

R9MSB

Product Specifications

92.1% AFUE, Single Stage, PSC Gas Furnace

EASIER TO SELL

- 92.1% AFUE, all models all positions, California NOx approved
- 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
- Approved for Manufactured Housing/Mobile Home applications with accessory (order separately)

TOUGHER

- Flame roll-out sensors standard
- Adjustable heating blower OFF delay
- Factory set blower ON delay
- RPJ® primary heat exchanger
- Stainless steel secondary heat exchanger
- High temperature limit control prevents overheating
- Direct ignition with Silicon Nitride ignitor
- High quality, corrosion-resistant, prepainted steel cabinet

EASIER TO INSTALL AND SERVICE

- Direct vent (2-pipe), single-pipe venting or ventilated combustion air
- 24 VAC humidifier terminal & electronic air cleaner terminal
- 35" (889mm) high, for ease of installation
- Simplified, factory installed internal condensate drain system
- Innovative 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
- At least twelve different venting configurations
- Through the casing flue pipe for counterflow or horizontal applications with accessory (order separately)
- Concentric vent available
- Self diagnostics with super bright LED
- Slide out heat exchanger and blower assembly

WARRANTY *

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



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



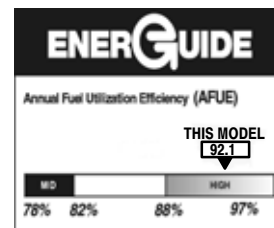
WARNING

CARBON MONOXIDE POISONING AND FIRE HAZARD

Failure to follow this warning could result in personal injury, death, and/or property damage.

This furnace is not designed for use in recreation vehicles or outdoors. This furnace is designed for use in manufactured (Mobile) homes when an optional Mobile Home accessory kit is installed.

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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.

Model Number	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)
R9MSB0601716B	60,000	92.1%	985–1505	35 x 17-1/2 x 29-1/2 (889 x 445 x 750)	142 (65)
R9MSB0801716B	80,000	92.1%	760–1555	35 x 17-1/2 x 29-1/2 (889 x 445 x 750)	151 (69)
R9MSB1002120B	100,000	92.1%	1475–1970	35 x 21 x 29-1/2 (889 x 533 x 750)	166 (76)
R9MSB1202420B	120,000	92.1%	1450–2050	35 x 24-1/2 x 29-1/2 (889 x 622 x 750)	184 (84)

MODEL NUMBER IDENTIFICATION GUIDE

DIGIT POSITION	1	2	3	4	5	6, 7, 8	9, 10	11, 12	13	14
	R	9	M	S	B	060	17	14	A	1
R = Non-Branded 9 = 90% - 100%			EFFICIENCY							
M = Multiposition			FEATURE							
S = Single-stage			FEATURE							
B = Base AFUE Efficiency			FEATURE							
060 = 60,000 BTU/hr 080 = 80,000 BTU/hr 100 = 100,000 BTU/hr 120 = 120,000 BTU/hr					INPUT HEAT					
14 = 14-3/16" 17 = 17-1/2" 21 = 21" 24 = 24-1/2"							CABINET WIDTH			
16 = 1600 CFM (max) 20 = 2000 CFM (max) 22 = 2200 CFM (max)									COOLING AIRFLOW	
SALES (MAJOR) REVISION DIGIT										

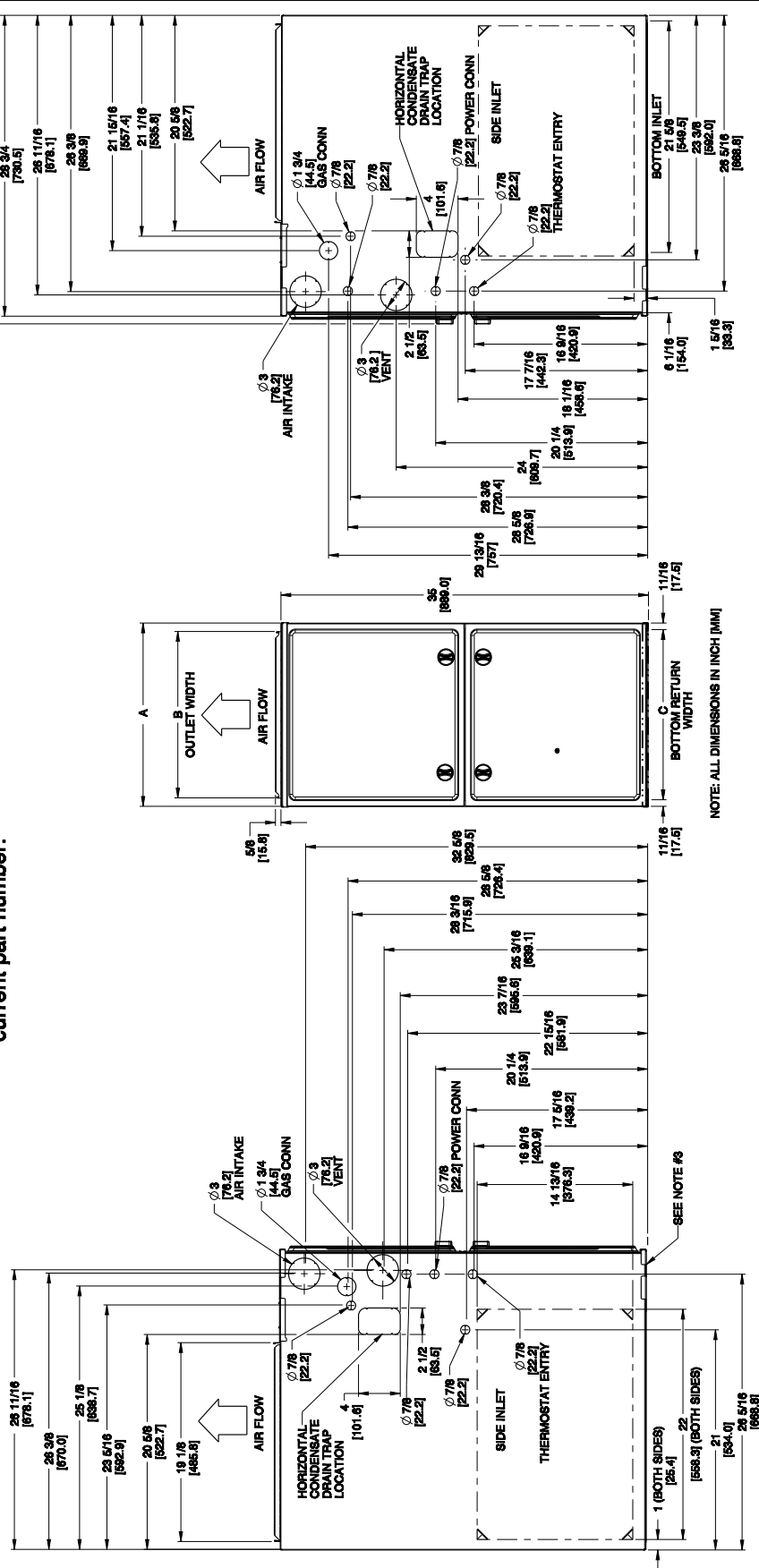
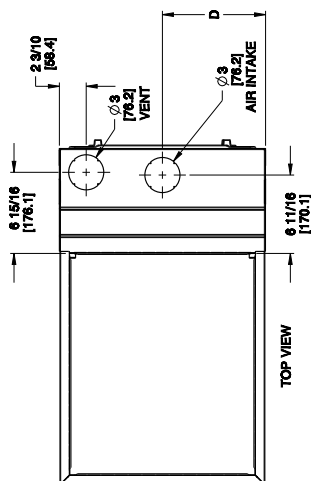
ACCESSORIES PART NUMBER IDENTIFICATION GUIDE

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)									

Heating Capacity and Efficiency							
Model Size			0601716B	0801716B	1002120B	1202420B	
Input	Heat	(BTUH)	60,000	80,000	100,000	120,000	
Output	Heat	(BTUH)	56,000	75,000	93,000	112,000	
Efficiency	AFUE % (ICS)		92.1				
Certified Temperature Rise Range °F (°C)		Heat	35–65(19–36)	35–65(19–36)	40 - 70(22 - 39)	45 - 75(25 - 42)	
Airflow Capacity and Blower Data							
Model Size			0601716B	0801716B	1002120B	1202420B	
Rated External Static Pressure in. w.c.(kPa)		Heating	0.12 (.05)	0.15 (.38)	0.20 (.050)	0.20 (.050)	
		Cooling	0.5 (.125)				
Airflow Delivery @ Rated ESP (CFM)		Heat	980	1030	1550	2070	
		Cooling	1505	1555	1970	2080	
Cooling Capacity (tons) @ 400, 350 CFM/ton		CFM/ton	3.5	4	5	5	
		CFM/ton	4	4.5	5+	5+	
Direct-Drive Motor Type			Permanent Split Capacitor (PSC)				
Direct-Drive Motor HP			0.5	0.5	0.75	0.75	
Motor Full Load Amps			7.9	7.9	11.1	11.1	
RPM Range			500-1150				
Speed Selections			4	5	4	4	
Blower Wheel Dia x Width	in.		11 x 8	11 x 8	11 x 10	11 x 11	
Air Filtration System			Field Supplied				
Filter Used for Certified Watt Data			NAHA00506FB		NAHA00706FB		
Electrical Data							
Model Size			0601716B	0801716B	1002120B	1202420B	
Input Voltage	Volts-Hertz-Phase		115-60-1				
Operating Voltage Range	Min-Max		104-127				
Maximum Input Amps	Amps		8.6	8.1	11.9	11.9	
Unit Ampacity	Amps		11.7	11.1	15.8	15.8	
Minimum Wire Size	AWG		14	14	12	12	
Maximum Wire Length @ Minimum Wire Size	Feet		31	33	36	36	
	(M)		(9.4)	(10.1)	(11.0)	(11.0)	
Maximum Fuse/Ckt Bkr (Time-Delay Type Recommended)			Amps	15	15	20	20
Transformer Capacity (24vac output)			24 VAC Output / 40 VA				
External Control Power Available	Heating		27.9 VA				
	Cooling		34.6 VA				
Controls							
Model Size			0601716B	0801716B	1002120B	1202420B	
Gas Connection Size			1/2" - NPT				
Burners (Monoport)			3	4	5	6	
Gas Valve (Redundant)	Manufacturer		White Rodgers™				
Minimum Inlet Gas pressure (in. wc)			4.5				
Maximum Inlet Gas pressure (in. wc)			13.6				
Manufactured (Mobile) Home Kit			NAHB00101MH				
Ignition Device			Silicon Nitride				
Limit Control			190	185	220	165	
Heating Blower Control (Htg Off-Delay)			Adjustable: 90, 120, 150, 180 seconds				
Cooling Blower Control (Time Delay Relay)			90 seconds				
Thermostat Connections			C, R, W, G, Y				
Accessory Connections			EAC (115vac); HUM (24vac)				

NOTES:

1. Doors may vary by model.
2. Minimum return-air openings at furnace, based on metal duct. If flex duct is used, see flex duct manufacturer's recommendations for equivalent diameters.
 - 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. (508 mm) 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 560mm) rectangle.
- d. Return air above 1800 CFM at 0.5 in. w.c. ESP on 24.5" casing, requires one of the following configurations: 2 sides, 1 side and a bottom or bottom only. See Air Delivery table in this document for specific use to allow for sufficient airflow to the furnace.
3. Vent and Combustion air pipes through blower compartment must use accessory "Vent Kit - Through the Cabinet". See accessory list for current part number.



NOTE: ALL DIMENSIONS IN INCH [MM]

SD5060-4 Rev F

FURNACE SIZE	A	B	C	D	SHIP WT. LB (KG)
	CABINET WIDTH	OUTLET WIDTH	BOTTOM INLET WIDTH	AIR INTAKE	
0601716B	17-1/2 (445)	15-7/8 (403)	16 (406)	8-3/4 (222)	142 (65)
0801716B	17-1/2 (445)	15-7/8 (403)	16 (406)	8-3/4 (222)	151 (69)
1002120B	21 (533)	19-3/8 (492)	19-1/2 (495)	10-1/2 (267)	167 (76)
1202420B	24-1/2 (622)	22-7/8 (581)	23 (584)	12-1/4 (311)	184 (84)

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)

* Consult your local building codes.

AIR DELIVERY – CFM (with filter)

SIZE	RETURN AIR CONNECTION	WIRE LEAD COLOR	COOLING TONS	CFM /TON	TEST AIRFLOW DELIVERY @ VARIOUS EXTERNAL STATIC PRESSURES									
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
0601716B	SIDE/BOTTOM	Black	4.0	376	1600	1545	1505	1475	1505	1445	1400	1330	1235	1140
		Yellow	3.5	377	1380	1340	1335	1330	1320	1285	1225	1155	1085	1000
		Blue ³	3.0	387	1190	1185	1195	1195	1160	1125	1075	1015	950	885
		Red ³	2.5	394	1030	1025	1030	1010	985	940	905	855	805	735
0801716B	SIDE/BOTTOM	Black	4.0	389	1650	1620	1640	1605	1555	1495	1425	1345	1255	1165
		Yellow	3.5	381	1420	1425	1400	1370	1335	1290	1230	1170	1095	1015
		Orange	3.0	383	1205	1205	1185	1165	1150	1100	1055	1000	935	870
		Blue	2.5	384	1035	1020	1005	985	960	930	895	845	795	735
		Red	2.0	380	850	825	805	785	760	725	695	655	600	545
1002120B	BOTTOM or TWO-SIDES ^{4,5}	Black	5.0	394	2270	2205	2130	2055	1970	1880	1780	1670	1555	1425
		Yellow	5.0	367	2090	2040	1980	1910	1835	1755	1670	1570	1460	1340
		Blue	4.0	416	1850	1815	1775	1725	1665	1600	1525	1435	1335	1225
		Red	3.5	421	1580	1550	1540	1515	1475	1420	1355	1280	1190	1100
1202420B	BOTTOM or TWO-SIDES ^{4,5}	Black	5.0	410	2385	2310	2230	2150	2050	1920	1780	1650	1540	1415
		Yellow	5.0	369	2130	2070	2010	1940	1845	1740	1630	1525	1420	1305
		Blue	4.0	416	1875	1840	1795	1735	1665	1580	1495	1410	1310	1205
		Red ³	3.5	414	1610	1585	1555	1515	1450	1395	1325	1250	1160	1080

NOTES:

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. **ADJUST THE BLOWER SPEED TAPS AS NECESSARY FOR THE PROPER AIR TEMPERATURE RISE FOR EACH INSTALLATION.**
3. Shaded areas indicate that this airflow range is BELOW THE RANGE ALLOWED FOR HEATING OPERATION. THESE AIRFLOW RANGES MAY ONLY BE USED FOR COOLING.
4. 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.
5. 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.
6. All airflows that are shown in BOLD exceed 0.58 Watts per CFM at the given external static pressure.

ACCESSORIES						
PART NUMBER	COMPONENT NAME	DESCRIPTION	0601716	0801716	1002120	1202420
NAHA00101CT	EXTERNAL TRAP KIT	CONDENSATE TRAP	X	X	X	X
NAHA00110DA	DRAIN ACCESSORY	1/2" CPVC TO 3/4" PVC (10 PACK)	X	X	X	X
NAHA002CV	VENT TERMINATION KIT	2" CONCENTRIC VENT	X	X	X	
NAHA001CV		3" CONCENTRIC VENT	X	X	X	X
NAHA00101VC	INTERNAL VENT KIT	THROUGH THE CABINET	X	X	X	X
NAHA00301VT	DIRECT VENT TERMINATION KIT	2" BRACKET	X	X	X	
NAHA00401VT		3" BRACKET	X	X	X	X
NAHA00101CK	INLET AIR PIPE COUPLING	COUPLING FOR POLYPROPYLENE VENT SYSTEMS	X	X	X	X
NAHA00101HV	HORIZONTAL INSTALLATION KIT	TRAP GROMMET (DIRECT VENT APPLICATION ONLY)	X	X	X	X
NAHA00101HH	FREEZE PROTECT KIT	CONDENSATE DRAIN LINE - TAPE	X	X	X	X
NAHA00201HH	CONDENSATE FREEZE PROTECT KIT	CONDENSATE TRAP WITH HEAT PAD	X	X	X	X
NAHA01101SB	FLOOR BASE KIT	COMBUSTIBLE FLOOR	X	X	X	X
NAHC00901LP*	GAS CONVERSION KIT	NATURAL TO PROPANE	X	X	X	X
NAHC00901NG*		PROPANE TO NATURAL	X	X	X	X
NAHB00101MH*	MANUFACTURED HOME KIT	GAS CONVERSION KIT	X	X	X	X
NAHA00506FB†	WASHABLE FILTER PACK	WASHABLE FILTER 1" X 16" X 25" (6 PACK)	X	X		
NAHA00706FB		WASHABLE FILTER 1" X 24" X 25" (6 PACK)			X	X
NAHB00601FF	EXTERNAL BOTTOM FILTER RACK	17-1/2" X 25" WASHABLE FILTER INCLUDED	X	X		
NAHB00701FF		21" X 25" WASHABLE FILTER INCLUDED			X	
NAHB00801FF		24-1/2" X 25" WASHABLE FILTER INCLUDED				X
NAHA01001FF	SIDE FILTER RACK	16" X 25" RACK - FILTER NOT INCLUDED	X	X	X	X
NAHA01006FF	SIDE FILTER PACK	16" X 25" FILTER (6 PACK)	X	X	X	X
NAHB00101CA	COIL ADAPTER KIT	WITH NO OFFSET	X	X	X	X
NAHB00201CA		WITH SINGLE OFFSET	X	X	X	X
NAHB00301CA		WITH DOUBLE OFFSET	X	X	X	X
NAHA01701RA	RETURN AIR KIT	17-1/2" WIDE	X	X		
NAHA02101RA		21" WIDE			X	
NAHA02401RA		24-1/2" WIDE				X
NAHA001NK	CONDENSATE NEUTRALIZER KIT	NEUTRALIZES CONDENSATE	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.

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