



Lochinvar®

HIGH EFFICIENCY BOILERS & WATER HEATERS

COMMERCIAL ELECTRIC COMPACT BOILER

Submittal Sheet

EBC-Sub-14

Job Name: _____

Location: _____

Engineer: _____

Agent/Wholesaler: _____

Contractor: _____

Modbus

CPU IP Address: _____

HMI IP Address: _____

BACnet:

CPU IP Address: _____

HMI IP Address: _____

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

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

Model No. _____

Normal Operating Pressure (psi) _____

REQUIRED: Safety Relief Valve Setting:

If ordering for Canada, please select appropriate CRN:

HOLD FOR APPROVAL

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

**** REQUIRED FIELD ****

Standard Features

PRESSURE VESSEL AND ENCLOSURE

- 160 psi, 250 °F Design Standard
- 4" thick fiberglass insulation

STANDARD ELECTRIC & CONTROL PACKAGE

- Incoloy sheathed, U-Shaped heating elements
- Main supply circuit lugs with integral branch circuit fusing
- Magnetic contactors
- 120 volt fused control transformer
- Electronic Temperature Control
- Short Circuit Current Rating (SCCR) of 5,000 A
- BW*1
 - Electronic Multi-stage step Control (1 and 2 step models)
- Proportional Progressive Sequence Step Control (3 and 4 step models)
- BW*2 & BW*3
 - Proportional Progressive Sequence Step Control

STANDARD TRIM PACKAGE

- 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
- 3" NPT Water inlet & outlet connections
- Low Water Cut-Off Switch:
- KW Limiting Switch(es):
- High Temperature Limit Switches
- Temperature Gauge
- Flow Switch (BW*2 & BW*3)
- On-Board Alarm System (BW*2 & BW*3)

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)

Optional Features

- Additional Step Control
- Additional Step Control Circuits
- Audible Alarm (Standard on BW*2&3)
- Auxiliary Temperature Limit Switches:

Manual Reset	Auto Reset
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- BMS Alarm Interface
- BMS Remote Step Control (Remote enable)

4-20 mA	0-10 V
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- BMS Remote Set-Point Control

4-20 mA	0-10 V
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- BMS 120V Interface to Limit Boiler Power Demand
- BMS 24V Interface to Limit Boiler Power Demand
- Control Panel Door Solenoid Interlock
- Flow Switch (Standard on BW*2&3)
- Ground Fault Detection (GFI)
- High Pressure Limit Switch
- Modbus (Include IP Addresses in header above)

TCP/IP	RTU
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- BACnet (Include IP Addresses in header above)

IP	MS/TP
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- Outdoor Temperature Reset
- Substitute Low Water Cut Off Switch - Float Type
- Time Clock
- Auxiliary Low Water Cutoff Switch: Probe Float
- Multifunction Power & Energy Meter
- Main Power Disconnect - Rotary Handle:

Non-Fused	Fused
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- Main Power Disconnect - Circuit Breaker
- E-Stop Mushroom Button
- Separate NEMA-1 120V Controls Enclosure (BW*1-3)
- SCR (Silicon Controlled Rectifier)
- SCCR Options: 65,000 A 100,000 A

Dimensions, Specifications, & Sizing Table

Model Number	Max. Flow (gpm)	Connection Sizes (NPT)	Dia (in.)	Volume (Gal.)	Dimensions			Weight (lbs.)
					A	B	C	
BWx1-xxxC	230	3"	12"	22	52"	24"	30"	600
BWx2-xxxC	230	3"	16"	36	52"	28"	34"	800
BWx3-xxxC	230*	3"	20"	56	52"	32"	38"	1100

* 4"/300 GPM is Optional

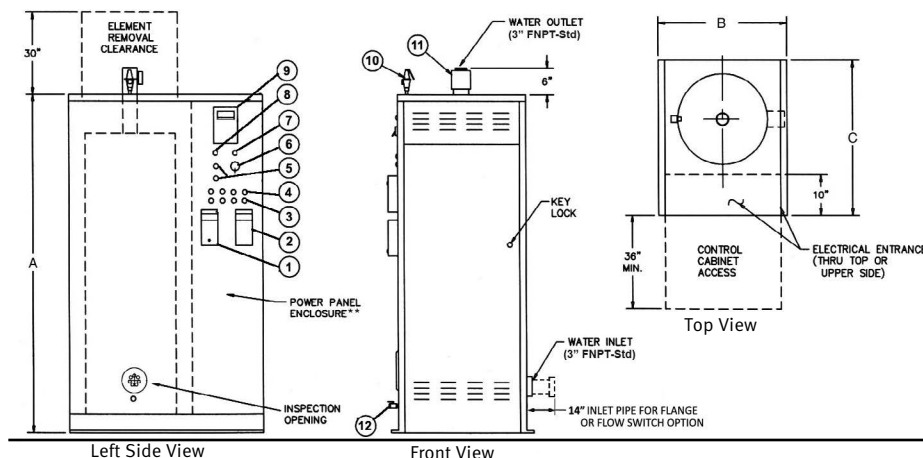
** Power Panel will be taller or wider for ABB Disconnect option. Consult factory.

Note 1: Information is subject to change without notice. Dimensions shown are approximate and should not be used for construction purposes.

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

Components

- | | | | |
|------------------------------------|--|--|-----------------------------------|
| 1. Temperature Limit, Auto Reset | 4. Pilot Lights, Amber (Steps "On") | 7. Pilot Light, Amber (Control Power "On") | 10. Safety Relief Valve |
| 2. Temperature Limit, Manual Reset | 5. PB Switches (Low Water Cutoff "Test"/"Reset") | 8. Pilot Light, Red (Low Water) | 11. Temperature & Pressure Gauges |
| 3. Manual Limit Switches | 6. Toggle Switch (Control Power) | 9. Temperature Setpoint/Control/Readout | 12. Drain Valve |

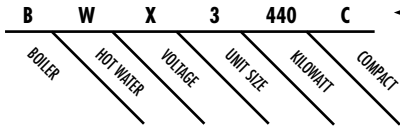


Mechanical Options

- 4" NPT Inlet/Outlet Connections (BW*3 Only)
- Upgrade to 3" Flanged Connections
- Upgrade to 4" Flanged Connections
- 304 Stainless Steel Vessel and Non-Ferrous Trim
- Lifting Lugs

Commercial Electric Compact Boiler Rating and Circuit Configurations

FOR EASE IN ORDERING BY MODEL NUMBER



← This model number is for a 480V, 3 Phase, 440Kw Compact size 1 Electric Hot Water Boiler.
Refer to page 1 for unit size dimensions.

VOLTAGE SCHEDULE

B	240V	3PH
K	208V	3PH
X	480V	3PH
N	600V	3PH

Model Number	Rating MBH kW		208 & 240 Volt				FLA		480 Volt				FLA		600 Volt			
			Elements Qty	kW	Circuits	Number of : Steps@ kW	208V Amps	240V Amps	Elements Qty	kW	Circuits	Number of : Steps@ kW	FLA Amps	Elements Qty	kW	Circuits	Number of : Steps@ kW	FLA Amps
BW*1-160C	546	160	-	-	-	-	-	-	8	20	4	4@40	192	-	-	-	-	-
BW*1-164C	559	163.8	-	-	-	-	-	-	-	-	-	-	-	7	23.4	4	1@70.2, 2@46.8	158
BW*2-165C	563	165	11	15	11	1@45, 4@30	458	397	11	15	6	1@45, 4@30	198	-	-	-	-	-
BW*2-180C	614	180	12	15	12	6@30	500	433	9	20	5	4@40, 1@20	217	-	-	-	-	-
BW*1-187C	639	187.2	-	-	-	-	-	-	-	-	-	-	-	8	23.4	4	4@46.8	180
BW*2-200C	682	200	-	-	-	-	-	-	10	20	5	5@40	241	-	-	-	-	-
BW*3-210C	717	210	-	-	-	-	-	-	14	15	7	7@30	253	-	-	-	-	-
BW*2-211C	719	210.6	-	-	-	-	-	-	-	-	-	-	-	9	23.4	5	1@70.2, 3@46.8	203
BW*3-225C	768	225	-	-	-	-	-	-	15	15	8	1@45, 6@30	271	-	-	-	-	-
BW*2-234C	798	234	-	-	-	-	-	-	-	-	-	-	-	10	23.4	5	5@46.8	225
BW*2-240C	819	240	-	-	-	-	-	-	12	20	6	6@40	289	-	-	-	-	-
BW*2-257C	878	257.4	-	-	-	-	-	-	-	-	-	-	-	11	23.4	6	1@70.2, 4@46.8	248
BW*3-280C	955	280	-	-	-	-	-	-	14	20	7	7@40	337	-	-	-	-	-
BW*2-281C	985	280.8	-	-	-	-	-	-	-	-	-	-	-	12	23.4	6	6@46.8	270
BW*3-300C	1024	300	-	-	-	-	-	-	15	20	8	1@20, 7@40	361	-	-	-	-	-
BW*3-304C	1038	304.2	-	-	-	-	-	-	-	-	-	-	-	13	23.4	7	1@70.2, 5@46.8	293
BW*3-320C	1092	320	-	-	-	-	-	-	16	20	8	8@40	385	-	-	-	-	-
BW*3-330C	1126	330	-	-	-	-	-	-	22	15	11	5@30, 3@60	397	-	-	-	-	-
BW*3-351C	1198	351	-	-	-	-	-	-	-	-	-	-	-	15	23.4	8	1@70.2, 6@46.8	338
BW*3-360C	1228	360	-	-	-	-	-	-	18	20	9	9@40	433	-	-	-	-	-
BW*3-398C	1357	397.8	-	-	-	-	-	-	-	-	-	-	-	17	23.4	9	1@70.2, 7@46.8	383
BW*3-400C	1365	400	-	-	-	-	-	-	20	20	10	6@40, 2@80	481	-	-	-	-	-
BW*3-421C	1437	421.2	-	-	-	-	-	-	-	-	-	-	-	18	23.4	9	2@70.2, 6@46.8	405
BW*3-440C	1501	440	-	-	-	-	-	-	22	20	11	5@40, 3@80	529	-	-	-	-	-
BW*3-445C	1517	444.6	-	-	-	-	-	-	-	-	-	-	-	19	23.4	10	3@70.2, 5@46.8	428
BW*3-468C	1597	468	-	-	-	-	-	-	-	-	-	-	-	20	23.4	10	4@70.2, 4@46.8	450
BW*3-491C	1677	491.4	-	-	-	-	-	-	-	-	-	-	-	21	23.4	11	5@70.2, 3@46.8	473

All voltages are 3-Phase. For single phase, consult factory.



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