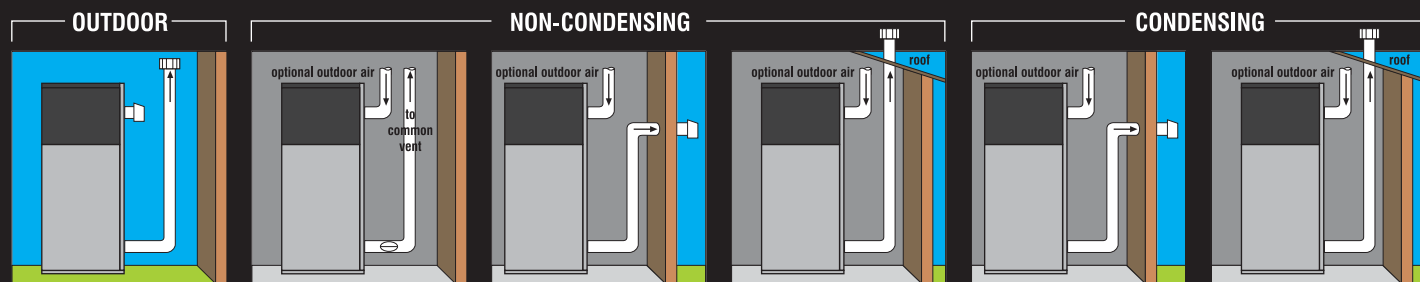


Recovery Capacity - Non Condensing						Recovery Capacity - Condensing						MBTUH Input & Output				Secondary Stainless Steel Heat Exchanger Head Loss & Flow (Condensing Units Only)					
MOD #	100°F	56°C	80°F	44°C	60°F	33°C	100°F	56°C	80°F	44°C	60°F	33°C	MOD #	NON-CONDENSE		CONDENSING		MODEL	USGPM	Δ P - FT	Δ T @ HI FIRE
	RISE /GPH	RISE /LPH	RISE /GPH	RISE /LPH	RISE /GPH	RISE /LPH	RISE /GPH	RISE /LPH	RISE /GPH	RISE /LPH	RISE /GPH	RISE /LPH		INPUT	OUTPUT	INPUT	OUTPUT				
500	509	1928	637	2410	849	3213	569	2154	712	2693	949	3591	500	500	425	500	475	502	10	0.4	10.0
750	764	2891	955	3614	1273	4819	854	3232	1067	4040	1423	5386	750	750	638	750	713	752	13	0.7	10.0
1100	1120	4241	1401	5301	1867	7068	1252	4740	1565	5925	2087	7900	1100	1100	935	1100	1045	1102	22	1.8	10.0
1200	1222	4626	1528	5783	2037	7711	1366	5171	1708	6463	2277	8618	1200	1200	1020	1200	1140	1202	24	2.1	10.0
1500	1528	5783	1910	7229	2546	9638	1708	6463	2135	8079	2846	10772	1500	1500	1275	1500	1425	1502	30	3.1	10.0
1750	1783	6747	2228	8433	2971	11245	1992	7541	2490	9426	3320	12568	1750	1750	1488	1750	1663	1752	35	4.2	10.0
2000	2037	7711	2546	9638	3395	12851	2277	8618	2846	10772	3795	14363	2000	2000	1700	2000	1900	2002	40	5.5	10.0
2500	2546	9638	3183	12048	4244	16064	2846	10772	3558	13485	4743	17954	2500	2500	2125	2500	2375	2502	50	8.0	10.0
3000	3056	11566	3820	14457	5093	19277	3415	12927	4269	16158	5692	21544	3000	3000	2550	3000	2850	3002	60	11.5	10.0
3500	3565	13494	4456	16867	5942	22489	3984	15081	4981	18851	6641	25135	3500	3500	2975	3500	3325	3502	40	8.5	15.0
4000	4074	15421	5093	19277	6790	25702	4554	17236	5692	21544	7589	28726	4000	4000	3400	4000	3800	4002	46	11.0	15.0
4500	4584	17349	5729	21686	7639	28915	5123	19390	6404	24240	8539	32320	4500	4500	3825	4500	4275	4502	52	14.0	15.0
5000	5093	19277	6366	24096	8488	32128	5692	21544	7115	26931	9487	35907	5000	4999	4249	4999	4749	5002	57	16.5	15.0
MEGA 4504	4584	17350	5730	21688	7640	28917	5123	19392	6404	24240	8539	32320	MEGA 4504	4500	3825	4500	4275	4524	52	14.0	15.0
MEGA 5004	5093	19277	6366	24096	8488	32128	5692	21545	7115	26931	9487	35908	MEGA 5004	4999	4249	4999	4749	5024	57	16.5	15.0
MEGA 6004	6076	22998	7595	28747	10127	38330	6791	25703	8489	32129	11318	42839	MEGA 6004	6000	5100	6000	5700	6024	68	25.0	15.0

### Venting Options



**Outdoor Venting**  
Condensing and Non-Condensing

**Conventional Venting**  
Vents into common breeching as Cat. I. Barometric damper may be used to control excess draft. Optional outdoor air.

**Thru-Wall Vent**  
Vents horizontally up to 100 equivalent ft. Optional 100 ft. of inlet air duct, vertical or horizontal.

**Vertical Vent**  
Vents vertically up to 100 ft. Optional 100 ft. of inlet air duct, vertical or horizontal.

**Thru-Wall Vent**  
Vents up to 100 equivalent ft. using Cat. IV approved venting. Optional 100 ft. of inlet air duct, vertical or horizontal.

**Vertical Vent**  
Vents vertically using Category II approved venting. Optional 100 ft. air duct, vertical or horizontal.



**CAMUS**  
Tel: 905-696-7800 Fax: 905-696-8801

CAMUS HYDRONICS LTD. · 6226 Netherhart Rd., Mississauga, Ontario L5T 1B7



CAMUS Hydraulics is a manufacturer of replacement parts for most copper finned water heaters and heating boilers as well as a supplier of speciality HVAC products. Our service line is open 24 hours, 7 days a week!

The CAMUS CERTIFIED! seal assures you that Reliability, Efficiency & Serviceability are built into every single unit! For more information on these and other innovative products from CAMUS Hydraulics, call 905-696-7800 today.

**EXTREMELY LOW NOx!**

## DynaFlame Series

including **DX** and **MEGA** series

### Gas Fired Commercial Copper Tube and Stainless Steel Boilers

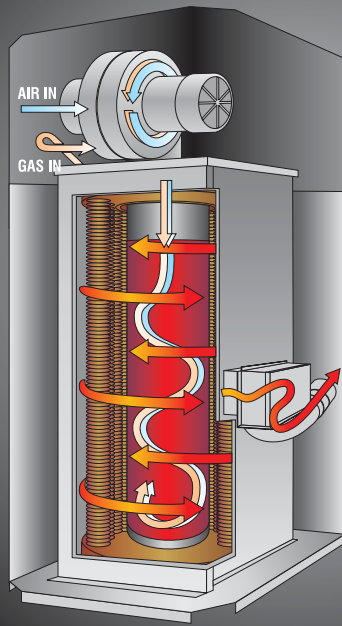
**For Hydronic Heating and Hot Water Supply**



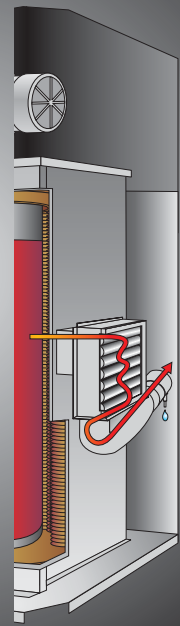
# DynaFlame Series

# CAMUS

## Non-Condensing Unit (standard feature)



## Condensing Unit (optional feature)



## Dynaflame Control Panel Highlights



- Advanced Digital Control System w / pin point accuracy
- 7" colour touch-screen user interface
- Remote operation through 4-20mA for set-point or fire-rate control
- Cascade up to 8 individual appliances in daisy-chain formation
- Building management interface through Modbus RTU (RS-485)
- Multiple pump control
- Lead-lag cascade control and indoor/outdoor reset capable
- Error faults show in text, time stamped
- Operation and combustion timed override test functions with infinitely adjustable firing rate for combustion and pump tests
- Digital safety annunciation and real-time flame signal readout
- Real-time analogue readout of control signals and temperatures
- UL353 safety approved discharge temperature high limit
- Password setup feature for service personnel

## Standard Features - Non-Condensing Models

- 85% Thermal Efficiency
- Suitable for Cat. 1 installation
- All Stainless Steel water surfaces
- Single point input adjustment for controlling air and gas
- 1 to 1 gas/air ratio for perfect modulation throughout
- Extremely low NOx emissions (less than 10 PPM)
- Flow switch
- Pressure Relief Valve
- Very small footprint
- Extremely low noise level
- Stainless Steel Outer Jacket & Combustion Chamber
- Hot surface ignition with soft start, rumble-free operation
- Low Gas Pressure Switch
- Flame Failure Alarm
- Metal fibre knit burner
- Direct Ignition (up to 2.5 million BTU/hr)
- Proven Pilot Ignition (3 to 6 million BTU/hr)
- Easy access to components for maximum serviceability
- All welded Stainless Steel Construction
- Inspected and tested to ASME requirements
- Maximum allowable working pressure of 160 PSI
- Maximum operating water temperature of 200°F
- 24 volt circuit breaker
- Protective air filters
- Very low gas pressure operation (down to 3" pressure inlet)
- Main burner test firing valve
- Natural Gas or Propane
- Range of burner modulation of 35 - 100% (non-condense)

## Standard Equipment - Condensing Models

- All standard equipment as above
- Stainless Steel Secondary Exchanger at 95% Efficiency
- Range of burner modulation of 20 - 100% (condensing)

\* Note: Optional Neutralization kit available on Condensing Models

## Optional Features

- High Gas Pressure Switch (standard on models 3000 - 6004)
- Copper or Cupro Nickel Heat Exchanger
- Dual Fuel, Natural Propane
- Pump Delay
- Outdoor Installation
- Protocol Interface Card
- Low Water Cut-Off
- Air Inlet Damper

## Venting ('V') Diameter - Non-Condensing

MOD. #	Outdoor	Cat. III Up to 50 ft.	Cat. III Up to 100 ft.	Cat. I
500	4"	4"	6"	8"
750	6"	6"	8"	10"
1100	6"	6"	8"	10"
1200	6"	6"	8"	10"
1500	7"	7"	10"	12"
1750	7"	7"	10"	12"
2000	8"	8"	12"	14"
2500	8"	8"	12"	14"
3000	8"	8"	12"	14"
3500	9"	9"	14"	16"
4000	9"	9"	14"	16"
4500	10"	10"	14"	16"
5000	10"	10"	14"	16"
4504	10"	10"	14"	16"
5004	10"	10"	14"	16"
6004	12"	12"	14"	16"

## Venting ('V') Diameter - Condensing

MOD. #	Outdoor	Cat. IV Up to 50 ft.	Cat. IV Up to 100 ft.	Cat. II
500	4"	4"	6"	5"
750	6"	6"	8"	6"
1100	6"	6"	8"	7"
1200	6"	6"	8"	7"
1500	7"	7"	10"	8"
1750	7"	7"	10"	8"
2000	8"	8"	12"	9"
2500	8"	8"	12"	9"
3000	8"	8"	12"	10"
3500	9"	9"	14"	12"
4000	9"	9"	14"	12"
4500	10"	10"	14"	12"
5000	10"	10"	14"	12"
4524	10"	10"	14"	12"
5024	10"	10"	14"	12"
6024	12"	12"	14"	12"

## Flow and Pressure Drop at a Given Temperature Rise

MOD. #	Copper Tube				Stainless Steel				
	30 °F (16.7 °C) Temp. Rise		35 °F (19.4 °C) Temp. Rise		20 °F (11.1 °C) Temp. Rise		30 °F (16.7 °C) Temp. Rise		
	USGPM	Δ P - FT	USGPM	Δ P - FT	USGPM	Δ P - FT	USGPM	Δ P - FT	
500	28.0	0.7	24.0	0.5	500	42.0	1.5	28.0	0.7
750	42.0	1.4	36.0	1.0	750	63.0	3.0	42.0	1.4
1100	61.6	2.7	52.8	2.1	1100	92.4	5.9	61.6	2.8
1200	68.0	2.9	58.3	2.2	1200	102.0	4.4	68.0	2.0
1500	83.9	1.9	71.9	1.4	1500	125.9	8.3	83.9	3.8
1750	97.9	2.9	83.9	2.2	1750	135.0	12.5	90.0	6.0
2000	111.9	4.1	95.9	3.1	2000	167.9	6.7	111.9	3.2
2500	139.9	6.1	119.9	4.6	2500	209.9	8.4	139.9	3.9
3000	167.9	8.4	143.9	7.0	3000	251.9	9.9	167.9	4.7
3500	198.1	12.7	169.8	9.5	3500	297.2	11.8	198.1	5.6
4000	226.9	17.0	194.5	12.7	4000	340.4	17.1	226.9	8.1
4500	254.7	21.9	218.3	16.4	4500	382.1	28.4	254.7	13.3
5000	282.9	27.6	242.5	20.7	5000	424.4	31.1	282.9	14.7
MEGA 4504	254.7	15.3	218.3	11.4	MEGA 4504	382.1	20.4	254.7	9.7
MEGA 5004	282.9	19.6	242.5	14.9	MEGA 5004	424.4	23.5	282.9	11.2
MEGA 6004	339.5	31.8	291.0	24.1	MEGA 6004	509.3	38.0	339.5	18.0

## Dimensional Specifications

MOD. #	Width Dim. 'A'	Depth Dim. 'B'	Height Dim. 'C'	Water Conn. 'D'	Air Inlet 'E'	Flue Height 'F'	Gas Height 'G'	Dim. 'H'	Dim. 'I'	Dim. 'J'	Dim. 'K'	Dim. 'L'
500	25"	27"	45 3/4"	27"	37 1/4"	13 1/4"	33 3/4"	17 3/4"	6"	4 1/2"	2 3/8"	11 1/2"
750	25"	27"	55"	36 3/8"	46 3/8"	15 3/4"	43"	25"	6"	4 1/2"	2 3/8"	11 1/2"
1100	25"	27"	68 1/4"	49 3/8"	59 3/8"	22"	56 1/4"	31 1/8"	6"	4 1/2"	2 3/8"	11 1/2"
1200	25"	27"	68 1/4"	49 3/8"	59 3/8"	22"	56 1/4"	31 1/8"	6"	4 1/2"	2 3/8"	11 1/2"
1500	29 3/8"	31 3/4"	58 1/2"	38 1/4"	48 3/8"	16 3/8"	45 3/8"	24 1/2"	6"	3 3/8"	1 7/8"	13 1/2"
1750	29 3/8"	31 3/4"	62 3/8"	42 3/8"	53 3/8"	16 3/8"	50 3/8"	24 1/2"	6"	3 3/8"	1 7/8"	13 1/2"
2000	29 3/8"	31 3/4"	66 3/8"	46 3/8"	57 3/8"	20"	53 3/8"	28 3/4"	6"	3 3/8"	1 7/8"	13 1/2"
2500	29 3/8"	31 3/4"	73 1/2"	52 3/8"	63 3/8"	25 3/4"	60 3/8"	34 1/2"	6"	3 3/8"	1 7/8"	13 1/2"
3000	29 3/8"	31 3/4"	79 1/2"	58 3/8"	69 3/8"	31 3/4"	66 3/8"	40 1/2"	6"	3 3/8"	1 7/8"	13 1/2"
3500	29 3/8"	31 3/4"	86 1/2"	63 3/8"	76"	24 3/8"	72 3/8"	32 3/8"	20"	3 3/8"	1 7/8"	13 1/2"
4000	29 3/8"	31 3/4"	91 1/2"	68 3/8"	81"	29 3/8"	77 3/8"	37 3/8"	20"	3 3/8"	1 7/8"	13 1/2"
4500	29 3/8"	31 3/4"	96 1/2"	73 3/8"	86"	34 3/8"	82 3/8"	42 3/8"	20"	3 3/8"	1 7/8"	13 1/2"
5000	29 3/8"	31 3/4"	101 1/2"	78 3/8"	91"	39 3/8"	87 3/8"	47 3/8"	20"	3 3/8"	1 7/8"	13 1/2"
MEGA 4504	35 3/4"	39 1/4"	83"	59 3/4"	72 1/4"	20 3/4"	67 3/8"	28 3/8"	20"	2 1/2"	3 1/2"	17 3/8"
MEGA 5004	35 3/4"	39 1/4"	88 1/4"	65"	77 1/2"	26"	72 1/4"	34 3/8"	20"	2 1/2"	3 1/2"	17 3/8"
MEGA 6004	35 3/4"	39 1/4"	102"	75 1/2"	91"	35 1/2"	85 1/2"	44 3/8"	20"	2 1/2"	2 3/4"	17 3/8"

## Dimensional Specifications

MOD. #	Dim. 'M'	Dim. 'N'	Dim. 'P'	Air Inlet Dia. 'W'	† Water Conn. Primary Recommended Pipe Size	† Water Conn. Second. (grooved) Recommended Pipe Size	Gas Conn. (NPT)	Approx. Ship. Wts. (including skid)	
								NON CONDENSING	CONDENSING
500	18 3/4"	6 1/4"	5"	6"	2"	1 1/2"	1"	520 lbs.	593 lbs.
750	18 3/4"	6 1/4"	5"	8"	2"	1 1/2"	1"	600 lbs.	678 lbs.
1100	18 3/4"	6 1/4"	5"	8"	2"	1 1/2"	1"	640 lbs.	704 lbs.
1200	18 3/4"	6 1/4"	5"	8"	2"	1 1/2"	1"	700 lbs.	770 lbs.
1500	22"	10 1/4"	5"	10"	2 1/2"	1 1/2"	1 1/4"	825 lbs.	899 lbs.
1750	22"	10 1/4"	5"	10"	2 1/2"	1 1/2"	1 1/4"	900 lbs.	963 lbs.
2000	22"	10 1/4"	5"	12"	3"	1 1/2"	1 1/4"	943 lbs.	999 lbs.
2500	22"	10 1/4"	5 1/2"	12"	3"	1 1/2"	1 1/2"	1,025 lbs.	1,085 lbs.
3000	22"	10 1/4"	5 1/2"	12"	3"	1 1/2"	1 1/2"	1,100 lbs.	1,120 lbs.
3500	22"	10 1/4"	6"	14"	4"	1 1/2"	2"	1,250 lbs.	1,330 lbs.
4000	22"	10 1/4"	6"	14"	4"	1 1/2"	2"	1,290 lbs.	1,380 lbs.
4500	22"	10 1/4"	31"	14"	4"	1 1/2"	2 1/2"	1,420 lbs.	1,500 lbs.
5000	22"	10 1/4"	31"	14"	4"	1 1/2"	2 1/2"	1,627 lbs.	1,720 lbs.
MEGA 4504	25 3/8"	12"	31"	14"	4"	1 1/2"	2 1/2"	1,525 lbs.	1,610 lbs.
MEGA 5004	25 3/8"	12"	31"	14"	4"	1 1/2"	2 1/2"	1,732 lbs.	1,815 lbs.
MEGA 6004	25 3/8"	12"	31"	14"	4"	1 1/2"	3"	1,963 lbs.	2,210 lbs.

† PLEASE NOTE: Copper: For models 500 - 1200 the Appliance Primary inlet/outlet Connections are 2" NPT. For models 1500 - 5000 the Primary inlet/outlet Connections are 3" NPT. For models 4504 - 6004 Primary Inlet / Outlet are 4" Grooved Connections. Stainless: For models 500 - 1750, 3000 Heat Exchanger features Grooved Connections. 2000 - 2500, 3500 - 6004 Heat Exchanger features NPT Connections.

