

Slant/Fin®

Monitron™

Electric Boiler



A major answer to the changing heating-fuel situation

HOT WATER MODELS IN 9 SIZES

8 kw (27,301 Btuh) to 40 kw (136,506 Btuh)

Before purchasing this appliance,
read important energy cost and
efficiency information available
from your contractor.



Slant/Fin[®] Monitron[™]

Monitron—Compact, easy to install for new or “standby” installations

Monitron combines the availability and dependability of electricity with the comfort and performance of conventional hydronic heating using baseboard, radiant or cast-iron radiators.

Monitron as a replacement unit: Works with virtually any existing hot water hydronic radiation system. Although rated in kilowatts, it is also clearly identified by BTU output.

Monitron as a standby unit: Particularly suitable for commercial and industrial facilities, or office buildings which can't risk down-time with their existing heating equipment. If oil or gas is temporarily unavailable, the owner easily switches the heating system to the electric boiler.

Monitron as a primary heating unit offers:

- The convenience of electricity and the comfort of hydronics.
- The elimination of a chimney.
- Competitive pricing with electric baseboard systems.
- Simple zoning by zone valves.

Monitron by Slant/Fin is the electronic-age boiler designed to save energy for new or existing heating systems.

America's Best - Built Electric Boiler

- One piece cast-iron heat exchanger.
- Built in air eliminator.
- Internal baffles improve heat transfer.

Energy-saver electric sequential control package *

With manual mild-weather energy-saver switches *

NORMAL OPERATIONS

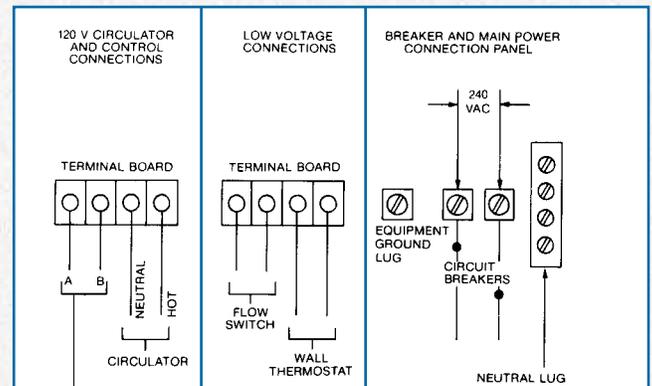
When the thermostat calls for heat, the circulator turns on and the first electric heater bank is energized. At preset 30-second intervals, the other heater banks automatically energize. The circulator continues operating until the room thermostat is satisfied. A flow switch supplied by Slant/Fin or others is required. It prevents the elements from being energized unless the circulator is operating. This avoids element burnout.

* All models except EH-8 and EH-10

Standard equipment

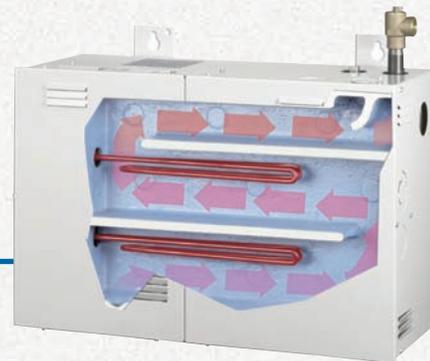
- Dual limit aquastat
- Altitude pressure and temperature gauge
- Safety relief valve (unmounted)
- Circulator relay and heater contactors
- Circuit breaker (one or two heaters per breaker)
- Low voltage thermostat with adjustable heat anticipator (packed separately)
- Drain cock, 3/8" (packed separately)
- Built-in air separator

TYPICAL WIRING DIAGRAM



TO ZONE VALVE TRANSFORMER WHEN USED

Monitron installed as primary boiler.

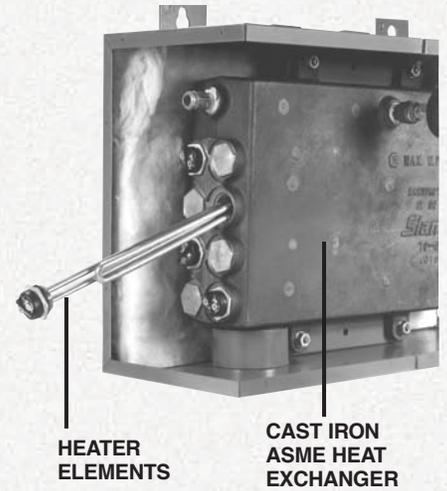
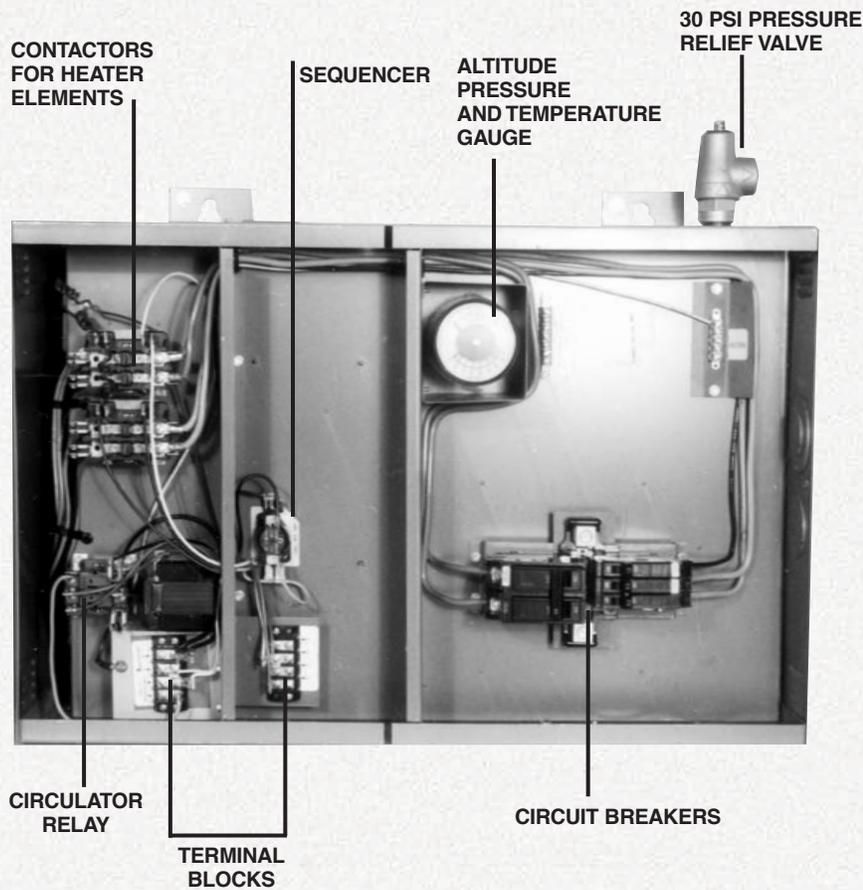


OPTIONAL MILD-WEATHER OPERATION

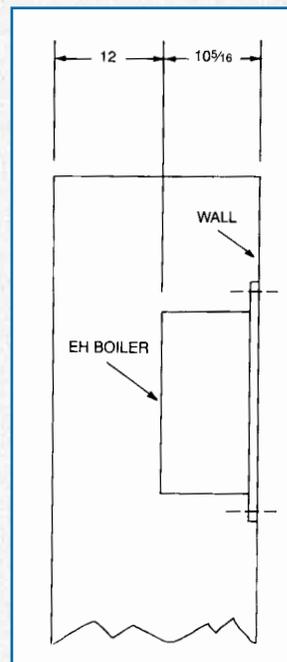
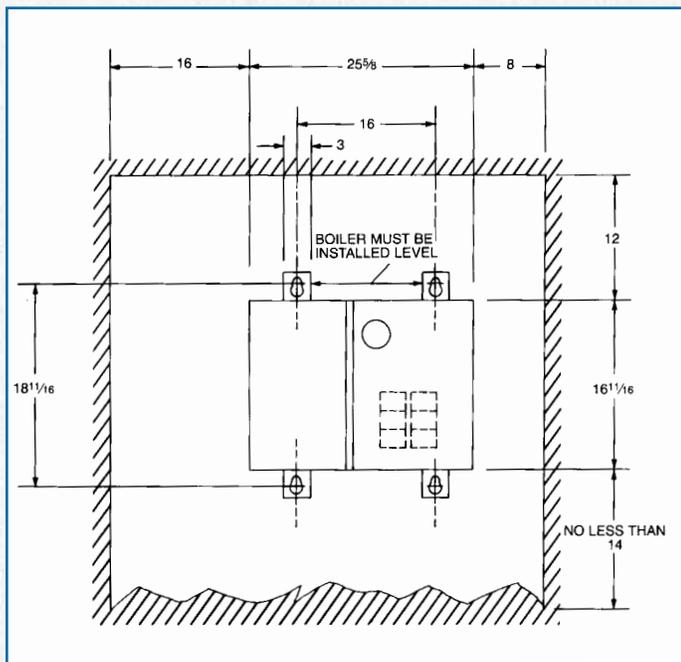
Mild-weather energy savings are made possible through the use of circuit breakers on the breaker panel. This permits the owner to manually switch off one or more of the elements. Then, when just a moderate amount of heat is needed, all the elements are not energized, cycling is reduced, and overheating is diminished. This energy-saving feature is standard on Monitron models EH-12-S through EH-40-S.

- Cast-iron ASME approved heat exchanger
- Terminal blocks for circulator, thermostat, flow switch and for zone valve transformer
- Sequencer
- Complete jacketing
- U.L. listed, ASME authorized
- Flow switch. Not included with, but necessary on all models
- Circuit breaker for circulator and control circuit.

FEATURES



DIMENSIONS



NOTES:

1. May be totally enclosed.
2. All clearance dimensions are minimum.
3. All dimensions are in inches.

RATINGS AND SPECIFICATIONS

Boiler Model No.	SINGLE PHASE * KW at 240 VAC	SINGLE PHASE D.O.E Capacity *(Btu/hr) at 240 VAC	Neutral Lug Size (AWG)		SINGLE PHASE — THREE WIRE			THREE PHASE — FOUR WIRE 208 VAC WYE §						
			Solid Cu ¶ AL	Stranded Cu ¶ AL	Main Lug Size (AWG) CU ¶ AL	Grounding Lug Size (AWG) Cu ¶ AL	† ** Heater Amps at 240 VAC	KW at 208 VAC	D.O.E Capacity (Btu/h) at 208 VAC	Main Lug Size (AWG) CU ¶ AL	Grounding Lug Size (AWG) Cu ¶ AL	† Heater Amps at 208 VAC		
EH8S	8	27000	14-12	12	6-2/0	14-4	6-4	33	—	—	—	—	—	—
EH10S	10	34000	14-12	12	6-2/0	14-4	6-4	42	—	—	—	—	—	—
EH12S	12	41000	14-12	12	6-2/0	14-4	6-4	50	9.012	31000	6-2/0	14-4	6-4	25.1
EH16S	16	55000	14-12	12	6-2/0	14-4	6-4	67	12.016	41000	6-2/0	14-4	6-4	‡38.1
EH20S	20	68000	14-12	12	6-2/0	14-4	6-4	83	15.020	51000	6-2/0	14-4	6-4	‡48
EH24S	24	82000	14-12	12	6/2/0	14-4	6-4	100	18.024	62000	6-2/0	14-4	6-4	‡60
EH28S	28	96000	14-12	12	2-250 MCM	14-4	6-4	117	21.028	72000	6-2/0	14-4	6-4	‡60
EH32S	32	109000	14-12	12	2-250 MCM	14-4	6-4	133	24.032	82000	6-2/0	14-4	6-4	‡73
EH40S	40	137000	14-12	12	2-250 MCM	6-2/0	—	167	30.040	103000	6-2/0	14-4	6-4	‡95.4

* Multiply by 0.751 for values at 208 volts AC.

** Multiply by 0.867 for values at 208 volts AC.

† For total current add, to the value shown in the table, the current draw for circulator and/or zone valve transformer (12 Amp. max.),

‡ Leg with the highest value of line current of an unbalanced 3 phase load.

¶ Aluminum conductors may be used, lug size, conduit size, ampacity and all applicable codes permitting. However, aluminum conductors may not be used for model EH-40 single phase.

§ 3 phase 240V special model also available. Consult factory for information.

Specify Model as follows: Model Number. Single or three Phase.

“135S” for single phase, 120V/240V, 120V/208V WYE. 3 wire (see note (1) below) with control circuit breaker.

“345S” for three phase, 120V/208V WYE. 4 wire (see note (1) below) with control circuit breaker.

Note No. 1: Voltage of any line to ground cannot exceed 125 VAC.

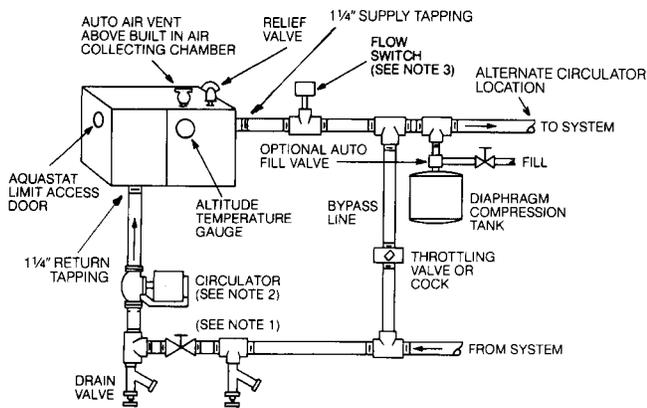
Example: EH-20-135S=20KW boiler for 120V/240V. 120V/208V Single Phase 3 wire.

ELECTRICAL

- Single branch circuit for 3 wire 120/208 V WYE, 120/240 Volt a.c. single phase, 60 Hz or for 4 wire 120/208V WYE three phase, 60Hz a.c. See note (1) above.
- Circulator relay 12 AMP Max, 120V a.c.
- Heating elements: Low-density replaceable. Copper sheathed and silver brazed base.
- Relays: Heavy-duty contactors, 48 AMP U.L. rating

TYPICAL PIPING DIAGRAM

FOR USE WITH TWO-WAY ZONE VALVES



NOTES:

1. Optional blocking gate valve and hose end valve used (with drain valve) for fast fill and purge of system.
IMPORTANT Close bypass line valve (if used) during purging.
2. Alternative circulator location could be installed on supply piping. Circulator should not be installed at lowest point of piping.
3. There should be no elbows, tees, or change of pipe size for at least 5 diameters of pipe size (see table below) upstream and downstream of flow switch.

Boiler Model	Flow Switch McDonnell & Miller No.	Pipe Size	Minimum Length of Straight Pipe Upstream and Down-Stream of Flow Switch
EH-40	FS8W	1 1/4 IN.	8 1/2 IN.
EH-8 Thru EH-32	FS4-3T3-1	1 IN.	6 1/2 IN.

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