460/60/3	Standard	3	24.8	25
	460/60/3	Low	3	24.8	25
	575/60/3	Standard	2.5	20.6	20
	575/60/3	Low	2.5	21.8	20
RTUD 2500	208-230/60/3	Standard	6	49.5	50
	208-230/60/3	Low	6	49.5	50
	460/60/3	Standard	3	24.8	25
	460/60/3	Low	3	24.8	25
	575/60/3	Standard	2.5	20.6	20
	575/60/3	Low	2.5	21.8	20

1. MCA—minimum circuit ampacity
2. MOP—maximum overcurrent protection
3. FLA—fan rated load amps
4. Local codes may take precedence.
5. Information is the same for both circuits unless it is shown as: circuit 1/circuit 2.

Table 43. Electrical Data – RTWD – 50 Hz – standard efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Power Conns	Unit Wiring			Motor Data	
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTWD 70	400/50/3	1	106	150	46/46	129/129	427/427
	400/50/3	2	60/58	100/100			
RTWD 80	400/50/3	1	123	175	46/60	129/144	427/462
	400/50/3	2	60/75	100/125			
RTWD 90	400/50/3	1	137	175	60/60	144/144	462/462
	400/50/3	2	77/75	125/125			
RTWD 100	400/50/3	1	152	200	60/72	144/180	462/589
	400/50/3	2	77/90	125/150			
RTWD 110	400/50/3	1	164	225	72/72	180/180	589/589
	400/50/3	2	92/90	150/150			
RTWD 120	400/50/3	1	180	250	72/85	180/217	589/668
	400/50/3	2	92/106	150/175			
RTWD 130	400/50/3	1	193	250	85/85	217/217	668/668
	400/50/3	2	108/106	175/175			
RTWD 140	400/50/3	1	211	300	85/99	217/259	668/796
	400/50/3	2	108/124	175/200			
RTWD 150	400/50/3	1	225	300	99/99	259/259	796/796
	400/50/3	2	126/124	200/200			

1. MCA—minimum circuit ampacity
2. MOP—maximum overcurrent protection
3. RLA—rated load amps are rated in accordance with UL Standard 1995.
4. LRA—locked rotor amps are based on full winding starts.
5. LRA YD—Locked Rotor Amps in Wye configuration. LRA XL—Locked Rotor Amps in the Delta configuration.
6. Local codes may take precedence.
7. Data containing information on two circuits shown as follows: circuit 1/circuit 2.
8. Standard condensing temperature option refers to entering condenser water temperatures 95°F (35°C) and below.



Electrical Data

Table 44. Electrical Data – RTWD – 50 Hz – high efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Power Conns	Unit Wiring			Motor Data	
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTWD 60	400/50/3	1	88	125		112/112	370/370
	400/50/3	2	50/48	80/80	38/38		
RTWD 70	400/50/3	1	103	125		129/129	427/427
	400/50/3	2	58/56	100/100	45/45		
RTWD 80	400/50/3	1	121	175		129/144	427/462
	400/50/3	2	58/74	100/125	45/59		
RTWD 90	400/50/3	1	135	175		144/144	462/462
	400/50/3	2	76/74	125/125	59/59		
RTWD 100	400/50/3	1	150	200		144/180	462/589
	400/50/3	2	76/89	125/150	59/71		
RTWD 110	400/50/3	1	162	225		180/180	589/589
	400/50/3	2	91/89	150/150	71/71		
RTWD 120	400/50/3	1	178	250		180/217	589/668
	400/50/3	2	91/105	150/175	71/84		
RTWD 130	400/50/3	1	192	250		217/217	668/668
	400/50/3	2	108/105	175/175	84/84		
RTWD 140	400/50/3	1	209	300		217/259	668/796
	400/50/3	2	108/123	175/200	84/98		
RTWD 160	400/50/3	1	223	300		259/259	796/796
	400/50/3	2	125/123	200/200	98/98		
RTWD 180	400/50/3	1	247	350		259/291	796/896
	400/50/3	2	125/147	200/250	98/117		
RTWD 200	400/50/3	1	266	350		291/291	896/896
	400/50/3	2	149/147	250/250	117/117		
RTWD 220	400/50/3	1	296	400		291/354	896/1089
	400/50/3	2	149/177	250/300	117/141		
RTWD 250	400/50/3	1	320	450		354/354	1089/1089
	400/50/3	2	179/177	300/300	141/141		

1. MCA—minimum circuit ampacity
2. MOP—maximum overcurrent protection
3. RLA—rated load amps are rated in accordance with UL Standard 1995.
4. LRA—locked rotor amps are based on full winding starts.
5. LRA YD—Locked Rotor Amps in Wye configuration. LRA XL—Locked Rotor Amps in the Delta configuration.
6. Local codes may take precedence.
7. Data containing information on two circuits shown as follows: circuit 1/circuit 2.
8. Standard condensing temperature option refers to entering condenser water temperatures 95°F (35°C) and below.

Table 45. Electrical Data – RTWD – 50 Hz – high efficiency – high condensing temperature

Unit ID	Rated Voltage	# Power Conns	Unit Wiring			Motor Data	
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTWD 60	400/50/3	1	110	150	48/48	112/112	370/370
	400/50/3	2	62/60	110/100			
RTWD 70	400/50/3	1	133	175	58/58	129/129	427/427
	400/50/3	2	75/73	125/125			
RTWD 80	400/50/3	1	153	225	58/74	129/144	427/462
	400/50/3	2	75/93	125/150			
RTWD 90	400/50/3	1	169	225	74/74	144/144	462/462
	400/50/3	2	95/93	150/150			
RTWD 100	400/50/3	1	186	250	74/88	144/180	462/589
	400/50/3	2	95/110	150/175			
RTWD 110	400/50/3	1	200	250	88/88	180/180	589/589
	400/50/3	2	112/110	200/175			
RTWD 120	400/50/3	1	215	300	88/100	180/217	589/668
	400/50/3	2	112/125	200/225			
RTWD 130	400/50/3	1	226	300	100/98	217/217	668/668
	400/50/3	2	128/123	225/200			
RTWD 140	400/50/3	1	250	350	100/118	217/259	668/796
	400/50/3	2	128/148	225/250			
RTWD 160	400/50/3	1	268	350	118/118	259/259	796/796
	400/50/3	2	150/148	250/250			
RTWD 180	400/50/3	1	297	400	118/141	259/291	796/896
	400/50/3	2	150/177	250/300			
RTWD 200	400/50/3	1	320	450	141/141	291/291	896/896
	400/50/3	2	179/177	300/300			
RTWD 220	400/50/3	1	352	500	141/167	291/354	896/1089
	400/50/3	2	179/209	300/350			
RTWD 250	400/50/3	1	378	500	167/167	354/354	1089/1089
	400/50/3	2	211/209	350/350			

1. MCA—minimum circuit ampacity
2. MOP—maximum overcurrent protection
3. RLA—rated load amps are rated in accordance with UL Standard 1995.
4. LRA—locked rotor amps are based on full winding starts.
5. LRA YD—Locked Rotor Amps in Wye configuration. LRA XL—Locked Rotor Amps in the Delta configuration.
6. Local codes may take precedence.
7. Data containing information on two circuits shown as follows: circuit 1/circuit 2.
8. High condensing temperature option refers to entering condenser water temperatures above 95°F (35°C).



Electrical Data

Table 46. Electrical Data – RTWD – 50 Hz – premium efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Power Conns	Unit Wiring			Motor Data	
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTWD 160	400/50/3	1	221	300	97/97	259/259	796/796
	400/50/3	2	124/122	200/200			
RTWD 180	400/50/3	1	246	350	97/117	259/291	796/896
	400/50/3	2	124/147	200/250			
RTWD 200	400/50/3	1	266	350	117/117	291/291	896/896
	400/50/3	2	149/147	250/250			

1. MCA—minimum circuit ampacity
2. MOP—maximum overcurrent protection
3. RLA—rated load amps are rated in accordance with UL Standard 1995.
4. LRA—locked rotor amps are based on full winding starts.
5. LRA YD—Locked Rotor Amps in Wye configuration. LRA XL—Locked Rotor Amps in the Delta configuration.
6. Local codes may take precedence.
7. Data containing information on two circuits shown as follows: circuit 1/circuit 2.
8. Standard condensing temperature option refers to entering condenser water temperatures 95°F (35°C) and below.

Table 47. Electrical Data – RTWD – 50 Hz – premium efficiency – high condensing temperature

Unit ID	Rated Voltage	# Power Conns	Unit Wiring			Motor Data	
			MCA Ckt 1/Ckt 2	MOP Ckt 1/Ckt 2	RLA Ckt 1/Ckt 2	LRA YD Ckt 1/Ckt 2	LRA XL Ckt 1/Ckt 2
RTWD 160	400/50/3	1	268	350	118/118	259/259	796/796
	400/50/3	2	150/148	250/250			
RTWD 180	400/50/3	1	297	400	118/141	259/291	796/896
	400/50/3	2	150/177	250/300			
RTWD 200	400/50/3	1	320	450	141/141	291/291	896/896
	400/50/3	2	179/177	300/300			

1. MCA—minimum circuit ampacity
2. MOP—maximum overcurrent protection
3. RLA—rated load amps are rated in accordance with UL Standard 1995.
4. LRA—locked rotor amps are based on full winding starts.
5. LRA YD—Locked Rotor Amps in Wye configuration. LRA XL—Locked Rotor Amps in the Delta configuration.
6. Local codes may take precedence.
7. Data containing information on two circuits shown as follows: circuit 1/circuit 2.
8. High condensing temperature option refers to entering condenser water temperatures above 95°F (35°C).

Table 48. Customer Wire Selection – RTWD – 60 Hz – standard efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTWD 80	200/60/3	1	380	N/A	#4-500	250	N/A	#6-#350	300	N/A	3/0-(2)500
	200/60/3	2	195	N/A	#14-2/0	250	N/A	#6-#350	200	N/A	#6-#350
	230/60/3	1	380	N/A	#4-500	250	N/A	#6-#350	250	N/A	#6-#350
	230/60/3	2	195	N/A	#14-2/0	100	N/A	#10-1/0	175	N/A	#6-#350
	380/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	150	#6-#350	#6-#350
	380/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	110	#6-#350	#6-#350
	460/60/3	1	380	#4-500	#4-500	100	#10-1/0	#10-1/0	125	#6-#350	#6-#350
	460/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	90	#6-#350	#6-#350
	575/60/3	1	380	#4-500	#4-500	100	#10-1/0	#10-1/0	100	#6-#350	#6-#350
	575/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	70	#6-#350	#6-#350
RTWD 90	200/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	350	N/A	3/0-(2)500
	200/60/3	2	195	N/A	#14-2/0	250	N/A	#6-#350	225	N/A	#6-#350
	230/60/3	1	380	N/A	#4-500	250	N/A	#6-#350	300	N/A	3/0-(2)500
	230/60/3	2	195	N/A	#14-2/0	250	N/A	#6-#350	200	N/A	#6-#350
	380/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	175	#6-#350	#6-#350
	380/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	125	#6-#350	#6-#350
	460/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	150	#6-#350	#6-#350
	460/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	100	#6-#350	#6-#350
	575/60/3	1	380	#4-500	#4-500	100	#10-1/0	#10-1/0	110	#6-#350	#6-#350
	575/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	80	#6-#350	#6-#350
RTWD 100	200/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	400	N/A	3/0-(2)500
	200/60/3	2	195 380	N/A	#14-2/0 #4-500	250	N/A	#6-#350	225 300	N/A	#6-#350 3/0-(2)500
	230/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	350	N/A	3/0-(2)500
	230/60/3	2	195	N/A	#14-2/0	250	N/A	#6-#350	200 250	N/A	#6-#350
	380/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	225	#6-#350	#6-#350
	380/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	125 150	#6-#350	#6-#350
	460/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	175	#6-#350	#6-#350
	460/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	100 125	#6-#350	#6-#350
	575/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	150	#6-#350	#6-#350
	575/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	80 110	#6-#350	#6-#350



Electrical Data

Table 48. Customer Wire Selection – RTWD – 60 Hz – standard efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTWD 110	200/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	450	N/A	3/0-(2)500
	200/60/3	2	380	N/A	#4-500	250	N/A	#6-#350	300	N/A	3/0-(2)500
	230/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	400	N/A	3/0-(2)500
	230/60/3	2	195	N/A	#14-2/0	250	N/A	#6-#350	250	N/A	#6-#350
	380/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	225	#6-#350	#6-#350
	380/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	150	#6-#350	#6-#350
	460/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	200	#6-#350	#6-#350
	460/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	125	#6-#350	#6-#350
	575/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	150	#6-#350	#6-#350
575/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	110	#6-#350	#6-#350	
RTWD 120	200/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	200/60/3	2	380	N/A	#4-500	250	N/A	#6-#350	300 350	N/A	3/0-(2)500
	230/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	450	N/A	3/0-(2)500
	230/60/3	2	195 380	N/A	#14-2/0 #4-500	250	N/A	#6-#350	250 300	N/A	#6-#350 3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	250	#6-#350	#6-#350
	380/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	150	#6-#350	#6-#350
	460/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	225	#6-#350	#6-#350
	460/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	125 150	#6-#350	#6-#350
	575/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	175	#6-#350	#6-#350
575/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	110 125	#6-#350	#6-#350	

Table 48. Customer Wire Selection – RTWD – 60 Hz – standard efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTWD 130	200/60/3	1	760	N/A	#4-(2)500	400	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	200/60/3	2	380	N/A	#4-500	250	N/A	#6-#350	350	N/A	3/0-(2)500
	230/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	450	N/A	3/0-(2)500
	230/60/3	2	380	N/A	#4-500	250	N/A	#6-#350	300	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	250	#6-#350	#6-#350
	380/60/3	2	195	#14-2/0	#14-2/0	250	#6-#350	#6-#350	200 175	#6-#350	#6-#350
	460/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	225	#6-#350	#6-#350
	460/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	150	#6-#350	#6-#350
	575/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	175	#6-#350	#6-#350
	575/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	125	#6-#350	#6-#350
RTWD 140	200/60/3	1	760	N/A	#4-(2)500	600	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	200/60/3	2	380	N/A	#4-500	250	N/A	#6-#350	350 450	N/A	3/0-(2)500
	230/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	230/60/3	2	380	N/A	#4-500	250	N/A	#6-#350	300 350	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	300	3/0-(2)500	3/0-(2)500
	380/60/3	2	195	#14-2/0	#14-2/0	250	#6-#350	#6-#350	200 225	#6-#350	#6-#350
	460/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	250	#6-#350	#6-#350
	460/60/3	2	195	#14-2/0	#14-2/0	100 250	#10-1/0 #6-#350	#10-1/0 #6-#350	150 175	#6-#350	#6-#350
	575/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	200	#6-#350	#6-#350
	575/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	125 150	#6-#350	#6-#350

1. Optional non-fused disconnect and circuit breaker.
2. Copper wire only, based on nameplate minimum circuit ampacity (MCA).
3. Standard condensing temperature option refers to entering condenser water temperatures 95°F (35°C) and below.
4. Circuit two information is the same as circuit one unless listed on a separate line below circuit one values.
5. XL - across-the-line starter and YD - wye-delta starter.



Electrical Data

Table 49. Customer Wire Selection – RTWD – 60 Hz – high efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTWD 80	200/60/3	1	380	N/A	#4-500	250	N/A	#6-#350	300	N/A	3/0-(2)500
	200/60/3	2	195	N/A	#14-2/0	250	N/A	#6-#350	200	N/A	#6-#350
	230/60/3	1	380	N/A	#4-500	250	N/A	#6-#350	250	N/A	#6-#350
	230/60/3	2	195	N/A	#14-2/0	100	N/A	#10-1/0	175	N/A	#6-#350
	380/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	150	#6-#350	#6-#350
	380/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	110	#6-#350	#6-#350
	460/60/3	1	380	#4-500	#4-500	100	#10-1/0	#10-1/0	125	#6-#350	#6-#350
	460/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	90	#6-#350	#6-#350
	575/60/3	1	380	#4-500	#4-500	100	#10-1/0	#10-1/0	100	#6-#350	#6-#350
	575/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	70	#6-#350	#6-#350
RTWD 90	200/60/3	1	380	N/A	#4-500	250	N/A	#6-#350	350	N/A	3/0-(2)500
	200/60/3	2	195	N/A	#14-2/0	250	N/A	#6-#350	225	N/A	#6-#350
	230/60/3	1	380	N/A	#4-500	250	N/A	#6-#350	300	N/A	3/0-(2)500
	230/60/3	2	195	N/A	#14-2/0	250	N/A	#6-#350	200	N/A	#6-#350
	380/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	175	#6-#350	#6-#350
	380/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	125	#6-#350	#6-#350
	460/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	150	#6-#350	#6-#350
	460/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	100	#6-#350	#6-#350
	575/60/3	1	380	#4-500	#4-500	100	#10-1/0	#10-1/0	110	#6-#350	#6-#350
	575/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	80	#6-#350	#6-#350
RTWD 100	200/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	400	N/A	3/0-(2)500
	200/60/3	2	195	N/A	#14-2/0	250	N/A	#6-#350	225 300	N/A	#6-#350 3/0-(2)500
	230/60/3	1	380	N/A	#4-500	250	N/A	#6-#350	350	N/A	3/0-(2)500
	230/60/3	2	195	N/A	#14-2/0	250	N/A	#6-#350	200 250	N/A	#6-#350
	380/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	200	#6-#350	#6-#350
	380/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	125 150	#6-#350	#6-#350
	460/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	175	#6-#350	#6-#350
	460/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	100 125	#6-#350	#6-#350
	575/60/3	1	380	#4-500	#4-500	100	#10-1/0	#10-1/0	125	#6-#350	#6-#350
	575/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	80 100	#6-#350	#6-#350

Table 49. Customer Wire Selection – RTWD – 60 Hz – high efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTWD 110	200/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	450	N/A	3/0-(2)500
	200/60/3	2	380 195	N/A	#4-500 #14-2/0	250	N/A	#6-#350	300	N/A	3/0-(2)500
	230/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	350	N/A	3/0-(2)500
	230/60/3	2	195	N/A	#14-2/0	250	N/A	#6-#350	250	N/A	#6-#350
	380/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	225	#6-#350	#6-#350
	380/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	150	#6-#350	#6-#350
	460/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	175	#6-#350	#6-#350
	460/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	125	#6-#350	#6-#350
	575/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	150	#6-#350	#6-#350
	575/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	100	#6-#350	#6-#350
RTWD 120	200/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	200/60/3	2	380	N/A	#4-500	250	N/A	#6-#350	300 350	N/A	3/0-(2)500
	230/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	400	N/A	3/0-(2)500
	230/60/3	2	195 380	N/A	#14-2/0 #4-500	250	N/A	#6-#350	250 300	N/A	#6-#350 3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	250	#6-#350	#6-#350
	380/60/3	2	195	#14-2/0	#14-2/0	100 250	#10-1/0 #6-#350	#10-1/0 #6-#350	150 175	#6-#350	#6-#350
	460/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	200	#6-#350	#6-#350
	460/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	125 150	#6-#350	#6-#350
	575/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	175	#6-#350	#6-#350
	575/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	100 125	#6-#350	#6-#350
RTWD 130	200/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	200/60/3	2	380	N/A	#4-500	250	N/A	#6-#350	350	N/A	3/0-(2)500
	230/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	450	N/A	3/0-(2)500
	230/60/3	2	380	N/A	#4-500	250	N/A	#6-#350	300	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	250	#6-#350	#6-#350
	380/60/3	2	195	#14-2/0	#14-2/0	250	#6-#350	#6-#350	175	#6-#350	#6-#350
	460/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	225	#6-#350	#6-#350
	460/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	150	#6-#350	#6-#350
	575/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	175	#6-#350	#6-#350
	575/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	125	#6-#350	#6-#350



Electrical Data

Table 49. Customer Wire Selection – RTWD – 60 Hz – high efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTWD 150	200/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	200/60/3	2	380	N/A	#4-500	250	N/A	#6-350	350 400	N/A	3/0-(2)500
	230/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	230/60/3	2	380	N/A	#4-500	250	N/A	#6-350	300 350	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	380/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	175 225	#6-350	#6-350
	460/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	250	3/0-(2)500	3/0-(2)500
	460/60/3	2	175	#14-2/0	#14-2/0	100	1/0-#10	1/0-#10	150 175	#6-350	#6-350
	575/60/3	1	175	#14-2/0	#14-2/0	250	#6-350	#6-350	200	#6-350	#6-350
575/60/3	2	175	#14-2/0	2/0-#1	100	1/0-#10	1/0-#10	125 150	#6-350	#6-350	
RTWD 160	200/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	200/60/3	2	380	N/A	#4-500	250	N/A	#6-350	400	N/A	3/0-(2)500
	230/60/3	1	760	N/A	(2)#4-500	400	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	230/60/3	2	380	N/A	#4-500	250	N/A	#6-350	350	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	380/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	225	#6-350	#6-350
	460/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	250	3/0-(2)500	3/0-(2)500
	460/60/3	2	175	#14-2/0	#14-2/0	250 100	#6-350 1/0-#10	#6-350 1/0-#10	175	#6-350	#6-350
	575/60/3	1	175	#14-2/0	#14-2/0	250	#6-350	#6-350	225	#6-350	#6-350
575/60/3	2	175	#14-2/0	2/0#14	100	1/0-#10	1/0-#10	150	#6-350	#6-350	
RTWD 180	200/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	700	N/A	#1-(3)500
	200/60/3	2	380	N/A	#4-500	250 400	N/A	#6-350 3/0-(2)500	400 500	N/A	3/0-(2)500
	230/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	230/60/3	2	380	N/A	#4-500	250	N/A	#6-350	350 400	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	380/60/3	2	XL 175/380 YD 175	#14-2/0 #4-500	#14-2/0	250	#6-350	#6-350	225 250	#6-350	#6-350
	460/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	460/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	175 225	#6-350	#6-350
	575/60/3	1	175	#14-2/0	#14-2/0	250	#6-350	#6-350	250	#6-350	#6-350
575/60/3	2	175	#14-2/0	#14-2/0	100	1/0-#10	1/0-#10	150 175	#6-350	#6-350	

Table 49. Customer Wire Selection – RTWD – 60 Hz – high efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTWD 200	200/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	700	N/A	500-#1
	200/60/3	2	380	N/A	#4-500	400	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	230/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	230/60/3	2	380	N/A	#4-500	250	N/A	#6-350	400	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	380/60/3	2	XL 380 YD 175	#4-500	#14-2/0	250	#6-350	#6-350	250	#6-350	#6-350
	460/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	460/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	225	#6-350	#6-350
	575/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	250	3/0-(2)500	3/0-(2)500
	575/60/3	2	175	#14-2/0	#14-2/0	100	1/0-#10	1/0-#10	175	#6-350	#6-350
RTWD 220	200/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	800	N/A	#1-(3)500
	200/60/3	2	380	N/A	#4-500	400	N/A	3/0-(2)500	500 600	N/A	3/0-(2)500
	230/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	700	N/A	#1-(3)500
	230/60/3	2	380	N/A	#4-500	250 400	N/A	#6-350 3/0-(2)500	400 500	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	450	3/0-(2)500	3/0-(2)500
	380/60/3	2	XL 380 YD 175/ 380	#4-500	#14-2/0 #4-500	250	#6-350	#6-350	250 300	#6-350 3/0-(2)500	#6-350 3/0-(2)500
	460/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	460/60/3	2	175	#14-2/0 #4-500	#14-2/0	250	#6-350	#6-350	225 250	#6-350	#6-350
	575/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	575/60/3	2	175	#14-2/0	#14-2/0	100 250	1/0-#10 #6-350	1/0-#10 #6-350	175 200	#6-350	#6-350
RTWD 250	200/60/3	1	760	N/A	(2)#4-500	700	N/A	#1-(3)500	800	N/A	#1-(3)500
	200/60/3	2	380	N/A	#4-500	400	N/A	3/0-(2)500		N/A	3/0-(2)500
	230/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	800	N/A	#1-(3)500
	230/60/3	2	380	N/A	#4-500	400	N/A	3/0-(2)500		N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	450	3/0-(2)500	3/0-(2)500
	380/60/3	2	380	#4-500	#4-500	250	#6-350	#6-350		3/0-(2)500	3/0-(2)500
	460/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	400	3/0-(2)500	3/0-(2)500
	460/60/3	2	XL 380 YD 175	#4-500	#14-2/0	250	#6-350	#6-350		#6-350	#6-350
	575/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	575/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350		#6-350	#6-350

1. Optional non-fused disconnect and circuit breaker.
2. Copper wire only, based on nameplate minimum circuit ampacity (MCA).
3. Standard condensing temperature option refers to entering condenser water temperatures 95°F (35°C) and below.
4. Circuit two information is the same as circuit one unless listed on a separate line below circuit one values.
5. XL - across-the-line starter and YD - wye-delta starter.



Electrical Data

Table 50. Customer Wire Selection – RTWD – 60 Hz – premium efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTWD 150	200/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	200/60/3	2	380	N/A	#4-500	250	N/A	#6-350	350 400	N/A	3/0-(2)500
	230/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	230/60/3	2	380	N/A	#4-500	250	N/A	#6-350	300 350	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	380/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	175 225	#6-350	#6-350
	460/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	250	#6-350	#6-350
	460/60/3	2	175	#14-2/0	#14-2/0	100	1/0-#10	1/0-#10	150 175	#6-350	#6-350
	575/60/3	1	175	#14-2/0	#14-2/0	250	#6-350	#6-350	200	#6-350	#6-350
575/60/3	2	175	#14-2/0	#14-2/0	100	1/0-#10	1/0-#10	125 150	#6-350	#6-350	
RTWD 160	200/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	200/60/3	2	380	N/A	#4-500	250	N/A	#6-350	400	N/A	3/0-(2)500
	230/60/3	1	760	N/A	(2)#4-500	400	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	230/60/3	2	380	N/A	#4-500	250	N/A	#6-350	350	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	380/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	225	#6-350	#6-350
	460/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	250	3/0-(2)500	3/0-(2)500
	460/60/3	2	175	#14-2/0	#14-2/0	100	1/0-#10	1/0-#10	175	#6-350	#6-350
	575/60/3	1	175	#14-2/0	#14-2/0	250	#6-350	#6-350	200	#6-350	#6-350
575/60/3	2	175	#14-2/0	#14-2/0	100	1/0-#10	1/0-#10	150	#6-350	#6-350	

Table 50. Customer Wire Selection – RTWD – 60 Hz – premium efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTWD 180	200/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	700	N/A	#1-(3)500
	200/60/3	2	380	N/A	#4-500	250 400	N/A	#6-350 3/0-(2)500	400 500	N/A	3/0-(2)500
	230/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	230/60/3	2	380	N/A	#4-500	250	N/A	#6-350	350 400	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	380/60/3	2	XL 175/308 YD 175	#14-2/0 #4-500	#4-500	250	#6-350	#6-350	225 250	#6-350	#6-350
	460/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	460/60/3	2	175	#14-2/0	#14-2/0	100 250	1/0-#10 #6-350	1/0-#10 #6-350	175 225	#6-350	#6-350
	575/60/3	1	175	#14-2/0	#14-2/0	250	#6-350	#6-350	250	#6-350	#6-350
	575/60/3	2	175	#14-2/0	#14-2/0	100	1/0-#10	1/0-#10	150 175	#6-350	#6-350
RTWD 200	200/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	700	N/A	#1-(3)500
	200/60/3	2	380	N/A	#4-500	400	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	230/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	230/60/3	2	380	N/A	#4-500	250	N/A	#6-350	400	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	380/60/3	2	XL 380 YD 175	#4-500	#14-2/0	250	#6-350	#6-350	250	#6-350	#6-350
	460/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	460/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	225	#6-350	#6-350
	575/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	250	3/0-(2)500	3/0-(2)500
	575/60/3	2	175	#14-2/0	#14-2/0	100	1/0-#10	1/0-#10	175	#6-350	#6-350

1. Optional non-fused disconnect and circuit breaker.
2. Copper wire only, based on nameplate minimum circuit ampacity (MCA).
3. Standard condensing temperature option refers to entering condenser water temperatures 95°F (35°C) and below.
4. Circuit two information is the same as circuit one unless listed on a separate line below circuit one values.
5. XL - across-the-line starter and YD - wye-delta starter.



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Table 51. Customer Wire Selection – RTWD – 60 Hz – high efficiency – high condensing temperature

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTWD 80	200/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	350	N/A	3/0-(2)500
	200/60/3	2	195	N/A	#14-2/0	250	N/A	#6-#350	250	N/A	#6-#350
	230/60/3	1	380	N/A	#4-500	250	N/A	#6-#350	300	N/A	3/0-(2)500
	230/60/3	2	195	N/A	#14-2/0	250	N/A	#6-#350	225	N/A	#6-#350
	380/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	200	#6-#350	#6-#350
	380/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	125	#6-#350	#6-#350
	460/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	N/A	N/A	N/A
	460/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	110	#6-#350	#6-#350
	575/60/3	1	380	#4-500	#4-500	100	#10-1/0	#10-1/0	125	#6-#350	#6-#350
	575/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	90	#6-#350	#6-#350
RTWD 90	200/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	450	N/A	3/0-(2)500
	200/60/3	2	380	N/A	#4-500	250	N/A	#6-#350	300	N/A	3/0-(2)500
	230/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	400	N/A	3/0-(2)500
	230/60/3	2	195	N/A	#14-2/0	250	N/A	#6-#350	250	N/A	#6-#350
	380/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	225	#6-#350	#6-#350
	380/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	150	#6-#350	#6-#350
	460/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	200	#6-#350	#6-#350
	460/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	125	#6-#350	#6-#350
	575/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	150	#6-#350	#6-#350
	575/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	110	#6-#350	#6-#350
RTWD 100	200/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	200/60/3	2	380	N/A	#4-500	250	N/A	#6-#350	300 350	N/A	3/0-(2)500
	230/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	450	N/A	3/0-(2)500
	230/60/3	2	195 380	N/A	#14-2/0 #4-500	250	N/A	#6-#350	250 300	N/A	#6-#350 3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	250	3/0-(2)500	3/0-(2)500
	380/60/3	2	195	#14-2/0	#14-2/0	100 250	#10-1/0 #6-#350	#10-1/0 #6-#350	150 200	#6-#350	#6-#350
	460/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	225	#6-#350	#6-#350
	460/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	125 150	#6-#350	#6-#350
	575/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	175	#6-#350	#6-#350
	575/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	110 125	#6-#350	#6-#350

Table 51. Customer Wire Selection – RTWD – 60 Hz – high efficiency – high condensing temperature

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTWD 110	200/60/3	1	760	N/A	#4-(2)500	600	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	200/60/3	2	380	N/A	#4-500	250	N/A	6-#350	400 350	N/A	3/0-(2)500
	230/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	230/60/3	2	380	N/A	#4-500	250	N/A	6-#350	300	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	300	3/0-(2)500	3/0-(2)500
	380/60/3	2	195	#14-2/0	#14-2/0	250	#6-#350	#6-#350	200	#6-#350	#6-#350
	460/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	250	#6-#350	#6-#350
	460/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	175 150	#6-#350	#6-#350
	575/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	N/A	N/A	N/A
	575/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	125	#6-#350	#6-#350
RTWD 120	200/60/3	1	760	N/A	#4-(2)500	600	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	200/60/3	2	380	N/A	#4-500	250	N/A	6-#350	400 450	N/A	3/0-(2)500
	230/60/3	1	760	N/A	#4-(2)500	600	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	230/60/3	2	380	N/A	#4-500	250	N/A	6-#350	300 400	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	300	3/0-(2)500	3/0-(2)500
	380/60/3	2	195	#14-2/0	#14-2/0	250	#6-#350	#6-#350	200 225	#6-#350	#6-#350
	460/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	250	3/0-(2)500	3/0-(2)500
	460/60/3	2	195	#14-2/0	#14-2/0	100/ 250	#10-1/0 #6-#350	#10-1/0 #6-#350	175 200	#6-#350	#6-#350
	575/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	200	3/0-(2)500	3/0-(2)500
	575/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	125 150	#6-#350	#6-#350
RTWD 130	200/60/3	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	200/60/3	2	380	N/A	#4-500	250	N/A	6-#350	450	N/A	3/0-(2)500
	230/60/3	1	760	N/A	#4-(2)500	600	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	230/60/3	2	380	N/A	#4-500	250	N/A	6-#350	400	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	380/60/3	2	195	#14-2/0	#14-2/0	250	#6-#350	#6-#350	225	#6-#350	#6-#350
	460/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	250	3/0-(2)500	3/0-(2)500
	460/60/3	2	195	#14-2/0	#14-2/0	250	#6-#350	#6-#350	200	#6-#350	#6-#350
	575/60/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	225	#6-#350	#6-#350
	575/60/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	150	#6-#350	#6-#350



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Table 51. Customer Wire Selection – RTWD – 60 Hz – high efficiency – high condensing temperature

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTWD 150	200/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	700	N/A	#1-(3)500
	200/60/3	2	380	N/A	#4-500	250 400	N/A	#6-350 3/0-(2)500	450 500	N/A	3/0-(2)500
	230/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	230/60/3	2	380	N/A	#4-500	250 400	N/A	#6-350 3/0-(2)500	350 450	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	380/60/3	2	XL 175/380 YD 175	#14-2/0 #4-500	#14-2/0	250	#6-350	#6-350	225 250	#6-350	#6-350
	460/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	460/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	175 225	#6-350	#6-350
	575/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	250	#6-350	#6-350
575/60/3	2	175	#14-2/0	#14-2/0	100 250	1/0-#10 #6-350	1/0-#10 #6-350	150 175	#6-350	#6-350	
RTWD 160	200/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	700	N/A	#1-(3)500
	200/60/3	2	380	N/A	#4-500	400	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	230/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	230/60/3	2	380	N/A	#4-500	400	N/A	(2)500-3/	450	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	400	3/0-(2)500	3/0-(2)500
	380/60/3	2	XL 380 YD 175	#4-500	#14-2/0	250	350-#	#6-350	250	350-#	#6-350
	460/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	300	3/0-(2)500	3/0-(2)500
	460/60/3	2	175	#14-2/0	#14-2/0	250	350-#	#6-350	225	350-#	#6-350
	575/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	250	3/0-(2)500	3/0-(2)500
575/60/3	2	175	#14-2/0	#14-2/0	250	350-#	#6-350	175	350-#	#6-350	
RTWD 180	200/60/3	1	760	N/A	(2)#4-500	700	N/A	#1-(3)500	800	N/A	#1-(3)500
	200/60/3	2	380	N/A	#4-500	400	N/A	3/0-(2)500	500 600	N/A	3/0-(2)500
	230/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	700	N/A	#1-(3)500
	230/60/3	2	380	N/A	#4-500	400	N/A	3/0-(2)500	450 500	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	450	3/0-(2)500	3/0-(2)500
	380/60/3	2	XL 380 YD 175/380	#4-500	#14-2/0 #4-500	250	#6-350	#6-350	250 300	#6-350 3/0-(2)500	#6-350 3/0-(2)500
	460/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	460/60/3	2	XL 175/380 YD 175	#14-2/0 #4-500	#14-2/0	250	#6-350	#6-350	225 250	#6-350	#6-350
	575/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
575/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	175 200	#6-350	#6-350	

Table 51. Customer Wire Selection – RTWD – 60 Hz – high efficiency – high condensing temperature

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTWD 200	200/60/3	1	760	N/A	(2)#4-500	700	N/A	#1-(3)500	800	N/A	#1-(3)500
	200/60/3	2	380	N/A	#4-500	400	N/A	3/0-(2)500		N/A	3/0-(2)500
	230/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	700	N/A	#1-(3)500
	230/60/3	2	380	N/A	#4-500	400	N/A	3/0-(2)500		N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	450	3/0-(2)500	3/0-(2)500
	380/60/3	2	380	#4-500	#4-500	250	#6-350	#6-350		3/0-(2)500	3/0-(2)500
	460/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	460/60/3	2	XL 380 YD 175	#4-500	#14-2/0	250	#6-350	#6-350		#6-350	#6-350
	575/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	575/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350		#6-350	#6-350
RTWD 220	200/60/3	1	760	N/A	(2)#4-500	800	N/A	#1-(3)500	1000	N/A	250-(4)500
	200/60/3	2	380 760	N/A	#4-500 (2)#4-500	400 600	N/A	3/0-(2)500	600 700	N/A	3/0-(2)500 #1-(3)500
	230/60/3	1	760	N/A	(2)#4-500	700	N/A	#1-(3)500	800	N/A	#1-(3)500
	230/60/3	2	380	N/A	#4-500	400	N/A	3/0-(2)500	500 600	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	500	3/0-(2)500	3/0-(2)500
	380/60/3	2	380	#4-500	#4-500	250	#6-350	#6-350	300 400	3/0-(2)500	3/0-(2)500
	460/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	400	3/0-(2)500	3/0-(2)500
	460/60/3	2	XL 380 YD 175/380	#4-500	#14-2/0 #4-500	250	#6-350	#6-350	250 300	#6-350 3/0-(2)500	#6-350 3/0-(2)500
	575/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	575/60/3	2	XL 175/380 YD 175	#14-2/0 #4-500	#14-2/0	250	#6-350	#6-350	200 250	#6-350	#6-350
RTWD 250	200/60/3	1	760	N/A	(2)#4-500	800	N/A	#1-(3)500	1000	N/A	250-(4)500
	200/60/3	2	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	700	N/A	#1-(3)500
	230/60/3	1	760	N/A	(2)#4-500	800	N/A	#1-(3)500	800	N/A	#1-(3)500
	230/60/3	2	380	N/A	#4-500	400	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	380/60/3	1	760	(2)#4-500	(2)#4-500	600	3/0-(2)500	3/0-(2)500	500	3/0-(2)500	3/0-(2)500
	380/60/3	2	380	#4-500	#4-500	250	#6-350	#6-350	400	3/0-(2)500	3/0-(2)500
	460/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	450	3/0-(2)500	3/0-(2)500
	460/60/3	2	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	575/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	575/60/3	2	XL 380 YD 175	#4-500	#14-2/0	250	#6-350	#6-350	250	#6-350	#6-350

1. Optional non-fused disconnect and circuit breaker.
2. Copper wire only, based on nameplate minimum circuit ampacity (MCA).
3. High condensing temperature option refers to entering condenser water temperatures above 95°F (35°C).
4. Circuit two information is the same as circuit one unless listed on a separate line below circuit one values.
5. XL - across-the-line starter and YD - wye-delta starter.



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Table 52. Customer Wire Selection – RTWD – 60 Hz – premium efficiency – high condensing temperature

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTWD 150	200/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	700	N/A	#1-(3)500
	200/60/3	2	380	N/A	#4-500	250 400	N/A	#6-350 3/0-(2)500	400 500	N/A	3/0-(2)500
	230/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	230/60/3	2	380	N/A	#4-500	250 400	N/A	#6-350 3/0-(2)500	350 450	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	380/60/3	2	XL 175/380 YD 175	#14-2/0 #4-500	#14-2/0	250	#6-350	#6-350	225 250	#6-350	#6-350
	460/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	460/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	175 225	#6-350	#6-350
	575/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	250	#6-350	#6-350
	575/60/3	2	175	#14-2/0	#14-2/0	100 250	1/0-#10 #6-350	1/0-#10 #6-350	150 175	#6-350	#6-350
RTWD 160	200/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	700	N/A	#1-(3)500
	200/60/3	2	380	N/A	#4-500	400	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	230/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	230/60/3	2	380	N/A	#4-500	400	N/A	3/0-(2)500	450	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	400	3/0-(2)500	3/0-(2)500
	380/60/3	2	XL 380 YD 175	#4-500	#14-2/0	250	#6-350	#6-350	250	#6-350	#6-350
	460/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	300	3/0-(2)500	3/0-(2)500
	460/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	225	#6-350	#6-350
	575/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	250	3/0-(2)500	3/0-(2)500
	575/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	175	#6-350	#6-350

Table 52. Customer Wire Selection – RTWD – 60 Hz – premium efficiency – high condensing temperature

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTWD 180	200/60/3	1	760	N/A	(2)#4-500	700	N/A	#1-(3)500	800	N/A	#1-(3)500
	200/60/3	2	380	N/A	#4-500	400	N/A	3/0-(2)500	500 600	N/A	3/0-(2)500
	230/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	700	N/A	#1-(3)500
	230/60/3	2	380	N/A	#4-500	400	N/A	3/0-(2)500	450 500	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	450	3/0-(2)500	3/0-(2)500
	380/60/3	2	XL 380 YD 175/380	#4-500	#14-2/0 #4-500	250	#6-350	#6-350	250 300	#6-350 3/0-(2)500	#6-350 3/0-(2)500
	460/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	460/60/3	2	XL 175/380 YD 175	#4-500	#14-2/0 #4-500	250	#6-350	#6-350	225 250	#6-350	#6-350
	575/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
575/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	175 200	#6-350	#6-350	
RTWD 200	200/60/3	1	760	N/A	(2)#4-500	700	N/A	#1-(3)500	800	N/A	#1-(3)500
	200/60/3	2	380	N/A	#4-500	400	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	230/60/3	1	760	N/A	(2)#4-500	600	N/A	3/0-(2)500	700	N/A	#1-(3)500
	230/60/3	2	380	N/A	#4-500	400	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	450	3/0-(2)500	3/0-(2)500
	380/60/3	2	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	460/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	460/60/3	2	XL 380 YD 175	#4-500	#14-2/0	250	#6-350	#6-350	250	#6-350	#6-350
	575/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
575/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	200	#6-350	#6-350	

1. Optional non-fused disconnect and circuit breaker.
2. Copper wire only, based on nameplate minimum circuit ampacity (MCA).
3. High condensing temperature option refers to entering condenser water temperatures above 95°F (35°C).
4. Circuit two information is the same as circuit one unless listed on a separate line below circuit one values.
5. XL - across-the-line starter and YD - wye-delta starter.



Electrical Data

Table 53. Customer Wire Selection – RTUD – 60 Hz

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTUD 80	200/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	400	N/A	3/0-(2)500
	200/60/3	2	175	N/A	#14-2/0	250	N/A	#6-350	250	N/A	#6-350
	230/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	350	N/A	3/0-(2)500
	230/60/3	2	175	N/A	#14-2/0	250	N/A	#6-350	250	N/A	#6-350
	380/60/3	1	175	#14-2/0	#14-2/0	250	#6-350	#6-350	225	#6-350	#6-350
	380/60/3	2	175	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	150	#6-350	#6-350
	460/60/3	1	175	#14-2/0	#14-2/0	250	#6-350	#6-350	175	#6-350	#6-350
	460/60/3	2	175	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	125	#6-350	#6-350
	575/60/3	1	175	#14-2/0	#14-2/0	250	#6-350	#6-350	150	#6-350	#6-350
	575/60/3	2	175	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	100	#6-350	#6-350
RTUD 90	200/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	200/60/3	2	380	N/A	#4-500	250	N/A	#6-350	350/300	N/A	3/0-(2)500
	230/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	400	N/A	3/0-(2)500
	230/60/3	2	175	N/A	#14-2/0	250	N/A	#6-350	250	N/A	#6-350
	380/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	250	3/0-(2)500	3/0-(2)500
	380/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	175	#6-350	#6-350
	460/60/3	1	175	#14-2/0	#14-2/0	250	#6-350	#6-350	200	#6-350	#6-350
	460/60/3	2	175	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	150	#6-350	#6-350
	575/60/3	1	175	#14-2/0	#14-2/0	250	#6-350	#6-350	175	#6-350	#6-350
	575/60/3	2	175	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	110	#6-350	#6-350
RTUD 100	200/60/3	1	760	N/A	#4-(2)500	600	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	200/60/3	2	380	N/A	#4-500	250	N/A	#6-350	350/400	N/A	3/0-(2)500
	230/60/3	1	380	N/A	#4-500	400	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	230/60/3	2	175/380	N/A	#14-2/0 #4-500	250	N/A	#6-350	250/350	N/A	#6-350 3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	380/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	175/225	#6-350	#6-350
	460/60/3	1	175	#14-2/0	#14-2/0	250	#6-350	#6-350	250	#6-350	#6-350
	460/60/3	2	175	#14-2/0	#14-2/0	100/250	#10-1/0 #6-350	#10-1/0 #6-350	150/175	#6-350	#6-350
	575/60/3	1	175	#14-2/0	#14-2/0	250	#6-350	#6-350	200	#6-350	#6-350
	575/60/3	2	175	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	110/150	#6-350	#6-350

Table 53. Customer Wire Selection – RTUD – 60 Hz

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTUD 110	200/60/3	1	760	N/A	#4-(2)500	600	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	200/60/3	2	380	N/A	#4-500	250	N/A	#6-350	400	N/A	3/0-(2)500
	230/60/3	1	380	N/A	#4-500	600	N/A	3/0-(2)500	500	N/A	3/0-(2)500
	230/60/3	2	380	N/A	#4-500	250	N/A	#6-350	350	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	300	3/0-(2)500	3/0-(2)500
	380/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	225	#6-350	#6-350
	460/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	250	3/0-(2)500	3/0-(2)500
	460/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	175	#6-350	#6-350
	575/60/3	1	175	#14-2/0	#14-2/0	250	#6-350	#6-350	200	#6-350	#6-350
575/60/3	2	175	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	150	#6-350	#6-350	
RTUD 120	200/60/3	1	760	N/A	#4-(2)500	600	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	200/60/3	2	380	N/A	#4-500	250/400	N/A	#6-350 3/0-(2)500	400/450	N/A	3/0-(2)500
	230/60/3	1	760	N/A	#4-(2)500	600	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	230/60/3	2	380	N/A	#4-500	250	N/A	#6-350	350/450	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	380/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	225/250	#6-350	#6-350
	460/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	460/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	175/225	#6-350	#6-350
	575/60/3	1	175	#14-2/0	#14-2/0	250	#6-350	#6-350	225	#6-350	#6-350
575/60/3	2	175	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	150/175	#6-350	#6-350	
RTUD 130	200/60/3	1	760	N/A	#4-(2)500	600	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	200/60/3	2	380	N/A	#4-500	400	N/A	3/0-(2)500	450	N/A	3/0-(2)500
	230/60/3	1	760	N/A	#4-(2)500	600	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	230/60/3	2	380	N/A	#4-500	250	N/A	#6-350	450	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	380/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	250	#6-350	#6-350
	460/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	460/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	225	#6-350	#6-350
	575/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	250	3/0-(2)500	3/0-(2)500
575/60/3	2	175	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	175	#6-350	#6-350	



Electrical Data

Table 53. Customer Wire Selection – RTUD – 60 Hz

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTUD 150	200/60/3	1	760	N/A	#4-(2)500	700	N/A	#1-(3)500	800	N/A	#1-(3)500
	200/60/3	2	760	N/A	#4-(2)500	700	N/A	#1-(3)500	800	N/A	#1-(3)500
	230/60/3	1	760	N/A	#4-(2)500	600	N/A	3/0-(2)500	700	N/A	#1-(3)500
	230/60/3	2	760	N/A	#4-(2)500	600	N/A	3/0-(2)500	700	N/A	#1-(3)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	400	3/0-(2)500	3/0-(2)500
	380/60/3	2	175/ 380	#14-2/0/ #4-500	#4-500	250	#6-350	3/0-(2)500	250/ 300	#6-350 3/0-(2)500	3/0-(2)500
	460/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	460/60/3	2	175	#14-2/0	#4-500	250	#6-350	3/0-(2)500	225/ 250	#6-350	3/0-(2)500
	575/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	250	3/0-(2)500	3/0-(2)500
	575/60/3	2	175	#14-2/0	#4-500	100/ 250	#10-1/0 #6-350	#6-350	175/ 200	#6-350	3/0-(2)500
RTUD 160	200/60/3	1	760	N/A	#4-(2)500	700	N/A	#1-(3)500	800	N/A	#1-(3)500
	200/60/3	2	760	N/A	#4-(2)500	700	N/A	#1-(3)500	800	N/A	#1-(3)500
	230/60/3	1	760	N/A	#4-(2)500	600	N/A	3/0-(2)500	700	N/A	#1-(3)500
	230/60/3	2	760	N/A	#4-(2)500	600	N/A	3/0-(2)500	700	N/A	#1-(3)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	450	3/0-(2)500	3/0-(2)500
	380/60/3	2	380	#4-500	#4-500	250	#4-500	3/0-(2)500	300	3/0-(2)500	3/0-(2)500
	460/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	460/60/3	2	175	#14-2/0	#4-500	250	#4-500	3/0-(2)500	250	#6-350	3/0-(2)500
	575/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	575/60/3	2	175	#14-2/0	#4-500	250	#4-500	#6-350	200	#6-350	3/0-(2)500
RTUD 180	200/60/3	1	760	N/A	#4-(2)500	800	N/A	#1-(3)500	800	N/A	#1-(3)500
	200/60/3	2	380/ 760	N/A	#4-500/ #4-(2)500	400	N/A	3/0-(2)500	600/ 700	N/A	3/0-(2)500/ #1-(3)500
	230/60/3	1	760	N/A	#4-(2)500	700	N/A	#1-(3)500	800	N/A	#1-(3)500
	230/60/3	2	380	N/A	#4-500	400	N/A	3/0-(2)500	500/ 600	N/A	3/0-(2)500
	380/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	500	3/0-(2)500	3/0-(2)500
	380/60/3	2	380	#4-500	#4-500	250	#6-350	#6-350	300/ 350	3/0-(2)500	3/0-(2)500
	460/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	400	3/0-(2)500	3/0-(2)500
	460/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	250	#6-350	#6-350
	575/60/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	575/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	200/ 225	#6-350	#6-350

Table 53. Customer Wire Selection – RTUD – 60 Hz

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTUD 200	200/60/3	1	760	N/A	#4-(2)500	800	N/A	#1-(3)500	1000	N/A	250-(4)500
	200/60/3	2	760	N/A	#4-(2)500	400	N/A	3/0-(2)500	700	N/A	#1-(3)500
	230/60/3	1	760	N/A	#4-(2)500	700	N/A	#1-(3)500	800	N/A	#1-(3)500
	230/60/3	2	380	N/A	#4-500	400	N/A	3/0-(2)500	600	N/A	3/0-(2)500
	380/60/3	1	760	#4-(2)500	#4-(2)500	600	3/0-(2)500	3/0-(2)500	500	3/0-(2)500	3/0-(2)500
	380/60/3	2	380	#4-500	#4-500	250	#6-350	#6-350	350	3/0-(2)500	3/0-(2)500
	460/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	400	3/0-(2)500	3/0-(2)500
	460/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	250	#6-350	#6-350
	575/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	575/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	250/225	#6-350	#6-350
RTUD 220	200/60/3	1	760	N/A	#4-(2)500	800	N/A	#1-(3)500	1000	N/A	250-(4)500
	200/60/3	2	760	N/A	#4-(2)500	400/600	N/A	3/0-(2)500	700	N/A	#1-(3)500
	230/60/3	1	760	N/A	#4-(2)500	800	N/A	#1-(3)500	1000	N/A	250-(4)500
	230/60/3	2	380/760	N/A	#4-500/ #4-(2)500	400/600	N/A	3/0-(2)500	600/700	N/A	3/0-(2)500/ #1-(3)500
	380/60/3	1	760	#4-(2)500	#4-(2)500	600	3/0-(2)500	3/0-(2)500	600	3/0-(2)500	3/0-(2)500
	380/60/3	2	380	#4-500	#4-500	250	#6-350	#6-350	350/450	3/0-(2)500	3/0-(2)500
	460/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	500	3/0-(2)500	3/0-(2)500
	460/60/3	2	175/380	#14-2/0/ #4-500	#14-2/0/ #4-500	250	#6-350	#6-350	250/350	#6-350/ 3/0-(2)500	#6-350/ 3/0-(2)500
	575/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	400	3/0-(2)500	N/A
575/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	250	#6-350	#6-350	
RTUD 250	200/60/3	1	760	N/A	#4-(2)500	800	N/A	#1-(3)500	1000	N/A	250-(4)500
	200/60/3	2	760	N/A	#4-(2)500	600	N/A	3/0-(2)500	700	N/A	#1-(3)500
	230/60/3	1	760	N/A	#4-(2)500	800	N/A	#1-(3)500	1000	N/A	250-(4)500
	230/60/3	2	760	N/A	#4-(2)500	600	N/A	3/0-(2)500	700	N/A	#1-(3)500
	380/60/3	1	760	#4-(2)500	#4-(2)500	600	3/0-(2)500	3/0-(2)500	600	3/0-(2)500	3/0-(2)500
	380/60/3	2	380	#4-500	#4-500	250	#6-350	#6-350	450	3/0-(2)500	3/0-(2)500
	460/60/3	1	380	#4-500	#4-500	600	3/0-(2)500	3/0-(2)500	500	3/0-(2)500	3/0-(2)500
	460/60/3	2	380	#4-500	#4-500	250	#6-350	#6-350	350	3/0-(2)500	3/0-(2)500
	575/60/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	400	3/0-(2)500	N/A
	575/60/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	250	#6-350	#6-350

1. Optional non-fused disconnect and circuit breaker.
2. Copper wire only, based on nameplate minimum circuit ampacity (MCA).
3. Standard condensing temperature option refers to entering condenser water temperatures 95°F (35°C) and below.
4. Circuit two information is the same as circuit one unless listed on a separate line below circuit one values.
5. XL - across-the-line starter and YD - wye-delta starter.



Electrical Data

Table 54. Customer Wire Selection – RTWD – 50 Hz – standard efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTWD 70	400/50/3	1	380	#4–500	#4–500	250	#6–#350	#6–#350	150	#6–#350	#6–#350
	400/50/3	2	195	#14–2/0	#14–2/0	100	#10–1/0	#10–1/0	100	#6–#350	#6–#350
RTWD 80	400/50/3	1	380	#4–500	#4–500	250	#6–#350	#6–#350	175	#6–#350	#6–#350
	400/50/3	2	195	#14–2/0	#14–2/0	100	#10–1/0	#10–1/0	100 125	#6–#350	#6–#350
RTWD 90	400/50/3	1	380	#4–500	#4–500	250	#6–#350	#6–#350	175	#6–#350	#6–#350
	400/50/3	2	195	#14–2/0	#14–2/0	100	#10–1/0	#10–1/0	125	#6–#350	#6–#350
RTWD 100	400/50/3	1	380	#4–500	#4–500	250	#6–#350	#6–#350	200	#6–#350	#6–#350
	400/50/3	2	195	#14–2/0	#14–2/0	100	#10–1/0	#10–1/0	125 150	#6–#350	#6–#350
RTWD 110	400/50/3	1	380	#4–500	#4–500	250	#6–#350	#6–#350	225	#6–#350	#6–#350
	400/50/3	2	195	#14–2/0	#14–2/0	100	#10–1/0	#10–1/0	150	#6–#350	#6–#350
RTWD 120	400/50/3	1	380	#4–500	#4–500	250	#6–#350	#6–#350	250	#6–#350	#6–#350
	400/50/3	2	195	#14–2/0	#14–2/0	100	#10–1/0	#10–1/0	150 175	#6–#350	#6–#350
RTWD 130	400/50/3	1	380	#4–500	#4–500	250	#6–#350	#6–#350	250	#6–#350	#6–#350
	400/50/3	2	195	#14–2/0	#14–2/0	100	#10–1/0	#10–1/0	175	#6–#350	#6–#350
RTWD 140	400/50/3	1	380	#4–500	#4–500	250	#6–#350	#6–#350	300	3/0-(2)500	3/0-(2)500
	400/50/3	2	195	#14–2/0	#14–2/0	100 250	#10–1/0 #6–#350	#10–1/0 #6–#350	175 200	#6–#350	#6–#350
RTWD 150	400/50/3	1	380	#4–500	#4–500	250	#6–#350	#6–#350	300	3/0-(2)500	3/0-(2)500
	400/50/3	2	195	#14–2/0	#14–2/0	250	#6–#350	#6–#350	200	#6–#350	#6–#350

1. Optional non-fused disconnect and circuit breaker.
2. Copper wire only, based on nameplate minimum circuit ampacity (MCA).
3. Standard condensing temperature option refers to entering condenser water temperatures 95°F (35°C) and below.
4. Circuit two information is the same as circuit one unless listed on a separate line below circuit one values.
5. XL - across-the-line starter and YD - wye-delta starter.

Table 55. Customer Wire Selection – RTWD – 50 Hz – high efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTWD 60	400/50/3	1	380	#4-500	#4-500	100	#10-1/0	#10-1/0	125	#6-#350	#6-#350
	400/50/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	80	#6-#350	#6-#350
RTWD 70	400/50/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	125	#6-#350	#6-#350
	400/50/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	100	#6-#350	#6-#350
RTWD 80	400/50/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	175	#6-#350	#6-#350
	400/50/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	100 125	#6-#350	#6-#350
RTWD 90	400/50/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	175	#6-#350	#6-#350
	400/50/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	125	#6-#350	#6-#350
RTWD 100	400/50/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	200	#6-#350	#6-#350
	400/50/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	125 150	#6-#350	#6-#350
RTWD 110	400/50/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	225	#6-#350	#6-#350
	400/50/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	150	#6-#350	#6-#350
RTWD 120	400/50/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	250	#6-#350	#6-#350
	400/50/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	150 175	#6-#350	#6-#350
RTWD 130	400/50/3	1	380	#4-500	#4-500	250	#6-350	#6-350	250	3/0-(2)500	3/0-(2)500
	400/50/3	2	175	#14-2/0	#14-2/0	100	1/0-#10	1/0-#10	175	#6-350	#6-350
RTWD 140	400/50/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	400/50/3	2	175	#14-2/0	#14-2/0	100 250	1/0-#10 #6-350	1/0-#10 #6-350	175 200	#6-350	#6-350
RTWD 160	400/50/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	400/50/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	200	#6-350	#6-350
RTWD 180	400/50/3	1	380	#4-500	#4-500	250	#6-350	#6-350	350	3/0-(2)500	3/0-(2)500
	400/50/3	2	XL 175/380 YD 175	#14-2/0 #4-500	#14-2/0	250	#6-350	#6-350	200 250	#6-350	#6-350
RTWD 200	400/50/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	400/50/3	2	XL 380 YD 175	#4-500	#14-2/0	250	#6-350	#6-350	250	#6-350	#6-350
RTWD 220	400/50/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	400	3/0-(2)500	3/0-(2)500
	400/50/3	2	XL 380 YD 175/380	#5-500 #4-500	#14-2/0 #4-500	250	#6-350	#6-350	250 300	#6-350 3/0-(2)500	#6-350 3/0-(2)500
RTWD 250	400/50/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	450	3/0-(2)500	3/0-(2)500
	400/50/3	2	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500

1. Optional non-fused disconnect and circuit breaker.
2. Copper wire only, based on nameplate minimum circuit ampacity (MCA).
3. Standard condensing temperature option refers to entering condenser water temperatures 95°F (35°C) and below.
4. Circuit two information is the same as circuit one unless listed on a separate line below circuit one values.
5. XL - across-the-line starter and YD - wye-delta starter.



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Table 56. Customer Wire Selection – RTWD – 50 Hz – high efficiency – high condensing temperature

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTWD 60	400/50/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	150	#6-#350	#6-#350
	400/50/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	110 100	#6-#350	#6-#350
RTWD 70	400/50/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	175	#6-#350	#6-#350
	400/50/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	125	#6-#350	#6-#350
RTWD 80	400/50/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	225	#6-#350	#6-#350
	400/50/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	125 150	#6-#350	#6-#350
RTWD 90	400/50/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	225	#6-#350	#6-#350
	400/50/3	2	195	#14-2/0	#14-2/0	100	#10-1/0	#10-1/0	150	#6-#350	#6-#350
RTWD 100	400/50/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	250	#6-#350	#6-#350
	400/50/3	2	195	#14-2/0	#14-2/0	100 250	#10-1/0 #6-#350	#10-1/0 #6-#350	150 175	#6-#350	#6-#350
RTWD 110	400/50/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	250	3/0-(2)500	3/0-(2)500
	400/50/3	2	195	#14-2/0	#14-2/0	250	#6-#350	#6-#350	200 175	#6-#350	#6-#350
RTWD 120	400/50/3	1	380	#4-500	#4-500	250	#6-#350	#6-#350	300	3/0-(2)500	3/0-(2)500
	400/50/3	2	195	#14-2/0	#14-2/0	250	#6-#350	#6-#350	200 225	#6-#350	#6-#350
RTWD 130	400/50/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	400/50/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	225 200	#6-350	#6-350
RTWD 140	400/50/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	400/50/3	2	XL 175/380 YD 175	#14-2/0 #4-500	#14-2/0	250	#6-350	#6-350	225 250	#6-350	#6-350
RTWD 160	400/50/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	400/50/3	2	XL 380 YD 175	#4-500	#14-2/0	250	#6-350	#6-350	250	#6-350	#6-350
RTWD 180	400/50/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	400	3/0-(2)500	3/0-(2)500
	400/50/3	2	XL 380 YD 175/380	#4-500	#14-2/0 #4-500	250	#6-350	#6-350	250	#6-350	3/0-(2)500
RTWD 200	400/50/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	450	3/0-(2)500	3/0-(2)500
	400/50/3	2	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
RTWD 220	400/50/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	500	3/0-(2)500	3/0-(2)500
	400/50/3	2	380	#4-500	#4-500	250	#6-350	#6-350	300 350	3/0-(2)500	3/0-(2)500
RTWD 250	400/50/3	1	380	#4-500	500-#5	600	3/0-(2)500	3/0-(2)500	500	3/0-(2)500	3/0-(2)500
	400/50/3	2	380	#4-500	#4-500	250	#6-350	#6-350	350	3/0-(2)500	3/0-(2)500

1. Optional non-fused disconnect and circuit breaker.
2. Copper wire only, based on nameplate minimum circuit ampacity (MCA).
3. High condensing temperature option refers to entering condenser water temperatures above 95°F (35°C).
4. Circuit two information is the same as circuit one unless listed on a separate line below circuit one values.
5. XL - across-the-line starter and YD - wye-delta starter.

Table 57. Customer Wire Selection – RTWD – 50 Hz – premium efficiency – standard condensing temperature

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTWD 160	400/50/3	1	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500
	400/50/3	2	175	#14-2/0	#14-2/0	250	#6-350	#6-350	200	#6-350	#6-350
RTWD 180	400/50/3	1	380	#4-500	500--#4	250	#6-350	#6-350	350	3/0-(2)500	3/0-(2)500
	400/50/3	2	XL 175/380 YD 175	#14-2/0 #4-500	#14-2/0	250	#6-350	#6-350	200 250	#6-350	#6-350
RTWD 200	400/50/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	400/50/3	2	XL 380 YD 175	#6-500 #4-500	#14-2/0	250	#6-350	#6-350	250	#6-350	#6-350

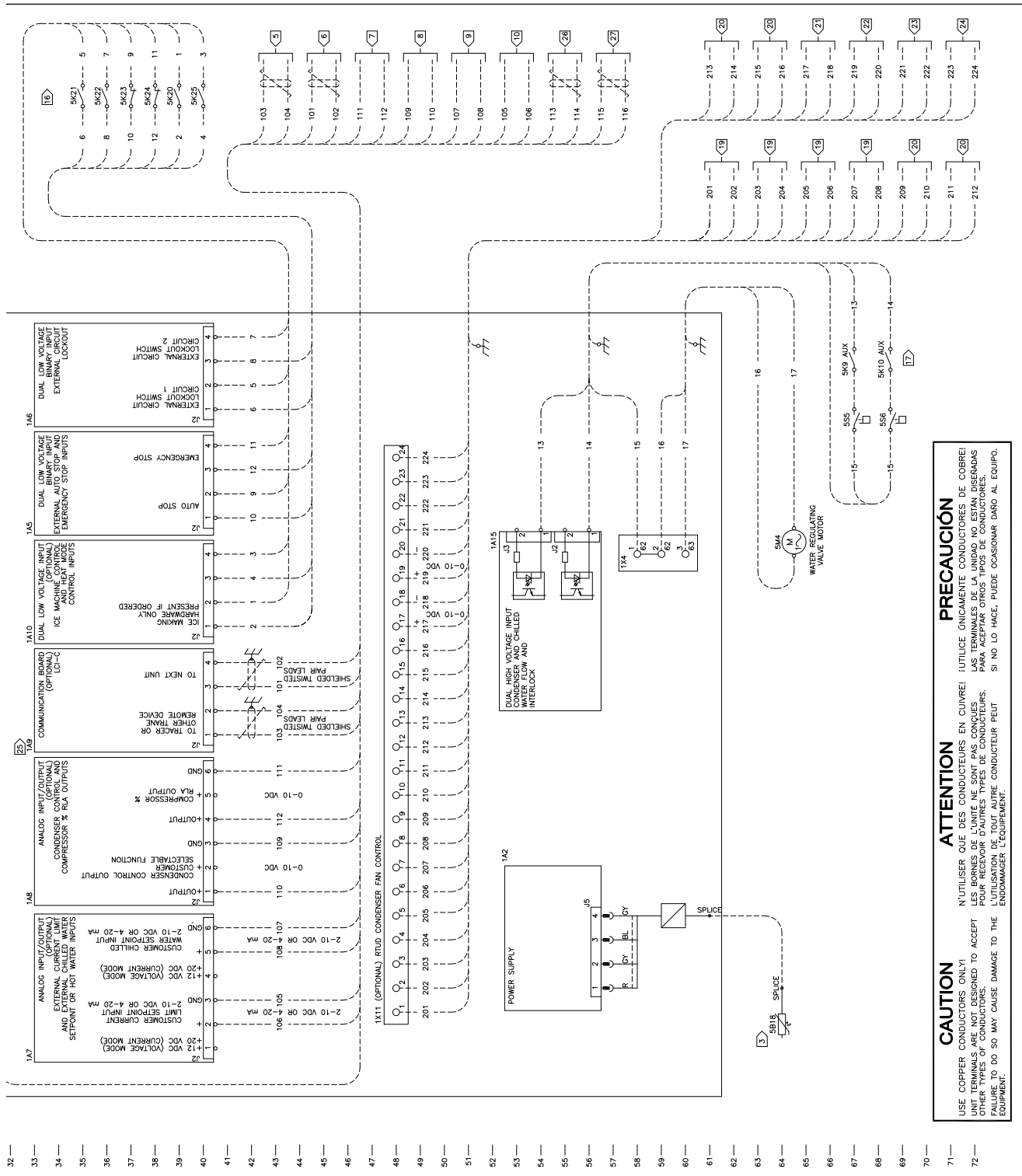
1. Optional non-fused disconnect and circuit breaker.
2. Copper wire only, based on nameplate minimum circuit ampacity (MCA).
3. Standard condensing temperature option refers to entering condenser water temperatures 95°F (35°C) and below.
4. Circuit two information is the same as circuit one unless listed on a separate line below circuit one values.
5. XL - across-the-line starter and YD - wye-delta starter.

Table 58. Customer Wire Selection – RTWD – 50 Hz – premium efficiency – high condensing temperature

Unit ID	Rated Voltage	# Conn	Wire Selection Main Terminal Block			Wire Selection Non-Fused Disconnect			Wire Selection Circuit Breaker		
			Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range	Size amps	XL Wire Range	YD Wire Range
RTWD 160	400/50/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	350	3/0-(2)500	3/0-(2)500
	400/50/3	2	XL 380 YD 175	#4-500	#14-2/0	250	#6-350	#6-350	250	#6-350	#6-350
RTWD 180	400/50/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	400	3/0-(2)500	3/0-(2)500
	400/50/3	2	XL 380 YD 175/380	#4-500	#14-2/0 #4-500	250	#6-350	#6-350	250 300	#6-350 3/0-(2)500	#6-350 3/0-(2)500
RTWD 200	400/50/3	1	380	#4-500	#4-500	400	3/0-(2)500	3/0-(2)500	450	3/0-(2)500	3/0-(2)500
	400/50/3	2	380	#4-500	#4-500	250	#6-350	#6-350	300	3/0-(2)500	3/0-(2)500

1. Optional non-fused disconnect and circuit breaker.
2. Copper wire only, based on nameplate minimum circuit ampacity (MCA).
3. Standard condensing temperature option refers to entering condenser water temperatures 95°F (35°C) and below.
4. Circuit two information is the same as circuit one unless listed on a separate line below circuit one values.
5. XL - across-the-line starter and YD - wye-delta starter.

Figure 2. RTWD/RTUD - Field Wiring Diagram (continued)



CAUTION
 USE COPPER CONDUCTORS ONLY!
 UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.
 FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.

ATTENTION
 N'UTILISER QUE DES CONDUCTEURS EN CUIVRE!
 LES BORNES DE L'UNITÉ NE SONT PAS CONÇUES POUR RECEVOIR D'AUTRES TYPES DE CONDUCTEURS.
 L'UTILISATION DE TOUT AUTRE CONDUCTEUR PEUT ENDOMMAGER L'ÉQUIPEMENT.

PRECAUCIÓN
 UTILICE ÚNICAMENTE CONDUCTORES DE COBRE!
 LAS TERMINALES DE LA UNIDAD NO ESTÁN DISEÑADAS PARA ACEPTAR OTROS TIPOS DE CONDUCTORES.
 SI NO LO HACE, PUEDE OCASIONAR DAÑO AL EQUIPO.



Electrical Connection

Table 59. RTWD/RTUD - Field Wiring Diagram Notes

#	Description
1	Single source power is provided as standard on these products, dual source power is optional. Field connections for single source power are made to 1X1, 1Q1, or 1Q2. When dual source power is selected the field connections for circuit #2 are made to 1X2, 1Q3, or 1Q4.
2	For voltages 200 V/60 Hz, 220V/50Hz, 380 V/60 Hz, 460 V/60 Hz, wire 26A shall be connected to H2. For voltages 230 V/60 Hz and 575 V/60 Hz, wire 26A shall be connected to H3. 400 V/50 Hz unit is factory wired with 26A connected to H3 - reconnect wire 26A to H2 for 380V/50Hz, or H4 for 415V/50Hz. H4 is only available with 400V/50Hz panels.
3	Factory installed outdoor air temperature sensor lead length to be spliced and extended by customer. 18 AWG twisted pair recommended.
4	Customer supplied power 115/60/1 or 220/50/1 to power relays. Max fuse size is 15 amps. Ground all customer supplied power supplied as required by applicable codes. Green ground screws are provided in unit control panel.
5	Wired to next unit. 22 AWG shielded communication wire equivalent to helix LF22P0014216 recommended. The sum total of all interconnected cable segments not to exceed 4500 feet. Connection topology should be daisy chain. Refer to building automation system (BAS) communication installation literature for end of line termination resistor requirements.
6	Wired to Tracer or other Trane remote device. 22 AWG shielded communication wire equivalent to helix LF22P0014216 recommended. The sum total of all interconnected cable segments not to exceed 4500 feet. Connection topology should be daisy chain. Refer to building automation system (BAS) communication installation literature for end of line termination resistor requirements
7	Wired to compressor % RLA.
8	Wired to condenser control customer selectable function.
9	Wired to customer chilled water setpoint 2-10 V or 4-20 mA.
10	Wired to customer current limit setpoint 2-10 V or 4-20 mA.
11	Refer to RTWD/RTUD electrical schematic for specific electrical connection information and notes pertaining to wiring installation.
12	All unit power wiring must be 600-V copper conductors only and have a minimum temperature insulation rating of 75°C. Refer to unit nameplate for minimum circuit ampacity and maximum overcurrent protection device. Provide an equipment ground in accordance with applicable electric codes.
13	All field wiring must be in accordance with national electric code and local requirements.
14	All customer control circuit wiring must be copper conductors only and have a minimum insulation rating of 300 volts. Except as noted, all customer wiring connection are made to circuit board mounted box lugs with a wire range of 14 to 18 AWG.
15	Unit provided dry contacts for the condenser/chilled water pump control. Relays are rated for 7.2 amps resistive, 2.88 amps pilot duty, or 1/3 HP, 7.2 FLA at 120 volts 60Hz. Contacts are rated for 5 A general purpose duty 240-V.
16	Customer supplied contacts for all low voltage connections must be compatible with dry circuit 24 VDC for a 12 mA resistive load. Silver or gold plated contacts recommended.
17	Flow switch and interlock contacts must be acceptable for use in a 120-V, 1-mA circuit or a 220-V, 2-mA circuit.
18	Only present on "ED" frame molded case switches. 1X7, 1X8, 27A, 28A, 29A, 30A, 31A, and 32A are not present with all other molded case switches.
19	Wires are connected to normally open dry contacts for circuit 1 condenser fan control relays are rated for 7.2 amps resistive, 2.88 amps pilot duty, or 1/3 HP, 7.2 FLA at 120-V, contacts are rated for 5 amps general purpose duty 240-V. Wires 201 and 202 enable fan group 1. Wires 203 and 204 enable fan group 2. Wires 205 and 206 enable group 3. Wires 207 and 208 enable fan group 4.
20	Wires are connected to normally open dry contacts for circuit 2 condenser fan control relays are rated for 7.2 amps resistive, 2.88 amps pilot duty, or 1/3 HP, 7.2 FLA at 120-V, contacts are rated for 5 amps general purpose duty 240-V. Wires 209 and 210 enable fan group 1. Wires 211 and 212 enable fan group 2. Wires 213 and 214 enable group 3. Wires 215 and 216 enable fan group 4.
21	Wires are connected to 0-10 VDC signal at 22m A maximum for circuit 1, group 1, condenser fan speed control.
22	Wires are connected to 0-10 VDC signal at 22m A maximum for circuit 2, group 1, condenser fan speed control.
23	Wires are connected to circuit 1, group 1, condenser fan fault feedback. Connection must be compatible with dry circuit 24 VDC for A 122-mA resistive load. Silver or gold plated contacts recommended.
24	Wires are connected to circuit 2, group 1, condenser fan fault feedback. Connection must be compatible with dry circuit 24 VDC for A 122-mA resistive load. Silver or gold plated contacts recommended.
25	1A31 (BACnet) and 1A9 (LonTalk) may not be installed on the same unit.
26	Wired to next unit. 18-AWG, 24-pF/ft, shielded communication wire recommended. the sum total of all interconnected cable segments not to exceed 4000 feet. Connection topology should be daisy chain. Limit link to 60 Trane devices or 32 devices of Trane and non-Trane manufacture.
27	Wired to Tracer or other Trane remote device. 18-AWG, 24-pF/ft, shielded communication wire recommended. the sum total of all interconnected cable segments not to exceed 4000 feet. Connection topology should be daisy chain. Limit link to 60 Trane devices or 32 devices of Trane and non-Trane manufacture.

RTWD/RTUD - Replaceable Fuse Table

Volts	Hertz	Designation	Class	Quantity	Size (A)
200	60	1F13, 14	CC	2	10
		1F18, 19, 20, 21	CC	4	3
		1F16, 17	CC	2	6
		1F15	CC	1	10
230	60	1F13, 14	CC	2	8
		1F18, 19, 20, 21	CC	4	3
		1F16, 17	CC	2	6
		1F15	CC	1	10
380	60	1F13, 14	CC	2	5
		1F18, 19, 20, 21	CC	4	3
		1F16, 17	CC	2	6
		1F15	CC	1	10
460	60	1F13, 14	CC	2	5
		1F18, 19, 20, 21	CC	4	3
		1F16, 17	CC	2	6
		1F15	CC	1	10
575	60	1F13, 14	CC	2	4
		1F18, 19, 20, 21	CC	4	3
		1F16, 17	CC	2	6
		1F15	CC	1	10
400	50	1F13, 14	CC	2	5
		1F18, 19, 20, 21	CC	4	3
		1F16, 17	CC	2	6
		1F15	CC	1	10

Figure 3. Connection Diagram

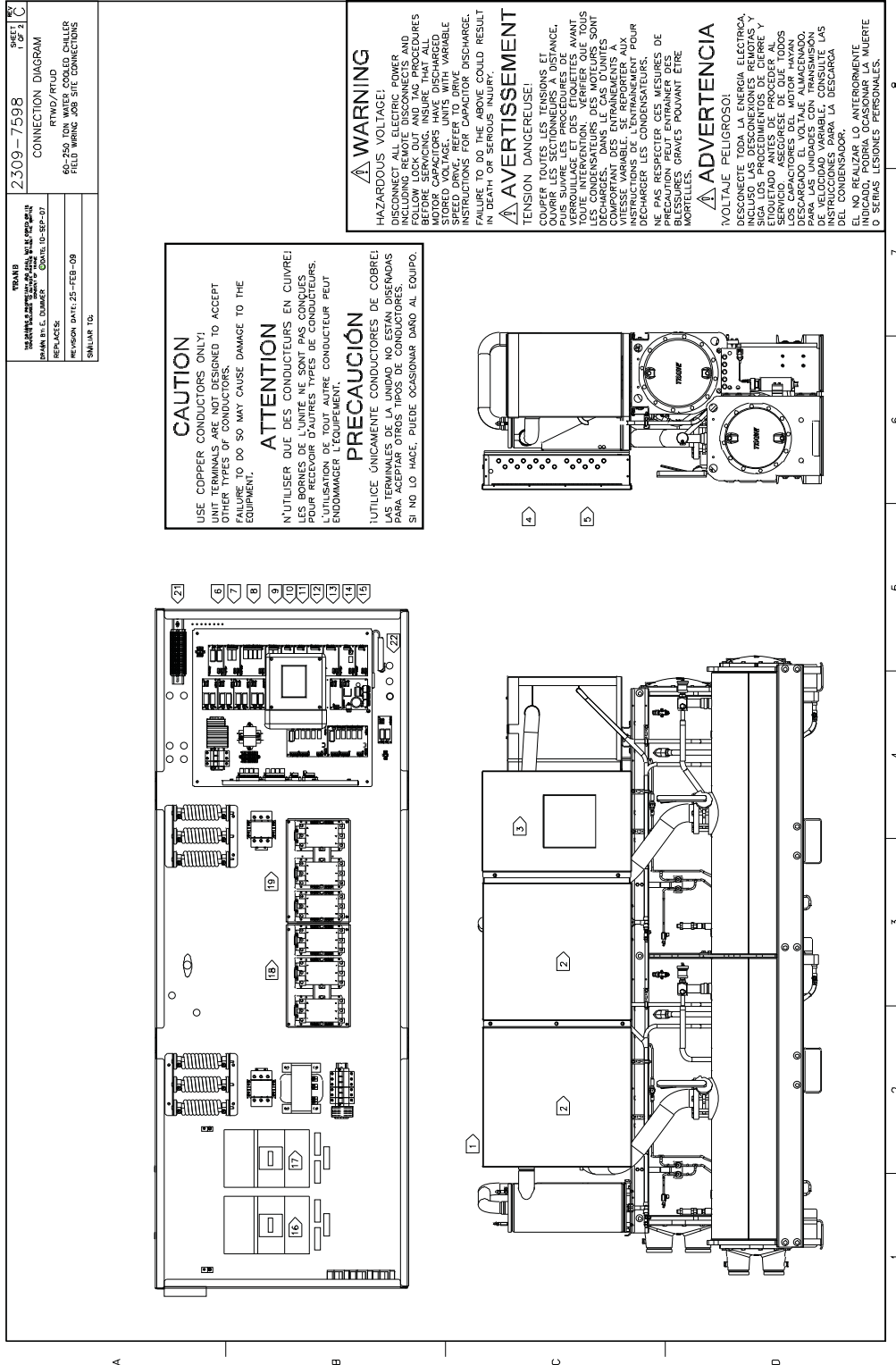


Table 60. RTWD/RTUD Connection Diagram Notes

#	Description		Additional Information
1	Line voltage entrance (see unit nameplate)	location	
2	Power section	location	
3	Controls section	location	
4	Customer control power high voltage entrance	location	
5	Customer control power low voltage entrance	location	
6	Condenser and chilled water flow inputs.	optional	1A15, (5K10 and 5K9)
7	Condenser and chilled water pump relay outputs. Separate 115/60/1 or 220/50/1 customer power is required.	optional	1A14, (5K10 and 5K9)
8	Unit status programmable relay outputs. Separate 115/60/1 or 220/50/1 customer power is required.	optional	1A13, (5K12–5K19)
9	Ice making status relay output. Separate 115/60/1 or 220/50/1 customer power is required.	optional	1A12, (5K11)
10	External auto stop and emergency stop inputs.	standard	1A5, (5K23 and 5K24)
11	External circuit lockout inputs circuit 1 and circuit 2.	standard	1A6, (5K21 and 5K22)
12	External current-limit and chilled water setpoint or hot water inputs.	optional	1A7, (4-20 mA or 2-10 V)
13	Condenser control and compressor % RLA input.	optional	1A8, (4-20 mA or 0-10 V)
14	Tracer Communications	optional	1A9
15	Ice machine control and heat mode control.	optional	1A10, (5K20 and 5K25)
16	Circuit 1 disconnect	optional	1A6
17	Circuit 2 disconnect	optional	1A6
18	Wye-delta closed transition starter or across-the-line starter circuit 1A	location	
19	Wye-delta closed transition starter or across-the-line starter circuit 2A	location	
20	Refer to RTWD/RTUD electrical schematic for specific electrical connection information and notes pertaining to wiring installation.		
21	RTWD condenser control	optional	1A8
22	Outdoor air temperature sensor	optional (RTWD)	

Electrical Connection

Figure 4. RTWD/RTUD Layout Diagram

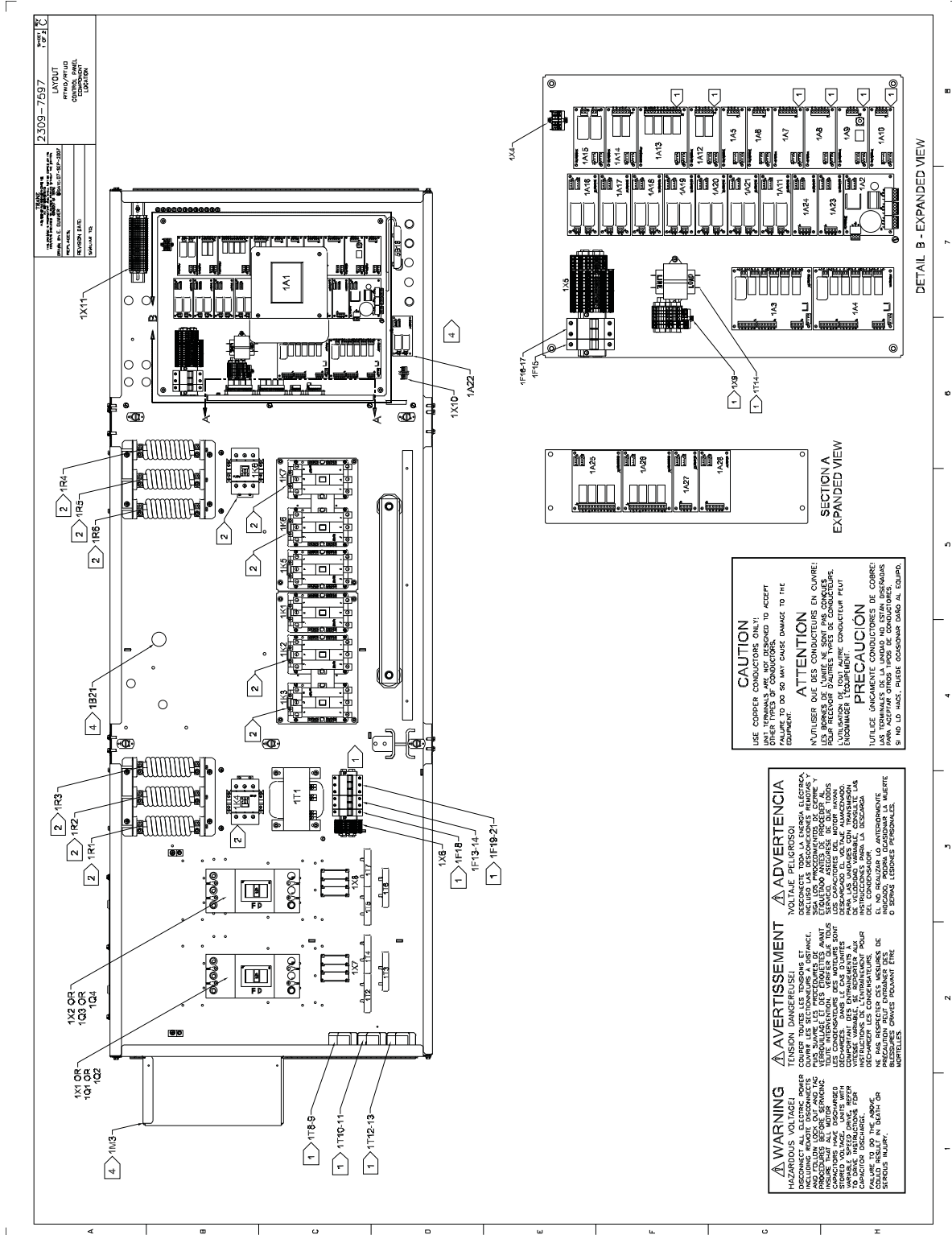


Table 61. RTWD/RTUD Layout Notes

1A1	Dyna View main processor interface	**	1K3	Contact, compressor 1A short.
1A2	Power supply module.	**	1K4	Contact, compressor 1A transition.
1A3	Starter module, compressor 1A.		1K5	Contact, compressor 2A start.
1A4	Starter module, compressor 2A.	**	1K6	Contact, compressor 2A run.
1A5	Dual low voltage input, external auto stop and emergency stop inputs.	**	1K7	Contact, compressor 2A short.
1A6	Dual low voltage input, external circuit lockout, refrigerant circuit 1 and 2.	**	1K8	Contact, compressor 2A transition.
* 1A7	Analog input/output, external current limit and external chilled water or hot water setpoint inputs.	*	1Q1	Disconnect switch, power distribution.
* 1A8	Analog input/output, condenser control and compressor % RLA output.	*	1Q2	Circuit breaker, power distribution.
* 1A9	Dual low voltage input, LCI-C communications (Echelon).	*	1Q3	Disconnect switch, power distribution.
* 1A10	Dual low voltage input, ice machine control and heat mode control.	*	1Q4	Circuit breaker, power distribution.
* 1A11	Dual high voltage input, motor thermostats compressor 2A and 1A.	**	1R1	Resistor, transition, compressor 1A, line A.
* 1A12	Dual relay output, ice making status.	**	1R2	Resistor, transition, compressor 1A, line B.
* 1A13	Quad relay outputs, unit status programmable relays.	**	1R3	Resistor, transition, compressor 1A, line C.
1A14	Dual relay output, condenser and chilled water pump relays.	**	1R4	Resistor, transition, compressor 2A, line A.
* 1A15	Dual high voltage input, condenser and chilled water flow and interlock.	**	1R5	Resistor, transition, compressor 2A, line B.
1A16	Dual triac output, modulating unload and load compressor 2A.	**	1R6	Resistor, transition, compressor 2A, line C.
1A17	Dual triac output, step load control compressor 2A and 1A.		1T1	Transformer, control power.
1A18	Dual triac output, modulating unload and load compressor 1A.		1T2	Transformer, current, compressor 1A, line A.
1A19	Dual high voltage input, high pressure cutout compressor 2A and 1A.		1T3	Transformer, current, compressor 1A, line B.
1A20	Dual triac output, oil return gas pump drain and fill, circuit 2.		1T4	Transformer, current, compressor 1A, line C.
1A21	Dual triac output, oil return gas pump drain and fill, circuit 1.		1T5	Transformer, current, compressor 2A, line A.
*** 1A22	Dual high voltage input, panel ventilation.		1T6	Transformer, current, compressor 2A, line B.
1A23	Dual low voltage input, oil loss level.		1T7	Transformer, current, compressor 2A, line C.
* 1A24	Dual low voltage input, water flow sensor.	*	1T8	Transformer, potential, under/over voltage - power meter, line A to B.
* 1A25	Quad relay outputs, circuit 1 fan control.	*	1T9	Transformer, potential, power meter, line B to C.
* 1A26	Quad relay outputs, circuit 2 fan control.	*	1T10	Transformer, potential, power meter, line A to C.
* 1A27	Analog input/output, fan speed control.	*	1T11	Transformer, potential, power meter, line A to B.
* 1A28	Dual low voltage input, fault feedback.	*	1T12	Transformer, potential, power meter, line B to C.
*** 1B21	Thermostat, panel ventilation	*	1T13	Transformer, potential, power meter, line A to C.
*** 1M3	Motor, ventilation fan.		1T14	Transformer, potential, power meter, line A to B.
1F13	Fuse, potential transformer primary, compressor 1A, line A, under/over voltage - power meter.		1X1	Power distribution block.
1F14	Fuse, potential transformer primary, compressor 1A, line B, under/over voltage - power meter.	*	1X2	Power distribution block.
1F15	Fuse, control power transformer secondary, 115 V.		1X4	Terminal strip, customer control wiring.
1F16	Fuse, control power transformer secondary, 27 V.		1X5	Terminal strip, factory control wiring.
1F17	Fuse, control power transformer secondary, 27 V.	*	1X6	Terminal strip, factory power meter wiring.
* 1F18	Fuse, potential transformer primary, compressor 1A, line C, power meter.	*	1X7	Power distribution block.
* 1F19	Fuse, potential transformer primary, compressor 2A, line A, power meter.	*	1X8	Power distribution block.
* 1F20	Fuse, potential transformer primary, compressor 2A, line B, power meter.		1X9	Terminal strip, water flow sensor control wiring.
* 1F21	Fuse, potential transformer primary, compressor 2A, line C, power meter.	***	1X10	Terminal strip, ventilation.
1K1	Contact, compressor 1A start.	*	1X11	Terminal strip, fan control.
** 1K2	Contact, compressor 1A run.	*	5B18	Temperature sensor, outdoor air temperature.

Notes: Refer to RTWD/RTUD electrical schematic for specific electrical connection information and notes pertaining to wiring installation.

* - Optional components; may not be present on all units. ** - Wye-delta components; may not be present on all units. *** - Only present when ventilation is required.

Dimensions

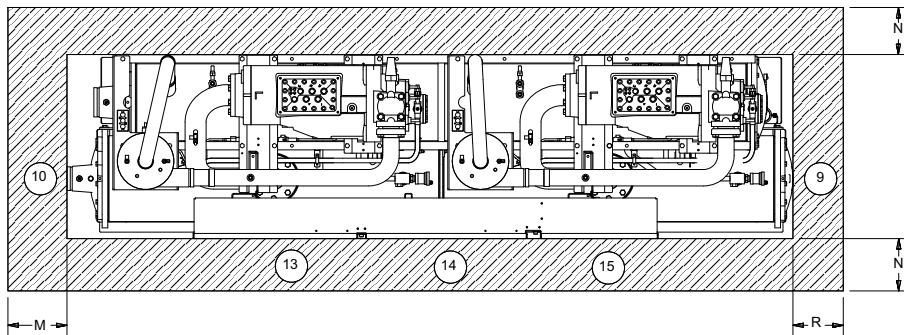
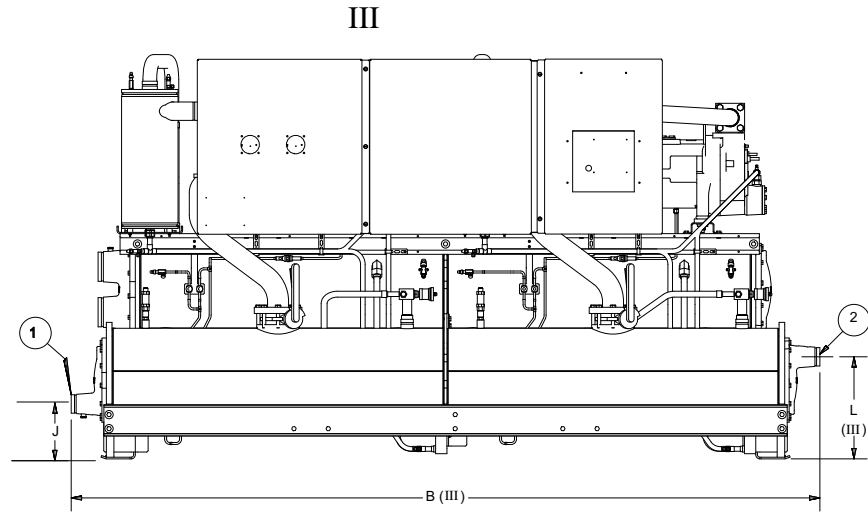
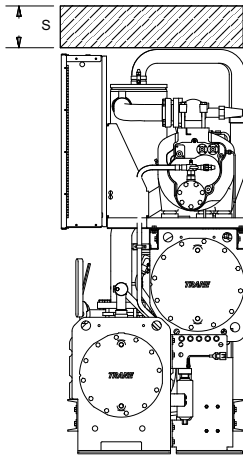
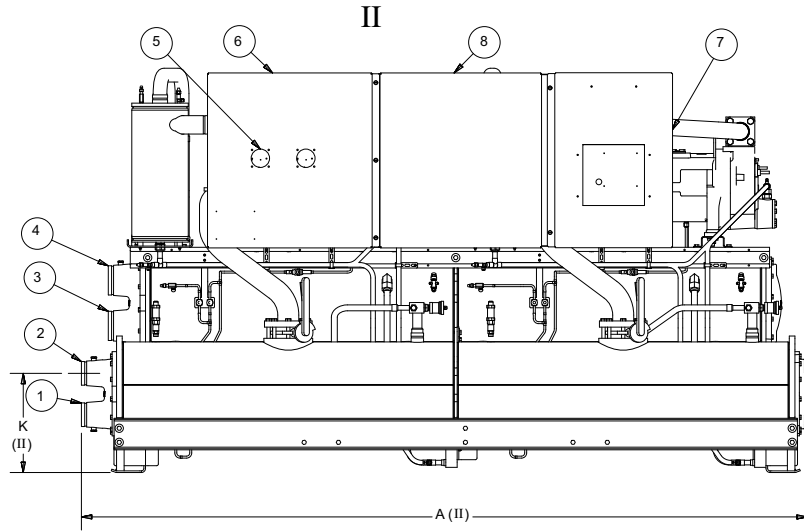
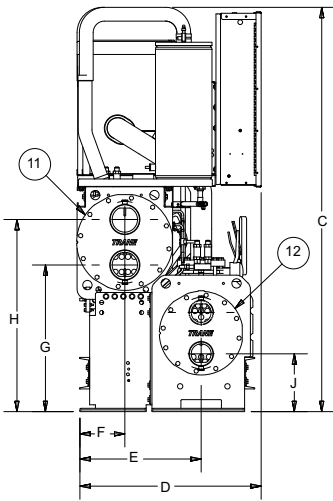


Table 62. RTWD/RTUD – 60 Hz Dimensions – 80-140 ton

	Standard Efficiency		RTWD/RTUD - High Efficiency	
	80,90,100,110 inch/mm	120,130,140 inch/mm	80,90 inch/mm	100,110,120,130 inch/mm
A (2 pass evap)	138.2/3510	138.8/3525	126.4/3210	127.0/3225
B (3 pass evap)	142.5/3620	142.5/3620	130.7/3320	130.7/3320
C	75.9/1929	76.9/1955	76.1/1933	76.9/1955
D	34.3/871	34.8/884	35.1/890	35.0/890
E	23.6/600	23.6/600	23.6/600	23.6/600
F	9.1/231	9.1/231	9.1/231	9.1/231
G	27.9/709	27.9/709	27.9/709	27.9/709
H	36.6/929	36.6/929	36.6/929	36.6/929
J (2 pass evap)	11.0/280	10.6/268	10.8/273	10.2/259
J (3 pass evap)	10.4/265	10.1/256	10.2/258	9.8/247
K (2 pass evap)	18.9/479	19.2/488	18.6/472	18.9/479
L (3 pass evap)	19.5/495	19.5/496	19.2/488	19.2/487
M	36/914	36/914	36/914	36/914
N*	36/914*	36/914*	36/914*	36/914*
R	127/3226	127/3226	115/2921	115/2921
S	36/914	36/914	36/914	36/914

Reference	
1	Evaporator Water Inlet
2	Evaporator Water Outlet
3	Condenser Water Inlet (RTWD only)
4	Condenser Water Outlet (RTWD only)
5	Power Disconnect
6	Power Wire
7	Control Wire
8	Control Panel
9	Condenser Return Waterbox End (RTWD only) - Minimum Clearance (for tube removal)
10	Condenser Supply Waterbox End (RTWD only) - Minimum Clearance (for maintenance)
11	Condenser (RTWD only)
12	Evaporator
13	Panel Power Section [door swing 31.3 inch (796.9 mm)]
14	Panel Power Section [door swing 31.1 inch (790.1 mm)]
15	Panel Control Section [door swing 22.4 inch (568.14 mm)]
II	2 Pass Evaporator Unit
III	3 Pass Evaporator Unit
*	42 inch (1067 mm) clearance required to other ground parts, two units with panels facing each other or other live parts require a clearance of 48 inch (1220 mm)
**	Sound attenuator may increase the footprint - submittal should be used.

Dimensions

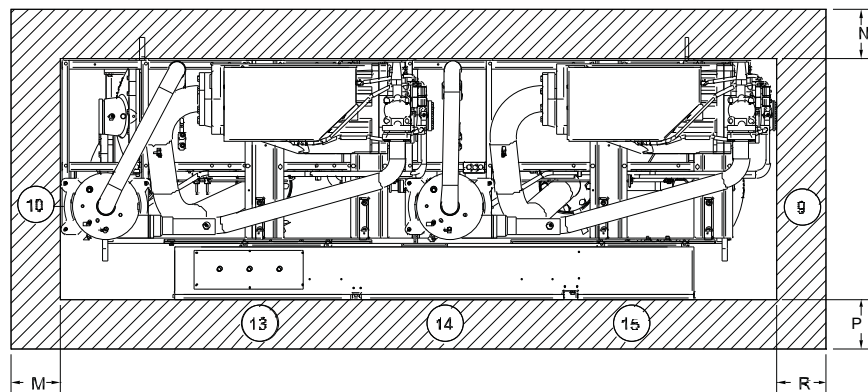
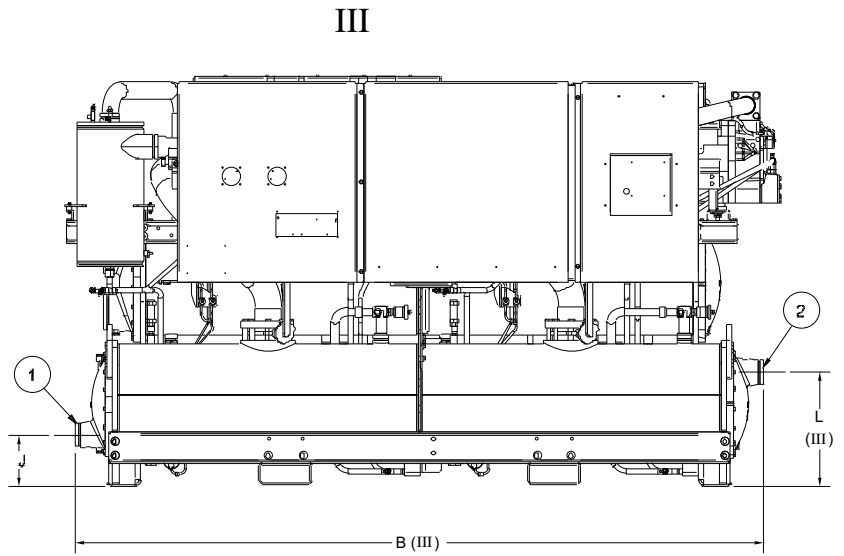
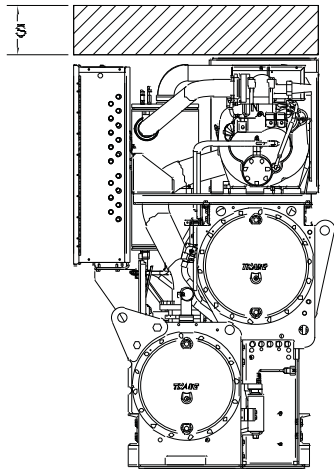
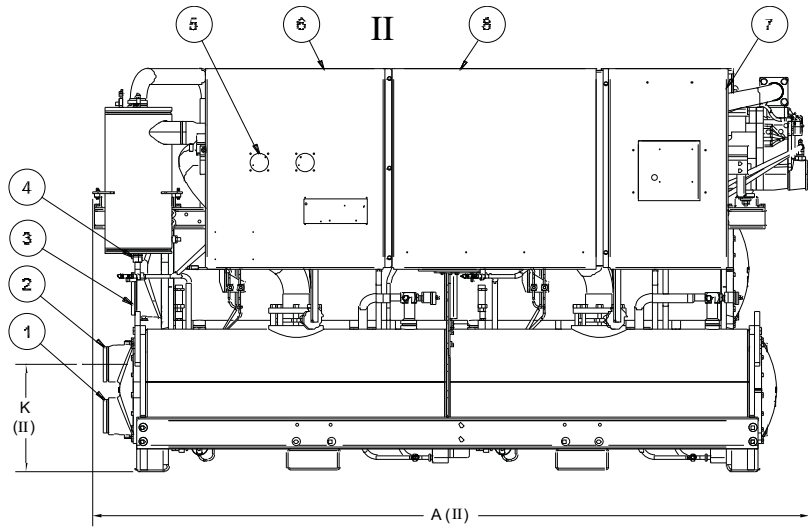
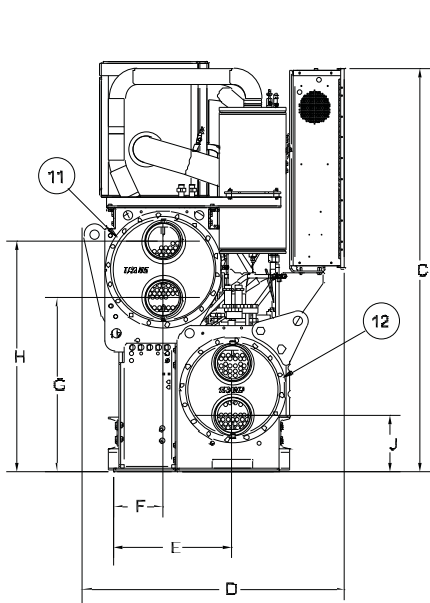


Table 63. RTWD/RTUD – 60 Hz Dimensions – 150-250 tons

	RTWD			RTUD		
	High Efficiency		Prem Efficiency			
	150-200 inch/mm	220, 250 inch/mm	150-200 inch/mm	150 inch/mm	160-200 inch/mm	220,250 inch/mm
A (2 pass evap)	132.9/3376	136.7/3472	147.8/3754	127.0/3225	132.9/3376	136.7/3472
B (3 pass evap)	133.0/3378	136.7/3472	150.8/3831	130.7/3320	133.0/3378	136.7/3472
C	75.6/1920	76.9/1955	76.8/1950	76.9/1955	75.4/1916	75.4/1916
D	49.4/1256	49.9/1267	49.4/1256	39.4/1002	49.5/1258	49.5/1258
E	21.5/547	21.5/547	21.5/547	11.4/290	21.5/547	21.5/547
F	10.5/267	11.2/285	10.4/265			
G	32.7/830	33.1/840	33.8/860			
H	42.4/1078	43.9/1115	43.6/1108			
J (2 pass evap)	10.1/256	10.6/270	10.6/270	10.2/259	10.1/256	10.1/256
J (3 pass evap)	9.5/241	9.7/247	9.7/247	9.7/247	9.5/241	9.5/241
K (2 pass evap)	19.3/490	20.6/524	20.6/524	18.9/479	19.3/490	19.3/490
L (3 pass evap)	19.9/505	21.6/549	21.6/550	19.2/487	19.9/505	19.9/505
M	36.0/914	36.0/914	36.0/914	36.0/914	36.0/914	36.0/914
N	36.0/914	36.0/914	36.0/914	36.0/914	36.0/914	36.0/914
P*	40/1016*	40/1016*	40/1016*	40/1016*	40/1016*	40/1016*
R	114.8/2916	114.8/2916	134.5/3416	114.8/2916	114.8/2916	114.8/2916
S	36.0/914	36.0/914	36.0/914	36.0/914	36.0/914	36.0/914

Reference

1	Evaporator Water Inlet
2	Evaporator Water Outlet
3	Condenser Water Inlet (RTWD only)
4	Condenser Water Outlet (RTWD only)
5	Power Disconnect
6	Power Wire
7	Control Wire
8	Control Panel
9	Condenser Return Waterbox End (RTWD only) - Minimum Clearance (for tube removal)
10	Condenser Supply Waterbox End (RTWD only) - Minimum Clearance (for maintenance)
11	Condenser (RTWD only)
12	Evaporator
13	Panel Power Section [door swing 31.3 inch (796.9 mm)]
14	Panel Power Section [door swing 31.1 inch (790.1 mm)]
15	Panel Control Section [door swing 22.4 inch (568.14 mm)]

II 2 Pass Evaporator Unit

III 3 Pass Evaporator Unit

Control panel clearance is 36 or 40 inch (914 or 1016 mm) depending on voltages, starter type, unit application and local code; 42 inch (1067 mm) clearance required to other grounded parts; two units with panels facing each other or other live parts require a clearance of 48 inch (1220 mm).

Dimensions

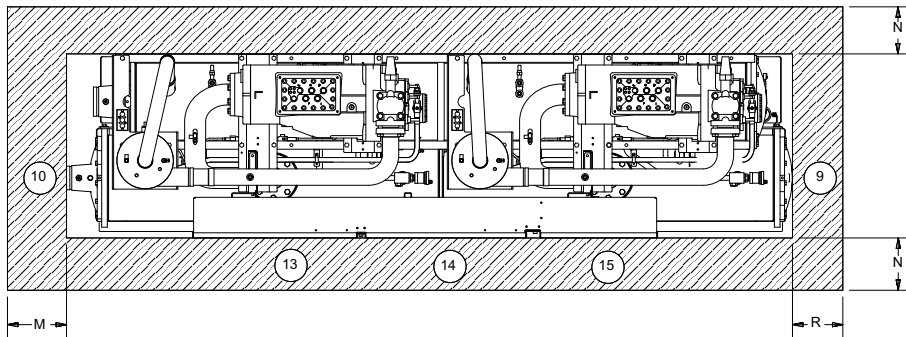
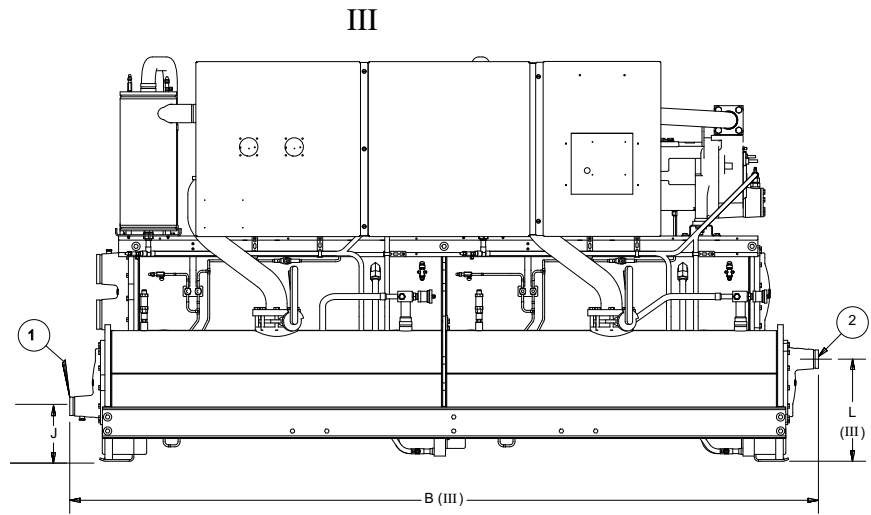
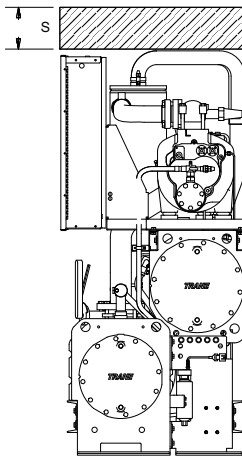
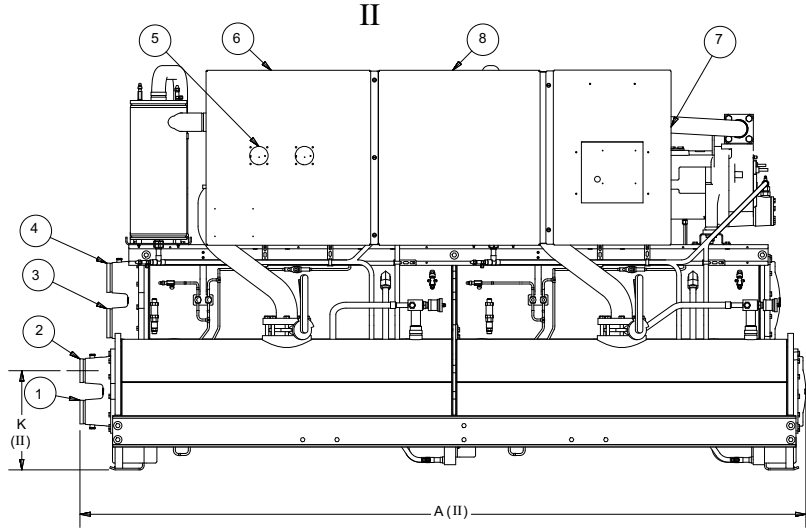
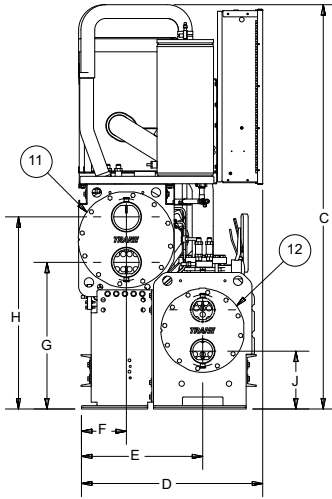


Table 64. RTWD – 50 Hz Dimensions – 70-150 ton SE, 60-120 ton HE

RTWD	Standard Efficiency		High Efficiency	
	70,80,90,100,110 inch/mm	120,130,140,150 inch/mm	60,70,80 inch/mm	90,100,110,120 inch/mm
A (2 pass evap)	138.2/3510	138.8/3525	126.4/3210	127.0/3225
B (3 pass evap)	145.5/3620	145.5/3620	130.7/3320	130.7/3320
C	75.9/1929	76.9/1955	76.1/1933	76.1/1933
D	34.3/871	34.8/884	35.1/890	35.1/890
E	23.6/600	23.6/600	23.6/600	23.6/600
F	9.1/231	9.1/231	9.1/231	9.1/231
G	27.9/709	27.9/709	27.9/709	27.9/709
H	36.6/929	36.6/929	36.6/929	36.6/929
J (2 pass evap)	11.0/280	10.6/268	10.7/273	10.2/259
J (3 pass evap)	10.4/265	10.1/256	10.2/259	9.7/247
K (2 pass evap)	18.9/479	19.2/487	18.6/473	18.9/479
L (3 pass evap)	19.5/495	19.5/496	19.2/487	19.2/487
M	36/914	36/914	36/914	36.0/914
N*	36/914*	36/914*	36/914*	36/914*
R	127/3226	127/3226	115/2921	115/2921
S	36/914	36/914	36/914	36.0/914

Reference	
1	Evaporator Water Inlet
2	Evaporator Water Outlet
3	Condenser Water Inlet
4	Condenser Water Outlet
5	Power Disconnect
6	Power Wire
7	Control Wire
8	Control Panel
9	Condenser Return Waterbox End - Minimum Clearance (for tube removal)
10	Condenser Supply Waterbox End - Minimum Clearance (for maintenance)
11	Condenser
12	Evaporator
13	Panel Power Section [door swing 31.3 inch (796.9 mm)]
14	Panel Power Section [door swing 31.1 inch (790.1 mm)]
15	Panel Control Section [door swing 22.4 inch (568.14 mm)]
II	2 Pass Evaporator Unit
III	3 Pass Evaporator Unit
*	42 inch (1067 mm) clearance required to other ground parts, two units with panels facing each other or other live parts require a clearance of 48 inch (1220 mm)

Dimensions

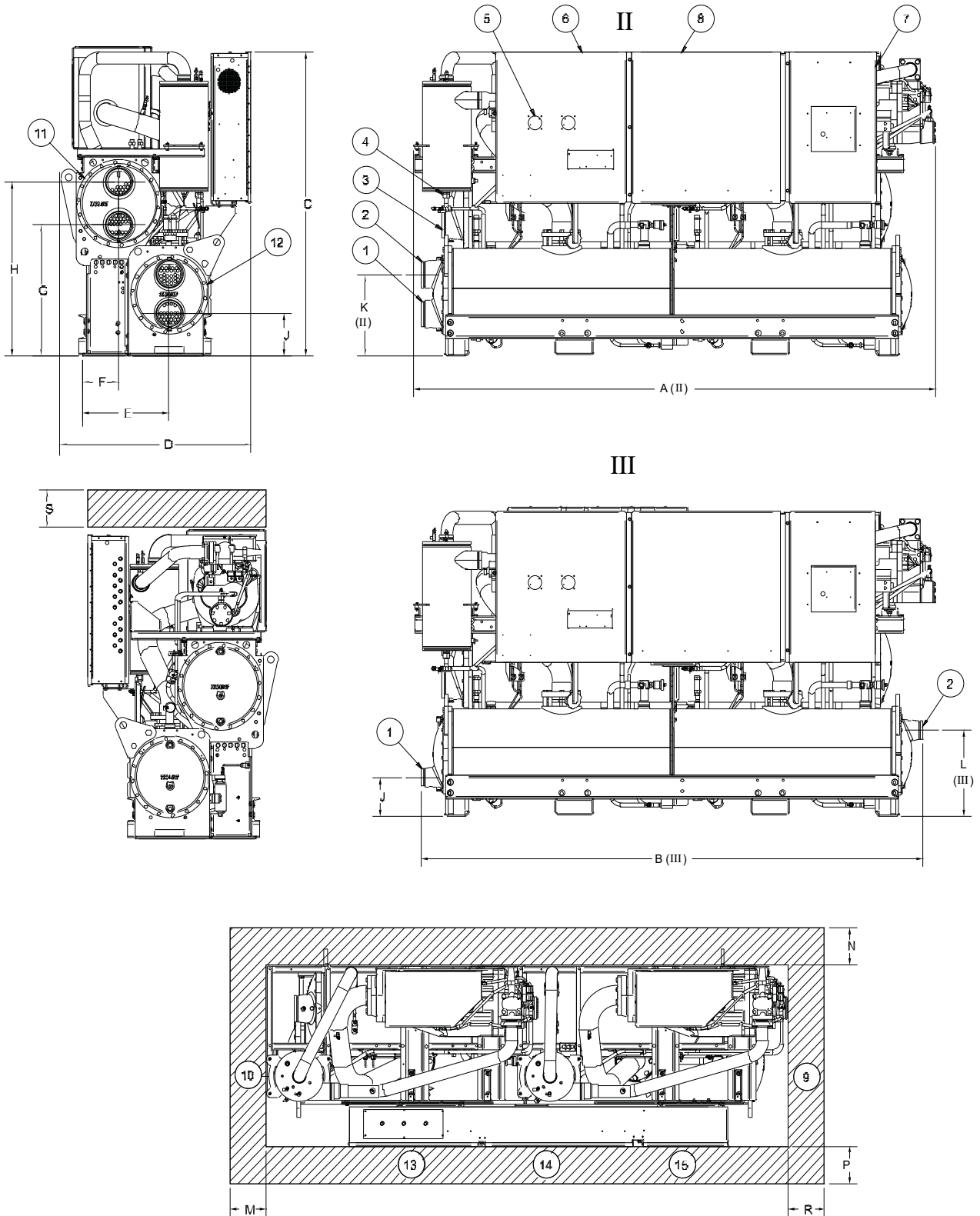


Table 65. RTWD – 50 Hz Dimensions – 130-250 ton HE, 160-200 ton PE

RTWD	High Efficiency			Premium Efficiency	
	130, 140, 160, 180 inch/mm	180 inch/mm	200, 220, 250 inch/mm	160, 180 inch/mm	200 inch/mm
A (2 pass evap)	132.9/3376	136.7/3472	136.7/3472	147.8/3755	136.7/3472
B (3 pass evap)	133.0/3378	136.7/3472	136.7/3472	150.8/3831	136.7/3472
C	75.6/1920	75.6/1920	76.9/1955	76.8/1950	76.9/1955
D	49.4/1256	49.4/1256	49.9/1267	49.4/1256	49.9/1267
E	21.5/547	21.5/547	21.5/547	21.5/547	21.5/547
F	10.4/265	10.4/265	11.2/285	10.5/267	11.2/285
G	32.7/830	32.7/830	33.1/841	33.8/860	33.1/841
H	42.4/1078	42.4/1078	43.9/1115	43.6/1108	43.9/1115
J (2 pass evap)	10.1/256	10.1/256	10.6/270	10.6/270	10.6/270
J (3 pass evap)	9.5/241	9.5/241	9.7/247	9.7/247	9.7/247
K (2 pass evap)	19.3/490	19.3/490	20.6/524	20.6/524	20.6/524
L (3 pass evap)	19.9/505	19.9/505	21.6/550	21.6/550	21.6/550
M	36.0/914	36.0/914	36.0/914	36.0/914	36.0/914
N	36.0/914	36.0/914	36.0/914	36.0/914	36.0/914
P*	40/1016*	40/1016*	40/1016*	40/1016*	40/1016*
R	114.8/2916	114.8/2916	114.8/2916	134.5/3416	134.5/3416
S	36.0/914	36.0/914	36.0/914	36.0/914	36.0/914

Reference

1	Evaporator Water Inlet
2	Evaporator Water Outlet
3	Condenser Water Inlet
4	Condenser Water Outlet
5	Power Disconnect
6	Power Wire
7	Control Wire
8	Control Panel
9	Condenser Return Waterbox End - Minimum Clearance (for tube removal)
10	Condenser Supply Waterbox End - Minimum Clearance (for maintenance)
11	Condenser
12	Evaporator
13	Panel Power Section [door swing 31.3 inch (796.9 mm)]
14	Panel Power Section [door swing 31.1 inch (790.1 mm)]
15	Panel Control Section [door swing 22.4 inch (568.14 mm)]

II 2 Pass Evaporator Unit

III 3 Pass Evaporator Unit

Control panel clearance is 36 or 40 inch (914 or 1016 mm) depending on voltages, starter type, unit application and local code; 42 inch (1067 mm) clearance required to other grounded parts; two units with panels facing each other or other live parts require a clearance of 48 inch (1220 mm).

Dimensions

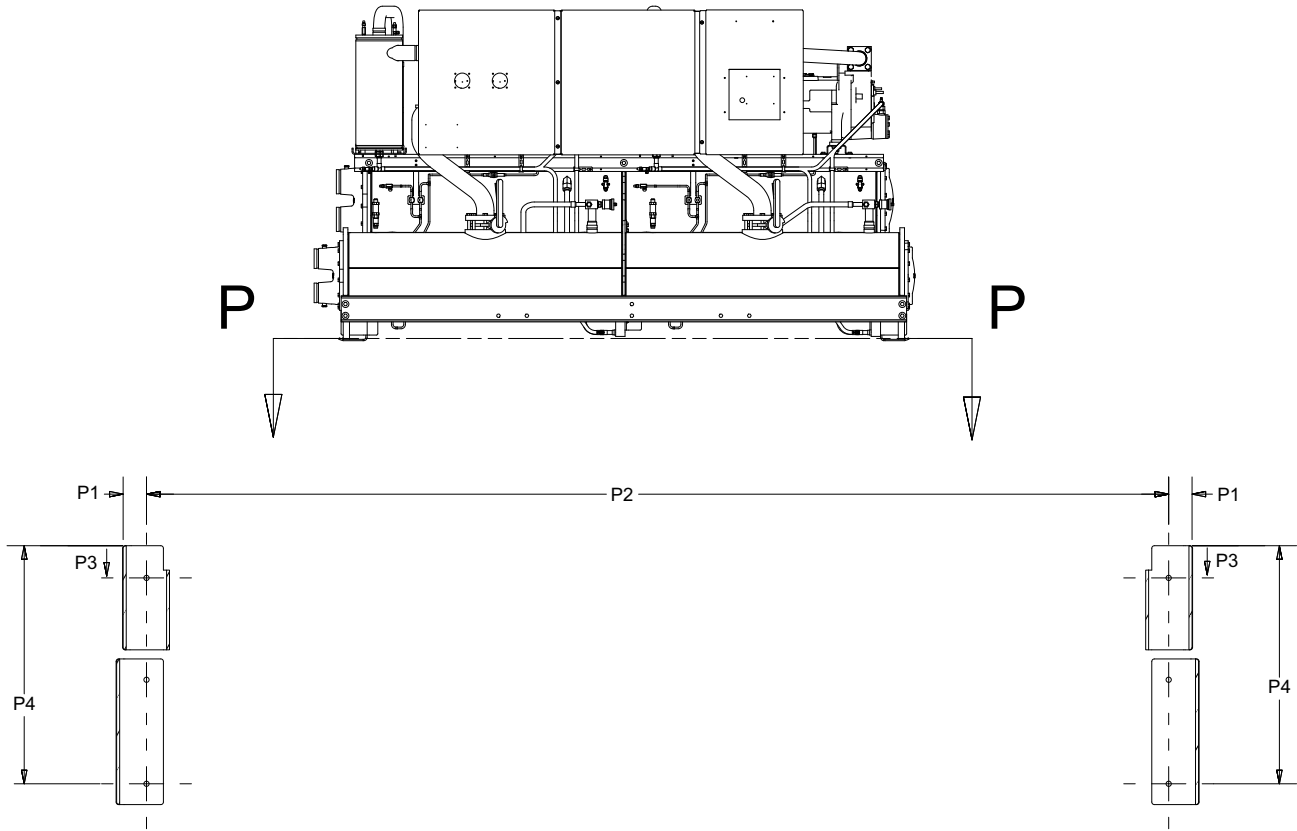


Table 66. RTWD/RTUD – unit footprint – all sizes (RTUD high efficiency only)

	Standard Efficiency 70-150 tons	High Efficiency 70-120 tons 130 (60 Hz)	High Efficiency 140-250 130 HE (50 Hz) 200 PE (50 Hz)	Premium Efficiency 150-180 tons 200 PE (60 Hz)
	inch/mm	inch/mm	inch/mm	inch/mm
P1	2.9/73	2.9/73	2.9/73	2.9/73
P2	123.8/3150	111.9/2845	111.9/2845	131.7/3344
P3	2.4/99	2.4/99	4.3/109	4.3/109
P4	27.4/732	26.5/732	29.2/743	29.2/743

Note: Base hole diameters all 0.63 inch (16 mm).

Table 67. Weights – RTWD – 60 Hz – I-P units

Model	Standard Efficiency		High Efficiency		Premium Efficiency	
	Operating Weight (lbs)	Shipping Weight (lbs)	Operating Weight (lbs)	Shipping Weight (lbs)	Operating Weight (lbs)	Shipping Weight (lbs)
80	5900	5703	5733	5551	N/A	N/A
90	5933	5721	5792	5587	N/A	N/A
100	6140	5902	6255	6025	N/A	N/A
110	6332	6074	6475	6208	N/A	N/A
120	6531	6248	6511	6230	N/A	N/A
130	6535	6243	6544	6248	N/A	N/A
140	6972	6650	N/A	N/A	N/A	N/A
150	N/A	N/A	7895	7555	8735	8254
160	N/A	N/A	8408	8047	9182	8702
180	N/A	N/A	8501	8109	9304	8783
200	N/A	N/A	8589	8168	9348	8814
220	N/A	N/A	9491	8993	N/A	N/A
250	N/A	N/A	10053	9462	N/A	N/A

Note: All weights +/-3%.
Weights include optional base rail fork lifting, subtract 300 lbs if this option is not selected.

Table 68. Weights – RTWD – 60 Hz – SI units

Model	Standard Efficiency		High Efficiency		Premium Efficiency	
	Operating Weight (kg)	Shipping Weight (kg)	Operating Weight (kg)	Shipping Weight (kg)	Operating Weight (kg)	Shipping Weight (kg)
80	2676	2587	2600	2518	N/A	N/A
90	2691	2595	2627	2534	N/A	N/A
100	2785	2677	2837	2733	N/A	N/A
110	2872	2755	2937	2816	N/A	N/A
120	2962	2834	2953	2826	N/A	N/A
130	2964	2832	2968	2834	N/A	N/A
140	3162	3016	N/A	N/A	N/A	N/A
150	N/A	N/A	3581	3427	3962	3744
160	N/A	N/A	3814	3650	4165	3947
180	N/A	N/A	3856	3678	4220	3984
200	N/A	N/A	3896	3705	4240	3998
220	N/A	N/A	4305	4079	N/A	N/A
250	N/A	N/A	4560	4292	N/A	N/A

Note: All weights +/-3%.
Weights include optional base rail fork lifting, subtract 136.1 kg if this option is not selected.

Dimensions

Table 69. Weights - RTUD - 60 Hz

Model	I-P units		SI units	
	Operating Weight (lbs)	Shipping Weight (lbs)	Operating Weight (kg)	Shipping Weight (kg)
80	4850	4339	2200	2118
90	4903	4698	2224	2131
100	5187	4958	2353	2249
110	5393	5126	2446	2325
120	5423	5143	2460	2333
130	5448	5152	2471	2337
150	6845	6506	3105	2951
160	7383	7024	3349	3186
180	7445	7053	3377	3199
200	7500	7079	3402	3211
220	8122	7374	3684	3345
250	8523	7932	3866	3598

Note: All weights +/-3%.

Weights include optional base rail fork lifting, subtract 300 lbs if this option is not selected.

Table 70. Weights – RTWD – 50 Hz – I-P units

Model	Standard Efficiency		High Efficiency		Premium Efficiency	
	Operating Weight (lbs)	Shipping Weight (lbs)	Operating Weight (lbs)	Shipping Weight (lbs)	Operating Weight (lbs)	Shipping Weight (lbs)
60	N/A	N/A	5706	5525	N/A	N/A
70	5874	5677	5724	5534	N/A	N/A
80	6030	5807	5893	5680	N/A	N/A
90	6187	5938	6319	6063	N/A	N/A
100	6268	6010	6412	6145	N/A	N/A
110	6332	6014	6495	6220	N/A	N/A
120	6903	6614	6914	6619	N/A	N/A
130	7337	7016	8188	7848	N/A	N/A
140	7342	7020	8256	7895	N/A	N/A
150	7395	7049	N/A	N/A	N/A	N/A
160	N/A	N/A	8353	7963	9072	8576
180	N/A	N/A	8770	8351	9579	9030
200	N/A	N/A	9740	9242	10042	9451
220	N/A	N/A	9778	9268	N/A	N/A
250	N/A	N/A	9943	9383	N/A	N/A

Note: All weights +/-3%.

Weights include optional base rail fork lifting, subtract 300 lbs if this option is not selected.

Table 71. Weights – RTWD – 50 Hz – SI units

Model	Standard Efficiency		High Efficiency		Premium Efficiency	
	Operating Weight (kg)	Shipping Weight (kg)	Operating Weight (kg)	Shipping Weight (kg)	Operating Weight (kg)	Shipping Weight (kg)
60	N/A	N/A	2588	2506	N/A	N/A
70	2664	2575	2596	2510	N/A	N/A
80	2735	2634	2673	2576	N/A	N/A
90	2806	2693	2866	2750	N/A	N/A
100	2843	2726	2908	2787	N/A	N/A
110	2872	2755	2946	2821	N/A	N/A
120	3131	3000	3136	3002	N/A	N/A
130	3328	3182	3714	3560	N/A	N/A
140	3330	3184	3745	3581	N/A	N/A
150	3354	3197	N/A	N/A	N/A	N/A
160	N/A	N/A	3789	3612	4115	3890
180	N/A	N/A	3979	3788	4345	4096
200	N/A	N/A	4418	4192	4555	4287
220	N/A	N/A	4435	4204	N/A	N/A
250	N/A	N/A	4510	4256	N/A	N/A

Note: All weights +/-3%.

Weights include optional base rail fork lifting, subtract 136.1 kg if this option is not selected.

Dimensions

Figure 5. Trane Air-Cooled Condenser - 80 ton, 150 ton (cond 1 & 2), 160 ton (cond 1 & 2), 180 ton (cond 1)

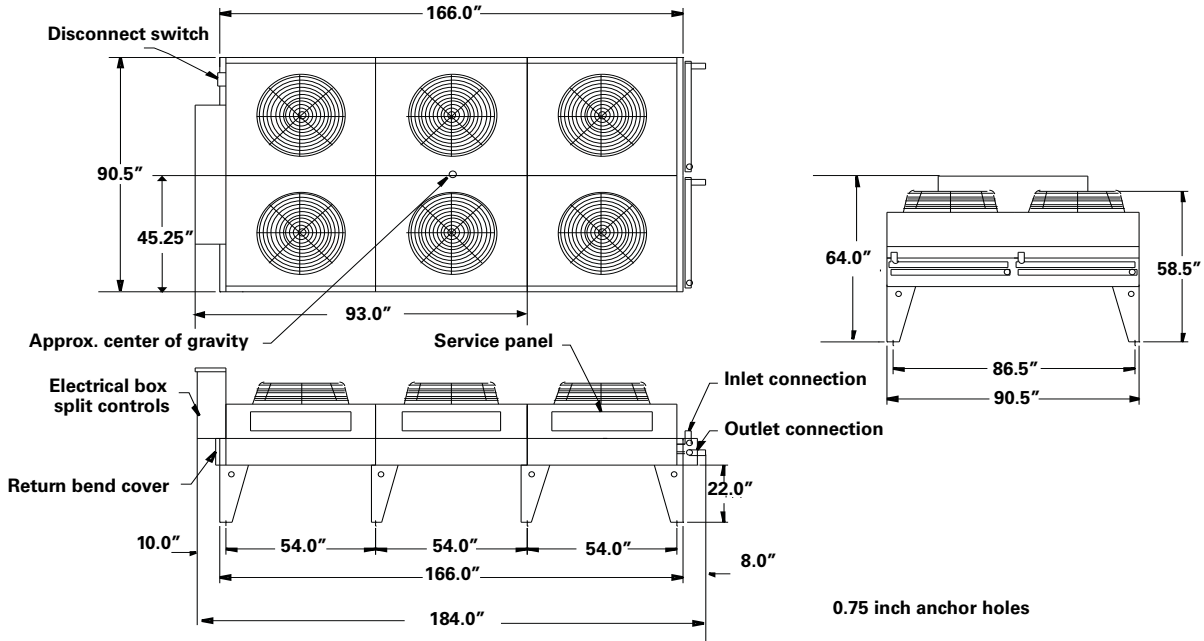


Figure 6. Trane Air-Cooled Condenser - 90 ton, 100 ton, 110 ton, 180 ton (cond 2), 200 ton (cond 1 & 2), 220 ton (cond 1 & 2), 250 ton (cond 1 & 2)

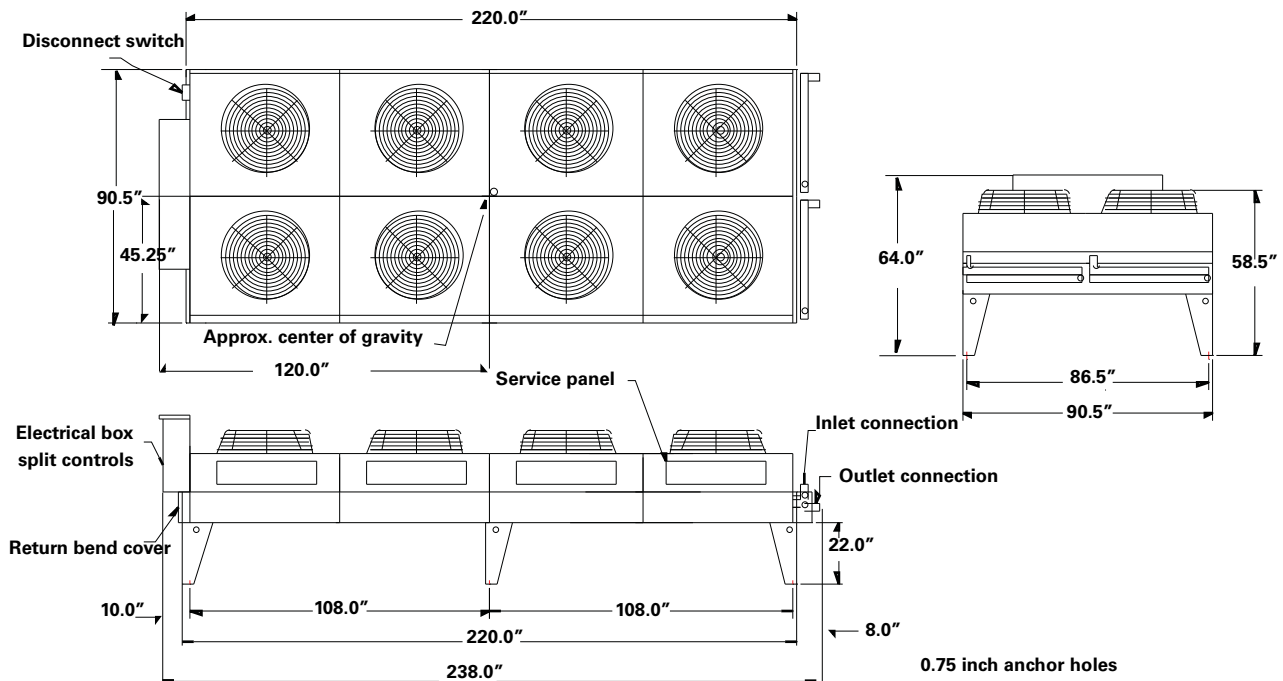
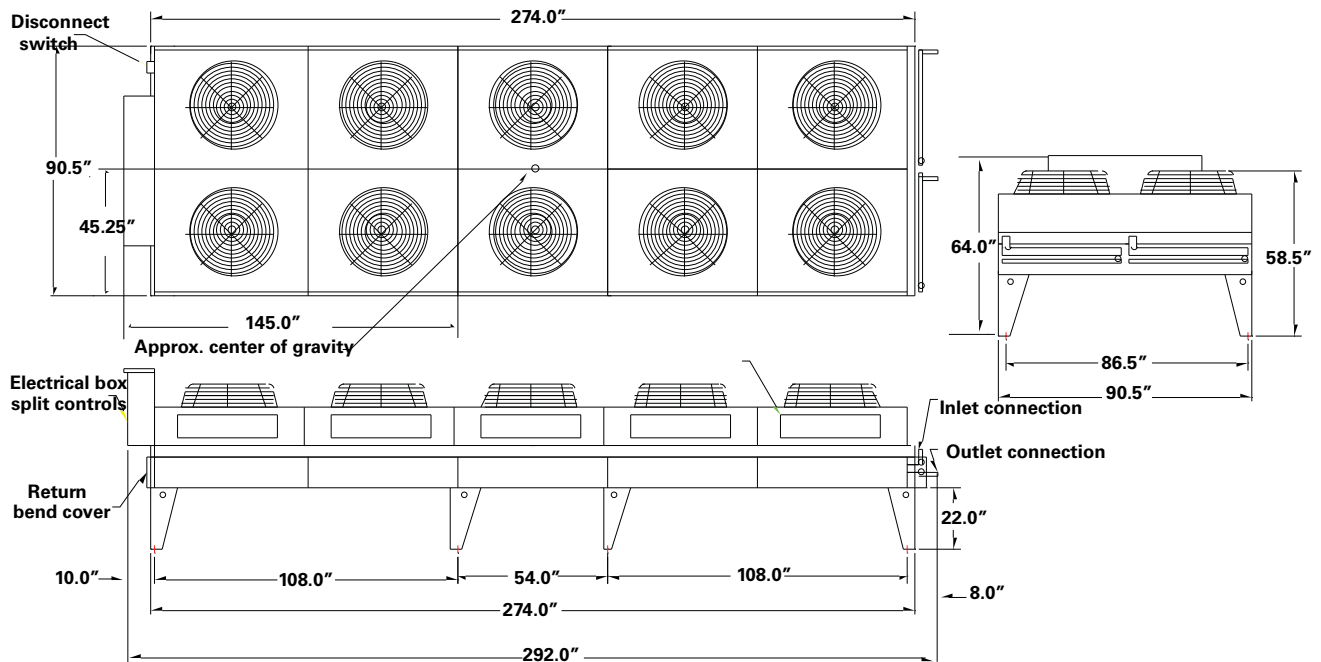


Figure 7. Trane Air-Cooled Condenser - 120 ton, 130 ton

Table 72. Air-Cooled Condenser Weights

RTUD Tonnage	I-P Units	SI Units
	Shipping Weight (lbs)	Shipping Weight (kg)
80	2100	953
90	2651	1202
100	2884	1308
110	2950	1338
120	4005	1817
130	4046	1835
150 (cond 1)	2044	927
150 (cond 2)	2100	953
160 (cond 1)	2100	953
160 (cond 2)	2100	953
180 (cond 1)	2100	953
180 (cond 2)	2526	1146
200 (cond 1)	2526	1146
200 (cond 2)	2526	1146
220 (cond 1)	2526	1146
220 (cond 2)	2884	1308
250 (cond 1)	2884	1308
250 (cond 2)	2884	1308



Mechanical Specifications

General

Exposed metal surfaces are painted with air-dry beige, direct-to-metal, single-component paint. RTWD units ship with full operating charges of refrigerant and oil. RTUD units ship with a full operating charge of oil and a nitrogen holding charge. Molded elastomeric isolation pads are supplied for placement under all support points.

Trane air-cooled condenser structural elements and fan sections are galvanized steel.

Compressor and Motor

The unit is equipped with two semi-hermetic, direct-drive, 3600 rpm 60 Hz (3000 rpm 50 Hz) rotary compressors that include a load/unload valve, rolling element bearings, oil filtration device and heater. The motor is a suction gas-cooled, hermetically sealed, two-pole squirrel cage induction motor. Oil separator device is provided separate from the compressor. Check valves in the compressor discharge and lube oil system and a solenoid valve in the lube system are also provided.

Unit-Mounted Starter

The unit is supplied with a UL 1995 indoor type enclosure with top power-wiring access and three-phase, overload protection. The starter is available in a wye-delta or across-the-line configuration, factory-mounted and fully pre-wired to the compressor motor and control panel. A factory-installed, factory-wired 820 VA control power transformer provides all unit control power (120 Vac secondary) and Trane CH530 module power (24 Vac secondary). Optional starter features include circuit breaker, high fault panel with circuit breaker, or mechanical, non-fused disconnect.

Evaporator

Dual circuited, shell and tube falling film evaporator design is used. Seamless internally finned, copper tubes are mechanically expanded into tube sheets and mechanically fastened to tube supports. Evaporator tubes are 1.0 inch (25.4 mm) diameter on standard efficiency chillers and 0.75 inch (19.05 mm) diameter on high and premium efficiency chillers. All tubes can be individually replaced.

Shells and tube sheets are made of carbon steel. Designed, tested, and stamped in accordance with ASME code. The evaporator is designed for refrigerant-side/working-side pressure of 200 psig (13.8 bars).

All water pass arrangements are available with grooved connections with 150 psig (10.5 bars) waterside working pressure. Waterside shall be hydrostatically tested at 225 psig (15.5 bars).

Condenser (RTWD only)

Dual circuited, shell and tube condenser designed with seamless internally/externally finned tubes expanded into tubesheets and mechanically fastened to tube supports. Condenser tubes are 1.0 inch (25.4 mm) diameter on standard efficiency chillers and 0.75 inch (19.05 mm) diameter on high and premium efficiency chillers. All tubes can be individually replaced.

Shells and tube sheets are made of carbon steel. Designed, tested, and stamped in accordance with ASME code. The condenser is designed for refrigerant-side/working-side pressure of 300 psig (20.7 bars).

Water side has single inlet and outlet piping connection. All water pass arrangements are available with grooved connections with 150 psig (10.5 bars) waterside working pressure. Waterside shall be hydrostatically tested at 225 psig (15.5 bars).

Standard temperature condenser allow for leaving condenser water temperature up to 105°F (40.6°C) and for entering condenser water temperatures up to 95°F (35°C).

Condenser (Trane air-cooled only)

Air-cooled condenser coils have aluminum fins mechanically bonded to internally finned seamless copper tubing. The condenser coil has a subcooling circuit. Condensers are factory proof and leak tested at 400 psig (27.6 bars).

Direct-drive vertical discharge condenser fans are balanced. Three-phased condenser fan motors with permanently lubricated ball bearings and inherent overheat protection in each phase are provided.

Standard ambient units start and operate from 32°F to 125°F (0°C to 52°C).

Refrigerant Circuit

Each unit has two refrigerant circuits, with one rotary screw compressor per circuit. Each refrigerant circuit includes compressor suction and discharge service valves, liquid line shut off valve, removable core filter, charging port and an electronic expansion valve. Modulating compressors and electronic expansion valves provide variable capacity modulation over the entire building load and maintain proper refrigerant flow.

Oil Management

The unit is configured with an oil management system that ensures proper oil circulation throughout the unit. The key components of the system include an oil separator, oil filter and gas pump. An optional oil cooler is installed when the unit is used for high condensing temperature or low evaporator temperature conditions. For example: remote condensers, heat recovery, water-to-water heat pump, ice making and low temperature process applications.

Unit Controls (Trane CH530)

The microprocessor-based control panel is factory-installed and factory-tested. The control system is powered by a pre-wired control power transformer, and will load and unload the chiller through adjustment of the compressor slide valve. Microprocessor-based chilled water reset based on return water is standard.

The Trane CH530 microprocessor automatically acts to prevent unit shutdown due to abnormal operating conditions associated with low evaporator refrigerant temperature, high condensing temperature, and/or motor current overload. If an abnormal operating condition continues and the protective limit is reached, the machine will shut down.

Mechanical Specifications

The panel includes machine protection shutdown requiring *manual reset* for the following conditions:

- Low evaporator refrigerant temperature and pressure
- High condenser refrigerant pressure
- Low oil flow
- Critical sensor or detection circuit faults
- Motor current overload
- High compressor discharge temperature
- Lost communication between modules
- Electrical distribution faults: phase loss, phase imbalance, or phase reversal
- External and local emergency stop
- Starter transition failure

The panel also includes machine protection shutdown with *automatic reset* for the following correctable conditions:

- Momentary power loss
- Under/over voltage
- Loss of evaporator or condenser water flow

When a fault is detected, the control system conducts more than 100 diagnostic checks and displays results. The display will identify the fault, indicate date, time, and operating mode at time of occurrence, and provide type of reset required and a help message.

Clear Language Display Panel

Factory-mounted to the control panel door, the operator interface has an LCD touch-screen display for operator input and information output. This interface provides access to the following information: evaporator report, condenser report, compressor report, ASHRAE Guideline 3 report, operator settings, service settings, service tests, and diagnostics. All diagnostics and messages are displayed in clear un-coded language.

Data contained in available reports includes:

- Water and air temperatures
- Refrigerant levels and temperatures
- Oil pressure
- Flow switch status
- EXV position
- Head pressure control command
- Compressor starts and run-time
- Line phase percent RLA, amps, and volts

All necessary settings and setpoints are programmed into the microprocessor-based controller via the operator interface. The controller is capable of receiving signals simultaneously from a variety of control sources, in any combination, and priority order of control sources can be programmed. The control source with priority determines active setpoints via the signal it sends to the control panel. Control sources may be:

- Local operator interface (standard)
- Time of day scheduling (optional capability available from local operator interface)
- Hard-wired 4-20 mA or 2-10 Vdc signal from an external source (interface optional; control source not supplied)
- LonTalk™ LCI-C (interface optional; control source not supplied)
- Trane Tracer Summit™ system (interface optional; control source not supplied)

Quality Assurance

The quality management system applied by Trane has been subject to independent third-party assessment and approval to ISO 9001. The products described in this catalog are designed, manufactured and tested in accordance with the approved system requirements described in the Trane Quality Manual.

Options

Base Rail Forklifting

Channels built into the base frame allow for easy movement using a forklift

Dual Relief Valve

Unit comes with dual relief valves on both the high pressure side and low pressure side of each refrigerant circuit. Each dual relief valve configuration includes an isolation valve. Single relief valves are standard.

Flanged Water Connection Kit

Kit to convert all four water connections (RTWD units) or two water connections (RTUD units) from grooved pipe to flanged connections. This includes: grooved couplings, pipe offsets, and grooved to flange adapters.

Factory Installed Flow Switches

Factory installed IMF effector flow switches for the evaporator and/or condenser.

High-Temperature Condenser

Optimized compressors, oil cooler and high condenser temperature control panel allows for leaving condenser water temperatures up to 140°F (60°C). This option is required for entering condenser water temperatures above 95°F (35°C).

Insulation

The evaporator, water boxes, and motor housing are covered with factory installed 0.75 inch (19.05 mm) insulation. Factory installed foam insulation is used on the suction line, liquid level sensor, oil return system assembly (with its associated piping).

Insulation for High Humidity

The evaporator and water boxes are covered with factory installed 1.5 inch (38.1 mm) insulation. Factory installed foam insulation is used on the motor housing, suction line, liquid level sensor, and oil return system assembly (with its associated piping).

Isolators

Molded elastomeric isolators ship with the unit.

Low-Temperature Evaporator

Optimized compressors and oil cooler enable evaporator operation down to minimum leaving water temperature of 10°F (-12.2°C).

Nitrogen Charge

Unit is shipped with a nitrogen holding charge in lieu of refrigerant (standard for RTUD).

Performance Tests

Performance tests are available to certify chiller performance before shipment.

Two-Way Condenser Water Regulating Valve (RTWD only)

For water regulation, a field-installed, 2-way butterfly-type (lug-style) valve, with integral electrical operator and factory-mounted valve actuator, is available. The single-phase, dual frequency 50 or 60 Hz, motor can be selected with 115 V (can be powered directly from control power transformer at unit) or 220 V power. The 2-way valve is field-wired and controlled by the chiller regulating valve control output. Valves are available in 3 and 4 inch (88.9 mm and 114.3 mm) sizes.

Seismic Rating

The unit will be seismically rated.

Water-to-Water Heat Pump

Optimized compressors, oil cooler and high condenser temperature control panel allows for leaving condenser water temperatures up to 140°F (60°C). This option allows for entering condenser water temperatures above 95°F (35°C). Condenser leaving water temperature control option is required; the setpoint range is 80°F (26.7°C) to 140°F (60°C).

Electrical Options:**Across-the-Line Starter**

Across-the-line starter is unit mounted with a UL 1995 gasketed enclosure.

Wye-Delta Starter

This option provides a reduced-inrush, unit mounted starter with a UL 1995 gasketed enclosure. Wye-delta starters are standard with 200–230 V machines.

Circuit Breaker

A molded case standard interrupting capacity circuit breaker, factory pre-wired with terminal block power connections and equipped with a lockable external operator handle, is available to disconnect the chiller from main power.

High Fault Rated Control Panel with Circuit Breaker

A molded case circuit breaker, factory pre-wired with terminal block power connections and equipped with a lockable external operator handle, is available to disconnect the chiller from main power. The control panel has a higher short circuit rating as determined by UL 508.

Non-Fused Disconnect

A non-fused molded case disconnect switch, factory pre-wired with terminal block power connections and equipped with a lockable external operator handle, is available to disconnect the chiller from main power.

Dual Point Power Connection

Unit is available with either dual or single point power connections.

Under/Over-Voltage Protection

Unit receives protection against variations in voltage (current lag and spike protection is standard).

Control Options:**A/C Fan Control (RTUD only)**

Fan controls are integral to the chiller panel and shall manage the appropriate relays and variable speed fan outputs to control the differential pressure.

BACnet Interface

BACnet communications capabilities are available, with communication link via single twisted-pair wiring to communication board.

Chilled Water Reset – Outdoor Air Temperature

Controls, sensors, and safeties allow reset of chilled water temperature, based on temperature signal, during periods of low outdoor air temperature (chilled water reset based on return chilled water temperature is standard). Standard for RTUD units.

Condenser Leaving Water Temperature Control (RTWD only)

Enables the unit to use the leaving condenser water temperature to load and unload the chiller relative to the leaving condenser water setpoint. The control system allows for a condenser leaving temperature range of 80°F (26.7°C) to 140°F (60°C) with a water to water heat pump.

Condenser Differential Pressure Output (RTWD only)

Provides a 2–10 Vdc signal based on the system refrigerant differential pressure and time at the differential with customer defined endpoints.

Condenser Pressure (%HPC) Output (RTWD only)

Provides a 2–10 Vdc output that is a function of percent high pressure cutout for condenser pressure. The percent high pressure cutout for condenser pressure indication output is based on the condenser refrigerant pressure transducer(s).

Condenser Water Control Output (RTWD only)

Provides a highly configured signal designed to control a condenser water regulating valve.

External Chilled Water or Hot Water Setpoint

External chilled or hot water setpoint signal can be field wired to a factory-installed, tested interface board through a 2–10 Vdc or 4–20 mA signal.

External Current-Limiting

External current-limit setpoint is communicated to a factory-installed, tested communication board through a 2–10 Vdc or 4–20 mA signal.

LonTalk/Tracer Summit Interface

LonTalk (LCI-C) or Tracer Summit communications capabilities are available, with communication link via single twisted-pair wiring to factory-installed, tested communication board.

Low Ambient Fan Control - Two Speed (RTUD only)

The fan control shall provide for the first fan to be a two speed fan and the microprocessor can be programmed to control the low and high speed of that fan.

Low Ambient Fan Control - Variable Speed (RTUD only)

The fan control shall operate a fixed speed fan or a single inverter driven fan and the controls include the enabling and speed command signals to the variable speed inverter.

Motor Current Analog Output

Control system indicates the active chiller percent of full run load amps, based on a 0–10 Vdc.

Power Meter

Tracks energy consumption (compressors only) with kWh meter.

Programmable Relays

Predefined, factory-installed, programmable relays allow the operator to select four relay outputs. Available outputs are: Alarm-Latching, Alarm-Auto Reset, General Alarm, Warning, Chiller Limit Mode, Compressor Running, Head Pressure Relief Request, and Tracer Control.

Time of Day Scheduling

Time of day scheduling capabilities are available for scheduling single chiller applications through Trane CH530 panel (without the need for building automation system-BAS). This feature allows the user to set up to 10 events in a 7 day time period.

Trane Air-Cooled Remote Condenser Options (RTUD only)**Low Ambient**

Allows the condenser to start and operate down to 14°F and up to 125°F (-10°C-52°C).

Condenser Voltage

Voltages available 208-230, 460, and 575.

CompleteCoat Condenser Coil

Allows for the operation in coastal environments. This option includes condenser coil box coating that resists bi-metallic corrosion.



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For more information, contact your local Trane office or e-mail us at comfort@trane.com

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Trane has a policy of continuous product and product data improvement and reserves the right to change design and specifications without notice. Only qualified technicians should perform the installation and servicing of equipment referred to in this literature.