

96% AFUE, Two-Stage, Variable Speed Gas Furnace

EASIER TO SELL

- 96% AFUE, all models, all positions
- Two-stage heating operation
- Xtra SEER variable speed ECM blower motor
- Supports two-stage cooling units
- Dehumidification feature in cooling
- 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



**TSTAT0101SC
Recommended**



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

TOUGHER

- Flame roll-out sensors standard
- Adjustable heating blower OFF delay
- Factory set blower ON delay
- Stainless steel 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, one-piece steel cabinet

QUIETER

- Two-speed induced draft combustion blower
- Variable speed ECM blower motor
- Fully insulated steel cabinet

EASIER TO INSTALL AND SERVICE

- Direct vent (2-pipe), single-pipe venting or ventilated combustion air
- 24VAC humidifier terminal
- Electronic air cleaner terminal
- 35" (889mm) high, for ease of installation
- 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
- Slide out heat exchanger assembly and blower assembly

WARRANTY *

- 10 year No Hassle Replacement™ limited warranty
- Lifetime heat exchanger limited warranty with timely registration
- 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.

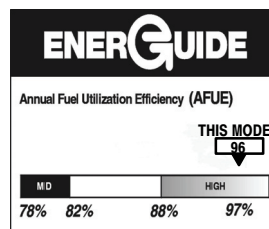
⚠ WARNING

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, manufactured (mobile) homes or outdoors.

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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)
G9MVT0401410A	40,000	96%	440–905	35 x 14–3/16 x 29.5 (889 x 361 x 750)	121 (54)
G9MVT0601714A	60,000	96%	435–1475	35 x 17–1/2 x 29.5 (889 x 445 x 750)	142 (64)
G9MVT0801716A	80,000	96%	555–1610	35 x 17–1/2 x 29.5 (889 x 445 x 750)	152 (68)
G9MVT1002116A	100,000	96%	480–1805	35 x 21 x 29.5 (889 x 533 x 750)	166 (75)
G9MVT1202422A	120,000	96%	480–2115	35 x 24–1/2 x 29.5 (889 x 622 x 750)	190 (86)

MODEL NUMBER IDENTIFICATION GUIDE

DIGIT POSITION	1	2	3	4	5	6,7,8	9,10	11,12	13	14
G = Mainline	G	9	M	V	T	060	14	12	A	1
N = Entry										
9 = 90+% AFUE	EFFICIENCY									
M = Multiposition	POSITION									
A = Modulating ECM Variable Speed Blower										
V = ECM Variable Speed										
X = ECM Blower										
S = Single-stage										
T = Two-stage	TYPE									
C = Communicating										
E = Extra AFUE Efficiency										
T = Two-Stage	FEATURE									
040 = 40,000 BTU/hr										
060 = 60,000 BTU/hr										
080 = 80,000 BTU/hr										
100 = 100,000 BTU/hr										
120 = 120,000 BTU/hr	HEAT INPUT									
14 = 14-3/16"										
17 = 17-1/2"										
21 = 21"										
24 = 24-1/2"	CABINET WIDTH									
08 = 800 CFM										
12 = 1200 CFM										
14 = 1400 CFM										
16 = 1600 CFM										
20 = 2000 CFM										
22 = 2200 CFM	NOMINAL MAXIMUM COOLING AIRFLOW @ .5 IN. W.C.									
SALES (MAJOR) REVISION DIGIT										
ENGINEERING (MINOR) REVISION DIGIT										

ECM—Electronically Commutated Motor

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	MAJOR SERIES						
B = 2nd Generation							
Product Identifier Number							
Package Quantity							
Type of Kit (Example: DH = Draft Hood – Chimney Adapter)							

PHYSICAL DATA

UNIT SIZE (NATURAL GAS Ratings)			0401410A	0601714A	0801716A	1002116A	1202422A
Input	High Heat	(BTUH)	40,000	60,000	80,000	100,000	120,000
	Low Heat	(BTUH)	26,000	39,000	52,000	65,000	78,000
Output	High Heat	(BTUH)	39,000	58,000	78,000	98,000	117,000
	Low Heat	(BTUH)	25,000	38,000	50,000	63,000	76,000
Efficiency	AFUE % (ICS)		96.0				
Certified Temperature Rise Range °F (°C)	High Heat		40–70(21–38)	35–65(19–36)	40–70(21–38)	45–75(25–41)	45–75(25–41)
	Low Heat		30–60(17–33)	30–60(17–33)	30–60(17–33)	30–60(17–33)	30–60(17–33)

ICS — Isolated Combustion System

AIRFLOW CAPACITY AND BLOWER DATA

			0401410A	0601714A	0801716A	1002116A	1202422A
Certified External Static Pressure in. w.c.(kPa)	Heating		.10 (.025)	.12 (.030)	.15 (.038)	.20 (.050)	.20 (.050)
	Cooling		.5 (.125)				
Airflow Delivery @ Rated ESP (CFM)	High Heating		815	1135	1510	2035	2375
	Low Heating		660	860	860	1530	1675
	Cooling		905	1475	1610	1805	2115
Cooling Capacity (tons) @ 400, 350 CFM/ton	400		2	3.5	4	4.5	5
	350		2.5	4	4.5	5	6
Direct-Drive Motor Type			Electronically Communicated Motor (ECM)				
Direct-Drive Motor HP			1/2	3/4	3/4	1	1
Motor Full Load Amps			6.8	8.4	8.4	10.9	10.9
RPM Range			600–1200				
Speed Selections			PWM – Variable				
Blower Wheel Dia x Width		inches	11 x 7	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	

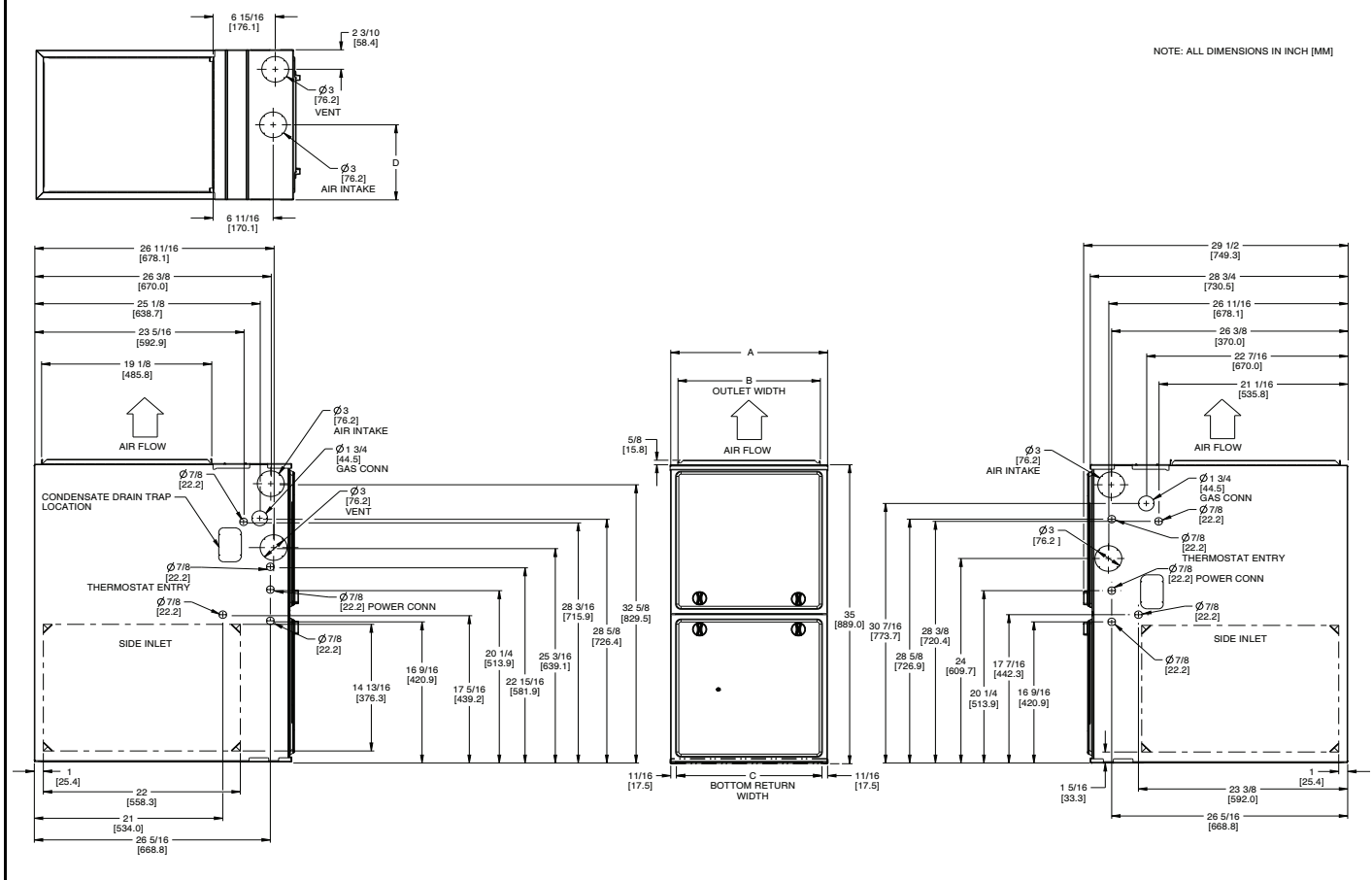
CONTROLS

		0401410A	0601714A	0801716A	1002116A	1202422A
Gas Connection Size		1/2" – NPT				
Burners (Monoport)		2	3	4	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		NAHA01001LP				
Gas Conversion Kit – Propane to Natural		NAHA01001NG				
Manufactured (Mobile) Home Kit		Not approved for Manufactured (Mobile) Home use				
Ignition Device		Silicon Nitride				
Limit Control		165	180	170	160	160
Heating Blower Control (Heating Off-Delay)		Adjustable: 90, 120, 150, 180 seconds				
Cooling Blower Control (Time Delay Relay)		90 seconds				
Observer Control System		TSTAT0101SC				
Thermostat Connections		W2, Y1, DHUM, G C W/W1, Y/Y2, R				
Accessory Connections		EAC (115vac); HUM (24vac); 1–Stg. AC (via Y/Y2)				

ELECTRICAL DATA

			0401410A	0601714A	0801716A	1002116A	1202422A
Input Voltage (Volts–Hertz–Phase)			115–60–1				
Operating Voltage Range		Min–Max	104 – 127				
Maximum Input Amps		Amps	8.2	9.8	9.8	12.3	12.3
Unit Ampacity		Amps	11.0	13.0	13.0	16.1	16.1
Minimum Wire Size		AWG	14	14	14	12	12
Maximum Wire Length @ Minimum Wire Size		Feet (M)	33 (10.1)	28 (8.5)	28 (8.5)	35 (10.7)	35 (10.7)
Maximum Fuse/Circuit Breaker (Time–Delay Type Recommended)		Amps	15	15	15	20	20
Transformer Capacity (24 vac Output)			40 VA				
External Control Power Available	Heating		24.3 VA				
	Cooling		34.6 VA				

UNIT DIMENSIONS



FURNACE SIZE	A	B	C	D	SHIP WT. LB (KG)
	CABINET WIDTH	OUTLET WIDTH	BOTTOM INLET WIDTH	AIR INTAKE	
40,000	14 3/16 (361)	12 1/2 (319)	12 9/16 (322)	7 1/8 (181)	121 (54)
60,000	17-1/2 (445)	15-7/8 (403)	16 (406)	8 3/4 (222)	141 (63)
80,000	17-1/2 (445)	15-7/8 (403)	16 (406)	8 3/4 (222)	152 (68)
100,000	21 (533)	19-3/8 (492)	19-1/2 (495)	10 1/2 (267)	166 (75)
120,000	24-1/2 (622)	22-7/8 (581)	23 (584)	12 1/4 (311)	190 (86)

NOTE: Doors may vary by model.

- 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. (508mm) 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.
- 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)

COOLING⁴ AND HEATING AIR DELIVERY - CFM (Bottom Return⁵ with filter)

INPUT BTUH	Cooling Switch Settings			External Static Pressure (ESP) in. w.c.									
	SW2-3	SW2-2	SW2-1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
40,000													
	OFF	OFF	OFF	1125	1080	1020	970	905	855	805	755	700	635
	OFF	OFF	ON	615	555	510	475	440	395	355	270	230	note 7
	OFF	ON	OFF	785	740	695	665	630	590	565	520	485	450
	OFF	ON	ON	990	950	910	875	850	815	770	720	670	615
	ON	OFF	OFF	1125	1080	1020	970	905	855	805	755	700	635
	ON	OFF	ON	1125	1080	1020	970	905	855	805	755	700	635
	ON	ON	OFF	1125	1080	1020	970	905	855	805	755	700	635
	ON	ON	ON	1125	1080	1020	970	905	855	805	755	700	635
	Maximum Clg Airflow ²			1125	1080	1020	970	905	855	805	755	700	635
	High Heat Airflow ³			815	770	725	695	660	625	595	550	510	475
	Low Heat Airflow ³			660	605	560	530	495	450	415	340	300	note 7
60,000													
	OFF	OFF	OFF	1330	1295	1260	1220	1190	1150	1110	1075	1045	1005
	OFF	OFF	ON	725	660	600	520	435					
	OFF	ON	OFF	780	725	660	615	540					
	OFF	ON	ON	975	925	875	835	785	750	690	655	610	570
	ON	OFF	OFF	1160	1120	1090	1045	1010	970	920	885	840	800
	ON	OFF	ON	1330	1295	1260	1220	1190	1150	1110	1075	1045	1005
	ON	ON	OFF	1705	1650	1595	1545	1475	1415	1340	1275	1200	1105
	ON	ON	ON	1705	1650	1595	1545	1475	1415	1340	1275	1200	1105
	Maximum Clg Airflow ²			1705	1650	1595	1545	1475	1415	1340	1275	1200	1105
	High Heat Airflow ³			1145	1105	1075	1030	995	955	905	870	825	785
	Low Heat Airflow ³			870	820	760	720	655	620	560	525	470	435
80,000													
	OFF	OFF	ON	775	635	455	230	note 7					
	OFF	ON	OFF	840	740	675	625	555					
	OFF	ON	ON	995	955	910	860	815	770	720	660	620	585
	ON	OFF	OFF	1175	1140	1090	1060	1025	980	940	905	855	815
	ON	OFF	ON	1325	1280	1245	1210	1180	1140	1105	1070	1025	990
	ON	ON	OFF	1545	1515	1480	1445	1410	1380	1350	1315	1245	1175
	ON	ON	ON	1805	1765	1720	1665	1610	1540	1475	1400	1315	1235
	Maximum Clg Airflow ²			1805	1765	1720	1665	1610	1540	1475	1400	1315	1235
	High Heat Airflow ³			1520	1490	1455	1420	1385	1355	1320	1285	1220	1155
	Low Heat Airflow ³			1180	1145	1095	1065	1030	985	945	910	860	820

COOLING⁴ AND HEATING AIR DELIVERY - CFM (Bottom Return⁵ with filter)

(SW1-5 and SW4-3 set to OFF, except as indicated. See notes 1 and 2)

INPUT BTUH	Cooling Switch Settings			External Static Pressure (ESP) in. w.c.									
	SW2-3	SW2-2	SW2-1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
100,000													
	OFF	OFF	OFF	2115	2035	1965	1890	1805	1725	1625	1540	1435	1345
	OFF	OFF	ON	870	715	585	525	450					
	OFF	ON	OFF	1025	950	900	835	770					
	OFF	ON	ON	1210	1165	1105	1055	1000	950	895	845	800	735
	ON	OFF	OFF	1400	1355	1295	1250	1205	1155	1110	1060	1020	960
	ON	OFF	ON	1615	1570	1525	1485	1435	1395	1345	1310	1260	1210
	ON	ON	OFF	2115	2035	1965	1890	1805	1725	1625	1540	1435	1345
	ON	ON	ON	2115	2035	1965	1890	1805	1725	1625	1540	1435	1345
	Maximum Clg Airflow ²			2115	2035	1965	1890	1805	1725	1625	1540	1435	1345
	High Heat Airflow ³			2115	2035	1965	1890	1805	1725	1625	1540	1435	1345
	Low Heat Airflow ³			1575	1530	1485	1445	1395	1350	1305	1265	1215	1165
INPUT BTUH	Cooling Switch Settings			External Static Pressure (ESP) in. w.c.									
	SW2-3	SW2-2	SW2-1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
120,000													
	OFF	OFF	OFF	2010	1960	1910	1850	1800	1750	1690	1645	1565	1480
	OFF	OFF	ON	1015	805	645	550	480					
	OFF	ON	OFF	1075	975	915	835	765					
	OFF	ON	ON	1205	1135	1055	1000	935					
	ON	OFF	OFF	1400	1330	1260	1190	1145	1080	1035	970	905	845
	ON	OFF	ON	1615	1550	1500	1435	1370	1325	1265	1215	1160	1110
	ON	ON	OFF	2010	1960	1910	1850	1800	1750	1690	1645	1565	1480
	ON	ON	ON	note 7	2375	2300	2205	2115	2010	1890	1750	1645	1550
	Maximum Clg Airflow ²			note 7	2375	2300	2205	2115	2010	1890	1750	1645	1550
	High Heat Airflow ³			note 7	2375	2300	2205	2115	2010	1890	1750	1645	1550
	Low Heat Airflow ³			1735	1675	1625	1560	1500	1455	1395	1345	1285	1225

- Nominal 350 CFM/ton cooling airflow is delivered with SW1-5 and SW4-2 set to OFF.
Set both SW1-5 and SW4-3 to ON for +7% airflow (nominal 370 CFM/ton).
Set SW1-5 to ON and SW4-3 to OFF for +15% airflow (nominal 400 CFM/ton).
Set SW4-3 to ON and SW1-5 to OFF for -7% airflow (nominal 325 CFM/ton).
- Maximum cooling airflow is achieved when switches SW3-1, SW3-2, SW3-3 and SW1-5 are set to ON, and SW4-3 is set to OFF.
- All heating CFM's are when low heat rise adjustment switch (SW1-3) and comfort/efficiency adjustment switch (SW1-4) are both set to OFF.
- Ductwork must be sized for high-heating CFM within the operational range of ESP. Operation within the blank areas of the chart is not recommended because high-heat operation will be above 1.0 ESP.
- All airflows on 21" casing size furnaces are 5% less on side return only installations.
- Side returns for 24.5" casing sizes require two sides, or side and bottom, to allow sufficient airflow at the return of the furnace.
- Airflow not stable at this ESP.

ACCESSORIES							
PART NUMBER	COMPONENT NAME	DESCRIPTION	0401410	0601714	0801716	1002116	1202422
NAHA00101VC	VENT KIT	THROUGH CABINET	X	X	X	X	X
NAHA002CV	VENT TERM KIT	CONCENTRIC VENT 2"	X	X	X	X	
NAHA001CV	VENT TERM KIT	CONCENTRIC VENT 3"		X	X	X	X
NAHA00110DA	DRAIN ACCESSORY	1/2 INCH CPVC TO 3/4 INCH PVC (10 PACK)	X	X	X	X	X
NAHA00101HV	HORIZONTAL INSTALLATION KIT	TRAP GROMMET	X	X	X	X	X
NAHA00101HH	FREEZE PROTECT KIT	CONDENSATE DRAIN LINE - TAPE	X	X	X	X	X
NAHA00201HH	FREEZE PROTECT KIT	HEAT PATCH FOR DRAIN TRAP	X	X	X	X	X
NAHA01101SB	FLOOR BASE KIT	COMBUSTIBLE FLOOR	X	X	X	X	X
NAHA01001LP*	GAS CONVERSION KIT	NATURAL TO PROPANE	X	X	X	X	X
NAHA01001NG*	GAS CONVERSION KIT	PROPANE TO NATURAL	X	X	X	X	X
NAHA00506FB†	WASHABLE FILTER PACK	WASHABLE FILTER, 1 INCH 16 X 25 (6 PACK)	X	X	X		
NAHA00706FB	WASHABLE FILTER PACK	WASHABLE FILTER, 1 INCH 24 X 25 (6 PACK)				X	X
NAHB00501FF	EXTERNAL BOTTOM FILTER RACK	14 X 25 INCH WASHABLE FILTER INCLUDED	X	X	X		
NAHB00601FF	EXTERNAL BOTTOM FILTER RACK	17.5 X 25 INCH WASHABLE FILTER INCLUDED		X	X		
NAHB00701FF	EXTERNAL BOTTOM FILTER RACK	21 X 25 INCH WASHABLE FILTER INCLUDED				X	
NAHB00801FF	EXTERNAL BOTTOM FILTER RACK	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
TSTAT0101SC	OBSERVER CONTROL SYSTEM	SELF-CONFIGURATING COMMUNICATING CONTROL	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.

Part Number	Gas Type	Orifice Size	Part Number	Gas Type	Orifice Size
1185612	Natural	42	1184256	Propane	54
1176928	Natural	43	1185615	Propane	55
1185574	Natural	44	1185616	Propane	56
1177213	Natural	45	1185617	Propane	1.25 mm
1183809	Natural	46	1185618	Propane	1.30 mm
1185613	Natural	47			
1185614	Natural	48			