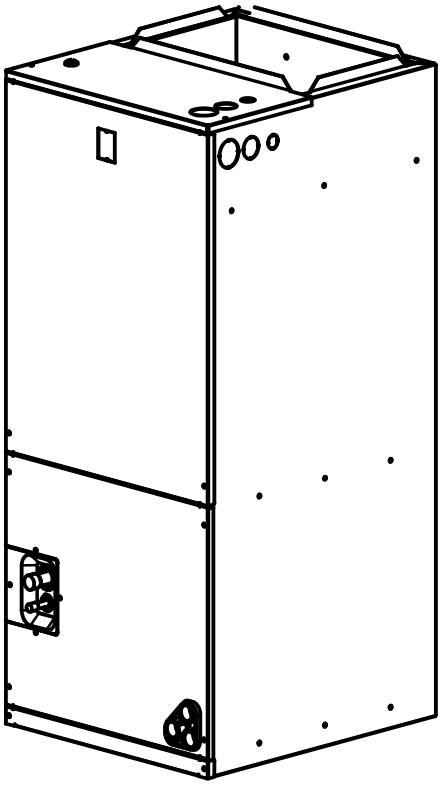
Monarch SERIES

EcoTemp



Product Specifications

WATPM Series Air Handler
Up to 18 SEER
2-3-4-5 Ton Capacity R410A

Contents

Standard Air Handler Features

- Multi-speed ECM blower motor.
- Factory-installed TXV metering.
- Multipositlon Installation -.upflow or horizontal right standard; Field convertible to horizontal left or downflow.
- Multiple electrical entry locations.
- Field Installed heater kits 5, 8, 10, 15, 20KW available as an accessory.
- Dual front panel design for ease of maintenance.
- Blower and coil easy slide out design for ease of maintenance.
- Fully-insulated cabinet design.
- Horizontal and vertical condensate drain pans standard.
- Condensate drain pan is polymer with UVC inhibitor.
- Primary and secondary condensate drain fittings.
- Factory-sealed cabinet certified to achieve 2% or less leakage rate at 1.0 inch water column.
- Integrated filter rack with tool-less door access.
- AHRI and ETL Listed.

AHRI CERTIFIED www.ahridirectory.org Unitary Small AC AHRI Standard 210/240 Certification applies only when the complete system is listed with AHRI.

AHRI CERTIFIED www.ahridirectory.org Unitary Small HP AHRI Standard 210/240 Certification applies only when the complete system is listed with AHRI.

C ETL LISTED US Intertek

5 YEAR PARTS LIMITED WARRANTY

R-410A REFRIGERANT

PRODUCT SPECIFICATIONS

FAN COIL MODEL NUMBER IDENTIFICATION GUIDE

Digit Position:	1,2	3	4	5	6,7	8	9	10
Example Part Number:	**WA**	**T**	**P**	**M**	**24**	**4**	**A**	**1**

WA = Air Handler

T = TXV
E = EEV

P = High Efficency ECM Motor
S = PSC Motor — **MOTOR TYPE**

L = Aluminum Tube,Aluminum Fin Evaporator Coil
M = Copper Tube,Aluminum Fin Evaporator Coil — **INSTALLATION TYPE**

24 = 24000BTU/hr = 2 tons
36 = 36000BTU/hr = 3 tons
48 = 48000BTU/hr = 4 tons
60 = 68000BTU/hr = 5 tons — **NOMINAL COOLING CAPACITY**

4 = R-410A — **REFRIGERANT**

Sales Code

Extra Digit

Specifications

	WATPM244A1	WATPM364A1	WATPM484A1	WATPM604A1
Cooling Capacity				
Nominal Cooling (BTU/h)	24,000	34,600	47,000	57,000
Nominal Heating (BTU/h)	24,000	33,600	46,500	55,000
Blower				
Diameter	10⅝"	11"	11"	11"
Width	8"	10⅝"	10⅝"	10⅝"
Fan Motor				
Horsepower (HP)	1/3	1/2	3/4	3/4
FLA	2.8	4.1	6.0	6.0
Refrigeration System				
Refrigerant Line Size[1]				
Liquid Line Size (“O.D.)	⅜"	⅜"	⅜"	⅜"
Suction Line Size (“O.D.)	¾"	¾"	⅞"	⅞"
Refrigerant Connection Size				
Liquid Valve Size (“O.D.)	⅜"	⅜"	⅜"	⅜"
Suction Line Size (“O.D.)	¾"	¾"	⅞"	⅞"
Expansion Device	TXV	TXV	TXV	TXV
Decibels				
High dB(A)	62	64	67	68
Medium dB(A)	59	60	63	64
Low dB(A)	55	56	59	60
Electrical Data				
Voltage-Phase-Hz	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60
Minimum Circuit Ampacity [2]	3.5	5.1	7.5	7.5
Max. Overcurrent Protection [3]	15	15	15	15
Min / Max Volts	187 / 253	187 / 253	187 / 253	187 / 253
Air Filter Sizes	18’’ x 20’’	20’’ x 22’’	20’’ x 22’’	20’’ x 22’’
Equipment Weight (lbs)	119	161	162	170
Ship Weight (lbs)	132	178	180	188

1 Tested and rated in accordance with AHRI Standard 210/240

2 Wire size should be determined in accordance with National

Electrical Codes; extensive wire runs will require larger wire sizes

3 Must use time-delay fuses or HACR-type circuit breakers of the same size as noted.

Dimensions

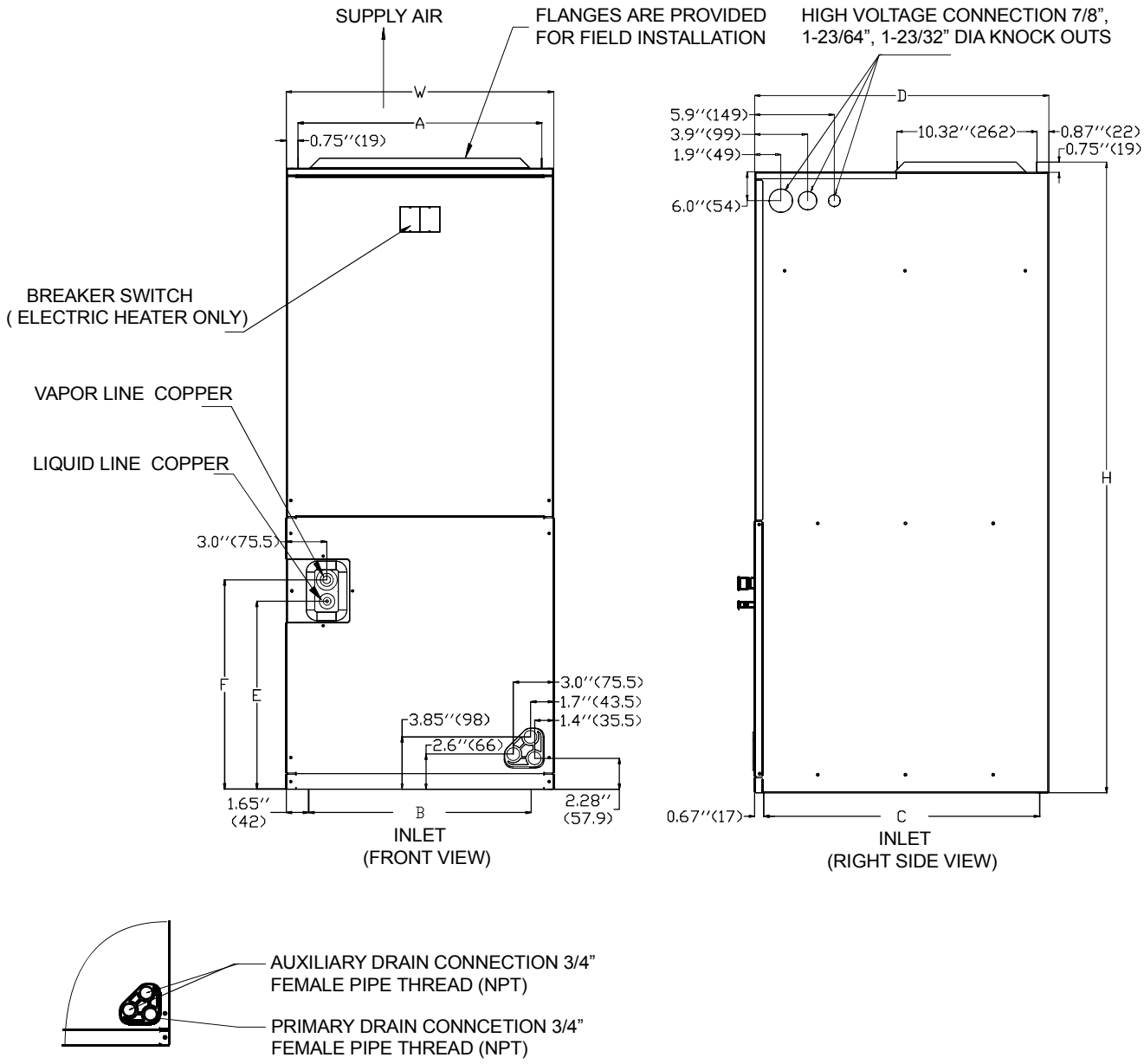


Fig.1 DIMENSIONS

MODEL SIZE	Dimensions inch [mm]			Dimensions inch [mm]				
	"H" IN. [mm]	"W" IN.[mm]	"D" IN.[mm]	"A" IN.[mm]	"B" IN.[mm]	"C" IN.[mm]	"E" IN.[mm]	"F" IN.[mm]
24	46½"[1180]	19⅝"[500]	21⅝"[550]	18"[456]	16⅓"[416]	20⅓"[516]	13¾"[350]	15⅓"[390]
36	54½"[1385]	22"[560]	24"[610]	19½"[496]	18¾"[476]	22¾"[576]	19⅓"[492]	21"[532]
48	54½"[1385]	22"[560]	24"[610]	19½"[496]	18¾"[476]	22¾"[576]	19⅓"[492]	21"[532]
60	54½"[1385]	22"[560]	24"[610]	19½"[496]	18¾"[476]	22¾"[576]	19⅓"[492]	21"[532]

Airflow Performance

Airflow performance data is based on cooling performance with a coil and no filter in place. Select performance table for appropriate unit size external static applied to unit allows operation within the minimum and maximum limits shown in table below for both cooling and electric heat operation.

Model Number	Motor Speed		SCFM(Watts)									
			External Static Pressure-Inches W.C.[kPa]									
			0[0]	0.1[.02]	0.16[.04]	0.2[.05]	0.3[.07]	0.4[.10]	0.5[.12]	0.6[.15]	0.7[.17]	0.8[.20]
24	Tap(5)	SCFM	1016	955	924	914	870	827	790	741	691	657
		Watts	138.8	146.1	155.8	157.1	164.9	174.1	184.8	194.9	201.4	209.2
	Tap(4)	SCFM	955	892	863	853	804	768	729	671	630	---
		Watts	118.1	124.7	134.2	135.4	141.6	151.9	161.8	168.6	178.4	---
	Tap(3) -Factory	SCFM	927	829	791	789	739	701	643	597	---	---
		Watts	109.0	104.6	111.7	114.9	120.5	130.6	136.5	146.6	---	---
	Tap(2)	SCFM	887	766	683	671	631	567	522	465	---	---
		Watts	97.3	87.1	82.4	83.3	93.0	98.6	107.5	111.7	---	---
	Tap(1)	SCFM	829	698	589	547	366	347	277	234	---	---
		Watts	80.5	71.1	63.2	59.5	53.8	60.3	64.1	72.1	---	---
36	Tap(5)	SCFM	1532	1471	1428	1386	1372	1327	1271	1210	1159	1101
		Watts	233	247	262.1	265.6	269.6	274.8	281.2	290.4	298.1	310.3
	Tap(4)	SCFM	1408	1343	1297	1265	1246	1197	1141	1073	1015	880
		Watts	197.1	209.2	213.7	219.3	221.9	227.2	238.3	245.2	255.9	273.1
	Tap(3) -Factory	SCFM	1326	1230	1174	1151	1107	1024	896	828	807	726
		Watts	147.9	164.6	172.2	175.4	183	189.7	201.8	216.9	221.1	224.9
	Tap(2)	SCFM	1236	1175	1100	1075	1029	963	835	736	661	582
		Watts	124.3	130.1	133.1	136.9	142.1	145.7	156.5	167.9	176.4	186.7
	Tap(1)	SCFM	1182	1141	1020	995	944	818	648	553	461	363
		Watts	123.9	112.4	105.1	103.2	106.5	112.1	123.5	129.1	139.6	148.9
48	Tap(5)	SCFM	2032	1985	1948	1935	1901	1854	1810	1761	1711	1656
		Watts	431.2	449.2	446.3	461.6	481.1	495.6	509.5	523.1	537.2	551.4
	Tap(4)	SCFM	1769	1716	1682	1668	1630	1583	1535	1479	1423	1381
		Watts	296.2	310.5	324.3	328.1	338.8	353.3	367.3	318.1	396.4	409.1
	Tap(3) -Factory	SCFM	1516	1470	1427	1413	1378	1307	1252	1198	1147	1030
		Watts	193.1	209.7	221.6	223.1	235.3	248.9	263.2	276.6	290.1	314.1
	Tap(2)	SCFM	1375	1258	1197	1179	1155	1139	1074	1020	964	896
		Watts	150.8	145.8	148.5	158.3	168.9	170.2	183.6	195.8	212.8	224.9
	Tap(1)	SCFM	1337	1195	1165	1044	984	965	904	786	731	697
		Watts	139	128.2	123.8	122.4	131.9	133.6	144.7	160.7	171.5	177.8
60	Tap(5)	SCFM	2028	1982	1938	1928	1895	1852	1804	1759	1709	1654
		Watts	444.8	462.7	479.3	485.6	494.2	508.4	521.6	535.1	549.8	558.9
	Tap(4) -Factory	SCFM	1773	1726	1678	1661	1631	1584	1534	1480	1432	1381
		Watts	305.1	320.8	334.3	338.7	350.7	364.2	378.2	392.6	404.7	410.9
	Tap(3)	SCFM	1528	1473	1421	1408	1382	1317	1266	1201	1148	1072
		Watts	205.1	218.9	232.1	235.3	243.1	258.6	271.2	279.3	290.1	305.8
	Tap(2)	SCFM	1375	1258	1227	1199	1155	1139	1074	1020	964	896
		Watts	150.8	145.8	148.5	158.3	168.9	170.2	183.6	195.8	212.8	224.9
	Tap(1)	SCFM	1337	1205	1165	1044	984	965	904	786	731	697
		Watts	139	128.2	123.8	122.4	131.9	133.6	144.7	160.7	171.5	177.8

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

NOTES: Airflow based upon cooling coil at 230V with no electric heat and no filter. Airflow at 208V is approximately the same as 230V because the mult-tap ECM motor is a constant torque motor. The torque doesn't drop off at the speeds in which the motor operates.

Heater Kit Data

Electric Kit MCA/MOP Data

Heat Kit Model	Air Handler Model	(kW)Electric Heat	MIN. Circuit Ampacity		MAX.Fuse or Breaker (HACR) Ampacity		Fan speed				
			230	208	230	208	1	2	3	4	5
MEHK05A	24	5	27.2	24.6	30	25	●	●	●	●	●
MEHK08A		7.5	40.8	36.9	45	40	X	X	●	●	●
MEHK10A		10	54.4	49.2	60	50	X	X	●	●	●
MEHK05A	36	5	27.2	24.6	30	25	●	●	●	●	●
MEHK08A		7.5	40.8	36.9	45	40	X	●	●	●	●
MEHK10A		10	54.4	49.2	60	50	X	X	●	●	●
MEHK15B		15	81	74	90	80	X	X	●	●	●
MEHK05A	48	5	27.2	24.6	30	25	●	●	●	●	●
MEHK08A		7.5	40.8	36.9	45	40	●	●	●	●	●
MEHK10A		10	54.4	49.2	60	50	X	●	●	●	●
MEHK15B		15	81	74	90	80	X	X	●	●	●
MEHK20B		20	108	98	110	100	X	X	X	●	●
MEHK05A	60	5	27.2	24.6	30	25	X	X	●	●	●
MEHK08A		7.5	40.8	36.9	45	40	X	X	●	●	●
MEHK10A		10	54.4	49.2	60	50	X	X	●	●	●
MEHK15B		15	81	74	90	80	X	X	●	●	●
MEHK20B		20	108	98	110	100	X	X	X	●	●

* Heat kit suitable for AHU 4-way position installation[● means available，**X** means not available].

Heater Kit Accessories

Model	Description	24	36	48	60
MEHK05A	5kW Heat Kit,Double Pole Breaker	o	o	o	o
MEHK08A	7.5kW Heat Kit,Double Pole Breaker	o	o	o	o
MEHK10A	10kW Heat Kit,Double Pole Breaker	o	o	o	o
MEHK15B	15kW Heat Kit,Double Pole Breaker	x	o	o	o
MEHK20B	20kW Heat Kit,Double Pole Breaker	x	x	o	o

Note: 1、**o** means available，**X** means not available.

WARNING

HIGH VOLTAGE!
DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

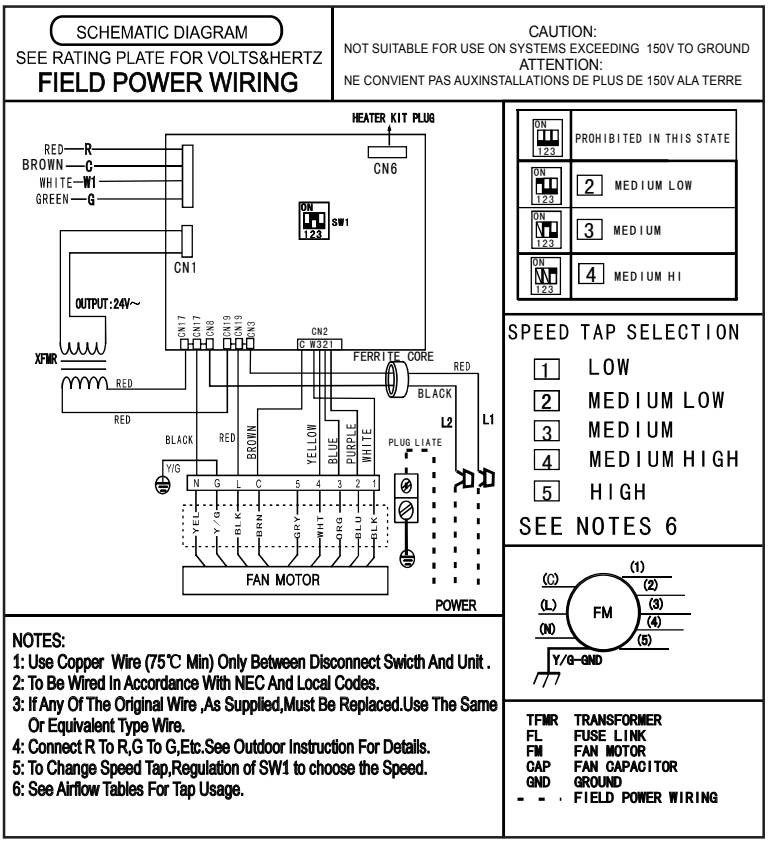


Fig.2: Indoor Unit Wiring Diagram for ECM Motor (24K/36K/48K).

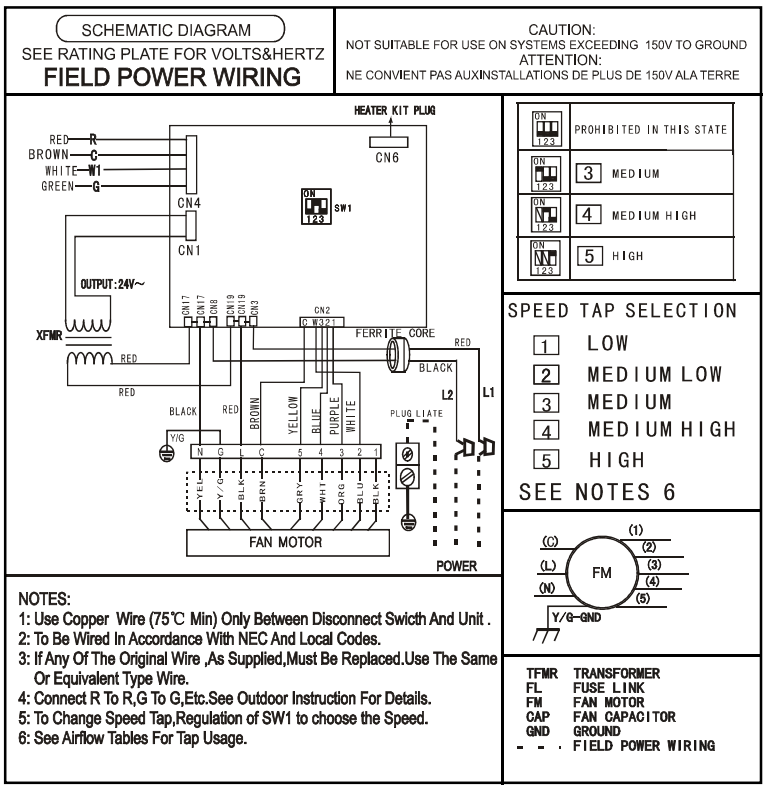


Fig.3: Indoor Unit Wiring Diagram for ECM Motor (60K).

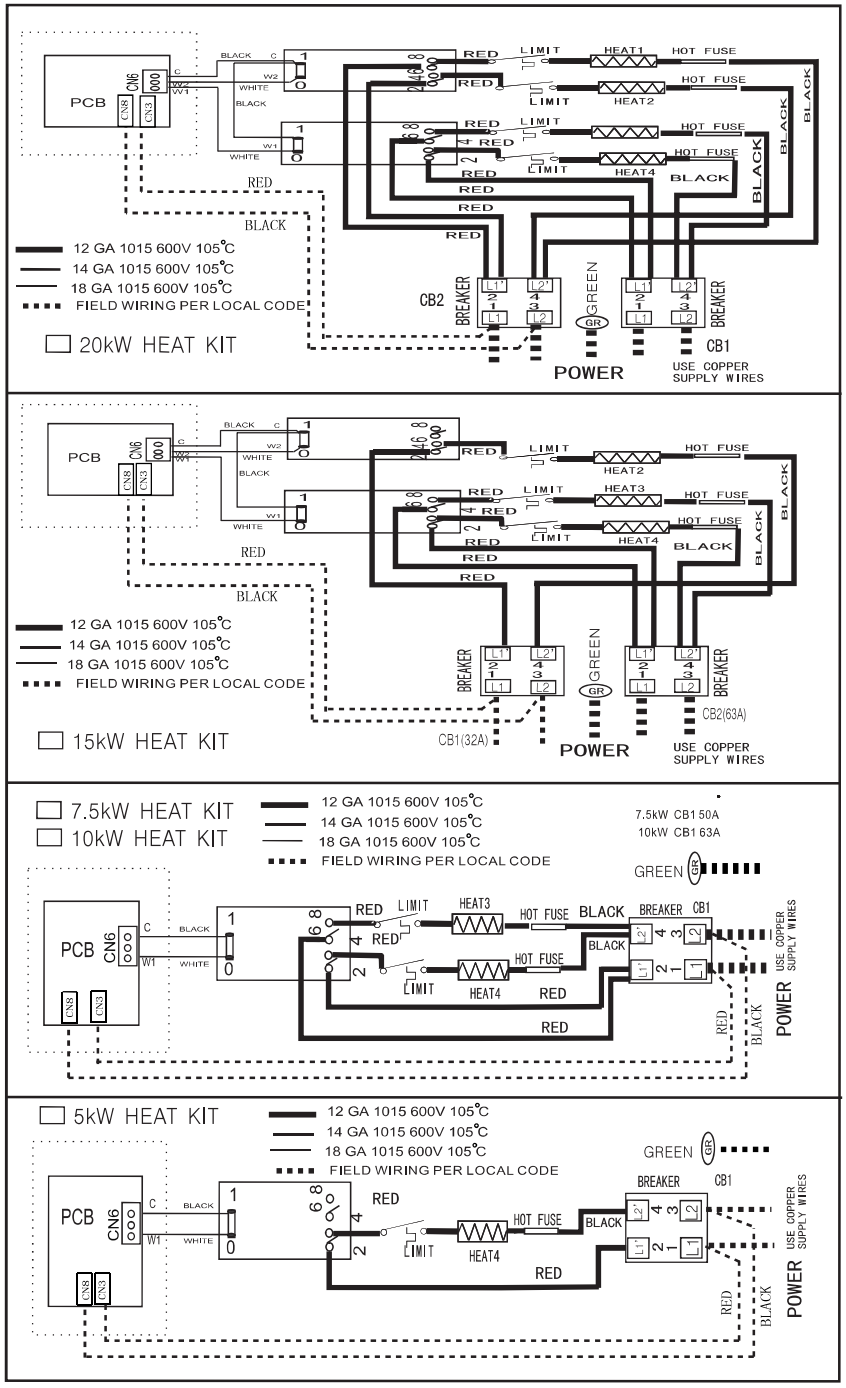


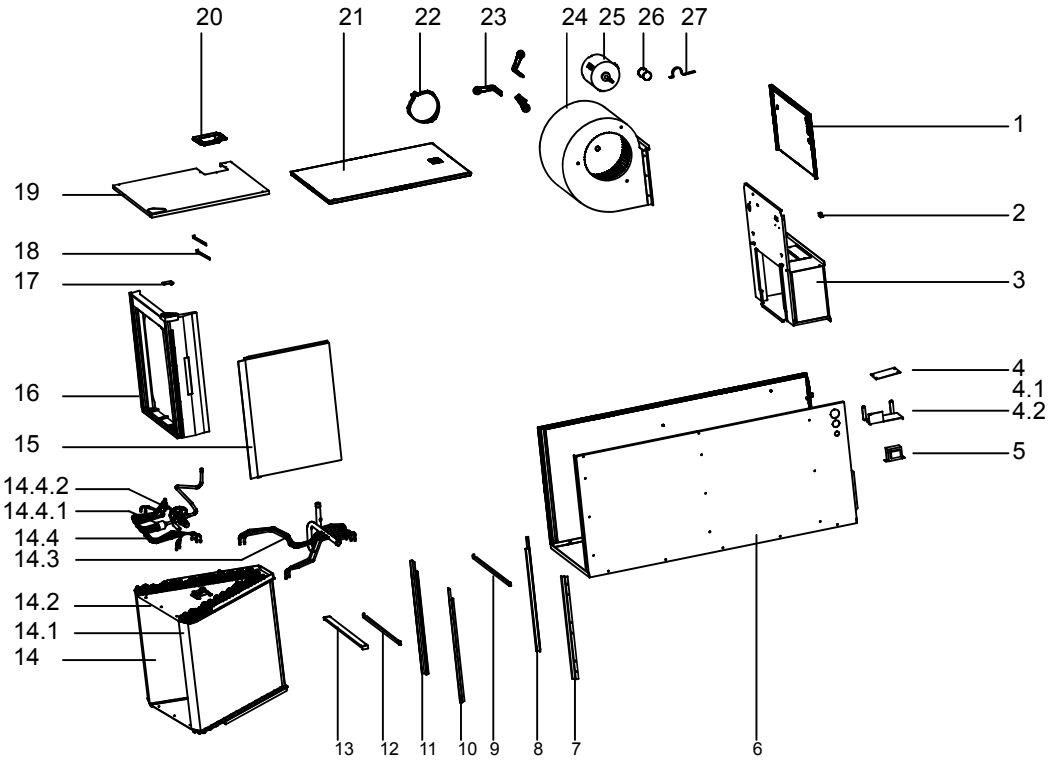
Fig.4: Indoor Unit Wiring Diagram for Electric Heat.

Wiring is subject to change. Always refer to the wiring diagram on the unit for the most up-to-date wiring.

WARNING

High Voltage: Disconnect all power before servicing or installing this unit. Multiple power sources may be present. Failure to do so may cause property damage, personal injury, or death.

Parts List



No.	Part Name	Qty	2T	3T	4T	5T
1	Top Pan, Cabinet	1	201270590079	201270890064	201270890064	201270890064
2	Ground Lug	1	202301440007	202301440007	202301440007	202301440007
3	Duct, Discharge	1	201270490108	201270890101	201270890101	201270890101
4	Main Control Board, Assy	1	203370390083	203370390083	203370390083	203370390083
4.1	Main Control Board	1	201370390077	201370390077	201370390077	201370390077
4.2	Bracket, Mounting	1	201270590096	201270590096	201270590096	201270590096
5	Transformer	1	202300930295	202300930295	202300930295	202300930295
6	Wrapper, Cabinet	1	201270590088	201270890076	201270890076	201270890076
7	Downflow Coil Support (Right)	1	201270590081	201270890067	201270890067	201270890067
8	Downflow Coil Support (Left)	1	201270590153	201270890135	201270890135	201270890135
9	Support Bracket (Middle)	1	201270590403	201270890107	201270890107	201270890107
10	Upflow Coil Support (Right)	1	201270590082	201270890066	201270890066	201270890066
11	Upflow Coil Support (Left)	1	201270590151	201270890133	201270890133	201270890133
12	Support Bracket (Lower)	1	201270590083	201270890069	201270890069	201270890069
13	Cover, Filter	1	201270590080	201270890065	201270890065	201270890065
14	Evaporator Assy	1	201570390087	201570590127	201570790132	201570890133
14.4.1	Distributor	1	201600500030	201600500118	201600500118	201600500118
14.4.2	Expansion valve	1	201601300510	201601300510	201601300508	201601300513
15	Drain Pan, Horizontal	1	201270590091	201270890068	201270890068	201270890068
16	Drain Pan, Vertical	1	201170590002	201170890002	201170890002	201170890002
17	Drain Pan Clamp	1	201270390194	201270390194	201270390194	201270390194
18	Drain Pan Support	2	201270390363	201270390363	201270390363	201270390363
19	Coil Door, Cabinet	1	201270590086	201270890074	201270890074	201270890074
20	Plate, Refrig Line Access	1	201270390192	201270390192	201270390192	201270390192
21	Blower Door, Cabinet	1	201270590087	201270890075	201270890075	201270890075
22	Mounting Bracket, Motor	1	201270390273	201270390273	201270390273	201270390273
23	Mounting Legs, Motor	3	201270290059	201270290059	201270290059	201270290059
24	Blower Assy, Wrapper/Wheel	1	201200300834	201200300894	201200300894	201200300894
25	Blower Motor	1	202400300548	202400300549	202400300560	202400300560