Model #: RTWD100F2A02A1A1AA1A1A1Y1A1A100A1000000B0C0100D0
Serial #: U09D033985

TRANE

L:10' 7"
W: 2' 11"
H: 6' 5"

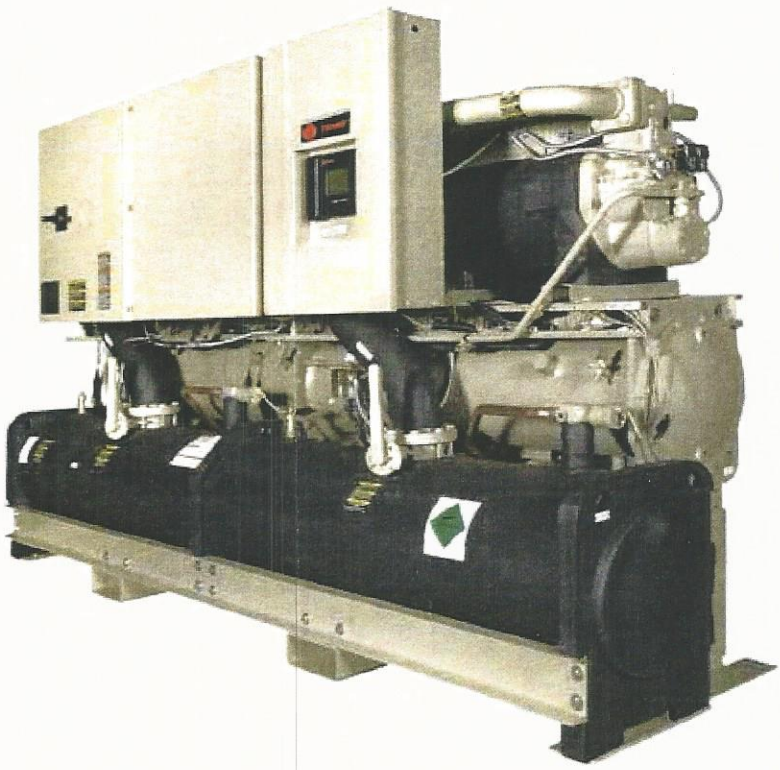
Shipping Weight: 6,025
Operating Weight: 6,255

Product Catalog

Series R™ Helical Rotary Liquid Chillers

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

Made in USA



February 2010

RLC-PRC029-EN

TRANE

RTWD100F2A02A1A1AA1A1A1Y1A1A100A1000000B0C0100D0

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

Dimensions

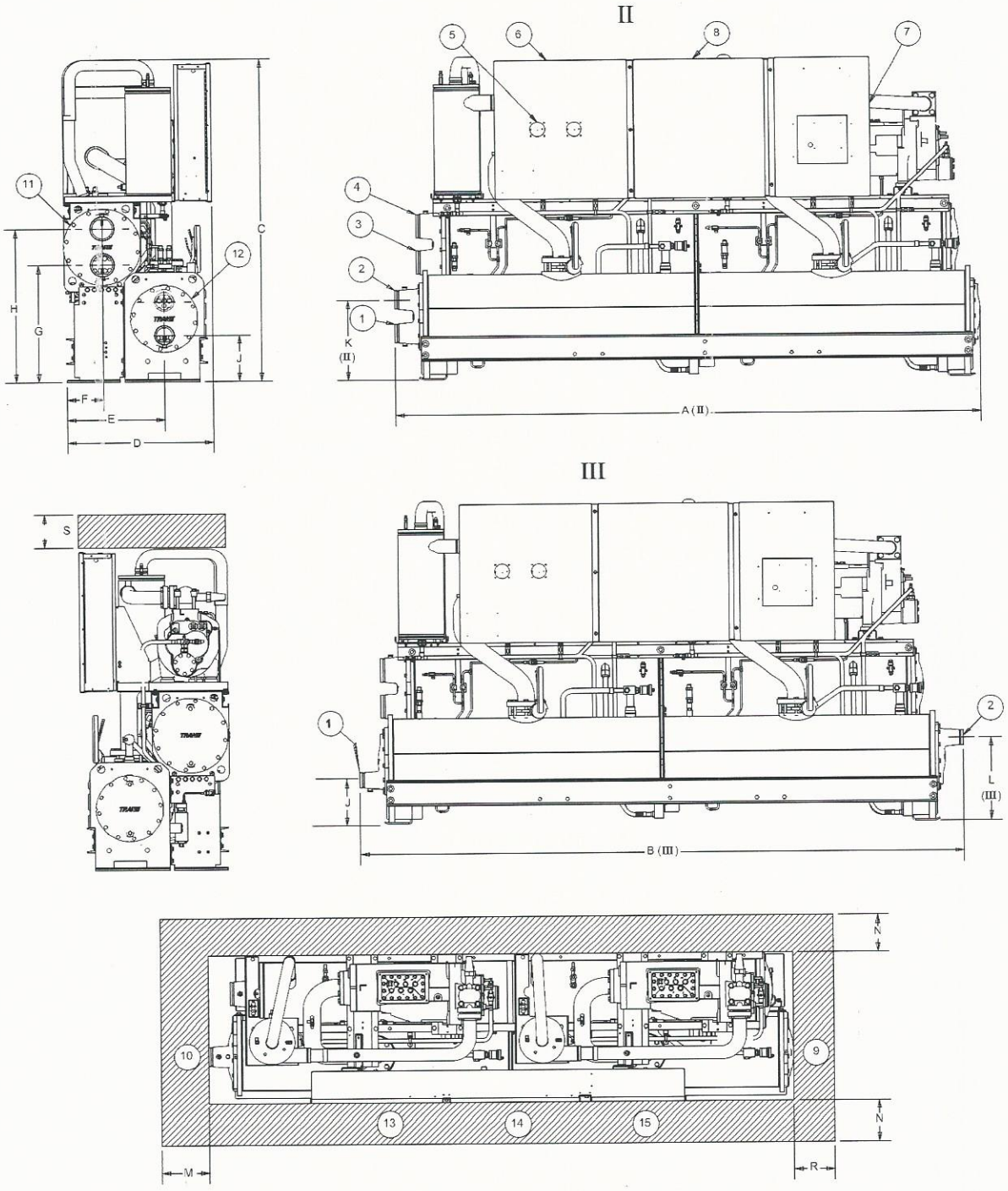


Table 62. RTWD/RTUD – 60 Hz Dimensions – 80-140 ton

	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.

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.