

TECHNICAL SPECIFICATIONS

FG7T (C and L Series)

iSEER™ Smartlite®



**Two Stage, Variable Speed,
Condensing Upflow/Horizontal
and Downflow Gas Furnaces
Induced Draft - 95.1 AFUE
Input 60,000 - 120,000 Btuh**

The high efficiency upflow gas furnace may be installed free standing in a utility room, basement, or enclosed in an alcove or closet. Upflow/horizontal units come ready for upflow or horizontal application. The extended flush jacket provides a pleasing “appliance appearance.” Design certified by CSA for application in Canada and the United States.

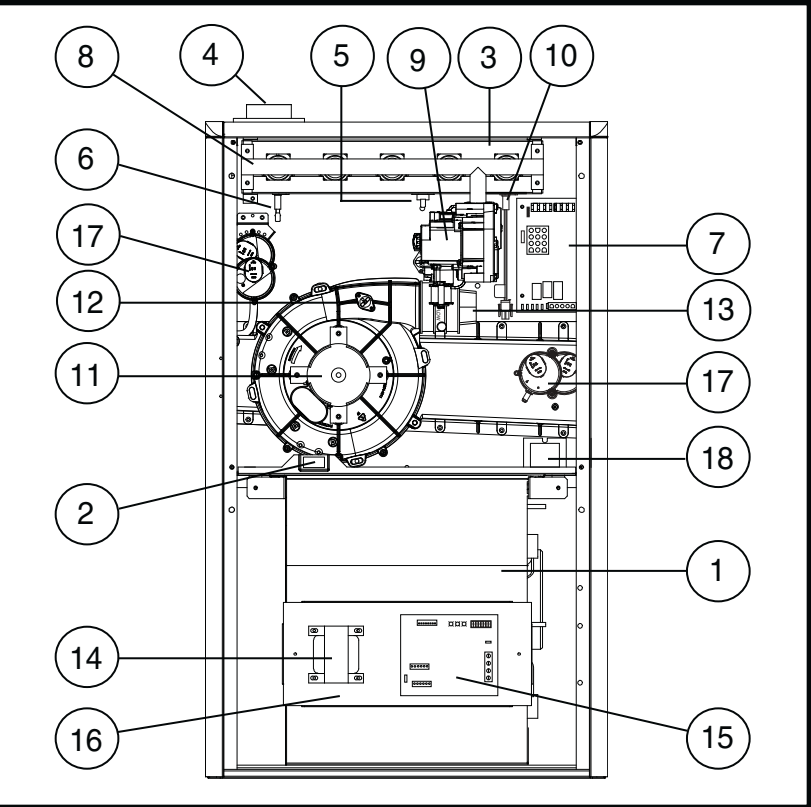


FEATURES and BENEFITS

- **i SEER:** Energy efficient brushless DC (ECM) motor gives up to 1 SEER point efficiency gain in cooling.
- **100% fired and tested:** All units and each component are tested on the manufacturing line.
- **Best packaging in the industry:** Unique corner post design assures product will arrive to the homeowner dent free.
- **30 second blower delay:** At start-up assures a warm duct temperature at furnace start-up. Adjustable blower off settings (60, 90, 120 and 180 seconds).
- **30 second post purge:** Increases life of heat exchanger.
- **Two Stage Inducer:** Optimizes efficiency on first stage heat and reduces sound levels.
- **Hot surface igniter:** Innovative application of a silicon nitride type igniter. Utilizes proven Smartlite® technology.
- **Color coded wire harness:** Designed to fit the components, all with quick-connect fittings for ease of service and replacement.
- **Flexible category IV venting system:** May be vertically or horizontally vented using either a one-pipe or two-pipe system for maximum flexibility in installation.
- **High Static Blowers:** All models equipped with high static blowers.
- **Low Boy Height:** Easy to apply in low ceiling applications, works well with taller high SEER coils, easier to handle and install.
- **Tubular primary heat exchanger:** Heavy gauge aluminized steel heat exchanger and stainless steel secondary heat exchanger assures a long life.
- **90 second fixed cooling cycle blower-off delay (TDR):** increases cooling performance when matched with a NORDYNE coil.
- **LP convertible:** Simple burner orifice and regulator spring change for ease of convertibility.
- **Diagnostic lights for easy troubleshooting without counting flashes:** Dedicated light for flame signal strength and 2 lights in combination to indicate all other fault codes with easy to recognize states without counting flashes.
- **Incorporates integrated control board:** With connections for electronic air cleaner, humidifier and twinning.
- **Two piece door design:** Enhances furnace appearance and uses captured screws to prevent losing door screws.
- **Blower Compartment:** Sealed door to reduce air leakage and insulated for ultra quiet operation.
- **Sealed Vestibule:** Reduces burner and inducer sound levels.

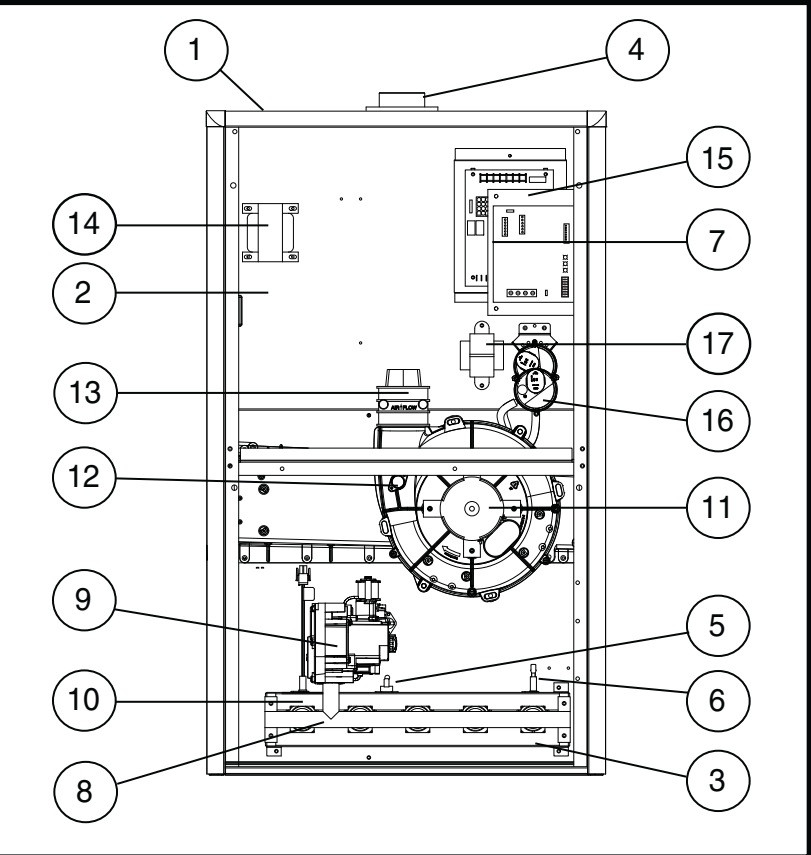
GAS FURNACE COMPONENTS

ITEM	COMPONENT NAME
1.	Blower Assembly
2.	Blower Door Switch
3.	Burner Assembly
4.	Finish Flange
5.	Flame Roll-Out Switch
6.	Flame Sensor
7.	Furnace Control Board
8.	Gas Manifold
9.	Gas Valve
10.	Igniter
11.	Inducer Assembly
12.	Inducer Limit Switch
13.	Inline Drain Assembly
14.	Motor Choke (C and D cabinets only)
15.	Motor Control Board
16.	Motor Control Box
17.	Pressure Switches
18.	Transformer



Upflow/Horizontal Gas Furnace

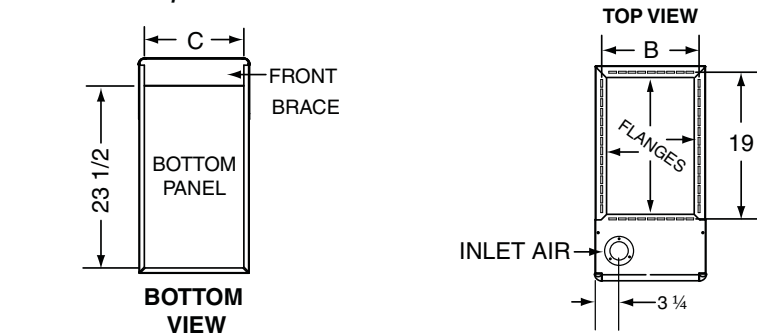
ITEM	COMPONENT NAME
1.	Blower Assembly
2.	Blower Door Switch (behind blower panel)
3.	Burner Assembly
4.	Finish Flanges
5.	Flame Roll-Out Switch
6.	Flame Sensor
7.	Furnace Control Board
8.	Gas Manifold
9.	Gas Valve
10.	Igniter
11.	Inducer Assembly
12.	Inducer Limit Switch
13.	Inline Drain Assembly
14.	Motor Choke (C and D cabinets only)
15.	Motor Control Board
16.	Pressure Switches
17.	Transformer



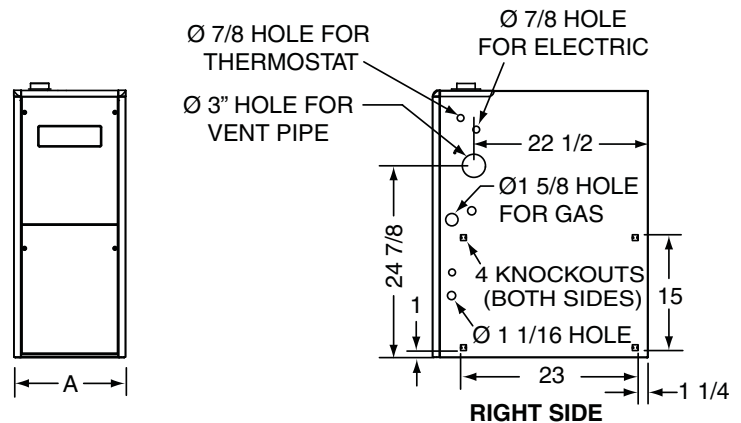
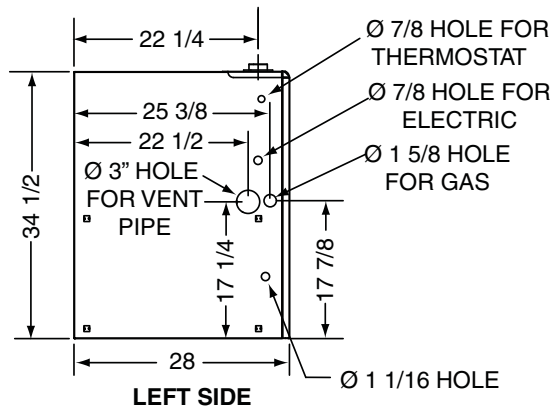
Downflow Gas Furnace

DIMENSIONS

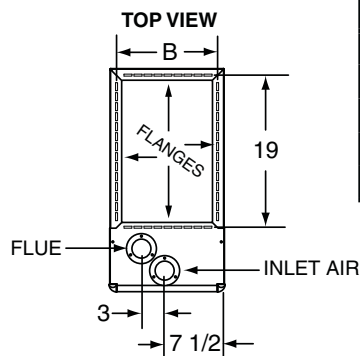
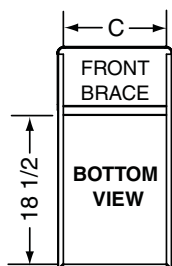
*TC 95.1% Upflow/Horizontal Furnace



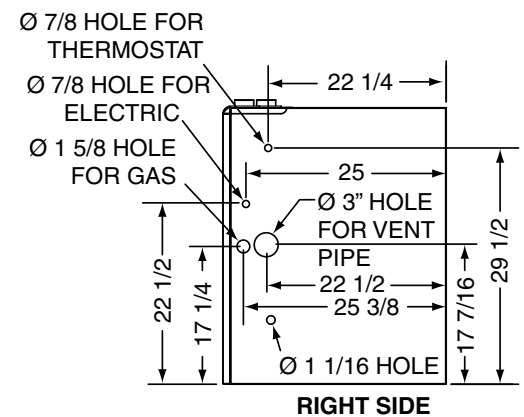
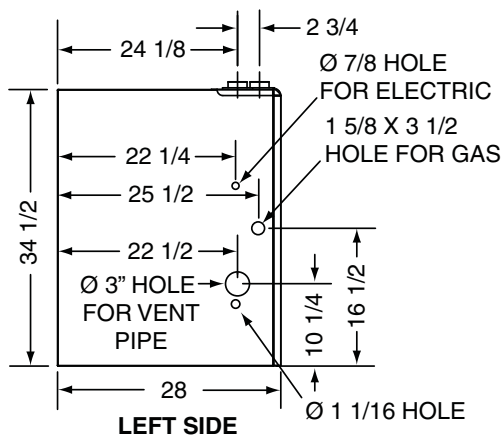
Upflow/Horz. Cabinets	Dim. "A"	Dim. "B"	Dim. "C"
'B' Cabinet	17 1/2	15 7/8	16 1/8
'C' Cabinet	21	19 3/8	19 5/8
'D' Cabinet	24 1/2	22 7/8	23 1/8
NOTES:			
Dimensions shown in inches.			



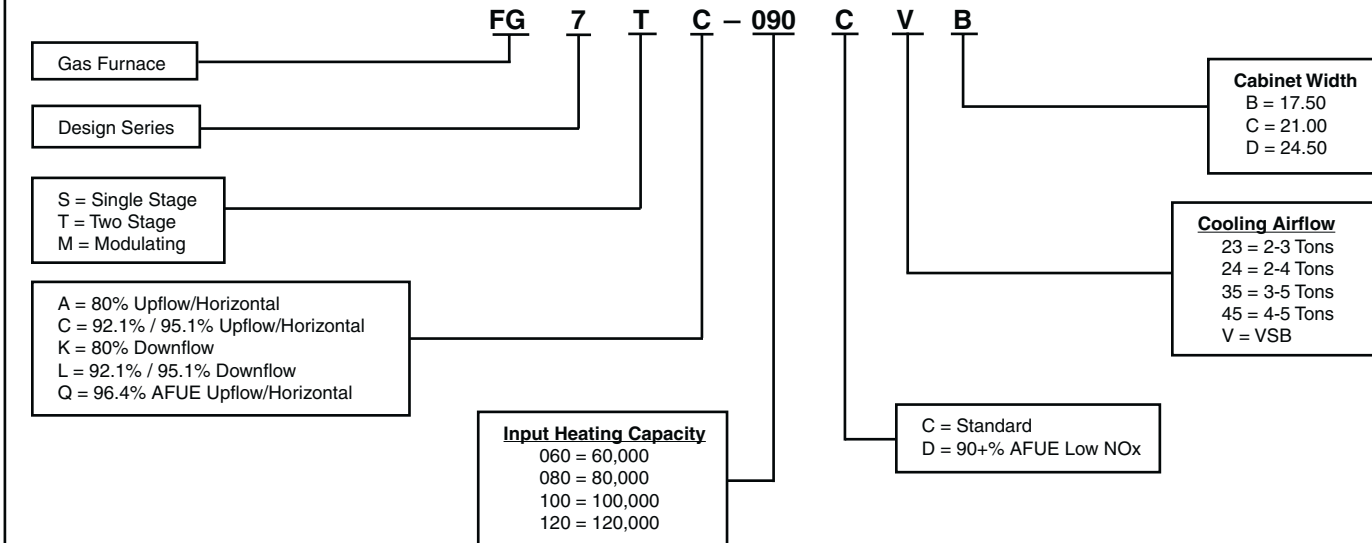
*TL 95.1% Downflow Furnace



Downflow Cabinets	Dim. "A"	Dim. "B"	Dim. "C"
'B' Cabinet	17 1/2	15 7/8	16 1/8
'C' Cabinet	21	19 3/8	19 5/8
'D' Cabinet	24 1/2	22 7/8	23 1/8
NOTES:			
Dimensions shown in inches.			



MODEL IDENTIFICATION CODE



SPECIFICATIONS

FG7TC/TL MODELS NUMBERS:	-060D-VB	-080D-VC	-100D-VC	-120D-VD
Input - Btuh (a)	60,000 / 39,000	80,000 / 52,000	100,000 / 65,000	120,000 / 78,000
Heating Capacity - Btuh	57,000 / 37,050	76,000 / 49,400	95,000 / 61,750	114,000 / 74,100
AFUE	95.1	95.1	95.1	95.1*
Blower D x W	11 x 8	11 x 10	11 x 10	11 x 10
Motor H.P. - Speed - Type	1/2 - Variable	3/4 - Variable	3/4 - Variable	1 - Variable
Motor FLA	6.2	8.7	8.7	11.70
Rated Ext. SP - In. W.C.	0.5	0.5	0.5	0.5
Temperature Rise Range - °F	30-60	35-65	35-65	40-70
Shipping Weights	125lbs	135lbs	145lbs	160lbs

*TL 120 is 94.8% AFUE

Note:

All models are 115V, 60 Hz. Gas Connections are 1/2" N.P.T. AFUE = Annual Fuel Utilization Efficiency

(a) Ratings to 2,000 ft. Over 2,000 ft. reduce 4% for each 1,000 ft. above sea level.

BLOWER PERFORMANCE - FG7TC/TL

Nominal Heating Airflows (CFM) and Temperature Rise (°F)

B Cabinet					*TC/TL-060D-VB Models	
Switch Settings HEAT					Input (BTU) 60000	
A/B	2	3	4		CFM	Temp Rise (°F)
1	0	0	0		1000	53
1	0	0	1		1100	48
1	0	1	0		1200	44
1	0	1	1		1300	41
1	1	0	0		1400	38
1	1	0	1		1500	35
1	1	1	0		1600	33
1	1	1	1		1700	31

C Cabinet					*TC/TL-080D-VC Models		*TC/TL-100D-VC Models	
Switch Settings HEAT					Input (BTU) 80000		Input (BTU) 100000	
A/B	2	3	4		CFM	Temp Rise (°F)	CFM	Temp Rise (°F)
#	0	0	0		1000	70	1000	88
#	0	0	1		1115	63	1115	79
#	0	1	0		1230	57	1230	72
#	0	1	1		1345	52	1345	65
#	1	0	0		1460	48	1460	60
#	1	0	1		1575	45	1575	56
#	1	1	0		1690	42	1690	52
#	1	1	1		1805	39	1805	49

Switch not used - can be 0 or 1

D Cabinet					*TC/TL-120D-VD Models	
Switch Settings HEAT					Input (BTU) 120000	
A/B	2	3	4		CFM	Temp Rise (°F)
#	0	0	0		1500	70
#	0	0	1		1615	65
#	0	1	0		1730	61
#	0	1	1		1845	57
#	1	0	0		1960	54
#	1	0	1		2075	51
#	1	1	0		2190	48
#	1	1	1		2305	46

Notes:

- Two openings are recommended for airflows above 1600 CFM if the filter(s) is (are) adjacent to the furnace.
- Temperature rises in the table are approximate. Actual temperature rises may vary.
- Temperature rises that are shaded in grey are for reference only. These conditions are not recommended.

COOLING AIRFLOW

A Cabinet							Nominal A/C and HP Capacity			
Switch Settings					CFM					
HEAT		COOL								
A/B	5	6	7	8						LOW
0	0	0	0	0	360	525	3 TON	2.5 TON	2 TON	1.5 TON
0	0	0	0	1	400	580				
0	0	0	1	0	440	635				
0	0	0	1	1	475	690				
0	0	1	0	0	515	745				
0	0	1	0	1	550	800				
0	0	1	1	0	590	855				
0	0	1	1	1	630	910				
0	1	0	0	0	665	965				
0	1	0	0	1	705	1020				
0	1	0	1	0	740	1075				
0	1	0	1	1	780	1130				
0	1	1	0	0	820	1185				
0	1	1	0	1	855	1240				
0	1	1	1	0	895	1295				
0	1	1	1	1	930	1350				

B Cabinet							Nominal A/C and HP Capacity			
Switch Settings					CFM					
HEAT		COOL								
A/B	5	6	7	8						LOW
1	0	0	0	0	485	700	3.5 TON	3 TON	2.5 TON	2 TON
1	0	0	0	1	525	760				
1	0	0	1	0	565	820				
1	0	0	1	1	605	880				
1	0	1	0	0	650	940				
1	0	1	0	1	690	1000				
1	0	1	1	0	730	1060				
1	0	1	1	1	775	1120				
1	1	0	0	0	815	1180				
1	1	0	0	1	855	1240				
1	1	0	1	0	895	1300				
1	1	0	1	1	940	1360				
1	1	1	0	0	980	1420				
1	1	1	0	1	1020	1480				
1	1	1	1	0	1065	1540				
1	1	1	1	1	1105	1600				

C Cabinet							Nominal A/C and HP Capacity
Switch Settings					CFM		
HEAT		COOL					
A/B	5	6	7	8	LOW	CFM	
#	0	0	0	0	705	1025	5 TON 4 TON 3.5 TON 3 TON 2.5 TON
#	0	0	0	1	750	1090	
#	0	0	1	0	795	1155	
#	0	0	1	1	840	1220	
#	0	1	0	0	885	1285	
#	0	1	0	1	930	1350	
#	0	1	1	0	975	1415	
#	0	1	1	1	1020	1480	
#	1	0	0	0	1065	1545	
#	1	0	0	1	1110	1610	
#	1	0	1	0	1155	1675	
#	1	0	1	1	1200	1740	
#	1	1	0	0	1245	1805	
#	1	1	0	1	1290	1870	
#	1	1	1	0	1335	1935	
#	1	1	1	1	1380	2000	

D Cabinet							Nominal A/C and HP Capacity		
Switch Settings				CFM					
HEAT		COOL							
A/B	5	6	7			8			
#	0	0	0	0	965	1400	5 TON	4 TON	3.5 TON
#	0	0	0	1	995	1440			
#	0	0	1	0	1020	1480			
#	0	0	1	1	1050	1520			
#	0	1	0	0	1075	1560			
#	0	1	0	1	1105	1600			
#	0	1	1	0	1130	1640			
#	0	1	1	1	1160	1680			
#	1	0	0	0	1185	1720			
#	1	0	0	1	1215	1760			
#	1	0	1	0	1240	1800			
#	1	0	1	1	1270	1840			
#	1	1	0	0	1295	1880			
#	1	1	0	1	1325	1920			
#	1	1	1	0	1350	1960			
#	1	1	1	1	1380	2000			

Switch not used - can be 0 or 1

VENTING

All models are approved for vertical non direct (1 pipe) and direct (2 pipe) venting applications. See Vent Table below for specified sizes and allowable lengths.

VENT TABLE

FURNACE MODELS (BTU)	FURNACE INSTALLATION	SINGLE PIPE LENGTH (FT.) with 1 long radius elbow**		DIRECT VENT, DUAL PIPE LENGTH (ft.) WITH 1 long radius elbow on each pipe**	
		OUTLET	OUTLET	INLET/OUTLET	INLET/OUTLET
		2" Diameter	3" Diameter	2" Diameter	3" Diameter
60,000	Upflow	90	90	90	90
	Horizontal	50	90	50	90
	Downflow	30	90	30	90
80,000	Upflow	90	90	90	90
	Horizontal	30	90	30	90
	Downflow	30	90	30	90
100,000	Upflow	60	90	60	90
	Horizontal	30	90	30	90
	Downflow	30	90	25	90
120,000	Upflow	N/A	90	N/A	90
	Horizontal	N/A	90	N/A	90
	Downflow	N/A	90	N/A	90

*NOTES:

1. Subtract 2.5 ft. for each additional 2 inch long radius elbow, 5 ft. for each additional 2 inch short radius elbow, 3.5 ft. for each additional 3 inch long radius elbow, and 7 ft. for each additional 3 inch short radius elbow. Subtract 5ft for each 2" tee and 8ft for each 3" tee.
2. Two 45 degree elbows are equivalent to one 90 degree elbow.
3. This table applies for elevations from sea level to 2,000 ft. For higher elevations, decrease pipe lengths by 8% per 1,000 ft of altitude.

ACCESSORIES

FG7TC/TL KITS	
Description	SKU
2" Concentric vent kit	904177
3" Concentric vent kit	904176
"A" Cabinet downflow sub base kit	902974
"B", "C", "D" Cabinet downflow sub base kit	904911
2" Side wall vent kit	904617
3" Side wall vent kit	904347
U.S. LP Conversion kit (0 to 10,000 ft.)	904914
Canada LP Conversion kit (0 to 4,500 ft.)	904915
Bottom return filter 20 per box, "A" cabinet	903088
Bottom return filter 20 per box, "B" cabinet	904916
Bottom return filter 20 per box, "C" cabinet	904917
Bottom return filter 20 per box, "D" cabinet	904918
Side return filter kit	541036
Neutralizer kit	902377



GENERAL TERMS OF LIMITED WARRANTY

Nortek Global HVAC LLC will furnish a replacement for any part of this product which fails in normal use and service within the terms and conditions of the warranty.

For complete details of the Limited Warranty, including applicable terms and conditions, see your local installer or contact the Nortek Global HVAC LLC warranty department for a copy.

Before purchasing this appliance, read important energy cost and efficiency information available from your retailer. Specifications and illustrations subject to change without notice and without incurring obligations. Printed in U.S.A (06/2015)

361D-0909 (Replaces 361D-0709)