



The new degree of comfort.®

Renaissance Xcede™ Series Commercial Package Air Conditioner 3.5-10.0 Ton



EMRHR- High Efficiency Series

R410A, 50 Hz

Nominal Sizes [42-120 BTU/hr]

[12.3-35.2 kW]



50Hz





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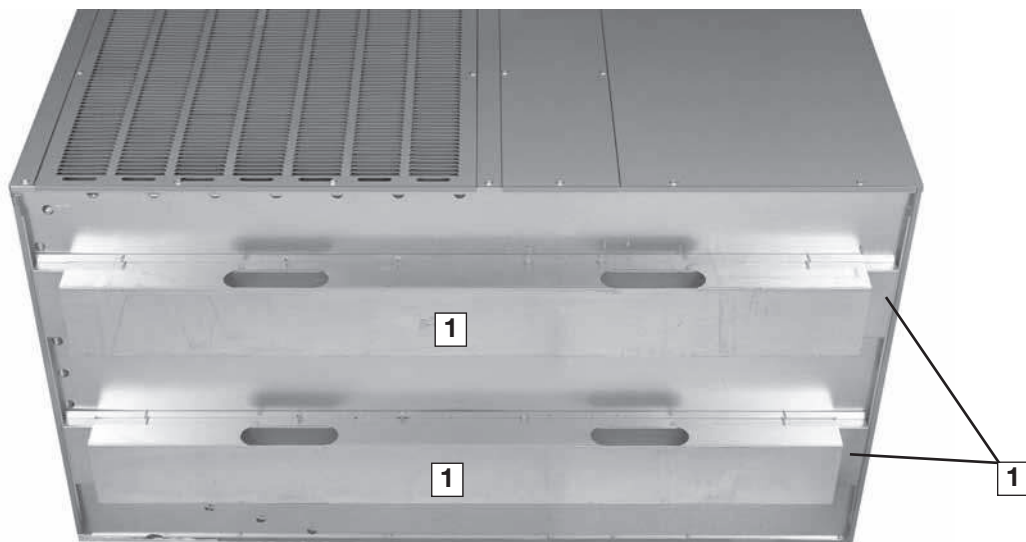


The EMRHR series of Package Air Conditioners is designed to be the most efficient, quickest to install, easiest to service, and most reliable units in the industry - while still maintaining an affordable price. This platform provides you with a nominal capacity of 3.5 to 10 Ton.

As with all units offered by Rheem, we started our design process with input from the customer. From fan grille to the base rails, Rheem has combined 30 years worth of package unit design experience with input from Dealers to meet the latest application requirements.

Starting at the bottom, the base rails (1) allow for separation between the unit base and the ground level, protecting the base from ground moisture and providing air circulation around the unit. Constructed from sturdy 14-gauge G-90 sheet metal, the base rails also allow for easier maneuverability during installation.

The 102 and 120 models employ a full perimeter base rail that integrate fork slots and rigging holes to save setup time on the job site.



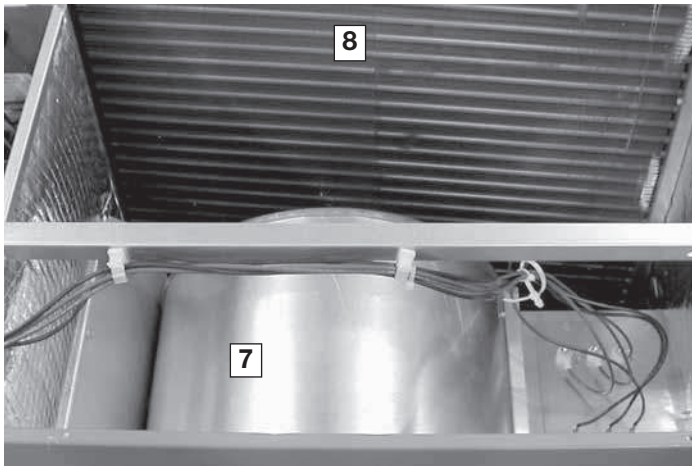


Rheem package equipment uses a pre paint system, rated at 1008 hour salt spray per ASTM B117. This process also greatly diminishes and dulls sharp edges, reducing the occurrence of cuts and torn clothes.

Furthermore, the cabinet is a slim 33" wide for smaller chassis (3.5 to 6.5TR) and 61.2" wide for larger chassis (8-10TR). Full-louver coil protection (2) makes Rheem unique in the industry and also totally protects the outdoor coil from vandalism and weather extremes.

Keeping service technicians in mind, Rheem takes pride providing easy access to internal components. The outdoor-section top cover (3) is easily removed to allow access to the scroll compressor (4), outdoor fan motor (5), and refrigerant tubing (6).

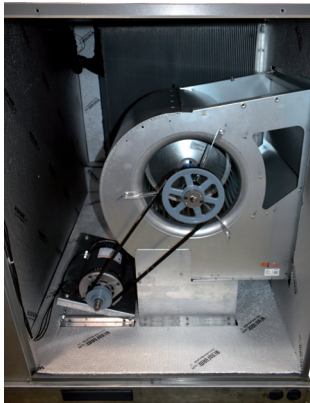




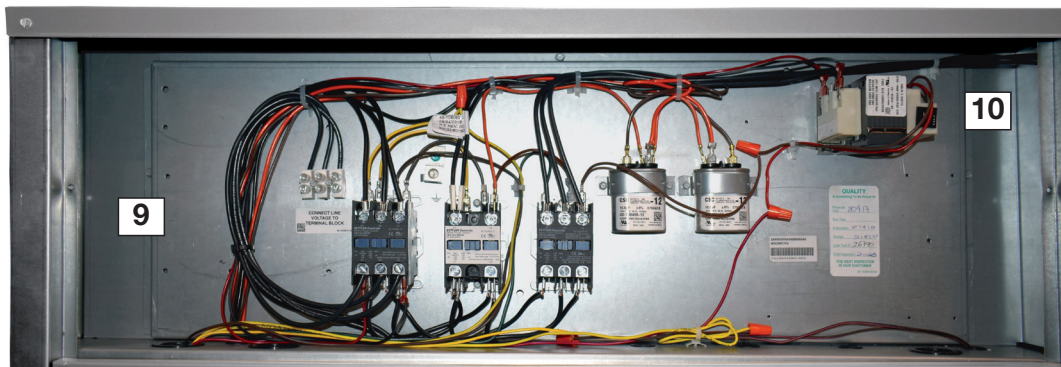
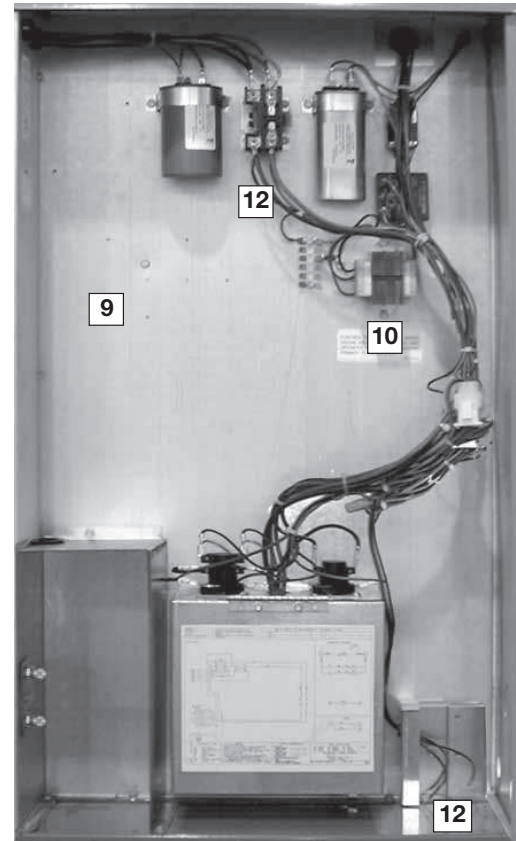
The indoor-section top cover also easily opens to access the removable blower housing and motor (7). This also gains total access to the indoor coil for cleaning and service (8).

The indoor motor and blower system will achieve nominal 400 CFM per ton up to a minimum of .8 inches of static pressure, which helps to eliminate customer dissatisfaction over poor air-flow brought about by high-static duct designs.

The supply and return are located along width of the unit. Models 042 thru 078 uses Direct drive indoor motor while 102 and 120 has a high performance belt drive motor with variable pitch pulleys and quick-adjust belt system.



The controls are located in a large, easy-to-access control box (10), which provides plenty of space in which to troubleshoot. The transformer (11) is protected by an in-line fuse, which protects the transformer during a low-voltage electrical short. The low-voltage (12) and high-voltage (13) wiring connections are easily accessed and have ample room around which to maneuver. Troubleshooting is further aided with number- and color-coded wiring, which corresponds with the large, easy-to-read wiring diagram located on the inside of the control box access panel.





High and low refrigerant pressure can easily and accurately be measured using the two gauge ports (14)



Foil-faced fiberglass insulation is securely glued and captured to the cabinet of small chassis while foil-faced closed-cell insulation is used for the cabinet of larger chassis. On the base of the unit, closed-cell insulation is used to prevent moisture from being absorbed and help reduce mold content to provide better indoor air quality.

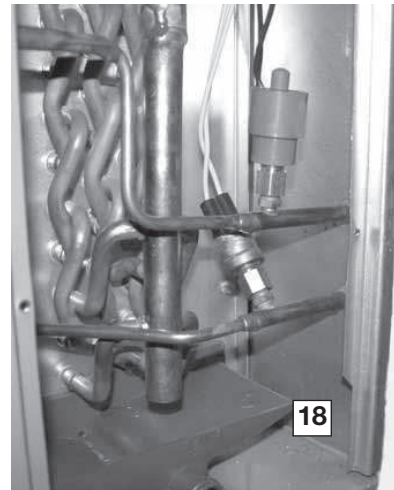
For reliability and long-lasting operation, Rheem uses 100% scroll compressor technology (17) on all package platforms. With over 18 years of history, the scroll compressor has proven to be reliable, efficient, and quiet during operation.



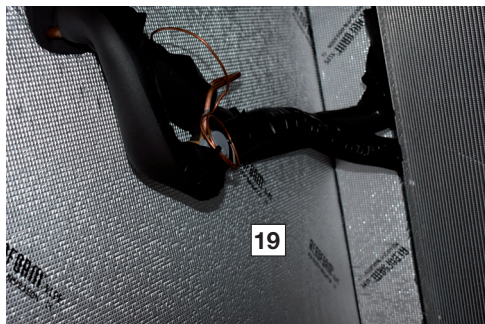
A small side panel grants access to a removable, sloped drain pan (15A) for smaller chassis and slide-out composite drain pan (15B) for larger chassis, which helps to ensure indoor air quality (IAQ) throughout the life of the unit. A 1" drain trap (16) assembly is provided for convenience.



High and low pressure controls are provided from factory (18).

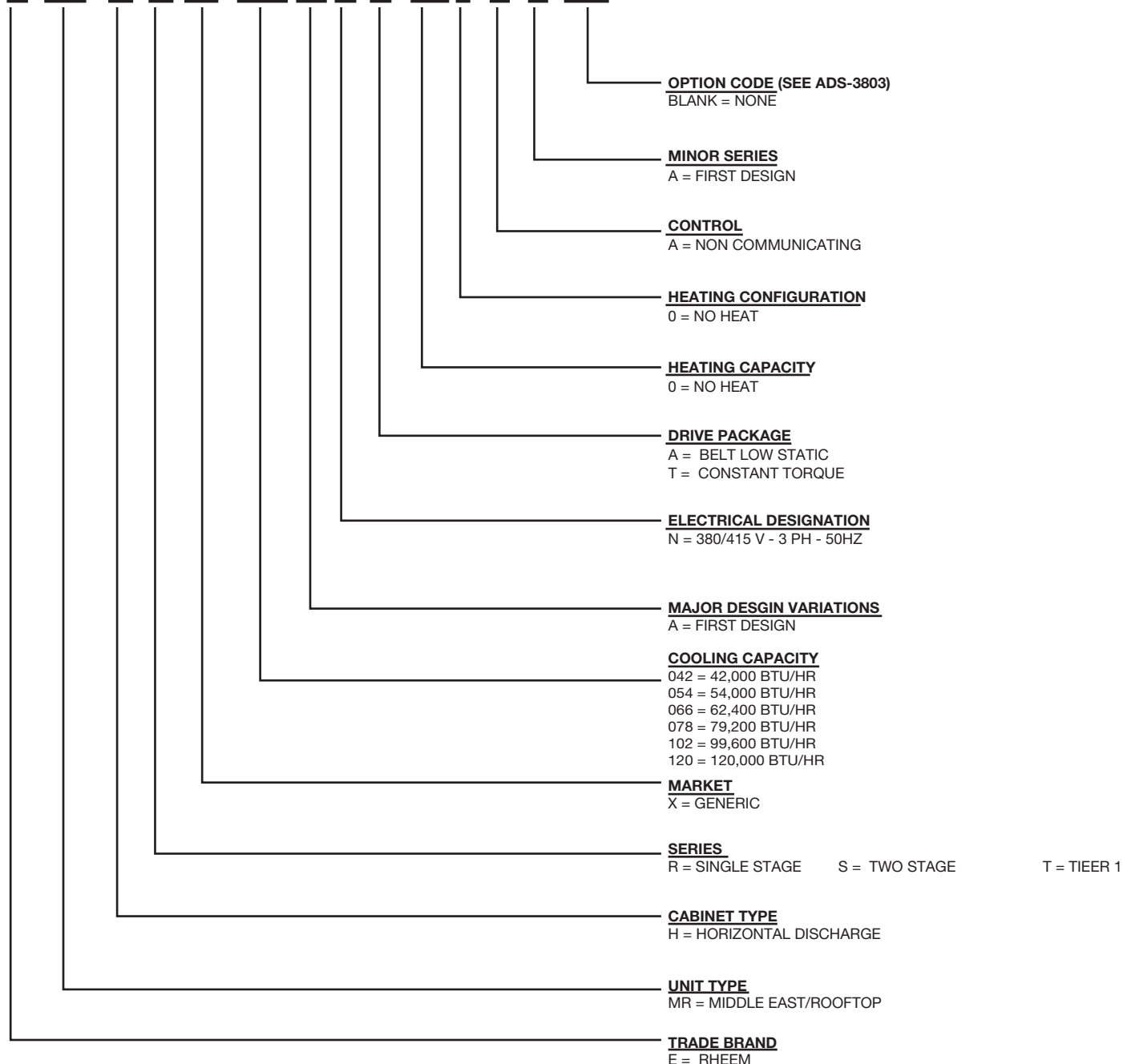


The smaller chassis units have the Copper tube/Aluminum Fin coils while the larger chassis units have aluminum Micro-Channel coil that uses the latest enhanced fin design for the most effective method of heat transfer with a reduction in refrigerant charge and unit weight. All units use TXVs (19) as refrigerant metering system.



NOMENCLATURE

E MR H R X 066 A N T 00 0 A A ***



[] Designates Metric Conversions

Available Models 50Hz
EMRHRX042ANT000AAAA0
EMRHRX054ANT000AAAA0
EMRHRX066ANT000AAAA0
EMRHRX078ANT000AAAA0
EMRHRX102ANA000AAAA0
EMRHRX120ANA000AAAA0

GENERAL DATA - EMRHR NOMINAL SIZES 3.5 - 10 TONS [12.3 - 35.17 kW]

Model EMRHR Series	X042ANT	X054ANT	X066ANT
Compressor			Continued >
No./Type	1/Scroll	1/Scroll	1/Scroll
Outdoor Sound Rating (dB)	77	72	73
Outdoor Coil - Fin Type	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled
Tube Size in. [mm] OD	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft [sq.m]	16.54 [1.54]	16.54 [1.54]	16.54 [1.54]
Rows/ FPI [FPcm]	2/22 [9]	2/22 [9]	2/22 [9]
Indoor Coil - Fin Type	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled
Tube Size in. [mm] OD	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft [sq.m]	5.78 [0.54]	5.78 [0.54]	5.78 [0.54]
Rows/ FPI [FPcm]	4/13 [5]	4/13 [5]	4/13 [5]
Refrigerant Control	TX Valve	TX Valve	TX Valve
Drain Connection No./Size in. [mm]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
Outdoor Fan Type	Propeller	Propeller	Propeller
No. Used/Diameter in [mm]	1/24 [609.6]	1/24 [609.6]	1/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1
CFM [L/s]	3400 [1604]	3400 [1604]	3400 [1604]
No. Motors/HP	1 at 1/3 HP	1 at 1/3 HP	1 at 1/2 HP
Motor RPM	900	900	944
Indoor Fan Type	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in [mm]	1/11x9 [279x229]	1/11x9 [279x229]	1/11x9 [279x229]
Drive Type	Direct	Direct	Direct
No. Speeds	Multiple	Multiple	Multiple
No. Motors	1	1	1
Motor HP	3/4	1	1
Motor RPM	1050	1050	1050
Motor Frame Size	48	48	48
Filter Type	Permanent	Permanent	Permanent
Furnished	No	No	No
(NO.) Size Recommended in. [mmxmmxmm]	(1) 1x12x24 [25x304x609]	(1) 1x12x24 [25x304x609]	(1) 1x12x24 [25x304x609]
Refrigerant Charge Oz. [g]	205 [5811]	186 [5273]	182 [5159]
Weights			
Net Weight lbs. [kg]	357 [162]	360 [163]	366 [166]
Ship Weight lbs. [kg]	383 [174]	386 [175]	392 [178]

NOTES:

1. Outdoor Sound Rating shown is tested in accordance with ARI Standard 270.
2. Standard 3/4" PVC P-Trap provided.

[] Designates Metric Conversions

GENERAL DATA - EMRHR MODELS

NOMINAL SIZES 3.5 - 10 TONS [12.3 - 35.17 kW]

Model - EMRHR	X078ANT	X102ANA	X120ANA
Compressor			
No./Type	1/Scroll	1/Scroll	1/Scroll
Outdoor Sound Rating (dB)⁵	79	81	84
Outdoor Coil - Fin Type	Louvered	Louvered	Louvered
Tube Type	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth in. [mm]	1 [25.4]	0.81 [20.6]	1 [25.4]
Face Area sq. ft. [sq. m]	16.20[1.50]	25.6 [2.38]	25.6 [2.38]
Rows / FPI [FPcm]	1/23 [9]	1 / 23 [9]	1 / 23 [9]
Indoor Coil - Fin Type	Louvered	Louvered	Louvered
Tube Type	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth in. [mm]	1.26 [32]	1.26[32]	1.26 [32]
Face Area sq. ft. [sq. m]	5.60[.52]	10.9[1.01]	10.9 [1.01]
Rows / FPI [FPcm]	1/20 [8]	1/20[8]	1/20[8]
Refrigerant Control	TX Valve	TX Valve	TX Valve
Drain Connection No./Size in. [mm]	1.1 [25.4]	1/0.75 [19.05]	1/0.75 [19.05]
Outdoor Fan - Type	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	1/24 [609.6]	2/24 [609.6]	2/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1
CFM [L/s]	4000[1888]	8000 [3775]	9000 [4247]
No. Motors/HP	1 at 3/4 HP	2 at 1/3 HP	2 at 3/4 HP
Motor RPM	1200	900	900
Indoor Fan - Type	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	1/11x9 [279x229]	1/15x15 [381x381]	1/15x15 [381x381]
Drive Type	Direct	Belt (Adjustable)	Belt (Adjustable)
No. Speeds	Multiple	Single	Single
No. Motors	1	1	1
Motor HP	1	3	3
Motor RPM	1050	1425	1425
Motor Frame Size	48	56	56
Filter - Type	Permanent	Permanent	Permanent
Furnished	No	Yes	Yes
(NO.) Size Recommended in. [mm x mm x mm]	(1) .1x12x24 (25x304x609)	(2) .875x18x24 [22x457x610]	(2) .875x18x24 [22x457x610]
Refrigerant Charge Oz. [g]	85[2409]	120 [3411]	128 [3629]
Weights			
Net Weight lbs. [kg]	379[172]	993 [450]	993 [450]
Ship Weight lbs. [kg]	405[184]	1032 [468]	1032 [468]

NOTES:

1. Outdoor Sound Rating shown is tested in accordance with ARI Standard 270.
2. Standard 3/4" PVC P-Trap provided.

[] Designates Metric Conversions



Model	T1 (27/19 - 35°C)			T3 (29/19 - 46°C)		
	Rated Capacity (BTUH)	Rated PI (kW)	Rated EER	Rated Capacity (BTUH)	Rated PI (kW)	Rated EER
EMRHRX042ANT	44000.0	3.21	13.71	40500.0	4.03	10.05
EMRHRX054ANT	55000.0	4.15	13.25	52000.0	5.10	10.20
EMRHRX066ANT	63000.0	4.66	13.52	57500.0	5.72	10.05
EMRHRX078ANT	82200.0	6.96	11.81	75300.0	7.94	9.48
EMRHRX102ANA	104100.0	8.00	13.01	92000.0	9.72	9.47
EMRHRX120ANA	120000.0	9.49	12.65	107500.0	11.34	9.48

COOLING PERFORMANCE DATA - EMRHRX042AN

		Entering Indoor Air @ 80°F [26.6°C] dbE ①														
		71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			61°F [16.1°C]			59°F [15.0°C]		
wbE		1580 [746]	1400 [661]	1220 [576]	1580 [746]	1400 [661]	1220 [576]	1580 [746]	1400 [661]	1220 [576]	1580 [746]	1400 [661]	1220 [576]	1580 [746]	1400 [661]	1220 [576]
CFM [L/s]																
DR ①		0.10	0.08	0.05	0.10	0.08	0.05	0.10	0.08	0.05	0.10	0.08	0.05	0.10	0.08	0.05
Outdoor Dry Bulb Temperature	75°F [23.9°C]	Total BTUH [kW] 55.1 [16.1] 31.9 [9.4] 2.2	53.8 [15.8] 30.1 [8.8] 2.2	52.6 [15.4] 28.3 [8.3] 2.1	52.5 [15.4] 41.4 [12.1] 2.1	51.3 [15] 39.1 [11.5] 2.1	50.1 [14.7] 36.7 [10.8] 2.1	48.2 [14.1] 48.2 [14.1] 2.0	47.1 [13.8] 45.8 [13.4] 2.0	46 [13.5] 43.1 [12.6] 2.0	45.5 [13.3] 45.5 [13.3] 2.0	44.4 [13] 44.4 [13] 2.0	43.4 [12.7] 43.4 [12.7] 2.0	42.3 [12.4] 42.3 [12.4] 2.0	41.3 [12.1] 41.3 [12.1] 2.0	40.4 [11.8] 40.4 [11.8] 1.9
	80°F [26.7°C]	Total BTUH [kW] 53.5 [15.7] 31.3 [9.2] 2.4	52.3 [15.3] 29.5 [8.6] 2.4	51 [15] 27.7 [8.1] 2.3	50.8 [14.9] 40.8 [12] 2.3	49.7 [14.6] 38.5 [11.3] 2.3	48.5 [14.2] 36.2 [10.6] 2.3	46.6 [13.7] 46.6 [13.7] 2.3	45.5 [13.3] 45.2 [13.3] 2.2	44.5 [13] 42.5 [12.5] 2.2	43.9 [12.9] 43.9 [12.9] 2.2	42.9 [12.6] 42.9 [12.6] 2.2	41.8 [12.3] 41.8 [12.3] 2.2	40.7 [11.9] 40.7 [11.9] 2.2	39.8 [11.7] 39.8 [11.7] 2.2	38.9 [11.4] 38.9 [11.4] 2.1
	85°F [29.4°C]	Total BTUH [kW] 51.8 [15.2] 30.6 [9] 2.6	50.6 [14.8] 28.8 [8.5] 2.6	49.4 [14.5] 27.1 [7.9] 2.5	49.1 [14.4] 40.1 [11.7] 2.5	48 [14.1] 37.8 [11.1] 2.5	46.9 [13.7] 35.5 [10.4] 2.5	44.9 [13.1] 44.9 [13.1] 2.5	43.8 [12.8] 43.8 [12.8] 2.4	42.8 [12.5] 41.9 [12.3] 2.4	42.1 [12.3] 42.1 [12.3] 2.4	41.2 [12.1] 41.2 [12.1] 2.4	40.2 [11.8] 40.2 [11.8] 2.4	39 [11.4] 39 [11.4] 2.4	38.1 [11.2] 38.1 [11.2] 2.4	37.2 [10.9] 37.2 [10.9] 2.4
	90°F [32.2°C]	Total BTUH [kW] 49.9 [14.6] 29.8 [8.7] 2.8	48.7 [14.3] 28.1 [8.2] 2.8	47.6 [14] 26.4 [7.7] 2.8	47.2 [13.8] 39.3 [11.5] 2.8	46.2 [13.5] 37.1 [10.9] 2.7	45.1 [13.2] 34.8 [10.2] 2.7	43 [12.6] 43 [12.6] 2.7	42 [12.3] 42 [12.3] 2.7	41 [12] 41 [12] 2.6	40.3 [11.8] 40.3 [11.8] 2.7	39.3 [11.5] 39.3 [11.5] 2.6	38.4 [11.3] 38.4 [11.3] 2.6	37.1 [10.9] 37.1 [10.9] 2.6	36.3 [10.6] 36.3 [10.6] 2.6	35.4 [10.4] 35.4 [10.4] 2.6
	95°F [35.0°C]	Total BTUH [kW] 47.9 [14] 28.9 [8.5] 3.1	46.8 [13.7] 27.2 [8] 3.1	45.7 [13.4] 25.6 [7.5] 3.0	45.3 [13.3] 38.4 [11.2] 3.0	44.2 [13] 36.2 [10.6] 3.0	43.2 [12.7] 34 [10] 3.0	41 [12] 41 [12] 3.0	40.1 [11.7] 40.1 [11.7] 2.9	39.1 [11.5] 39.1 [11.5] 2.9	38.3 [11.2] 38.3 [11.2] 2.9	37.4 [11] 37.4 [11] 2.9	36.5 [10.7] 36.5 [10.7] 2.9	35.1 [10.3] 35.1 [10.3] 2.9	34.3 [10.1] 34.3 [10.1] 2.9	33.5 [9.8] 33.5 [9.8] 2.8
	100°F [37.8°C]	Total BTUH [kW] 45.8 [13.4] 27.9 [8.2] 3.4	44.7 [13.1] 26.3 [7.7] 3.3	43.7 [12.8] 24.7 [7.3] 3.3	43.1 [12.6] 37.4 [11.1] 3.3	42.1 [12.3] 35.3 [10.3] 3.2	41.2 [12.1] 33.2 [9.7] 3.2	38.9 [11.4] 38.9 [11.4] 3.2	38 [11.1] 38 [11.1] 3.2	37.1 [10.9] 37.1 [10.9] 3.1	36.1 [10.6] 36.1 [10.6] 3.2	35.3 [10.3] 35.3 [10.3] 3.1	34.5 [10.1] 34.5 [10.1] 3.1	33 [9.7] 33 [9.7] 3.2	32.2 [9.4] 32.2 [9.4] 3.1	31.5 [9.2] 31.5 [9.2] 3.1
	105°F [40.6°C]	Total BTUH [kW] 43.5 [12.7] 26.9 [7.9] 3.6	42.5 [12.5] 25.3 [7.4] 3.6	41.5 [12.2] 23.8 [7] 3.5	40.9 [12] 36.4 [10.7] 3.6	39.9 [11.7] 34.3 [10.1] 3.5	39 [11.4] 32.2 [9.4] 3.5	36.6 [10.7] 36.6 [10.7] 3.5	35.8 [10.5] 35.8 [10.5] 3.5	34.9 [10.2] 34.9 [10.2] 3.4	33.9 [9.9] 33.9 [9.9] 3.5	33.1 [9.7] 33.1 [9.7] 3.4	32.3 [9.5] 32.3 [9.5] 3.4	30.7 [9] 30.7 [9] 3.4	30 [8.8] 30 [8.8] 3.4	29.3 [8.6] 29.3 [8.6] 3.4
	110°F [43.3°C]	Total BTUH [kW] 41.1 [12] 25.7 [7.5] 3.9	40.2 [11.8] 24.3 [7.1] 3.9	39.2 [11.5] 22.8 [6.7] 3.8	38.5 [11.3] 35.2 [9.7] 3.8	37.6 [11] 33.2 [9.7] 3.8	36.7 [10.8] 31.2 [9.2] 3.8	34.2 [10] 34.2 [10] 3.8	33.4 [9.8] 33.4 [9.8] 3.7	32.7 [9.6] 32.7 [9.6] 3.7	31.5 [9.2] 31.5 [9.2] 3.7	30.8 [9] 30.8 [9] 3.7	30 [8.8] 30 [8.8] 3.7	28.3 [8.3] 28.3 [8.3] 3.7	27.7 [8.1] 27.7 [8.1] 3.7	27 [7.9] 27 [7.9] 3.6
	115°F [46.1°C]	Total BTUH [kW] 38.6 [11.3] 24.5 [7.2] 4.2	37.7 [11.1] 23.1 [6.8] 4.2	36.8 [10.8] 21.7 [6.4] 4.1	36 [10.5] 34 [10] 4.2	35.1 [10.3] 32.1 [9.4] 4.1	34.3 [10.1] 30.1 [8.8] 4.1	31.7 [9.3] 31.7 [9.3] 4.1	31 [9.1] 31 [9.1] 4.0	30.2 [8.9] 30.2 [8.9] 4	29 [8.5] 29 [8.5] 4.1	28.3 [8.3] 28.3 [8.3] 4.0	27.6 [8.1] 27.6 [8.1] 4.0	25.8 [7.6] 25.8 [7.6] 4.0	25.2 [7.4] 25.2 [7.4] 4.0	24.6 [7.2] 24.6 [7.2] 3.9
	118.4°F [48°C]	Total BTUH [kW] 36.8 [10.8] 23.6 [6.9] 4.4	35.9 [10.5] 22.3 [6.5] 4.4	35.1 [10.3] 21 [6.2] 4.3	34.2 [10] 33.1 [9.7] 4.4	33.3 [9.8] 31.2 [9.1] 4.3	32.6 [9.6] 29.4 [8.6] 4.3	29.9 [8.8] 29.9 [8.8] 4.3	29.2 [8.6] 29.2 [8.6] 4.2	28.5 [8.4] 28.5 [8.4] 4.2	27.2 [8] 27.2 [8] 4.3	26.5 [7.8] 26.5 [7.8] 4.2	25.9 [7.6] 25.9 [7.6] 4.2	24 [7] 24 [7] 4.2	23.4 [6.9] 23.4 [6.9] 4.2	22.9 [6.7] 22.9 [6.7] 4.1
	120°F [48.9°C]	Total BTUH [kW] 35.9 [10.5] 23.2 [6.8] 4.5	35.1 [10.3] 21.9 [6.4] 4.5	34.3 [10.1] 20.6 [6] 4.4	33.3 [9.8] 32.7 [9.6] 4.5	32.5 [9.5] 30.8 [9] 4.4	31.8 [9.3] 29 [8.5] 4.4	29 [8.5] 29 [8.5] 4.4	28.4 [8.3] 28.4 [8.3] 4.3	27.7 [8.1] 27.7 [8.1] 4.3	26.3 [7.7] 26.3 [7.7] 4.4	25.7 [7.5] 25.7 [7.5] 4.3	25.1 [7.4] 25.1 [7.4] 4.3	23.2 [6.8] 23.2 [6.8] 4.3	22.6 [6.6] 22.6 [6.6] 4.3	22.1 [6.5] 22.1 [6.5] 4.2
	125°F [51.7°C]	Total BTUH [kW] 33.2 [9.7] 21.8 [6.4] 4.9	32.4 [9.5] 20.5 [6] 4.8	31.6 [9.3] 19.3 [5.7] 4.8	30.5 [8.9] 30.5 [8.9] 4.8	29.8 [8.7] 29.5 [8.6] 4.7	29.1 [8.5] 27.7 [8.1] 4.7	26.3 [7.7] 26.3 [7.7] 4.7	25.7 [7.5] 25.7 [7.5] 4.7	25.1 [7.3] 25.1 [7.3] 4.6	23.5 [6.9] 23.5 [6.9] 4.7	23 [6.7] 23 [6.7] 4.6	22.4 [6.6] 22.4 [6.6] 4.6	20.4 [6] 20.4 [6] 4.7	19.9 [5.8] 19.9 [5.8] 4.6	19.4 [5.7] 19.4 [5.7] 4.6

NOTES:

dbE-Entering air dry bulb

wbE-Entering air wet bulb

Total-Total Cooling Capacity x 1000 BTUH

Sens-Sensible capacity x 1000 BTUH

Power-KW input (Compressor + OD motor)



COOLING PERFORMANCE DATA - EMRHRX054AN

wbE		Entering Indoor Air @ 80°F [26.6°C] dbE ①																
		71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			61°F [16.1°C]			59°F [15.0°C]				
CFM [L/s]		2020 [953]	1875 [885]	1580 [746]	2020 [953]	1875 [885]	1580 [746]	2020 [953]	1875 [885]	1580 [746]	2020 [953]	1875 [885]	1580 [746]	2020 [953]	1875 [885]	1580 [746]		
DR ①		0.13	0.10	0.07	0.13	0.10	0.07	0.13	0.10	0.07	0.13	0.10	0.07	0.13	0.10	0.07		
Outdoor Dry Bulb Temperature	75°F [23.9°C]	Total BTUH [kW]	65.5 [19.2]	64.6 [18.9]	62.7 [18.4]	62.8 [18.4]	62 [18.2]	60.2 [17.6]	58.6 [17.2]	57.8 [16.9]	56.2 [16.5]	55.9 [16.4]	55.1 [16.2]	53.6 [15.7]	52.8 [15.5]	52.1 [15.3]	50.6 [14.8]	
		Sens BTUH [kW]	42.3 [12.4]	40.8 [12]	37.8 [11.1]	51.6 [15.1]	49.8 [14.6]	46.1 [13.5]	58.6 [17.2]	56.5 [16.6]	52.4 [15.3]	55.9 [16.4]	55.1 [16.2]	53.6 [15.7]	52.8 [15.5]	52.1 [15.3]	50.6 [14.8]	
		Power	2.9	2.9	2.9	2.8	2.8	2.8	2.8	2.8	2.7	2.7	2.7	2.7	2.7	2.7	2.7	
		80°F [26.7°C]	Total BTUH [kW]	63.9 [18.7]	63 [18.5]	61.2 [17.9]	61.3 [17.9]	60.4 [17.7]	58.7 [17.2]	57 [16.7]	56.2 [16.5]	54.6 [16]	54.3 [15.9]	53.6 [15.7]	52 [15.2]	51.2 [15]	50.5 [14.8]	49.1 [14.4]
		Sens BTUH [kW]	41.7 [12.2]	40.2 [11.8]	37.3 [10.9]	51 [14.9]	49.2 [14.4]	45.6 [13.4]	57 [16.7]	55.9 [16.4]	51.8 [15.2]	54.3 [15.9]	53.6 [15.7]	52 [15.2]	51.2 [15]	50.5 [14.8]	49.1 [14.4]	
		Power	3.1	3.1	3.1	3.1	3.0	3.0	3.0	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9	
		85°F [29.4°C]	Total BTUH [kW]	62.1 [18.2]	61.3 [18]	59.5 [17.4]	59.5 [17.4]	58.7 [17.2]	57 [16.7]	55.3 [16.2]	54.5 [16]	53 [15.5]	52.6 [15.4]	51.9 [15.2]	50.4 [14.8]	49.5 [14.5]	48.8 [14.3]	47.4 [13.9]
		Sens BTUH [kW]	41 [12]	39.6 [11.6]	36.6 [10.7]	50.3 [14.7]	48.5 [14.2]	45 [13.2]	55.3 [16.2]	54.5 [16]	51.2 [15]	52.6 [15.4]	51.9 [15.2]	50.4 [14.8]	49.5 [14.5]	48.8 [14.3]	47.4 [13.9]	
		Power	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.2	3.2	3.1	3.1	3.1	3.1	
		90°F [32.2°C]	Total BTUH [kW]	60.3 [17.7]	59.5 [17.4]	57.8 [16.9]	57.7 [16.9]	56.9 [16.7]	55.3 [16.2]	53.5 [15.7]	52.7 [15.4]	51.2 [15]	50.8 [14.9]	50 [14.7]	48.6 [14.2]	47.6 [14]	47 [13.8]	45.6 [13.4]
		Sens BTUH [kW]	40.2 [11.8]	38.8 [11.4]	35.9 [10.5]	49.5 [14.5]	47.8 [14]	44.3 [13]	53.5 [15.7]	52.7 [15.4]	50.5 [14.8]	50.8 [14.9]	50 [14.7]	48.6 [14.2]	47.6 [14]	47 [13.8]	45.6 [13.4]	
		Power	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.4	3.4	3.3	
		95°F [35.0°C]	Total BTUH [kW]	58.3 [17.1]	57.5 [16.9]	55.9 [16.4]	55.7 [16.3]	54.9 [16.1]	53.4 [15.6]	51.5 [15.1]	50.8 [14.9]	49.3 [14.5]	48.8 [14.3]	48.1 [14.1]	46.7 [13.7]	45.7 [13.4]	45 [13.2]	43.7 [12.8]
		Sens BTUH [kW]	39.3 [11.5]	38 [11.1]	35.2 [10.3]	48.6 [14.2]	46.9 [13.8]	43.5 [12.7]	51.5 [15.1]	50.8 [14.9]	49.3 [14.5]	48.8 [14.3]	48.1 [14.1]	46.7 [13.7]	45.7 [13.4]	45 [13.2]	43.7 [12.8]	
		Power	3.8	3.8	3.7	3.8	3.7	3.7	3.7	3.7	3.6	3.7	3.6	3.6	3.6	3.6	3.5	
		100°F [37.8°C]	Total BTUH [kW]	56.2 [16.5]	55.4 [16.2]	53.8 [15.8]	53.6 [15.7]	52.9 [15.5]	51.3 [15]	49.4 [14.5]	48.7 [14.3]	47.3 [13.9]	46.7 [13.7]	46 [13.5]	44.7 [13.1]	43.6 [12.8]	42.9 [12.6]	41.7 [12.2]
	Sens BTUH [kW]	38.4 [11.2]	37 [10.9]	34.3 [10.1]	47.7 [14]	46 [13.5]	42.6 [12.5]	49.4 [14.5]	48.7 [14.3]	47.3 [13.9]	46.7 [13.7]	46 [13.5]	44.7 [13.1]	43.6 [12.8]	42.9 [12.6]	41.7 [12.2]		
	Power	4.1	4.1	4.0	4.0	4.0	3.9	3.9	3.9	3.9	3.9	3.9	3.8	3.9	3.9	3.8		
	105°F [40.6°C]	Total BTUH [kW]	54 [15.8]	53.2 [15.6]	51.7 [15.2]	51.4 [15.1]	50.6 [14.8]	49.2 [14.4]	47.1 [13.8]	46.5 [13.6]	45.2 [13.2]	44.4 [13]	43.8 [12.8]	42.6 [12.5]	41.3 [12.1]	40.7 [11.9]	39.6 [11.6]	
	Sens BTUH [kW]	37.4 [10.9]	36 [10.6]	33.4 [9.8]	46.6 [13.7]	45 [13.2]	41.7 [12.2]	47.1 [13.8]	46.5 [13.6]	45.2 [13.2]	44.4 [13]	43.8 [12.8]	42.6 [12.5]	41.3 [12.1]	40.7 [11.9]	39.6 [11.6]		
	Power	4.4	4.3	4.3	4.3	4.3	4.2	4.2	4.2	4.1	4.2	4.2	4.1	4.2	4.1	4.1		
	110°F [43.3°C]	Total BTUH [kW]	51.6 [15.1]	50.9 [14.9]	49.4 [14.5]	49 [14.4]	48.3 [14.2]	46.9 [13.8]	44.8 [13.1]	44.1 [12.9]	42.9 [12.6]	42.1 [12.3]	41.5 [12.2]	40.3 [11.8]	38.9 [11.4]	38.4 [11.3]	37.3 [10.9]	
	Sens BTUH [kW]	36.2 [10.6]	35 [10.2]	32.4 [9.5]	45.5 [13.3]	43.9 [12.9]	40.7 [11.9]	44.8 [13.1]	44.1 [12.9]	42.9 [12.6]	42.1 [12.3]	41.5 [12.2]	40.3 [11.8]	38.9 [11.4]	38.4 [11.3]	37.3 [10.9]		
	Power	4.6	4.6	4.5	4.6	4.5	4.5	4.5	4.5	4.4	4.4	4.4	4.4	4.4	4.4	4.4		
	115°F [46.1°C]	Total BTUH [kW]	49.1 [14.4]	48.4 [14.2]	47 [13.8]	46.5 [13.6]	45.8 [13.4]	44.5 [13.1]	42.3 [12.4]	41.7 [12.2]	40.5 [11.9]	39.6 [11.6]	39 [11.4]	37.9 [11.1]	36.4 [10.7]	35.9 [10.5]	34.9 [10.2]	
	Sens BTUH [kW]	35 [10.3]	33.8 [9.9]	31.3 [9.2]	44.3 [13]	42.8 [12.5]	39.6 [11.6]	42.3 [12.4]	41.7 [12.2]	40.5 [11.9]	39.6 [11.6]	39 [11.4]	37.9 [11.1]	36.4 [10.7]	35.9 [10.5]	34.9 [10.2]		
	Power	4.9	4.9	4.8	4.9	4.8	4.8	4.8	4.8	4.7	4.8	4.7	4.7	4.7	4.7	4.6		
	118.4°F [48°C]	Total BTUH [kW]	47.3 [13.9]	46.6 [13.7]	45.3 [13.3]	44.7 [13.1]	44.1 [12.9]	42.8 [12.5]	40.5 [11.9]	39.9 [11.7]	38.8 [11.4]	37.8 [11.1]	37.2 [10.9]	36.2 [10.6]	34.6 [10.1]	34.2 [10]	33.2 [9.7]	
	Sens BTUH [kW]	34.2 [10]	33 [9.7]	30.6 [9]	43.4 [12.7]	42 [12.3]	38.9 [11.4]	40.5 [11.9]	39.9 [11.7]	38.8 [11.4]	37.8 [11.1]	37.2 [10.9]	36.2 [10.6]	34.6 [10.1]	34.2 [10]	33.2 [9.7]		
	Power	5.2	5.1	5.0	5.1	5.1	5.0	5.0	5.0	4.9	4.9	4.9	4.9	5.0	4.9	4.9		
	120°F [48.9°C]	Total BTUH [kW]	46.5 [13.6]	45.8 [13.4]	44.5 [13]	43.9 [12.9]	43.3 [12.7]	42 [12.3]	39.6 [11.6]	39.1 [11.5]	38 [11.1]	36.9 [10.8]	36.4 [10.7]	35.4 [10.4]	33.8 [9.9]	33.4 [9.8]	32.4 [9.5]	
	Sens BTUH [kW]	33.8 [9.9]	32.6 [9.5]	30.2 [8.8]	43 [12.6]	41.6 [12.2]	38.5 [11.3]	39.6 [11.6]	39.1 [11.5]	38 [11.1]	36.9 [10.8]	36.4 [10.7]	35.4 [10.4]	33.8 [9.9]	33.4 [9.8]	32.4 [9.5]		
	Power	5.3	5.2	5.1	5.2	5.2	5.1	5.1	5.1	5.0	5.1	5.1	5.0	5.1	5.0	5.0		
	125°F [51.7°C]	Total BTUH [kW]	43.7 [12.8]	43.1 [12.6]	41.9 [12.3]	41.1 [12]	40.5 [11.9]	39.4 [11.5]	36.9 [10.8]	36.4 [10.7]	35.3 [10.4]	34.2 [10]	33.7 [9.9]	32.7 [9.6]	31.1 [9.1]	30.6 [9]	29.8 [8.7]	
	Sens BTUH [kW]	32.4 [9.5]	31.3 [9.2]	29 [8.5]	41.1 [12]	40.2 [11.8]	37.3 [10.9]	36.9 [10.8]	36.4 [10.7]	35.3 [10.4]	34.2 [10]	33.7 [9.9]	32.7 [9.6]	31.1 [9.1]	30.6 [9]	29.8 [8.7]		
	Power	5.6	5.5	5.5	5.5	5.5	5.4	5.5	5.4	5.3	5.4	5.4	5.3	5.4	5.3	5.3		

NOTES:

dbE-Entering air dry bulb

wbE-Entering air wet bulb

Total-Total Cooling Capacity x 1000 BTUH

Sens-Sensible capacity x 1000 BTUH

Power-KW input (Compressor + OD motor)



COOLING PERFORMANCE DATA - EMRHRX066AN

		Entering Indoor Air @ 80°F [26.6°C] dbE ①														
		71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			61°F [16.1°C]			59°F [15.0°C]		
wbE		2480 [1170]	2080 [982]	1920 [906]	2480 [1170]	2080 [982]	1920 [906]	2480 [1170]	2080 [982]	1920 [906]	2480 [1170]	2080 [982]	1920 [906]	2480 [1170]	2080 [982]	1920 [906]
CFM [L/s]																
DR ①		0.13	0.10	0.07	0.13	0.10	0.07	0.13	0.10	0.07	0.13	0.10	0.07	0.13	0.10	0.07
Outdoor Dry Bulb Temperature	75°F [23.9°C]	Total BTUH [kW] 74 [21.7] 50.4 [14.8] 3.3	71.5 [20.9] 46.2 [13.5] 3.3	70.5 [20.6] 44.6 [13.1] 3.3	71.3 [20.9] 60.2 [17.6] 3.3	68.9 [20.2] 55.2 [16.2] 3.2	67.9 [19.9] 53.2 [15.6] 3.2	67 [19.6] 67 [19.6] 3.2	64.7 [19] 61.9 [18.2] 3.2	63.8 [18.7] 59.7 [17.5] 3.1	64.2 [18.8] 64.2 [18.8] 3.2	62 [18.2] 62 [18.2] 3.1	61.2 [17.9] 61.2 [17.9] 3.1	61 [17.9] 61 [17.9] 3.1	59 [17.3] 59 [17.3] 3.1	58.2 [17] 58.2 [17] 3.1
	80°F [26.7°C]	Total BTUH [kW] 72.3 [21.2] 49.7 [14.6] 3.5	69.9 [20.5] 45.6 [13.4] 3.5	68.9 [20.2] 44 [12.9] 3.5	69.7 [20.4] 59.5 [17.4] 3.5	67.3 [19.7] 54.6 [16] 3.4	66.4 [19.4] 52.6 [15.4] 3.4	65.4 [19.2] 65.4 [19.2] 3.4	63.2 [18.5] 61.3 [18] 3.4	62.3 [18.2] 59.1 [17.3] 3.3	62.6 [18.3] 62.6 [18.3] 3.4	60.5 [17.7] 60.5 [17.7] 3.3	59.6 [17.5] 59.6 [17.5] 3.3	59.4 [17.4] 59.4 [17.4] 3.3	57.4 [16.8] 57.4 [16.8] 3.3	56.6 [16.6] 56.6 [16.6] 3.3
	85°F [29.4°C]	Total BTUH [kW] 70.6 [20.7] 49 [14.4] 3.8	68.2 [20] 45 [13.2] 3.7	67.2 [19.7] 43.3 [12.7] 3.7	67.9 [19.9] 58.8 [17.2] 3.7	65.6 [19.2] 53.9 [15.8] 3.6	64.7 [19] 52 [15.2] 3.6	63.6 [18.6] 63.6 [18.6] 3.6	61.5 [18] 60.7 [17.8] 3.6	60.6 [17.8] 58.5 [17.1] 3.6	60.8 [17.8] 60.8 [17.8] 3.6	58.8 [17.2] 58.8 [17.2] 3.5	58 [17] 58 [17] 3.5	57.7 [16.9] 57.7 [16.9] 3.6	55.7 [16.3] 55.7 [16.3] 3.5	54.9 [16.1] 54.9 [16.1] 3.5
	90°F [32.2°C]	Total BTUH [kW] 68.7 [20.1] 48.2 [14.1] 4.0	66.4 [19.5] 44.2 [13] 3.9	65.4 [19.2] 42.6 [12.5] 3.9	66 [19.3] 57 [16.7] 3.9	63.8 [18.7] 53.2 [15.6] 3.9	62.9 [18.4] 51.3 [15] 3.8	61.7 [18.1] 61.7 [18.1] 3.9	59.6 [17.5] 59.6 [17.5] 3.8	58.8 [17.2] 57.8 [16.9] 3.8	58.9 [17.3] 58.9 [17.3] 3.8	57 [16.7] 57 [16.7] 3.8	56.2 [16.5] 56.2 [16.5] 3.8	55.8 [16.3] 55.8 [16.3] 3.8	53.9 [15.8] 53.9 [15.8] 3.7	53.1 [15.6] 53.1 [15.6] 3.7
	95°F [35.0°C]	Total BTUH [kW] 66.7 [19.5] 47.3 [13.9] 4.3	64.4 [18.9] 43.4 [12.7] 4.2	63.5 [18.6] 41.8 [12.3] 4.2	64 [18.8] 57 [16.7] 4.2	61.8 [18.1] 52.3 [15.3] 4.1	61 [17.9] 50.5 [14.8] 4.1	59.7 [17.5] 59.7 [17.5] 4.1	57.7 [16.9] 57.7 [16.9] 4.1	56.9 [16.7] 56.9 [16.7] 4.0	56.9 [16.7] 56.9 [16.7] 4.1	55 [16.1] 55 [16.1] 4.0	54.2 [15.9] 54.2 [15.9] 4.0	53.8 [15.8] 53.8 [15.8] 4.1	51.9 [15.2] 51.9 [15.2] 4.0	51.2 [15] 51.2 [15] 4.0
	100°F [37.8°C]	Total BTUH [kW] 64.5 [18.9] 46.3 [13.6] 4.5	62.3 [18.3] 42.5 [12.4] 4.4	61.5 [18] 40.9 [12] 4.4	61.9 [18.1] 56 [16.4] 4.5	59.8 [17.5] 51.4 [15.1] 4.4	58.9 [17.3] 49.6 [14.5] 4.3	57.5 [16.9] 57.5 [16.9] 4.4	55.6 [16.3] 55.6 [16.3] 4.3	54.8 [16.1] 54.8 [16.1] 4.3	54.8 [16.1] 54.8 [16.1] 4.4	52.9 [15.5] 52.9 [15.5] 4.3	52.2 [15.3] 52.2 [15.3] 4.3	51.6 [15.1] 51.6 [15.1] 4.3	49.9 [14.6] 49.9 [14.6] 4.2	49.2 [14.4] 49.2 [14.4] 4.2
	105°F [40.6°C]	Total BTUH [kW] 62.2 [18.2] 45.2 [13.2] 4.8	60.1 [17.6] 41.5 [12.1] 4.7	59.3 [17.4] 40 [11.7] 4.7	59.6 [17.5] 55 [16.1] 4.7	57.6 [16.9] 50.4 [14.8] 4.7	56.8 [16.6] 48.6 [14.2] 4.6	55.3 [16.2] 55.3 [16.2] 4.7	53.4 [15.6] 53.4 [15.6] 4.6	52.6 [15.4] 52.6 [15.4] 4.6	52.5 [15.4] 52.5 [15.4] 4.6	50.7 [14.9] 50.7 [14.9] 4.6	50 [14.7] 50 [14.7] 4.5	49.3 [14.5] 49.3 [14.5] 4.6	47.6 [14] 47.6 [14] 4.5	47 [13.8] 47 [13.8] 4.5
	110°F [43.3°C]	Total BTUH [kW] 59.8 [17.5] 44 [12.9] 5.1	57.8 [16.9] 40.4 [11.8] 5.0	57 [16.7] 38.9 [11.4] 5.0	57.2 [16.7] 53.8 [15.8] 5.0	55.2 [16.2] 49.4 [14.5] 4.9	54.4 [16] 47.6 [13.9] 4.9	52.8 [15.5] 52.8 [15.5] 5.0	51.1 [15] 51.1 [15] 4.9	50.3 [14.8] 50.3 [14.8] 4.9	50.1 [14.7] 50.1 [14.7] 4.9	48.4 [14.2] 48.4 [14.2] 4.8	47.7 [14] 47.7 [14] 4.8	46.9 [13.7] 46.9 [13.7] 4.9	45.3 [13.3] 45.3 [13.3] 4.8	44.7 [13.1] 44.7 [13.1] 4.8
	115°F [46.1°C]	Total BTUH [kW] 57.3 [16.8] 42.7 [12.5] 5.4	55.3 [16.2] 39.2 [11.5] 5.3	54.6 [16] 37.8 [11.1] 5.3	54.6 [16] 52.5 [15.4] 5.3	52.8 [15.5] 48.2 [14.1] 5.2	52 [15.2] 46.5 [13.6] 5.2	50.3 [14.7] 50.3 [14.7] 5.3	48.6 [14.2] 48.6 [14.2] 5.2	47.9 [14] 47.9 [14] 5.1	47.5 [13.9] 47.5 [13.9] 5.2	45.9 [13.5] 45.9 [13.5] 5.1	45.3 [13.3] 45.3 [13.3] 5.1	44.3 [13] 44.3 [13] 5.2	42.9 [12.6] 42.9 [12.6] 5.1	42.3 [12.4] 42.3 [12.4] 5.1
	118.4°F [48°C]	Total BTUH [kW] 55.5 [16.3] 41.8 [12.3] 5.6	53.5 [15.7] 38.4 [11.3] 5.5	52.8 [15.5] 37 [10.8] 5.5	52.8 [15.5] 51.6 [15.1] 5.5	51 [14.9] 47.4 [13.9] 5.4	50.3 [14.7] 45.7 [13.4] 5.4	48.5 [14.2] 48.5 [14.2] 5.5	46.8 [13.7] 46.8 [13.7] 5.4	46.2 [13.5] 46.2 [13.5] 5.3	45.7 [13.4] 45.7 [13.4] 5.4	44.1 [12.9] 44.1 [12.9] 5.3	43.5 [12.7] 43.5 [12.7] 5.3	42.5 [12.5] 42.5 [12.5] 5.4	41.1 [12] 41.1 [12] 5.3	40.5 [11.9] 40.5 [11.9] 5.3
	120°F [48.9°C]	Total BTUH [kW] 54.6 [16] 41.4 [12.1] 5.7	52.7 [15.5] 38 [11.1] 5.6	52 [15.2] 36.6 [10.7] 5.6	51.9 [15.2] 51.2 [15] 5.6	50.2 [14.7] 47 [13.8] 5.5	49.5 [14.5] 45.3 [13.3] 5.5	47.6 [14] 47.6 [14] 5.6	46 [13.5] 46 [13.5] 5.5	45.4 [13.3] 45.4 [13.3] 5.4	44.8 [13.1] 44.8 [13.1] 5.5	43.3 [12.7] 43.3 [12.7] 5.4	42.7 [12.5] 42.7 [12.5] 5.4	41.7 [12.2] 41.7 [12.2] 5.5	40.3 [11.8] 40.3 [11.8] 5.4	39.7 [11.6] 39.7 [11.6] 5.4
	125°F [51.7°C]	Total BTUH [kW] 51.8 [15.2] 40 [11.7] 6.0	50 [14.7] 36.7 [10.7] 5.9	49.3 [14.5] 35.4 [10.4] 5.9	49.1 [14.4] 49.1 [14.4] 6.0	47.4 [13.9] 45.6 [13.4] 5.9	46.8 [13.7] 44 [12.9] 5.8	44.8 [13.1] 44.8 [13.1] 5.9	43.3 [12.7] 43.3 [12.7] 5.8	42.7 [12.5] 42.7 [12.5] 5.8	42 [12.3] 42 [12.3] 5.9	40.6 [11.9] 40.6 [11.9] 5.8	40 [11.7] 40 [11.7] 5.7	38.9 [11.4] 38.9 [11.4] 5.8	37.5 [11] 37.5 [11] 5.7	37 [10.8] 37 [10.8] 5.7

NOTES:
 dbE-Entering air dry bulb
 wbE-Entering air wet bulb
 Total-Total Cooling Capacity x 1000 BTUH
 Sens-Sensible capacity x 1000 BTUH
 Power-KW input (Compressor + OD motor)





COOLING PERFORMANCE DATA - EMRHRX078AN

		Entering Indoor Air @ 80°F [26.7°C] dbE ①																
wbE		71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			61°F [16.1°C]			59°F [15.0°C]				
CFM [L/s]		2480 [1170]	2200 [1038]	1920 [906]	2480 [1170]	2200 [1038]	1920 [906]	2480 [1170]	2200 [1038]	1920 [906]	2480 [1170]	2200 [1038]	1920 [906]	2480 [1170]	2200 [1038]	1920 [906]		
DR ①		0.09	0.07	0.05	0.09	0.07	0.05	0.09	0.07	0.05	0.09	0.07	0.05	0.09	0.07	0.05		
Outdoor Dry Bulb Temperature	75°F [23.9°C]	Total BTUH [kW]	90 [26.4]	87.9 [25.8]	85.9 [25.2]	87.4 [25.6]	85.4 [25]	83.4 [24.4]	83.1 [24.3]	81.2 [23.8]	79.3 [23.2]	80.3 [23.5]	78.4 [23]	76.6 [22.5]	77 [22.6]	75.3 [22.1]	73.5 [21.6]	
		Sens BTUH [kW]	53.2 [15.6]	50.2 [14.7]	47.2 [13.8]	47.2 [13.8]	47.2 [13.8]	47.2 [13.8]	47.2 [13.8]	47.2 [13.8]	47.2 [13.8]	47.2 [13.8]	47.2 [13.8]	47.2 [13.8]	47.2 [13.8]	47.2 [13.8]	47.2 [13.8]	47.2 [13.8]
		Power	5.5	5.4	5.4	5.4	5.4	5.3	5.4	5.3	5.2	5.3	5.3	5.2	5.3	5.2	5.2	5.2
	80°F [26.7°C]	Total BTUH [kW]	88.2 [25.9]	86.2 [25.3]	84.2 [24.7]	85.6 [25.1]	83.7 [24.5]	81.8 [24]	81.3 [23.8]	79.5 [23.3]	77.7 [22.8]	78.5 [23]	76.8 [22.5]	75 [22]	73.3 [21.5]	73.6 [21.6]	71.9 [21.1]	70.2 [20.6]
		Sens BTUH [kW]	52.5 [15.4]	49.6 [14.5]	46.6 [13.7]	46.6 [13.7]	46.6 [13.7]	46.6 [13.7]	46.6 [13.7]	46.6 [13.7]	46.6 [13.7]	46.6 [13.7]	46.6 [13.7]	46.6 [13.7]	46.6 [13.7]	46.6 [13.7]	46.6 [13.7]	46.6 [13.7]
		Power	5.7	5.6	5.6	5.6	5.6	5.5	5.6	5.5	5.4	5.4	5.5	5.4	5.5	5.4	5.4	5.4
	85°F [29.4°C]	Total BTUH [kW]	86.5 [25.3]	84.5 [24.8]	82.6 [24.2]	83.9 [24.6]	82 [24]	80.1 [23.5]	79.6 [23.3]	77.8 [22.8]	76 [22.3]	74.2 [21.8]	76.8 [22.5]	75 [22]	73.3 [21.5]	73.5 [21.6]	71.9 [21.1]	70.2 [20.6]
		Sens BTUH [kW]	51.8 [15.2]	48.9 [14.3]	46 [13.5]	46.3 [13.5]	46 [13.5]	46 [13.5]	46 [13.5]	46 [13.5]	46 [13.5]	46 [13.5]	46 [13.5]	46 [13.5]	46 [13.5]	46 [13.5]	46 [13.5]	46 [13.5]
		Power	5.9	5.9	5.8	5.9	5.8	5.7	5.8	5.7	5.7	5.7	5.8	5.7	5.6	5.7	5.7	5.6
	90°F [32.2°C]	Total BTUH [kW]	84.6 [24.8]	82.7 [24.2]	80.8 [23.7]	82 [24]	80.2 [23.5]	78.3 [23]	77.7 [22.8]	76 [22.3]	74.2 [21.8]	74.9 [22]	73.2 [21.5]	71.6 [21]	70.1 [20.5]	71.7 [21]	70.1 [20.5]	68.5 [20.1]
		Sens BTUH [kW]	51 [14.9]	48.1 [14.1]	45.3 [13.3]	45.3 [13.3]	45.3 [13.3]	45.3 [13.3]	45.3 [13.3]	45.3 [13.3]	45.3 [13.3]	45.3 [13.3]	45.3 [13.3]	45.3 [13.3]	45.3 [13.3]	45.3 [13.3]	45.3 [13.3]	45.3 [13.3]
		Power	6.2	6.1	6.0	6.1	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	5.8
95°F [35.0°C]	Total BTUH [kW]	82.8 [24.3]	80.9 [23.7]	79 [23.2]	80.2 [23.5]	78.4 [23]	76.5 [22.4]	75.9 [22.2]	74.1 [21.7]	72.4 [21.2]	73.1 [21.4]	71.4 [20.9]	69.8 [20.4]	69.8 [20.5]	68.3 [20]	66.7 [19.5]	65.1 [19.0]	
	Sens BTUH [kW]	50.2 [14.7]	47.4 [13.9]	44.5 [13.1]	44.5 [13.1]	44.5 [13.1]	44.5 [13.1]	44.5 [13.1]	44.5 [13.1]	44.5 [13.1]	44.5 [13.1]	44.5 [13.1]	44.5 [13.1]	44.5 [13.1]	44.5 [13.1]	44.5 [13.1]	44.5 [13.1]	
	Power	6.4	6.3	6.3	6.3	6.3	6.2	6.3	6.2	6.1	6.2	6.2	6.1	6.2	6.1	6.1	6.1	
100°F [37.8°C]	Total BTUH [kW]	80.8 [23.7]	79 [23.1]	77.2 [22.6]	78.2 [22.9]	76.5 [22.4]	74.7 [21.9]	73.9 [21.7]	72.3 [21.2]	70.6 [20.7]	71.1 [20.8]	69.5 [20.4]	67.9 [19.9]	67.9 [19.9]	66.4 [19.4]	64.8 [18.9]	63.2 [18.4]	
	Sens BTUH [kW]	49.3 [14.4]	46.5 [13.6]	43.8 [12.8]	43.8 [12.8]	43.8 [12.8]	43.8 [12.8]	43.8 [12.8]	43.8 [12.8]	43.8 [12.8]	43.8 [12.8]	43.8 [12.8]	43.8 [12.8]	43.8 [12.8]	43.8 [12.8]	43.8 [12.8]	43.8 [12.8]	
	Power	6.7	6.6	6.5	6.6	6.5	6.5	6.5	6.5	6.4	6.5	6.4	6.4	6.5	6.4	6.4	6.3	
105°F [40.6°C]	Total BTUH [kW]	78.8 [23.1]	77.1 [22.6]	75.3 [22.1]	76.2 [22.3]	74.5 [21.8]	72.8 [21.3]	71.9 [21.1]	70.3 [20.6]	68.7 [20.1]	69.1 [20.3]	67.6 [19.8]	66 [19.3]	65.9 [19.3]	64.4 [18.9]	62.9 [18.4]	61.4 [17.9]	
	Sens BTUH [kW]	48.4 [14.2]	45.7 [13.4]	42.9 [12.6]	42.9 [12.6]	42.9 [12.6]	42.9 [12.6]	42.9 [12.6]	42.9 [12.6]	42.9 [12.6]	42.9 [12.6]	42.9 [12.6]	42.9 [12.6]	42.9 [12.6]	42.9 [12.6]	42.9 [12.6]	42.9 [12.6]	
	Power	6.9	6.9	6.8	6.9	6.8	6.7	6.8	6.7	6.7	6.8	6.7	6.6	6.7	6.7	6.6	6.6	
110°F [43.3°C]	Total BTUH [kW]	76.8 [22.5]	75.1 [22]	73.3 [21.5]	74.2 [21.7]	72.5 [21.3]	70.8 [20.8]	69.9 [20.5]	68.3 [20]	66.7 [19.6]	67.1 [19.7]	65.6 [19.2]	64.1 [18.8]	63.9 [18.7]	62.4 [18.3]	61 [17.9]	59.5 [17.5]	
	Sens BTUH [kW]	47.4 [13.9]	44.7 [13.1]	42.1 [12.3]	42.1 [12.3]	42.1 [12.3]	42.1 [12.3]	42.1 [12.3]	42.1 [12.3]	42.1 [12.3]	42.1 [12.3]	42.1 [12.3]	42.1 [12.3]	42.1 [12.3]	42.1 [12.3]	42.1 [12.3]	42.1 [12.3]	
	Power	7.2	7.2	7.1	7.2	7.1	7.0	7.1	7.0	6.9	7.1	7.0	6.9	7.0	6.9	6.9	6.9	
115°F [46.1°C]	Total BTUH [kW]	74.7 [21.9]	73 [21.4]	71.3 [20.9]	72.1 [21.1]	70.5 [20.7]	68.8 [20.2]	67.8 [19.9]	66.3 [19.4]	64.7 [19]	65 [19]	63.5 [18.6]	62.1 [18.2]	61.8 [18.1]	60.4 [17.7]	59 [17.3]	57.6 [16.9]	
	Sens BTUH [kW]	46.4 [13.6]	43.8 [12.8]	41.2 [12.1]	41.2 [12.1]	41.2 [12.1]	41.2 [12.1]	41.2 [12.1]	41.2 [12.1]	41.2 [12.1]	41.2 [12.1]	41.2 [12.1]	41.2 [12.1]	41.2 [12.1]	41.2 [12.1]	41.2 [12.1]	41.2 [12.1]	
	Power	7.5	7.4	7.4	7.5	7.4	7.3	7.4	7.3	7.2	7.4	7.3	7.2	7.3	7.3	7.2	7.2	
118.4°F [48°C]	Total BTUH [kW]	73.2 [21.5]	71.6 [21]	69.9 [20.5]	70.7 [20.7]	69.1 [20.3]	67.4 [19.8]	66.3 [19.4]	64.9 [19]	63.3 [18.6]	63.5 [18.6]	62.1 [18.2]	60.7 [17.8]	60.3 [17.7]	59 [17.3]	57.6 [16.9]	56.2 [16.5]	
	Sens BTUH [kW]	45.7 [13.4]	43.1 [12.6]	40.5 [11.9]	40.5 [11.9]	40.5 [11.9]	40.5 [11.9]	40.5 [11.9]	40.5 [11.9]	40.5 [11.9]	40.5 [11.9]	40.5 [11.9]	40.5 [11.9]	40.5 [11.9]	40.5 [11.9]	40.5 [11.9]	40.5 [11.9]	
	Power	7.7	7.7	7.6	7.7	7.6	7.5	7.6	7.5	7.4	7.6	7.5	7.4	7.5	7.5	7.4	7.4	
120°F [48.9°C]	Total BTUH [kW]	72.5 [21.3]	70.9 [20.8]	69.3 [20.3]	70 [20.5]	68.4 [20]	66.8 [19.6]	65.6 [19.2]	64.2 [18.8]	62.7 [18.4]	62.8 [18.4]	61.4 [18]	60 [17.6]	59.6 [17.5]	58.3 [17.1]	56.9 [16.7]	55.5 [16.3]	
	Sens BTUH [kW]	45.3 [13.3]	42.8 [12.5]	40.2 [11.8]	40.2 [11.8]	40.2 [11.8]	40.2 [11.8]	40.2 [11.8]	40.2 [11.8]	40.2 [11.8]	40.2 [11.8]	40.2 [11.8]	40.2 [11.8]	40.2 [11.8]	40.2 [11.8]	40.2 [11.8]	40.2 [11.8]	
	Power	7.8	7.8	7.7	7.8	7.7	7.6	7.7	7.6	7.5	7.7	7.6	7.5	7.6	7.6	7.5	7.5	
125°F [51.7°C]	Total BTUH [kW]	70.3 [20.6]	68.7 [20.1]	67.2 [19.7]	67.8 [19.9]	66.2 [19.4]	64.7 [19]	63.4 [18.6]	62 [18.2]	60.6 [17.8]	60.6 [17.8]	59.3 [17.4]	57.9 [17]	57.4 [16.8]	56.1 [16.4]	54.8 [16.1]	53.4 [15.7]	
	Sens BTUH [kW]	44.2 [13]	41.7 [12.2]	39.2 [11.5]	39.2 [11.5]	39.2 [11.5]	39.2 [11.5]	39.2 [11.5]	39.2 [11.5]	39.2 [11.5]	39.2 [11.5]	39.2 [11.5]	39.2 [11.5]	39.2 [11.5]	39.2 [11.5]	39.2 [11.5]	39.2 [11.5]	
	Power	8.2	8.1	8.0	8.1	8.0	7.9	8.0	7.9	7.9	8.0	7.9	7.8	8.0	7.9	7.8	7.8	

NOTES:

dbE-Entering air dry bulb

wbE-Entering air wet bulb

Total-Total Cooling Capacity x 1000 BTUH

Sens-Sensible capacity x 1000 BTUH

Power-KW input (Compressor + OD motor)



COOLING PERFORMANCE DATA - EMRHRX102AN

		Entering Indoor Air @ 80°F [26.7°C] dbE ①															
		71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			61°F [16.1°C]			59°F [15.0°C]			
wbE		4100 [1935]	3300 [1557]	2900 [1369]	4100 [1935]	3300 [1557]	2900 [1369]	4100 [1935]	3300 [1557]	2900 [1369]	4100 [1935]	3300 [1557]	2900 [1369]	4100 [1935]	3300 [1557]	2900 [1369]	
CFM [L/s]		0.09	0.03	0.01	0.09	0.03	0.01	0.09	0.03	0.01	0.09	0.03	0.01	0.09	0.03	0.01	
DR ①		0.09	0.03	0.01	0.09	0.03	0.01	0.09	0.03	0.01	0.09	0.03	0.01	0.09	0.03	0.01	
Outdoor Dry Bulb Temperature	75°F [23.9°C]	Total BTUH [kW]	114.4 [33.5]	109.6 [32.1]	107.2 [31.4]	111.7 [32.7]	107 [31.4]	104.7 [30.7]	107.4 [31.5]	102.9 [30.1]	100.6 [29.5]	104.6 [30.7]	100.2 [29.4]	98 [28.7]	101.4 [29.7]	97.1 [28.5]	95 [27.8]
		Sens BTUH [kW]	81.7 [23.9]	73.4 [21.5]	69.2 [20.3]	91.7 [26.9]	82.3 [24.1]	77.7 [22.8]	99.2 [29.1]	89.1 [26.1]	84 [24.6]	102 [29.9]	91.6 [26.8]	86.4 [25.3]	101.4 [29.7]	93.6 [27.4]	88.3 [25.9]
		Power	6.4	6.3	6.2	6.4	6.2	6.2	6.3	6.2	6.1	6.3	6.1	6.1	6.2	6.1	6.0
	80°F [26.7°C]	Total BTUH [kW]	112.8 [33.1]	108 [31.7]	105.7 [31]	110.1 [32.3]	105.5 [30.9]	103.1 [30.2]	105.8 [31]	101.3 [29.7]	99.1 [29]	103 [30.2]	98.6 [28.9]	96.4 [28.3]	99.8 [29.2]	95.6 [28]	93.4 [27.4]
		Sens BTUH [kW]	81 [23.7]	72.8 [21.3]	68.7 [20.1]	91 [26.7]	81.8 [24]	77.1 [22.6]	98.5 [28.9]	88.5 [25.9]	83.5 [24.5]	101.3 [29.7]	91 [26.7]	85.9 [25.2]	99.8 [29.2]	93 [27.3]	87.7 [25.7]
		Power	6.7	6.5	6.4	6.6	6.4	6.4	6.5	6.4	6.3	6.5	6.4	6.3	6.5	6.3	6.2
	85°F [29.4°C]	Total BTUH [kW]	111 [32.5]	106.3 [31.2]	104 [30.5]	108.3 [31.7]	103.8 [30.4]	101.5 [29.7]	104 [30.5]	99.6 [29.2]	97.4 [28.5]	101.2 [29.7]	96.9 [28.4]	94.8 [27.8]	98 [28.7]	93.9 [27.5]	91.8 [26.9]
		Sens BTUH [kW]	80.3 [23.5]	72.1 [21.1]	68 [19.9]	90.3 [26.4]	81.1 [23.8]	76.5 [22.4]	97.7 [28.6]	87.8 [25.7]	82.8 [24.3]	100.6 [29.5]	90.3 [26.5]	85.2 [25]	98 [28.7]	92.3 [27.1]	87.1 [25.5]
		Power	6.9	6.7	6.7	6.8	6.7	6.6	6.7	6.6	6.5	6.7	6.6	6.5	6.7	6.5	6.5
	90°F [32.2°C]	Total BTUH [kW]	109.1 [32]	104.5 [30.6]	102.2 [30]	106.4 [31.2]	101.9 [29.9]	99.7 [29.2]	102.1 [29.9]	97.8 [28.7]	95.6 [28]	99.3 [29.1]	95.1 [27.9]	93 [27.3]	96.1 [28.2]	92 [27]	90 [26.4]
		Sens BTUH [kW]	79.4 [23.3]	71.4 [20.9]	67.3 [19.7]	89.4 [26.2]	80.3 [23.5]	75.8 [22.2]	96.9 [28.4]	87.1 [25.5]	82.1 [24.1]	99.3 [29.1]	89.6 [26.3]	84.5 [24.8]	96.1 [28.2]	91.6 [26.8]	86.4 [25.3]
		Power	7.1	7.0	6.9	7.0	6.9	6.8	7.0	6.8	6.8	6.9	6.8	6.7	6.9	6.8	6.7
	95°F [35.0°C]	Total BTUH [kW]	107.1 [31.4]	102.6 [30.1]	100.3 [29.4]	104.4 [30.6]	100 [29.3]	97.8 [28.7]	100 [29.3]	95.8 [28.1]	93.7 [27.5]	97.3 [28.5]	93.1 [27.3]	91.1 [26.7]	94 [27.6]	90.1 [26.4]	88.1 [25.8]
		Sens BTUH [kW]	78.5 [23]	70.5 [20.7]	66.5 [19.5]	88.5 [25.9]	79.5 [23.3]	75 [22]	96 [28.1]	86.2 [25.3]	81.3 [23.8]	97.3 [28.5]	88.8 [26]	83.7 [24.5]	94 [27.6]	90.1 [26.4]	85.6 [25.1]
		Power	7.4	7.2	7.1	7.3	7.1	7.1	7.2	7.1	7.0	7.2	7.0	7.0	7.2	7.0	6.9
100°F [37.8°C]	Total BTUH [kW]	104.9 [30.7]	100.5 [29.4]	98.3 [28.8]	102.2 [30]	97.9 [28.7]	95.7 [28.1]	97.9 [28.7]	93.7 [27.5]	91.7 [26.9]	95.1 [27.9]	91.1 [26.7]	89.1 [26.1]	91.9 [26.9]	88 [25.8]	86.1 [25.2]	
	Sens BTUH [kW]	77.5 [22.7]	69.6 [20.4]	65.7 [19.2]	87.5 [25.6]	78.6 [23]	74.1 [21.7]	95 [27.8]	85.3 [25]	80.5 [23.6]	95.1 [27.9]	87.8 [25.7]	82.9 [24.2]	91.9 [26.9]	88 [25.8]	84.7 [24.8]	
	Power	7.6	7.5	7.4	7.6	7.4	7.3	7.5	7.3	7.3	7.5	7.3	7.2	7.4	7.3	7.2	
105°F [40.6°C]	Total BTUH [kW]	102.6 [30.1]	98.3 [28.8]	96.1 [28.2]	99.9 [29.3]	95.7 [28]	93.6 [27.4]	95.6 [28]	91.5 [26.8]	89.5 [26.2]	92.8 [27.2]	88.9 [26]	86.9 [25.5]	89.6 [26.2]	85.8 [25.1]	83.9 [24.6]	
	Sens BTUH [kW]	76.4 [22.4]	68.6 [20.1]	64.7 [19]	86.4 [25.3]	77.6 [22.7]	73.2 [21.4]	93.8 [27.5]	84.3 [24.7]	79.5 [23.3]	92.8 [27.2]	86.8 [25.4]	81.9 [24]	89.6 [26.2]	85.8 [25.1]	83.8 [24.6]	
	Power	7.9	7.7	7.7	7.8	7.7	7.6	7.8	7.6	7.5	7.7	7.6	7.5	7.7	7.5	7.5	
110°F [43.3°C]	Total BTUH [kW]	100.2 [29.4]	95.9 [28.1]	93.8 [27.5]	97.5 [28.6]	93.4 [27.4]	91.3 [26.8]	93.1 [27.3]	89.2 [26.1]	87.2 [25.6]	90.3 [26.5]	86.5 [25.4]	84.6 [24.8]	87.1 [25.5]	83.5 [24.5]	81.6 [23.9]	
	Sens BTUH [kW]	75.2 [22]	67.5 [19.8]	63.7 [18.7]	85.2 [25]	76.5 [22.4]	72.2 [21.1]	92.7 [27.2]	83.2 [24.4]	78.5 [23]	90.3 [26.5]	85.8 [25.1]	80.9 [23.7]	87.1 [25.5]	83.5 [24.5]	81.6 [23.9]	
	Power	8.2	8.0	7.9	8.1	8.0	7.9	8.1	7.9	7.8	8.0	7.9	7.8	8.0	7.8	7.7	
115°F [46.1°C]	Total BTUH [kW]	97.6 [28.6]	93.5 [27.4]	91.4 [26.8]	94.9 [27.8]	90.9 [26.6]	88.9 [26.1]	90.6 [26.5]	86.7 [25.4]	84.8 [24.9]	87.8 [25.7]	84.1 [24.6]	82.2 [24.1]	84.6 [24.8]	81 [23.7]	79.2 [23.2]	
	Sens BTUH [kW]	73.9 [21.6]	66.4 [19.4]	62.6 [18.3]	83.9 [24.6]	75.3 [22.1]	71.1 [20.8]	90.6 [26.5]	82.1 [24.1]	77.4 [22.7]	87.8 [25.7]	84.1 [24.6]	79.8 [23.4]	84.6 [24.8]	81 [23.7]	79.2 [23.2]	
	Power	8.5	8.3	8.2	8.4	8.3	8.2	8.4	8.2	8.1	8.3	8.2	8.1	8.3	8.1	8.0	
118.4°F [48°C]	Total BTUH [kW]	95.8 [28.1]	91.7 [26.9]	89.7 [26.3]	93.1 [27.3]	89.1 [26.1]	87.2 [25.6]	88.8 [26]	84.9 [24.9]	83.1 [24.4]	86 [25.2]	82.3 [24.1]	80.5 [23.6]	82.8 [24.3]	79.2 [23.2]	77.5 [22.7]	
	Sens BTUH [kW]	72.9 [21.4]	65.5 [19.2]	61.8 [18.1]	82.9 [24.3]	74.5 [21.8]	70.3 [20.6]	88.8 [26]	81.2 [23.8]	76.7 [22.5]	86 [25.2]	82.3 [24.1]	79.1 [23.2]	82.8 [24.3]	79.2 [23.2]	77.5 [22.7]	
	Power	8.7	8.5	8.4	8.7	8.5	8.4	8.6	8.4	8.3	8.6	8.4	8.3	8.5	8.3	8.2	
120°F [48.9°C]	Total BTUH [kW]	94.9 [27.8]	90.9 [26.6]	88.9 [26]	92.2 [27]	88.3 [25.9]	86.4 [25.3]	87.9 [25.7]	84.1 [24.7]	82.3 [24.1]	85.1 [24.9]	81.5 [23.9]	79.7 [23.3]	81.9 [24]	78.4 [23]	76.7 [22.5]	
	Sens BTUH [kW]	72.5 [21.2]	65.1 [19.1]	61.4 [18]	82.5 [24.2]	74.1 [21.7]	69.9 [20.5]	87.9 [25.7]	80.8 [23.7]	76.3 [22.3]	85.1 [24.9]	81.5 [23.9]	78.7 [23]	81.9 [24]	78.4 [23]	76.7 [22.5]	
	Power	8.8	8.6	8.5	8.8	8.6	8.5	8.7	8.5	8.4	8.7	8.5	8.4	8.6	8.4	8.3	
125°F [51.7°C]	Total BTUH [kW]	92.1 [27]	88.2 [25.8]	86.2 [25.3]	89.4 [26.2]	85.6 [25.1]	83.7 [24.5]	85 [24.9]	81.4 [23.9]	79.6 [23.3]	82.2 [24.1]	78.8 [23.1]	77 [22.6]	79 [23.2]	75.7 [22.2]	74 [21.7]	
	Sens BTUH [kW]	71 [20.8]	63.8 [18.7]	60.2 [17.6]	81 [23.7]	72.8 [21.3]	68.7 [20.1]	85 [24.9]	79.5 [23.3]	75 [22]	82.2 [24.1]	78.8 [23.1]	77 [22.6]	79 [23.2]	75.7 [22.2]	74 [21.7]	
	Power	9.2	9.0	8.9	9.1	8.9	8.8	9.0	8.8	8.7	9.0	8.8	8.7	9.0	8.8	8.7	

NOTES:

dbE-Entering air dry bulb

wbE-Entering air wet bulb

Total-Total Cooling Capacity x 1000 BTUH

Sens-Sensible capacity x 1000 BTUH

Power-KW input (Compressor + OD motor)





COOLING PERFORMANCE DATA - EMRHRX120AN

		Entering Indoor Air @ 80°F [26.7°C] dbE ①															
wbE		71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			61°F [16.1°C]			59°F [15.0°C]			
CFM [L/s]		4800 [2265]	3800 [1793]	3200 [1510]	4800 [2265]	3800 [1793]	3200 [1510]	4800 [2265]	3800 [1793]	3200 [1510]	4800 [2265]	3800 [1793]	3200 [1510]	4800 [2265]	3800 [1793]	3200 [1510]	
DR ①		0.10	0.05	0.01	0.10	0.05	0.01	0.10	0.05	0.01	0.10	0.05	0.01	0.10	0.05	0.01	
Outdoor Dry Bulb Temperature	75°F [23.9°C]	Total BTUH [kW]	132.4 [38.8]	126.4 [37]	122.7 [36]	129.7 [38]	123.8 [36.3]	120.2 [35.2]	125.4 [36.7]	119.6 [35.1]	116.2 [34.1]	122.6 [35.9]	117 [34.3]	113.6 [33.3]	119.3 [35]	113.9 [33.4]	110.6 [32.4]
		Sens BTUH [kW]	95.6 [28]	85.1 [25]	78.9 [23.1]	105.7 [31]	94.1 [27.6]	87.2 [25.5]	113.2 [33.2]	100.9 [29.6]	93.4 [27.4]	116.1 [34]	103.4 [30.3]	95.8 [28.1]	118.3 [34.7]	105.4 [30.9]	97.6 [28.6]
		Power	7.7	7.6	7.5	7.7	7.5	7.4	7.6	7.4	7.3	7.6	7.4	7.3	7.5	7.4	7.3
	80°F [26.7°C]	Total BTUH [kW]	130.8 [38.3]	124.8 [36.6]	121.2 [35.5]	128.1 [37.5]	122.2 [35.8]	118.7 [34.8]	123.7 [36.3]	118.1 [34.6]	114.7 [33.6]	120.9 [35.4]	115.4 [33.8]	112.1 [32.8]	117.7 [34.5]	112.3 [32.9]	109.1 [32]
		Sens BTUH [kW]	94.9 [27.8]	84.5 [24.8]	78.3 [23]	105 [30.8]	93.5 [27.4]	86.6 [25.4]	112.6 [33]	100.3 [29.4]	92.9 [27.2]	115.4 [33.8]	102.8 [30.1]	95.2 [27.9]	117.6 [34.5]	104.8 [30.7]	97 [28.4]
		Power	8.0	7.8	7.7	7.9	7.7	7.6	7.8	7.6	7.5	7.8	7.6	7.5	7.7	7.6	7.5
	85°F [29.4°C]	Total BTUH [kW]	129 [37.8]	123.1 [36.1]	119.6 [35]	126.3 [37]	120.5 [35.3]	117.1 [34.3]	121.9 [35.7]	116.4 [34.1]	113 [33.1]	119.1 [34.9]	113.7 [33.3]	110.4 [32.4]	115.9 [34]	110.6 [32.4]	107.4 [31.5]
		Sens BTUH [kW]	94.2 [27.6]	83.9 [24.6]	77.7 [22.8]	104.2 [30.5]	92.8 [27.2]	86 [25.2]	111.8 [32.8]	99.6 [29.2]	92.2 [27]	114.7 [33.6]	102.1 [29.9]	94.6 [27.7]	115.9 [34]	104.1 [30.5]	96.4 [28.3]
		Power	8.2	8.0	7.9	8.1	7.9	7.8	8.0	7.9	7.7	8.0	7.8	7.7	8.0	7.8	7.7
	90°F [32.2°C]	Total BTUH [kW]	127.1 [37.2]	121.3 [35.5]	117.8 [34.5]	124.4 [36.4]	118.7 [34.8]	115.3 [33.8]	120 [35.2]	114.5 [33.6]	111.3 [32.6]	117.2 [34.4]	111.9 [32.8]	108.7 [31.8]	114 [33.4]	108.8 [31.9]	105.7 [31]
		Sens BTUH [kW]	93.3 [27.3]	83.1 [24.4]	77 [22.6]	103.4 [30.3]	92.1 [27]	85.3 [25]	111 [32.5]	98.8 [29]	91.5 [26.8]	113.8 [33.3]	101.4 [29.7]	93.9 [27.5]	114 [33.4]	103.3 [30.3]	95.7 [28]
		Power	8.4	8.2	8.1	8.3	8.2	8.0	8.3	8.1	8.0	8.3	8.2	8.1	8.2	8.0	7.9
	95°F [35.0°C]	Total BTUH [kW]	125 [36.6]	119.3 [35]	115.9 [34]	122.3 [35.9]	116.8 [34.2]	113.4 [33.2]	118 [34.6]	112.6 [33]	109.4 [32]	115.2 [33.8]	109.9 [32.2]	106.8 [31.3]	112 [32.8]	106.8 [31.3]	103.8 [30.4]
		Sens BTUH [kW]	92.4 [27.1]	82.3 [24.1]	76.2 [22.3]	102.5 [30]	91.3 [26.7]	84.5 [24.8]	110 [32.2]	98 [28.7]	90.8 [26.6]	112.9 [33.1]	100.5 [29.5]	93.1 [27.3]	112 [32.8]	102.5 [30]	94.9 [27.8]
	Power	8.7	8.5	8.3	8.6	8.4	8.3	8.5	8.3	8.2	8.5	8.3	8.2	8.5	8.3	8.2	
100°F [37.8°C]	Total BTUH [kW]	122.9 [36]	117.3 [34.4]	113.9 [33.4]	120.2 [35.2]	114.7 [33.6]	111.4 [32.6]	115.8 [33.9]	110.5 [32.4]	107.3 [31.5]	113 [33.1]	107.8 [31.6]	104.7 [30.7]	109.8 [32.2]	104.8 [30.7]	101.8 [29.8]	
	Sens BTUH [kW]	91.4 [26.8]	81.4 [23.8]	75.4 [22.1]	101.4 [29.7]	90.3 [26.5]	83.7 [24.5]	109 [31.9]	97.1 [28.4]	89.9 [26.4]	111.8 [32.8]	99.6 [29.2]	92.3 [27]	109.8 [32.2]	101.6 [29.8]	94.1 [27.6]	
	Power	8.9	8.7	8.6	8.9	8.7	8.5	8.8	8.6	8.5	8.8	8.6	8.4	8.7	8.5	8.4	
105°F [40.6°C]	Total BTUH [kW]	120.6 [35.3]	115 [33.7]	111.7 [32.7]	117.8 [34.5]	112.5 [33]	109.2 [32]	113.5 [33.3]	108.3 [31.7]	105.2 [30.8]	110.7 [32.4]	105.6 [31]	102.6 [30.1]	107.5 [31.5]	102.6 [30.1]	99.6 [29.2]	
	Sens BTUH [kW]	90.2 [26.4]	80.4 [23.6]	74.4 [21.8]	100.3 [29.4]	89.3 [26.2]	82.8 [24.3]	107.9 [31.6]	96.1 [28.2]	89 [26.1]	110.7 [32.4]	98.6 [28.9]	91.3 [26.8]	107.5 [31.5]	100.6 [29.5]	93.2 [27.3]	
	Power	9.2	9.0	8.9	9.1	8.9	8.8	9.1	8.9	8.7	9.0	8.8	8.7	9.0	8.8	8.7	
110°F [43.3°C]	Total BTUH [kW]	118.1 [34.6]	112.7 [33]	109.5 [32.1]	115.4 [33.8]	110.1 [32.3]	107 [31.3]	111 [32.5]	106 [31.1]	102.9 [30.2]	108.2 [31.7]	103.3 [30.3]	100.3 [29.4]	105 [30.8]	100.2 [29.4]	97.3 [28.5]	
	Sens BTUH [kW]	89 [26.1]	79.3 [23.2]	73.5 [21.5]	99.1 [29]	88.3 [25.9]	81.8 [24]	106.7 [31.3]	95 [27.8]	88 [25.8]	108.2 [31.7]	97.5 [28.6]	90.3 [26.5]	105 [30.8]	99.5 [29.2]	92.2 [27]	
	Power	9.5	9.3	9.2	9.4	9.2	9.1	9.4	9.1	9.0	9.3	9.1	9.0	9.3	9.1	9.0	
115°F [46.1°C]	Total BTUH [kW]	115.5 [33.9]	110.2 [32.3]	107.1 [31.4]	112.8 [33.1]	107.7 [31.6]	104.6 [30.6]	108.5 [31.8]	103.5 [30.3]	100.5 [29.5]	105.7 [31]	100.8 [29.5]	97.9 [28.7]	102.4 [30]	97.8 [28.6]	95 [27.8]	
	Sens BTUH [kW]	87.7 [25.7]	78.1 [22.9]	72.4 [21.2]	97.8 [28.7]	87.1 [25.5]	80.7 [23.6]	105.4 [30.9]	93.8 [27.5]	86.9 [25.5]	105.7 [31]	96.4 [28.2]	89.3 [26.2]	102.4 [30]	97.8 [28.6]	91.1 [26.7]	
	Power	9.8	9.6	9.4	9.7	9.5	9.4	9.7	9.4	9.3	9.6	9.4	9.3	9.6	9.4	9.3	
118.4°F [48°C]	Total BTUH [kW]	113.7 [33.3]	108.5 [31.8]	105.4 [30.9]	111 [32.5]	105.9 [31]	102.9 [30.2]	106.6 [31.2]	101.7 [29.8]	98.8 [29]	103.8 [30.4]	99 [29]	96.2 [28.2]	100.6 [29.5]	96 [28.1]	93.2 [27.3]	
	Sens BTUH [kW]	86.7 [25.4]	77.3 [22.7]	71.6 [21]	96.8 [28.4]	86.3 [25.3]	79.9 [23.4]	104.4 [30.6]	93 [27.3]	86.2 [25.3]	103.8 [30.4]	95.5 [28]	88.5 [25.9]	100.6 [29.5]	96 [28.1]	90.4 [26.5]	
	Power	10	9.8	9.7	10	9.7	9.6	9.9	9.7	9.5	9.9	9.6	9.5	9.8	9.6	9.5	
120°F [48.9°C]	Total BTUH [kW]	112.8 [33.1]	107.7 [31.5]	104.6 [30.6]	110.1 [32.3]	105.1 [30.8]	102.1 [29.9]	105.7 [31]	100.9 [29.6]	98 [28.7]	102.9 [30.2]	98.2 [28.8]	95.4 [28]	99.7 [29.2]	95.2 [27.9]	92.4 [27.1]	
	Sens BTUH [kW]	86.3 [25.3]	76.9 [22.5]	71.2 [20.9]	96.4 [28.3]	85.9 [25.2]	79.5 [23.3]	104 [30.5]	92.6 [27.1]	85.8 [25.1]	102.9 [30.2]	95.1 [27.9]	88.1 [25.8]	99.7 [29.2]	95.2 [27.9]	90 [26.4]	
	Power	10.1	9.9	9.8	10.1	9.8	9.7	10.0	9.8	9.6	10.0	9.7	9.6	9.9	9.7	9.6	
125°F [51.7°C]	Total BTUH [kW]	110 [32.2]	104.9 [30.8]	101.9 [29.9]	107.3 [31.4]	102.4 [30]	99.4 [29.1]	102.9 [30.2]	98.2 [28.8]	95.4 [27.9]	100.1 [29.3]	95.5 [28]	92.8 [27.5]	96.9 [28.4]	92.5 [27.1]	89.8 [26.3]	
	Sens BTUH [kW]	84.9 [24.9]	75.6 [22.1]	70 [20.5]	94.9 [27.8]	84.6 [24.8]	78.3 [23]	102.5 [30]	91.3 [26.8]	84.6 [24.8]	100.1 [29.3]	93.8 [27.5]	86.9 [25.5]	96.9 [28.4]	92.5 [27.1]	88.7 [26]	
	Power	10.5	10.2	10.1	10.4	10.2	10.0	10.3	10.1	9.9	10.3	10.1	9.9	10.3	10.0	9.9	

NOTES:

dbE-Entering air dry bulb

wbE-Entering air wet bulb

Total-Total Cooling Capacity x 1000 BTUH

Sens-Sensible capacity x 1000 BTUH

Power-KW input (Compressor + OD motor)



INDOOR AIRFLOW PERFORMANCE

INDOOR AIRFLOW PERFORMANCE

INDOOR AIRFLOW PERFORMANCE - 3.5, 4.5, 5.5 and 6.5 TON [12.3, 15.8, 19.3 and 22.8 kW]
Voltage 380-415V - 3 Phase 50Hz

Nominal Cooling Capacity Tons	Motor Speed From Factory	Manufacturer Recommended Air-Flow Range [Min/Max] CFM	Blower Size/ Motor HP & # of Speeds	Motor Speed	External Static Pressure-Inches W.C. [kPa]									
					0.1 [.02]	0.2 [.05]	0.3 [.07]	0.4 [.10]	0.5 [.12]	0.6 [.15]	0.7 [.17]	0.8 [.20]	0.9 [.22]	1.00 [.25]
3.5	Low [Tap 2]	1225/1575	11x9 3/4 2 Speed [X-13 Motor]	Low [Tap 2]	CFM [L/s]	1435 [677]	1372 [648]	1329 [627]	1289 [608]	1248 [589]	1207 [570]	1153 [544]	-	-
				RPM	589	629	675	718	762	805	857	-	-	
				Watts	205	214	231	243	257	272	288	-	-	
4.5	Low [Tap 2]	1575/2025	11x9 1 2 Speed [X-13 Motor]	High [Tap 1]	CFM [L/s]	-	1579 [745]	1543 [728]	1506 [711]	1468 [693]	1431 [675]	1395 [658]	1355 [639]	1312 [619]
				RPM	-	666	706	747	788	827	864	905	946	
				Watts	-	290	305	322	339	355	368	385	402	
5.5	Low [Tap 2]	1925/2475	11x9 1 2 Speed [X-13 Motor]	Low [Tap 2]	CFM [L/s]	1874 [884]	1840 [868]	1810 [854]	1794 [847]	1778 [839]	1762 [832]	1734 [818]	1703 [804]	1670 [788]
				RPM	725	746	766	779	801	831	862	895	930	965
				Watts	420	430	439	448	459	472	488	505	524	542
6.5	Low [Tap 2]	1925/2475	11x9 1 2 Speed [X-13 Motor]	High [Tap 1]	CFM [L/s]	-	1896 [895]	1870 [883]	1857 [876]	1847 [872]	1819 [858]	1789 [844]	1758 [830]	1725 [814]
				RPM	-	786	808	826	848	878	910	943	977	
				Watts	-	491	500	511	525	540	557	574	592	
5.5	Low [Tap 2]	1925/2475	11x9 1 2 Speed [X-13 Motor]	Low [Tap 2]	CFM [L/s]	2106 [994]	2077 [980]	2047 [966]	2040 [963]	2010 [949]	1978 [934]	1943 [917]	1911 [902]	1879 [887]
				RPM	737	766	781	809	831	861	898	928	957	989
				Watts	523	539	550	560	576	595	616	633	650	668
6.5	Low [Tap 2]	1925/2475	11x9 1 2 Speed [X-13 Motor]	High [Tap 1]	CFM [L/s]	2262 [1068]	2242 [1058]	2221 [1048]	2197 [1037]	2176 [1027]	2139 [1009]	2107 [994]	2070 [977]	2034 [960]
				RPM	785	799	816	838	858	891	920	952	983	1012
				Watts	659	666	676	691	706	724	741	759	776	792
6.5	Low [Tap 2]	1925/2475	11x9 1 2 Speed [X-13 Motor]	Low [Tap 2]	CFM [L/s]	2283 [1077]	2255 [1064]	2226 [1051]	2199 [1038]	2166 [1022]	2131 [1006]	2098 [990]	2067 [976]	2021 [954]
				RPM	757	784	812	840	871	903	933	966	998	1035
				Watts	648	668	668	705	727	749	767	781	803	823
6.5	Low [Tap 2]	1925/2475	11x9 1 2 Speed [X-13 Motor]	High [Tap 1]	CFM [L/s]	2386 [1126]	2386 [1114]	2332 [1101]	2305 [1088]	2269 [1071]	2239 [1057]	2203 [1040]	2176 [1027]	2138 [1009]
				RPM	796	823	851	881	907	936	963	992	1019	1053
				Watts	773	789	809	828	849	867	885	900	915	934

AIRFLOW PERFORMANCE

Air Flow CFM [L/s]		External Static Pressure — Inches of Water [kPa]																						
		Voltage 380-415 / 3 phase / 50 Hz																						
		0.1 [0.02]	0.2 [0.05]	0.3 [0.07]	0.4 [0.10]	0.5 [0.12]	0.6 [0.15]	0.7 [0.17]	0.8 [0.20]	0.9 [0.22]	1.0 [0.25]	1.1 [0.27]	0.1 [0.02]	0.2 [0.05]	0.3 [0.07]	0.4 [0.10]	0.5 [0.12]	0.6 [0.15]	0.7 [0.17]	0.8 [0.20]	0.9 [0.22]	1.0 [0.25]	1.1 [0.27]	
RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	
2700 [1274]	—	—	497	588	532	633	567	685	601	743	809	668	880	—	—	—	—	—	—	—	—	—	—	—
2800 [1321]	—	—	505	617	539	664	573	717	607	777	844	672	918	—	—	—	—	—	—	—	—	—	—	—
2900 [1368]	—	—	512	648	546	696	580	752	613	814	882	677	958	—	—	—	—	—	—	—	—	—	—	—
3000 [1416]	—	—	520	681	553	732	586	789	619	852	923	682	1000	—	—	—	—	—	—	—	—	—	—	—
3100 [1463]	—	—	494	672	528	717	593	828	625	893	965	688	1044	—	—	—	—	—	—	—	—	—	—	—
3200 [1510]	—	—	503	708	536	755	568	809	600	870	937	663	1010	—	—	—	—	—	—	—	—	—	—	—
3300 [1557]	—	—	511	747	544	796	576	851	607	913	982	669	1058	—	—	—	—	—	—	—	—	—	—	—
3400 [1604]	—	—	520	788	552	839	583	896	614	960	1030	675	1107	—	—	—	—	—	—	—	—	—	—	—
3500 [1652]	497	786	529	832	560	884	591	943	622	1008	1081	681	1159	—	—	—	—	—	—	—	—	—	—	—
3600 [1699]	506	830	538	878	569	932	599	992	629	1059	1133	688	1214	—	—	—	—	—	—	—	—	—	—	—
3700 [1746]	516	877	547	926	577	981	607	1044	637	1113	1188	—	—	—	—	—	—	—	—	—	—	—	—	—
3800 [1793]	526	926	556	976	586	1034	616	1098	645	1168	1246	—	—	—	—	—	—	—	—	—	—	—	—	—
3900 [1840]	536	977	566	1029	595	1088	624	1154	653	1226	1305	—	—	—	—	—	—	—	—	—	—	—	—	—
4000 [1888]	546	1030	576	1084	605	1145	633	1213	661	1287	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4100 [1935]	557	1086	585	1142	614	1204	642	1274	669	1349	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Drive Package	A				
Motor H.P. [W]	3 [2237.1]				
Blower Sheave	AK79H				
Motor Sheave	1VP40*7/8				
Belt	A59				
Turns Open	0	1	2	3	4
RPM	680	645	608	572	533
				496	

- NOTES:
1. Factory sheave settings are shown in bold type.
 2. Do not set motor sheave below minimum or maximum turns open shown.
 3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressure
 4. Drive data shown is for horizontal airflow with wet coil.

AIRFLOW PERFORMANCE

AIRFLOW PERFORMANCE — 10 TON [35.17 kW] — 50 Hz — SIDEFLOW

Air Flow CFM [L/s]		Model EMRHR*120* Voltage 380-415 / 3 phase / 50 Hz																							
		External Static Pressure										Inches of Water [kPa]													
		0.1 [0.02]		0.2 [0.05]		0.3 [0.07]		0.4 [0.10]		0.5 [0.12]		0.6 [0.15]		0.7 [0.17]		0.8 [0.20]		0.9 [0.22]		1.0 [0.25]		1.1 [0.27]			
		RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W
3200 [1510]	—	—	—	—	—	—	—	563	771	595	830	626	895	656	965	687	1040	717	1121	747	1208	—	—		
3300 [1557]	—	—	—	—	—	—	—	571	809	602	870	632	937	663	1009	693	1087	723	1170	753	1259	—	—		
3400 [1604]	—	—	—	—	—	—	—	578	850	609	913	639	982	669	1057	699	1137	728	1223	758	1314	—	—		
3500 [1652]	—	—	—	—	—	556	833	586	893	616	959	646	1030	675	1107	705	1190	734	1278	763	1371	—	—		
3600 [1699]	—	—	—	—	—	564	878	594	940	623	1008	653	1082	682	1161	711	1245	740	1336	769	1431	—	—		
3700 [1746]	—	—	—	—	—	572	925	601	990	631	1060	660	1136	689	1217	717	1304	746	1396	—	—	—	—		
3800 [1793]	—	—	—	—	—	—	—	580	975	609	1042	638	1115	667	1193	696	1277	724	1366	752	1460	—	—		
3900 [1840]	—	—	—	—	—	560	965	589	1029	617	1098	646	1173	674	1253	703	1339	731	1430	758	1527	—	—		
4000 [1888]	—	—	—	—	—	569	1019	597	1085	626	1157	654	1234	682	1316	710	1404	737	1498	765	1597	—	—		
4100 [1935]	—	—	—	—	—	578	1076	606	1144	634	1218	662	1297	689	1382	717	1473	744	1569	—	—	—	—		
4200 [1982]	559	1071	587	1136	615	1207	642	1283	670	1364	697	1451	724	1544	751	1642	—	—	—	—	—	—	—		
4300 [2029]	569	1132	596	1199	624	1272	651	1350	678	1434	705	1524	732	1619	758	1719	—	—	—	—	—	—	—		
4400 [2076]	578	1196	606	1265	633	1340	660	1421	686	1507	713	1599	739	1696	765	1799	—	—	—	—	—	—	—		
4500 [2123]	588	1263	615	1334	642	1412	669	1494	695	1583	721	1677	747	1776	—	—	—	—	—	—	—	—	—		
4600 [2171]	598	1332	625	1406	651	1486	678	1571	704	1662	729	1758	755	1860	—	—	—	—	—	—	—	—	—		
4700 [2218]	609	1405	635	1481	661	1563	687	1650	712	1743	738	1842	763	1946	—	—	—	—	—	—	—	—	—		
4800 [2265]	619	1481	645	1559	670	1643	696	1733	721	1828	746	1929	771	2035	—	—	—	—	—	—	—	—	—		

Drive Package	A					
Motor H.P. [W]	3 [2237.1]					
Blower Sheave	AK71H					
Motor Sheave	1VP40*7/8					
Belt	A57					
Turns Open	0	1	2	3	4	5
RPM	758	722	683	642	599	558

- NOTES:
1. Factory sheave settings are shown in bold type.
 2. Do not set motor sheave below minimum or maximum turns open shown.
 3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressure
 4. Drive data shown is for horizontal airflow with wet coil.

ELECTRICAL DATA

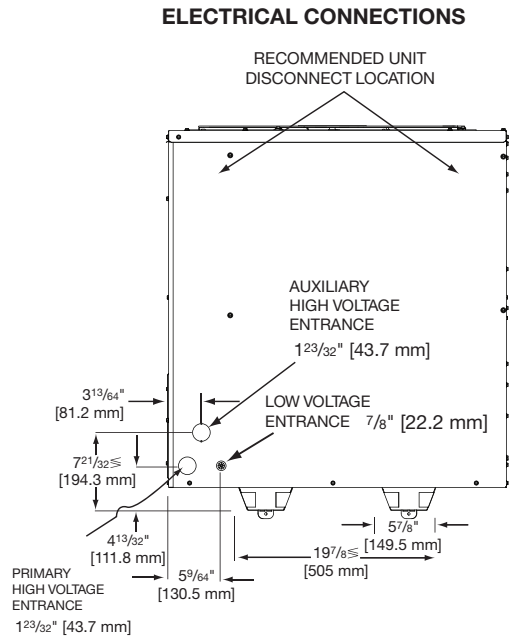
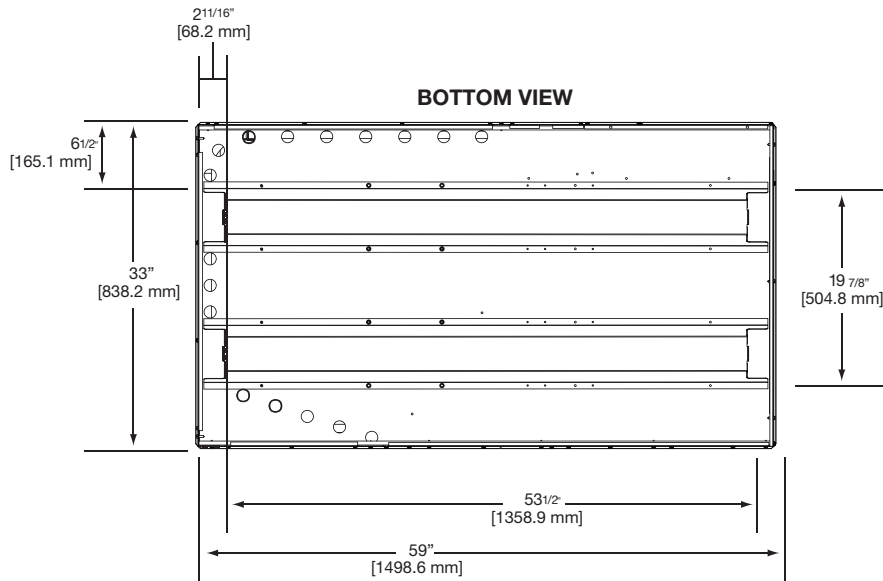
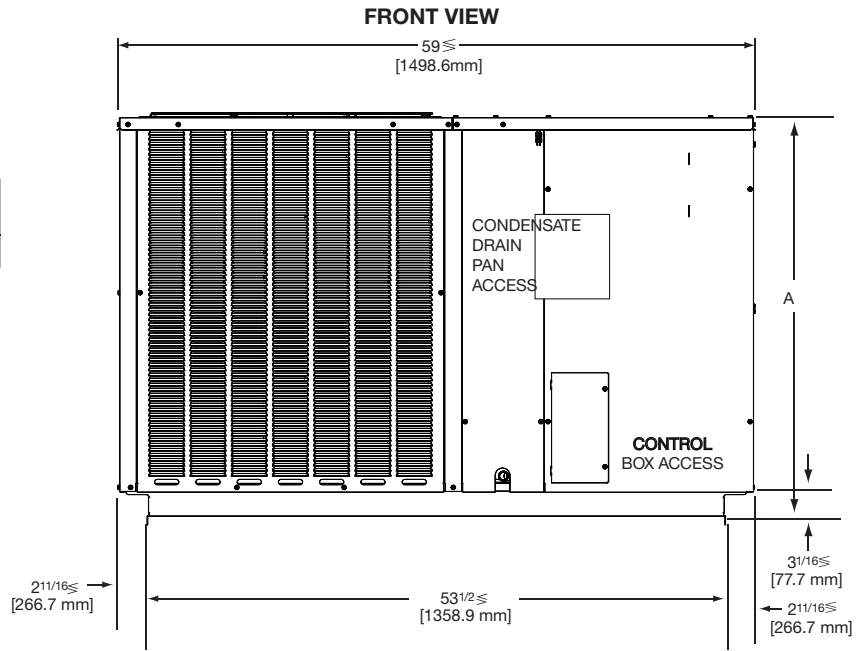
ELECTRICAL DATA - EMRHR SERIES							
		X042ANT	X054ANT	X066ANT	X078ANT	X102ANA	X120ANA
Unit Information	Unit Operating Voltage Range	342-456	342-456	342-456	342-456	342-456	342-456
	Volts	380-415	380-415	380-415	380-415	380-415	380-415
	Phase	3	3	3	3	3	3
	Hz	50	50	50	50	50	50
	Minimum Circuit Ampacity	12	15	17	24	26	30
	Minimum Overcurrent Protection Device Size	15	20	20	30	30	35
	Maximum Overcurrent Protection Device Size	15	20	20	35	40	45
Compressor Motor	No.	1	1	1	1	1	1
	Volts	380-415	380-415	380-415	380-415	380-415	380-415
	Phase	3	3	3	3	3	3
	RPM	2900	2900	2900	2900	2900	2900
	Amps (RLA), Comp. 1	6.1	7.8	8	13	14.7	16.0
	Amps (LRA), Comp. 1	43	51.5	67.1	101	128	139
	HP, Compressor 2	-	-	-	-	-	-
	Amps (RLA), Comp. 2	-	-	-	-	-	-
Amps (LRA), Comp. 2	-	-	-	-	-	-	
Condenser Motor	No.	1	1	1	1	2	2
	Volts	380-415	380-415	380-415	380-415	380-415	380-415
	Phase	1	1	1	1	1	1
	HP	1/3	1/3	1/2	3/4	1/3	3/4
	Amps (FLA, each)	1.0	1.0	2.5	3.1	1.0	2.3
	Amps (LRA, each)	2.2	2.2	N/A	N/A	1.8	4.9
Evaporator Fan	No.	1	1	1	1	1	1
	Volts	380-415	380-415	380-415	380-415	380-415	380-415
	Phase	1	1	1	1	3	3
	HP	3/4	1	1	1	3	3
	Amps (FLA, each)	3.2	4.0	4.0	4.0	5.3	5.3
	Amps (LRA, each)	N/A	N/A	N/A	N/A	38.1	38.1

1. Amp Draw Per Motor. Multiply Value by Number of Motors to Determine Total Amps.

SOUND DATA

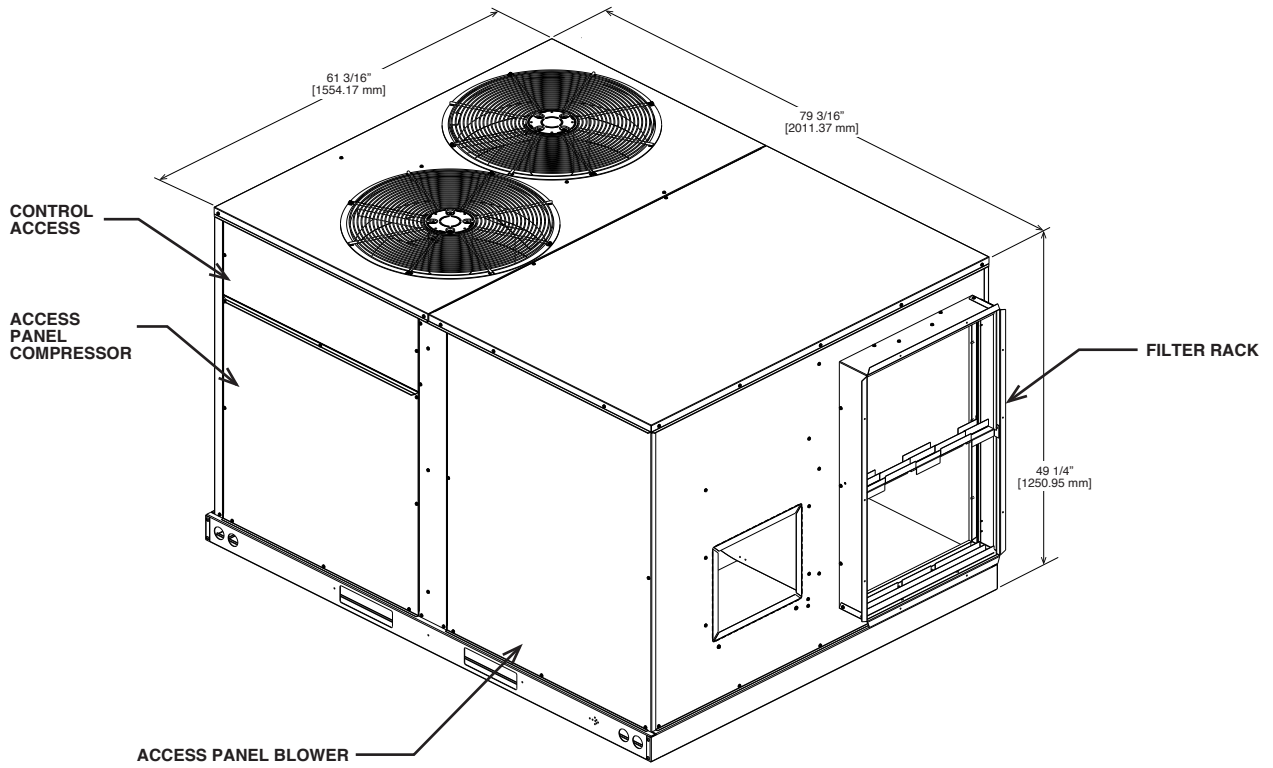
Model Number	OD Fan Running	Entire Unit Running
EMRHRX120ANA	84 dB	N/A
EMRHRX102ANA	81 dB	N/A
EMRHRX078ANT	79 dB	N/A
EMRHRX066ANT	73 dB	75 dB
EMRHRX054ANT	72 dB	74 dB
EMRHRX042ANT	77 dB	78 dB

Model	Height "A"
042, 054, 066, 078	37 1/8"

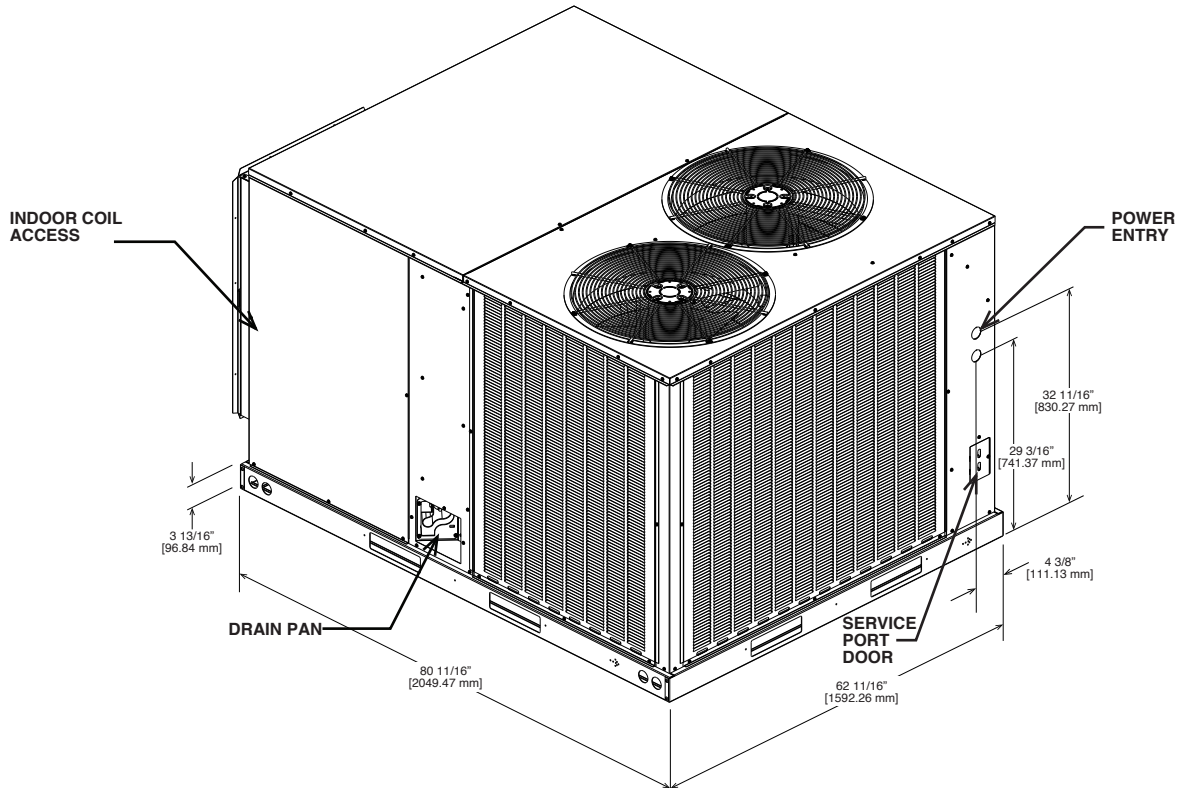




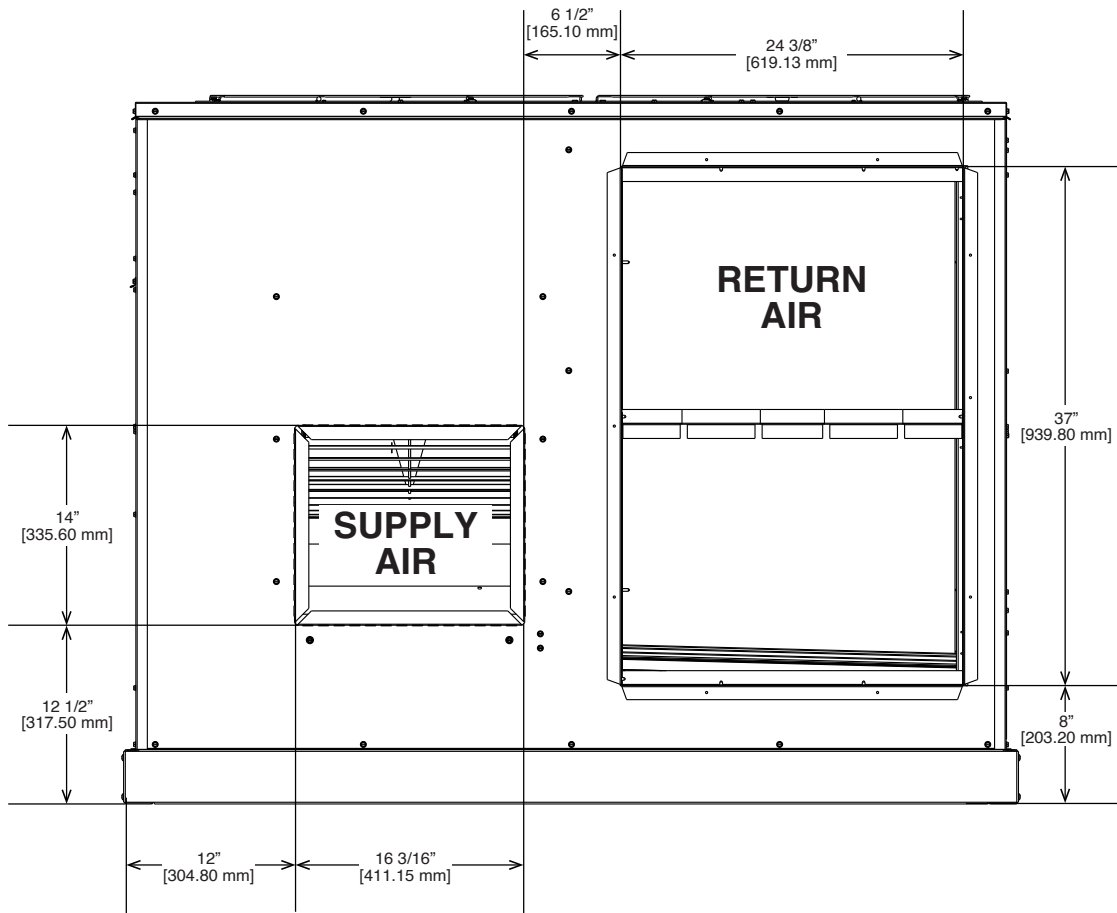
Model 102/120

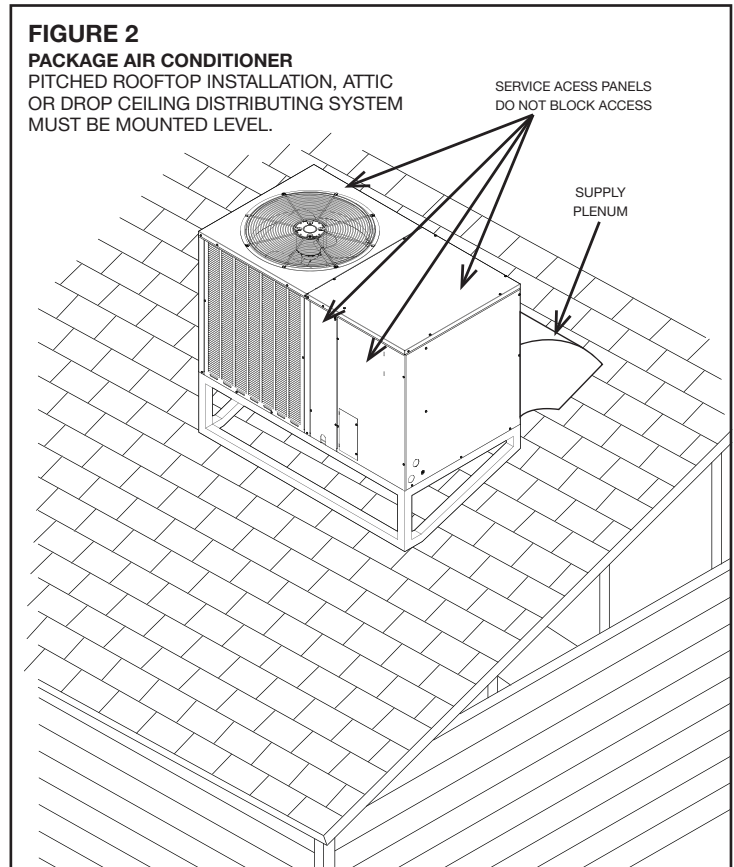
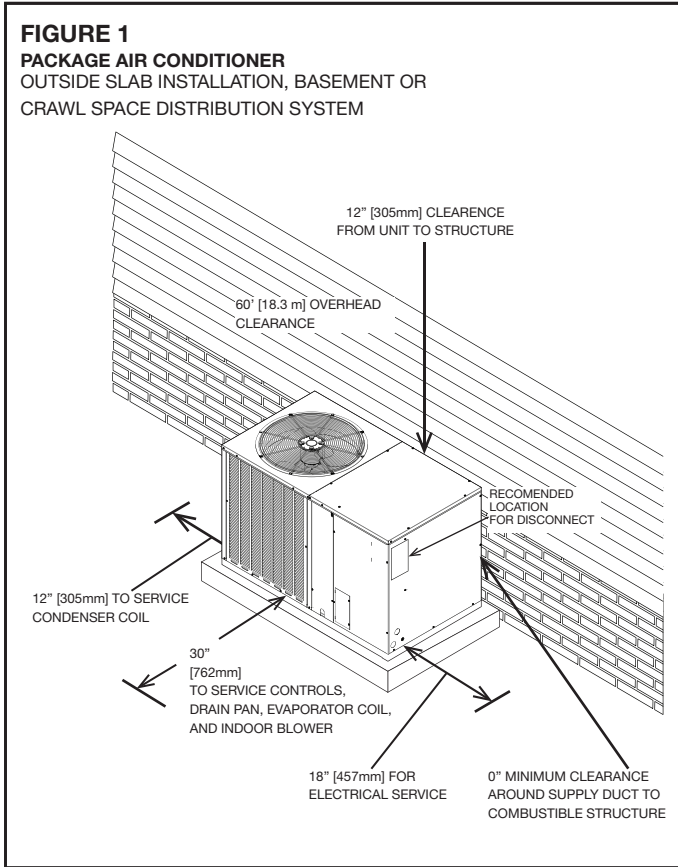


Model 102/120



Model: 102/120





CLEARANCES

The following minimum clearances must be observed for proper unit performance and serviceability.

1. Provide 30" minimum clearance at the front and 18" on the right side of the unit for service access. Provide 12" minimum clearance on the left side of the unit for air inlet and 12" minimum clearance from unit to structure on back side.
2. Provide 60" minimum clearance from top of unit.
3. Unit is design certified for application on combustible flooring with 0" minimum clearance.
4. See Figure 1 for illustration of minimum installation-service clearances.

ROOFTOP INSTALLATION

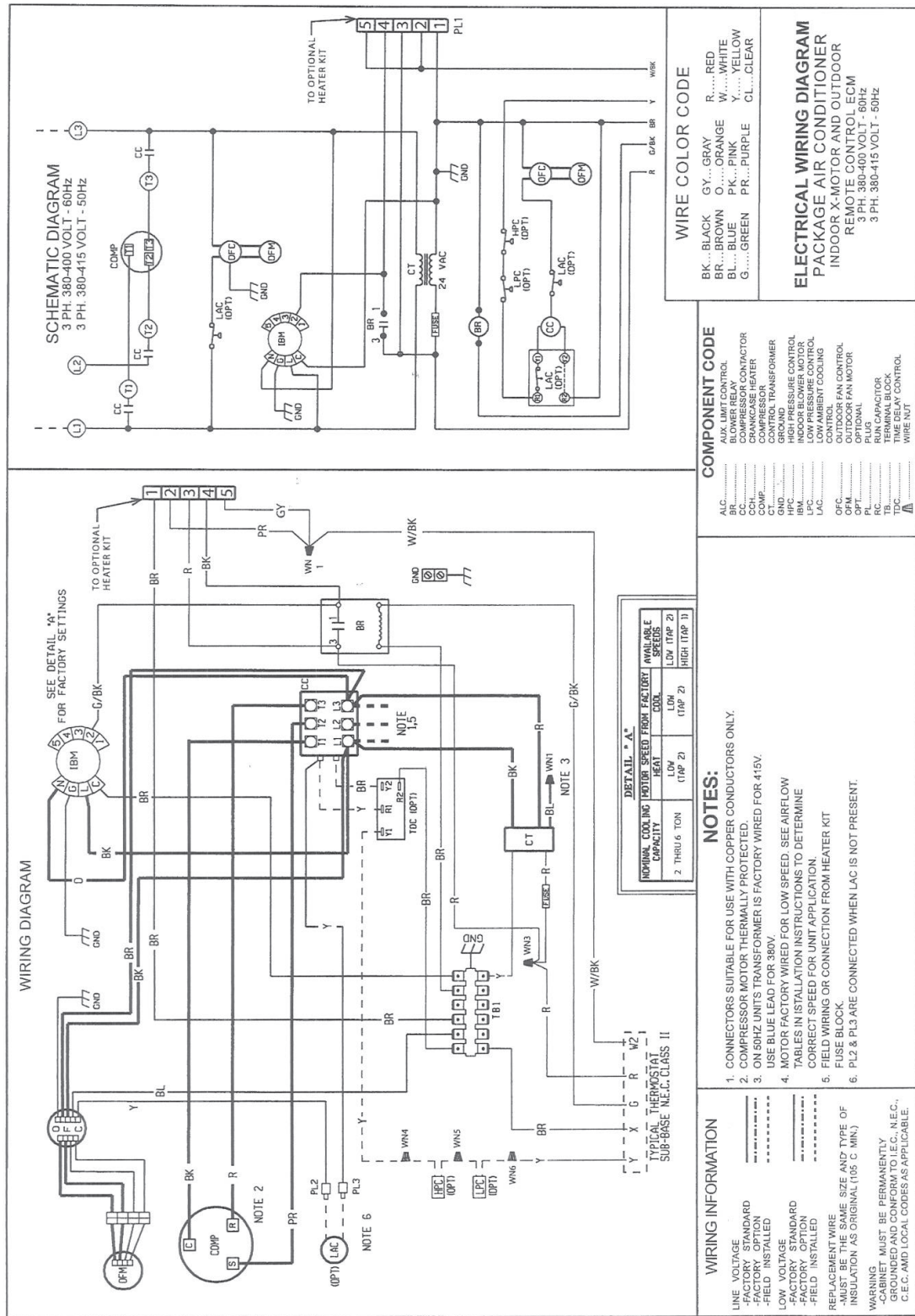
1. Before locating the unit on the roof, make sure that the strength of the roof and beams is adequate at that point to support the weight involved. (See specification sheet for weight of unit.) This is very important and user's responsibility.
2. The unit should be placed on a solid and level platform of adequate strength.
3. The location of the unit on the roof should be such as to provide proper access for inspection and servicing (Figure 2).

IMPORTANT: If unit will not be put into service immediately, cover supply and return openings to prevent excessive condensation.

DUCTWORK

Ductwork should be fabricated by the installing contractor in accordance with local codes and NFPA90A. Industry manuals may be used as a guide when sizing and designing the duct system.

EMRHR-042/054/066/078 Wiring Diagram



SCHEMATIC DIAGRAM
3 PH. 380-400 VOLT - 60Hz
3 PH. 380-415 VOLT - 50Hz

WIRE COLOR CODE

- BK...BLACK
- BR...BROWN
- BL...BLUE
- G...GREEN
- GY...GRAY
- O...ORANGE
- PK...PINK
- PR...PURPLE
- R...RED
- W...WHITE
- Y...YELLOW
- CL...CLEAR

COMPONENT CODE

- ALC.....ALX. LIMIT CONTROL
- BR.....BLOWER RELAY
- CC.....COMPRESSOR CAPACITOR
- COMP.....COMPRESSOR
- CT.....CONTROL TRANSFORMER
- HPC.....HIGH PRESSURE CONTROL
- IBM.....INDOOR BLOWER MOTOR
- LFC.....LOW PRESSURE CONTROL
- LAC.....LAC (OPT.)
- LAC.....LAC (OPT.)
- OFM.....OUTDOOR FAN MOTOR
- OFM.....OUTDOOR FAN MOTOR
- OPT.....OPTIONAL
- PL.....RUN CAPACITOR
- RC.....RELAY COIL
- TDC.....THERMOSTAT
- TDC.....TIME DELAY CONTROL
- W/NUT.....WIRE NUT

ELECTRICAL WIRING DIAGRAM
INDOOR X-MOTOR AND OUTDOOR
REMOTE CONTROL ECM
3 PH. 380-400 VOLT - 60Hz
3 PH. 380-415 VOLT - 50Hz

WIRING DIAGRAM

SEE DETAIL *A* FOR FACTORY SETTINGS

DETAIL *A*		AVAILABLE SPEEDS	
NOMINAL COOLING CAPACITY	MOTOR SPEED FROM FACTORY	LOW (TAP 2)	HIGH (TAP 1)
2 THRU 6 TON	LOW HEAT (TAP 2)		
	HIGH HEAT (TAP 1)		

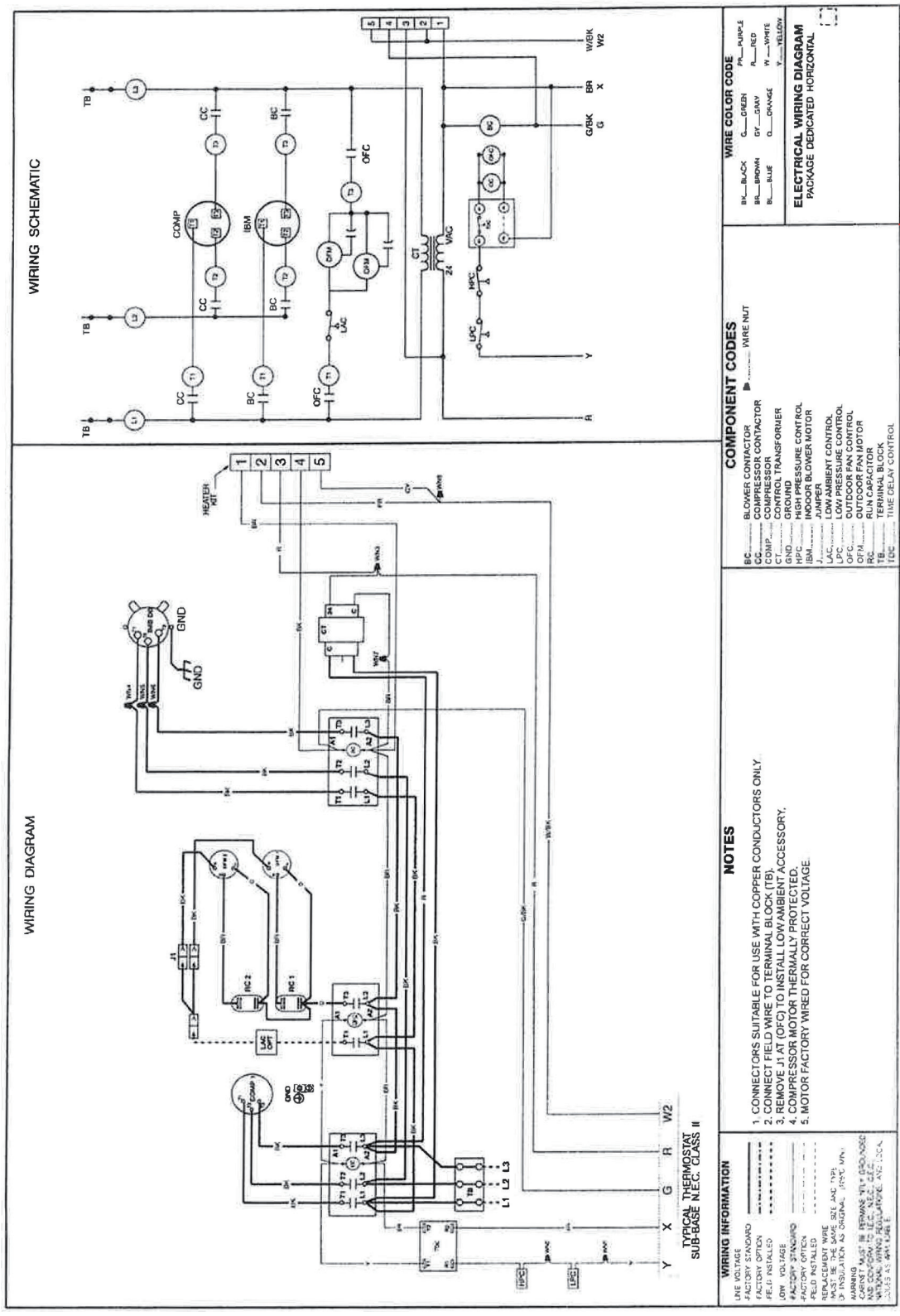
NOTES:

- CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
- COMPRESSOR MOTOR THERMALLY PROTECTED.
- ON 50HZ UNITS TRANSFORMER IS FACTORY WIRING FOR 415V. USE BLUE LEAD FOR 380V.
- MOTOR FACTORY WIRING FOR LOW SPEED. SEE AIRFLOW TABLES IN INSTALLATION INSTRUCTIONS TO DETERMINE CORRECT SPEED FOR UNIT APPLICATION.
- FIELD WIRING OR CONNECTION FROM HEATER KIT FUSE BLOCK.
- PL2 & PL3 ARE CONNECTED WHEN LAC IS NOT PRESENT.

WIRING INFORMATION

- LINE VOLTAGE
- FACTORY STANDARD
- FACTORY OPTION
- FIELD INSTALLED
- LOW VOLTAGE STANDARD
- FACTORY OPTION
- FIELD INSTALLED
- REPLACEMENT WIRE
- MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105 C MIN.)
- WARNING
- CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C. AND LOCAL CODES AS APPLICABLE.

EMRHR-102/120 Wiring Diagram



WIRING INFORMATION	NOTES	COMPONENT CODES	WIRE COLOR CODE
<p>LINE VOLTAGE</p> <p>FACTORY STANDARD</p> <p>FIELD INSTALLED</p> <p>LOW VOLTAGE</p> <p>FACTORY STANDARD</p> <p>FACTORY OPTION</p> <p>FIELD INSTALLED</p> <p>MUST BE THE SAME SIZE AND TYPE</p> <p>INSULATION AS ORIGINAL (PVC UNLESS OTHERWISE SPECIFIED)</p> <p>CABINET MUST BE REMAINTENANCE ACCESSIBLE</p> <p>SEE CONSTRUCTION INSTRUCTIONS FOR WIRING</p> <p>SEE CONSTRUCTION INSTRUCTIONS FOR WIRING</p>	<p>1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.</p> <p>2. CONNECT FIELD WIRE TO TERMINAL BLOCK (TB).</p> <p>3. REMOVE J1 AT (OFC) TO INSTALL LOW AMBIENT ACCESSORY.</p> <p>4. COMPRESSOR MOTOR THERMALLY PROTECTED.</p> <p>5. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.</p>	<p>BC.....BLOWER CONTACTOR</p> <p>CC.....COMPRESSOR CONTACTOR</p> <p>CDMP.....CONTROL TRANSFORMER</p> <p>GND.....GROUND</p> <p>IBM.....INDOOR BLOWER MOTOR</p> <p>J.....JUMPER</p> <p>LAC.....LOW AMBIENT CONTROL</p> <p>OFM.....OUTDOOR FAN MOTOR</p> <p>OFC.....OUTDOOR FAN CONTROL</p> <p>RC.....RUN CAPACITOR</p> <p>TB.....TERMINAL BLOCK</p> <p>TCC.....THERMOSTAT CONTROL</p>	<p>BL.....BLACK</p> <p>BR.....BROWN</p> <p>BU.....BLUE</p> <p>GR.....GREEN</p> <p>DR.....DRY</p> <p>OR.....ORANGE</p> <p>PK.....PURPLE</p> <p>RD.....RED</p> <p>WH.....WHITE</p> <p>Y.....YELLOW</p>

GUIDE SPECIFICATIONS - EMRHR 042 thru 078

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ELECTRIC HEAT PACKAGED ROOFTOP

HVAC Guide Specifications

Size Range: 3.5 to 6.5 Nominal Tons

Section Description

23 06 80 Schedules for Decentralized HVAC Equipment

23 06 80.13 Decentralized Unitary HVAC Equipment Schedule

23 06 80.13.A. Rooftop unit schedule

1. Schedule is per the project specification requirements.

23 07 16 HVAC Equipment Insulation

23 07 16.00.A Decentralized, Rooftop Units:

1. Interior cabinet surfaces shall be insulated with a minimum 3/4-in. thick, minimum 1-1/2 lb. density, flexible fiberglass insulation bonded with a phenolic binder, with aluminum foil facing on the air side.
2. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.

23 09 13 Instrumentation and Control Devices for HVAC

23 09 13.23 Sensors and Transmitters

23 09 13.23.A. Thermostats

1. Thermostat must
 - a. have capability to energize 2 different stages of cooling, and 2 different stages of heating.
 - b. must include capability for occupancy scheduling.

23 09 33 Electric and Electronic Control System for HVAC

23 09 33.00.A. General:

1. Shall be complete with self-contained low-voltage control circuit. Transformer shall have 50VA capabilities.
2. Shall utilize color-coded wiring.

23 09 33.00.B. Safeties:

1. Compressor over-temperature, over current.
2. Low-pressure switch.
3. High-pressure switch.
4. Automatic reset, motor thermal overload protector.

23 09 93 Sequence of Operations for HVAC Controls

23 09 93.00.A INSERT SEQUENCE OF OPERATION

23 41 13 Panel Air Filters

23 41 13.00.A. Standard filter section shall

1. Shall consist of factory-installed, low velocity, cleanable 1-in. thick aluminum filters of commercially available sizes.
2. Filters shall be accessible through an access panel as described in the unit cabinet section of this specification (23 81 19.13.H).

23 81 19 Self-Contained Air Conditioners

23 81 19.13 Small-Capacity Self-Contained Air Conditioners

23 81 19.13.A. General

1. Outdoor, rooftop mounted, electrically controlled, heating and cooling unit utilizing a(n) hermetic scroll compressor(s) for cooling duty.
2. Factory assembled, single-piece heating and cooling rooftop unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, and special features required prior to field start-up.
3. Unit shall use environmentally sound R-410a refrigerant.
4. Unit shall be installed in accordance with the manufacturer's instructions.
5. Unit must be selected and installed in compliance with local, state, and federal codes.

23 81 19.13.B. Quality Assurance

1. Unit meets applicable regional minimum efficiency requirements.
2. Unit shall be rated in accordance with AHRI Standards 210/240.
3. Unit shall be designed to conform to ASHRAE 15.
4. Unit shall be safety tested and certified in accordance with IEC-60335-1 & 2-40 Standards and UL-listed as a total package for safety requirements.
5. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.

6. Unit casing shall be capable of withstanding 1000-hour salt spray exposure per ASTM B117 (scribed specimen).
 7. Unit shall be designed in accordance with ISO 9001:2000, and shall be manufactured in a facility registered by ISO 9001:2000.
 8. Unit shall be subjected to a completely automated run test on the assembly line. The data for each unit will be stored at the factory, and must be available upon request.
 10. Unit shall be designed in accordance with IEC-60335 standard including tested to withstand rain.
- 23 81 19.13.C. Delivery, Storage, and Handling
1. Unit shall be stored and handled per manufacturer's recommendations.
 2. Lifted by crane requires either shipping top panel or spreader bars.
 3. Unit shall only be stored or positioned in the upright position.
- 23 81 19.13.E. Project Conditions
1. As specified in the contract.
- 23 81 19.13.F. Operating Characteristics
1. Unit shall be capable of starting and running at 125°F (52°C) ambient outdoor temperature, meeting maximum load criteria of AHRI Standard 210/240 at $\pm 10\%$ voltage.
 2. Compressor with standard controls shall be capable of operation from 40°F (4°C) , ambient outdoor temperatures. Accessory low ambient kit is necessary if mechanically cooling at ambient temperatures below 40°F (4°C).
 3. Unit shall discharge supply air horizontally as shown on contract drawings.
- 23 81 19.13.G. Electrical Requirements
1. Main power supply voltage, phase, and frequency must match those required by the manufacturer.
- 23 81 19.13.H. Unit Cabinet
1. Unit cabinet shall be constructed of galvanized pre-painted steel.
 2. Unit cabinet exterior paint shall be: film thickness, (dry) 0.003 inches minimum, flat (per ASTM D523, 60°F): 60, Hardness: H-2H Pencil hardness.
 3. Evaporator fan compartment interior cabinet insulation shall conform to AHRI Standards 210/240 minimum exterior sweat criteria. Interior surfaces shall be insulated with a minimum 3/4-in. thick, minimum 1-1/2 lb density, flexible fiberglass insulation bonded with a phenolic binder, with aluminum foil-faced on the air side.
 4. Base Rail
 - a. Unit shall have base rails.
 - b. Holes shall be provided in the base rail for moving the rooftop by fork truck.
 - c. Base rail shall be a minimum of 14 gauge thickness.
 5. Condensate pan and connections:
 - a. Shall be a sloped condensate drain pan made of a non-corrosive material.
 - b. Shall comply with ASHRAE Standard 62.
 - c. Shall use provided 3/4" drain trap assembly, through the side of the drain pan. Connection shall be made per manufacturer's recommendations.
 6. Top panel:
 - a. Indoor section shall be a single piece top panel.
 7. Electrical Connections
 - a. All unit power wiring shall enter unit cabinet at a single, factory-prepared, knockout location.
 8. Component access panels (standard)
 - a. Cabinet panels shall be easily removable for servicing.
- 23 81 19.13.I. Coils
1. Standard Aluminum/Copper Coils: All models except EMRHRX078ANT
 - a. Standard evaporator and condenser coils shall have aluminum lanced plate fins mechanically bonded to seamless internally grooved copper tubes with all joints brazed.
 - b. Evaporator and Condenser coils shall be leak tested to 150 psig, pressure tested to 550 psig, and qualified to UL 1995 burst test at 2,200 psig.
 2. Standard Aluminum Micro Channel Coils: EMRHRX078ANT – Only Model
 - a. Standard evaporator and condenser coils shall have aluminum micro channel coils.
 - b. Evaporator and Condenser coils shall be leak tested to 150 psig, pressure tested to 550 psig, and qualified to UL 1995 burst test at 2,200 psig.
- 23 81 19.13. J. Refrigerant Components
1. Refrigerant circuit shall include the following control, safety, and maintenance features:
 - a. Thermal Expansion Valve (TXV) with venturi type distributor .
 - b. Refrigerant filter drier.
 - c. External service gauge connections to unit suction and liquid lines.

2. Compressors

- a. Unit shall use one fully hermetic, scroll compressor for each independent refrigeration circuit.
- b. Compressor motors shall be cooled by refrigerant gas passing through motor windings.
- d. Compressors shall be internally protected from high discharge temperature conditions.
- e. Compressors shall be protected from an over-temperature and over-ampere conditions by an internal, motor overload device.
- f. Compressor shall be factory mounted on rubber grommets.
- g. Compressor motors shall have internal line break thermal, current overload and high pressure differential protection.
- h. Crankcase heaters shall not be required for normal operating range.

23 81 19.13.K. Filter Section

1. Filters access is specified in the unit cabinet section of this specification.
2. Filters shall be held in place by a sliding filter tray, facilitating easy removal and installation.
3. Shall consist of factory-installed, low velocity, cleanable 1-in. thick aluminum filters.
4. Filters shall be standard, commercially available sizes.
5. Filter face velocity shall not exceed 365 fpm at nominal airflows.

23 81 19.13.L . Evaporator Fan and Motor

1. Evaporator Fan Motor:
 - a. Shall have permanently lubricated bearings.
 - b. Shall have inherent automatic-reset thermal overload protection or circuit breaker.
 - c. Shall have a maximum continuous bhp rating for continuous duty operation; no safety factors above that rating shall be required.
2. Evaporator Fan:
 - a. Blower fan shall be double-inlet type with forward-curved blades.
 - b. Shall be constructed from steel with a corrosion resistant finish and dynamically balanced.

23 81 19.13.M. Condenser Fan and Motor

1. Condenser Fan Motor:
 - a. Shall be a totally enclosed motor.
 - b. Shall use permanently lubricated bearings.
 - c. Shall have inherent thermal overload protection with an automatic reset feature.
 - d. Shall use a shaft-down design. Shaft-up designs including those with “rain-slinger devices” shall not be allowed.
2. Condenser Fan:
 - a. Shall be a direct-driven propeller type fan.
 - b. Shall have aluminum blades riveted to corrosion-resistant steel spiders and shall be dynamically balanced.

23 81 19.13.N. Special Features, Options and Accessories

1. Low Ambient Control Package
 - a. Controller shall control coil head pressure by condenser-fan cycling.
2. Condenser Coil Hail Guard Assembly
 - a. Shall protect against damage from hail.
 - b. Shall be louvered design.
3. Electric Heat:
 - a. Heating Section
 - (1.) Heater element open coil resistance wire, nickel-chrome alloy, strung through ceramic insulators mounted on metal frame. Coil ends are staked and welded to terminal screw slots.
 - (2.) Heater assemblies are provided with integral fusing for protection of internal heater circuits not exceeding 48 amps each. Auto reset thermo limit controls, magnetic heater contactors (24 v coil) and terminal block all mounted in electric heater control box (minimum 18 ga galvanized steel) attached to end of heater assembly.

GUIDE SPECIFICATIONS - EMRHR 102 thru 120

You may copy this document directly into your building specification. This specification is written to comply with the 2016 version of the “master format” as published by the Construction Specification Institute. www.csinet.org.

ELECTRIC HEAT PACKAGED ROOFTOP

HVAC Guide Specifications

Size Range: 8.5 to 10.0 Nominal Tons

Section Description

23 06 80 Schedules for Decentralized HVAC Equipment

23 06 80.13 Decentralized Unitary HVAC Equipment Schedule

23 06 80.13.A. Rooftop unit schedule

1. Schedule is per the project specification requirements.

23 07 16 HVAC Equipment Insulation

23 07 16.00.A Decentralized, Rooftop Units:

1. Interior cabinet surfaces shall be insulated with a minimum 1/2-in. thick, cross linked polyolefin foam, density of 25 +/- 3Kg/m³, with aluminum foil facing on the air side.
2. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.

23 09 13 Instrumentation and Control Devices for HVAC

23 09 13.23 Sensors and Transmitters

23 09 13.23.A. Thermostats

1. Thermostat must
 - a. have capability to energize 2 different stages of cooling, and 2 different stages of heating.
 - b. must include capability for occupancy scheduling.

23 09 33 Electric and Electronic Control System for HVAC

23 09 33.00.A. General:

1. Shall be complete with self-contained low-voltage control circuit protected by a resettable circuit breaker on the 24-v transformer side. Transformer shall have 100VA capabilities.
2. Shall utilize color-coded wiring.

23 09 33.00.B. Safeties:

1. Compressor over-temperature, over current.
2. Low-pressure switch.
3. High-pressure switch.
4. Automatic reset, motor thermal overload protector.

23 09 93 Sequence of Operations for HVAC Controls

23 09 93.00.A INSERT SEQUENCE OF OPERATION

23 41 13 Panel Air Filters

23 41 13.00.A. Standard filter section shall

1. Shall consist of factory-installed, low velocity, cleanable 1-in. thick aluminum filters of commercially available sizes.
2. Filters shall be accessible through an access panel as described in the unit cabinet section of this specification (23 81 19.13.H).

23 81 19 Self-Contained Air Conditioners

23 81 19.13 Small-Capacity Self-Contained Air Conditioners

23 81 19.13.A. General

1. Outdoor, rooftop mounted, electrically controlled, heating and cooling unit utilizing a(n) hermetic scroll compressor(s) for cooling duty.
2. Factory assembled, single-piece heating and cooling rooftop unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, and special features required prior to field start-up.
3. Unit shall use environmentally sound R-410a refrigerant.
4. Unit shall be installed in accordance with the manufacturer's instructions.
5. Unit must be selected and installed in compliance with local, state, and federal codes.

23 81 19.13.B. Quality Assurance

1. Unit meets applicable regional minimum efficiency requirements.
2. Unit shall be rated in accordance with AHRI Standards 340/360.
3. Unit shall be designed to conform to ASHRAE 15.
4. Unit shall be safety tested and certified in accordance with IEC-60335-1 & 2-40 Standards and UL-listed as a total package for safety requirements.
5. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.

6. Unit casing shall be capable of withstanding 1000-hour salt spray exposure per ASTM B117 (scribed specimen).
 7. Unit shall be designed in accordance with ISO 9001:2000, and shall be manufactured in a facility registered by ISO 9001:2000.
 8. Unit shall be subjected to a completely automated run test on the assembly line. The data for each unit will be stored at the factory, and must be available upon request.
 10. Unit shall be designed in accordance with IEC-60335 standard including tested to withstand rain.
- 23 81 19.13.C. Delivery, Storage, and Handling
1. Unit shall be stored and handled per manufacturer's recommendations.
 2. Lifted by crane requires either shipping top panel or spreader bars.
 3. Unit shall only be stored or positioned in the upright position.
- 23 81 19.13.D. Project Conditions
1. As specified in the contract.
- 23 81 19.13.E. Operating Characteristics
1. Unit shall be capable of starting and running at 125°F (52°C) ambient outdoor temperature, meeting maximum load criteria of AHRI Standard 340/360 at $\pm 10\%$ voltage.
 2. Compressor with standard controls shall be capable of operation from 40°F (4°C) , ambient outdoor temperatures. Accessory low ambient kit is necessary if mechanically cooling at ambient temperatures below 40°F (4°C).
 3. Unit shall discharge supply air horizontally as shown on contract drawings.
- 23 81 19.13.F . Electrical Requirements
1. Main power supply voltage, phase, and frequency must match those required by the manufacturer.
- 23 81 19.13.G. Unit Cabinet
1. Unit cabinet shall be constructed of galvanized pre-painted steel.
 2. Unit cabinet exterior paint shall be: film thickness, (dry) 0.003 inches minimum, flat (per ASTM D523, 60°F): 60, Hardness: H-2H Pencil hardness.
 3. Evaporator fan compartment interior cabinet insulation shall conform to AHRI Standards 340/360 minimum exterior sweat criteria. Interior surfaces shall be insulated with a minimum 1/2-in. thick, cross linked polyolefin foam, density of 25 +/- 3Kg/m³, aluminum foil-faced on the air side.
 4. Base Rail
 - a. Unit shall have base rails on all sides.
 - b. Holes shall be provided in the base rails for rigging shackles to facilitate maneuvering and overhead rigging.
 - c. Holes shall be provided in the base rail for moving the rooftop by fork truck.
 - d. Base rail shall be a minimum of 14 gauge thickness.
 5. Condensate pan and connections:
 - a. Shall be a sloped condensate drain pan made of a non-corrosive material.
 - b. Shall comply with ASHRAE Standard 62.
 - c. Shall use a 3/4" NPT drain connection, through the side of the drain pan. Connection shall be made per manufacturer's recommendations.
 6. Top panel:
 - a. Indoor section shall be a single piece top panel.
 7. Electrical Connections
 - a. All unit power wiring shall enter unit cabinet at a single, factory-prepared, knockout location.
 8. Component access panels (standard)
 - a. Cabinet panels shall be easily removable for servicing.
- 23 81 19.13.H. Coils
1. Standard Aluminum Micro Channel Coils: on all models.
 - a. Standard evaporator and condenser coils shall have aluminum micro channel coils.
 - b. Evaporator and Condenser coils shall be leak tested to 150 psig, pressure tested to 550 psig, and qualified to UL 1995 burst test at 2,200 psig.
- 23 81 19.13.I . Refrigerant Components
1. Refrigerant circuit shall include the following control, safety, and maintenance features:
 - a. Thermal Expansion Valve (TXV) with venturi type distributor .
 - b. Refrigerant filter drier.
 - c. External service gauge connections to unit suction and liquid lines.
 2. Compressors
 - a. Unit shall use one fully hermetic, scroll compressor for each independent refrigeration circuit.
 - b. Compressor motors shall be cooled by refrigerant gas passing through motor windings.
 - d. Compressors shall be internally protected from high discharge temperature conditions.

- e. Compressors shall be protected from an over-temperature and over-ampereage conditions by an internal, motor overload device.
- f. Compressor shall be factory mounted on rubber grommets.
- g. Compressor motors shall have internal line break thermal, current overload and high pressure differential protection.
- h. Crankcase heaters shall not be required for normal operating range.

23 81 19.13.I. Filter Section

- 1. Filters access is specified in the unit cabinet section of this specification.
- 2. Filters shall be held in place by a sliding filter tray, facilitating easy removal and installation.
- 3. Shall consist of factory-installed, low velocity, cleanable 1-in. thick aluminum filters.
- 4. Filters shall be standard, commercially available sizes.
- 5. Filter face velocity shall not exceed 365 fpm at nominal airflows.

23 81 19.13.J. Evaporator Fan and Motor

- 1. Evaporator fan motor:
 - a. Shall have permanently lubricated bearings.
 - b. Shall have inherent automatic-reset thermal overload protection or circuit breaker.
 - c. Shall have a maximum continuous bhp rating for continuous duty operation; no safety factors above that rating shall be required.
- 2. Belt-driven Evaporator Fan:
 - a. Belt drive shall include an adjustable-pitch motor pulley.
 - b. Shall use sealed, permanently lubricated ball-bearing type.
 - c. Blower fan shall be double-inlet type with forward-curved blades.
 - d. Shall be constructed from steel with a corrosion resistant finish and dynamically balanced.

23 81 19.13.K. Condenser Fans and Motors

- 1. Condenser fan motors:
 - a. Shall be a totally enclosed motor.
 - b. Shall use permanently lubricated bearings.
 - c. Shall have inherent thermal overload protection with an automatic reset feature.
 - d. Shall use a shaft-down design. Shaft-up designs including those with “rain-slinger devices” shall not be allowed.
- 2. Condenser Fans:
 - a. Shall be a direct-driven propeller type fan.
 - b. Shall have aluminum blades riveted to corrosion-resistant steel spiders and shall be dynamically balanced.

23 81 19.13.L. Special Features, Options and Accessories

- 1. Low Ambient Control Package
 - a. Controller shall control coil head pressure by condenser-fan cycling.
- 2. Condenser Coil Hail Guard Assembly
 - a. Shall protect against damage from hail.
 - b. Shall be louvered design.
- 3. Electric Heat:
 - a. Heating Section
 - (1.) Heater element open coil resistance wire, nickel-chrome alloy, strung through ceramic insulators mounted on metal frame. Coil ends are staked and welded to terminal screw slots.
 - (2.) Heater assemblies are provided with integral fusing for protection of internal heater circuits not exceeding 48 amps each. Auto reset thermo limit controls, magnetic heater contactors (24 v coil) and terminal block all mounted in electric heater control box (minimum 18 ga galvanized steel) attached to end of heater assembly.



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