



Utica Boilers AT Electric Boiler- Submittal



Engineer: _____

Project Name: _____

Project Location: _____

Contractor: _____



APPLICATION:

Electric hot water boiler for indoor installation. Wall mounted. All boilers are factory assembled with controls and wiring, and test fired to ensure dependable performance.

CERTIFICATION AND APPROVALS:

AT Series Electric Boiler is manufactured and tested in accordance with American Society of Mechanical Engineers (ASME) and certified by Canadian Standards Association (CSA). Registered with National Board BPVI, and Massachusetts Board. Cast Iron heat exchanger is tested for maximum allowable working pressure of 30 psig in accordance with ASME boiler and pressure vessel code, section IV, rules for construction of heating boilers. A 30 psig safety relief valve is shipped standard.

BOILERS INCLUDE:

- Mounting hardware
- Three character LED display
- Three button User Interface
- Error code display
- Element Staging and Rotation
- Dual set points for comfort heating and domestic hot water
- Setting for Fahrenheit or Centigrade temperature scales
- Water temperature heating range 90°-180°F (32-82°C)
- Dry fire protection
- Connections for flow sensor and low water cutoff
- Load management control connection with auxiliary heat source connection
- Freeze protection
- Circulator pump terminals
- 40 VA transformer
- Three wire thermostat connection
- Audible alarm
- Pump exercising



Manufactured by:
ECR International Inc.
2201 Dwyer Avenue, Utica, NY 13501
Tel. 800 325 5479
www.ecrinternational.com
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- Relay contact monitoring
- Non-Volatile memory

- Heat Exchanger:
 - ▶ One piece

- Electrical
 - ▶ 208/240 vac, 1 ph, 60 Hz

- Other:
 - ▶ Field supplied Anti-Scald valve is required for Domestic Hot Water Supply.

- Warranty
 - ▶ Factory Standard Warranty is 20 years on heat exchanger, one year on parts.



| | | | | |
|--|---------------------------------------|-----------------------------------|--|--|
| Clearances ⁽¹⁾ Required distances measured from boiler. ⁽²⁾ Service, proper operation clearance recommendation. | | | Combustible Materials & Service (Required) ^{(1) (2)} | |
| | Top | | 16 in (40.6 cm) | |
| | Left Side | | 20 in (50.8 cm) | |
| | Right Side | | 20 in (50.8 cm) | |
| | Front | | 12 in (30.5 cm) | |
| | Back | | 0 in (0 cm) | |
| | Bottom | | 10 in (25.4 cm) | |
| Connections AT Boiler | 1¼ in NPT Heating Supply & Return | | | |
| Relief Valve | 3/4 in NPT | | | |
| Flow Rate | “AT” Series - 2 Element Boiler | | | |
| | kW Capacity | | Minimum Flow Rate (gpm)* | |
| | 6 | | 2.0 | |
| | 8 | | 2.7 | |
| | 10 | | 3.4 | |
| | 12 | | 4.1 | |
| | “AT” Series - 4 Element Boiler | | | |
| | kW Capacity | | Minimum Flow Rate (gpm)* | |
| | 12 | | 4.1 | |
| | 16 | | 5.5 | |
| | 20 | | 6.8 | |
| 24 | | 8.2 | | |
| Dimension/Weights | Model | Width | Height | |
| | AT Boiler | 18 ⁵ / ₈ in | 14 ⁵ / ₈ in | |
| | | 22.9 cm | 37.1 cm | |

* Flow rate based on 20°ΔT



AT Boiler Electrical Specifications

Operating at 240 Vac

"AT" Series - 2 Element Boiler

| Model | Boiler Size Nominal kW | Voltage (ac) | Output Power (Watts) | Output Power Btu/h | Amperage 240 Vac | Element Size (Watts) at 240 Vac | Number Elements | Accessory Load (A) | Total Amps | MCA | MOP | *Recommended Wire | | |
|--------|------------------------|--------------|----------------------|--------------------|------------------|---------------------------------|-----------------|--------------------|------------|------|------|-------------------|------------------|------------------|
| | | | | | | | | | | | | 60°C (140°F) AWG | 75°C (167°F) AWG | 90°C (194°F) AWG |
| AT0623 | 6 | 240 | 6,000 | 20,500 | 25.0 | 3,000 | 2 | 6 | 31.0 | 38.8 | 40.0 | 8 | 8 | 10 |
| AT0824 | 8 | 240 | 8,000 | 27,300 | 33.3 | 4,000 | 2 | 6 | 39.3 | 49.2 | 50.0 | 6 | 8 | 8 |
| AT1025 | 10 | 240 | 10,000 | 34,100 | 41.7 | 5,000 | 2 | 6 | 47.7 | 59.6 | 60.0 | 4 | 6 | 6 |
| AT1226 | 12 | 240 | 12,000 | 41,000 | 50.0 | 6,000 | 2 | 6 | 56.0 | 70.0 | 70.0 | 4 | 4 | 6 |

"AT" Series - 4 Element Boiler

| | | | | | | | | | | | | | | |
|--------|----|-----|--------|--------|-------|-------|---|---|-------|-------|-------|-----|-----|---|
| AT1243 | 12 | 240 | 12,000 | 41,000 | 50.0 | 3,000 | 4 | 6 | 56.0 | 70.0 | 70.0 | 4 | 4 | 6 |
| AT1644 | 16 | 240 | 16,000 | 54,600 | 66.7 | 4,000 | 4 | 6 | 72.7 | 90.8 | 100.0 | 2 | 3 | 4 |
| AT2045 | 20 | 240 | 20,000 | 68,200 | 83.3 | 5,000 | 4 | 6 | 89.3 | 111.7 | 125.0 | 1/0 | 2 | 2 |
| AT2446 | 24 | 240 | 24,000 | 82,000 | 100.0 | 6,000 | 4 | 6 | 106.0 | 132.5 | 150.0 | 2/0 | 1/0 | 1 |

Operating at 208 Vac

"AT" Series - 2 Element Boiler

| Model | Boiler Size Nominal kW | Voltage (ac) | Output Power (Watts) | Output Power Btu/h | Amperage 240 Vac | Element Size (Watts) at 240 Vac | Number Elements | Accessory Load (A) | Total Amps | MCA | MOP | *Recommended Wire | | |
|--------|------------------------|--------------|----------------------|--------------------|------------------|---------------------------------|-----------------|--------------------|------------|------|------|-------------------|------------------|------------------|
| | | | | | | | | | | | | 60°C (140°F) AWG | 75°C (167°F) AWG | 90°C (194°F) AWG |
| AT0623 | 6 | 208 | 4,507 | 15,400 | 21.7 | 3,000 | 2 | 6 | 27.7 | 34.6 | 35.0 | 8 | 10 | 10 |
| AT0824 | 8 | 208 | 6,009 | 20,500 | 28.9 | 4,000 | 2 | 6 | 34.9 | 43.6 | 45.0 | 6 | 8 | 8 |
| AT1025 | 10 | 208 | 7,511 | 25,600 | 36.1 | 5,000 | 2 | 6 | 42.1 | 52.6 | 60.0 | 6 | 6 | 8 |
| AT1226 | 12 | 208 | 9,013 | 30,800 | 43.3 | 6,000 | 2 | 6 | 49.3 | 61.7 | 70.0 | 4 | 6 | 6 |

"AT" Series - 4 Element Boiler

| | | | | | | | | | | | | | | |
|--------|----|-----|--------|--------|------|-------|---|---|------|-------|-------|-----|---|---|
| AT1243 | 12 | 208 | 9,013 | 30,800 | 43.3 | 3,000 | 4 | 6 | 49.3 | 61.7 | 70.0 | 4 | 6 | 6 |
| AT1644 | 16 | 208 | 12,018 | 41,000 | 57.8 | 4,000 | 4 | 6 | 63.8 | 79.7 | 80.0 | 3 | 4 | 4 |
| AT2045 | 20 | 208 | 15,200 | 51,200 | 72.2 | 5,000 | 4 | 6 | 78.2 | 97.8 | 100.0 | 1 | 3 | 3 |
| AT2446 | 24 | 208 | 18,027 | 61,600 | 86.7 | 6,000 | 4 | 6 | 92.7 | 115.8 | 125.0 | 1/0 | 1 | 2 |

MCA = Minimum Circuit Ampacity

MOP = Maximum Over-current protection

*Recommended Field Wire Size per NEC Table 310.16

Not more than three (3) current carrying conductors in raceway

Based on ambient temperature of 30°C (86°F). Other ambient temperatures see NEC or CEC for correction factors.

Use Copper conductors only.

Recommended use only Class B or C type wire

Check with latest version of NEC and local codes. NEC/CEC and local codes for compliance in your area.

Assuming 60°C (140°F) wire will be used for connections to boiler rated at 80 amperes or less, and 75°C (167°F) wire will be used with boiler rated at more than 80 amperes.

Manufactured by:

ECR International Inc.

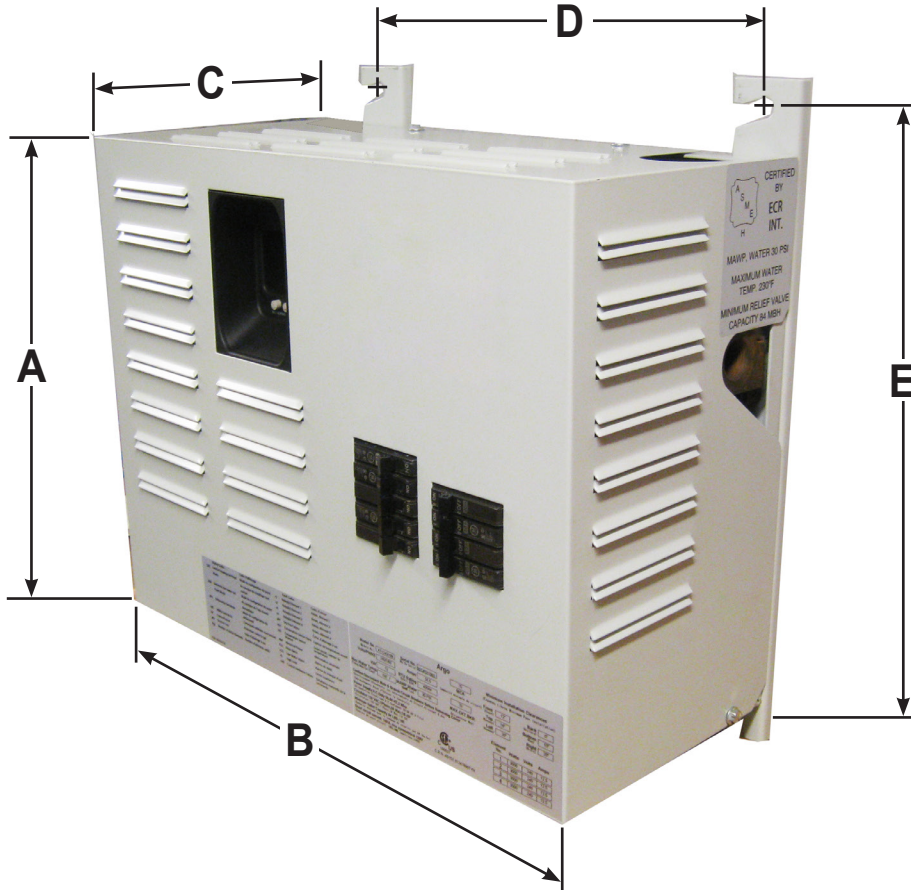
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"AT" SERIES BOILER DIMENSIONS



| Dimensions | | | | | Inlet & Outlet Pipe Size | Approximate Shipping Wt. |
|-----------------------------------|-----------------------------------|-----------------------------------|--|--|-----------------------------------|--------------------------|
| A | B | C | D | E | | |
| 14 ⁵ / ₈ in | 18 ⁵ / ₈ in | 9 ¹ / ₃₂ in | 14 ³ / ₈ in ϕ | 16 ¹⁵ / ₃₂ in ϕ | 1 ¹ / ₄ NPT | 70 lbs. |

All specifications subject to change without notice.



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