## Challenger \_\_\_\_ Fully Condensing Water Boiler



## Engineering Submittal CC150s

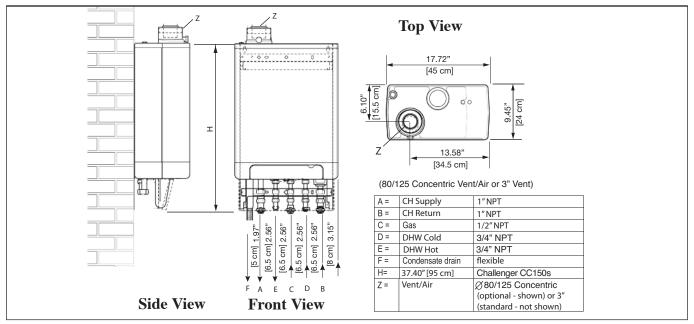


## **Engineering Submittal Data**

- ASME Boiler Certification ASME "H" Stamp
- Unit complies with ANSI Z21.13/CSA 4.9 Boiler
- Fully condensing 93% AFUE
- Microprocessor electronic gas and air modulation control
- Full modulation capability from 25% to rated input
- Modulation allows fewer and longer cycles leading to lower operating cost and longer component life
- Digital display control panel
- Electronic controls with easy to read menus, performance and trouble shooting codes
- Boiler water supply temperature can be maintained by the CHALLENGER, eliminating the need for a mix system to achieve the desired temperature with high limit protection
- Swing down control panel for easy access and service
- Control interface and logic for indirect fired hot water heater with priority
- Automatic boiler freeze protection
- Anti-freeze compatible per manufacturer's specifications
- Aluminum heat exchanger construction with vertical flueways with separate copper tube CH (Central Heating) water ways
- Low water content

- Limited 10 year heat exchanger warranty
- 1 year parts warranty
- Light weight construction for wall mounting
- Standard equipment:
  - ASME 30 psi [2 bar] pressure relief valve
  - pressure and temperature gauge
  - high limit temperature safety control
  - outdoor temperature reset control
  - air vent
  - 120 volt terminal strip (power supply and boiler primary pump)
  - pressure sensor low water cut off
  - variable speed blower
- Stainless steel premix knit burner
- Reliable spark ignition
- Attractive appliance design for installation in high visibility areas
- Use of 3" PVC, CPVC or AL29-4C® pipe for vent and air up to 60 feet
  - (Each  $90^{\circ}$  elbow = 5 ft, each  $45^{\circ}$  elbow = 3 feet)
- Minimum vent length: 5 equivalent feet and vent terminal

Project / Location:	Date:
Consulting Engineer / Architect:	
Mechanical Contractor:	
Notes:	

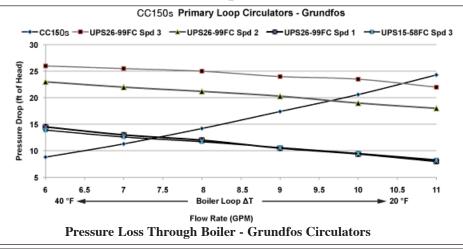


Model	Fuel	Input Modulation MBH [Kw]	DOE Heating Capacity MBH [Kw]	Net I=B=R MBH [Kw]	AFUE	Weight (Empty) [Kg]
CC150s	Natural or Propane Gas	33 to 145 [9.7 to 42.5]	129 [37.8]	112 [32.8]	93%	80 [36]

## **CH Pressure Drop Curve**

Note: Minimum allowable flow rate at full input: 7 gpm [27 lpm] CC150s

Pump curves and system curves do NOT include any allowance for near boiler piping.



CC150s Primary Loop Circulators - Taco --- cc150s -0-00R-IFC Spd 2 ■ 0013-IFC -©-00R-IFC Spd 3 30 Note: Minimum allowable flow rate at full Pressure Drop (ft of Head) 25 input: 7 gpm [27 lpm] CC150s Pump curves and system curves do NOT include any allowance for near boiler piping. 9.5 10.5 8.5 Flow Rate (GPM) **Pressure Loss Through Boiler - Taco Circulators**