



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 | Insulation & Jacket |
| Other Working Pressure (specify) _____ | Manhole (only on tanks 30" diameter and above) |
| Vertical Orientation | Handhole |
| Horizontal Orientation | Lifting Lugs |
| Saddles (for horizontal tanks) | Seismic Bracing (not available under 250 gallons) |
| Tank Legs (for vertical tanks) | |
| T&P Gauge | |
| 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)
- Epoxy 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)



SUBMITTAL SHEET

CUSTOM HD STORAGE TANKS

Tube Bundle Sizing Questions

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

Tank Side:

Tank Capacity _____

Inlet Water Temp _____

Stored or Tank Set Point _____

Recovery Rate (GPH) _____

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) _____

Steam Inlet Pressure _____

Steam Outlet Pressure _____

Boiler:

Boiler Water Entering Temp. _____

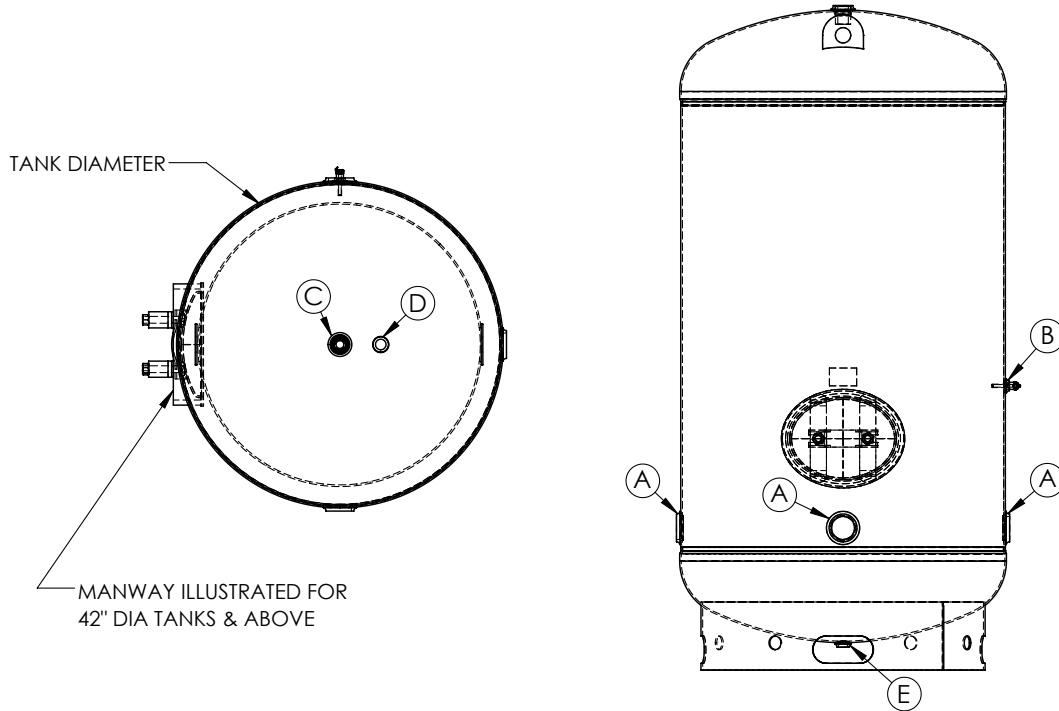
Boiler Water Leaving Temp. _____

Boiler Water Available (GPH) _____

Note: Units with a coil will ship standard with a recirculation pump unless stated otherwise.

CUSTOM HD STORAGE TANKS

VERTICAL TANK

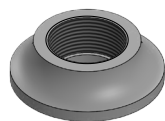


Base Model _____

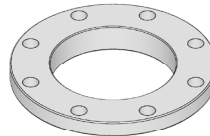
*Consult Factory For Additional Options

| 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

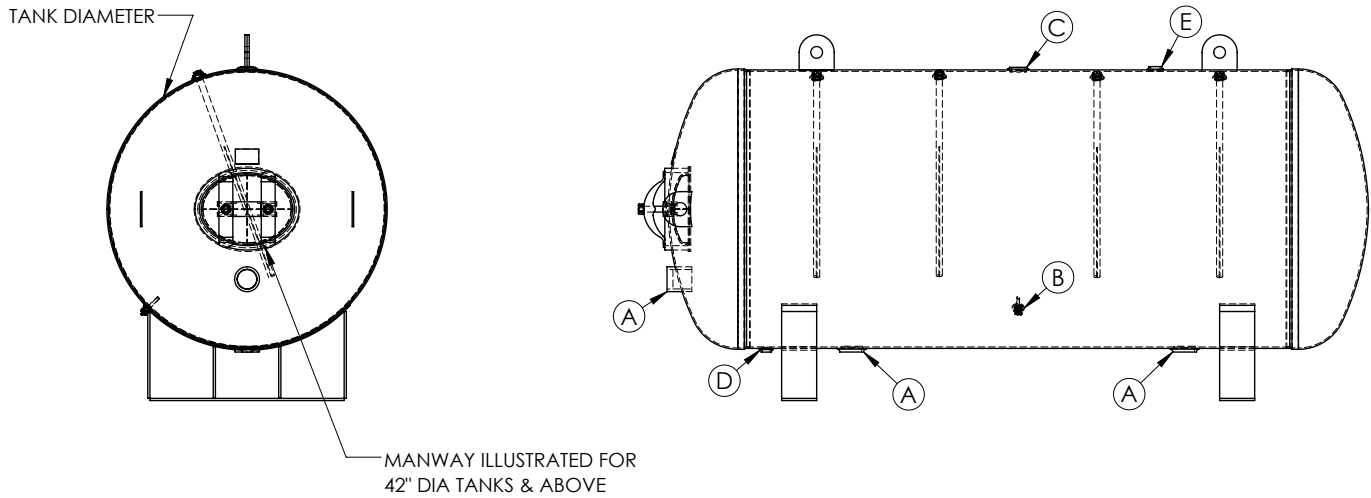


BOLTING FLANGE (FFSO, CL150)

DIR: 2000557168

CUSTOM HD STORAGE TANKS

HORIZONTAL TANK

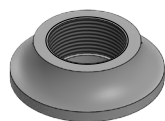


Base Model _____

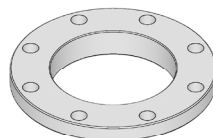
*Consult Factory For Additional Options

| 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.
- Epoxy Lined — The application of specially formulated epoxy makes this lining suitable for cold or hot water storage.

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 and epoxy 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.

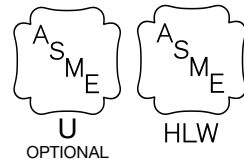
INSPECTION OPENINGS

- 12" x 16" manhole or 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.

TANK OPTIONS

- Manholes / Handholes
- Additional / Custom Tank Openings
- Lifting Lugs
- Horizontal Tank Saddles
- Factory Jacketing and Insulation
- Tube bundles
- Cement and Epoxy Linings

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*48-700A | 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*48-1500A | 1,503 | 5,689 | 48 (122) | 196 (498) | 192 (488) | 2,793 (1,267) | 2,793 (1,267) | 4,505 (2,043) |
| 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) |

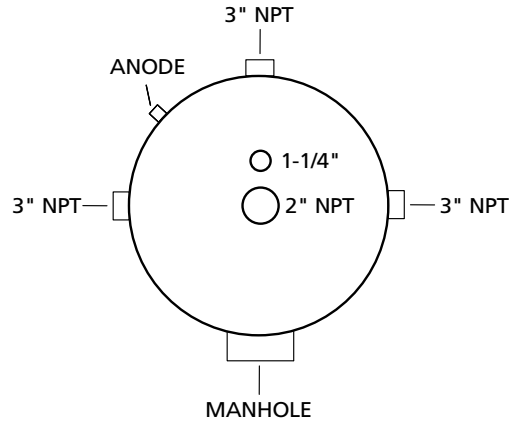
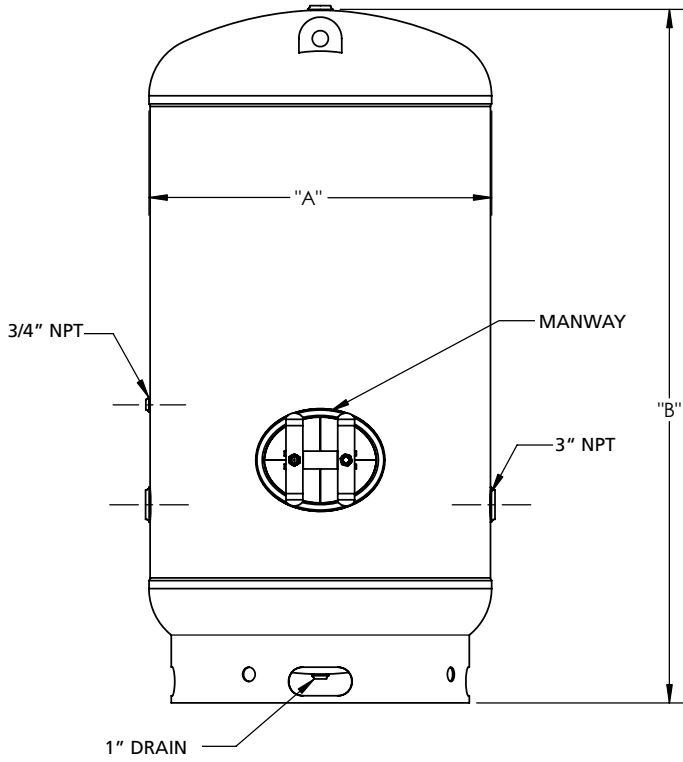
* For H e.g. (HDH48-1500A) or V e.g. (HDV48-1500A)

Specify Horizontal or Vertical installation H or V (after the HD)

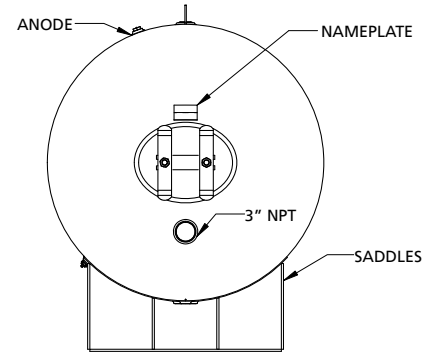
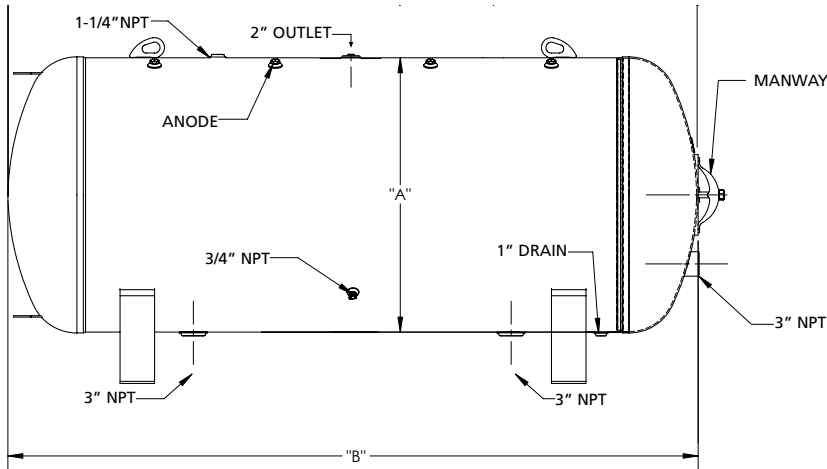
For Jacketed models, the J will follow the orientation: HDVJ48-1500A.

For linings other than glass, use the suffix after the number and the A - HDHJ42-1000AE for Epoxy lined or 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.

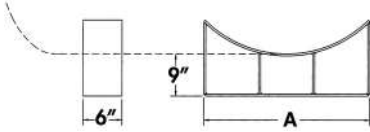


30" - 72" DIAMETER HORIZONTAL TANKS

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, epoxy, cement) _____. Tank(s) lined with (glass, cement, epoxy) _____ 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 (four) _____ 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.