

FBZ Series:

FBZ-0400

400 kW

Electric Steam Boiler



Fulton's FBZ is engineered to address the needs of sustainable energy, delivering nearly 100% efficiency and premium steam quality. The FBZ achieves zero scope 1 emissions by removing the use of fossil fuels and combustion methods, presenting an environmentally friendly solution for a range of industrial and commercial uses.

STANDARD FEATURES:

- Vertical footprint
- Thick wall construction
- 99%+ Operating efficiencies
- 150 PSIG maximum allowable working pressure
- Near zero jacket loss
- Operating and high pressure limit switches
- NEMA 1 enclosure with locking electrical panel
- Zero scope 1 emissions
- Incoloy sheathed elements
- Control circuit transformer
- Low water light
- On/off probe type level control
- Two (2) low water cutoff probes,
 - (1) with auto reset
 - (1) with manual reset
- Modbus integration
- 5.7" touchscreen with PLC
- SCR Control
- 10 year pressure vessel warranty

OPTIONS:

- Stainless steel jacket
- Conductivity based surface blowdown
- Timer based bottom blowdown
- High water overflow protection
- Reflex type sight glass
- Boiler alarm package
- Remote E-Stop
- MM-150 ALWCO
- MM-157 PLWCO and pump control
- MM-193-7b PLWCO modulating level control
- Differential pressure level control
- On/off motorized FW valve & 3-valve bypass
- On/off FW solenoid valve
- BACnet integration

PROJECT DETAILS:

Project Name	
Date Submitted	
Fulton Representative	

City, State (Province)	
Engineer of Record	
Contractor	

LISTINGS & COMPLIANCE:

- ASME Section I or IV Code
- ETL Approved to UL-834
- CSD-1 and CSA Controls
- Exceeds AHRAE 90.1 efficiency requirements
- Control Panel Wired in a UL-508 Factory

TRIM KIT ITEMS:

- ASME Safety Relief Valve
- Pressure Gauge
- Installation, Operation and Maintenance Manual
- Gauge Glass and Protector Rods
- Touch-up Spray

NOTE:

Information provided in this document is based on standard boiler configurations only. Custom configurations may result in deviations.

CAPACITIES:

FBZ		FBZ-0400
Unit Size	kW	400
Rated Output (At 0 psig operating pressure and 212F feedwater temperature)	BTU/hr	1,364,800
	Boiler HP	40.8
	lbs/hr	1,400
	kg/hr	635

CONNECTION SIZES:

FBZ		FBZ-0400
Steam Outlet at 150 PSI trim	inches	4
	<i>mm</i>	<i>102</i>
Steam Outlet at 15 PSI trim	inches	6
	<i>mm</i>	<i>152</i>
Feedwater Inlet	inches	1
	<i>mm</i>	<i>25</i>
Bottom Blowdown Outlet	inches	1-1/2
	<i>mm</i>	<i>38</i>
High Water Protection	inches	3/4
	<i>mm</i>	<i>19</i>
Surface Blowdown	inches	3/4
	<i>mm</i>	<i>19</i>
Water Column Drain	inches	1
	<i>mm</i>	<i>25</i>
Safety Relief Valve Inlet x Outlet Section I 150 PSI trim	inches	1 x 1-1/4
	<i>mm</i>	<i>25 x 32</i>
Safety Relief Valve Inlet x Outlet Section I 15 PSI trim	inches	(2) 1-1/2 x 2
	<i>mm</i>	<i>38 x 51</i>

ELECTRICAL REQUIREMENTS:

FBZ		FBZ-0400	
Short Circuit Current Rating	kA	100*	
NEMA Rating		1	
Electrical Supply	Volts	480	600
	\emptyset	3	3
	Hz	60	60
Full Load Amps	Amps	483	386
MCA	Amps	604	483
MOCP	Amps	1,087	869

*In the absence of rated upstream disconnect(s), Fulton FBZ boilers carry a 5kA SCCR. FBZ is supplied as standard with contactors, fuse blocks, fuses, and internal power distribution blocks with 100kA SCCR. In order to meet elevated SCCR per NFPA 70 Article 424, FBZ boilers must be supplied with electrical feeds rated at or below 600 MCA. Each of these feeds must be installed with external power disconnects or appropriate fusing of the desired SCCR. A maximum of 100kA SCCR is possible. Consult your local jurisdiction for any additional requirements.

WEIGHTS AND VOLUMES:

FBZ		FBZ-0400
Water Capacity	gallons <i>liters</i>	335 <i>1,268</i>
Dry Weight	lbs <i>kg</i>	4,000 <i>1,814</i>
Operating Weight	lbs <i>kg</i>	6,800 <i>3,084</i>
Shipping Weight	lbs <i>kg</i>	4,300 <i>1,950</i>
Flooded Weight	lbs <i>kg</i>	7,500 <i>3,402</i>

ELECTRIC HEATERS:

FBZ	FBZ-0400
Number Of Heaters:	QTY (4) 100 KW
Turndown	100:1 with full modulation

DIMENSIONS:

Refer to the Product Data Submittal Drawing for dimensions.