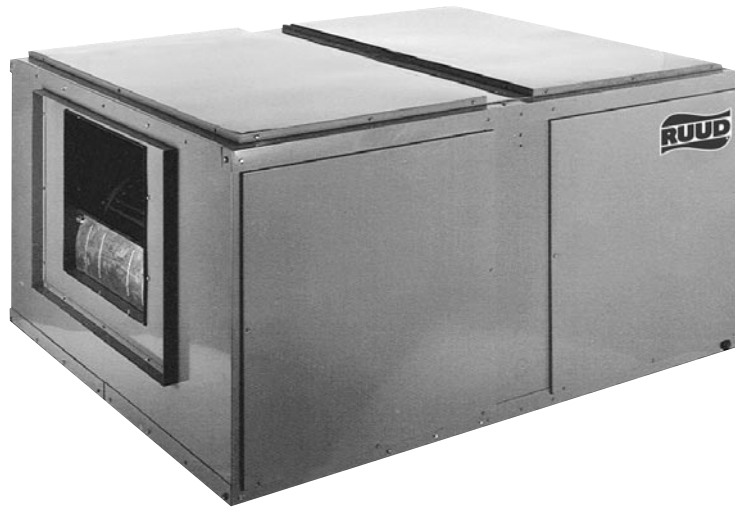




Air Handler
RHGM Series

Ruud Commercial Air Handler



RHGM Series

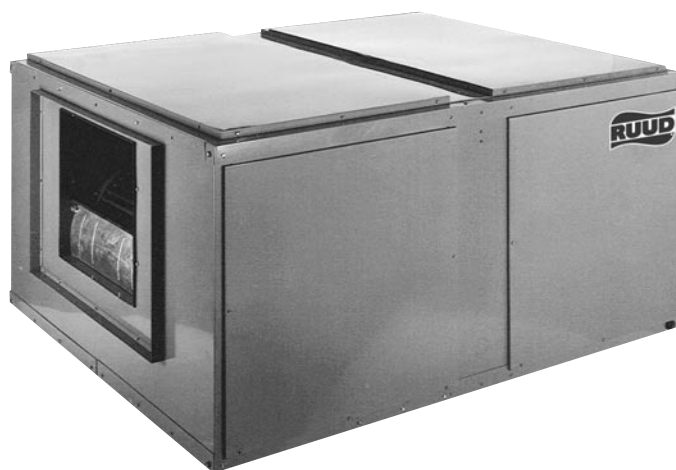
Featuring 2-Stage Airflow
Nominal Sizes 7.5 & 10 Ton [26 & 35 kW]





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CABINET—Unit cabinet should be constructed of galvanized, pre-painted steel.

MOTOR—Inherently protected motors are mounted inside of insulated cabinet to reduce motor noise. A choice of motor horsepower and drive combinations are available to allow you to meet specified CFM at various static pressures up to 2" [.498 kPa] external static pressure.

LOW PROFILE—Allows for horizontal installation in most standard drop ceiling applications, and the movement of units through most standard doorways for addition or replacement work.

THERMAL EXPANSION VALVES—Standard all models.

FILTERS—One inch [25 mm] throwaway filters are standard, but filter racks are designed to accept either one inch [25 mm] or two inch [51 mm] filters.

EVAPORATOR COIL—Two circuit, interlaced row split coils are constructed with copper tubes and aluminum fins mechanically bonded to the tubes for maximum heat transfer capabilities. All coil assemblies are leak tested up to 450 PSIG [3100 kPa] internal pressure prior to installation into units.

REFRIGERANT CONNECTIONS—Field piping connections are made through a fixed post between two side access panels on either side of the unit. Allows flexibility to meet most field conditions as well as full accessibility after the installation is complete. Units may be used with two straight cool condensing units or single circuit manifolded in the field using the copper fittings shipped with each unit. The RHGM Air Handler has not been tested, rated or certified to operate with dual residential remote heat pumps.

DRAIN PAN—The galvanized steel drain pan is designed to trap condensate in either vertical or horizontal installations. Condensate drain connections are located on both sides of the unit allowing complete flexibility to meet most field conditions.

SERVICE ACCESS—Two removable panels on top and each side of the unit are easily removed for access to motors, blowers, sheaves, and filters.

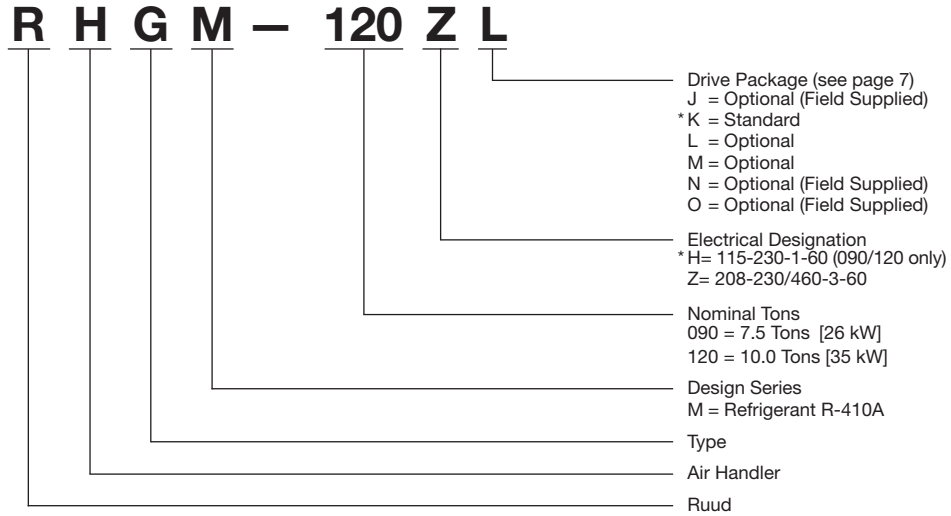
HORIZONTAL OR VERTICAL—All models are designed for either application and can be installed in either position as supplied from the factory.

TESTING—All units are run tested at the factory prior to shipment. Units are shipped with a holding charge of nitrogen.

HEAT PUMP—The RHGM Air Handler is designed for heat pump and air conditioning applications. It has two TX valves with internal check valves that allow reverse flow to occur, providing superior control during heating and cooling cycles. RHGM Air Handler has been rated and certified to operate with 7.5 ton [26 kW] and 10 ton [35 kW] condensing units and 7.5 ton [26 kW] and 10 ton [35 kW] remote heat pumps.

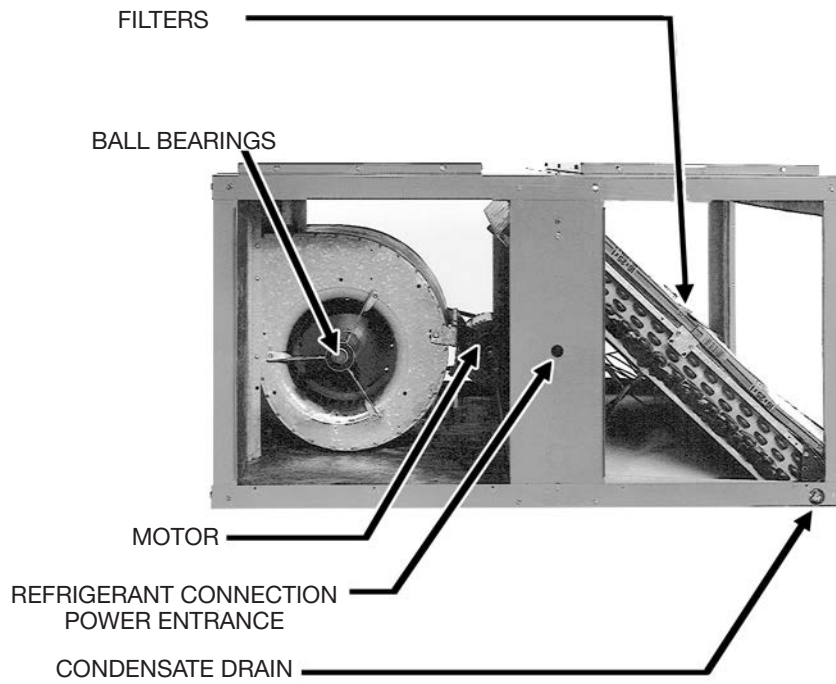
[] Designates Metric Conversions

Model Number Identification
RHGM Series

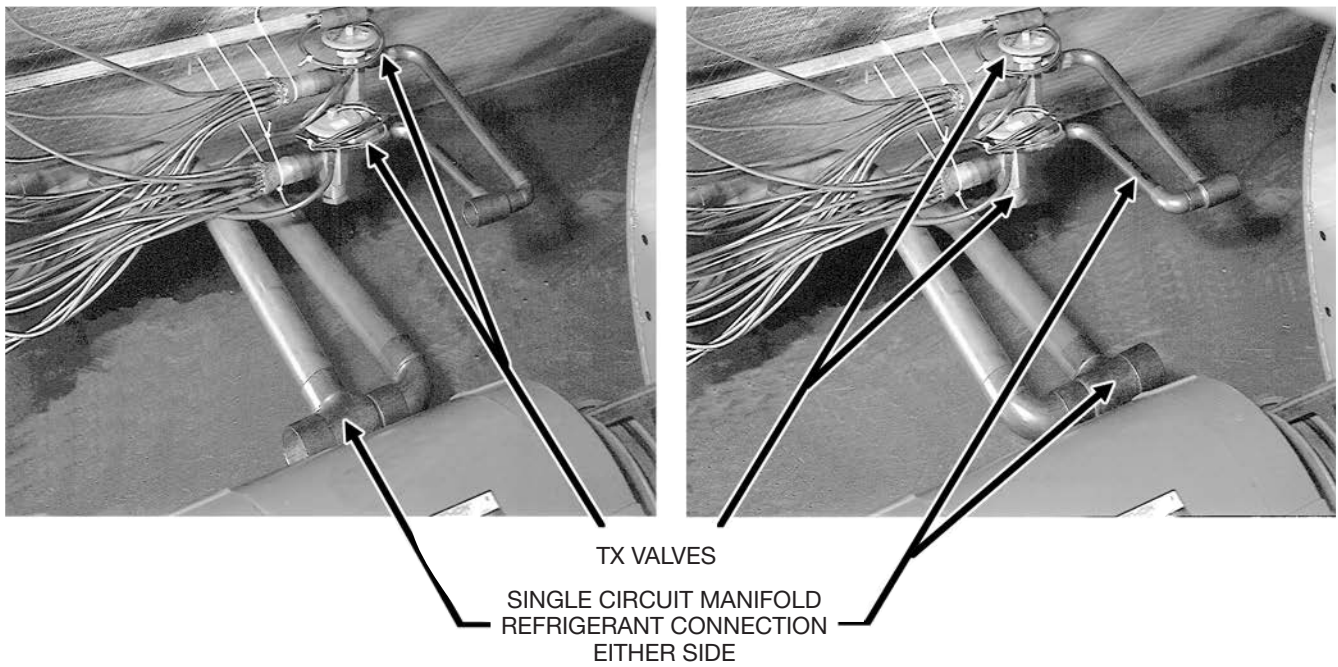


**“H” voltage models are available with “K” drive package only.

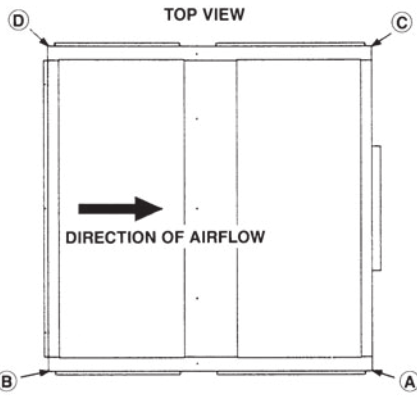
[] Designates Metric Conversions



Unit with side panel removed for coil connections and air filter access.



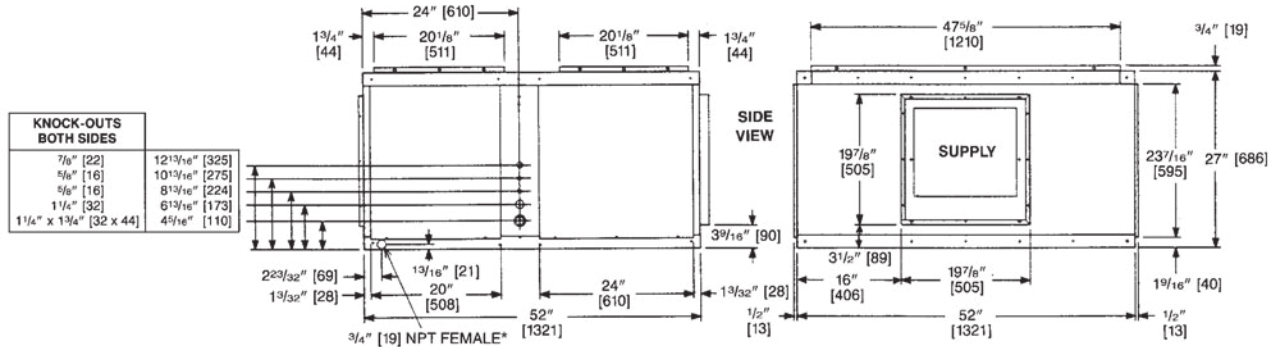
[] Designates Metric Conversions



RETURN AIR OPENINGS = 47³/₈" [1203] WIDTH x 19⁷/₈" [505] HEIGHT

| REFRIGERANT STUB SIZES, IN. [mm] | | | | |
|----------------------------------|-------------------|-------------------|-------------|------------------------------------|
| MODEL | DUAL LIQ. | DUAL SUC. | SINGLE LIQ. | SINGLE SUC. |
| 090 | 1/2, 1/2 [13, 13] | 7/8, 7/8 [22, 22] | 5/8 [16] | 1 ³ / ₈ [35] |
| 120 | 1/2, 1/2 [13, 13] | 7/8, 7/8 [22, 22] | 5/8 [16] | 1 ³ / ₈ [35] |

| MODEL | CORNER WEIGHTS, LBS. [kg] | | | | TOTAL WEIGHT |
|-------|---------------------------|---------|---------|---------|--------------|
| | A | B | C | D | |
| 090 | 98 [44] | 86 [40] | 97 [44] | 84 [38] | 365 [166] |
| 120 | 100 [45] | 88 [40] | 97 [44] | 87 [40] | 372 [169] |



*Drain connections are provided on both sides of the drain pan. The drain can be connected to either side of the drain pan, but not both. The drain must be trapped.

[] Designates Metric Conversions

| ITEM | | MODEL NO. RHGM- | |
|---|--|--|--|
| | | 090 | 120 |
| Nominal Size tons [kW] | | 7.5 [26] | 10 [35] |
| Nominal CFM [L/s] @ Rated E.S.P., in. [kPa] of water | | 3000 @ .25 [1416 @ .062] | 3000 @ .25 [1416 @ .062] 4000 @ .30 [1888 @ .075] |
| MOTOR | Standard— 3450 RPM [W] 1 Ø 1725 RPM [W] 3 Ø | 1 HP [766] 1 HP [766] | 2 HP [1491] 1½ HP [1119] |
| | Optional— 1725 RPM [W] 3 Ø | 1½ HP [1119] | 2 HP, 3 HP [1491, 2237] |
| Blower Size—diameter & width, in. [mm] | | 12 x 12 [305 x 305] | 12 x 12 [305 x 305] |
| Blower Shaft Size (diameter) in. [mm] | | ¾ [19] | ¾ [19] |
| Motor Sheave Size 3450 RPM 1 Ø Adjustment (std.) in. [mm] 1725 RPM 3 | | 1.9-2.9 [48-74] 3.4-4.4 [86-112] | 2.4-3.2 [61-81] 4.0-5.0 [102-127] |
| Coil Face Area, sq. feet [m²] | | 10.2 [.95] | 10.2 [.95] |
| Coil Tube Diameter in. [mm] | | ¾ [10] | ¾ [10] |
| Coil, Rows Deep—Fins Per Inch [mm] | | 4/15 [.59] | 4/15 [.59] |
| Refrigerant Control—Thermal Expansion Valves (Quantity) | | BBIZE-5-GA (2) | CBBIZE-6-GA (2) |
| Filter Size, in. [mm] (Number Required) Disposable* | | 16 x 25 x 1 (4) [406 x 635 x 25] | 16 x 25 x 1 (4) [406 x 635 x 25] |
| CABINET: Finish | | Powder Paint | Powder Paint |
| Sheet Metal | | Galvanized | Galvanized |
| Gauge (nominal) Top | | 18 | 18 |
| Sides | | 16 | 16 |
| Bottom | | 18 | 18 |
| Doors and Covers | | 20 min. | 20 min. |
| UNIT WEIGHTS: Operating (lbs.) [kg] | | 365 [166] | 372 [170] |
| Shipping (lbs.) [kg] | | 411 [186] | 418 [190] |
| PACKAGED DIMENSIONS: (H x W x L) [mm] | | 31½" x 56" x 57¼" [800 x 1422 x 1454] | 31½" x 56" x 57¼" [800 x 1422 x 1454] |

*Unit will accept 2" [51 mm] filters.

NOTE: If a factory accessory heater kit is not used, a field supplied fan contactor is required and should have a 24 volt coil with contacts rated to handle the evaporator motor FLA at desired voltage. A factory supplied 30 Amp 3 Pole or 30 Amp 2 Pole contactor may be purchased from the Parts Department.

[] Designates Metric Conversions

INDOOR BLOWER PERFORMANCE (DRY COIL) RHGM-090 HK & 120 HK

| DRIVE PKG | STD CFM | E.S.P. — INCHES OF WATER [kPa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------|-----------------|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | .1 [0.02] | .2 [0.05] | .3 [0.07] | .4 [0.10] | .5 [0.12] | .6 [0.15] | .7 [0.17] | .8 [0.20] | .9 [0.22] | 1.0 [0.25] | 1.1 [0.27] | 1.2 [0.30] | 1.3 [0.32] | 1.4 [0.35] | 1.5 [0.37] | 1.6 [0.40] | 1.7 [0.42] | 1.8 [0.45] | 1.9 [0.47] | 2.0 [0.50] | | | | | | | | | | | | | | | | | | | | |
| | | RPM | W | T.O. | RPM | W | T.O. | RPM | W | T.O. | RPM | W | T.O. | RPM | W | T.O. | RPM | W | T.O. | RPM | W | T.O. | RPM | W | T.O. | RPM | W | T.O. | | | | | | | | | | | | | |
| | 3000 [1416 L/s] | 780 | 5 | 1110 | 820 | 1200 | 860 | 1350 | 890 | 1440 | 960 | 1500 | 1005 | 1060 | 1090 | 1120 | 1180 | 1220 | 1260 | 1300 | 1340 | 1380 | 1420 | 1460 | 1500 | 1540 | 1580 | 1620 | 1660 | 1700 | 1740 | 1780 | 1820 | 1860 | 1900 | 1940 | 1980 | 2020 | 2060 | 2100 | |
| | 3200 [1510 L/s] | 780 | 5 | 1200 | 820 | 1360 | 890 | 1440 | 910 | 1520 | 980 | 1560 | 1030 | 1080 | 1110 | 1150 | 1190 | 1230 | 1270 | 1310 | 1350 | 1390 | 1430 | 1470 | 1510 | 1550 | 1590 | 1630 | 1670 | 1710 | 1750 | 1790 | 1830 | 1870 | 1910 | 1950 | 1990 | 2030 | 2070 | 2110 | |
| | 3400 [1605 L/s] | 775 | 5 | 1130 | 840 | 1330 | 840 | 1440 | 880 | 1530 | 945 | 1570 | 990 | 1620 | 1000 | 1650 | 1030 | 1680 | 1060 | 1710 | 1090 | 1740 | 1120 | 1770 | 1150 | 1800 | 1180 | 1830 | 1210 | 1860 | 1290 | 1910 | 1320 | 1950 | 1360 | 1990 | 1400 | 2030 | 1440 | 2070 | 1480 |
| | 3600 [1699 L/s] | 775 | 5 | 1400 | 835 | 1465 | 835 | 1545 | 870 | 1630 | 900 | 1670 | 930 | 1720 | 960 | 1760 | 990 | 1800 | 1020 | 1840 | 1050 | 1880 | 1080 | 1920 | 1110 | 1960 | 1140 | 2000 | 1170 | 2040 | 1200 | 2080 | 1230 | 2120 | 1260 | 2160 | 1300 | 2200 | 1340 | 2240 | 1380 |
| | 3800 [1793 L/s] | 770 | 5 | 1510 | 830 | 1580 | 865 | 1725 | 890 | 1840 | 920 | 1930 | 960 | 2030 | 990 | 2085 | 1015 | 2155 | 1045 | 2205 | 1075 | 2255 | 1105 | 2305 | 1135 | 2355 | 1165 | 2405 | 1195 | 2455 | 1225 | 2505 | 1255 | 2555 | 1305 | 2605 | 1355 | 2655 | 1405 | | |
| | 4000 [1888 L/s] | 805 | 4.6 | 1695 | 860 | 1860 | 900 | 1975 | 920 | 2075 | 955 | 2205 | 980 | 2315 | 1015 | 2385 | 1045 | 2455 | 1075 | 2525 | 1105 | 2595 | 1135 | 2665 | 1165 | 2735 | 1195 | 2805 | 1225 | 2875 | 1255 | 2945 | 1285 | 3015 | 1315 | 3085 | 1345 | 3115 | 1375 | | |
| | 4200 [1982 L/s] | 830 | 4.2 | 1890 | 865 | 2000 | 900 | 2240 | 960 | 2365 | 1000 | 2440 | 1030 | 2515 | 1060 | 2585 | 1090 | 2655 | 1120 | 2725 | 1150 | 2795 | 1180 | 2865 | 1210 | 2935 | 1240 | 2995 | 1270 | 3045 | 1300 | 3095 | 1330 | 3145 | 1365 | 3205 | 1395 | 3245 | | | |
| | 4400 [2077 L/s] | 870 | 3.6 | 2145 | 900 | 2275 | 940 | 2440 | 980 | 2515 | 1020 | 2590 | 1060 | 2665 | 1100 | 2740 | 1140 | 2815 | 1180 | 2890 | 1220 | 2965 | 1260 | 3040 | 1300 | 3115 | 1340 | 3185 | 1380 | 3260 | 1410 | 3340 | 1460 | 3420 | 1510 | 3500 | 1560 | 3580 | | | |
| | 4600 [2171 L/s] | 900 | 3.2 | 2275 | 940 | 2440 | 980 | 2515 | 1020 | 2590 | 1060 | 2665 | 1100 | 2740 | 1140 | 2815 | 1180 | 2890 | 1220 | 2965 | 1260 | 3040 | 1300 | 3115 | 1340 | 3185 | 1380 | 3260 | 1410 | 3340 | 1460 | 3420 | 1510 | 3500 | 1560 | 3580 | 1610 | 3660 | | | |
| | 4800 [2265 L/s] | 960 | 2.9 | 2440 | 1000 | 2600 | 1040 | 2675 | 1080 | 2750 | 1120 | 2825 | 1160 | 2900 | 1200 | 2975 | 1240 | 3050 | 1280 | 3125 | 1320 | 3200 | 1340 | 3315 | 1360 | 3440 | 1400 | 3520 | 1460 | 3600 | 1520 | 3680 | 1580 | 3760 | 1640 | 3840 | 1700 | 3920 | | | |

K = IVP34, AZ90, 2 HP [1491 W] 10
 NOTES: T.O. = Turns Open
 1. Standard air @ .075 lbs/ft³
 2. Operation below heavy lines require optional drives.
 3. Motor efficiency = .70
 4. BHP = WATTS x MOTOR EFFICIENCY
 746
 5. BHP = Brake Horsepower
 RPM = Blower Speed

RHGM-090 Z, -120 Z

| DRIVE PKG | STD CFM | E.S.P. — INCHES OF WATER [kPa] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------|-----------------|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | .1 [0.02] | .2 [0.05] | .3 [0.07] | .4 [0.10] | .5 [0.12] | .6 [0.15] | .7 [0.17] | .8 [0.20] | .9 [0.22] | 1.0 [0.25] | 1.1 [0.27] | 1.2 [0.30] | 1.3 [0.32] | 1.4 [0.35] | 1.5 [0.37] | 1.6 [0.40] | 1.7 [0.42] | 1.8 [0.45] | 1.9 [0.47] | 2.0 [0.50] | | | | | | | | | | | | | | | | | | | |
| | | RPM | W | T.O. | RPM | W | T.O. | RPM | W | T.O. | RPM | W | T.O. | RPM | W | T.O. | RPM | W | T.O. | RPM | W | T.O. | RPM | W | T.O. | RPM | W | T.O. | RPM | W | T.O. | RPM | W | T.O. | RPM | W | T.O. | RPM | W | T.O. |
| | 2400 [1133 L/s] | 650 | 5 | 1110 | 720 | 1200 | 760 | 1300 | 790 | 1350 | 815 | 1400 | 845 | 1450 | 880 | 1500 | 910 | 1550 | 945 | 1600 | 975 | 1650 | 1010 | 1700 | 1045 | 1750 | 1080 | 1800 | 1110 | 1850 | 1145 | 1900 | 1180 | 1950 | 1215 | 2000 | 1250 | 2050 | 1285 | |
| | 2600 [1227 L/s] | 635 | 5.45 | 1200 | 715 | 1300 | 750 | 1350 | 785 | 1400 | 810 | 1450 | 845 | 1500 | 880 | 1550 | 910 | 1600 | 945 | 1650 | 975 | 1700 | 1000 | 1750 | 1035 | 1800 | 1070 | 1850 | 1105 | 1900 | 1140 | 1950 | 1175 | 2000 | 1210 | 2050 | 1245 | 2100 | 1280 | |
| | 2800 [1321 L/s] | 630 | 5.95 | 1300 | 740 | 1400 | 775 | 1450 | 805 | 1500 | 825 | 1550 | 860 | 1600 | 895 | 1650 | 925 | 1700 | 955 | 1750 | 985 | 1800 | 1010 | 1850 | 1045 | 1900 | 1080 | 1950 | 1115 | 2000 | 1150 | 2050 | 1185 | 2100 | 1220 | 2150 | 1255 | 2200 | 1290 | |
| | 3000 [1416 L/s] | 630 | 6.60 | 1400 | 765 | 1500 | 790 | 1550 | 820 | 1600 | 845 | 1650 | 880 | 1700 | 910 | 1750 | 940 | 1800 | 970 | 1850 | 1000 | 1900 | 1030 | 1950 | 1065 | 2000 | 1100 | 2050 | 1135 | 2100 | 1170 | 2150 | 1200 | 2200 | 1240 | 2250 | 1280 | 2300 | 1320 | |
| | 3200 [1510 L/s] | 660 | 8.10 | 1500 | 785 | 1600 | 810 | 1650 | 840 | 1700 | 865 | 1750 | 900 | 1800 | 930 | 1850 | 960 | 1900 | 990 | 1950 | 1020 | 2000 | 1050 | 2050 | 1085 | 2100 | 1120 | 2150 | 1155 | 2200 | 1190 | 2250 | 1225 | 2300 | 1260 | 2350 | 1300 | 2400 | | |
| | 3400 [1605 L/s] | 690 | 9.40 | 1600 | 810 | 1700 | 840 | 1750 | 870 | 1800 | 895 | 1850 | 930 | 1900 | 960 | 1950 | 990 | 2000 | 1020 | 2050 | 1050 | 2100 | 1080 | 2150 | 1110 | 2200 | 1140 | 2250 | 1175 | 2300 | 1210 | 2350 | 1245 | 2400 | 1290 | 2450 | 1340 | 2500 | | |
| | 3600 [1699 L/s] | 730 | 11.00 | 1700 | 845 | 1800 | 875 | 1850 | 905 | 1900 | 930 | 1950 | 965 | 2000 | 995 | 2050 | 1025 | 2100 | 1055 | 2150 | 1085 | 2200 | 1115 | 2250 | 1145 | 2300 | 1175 | 2350 | 1210 | 2400 | 1245 | 2450 | 1290 | 2500 | 1340 | 2550 | 1390 | 2600 | | |
| | 3800 [1793 L/s] | 745 | 12.65 | 1800 | 875 | 1900 | 905 | 1950 | 935 | 2000 | 960 | 2050 | 995 | 2100 | 1025 | 2150 | 1055 | 2200 | 1085 | 2250 | 1115 | 2300 | 1145 | 2350 | 1175 | 2400 | 1210 | 2450 | 1245 | 2500 | 1290 | 2550 | 1340 | 2600 | 1390 | 2650 | 1440 | 2700 | | |
| | 4000 [1888 L/s] | 780 | 14.65 | 1900 | 910 | 2000 | 940 | 2050 | 970 | 2100 | 995 | 2150 | 1025 | 2200 | 1055 | 2250 | 1085 | 2300 | 1115 | 2350 | 1145 | 2400 | 1175 | 2450 | 1210 | 2500 | 1245 | 2550 | 1290 | 2600 | 1340 | 2650 | 1390 | 2700 | 1440 | 2750 | 1490 | 2800 | | |
| | 4200 [1982 L/s] | 825 | 17.50 | 2000 | 940 | 2100 | 970 | 2150 | 1000 | 2200 | 1025 | 2250 | 1055 | 2300 | 1085 | 2350 | 1115 | 2400 | 1145 | 2450 | 1175 | 2500 | 1210 | 2550 | 1245 | 2600 | 1290 | 2650 | 1340 | 2700 | 1390 | 2750 | 1440 | 2800 | 1490 | 2850 | 1540 | 2900 | | |
| | 4400 [2077 L/s] | 845 | 19.25 | 2100 | 965 | 2200 | 995 | 2250 | 1025 | 2300 | 1050 | 2350 | 1080 | 2400 | 1110 | 2450 | 1140 | 2500 | 1170 | 2550 | 1200 | 2600 | 1245 | 2650 | 1290 | 2700 | 1340 | 2750 | 1390 | 2800 | 1440 | 2850 | 1490 | 2900 | 1540 | 2950 | 1590 | 3000 | | |
| | 4600 [2171 L/s] | 915 | 22.25 | 2200 | 990 | 2300 | 1020 | 2350 | 1050 | 2400 | 1075 | 2450 | 1105 | 2500 | 1135 | 2550 | 1165 | 2600 | 1195 | 2650 | 1225 | 2700 | 1255 | 2750 | 1290 | 2800 | 1340 | 2850 | 1390 | 2900 | 1440 | 2950 | 1490 | 3000 | 1540 | 3050 | 1590 | 3100 | | |
| | 4800 [2265 L/s] | 930 | 25.55 | 2300 | 1015 | 2400 | 1045 | 2450 | 1075 | 2500 | 1105 | 2550 | 1135 | 2600 | 1165 | 2650 | 1195 | 2700 | 1225 | 2750 | 1255 | 2800 | 1285 | 2850 | 1320 | 2900 | 1360 | 2950 | 1400 | 3000 | 1450 | 3050 | 1500 | 3100 | 1550 | 3150 | 1600 | 3200 | | |
| | 5000 [2360 L/s] | 960 | 28.70 | 2400 | 1040 | 2500 | 1070 | 2550 | 1100 | 2600 | 1125 | 2650 | 1155 | 2700 | 1185 | 2750 | 1215 | 2800 | 1245 | 2850 | 1285 | 2900 | 1320 | 2950 | 1360 | 3000 | 1400 | 3050 | 1450 | 3100 | 1500 | 3150 | 1550 | 3200 | 1600 | 3250 | 1650 | 3300 | | |

J = IVP50, AZ100, 1 1/2 HP [1119 W] [Field Supplied]
 K = IVP56, AZ100, 1 1/2 HP [1119 W]
 L = IVP68, AZ100, 2 HP [1491 W]
 M = IVP68, AZ100, 3 HP [2237 W]
 N = IVP65, AZ80, 3 HP [2237 W] [Field Supplied]
 O = IVP75, AZ90, 3 HP [2237 W] [Field Supplied]
 NOTE: Bold lines separate J, K, L, M, N and O drives respectively.

[J] Designates Metric Conversions

COMPONENT AIR RESISTANCE

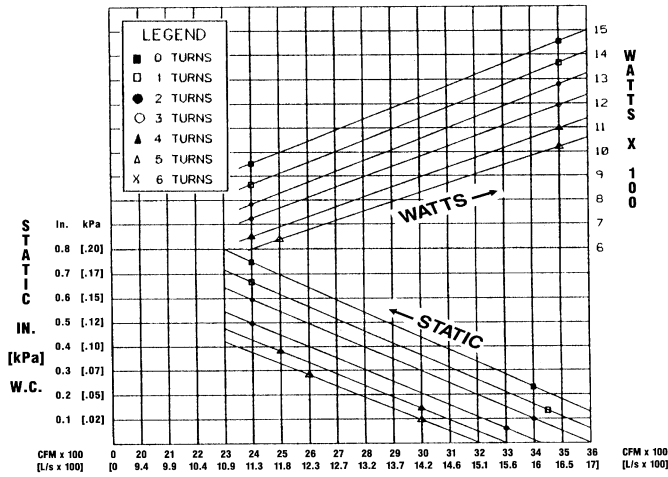
| CFM [L/s] | 1800 [850] | 2200 [1038] | 2600 [1227] | 3000 [1416] | 3400 [1605] | 3800 [1793] | 4200 [1982] | 4600 [2171] | 5000 [2360] |
|----------------------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Electric Heater 20KW, 30KW | .060 [.015] | .100 [.025] | .140 [.034] | .160 [.040] | .230 [.057] | .320 [.080] | .410 [.102] | .500 [.124] | .600 [.150] |

NOTE: Add component resistance to duct resistance to determine total E.S.P.

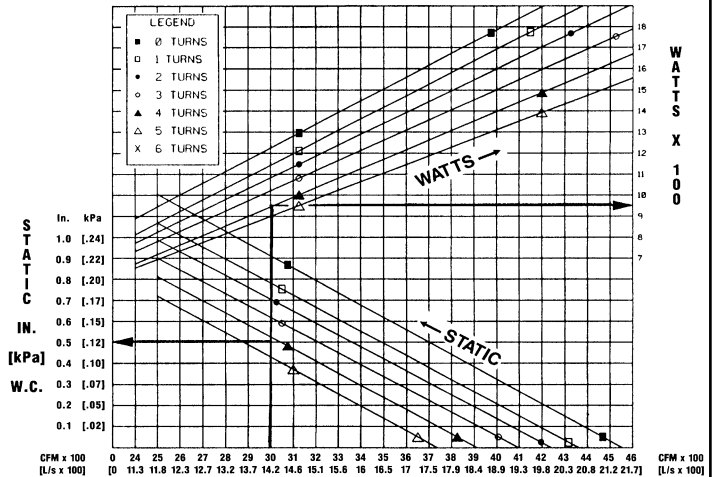
[] Designates Metric Conversions

BLOWER PERFORMANCE CURVES — 7.5 & 10 TON [26 & 35 kW] (WET COIL)

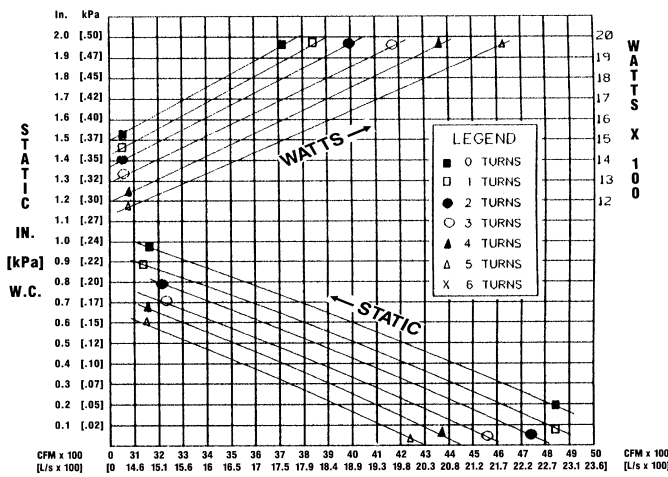
7.5 & 10 TON [26 & 35 kW] (RHGM-120 ONLY)
J DRIVE (3Ø only)



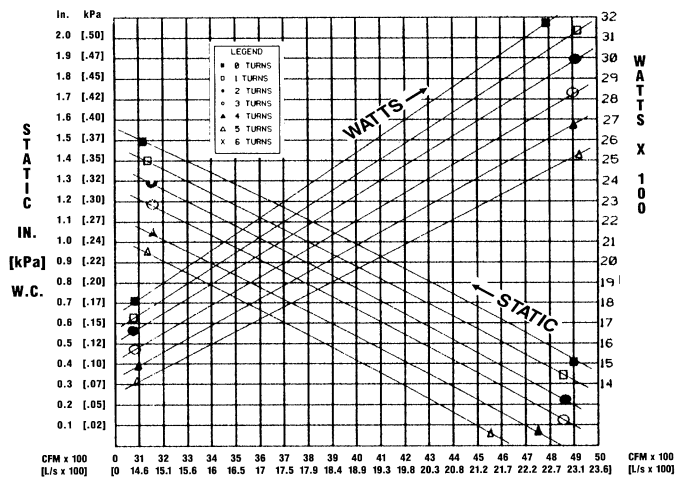
7.5 & 10 TON [26 & 35 kW]
K DRIVE (3Ø only)



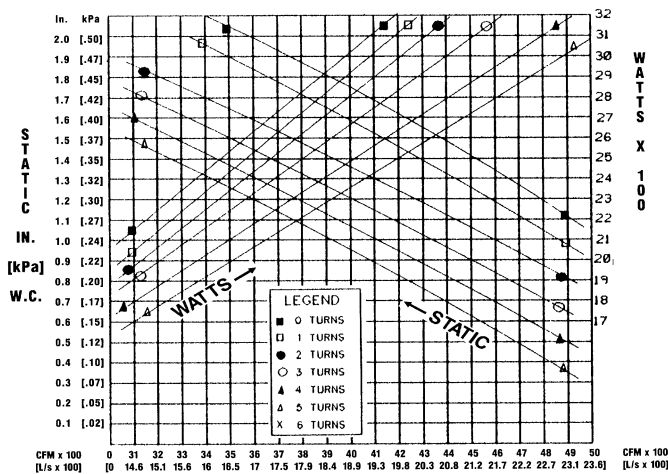
7.5 & 10 TON [26 & 35 kW]
L DRIVE (3Ø only)



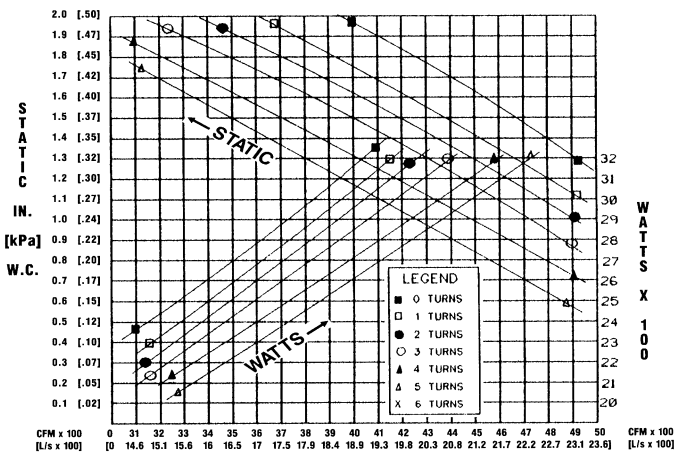
7.5 & 10 TON [26 & 35 kW]
M DRIVE (3Ø only)



7.5 & 10 TON [26 & 35 kW]
N DRIVE (3Ø only)



7.5 & 10 TON [26 & 35 kW]
O DRIVE (3Ø only)



[] Designates Metric Conversions

EVAPORATOR PERFORMANCE DATA (GROSS CAPACITY)

| EVAPORATOR/AIR HANDLER RHGM-090 @ 3000 CFM [1416 L/s] 105°F (40.8°C) LIQUID TEMPERATURE AT TXV | | | | | | | | | | | | | |
|---|------------|---------|--------|--------|--------|---------|--------|--------|--------|---------|--------|--------|--------|
| AIRFLOW | EVAP. TEMP | 75/63°F | | | | 80/67°F | | | | 55/71°F | | | |
| | | TC | SC | LDB °F | LWB °F | TC | SC | LDB °F | LWB °F | TC | SC | LDB °F | LWB °F |
| 3000 | 40 | 101,593 | 73,674 | 52.9 | 51.0 | 127,358 | 84,666 | 63.8 | 51.9 | 153,992 | 94,880 | 54.9 | 53.1 |
| | 45 | 80,928 | 62,952 | 57.3 | 54.8 | 103,594 | 73,170 | 58.8 | 56.3 | 130,995 | 83,959 | 59.4 | 57.3 |
| | 50 | 59,031 | 52,456 | 61.6 | 66.7 | 80,997 | 82,400 | 63.0 | 50.2 | 105,321 | 72,678 | 64.1 | 61.6 |

| EVAPORATOR/AIR HANDLER RHGM-120 @ 3800 CFM [1793 L/s] 105°F (40.6°C) LIQUID TEMPERATURE AT TXV | | | | | | | | | | | | | |
|---|------------|---------|---------|--------|--------|---------|---------|--------|--------|---------|---------|--------|--------|
| AIRFLOW | EVAP. TEMP | 75/63°F | | | | 80/67°F | | | | 85/71°F | | | |
| | | TC | SC | LDB °F | LWB °F | TC | SC | LDB °F | LWB °F | TC | SC | LDB °F | LWB °F |
| 3800 | 40 | 154,071 | 108,420 | 49.6 | 48.2 | 190,237 | 123,295 | 50.5 | 48.1 | 189,959 | 10,8803 | 60.4 | 58.6 |
| | 45 | 121,745 | 92,384 | 54.1 | 52.3 | 157,209 | 107,660 | 66.0 | 53.4 | 196,257 | 122,470 | 55.9 | 54.3 |
| | 50 | 88,849 | 77,108 | 58.5 | 56.3 | 122,773 | 91,908 | 59.5 | 57.5 | 159,969 | 108,803 | 60.4 | 56.6 |

NOTES: 1. Total and sensible capacity is gross with no deduction for indoor blower motor heat. 2. Interpolation is permissible. Do not extrapolate.
3. Capacities are based on 105°F (40.6°C) liquid temperature at the TXV or about 95°F (35°C) dry bulb outdoor ambient.
TC = Total Capacity, BTUH LDB = Leaving Air Dry Bulb
SC = Sensible Capacity, BTUH LWB = Leaving Air Wet Bulb

AIRFLOW CORRECTION FACTORS

| RHGM-090 @ 3000 CFM [1416 L/s] | | | | | | | |
|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| ACTUAL—CFM [L/s] | 2400 [1133] | 2600 [1227] | 2800 [1321] | 3000 [1416] | 3200 [1510] | 3400 [1605] | 3600 [1699] |
| TOTAL MBH | 0.85 | 0.90 | 0.95 | 1.00 | 1.04 | 1.09 | 1.13 |
| SENSIBLE MBH | 0.83 | 0.88 | 0.94 | 1.00 | 1.06 | 1.11 | 1.16 |

NOTES: 1. Multiply correction factor times gross performance data.
2. Resulting sensible capacity cannot exceed total capacity.

| RHGM-120 @ 3800 CFM [1793 L/s] | | | | | | | | | | | | | |
|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| ACTUAL—CFM [L/s] | 2400 [1133] | 2600 [1227] | 2800 [1321] | 3000 [1416] | 3200 [1510] | 3400 [1605] | 3600 [1699] | 3800 [1793] | 4000 [1888] | 4200 [1982] | 4400 [2077] | 4600 [2171] | 4800 [2265] |
| TOTAL MBH | 0.76 | 0.79 | 0.82 | 0.85 | 0.89 | 0.93 | 0.97 | 1.00 | 1.03 | 1.06 | 1.10 | 1.12 | 1.15 |
| SENSIBLE MBH | 0.68 | 0.73 | 0.78 | 0.82 | 0.87 | 0.91 | 0.96 | 1.00 | 1.04 | 1.08 | 1.13 | 1.17 | 1.21 |

NOTES: 1. Multiply correction factor times gross performance data.
2. Resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

ELECTRIC HEATER KIT CHARACTERISTICS

| AIR HANDLER MODEL | HEATER KIT MODEL | HEATER KIT VOLTAGE | HEATER KIT [kW] | HEATER KIT AMPS | HEATING CAPACITY [kW] | HEATING CAPACITY MBH | MINIMUM CIRCUIT AMPACITY | MAX. FUSE OR HACR BREAKER SIZE |
|---------------------|------------------|--------------------|-----------------|-----------------|-----------------------|----------------------|--------------------------|--------------------------------|
| RHGM-090 / RHGM-120 | RXHE-DE020CA | 208/240 | 20 | 43.1/48.9 | 15.6/20.2 | 53.2/68.9 | 67/73 | 70/80 |
| RHGM-090 / RHGM-120 | RXHE-DE030CA | 208/240 | 30 | 60.8/70.2 | 22.0/29.6 | 75.1/101 | 89/100 | 90/100 |
| RHGM-090 / RHGM-120 | RXHE-DE020DA | 480 | 20 | 24.7 | 20.2 | 68.9 | 37 | 40 |
| RHGM-090 / RHGM-120 | RXHE-DE030DA | 480 | 30 | 35 | 29.7 | 101.3 | 50 | 50 |

NOTE: All kits have two stages of capacity, first stage heating is 50% of total capacity.

ELECTRICAL DATA TABLE

| AIR HANDLER MOTOR | | | RATING PLATE AMPS | MOTOR LRA | MINIMUM CIRCUIT AMPACITY | RECOMMENDED MINIMUM Cu WIRE SIZE (3% VOLTAGE 75°C DROP) MAX. RUN IN FEET | MAX. FUSES BREAKERS |
|-------------------|---------|-------|-------------------|-----------|--------------------------|--|---------------------|
| HP [W] | VOLTS | PHASE | | | | | |
| 1 [746] | 208-230 | 3Ø | 4.0/3.6 | 23.9/21.6 | 15 | #14/240 | 15 |
| 1 [746] | 460 | 3Ø | 1.8 | 10.8 | 15 | #14/400 | 15 |
| 1 [746] | 115-230 | 1Ø | 16/8 | 96/48 | 20/15 | #12/120 #14/180 | 20/15 |
| 1½ [1119] | 208-230 | 3Ø | 5.7/5.2 | 34.5/31.2 | 15 | #14/230 | 15 |
| 1½ [1119] | 460 | 3Ø | 2.6 | 15.6 | 15 | #14/300 | 15 |
| 2 [1491] | 208-230 | 3Ø | 7.5/6.8 | 45.1/40.8 | 15 | #14/165 | 15 |
| 2 [1491] | 460 | 3Ø | 3.4 | 20.4 | 15 | #14/275 | 15 |
| 2 [1491] | 115-230 | 1Ø | 24/12 | 144/72 | 30/15 | #10/140 #14/120 | 30/15 |
| 3 [2237] | 208-230 | 3Ø | 10.6/9.6 | 64.1/58 | 15 | #14/135 | 15 |
| 3 [2237] | 460 | 3Ø | 4.8 | 26.8 | 15 | #14/230 | 15 |

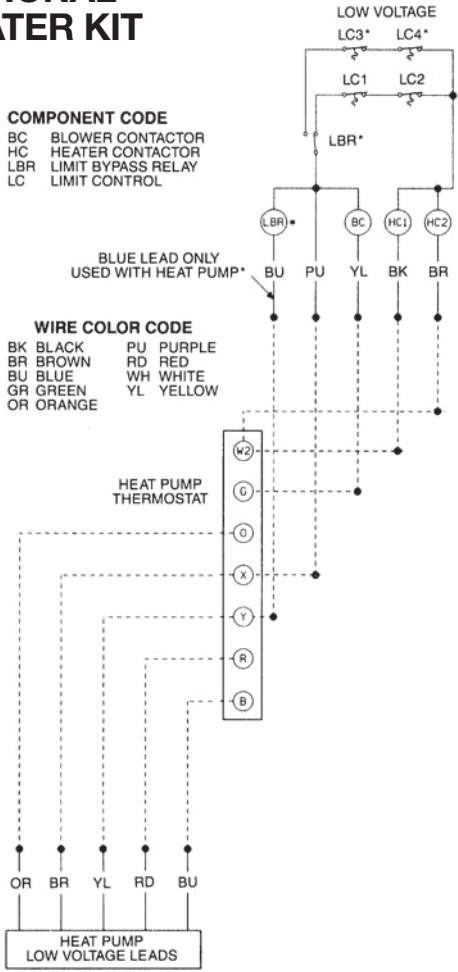
NOTE: N.E.C., C.E.C. and local codes take precedence over suggested wire and fuse sizes.

[] Designates Metric Conversions

OPTIONAL HEATER KIT

COMPONENT CODE
 BC BLOWER CONTACTOR
 HC HEATER CONTACTOR
 LBR LIMIT BYPASS RELAY
 LC LIMIT CONTROL

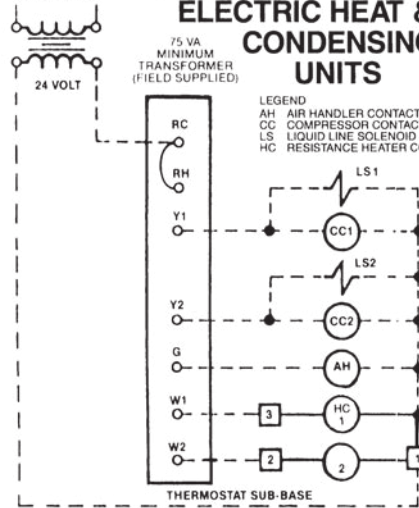
WIRE COLOR CODE
 BK BLACK PU PURPLE
 BR BROWN RD RED
 BU BLUE WH WHITE
 GR GREEN YL YELLOW
 OR ORANGE



*LBR, LC3 AND LC4 NOT REQUIRED ON 200/240 V KITS RATED 20KW & 30KW OR KITS INSTALLED ON 15 TON OR 20 TON AIR HANDLERS

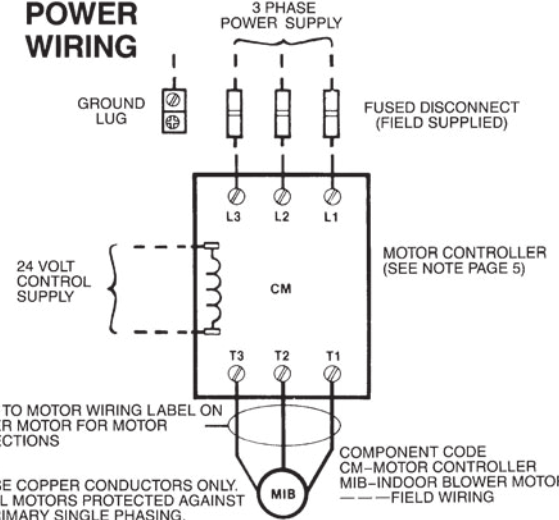
TYPICAL WIRING CONNECTIONS WITH DUAL CIRCUIT AIR HANDLER, ELECTRIC HEAT & TWO CONDENSING UNITS

120-208-230-460 VOLT AS REQUIRED



LEGEND
 AH AIR HANDLER CONTACTOR COIL (SUPPLIED BY OTHERS)
 CC COMPRESSOR CONTACTOR COIL
 LS LIQUID LINE SOLENOID (SUPPLIED BY OTHERS)
 HC RESISTANCE HEATER CONTROLLER

POWER WIRING



REFER TO MOTOR WIRING LABEL ON BLOWER MOTOR FOR MOTOR CONNECTIONS

NOTE:
 1. USE COPPER CONDUCTORS ONLY.
 2. ALL MOTORS PROTECTED AGAINST PRIMARY SINGLE PHASING.

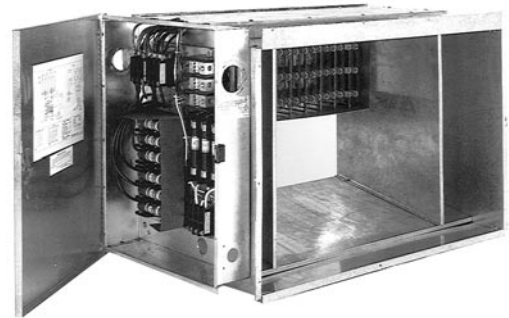
COMPONENT CODE
 CM-MOTOR CONTROLLER
 MIB-INDOOR BLOWER MOTOR
 ---FIELD WIRING

AIR HANDLER ACCESSORIES

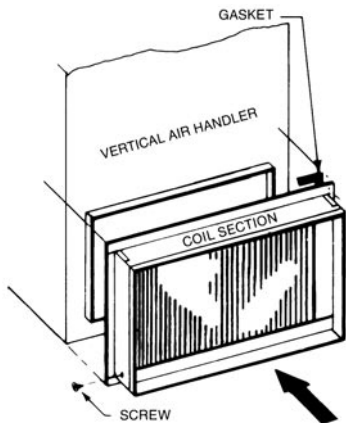
| ACCESSORY DESCRIPTION | MODEL NUMBER | SIZES USED ON | NET WEIGHT (LBS) [kg] |
|-----------------------|--------------|---------------|-----------------------|
| Hot Water Coil | RXHC-C74W | 090, 120 | 200 [91] |
| Steam Coil | RXHC-C74S | 090, 120 | 200 [91] |
| Auxiliary Heater Kit | RXHE-DE020*A | 090, 120 | 75 [34] |
| | RXHE-DE030*A | 090, 120 | 75 [34] |

NOTE: *Designates "C", "D" or "Y" Voltage

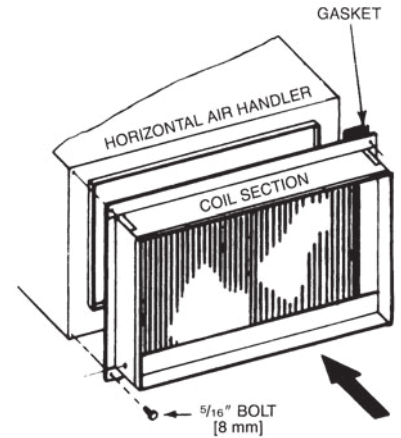
RXHE ELECTRIC HEATER KIT



HOT WATER OR STEAM COILS



(090, 120) RXHC-C74W
RXHC-C74S



(090, 120) RXHC-C74W
RXHC-C74

[] Designates Metric Conversions

AIR HANDLER ACCESSORIES (con't)

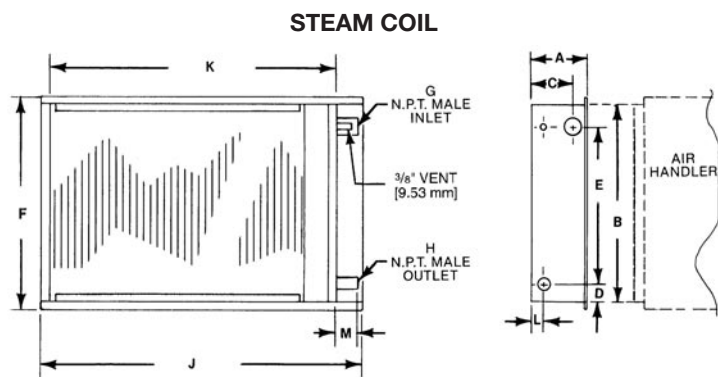
PHYSICAL SPECIFICATIONS

| NOMINAL TONS [kW] | FINNED HEIGHT-IN. [mm] | FINNED LENGTH-IN. [mm] | FACE AREA FT ² [m ²] | CIRCUITS & TUBES HIGH |
|--------------------------|------------------------|------------------------|---|-----------------------|
| 7 1/2 [26.38]-10 [35.17] | 18 [457] | 40 [1016] | 5.0 [.46] | 12 |

GROSS COIL PERFORMANCE

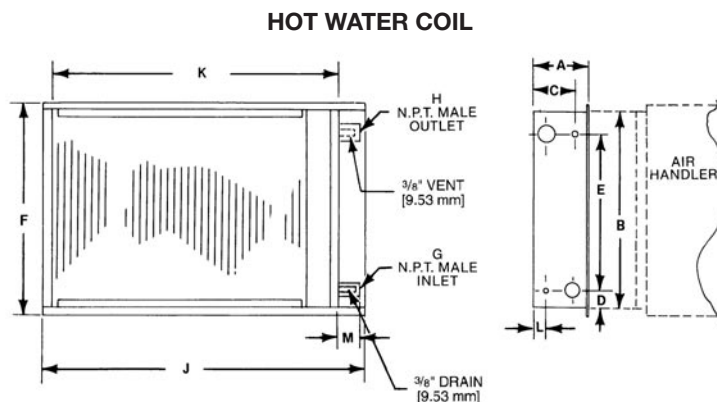
| NOMINAL TONS [kW] | NOMINAL BTUH | | NOMINAL CFM [L/s] | VELOCITY FPM |
|-------------------|--------------|---------|--------------------|--------------|
| | STEAM | WATER | | |
| 7 1/2 [26.38] | 242,500 | 185,000 | 3,000 [1416] | 600 |
| 10 [35.17] | 285,000 | 240,000 | 4,000 [1888] | 800 |

1. Entering air temperature @ 60°F
2. Entering steam @ 5 PSIG
3. Entering water @ 200°F
4. Face velocity = $\frac{\text{CFM}}{\text{Face Area}}$



STEAM COIL COIL DIMENSIONS—INCHES [mm]

| MODEL | NOMINAL TONS [kW] | A | B | C | D | E | F | G | H | J | K | L | M |
|----------|------------------------------|-----------------|-----------------|----------------|----------------|-------------|-------------|---------------|---------------|-------------------|-------------------|-----------------|---------------|
| RXHC-C74 | 7 1/2 [26.38]- 10 [35.17] | 9 1/16 [230] | 2 13/8 [543] | 5 3/8 [137] | 3 3/16 [81] | 15 [381] | 24 [610] | 1 1/2 [38] | 1 1/4 [32] | 5 1 1/2 [1308] | 4 7 5/8 [1210] | 2 13/16 [71] | 3 1/4 [83] |



HOT WATER COIL DIMENSIONS—INCHES [mm]

| MODEL | NOMINAL TONS [kW] | A | B | C | D | E | F | G | H | J | K | L | M |
|-----------|------------------------------|-----------------|-----------------|----------------|----------------|-------------|-------------|---------------|---------------|-------------------|-------------------|-----------------|-----------|
| RXHC-C74W | 7 1/2 [26.38]- 10 [35.17] | 9 1/16 [230] | 2 13/8 [543] | 5 3/8 [137] | 3 3/16 [81] | 15 [381] | 24 [610] | 1 1/4 [32] | 1 1/4 [32] | 5 1 1/2 [1308] | 4 7 5/8 [1210] | 2 13/16 [71] | 3 [76] |

[] Designates Metric Conversions

AIR HANDLER ACCESSORIES (con't) HOT WATER COILS

**CURVE 2
HOT WATER COIL**

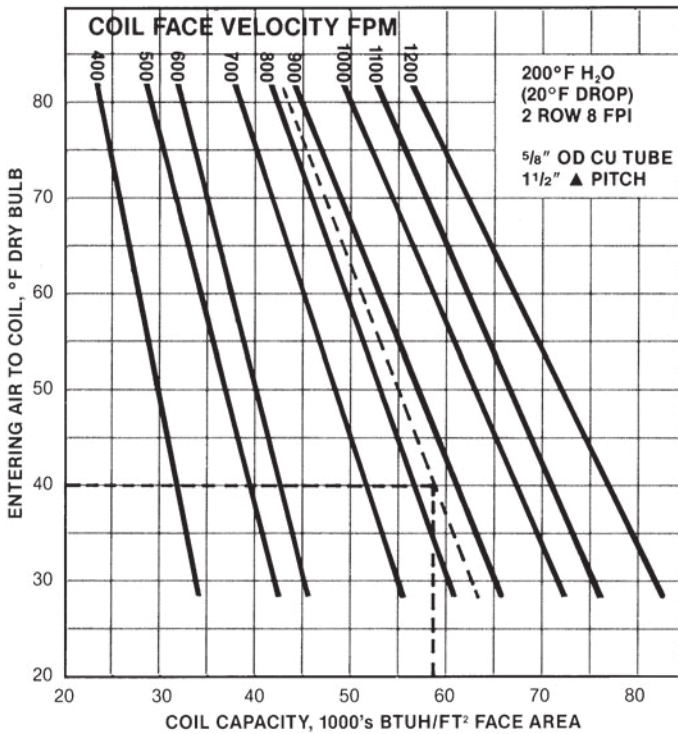


TABLE IV

Curve 2 ratings are based on 200°F entering water and 20°F temperature drop. For other conditions use the following correction factors:

| ENTERING WATER °F | FACTOR | WATER TEMPERATURE DROP °F | FACTOR |
|-------------------|--------|---------------------------|--------|
| 220 | 1.14 | 10 | 1.030 |
| 210 | 1.07 | 15 | 1.015 |
| 200 | 1.00 | 20 | 1.000 |
| 190 | .98 | 25 | .985 |
| 180 | .93 | 30 | .970 |

HOT WATER COIL SELECTION:

Specified:

Entering Air Temp. @ 40°F
5000 CFM @ 6000 Ft. Elevation
220°F Entering Water Temp. @ 36 GPM

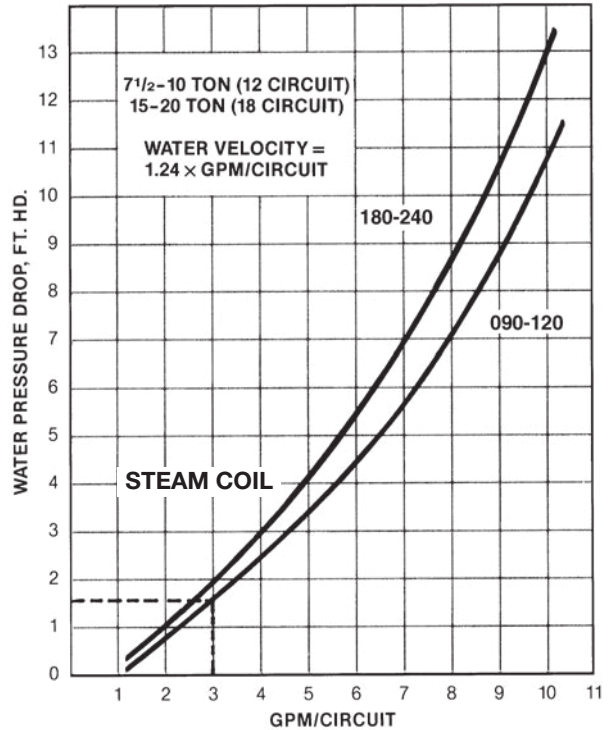
Select 10 Ton Nominal Coil:

Face Area = 5 Ft²
Circuits = 12

Determine Coil Performance:

From Table I, Altitude and Temperature Correction Factor = 1.19 Std. CFM = 5000/1.19 = 4202
Face Velocity = 4202/5 = 840 FPM
From Curve 2, BTUH/Ft² = 57,500
Coil Capacity = 5 x 57,500 = 287,500 BTUH
Water Temp. Drop = 290,000/(500 x 36) = 16.1°F
From Table IV, Water Temp. Factor = 1.14
From Table IV, Water Temp. Drop Factor = 1.012
Total Capacity = 287,500 x 1.14 x 1.012 = 334,570 BTUH
From Curve 3, Water Pressure Drop 36 GPM/12 Circuits = 3 GPM/Circuit = 1.6 FT. HD.
From Table II, Air Side Pressure Drop = .38" H₂O

**CURVE 3
HOT WATER COIL WATER
PRESSURE DROP**



BASIC FORMULA:

$$\text{Air Temperature Rise, } ^\circ\text{F} = \frac{\text{BTUH}}{1.08 \times \text{CFM}}$$

$$\text{Water Temperature Drop, } ^\circ\text{F} = \frac{\text{BTUH}}{500 \times \text{GPM}}$$

AIR HANDLER ACCESSORIES (con't)
STEAM COILS AIRFLOW

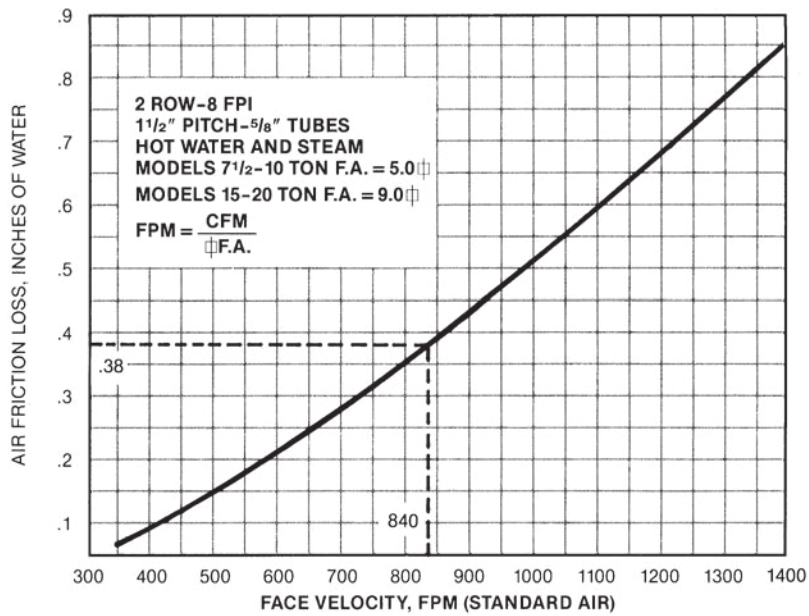
TABLE I
ALTITUDE AND TEMPERATURE CORRECTION FACTOR TABLE

| AIR TEMP. (F) | ALTITUDE IN FEET ABOVE SEA LEVEL | | | | | | | | | | | | | | | |
|---------------|----------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|
| | 0 | 500 | 1000 | 1500 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 | 6000 | 7000 | 8000 | 9000 | 10,000 |
| 0 | .87 | .89 | .91 | .92 | .94 | .96 | .98 | .99 | 1.01 | 1.03 | 1.05 | 1.09 | 1.13 | 1.17 | 1.22 | 1.26 |
| 40 | .94 | .96 | .98 | 1.00 | 1.02 | 1.04 | 1.06 | 1.08 | 1.10 | 1.12 | 1.14 | 1.19 | 1.23 | 1.28 | 1.32 | 1.36 |
| 70 | 1.00 | 1.02 | 1.04 | 1.06 | 1.08 | 1.10 | 1.12 | 1.14 | 1.19 | 1.18 | 1.20 | 1.25 | 1.30 | 1.35 | 1.40 | 1.45 |
| 100 | 1.06 | 1.08 | 1.10 | 1.12 | 1.14 | 1.16 | 1.19 | 1.21 | 1.23 | 1.25 | 1.28 | 1.33 | 1.38 | 1.43 | 1.48 | 1.54 |
| 120 | 1.09 | 1.12 | 1.14 | 1.16 | 1.18 | 1.20 | 1.23 | 1.25 | 1.28 | 1.30 | 1.32 | 1.38 | 1.43 | 1.48 | 1.53 | 1.58 |

EXAMPLE: Determine Equivalent "Standard Air" for use in System Performance Calculations:

$$\text{Standard Air} = \frac{\text{Specified CFM}}{\text{Correction Factor}}$$

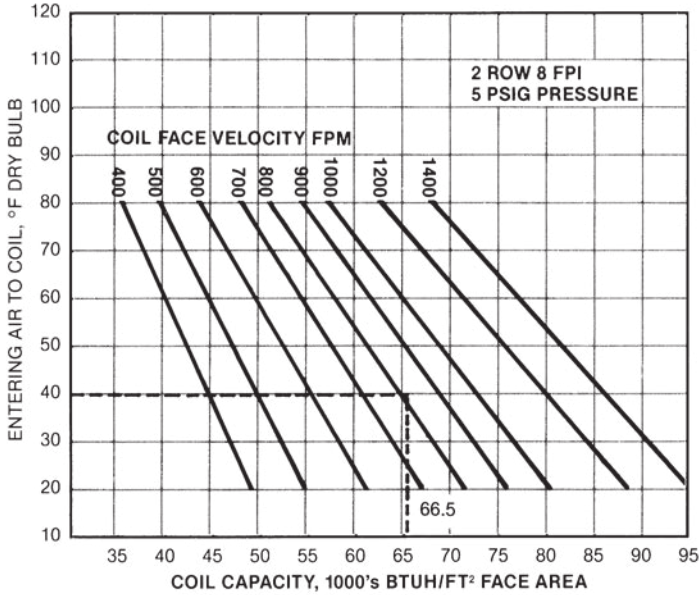
TABLE II
AIR FRICTION LOSS



AIR HANDLER ACCESSORIES (con't)

STEAM COILS

**CURVE 1
STEAM COIL CAPACITY**



TEMPERATURE OF STEAM AT VARIOUS PRESSURES

| Approximate Gauge Pressure (lbs.) | 2 | 5 | 10 | 15 | 20 | 30 |
|-----------------------------------|-----|-----|-----|-----|-----|-----|
| Temperature °F | 218 | 227 | 240 | 250 | 259 | 275 |

TABLE III

Steam Coil Capacity, factors are based on 5 PSIG Steam Pressure. For other conditions use the adjacent correction factors.

| STEAM PR., PSIG | FACTOR |
|-----------------|--------|
| 2 | .96 |
| 5 | 1.00 |
| 10 | 1.06 |
| 15 | 1.11 |
| 20 | 1.16 |
| 30 | 1.24 |

BASIC FORMULA:

$$\text{Air Temperature Rise, } ^\circ\text{F} = \frac{\text{BTUH}}{1.08 \times \text{CFM}}$$

STEAM COIL SELECTION:

Specified:
Steam @ 30 PSIG
Entering Air Temp. @ 40°F Dry Bulb
5000 CFM @ 6000 Ft. Elevation

Select 10 Ton Nominal Coil:

Face Area = 5 Ft²
Circuits = 12

Determine Coil Performance:

From Table I (page 21), Altitude and Temperature Correction Factor = 1.19
Std. CFM = 5000/1.19 = 4202
Face Velocity = 4202/5 = 840 FPM
From Curve 1, BTUH/Ft = 66,500
Coil Capacity = 5 x 65,000 = 325,000 BTUH
From Table III, Steam Correction Factor = 1.24
Total Coil Capacity = 1.24 x 332,500 = 412,300 BTUH
Air Temp. Rise = 403,000/(1.08 x 4202) = 90.85°F
From Table II, Air Side Pressure Drop = .38" H₂O

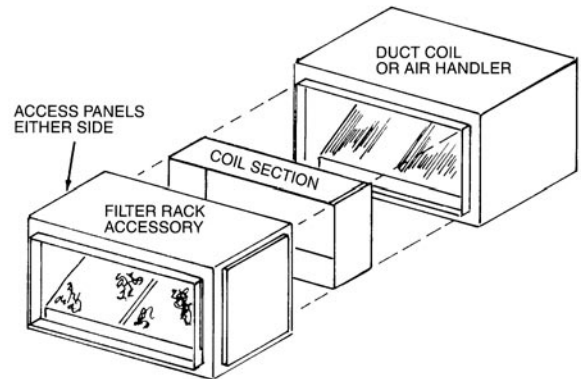
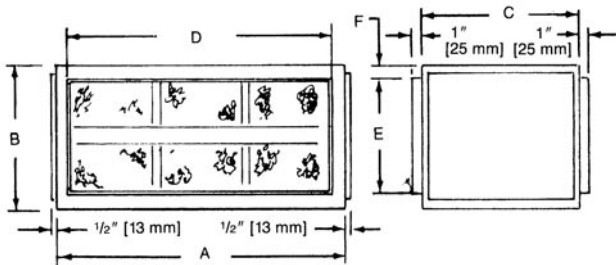
FILTER RACK

The filter rack accessory can be connected directly to the hot water/steam coil accessory. The filter rack accessory is ONLY needed when hot water steam coils are used.

| MODEL NO. | AIR HANDLER SIZES USE ON | IN. [mm] | | | | | |
|-----------|--------------------------|---------------|----------|--------------|---------------|--------------|-------------|
| | | A | B | C | D | E | F |
| RXHF-B74A | 090, 120 | 51 1/2 [1308] | 24 [610] | 25 1/8 [638] | 47 3/8 [1203] | 19 7/8 [505] | 2 1/16 [52] |

FILTER PRESSURE DROP:

| MODEL NO. | CFM [L/s] x 1000 [472] | | | | | | | | |
|-----------|------------------------|---------|---------|----------|----------|----------|---|---|----|
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| RXHF-B74A | .01 [2] | .02 [4] | .03 [7] | .07 [16] | .10 [22] | .15 [33] | — | — | — |



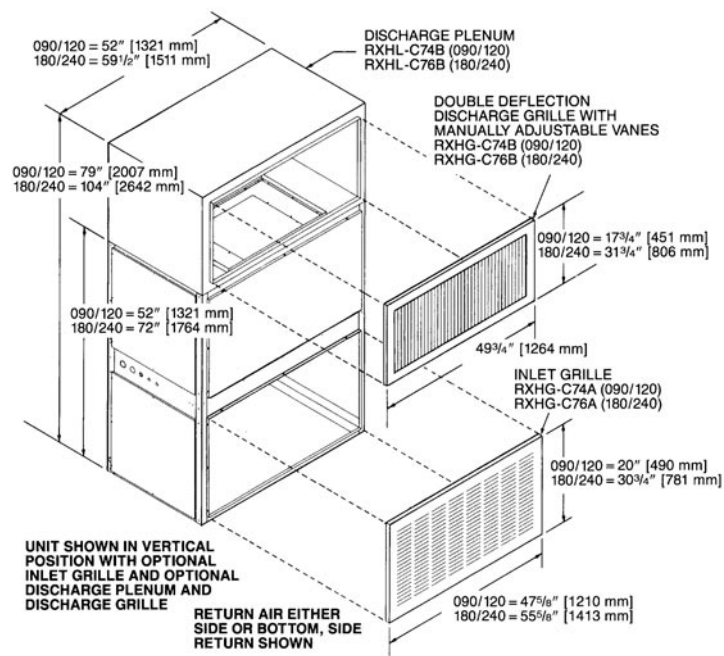
| MODEL NO. | FILTER SIZE (QTY.) TYPE |
|-----------|--|
| RXHF-B74A | 16x20x1 (4) Disposable 20x20x1 (2) Disposable |

[] Designates Metric Conversions

AIR HANDLER ACCESSORIES (con't)

UNIT WITH ACCESSORIES

7.5 THROUGH 10 NOMINAL TONS [26 THROUGH 35 kW]



TYPICAL APPLICATION

7.5 & 10 NOMINAL TONS

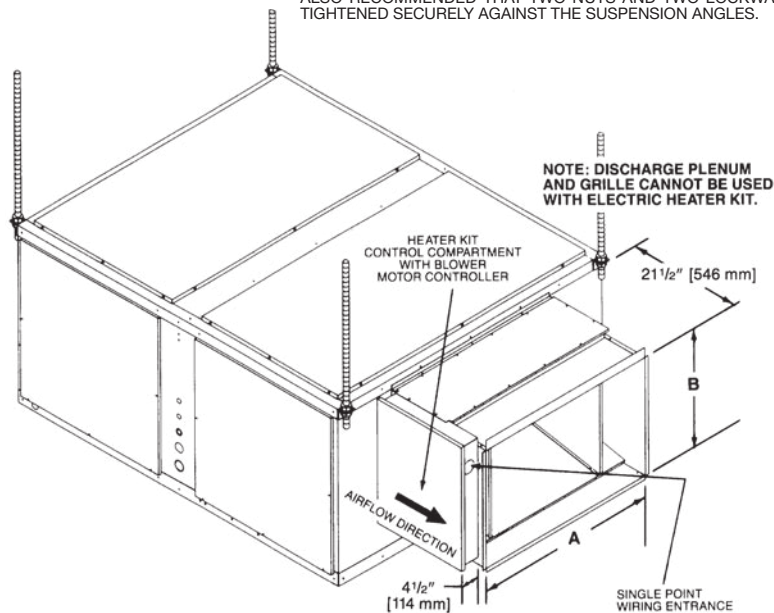
[26 & 35 kW]

OPTIONAL ELECTRICAL HEATER KIT SHOWN INSTALLED IN HORIZONTAL POSITION AND CONNECTED DIRECTLY TO THE AIR HANDLER. THE HEATER KIT MAY ALSO BE INSTALLED WITH THE AIR HANDLER SET IN THE VERTICAL POSITION. IN EITHER POSITION THE HEATER KIT CONTROL COMPARTMENT MUST BE ON THE LEFT SIDE FACING THE AIR DISCHARGE OPENING.

FOUR HEAVY GAUGE ANGLES ARE FURNISHED (SHIPPED LOOSE) FOR SUSPENDING UNITS FROM ALL FOUR CORNERS. MINIMUM OF 1/2" [13] SUPPORT RODS ARE RECOMMENDED. IF ALL-THREAD IS USED, IT IS ALSO RECOMMENDED THAT TWO NUTS AND TWO LOCKWASHERS BE TIGHTENED SECURELY AGAINST THE SUSPENSION ANGLES.

| MODEL NO. | AIR HANDLERS SIZES USED ON | IN. [mm] | |
|--------------|-------------------------------|----------|----------|
| | | A | B |
| RXHE-DE****A | 090, 120 | 20 [508] | 20 [508] |

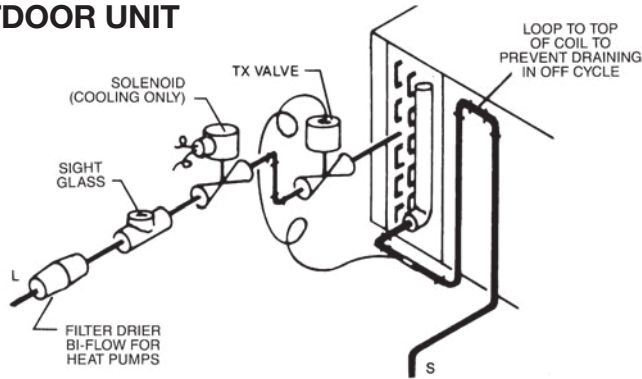
THE BOTTOM OF THE AIR HANDLER SHOULD BE SLOPED IN TWO PLANES THAT PITCH THE CONDENSATE TO THE DRAIN CONNECTION. THE DRAIN PAN SHOULD NOT LEAVE PUDDLES LARGER THAN 2 INCHES IN DIAMETER AND 1/8 INCH DEEP FOR MORE THAN 3 MINUTES.



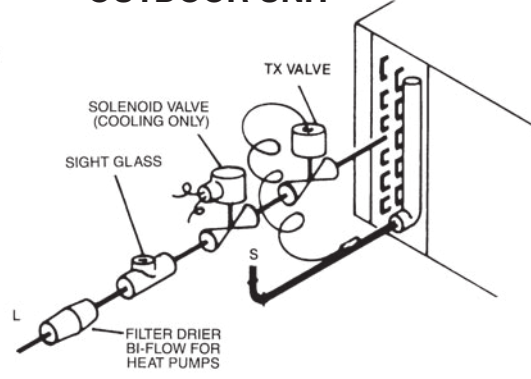
[] Designates Metric Conversions

TYPICAL PIPING RECOMMENDATIONS

INDOOR COIL ABOVE OUTDOOR UNIT



INDOOR COIL BELOW OUTDOOR UNIT



NOTE: PIPING ACCESSORIES SHOWN SHOULD BE MOUNTED AS CLOSE TO AIR HANDLING UNIT AS POSSIBLE.

The 7.5 [26 kW] and 10 [35 kW] Air Handlers are designed as two (2) circuit, full face equal distribution coils. As shipped from the factory, the suction and liquid lines are dual circuits. Copper fittings are supplied in the unit to field manifold the suction and liquid lines for single circuit.

NOTE: The expansion valve bulbs must be secured to the corresponding suction lines. The circuits are marked accordingly. See illustration under Typical Piping recommendations for additional information.

REFRIGERANT PIPING (See Tables at Right)

The following will be of help in accomplishing a successful installation.

1. Size liquid line for no more than 50 PSIG [345 kPa] pressure drop.
2. Size suction lines for no more than 2°F [1.1°C] loss which corresponds to approximately 5 PSIG [34 kPa] pressure drop.
3. When indoor unit is installed below outdoor unit, do not exceed the recommended vapor line O.D. This will insure adequate velocities for proper oil return.
4. Install strainer-drier and sight glass in liquid line.
5. Pitch all horizontal suction lines downward in the direction of flow for cooling only applications.
6. Locate the outdoor unit and indoor unit as close together as possible to minimize piping runs.
7. A liquid line solenoid installed just ahead of the expansion valve is recommended for cooling only applications. Be sure condensing unit is suitable for pump down.
8. Piping runs between condenser and evaporator not to exceed 150' [46 m] linear length (90' [27 m] linear length for heat pumps).

NOTE: Refer to suction and liquid line pressure drop charts found in condensing unit and remote heat pump literature.

[] Designates Metric Conversions

CONDENSATE DRAIN PIPING

- Consult local codes or ordinances for specific requirements regarding condensate drain.
- Condensate drain is open to atmosphere and must be trapped. Trap must be at least 3 inches [76 mm] deep and made of flexible material or fabricated to prevent freeze-up.
- Pitch the drain line at least 1/4 inch [6 mm] per foot away from the drain pan.
- Do not reduce the drain line size from the connection size provided on the unit.
- Do not connect the drain line to a closed sewer line.

| PIPING SIZES 090 & 120 | | | | |
|------------------------|----------------------------|----------|-----------------------------|------------|
| LINEAR LENGTH, FT. [m] | LIQUID LINE O.D., IN. [mm] | | SUCTION LINE O.D., IN. [mm] | |
| | 090 | 120 | 090 | 120 |
| 0-50 [0-15] | 1/2 [13] | 5/8 [16] | 1 1/8 [29] | 1 3/8 [35] |
| 51-100* [16-30] | 1/2 [13] | 5/8 [16] | 1 3/8 [35] | 1 5/8 [41] |
| 101-150 [31-46] | 1/2 [13] | 5/8 [16] | 1 3/8 [35] | 1 5/8 [41] |

*For cooling only, refer to remote heat pump literature for piping recommendations.

| EQUIVALENT LENGTH, FT. [m] OF STRAIGHT TYPE "L" TUBING FOR NON-FERROUS VALVES AND FITTINGS (BRAZED) | | | | | | |
|---|-----------------|-------------|------------------|-----------------|---------------|-----------------|
| TUBE SIZE INCHES [mm] | SOLE-NOID VALVE | ANGLE VALVE | SHORT RADIUS ELL | LONG RADIUS ELL | TEE LINE FLOW | TEE BRANCH FLOW |
| 1/2 [13] | 70 [21.3] | 8.3 [2.5] | 1.6 [0.5] | 1.0 [0.3] | 1.0 [0.3] | 3.1 [0.9] |
| 5/8 [16] | 72 [21.9] | 10.4 [3.2] | 1.9 [0.8] | 1.2 [0.4] | 1.2 [0.4] | 3.6 [1.1] |
| 3/4 [19] | 75 [22.9] | 12.5 [3.8] | 2.1 [0.7] | 1.4 [0.4] | 1.4 [0.4] | 4.2 [1.3] |
| 7/8 [22] | 78 [23.8] | 14.8 [4.4] | 2.4 [0.7] | 1.6 [0.5] | 1.6 [0.5] | 4.8 [1.5] |
| 1 1/8 [29] | | 18.8 [5.7] | 3.0 [0.9] | 2.0 [0.6] | 2.0 [0.6] | 6.0 [1.8] |
| 1 3/8 [35] | | 22.9 [7.0] | 3.6 [1.1] | 2.4 [0.7] | 2.4 [0.7] | 7.2 [2.2] |
| 1 5/8 [41] | | 27.1 [8.3] | 4.2 [1.3] | 2.8 [0.8] | 2.8 [0.8] | 8.4 [2.6] |
| 2 1/8 [54] | | 35.4 [10.8] | 5.3 [1.6] | 3.5 [1.1] | 3.5 [1.1] | 10.7 [3.3] |

OPERATING SEQUENCE

NOTE: Please refer to specification sheets covering RAWL- condensing units for operating sequence.

GUIDE SPECIFICATIONS

Furnish and install as shown on the drawing Ruud Model _____ draw through air handler suitable for both horizontal and vertical applications. The entire assembly shall be UL and cUL listed with the cooling (and heat pump heating) capacity AHRI Certified.

DRIVE PACKAGE—A complete drive package shall be factory or field installed. Package shall consist of a 3 phase 1750 RPM open drip proof internally protected motor, not requiring an external starter. Variable pitch motor sheave, fixed pitch fan sheave, and belt.

COILS—Coils shall be fabricated of $\frac{3}{8}$ " [10 mm] O.D. seamless copper tubing expanded into aluminum fins. All coils shall be submitted to an air pressure test of up to 550 PSIG [2068 kPa] under water after fabrication and dehydrated prior to assembly in unit. Units shall be shipped with a nitrogen holding charge. Airflow shall be draw through design providing uniform air distribution across the coil surface.

BLOWER, BEARINGS AND SHAFT—Fans shall be a double width, double inlet, forward curve, centrifugal type, statically and dynamically balanced, and constructed of galvanized steel. They shall be mounted on $\frac{3}{4}$ " [19 mm], diameter solid shafts made of high carbon steel, centerless ground and polished, supported by resilient mounted sealed bearings.

DRAIN PAN—The drain pan shall be manufactured of zinc coated steel. The pan shall have internally threaded pipe size drain connections and shall be designed to accept condensate in either horizontal or vertical type applications on either side of unit.

FILTERS—Filter mounting hardware shall be designed to accept up to 2" [51 mm] filters for field replacement. One inch [25 mm] throw away filters shall be furnished with the unit.

CABINET—Cabinets shall be manufactured of galvanized steel subjected to multi-stage cleaning. Units shall have removable service access panels on each side and top.

INSULATION—Cabinets shall be insulated with $\frac{1}{2}$ " [13 mm] by $1\frac{1}{2}$ pound [.68 kg] density fiberglass insulation coated with neoprene and bonded to the cabinet surface with a U.L. approved adhesive. Insulation shall have fire retarding characteristics in accordance with smoke developed rating not to exceed 50 and flame spread rating of 25 per Underwriters Laboratories testing procedures.

FACTORY TESTING—In addition to the pre-assembly testing mentioned above, each coil shall be leak tested after assembly into the unit. While under pressure, the coil shall be leak tested using an Electronic Leak Detector.

ELECTRIC HEATERS—UL and cUL listed electric heater kits shall be available in a wide range of capacities. All kits shall offer two stages of capacity, blower motor controller and single point connection. Heater kits shall be available for installation directly on the supply fan discharge for either horizontal or vertical application.

RETURN AIR GRILLES—Shall be provided for vertical return applications.

HOT WATER OR STEAM COILS—Shall be available for field installation. All coils shall be tested to 300 psi. Coils shall be available for either horizontal or vertical air handler applications.

[] Designates Metric Conversions

GENERAL TERMS OF LIMITED WARRANTY*

Ruud will furnish a replacement for any part of this product which fails in normal use and services within the applicable periods stated below, in accordance with the terms of the limited warranty.

*For Complete Details of the Limited Warranty, Including Applicable Terms and Conditions, See Your Local Installer or Contact the Manufacturer for a Copy.

Any Part.....One (1) Year



In keeping with its policy of continuous progress and product improvement, Ruud reserves the right to make changes without notice.

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