

ES SERIES

ELECTRIC STEAM BOILERS



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.
- 5kA standard with optional 100kA SCCR.



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**

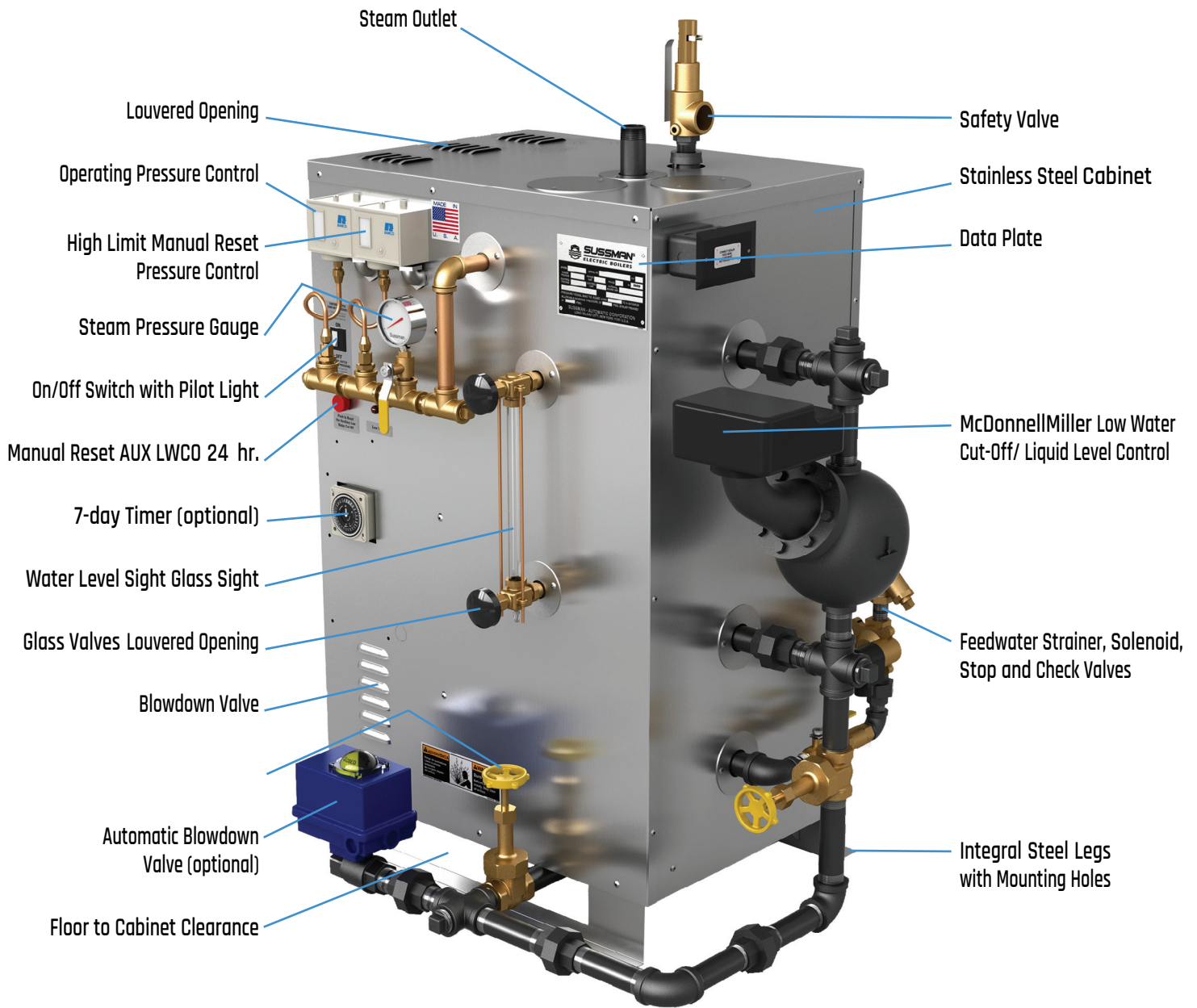
SAFETY FEATURES:

- **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



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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

1. ES12 – 48 available in 208 and 240 single phase.
2. 380/3 and 415/3 boilers built to UL834, not UL listed.
3. Dimensions are for 480/3 models. Lower voltage models may be physically larger – see dimensional drawings for all voltages.
4. See dimensional drawings for boiler connections and clearances.

