

Comfort-Cire®

CONQUEST 90®

GAS FURNACES

UPFLOW ■ DOWNFLOW / HORIZONTAL



UPFLOW

DOWNFLOW/
HORIZONTAL



As an ENERGY STAR® Partner, Heat Controller has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.



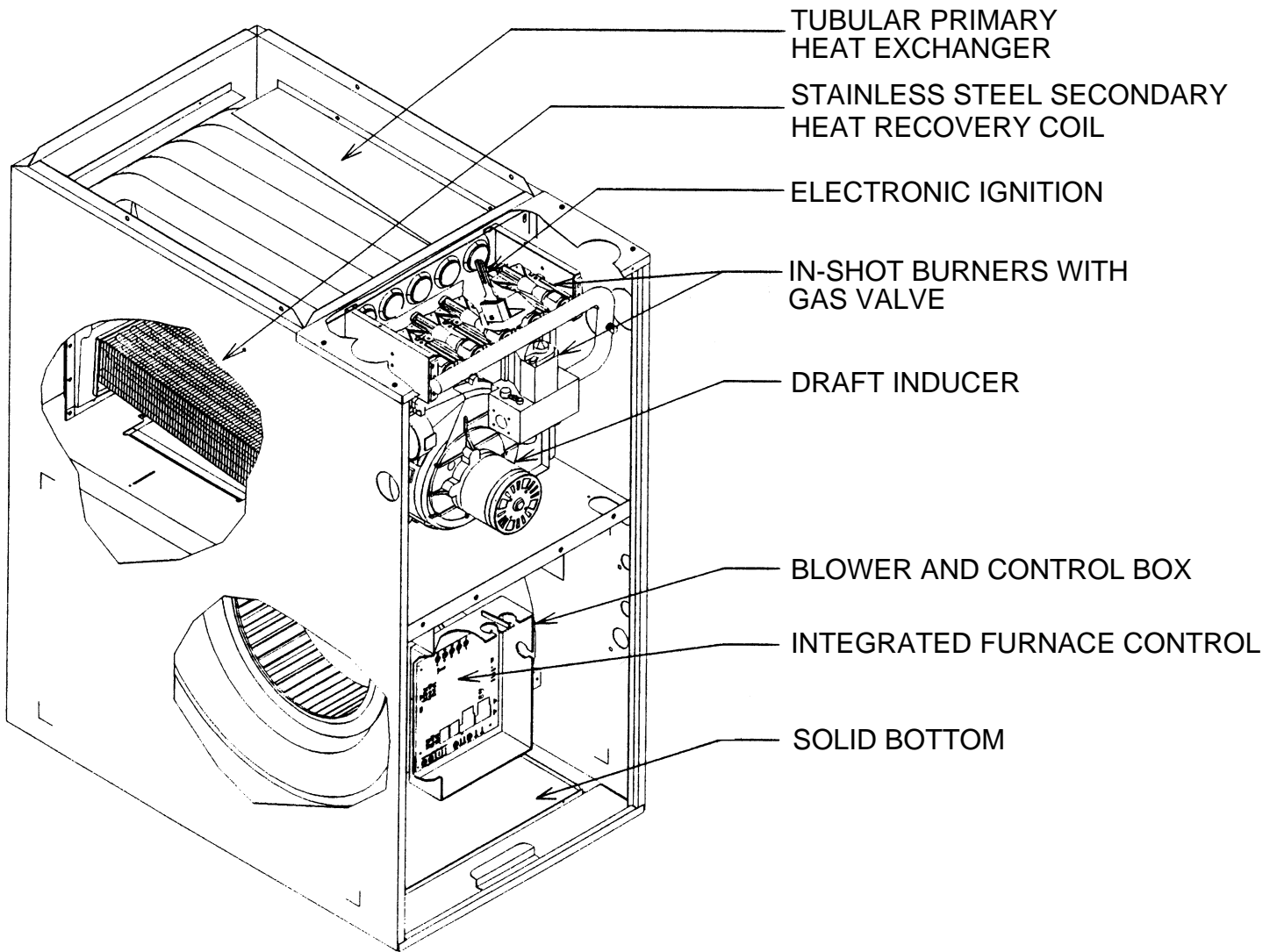
CONQUEST 90® GAS FURNACE

UPFLOW MODELS - 45,000 TO 120,000 BTUH INPUT
DOWNFLOW / HORIZONTAL MODELS -
45,000 TO 120,000 BTUH INPUT

Features

- Heat exchanger is constructed of all stainless steel for maximum corrosion resistance and thermal fatigue reliability.
- Low profile "34 inch" design is lighter and easier to handle and leaves room for optional equipment.
- Left or right side gas, electric, and condensate drainage connections on upflow models.
- Integrated control board controls all operational functions and provides connection for electronic air cleaner.
- A slow-opening gas valve and a specially designed inducer system make it one of the quietest furnaces on the market today.
- Pre-painted, galvanized steel cabinet.
- Optional indoor or outdoor combustion air. Combustion air may be piped to either the top or side of the cabinet on all upflow models. A special fitting is provided to ease installation.
- All models are air conditioning ready.

90 PLUS UPFLOW GAS FURNACE



GENERAL TERMS OF LIMITED WARRANTY*

Heat Controller, Inc., 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.

Gas Heat Exchanger Warranty	Lifetime
Draft Inducer Warranty	Five (5) Years
Integrated Blower Control Board Warranty	Five (5) Years
Any Other Part	Five (5) Years

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

STANDARD EQUIPMENT

Completely assembled and wired; heat exchanger; primary: 409 and aluminized 409 stainless steel, secondary: 29-4C stainless steel; induced draft; pressure switches; redundant main gas control; blower compartment door safety switch; solid state time on/off blower control; limit controls; manual shut-off valve; pressure regulator for natural and L.P. (propane) gases; 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.)

OPTIONAL EQUIPMENT

Side filter frame assembly; return air cabinet for all sizes. (See page 4)

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

All models can be converted by a qualified 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 parts distributor.

NOT APPROVED FOR USE IN MOBILE HOME APPLICATIONS

UPFLOW SPECIFICATIONS

MODEL GLUA	45-E3A	60-E3A	75-E3A	75-E4A	90-E5A	105-E5A	120-E5A
INPUT-BTU/HR	45,000	60,000	75,000	75,000	90,000	105,000	120,000
HEATING CAPACITY BTU/HR	42,000	56,000	70,000	70,000	84,500	97,500	111,500
BLOWER (D x W)	11 x 7	11 x 7	11 x 7	12 X7	12 x 11	12 x 11	11 x 10
MOTOR H.P.-SPEEDS-TYPE	1/2-4-PSC	1/2-3-PSC	1/2-3-PSC	3/4-3-PSC	3/4-3-PSC	3/4-3-PSC	3/4-3-PSC
MOTOR FULL LOAD AMPS	6.8	6.8	6.8	9.5	9.5	9.5	9.5
HEATING SPEED	MED-LO	LO	LO	MED	LO	LO	LO
COOLING SPEED	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
HEAT EXT. STATIC PRESSURE (IN. W.C.)	.10	.12	.15	.12	.15	.20	.20
MAX. EXT. STATIC PRESSURE (IN. W.C.)	.50	.50	.50	.50	.50	.50	.50
HEATING C.F.M. @ .2" W.C. E.S.P.	885	845	1050	1275	1465	1445	1580
COOLING C.F.M. @ .5" W.C. E.S.P.	1195	1100	1110	1540	1910	1810	1900
TEMPERATURE RISE RANGE °F	30-60	40-70	45-75	40-70	35-65	50-80	50-80
STANDARD FILTER - NOT INCLUDED	15 ³ / ₄ " x 25"	15 ³ / ₄ " x 25"	15 ³ / ₄ " x 25"	19 ¹ / ₄ " x 25"	19 ¹ / ₄ " x 25"	19 ¹ / ₄ " x 25"	22 ³ / ₄ " x 25"
APPROX. SHIPPING WEIGHT (LBS.)	111	117	123	123	148	152	160
FILTER SIZE-RETURN AIR CABINETS	(2) 12" x 16"	(2) 12" x 16"	(2) 12" x 16"	(2) 20" X 16"	(2) 20" x 16"	(2) 20" x 16"	(2) 24" x 16"
AFUE (1)	94.3	93.3	92.8	92.8	93.0	92.0	94.2

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.

UPFLOW ACCESSORIES

FOR USE WITH	RETURN AIR CABINET	CONCENTRIC TERMINATION KIT (1)	COIL CABINET (3)	L.P. KIT	HORIZONTAL VENT TERMINATION KIT (1)	HIGH ALTITUDE KIT (2)	FOSSIL FUEL KIT	INTERNAL FILTER RACK
GLUA 45	7603-639	VERTICAL HXGY-E02	UCC-17	FP02H-H	HXGY-D02	HXGY-F06	HXPF-F01	HXGF-DA BOX OF 10
GLUA 60	7603-639					HXGY-F06		
GLUA 75-3	7603-639					HXGY-F07		
GLUA 75-4, 90	7603-640	HORIZONTAL 7603-642	UCC-21		HXGY-D03	HXGY-F06	HXPF-F02 (TVA)	
GLUA 105	7603-640		UCC-24			HXGY-F04		
GLUA 120	7603-641					HXGY-D04		

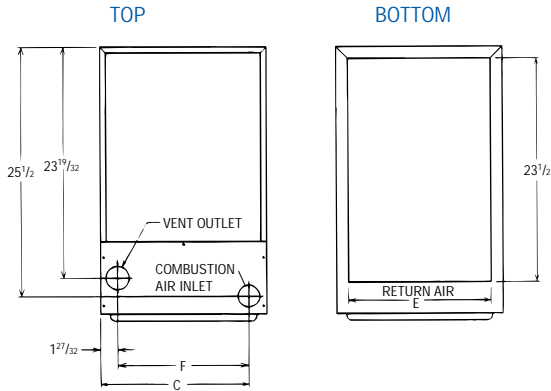
(1) Termination kit must be used on all horizontal vents.. (2) For altitudes over 5,000 ft.

(3) 7603-703 kit adapts UCC-17 to 21" furnace / 7603-704 kit adapts UCC-17 to 24¹/₂" furnace / 7603-705 kit adapts UCC-21 to 24¹/₂" furnace

UPFLOW BLOWER PERFORMANCE DATA

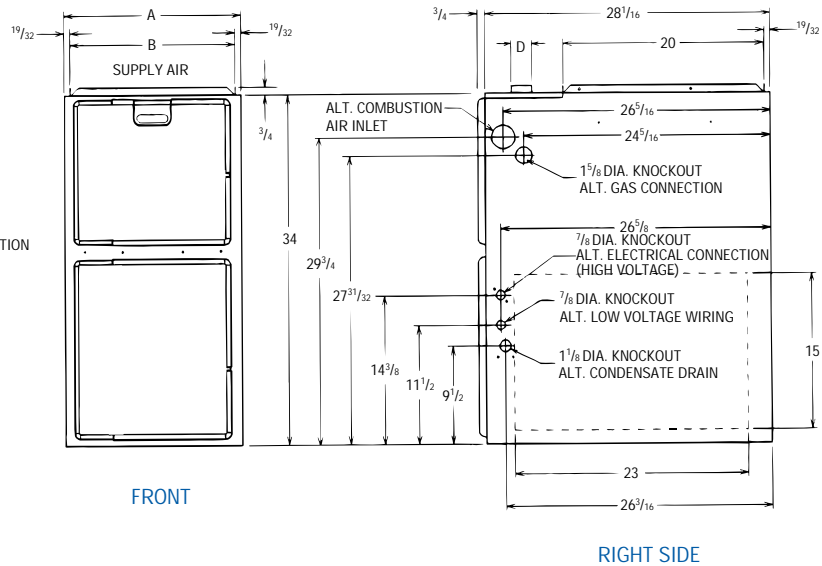
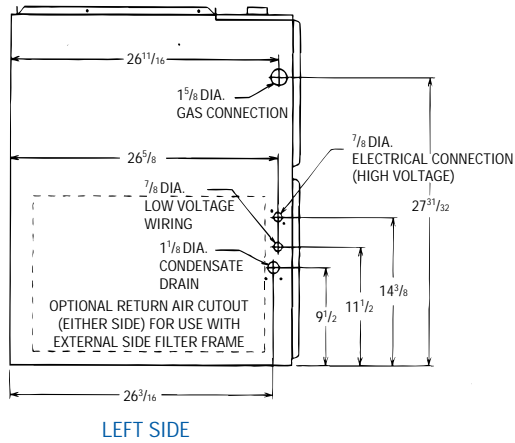
MODEL (GLUA)	BLOWER SIZE	MOTOR H.P.	BLOWER SPEED	CFM AIR DELIVERY EXTERNAL STATIC PRESSURE INCHES WATER COLUMN						
				0.7	0.6	0.5	0.4	0.3	0.2	0.1
45-E3A	11 X 7	1/2	LOW	605	645	685	720	760	780	805
			MED-LO	690	730	775	810	850	885	920
			MED-HI	890	950	1010	1045	1085	1110	1140
			HIGH	1080	1140	1195	1235	1280	1320	1360
60-E3A	11 X 7	1/2	LOW	670	715	760	790	815	845	880
			MED	835	880	925	960	990	1025	1060
			HIGH	985	1040	1100	1135	1175	1215	1260
75-E3A	11 X 7	1/2	LOW	655	702	750	785	825	850	880
			MED	825	875	925	970	1010	1050	1090
			HIGH	1005	1055	1110	1160	1210	1255	1300
75-E4A	12 x 7	3/4	LOW	1195	1235	1270	1310	1350	1375	1405
			MED	1325	1380	1440	1480	1525	1560	1595
			HIGH	1480	1555	1625	1675	1730	1780	1835
90-E5A	12 x 11	3/4	LOW	1255	1315	1375	1405	1440	1465	1490
			MED	1460	1520	1580	1600	1620	1670	1720
			HIGH	1745	1825	1910	1955	2000	2050	2100
105-E5A	12 X 11	3/4	LOW	1240	1295	1350	1375	1405	1445	1490
			MED	1410	1475	1540	1580	1620	1665	1710
			HIGH	1610	1710	1810	1855	1900	1955	2010
120-E5A	11 X 10	3/4	LOW	1355	1415	1475	1515	1555	1580	1610
			MED	1520	1590	1660	1715	1775	1820	1870
			HIGH	1690	1795	1900	1945	1990	2050	2115

UPFLOW DIMENSIONS

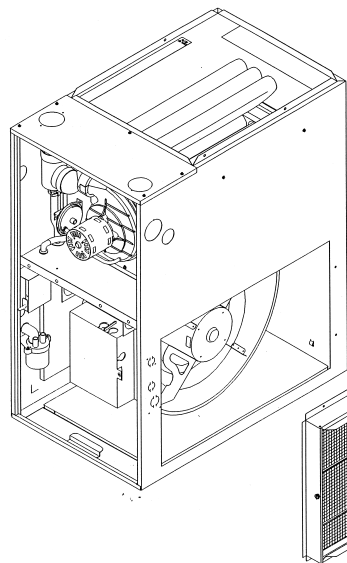


UPFLOW DIMENSIONS AND CLEARANCE

MODEL	A	B	C	D	E	F	MINIMUM CLEARANCE (IN.)						SHIP WGTS.
							LEFT SIDE	RIGHT SIDE	BACK	TOP	FRONT	VENT	
45	17 1/2	16 11/32	15 5/8	2	15	13 25/32	0	0	0	1	2	0	111
60	17 1/2	16 11/32	15 5/8	2	15	13 25/32	0	0	0	1	2	0	117
75-3	17 1/2	16 11/32	15 5/8	2	15	13 25/32	0	0	0	1	2	0	123
75-4,90	21	19 27/32	19 1/8	2	18 1/2	17 9/32	0	0	0	1	2	0	148
105	21	19 27/32	19 1/8	2	18 1/2	17 9/32	0	0	0	1	2	0	152
120	24 1/2	23 11/32	22 5/8	2	22	20 25/32	0	0	0	1	2	0	160



UPFLOW ACCESSORIES



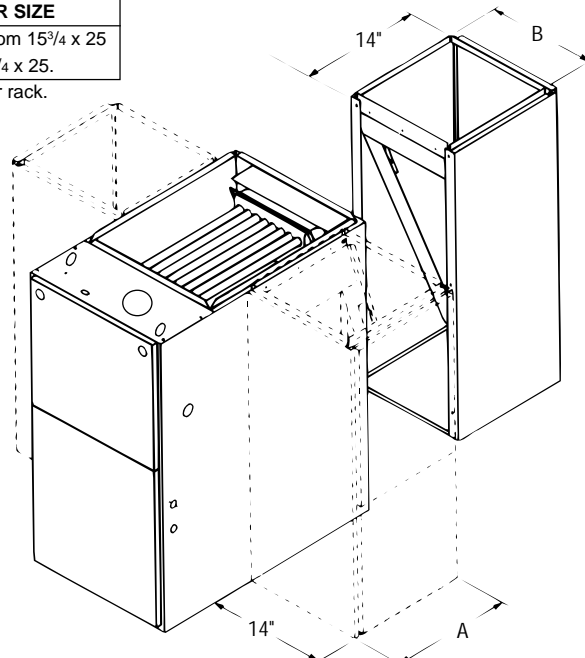
FILTER RACK

SEE PHYSICAL DATA FOR FURNACE MODEL MATCH

EXTERNAL FILTER RACK	FILTER SIZE
HXGF-CA Box of 1	Adjustable from 15 3/4 x 25 to 22 3/4 x 25.

NOTE: Filters not supplied with filter rack.

TWINNING KIT	HXGP-F03
--------------	----------



The 7603-641 may only be installed on side opposite gas pipe & electrical.

SEE PHYSICAL DATA FOR FURNACE MODEL MATCH

RETURN AIR CABINETS	A	B	FILTER SIZE
7603-639	17 1/2	16 11/32	(2) 12 x 16
7603-640	21	19 27/32	(2) 20 x 16
7603-641	24 1/2	23 11/32	(2) 24 x 16

DOWNFLOW / HORIZONTAL SPECIFICATIONS

MODEL GLDH	45-E3A	60-E3A	75-E3A	75-E4A	90-E5A	105-E5A	120-E5A
INPUT-BTU/HR	45,000	60,000	75,000	75,000	90,000	105,000	120,000
HEATING CAPACITY BTU/HR	41,500	56,000	69,000	69,000	84,000	97,000	112,000
BLOWER (D x W)	11 x 7	11 x 7	11 x 7	12 x 7	12 x 11	12 x 11	11 x 10
MOTOR H.P.-SPEEDS-TYPE	1/2-4-PSC	1/2-3-PSC	1/2-3-PSC	3/4-3-PSC	3/4-3-PSC	3/4-3-PSC	3/4-3-PSC
MOTOR FULL LOAD AMPS	6.8	6.8	6.8	9.5	9.5	9.5	9.5
HEATING SPEED	MED	MED	MED	MED	MED	MED	MED
COOLING SPEED	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
HEAT EXT. STATIC PRESSURE (IN. W.C.)	.10	.12	.12	.12	.15	.20	.20
MAX. EXT. STATIC PRESSURE (IN. W.C.)	.50	.50	.50	.50	.50	.50	.50
HEATING C.F.M. @ .2" W.C. E.S.P.	890	885	1060	1375	1400	1425	1565
COOLING C.F.M. @ .5" W.C. E.S.P.	1220	1180	1150	1625	1850	1820	2040
TEMPERATURE RISE RANGE °F	30-60	40-70	45-75	35-65	45-75	50-80	50-80
STANDARD FILTER - NOT INCLUDED	(2) 12" x 20"	(2) 12" x 20"	(2) 12" x 20"	(2) 14" x 20"	(2) 14" x 20"	(2) 14" x 20"	(2) 14" x 20"
APPROX. SHIPPING WEIGHT (LBS.)	111	117	123	123	148	152	160
AFUE (1)	92.7	92.4	92.5	92.3	92.4	92.0	92.1

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.

NOTICE: Horizontal installation is for right side only with supply air to left.

DOWNFLOW / HORIZONTAL ACCESSORIES

FOR USE WITH	COMBUSTIBLE FLOOR BASE	COIL CABINET	CONCENTRIC TERMINATION KIT (1)	HORIZONTAL VENT TERMINATION KIT (1)	L.P. KIT	HIGH ALTITUDE KIT (2)	FOSSIL FUEL KIT
GLDH 45	7603-100	DCC-21	VERTICAL	HXGY-D02	FP02H-H	HXGY-F06	HXPF-F01
GLDH 60	7603-100		HXGY-E02			HXGY-F06	
GLDH 75-E3A	7603-100		HXGY-F07			HXGY-F07	
GLDH75-E4A	7603-101		HORIZONTAL	HXGY-D03		HXGY-F06	HXPF-F02 (TVA)
GLDH 90	7603-101					HXGY-F04	
GLDH 105	7603-101					HXGY-F05	
GLDH 120	7603-102	DCC-24A	7603-642	HXGY-D04			

(1) Termination kit must be used on all horizontal vents.

(2) For altitudes over 5,000 ft.

INTERNAL FILTER RACK BOX OF 10	HXGF-DB	TWINNING KIT	HXGP-F03
EXTERNAL FILTER RACK BOX OF 1	HXGF-CC	TWINNING KIT	HXGP-F03

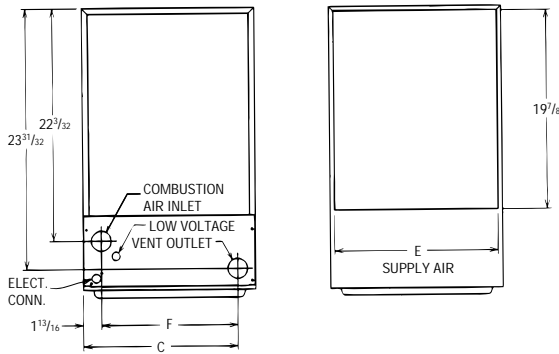
DOWNFLOW / HORIZONTAL BLOWER PERFORMANCE DATA

MODEL (GLDH)	BLOWER SIZE	MOTOR H.P.	BLOWER SPEED	CFM AIR DELIVERY EXTERNAL STATIC PRESSURE INCHES WATER COLUMN						
				0.7	0.6	0.5	0.4	0.3	0.2	0.1
45-E3A	11 X 7	1/2	LOW	610	650	690	725	760	790	820
			MED-LOW	720	750	785	815	850	890	930
			MED-HI	900	950	1002	1045	1090	1120	1150
			HIGH	1115	1165	1220	1270	1320	1365	1414
60-E3A	11 X 7	1/2	LOW	680	725	770	815	860	885	910
			MED	875	920	965	1005	1045	1080	1115
			HIGH	1070	1125	1180	1225	1270	1315	1365
75-E3A	11 X 7	1/2	LOW	660	705	750	790	835	860	890
			MED	845	890	940	980	1025	1060	1100
			HIGH	1025	1090	1150	1200	1250	1295	1340
75-E4A	12 x 7	3/4	LOW	1195	1235	1270	1310	1350	1375	1405
			MED	1325	1380	1440	1480	1525	1560	1595
			HIGH	1480	1555	1625	1675	1730	1780	1835
90-E5A	12 X 11	3/4	LOW	1175	1260	1350	1365	1380	1400	1420
			MED	1390	1480	1570	1560	1550	1575	1605
			HIGH	1680	1765	1850	1890	1930	1965	2005
105-E5A	12 X 11	3/4	LOW	1200	1280	1360	1375	1390	1425	1460
			MED	1420	1490	1560	1585	1615	1645	1680
			HIGH	1675	1745	1820	1880	1940	2000	2055
120-E5A	11 X 10	3/4	LOW	1375	1425	1475	1505	1540	1565	1590
			MED	1590	1645	1700	1750	1800	1820	1840
			HIGH	1890	1965	2040	2110	2185	2250	2315

DOWNFLOW / HORIZONTAL DIMENSIONS

TOP

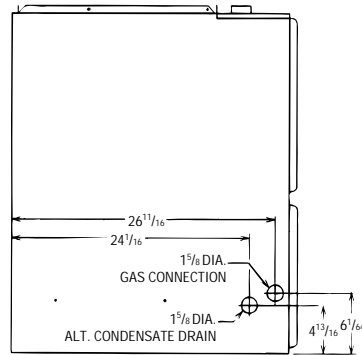
BOTTOM



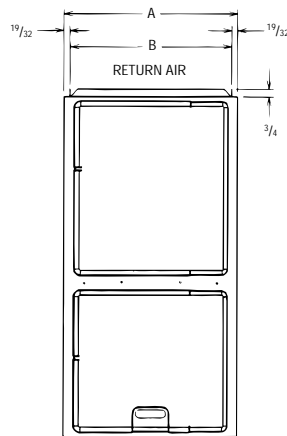
DOWNFLOW MODELS

MODEL	A	B	C	D	E	F	MINIMUM CLEARANCE (IN.)						SHIP WGT.
							LEFT SIDE	RIGHT SIDE	BACK	TOP	FRONT	VENT	
45	17 1/2	16 11/32	15 5/8	2	16 5/8	13 7/8	0	0	0	1	2	0	111
60	17 1/2	16 11/32	15 5/8	2	16 5/8	13 7/8	0	0	0	1	2	0	117
75-E3	17 1/2	16 11/32	15 5/8	2	16 5/8	13 7/8	0	0	0	1	2	0	123
75-E4,90	21	19 27/32	19 9/16	2	20 1/8	17 3/8	0	0	0	1	2	0	148
105	21	19 27/32	19 9/16	2	20 1/8	17 3/8	0	0	0	1	2	0	152
120	24 1/2	23 11/32	22 5/8	2	23 5/8	20 7/8	0	0	0	1	2	0	160

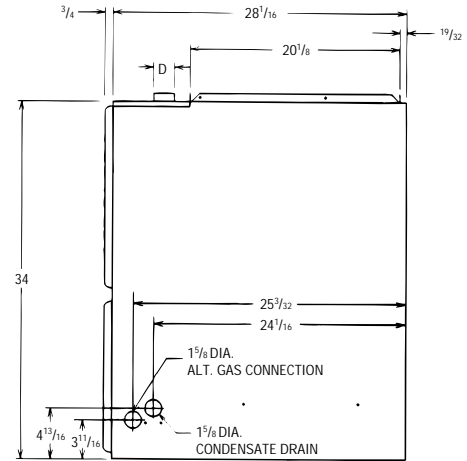
- (1) The 2" front clearance is required for ventilation.
- (2) This design is certified for installation on non-combustible floors.
- (3) This design is certified for installation on combustible, wood flooring when installed on a special base.
- (4) This gas fired furnace must not be installed directly on carpeting, tile or other combustible material other than wood flooring.



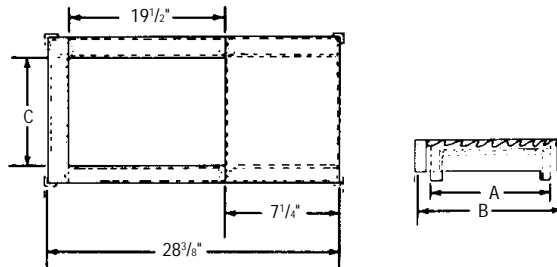
LEFT SIDE



FRONT



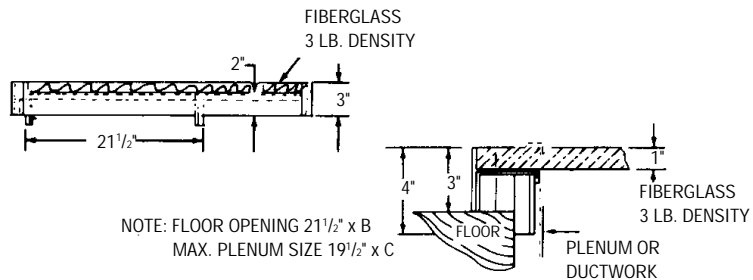
RIGHT SIDE



COMBUSTIBLE FLOOR BASE

COMBUSTIBLE FLOOR BASE DIMENSIONS

PART NO.	A	B	C
7603-100	16 3/4	18	14 3/4
7603-101	20 1/4	21 1/2	18 1/4
7603-102	23 1/4	25	21 1/4



Specifications and performance data subject to change without notice.

HEAT CONTROLLER, INC.

1900 WELLWORTH AVENUE • JACKSON, MICHIGAN 49203
THE QUALITY LEADER IN CONDITIONING AIR