



Blowdown Tanks for Process Steam Boilers

Rite Blowdown (Blowoff) Tanks are engineered for the safe removal of scale causing solids in process steam boilers. These vented, heavy-duty tanks are constructed in accordance with ASME Code Section VIII, Division 1 for a maximum allowable working pressure (MAWP) of 150 PSIG @ 450°F and comply with current National Board Rules and Recommendations. Rite Blowdown Tanks may be used for intermittent blowdown service as supplied or for continuous blowdown or multiple boiler blowoff service, with the addition of an automatic or manually operated aftercooler system.

All Rite Blowdown Tanks feature **tangential blowdown inlet nozzles with half inch thick full circumference wear plates** for improved blowdown performance and extended tank life over other designs. And, unlike blowdown separators that require expensive temperature regulating valves and volume cold water supply to cool their direct discharge, Rite Blowdown Tanks hold enough cooled water left over from each previous blowoff to cool and temper the next, thus **insuring a safe, low volume discharge every time you blowdown**. Compare our standard features below and see why one choice stands out the **Rite** choice.

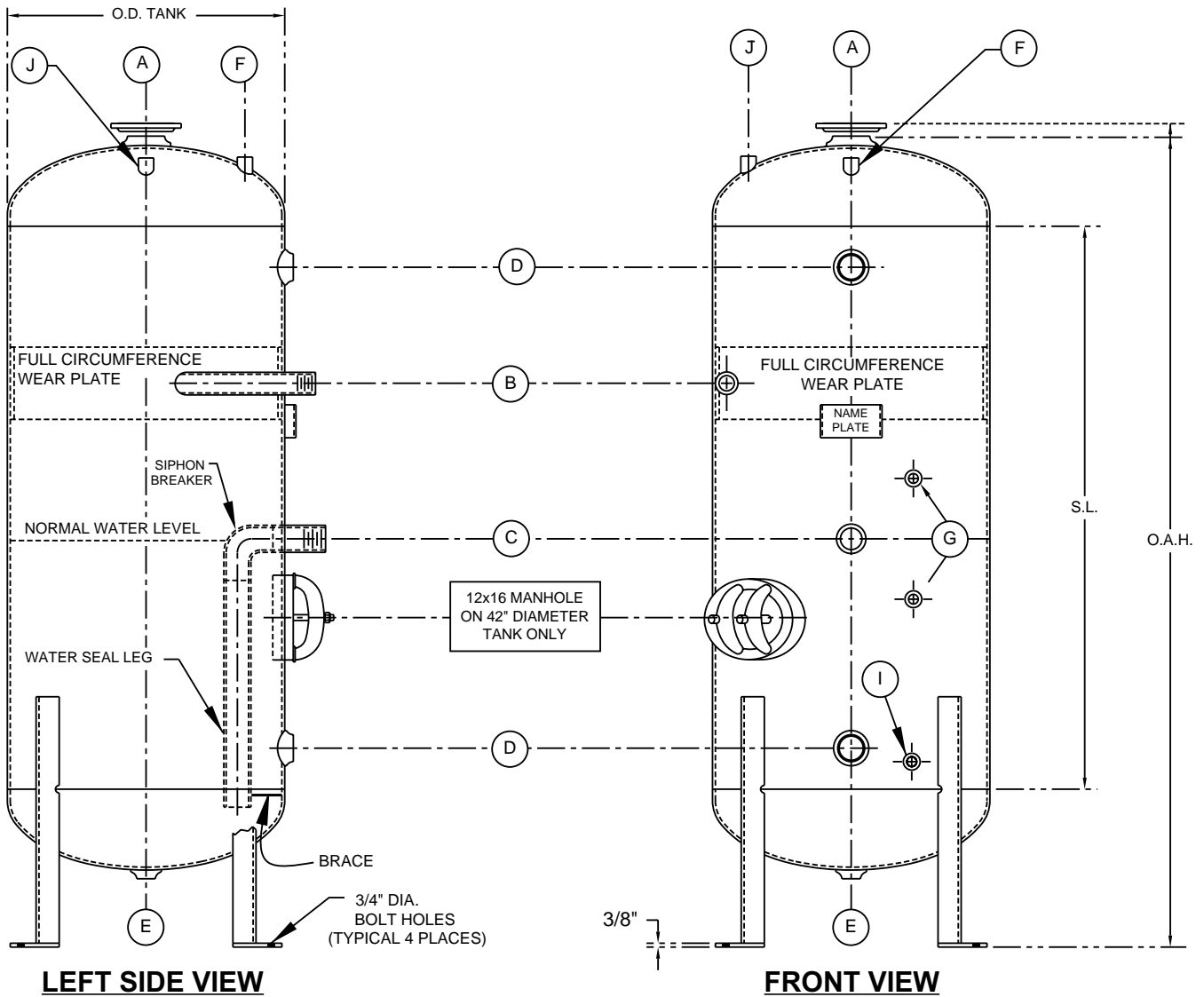
- Cold Water Connection (if Used)
- 3/8 (.375) thick head and shell construction. Meets National Board minimum requirement
- **Schedule 80 tangential blowdown inlet nozzle for superior mixing with cooled water due to centrifugal, swirling action**
- Water Outlet connection is always larger than Blowdown tank inlet nozzle to assure faster discharge and reduce the potential for water carryover out the flash steam vent
- Internal dip tube pipe with siphon breaker assures tempered water outlet
- Heavy-duty welded tank leg supports are standard not optional
- Leveling feet with 3/4 holes for seismic anchoring



- Large vent for low velocity and quiet release of flash steam
No additional vent appliances required
- Pressure gauge port
- Upper inspection opening
- **1/2" thick by 12" wide full circumference wear plate sets the standard for extending tank life where it's needed most**
- Built to ASME Code. National Board Registration Number and U Stamp as required
- Gauge glass connections
- Thermometer gauge port
- Lower inspection opening
- Finished with two coats of durable metallic blue enamel paint
- Cleanout/drain connection

Model BDT 2460 shown with optional Gauge glass, and Thermometer.

RITE BLOWDOWN (BLOWOFF) TANKS



REF.	DESCRIPTION	BDT1648	BDT1860	BDT1872	BDT2448	BDT2460	BDT2472	BDT3060	BDT3072	BDT3672	BDT4260
A	VENT, FLASH STEAM	2 1/2" FNPT	3" FNPT	3" FNPT	4" FLG	4" FLG	4" FLG	5" FLG.	5" FLG.	5" FLG.	6" FLG.
B	BLOWDOWN INLET	1" MNPT	1 1/2" MNPT	1 1/2" MNPT	1 1/2" MNPT	2" MNPT	2" MNPT	2" MNPT	2" MNPT	2" MNPT	2" MNPT
C	TEMPERED WATER OUTLET	2" MNPT	2" MNPT	2" MNPT	2" MNPT	2 1/2" MNPT	2 1/2" MNPT	3" MNPT	3" MNPT	3" MNPT	3" MNPT
D	INSPECTION PORTS (2)	2" FNPT	2" FNPT	2" FNPT	2" FNPT	2" FNPT	2" FNPT	2" FNPT	2" FNPT	2" FNPT	11x15 M.W.
E	CLEANOUT / FLUSHING DRAIN	2" FNPT	2" FNPT	2" FNPT	2" FNPT	2" FNPT	2" FNPT	3" FNPT	3" FNPT	3" FNPT	3" FNPT
F	PRESSURE GAGE CONNECTION	1/2" FNPT	1/2" FNPT	1/2" FNPT	1/2" FNPT	1/2" FNPT	1/2" FNPT	1/2" FNPT	1/2" FNPT	1/2" FNPT	1/2" FNPT
G	GAUGE GLASS CONNECTIONS (2)	1/2" FNPT	1/2" FNPT	1/2" FNPT	1/2" FNPT	1/2" FNPT	1/2" FNPT	1/2" FNPT	1/2" FNPT	1/2" FNPT	1/2" FNPT
I	THERMOMETER CONNECTION	3/4" FNPT	3/4" FNPT	3/4" FNPT	3/4" FNPT	3/4" FNPT	3/4" FNPT	3/4" FNPT	3/4" FNPT	3/4" FNPT	3/4" FNPT
J	COLD WATER CONNECTION	3/4" FNPT	3/4" FNPT	3/4" FNPT	3/4" FNPT	3/4" FNPT	3/4" FNPT	3/4" FNPT	3/4" FNPT	3/4" FNPT	3/4" FNPT
O.D.	OUTSIDE DIAMETER INCHES (cm)	16 (41)	18 (46)	18 (46)	24 (61)	24 (61)	24 (61)	30 (77)	30 (77)	36 (92)	42 (107)
S.L.	SHELL LENGTH INCHES (cm)	48 (122)	60 (153)	72 (183)	48 (122)	60 (153)	72 (183)	60 (153)	72 (183)	72 (183)	60 (153)
O.A.H.	OVERALL HEIGHT INCHES (cm)	75 (191)	88 (224)	96 (244)	78 (198)	90 (229)	98 (249)	92 (234)	104 (264)	107 (272)	98 (249)
BLOWDOWN CAPACITY (HALF TANK) GALLONS (LITERS)		21 (79)	36 (136)	40 (151)	54 (204)	65 (246)	76 (288)	106 (401)	124 (469)	183 (693)	222 (840)
NORMAL OPERATING WEIGHT (TANK HALF FULL) POUNDS (kg)		610 (277)	890 (404)	993 (450)	1165 (528)	1350 (612)	1540 (699)	1984 (900)	2254 (1022)	3041 (1379)	3481 (1579)
FLOODED WEIGHT (FULL) POUNDS (kg)		960 (435)	1190 (540)	1327 (602)	1615 (733)	1894 (859)	2172 (985)	2867 (1300)	3288 (1491)	4566 (2071)	5332 (2419)
SHIPPING WEIGHT POUNDS (kg)		435 (197)	590 (268)	660 (299)	715 (324)	810 (367)	905 (411)	1150 (522)	1350 (612)	1590 (721)	1650 (748)
MAX. BOILER OPERATING PRESSURE		150 psi	150 psi	150 psi	150 psi	150 psi	150 psi	150 psi	150 psi	150 psi	150 psi

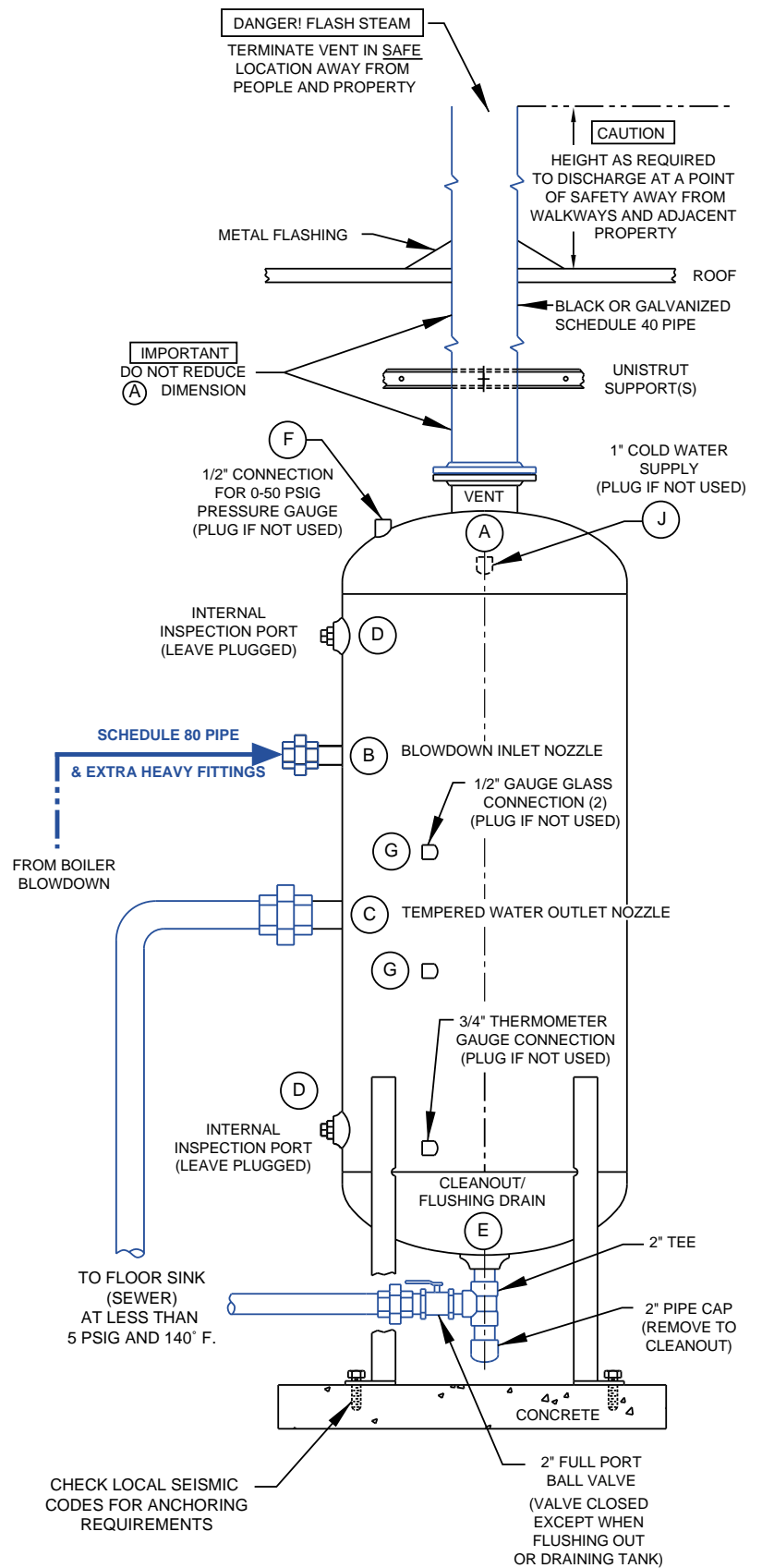
RITE BLOWDOWN (BLOWOFF) TANKS - INSTALLATION & OPERATION

Installation

1. Level tank on concrete pad (with shims if required) until plumb.
2. Limit the number of elbows in vent piping to two 45° offsets.
3. Do not use plastic pipe or fittings.
4. Do not insulate the tank.
5. For multiple boiler connections, continuous blowdown systems or frequent blowoff operations - an aftercooler may be required to keep the tempered water outlet temperature at or below 140° F. Use cold water connection (J) for manual control, or install automatic aftercooler system at the tempered water outlet nozzle (C).
6. Blue lines indicate field piping.

General Operating Instructions

1. Electrically turn off boiler feed pump.
2. Blowdown low pressure steam boilers at or near operating pressure.
3. Blowdown high pressure steam boilers between 50-75 PSIG.
4. Note the water level in the boiler's gauge glass.
5. If boiler is equipped with fast & slow opening blowdown valves, open the fast one first, the slow one second. Shut blowdown valves off after water level in boiler gauge glass drops about 4" (see step 7).
6. Restore power to boiler feed pump. Pump should come on and refill the boiler to normal operating level.
7. Your chemical treatment company may alter the amount and frequency of blowdown based on specific job conditions.



RIGHT SIDE VIEW



Blowdown Tanks

SPECIFICATION AND ORDER FORM

Provide _____ Rite Blowdown Tank(s) Model(s) BDT-_____. Blowdown tank shall be constructed in accordance with the ASME Code Section VIII, Division 1 for a maximum allowable working pressure of 150 PSIG. Shell and head thickness shall be 3/8 (.375). The tank shall have the following fittings as recommended by the National Board for the design and construction of blowdown tanks: Vent; blowdown inlet; tempered water outlet; inspection openings (2); pressure gauge connection; gauge glass connections; thermometer connection; cold water connection and a cleanout/flushing drain.

The blowdown inlet nozzle shall be tangential entry and constructed from Schedule 80 pipe. A 1/2 thick by 12 wide carbon steel full circumference wear plate shall be attached inside the tank at the blowdown inlet nozzle to resist erosion of the tank shell. The tempered water outlet nozzle shall be larger than the blowdown inlet nozzle for faster drainage and shall incorporate a water seal leg and integral anti-siphon feature.

The tank shall be supported by four heavy duty angle iron legs on feet with anchoring holes. Tanks shall be furnished with lifting lug(s) and painted with two or more coats of hard metallic blue enamel paint.

The following options shall also be required:

- _____ National Board U stamp and registration number.
- _____ Industrial grade thermometer with brass well (shipped loose).
- _____ Pressure gauge with siphon loop (shipped loose).
- _____ Gauge glass assembly (shipped loose).
- _____ Automatic aftercooler assembly (shipped loose).
- _____ 4X6 handhole assembly (except on model BDT 4260).
- _____ Other: _____

Blowdown tank is for a *Rite* Model _____.

Blowdown tank is for a _____ Boiler, Model # _____.

A copy of this brochure shall ship with the tank _____ or mailed ahead of time to: _____

R e p r e s e n t a - Job Name: _____ Ship to: _____
tive _____

Requested Ship Date _____ Purchase Order # _____

Price: _____ Freight _____

Attn: _____

Mark: _____

Call _____ Hrs. Ahead()- _____

Contact: _____