

Dimensions

Figure 5. RTWD/RTUD, 150 to 250 tons, 60 Hz

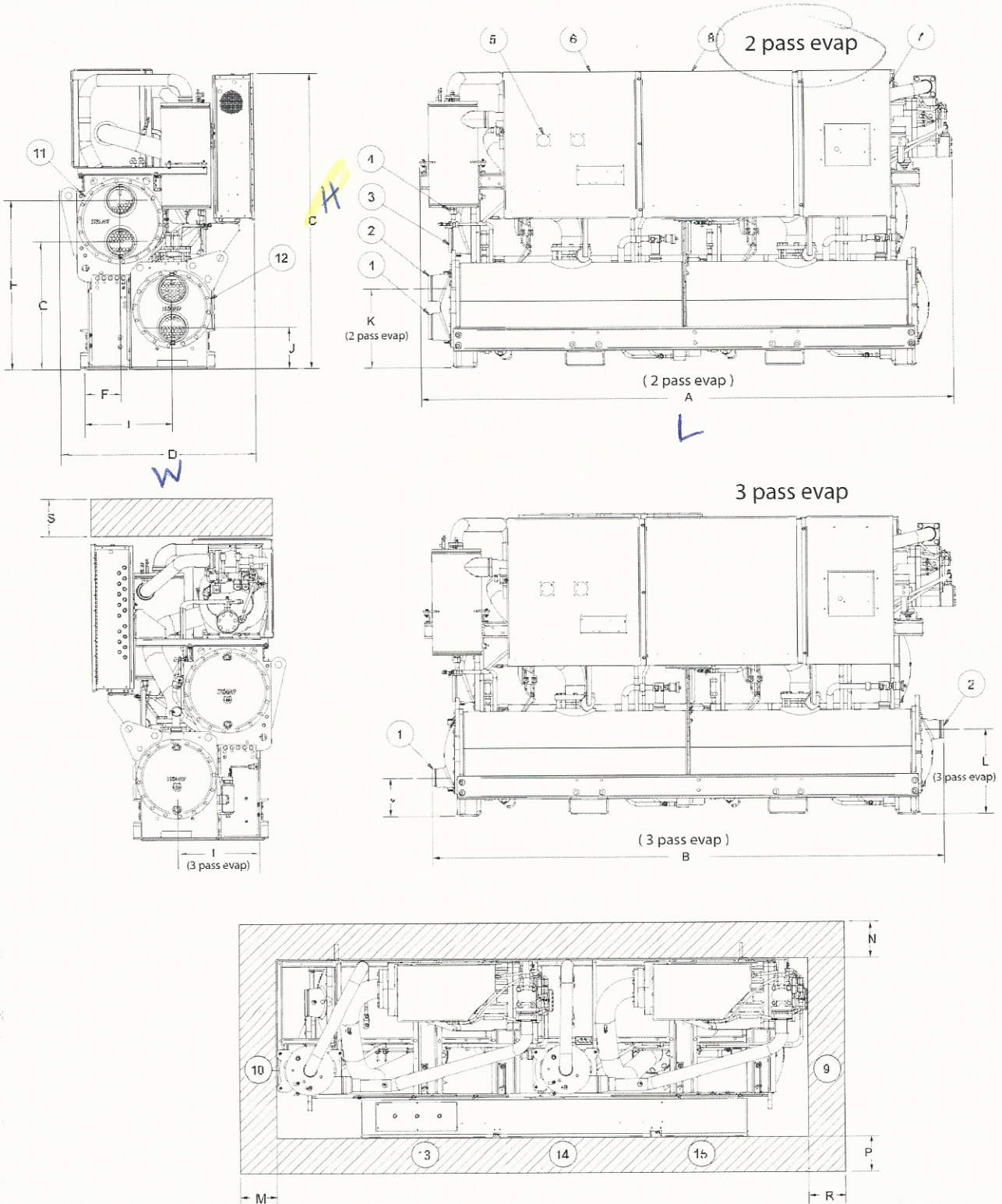


Table 43. RTWD/RTUD, 150 to 250 tons, 60 Hz – in (mm)

	RTWD			RTUD		
	High Efficiency		Prem Efficiency	High Efficiency		
	150-200T	220, 250T	150-200T	150T	160-200T	220,250Y
L A (2 pass evap)	132.3 (3360)	136.1 (3456)	147.9 (3755)	126.9 (3225)	132.3 (3360)	132.3 (3360)
B (3 pass evap)	132.8 (3371)	136.1 (3456)	150.9 (3831)	130.8 (3321)	132.8 (3371)	132.9 (3376)
H C	75.6 (1920)	76.9 (1955)	76.8 (1950)	76.9 (1955)	75.6 (1920)	76.7 (1949)
W D	47.3 (1202)	47.8 (1213)	47.3 (1202)	37.9 (962)	47.4 (1203)	47.4 (1203)
E	24.6 (624)	24.8 (630)	24.6 (624)	23.5 (599)	24.5 (624)	24.6 (624)
F	11.1 (282)	11.2 (295)	11.1 (282)	-	-	-
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)	11.3 (263)
J (3 pass evap)	9.5 (241)	9.7 (247)	9.7 (247)	9.8/247	9.5 (241)	8.8 (223)
K (2 pass evap)	19.3 (490)	20.6 (524)	20.6 (524)	18.9/479	19.3 (490)	19.9 (483)
L (3 pass evap)	19.9 (505)	21.6 (549)	21.6 (549)	19.8/501	19.9 (505)	20.7 (526)
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)
- 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).
- *
** Sound attenuator may increase the footprint - submittal should be used.

RTUD

Table 47. Weights – RTUD, 60 Hz

Model	Operating		Shipping	
	lb	kg	lb	kg
80	4874	2211	4793	2174
90	4892	2219	4804	2179
100	5073	2301	4974	2256
110	5326	2416	5221	2368
120	5322	2414	5194	2356
130	5322	2414	5194	2356
150	5917	2684	5781	2622
160	6804	3086	6643	3013
180	6876	3119	6715	3046
200	6980	3166	6810	3089
220	7300	3311	7112	3226
250	7602	3448	7401	3357

Note: Weights include optional base rail fork lifting, subtract 300 lbs (136.1 kg) if this option is not selected.

Air-Cooled Condenser

Table 48. Air-cooled condenser shipping weights

RTUD Size	Condenser 1		Condenser 2	
	lb	kg	lb	kg
80	2100	953	-	-
90	2651	1202	-	-
100	2884	1308	-	-
110	2950	1338	-	-
120	4005	1817	-	-
130	4046	1835	-	-
150	2044	927	2100	953
160	2100	953	2100	953
180	2100	953	2526	1146
200	2526	1146	2526	1146
220	2526	1146	2884	1308
250	2884	1308	2884	1308



General Data

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.



Model Number Descriptions

Digits 1-4 – Chiller Model

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

Digits 5-7 – 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 Ton
- 200 = 200 Nominal Tons
- 220 = 220 Nominal Tons
- 250 = 250 Nominal Tons

Digit 8 – Unit Voltage

- A = 200/60/3
- B = 230/60/3
- D = 380/60/3
- F = 460/60/3
- G = 575/60/3

Digit 9 – Manufacturing Plant

- 2 = Pueblo, USA

Digits 10, 11 – Design Sequence

** = Factory Assigned

Digit 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
- D = IBC Seismically Rated Unit
- E = UL/Canadian and IBC
- F = OSHPD Seismically Rated Unit
- G = UL/Canadian and OSHPD

Digit 14 – Pressure Vessel Code

- 1 = ASME Pressure Vessel Code
- 3 = Chinese Code 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 Temp
- 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 - Standard
- C = Grooved Pipe - Condenser Marine

Digit 18 – Evaporator Tubes

- A = Internal and External Enhanced Evap Tube

Digit 19 – Evaporator Passes

- 2 = 2-Pass Evaporator
- 3 = 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
- 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 = DynaView™/English
- B = DynaView/Spanish
- C = DynaView/Spanish-Mexico
- D = DynaView/French
- E = DynaView/German
- F = DynaView/Dutch
- G = DynaView/Italian
- H = DynaView/Japanese
- J = DynaView/Portuguese-Portugal
- K = DynaView/Portuguese-Brazil
- L = DynaView/Korean
- M = DynaView/Thai
- N = DynaView/Simplified Chinese
- P = DynaView/Traditional Chinese
- R = DynaView/Russian
- T = DynaView/Polish
- U = DynaView/Czech
- V = DynaView/Hungarian
- W = DynaView/Greek
- X = DynaView/Romanian
- Y = DynaView/Swedish

Digit 29 – Remote Interface (Digital Comm)

- 0 = No Remote Digital Comm
- 1 = LonTalk®/Tracer™ Summit Interface
- 2 = Time of Day Scheduling
- 4 = BACnet® Interface

Digit 30 – External Water and Current Limit Setpoint

- 0 = No External Water and Current Limit Setpoint
- A = External Water and Current Limit Setpoint 4-20 mA
- B = External Water and 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 Relay
- A = Programmable Relay

Digit 33 – Condenser Refrigerant Pressure Output

- 0 = No Condenser Refrigerant Output
- 1 = Condenser Water Control Output
- 3 = Differential Pressure Output

Digit 34 – Outdoor Air Temp Sensor

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



Model Number Descriptions

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 39 – Low Ambient Fan Control

- 0 = No Low Ambient Fan Control (RTWD)
- 1 = Two Speed Fans
- 2 = Variable Speed Fan with Analog Interface
- 3 = Variable Speed Fan with PWM Interface

Digit 40 – Installation Accessories

- 0 = No Installation Accessories
- A = Elastomeric Isolators
- B = Flanged Water Connection Kit
- C = Isolators and 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
- 7 = Factory Installed Proof of Flow (Evap/Cond)
- 8 = Factor Installed Proof of Flow (Evap)

Digit 42 – 2-Way Water Regulating Valve

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

Digit 43 – Sound Reduction Package

- 0 = No Sound Reduction Package
- A = Sound Reduction - Factory Installed

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 (R-134a)
- 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

Digits 49-55

- 0 = Not Used

Digit 56 – Shipping Package

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

Digit 59 – Performance Test

- 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
- G = Witness 1-Point Test with Report Rapid Restart
- H = Witness 2-Point Test with Report
- J = Witness 3-Point Test with Report
- K = Witness 4-Point Test with Report
- K = Witness 4-Point Test with Report Rapid Restart

Digit 60 – Evaporator Fluid Type

- 0 = Water
- 1 = Calcium Chloride
- 2 = Ethylene Glycol
- 3 = Propylene Glycol
- 4 = Methanol

Digit 61 – Condenser Fluid Type

- 0 = Water
- A = Calcium Chloride
- B = Ethylene Glycol
- C = Propylene Glycol
- D = Methanol
- E = Air-Cooled Condenser