

**FMU4X, FMC4X
FMU4Z, FMC4Z
HORIZONTAL FAN COILS
SIZES 18 TO 36
1-1/2 TO 3 NOMINAL TONS**



turn to the experts

Product Data

HORIZONTAL FAN COILS

- FMU4Z and FMC4Z 1-1/2, 2, 2-1/2, and 3 Tons
- FMU4X and FMC4X 1-1/2, 2, 2-1/2, and 3 Tons

ALL MODELS

- Horizontal application only
- Accessory field-installed electric heat kits available in 3, 5, 6, 7.5, or 10 kW
- 40 VA 208/230v-1-60 transformer
- All Models use Puron® (R-410A) TXV metering device
- Adjustable condensate drainpan

FMC4X & FMC4Z

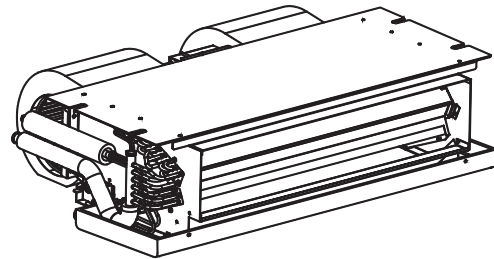
- Horizontal return applications require field fabricated bottom cover
- Cabinets meet the requirement of 1.4% cabinet leakage rate when tested to ASHRAE Standard 193
- Cabinets constructed to prevent cabinet sweating
- Refrigerant lines and electrical connections can be run out the back or side of casing

PERFORMANCE

- PSC motor on all FMU4X & FMC4X models
- ECM motor on all FMU4Z & FMC4Z models

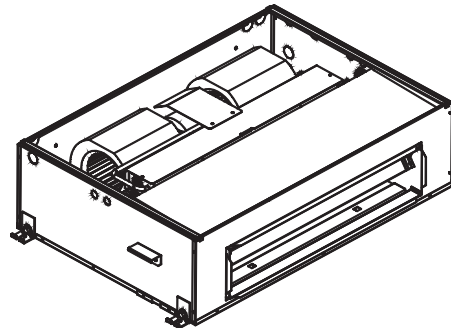
EASY TO INSTALL AND SERVICE

- A-coil design for maximum surface area
- Multiple electrical, refrigerant lineset and drain line entry for application flexibility
- Primary and secondary drain connections exit from the back or side of the cabinet
- Supports furred-down ceiling open return and ducted return applications
- Sweat connections for long term reliability
- Grooved aluminum tube / aluminum fin coils on FMU4X & FMC4X models with "AL" in the 10th & 11th position



A13303

**FMU4X & FMU4Z - Uncased Horizontal Fan Coil
(FMU4Z model shown)**



A13304

**FMC4X & FMC4Z - Cased Horizontal Fan Coil
(Unit pictured upside down)**



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.



| Model | Tons | Nominal BTU | CFM (L/s) | Dimensions H x W x D in. (mm) | Ship Wt. lbs. (kg) |
|----------------|-------|-------------|-----------|--|-----------------------|
| UNCASED | | | | | |
| FMU4X1800AL | 1-1/2 | 18,000 | 600(283) | 10-1/4 x 37-1/4 x 26-3/8 (260 x 946 x 670) | 75 (34) |
| FMU4X2400AL | 2 | 24,000 | 800(378) | | 75 (34) |
| FMU4X3000AL | 2-1/2 | 30,000 | 1000(472) | 10-1/4 x 49-1/4 x 26-3/8 (260 x 1251 x 670) | 93 (42) |
| FMU4X3600AL | 3 | 36,000 | 1200(566) | | 93 (42) |
| FMU4Z1800AL | 1-1/2 | 18,000 | 600(283) | 10-1/4 x 37-1/4 x 26-3/8 (260 x 946 x 670) | 75 (34) |
| FMU4Z2400AL | 2 | 24,000 | 800(378) | | 75 (34) |
| FMU4Z3000AL | 2-1/2 | 30,000 | 1000(472) | 10-1/4 x 49-1/4 x 26-3/8 (260 x 1251 x 670) | 93 (42) |
| FMU4Z3600AL | 3 | 36,000 | 1200(566) | | 93 (42) |
| CASED | | | | | |
| FMC4X1800AL | 1-1/2 | 18,000 | 600(283) | 11 x 39-3/4 x 27-3/4 (282 x 1010 x 704) | 109 (49) |
| FMC4X2400AL | 2 | 24,000 | 800(378) | | 109 (49) |
| FMC4X3000AL | 2-1/2 | 30,000 | 1000(472) | 11 x 51-3/4 x 27-3/4 (282 x 1315 x 704) | 135 (61) |
| FMC4X3600AL | 3 | 36,000 | 1200(566) | | 135 (61) |
| FMC4Z1800AL | 1-1/2 | 18,000 | 600(283) | 11 x 39-3/4 x 27-3/4 (282 x 1010 x 704) | 109 (49) |
| FMC4Z2400AL | 2 | 24,000 | 800(378) | | 109 (49) |
| FMC4Z3000AL | 2-1/2 | 30,000 | 1000(472) | 11 x 51-3/4 x 27-3/4 (282 x 1315 x 704) | 135 (61) |
| FMC4Z3600AL | 3 | 36,000 | 1200(566) | | 135 (61) |

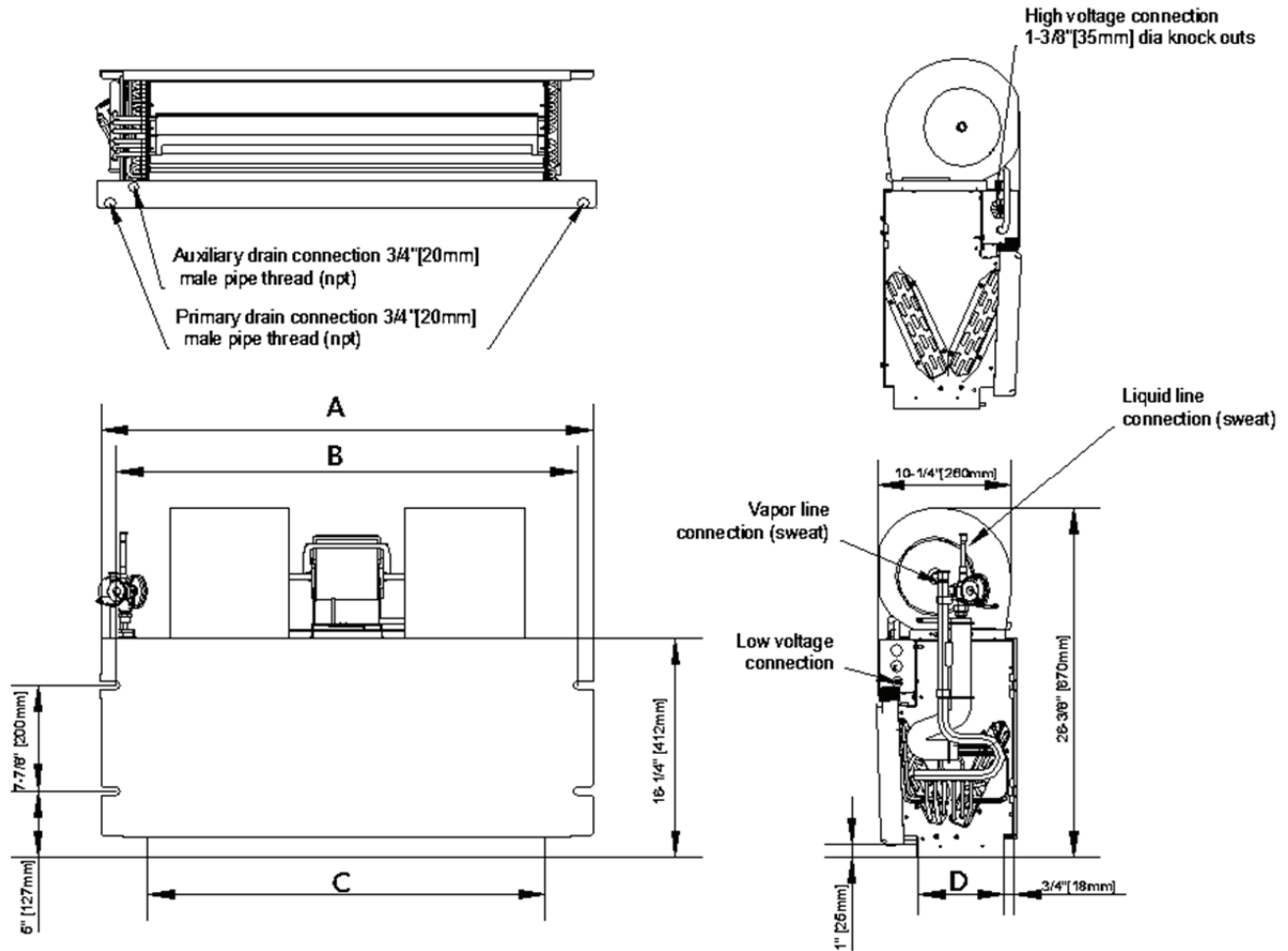
FAN COIL MODEL NUMBER IDENTIFICATION GUIDE

| | | | | | | | | |
|--|----------|----------|-------------------|-------------|-----------------|------------------|----------|-----------------------|
| | F | M | U | 4 | Z | 2400 | A | L |
| F = Fan Coil | | | | | | | | |
| M = Multi-Family | | TYPE | | | | | | |
| U = Uncased C = Cased | | | INSTALLATION TYPE | | | | | |
| 4 = Puron® Refrigerant | | | | REFRIGERANT | | | | |
| X = TXV & PSC Motor Z = TXV & ECM Motor | | | | | METERING DEVICE | | | |
| 1800 = 18,000 BTUH = 1-1/2 tons 2400 = 24,000 BTUH = 2 tons 3000 = 30,000 BTUH = 2-1/2 tons 3600 = 36,000 BTUH = 3 tons | | | | | | NOMINAL CAPACITY | | |
| A = Marketing Revision | | | | | | | REVISION | |
| L = All Aluminum Coils | | | | | | | | SALES CODE / FEATURES |

ELECTRIC HEATER MODEL NUMBER IDENTIFICATION GUIDE

| | | | | |
|--|------------|----------|--------------------|----------|
| | EHK | 3 | 05 | B |
| EHK = Electric Heater Kit | | | | |
| Sales Code | | | | |
| 03 = 3 kW 05 = 5 kW 06 = 6 kW 08 = 7.5 kW 10 = 10 kW | | | NOMINAL HEAT VALUE | |
| Engineering Code | | | | |

DIMENSIONS

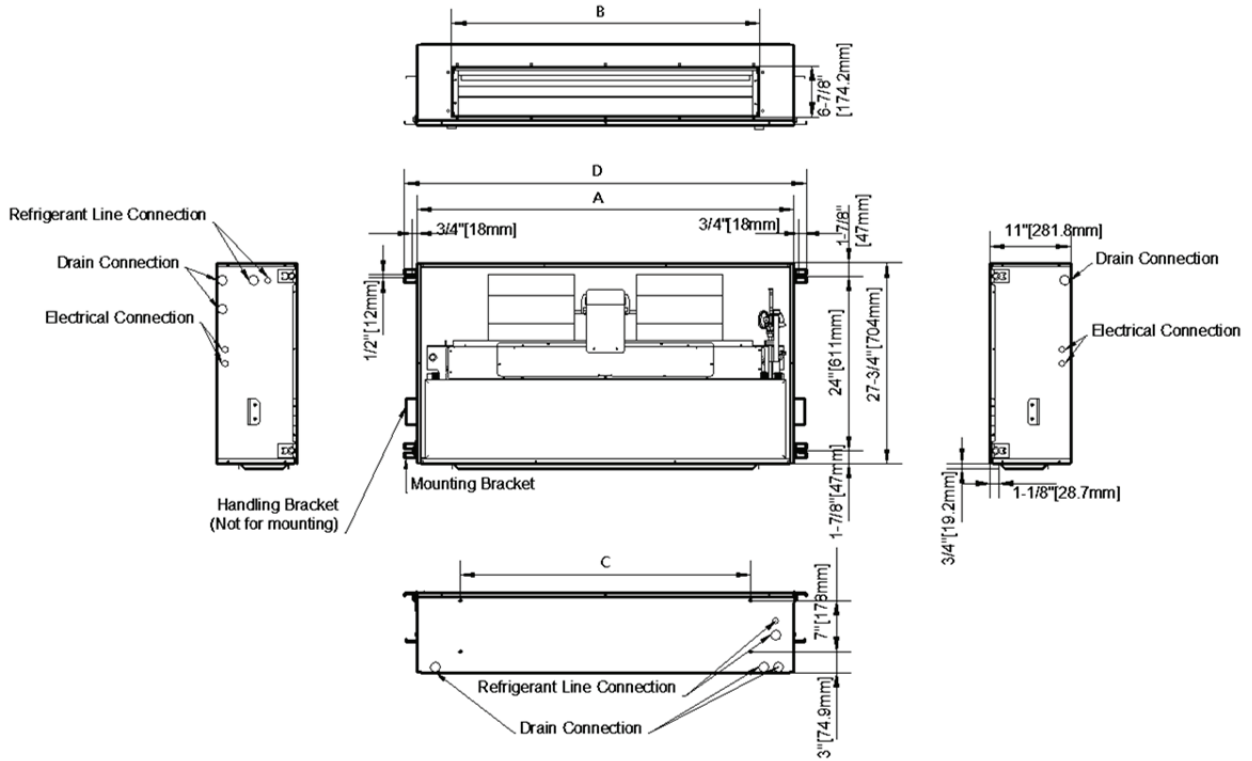


A170307

**FMU4X & FMU4Z Uncased Horizontal Fan Coil Dimensional Drawing
(FMU4Z model shown)**

| Model Size | Dimensions- inches (mm) | | | | Unit Operating Weight lbs (kg) |
|------------|-------------------------|-----------------|-----------|-------------|-----------------------------------|
| | "A" | "B" | "C" | "D" | |
| 18 | 37-1/4 (946) | 34-11/16 (881) | 30 (762) | 6-1/2 (165) | 75 (34) |
| 24 | 37-1/4 (946) | 34-11/16 (881) | 30 (762) | 6-1/2 (165) | 75 (34) |
| 30 | 49-1/4 (1251) | 46-11/16 (1186) | 42 (1067) | 6-1/2 (165) | 93 (42) |
| 36 | 49-1/4 (1251) | 46-11/16 (1186) | 42 (1067) | 6-1/2 (165) | 93 (42) |

DIMENSIONS



**FMC4X & FMC4Z Cased Horizontal Fan Coil Dimensional Drawing
(FMC4Z model shown)**

A170308

| Model Size | Dimensions- inches (mm) | | | | Unit Operating Weight lbs (kg) |
|------------|-------------------------|---------------|-----------|---------------|-----------------------------------|
| | "A" | "B" | "C" | "D" | |
| 18 | 39-3/4 (1010) | 30-3/8 (771) | 28 (711) | 43-3/8 (1101) | 109 (49) |
| 24 | 39-3/4 (1010) | 30-3/8 (771) | 28 (711) | 43-3/8 (1101) | 109 (49) |
| 30 | 51-3/4 (1315) | 42-3/8 (1076) | 40 (1016) | 55-3/8 (1406) | 135 (61) |
| 36 | 51-3/4 (1315) | 42-3/8 (1076) | 40 (1016) | 55-3/8 (1406) | 135 (61) |

| REQUIRED CLEARANCES - ALL MODELS inches (mm) | | |
|--|------------------|---|
| No Heaters | All Sides | 0 |
| | From Supply Duct | 0 |
| With Heaters | All Sides | 0 |
| | From Supply Duct | 0 |

PHYSICAL DATA

| | Unit Size | | | |
|---|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| FM(U,C)4Z | 18 | 24 | 30 | 36 |
| Nominal Cooling Capacity (BTUH) | 18,000 | 24,000 | 30,000 | 36,000 |
| COIL | | | | |
| Puron® (R-410A) - Refrigerant Metering Device | TXV | TXV | TXV | TXV |
| Coil Configuration | A-Coil | | | |
| BLOWER & MOTOR | | | | |
| Air Discharge | Horizontal | | | |
| Blower Type | Dual Blower Direct Drive | | | |
| CFM (Nominal) | 600 | 800 | 1000 | 1200 |
| Motor Type | ECM | ECM | ECM | ECM |
| Motor HP | 1/3 | 1/3 | 1/3 | 1/3 |
| Rated RPM | 1050 | 1050 | 1050 | 1050 |
| Motor Speeds | 5 | 5 | 5 | 5 |
| FILTER | | | | |
| Field Installed - in. (mm) | Qty. 2- 16x20x1 (406x508x25) | Qty. 2- 16x20x1 (406x508x25) | Qty. 2- 20x20x1 (508x508x25) | Qty. 2- 20x20x1 (508x508x25) |
| CONNECTIONS (Sweat) | | | | |
| Suction - in. (mm) | 3/4 in. (19 mm) | | | |
| Liquid - in. (mm) | 3/8 in. (9.5 mm) | | | |
| Condensate (MPT) - in. (mm) | 3/4 in. (19 mm) | | | |
| ELECTRICAL DATA | | | | |
| Voltage | 208/230 | 208/230 | 208/230 | 208/230 |
| Hertz | 60 | 60 | 60 | 60 |
| Minimum Circuit Ampacity | 2.6 | 2.6 | 2.6 | 2.6 |
| Maximum Circuit Protector | 15 (A) | 15 (A) | 15 (A) | 15 (A) |

| | Unit Size | | | |
|--|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| FM(U,C)4X | 18 | 24 | 30 | 36 |
| Nominal Cooling Capacity (BTUH) | 18,000 | 24,000 | 30,000 | 36,000 |
| COIL | | | | |
| Puron®(R-410A) - Refrigerant Metering Device | TXV | | | |
| Coil Configuration | A-Coil | | | |
| BLOWER & MOTOR | | | | |
| Air Discharge | Horizontal | | | |
| Blower Type | Dual Blower Direct Drive | | | |
| CFM (Nominal) | 600 | 800 | 1000 | 1200 |
| Motor Type | PSC | PSC | PSC | PSC |
| Motor HP | 1/8 | 1/8 | 1/3 | 1/3 |
| Rated RPM | 1075 | 1075 | 1600 | 1600 |
| Motor Speeds | 3 | 3 | 3 | 3 |
| FILTER | | | | |
| Field Installed - in. (mm) | Qty. 2- 16x20x1 (406x508x25) | Qty. 2- 16x20x1 (406x508x25) | Qty. 2- 20x20x1 (508x508x25) | Qty. 2- 20x20x1 (508x508x25) |
| CONNECTIONS (Sweat) | | | | |
| Suction - in. (mm) | 3/4 in. (19 mm) | | | |
| Liquid - in. (mm) | 3/8 in. (9.5 mm) | | | |
| Condensate (MPT) - in. (mm) | 3/4 in. (19 mm) | | | |
| ELECTRICAL DATA | | | | |
| Voltage | 208/230 | 208/230 | 208/230 | 208/230 |
| Hertz | 60 | 60 | 60 | 60 |
| Minimum Circuit Ampacity | 1.32 | 1.32 | 2.2 | 2.2 |
| Maximum Circuit Protector | 15 (A) | 15 (A) | 15 (A) | 15 (A) |

PERFORMANCE DATA

AIRFLOW PERFORMANCE (STANDARD CFM)

ECM - SELECTING HEAT PUMP SPEED OF ECM MOTOR (Uncased)

| Model | Motor Speed | CFM Wet Coil without Filter or Electric Heat, Uncased | | | | | | | |
|-------|-------------|---|-----------|-------------|-----------|------------|------------|------------|------------|
| | | External Static Pressure-Inches W.C.[kPa] | | | | | | | |
| | | [0] | 0.1[.025] | 0.15[.0375] | 0.2[.050] | 0.3[0.075] | 0.4[0.100] | 0.5[0.125] | 0.6[0.150] |
| 18 | 1 | 741 | 670 | 638 | 612 | 545 | 470 | 403 | 336 |
| | 2 | 925 | 860 | 819 | 788 | 727 | 655 | 588 | 500 |
| | 3 | 1069 | 1005 | 973 | 941 | 886 | 826 | 683 | 550 |
| | 4 | 1193 | 1140 | 1106 | 1071 | 970 | 850 | 700 | 560 |
| | 5 | 1288 | 1221 | 1177 | 1133 | 1024 | 895 | 745 | 575 |
| 24 | 1 | 741 | 670 | 638 | 612 | 545 | 470 | 403 | 336 |
| | 2 | 925 | 860 | 819 | 788 | 727 | 655 | 588 | 500 |
| | 3 | 1069 | 1005 | 973 | 941 | 886 | 826 | 683 | 550 |
| | 4 | 1193 | 1140 | 1106 | 1071 | 970 | 850 | 700 | 560 |
| | 5 | 1288 | 1221 | 1177 | 1133 | 1024 | 895 | 745 | 575 |
| 30 | 1 | 800 | 691 | 647 | 602 | 530 | 460 | 380 | 300 |
| | 2 | 1025 | 921 | 871 | 820 | 723 | 628 | 536 | 448 |
| | 3 | 1203 | 1106 | 1059 | 1011 | 916 | 822 | 729 | 636 |
| | 4 | 1339 | 1266 | 1224 | 1181 | 1085 | 978 | 859 | 729 |
| | 5 | 1468 | 1399 | 1361 | 1323 | 1253 | 1061 | 900 | 760 |
| 36 | 1 | 800 | 691 | 647 | 602 | 530 | 460 | 380 | 300 |
| | 2 | 1025 | 921 | 871 | 820 | 723 | 628 | 536 | 448 |
| | 3 | 1203 | 1106 | 1059 | 1011 | 916 | 822 | 729 | 636 |
| | 4 | 1339 | 1266 | 1224 | 1181 | 1085 | 978 | 859 | 729 |
| | 5 | 1468 | 1399 | 1361 | 1323 | 1253 | 1061 | 900 | 760 |

PSC- SELECTING HEAT PUMP SPEED OF PSC MOTOR (Uncased)

| Model | Motor Speed | CFM Wet Coil without Filter or Electric Heat, Uncased | | | | | | | |
|-------|-------------|---|-------------|-------------|-------------|------------|-------------|------------|-------------|
| | | External Static Pressure-Inches W.C.[kPa] | | | | | | | |
| | | [0] | 0.05[.0125] | 0.1[.025] | 0.15[.0375] | 0.2[.050] | 0.25[.0625] | 0.3[.075] | 0.35[.0875] |
| 18 | Low | 748 | 716 | 677 | 629 | 573 | 510 | 439 | 360 |
| | Medium | 955 | 910 | 855 | 792 | 719 | 638 | 547 | 448 |
| | High | 992 | 941 | 884 | 820 | 749 | 672 | 588 | 497 |
| 24 | Low | 748 | 716 | 677 | 629 | 573 | 510 | 439 | 360 |
| | Medium | 955 | 910 | 855 | 792 | 719 | 638 | 547 | 448 |
| | High | 992 | 941 | 884 | 820 | 749 | 672 | 588 | 497 |
| Model | Motor Speed | CFM Wet Coil without Filter or Electric Heat, Uncased | | | | | | | |
| | | External Static Pressure-Inches W.C.[kPa] | | | | | | | |
| | | [0] | 0.1[.025] | 0.15[.0375] | 0.2[.050] | 0.3[0.075] | 0.4[0.100] | 0.5[0.125] | 0.6[0.150] |
| 30 | Low | 1221 | 1132 | 1085 | 1037 | 936 | 831 | 720 | 603 |
| | Medium | 1331 | 1247 | 1202 | 1155 | 1055 | 947 | 831 | 707 |
| | High | 1442 | 1370 | 1328 | 1282 | 1178 | 1059 | 925 | 775 |
| 36 | Low | 1221 | 1132 | 1085 | 1037 | 936 | 831 | 720 | 603 |
| | Medium | 1331 | 1247 | 1202 | 1155 | 1055 | 947 | 831 | 707 |
| | High | 1442 | 1370 | 1328 | 1282 | 1178 | 1059 | 925 | 775 |

■ - Shaded boxes represent airflow outside the required 300-450 CFM/ton.

NOTES:

- Airflow data is without filter or electric heat accessory. Heater adds 0.05 -in. static.
- Use wet coil data for determining cooling airflow
- Accessory louver panel adds 0.05 -in. Static.
- When electric heater is working only, 300CFM for each ton is sufficient except 30K work with 10KW heat (≥ 900 SCFM)

PERFORMANCE DATA (cont.)

ECM - SELECTING HEAT PUMP SPEED OF ECM MOTOR (Cased, Back Return)

| Model | Motor Speed | CFM Wet Coil without Filter or Electric Heat, Cased, Back Return | | | | | | | |
|-------|-------------|--|-----------|-------------|-----------|-----------|-----------|-----------|-------------|
| | | External Static Pressure-Inches W.C.[kPa] | | | | | | | |
| | | [0] | 0.1[.025] | 0.15[.0375] | 0.2[.050] | 0.3[.075] | 0.4[.100] | 0.5[.125] | 0.55[.1375] |
| 18K | 1 | 753 | 655 | 609 | 564 | 481 | 407 | 340 | 309 |
| | 2 | 913 | 828 | 787 | 746 | 666 | 588 | 513 | 476 |
| | 3 | 1044 | 982 | 945 | 904 | 810 | 700 | 575 | 500 |
| | 4 | 1153 | 1058 | 1007 | 953 | 837 | 711 | 578 | 503 |
| | 5 | 1163 | 1068 | 1017 | 963 | 847 | 719 | 580 | 506 |
| 24K | 1 | 753 | 655 | 609 | 564 | 481 | 407 | 340 | 309 |
| | 2 | 913 | 828 | 787 | 746 | 666 | 588 | 513 | 476 |
| | 3 | 1044 | 982 | 945 | 904 | 810 | 700 | 575 | 500 |
| | 4 | 1153 | 1058 | 1007 | 953 | 837 | 711 | 578 | 503 |
| | 5 | 1163 | 1068 | 1017 | 963 | 847 | 719 | 580 | 506 |
| 30K | 1 | 801 | 700 | 651 | 602 | 508 | 418 | 331 | 288 |
| | 2 | 1015 | 916 | 869 | 822 | 731 | 645 | 562 | 523 |
| | 3 | 1177 | 1107 | 1069 | 1029 | 943 | 848 | 745 | 670 |
| | 4 | 1327 | 1279 | 1245 | 1203 | 1098 | 963 | 795 | 692 |
| | 5 | 1493 | 1404 | 1350 | 1289 | 1150 | 987 | 798 | 695 |
| 36K | 1 | 801 | 700 | 651 | 602 | 508 | 418 | 331 | 288 |
| | 2 | 1015 | 916 | 869 | 822 | 731 | 645 | 562 | 523 |
| | 3 | 1177 | 1107 | 1069 | 1029 | 943 | 848 | 745 | 670 |
| | 4 | 1327 | 1279 | 1245 | 1203 | 1098 | 963 | 795 | 692 |
| | 5 | 1493 | 1404 | 1350 | 1289 | 1150 | 987 | 798 | 695 |

ECM- SELECTING HEAT PUMP SPEED OF ECM MOTOR (Cased, Bottom Return)

| Model | Motor Speed | CFM Wet Coil without Filter or Electric Heat, Cased, Bottom Return | | | | | | | |
|-------|-------------|--|-----------|-------------|-----------|-----------|-----------|-----------|-------------|
| | | External Static Pressure-Inches W.C.[kPa] | | | | | | | |
| | | [0] | 0.1[.025] | 0.15[.0375] | 0.2[.050] | 0.3[.075] | 0.4[.100] | 0.5[.125] | 0.55[.1375] |
| 18K | 1 | 756 | 658 | 611 | 566 | 480 | 400 | 325 | 290 |
| | 2 | 946 | 855 | 810 | 766 | 675 | 591 | 506 | 464 |
| | 3 | 1035 | 965 | 926 | 883 | 788 | 681 | 561 | 497 |
| | 4 | 1208 | 1110 | 1056 | 999 | 874 | 736 | 585 | 504 |
| | 5 | 1225 | 1132 | 1079 | 1023 | 898 | 758 | 602 | 518 |
| 24K | 1 | 756 | 658 | 611 | 566 | 480 | 400 | 325 | 290 |
| | 2 | 946 | 855 | 810 | 766 | 678 | 591 | 506 | 464 |
| | 3 | 1035 | 965 | 926 | 883 | 788 | 681 | 561 | 497 |
| | 4 | 1208 | 1110 | 1056 | 999 | 874 | 736 | 585 | 504 |
| | 5 | 1225 | 1132 | 1079 | 1023 | 898 | 758 | 602 | 518 |
| 30K | 1 | 796 | 712 | 670 | 626 | 537 | 445 | 351 | 302 |
| | 2 | 1012 | 901 | 850 | 801 | 709 | 627 | 555 | 522 |
| | 3 | 1156 | 1083 | 1044 | 1002 | 911 | 811 | 702 | 616 |
| | 4 | 1310 | 1197 | 1150 | 1101 | 980 | 850 | 708 | 626 |
| | 5 | 1469 | 1328 | 1256 | 1182 | 1031 | 875 | 714 | 632 |
| 36K | 1 | 796 | 712 | 670 | 626 | 537 | 445 | 351 | 302 |
| | 2 | 1012 | 901 | 850 | 801 | 709 | 627 | 555 | 522 |
| | 3 | 1156 | 1083 | 1044 | 1002 | 911 | 811 | 702 | 616 |
| | 4 | 1310 | 1197 | 1150 | 1101 | 980 | 850 | 708 | 626 |
| | 5 | 1469 | 1328 | 1256 | 1182 | 1031 | 875 | 714 | 632 |

■ – Shaded boxes represent airflow outside the required 300-450 CFM/ton.

NOTES:

- Airflow data is without filter or electric heat accessory. Heater adds 0.05 –in. static.
- Use wet coil data for determining cooling airflow
- Accessory louver panel adds 0.05 –in. Static.
- When electric heater is working only, 300CFM for each ton is sufficient except 30K work with 10KW heat (≥ 900 SCFM)

PERFORMANCE DATA (cont.)

PSC- SELECTING HEAT PUMP SPEED OF PSC MOTOR (Cased, Back Return)

| Model | Motor Speed | CFM Wet Coil without Filter or Electric Heat, Cased, Back Return | | | | | | | |
|-------|-------------|--|-------------|-------------|-------------|-----------|-------------|-----------|-------------|
| | | External Static Pressure-Inches W.C.[kPa] | | | | | | | |
| | | [0] | 0.05[.0125] | 0.1[.025] | 0.15[.0375] | 0.2[.050] | 0.25[.0625] | 0.3[.075] | 0.35[.0875] |
| 18K | L | 714 | 679 | 636 | 585 | 527 | 461 | 387 | 306 |
| | M | 829 | 790 | 743 | 690 | 628 | 559 | 483 | 399 |
| | H | 876 | 830 | 776 | 723 | 662 | 593 | 517 | 432 |
| 24K | L | 714 | 679 | 636 | 585 | 527 | 461 | 387 | 306 |
| | M | 829 | 790 | 743 | 690 | 628 | 559 | 483 | 399 |
| | H | 876 | 830 | 776 | 723 | 662 | 593 | 517 | 432 |
| Model | Motor Speed | CFM Wet Coil without Filter or Electric Heat, Cased, Back Return | | | | | | | |
| | | External Static Pressure-Inches W.C.[kPa] | | | | | | | |
| | | [0] | 0.1[.025] | 0.15[.0375] | 0.2[.050] | 0.3[.075] | 0.4[.100] | 0.5[.125] | 0.6[.150] |
| 30K | L | 1191 | 1096 | 1047 | 997 | 894 | 787 | 675 | 560 |
| | M | 1299 | 1201 | 1151 | 1101 | 1000 | 897 | 793 | 687 |
| | H | 1435 | 1323 | 1268 | 1214 | 1107 | 1003 | 902 | 804 |
| 36K | L | 1191 | 1096 | 1047 | 997 | 894 | 787 | 675 | 560 |
| | M | 1299 | 1201 | 1151 | 1101 | 1000 | 897 | 793 | 687 |
| | H | 1435 | 1323 | 1268 | 1214 | 1107 | 1003 | 902 | 804 |

PSC- SELECTING HEAT PUMP SPEED OF PSC MOTOR (Cased, Bottom Return)

| Model | CFM Wet Coil without Filter or Electric Heat, Cased, Bottom Return | | | | | | |
|-------|--|-------------|-------------|-------------|------------|-----------|-------------|
| | External Static Pressure-Inches W.C.[kPa] | | | | | | |
| | [0] | 0.05[.0125] | 0.1[.025] | 0.15[.0375] | .25[.0625] | 0.3[.075] | 0.35[.0875] |
| 18K | 726 | 689 | 645 | 593 | 464 | 392 | 315 |
| | 845 | 801 | 753 | 692 | 559 | 487 | 411 |
| | 887 | 832 | 773 | 711 | 573 | 498 | 419 |
| 24K | 726 | 689 | 645 | 593 | 464 | 392 | 315 |
| | 845 | 801 | 753 | 692 | 559 | 487 | 411 |
| | 887 | 832 | 773 | 711 | 573 | 498 | 419 |
| Model | CFM Wet Coil without Filter or Electric Heat, Cased, Bottom Return | | | | | | |
| | External Static Pressure-Inches W.C.[kPa] | | | | | | |
| | [0] | 0.1[.025] | 0.15[.0375] | 0.2[.050] | .4[.100] | 0.5[.125] | 0.6[.150] |
| 30K | 1200 | 1095 | 1042 | 989 | 768 | 655 | 539 |
| | 1305 | 1208 | 1158 | 1106 | 884 | 764 | 638 |
| | 1423 | 1327 | 1276 | 1224 | 994 | 867 | 733 |
| 36K | 1200 | 1095 | 1042 | 989 | 768 | 655 | 539 |
| | 1305 | 1208 | 1158 | 1106 | 884 | 764 | 638 |
| | 1423 | 1327 | 1276 | 1224 | 994 | 867 | 733 |

■ – Shaded boxes represent airflow outside the required 300-450 CFM/ton.

NOTES:

- Airflow data is without filter or electric heat accessory. Heater adds 0.05 –in. static.
- Use wet coil data for determining cooling airflow
- Accessory louver panel adds 0.05 –in. Static.
- When electric heater is working only, 300CFM for each ton is sufficient except 30K work with 10KW heat (≥ 900 SCFM)

REQUIRED CFM RANGE

| Size | CFM | |
|------|-----|------|
| | Min | Max |
| 18 | 450 | 675 |
| 24 | 600 | 900 |
| 30 | 750 | 1125 |
| 36 | 900 | 1350 |

PERFORMANCE DATA (cont.)

GROSS COOLING CAPACITIES (MBH)

| INDOOR COIL AIR | | SATURATED TEMPERATURE LEAVING EVAPORATOR (deg F) | | | | | | | | | | | | | | |
|---|-----|--|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|
| | | 35 | | | 40 | | | 45 | | | 50 | | | 55 | | |
| CFM | EWB | TC | SHC | BF | TC | SHC | BF | TC | SHC | BF | TC | SHC | BF | TC | SHC | BF |
| FM(C,U)4(X,Z)1800AL | | | | | | | | | | | | | | | | |
| 525 | 72 | 31.17 | 15.22 | 0.00 | 28.42 | 13.93 | 0.03 | 25.33 | 12.56 | 0.05 | 21.81 | 11.10 | 0.05 | 17.82 | 9.55 | 0.06 |
| | 67 | 25.90 | 15.84 | 0.06 | 23.07 | 14.47 | 0.06 | 19.86 | 13.00 | 0.06 | 16.23 | 11.45 | 0.06 | 12.13 | 9.82 | 0.06 |
| | 62 | 21.06 | 16.35 | 0.06 | 18.13 | 14.89 | 0.06 | 14.92 | 13.40 | 0.06 | 12.25 | 12.25 | 0.10 | 10.38 | 10.38 | 0.24 |
| 600 | 72 | 33.78 | 16.47 | 0.02 | 30.86 | 15.12 | 0.05 | 27.54 | 13.67 | 0.06 | 23.73 | 12.10 | 0.07 | 19.39 | 10.43 | 0.07 |
| | 67 | 28.16 | 17.29 | 0.07 | 25.11 | 15.83 | 0.07 | 21.63 | 14.26 | 0.07 | 17.67 | 12.58 | 0.07 | 13.20 | 10.82 | 0.07 |
| | 62 | 22.93 | 17.96 | 0.07 | 19.75 | 16.40 | 0.07 | 16.30 | 14.81 | 0.07 | 13.55 | 13.55 | 0.12 | 11.48 | 11.48 | 0.25 |
| 675 | 72 | 36.15 | 17.59 | 0.04 | 33.06 | 16.20 | 0.06 | 29.52 | 14.68 | 0.07 | 25.47 | 13.03 | 0.08 | 20.81 | 11.25 | 0.08 |
| | 67 | 30.20 | 18.62 | 0.08 | 26.95 | 17.09 | 0.08 | 23.24 | 15.43 | 0.09 | 18.99 | 13.65 | 0.09 | 14.19 | 11.76 | 0.09 |
| | 62 | 24.63 | 19.47 | 0.09 | 21.23 | 17.81 | 0.09 | 17.59 | 16.15 | 0.09 | 14.79 | 14.79 | 0.14 | 12.52 | 12.52 | 0.27 |
| SATURATED TEMPERATURE LEAVING EVAPORATOR (deg F) | | | | | | | | | | | | | | | | |
| INDOOR COIL AIR | | 35 | | | 40 | | | 45 | | | 50 | | | 55 | | |
| CFM | EWB | TC | SHC | BF | TC | SHC | BF | TC | SHC | BF | TC | SHC | BF | TC | SHC | BF |
| FM(C,U)4(X,Z)2400AL | | | | | | | | | | | | | | | | |
| 700 | 72 | 37.46 | 18.58 | 0.05 | 34.27 | 17.12 | 0.07 | 30.61 | 15.52 | 0.08 | 26.42 | 13.79 | 0.08 | 21.59 | 11.92 | 0.09 |
| | 67 | 31.31 | 19.71 | 0.09 | 27.96 | 18.11 | 0.09 | 24.11 | 16.37 | 0.09 | 19.71 | 14.48 | 0.09 | 14.73 | 12.49 | 0.09 |
| | 62 | 25.55 | 20.65 | 0.09 | 22.03 | 18.91 | 0.09 | 18.28 | 17.17 | 0.09 | 15.43 | 15.43 | 0.15 | 13.06 | 13.06 | 0.28 |
| 800 | 72 | 40.19 | 19.94 | 0.07 | 36.84 | 18.43 | 0.09 | 32.95 | 16.76 | 0.10 | 28.46 | 14.93 | 0.10 | 23.29 | 12.94 | 0.10 |
| | 67 | 33.69 | 21.36 | 0.11 | 30.12 | 19.68 | 0.11 | 26.01 | 17.84 | 0.11 | 21.28 | 15.84 | 0.11 | 15.93 | 13.71 | 0.11 |
| | 62 | 27.55 | 22.54 | 0.11 | 23.79 | 20.71 | 0.11 | 19.86 | 18.91 | 0.11 | 16.99 | 16.99 | 0.17 | 14.38 | 14.38 | 0.30 |
| 900 | 72 | 42.69 | 21.21 | 0.09 | 39.17 | 19.65 | 0.10 | 35.06 | 17.92 | 0.11 | 30.32 | 16.01 | 0.11 | 24.84 | 13.91 | 0.12 |
| | 67 | 35.86 | 22.91 | 0.12 | 32.09 | 21.16 | 0.12 | 27.75 | 19.24 | 0.12 | 22.73 | 17.13 | 0.12 | 17.05 | 14.89 | 0.12 |
| | 62 | 29.39 | 24.36 | 0.12 | 25.42 | 22.44 | 0.12 | 21.37 | 20.58 | 0.12 | 18.44 | 18.44 | 0.20 | 15.62 | 15.62 | 0.32 |
| SATURATED TEMPERATURE LEAVING EVAPORATOR (deg F) | | | | | | | | | | | | | | | | |
| INDOOR COIL AIR | | 35 | | | 40 | | | 45 | | | 50 | | | 55 | | |
| CFM | EWB | TC | SHC | BF | TC | SHC | BF | TC | SHC | BF | TC | SHC | BF | TC | SHC | BF |
| FM(C,U)4(X,Z)3000AL | | | | | | | | | | | | | | | | |
| 875 | 72 | 43.25 | 21.49 | 0.03 | 39.50 | 19.74 | 0.06 | 35.30 | 17.88 | 0.06 | 30.45 | 15.85 | 0.07 | 24.89 | 13.66 | 0.07 |
| | 67 | 36.06 | 22.72 | 0.08 | 32.19 | 20.84 | 0.08 | 27.76 | 18.80 | 0.08 | 22.68 | 16.60 | 0.08 | 16.92 | 14.27 | 0.08 |
| | 62 | 29.39 | 23.75 | 0.08 | 25.33 | 21.71 | 0.08 | 20.93 | 19.65 | 0.08 | 17.49 | 17.49 | 0.13 | 14.78 | 14.78 | 0.26 |
| 1000 | 72 | 46.56 | 23.14 | 0.05 | 42.58 | 21.32 | 0.07 | 38.10 | 19.36 | 0.08 | 32.92 | 17.23 | 0.09 | 26.93 | 14.89 | 0.09 |
| | 67 | 38.91 | 24.68 | 0.09 | 34.80 | 22.72 | 0.09 | 30.04 | 20.56 | 0.09 | 24.57 | 18.21 | 0.09 | 18.36 | 15.72 | 0.09 |
| | 62 | 31.78 | 26.00 | 0.09 | 27.44 | 23.85 | 0.09 | 22.80 | 21.69 | 0.09 | 19.32 | 19.32 | 0.15 | 16.33 | 16.33 | 0.28 |
| 1125 | 72 | 49.47 | 24.61 | 0.08 | 45.31 | 22.74 | 0.09 | 40.58 | 20.72 | 0.10 | 35.11 | 18.48 | 0.10 | 28.77 | 16.03 | 0.10 |
| | 67 | 41.45 | 26.48 | 0.11 | 37.10 | 24.44 | 0.11 | 32.08 | 22.19 | 0.11 | 26.27 | 19.72 | 0.11 | 19.67 | 17.09 | 0.11 |
| | 62 | 33.93 | 28.10 | 0.11 | 29.33 | 25.84 | 0.11 | 24.54 | 23.64 | 0.11 | 21.04 | 21.04 | 0.18 | 17.79 | 17.79 | 0.30 |
| SATURATED TEMPERATURE LEAVING EVAPORATOR (deg F) | | | | | | | | | | | | | | | | |
| INDOOR COIL AIR | | 35 | | | 40 | | | 45 | | | 50 | | | 55 | | |
| CFM | EWB | TC | SHC | BF | TC | SHC | BF | TC | SHC | BF | TC | SHC | BF | TC | SHC | BF |
| FM(C,U)4(X,Z)3600AL | | | | | | | | | | | | | | | | |
| 1050 | 72 | 50.80 | 24.99 | 0.06 | 46.48 | 23.05 | 0.08 | 41.61 | 20.96 | 0.09 | 35.97 | 18.67 | 0.09 | 29.45 | 16.17 | 0.09 |
| | 67 | 42.50 | 26.75 | 0.10 | 38.02 | 24.65 | 0.10 | 32.84 | 22.34 | 0.10 | 26.88 | 19.82 | 0.10 | 20.10 | 17.13 | 0.10 |
| | 62 | 34.75 | 28.27 | 0.10 | 30.01 | 25.95 | 0.10 | 25.00 | 23.66 | 0.10 | 21.30 | 21.30 | 0.16 | 18.00 | 18.00 | 0.29 |
| 1200 | 72 | 54.31 | 26.77 | 0.09 | 49.78 | 24.77 | 0.10 | 44.61 | 22.60 | 0.11 | 38.62 | 20.20 | 0.11 | 31.67 | 17.55 | 0.11 |
| | 67 | 45.56 | 28.94 | 0.12 | 40.81 | 26.75 | 0.12 | 35.32 | 24.32 | 0.12 | 28.94 | 21.66 | 0.12 | 21.70 | 18.81 | 0.12 |
| | 62 | 37.34 | 30.82 | 0.12 | 32.32 | 28.41 | 0.12 | 27.16 | 26.06 | 0.12 | 23.43 | 23.43 | 0.19 | 19.81 | 19.81 | 0.32 |
| 1350 | 72 | 57.64 | 28.49 | 0.11 | 52.87 | 26.43 | 0.11 | 47.45 | 24.18 | 0.12 | 41.12 | 21.68 | 0.12 | 33.79 | 18.92 | 0.12 |
| | 67 | 48.46 | 31.08 | 0.13 | 43.46 | 28.81 | 0.13 | 37.67 | 26.29 | 0.13 | 30.92 | 23.49 | 0.13 | 23.27 | 20.51 | 0.13 |
| | 62 | 39.80 | 33.36 | 0.13 | 34.58 | 30.89 | 0.13 | 29.26 | 28.42 | 0.13 | 25.42 | 25.42 | 0.22 | 21.51 | 21.51 | 0.34 |

PERFORMANCE DATA (cont.)

SENSIBLE CAPACITY (SHC) CORRECTION FACTOR

| BYPASS FACTOR | ENTERING AIR DRY-BULB TEMPERATURE (°F) | | | | | |
|--------------------------|---|------|------|------|---------|----------------------------------|
| | 79 | 78 | 77 | 76 | 75 | Under 75 |
| | 81 | 82 | 83 | 84 | 85 | Over 85 |
| | ENTERING AIR DRY-BULB TEMPERATURE (°C) | | | | | |
| | 26 | 25 | 25 | 24 | 24 | Under 75 |
| 27 | 28 | 28 | 29 | 29 | Over 85 | |
| Correction Factor | | | | | | |
| 0.10 | .098 | 1.96 | 2.94 | 3.92 | 4.91 | Use formula shown below |
| 0.20 | 0.87 | 1.74 | 2.62 | 3.49 | 4.36 | |
| 0.30 | 0.76 | 1.53 | 2.29 | 3.05 | 3.82 | |

Interpolation is permissible.

$$\text{Correction Factor} = 1.09 \times (1 - \text{BF}) \times (\text{db} - 80)$$

NOTES:

1. Contact manufacturer for cooling capacities at conditions other than shown in table.
2. Formulas:
 Leaving db = entering db - $\frac{\text{sensible heat cap.}}{1.09 \times \text{CFM}}$
 Leaving wb = wb corresponding to enthalpy of air leaving coil (h_{lwb})
 $h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{CFM}}$
 where h_{ewb} = enthalpy of air entering coil. Direct interpolation is permissible. Do not extrapolate.
3. SHC is based on 80°F (27°C) db temperature of air entering coil. Below 80°F (27°C) db, subtract (Correction Factor x CFM) from SHC. Above 80°F (27°C) db, add (Correction Factor x CFM) to SHC.
4. Bypass Factor = 0 indicates no psychometric solution. Use bypass factor of next lower EWB for approximation.

ESTIMATED SOUND POWER LEVEL (dBA)

| PSC ESTIMATED SOUND PRESSURE LEVEL | | | | | |
|---|----------|-----|-----|------|------|
| Unit Size | | 18K | 24K | 30K | 36K |
| Indoor sound pressure level | dBA High | 54 | 54 | 62.5 | 62.5 |
| ESTIMATED SOUND POWER | W High | 66 | 66 | 74.5 | 74.5 |

| SOUND PRESSURE DATA | | | | | | | | | |
|----------------------------|------------|---------------------|------------------------------|------|------|------|------|------|------|
| UNIT SIZE | CONDITIONS | | OCTAVE BAND CENTER FREQUENCY | | | | | | |
| | CFM | Ext Static Pressure | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 |
| 18 | 600 | 0.18 | 49.1 | 51.8 | 45.1 | 47.1 | 48.8 | 45.7 | 42.7 |
| 24 | 800 | 0.18 | 49.1 | 51.8 | 45.1 | 47.1 | 48.8 | 45.7 | 42.7 |
| 30 | 1000 | 0.24 | 66.3 | 57.3 | 60.0 | 61.8 | 55.2 | 52.7 | 49.6 |
| 36 | 1200 | 0.24 | 66.3 | 57.3 | 60.0 | 61.8 | 55.2 | 52.7 | 49.6 |

| ECM ESTIMATED SOUND PRESSURE LEVEL | | | | | |
|---|----------|-----|-----|------|------|
| Unit Size | | 18K | 24K | 30K | 36K |
| Indoor sound pressure level | dBA High | 54 | 54 | 62.5 | 62.5 |
| ESTIMATED SOUND POWER | W High | 66 | 66 | 74.5 | 74.5 |

| SOUND PRESSURE DATA | | | | | | | | | |
|----------------------------|------------|---------------------|------------------------------|------|------|------|------|------|------|
| UNIT SIZE | CONDITIONS | | OCTAVE BAND CENTER FREQUENCY | | | | | | |
| | CFM | Ext Static Pressure | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 |
| 18 | 600 | 0.18 | 49.1 | 51.8 | 45.1 | 47.1 | 48.8 | 45.7 | 42.7 |
| 24 | 800 | 0.18 | 49.1 | 51.8 | 45.1 | 47.1 | 48.8 | 45.7 | 42.7 |
| 30 | 1000 | 0.24 | 66.3 | 57.3 | 60.0 | 61.8 | 55.2 | 52.7 | 49.6 |
| 36 | 1200 | 0.24 | 66.3 | 57.3 | 60.0 | 61.8 | 55.2 | 52.7 | 49.6 |

* Estimated sound power levels have been derived using the method described in the 1987 ASHRAE HVAC Systems & Applications Handbook, Chapter 52, p. 52.7.

PERFORMANCE DATA (cont.)

OPTIONAL FIELD-INSTALLED ELECTRIC HEAT PACKAGES

| HEATER PART NUMBER WITH TDR | SIZES USED WITH | NOMINAL kw @ 240V | HEATER VOLTS-PHASE (60 Hz) | HEATER CAPACITY (MBH) | | MIN. CIRCUIT AMPACITY | | MAX. FUSE OR BREAKER (HACR) AMPACITY | | APPROX. SHIP WGT. LBS. (kg) |
|-----------------------------|-----------------|-------------------|----------------------------|-----------------------|------|-----------------------|------|--------------------------------------|-----|-----------------------------|
| | | | | 208 | 240 | 208 | 240 | 208 | 240 | |
| EHK303B | All | 3 | 208/240-1 | 7.7 | 10.2 | 15.8 | 17.9 | 20 | 20 | 10 (4.5) |
| EHK305B | All | 5 | 208/240-1 | 12.8 | 17.1 | 24.9 | 28.3 | 30 | 30 | 10 (4.5) |
| EHK306B | All | 6 | 208/240-1 | 15.4 | 20.5 | 29.4 | 33.5 | 35 | 35 | 10 (4.5) |
| EHK308B | All | 7.5 | 208/240-1 | 19.3 | 25.7 | 36.1 | 41.4 | 50 | 50 | 10 (4.5) |
| EHK310B | All | 10 | 208/240-1 | 24.7 | 32.8 | 45.5 | 52.3 | 60 | 60 | 10 (4.5) |

OTHER ACCESSORIES

| Kit Number | Description | Used on sizes |
|--------------|---|----------------|
| KFAGP0101COV | Solid Access Panel, Small | 18, 24 |
| KFAGP0101LGL | Louvered Access Panel with Filter Rack, Small | 18, 24 |
| KFAGP0201COV | Solid Access Panel, Large | 30, 36 |
| KFAGP0201LGL | Louvered Access Panel with Filter Rack, Large | 30, 36 |
| KSATX0601HSO | TXV Kit R-22 | 18, 24, 30, 36 |
| KSATX0201PUR | TXV Kit - Puron® | 18, 24, 30 |
| KSATX0301PUR | TXV Kit - Puron® | 36 |
| KFAET0150ETK | PVC Condensate Trap Kit (50 pack) | 18, 24, 30, 36 |

