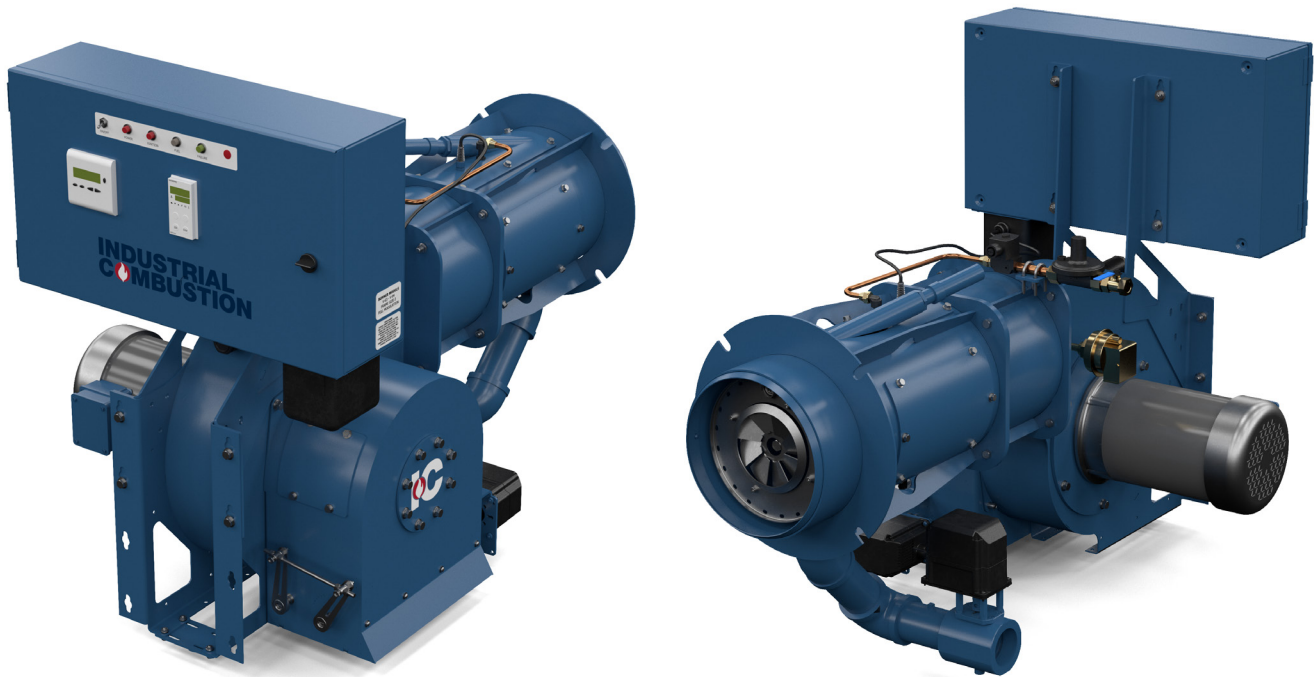


V SERIES

TECHNICAL DATA INFORMATION PACKET



**INDUSTRIAL
COMBUSTION**

Technical Data

V Series Standard Product

Uncontrolled Emissions Configuration (VG, VLG)

2.5 - 16.8 MMBTU/H NG; 17.9 - 120 GPH #2 OIL

UL listed with CSD-1*
for U.S.

Standard equipment:	Combustion Control System	Fuel options:
3450 RPM motor, panel signal lights (Power On, Main Fuel, Ignition, Flame Failure), combustion air proving switch, safety shutoff valves, 120/1/60 control circuit, burner mounted panel and a prepiped, shipped loose gas train	Siemens LMV3 Parallel Positioning Combustion Control System	Main Fuel: Natural gas (VG) or Combination gas/ #2 oil - pressure atomized (VLG). Igniter Fuel: Natural gas.

Series Features

V-25, 30, 34

V-42 to V-54

V63, 84, 105,
126, 147, 168

Flame Safeguard			
Open Damper Purge Control with UV Scanner	•	•	•
Mode of Operation			
Full Modulation Firing	•	•	•
Ignition			
Gas/Electric Pilot and Ignition Transformer (VG/VLG)	•	•	•
Oil Components			
Blower-Coupled Atomizing-Oil Pump	•	•	
Remote Atomizing-Oil Pump With Separate Motor			•
Simplex Oil Nozzle	•		
Return Flow Oil Nozzle		•	•
Gas Components			
Butterfly Rate Control Valve	•	•	•
High & Low Gas Pressure Interlocks	•	•	•
Gas Shutoff Cocks (2)	•	•	•

* CSD-1 provisions are subject to approval by local inspectors. Additional parts or equipment may be required. Consult local authorities having jurisdiction prior to burner installation.

Technical Data

V Series

Uncontrolled Emissions Configuration (VG, VL, VLG)

1.3 - 16.8 MMBTU/H NG; 9.3 - 120 GPH #2 OIL

UL listed with choice of NFPA, CSD-1, GAP, and FM for U.S. or Canadian units*

Standard equipment:	Combustion Control System options:	Fuel options:
3450 RPM motor, panel signal lights (Power On, Main Fuel, Ignition, Flame Failure), combustion air proving switch, safety shutoff valves, 120/1/60 control circuit, burner mounted panel with standard or inverted configuration, and unassembled gas train components shipped loose. V-25 to V-54 inverted orientation; V-63 to V-168 standard orientation	Parallel Positioning Combustion Control System with O ₂ Trim and Variable Frequency Drive (VFD)	Main Fuel: Natural gas (VG), #2 oil - pressure atomized (VL) or Combination gas/ #2 oil - pressure atomized (VLG). Igniter Fuel: Natural gas and/or propane. Fuel Changeover Switch: Combination gas/oil units only (VLG).

Series Features

◊ Optional Feature • Standard Feature

Flame Safeguard						
Limited Damper Purge (LDP) Control with UV Scanner	• ¹	• ¹	• ¹	• ¹		
Open Damper Purge Control with UV Scanner	◊	◊	◊	◊	•	•
Turndown						
Up to 10:1 on Natural Gas				• ²	• ²	• ²
Mode of Operation						
On-Off Firing	•					
Low-High-Low Firing	◊	◊	◊	◊		
Full Modulation Firing	◊	◊	◊	◊	•	•
Auto-Manual Firing Rate Control	• ³	• ³	• ³	• ³	• ³	• ³
Ignition						
Gas/Electric Pilot and Ignition Transformer (VG/VLG)	• ⁴	• ⁴	• ⁴	•	•	•
Dual Ignition (VLG)	◊	◊	◊	◊		
Direct Spark (VL)	•	•	•			
Oil Components						
Blower-Coupled Atomizing-Oil Pump	•	•	•			
Remote Atomizing-Oil Pump With Separate Motor	◊	◊	◊	•	•	•
Simplex Oil Nozzle	•	•				
Return Flow Oil Nozzle	◊	◊	•	•	•	•
Gas Components						
Butterfly Rate Control Valve	◊ ⁵	•	•	•	•	•
High & Low Gas Pressure Interlocks	◊	•	•	•	•	•
Gas Shutoff Cocks (2)	•	•	•	•	•	•

* Code and insurance provisions are subject to approval by local inspectors. Additional parts or equipment may be required. Consult local authorities having jurisdiction prior to burner installation

¹ LDP (60% air above 2,500 - 6,300 MBH). <2,500 MBH, purge is at low-fire damper setting

² High turndown on gas requires parallel positioning system and VFD

³ Standard for linkage full modulation; optional on select parallel positioning systems

⁴ Optional for VL models 13-55

⁵ Standard for low-high-low or full modulation

Standard Ratings

V Series

Gas only S model

Specifications for gas only and standard impeller models VG-xxxS							
Burner Model ¹	Gas Input MBtu/ hr	BHP @80% Eff.	Furnace Pressure ("W.C.)	Blower Motor HP	Standard Gas Train Pipe Size (in.)	Min. Gas Pressure ("w.c.)	Blower Motor Volt/Ph 60 Hz. ²
VG-13S-1	1,300	31	1.5	3/4	1	8.6/9.2*	115/230/1
VG-15S-1	1,500	36	1.4	3/4	1	11.4/11.7*	115/230/1
VG-17S-1	1,700	40	1.4	3/4	1	14.3/14.7*	115/230/1
VG-20S-1	2,000	48	1.6	3/4	1	19.7/20.2*	115/230/1
VG-21S-1	2,100	50	1.6	3/4	1	21.5/22.1*	115/230/1
VG-25S-1**	2,500	60	2.2	3/4	1 1/2	9.6/10.4*	115/230/1 <u>230/460/3</u>
VG-30S-1**	3,000	71	1.0	3/4	2	8.7	115/230/1 <u>230/460/3</u>
VG-34S-1**	3,400	81	1.3	2	2	10.3	230/460/3
VG-35S-1	3,500	83	1.3	2	2	10.9	230/460/3
VG-40S-2	4,000	95	1.2	2	2	10.4	230/460/3
VG-42S-2**	4,200	100	1.2	2	2	11.5	<u>230/460/3</u>
VG-45S-2	4,500	107	2.1	3	2	10.8	230/460/3
VG-50S-2	5,000	119	2.0	3	2	13.6	230/460/3
VG-54S-2**	5,400	129	1.8	3	2	19.2	<u>230/460/3</u>
VG-55S-2	5,500	131	1.6	3	2	19.7	230/460/3
VG-60S-3	6,000	143	1.8	5	2	17.6	230/460/3
VG-63S-3**	6,300	150	1.6	5	2	19.4	<u>230/460/3</u>
VG-70S-3	7,000	167	1.0	5	2 1/2	15.8	230/460/3
VG-80S-3	8,000	190	3.8	7 1/2	2 1/2	15.1	230/460/3
VG-84S-3**	8,400	200	3.6	7 1/2	2 1/2	15.5	<u>230/460/3</u>
VG-90S-3	9,000	214	3.2	7 1/2	2 1/2	17.4	230/460/3
VG-100S-3	10,000	238	4.1	10	2 1/2	20.5	230/460/3
VG-105S-3**	10,500	250	3.8	10	2 1/2	44.7	<u>230/460/3</u>
VG-110S-3	11,000	262	3.4	10	2 1/2	48.7	230/460/3
VG-120S-4	12,000	286	4.7	15	2 1/2	34.2	230/460/3
VG-126S-4**	12,600	300	4.3	15	2	49.1	<u>230/460/3</u>
VG-147S-4**	14,700	350	5.5	15	2	2.5 PSI	<u>230/460/3</u>
VG-168S-4**	16,800	400	3.6	15	2	3.1 PSI	<u>230/460/3</u>

¹ Offered as configured-to-order model

² [Voltage] indicates voltage of standard model when it differs from configured-to-order model. Underlined value indicates voltage that the standard models are factory-wired for.

* Low/High and Full Modulation minimum gas pressure

** Available as standard and configured-to-order model

Input is based on fuel Btu content, listed furnace pressure and altitude of 2,000 feet or less. If altitude >2,000 feet and <8,000 feet, derate capacity 4% per 1,000 feet over 2,000. Consult factory for higher altitudes. If furnace pressure exceeds listed value, derate capacity 5% for every 0.5 "w.c. of pressure in excess of stated. Consult factory if derate exceeds 20%. Gas input is based on natural gas with 1,000 Btu/cu. ft., 0.60 gravity. For total pressure at manifold, add furnace pressure. Oil input based on 140,000 Btu/gal. Consult factory for 50 Hz. applications.

Standard Ratings

V Series

Gas only P model

Specifications for gas only and high back pressure impeller models VG-xxxP							
Burner Model ¹	Gas Input MBtu/ hr	BHP @80% Eff.	Furnace Pressure ("W.C.)	Blower Motor HP	Standard Gas Train Pipe Size (in.)	Min. Gas Pressure ("w.c.)	Blower Motor Volt/Ph 60 Hz.
VG-13P-1	1,300	31	1.5	3/4	1	8.6/9.2*	115/230/1
VG-15P-1	1,500	36	1.4	3/4	1	11.4/11.7*	115/230/1
VG-17P-1	1,700	40	1.4	3/4	1	14.3/14.7*	115/230/1
VG-20P-1	2,000	48	1.6	3/4	1	19.7/20.2*	115/230/1
VG-21P-1	2,100	50	1.6	3/4	1	21.5/22.1*	115/230/1
VG-25P-1	2,500	60	2.2	3/4	1 1/2	9.6/10.4*	115/230/1
VG-30P-1	3,000	71	2.0	2	2	8.7	230/460/3
VG-34P-1	3,400	81	2.2	3	2	10.3	230/460/3
VG-35P-1	3,500	83	2.1	3	2	10.9	230/460/3
VG-40P-2	4,000	95	2.2	3	2	10.4	230/460/3
VG-42P-2	4,200	100	2.2	3	2	11.5	230/460/3
VG-45P-2	4,500	107	2.1	3	2	10.8	230/460/3
VG-50P-2	5,000	119	3.9	5	2	13.6	230/460/3
VG-54P-2	5,400	129	3.7	5	2	19.2	230/460/3
VG-55P-2	5,500	131	3.5	5	2	19.7	230/460/3
VG-60P-3	6,000	143	3.0	7 1/2	2	17.6	230/460/3
VG-63P-3	6,300	150	2.8	7 1/2	2	19.4	230/460/3
VG-70P-3	7,000	167	2.4	7 1/2	2 1/2	15.8	230/460/3
VG-80P-3	8,000	190	3.8	7 1/2	2 1/2	15.1	230/460/3
VG-84P-3	8,400	200	3.6	7 1/2	2 1/2	15.5	230/460/3
VG-90P-3	9,000	214	3.2	7 1/2	2 1/2	17.4	230/460/3
VG-100P-3	10,000	238	4.1	10	2 1/2	20.5	230/460/3
VG-105P-3	10,500	250	3.8	10	2 1/2	44.7	230/460/3
VG-110P-3	11,000	262	3.4	10	2 1/2	48.7	230/460/3
VG-120P-4	12,000	286	4.7	15	2 1/2	34.2	230/460/3
VG-126P-4	12,600	300	4.3	15	2	49.1	230/460/3
VG-147P-4	14,700	350	5.5	15	2	2.5 PSI	230/460/3
VG-168P-4	16,800	400	3.6	15	2	3.1 PSI	230/460/3

¹ Offered as configured-to-order model

* Low/High and Full Modulation minimum gas pressure

Input is based on fuel Btu content, listed furnace pressure and altitude of 2,000 feet or less. If altitude >2,000 feet and <8,000 feet, derate capacity 4% per 1,000 feet over 2,000. Consult factory for higher altitudes. If furnace pressure exceeds listed value, derate capacity 5% for every 0.5 "w.c. of pressure in excess of stated. Consult factory if derate exceeds 20%. Gas input is based on natural gas with 1,000 Btu/cu. ft., 0.60 gravity. For total pressure at manifold, add furnace pressure. Oil input based on 140,000 Btu/gal. Consult factory for 50 Hz. applications.

Standard Ratings

V Series

Oil only or Gas/Oil S model

Specifications for gas/oil and oil only, and standard impeller models VLG-xxxS and VL-xxxS										
Burner Model ¹	Gas Input MBtu/hr	#2 Oil Input UP GPH	BHP @80% Eff.	Furnace Pressure ("W.C.)	Blower Motor HP ²	Blower Motor HP ³	Remote Oil Pump Motor HP ⁴	Standard Gas Train Pipe Size (in.)	Min. Gas Pressure ("w.c.)	Blower Motor Volt/Ph 60 Hz. ⁵
VLG-13S-1	1,300	9.3	31	1.3	3/4	3/4	1/2	1	8.6/9.2 ⁶	115/230/1
VLG-15S-1	1,500	10.7	36	1.2	3/4	3/4	1/2	1	11.4/11.7 ⁶	115/230/1
VLG-17S-1	1,700	12.1	40	1.2	3/4	1	1/2	1	14.3/14.7 ⁶	115/230/1
VLG-20S-1	2,000	14.3	48	1.3	3/4	1	1/2	1	19.7/20.2 ⁶	115/230/1
VLG-21S-1	2,100	15.0	50	1.3	3/4	1	1/2	1	21.5/22.1 ⁶	115/230/1
VLG-25S-1 ⁷	2,500	17.9	60	2.6	2	2	1/2	1 1/2	9.6/10.4 ⁶	115/230/1 [230/460/3]
VLG-30S-1 ⁷	3,000	21.4	71	1.7	2	2	1/2	2	8.7	<u>230</u> /460/3
VLG-34S-1 ⁷	3,400	24.3	81	0.8	2	2	1/2	2	10.3	<u>230</u> /460/3
VLG-35S-1	3,500	25.0	83	0.7	2	2	1/2	2	10.9	230/460/3
VLG-40S-2	4,000	28.6	95	1.8	3	3	1/2	2	10.4	230/460/3
VLG-42S-2 ⁷	4,200	30.0	100	1.7	3	3	1/2	2	11.5	<u>230</u> /460/3
VLG-45S-2	4,500	32.1	107	1.5	3	3	1/2	2	10.8	230/460/3
VLG-50S-2	5,000	35.7	119	1.3	3	3	1/2	2	13.6	230/460/3
VLG-54S-2 ⁷	5,400	38.6	129	1.1	3	3	3/4	2	19.2	<u>230</u> /460/3
VLG-55S-2	5,500	39.3	131	0.9	3	3	3/4	2	19.7	230/460/3
VLG-60S-3	6,000	42.9	143	2.6	7 1/2	-	3/4	2	17.6	230/460/3
VLG-63S-3 ⁷	6,300	45.0	150	2.4	7 1/2	-	3/4 ⁸	2	19.4	<u>230/460</u> /3
VLG-70S-3	7,000	50.0	167	1.8	7 1/2	-	3/4	2 1/2	15.8	230/460/3
VLG-80S-3	8,000	57.1	190	3.0	7 1/2	-	3/4	2 1/2	15.1	230/460/3
VLG-84S-3 ⁷	8,400	60.0	200	2.8	7 1/2	-	1 ⁸	2 1/2	15.5	<u>230/460</u> /3
VLG-90S-3	9,000	64.3	214	2.5	7 1/2	-	1	2 1/2	17.4	230/460/3
VLG-100S-3	10,000	71.4	238	3.5	10	-	1 1/2	2 1/2	20.5	230/460/3
VLG-105S-3 ⁷	10,500	75.0	250	3.3	10	-	1 1/2 ⁸	2 1/2	44.7	<u>230/460</u> /3
VLG-110S-3	11,000	78.6	262	3.0	10	-	1 1/2	2 1/2	48.7	230/460/3
VLG-120S-4	12,000	85.7	286	2.5	15	-	1 1/2	2 1/2	34.2	230/460/3
VLG-126S-4 ⁷	12,600	90.0	300	3.0	15	-	1 1/2 ⁸	2	49.1	<u>230/460</u> /3
VLG-147S-4 ⁷	14,700	105.0	350	5.1	15	-	1 1/2 ⁸	2	2.5 psi	<u>230/460</u> /3
VLG-168S-4 ⁷	16,800	120.0	400	3.1	15	-	1 1/2 ⁸	2	3.1 psi	<u>230/460</u> /3

¹ Offered as configured-to-order model

² Motor ratings for gas/oil burners using a remote oil pump

³ Motor ratings for gas/oil burners using a direct drive oil pump

⁴ Remote oil pump is optional for frame size 1 and 2 but standard for frame sizes 3 and 4. Pump motors are 115/230/1 unless marked otherwise.

⁵ [Voltage] indicates voltage of standard model when it differs from configured-to-order model.

Underlined value indicates voltage that the standard models are factory-wired for.

⁶ Low/High and Full Modulation minimum gas pressure.

⁷ Available as standard and configured-to-order model

⁸ Standard models have oil pump motor starters factory wired to match blower motor voltage

Input is based on fuel Btu content, listed furnace pressure and altitude of 2,000 feet or less. If altitude >2,000 feet and <8,000 feet, derate capacity 4% per 1,000 feet over 2,000. Consult factory for higher altitudes. If furnace pressure exceeds listed value, derate capacity 5% for every 0.5 "w.c. of pressure in excess of stated. Consult factory if derate exceeds 20%. Gas input is based on natural gas with 1,000 Btu/cu. ft., 0.60 gravity. For total pressure at manifold, add furnace pressure. Oil input based on 140,000 Btu/gal. Consult factory for 50 Hz. applications.

Standard Ratings

V Series

Oil only or Gas/Oil P model

Specifications for gas/oil and oil only, and high back pressure impeller models VLG-xxxP and VL-xxxP										
Burner Model ¹	Gas Input MBtu/hr	#2 Oil Input UP GPH	BHP @80% Eff.	Furnace Pressure ("W.C.)	Blower Motor HP ²	Blower Motor HP ³	Remote Oil Pump Motor HP ⁴	Standard Gas Train Pipe Size	Min. Gas Pressure ("w.c.)	Blower Motor Volt/Ph 60 Hz.
VLG-13P-1	1,300	9.3	31	1.3	3/4	3/4	1/2	1	8.6/9.2 ⁵	115/230/1
VLG-15P-1	1,500	10.7	36	1.2	3/4	3/4	1/2	1	11.4/11.7 ⁵	115/230/1
VLG-17P-1	1,700	12.1	40	1.2	3/4	1	1/2	1	14.3/14.7 ⁵	115/230/1
VLG-20P-1	2,000	14.3	48	1.3	3/4	1	1/2	1	19.7/20.2 ⁵	115/230/1
VLG-21P-1	2,100	15.0	50	2.6	3/4	1	1/2	1	21.5/22.1 ⁵	115/230/1
VLG-25P-1	2,500	17.9	60	3.2	3	3	1/2	1 1/2	9.6/10.4 ⁵	230/460/3
VLG-30P-1	3,000	21.4	71	2.3	3	3	1/2	2	8.7	230/460/3
VLG-34P-1	3,400	24.3	81	1.8	3	3	1/2	2	10.3	230/460/3
VLG-35P-1	3,500	25.0	83	1.7	3	3	1/2	2	10.9	230/460/3
VLG-40P-2	4,000	28.6	95	3.8	5	5	1/2	2	10.4	230/460/3
VLG-42P-2	4,200	30.0	100	3.7	5	5	1/2	2	11.5	230/460/3
VLG-45P-2	4,500	32.1	107	3.5	5	5	1/2	2	10.8	230/460/3
VLG-50P-2	5,000	35.7	119	3.3	5	5	1/2	2	13.6	230/460/3
VLG-54P-2	5,400	38.6	129	3.1	5	5	3/4	2	19.2	230/460/3
VLG-55P-2	5,500	39.3	131	2.9	5	5	3/4	2	19.7	230/460/3
VLG-60P-3	6,000	42.9	143	4.0	7 1/2	-	3/4	2	17.6	230/460/3
VLG-63P-3	6,300	45.0	150	3.8	7 1/2	-	3/4	2	19.4	230/460/3
VLG-70P-3	7,000	50.0	167	3.4	7 1/2	-	3/4	2 1/2	15.8	230/460/3
VLG-80P-3	8,000	57.1	190	4.6	10	-	3/4	2 1/2	15.1	230/460/3
VLG-84P-3	8,400	60.0	200	4.3	10	-	1	2 1/2	15.5	230/460/3
VLG-90P-3	9,000	64.3	214	4.0	10	-	1	2 1/2	17.4	230/460/3
VLG-100P-3	10,000	71.4	238	3.5	10	-	1 1/2	2 1/2	20.5	230/460/3
VLG-105P-3	10,500	75.0	250	3.3	10	-	1 1/2	2 1/2	44.7	230/460/3
VLG-110P-3	11,000	78.6	262	3.0	10	-	1 1/2	2 1/2	48.7	230/460/3
VLG-120P-4	12,000	85.7	286	6.7	15	-	1 1/2	2 1/2	34.2	230/460/3
VLG-126P-4	12,600	90.0	300	7.2	15	-	1 1/2	2	49.1	230/460/3
VLG-147P-4	14,700	105.0	350	5.1	15	-	1 1/2	2	2.5 psi	230/460/3
VLG-168P-4	16,800	120.0	400	3.1	15	-	1 1/2	2	3.1 psi	230/460/3

¹ Offered as configured-to-order model

² Motor ratings for gas/oil burners using a remote oil pump

³ Motor ratings for gas/oil burners using a direct drive oil pump

⁴ Remote oil pump is optional for frame size 1 and 2 but standard for frame sizes 3 and 4. Pump motors are 115/230/1 unless marked otherwise

⁵ Low/High and Full Modulation minimum gas pressure

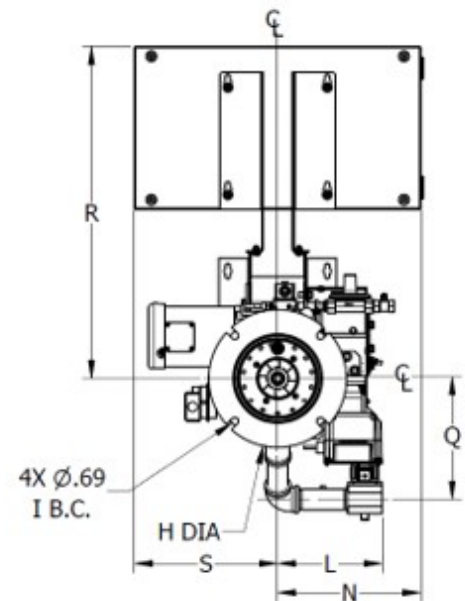
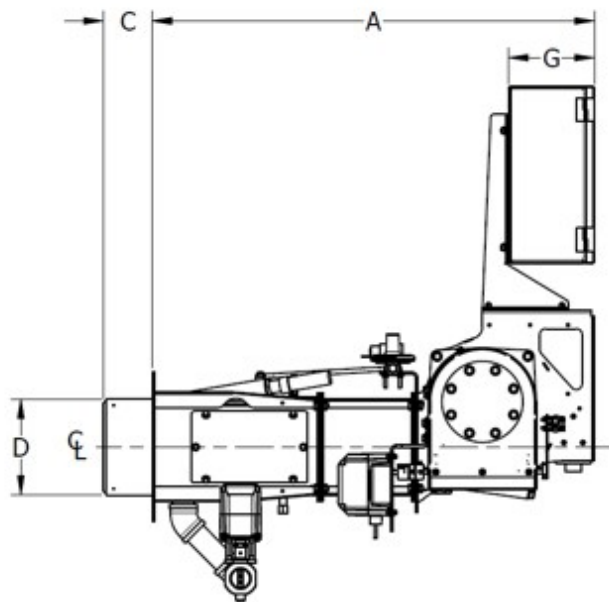
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Standard Dimensions

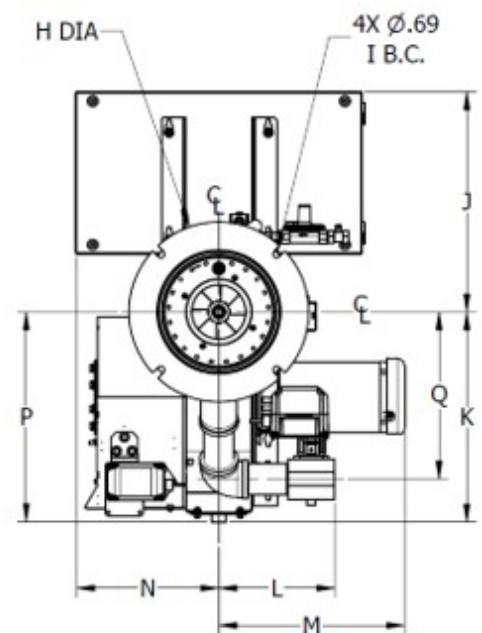
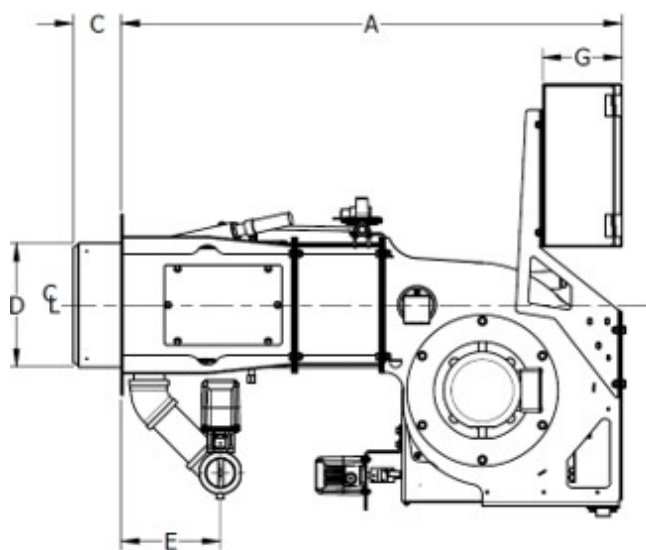
V Series

Gas only Configuration

Scroll Up



Scroll Down



Standard Dimensions

V Series

Gas only Configuration

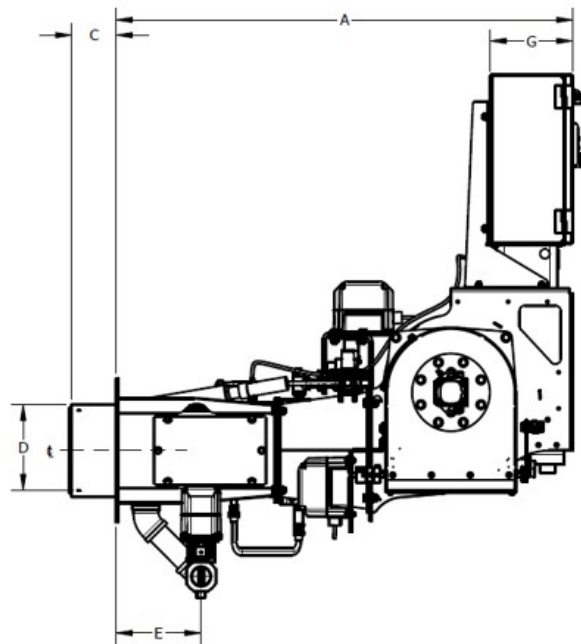
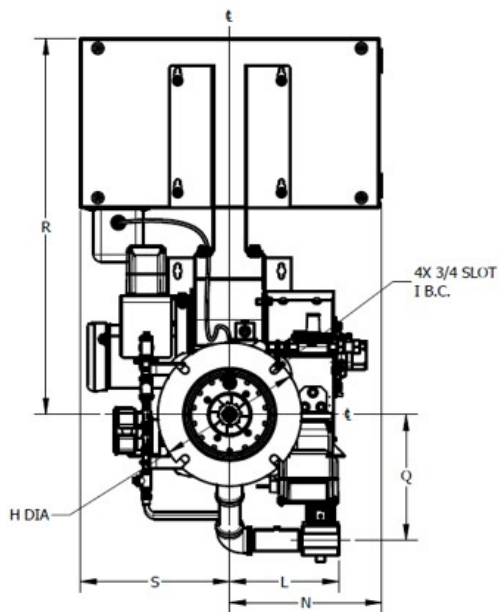
		Burner Frame Size & Model Number			
		DIM	Size 1	Size 2	Size 3
Length in inches					
Overall length	A	30 3/4	41 1/8	46 1/2	52 9/16
Width in inches					
Center line to right side (Standard)	M	NA	NA	17 5/16	19 9/16
Center line to left side (Standard)	N	NA	NA	13 5/16	13 5/16
Center line to right side (Inverted)	N	13 5/16	13 5/16	NA	NA
Center line to left side (Inverted)	S	13 5/16	13 5/16	NA	NA
Height in inches					
Center line to top (Standard)	J	21 3/16	21 3/16	21	21 1/4
Center line to bottom (Standard)	K	11 5/16	14 5/8	18 13/16	19 1/2
Center line to burner support (Standard)	P	11 5/16	14 5/8	18 13/16	19 1/2
Center line to top (Inverted)	R	33 9/16	33 9/16	37 3/4	38 7/16
Center line to center line of main gas inlet (Inverted)	Q	11 1/4	12 3/8	15 9/16	16 7/8
Blast tube dimensions in inches					
Extension (Standard)	C STD	4	4	4	5
Diameter	D STD	8 1/4	10	11 1/2	13 5/8
Panel box depth in inches					
Panel box depth	G	7 3/8	7 3/8	7 3/8	7 3/8
Mounting flange dimensions in inches					
Diameter	H	12 7/8	15	16 3/4	17 1/2
Bolt circle diameter	I	11 1/4	13 1/4	15 1/4	15 3/8
Gas inlet measurement in inches					
Center line to main gas inlet	L	9 3/4	10 1/2	10 13/16	11
Mounting flange to main gas inlet	E	7 9/16	6 5/8	9 1/4	9 1/2

Standard Dimensions

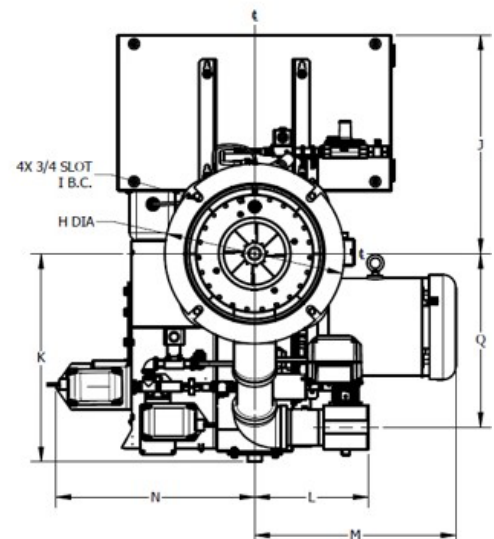
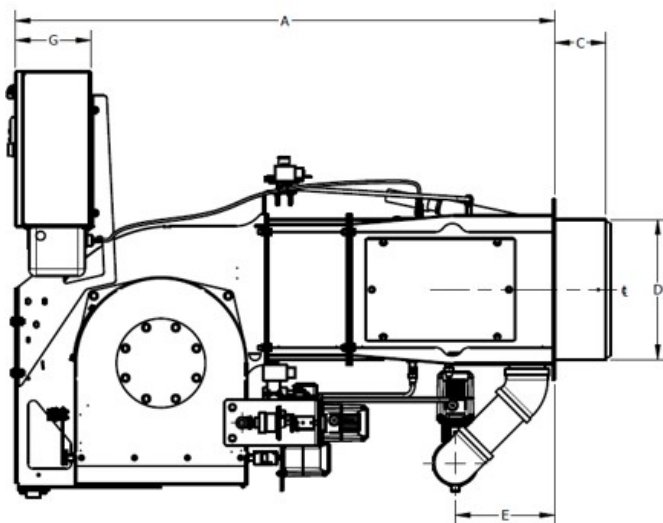
V Series

Oil only, Gas/Oil Configuration

Scroll Up



Scroll Down



Standard Dimensions

V Series

Oil only, Gas/Oil Configuration

		Burner Frame Size & Model Number			
		DIM	Size 1	Size 2	Size 3
Length in inches					
Overall length	A	40 3/4	41 1/8	46 1/2	52 9/16
Width in inches					
Center line to right side (Standard)	M	NA	NA	18 13/16	19 5/8
Center line to left side (Standard)	N	NA	NA	13 5/16	13 5/16
Center line to right side (Inverted)	N	13 5/16	13 5/16	NA	NA
Center line to left side (Inverted)	S	13 5/16	13 5/16	NA	NA
Height in inches					
Center line to top (Standard)	J	21 3/16	21 3/16	21	21 1/4
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Panel box depth	G	7 3/8	7 3/8	7 3/8	7 3/8
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Gas inlet measurement in inches					
Center line to main gas inlet	L	9 3/4	10 1/2	10 13/16	11
Mounting flange to main gas inlet	E	7 9/16	6 5/8	9 1/4	9 1/2

Technical Data

V Series

<30 PPM Low NOx Configuration (LNV, LNVG)

1.3 - 14.7 MMBTU/H NG: 9.3 - 105 GPH #2 OIL

UL listed with choice of NFPA, CSD-1, GAP, and FM for U.S. or Canadian units*

Standard equipment:	Combustion Control System options:	Fuel options:
3450 RPM motor, panel signal lights (Power On, Main Fuel, Ignition, Flame Failure), FGR, combustion air proving switch, safety shutoff valves, 120/1/60 control circuit, burner mounted panel with standard or inverted configuration, and unassembled gas-train components shipped loose.	Parallel Positioning Combustion Control System with O ₂ Trim and Variable Frequency Drive (VFD)	<p>Main Fuel: Natural gas (LNVG) or Combination gas/ #2 oil - pressure atomized (LNVLG).</p> <p>Igniter Fuel: Natural gas and/or propane.</p> <p>Fuel Changeover Switch: Combination gas/oil units only (LNVLG).</p>

Series Features

◊ Optional Feature • Standard Feature

	LNV-13 to LNV-25	LNV-30 to LNV-40	LNV-42 to LNV-55	LNV-60 to LNV-63	LNV-70 to LNV-100	LNV-105 to LNV-147
Flame Safeguard						
Open Damper Purge Control with UV Scanner	•	•	•	•	•	•
Turndown						
Up to 5:1 on Natural Gas	•	•	•	•	•	•
Mode of Operation						
Full Modulation Firing	•	•	•	•	•	•
Auto-Manual Firing Rate Control	• ¹	• ¹	• ¹	• ¹	• ¹	• ¹
Ignition						
Gas/Electric Pilot and Ignition Transformer	•	•	•	•	•	•
Dual Ignition (LNVLG)	◊	◊	◊	◊		
Oil Components						
Separately Driven Oil Pump Set	•	•	•	•	•	•
Simplex Oil Nozzle	•	◊	◊			
Return Flow Oil Nozzle		•	•	•	•	•
Gas Components						
Butterfly Rate Control Valve	•	•	•	•	•	•
High & Low Gas Pressure Interlocks	◊	•	•	•	•	•
Gas Shutoff Cocks (2)	•	•	•	•	•	•

¹ Standard for full modulation; optional on select parallel positioning systems

* Code and insurance provisions are subject to approval by local inspectors. Additional parts or equipment may be required. Consult local authorities having jurisdiction prior to burner installation

Standard Ratings

V Series

LNVG - LNVLG: < 30 PPM Low NOx P model Configuration

Specifications for < 30 ppm and high back pressure impeller models LNV-xxxP and LNVG-xxxP										
Burner Model ¹	Gas Input MBtu / hr	#2 Oil Input UP GPH	BHP @80% Eff.	Furnace Pressure ("W.C.)	Blower Motor HP ²	Remote Oil Pump Motor HP ³	Standard Gas Train Pipe Size (in.)	Min. Gas Pressure ("w.c.)	FGR Line Piping (in.)	Blower Motor Volt/PH 60 Hz.
LNV-13P-1	1,300	9.3	31	1.3	3/4	1/2	1	9.2	4	115/230/1
LNV-15P-1	1,500	10.7	36	1.2	3/4	1/2	1	11.7	4	115/230/1
LNV-17P-1	1,700	12.1	40	1.2	3/4	1/2	1	14.7	4	115/230/1
LNV-20P-1	2,000	14.3	48	1.3	3	1/2	1	20.2	4	115/230/1
LNV-21P-1	2,100	15.0	50	2.6	3	1/2	1	22.1	4	115/230/1
LNV-25P-1	2,500	17.9	60	3.2	3	1/2	1 1/2	10.4	4	230/460/3
LNV-30P-1	3,000	21.4	71	2.3	3	1/2	2	8.7	4	230/460/3
LNV-34P-2	3,400	24.3	81	1.8	5	1/2	2	10.3	4	230/460/3
LNV-35P-2	3,500	25.0	83	1.7	5	1/2	2	10.9	4	230/460/3
LNV-40P-2	4,000	28.6	95	3.8	5	1/2	2	10.4	4	230/460/3
LNV-42P-2	4,200	30.0	100	3.7	5	1/2	2	11.5	4	230/460/3
LNV-45P-2	4,500	32.1	107	3.5	5	1/2	2	10.8	4	230/460/3
LNV-50P-2	5,000	35.7	119	3.3	5	1/2	2	13.6	4	230/460/3
LNV-54P-3	5,400	38.6	129	3.1	7 1/2	3/4	2	19.2	4	230/460/3
LNV-55P-3	5,500	39.3	131	2.9	7 1/2	3/4	2	19.7	4	230/460/3
LNV-60P-3	6,000	42.9	143	4.0	7 1/2	3/4	2	17.6	4	230/460/3
LNV-63P-3	6,300	45.0	150	3.8	7 1/2	3/4	2	19.4	4	230/460/3
LNV-70P-3	7,000	50.0	167	3.4	10	3/4	2 1/2	15.8	4	230/460/3
LNV-80P-3	8,000	57.1	190	4.6	10	3/4	2 1/2	15.1	4	230/460/3
LNV-84P-3	8,400	60.0	200	4.3	10	1	2 1/2	15.5	4	230/460/3
LNV-90P-3	9,000	64.3	214	4.0	10	1	2 1/2	17.4	4	230/460/3
LNV-100P-4	10,000	71.4	238	3.5	15	1 1/2	2 1/2	20.5	6	230/460/3
LNV-105P-4	10,500	75.0	250	3.3	15	1 1/2	2 1/2	44.7	6	230/460/3
LNV-110P-4	11,000	78.6	262	3.0	15	1 1/2	2 1/2	48.7	6	230/460/3
LNV-120P-4	12,000	85.7	286	4.7	15	1 1/2	2 1/2	34.2	6	230/460/3
LNV-126P-4	12,600	90.0	300	4.5	15	1 1/2	2	49.1	6	230/460/3
LNV-147P-4	14,700	105.0	350	2.5	15	1 1/2	2	2.5 PSI	6	230/460/3

¹ Offered as configured-to-order model

² LN models require a remote oil pump on all gas/oil burners

³ Pump motors are 115/230/1 60 Hz

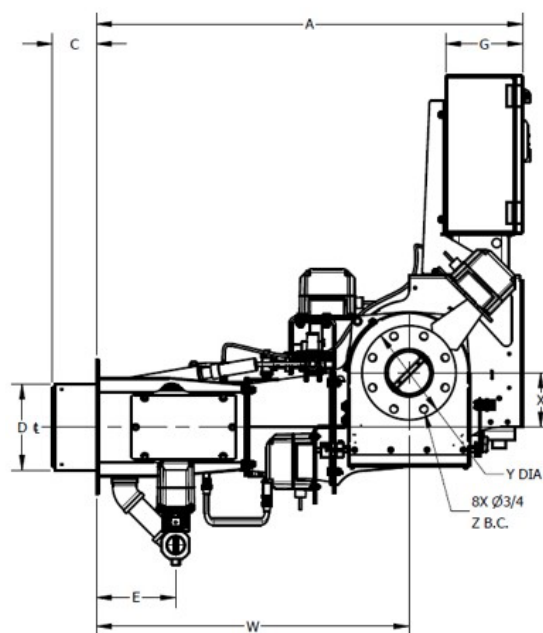
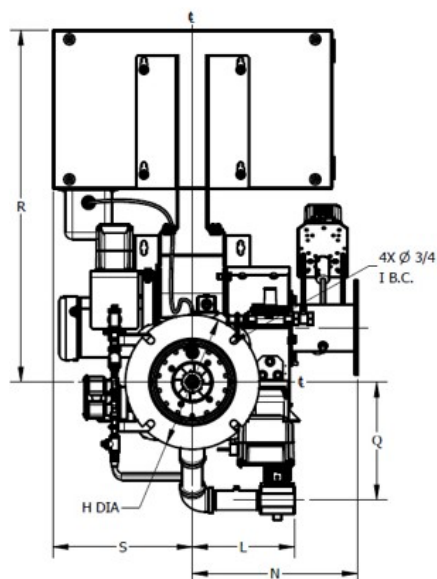
Input is based on fuel BTU content, listed furnace pressure and altitude of 2,000 feet or less. If altitude >2,000 feet and <8,000 feet, derate capacity 4% per 1,000 feet over 2,000. Consult factory for higher altitudes. If furnace pressure exceeds listed value, derate capacity 5% for every 0.5 "w.c. of pressure in excess of stated. Consult factory if derate exceeds 20%. Gas input is based on natural gas with 1,000 BTU/cu. ft., 0.60 gravity. For total pressure at manifold, add furnace pressure. Oil input based on 40,000 BTU/gal. Consult factory for 50 Hz. applications.

Standard Dimensions

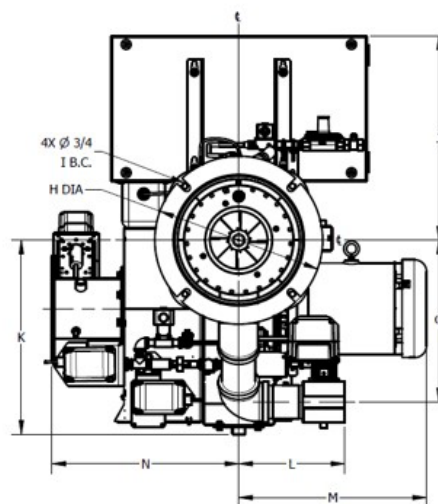
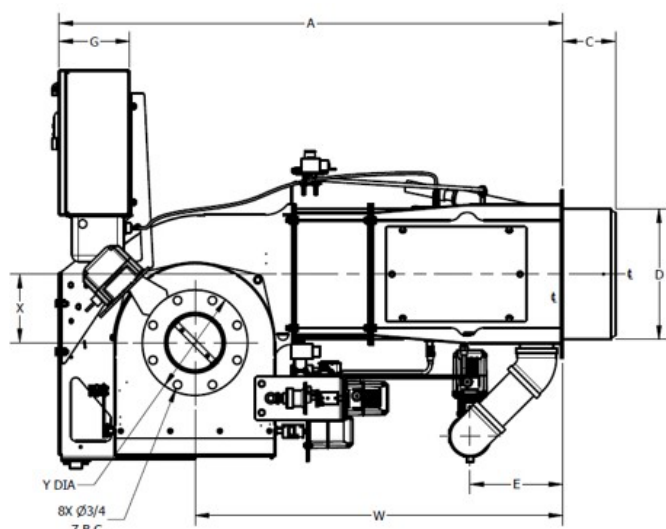
V Series

LNVG - LNVLG: <30 PPM Low NOx - Gas, Gas/Oil Configuration

Scroll Up



Scroll Down



Standard Dimensions

V Series

LNVG - LNVLG: <30 PPM Low NOx - Gas, Gas/Oil Configuration

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Diameter	D STD	8 1/4	10	11 1/2	13 5/8
Panel box depth in inches					
Panel box depth	G	7 3/8	7 3/8	7 3/8	7 3/8
Mounting flange dimensions in inches					
Diameter	H	12 7/8	15	16 3/4	17 1/2
Bolt circle diameter	I	11 1/4	13 1/4	15 1/4	15 3/8
Gas inlet measurement in inches					
Center line to main gas inlet	L	9 3/4	10 1/2	10 13/16	11
Mounting flange to main gas inlet	E	7 9/16	6 5/8	9 1/4	9 1/2
Flue gas recirculation (FGR) in inches					
Center line of FGR to mounting flange	W	29 7/8	30 1/4	33 1/2	33 3/8
Center line of burner to center line of FGR	X	5 3/16	5 3/16	8	7 1/4
Diameter	Y	9	9	9	11
Bolt circle diameter	Z	7 1/2	7 1/2	7 1/2	9 1/2



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