

**FF1E
Base Series Fan Coil
Sizes 018 thru 037**



Product Data

FEATURES



The FF1E Series Fan Coil unit is primarily designed for apartment applications as upflow indoor air handlers for split-system heat pumps and air conditioners for use with either Puron® refrigerant or R-22 refrigerant. These units are available with factory-installed electric heaters, which include the disconnect. A field-installed cooling control with disconnect is also available. A Time Delay Relay (TDR) is included with either the electric heat or the cooling control packages. Both models are available with a factory-installed TXV for use with Puron® refrigerant or R-22 refrigerant.

This fan coil may be installed free-standing, wall hung or flush mounted in the wall. The 22" (559 mm) wide cabinet size in all models allows units to fit between standard stud spacings. No return-air ductwork is required if the application provides for return air in the front of the cabinet through either a louvered closet door or an optional accessory decorative grille panel.

The cabinet exterior is made of pre-painted, galvanized sheet metal. The cabinet is fully insulated to meet applications in conditioned space. Additional insulation is required if the unit is installed in an unconditioned space. The unit is supplied with a replaceable filter.

Multi-speed, direct-drive, PSC blower motors have been selected to provide the proper air handling for both heating and cooling. Electronic commutating motors (ECM) use X13 high-efficiency motors to increase system performance. Motors are suspended at three points on rubber grommets for quieter operation.

All refrigerant lines, electrical power, and thermostat wiring enter from the top of the cabinet. Sweat-type refrigerant connections on both liquid and suction lines make for swift, low-cost installation. All service access to the unit is conveniently located in the front.

All units come with a factory-supplied, hard-shutoff thermostatic expansion valve (TXV) metering device for performance improvement.

The drain pan is constructed of high-impact, sound-deadening, corrosion-proof polyester resin. Primary and secondary drain connections exit from the bottom or either side of the cabinet.

MODEL NUMBER NOMENCLATURE

1 2 3 4 5 6 7 8 9 10 11 12
F F 1 E N P 0 1 8 0 0 5

Product

F = Fan Coil

Type

F = Thru-the-Wall

Position

1 = Upflow

Series

E

Electrical

N = 208/230v, 1ph-60 Hz

Refrigerant

P = Puron® (R-410A)

E = R-22

Heating Size

005 = 5kW

075 = 7.5 kW

011 = 11 kW

Capacity

018 = 18,000

019 = 19,000

024 = 24,000

025 = 25,000

030 = 30,000

031 = 31,000

036 = 36,000

037 = 37,000

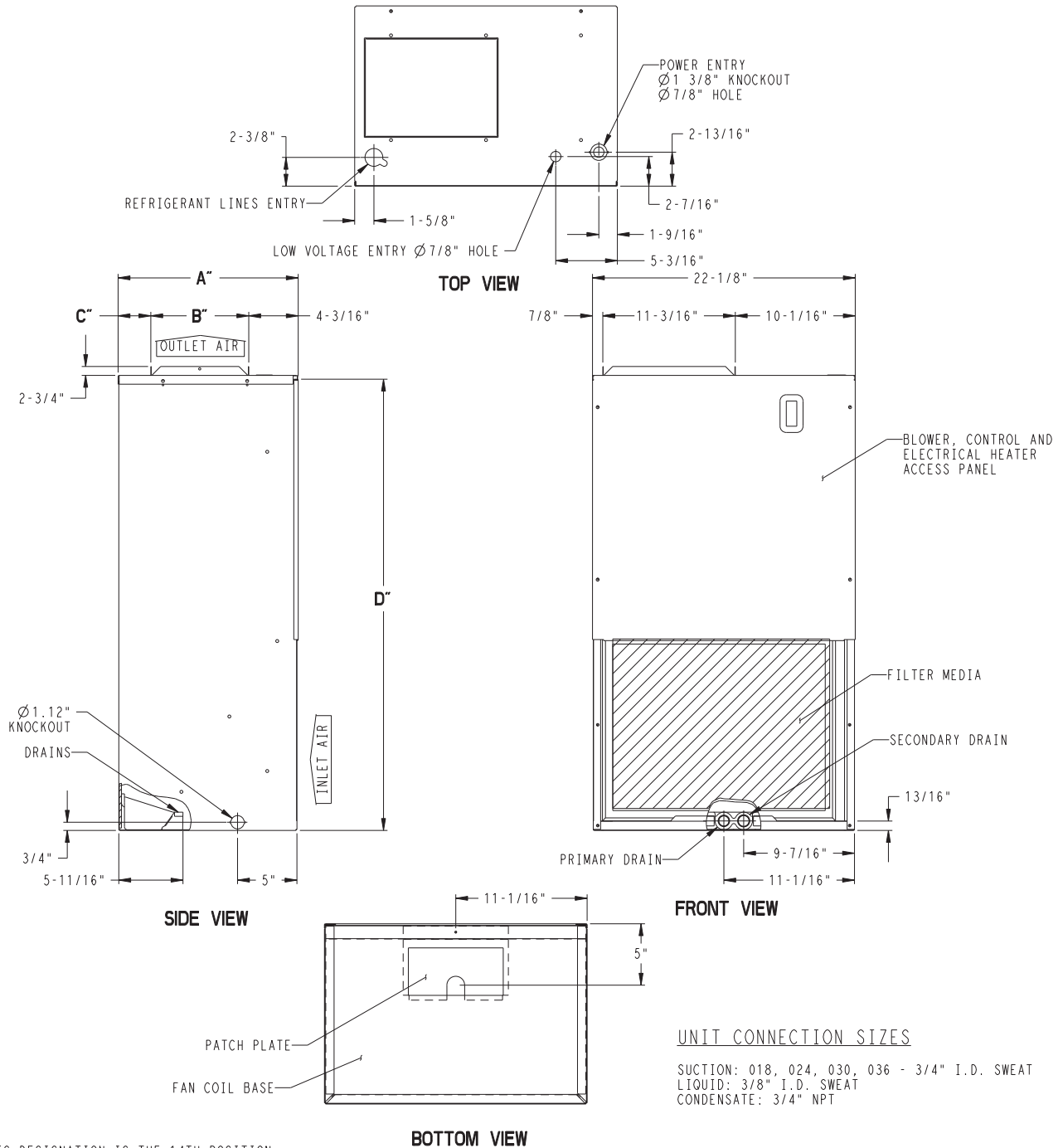


Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.



DIMENSIONS

UNIT	SERIES	A	B	C	D	SHIPPING WT (LBS) NON TIN-COATED
FF1ENE018	A	15-3/16"	8-1/4"	2-3/4"	38-1/16"	80
FF1ENE024	A	15-3/16"	8-1/4"	2-3/4"	38-1/16"	84
FF1ENE030	A	15-3/16"	8-1/4"	2-3/4"	38-1/16"	84
FF1ENE036	A	18-3/8"	9-1/4"	5"	43-3/16"	100
FF1ENP019	A	15-3/16"	8-1/4"	2-3/4"	38-1/16"	90
FF1ENP025	A	15-3/16"	8-1/4"	2-3/4"	38-1/16"	92
FF1ENP031	A	18-3/8"	9-1/4"	5"	43-3/16"	105
FF1ENP037	A	18-3/8"	9-1/4"	5"	43-3/16"	110



NOTE:

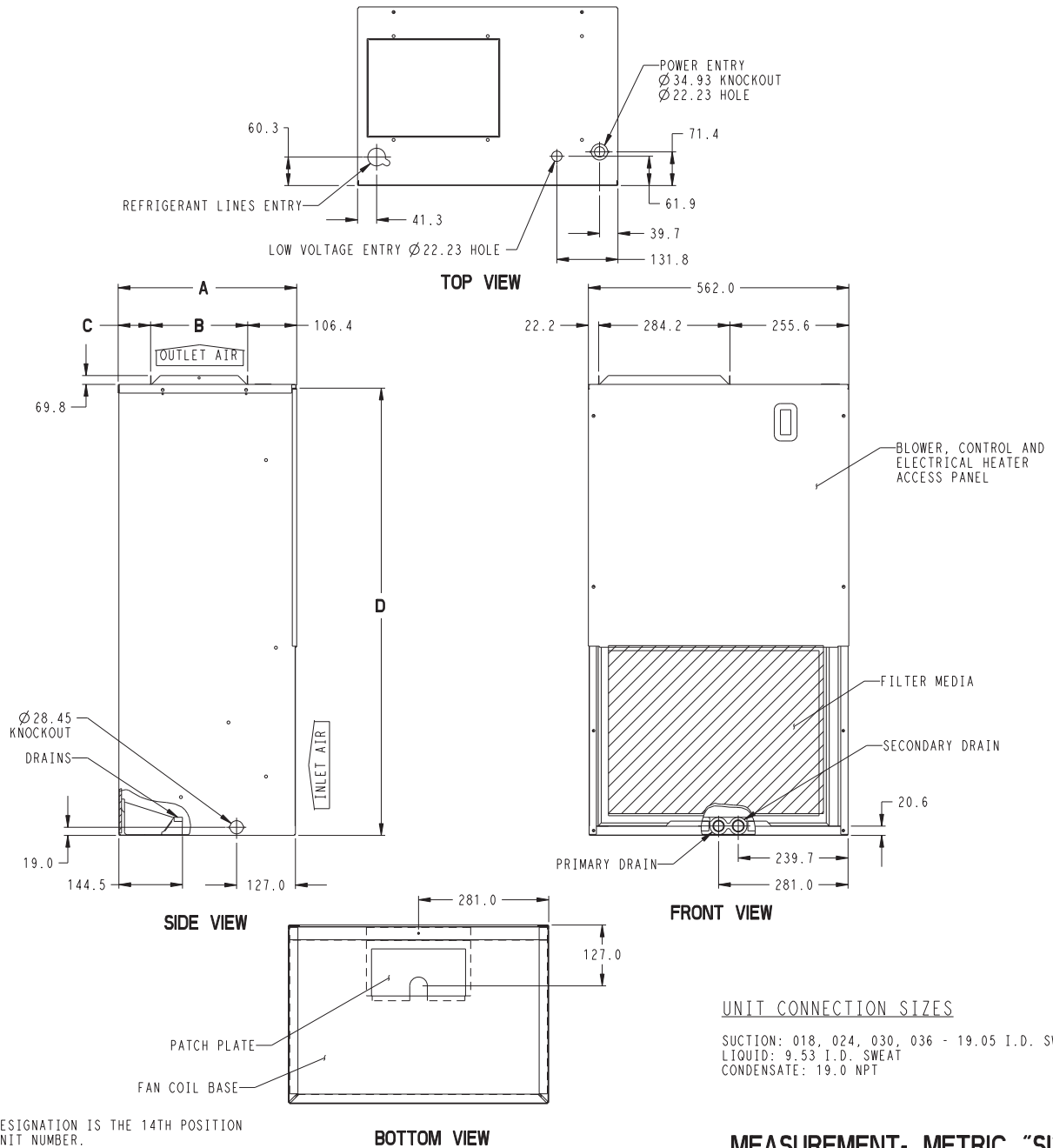
- SERIES DESIGNATION IS THE 14TH POSITION OF THE UNIT NUMBER.
- ALL DIMENSIONS ARE IN "INCHES" UNLESS NOTED.

MEASUREMENT- ENGLISH

A09200

DIMENSIONS

UNIT	SERIES	A	B	C	D	SHIPPING WT (Kgs) NON TIN-COATED
FF1ENE018	A	385.8	209.6	69.8	966.8	36.3
FF1ENE024	A	385.8	209.6	69.8	966.8	38.1
FF1ENE030	A	385.8	209.6	69.8	966.8	38.1
FF1ENE036	A	466.7	235.0	127.0	1097.0	45.4
FF1ENP019	A	385.8	209.6	69.8	966.8	40.8
FF1ENP025	A	385.8	209.6	69.8	966.8	41.7
FF1ENP031	A	466.7	235.0	127.0	1097.0	47.6
FF1ENP037	A	466.7	235.0	127.0	1097.0	49.9



NOTE:

- SERIES DESIGNATION IS THE 14TH POSITION OF THE UNIT NUMBER.
- ALL DIMENSIONS ARE IN "MM" UNLESS NOTED.

MEASUREMENT- METRIC "SI"

A09201

PHYSICAL DATA

CATALOG ORDERING #	FACTORY–INSTALLED HEAT (kW)			FACTORY–SUPPLIED DISCONNECTS	NOMINAL COOLING CAPACITY (BTUH)
	5kW	7.5kW	11kW		
FF1EN*018---	005	075	011	STD	18,000
FF1ENP019---	005	075	NA	STD	
FF1EN*024---	005	075	011	STD	
FF1ENP025---	005	075	011	STD	24,000
FF1EN*030---	005	075	011	STD	
FF1ENP031---	005	075	011	STD	
FF1EN*036---	005	075	011	STD	30,000
FF1ENP037---	005	075	011	STD	

* [P or R] Models are available for use with Puron® Refrigerant (P) or R-22 (R)

SPECIFICATIONS

FF1ENE	18		24		30		36	
FF1ENP	18	19	24	25	30	31	36	37
COIL								
Refrigerant Metering Device	TXV – factory–installed, hard shutoff, bi–flow type for heat pump application							
TXV	3 ton for R–22							
	2 ton for Puron® refrigerant (R–410A)					3 ton for Puron® refrigerant (R–410A)		
Rows/Fins Per In. (mm)	3 / 14.5 (368)							
Face Area Ft² (m²)	2.23 (.21)		2.72 (.25)			3.46 (.32)		
Configuration	Slope							
BLOWER & MOTOR								
Air Discharge	Upflow							
Blower Type	Direct Drive							
CFM (Nominal)	600		800		1000		1200	
Motor Type	PSC	X13 (ECM)	PSC	X13 (ECM)	PSC	X13 (ECM)	PSC	X13 (ECM)
Motor HP	1/5	1/3	1/5	1/3	1/3	1/3	1/3	1/3
Motor Speeds	2	5	2	5	2	5	2	5
FILTER								
1" (25mm) Thick	16 x 20 (406 x 508)					20 x 20 (508 x 508)		
CONNECTIONS (Sweat)								
Suction In. (mm)	3/4 (19)							
Liquid In. (mm)	3/8 (9.5)							
Condensate (FPT) In. (mm)	3/4 (19)							

FF1E

PERFORMANCE DATA

AIRFLOW PERFORMANCE (CFM)

MODEL SIZE	BLOWER SPEED	EXTERNAL STATIC PRESSURE (IN. WC.)					
		0.10	0.20	0.30	0.40	0.50	0.60
018	High	995	955	910	862	811	—
	Low	738	711	678	641	600	—
019	High	995	955	910	862	811	—
	Low	738	711	678	641	600	—
024	High	950	908	861	810	754	693
	Low	732	699	662	621	576	527
025	High	950	908	861	810	754	693
	Low	732	699	662	621	576	527
030	High	1128	1082	1030	973	911	845
	Low	1053	1011	964	911	854	791
031	High	1128	1082	1030	973	911	845
	Low	1053	1011	964	911	854	791
036	High	1408	1355	1295	1227	1152	1068
	Low	1191	1157	1113	1061	1000	931
037	High	1408	1355	1295	1227	1152	1068
	Low	1191	1157	1113	1061	1000	931

NOTES:

1. Airflow based upon dry coil at 230v with factory approved filter and electric heater (2 element heater sizes 018 through 036).
2. Not recommended for use above 0.60 in. external static pressure.

— Airflow outside 450 cfm/ton.

PERFORMANCE DATA (cont.)

GROSS COOLING CAPACITIES (mbh)

UNIT SIZE	INDOOR COIL AIR		SATURATED TEMPERATURE LEAVING EVAPORATOR °F (°C)														
			35 (2)			40 (4)			45 (7)			50 (10)			55 (13)		
	CFM	EWB	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF
FF1ENP 018	525	72 (22)	40	20	0.00	36	18	0.00	32	16	0.00	27	14	0.02	21	11	0.02
		67 (19)	33	20	0.02	29	18	0.02	24	16	0.03	20	14	0.03	14	12	0.03
		62 (17)	27	21	0.03	22	18	0.03	18	16	0.03	14	14	0.08	12	12	0.22
	600	72 (22)	44	22	0.00	40	20	0.00	35	17	0.01	30	15	0.02	24	13	0.03
		67 (19)	36	22	0.03	32	20	0.03	27	18	0.03	22	15	0.04	16	13	0.04
		62 (17)	29	23	0.04	25	21	0.04	20	18	0.04	16	16	0.10	13	13	0.24
FF1ENP 024	675	72 (22)	48	24	0.00	43	21	0.00	38	19	0.02	32	16	0.03	26	14	0.04
		67 (19)	40	25	0.04	35	22	0.04	29	19	0.04	23	17	0.04	17	14	0.05
		62 (17)	32	25	0.05	27	23	0.05	22	20	0.05	17	17	0.11	14	14	0.26
	700	72 (22)	52	26	0.00	47	23	0.00	41	20	0.01	34	18	0.02	28	15	0.03
		67 (19)	43	26	0.03	37	23	0.03	32	21	0.03	25	18	0.03	18	15	0.04
		62 (17)	34	27	0.03	29	24	0.03	23	21	0.04	18	18	0.09	15	15	0.24
	800	72 (22)	57	28	0.01	52	26	0.00	45	23	0.02	38	20	0.03	30	16	0.03
		67 (19)	47	29	0.04	41	26	0.04	35	23	0.04	28	20	0.04	20	17	0.05
		62 (17)	38	30	0.04	32	27	0.04	26	24	0.05	20	20	0.11	17	17	0.25
	900	72 (22)	63	31	0.00	56	28	0.00	49	25	0.03	41	21	0.04	33	18	0.04
		67 (19)	51	32	0.05	45	29	0.05	38	25	0.05	30	22	0.05	22	19	0.06
		62 (17)	41	33	0.05	35	29	0.05	28	26	0.06	22	22	0.13	19	19	0.27
FF1ENP 030	875	72 (22)	60	30	0.00	54	27	0.00	47	24	0.03	40	20	0.04	32	17	0.04
		67 (19)	50	31	0.04	43	27	0.05	37	24	0.05	29	21	0.05	21	18	0.05
		62 (17)	40	31	0.05	34	28	0.05	27	25	0.06	22	22	0.12	18	18	0.27
	1000	72 (22)	66	33	0.00	59	29	0.01	52	26	0.04	44	22	0.05	35	19	0.05
		67 (19)	54	34	0.06	47	30	0.06	40	27	0.06	32	23	0.06	23	20	0.07
		62 (17)	44	35	0.06	37	31	0.07	30	28	0.07	24	24	0.15	20	20	0.29
	1100	72 (22)	71	35	0.00	63	31	0.02	55	28	0.05	46	24	0.06	37	20	0.06
		67 (19)	58	36	0.06	51	33	0.07	43	29	0.07	34	25	0.07	25	21	0.08
		62 (17)	47	37	0.07	39	34	0.07	32	30	0.08	26	26	0.17	22	22	0.30
FF1ENP 036	1050	72 (22)	80	39	0.01	71	35	0.00	62	31	0.02	52	27	0.03	42	23	0.04
		67 (19)	65	40	0.04	57	36	0.04	48	32	0.04	38	28	0.05	28	23	0.05
		62 (17)	52	41	0.05	44	37	0.05	35	33	0.05	28	28	0.11	24	24	0.26
	1200	72 (22)	88	43	0.00	78	39	0.00	68	34	0.03	58	30	0.04	46	25	0.05
		67 (19)	72	45	0.05	63	40	0.05	53	35	0.06	42	31	0.06	30	26	0.06
		62 (17)	58	46	0.06	49	41	0.06	39	36	0.07	31	31	0.14	26	26	0.28
	1350	72 (22)	95	47	0.00	85	42	0.02	74	37	0.05	62	32	0.06	49	27	0.06
		67 (19)	78	49	0.06	68	44	0.06	57	39	0.07	45	34	0.07	33	28	0.07
		62 (17)	63	50	0.07	53	45	0.07	42	40	0.08	34	34	0.16	29	29	0.30

CFM – Cubic Ft per Minute
 SHC – Gross Sensible Capacity 1000 Btuh

EWB – Entering Wet Bulb °F (°C)
 BF – Bypass Factor

LWB – Leaving Wet Bulb °F (°C)
 MBH – 1000 Btuh

NOTES:

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

SHC CORRECTION FACTOR

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

Interpolation is permissible.

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

PERFORMANCE DATA (cont.)

GROSS COOLING CAPACITIES (mbh)

UNIT SIZE	INDOOR COIL AIR		SATURATED TEMPERATURE LEAVING EVAPORATOR °F (°C)														
			35 (2)			40 (4)			45 (7)			50 (10)			55 (13)		
	CFM	EWB	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF
FF1ENP 019	525	72 (22)	40	20	0.00	36	18	0.00	32	16	0.00	27	14	0.02	21	11	0.02
		67 (19)	33	20	0.02	29	18	0.02	24	16	0.03	20	14	0.03	14	12	0.03
		62 (17)	27	21	0.03	22	18	0.03	18	16	0.03	14	14	0.08	12	12	0.22
	600	72 (22)	44	22	0.00	40	20	0.00	35	17	0.01	30	15	0.02	24	13	0.03
		67 (19)	36	22	0.03	32	20	0.03	27	18	0.03	22	15	0.04	16	13	0.04
		62 (17)	29	23	0.04	25	21	0.04	20	18	0.04	16	16	0.10	13	13	0.24
	675	72 (22)	48	24	0.00	43	21	0.00	38	19	0.02	32	16	0.03	26	14	0.04
		67 (19)	40	25	0.04	35	22	0.04	29	19	0.04	23	17	0.04	17	14	0.05
		62 (17)	32	25	0.05	27	23	0.05	22	20	0.05	17	17	0.11	14	14	0.26
FF1ENP 025	700	72 (22)	52	26	0.00	47	23	0.00	41	20	0.01	34	18	0.02	28	15	0.03
		67 (19)	43	26	0.03	37	23	0.03	32	21	0.03	25	18	0.03	18	15	0.04
		62 (17)	34	27	0.03	29	24	0.03	23	21	0.04	18	18	0.09	15	15	0.24
	800	72 (22)	57	28	0.01	52	26	0.00	45	23	0.02	38	20	0.03	30	16	0.03
		67 (19)	47	29	0.04	41	26	0.04	35	23	0.04	28	20	0.04	20	17	0.05
		62 (17)	38	30	0.04	32	27	0.04	26	24	0.05	20	20	0.11	17	17	0.25
	900	72 (22)	63	31	0.00	56	28	0.00	49	25	0.03	41	21	0.04	33	18	0.04
		67 (19)	51	32	0.05	45	29	0.05	38	25	0.05	30	22	0.05	22	19	0.06
		62 (17)	41	33	0.05	35	29	0.05	28	26	0.06	22	22	0.13	19	19	0.27
FF1ENP 031	875	72 (22)	60	30	0.00	54	27	0.00	47	24	0.03	40	20	0.04	32	17	0.04
		67 (19)	50	31	0.04	43	27	0.05	37	24	0.05	29	21	0.05	21	18	0.05
		62 (17)	40	31	0.05	34	28	0.05	27	25	0.06	22	22	0.12	18	18	0.27
	1000	72 (22)	66	33	0.00	59	29	0.01	52	26	0.04	44	22	0.05	35	19	0.05
		67 (19)	54	34	0.06	47	30	0.06	40	27	0.06	32	23	0.06	23	20	0.07
		62 (17)	44	35	0.06	37	31	0.07	30	28	0.07	24	24	0.15	20	20	0.29
	1100	72 (22)	71	35	0.00	63	31	0.02	55	28	0.05	46	24	0.06	37	20	0.06
		67 (19)	58	36	0.06	51	33	0.07	43	29	0.07	34	25	0.07	25	21	0.08
		62 (17)	47	37	0.07	39	34	0.07	32	30	0.08	26	26	0.17	22	22	0.30
FF1ENP 037	1050	72 (22)	80	39	0.01	71	35	0.00	62	31	0.02	52	27	0.03	42	23	0.04
		67 (19)	65	40	0.04	57	36	0.04	48	32	0.04	38	28	0.05	28	23	0.05
		62 (17)	52	41	0.05	44	37	0.05	35	33	0.05	28	28	0.11	24	24	0.26
	1200	72 (22)	88	43	0.00	78	39	0.00	68	34	0.03	58	30	0.04	46	25	0.05
		67 (19)	72	45	0.05	63	40	0.05	53	35	0.06	42	31	0.06	30	26	0.06
		62 (17)	58	46	0.06	49	41	0.06	39	36	0.07	31	31	0.14	26	26	0.28
	1350	72 (22)	95	47	0.00	85	42	0.02	74	37	0.05	62	32	0.06	49	27	0.06
		67 (19)	78	49	0.06	68	44	0.06	57	39	0.07	45	34	0.07	33	28	0.07
		62 (17)	63	50	0.07	53	45	0.07	42	40	0.08	34	34	0.16	29	29	0.30

CFM – Cubic Ft per Minute

SHC – Gross Sensible Capacity 1000 Btuh

EWB – Entering Wet Bulb °F (°C)

BF – Bypass Factor

LWB – Leaving Wet Bulb °F (°C)

MBH – 1000 Btuh

TC – Gross Cooling Capacity 1000 Btuh

NOTES:

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

SHC CORRECTION FACTOR

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

Interpolation is permissible.

Correction Factor = 1.09 x (1 - BF) x (db - 80)

PERFORMANCE DATA (cont.)

GROSS COOLING CAPACITIES (mbh)

UNIT SIZE	INDOOR COIL AIR		SATURATED TEMPERATURE LEAVING EVAPORATOR °F (°C)														
			35 (2)			40 (4)			45 (7)			50 (10)			55 (13)		
	CFM	EWB	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF
FF1ENE 018	525	72 (22)	38	19	0.00	35	17	0.00	30	15	0.01	26	13	0.02	21	11	0.02
		67 (19)	32	20	0.02	28	18	0.02	24	16	0.03	19	14	0.03	13	12	0.03
		62 (17)	26	20	0.03	22	18	0.03	18	16	0.04	14	14	0.11	12	12	0.26
	600	72 (22)	42	21	0.00	38	19	0.00	33	17	0.02	28	15	0.02	23	13	0.03
		67 (19)	35	22	0.03	30	20	0.03	26	18	0.03	21	15	0.03	15	13	0.04
		62 (17)	28	22	0.04	24	20	0.04	19	18	0.05	16	16	0.13	13	13	0.28
	675	72 (22)	45	22	0.00	41	20	0.02	36	18	0.03	30	16	0.03	24	14	0.04
		67 (19)	37	23	0.04	33	21	0.04	28	19	0.04	22	17	0.04	16	14	0.05
		62 (17)	30	25	0.05	26	22	0.05	21	20	0.06	17	17	0.15	14	14	0.30
FF1ENE 024	700	72 (22)	49	24	0.00	44	22	0.00	39	20	0.01	33	17	0.02	26	14	0.03
		67 (19)	41	25	0.03	36	23	0.03	30	20	0.03	24	18	0.03	17	15	0.04
		62 (17)	33	26	0.03	28	24	0.03	22	21	0.04	18	18	0.13	15	15	0.28
	800	72 (22)	54	27	0.00	49	24	0.01	43	22	0.03	36	19	0.03	29	16	0.03
		67 (19)	45	28	0.04	39	25	0.04	33	23	0.04	26	20	0.04	19	17	0.05
		62 (17)	36	29	0.04	31	26	0.05	25	23	0.06	20	20	0.15	17	17	0.29
	900	72 (22)	58	29	0.00	52	26	0.02	46	23	0.04	39	20	0.04	31	17	0.04
		67 (19)	48	30	0.05	42	27	0.05	36	25	0.05	29	22	0.05	20	18	0.06
		62 (17)	39	32	0.05	33	29	0.06	27	26	0.07	22	22	0.17	18	18	0.31
FF1ENE 030	875	72 (22)	58	29	0.00	52	26	0.02	46	23	0.03	39	20	0.04	31	17	0.04
		67 (19)	48	30	0.04	42	27	0.05	36	25	0.05	29	22	0.05	20	18	0.06
		62 (17)	39	32	0.05	33	29	0.05	27	26	0.07	22	22	0.16	18	18	0.31
	1000	72 (22)	63	31	0.01	57	28	0.03	50	25	0.05	42	22	0.05	34	19	0.05
		67 (19)	52	33	0.06	46	30	0.06	39	27	0.06	31	24	0.06	22	20	0.08
		62 (17)	42	35	0.06	36	32	0.07	29	28	0.08	24	24	0.19	20	20	0.33
	1100	72 (22)	67	33	0.03	60	30	0.05	53	27	0.05	45	24	0.06	35	20	0.06
		67 (19)	55	35	0.06	49	32	0.07	41	29	0.07	33	25	0.07	24	22	0.09
		62 (17)	45	37	0.07	38	34	0.08	31	31	0.10	26	26	0.21	22	22	0.34
FF1ENE 036	1050	72 (22)	72	36	0.00	65	32	0.01	56	28	0.03	48	25	0.03	37	21	0.04
		67 (19)	59	37	0.04	52	33	0.04	44	30	0.04	34	26	0.04	24	21	0.06
		62 (17)	48	38	0.05	40	35	0.05	32	31	0.06	26	26	0.16	22	22	0.31
	1200	72 (22)	79	39	0.00	71	35	0.03	62	31	0.04	52	27	0.05	41	23	0.05
		67 (19)	65	41	0.05	57	37	0.05	48	33	0.06	38	29	0.06	26	24	0.07
		62 (17)	52	42	0.06	44	38	0.06	36	34	0.08	29	29	0.18	24	24	0.33
	1350	72 (22)	85	42	0.01	76	38	0.04	66	34	0.05	55	29	0.06	44	25	0.06
		67 (19)	70	44	0.06	61	40	0.06	51	36	0.07	41	31	0.07	28	26	0.09
		62 (17)	56	46	0.07	48	42	0.07	39	37	0.09	32	32	0.20	26	26	0.34

CFM – Cubic Ft per Minute

SHC – Gross Sensible Capacity 1000 Btuh

EWB – Entering Wet Bulb °F (°C)

BF – Bypass Factor

LWB – Leaving Wet Bulb °F (°C)

MBH – 1000 Btuh

TC – Gross Cooling Capacity 1000 Btuh

NOTES:

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

SHC CORRECTION FACTOR

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

Interpolation is permissible.

Correction Factor = 1.09 x (1 - BF) x (db - 80)

PERFORMANCE DATA (cont.)

AIR DELIVERY PERFORMANCE CORRECTION COMPONENT PRESSURE DROP (IN.WC.) AT INDICATED AIRFLOW (DRY-TO-WET COIL)

UNIT SIZE	CFM								
	500	600	700	800	900	1000	1100	1200	1300
018	0.034	0.049	0.063	--	--	--	--	--	--
019	0.034	0.049	0.063	--	--	--	--	--	--
024	0.021	0.033	0.045	0.056	0.068	--	--	--	--
025	0.021	0.033	0.045	0.056	0.068	--	--	--	--
030	--	--	--	0.056	0.068	0.079	0.090	--	--
031	--	--	--	0.056	0.068	0.079	0.090	--	--
036	--	--	--	--	--	0.055	0.064	0.073	0.081
037	--	--	--	--	--	0.055	0.064	0.073	0.081

ESTIMATED SOUND POWER LEVEL (dBA)

UNIT SIZE	CONDITIONS		OCTAVE BAND CENTER FREQUENCY*						
	CFM	Ext Static Pressure	63	125	250	500	1000	2000	4000
018	600	0.25	64.7	60.7	56.7	53.7	51.7	49.7	45.7
019	600	0.25	64.7	60.7	56.7	53.7	51.7	49.7	45.7
024	800	0.25	66.0	62.0	58.0	55.0	53.0	51.0	47.0
025	800	0.25	66.0	62.0	58.0	55.0	53.0	51.0	47.0
030	1000	0.25	67.0	63.0	59.0	56.0	54.0	52.0	48.0
031	1000	0.25	67.0	63.0	59.0	56.0	54.0	52.0	48.0
036	1200	0.25	67.8	63.8	59.8	56.8	54.8	52.8	48.8
037	1200	0.25	67.8	63.8	59.8	56.8	54.8	52.8	48.8

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

AIR DELIVERY PERFORMANCE CORRECTION COMPONENT PRESSURE DROP (IN. WC.) AT INDICATED AIRFLOW

AIR DELIVERY (CFM)		400	500	600	700	800	900	1000	1100
Electric Heaters	1 – Element 5 kW	0.007	0.010	0.015	0.025	0.035	0.055	0.070	0.080
	2 – Element 7.5 & 11 kW	0.010	0.012	0.018	0.028	0.050	0.075	0.100	0.130

Subtract the above pressure drop corrections from unit airflow data when that component or condition is used. The remaining external static pressure will be available for the duct system.

PERFORMANCE DATA (cont.)

ELECTRICAL DATA

MODEL SIZE	MTR. HP	MTR. FLA	PH/ HZ	COOLING CONTROL*/HEAT PACK INSTALLED	MIN. WIRE SIZE (208/230)†	MAX. FT. WIRE (208/230)‡	HEATER AMPS (208/230)	MIN. CIRCUIT AMPS (MCA) (208/230)	MAX. FUSE OR CKT. BRK. AMPS (208/230)
FF1ENP018	1/5	1.5	1/60	KFDCC0101DCC	14	394 (120)	—	1.9	15
				KFDEH0801D05	10/10	70/70 (21)	18.1/20.0	24.5/26.9	25/30
				KFDEH0901D75	8/8	75/75 (23)	27.1/30.0	35.8/39.4	40/40
				KFDEH1001D11	6/6	82/82 (25)	39.8/44.0	51.6/56.9	60/60
FF1ENP019	1/3	2.8	1/60	KFDCC0101DCC	14	394 (120)	—	1.9	15
				KFEEH0101D05	10/10	70/70 (21)	18.1/19.8	26.1/28.3	30/30
				KFEEH0201D75	8/8	75/75 (23)	27.1/30.0	37.4/41.0	40/50
FF1ENP024	1/5	1.5	1/60	KFDCC0101DCC	14	394 (120)	—	1.9	15
				KFDEH0801D05	10/10	70/70 (21)	18.1/20.0	24.5/26.9	25/30
				KFDEH0901D75	8/8	75/75 (23)	27.1/30.0	35.8/39.4	40/40
				KFDEH1001D11	6/6	82/82 (25)	39.8/44.0	51.6/56.9	60/60
FF1ENP025	1/3	2.8	1/60	KFDCC0101DCC	14	394 (120)	—	1.9	15
				KFEEH0101D05	10/10	70/70 (21)	18.1/19.8	26.1/28.3	30/30
				KFEEH0201D75	8/8	75/75 (23)	27.1/30.0	37.4/41.0	40/50
				KFEEH0301D11	6/6	82/82 (25)	39.8/43.8	53.3/58.3	60/60
FF1ENP030	1/3	1.9	1/60	KFDCC0101DCC	14	312 (95)	—	2.4	15
				KFDEH0801D05	10/10	69/69 (21)	18.1/20.0	25.0/27.4	30/30
				KFDEH0901D75	8/8	74/74 (23)	27.1/30.0	36.3/39.9	40/40
				KFDEH1001D11	6/6	81/82 (25)	39.8/44.0	52.1/57.4	60/60
FF1ENP031	1/3	2.8	1/60	KFDCC0101DCC	14	312 (95)	—	2.4	15
				KFEEH0101D05	10/10	69/69 (21)	18.1/19.8	26.1/28.3	30/30
				KFEEH0201D75	8/8	74/74 (23)	27.1/30.0	37.4/41.0	40/50
				KFEEH0301D11	6/6	81/82 (25)	39.8/43.8	53.3/58.3	60/60
FF1ENP036	1/3	2.0	1/60	KFDCC0101DCC	14	300 (91)	—	2.5	15
				KFDEH0801D05	10/10	68/69 (21)	18.1/20.0	25.1/27.5	30/30
				KFDEH0901D75	8/8	73/74 (23)	27.1/30.0	36.4/40.0	40/40
				KFDEH1001D11	6/6	81/81 (25)	39.8/44.0	52.3/57.5	60/60
FF1ENP037	1/2	4.1	1/60	KFDCC0101DCC	14	300 (91)	—	2.5	15
				KFEEH0101D05	10/10	68/69 (21)	18.1/19.8	27.8/29.9	30/30
				KFEEH0201D75	8/8	73/74 (23)	27.1/30.0	39.0/42.6	40/50
				KFEEH0301D11	6/6	81/81 (25)	39.8/43.8	54.9/59.9	60/60
FF1ENE018	1/5	1.5	1/60	KFDCC0101DCC	14	394 (120)	—	1.9	15
				KFDEH0801D05	10/10	70/70 (21)	18.1/20.0	24.5/26.9	25/30
				KFDEH0901D75	8/8	75/75 (23)	27.1/30.0	35.8/39.4	40/40
				KFDEH1001D11	6/6	82/82 (25)	39.8/44.0	51.6/56.9	60/60
FF1ENE024	1/5	1.5	1/60	KFDCC0101DCC	14	394 (120)	—	1.9	15
				KFDEH0801D05	10/10	70/70 (21)	18.1/20.0	24.5/26.9	25/30
				KFDEH0901D75	8/8	75/75 (23)	27.1/30.0	35.8/39.4	40/40
				KFDEH1001D11	6/6	82/82 (25)	39.8/44.0	51.6/56.9	60/60
FF1ENE030	1/3	1.9	1/60	KFDCC0101DCC	14	312 (95)	—	2.4	15
				KFDEH0801D05	10/10	69/69 (21)	18.1/20.0	25.0/27.4	30/30
				KFDEH0901D75	8/8	74/74 (23)	27.1/30.0	36.3/39.9	40/40
				KFDEH1001D11	6/6	81/82 (25)	39.8/44.0	52.1/57.4	60/60
FF1ENE036	1/3	2.0	1/60	KFDCC0101DCC	14	300 (91)	—	2.5	15
				KFDEH0801D05	10/10	68/69 (21)	18.1/20.0	25.1/27.5	30/30
				KFDEH0901D75	8/8	73/74 (23)	27.1/30.0	36.4/40.0	40/40
				KFDEH1001D11	6/6	81/81 (25)	39.8/44.0	52.3/57.5	60/60

* Field—installed Cooling Control Package required.

† Use copper wire only. 75°C wire must be used in this application. When using non-metallic (NM) sheathed cable, wire size required should be based on that of 60°C conductors, instead of wire sizes shown in table above per NEC 1996 Article 336–30.

‡ Length shown is as measured one way along wire path between unit and service panel for a voltage drop not to exceed 2%.

FLA — Full Load Amps

FF1E

OPTIONAL FIELD-INSTALLED ELECTRIC HEAT PACKAGES

HEATER PART NUMBER WITH TDR	SIZE(s) USED WITH	NOMINAL kW @ 240v	HEATER VOLTS-PHASE (60 Hz)	HEATER CAPACITY (MBH)*		APPROX. SHIP WGT. LBS. (KG)
KFDEH0801D05	018/024/030/036	5	208/230-1	14.3	17.2	7 (3)
KFDEH0901D75	018/024/030/036	7.5	208/230-1	20.7	25.0	7 (3)
KFDEH1001D11	018/024/030/036	11	208/230-1	29.7	36.0	7 (3)
KFEEH0101D05	019/025/031/037	5	208/230-1	14.3	17.2	7 (3)
KFEEH0201D75	019/025/031/037	7.5	208/230-1	20.7	25.0	7 (3)
KFEEH0301D11	019/025/031/037	11	208/230-1	29.7	36.0	7 (3)

*Heater capacities shown here are for the largest size fan coil unit and they do include blower motor heat.

OTHER ACCESSORIES

KIT NUMBER	DESCRIPTION	USED ON SIZES
KFDCC0101DCC	Cooling Control Package	All
KFBLG0106LGL*	Louvered Wall Panel with Frame	018 – 030
KFBLG0206LGL*	Louvered Wall Panel with Frame	031 – 037

* 6 pack

FF1E