



80% A.F.U.E.[†] DOWNFLOW GAS FURNACES

The Thermal Zone[®] line of downflow gas furnaces is designed for installation in closets, alcoves, utility rooms, or attics. The design is certified by CSA International.

Features

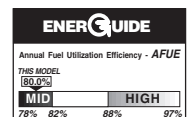
- Innovative design results in reliable, efficient operation at sound levels which provide distinct competitive advantage.
- Patented heat exchanger, constructed of both stainless and aluminized steel for the maximum in corrosion resistance.
- Low profile "34 inch" [864 mm] design is lighter and easier to handle, and leaves room for optional equipment.
- Left or right side gas and electric inlet connections with quick, simple change.
- Direct Spark ignition.
- Integrated board with humidifier and electronic air cleaner hookups.
- Insulated blower compartment helps to reduce jacket loss and noise.
- Pre-paint galvanized steel cabinet.
- Molded permanent filter.
- Grab-holes in doors to aid in easy door removal and replacement.

A variety of cooling coils and plenums designed to use with Thermal Zone[®] gas furnaces are available as optional accessories.

[†]A.F.U.E. (Annual Fuel Utilization Efficiency) calculated in accordance with Department of Energy test procedures.

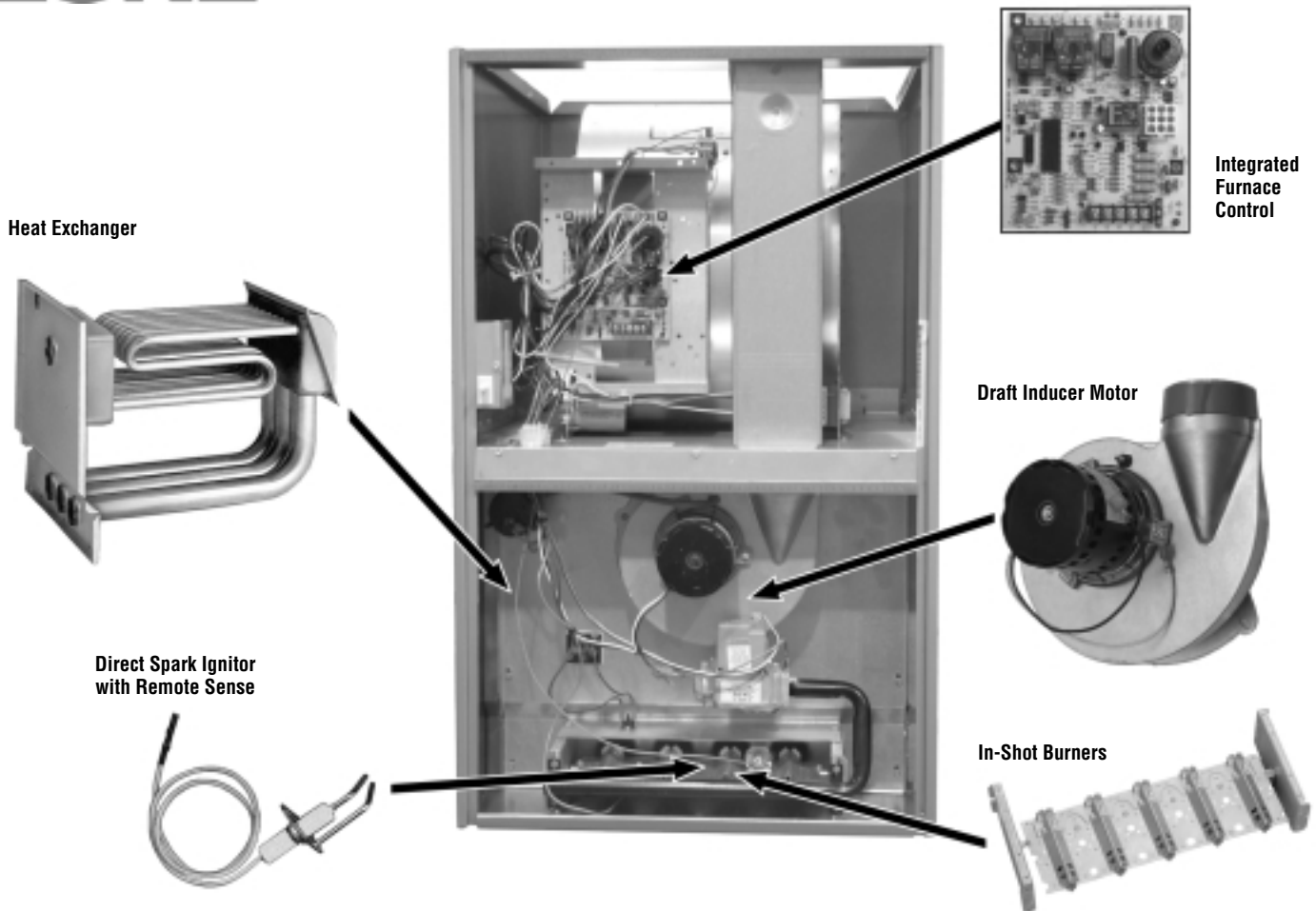
TZ81DN- SERIES
Models with Input Rates from
50,000 to 150,000 BTU/HR
[15 to 44 kW]
(U.S. & Canadian Models)

Manufactured for
Thermal Zone[®]
Philadelphia, PA





80% DOWNFLOW GAS FURNACE



STANDARD EQUIPMENT

Completely assembled and wired; induced draft; pressure switch; redundant main gas control; blower compartment door safety switch; solid state time on/time off blower control; limit control; manual shut-off valve, pressure regulator for natural and L.P. (propane) gas; transformer; direct drive multi-speed blower motor. Furnaces are equipped with cooling/heating relay and transformer (40VA) ready for air conditioning applications. (Please note: a thermostat is not included as standard equipment.) Flame sensor diagnostics; on-board twinning; fused-protection (secondary), **3rd speed option for continuous fan; common heat/cool terminal.**

NOTE: Furnace is not listed for use with fuels other than natural or L.P. (propane) gas.

The complete terms of limited and other warranties are available at our sales office, or through local installer.

All models can be converted by a qualified Thermal Zone® distributor or local service dealer to use L.P. (propane) gas without changing burners. Factory approved kits must be used to convert from natural to L.P. (propane) gas and may be ordered as optional accessories from a Thermal Zone® parts distributor. For L.P. (propane) operation, refer to Conversion Kit Index Form.

NOTE: For natural and L.P. (propane) gas models, direct spark ignition is 100% lockout type.

WARNING
 THIS FURNACE IS NOT APPROVED
 OR RECOMMENDED
 FOR USE IN MOBILE HOMES

BEFORE PURCHASING THIS APPLIANCE, READ IMPORTANT ENERGY COST AND EFFICIENCY INFORMATION AVAILABLE FROM YOUR RETAILER.

PHYSICAL DATA AND SPECIFICATIONS

MODEL NUMBERS TZ81DN-	503TA	753TA	754TA	103TA	105TA	125TA	155TA
Input—BTU/Hr [kW] ②	50,000 [15]	75,000 [22]	75,000 [22]	100,000 [29.3]	100,000 [29.3]	125,000 [36.6]	150,000 [44]
Heating Capacity BTU/Hr [kW] ①	41,000 [12]	60,500 [18]	60,500 [18]	80,000 [23]	81,000 [24]	99,000 [29]	120,000 [35]
High Altitude Input [kW]	45,000 [13]	67,500 [19.8]	67,500 [19.8]	90,000 [26.4]	90,000 [26.4]	112,500 [33]	135,000 [39.6]
High Altitude Output Capacity [kW]	36,500 [10.7]	54,000 [15.8]	54,000 [15.8]	72,000 [21.1]	72,500 [21.2]	89,000 [26.1]	107,500 [31.5]
Heat Ext. Static Pressure [kPa]	.10 [.025]	.12 [.029]	.12 [.029]	.15 [.037]	.15 [.037]	.20 [.05]	.20 [.05]
Blower (D x W) [mm]	11 x 6 [279 x 152]	11 x 6 [279 x 152]	11 x 7 [279 x 178]	11 x 7 = 10*AM [279 x 178]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]
Motor H.P. [W]—Speeds [W]—PSC Type	1/2-4-PSC [373]	1/2-3-PSC [373]	3/4-3-PSC [559]	1/2-3-PSC [373]	3/4-3-PSC [559]	3/4-3-PSC [559]	3/4-3-PSC [559]
Motor Full Load Amps	6.8	5.8	9.5	7.1	9.5	9.5	9.5
Heating Speed	LOW	MEDIUM	LOW	MED	LOW	LOW	LOW
Cooling Speed	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Cooling CFM @ .5" [kPa] E.S.P. (Nominal) [L/s]	1200 [566]	1200 [566]	1600 [755]	1200 [566]	2000 [944]	2000 [944]	2000 [944]
Rated E.S.P. (In. W.C.) [kPa]	0.5 [.12]	0.5 [.12]	0.5 [.12]	0.5 [.12]	0.5 [.12]	0.5 [.12]	0.5 [.12]
Temperature Rise Range °F [°C]	25-55 [13.9-30.6]	30-60 [16.7-33.3]	25-55 [13.9-30.6]	45-75 [25-41.7]	40-70 [22.2-38.9]	40-70 [22.2-38.9]	50-80 [27.8-44.4]
Max. Outlet Air Temp. °F [°C]	155 [68.3]	165 [73.9]	155 [68.3]	190 [87.8]	170 [76.7]	180 [82.2]	170 [76.7]
Standard Filter [mm]	(1) 14 x 20 [356 x 508]	(2) 12 x 20 [305 x 508]	(2) 12 x 20 [305 x 508]	(2) 12 x 20 [305 x 508]	(2) 14 x 20 [356 x 508]	(2) 14 x 20 [356 x 508]	(2) 14 x 20 [356 x 508]
Approx. Shipping Weight (Lbs.) [kg]	85 [38.6]	105 [47.6]	105 [47.6]	115 [52.2]	120 [54.4]	140 [63.5]	150 [68.0]
AFUE—Electric Ignition Models ①	80%	80%	80%	80%	80%	80%	80%

NOTES: All models are 115V, 60HZ, 1Ø. Gas connection size for all models is 1/2" N.P.T.

① In accordance with D.O.E. test procedures.

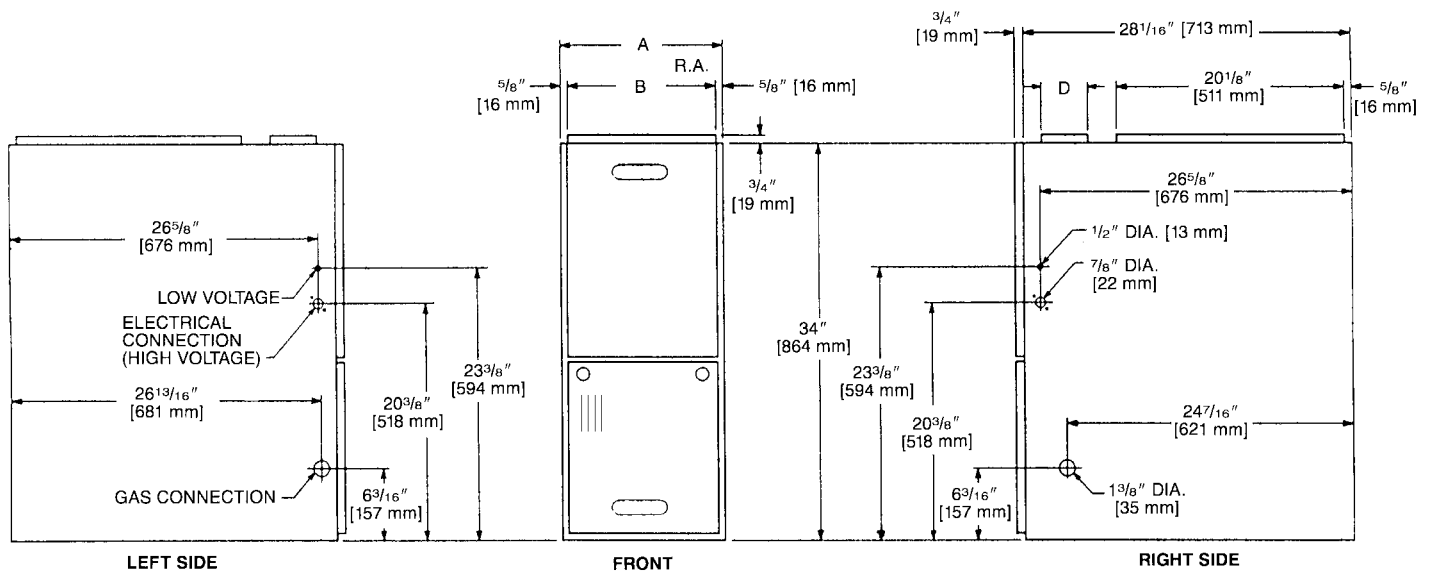
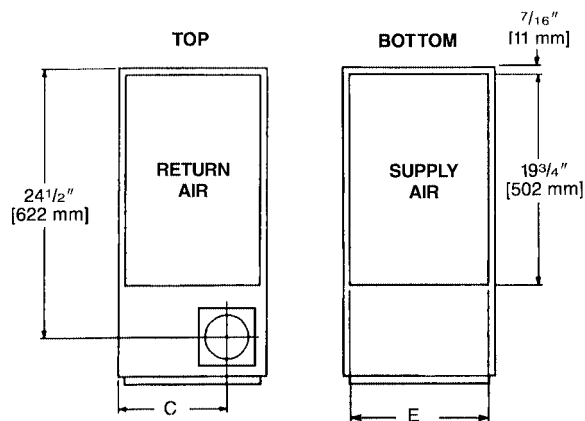
② See Conversion Kit Index Form for high altitude derate in U.S. applications. For Canadian applications, reference the furnace installation instructions.

MODEL IDENTIFICATION—DOWNFLOW MODELS

<u>TZ</u>	<u>8</u>	<u>1</u>	<u>DN</u>	<u>50</u>	<u>3TA</u>
Thermal Zone®	80% Efficiency	Single Stage	Downflow/ Horizontal	Heating Input Designation BTUH/HR [kW] 50/N50 = 50,000 [15] 75/N75 = 75,000 [22] 10/N10 = 100,000 [28] 12 = 125,000 [37] 15 = 150,000 [44]	Nominal Airflow 3TA = 3 TON 4TA = 4 TON 5TA = 5 TON

[] Designates Metric Conversions

DOWNFLOW DIMENSIONS



DIMENSIONS AND CLEARANCE TO COMBUSTIBLE MATERIAL (INCHES) [mm]

MODEL TZ81DN- SERIES	A	B	C	D	E	REDUCED CLEARANCES (IN.) [mm]						
						LEFT SIDE	RIGHT SIDE	BACK	TOP	FRONT	VENT	SHIP. WGT. (LBS.) [kg]
50	14 [356]	12 ²⁷ / ₃₂ [326]	10 ³ / ₈ [264]	①	13 ¹ / ₈ [333]	0	4 ②	0	1 [25]	3 [76]	6 [152] ③	85 [38.6]
754TA, 753TA	17 ¹ / ₂ [445]	16 ¹¹ / ₃₂ [415]	12 ¹ / ₈ [308]	①	16 ⁵ / ₈ [422]	0	3 ②	0	1 [25]	3 [76]	6 [152] ③	105 [47.6]
103TA	17 ¹ / ₂ [445]	16 ¹¹ / ₃₂ [415]	12 ¹ / ₈ [308]	①	16 ⁵ / ₈ [422]	0	3 ②	0	1 [25]	3 [76]	6 [152] ③	115 [52.2]
105TA	21 [533]	19 ²⁷ / ₃₂ [504]	13 ⁷ / ₈ [352]	①	20 ¹ / ₈ [511]	0	0	0	1 [25]	3 [76]	6 [152] ③	120 [54.4]
12	24 ¹ / ₂ [622]	23 ¹¹ / ₃₂ [593]	15 ⁵ / ₈ [397]	①	23 ⁵ / ₈ [600]	0	0	0	1 [25]	3 [76]	6 [152] ③	140 [63.5]
15	24 ¹ / ₂ [622]	23 ¹¹ / ₃₂ [593]	15 ⁵ / ₈ [397]	①	23 ⁵ / ₈ [600]	0	0	0	1 [25]	3 [76]	6 [152] ③	150 [68]

NOTES: ① May require a 3" [76 mm] to 4" [102 mm] or 3" [76 mm] to 5" [127 mm] adapter.

② May be 0" [0 mm] with type B vent.

③ May be 1" [25 mm] with type B vent.

Furnaces must be vented in accordance with the National Fuel Gas Code, ANSI Z223.1 and/or Can/CGA-B149 Installation Codes and in accordance with local codes.

BLOWER PERFORMANCE DATA—DOWNFLOW MODELS

MODEL NUMBER TZ81DN-SERIES	BLOWER SIZE [mm]	MOTOR H.P. [W]	BLOWER SPEED	CFM [L/s] AIR DELIVERY EXTERNAL STATIC PRESSURE INCHES [kPa] WATER COLUMN						
				.1 [.02]	.2 [.05]	.3 [.07]	.4 [.10]	.5 [.12]	.6 [.15]	.7 [.17]
503TA	11 x 6 [279 x 152]	1/2 [373]	LOW	735 [347]	715 [337]	690 [326]	660 [311]	635 [300]	605 [286]	575 [271]
			MED-LO	1025 [484]	1015 [479]	995 [470]	975 [460]	955 [451]	930 [439]	905 [427]
			MED-HI	1185 [559]	1165 [550]	1150 [543]	1130 [533]	1100 [519]	1075 [507]	1040 [491]
753TA	11 x 6 [279 x 152]	1/2 [373]	LOW	1104 [529]	1081 [510]	1050 [496]	1025 [484]	999 [471]	971 [458]	940 [444]
			MED	1284 [606]	1269 [599]	1236 [583]	1206 [569]	1179 [556]	1139 [538]	1102 [520]
			HIGH	1478 [698]	1438 [679]	1397 [659]	1362 [643]	1392 [657]	1282 [605]	1242 [586]
754TA	11 x 7 [279 x 178]	1/2 [373]	LOW	1210 [571]	1205 [569]	1195 [564]	1180 [557]	1165 [550]	1155 [545]	1130 [533]
			MED	1580 [746]	1560 [736]	1550 [732]	1530 [722]	1495 [706]	1465 [691]	1430 [675]
			HIGH	1915 [904]	1880 [887]	1825 [861]	1790 [845]	1740 [821]	1675 [791]	1600 [755]
103TA	11 x 7 [279 x 178]	1/2 [373]	LOW	1070 [505]	1055 [498]	1040 [491]	1010 [477]	980 [463]	945 [446]	905 [427]
			MED	1240 [585]	1210 [571]	1190 [562]	1165 [550]	1135 [536]	1095 [517]	1055 [498]
			HIGH	1420 [670]	1395 [658]	1370 [647]	1340 [632]	1305 [616]	1265 [597]	1220 [576]
105TA	11 x 10 [279 x 254]	3/4 [559]	LOW	1690 [798]	1670 [788]	1655 [781]	1615 [762]	1585 [748]	1565 [739]	1525 [720]
			MED	—	2085 [984]	2055 [970]	2005 [946]	1970 [930]	1945 [918]	1880 [887]
			HIGH	—	2410 [1137]	2355 [1111]	2305 [1088]	2240 [1057]	2165 [1022]	2100 [991]
125TA	11 x 10 [279 x 254]	3/4 [559]	LOW	—	1690 [798]	1660 [783]	1635 [772]	1580 [746]	1535 [724]	1480 [698]
			MED	—	2090 [986]	2035 [960]	1985 [937]	1930 [911]	1850 [873]	1785 [842]
			HIGH	—	2395 [1130]	2335 [1102]	2260 [1067]	2185 [1031]	2080 [982]	1965 [927]
155TA	11 x 10 [279 x 254]	3/4 [559]	LOW	1675 [791]	1650 [779]	1620 [765]	1570 [741]	1545 [729]	1485 [701]	1425 [673]
			MED	2105 [993]	2075 [979]	2035 [960]	1990 [939]	1955 [923]	1900 [897]	1815 [857]
			HIGH	—	—	—	—	—	—	—

NOTES: Recommended blower speeds are in bold.

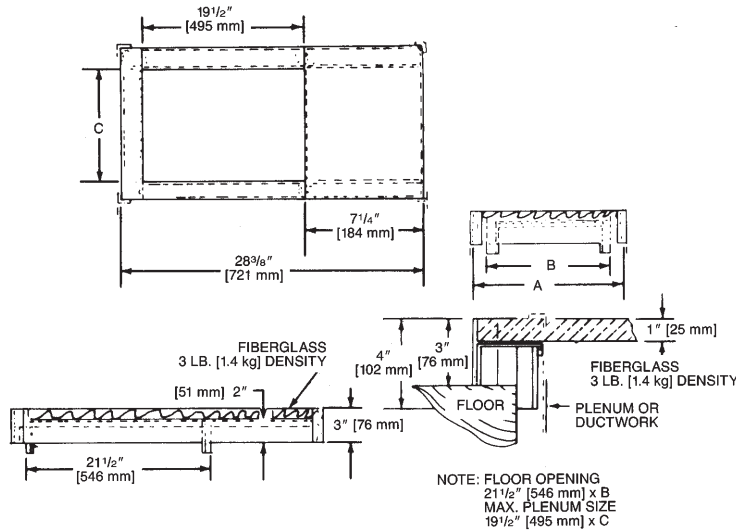
[] Designates Metric Conversions

ACCESSORIES—DOWNFLOW

DOWNFLOW WARNING: Unit design is certified for installation on non-combustible floor. A special factory supplied combustible floor sub-base is required when installing on a combustible floor. Failure to install the sub-base may result in fire, property damage and personal injury.

COMBUSTIBLE FLOOR BASE DIMENSIONS

COMBUSTIBLE FLOOR BASE	USE WITH FURNACE SIZES	A IN. [mm]	B IN. [mm]	C IN. [mm]
RXGC-B14	50	14 ¹ / ₂ [368]	13 ¹ / ₄ [337]	11 ¹ / ₄ [286]
RXGC-B17	75, 103TA	18 [457]	16 ³ / ₄ [425]	14 ³ / ₄ [451]
RXGC-B21	105TA	21 ¹ / ₂ [546]	20 ¹ / ₄ [514]	18 ¹ / ₄ [464]
RXGC-B24	125TA, 155TA	25 [635]	23 ³ / ₄ [603]	21 ³ / ₄ [552]



GXGP-F03

PARALLEL FURNACE KITS—are for parallel operation requirements.

RXPF-F01 and F02

FOSSIL FUEL KITS—are for use with Thermal Zone Value Series Heat Pumps and 80% warm air furnaces. The RXPF-F02 meets TVA requirements.

RXGF-CC*

FILTER RACK—Downflow top return mount.

NOTE: Filter racks are shipped without filters.

*Filters available through PROSTOCK®.

RXGF-DB*

Each order contains (1) one box of 10 filter racks supplied without filters.

*Filters available through PROSTOCK®.

FOR HIGH ALTITUDES:

HIGH ALTITUDE OPTION CODE: U.S. & Canada – None required for high altitudes.

HIGH ALTITUDE CONVERSION KITS: U.S. & Canada – None required for high altitudes.

80+ HIGH ALTITUDE INSTRUCTIONS

Caution: Always follow National Fuel Gas Code (NFGC) guidelines when converting for high altitudes.

High altitude option codes are not required for these models. However, the burner orifice size needs to be recalculated and verified at elevations above 2000 ft. See Installation Instructions for more information.

NOTE: For Canadian installations only, an optional derate (manifold gas pressure reduction) method may be used to adjust the furnace for

GENERAL TERMS OF LIMITED WARRANTY

Thermal Zone® will furnish a replacement for any part of this product which fails in normal use and service within the applicable period stated, in accordance with the terms of the limited warranty.

For Complete Details of the Limited Warranty, Including Applicable Terms and Conditions, See Your Local Installer or Contact the Manufacturer for a Copy.

Gas Heat Exchanger Limited WarrantyTwenty (20) Years
 *Any Other Part.....Five (5) Years

***This five year limited warranty is applicable only to single-phase products installed in residential applications on or after January 1, 2001.**

NOTES

Before proceeding with installation, refer to installation instructions packaged with each model, as well as complying with all Federal, State, Provincial, and Local codes, regulations, and practices.

"In keeping with its policy of continuous progress and product improvement, the right is reserved to make changes without notice."