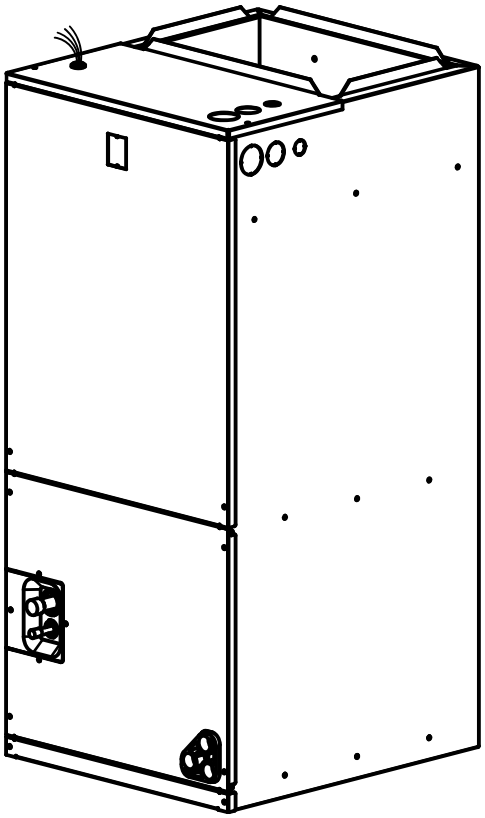
Ameristar™
HEATING & COOLING

INSTALLATION INSTRUCTIONS

HIGH EFFICIENCY
AIR HANDLERS
1.5-5Tons

FEATURING R-410A OR R22 REFRIGERANT



RECOGNIZE THIS SYMBOL AS AN INDICATION OF IMPORTANT SAFETY INFORMATION

⚠ WARNING

These instructions are intended as an aid to qualified licensed service personnel for proper installation, adjustment and operation of this unit. Read these instructions thoroughly before attempting installation or operation. Failure to follow these instruction may result in improper installation,adjustment, service or maintenance possibly resulting in fire, electrical shock, property damage, personal injury or death.

AHRI CERTIFIED® www.ahridirectory.org

AHRI CERTIFIED® www.ahridirectory.org

ETL LISTED C US Intertek

DO NOT DESTROY THIS MANUAL
Please read carefully and keep in a safe place for future reference by a serviceman.

TABLE OF CONTENTS

This document is customer property and is to remain with this unit.
These instructions do not cover all the different variations systems nor does it provide for every possible contingency to be met in connection with installtion.
All phases of this installation must comply with NATIONAL STATE AND LOCAL CODES. If additional information is required please contact your local distributor.

1.0 SAFETY

This is a safety alert symbol. When you see this symbol on labels or in manuals, be alert to the potential for personal injury.

This is an attention alert symbol. When you see this symbol on labels or in manuals, be alert to the potential for personal injury.

WARNING

Disconnect all power to unit before installing or servicing. More than one disconnect switch may be required to de-energize the equipment. Hazardous voltage can cause server personal injury or death.

WARNING

If removal of the blower assembly is required, all disconnect switches supplying power to the equipment must be de-energized and locked (if not in sight of unit) so the field power wires can be safely removed from the blower assembly. Failure to do so can cause electrical shock resulting in personal injuring or death.

WARNING

Because of possible damage to equipment or personal injury, installation, service, and maintenance should be performed by a trained, qualified service personnel. Consumer service is recommended only for filter cleaning / replacement. Never operate the unit with the acess panels removed.

WARNING

These instructions are intended as an aid to qualified, licensed service personnel for proper installation, adjustment and operation of this unit. Read these instructions thoroughly before attempting installation or operation. failure to follow these instructions may result in improper installation, adjustment, service or maintenance possibly resulting in fire, electrical shock, property damage, personal injury or death.

WARNING

The unit must be permanently grounded. Failure to do so can result in electrical shock causing personal injury or death.

WARNING

PROPOSITION 65: This appliance contains fiberglass insulation. Respirable particles of fiberglass are known to State of California to cause cancer.

All manufacturer products meet current federal OSHA Guidelines for safety. California Proposition 65 warnings are required for certain products, which are not covered by the OSHA standards.

California's Proposition 65 requires warnings for products sold in California that contain or produce any of over 600 listed chemicals known to the State of California to cause cancer or birth defects such as fiberglass insulation, lead in brass, and combustion products from natural gas.

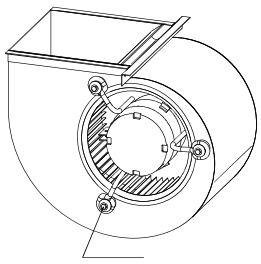
All "new equipment" shipped for sale in California will have labels stating that the product contains and /or produces Proposition 65 chemicals. Although we have not changed our processes, having the same label on all our products facilitates manufacturing and shipping. We cannot always know "when, or if" products will be sold in the California market.

You may receive inquiries from customers about chemicals found in, or produced by, some of our heating and air-conditioning equipment, or found in natural gas used with some of our products. Listed below are those chemicals and substances commonly associated with similar equipment in our industry and other manufacturers.

Glass Wool (Fiberglass) Insulation
Carbon Monoxide (CO).
Formaldehyde
Benzene

More details are available at the websites for OSHA (Occupational Safety and Health Administration), at www.osha.gov and the State of California's OEHHA (Office of Environmental Health Hazard Assessment), at www.oehha.org. Consumer education is important since the chemicals and substances on the list are found in our daily lives. Most consumers are aware that products present safety and health risks, when improperly used, handled and maintained.

CAUTION



BLOWER MOTOR SHIPPING BOLT

Make sure the blower motor support is tight (3-motor mount bolts) then check to see if wheel is secured to motor shaft before operating unit.

WARNING

The first 6 inches of supply air plenum and ductwork must be constructed of sheet metal as required by NFPA 90B. The supply air plenum or duct must have a solid sheet metal bottom directly under the unit with no openings, registers or flexible air ducts located in it. If flexible supply air ducts are used they may be located only in the vertical walls of rectangular plenum, a minimum of 6 inches from the solid bottom. Metal plenum of duct may be connected to the combustible floor base, if not, it must be connected to the unit supply duct exposed to the supply air opening from the downflow unit. Exposing combustible (non-metal) material to the supply opening of a downflow unit can cause a fire resulting in property damage, personal injury or death.

Exception warning to downflow:
Installations on concrete floor slab with supply air plenum and ductwork completely encased must be not less than 2 inches of concrete (See NFPA 90A).

2.0 GENERAL

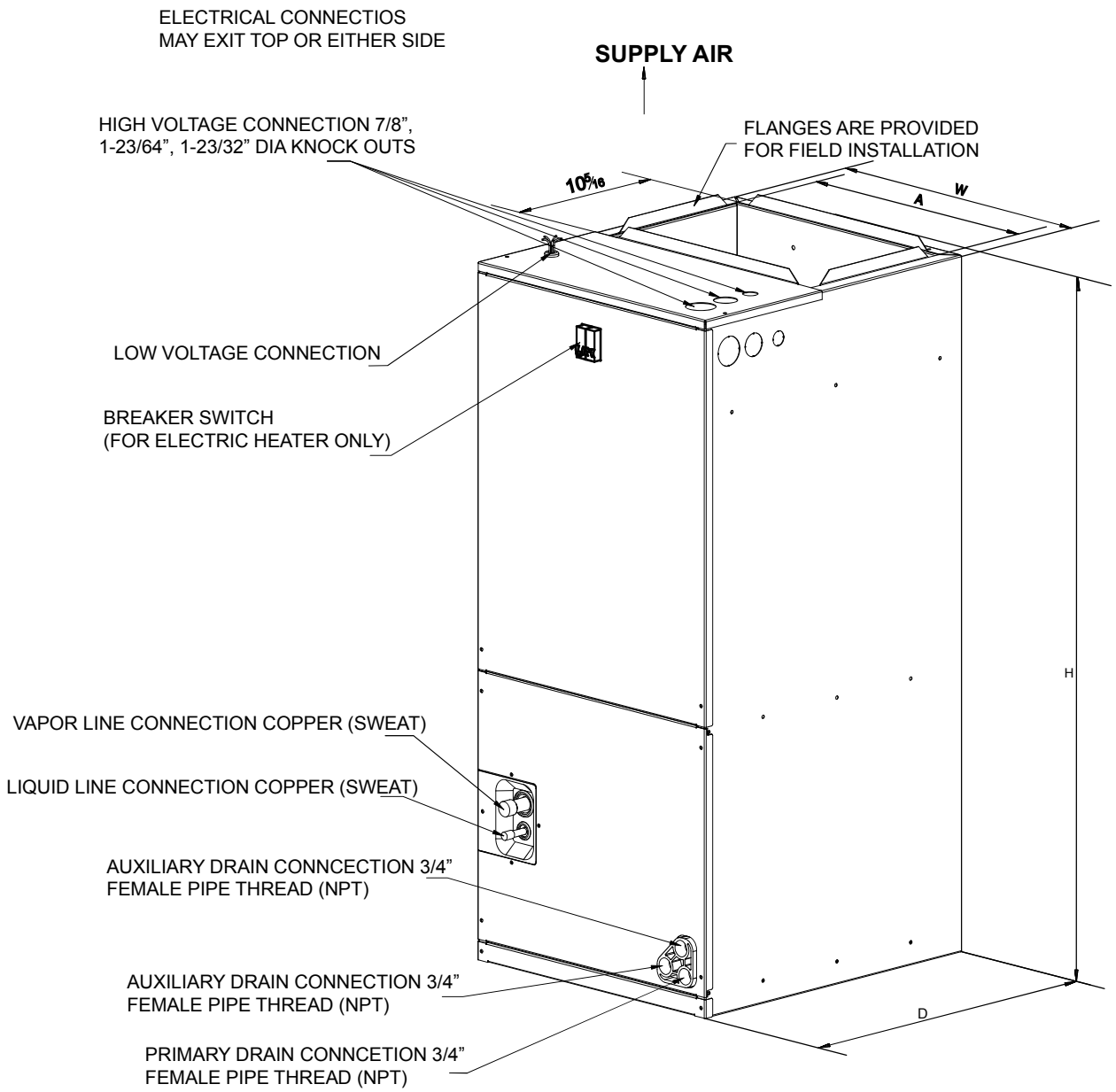
These Air Handlers are four way compatible for upflow ,downflow ,horizontal right and left positions.

This Air Handler provides the flexibility for installation in any upflow or downflow horizontal application. The direct drive motors provides a selection of air volume to match any application. 3-Speed motors provide selections of air flow to meet desired applications.

Top and side power and control wiring, accessible screw terminals for control wiring all combine to make the installation easy, and minimize installation cost. Please contact your local distributor. See fig.1.

2.1 UNIT DIMENSIONS

NOTE: 24” CLEARANCE IS REQUIRED IN THE FRONT OF THE UNIT FOR FILTER AND COIL MAINTENANCE.



UPFLOW UNIT SHOWN;
UNIT MAY BE INSTALLED UPFLOW, DOWNFLOW, HORIZONTAL RIGHT, OR LEFT AIR SUPPLY.

Fig.1 DIMENSIONS

DIMENSIONAL DATA

MODEL SIZE	Dimensions inch [mm]				UNIT WEIGHT /SHIPPING WEIGHT (LBS.[kg])
	UNIT HEIGHT "H" IN. [mm]	UNIT WIDTH "W" IN.[mm]	UNIT LENGHT "D" IN.[mm]	SUPPLY DUCT "A"	
18	41-3/8"[1050]	18-1/8"[460]	20-1/2"[520]	16"[406]	106/119 [48]/[54]
25	46-1/2"[1180]	19-5/8"[500]	21-5/8"[550]	18"[456]	136/152 [62]/[69]
32	46-1/2"[1180]	19-5/8"[500]	21-5/8"[550]	18"[456]	136/152 [62]/[69]
36	46-1/2"[1180]	19-5/8"[500]	21-5/8"[550]	18"[456]	141/156 [64]/[71]
44	54-1/2"[1385]	22"[560]	24"[610]	19-1/2"[496]	172/187 [78]/[85]
48	54-1/2"[1385]	22"[560]	24"[610]	19-1/2"[496]	172/187 [78]/[85]
60	54-1/2"[1385]	22"[560]	24"[610]	19-1/2"[496]	172/187 [78]/[85]

3.0 APPLICATIONS

3.1 VERTICAL UPFLOW

- Vertical Upflow configuration is the factory set on all models (see Fig 1).
- If return air is to be ducted, install duct flush with floor. Use fireproof resilient gasket 1/8 to 1/4 in. thick between the ducts, unit and floor. Set unit on floor over opening.

IMPORTANT NOTE
Torque applied to drain connections should not exceed 15.ft.lbs.(see Fig.1&2)

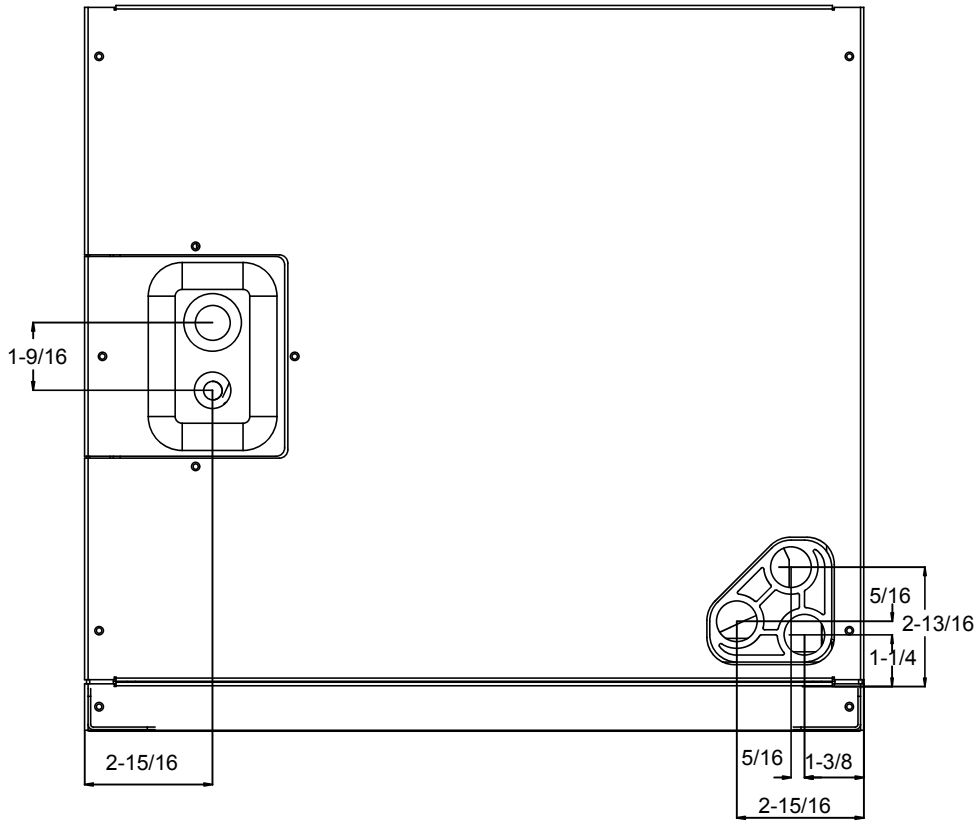


Fig.2 DIMENSIONS FOR FRONT CONNECT COIL

3.2 VERTICAL DOWNFLOW

Conversion to Vertical Downflow: A vertical upflow unit may be converted to vertical downflow . Remove the door and indoor coil and reinstall 180° from original position**.** See Fig3.

IMPORTANT: To comply with certification agencies and the National Electric Code for horizontal right application, the circuit breaker(s) on field-installed electric heater kits must be re-installed per procedure below so that the breaker switch “on” position and marking is up and, “off” position and marking is down.

- To rotate breaker(s): Rotate one breaker set (circuit) at a time starting with the one on the right. Loosen both lugs on the load side of the breaker. (Make sure that wires are identified and are reinstalled into proper breaker).Wires are bundles with wire ties, one bundle going to the right lug and one bundle going to the left lug.

- Using a screwdriver or pencil, lift blue plastic tab with hole away from breaker until breaker releases from mounting opening.
- With breaker held in hand, rotate breaker so that “on” position is up, “off” position is down with unit in planned vertical mounting position. insert right wire bundle into top right breaker lug, ensuring all strands of all wires are inserted fully into lug, and no wire insulation is in lug.
- Tighten lug as tight as possible while holding circuit breaker. Check wires and make sure each wire is secure and none are loose. Repeat for left wire bundle in left top circuit breaker lug.
- Replace breaker by inserting breaker mounting tab opposite white pull tab in opening, hook mounting tab over edge in opening.
- With screwdriver or pencil, pull blue tab with hole away from breaker while setting that side of breaker into opening. When breaker is in place, release tab, locking circuit breaker into location in opening.
- Repeat above operation for remaining breaker(s) (if more than one is provided).
- Replace single point wiring jumper bar, if it is used, on line side of breaker and tighten securely.
- Double check wires and lugs to make sure all are secure and tight. Check to make sure unit wiring to circuit breaker load lugs match that shown on the unit wiring diagram.

CAUTION

When using the unit with electrical heater, the switch is used only for electrical heater on the front of panel.

3.3 HORIZONTAL

Horizontal right is the default factory configuration for the units.

Horizontal left isn’t the default factory configuration for the units.

Conversion to Horizontal: A vertical upflow unit may be converted to horizontal left by removing indoor coil assembly and reinstalling coil as shown for left hand air supply. And reinstall coil in unit as shown for left hand air supply.

- Rotate unit into the downflow position, with the coil compartment on top and the blower compartment on bottom. See Fig. 3.
- Reinstall the indoor coil 180° from original position. Ensure the retaining channel is fully engaged with the coil rail. See Fig. 3.
- Secondary drain pan kits are recommended when the unit is configured for the horizontal position over a finished ceiling and/or living space.

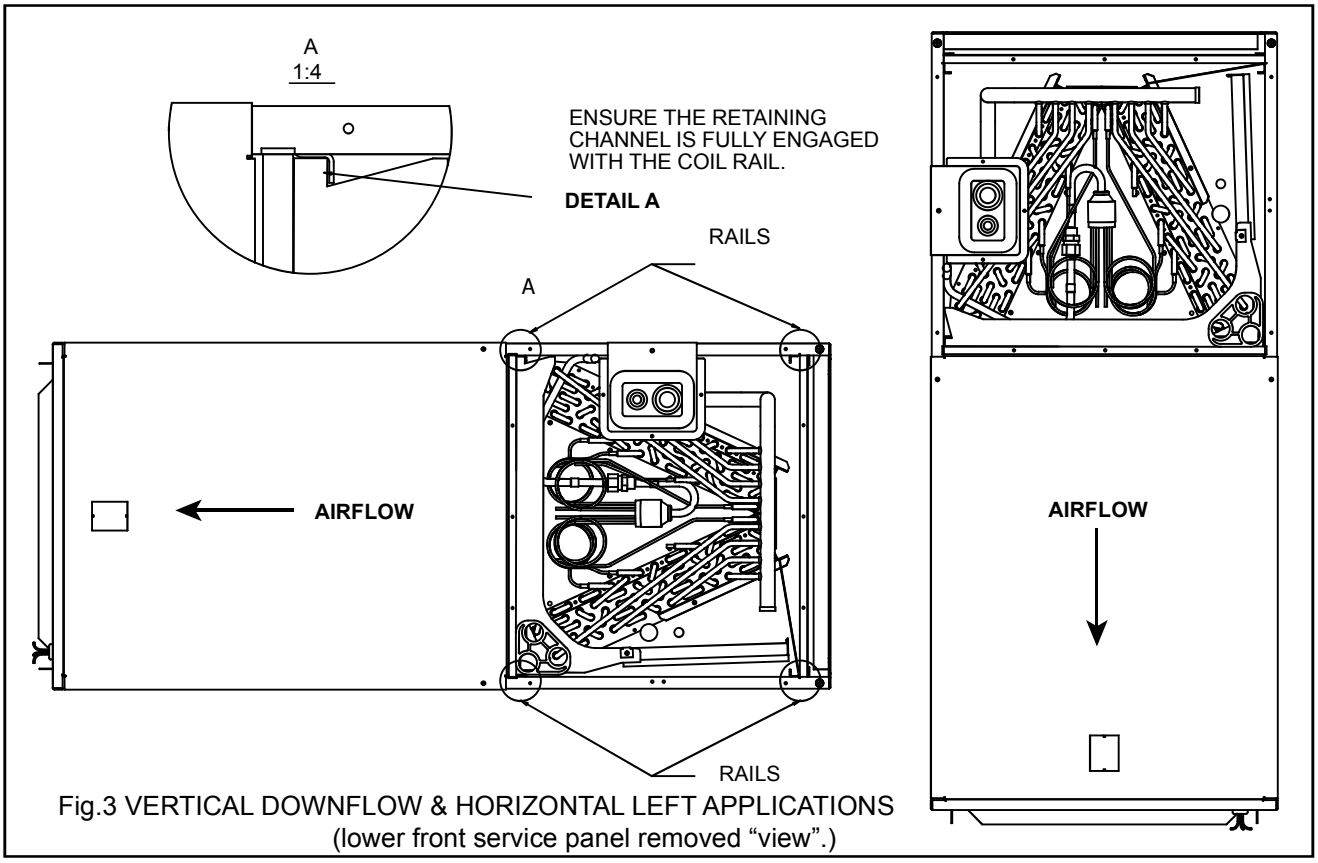


Fig.3 VERTICAL DOWNFLOW & HORIZONTAL LEFT APPLICATIONS
(lower front service panel removed "view".)

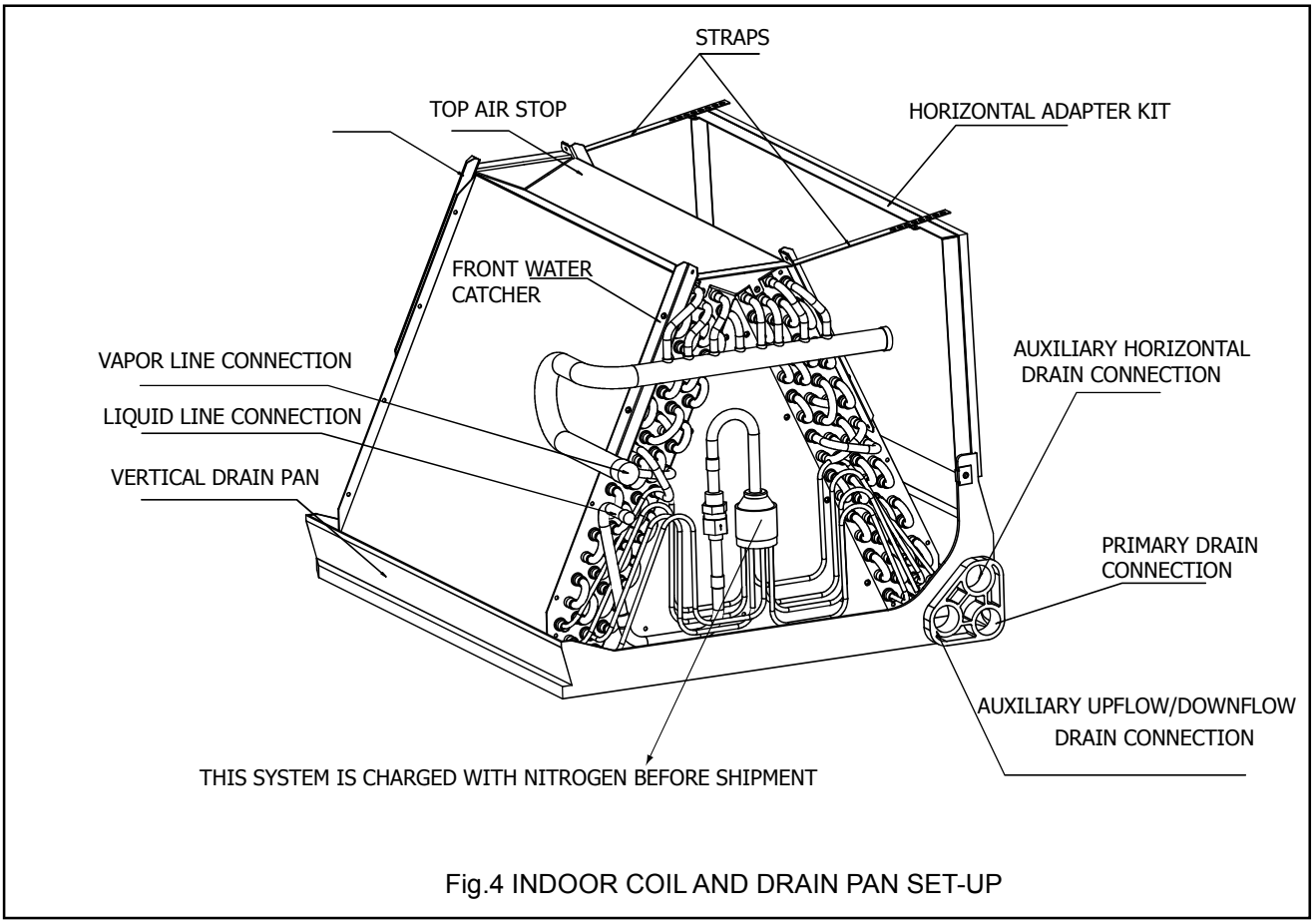


Fig.4 INDOOR COIL AND DRAIN PAN SET-UP

CAUTION

Horizontal units must be configured for right hand air supply or left hand air supply. Horizontal drain pan must be located under indoor coil. Failure to use the drain pan can result in property damage.

Conversion in Horizontal Direction: Horizontal right-hand supply can be changed to horizontal left-hand supply by removing the indoor coil and reinstalling 180° from original.

3.4 INSTALLATION IN AN UNCONDITIONED SPACE

IMPORTANT: There are two pairs of coil rails in the air handler for default and counter flow application. If the air handler is installed in an unconditioned space, the two unused coil rails should be removed to minimize air handler surface sweating. The coil rails can be easily removed by taking off the 6 mounting screws from both sides of the cabinet.

4.0 ELECTRICAL WIRING

Field wiring must comply with the National Electric Code (C.E.C. in Canada) and any applicable local ordinance.

WARNING

Disconnect all power to unit before installing or servicing. More than one disconnect switch may be required to de-energize the equipment. Hazardous voltage can cause severe personal injury or death.

4.1 POWER WIRING

It is important that proper electrical power is available for connection to the unit model being installed. See the unit nameplate, wiring diagram and electrical data in the installation instructions.

- If required, install a branch circuit disconnect of adequate size, located within sight of, and readily accessible to the unit.
- **IMPORTANT**: After the Electric Heater is installed, units may be equipped with one, two, or three 30/60 amp. circuit breakers. These breaker(s) protect the internal wiring in the event of a short circuit and serve as a disconnect. Circuit breakers installed within the unit do not provide over-current protection of the supply wiring and therefore may be sized larger than the branch circuit protection.
- Supply circuit power wiring must be 75°C minimum copper conductors only. See Electrical Data In this section for ampacity, wire size and circuit protector require ment. Supply circuit protective devices may be either fuses or “HACR” type circuit breakers.
- Power wiring may be connected to either the right, left side or top. Three 7/8”, 1-3/8”, 1-3/4” dia. concentric knockouts are provided for connection of power wiring to unit.
- Power wiring is connected to the power terminal block in unit electric cabinet.

4.2 CONTROL WIRING

IMPORTANT: Class 2 low voltage control wiring should not be run in conduit with main power wiring and must be separated from power wiring, unless class 1 wire of proper voltage rating is used.

- Low voltage control wiring should be 18 Awg. color-coded. For lengths longer than 100 ft., 16 Awg. wire should be used.

- Low voltage control connections are made to low voltage pigtails extending from top of air handler (upflow position - see Figure 3). Connections for control wiring are made with wire nuts. Control wiring knockouts (518 and 7/8) are also provided on the right and left side of the unit for side connection.

- See wiring diagrams attached to indoor and outdoor sections to be connected.

- Make sure, after installation, separation of control wiring and power wiring has been maintained.

4.3 GROUNDING

WARNING

The unit must be permanently grounded. Fallure to do so can result In electrical shock causing personal injury or death.

- Grounding may be accomplished by grounding metal conduit when installed in accord ance with electrical codes to the unit cabinet.

- Grounding may also be accomplished by attaching ground wire(s) to ground lug(s) provided in the unit wiring compartment.

- Ground lug(s) are located close to wire entrance on left side of unit (up-flow). Lug(s) may be moved to marked locations near wire entrance on right side of unit (upflow). If alternate location is more convenient.

- Use of multiple supply circuits require grounding of each circuit to lug(s) provided in unit.

4.4 ELECTRICAL DATA

MODEL	VOLTAGE	HERTZ	HP	RPM	SPEEDS	CIRCUIT AMPS.	MAXIMUM CIRCUIT PROTECTOR
18	208/230	60	1/8	580	3	0.68	15(A)
25	208/230	60	1/5	701	3	0.95	15(A)
32	208/230	60	1/4	872	3	1.48	15(A)
36	208/230	60	1/2	794	3	1.63	15(A)
44	208/230	60	1/2	845	3	2.11	15(A)
48	208/230	60	1/2	845	3	2.11	15(A)
60	208/230	60	3/4	963	3	2.79	15(A)

4.5 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 (AC/HP)		
			240	208	240	208	Low	Medium	High
MAYHTR1A05BKRA	18	5	27	23.5	30	25	●	●	●
MAYHTR1A08BKRA		7.5	40	34.8	45	40	--	●	●
MAYHTR1A10BKRA		10	53	46.1	60	50	--	--	●
MAYHTR1A05BKRA	25	5	27.3	23.9	30	25	●	●	●
MAYHTR1A08BKRA		7.5	37.8	32.9	45	40	●	●	●
MAYHTR1A10BKRA		10	53.4	46.4	60	50	--	●	●
MAYHTR1A05BKRA	32	5	28	24.5	30	25	●	●	●
MAYHTR1A08BKRA		7.5	41	35.8	45	40	●	●	●
MAYHTR1A10BKRA		10	54	47.1	60	50	●	●	●
MAYHTR1A05BKRA	36	5	28.3	24.9	30	25	●	●	●
MAYHTR1A08BKRA		7.5	41.4	36.2	45	40	●	●	●
MAYHTR1A10BKRA		10	54.4	47.4	60	50	●	●	●
MAYHTR1A15BKRA		15	54.4/26	47.34/22.8	60/30	50/25	--	●	●
MAYHTR1A20BKRA		20	54.4/52.1	47.4/45.1	60/60	50/50	--	--	●
MAYHTR1A05BKRA	44	5	28.3	24.9	30	25	●	●	●
MAYHTR1A08BKRA		7.5	41.4	36.2	45	40	●	●	●
MAYHTR1A10BKRA		10	54.4	47.4	60	50	●	●	●
MAYHTR1A15BKRA		15	54.4/26	47.4/22.8	60/30	50/25	●	●	●
MAYHTR1A20BKRA		20	54.4/52.1	47.4/45.1	60/60	50/50	●	●	●
MAYHTR1A05BKRA	48	5	28.8	25.4	30	30	●	●	●
MAYHTR1A08BKRA		7.5	41.9	36.7	45	40	●	●	●
MAYHTR1A10BKRA		10	54.9	47.9	60	50	●	●	●
MAYHTR1A15BKRA		15	54.9/26	47.9/22.8	60/30	50/25	●	●	●
MAYHTR1A20BKRA		20	54.9/52.1	47.9/45.1	60/60	50/50	●	●	●
MAYHTR1A05BKRA	60	5	29.6	26.1	30	30	●	●	●
MAYHTR1A08BKRA		7.5	42.6	37.4	45	40	●	●	●
MAYHTR1A10BKRA		10	55.6	48.7	60	50	●	●	●
MAYHTR1A15BKRA		15	55.6/26	48.7/22.8	60/30	50/25	●	●	●
MAYHTR1A20BKRA		20	55.6/52.1	48.7/45.1	60/60	50/50	●	●	●

* Heat kit suitable for AHU 4-way position installation[● means available，--means not available].
Ampacities for MCA and Fuse/breaker including the blower motor.

Electric Heater Kits

NO.	Kit#	Description	Ref. Air Handler use
1	MAYHTR1A05BKRA	5kW Heat Strip	18,25,32,36,44,48,60
2	MAYHTR1A08BKRA	7.5kW Heat Strip	18,25,32,36,44,48,60
3	MAYHTR1A10BKRA	10kW Heat Strip	18,25,32,36,44,48,60
4	MAYHTR1A15BKRA	15kW Heat Strip, Double Breaker's panel	36,44,48,60
5	MAYHTR1A20BKRA	20kW Heat Strip, Double Breaker's panel	36,44,48,60

5.0 AIRFLOW PERFORMANCE (AMERISTAR AIR HANDLERS ARE NOT SUITABLE FOR MOBILE HOME APPLICATIONS)

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.

AIRFLOW PERFORMANCE DATA

Model Number	Motor Speed		CFM(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]
18	Low	CFM	551	509	478	462	393	345	280	-	-	-
		RPM	440	518	576	595	679	726	781	-	-	-
		Watts	122.4	120	118.2	116.8	116.3	109.9	106.2	-	-	-
		Amps	0.62	0.62	0.62	0.62	0.61	0.61	0.6	-	-	-
	Middle	CFM	661	622	596	577	506	443	400	-	-	-
		RPM	518	580	618	640	731	770	812	-	-	-
		Watts	145.2	143	141.6	140.8	136.3	133.6	131.2	-	-	-
		Amps	0.69	0.68	0.68	0.68	0.67	0.67	0.66	-	-	-
	High	CFM	861	807	765	729	682	634	590	550	487	400
		RPM	693	720	758	787	831	871	894	911	940	975
		Watts	265	258	255	251.3	243.6	235.4	232	229.5	224.4	217.4
		Amps	1.21	1.20	1.19	1.19	1.18	1.17	1.16	1.15	1.14	1.12
25	Low	CFM	815	751	717	683	576	478	379	-	-	-
		RPM	505	564	593	622	704	774	824	-	-	-
		Watts	166	164	163	162	156	151	145	-	-	-
		Amps	0.8	0.8	0.8	0.79	0.79	0.78	0.77	-	-	-
	Middle	CFM	1022	962	931	899	829	714	584	-	-	-
		RPM	618	657	677	697	739	806	862	-	-	-
		Watts	221	220	220	219	217	214	210	-	-	-
		Amps	0.98	0.97	0.97	0.97	0.97	0.96	0.95	-	-	-
	High	CFM	1142	1082	1052	1022	963	863	807	-	-	-
		RPM	681	714	732	750	784	848	880	-	-	-
		Watts	286	285	284	283	281	276	273	-	-	-
		Amps	1.27	1.26	1.26	1.26	1.25	1.24	1.24	-	-	-

Model Number	Motor Speed	CFM(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]
32	Low	CFM	1021	978	949	932	885	758	684	-	-	-
		RPM	613	659	688	702	749	796	856	-	-	-
		Watts	246	243	240	238	233	220	214	-	-	-
		Amps	1.17	1.17	1.17	1.16	1.16	1.15	1.15	-	-	-
	Middle	CFM	1202	1156	1127	1105	1049	986	815	-	-	-
		RPM	708	742	762	774	809	844	880	-	-	-
		Watts	295	293	292	290	287	282	271	-	-	-
		Amps	1.34	1.33	1.33	1.33	1.33	1.33	1.32	-	-	-
	High	CFM	1312	1269	1233	1211	1154	1088	998	804	720	603
		RPM	764	792	808	815	848	876	907	960	987	1013
		Watts	353	349	346	345	340	335	325	313	306	296
		Amps	1.59	1.59	1.59	1.59	1.59	1.58	1.58	1.56	1.55	1.54
36	Low	CFM	1129	1088	1061	1040	988	941	819	-	-	-
		RPM	642	675	706	732	771	817	853	-	-	-
		Watts	322	312	306	301	289	269	254	-	-	-
		Amps	1.54	1.52	1.51	1.5	1.47	1.42	1.39	-	-	-
	Middle	CFM	1317	1268	1237	1217	1157	1111	1027	-	-	-
		RPM	776	810	841	874	905	935	966	-	-	-
		Watts	360	354	348	345	335	323	309	-	-	-
		Amps	1.69	1.67	1.66	1.65	1.63	1.6	1.57	-	-	-
	High	CFM	1643	1581	1544	1518	1446	1356	1261	1123	915	812
		RPM	868	883	895	906	931	955	978	1013	1028	1050
		Watts	463	451	443	438	429	415	401	371	356	343
		Amps	2.22	2.2	2.18	2.17	2.14	2.12	2.09	2.03	1.99	1.96
44	Low	CFM	1348	1302	1282	1262	1214	1160	1091	-	-	-
		RPM	660	706	730	753	795	837	807	-	-	-
		Watts	365	359	355	351	342	332	319	-	-	-
		Amps	1.62	1.6	1.59	1.57	1.55	1.51	1.48	-	-	-
	Middle	CFM	1585	1534	1509	1484	1426	1360	1285	-	-	-
		RPM	758	792	814	835	865	894	923	-	-	-
		Watts	427	421	417	413	404	395	386	-	-	-
		Amps	1.86	1.84	1.82	1.81	1.78	1.75	1.71	-	-	-
	High	CFM	1760	1701	1673	1645	1583	1510	1435	1352	1259	1151
		RPM	832	861	877	893	917	941	963	984	1010	1032
		Watts	527	519	514	509	498	488	477	463	449	433
		Amps	2.31	2.28	2.26	2.24	2.21	2.17	2.13	2.08	2.04	1.98
48	Low	CFM	1471	1427	1395	1374	1316	1247	1180	-	-	-
		RPM	694	732	753	769	803	833	864	-	-	-
		Watts	381	376	372	370	364	357	349	-	-	-
		Amps	1.66	1.64	1.63	1.62	1.6	1.58	1.55	-	-	-
	Middle	CFM	1729	1678	1646	1625	1558	1491	1402	-	-	-
		RPM	790	817	833	845	876	898	920	-	-	-
		Watts	485	477	473	470	460	451	440	-	-	-
		Amps	2.14	2.12	2.09	2.08	2.06	2.03	1.99	-	-	-
	High	CFM	2045	1992	1951	1928	1847	1763	1677	1563	1450	1317
		RPM	895	920	932	938	956	972	987	1002	1015	1030
		Watts	641	627	617	612	596	582	566	546	528	507
		Amps	2.86	2.82	2.8	2.78	2.73	2.68	2.64	2.57	2.52	2.45
60	Low	CFM	1786	1740	1709	1688	1630	1562	1489	-	-	-
		RPM	830	843	849	856	890	921	942	-	-	-
		Watts	584	569	560	552	536	516	497	-	-	-
		Amps	2.64	2.59	2.55	2.54	2.58	2.42	2.37	-	-	-
	Middle	CFM	2140	2071	2039	2006	1932	1799	1677	-	-	-
		RPM	917	930	938	943	957	970	990	-	-	-
		Watts	645	630	623	617	602	585	569	-	-	-
		Amps	2.87	2.81	2.78	2.76	2.71	2.65	2.59	-	-	-
	High	CFM	2357	2276	2225	2188	2100	2004	1902	1764	1554	1393
		RPM	964	976	982	990	1000	1012	1022	1032	1042	1063
		Watts	754	733	718	710	693	673	650	630	607	575
		Amps	3.34	3.27	3.22	3.19	3.12	3.05	2.98	2.91	2.83	2.71

The air distribution system has the greatest effect on airflow. The duct system is totally controlled by the contractor. For this reason, the contractor should use only industry-recognized procedures.
Heat pump systems require a specified airflow. Each ton of cooling requires between 350 and 450 cubic feet of air per minute (CFM), or 400 CFM nominally.
Duct design and construction should be carefully done. System performance can be lowered dramatically through bad planning or workmanship.
Air supply diffusers must be selected and located carefully. They must be sized and positoined to deliver treated air along the perimerter of the space. If they are too small for their intended airflow, they become noisy. If they are not located properly, they cause drafts. Reture air grilles must be properly sized to carry air back to the blower.If they are too small, they also cause noise.
The installers should balance the air distribution system to ensure proper quiet airflow to all rooms in the home. This ensures a comfortable living space.
An air velocity meter or airflow hood can give a reading of system CFM.

6.0 DUCTWORK

Field ductwork must comply with the National Fire Protection Association NFPA 90A, NFPA 90B and any applicable local ordinance.

WARNING

Do not, under any circumstances, connect return ductwork to any other heat producing device such as fireplace insert, stove, etc. Unauthorized use of such devices may result in fire, carbon monoxide poisoning, explosion, personal injury or property damage.

Sheet metal ductwork run in unconditioned spaces must be insulated and covered with a vapor barrier. Fibrous ductwork may be used if constructed and installed in accordance with SMACNA Construction Standard on Fibrous Glass Ducts. Ductwork must comply with National Fire Protection Association as tested by U/L Standard 181 for Class I Air Ducts. Check local codes for requirements on ductwork and insulation.

- Duct system must be designed within the range of external static pressure the unit is designed to operate against. It is important that the system airflow be adequate. Make sure supply and return ductwork, grills, special filters, accessories, etc. are accounted for in total resistance. See airflow performance tables in this manual.
- Design the duct system in accordance with “ACCA” Manual “D” Design for Residential Winter and Summer Air Conditioning and Equipment Selection. Latest editions are available from: “ACCA” Air Conditioning Contractors of America, 1513 16th Street, N.W., Washington, D.C. 20036. If duct system incorporates flexible air duct, be sure pressure drop Information (straight length plus all turns) shown in “ACCA” Manual “D” is accounted for in system.
- Supply plenum is attached to the 3/4” duct flanges supplied with the unit. Attach flanges around the blower outlet.

  IMPORTANT: If an elbow is included in the plenum close to the unit, it must not be smaller than the dimensions of the supply duct flange on the unit.
- **IMPORTANT:** The front flange on the return duct if connected to the blower casing must not be screwed into the area where the power wiring is located. Drills or sharp screw points can damage insulation on wires located inside unit.
- Secure the supply and return ductwork to the unit flanges, using proper fasteners for the type of duct used and tape the duct-to-unit joint as required to prevent air leaks.

7.0 REFRIGERANT CONNECTIONS

Keep the coil connections sealed until refrigerant connections are made. See the Installation Instructions for the outdoor unit for details on line sizing, tubing installation, and charging information.

The coil comes from the factory with a nitrogen holding charge. Evacuate the system before charging with refrigerant.

Install refrigerant tubing so that it does not block service access to the front of the unit.

Nitrogen should flow through the refrigerant lines while brazing.

Use a brazing shield to protect the cabinet's paint and a wet rag to protect the rubber grommet from being damaged by torch flames. After the refrigerant connections are made, seal the gap around the connections with pressure sensitive gasket.

7.1 CONDENSATE DRAIN TUBING

Consult local codes for specific requirements.

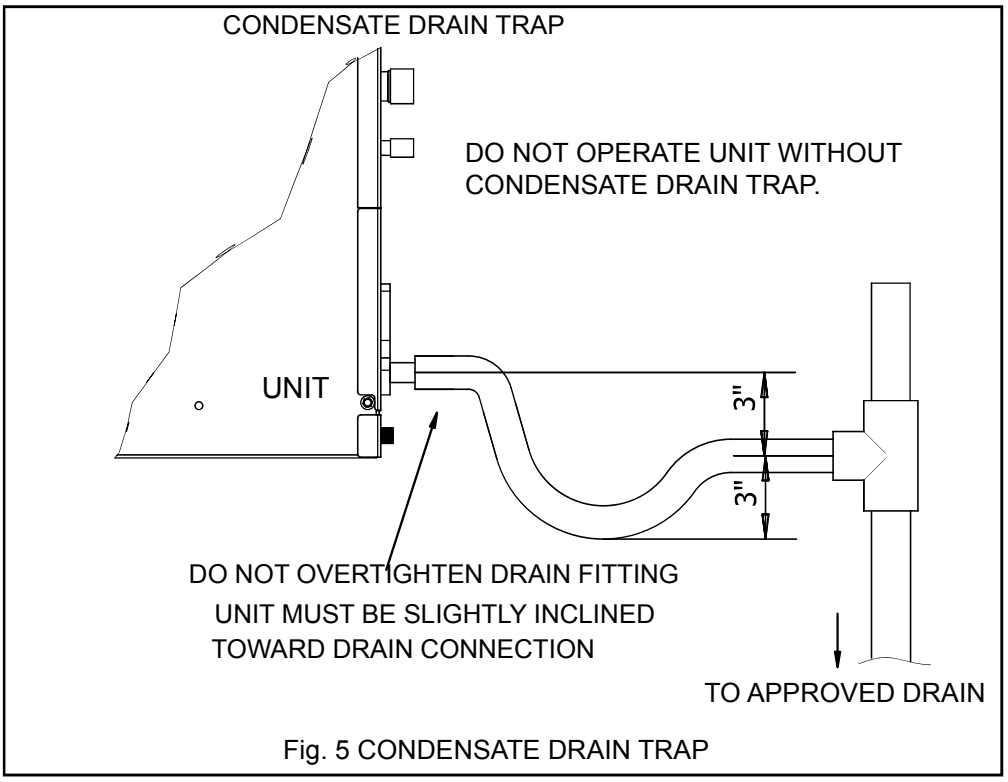


Fig. 5 CONDENSATE DRAIN TRAP

IMPORTANT:
1. When making drain fitting connections to the drain pan, use a thin layer of Teflon paste, silicone or Teflon tape and install, hand tighten.
2. When making drain fitting connections to drain pan, do not overtighten. Over tightening fittings can split pipe connetions on the drain pan.

- Install drain lines so they do not block service access to front of the unit. Minimum clearance of 24 inches is required for filter, coil or blower removal and service access.
- Make sure unit is level or pitched slightly toward primary drain connection so that water will drain completely from the pan. (See Fig. 5)
- Do not reduce drain line size less than connection size provided on condensate drain pan.
- All drain lines must be pitched downward away from the unit a minimum of 1/4” per foot of line to ensure proper drainage.
- Do not connect condensate drain line to a closed or open sewer pipe. Run condensate to an open drain or run line to a safe outdoor area.
- The drain line should be insulated where necessary to prevent sweating and damage due to condensate forming on the outside surface of the line.
- Make provisions for disconnecting and cleaning of the primary drain line should it become necessary. Install a 3 inch trap in the primary drain line as close to the unit as possible. Make sure that the top of the trap is below connection to the drain pan to allow complete drainage of pan (See Fig. 5).
- Auxiliary drain line should be run to a place where it will be noticeable if it becomes operational. Homeowner should be warned that a problem exists if water should begin running from the auxiliary drain line.
- Plug the unused drain connection with the plugs provided in the parts bag, using a thin layer of teflon paste, silicone or teflon tape to form a water tight seal.
- Test condensate drain pan and drain line after installation is complete. Pour water into drain pan, enough to fill drain trap and line. Check to make sure drain pan is draining completely, no leaks are found in drain line fittings, and water is draining from the termination of the primary drain line.

8.0 AIR FILTER (not factory-installed)

- External filter or other means of filtration is required. Units should be sized for a maximum of 300 feet/min. air velocity or what is recommended for the type filter installed.

Filter application and placement are critical to airflow, which may affect the heating and cooling system performance. Reduced airflow can shorten the life of the system’s major components, such as motor, limits, elements, heat relays, evaporator coil or compressor.

If adding high efficiency filters or electronic air filtration systems, it is very important that the air flow is not reduced. If air flow is reduced the overall performance and efficiency of the unit will be reduced. It is strongly recommended that a profesional installation technician is contacted to ensure installation of these such filtration systems are installed correctly.

IMPORTANT: DO NOT DOUBLE FILTER THE RETURN AIR DUCT SYSTEM. DO NOT FILTER THE SUPPLY AIR DUCT SYSTEM.THIS WILL CHANGE THE PERFORMANCE OF THE UNIT AND REDUCE AIRFLOW .

WARNING

Do not operate the system without filters. A portion of the dust entrained in the air may temporarily lodge In the duct runs and at the supply registers. Any circulated dust particles could be heated and charred by contact with the air handler elements. This residue could soil ceilings, walls, drapes, carpets and other articles in the house.
Soot damage may occur with filters in place, when certain types of candles, oil lamps or standing pilots are burned.

9.0 FILTER INSTALLATION DIMENSIONS

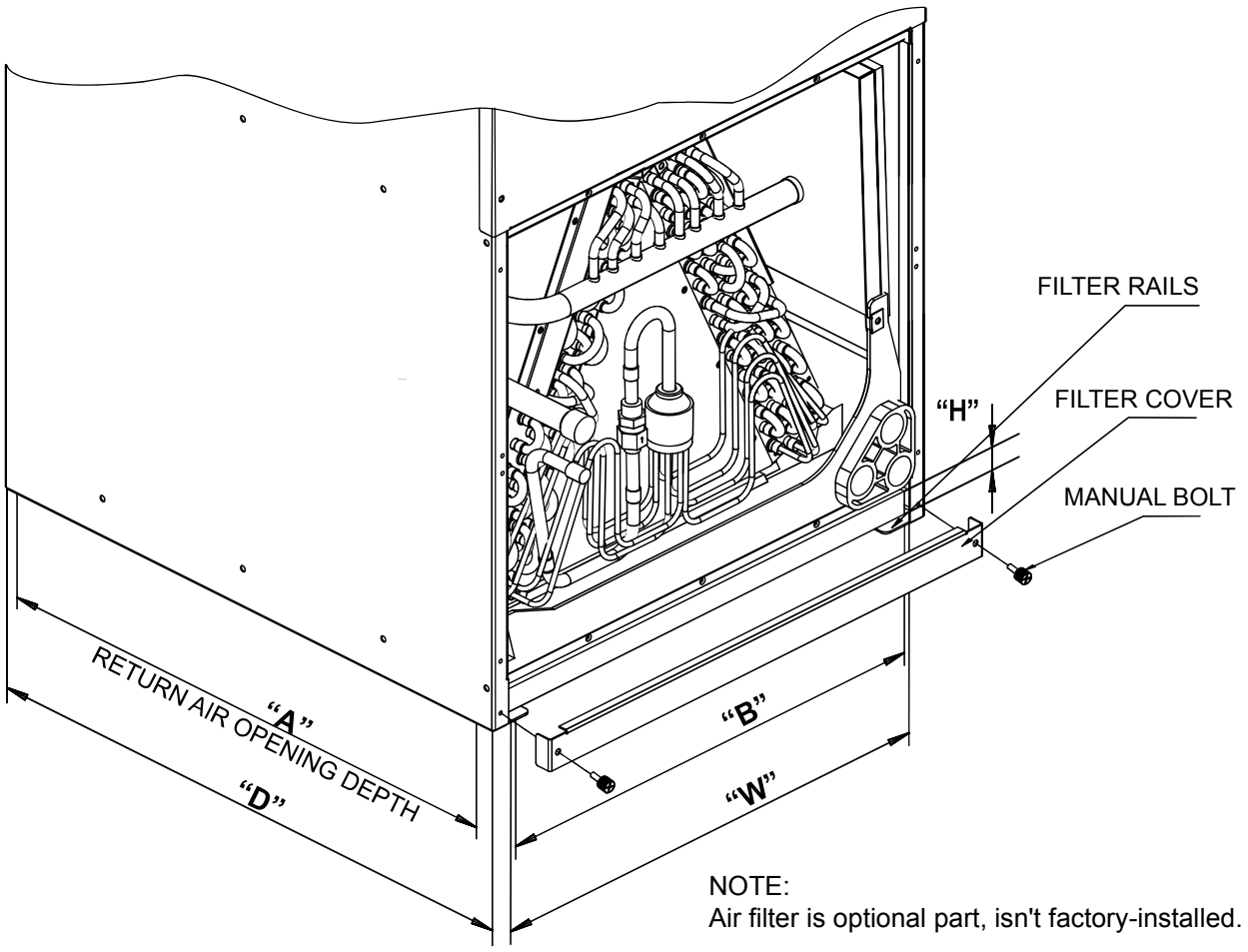


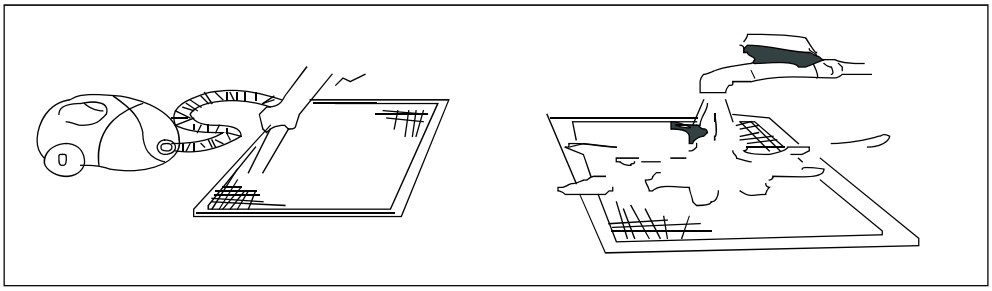
Fig. 6 EXTERNAL FILTER BASE

DIMENSIONAL DATA

MODEL	FILTER SIZE IN [mm]	"W" IN [mm]	"D" IN [mm]	"H" IN [mm]	Return width "A" IN	Return length "B" IN
18	16X20[406X508]	16.8[426]	20.4[518]	1[25.4]	19.6	14.8
25/32/36	18X20[457X508]	18.3[466]	21.6[548]	1[25.4]	20.8	16.3
44/48/60	20X22[508X559]	20.7[526]	23.9[608]	1[25.4]	23	18.8

- AIR FILTER REMOVAL

1.Remove bolts manually, remove air filter recover, see in Fig 6;
2. Hold the edge of the air filter and extract out .
3. Clean the air filter (Vacuum cleaner or pure water may be used to clean the air filter. If the dust accumulation is too heavy, use soft brush and mild detergent to clean it and dry out in cool place) .



10.0 WIRING DIAGRAM

1. To avoid the electrical shock, please connect the air conditioner with the ground lug. The main power plug in the air conditioner has been joined with the ground wiring, please don't change it freely.
2. The power socket is used as the air conditioner specially.
3. Don't pull the power wiring hard.
4. When connecting the air conditioner with the ground, observe the local codes.
5. If necessary, use the power fuse or the circuit, breaker or the corresponding scale ampere.

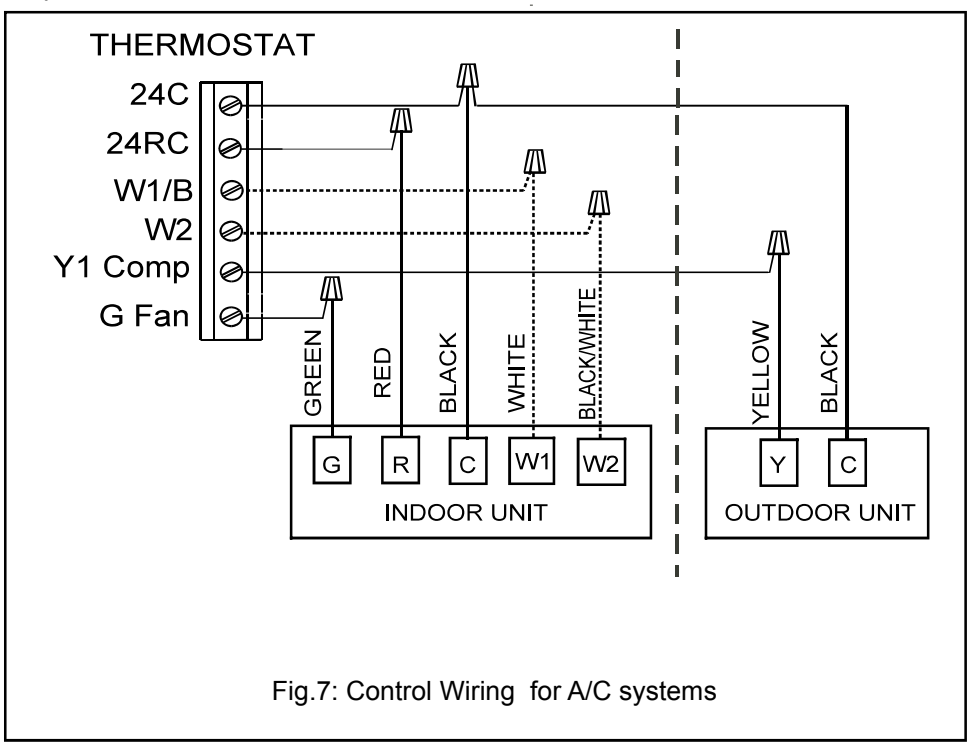


Fig.7: Control Wiring for A/C systems

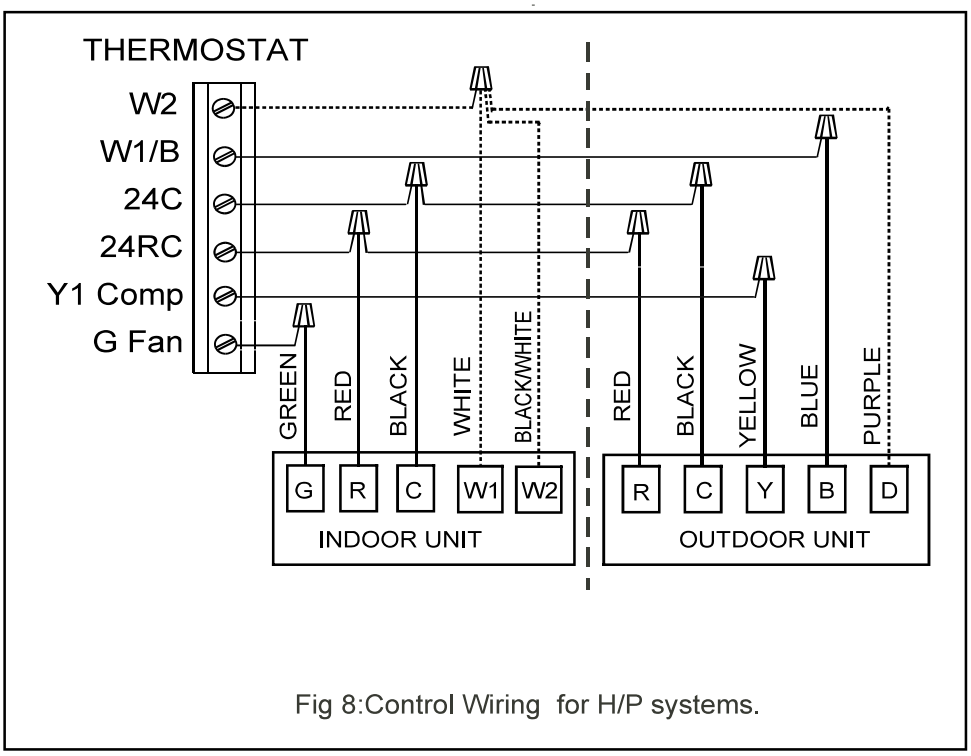


Fig 8:Control Wiring for H/P systems.

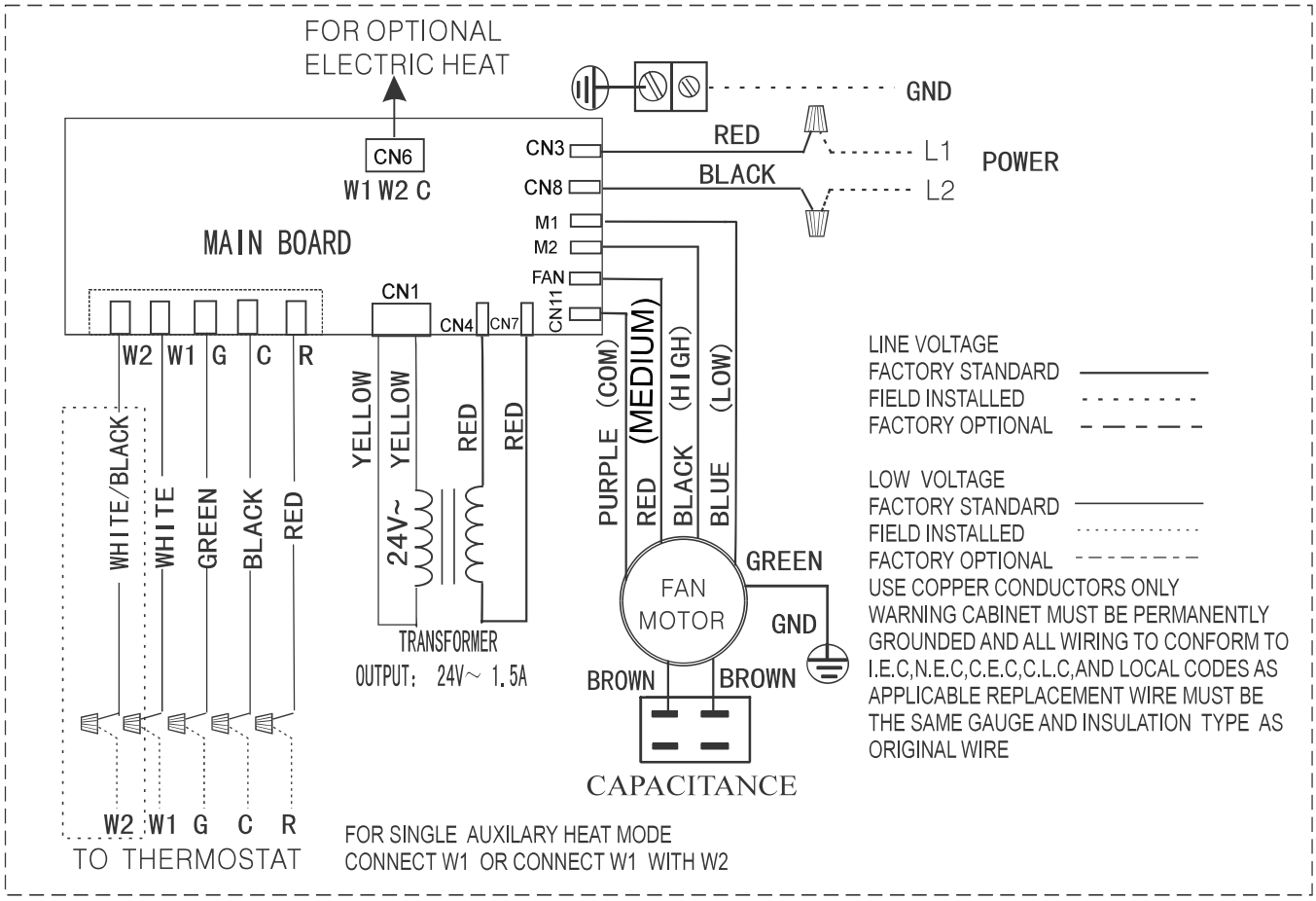


Fig.9: Indoor Unit Wiring Diagram for A/C systems and H/P systems.

Note:Description of fan speed switch
1.Default as medium speed of factory settings.
2.High speed wiring: Switch to high speed (black wire) and connect with FAN terminal, while medium speed (red wire) connect with M2 terminal.
3.Low speed wiring: Switch to low speed (blue wire) and connect with FAN terminal, while medium speed (red wire) connect with M1 terminal.

Terminal / Fan speed	Fan	M1	M2
Medium	Red	Blue	Black
High	Black	Blue	Red
Low	Blue	Red	Black

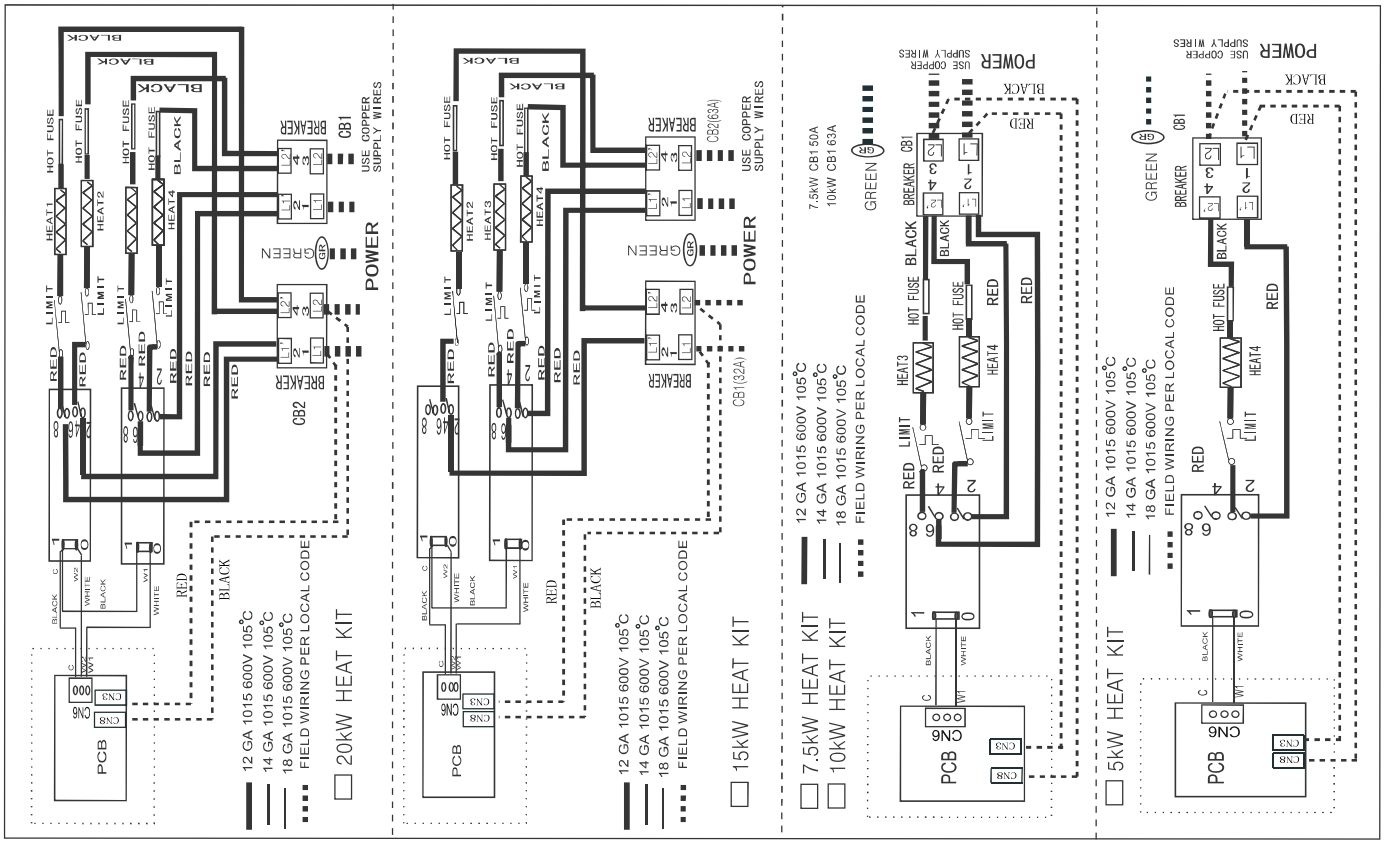


Fig.10: Indoor Unit Wiring Diagram for Electric Heat.

ELECTRIC WIRING GAUGE

Wiring gauge for A/C systems

Model(Btu/h)			18	25/32	36	44/48	60
Power		Phase	Single				
		Voltage/frequency	208/230V, 60Hz				
Lines Gauge	Input Current Fuse	Indoor unit (A)	15A	15A	15A	15A	15A
	Indoor Unit Power Line	Line Quantity	3	3	3	3	3
		Line Diameter(AWG)	14	14	14	14	14
	Outdoor Unit Power Line	Line Quantity	3	3	3	3	3
		Line Diameter(AWG)	14	12	12	10	10
	Outdoor -Indoor Signal Line	Line Quantity	2	2	2	2	2
		Line Diameter(AWG)	18	18	18	18	18
	Thermostat Signal Line	Line Quantity	4	4	4	4	4
		Line Diameter(AWG)	18	18	18	18	18

NOTE: If indoor unit has auxiliary heating already installed and a different auxiliary heating unit is required the indoor unit (A) and indoor line diameters will be different.

Wiring gauge for H/P systems

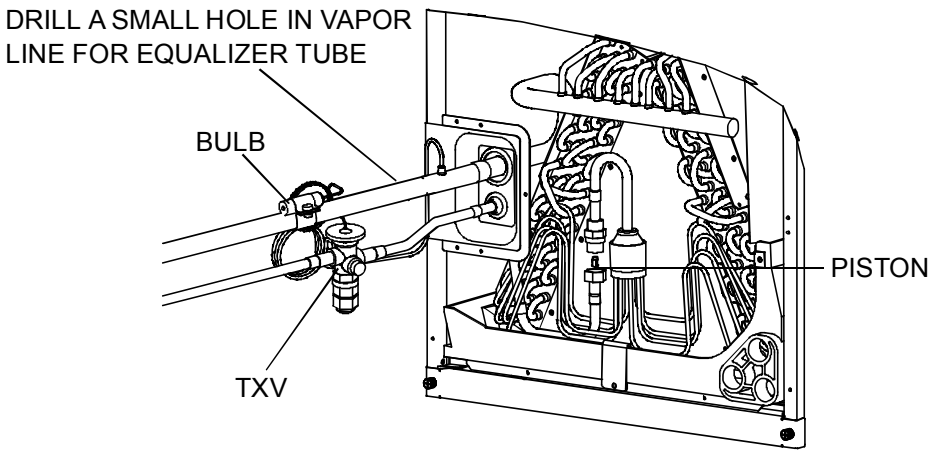
Model(Btu/h)			18	25/32	36	44/48	60
Power		Phase	Single				
		Voltage/frequency	208/230V, 60Hz				
Lines Gauge	Input Current Fuse	Indoor unit (A)	15A	15A	15A	15A	15A
	Indoor Unit Power Line	Line Quantity	3	3	3	3	3
		Line Diameter(AWG)	14	14	14	14	14
	Outdoor Unit Power Line	Line Quantity	3	3	3	3	3
		Line Diameter(AWG)	14	12	12	10	10
	Outdoor -Indoor Signal Line	Line Quantity	4	4	4	4	4
		Line Diameter(AWG)	18	18	18	18	18
	Thermostat Signal Line	Line Quantity	5	5	5	5	5
		Line Diameter(AWG)	18	18	18	18	18

NOTE: If indoor unit has auxiliary heating already installed and a different auxiliary heating unit is required the indoor unit (A) and indoor line diameters will be different.

These units must be wired and installed in accordance with all National and Local Safety Codes.

Orifice/TXV Replacement Information

NOTE: The orifice / TXV replacement options noted in this sheet supersede those in the installation guide. Please reference this sheet for all refrigerant metering options.



Step 1: Remove the screws and front coil panel.

Step 2: Remove the rubber plugs from the liquid and vapor lines.

Step 3: Using a back up wrench and loosen the flow assembly. Remove the factory installed piston Reassemble and tighten the flow assembly. Tighten the flow assembly to 11 (±2) ft-lb

Step 4: If replacing the preinstalled orifice with the optional orifice, ensure the replacement orifice is placed in the same orientation as the preinstalled orifice before tightening the flow assembly.

TXV-Specific Steps

Step 5: Drill a small hole in the suction line for the TXV equalizer line. The hole must be on top as noted in the picture.

Step 6: Dry fit the TXV to the liquid line entering the coil. The valve must be in the upright position as pictured. Keep the valve as close to the coil as possible, although a short piece of field fabricated tubing may be needed. The TXV must be mounted in the CORRECT direction of flow. Place the TXV equalizer line 3 to 4 mm inside the small hole drilled in the vapor line.

Step 7: Wrap the TXV and coil panel with a wet rag to prevent overheating while brazing. Use a nitrogen flow and braze all connections.

Step 8: Allow tubing to cool and pressurize line sets with 150 PSI of nitrogen to check braze connections and flow assembly for leaks. Make repairs as needed.

Step 9: Locate and clean a straight section of the vapor line as close to the coil as possible. Use the supplied copper straps to secure the TXV sensing bulb on top of the vapor line as pictured.

Step 10: Insulate the entire vapor line and sensing bulb It is also recommended to insulate the TXV and liquid line between the valve and coil to prevent condensation in hot humid environments.

Step 11: Replace the front coil panel and secure in place.

Step 12: Follow the steps in the installation guide for vacuum requirements and system start up procedures.

Step 13: Allow system to run for a minimum of 10 minutes in the cooling mode.

A: For fixed orifice installation: Use the superheat charging chart to obtain proper superheat based on indoor / outdoor conditions.

B: For TXV installation: Charge the system to 10 degrees of subcooling. Adjust the expansion valve to achieve 9 (± 3 degrees) of superheat.

Step 14: Allow system to run for an additional 10 minutes to verify the subcooling and superheat readings.

TABLE 2: The Piston/TXV in () means the recommended model for field installation.

Condensing Unit		Air Handle	Piston Size / TXV Valve Model	SEER	If Preinstalled Piston Replace Required
AC	M4AC4018B1000AA	M4AH4018A1000AA	MAYTXVACAC1818AA / (049)	14	YES
	M4AC4024A1000AA	M4AH4025A1000AA	057 /（MAYTXVACHP1830AA）	14	NO
	M4AC4030B1000AA	M4AH4032A1000AA	063 /（MAYTXVACHP1830AA）	14	NO
	M4AC4036A1000AA	M4AH4036A1000AA	MAYTXVACHP3642AA / (070)	14	YES
	M4AC4042A1000AA	M4AH4044A1000AA	080 /（MAYTXVACHP3642AA）	14	NO
	M4AC4048A1000AA	M4AH4048A1000AA	MAYTXVACHP4848AA / (105)	14	YES
	M4AC4060A1000AA	M4AH3060B1000AA	102 /（MAYTXVACHP6060AA）	14	YES
	M4AC4018C1000AA	M4AH4018A1000AA	051/(MAYTXVACHP1830AA)	14	YES
	M4AC4024C1000AA	M4AH4025A1000AA	058/(MAYTXVACHP1830AA)	14	YES
	M4AC4030C1000AA	M4AH4032A1000AA	064/(MAYTXVACHP1830AA)	14	YES
	M4AC4036C1000AA	M4AH4036A1000AA	071/(MAYTXVACHP1830AA)	14	YES
	M4AC4042C1000AA	M4AH4044A1000AA	077/(MAYTXVACHP3642AA)	14	YES
	M4AC4048C1000AA	M4AH4048A1000AA	082/(MAYTXVACHP3642AA)	14	YES
	M4AC4060C1000AA	M4AH3060B1000AA	090/(MAYTXVACHP6060AA)	14	YES
HP	M4HP4018B1000AA	M4AH4018A1000AA	MAYTXVACHP1830AA/ (052)	14	NO
	M4HP4024B1000AA	M4AH4025A1000AA	057 /（MAYTXVACHP1830AA）	14	NO
	M4HP4030A1000AA	M4AH4032A1000AA	063 /（MAYTXVACHP1830AA）	14	NO
	M4HP4036A1000AA	M4AH4036A1000AA	MAYTXVACHP3642AA / (068)	14	YES
	M4HP4042A1000AA	M4AH4044A1000AA	080 /（MAYTXVACHP3642AA）	14	NO
	M4HP4048A1000AA	M4AH4048A1000AA	MAYTXVACHP4848AA / (082)	14	YES
	M4HP4060A1000AA	M4AH3060B1000AA	MAYTXVACHP6060AA / (096)	14	YES

Base Limited Warranty

Single Phase R-410A Outdoor Units, Single Phase R-22 Outdoor Units, Air Handlers, Furnaces, Packaged Units, Cased Coils, Ductless and Specific Terms for Commercial Applications.

Subject to the terms and conditions of this limited warranty, Ingersoll Rand ("Company') extends a limited warranty against manufacturing defects for the product(s) identified in **Table 1** attached hereto ("Products') that are installed in a residential/multi-family application (personal, family or household purposes) under normal use and maintenance in the United States and Canada.

In order to maximize the available benefits under this limited warranty, the Purchaser (as defined below) should read it in its entirety. All repairs of Product parts covered under this limited warranty must be made with authorized service parts and by a licensed HVAC service provider. Additionally, commercial applications are treated differently under this limited warranty as stated in **Table 1** attached hereto. For purposes of this limited warranty, "commercial applications" shall mean any application other than for personal, family, or household use.

TERM: The limited warranty period for Products is as stated in **Table 1** attached hereto. If the Purchaser properly registers the Products, the limited warranty period shall be extended as stated in **Table 1** attached hereto. Regardless of registration, the Commencement Date for a limited warranty period shall be the date that the original installation is complete and all Product start-up procedures have been properly completed and verified by an installer's invoice. If the installation and start-up date cannot be verified by the installer's invoice, the Commencement Date shall be sixty (60) days after the factory manufacture date which is verified by the Product serial number. Where a Product is installed in a newly constructed home, the Commencement Date is the date the Purchaser purchased the residence from the builder. Proof of Product purchase, installation, and/or closing date of the residence may be required to confirm the Commencement Date.

The installation of Product replacement parts under this limited warranty shall not extend the original warranty period. The warranty period for any Product part replaced under this limited warranty is the applicable warranty period remaining under the original Product warranty.

WHO IS COVERED: This limited warranty is provided only to the original owner and his or her spouse ("Purchaser') of the residence where the Products are originally installed. This warranty is not transferable except according to terms stated on the applicable website identified below under Registration Requirements. Company has the right to request any and all proof of Product purchase or installation and/or closing date of the residence.

WHAT COMPANY WILL DO: Company may request proof of Product purchase and/or installation in order to provide Product parts under this limited warranty. As Company's only responsibility and Purchaser's only remedy under this limited warranty, Company will furnish a replacement part to the licensed HVAC service provider, without charge for the part only, to replace any Product part that fails due to a manufacturing defect under normal use and maintenance. The Purchaser must pay for any and all shipping and handling charges and other costs of warranty service for the replacement part. If a Product part is not available, Company will, at its option, provide a free suitable substitute part or provide a credit in the amount of the then factory selling price for a new suitable substitute part to be used by the Purchaser towards the retail purchase price of a new Company product. Any new Product purchase shall be at Purchaser's sole cost and expense including, but not limited to, all shipping, removal, and installation costs and expenses.

REGISTRATION REQUIREMENTS: All Products must be properly registered online by the Purchaser within sixty (60) days after the Commencement Date to receive the registered limited warranty terms. To register online, go to:

http://www.ameristarac.com

and click "Begin Online Registration." If a Purchaser does not register within this stated time period, the base limited warranty terms shall apply.

ELIGIBILITY REQUIREMENTS: The following items are required in order for the Products to be covered under this limited warranty:

- The Products must be in the same location where they were originally installed.
- The Products must be properly installed, operated, and maintained by a licensed HVAC service provider in accordance with the Product specifications or installation, operation, and maintenance instructions provided by Company with each Product. Failure to conform to such specifications and/or instructions shall void this limited warranty. Company may request written documentation showing the proper preventative maintenance.
- All Product parts replaced by Company under this limited warranty must be given to the servicing provider for return to Company.
- Air handlers, air conditioners, heat pumps, cased or uncased coils, stand-alone furnaces, and packaged units must be part of an Air Conditioning, Heating, and Refrigeration Institute rated and matched system or a specification in a Company provided bulletin or otherwise approved in writing by a Company authorized representative.

EXCLUSIONS: The following are not covered by this limited warranty:

- Labor costs including, but not limited to, costs for diagnostic calls or the removal and reinstallation of Products and/or Product parts.
- Shipping and freight expenses required to ship Product replacement parts.
- Failures, defects, or damage (including, but not limited to, any loss of data or property) caused by (1) any third party product, service, or system connected or used in conjunction with the Products; (2) any use that is not designed or intended for the Products; (3) modification, alteration, abuse, misuse, negligence, or accident; (4) improper storage, installation, maintenance, or operation including, but not limited to, operation of electrical equipment at voltages other than the range specified on the Product nameplate; (5) any use in violation of written instructions or specifications provided by Company; (6) any acts of God including, but not limited to, fire, water, storms, lightning, or earthquakes; or any theft or riots; or (7) a corrosive atmosphere or contact with corrosive materials such as, but not limited to, chlorine, fluorine, salt, sulfur, recycled waste water, urine, fertilizers, rust, or other damaging substances or chemicals.
- Products purchased direct including, but not limited to, Internet or auction purchases and purchases made on an uninstalled basis.
- Cabinets or cabinet pieces that do not affect product performance, air filters, refrigerant, refrigerant line sets, belts, wiring, fuses, surge protection devices, non-factory installed driers, and Product accessories.
- Increased utility usage costs.

REFRIGERANT POLICY: (1) Manufacturer-Installed Refrigerant: Beginning on January 1, 2010, R-22 refrigerant will no longer be used as a manufacturer-installed refrigerant as required by federal regulation. All Products with manufacturer-installed refrigerant will include R410-A refrigerant. Any and all expenses or costs associated with replacing Product parts that are not R-410A compatible will not be covered by the terms and conditions of this limited warranty. (2) Non-Manufacturer installed Refrigerant: For Products manufactured and sold by the Company without refrigerant, only manufacturer approved and genuine alternate refrigerants shall be used. The use of contaminated, counterfeit, non-genuine, or non-manufacturer approved alternate refrigerant will void this limited warranty. (3) All Products: Products include a liquid line filter drier which must be replaced when a compressor replacement is necessary. A suction line filter drier must be added for compressors defined as burnouts and failure to do so will void this warranty. Non-approved refrigerant and/or non-approved refrigerant system additives including, but not limited to dyes will void this limited warranty.

ADDITIONAL TERMS:

THIS LIMITED WARRANTY AND LIABILITY SET FORTH HEREIN ARE IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES, WHETHER IN CONTRACT OR IN NEGLIGENCE, EXPRESS OR IMPLIED, IN LAW OR IN FACT. THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO THE DURATION OF THE APPLICABLE PRODUCT WARRANTY. COMPANY DOES NOT AUTHORIZE ANY PERSON TO CREATE FOR IT ANY OBLIGATION OR LIABILITY IN CONNECTION WITH THE PRODUCTS.

NOTWITHSTANDING ANYTHING IN THIS LIMITED WARRANTY TO THE CONTRARY, COMPANY SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL AND/OR PUNITIVE DAMAGES, WHETHER BASED ON CONTRACT, WARRANTY, TORT (INCLUDING, BUT NOT LIMITED TO, STRICT LIABILITY OR NEGLIGENCE), PATENT INFRINGEMENT, OR OTHERWISE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. COMPANY'S MAXIMUM LIABILITY HEREUNDER IS LIMITED TO THE ORIGINAL PURCHASE PRICE OF THE PRODUCTS.

No action arising out of any claimed breach of this limited warranty may be brought by a Purchaser more than one (1) year after the cause of action has arisen.

This limited warranty gives you specific legal rights, and you may also have other rights as otherwise permitted by law. If this Product is considered a consumer product, please be advised that some local laws do not allow limitations on incidental or consequential damages, how long a warranty lasts based on registration, or how long an implied warranty lasts, so that the above limitations may not fully apply. Refer to your local laws for your specific rights under this limited warranty. If you have any questions regarding this limited warranty, please contact your original installation dealer, or any participating dealer, should your original installation dealer no longer be available.

GW-659-1917

TABLE 1: Warranty Time Periods

COVERAGE TERMS FOR RESIDENTIAL APPLICATIONS: Pursuant to the Ingersoll Rand ("Company") limited warranty terms and conditions, the following Products are covered for the base time periods as stated below ("Base Limited Warranty Period'). If registered, the Base Limited Warranty Periods for certain Products will be extended as stated below ("Registered Limited Warranty Period").

FURNACES:
M801P, M951P, M952V
Base Limited Warranty Period: Parts – five (5) years, Heat Exchanger – twenty (20) years.
Registered Limited Warranty Period: Parts – ten (10) years, Heat Exchanger: twenty (20) years.

AIR HANDLERS:
M4AH3, M4AH4
Base Limited Warranty Period: Indoor Coil and Parts – five (5) years.
Registered Limited Warranty Period: Indoor Coil and Parts – ten (10) years.

TMM4, TMM5
Base Limited Warranty Period: Indoor Coil and Parts – three (3) years.
Registered Limited Warranty Period: Indoor Coil and Parts – ten (10) years.

ELECTRIC HEATERS, installed in M4A3/4 AIR HANDLERS:
MAYHTR1A
Limited Warranty Period: Parts – ten (10) years.

SINGLE PHASE R410 OUTDOOR UNITS:
M4AC3 **(M4AC3018, 24, 30, 36, 42, 48, 60 only)**, M4HP3, M4AC4, M4HP4
Base Limited Warranty Period: Compressor, Outdoor Coil, Parts: five (5) years.
Registered Limited Warranty Period: Compressor, Outdoor Coil, Parts – ten (10) years.

SINGLE PHASE R410 OUTDOOR UNITS:
M4AC3 **(M4AC3017, 23, 29 only)**
Base Limited Warranty Period: Compressor, Outdoor Coil, Parts: one (1) year.
Registered Limited Warranty Period: Compressor, Outdoor Coil, Parts – five (5) years.

SINGLE PHASE R22 OUTDOOR UNITS:
M2AC3, M2HP3
Base Limited Warranty Period: Compressor, Outdoor Coil, Parts - one (1) year.
Registered Limited Warranty Period: Compressor, Outdoor Coil, Parts – five (5) years.

CASED COILS:
M4CXC
Base Limited Warranty Period: Coil, Parts –five (5) years.
Registered Limited Warranty Period: Coil and Parts – ten (10) years.
4MXC, 4GXC
Base Limited Warranty Period: Coil, Parts –three (3) years.
Registered Limited Warranty Period: Coil and Parts – ten (10) years.

PACKAGED UNITS:
M4PH3, M4PG3, M4PH4, M4PW4, M4PG4
Base Limited Warranty Period: Compressor, Coil, Parts – five (5) years, Heat Exchanger – ten (10) years.
Registered Limited Warranty Period: Compressor, Coil, Parts – ten (10) years, Heat Exchanger – ten (10) years.

ELECTRIC HEATERS, installed in M4PH4 PACKAGED UNITS:
MAYHTR1P
Limited Warranty Period: Parts – ten (10) years.

DUCTLESS SYSTEMS:**
M4THS22/M4MHW22, M4THS15/M4MHW15, M4TCS15/M4MCW15:
Base Limited Warranty Period:
All Parts – five (5) year.
Registered Limited Warranty Period:
All Parts – ten (10) years.
**There is no distinction between residential and commercial use for this Limited Warranty term and coverage.

SPECIFIC TERMS FOR COMMERCIAL APPLICATIONS
Base Limited Warranty Period Applies