HTP

Advanced Heating & Hot Water Systems

Mod Con™ VWH Hot Water Supply Boiler

An Intelligent Design that Delivers Highly Efficient Water Heating with up to 97% Thermal Efficiency

Construction Features

Combustion System

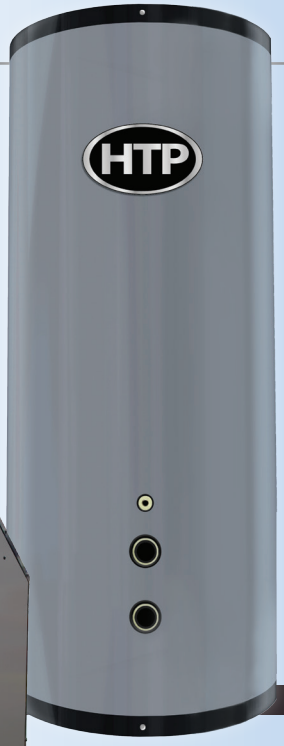
- Modulating Burner with up to a 5 to 1 turndown
- Gas Valve (Tested to UL, FM, CSA Standards)
- Up to 97% Thermal Efficiency*
- High Grade NIT Burner
- Low Nox Operation
- Gas Conversion available
- Whisper Quiet Operation
- Reliable Spark Ignition

Heat Exchanger

- All Stainless Steel Construction
- No Gaskets, Welded Construction. ASME Approved
- 150 PSI Relief Rated
- Easy to Service

Integrated Control System

- Built-in sequencer for up to 8 boilers
- Digital display with LED status indicators
- Integrated Control allows only the amount of heated energy required
- 24 volt monitor for system safeties
- Dual flame sensing (Flame probe/ Spark Ignition Probe)



*Note: Thermal efficiency tested with low temperature return

Heat Exchanger Bears the ASME "H" Stamp

AHRI MEMBER

ULTRA Low NOx Emissions SCAQMD Rule 1146.2

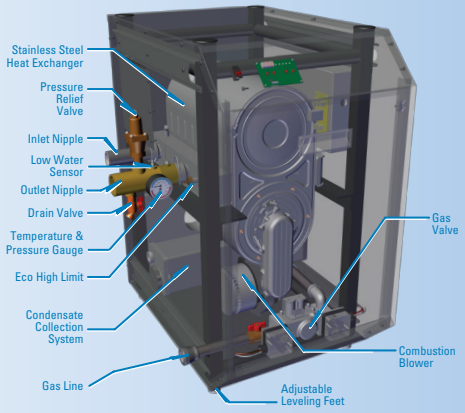
Additional Features

- Superior Condensate collection system (Patent Pending) Easy to service with overflow protection
- PVC – CPVC – Stainless Steel Venting
- Vents up 200 feet combined
- Stack units for increased output in small footprint
- Adjustable Legs
- Direct Vent Sealed Combustion
- Models Available for Natural or LP Gas
- Easy access for wiring or field service of combustion heat exchanger
- High limit manual reset/Low water cut-off (standard equipment)
- Removable front cover allows easy access to burner assembly

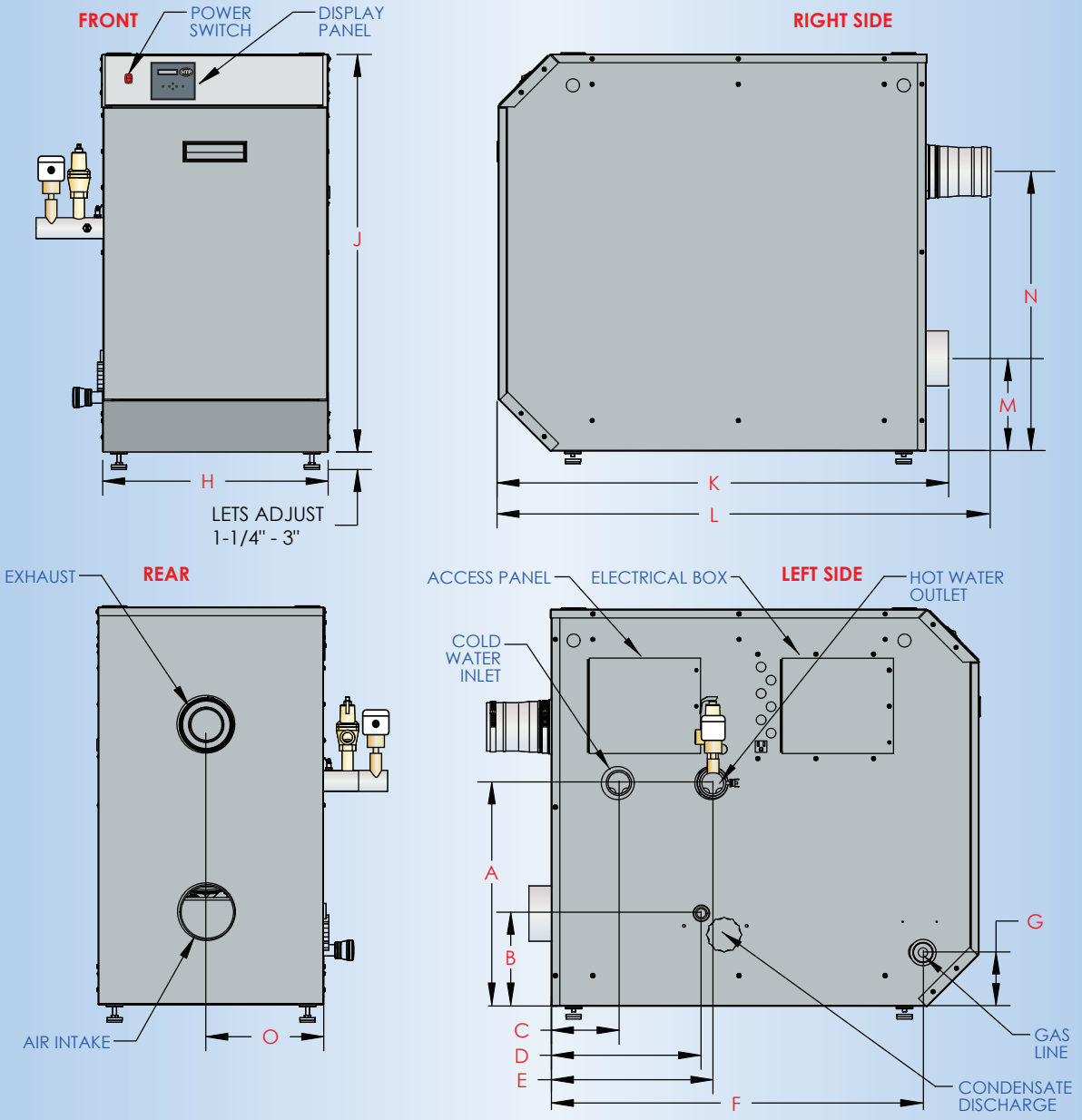
- Zero clearance to all combustible surfaces
- Factory installed AGA/ASME rated relief valve.
- PC monitoring for history – system operation (optional)
- Self diagnostic electronic control with digital readout to monitor system parameters.
- 5-year limited warranty

Optional Equipment

- High and Low Gas Pressure Switch
- Alarm
- Venting Kit
- Caster Wheel Kit
- PC Software for History and System monitoring
- Condensate Neutralizer Kit



MOD CON VWH Dimensional Information



MODEL	A	B	C	D	E	F	G	H	J	K	L	M	N	O
MOD CON 500	20"	14-3/4"	6-1/4"	13-1/4"	14-1/2"	33-1/4"	5-1/8"	20-1/2"	36"	40"	43"	8-1/4"	25-1/2"	10-1/2"
MOD CON 850	20"	20"	6-1/4"	16-1/4"	18-3/4"	43-1/2"	20"	20-1/2"	36"	68-3/4"	70-3/4"	8-1/4"	25-1/2"	10-1/2"

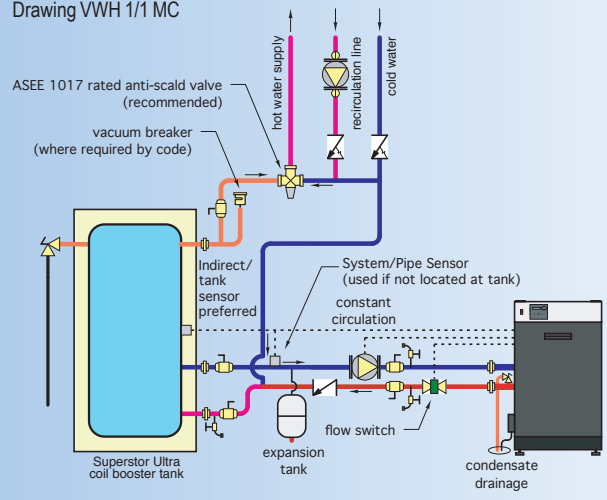
NOTE: ALL DIMENSIONS & WEIGHTS ARE APPROXIMATE AND HEIGHTS DO NOT INCLUDE ADJUSTABLE LEGS.

MODEL	BTU/HR INPUT LOW FIRE	Gross Output BTU/HR	Net I=B=R BTU/HR	Thermal Efficiency	Boiler Water	Supply/ Return Connec-tion	Gas Conn.	Vent Dia.	Ship. Wt.	High Fan Speed	Low Fan Speed	Fan Speed at Ignition
MOD CON 500	100,000-500,000	470,000	409,000	95%	4.2	2"	1-1/2"	4"	505	6930	1250	3000
MOD CON 850	170,000-850,000	799,000	695,000	97%	5.8	2"	2"	6"	580	5400	1500	3000

MOD CON VWH Preferred Piping (Zoning with Valves) Space Heating Mode

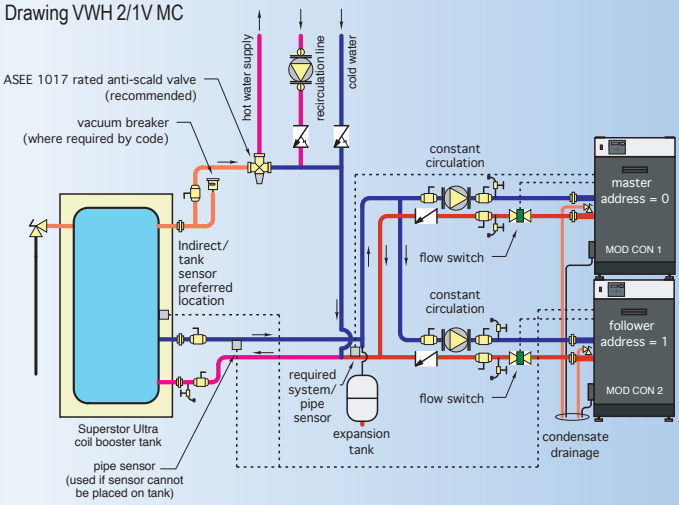
Volume Water Heating using MOD CON boiler
(1 boiler supplying 1 storage tank)

Drawing VWH 1/1 MC



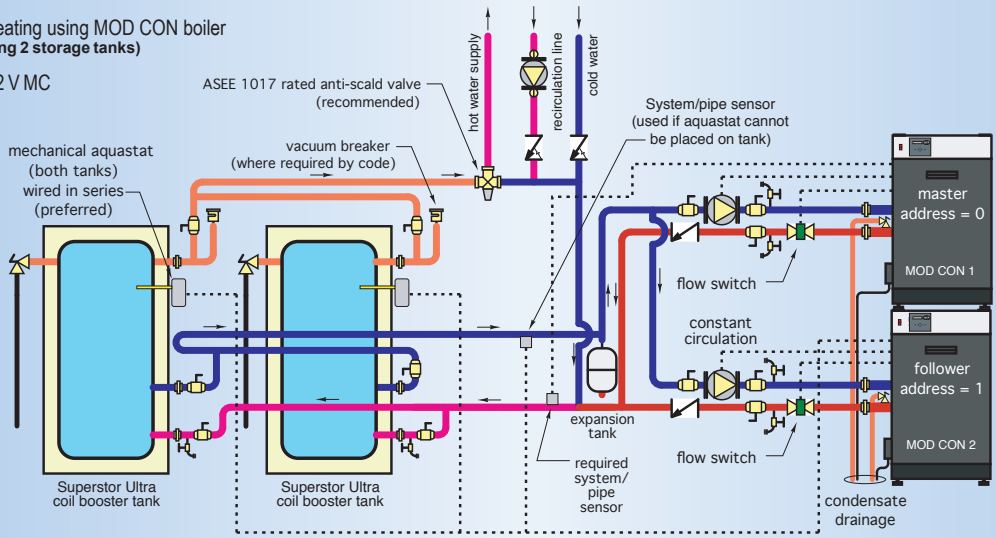
Volume Water Heating using MOD CON boiler
(2 boilers supplying 1 storage tank)

Drawing VWH 2/1V MC



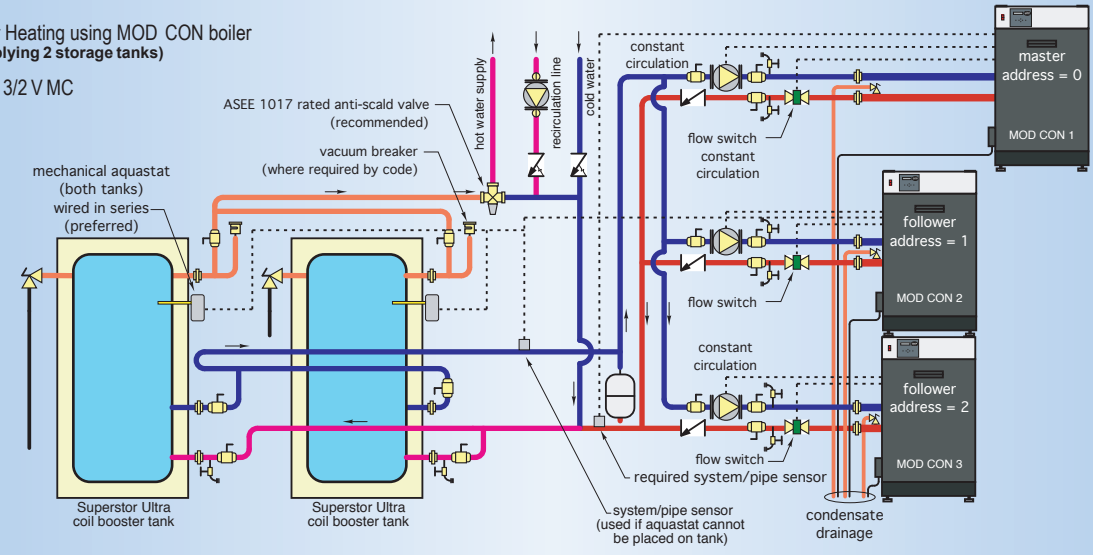
Volume Water Heating using MOD CON boiler
(2 boilers supplying 2 storage tanks)

Drawing VWH 2/2 V MC



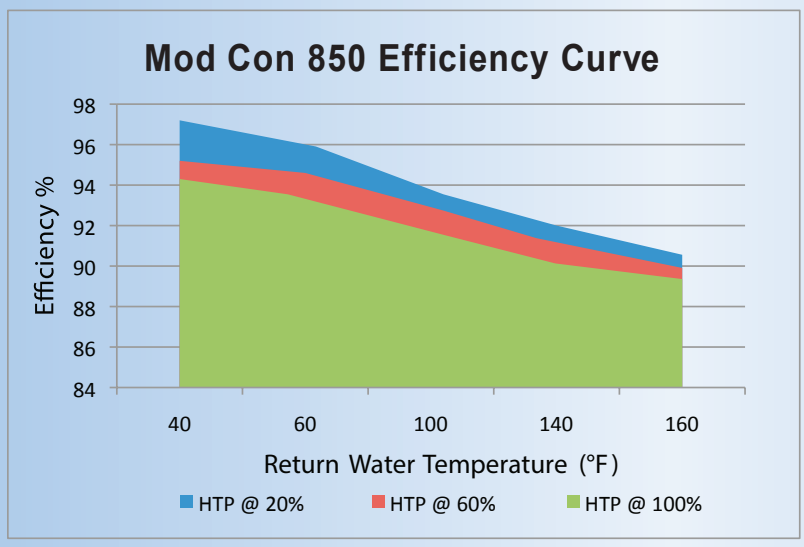
Volume Water Heating using MOD CON boiler
(3 boilers supplying 2 storage tanks)

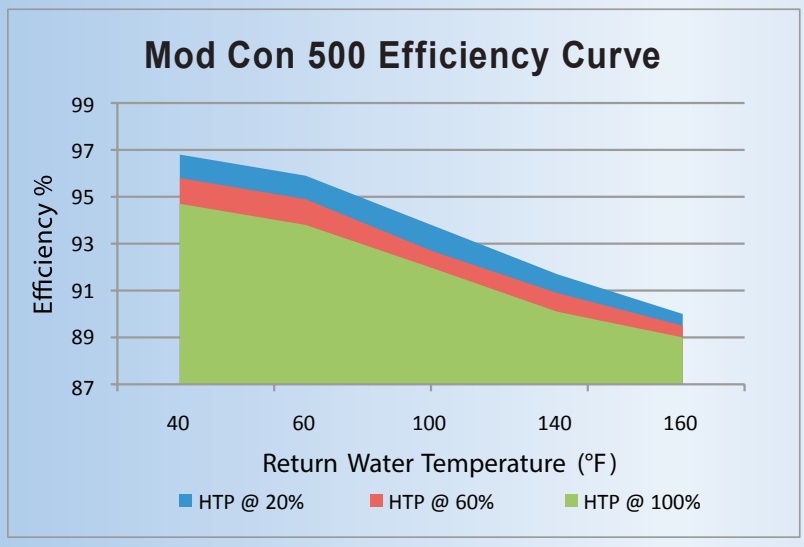
Drawing VWH 3/2 V MC



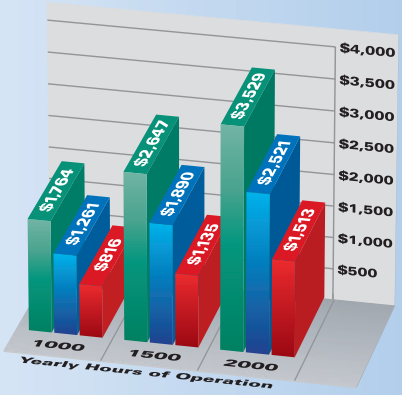
MOD CON VWH Efficiency

Condensing Technology, with 94% Efficiency, means lower energy cost to you!

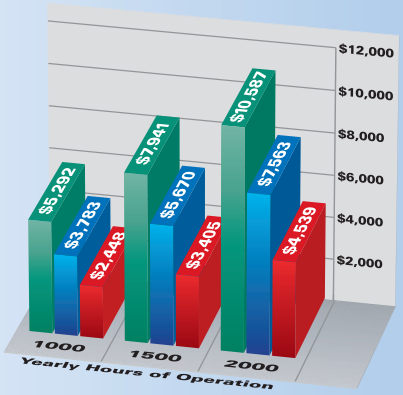




MOD CON VWH 500 Fuel Savings at 1 Year n 75% n 80% n 85%



MOD CON VWH 500 Fuel Savings at 3 Years n 75% n 80% n 85%



(based on running hours, calculated using FTC-published average energy costs, Jan. 2009; $1.21 per therm) The cost of fuel in some areas of the country has increased by almost 40% in just one year. The highly efficient modulating output of the Mod Con VWH will provide a maximum payback on fuel savings. As the charts below illustrate, savings can result in a payback period in less than three years when compared to the conventional technology of other Hot Water Supply Boilers. The Mod Con VWH could save you as much as 50% on your present fuel bills.

MOD CON VWH Recovery Ratings with Storage Tanks

The chart below provides you with the first hour ratings as compared to commercial direct fired storage water heaters. This chart will help you determine the exact size of the storage tank required for the new or retro-fit application.

ModCon 500

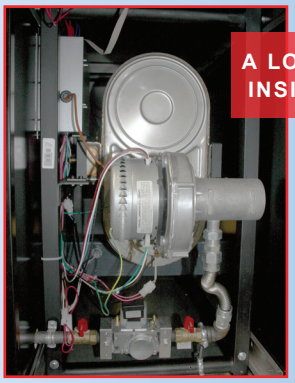
Inlet Temp.	Outlet Temp.	Recovery Gallons Per Hour	First Hour Rating With 119 Gallon	First Hour Rating With 175 Gallon	First Hour Rating With 200 Gallon
40°	80°	1,410	1,499	1,541	1,560
40°	90°	1,128	1,217	1,259	1,278
40°	100°	940	1,029	1,071	1,090
40°	110°	806	895	937	956
40°	120°	705	794	836	855
40°	130°	627	716	758	777
40°	140°	564	653	695	714
40°	150°	513	602	644	663
40°	160°	470	559	601	620
40°	170°	434	523	565	584
40°	180°	403	492	534	553

ModCon 850

Inlet Temp.	Outlet Temp.	Recovery Gallons Per Hour	First Hour Rating With 175 Gallon	First Hour Rating With 200 Gallon	First Hour Rating With 300 Gallon
40°	80°	2,397	2,522	2,547	2,622
40°	90°	1,918	2,043	2,068	2,143
40°	100°	1,598	1,723	1,748	1,823
40°	110°	1,370	1,495	1,520	1,595
40°	120°	1,199	1,324	1,349	1,424
40°	130°	1,065	1,190	1,215	1,290
40°	140°	959	1,084	1,109	1,184
40°	150°	872	997	1,022	1,097
40°	160°	799	924	949	1,024
40°	170°	738	863	888	963
40°	180°	685	810	835	910

Minimum Storage Tank Sizes For The Mod Con VWH Models

Mod Con 500	Mod Con 850	Mod Con 1000	Mod Con 1700
119 Gal.	175 Gal.	200 Gal.	350 Gal.



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