



**BROCK**

HEATING & COOLING



**BROPF4MNB**

**DIRECT EXPANSION  
FAN COIL**

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**FAN  
COIL**



# BROPF4MNB

## DIRECT EXPANSION FAN COIL FOR R-410A REFRIGERANT SIZES 019 THRU 061

### FEATURES/BENEFITS

**Available Sizes:** 18,000 to 60,000 BTU unit, 1.5 to 5.0 ton unit.

**Electrical Range:** 40-va, 208/230-v transformer, 60 Hz, 1 Phase.

**Fan Motor:** All unit designs incorporate integrated operational controls within the high efficiency multi-tap electronic commutating motor (ECM).

**Cabinet:** The attractive, pre-painted, 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. Assembled at the factory compliant with low leak requirements of less than 2% cabinet leakage rate at 0.5 inches W.C. and 1.4% cabinet leakage rate at 0.5 inches W.C. when tested in accordance with ASHRAE 193 standard.

**Coil Design:** The 019 through 031 sizes are slope coil units. The 037 through 061 sizes are "A" coil units. All models feature the components you need and expect, such as grooved tubing and lanced sine-wave 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. All drain connections (primary and secondary) have been designed to ensure proper condensate drainage, limiting the amount of standing water.

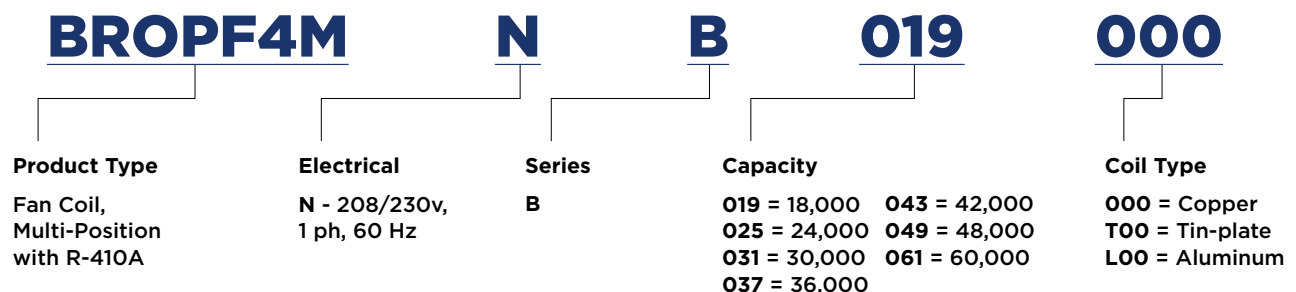
**Controls:** Every unit comes fully equipped with cooling controls including 40-va transformer and integrated fan control with time-delay relay (TDR). These units accommodate field-installed heater packages from 3- to 30-kW (fused, circuit breaker, or non-fused). All units include a factory-supplied 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 bi-flow, hard-shutoff TXV.

*NOTE: Read the entire instruction manual before starting the installation.*

### MODEL NUMBER NOMENCLATURE



# DIMENSIONS

Unit	Series	A	B	C	D	E	F	G	H	J	Coil Configuration		Shipping WT (LBS)	
											Slope	"A"	Non Tin Coated	Tin-Coated
BROPF4MNB019	A	49 5/8"	17 5/8"	15 3/4"	15 5/8"	15 3/8"	23 1/8"	23 5/8"	-	19"	X	-	122	122
BROPF4MNB025	A	49 5/8"	17 5/8"	15 3/4"	15 5/8"	15 3/8"	23 1/8"	23 5/8"	-	19"	X	-	122	122
BROPF4MNB031	A	53 7/16"	21 1/8"	19 1/4"	19 1/8"	19 3/16"	26 15/16"	27 1/2"	-	-	X	-	146	146
BROPF4MNB037	A	49 5/8"	21 1/8"	19 1/4"	19 1/8"	15 11/16"	23 7/16"	23 1/8"	-	-	-	X	157	157
BROPF4MNB043	A	49 5/8"	21 1/8"	19 1/4"	19 1/8"	15 11/16"	23 7/16"	23 1/8"	-	-	-	X	157	157
BROPF4MNB049	A	53 7/16"	24 11/16"	22 3/4"	22 11/16"	19 1/2"	27 1/4"	26 15/16"	-	-	-	X	185	185
BROPF4MNB061	A	59 3/16"	24 11/16"	22 3/4"	22 11/16"	25 1/4"	32 15/16"	32 5/8"	34 1/16"	-	-	X	201	201

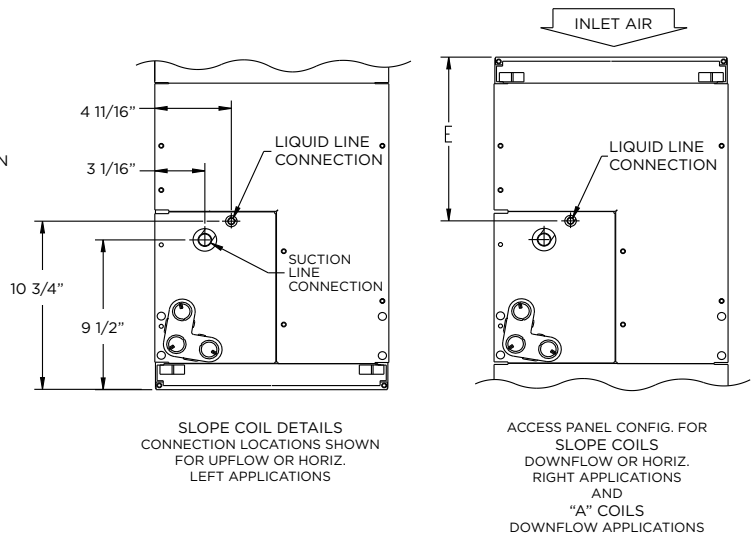
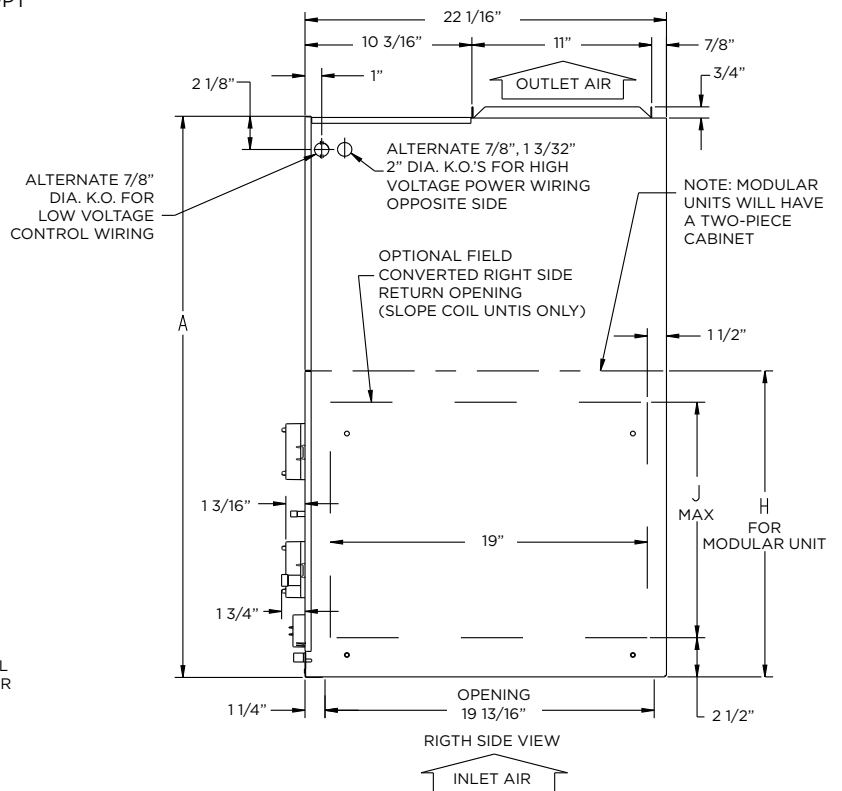
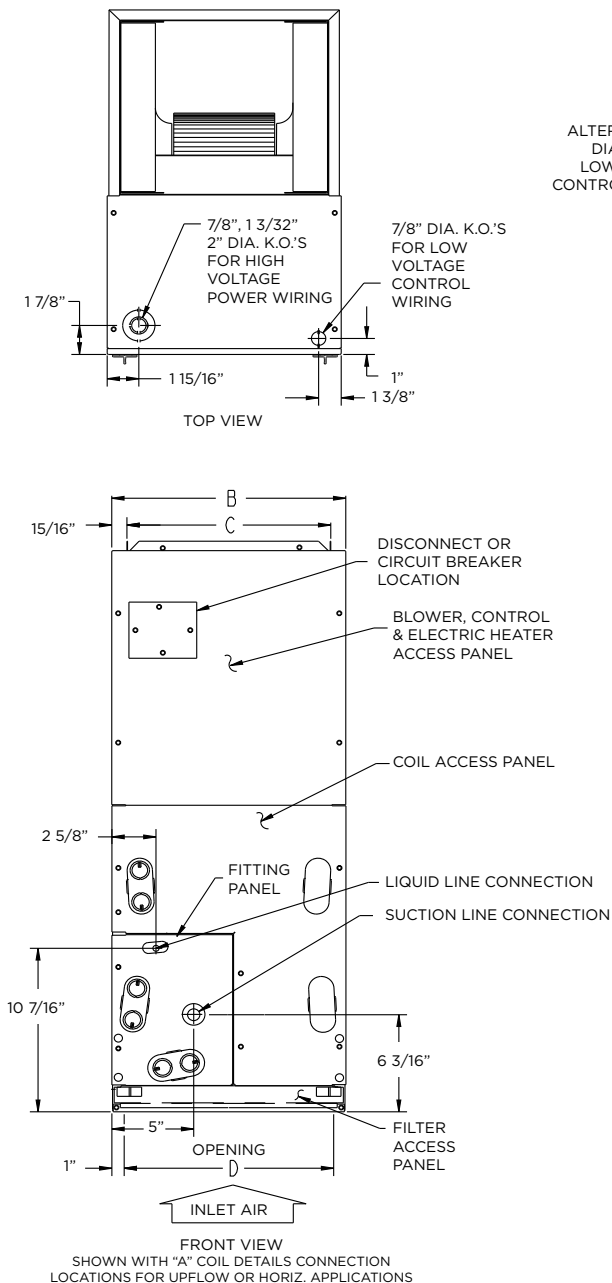
**NOTE:**

- Series designation is the 14th position of unit product number
- All dimensions are in "inches" unless noted.

**UNIT CONNECTION SIZES**

Suction: 018 THRU 025 - 5/8" I.D. SWEAT  
 030 THRU 037 - 3/4" I.D. SWEAT  
 042 THRU 061 - 7/8" I.D. SWEAT  
 Liquid: 3/8" I.D. SWEAT  
 Condensate: 3/4" FPT

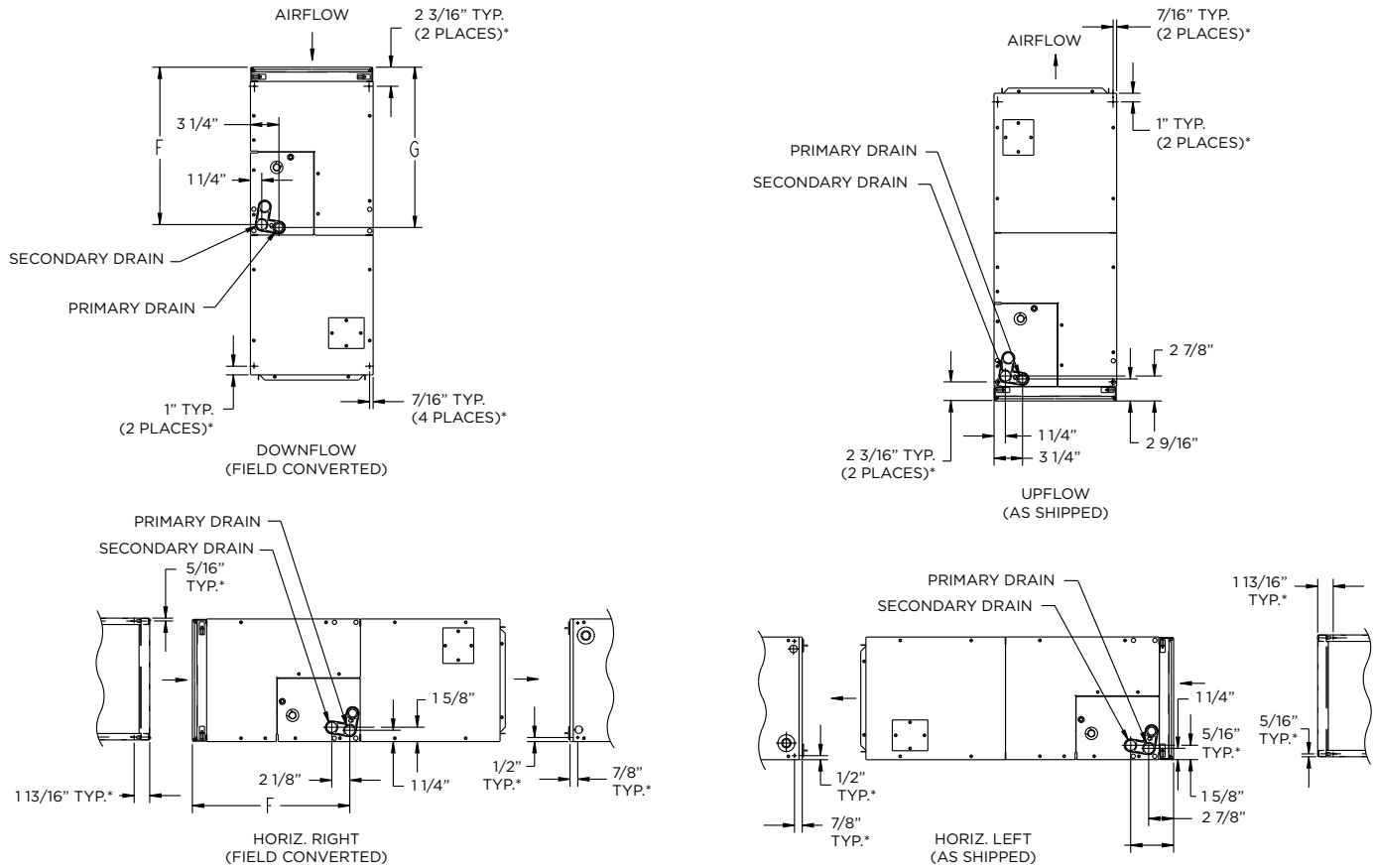
Note: Allow 21" from front for service



NOTES:

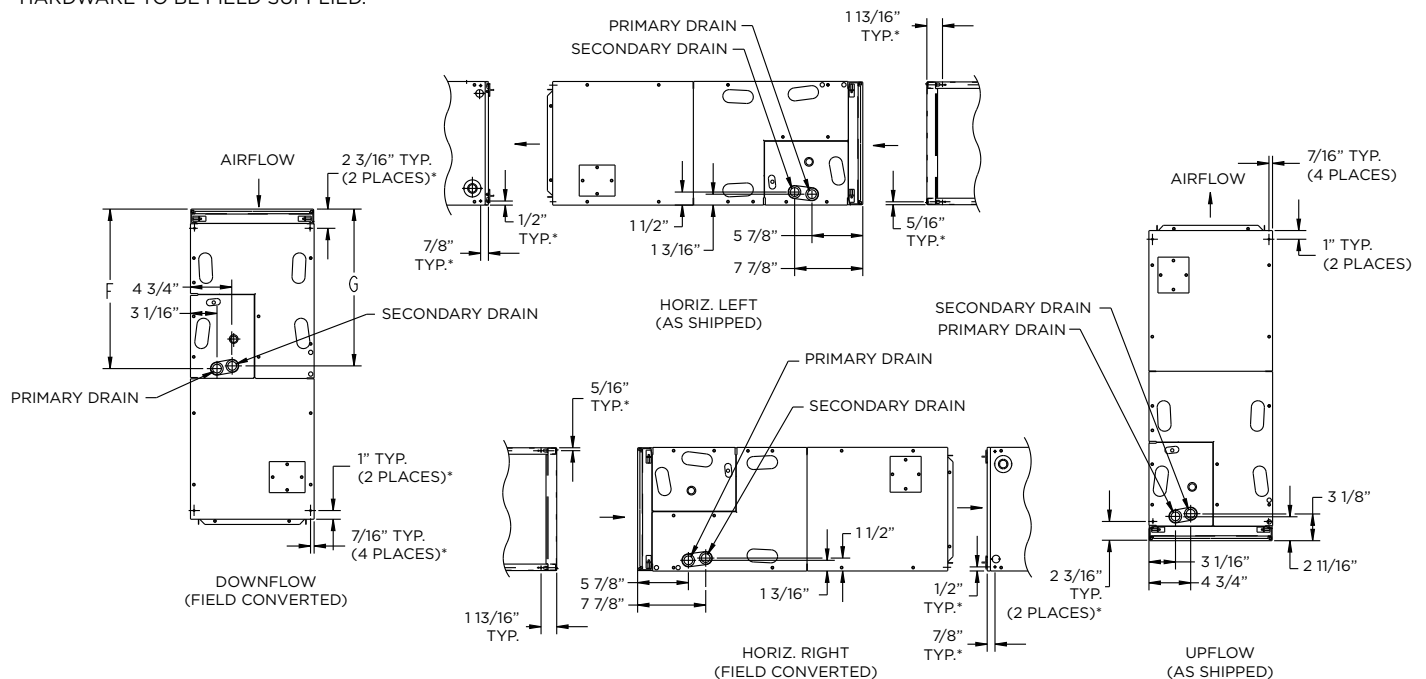
1. Condensate pan drain caps not shown for clarity.
2. All dimensions are in "inches" unless noted.

# Slope Coil



\* HORIZONTAL MOUNT LOCATIONS - DIMPLES PROVIDED IN TOP PANEL, AND BACK OF CABINET. IN CABINET BOTTOM. HOLES PROVIDED .136" DIA. HORIZONTAL HANGING HARDWARE TO BE FIELD SUPPLIED.

# A-Coil



Unit	Series	A	B	C	D	E	F	G	H	J	Coil Configuration Slope "A"	Shipping WT (LBS) Non Tin Coated	Shipping WT (LBS) Tin-Coatec
BROPF4MNB019	A	1260.5	447.7	400.0	396.9	390.5	587.4	600.1	-	482.6	X -	55.3	55.3
BROPF4MNB025	A	1260.5	447.7	400.0	396.9	390.5	587.4	600.1	-	482.6	X -	55.3	55.3
BROPF4MNB031	A	1357.3	536.6	489.0	485.8	487.4	684.2	698.5	-	-	X -	66.2	66.2
BROPF4MNB037	A	1260.5	536.6	489.0	485.8	398.5	595.3	587.4	-	-	- X	71.2	71.2
BROPF4MNB043	A	1260.5	536.6	489.0	485.8	398.5	595.3	587.4	-	-	- X	71.2	71.2
BROPF4MNB049	A	1357.3	627.1	577.8	576.3	495.3	692.2	684.2	-	-	- X	84.1	84.1
BROPF4MNB061	A	1503.4	627.1	577.8	576.3	641.4	836.6	828.7	865.2	-	- X	91.2	91.2

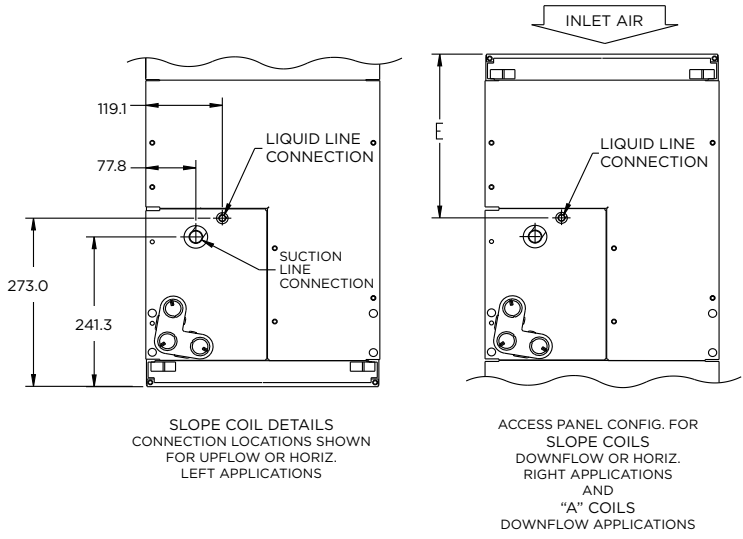
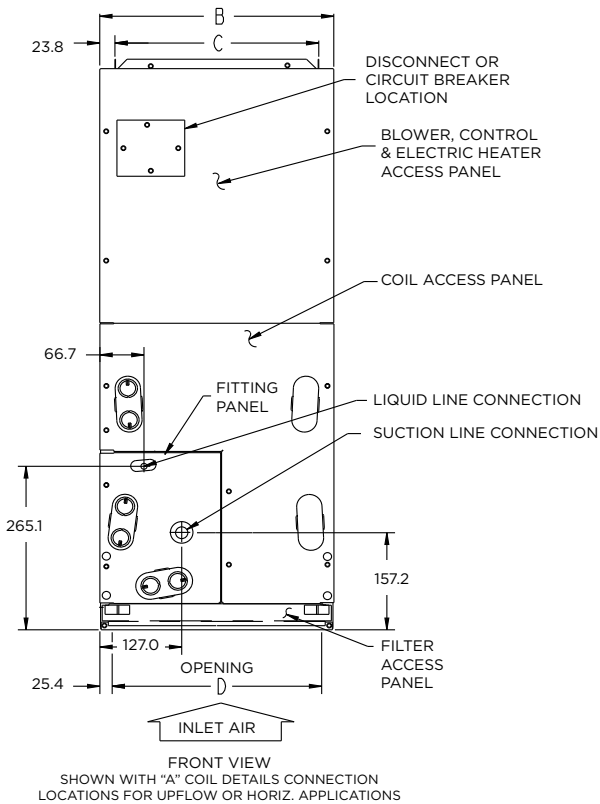
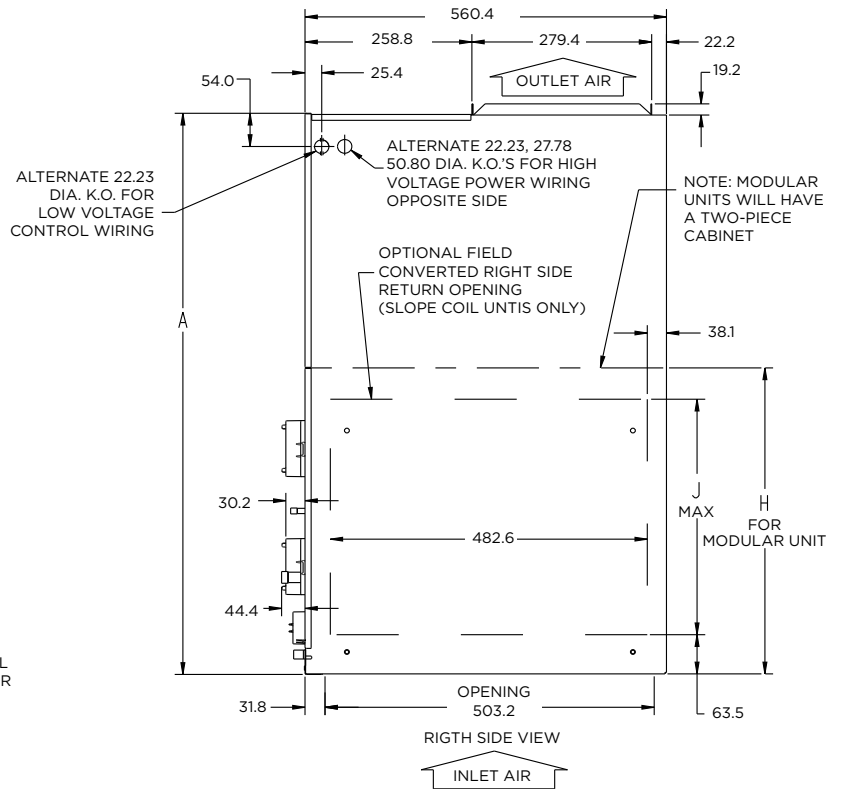
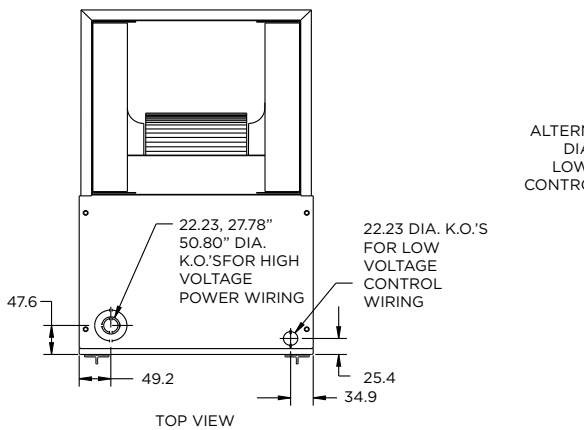
**NOTE:**

1. Series designation is the 14th position of unit product number
2. All dimensions are in "mm" unless noted.

**UNIT CONNECTION SIZES**

Suction: 018 THRU 025 - 15.88 I.D. SWEAT  
 030 THRU 037 - 19.05 I.D. SWEAT  
 042 THRU 061 - 22.23 I.D. SWEAT  
 Liquid: 9.53 I.D. SWEAT  
 Condensate: 19.0 FPT

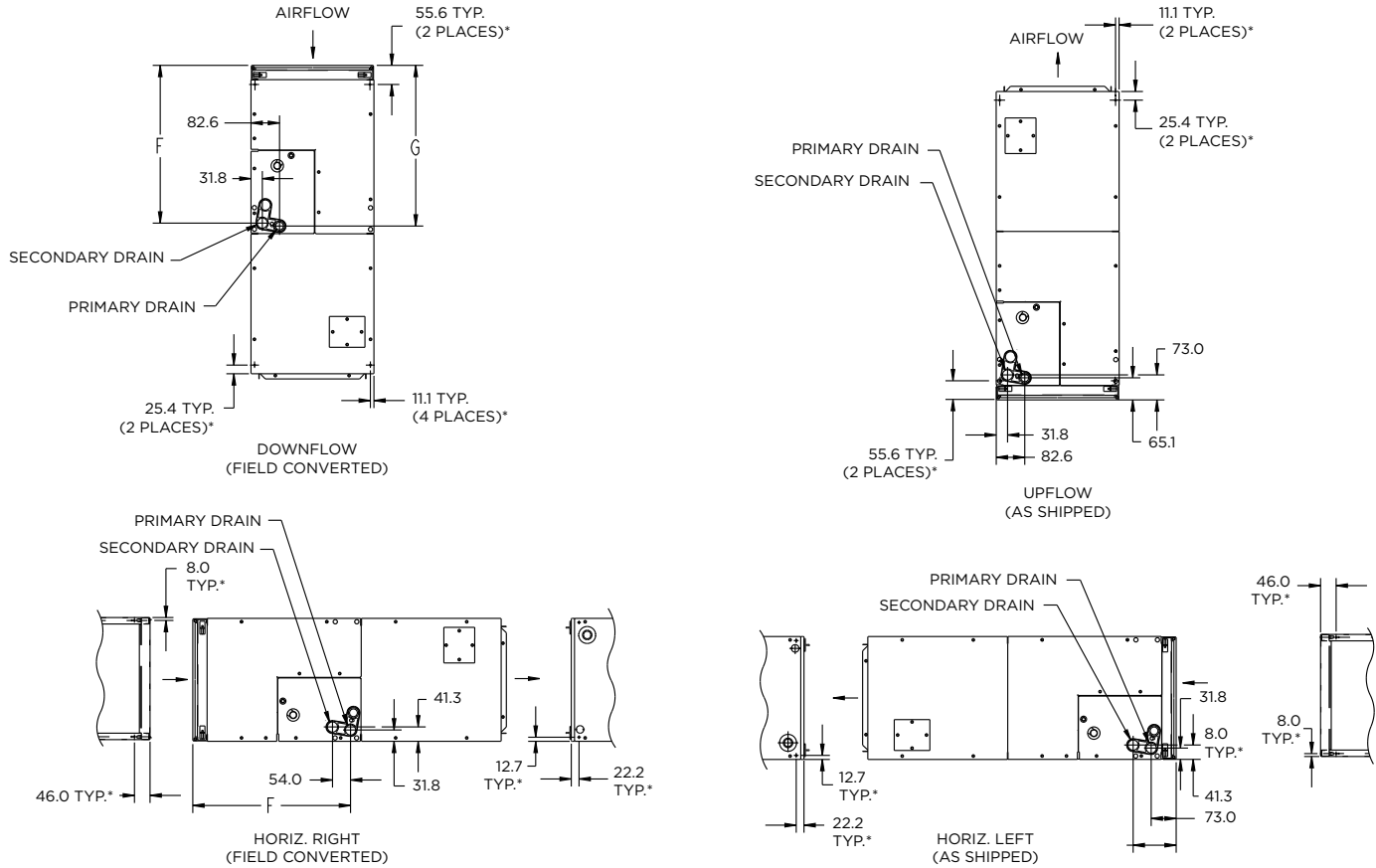
Note: Allow 533.4 from front for service



**NOTES:**

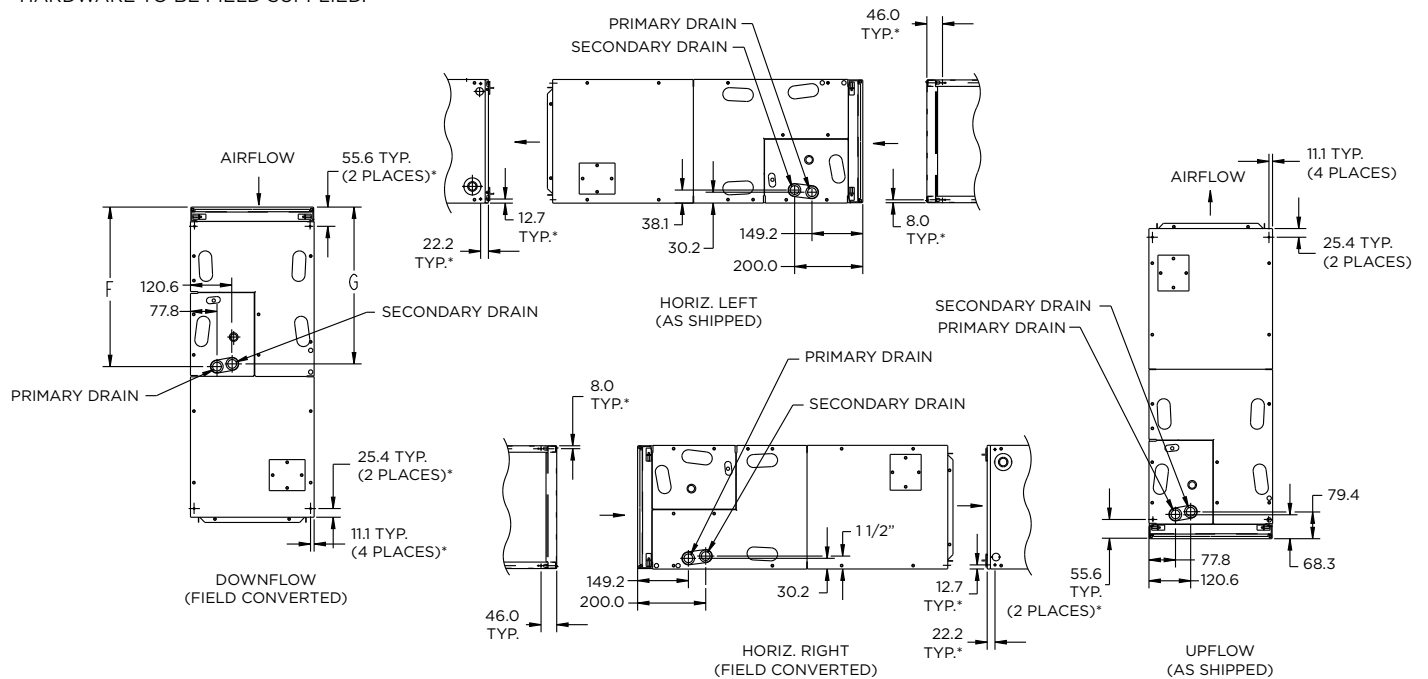
1. Condensate pan drain caps not shown for clarity.
2. All dimensions are in "mm" unless noted.

# Slope Coil



\* HORIZONTAL MOUNT LOCATIONS - DIMPLES PROVIDED IN TOP PANEL, AND BACK OF CABINET. IN CABINET BOTTOM. HOLES PROVIDED 3.45 DIA. HORIZONTAL HANGING HARDWARE TO BE FIELD SUPPLIED.

## A-Coil



## PHYSICAL DATA

Model no.	Field Installed Heat(kw)	Nominal Cooling Capacity(btuh)	Dimensions			Shipping Weight
			Height	Width	Depth	
BROPF4MNB019	3, 5, 8, 10	18,000	49 5/8-in 1261mm	17 5/8-in 447mm	22-1/16-in 560 mm	122 lb 55 kg
BROPF4MNB025	3, 5, 8, 10, 15	24,000	49 5/8-in 1261mm	17-5/8-in 448 mm	22-1/16-in 560 mm	122 lb 55 kg
BROPF4MNB031	5, 8, 10, 15, 20	30,000	53 7/16-in 1357mm	21 1/8-in 536mm	22-1/16-in 560 mm	146 lb 66 kg
BROPF4MNB037	5, 8, 9, 10, 15, 20	36,000	49 5/8-in 1260mm	21-1/8-in 537 mm	22-1/16-in 560 mm	157 lb 71 kg
BROPF4MNB043	5, 8, 9, 10, 15, 18, 20	42,000	49-5/8-in 1260 mm	21-1/8-in 537 mm	22-1/16-in 560 mm	157 lb 71 kg
BROPF4MNB049	5, 8, 9, 10, 15, 18, 20, 24, 30	48,000	53-7/16-in 1357 mm	24 11/16-in 627mm	22-1/16-in 560 mm	185 lb 84 kg
BROPF4MNB061	5, 8, 9, 10, 15, 18, 20, 24, 30	60,000	59-3/16-in 1503 mm	24-11/16-in 627 mm	22-1/16-in 560 mm	201 lb 91 kg

## SPECIFICATIONS

MODEL PF4MNB	019	025	031	037	043	049	061
<b>COIL</b>							
R-410A Refrigerant Metering Device	TXV - factory installed hard-shutoff, bi-flow type for heat pump application						
TXV	2 ton			3 ton		4 ton	
Rows/Fins Per In.	3 / 14.5						
Face Area (Sq. Ft.)	2.97	3.46	4.45		5.93	7.42	
Configuration	Slope					A	
<b>FAN</b>							
CFM (Nominal)	600	800	1000	1200	1400	1600	2000
Motor Type (ECM)	Multi-tap ECM						
Motor Hp	1/3	1/3	1/2	1/2	1/2	3/4	3/4
<b>FILTER</b>							
21-1/2-in / 546 mm X	16-3/8-in / 417 mm		19-7/8-in / 505 mm		23-5/16-in / 585 mm		
<b>CABINET CONFIGURATION OPTIONS</b>							
						Single Piece	Modular

## PERFORMANCE DATA

**Table 1 - Airflow Performance (CFM)**

Model & Size	Blower Speed	0.10	0.20	0.30	0.40	0.50	0.60
BROPF4MNB019	Tap 5	776	745	696	660	609	572
	Tap 4	683	644	589	548	494	461
	Tap 3	683	644	589	548	494	461
	Tap 2	631	563	500	443	409	361
	Tap 1	625	524	457	417	367	319
BROPF4MNB025	Tap 5	956	920	891	851	816	780
	Tap 4	825	795	757	722	674	634
	Tap 3	825	795	757	722	674	634
	Tap 2	726	695	635	598	543	509
	Tap 1	631	563	500	443	409	361
BROPF4MNB031	Tap 5	1189	1151	1104	1050	1003	959
	Tap 4	1041	998	944	886	837	772
	Tap 3	1041	998	944	886	837	772
	Tap 2	924	876	817	752	704	660
	Tap 1	779	693	628	571	526	476
BROPF4MNB037	Tap 5	1363	1332	1294	1253	1207	1157
	Tap 4	1237	1206	1160	1121	1070	1013
	Tap 3	1237	1206	1160	1121	1070	1013
	Tap 2	1095	1058	1007	951	888	824
	Tap 1	1014	885	773	673	609	549
BROPF4MNB043	Tap 5	1519	1490	1454	1419	1379	1332
	Tap 4	1437	1403	1366	1333	1294	1245
	Tap 3	1437	1403	1366	1333	1294	1245
	Tap 2	1257	1226	1191	1141	1090	1033
	Tap 1	1237	1206	1160	1121	1070	1013
BROPF4MNB049	Tap 5	1757	1725	1693	1653	1614	1576
	Tap 4	1664	1626	1593	1552	1517	1477
	Tap 3	1664	1626	1593	1552	1517	1477
	Tap 2	1459	1420	1379	1336	1298	1259
	Tap 1	1301	1241	1195	1150	1102	1039
BROPF4MNB061	Tap 5	2030	1995	1961	1927	1888	1842
	Tap 4	1811	1775	1740	1703	1664	1613
	Tap 3	1811	1775	1740	1703	1664	1613
	Tap 2	1665	1632	1593	1556	1507	1453
	Tap 1	1462	1418	1371	1327	1278	1228

■ - Airflow above 450 cfm/ton.

Notes:

- Airflow based upon dry coil at 230v with factory-approved filter and electric heater (2 element heater sizes 018 through 037, 3 element heater sizes 043 through 061).
- Airflow at 208 volts is approximately the same as 230 volts because the multi-tap ECM motor is a constant torque motor. The torque doesn't drop off at the speeds the motor operates.
- 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 043 - 061 sizes must have supply static greater than 0.20 in wc.
- Airflow above 400 cfm/ton on 049-061 size could result in condensate blowing off coil or splashing out of drain pan.



**Table 2 - Gross Cooling Capacities (mbh)**

PF4M SIZE	INDOOR COIL		SATURATED TEMPERATURE LEAVING EVAPORATOR (°F / °C)														
	CFM	AIR	35 / 2			40 / 4			45 / 7			50 / 10			55 / 13		
		EWB	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF
019	525	72 / 22	36	19	0.00	33	17	0.00	28	15	0.00	24	13	0.00	19	11	0.01
		67 / 19	29	19	0.01	26	17	0.01	22	15	0.02	17	13	0.02	12	10	0.02
		62 / 17	23	19	0.02	20	17	0.02	16	15	0.02	12	12	0.07	10	10	0.24
	600	72 / 22	40	21	0.00	36	19	0.00	32	17	0.00	27	14	0.01	21	12	0.02
		67 / 19	33	21	0.02	29	19	0.02	24	17	0.02	19	14	0.02	13	12	0.03
		62 / 17	26	21	0.02	22	19	0.02	17	17	0.03	13	13	0.08	11	11	0.25
	675	72 / 22	44	23	0.00	40	21	0.00	35	18	0.00	29	16	0.02	23	13	0.02
		67 / 19	36	23	0.02	32	21	0.03	26	18	0.03	21	16	0.03	15	13	0.03
		62 / 17	29	24	0.03	24	21	0.03	19	19	0.04	15	15	0.10	12	12	0.26
025	700	72 / 22	48	25	0.00	43	22	0.00	37	19	0.00	31	17	0.02	25	14	0.03
		67 / 19	39	25	0.03	34	22	0.03	28	20	0.03	22	17	0.03	16	14	0.04
		62 / 17	31	25	0.03	26	23	0.03	20	20	0.04	16	16	0.10	13	13	0.26
	800	72 / 22	53	27	0.00	47	24	0.00	41	21	0.01	35	18	0.03	27	15	0.04
		67 / 19	43	28	0.04	37	25	0.04	31	22	0.04	25	19	0.04	17	16	0.05
		62 / 17	34	28	0.04	29	25	0.04	23	22	0.05	18	18	0.12	5	15	0.28
	900	72 / 22	57	30	0.00	51	27	0.00	45	23	0.03	38	20	0.04	30	17	0.05
		67 / 19	47	30	0.05	41	27	0.05	34	24	0.05	27	21	0.05	19	17	0.06
		62 / 17	37	31	0.05	31	28	0.05	25	24	0.06	20	20	0.14	16	16	0.29
031	875	72 / 22	59	30	0.00	53	27	0.00	46	24	0.01	38	20	0.02	30	17	0.03
		67 / 19	48	31	0.03	42	28	0.03	35	24	0.04	27	21	0.04	19	17	0.04
		62 / 17	38	31	0.04	32	28	0.04	25	24	0.04	20	20	0.11	16	16	0.27
	1000	72 / 22	65	33	0.00	58	30	0.00	51	26	0.02	42	23	0.04	33	19	0.04
		67 / 19	53	34	0.04	46	31	0.04	38	27	0.05	30	23	0.05	21	19	0.05
		62 / 17	42	35	0.05	35	31	0.05	28	27	0.06	22	22	0.13	18	18	0.29
	1125	72 / 22	71	36	0.00	63	33	0.00	55	29	0.03	46	25	0.05	36	20	0.05
		67 / 19	58	37	0.05	50	33	0.05	42	29	0.06	33	25	0.06	23	21	0.07
		62 / 17	46	38	0.06	38	34	0.06	30	30	0.07	24	24	0.15	20	20	0.30
037	1050	72 / 22	67	36	0.00	60	32	0.00	52	28	0.00	44	24	0.02	35	20	0.03
		67 / 19	54	37	0.03	47	33	0.03	40	29	0.03	31	25	0.03	22	20	0.04
		62 / 17	43	37	0.03	36	33	0.03	29	29	0.04	22	22	0.10	18	18	0.26
	1200	72 / 22	74	40	0.00	66	36	0.00	58	31	0.01	48	27	0.03	38	22	0.04
		67 / 19	60	41	0.04	52	36	0.04	44	32	0.04	35	27	0.04	24	23	0.05
		62 / 17	48	41	0.04	40	37	0.04	32	32	0.05	25	25	0.12	21	21	0.28
	1350	72 / 22	81	43	0.00	72	39	0.00	63	34	0.03	53	30	0.04	41	25	0.05
		67 / 19	66	45	0.05	57	40	0.05	48	35	0.05	38	30	0.05	27	25	0.06
		62 / 17	52	46	0.05	44	41	0.05	35	36	0.06	28	28	0.14	23	23	0.29

**Table 2 - Gross Cooling Capacities (mbh) - continued**

PF4M SIZE	INDOOR COIL AIR		SATURATED TEMPERATURE LEAVING EVAPORATOR (°F / °C)														
	CFM	EWB	35 / 2 TC	SHC	BF	40 / 4 TC	SHC	BF	45 / 7 TC	SHC	BF	50 / 10 TC	SHC	BF	55 / 13 TC	SHC	BF
<b>043</b>	1225	72 / 22	79	41	0.00	71	37	0.00	62	33	0.02	52	28	0.03	41	23	0.04
		67 / 19	64	42	0.04	56	38	0.04	47	33	0.04	37	29	0.04	26	24	0.05
		62 / 17	51	43	0.04	43	38	0.04	34	34	0.05	27	27	0.12	22	22	0.28
	1400	72 / 22	87	46	0.00	78	41	0.00	68	36	0.03	57	31	0.04	45	26	0.05
		67 / 19	71	47	0.05	62	42	0.05	52	37	0.05	41	32	0.05	29	26	0.06
		62 / 17	56	48	0.06	47	43	0.06	38	38	0.06	30	30	0.14	25	25	0.29
	1575	72 / 22	95	50	0.00	85	45	0.00	74	39	0.04	62	34	0.05	48	28	0.06
		67 / 19	77	51	0.06	67	46	0.06	56	40	0.06	44	35	0.07	31	29	0.07
		62 / 17	61	52	0.07	51	47	0.07	41	41	0.08	33	33	0.17	27	27	0.31
<b>049</b>	1400	72 / 22	90	48	0.00	81	43	0.00	71	38	0.00	59	32	0.02	47	27	0.03
		67 / 19	73	49	0.03	64	44	0.03	54	38	0.03	42	33	0.03	30	27	0.04
		62 / 17	58	49	0.03	49	44	0.03	39	39	0.04	30	30	0.10	25	25	0.26
	1600	72 / 22	100	53	0.00	89	48	0.00	78	42	0.01	65	36	0.03	51	30	0.04
		67 / 19	81	54	0.04	71	48	0.04	59	43	0.04	47	36	0.04	33	30	0.05
		62 / 17	65	55	0.04	54	49	0.04	43	43	0.05	34	34	0.12	28	28	0.28
	1800	72 / 22	109	58	0.00	97	52	0.00	85	46	0.03	71	39	0.04	56	33	0.05
		67 / 19	89	59	0.05	77	53	0.05	65	47	0.05	51	40	0.05	36	33	0.06
		62 / 17	70	60	0.05	59	54	0.05	47	48	0.06	37	37	0.14	31	31	0.29
<b>061</b>	1600	72 / 22	109	57	0.00	98	51	0.00	86	45	0.00	73	39	0.01	58	32	0.02
		67 / 19	89	58	0.02	78	52	0.02	66	46	0.02	52	39	0.03	37	33	0.03
		62 / 17	71	59	0.03	60	52	0.03	48	46	0.03	37	37	0.09	31	31	0.24
	1750	72 / 22	117	61	0.00	105	55	0.00	92	48	0.01	78	41	0.02	62	35	0.02
		67 / 19	95	62	0.03	84	56	0.03	70	49	0.03	56	42	0.03	40	35	0.03
		62 / 17	76	63	0.03	64	56	0.03	51	50	0.04	40	40	0.10	33	33	0.25
	2000	72 / 22	129	67	0.00	116	60	0.00	102	53	0.02	86	46	0.03	68	38	0.03
		67 / 19	105	69	0.04	92	62	0.04	78	54	0.04	62	47	0.04	44	39	0.05
		62 / 17	84	70	0.04	71	63	0.04	57	55	0.05	45	45	0.12	37	37	0.27

CFM - Cubic Ft. per Minute  
 EWB - Entering Wet Bulb (°F / °C)  
 LWB - Leaving Wet Bulb (°F / °C)  
 TC - Gross Cooling Cap 1000 Btuh  
 SHC - Gross Sensible Cap 1000 Btuh  
 BF - Bypass Factor  
 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 bypassfactor of next lower EWB for approximation.

**Table 3 – SHC Correction Factor**

Entering Air Dry-Bulb Temperature (°F)						
Bypass Factor	79	78	77	76	75	Under 75
	81	82	83	84	85	Over 85
Entering Air Dry-Bulb Temperature (°C)						
Bypass Factor	26	25	25	24	24	Under 75
	27	28	28	29	29	Over 85
Correction Factor						
0.10	0.098	1.96	2.94	3.92	4.91	Use formula
0.20	0.87	1.74	2.62	3.49	4.36	shown below
0.30	0.76	1.53	2.29	3.05	3.82	

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

**Table 4 – Minimum CFM and Motor Speed Selection**

FAN COIL SIZES	Heater kW									
	3	5	8	9	10	15	18	20	24	30
019	525	525	525	—	600*	—	—	—	—	—
025	700	700	700	—	700	775*	—	—	—	—
031	—	875	875	—	875	875	—	1060*	—	—
037	—	1050	970	970	970	920	—	1040	—	—
043	—	—	1225	1225	1225	1225	1225	1225	—	—
049	—	—	1400	1400	1400	1400	1400	1400	1400	1400
061	—	—	1750	1750	1750	1750	1750	1750	1750	1750

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

**Table 5 – 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
019	0.034	0.049	0.063	—	—	—	—	—	—	—	—	—	—	—	—	—
025	0.016	0.027	0.038	0.049	0.059	—	—	—	—	—	—	—	—	—	—	—
031	—	—	—	0.049	0.059	0.070	0.080	—	—	—	—	—	—	—	—	—
037	—	—	—	—	—	0.055	0.064	0.073	0.081	—	—	—	—	—	—	—
043	—	—	—	—	—	—	—	0.049	0.056	0.063	0.070	—	—	—	—	—
049	—	—	—	—	—	—	—	—	—	0.038	0.043	0.049	0.054	0.059	—	—
061	—	—	—	—	—	—	—	—	—	—	—	0.027	0.031	0.035	0.039	0.043

**Table 6 – Factory-Installed Filter Static Pressure Drop (in wc)**

Unit Size PF4MNB	CFM								
	400	600	800	1000	1200	1400	1600	1800	2000
019, 025	0.012	0.022	0.048	0.072	—	—	—	—	—
031, 037, 043	—	—	0.036	0.051	0.07	0.092	0.12	—	—
049, 061	—	—	—	—	—	0.073	0.086	0.105	0.13

**Table 7 – Electric Heater Static Pressure Drop (in wc)**

019 - 031			037- 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.

**Table 8 – 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.

**Table 9 – Estimated Sound Power Level (dBA)**

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

**Table 10 – Fan Coil Electrical Data (Units without Electric Heat)**

Model No.	Mtr HP	Mtr FLA	VOLTS/Ph/Hz	Single Circuit		BRANCH CIRCUIT MIN WIRE SIZE* AWG
				MCA	Maximum Overcurrent Protection	
BROPF4MNB019(0,T,L)00	1/3	2.8	208/230/1/60	3.5	15	14
BROPF4MNB025(0,T,L)00	1/3	2.8	208/230/1/60	3.5	15	14
BROPF4MNB031(0,T,L)00	1/2	4.1	208/230/1/60	5.1	15	14
BROPF4MNB037(0,T,L)00	1/2	4.1	208/230/1/60	5.1	15	14
BROPF4MNB043(0,T,L)00	1/2	4.1	208/230/1/60	5.1	15	14
BROPF4MNB049(0,T,L)00	3/4	6.0	208/230/1/60	7.5	15	14
BROPF4MNB061(0,T,L)00	3/4	6.0	208/230/1/60	7.5	15	14

\* 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.

**Table 11 – Electric Heaters 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	–	–

\*Circuit breakers are 2 pole



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