



Lochinvar®

HIGH EFFICIENCY BOILERS & WATER HEATERS

COMMERCIAL ELECTRIC BOILER

Submittal Sheet

EBW-Sub-11

Job Name: _____

****REPLACEMENT:** YES NO**

Location: _____

****EXISTING SERIAL NO.**** _____

Engineer: _____

Model No. _____

Agent/Wholesaler: _____

Normal Operating Pressure (psi) _____

Contractor: _____

REQUIRED: Safety Relief Valve Setting: _____

Modbus

If ordering for Canada, please select appropriate CRN: _____

CPU IP Address: _____

HOLD FOR APPROVAL

HMI IP Address: _____

if documentation required prior to shipment. P.O. REQUIRED

BACnet:

CPU IP Address: _____

**** REQUIRED FIELD ****

HMI IP Address: _____

Gateway IP Address: _____

Standard Features

PRESSURE VESSEL AND ENCLOSURE

- 160 psi, 250 °F Design Standard
- 4" thick fiberglass insulation
- Built to 150 psi, 250 °F design standard
- Wrapped with 4" thick blanket of fiberglass insulation.
- Boiler vessel enclosure is 16-Gauge painted steel jacket mounted on a full-size, flanged steel base
- Electronic control panel built into the NEMA-1 compliant enclosure, accessible via key-locked door(s).

STANDARD ELECTRIC & CONTROL PACKAGE

- Incoloy sheathed, U-Shaped heating elements rated to 75 watts-per-square-inch
- Individually mounted in 2-1/2 inch-square flanges for easy removal and replacement.
- Main supply circuit lugs with integral branch circuit fusing.
- Magnetic contactors rated @ 500,000 cycles
- 120 volt fused control transformer
- Short Circuit Current Rating (SCCR) of 5,000 A
- Automatic electronic temperature control varies by model:
 - 1) For one to four step models, electronic multi-stage step control.
 - 2) For models with five or more steps, Proportional Progressive Sequence Step Control.

STANDARD TRIM PACKAGE

- Full port drain valve
- On/Off power switch with pilot light
- Pressure gauge w/cock
- ASME safety relief valve(s)
- One status pilot light for each step
- Water inlet & outlet connections:
 - > Flange
 - > Low Water Cut-Off Switch:
 - > Probe type with manual reset, test & pilot light to meet CSD-1 requirements.
- KW Limiting Switch(es):
 - > All BW*24-42 models feature an On/Off toggle switch for each step. In the off position, the toggle switch cuts power to its assigned step, disabling that step, thereby limiting the maximum KW output from the boiler.
- High Temperature Limit Switches:
 - > All BW*24-42 models are equipped with two temperature limit switches: one with an auto reset and one with a manual reset.
- Temperature Gauge:
 - > All BW*24-42 models are equipped with a dial type temperature gauge plus a digital electronic temperature readout on the temperature controller interface.

CODES & REGISTRATIONS

- UL Subject 834
- NEC/NFPA Article 424-G
- ASME Safety Code CSD-1
- ASME Certified, "H" Stamp / National Board
- NEMA-1 (Electronic Control Panel)

Warranty (See warranty for details)

Optional Equipment

- Additional Step Control
- Additional Step Control Circuits
- Audible Alarm
- Aux. Temp. Limit Switches
 - Manual Reset
 - Auto Reset
- BMS Alarm Interface
- BMS Remote Step Control (Remote enable)
 - 4-20 mA 0-10 V
- BMS Remote Set-Point Control
 - 4-20 mA 0-10 V
- BMS 120V Interface to Limit Boiler Power Demand
- BMS 24V Interface to Limit Boiler Power Demand
- Control Panel Door Solenoid Interlock
- Flow Switch
- Ground Fault Detection (GFI)
- High Pressure Limit Switch
- Lifting Lugs
- Modbus (Include IP Addresses in header above)
 - TCP/IP RTU
- BACnet (Include IP Addresses in header above)
 - IP MS/TP
- Outdoor Temperature Reset
- Substitute Low Water Cut Off Switch - Float Type
- Time Clock
- Auxiliary Low Water Cutoff Switch
 - Probe Float
- Multifunction Power & Energy Meter
- Auto Air Vent (BW*24-42)
- Main Power Disconnect - Rotary Handle:
 - Non-Fused Fused
- Main Power Disconnect - Circuit Breaker
- E-Stop Mushroom Button
- Dual Feed Electrical Supply (BW*24-42)
- SCR (Silicon Controlled Rectifier)
- SCCR (Short-Circuit Current Rating) Options:
 - 65,000 A 100,000 A

Inlet/Outlet Connections

Mechanical Options

MODEL	STD. SIZE	3" NPT	3" FLG	4" FLG	6" FLG	8" FLG	10" FLG	12" FLG
BW*24 (480-600kW)	4" FLG							
BW*24 (640-1096kW), BW*30	6" FLG							
BW*36	8" FLG							
BW*42	10" FLG							



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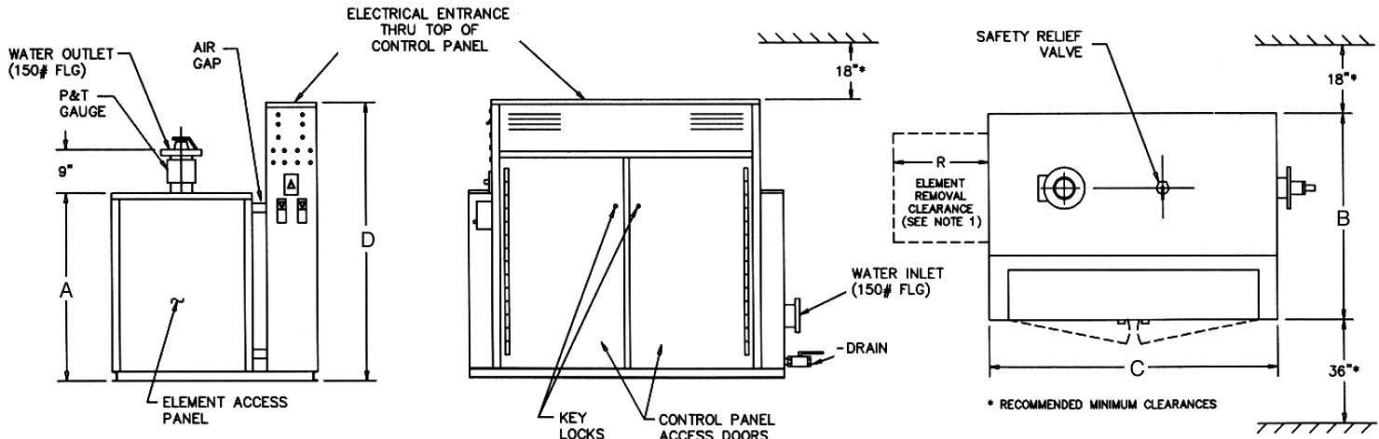
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DESIGNED ★ ENGINEERED ★ ASSEMBLED
USA



Commercial Electric Boiler Dimensions & Specifications



Note 1: Element removal clearance (R") is equal to 2 times the element kW.

Note 2: Optional equipment may change overall boiler dimensions. Please consult factory for dimensional information.

Note 3: Information is subject to change without notice.

Note 4: Dimensions shown are approximate and should not be used for construction purposes.

Model Number	Max Input kW	MBH Per Hour	Max # of Elements	Connection Sizes (NPT)		Max. Flow GPM	Tank Dims (In)	Data Vol (Gal)	Dimensions (Inches)				Weight (lbs.)	
				In/Out	Drain				A	B	C	D	Ship	Oper.
BW_24	600	2047	30	4" FLG	1-1/4"	470	24x44	70	34"	40"	52"	51"	1,300	1,860
BW_24	920	3139	46	6" FLG	1-1/2"	680	24x44	70	34"	40"	56"	63"	1,500	2,060
BW_30	1825	6228	78	6" FLG	1-1/2"	900	30x48	125	40"	50"	60"	75"	1,900	2,900
BW_36	2246	7665	100	8" FLG	2"	1,170	36x48	165	46"	56"	62"	87"	2,400	3,720
BW_42	3089	10529	150	10" FLG	2"	1,840	42x50	260	54"	76"	64"	77"	3,600	5,760

480 Volts • 3 Ph (Model Prefix BWX)										600 Volts • 3 Ph (Model Prefix BWN)					
Model Number	Ratings		Elements		Circuits	Number of Steps@ kW		Amps		Qty	Elements		Circuits	Number of Steps@ kW	
	MBH	kW	Qty	kW		kW	Amps				Qty	kW		kW	Amps
BWX24-480F	1638	480	24	20	12	4@80, 4@40	578			N/A	N/A	N/A	N/A	N/A	N/A
BWX24-520F	1774	520	26	20	13	5@80, 3@40	626			N/A	N/A	N/A	N/A	N/A	N/A
BWX24-560F	1911	560	28	20	14	6@80, 2@40	674			N/A	N/A	N/A	N/A	N/A	N/A
BWX24-600F	2047	600	30	20	15	7@80, 1@40	722			N/A	N/A	N/A	N/A	N/A	N/A
BWX24-640F	2184	640	32	20	16	8@80	770			N/A	N/A	N/A	N/A	N/A	N/A
BWN24-655F	2236	655	N/A	N/A	N/A	N/A	N/A			28	23.4	14	6@93.6, 2@46.8	630	
BWX24-680F	2320	680	34	20	17	7@80, 3@40	818			N/A	N/A	N/A	N/A	N/A	N/A
BWX24-720F	2457	720	36	20	18	8@80, 2@40	867			N/A	N/A	N/A	N/A	N/A	N/A
BWN24-749F	2555	749	N/A	N/A	N/A	N/A	N/A			32	23.4	16	8@93.6	721	
BWX24-760F	2593	760	38	20	19	9@80, 1@40	915			N/A	N/A	N/A	N/A	N/A	N/A
BWN24-796F	2715	796	N/A	N/A	N/A	N/A	N/A			34	23.4	17	7@93.6, 3@46.8	766	
BWX24-800F	2730	800	40	20	20	10@80	963			N/A	N/A	N/A	N/A	N/A	N/A
BWX24-840F	2866	840	42	20	21	9@80, 3@40	1011			N/A	N/A	N/A	N/A	N/A	N/A
BWN24-842F	2874	842	N/A	N/A	N/A	N/A	N/A			36	23.4	18	8@93.6, 2@46.8	810	
BWX24-880F	3003	880	44	20	22	10@80, 2@40	1059			N/A	N/A	N/A	N/A	N/A	N/A
BWX24-900F	3071	900	45	20	22	10@80, 1@60, 1@40	1107			N/A	N/A	N/A	N/A	N/A	N/A
BWN24-936F	3194	936	N/A	N/A	N/A	N/A	N/A			40	23.4	20	10@93.6	901	
BWN24-1076F	3673	1076	N/A	N/A	N/A	N/A	N/A			46	23.4	23	11@93.6, 1@46.8	1035	
BWX30-1000F	3412	1000	50	20	25	1@120, 11@80	1204			N/A	N/A	N/A	N/A	N/A	N/A
BWX30-1080F	3685	1080	54	20	27	3@120, 9@80	1300			N/A	N/A	N/A	N/A	N/A	N/A
BWX30-1160F	3958	1160	58	20	29	5@120, 7@80	1396			N/A	N/A	N/A	N/A	N/A	N/A
BWN30-1170F	3992	1170	N/A	N/A	N/A	N/A	N/A			50	23.4	25	1@140.4, 11@93.6	1126	
BWX30-1240F	4231	1240	62	20	31	7@120, 5@80	1493			N/A	N/A	N/A	N/A	N/A	N/A
BWN30-1264F	4311	1264	N/A	N/A	N/A	N/A	N/A			54	23.4	27	3@140.4, 9@93.6	1216	
BWX30-1320F	4504	1320	66	20	33	9@120, 3@80	1589			N/A	N/A	N/A	N/A	N/A	N/A
BWN30-1357F	4631	1357	N/A	N/A	N/A	N/A	N/A			58	23.4	29	5@140.4, 7@93.6	1306	
BWX30-1400F	4777	1400	70	20	35	11@120, 1@80	1685			N/A	N/A	N/A	N/A	N/A	N/A
BWN30-1451F	4950	1451	N/A	N/A	N/A	N/A	N/A			62	23.4	31	7@140.4, 5@93.6	1396	
BWX30-1480F	5050	1480	74	20	37	9@120, 5@80	1781			N/A	N/A	N/A	N/A	N/A	N/A
BWN30-1520F	5186	1520	76	20	38	10@120, 4@80	1829			N/A	N/A	N/A	N/A	N/A	N/A
BWN30-1544F	5269	1544	N/A	N/A	N/A	N/A	N/A			66	23.4	33	9@140.4, 3@93.6	1486	
BWN30-1638F	5589	1638	N/A	N/A	N/A	N/A	N/A			70	23.4	35	11@140.4, 1@93.6	1576	
BWN30-1778F	6068	1778	N/A	N/A	N/A	N/A	N/A			76	23.4	38	10@140.4, 4@93.6	1711	
BWN30-1825F	6228	1825	N/A	N/A	N/A	N/A	N/A			78	23.4	39	11@140.4, 3@93.6	1756	
BWX36-1600F	5459	1600	80	20	40	12@120, 2@80	1926			N/A	N/A	N/A	N/A	N/A	N/A
BWX36-1680F	5732	1680	84	20	42	14@120	2022			N/A	N/A	N/A	N/A	N/A	N/A
BWX36-1760F	6005	1760	88	20	44	12@120, 4@80	2119			N/A	N/A	N/A	N/A	N/A	N/A
BWX36-1840F	6278	1840	92	20	46	14@120, 2@80	2215			N/A	N/A	N/A	N/A	N/A	N/A
BWN36-1919F	6547	1919	N/A	N/A	N/A	N/A	N/A			82	23.4	41	13@140.4, 1@93.6	1847	
BWX36-1920F	6551	1920	96	20	48	16@120	2311			N/A	N/A	N/A	N/A	N/A	N/A
BWX36-2000F	6824	2000	100	20	50	14@120, 4@80	2407			N/A	N/A	N/A	N/A	N/A	N/A
BWN36-2059F	7026	2059	N/A	N/A	N/A	N/A	N/A			88	23.4	44	12@140.4, 4@93.6	1981	
BWN36-2153F	7345	2153	N/A	N/A	N/A	N/A	N/A			92	23.4	46	14@140.4, 2@93.6	2072	
BWN36-2246F	7665	2246	N/A	N/A	N/A	N/A	N/A			96	23.4	48	16@140.4	2161	
BWX42-2080F	7097	2080	104	20	52	16@120, 2@80	2503			N/A	N/A	N/A	N/A	N/A	N/A
BWX42-2240F	7643	2240	112	20	56	16@120, 4@80	2696			N/A	N/A	N/A	N/A	N/A	N/A
BWX42-2400F	8189	2400	120	20	60	20@120	2888			N/A	N/A	N/A	N/A	N/A	N/A
BWN42-2527F	8623	2527	N/A	N/A	N/A	N/A	N/A			108	23.4	54	18@140.4	2432	
BWX42-2560F	8735	2560	128	20	64	20@120, 2@80	3081			N/A	N/A	N/A	N/A	N/A	N/A
BWN42-2714F	9262	2714	N/A	N/A	N/A	N/A	N/A			116	23.4	58	10@140.4, 14@93.6	2612	
BWN42-2808F	9581	2808	N/A	N/A	N/A	N/A	N/A			120	23.4	60	12@140.4, 12@93.6	2702	
BWN42-3089F	10539	3089	N/A	N/A	N/A	N/A	N/A			132	23.4	66	18@140.4, 6@93.6	2972	