



## Typical Specifications For TH Series Domestic Hot Water Boilers Models TH 082 - TH 502

The domestic hot water (DHW) boiler shall be a CAMUS TANK HEATER model \_\_\_\_\_ having a modulating input rating of \_\_\_\_\_ Btu (kW) /hr. and a recovery capacity of \_\_\_\_\_ GPH (LPH) at 100°F (56°C) and shall be operated on Natural gas or L.P. Gas. The boiler shall be capable of full modulation firing down to 20% of rated input with turn down ratio of 5 to 1.

The DHW boiler shall be design certified by CSA International and shall meet the requirements of ANSI Z21.10 and CSA 4.3. The boiler shall bear the ASME "H" stamp and shall be national board listed.

### **Combustion Chamber:**

The combustion chamber shall be sealed and completely enclosed, independent of the outer jacket assembly. The Stainless Steel combustion chamber shall be designed to drain condensation to the bottom of the heat exchanger assembly. A condensate collection box shall be employed to trap and neutralize flue product condensate.

### **Burner:**

The burner shall be a premix design and constructed of high temperature Stainless Steel with knitted metal fiber outer covering to provide modulating firing rates. The burner shall provide equal distribution of heat through the entire heat exchanger. A window view port shall be provided for visual inspection of the boiler during firing.

### **Heat Exchanger:**

The heat exchanger shall be inspected and tested to A.S.M.E. Section IV requirements. The A.S.M.E. Section IV seal of approval will not be provided as standard for jurisdictions not requiring the A.S.M.E. Section IV seal of approval. The heat exchanger shall be a multi-pass stainless steel all welded construction heat exchanger with maximum working pressure of 160 PSI (1100 kPa). A temperature and pressure relief valve of \_\_\_\_\_ lbs/hr shall be furnished with the heater.

### **Storage Tank:**

The storage tank shall be CSA Certified. The stainless steel storage tank shall be rated with a maximum working pressure of 160 PSI (1100kPa) with a 10 year warranty.

### **Integrated Combustion and Operating Controls:**

The CSA certified control module shall incorporate at least the following features:

- A high resolution LCD display.
- Three levels of access (user, installer, and lab).
- Real time data collection and diagnostics of selected parameters with PC interface.
- Support for up to eight (8) boilers in a sequencing application.
- MODBUS ready.
- Heater modulation to shut down on high temperature flue gas detection.

The controller shall employ a direct spark ignition with up to five (5) trials for ignition followed by a lock-out condition.

### **Venting and Air Intake Options**

The boiler shall be vented as a through-wall (vertical or horizontal) Category IV condensing appliance for up to 100 equivalent ft using CPVC material approved for use on condensing application under standard ULC S636 or equivalent, or as permitted by the local jurisdiction. The following air intake options shall be utilized: Outside air sealed direct (vertical or horizontal);

- Outside air sealed direct (vertical or horizontal);
- Outside air ducted to jacket flange;
- Indoor air.

Models 202 – 502 may be vented as Category II condensing appliances.

### **Gas Train:**

The gas train shall consist of a dual seat gas valve with a pressure regulating electro-hydraulic actuator to provide slow opening, fast closing, safety shutoff and air/gas ratio control.

### **External Jacket and Fasteners:**

The external jacket shall be of stainless steel mirror finish panels and heavy gauge painted steel assembled utilizing interference fit locks and minimal non-strip self tap screws.

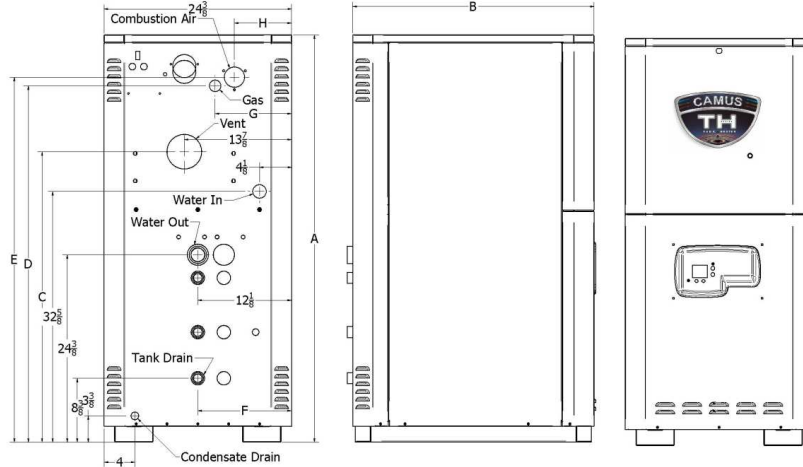
# SUBMITTAL DATA SHEET – TH SERIES – DOMESTIC HW

Engineer: \_\_\_\_\_ Job Location: \_\_\_\_\_ Date: \_\_\_\_\_

Prepared by: \_\_\_\_\_ Buyer's Name: \_\_\_\_\_ Quote #: \_\_\_\_\_

Job Name: \_\_\_\_\_ Buyer's Address: \_\_\_\_\_

MODEL	INPUT & OUTPUT LEVELS	
	BTUH INPUT	BTUH OUTPUT
TH-082	80,000	78,000
TH-102	100,000	97,000
TH-152	150,000	146,000
TH-202	199,000	193,000
TH-252	250,000	243,000
TH-292	299,000	291,000
TH-392	399,000	387,000
TH-502	500,000	485,000



MODEL	Approx. Shipping Weight [lbs.]
TH-082	121
TH-102	125
TH-152	158
TH-202	192
TH-252	192
TH-292	340
TH-392	386
TH-502	405

MODEL	Dim "A" [in.]	Dim "B" [in.]	Dim "C" [in.]	Dim "D" [in.]	Dim "E" [in.]	Dim "F" [in.]	Dim "G" [in.]	Dim "H" [in.]	Length of Vent & Air Intake Pipes at Recommended Diameter [in.]				Water Conn. At Heater NPT [in.]	Gas Conn. At Heater NPT [in.]
									Category IV			Cat. II Comb. Vent		
									over 25' & up to 100'	over 15' & up to 25'	Up to 15'			
TH-082	53	22 1/4	46 1/4	46 3/8	47 1/2	8 3/4	9 7/8	7 3/8	3	3	2	-	1	1/2
TH-102	53	22 1/4	46 1/4	46 3/8	47 1/2	8 3/4	9 7/8	7 3/8	3	3	2	-	1	1/2
TH-152	53	22 1/4	46 1/4	46 3/8	47 1/2	8 3/4	9 7/8	7 3/8	3	3	2	-	1	1/2
TH-202	53	31 1/4	37 3/4	46 3/8	47 1/2	12 1/8	9 7/8	7 3/8	3	3	2	4	1	1/2
TH-252	53	31 1/4	37 3/4	46 3/8	47 1/2	12 1/8	9 7/8	7 3/8	3	3	2	4	1 1/4	1/2
TH-292	65 1/2	31 1/4	37 1/2	58 3/8	53 7/8	12 1/8	11 3/8	8 7/8	4	3	3	5	1 1/4	3/4
TH-392	65 1/2	31 1/4	37 1/2	58 3/8	53 7/8	12 1/8	11 3/8	8 7/8	4	3	3	5	1 1/2	1
TH-502	65 1/2	31 1/4	37 1/2	58 3/8	53 7/8	12 1/8	11 3/8	8 7/8	4	3	3	6	1 1/2	1

MODEL	TANK CAPACITY [US GAL.]
TH-082	20
TH-102	20
TH-152	20
TH-202	40
TH-252	40
TH-292	40
TH-392	40
TH-502	40

MODEL	RECOVERY CAPACITY							
	140°F Rise	78°C Rise	100°F Rise	56°C Rise	80°F Rise	44°C Rise	60°F Rise	33°C Rise
	GPH	LPH	GPH	LPH	GPH	LPH	GPH	LPH
TH-082	67	254	93	352	116	440	155	587
TH-102	83	314	116	439	145	549	193	732
TH-152	125	473	174	659	218	823	290	1098
TH-202	166	628	232	878	290	1098	387	1464
TH-252	208	787	290	1098	363	1372	483	1829
TH-292	248	939	349	1321	436	1651	582	2202
TH-392	332	1257	465	1760	581	2200	775	2933
TH-502	416	1575	581	2199	726	2749	968	3665

MODEL	TEMPERATURE RISE ACROSS HEAT EXCHANGER					
	20°F		30°F		35°F	
	USGPM	ΔP-FT	USGPM	ΔP-FT	USGPM	ΔP-FT
TH-082	7.5	11.5	5.0	8.2	4.3	6.2
TH-102	9.4	26.9	6.3	12.3	5.4	9.4
TH-152	14.0	27.8	9.5	10.4	8.1	7.8
TH-202	19.2	25.9	12.6	7.2	10.8	5.8
TH-252	23.5	28.3	15.8	11.5	13.5	8.7
TH-292	28.8	25.8	18.9	9.3	16.2	7.0
TH-392	38.4	23.9	25.2	8.4	21.6	6.3
TH-502	48.6	29.4	31.5	9.2	27.0	6.9

Model # \_\_\_\_\_ # Of Units \_\_\_\_\_ Type of Gas \_\_\_\_\_

Total Input \_\_\_\_\_ BTU/hr Flow \_\_\_\_\_ USGPM @ Allowable Pressure Drop \_\_\_\_\_ ft.  
 Total Output \_\_\_\_\_ BTU/hr Recovery Rate \_\_\_\_\_ USGPH @ \_\_\_\_\_ °F

Optional Accessories \_\_\_\_\_