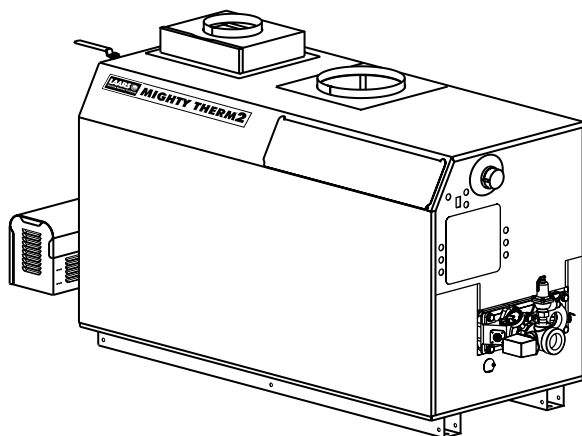


MIGHTY THERM²

Pump-Mounted Boiler & Water Heater



Date:

Project #:

Engineer:

Prepared By:

Bid Date:

MT2H Hydronic Heater

MT2V Volume Water Heater

Indoor/Outdoor Sizes 500-2000

Submittal Data



Project Name:

Location:

Contractor:

Standard Equipment

- ASME 160 psi working pressure heat exchanger
- ASME "H" stamp
- Two-stage firing
- Flanged water connections
- Glass-lined headers
- External header gaskets
- 75 psi (517 kPa) ASME rated pressure relief valve (MT2H)
- 125 psi (861 kPa) ASME rated pressure relief valve (MT2V)
- Flow switch
- Temperature pressure gauge
- Pump, mounted and wired
- Multiple operating gas valve/pressure regulators
- Manual "A" gas valve
- Intake air filter
- Multiple, removable burner trays
- Stainless steel burners
- Built-in draft fan for Category I or III vent systems
- Air pressure switch
- Burner site glass
- 24V control system
- 115/24VAC transformer
- Manual reset high limit
- External controller connections with selector switch
- Hot surface ignition
- On/Off toggle switch
- Pump time delay
- Less than 10 ppm NOx

Boiler Data

Model:

- ☐ Boiler MT2H
☐ Water Heater MT2V

Number of Units:

Fuel

- ☐ Natural
☐ Propane

Heat Exchanger

- ☐ Copper
☐ Cupro-Nickel
☐ Copper, Reversed
☐ Cupro-Nickel, Reversed

Water Trim

- ☐ Glass-Lined Cast Iron
☐ Bronze Trim
☐ Full Bronze

Pump

- ☐ Soft Water (MT2V only)
☐ Normal Water
☐ Hard Water (MT2V only)

Options

- ☐ CSD-1
☐ 200°F Max Controls (std. on MT2V)
☐ Low Water Cutoff
☐ Auto reset high limit
☐ Ignition failure alarm with bell and dry contacts, red trouble and green main gas lights
☐ ASME "HLW" Stamp (MT2V only)



Sizing Data

	Indoor Model	Input ^{1,3} BTU/h	Output ^{1,3} BTU/h	Gas Conn. Size inches ²	Water Conn. Size inches ²	Shipping Weight lbs. <i>kg</i>	
	500	500,000	425,000	1¼	2	480	218
	750	750,000	638,000	1¼	2	560	254
	1000	999,000	849,000	1½	2½	670	304
	1250	1,250,000	1,062,500	2	2½	730	331
	1500	1,500,000	1,275,000	2	2½	815	370
	1750	1,750,000	1,487,500	2	2½	880	400
	2000	1,999,000	1,699,000	2	2½	1010	459

NOTES: 1. Input and output must be derated 4% per 1000 feet above sea level when installed above 2000 feet altitude.
2. Dimensions are nominal.
3. For other boiler ratings:
Boiler Horsepower: HP = $\frac{\text{Output}}{33,475}$ Radiation Surface: EDR sq. ft. = $\frac{\text{Output}}{150}$

Accessories

	Side-wall vent terminal for indoor unit with horizontal venting		Vent terminal for outdoor unit		Air terminal for outdoor unit
			Side-wall combustion air terminal for indoor unit with horizontal ducted air		

Water Flow Data

MT2H (Boiler)
Temperature Rise in Degrees

Size	20°F	11°C	25°F	14°C	30°F	17°C	35°F	19°C
	Flow gpm	<i>Flow lpm</i>	Flow gpm	<i>Flow lpm</i>	Flow gpm	<i>Flow lpm</i>	Flow gpm	<i>Flow lpm</i>
500	43	161	34	129	28	107	24	92
750	64	242	51	193	43	161	36	138
1000	85	321	68	257	57	214	49	184
1250	106	402	85	322	71	268	61	230
1500	128	483	102	386	85	322	73	276
1750	N/R	N/R	119	451	99	375	85	322
2000	N/R	N/R	136	515	113	429	97	368

MT2V (Water Heater)

Size	Hard Water		Normal Water		Soft Water	
	Flow gpm	<i>Flow lps</i>	Flow gpm	<i>Flow lps</i>	Flow gpm	<i>Flow lps</i>
500	90	341	68	257	45	170
750	90	341	68	257	45	170
1000	90	341	68	257	45	170
1250	90	341	68	257	68	257
1500	90	341	68	257	68	257
1750	90	341	68	257	68	257
2000	112	424	112	424	112	424

Recovery Data

WATER TEMPERATURE RISE IN DEGREES									
Size	40°F gph	50°F gph	60°F gph	70°F gph	80°F gph	90°F gph	100°F gph	120°F gph	140°F gph
500	1276	1020	850	729	638	567	510	425	364
750	1915	1532	1277	1094	957	851	766	638	547
1000	2548	2038	1699	1456	1274	1132	1019	849	728
1250	3189	2551	2126	1822	1594	1417	1276	1063	911
1500	3827	3061	2551	2187	1913	1701	1531	1276	1093
1750	4464	3571	2976	2551	2232	1984	1786	1488	1276
2000	5099	4079	3399	2914	2550	2266	2040	1700	1457
Size	22°C L/h	28°C L/h	33°C L/h	39°C L/h	44°C L/h	50°C L/h	56°C L/h	67°C L/h	78°C L/h
500	4821	3857	3214	2755	2411	2143	1929	1607	1378
750	7238	5790	4825	4136	3619	3217	2895	2413	2068
1000	9632	7705	6421	5504	4816	4281	3853	3211	2752
1250	12054	9643	8036	6888	6027	5357	4821	4018	3444
1500	14464	11571	9643	8265	7232	6429	5786	4821	4133
1750	16875	13500	11250	9643	8438	7500	6750	5625	4821
2000	19274	15419	12850	11014	9637	8566	7710	6425	5507

NOTE: gph = gallons per hour, L/h = Liters per hour.

Electrical Data

MT2H & MT2V (pump mounted)	Boiler / Heater Circuit Size			Pump Circuit Size			Blower Circuit
Size	Volts	Phase	Amps	Volts	Phase	Amps	
500-750	120	Single	15	120	Single	15	Included in Boiler Circuit
1000-1750			20			15	
2000			20			20	

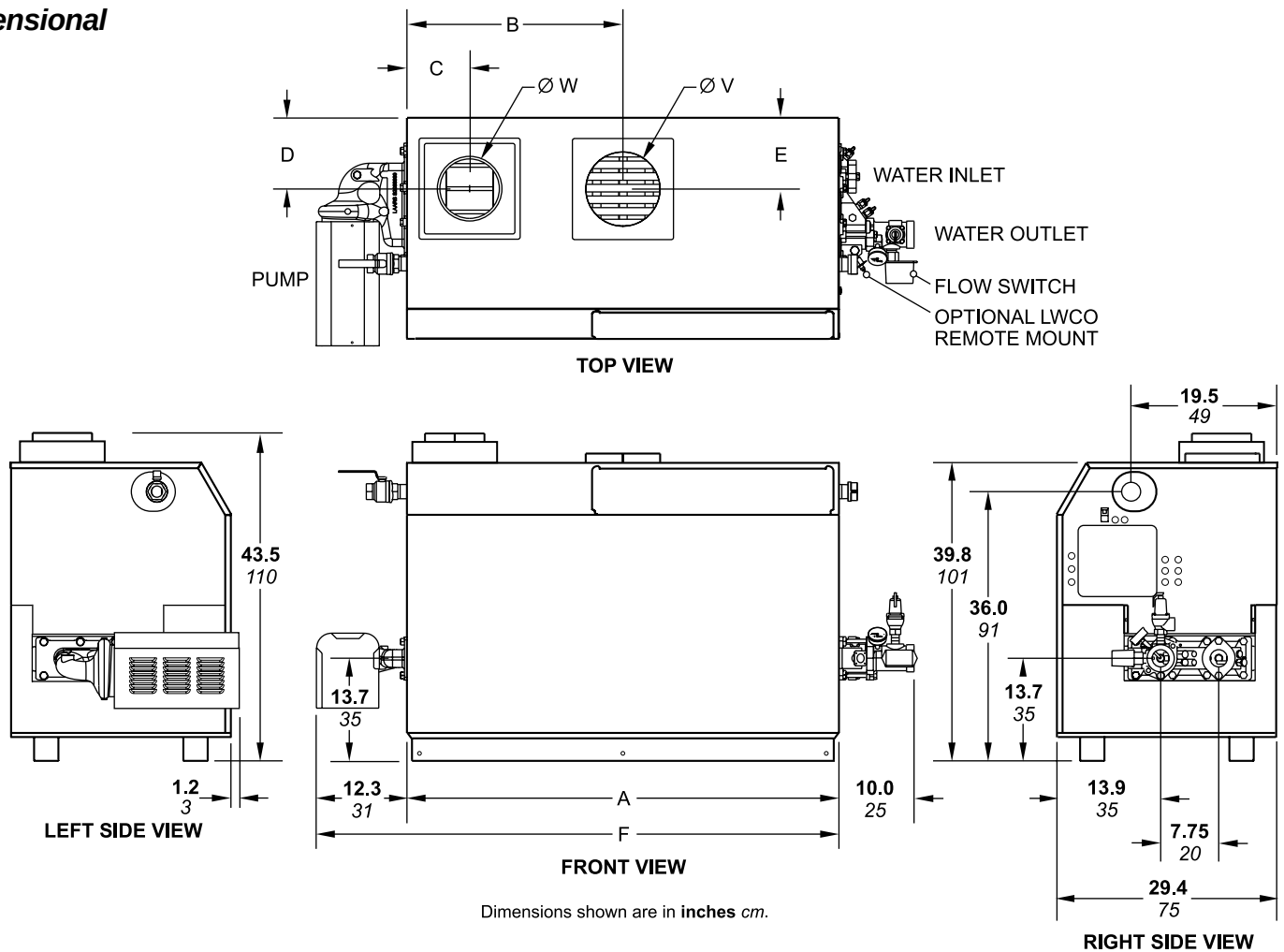
Pump Data

MT2V Water Heaters							MT2H Boilers			
Size	Water Category						Size			
	SOFT		NORMAL		HARD			HP	Amps	
	HP	Amps	HP	Amps	HP	Amps				
500	1/3	2.8	1/3	2.8	3/4	7.2	500	1/3	2.8	
750	1/3	2.8	1/3	2.8	3/4	7.2	750	1/3	2.8	
1000	1/3	2.8	1/2	5.2	3/4	7.2	1000	1/2	5.2	
1250	1/3	2.8	1/2	5.2	3/4	7.2	1250	1/2	5.2	
1500	1/3	2.8	3/4	7.2	3/4	7.2	1500	3/4	7.2	
1750	3/4	7.2	3/4	7.2	3/4	7.2	1750	3/4	7.2	
2000	1	9.8	1	9.8	1	9.8	2000	1	9.8	

Clearances

Appliance Surface	Required Clearance From Combustible Material		Suggested Service Access Clearances
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Dimensional Data



Size	A	B	C	D	E	F	Air Conn. W	Vent Conn. V
500	33 $\frac{3}{4}$ 86	16 $\frac{3}{4}$ 43	6 $\frac{1}{2}$ 17	10 25	8 20	46 $\frac{1}{4}$ 117	6 15	8 20
750	45 $\frac{3}{4}$ 116	22 $\frac{3}{4}$ 58	6 $\frac{1}{2}$ 17	10 25	9 $\frac{1}{2}$ 24	58 $\frac{3}{4}$ 148	6 15	10 25
1000	57 $\frac{3}{4}$ 147	28 $\frac{3}{4}$ 73	6 $\frac{1}{2}$ 17	10 25	9 $\frac{1}{2}$ 24	70 $\frac{3}{4}$ 178	8 20	10 25
1250	68 $\frac{3}{4}$ 173	34 $\frac{3}{4}$ 87	10 $\frac{3}{4}$ 26	10 25	9 23	80 $\frac{3}{4}$ 205	8 20	12 30
1500	78 $\frac{3}{4}$ 200	39 $\frac{1}{2}$ 100	10 $\frac{3}{4}$ 26	10 25	9 23	91 $\frac{1}{4}$ 232	8 20	12 30
1750	89 $\frac{3}{4}$ 227	44 $\frac{3}{4}$ 113	10 $\frac{3}{4}$ 26	10 25	9 23	101 $\frac{3}{4}$ 258	8 20	14 36
2000	99 $\frac{3}{4}$ 253	49 $\frac{3}{4}$ 127	10 $\frac{3}{4}$ 26	10 25	9 23	112 $\frac{3}{4}$ 285	12 30	14 36

Dimensions shown in inches cm.

Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.