

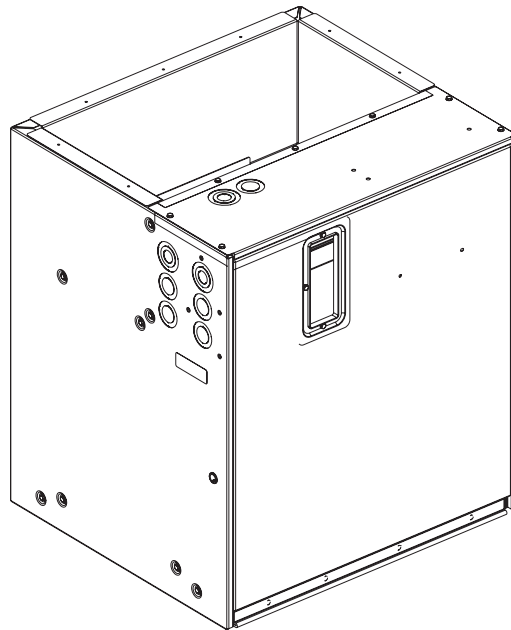


# Modular Blower Variable Speed Communicating

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**Variable Speed  
Communicating Modular Blowers 2 - 5 ton**

4TBE0C04A1000A  
4TBE0C08A1000A



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**PUB. NO. 22-1828-01**



# Features And Benefits

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- Ships upside down - converts to horizontal by laying unit on side.
- Four-way convertibility – horizontal (left & right); upflow, and downflow
- Compact 21" depth for easy installation
- Variable speed ECM motor
- Direct drive blower
- Comfort-R™ enhanced dehumidification cycle
- Soft Start - On cycle fan speed is increased gradually to reduce sound and drafts
- Corrosion resistant galvanized metal with attractive finish
- 200/230 volt primary & 24 VAC secondary transformer
- Low voltage terminal board
- Uses 1400 & 3400 series heaters
- Access to heater circuit breakers
- Polarized plugs for making motor and transformer electrical connections from modular blower control box to electric heaters
- Built-in indoor fan delay function for increased efficiency
- 4TBE0C04 airflow selectable for 2 — 3-1/2 ton O.D. unit
- 4TBE0C08 airflow selectable for 3 — 5 ton O.D. unit
- Energy-saving continuous fan
- Enhanced cooling/heating control
- ComfortLink™ II 3-wire connectivity or 24 VAC connection.

# Optional Equipment

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OPTIONAL EQUIPMENT FOR MODULAR BLOWERS (Check mark [ ] indicates accessories included).

Plenum - Pedestal (4TBE0C04 & 08) .....	TAYPLNM100 [ ]
Sub-base For Downflow (4TBE0C04 & 08) .....	TAYBASE100 [ ]
Knockout cover plate (4TBE) .....	BAY99X123 [ ]
Humidistat.....	BAYSTAT253 [ ]
Plenum For Upflow Non-Ducted Applications (4TBE) .....	BAYPLNM120 [ ]
Single Power Entry Kit (4TBE).....	BAYSPEK140B [ ]



# Contents

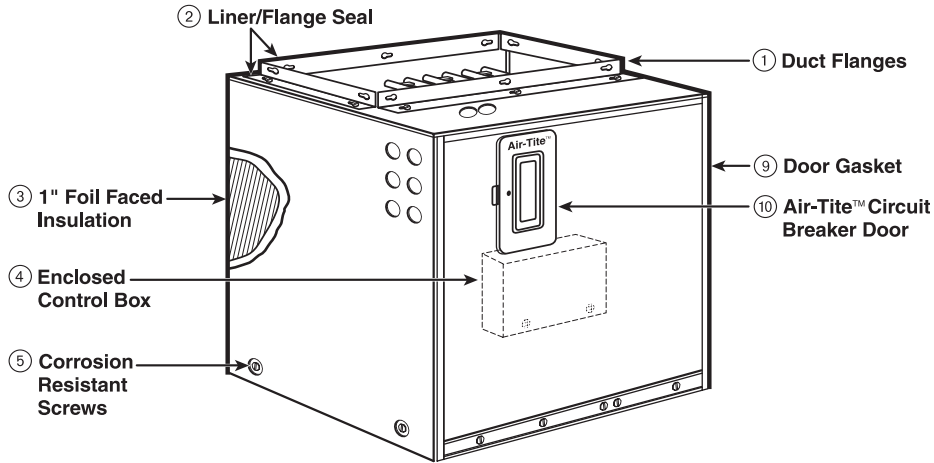
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**TRANE®**

## “Air-Tite™” Features and Benefits



- 1 Duct Flange – Allows flush fit for  $\frac{3}{4}$ ", 1" or  $1\frac{1}{2}$ " duct insulation.
- 2 Liner/Flange Seal – Exclusive Duct Flange Thermal Break/Seal and double wall construction to reduce cabinet loss and sweating.
- 3 1" Foil Faced Insulation – Thicker foil faced insulation for reduced cabinet loss, sweating and lower power bills.
- 4 Enclosed Control Box – Totally enclosed control box with transformer inside to improve component life, unit durability and reliability.
- 5 Corrosion Resistant Screws – Exclusive “Weatherguard™” coated screws to maintain the quality appearance of the unit for the life of the product.
- 6 Door Gasket – Exclusive formed gasket (similar to a car door gasket) to reduce air infiltration and heat transfer and lower power bills.
- 7 Air-Tite™ Circuit Breaker Door – Easy access to breakers with positive air seal.



# General Data

## PRODUCT SPECIFICATIONS

<b>MODEL</b>	<b>4TBE0C04A1000A</b>	<b>4TBE0C08A1000A</b>
<b>RATED VOLTS/PH/HZ.</b>	200-230/1/60	200-230/1/60
<b>PERFORMANCE</b> ①	See O.D. Specifications	See O.D. Specifications
<b>DUCT CONNECTIONS</b>	See Outline Drawing	See Outline Drawing
<b>INDOOR FAN — Type</b>	Centrifugal	Centrifugal
Diameter-Width (In.)	11 x 10	11 x 10
No. Used	1	1
Drive - No. Speeds	Direct - Serial ECM	Direct - Serial ECM
CFM vs. in. w.g.	See Fan Performance Table	See Fan Performance Table
No. Motors — H.P.	1 — 1/2	1 — 1
Motor Speed R.P.M.	Variable	Variable
Volts/Ph/Hz	200-230/1/60	200-230/1/60
F.L. Amps	4.3	7.0
<b>DIMENSIONS</b>	H x W x D	H x W x D
Crated (In.)	28 5/8 x 24 1/4 x 26 1/4	28 5/8 x 24 1/4 x 26 1/4
Uncrated	27 7/8 x 23 1/2 x 21	27 7/8 x 23 1/2 x 21
<b>WEIGHT</b>		
Shipping (Lbs.)/Net (Lbs.)	94 / 83	94 / 83



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# Performance Data

**4TBE0C04A AIRFLOW PERFORMANCE TABLE**

Airflow Performance 4TBE0C04A1000A								
Outdoor Unit Size	Airflow Settings		Airflow Power	External Static Pressure (in. wg.)				
	Name	CFM/ton		0.1	0.3	0.5	0.7	0.9
2	Low	290	CFM	634	601	558	472	390
			W	39	77	114	147	177
2	Med-Low	350	CFM	765	732	688	595	493
			W	50	91	127	172	212
2	Med-High	400	CFM	857	831	784	706	610
			W	56	104	146	192	230
2	High	450	CFM	964	930	881	801	711
			W	77	120	165	211	261
2.5	Low	290	CFM	775	756	715	625	526
			W	38	89	130	174	213
2.5	Med-Low	350	CFM	925	899	862	773	687
			W	64	114	154	203	241
2.5	Med-High	400	CFM	1051	1035	981	918	825
			W	90	141	180	232	278
2.5	High	450	CFM	1176	1167	1101	1036	959
			W	116	170	224	271	320
3	Low	290	CFM	915	895	847	768	659
			W	77	113	154	198	245
3	Med-Low	350	CFM	1104	1094	1034	957	868
			W	100	148	203	251	293
3	Med-High	400	CFM	1253	1228	1186	1120	1065
			W	128	181	235	293	341
3	High	450	CFM	1428	1411	1370	1295	1230
			W	159	231	299	350	406
3.5	Low	290	CFM	1055	1047	1009	932	847
			W	87	140	190	235	280
3.5	Med-Low	350	CFM	1284	1273	1231	1156	1089
			W	131	194	242	295	349
3.5	Med-High	400	CFM	1469	1465	1416	1345	1273
			W	181	245	305	367	417
3.5	High	450	CFM	1664	1642	1598	1525	1447
			W	239	330	392	466	526



# Performance Data

4TBE0C08A AIRFLOW PERFORMANCE TABLE

Airflow Performance 4TBE0C08A1000A								
Outdoor Unit Size	Airflow Settings		Airflow Power	External Static Pressure (in. wg.)				
	Name	CFM/ton		0.1	0.3	0.5	0.7	0.9
3	Low	290	CFM	930	953	928	862	790
			W	76	122	168	215	264
3	Med-Low	350	CFM	1119	1136	1107	1059	982
			W	111	154	204	258	308
3	Med-High	400	CFM	1274	1290	1260	1197	1151
			W	128	181	234	294	351
3	High	450	CFM	1440	1447	1422	1381	1311
			W	170	220	279	346	407
3.5	Low	290	CFM	1105	1103	1079	1015	943
			W	90	144	195	246	288
3.5	Med-Low	350	CFM	1319	1314	1290	1227	1175
			W	154	190	242	291	362
3.5	Med-High	400	CFM	1496	1496	1467	1431	1360
			W	169	236	300	370	430
3.5	High	450	CFM	1684	1683	1665	1603	1554
			W	215	290	366	432	508
4	Low	290	CFM	1251	1240	1193	1132	1080
			W	115	170	231	277	335
4	Med-Low	350	CFM	1498	1482	1442	1399	1325
			W	155	230	292	360	408
4	Med-High	400	CFM	1703	1694	1672	1602	1556
			W	231	294	371	435	505
4	High	450	CFM	1915	1904	1878	1832	1776
			W	320	395	479	550	634
5	Low	290	CFM	1522	1517	1468	1405	1378
			W	203	259	309	373	423
5	Med-Low	350	CFM	1864	1843	1807	1771	1715
			W	278	351	444	517	591
5	Med-High	400	CFM	2160	2145	2109	2065	1990
			W	439	525	609	684	780
5	High	450	CFM	2385	2370	2329	2282	2239
			W	526	630	754	846	962



**TRANE®**

# Electrical Data

## 4TBE0C04A Heater Data

						MIN BLOWER SPEED		CAPACITY	
	VOLT	MTR AMPS	HEATER AMPS	MCA	MOP	WITH OUT HEAT PUMP	WITH HEAT PUMP	KW	TOTAL BTUH
<b>4TBE0C04</b> (no heater)		4.30		5	15				
BAYHTR1405***	208	4.30	17.3	27	30	900	900	3.60	12300
	240		20.0	30	30			4.80	16400
BAYHTR1408***	208		27.7	40	40	900	900	5.76	19700
	240		32.0	45	45			7.68	26200
BAYHTR1410***	208		34.6	49	50	900	1100	7.20	24600
	240		40.0	55	60			9.60	32800
circuit 1 BAYHTR1415BRK circuit 2	208		34.6	49	50	900 (1)	1100	7.20	39300
	240		40.0	55	60			9.60	52400
	208		20.8	26	30			4.33	
	240		24.0	30	30			5.76	
BAYHTR1415BRK with single circuit power source kit BAYSPEK140B	208		55.4	79	80	900 (1)	1100	11.5	39300
	240		64.0	89	90			15.4	52400
BAYHTR3410***	208		30.0	37	40	900	1100	7.20	24600
	240		34.6	43	45			9.60	32800
BAYHTR3415***	208	33.1	46	50	900 (1)	1100	11.53	39300	
	240	38.2	52	60			15.36	52400	
circuit 1 BAYHTR1419BRK circuit 2	208	27.7	40	40	900 (2)	1100 (1)	5.76	49200	
	240	32.0	45	45			7.68	65500	
	208	41.6	52	60			8.66		
	240	48.0	60	60			11.52		
BAYHTR1419BRK with single circuit power source kit BAYSPEK140B	208	69.3	96	100	900 (2)	1100 (1)	14.4	49200	
	240	80.0	109	110			19.2	65500	

**NOTES:**

(1) Minimum speed in downflow installations is 1400 CFM.

(2) Minimum speed in downflow installations is 1100 CFM.

(\*\*\*) = additional suffix digits 000, BRK or PDC - 000 = pigtailed, BRK = contains circuit breakers & PDC = contains pull disconnect.

**IMPORTANT:** Any power supply and / or combination power supply, circuit or circuits must be wired and protected in accordance with local Electrical codes.





# Electrical Data

## 4TBE0C08A Heater Data

	VOLT	MTR AMPS	HEATER AMPS	MCA	MOP	MIN BLOWER SPEED		CAPACITY	
						WITH OUT HEAT PUMP	WITH HEAT PUMP	KW	TOTAL BTUH
<b>4TBE0C08</b> (no heater)		7.50		9	15				
BAYHTR1405***	208		17.3	31	35	900	900	3.60	12300
	240		20.0	34	35			4.80	16400
BAYHTR1408***	208		27.7	44	45	900	900 (1)	5.76	19700
	240		32.0	49	50			7.68	26200
BAYHTR1410***	208		34.6	53	60	900	1200 (2)	7.20	24600
	240		40.0	59	60			9.60	32800
circuit 1 BAYHTR1415BRK circuit 2	208		34.6	53	60	900 (1)	1200	7.20	39300
	240		40.0	59	60			9.60	52400
	208		20.8	26	30			4.33	
	240		24.0	30	30			5.76	
BAYHTR1415BRK with single circuit power source kit BAYSPEK140B	208		55.4	79	80	900 (1)	1200	11.5	39300
	240		64.0	89	90			15.4	52400
BAYHTR3410***	208		30.0	37	40	900	1200 (2)	7.20	24600
	240		34.6	43	45			9.60	32800
BAYHTR3415***	208		33.1	49	50	900 (1)	1200	11.53	39300
	240		38.2	56	60			15.36	52400
circuit 1 BAYHTR1419BRK circuit 2	208		27.7	44	45	900 (5)	1200 (3)	5.76	49200
	240		32.0	49	50			7.68	65500
	208		41.6	52	60			8.66	
	240		48.0	60	60			11.52	
BAYHTR1419BRK with single circuit power source kit BAYSPEK140B	208		69.3	96	100	900 (5)	1200 (3)	14.4	49200
	240		80.0	109	110			19.2	65500
circuit 1 BAYHTR1425BRK circuit 2 circuit 3	208		38.1	48	50	Note (6)	1500 (4)	7.93	63900
	240		44.0	55	60			10.56	85200
	208		34.6	53	60			7.2	
	240		40	59	60			9.6	
	208		17.3	22	25			3.6	
	240		20	25	25			4.8	

**NOTES:**

(1) Minimum speed in downflow installations is 1200 CFM.

(2) Minimum speed in upflow installations is 900 CFM.

(3) Minimum speed in upflow installations is 1500 CFM.

(4) Minimum speed in horizontal left installations is 1800 CFM.

(5) Heater not approved for horizontal right installation.

(6) Minimum speed in horizontal left installations is 1500 CFM; in downflow installations is 1200 CFM. Minimum speed for upflow installations on 240 volts is 1800 CFM. Heater not approved for upflow installations on 208 volts. Minimum speed for horizontal right installations on 240 volts is 1200 CFM. Heater not approved for horizontal right installations on 208 volts.

(\*\*\*) = additional suffix digits 000, BRK or PDC - 000 = pigtailed, BRK = contains circuit breakers & PDC = contains pull disconnect.

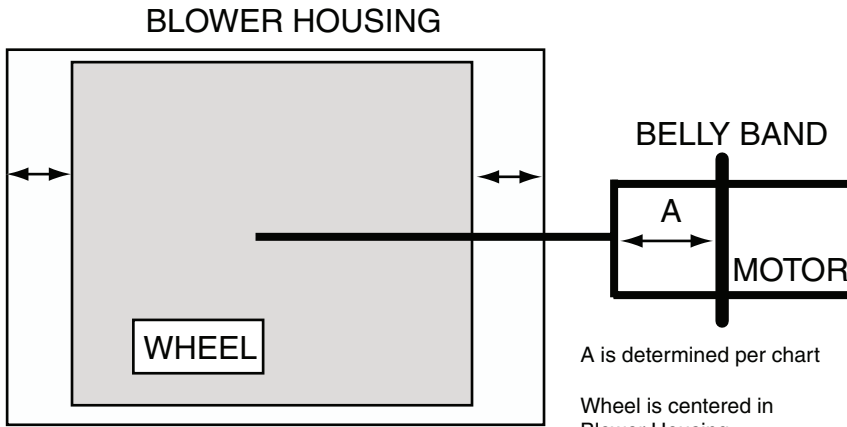
**IMPORTANT:** Any power supply and / or combination power supply, circuit or circuits must be wired and protected in accordance with local Electrical codes.



**TRANE**<sup>®</sup>

# Performance Data

## DISTANCE FROM BELLY BAND TO SHAFT FACE OF MOTOR FOR MINIMUM VIBRATION



Model Number	"A" (inches)
4TBE0C04	1.375
4TBE0C08	2.125

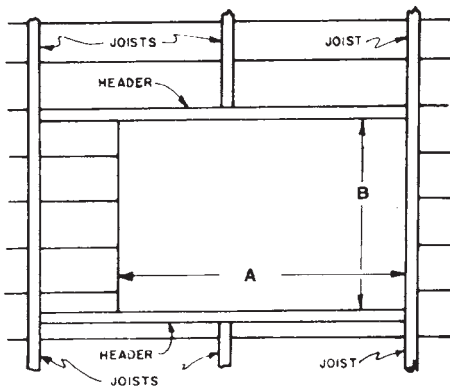
FOR FACTORY OEM MOTORS

A is determined per chart

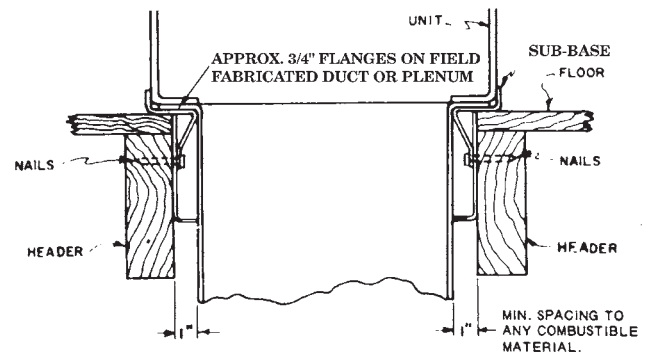
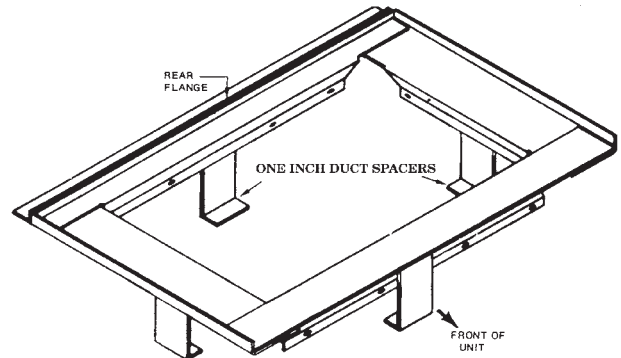
Wheel is centered in Blower Housing

# Mounting

## MODULAR BLOWER SUBBASE



FLOOR OPENING - SIZE		
MODEL NO.	A	B
TAYBASE100	23-3/4	14-13/16

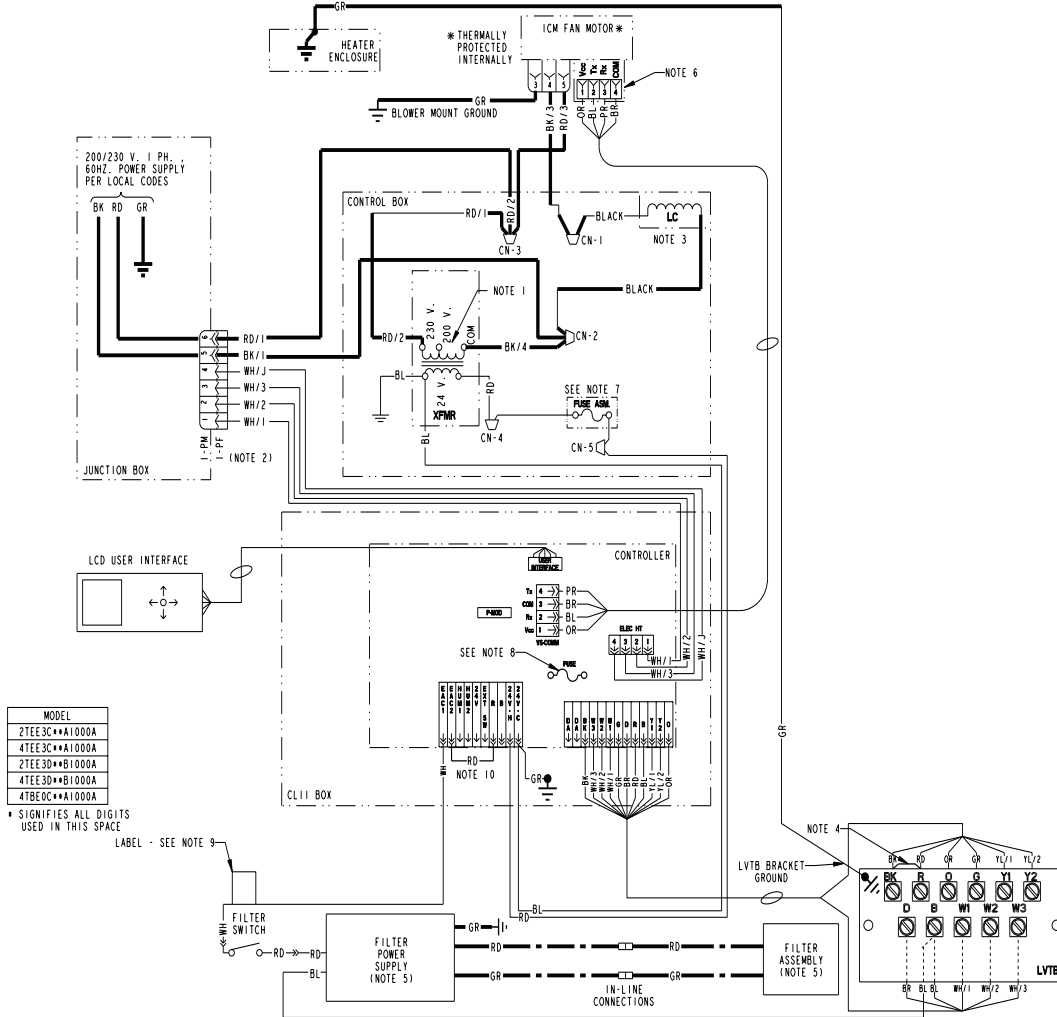




**TRANE**®

# Wiring Diagram

## WIRING DIAGRAM FOR COMMUNICATING VARIABLE SPEED MODULAR BLOWERS



MODEL
2TEE3C**A100DA
4TEE3C**A100DA
2TEE3D**B100DA
4TEE3D**B100DA
4TBE0C**A100DA

\* SIGNIFIES ALL DIGITS USED IN THIS SPACE

LABEL - SEE NOTE 9

CL11 BOX

IN-LINE CONNECTIONS

LVTB BRACKET GROUND

### LEGEND

- 24 V. LINE V.
- MULTIWIRED HARNESS
- GROUND
- JUNCTION
- CAPACITOR
- WIRE NUT OR CONNECTOR
- TERMINAL
- TRANSFORMER
- FUSE
- TERMINAL BLOCK/BOARD
- RELAY CONTACT NO.
- MAGNETIC COIL
- POL. PLUG FEMALE HOUSING (MALE TERMINALS)
- POL. PLUG MALE HOUSING (FEMALE TERMINALS)
- WIRE CONNECTOR
- INTEGRAL CONTROL MOTOR
- LINE CHOKE
- LOW VOLTAGE TERMINAL BLOCK
- POLARIZED PLUG (FEMALE HOUSING)
- POLARIZED PLUG (MALE HOUSING)
- TRANSFORMER
- ELECTRONIC AIR CLEANER
- HUMIDIFIER
- DISCHARGE AIR SENSOR
- EXTERNAL SWITCH
- PERSONALITY MODULE (MODULE ALWAYS REMAINS WITH UNIT)
- COLOR OF WIRE
- BK BLACK
- RD RED
- WH WHITE
- GR GREEN
- BL BLUE
- BR BROWN
- YL YELLOW
- PR PURPLE

**WARNING**

HAZARDOUS VOLTAGE!  
 DISCONNECT ALL ELECTRICAL POWER INCLUDING REMOTE DISCONNECTS BEFORE SERVICING.  
 Failure to disconnect power before servicing can cause severe personal injury or death.

**CAUTION**

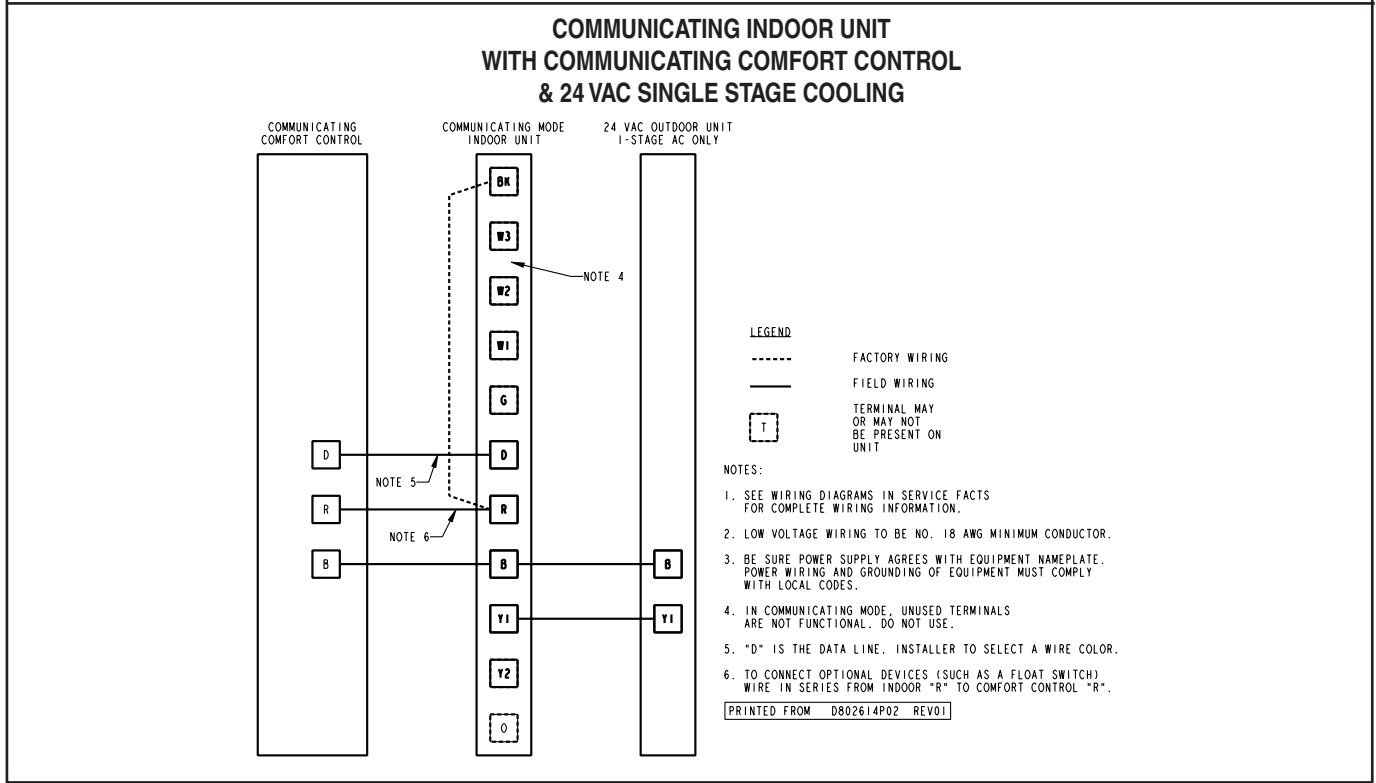
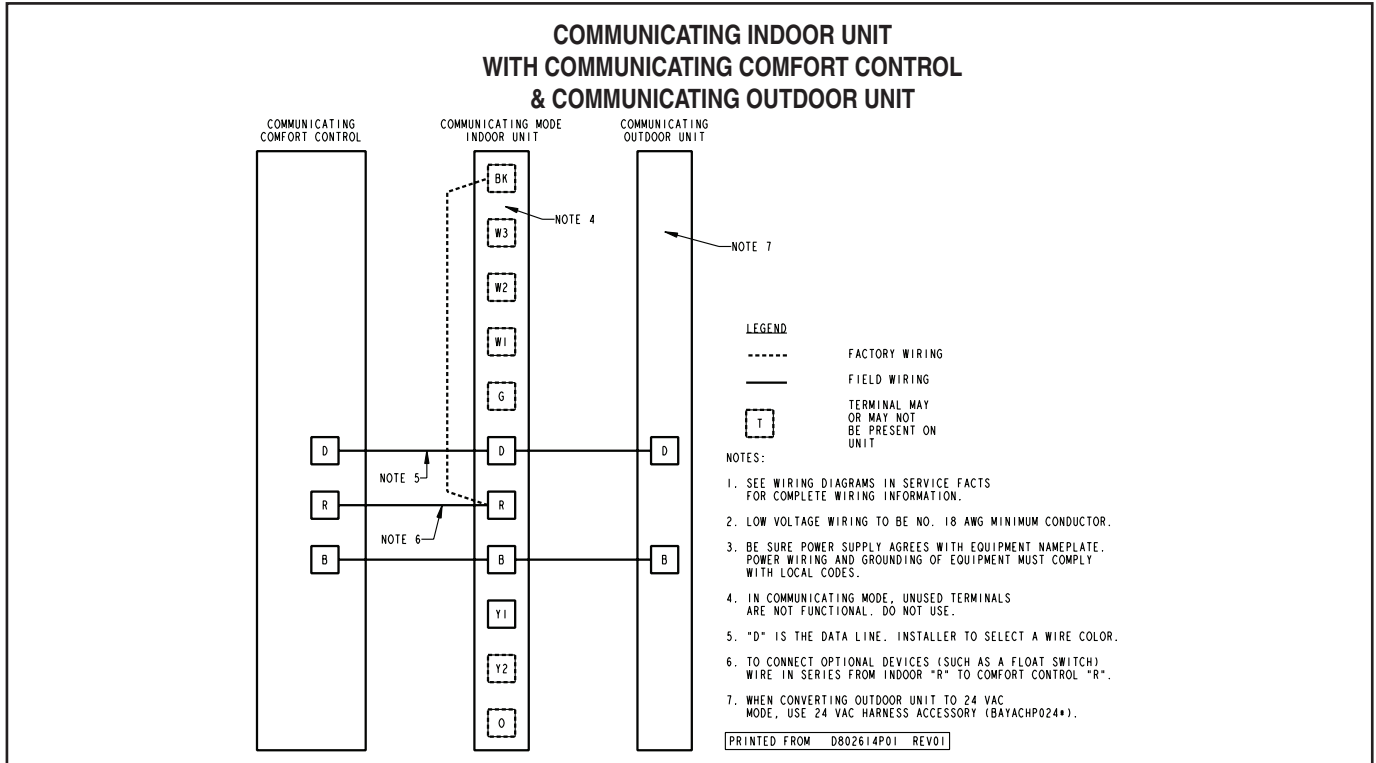
USE COPPER CONDUCTORS ONLY!  
 UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.  
 Failure to do so may cause damage to the equipment.

### NOTES:

- FOR 200V OPERATION SWAP RED TRANSFORMER LEAD AND INSULATED CAP ON 200V CENTER TRANSFORMER TERMINAL
- WHEN HEATERS ARE USED, DISCARD I-PF WITH ATTACHED LEADS AND CONNECT I-PF TO THE MATING PLUG IN THE HEATER CONTROL BOX.
- LINE CHOKES MAY NOT BE USED ON ALL MODELS. IF CHOKES NOT USED, BK/3 WTR (P144) LEAD CONNECTS TO BK/2 WTR(L23) TERMINAL
- IF OPTIONAL HUMIDISTAT IS USED, REMOVE R TO BK JUMPER ON TERMINAL BOARD AND INSTALL HUMIDISTAT BETWEEN R AND BK. JUMPER R TO O FOR COOLING-ONLY NON-HEAT PUMP SYSTEMS WITH A HUMIDISTAT.
- FILTER ASSEMBLY, POWER SUPPLY & SWITCH, ARE USED ON 2/4TEE3D\*\*B MODELS ONLY
- Rx (RECEIVE) ON MOTOR CONNECTS TO Tx (TRANSMIT) ON BOARD. Tx (TRANSMIT) ON MOTOR CONNECTS TO Rx (RECEIVE) ON BOARD.
- FOR REPLACEMENT FUSE, USE LITTLE FUSE LMF 3-2/10 OR BUSSMAN GAG 3-2/10.
- 5 AMP AUTOMOTIVE TYPE FUSE TO PROTECT CONTROL BOARD.
- ON "C" MODELS, THE WHITE WIRE IS USED TO HOOKUP THE IFD FILTER POWER SUPPLY OR AN ADD ON EAC (SEE EAC INSTRUCTIONS FOR WIRING)
- REMOVE THIS JUMPER IF A 240/120 VOLT EAC IS TO BE APPLIED AND CONTROLLED VIA THE AH CONTROL.

PRINTED FROM D802059P01 REV9

# Field Wiring

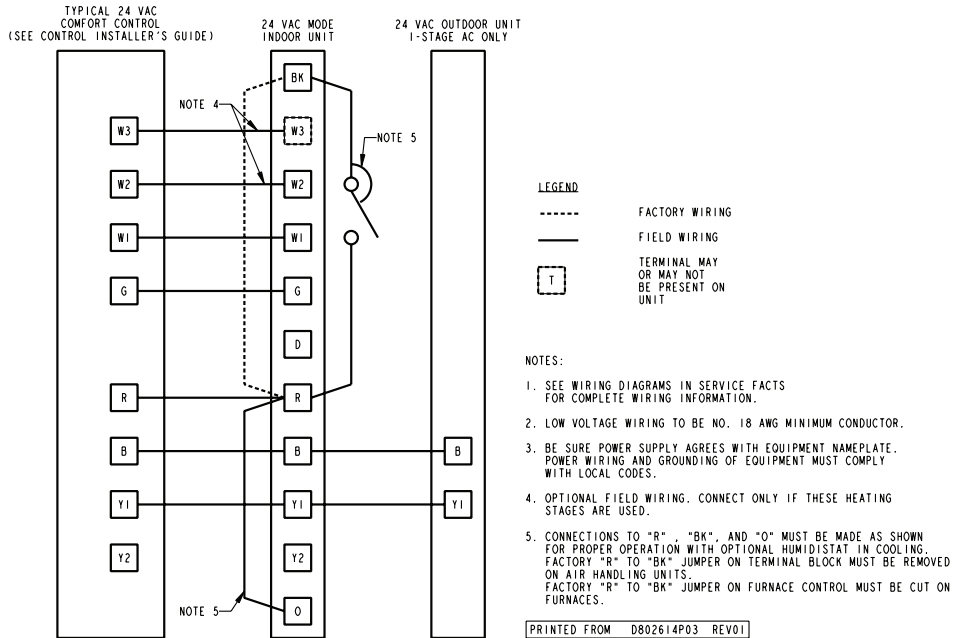




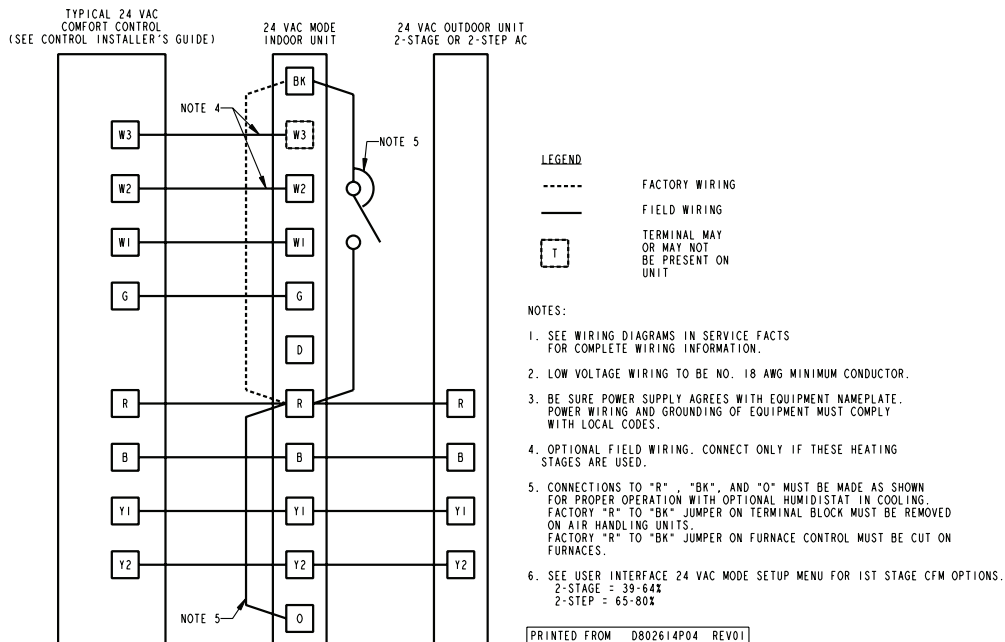
**TRANE®**

# Field Wiring

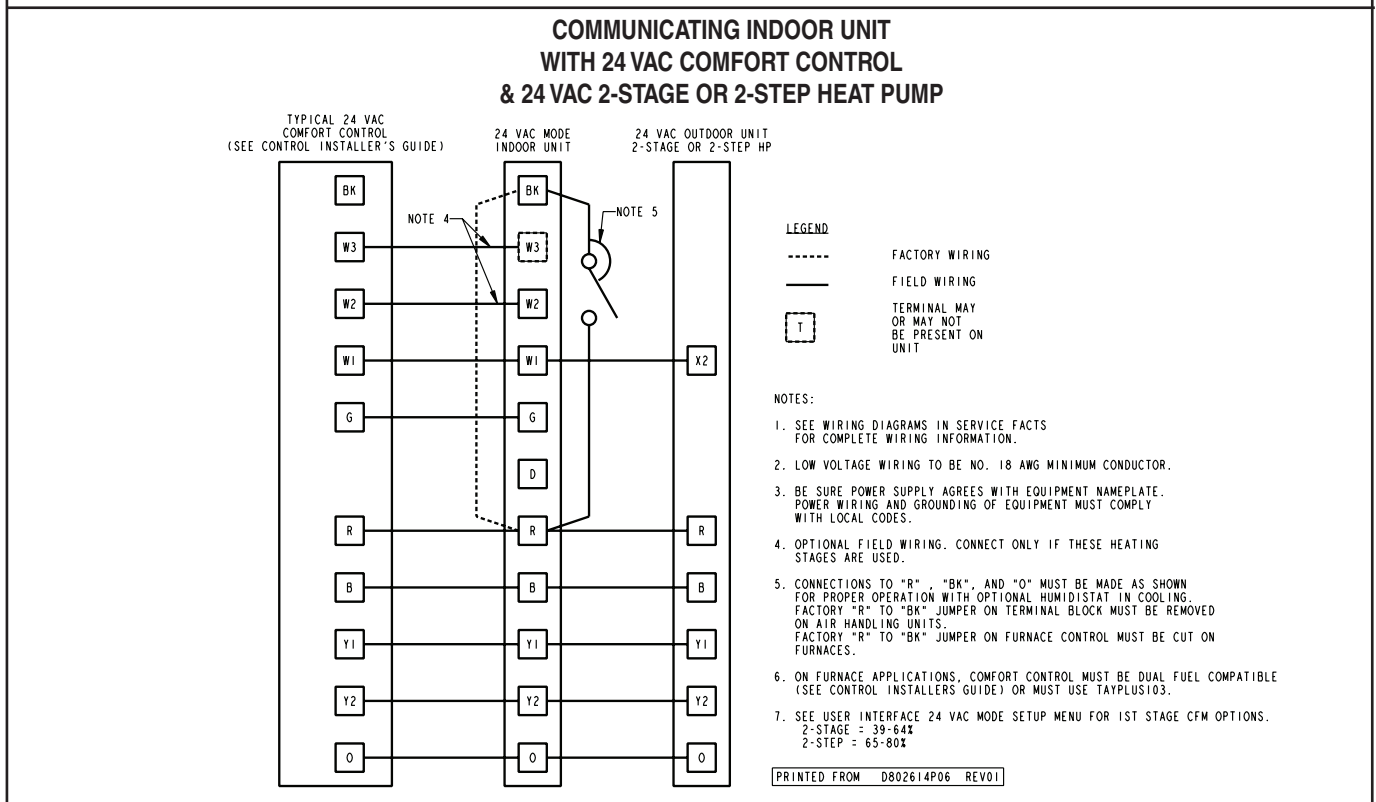
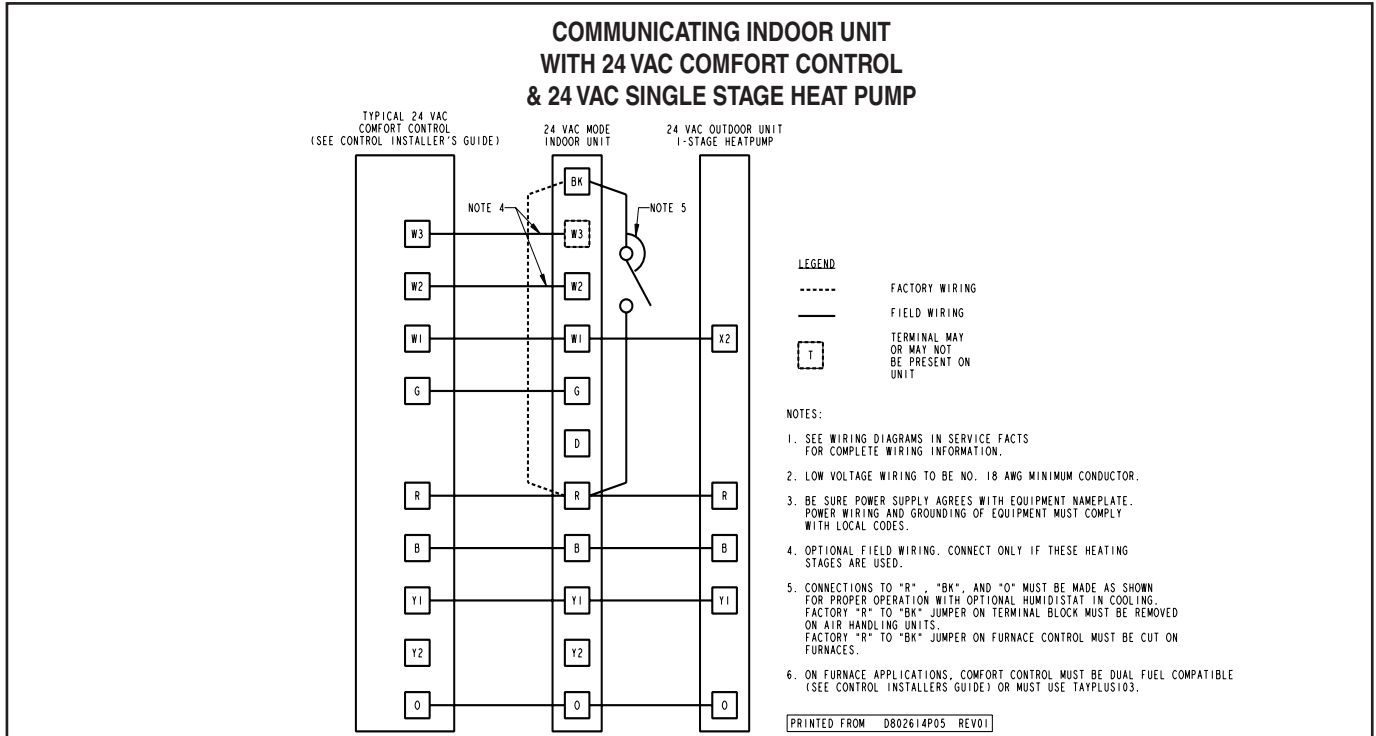
## COMMUNICATING INDOOR UNIT WITH 24 VAC COMFORT CONTROL & 24 VAC SINGLE STAGE COOLING



## COMMUNICATING INDOOR UNIT WITH 24 VAC COMFORT CONTROL & 24 VAC 2-STAGE OR 2-STEP COOLING



# Field Wiring





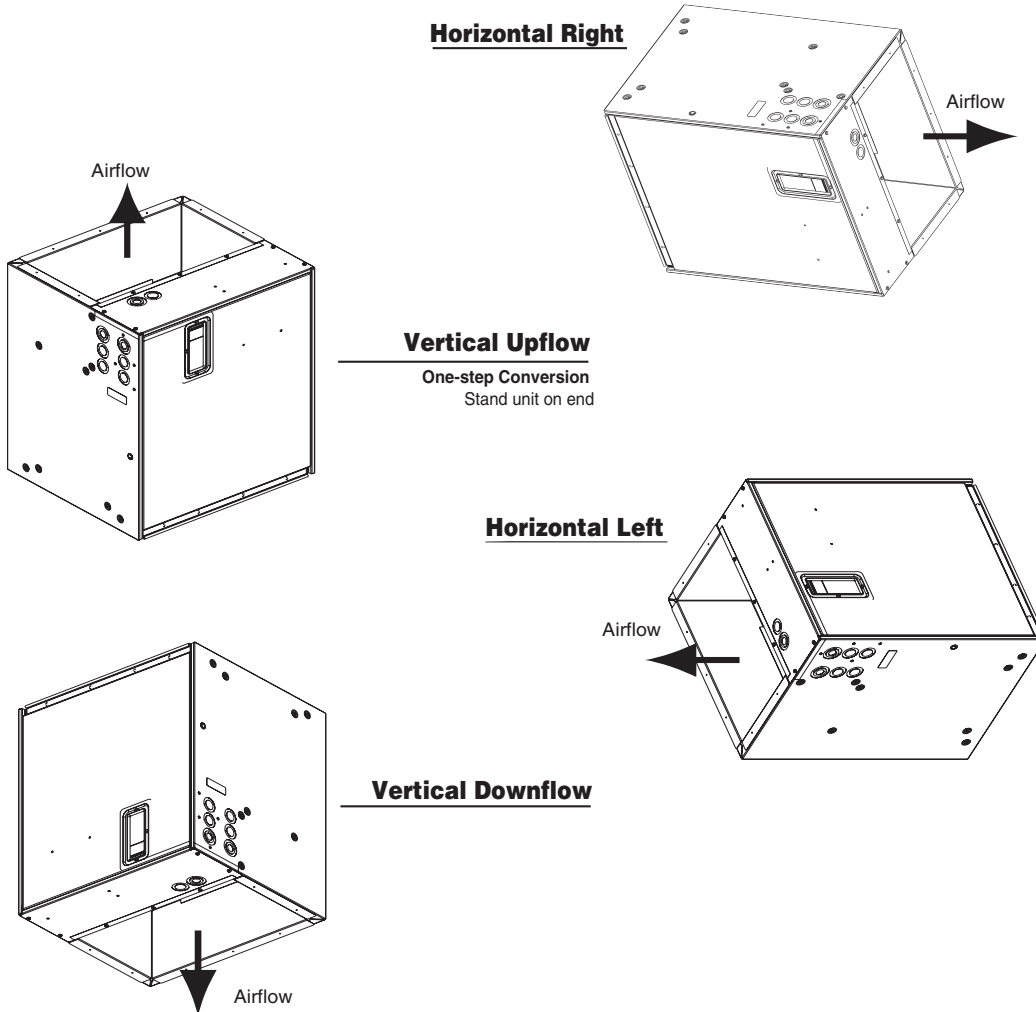
**TRANE**<sup>®</sup>

# 4TBE Convertibility

## FOUR (4) WAY CONVERTIBILITY

### 4 CONVERSION APPLICATIONS

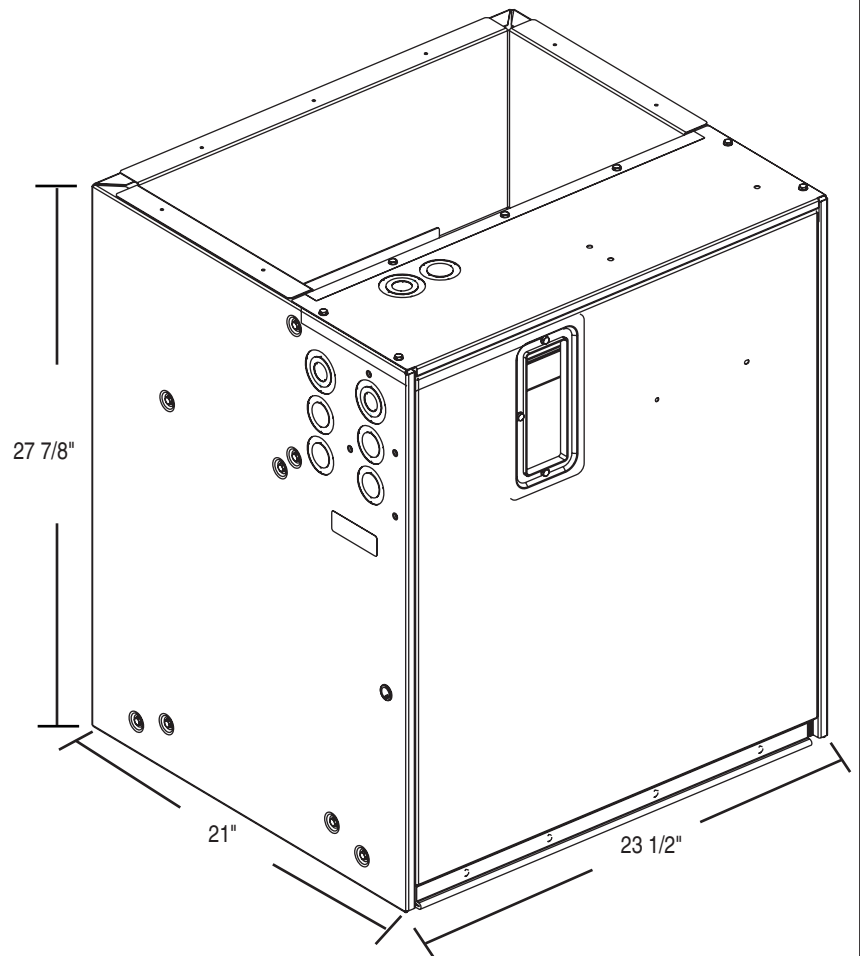
1. Horizontal Right
2. Vertical Upflow
3. Horizontal Left
4. Vertical Downflow





# Dimensions

**4TBE0C04 & 08A MODULAR BLOWER DIMENSIONAL DATA**



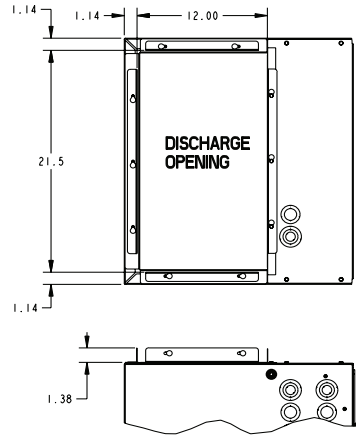
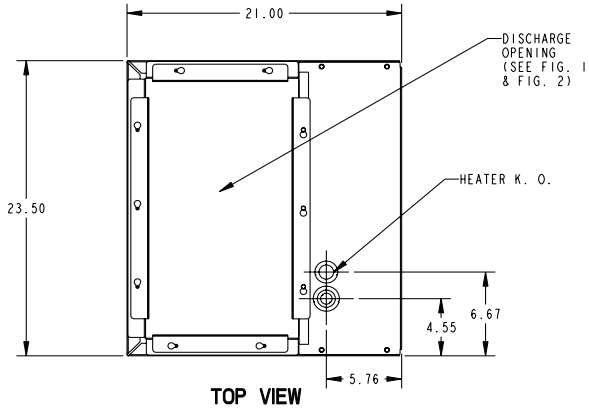
Model No.	H	W	D
4TBE0C04A	27 7/8"	23 1/2"	21"
4TBE0C08A			



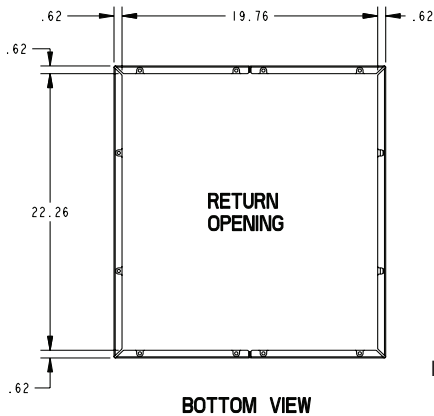
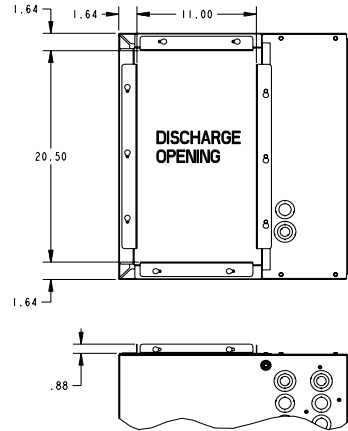
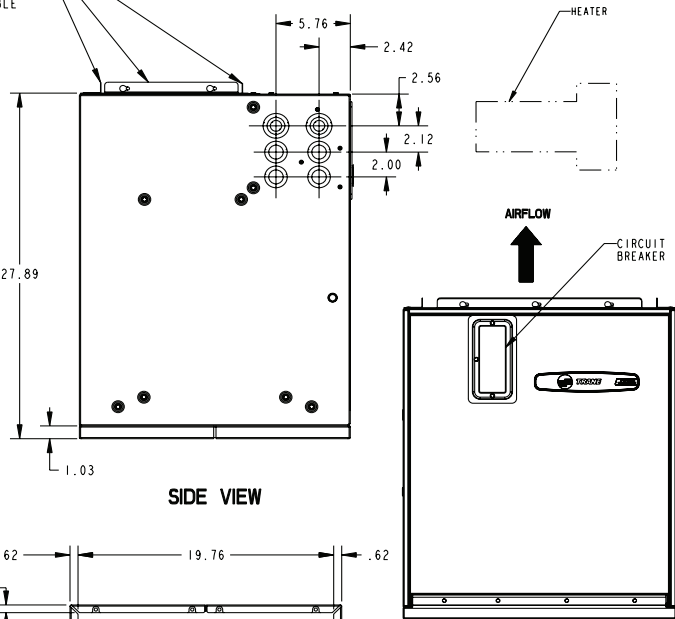
**TRANE®**

# Outline Drawings

## OUTLINE DRAWING FOR 4TBE0C04 & 08A MODULAR BLOWERS



.88" x 1.38" DUCT FLANGES (SEE FIG. 1 & FIG. 2) REVERSIBLE



From Dwg. D802865rev0

MINIMUM UNIT CLEARANCE TABLE		
	TO COMBUSTIBLE MATERIAL (REQUIRED)	SERVICE CLEARANCE (RECOMMENDED)
SIDES	0"	2"
FRONT	0"	21"
BACK	0"	0"
INLET DUCT	0"	1"
OUTLET DUCT	1"*	

\* 1" FOR THE PLENUM AND THE FIRST 3 FT. OF OUTLET DUCT WHEN ELECTRIC HEATERS ARE INSTALLED.

# Mechanical Specification Options

## Features and General Information

These blower units are completely factory assembled including fan, motor, and controls in an insulated casing that can be applied in horizontal or vertical configuration.

This new line of 4TBE modular blowers provides exclusive compact size combined with multi-position capability.

The unit ships upside down and converts to the horizontal configuration just by laying the unit on its side.\* No tools required.

## Comfort Control

ComfortLink II™ Communicating modular blower design offers 3-wire connectivity for installation ease. Assures the entire heating and air conditioning system is set up in the proper modes to optimize the engineered performance of the matched system installed.

## Casing

These models have a rugged galvanized sheet metal and steel frame construction. The casing is painted with an enamel finish. The casing is insulated and provides knockouts for electrical power and control wiring.

## Fan

The blower housing is forward curved, dynamically balanced with a variable speed direct drive fan motor. The variable speed ECM fan motor is permanently lubricated.

## Controls

Low voltage terminal board, communicating control board, and plug-in module for accessory electric heat control is included.

## Electric Heaters

Heaters for the 4TBE modular blowers are available in a wide range of capacities and voltages with various staging options, and plug-in control wiring. Heaters fit inside the internal compartment.



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Since Trane has a policy of continuous product and product data improvement, it reserves the right to change design and specifications without notice.