



APARTMENT FAN COILS

ALL MODELS

- 1-1/2, 2, 2-1/2, and 3 Tons
- Upflow application only
- Accessory field-installed electric heat kits available in 5, 7.5, or 10 kW
- 208/230-1-60 supply voltage
- Front return convertible to bottom return
- Cabinet exterior is galvanized sheet metal
- Sealed to meet 2% cabinet leakage when tested at 1.0 in. w.c. of static pressure
- Fully insulated for conditioned space (not to be installed in unconditioned spaces)

FMA4P

- For use with R-410A refrigerant or R-22 with accessory R-22 TXV

FMA4X

- R-410A refrigerant TXV standard or for use with R-22 with accessory R-22 TXV

PERFORMANCE

- PSC motor on all FMA4P
- ECM motor on all FMA4X
- Motor suspended on rubber grommets for quieter operation
- Fresh air intake holes (capped from factory)

EASY TO INSTALL AND SERVICE

- Units fits between standard stud spacings
- All service access is located in the front
- Primary and secondary drain connections exit from the bottom
- No return-air ductwork required in specific applications
- Wall handing brackets included with the unit

WARRANTY*

- 5 year parts limited warranty

* For owner occupied, residential applications only. See warranty certificate for complete details and restrictions, including warranty coverage for other applications.



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.ahrirectory.org.



Model	Size	Tons	Nominal BTU	CFM (L/s)		Dimensions H x W x D in. (mm)	Filter Size in. (mm)	Ship Wt. lbs. (kg)
				Min	Max			
FMA4P & FMA4X	1800A	1-1/2	18,000	450 (212)	675 (319)	36-1/2 x 20-1/2 x 15 (928 x 521 x 381)	16 x 20 (406 x 508)	99 (45)
	2400A	2	24,000	600 (283)	900 (425)			99 (45)
	3000A	2-1/2	30,000	750 (354)	1125 (531)	39-1/2 x 22 x 19 (1004 x 559 x 483)	20 x 20 (508 x 508)	121 (55)
	3600A	3	36,000	900 (425)	1350 (637)			121 (55)

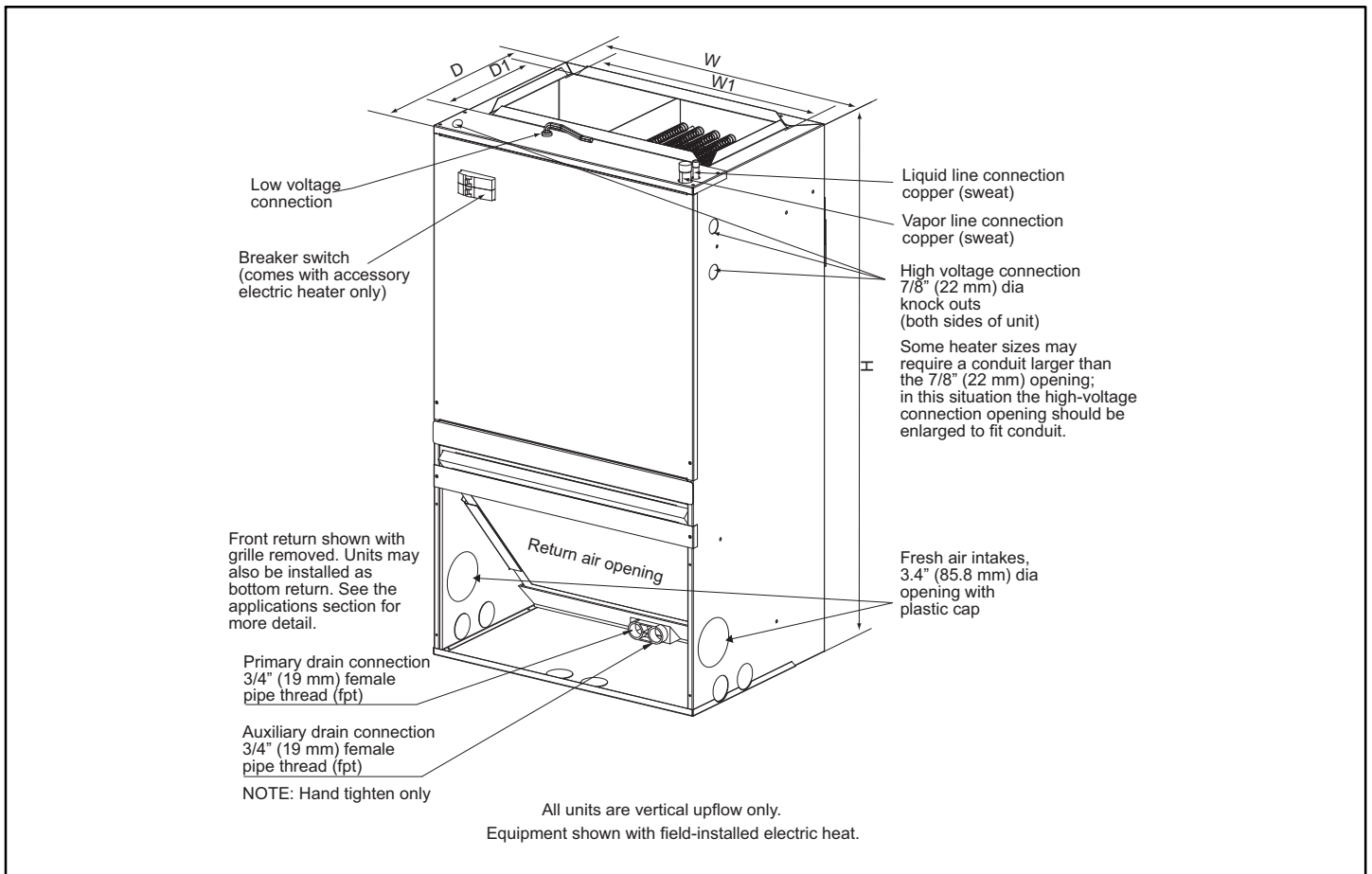
FAN COIL MODEL NUMBER IDENTIFICATION GUIDE

	F	M	A	4	P	2400	A
F = Fan Coil	TYPE			INSTALLATION TYPE		NOMINAL CAPACITY	
M = Multi-Family							
A = Apartment Upflow						SALES CODE / FEATURES	
4 = Environmentally Sound R-410A				REFRIGERANT			
P = R-410A Piston						NOMINAL CAPACITY	
X = R-410A TXV Standard				METERING DEVICE			
1800 = 18,000 BTUH = 1-1/2 tons						NOMINAL CAPACITY	
2400 = 24,000 BTUH = 2 tons							
3000 = 30,000 BTUH = 2-1/2 tons						NOMINAL CAPACITY	
3600 = 36,000 BTUH = 3 tons							
A = Standard						SALES CODE / FEATURES	

ELECTRIC HEATER MODEL NUMBER IDENTIFICATION GUIDE

	EHK	2	05	B
EHK = Electric Heater Kit	NOMINAL HEAT VALUE			NOMINAL HEAT VALUE
Sales Code				
05 = 5 kW				NOMINAL HEAT VALUE
08 = 7.5 kW				
10 = 10 kW				NOMINAL HEAT VALUE
Engineering Code				

DIMENSIONS



DIMENSIONS						
Model Size	Height (H) in. (mm)	Width (W) in. (mm)	Width 1 (W1) in. (mm)	Length (D) in. (mm)	Length (D1) in. (mm)	Unit/Shipping Weight - lbs (kg)
18	36-1/2 (928)	20-1/2 (521)	17-2/5 (442)	15 (381)	9-1/2 (242)	88/99 (40/45)
24	36-1/2 (928)	20-1/2 (521)	17-2/5 (442)	15 (381)	9-1/2 (242)	88/99 (40/45)
30	39-1/2 (1004)	22 (559)	18-4/5 (478)	19 (483)	9-1/2 (242)	110/121 (50/55)
36	39-1/2 (1004)	22 (559)	18-4/5 (478)	19 (483)	9-1/2 (242)	110/121 (50/55)

REQUIRED CLEARANCES – ALL MODELS inches (mm)			
No Heaters	All Sides		0
	From Supply Duct		0
With Heaters	All Sides		0
	From Supply Duct		0

PHYSICAL DATA

FMA4P	Unit Size			
	18	24	30	36
Nominal Cooling Capacity (BTUH)	18,000	24,000	30,000	36,000
COIL				
R410—A - Refrigerant metering Device Piston*	50 (1.27mm)	57 (1.45mm)	70 (1.78mm)	72 (1.83mm)
Rows/Fins Per In.	17	17	17	17
Face Area Ft ²	2.149	2.149	2.955	2.955
Coil Configuration	Slope			
BLOWER & MOTOR				
Air Discharge	Upflow			
Blower Type	Direct Drive			
CFM (Nominal)	600	800	1000	1200
Motor Type	PSC	PSC	PSC	PSC
Motor HP	1/6	1/4	1/3	1/2
Rated RPM	1075	1075	1075	1075
Motor Speeds	3	3	3	3
FILTER				
Field Installed – in (mm)	16x20x1 (406x508x25)	16x20x1 (406x508x25)	20x20x1 (508x508x25)	20x20x1 (508x508x25)
CONNECTIONS (Sweat)				
Suction – in. (mm)	3/4 In. (19 mm)			
Liquid – in. (mm)	3/8 In. (9.5 mm)			
Condensate (FPT) – in. (mm)	3/4 In. (19 mm)			
ELECTRICAL DATA				
Voltage	208/230	208/230	208/230	208/230
Hertz	60	60	60	60
Circuit Amps	0.8	1.0	1.28	1.8
Minimum Circuit Ampacity	1	1.3	1.6	2.3
Maximum Circuit Protector	15 (A)	15 (A)	15 (A)	15 (A)

* The piston included with the fan coil is unique to this product and **CANNOT** be replaced with the piston shipped with outdoor unit. Refer to the AHRI ratings to check if your combination can use the piston shipped with the unit or requires an accessory TXV.

PERFORMANCE DATA

PSC – AIRFLOW PERFORMANCE (STANDARD CFM)

MODEL FMA4P	BLOWER SPEEDS	EXTERNAL STATIC PRESSURE (in. w.c.)							
		0	0.1	0.2	0.3	0.4	0.5	0.6	0.7
18	High	776	733	695	653	610	564	525	464
	Med	661	624	585	546	502	454	415	354
	Low	565	529	487	448	405	353	299	244
24	High	917	881	830	790	739	687	631	564
	Med	819	785	745	703	654	604	544	480
	Low	668	631	591	551	506	464	403	343
30	High	1236	1176	1115	1064	1000	936	861	793
	Med	1113	1065	1014	962	908	842	772	701
	Low	935	894	852	807	755	694	631	561
36	High	1350	1292	1228	1167	1108	1045	981	902
	Med	1266	1198	1139	1088	1029	970	905	831
	Low	1115	1066	1015	966	918	861	801	722

■ – Shaded boxes represent airflow outside the required 300-450 cfm/ton.

NOTES:

- Airflow data includes use with electric heat and standard 1" fiberglass filter, and is measured in standard cfm.
- Airflow data is with no return grill. When using a return grill on 18 & 24 sizes, decrease numbers above by approx. 10 cfm. For 30 & 36 sizes, decrease numbers above by approx. 50 cfm.
- Airflow is equivalent for front or bottom return configurations.

PHYSICAL DATA

FMA4X	Unit Size			
	18	24	30	36
Nominal Cooling Capacity (BTUH)	18,000	24,000	30,000	36,000
COIL				
Rows/Fins Per In.	17	17	17	17
Face Area Ft ²	2.149	2.149	2.955	2.955
Coil Configuration	Slope			
BLOWER & MOTOR				
Air Discharge	Upflow			
Blower Type	Direct Drive			
CFM (Nominal)	600	800	1000	1200
Motor Type	ECM	ECM	ECM	ECM
Motor HP	1/3	1/3	1/2	1/2
Rated RPM	1050	1050	1050	1050
Motor Speeds	5	5	5	5
FILTER				
Field Installed – in (mm)	16x20x1 (406x508x25)	16x20x1 (406x508x25)	20x20x1 (508x508x25)	20x20x1 (508x508x25)
CONNECTIONS (Sweat)				
Suction – in. (mm)	3/4 In. (19 mm)			
Liquid – in. (mm)	3/8 In. (9.5 mm)			
Condensate (FPT) – in. (mm)	3/4 In. (19 mm)			
ELECTRICAL DATA				
Voltage	208/230	208/230	208/230	208/230
Hertz	60	60	60	60
Circuit Amps	1.9	1.9	2.7	2.7
Minimum Circuit Ampacity	2.4	2.4	3.4	3.4
Maximum Circuit Protector	15	15	15	15

PERFORMANCE DATA

ECM – AIRFLOW PERFORMANCE (STANDARD CFM)

MODEL FMA4X	BLOWER SPEEDS	EXTERNAL STATIC PRESSURE (in w.c.)								
		0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
18	Tap (5)	884	854	833	803	771	737	700	668	632
	Tap (4)	796	767	737	709	675	645	612	579	538
	Tap (3)	714	681	654	616	588	555	527	494	459
	Tap (2) - Factory	653	619	584	558	525	494	463	434	396
	Tap (1)	581	545	511	472	440	407	374	344	329
24	Tap (5)	884	854	833	803	771	737	700	668	632
	Tap (4) - Factory	796	767	737	709	675	645	612	579	538
	Tap (3)	714	681	654	616	588	555	527	494	459
	Tap (2)	653	619	584	558	525	494	463	434	396
	Tap (1)	581	545	511	472	440	407	374	344	329
30	Tap (5)	1309	1272	1236	1200	1164	1125	1088	1051	1010
	Tap (4)	1122	1088	1056	1022	986	950	915	877	836
	Tap (3)	1109	1073	1038	1003	973	937	901	867	828
	Tap (2) - Factory	1010	975	941	904	869	835	793	751	704
	Tap (1)	936	899	862	833	793	755	710	664	619
36	Tap (5)	1309	1272	1236	1200	1164	1125	1088	1051	1010
	Tap (4) - Factory	1122	1088	1056	1022	986	950	915	877	836
	Tap (3)	1109	1073	1038	1003	973	937	901	867	828
	Tap (2)	1010	975	941	904	869	835	793	751	704
	Tap (1)	936	899	862	833	793	755	710	664	619

■ – Shaded boxes represent airflow outside the required 300-450 cfm/ton.

NOTES:

- Airflow based upon dry coil at 230V with no electric heat and factory-approved filter. For FMA4X and WAXA, airflow at 208V is approximately the same as 230V because the multi-tap ECM motor is a constant torque motor. The torque doesn't drop off at the speeds in which the motor operates.
- Airflow is equivalent for front or bottom return configurations.

REQUIRED CFM RANGE

Size	CFM	
	Min	Max
18	450	675
24	600	900
30	750	1125
36	900	1350

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
18	525	72 (22)	38	18	0.00	35	17	0.00	31	15	0.00	27	14	0.00	22	12	0.00
		67 (19)	32	19	0.00	28	18	0.00	25	16	0.00	20	14	0.00	15	12	0.00
		62 (17)	26	20	0.00	22	18	0.00	19	17	0.01	15	15	0.07	13	13	0.21
	600	72 (22)	42	20	0.00	38	18	0.00	34	17	0.00	30	15	0.00	24	13	0.00
		67 (19)	34	21	0.00	31	19	0.00	26	17	0.00	22	16	0.00	17	14	0.01
		62 (17)	28	22	0.01	24	20	0.01	20	19	0.01	17	17	0.08	14	14	0.22
	675	72 (22)	45	21	0.00	41	20	0.00	37	18	0.00	32	16	0.00	26	14	0.00
		67 (19)	37	23	0.01	33	21	0.01	29	19	0.01	24	17	0.01	18	15	0.01
		62 (17)	30	24	0.01	26	22	0.01	22	20	0.01	19	19	0.10	16	16	0.24
24	700	72 (22)	46	22	0.00	43	20	0.00	38	19	0.00	33	17	0.00	27	15	0.00
		67 (19)	38	24	0.01	35	22	0.01	30	20	0.01	25	18	0.01	19	16	0.01
		62 (17)	31	25	0.01	27	24	0.01	23	22	0.02	20	20	0.11	17	17	0.24
	800	72 (22)	50	24	0.00	46	22	0.00	41	20	0.01	36	18	0.01	30	16	0.01
		67 (19)	41	26	0.01	37	24	0.01	32	22	0.01	27	20	0.01	21	18	0.02
		62 (17)	34	28	0.01	30	26	0.01	25	25	0.03	22	22	0.14	19	19	0.26
	900	72 (22)	53	25	0.01	48	24	0.01	44	22	0.01	38	20	0.01	32	17	0.01
		67 (19)	44	28	0.01	39	26	0.01	34	24	0.01	29	22	0.02	22	19	0.02
		62 (17)	36	30	0.02	32	28	0.02	27	27	0.05	24	24	0.16	21	21	0.28
30	875	72 (22)	67	33	0.00	61	30	0.00	54	27	0.00	46	23	0.00	37	20	0.00
		67 (19)	55	34	0.01	49	31	0.01	41	28	0.01	33	24	0.01	23	20	0.01
		62 (17)	44	35	0.01	38	32	0.01	30	28	0.01	24	24	0.07	20	20	0.23
	1000	72 (22)	74	37	0.00	67	33	0.00	59	30	0.00	50	26	0.00	40	22	0.01
		67 (19)	61	38	0.01	54	34	0.01	46	31	0.01	37	27	0.01	25	22	0.01
		62 (17)	49	39	0.01	42	35	0.01	34	31	0.02	27	27	0.08	22	22	0.24
	1100	72 (22)	79	39	0.00	72	36	0.00	63	32	0.01	54	28	0.01	43	24	0.01
		67 (19)	65	41	0.01	57	37	0.01	49	33	0.01	39	29	0.01	28	24	0.02
		62 (17)	52	42	0.02	45	38	0.02	36	34	0.02	29	29	0.09	24	24	0.25
36	1050	72 (22)	73	36	0.00	67	33	0.00	59	29	0.01	51	26	0.01	41	22	0.01
		67 (19)	60	38	0.01	54	34	0.01	46	31	0.01	37	27	0.01	27	23	0.02
		62 (17)	49	39	0.01	42	36	0.01	34	32	0.02	28	28	0.09	23	23	0.24
	1200	72 (22)	80	39	0.00	73	36	0.00	65	32	0.01	55	28	0.01	45	24	0.01
		67 (19)	66	41	0.02	58	38	0.02	50	34	0.02	41	30	0.02	30	26	0.02
		62 (17)	53	43	0.02	46	40	0.02	38	36	0.02	32	32	0.11	26	26	0.25
	1350	72 (22)	85	42	0.00	78	39	0.01	69	35	0.01	59	31	0.02	48	27	0.02
		67 (19)	71	45	0.02	63	41	0.02	54	37	0.02	44	33	0.02	32	28	0.03
		62 (17)	57	47	0.02	49	44	0.02	41	39	0.03	35	35	0.12	29	29	0.26

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

SENSIBLE CAPACITY (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)

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.

ESTIMATED SOUND POWER LEVEL (dBA)

UNIT SIZE	CONDITIONS		OCTAVE BAND CENTER FREQUENCY						
	CFM	Ext Static Pressure	63	125	250	500	1000	2000	4000
18	600	0.25	46	52.1	48.9	51.8	52.5	51.7	49.7
24	800	0.25	54.1	57.1	58.6	59	61.5	59.8	57
30	1000	0.25	51.6	52.6	52.6	53.3	56.1	52.8	59.7
36	1200	0.25	52.6	52.3	54.6	54.3	57.2	53.8	50.4

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

OPTIONAL FIELD-INSTALLED ELECTRIC HEAT PACKAGES

HEATER PART NUMBER WITH TDR	SIZES USED WITH	NOMINAL kw @ 240V	HEATER VOLTS-PHASE (60 Hz)	HEATER CAPACITY (MBH)		MIN. CIRCUIT AMPACITY		MAX. FUSE OR BREAKER (HACR) AMPACITY		APPROX. SHIP WGT. LBS. (kg)
				208	240	208	240	208	240	
EHK205B	18/24/30/36	5	208/240-1	14.8	17.1	22.6	26.1	30	30	5.1 (2.3)
EHK208B	18/24/30/36	7.5	208/240-1	22.2	25.6	33.9	39.1	50	50	5.1 (2.3)
EHK210B	18/24/30/36	10	208/240-1	29.6	34.1	45.2	52.1	60	60	5.1 (2.3)

OTHER ACCESSORIES

Kit Number	Description	Used on sizes
AMWK001WG	Louvered Wall Panel with Frame (6 pack)	18, 24
AMWK002WG	Louvered Wall Panel with Frame (6 pack)	30, 36
NAEA20101TX	TXV Kit R-22	18, 24, 30, 36
NAEA40501TX	TXV Kit R-410A	18, 24, 30
NAEA40601TX	TXV Kit R-410A	36
EBAC01CTK	PVC Condensate Trap Kit (50 pack)	All
NASA00110RA	Return Air Opening Grille (10 pack)	18, 24
NASA00210RA	Return Air Opening Grille (10 pack)	30, 36