



# Blowdown Tanks

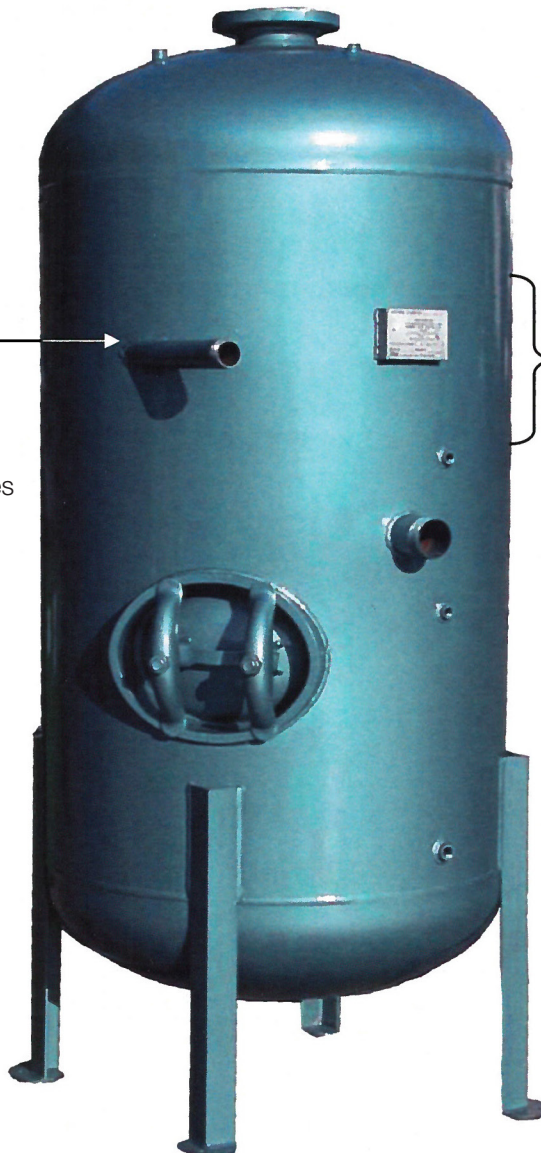
## For High Pressure Process Steam Boilers

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 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 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.

- Optional Cooling Water Connection
- 3/8" (.375") thick head and shell construction
- **Schedule 80 tangential blowdown inlet nozzle for superior mixing**
- Heavy-duty welded tank leg supports are standard
- Leveling feet with anchoring holes

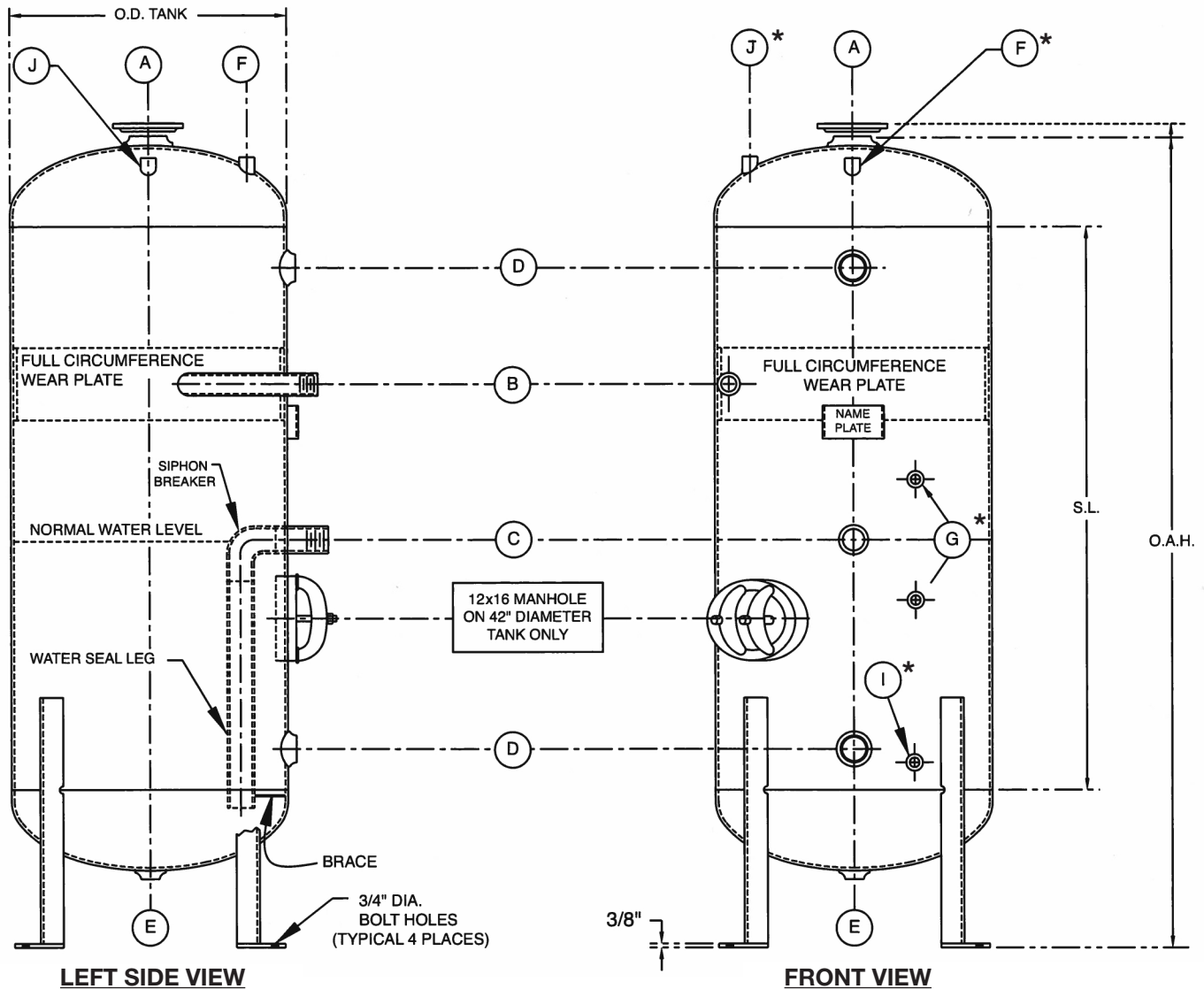
**BDT-4260**  
Shown



- Large vent for low velocity and quiet release of flash steam
- Optional pressure gauge port
- Inspection openings
- **1/2" thick by 12" wide full circumference internal wear plate sets the standard for extending tank life**
- Built to ASME Code and National Board Registered
- Optional gauge glass connections
- Optional thermometer gauge port
- Finished with two coats of hard metallic blue polyurethane paint
- Cleanout/drain connection



# Blowdown (Blowoff) Tanks Data & Dimensions



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	12x16 M.W.
E	CLEANOUT / FLUSHING DRAIN	2" FNPT	2" FNPT	2" FNPT	2" FNPT	2" FNPT	2" FNPT	3" FNPT	3" FNPT	3" FNPT	2" 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

\* If supplied.

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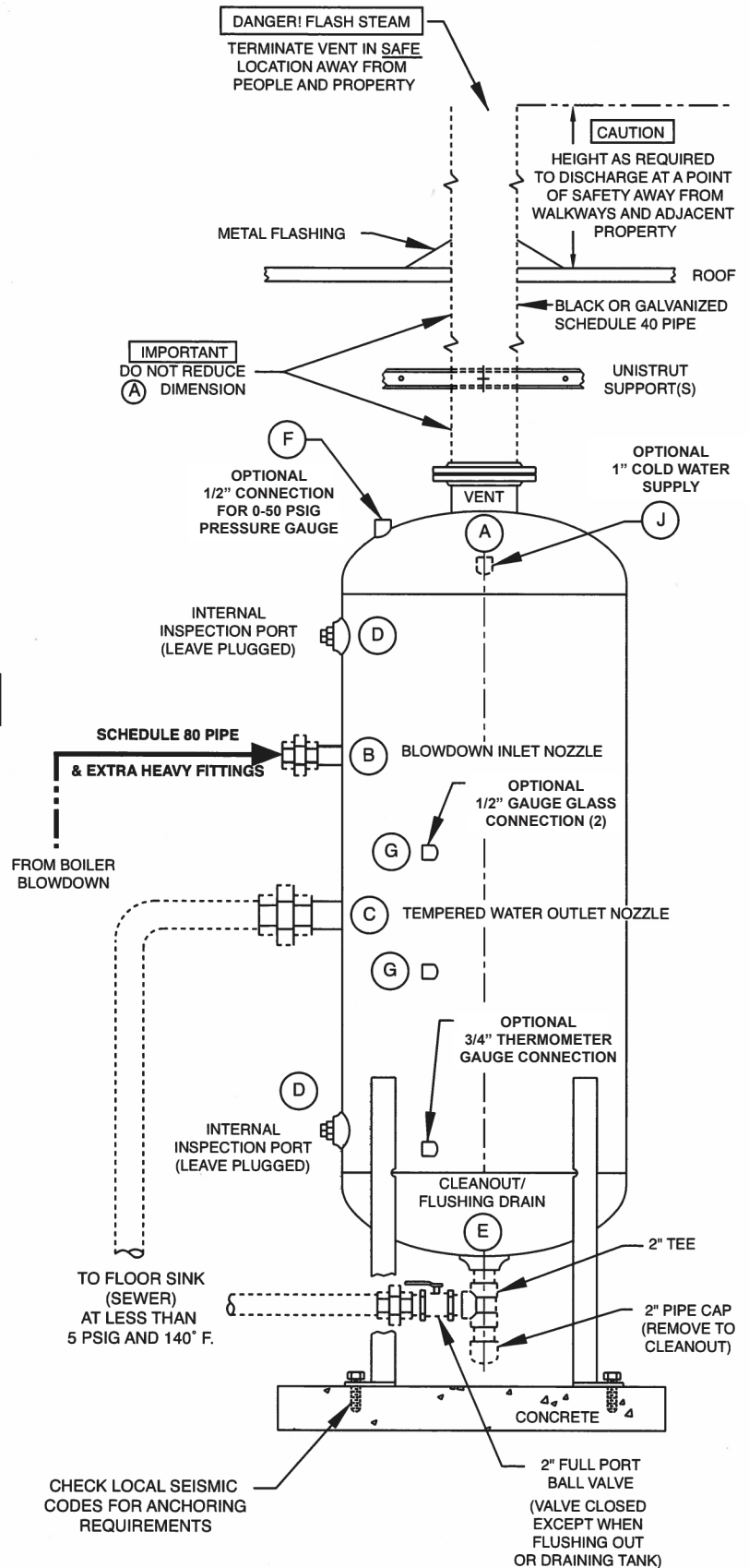
# Blowdown (Blowoff) Tanks Installation & Operation

## 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 degree 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 degrees F. Use cold water connection **J** for manual control, or install automatic aftercooler system at the tempered water outlet nozzle **C**.
6. Dashed 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 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 job conditions.



**RIGHT SIDE VIEW**



# Blowdown Tanks For High Pressure Steam Process Boilers Specification and Order Form

SN \_\_\_\_\_  
NB \_\_\_\_\_

Provide \_\_\_\_\_ Rite Blowdown Tank Model BDTHPS\_\_\_\_\_. Blowdown tank shall be constructed in accordance with the ASME Code Section VII, Division 1 for a maximum allowable working pressure of 150 psig and shall be National Board "U" stamped and registered. Shell and head thickness shall be 3/8" (.375"). The tank shall have the following standard connections: vent, tangential blowdown inlet, tempered water outlet, thermometer, pressure gauge, gauge glass, inspection openings, and a clean-out/flushing drain. Cold water supply is optional.

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 welded inside the tank at the inlet nozzle point of entry to protect the tank shell from erosion during blowdowns. 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 polyurethane paint.

The following options shall also be required:

- \_\_\_\_\_ Industrial grade thermometer (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 where 12" x 16" is standard).
- \_\_\_\_\_ Other: \_\_\_\_\_.

Blowdown tank is for a \_\_\_\_\_ Boiler, Model \_\_\_\_\_ A# \_\_\_\_\_

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

\_\_\_\_\_

Representative \_\_\_\_\_ Job Name \_\_\_\_\_ Ship to: \_\_\_\_\_

Requested Ship Date \_\_\_\_\_ Purchase Order # \_\_\_\_\_

Price: \_\_\_\_\_ Freight \_\_\_\_\_ Attn: \_\_\_\_\_ Tag: \_\_\_\_\_

Call \_\_\_\_\_ Hrs. Ahead: \_\_\_\_\_

Contact: \_\_\_\_\_