



ENGINEERING DATA

GAS FURNACES

GHR32

ELITE® SERIES

Horizontal/Down-Flow

Two Stage Heat

AFUE - 92.7%

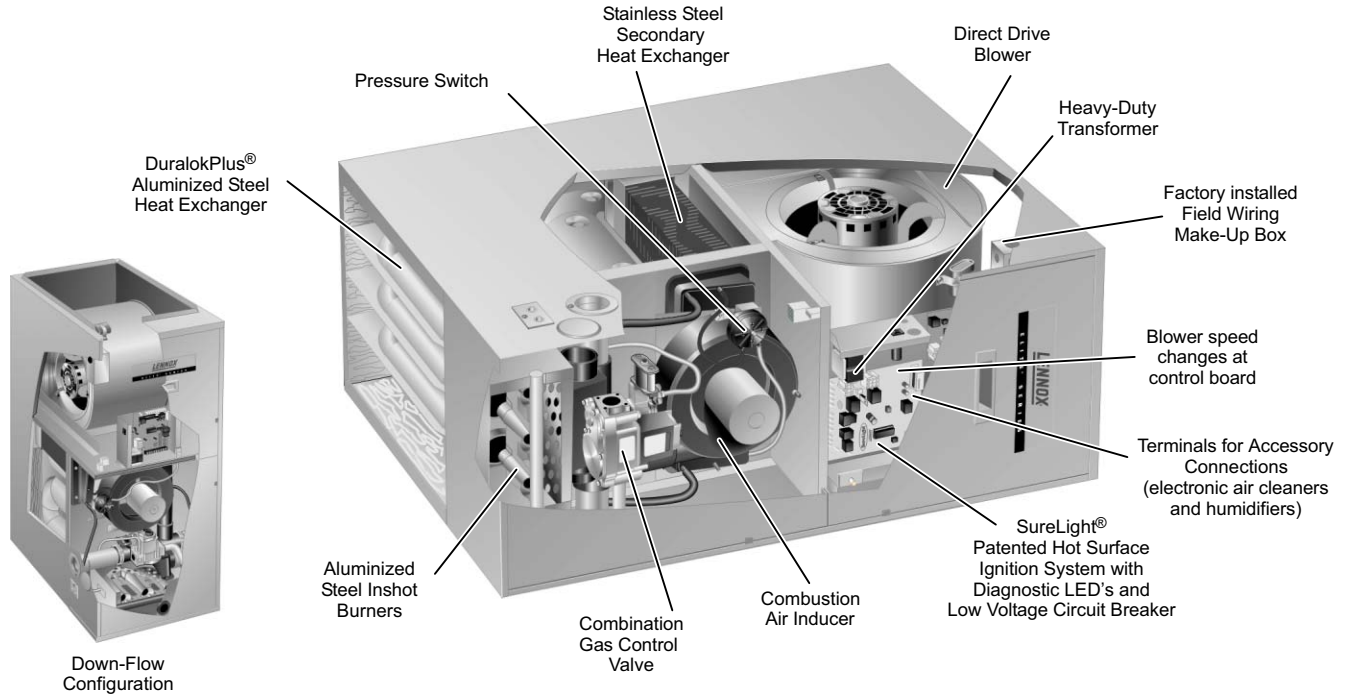
Input - 50,000 to 118,000 Btuh (14.7 to 34.6 kW)

Add-on Cooling - 2 to 5 Tons (7.0 to 17.6 kW)

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MODEL NUMBER IDENTIFICATION

GHR32 Q3 -75

Unit Type
GHR - Horizontal/Down-Flow Gas Furnace

Series
32 - 90% Two Stage Heating

Nominal Gas Heat Input
 50 - 50,000 Btuh (14.7 kW)
 75 - 72,000 Btuh (21.1 kW)
 100 - 100,000 Btuh (29.3 kW)
 120 - 118,000 Btuh (34.6 kW)

Nominal Add-On Cooling Capacity
 Q2/3 - 2 to 3 tons (7.0 to 10.6 kW)
 Q3 - 2 to 3.5 tons (7.0 to 12.3 kW)
 Q4/5 - 3.5 to 5 tons (12.3 to 17.6 kW)

NOTE - Due to Lennox' ongoing commitment to quality, Specifications, Ratings and Dimensions subject to change without notice and without incurring liability. Improper installation, adjustment, alteration, service or maintenance can cause property damage or personal injury. Installation and service must be performed by a qualified installer and servicing agency.

FEATURES

Applications

- High fire input capacities of 50,000, 72,000, 100,000 and 118,000 Btuh (14.7, 21.1, 29.3 and 34.6 kW).
- Energy efficiency (AFUE) of 90.0%.
- Utility room, alcove, closet, crawl space or attic installation.
- Lennox add-on evaporator coils, electronic air cleaners and power humidifiers can be added to furnace.
- Shipped factory assembled with all controls installed and wired.
- Shipped for down-flow and horizontal left hand air discharge, easily converted to horizontal right hand air discharge.
- Each unit factory test operated to insure proper operation.

Approvals

- Units certified by CSA International and ratings are certified by GAMA.
- Units tested and rated according to U.S. DOE test procedures and FTC labeling regulations.
- Approved by California Energy Commission and meet California Seasonal Efficiency requirements and California Nitrogen Oxides (NO_x) Standards.
- Blower data from unit tests conducted in Lennox Laboratory air test chamber.
- Units approved for conventional or horizontal venting.
- Manufactured in accordance with ISO 9002 quality standards.
- ENERGY STAR[®] certified units are designed to use less energy, help save money on utility bills, and help protect the environment.

Equipment Warranty

- "DuralokPlus[™]", ArmorTuf[™] Aluminized Steel Heat Exchangers - limited twenty year warranty.
- All other covered components - limited five years (residential applications), one year (non-residential applications).
- Refer to Lennox Equipment Limited Warranty certificate included with equipment for details.

Lennox DuralokPlus[™] Aluminized Steel Primary and Stainless Steel Secondary Heat Exchanger Assembly

- Heavy gauge, ArmorTuf[™], aluminized steel primary heat exchanger.
- Crimped seam clamshell type design.
- Minimum resistance to air flow.
- Secondary stainless steel condenser coil heat exchanger with aluminum fins fitted to stainless steel tubes.
- Heat exchanger assembly has been laboratory life cycle tested.
- Combined flue vent / condensate drain header box.
- Secondary condenser coil factory tested for leaks.

Inshot Burners

- Aluminized steel inshot burners.
- Burners completely enclosed.
- Heavy gauge steel burner box.
- Burner sight glass furnished on burner box.
- Burner assembly removeable from unit.

Intake, Exhaust and Condensate Connections

- Connects to either side of unit.
- Inlet air pipe connects with no-hub connector clamp (provided).
- Exhaust pipe connects to outside of cabinet.
- Quick connect, low profile condensate trap provided for field installation.
- Condensate hose re-routing not required if unit position changed.

SureLight[®] Hot Surface Ignition

- Tough, reliable, long-life, trouble-free performance.
- Tungsten heater element sandwiched between two plates of silicon nitride.
- Cemented to steatite block for protection against current leakage.
- Ignition leads constructed of nickel plated copper enclosed in high temperature Teflon insulation for dependable operation.
- No electrical noise.

SureLight[®] Integrated Control Board

- Solid-state board contains all necessary controls and relays to operate furnace.
- Combustion air inducer is controlled by board. Prior to ignition, a pre-purge cycle for 15 seconds is initiated. After the main burners are turned off, a post-purge cycle for 5 seconds is run.
- Adaptive technology of ignition control board continuously monitors and adjusts the ignitor power to operate at minimum igniter temperature required for ignition, prolonging ignitor life.
- Electronic flame sensor control assures safe and reliable operation.
- Should loss of flame occur, flame sensor controls will initiate 4 attempts at re-ignition before locking out unit operation for 60 minutes.
- Watchguard type circuit automatically resets ignition controls after one hour of continuous thermostat demand after unit lockout, eliminating nuisance calls for service.
- Fan control consists of adjustable blower timed-off delay (60 to 180 seconds) and fixed blower timed-on delay (45 seconds).
- For air-conditioning applications, blower is automatically energized on thermostat demand for cooling.
- Provisions for additional power supply requirements for 120 volt (less than 4 amps) power humidifiers and electronic air cleaners.
- Ignition control has two LED's to indicate status and as an aid in troubleshooting.

Two Stage Control Board

- Factory installed behind blower access door.
- Control allows one of three different modes of operation:
 1. Two-stage operation controlled from two stage thermostat.
 2. Two-stage operation controlled from single stage thermostat with timed on second stage (adjustable 8, 12 or 15 minutes).
 3. Single stage (high fire) operation only.

Two Stage Gas Control Valve

- 24 volt redundant combination two stage gas control valve combines manual shut off valve (On-Off), automatic electric valve (dual) and gas pressure regulation into a compact combination control.

Two Speed Combustion Air Inducer

- Shaded pole heavy duty two speed combustion air inducer prepurges heat exchanger and safely vents flue products.
- Controlled by furnace control center board for a prepurge cycle (15 seconds) and a post purge cycle (5 seconds).
- Pressure switch proves blower operation before allowing gas valve to open.
- Blower operates only during heating cycle.

FEATURES

Limit Controls

- Automatic reset, primary and secondary limits are accurately located.
- Primary limit factory installed on vestibule panel, secondary limit factory installed on blower housing.

Flame Rollout Switch

- Manual reset.
- Factory installed on top of burner box.

24 Volt Transformer

- Furnished and factory installed in control box.
- 40VA transformer has circuit breaker wired in series.

Field Wiring Make-up Box

- Furnished for line voltage wiring.
- Box may be installed internally or externally on either side of furnace.
- Contains plug-in connection for power supply wiring, wire for 120 volt accessory connection and all necessary hardware for installation.

Cabinet

- Low profile, narrow width cabinet allows easy installation.
- Heavy gauge cold rolled steel constructed.
- Baked-on enamel paint finish.
- Fully insulated cabinet with complete service access and easy blower removal.
- Safety interlock switch automatically shuts off power to unit when blower compartment access door is removed.
- Gas piping and electrical inlets are provided in both sides of cabinet.

Blower

- Multi-speed direct drive blower.
- Statically and dynamically balanced.
- Resiliently mounted.
- Blower speeds are easily changed on blower motor. See blower performance tables.

OPTIONAL ACCESSORIES - MUST BE ORDERED EXTRA

Condensate Drain Heat Cable Kits

- Self-limiting wattage heat cable prevents condensate drain from freezing in unconditioned areas.
 - Heat cable kits are available in the following lengths: 50 ft. (15.2 m) - LB-88643C (**26K70**), 24 ft. (7.3 m) - LB-88643B (**26K69**) or 6 ft. (1.8 m) - LB-88643A (**26K68**)
- Also available Heat Cable Tape: 66 ft. (20 m) length, 1/2 in. (13 mm) wide fiberglass (**39G04**) or 60 ft. (18 m) length, 2 in. (51 mm) wide aluminum foil (**39G03**).

Down-flow Additive Base

- Required for heating only units installed on combustible floors.
- Not required in add-on cooling applications.
- See Specifications table for order number.

Filter

- Washable or vacuum cleanable polyurethane frame type air filter available for field installation.
- Secured by one rear filter clip and two side filter clips.
- Filter easily removed for servicing by pushing up filter clips on each side of cabinet.
- See Specifications table for order no.

High Altitude Pressure Switch kit

- Required on units for proper 2nd stage operation at altitudes over 4500 ft. (1372 m).
- See Specifications table and High Altitude Information table for applications and catalog number.

Horizontal Support Frame Kit

- Provides support of unit in horizontal applications.
- Consists of (2) 1 x 1-1/2 x 32-5/8 in. (25 x 38 x 829 mm) and (2) 1 x 3 x 53-7/8 in. (25 x 76 x 1368 mm) painted heavy gauge cold rolled steel support channels with assembly and suspending holes.
- Bolts and nuts furnished for field assembly.
- Suspending rods must be field provided.
- See Specifications table.

LPG/Propane Conversion Kit

- For LPG/propane models a conversion kit is required for field changeover from natural gas.
- See specifications table for order number.

Concentric Termination Kit

- Facilitates installation of combustion air intake pipe and flue exhaust pipe.
- 1-1/2 inch (38 mm) kit LB-49107CE (**60G77**) or 2 inch (51 mm) kit (**33K97**) contains concentric termination assembly, mounting clamp, roof flashing, reducer bushing and 45 degree elbow.
- Kit requires single hole penetration of roof or wall for installation.
- CSA certified.
- See Specifications table and dimension drawings.

Roof Termination Kit

- Facilitates installation of combustion air intake pipe and flue exhaust pipe.
- 2 inch (51 mm) kit, LB-49107CC (**15F75**), or 3 inch (76 mm) kit, LB-65678A (**44J41**), contains two neoprene rubber roof flashings.
- See Specifications table and dimension drawings.
- Refer to venting tables in this bulletin to determine pipe size needed and proper termination kit required.

OPTIONAL ACCESSORIES - MUST BE ORDERED EXTRA

Wall Assembly Termination Kits

- Facilitates installation of combustion air intake pipe and flue exhaust pipe.
- Refer to venting tables in this bulletin to determine pipe size needed and proper termination kit required.
- See Specifications table and dimension drawings.

Close Couple Kits

- **(22G44)** 2 inch (51 mm) or **(44J40)** 3 inch (76 mm) consists of close-couple side-by-side PVC piping with galvanized steel wall cover plate for sealing and isolating piping penetration of the wall.
- Piping spacing and length is sized for proper wall installations.
- CSA certified.

WTK Close Couple Kits

- 2 in. (51 mm) **(30G28)** or 3 in. (76 mm) **(81J20)** contains one insulated faceplate, one insulated exhaust pipe, elbow and fittings.

Wall Ring Kit (15F74)

- 2 inch (51 mm) contains 2 stainless steel outside seal caps, 2 galvanized steel inside seal caps, 4 seal rings for the caps and 18 inch (457 mm) insulation sleeve for sealing and isolating intake and exhaust piping penetration of wall.
- Maintain a maximum of 6 inches (152 mm) between the inlet and outlet openings in the installation of the pipes.
- See dimension drawings.

WTKX Extension Riser Kit (30G79)

- 2 inch (51 mm) is used where extended grade line clearance is required.
- Includes 3 ft. (1.0m) extension riser containing both vent lines (exhaust vent insulated) and wall securing bracket.
- See dimension drawings.

Thermostat

- See Thermostats bulletin in Thermostats and Controls section and Lennox Price Book for a complete list of thermostats.

HIGH ALTITUDE INFORMATION

No gas pressure adjustment is needed when operating from 0 to 4500 ft. (0 to 8 m). See below for correct manifold pressures for altitudes greater than 4500 ft. (1372 m) for natural gas.

FUEL	Manifold Pressure (Outlet) in. w.g. (kPa)			
	0-4500 ft. (0-1372 m) above sea level	4501-5500 ft. (1373-1676 m) above sea level	5501-6500 ft. (1677-1981 m) above sea level	6501-7500 ft. (1982-2286 m) above sea level
Natural Gas	3.5 (0.87)	3.4 (0.85)	3.3 (0.82)	3.2 (0.80)
LPG/Propane	10.0 (2.49)	10.0 (2.49)	10.0 (2.49)	10.0 (2.49)

NOTE - Pressure switch is factory set. No adjustment is necessary. All models use the factory installed pressure switch from 0-4500 feet (0-1370 m) altitude. Units require a High Altitude Pressure Switch kit for proper 2nd stage operation if installed at altitudes above 4500 feet (1370 m). Order **67K27** for -75 natural gas models and -100, -120 natural gas and LPG/Propane models. Not required on -75 LPG/Propane models.

FILTER AIR RESISTANCE

cfm (L/s)	in. w.g. (Pa)
0 (0)	0.00 (0)
200 (95)	0.01 (0)
400 (190)	0.03 (5)
600 (285)	0.04 (10)
800 (380)	0.06 (15)
1000 (470)	0.09 (20)
1200 (565)	0.12 (30)
1400 (660)	0.15 (35)
1600 (755)	0.19 (45)
1800 (850)	0.23 (55)
2000 (945)	0.27 (65)
2200 (1040)	0.33 (80)
2400 (1130)	0.38 (95)
2600 (1225)	0.44 (110)

SPECIFICATIONS

Gas Heating Performance	Model No.	GHR32Q2/3-50	GHR32Q3-75	GHR32Q4/5-100	GHR32Q4/5-120
	Input Btuh (kW) - High	50,000 (14.7)	72,000 (21.1)	100,000 (29.3)	118,000 (34.6)
	Input Btuh (kW) - Low	34,000 (10.0)	51,000 (14.9)	68,000 (19.9)	81,600 (23.9)
	Output Btuh (kW) - High	47,000 (13.8)	67,000 (19.6)	95,000 (27.8)	112,000 (32.8)
	Output Btuh (kW) - Low	32,000 (9.4)	48,000 (14.1)	65,000 (19.0)	78,000 (22.8)
	□ A.F.U.E.	92.7%	92.7%	92.7%	92.7%
	California Seasonal Efficiency	82.7%	84.6%	84.9%	86.0%
	Temperature rise range - °F (°C) - Low Fire	15 - 45 (8 - 25)	20 - 50 (11 - 28)	20 - 50 (11 - 28)	25 - 55 (14 - 31)
	High Fire	30 - 60 (17 - 33)	40 - 70 (22 - 39)	40 - 70 (22 - 39)	45 - 75 (25 - 42)
	High static (CSA certified) - in wg. (Pa)	.50 (125)	.50 (125)	.50 (125)	.50 (125)
Connections	② Exhaust pipe (PVC) diameter - in. (mm)	2 (51)	2 (51)	2 (51)	2 (51)
	② Intake pipe (PVC) diameter - in. (mm)	2 (51)	2 (51)	2 (51)	2 (51)
	Condensate drain (PVC) - in. (mm)	1/2 (12.7)	1/2 (12.7)	1/2 (12.7)	1/2 (12.7)
	Gas Piping Size I.P.S. - in. (mm)	1/2 (12.7)	1/2 (12.7)	1/2 (12.7)	1/2 (12.7)
Indoor Blower	Blower motor output - hp (W)	1/3 (249)	1/2 (373)	3/4 (560)	3/4 (560)
	Wheel nominal diameter x width - in.	10 x 8	10 x 8	11-1/2 x 9	11-1/2 x 9
	mm	254 x 203	254 x 203	292 x 229	292 x 229
	Add-on cooling - Tons	2 to 3	2 to 3.5	3.5 to 5	3.5 to 5
	kW	7.0 to 10.6	7.0 to 12.3	12.3 to 17.6	12.3 to 17.6
Shipping Data	Weight - lbs. (kg) 1 package	147 (67)	155 (70)	196 (89)	205 (93)
Electrical	120 volts - 60 hertz - 1 phase (less than 12 amps)				
OPTIONAL ACCESSORIES (MUST BE ORDERED EXTRA)					
Condensate Drain Heat Cable	26K68 6 ft. (1.8 m) - 26K69 24 ft. (7.3 m) - 26K70 50 ft. (15.2 m)				
Condensate Drain Heat Cable Tape	39G04 - 1/2 in. (38 mm) fiberglass or 39G03 - 2 in. (25 mm) aluminum foil (1 roll)				
③ Filter kit — Number and size of filters - in. (mm)	31J81 (1) 14 x 25 x 1 (356 x 635 x 25)	31J81 (1) 14 x 25 x 1 (356 x 635 x 25)	59436 (1) 20 x 25 x 1 (508 x 635 x 25)	59436 (1) 20 x 25 x 1 (508 x 635 x 25)	
④ High Altitude Pressure Switch Kit	67K27	67K27 (natural gas only)	67K27	67K27	
LPG/Propane kit (Honeywell)	11M57	11M57	11M57	11M57	
Down-Flow Additive Base	32K52	32K52	32K53	32K53	
Horizontal Support Frame Kit	56J18 18 lbs. (8 kg)	56J18 18 lbs. (8 kg)	56J18 18 lbs. (8 kg)	56J18 18 lbs. (8 kg)	
Termination Kit - Concentric	60G77 1-1/2 inch (38 mm)	60G77 1-1/2 inch (38 mm)	33K97 2 inch (51 mm)	60L46 3 inch (76 mm)	
② Termination Kits - Roof	2 inch (51 mm)	15F75	15F75	15F75	Not Available
	3 inch (76 mm)	Not Available	44J41	44J41	44J41
② Termination Kits - Wall Assembly	2 inch (51 mm)	15F74 (wall ring kit) - 22G44 (close couple) 30G28 (WTK close couple) 30G79 (WTKX close couple with extension riser)			Not Available
	3 inch (76 mm)	Not Available	44J40 (close couple) - 81J20 (WTK close couple)		

① Annual Fuel Utilization Efficiency based on U.S. DOE test procedures and FTC labeling regulations. Isolated combustion system rating for non-weatherized furnaces.

② Determine from venting tables proper intake and exhaust pipe size and termination kit required.

③ Cleanable polyurethane frame type filter.

④ Required for proper 2nd stage operation at altitudes over 4500 ft. (1370 m).

BLOWER/WATTS DATA

GHR32Q2/3-50 BLOWER PERFORMANCE

External Static Pressure		Air Volume and Motor Watts at Specific Blower Taps											
		High			Medium-High			Medium-Low			Low		
in. w.g.	Pa	cfm	L/s	Watts	cfm	L/s	Watts	cfm	L/s	Watts	cfm	L/s	Watts
0	0	1480	700	640	1330	630	520	1070	505	435	900	425	355
.10	25	1430	675	615	1290	610	500	1050	495	420	880	415	346
.20	50	1380	650	595	1240	585	480	1040	490	400	870	410	330
.30	75	1320	625	570	1200	565	455	1010	475	380	850	400	320
.40	100	1260	595	545	1140	540	430	980	460	370	820	385	300
.50	125	1200	565	520	1080	510	410	930	440	320	790	375	280
.60	150	1100	520	500	1000	470	385	860	405	300	740	350	265
.70	175	1000	470	470	890	420	370	750	355	290	660	310	250
.80	200	800	380	440	700	330	340	590	280	280	550	260	240

NOTE — All air data is measured external to unit with air filter (not furnished) in place.

GHR32Q3-75 BLOWER PERFORMANCE

External Static Pressure		Air Volume and Motor Watts at Specific Blower Taps											
		High			Medium-High			Medium-Low			Low		
in. w.g.	Pa	cfm	L/s	Watts	cfm	L/s	Watts	cfm	L/s	Watts	cfm	L/s	Watts
0	0	1650	780	720	1540	725	585	1450	685	540	1230	580	450
.10	25	1590	750	660	1490	705	550	1400	660	505	1200	565	420
.20	50	1520	715	645	1430	675	520	1350	635	485	1170	550	405
.30	75	1440	680	630	1370	645	490	1300	615	450	1130	535	390
.40	100	1370	645	610	1300	615	470	1240	585	430	1090	515	370
.50	125	1300	615	590	1240	585	450	1170	550	410	1040	490	330
.60	150	1210	570	560	1170	550	430	1100	520	375	970	460	320
.70	175	1120	530	540	1080	510	410	1020	480	350	890	420	280
.80	200	1020	480	515	980	460	380	900	425	325	750	355	260
.90	225	880	415	500	820	385	350	750	355	300	600	285	240

NOTE — All air data is measured external to unit with air filter (not furnished) in place.

GHR32Q4/5-100 BLOWER PERFORMANCE

External Static Pressure		Air Volume and Motor Watts at Specific Blower Taps														
		High			Medium-High			Medium			Medium-Low			Low		
in. w.g.	Pa	cfm	L/s	Watts	cfm	L/s	Watts	cfm	L/s	Watts	cfm	L/s	Watts	cfm	L/s	Watts
0	0	2530	1195	1360	2300	1085	1210	2030	960	1050	1780	840	885	1540	725	745
.10	25	2460	1160	1290	2250	1060	1140	2010	950	1010	1760	830	850	1530	720	730
.20	50	2380	1125	1270	2200	1040	1100	1990	940	990	1740	820	830	1520	715	720
.30	75	2310	1090	1250	2150	1015	1080	1950	920	970	1720	810	805	1510	715	710
.40	100	2250	1060	1200	2090	985	1060	1910	900	950	1690	800	790	1500	710	690
.50	125	2180	1030	1150	2020	955	1020	1870	880	910	1660	785	780	1480	700	670
.60	150	2100	990	1100	1960	925	980	1810	855	870	1620	765	760	1430	675	650
.70	175	2010	950	1070	1880	885	940	1750	825	855	1570	740	730	1380	650	630
.80	200	1910	900	1040	1800	850	920	1680	795	840	1500	710	710	1320	625	615
.90	225	1800	850	1010	1700	800	890	1580	745	800	1420	670	690	1240	585	600
1.00	250	1700	800	980	1600	755	870	1500	710	780	1320	625	670	1120	530	590

NOTE — All air data is measured external to unit with air filter (not furnished) in place.

GHR32Q4/5-120 BLOWER PERFORMANCE

External Static Pressure		Air Volume and Motor Watts at Specific Blower Taps														
		High			Medium-High			Medium			Medium-Low			Low		
in. w.g.	Pa	cfm	L/s	Watts	cfm	L/s	Watts	cfm	L/s	Watts	cfm	L/s	Watts	cfm	L/s	Watts
0	0	2400	1135	1250	2270	1070	1140	2060	970	1010	1800	850	860	1560	735	720
.10	25	2350	1110	1220	2220	1050	1100	2040	965	980	1780	840	830	1550	730	705
.20	50	2290	1080	1200	2170	1025	1080	2000	945	960	1750	825	815	1540	725	685
.30	75	2220	1050	1180	2120	1000	1060	1960	925	940	1720	810	800	1520	715	675
.40	100	2150	1015	1130	2050	965	1020	1900	895	920	1680	795	770	1500	710	660
.50	125	2080	980	1100	1980	935	980	1850	875	880	1640	775	750	1460	690	650
.60	150	2000	945	1050	1910	900	940	1780	840	840	1590	750	720	1420	670	630
.70	175	1900	895	1010	1830	865	920	1710	805	810	1530	720	690	1380	650	610
.80	200	1800	850	980	1740	820	900	1630	770	790	1460	690	675	1320	625	595
.90	225	1700	800	960	1630	770	860	1540	725	770	1380	650	660	1250	590	580
1.00	250	1600	755	940	1530	720	840	1430	675	750	1300	615	640	1150	545	560

NOTE — All air data is measured external to unit with air filter (not furnished) in place.

TERMINATION, INTAKE AND EXHAUST PIPE VENTING TABLE

VENTING REQUIREMENTS

Model No.		GHR32-50	GHR32-75	GHR32-100	GHR32-120
Vent Pipe Minimum Equivalent Length with Accelerator - Exhaust pipe should terminate with an accelerator. See Termination Kits, below.		20 ft. (6.1 m)	20 ft. (6.1 m)	15 ft. (4.6 m)	15 ft. (4.6 m)
Maximum Equivalent Vent Length		Minimum Vent Pipe Diameter Required			
Maximum length is for one individual run, either intake or exhaust.	feet (m)				
	15 (4.6)	Not Recommended			
	20 (6.1)	2 in. (51 mm)	2 in. (51 mm)	3 in. (76 mm)	3 in. (76 mm)
	25 (7.6)	2 in. (51 mm)	2 in. (51 mm)	3 in. (76 mm)	3 in. (76 mm)
	30 (9.1)	2 in. (51 mm)	2 in. (51 mm)	3 in. (76 mm)	3 in. (76 mm)
	35 (10.7)	2 in. (51 mm)	2 in. (51 mm)	3 in. (76 mm)	3 in. (76 mm)
	40 (12.2)	2 in. (51 mm)	2 in. (51 mm)	3 in. (76 mm)	Not Available
	45 (13.7)	2 in. (51 mm)	3 in. (76 mm)	3 in. (76 mm)	Not Available
	50 (15.2)	2 in. (51 mm)	3 in. (76 mm)	3 in. (76 mm)	Not Available
	55 (16.8)	2 in. (51 mm)	3 in. (76 mm)	3 in. (76 mm)	Not Available
	60 (18.3)	3 in. (76 mm)	3 in. (76 mm)	3 in. (76 mm)	Not Available
70 (21.3)	3 in. (76 mm)	3 in. (76 mm)	Not Available	Not Available	
80 (24.4)	3 in. (76 mm)	3 in. (76 mm)	Not Available	Not Available	
90 (27.4)	3 in. (76 mm)	3 in. (76 mm)	Not Available	Not Available	
100 (30.5)	3 in. (76 mm)	3 in. (76 mm)	Not Available	Not Available	

VENT/INTAKE AIR TERMINATION KIT USAGE

Termination Kits See Pages 10-12 for dimensions and descriptions	Kits for 2 in. (51 mm) Venting NOTE - Exhaust pipe must be terminated with an accelerator; 1-1/2 in. (38.1 mm) diameter pipe, 12 in. (305 mm) in length. (all but Concentric Kits)	5 Wall Kit (22G44)	Acceptable	Acceptable	6 Acceptable	Not Available
		5 WTK Wall Kit (30G28)	Acceptable	Acceptable	Not Available	Not Available
		7 WTKX Wall Kit (30G79)	Acceptable	Acceptable	Not Available	Not Available
		Concentric Kit (60G77) 1-1/2 in.	Acceptable	Acceptable	Not Available	Not Available
		Roof Kit (15F75)	Acceptable	Acceptable	Acceptable	Not Available
NOTE - Intake and Exhaust pipes must be the same diameter.	Kits for 3 in. (76 mm) Venting NOTE - Exhaust pipe must be terminated with an accelerator; 2 in. (51 mm) diameter pipe, 12 in. (305 mm) in length. (All but Concentric Kits)	5 Wall Kit (44J40)	Acceptable	Acceptable	Acceptable	Acceptable
		5 WTK Wall Kit (81J20)	Acceptable	Acceptable	Acceptable	Acceptable
		Concentric Kit (33K97) 2 in.	Acceptable	Acceptable	Acceptable	8 Acceptable
		Concentric Kit (60L46) 3 in.	Not Available	Not Available	Not Available	Acceptable
		Roof Kit (44J41)	Acceptable	Acceptable	Acceptable	Acceptable

1 2 in. (51 mm) pipe may be used to adapt terminations and intake/exhaust furnace connections. The TOTAL of 2 in. (51 mm) pipe that can be used CANNOT exceed 3 feet (1 m).

Equivalent Vent Lengths:

2 10 ft. (3 m) and two 90° elbows of 2 in. (51 mm) pipe equals 20 ft. (6.1 m).

3 5 ft. (1.5 m) and two 90° elbows of 2 in. (51 mm) pipe equals 15 ft. (4.6 m).

4 5 ft. (1.5 m) and two 90° elbows of 3 in. (76 mm) pipe equals 15 ft. (4.6 m).

One 90° elbow equals 5 feet (1.5 m) of straight vent pipe.

One 45° elbow equals 2.5 feet (.75 m) of straight vent pipe.

5 When additional/field supplied venting is used to clear average snow accumulation, the additional length of pipe and elbows must be figured into the Maximum Equivalent Vent Length/Minimum Vent Pipe Diameter Requirements.

6 90° intake elbow CANNOT be used in this application.

7 12 feet (3.6 m) of additional vent must be figured into the Maximum Equivalent Vent Length/Minimum Vent Pipe Diameter Requirements if this kit is used.

8 Only used with minimum vent length.

INSTALLATION CLEARANCES

DOWN-FLOW	
Sides	0 inches (0 mm)
Rear	0 inches (0 mm)
Top	1 inch (25 mm)
*Front	*0 inches (0 mm)
Floor	†Combustible
Exhaust Pipe	0 inches (0 mm)
Exhaust Pipe (service)	6 inches (152 mm)
Service Clearance (front)	30 inches (762 mm)
Service Clearance (condensate side)	4 inches (102 mm)

NOTE—Air for combustion and supply air ventilation must conform to the methods outlined in American National Standard (ANSI-Z223.1) National Fuel Gas Code or National Standard of Canada CAN/CGA-149.1 and CAN/CGA-149.2 "Installation Code for Gas Burning Appliances".

NOTE—In the U.S. flue sizing must conform to the methods outlined in current GAMA/A.G.A. venting tables, American National Standard (ANSI-Z223.1) National Fuel Gas Code or applicable provisions of local building codes. In Canada flue sizing must conform to the methods outlined in National Standard of Canada CAN/CGA-149.1 and CAN/CGA-149.2.

†Clearance for installation on combustible floor if optional additive base is installed between furnace and combustible floor. Not required in add-on cooling applications if installed in accordance with local codes or National Fuel Gas Code ANSI-Z223.1.

*Front clearance for alcove installations is 30 inches (762 mm).

HORIZONTAL	
Sides	0 inches (0 mm)
Rear	0 inches (0 mm)
Top	0 inches (0 mm)
*Front	*0 inches (0 mm)
Floor	Combustible
Exhaust Pipe	0 inches (0 mm)
Exhaust Pipe (service)	6 inches (152 mm)
Service Clearance (front)	30 inches (762 mm)
Service Clearance (condensate side)	4 inches (102 mm)

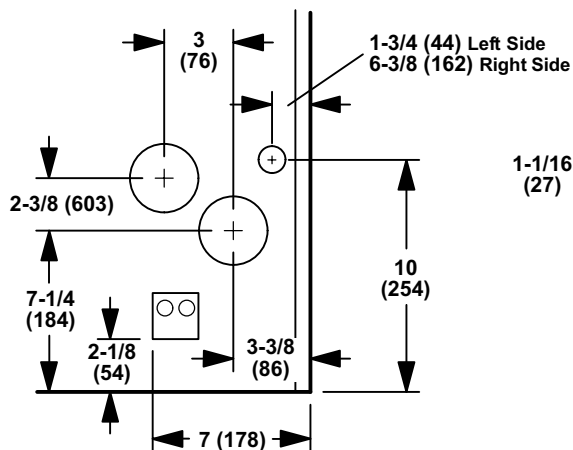
NOTE—Air for combustion and supply air ventilation must conform to the methods outlined in American National Standard (ANSI-Z223.1) National Fuel Gas Code or National Standard of Canada CAN/CGA-149.1 and CAN/CGA-149.2 "Installation Code for Gas Burning Appliances".

NOTE—In the U.S. flue sizing must conform to the methods outlined in current GAMA/A.G.A. venting tables, American National Standard (ANSI-Z223.1) National Fuel Gas Code or applicable provisions of local building codes. In Canada flue sizing must conform to the methods outlined in National Standard of Canada CAN/CGA-149.1 and CAN/CGA-149.2.

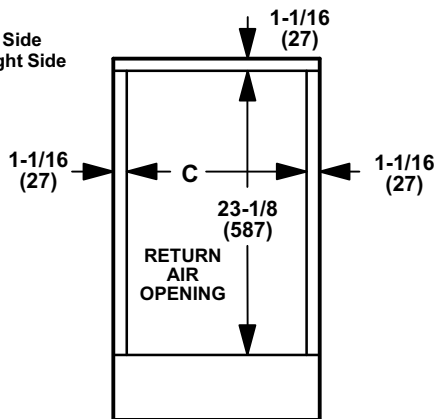
*Front clearance for alcove installations is 30 inches (762 mm).

DIMENSIONS - INCHES (MM) - DOWN-FLOW POSITION SHOWN

DETAIL OF PIPING

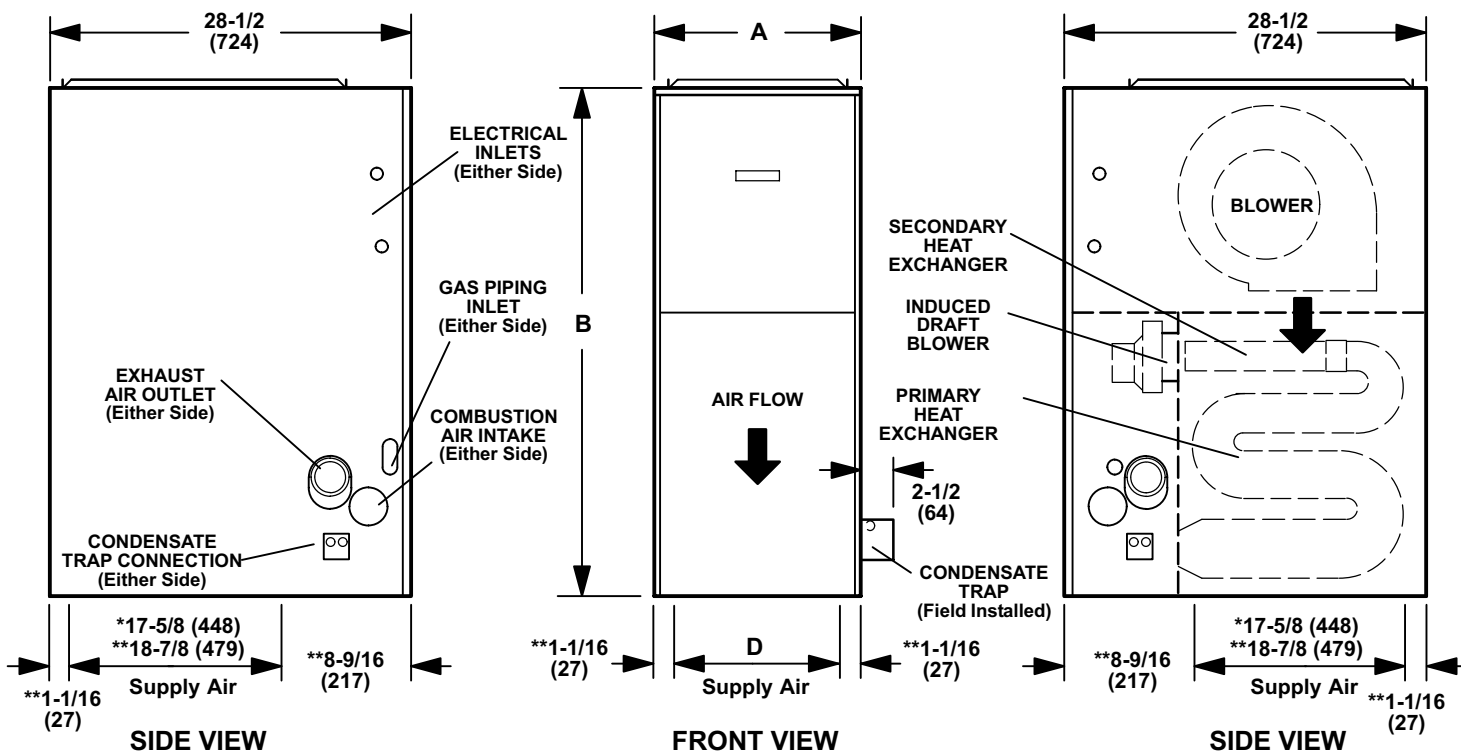
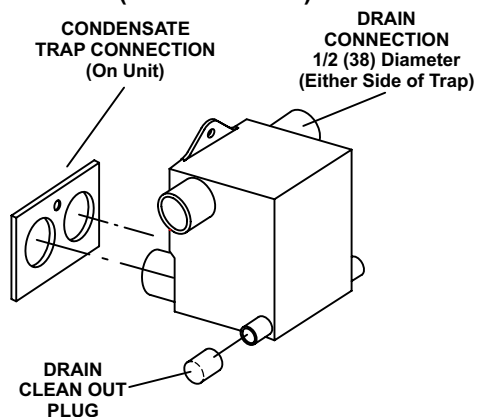


SIDE VIEW



TOP VIEW

DETAIL OF CONDENSATE TRAP (Field Installed)



SIDE VIEW

FRONT VIEW

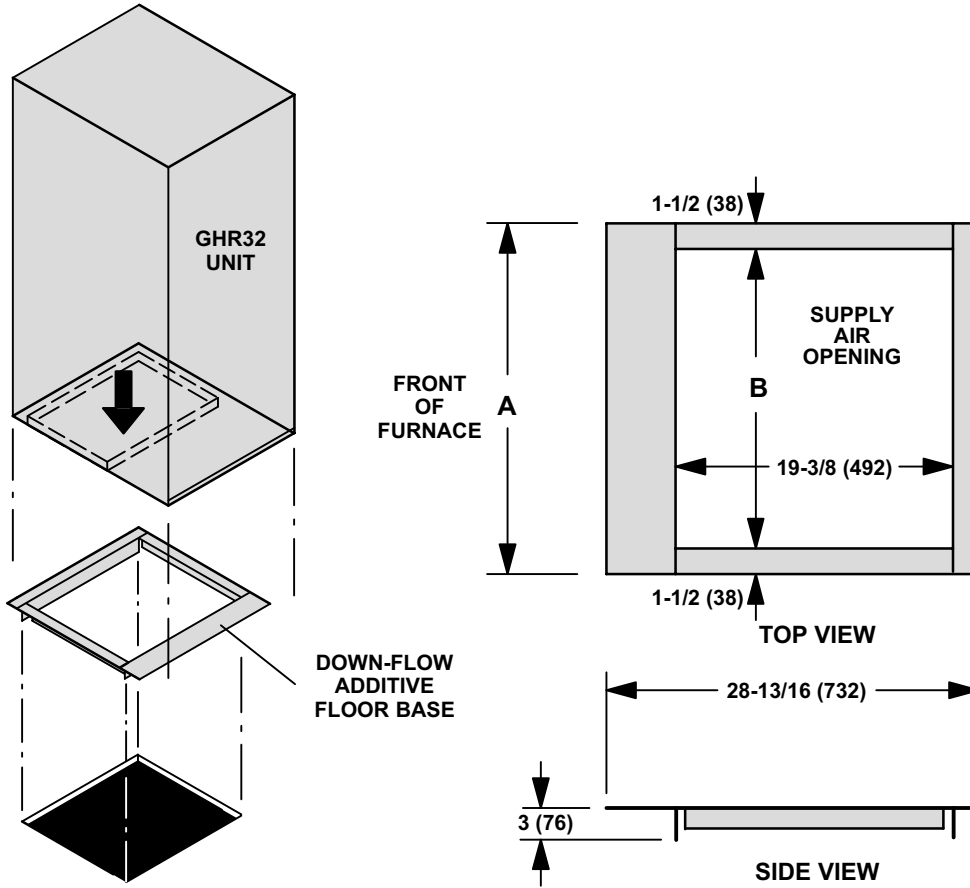
SIDE VIEW

NOTE — Supply air opening is equipped with a 5/8 inch (16 mm) flange that may be bent 90° for plenum connection on conventional down-flow furnace applications or to help in alignment with cooling coil.
 *Dimensions before both flanges are bent.
 **Dimensions after both flange are bent.

Model No.	A		B		C		*D		**D	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
GHR32Q2/3-50 GHR32Q3-75	16-1/4	413	40	1016	14-1/8	305	12-7/8	327	14-1/8	359
GHR32Q4/5-100 GHR32Q4/5-120	21-1/4	540	46	1168	19-1/8	457	17-7/8	454	19-1/8	486

OPTIONAL ACCESSORY DIMENSIONS - INCHES (MM)

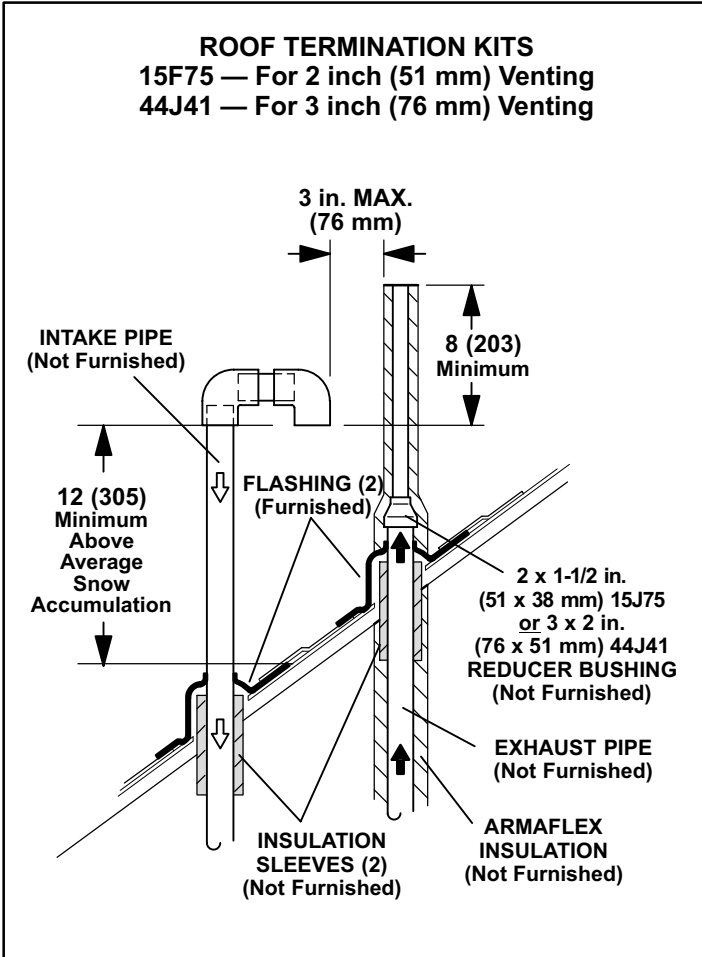
DOWN-FLOW ADDITIVE FLOOR BASE



Furnace Model No.	A		B	
	in.	mm	in.	mm
GHR32Q2/3-50 GHR32Q3-75	17-3/8	302	14-3/8	207
GHR32Q4/5-100 GHR32Q4/5-120	22-3/8	501	19-3/8	375

OPTIONAL ACCESSORY DIMENSIONS - INCHES (MM)

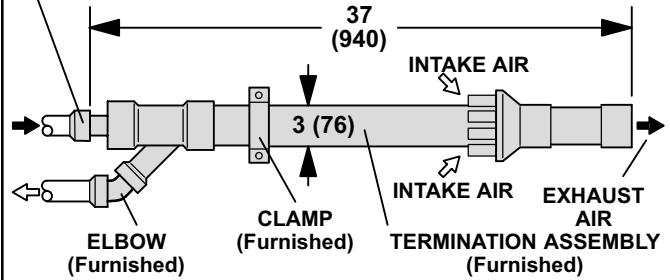
ROOF TERMINATION KITS
 15F75 — For 2 inch (51 mm) Venting
 44J41 — For 3 inch (76 mm) Venting



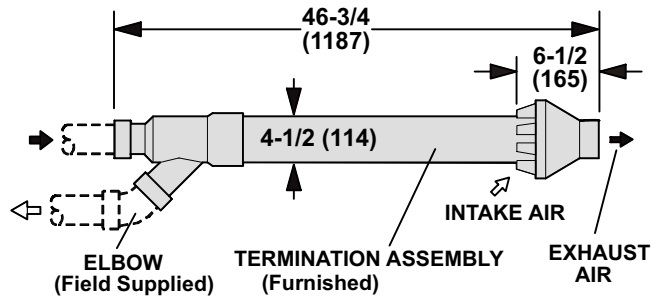
CONCENTRIC TERMINATION KITS

60G77 — For 1-1/2 inch (38 mm) Venting
 33K97 — For 2 inch (51 mm) Venting

2 x 1-1/2 in. (51 x 38 mm) 60G77
 3 x 2 in. (76 x 51 mm) 33K97
 REDUCER BUSHING (Furnished)

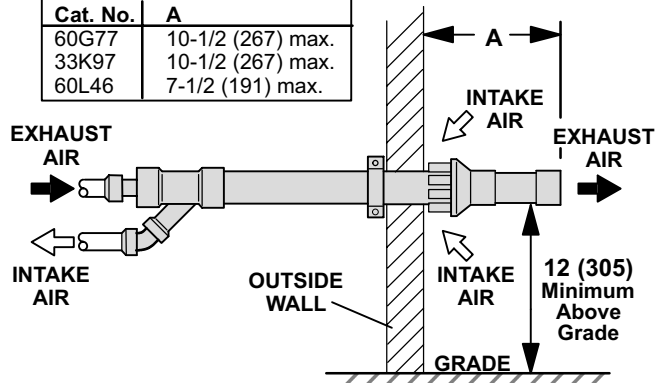


60L46 — For 3 inch (76 mm) Venting

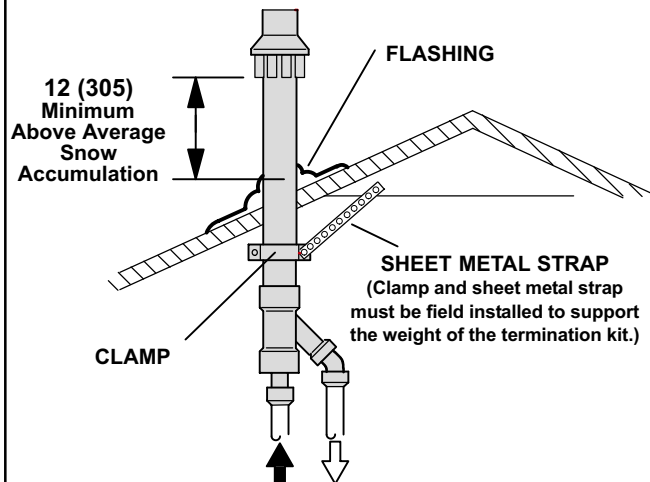


CONCENTRIC WALL TERMINATION APPLICATIONS

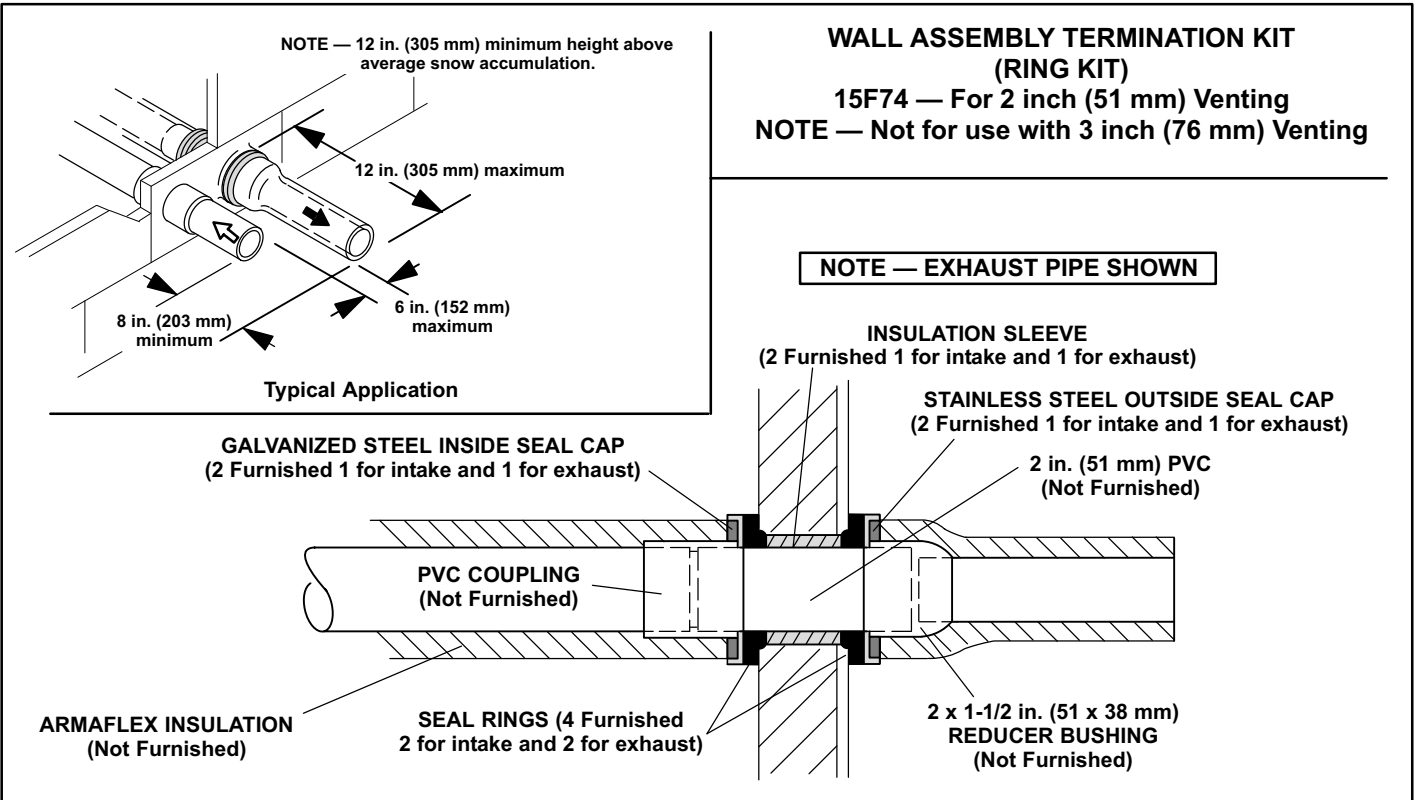
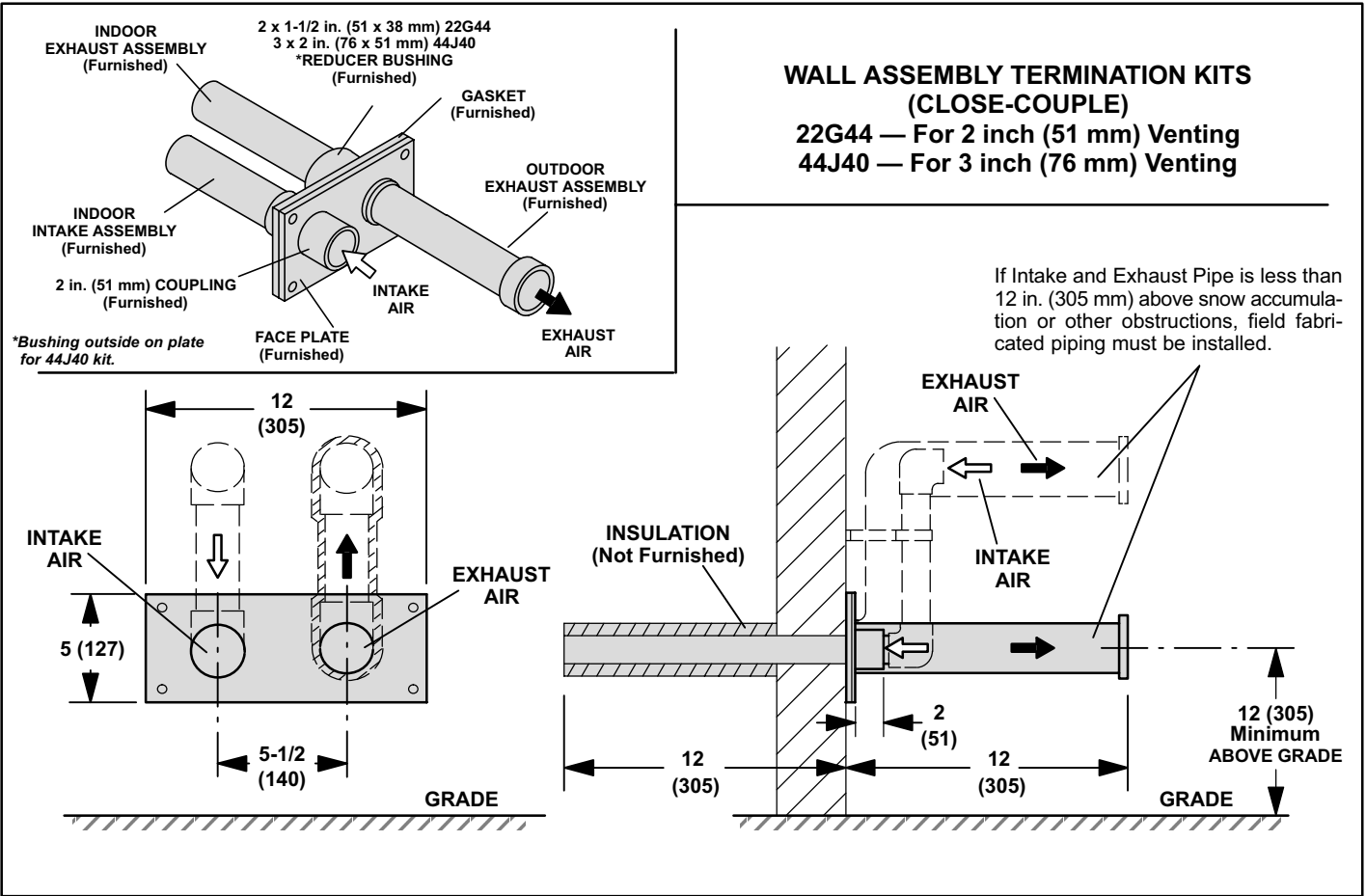
Cat. No.	A
60G77	10-1/2 (267) max.
33K97	10-1/2 (267) max.
60L46	7-1/2 (191) max.



CONCENTRIC ROOF TERMINATION APPLICATIONS



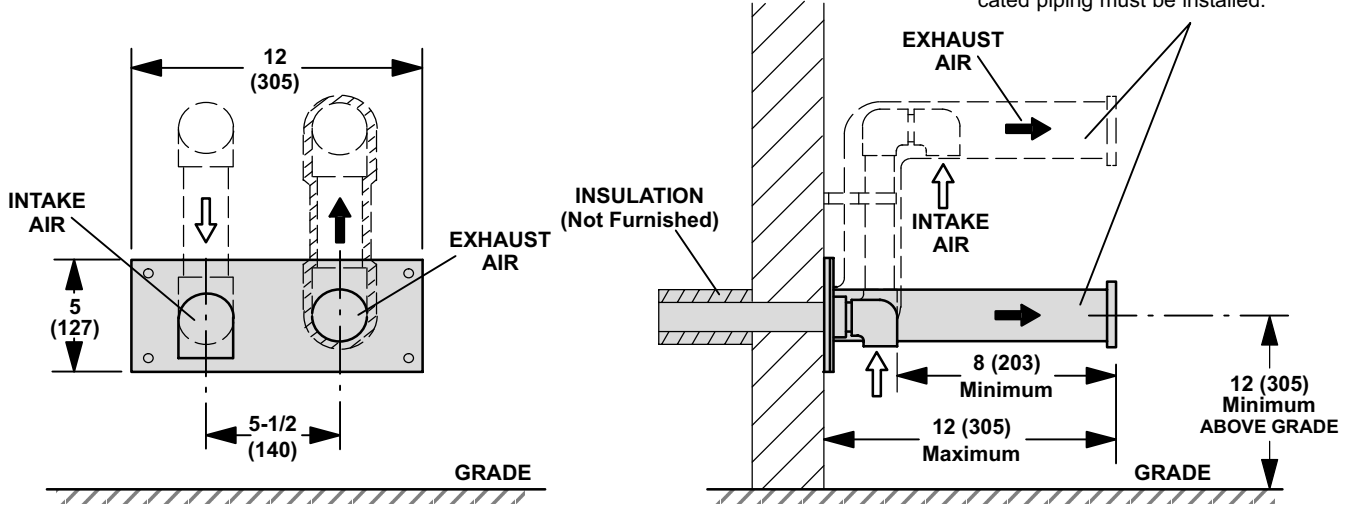
OPTIONAL ACCESSORY DIMENSIONS - INCHES (MM)



OPTIONAL ACCESSORY DIMENSIONS - INCHES (MM)

**WTK WALL ASSEMBLY TERMINATION KIT
WITH FIELD FABRICATION ABOVE
GRADE EXTENDED CLEARANCE
30G28 — For 2 inch (51 mm) Venting
81J20 — For 3 inch (76 mm) Venting**

If Intake and Exhaust Pipe is less than 12 in. (305 mm) above snow accumulation or other obstructions, field fabricated piping must be installed.



**WTKX WALL ASSEMBLY EXTENSION RISER TERMINATION KIT
30G79 — For 2 inch (51 mm) Venting
NOTE — Not for 3 inch (76 mm) Venting**

