

Dunkirk | **HELIX^{VLT}**
VERTICAL LASER TUBE

Innovative. Efficient. Dependable. Dunkirk.

Helix VLT

96% AFUE Residential Gas Modulating Condensing Boiler



INNOVATIVE — Because we wouldn't have it any other way...

The fact is Dunkirk has been designing, manufacturing, and marketing residential condensing boilers longer than any other North American company. We were the first to introduce 95% efficient condensing boilers. Unlike most North American boiler companies Dunkirk designed a heat exchanger for our demanding American condensing boiler customers. Our American craftsmen are certified to test and apply the crucial ASME mark for safe condensing boiler pressure vessels in our factory. **Simply put - if you want the most advanced boiler available from an American manufacturer, you want Dunkirk.**

Introducing the latest in condensing boiler technology.



Dunkirk's new 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.

Dunkirk understands that there are more important things in life to spend your money on than heating bills; that's why we're proud to bring you the most efficient, forward-thinking home heating solutions available today.

Home heating goes well beyond the initial cost of the system. Your boiler selection impacts your monthly bills. Efficiency, ease of maintenance, and longevity all add up. Spikes in utility rates or costly maintenance and repairs can easily derail the best financial plan.

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

The new VLT features an EnergyStar Rated 96% AFUE. Just add up the savings:

-96% AFUE

-Sealed Combustion

-*Built-in Outdoor Temperature Reset

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

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![†]

[†](Individual savings may vary).

The Dunkirk VLT's original design incorporates easy maintenance, durability and safety to make the most of your home heating investment. The self cleaning heat exchanger features wide smooth waterways that help remove hard water deposits and prevent scaling. A corrosion resistant CPVC flue collector adds to the longevity of the boiler. The VLT's sealed housing reduces noise for quiet comfort in any living space. Since most municipal codes require heating systems to incorporate a Low Water Cut Off (LWCO) to guard against unsafe operation, the Dunkirk VLT features a built-in LWCO.

DEPENDABLE — Dunkirk holds our boilers to the highest quality standards and we stand behind our products...

Each VLT boiler produced is subjected to a rigorous set of quality control checks before it leaves our factory. Dunkirk checks all of the electrical, plumbing, pressure vessel and combustion set up parameters prior to approving a VLT for shipment. We even include the final computer generated results for your professional contractor to reference while completing your installation. Every Dunkirk VLT is backed by a 15 year limited manufacturer's heat exchanger warranty, and the availability of optional Comfort Plus Parts & Labor Extended Warranties ensure you peace of mind for years to come.





Factory wired and installed, probe-type low water cut off with test button.

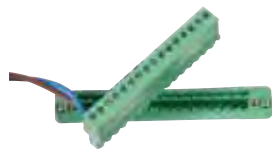


Control features simple text display, outdoor reset, priority domestic hot water and integrated multiple boiler control for up to 16 modules.



Corrosion resistant CPVC flue collector.

Built in primary/secondary piping with pump.



Simplified electrical connections with removable terminal block.



Innovative 316L/444 stainless steel fin tube heat exchanger.

Integral Condensate Trap.

Jacket slides on and off for quick access.

Top Connections



Bottom Connections

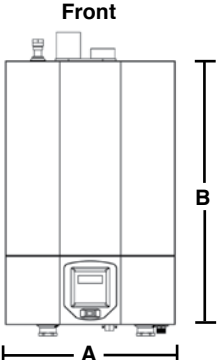
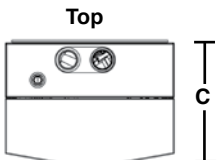
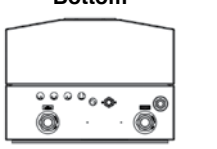
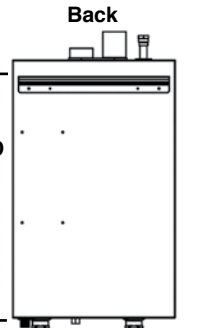







Replacement ready with 1-1/4" piping connections and low pressure drop - no high head pump required.

Wall mount bracket included



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

| Dimensions/Weights | Model | Boiler Input Rate (MBH) ⁽¹⁾ | | Heating Capacity (MBH) ⁽¹⁾⁽²⁾ | Net I=B=R Rating, Water (MBH) ⁽¹⁾⁽³⁾ | AFUE % ⁽²⁾ | | | | |
|---|--|---|---|--|---|-----------------------|------------------|-----------------|------------------|--|
| | | Max. | Min. | | | | | | | |
|  Front A B | DKVLT-050 | 50 | 10 | 46 | 40 | 96.0 | | | | |
| | DKVLT-075 | 75 | 15 | 69 | 60 | 96.0 | | | | |
| | DKVLT-100 | 100 | 20 | 91 | 79 | 96.0 | | | | |
| | DKVLT-150 | 150 | 30 | 139 | 121 | 96.0 | | | | |
| | DKVLT-200 | 200 | 40 | 185 | 161 | 96.0 | | | | |
|  Top C | (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 I=B=R 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) | | | | | | | | | |
| |  Bottom | Clearances (4) Required distances measured from boiler. (5) Service, proper operation clearance recommendation. | Combustible Materials (Required) ⁽⁴⁾ | | Service ⁽⁵⁾ | | | | | |
| Top | | | 0" (0 cm) | | 14" (36 cm) | | | | | |
| Left Side | | | 0" (0 cm) | | 0" (0 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 | 1/2" (1.3 cm) | | 6" (16 cm) | | | | | | | |
|  Back D | Combustion Air & Vent Pipe Equivalent Length (Schedule 40 PVC) | 2" Pipe 050 | | 2" Pipe 075/100 | | 3" Pipe 075/100 | | 3" Pipe 150/200 | | |
| | | Min. Length | 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) | |
| Notes: 1 - 90° Elbow = 5 Ft. (1.6 m), 1 - 45° Elbow = 3.5 Ft. (1.1 m), 1 - 2" x 3" Adapter = 0 Ft. (0 m), Concentric Vent Kit = 5 Ft. (1.6 m) equivalent length. | | | | | | | | | | |
| Connections | | Return/Supply Water | | Gas In | | Condensate Drain | | | | |
| 050/075/100 | | 1-1/4" NPT | | 1/2" NPT | | 3/4" NPT | | | | |
| 150/200 | | 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 - 1.8 Gallons | | | | | | | | |
| Standard Equipment | | Mounting Wall: Wall Bracket included. Boiler Control Module: Automatic Low Voltage/Intermittent Power Reset. Controls up to 16 boilers for multiple boiler applications. 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 (Taco 007 or Grundfos UP15-42F), Concentric Vent Kit (2" and 3"), System Sensor (For Multiple Boiler Applications), Computer Interface | | | | | | | | |
| Dimensions | | | | | | | | | | |
| Models | 050 075 100 | 150 200 | | | | | | | | |
| Width (A) | 20" 508 mm | 23" 584 mm | | | | | | | | |
| Height (B) | 31" 787 mm | 42" 1092 mm | | | | | | | | |
| Depth (C) | 14" 356 mm | 16" 406 mm | | | | | | | | |
| Bracket (D) | 28" 711 mm | 40" 1016 mm | | | | | | | | |
| Weights | | | | | | | | | | |
| Ship Wgt. | 111 lbs. 50 kg | ~ 182 lbs. 83 kg | | | | | | | | |
| Boiler Wgt. | 91 lbs. 41 kg | ~ 157 lbs. 71 kg | | | | | | | | |
| Certifications | |      | | | | | | | | |

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