



High Efficiency Firetube Condensing Boiler

For hydronic heating applications

efficiencies up to

99%

VALIANT-FT®





Firetube heat exchanger

Industry leading counterflow firetube design

- 439 stainless steel construction
- Dedicated stainless steel alloys
- Resistant to corrosion
- Extremely low operating noise
- Maximum operating temperature of 200°F
- Up to 40° ΔT
- Maximum operating pressures:
080-155 – 30 PSI
199-399 – 80 PSI

low water mass design

- Increased tolerance for varying flow or low flow conditions
- Increased tolerances to changes in water chemistry
- Decreased risk of scaling and erosion
- Decreased boiler cycling

• Up to 10:1 turndown - lowering firing rates provide better heat transfer throughout the heat exchanger, reduces on/off cycle, increases energy savings and minimizes wear and tear on the appliance and components.

Convenience of access

Serviceability in any situation



The Valiant-FT takes into consideration convenience of access to all components, as well as multiple field installation possibilities. All the components are conveniently placed inside the jacket, making them easily accessible from multiple access points from the body of the unit. Paired with the small footprint and zero inch clearance to combustibles on either side, the Valiant-FT can be installed seamlessly into any space restrictive job sites while still maintaining an ease of access to the appliance.

- Can be floor or wall mounted
- Reversible swing door (swing open left or right)
- Interchangeable location of touchscreen (top or bottom)
- Service panels on 3 sides

A top mounted stainless steel mesh burner design makes it easily removable for cleaning and access to the combustion chamber, including all burner mounted components.

Controls

Communications and Lead Lag capability



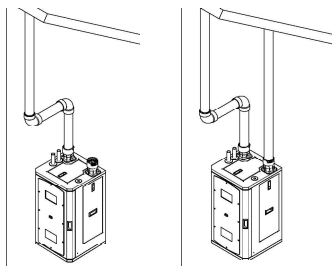
The Valiant-FT utilizes a 7" color HMI touchscreen which provides an easy-to-read graphical display of all information making it extremely user friendly and intuitive to use. This display provides the ability to change set points over various modes of operation, such as Central Heating, DHW, Outdoor Reset and more. This interface provides visual graphs illustrating the various temperature points over a period of time. It also allows for overall appliance monitoring, including all sensors, firing rate, fan speed, flame signal, alarm reporting, and manual firing rate control during product commissioning.

A second digital display is mounted on the inside door of the Valiant-FT. This display provides access to additional parameters which can be changed by the installer to suit the requirements of the specific job site. This adds an additional layer of multi-level access to the control which makes the control easy to use for the user without the fear of changing any major performance altering parameters.

The Valiant-FT control is Modbus RTU ready and capable of alternative protocols through the use of a gateway. Our Field Server Protonode is proven and capable of communication with common protocols including but not limited to BACnet, LonWorks and Metasys. The Protonode provides ease of integration with new and existing building management systems.

- Multi-unit cascade function up to 64 Boilers
- Multiple Lead Lag Modes
- Fail-Safe Mode



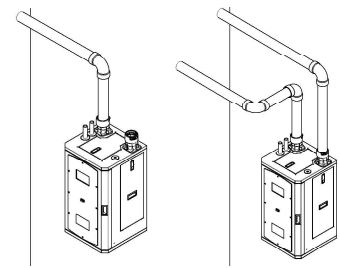


Vertically Vented

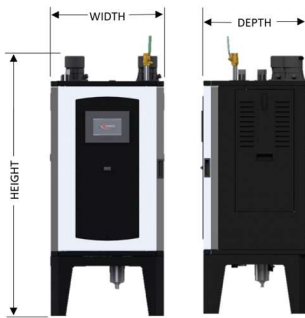
Venting configurations

The Valiant-FT is a Category IV appliance suitable for up to 100' of flue gas venting. In a directly vented system, an additional 100' of combustion air can be combined for a maximum total of 200'.

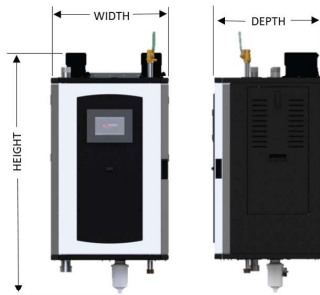
- Suitable for use with CPVC, PVC, Polypropylene and AL29-4C venting systems
- 3" venting diameters for all model sizes
- Vertically or horizontally vented with combustion air drawn from either the room, or directly from outside



Horizontally Vented



Floor-mounted



Wall-mounted

Dimensions & Specifications

Model	Width	Depth	Height (Wall)	Height (Floor)
80	19"	18 1/2"	37"	49 5/16"
110	19"	18 1/2"	37"	49 5/16"
155	19"	18 1/2"	37"	49 5/16"
199	21"	18 1/2"	38.3"	50 5/8"
250	21"	18 1/2"	38.3"	50 5/8"
299	23"	21"	40.3"	52 11/16"
399	23"	21"	40.3"	52 11/16"

Max. Input (Btu/hr)	Max. Output (Btu/hr)
80,000	76,000
110,000	104,500
155,000	147,250
199,000	189,050
250,000	237,500
299,000	284,050
399,000	387,030

Model	Weight lb (kg)
80	130 (60)
110	130 (60)
155	170 (77)
199	200 (90)
250	200 (90)
299	240 (109)
399	250 (113)

Shipping Weights

Heat Exchanger Head Loss and Flow

Model	VA0080		VA0110		VA0155		VA0199		VA0250		VA0299		VA0399		
Unit	GPM	ft-hd	GPM	ft-hd	GPM	ft-hd	GPM	ft-hd	GPM	ft-hd	GPM	ft-hd	GPM	ft-hd	
Temp. Rise (°F)	20	7.59	1.66	10.44	2.56	14.71	4.99	18.89	2.69	23.73	4.32	28.38	3.23	38.67	4.91
	25	6.08	1.27	8.35	1.69	11.77	3.27	15.11	1.85	18.98	2.98	22.71	2.39	30.94	3.29
	30	5.06	0.98	6.96	1.44	9.81	2.45	12.59	1.45	15.82	2.3	18.92	1.62	25.78	2.45
	35	4.34	0.86	5.97	1.19	8.41	1.99	10.79	1.15	13.56	1.86	16.22	1.32	22.1	1.95
	40	3.8	0.64	5.22	0.94	7.36	1.7	9.44	1.00	11.87	1.55	14.19	1.13	19.34	1.6

Standard Features

- ASME "H" stamped stainless steel heat exchanger
- Fully welded construction with stainless steel pressure vessel combustion chamber, tubes and tubesheets
- Modulating boiler with up to 10:1 turndown
- 95% DOE AFUE efficiency (VA80-299)
- 97% thermal & combustion efficiency (VA399)
- NG or LP operation (field convertible)
- Standard wall-hung configuration (optional kit for floor-mount configuration)
- Inherent O₂ trim via air density response
- Zero clearances to combustible materials
- Built-in high limit with soft manual reset through touchscreen
- Built-in low water cut-off with soft manual reset through touchscreen
- Universal vent connection with combustion analyzer test port
- Return water temperatures as low as 40°F
- Factory test-fired and certified
- 10 year limited warranty on heat exchanger
- 5 year limited warranty on burner
- 1 year limited warranty on parts

Model	Maximum Flow GPM	Minimum Flow	
		High Fire GPM	Low Fire GPM
80	17.0	3.0	1.0
110	17.0	4.2	1.0
155	17.0	5.9	1.0
199	27.0	7.6	1.5
250	27.0	9.5	1.5
299	27.0	11.4	1.5
399	38.0	15.5	4.5



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Camus Hydraulics is taking a leading role in the development of environmentally friendly products through innovative engineering as we incorporate the very latest technologies designed to create higher efficiency levels while lowering emissions.

Camus is continually setting new benchmarks of excellence through skillfully engineered and solidly constructed high efficiency products designed to provide years of reliable service and comfort.

Additional specifications can be obtained by visiting our website or by calling your local Camus representative.

www.camus-hydraulics.com

The Camus® Certified seal assures you that reliability, efficiency and serviceability are built into every single unit.

