



Model Number Description

70-125 Tons

Model Nomenclature Digit Number

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

RTA A1 2 5 4X R 0 1 A 3 D 0 G QBF

70-125 Tons

Digits 1,2 — Unit Model

RT = Rotary Chiller

Digit 3 — Unit Type

A = Air Cooled

Digit 4 — Development Sequence

A = First Sequence

Digit 5, 6 & 7 — Nominal Capacity

070 = 70 tons

080 = 80 tons

090 = 90 tons

100 = 100 tons

110 = 110 tons

125 = 125 tons

Digit 8 — Unit Voltage

A = 200/60/3

C = 230/60/3

D = 380/60/3

4 = 460/60/3

5 = 575/60/3

K = 400/50/3

S = Special

Digit 9 — Compressor Starter Type

Y = Y-Delta Closed Transition

X = X-Line (Across the Line)

S = Special

Digit 10, 11 — Design Sequence

** = Factory Input

Digit 12 — Evaporator Leaving Temperature

1 = Standard 40 to 65°F

2 = Low 0 to 39°F

3 = Ice-Making 20 to 65°F

S = Special

Digit 13 — Condenser Coil Fin Material

A = Aluminum

S = Special

2 = CompleteCoat

4 = Copper

Digit 14 — Agency Listing

0 = No Agency Listing

3 = C/UL Listing

4 = China Pressure Vessel Code

5 = China Pressure Vessel Code
& C/UL Listing

Digit 15 — Control Interface

C = Deluxe without Communication

D = Deluxe with Communication

L = LonTalk (LCI-C)

Digit 16 — Chilled Water Reset

0 = No Chilled Water Reset

1 = Based on Return Water Temperature

2 = Based on Outside Air Temperature

Digit 17 — Miscellaneous Factory Installed Options

A = Architectural Louvered Panels

B = Control Power Transformer

C = Convenience Outlet

D = Low Ambient Lockout Sensor

F = Mech. Disconnect Switch

G = Low Ambient Operation

K = Coil Protection

M = Access Guard

P = Circuit Breaker (Single Point Power)

0 = Size C2 HP Pump Package

1 = Size D3 HP Pump Package

2 = Size D5 HP Pump Package

3 = Size E2 HP Pump Package

4 = Size E3 HP Pump Package

5 = Size F5 HP Pump Package

6 = Size F7 HP Pump Package

7 = Size G3 HP Pump Package

8 = Size G5 HP Pump Package

Field Installed Options

N = Elastomeric Isolators

R = Remote Display Panel

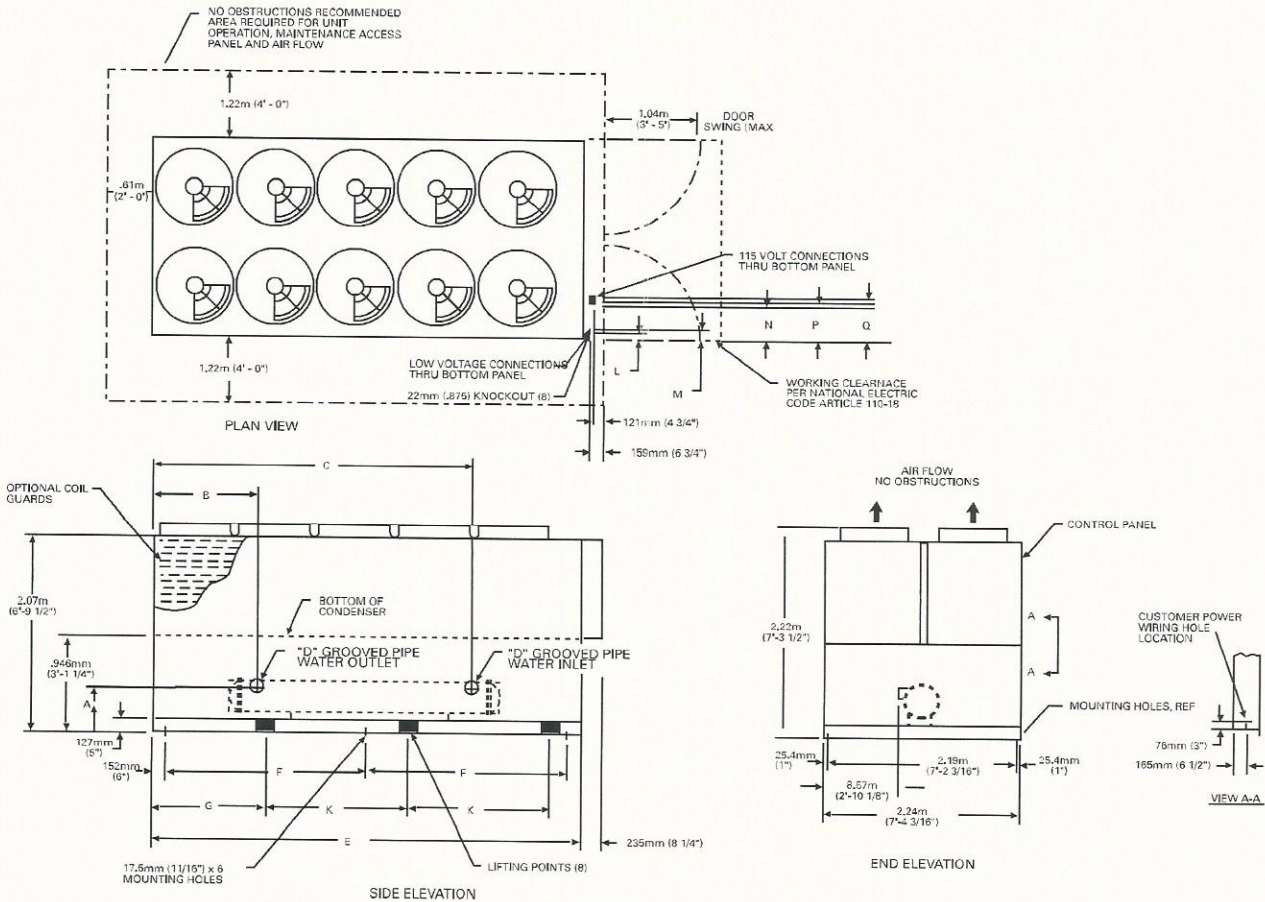
J = Remote Evaporator

H = Sound Attenuator

Dimensional Data

Packaged Unit

Figure D-1 – RTAA 70-125 Unit Dimensions



| UNIT SIZE | A | B | C | D | E | F | G | K |
|----------------|----------------------|------------------------|------------------------|---------------|------------------------|-----------------------|------------------------|-------------------|
| 70-100 | .492m (1'-7 3/8") | 1.213m (3'-11 3/4") | 2.851m (9'-4 1/4") | 102mm (4") | 4.940m (16'-2 1/2") | 2.317m (7'-7 1/4") | 1.549m (5'-1") | 1.626m (5'-4") |
| 110-125 | .479m (1'-6 7/8") | 1.032m (3'-4 5/8") | 3.499m (11'-5 3/4") | 152mm (6") | 5.626m (18'-5 1/2") | 2.661m (8'-8 3/4") | 1.511m (4'-11 1/2") | 1.930m (6'-4") |

| UNIT SIZE | NO. OF FANS PER UNIT | | | | | |
|-----------|----------------------|----|----|-----|-----|-----|
| | 70 | 80 | 90 | 100 | 110 | 125 |
| NO. FANS | | | | | | |
| STD UNIT | 8 | 8 | 9 | 10 | 10 | 10 |

| PANEL TYPE | 115 VOLT & LOW VOLTAGE CONNECTIONS | | | | |
|-------------------------|------------------------------------|----------------------|------------------------|-------------------|-----------------------|
| | L | M | N | P | Q |
| X-LINE CONTROL PANEL | .889m (2'-11") | .927m (3'-0 1/2") | 1.206m (3'-11 1/2") | 1.245m (4'-1") | 1.283m (4'-2 1/2") |
| WYE DELTA CONTROL PANEL | 76mm (3") | 114mm (4 1/2") | .39m (1'-3 1/2") | .43m (1'-5") | .47m (1'-8 1/2") |



Weights

Packaged Unit

Table W-1 — Packaged Unit Weights (Aluminum)

| Unit Size | Units | Isolator Location | | | | | | Operating Weight | Shipping Weight |
|-----------|-------|-------------------|------|------|------|------|-----|------------------|-----------------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | | |
| RTAA 70 | lbs. | 1622 | 1636 | 1215 | 1229 | 808 | 822 | 7332 | 6507 |
| | kg | 737 | 744 | 552 | 559 | 367 | 374 | 3333 | 2952 |
| RTAA 80 | lbs. | 1624 | 1638 | 1220 | 1235 | 817 | 831 | 7364 | 6556 |
| | kg | 738 | 745 | 555 | 561 | 371 | 378 | 3347 | 2974 |
| RTAA 90 | lbs. | 1667 | 1623 | 1275 | 1232 | 884 | 840 | 7521 | 6741 |
| | kg | 758 | 738 | 580 | 560 | 402 | 382 | 3419 | 3058 |
| RTAA 100 | lbs. | 1672 | 1687 | 1284 | 1299 | 897 | 912 | 7751 | 6990 |
| | kg | 760 | 767 | 584 | 591 | 408 | 414 | 3523 | 3171 |
| RTAA 110 | lbs. | 2033 | 1755 | 1622 | 1344 | 1211 | 933 | 8772 | 7706 |
| | kg | 924 | 798 | 737 | 611 | 550 | 424 | 3987 | 3495 |
| RTAA 125 | lbs. | 2043 | 1759 | 1635 | 1351 | 1227 | 943 | 8742 | 7740 |
| | kg | 929 | 800 | 743 | 614 | 558 | 429 | 3974 | 3511 |

Notes:

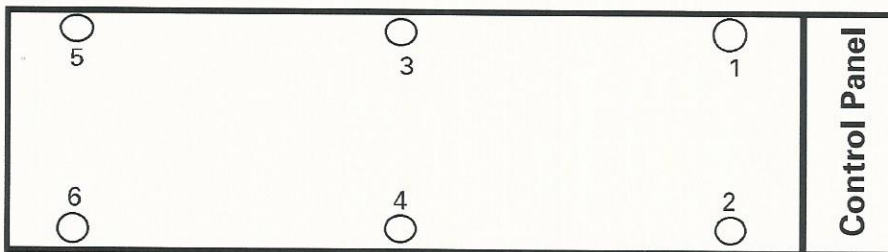
1. Operating weight includes the weight of accessory panels and water.
2. Shipping weight does not include the weight of accessory panels or water.

Table W-2 — Packaged Unit Weights (Copper)

| Unit Size | Units | Isolator Location | | | | | | Operating Weight | Shipping Weight |
|-----------|-------|-------------------|------|------|------|------|------|------------------|-----------------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | | |
| RTAA 70 | lbs. | 1769 | 1784 | 1325 | 1341 | 881 | 897 | 7997 | 7172 |
| | kg | 804 | 811 | 602 | 609 | 401 | 408 | 3335 | 3253 |
| RTAA 80 | lbs. | 1770 | 1786 | 1331 | 1346 | 891 | 906 | 8029 | 7221 |
| | kg | 805 | 832 | 605 | 612 | 405 | 412 | 3650 | 3275 |
| RTAA 90 | lbs. | 1819 | 1772 | 1392 | 1345 | 965 | 917 | 8210 | 7430 |
| | kg | 827 | 805 | 633 | 611 | 438 | 417 | 3732 | 3370 |
| RTAA 100 | lbs. | 1826 | 1842 | 1403 | 1419 | 979 | 996 | 8465 | 7704 |
| | kg | 830 | 837 | 638 | 645 | 445 | 453 | 3848 | 3495 |
| RTAA 110 | lbs. | 2161 | 2106 | 1622 | 1566 | 1082 | 1027 | 9564 | 8498 |
| | kg | 982 | 957 | 737 | 712 | 492 | 467 | 4347 | 3855 |
| RTAA 125 | lbs. | 2109 | 2127 | 1593 | 1611 | 1077 | 1095 | 9612 | 8610 |
| | kg | 959 | 967 | 724 | 732 | 489 | 498 | 4369 | 3905 |

Notes:

1. Operating weight includes the weight of accessory panels and water.
2. Shipping weight does not include the weight of accessory panels or water.





General Data

Table G-1 – General Data RTAA – 70-125 Ton

| Size | | 70 | 80 | 90 | 100 | 110 | 125 |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Compressor | | | | | | | |
| Quantity | | 2 | 2 | 2 | 2 | 2 | 2 |
| Nominal Size (1) | (Tons) | 35/35 | 40/40 | 50/40 | 50/50 | 60/50 | 60/60 |
| Evaporator | | | | | | | |
| Water Storage | (Gallons) | 39.8 | 37.3 | 34.4 | 32.1 | 53.4 | 45.8 |
| | (Liters) | 150.6 | 143.1 | 130.2 | 121.5 | 202.11 | 173.4 |
| Min. Flow | (GPM) | 84 | 96 | 108 | 120 | 132 | 150 |
| | (L/Sec) | 5.3 | 6.1 | 6.8 | 76 | 8.3 | 9.5 |
| Max. Flow | (GPM) | 252 | 288 | 324 | 360 | 396 | 450 |
| | (L/Sec) | 15.9 | 18.2 | 20.4 | 22.7 | 25.0 | 28.4 |
| Condenser | | | | | | | |
| Qty of Coils | | 4 | 4 | 4 | 4 | 4 | 4 |
| Coil Length | (In) | 156/156 | 156/156 | 168/156 | 168/168 | 204/168 | 204/204 |
| | (mm) | 3962/3962 | 3962/3962 | 4267/3962 | 4267/4267 | 5182/4267 | 5182/5182 |
| Coil Height | (In) | 42 | 42 | 42 | 42 | 42 | 42 |
| | (mm) | 1067 | 1067 | 1067 | 1067 | 1067 | 1067 |
| Fins/Ft. | | 192 | 192 | 192 | 192 | 192 | 192 |
| Number of Rows | | 2 | 2 | 2 | 2 | 2 | 2 |
| Condenser Fans (60 Hz) | | | | | | | |
| Quantity (1) | | 4/4 | 4/4 | 5/4 | 5/5 | 5/5 | 5/5 |
| Diameter | (In) | 30 | 30 | 30 | 30 | 30 | 30 |
| | (mm) | 762 | 762 | 762 | 762 | 762 | 762 |
| Total Airflow | (CFM) | 71750 | 71750 | 77640 | 83530 | 87505 | 91480 |
| Nominal RPM | 60 Hz | 1140 | 1140 | 1140 | 1140 | 1140 | 1140 |
| Tip Speed | (Ft/Min) | 8954 | 8954 | 8954 | 8954 | 8954 | 8954 |
| Motor HP (Ea) | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| Condenser Fans (50 Hz) | | | | | | | |
| Quantity (1) | | 4/4 | 4/4 | 5/4 | 5/5 | 5/5 | 5/5 |
| Diameter | (In) | 30 | 30 | 30 | 30 | 30 | 30 |
| | (mm) | 762 | 762 | 762 | 762 | 762 | 762 |
| Total Airflow | (CFM) | 59172 | 59200 | 63963 | 68724 | 72104 | 75492 |
| Nominal RPM | 50 Hz | 970 | 970 | 970 | 970 | 970 | 970 |
| Tip Speed | (Ft/Min) | 7618 | 7618 | 7618 | 7618 | 7618 | 7618 |
| Motor HP (Ea) | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| Min Starting/Oper Ambient (2) | | | | | | | |
| Std Unit | (Deg F) | 25 | 25 | 25 | 25 | 25 | 25 |
| | (Deg C) | -3.9 | -3.9 | -3.9 | -3.9 | -3.9 | -3.9 |
| Low Ambient | (Deg F) | -10 | -10 | -10 | -10 | -10 | -10 |
| | (Deg C) | -23.3 | -23.3 | -23.3 | -23.3 | -23.3 | -23.3 |
| General Unit | | | | | | | |
| Refrigerant | | HCFC-22 | HCFC-22 | HCFC-22 | HCFC-22 | HCFC-22 | HCFC-22 |
| No. of Independent Refrigerant Circuits | | 2 | 2 | 2 | 2 | 2 | 2 |
| Refrigerant Charge (1) | (Lb) | 58/58 | 61/61 | 73/61 | 73/73 | 98/73 | 98/98 |
| | (Kg) | 26/26 | 28/28 | 34/28 | 34/34 | 44/34 | 44/44 |
| Oil Charge (1) | (Gallons) | 2.5/2.5 | 2.5/2.5 | 3/2.5 | 3/3 | 3/3 | 3/3 |
| | (Liters) | 10.6/10.6 | 10.6/10.6 | 12.7/10.6 | 12.7/12.7 | 12.7/12.7 | 12.7/12.7 |

1. Data containing information on two circuits shown as follows: ckt 1/ckt2.
2. Minimum start-up/operating ambient based on a 5 mph wind across the condenser.

Table G-2 – General Data Pump Package

| Pump Package Size | | C2 | D3 | D5 | E2 | E3 | F5 | F7 | G3 | G5 |
|----------------------|-----------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Pump | | | | | | | | | | |
| Quantity | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Motor HP | (each) | 2 | 3 | 5 | 2 | 3 | 5 | 7.5 | 3 | 5 |
| Water Storage | | | | | | | | | | |
| 4" connection | (Gallons) | 13.64 | 13.54 | 16.18 | 16.25 | 16.25 | 23.54 | 23.54 | 23.62 | 23.62 |
| | (Liters) | 51.63 | 51.25 | 61.25 | 61.51 | 61.51 | 89.11 | 89.11 | 89.41 | 89.41 |
| 6" connection | (Gallons) | -- | 16.8 | 19.41 | -- | 19.59 | 26.09 | 26.09 | 26.56 | 26.56 |
| | (Liters) | -- | 64.28 | 73.47 | -- | 74.16 | 98.76 | 98.76 | 100.54 | 100.54 |

1. Information given for 460/60/3 units only.