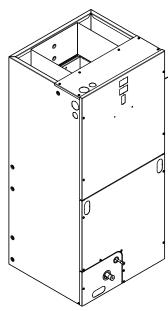
# Installer's Guide

# **Convertible Air Handlers** 2 — 5 Ton

TEM6A0B24H21S TEM6A0B30H21S TEM6A0C36H31S TEM6A0C42H41S TEM6A0D48H41S TEM6A0D60H51S





The TEM6 series air handler is designed for installation in a closet, utility room, alcove, basement, crawlspace or attic. These versatile units are applicable to air conditioning and heat pump applications. Several models are available to meet the specific requirements of the outdoor equipment. Field installed electric resistance heaters are available.

#### A SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.



# SAFETY SECTION **AIR HANDLERS**

Important: This document contains a wiring diagram,

a parts list, and service information. This is customer property and is to remain with this unit. Please return to service information pack upon completion of work.

Important: These instructions do not cover all variations in systems nor provide for every possible contingency to be met in connection with the installation. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to your installing dealer or local distributor.

# **A** WARNING

#### **HAZARDOUS VOLTAGE!**

Failure to follow this Warning could result in property damage, severe personal injury, or death. Disconnect all electric power, including remote disconnects before servicing. Follow proper lockout/tagout procedures to ensure the power cannot be inadvertently energized.

# **A** CAUTION

## **GROUNDING REQUIRED!**

Failure to inspect or use proper service tools may result in equipment damage or personal injury. Reconnect all grounding devices. All parts of this product that are capable of conducting electrical current are grounded. If grounding wires, screws, straps, clips, nuts, or washers used to complete a path to ground are removed for service, they must be returned to their original position and properly fastened.

## **A** WARNING

#### LIVE ELECTRICAL COMPONENTS!

Failure to follow this Warning could result in property damage, severe personal injury, or death. Follow all electrical safety precautions when exposed to live electrical components. It may be necessary to work with live electrical components during installation, testing, servicing, and troubleshooting of this product.

### **A** WARNING

### PRESSURIZED REFRIGERANT!

Failure to follow this Warning could result in personal injury

System contains oil and refrigerant under high pressure. Recover refrigerant to relieve pressure before opening the system. Do no use nonapproved refrigerants or refrigerant substitutes or refrigerant additives.

### **A** CAUTION

#### SHARP EDGE HAZARD!

Failure to follow this Caution could result in property damage or personal injury. Be careful of sharp edges on equipment or any cuts made on sheet metal while installing or servicina.

# **▲** CAUTION

#### HAZARDOUS VAPORS!

Failure to follow this caution could result in property damage or personal injury. Equipment corrosion damage. To prevent shortening its service life, the air handler should not be used during the finishing phases of construction or remodeling. The low return air temperatures can lead to the formation of condensate. Condensate in the presence of chlorides and fluorides from paint, varnish, stains, adhesives, cleaning compounds, and cement creates a corrosive condition which may cause rapid deterioration of the cabinet and internal components.

## CAUTION

#### COIL IS PRESSURIZED!

- Coil is pressurized with approximately 8-12 psi dry air and factory checked for leaks.
- Carefully release the pressure by removing the rubber plug on the liquid line.
- If no pressure is released, check for leaks.

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## **A WARNING**

#### SAFETY HAZARD!

Fiberglass dust and ceramic fibers are believed by the state of California to cause cancer through inhalation. Glasswool fibers may also cause respiratory, skin, or eye irritation.

### PRECAUTIONARY MEASURES

- Avoid breathing fiberglass dust
- Use a NIOSH approved dust/mist respirator
- Avoid contact with the skin or eyes. Wear longsleeved, loose fitting clothing, gloves, and eye protection
- Wash clothes separately from other clothing, rinse washer thoroughly
- Operations such as sawing, blowing, tear-out, and spraying may generate fiber concentrations requiring additional respiratory protection. Use the appropriate NIOSH approved respirator in these situations

#### FIRST AID MEASURES

- EYE CONTACT: FLUSH EYES WITH WATER TO REMOVE DUST. IF SYMPTOMS PERSIST, SEEK MEDICAL ATTENTION.
- SKIN CONTACT: WASH AFFECTED AREA GENTLY WITH SOAP AND WARM WATER AFTER HANDLING.

This warning complies with state of California law, Proposition 65.

# **A** WARNING

#### SAFETY HAZARD!

This appliance is not to be used by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.

### **A** WARNING

### **SAFETY HAZARD!**

Children should be supervised to ensure that they do not play with the appliance.

Important: Installation of this unit shall be made in accordance with the National Electric Code, NFPA No. 90A and 90B, and any other local codes or utilities requirements.

Important: Air handlers do not require repositioning of the coil or drain pan for upflow or horizontal left applications. See the downflow and horizontal right installation sections for application instructions. Note: Air handlers have been evaluated in accordance with the Code of Federal Regulations, Chapter XX, Part 3280 or the equivalent. "SUITABLE FOR MOBILE HOME USE."

Note: Condensation may occur on the surface of the air handler when installed in an unconditioned space. When units are installed in unconditioned spaces, verify that all electrical and refrigerant line penetrations on the air handler are sealed completely.

Note: The manufacturer recommends installing ONLY A.H.R.I approved, matched indoor and outdoor systems. Some of the benefits of installing approved matched indoor and outdoor split systems are maximum efficiency, optimum performance, and the best overall system reliability.

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# **Features**

#### Table 1. Standard Features

- MULTI-POSITION UPFLOW, DOWNFLOW, HORIZONTAL LEFT AND HORIZONTAL RIGHT
- PAINTED FINISH ON GALVANIZED STEEL EXTERIOR WITH FULLY INSULATED CABINET THAT MEETS R4.2 VALUE
- STURDY POLYCARBONATE DRAIN PANS
  - The TEM air handler has factory installed drain pans and is shipped for upflow and horizontal left applications
- 208/230 VAC OPERATION
- VARIABLE-SPEED DIRECT DRIVE BLOWER.
- FACTORY INSTALLED R-410A THERMAL EXPANSION VALVE
- ALL ALUMINUM COIL
- BOTTOM RETURN
- MEETS THE MINIMUM LEAKAGE REQUIREMENTS FOR THE FLORIDA AND CALIFORNIA BUILDING CODES

#### Table 2. Optional Accessories

- 4,5,8,10,15,20, and 25 KW SINGLE PHASE ELECTRIC HEATERS
  - Circuit breakers available on single phase 4, 5, 8, 10, 15, 20, and 25 KW heaters
  - Lugs available on single phase 4, 5, 8, and 10 KW heaters
  - Lugs available on three phase 10 and 15 KW heaters
- SINGLE POINT POWER ENTRY KIT (for 15 and 20 KW heaters)
- SUPPLY DUCT FLANGE KIT
- DOWNFLOW SUB-BASE KITS TAYBASE185, TAYBASE235, TAYBASE260
- SLIM FIT FILTER BOX KIT BAYSF1185AAA, BAYSF1235AAA, BAYSF1265AAA

# **Installation Instructions**

#### 1. Unpacking

Carefully unpack the unit and inspect the contents for damage. If any damage is found at the time of delivery, proper notification and claims should be made with the carrier.

Check the rating plate to assure model number and voltage, plus any kits match with what you ordered. The manufacturer should be notified within 5 days of any discrepancy or parts shortage.

#### 2. Location

The air handler should be centrally located and may be installed in a closet, alcove, utility room, basement, crawl space or attic. Minimum clearances must be met. IMPORTANT: The downflow sub-base may be required with electric heat applications. See minimum clearance table.

The unit must be installed in a level position to ensure proper condensation drainage. Make sure the unit is level in both directions within 1/8" on either side.

When the unit is installed in a closet or utility room, the room should be large enough, and have an opening to allow replacement of the unit. All servicing is done from the front and a clearance of 21" is needed for service unless the closet door aligns with the front of the air handler.

If you are installing the unit in an unconditioned space such as an attic or crawl space, you must ensure that the area provides sufficient air circulation to prevent moisture collection on the cabinet during high dew point conditions. A drain pan must be installed under the entire unit when it is installed in or above a finished ceiling or in an unconditioned space.

#### 3. Duct Work

The duct work should be installed in accordance with the NFPA No. 90A "Installation of Air Conditioning and Ventilating systems" and No. 90B "Residential Type Warm Air Heating and Air Conditioning Installation."

The duct work should be insulated in accordance with the applicable requirements for the particular installation as required by HUD, FHA, VA the applicable building code, local utility or other governing body.

#### 4. Condensate Drain

The unit is supplied with primary and auxiliary condensate drains that have 3/4" NPT connections. The primary drain must be trapped outside the unit and piped in accordance with applicable building codes. Do not reduce the drain line size less than the connection size on the drain pan. Condensate should be piped to an open drain or to the outside. All drains must pitch downward away from the unit a minimum of 1/4" per foot of line to ensure proper drainage.

**IMPORTANT:** If cleanout Tee is used, stand pipe must be sealed/capped.

Insulate the primary drain line to prevent sweating where dew point temperatures may be met. (Insulation is optional depending on climate and application needs.)

#### 5. Refrigerant Piping

Refrigerant piping external to the unit shall be sized in accordance with the instructions of the manufacturer of the outdoor equipment.

#### 6. Metering Device

All units are shipped and installed with an internally-checked, non-bleed TXV designed for air conditioning or heat pump operation. Some outdoor models may require a start assist kit. See outdoor unit for more information.

#### 7. Blower

This unit is supplied with a variable speed motor with a direct drive blower wheel which can obtain various air flows. The unit is shipped with factory set cooling and heating air flows. Performance tables are available for additional airflow settings. Disconnect all power to the unit before making any adjustments to the airflow settings. Be sure to check the air flow and the temperature drop across the evaporator coil to ensure sufficient air flow.

#### 8. Airflow Adjustment

### **A** CAUTION

#### **EQUIPMENT DAMAGE!**

Failure to follow this procedure may result in equipment damage.

Disconnect power to the air handler before changing dip switch positions.

Blower speed changes are made on the ECM Fan Control. The ECM Fan Control controls the variable speed motor.

There is a bank of 8 dip switches. The dip switches work in pairs to match the airflow for the outdoor unit size (tons). cooling airflow adjustment, Fan off-delay options, and heating airflow adjustment. The switches appear as shown in Figure 2, p. 6

Figure 1. ECM Fan Control

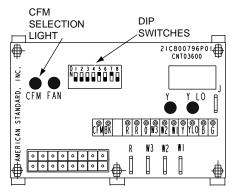
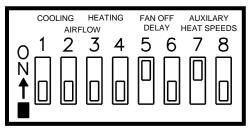


Figure 2. Dip Switches



DIP SWITCHES (TYPICAL SETTINGS)

If the airflow needs to be increased or decreased, see the Airflow Label on the air handler or Blower Performance Table.

Be sure to set the airflow for the correct tonnage.

Switches 1-4 Cooling Airflow

Switches 5-6 Fan Off Delay Options

Switches 7-8 Auxiliary Heat

#### **Indoor Blower Timing**

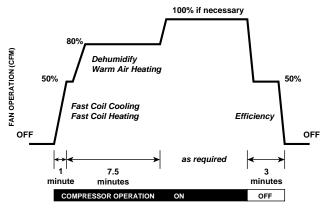
IMPORTANT: Leave dip switches 5 and 6 in the "asshipped" positions during system startup and check out. Afterwards, adjust as desired.

Table 3. Cooling Off — Delay Options

SWITCH S	SETTINGS	SELECTION	NOMINAL AIRFLOW
5 — OFF	6 — OFF	NONE	SAME
5 — ON	6 — OFF	1.5 MINUTES	100% (a)
5 — OFF	6 — ON	3 MINUTES	50%
5 — ON	6 — ON	ENHANCED (b)	50-100%

<sup>(</sup>a) Default setting

Figure 3. Enhanced Mode



#### 9. Wiring

Consult all schematic and pictorial wiring diagrams

<sup>(</sup>b) This ENHANCED MODE selection provides a ramping up and ramping down of the blower speed to provide improved comfort, quietness, and potential energy savings. The graph shows the ramping process.

of this unit and the outdoor equipment to determine compatibility of wiring connections and to determine specific requirements.

All field wiring to the air handler should be installed in accordance with the latest edition of the National Electric Code NFPA No. 70 and any local codes. Check rating plates on unit for rated volts, minimum circuit ampacity and maximum over current protection. Supply circuit power wiring must be 75 degree C (167 degree F) minimum copper conductors only. Copper supply wires shall be sized to the National Electric Code or local code requirements, whichever is more stringent.

The unit is shipped wired for 230/240 Volt AC 60 HZ 1 Phase Operation. If the unit is to be operated at 208 VAC 60HZ, follow the instructions on the indoor unit wiring diagram to change the low voltage transformer to 208 VAC operation (Ensure unit is properly grounded).

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

Low voltage control wiring should be 18 Awg, color coded (105 degree C minimum). For lengths longer than 100ft., 16 Awg wire should be used. Make certain that separation of control wiring and power wiring has been maintained.

#### 10. Air Filter

To protect the coil, blower and other internal parts from excessive dirt and dust an air filter must be installed before air enters the evaporator coil. A remote filter must be installed. Consult the filter manufacturer for proper sizing and maximum velocity requirements.

Important: Air filters shall meet the test requirements in UL 900.

#### 11. Thermostat

Select a thermostat that is commonly used with HP

or AC single stage heating/cooling with electric heat. The thermostat will energize the fan on a demand for heat or cool.

Install the thermostat on an inside wall, away from drafts, lights or other heat sources in a location that has sufficient air circulation from other rooms being controlled by the thermostat.

# 12. Sequence of Operation Cooling (Cooling only)

When the thermostat calls for cooling, the circuit from R to G is completed. The blower motor is energized directly by the ECM fan control, which receives the 24VAC signal from the thermostat.

The circuit from R to Y is also complete energizing the compressor contactor of the outdoor unit. The contactor will close and start the compressor and condenser fan motor.

#### Cooling (heat pump)

When the thermostat calls for cooling, the circuit from R to G is completed. The blower motor is energized directly by the ECM fan control, which receives the 24VAC signal from the thermostat.

The circuit from R to Y is also complete energizing the compressor contactor of the outdoor unit. The contactor will close and start the compressor and condenser fan motor.

Circuit R to O energizes the reversing valve to the cooling position.

#### Heating (heat pump)

When the thermostat calls for heating, the circuit from R to G is completed and the blower motor is energized directly by the ECM fan control, which receives the 24VAC signal from the thermostat.

The circuit from R to Y is also complete energizing the compressor contactor of the outdoor unit. The contactor will close and start the compressor and condenser fan motor.

In the heating mode, the reversing valve of the outdoor unit is not energized.

If the indoor temperature continues to fall, the R to W circuit is completed energizing the electric heat contactor(s).

#### Heating (electric heat only)

**Note:** The thermostat must be setup to bring the blower on when the electric heat is energized.

When the thermostat calls for heating, the circuit from R to G is completed and the blower motor is energized directly by the ECM fan control, which receives the 24VAC signal from the thermostat. The circuit from R to W is completed energizing the heating contactor(s).

#### **Defrost**

Supplemental heat during defrost can be provided by connecting the X2 (black) wire from the outdoor unit to W1 or W2 at the indoor unit. This will prevent cold air from being discharged from the indoor unit during defrost.

#### 13. Operational and Checkout Procedures

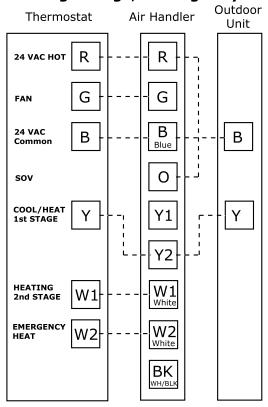
To obtain proper performance, all units must be operated and charge adjustments made in accordance with procedures found in the Service Facts document of the outdoor unit. After installation has been completed, it is recommended that the entire system be checked against the checkout list located at the back of this document. See "Checkout Procedures," p. 30

#### 14. Maintenance

The system air filter(s) should be inspected, cleaned or replaced at least monthly. Make certain that the access panels are replaced and secured properly before placing the unit back in operation. This product is designed for dependable service; however, periodic maintenance should be scheduled and conducted by trained professional service personnel. This service should be conducted at least annually, and should include testing and inspection of electrical and refrigerant components. The heat transfer surface should be cleaned. The blower motor is permanently lubricated for normal operating conditions.

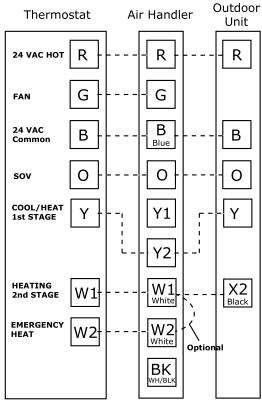
# **Field Wiring**

### Single Stage, Cooling Only



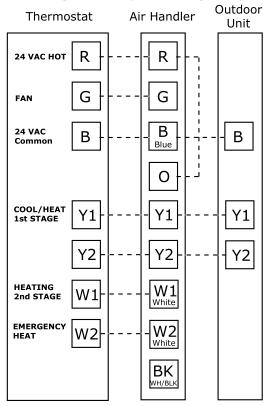
- 1. \* Units with pigtails require wirenuts for connections.
- 2. Cap all unused wires.
- 3. For BK enabled comfort control, do not connect Y1 or Y2 at the air handler  $\,$
- 4. For BK enabled comfort control, cut the jumper wire between R and BK on the control board. See wiring schematic for details.
- 5. In AC systems for multiple stages of electric heat, jumper W1 and W2 together if comfort control has only one stage of heat.

### Single Stage, HP



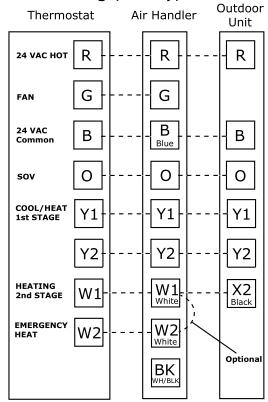
- 1. \* Units with pigtails require wirenuts for connections.
- 2. Cap all unused wires.
- 3. For BK enabled comfort control, do not connect Y1 or Y2 at the air handler  $\,$
- 4. For BK enabled comfort control, cut the jumper wire between R and BK on the control board. See wiring schematic for details.
- 5. In systems for multiple stages of electric heat, jumper W1 and W2 together if comfort control has only one stage of heat.

# 2 Stage, 2 Step, Cooling Only



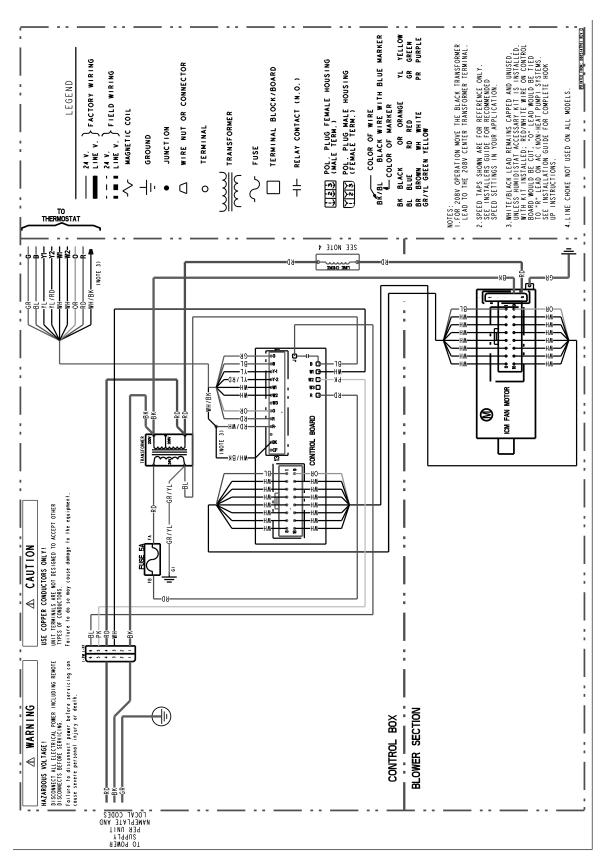
- 1.  $^{*}$  Units with pigtails require wirenuts for connections.
- 2. Cap all unused wires.
- 3. For BK enabled comfort control, do not connect Y1 or Y2 at the air handler  $\,$
- 4. For BK enabled comfort control, cut the jumper wire between R and BK on the control board. See wiring schematic for details.
- 5. In AC systems for multiple stages of electric heat, jumper W1 and W2 together if comfort control has only one stage of heat.

# 2 Stage, 2 Step, HP



- 1. \* Units with pigtails require wirenuts for connections.
- 2. Cap all unused wires.
- 3. For BK enabled comfort control, do not connect Y1 or Y2 at the air handler
- 4. For BK enabled comfort control, cut the jumper wire between R and BK on the control board. See wiring schematic for details.
- 5. In systems for multiple stages of electric heat, jumper W1 and W2 together if comfort control has only one stage of heat.

# **Electrical Data**



# **Performance and Electrical Data**

Table 4. Air Flow Performance

	TEM6A0B	24, TEM6A	0B30 CO	DLING AI	RFLOW P	ERFORM	ANCE, WET	COIL, N	) FILTER	, NO HEA	ATER	
OUTDOOR	SPEED	AIRFLOW		DIP SWITC	H SETTING	ì	AIRFLOW		EXTERNA	L STATIC P	RESSURE	
UNIT SIZE (TONS)	SETTING	SETTING	SW1	SW2	SW3	SW4	POWER	0.1	0.3	0.5	0.7	0.9
	LOW	353 CFM/ ton	ON	ON	OFF	ON	CFM Watts	533 52	497 78	461 104	425 130	390 157
1.5	NORMAL	401 CFM/ ton	ON	ON	OFF	OFF	CFM Watts	611 65	580 95	548 125	517 155	486 185
	HIGH	451 CFM/ ton	ON	ON	ON	OFF	CFM Watts	684 81	668 115	644 148	611 182	570 215
	LOW	343 CFM/ ton	OFF	ON	OFF	ON	CFM Watts	687 82	672 115	648 149	614 182	571 215
2	NORMAL	390 CFM/ ton	OFF	ON	OFF	OFF	CFM Watts	789 104	798 145	780 183	735 216	663 246
	HIGH	439 CFM/ ton	OFF	ON	ON	OFF	CFM Watts	884 135	887 177	882 230	845 274	751 290
	LOW	300 CFM/ ton	ON	OFF	OFF	ON	CFM Watts	752 92	749 123	729 167	691 211	636 241
2.5	NORMAL	340 CFM/ ton	ON	OFF	OFF	OFF	CFM Watts	859 128	861 172	863 211	830 242	727 268
	HIGH	383 CFM/ ton	ON	OFF	ON	OFF	CFM Watts	963 172	973 223	995 263	967 291	844 308
	LOW	323 CFM/ ton	OFF	OFF	OFF	ON	CFM Watts	959 169	962 217	974 263	940 297	816 311
3	NORMAL	367 CFM/ ton	OFF	OFF	OFF	OFF	CFM Watts	1097 240	1100 296	1100 343	1034 363	858 341
	HIGH	413 CFM/ ton	OFF	OFF	ON	OFF	CFM Watts	1192 304	1150 331	1115 354	1031 361	856 339

Table 5. Air Flow Performance

	TEM	6A0B24, TI	М6АОВЗ	O HEATI	NG AIRFL	OW PER	FORMANCE	NO FIL	ΓER, NO I	HEATER		
OUTDOOR	SPEED	AIRFLOW		DIP SWITC			AIRFLOW			L STATIC F	RESSURE	
UNIT SIZE (TONS)	SETTING	SETTING	SW1	SW2	SW3	SW4	POWER	0.1	0.3	0.5	0.7	0.9
	LOW	394 CFM/ ton	ON	ON	OFF	ON	CFM Watts	599 58	571 88	539 117	502 146	462 175
1.5	NORMAL	448 CFM/ ton	ON	ON	OFF	OFF	CFM Watts	680 72	665 109	641 145	610 178	572 209
	HIGH	493 CFM/ ton	ON	ON	ON	OFF	CFM Watts	748 89	746 118	682 163	545 208	326 240
	LOW	393 CFM/ ton	OFF	ON	OFF	ON	CFM Watts	785 97	790 128	773 175	735 223	674 253
2	NORMAL	446 CFM/ ton	OFF	ON	OFF	OFF	CFM Watts	904 131	902 179	912 219	894 253	809 281
	HIGH	491 CFM/ ton	OFF	ON	ON	OFF	CFM Watts	980 167	972 216	990 268	974 308	863 324
	LOW	350 CFM/ ton	ON	OFF	OFF	ON	CFM Watts	866 125	870 162	866 215	833 263	750 286
2.5	NORMAL	398 CFM/ ton	ON	OFF	OFF	OFF	CFM Watts	995 171	988 222	1005 271	986 309	872 325
	HIGH	437 CFM/ ton	ON	OFF	ON	OFF	CFM Watts	1099 220	1086 274	1098 328	1065 362	918 353
	LOW	338 CFM/ ton	OFF	OFF	OFF	ON	CFM Watts	1010 174	1001 224	1018 275	1000 315	888 331
3	NORMAL	384 CFM/ ton	OFF	OFF	OFF	OFF	CFM Watts	1154 246	1151 312	1135 350	1066 361	905 345
	HIGH	422 CFM/ ton	OFF	OFF	ON	OFF	CFM Watts	1245 305	1167 322	1127 346	1067 361	927 352

Table 6. Air Flow Performance

	TEM6A0C	36, TEM6A	0C42 CO	DLING AI	RFLOW P	ERFORM	ANCE, WET	COIL, N	O FILTER	, NO HEA	TER	
OUTDOOR	SPEED	AIRFLOW		DIP SWITC	H SETTING	ì	AIRFLOW		EXTERNA	L STATIC P	RESSURE	
UNIT SIZE (TONS)	SETTING	SETTING	SW1	SW2	SW3	SW4	POWER	0.1	0.3	0.5	0.7	0.9
	LOW	300 CFM/ ton	ON	ON	OFF	ON	CFM Watts	761 63	755 98	719 131	654 163	560 193
2.5	NORMAL	341 CFM/ ton	ON	ON	OFF	OFF	CFM Watts	862 82	861 120	834 158	781 196	700 235
	HIGH	384 CFM/ ton	ON	ON	ON	OFF	CFM Watts	962 106	963 147	948 190	915 234	863 279
	LOW	319 CFM/ ton	OFF	ON	OFF	ON	CFM Watts	961 106	962 147	947 189	914 233	862 279
3	NORMAL	363 CFM/ ton	OFF	ON	OFF	OFF	CFM Watts	1092 146	1093 192	1082 240	1060 288	1026 337
	HIGH	408 CFM/ ton	OFF	ON	ON	OFF	CFM Watts	1231 196	1231 249	1221 301	1203 353	1175 404
	LOW	315 CFM/ ton	ON	OFF	OFF	ON	CFM Watts	1104 150	1105 197	1094 245	1072 293	1039 343
3.5	NORMAL	357 CFM/ ton	ON	OFF	OFF	OFF	CFM Watts	1258 209	1258 263	1248 317	1229 369	1201 421
	HIGH	402 CFM/ ton	ON	OFF	ON	OFF	CFM Watts	1418 286	1415 347	1401 406	1379 462	1348 516
	LOW	308 CFM/ ton	OFF	OFF	OFF	ON	CFM Watts	1238 199	1238 253	1229 306	1210 357	1182 408
4	NORMAL	350 CFM/ ton	OFF	OFF	OFF	OFF	CFM Watts	1412 282	1410 344	1398 404	1378 462	1349 517
	HIGH	394 CFM/ ton	OFF	OFF	ON	OFF	CFM Watts	1570 393	1528 436	1473 466	1406 483	1326 488

Table 7. Air Flow Performance

	TEM	6A0C36, T	EM6A0C4	2 HEATI	NG AIRFL	OW PERI	FORMANCE	, NO FIL	ΓER, NO I	HEATER		
OUTDOOR	SPEED	AIRFLOW		DIP SWITC			AIRFLOW			L STATIC P	RESSURE	
UNIT SIZE (TONS)	SETTING	SETTING	SW1	SW2	SW3	SW4	POWER	0.1	0.3	0.5	0.7	0.9
	LOW	341 CFM/ ton	ON	ON	OFF	ON	CFM Watts	860 77	863 115	838 154	788 193	707 232
2.5	NORMAL	379 CFM/ ton	ON	ON	OFF	OFF	CFM Watts	949 98	953 138	937 180	906 224	852 269
	HIGH	417 CFM/ ton	ON	ON	ON	OFF	CFM Watts	1042 122	1046 166	1036 212	1015 259	980 308
	LOW	381 CFM/ ton	OFF	ON	OFF	ON	CFM Watts	1147 154	1149 203	1141 253	1123 303	1094 353
3	NORMAL	424 CFM/ ton	OFF	ON	OFF	OFF	CFM Watts	1277 204	1279 259	1272 314	1255 368	1228 421
	HIGH	466 CFM/ ton	OFF	ON	ON	OFF	CFM Watts	1409 260	1409 323	1401 383	1384 442	1357 500
	LOW	348 CFM/ ton	ON	OFF	OFF	ON	CFM Watts	1222 180	1224 232	1216 285	1200 336	1174 388
3.5	NORMAL	386 CFM/ ton	ON	OFF	OFF	OFF	CFM Watts	1361 240	1362 300	1354 358	1337 415	1310 471
	HIGH	425 CFM/ ton	ON	OFF	ON	OFF	CFM Watts	1497 316	1478 372	1449 420	1408 461	1356 494
	LOW	338 CFM/ ton	OFF	OFF	OFF	ON	CFM Watts	1360 239	1361 299	1353 358	1336 415	1309 470
4	NORMAL	375 CFM/ ton	OFF	OFF	OFF	OFF	CFM Watts	1511 325	1489 380	1456 426	1412 464	1355 493
	HIGH	413 CFM/ ton	OFF	OFF	ON	OFF	CFM Watts	1659 420	1605 463	1535 488	1450 494	1349 483

Table 8. Air Flow Performance

	TEM6A0D	48, TEM6A	0D60 CO	DLING AI	RFLOW F	PERFORM	ANCE, WET	COIL, N	O FILTER	R, NO HE	ATER	
OUTDOOR	SPEED	AIRFLOW		DIP SWITC	H SETTING	j .	AIRFLOW		EXTERNA	L STATIC P	RESSURE	
UNIT SIZE (TONS)	SETTING	SETTING	SW1	SW2	SW3	SW4	POWER	0.1	0.3	0.5	0.7	0.9
	LOW	323 CFM/ ton	ON	ON	OFF	ON	CFM Watts	979 87	978 126	959 170	922 217	867 269
3	NORMAL	367 CFM/ ton	ON	ON	OFF	OFF	CFM Watts	1111 124	1113 168	1101 215	1075 265	1036 317
	HIGH	415 CFM/ ton	ON	ON	ON	OFF	CFM Watts	1252 165	1259 214	1254 264	1239 314	1212 364
	LOW	315 CFM/ ton	OFF	ON	OFF	ON	CFM Watts	1111 124	1113 168	1101 215	1075 265	1036 317
3.5	NORMAL	358 CFM/ ton	OFF	ON	OFF	OFF	CFM Watts	1259 167	1266 217	1261 267	1246 317	1220 368
	HIGH	404 CFM/ ton	OFF	ON	ON	OFF	CFM Watts	1419 223	1428 279	1425 334	1411 389	1386 444
	LOW	309 CFM/ ton	ON	OFF	OFF	ON	CFM Watts	1241 161	1248 210	1243 259	1227 309	1201 359
4	NORMAL	351 CFM/ ton	ON	OFF	OFF	OFF	CFM Watts	1407 218	1416 273	1413 328	1399 383	1373 437
	HIGH	396 CFM/ ton	ON	OFF	ON	OFF	CFM Watts	1583 296	1593 359	1594 422	1586 485	1570 547
	LOW	295 CFM/ ton	OFF	OFF	OFF	ON	CFM Watts	1478 249	1487 307	1486 365	1474 423	1452 481
5	NORMAL	335 CFM/ ton	OFF	OFF	OFF	OFF	CFM Watts	1671 344	1681 412	1684 479	1678 545	1635 565
	HIGH	379 CFM/ ton	OFF	OFF	ON	OFF	CFM Watts	1880 476	1892 556	1900 635	1902 714	1760 650

Table 9. Air Flow Performance

	TEM	6A0D48, T	EM6A0D6	50 HEATI	NG AIRF	LOW PER	FORMANCE	, NO FIL	TER, NO	HEATER		
OUTDOOR	SPEED	AIRFLOW		DIP SWITC			AIRFLOW	<u> </u>		L STATIC P	RESSURE	
UNIT SIZE (TONS)	SETTING	SETTING	SW1	SW2	SW3	SW4	POWER	0.1	0.3	0.5	0.7	0.9
	LOW	360 CFM/ ton	ON	ON	OFF	ON	CFM Watts	1087 111	1091 153	1081 199	1055 249	1015 301
3	NORMAL	400 CFM/ ton	ON	ON	OFF	OFF	CFM Watts	1205 139	1213 186	1211 234	1198 283	1173 333
	HIGH	440 CFM/ ton	ON	ON	ON	OFF	CFM Watts	1322 175	1333 227	1332 279	1321 332	1297 384
	LOW	347 CFM/ ton	OFF	ON	OFF	ON	CFM Watts	1219 143	1228 191	1226 240	1213 289	1189 339
3.5	NORMAL	386 CFM/ ton	OFF	ON	OFF	OFF	CFM Watts	1351 184	1363 237	1363 290	1351 344	1328 397
	HIGH	424 CFM/ ton	OFF	ON	ON	OFF	CFM Watts	1482 232	1495 291	1497 349	1489 408	1471 466
	LOW	351 CFM/ ton	ON	OFF	OFF	ON	CFM Watts	1405 201	1417 256	1418 311	1408 367	1385 422
4	NORMAL	390 CFM/ ton	ON	OFF	OFF	OFF	CFM Watts	1555 262	1568 323	1572 385	1567 447	1553 509
	HIGH	429 CFM/ ton	ON	OFF	ON	OFF	CFM Watts	1703 334	1717 403	1723 472	1722 540	1665 560
	LOW	327 CFM/ ton	OFF	OFF	OFF	ON	CFM Watts	1625 294	1639 359	1644 424	1641 489	1630 554
5	NORMAL	363 CFM/ ton	OFF	OFF	OFF	OFF	CFM Watts	1797 384	1812 459	1820 533	1822 606	1750 615
	HIGH	400 CFM/ ton	OFF	OFF	ON	OFF	CFM Watts	1970 495	1986 581	1999 667	2010 740	1910 680

Table 10. Electrical Data

				TEM6A0B2	4, TEM6A0B	30 HEATER	DATA				
	No. of			240 \	/olt				208	Volt	
Heater Model No.	Circuits/	Capa	acity	Heater	Minimum	Maximum	Сар	acity	Heater	Minimum	Maximum
	Phases	kW	BTUH	Amps per Circuit	Circuit Ampacity	Overload Protection	kW	BTUH	Amps per Circuit	Circuit Ampacity	Overload Protection
No Heater				2.8 *	4	15			2.8 *	4	15
BAYHTR1504BRKC BAYHTR1504LUGB	1/1	3.84	13100	16.0	24	25	2.88	9800	13.8	21	25
BAYHTR1505BRKC BAYHTR1505LUGB	1/1	4.80	16400	20.0	29	30	3.60	12300	17.3	25	25
BAYHTR1508BRKC BAYHTR1508LUGB	1/1	7.68	26200	32.0	44	45	5.76	19700	27.7	38	40
BAYHTR1510BRKC BAYHTR1510LUGB	1/1	9.60	32800	40.0	54	60	7.20	24600	34.6	47	50
BAYHTR1516BRKA Circuit 1 (a)	2/1	9.60	32800	40.0	54	60	7.20	24600	34.6	47	50
BAYHTR1516BRKA Circuit 2	2/1	4.80	16400	20.0	25	25	3.60	12300	17.3	22	25
BAYHTR3510LUG	1/3	9.60	32800	23.1	32	35	7.20	24600	20.0	28	30
BAYHTR3515LUG	1/3	14.40	49100	34.6	46	50	10.80	36900	30.0	41	45
* = Motor Amps	•	•	•			•	•	•			

<sup>(</sup>a) MCA and MOP for circuit 1 contains the motor amps

Table 11. Electrical Data

	TEM6A0C36, TEM6A0C42 HEATER DATA           240 Volt         208 Volt													
	No. of			240 \	/olt				208	Volt				
Heater Model No.	Circuits/	Cap	acity	Heater	Minimum	Maximum	Сар	acity	Heater	Minimum	Maximum			
	Phases	kW	BTUH	Amps per Circuit	Circuit Ampacity	Overload Protection	kW	BTUH	Amps per Circuit	Circuit Ampacity	Overload Protection			
No Heater				4.3 *	5	15			4.3 *	5	15			
BAYHTR1504BRKC BAYHTR1504LUGB	1/1	3.84	13100	16.0	25	25	2.88	9800	13.8	23	25			
BAYHTR1505BRKC BAYHTR1505LUGB	1/1	4.80	16400	20.0	30	30	3.60	12300	17.3	27	30			
BAYHTR1508BRKC BAYHTR1508LUGB	1/1	7.68	26200	32.0	45	45	5.76	19700	27.7	40	40			
BAYHTR1510BRKC BAYHTR1510LUGB	1/1	9.60	32800	40.0	55	60	7.20	24600	34.6	49	50			
BAYHTR1516BRKA Circuit 1 (a)	2/1	9.60	32800	40.0	55	60	7.20	24600	34.6	49	50			
BAYHTR1516BRKA Circuit 2	2/1	4.80	16400	20.0	25	25	3.60	12300	17.3	22	25			
BAYHTR1522BRKA Circuit 1 (a)	2/1	9.60	32800	40.0	55	60	7.20	24600	34.6	49	50			
BAYHTR1522BRKA Circuit 2	2/1	9.60	32800	40.0	50	50	7.20	24600	34.6	43	45			
BAYHTR3510LUG	1/3	9.60	32800	23.1	34	35	7.20	24600	20.0	30	30			
BAYHTR3515LUG	1/3	14.40	49100	34.6	48	50	10.80	36900	30.0	42	45			
* = Motor Amps														

<sup>(</sup>a) MCA and MOP for circuit 1 contains the motor amps

Table 12. Electrical Data

			TI	EM6A0D48	, TEM6A0D	60 HEATER	DATA				
	No of			240 \	/olt				208	Volt	
Heater Model No.	No. of Circuits/	Сара	acity	Heater	Minimum	Maximum	Сар	acity	Heater	Minimum	Maximum
	Phases	kW	BTUH	Amps per Circuit	Circuit Ampacity	Overload Protection	kW	BTUH	Amps per Circuit	Circuit Ampacity	Overload Protection
No Heater				6.8 *	9	15			6.8 *	9	15

Table 12. Electrical Data (continued)

TEM6A0D48, TEM6A0D60 HEATER DATA														
BAYHTR1504BRKC BAYHTR1504LUGB	1/1	3.84	13100	16.0	29	30	2.88	9800	13.8	26	30			
BAYHTR1505BRKC BAYHTR1505LUGB	1/1	4.80	16400	20.0	34	35	3.60	12300	17.3	30	30			
BAYHTR1508BRKC BAYHTR1508LUGB	1/1	7.68	26200	32.0	49	50	5.76	19700	27.7	43	45			
BAYHTR1510BRKC BAYHTR1510LUGB	1/1	9.60	32800	40.0	59	60	7.20	24600	34.6	52	60			
BAYHTR1516BRKA Circuit 1 (a)	2/1	9.60	32800	40.0	59	60	7.20	24600	34.6	52	60			
BAYHTR1516BRKA Circuit 2	2/1	4.80	16400	20.0	25	25	3.60	12300	17.3	22	25			
BAYHTR1522BRKA Circuit 1 (a)	2/1	9.60	32800	40.0	59	60	7.20	24600	34.6	52	60			
BAYHTR1522BRKA Circuit 2	2/1	9.60	32800	40.0	50	50	7.20	24600	34.6	43	45			
BAYHTR1525BRKA Circuit 1 <sup>(a)</sup>		6.00	20500	25.0	40	40	4.50	15400	21.6	36	40			
BAYHTR1525BRKA Circuit 2	4/1	6.00	20500	25.0	31	35	4.50	15400	21.6	27	30			
BAYHTR1525BRKA Circuit 3	4/1	6.00	20500	25.0	31	35	4.50	15400	21.6	27	30			
BAYHTR1525BRKA Circuit 4		6.00	20500	25.0	31	35	4.50	15400	21.6	27	30			
BAYHTR3510LUG	1/3	9.60	32800	23.1	36	40	7.20	24600	20.0	33	35			
BAYHTR3515LUG	1/3	14.40	49100	34.6	51	60	10.80	36900	30.0	45	45			
* = Motor Amps											·			

<sup>(</sup>a) MCA and MOP for circuit 1 contains the motor amps

# **Minimum Airflow CFM**

TEM6A0B24H21S, TEM6A0B30H21S					
Heater Minimum Heater Airflow CFM					
	With Heat Pump	Without Heat Pump			
BAYHTR1504BRKC, BAYHTR1504LUGB BAYHTR1505BRKC, BAYHTR1505LUGB	550	600			
BAYHTR1508BRKC, BAYHTR1508LUGB	800	600			
BAYHTR1510BRKC, BAYHTR1510LUGB	825	700			
BAYHTR1516BRKA	1050	850			
BAYHTR3510LUGC	800	600			
BAYHTR3515LUGC	900	850			

TEM6A0C36H31S, TEM6A0C42H41S					
Heater	Minimum He	ater Airflow CFM			
	With Heat Pump	Without Heat Pump			
BAYHTR1504BRKC, BAYHTR1504LUGB BAYHTR1505BRKC, BAYHTR1505LUGB	875	675			
BAYHTR1508BRKC, BAYHTR1508LUGB	875	675			
BAYHTR1510BRKC, BAYHTR1510LUGB	1225	825			
BAYHTR1516BRKA	1325	1150			
BAYHTR3510LUGC	875	675			
BAYHTR3515LUGC	1250	1150			
BAYHTR1522BRKA	1325	1150			

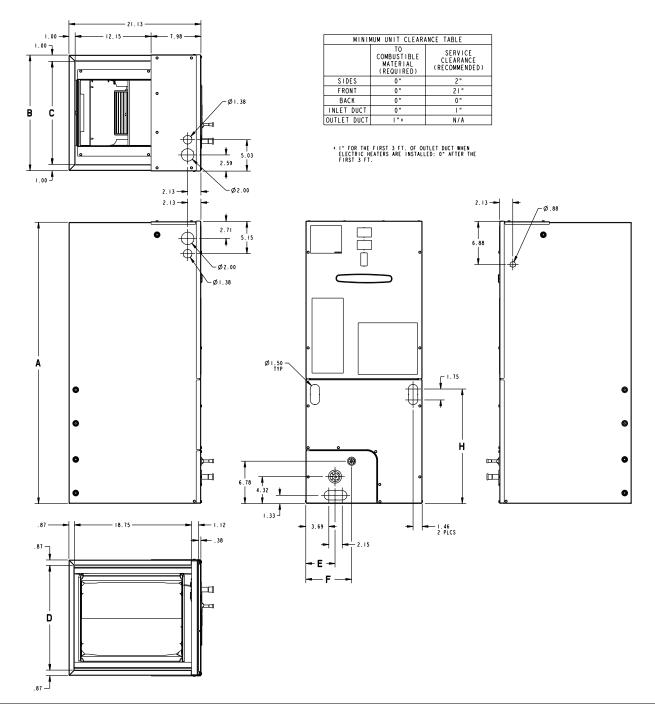
TEM6A0D48H41S, TEM6A0D60H51S					
Heater	Minimum Heater Airflow CFM				
	With Heat Pump	Without Heat Pump			
BAYHTR1504BRKC, BAYHTR1504LUGB BAYHTR1505BRKC, BAYHTR1505LUGB	1150	975			
BAYHTR1508BRKC, BAYHTR1508LUGB	1150	975			
BAYHTR1510BRKC, BAYHTR1510LUGB	1150	975			
BAYHTR1516BRKA	1325	1125			
BAYHTR3510LUGC	1150	975			
BAYHTR3515LUGC	1375	1150			
BAYHTR1522BRKA	1375	1125			
BAYHTR1525BRKA	1375	1125			

TEM6A0B24H21, TEM6A0B30H21 Airflow Performance with Auxiliary Heat						
Airflow Settings	Dip Swi	itch Settings	Nominal Airflow			
	Switch 7	Switch 8	- Nominal Airnow	See following tables for heater application:		
Low	ON	ON	601	- Pressure Drop for Electrical Heters		
Med-Lo	OFF	ON	723	- Minimum Heating		
Med-Hi	ON	OFF	851	Airflow Matrix (on unit nameplates)		
High	OFF	OFF	973			

TEM6A0C36H31, TEM6A0C42H41 Airflow Performance with Auxiliary Heat						
Airflow Settings	Dip Swi	tch Settings	Nominal Airflow			
Airnow Settings	Switch 7	Switch 8	Norminal Airnow	See following tables for heater application:		
Low	ON	ON	696	- Pressure Drop for Electrical Heters		
Med-Lo	OFF	ON	825	- Minimum Heating		
Med-Hi	ON	OFF	1150	Airflow Matrix (on unit nameplates)		
High	OFF	OFF	1298			

TEM6A0D48H41, TEM6A0D60H51 Airflow Performance with Auxiliary Heat						
Airflow Settings	Dip Swi	tch Settings	Nominal Airflow			
Airnow Settings	Switch 7	Switch 8	Norminal All now	See following tables for heater application:		
Low	ON	ON	997	- Pressure Drop for Electrical Heters		
Med-Lo	OFF	ON	1129	- Minimum Heating		
Med-Hi	ON	OFF	1350	Airflow Matrix (on unit nameplates)		
High	OFF	OFF	1597			

# **Outline Drawing**



PRODUCT DIMENSIONS									
Air Handler Model	А	В	С	D	E	F	Н	Flow Control	Gas Line Braze
TEM6A0B24, 30	46.77	18.50	16.50	16.75	4.68	7.33	20.09	TXV	3/4
TEM6A0C36, 42	51.27	23.50	21.50	21.75	7.01	9.66	24.59	TXV	7/8
TEM6A0D48, 60	53.87	26.50	24.50	24.75	7.01	9.66	27.19	TXV	7/8
All dimensions are in inches									

# **Heater Pressure Drop Table**

		Number of Racks					
Airflow CFM	1	2	3	4			
<b>U.</b>		Air Pressure Drop — Inches W.G.					
1800	0.02	0.04	0.06	0.14			
1700	0.02	0.04	0.06	0.14			
1600	0.02	0.04	0.06	0.13			
1500	0.02	0.04	0.06	0.12			
1400	0.02	0.04	0.06	0.12			
1300	0.02	0.04	0.05	0.11			
1200	0.01	0.04	0.05	0.10			
1100	0.01	0.03	0.05	0.09			
1000	0.01	0.03	0.04	0.09			
900	0.01	0.03	0.04	0.08			
800	0.01	0.03					
700	0.01	0.02					
600	0.01	0.02					

# **Subcooling Adjustment**

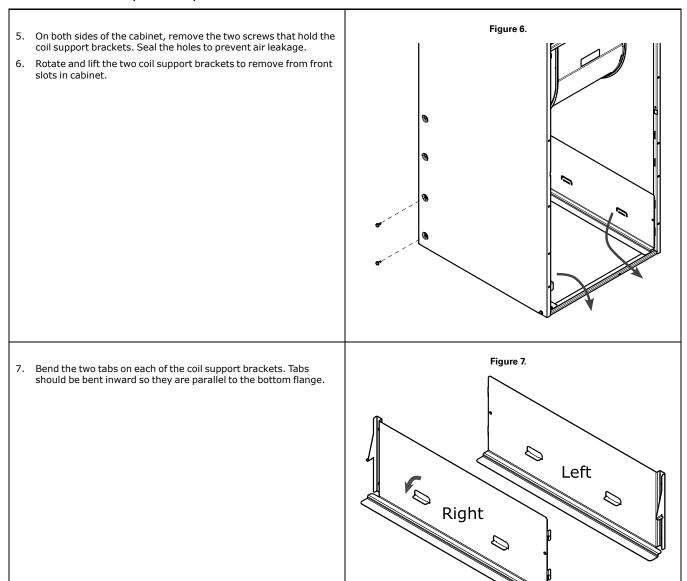
System Matched with:	Indoor Unit Model No.	Outdoor Model No.	Subcooling			
16 SEER HP — 2 ton	ER HP — 2 ton TEM6A0C36H31		13 Degrees			
15 SEER HP — 2 ton	TEM6A0B24H21 TEM6A0B30H21	4TWR5024G1000A 4A6H5024G1000A	14 Degrees			
15 SEER HP — 3 ton	TEM6A0B30H21 TEM6A0C36H31 TEM6A0C42H41	4TWR5036G1000A 4A6H5036G1000A	14 Degrees			
All other matches must be charged per the nameplate charging instructions						

# **Coil Conversion Instructions**

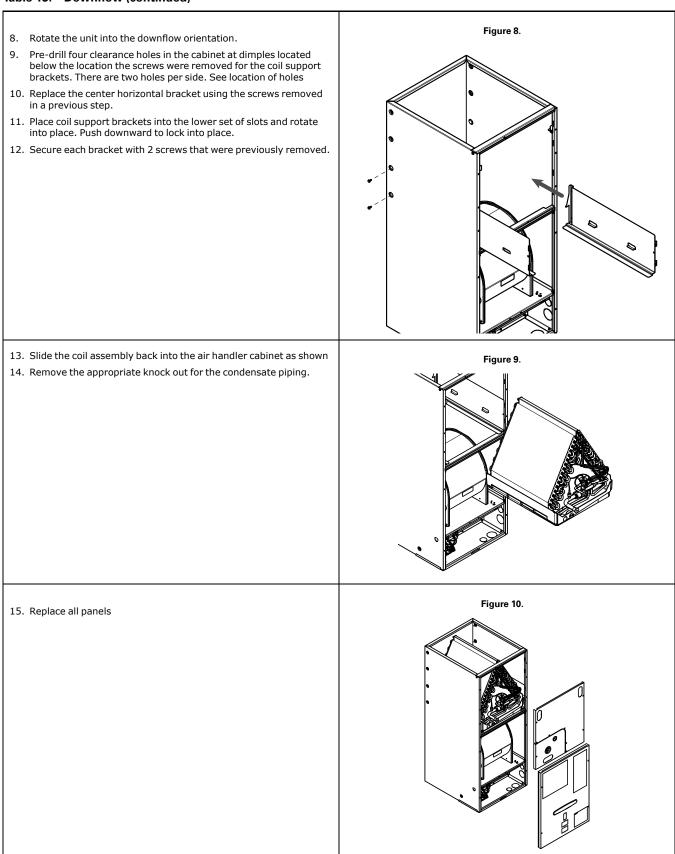
#### Table 13. Downflow

Follow the conversion steps when installing the air handler in Figure 4. downflow configuration. Remove the front panels from the air handler. The coil and line set panel do not need to be separated. Remove the two coil retaining brackets located at the front of the drain pan. Each is held in place by one screw. Discard brackets. 3. Remove the two screws holding the center horizontal brace and rotate out of place. Retain parts. Figure 5. 4. Slide the coil assembly out. Remove and discard the horizontal drain pan.

#### Table 13. Downflow (continued)



#### Table 13. Downflow (continued)

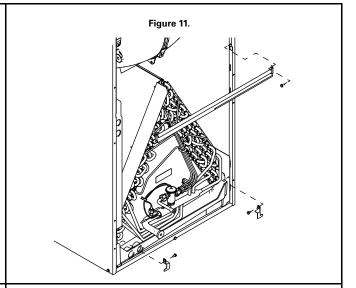


# **Coil Conversion**

#### Table 14. Horizontal Right

Follow the conversion steps when installing the air handler in horizontal right configuration.

- 1. Remove the front panels from the air handler. The coil and line set panel do not need to be separated.
- Remove the two coil retaining brackets located at the front of the drain pan. Each is held in place by one screw. Save brackets and screws.
- 3. Remove the two screws holding the center horizontal brace and rotate out of place. Retain parts.



- 4. Make note of the horizontal drain pan orientation (up/down).
- 5. Slide the coil assembly out.
- Change location of the front and rear water diverter brackets by removing the screws on the water diverter brackets that are located on the left side of the coil. Attach the water diverters to the right hand side of the coil using the same screws.

Important: The coil slabs are different and the mount hole locations will vary. See the illustrations on the following pages that correspond to the unit tonnage to see the correct mounting position of the water diverter bracket.

**Important:** The water diverter brackets are not symmetrical and will vary by tonnage.

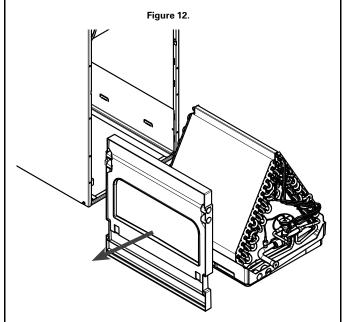


Table 14. Horizontal Right (continued)

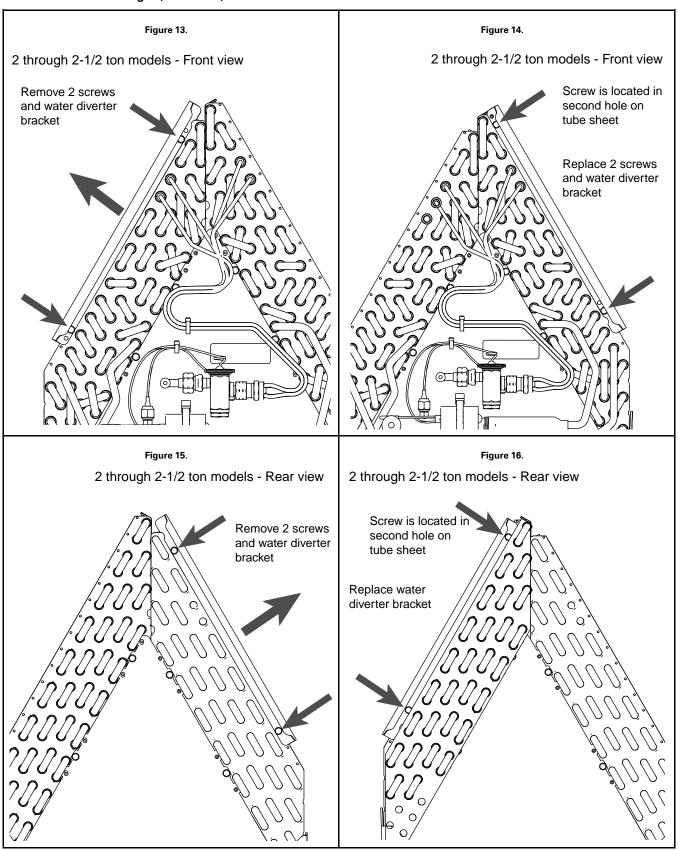


Table 14. Horizontal Right (continued)

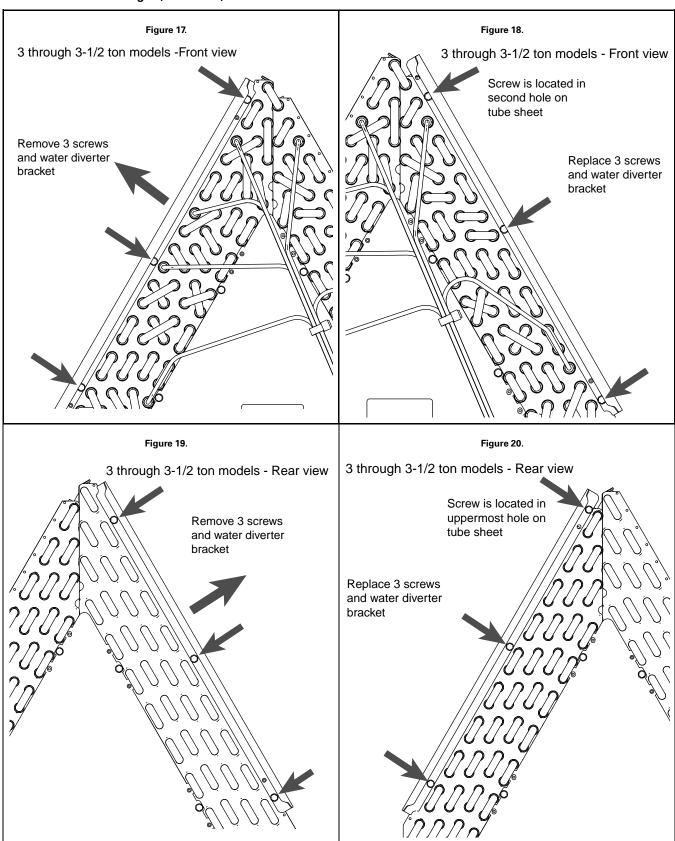


Table 14. Horizontal Right (continued)

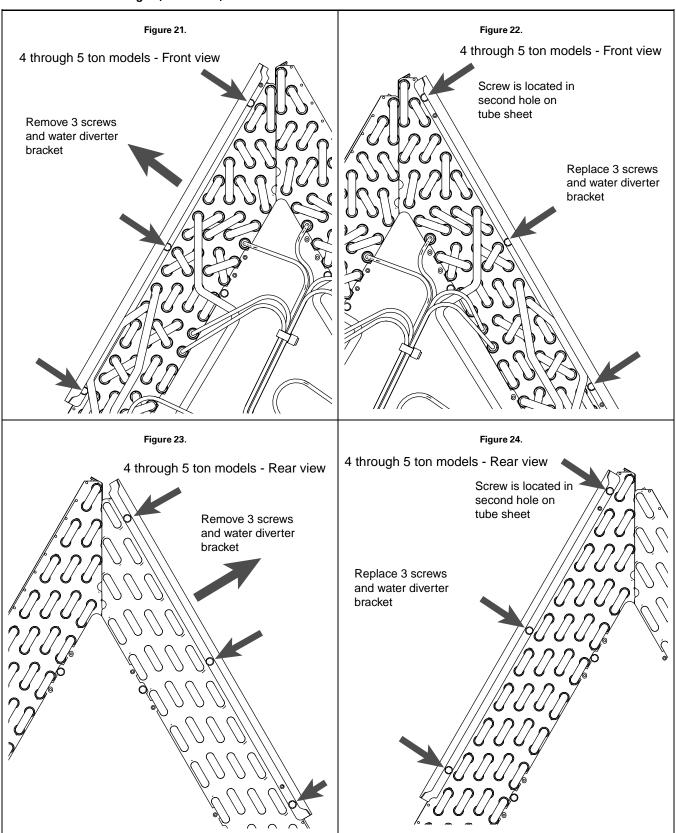
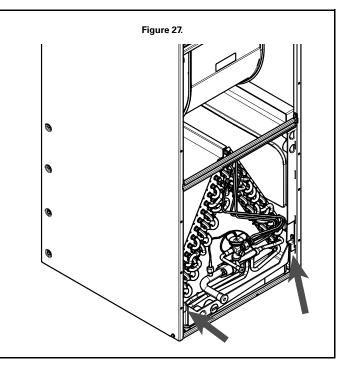


Table 14. Horizontal Right (continued)

Figure 25. 7. Relocate the horizontal drain pan from the left side of the coil to the right side. 8. Remove the drain pan support bracket. Do not discard. Remove the two drain plugs from the front of the drain pan and insert them in the drains at the rear of the drain pan. Figure 26. 9. Reinstall the drain pan support bracket. The bracket should be located between the two drain plugs as shown in

### Table 14. Horizontal Right (continued)

- 10. Slide the coil assembly back into the air handler cabinet.
- 11. Replace the center horizontal brace removed in a previous step.
- 12. Replace the two coil retaining brackets removed in a previous step.
- 14. Replace all panels.



# **Checkout Procedures**

The final phase of the installation is the system Checkout Procedures. The following list represents the most common items covered in a Checkout Procedure. Confirm all requirements in this document have been met.

All wiring connections are tight and properly secured.	Supply registers and return grilles are open, unobstructed, and air filter is installed.
Voltage and running current are within limits.	Indoor blower and outdoor fan are operating smoothly and
All refrigerant lines (internal and external to equipment) are isolated, secure, and not in direct contact with each other or	without obstruction.
structure.	Indoor blower motor set on correct speed setting to deliver required CFM.
All braze connections have been checked for leaks. A vacuum of 350 microns provides confirmation that the refrigeration system is leak free and dry.	Cover panels are in place and properly tightened.
Final unit inspection to confirm factory tubing has not shifted during shipment. Adjust tubing if necessary so tubes do not rub	For gas heating systems, manifold pressure has been checked and all gas line connections are tight and leak free.
against each other or any component when unit runs.	For gas heating systems, flue gas is properly vented.
Ductwork is sealed and insulated.	System functions safely and properly in all modes.
All drain lines are clear with joints properly sealed. Pour water into drain pan to confirm proper drainage.	Owner has been instructed on use of system and given manual.







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