

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK CITY OF PORTLAND

BUILDING INSPECTION

Please Read Application And Notes, If Any, Attached

Permit Number: 061332
PERMIT ISSUED
SEP 26 2006
CITY OF PORTLAND

This is to certify that CITY OF PORTLAND / Precision Tanks Inc.
has permission to Tank removal 1-2000 gallon diesel tank at 101 Middle St. 1000 gallon #2 diesel oil
AT 101 MIDDLE ST 028 1001001

provided that the person or persons performing or supervising this permit shall comply with all of the provisions of the Statutes of the State and of the Ordinances of the City of Portland regulating the construction, maintenance and use of buildings and structures, and of the application on file in this department.

Apply to Public Works for street line and grade if nature of work requires such information.

Verification of inspection must be given and written permission procured before this building or part thereof is occupied or services resumed in 4
YOUR NOTICE REQUIRED.

A certificate of occupancy must be procured by owner before this building or part thereof is occupied.

OTHER REQUIRED APPROVALS

Fire Dept. Gregg Cass 9-19-06

Health Dept. _____

Appeal Board _____

Other _____

Department Name

[Signature] 9/25/06
Director - Building & Inspection Services

PENALTY FOR REMOVING THIS CARD

City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 06-1332	Issue Date: SEP 26 2006	CBL: 028 N001001
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Location of Construction: 101 MIDDLE ST	Owner Name: CITY OF PORTLAND	Owner Address: 389 CONGRESS ST	Phone:
Business Name:	Contractor Name: Precision Tanks Inc.	Contractor Address: 41 Masterman Road Jay	Phone: 2076459549
Lessee/Buyer's Name	Phone:	Permit Type: Tanks - Commercial	Zone: B-3

Past Use: Commercial/ Tank <i>Public Safety Bldg</i>	Proposed Use: Commercial/ Tank removal 1-2000 gallon diesel tank and 1-1000 gallon #2 fuel oil	Permit Fee: \$30.00	Cost of Work: \$0.00	CEO District: 1
		FIRE DEPT: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied	INSPECTION: Use Group: U Type: Tanks	

Proposed Project Description: Tank removal 1-2000 gallon diesel tank and 1 - 1000 gallon #2 fuel oil	Signature: <i>DK Per Sayk.</i>	Signature: <i>NFPA</i>
PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)		
Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied		
Signature:	Date:	

Permit Taken By: Idobson	Date Applied For: 09/11/2006	Zoning Approval
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<p>1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules</p> <p>2. Building permits do not include plumbing, septic or electrical work.</p> <p>3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..</p>	<p>Special Zone or Reviews</p> <p><input type="checkbox"/> Shoreland</p> <p><input type="checkbox"/> Wetland</p> <p><input type="checkbox"/> Floodzone</p> <p><input type="checkbox"/> Subdivision</p> <p><input type="checkbox"/> Site Plan</p> <p>Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/></p> <p>Date: <i>9/11/06</i></p>	<p>Zoning Appeal</p> <p><input type="checkbox"/> Variance</p> <p><input type="checkbox"/> Miscellaneous</p> <p><input type="checkbox"/> Conditional Use</p> <p><input type="checkbox"/> Interpretation</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Denied</p> <p>Date: <i>late</i></p>	<p>Historic Preservation</p> <p><input checked="" type="checkbox"/> Not in District or Landmark</p> <p><input type="checkbox"/> Does Not Require Review</p> <p><input type="checkbox"/> Requires Review</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Approved w/Conditions</p> <p><input type="checkbox"/> Denied</p> <p>Date: <i>S</i></p>
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CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT _____ ADDRESS _____ DATE _____ PHONE _____

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE _____ DATE _____ PHONE _____



General Building Permit Application


If you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.

Location/Address of Construction: <u>109 Middle</u>		
Total Square Footage of Proposed Structure		Square Footage of Lot
Tax Assessor's Chart, Block & Lot Chart# Block# Lot#	Owner:	Telephone:
<u>28</u> <u>n</u> <u>1</u>	<u>City of Port</u>	
Lessee/Buyer's Name (If Applicable)	Applicant name, address & telephone:	cost Of Work: \$ _____
	<u>Bob Leeman -</u> <u>233 0350</u>	Fee: \$ _____
		C of O Fee: \$ _____
Current Specific use: _____		
If vacant, what was the previous use? _____		
Proposed Specific use: _____		
Project description: <u>REMOVAL AND DISPOSAL OF 1-2000G. DIESEL TANK AND 1-10000 GALLON #2 FUEL OIL TANK. WE HAVE A NEW TANK SCHEDULED TO SHOW UP ON OCT. 2 WEEK. (WE WOULD LIKE TO START ON OCT. 2.)</u>		
Contractor's name, address & telephone:		
Who should we contact when the permit is ready: <u>PRECISION TANKS, INC.</u>		
Mailing address: <u>41 MASTERMAN ROAD</u> <u>JAY, ME 04239</u>		
Phone: <u>207-645-9599</u>		

Please submit all of the information outlined in the Commercial Application Checklist. Failure to do so will result in the automatic denial of your permit.

In order to be sure the City fully understands the full scope of the project, the Planning and Development Department may request additional information prior to the issuance of a permit. For further information visit us on-line at www.norlandmaine.gov, stop by the Building Inspections office, room 315 City Hall or call 874-8703.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature of applicant: 	Date: <u>9/11/06</u>
<u>TONY COUTURE - PRESIDENT</u>	

This is not a permit; you may not commence ANY work until the permit is issued.



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

August 29, 2006

City of Portland
389 Congress St.
Portland, ME. 04101
Attn: Robert Leeman

RE: Public Safety Building

Dear Mr. Leeman:

This letter is written to acknowledge the Department's receipt of your registration materials on August 28, 2006 for either a new tank or replacement of ancillary equipment at an UST storage tank facility located at Public Safety Building, Portland, Maine. Maine statute dictates that the installation may take place ten (10) business days following notification (38 M.R.S.A., Section 563.1.A.). This installation may begin on September 11, 2006. Have a copy of your registration available and display this letter in a prominent place during construction or replacement activities.

NOTE: Please note also that the installer must complete and submit the Certification of proper Installation to the Department within 30 days of completing the work (Chapter 691(5)(B)(4)(f). The owner is responsible for ensuring that this certification is submitted.

If you have any questions or concerns, I can be reached at (207) 287-2651

Sincerely,

John M. Dunlap
Division of Oil and Hazardous Waste Facilities Regulation
Bureau of Remediation and Waste Management

Cc: Tony Couture # 287

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333.0017
(207) 287-7688 FAX: (207) 287.7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD
BANGOR, MAINE 04401
(207) 941.4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 0476902094
(207) 764-0477 FAX: (207) 760-3143



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CERTIFICATION OF PROPER INSTALLATION

JOHN ELIAS B. DACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

Date Completed: _____

Mail To: Tony Couture
Precision Tank, Inc.
41 Maternan Road
Jay, ME. 04239

Facility Name: Public Safety Building # 6888

Number of Tanks Installed and Size: _____

Type of Tanks Installed: _____

Type of Pump: _____

Type of Piping Installed: _____

Type of Tank Monitoring Installed: _____

Type of Pipe Monitoring Installed: _____

Other Ancillary Equipment Installed: _____

When only the overflow bucket is retrofitted or replaced the largest capacity overflow bucket feasible from 5 to 15 gallons must be installed. Submit documentation with the upgrade registration showing the spill bucket installed is the largest feasible. Installation of an overflow bucket smaller than (15) gallons requires the approval of the commissioner.

Expiration Date of Warranty: _____

Certified Tank Installer Name: _____

Certified Tank Installer Number: _____

This is to certify that this facility was installed in accordance with Chapter 691 of the Department of Environmental Protection's Rules and in conformance with P.L. 1990, Chapter 865.

INSTALLER SIGNATURE: _____

Return to:

Maine Department of Environmental Protection
Bureau of Remediation and Waste Management
17 State House Station
Augusta, Maine 04333-0017
(207) 287-2651
Attn: Tank Registration Staff

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287.7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD
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PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769-2094
(207) 764-0477 FAX: (207) 760-3143

City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 06-1333	Issue Date: PERMIT ISSUED SEP 26 2006	CBL: 028 N001001
Owner Name: CITY OF PORTLAND	Owner Address: 389 CONGRESS ST	Phone:
Contractor Name: Precision Tanks Inc.	Contractor Address: 41 Masterman Blvd CITY OF PORTLAND	Phone: 0764 59549
Lessee/Buyer's Name:	Permit Type:	Zone: B-3

Location of Construction: 101 MIDDLE ST	Owner Name: CITY OF PORTLAND	Owner Address: 389 CONGRESS ST
Business Name:	Contractor Name: Precision Tanks Inc.	Contractor Address: 41 Masterman Blvd CITY OF PORTLAND
Lessee/Buyer's Name:	Phone:	Permit Type:

Past Use: <i>Commercial public Safety Bldg</i>	Proposed Use: Commercial/ install 1- 12000 gallon XERXES double walled tank
Proposed Project Description: install 1- 12000 gallon XERXES double walled tank	

Permit Fee: \$35.00	Cost of Work: \$0.00	CEO District: 1
FIRE DEPT: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied	INSPECTION: Use Group: <i>Tanks</i> Type: <i>NFPA 30</i>	
Signature: <i>Greg Cass</i>	Signature: <i>[Signature]</i>	
PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)		
Action. <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied		
Signature:		Date:

Permit Taken By: Idobson	Date Applied For: 09/11/2006	Zoning Approval
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2. Building permits do not include plumbing, septic or electrical work.

3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..

Special Zone or Reviews <input type="checkbox"/> Shoreland <input type="checkbox"/> Wetland <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/> Date: <i>9/14/06</i>	Zoning Appeal <input type="checkbox"/> Variance <input type="checkbox"/> Miscellaneous <input type="checkbox"/> Conditional Use <input type="checkbox"/> Interpretation <input type="checkbox"/> Approved <input type="checkbox"/> Denied Date:	Historic Preservation <input checked="" type="checkbox"/> Not in District or Landmark <input type="checkbox"/> Does Not Require Review <input type="checkbox"/> Requires Review <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied Date:
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CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE		DATE	PHONE

City of Portland, Maine - Building or Use Permit

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 06-1333	Date Applied For: 09/11/2006	CBL: 028 N001001
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Location of Construction: 101 MIDDLE ST	Owner Name: CITY OF PORTLAND	Owner Address: 389 CONGRESS ST	Phone:
Business Name:	Contractor Name: Precision Tanks Inc.	Contractor Address: 41 Masterman Road Jay	Phone (207) 645-9549
Lessee/Buyer's Name	Phone:	Permit Type: Tanks - Commercial	

Proposed Use: Public Safety Bldg/ install 1- 12000 gallon XERXES double walled	Proposed Project Description: install 1- 12000 gallon XERXES double walled tank
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Dept: Zoning **Status:** Approved **Reviewer:** Marge Schmuckal **Approval Date:** 09/14/2006
Note: **Ok to Issue:**

Dept: Building **Status:** Approved **Reviewer:** Tammy Munson **Approval Date:** 09/25/2006
Note: Rec'd copy of permits from DEP **Ok to Issue:**

Dept: Fire **Status:** Approved with Conditions **Reviewer:** Cptn Greg Cass **Approval Date:** 09/19/2006
Note: **Ok to Issue:**

- 1) Install shall comply with NFPA 30.
A compliance letter from the installation contractor is required.





Fax Transmittal

Mechanical Contractors
 41 Masterman Road
 Jay, ME 04239

Phone: 207-645-9549
 Fax: 207-645-4247
 email: pti@megalink.net

Date 9-22-06

Fax # Sent To: 874-8716

Send To City of Portland

ATTN: Tammy Munson

From: Tony Couture

Pages Sent 15 Including Cover

Subject DEP Paperwork

- Message
1. Registration of the Tank (New) (pgs 1-11)
 2. Notice of intent to abandon (Remove) old tank
 3. Certificate of proper Installation (after new installation)
 4. Notice to proceed letter from the DEP.

Jene Couture

Reply

**Department of Environmental Protection
17 State House Station
Augusta, ME 04333-0017
(207) 287-2651**

**REGISTRATION GENERAL INFORMATION OF
UNDERGROUND OIL STORAGE TANKS**

The **purpose** of this registration **is** to gather information on underground tanks that store or have stored petroleum products. Registration **is** required for all underground oil storage facilities regardless of tank size or type of petroleum product stored and regardless of whether the tanks are in service or out of service. The information you **provide** should be accurate and based upon reasonably available records, or, in the absence of such records, to the best of your knowledge or belief..

1. Who must register an underground oil storage tank?

The tank owner or operator is responsible for meeting registration requirements. Completed registration forms for new and replacement underground oil storage facilities and **tanks** must be submitted to the Department of Environmental Protection (DEP) five (5) business days **prior** to installation. If the ownership of an existing tank is uncertain or in dispute, the current owner of the property where the tank(s) are located must register it. The registration requirements are set forth in Title 38, § 563, of the Maine Revised Statutes Annotated (**MRSA**) and in Chapter 691, § 4 of DEP rules.

2. What tanks must be registered?

All tanks that meet the state definition of underground oil storage tank must be registered. State **law** at **38 MRSA** section 562-A, subsection **22** defines a tank **as** "any container, 10% or more of which is beneath the surface of the ground and which is used, or intended to be **used**, for the storage, use, treatment, collection, capture or supply of oil". The term does not include "any tanks situated in an underground area if these tanks or containers are situated upon or above the surface of a floor and in such a manner that they may be readily inspected". Oil means "petroleum products **and** their by-products of **any** kind and in **any** form including, but not limited to, petroleum, fuel oil, motor oil, sludge, oil refuse, oil mixed with other **waste**, crude oil, and waste oil and all other liquid hydrocarbons regardless of specific gravity".

The following categories of tanks are exempt from the underground oil storage facility registration requirements of DEP rules. Tanks and piping located aboveground where less than ten percent (10%) of the tank is located below ground septic tanks; pipeline facilities (including gathering lines) regulated under the Federal Natural Gas Pipeline Safety Act of 1968, or the Federal Hazardous Liquid Pipeline Safety Act of 1973; interstate pipeline facilities regulated under

REGISTRATION GENERAL INFORMATION OF UNDERGROUND OIL STORAGE TANKS

State laws (**38 MRSA § 563**); surface impoundment's, pits, ponds or lagoons; surface water or waste water collection systems; flow-through process tanks except where used for treatment; liquid traps or associated gathering lines directly related to oil or gas production and gathering operations; and storage tanks situated in an underground area (such as a basement, cellar, mineworking, **drift**, shaft, or tunnel) if the storage tank is situated or above the surface of the floor and fully inspectable.

If you are in doubt as to whether you are the owner of an underground storage tank, you are encouraged to register the **tank using** this form.

3. What substances are covered in the term oil?

All liquid petroleum and petroleum products except **propane** are included by state law.

4. Where should I register?

Please send the registration form to: MDEP-BRWM, 17 State House Station, Augusta, ME 04333-0017 **ATTN:** Tank Registration section. A copy must also be filed with the local fire department. Remember to keep a copy for your own records.

5. When should I register my tank?

Owners of underground oil storage tanks existing as of March 1, 1985 should have registered by February 1, 1986. Tanks installed after March 1, 1985 must be registered **five (5) days** before installation.

6. Restrictions on tank location.

A new provision of Maine law, **38 MRSA § 563-C** may prohibit the siting of a new underground oil storage facility near drinking water supplies.

After September 30, 2001 a **person** may not register, install, or cause to be installed a new underground oil storage facility, referred to in this section as a "facility," that is:

- A. Within the source **water** protection **area** of a public **drinking** water **supply** mapped by the Department of **Human** Services (**DHS**) prior to **the registration** or installation of the facility, or within 1,000 feet of the public water supply, whichever is **greater**; or
- B. Within 300 feet of a private water supply in existence at the time the facility owner applied to **register** the facility.

REGISTRATION GENERAL INFORMATION OF UNDERGROUND OIL STORAGE TANKS

“Source Water Protection Area” means an area that contributes recharge water to a public water supply well for a public **drinking** water supply that is mapped by **DHS**. The *maps can be obtained at local town offices, or through the Maine Bureau of Health drinking water program at (207) 287 2070, or are available on the Maine Drinking Water Program website at <http://www.maine.gov/dhhs/eng/water/index.htm>.*

7. Exemptions.

From restrictions on tank location. The siting prohibitions listed above in **6A** and **B** do not apply to:

- A. Replacement or expansion of a underground facility registered **and** installed on or before September 30, 2001, provided the replacement or expansion occurs on the same property **and** the owner or operator continues to **pay** the annual registration fee as required by **38 MRSA § 563(4)**. Failure to pay the annual fee disqualifies a facility from being considered exempt under this section.
- B. Conversion of **an** aboveground oil storage facility registered **and** installed on or before September 30, 2001 to **an** underground oil storage facility, provided the conversion occurs on *the same property*;
- C. A **facility** used solely for the storage of heating oil that is consumed on site;
- D. Underground piping associated with **an** aboveground oil storage facility; or
- E. A well located on **the same** property as a **facility and** serving **only** users on that property.

8. Variance.

From the restrictions on **tank** locations. The commissioner may **grant** a variance from the siting prohibition under some circumstances. *See 38 MRSA, § 563-C, subsection 3.* **A variance application can be obtained by contacting the DEP tanks licensing unit at (207) 287-2651.**

9. Penalties.

The registration of all underground oil storage **tanks** is **critical** to developing a sound environmental program for managing and locating these tanks. For this reason, the Legislature **has** required that late fees **and** penalties be assessed to owners **who** neglect to properly register their tanks. Tank owners who knowingly **fail** to **notify** or who **submit** false information to the Department may be subject to a federal civil penalty of \$10,000 for each **tank** for which notification is not given or false information is submitted.

10. Questions and assistance.

For assistance in completing the registration form or answering questions about the rules for underground oil storage facilities, please call (207) 287-2651 and **ask for** someone in the Underground Storage Tank **Program**.

11. Amended registration.

Owners must **amend** the tank **registration** in writing to the DEP if:

- A. The facility is sold or otherwise transferred;
- B. The facility is modified, e.g., new tanks or piping, change of product stored; retrofitting of or changes in *leak* detection or overfill prevention equipment; etc.

Registration must be amended within ten (10) business days of the **date** of the change. A person who has not submitted **an** amended registration **as** required must pay a late fee of \$ 100.

12. What registration fees are required?

A registration fee of \$35 is required on all tanks except those **servicing** a single family residence. The fee must be paid upon initial registration **and** annually thereafter. All payments should be made payable to the **State** of Maine Groundwater Fund. These **fees** must be paid prior to **January 1st** of each year.

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
REGISTRATION FORM
FOR UNDERGROUND OIL AND PETROLEUM PRODUCTS STORAGE
TANKS
(Pursuant to 38 M.R.S.A. Section 563, 40 CFR Part 280)

STATEUSEONLY
DATE OF REGIST. ____/____/____

Instructions: Please complete both section A and B of this form. The first part of section A will help you determine if the Maine laws limiting the siting of new underground oil tanks applies to your facility. Section A-2 provides guidance for new facilities located near wells and water supplies and must be completed in your answered "no" to all of the questions in A-1. Section B covers the information necessary for all tank registrations regardless of where the facility is located.

SECTION A

IF YOU ANSWER YES TO ANY OF THE QUESTIONS BELOW, THEN YOUR FACILITY IS EXEMPT FROM THE SITING RESTRICTIONS. CONTINUE TO SECTION B OF THE TANK REGISTRATION FORM.

Recent legislation limits where new underground oil tanks maybe installed. (See 38 M.R.S.A. section 563-C). The purpose of the legislation is to protect wells and water supplies from contamination. To determine if this law applies to your tank installation, please fill out section A of the tank registration form.

Section A-1

To determine if the Maine law governing siting of new underground oil tanks applies to your tank(s), please answer yes or no to the following questions:

1. YES Were all of the tanks you are registering installed before September 30, 2001?
2. YES Will the new facility be used solely to store heating oil that is consumed on site (not re-sold)?
3. NO Is the facility replacing an aboveground oil storage facility registered and installed before September 30, 2001 and presently on the same property?
(If so, please enter registration # here _____)
4. NO Is the facility replacing or expanding an underground oil storage facility presently on the same property and registered and installed on or before September 30, 2001? (enter registration # here _____)

IF YOU ANSWERED NO TO ALL OF THE QUESTIONS ABOVE THEN COMPLETE SECTION A-2 (SEE NEXT PAGE).

SECTION A-2

You **must supply map** coordinates of the **corners** of *the* facility or facilities footprint, and groundwater monitoring wells. **All** coordinates **must** be in UTM (Universal Transverse Mercator), North American Datum 1983 (NAD 83), Zone 19 North standards and **must** be sub-meter accuracy & precision. **Map** coordinate units for UTM **are** in **meters**.

(NOTE: Please do not submit stateplane coordinates which are in feet.)

Based on your response to the questions in section A-1, you are preparing to register a facility that may be subject to the siting restrictions of 38 MRSA § 563-C. To determine if and how these restrictions apply, please answer the following questions. **Please be sure your answers are accurate. Failure to provide accurate answers could result in delays of the installation of your underground oil storage facility.**

1. _____ **Will any portion of the underground oil storage facility be installed after September 30, 2001?** If no, then Section A-2 does not apply to the tank(s) you are registering – go to Section B.
2. _____ **Will any portion of the facility be located within 300' of a private well or water supply?**
This does not include a private well located on the same lot as the facility and serving only users living on that property.
The term "facility" includes tanks, product piping, dispensing facilities, vent piping and stage II vapor recovery piping (if required).
3. _____ **Will any portion of the facility be located within the source water protection area of a public drinking water supply mapped by the Department of Human Services or within 1000' of a public water supply, whichever is greater?** Maps of source water protection areas are available on the web at <http://www.maine.gov/dhhs/eng/water/index.htm>. Public water supplies are defined as any well or water supply where water is obtained for, sold, furnished or distributed to the public for human consumption. To be a public water supply, the well or water supply must meet one or more of the following requirements:
 - Serve more than 15 connections OR
 - Regularly serve at least 25 individuals daily for at least 60 days of the year OR
 - Provide bottled water for sale where the water is pumped from on site.
4. _____ **Does the public well or water supply serve a school or community water supply system?** (A school is an institution for the formal classroom instruction of children in grades K-16. A community water system is a public water system that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.)
5. _____ **Will any portion of the facility be located within a mapped significant sand & gravel aquifer?**
Maine law prohibits installation of USTs within sand and gravel aquifers mapped by the Maine Geological Survey unless a variance is obtained from the Department of Environmental Protection (DEP). See 38 MRSA § 563-A and Chapter 691, section 3-A of the Department's rules to determine if you are eligible to apply for a variance. In considering whether to grant a variance, the Commissioner may consider the importance of the groundwater resource, any engineering or monitoring measures proposed by the applicant, the geology of the site and other relevant factors.

If the answer to #2 or #4 above is YES then a new underground oil storage facility may not be installed unless the applicant proves there is no hydro-geologic connection between the proposed facility and the water supply at

issue. Contact the DEP at (207)287-2651 to obtain information on the procedures to follow to determine if a hydrogeologic connection exists.

If the answer to #3 is YES (and the answer to #4 is NO) then a variance from the siting restriction may be granted upon written application if the DEP determines that the proposed installation is designed to exceed minimum regulatory requirements and will effectively minimize releases of oil and the likelihood of drinking water contamination. PLEASE CONTACT THE DEPARTMENT FOR A VARIANCE APPLICATION.

If the answer to #5 is YES Please review Chapter 69I, Section 3-A D to determine if a variance may be applicable for the proposed site. The commissioner shall not grant a variance from the prohibition in Chapter 69I, section 3-A of the Department's Rules Section 3-A(C) if any part of the proposed facility site overlies a mapped aquifer that has high potential as a future Public drinking water resource.

Department of Environmental Protection
17 State House Station
Augusta, ME 04333-0017
(207)287-2651

SECTION B

- 1. **REGISTRATION NUMBER:** 6888
(Complete only if a registration number has been previously assigned by the Maine Department of Environmental Protection.)
- 2. **FACILITY INFORMATION:**
 - A. Name of Facility: Public Safety Buildings
 - B. Street Address of Facility: 109 Middle st
 - C. Town/City where Facility is located: Portland
 - D. Mailing Address: 389 Congress st
Portland, Maine Zip Code: 04101
 - E. Telephone: 207-874-8892
 - F. Directions to Facility: Franklin st. to Middle,
Right on Middle, 1st Building on Right
- 3. **TANK OWNER:**
 - A. Name: City of Portland
(last) (first) (middle initial)
 - B. Mailing Address: 389 Congress st
 - C. Town/City: Portland D. State: ME E. Zip Code: 04101
 - F. Phone: 207-874-8892 G. Fax: 207-874-8473
- 4. **TANK OPERATOR:** (if different from owner)

A. Name: Same
(last) (first) (middle initial)

B. Mailing Address: _____

C. Town/City: _____ D. State: _____ E. Zip Code: _____

F. Phone: _____ G. Fax: _____

5. CONTACT PERSON:

A. Name: Robert Leeman B. Phone: 207-874-8892

6. FACILITY SITING

A. Are any planned or existing tank (s) (including piping and pumps) within 1000 feet of a public water supply source? Yes _____ No X

B. Are any planned or existing tank(s) (including piping and pumps) within 300 feet of a private water supply source? Yes _____ No X

C. (Complete if the answer to "B" above is YES.) Is the water supply which is located within 300 feet of the tank(s) owned by someone other than the facility owner or operator? Yes _____ No _____

D. Is the facility located on a sand and gravel aquifer or recharge area as mapped by the Maine Geological Survey? Yes _____ NO- X

E. Is the facility located within a 100 year flood plain? Federal Emergency Management Agency (FEM) maps showing floodplain locations are available at most municipal offices. Yes _____ No X

Note: If you wish assistance in answering items (D) and (E), please call the Department at (207) 287-2651 and ask for staff within the tanks registration program. Sand and gravel aquifer maps can be reviewed at any of the Department's offices or purchased for a nominal fee from the Maine Geological Survey, 22 State House Station, Augusta, ME 04333 (207) 287-2801

7. Facility Use (check one):

- Wholesale Distribution of Oil
- Retail Distribution of Oil
- Oil Storage at a Commercial Establishment for On-site Consumption
- Oil Storage at an Industrial Establishment for On-site Consumption
- Oil Storage at a Single Family Residence
- Oil Storage/Farm
- Oil Storage at a Multi-family Residence.
- Oil Storage/Public Facility
- Oil Storage/Federal Facility
- Oil Storage/State facility
- Oil Storage/Municipal or Public School Facility

8. ADDITIONAL INFORMATION

The following information is required for all new and replacement facility registrations or piping upgrades/extensions. Additional information will be required if the facility may be subject to siting restrictions.

- A.** A scale drawing of the **proposed** facility tied to a property marker or other permanent structure. The drawing must **show** the proposed location of all the **ranks, piping and** dispensers **and** other facility components Intended to contain **product** (either **as** a liquid or vapor) relative to other **site** features, including *existing* buildings monitoring wells and adjacent roads. If **this is a** replacement **or upgrade** installation, then the **drawing** must **show the** location of the new **tank** or piping relative to **existing** tanks, piping **and dispensers**. For **new** or replacement motor **fuel** facilities or piping upgrades, the proposed location of the **tank** pad, piping runs **and** dispensers should be marked onsite.

B. For new or replacement motor fuel storage facility, a sketch showing distances and bearings to private wells within 400 feet and public water supplies within 1200 feet.
See Attachment "A" for example.

8. INDIVIDUAL TANK DATA: Complete for each tank

<p>A. Tank Type A.= Steel - bare or asphalt coated B.= Cathodic-Single Wall C.= Fiberglass-Single Wall D.= Fiberglass-Double Wall E.= Jacketed - Double Wall F.= Cathodic Steel - Double Wall G.= Other _____</p>	<p>D. Tank Leak Detection 0.=Unknown 4.=Manual Groundwater Sampling 5.=Automatic Tank Gauge 7.=Secondary Containment-Continuous Electronic 8.=Secondary Containment - Manual Monitoring 9.=SIA Statistical Inventory Analysis 10.=None</p>	<p>F. Tank Status A.=Planned B.=Active C.=Out of Service D.=Abandon in Place (Filled) E.=Planned for Removal F.=Removed (Date) _____</p>
<p>B. Piping Type (same codes as tank) or D.=Steel w/secondary O.=Copper X.=flexible Single Wall Y.=flexible-Double Wall Z.=Copper w/secondary</p>	<p>E. Product Stored 1.=Kerosene 5.=#5 Fuel Oil 23.=Unleaded 25.=Jet-Fuel 28.=Unleaded Premium 29.=Diesel 99.=Other (please specify) _____</p>	<p>G. Pump Type: (1) Suction (2) Pressure (3) Suction & Return (10)= None</p>
<p>C. Tank Size Size of Tank in gallons _____</p>	<p>H. Pipe Leak Detection (Use same Codes as Tank except): 9.=SIA I. Overfill & Spill 2.=Electronic 90% Cap 5.=Automatic Shutoff (95% capacity) 6.=Automatic Alarm (90% Capacity) 7.=Vent Whistle</p>	<p>J. Date Installed _____</p>

TANK 1: A. G B. Y C. 12p04 D. 7 E. 2 F. A G. 1 H. 7 I. 2 J. 5 K. 1 L. SEPT 28 2006

TANK 2: A. _____ B. _____ C. _____ D. _____ E. _____ F. _____ G. _____ H. _____ I. _____ J. _____

TANK 3: A. _____ B. _____ C. _____ D. _____ E. _____ F. _____ G. _____ H. _____ I. _____ J. _____

- 9. A registration fee of \$35.00 is required for all tank(s) except for tank(s) serving single family residences. Registration fees are due upon registration and annually thereafter, prior to January 1".

Attach a check for the applicable registration fee, made payable to the State of Maine Groundwater Fund, and return this form to Attn: Tank Registration, Maine Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017.

Fee Computation: _____ tank(s) at \$35.00 per tank = \$ _____

- 10. **MAKE TWO (2) COPIES OF THIS FORM.** Submit the original to Attn: Tank Registration, Maine Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017. Send one (1) copy to the local Fire Department having jurisdiction. Retain the third copy for your records. For new and replacement tank(s), the registration form is due at least five (5) business days prior to installation.

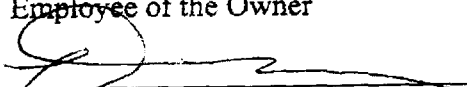
- 11. Your registration shall not be considered complete and will be returned to you if both Sections A and B are not completed.

- 12. **IF NEW, REPLACEMENT OR RETROFITTING EXISTING TANKS OR PIPING ARE INCLUDED WITH THIS REGISTRATION, PLEASE PROVIDE:**

A. Name of Installer: MY CULTURE

B. Installer ID Number: 287 Date of Planned Installation: 10/4/06

- 13. **CERTIFY THIS FORM BY SIGNING.** By signing this form, I, the tank registrant, certify that all information is accurate and complete to the best of my knowledge, and that I will comply with all applicable federal, state, and local laws and regulations concerning the underground storage of petroleum products. The owner or operator is required by Maine statutes to file an amendment to this registration with the Department of Environmental Protection immediately upon any change of information contained in this form.

Robert Leeman
 Owner or Authorized
 Employee of the Owner

 Signature

Public Buildings Director
 Title (Please print or type)
9/28/06
 Date

H/BOHMC/ reg underground tank info
 December, 2001 (rev. 2004)

Expires after 6 (six) months if the Department does not receive notice that removal was completed.

Department of Environmental Protection
Bureau of Remediation and Waste Management
17 State House Station
Augusta, Maine 04333-0017
Attention: Tank Removal Notice
Telephone: (207) 287-2651

**NOTICE OF INTENT TO ABANDON (REMOVE)
AN UNDERGROUND OIL STORAGE FACILITY**

THIS FORM MUST BE FILED WITH THE D.E.P. AND YOUR LOCAL FIRE DEPARTMENT AT LEAST 30 DAYS PRIOR TO THE SCHEDULED REMOVAL

PLEASE TYPE OR PRINT IN INK.

Name of Facility Owner: CITY OF PORTLAND
Mailing Address: 385 CONGRESS ST Telephone #: 874-8897
City: PORTLAND State: ME. Zip Code: 04101
Contact Person (name, address & telephone #): ROBERT LEEMAN
385 CONGRESS ST. PORTLAND 04101 207 874-8897
Name of Facility: PUBLIC SAFETY BUILDING Registration #: 6888
Facility Location (town & street): _____

1. Identify the tanks at this location which are going to be removed:

Tank #	Tank Age	Tank Size (gallons)	Type of Product Stored
1		2,000	DIESEL
2		10,000	# 2 FUEL
3			

2. Directions to this facility (be specific): _____

3. Is or was the tank(s) used to store Class I liquids (e.g., gasoline, jet fuel)? Yes _____ No
IF YES, REMOVAL OF THE TANK(S) MUST BE DONE UNDER THE DIRECTION OF A CERTIFIED TANK INSTALLER

Tank Installer's Name: _____ certification Number: 27 Signature: _____

4. Environmental site assessments are required for all tanks except those used for storing heating oil, not for resale, or for farm or residential motor fuel tanks under 1,100 gallons where the product is used on site. Site Assessor's Name and Address (if applicable): _____

5. Name and telephone number of contractor who will do the tank removal:
TANK REMOVAL - PRECISION TANKS, INC.

6. Expected date of removal (month/day/year): 10/3/06

I hereby provide Notice that I intend to properly abandon the underground oil storage facility as described above.

Date: 9-22-06 Signature of owner or operator: _____
Printed Name and Title: _____

Mail original and yellow copy to DEP; pink copy to fire department; retain gold copy.
RETURN POSTCARD AFTER TANK(S) HAS BEEN REMOVED



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CERTIFICATION OF PROPER INSTALLATION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

Date Completed: _____

Mail To: Tony Couture
Precision Tank, Inc.
41 Materman Road
Jay, ME. 04239

Facility Name: Public Safety Building# 6888

Number of Tanks Installed and Size: _____

Type of Tanks Installed: _____

Type of Pump: _____

Type of Piping Installed: _____

Type of Tank Monitoring Installed: _____

Type of Pipe Monitoring Installed: _____

Other Ancillary Equipment Installed: _____

When only the overfill bucket is retrofitted or replaced the largest capacity overfill bucket feasible from 5 to 15 gallons must be installed. Submit documentation with the upgrade registration showing the spill bucket installed is the largest feasible. Installation of an overfill bucket smaller than (15) gallons requires the approval of the commissioner.

Expiration Date of Warranty: _____

~~Certified~~ Tank Installer Name: _____

~~Certified~~ Tank Installer Number: _____

This is to certify that this facility was installed in accordance with Chapter 691 of the Department of Environmental Protection's Rules and in conformance with P.L. 1990, Chapter 865.

INSTALLER SIGNATURE: _____

Return to:

Maine Department of Environmental Protection
Bureau of Remediation and Waste Management
17 State House Station
Augusta, Maine 04333-0017
(207) 287-2651
Attn: Tank Registration Staff

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333.0017
(207) 287-7688 FAX: (207)287.1826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD
BANGOR, MAINE 04401
(207)941-4570 FAX: (207)941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207)822-6300 FAX: (207)822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769-2094
(207) 764-0477 FAX: (207)760-3143



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID R. LITTELL
COMMISSIONER

August 29, 2006

City of Portland
389 Congress St.
Portland, ME. 04101
Attn: Robert Leeman

RE: Public Safety Building

Dear Mr. Leeman:

This letter is written to acknowledge the Department's receipt of your registration materials on August 28, 2006 for either a new tank or replacement of ancillary equipment at an UST storage tank facility located at Public Safety Building, Portland, Maine. Maine statute dictates that the installation may take place ten (10) business days following notification (38 M.R.S.A., Section 563.1.A.). This installation may begin on September 11, 2006. Have a copy of your registration available and display this letter in a prominent place during construction or replacement activities.

NOTE: Please note also that the installer must complete and submit the Certification of proper Installation to the Department within 30 days of completing the work (Chapter 691(5)(B)(4)(f)). The owner is responsible for ensuring that this certification is submitted.

If you have any questions or concerns, I can be reached at (207) 287-2651.

Sincerely,

John M. Dunlap
Division of Oil and Hazardous Waste Facilities Regulation
Bureau of Remediation and Waste Management

Cc: Tony Couture # 287

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207)287-7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207)941.4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207)822-6300 FAX: (207)822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769-2094
(207) 764-0477 FAX: (207)760-3143



FILL IN AND SIGN WITH INK

APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT

PERMIT ISSUED
 SEP 26 2006
 28 N 1
 CITY OF PORTLAND

To the INSPECTOR OF BUILDINGS, PORTLAND, ME.

The undersigned hereby applies for a permit to install the following heating, cooking or power equipment in accordance with the Laws of Maine, the Building Code of the City of Portland, and the following specifications:

Location / CBL PORTLAND PUBLIC SAFETY BUILDING Use of Building POLICE Date 9/11/06
 Name and address of owner of appliance CITY OF PORTLAND, 109 MIDDLE ST., PORTLAND, ME.

Installer's name and address PRECISION TANKS, INC.
41 MASTERMAN ROAD, JAY, ME 04739 Telephone 645-9549

Location of appliance:

- Basement Floor
 Attic Roof

(UNDERGROUND FUEL TANK)

Type of Fuel:

- Gas Oil Solid

Appliance Name: XERXES DOUBLE WALL UNIT

U.L. Approved Yes No

Will appliance be installed in accordance with the manufacture's installation instructions? Yes No

IF NO Explain: _____

The Type of License of Installer:

- Master Plumber # _____
 Solid Fuel # _____
 Oil # M520005765
 Gas # _____
 Other TANK INSTALLER 287

Type of Chimney:

- Masonry Lined
 Factory built _____

- Metal
 Factory Built U.L. Listing # _____

- Direct Vent
 Type _____ uL# _____

Type of Fuel Tank

- Oil
 Gas

Size of Tank 12,000

Number of Tanks 1

Distance from Tank to Center of Flame 150 feet.

Cost of Work: \$ 94000

Permit Fee: \$ _____

Approved

Approved with Conditions

Fire: _____

Ele.: _____

Bldg.: _____

See attached letter or requirement

Inspector's Signature

Date Approved

Signature of Installer

[Signature] TONY COOTURE - PRESIDENT

Guide Specifications

Double-Wall FRP Tanks for Fuel Storage

Short Form

The contractor shall provide Double-Wall Fiberglass Reinforced Plastic (FRP) Underwriters Laboratories labeled underground storage tanks as shown on the drawings. Sizes and fittings shall be as shown. The tanks shall be fiberglass tanks as manufactured by Xerxes Corporation. Tanks shall be tested and installed with pea gravel or crushed stone according to Xerxes' Installation Manual and Operating Guidelines for Single-Wall and Double-Wall Fiberglass Underground Storage Tanks in effect at time of installation.

Long Form: Section 13177-1

Part I: General

1.0 Related Work Specified in Other Sections

- A. Liquid-Level Gauges: Section 15174
- B. Plastic Pipe: Section 15064
- C. Anchor Bolts: Section 05501
- D. Cast-in-Place Concrete: Section 03300

1.02 Quality Assurance

- A. Acceptable Manufacturer: Xerxes Corporation
- B. Governing Standards, as applicable:
 1. ASTM standard document number D4091-92.
 2. Underwriters Laboratories, Inc. (U.L.) Standard for Safety 1316. File MH 9061 for storage of flammable liquids. A U.L. certification plate shall be attached to each tank.
 3. National Fire Protection Act (NFPA) Standards:
 - NFPA 31: Flammable and Combustible Liquids Code
 - NFPA 30A: Automotive and Marine Service Station Code
 - NFPA 31: Installation of Oil-Burning Equipment.
 4. City of New York Department Building, M.E.A., Division #161-89 M
 5. Los Angeles Fire Department.

Part II: Products

2.01 Double-Wall Fiberglass Reinforced Plastic (FRP) Underground Storage Tanks

A. Loading Conditions: Tanks shall meet the following design criteria:

1. Internal Load - Tank shall withstand a 5-psi air pressure test with 5:1 safety factor. Contractor shall individually test tanks for leakage prior to installation. Maximum test pressure is 5 psi.
2. Vacuum Test - To verify structural integrity, every tank shall be vacuum tested by the manufacturer at the factory to 11.5 inches of mercury.
3. Surface Loads - Tank shall withstand surface H-20 axle loads when properly installed according to current manufacturer's installation instructions.
4. External Hydrostatic Pressure - Tank shall be buried in ground with 7' of overburden over the top of the tanks, the hole fully flooded and a safety factor of 5:1 against general buckling.
5. Tanks shall support accessory equipment- such as heating coils, drop tubes, sumpers pumps and ladders- when installed according to tank manufacturer's recommendations and limitations.

B. Product Storage:

1. Tanks shall be capable of storing petroleum products with specific gravity up to 1.1.
2. Tanks shall be vented to atmospheric pressure. The tank is not designed as a pressure vessel, except for use with vapor-recovery systems, provided the pressure of vacuum does not exceed 1 psi.
3. Gasoline; gasohol (90% gasoline/ 10% ethanol mixture); 90.5% gasoline and 9.5% Oxinol-50* (4.75% methanol and 4.75% CTBA mixture); Dupont EPA waiver (gasoline with 5% methanol and a minimum of 2.5% co-solvent- gasoline with up to 20% (by volume) of MTBE; gasoline/water/ethanol or methanol motor fuels, including 100% ethanol or methanol or M25 (85% methanol) at ambient temperatures; jet fuel; avgas; kerosene; diesel fuel; new or used motor oil; or used for fuel oil at temperatures not to exceed 150 degree F.

C. Materials:

1. Tanks shall be manufactured with 100% resin and and glass-fiber reinforcement. No sand fillers.

D. Tank Dimensions (Refer to Xerxes literature on gallonage.):

1. Tank shall have nominal capacity of _____ gallons
2. Tank shall have nominal outside diameter of _____ feet.
3. Tanks shall have approximate overall length of _____ feet

E. Interstitial Space

1. Tank shall have a space between the primary and secondary shell walls to allow for the free flow and containment of all leaked product from the primary tank. The space also allows the insertion of monitoring device through a monitoring fitting.

3.02 Appurtenances And Accessories

A. Optional Anchor Straps

1. Straps shall be FRP anchor strap as supplied by tank manufacturer
2. Number and location of straps shall be specified in current literature by tank manufacturer

B. Manways

1. All manways are to be flanged and 22" I.D., complete with U.L. listed gaskets, bolts and covers. (30" and 36" I.D. manways are also available on certain larger size tanks and are optional.)
2. Location is shown on tank drawings.
3. Optional manways extensions tubes shall be FRP.

C. Optional Fill Tubes

1. Fill tubes shall be FRP or contractor supplied and installed aluminum. Locations are shown on drawings.
2. FRP tubes shall be 4" diameter, with a 6" x 4" double-tapped reducer bushing, and include a 6" NPT fitting. FRP tubes can be installed in the manway cover or tank shell wall. Aluminum tubes (contractor supplied) shall be 4" in diameter and fit directly into a 4" NPT fitting. Tubes shall terminate a minimum of 4" from the bottom of tank.

D. Gauge Plates- Gauge plates shall be installed under each service fitting and manway opening.

E. Heating Coils

1. Optional heating coils shall be installed in a separate 22" manway and shall be the standard item supplied by tank manufacturer.
2. Location is shown in Dimensional Data.

F. Optional Ladders- Ladders shall be the standard ladder as supplied by tank manufacturer (aluminum, carbon steel or fiberglass).

G. NPT Threaded Fittings

1. All threaded fittings shall be a material of construction consistent with the requirements of the U.L. label.
2. All standard threaded fittings shall be half couplings and shall be 4" in diameter. Reducers are to be used for smaller sizes where shown and provided by contractor

Sizes	Standard	Other Sizes
Fill	4"	_____
Gauge	4"	_____
Inlet	4"	_____
Outlet	4"	_____
Vent	4"	_____
Extra	4"	_____

4. Strength- NPT Fittings shall withstand a minimum of 150 foot-pounds of torque and 1,000 bot-pound# of bending, both with a 2:1 safety factor.

Part III: Execution

3.01 Installation

Contractor shall be trained by the tank manufacturer, the state or other approved agency.

3.02 Testing

Tanks shall be installed and tested according to Xerxes' Installation Manual and Operating Guidelines for Single-Wall and Double-Wall Fiberglass Underground Storage Tanks in effect at time of installation. (Refer to current publication and include as part of specification)

Part IV: Warranty

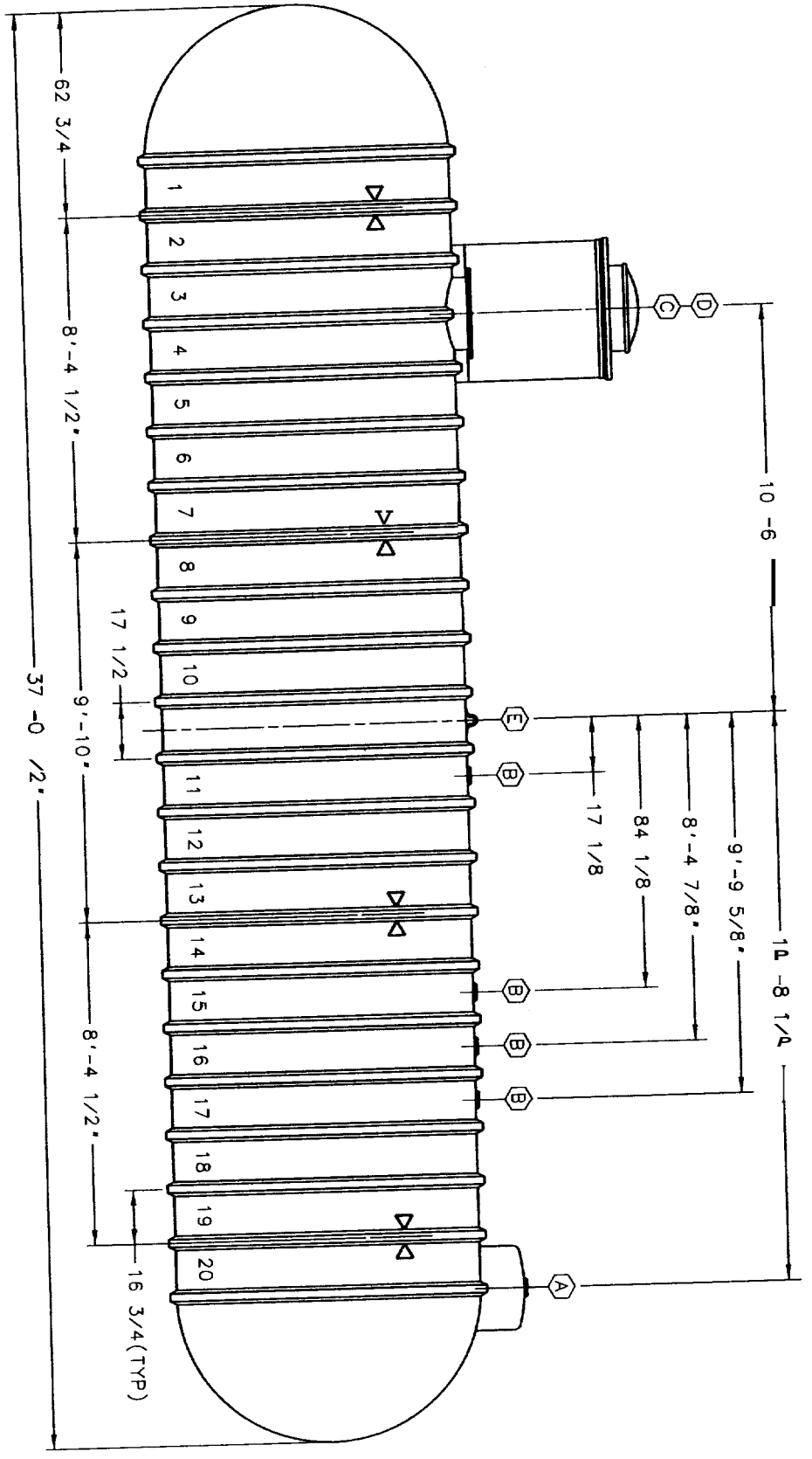
Warranty shall be manufacturer's standard warranty in effect at time of original purchase.



7901 Xerxes Avenue South • Minneapolis, MN • 55431 • (952) 887-1890 phone • (952) 887-1852 fax
www.xerxescorp.com

DW:sp11/02PP

NOTE:
1 - TANK IS HOCTORY BRAINE FILLED



- (A) 25" DIA HYDROSTATIC MONITORING RESERVOIR WITH 4" NPT FITTING
- (B) 4" NPT SERVICE FITTING WITH 12"x12" STRIKER PLATE
- (C) 22" DIA MANWAY WITH 3-4" NPT FITTINGS IN COVER & 4-12" x 12" STRIKER PLATES
- (D) 42" DIA x 36" HIGH CONTAINMENT SUMP WITH 26" DIA LEVER LOCK WATERTIGHT TOP
- (E) LIFTING LUG
- (X) HOLD DOWN STRAP LOCATION

REV	REVISION DESCRIPTION	DATE	BY
0			

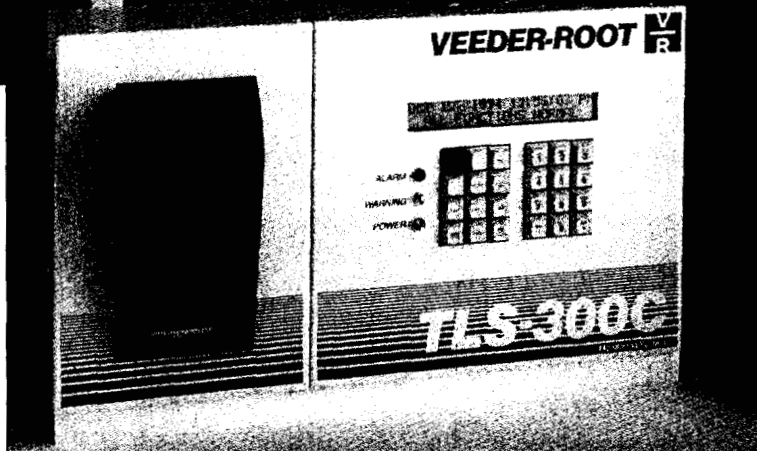
XERXES
CORPORATION

DESIGN	DATE	BY	CHK'D	DATE	BY
DSM	8-17-06	MM			
DESIGN	DATE	BY	CHK'D	DATE	BY
JWL	8-17-06				
SCALE	1/2" = 1'-0"	NEXT ASS'Y			
JAN'S	DATE	BY	CHK'D	DATE	BY
JB	8-17-06				
QTY	1	REV	0	DATE	
NO. SIZE	NO. HEADERS	NO. STRAPS	NO. DATE	NO. DATE	NO. DATE
C	628-516	00			
SCALE: 1/2" = 1'-0" NEXT ASS'Y					

8" DIA DWT-11
CAP. 12,000 GALLONS
PORTLAND

TLS-300C UST Monitoring Systems

The low cost compliance solution for commercial, industrial and institutional customers



- ▶ **The right choice for 7-tank and 2-tank applications.**
- ▶ **Meets compliance requirements for leak detection/inventory control.**
- ▶ **UL and CSA approved.**
- ▶ **Two-line, 24-character-per-line liquid crystal display and 72-key keypad, step the operator through simple menu-driven programming and operation functions.**
- ▶ **Standard integral printer.**
- ▶ **Proven design means simple set up and installation.**
- ▶ **Programmable in English, French, German or Spanish, and Standard or metric units.**
- ▶ **Clearly labeled, plug-in connectors offer quick disconnect of probes and relays.**

Veeder-Root's new TLS-300C UST Monitoring System features in-tank leak detection, along with inventory control, and interstitial leak detection capabilities to meet business management and regulatory compliance requirements at your site.

The TLS-300C system provides inventory management and in-tank leak detection with one to two Series 8473 0.1 GPH Magnetostrictive Probes. The Mag probes can handle a wide variety of fuels and fluids, and have been third-party tested and certified to perform better than the U.S. E.P.A. standards.

The TLS-300C system accommodates Veeder-Root's Series 7943 float-switch sensors, including: interstitial sensors for both steel and fiber-glass tanks, piping sump sensors, hydrostatic sensors, and discriminating dispenser pan and containment sump sensors.

The TLS-300C systems are equipped with audible and visual alarms, triggered by in-tank and interstitial alarm conditions. Any of the in-tank alarm limits can also be tied to relays to trigger on-site devices, such as overflow alarms, or to shut down submersibles.

System Capabilities

- ▶ Monitors up to two tanks.
- ▶ RS-232 communications interface with auxiliary port provides two 25-pin D-connectors for data transmission to computers or point-of-sale terminals.
- ▶ Standard integral report printer documents inventory leak detection, alarm and setup information.

In-Tank Leak Defection Capabilities

- ▶ Accommodates one or two Veeder-Root Magnetostrictive Probes for 0.1 GPH in-tank leak detection capability.

Interstitial Leak Sensing Capabilities

- ▶ Automatic continuous leak sensing:
 - Tank *interstitial* space
 - Piping Sump
- ▶ Audible alarm and display indicate leak location.

Alarm Capabilities

- ▶ In-tank warnings and alarms are activated for the following conditions:
 - leak
 - Sudden *loss*
 - Overflow
 - High water
 - Low product
 - Delivery needed
 - Test failure
 - Tank test *not* performed
- ▶ Interstitial and piping sump warning and alarms are activated for the following conditions:
 - Fuel presence
 - Low liquid
 - High liquid
- ▶ Alarm relays can trigger alarm/security devices.

Input/Output Capabilities

- ▶ Two built-in inputs provide for:
 - Solid-state or *switch* input from external devices.
- ▶ Two built-in output relays provide for:
 - *Outputs to* overflow alarms and external audible and visual warning devices.
- ▶ Either relay can shut down the submersible if power to the monitor is lost or a leak is detected.

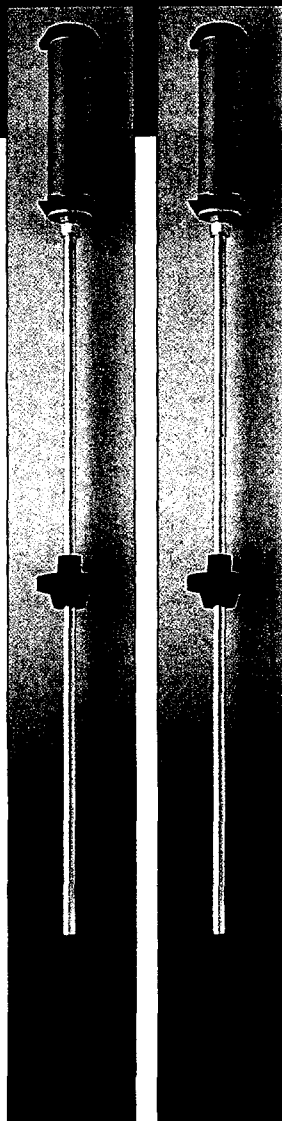
Emergency Generator Applications

- ▶ Selectable via programming.
- ▶ One system handles a mix of standard and emergency generator tanks.
- ▶ Records generator activity.
- ▶ Complete inventory reports before and after generator operation.

FROM VEEDER-ROOT

Magnetostrictive Probes for TLS Tank Monitoring Systems

Certified performance for inventory control and in-tank leak detection in gasolines, diesel and a wide variety of other approved fluids.



MAG 1

MAG 2

- ▶ **Highly accurate Magnetostrictive measurement technology**
- ▶ **Fast, accurate leak tests**
- ▶ **MAG 1(0.1 GPH) and MAG 2(0.2 GPH) probes available**
- ▶ **MAG 1 probe third-party certified to exceed U.S. E.P.A. performance standards for 0.1 GPH Volumetric Tank Tightness Testing**
- ▶ **Mag 1 probe compatible with TLS-350 and TLS-350R with CSLD for continuous statistical leak detection**
- ▶ **MAG 2 probe third-party certified to exceed U.S. E.P.A. performance standards for 0.2 GPH Automatic Tank Gauging**
- ▶ **Compatible with gasolines, diesel and other approved fluids**
- ▶ **Water measurement capability**

- ▶ **2" and 4" Float Kits available**

Series 8473 MAG 1 Probe

The MAG 1 probe provides highly accurate, trouble-free performance in gasolines, diesel and a wide variety of approved fluids. Its magnetostrictive technology and five-point temperature sensing make it capable of extremely accurate inventory control and in-tank leak testing.

The MAG 1 probe has been third-party tested and certified to perform far better than the U.S. E.P.A. standards for both 0.1 GPH volumetric tank tightness testing and 0.2 GPH automatic tank gauging. See the summary of leak test performance on back or call us for a copy of the complete test results.

Series 8473 MAG 2 Probe

The MAG 2 probe provides the same reliable inventory control features and fluid compatibility as the MAG 1 probe, but offers 0.2 GPH leak detection at a lower cost. It offers MAG probe performance with 0.2 GPH monthly monitoring capability.

The MAG 2 probe has also been third-party tested and certified to exceed U.S. E.P.A. standards for 0.2 G.P.H automatic tank gauging. See the summary of leak test performance on back or call us for a copy of the complete test results.

MAG 1 Probe and the TLS-350 with CSLD—Leak detection without shutting down your tanks!

CSLD, Continuous Statistical Leak Detection, is a new, advanced tank testing technology that makes full use of the TLS-350 and TLS-350R's in-tank monitoring capabilities. CSLD eliminates the need for tank shutdown to perform a leak test — no lost business, no lost operating time!

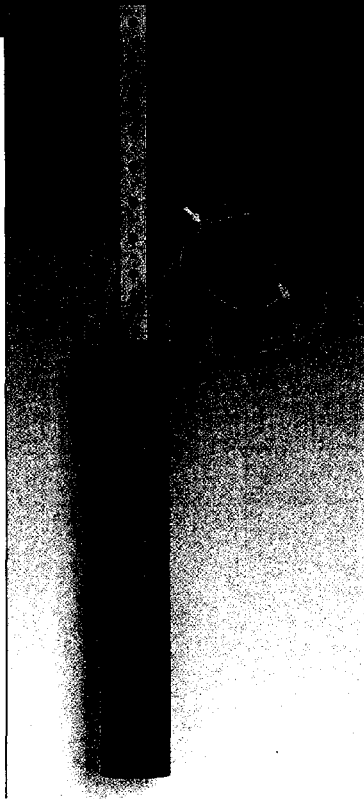
The TLS-350 and TLS-350R equipped with CSLD use the MAG 1 probe to continuously monitor fuel height and temperature information to detect idle times in the tank. During each idle time, data are collected and combined with information from other idle periods to form a highly accurate leak detection database. Sophisticated statistical analysis techniques in CSLD constantly evaluate the database to discard invalid data and perform leak tests based on only high-quality information in the current database. In fact, a new leak test is performed every time new data from an idle period is added.

It's the next generation in leak detection technology made possible, in part, by the accuracy of the MAG 1 probe!

Approved for Aboveground Tank Applications

Veeder-Root Magnetostrictive Probes are approved for use in aboveground storage tanks to monitor fuel inventory. An AST Installation Kit (Form Number 312020-984) is required for these applications and is available from Veeder-Root or your authorized Veeder-Root distributor.

Piping Sump Sensor



Positive Alarm Indication of any Liquid in Underground Fuel Storage Tank Piping Sumps

- ▶ **For TLS-350R, TLS-350, ILS-350, TLS-300i, TLS-250i and ILS-250 UST Monitoring Systems.**
- ▶ **System Indicators Pinpoint Alarm Location.**
- ▶ **Simple to Install.**
- ▶ **Two-wire Connection to System Monitor.**
- ▶ **Complete with All Mounting Hardware.**

Fast Action Helps Prevent Serious Safety and Environmental Problems

The Veeder-Root Piping Sump Sensor detects the presence of liquid in a UST piping sump. Liquid presence could mean a dangerous line leak.

When the sensor detects liquid, it sends an alarm signal to the TLS console monitor, where both visual and audible built-in alarm indicators immediately identify the location of the problem. You can then quickly take action to help prevent serious safety and environmental problems.

For even greater warning capability, the TLS-350R, TLS-350, ILS-350, TLS-300i, TLS-250i and ILS-250 feature internal alarm relays that can also trigger on-site alarms. With the TLS-350R, TLS-350 and TLS-300i, alarm signals from the sump sensor trigger a leak report showing the time and location of the alarm condition. The information is stored in the system's Alarm History and can be printed on the monitor's integral printer, or retrieval remotely through its data communications interface.

Simple to Install

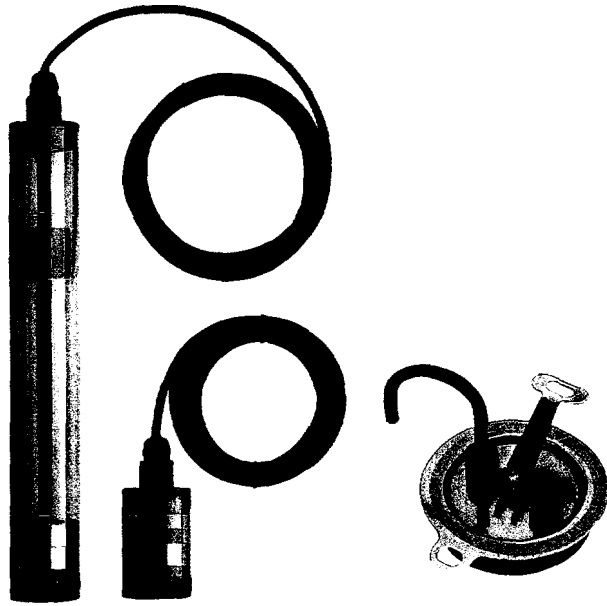
The Veeder-Root Piping Sump Sensor can be used *in* the piping sumps of either steel or fiberglass tanks. Each sensor comes with complete hardware for mounting on an available junction box or directly to the side of a fiberglass sump. Only two wires are required to connect the sensor to a TLS or ILS system.

Standard Components

QTY	DESCRIPTION
1	Piping Sump Sensor Assembly
1	PVC Mounting Sleeve
1	Aluminum 90° Mounting Bracket
1	Watertight Cord Grip
1	#6-20 (0.312") Sheet Metal Screws

New! Hydrostatic Reservoir Sensor

for use with TLS and ILS Systems



- ▶ **Dual-float and single-float technology models — ideal for locations with high or low water tables.**
- ▶ **Dual-float model differentiates between high and low level conditions.**
- ▶ **Sensors installed in brine-filled reservoir of double-wall tanks.**
- ▶ **Lockable, watertight cap prevents accidental spills into monitoring area.**
- ▶ **Long-life construction and reusable.**
- ▶ **Designed and tested to comply with UL and CSA standards.**

Veeder-Root's Hydrostatic Reservoir Sensor accurately detects fluid level change in the reservoir and interstice of a double-wall storage tank.

Available in a dual-float or single-float configuration. The Dual-Float Hydrostatic Sensor is ideal for high groundwater areas, and can differentiate between a high level alarm condition and a low level alarm condition. If an inner-wall leak occurs, the brine solution seeps into the tank lowering the brine level in the reservoir. The Dual-Float Sensor will then trigger a low level alarm. If an outer-wall leak occurs, the groundwater seeps into the reservoir. The Dual-Float Sensor will then trigger a high level alarm.

The Single-Float Sensor is ideal for low groundwater areas, since it only detects low level alarm conditions. If an inner-wall leak occurs, the brine solution seeps into the tank. If an outer-wall leak occurs, the brine solution leaks out of the tank. In both cases, the brine level decreases and the Single-Float Sensor triggers a low level alarm.

The housing is constructed of clear **PVC**, allowing the operator to pull the sensor from the reservoir to visually inspect float operation. A watertight, lockable cap prevents accidental spills on the ground surface from entering the reservoir.

Veeder-Root warrants the Hydrostatic Reservoir Sensors are warranted to be free from material defects for a period of one year from the date of installation or 15 months from the date of invoice.

Detection Capabilities

- ▶ **Dual-Float sensor alarm conditions:**
 - Leak in inner wall triggers a low level alarm.
 - Leak in outer wall triggers a high level alarm in high groundwater areas; low level alarm in low groundwater areas.
- ▶ **Single-float sensor alarm conditions:**
 - Leak in inner or outer wall triggers a low level alarm in low groundwater areas.

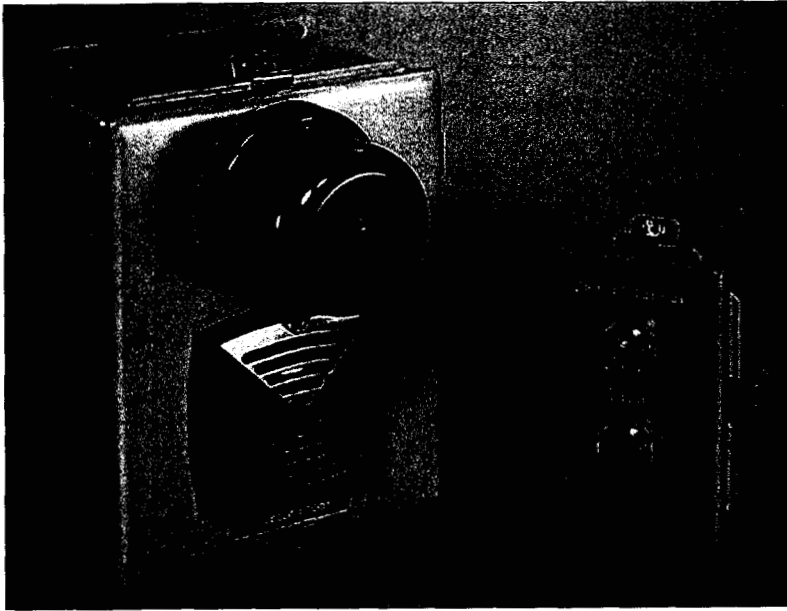
Operating Capabilities

- ▶ **Operating Temperature Range:** -25°C to +40°C.
- ▶ **Storage Temperature Range:** -40°C to +70°C.
- ▶ **Rests in salt brine solution of up to 30% calcium chloride.**
- ▶ **Cable length:** 12 feet.
- ▶ **Single-Float Sensor Dimensions:** 6.0" high, 2.5" diameter.
- ▶ **Dual-Float Sensor Dimensions:** 19.3" high, 2.5" diameter.
- ▶ **Withstands removal from reservoir several times a year without sensor damage.**
- ▶ **Clear plastic housing for visual inspection of float operation.**

FROM VEEDER-ROOT

Overfill Alarm and Alarm Acknowledgement Switch

for use with TLS-350R, TLS-350, TLS-300, TLS-300i and TLS-250 Systems



- ▶ Audible horn and flashing light provide an early warning of potential tank bulk delivery overfills.
- ▶ Wired to one of the built-in alarm relays in a TLS-300, **TLS-300i**, TLS-250 or TLS-250i System or to an I/O Combination Module or a Four-Relay Output Module in the TLS-350 or TLS-350R.
- ▶ Programmable overfill alarm limits can be set for each tank at a TLS System location.
- ▶ Built-in timer lets you adjust length of time that the audible alarm will stay on from 0 to 60 seconds.
- ▶ Adjust noise level from 78 to 103dB (at 10 feet).
- ▶ Optional alarm acknowledgment switch is available for locations where driver intervention is required by local codes.

Audible and Visual Warnings of Potential Overfills

Veeder-Root's TLS Overfill Alarm provides an early warning of potential tank bulk delivery overfills as required by the Federal regulations governing underground storage tanks. Wired to an alarm

relay in a TLS-350R, TLS-350, TLS-300, TLS-300i, TLS-250 or TLS-250i System, the alarm relay activates the TLS overfill alarm horn and light when a potential overfill is detected. All TLS systems have programmable overfill alarm limits that can be set for each tank at a location.

An optional Alarm Acknowledgement Switch is also available for locations where driver intervention is required by local codes. When the driver presses the acknowledgement button, the overfill alarm shuts off and the alarm acknowledgement light illuminates. This light will stay on until the TLS prints an inventory increase report.

SPECIFICATIONS

General

- ▶ Enclosure: Painted steel; NEMA 4; 1/2" conduit connector at bottom of alarm and at left side of acknowledgement switch.
- ▶ Operating Temperature Range: -40° to +150° F.
- ▶ Supply Voltage: 120 VAC, 50/60 Hz.

Alarm Unit

- ▶ Actuation: From TLS alarm contact.
- ▶ Audible Alarm:
 - Output: Adjustable "Time On" from 0 to 60 seconds.
- ▶ Visual Alarm:
 - Lamp Rating 25 watt., 120 VAC.
 - Lens: Red Polycarbonate.
 - Flashing Rate: 75 per minute.
- ▶ Dimensions: 11" long, 7" wide, 4" deep.

Alarm Acknowledgement Switch

- ▶ Function: Turns off alarm unit while actuating acknowledgement lamp.
- ▶ Acknowledgement Lamp: 120 VAC. Amber lens.
- ▶ Dimensions: 7" long, 3" deep.



Dualoy 3000/L Fiberglass Pipe and Fittings

underground piping for petroleum products, alcohols, alcohol-gasoline mixtures and reformulated fuels

Uses and applications

Servicestation product, vent and vapor recovery piping
Bulk plant terminals and fueling terminals
Airports, marinas and marine terminals
Central fuel oil systems
All piping systems requiring UL or ULC listing for petroleum products, alcohols, alcohol-gasoline mixtures and reformulated fuels

Performance

Operating pressures to 300 psig
Continuous operating temperatures to 150°F (66°C)

Listings



Dualoy 3000/L is listed in the United States with Underwriters Laboratories for nonmetallic underground piping for petroleum products, gasoline-alcohol blends, alcohols such as methanol and ethanol, and reformulated fuels (File MH9162). Dualoy 3000/L pipe and fittings are also listed with Underwriters' Laboratories of Canada (File CMH715), in the Netherlands with KIWA (Ref. ATA no. 2062/1-E), and with the French Ministry of the Environment (Arrêté 261 bis). In Great Britain the Dualoy 3000/L system has been tested and accepted by the London Fire and Civil Defence Authority.

Composition

Pipe — Filament-wound fiberglass reinforced epoxy pipe with integral epoxy liner and exterior coating. When classified in accordance with ASTM 02310 and ASTM 02996, the pipe meets the following cell limits: RTRP 11CF1-5430.
Fittings — Compression-molded and filament-wound fiberglass reinforced epoxy
Adhesive — A20LT ambient-cure, two-part epoxy for all services (including alcohols)

Joining system

Bell and spigot taper/taper adhesive-bonded joint

Pipe lengths

Standard 20-ft random lengths (17 to 21 ft)
Other lengths available on request

Fittings

Adapters: bell x NPT female ²	Flange rings ¹
Adapters: bell x NPT male ¹	Flange stub ends ¹
Adapters: isolation ¹	Nipples ²
Adapters: spigot x NPT female ²	Reducer bushings ¹
Adapters: spigot x NPT male ²	Repair couplings ¹
45° Elbows ¹	Sleeve couplings ²
90° Elbows ¹	Tees ¹
End caps ¹	

1) Indicates molded fitting. For alcohol service, install only those molded fittings that are identified as being intended for alcohol service. Materials used to mold alcohol-qualified fittings are different from those used to mold fittings for petroleum service only.
2) Indicates filament-wound fitting. Filament-wound fittings are listed for all services.
3) Other fittings available without UL listing.

Typical pipe dimensions and weights

Nominal Pipe Size		Pipe <i>Ob'</i> (in)	Pipe ID (in)	Wall Thickness		Unit Volume (gal/ft)	Pipe Weight (lb/ft)
(in)	(mm)			Total (in)	Structural (in)		
2	50	2.37	2.21	0.080	0.060	0.20	0.47
3	80	3.49	3.32	0.085	0.065	0.45	0.72
4	100	4.51	4.33	0.087	0.070	0.77	1.00
6	150	6.63	6.39	0.120	0.100	1.67	2.10

1) Typical *outside* diameters of 2- through 6-inch pipe are *within* API, ASTM and ANSI fiberglass and steel pipe dimensions.

Typical pipe performance

Nominal Pipe Size		Pressure Rating (psig)	Ultimate Internal Pressure (psig)	Ultimate Collapse Pressure ¹ (psig)
(in)	(mm)			
2	50	300	3200	153
3	80	200	2400	90
4	100	175	2000	39
6	150	175	2000	38

1) At 80°F (27°C). For continuous Service do *not* exceed 75% of these values.

Fittings pressure performance

For dimensions of fittings, consult Ameron publication **DUALOY 3000/L FITTINGS DIMENSIONS, FP266**. Pressure ratings of fittings without UL listing are available on request.

Petroleum Products Only

Nominal Pipe Size		Elbows (psig)	Tees (psig)	Threaded Adapters (psig)	Sleeve Couplings (psig)	Flanges (psig)	Reducer Bushings (psig)	End Caps (psig)
(in)	(mm)							
2	50	300	250	300	300	300	300	300
3	80	200	200	200	200	200	200	200
4	100	150	150	150	150	150	150	150
6	150	175	175	175	175	175	175	175

Petroleum Products, Alcohols and Alcohol-Gasoline Mixtures

Nominal Pipe Size		Elbows (psig)	Tees (psig)	Bell x Male Adapters (psig)	All Other Adapters (psig)	Sleeve Couplings (psig)	Reducer Bushings (psig)	End Caps (psig)
(in)	(mm)							
2	50	175	175	175	300	300	300	175
3	80	125	125	125	200	200	200	125
4	100	100	100	100	150	150	150	100
6	150	100 ¹	100 ¹	100 ¹	175	175	175	100

1) UL listing pending

Typical mechanical properties

Pipe Property ¹	Units	Value ¹	Method	
			ASTM	ATM ²
Tensile strength				
Longitudinal	10 ³ psi	35.0	82705	161
Circumferential	10 ³ psi	70.0	D1599	151
Tensile modulus				
Longitudinal	10 ⁶ psi	3.0	02105	161
Circumferential	10 ⁶ psi	4.2	—	—
Compressive strength				
Longitudinal	10 ³ psi	35.0	—	142
Compressive modulus				
Longitudinal	10 ⁶ psi	3.0	—	142
Long-term hydrostatic design basis				
Cyclic	10 ³ psi	8.0	D2992(A)	—
Poisson's ratio ³				
ν_{yx}	—	0.16	—	—
ν_{xy}	—	0.26	—	—

- 1) Based on structural wall thickness.
- 2) Ameron test method.
- 3) The first subscript denotes the direction of contraction and the second that of the applied stress.
x denotes longitudinal direction.
y denotes circumferential direction.

Nominal Pipe Size		Stiffness Factor ¹
(in)	(mm)	(lb·in ³ /in ²)
2	50	45
3	80	75
4	100	60
6	150	275

- 1) At 5% deflection.

Bending radius

Nominal Pipe Size		Minimum Bending Radius ¹	Maximum Deflection per 20-ft Joint	Minimum Length Required for 10° Change
(in)	(mm)	(ft)	(deg)	(ft)
2	50	75	15	13
3	80	100	10	20
4	100	150	7.5	27
6	150	200	5	40

- 1) At rated pressure. Sharper bends may create excessive stress concentrations. Do not bend pipe until adhesive has cured.

Conversions

1 psi = 6895 Pa = 0.07031 kg/cm²
1 bar = 10⁵ Pa = 14.5 psi = 1.02 kg/cm²
1 MPa = 10⁶ Pa = 145 psi = 10.2 kg/cm²
1 GPa = 10⁹ Pa = 145,000 psi = 10,200 kg/cm²
1 in = 25.4 mm
1 ft = 0.3048 m
1 lb-in = 0.113 N·m
°C = $\frac{5}{9}$ (°F - 32)

Important notice

This literature and the information and recommendations it contains are based on data reasonably believed to be reliable. However, such factors as variations in environment, application or installation, changes in operating procedures, or extrapolation of data may cause different results. Ameron makes no representation or warranty, express or implied, including warranties of merchantability or fitness *for purpose*, as to the accuracy, adequacy or completeness of the recommendations or information contained herein. Ameron assumes no liability whatsoever in connection with this literature or the information or recommendations it contains.



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Phone 03455-73341
Telex 40257 BONDSNL
Fax 03455-75254

Ameron (Pte) Ltd.
No. 7A, Tuas Avenue 3
Singapore 2263
phone 862-1301
Telex 38960 AMERONRS
Fax 862-1302

Manufacturing plants: Burkburnett, Texas; Spartanburg, South Carolina; Geldermalsen, The Netherlands and Singapore. Bondstrand pipe is also manufactured in Japan and Saudi Arabia.

OPW 233 EXTRACTOR FITTINGS

VAPOR LINE

OPW 233 Extractor Fittings allow ball float vent valves to be removed from underground storage tanks without breaking up concrete.

OPW 233V

The OPW 233V extractors are used to connect OPW 53V Ball Float Vent Valves to the vent lines in underground storage tanks. It is furnished complete with an extractable cage. The entire float vent sub-assembly can be extracted from the tank for tank testing by using the OPW 52 or 89 extractor wrench.

The OPW 233V extractor is a single outlet extractor.

Materials

Body: cast iron with Duragard® coating
Extractor cage: ZA12



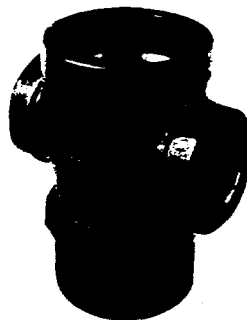
OPW 233VM

The OPW 233VM extractor is a multi-outlet extractor. It is available in 2 sizes, used in direct manifolded systems, vapor recovery, or where provisions for Stage II vapor recovery are needed.

All OPW 233V extractors are specially coated with black Duragard® coating for improved corrosion resistance and easier cage removal.

Materials

Body: cast iron with Duragard® coating
Extractor cage: ZA12



OPW 233

OPW 233 Extractor Fittings are designed for use with the 30MV Ball Float Vent Valves. **It is provided without a cage assembly.**

OPW 233VMP & 233VP Test Plugs

OPW Test Plugs are used to isolate the tank from the vent piping system during tank testing.

- ◆ 233VP-6046, WT.: .78 lbs.
- ◆ 233VMP-6047, WT.: 1.24 lbs.

Replacement Ports

OPW 233V and 233VM

Part No.	Description
H-8932	Cage SA

Ordering Specifications

Product No.	Top Thread		Outlet Thread		Bottom Thread		lbs.	kgs.	*Test Plugs
	in.	mm.	in.	mm.	in.	mm.			
233-4420 (Tee)*	4"	102	2"	51	4"	102 Ext.	13.89	6.31	233VP (6046)
233-4430 (Tee)*	4"	102	3"	76	4"	102 Ext.	14.06	6.39	233VP (6046)
233-4422 (Cross)*	4"	102	2"x2"	51x51	4"	102 Ext.	15.18	6.90	233VMP (6047)
233-4433 (Cross)	4"	102	3"x3"	76x76	4"	102 Ext.	15.54	7.06	233VP (6046)
233-4432 (Cross)*	4"	102	3"x2"	76x51	4"	102 Ext.	17.29	7.86	233VMP (6047)
233-5522 (Cross)	4"	102	2"x2"	51x51	4"	102 Ext.	15.18	6.90	233VP (6046)
233V-4420 (Tee)	4"	102	2"	51	4"	102 Ext.	15.33	6.99	233VP (6046)
233V-4430 (Tee)	4"	102	3"	76	4"	102 Ext.	12.50	5.68	233VP (6046)
233VM-4422 (Cross)	4"	102	2"x2"	51x51	4"	102 Ext.	16.62	7.55	233VMP (6047)
233VM-4433 (Cross)	4"	102	3"x3"	76x76	4"	102 Ext.	16.98	7.72	233VP (6046)
233VM-5522 (Cross)	4"	102	2"x2"	51x51	4"	102 Int.	16.62	7.55	233VMP (6046)
233VM-6045 (Cross)	4"	102	3"x2"	76x51	4"	102 Ext.	16.62	8.51	233VMP (6047)
233VM-604L (BSPP)	4"	102	3"x2"	76x51	4"	102 Ext.	18.73	8.51	233VMP (6047)

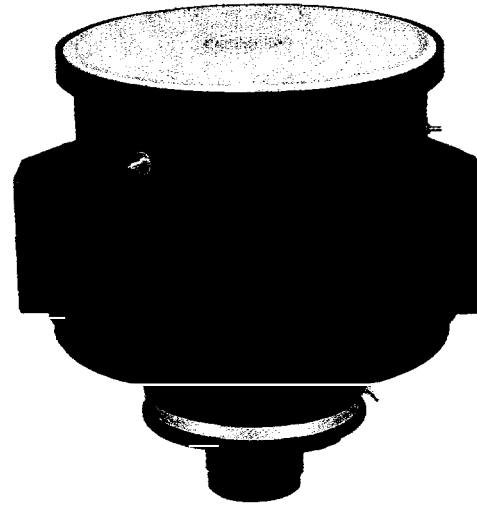
* without cage assembly

OPW 101BG-2100 SERIES BELOW-GRADE SPILL CONTAINERS

OPW Below-Grade Spill Containment Manholes are used in new tank or riser pipe installations. The watertight spill containment chamber is installed completely below grade level. A grade level manhole cover lies flush with the driveway grade to reduce a tripping hazard and the potential for damage from snow plows and traffic. Surface water drains into the backfill between the manhole skirt and the exterior of the containment bucket. Below-grade spill containers are available in thread-on and slip-on configurations in 5 and 15-gallon capacities.

Features:

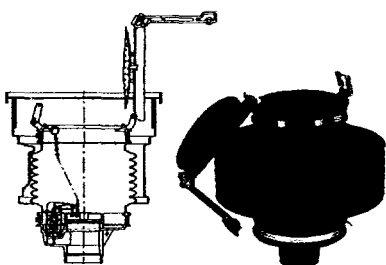
- ◆ **Pull-to-Open Drain Valve** - Allows high-speed drainage of excess product into the tank. Designed with a convenient self-cleaning seal and removable Screen for easier component cleaning. (CARB Approved)
- ◆ **Optional Hatch-Actuated Drain Valve** - As hatch is locked down, drain valve automatically opens, allowing any contained liquid to drain into tank.
- ◆ **Capacity** - 5-gallon and 15-gallon capacities.
- ◆ **Outer Shell** - The outer shell isolates the containment vessel from the surrounding concrete and gravel. This high density polyethylene shell is designed to provide space between the outer shell and the containment vessel to allow any surface water that enters to flow into the backfill, not the containment vessel. Elimination of water in the spill container reduces product contamination and ice formation during cold winter months.
- ◆ **Vapor-Tight Lid** - A unique, hinged and sealed containment vessel lid provides a vapor-tight seal, designed to prevent vapors from escaping at ground level while eliminating the accumulation of dirt and water that contaminate fuel. Incorporating a special lid interlock design, the grade level cover cannot be replaced on the outer shell without the lever being in the closed and locked position.
- ◆ **Composite Grade Level Cover** - Made of sturdy fiberglass reinforced composite, the grade cover is less prone to theft than aluminum covers, and lighter in weight than cast iron. In addition, the cover lies flush with the actual grade so no ramps are required to support the cover, eliminating snow plow hazards and "speed bumps."
(Optional steel plate cover is also available)
- ◆ **Fuel Compatibility** - Designed to accommodate the fuels of the future, including methanol, ethanol and fuels with MTBE additives.
- ◆ **Easy Installation** - Reduces job-site time and installation costs. Simply thread the Duratuff® II base (cast iron base is optional) onto a standard 4" schedule 40 pipe. Guides are provided to assure proper positioning of the spill container. The hinged lid orientation is adjustable during installation for site-specific placement.
- ◆ **Product Identification Tags** - Available for both the spill container cover and bucket to positively identify the product contained in the UST with standard API symbols. (See product I.D. tag specification page for more information: page 153.)
- ◆ **Highway 20 Rated (H20)** - All OPW spill containers and manholes exceed the requirements of the Highway 20 rating.



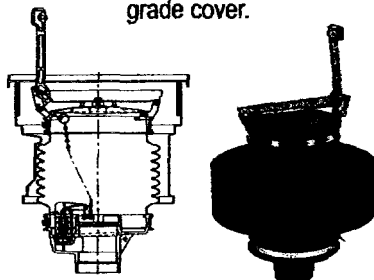
OPW 101BG-2115, 15-gallon

Important Notice. The OPW 101BG-2100 Spill Container Series does not prevent contamination of the soil or backfill resulting from spills flowing between the spill container and the outer shell. Ground contamination may result if the spill container is filled beyond capacity, or if a spill occurs outside the spill containment cell.

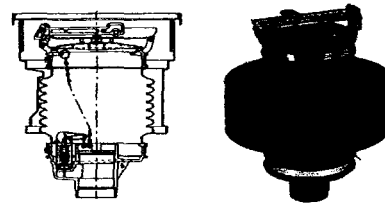
Lid and lever in open position.



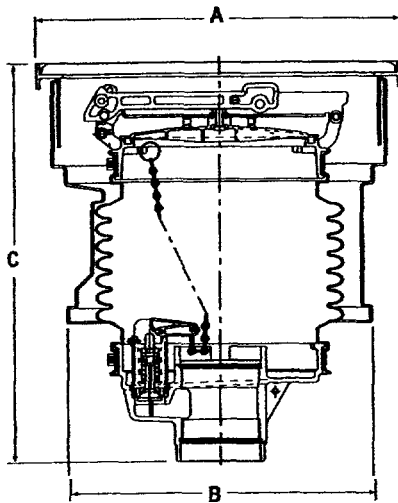
Lid down, but not dosed. Lever still in upright position preventing replacement of grade cover.



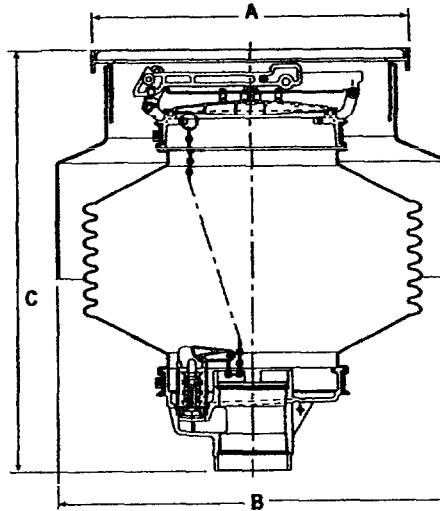
Lid and lever in closed and locked position. Grade cover now easily replaced on rim.



OPW 101BG-2100 SERIES BELOW-GRADE SPILL CONTAINERS



OPW 101BG-2100, 5-Gallon



OPW 101BG-2115, 15-Gallon

Dimensions

	101BG-2100		101BG-2115	
	in.	cm.	in.	cm.
A	20 ⁹ / ₁₆ "	52	20 ⁹ / ₁₆ "	52
B	17 ¹ / ₄ "	44	25 ¹ / ₂ "	65
C*	23 ¹ / ₁₆ "	59	27 ²⁷ / ₃₂ "	71

* Subtract 2" from "C" dimension for Cast Iron Base Models.

CARB Certifications and listings

101BG(S)-2100 101BG(S)-2115	Approval Letter #93-26
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Ordering Specifications

Duratuff® II Base Models

Model	Gal.	Liter	Drain		lbs.	kg.
			Valve	lbs. kg.		
101BG-2100	5	19	Pull	60	27	
101BG-2105**	5	19	None	60	27	
101BG-2115	15	57	Pull	65	29	
101BG-205S*	5	19	Pull	80	36	
101BG-215S*	15	57	Pull	85	38	

* Steel grade level cover.

** Slip on Base

Cast Iron Base Models

Model	Gal.	Liter	Drain		lbs.	kg.
			Valve	lbs. kg.		
101BG-2100C	5	19	Pull	72	33	
101BG-2115C	15	57	Pull	77	35	
101BG-205SC*	5	19	Pull	92	42	
101BG-215SC*	15	57	Pull	97	44	

* Steel grade level cover.

Materials:

Grade cover: fiberglass reinforced composite (steel optional)

Lid: glass reinforced composite

Lever, top case: polyethylene

Outer shell: polyethylene, powder-coated steel

Containment cell: polyethylene

Base: Duratuff® II or cast iron

Replacement Parts/Accessories

Part No.	Description
1DK-2100-EVR	Pull Drain Valve
101BG-21AR	Inside Hatch Height Extender
101BG-21LA	Red Lever and Crossarm Assembly

Part No.	Description
101BG-BUCKET	5 Gallon Replacement Spill Container
C04785M	5 Gallon Insert Support
C04476M	15 Gallon Insert Support
D01747M	Composite Manhole Cover

Part No.	Description
E00491	Complete Replacement Top Assembly
H11671M	Steel Manhole Cover
H12280M	Ringseal
H12620	Inside Hatch
P116-20LID	Steel Manhole Cover w/ID Tag System



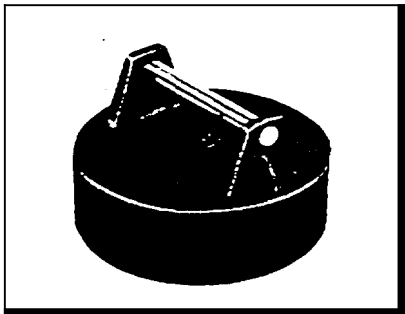
North America Toll Free - TELEPHONE: (800) 422-2525 • Fax: (800) 421-3297 • Email: domestic@opw-fc.com
International - TELEPHONE: (513) 870-3315 or (513) 870-3261 • Fax: (513) 870-3157 • Email: intl@opw-fc.com
www.opw-fc.com

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PIPE AND DUST CAPS

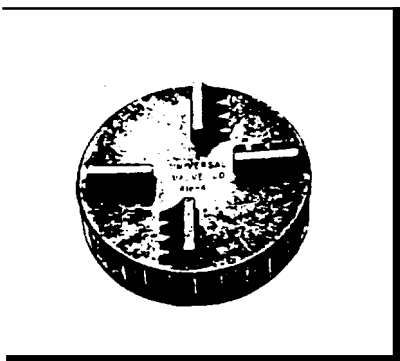
PIPE CAP - Used for capping pipe in extractor valve assemblies



412

Model#	Size	Weight (lbs.)	Material
412-30	7"	1.7	Bronze
412-40	4"	1.2	Aluminum-w gaske:

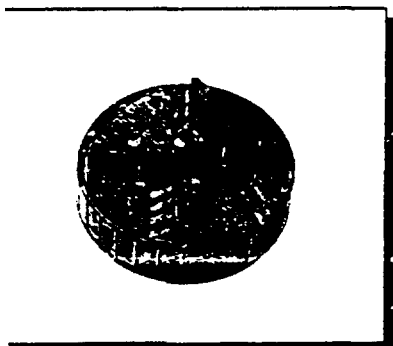
- All metal construction
- Plated steel crossbar



41a

Model #	Size	Weight (lbs.)

- Reinforced composite plastic construction
- Buna-N seal



418TM

Patent Pending

TANK MONITORING CAP - The cap features a built in liquid tight strain relief cord connector which allows installation of the leads of the in-tank monitor through the cap.

Model #	Size	Cable Grip	Weight (lbs.)
418TM-40	4"	3/8" Cable	0.6
418TM-40-15	4"	1/2" Cable	0.6

- Cord connector is UL # E79903 and CSA # LR50370-10 approved
- Reinforced composite plastic construction

OPW 61SO OVERFILL PREVENTION VALVES

Ordering Specifications and Dimensions

Product/ Suffix No.	Description	A-Upper Tube Length		B-Lower Tube Length		C-Overall Length		Max. Riser Length		Max. Nominal Tank Dia.		Max. Actual Tank Dia.		Weight		List Price
		in.	m.	in.	m.	in.	m.	in.	m.	in.	m.	in.	m.	lbs.	kg.	
61SO-3000	3" two-point	60"	1.5	83"	2.1	155 1/2"	4.0	53 1/2"	1.4	96"	2.5	108"	2.7	13	6	\$935.05
61SO-1000	Grooved-tube	60"	1.5	83"	2.1	154 1/2"	3.9	53 1/2"	1.4	96"	2.4	107"	2.7	17	8	\$535.35
61SO-100C	CARB, Grooved-tube	60"	1.5	83"	2.1	154 1/2"	3.9	53 1/2"	1.4	96"	2.4	107"	2.7	17	8	\$585.70
61SO-4000	4" two-point	60"	1.5	83"	2.1	154 1/2"	3.9	53 1/2"	1.4	96"	2.4	107"	2.7	16	7	\$455.20
61SO-4010	4" two-point	120"	3.1	102"	2.6	233 1/2"	5.9	113 1/2"	2.9	120"	3.1	126"	3.2	25	11	\$503.50
61SO-400C-EVR	CARB 4", two-point	60"	1.5	83"	2.1	154 1/2"	3.9	53 1/2"	1.4	96"	2.4	107"	2.7	16	7	\$476.00
61SO-410C-EVR	CARB 4", two-point	120"	3.1	102"	2.6	233 1/2"	5.9	113 1/2"	2.9	120"	3.1	126"	3.2	25	11	\$560.00
61SO-420C-EVR	CARB 4", two-point	120"	3.1	126"	3.2	257 1/2"	6.5	113 1/2"	2.9	144"	3.7	150"	3.8	26	12	\$567.00
61JSK-4400-EVR	Jack Screw Assembly; CARB 61SO Installation Kit. Required on all 61SO-EVR Models															
61SO-4901	4" KIWA two-point	60"	1.5	83"	2.1	154 1/2"	3.9	53 1/2"	1.4	96"	2.4	107"	2.7	17	8	\$470.95
61SO-490C	4" KIWA vapor-tight	60"	1.5	83"	2.1	154 1/2"	3.9	53 1/2"	1.4	96"	2.4	107"	2.7	16	7	\$581.30
61SOM-4121*‡	Two-point methanol	120"	3.1	not included		233 1/2"	5.9	113 1/2"	2.9	120"	3.1	126"	3.2	25	11	\$926.80
61SOM-412C-EVR*‡	CARB 4", two-point	120"	3.1	not included		233 1/2"	5.9	113 1/2"	2.9	120"	3.1	126"	3.2	25	11	\$940.15
61SOC-4001	Coaxial	60"	1.5	83"	2.1	154 1/2"	3.9	53 1/2"	1.4	96"	2.4	107"	2.7	16	7	\$545.30
61SOC-4011	Coaxial	120"	3.1	102"	2.6	233 1/2"	5.9	113 1/2"	2.9	120"	3.1	126"	3.2	25	11	\$584.65
61SOP-4002	CARB, pop. coaxial	60"	1.5	83"	2.1	154 1/2"	3.9	53 1/2"	1.4	96"	2.4	107"	2.7	20	9	\$717.20
61SOP-4012	CARB, pop. coaxial	108"	2.7	102"	2.6	221 1/2"	5.6	101 1/2"	2.6	120"	3.1	126"	3.2	27	12	\$760.35
61SOCM-4000*‡	Coaxial, methanol	120"	3.1	not included		233 1/2"	5.9	113 1/2"	2.9	120"	3.1	126"	3.2	25	11	\$754.20
61SO-4BYT	Overfill valve only, no drop tubes supplied															
61SOR-4000**	Remote	72"	1.8	83"	2.1	166 1/2"	4.2	65 1/2"	1.7	96"	2.4	107"	2.7	19	9	\$680.29
61SORM-4000***‡	Remote, methanol	72"	1.8	not included		185 1/2"	4.7	65 1/2"	1.7	120"	3.1	126"	3.2	19	9	\$926.80
61JSK-4RMT	Jack Screw Kit for Remote application															

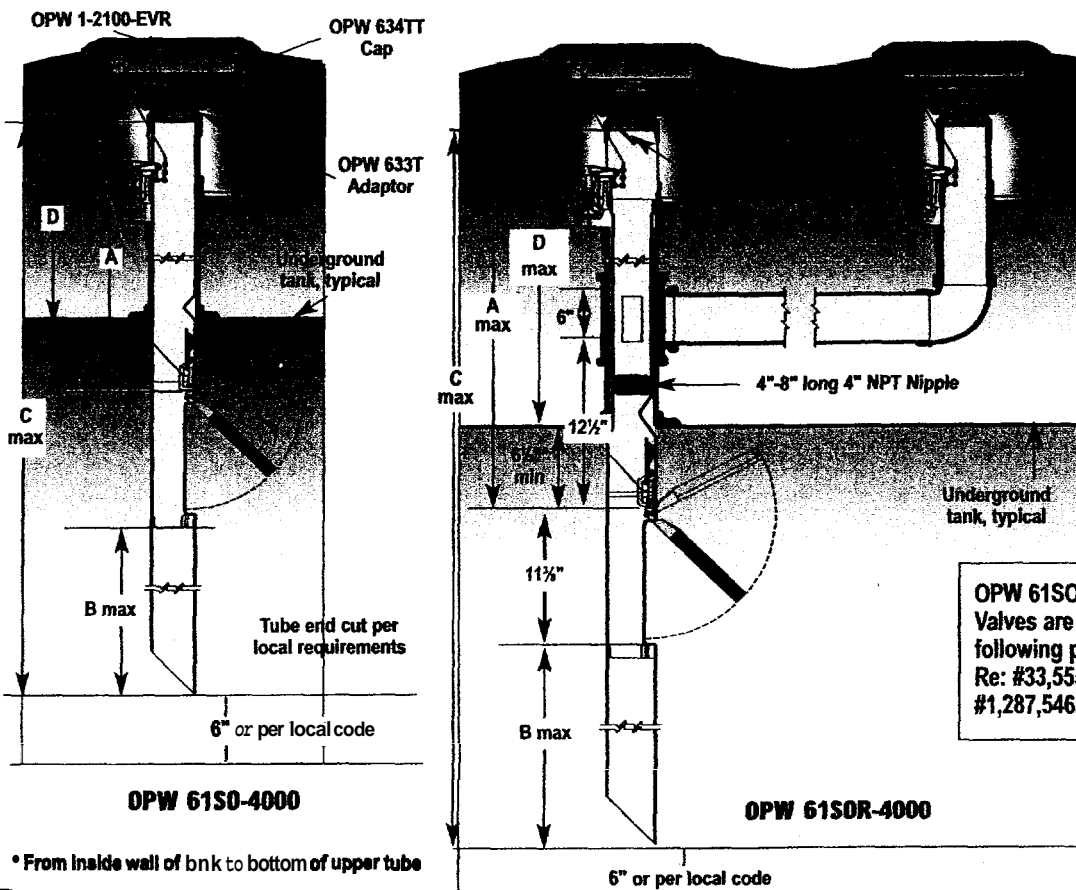
*For use with M85 & M100 methanol fuels **Remote fill applications ***Remote fill, methanol

‡ Methanol models do not include lower drop tube. Adaptor for 3" A.O. Smith Fiberglass Pipe (Drop Tube) is included. Appropriate length of 3" A.O. Smith Fiberglass Pipe is required for lower Drop Tube (not furnished).

All valves above are compatible with 85% Ethanol (E85).

Typical Application Assembly

installation schematic typical; exact dimensions will vary with tank configuration.



Replacement Parts

Part No.	Description
61SOK-0001	Float Kit
CS3889M	Two-point inlet tube
CO3632M	Coaxial inlet tube
D01756	Inlet Tube/Adaptor Assy. for 61SOP

OPW 61SO Overfill Prevention Valves are covered under the following patent: #4,986,320. Re: #33,555 and Canadian patent #1,287,546. Other patents pending.

* From inside wall of tank to bottom of upper tube

OPW VAPOR VENTS

OPEN VENT

OPW 23

The OPW 23 is an open vent and directs vapors upward in accordance with NFPA Code 30. This vent features an aluminum body and a 40-mesh brass screen. Set screws make installation easy.

Materials

Body: aluminum
Screen: 40-mesh brass
Set Screws: brass

Ordering Specifications

Product No.	in.	mm.	oz.	kg.	Description
23-0044	1½"	38	3.8	.11	open vent
23-0033	2"	51	4.3	.12	open vent
23-0055	3"	76	5.0	.14	open vent

Replacement Parts

Part No.	Description
H-00122-M	Screw
H-01967	Nut
H-01969	Screen



PRESSURE VACUUM VENTS

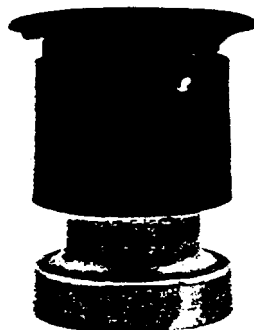
The OPW 523 and 523S Pressure Vacuum Vents maintain the required pressure in the UST to prevent vapor loss.

OPW 523

The OPW 523 Pressure Vacuum Vents discharge upward and are available with a 1 oz., 8 oz. or 12 oz. pressure setting and a ½ oz. vacuum setting. Now available in corrosion resistant Duratuff®, the OPW 523 comes in 2" and 3" sizes and has a thread-on connection. The rated maximum flow pressure drop is 2 psi at 7000 SCFH. The OPW 523 is UL listed and complies with NFPA code 30.



523 2"



523 3"



523S 2"

OPW 523S

The OPW 523S Pressure Vacuum Vent is similar to the 523 except that it is attached to the vent line with clamps for the 2" and set screws for the 3". The rated maximum flow pressure drop is 2 psi at 7000 SCFH. The OPW 523S is UL listed and complies with NFPA code 30.

Materials

Body and Cap: Duratuff®
Screen and Fasteners: stainless steel
Seat Ring: anodized aluminum
Adaptor: 2" - Duratuff®
3 - ZA-12 alloy

Ordering Specifications

Product No.	in.	mm.	ozs.	kg.	Description
523LP-2200	2"	51	12	.34	1 oz, threads
523LP-2205	2"	51	12	.34	1" wc, threads
523LPS-2250	2"	51	12	.34	1 oz, set screws
523LPS-2255	2"	51	12	.34	1" wc, threads
523LP-3200	3"	76	35	1.0	1 oz, threads
523LP-3205	3"	76	35	1.0	1" wc, threads
523LPS-3250	3"	76	35	1.0	1 oz, set screws
523LPS-3255	3"	76	35	1.0	1" wc, threads
523-1100	2"	51	12	.34	8 oz, threads
523S-1150	2"	51	12	.34	8 oz, set screws
523-3100	3"	76	35	1.0	8 oz, threads
523S-3150	3"	76	35	1.0	8 oz, set screws
523-2300	2"	51	12	.34	12 oz, threads
523S-2350	2"	51	12	.34	12 oz, set screws
523-3300	3"	76	35	1.0	12 oz, threads
523S-3350	3"	76	35	1.0	12 oz, set screws

OPW TIGHT FILL EQUIPMENT

TOP SEAL CAPS

OPW 634TT

The OPW 634TT is designed to mate with the 633T and other similar top seal adaptors.

Heavy duty and corrosion resistant, the body is made of Duratuff® to help eliminate rust and oxidation for a long, maintenance free life.

The toggle lever distributes downward pressure to compress its buna-N gasket evenly, assuring a positive, uniform, leakproof seal. The 634TT can be locked with a padlock or wire seal.

Materials

Cap 8 links: Duratuff®
 Pins: stainless steel
 Gasket: buna-N
 Color: grey

Ordering Specifications

Product No.	in.	mm.	lbs.	kg.
→ 634TT-7085	4"	102	1.01	.46

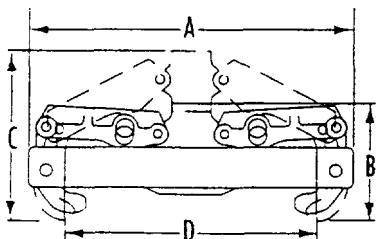
Replacement Parts

Port No.	Description
H-05995-M	Buno-N Gasket



Dimensions

	in.	mm.
A	7"	178
B	2 1/8"	62
C	3 3/8"	86
D	5 1/8"	138



OPW 634TE

The OPW 634TE mates with the OPW 633T and similar competitive adaptors.

When removing the cap of the 634TE, the cam action of the locking lever will force the cap free from the adaptor.

The locking lever also has a cam action against the top of the groove in the adaptor. This provides a pull down action on the cap and a positive water and vapor tight seal. The 634TE can be locked with a padlock or wire seal. Patent 3118561

Materials

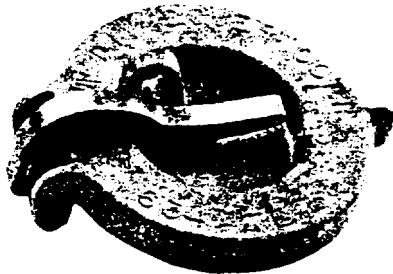
Cap: Duratuff®
 Lever: brass
 Gasket: buna-N
 Pivot pin: stainless steel
 Color: grey

Ordering Specifications

Product No.	in.	mm.	lbs.	kg.
634TE-7085	3	76	1.11	.50

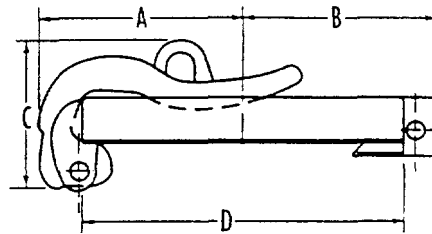
Replacement Parts

Port No.	Description
C-01094-RB	lever
H-10765-M	Gasket
H-10731-RE	Pivot Pin



Dimensions

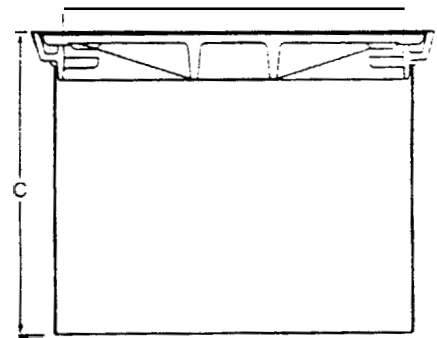
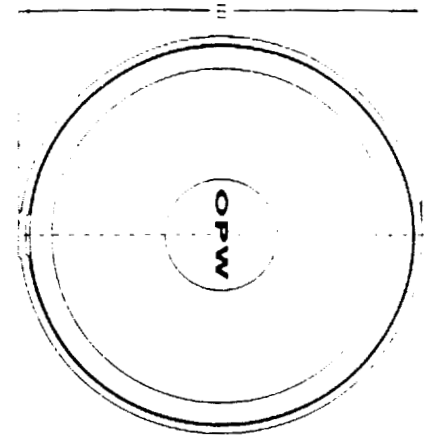
	in.	mm.
A	2 9/16"	67
B	2 9/16"	64
C	2 3/8"	56
D	4 1/8"	105



IMPORTANT OPW products should be used in compliance with applicable federal, state and local laws and regulations. Product selection should be based on physical specifications and limitations and compatibility with the environment and material to be handled. **OPW MAKES NO WARRANTY OF FITNESS FOR A PARTICULAR USE.** All illustrations and specifications in this literature are based on the latest product information available at the time of publication. **Dover/OPW reserves the right to make changes at any time in prices, materials, specifications and models and to discontinue models without notice or obligation.**

OPW 104A ALL PURPOSE CAST IRON MANHOLE

The OPW 104A manholes are designed for use in a wide variety of service stations, commercial, and industrial driveway applications. The 104A cast iron covers and body rings are heavily ribbed to ensure maximum load bearing capacity. The sturdy steel skirt on the standard 104A extends nearly a foot below grade to ensure trouble-free installation in deep concrete. Optional skirts that extend a full 19 1/4" below grade are available in the 12" and 18" diameter models for sandy soil locations.



Features include:

- Full size throat diameters for maximum access
- H₂O Load Rating
- ◆ Rugged cast iron covers and body rings
- Cast-in non-skid finish on covers
- Sturdy, extra long steel skirts
- ◆ Individually boxed for ease of handling

Materials

Body ring: cast iron
Cover: cast iron
Skirt: steel

Ordering Specifications

Product	ID(in.)	ID(mm.)	lbs.	kg.
104A-0800	8"	203	15	6.8
104A-1200	12"	305	28	12.7
104A-1219	12"	305	33	15.0
104A-1800	18"	457	50	22.7
104A-1819	18"	457	57	25.9

Replacement Ports

Port No.	Description
E00508M	Cover for 8" 104A-0800
E00510M	Cover for 12" 104A-1200
E00512M	Cover for 18" 104A-1800

Dimensions

Product	A	B	C
104A-0800	8"	10 1/4"	11 1/2"
104A-1200	12"	14 1/4"	11 1/2"
104A-1219	12"	14 1/4"	19 1/4"
104A-1800	18"	20 1/4"	11 1/2"
104A-1819	18"	20 1/4"	19 1/2"

POMECO/OPW 110/120 SERIES STEEL ROUND MANHOLES

POMECO/OPW 110/120 series Round Manholes are designed for use in a wide range of service station driveway, industrial, and commercial applications. The 110s and 120s are used to provide access to all types of underground equipment, including vapor recovery connections, UST monitoring equipment and submersible pumps. The 120 Series includes Roto-Lock fasteners on 24" and larger manholes.

Features

- ◆ **Standard and Raintight Models Available** - Raintight models include Buna-N gaskets and recessed hex-head bolts or Roto-Lock fasteners to help prevent water intrusion.
- ◆ **Wide Range of Sizes** - Sizes range from 8" to 48" (25 to 122 cm) to accommodate a wide range of applications. Custom sizes and configurations are also available.
- ◆ **Easy Cover Removal** - An integral recessed handle is included on all raintight and plain manholes 24" and larger. Manholes 42" and larger include dual recessed handles and provision for centered 1/2" - 13 threaded allen head **Mind plug** for easy removal so that a 1/2" - 13 eyebolt can be threaded into the hole for easier removal of covers.
- ◆ **Highway 20 Rated (H20)** - All OPW spill containers and manholes exceed the requirements of the Highway 20 rating.

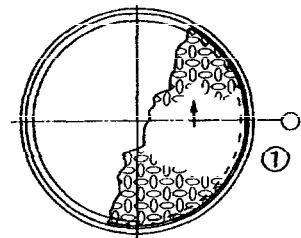
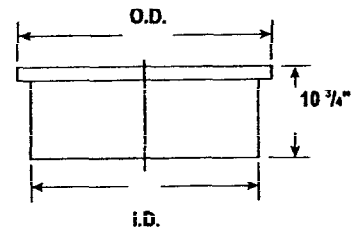
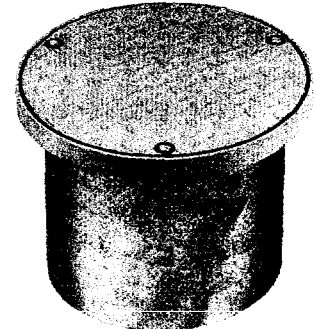
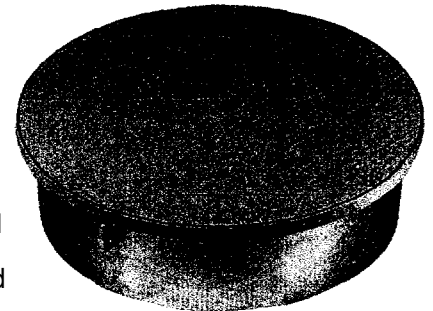
Ordering Specifications

Model No.	Description	O.D.		I.D.		Thickness	Weight			Ring
		in.	cm.	in.	cm.		in.	cm.	lbs.	
6110-0800	Standard	9 7/8"	25	8"	20	3/8"	9	12	5	Cast Iron
6110-08WT	Raintight	9 7/8"	25	8"	20	3/8"	9	12	5	Cast Iron
6110-12WT	Raintight	14 1/2"	35	12"	30	3/8"	9	30	14	Fab. Steel
6110-1200	Standard	14 1/2"	35	12"	30	3/8"	9	30	14	Fab. Steel
6110-16WT	Raintight	18"	46	16"	41	3/8"	9	45	20	Fab. Steel
6110-1600	Standard	18"	46	16"	41	3/8"	9	45	20	Fab. Steel
6110-18WT	Raintight	20 1/4"	51	18"	46	3/8"	9	54	25	Fab. Steel
6110-1800	Standard	20 1/4"	51	18"	46	3/8"	9	54	25	Fab. Steel
6110-24WT	Raintight	24"	61	21 5/8"	55	3/8"	9	88	40	Fab. Steel
6110-2410	Standard*	24"	61	22 3/4"	50	3/8"	9	88	40	Fab. Steel
6110-30WT		30"	76	27 5/8"	70	1/2"	13	160	73	Fab. Steel
6110-3010	Standard*	30"	76	27 5/8"	70	3/8"	9	160	73	Fab. Steel
6110-37WT	Raintight*	37"	94	34 5/8"	80	1/2"	13	178	81	Fab. Steel
6110-3710	Standard*	37"	94	34 5/8"	88	3/8"	9	178	81	Fab. Steel
6110-37TX	Standard**	37"	94	34 5/8"	88	3/8"	9	178	81	Fab. Steel
6110-4010	Standard*	40"	102	37 5/8"	96	3/8"	9	198	90	Fab. Steel
6110-42WT	Raintight*	42"	107	39 5/8"	101	1/2"	13	290	132	Fab. Steel
6110-4200	Standard	42"	107	39 5/8"	101	1/2"	13	290	132	Fab. Steel
6110-48WT	Raintight*	48"	122	45 5/8"	116	3/4"	19	390	177	Fab. Steel
6120-12WT	Roto-Lock Raintight	13 3/4"	35	12"	30	3/8"	9	30	14	Fab. Steel
6120-18WT	Roto-Lock Raintight	20 1/8"	51	19"	46	3/8"	9	54	25	Fab. Steel
6120-24WT	Roto-Lock Raintight 24WT*	24"	61	22 5/8"	55	3/8"	9	88	40	Fab. Steel
6120-30WT	Roto-Lock Raintight 30WT*	30"	76	28 5/8"	70	1/2"	13	160	73	Fab. Steel
6120-37WT	Roto-Lock Raintight 37WT*	37"	94	35 5/8"	88	3/8"	13	178	81	Fab. Steel
6120-42WT	Roto-Lock Raintight 42WT*	42"	107	40 5/8"	101	1/2"	13	290	132	Fab. Steel
6120-48WT	Roto-Lock Raintight 48WT*	48"	122	46 5/8"	116	1/2"	19	390	177	Fab. Steel

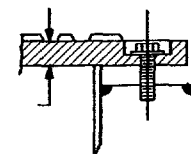
* Recessed Handle ** Reinforced Cover
Standard - Plain No Bolts Raintight - Bolt Down Deep skirts available upon request.

Replacement Parts

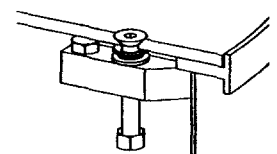
Part No.	Description	Part No.	Description
P110-Handle	Replacement Handle Kit	P120-GKIT	120 Roto-Lock Hardware & Gasket Kit for 37" & 42" Covers
P110-12G	12" Replacement Gasket	P110-12L	Replacement Cover 12"
P110-16G	16" Replacement Gasket	P110-16L	Replacement Cover 16"
P110-18G	18" Replacement Gasket	P110-18L	Replacement Cover 18"
P110-24G	24" Replacement Gasket	P110-24L	Replacement Cover 24"
P110-30G	30" Replacement Gasket	P110-37L	Replacement Cover 37"
P110-37G	37" Replacement Gasket	P110-40L	Replacement Cover 40"
P110-42G	42" Replacement Gasket	P110-42L	Replacement Cover 42"
P110-48G	48" Replacement Gasket	P110-48L	Replacement Cover 48"
P110-36TEE	"T" Handle Cover Lifter	P120-36L	Replacement Cover 36" Roto-Lock
P110-GKIT	110 Series Gasket Kit up to 42" manholes	P120-37L	Replacement Cover 37" Roto-Lock
PROTO-Lock	(1) Replacement Rotolock	P120-42L	Replacement Cover 42" Roto-Lock



Section 1
(See Lid Thickness Dimensions)



Hex Head Detail
5/16" Bolt



Roto-Lock Detail
3/4" Hex

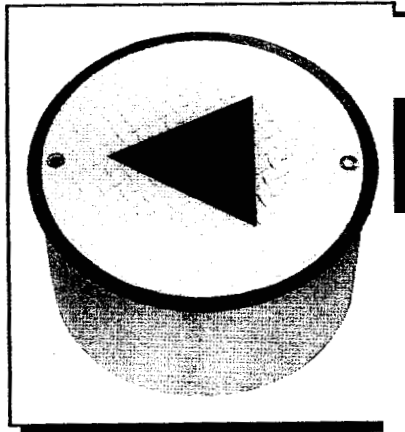
Materials:

Skirt: galvanized steel
Cover: steel diamond plate
Ring: cast iron or fabricated steel
Gasket: Buna-N

Contact Customer Service For
Specials, Powder Coating or
Tee Handles.



MONITORING WELL MANHOLES



98MW

MONITORING WELL MANHOLE - Recommended for applications where more than a 12" manhole is needed.

Model #	Size	Weight (lbs.)	Height	Width
98MW-1810	18" x 10"	48.0	9 1/2"	18"

NOTE: Cover is painted white with Mack triangle and features non-corrosive polymeric coating.

- Cast ring for maximum strength
- 18 gauge galvanized steel skirt
- 2 flush mount stainless steel bolts for security
- 3/8" diamond plate steel cover
- Carries the H-20 load rating