



INDUSTRIAL PROCESS

- Operating pressure up to 130 PSIG
- Central plant or point of use
- Small footprint
- Fast "start to steam"



HEALTHCARE/ LABORATORY

- Ideal for sterilization and lab use
- Point of use installation ease
- Small footprint
- Reliability



MICROBREWING/ DISTILLING

- Low pressure (15 PSIG) option
- Low installed cost
- Efficient
- Easy to maintain



CBD EXTRACTION

- Point of use installation ease
- Small Footprint
- Highly reliable and efficient
- Zero Emissions

ES Packaged Electric Steam Boilers

Lbs/Hr Sat. Steam: 36 to 542

KW Rating: 12 to 180

ASME Rating: 100 and 150 PSIG

Operating PSIG Range: 3-130 PSIG Max

ES Series Features:

- Safe easy-to-use heat source. No on-site products of combustion.
- Easy, quick to install, requires a water-feed connection and an electrical connection.
- Applications include: Steam for tanks, reactors, distillations, autoclaves, dyestuffs, cosmetics, paraffins, glues, steam jacketed kettles, sterilizers, pipe tracing and humidification.
- Built to Section 1 of ASME Boiler and Pressure Vessel Codes. UL listed.



ES Series Standard Features:

- **WATER FEED SYSTEM**
Strainer, solenoid valve and check valve factory wired and plumbed.
- **LOW WATER CUT-OFF/LEVEL CONTROL**
McDonnell Miller No.150 control automatically maintains proper water level, shutting off the boiler when water supply in the boiler drops below a safe operating level.
- **WATER LEVEL SIGHT GLASS**
Allows constant observation of water level while boiler is in operation.
- **MAIN ON/OFF SWITCH**
Allows manual operation of the boiler operating control circuit.
- **PILOT LIGHT**
Indicates control circuit's on/off condition.
- **INTEGRAL POWER CONTACTORS**
Magnetic contactors for energizing the boiler elements. Integrally mounted in the control unit
- **BLOWDOWN/DRAIN VALVES**
Facilitates emptying the boiler pressure vessel and MM150 water column piping during blowdown sequence.
- **LONG LIFE HEATING ELEMENTS**
Industrial grade, heavy duty 0.430 inch diameter INCOLOY alloy 800 heating elements, equipped with one piece resistance welded terminations for added strength and safety.
- **OPERATING PRESSURE CONTROL**
Resets automatically to maintain preset pressure within boiler.
- **ENERGY SAVINGS AND MINIMUM MAINTENANCE**
Pressure vessel insulation minimizes heat loss and maximizes energy savings, insured by fibrous glass material.
- **EASY CONTROL MAINTENANCE**
All control panels and components are easily accessible. Fully-louvered openings avoid component heat build-up.
- **NEMA 1 LOUVERED ENCLOSURE STANDARD**
- **STEAM OUTLET BALL VALVE**
- **5-YEAR LIMITED WARRANTY ON PRESSURE VESSEL**
- **TRIM PRESSURE**
Factory standard 150 PSIG, 100 PSIG, 50 PSIG or 15 PSIG.

Meeting Code Requirements:

- **PRESSURE VESSEL RATED AT 100 PSIG TO ASME SECTION 1, M STAMP OR 150 PSIG TO ASME SECTION 1, S STAMP**
- **UL AND cUL LISTED TO UL834**
- **ELECTRICAL CONSTRUCTION CONFORMS TO NEC STANDARDS**

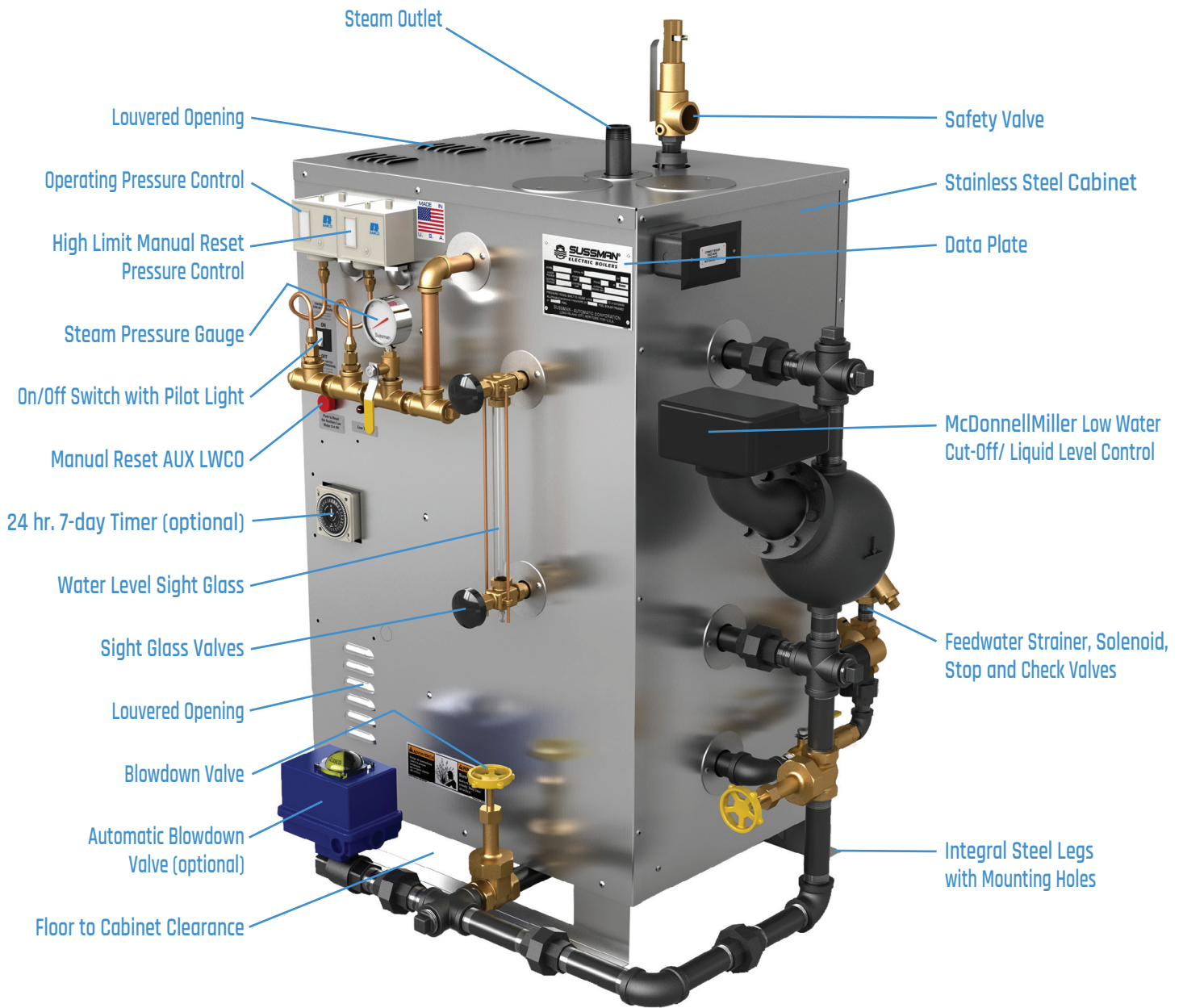
Safety Features:

- **STEAM SAFETY VALVE**
Automatically opens to reduce pressure should excessive steam cause pressure build-up.
- **STEAM PRESSURE GAUGE**
Allows visual observation of steam pressure over full range.
- **MANUAL RESET PRESSURE CONTROL**
Provides high limit pressure cut-out with manual reset.
- **AUXILIARY LWCO**
Standard electronic back-up to primary MM150 control.

Options & Accessories:

- **MULTIPLE CONTROL AND ALARM OPTIONS**
- **CONTROL CIRCUIT TRANSFORMER**
- **STAGING STEP SEQUENCER**
- **AUTOMATIC BLOWDOWN SYSTEM**
- **HIGH PRESSURE FEED WATER SYSTEM**
- **CONDENSATE RETURN SYSTEM**
- **BLOWDOWN SEPARATOR AND COOLER**
- **BACnet COMMUNICATION**

ES Packaged Electric Steam Boiler



Typical boiler arrangement

Features Not Shown:

- Electronic Aux LWCO
- Section I Carbon Steel ASME Pressure Vessel
- Incoloy Heating Elements



ES Packaged Electric Steam Boilers Specifications

| Boiler Model | kW | BHP Rating | Steam Output | ASME Steam Output | Amperage at Three Phase Voltage | | | | | | Dimensions (in) 15, 50 & 100 PSIG trim | | | Shipping Wt. lbs. | Dimensions (in) 150 PSIG trim | | | Shipping Wt. lbs. |
|--------------|-----|------------|--|---|---------------------------------|-------|-------|-------|-------|-------|---|----|----|----------------------|----------------------------------|----|----|----------------------|
| | | | Lbs./Hr at 0 PSIG with 50F Feed Water | Lbs./Hr at 0 PSIG with 212F Feed Water | 208/3 | 240/3 | 380/3 | 415/3 | 480/3 | 600/3 | L | W | H | L | W | H | | |
| ES-12 | 12 | 1.22 | 36.2 | 42 | 33 | 29 | 18 | 17 | 14 | 12 | 21 | 31 | 36 | 225 | 25 | 33 | 47 | 400 |
| ES-18 | 18 | 1.84 | 54.2 | 63 | 50 | 43 | 27 | 25 | 22 | 17 | 21 | 31 | 36 | 225 | 25 | 33 | 47 | 400 |
| ES-24 | 24 | 2.45 | 72.3 | 84 | 67 | 58 | 37 | 33 | 29 | 23 | 24 | 33 | 47 | 360 | 25 | 33 | 47 | 410 |
| ES-30 | 30 | 3.06 | 90.4 | 105 | 83 | 72 | 46 | 42 | 36 | 29 | 24 | 33 | 47 | 360 | 25 | 33 | 47 | 410 |
| ES-36 | 36 | 3.67 | 108 | 126 | 100 | 87 | 55 | 50 | 43 | 35 | 24 | 33 | 47 | 360 | 25 | 33 | 47 | 410 |
| ES-48 | 48 | 4.90 | 145 | 168 | 133 | 116 | 73 | 67 | 58 | 46 | 24 | 33 | 47 | 400 | 25 | 33 | 47 | 430 |
| ES-60 | 60 | 6.12 | 181 | 210 | 167 | 145 | 91 | 84 | 72 | 58 | 24 | 33 | 47 | 400 | 25 | 33 | 47 | 430 |
| ES-72 | 72 | 7.35 | 217 | 252 | 200 | 173 | 110 | 100 | 87 | 69 | 24 | 33 | 47 | 400 | 25 | 33 | 47 | 430 |
| ES-85 | 84 | 8.5 | 256 | 294 | 233 | 202 | 128 | 117 | 101 | 81 | 29 | 35 | 64 | 650 | 31 | 37 | 64 | 730 |
| ES-100 | 108 | 11.0 | 325 | 378 | 300 | 260 | 164 | 150 | 130 | 104 | 29 | 35 | 64 | 650 | 31 | 37 | 64 | 730 |
| ES-135 | 144 | 14.6 | 433 | 504 | 400 | 347 | 219 | 201 | 173 | 139 | 31 | 37 | 64 | 710 | 31 | 37 | 64 | 750 |
| ES-160 | 158 | 16.1 | 475 | 551 | 438 | 379 | 240 | 219 | 190 | 152 | 31 | 37 | 64 | 710 | 31 | 37 | 64 | 750 |
| ES-180 | 180 | 18.4 | 542 | 630 | 500 | 434 | 274 | 251 | 217 | 173 | 31 | 37 | 64 | 710 | 31 | 37 | 64 | 750 |

- ES12 – 48 available in 208 and 240 single phase.
- 380/3 and 415/3 boilers built to UL834, not UL listed.
- Dimensions are for 480/3 models. Lower voltage models may be physically larger – see dimensional drawings for all voltages.
- See dimensional drawings for boiler connections and clearances.

