



# SUBMITTAL SHEET

## CUSTOM HD STORAGE TANKS

Job Name \_\_\_\_\_

State/Province \_\_\_\_\_ City \_\_\_\_\_

Engineer \_\_\_\_\_

Wholesaler \_\_\_\_\_

Mech. Contractor \_\_\_\_\_

Model No. \_\_\_\_\_

Dimensional Restrictions \_\_\_\_\_

Notes \_\_\_\_\_

### Standard Features:

- 5 Year Limited Warranty
- Magnesium Anode
- PERMAGLAS® lining
- Ring Base (for vertical tanks)
- ASME Certified
- 125 PSI Working Pressure
- Steel Tank Construction
- Openings: (3) Circulation; (1) Temp. Sensor;  
(1) Hot Water Outlet; (1) Drain; (1) T&P

### Optional Equipment/Features: (please indicate on pages 3 & 4):

- |   |   |
|---|---|
| 150 PSI Working Pressure  | Manhole (only on tanks 30" diameter and above)    |
| Other Working Pressure (specify) _____  | Handhole  |
| Vertical Orientation  | Lifting Lugs                                      |
| Horizontal Orientation  | Seismic Bracing (not available under 250 gallons) |
| Saddles (for horizontal tanks)  | Insulation & Jacket                               |
| T&P Gauge   | (available up to: 125" height/length or 2500 USG) |
| Bare (paint applied as rust inhibitor until tank can be field insulated per ASHRAE standards) |   |

### Lining Options:

- Glass Lining (standard)
- Cement Lining (only on tanks 30" diameter and above)
- U Code Certification (unlined)

### Special Tappings:

NPT: Size \_\_\_\_\_" Quantity \_\_\_\_\_

Size \_\_\_\_\_" Quantity \_\_\_\_\_

Flanged: Size \_\_\_\_\_" Quantity \_\_\_\_\_

Size \_\_\_\_\_" Quantity \_\_\_\_\_

(please indicate locations on pages 3 & 4)



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## CUSTOM HD STORAGE TANKS

### Tube Bundle Sizing Questions

**(For units with a heating coil the below must be completed)**

\*Minimum of 5 data points are required in order to complete a tube bundle sizing\*

#### **Tank Side:**

Tank Capacity \_\_\_\_\_

Inlet Water Temp \_\_\_\_\_ \*Required

Stored or Tank Set Point \_\_\_\_\_ \*Required

Recovery Rate (GPH) \_\_\_\_\_ \*Required

Design Pressure (125 PSI or 150 PSI) \_\_\_\_\_

Coil Material (if other than copper) \_\_\_\_\_

Double or Single Wall Coil \_\_\_\_\_

#### **Coil Side Heating Source (Choose Steam or Boiler Water)**

#### **Steam:**

Steam Pressure \_\_\_\_\_ Steam Available (lbs/h) \_\_\_\_\_ \*Required

Steam Inlet Pressure \_\_\_\_\_ \*Required

Steam Outlet Pressure \_\_\_\_\_ \*Required

#### **Boiler:**

Boiler Water Entering Temp. \_\_\_\_\_ \*Required

Boiler Water Leaving Temp. \_\_\_\_\_ \*Required

Boiler Water Available (GPH) \_\_\_\_\_ \*Required

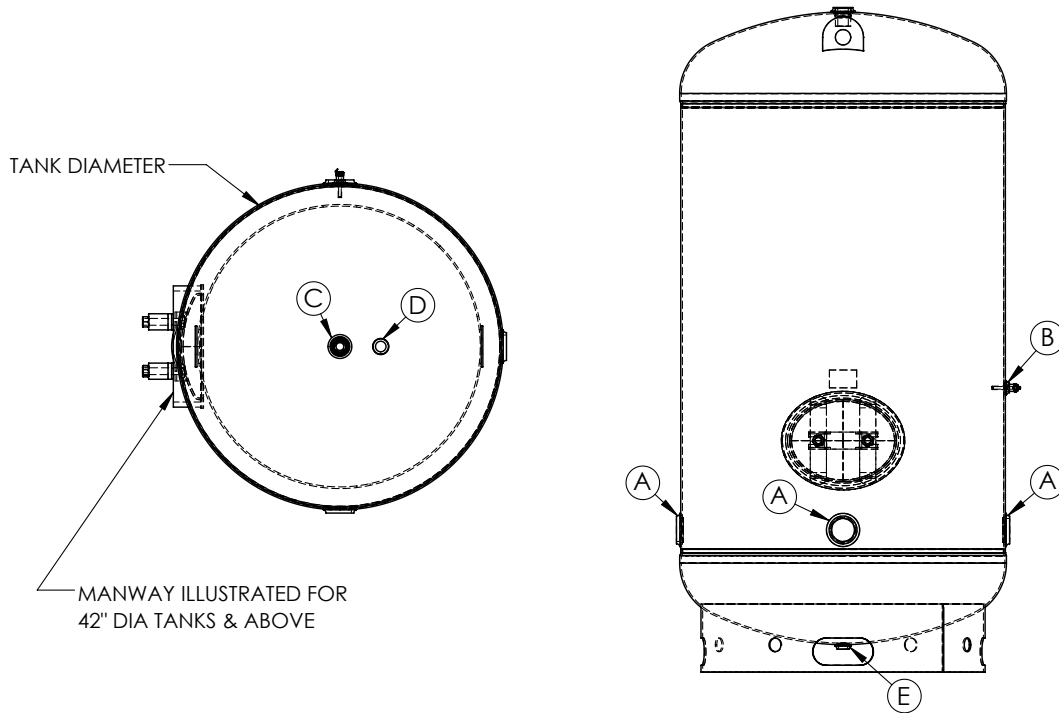
Glycol (yes no )

If yes, Type of Glycol \_\_\_\_\_ and % of glycol \_\_\_\_\_%

All models that include a tube bundle will ship with a Recirc Pump unless otherwise stated 1/25hp (120V/1PH)

## CUSTOM HD STORAGE TANKS

### VERTICAL TANK



Base Model \_\_\_\_\_

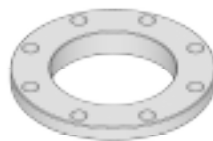
\*Consult Factory For Additional Options

Standard Connections (Illustrated)			
Opening	Size	Description	QTY
A	3" NPT	Inlet / Circulating	3
B	3/4" NPT	Aquastat	1
C	2" NPT	Outlet	1
D	1-1/4" NPT	T&P (Relief Valve)	1
E	1"	Drain	1

Standard Connections (Illustrated)		
Size	QTY	Specify Fitting Type NPT Threaded or Bolting Flange



NPT THREAD

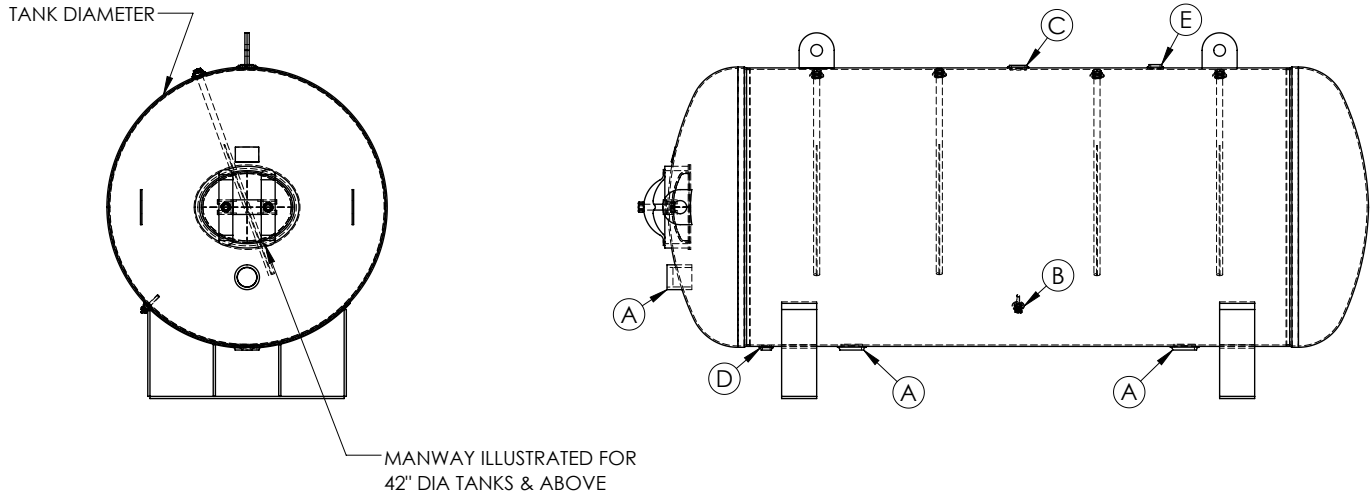


BOLTING FLANGE  
(FFSO, CL150)

DIR: 2000557168

## CUSTOM HD STORAGE TANKS

### HORIZONTAL TANK



Base Model \_\_\_\_\_

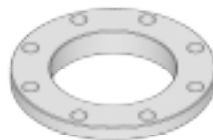
\*Consult Factory For Additional Options

Standard Connections (Illustrated)			
Opening	Size	Description	QTY
A	3" NPT	Inlet / Circulating	3
B	3/4" NPT	Aquastat	1
C	2" NPT	Outlet	1
D	1" NPT	Drain	1
E	1-1/4" NPT	T&P (Relief Valve)	1

Alternate Additional Connections		
Size	QTY	Specify Fitting Type NPT Threaded or Bolting Flange



NPT THREAD



BOLTING FLANGE (FFSO, CL150)

DIR: 2000557168

## HEAVY-DUTY LARGE VOLUME STORAGE TANKS MODEL HD CUSTOM BUILT

Large volume tanks are designed for storing potable water.

### FEATURES

#### SIZES FROM 120 TO 4,000 GALLONS

All tanks are constructed to the requirements of the ASME Code. These ASME Code tanks are available at 125 and 150 psi working pressure. Consult factory for tanks with special configurations.

#### LINING AND COATINGS

Each lining and coating has particular capabilities and limitations. Thorough investigation on the service life of steel tanks with protective coatings or linings has led to the recommendation of the following linings:

- Glass Lined — All internal surfaces exposed to water are glass lined per ASME HLW Code procedures.
- Cement Lined — Cement lining consists of a specially formulated cement applied over the interior of the vessel. Cement lined tanks are recommended when storing water at 180°F or higher.

Please consult the factory for recommendations on the uses of linings for specific applications. All tanks receive one prime coat of paint on external surface.

#### CATHODIC PROTECTION

Glass lined tanks are furnished with anodes designed for maximum protection.

#### CUSTOM TANK OPENINGS

All tanks will be supplied with the fittings located as indicated on the drawings unless specified otherwise. Custom tank opening sizes and locations can be provided to your specification.

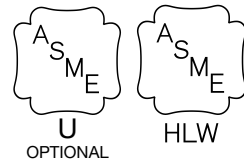
#### INSPECTION OPENINGS

- 4" x 6" handhole are available as options on diameters 36" and below.
- Two 2" ASME inspection openings are standard on tanks 36" diameter and below.
- 12" x 16" manhole is standard on tanks with 42" diameter and above and optional for tanks with a diameter of 30" & 36.

#### TANK OPTIONS

- Manholes / Handholes
- Additional / Custom Tank Openings
- Lifting Lugs
- Horizontal Tank Saddles
- Factory Jacketing and Insulation
- Tube bundles
- Cement lining or unlined

MODELS  
HD-24-120 THROUGH  
HD-72-4000



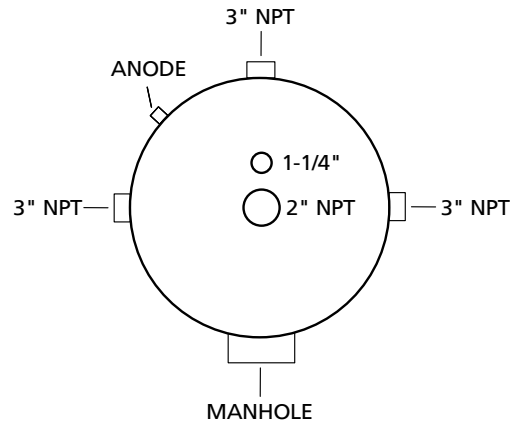
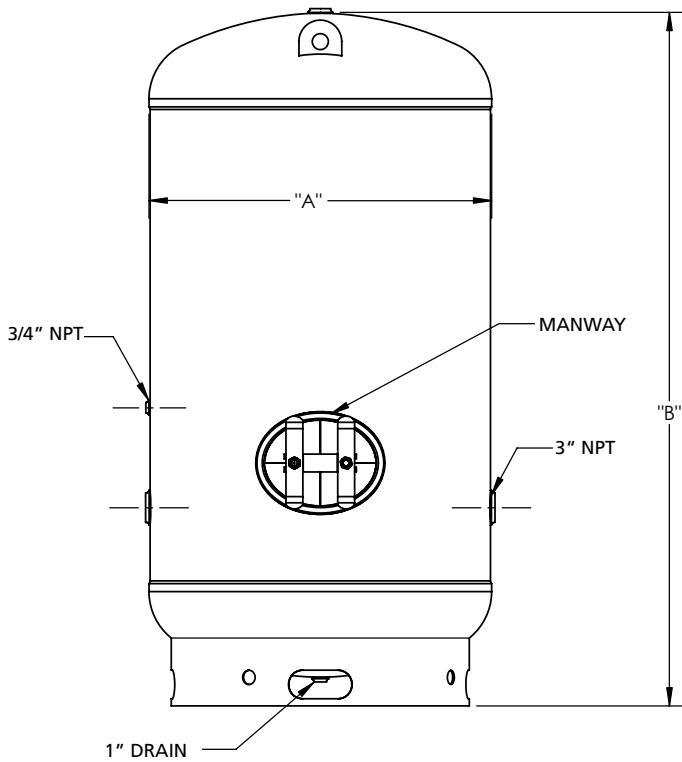


# Commercial Storage Tanks

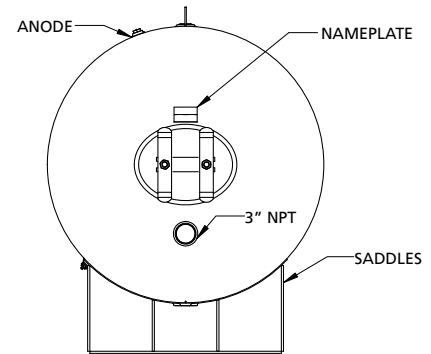
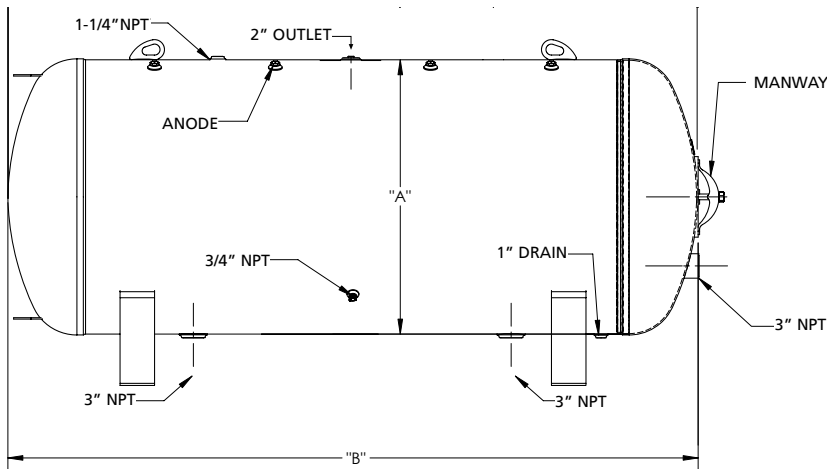
## STORAGE TANK SELECTION

MODEL NUMBER	TANK CAPACITY		DIMENSIONS IN (CM)			SHIPPING WEIGHT LB (KG)		
	USG	L	DIAMETER ("A")	VERTICAL HEIGHT ("B")	HORIZONTAL LENGTH ("B")	125 PSI	150 PSI	CEMENT LINED
HD*24-120A	118	447	24 (61)	64 (163)	60 (152)	368 (167)	368 (167)	-
HD*24-140A	141	534	24 (61)	76 (193)	72 (183)	428 (194)	428 (194)	-
HD*24-200A	188	712	24 (61)	100 (254)	96 (244)	556 (252)	556 (252)	-
HD*24-250A	235	890	24 (61)	124 (315)	120 (305)	684 (310)	684 (310)	-
HD*28-175A	175	662	28 (71)	65 (165)	-	353 (160)	353 (160)	-
HD*28-200A	200	757	28 (71)	76 (193)	-	488 (221)	488 (221)	-
HD*30-150A	147	556	30 (76)	52 (132)	48 (122)	400 (181)	400 (181)	695 (315)
HD*30-185A	184	697	30 (76)	64 (163)	60 (152)	468 (212)	468 (212)	812 (368)
HD*30-220A	220	833	30 (76)	76 (193)	72 (183)	548 (249)	548 (249)	958 (435)
HD*30-250A	257	973	30 (76)	87 (221)	83 (211)	628 (285)	628 (285)	1,103 (500)
HD*30-300A	294	1,113	30 (76)	100 (254)	96 (244)	701 (318)	701 (318)	1,242 (563)
HD*30-375A	367	1,389	30 (76)	124 (315)	120 (305)	868 (394)	868 (394)	1,540 (699)
HD*36-275A	265	1,003	36 (91)	64 (163)	60 (152)	577 (262)	577 (262)	995 (451)
HD*36-325A	318	1,204	36 (91)	76 (193)	72 (183)	673 (305)	673 (305)	1,173 (532)
HD*36-400A	370	1,401	36 (91)	87 (221)	83 (211)	770 (349)	770 (349)	1,343 (609)
HD*36-425A	423	1,601	36 (91)	100 (254)	96 (244)	866 (393)	866 (393)	1,513 (686)
HD*36-500A	528	1,999	36 (91)	124 (315)	120 (305)	1,058 (480)	1,058 (480)	1,861 (844)
HD*42-450A	432	1,635	42 (107)	76 (193)	72 (183)	795 (361)	909 (412)	1,385 (628)
HD*42-500A	504	1,908	42 (107)	88 (224)	84 (213)	908 (412)	1,050 (476)	1,587 (720)
HD*42-600A	576	2,180	42 (107)	100 (254)	96 (244)	1,020 (463)	1,190 (540)	1,790 (812)
HD*42-750A	720	2,726	42 (107)	124 (315)	120 (305)	1,245 (565)	1,470 (667)	2,195 (996)
HD*42-900A	864	3,271	42 (107)	148 (376)	144 (366)	1,470 (667)	1,751 (794)	2,601 (1,180)
HD*42-1000A	1,008	3,516	42 (107)	172 (437)	168 (427)	1,695 (769)	2,031 (921)	3,006 (1,363)
HD*48-500A	504	1,908	48 (122)	73 (185)	69 (175)	1,062	1,062	1,856
HD*48-700A	658	2,491	48 (122)	88 (224)	84 (213)	1,346 (611)	1,346 (611)	2,124 (963)
HD*48-750A	752	2,846	48 (122)	100 (254)	96 (244)	1,507 (684)	1,507 (684)	2,392 (1,085)
HD*48-950A	940	3,558	48 (122)	124 (315)	120 (305)	1,828 (829)	1,828 (829)	2,918 (1,324)
HD*48-1150A	1,128	4,270	48 (122)	148 (376)	144 (366)	2,150 (975)	2,150 (975)	3,444 (1,562)
HD*48-1300A	1,315	4,978	48 (122)	172 (437)	168 (427)	2,471 (1,121)	2,471 (1,121)	3,970 (1,801)
HD*54-1000A	951	3,560	54 (137)	100 (254)	96 (244)	1,721 (781)	1,972 (894)	2,729 (1,238)
HD*54-1200A	1,189	4,501	54 (137)	124 (315)	120 (305)	2,083 (945)	2,423 (1,099)	3,320 (1,506)
HD*54-1450A	1,427	5,402	54 (137)	148 (376)	144 (366)	2,451 (1,112)	2,881 (1,307)	3,919 (1,778)
HD*54-1700A	1,665	6,303	54 (137)	172 (437)	168 (427)	2,807 (1,273)	3,326 (1,509)	4,511 (2,046)
HD*54-1900A	1,903	7,204	54 (137)	196 (498)	192 (488)	3,168 (1,437)	3,777 (1,713)	5,102 (2,314)
HD*54-2150A	2,141	8,105	54 (137)	220 (559)	216 (549)	3,530 (1,601)	4,228 (1,918)	5,701 (2,586)
HD*60-1500A	1,469	5,561	60 (152)	124 (315)	120 (305)	2,784 (1,263)	3,221 (1,461)	4,177 (1,895)
HD*60-1750A	1,763	6,673	60 (152)	148 (376)	144 (366)	3,267 (1,482)	3,823 (1,734)	4,913 (2,228)
HD*60-2000A	2,056	7,783	60 (152)	172 (437)	168 (427)	3,749 (1,701)	4,425 (2,007)	5,658 (2,566)
HD*60-2400A	2,350	8,896	60 (152)	196 (498)	192 (488)	4,231 (1,919)	5,026 (2,280)	6,394 (2,900)
HD*60-2650A	2,644	10,009	60 (152)	220 (559)	216 (549)	4,713 (2,138)	5,628 (2,553)	7,130 (3,234)
HD*72-2100A	2,115	8,006	72 (183)	124 (315)	120 (305)	3,416 (1,549)	3,904 (1,771)	5,104 (2,315)
HD*72-2500A	2,538	9,607	72 (183)	148 (376)	144 (366)	3,995 (1,812)	-	5,995 (2,719)
HD*72-3000A	2,961	11,209	72 (183)	172 (437)	168 (427)	4,575 (2,075)	-	6,885 (3,123)
HD*72-3400A	3,384	12,810	72 (183)	196 (498)	192 (488)	5,154 (2,338)	-	7,767 (3,523)
HD*72-4000A	3,807	14,411	72 (183)	220 (559)	216 (549)	5,733 (2,600)	-	8,658 (3,927)

\* For H e.g. ( HDH48-1500A) or V e.g. (HDV48-1500A)  
Specify Horizontal or Vertical installation H or V (after the HD)  
For Jacketed models, the J will follow the orientation: HDVJ48-1500A.  
For linings other than glass, use the suffix after the number and the A - HDHJ42-1000AC for Cement lined. U = Unlined.  
For 150 psi ASME working pressure, insert M at the end - HDV42 - 1000AM.



**NOTE:**  
 SPECIFY FOR HORIZONTAL OR VERTICAL INSTALLATION.  
 2 each 2" ASME inspection openings are standard on tanks 36" diameter and below.  
 12"x16" ASME inspection openings are standard on tanks with 42" diameter and above.

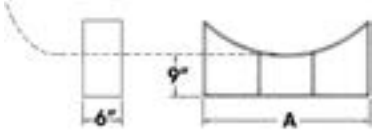


30" - 72" DIAMETER HORIZONTAL TANKS

## TANK SADDLE DIMENSIONS

**Tank Diameter**  
**30 36 42 48 54 60 72**

A 21" 25" 29" 34" 48" 52" 62"



**NOTE:** Alternate saddle heights are available.  
 (Consult factory)

## TANK SADDLES

A.O. SMITH PART NO.	SADDLE DESCRIPTIONS
100170345	SADDLE, TANK, 24", 9" CLR, P-1
100170349	SADDLE, TANK, 30", 9" CLR, P-1
100170338	SADDLE, TANK, 28", 9" CLR, P-1
100170352	SADDLE, TANK, 36", 9" CLR, P-1
100170355	SADDLE, TANK, 42", 9" CLR, P-1
100170358	SADDLE, TANK, 48", 9" CLR, P-1
100170361	SADDLE, TANK, 54", 9" CLR, P-1
100170365	SADDLE, TANK, 60", 9" CLR, P-1
100170371	SADDLE, TANK, 72", 9" CLR, P-1

## FACTORY INSULATION OPTIONS

### Factory Jacketed and Insulation

- **INSULATION** — Entire tank is surrounded with insulation.
- **CABINET** — Heavy gauge painted steel.
- Adds 4" to the round jacketed and 6" to the square jacketed diameter of the tank, and 2" to the height.
- Units with length/height greater than 125" cannot be jacketed and insulated at the factory.

## SUGGESTED SPECIFICATION

### SAMPLE SPECIFICATION FOR CUSTOM-LINE STORAGE TANKS

When jacketed or insulated these models meet or exceed the thermal efficiency and standby loss requirements of ASHRAE 90.1b (current standard).

ASME storage tank to be A. O. Smith Custom-Line model \_\_\_\_\_. Capacity to be \_\_\_\_\_ gallons with a diameter of \_\_\_\_\_ inches. Tank(s) shall be constructed and stamped according to ASME specifications for \_\_\_\_\_ psi working pressure. Manhole (12" x 16"), handhole (4" x 6") or inspection openings (2'-2') shall be installed in accordance with ASME code requirements and manufacturer(s) standard practice. Tank to be constructed of (carbon steel) \_\_\_\_\_. Lining shall be glass, cement, or unlined \_\_\_\_\_. Tank(s) lined with (glass, cement or unlined) \_\_\_\_\_ lining shall be equipped with the number and size of anode rod(s) sufficient to provide adequate protection for the tank lining. Tank shall be (vertical, horizontal) \_\_\_\_\_ design and provided with \_\_\_\_\_ ring base, \_\_\_\_\_ saddles.

**For Technical Information call 888-599-2837. A. O. Smith Enterprises Ltd. reserves the right to make product changes or improvements without prior notice.**