



# Helix VX

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

- 95% AFUE
- 5:1 Turn Down Ratio
- VX Vertical Heat Exchanger
  - Patent Pending
  - Low Maintenance, Self-Cleaning
  - Designed in the U.S., for the U.S.
  - 150 psi MAWP
- Approved for PVC, CPVC and Polypropylene venting
- Warranty Coverage
  - 15-Year Limited Heat Exchanger
  - FREE 2-Year Parts & Labor Limited Warranty\*
- Innovative American Manufacturing



\*Unit must be registered within 60 days from the date of original installation. All terms of Trinity Extended Service Agreement apply.



Innovative. Efficient. Dependable. Dunkirk.



[www.dunkirk.com](http://www.dunkirk.com)

## ▶ Innovative.

The heat exchanger is the critical component of any boiler and is primarily responsible for efficiency and durability. At the heart of the 95% efficient VX is the Helix family's innovative, vertically mounted helical fin tube heat exchanger, made of 316L/444 stainless steel. The fins are laser welded onto the stainless tube resulting in greater strength and heat transfer capabilities.



### VX Coil

The VX offers a round shape and a large diameter coil for better water flow and reduced scaling.

The vertically positioned VX heat exchanger coil drains away any debris and scale and in doing so is self cleaning.

## ▶ Efficient.

The Helix VX is 95% AFUE (Annual Fuel Utilization Efficiency) and has been awarded Energy Star Most Efficient status. The VX's advanced control automatically regulates boiler operation to ensure you are using the least amount of fuel possible.

The VX's control adjusts both the amount of gas being burned (modulation) as well as the boiler water temperature (outdoor reset). Gas burner modulation reduces your fuel cost by adjusting the fuel burned to meet the actual demands of your heating system. Rarely will your home require the full capacity of the VX and burning more gas than needed is bad for your budget and the environment. Outdoor Temperature Reset adjusts the boiler water temperature based on outdoor conditions. During cold periods, water temperature is increased. As it gets warmer, water temperature is lowered. Varying the water temperature reduces your fuel costs.

*The increased efficiency of the Dunkirk Helix VX could save up to 40% on heating bills annually.\**

*The 95% AFUE efficiency of the Helix VX allows it to qualify for State, Federal and local Utility company rebates.\*\**

The average water heater is rated at .59 EF - Energy Factor, measure of the useful energy coming out of your water heater divided by the amount of energy consumed to heat domestic water. The typical water heater accounts for 18% of your fuel bill. One of the conveniences of heating with a boiler is the ability to use it to generate your domestic hot water. By pairing your 95% efficient VX with an H2O indirect water heater tank you will reduce your fuel consumption for heating hot water, increase the amount of hot water available and be protected with a lifetime tank warranty. Ask your heating contractor to replace your inefficient standalone hot water tank with an H2O.

## ▶ Dependable.

### Dunkirk's Stainless Steel Heat Exchanger

- ASME certified to operate in applications up to 150 psi – though the typical residential application is around 15 psi
- Every heat exchanger is tested up to 375 psi; this is 25 times the typical residential boiler system operating pressure
- Proven reliability with tens of thousands of successful U.S. boiler installations

### Helix Quality

- Every boiler is test-fired at the factory
- Complete combustion test is performed and a computer printout of the results are shipped with every boiler to ensure proper commissioning

### 15 year Limited Manufacturer's Warranty

The VX heat exchanger is simply the finest ever designed and as such we provide the strongest factory warranty available. An additional first year leak-free heat exchanger coverage provides the original purchaser the right to select a new replacement VX boiler or heat exchanger at their choice, and receive a labor allowance of \$500.00 for the servicing contractor.



**“The Helix VX wall hung, modulating condensing boiler is the latest addition to Dunkirk’s Helix boiler family.”**

**Key Features**

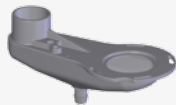
**Gas Supply**

- Top Pipe connection with built in drip leg saves material & time



**Heat Exchanger**

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



**Polypropylene Flue Collector**

- Corrosion resistant

**Electrical Wiring**

- Easy Access / Protected Terminal Strip

**H2O Indirect Water Heater**

- All 316 L Stainless Construction - no dissimilar metals to corrode
- Top Piping Connection saves material/time
- Stainless Dip Tube
- Extruded Stainless Steel Wall
- Coil Stand Off eliminates shipping damage
- Equipped with T&P and Relief Valves
- Less than 1/2 F degree loss per hour
- Smooth coil design eliminates sediment collection
- Limited Lifetime Warranty



\*Optional stand

**Advanced Controls**



- 5:1 turn down ratio
- Easy to understand English text display
- Outdoor reset maximizes fuel economy
- Priority domestic hot water meets changing demands
- Connections for Primary pump, CH pump, and DHW pump
- Automatically manages up to 16 units in Multiple Boiler System

**SETTINGS**  
Central Heating Setpoint 180°F

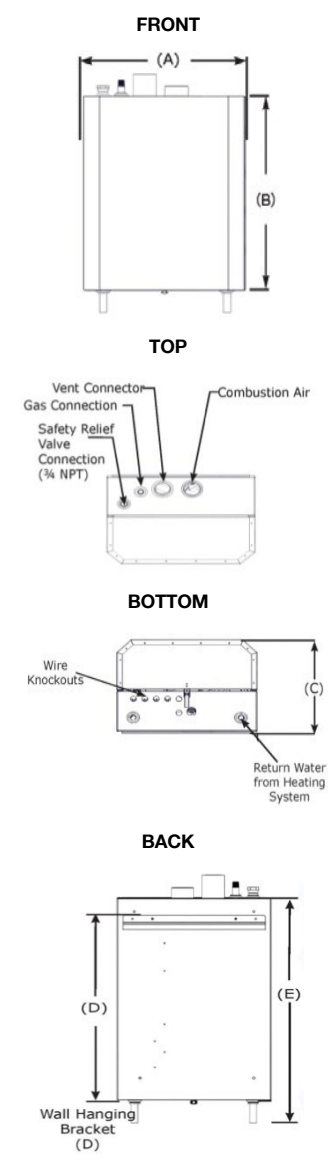




**SETTINGS**  
DHW Setpoint 180°F

There are two basic settings; one for Central Heating and one for Domestic Hot Water. Both have factory pre-sets for standard installation and require no further adjustment. If desired, adjusting the settings is as easy as pushing a button!  
When using the Outdoor Air Sensor the Central heat setpoint automatically adjusts itself!

**Factory Tested**



- Certified to ASME standards in ECR’s factory

Dimensional Diagram	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 %
		Maximum	Minimum			
	VX-050	50	10	47	41	95
	VX-075	75	15	69	60	95
	VX-100	100	20	92	80	95
	VX-150	150	30	140	122	95
	VX-200	200	40	186	162	95
(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.						
<b>General Information</b> (See Installation, Operation and Maintenance Manual for complete instructions)						
<b>Clearances</b> (4) Required distances measured from boiler jacket. (5) Service, proper operation clearance recommendation.	<b>Dimension</b>		<b>Combustible Materials (Required) <sup>(4)</sup></b>		<b>Service <sup>(4) (5)</sup></b>	
	<b>Top</b>		0" (0 cm)		14" (36 cm)	
	<b>Left Side</b>		0" (0 cm)		0" (0 cm)	
	<b>Right Side</b>		0" (0 cm)		0" (0 cm)	
	<b>Front</b>		0" (0 cm)		6" (16 cm)	
	<b>Back</b>		0" (0 cm)		0" (0 cm)	
	<b>Bottom</b>		0" (0 cm)		12" (32 cm)	
	<b>Combustion</b>		0" (0 cm)		6" (16 cm)	
<b>Hot Water Piping</b>		See Local Code		6" (16 cm)		
<b>Combustion Air &amp; Vent Pipe Equivalent Length</b> (Schedule 40 PVC)						
		<b>2" Pipe</b>		<b>3" Pipe</b>		
		<b>050</b>	<b>075/100</b>	<b>75/100</b>	<b>150/200</b>	
Minimum Length		6 Ft. (1.8 m)	6 Ft. (1.8 m)	6 Ft. (1.8 m)	6 Ft. (1.8 m)	
Maximum Length		100 Ft. (30.5 m)	50 Ft. (15.2 m)	100 Ft. (30.5 m)	100 Ft. (30.5 m)	
Note: Refer to IOM and vent pipe manufacturer's instructions for equivalent vent lengths and alternate venting materials.						
<b>Connections</b>		<b>Return/Supply Water</b>		<b>Gas In</b>	<b>Condensate Drain</b>	
<b>050/075/100</b>		3/4" Copper stub		1/2" NPT	3/4" NPT	
<b>150/200</b>		1" Copper stub		3/4" NPT	3/4" NPT	
<b>Electrical</b>		120 Volts AC, 60hertz, 1 phase, Less than 12 amps (15 amp circuit recommended)				
<b>Gas Pressure</b>		Natural Gas – Min: 3.0" w.c. (0.7 kPa), Max: 13.5" w.c. (3.3 kPa) Propane – Min: 5.0" w.c. (1.2 kPa), Max: 13.5" w.c. (3.4 kPa)				
<b>Water Content</b>		050/075/100 - 1.1 Gallons, 150/200 - 1.8 Gallons				
<b>Standard Equipment</b>		Wall Mounted: Bracket included. Boiler Control Module: Automatic Low Voltage/Intermittent Direct Spark Ignition/Modulating with a 5:1 combustion turn down ratio. For multiple boiler applications - the control module can stage up to 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. Combustion: Gas Valve with Premix Venturi and Blower, Durable Stainless Steel Mesh Modulating Burner with 5:1 turn down ratio, Direct Spark Igniter and Flame Sensor. Electrical: Low Voltage Terminal Strip, High Voltage Junction Box and Transformer. Other: 30 PSI Safety Relief Valve, Boiler Drain Valve and Condensate Drain with built in trap.				
<b>Options</b>		LP Conversion Kit, Concentric Vent Kit (2" and 3"), System Sensor (For Multiple Boiler Applications)				
<b>Certifications</b>		   				
<b>Dimensions</b>						
<b>Models</b>	050	150				
	075	200				
	100	200				
Width "A"	20"	23"				
	508 mm	584 mm				
Height "B"	27.75"	37.75"				
	705 mm	959 mm				
Depth "C"	14.75"	16.3"				
	357 mm	414 mm				
Bracket "D"	24.41"	35.6"				
	620 mm	904 mm				
Ht. w/Piping "E"	30.75"	40.75"				
	781 mm	1035 mm				



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All specifications subject to change without notice.

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 PN 240010711 Rev. 1/18