

SB-E Indirectly Fired Water Heater Tanks

Features

- » Heavy gauge steel with porcelain enamel coating
- » Superb quality with long service life
- » 3 kW electric heating element
- » Fitted with one large heat exchangers
- » 2 auxiliary ports
- » Sacrificial anode rod
- » Up to 2" R-14 urethane foam insulation for low standby heat loss
- » Large clean out port for ease of maintenance
- » Powder-coated steel outer jacket
- » 10-year limited warranty

Models & Specifications

	SB 300 E	SB 400 E
Item Number	234110	234111
Hydraulic data		
Storage Capacity	79.3 gal (300 l)	105.6 gal (400 l)
Volume of heat exchanger	2.4 gal (9.5 l)	2.9 gal (11.1 l)
Surface area of heat exchanger	16.1 ft² (1.5 m²)	20.6 ft² (1.9 m²)
Heating element		
Heating element voltage	220-240 V	
Heating capacity	3.0 kW (10,239 Btu/hr)	
Frequency	60 Hz	
Rated current	12.5 A	
Required circuit breaker	20 A	
Heating element type	Dome element	
Heating element material	Ceramic	
Temperature control	Knob with °F & °C scale under the heating element cover	
Set range of thermostat	86-167 °F (30-75 °C)	
Miscellaneous		
Pressure drop at 4.4 gpm	3.7 ft. head (11 kPa)	4.0 ft. head (12 kPa)
Heat exchanger power rating	165,000 Btu/hr (48.4 kW)	183,000 Btu/hr (53.7 kW)
Inlet 50 °F, 140 °F Outlet		
Recovery rate (maximum input)	234 gal/hr (885 l/hr)	258 gal/hr (976 l/hr)
Recover rate (electric element only)	13.7 gal/hr (51.8 l/hr)	13.7 gal/hr (51.8 l/hr)
Max. tank pressure	145 psi (10 bar)	
Max. heat exchanger pressure	145 psi (10 bar)	
Max. tank temperature	203 °F (95 °C)	
Tank heat loss in 24 hours	2.8 kW (9,553 Btu)	3.0 kW (10,236 Btu)
Empty weight	313 lb (142 kg)	399 lb (181 kg)
Filled weight	1,010 lb (458 kg)	1,334 lb (605 kg)
Type of anode	Magnesium with wear indicator	
Dimensions		
Height	61 ¹ / ₈ " (1552 mm)	60 ¹³ / ₁₆ " (1544 mm)
Diameter	25 ⁹ / ₁₆ " (650 mm)	29 ¹ / ₂ " (750 mm)
Insulation thickness	2" (50 mm)	
Diameter without insulation	21 ⁵ / ₈ " (550 mm)	25 ⁹ / ₁₆ " (650 mm)



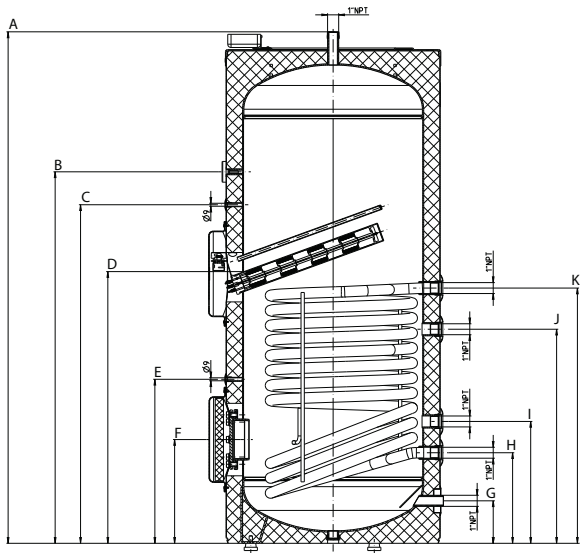
Tested and Certified by Water Quality Association against NSF/ANSI 372 for lead free compliance.



Certified to UL Std. 174
Conforms to CAN/CSA Std. 22.2 No. 110-94

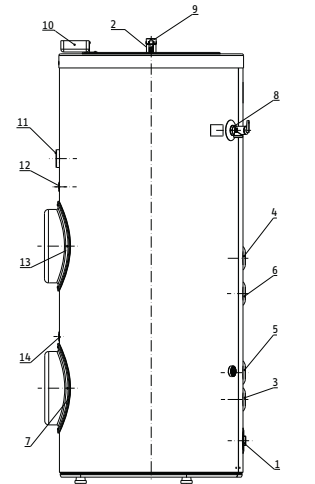
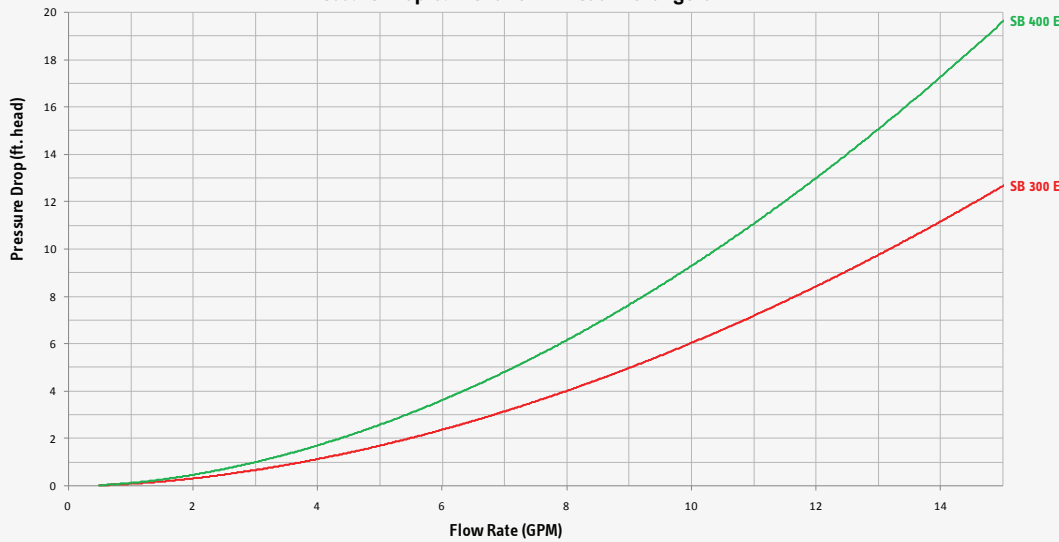
ISO 9001
CERTIFIED

Dimensions



Type	SB 300 E	SB 400 E	Connection	
A	Height to hot water outlet, overall height	61 ¹ / ₈ " (1552 mm)	60 ¹³ / ₁₆ " (1544 mm)	1" NPT male
B	Height to thermometer	44 ⁷ / ₁₆ " (1128 mm)	45 ¹ / ₁₆ " (1145 mm)	
C	Height to upper temperature probe sensor sleeve	40 ¹ / ₂ " (1028 mm)	42 ³ / ₄ " (1085 mm)	Ø 9 mm
D	Height to heating element port	32 ¹ / ₂ " (825 mm)	34 ⁷ / ₈ " (886 mm)	
E	Height to lower temperature sensor sleeve	30 ¹ / ₂ " (775 mm)	32 ¹ / ₁₆ " (830 mm)	Ø 9 mm
F	Height to clean-out port	12 ³ / ₈ " (315 mm)		Ø 115 mm
G	Height to cold water inlet	54 ¹ / ₁₆ " (129 mm)	45 ¹ / ₁₆ " (110 mm)	1" NPT male
H	Height to heat exchanger lower port	10 ¹³ / ₁₆ " (275 mm)	11" (280 mm)	1" NPT female
I	Height to auxiliary heat source lower port	14 ³ / ₁₆ " (370 mm)		1" NPT female
J	Height to auxiliary heat source upper port	25 ⁹ / ₁₆ " (650 mm)	27 ⁹ / ₁₆ " (700 mm)	1" NPT female
K	Height to heat exchanger upper port	19 ⁹ / ₁₆ " (498 mm)		1" NPT female
L	Height to T&P valve port	48 ¹ / ₄ " (1228 mm)		¾" NPT female

Pressure Drop Curve for SB-E Heat Exchangers



- 1 Cold water inlet
- 2 Hot water outlet
- 3 Lower heat exchanger port
- 4 Upper heat exchanger port
- 5 Lower auxiliary port
- 6 Upper auxiliary port
- 7 Clean-out port
- 8 T&P valve port
- 9 Anode replacement indicator
- 10 Junction box
- 11 Analog thermometer
- 12 Upper temperature sensor sleeve
- 13 Electric heating element
- 14 Lower temperature sensor sleeve

Specification

Tank shall be constructed of steel with porcelain enamel coating on all surfaces in contact with DHW. Tank shall be insulated with urethane foam insulation 2 in. (50 mm.) thick to R-14 with an steel outer casing cover. Standby heat loss shall be between 2.6 and 3.5 kWh (8,871-11,942 Btu) per 24 hours. Tank shall be delivered in cardboard packaging on a one-way pallet. Tank shall have been pressure tested to 217 psi (15 bar) and the maximum operating pressure shall be 145 psi (10 bar). Tank shall be ETL certified in USA and Canada to IAS U.S. Requirements for Indirect Fired Water Heaters For Use With External Heat Source. No 1-91, Dated June 6, 1992. Tank shall be equipped with welded steel plain-ended pipe heat exchangers, hot water corrosion protection via special enamel coating and magnesium sacrificial anode, two immersion sleeves for housing of temperature probe and thermometer, 2 auxiliary circulation ports, inspection/cleaning port with cover.

Engineer/Architect _____ Date _____

Job Name/Customer _____ Location _____

Contractor _____ Representative _____

Qty Volume

SBB model _____