

## TECHNICAL SPECIFICATIONS

# ESH1BF Series

## Extra High Efficiency Heat Pump

### 16 SEER Residential System 2 - 5 Ton Capacity

The ESH1BF Series of heat pumps offers exceptional performance from a small, compact package. The unit, when combined with our engineered coils or air handlers, offers a full line of quality, split system cooling equipment.



## FEATURES and BENEFITS

- **Permanently Lubricated Motor** – A heavy duty PSC motor for long lasting reliability and quiet operation. Requires no maintenance and is completely protected from rain and snow.
- **Removable Top Grille Assembly** – Allows ease of service from the top without disconnecting fan motor leads.
- **Composite Base Pan** – Absorbs sound and is corrosion resistant. Composite is also stronger and lighter than steel.
- **High Pressure Switch** – Protects against abnormally high system pressures. Auto-reset feature prevents nuisance service visits.
- **Liquid Line Filter/Drier** – Included with unit, field installed.
- **One Piece Top/Orifice** – Designed for maximum airflow and quiet operation.
- **Five Minute Restart Time Delay** – When the unit shuts down, a five minute delay keeps the unit from restarting, eliminating the highest cause for compressor failure.
- **Easy Compressor and Control Access** – Designed to make servicing easier for the contractor, access panels are provided to all controls and the compressor from the side of the unit.
- **Designed Using Galvanized Steel** – With a polyester urethane coat finish that passes 950 hours of salt spray per ASTM Std. B117.
- **Fixed Orifice** – Integrated in liquid line service valve for easy change-out.
- **Micro-Channel Coils** – All aluminum coils in all models which provides high corrosion resistance.
- **Service-Friendly Jacket** – Side panels can be easily removed and replaced without removing the top grill.

## 2 - 4 Ton Units

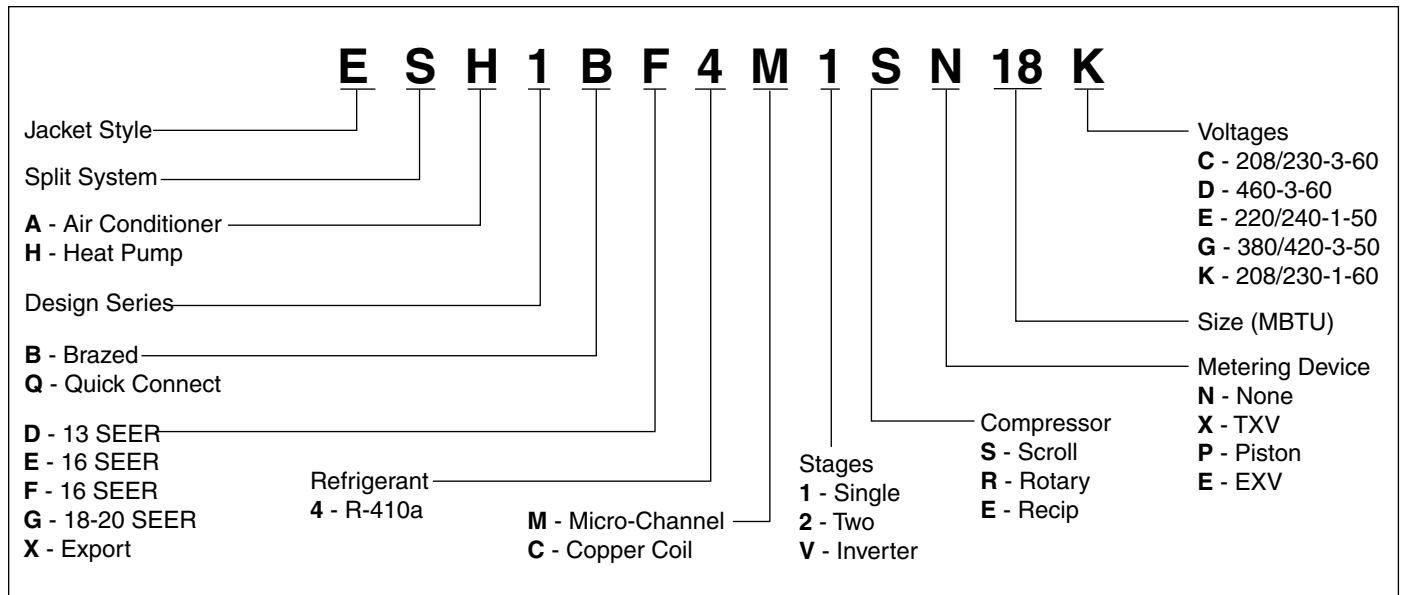
- **Copeland Scroll Compressor** – Copeland's proven and simple design equates to years of comfort and reliability for the homeowner with virtually silent operation.

## 5 Ton Units

- **Copeland Scroll UltraTech™ Compressor** – The Ultra Tech Compressor operates with 2 stages of cooling capacity to provide superior comfort and efficiency. Copeland's proven and simple design equates to years of comfort and reliability for the homeowner with virtually silent operation.
- **Low Pressure Switch** – Loss of charge protection ensures long compressor life. Auto-reset feature prevents nuisance service visits.



# MODEL IDENTIFICATION CODES

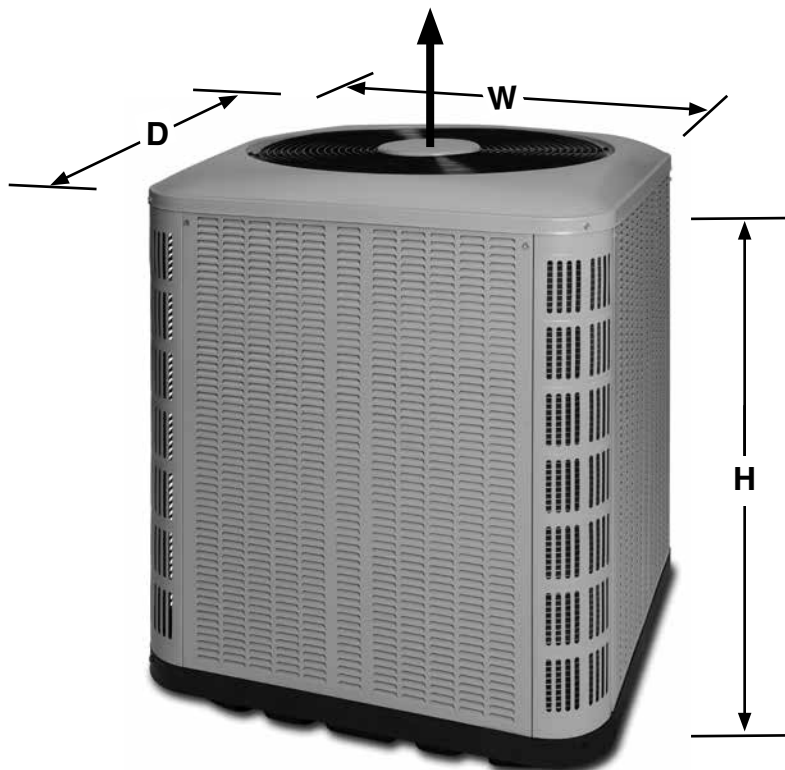


## DIMENSIONS

### AIR CONDITIONER OUTDOOR SECTION

ESH1BF	24K	30K	36K	42K	48K	60K
H	37.25	37.25	45.25	45.25	45.25	45.25
W	31.75	31.75	31.75	31.75	31.75	31.75
D	31.75	31.75	31.75	31.75	31.75	31.75

**Air Discharge**  
**Allow Adequate Clearance for Airflow**



# PHYSICAL AND ELECTRICAL SPECIFICATIONS / OUTDOOR UNITS

## 16 SEER — Extra High Efficiency — Single Phase

Model Number ESH1BF		24K	30K	36K	42K	48K	60K	
Electrical Data	Volts-Cycles-Phase (1)	208/230-60-1						
	Total Amps	14.4	13.7	16.7	20.5	20.6	31.4	
	Delay Fuse Max. (2)	30	25	30	40	40	60	
	Min. Circuit Ampacity	17.7	16.9	20.2	25.0	25.1	38.6	
Component Data	Fan Motor	Type	PSC			BLDC		
		Amps	0.9	0.9	2.6	2.6	2.6	2.6
		HP	0.13	0.13	0.33	0.33	0.33	0.33
	Compressor Data	RLA	13.4	12.8	14.1	17.9	18.0	28.8
		LRA	58.3	64.0	77.0	112.0	117.0	152.9
	Refrigerant suction line O.D. NOTE: Liquid line is 3/8" O.D. for entire length."	0-24 ft.	3/4"	3/4"	7/8"	7/8"	7/8"	7/8"
25-39 ft.		3/4"	3/4"	7/8"	7/8"	7/8"	1-1/8" (4)	
40-75 ft.		3/4"	3/4"	7/8"	7/8"	7/8"	1-1/8" (4)	
Approximate Weight (lbs.)	Net	201	201	212	232	234	236	
	Ship	212	212	225	245	247	249	
Sound Rating db		71	71	73	74	74	78	

(1) Operating Voltage Range: 187v min. - 253v max.

(2) HACR Type Circuit Breakers may be used.

(3) Additional charge for line sets above 15 feet.

Values based on suction line as follows with 3/8" liquid line.

a) 3/4" = 0.6 oz. per additional foot.

b) 7/8" = 0.7 oz. per additional foot.

c) 1 1/8" = 0.8 oz. per additional foot.

(4) Requires 1-1/8" to 7/8" reducer from line to unit.

## ACCESSORIES - Condensing Unit

### Start Assist Kit - 912933

Provides additional starting torque for the compressor motor when operating with low line voltage or high operating temperatures.

### Fan Delay Kit (TDR) - 911758

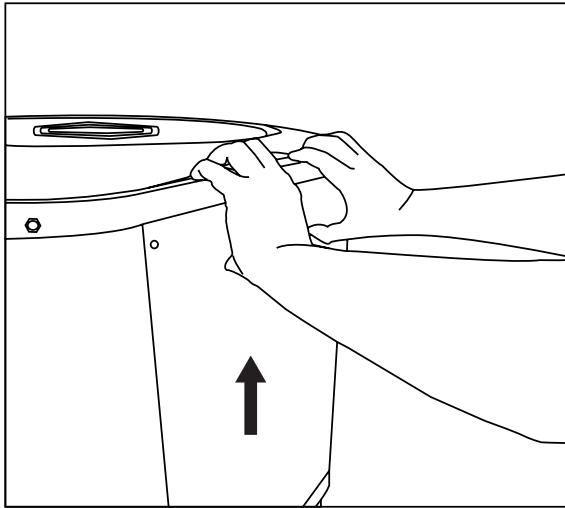
80 second fan delay

### Low Ambient Kit - 918837

### Outdoor Thermostat - 913852

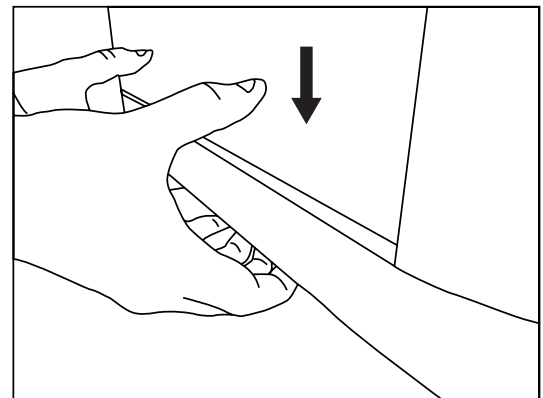
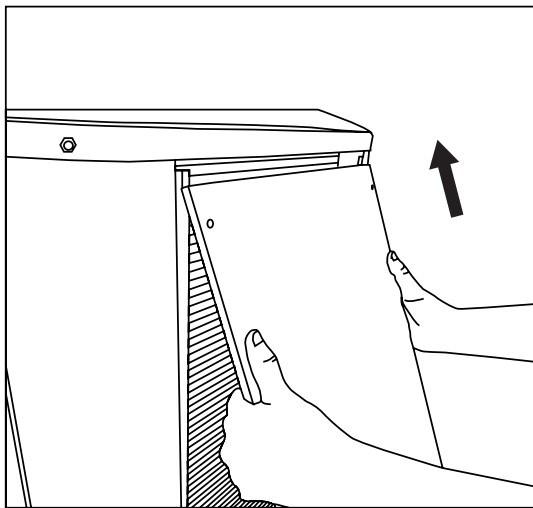
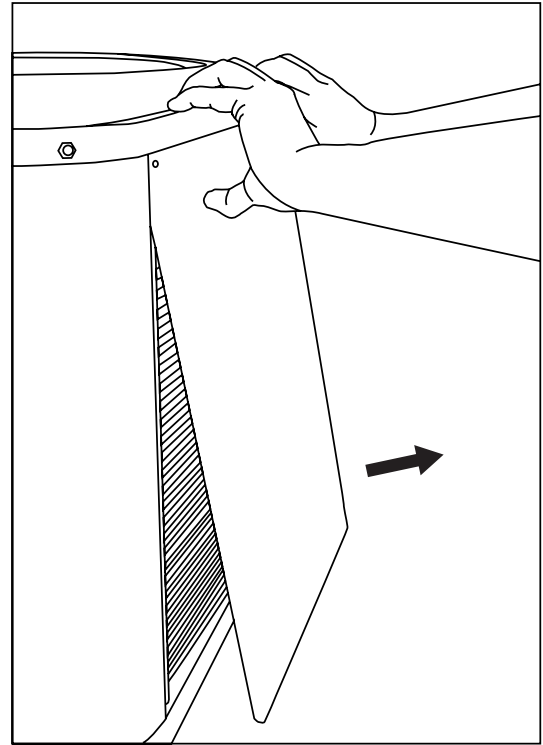
Two stage logic provides ability to lock out electric strips down to balance point and bring on in stages.

## PANEL REMOVAL AND REPLACEMENT INSTRUCTIONS



### Removing Panels:

1. Remove screws.
2. Pull up on panel.
3. Rotate bottom of panel out.
4. Pull panel off.



### Reinstalling Panels:

1. Place panel back in towards top of unit.
2. Rotate bottom of panel inwards.
3. Push panel down until it fills gap at bottom of unit.
4. Replace screws.

# 16 SEER COOLING EXPANDED RATINGS

Outdoor Unit	Indoor Unit	BTUH	SEER	EER	Heating Capacity BTUH @ 47° F	HSPF	Low Speed SCFM	High Speed SCFM
ESH1BF4M1SP24K	B6VMMX24K-B	24,000	16.0	13.0	22,800	9.0	N/A	900
ESH1BF4M1SP30K	B6VMMX30K-B	28,600	16.0	13.0	28,400	9.0	N/A	1,090
ESH1BF4M1SP36K	B6VMMX36K-B	34,200	16.0	13.0	33,800	9.0	N/A	1,230
ESH1BF4M1SP42K	B6VMMX48K-C	40,500	16.0	13.0	40,500	9.0	N/A	1,315
ESH1BF4M1SP48K	B6VMMX48K-C	45,500	16.0	13.0	45,000	9.0	N/A	1,420
ESH1BF4M2SX60K	B6VMMX60K-C	55,000	16.0	11.5	55,000	8.5	1,280	1,835

All ratings are with time delay relay.

See current AHRI Directory for certified combinations and ratings.

[www.ahridirectory.org](http://www.ahridirectory.org)

## COOLING EXPANDED RATINGS

### ESH1BF4M1SP24K with B6VMMX24K-B

CFM	O.D.T		65°F			75°F			85°F			95°F			105°F			115°F		
	E.D.B.	E.W.B.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.
800	80	62	25.1	22.0	1.24	24.1	21.3	1.37	23.0	20.7	1.54	21.7	20.0	1.75	20.2	19.4	1.99	18.6	18.6	2.27
	80	67	27.7	19.0	1.24	26.7	18.3	1.37	25.6	17.7	1.54	24.3	17.0	1.75	22.9	16.4	1.99	21.3	15.7	2.27
	80	72	29.3	14.9	1.24	28.3	14.2	1.37	27.2	13.6	1.54	25.9	13.0	1.75	24.5	12.3	1.99	22.8	11.7	2.27
	75	62	24.8	18.8	1.24	23.9	18.1	1.37	22.7	17.5	1.54	21.5	16.8	1.75	20.0	16.2	1.99	18.4	15.5	2.27
900	80	62	25.5	23.3	1.27	24.5	22.6	1.40	23.4	22.0	1.57	22.1	21.3	1.78	20.7	20.7	2.02	19.0	19.0	2.30
	80	67	28.1	20.3	1.27	27.2	19.6	1.40	26.0	19.0	1.57	24.8	18.3	1.78	23.3	17.7	2.02	21.7	17.1	2.30
	80	72	29.7	16.2	1.27	28.7	15.6	1.40	27.6	14.9	1.57	26.3	14.3	1.78	24.9	13.6	2.02	23.3	13.0	2.30
	75	62	25.3	20.1	1.26	24.3	19.4	1.40	23.2	18.8	1.57	21.9	18.1	1.77	20.4	17.5	2.02	18.8	16.8	2.30
1000	80	62	26.0	23.9	1.29	25.1	23.3	1.43	23.9	22.7	1.60	22.6	22.0	1.80	21.2	21.2	2.05	19.6	19.6	2.33
	80	67	28.7	21.0	1.29	27.7	20.3	1.43	26.6	19.7	1.60	25.3	19.0	1.80	23.8	18.4	2.05	22.2	17.7	2.33
	80	72	30.2	16.9	1.29	29.3	16.2	1.43	28.2	15.6	1.60	26.9	14.9	1.80	25.4	14.3	2.05	23.8	13.7	2.33
	75	62	25.8	20.7	1.29	24.8	20.1	1.42	23.7	19.5	1.59	22.4	18.8	1.80	21.0	18.2	2.04	19.3	17.5	2.32

### ESH1BF4M1SP30K with B6VMMX30K-B

CFM	O.D.T		65°F			75°F			85°F			95°F			105°F			115°F		
	E.D.B.	E.W.B.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.
875	80	62	29.1	24.8	1.48	28.2	24.2	1.63	27.0	23.6	1.83	25.6	22.9	2.08	23.9	22.1	2.38	22.0	21.2	2.73
	80	67	31.8	21.1	1.49	30.9	20.6	1.64	29.8	19.9	1.84	28.3	19.2	2.09	26.6	18.4	2.39	24.7	17.6	2.73
	80	72	33.4	16.4	1.49	32.5	15.8	1.65	31.4	15.1	1.85	29.9	14.4	2.09	28.3	13.6	2.39	26.3	12.8	2.74
	75	62	28.5	20.9	1.48	27.6	20.3	1.63	26.5	19.7	1.83	25.1	19.0	2.08	23.4	18.2	2.38	21.4	17.3	2.73
1000	80	62	29.3	26.3	1.53	28.4	25.7	1.68	27.3	25.0	1.88	25.8	24.3	2.13	24.2	23.5	2.43	22.2	22.2	2.77
	80	67	32.0	22.6	1.53	31.1	22.0	1.68	30.0	21.4	1.88	28.6	20.6	2.13	26.9	19.9	2.43	24.9	19.0	2.78
	80	72	33.6	17.8	1.54	32.7	17.2	1.69	31.6	16.6	1.89	30.2	15.9	2.14	28.5	15.1	2.44	26.5	14.2	2.78
	75	62	28.7	22.4	1.53	27.9	21.8	1.68	26.7	21.2	1.88	25.3	20.4	2.13	23.6	19.7	2.43	21.6	18.8	2.77
1125	80	62	31.2	27.6	1.57	30.3	27.0	1.72	29.2	26.4	1.92	27.7	25.7	2.17	26.0	24.9	2.47	24.1	24.0	2.82
	80	67	33.9	24.0	1.58	33.0	23.4	1.73	31.9	22.7	1.93	30.4	22.0	2.18	28.8	21.2	2.48	26.8	20.4	2.82
	80	72	35.5	19.2	1.58	34.6	18.6	1.74	33.5	17.9	1.94	32.1	17.2	2.18	30.4	16.4	2.48	28.4	15.6	2.83
	75	62	30.6	23.8	1.57	29.8	23.2	1.72	28.6	22.5	1.92	27.2	21.8	2.17	25.5	21.0	2.47	23.5	20.2	2.82

### ESH1BF4M1SP36K with B6VMMX36K-B

CFM	O.D.T		65°F			75°F			85°F			95°F			105°F			115°F		
	E.D.B.	E.W.B.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.
1050	80	62	35.4	30.8	1.81	34.2	30.0	1.99	32.6	29.2	2.22	30.8	28.4	2.49	28.8	27.6	2.80	26.5	26.5	3.16
	80	67	38.7	25.8	1.82	37.4	25.0	2.01	35.9	24.2	2.23	34.1	23.4	2.50	32.0	22.6	2.82	29.7	21.7	3.18
	80	72	41.6	20.4	1.84	40.3	19.6	2.02	38.8	18.8	2.25	37.0	18.0	2.52	34.9	17.2	2.83	32.6	16.4	3.19
	75	62	35.3	26.0	1.81	34.0	25.2	1.99	32.5	24.4	2.22	30.7	23.6	2.49	28.6	22.8	2.81	26.3	22.0	3.17
1200	80	62	35.8	32.5	1.88	34.5	31.7	2.06	33.0	31.0	2.29	31.2	30.1	2.56	29.1	29.1	2.88	26.8	26.8	3.23
	80	67	39.0	27.5	1.90	37.7	26.7	2.08	36.2	25.9	2.31	34.4	25.1	2.58	32.3	24.3	2.89	30.0	23.5	3.25
	80	72	41.9	22.1	1.91	40.7	21.4	2.09	39.1	20.6	2.32	37.3	19.8	2.59	35.3	18.9	2.91	32.9	18.1	3.27
	75	62	35.7	27.7	1.88	34.4	26.9	2.07	32.8	26.1	2.30	31.0	25.3	2.57	29.0	24.5	2.88	26.7	23.7	3.24
1350	80	62	36.8	33.4	1.95	35.5	32.6	2.14	34.0	31.8	2.36	32.2	31.0	2.63	30.1	30.1	2.95	27.8	27.8	3.31
	80	67	40.0	28.4	1.97	38.8	27.6	2.15	37.2	26.8	2.38	35.4	26.0	2.65	33.4	25.2	2.96	31.0	24.4	3.32
	80	72	42.9	23.0	1.98	41.7	22.2	2.17	40.1	21.5	2.40	38.3	20.6	2.67	36.3	19.8	2.98	34.0	19.0	3.34
	75	62	36.7	28.6	1.96	35.4	27.8	2.14	33.9	27.0	2.37	32.1	26.2	2.64	30.0	25.4	2.95	27.7	24.6	3.31

# COOLING EXPANDED RATINGS (Continued)

ESH1BF4M1SP42K with B6VMMX42K-B

O.D.T			65°F			75°F			85°F			95°F			105°F			115°F		
CFM	E.D.B.	E.W.B.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.
1225	80	62	42.9	36.9	2.21	41.2	35.9	2.44	39.3	34.8	2.72	37.0	33.7	3.05	34.5	32.6	3.43	31.7	31.4	3.86
	80	67	47.2	31.3	2.21	45.5	30.3	2.44	43.5	29.2	2.72	41.3	28.1	3.05	38.8	26.9	3.43	36.0	25.8	3.86
	80	72	50.3	24.5	2.21	48.6	23.5	2.44	46.7	22.4	2.72	44.4	21.3	3.05	41.9	20.2	3.43	39.1	19.0	3.86
	75	62	42.6	31.2	2.21	40.9	30.2	2.44	38.9	29.1	2.72	36.7	28.0	3.05	34.2	26.9	3.43	31.4	25.7	3.86
1400	80	62	43.4	39.0	2.28	41.7	37.9	2.52	39.7	36.9	2.80	37.5	35.8	3.13	34.9	34.6	3.51	32.1	32.1	3.94
	80	67	47.6	33.4	2.28	45.9	32.3	2.51	44.0	31.3	2.79	41.7	30.1	3.12	39.2	29.0	3.50	36.4	27.9	3.93
	80	72	50.7	26.6	2.28	49.0	25.6	2.51	47.1	24.5	2.79	44.8	23.4	3.12	42.3	22.3	3.50	39.5	21.1	3.93
	75	62	43.0	33.3	2.28	41.3	32.3	2.51	39.3	31.2	2.79	37.1	30.1	3.12	34.6	29.0	3.50	31.8	27.8	3.93
1575	80	62	44.9	40.4	2.36	43.3	39.3	2.59	41.3	38.2	2.87	39.0	37.1	3.20	36.5	36.0	3.58	33.7	33.7	4.01
	80	67	49.2	34.8	2.36	47.5	33.7	2.59	45.6	32.6	2.87	43.3	31.5	3.20	40.8	30.4	3.58	38.0	29.3	4.01
	80	72	52.3	28.0	2.35	50.6	26.9	2.58	48.7	25.9	2.86	46.4	24.8	3.20	43.9	23.6	3.58	41.1	22.5	4.01
	75	62	44.6	34.7	2.35	42.9	33.6	2.58	40.9	32.6	2.86	38.7	31.5	3.20	36.2	30.3	3.58	33.4	29.2	4.01

ESH1BF4M1SP48K with B6VMMX48K-B

ODT			65°F			75°F			85°F			95°F			105°F			115°F		
CFM	E.D.B.	E.W.B.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.
1235	80	62	47.1	38.9	2.40	45.0	37.8	2.64	42.7	36.7	2.95	40.3	35.6	3.32	37.7	34.4	3.76	34.9	33.2	4.26
	80	67	52.0	33.0	2.42	49.9	31.9	2.66	47.6	30.8	2.97	45.2	29.7	3.34	42.6	28.5	3.78	39.9	27.3	4.28
	80	72	55.6	25.8	2.44	53.5	24.7	2.68	51.2	23.6	2.99	48.8	22.5	3.36	46.2	21.3	3.80	43.5	20.1	4.30
	75	62	47.3	33.0	2.40	45.2	31.9	2.65	43.0	30.8	2.95	40.5	29.7	3.33	37.9	28.5	3.76	35.2	27.2	4.26
1435	80	62	47.4	41.4	2.48	45.3	40.3	2.73	43.1	39.2	3.03	40.6	38.1	3.41	38.0	36.9	3.84	35.3	35.3	4.34
	80	67	52.3	35.4	2.50	50.2	34.4	2.75	48.0	33.3	3.05	45.5	32.2	3.43	42.9	31.0	3.86	40.2	29.7	4.36
	80	72	56.0	28.3	2.52	53.9	27.2	2.77	51.6	26.1	3.07	49.2	25.0	3.45	46.6	23.8	3.88	43.8	22.6	4.38
	75	62	47.7	35.4	2.49	45.6	34.4	2.73	43.3	33.3	3.04	40.9	32.2	3.41	38.3	31.0	3.85	35.5	29.7	4.35
1635	80	62	48.6	43.0	2.57	46.5	41.9	2.81	44.2	40.8	3.12	41.8	39.7	3.49	39.2	38.5	3.93	36.5	36.5	4.43
	80	67	53.5	37.1	2.59	51.4	36.0	2.83	49.1	34.9	3.14	46.7	33.8	3.51	44.1	32.6	3.94	41.4	31.3	4.45
	80	72	57.1	29.9	2.61	55.0	28.8	2.85	52.7	27.7	3.16	50.3	26.6	3.53	47.7	25.4	3.96	45.0	24.2	4.46
	75	62	48.8	37.0	2.57	46.7	36.0	2.81	44.5	34.9	3.12	42.0	33.8	3.49	39.4	32.6	3.93	36.7	31.3	4.43

# COOLING EXPANDED RATINGS WITH VARIABLE SPEED AIR HANDLER

ESH1BF4M2SX60K with B6VMMX60K-C HIGH SPEED

O.D.T			65°F			75°F			85°F			95°F			105°F			115°F		
CFM	E.D.B.	E.W.B.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.
1685	80	62	56.7	43.3	3.55	54.6	43.0	3.85	52.3	43.2	4.19	49.9	42.5	4.58	47.54	46.39	5.04	44.78	43.70	5.55
	80	67	61.9	35.9	3.62	59.4	35.6	3.91	56.9	36.0	4.25	54.3	35.3	4.64	51.48	34.74	5.09	48.40	32.53	5.61
	80	72	68.4	27.9	3.70	65.7	27.7	3.99	62.9	28.3	4.33	59.9	27.8	4.72	56.73	27.39	5.18	53.22	28.10	5.69
	75	62	56.5	36.3	3.55	54.3	36.0	3.84	52.0	36.2	4.18	49.6	35.5	4.58	47.00	32.77	5.03	44.16	35.13	5.54
	75	67	62.3	28.6	3.62	59.9	28.4	3.91	57.3	28.8	4.25	54.5	28.2	4.64	51.63	26.00	5.10	48.35	28.27	5.61
1835	80	62	57.7	45.2	3.62	55.4	46.1	3.91	53.3	46.7	4.25	50.8	46.3	4.64	48.26	46.33	5.10	46.10	45.71	5.62
	80	67	62.8	37.2	3.68	60.3	38.3	3.97	57.8	37.3	4.31	55.0	36.9	4.70	52.13	36.96	5.16	48.97	36.91	5.67
	80	72	69.3	28.8	3.76	66.5	30.1	4.05	63.6	29.2	4.39	60.5	29.0	4.78	57.12	29.26	5.23	53.46	29.48	5.75
	75	62	57.4	37.7	3.61	55.1	38.6	3.90	52.8	37.6	4.24	50.3	37.1	4.64	47.59	37.03	5.09	44.67	36.84	5.60
	75	67	63.2	29.5	3.68	60.6	30.7	3.97	57.9	29.8	4.31	55.1	29.5	4.70	51.90	29.55	5.15	48.55	29.55	5.66
1985	80	62	58.8	49.5	3.68	56.4	49.8	3.97	54.1	48.9	4.31	51.6	48.8	4.71	49.61	47.93	5.17	47.02	46.82	5.69
	80	67	63.7	39.2	3.74	61.1	39.7	4.03	58.4	38.7	4.37	55.7	38.5	4.76	52.65	38.26	5.22	49.42	38.41	5.73
	80	72	70.1	30.3	3.82	67.1	31.0	4.11	64.1	30.1	4.45	60.9	30.2	4.84	57.33	30.17	5.29	53.50	30.51	5.80
	75	62	58.2	39.6	3.67	55.8	39.9	3.96	53.4	38.9	4.30	50.8	38.7	4.70	48.08	38.34	5.15	45.06	38.32	5.66
	75	67	63.8	31.1	3.74	61.1	31.6	4.03	58.4	30.7	4.37	55.3	30.6	4.76	52.16	30.37	5.21	48.92	30.52	5.72

# COOLING EXPANDED RATINGS WITH VARIABLE SPEED AIR HANDLER (Continued)

## ESH1BF4M2SX60K with B6VMMX60K-C LOW SPEED

CFM	ODT		65°F			75°F			85°F			95°F			105°F			115°F		
	E.D.B.	E.W.B.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.	T.C.	S.C.	K.W.
1030	80	62	41.1	30.5	2.12	39.5	30.3	2.41	37.8	30.4	2.74	35.9	29.9	3.11	33.99	32.18	3.53	31.76	30.06	4.01
	80	67	45.4	25.4	2.08	43.5	25.2	2.38	41.5	25.5	2.71	39.4	25.0	3.08	37.20	24.57	3.50	34.77	22.65	3.98
	80	72	50.1	20.0	2.05	48.1	19.9	2.34	46.0	20.3	2.67	43.7	19.8	3.04	41.35	19.48	3.47	38.68	19.92	3.95
	75	62	41.0	25.7	2.12	39.3	25.5	2.41	37.6	25.6	2.74	35.7	25.1	3.11	33.62	22.90	3.53	31.35	24.63	4.01
	75	67	45.5	20.5	2.08	43.6	20.3	2.38	41.7	20.6	2.71	39.6	20.1	3.08	37.39	18.35	3.50	34.91	19.94	3.98
1180	80	62	42.5	32.9	2.13	40.9	34.3	2.42	39.1	33.5	2.75	37.1	33.2	3.12	35.03	33.08	3.54	33.02	32.74	4.02
	80	67	46.6	27.2	2.10	44.6	28.0	2.39	42.6	27.3	2.72	40.5	26.9	3.10	38.13	26.88	3.52	35.61	26.77	4.00
	80	72	51.6	21.1	2.06	49.4	22.1	2.35	47.2	21.4	2.69	44.8	21.2	3.06	42.28	21.31	3.48	39.48	21.40	3.96
	75	62	42.2	27.5	2.13	40.5	28.1	2.43	38.7	27.4	2.76	36.7	27.0	3.13	34.56	26.84	3.55	32.18	26.61	4.03
	75	67	46.8	21.6	2.10	44.9	22.4	2.39	42.8	21.7	2.72	40.6	21.4	3.09	38.25	21.45	3.51	35.63	21.40	4.00
1330	80	62	43.8	36.6	2.15	42.0	36.8	2.44	40.1	36.0	2.77	38.1	35.9	3.14	36.34	35.11	3.56	34.29	34.14	4.03
	80	67	47.6	29.3	2.12	45.6	29.7	2.41	43.5	28.9	2.74	41.3	28.8	3.11	38.92	28.51	3.54	36.31	28.54	4.02
	80	72	52.7	22.7	2.07	50.5	23.2	2.37	48.1	22.5	2.70	45.6	22.5	3.08	42.94	22.40	3.50	39.98	22.66	3.98
	75	62	43.3	29.6	2.15	41.5	29.8	2.44	39.6	29.0	2.77	37.5	28.8	3.14	35.26	28.48	3.57	32.83	28.38	4.05
	75	67	47.9	23.2	2.11	45.8	23.5	2.41	43.7	22.8	2.74	41.4	22.8	3.11	38.81	22.55	3.54	35.96	22.58	4.02

# HEATING EXPANDED RATINGS

## ESH1BF4M1SP24K with B6VMMX24K-B

CFM	Indoor T. Deg.F	OUTDOOR TEMPERATURE (Deg. F)																							
		10			17			20			30			40			47			50			60		
		MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW
785	60	11.3	2.23	1.49	13.8	2.68	1.50	14.8	2.87	1.51	18.3	3.50	1.53	21.8	4.11	1.56	24.3	4.53	1.57	25.3	4.70	1.58	28.8	5.28	1.60
	70	10.8	2.20	1.43	13.0	2.61	1.46	14.0	2.78	1.48	17.3	3.33	1.52	20.5	3.84	1.57	22.8	4.19	1.60	23.8	4.33	1.61	27.0	4.79	1.66
	80	10.2	2.14	1.40	12.3	2.51	1.43	13.2	2.67	1.45	16.2	3.16	1.50	19.2	3.62	1.56	21.3	3.93	1.59	22.2	4.05	1.61	25.3	4.45	1.66
885	60	11.4	2.18	1.53	13.9	2.63	1.55	14.9	2.82	1.55	18.5	3.45	1.57	22.1	4.06	1.59	24.5	4.48	1.61	25.6	4.66	1.61	29.2	5.24	1.63
	70	10.9	2.15	1.48	13.2	2.56	1.51	14.2	2.73	1.52	17.5	3.27	1.57	20.8	3.79	1.61	23.1	4.14	1.64	24.1	4.28	1.65	27.4	4.75	1.69
	80	10.3	2.10	1.43	12.4	2.48	1.47	13.4	2.63	1.49	16.4	3.12	1.55	19.5	3.57	1.60	21.7	3.87	1.64	22.6	3.99	1.66	25.7	4.38	1.72
985	60	11.5	2.14	1.58	14.0	2.59	1.59	15.1	2.78	1.59	18.7	3.41	1.61	22.3	4.02	1.62	24.8	4.44	1.64	25.9	4.62	1.64	29.4	5.22	1.66
	70	11.0	2.12	1.52	13.3	2.53	1.55	14.3	2.70	1.56	17.7	3.24	1.60	21.1	3.76	1.64	23.4	4.10	1.67	24.4	4.25	1.68	27.8	4.72	1.73
	80	10.4	2.07	1.48	12.6	2.43	1.52	13.5	2.58	1.53	16.6	3.06	1.59	19.7	3.50	1.65	21.9	3.80	1.69	22.8	3.92	1.71	25.9	4.30	1.76

## ESH1BF4M1SP30K with B6VMMX30K-B

CFM	Indoor T. Deg.F	OUTDOOR TEMPERATURE (Deg. F)																							
		10			17			20			30			40			47			50			60		
		MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW
985	60	14.4	2.47	1.71	17.3	2.88	1.76	18.5	3.04	1.78	22.6	3.57	1.86	26.7	4.05	1.93	29.6	4.37	1.98	30.8	4.50	2.01	34.9	4.92	2.08
	70	13.8	2.40	1.68	16.5	2.76	1.75	17.7	2.90	1.78	21.5	3.36	1.88	25.4	3.76	1.98	28.1	4.03	2.05	29.3	4.13	2.08	33.2	4.47	2.18
	80	13.2	2.30	1.68	15.7	2.62	1.76	16.8	2.75	1.79	20.5	3.15	1.91	24.1	3.51	2.02	26.7	3.74	2.09	27.8	3.83	2.13	31.4	4.12	2.24
1085	60	14.4	2.42	1.75	17.4	2.83	1.80	18.6	3.00	1.82	22.8	3.53	1.89	27.0	4.03	1.96	29.9	4.35	2.01	31.1	4.48	2.04	35.3	4.91	2.11
	70	13.9	2.35	1.73	16.6	2.72	1.80	17.8	2.86	1.83	21.8	3.32	1.92	25.7	3.74	2.02	28.4	4.01	2.08	29.6	4.12	2.11	33.5	4.46	2.21
	80	13.3	2.27	1.72	15.9	2.59	1.80	17.0	2.72	1.83	20.7	3.13	1.94	24.4	3.49	2.06	27.0	3.71	2.13	28.1	3.81	2.17	31.9	4.10	2.28
1185	60	14.5	2.38	1.79	17.5	2.79	1.84	18.8	2.96	1.86	23.0	3.50	1.93	27.2	4.00	1.99	30.1	4.33	2.04	31.4	4.47	2.06	35.6	4.90	2.13
	70	14.0	2.33	1.77	16.8	2.69	1.83	18.0	2.84	1.86	22.0	3.30	1.95	26.0	3.72	2.05	28.7	3.99	2.11	29.9	4.10	2.14	33.9	4.45	2.23
	80	13.4	2.24	1.76	16.0	2.56	1.84	17.2	2.69	1.87	20.9	3.09	1.98	24.6	3.45	2.09	27.2	3.68	2.17	28.4	3.77	2.20	32.1	4.06	2.32



# HEATING EXPANDED RATINGS (Continued)

ESH1BF4M1SP36K with B6VMMX36K-B

		OUTDOOR TEMPERATURE (Deg. F)																							
CFM	Indoor T. Deg.F	10			17			20			30			40			47			50			60		
		MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW
1080	60	18.1	2.70	1.97	21.2	3.02	2.06	22.6	3.15	2.10	27.1	3.56	2.23	31.6	3.91	2.37	34.8	4.14	2.46	36.1	4.23	2.50	40.6	4.52	2.64
	70	17.4	2.57	1.99	20.4	2.85	2.10	21.7	2.97	2.14	26.0	3.31	2.30	30.3	3.61	2.46	33.3	3.80	2.57	34.6	3.88	2.62	38.9	4.11	2.78
	80	16.8	2.44	2.02	19.7	2.69	2.15	20.9	2.79	2.20	25.0	3.08	2.37	29.0	3.34	2.55	31.9	3.50	2.67	33.1	3.56	2.72	37.2	3.76	2.90
1230	60	18.2	2.64	2.02	21.4	2.98	2.11	22.8	3.11	2.15	27.4	3.53	2.28	32.0	3.90	2.41	35.2	4.14	2.50	36.6	4.24	2.53	41.2	4.54	2.66
	70	17.6	2.52	2.05	20.7	2.81	2.15	22.0	2.93	2.20	26.3	3.29	2.35	30.7	3.60	2.50	33.8	3.80	2.61	35.1	3.88	2.65	39.4	4.13	2.80
	80	17.0	2.39	2.08	19.9	2.65	2.20	21.1	2.75	2.25	25.3	3.06	2.42	29.5	3.33	2.59	32.4	3.50	2.71	33.6	3.57	2.76	37.8	3.78	2.93
1380	60	18.3	2.59	2.07	21.6	2.93	2.16	23.0	3.07	2.20	27.7	3.50	2.32	32.4	3.88	2.44	35.6	4.13	2.53	37.0	4.23	2.57	41.7	4.55	2.69
	70	17.8	2.49	2.10	20.9	2.79	2.20	22.2	2.91	2.24	26.7	3.27	2.39	31.1	3.60	2.54	34.2	3.80	2.64	35.5	3.88	2.68	40.0	4.14	2.83
	80	17.2	2.36	2.14	20.1	2.62	2.25	21.4	2.73	2.30	25.6	3.04	2.47	29.8	3.32	2.63	32.7	3.49	2.75	34.0	3.56	2.80	38.2	3.78	2.96

ESH1BF4M1SP42K with B6VMMX42K-B

		OUTDOOR TEMPERATURE (Deg. F)																							
CFM	Indoor T. Deg.F	10			17			20			30			40			47			50			60		
		MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW
1175	60	20.8	2.53	2.41	24.8	2.91	2.50	26.6	3.07	2.54	32.3	3.57	2.66	38.1	4.01	2.78	42.2	4.31	2.87	43.9	4.43	2.91	49.7	4.80	3.03
	70	20.0	2.35	2.50	23.9	2.71	2.60	25.6	2.85	2.64	31.2	3.29	2.78	36.8	3.70	2.92	40.7	3.96	3.02	42.4	4.06	3.06	48.0	4.40	3.20
	80	19.5	2.19	2.60	23.2	2.51	2.71	24.9	2.64	2.76	30.2	3.05	2.91	35.6	3.41	3.06	39.3	3.64	3.17	40.9	3.74	3.21	46.3	4.03	3.37
1325	60	20.9	2.50	2.46	25.0	2.89	2.54	26.8	3.05	2.58	32.7	3.56	2.69	38.5	4.02	2.81	42.7	4.32	2.90	44.4	4.44	2.93	50.3	4.83	3.05
	70	20.2	2.33	2.55	24.2	2.69	2.64	25.9	2.83	2.68	31.6	3.29	2.81	37.2	3.70	2.95	41.2	3.97	3.04	42.9	4.08	3.08	48.5	4.43	3.22
	80	19.6	2.17	2.65	23.5	2.50	2.76	25.1	2.63	2.80	30.6	3.04	2.95	36.0	3.42	3.09	39.8	3.66	3.19	41.5	3.76	3.24	46.9	4.07	3.38
1475	60	21.0	2.46	2.50	25.2	2.86	2.58	27.0	3.02	2.62	32.9	3.53	2.73	38.9	4.01	2.85	43.1	4.32	2.93	44.9	4.44	2.96	50.8	4.85	3.08
	70	20.5	2.31	2.59	24.5	2.67	2.68	26.2	2.82	2.72	31.9	3.28	2.85	37.6	3.70	2.98	41.6	3.98	3.07	43.3	4.09	3.11	49.1	4.45	3.24
	80	19.8	2.16	2.70	23.7	2.48	2.80	25.3	2.62	2.84	30.8	3.03	2.98	36.4	3.41	3.12	40.2	3.66	3.22	41.9	3.76	3.26	47.4	4.08	3.40

ESH1BF4M1SP48K with B6VMMX48K-B

		OUTDOOR TEMPERATURE (Deg. F)																							
CFM	Indoor T. Deg.F	10			17			20			30			40			47			50			60		
		MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW
1225	60	22.5	2.62	2.52	27.1	3.02	2.63	29.0	3.18	2.67	35.5	3.69	2.82	42.0	4.15	2.97	46.5	4.44	3.07	48.5	4.56	3.12	54.9	4.94	3.26
	70	21.7	2.42	2.63	26.1	2.79	2.74	28.0	2.94	2.79	34.3	3.40	2.96	40.6	3.82	3.12	45.1	4.08	3.24	47.0	4.19	3.29	53.3	4.53	3.45
	80	21.2	2.26	2.76	25.5	2.59	2.88	27.3	2.73	2.93	33.4	3.15	3.11	39.4	3.52	3.29	43.7	3.76	3.41	45.5	3.85	3.46	51.6	4.16	3.64
1425	60	22.8	2.58	2.58	27.4	2.99	2.68	29.4	3.16	2.72	36.0	3.68	2.86	42.6	4.16	3.00	47.2	4.47	3.10	49.1	4.59	3.14	55.7	4.99	3.28
	70	22.0	2.40	2.69	26.5	2.78	2.80	28.4	2.93	2.85	34.8	3.40	3.00	41.2	3.83	3.15	45.7	4.11	3.26	47.6	4.22	3.31	54.0	4.58	3.46
	80	21.4	2.23	2.82	25.8	2.57	2.94	27.6	2.71	2.99	33.8	3.15	3.15	40.0	3.54	3.32	44.4	3.79	3.44	46.2	3.89	3.49	52.4	4.21	3.65
1625	60	22.9	2.54	2.64	27.6	2.96	2.73	29.6	3.13	2.77	36.3	3.66	2.91	43.0	4.15	3.04	47.8	4.47	3.13	49.8	4.60	3.17	56.5	5.01	3.31
	70	22.4	2.38	2.75	26.9	2.76	2.85	28.8	2.92	2.90	35.3	3.40	3.04	41.8	3.84	3.19	46.3	4.12	3.29	48.2	4.24	3.34	54.7	4.61	3.48
	80	21.7	2.21	2.88	26.1	2.56	2.99	28.0	2.70	3.04	34.2	3.14	3.20	40.5	3.54	3.35	44.9	3.80	3.46	46.8	3.91	3.51	53.0	4.24	3.67

# HEATING EXPANDED RATINGS WITH VARIABLE SPEED AIR HANDLER

## ESH1BF4M2SX60K with B6VMMX60K-C HIGH SPEED

		OUTDOOR TEMPERATURE (Deg. F)																							
CFM	Indoor T. Deg.F	10			17			20			30			40			47			50			60		
		MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW
1635	60	28.4	2.71	3.08	34.5	2.94	3.44	37.1	3.03	3.59	45.8	3.27	4.11	54.4	3.46	4.62	60.5	3.56	4.98	63.1	3.61	5.13	71.8	3.73	5.65
	70	27.5	2.46	3.28	33.5	2.68	3.67	36.0	2.76	3.83	44.6	2.98	4.39	53.1	3.15	4.94	59.1	3.26	5.32	61.6	3.29	5.49	70.2	3.41	6.04
	80	27.0	2.26	3.50	32.8	2.45	3.92	35.3	2.52	4.10	43.6	2.72	4.70	52.0	2.87	5.30	57.8	2.96	5.72	60.3	2.99	5.90	68.6	3.09	6.50
1835	60	28.7	2.69	3.13	34.9	2.94	3.47	37.5	3.04	3.62	46.3	3.30	4.11	55.1	3.51	4.60	61.2	3.63	4.95	63.9	3.68	5.10	72.7	3.81	5.59
	70	27.9	2.45	3.33	33.9	2.69	3.70	36.5	2.77	3.86	45.1	3.02	4.38	53.7	3.21	4.91	59.7	3.32	5.28	62.3	3.36	5.44	70.9	3.49	5.96
	80	27.2	2.24	3.56	33.1	2.46	3.95	35.7	2.54	4.13	44.1	2.76	4.69	52.5	2.93	5.26	58.4	3.03	5.66	61.0	3.07	5.83	69.4	3.18	6.40
2035	60	28.7	2.66	3.17	35.0	2.93	3.51	37.7	3.03	3.65	46.6	3.31	4.13	55.6	3.53	4.62	61.8	3.66	4.95	64.5	3.71	5.10	73.5	3.86	5.58
	70	28.2	2.45	3.38	34.3	2.69	3.74	36.9	2.78	3.89	45.6	3.04	4.40	54.3	3.24	4.91	60.3	3.36	5.26	62.9	3.41	5.41	71.6	3.55	5.92
	80	27.5	2.24	3.61	33.5	2.46	3.99	36.0	2.54	4.15	44.5	2.78	4.70	53.0	2.97	5.24	59.0	3.08	5.62	61.5	3.12	5.79	70.0	3.25	6.33

## ESH1BF4M2SX60K with B6VMMX60K-C LOW SPEED

		OUTDOOR TEMPERATURE (Deg. F)																							
CFM	Indoor T. Deg.F	10			17			20			30			40			47			50			60		
		MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW	MBH	COP	kW
1130	60	18.6	2.30	2.37	22.9	2.65	2.53	24.7	2.79	2.60	30.8	3.20	2.82	36.9	3.56	3.04	41.2	3.78	3.20	43.0	3.87	3.27	49.2	4.13	3.49
	70	17.9	2.13	2.46	22.0	2.45	2.63	23.8	2.58	2.71	29.7	2.95	2.95	35.6	3.26	3.20	39.8	3.45	3.38	41.5	3.53	3.45	47.4	3.76	3.70
	80	17.3	1.98	2.56	21.3	2.27	2.75	23.0	2.38	2.83	28.7	2.71	3.10	34.4	2.99	3.37	38.4	3.16	3.56	40.1	3.22	3.65	45.8	3.43	3.92
1280	60	18.7	2.27	2.42	23.1	2.63	2.57	24.9	2.77	2.64	31.1	3.20	2.85	37.3	3.57	3.07	41.7	3.80	3.22	43.6	3.89	3.28	49.8	4.18	3.50
	70	18.1	2.11	2.51	22.3	2.44	2.68	24.1	2.57	2.75	30.0	2.95	2.99	36.0	3.28	3.22	40.2	3.48	3.39	42.0	3.56	3.46	48.0	3.81	3.70
	80	17.5	1.96	2.61	21.5	2.26	2.80	23.2	2.37	2.87	29.0	2.72	3.13	34.8	3.01	3.40	38.9	3.19	3.58	40.6	3.26	3.66	46.4	3.47	3.92
1430	60	18.8	2.24	2.47	23.2	2.61	2.61	25.1	2.75	2.68	31.4	3.19	2.89	37.7	3.57	3.10	42.1	3.81	3.24	44.0	3.90	3.31	50.3	4.20	3.52
	70	18.3	2.10	2.56	22.5	2.43	2.72	24.3	2.56	2.79	30.4	2.95	3.02	36.4	3.29	3.25	40.7	3.50	3.41	42.5	3.58	3.48	48.5	3.83	3.71
	80	17.7	1.95	2.66	21.7	2.25	2.84	23.5	2.36	2.91	29.3	2.72	3.17	35.2	3.02	3.42	39.2	3.20	3.59	41.0	3.27	3.67	46.8	3.50	3.92





### GENERAL TERMS OF LIMITED WARRANTY

Nortek Global HVAC, LLC will furnish a replacement for any part of this product which fails in normal use and service within the terms and conditions of the warranty.

For complete details of the Limited Warranty, including applicable terms and conditions, see your local installer or contact the Nortek Global HVAC, LLC warranty department for a copy.

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