

80% AFUE, Single Stage Gas Furnace

EASIER TO SELL

- 80% AFUE
- Flame roll-out sensors standard
- Category I venting
- Blocked vent switch
- Louvered door
- 24 VAC and 115 VAC humidifier terminal
- Electronic air cleaner terminal
- N80ESL - Low NOx units are designed for California installations and meet 40 ng/J NOx emissions. Can be installed in air quality management districts with a 40 ng/J NOx emissions requirement.
- Cabinet air leakage less than 2.0% at 1.0 in. W.C. and cabinet air leakage less than 1.4% at 0.5 in. W.C. when tested in accordance with ASHRAE standard 193

TOUGHER

- Adjustable heating blower OFF delay
- Factory set blower ON delay
- RPJ aluminized steel heat exchanger
- High temperature limit control prevents overheating
- Direct ignition with Silicon Nitride ignitor
- One piece prepainted steel cabinet

QUIETER

- In-shot burners

EASIER TO INSTALL AND SERVICE

- 33 1/3" (847mm) high, for ease of installation
- Quarter turn knobs for easy door removal and secure attachment
- Factory shipped for natural gas, with propane gas conversion kits available
- Four position - upflow/downflow/horizontal (left/right) installation
- Three position inducer elbow capability
- Through the casing flue pipe for counterflow applications
- Common venting with other Category I appliances
- Masonry chimney adapter available
- Self diagnostics
- Slide out blower assembly

LIMITED WARRANTY*

- 20 year heat exchanger limited warranty
- 5 year parts limited warranty
 - With timely registration, an additional 5 year parts limited warranty
- * For residential applications only, See warranty certificate for complete details and restrictions, including warranty coverage of other applications.



Illustrations and photographs are only representative. Some product models may vary.

▲ WARNING

This furnace is not designed for use in mobile homes, trailers, or recreational vehicles. Such use could result in property damage and/or death.



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.



ISO 9001 Quality

Model	Size	Input (MBTUH)	Efficiency AFUE	Cooling Capacity CFM range @ .5 in. w.c. (125 Pa)	Dimensions H x W x D Inches (Millimeters)	Shipping Wt. Lbs(Kg)
N80ESN/L	0451412	44,000	80%	415-1080	33-1/3 x 14-3/16 x 29 (847 x 360 x 737)	104 (47)
N80ESN/L	0451712	44,000	80%	320-1215	33-1/3 x 17-1/2 x 29 (847 x 445 x 737)	119 (54)
N80ESN/L	0701412	66,000	80%	315-1070	33-1/3 x 14-3/16 x 29 (847 x 360 x 737)	114 (52)
N80ESN/L	0701712	66,000	80%	385-1005	33-1/3 x 17-1/2 x 29 (847 x 445 x 737)	120 (54)
N80ESN/L	0702116	66,000	80%	775-1545	33-1/3 x 21 x 29 (847 x 533 x 737)	142 (64)
N80ESN/L	0901714	88,000	80%	750-1210	33-1/3 x 17-1/2 x 29 (847 x 445 x 737)	131 (49)
N80ESN/L	0902116	88,000	80%	845-1445	33-1/3 x 21 x 29 (847 x 533 x 737)	137 (62)
N80ESN/L	0902120	88,000	80%	915-1980	33-1/3 x 21 x 29 (847 x 533 x 737)	140 (64)
N80ESN/L	0902420	88,000	80%	845-1960	33-1/3 x 24-1/2 x 29 (847 x 622 x 737)	146 (66)
N80ESN/L	1102120	110,000	80%	990-1715	33-1/3 x 21 x 29 (847 x 533 x 737)	146 (66)
N80ESN/L	1102420	110,000	80%	820-2005	33-1/3 x 24-1/2 x 29 (847 x 622 x 737)	161 (73)
N80ESN/L	1352420	132,000	80%	1025-1810	33-1/3 x 24-1/2 x 29 (847 x 622 x 737)	167 (76)
N80ESN/L	1552420	154,000	80%	835-1965	33-1/3 x 24-1/2 x 29 (847 x 622 x 737)	168 (76)

MODEL NUMBER IDENTIFICATION GUIDE

DIGIT POSITION	1	2,3	4	5	6	7-9	10,11	12,13	14	15
F, G, N, R	BRAND									
80 - 80% AFUE 92 - 92% AFUE 95 - 95% AFUE 96 - 96% AFUE 97 - 97% AFUE	EFFICIENCY									
C = Comm. Variable-Speed Constant Airflow (VCA) ECM E = Fixed-Speeds Constant Torque (FCT) ECM V = Variable-Speed Constant Torque (VCT) ECM	MOTOR TYPE									
M - Modulating S - Single Stage T - Two Stage	HEATING STAGES									
L = Low NOx M = Mobile/Manufactured Home N = Standard NOx U = Ultra Low Nox	FEATURE									
026 = 26,000 BTU/h 040 = 40,000 BTU/h 060 = 60,000 BTU/h	HEATING INPUT									
14 = 14.2" 17 = 17.5" 21 = 21.0" 24 = 24.5"	CABINET WIDTH									
08 = 800 CFM 10 = 1000 CFM 12 = 1200 CFM 14 = 1400 CFM 16 = 1600 CFM 20 = 2000 CFM 22 = 2200 CFM	COOLING CAPACITY									
A, B, C, D...	MAJOR SERIES									
1, 2, 3, 4...	MINOR SERIES									

A190043

For California Residents:

For installation in SCAQMD only: This furnace does not meet the SCAQMD Rule 1111 14 ng/J NOx emission limit, and thus is subject to a mitigation fee of up to \$450. This furnace is not eligible for the Clean Air Furnace Rebate Program: www.CleanAirFurnaceRebate.com

MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS FOR ALL UNITS

This forced air furnace is equipped for use with natural gas at altitudes 0 - 10,000 ft (0 - 3,050m).

An accessory kit, supplied by the manufacturer, shall be used to convert to propane gas use or may be required for some natural gas applications.

This furnace is for indoor installation in a building constructed on site.

The furnace may be installed on combustible flooring in alcove or closet at minimum clearance as indicated by the diagram from combustible material.

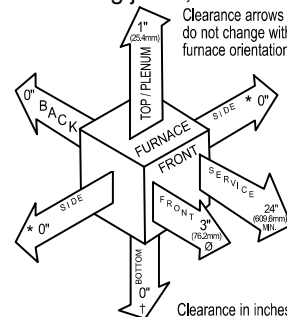
This furnace may be used with a Type B-1 Vent and may be vented in common with other gas fired appliances.

This furnace is approved for UPFLOW, DOWNFLOW, and HORIZONTAL installations.

Downflow Positions:

- † Installation on non-combustible floors only.
For Installation on combustible flooring only when installed on special base or coil assembly.
- ∅ 18 inch front clearance required for alcove.

* Indicate supply or return sides when furnace is in the horizontal position. Line contact only permissible between lines formed by intersections of the Top and two Sides of the furnace jacket, and building joists, studs or framing.



Vent Clearance to combustibles:
For Single Wall vents 6 inches (6 po).
For Type B-1 vent type 1 inch (1 po).

PHYSICAL DATA							
UNIT SIZE		0451412	0451712	0701412	0701712	0702116	0901714
RATINGS AND PERFORMANCE							
Input Btuh*	All Standard All Low NOx Upflow	44,000	44,000	66,000	66,000	66,000	88,000
Nonweatherized ICS	All Low Nox Downflow/Horizontal	42,000	42,000	63,000	63,000	63,000	84,000
Output Capacity (Btuh)†	All Standard All Low NOx Upflow	36,000	35,000	54,000	54,000	53,000	71,000
Nonweatherized ICS	All Low Nox Downflow/Horizontal	34,000	34,000	51,000	51,000	51,000	68,000
AFUE‡		80.00	80.00	80.00	80.00	80.00	80.00
Certified Temperature Rise Range – °F (°C)		30–60 (17–33)	30–60 (17–33)	30–60 (17–33)	35–65 (19–36)	25–55 (14–30)	40–70 (22–39)
Certified External Static Pressure	Heat/Cool	0.10/0.50	0.10/0.50	0.12/0.50	0.12/0.50	0.12/0.50	0.15/0.50
Airflow CFM‡	Heating	710	760	1090	985	1305	1203
	Cooling	1080	1215	1070	1005	1545	1210
ELECTRICAL							
Unit Volts–Hertz–Phase		115–60–1					
Operating Voltage Range	Min–Max	104–127					
Maximum Unit Amps		5.6	7.6	5.6	5.6	10.0	8.3
Unit Ampacity		7.8	10.3	7.8	7.8	13.3	11.0
Maximum Wire Length (Measure 1 Way in Ft (M))		47 (14.3)	36 (11)	47 (14.3)	47 (14.3)	27 (8.2)	33 (10.1)
Minimum Wire Size		14					
Maximum Fuse or Ckt Bkr Size (Amps)**		15					
Transformer (24v)		40va					
External Control	Heating	12va					
Power Available	Cooling	35va					
Air Conditioning Blower Relay		Standard					
CONTROLS							
Heating Blower Control		Solid State Time Operation					
Burners (Monoport)		2	2	3	3	3	4
Gas Connection Size		1/2in. NPT					
GAS CONTROLS							
Gas Valve (Redundant)	Mfr.	WhiteRodgers					
	Min. inlet pressure (In. W.C.)	4.5 (Natural Gas)					
	Max. inlet pressure (In. W.C.)	13.6 (Natural Gas)					
Ignition Device		Hot Surface					
Factory installed orifice		Size 43					
BLOWER DATA							
Direct Drive Motor HP		1/3	1/2	1/3	1/3	3/4	1/2
Motor Full Load Amps		4.4	6.4	4.4	4.4	8.8	6.8
RPM (Nominal)Speeds		1050–5	1050–5	1050–5	1050–5	1050–5	1050–5
Blower Wheel Diameter x Width – In. (mm)		10 x 6 (254 x 152)	10 x 8 (254 x 203)	11 x 8 (279 x 203)	11 x 8 (279 x 203)	10 x 10 (254 x 254)	11 x 8 (279 x 203)

* Gas input ratings are certified for elevations to 2000 ft. (610 M). In USA, For elevations above 2000 ft (610 M), reduce ratings 4 percent for each 1000 ft (305 M) above sea level. Refer to National Fuel Gas Code NFPA 54/ANSI Z223.1 Table F.4 or furnace installation instructions.

† Capacity in accordance with U.S. Government DOE test procedures.

‡ Airflow shown is for bottom only return-air supply for the as-shipped speed tap. For air delivery above 1800 CFM, see Air Delivery table for other options. A filter is required for each return-air supply. An airflow reduction of up to 7 percent may occur when using the factory-specified 4-5/16–in. (110 mm) wide, high efficiency media filter.

** Time–delay type is recommended.

ICS Isolated Combustion System

PHYSICAL DATA (CONTINUED)

UNIT SIZE	0902116	0902120	0902420	1102120	1102420	1352420	1552420	
RATINGS AND PERFORMANCE								
Input Btuh*	All Standard All Low NOx Upflow	88,000	88,000	88,000	110,000	110,000	132,000	154,000
Nonweatherized ICS	All Low Nox Downflow/Horizontal	84,000	84,000	84,000	105,000	105,000	126,000	147,000
Output Capacity (Btuh)†	All Standard All Low NOx Upflow	72,000	71,000	72,000	90,000	90,000	107,000	125,000
Nonweatherized ICS	All Low Nox Downflow/Horizontal	68,000	68,000	69,000	85,000	86,000	102,000	119,000
AFUE‡		80.00	80.00	80.00	80.00	80.00	80.00	80.00
Certified Temperature Rise Range °F (°C)		35–65 (19–36)	25–55 (14–30)	30–60 (17–33)	30–60 (17–33)	30–60 (17–33)	40–70 (22–39)	45–75 (25–41)
Certified External Static Pressure	Heat/Cool	0.15/0.50	0.15/0.50	0.15/0.50	0.20/0.50	0.20/0.80	0.20/0.50	0.20/0.50
Airflow CFM‡	Heating	1418	1650	1565	1890	1930	1760	1995
	Cooling	1445	1980	1960	2040	2005	1810	1965
ELECTRICAL								
Unit Volts–Hertz–Phase		115–60–1						
Operating Voltage Range	Min–Max	104–127						
Maximum Unit Amps		8.3	13	10.3	13.4	10.7	10.7	10.7
Unit Ampacity		11	16.90	13.50	17.40	14	14	14
Maximum Wire Length (Measure 1 Way in Ft (M))		33 (10.1)	34 (10.4)	27 (8.2)	33 (10.1)	26 (7.9)	26 (7.9)	26 (7.9)
Minimum Wire Size		14	12	14	12	14	14	14
Maximum Fuse or Ckt Bkr Size (Amps)**		15	20	15	20	15	15	15
Transformer (24v)		40va						
External Control	Heating	12va						
Power Available	Cooling	35va						
Air Conditioning Blower Relay		Standard						
CONTROLS								
Heating Blower Control		SolidState Time Operation						
Burners (Monoport)		4	4	4	5	5	6	7
Gas Connection Size		1/2in. NPT						
GAS CONTROLS								
Gas Valve (Redundant)	Mfr.	WhiteRodgers						
	Min. inlet pressure (In. W.C.)	4.5 (Natural Gas)						
	Max. inlet pressure (In. W.C.)	13.6 (Natural Gas)						
Ignition Device		Hot Surface						
Factory installed orifice		Size 43						
BLOWER DATA								
Direct Drive Motor HP		1/2	1	3/4	1	3/4	3/4	3/4
Motor Full Load Amps		6.80	11.50	8.80	11.50	8.80	8.80	8.80
RPM (Nominal)Speeds		1050–5	1050–5	1050–5	1050–5	1050–5	1050–5	1050–5
Blower Wheel Diameter x Width – In. (mm)		10 x 10 (254 x 254)	11 x 11 (279 x 279)	11 x 11 (279 x 279)	11 x 11 (279 x 279)	11 x 11 (279 x 279)	11 x 11 (279 x 279)	11 x 11 (279 x 279)

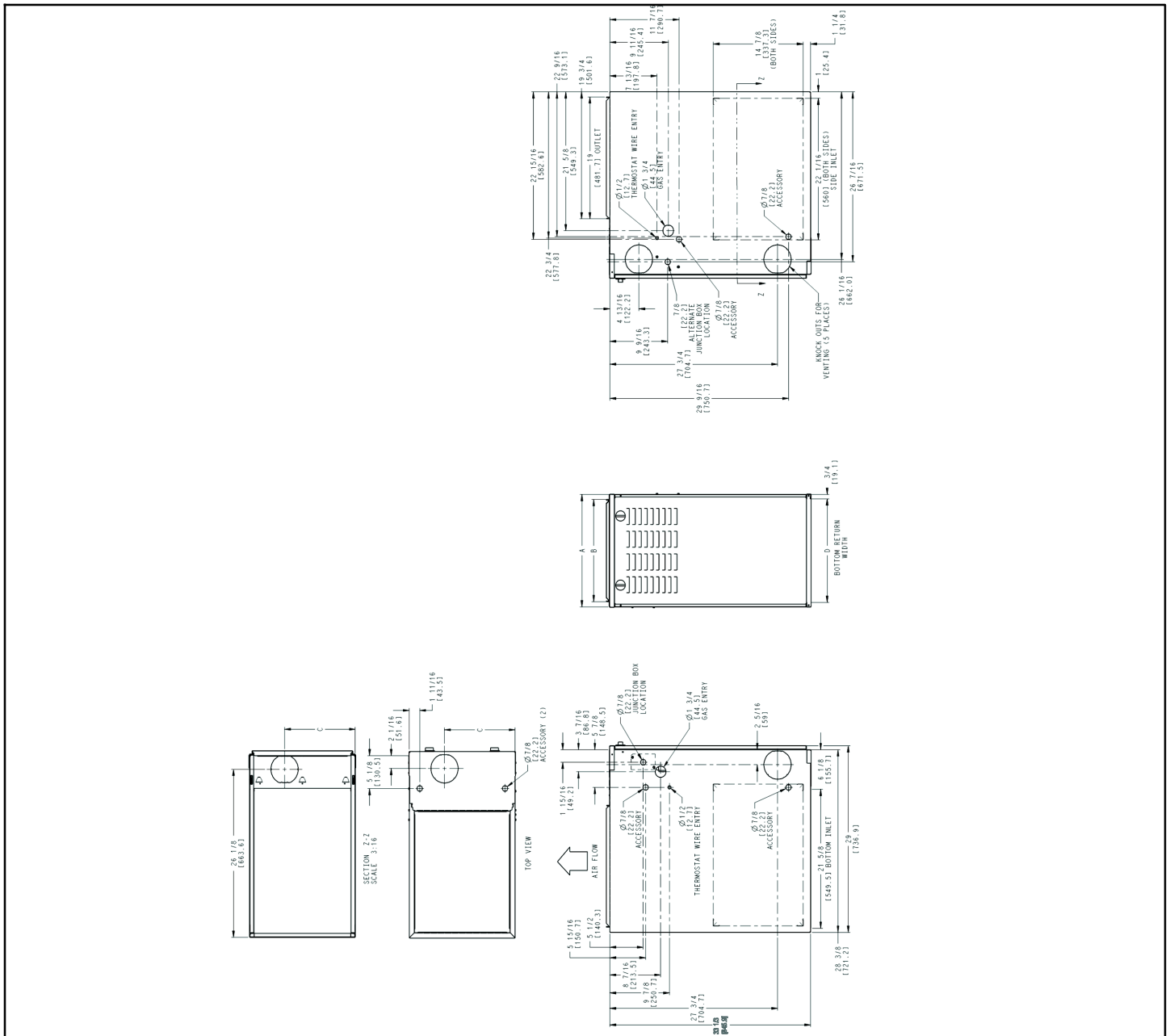
* Gas input ratings are certified for elevations to 2000 ft. (610 M). In USA, for elevations above 2000 ft. (610 M), reduce ratings 4 percent for each 1000 ft. (305 M) above sea level. Refer to National Fuel Gas Code NFPA 54/ANSI Z223.1 Table F.4 or furnace installation instructions.

† Capacity in accordance with U.S. Government DOE test procedures.

‡ Airflow shown is for bottom only return-air supply for the as-shipped speed tap. For air delivery above 1800 CFM, see Air Delivery table for other options. A filter is required for each return-air supply. An airflow reduction of up to 7 percent may occur when using the factory-specified 4-5/16–in. (110 mm) wide, high efficiency media filter.

** Time–delay type is recommended.

ICS Isolated Combustion System



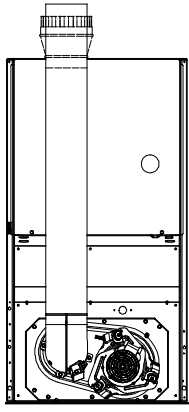
A190084

DIMENSIONS

FURNACE SIZE	A CABINET WIDTH	B OUTLET WIDTH	C TOP AND BOTTOM FLUE COLLAR	D BOTTOM INLET WIDTH	VENT CONNECTION SIZE	SHIP WT. LB. (KG)
0451412	14-3/16 (360)	12-9/16 (319)	9-5/16 (237)	12-11/16 (322)	4 (102)	104 (47)
0451712	17-1/2 (445)	15-7/8 (403)	11-9/16 (294)	16 (406)	4 (102)	119 (54)
0701412	14-3/16 (360)	12-9/16 (319)	9-5/16 (237)	12-11/16 (322)	4 (102)	114 (52)
0701712	17-1/2 (445)	15-7/8 (403)	11-9/16 (294)	16 (406)	4 (102)	120 (54)
0702116	21 (533)	19-3/8 (492)	13-5/16 (338)	19-1/2 (495)	4 (102)	142 (64)
0901714	17-1/2 (445)	15-7/8 (403)	11-9/16 (294)	16 (406)	4 (102)	131 (49)
0902116	21 (533)	19-3/8 (492)	13-5/16 (338)	19-1/2 (495)	4 (102)	137 (62)
0902120	21 (533)	19-3/8 (492)	13-5/16 (338)	19-1/2 (495)	4 (102)	140 (64)
0902420	24-1/2 (622)	22-7/8 (581)	15-1/16 (383)	23 (584)	4 (102)	146 (66)
1102120	21 (533)	19-3/8 (492)	13-5/16 (338)	19-1/2 (495)	4 (102)	146 (66)
1102420	24-1/2 (622)	22-7/8 (581)	15-1/16 (383)	23 (584)	4 (102)	161 (73)
1352420	24-1/2 (622)	22-7/8 (581)	15-1/16 (383)	23 (584)	4 (102)	167 (76)
1552420	24-1/2 (622)	22-7/8 (581)	15-1/16 (383)	23 (584)	4 (102)	168 (76)

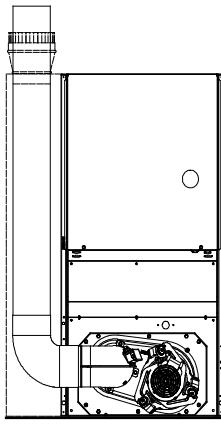
* 135 Btu/h and 155 Btu/h size furnaces require a 5 or 6-in. (127 or 152 mm) vent. Use a vent adapter between furnace and vent stack. See Installation Instructions for complete installation requirements.

DOWNFLOW VENT CONFIGURATIONS



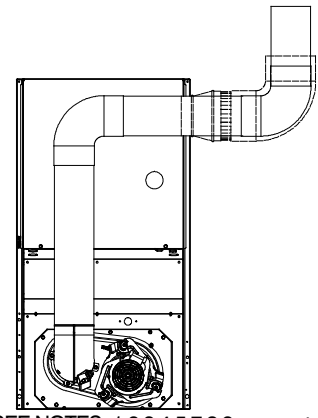
SEE NOTES: 1,2,4,5,7,8,9

A02061



SEE NOTES: 1,2,4,5,6,7,8,9

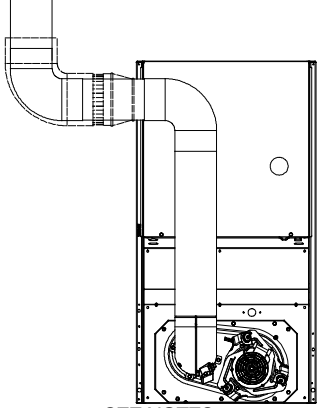
A02062



SEE NOTES: 1,2,3,4,5,7,8,9

A02063

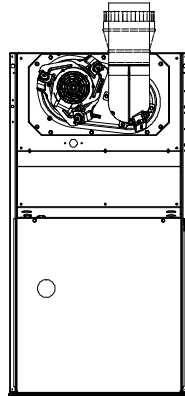
DOWNFLOW CONTINUED



SEE NOTES: 1,2,3,4,5,7,8,9

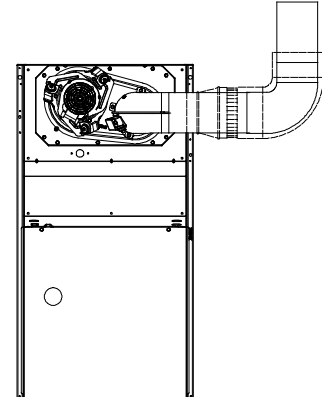
A02060

UPFLOW VENT CONFIGURATIONS



SEE NOTES: 1,2,4,7,8,9

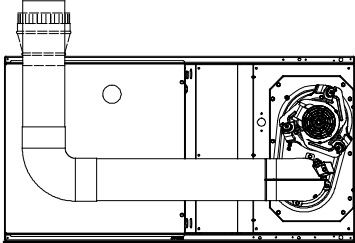
A02058



SEE NOTES: 1,2,3,4,7,8,9

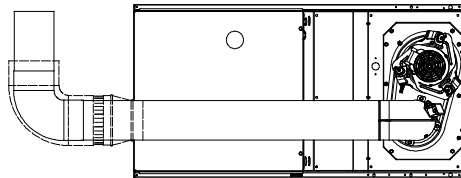
A02059

HORIZONTAL RIGHT VENT CONFIGURATIONS



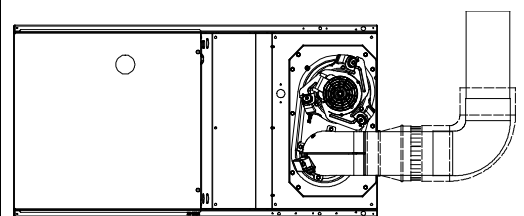
SEE NOTES: 1,2,4,5,7,8,9

A02070



SEE NOTES: 1,2,4,5,7,8,9

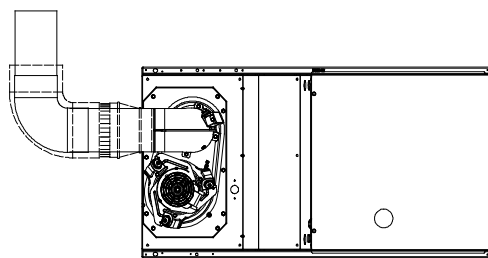
A02068



SEE NOTES: 1,2,4,7,8,9

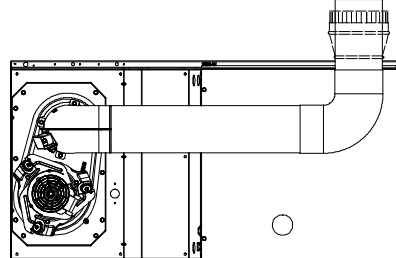
A02069

HORIZONTAL LEFT VENT CONFIGURATIONS



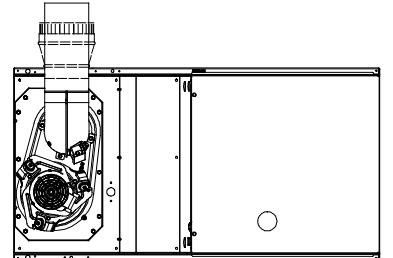
SEE NOTES: 1,2,4,7,8,9

A02064



SEE NOTES: 1,2,4,5,7,8,9

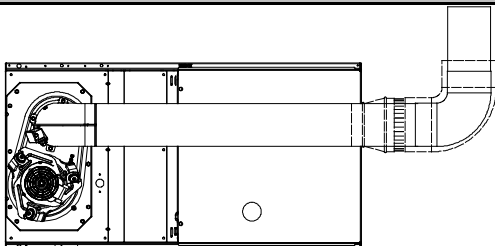
A02065



SEE NOTES: 1,2,4,5,7,8,9

A02066

HORIZONTAL LEFT VENT CONFIGURATIONS



SEE NOTES: 1,2,4,5,7,8,9

A02067

Venting Notes

1. For common vent, vent connector sizing and vent material, use the NFGC.
2. Immediately increase to 5 inch (127 mm) or 6 inch (152 mm) vent connector outside furnace casing when 5 inch (127 mm) vent connector is required, refer to Note 1 above.
3. Side outlet vent for upflow and downflow installations must use Type B vent immediately after exiting the furnace, except when the Downflow Vent Guard Kit, is used in the downflow position
4. Type-B vent where required, refer to the Note 1 above.
5. A 4 inch (102 mm) single-wall (26 ga. minimum) vent must be used inside furnace casing and when the Downflow Vent Guard Kit is used external to the furnace.
6. Accessory Downflow Vent Guard Kit is required in downflow installations with lower vent configuration.
7. Chimney Adapter Kit may be required for exterior masonry chimney applications. Refer to Chimney Adapter Kit for sizing and complete application details.
8. Secure vent connector to furnace elbow with (2) corrosion-resistant sheet metal screws, spaced approximately 180° apart.
9. Secure all other single wall vent connector joints with (3) corrosion resistant screws spaced approximately 120° apart. Secure Type-B vent connectors per vent connector manufacturer's recommendations.

ACCESSORIES								
PART	DESCRIPTION	0451412	0451712	0701412	0701712	0702116	0901714	0902116
NAHB00501FF	External Bottom Filter Rack, 14 inch (14 x 25 inch washable filter included)	X	X	X	X			
NAHB00601FF	External Bottom Filter Rack, 17 inch (17 x 25 inch washable filter included)					X	X	
NAHB00701FF	External Bottom Filter Rack, 21 inch (20 x 25 inch washable filter included)							X
NAHA00506FB†	Washable filter, 1 inch 16 x 25 (6 pack)	X	X	X	X	X	X	
NAHA00706FB	Washable filter, 1 inch 24 x 25 (6 pack)							X
NAHA01401RA	Return Air Kit, 14-3!6" Wide	X		X				
NAHA01701RA	Return Air Kit, 17" Wide		X		X		X	
NAHA02101RA	Return Air Kit, 21" Wide					X		X
NAHA01101SB	Combustible Floor Base (Not required when evaporator coil case is used for downflow)	X	X	X	X	X	X	X
NAHB00301VC	Downflow Vent Guard (Not required when vent is routed through cabinet)	X	X	X	X	X	X	X
NAHA00401DH	Chimney Adapter Kit 4-in. vent	X	X	X	X	X	X	X
AGAGC8NPS01A	Natural-to-Propane Conversion Kit *	X	X	X	X	X	X	X
AGAGC8PNS01A	Propane-to-Natural Conversion Kit *	X	X	X	X	X	X	X
AGABLRJMP10A	Blower Speed Tap Jumper Kit (10 pack)	X	X	X	X	X	X	X

ACCESSORIES								
PART	DESCRIPTION	0902120	0902420	1102120	1102420	1352420	1552420	
NAHB00601FF	External Bottom Filter Rack, 17 inch (17 x 25 inch washable filter included)		X					
NAHB00701FF	External Bottom Filter Rack, 21 inch (20 x 25 inch washable filter included)	X		X	X			
NAHB00801FF	External Bottom Filter Rack, 24 inch (24 x 25 inch washable filter included)					X	X	
NAHA00506FB†	Washable filter, 1 inch 16 x 25 (6 pack)		X					
NAHA00706FB	Washable filter, 1 inch 24 x 25 (6 pack)	X		X	X	X	X	
NAHA02101RA	Return Air Kit, 21" Wide	X		X				
NAHA02401RA	Return Air Kit, 24" Wide		X		X	X	X	
NAHA01101SB	Combustible Floor Base (Not required when evaporator coil case is used for downflow)	X	X	X	X	X	X	
NAHB00301VC	Downflow Vent Guard (Not required when vent is routed through cabinet)	X	X	X	X	X	X	
NAHA00401DH	Chimney Adapter Kit 4-in. vent	X	X	X	X			
NAHA00301DH	Chimney Adapter Kit 5-in. vent					X	X	
AGAGC8NPS01A	Natural-to-Propane Conversion Kit *	X	X	X	X	X	X	
AGAGC8PNS01A	Propane-to-Natural Conversion Kit *	X	X	X	X	X	X	
AGABLRJMP10A	Blower Speed Tap Jumper Kit (10 pack)	X	X	X	X	X	X	

- X Accessory available
- † Suitable for 17 inch external bottom filter rack
- * Factory authorized and field installed. Gas conversion kits are CSA recognized.