

80% AFUE GAS FURNACE

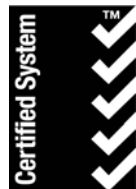
Multipoise Design

GRANDAIRE®

Heating & Cooling Products



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ISO 9001
QMI-SAI Global



WFMR/WFML

UPFLOW/DOWNFLOW/HORIZONTAL (NATURAL GAS)

Model Number	Heat Exchangers	Input (MBTUH)	Efficiency AFUE	Cooling Capacity @ .5 in wc
WFMR/WFML 045A024B	20 year	44,000	80.0	2.0
WFMR 045A036B	20 year	44,000	80.0	3.0
WFMR/WFML 070A024B	20 year	66,000	80.0	2.0
WFMR/WFML 070A036B	20 year	66,000	80.0	3.0
WFMR/WFML 090B042B	20 year	88,000	80.0	3.5
WFMR/WFML 090C048B	20 year	88,000	80.0	4.0
WFMR/WFML 110C048B	20 year	110,000	80.0	4.0
WFMR/WFML 110C066B	20 year	110,000	80.0	5.5
WFMR/WFML 135D066B	20 year	132,000	80.0	5.5

STANDARD FEATURES

- Four-position furnace: upflow, horizontal right, horizontal left, downflow
- Electronic control center
- Adjustable heating air temperature rise, LED diagnostics and self test feature
- Hot Surface Ignition (HSI)
- WFMR furnaces are approved for use with natural gas or propane gas with conversion kit
- WFML is approved for use in Low NOx Air Quality Management Districts

LIMITED WARRANTY*

- 1 year unit replacement limited warranty
- 20 year heat exchanger limited warranty
- * 5 year parts (with an additional 5 years parts if properly registered) limited warranty to the original purchaser only for owner-occupied dwellings – see warranty certificate for details

Product Specifications

NOMENCLATURE IDENTIFICATION GUIDE

DIGIT POSITION	1, 2	3	4	5, 6, 7	8	9, 10, 11	12	13
	WF	M	R	045	A	024	B	1
WF = Gas Furnace								
M = Mid								
H = High	EFFICIENCY							
R = Regular								
L = Low NOx			FEATURE					
045 = 44,000								
070 = 66,000								
090 = 88,000								
110 = 110,000								
135 = 132,000				HEATING INPUT, MBTUH				
A = 14½"								
B = 17½"								
C = 21"								
D = 24½"					CABINET WIDTH, Inches			
24 = 24,000 BTU/hr, 2 Ton								
30 = 30,000 BTU/hr, 2½ Ton								
36 = 36,000 BTU/hr, 3 Ton								
48 = 48,000 BTU/hr, 4 Ton								
66 = 66,000 BTU/hr, 5.5 Ton						COOLING SIZE		
SALES DIGIT								
EXTRA DIGIT								

ACCESSORIES PART NUMBER IDENTIFICATION GUIDE

DIGIT POSITION	1	2	3	4	5, 6, 7	8, 9	10, 11
	N	A	H	A	001	01	DH
N = Non-Branded	BRANDING						
A = Accessory	PRODUCT GROUP						
H = Heating			KIT USAGE				
A = Original							
B = 2nd Generation				MAJOR SERIES			
Product Identifier Number							
Package Quantity							
Type of Kit (Example: DH = Draft Hood - Chimney Adapter)							

SPECIFICATIONS

WFMR & WFML		045A024	045A036	070A024	070A036	090B042	090C048	110C048	110C066	135D066
RATING AND PERFORMANCE										
Input Btuh*	WFML upflow All WFMR	44,000	44,000	66,000	66,000	88,000	88,000	110,000	110,000	132,000
	WFML Downflow/ Horizontal	42,000	42,000	63,000	63,000	84,000	84,000	105,000	105,000	126,000
Output Capacity (Btuh) Nonweatherized ICS†	WFML upflow All WFMR	35,000	36,000	53,000	54,000	71,000	71,000	89,000	89,000	107,000
	WFML Downflow/ Horizontal	34,000	34,000	51,000	51,000	68,000	68,000	85,000	85,000	102,000
AFUE‡		80.0								
Certified Temperature Rise Range °F		30-60	20-50	40-70	30-60	40-70	30-60	40-70	30-60	40-70
°C		17-33	11-28	22-39	17-33	22-39	17-33	22-39	17-33	22-39
External Static Pressure	Heat/Cool	0.10/0.50	0.10/0.50	0.12/0.50	0.12/0.50	0.15/0.50	0.15/0.50	0.20/0.50	0.20/0.80	0.20/0.50
Airflow CFM‡	Heating	865	1250	720	1195	1300	1505	1515	1840	1830
	Cooling	835	1160	870	1200	1385	1635	1655	2160	2085
ELECTRICAL										
Transformer (24v)		40VA								
External Control	Heating	12VA								
	Cooling	35VA								
Air Conditioning Blower Relay		Standard								
CONTROLS										
Limit Control		SPST								
Heating Blower Control		Solid-State Timer Operation								
Burners (Monoport)		2	2	3	3	4	4	5	5	6
Gas Connection Size		1/2 inch NPT								
GAS CONTROLS										
Gas Valve (Redundant)		White Rodgers								
Min Inlet Pressure (in wc/kPa)		4.5/1.121 (Natural Gas)								
Max inlet pressure (in wc/kPa)		13.6/3.386 (Natural Gas)								
Ignition Device		Hot Surface								
BLOWER DATA										
Direct-Drive Motor HP(PSC)		1/5	1/3	1/5	1/3	1/3	1/2	1/2	3/4	3/4
Motor Full Load Amps		2.8	5.2	2.8	5.2	5.2	7.1	7.1	11.8	11.8
RPM (Nominal) speeds		1075-3	1075-3	1075-3	1075-3	1075-3	1075-3	1075-3	1075-3	1075-3
Blower Wheel Diameter x Width - inches(mm)		10 x 6 (254x152)				10 x 8 (254x203)	10 x 10 (254x254)		11 x 11 (279x279)	
FILTER ARRANGEMENT		External Filter Rack Required								

* Gas input ratings are certified for elevations to 2000 ft. (609.6 m) For elevations about 2000 ft. (609.6 m), reduce ratings 4% for each 1000 ft. (304.8m) above sea level. Refer to national Fuel Gas Code Table F4 or furnace Installation Instructions. In Canada, derate the unit 10% for elevations 2000 ft. (609.6 m) to 4500 ft. (1371.6 m) above sea level.

† 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% may occur when using the factory specified 4-5/16 inch (109.5 mm) wide, high efficiency media filter.

** Time delay type is recommended.

ICS Isolated Combustion System

N/A Not Applicable

ELECTRICAL DATA

FURNACE SIZE	VOLTS HERTZ PHASE	OPERATING VOLTAGE RANGE		MAXIMUM UNIT AMPS	MAXIMUM WIRE LENGTH FT (M)‡	MAXIMUM FUSE OR CKT BKR AMPS†	MINIMUM WIRE GAGE
		Maximum*	Minimum*				
WFM(R/L) 045A024	115-60-1	127	104	5.2	49 (14.9)	15	14
WFMR 045A036	115-60-1	127	104	7.2	37 (11.2)	15	14
WFM(R/L) 070A024	115-60-1	127	104	5.1	51 (15.5)	15	14
WFM(R/L) 070A036	115-60-1	127	104	7.2	38 (11.5)	15	14
WFM(R/L) 090B042	115-60-1	127	104	8.6	32 (9.8)	15	14
WFM(R/L) 090C048	115-60-1	127	104	10.0	28 (8.5)	15	14
WFM(R/L) 110C048	115-60-1	127	104	10.2	27 (8.2)	15	14
WFM(R/L) 110C066	115-60-1	127	104	15.1	29 (8.8)	20	12
WFM(R/L) 135D066	115-60-1	127	104	14.5	30 (9.1)	20	12

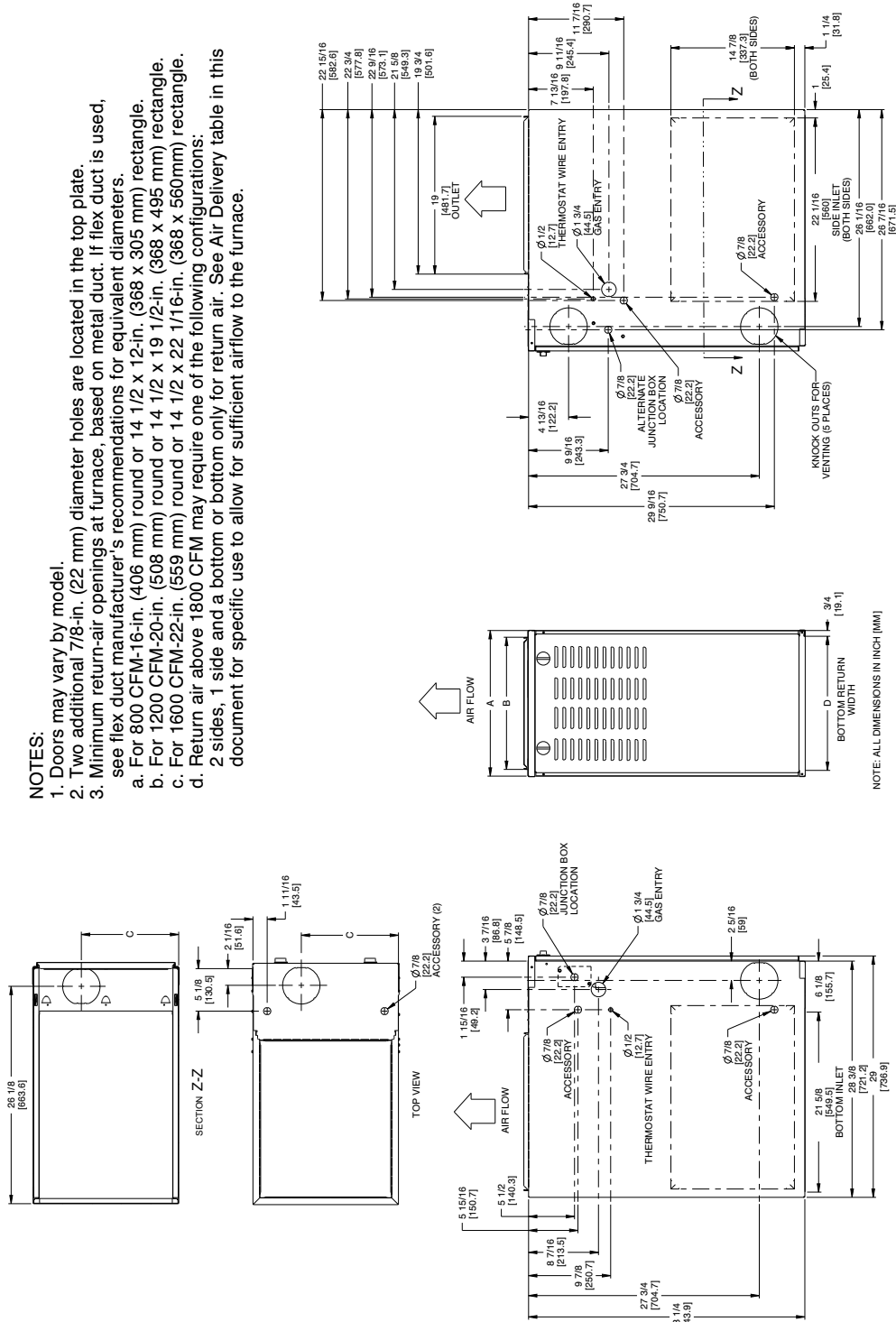
* Permissible limits of the voltage range at which unit operates satisfactorily.

† Time-delay type is recommended.

‡ Length shown is as measured 1 way along wire path between unit and service panel for maximum 2 percent voltage drop.

UNIT DIMENSIONS

- NOTES:**
- Doors may vary by model.
 - Two additional 7/8-in. (22 mm) diameter holes are located in the top plate.
 - Minimum return-air openings at furnace, based on metal duct. If flex duct is used, see flex duct manufacturer's recommendations for equivalent diameters.
 - For 800 CFM-16-in. (406 mm) round or 14 1/2 x 12-in. (368 x 305 mm) rectangle.
 - For 1200 CFM-20-in. (508 mm) round or 14 1/2 x 19 1/2-in. (368 x 495 mm) rectangle.
 - For 1600 CFM-22-in. (559 mm) round or 14 1/2 x 22 1/16-in. (368 x 560 mm) rectangle.
 - Return air above 1800 CFM may require one of the following configurations:
 - 2 sides, 1 side and a bottom or bottom only for return air. See Air Delivery table in this document for specific use to allow for sufficient airflow to the furnace.



NOTE: ALL DIMENSIONS IN INCH [MM]

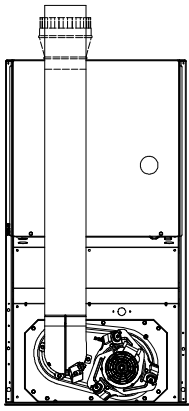
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UNIT SIZE	A	B	C	D	VENT CONNECTION SIZE*† in(mm)	SHIPPING WEIGHT (lb/kg)
	(CABINET WIDTH) in(mm)	(SUPPLY WIDTH) in(mm)	(TOP VENT OUTLET) in(mm)	(BOTTOM RETURN WIDTH) in(mm)		
WFM(R/L) 045A024	14-3/16(360)	12-9/16(319)	9-5/16(237)	12-11/16(322)	4(102)	104(47)
WFM(R/L) 070A036	14-3/16(360)	12-9/16(319)	9-5/16(237)	12-11/16(322)	4(102)	107(59)
WFM(R/L) 070A024	14-3/16(360)	12-9/16(319)	9-5/16(237)	12-11/16(322)	4(102)	111(50)
WFM(R/L) 070A036	14-3/16(360)	12-9/16(319)	9-5/16(237)	12-11/16(322)	4(102)	115(52)
WFM(R/L) 090B042	17-1/2(445)	15-7/8(403)	11-9/16(294)	16-1/8(410)	4(102)	127(58)
WFM(R/L) 090C048	21(533)	19-3/8(492)	13-5/16(338)	19-1/2(495)	4(102)	140(64)
WFM(R/L) 110C048	21(533)	19-3/8(492)	13-5/16(338)	19-1/2(495)	4(102)	146(66)
WFM(R/L) 110C066	21(533)	19-3/8(492)	13-5/16(338)	19-1/2(495)	4(102)	152(69)
WFM(R/L) 135D066	24-1/2(622)	22-7/8(581)	15-1/16(383)	23(584)	4(102)*	163(74)

* 135 Btu/h size furnaces require 5 inch (127mm) vents. Use a 4-5 inch (101.6-127mm) vent adapter between furnace and vent stack.

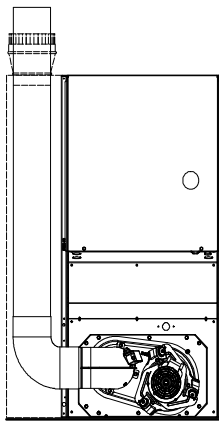
† See Installation Instructions for complete installation requirements.

DOWNFLOW VENT CONFIGURATIONS



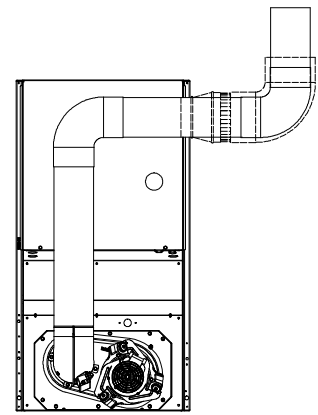
SEE NOTES: 1,2,4,5,7,8,9

A02061



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

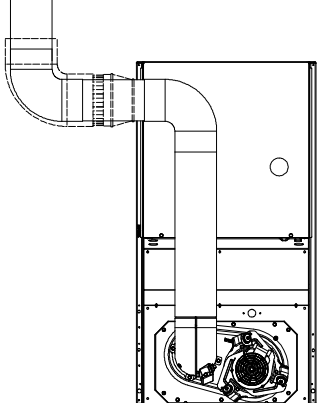
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SEE NOTES: 1,2,3,4,5,7,8,9

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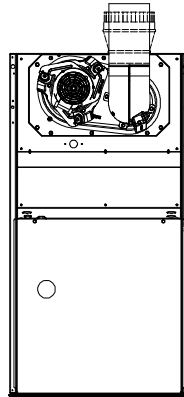
DOWNFLOW CONTINUED



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

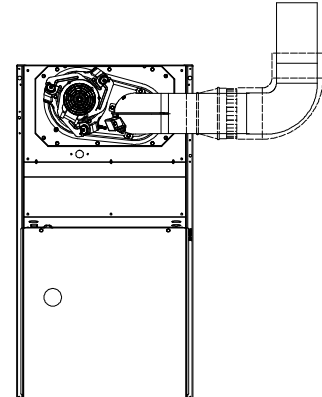
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UPFLOW VENT CONFIGURATIONS



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

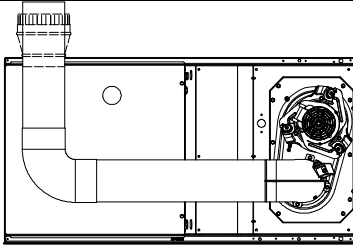
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SEE NOTES: 1,2,3,4,7,8,9

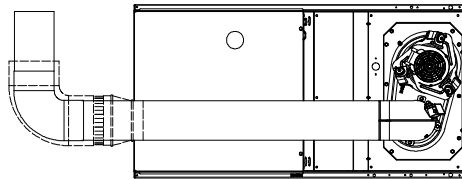
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HORIZONTAL RIGHT VENT CONFIGURATIONS



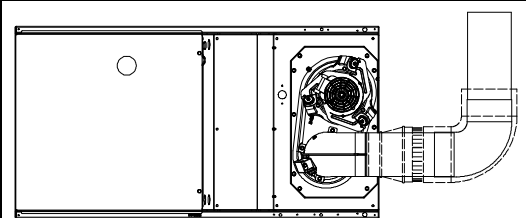
SEE NOTES: 1,2,4,5,7,8,9

A02070



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

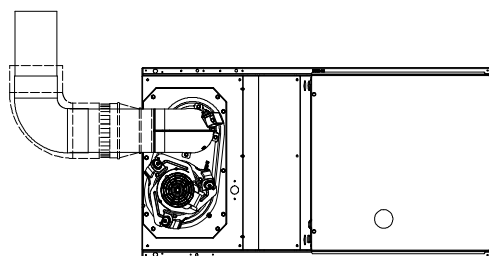
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SEE NOTES: 1,2,4,7,8,9

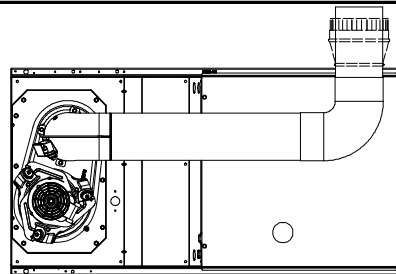
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HORIZONTAL LEFT VENT CONFIGURATIONS



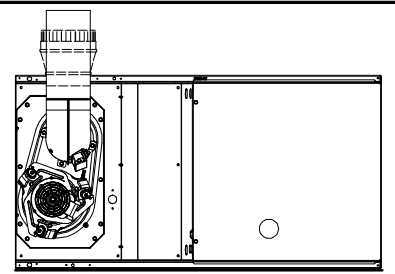
SEE NOTES: 1,2,4,7,8,9

A02064



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

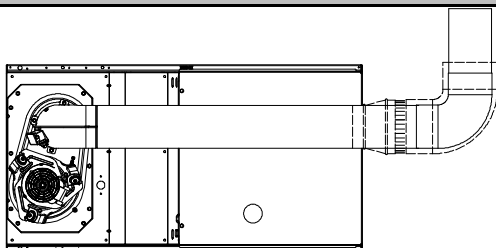
A02065



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: United States, use the latest edition of the National Fuel Gas Code (NFPA).
2. Immediately increase to 5 inch (127mm) vent connector outside furnace casing when 5 inch (127mm) vent connector required, refer to Note 1.
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 downflow position.
4. Type B vent where required, refer to Note 1.
5. 4 inch (102 mm) single-wall (26 ga. min.) 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, 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 two (2) corrosion-resistant sheet metal screws, space approximately 180° apart.
9. Secure all other single wall vent connector joints with three (3) corrosion-resistant screws spaced approximately 120° apart. secure Type B vent connectors per vent connector manufacturer's recommendations.

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.

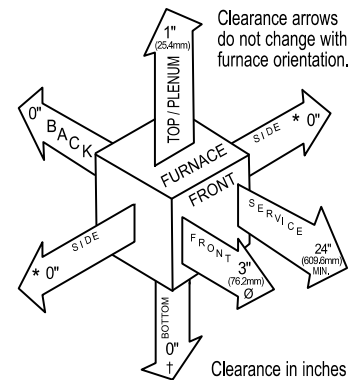
The furnace may be installed on combustible flooring in alcove or closet at minimum clearance as indicated by the diagram from combustible material.

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).

AIR DELIVERY-CFM (WITH FILTER)*												
FURNACE SIZE	RETURN-AIR INLET	SPEED	EXTERNAL STATIC PRESSURE (IN. W.C.)									
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
045A024	Bottom or Side(s)	High	1035	995	945	895	835	770	675	565	390	195
		Med-Low	865	830	790	745	690	625	545	440	250	195
		Low	760	720	680	635	580	520	445	345	220	195
045A036	Bottom or Side(s)	High	1440	1375	1305	1240	1160	1070	975	870	730	560
		Med-Low	1360	1300	1240	1175	1115	1040	950	850	725	575
		Low	1250	1210	1160	1100	1040	965	885	790	670	520
070A024	Bottom or Side(s)	High	1030	1005	965	925	870	810	740	645	465	280
		Med-Low	835	815	790	755	710	660	590	480	325	205
		Low	725	700	675	635	595	545	460	350	250	--
070A036	Bottom or Side(s)	High	1425	1375	1320	1265	1200	1125	1035	940	830	655
		Med-Low	1320	1280	1240	1205	1140	1075	995	905	790	620
		Low	1200	1175	1145	1105	1050	990	920	840	725	555
090B042	Bottom or Side(s)	High	1605	1570	1535	1465	1385	1285	1175	1055	895	645
		Med-High	1470	1445	1410	1380	1300	1220	1115	990	830	600
		Med-Low	1310	1295	1265	1230	1195	1120	1025	915	710	565
090C048	Bottom or Side(s)	High	1940	1880	1805	1720	1635	1540	1425	1290	1090	830
		Med-Low	1740	1700	1650	1590	1525	1440	1335	1195	1010	820
		Low	1505	1505	1480	1440	1375	1300	1190	1045	890	740
110C048	Bottom or Side(s)	High	1980	1915	1835	1750	1655	1495	1365	1185	965	700
		Med-Low	1745	1710	1650	1560	1450	1340	1205	1090	865	605
		Low	1530	1515	1470	1400	1310	1215	1095	990	830	670
110C066	Bottom Only	High	2485	2415	2340	2255	2160	2060	1950	1840	1720	1565
		Med-Low	2135	2100	2060	2000	1930	1860	1765	1670	1555	1425
		Low	1855	1840	1815	1775	1725	1675	1600	1510	1405	1290
	Bottom, Sides or 1 Side & Bottom	High	--	--	2355	2285	2190	2090	1965	1850	1705	1535
		Med-Low	2140	2100	2050	1990	1935	1865	1760	1670	1545	1410
		Low	1855	1840	1815	1775	1725	1675	1600	1510	1405	1290
	1 Side Only	High	2495	2440	2370	2290	2205	2120	2015	1910	1775	1625
		Med-Low	2030	2025	2000	1950	1905	1850	1750	1660	1555	1425
		Low	--	1735	1725	1695	1650	1595	1535	1455	1335	1230
135D066	Bottom Only	High	2445	2365	2280	2190	2085	1980	1850	1705	1520	1355
		Med-Low	2130	2080	2025	1960	1880	1795	1690	1550	1405	1255
		Low	1860	1830	1800	1755	1705	1630	1530	1415	1280	1140
	Bottom, Sides or Side & Bottom	High	--	--	2355	2280	2160	2065	1930	1805	1655	1465
		Med-Low	2120	2075	1995	1970	1905	1835	1735	1645	1515	1325
		Low	1860	1830	1800	1755	1725	1630	1530	1415	1280	1140
	1 Side Only	High	--	--	2215	2130	2030	1920	1795	1675	1540	1385
		Med-Low	2070	2015	1970	1935	1855	1765	1655	1550	1445	1265
		Low	1860	1830	1800	1755	1725	1630	1530	1415	1280	1140

* A filter is required for each return-air supply. Airflow performance includes 1 inch(25.4mm) washable filter media such as contained in factory-authorized accessory filter rack. To determine airflow performance without this filter, assume an additional .1 available external static pressure
 - Indicates unstable operating conditions.

ACCESSORIES

PART NUMBER	DESCRIPTION	045A024	045A036	070A024	070A036	090B042	090C048	110C048	110C066	135D066
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 (16 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
NAHA00506FB†	Washable filter, 1 inch 16 x 25 (6 pack)	X	X	X	X	X				
NAHA00706FB	Washable filter, 1 inch 24 x 25 (6 pack)						X	X	X	X
NAHA00901FF	External Side Filter Rack, 1 inch 16 x 25 (16 x 25 washable filter included)	X	X	X	X	X	X	X	X	X
NAHB00501WK	Twining Kit (Upflow, Downflow and Horizontal)	X	X	X	X	X	X	X	X	X
NAHA01101SB	Combustible Floor Base (Not required when evaporator coil case is used for downflow)	X	X	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	X	X
NAHA00401DH	Chimney Adapter Kit 4-in. vent	X	X	X	X	X	X	X	X	
NAHA00301DH	Chimney Adapter Kit 5-in. vent									X
NAHA00501LP*	Natural-to-Propane Conversion Kit	X	X	X	X	X	X	X	X	X
NAHA00501NG*	Propane-to-Natural Conversion Kit	X	X	X	X	X	X	X	X	X
NAHB00301WL	Warning Label Kit	X	X	X	X	X	X	X	X	X

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