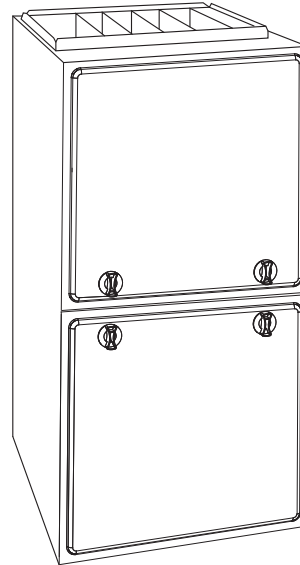


95.5 AFUE GAS FURNACE MULTIPOISE DESIGN

GRANDAIR
Heating & Cooling Products



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.



UPFLOW/DOWNFLOW/HORIZONTAL (NATURAL GAS)

Model Number	Heat Exchangers Warranty	Input (MBTUH)	Efficiency AFUE	Cooling Capacity CFM range @ .5 in. w.c. (125 Pa)
WFSR040A030A	20 years	40,000	95.5%	625-905
WFSR060B042A	20 years	60,000	95.5%	650-1420
WFSR080B048A	20 years	80,000	95.5%	810-1600
WFSR080C060A	20 years	80,000	95.5%	1225-2025
WFSR100C042A	20 years	100,000	95.5%	695-1565
WFSR100C060A	20 years	100,000	95.5%	1225-2145
WFSR120D060A	20 years	120,000	95.5%	1245-2065

STANDARD FEATURES

- Heating efficiency of 95.5 AFUE; California NOx approved
- Direct-vent/sealed combustion, single-pipe venting or ventilated combustion air
- PSC blower motor
- 4-way multipoise furnace
- Hot surface ignition
- LED diagnostics and self test feature
- Stores fault codes during power outages
- Adjustable heating air temperature rise
- Adjustable cooling airflow
- Approved for Manufactured Housing/Mobile Home applications with accessory (order separately)
- Certified to leak 2% or less of nominal air conditioning CFM delivered when pressurized to 1-inch water column with all present air inlets, air outlets and condensate drain port(s) sealed.

LIMITED WARRANTY*

- 1 year No Hassle Replacement™ limited warranty
 - 20 year heat exchanger limited warranty
 - 5 year parts limited warranty
 - With timely registration, an additional 5 year parts limited warranty
- * Applies to original purchaser/homeowner, some limitations may apply. See warranty certificate for complete details.

WFSR

Product Specifications

MODEL NUMBER IDENTIFICATION GUIDE								
NOMENCLATURE	1, 2	3	4	5, 6, 7	8	9, 10, 11	12	13
	WF	S	R	040	A	030	A	1
WF = Gas Furnace		EFFICIENCY	FEATURE	HEATING INPUT, MBTUH	CABINET WIDTH, Inches	COOLING SIZE		
M = Mid								
A, H, S= 90+								
R = Standard 90+, Standard 80								
040 = 40,000								
060 = 60,000								
080 = 80,000								
100 = 100,000								
120 = 120,000								
A = 14–3/16”								
B = 17–1/2”								
C = 21”								
D = 24–1/2”								
30 = 30,000 BTU/hr								
42 = 42,000 BTU/hr								
48 = 48,000 BTU/hr								
60 = 60,000 BTU/hr								
SALES DIGIT								
EXTRA DIGIT								
ACCESSORIES PART NUMBER IDENTIFICATION GUIDE								
DIGIT POSITION	1	2	3	4	5, 6, 7	8, 9	10, 11	
N	BRANDING	A	H	A	001	01	DH	
N = Non–Branded		PRODUCT GROUP						
A = Accessory								
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)								

PHYSICAL DATA									
UNIT SIZE (NATURAL GAS Ratings)			040A30	060B42	080B48	080C60	100C42	100C60	120D60
Input	Heat	(BTUH)	40,000	60,000	80,000	80,000	100,000	100,000	120,000
Output	Heat	(BTUH)	39,000	58,000	78,000	78,000	97,000	97,000	117,000
Efficiency	AFUE % (ICS)		95.5						
Certified Temperature Rise Range °F (°C)			40–70(22–39)						

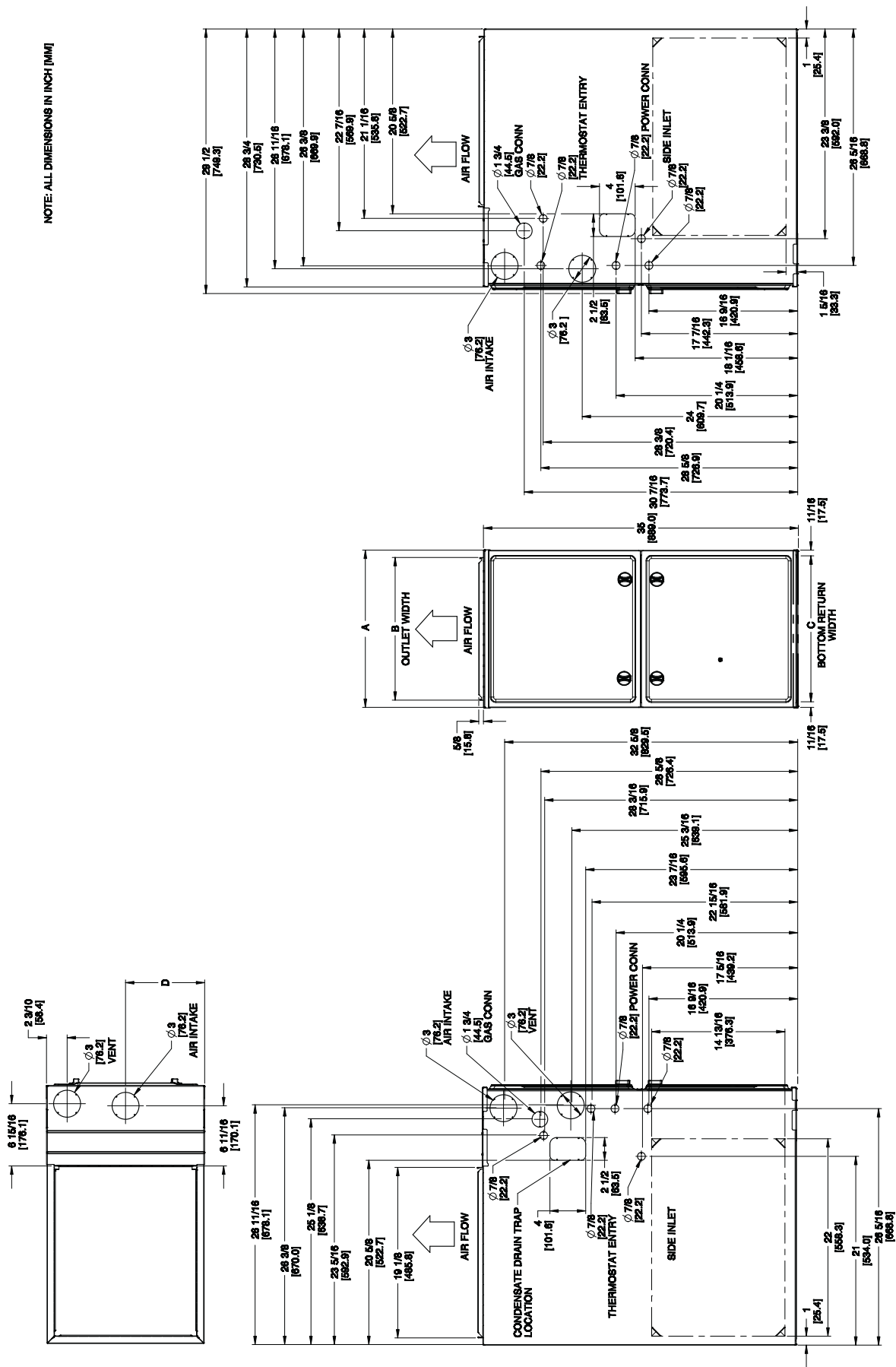
ICS — Isolated Combustion System

AIRFLOW CAPACITY AND BLOWER DATA								
UNIT SIZE		040A30	060B42	080B48	080C60	100C42	100C60	120D60
Certified External Static Pressure in.w.c.(kPa)	Heating	0.10 (.025)	0.12 (.05)	0.15 (.38)	0.15 (.38)	0.20 (.050)	0.20 (.050)	0.20 (.050)
	Cooling	.5 (.125)						
Airflow Delivery @ Rated ESP (CFM)	Heating	820	980	1040	1500	1565	1520	2210
	Cooling	905	1420	1600	2025	1565	2145	2065
Cooling Capacity (tons) @ 400, 350 CFM/ton	400 CFM/ton	2	3.5	4	5	4	5	5
	350 CFM/ton	2.5	4	4.5	5.5	4.5	6	6
Direct-Drive Motor Type		PSC – Permanent Split Capacitor						
Direct-Drive Motor HP		0.5	0.5	0.75	0.75	0.75	0.75	0.75
Motor Full Load Amps		6.2	6.8	7.9	13.8	6.5	13.8	14.1
RPM Range		500–1150						
Speed Selections		4	5	5	5	5	5	5
Blower Wheel Dia x Width	inches	11 x 7	11 x 8	11 x 8	11 x 10	11 x 10	11 x 10	11 x 11
Air Filtration System		Field Supplied						
Filter Used for Certified Watt Data		NAHA00806FB	NAHA00506FB		NAHA00606FB			NAHA00706FB

CONTROLS								
UNIT SIZE		040A30	060B42	080B48	080C60	100C42	100C60	120D60
Gas Connection Size		1/2" – NPT						
Burners (Monoport)		2	3	4	4	5	5	6
Gas Valve (Redundant)	Manufacturer	White Rogers™						
Minimum Inlet Gas pressure in. w.c. (kPa)		4.5 (1.1)						
Maximum Inlet Gas pressure in. w.c. (kPa)		13.6 (3.4)						
Gas Conversion Kit – Natural to Propane		NAHA00901LP						
Gas Conversion Kit – Propane to Natural		NAHA00901NG						
Manufactured (Mobile) Home Kit		NAHA00101MH						
Ignition Device		Silicon Nitride			Silicon Nitride			
Limit Control		165	180	170	200	180	180	160
Heating Blower Control (Heating Off-Delay)		Adjustable: 90, 120, 150, 180 seconds						
Cooling Blower Control (Time Delay Relay)		90 seconds						
Thermostat Connections		R, W, Y, G, C						
Accessory Connections		EAC (115vac); HUM (24vac)						

ELECTRICAL DATA									
UNIT SIZE			040A30	060B42	080B48	080C60	100C42	100C60	120D60
Input Voltage (Volts-Hertz-Phase)			115 – 60 – 1						
Operating Voltage Range		Min-Max	104 – 127						
Maximum Input Amps		Amps	6.8	8.4	9.6	14.5	7.6	14.6	14.9
Unit Ampacity		Amps	9.5	11.5	13.0	19.1	10.4	19.2	19.6
Minimum Wire Size		AWG	14	14	14	12	14	12	12
Maximum Wire Length @ Min Wire Size		Feet (M)	39(11.9)	32(9.8)	28(8.5)	30(9.1)	35(10.7)	29(8.8)	29(8.8)
Maximum Fuse/Circuit Breaker (Time-Delay Type Recommended)		Amps	15	15	15	20	15	20	20
Transformer Capacity			24 VAC Output / 40 VA						
External Control Power Available	Heating		27.9 VA						
	Cooling		34.6 VA						

NOTE: ALL DIMENSIONS IN INCH [MM]



FURNACE SIZE	A	B	C	D	SHIP WT. LB (KG)
	CABINET WIDTH	OUTLET WIDTH	BOTTOM INLET WIDTH	AIR INTAKE	
040A30	14-3/16 (361)	12-1/2 (319)	12-9/16 (322)	7-1/8 (181)	123 (55)
060B42	17-1/2 (445)	15-7/8 (403)	16 (406)	8-3/4 (222)	144 (65)
080B48	17-1/2 (445)	15-7/8 (403)	16 (406)	8-3/4 (222)	154 (69)
080C60	21 (533)	19-3/8 (492)	19-1/2 (495)	10-1/2 (267)	162 (73)
100C42	21 (533)	19-3/8 (492)	19-1/2 (495)	10-1/2 (267)	169 (76)
100C60	21 (533)	19-3/8 (492)	19-1/2 (495)	10-1/2 (267)	169 (76)
120D60	24-1/2 (622)	22-7/8 (581)	23 (584)	12-1/4 (311)	186 (84)

NOTE:

1. Doors may vary by model.
2. Recommended air duct dimensions and configurations:
 - a. For 800 CFM 16 in. (406 mm) round or 14-1/2 x 12 in. (368 x 305 mm) rectangle.
 - b. For 1200 CFM 20 in. (508mm) round or 14-1/2 x 19-1/2 in. (368 x 495 mm) rectangle.
 - c. For 1600 CFM 22 in. (559 mm) round or 14-1/2 x 22-1/16 in. (368 x 560 mm) rectangle.
 - d. For airflow requirements above 1800 CFM, see Air Delivery table in Installation Instructions for specific use of single side inlets. The use of both side inlets, a combination of 1 side and the bottom, or the bottom only return air openings may be required for airflow requirements above 1800 CFM at 0.5 in. w.c. ESP

MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS FOR ALL UNITS	
POSITION	CLEARANCE in(mm)
REAR	0
FRONT (Combustion air openings in furnace and in structure)	1 (25)
Required for service	24 (610)
All Sides of Supply Plenum	1 (25)
Sides	0
Vent	0
Top of Furnace	1 (25)

AIR DELIVERY – CFM (with filter)

UNIT SIZE	RETURN-AIR CONNECTION	SPEED TAPS ²	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
040A30	SIDE/BOTTOM	Black	1100	1055	1010	960	905	850	795	740	685	620
		Yellow	955	915	875	830	790	740	695	645	590	530
		Blue	820	795	765	730	695	655	615	570	515	460
		Red	730	710	680	655	625	595	555	515	465	400
060B42	SIDE/BOTTOM	Black	1665	1615	1550	1485	1420	1345	1270	1190	1105	985
		Yellow	1340	1320	1295	1260	1215	1165	1110	1045	925	850
		Orange	1050	1045	1035	1015	995	960	915	845	785	725
		Blue	985	980	975	950	930	900	845	795	740	690
		Red ⁵	735	720	700	675	650	620	595	560	520	480
080B48	SIDE/BOTTOM	Black	1870	1810	1740	1670	1600	1525	1440	1355	1270	1180
		Yellow	1525	1495	1460	1415	1365	1305	1240	1170	1090	990
		Orange	1375	1355	1330	1300	1260	1210	1155	1090	1025	940
		Blue	1045	1040	1030	1010	985	960	920	875	825	745
		Red ⁵	880	865	850	835	810	785	750	715	665	605
080C60	BOTTOM or TWO-SIDES ^{3,4}	Black	2390	2320	2230	2125	2025	1920	1825	1720	1600	1475
		Yellow	2010	1970	1925	1875	1805	1730	1655	1560	1460	1350
		Orange	1670	1660	1650	1620	1585	1550	1485	1410	1330	1225
		Blue	1500	1500	1495	1485	1460	1425	1380	1320	1255	1165
		Red	1270	1260	1255	1245	1225	1195	1160	1125	1065	1000
100C42	SIDE/BOTTOM	Black	1780	1735	1685	1625	1565	1495	1415	1325	1240	1145
		Blue	1605	1565	1520	1465	1410	1340	1265	1190	1110	1020
		Yellow	1345	1310	1270	1225	1175	1120	1060	995	920	835
		Orange ⁵	1130	1090	1045	1000	945	895	840	775	715	635
		Red ⁵	900	855	800	750	695	640	590	525	470	405
100C60	BOTTOM or TWO-SIDES ^{3,4}	Black	2510	2420	2330	2240	2145	2040	1920	1805	1675	1520
		Yellow	2030	2010	1970	1925	1870	1805	1725	1630	1525	1400
		Orange	1655	1660	1650	1635	1615	1575	1520	1450	1360	1270
		Blue	1520	1520	1520	1520	1500	1475	1430	1360	1290	1200
		Red	1265	1255	1250	1240	1225	1205	1175	1135	1085	1025
120D60	BOTTOM or TWO-SIDES ^{3,4}	Black	2470	2375	2280	2175	2065	1940	1820	1695	1580	1475
		Blue	2275	2210	2125	2045	1945	1835	1715	1605	1500	1395
		Yellow	1690	1685	1670	1640	1590	1525	1455	1385	1295	1210
		Orange ⁵	1460	1465	1450	1430	1400	1355	1315	1255	1185	1105
		Red ⁵	1310	1300	1290	1265	1245	1210	1165	1120	1060	985

NOTE:

1. A filter is required for each return-air inlet. Airflow performance includes a 3/4 in. (19 mm) washable filter media such as contained in factory-authorized accessory filter rack. See accessory list. To determine airflow performance without this filter, assume an additional 0.1 in. w.c. available external static pressure.
2. Blower speed taps are not always in the same order. Factory Default blower connections are as follows:
Heating airflow – BLUE (also used for Continuous Fan)
Cooling airflow – BLACK (enabled when the Y terminal is energized)
ADJUST THE BLOWER SPEED TAPS AS NECESSARY FOR THE PROPER AIR TEMPERATURE RISE FOR EACH INSTALLATION.
3. Airflows over 1800 CFM require bottom return, two-side return, or bottom and side return. A minimum filter size of 20" x 25" is required.
4. For upflow applications, air entering from one side into both the side of the furnace and a return air base counts as a side and bottom return.
5. Highlighted areas indicate that this airflow range is beyond the range allowed for heating. **THESE AIRFLOW RANGES MAY ONLY BE USED FOR COOLING.**

ACCESSORIES

PART NUMBER	COMPONENT NAME	DESCRIPTION	040A30	060B42	080B48	080C60	100C42	100C60	120D60
NAHA00101VC	VENT KIT	THROUGH CABINET	X	X	X	X	X	X	X
NAHA002CV	VENT TERM KIT	CONCENTRIC VENT 2"	X	X	X	X	X	X	
NAHA001CV		CONCENTRIC VENT 3"		X	X	X	X	X	X
NAHA00110DA	DRAIN ACCESSORY	1/2 INCH CPVC TO 3/4 INCH PVC (10 PACK)	X	X	X	X	X	X	X
NAHA00101HV	HORIZONTAL INSTALLATION KIT	TRAP GROMMET (DIRECT VENT APPLICATION ONLY)	X	X	X	X	X	X	X
NAHA00101HH	FREEZE PROTECT KIT	CONDENSATE DRAIN LINE - TAPE	X	X	X	X	X	X	X
NAHA01101SB	FLOOR BASE KIT	COMBUSTIBLE FLOOR	X	X	X	X	X	X	X
NAHA00901LP*	GAS CONVERSION KIT	NATURAL TO PROPANE	X	X	X	X	X	X	X
NAHA00901NG*		PROPANE TO NATURAL	X	X	X	X	X	X	X
NAHA00101MH*	MANUFACTURED HOME KIT	GAS CONVERSION KIT	X	X	X	X	X	X	X
NAHA00506FB†	WASHABLE FILTER PACK	WASHABLE FILTER, 1 INCH 16 X 25 (6 PACK)	X	X	X				
NAHA00706FB		WASHABLE FILTER, 1 INCH 24 X 25 (6 PACK)				X	X	X	X
NAHB00501FF	EXTERNAL BOTTOM FILTER RACK	14 X 25 INCH WASHABLE FILTER INCLUDED	X						
NAHB00601FF		17.5 X 25 INCH WASHABLE FILTER INCLUDED		X	X				
NAHB00701FF		21 X 25 INCH WASHABLE FILTER INCLUDED				X	X	X	
NAHB00801FF		24.5 X 25 INCH WASHABLE FILTER INCLUDED							X
NAHA00901FF	ADJUSTABLE SIDE OR BOTTOM FILTER RACK	1 INCH WASHABLE FILTER INCLUDED	X	X	X	X	X	X	X

COMING IN 2Q2012

NAHA00201HH	FREEZE PROTECT KIT	HEAT PATCH FOR DRAIN TRAP	X	X	X	X	X	X	X
NAHB00101CA	COIL ADAPTER KIT	WITH NO OFFSET	X	X	X	X	X	X	X
NAHB00201CA		WITH SINGLE OFFSET	X	X	X	X	X	X	X
NAHB00301CA		WITH DOUBLE OFFSET	X	X	X	X	X	X	X
NAHA01401RA	RETURN AIR KIT	14-3/16" WIDE	X						
NAHA01701RA		17-1/2" WIDE		X	X				
NAHA02101RA		21" WIDE				X	X	X	
NAHA02401RA		24-1/2" WIDE							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.

Part Number	Gas Type	Orifice Size
1185612	Natural	42
1176928	Natural	43
1185574	Natural	44
1177213	Natural	45

Part Number	Gas Type	Orifice Size
1183809	Natural	46
1185613	Natural	47
1185614	Natural	48

Part Number	Gas Type	Orifice Size
1184256	Propane	54
1185615	Propane	55
1185616	Propane	56
1185617	Propane	1.25 mm
1185618	Propane	1.30 mm