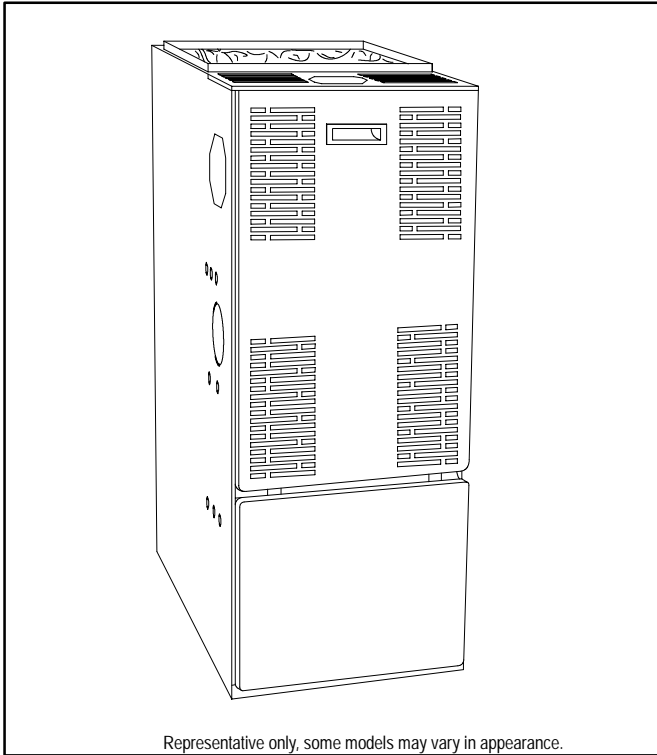


NOMV OIL FURNACE

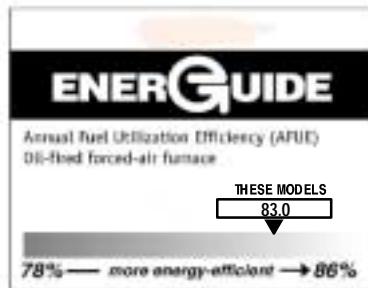


Representative only, some models may vary in appearance.

RESIDENTIAL OIL-FIRED FURNACE

FEATURES

- **Stainless Steel construction** - Heavy gauge heat exchanger quickly transfers heat to the ambient air.
- **Variable speed blower** - High efficiency GE variable speed ECM 2.3 motor, with constant airflow, delivers the right amount of air for improved comfort and great savings.
- **Dehumidification** - Variable speed ECM 2.3 motor allows modulation of blower speed to better extract humidity.
- **Sound attenuator** - Integrated inside secondary heat exchanger. High density acoustic wool dampens combustion sound.
- **Burner** - High static pressure Riello F40 coupled with electric air-damper.
- **Multi-position** - True 4-way multipoise unit that opens-up installation possibilities.
- **Inspection port/Clean outs** - External for easy access and sealed from blower compartment - Adjust combustion parameters and perform inspections easily with this sealed, spring-loaded access port.
- **Shipped complete** - Burner installed - barometric draft regulator supplied - external filter rack.
- **High quality finish** - High gloss baked electrostatic paint.
- **Efficient** - Up to 83.0% AFUE.
- **Approved** - For chimney vent ONLY.
- **Warranty** - Limited lifetime on heat exchanger, seven (7) years on burner and most other parts and 10 year No Hassle Replacement Warranty.



HIGH BOY - UPFLOW

Model Number	Heat Exchanger*	Dimensions H x W x D (In.)	Price
NOMV106D12B	Lifetime	48 ³ / ₄ x 20 x 35	
NOMV156E19B	Lifetime	53 x 20 x 39 ¹ / ₂	

* LIMITED LIFETIME WARRANTY.

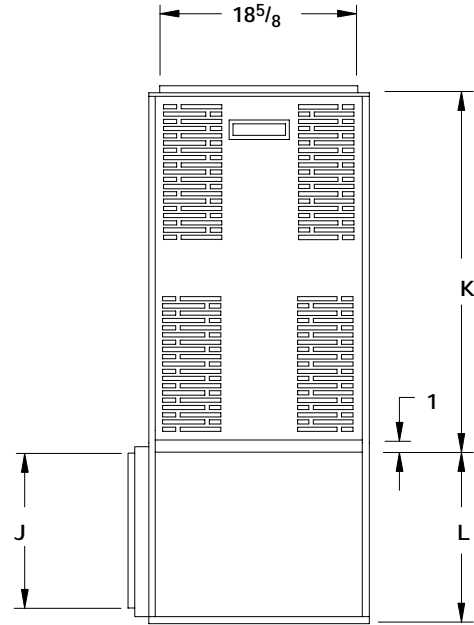
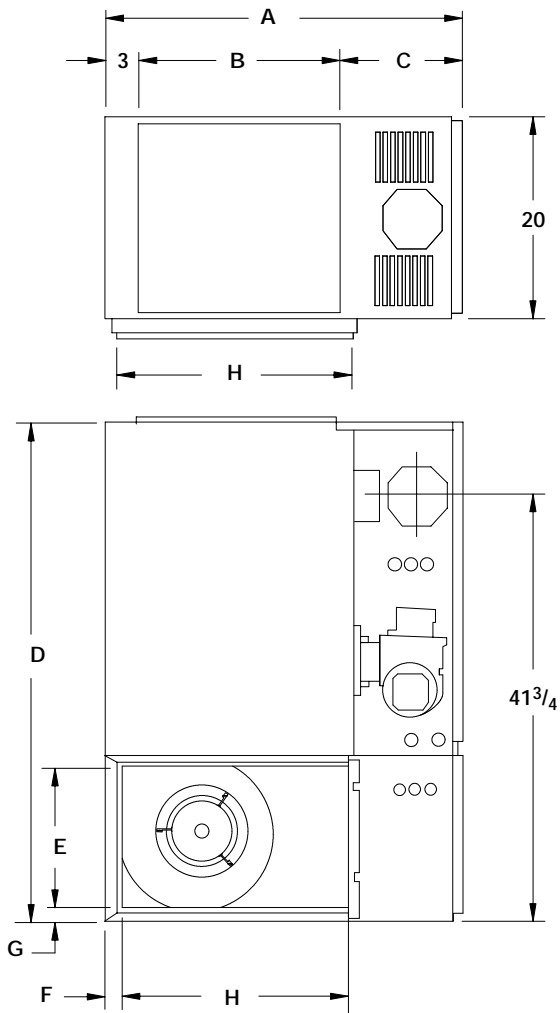
FURNACE SPECIFICATIONS with ELECTRIC DAMPER

Model:	NOMV106D12			NOMV156E19		
Rating and Performance						
Firing Rate (USGPH)	.50	.65	.75	.85	1.00	1.10
Input (BTUh)	70,000	91,000	105,000	119,000	140,000	154,000
Heating capacity (BTUh)	57,000	74,000	85,000	97,000	115,000	126,000
AFUE % (Up to)	83.0					
Minimum - maximum Heating Temperature Rise	55° - 85° F			55° - 85° F		
Flue draft minimum (WC)	-0.06 to -0.025			-0.06 to -0.025		
Overfire pressure draft (WC)	range +0.010 to +0.025			max +0.025		
Riello Burner, Model 40	F3 - Tube Insertion 3⁹/₁₆			F5 - Tube Insertion 3⁹/₁₆		
Nozzle (Delavan)	0.40 - 70A	0.50 - 70W	0.65 - 70W	0.75 - 70B	0.85 - 70W	1.00 - 70W
Pump pressure (Delavan)	160	170	135	130	140	125
Combustion air adjustment (turbulator/damper)	0 / 3	0 / 3.5	0 / 4	0 / 3	0 / 3.5	0 / 4
Electrical System						
Volts - Hertz - Phase	115-60-1			115-60-1		
Operating voltage range	104 - 132			104 - 132		
Rated voltage Amp	10.3			15.7		
Minimum ampacity for wiring sizing	12.2			18.1		
Max. wire length (ft.)	26			26		
Max. fuse size (Amps.)	15			20		
Control transformer	40 Va			40 Va		
Ext. control power available,	Heating	40 Va		40 Va		
	Cooling	30 Va		30 Va		
Blower Data						
Motor (HP) / number of speeds	1/2 HP ECM 2.3			1.0 HP ECM 2.3		
Blower wheel size (in.)	10 x 10			12 x 10		
Filter quantity and size Air Return	(1) 16" x 24" 15" x 23"			(1) 18" x 30" 17" x 29"		
Maximum cooling, tons @ 0.5" WC	2	2.5	3.0	3.0	4	5
Blower speed @ 0.5" WC static pressure	Med-Low	Med-High	High	Med-Low	Med-High	High
Weight (Lbs.)	221 lbs. / 100 kg			270 lbs. / 122 kg		

NEW MODEL NUMBER IDENTIFICATION GUIDE

MODEL NUMBER	N	O	M	V	106	D	12	#
FUEL O = Oil								REVISION
PRODUCT GROUP U = Upflow H = Horizontal T = Upflow/Horizontal L = Lowboy								AIR FLOW 12 = 1200 CFM 19 = 1900 CFM
								SUPPLY PLENUM SIZE A = 20 x 20 E = 19 x 24 B = 24 x 24 F = 20 x 24 C = 21 ¹ / ₈ x 21 ¹ / ₂ G = 22 x 30 D = 19 x 20
SERIES F = Front Breech R = Rear Breech V = Variable Speed								INPUT, MBTUH

DIMENSIONS



ALL DIMENSIONS IN INCHES

Representative only, some models may vary in appearance.

Furnace Dimensions for NOMV

Model No.	A	B	C	D	E	F	G	H	J	K	L	Flue
106D12	35	20	12	48 ^{3/4}	14	1 ^{3/4}	1 ^{5/8}	22	15	31 ^{1/4}	16 ^{5/8}	5
156E19	39 ^{1/2}	24	12 ^{1/2}	53	16	1 ^{1/2}	1 ^{5/8}	28	17	33 ^{1/4}	18 ^{3/4}	6

Minimum Installation Clearances from Combustible Materials

Models		NOMV106			NOMV156		
Location	Application	Upflow	Downflow	Horizontal	Upflow	Downflow	Horizontal
Sides	Furnace	0	2"	2"	1"	2"	2"
	Supply plenum within 6' of furnace	1"	2"	1"	1"	2"	1"
Back	Furnace	0	1"	0	0	1"	0
Top	Furnace or plenum	2"	2"	2"	2"	2"	2"
	Horizontal warm air duct within 6' of furnace	2"	2"	3"	2"	2"	3"
Bottom	Furnace (*combustible floor with the subbase)	0	0*	0*	0	0*	0*
Flue Pipe	Horizontally or below Flue Pipe	4"	4"	4"	4"	4"	4"
	Vertically above Flue Pipe	9"	9"	9"	9"	9"	9"
Front	Furnace	8"	8"	24"	8"	8"	24"

VARIABLE SPEED ADJUSTMENTS - NOMV106

OIL HEATING MODE - SW1 for NOMV106

24 VAC input (R) on W only

SW1 - HEAT DIP switch position	HEAT INPUT (USGPH)	CFM with SW3-ADJ DIP switch position A	CFM with SW3-ADJ DIP switch position B	CFM with SW3-ADJ DIP switch position C
A (1=OFF, 2=OFF)	0.75	1260	1425	1070
B (1=ON, 2=OFF)	0.65	1050	1190	895
C (1=OFF, 2=ON)	0.5	850	960	725
D (1=ON, 2=ON)	Same value as DIP switch position A			

CONTINUOUS FAN - SW2 for NOMV106

24 VAC input (R) on G only

SW2 - COOL DIP Switch position	A/C size (TON)	CFM with SW3-ADJ DIP switch position A	CFM with SW3-ADJ DIP switch position B	CFM with SW3-ADJ DIP switch position C
A (1=OFF, 2=OFF)	3.0	785	905	670
B (1=ON, 2=OFF)	2.5	655	755	560
C (1=OFF, 2=ON)	2.0	525	605	445
D (1=ON, 2=ON)	1.5	395	455	335

COOLING OR HEAT PUMP HEATING MODE - SW2 for NOMV106

24 VAC input (R) to G, Y/Y2 and O (for cooling)

SW2 - COOL DIP Switch position	A/C size (TON)	CFM with SW3-ADJ DIP switch position A	CFM with SW3-ADJ DIP switch position B	CFM with SW3-ADJ DIP switch position C
A (1=OFF, 2=OFF)	3.0	1050	1155	945
B (1=ON, 2=OFF)	2.5	875	965	790
C (1=OFF, 2=ON)	2.0	700	770	630
D (1=ON, 2=ON)	1.5	525	580	475

Note: In Cooling - Dehumidification mode, with no 24 VAC input to DH, the CFM are reduced by 15%

The CFMs shown are reduced by 55% if there is 24 VAC input to Y1 (slow speed of 2-speed compressor).

DELAY PROFILE FOR OIL HEATING MODE - SW4 for NOMV106

SW4 - DELAY DIP Switch position	HEAT INPUT (USGPH)	PreRun On-Delay CFM Level - Time	ShortRun On-Delay CFM Level - Time	Off-Delay CFM Level - Time
A (1=OFF, 2=OFF)	0.75	13% - 45 sec.	19% - 30 sec	38% - 3 min.
B (1=ON, 2=OFF)	0.65	13% - 45 sec.	19% - 60 sec	38% - 3 min.
C (1=OFF, 2=ON)	0.5	13% - 60 sec.	13% - 60 sec	38% - 3 min.
D (1=ON, 2=ON)	All	13% - 30 sec.	100% - 0 sec	100% - 2 min.

PreRun and ShortRun are the times before the blower starts at normal speed, with very low CFM, to minimize cool draft in the air distribution system.

Off Delay is the time required to cool down the heat exchanger, with low CFM, to minimize cool draft in the air distribution system.

DELAY PROFILE FOR COOLING OR HEAT PUMP HEATING MODE for NOMV106

No adjustment required	A/C size	PreRun On-Delay CFM Level - Time	ShortRun On-Delay CFM Level - Time	Off-Delay CFM Level - Time
-	All	13% - 30 sec.	75% - 2.5 min.	50% - 3 min.

PreRun and ShortRun are the times before the blower starts at normal speed, with very low CFMs, to minimize cool draft in the air distribution system.

Off Delay time required to cool down the coil (heating mode), with low CFMs, to minimize cool draft in the air distribution system.

VARIABLE SPEED ADJUSTMENTS - NOMV156

OIL HEATING MODE - SW1 for NOMV156

24 VAC input (R) on W only

SW1 - HEAT DIP switch position	HEAT INPUT (USGPH)	CFM with SW3-ADJ DIP switch position A	CFM with SW3-ADJ DIP switch position B	CFM with SW3-ADJ DIP switch position C
A (1=OFF, 2=OFF)	0.85	1450	1640	1235
B (1=ON, 2=OFF)	1.00	1700	1920	1445
C (1=OFF, 2=ON)	1.10	1850	2090	1575
D (1=ON, 2=ON)	Same value as DIP switch position A			

CONTINUOUS FAN - SW2 for NOMV156

24 VAC input (R) on G only

SW2 - COOL DIP Switch position	A/C size (TON)	CFM with SW3-ADJ DIP switch position A	CFM with SW3-ADJ DIP switch position B	CFM with SW3-ADJ DIP switch position C
A (1=OFF, 2=OFF)	5.0	1315	1510	1115
B (1=ON, 2=OFF)	4.0	1050	1210	895
C (1=OFF, 2=ON)	3.5	920	1055	780
D (1=ON, 2=ON)	3.0	790	905	670

COOLING OR HEAT PUMP HEATING MODE - SINGLE SPEED OR 2-SPEED HIGH - SW2 for NOMV156

24 VAC input (R) to G, Y/Y2 and O (for cooling)

SW2 - COOL DIP Switch position	A/C size (TON)	CFM with SW3-ADJ DIP switch position A	CFM with SW3-ADJ DIP switch position B	CFM with SW3-ADJ DIP switch position C
A (1=OFF, 2=OFF)	5.0	1750	1925	1575
B (1=ON, 2=OFF)	4.0	1400	1540	1260
C (1=OFF, 2=ON)	3.5	1225	1350	1105
D (1=ON, 2=ON)	3.0	1050	1155	945

Note: In Cooling - Dehumidification mode, with no 24 VAC input to DH, the CFM is reduced by 15%

The CFMs shown are reduced by 55% if there is 24 VAC input to Y1 (slow speed of 2-speed compressor).

DELAY PROFILE FOR OIL HEATING MODE - SW4 for NOMV156

SW4 - DELAY DIP Switch position	HEAT INPUT (USGPH)	PreRun On-Delay CFM Level - Time	ShortRun On-Delay CFM Level - Time	Off-Delay CFM Level - Time
A (1=OFF, 2=OFF)	0.85	13% - 45 sec.	44% - 30 sec	38% - 3 min.
B (1=ON, 2=OFF)	1.00	13% - 30 sec.	44% - 30 sec	38% - 3 min.
C (1=OFF, 2=ON)	1.10	13% - 30 sec.	50% - 30 sec	38% - 3 min.
D (1=ON, 2=ON)	All	13% - 30 sec.	100% - 0 sec	100% - 2 min.

PreRun and ShortRun are the times before the blower starts at normal speed, with very low CFM, to minimize cool draft in the air distribution system.

Off Delay is the time required to cool down the heat exchanger, with low CFM, to minimize cool draft in the air distribution system.

DELAY PROFILE FOR COOLING OR HEAT PUMP HEATING MODE for NOMV156

No adjustment required	A/C size	PreRun On-Delay CFM Level - Time	ShortRun On-Delay CFM Level - Time	Off-Delay CFM Level - Time
-	All	13% - 30 sec.	75% - 2.5 min.	50% - 3 min.

PreRun and ShortRun are the times before the blower starts at normal speed, with very low CFM, to minimize cool draft in the air distribution system.

Off Delay time required to cool down the coil (heating mode), with low CFM, to minimize cool draft in the air distribution system.

ACCESSORIES

Product Model No.	Burners	Horizontal Flow Base	Downflow Subbase	Downflow Flue Pipe Guard
NOMV106D12	Riello Model 40 Shipped with Nozzle 0.60-70B	HFB101	DFB101	FPG101
NOMV156E19	Riello Model 40 Shipped with Nozzle 1.00-70B			FPG102

ACCESSORY DESCRIPTION

Accessory Model No.	Description
HFB101	Horizontal Floor Base for NOMV Furnace
DFB101	Downflow Subbase for NOMV Furnace
FPG101	Flue Pipe Guard for Downflow (NOMV106 Furnace)
FPG102	Flue Pipe Guard for Downflow (NOMV156 Furnace)
N03F018	Nozzle, Oil Burner, Delavan, 0.40 GPH/70° Type A (NOMV106 Furnace)
N03G006	Nozzle, Oil Burner, Delavan, 0.50 GPH/70° Type W (NOMV106 Furnace)
N03G007	Nozzle, Oil Burner, Delavan, 0.65 GPH/70° Type W (NOMV106 Furnace)
N03H013	Nozzle, Oil Burner, Delavan, 0.75 GPH/70° Type B (NOMV156 Furnace)
N03G016	Nozzle, Oil Burner, Delavan, 0.85 GPH/70° Type W (NOMV156 Furnace)
N03G012	Nozzle, Oil Burner, Delavan, 1.00 GPH/70° Type W (NOMV156 Furnace)