
asme pressure vessels

Surface water blow-down is often done continuously to reduce the level of dissolved solids and bottom blow-down is performed periodically to remove sludge from the bottom of the boiler.
The amount of blow-down necessary depends on boiler operating pressure, amount of makeup water, impurity levels in the makeup water and the dissolved solids concentrations that a given boiler can tolerate.

A properly designed BBT has a capacity of not less than twice the volume of the boiler water so that the boiler can be blown down completely without any restriction.

The process of removing this water is referred to as boiler blow-down. Boiler blow-down can also refer to the discharged water itself.

Blow-down water has the same temperature and pressure as the boiler water. Local laws usually do not permit this high temperature and pressure water to be discharged into the sewer. An acceptably designed blow-down tank system reduces the temperature by mixing cold water with the effluent. It is a general rule that the temperature of the water leaving the BBT shall not exceed 150 °F and 5 psig.

# boiler blow-down vessels

**HT-1125**

## PRODUCT DETAILS

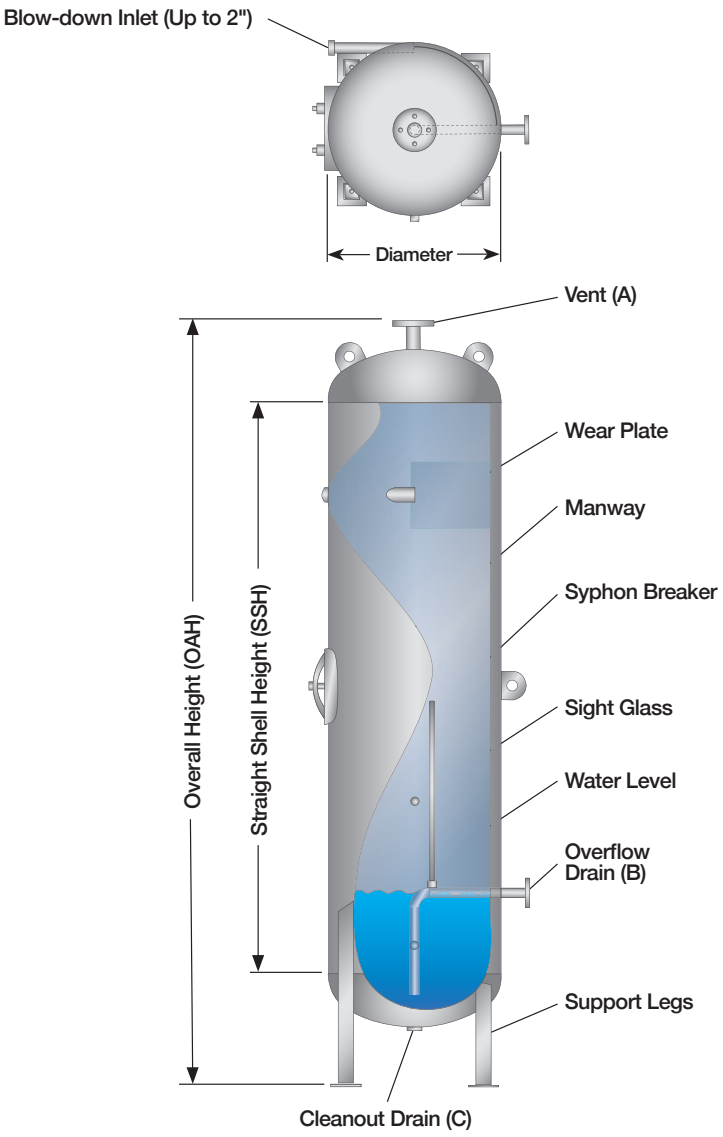
Boiler Blow-down Tanks (BBT) are used to control blow-down of a boiler so that the level of dissolved solids is minimized to reduce scaling in the boiler. BBT also enable high-pressure water to safely flash to steam.

Required boiler maintenance includes periodic removal of water to control the buildup of suspended solids and particulates as well as the concentration of treatment chemicals.

*Premium ASME Pressure Vessels from the Industry Leader*

# boiler blow-down vessel sizing guide

**HT-1125**




## Standard Features

- Manufactured to ASME Code for a working pressure 1/4 the maximum working pressure of the boiler
- Blow-down Inlet:
  - Tangential Blowdown Inlet with Wear Plate or Internal Baffle at the blowdown inlet so that the steam distribution will be equalized and directly discharged against the shell of the tank
- Tank Vent (sized for specific boiler or local code)
- 12" X 16" minimum elliptical manway
- Bottom Overflow Drain Outlet with Siphon Breaker
  - Built-in siphon break
  - Trapped so that water is drained within 6" from the bottom of the tank
- Cleanout Drain: 2" NPT minimum provided at the bottom of the tank
- Primer paint

## Options

Tank Support Systems:

- Horizontal - UL Saddles
- Vertical - Ring Bases, Angle Legs

| Dimensions | | | Vent* | Drain Outlet* | Drain Cleanout** |
|---|---|---|---|---|---|
| Diameter | SSH | OAH | A | B | C |
| 36" | 30" | 70" | 4" | 3" | 2" |
| 42" | 42" | 85" | 5" | 3" | 2" |
| 48" | 48" | 94" | 6" | 4" | 2" |
| 54" | 66" | 116" | 6" | 4" | 2" |
| 60" | 72" | 125" | 6" | 4" | 2" |
| 72" | 96" | 155" | 10" | 4" | 2" |

* RFSO, ** NPT.

Custom size and pressure BBT are available, please contact Highland Tank for details.

*All Highland Tank storage tank drawings are available for viewing or downloading in PDF or AutoCAD DXF format at highlandtank.com*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