



## Typical Specifications For DynaFlame Mega Hydronic Heating Boilers Models DF(N),(P)H 4504 - 6004 Models DF(N),(P)H 4524 - 6024

The heating boiler shall be a CAMUS DYNAFLAME MEGA model \_\_\_\_\_ having an input rating of \_\_\_\_\_ Btu (kW) /hr. and \_\_\_\_\_ Btu (kW)/hr output for hydronic heating.

The hydronic heating boiler shall be design certified by CSA International and shall meet the requirements of ANSI Z21.13, and CSA 4.9. The heating boiler shall be vented as a Category I non-condensing appliance or Category II condensing appliance.

### **Combustion Chamber:**

The combustion chamber shall consist of a stainless steel enclosure inside of which is assembled a cylindrical copper coil Heat Exchanger having a maximum allowable working pressure of 160 psig (1100 kPa). An access door shall be provided for ease of service and inspection of the Heat Exchanger.

### **Burner:**

The burner shall be constructed of stainless steel. 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 four-pass heat exchanger with maximum working pressure of 160 psig (1100 kPa). The heat exchanger is of cylindrical design, with integral copper-nickel finned tube  $\frac{7}{8}$ " I.D., 0.063" minimum wall thickness, 7 fins per inch, with nominal fin height of  $\frac{3}{8}$ ". Each end of the tubes shall be expanded by mechanical rolling process into the headers. The heat exchanger shall be gasket-less. All header castings shall be bronze. A pressure relief valve of \_\_\_\_\_ lb/hr shall be furnished with the heater.

### **Controls:**

Standard controls include an electronic proportional integrated combination limit/operator control accurate to  $1^{\circ}\text{F}$  ( $0.5^{\circ}\text{C}$ ) having a 4-20 mA output signal suitable for control of a variable frequency motor drive. The control shall also provide readouts of boiler target, differential and inlet/outlet temperatures as well as accumulated runtime. On/off switch, and full diagnostic light package shall be provided. The complete control package shall be mounted on the front panel with hinged door for easy access to all control modules. A flow switch shall be provided loose.

### **Firing Mode:**

The burner shall operate as fully modulating down to 20% for condensing and 35% for non-condensing application. Light off shall be at no more than 50% input to assure rumble free soft start.

### **Venting Options**

The following venting options shall be utilized: 1. Combined Venting. 2. Horizontal & Vertical Outside air Venting. 3. Through-Wall Venting. 4. Outdoor Venting. 5. Direct Venting.

### **Gas Train:**

The gas train shall consist of a gas valve with a pressure regulating electro-hydraulic actuator to provide slow opening, fast closing, safety shutoff and air/gas ratio control. A factory pre-set combination metering valve and orifice shall be provided for setting combustion parameters.

### **Ignition Module:**

The ignition module shall employ a proved igniter with 3 tries for ignition followed by lockout. Trial for ignition shall proceed with 15 seconds between retrials.

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

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

# SUBMITTAL DATA SHEET

## DYNAFLAME MEGA (HEATING) 4504-6004 and 4524-6024

Engineer: \_\_\_\_\_ Job Location: \_\_\_\_\_ Date: \_\_\_\_\_  
 Prepared by: \_\_\_\_\_ Buyer's Name: \_\_\_\_\_ Quote #: \_\_\_\_\_  
 Job Name: \_\_\_\_\_ Buyer's Address: \_\_\_\_\_

**Input & Output (MBTUH)**

Model	Non Condensing		Condensing	
	Input	Output	Input	Output
4504/4524	4500	3825	4500	4275
5004/5024	5000	4250	5000	4750
6004/6025	6000	5100	6000	5700

**Shipping Weight (lbs.)**

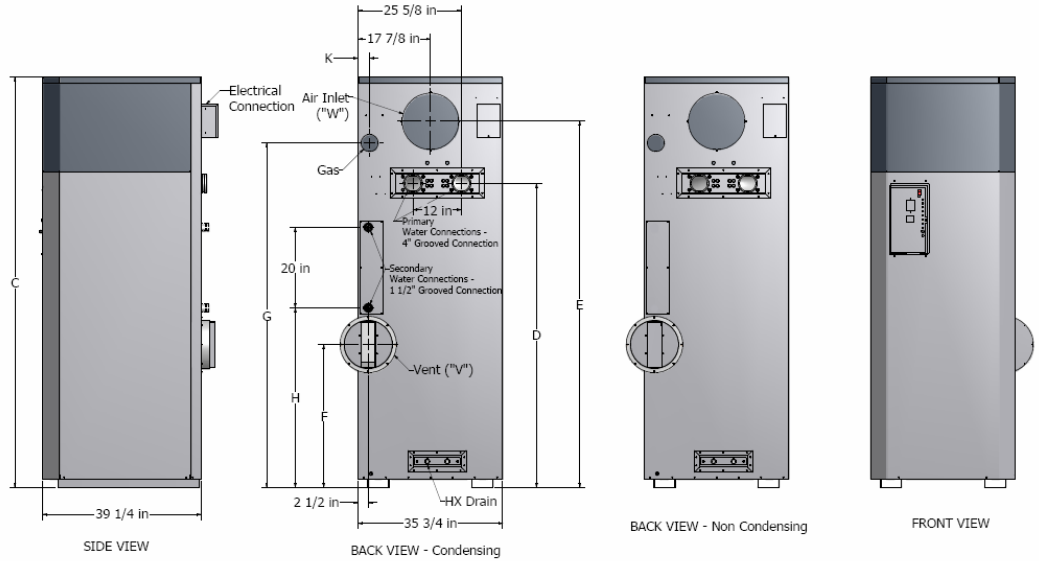
Model	Non Cond.	Cond.
4504/4524	1185	1260
5004/5024	1533	1608
6004/6025	1863	1948

**DynaFlame Non-Condensing**

Model	Vent Diameter Inches			
	Outdoor	Cat III Up to 50 ft	Cat III Up to 100 ft	Cat I
4504	10	10	14	16
5004	10	10	14	16
6004	12	12	14	16

**DynaFlame Condensing**

Model	Vent Diameter Inches			
	Outdoor	Cat IV Up to 50 ft	Cat IV Up to 100 ft	Cat II
4524	10	10	14	12
5024	10	10	14	12
6024	12	12	14	12



**Dimensions Non-Condensing**

Model	Height Dim. "C"	Water Conn. "D"	Air Inlet "E"	Flue Height "F"	Gas Height "G"	"K"	Air Inlet Dia. "W"(in.)	Water Conn. Prim. (in.) Grooved	Gas Conn. (NPT)
4504	83"	59 3/4"	72 1/4"	20 3/4"	67 7/8"	3 1/2"	14"	4"	2 1/2"
5004	88 1/4"	65"	77 1/2"	26"	72 1/4"	3 1/2"	14"	4"	2 1/2"
6004	102"	75 1/2"	91"	35 1/2"	85 1/2"	2 3/4"	14"	4"	3"

**Dimensions Condensing**

Model	Height Dim. "C"	Water Conn. "D"	Air Inlet "E"	Flue Height "F"	Gas Height "G"	"H"	"K"	Air Inlet Dia. "W"(in.)	Water Conn. Prim. (in.) Grooved	Water Conn. Second. (Grooved)	Gas Conn. (NPT)
4524	83"	59 3/4"	72 1/4"	20 3/4"	67 7/8"	28 7/8"	3 1/2"	14"	4"	1 1/2"	2 1/2"
5024	88 1/4"	65"	77 1/2"	26"	72 1/4"	34 1/2"	3 1/2"	14"	4"	1 1/2"	2 1/2"
6024	102"	75 1/2"	91"	35 1/2"	85 1/2"	44 5/8"	2 3/4"	14"	4"	1 1/2"	3"

**Primary Heat Exchanger Head Loss & Flow**

Model	ΔT Across Heat Exchanger			
	30°F		35°F	
	USGPM	ΔP - Ft.	USGPM	ΔP - Ft.
4504/4524	254.6	15.3	218.3	11.4
5004/5024	283.0	19.6	242.5	14.9
6004/6025	339.5	31.8	291.0	24.1

**Secondary Stainless-Steel Heat Exchanger Head Loss & Flow**

Model	*USGPM	ΔP - Ft.
4524	52.0	14.0
5024	57.0	16.5
6024	68.0	25.0

\*Flow for 15°F rise at high fire.

**Current drawn by Boiler @**

**230 Volts 60 Hz**

Models	Amps	Phase
4504 thru 5024	24	Single
6004/6024	16	Three

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 \_\_\_\_\_