



Model #: RTHDUDIFXHOUAG2A4LALG2A2RALAVXQAEXAAXXY315ALXAXX XXXDX
Serial #: U08B00125

Year: 2008
Size: 400 Tons

Series R™ Helical Rotary Liquid Chillers

Model RTHD
175-450 Tons (60 Hz)
125-450 Tons (50 Hz)

Built for Industrial and Commercial Applications



Shipping Weight: 19,107 lbs
Operating Weight: 21,065 lbs

L: 10' 6"
W: 5' 10"
H: 6' 6"



Model Nomenclature

RTH D U D 1 F X H O U A G 3 A 4 L A L G 2 A 2 R A L

RTH D U D 2 F 0 A0 U A G 3 A 4 L A L G 3 F 2 L A L
1,2,3 4 5 6 7 8 9 10,11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

Digits 01, 02, 03 – Series R™

RTH = Series R

Digit 04 – Dev Sequence

D = 4th Major Development

Digit 05 – Design Control

U = WCBU

Digit 06 – Compressor Frame

B = B Compressor
C = C Compressor
D = D Compressor
E = E Compressor

Digit 07 – Compressor Capacity

1 = Smaller Capacity for Frame
2 = Larger Capacity for Frame
3 = 50Hz Capacity

Digit 08 – Unit Power Supply

A = 200V/60Hz/3Ph power
C = 230V/60Hz/3Ph power
D = 380V/60Hz/3Ph power
R = 380V/50Hz/3Ph power
T = 400V/50Hz/3Ph power
U = 415V/50Hz/3Ph power
F = 460V/60Hz/3Ph power
H = 575V/60Hz/3Ph power

Digit 09 – Specials

X = No specials

C = All specials denoted by digits elsewhere
S = Uncategorized special not denoted by other digits

Digits 10, 11 – Design Sequence

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

Digit 12 – Agency Listing

X = No agency listing
U = C/UL

Digit 13 – Pressure Vessel Code

A = ASME
L = Chinese Pressure Vessel Code

Digit 14 – Evaporator Frame

B = B Frame
C = C Frame
D = D Frame
E = E Frame
F = F Frame
G = G Frame

Digit 15 – Evaporator Capacity

1 = Tube count #1
2 = Tube count #2
3 = Tube count #3
4 = Tube count #4
5 = Tube count #5
6 = Tube count #6

Digit 16 – Evaporator Tube Type

A = Enhanced Fin Copper

Digit 17 – Evaporator Water Pass Configuration

2 = 2 pass
3 = 3 pass
4 = 4 pass

Digit 18 – Evaporator Water Connection

L = Left Hand Evaporator Connection
R = Right Hand Evaporator Connection

Digit 19 – Evaporator Connection Type

A = Standard Grooved Pipe

Digit 20 – Evaporator Waterside Pressure

L = 150 psi
H = 300 psi

Digit 21 – Condenser

B = B Frame
D = D Frame
E = E Frame
F = F Frame
G = G Frame

Digit 22 – Condenser Capacity

1 = Tube count #1
2 = Tube count #2
3 = Tube count #3
4 = Tube count #4
5 = Tube count #5

Digit 23 – Condenser Tube Type

A = Enhanced Fin Copper
B = Smooth Bore Copper
C = Smooth Bore 90/10 CU/NI

Digit 24 – Condenser Passes

2 = 2 Pass

Digit 25 – Condenser Water Connection

L = Left Hand Connection
R = Right Hand Connection

Digit 26 – Condenser Connection Type

A = Standard Grooved Pipe
C = Marine

Digit 27 – Condenser Waterside Pressure

L = 150 psi
H = 300 psi

AVXQAEXAAXXY315ALXAXXXXXDX

Model Nomenclature

A V X Q X E X A A B D Y 444 D A X A 4 X X X R X V X
 28 29 30 31 32 33 34 35 36 37 38 39 40,41,42 43 44 45 46 47 48 49 50 51 52 53 54

Digit 28 – Condenser Leaving Water Temperature
A = Standard

Digit 29 – Refrigerant Specialties
 X = No Refrigerant Isolation Valves
V = With Refrigerant Isolation Valves

Digit 30 – Oil Cooler
X = Without Oil Cooler
 C = With Oil Cooler

Digit 31 – Thermal Insulation
 X = No Insulation
Q = Factory Installed Insulation

Digit 32 – Acoustic Insulation
 X = No Insulation
A = Standard Insulation

Digit 33 – Label and Literature Language
 C = Spanish
E = English
 F = French

Digit 34 – Safety Devices
X = Standard

Digit 35 – Factory Charge
A = Factory Refrigerant Charge (134a)
 B = Factory Nitrogen Charge

Digit 36 – Shipping Package
A = No Skid (standard)
 B = Shrink Wrap
 C = Skid
 D = Skid + Shrink Wrap
 J = Special

Digit 37 – Flow Switch
X = No Flow Switch
 A = Evaporator (NEMA 1)
 B = Evaporator and Condenser (NEMA 1)
 C = Evaporator (NEMA 4)
 D = Evaporator and Condenser (NEMA 4)

Digit 38 – Factory Test
X = Standard Test
 C = Witness Test
 D = Performance Test

Digit 39 – Starter Type
 Y = Wye Delta Closed Transition Starter
 A = Solid State Starter

Digits 40, 41, 42 – Design RLA (for starter)
 *** = Selection Assigned

Digit 43 – Power Line Connection Type
A = Terminal Blocks
 B = Mechanical Disconnect Switch
 D = Circuit Breaker
 F = High Interrupt Circuit Breaker
 H = Ground Fault Circuit Breaker
 J = Ground Fault High Interrupt Circuit Breaker

Digit 44 – Enclosure Type
A = NEMA 1

Digit 45 – Under/Over Voltage Protection
X = None
 U = With Under/Over Voltage Protection

Digit 46 – Operator Interface Language
A = Dyna-View/English
 B = Dyna-View/French
 C = Dyna-View/Italian
 D = Dyna-View/Spanish
 E = Dyna-View/German
 F = Dyna-View/Dutch
 G = Dyna-View/Traditional Chinese
 H = Dyna-View/Simple Chinese
 J = Dyna-View/Japanese
 K = Dyna-View/Portuguese
 L = Dyna-View/Korean
 M = Dyna-View/Thai

Digit 47 – Digital Communication Interface
X = None
 4 = Tracer Interface
 5 = LCI-C (LonTalk)

Digit 48 – External Chilled Water and Current Limit Setpoint
X = None
 4 = 4-20mA input
 2 = 2-10Vdc

Digit 49 – External Base Loading
X = None
 4 = 4-20mA input
 2 = 2-10Vdc input

Digit 50 – Icemaking
X = None
 A = Icemaking with Relay
 B = Icemaking without Relay

Digit 51 – Programmable Relays
X = None
 R = With

Digit 52 – Chilled Water Reset
X = Chilled Water Reset – Return Water
 T = Chilled Water Reset – Outdoor Air Temperature

Digit 53 – Control Outputs
 X = None
 V = Condenser Regulating Valve Control & Percent RLA
 P = Condenser Pressure (% HPC) & Percent RLA
D = Chiller Differential Pressure & Percent RLA

Digit 54 – Refrigerant Monitor Input
X = None
 A = 100 ppm / 4-20mA
 B = 1000 ppm / 4-20mA
 C = 100 ppm / 2-10Vdc
 D = 1000 ppm / 2-10Vdc



Dimensions and Weights

Shipping and Operating Weights

| Compressor Code | Evaporator Code | Condenser Code | Operating Weight | | Shipping Weight | |
|--------------------|--------------------|-------------------|------------------|-------|-----------------|-------|
| | | | (lbs) | (kg) | (lbs) | (kg) |
| B1 | B1 | B1 | 9,867 | 4,476 | 9,292 | 4,215 |
| B1 | C1 | D1 | 10,554 | 4,787 | 9,837 | 4,462 |
| B2 | B2 | B2 | 10,019 | 4,545 | 9,402 | 4,265 |
| B2 | C2 | D2 | 10,653 | 4,832 | 9,953 | 4,515 |
| C1 | D6 | E5 | 13,397 | 6,077 | 12,780 | 5,797 |
| C1 | D5 | E4 | 13,673 | 6,202 | 12,973 | 5,884 |
| C1 | E1 | F1 | 15,818 | 7,175 | 14,718 | 6,676 |
| C2 | D4 | E4 | 13,672 | 6,201 | 12,972 | 5,884 |
| C2 | D3 | E3 | 15,044 | 6,824 | 14,002 | 6,351 |
| C2 | F2 | F3 | 17,560 | 7,965 | 16,168 | 7,334 |
| D1 | D1 | E1 | 15,385 | 6,978 | 14,443 | 6,551 |
| D1 | F1 | F2 | 17,537 | 7,955 | 16,187 | 7,342 |
| D1 | G1 | G1 | 20,500 | 9,299 | 18,600 | 8,437 |
| D1 | G2 | G2 | 21,065 | 9,555 | 19,107 | 8,667 |
| D2, D3 | D2 | E2 | 15,570 | 7,062 | 14,562 | 6,605 |
| D2, D3 | F2 | F3 | 18,220 | 8,264 | 16,820 | 7,629 |
| D2, D3 | G2 | G1 | 20,700 | 9,389 | 18,700 | 8,482 |
| D2, D3 | G3 | G3 | 21,641 | 9,816 | 19,508 | 8,849 |
| E3 | D2 | E2 | 15,728 | 7,134 | 14,720 | 6,677 |
| E3 | F2 | F3 | 18,356 | 8,326 | 16,956 | 7,691 |
| E3 | G2 | G1 | 20,800 | 9,435 | 18,800 | 8,528 |
| E3 | G3 | G3 | 21,786 | 9,882 | 19,653 | 8,914 |

Notes:

1. All weights +/- 3%.
2. Shipping weights include standard 150 psig water boxes, refrigerant charge, and oil charge.
3. Operating weights include refrigerant, oil, and water charges.

Dimensions and Weights

DGG, EGG Configuration

| | Recommended Clearances |
|------------|------------------------|
| Front | 36" (914 mm) |
| Back | 36" (914 mm) |
| Either End | 36" (914 mm) |
| Other End* | 126" (3200 mm) |
| Top | 36" (914 mm) |

* Clearance for tube removal

Note:

1. Dimensions are based on 3 Pass Evap / 2 Pass Cond and LH/LH water connections. Refer to submittals for exact configuration.
2. Refer to the Nominal Capacity Data table in the General Data section for capacity ranges of each compressor.

