



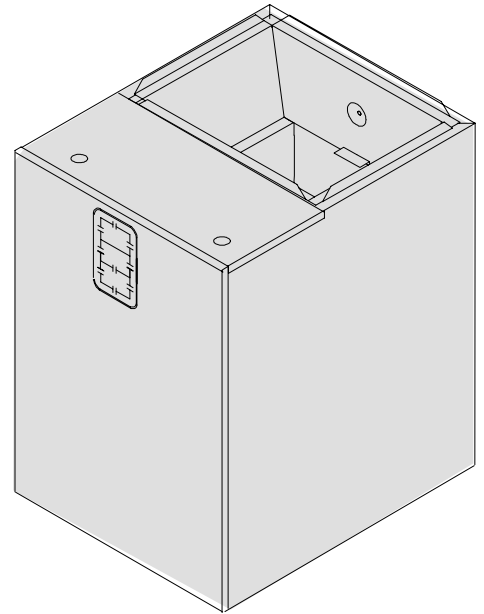
# MF Series SPECIFICATIONS

MODULAR ELECTRIC FURNACE  
2 THRU 5 TONS AIRFLOW  
ACCESSORY 5 KW - 30 KW ELECTRIC HEAT

## MODULAR ELECTRIC FURNACE FEATURES

### FEATURES

- Modular Electric Furnace, Air Conditioning or Heat Pump ready
- Upflow or horizontal left or right airflow
- Downflow applications require Subbase Accessory
- Prepainted galvanized steel cabinet
- Internally lined with 1/2" Tuf-Skin II insulation
- Electronic control board with quick connect receptacle for electric heat
- Direct drive slide-out blower assembly
- Three speed PSC blower motor
- Matches with AC and HP Cased Coils. Hot Water may be used but doesn't match case size.
- Accepts accessory slip-in electric heaters\*
- Accepts accessory two stage outdoor thermostats



### Accessory Heater

- UL listed for sale in U.S.A. and Canada
- Easy to install with simple plug in connection to Electric Furnace
- Designed for 208/240 Volt
- Single & Three phase models
- Breakerless 5, 7.5 and 10 nominal KW models available
- 5, 7.5, 10, 15, 20, 25 and 30 nominal KW models available with Circuit Breakers
- Auto-reset high temperature limits
- \* Requires No Heat Kit if installed without electric heat



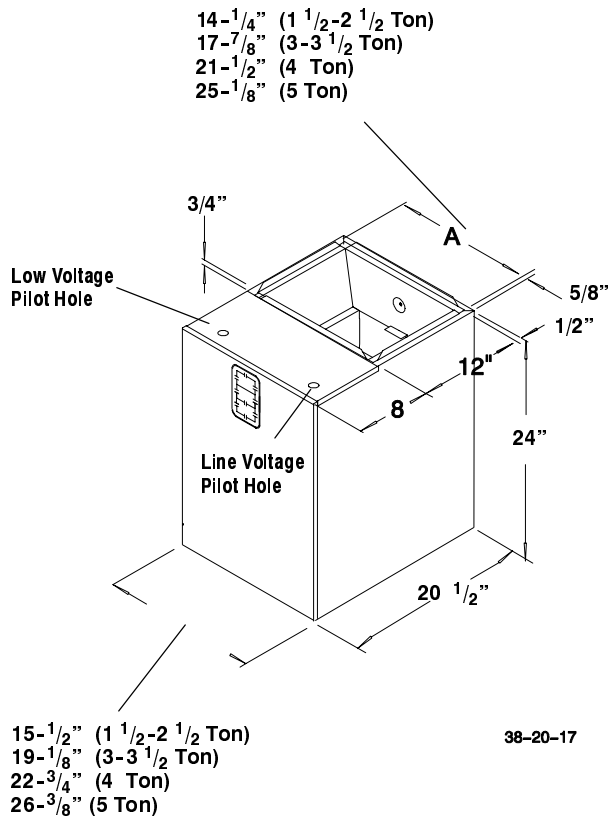
International Comfort Products Corporation (USA)  
650 Heil-Quaker Ave.  
Lewisburg, Tennessee 37091

442 31 2202 00  
January, 1999

## UNIT SPECIFICATIONS - ELECTRIC FURNACE

Model Number		MF08B1500A	MF12F1900A	MF16J2200A	MF20N2600A
<b>Application</b>		Upflow / Horizontal / Downflow *			
<b>Electrical</b> Volts -Phase -Hz.		208 / 230 - 1 - 60			
<b>Data **</b>	Minimum Circuit Ampacity	7.5	7.5	7.5	7.5
	Time Delay Fuse (Amps)	15			
	Maximum Fuse or Breaker Size (Amps)	15			
<b>Blower</b>	Size	DD10 - 7	DD10 - 8	DD10 - 9	DD10 - 9
<b>Data</b>	Horsepower - Speed	1/3 - 3	1/2 - 3	1/2 - 3	3/4 - 3
	Full Load / Lock Rotor Amps	2.2 / 4.1	4.0 / 6.8	4.0 / 6.8	6.0 / 13.2
<b>Transformer</b>		40 VA			
<b>Weight</b>	Shipping / Net (Lbs.)				

\* Kit required for Accessory Subbase      \*\* Disregard if electric heat is added. Refer to Electric Heat table.



CLEARANCES	
<b>NO HEATERS</b>	
All Sides .....	0"
From Supply Duct .....	0"
Recommended Service From Front .....	20"
(Service for blower, filter if installed)	
<b>WITH HEATERS</b>	
All Sides .....	0"
From First Three Feet of Supply Duct to Combustibles .....	1"
From Duct after Three Feet .....	0"
Recommended Service From Front .....	20"
(Service for blower, filter, heaters if installed)	

**Airflow Based on no coil, no filter, no electric heat. Deduct heater static shown in heater static table. Deduct filter static shown in filter static table. Deduct coil static, See Coil Specification Sheet. Deduct .10 for Horizontal Drain Pan Kit. Deduct .20 for Downflow Subbase Kit.**

MF08		SP IN. WG.								
SPEED	Volts	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	
LOW	230V	1053	1013	965	911	856	761	654	552	
	208V	863	827	788	725	641	568	492	381	
MED	230V	1333	1281	1221	1150	1060	990	857	743	
	208V	1156	1115	1059	997	941	853	738	618	
HIGH	230V	1553	1486	1411	1328	1227	1106	1032	865	
	208V	1394	1336	1272	1195	1096	1023	924	774	

MF16		SP IN. WG.								
SPEED	Volts	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	
LOW	230V	1103	1088	1067	1040	994	921	849	749	
	208V	872	847	820	788	750	696	630	530	
MED	230V	1500	1493	1470	1438	1383	1303	1143	993	
	208V	1229	1223	1198	1169	1123	1031	926	798	
HIGH	230V	1912	1879	1830	1771	1684	1577	1429	1154	
	208V	1629	1609	1584	1545	1478	1393	1214	1058	

MF12		SP IN. WG.								
SPEED	Volts	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	
LOW	230V	1103	1092	1086	1060	1024	973	906	803	
	208V	903	893	877	858	830	781	728	642	
MED	230V	1498	1473	1451	1409	1352	1277	1173	1044	
	208V	1246	1239	1222	1202	1160	1098	1014	906	
HIGH	230V	1860	1815	1760	1685	1596	1491	1352	1178	
	208V	1602	1584	1553	1501	1432	1347	1241	1096	

MF20		SP IN. WG.								
SPEED	Volts	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	
LOW	230V	1673	1670	1669	1643	1587	1461	1298	1081	
	208V	1320	1306	1289	1237	1147	1006	810	576	
MED	230V	2060	2030	1980	1912	1835	1723	1594	1444	
	208V	1676	1656	1613	1531	1381	1201	986	683	
HIGH	230V	2554	2459	2352	2242	2116	1966	1809	1606	
	208V	2420	2334	2244	2137	2021	1875	1732	1558	

FILTER STATIC PRESSURE DROP										
MODEL	*WASHABLE FILTER SIZE	DISPOSABLE FILTER SIZE	CFM							
			600	800	1000	1200	1400	1600	1800	2000
MF08	14 1/4 X 20 1/4	14 X 20	0.05	0.09	0.13	0.19	---	---	---	---
MF12	17 3/4 X 20 1/4	18 X 20	----	----	0.09	0.12	0.17	0.22	---	---
MF16	21 1/4 X 20 1/4	20 X 20	----	----	---	---	0.12	0.15	0.19	---
MF20	24 3/4 X 20 1/4	25 X 20	----	----	---	---	0.09	0.11	0.14	0.18

HEATER STATIC TABLE							
CFM	HEATER KW / STATIC DROP						
	5	7.5	10	15	20	25	30
600	.01	.01	.01				
800	.01	.01	.01	.01			
1000	.01	.01	.01	.01	.02		
1100	.01	.01	.01	.02	.02		
1200	.01	.01	.01	.02	.02		
1300	.01	.02	.02	.02	.02		
1400	.01	.02	.02	.02	.03	.03	
1500	.01	.02	.02	.02	.03	.04	
1600	.01	.02	.02	.03	.03	.04	.04
1700	.01	.02	.02	.03	.03	.04	.05
1800	.01	.02	.02	.03	.04	.04	.05
1900	.01	.02	.02	.03	.04	.05	.06
2000	.01	.02	.02	.03	.04	.05	.06

DO NOT OPERATE IN THIS AREA  
CFM / KW LIMIT EXCEEDED

**Deduct heater static shown in heater static table. See Airflow next page.**

**UNIT SPECIFICATIONS - No Heat Kit**

No Heat Model	Supply Circuit			Supply Circuit No.	Maximum Motor AMPS.	Total AMPS.	Branch Circuit Ampacity	Maximum Overcurrent Protective Device (AMPS.)	Recommended				
	Volts	Phase	Hertz						Supply Wire 75° C. Copper			Ground Wire	
									No.	Size	Max. Length (Ft)	No.	Size
AMF001NH	240	1	60	Single	6.0	6.0	7.5	15	2	14	104	1	14
	208	1	60	Single	6.0	6.0	7.5	15	2	14	90	1	14

**ELECTRICAL HEATER DATA TABLE: (Single Phase)**

Heater Model	Supply Voltage	Nomi-Heating BTUH	Heat-KW	KW Per Element	Supply Circuit No.	Heater KW Per Circuit	Heater AMPS.	Maxi-Motor AMPS.	Total AMP	Branch Circuit Ampacity	Maximum Overcurrent Protective Device (AMPS.)	Recommended				
												Supply Wire 75 ° C. Copper			Ground Wire	
												No.	Size	Max. Length (F)	No.	Siz
AMFK05AH	240	16,832	4.8	4.8	Single	4.8	20.0	6.0	26.0	32.5	35	2	10	61	1	10
	208	12,287	3.6	3.6	Single	3.6	17.3	6.0	23.3	29.2	30	2	10	59	1	10
AMFK07AH	240	24,573	7.2	3.6	Single	7.2	30.0	6.0	36.0	45.0	45	2	8	70	1	10
	208	18,430	5.4	2.7	Single	5.4	26.0	6.0	32.0	40.0	40	2	8	68	1	10
AMFK10AH	240	32,765	9.6	4.8	Single	9.6	40.0	6.0	46.0	57.5	60	2	6	85	1	10
	208	24,574	7.2	3.6	Single	7.2	34.7	6.0	40.7	50.8	60	2	6	83	1	10
AMFK14AH	240	49,147	14.4	4.8	Single	14.4	60.0	6.0	66.0	82.5	90	2	4	94	1	8
					Mult. 1	9.6	40.0	6.0	46.0	57.5	60	2	6	50	1	10
					Mult. 2	4.8	20.0	0.0	20.0	25.0	25	2	12	1	10	
	208	36,860	10.8	3.6	Single	10.8	52.0	6.0	58.0	72.5	80	2	4	93	1	8
					Mult. 1	7.2	34.7	6.0	40.7	50.8	60	2	6	50	1	10
					Mult. 2	3.6	17.3	0.0	17.3	21.7	25	2	12	1	10	

**ELECTRICAL HEATER DATA TABLE: (Three Phase)**

Heater Model	Supply Voltage	Nomi-Heating BTUH	Heat-KW	KW Per Element	Supply Circuit No.	Heater KW Per Circuit	Heater AMPS.	Maxi-Motor AMPS.	Total AMP	Branch Circuit Ampacity	Maximum Overcurrent Protective Device (AMPS.)	Recommended				
												Supply Wire 75 ° C. Copper			Ground Wire	
												No.	Size	Max. Length (F)	No.	Siz
AMFH10AH	240	32,765	9.6	3.2	Single	9.6	23.1	6.0	29.1	36.4	40	3	8	100	1	10
	208	24,574	7.2	2.4	Single	7.2	20.0	6.0	26.0	32.5	35	3	10	61	1	10
AMFK15AH	240	49,147	14.4	4.8	Single	14.4	34.6	6.0	40.6	50.8	60	3	6	111	1	10
	208	36,860	10.8	3.6	Single	10.8	30.0	6.0	36.0	45.0	50	3	8	70	1	10
AMFH20AH	240	65,530	19.2	3.2	Single	19.2	46.2	6.0	52.2	65.2	70	3	4	138	1	8
					Mult. 1	9.6	23.1	6.0	29.1	36.4	40	3	8	79	1	10
					Mult. 2	9.6	23.1	0.0	23.1	28.9	30	3	10	1	10	
	208	49,147	14.4	2.4	Single	14.4	40.0	6.0	46.0	57.5	60	3	6	85	1	10
					Mult. 1	7.2	17.3	6.0	23.3	29.2	30	3	10	57	1	10
					Mult. 2	7.2	17.3	0.0	17.3	21.7	25	3	12	1	10	

## HEATER STAGING

HEATER MODEL	VOLTAGE	TOTAL HEAT		1st STAGE (W1)		2nd STAGE (W2)	
		208V	240V	208V	240V	208V	240V
AMFK05AH	208-240/1/60	3.6	4.8	3.6	4.8	-	-
AMFK07AH	208-240/1/60	5.4	7.2	2.7	3.6	2.7	3.6
AMFK10AH	208-240/1/60	7.2	9.6	3.6	4.8	3.6	4.8
AMFK14AH	208-240/1/60	10.8	14.4	7.2	9.6	3.6	4.8
AMFK20AH	208-240/1/60	14.4	19.2	7.2	9.6	7.2	9.6
AMFK25AH	208-240/1/60	18.0	24.0	7.2	9.6	10.8	14.4
AMFK30AH	208-240/1/60	21.6	28.8	7.2	9.6	14.4	19.2
AMFH10AH	208-240/3/60	7.2	9.6	7.2	9.6	-	-
AMFH15AH	208-240/3/60	10.8	14.4	10.8	14.4	-	-
AMFH20AH	208-240/3/60	14.4	19.2	7.2	9.6	7.2	9.6
AMFH25AH	208-240/3/60	18.0	24.0	9.0	12.0	9.0	12.0
AMFH30AH	208-240/3/60	21.6	28.8	10.8	14.4	10.8	14.4

## ACCESSORIES

Model	Description	Use With
AMF001NHA	No Heat Kit	MF08-20
AMFK05AHA* AMFK05AHB	5 KW Single Phase	MF08-20
AMFK07AHA* AMFK07AHB	7 1/2 KW Single Phase	MF08-20
AMFK10AHA* AMFK10AHB	10 KW Single Phase	MF08-20
AMFK14AHB	15 KW Single Phase	MF08-20
AMFK20AHB	20 KW Single Phase	MF12-20
AMFK25AHB	25 KW Single Phase	MF16-20
AMFK30AHB	30 KW Single Phase	MF16-20
AMFK20SPA	Single Point Wiring Kit	15-20 KW
AMFK30SPA	Single Point Wiring Kit	25-30 KW
AMFH10AHB	10 KW Three Phase	MF12-20
AMFH15AHB	15 KW Three Phase	MF12-20
AMFH20AHB	20 KW Three Phase	MF16-20
AMFH25AHB	25 KW Three Phase	MF16-20
AMFH30AHB	30 KW Three Phase	MF16-20

\*AHA Models are Non-Breaker Models

## ACCESSORIES

Model	Description	Use With
AMF002OTA	2 Stage Outdoor Thermostat	7.5 KW & Above
AMF015DFA	Downflow Kit (Subbase)	MF08
AMF019DFA	Downflow Kit (Subbase)	MF12
AMF022DFA	Downflow Kit (Subbase)	MF16
AMF026DFA	Downflow Kit (Subbase)	MF20

## MODEL NUMBER IDENTIFICATION GUIDE

MF	12	F19	00	A
<b>PRODUCT FAMILY</b>				<b>SALES CODE</b>
MF = MODULAR ELECTRIC FURNACE				
			<b>FIELD INSTALLED HEATERS</b>	
<b>NOMINAL AIRFLOW</b>		<b>MATCHING COIL (NOMINAL WIDTH)</b>		
08 = 800 CFM	12 = 1200 CFM			
16 = 1600 CFM	20 = 2000 CFM			

## ACCESSORIES NUMBER IDENTIFICATION GUIDE

A	M	F	001	DP	A
<b>PRODUCT GROUP</b>				<b>SALES CODE</b>	
A = Accessories				<b>PRODUCT IDENTIFIER</b>	
<b>PRODUCT TYPE</b>				<b>PRODUCT IDENTIFIER NUMBER</b>	
C = Cooling H = Heating X = Special					
M = Multi Use (Heating and / or Cooling)				<b>SERIES</b>	
<b>ACCESSORY PRODUCT IDENTIFIER ASSIGNMENT</b>					
AH - Auxiliary Heater		DP - Drain Pan Kit			
OT - Outdoor Thermostat		DF - Downflow Kit			
WF - Washable Filter		NH - No Heat Kit			
SP - Single Point Wiring Kit		TK - Thermostatic Expansion Valve			

