PF1MNC
DIRECT EXPANSION FAN COIL
SIZES 018 THRU 061

Product Data

FEATURES/BENEFITS

AVAILABLE SIZES:

18,000 to 61,000 BTU unit

ELECTRICAL RANGE:

40-va, 208/230-v transformer, 60 Hz, 1 Phase.

FAN MOTOR:

2-speed motor in 018 through 036 sizes. 3-speed motor in 042 through 060 sizes. X13 high-efficiency motor in 019, 025, 031, 037, 043, 049, and 061 sizes.

CABINET:

The attractive, prepainted, galvanized steel casing offers rust protection for many years. All units have high-density insulation. These units are designed with a factory-supplied power plug. For easy cleaning, all units contain a factory-supplied, cleanable, framed filter.

COIL DESIGN:

The 018 through 037 sizes are slope coil units. The 042 through 061 sizes are “A” coil units. All models feature the components you need and expect, such as grooved copper tubing and lanced sine-wave aluminum fin. All units include fully-wettable coils, sweat-type refrigerant connections, and factory-washed coils for improved condensate control.

DRAIN PAN:

These units are designed with a high-impact thermoplastic condensate pan. The primary- and secondary-drain connections include brass inserts.

CONTROLS:

Every unit comes fully equipped with cooling controls including 40-va transformer and solid-state fan control with time-delay relay (TDR). These units accommodate field-installed heater packages from 3- to 30-kW (fused, circuit breaker, or non-fused). Factory-installed heater packages are available in 018-036 sizes. All units include a factory-supplied power plug.

INSTALLATION:

Units are factory shipped for upflow or horizontal left discharge. Units can be field converted to horizontal right discharge. These units are field convertible to downflow with an accessory kit.

SERVICEABILITY:

All units are designed with a factory-installed R-22 bi-flow, hard-shutoff TXV. A factory-installed, replaceable 5-amp blade-type auto fuse protects against transformer secondary short.

MODEL NUMBER NOMENCLATURE

PAYNE FAN COILS

1	2	3	4	5	6	7–9	10–12
P	**F**	**1**	**M**	**N**	**C**	**018**	**000**
P = Payne	F = Fan Coil	1 = Standard	M = Multipoise	N = 208/230v, 1ph–60Hz	C = Third Series	018 = 18,000 019 = 18,000 024 = 24,000 025 = 24,000 030 = 30,000 031 = 30,000 036 = 36,000 037 = 36,000 042 = 42,000 043 = 42,000 048 = 48,000 049 = 48,000 060 = 60,000 061 = 60,000	000 = No Heat 005 = 5kW 008 = 8 kW 010 = 10kW

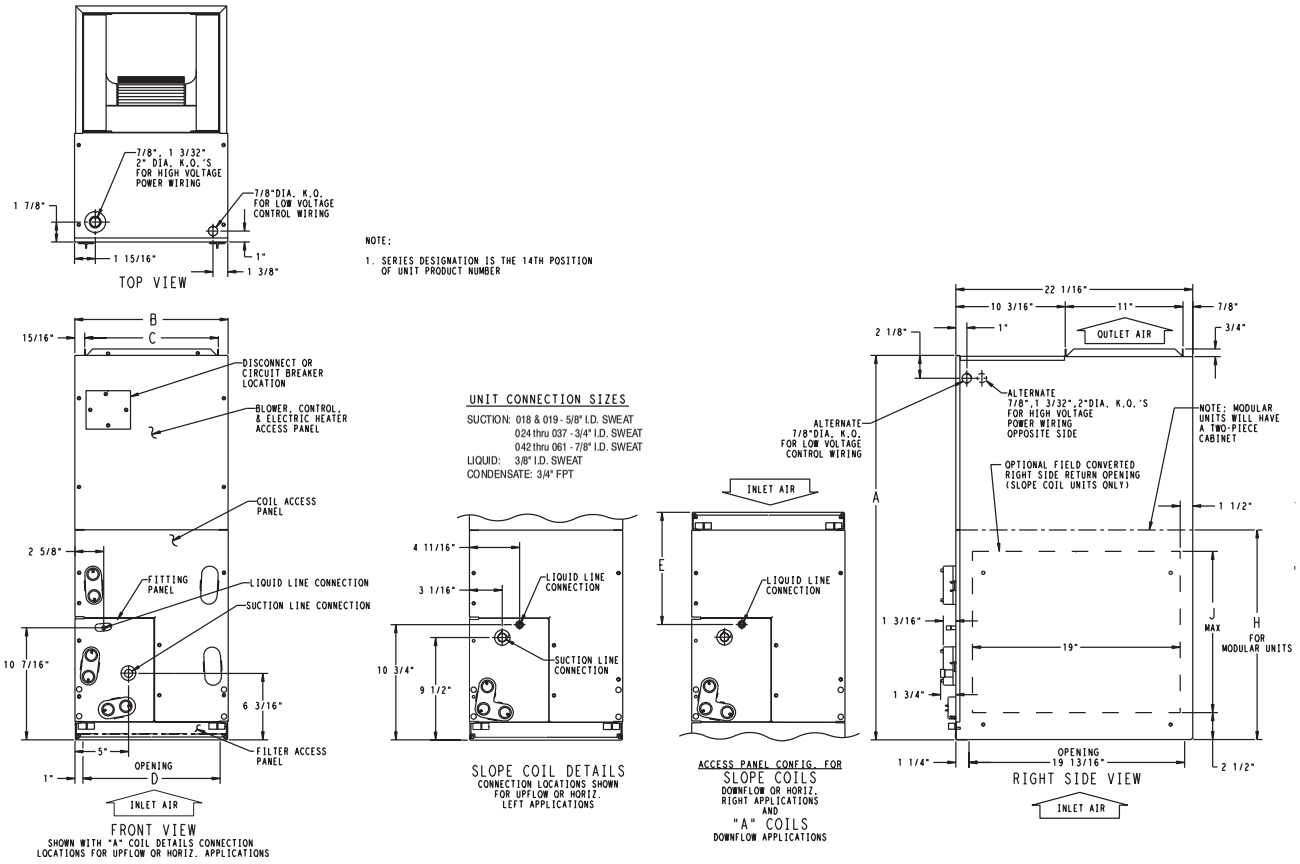
ARI PERFORMANCE CERTIFIED ARI Standard 210/240 Unitary Air Conditioners

ARI PERFORMANCE CERTIFIED ARI Standard 210/240 Unitary Heat Pumps

c UL US

ISO 9001:2000 QMI REGISTERED

CERTIFICATION APPLIES ONLY WHEN THE COMPLETE SYSTEM IS LISTED WITH ARI



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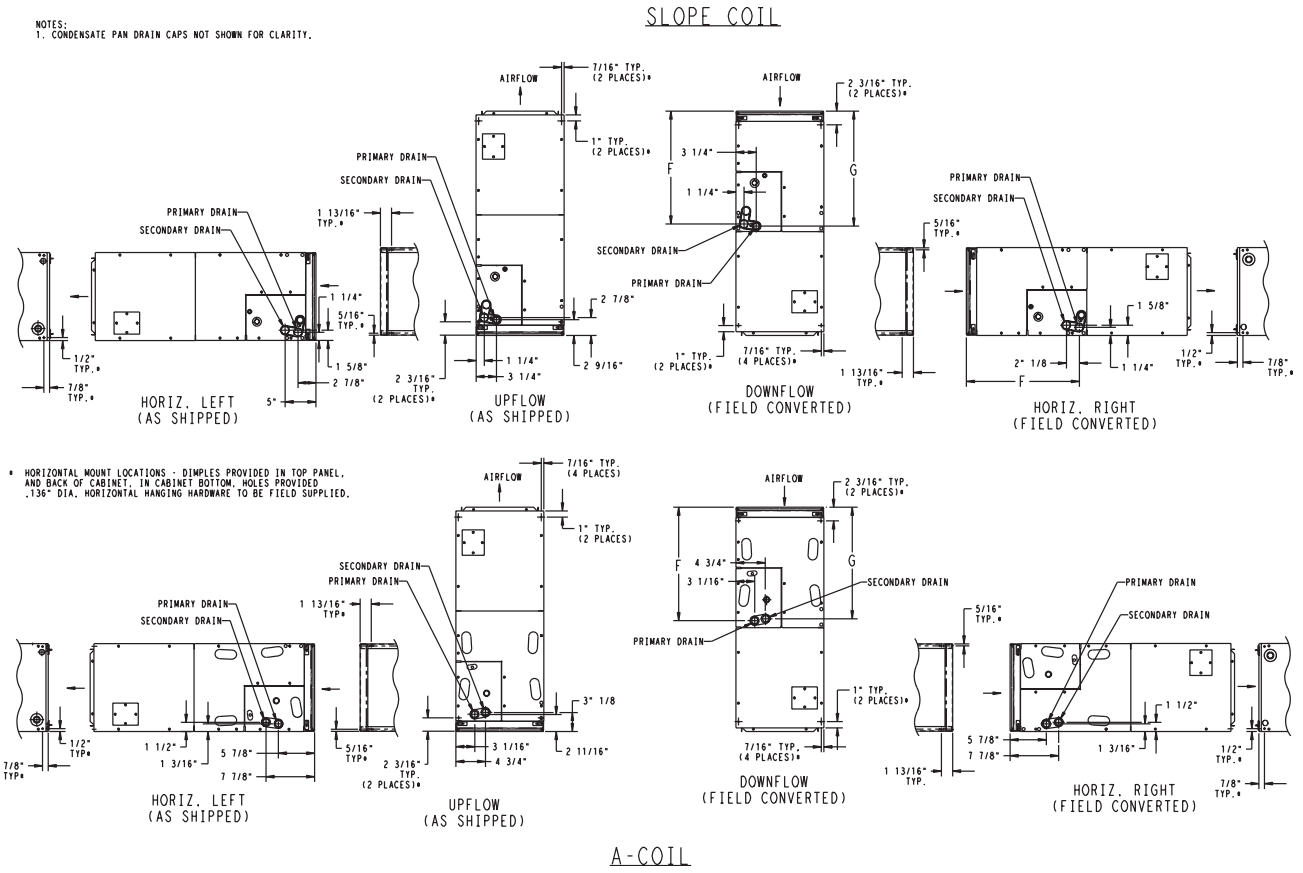
DIMENSIONS

UNIT SIZE	COIL TYPE	A		B		C		D		E		H*		J	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
018, 019	Slope	42–11/16	1084.3	14–5/16	363.5	12–7/16	316.0	12–5/16	312.7	10–7/16	265.1	—	—	12.0	304.8
024, 025, 030	Slope	47–11/16	1211.5	17–5/8	447.5	15–3/4	400.1	15–5/8	396.9	15–3/8	390.5	—	—	17.0	431.8
031	Slope	49–5/8	1260.5	17–5/8	447.5	15–3/4	400.1	15–5/8	396.9	15–3/8	390.5	—	—	17.0	431.8
036, 037	Slope	53–7/16	1357.3	21–1/8	536.5	19–1/4	489.0	19–1/8	485.8	19–3/16	487.0	—	—	19.0	482.6
042, 043	A	49–5/8	1260.5	21–1/8	536.5	19–1/4	489.0	19–1/8	485.8	15–3/8	390.5	—	—	—	—
048, 049	A	53–7/16	1357.3	21–1/8	536.5	19–1/4	489.0	19–1/8	485.8	19–1/2	495.3	—	—	—	—
060, 061	A	59–3/16	1503.4	24–11/16	627.0	22–3/4	577.9	22–11/16	576.2	25–1/4	641.5	34–1/16	685.2	—	—

* Applicable to modular units only.



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DIMENSIONS (cont)

UNIT SIZE	COIL TYPE	F		G	
		in	mm	in	mm
018, 019	Slope	18–1/8	460.4	18–5/8	473.1
024, 025, 030	Slope	23–1/8	587.4	23–5/8	600.0
031	Slope	23–1/8	587.4	23–5/8	600.0
036, 037	Slope	26–15/16	684.2	27–1/2	698.5
042, 043	A	23–7/16	593.3	23–1/8	587.4
048, 049	A	27–1/4	692.2	26–15/16	684.2
060, 061	A	32–15/16	836.6	32–5/8	828.7

PHYSICAL DATA

ODS CATALOG ORDERING NO.	FACTORY INSTALLED HEAT(kW)	NOMINAL COOLING CAPACITY(BTUH)	DIMENSIONS			SHIPPING WEIGHT
			Height	Width	Depth	
PF1MNC018000	–	18,000	42–11/16" 1084 mm	14–5/16" 448mm	22–1/16" 560 mm	100 lb 45 kg
PF1MNC018005	5					
PF1MNC019000	–					
PF1MNC024000	–	24,000	47–11/16" 1211 mm	17–5/8" 448 mm		117 lb 53 kg
PF1MNC024005	5					
PF1MNC025000	–					
PF1MNC030000	–	30,000				120 lb 54 kg
PF1MNC030008	8					
PF1MNC031000	–	30,000	49–5/8" 1260 mm			122 lb 55 kg
PF1MNC036000	–	36,000	53–7/16" 1357 mm	21–1/8" 537 mm		144 lb 65 kg
PF1MNC036010	10					
PF1MNC037000	–					
PF1MNC042000	–	42,000	49–5/8 1260 mm			150 lb 68 kg
PF1MNC043000	–					
PF1MNC048000	–	48,000	53–7/16 1357 mm			170 lb 77 kg
PF1MNC049000	–					
PF1MNC060000	–	60,000	59–3/16" 1503 mm	24–11/16" 627 mm		198 lb 90 kg
PF1MNC061000	–					

SPECIFICATIONS

MODEL PF1MNC	018	019	024	025	030	031	036	037	042	043	048	049	060	061
COIL														
Refrigerant Metering Device	TXV – factory–installed hard–shutoff, bi–flow type for heat pump application													
TXV	3 ton								5 ton				6 ton	
Rows/Fins Per In.	3 / 14.5													
Face Area (Sq Ft)	2.23		2.97				3.46		4.45		5.93		7.42	
Configuration	Slope								A					
FAN														
CFM (Nominal)	600		800		1000		1200		1400		1600		2000	
Motor Type	PSC	X13	PSC	X13	PSC	X13	PSC	X13	PSC	X13	PSC	X13	PSC	X13
Motor Hp	1/6	1/3	1/4	1/3	1/4	1/3	1/3	1/2	1/2	1/2	3/4	3/4	3/4	3/4
FILTER														
21–1/2" 546 mm X	13" / 330 mm		16–3/8" / 417 mm				19–7/8" / 505 mm						23–5/16" / 585 mm	
CABINET CONFIGURATION OPTIONS														
	1–piece												Modular	

PERFORMANCE DATA

AIRFLOW PERFORMANCE (CFM)

MODEL	BLOWER SPEED	TOTAL EXTERNAL STATIC PRESSURE					
		0.10	0.20	0.30	0.40	0.50	0.60
PF1MNC 018	High	816	795	753	690	607	504
	Low	633	620	588	538	468	380
PF1MNC 019	High	766	739	706	666	619	566
	Medium	701	659	619	578	538	499
	Low	614	572	530	486	441	396
PF1MNC 024	High	1055	991	926	860	793	724
	Low	934	878	818	754	686	614
PF1MNC 025	High	941	905	868	830	792	753
	Medium	823	786	747	707	665	622
	Low	633	583	533	482	431	378
PF1MNC 030	High	1070	1032	978	908	822	721
	Low	910	888	849	791	715	621
PF1MNC 031	High	1130	1097	1063	1028	992	955
	Medium	1033	1000	965	928	888	846
	Low	840	802	760	713	663	609
PF1MNC 036	High	1352	1316	1273	1223	1167	1103
	Low	1137	1112	1081	1043	998	946
PF1MNC 037	High	1437	1398	1354	1308	1257	1204
	Medium	1282	1238	1192	1142	1090	1036
	Low	1168	1118	1067	1014	959	903
PF1MNC 042	High	1720	1668	1602	1521	1426	1316
	Medium	1576	1540	1488	1421	1338	1239
	Low	1388	1367	1330	1278	1209	1124
PF1MNC 043	High	1616	1578	1533	1480	1420	1353
	Medium	1479	1437	1392	1344	1293	1240
	Low	1303	1258	1211	1161	1108	1054
PF1MNC 048	High	1902	1824	1743	1659	1571	1479
	Medium	1830	1763	1690	1611	1527	1436
	Low	1625	1584	1531	1465	1387	1296
PF1MNC 049	High	1805	1772	1739	1704	1669	1632
	Medium	1652	1617	1581	1543	1504	1463
	Low	1458	1418	1377	1335	1292	1248
PF1MNC 060	High	2128	2050	1965	1875	1778	1674
	Medium	1959	1898	1829	1750	1663	1566
	Low	1748	1709	1659	1598	1525	1442
PF1MNC 061	High	2057	2024	1989	1954	1916	1878
	Medium	1799	1766	1731	1695	1658	1618
	Low	1667	1633	1596	1558	1517	1475

– Shading – Airflow outside 450 cfm/ton.

NOTES:

1. Airflow based upon dry coil at 230v with factory–approved filter and electric heater (2 element heater sizes 18 thru 36, 3 element heater sizes 42 thru 60). Airflow at 208 volts is approximately 10% lower.
2. To avoid potential for condensate blowing out of drain pan prior to making drain trap:
   Return static pressure must be less than 0.40 in wc.
   Horizontal applications of 042 – 060 sizes must have supply static greater than 0.20 in wc.
3. Airflow above 400 cfm/ton on 048–060 size could result in condensate blowing off coil or splashing out of drain pan.

MINIMUM CFM AND MOTOR SPEED SELECTION

FAN COIL SIZES	HEATER kW									
	3	5	8	9	10	15	18	20	24	30
018, 019	525	525	525	—	600*	—	—	—	—	—
024, 025	700	700	700	—	700	775*	—	—	—	—
030, 031	—	875	875	—	875	875	—	1060*	—	—
036, 037	—	1050	970	970	970	920	—	1040	—	—
042, 043	—	—	1225	1225	1225	1225	1225	1225	—	—
048, 049	—	—	1400	1400	1400	1400	1400	1400	1400	1400
060, 061	—	—	1750	1750	1750	1750	1750	1750	1750	1750

*Indicates medium speed (blue). All other motor speeds at low tap.

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
018 019	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	24	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
024 025	700	72 / 22	49	24	0.00	44	22	0.00	38	19	0.02	32	17	0.03	26	14	0.03
		67 / 19	40	25	0.04	35	23	0.04	30	20	0.04	23	17	0.04	16	14	0.05
		62 / 17	32	26	0.04	27	23	0.04	22	21	0.05	18	18	0.14	15	15	0.29
	800	72 / 22	53	26	0.00	48	24	0.02	42	21	0.04	35	18	0.04	28	16	0.05
		67 / 19	44	27	0.05	38	25	0.05	32	22	0.05	26	19	0.05	18	16	0.06
		62 / 17	35	29	0.05	30	26	0.06	24	23	0.07	20	20	0.17	16	16	0.31
	900	72 / 22	57	28	0.00	51	26	0.03	45	23	0.05	38	20	0.05	30	17	0.06
		67 / 19	47	30	0.06	41	27	0.06	35	24	0.06	28	21	0.06	20	18	0.08
		62 / 17	38	31	0.07	32	28	0.07	26	25	0.08	22	22	0.19	18	18	0.33
030 031	875	72 / 22	62	30	0.00	55	27	0.01	48	24	0.02	41	21	0.03	32	18	0.04
		67 / 19	51	32	0.04	44	28	0.04	37	25	0.04	29	22	0.04	20	18	0.05
		62 / 17	41	33	0.04	34	29	0.05	27	26	0.06	22	22	0.15	18	18	0.30
	1000	72 / 22	67	33	0.00	60	30	0.02	52	27	0.04	44	23	0.04	35	20	0.05
		67 / 19	55	35	0.05	48	31	0.05	41	28	0.05	32	24	0.05	22	20	0.07
		62 / 17	44	36	0.06	38	33	0.06	30	29	0.07	25	25	0.18	20	20	0.32
	1125	72 / 22	72	36	0.01	65	32	0.04	57	29	0.05	47	25	0.05	38	22	0.06
		67 / 19	60	38	0.06	52	34	0.06	44	30	0.06	35	27	0.07	24	22	0.08
		62 / 17	48	39	0.07	41	36	0.07	33	32	0.09	27	27	0.20	23	23	0.34
036 037	1050	72 / 22	72	36	0.00	65	32	0.01	57	29	0.03	48	25	0.03	38	21	0.04
		67 / 19	59	37	0.04	52	34	0.04	44	30	0.04	34	26	0.04	24	21	0.06
		62 / 17	48	39	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	43	0.06	44	39	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	56	30	0.06	45	25	0.06
		67 / 19	70	45	0.06	61	40	0.06	51	36	0.07	41	31	0.07	29	26	0.09
		62 / 17	56	46	0.07	48	42	0.07	39	38	0.09	32	32	0.20	27	27	0.34
042 043	1225	72 / 22	85	42	0.00	77	38	0.01	67	34	0.02	57	30	0.03	46	25	0.03
		67 / 19	70	44	0.03	62	40	0.03	52	36	0.04	42	31	0.04	30	26	0.04
		62 / 17	57	46	0.04	48	42	0.04	39	37	0.05	32	32	0.14	27	27	0.28
	1400	72 / 22	92	46	0.00	83	42	0.02	73	37	0.03	62	33	0.04	50	28	0.04
		67 / 19	76	48	0.04	67	44	0.04	57	39	0.05	46	35	0.05	33	29	0.06
		62 / 17	62	51	0.05	53	46	0.05	43	41	0.06	36	36	0.16	30	30	0.30
	1575	72 / 22	99	49	0.01	89	45	0.03	79	40	0.04	67	36	0.05	53	30	0.05
		67 / 19	82	52	0.05	72	48	0.05	61	43	0.06	49	38	0.06	36	32	0.07
		62 / 17	67	55	0.06	57	50	0.06	47	45	0.08	39	39	0.18	33	33	0.32
048 049	1400	72 / 22	89	44	0.00	81	40	0.00	72	36	0.01	61	32	0.02	50	28	0.02
		67 / 19	74	47	0.02	66	43	0.02	56	38	0.03	46	34	0.03	34	29	0.03
		62 / 17	60	49	0.03	52	45	0.03	43	40	0.04	35	35	0.11	29	29	0.26
	1600	72 / 22	96	48	0.00	87	44	0.01	78	40	0.02	67	35	0.03	54	30	0.03
		67 / 19	80	51	0.03	71	47	0.03	61	42	0.03	50	37	0.03	37	32	0.04
		62 / 17	65	54	0.04	56	49	0.04	47	45	0.05	39	39	0.14	33	33	0.28
	1800	72 / 22	103	51	0.01	94	47	0.02	83	43	0.03	72	38	0.03	58	33	0.04
		67 / 19	86	55	0.04	76	51	0.04	66	46	0.04	53	41	0.04	40	36	0.05
		62 / 17	70	59	0.04	60	54	0.05	50	49	0.06	43	43	0.16	36	36	0.29

LEGEND:

CFM – Cubic Ft. per Minute
EWB – Entering Wet Bulb (°F / °C)
LWB – Leaving Wet Bulb (°F / °C)
TC – Gross Cooling Capacity 1000 Btuh
SHC – Gross Sensible Capacity 1000 Btuh
BF – Bypass Factor
MBH – 1000 Btuh

See **NOTES** on next page.

PERFORMANCE DATA (cont)

GROSS COOLING CAPACITIES (MBH)

UNIT SIZE	INDOOR COIL AIR		SATURATED TEMPERATURE LEAVING EVAPORATOR (°F)														
			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
060 061	1600	72 / 22	118	58	0.00	107	53	0.00	94	48	0.01	81	42	0.01	66	36	0.01
		67 / 19	98	61	0.02	86	55	0.02	74	50	0.02	60	44	0.02	43	37	0.03
		62 / 17	79	63	0.02	68	58	0.02	55	52	0.03	45	45	0.10	37	37	0.25
	1750	72 / 22	125	62	0.00	113	56	0.00	100	51	0.01	86	45	0.02	69	38	0.02
		67 / 19	103	65	0.02	92	59	0.02	78	53	0.03	64	47	0.03	46	40	0.03
		62 / 17	84	68	0.03	72	62	0.03	59	56	0.04	48	48	0.11	40	40	0.26
	2000	72 / 22	135	67	0.00	123	62	0.01	109	56	0.02	93	49	0.03	76	42	0.03
		67 / 19	113	71	0.03	100	65	0.03	85	59	0.03	69	52	0.03	51	45	0.04
		62 / 17	92	75	0.04	79	69	0.04	65	62	0.05	54	54	0.13	45	45	0.27

LEGEND:

CFM – Cubic Ft. per Minute
EWB – Entering Wet Bulb (°F / °C)
LWB – Leaving Wet Bulb (°F / °C)
TC – Gross Cooling Capacity 1000 Btuh
SHC – Gross Sensible Capacity 1000 Btuh
BF – Bypass Factor
MBH – 1000 Btuh

NOTES:

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

Interpolation is permissible.
Correction Factor = 1.09 x (1 – BF) x (db – 80)

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
	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	

AIR DELIVERY PERFORMANCE CORRECTION COMPONENT PRESSURE DROP (in wc) AT INDICATED AIRFLOW (DRY-TO-WET COIL)

SIZE	CFM															
	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
018, 019	0.034	0.049	0.063	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –
024, 025	0.016	0.027	0.038	0.049	0.059	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –
030, 031	– –	– –	– –	0.049	0.059	0.070	0.080	– –	– –	– –	– –	– –	– –	– –	– –	– –
036, 037	– –	– –	– –	– –	– –	0.055	0.064	0.073	0.081	– –	– –	– –	– –	– –	– –	– –
042, 043	– –	– –	– –	– –	– –	– –	– –	0.049	0.056	0.063	0.070	– –	– –	– –	– –	– –
048, 049	– –	– –	– –	– –	– –	– –	– –	– –	– –	0.038	0.043	0.049	0.054	0.059	– –	– –
060, 061	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	0.027	0.031	0.035	0.039	0.043

ELECTRIC HEATER STATIC PRESSURE DROP (in wc)

018 – 037			042 – 061		
HEATER ELEMENTS	kW	EXTERNAL STATIC PRESSURE CORRECTION	HEATER ELEMENTS	kW	EXTERNAL STATIC PRESSURE CORRECTION
0	0	+.02	0	0	+.04
1	3, 5	+.01	2	8, 10	+.02
2	8, 10	0	3	9, 15	0
3	9, 15	–.02	4	20	–.02
4	20	–.04	6	18, 24, 30	–.10

The airflow performance data was developed using fan coils with 10–kW electric heaters (2 elements) in the 018 through 037 size units and 15–kW heaters (3 elements) in the 042 through 060 size units. For fan coils with heaters of a different number of elements, the external available static at a given CFM from the curve may be corrected by adding or subtracting available external static pressure as indicated above.

ACCESSORY ELECTRIC HEATERS

HEATER PART NO.	kW @ 240V	VOLTS/ PH	STAGES (kW OPERATING)	INTERNAL CIRCUIT PROTECTION	FAN COIL SIZE USED WITH	HEATING CAP.** @ 230V
KFCEH0401N03	3	230/1	3	None	018–024	9,400
KFCEH0501N05	5	230/1	5	None	018–061	15,700
KFCEH0801N08	8	230/1	8	None	018–061	25,100
KFCEH0901N10	10	230/1	10	None	018–061	31,400
KFCEH3201F20	20	230/1	5, 20	Fuse‡	030–061	62,800
KFCEH1601315	15	230/3	5, 15	None	036–061	47,100
KFCEH2001318	18	230/3	6, 12, 18	None	042–061	56,500
KFCEH3401F24	24	230/3*	8, 16, 24	Fuse	048 – 061	78,300
KFCEH3501F30	30	230/3*	10, 20, 30	Fuse	048 – 061	94,100
KFCEH2401C05	5	230/1	5	Circuit Breaker	018–061	15,700
KFCEH2501C08	8	230/1	8	Circuit Breaker	018–061	25,100
KFCEH2601C10	10	230/1	10	Circuit Breaker	018–061	31,400
KFCEH3301C20	20	230/1	5, 20	Circuit Breaker	030–061	62,800
KFCEH2901N09	9	230/1†	3, 9	None	036–061	28,200
KFCEH3001F15	15	230/1	5, 15	Fuse‡	024–061	47,100
KFCEH3101C15	15	230/1	5, 15	Circuit Breaker	024–061	47,100

* Field convertible to 1 phase.
† Field convertible to 3 phase
‡ Single point wiring kit required for these heaters in Canada.
** Blower Motor heat not included.

ESTIMATED SOUND POWER LEVEL (DBA)

UNIT SIZE	CONDITIONS		OCTAVE BAND CENTER FREQUENCY*						
	CFM	Ext Static Pressure	63	125	250	500	1000	2000	4000
018, 019	600	0.25	64.7	60.7	56.7	53.7	51.7	49.7	45.7
024, 025	800	0.25	66.0	62.0	58.0	55.0	53.0	51.0	47.0
030, 031	1000	0.25	67.0	63.0	59.0	56.0	54.0	52.0	48.0
036, 037	1200	0.25	67.8	63.8	59.8	56.8	54.8	52.8	48.8
042, 043	1400	0.25	68.4	64.4	60.4	57.4	55.4	53.4	49.4
048, 049	1600	0.25	69.0	65.0	61.0	58.0	56.0	54.0	50.0
060, 061	2000	0.25	70.0	66.0	62.0	59.0	57.0	55.0	51.0

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

FAN COIL ELECTRICAL DATA (UNITS WITHOUT ELECTRICAL HEAT)

UNIT SIZE	VOLTS (1 PHASE)	FLA	MIN CKT AMPS	BRANCH CIRCUIT	
				Min Wire Size Awg*	Fuse Amps
018	208/230	1.8	2.3	14	15
019	208/230	2.8	3.5	14	15
024	208/230	1.8	2.3	14	15
025	208/230	2.8	3.5	14	15
030	208/230	1.5	1.9	14	15
031	208/230	2.8	3.5	14	15
036	208/230	2.4	3.0	14	15
037	208/230	4.1	5.1	14	15
042	208/230	2.9	3.6	14	15
043	208/230	4.1	5.1	14	15
048	208/230	4.3	5.4	14	15
049	208/230	6.0	7.5	14	15
060	208/230	5.2	6.5	14	15
061	208/230	6.0	7.5	14	15

* Use copper wire only. Use 75°C only 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 size shown in table above per NEC Article 336–26.

FLA – Full Load Amps

NOTE: If branch circuit wire length exceeds 100 ft / 30.5 m, consult NEC 215–2 to determine maximum wire length. Use 2% voltage drop.

ELECTRIC HEATER INTERNAL PROTECTION*

HEATER kW	PHASE	FUSE QTY/SIZE	CKT BKR QTY/SIZE†
3	1	—	—
5	1	—	1/60
8	1	—	1/60
10	1	—	1/60
15	1	2/30 — 2/60	2/60
20	1	4/60	2/60
24	1/3	6/60	—
30	1/3	6/60	—
9	1/3	—	—
15	3	—	—
18	3	—	—

*5–, 8–, 10–kW factory–installaed heat has no internal protection. 15–kW factory–installed heat is internally protected with fuses.

† Circuit breakers are 2 pole.

ELECTRICAL DATA FOR UNITS WITH FACTORY-INSTALLED HEATERS

MODEL NO	MTR-HP	MTR FLA	PH/HZ	HEAT PACK INSTALLED	HTR AMPS	MCA	MAX OVER-CUR. PROTECT	HTR AMPS	MCA	MAX OVER-CUR. PROTECT	HTR AMPS	MCA	MAX OVER-CUR. PROTECT
								L1/L2	L1/L2	L1/L2	L3/L4	L3/L4	L3/L4
PF1MNC018005	1/4	1.8	1/60	MKFCEH0501N05	18.1/20.0	24.9/27.3	25/30	–	–	–	–	–	–
PF1MNC024005	1/4	1.8	1/60	MKFCEH0501N05	18.1/20.0	24.9/27.3	25/30	–	–	–	–	–	–
PF1MNC030008	1/4	1.5	1/60	MKFCEH0801N08	28.9/32.0	38.0/41.9	40/45	–	–	–	–	–	–
PF1MNC036010	1/3	2.4	1/60	MKFCEH0901N10	36.2/40.0	48.3/53.0	50/60	–	–	–	–	–	–

MCA – Minimum Circuit Amps

FLA – Full Load Amps

ACCESSORY ELECTRIC HEATER ELECTRICAL DATA

HEATER PART NO.	KW		PHASE	INTERNAL CIRCUIT PROTECTION	HEATER AMPS 208/230V			BRANCH CIRCUIT													
								Min Ampacity 208/230V**			Min Wire Size (AWG) 208/230V††			Min Gnd Wire Size 208/230V			Max Fuse/Ckt Bkr Amps 208/230V			Max Wire Length 208/230V (Ft)‡‡		
					Single Circuit	Dual Circuit		Single Circuit	Dual Circuit		Single Circuit	Dual Circuit		Single Circuit	Dual Circuit		Single Circuit	Dual Circuit		Single Circuit	Dual Circuit	
	240v	208v				L1,L2	L3,L4		L1,L2	L3,L4		L1,L2	L3,L4		L1,L2	L3,L4		L1,L2	L3,L4		L1,L2	L3,L4
KFCEH0401N03	3	2.3	1	None	10.9/12.0	—	—	15.9/17.3	—	—	12/12	—	—	12/12	—	—	20/20	—	—	67/68	—	—
KFCEH0501N05[1]	5	3.8	1	None	18.1/20.0	—	—	26.0/28.4	—	—	10/10	—	—	10/10	—	—	30/30	—	—	66/66	—	—
KFCEH0501N05[2]	5	3.8	1	None	18.1/20.0	—	—	31.2/33.5	—	—	8/8	—	—	10/10	—	—	35/35	—	—	85/88	—	—
KFCEH2401C05[1]	5	3.8	1	Ckt Bkr	18.1/20.0	—	—	26.0/28.4	—	—	10/10	—	—	10/10	—	—	30/30	—	—	66/66	—	—
KFCEH2401C05[2]	5	3.8	1	Ckt Bkr	18.1/20.0	—	—	31.2/33.5	—	—	8/8	—	—	10/10	—	—	35/35	—	—	85/88	—	—
KFCEH0801N08	8	6.0	1	None	28.9/32.0	—	—	44.7/48.5	—	—	8/8	—	—	10/10	—	—	45/50	—	—	59/60	—	—
KFCEH2501C08	8	6.0	1	Ckt Bkr	28.9/32.0	—	—	44.7/48.5	—	—	8/8	—	—	10/10	—	—	45/50	—	—	59/60	—	—
KFCEH2901N09	9	6.8	1	None	32.8/36.0	—	—	49.5/53.5	—	—	8/6	—	—	10/10	—	—	50/60	—	—	54/87	—	—
KFCEH2901N09‡	9	6.8	3	None	18.8/20.8	—	—	32.0/34.5	—	—	8/8	—	—	10/10	—	—	35/35	—	—	83/85	—	—
KFCEH0901N10	10	7.5	1	None	36.2/40.0	—	—	53.8/58.5	—	—	6/6	—	—	10/10	—	—	60/60	—	—	78/80	—	—
KFCEH2601C10	10	7.5	1	Ckt Bkr	36.2/40.0	—	—	53.8/58.5	—	—	6/6	—	—	10/10	—	—	60/60	—	—	78/80	—	—
KFCEH3001F15	15	11.3	1	Fuse	54.2/59.9	36.2/40.0	18.1/20.0	76.3/83.4	53.8/58.5	22.7/25.0	4/4	6/6	10/10	8/8	10/10	10/10	80/90	60/60	25/25	88/89	78/80	75/76
KFCEH3101C15	15	11.3	1	Ckt Bkr	—	36.2/40.0	18.1/20.0	—	53.8/58.5	22.7/25.0	—	6/6	10/10	—	10/10	10/10	—	60/60	25/25	—	78/80	75/76
KFCEH1601315	15	11.3	3	None	31.3/34.6	—	—	47.7/51.8	—	—	8/6	—	—	10/10	—	—	50/60	—	—	56/90	—	—
KFCEH2001318	18	13.5	3	None	37.6/41.5	—	—	55.5/60.4	—	—	6/6	—	—	10/8	—	—	60/70	—	—	76/77	—	—
KFCEH3201F20	20	15.0	1	Fuse	72.3/79.9	36.2/40.0	36.2/40.0	98.9/108.4	53.8/58.5	45.3/50.0	3/2	6/6	8/8	8/6	10/10	10/10	100/110	60/60	50/50	85/109	78/80	59/59
KFCEH3301C20	20	15.0	1	Ckt Bkr	—	36.2/40.0	36.2/40.0	—	53.8/58.5	45.3/50.0	—	6/6	8/8	—	10/10	10/10	—	60/60	50/50	—	78/80	59/59
KFCEH3401F24†	24	18.0	3	Fuse	50.1/55.4	—	—	71.2/77.8	—	—	4/4	—	—	8/8	—	—	80/80	—	—	94/95	—	—
	24	18.0	1	Fuse	86.7/95.5	—	—	116.9/127.9	—	—	1/1	—	—	6/6	—	—	125/150	—	—	115/116	—	—
KFCEH3501F30†	30	22.5	3	Fuse	62.6/69.2	—	—	86.8/95.0	—	—	3/3	—	—	8/8	—	—	90/100	—	—	97/98	—	—
	30	22.5	1	Fuse	109.0/120.0	—	—	144.8/158.5	—	—	0/00	—	—	6/6	—	—	150/175	—	—	117/150	—	—

FIELD MULTIPOINT WIRING OF 24-AND 30-KW SINGLE PHASE

HEATER PART NO.	KW		PHASE	HEATER AMPS 208/230V			MIN AMPACITY 208/230V**			MIN WIRE SIZE (AWG) 208/230V††			MIN GND WIRE SIZE 208/230V	MAX FUSE/CKT BKR AMPS 208/230V			MAX WIRE LENGTH 208/230V (FT)‡‡		
	240V	208V		L1,L2	L3,L4	L5,L6	L1,L2	L3,L4	L5,L6	L1,L2	L3,L4	L5,L6		L1,L2	L3,L4	L5,L6	L1,L2	L3,L4	L5,L6
KFCEH3401F24†	24	18.0	1	28.9/32.0	28.9/32.0	28.9/32.0	44.7/48.5	36.2/40.0	36.2/40.0	8/8	8/8	8/8	10/10	45/50	40/40	40/40	59/60	73/73	73/73
KFCEH3501F30†	30	22.5	1	36.2/40.0	36.2/40.0	36.2/40.0	53.8/58.5	45.3/50.0	45.3/50.0	6/6	8/8	8/8	10/10	60/60	50/50	50/50	78/80	59/59	59/59

† Field convertible to 1 phase, single or multiple supply circuit.

‡ Field convertible to 3 phase.

** Includes blower motor amps of largest fan coil used with heater.

†† Copper wire must be used. If other than uncoated (non–plated), 75°C ambient, copper wire (solid wire for 10 AWG and smaller, stranded wire for larger than 10 AWG) is used, consult applicable tables of the National Electric Code (ANSI/NFPA 70).

‡‡ Length shown is as measured 1 way along wire path between unit and service panel for a voltage drop not to exceed 2%.

NOTES:

1. For fan coil sizes 018–036.
2. For fan coil sizes 042–061.
3. Single circuit application of F15 and F20 heaters requires single–point wiring kit accessory.

ACCESSORIES

ITEM		ACCESSORY PART NO.*	FAN COIL SIZE USED WITH
1.	Disconnect Kit	KFADK0201DSC	Cooling controls and heaters 3– through 10–kW
2.	Downflow Base Kit	KFACB0101CFB	018, 019
		KFACB0201CFB	024, 025, 030, 031
		KFACB0301CFB	036, 037, 042, 043, 048, 049
		KFACB0401CFB	060, 061
3.	Downflow Conversion Kit	KFADC0201SLP	Slope Coil Units—018, 019, 024, 025, 030, 031, 036, 037
		KFADC0401ACL	A–Coil Units—042, 043, 048, 049, 060, 061
4.	Single–Point Wiring Kit	KFASP0101SPK	Only with 15– and 20–kW Fused Heaters
5.	Filter Kit (12 Pack)	KFAFK0112SML	018, 019
		KFAFK0212MED	024, 025, 030, 031
		KFAFK0312LRG	036, 037, 042, 043, 048, 049
		KFAFK0412XXL	060, 061
6.	Power Plug Kit (25 Pack)	KFAPP0125PLG	All
7.	PVC Condensate Trap Kit (50 pack)	KFAET0150ETK	All
8.	Downflow/Horizontal Conversion Gasket Kit	KFAHD0101SLP	All
9.	Horizontal Water Management Kit (25 pack)	KFAHC0125AAA	All

* Factory–authorized and listed, field–installed.

ACCESSORY KITS DESCRIPTION SUGGESTED AND REQUIRED USE.

1. **Disconnect Kit**
   The kit is used to disconnect electrical power to the fan coil so service or maintenance may be performed safely.
   SUGGESTED USE: Units for 3- through 10-kW electric resistance heaters and cooling controls.
2. **Downflow Base Kit**
   This kit is designed to provide a 1-in. minimum clearance between unit discharge plenum, ductwork, and combustible materials. It also provides a gap-free seal with the floor.
   REQUIRED USE: This kit must be used whenever fan coils are used in downflow applications.
3. **Downflow Conversion Kit**
   Fan coils are shipped from the factory for upflow or horizontal-left applications. Downflow conversion kits provide proper condensate water drainage and support for the coil when used in downflow applications. Separate kits are available for slope coils and A-coils.
   REQUIRED USE: This kit must be used whenever fan coils are used in downflow applications.
4. **Single Point Wiring Kit**
   The single point wiring kit acts as a jumper between L1 and L3 lugs, and between the L2 and L4 lugs. This allows the installer to run 2 heavy-gauge, high voltage wires into the fan coil rather than 4 light-gauge, high voltage wires.
   SUGGESTED USE: Fan coils with 15- and 20-kW fused heaters only.
5. **Filter Kit (12 pack)**
   The kit consists of 12 fan coil framed filters. These filters collect large dust particles from the return air entering the fan coil and prevents them from collecting on the coil. This process helps to keep the coil clean, which increases heat transfer and in turn the efficiency of the system.
   SUGGESTED USE: To replace filters in fan coils.
   REQUIRED USE: All units unless a filter grille is used.
6. **Power Plug Kit**
   The kit consists of 25 wire harness assemblies. Each plug provides the high-voltage power connection to the fan coil in the absence of electric heat.
   REQUIRED USE: Units installed without electric heat.
7. **Condensate Drain Trap Kit**
   This kit consists of 50 PVC condensate traps. Each trap is pre-formed and ready for field installation. This deep trap helps the system make and hold proper condensate flow even during blower initiation.
   SUGGESTED USE: All fan coils.
8. **Downflow/Horizontal Conversion Gasket Kit**
   This kit provides the proper gasketing of units when applied in either a downflow or horizontal application.
   REQUIRED USE: Fan coils in either downflow or horizonatal applications.
9. **Horizontal Applications - Water Management Kit**
   This kit provides proper installation of fan coils under conditions of high static pressure and high relative humidty.
   SUGGESTED USE: All fan coils.