



# Helix VLT

## ► Gas-Fired, Wall Hung Modulating Condensing Boiler

- Up to 95% AFUE
- Built-In Primary/Secondary Piping cuts installation time in half
- Built-In Low Water Cut Off
- 5:1 Turn Down Ratio
- Innovative Heat Exchanger
  - Low Maintenance, Self-Cleaning
  - Designed in the U.S., for the U.S.
  - 150 psi MAWP



Innovative. Efficient. Dependable. Dunkirk.





## ► Innovative

Because we know what it takes to make a good thing even better...

The Dunkirk Helix VLT "Vertical Laser Tube," condensing boiler features a revolutionary, vertically mounted helical fin tube heat exchanger, made of 316L/444 stainless steel. This self-cleaning design features wide, smooth waterways that help remove hard water deposits and prevent scaling.

The Helix VLT offers more application flexibility with modulating capacities from 50 to 299 MBH and the H2O Series of Stainless Steel Indirect Water Heaters are a perfect match!

That's why we added a 299 MBH capacity to our line of high efficiency Dunkirk Helix VLT Stainless Steel Wall Hung Modulating Condensing Boilers and teamed them with the H2O Series - a full line of Stainless Steel, Single & Dual Coil Indirect Water Heaters, Buffer Tanks and Storage Tanks.

Dunkirk H2O Indirect Water Heaters are available in 30 to 150 gallon capacities and feature 316L stainless steel construction and top connections for an easy installation. The H2O is so well insulated that water will lose only a half-degree for every hour on standby. The H2O's smooth coil design prevents sediment build-up. This durable, efficient water heater is a great value.

Dunkirk is proud to bring you the most efficient, forward-thinking home heating solutions available today.

## ► Efficient

Just look at what you could be saving annually...

**Add up the savings with a Helix VLT:**

- + Up to 95% AFUE**
- + Sealed Combustion**
- + Outdoor Temperature Reset\***

The increased efficiency of the VLT could save you up to 40% on your heating bill each year.

If you pay \$1,800 annually to heat your home, you could save as much as \$720 per year.

**= That's \$3,600 over 5 years!\*\***

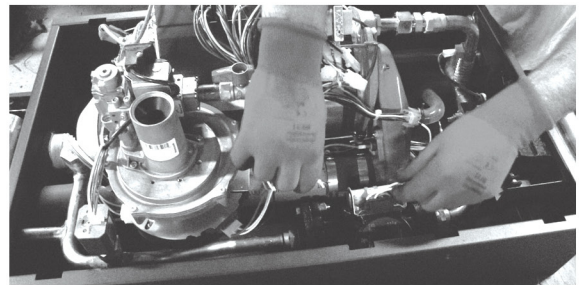
\* A factory standard Outdoor Temperature Reset adjusts water supply temperature for best possible fuel economy based on actual seasonal conditions.

\*\* Individual savings may vary.

## ► Dependable

Dunkirk holds our products to the highest quality standards and we stand behind them...

Each Helix VLT boiler produced is subjected to a rigorous set of quality control checks before it leaves our factory. Dunkirk test fires each boiler and checks all of the electrical, plumbing, pressure vessel and combustion set up parameters - fine tuning the product's performance prior to approving the unit for shipment. We even include the final computer generated results for your professional contractor to reference while completing your installation.



Since we go the extra mile to deliver a quality product we offer not only a 15 year limited manufacturer's warranty, we also back it up with an industry-leading first year \$500 Heat Exchanger Labor Warranty.

Our H2O Single Coil Indirect Water Heaters feature a limited lifetime warranty and optional Comfort Plus Parts & Labor warranties are available for all our products.

H2O (40 gal)

Helix VLT 100 MBH





**Built-in primary/secondary piping  
saves installation time and space**

*"Dunkirk installed both primary and secondary pipe work inside the actual unit. I couldn't believe it! It really is as simple as piping your Supply and Return with one pump, not two because the other is installed in the Helix already, right in the boiler!"*

- Sean McCormack  
BMC Plumbing & Heating  
Rockland County, NY

**Helix VLT 50-200 MBH ▾**



**Integral Condensate Trap ▲**

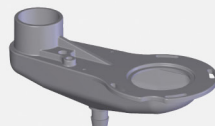
- Large diameter
- Quick connect to condensate drain or pump

**Heat Exchanger ▾**



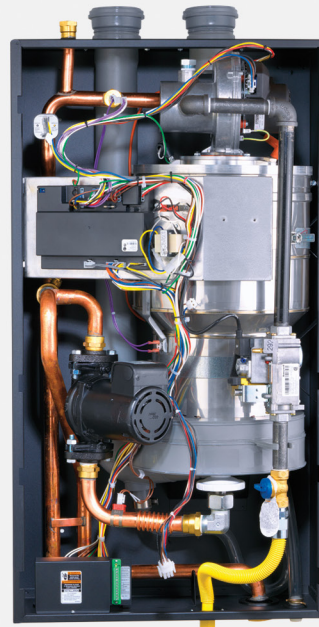
- 316L/444 stainless steel fin tube
- Vertically mounted
- Self-cleaning
- 150 psi MAWP
- Designed in the U.S., for the U.S.

**Non-Metallic  
Flue Collector ▾**



- Corrosion resistant

**Helix VLT 299 MBH ▾**



**299 Dual Diameter  
Heat Exchanger  
with polypropylene  
flue collector ▾**



- 316L/444 stainless steel fin tube
- Vertically mounted
- Self-cleaning
- 150 psi MAWP
- Designed in the U.S., for the U.S.

**LWCO ▾**



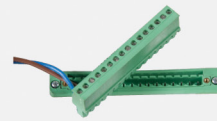
- Factory wired and installed
- Probe-type with test button
- Meets code where required
- Provides added protection

**Control Features ▾**



- 5:1 Turn down ratio
- Easy to understand English text display
- Outdoor reset maximizes fuel economy
- Priority domestic hot water meets changing demands
- Integrated multiple boiler control eliminates the need for costly multiple boiler controls

**Quick Connect ▾**



- Simplified electrical connection and removable terminal block make wiring easy

**Top Connections ▾**



- Approved for PVC, CPVC and Polypropylene venting

**Bottom Connections ▾**



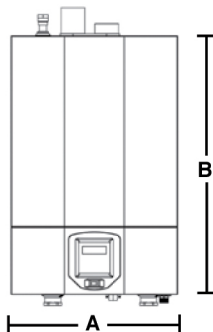

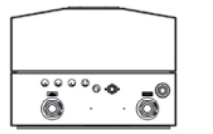
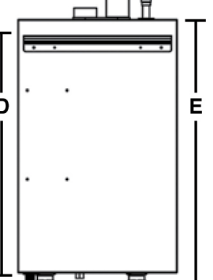
- Replacement ready with 1-1/4" piping connections and low pressure drop
- no high head pump required

**Wall Mount Bracket ▾**



- Bracket included
- Wall mount installation saves space

# Dunkirk VLT Natural or Propane Gas-Fired Modulating Condensing Hot Water Boiler

Dimensions/Weights	Model	Boiler Input Rate (MBH) <sup>(1)</sup>		Heating Capacity (MBH) <sup>(1)(2)</sup>	Net AHRI Rating, Water (MBH) <sup>(1) (3)</sup>	AFUE % <sup>(2)</sup>	
		Max.	Min.				
<div>Front</div> <div></div> <div>Top</div> <div></div> <div>Bottom</div> <div></div> <div>Back</div> <div></div>	DKVLT-050	50	10	46	40	95.0	
	DKVLT-075	75	15	69	60	95.0	
	DKVLT-100	100	20	91	79	95.0	
	DKVLT-150	150	30	139	121	95.0	
	DKVLT-200*	200	40	185	161	94.0	
	DKVLT-299*	299	60	273	239	94.0	
* The DKVLT-200 and DKVLT-299 have an AFUE of 94% and are ENERGY STAR rated products but they do not meet the 95% criteria for 2013 Most Efficient.							
(1) 1000 Btu/hr (British Thermal Units Per Hour)							
(2) Heating Capacity and AFUE (Annual Fuel Utilization Efficiency) are based on DOE (Department of Energy) test procedures.							
(3) Net AHRI Ratings based on piping and pickup allowance of 1.15. Contact Technical Support before selecting boiler for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping systems, etc.							
General Information (See Installation, Operation and Maintenance Manual for complete instructions)							
<div>Clearances</div> <div>(4) Required distances measured from boiler.</div> <div>(5) Service, proper operation clearance recommendation.</div>	Top	Combustible Materials (Required) <sup>(4)</sup>			Service <sup>(5)</sup>		
	Left Side	0" (0 cm)			14" (36 cm)		
	Right Side	0" (0 cm)			0" (0 cm)		
	Front	0" (0 cm)			6" (16 cm)		
	Back	0" (0 cm)			0" (0 cm)		
	Bottom	0" (0 cm)			12" (32 cm)		
	Combustion Air/Vent Piping	0" (0 cm)			6" (16 cm)		
	Hot Water Piping	See Local Code			6" (16 cm)		
<div>Combustion Air &amp; Vent Pipe Equivalent Length (Schedule 40 PVC)</div>	Min. Length	2" Pipe 050	2" Pipe 075/100	3" Pipe 075/100	3" Pipe 150/200	3" Pipe 299	4" Pipe 299
		6 Ft. (1.8 m)	6 Ft. (1.8 m)	6 Ft. (1.8 m)	6 Ft. (1.8 m)	6 Ft. (1.8 m)	6 Ft. (1.8 m)
	Max. Length	100 Ft. (30.5 m)	50 Ft. (15.2 m)	100 Ft. (30.5 m)	100 Ft. (30.5 m)	25 Ft. (7.7 m)	100 Ft. (30.5 m)
	Note: Refer to IOM and vent pipe manufacturer's instructions for equivalent vent lengths and alternate venting materials.						
Connections	Return/Supply Water		Gas In		Condensate Drain		
050/075/100	1-1/4" NPT		1/2" NPT		3/4" NPT		
150/200/299	1-1/4" NPT		3/4" NPT		3/4" NPT		
Electrical	120 Volts AC, 60 hertz, 1 phase, Less than 12 amps (15 amp circuit recommended)						
Water Content	050/075/100 - 1.1 Gallons, 150/200/299 - 1.8 Gallons						
Standard Equipment	Wall Mounted: Bracket included. Boiler Control Module: Automatic Line Voltage/Intermittent Direct Spark Ignition/Modulating with a 5:1 combustion turn down ratio. For multiple boiler applications – the control module can stage up 16 boilers. User Display interface: Easy programming with text display. Outdoor Temperature Sensor included. Heat Exchanger: High grade 316L/444 Stainless Steel Fin Coil with Flame Sight Glass. Built-in Primary/Secondary Manifold Piping and Pump. Combustion: Gas Valve with Premix Venturi and Blower, Durable Stainless Steel Mesh Modulating Burner with 5:1 turn down ratio, Direct Spark Igniter, Flame Sensor and LP Conversion Kit included. Electrical: Detachable Low Voltage Terminal Strip, High Voltage Junction Box and Transformer. Other: Factory installed probe-type Low Water Cut Off with test feature, 30 PSI Safety Relief Valve, Boiler Drain Valve and Condensate Drain with built in trap.						
Options	Central Heating Pump available for 50 to 200 MBH only (Taco 007 or Grundfos UP15-42F), Concentric Vent Kit (2" and 3"), System Sensor (For Multiple Boiler Applications)						
Certifications	<div><div>Energy Star</div><div>LEARN MORE AT <a href="http://energystar.gov">energystar.gov</a></div><div>US</div><div>150 psi MAWP</div><div>ASME H</div><div>AHRI CERTIFIED® <a href="http://www.ahridirectory.org">www.ahridirectory.org</a></div></div>						
Dimensions							
Models	050 075 100	150 200	299				
Width (A)	20" 508 mm	23" 584 mm					
Height (B)	30" 762 mm	40" 1041 mm					
Depth (C)	14" 356 mm	16" 406 mm	18.3" 465 mm				
Bracket (D)	28" 711 mm	40" 1016 mm					
Ht.w/Piping (E)	31" 787 mm	42" 1092 mm					
Weights							
Ship Wgt.	111 lbs. 50 kg	~182 lbs. 83 kg	~225 lbs. 102 kg				
Boiler Wgt.	91 lbs. 41 kg	~157 lbs. 71 kg	~195 lbs. 89 kg				

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