



Slant/Fin®

VGH



Victory VGH Series



High Efficiency Wall Mount Condensing Gas Boiler

**Models VGH-299 CH, VGH-399 CH
and VGH-500 CH**

Boiler Features

- Next Generation Stainless Steel Water Tube Heat Exchanger
- Easy Installation & Maintenance
- 3 in 1 Vent Connector & Long Vent Lengths
- Compact and Light Weight - All Under 188 lbs

Control Features

- ModBus Connection Standard
- Cascade Control up to 16 Boilers
- DHW Control Options Including Parallel DHW & CH Operation
- Full Text Control & Data Log
- Remote Access Capable



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Introducing the VGH Commercial Boiler

Our latest boiler boasts efficiencies of 95+, with a stainless steel heat exchanger for durability, superior heating and corrosion resistance and onboard control, all in a compact, lightweight wall mounted design.

★ HEAT EXCHANGER DESIGN

The next generation Duo Stainless Steel Water Tube Heat Exchanger features larger water passages increasing the heat output. The lower pressure drop on the water side, contributes to the boiler's compact size and, the lower pressure drop on the flue gas side, contributes to the longer approved vent lengths. Now you get more heat output in a smaller lightweight package, designed for easy access.

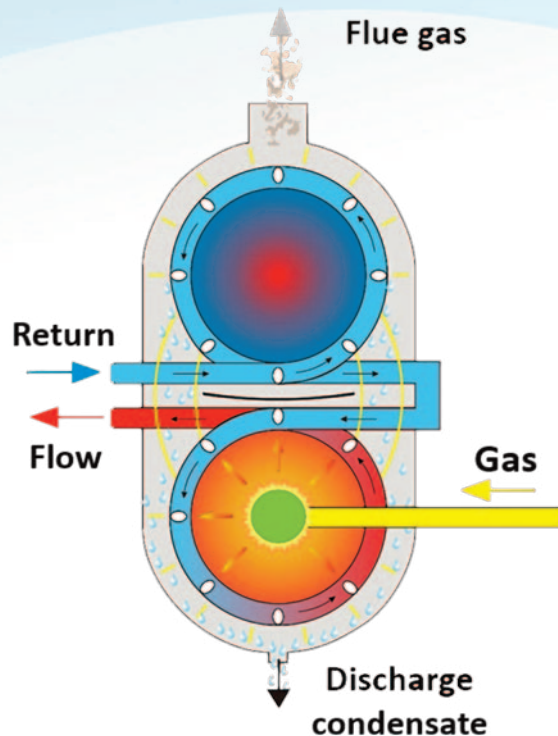
★ COMBUSTION DESIGN

VGH boilers have a fully modulating combustion design featuring a 5:1 turndown ratio. Using stainless steel premix burners, reduces excess air and provides efficient and reliable direct spark ignition. The VGH can operate with gas pressure as low as 3.5" WC and a negative pressure zero governor gas valve controls the outlet pressure. All models are field convertible to propane by simply changing an orifice and adjusting one control parameter.

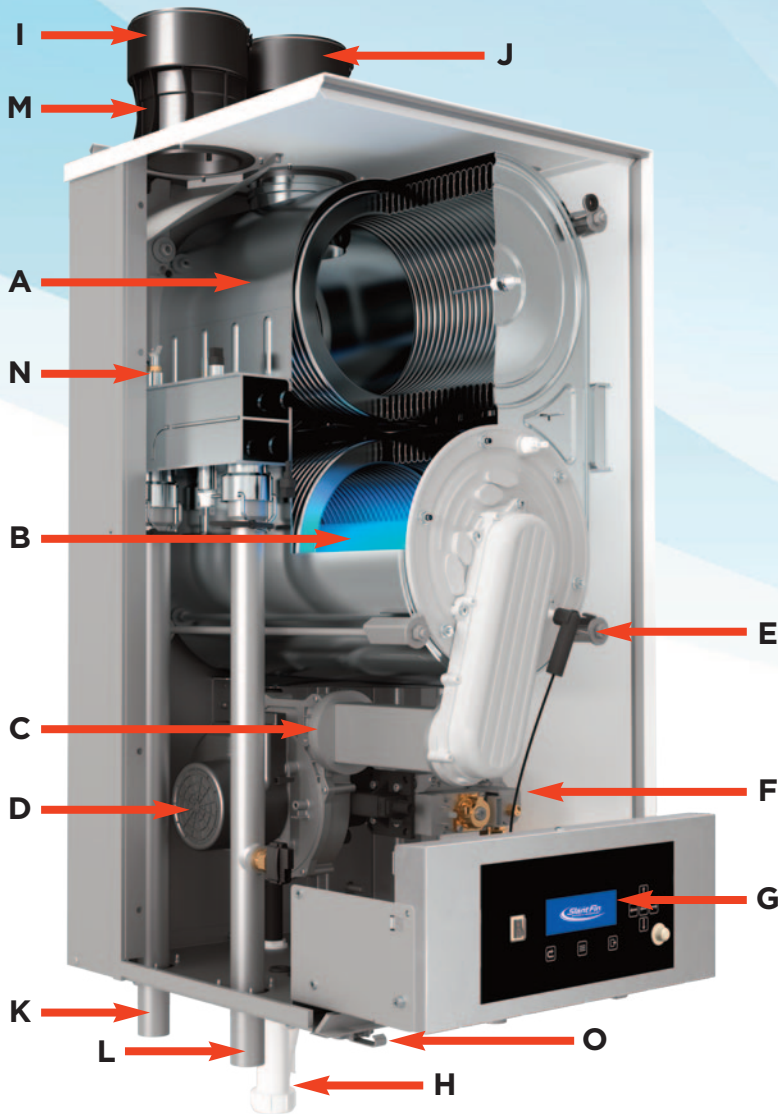
★ VENTING

The VGH is a direct vent sealed combustion boiler. It features a 3 in 1 exhaust vent and intake air connection. It is rated for vent length up to 481 feet, and is approved for common venting for a cascade system. An integrated combustion analyzer test port is standard on all models. The vent connection is designed to accept PVC, CPVC, Polypropylene and stainless steel, without additional adaptors, saving time and money during installation.

★ CASCADES



Efficiency and reliability are major factors for any boiler installation. But gone are the days of oversizing boilers to ensure capacity during high demand. Cascades, multiple boilers linked by a control, provide peak performance and operational efficiency; able to adjust capacity based on seasonal demands and occupancy. The VGH onboard control has 4 built-in cascade program modes. It allows for remote operation, control of heating and DHW, as well as boiler sequencing and rotation. A cascade will allow the system to continue to operate if one unit is taking off line for service. And, with seasonal rotation, the wear and tear on a single boiler is decreased, increasing the longevity of the system and of your investment. With the ability to cascade up to 16 boilers, the VGH lets you get just the right BTU output for your application.



MAIN PARTS:

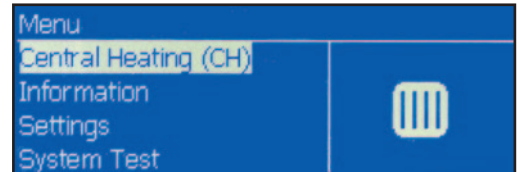
A- Duo Heat Exchanger	F- Gas Valve	K- Boiler Water Return
B- Burner	G- Display + Boiler Control	L- Boiler Water Supply
C- Non-Return Valve	H- Condensate Siphon	M- Flue Gas Test Ports
D- Blower	I- Air Inlet	N- Low Water Cut-Off Sensor
E- Ignition Cable + Electrode	J- Flue Gas Outlet	O- Easy Access Door Clips

Slant/Fin VGH

Don't let the small size fool you. This VGH design takes into account maintenance and service needs. The control provides a boiler operation history by recording time and date stamps on alarms, lockouts and failed ignitions in the error log. Error codes and text descriptions are displayed on the controls' LCD panel. There are easy to download troubleshooting parameters available.

Since it is wall mounted most components are at eye level. A flip out panel makes the control easy to use when the cover is removed. Ample front clearance and removable side panels makes easy access to all parts.

LCD DISPLAY:



CONTROL The feature rich control on the VGH has a large backlit LCD screen with easy-to-read full text information. The control's extensive data logging captures over 10 parameters, including burner runtime hours, hours till next service, and error logging includes a time and date stamp.

Additional features include:

CIRCULATOR CONTROLS for the boiler, system and DHW are standard. Additional functions include circulator overrun and exercise, as well as alternate functionality for the dampers and 3-way valves and PWM control for variable speed circulators.

DHW CONTROL OPTIONS Includes the expected DHW priority function, but we go above and beyond with additional features such as, parallel DHW and CH operation and an instantaneous DHW plate heat exchanger control option. (Plated Heat Exchanger sold separately).

CASCADE Integrated program options can control up to 16 boilers. There are four cascade program modes. They include, control for both heating and DHW, as well as, boiler sequencing and rotation, as well as, remote operation and heat demand indication from each boiler.

EXTERNAL CONTROL AND BMS OPTIONS with a Modbus connection are standard, as well as, 0-10VDC remote control for set point and boiler input. With the addition of the IP Module, you are able to check the boiler stats via a computer or smart phone.


As added protection for your investment, the VGH includes important features such as, two level frost protection, short cycle protection, adjustable power min-max limits, a temperature Boost function and multiple levels of security.

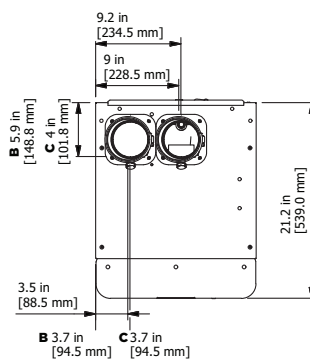
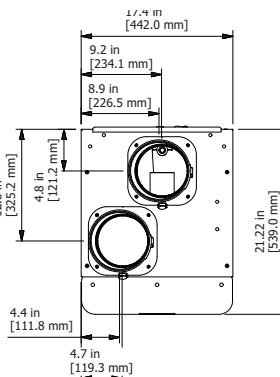
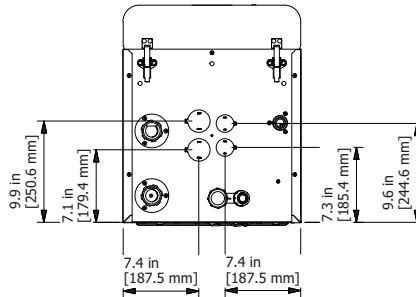
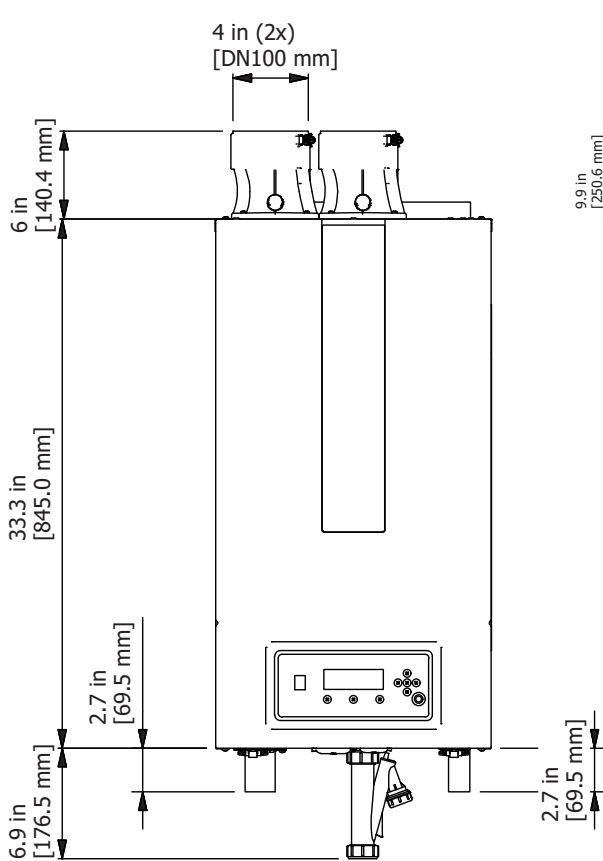
Slant/Fin[®] VGH

- Gas-Fired • High Efficiency
- Wall Mount • Energy Star Rated*

Models VGH-299, VGH-399 and VGH-500

Model	Input, MBH		Output MBH	AHRI Net Ratings Water, MBH	Thermal Efficiency %	Combustion Efficiency %	Max Exhaust/ Intake Lengths	Supply / Return Connection Size	Gas Connection	Water Content Gal (liter)	Empty Weight Lbs. (kg)	Flue Connection inch (mm)
	Min	Max										
VGH 299 CH	59.0	295	274	238	95.1*	-	228/228"	1 1/2"	1"	1.77 (6.7)	174 (79)	4" (100)
VGH 399 CH	80.0	396	378	329	95.5	95.4	121/121"	1 1/2"	1"	2.19 (8.3)	182 (83)	4" (100)
VGH 500 CH	98.0	500	476	414	95.1	94.5	451/451"	1 1/2"	1"	2.74 (10.4)	187 (85)	6" (150)

* AFUE VGH-299 CH is Energy Star Rated 



STANDARD EQUIPMENT

- Stainless Steel ASME heat exchanger
- Certified for use with Common venting system
- Unique locking wall bracket
- Condensate trap clean out & drain
- Built in 3 in 1 vent connector
- Control- Includes outdoor reset sensor
- 50 p.s.i relief valve

WINNING PERFORMANCE

It's been said that good things come in small packages; the VGH high efficiency boiler is proof of that. Compact 33.3 x 17.3 x 20.9 inches (h x w d) and light weight – under 188 lbs. The VGH series of wall mounted boilers is one of the smallest, lightest and most powerful boilers in its class. Its small size and light weight make for easy and flexible installation options without the need of specialized transportation tools.

Gas Consumption		
Model	Nat. Gas ft ³ /h (m ³ /h)	Propane ft ³ /h (m ³ /h)
VGH 299 CH	52-261 (1.5-7.4)	22.2-111 (0.6-3.1)
VGH 399 CH	73.9-372 (2.1-10.5)	31.3-157 (0.9-4.5)
VGH 500 CH	91.5-482 (2.6-13.6)	38.7-204 (1.1-5.8)

Polypropylene, PVC, CPVC, and Stainless steel venting is standard.



U.S.A.
Slant/Fin Corporation • 100 Forest Drive
Greenvale, NY 11548 • 516-484-2600
www.slantfin.com

Canada
Slant/Fin LTD/LTEE • 400 Ambassador Drive,
Mississauga, Ontario L5T 2 J3 • 905-677-8400
www.slantfin.ca