

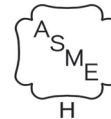


Engineer: _____

Project Name: _____

Project Location: _____

Contractor: _____



APPLICATION:

Gas fired hot water heating boiler for indoor installations. Approved for closet or alcove installations. For use with natural or liquefied petroleum gases (LP/propane) LP conversion kit provided with the boiler. Wall mounted—optional floor mount kit available. All boilers are factory assembled with controls and wiring and test fired to ensure dependable performance.

CERTIFICATION AND APPROVALS:

The stainless steel coil heat exchanger is manufactured and tested in accordance with American Society of Mechanical Engineers Standards (ASME) and certified by Canadian Standards Association (CSA) in the US. The stainless steel coil heat exchanger is tested for a maximum allowable working pressure of 150 PSIG (9 pounds per square inch gauge) in accordance with ASME boiler and pressure vessel code, section IV, rules for construction of heating boilers. A 30 PSIG safety relief valve is shipped standard.

BOILERS INCLUDE:


- Wall Mount Bracket
- Boiler Control Module. This boiler incorporates an integrated modulating control. The control senses supply water, return water and outside air temperatures and adjusts the firing rate to deliver the amount of heat needed to the structure.
 - ▶ Replaceable fuse /extra spare fuse shipped with the control.
 - ▶ User interface with LCD screen display English text—boiler status indication.
 - ▶ Function Programming Keys - Reset, Menu, Enter and arrow s (+ -).
 - ▶ Central Heating CH and Domestic Hot Water DHW setpoints. Domestic hot water priority with programmable maximum priority time.
 - ▶ Outdoor air sensor. Programmable reset curves and warm weather shutdown or fixed water temperature operation.
 - ▶ Boost function temperature setting and adjustable boost time.
 - ▶ Maximum power function to restrict firing rate in heat mode but allow full power in DHW mode.
 - ▶ Integral multiple boiler control capability up to 16 boilers. Requires an optional system sensor
 - ▶ Service reminder status.

- Boiler Combustion System
 - ▶ Premix modulating gas valve and blower. Fully Modulating with a 5:1 turn down ratio.
 - ▶ Stainless Steel Fiber Mesh Burner
 - ▶ Line voltage/intermittent direct spark ignition.
- UL listed probe type low water cutoff with status indicator lights and test feature.
- Heat Exchanger Assembly
 - ▶ Vertically mounted single piece helical fin tube coil. Manufactured out of 316L stainless steel tubing with 444 stainless steel fins welded onto the coil with a laser automated process.
 - ▶ Built-in Primary/Secondary manifold and piping system and heat exchanger pump.
 - ▶ Non-metallic flue gas collector with built in condensate drain trap.
- Electrical 120 volts AC, 60 hertz, 1 phase less than 12 amp
 - ▶ Removable low voltage terminal strip.
 - ▶ Line voltage junction box with DWH Pump and CH Pump connections.



OPTIONAL EQUIPMENT:

- Floor mounting stand
- 2" concentric vent kit, 3" concentric vent kit
- Multiple boiler system sensor

 Models & Capacities						
Model	Size	Boiler Input Rate (MBH) ⁽¹⁾		Heating Capacity (MBH) ₍₁₎₍₂₎	Net AHRI Rating, Water (MBH) ⁽¹⁾⁽³⁾	AFUE ⁽²⁾
		Maximum	Minimum			
DKVLT-050	050	050	10	46	40	95.0
DKVLT-075	075	075	15	69	60	95.0
DKVLT-100	100	100	20	91	79	95.0
DKVLT-150	150	150	30	139	121	95.0
DKVLT-200	200	200	40	185	161	94.0
DKVLT-299	299	299	60	273	239	94.0

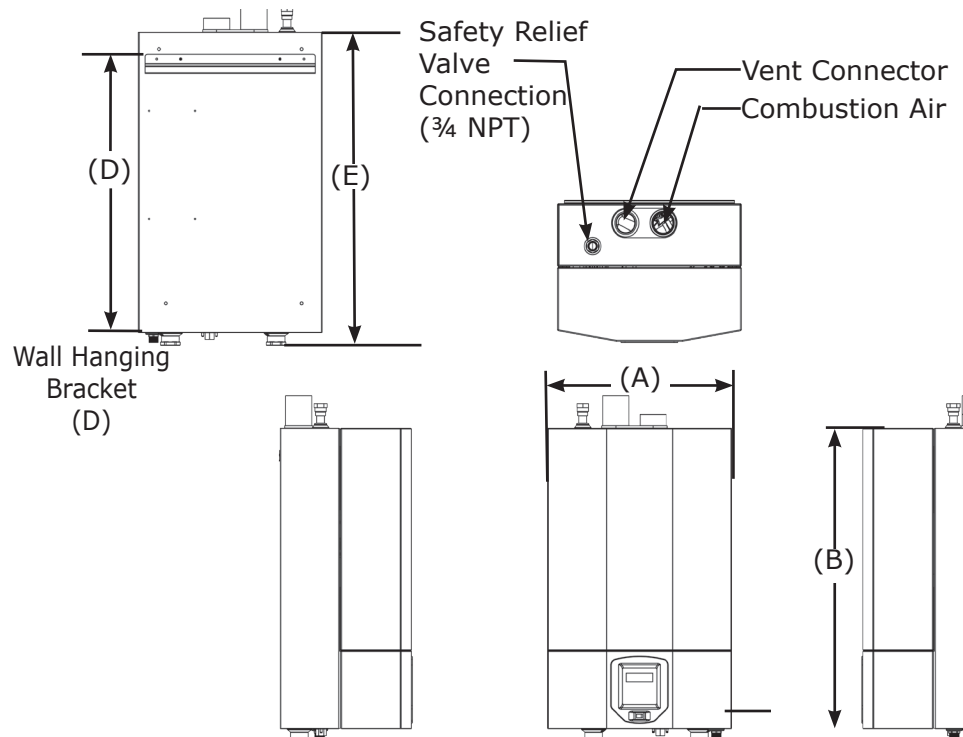
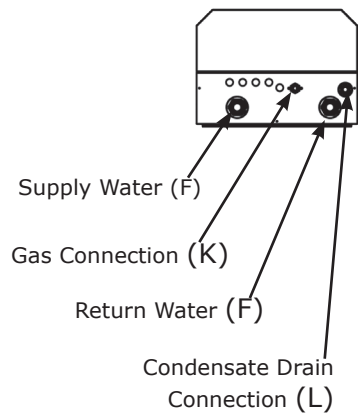
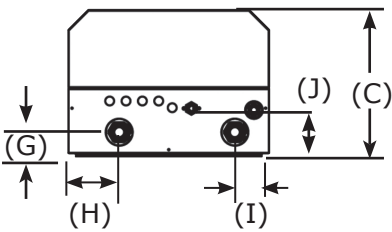
* The DKVLT Models are ENERGY STAR rated products.

⁽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.

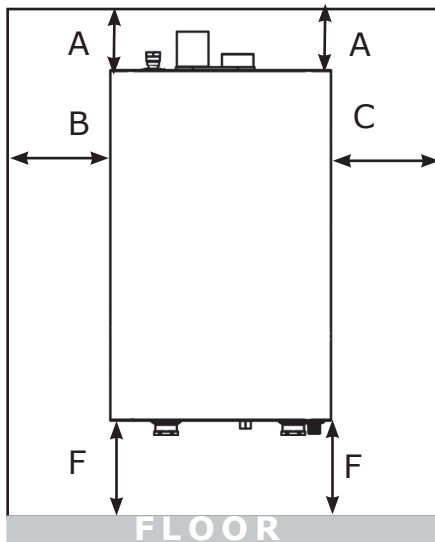
Physical Data				
Models	050/075/100	150/200	299	
Width (A)	20" (508mm)	23" (584mm)		
Height (B)	30" (762mm)	41" (1041mm)		
Depth (C)	14" (356mm)	16.0" (406mm)	18.3" (465mm)	
Bracket (D)	28" (711mm)	40" (1016mm)		
Height (E)	31" (787mm)	42" (1092mm)		
Water Connections	Size (F)	1-1/4" NPT	1-1/4" NPT	
	Location (G)	2" (51mm)	2" (51mm)	
	Location (H)	5" (127mm)	2" (51mm)	
	Location (I)	3" (76mm)	4-1/2" (114mm)	
Gas Connection	Location (J)	4-1/2" (114mm)	4-1/2" (114mm)	
	Size (K)	1/2" NPT	3/4" NPT	
Condensate Drain Connection (L)		3/4" NPT	3/4" NPT	
Weight	Shipping	111 lb (50 kg)	~182 lb (83 kg)	~225 lb (102 kg)
	Unit	91 lb (41 kg)	~157 lb (71kg)	~195 lb (89 kg)
Vent Connector		2" (51mm)	3" (76mm)	



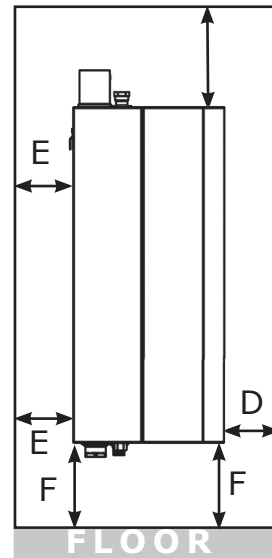
CLEARANCES

Dimension	Combustible Materials ⁽¹⁾	Service ⁽¹⁾⁽²⁾
Model	050/075/100/150/200/299	050/075/100/150/200/299
Top (A)	0" (0 cm)	14" (36 cm)
Left Side (B)	0" (0 cm)	0" (0 cm)
Right Side (C)	0" (0 cm)	0" (0 cm)
Front (D)	0" (0 cm)	6" (16 cm)
Back (E)	0" (0 cm)	0" (0 cm)
Bottom (F)	0" (0 cm)	12" (32 cm)
Combustion Air/Vent Piping	0" (0 cm)	6" (16 cm)

⁽¹⁾ Required distances measured from boiler jacket.
⁽²⁾ Service, proper operation clearance recommendation.



Front View



Side View

VENTING

Flue Gas Location	Combustion Air Location	Flue Gas Terminals
Roof	Roof	Two Pipe
		Concentric
	Side Wall	Single Pipe
	Inside Air	Single Pipe
Side Wall	Roof	Single Pipe
	Side Wall	Two Pipe
		Concentric
	Inside Air	Single Pipe

Minimum/Maximum Vent Lengths

	2" Pipe		3" Pipe			4" Pipe
Model	050	075/100	075/100	150/200	299	299
Minimum	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)
Maximum	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)

Equivalent Length of Venting Components

Component	Feet	Meters
90° Elbow	5	1.6
45° Elbow	3 ½	1.1
2" x 4" Adapter	0	0
3" x 4" Adapter	0	0
Concentric Vent Kit	5	1.6
Polypropylene Flexible Pipe per Foot	2 5/8	0.8

Note: Allowable Venting Materials - Polypropylene, PVC, CPVC and ABS. Tables shown are for vent systems utilizing PVC. Refer to IOM and vent pipe manufacturer's instructions for equivalent vent lengths and additional information.

