FZ4A
PREFERRED™ 2−SPEED SERIES FAN COIL
SIZES 024 THRU 061

Product Data

A10083

AIR HANDLER TECHNOLOGY AT ITS FINEST

The FZ4A fan coil has the proven technology of Bryant fan coil units with Puron® refrigerant as well as vertical and horizontal applications. The design features contoured condensate pans with rugged drain connections, ensuring that little water is left in the unit at the end of the cooling duty cycle. The lack of standing condensate and corrosion free pans improves IAQ and product life, features homeowners appreciate.

Standard features include grooved tubing and louvered fins. Coil circuiting has also been updated to make the most of all Bryant heat pumps and air conditioners. Units come with solid state fan controls, 1−inch (25mm) thick insulation with R−value of 4.2, multi−speed motors, and fully−wettable coils. Units can accommodate factory− and/or field−installed heaters from 3 to 30 kW.

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.

The new FZ fan coil will allow for a higher SEER, 2−stage option in a smaller space than previously available. Features of the FZ fan coil include two−stage blower operation, wider airflow range than FB4C and FX4D, lower continuous airflow option than FB4C and FX4D, and single and two−stage outdoor unit compatibility.

The FZ4A fan coil design is loaded with popular features. These fan coils utilize the latest in electronic commutation motor (ECM) technology through the use of high efficiency, multi−tap ECM motors allowing reliable air delivery with increased static pressure. It comes in a pre−painted (taupe metallic) galvanized steel casing and a factory−supplied power plug for ease of installation. The FZ4A unit is shipped with a factory−installed Puron® refrigerant TXV FZ4ANP (024−061).

STANDARD FEATURES

- Multi−tap ECM (electronic commutating motor) motors − all sizes
- Integrated motor controls, with 90−sec off TDR function, have replaced integrated circuit board
- Five available speed taps to meet a wide range of applications
- 2−speed operation
- Large, grooved tube, louvered fin coils
- Efficient, quiet, time−tested blower housings and diffusers
- Sturdy, drainable condensate pans
- Cabinet construction features innovations designed to prevent cabinet sweating
- Tested for condensate disposal in much tougher conditions than Air Conditioning and Refrigeration Institute requirements
- Super−thick R−4.2 insulation with vapor barrier
- Pre−painted galvanized steel cabinet (taupe metallic)
- Design meets stringent regulations for cabinet air leakage of less than 2% when tested at 0.5 inches W.C., and cabinet air leakage less than 1.4% at 0.5 inches W.C. when tested in accordance with ASHRAE 193 standard.
- Installation−flexible, multipoise units
- Horizontal hanging provisions on cabinet
- No tools required to access filter
- Newly improved filter rack area filter door insulation added for improved air seal
- Factory−installed heater packages available on select models (5− through 15−kW)
- 3− through 30−kW accessory heaters − field installed
- Factory−supplied power plug
- Easy plug−in provisions for heater installation
- Entry options for high and low voltage wiring hook−up
- Leak−preventing sweat connections
- Thermostatic expansion valve, TXV, on all FZ4ANP coils
- Puron® refrigerant factory−installed TXV on all FZ4ANP coils
- Designed for manufactured housing applications.

MODEL NUMBER NOMENCLATURE

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

Product
F = Fan Coil

Type
Z = Preferred 2−Speed, Puron

Position
4 = Multipoise

Series
A

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

Cabinet Style
P = TXV

Capacity
024 = 24,000
036 = 36,000
048 = 48,000
060 = 60,000
061 = 60,000

Coil Type
L = Aluminum

Heating Size
05 = 5 kW
10 = 10 kW
15 = 15 kW

Puron

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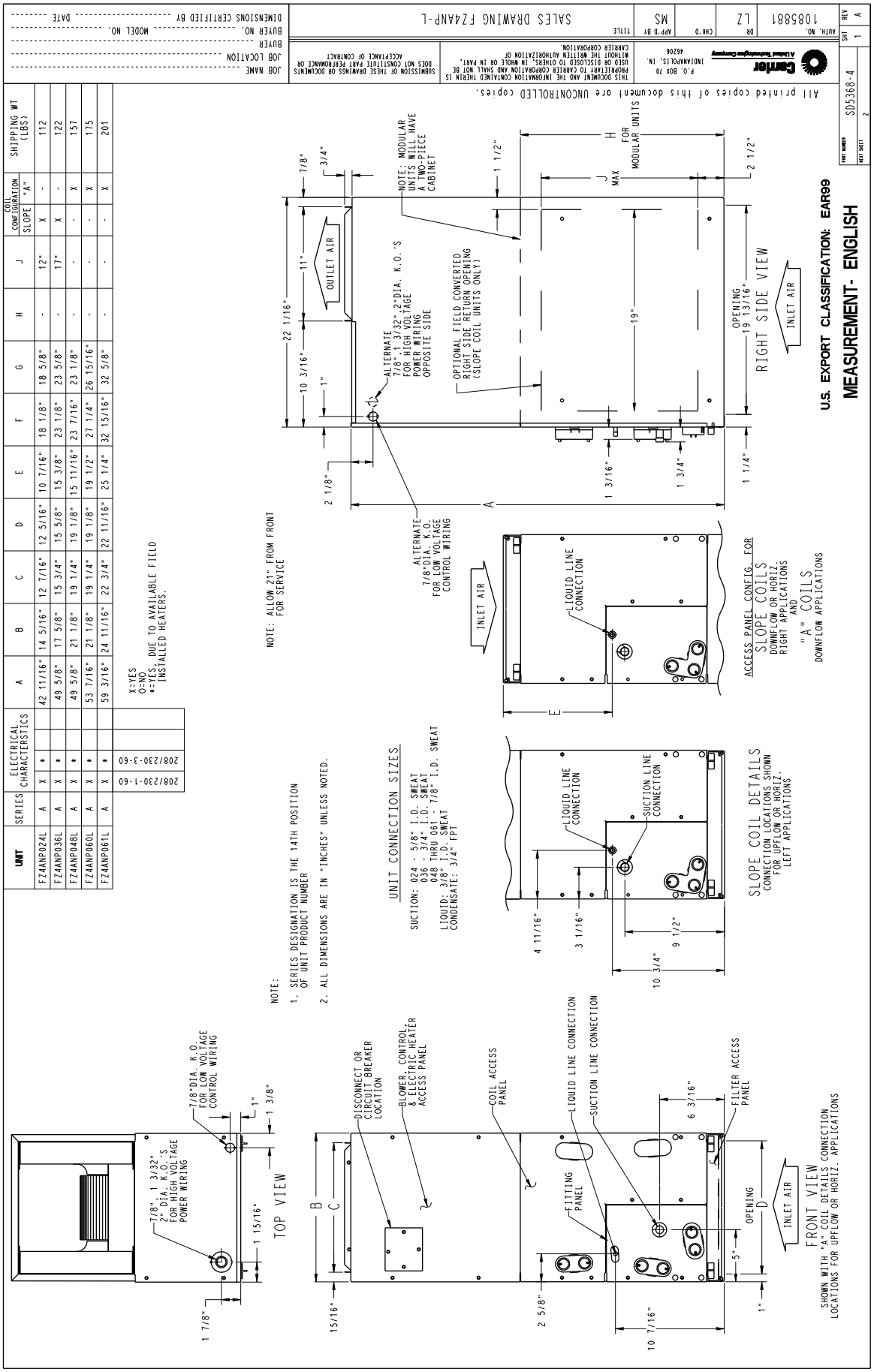
DIMENSIONS



UNIT	SERIES	ELECTRICAL CHARACTERISTICS				A	B	C	D	E	F	G	H	J	COIL CONFIGURATION SLOPE "A"	SHIPPING WT (LBS)
FZ4ANP024L	A	X	*			42 11/16"	14 5/16"	12 7/16"	12 5/16"	10 7/16"	18 1/8"	18 5/8"	-	12"	X -	112
FZ4ANP036L	A	X	*			49 5/8"	17 5/8"	15 3/4"	15 5/8"	15 3/8"	23 1/8"	23 5/8"	-	17"	X -	122
FZ4ANP048L	A	X	*			49 5/8"	21 1/8"	19 1/4"	19 1/8"	15 11/16"	23 7/16"	23 1/8"	-	-	- X	157
FZ4ANP060L	A	X	*			53 7/16"	21 1/8"	19 1/4"	19 1/8"	19 1/2"	27 1/4"	26 15/16"	-	-	- X	175
FZ4ANP061L	A	X	*			59 3/16"	24 11/16"	22 3/4"	22 11/16"	25 1/4"	32 15/16"	32 5/8"	-	-	- X	201
		208/230-1-60														
		208/230-3-60														

X=YES
O=NO
*=YES, DUE TO AVAILABLE FIELD INSTALLED HEATERS.

Fig. 1 – FZ4ANP – English

DIMENSIONS (cont.)

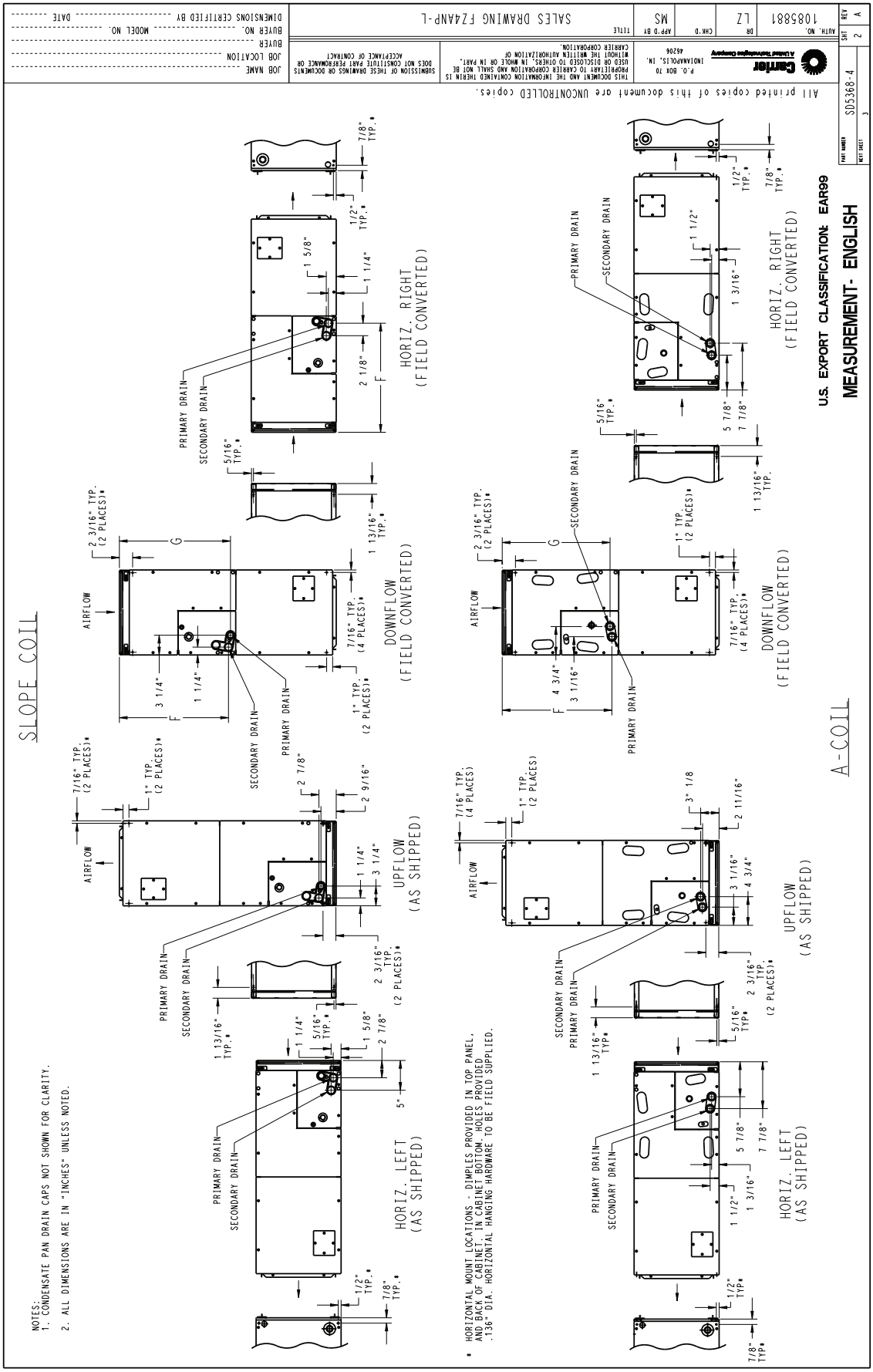


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Fig. 2 – FZ4ANP – English

DIMENSIONS (cont.)

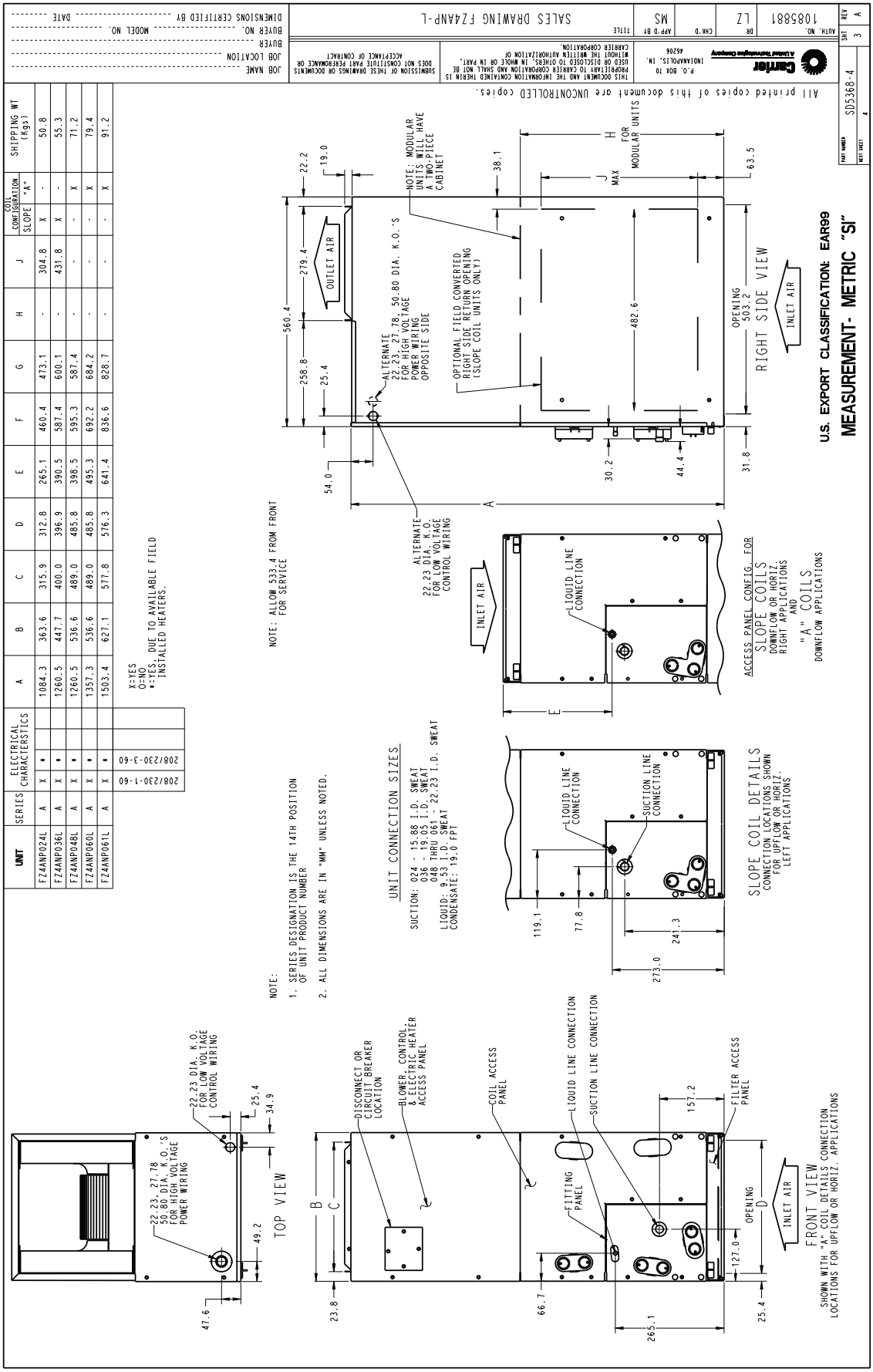

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Fig. 3 – FZ4ANP – Metric

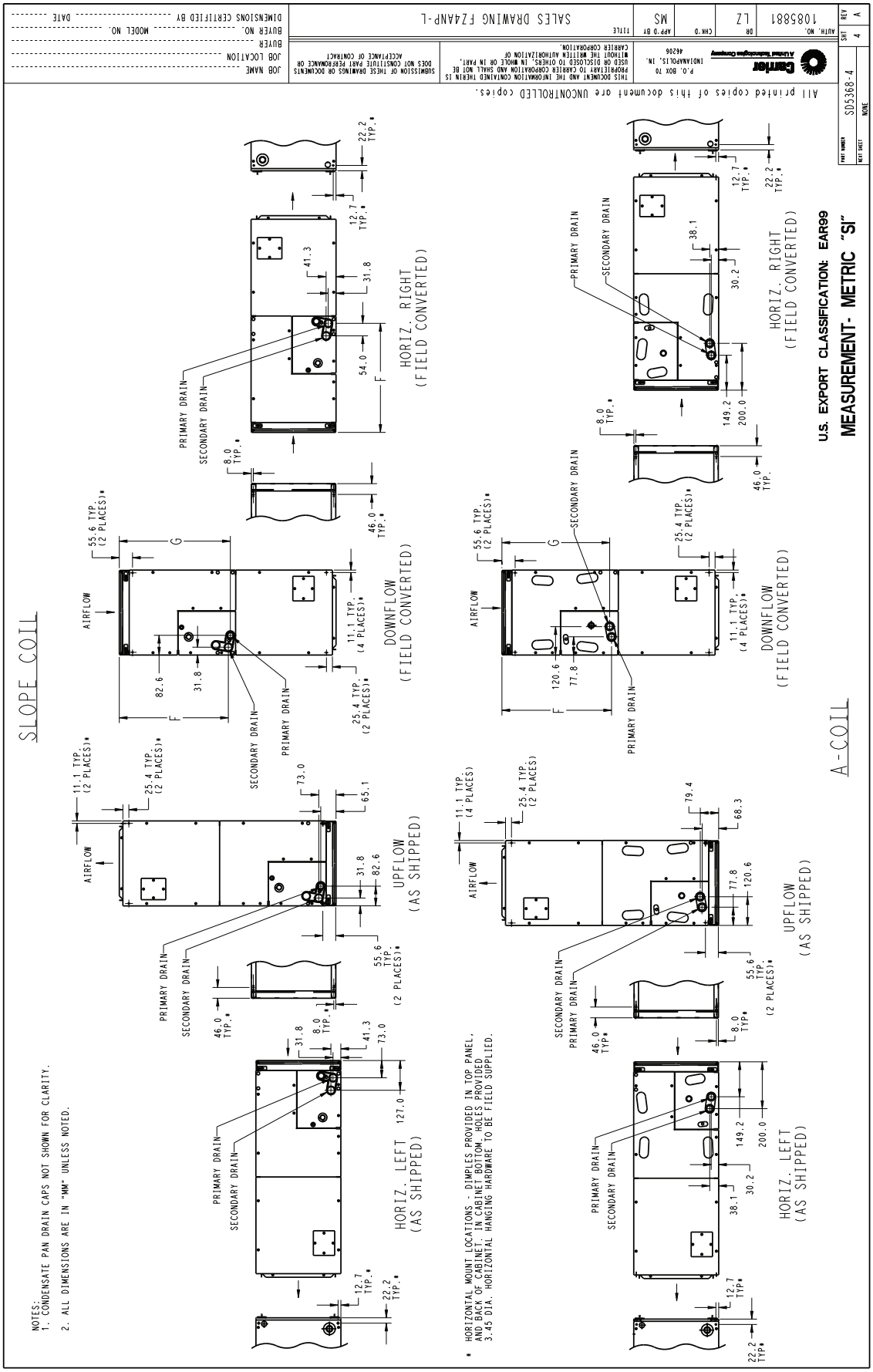

Fig. 4 – FZ4ANP – Metric

PHYSICAL DATA

ORDERING NO.	NOMINAL COOLING CAPACITY (Btuh)	DIMENSIONS			SHIPPING WEIGHT
		Height	Width	Depth	
FZ4ANP024L	24,000	42−11/16 in. 1084mm	14−5/16 in. 363mm	22−1/16 in. 560mm	112 lb 51 kg
FZ4ANP036L	36,000	49−5/8 in. 1260mm	17−5/8 in. 447mm	22−1/16 in. 560mm	122 lb 55 kg
FZ4ANP048L	48,000	49−5/8 in. 1260mm	21−1/8 in. 536mm	22−1/16 in. 560mm	157 lb 71 kg
FZ4ANP060L	60,000	53−7/16 in. 1357mm	21−1/8 in. 536mm	22−1/16 in. 560mm	175 lb 79 kg
FZ4ANP061L	60,000	59−3/16 in. 1503mm	24−11/16 in. 447mm	22−1/16 in. 560mm	201 lb 91 kg

SPECIFICATIONS

FZ4A	**24**	**36**	**48**	**60**	**61**
EVAPORATOR COIL					
Face Area (sq. ft)	2.23	2.97	4.45	5.93	7.42
Configuration	Slope		A		
FZ4ANP Metering Device Puron Refrigerant	TXV	TXV	TXV	TXV	TXV
FILTER*					
21−1/2−in (546 mm) X	13−in (330 mm)	16−3/8−in (417 mm)	19−7/8−in (505 mm)		23−5/16−in (585 mm)
BLOWER ASSEMBLY					
Motor Type (ECM)	Multi−tap ECM				
Motor HP	1/3	1/2	3/4	3/4	3/4
CFM	800	1200	1600	1750	2000

*Filter must be field−supplied for FZ4A units.

PERFORMANCE DATA

FZ4A AIRFLOW PERFORMANCE (CFM)

MODEL & SIZE	BLOWER SPEED	0.10	0.20	0.30	0.40	0.50	0.60
FZ4A 024	Tap 5	969	936	892	835	763	676
	Tap 4	826	795	766	743	706	660
	Tap 3	755	736	711	679	639	593
	Tap 2	573	541	507	471	434	394
	Tap 1	573	541	507	471	434	394
FZ4A 036	Tap 5	1301	1276	1245	1218	1176	1121
	Tap 4	1227	1191	1169	1143	1105	1074
	Tap 3	1209	1190	1166	1136	1100	1059
	Tap 2	792	753	710	665	616	564
	Tap 1	547	485	429	380	337	302
FZ4A 048	Tap 5	1743	1712	1679	1642	1610	1574
	Tap 4	1669	1634	1599	1564	1531	1499
	Tap 3	1496	1454	1415	1378	1344	1312
	Tap 2	1112	1066	1021	978	937	897
	Tap 1	822	764	702	634	562	485
FZ4A 060	Tap 5	1897	1867	1836	1808	1774	1736
	Tap 4	1817	1785	1757	1724	1693	1655
	Tap 3	1878	1848	1816	1782	1747	1711
	Tap 2	1445	1403	1360	1316	1271	1225
	Tap 1	1086	1026	963	895	822	746
FZ4A 061	Tap 5	2030	1995	1961	1927	1888	1842
	Tap 4	1811	1775	1740	1703	1664	1613
	Tap 3	1671	1666	1654	1634	1607	1573
	Tap 2	1350	1332	1309	1280	1245	1206
	Tap 1	1188	1063	949	846	753	670

NOTES:

1. Airflow based upon dry coil at 230v with factory−approved filter and electric heater (2 element heater sizes 024 through 036, 3 element heater sizes 048 through 061). For FZ4A models, 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.
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 048 − 061 sizes must have supply static greater than 0.20 in. wc.
3. Airflow above 400 cfm/ton on 048−061 size could result in condensate blowing off coil or splashing out of drain pan.

PERFORMANCE DATA (cont.)

GROSS COOLING CAPACITIES (MBH) – PURON® REFRIGERANT

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
FZ4A 024	700	72 / 22	43	22	0.00	38	20	0.00	33	17	0.03	28	15	0.04	22	12	0.05
		67 / 19	35	23	0.05	30	20	0.05	25	18	0.05	20	15	0.05	14	13	0.06
		62 / 17	28	23	0.06	23	21	0.06	18	18	0.06	15	15	0.14	12	12	0.29
	800	72 / 22	47	24	0.00	42	22	0.01	36	19	0.04	31	17	0.06	24	14	0.06
		67 / 19	38	25	0.06	33	22	0.06	28	20	0.07	22	17	0.07	15	14	0.08
		62 / 17	30	26	0.07	25	23	0.07	20	20	0.08	16	16	0.17	13	13	0.31
	900	72 / 22	51	26	0.00	45	24	0.03	40	21	0.06	33	18	0.07	26	15	0.07
		67 / 19	41	27	0.07	36	25	0.08	30	22	0.08	24	19	0.08	17	16	0.09
		62 / 17	33	28	0.08	28	25	0.08	22	22	0.09	18	18	0.19	15	15	0.33
FZ4A 036	1050	72 / 22	68	34	0.00	61	31	0.00	53	27	0.04	45	23	0.05	35	20	0.06
		67 / 19	56	36	0.06	49	32	0.06	41	28	0.06	32	24	0.07	22	20	0.07
		62 / 17	44	36	0.07	37	33	0.07	30	29	0.08	24	24	0.17	20	20	0.31
	1200	72 / 22	75	38	0.00	67	34	0.03	58	30	0.06	49	26	0.07	38	22	0.07
		67 / 19	61	39	0.07	53	35	0.08	45	31	0.08	35	27	0.08	25	22	0.09
		62 / 17	49	40	0.08	41	36	0.08	32	32	0.09	26	26	0.19	22	22	0.33
	1350	72 / 22	81	41	0.00	72	37	0.05	63	32	0.07	53	28	0.08	41	23	0.09
		67 / 19	66	43	0.08	58	38	0.09	48	34	0.09	38	29	0.09	27	25	0.10
		62 / 17	53	44	0.09	44	40	0.09	35	35	0.11	29	29	0.22	24	24	0.35
FZ4A 048	1400	72 / 22	88	46	0.00	79	42	0.00	69	37	0.03	58	31	0.04	45	26	0.05
		67 / 19	72	48	0.05	63	43	0.05	52	37	0.05	41	32	0.05	29	27	0.06
		62 / 17	57	49	0.06	48	43	0.06	38	38	0.06	30	30	0.14	25	25	0.29
	1600	72 / 22	97	51	0.00	87	46	0.01	75	40	0.04	63	35	0.06	49	29	0.06
		67 / 19	79	52	0.06	69	47	0.06	57	41	0.07	45	36	0.07	32	30	0.08
		62 / 17	63	54	0.07	53	48	0.07	42	42	0.08	34	34	0.17	28	28	0.31
	1800	72 / 22	105	55	0.00	94	50	0.03	82	44	0.06	68	38	0.07	54	31	0.07
		67 / 19	86	57	0.07	75	51	0.08	62	45	0.08	49	39	0.08	34	33	0.09
		62 / 17	68	59	0.08	57	53	0.08	45	47	0.09	37	37	0.19	30	30	0.33
FZ4A 060	1600	72 / 22	106	54	0.00	95	49	0.00	82	43	0.01	69	37	0.03	54	31	0.04
		67 / 19	86	56	0.04	75	50	0.04	63	44	0.04	49	37	0.04	35	31	0.05
		62 / 17	68	56	0.04	57	50	0.04	45	44	0.05	36	36	0.12	29	29	0.28
	1750	72 / 22	113	58	0.00	101	52	0.00	88	46	0.02	74	39	0.04	58	33	0.04
		67 / 19	92	59	0.04	80	53	0.05	67	47	0.05	53	40	0.05	37	33	0.05
		62 / 17	73	61	0.05	61	54	0.05	49	48	0.06	39	39	0.13	32	32	0.28
	2000	72 / 22	124	64	0.00	111	57	0.00	97	50	0.04	81	43	0.05	63	36	0.06
		67 / 19	101	66	0.06	88	59	0.06	74	52	0.06	58	44	0.06	41	37	0.07
		62 / 17	80	67	0.06	67	60	0.06	53	53	0.07	43	43	0.16	35	35	0.30
FZ4A 061	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 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 (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.
4. 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)

FZ4A 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	1400	1500	1600	1700	1800	1900	2000
024	0.034	0.049	0.063	0.076	0.089	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
036	- -	- -	- -	- -	- -	0.070	0.080	0.090	0.099	- -	- -	- -	- -	- -	- -	- -
048	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.063	0.070	0.076	0.083	0.090	- -	- -
060	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.049	0.054	0.059	0.065	0.070
061	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.027	0.031	0.035	0.039	0.043

ELECTRIC HEATER STATIC PRESSURE DROP (in wc)

FZ4A 024 – 036			FZ4A 048 – 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 024 through 036 size units and 15–kW heaters (3 elements) in the 048 through 061 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.

MINIMUM CFM AND MOTOR SPEED SELECTION

FZ4A	HEATER kW									
	3	5	8	9	10	15	18	20	24	30
024	700	700	700	—	700	775	—	—	—	—
036	—	1050	970	970	970	920	—	1040	—	—
048	—	—	1400	1400	1400	1400	1400	1400	1400	1400
060 & 061	—	—	1750	1750	1750	1750	1750	1750	1750	1750

Speed Tap 4 (white wire) is used for electric heat only. White wire must remain on tap 4.

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	024	9,400
KFCEH0501N05	5	230/1	5	None	024–061	15,700
KFCEH0801N08	8	230/1	8	None	024–061	25,100
KFCEH0901N10	10	230/1	10	None	024–061	31,400
KFCEH3201F20	20	230/1	5, 20	Fuse‡	036–061	62,800
KFCEH1601315	15	230/3	5, 15	None	036–061	47,100
KFCEH2001318	18	230/3	6, 12, 18	None	048–061	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	024–061	15,700
KFCEH2501C08	8	230/1	8	Circuit Breaker	024–061	25,100
KFCEH2601C10	10	230/1	10	Circuit Breaker	024–061	31,400
KFCEH3301C20	20	230/1	5, 20	Circuit Breaker	036–061	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)

FZ4A	CONDITIONS		OCTAVE BAND CENTER FREQUENCY*						
	CFM	Ext Static Pressure	63	125	250	500	1000	2000	4000
024	800	0.25	66.0	62.0	58.0	55.0	53.0	51.0	47.0
036	1200	0.25	67.8	63.8	59.8	56.8	54.8	52.8	48.8
048	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.

ELECTRICAL DATA FOR UNITS WITH FACTORY–INSTALLED HEAT

FZ4A	MTR HP	MTR FLA	VOLTS / PH/ HZ	HEAT PACK INSTALLED	SINGLE CIRCUIT			DUAL CIRCUIT					
					HEATER AMPS	MCA	MOCP	HTR. AMPS	MCA	MOCP	HTR. AMPS	MCA	MOCP
								L1/L2	L1/L2	L1/L2	L3/L4	L3/L4	L3/L4
024L05	1/3	2.8	208/230/1/60	MKFCEH0501N05	18.1/20.0	27.8/30.0	30/30	N/A	N/A	N/A	N/A	N/A	N/A
036L10	1/2	4.1	208/230/1/60	MKFCEH0901N10	36.2/40.0	50.4/55.1	60/60	N/A	N/A	N/A	N/A	N/A	N/A
048L10	3/4	6.0	208/230/1/60	MKFCEH0901N10	36.2/40.0	52.8/57.5	60/60	N/A	N/A	N/A	N/A	N/A	N/A
060L15	3/4	6.0	208/230/1/60	MKFCEH1501F15	54.2/59.9	75.3/82.4	80/90	36.2/40.0	52.8/57.5	60/60	18.1/20.0	22.6/25.0	25/25
061L15	3/4	6.0	208/230/1/60	MKFCEH1501F15	54.2/59.9	75.3/82.4	80/90	36.2/40.0	52.8/57.5	60/60	18.1/20.0	22.6/25.0	25/25

ELECTRICAL DATA FOR UNITS WITHOUT ELECTRICAL HEAT

MODEL NO.	MTR HP	MTR FLA	VOLTS/PH/HZ	SINGLE CIRCUIT		BRANCH CIRCUIT MIN WIRE SIZE* AWG
				MCA	MAXIMUM OVERCURRENT PROTECTION	
FZ4ANP024L00	1/3	2.8	208/230/1/60	3.5	15	14
FZ4ANP036L00	1/2	4.1	208/230/1/60	5.1	15	14
FZ4ANP048L00	3/4	6.0	208/230/1/60	7.5	15	14
FZ4ANP060L00	3/4	6.0	208/230/1/60	7.5	15	14
FZ4ANP061L00	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 sizes shown in table above per NEC Article 336−26.
NOTE: If branch circuit wire length exceeds 100 ft (30 m), consult NEC 215−2 to determine maximum wire length. Use 2% voltage drop.
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

*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%.

**Field convertible to 3 phase.

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

NOTES:

1. For fan coil sizes 024–036.
2. For fan coil sizes 048–061.
3. Single circuit application of F15 and F20 heaters requires single–point wiring kit accessory.

HEATER ELECTRICAL DATA

ELECTRIC HEATER INTERNAL PROTECTION

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

*All circuit breakers are 2 pole.

When using units with 20–, 24–, and 30–kW electric heaters, maintain a 1–in. (25mm) clearance from combustible materials to discharge plenum and ductwork and maintain a distance of 36–in (914mm) from the unit. Use an accessory downflow base to maintain proper clearance on downflow installations. Use flexible connectors between ductwork and unit to prevent transmission of vibration. When electric heater is installed, use heat resistant material for flexible connector between ductwork and unit at discharge connection. Ductwork passing through unconditioned space must be insulated and covered with vapor barrier.

ACCESSORIES

ITEM		ACCESSORY PART NO.*	FAN COIL SIZE USED WITH
1.	Disconnect Kit	KFADK0201DSC	All single phase 3kW – 10kW heaters
2.	Downflow Base Kit	KFACB0101CFB	024
		KFACB0201CFB	036
		KFACB0301CFB	048, 060
		KFACB0401CFB	061
3.	Downflow Conversion Kit †	KFADC0201SLP	Slope Coil Units—, 024, 036
		KFADC0401ACL	A–Coil Units— 048, 060, 061
4.	Downflow/Horizontal Conversion Gasket Kit	KFAHD0101SLP	All
5.	Horizontal Water Management Kit (25 pack) ‡	KFAHC0125AAA	A–Coil Units— 048, 060, 061
6.	Single–Point Wiring Kit	KFASP0101SPK	Only with 15– and 20–kW Fused Heaters
7.	Filter Kit (12 Pack)	KFAFK0112SML	024
		KFAFK0212MED	036
		KFAFK0312LRG	048, 060
		KFAFK0412XXL	061
8.	Fan Coil Filter Cabinet (Fan Coil Filter Media)	FNCCABCC0014 (FILXXFNC0014)	024
		FNCCABCC0017 (FILXXFNC0017)	036
		FNCCABCC0021 (FILXXFNC0021)	048, 060
9.	PVC Condensate Trap Kit (50 pack)	KFAET0150ETK	All
10.	Air Cleaner 240–volt Conversion Kit	KEAVC0201240	All
11.	Standard Filter Rack Kit	KFAFR0101FRM	024
		KFAFR0201FRM	036
		KFAFR0301FRM	048, 060
		KFAFR0401FRM	061
12.	TXV Kit R–22, Aluminum Coils Only	KSBTX0601HSO	024L, 036L
		KSBTX0701HSO	048L
		KSBTX1001HSO	060L, 061L
13.	Door Gasket Kit **	344994–751	All

* Factory authorized and listed, field–installed.
** This kit is for replacement of factory installed gaskets if they are damaged or removed from the fan coil.
† KFAHD0101SLP must also be purchased for downflow applications.
‡ KFAHD0101SLP must also be purchased for downflow or horizontal applications.

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. (25mm) 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. **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 horizontal applications.
5. **Horizontal Applications − Water Management Kit**
   This kit provides proper installation of fan coils under conditions of high static pressure and high relative humidity.
   SUGGESTED USE: All fan coils.
6. **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 two 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.
7. **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.
8. **Fan Coil Filter Cabinet**
   This cabinet is mounted to the fan coil on the return air end and designed to slip over the outer fan coil casing. The cabinets are insulated using the same insulation as production fan coils. They are designed for the removal of particulates from indoor air using FILXXFNC00(14, 17, 21, 24) media filter cartridges. These fan coil media filter cartridge kits are designed for the removal of particles from indoor air. The cartridge is installed in the return air duct next to the air handler or further upstream.
   SUGGESTED USE: All fan coils.
9. **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.
10. **Air Cleaner 240−volt Conversion Kit**
    The AIRA electronic air cleaner comes ready for 115−v operation.
    REQUIRED USE: This kit is required when running 240−volt circuit to air cleaner.
11. **Standard Filter Rack Kit**
    This kit mounts in fan coil filter rack area and modifies the existing filter rack to support standard 1−in. filter sizes.
    SUGGESTED USE: Fan coils using standard filter sizes.
12. **TXV KIT**
    This kit is designed to add TXVs to piston fan coils or convert Puron (R−410A) fan coils to R−22 TXVs.
13. **Door Gasket Kit**
    This kit consists of specific adhesive−backed foam strips which are applied to the unit door and frame, limiting air leakage.

NOTES:

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Replaces: PDSFZ4ANP−02