

Technical Specifications



9700 - B SERIES (NUV)

Napoleon Two Stage, Variable Speed,
Condensing Gas Furnace

Up to 97.1% AFUE Certified through AHRI
Input 40,000 - 120,000 Btuh



The Ultimate 9700 Series High Efficiency Gas Furnace is certified for upflow installation only, and requires zero clearance.

Certified by CSA for application in Canada and the United States.

FEATURES and BENEFITS

- Furnace is less than 33" (838 mm) tall!
- Variable Speed ECM EON Blower Motor
- 409 SS Wrinkle Bent Primary Heat Exchanger Tubes
- 29-4C Stainless Steel Heat Recovery Coil
- Aluminized Multi-Port In-Shot Burners
- Self Diagnostic Integrated Furnace Control
- Durable powder coated, acoustically, and thermally Insulated Cabinet
- Zero Clearance, up flow position only
- Direct and Single Vent installation approved
- Concentric Venting Approved
- 100% Units factory fired
- Internal Condensate Trap
- Clear Front Manifold Cover
- Easy Blower removal
- Sealed Vestibule and Blower Compartments for quiet operation
- Natural Gas and LP (propane) only
- Low fire is 60% of high fire rate
- Built in LED lights in upper and lower compartments
- Insulated Front Door
- Factory installed Ultra Violet Light Air Purifier
- Napoleon Elite Communicating Thermostat ready

WARRANTY

PRESIDENT'S LIMITED WARRANTY (Registered)

To the original registered owner and his or her spouse ("owner"), the **HEAT EXCHANGER*** is warranted for the owner's **LIFETIME** or so long as the owner owns the home in which the unit was originally installed, and **all remaining parts** as warranted for a period of **10 YEARS**, except as provided below. These warranties apply only if:

- The unit is installed in an owner-occupied, primary single family residence, and
- The unit is properly registered with Napoleon online within 60 days after the original installation. To register, go to www.napoleonheatingandcooling.com. Some states and provinces do not allow limitations on how long an implied limited warranty lasts or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This limited warranty gives you specific legal rights, and you may also have other rights which vary by jurisdiction.

With respect to the Heat Exchanger, if the heat exchanger fails within:

- the first 10 years for 9500 / 9600E / 9600 Series
- the first 15 years for 9700 Series

Napoleon will, at its discretion, provide a new equivalent gas furnace. After the 10 years (15 years - 9700 Series), Napoleon may choose to credit its prorated wholesale value towards the purchase of a new Napoleon furnace.

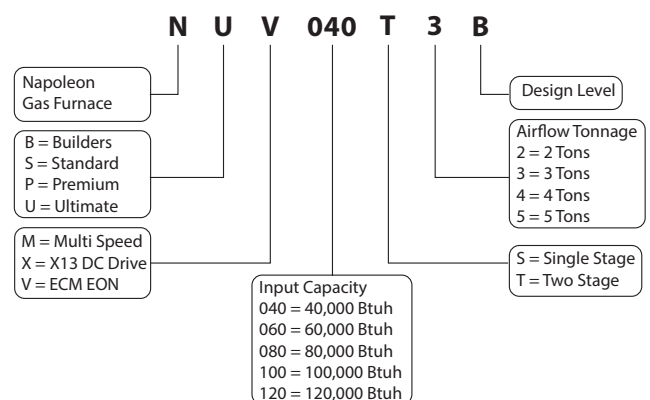
OR

LIMITED WARRANTY (Not Registered)

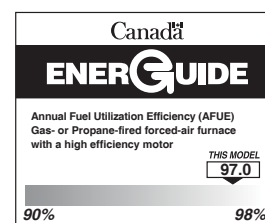
If not registered within 60 days, the **HEAT EXCHANGER** is warranted for a period of **20 YEARS** (pro rated), and all remaining parts are warranted for a period of **5 YEARS**, all other limitations apply.

With respect to the heat exchanger, Napoleon at its discretion, after 5 years may choose to provide a credit towards a replacement Napoleon gas furnace.

MODEL BREAKDOWN



H12.12.11A



MODEL BREAKDOWN continued

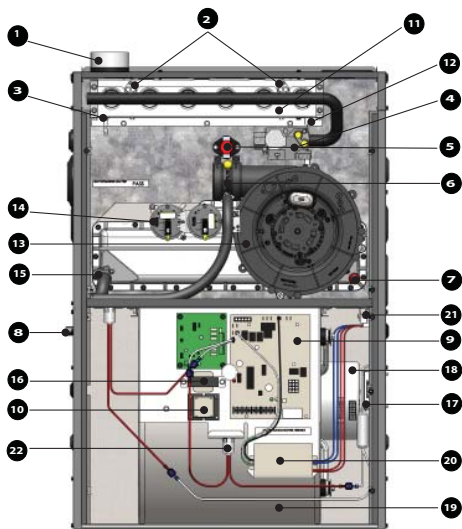
HEATING CAPACITIES

9700 - B SERIES	NUV040T2B	NUV060T3B	NUV080T3B	NUV080T4B	NUV100T5B	NUV120T5B
MOTOR	ECM EON	ECM EON	ECM EON	ECM EON	ECM EON	ECM EON
EFFICIENCY (AFUE)	97.0%	97.1%	97.0%	97.0%	97.0%	97.0%
INPUT BTU/HR 0-4500'	40,000	60,000	80,000	80,000	100,000	NG 120,000 LP 115,000
OUTPUT BTU/HR 0-4500'	38,800	58,260	77,600	77,600	97,000	NG 116,400 LP 111,550

AIRFLOW COOLING

9700 - B SERIES	NUV040T2B	NUV060T3B	NUV080T3B	NUV080T4B	NUV100T5B	NUV120T5B
MOTOR	ECM EON	ECM EON	ECM EON	ECM EON	ECM EON	ECM EON
BLOWER SIZE	10-6TDD	12-7TDD	12-7TDD	12-10TDD	12-10TDD	12-10TDD
MOTOR TYPE AND SIZE	1/3HP	1/2HP	1/2HP	3/4HP	3/4HP	1HP
MAXIMUM CFM AC	940	1125	1125	1500	1750	1750
MINIMUM CFM AC	560	560	560	750	700	700
AC TONNAGES	1½, 2, 2½	1½, 2, 2½, 3	1½, 2, 2½, 3	2, 3, 4, 5	2, 3, 4, 5	2, 3, 4, 5

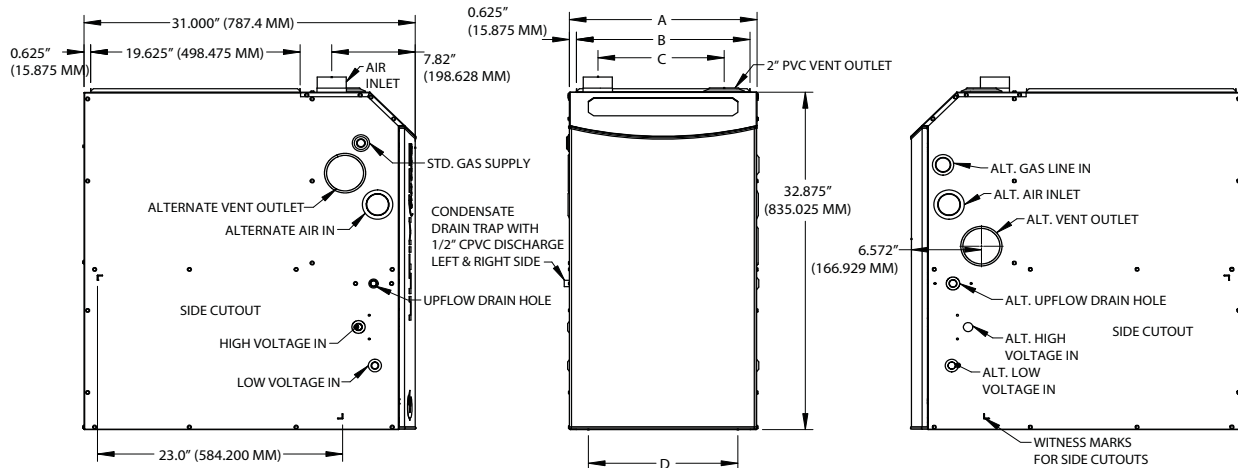
GAS FURNACE COMPONENTS



LEGEND

1. Combustion Air Intake Fitting
2. Flame Roll-Out Switch (2)
3. Flame Sensor - *located underneath*
4. Two Stage Gas Valve
5. Supply Air High Temperature Limit
6. Vent and Drain (Assembly) Coupling
7. Drain for Recovery Coil (3)
8. Condensate Trap
9. Two Stage Integrated Furnace Control (IFC)
10. Transformer for 24 VAC / 40 VA
11. Burner Assembly
12. Hot Surface Igniter (HSI)
13. Two Speed Exhauster
14. Pressure Switch Assembly
15. Front Manifold Cover Pressure Tap (3)
16. PFC "Choke Coil" (used on ¾ and 1 Hp units only)
17. Door Switch and Junction Box
18. Blower Motor
19. Circulating Air Blower
20. UV Light Ballast
21. UV Light Bulb
22. LED Service Light

CABINET DIMENSIONS



CABINET DIMENSIONS continued

TABLE A - FURNACE DIMENSIONS

INPUT K/Btu/hr	OUTPUT HIGH K/Btu/hr	INPUT LOW K/Btu/hr	OUTPUT LOW K/Btu/hr	Width A	Depth B	Height C	Supply Air (F x G)	Return Air (D x E)
40	39	24	23	17 1/2" (445 mm)	31" (787 mm)	32 7/8" (835 mm)	16 1/2" x 19 5/8" (419 mm x 499 mm)	14" x 23" (356 mm x 584 mm)
60	58	36	35					
80-3*	78	48	47					
80-4**								
100				97				
120	116	72	70	22 1/2" (572 mm)	21 1/2" x 19 5/8" (546 mm x 499 mm)			

NOTE: * 3 TON, ** 4 TON

H12.6.8

BLOWER PERFORMANCE

TABLE 7A - AIR FLOW (Y1-LOW COOL)					TABLE 7B - AIR FLOW (Y2-HIGH COOL)				
ECM EON		ESP 0.1" to 1.0" w.c.			ECM EON		ESP 0.1" to 1.0" w.c.		
Input	A/C Tonnage	ADJUST Jumper	COOL Jumper	CFM	Input	Max A/C Tonnage	ADJUST Jumper	COOL Jumper	CFM
40000	N/A	NORM	A	N/A	40000	2½ TON	NORM	A	940
			B	N/A				B	750
			C	N/A				C	560
			D	N/A				D	N/A
60000	N/A	NORM	A	675	60000	3 TON	NORM	A	1125
			B	564				B	940
			C	N/A				C	750
			D	N/A				D	560
80000	3 TON	NORM	A	675	80000	3 TON	NORM	A	1125
			B	564				B	940
			C	N/A				C	750
			D	N/A				D	560
	4 TON		A	900	80000	4 TON		A	1500
			B	675				B	1125
			C	564				C	940
			D	N/A				D	750
100000	N/A	NORM	A	1050	100000	5 TON	NORM	A	1750
			B	540				B	1400
			C	630				C	1050
			D	N/A				D	700
120000	N/A	NORM	A	1050	120000	5 TON	NORM	A	1750
			B	840				B	1400
			C	630				C	1050
			D	N/A				D	700

NOTE: Moving the ADJUST jumper from the NORM position to the (+) or (-) position will increase or lower the CFM by 15%. Airflow based on approximately 375 CFM/Ton. Refer to Figure 39 in the manual.

H12.1.8A

TABLE 9 - CONTINUOUS FAN CFM

Input K/Btu/hr	Motor HP	COOL Jumper	ADJUST Jumper	Continuous Fan (CFM)
040-2	1/3	A	NORM	600
060-3	1/2			
080-3*				3/4
080-4**	1			
100-5				1
120-5	930			

Note: Moving the ADJUST jumper from the NORM position to the (+) or (-) position will increase or lower the continuous fan CFM by 15%
* 3 TON, ** 4 TON

H12.3.7

HIGH ALTITUDE

In Canada, this furnace does not need to be converted for high altitude (2000-4500ft), when the fuel source is natural gas. It has been certified to operate at high altitude as manufactured. If the fuel source is liquid propane, refer to High Altitude Specifications table for appropriate derate above 2000ft based on a 4% reduction of input capacity for every 1000ft above sea level.

In the United States, this furnace does not need to be converted for high altitude from (2000-5400ft), when the fuel source is natural gas. It has been certified to operate at high altitude as manufactured up to 5400ft only. Beyond 5400ft the modifications are based on a 4% reduction of input capacity for every 1000ft above sea level. High Altitude Specifications table illustrates the impact of altitude at selected elevations and when fuel source is liquid propane. If the fuel source is liquid propane, refer to High Altitude Specifications table for appropriate derate above 2000ft based on a 4% reduction of input capacity for every 1000ft above sea level. Consult with local fuel suppliers or authorities to determine local regulations or customs.

H18.1B

TABLE 6 - HIGH ALTITUDE SPECIFICATIONS

Input K/Btu/hr	ALTITUDE	ORIFICE SIZE (DMS)
		NATURAL
40/60/80 100/120	0-2000 (0-610 m)	45
	2000-3000 (610-914 m)	
	3000-4000 (914-1219 m)	
	4000-5000 (1219-1524 m)	
	5000-5400 (1524-1646 m)	51
	5400-6000 (1646-1829 m)	
	6000-7000 (1829-2134 m)	
	7000-8000 (2134-2438 m)	
	8000-9000 (2438-2743 m)	
	9000-10000 (2743-3048 m)	

H12.8.6

VENTING

In Canada:

Furnace must be vented with S636 PVC or PPE

In United States:

- Schedule 40 PVC, ASTM D1785 or CSA B137.3
- PVC-DWV, ASTM D2665 or CSA B181.2
- Schedule 40 CPVC, ASTM F441 or CSA 137.6
- PVC PRIMER AND SOLVENT CEMENT: ASTM D2564
- PPE ULC S636

TABLE 4 - DIRECT AND NON-DIRECT VENT LENGTHS
Maximum Allowable Length Of Exhaust Or Intake. Minimum Vent Length 15 ft. (4.6 m) or equivalent.

INPUT K/Btu/hr	PIPE SIZE	NUMBER OF 90° ELBOWS							NOTES
		0	1	2	3	4	5	6	
40**	1½	60*	55	50	45	40	35	30	1. Count concentric vent fitting as straight pipe. 2. Use medium or long sweep elbows where possible. 3. One 90° elbow is equivalent to two 45° elbows. 4. For direct vent, the listed lengths are allowed for each vent (intake and exhaust). 5. For non-direct vent, the listed lengths are allowed for exhaust. The intake should have a 1½" or 2" snorkel intake fitting. (Figure 7)
	2	75*	70	65	60	55	50	45	
60	1½	60*	55	50	45	40	35	30	
	2	75*	70	65	60	55	50	45	
80	3	100*	95	90	85	80	75	70	
	2	50*	45	40	35	30	25	20	
100	3	100*	95	90	85	80	75	70	
	2	50*	45	40	35	30	25	20	
120	3	100*	95	90	85	80	75	70	

NOTE When 1½" or 3" pipe is used, exit the cabinet with 2" pipe. Reduce or increase immediately after exiting the cabinet on both intake and exhaust.
 * **Maximum allowable vent (intake and exhaust) length.**
 ** **40 K units must be vented with 1½" venting if total run length is to be less than 25 ft. (7.6m).**

EQUIVALENTS:

- Short Radius Elbow = 7 ft (2.13m)
- Standard Radius Elbow = 5 ft (1.52m)
- Long Radius Elbow = 3 ft (0.91m)
- 45 Degree Elbow = 2.5 ft (0.76m)
- Tee

Vent lengths that require more than 6-90° elbows, add listed equivalents for every elbow up to the maximum allowable vent length.



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 technical inquiries: hvacsupport@napoleonproducts.com



ACCESSORIES

PART NUMBER	DESCRIPTION	WT/lbs.
NNA-NC1625-A	MEDIA AIR CLEANER (MERV11) (16" X 25")	2
W250-0009	FILTER - 3 PACK (MERV11)	1
W370-0018	CONVERSION KIT - NATURAL TO LP	1
W370-0031	CONVERSION KIT - LP TO NATURAL	1
W370-0019	CONCENTRIC VENT KIT - 2"	5
W370-0020	CONCENTRIC VENT KIT - 3"	9
W370-0026	HIGH ALTITUDE CONVERSION KIT	1
NT144HCNPH	THERMOSTAT, 1H/1C NON PROGRAMMABLE HORIZONTAL	1
NT144HCNPV	THERMOSTAT, 1H/1C NON PROGRAMMABLE VERTICAL	1
NT151HCPV	THERMOSTAT, 1H/1C 5/2 DAY PROGRAMMABLE VERTICAL	1
NT86HCEZ	THERMOSTAT, 1H/1C EZ SET NON PROGRAMMABLE	1
NT853H2CP	THERMOSTAT, 3H/2C 7 DAY PROGRAMMABLE 4" LCD	1
NT953H2CP	THERMOSTAT, 3H/2C 7 DAY PROGRAMMABLE 12" TOUCH SCREEN	1

REPLACEMENT PARTS

Part Number	Part Description
W010-3494	KIT, SMALL FMC W/O CHOKES 40/60/80
W010-3495	KIT, LARGE FMC W/O CHOKES 100/120
W010-2558	EXHAUSTER, TWO SPEED GENTEK
W010-2559	BLOWER, 12-7T HOUSING 60/80
W010-2560	BLOWER, 12-10T HOUSING 100/120
W010-2561	CONTROL, INTERGRATED ECM
W010-2562	SENSOR, FLAME - REPLACEMENT
W010-2563	FUSE, 5 AMP
W010-2564	IGNITER, 601 TYPE TB 120V
W010-2567	SWITCH, HEAT LIMIT 140°F - 20°F
W010-2568	SWITCH, BURNER ROLLOUTS REPL 350°F
W010-2569	SWITCH, PRESSURE UNIT TRIPLE
W010-2571	TRANSFORMER, CHOKE COIL
W010-2572	TRANSFORMER, 120V / 24V 40VA
W010-2573	VALVE, TWO STAGE
W010-2610	BLOWER, 10-6T HOUSING 40
W010-2744	ASSY, MOTOR KIT 1/2 HP ECM 2.3 / EON 60 9700
W010-2745	ASSY, MOTOR KIT 1/2 HP ECM 2.3 / EON 80 9700
W010-2746	ASSY, MOTOR KIT 3/4 HP ECM 2.3 / EON 100 9700
W010-2747	ASSY, MOTOR KIT 1 HP ECM 2.3 / EON 120 9700
W010-2757	SWITCH, BLOWER DOOR 3 PRONG SDPT
W010-2768	ASSY, CONDENSATE TRAP
W010-2784	KIT, LED CABINET LIGHTS
W010-2785	KIT, UV REPLACEMENT BULB
W010-3116	ASSY, MOTOR KIT 1/3 HP ECM 2.3 / EON 40 9700
W020-0647	BAGGIE, REPLACEMENT PARTS