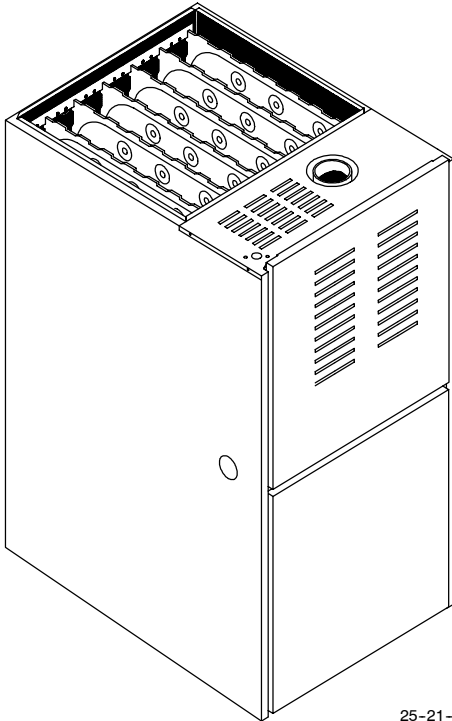


## 2-STAGE VARIABLE SPEED UPFLOW/HORIZONTAL

### SoftSound Plus™ 80



25-21-65

Representative photo only, some models may vary in appearance.

**MANUFACTURED FOR NATURAL GAS  
CONVERTIBLE TO (LP) PROPANE GAS**

**NOTE:** These furnaces are not designed for installation in a corrosive atmosphere, containing Chlorine, Fluorine, or any other damaging chemicals.

#### WARNING

This furnace is not designed for use inside mobile homes, trailers, or recreational vehicles. Such use could result in property damage, bodily injury, and/or death.

#### OPERATION

- 80% AFUE efficiency range.
- 2-Stage heating operation.
- Enclosed burners for quiet operation.
- Hot surface pilot ignition device.
- 2-Speed induced draft combustion blower.
- DC motor provides efficient, quiet operation.

#### HEAT EXCHANGER

- Four pass, non-welded, aluminized steel heat exchanger.
- 25 year limited warranty on heat exchanger.

#### VENTING

- Category I venting.

#### BURNER ASSEMBLY

- In-shot monoport, low NOx burners.

#### BLOWER ASSEMBLY

- Variable speed, prelubricated DC motors. Dynamically balanced.
- Resilient mounted motors to reduce vibration and noise.
- Entire blower assembly mounted on rails for easy service.

#### WIRING CENTER

- 40VA transformer.
- Color coded wiring harness.
- Terminal board allows easy selection of motor speeds.
- Electronic air cleaner and humidifier connections provided.
- Factory pre-wired.

#### CABINET

- Prepainted cabinet & doors.
- Fully insulated cabinet.

#### SAFETY

- Controls monitor system for safety.
- Diagnostic fault codes provide fast accurate service.
- 2-Stage redundant gas valve.
- High temperature limit control.
- Flue blockage pressure switch.
- Blower door interlock switch prevents furnace operation if door is removed.

#### INSTALLATION

- May be installed as an upflow furnace or as a horizontal left or right furnace.
- Compact 40" design.
- Convertible to (LP) Propane Gas.
- 0" clearances on sides and back.
- Filters and filter rack standard.
- California NOx approved.
- Single or two-stage thermostat compatibility.



## FURNACE SPECIFICATIONS UPFLOW HORIZONTAL

Model Number	NATURAL GAS	VNE050B12	VNE075F14	VNE100J20	VNE125J20
INPUT (btuh)	Hi Fire Lo Fire	50,000 35,000	75,000 52,500	100,000 70,000	125,000 87,500
HTG. CAP. (btuh)	Hi Fire Lo Fire	40,000 28,000	59,000 42,000	79,000 56,000	99,000 72,000
AFUE % (ICS)		80.0%	80.0%	80.0%	80.0%
CSE		73.0%	73.0%	73.0%	73.0%
NOx (Ng/J)		<40	<40	<40	<40
TEMP. RISE (deg. F)	Hi Fire Lo Fire	35 - 65 35 - 65	35 - 65 35 - 65	45 - 75 45 - 75	40 - 70 40 - 70
VOLTS/PH/HZ		115/60/1	115/60/1	115/60/1	115/60/1
F.L.A.		5.3	5.3	12	12
TRANSFORMER (V.A.)		40	40	40	40
GAS PIPE SIZE (IN.)		1/2	1/2	1/2	1/2
CATEGORY I VENT SIZE		3"	4"	4"	5"
COOLING CAP.		3.0 TON	3.5 TON	5.0 TON	5.0 TON
FILTER SIZE (IN.) (1 required)		14 x 25 x 1	14 x 25 x 1	16 x 25 x 1 (2)	16 x 25 x 1 (2)
SHIPPING WEIGHT (LBS.)		127	129	159	177
DIMENSIONS (in.) HEIGHT		40	40	40	40
WIDTH X DEPTH		15 <sup>1</sup> / <sub>2</sub> x 28 <sup>1</sup> / <sub>2</sub>	19 <sup>1</sup> / <sub>8</sub> x 28 <sup>1</sup> / <sub>2</sub>	22 <sup>3</sup> / <sub>4</sub> x 28 <sup>1</sup> / <sub>2</sub>	22 <sup>3</sup> / <sub>4</sub> x 28 <sup>1</sup> / <sub>2</sub>
BLOWER TYPE AND SIZE		10 x 8	10 x 10	11 x 10	11 x 10
MOTOR H.P. (TYPE)		1/2-DC	1/2-DC	1-DC	1-DC
MOTOR SPEEDS		4	4	4	4

## MODEL NUMBER IDENTIFICATION GUIDE

<b>MODEL NUMBER</b>	<b>V</b>	<b>N</b>	<b>E</b>	<b>050</b>	<b>B</b>	<b>12</b>	<b>G</b>
<b>PRODUCT GROUP</b>							
G = Gas      T = 2-Stage Gas      Variable Speed							
<b>FUEL</b>							
C = Downflow / Horizontal							
D = Downflow							
H = Horizontal							
N = Upflow / Horizontal							
U = Upflow							
<b>SERIES</b>							
							<b>MARKETING REVISION</b>
							<b>NOMINAL AIR FLOW (Cfm)</b>
							8 = 800                      16 = 1600
							12 = 1200                    18 = 1800
							14 = 1400                    20 = 2000
							<b>FURNACE WIDTH</b>
							B = 15 <sup>1</sup> / <sub>2</sub> J = 22 <sup>3</sup> / <sub>4</sub>
							F = 19 <sup>1</sup> / <sub>8</sub> N = 26 <sup>3</sup> / <sub>8</sub>
							<b>NOMINAL INPUT MBTUH</b>

## ACCESSORIES

Furnace Model Number	20" x 25" Bottom Return Filter Kit	20" x 25" Duct Stand-off with Filter	Nat. To LP Kit LP High Altitude	LP To Nat. Gas Kit
VNE050B12 VNE075F14	N/A	NAHA001TK	*1011789	*1011787
VNE100J20 VNE125J20	NAHA002FF			

\* Fast part number

Application of VNE100J20 & VNE125J20 above 1650 CFM requires two side returns, bottom return or NAHA001TK 20" x 25" duct stand-off filter kit for single side return. Bottom return applications with the VNE100J20 & VNE125J20 require the 20" x 25" bottom return filter kit, NAHA002FF.

To achieve 2000 CFM with the stand-off filter kit you will still need a bottom return or 2 side filters.

N/A Not Applicable.

# Heating, Cooling & Continuous Airflow Settings

## Continuous Blower (CFM) @ 0.10" Static

Switch Settings		Furnace Model		
#1	#2	50K	75K	100/125K
0*	0*	600	540	1000
0	1	730	660	1260
1	0	870	780	1500
1	1	1000	900	1725

\*Factory Setting

## Cooling (CFM) @ 0.50" Static (See Figure 1 - 3 for complete Airflow Range)

Switch Settings			Furnace Model		
#6	#7	#8	50K	75K	100/125K
0*	0*	0*	1200	1350	2100
0	0	1	1100	1200	2000
0	1	0	1000	1100	1800
0	1	1	900	1000	1600
1	0	0	800	900	1400
1	0	1	700	800	1200
1	1	0	650	600	1000
1	1	1	550	550	800

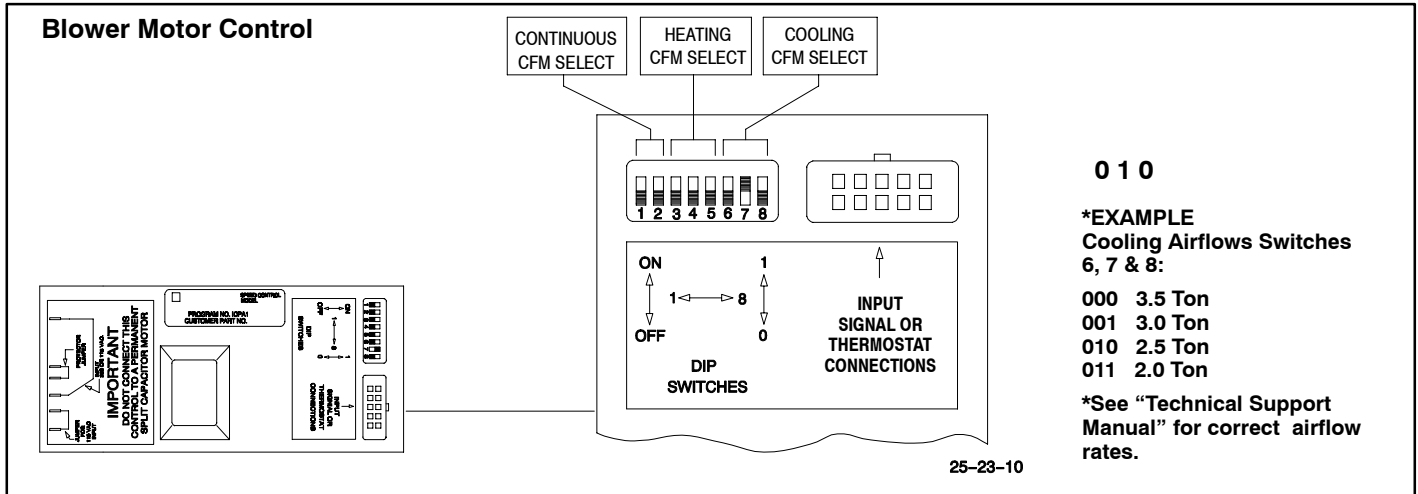
\*Factory setting

## Heating Air Temperature Adjustment (° F)\*

Switch Settings			Furnace Model		
#3	#4	#5	50K	75K	100/125K
0**	0**	0**	0	0	0
0	0	1	2	3	3
0	1	0	4	7	7
0	1	1	6	12	11
1	0	0	9	14	14
1	0	1	-4	-4	-5
1	1	0	-7	-9	-8
1	1	1	-6	-13	-13

\*Approximate air temperature change from factory setting @ 0.20" static on high heat (low heat speed changes with change of high heat speed on most settings)

\*\*Factory setting



# Heating, Cooling & Continuous Airflow Settings

Figure 1

## VNE050 (CFM VS. EXTERNAL STATIC PRESSURE)

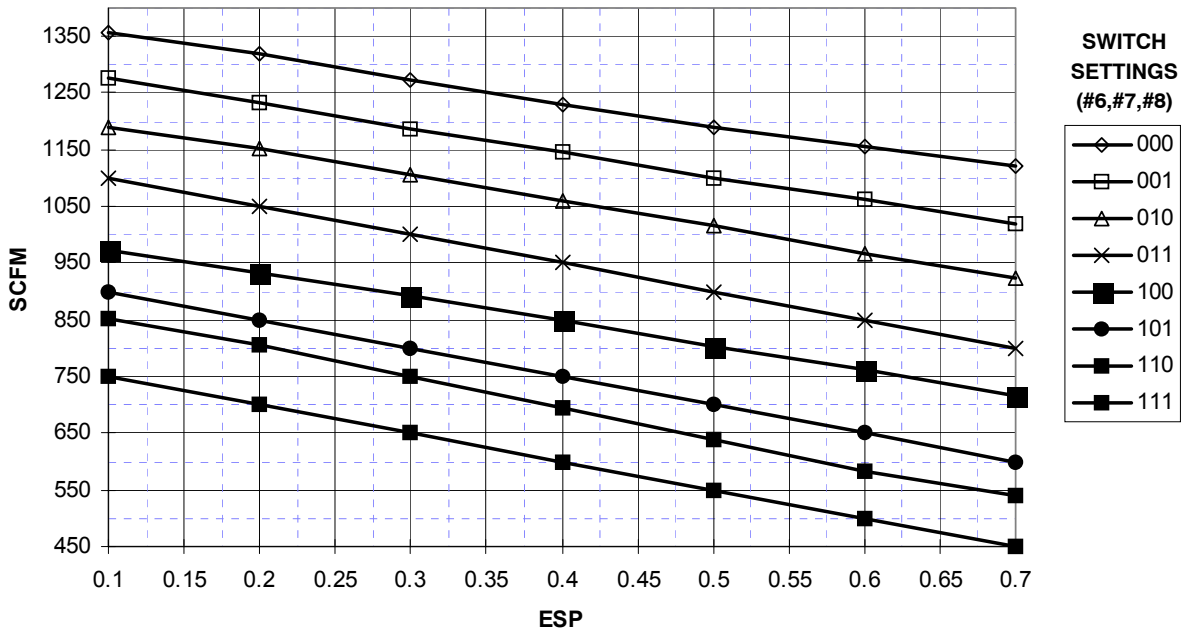
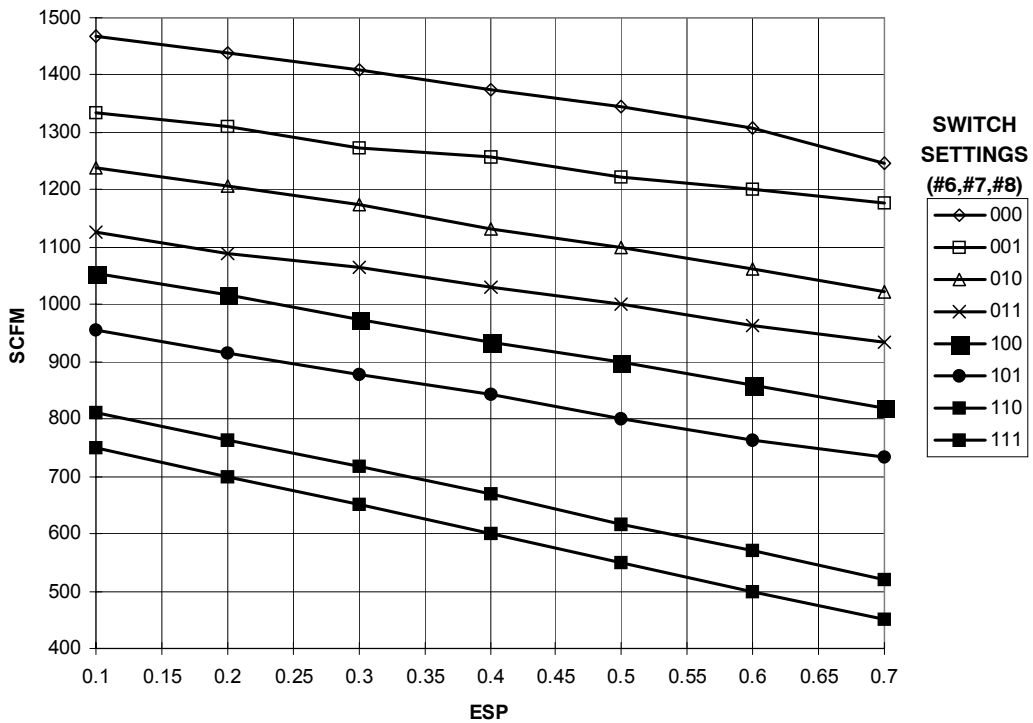


Figure 2

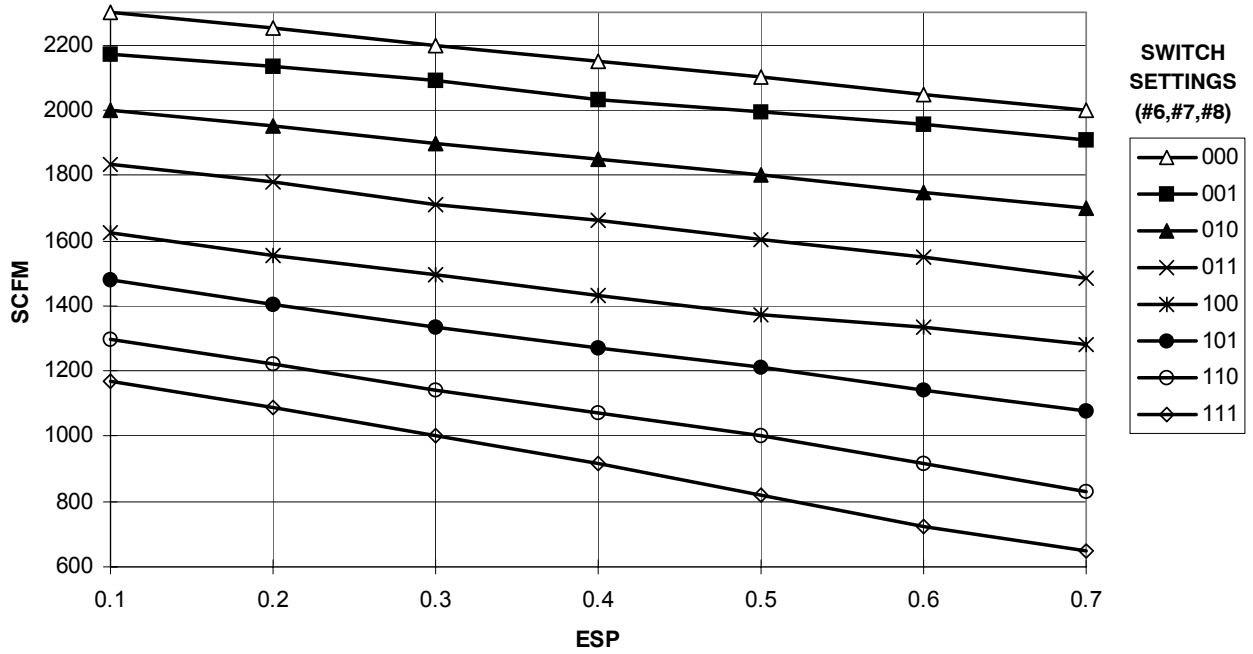
## VNE075 (CFM VS. EXTERNAL STATIC PRESSURE)



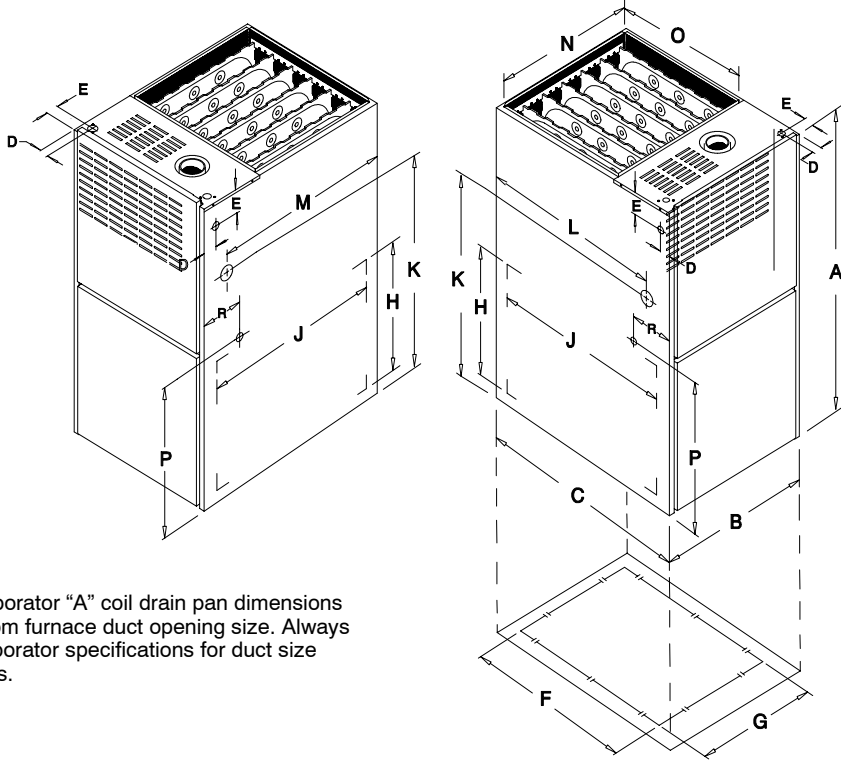
# Heating, Cooling & Continuous Airflow Settings

Figure 3

## VNE100/125 (CFM VS. EXTERNAL STATIC PRESSURE)



# UNIT DIMENSIONS



**NOTE:** Evaporator "A" coil drain pan dimensions may vary from furnace duct opening size. Always consult evaporator specifications for duct size requirements.

Unit is designed for bottom return or side return.  
Return air through back of unit is NOT allowed.

25-22-28

Unit Capacity	Cabinet			Electrical Connections						Supply Air		Return Air				Gas Connections			
				Top		Left/Right Side		Low Volt				Bottom		Side		Right Side		Left Side	
	A	B	C	D	E	D	E	R	P	O	N	F	G	J	H	M	K	L	K
050F	40	15 <sup>1</sup> / <sub>2</sub>	28 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>5</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>2</sub>	17 <sup>5</sup> / <sub>16</sub>	18 <sup>1</sup> / <sub>2</sub>	14	23 <sup>1</sup> / <sub>8</sub>	12 <sup>5</sup> / <sub>8</sub>	22 <sup>1</sup> / <sub>2</sub>	12 <sup>1</sup> / <sub>4</sub>	23 <sup>7</sup> / <sub>8</sub>	28 <sup>1</sup> / <sub>4</sub>	26	28 <sup>1</sup> / <sub>4</sub>
075G	40	19 <sup>1</sup> / <sub>8</sub>	28 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>5</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>2</sub>	17 <sup>5</sup> / <sub>16</sub>	18 <sup>1</sup> / <sub>2</sub>	17 <sup>5</sup> / <sub>8</sub>	23 <sup>1</sup> / <sub>8</sub>	14 <sup>3</sup> / <sub>4</sub>	22 <sup>1</sup> / <sub>2</sub>	14 <sup>1</sup> / <sub>2</sub>	23 <sup>7</sup> / <sub>8</sub>	28 <sup>1</sup> / <sub>4</sub>	26	28 <sup>1</sup> / <sub>4</sub>
100J, 125J	40	22 <sup>3</sup> / <sub>4</sub>	28 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>5</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>2</sub>	17 <sup>5</sup> / <sub>16</sub>	18 <sup>1</sup> / <sub>2</sub>	21 <sup>1</sup> / <sub>4</sub>	23 <sup>1</sup> / <sub>8</sub>	18 <sup>3</sup> / <sub>4</sub>	22 <sup>1</sup> / <sub>2</sub>	14 <sup>1</sup> / <sub>2</sub>	23 <sup>7</sup> / <sub>8</sub>	28 <sup>1</sup> / <sub>4</sub>	26	28 <sup>1</sup> / <sub>4</sub>