

UST SYSTEM COMPONENTS	DOCUMENTATION DEMONSTRATING COMPATIBILITY WITH SUBSTANCE LISTED ABOVE		METHOD A or B (MAY USE BOTH)	DESCRIPTION OF COMPONENT TYPE, MODEL NUMBER, & NATIONAL LABORATORY CERTIFICATION, LISTING OR MANUFACTURER APPROVAL (ATTACH TO CHECKLIST)
RELEASE DETECTION EQUIPMENT	NO	YES	B	Veeder-Root interstitial tank sensor. 794380-345 Sump sensor. 794380-323 Veeder-Root PLLD
SPILL PREVENTION EQUIPMENT	NO	YES	B	Manufacturer approval statement. OPW 1C-3112D spill container.
OVERFILL PREVENTION EQUIPMENT	NO	YES	B	Manufacturer approval statement. OPW 71SOM overfill drop tube.
GASKETS & SEALS	NO	YES	B	
JOINT ADHESIVES	NO	YES	B	Gasola E-85 compatible.

Methods:

- A. Certification or listing of UST system equipment or components by a nationally recognized, independent testing laboratory for use with the regulated substance stored.
- B. Equipment or manufacturer approval. The manufacturer's approval must be in writing, indicate an affirmative statement of compatibility, specify the range of biofuel blends the component is compatible with, and be from the equipment or component manufacturer

Note: Owners and operators may find American Petroleum Institute's Recommended Practice 1626, *Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Filling Stations*, useful in complying with the compatibility requirements.

In order to be in compliance with the 2015 federal UST regulation compatibility requirements for storing biofuels, you must keep documentation of compatibility of the UST system components listed on this page as long as you store the fuel.

For your records, you should update this checklist each time you repair or replace components of your UST system to ensure you have all the required compatibility documentation while storing biofuels.

Checklist Completed By: print name: Hayt. Arv date complete 12/5/18
 signature: [Signature] position/title: Estimator



Below Ground Products Fuel Compatibility Matrix

Updated 1/2015

OPW Product Number	Description	Standard Fuels: ≤15% Ethanol Gasoline ≤5% Bio-Diesel*	High Ethanol Content Gasoline: 15-100% Ethanol	High Biodiesel Content 5-20% Biodiesel*	Av- Gas / Jet Fuel	Kerosene / Fuel Oil
CXXA Double Wall Piping	Double Wall Primary Piping	X	X	X	X	X
DPC-2150/DPC-2200	Double Wall Pipe Couplings	X	X	X	X	X
SPC-0150, SPC-0200, SPC-0300	Single Wall Pipe Coupling	X	X	X	X	X
SPC-0075, SPC-0100	Single Wall Coupling Male NPT	X	X	X	X	X
SMA-1515, SMA-1520, SMA-2020, SMA-3030	E-Coated Male Adaptors	X	X	X	X	X
STF-1515, STF-2020, STF-2215, STF-2020	E-Coated Swivel Tees	X	X	X	X	X
SEF-1515, SRE-2015, SEF-2020, SEF-3030	E-Coated Swivel Elbows	X	X	X	X	X
SBC-2150, SBC-2200	Stainless Steel Swivel Bolt On Coupling	X	X	X	X	X
SMA-7575, SMA-1010	Swivel Male Adaptor (Brass or Zinc Plated)	X			X	X
SFA-7575, SFA-1010	Swivel Female Adaptor (Brass or Zinc Plated)	X			X	X
1-2100 Series / Multiports	Spill Containers	X	X	X	X	X
101BG-Series	Spill Containers	X	X	X	X	X
1-3100 Series (Edge)	Double Wall & Single Wall Spill Container Series	X	X	X	X	X
60V Series	Vapor Line Shear Valve	X	X	X	X	X
10 Series	Emergency Shut Off Valve	X	X	X	X	X
10 Plus Series	Emergency Shut Off Valve	X	X	X	X	X
10P-0152E85	E85 UL Approved Emergency Shut Off Valve	X	UL	X	X	X
61SALP-1020-EVR	Fill Swivel Adaptor	X	X	X	X	X
633T-8076	Fill Adaptor	X	X	X	X	X
61VSA-1020-EVR	Vapor Swivel Adaptor	X	X	X	X	X
1611AVB-1625	Vapor Adaptor	X	X	X	X	X
634TT-7085-EVR	Fill Cap	X	X	X	X	X
1711T-7085-EVR	Vapor Cap	X	X	X	X	X
634LPC-040	Low Profile Fill Cap	X	X	X	X	X
1711LPC-0300	Low Profile Vapor Cap	X	X	X	X	X
62M Series	Monitoring Probe Cap	X	X	X	X	X
6150 Series	Overfill Valve	X			X	X
6150M Series	Overfill Valve Anodized	X	X		X	X
6111 & 61TP Series	Tank Bottom Protectors	X			X	X
61T Series	Drop Tubes	X			X	X
7150 Series	Overfill Valve	X			X	X
7150M Series	Overfill Valve	X	X		X	X
233 Series	Extractor Valve	X	X	X	X	X
FCXX Series	Stainless Flex Connectors	X	X	X	X	X
53VML/30MV Series	Ball Floats	X	X	X	X	X
523V Series	Pressure Vacuum Vent	X	X	X	X	X
623V Series	Pressure Vacuum Vent	X	X	X	X	X

* Bio-Diesel must meet ASTM Standard for fuel quality to maintain compatibility with products above

UL - Emergency valve has UL or UL Approval for greater than 15% Ethanol Content ≤ Refers to less than or equal to the fuel standard rating for percentage of content

OPW 7150 Overfill Prevention Valves

The CARB-certified OPW 7150 vapor-tight Overfill Prevention Valve is designed to prevent the overfill of underground storage tanks by providing a positive shut-off of product delivery. The shut-off valve is an integral part of the drop tube used for gravity filling. The OPW 7150 allows easy installation (without breaking concrete) and requires no special manholes.

The OPW 7150 is a vapor-tight two-stage shut-off valve. When the liquid level rises to about 95% of tank capacity, the valve mechanism is released, closing automatically with the flow. This reduces the flow rate to approximately 5 gpm through a bypass valve. The operator may then stop the filling process and disconnect and drain the delivery hose. As long as the liquid exceeds the 95% level, the valve will close automatically each time delivery is attempted.

If the delivery is not stopped and the liquid rises to about 98% of tank capacity, the bypass valve closes completely. No additional liquid can flow into the tank until the level drops below a reset point.

NOTE: The 7150 Overfill Prevention Valve can be adjusted to shutoff at any desired tank capacity. Please contact the Authority Having Jurisdiction (AHJ) and review local, state, and national codes to determine the regulatory requirements governing shut-off capacity in your region, as well as take into account other considerations such as extreme tank tilt. In all cases, the upper tube must protrude into the tank at least 6 1/2" to ensure that the valve can shut off flow into the tank completely before the top of the tank is wetted as per EPA requirements.

7150 Instruction Sheet Order Number: H15524PA

Listings and Certifications



Materials

- Valve Body:** Cast aluminum
- Float:** Nitrile rubber, closed cell foam
- Valve:** Aluminum
- Seals:** Viton®
- Upper & lower Drop Tube:** Aluminum
- Plastic parts:** Acetal
- Hardware:** Stainless steel

Features

- ◆ **Simple, Easy and Quick Installation** – no excavation or special manholes required.
- ◆ **Economical** – costs a fraction of expensive, complicated and difficult-to-install valves.
- ◆ **Furnished Complete** – supplied with new upper and lower drop tubes, mounting hardware and thorough instructions for quick job site time.
- ◆ **Completely Automatic Operation** – no prechecks to perform, no resets and no overrides to be broken or abused.
- ◆ **No Pressurization of the Tank** – operates directly from liquid level.
- ◆ **Will Accept a Dipstick for Gauging**
- ◆ **Retrofits Directly** – for both new and existing tanks with 4" fill risers.
- ◆ **Quick Drain Feature** – automatically drains hose when head pressure is relieved.
- ◆ **Best Flow Rate in The Industry***

* OPW Test Lab results

Advantages of Overfill Prevention Compared to Overfill Warning Systems:

- ◆ **Completely Automatic Operation** – does not rely on the alertness or speed of response of the delivery attendant for certainty of overfill prevention.
- ◆ **Keeps the Top of UST "Dry," per EPA Requirements** – eliminating possible leaks at loose bung fittings and the need for double containment on vent lines.
- ◆ **Does Not Rely on Pressure in the UST to Stop Flow** – allowing faster fill times and reducing spill risk.
- ◆ **Speeds Delivery Operations** – product flows unimpeded into the tank until the hose "kick" that accompanies the valve shut-off provides a clear signal that the liquid has reached the shut-off level.
- ◆ **Simple and Inexpensive Installation** – in both two-point and coaxial fill applications, no additional excavation, manholes or vent piping are required.



Look for this label for authentic OPW EVR Approved products.
OPW 7150 is EVR Approved for E85



Important

In order to prevent product spillage from the Underground Storage Tank (UST), properly maintained delivery equipment and a proper connection at the tight-fill adaptor are essential. Delivery personnel should be managed and trained to inspect delivery elbows and hoses for damaged and missing parts. They should always make certain there is a positive connection between the adaptor and elbow. If delivery equipment is not properly maintained, or the elbow is not securely coupled to the adaptor, a serious spill may result when the OPW 7150 closes, causing a hazard and environmental contamination.

NOTE: The OPW 7150 is designed for use on tight-fill gravity drop applications only. Do not use for pressure fill applications.

Raising The Standard In Overfill Prevention

From the company that brought you the industry standard OPW 6150, OPW raises the standard with the introduction of the **7150 Overfill Prevention Valve** – breakthrough innovation that takes overfill prevention to a whole new level of overfill perfection.

- **Eliminates curing issues due to hot or cold temperatures**
- **Easier, quicker, installation**
- **Higher quality, more reliable installation**
- **Lower costs**
- **Greater protection against fugitive emissions and pressure decay**
- **Fastest flow rate in the industry**

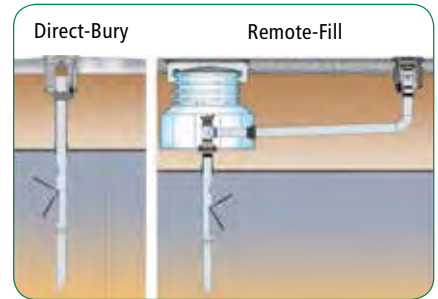
The new 7150 is a two-stage, positive shut-off valve, providing completely automatic operation with no pre-checks to perform, no resets, and no overrides to be broken or abused. The valve closes when the tank level rises to 95% capacity and provides a special bypass valve so the tank can be filled to a maximum capacity of 98%. The 7150 is available for direct-bury and remote applications.



All Vapor-Tight Overfill Valves are CARB EVR Certified



No Epoxy Sealants Required!



Replacement Parts

Part #	Description
61SOK-0001	Replacement Float Kit
H11931M	Drop Tube Seal
H14840M	Lower Tube Seal

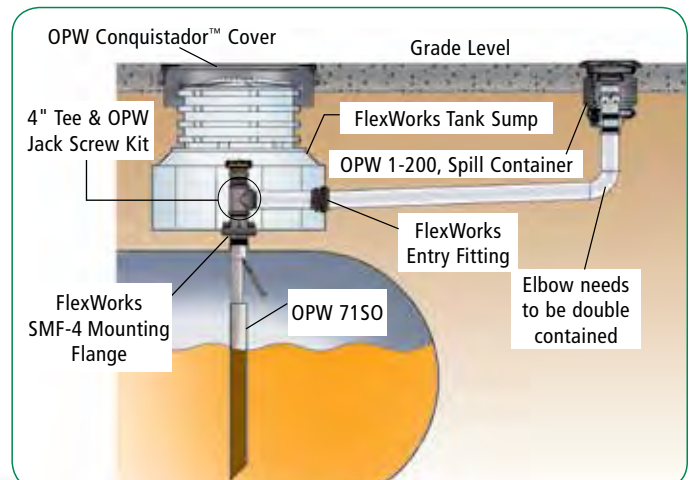
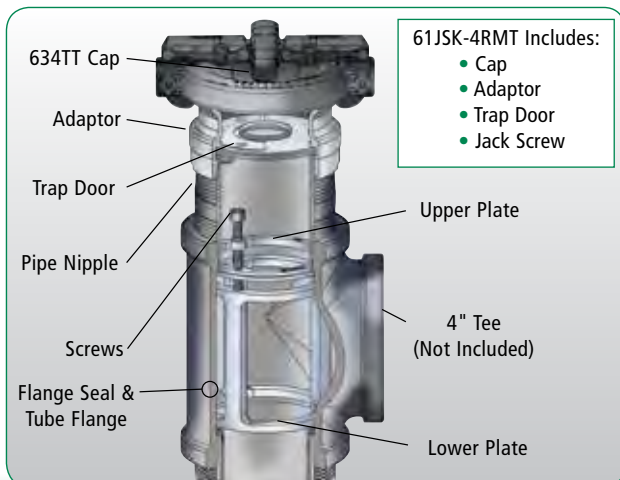
7150 Ordering Specifications

Product #	Description	Bury Depth		Tank Diameter		Upper Tube Length		Lower Tube Length		Overall Length		Max. Riser Length		Max. Nominal Tank Dia.		Max. Actual Tank Dia.		Weight	
		ft.	m	ft.	m	in.	m	in.	m	in.	m	in.	m	in.	m	in.	m	lbs.	kg
7150-400C	Vapor-Tight Overfill Valve	5	1.5	8	2.4	60	1.5	83	2.1	155 ³ / ₄	3.9	53 ¹ / ₂	1.4	96	2.4	107	2.7	16	7
7150-410C	Vapor-Tight Overfill Valve	10	3.0	10	3.0	120	3.1	102	2.6	234 ³ / ₄	5.9	113 ¹ / ₂	2.9	120	3.1	126	3.2	25	11
7150-420C	Vapor-Tight Overfill Valve	10	3.0	12	3.6	120	3.1	126	3.2	258 ³ / ₄	6.5	113 ¹ / ₂	2.9	144	3.7	150	3.8	26	12
7150-4000	Non Vapor-tight Overfill Valve	5	1.5	8	2.4	60	1.5	83	2.1	155 ³ / ₄	3.9	53 ¹ / ₂	1.4	96	2.4	107	2.7	16	7
7150-4010	Non Vapor-tight Overfill Valve	10	3.0	10	3.0	120	3.1	102	2.6	234 ³ / ₄	5.9	113 ¹ / ₂	2.9	120	3.1	126	3.2	25	11
7150M-412C	E85 Vapor-tight Overfill Valve	10	3.0	10	3.0	120	3.1	102	2.6	234 ³ / ₄	5.9	113 ¹ / ₂	2.9	120	3.1	126	3.2	38	17.3
7150-TOOLCT	7150 Installation Tool																	2.5	1
61JSK-4RMT	Jack Screw Kit For Vapor-Tight Remote Applications																	1.5	0.7
61JSK-4410	Jack Screw Kit For Composite Base Spill Bucketst																	1	0.5
61JSK-44CB	Jack Screw Kit For Cast Iron Base Spill Buckets																	1	0.5
71JSK-4RMT	E85 Jack Screw for Remote-Fill Applications																	1	0.5
71JSK-44MA	E85 Jack Screw for Direct-Fill Applications																	1.5	0.7

61JSK-4410 AND 61JSK-44CB Instruction Sheet Order Number: **H15289M**

7150 Vapor-Tight Remote Fill

The OPW Vapor-Tight Remote Fill is designed for two-point vapor-tight remote-fill applications, where the fill point is not directly over the UST. A CARB approved vapor-tight 7150 overfill valve is installed in the sump through a riser pipe directly over the tank.



Sensor Application Matrix

Sensor Description	Form #	Page #	Where Used							Category						Fuel Compatibility											
			Dispenser Pan	Spill Containment	STP Sump	Convault Tank	Annular Space	Monitoring Well	Oil/Water Separator tank	Discriminating	Non-Discriminating	Position Sensitive	Level Sensing	Static Testing	Hydrostatic	100% Gasoline	Diesel	Kerosene	Jet Fuel	Aviation Gas	E-15	E-85	E-100	Bio-Diesel 20	Bio-Diesel 100	Renewable (Green) Diesel	Diesel Exhaust Fuel (DEF)
DPS Standard Dispenser Pan	794380-322	2	X	X					X					X	X	X	X	X	X	X ¹		X		X		X	X
CSS Standard Containment Sump	794380-352	3		X	X				X					X	X	X	X	X	X	X ¹		X		X		X	X
DPO Optical Dispenser Pan	794380-320	4	X	X					X					X	X	X	X	X	X	X ¹		X		X		X	X
CSO Optical Containment Sump	794380-350	5		X	X				X					X	X	X	X	X	X	X ¹		X		X		X	X
MSS Mag Sump Sensor	857080-XXX	6	X	X	X				X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SSDP Solid State Dispenser Pan	794380-321	7	X	X						X				X	X	X	X	X	X			X	X	X		X	X
SSCS Solid State Containment Sump	794380-351	8		X	X					X				X	X	X	X	X	X			X	X	X		X	X
Piping Sump	794380-208	9	X	X	X					X				X	X	X	X	X	X			X		X		X	X
Non-Discriminating Stand-Alone Dispenser Pan	847990-001	10	X	X	X					X				X	X	X	X	X	X			X		X		X	X
Position-Sensitive	794380-323	11	X	X	X					X	X			X	X	X	X	X	X	X	X	X	X		X		X
Interstitial for Fiberglass Tanks, Discriminating	794380-343	12					X		X					X	X	X	X	X	X			X	X	X	X	X	X
Interstitial for Fiberglass Tanks	794390-409	13					X		X					X	X	X	X	X	X			X		X		X	X
Interstitial for Fiberglass Tanks, High Alcohol	794380-345	14					X		X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
Interstitial for Steel Tanks	794390-4X0	15			X		X		X					X	X	X	X	X	X			X		X		X	X
Interstitial for Steel Tanks, Position Sensitive ²	794380-333	16		X			X		X	X				X	X	X	X	X	X	X	X	X	X	X		X	X
Interstitial for Steel Tanks, High Alcohol	794380-430	17					X		X					X	X	X	X	X	X	X	X	X	X	X		X	X
Interstitial for Steel Tanks, High Alcohol, small footprint	794380-344	18					X		X					X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hydrostatic Reservoir (Dual Point)	794380-303	19					X						X	X	X	X	X	X	X	X ¹		X		X		X	X
Single-Point Hydrostatic Sensor	794380-301	20					X						X	X	X	X	X	X	X	X ¹		X		X			
Single Point Mini Hydrostatic Reservoir (High Alcohol)	794380-304	21					X						X	X	X	X	X	X	X	X	X	X	X	X		X	X
Vapor	794390-700	22					X							X		X	X	X									
Ground Water	794380-62X	23					X							X	X	X	X	X	X			X		X		X	X
Oil / Water Separator	794690-XXX	24					X							X	X	X	X	X	X			X				X	X

¹Single use only if sensor was exposed to E85 (Test per Sensor Operability Guide [P/N 577013-814] in E-10 or less)

²Small Containment Areas (i.e. Spill Buckets)

Ordering Information continued

Standard 1½ hp Fixed Speed Submersible Turbine Pumps

Model	Description	Model Length Range Number	Model Length Range*
STP150-VL1	1½ hp fixed speed	VL1	60" - 88"
STP150-VL2	1½ hp fixed speed	VL2	91" - 152"
STP150-VL3	1½ hp fixed speed	VL3	123" - 214"
STPH150-VL1	1½ hp high pressure fixed speed	VL1	61" - 89"
STPH150-VL2	1½ hp high pressure fixed speed	VL2	92" - 152"
STPH150-VL3	1½ hp high pressure fixed speed	VL3	124" - 215"

Alcohol-Gas (AG) 1½ hp Fixed Speed Submersible Turbine Pumps

Model	Description	Model Length Range Number	Model Length Range*
STPAG150-VL1	1½ hp AG fixed speed	VL1	60" - 88"
STPAG150-VL2	1½ hp AG fixed speed	VL2	91" - 152"
STPAG150-VL3	1½ hp AG fixed speed	VL3	123" - 214"
STPAGH150-VL1	1½ hp AG high pressure fixed speed	VL1	61" - 89"
STPAGH150-VL2	1½ hp AG high pressure fixed speed	VL2	92" - 152"
STPAGH150-VL3	1½ hp AG high pressure fixed speed	VL3	124" - 215"

Notes:

1. STP models are compatible with fuel mixtures containing up to 10% ethanol with gasoline, up to 5% Biodiesel with diesel fuels, and 20% MTBE, 20% ETBE or 17% TAME with gasoline. STPAG models are compatible with fuel mixtures containing diesel fuel with up to 20% Biodiesel, 100% Biodiesel, up to 85% ethanol with gasoline, and 20% MTBE, 20% ETBE or 17% TAME with gasoline.
2. All models are supplied with a standard check valve unless factory option "R" or "W" is specified.
3. All above models require single-phase, 208-230 VAC, 60 Hz incoming power.
4. 4" riser pipe, if supplied locally, must be 4½" OD by 3/16" WT tubing.
5. For riser pipe lengths 31" to 60", additional charges apply (call Customer Service for lead times).

*Model length (A) defined as the dimension from turbine manifold bottom to pump motor inlet.

Factory Installed Options

Specified in model number at time of STP order.

Model	Description
F	Floating suction adapter, 1½" NPT female, must be factory installed
K	IFS (intake filter screen) factory assembled to pump motor assembly
R	Model R check valve, factory installed, for Veeder-Root™ PLLD Line Leak
W	Model W check valve, factory installed, for Red Jacket PPM4000 Line Leak

Field Installed Options

1½ hp fixed speed specific accessories.

Model	Description
400137908	Syphon check valve, alcohol-gasoline compatible (when ordered with STP)
400818921	STP-CBS, single-phase control box with lockout switch, 120 Volt coil
402312921	STP-DHI-SCI, combo DHI with factory-wired STP-SCI (when purchased with a 4" STP)*
402312921	STP-DHI-SCI, combo DHI with factory-wired STP-SCI (when purchased without a 4" STP)
402313921	STP-DHI-CBS, combo DHI with factory-wired STP-CBS
402459931	Model 65 psi check valve AG compatible, (for slave of manifolded STPs with Veeder-Root™ PLLD)
402507930	Secondary syphon kit (when two syphon primes are required for one STP)
5800100215	STP-SCI, single-phase Smart Controller (when purchased without a 4" STP)
5800100215	STP-SCI, single-phase Smart Controller (when purchased with a 4" STP)*
5800300100	STP-DHI, dispenser hook isolation for 120 Volt dispenser handle switches, up to eight each

*When purchasing STP-SCI or STP-DHI-SCI in equal quantities of fixed speed 4" STPs, the STP-SCI or STP-DHI-SCI will be invoiced at special discount pricing.



S. Bravo Systems, Inc.

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Wednesday - August 25 - 2010

R3 10.21.13

RE: Bravo Fiberglass Sumps and Alternative fuels

This letter is to certify the compatibility of Bravo (S. Bravo Systems, Inc.) Single and Double Wall Fiberglass Containment Sumps with Alternative Fuels such as Biodiesel and Ethanol blended fuels. It also addresses compatibility with DEF Diesel Exhaust Fluid.

Bravo Fiberglass products are engineered with the same UL Listed materials used in the manufacture and certification of Fiberglass Tanks, matching the UL Standard 1316. Since our Fiberglass containment sumps are Built like a Tank, they can withstand continuous fuel exposure to Biodiesel, Ethanol and Alcohol blends without failure.

All DoubleWall Containment Sumps are engineered to be fully compliant with the California State Water Resource Control Board Assembly Bill AB-2481 for DoubleWall Sumps and Continuous Monitoring Systems.

The following Single and Double Wall Containment Sumps manufactured by Bravo Systems in Commerce, California are compatible with Biodiesel and Ethanol fuel blends up to B100 and E100, respectively.

- > B3XX Series Spill Buckets
- > B4XX Series Tank Sumps & Covers
- > B5XX Series Planter Transition Sumps
- > B6XX Series Walkover Transition Sumps
- > B7XX Series H-20 Rated Transition Sumps
- > B8XX Series Transition Sumps
- > B1XXX Series UDC Sumps
- > B7XXX Series UDC Sumps
- > B8XXX Series UDC Sumps
- > B9XXX Series UDC Sumps

Bravo Systems also certifies that these products are compatible with and approved for use in secondarily containing DEF Diesel Exhaust Fluid.

Each respective Series may be UL Listed in addition to being manufactured of UL recognized materials approved for use in the manufacture of Fiberglass UST tanks. Any other relevant documentation will be located in the documents area of each product's respective webpage.

Please feel free to contact us with any questions you may have at 800-AT-BRAVO.

Additionally, you may find further information at www.sbravo.com.

Sincerely,

Jonathan E. Smith
Director of Brand Management
S. Bravo Systems, Inc.



Mag Plus Magnetostrictive Probe and Float Kit Fluid Compatibility Guide, continued

Mag Plus Magnetostrictive Probes for Alternative Fluids without water detection with leak detection (Probe Model No. 846391-4xx, 846397-4xx, 846391-5xx, 846397-5xx) and *Mag Plus* Magnetostrictive Probes for Alternative Fluids without water detection* and no leak detection (Probe Model No. 846391-6xx, 846397-6xx).

Recommended for Inventory Monitoring and Leak Detection:			
Product	Float Kit	Product	Float Kit
Alcohol (<=100% Alcohol)	Alternative Fluids	Ethanol (<=100% Alcohol) Includes E85	Alternative Fluids
Methanol (<=100% Alcohol)	Alternative Fluids	MTBE (<=100% Ether)	Alternative Fluids
ETBE (<=100% Ether)	Alternative Fluids	Used Oil	Alternative Fluids
Recommended for Inventory Monitoring Only (Not Recommended for Leak Detection):			
Product	Float Kit	Product	Float Kit
Ethylene Glycol	Alternative Fluids	Fuel Oil #6	Alternative Fluids
Windshield Washer Fluid	Alternative Fluids	Propylene Glycol	Alternative Fluids
DEF (AdBlue)	Alternative Fluids		

Use of Magnetostrictive Probes in Fluids Not Listed Above

Veeder-Root will not be responsible for probe performance or product contamination in fluids other than those specifically identified in this guide. Veeder-Root does not recommend the use of its probes for tank leak detection other than for the products specifically identified in this guide.

Specifications and Compatible Fluids Requirements

The table below lists Veeder-Root Line Leak Detector specifications.

SPECIFICATION	TLS-4XX w/ DPLLD	TLS-350 w/ PLLD	TLS-350 w/ WPLLD
OPERATING TEMP:	-25 TO +130°F	-25 TO +130°F	-25 TO +130°F
COMPATIBLE FUELS:	UNLEADED GASOLINE LEADED GASOLINE 5% METHANOL / 95% UNLEADED 0 - 100% ETHANOL 10% ETHANOL / 90% UNLEADED 15% MTBE / 85% UNLEADED DIESEL BIODIESEL (UP TO B100) ^{1,2} KEROSENE JET FUEL AVIATION GASOLINE	UNLEADED GASOLINE LEADED GASOLINE 5% METHANOL / 95% UNLEADED 0 - 100% ETHANOL 10% ETHANOL / 90% UNLEADED 15% MTBE / 85% UNLEADED DIESEL BIODIESEL (UP TO B100) ^{1,2} KEROSENE JET FUEL AVIATION GASOLINE	UNLEADED GASOLINE LEADED GASOLINE 5% METHANOL / 95% UNLEADED 10% ETHANOL / 90% UNLEADED 15% MTBE / 85% UNLEADED DIESEL BIODIESEL (UP TO B100) ^{1,2} KEROSENE JET FUEL AVIATION GASOLINE
LINE FLOW RATE:	120 GPM MAX. W/SWIFTCHECK VALVE	120 GPM MAX. W/SWIFTCHECK VALVE	120 GPM MAX. W/SWIFTCHECK VALVE
OPERATING RANGE:	0 - 70 PSI	0 - 70 PSI	0 - 70 PSI
PROOF PRESSURE:	200 PSI	200 PSI	200 PSI
MAX. VERTICAL PIPELINE HEIGHT ABOVE TRANSDUCER³	11 FEET	11 FEET	11 FEET
MINIMUM PUMP OUTPUT PRESSURE⁴	23 psi	23 psi	23 psi

¹Biodiesel compliant with ASTM D7467 (up to B20) or ASTM D6751.

²Consult pump manufacturer for compatibility ratings on fuel blends greater than B20.

³Applications that exceed these max. vertical pipeline heights will require further consultation. Please contact Veeder-Root at 800-323-1799 (request a Veeder-Root/Red Jacket Application Engineer).

⁴Pump output pressure should be a minimum of 4 psi above the check valve's relief pressure.

Veeder-Root recommends that system software for the console be upgraded to the latest version when installing any new hardware. For TLS-350 Consoles, when installing latest software, PLLD or WPLLD must be specified and customer must upgrade to ECPU2 if not already installed. See Accessories/Upgrades section of price book or your local Veeder-Root authorized distributor for details.

Gasoila® Quick and Easy Sealant Reference Guide

Soft-Set



- General Purpose, Top-selling Sealant
- Perfect for New Pipes
- Stays Pliable in Cold Temperatures
- Non-Hardening,
- Non-Separating
- Non-Toxic

E-Seal



- Specifically for E10 and E85
- Stays Pliable in Cold Temperatures
- Non-Hardening,
- Non-Separating
- Non-Toxic

Hard-Set



- Hard Setting Sealant
- Assembles Threaded Joints Permanently
- Excellent for Coating Surfaces.
- Impervious to Gasoline
- Flammable

PLS-2



- Ideal for Demanding Pneumatic and LPG Applications

100



- Ideal for use on Systems with 100% Methanol, Ethanol, Alcohol and Highly Corrosive Chemicals
- Soft Setting

JC-30



- For Damaged, Irregular, Mis-cut and Straight Threads
- Vegetable Oil Base
- Thick Consistency, 10-15% more Solids than Conventional Sealants

NT



- Soft Setting for Applications Requiring Grit-Free, Non-PTFE Compound
- No Fillers to Contaminate Gas Lines
- For use when Non-PTFE Sealant is Preferred

FasSeal ATS

Anaerobic Thread Sealant that cures in Absence of Oxygen • Ideal for Refrigeration or other High Vibration Applications • High Speed Curing Time • Vibration Resistant.

TYPE

APPLICATIONS

USED BY

USED ON

APPROVALS

TYPE	APPLICATIONS	USED BY	USED ON	APPROVALS
Blue Gray Paste with PTFE	Water, Steam, Natural Gas, LPG, Propane, Gasoline, Butane *Not for Use with Oxygen systems	<ul style="list-style-type: none"> • Mechanical Contractors • Plumbers • Gas Utilities • Service Station Installers • Manufacturing Plants 	All Metals and Most Plastics	CSA, UL NSF 61 NSF 14
Green Paste with PTFE	Ethanol Blended Gasoline, including E10 and E85 (*NOT 100% Ethanol applications) *Not for Use with Oxygen systems	<ul style="list-style-type: none"> • Gas Station Installers 	All Metals	UL
Red Varnish	Aliphatic, Aromatic and Chlorinated Solvents *Not for Use with Oxygen systems	<ul style="list-style-type: none"> • Auto Industry to Seal Drive Trains, Coat parts • Contractors Installing Underground Piping, Steam Systems • Marine Manufacturers 	All Metals, Rubber, Porcelain, Wood	UL
Gray Paste with PTFE	Chlorine, Diesel, Jet Fuel, Steam, Dilute Acid, LPG *Not for Use with Oxygen systems	<ul style="list-style-type: none"> • Chemical Plants, • Gas Utilities • Refineries • Airlines, Hydraulics • Tank Trucks 	All Metals and Most Plastics	CSA UL
Black Paste	High Concentrations of Alcohol, Solvents, Caustic Chemicals 100% Ethanol 100% Methanol *Not for Use with Oxygen systems	<ul style="list-style-type: none"> • Pharmaceutical • Chemical Companies 	All Metals and Fiberglass *Not for Use on Plastic Pipe *Threads must be Clean Prior to use	
Oyster White Paste with PTFE	Water, Steam, Natural Gas, LPG, Propane, Gasoline, Freon 22 and Hydraulic Fluids *Not for Use with Oxygen systems	<ul style="list-style-type: none"> • Plumbers, • Gas Utilities • Manufacturing Plants 	All Metals	
Dark Blue Paste without PTFE	Water, Steam, LPG, Propane, Gasoline *Not for Use with Oxygen systems	<ul style="list-style-type: none"> • Propane Companies • Petroleum Companies 	All Metals and Most Plastics	NSF 61 NSF 14
Smooth White Paste with PTFE	Air Conditioning Lines, Hydraulic-Pneumatic Lines, Air Compressor Hoses, Sprinkler Installations *Not for Use with Oxygen systems	<ul style="list-style-type: none"> • HVAC • Refrigeration Companies 	Metals *Not for Use on Plastic Pipe	UL

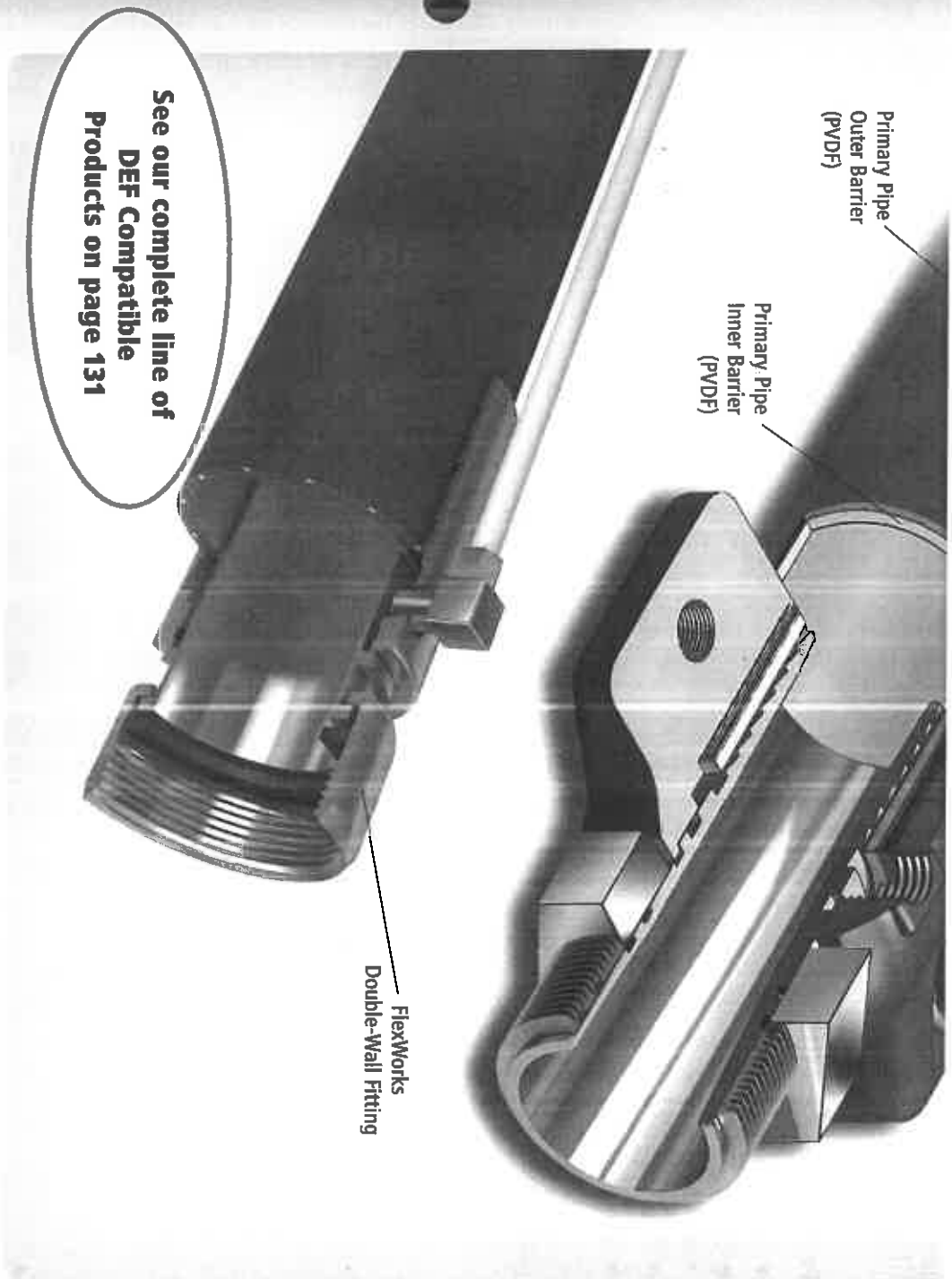
contained in sumps
 Termination joints precision
 swaged to simulate factory-
 made assemblies

tion & Maria Fuels:

the outer containment pipe includes inner
 monitoring and easy periodic testing.
 double-wall piping has both the primary
 barrier and secondary barrier.
 FOR MOTOR VEHICLE FUELS.

n.s.	Box/Reel		Box/Reel	
	O.D. mm	Size (in.)	Weight lbs.	Weight kg
18	29	44x44x25	134	61
18	29	58x58x48	527	239
50	38	44x44x25	169	77
50	38	58x58x48	605	274
00	51	38x45x30	240	109
00	51	58x58x48	605	274
00	51	58x58x48	980	444
50	63.5	63x63x33	192	87
50	63.5	68x68x48	770	349
50	88	63x63x33	652	296

contact our
 website for more information.



Product #	Size in.	Size cm	Description	Working Pressure PSIG	Working Pressure BAR	Temperature Rating F	Temperature Rating C	Burst Pressure
C075A	3/4	1.9	Double-Wall Primary Pipe					
C10A	1	2.54	Double-Wall Primary Pipe					
C15A	1.5	3.8	Double-Wall Primary Pipe	100		-20° to +120° F	-29° to +49° C	Exceeds 5X Working Pressure
C20A	2	5	Double-Wall Primary Pipe	75				
C30A	3	7.6	Double-Wall Primary Pipe	75				

Listings and
 Certifications



FlexWorks Next Generation Supply Piping

Why a new pipe?

OPW has developed a Next Generation FlexWorks Pipe in response to the voice of the customer. You asked and we delivered! The new pipe is more flexible, lighter and has reduced memory.



50 Years of Unmatched Chemical Resistance Performance Packed into One Unique Pipe - KYNAR® (PVDF) + OPW = 15 Years of Excellence in Underground Pipe Performance.

**Lighter,
More Flexible, Easier
to Install, UL Approved
for All Fuels**



What Makes This Pipe Different?

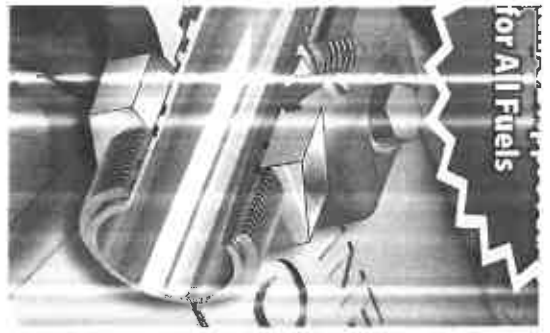
Lower installation costs

- ◆ **Increased Pipe Flexibility** – the force required to bend the pipe has been reduced to facilitate piping layout. This makes installation quicker and easier, especially in cold weather.
- ◆ **Pipe Weight** – has been reduced to facilitate shipping and handling
- ◆ **Pipe Memory** – Inherent pipe memory has been reduced significantly to facilitate connection of pipes inside sumps

- ◆ **Redesigned Profile** – enhanced leak detection performance
- ◆ **Next Generation** – enhanced Kynar liner

Ordering Specifications - 5

New Pipe Part #	ID	Description
C075A-250		Double Wall Primary Pip
C075A-1000		Double Wall Primary Pip
C075A-SB	3/4"	Double Wall Primary Pip
C075A-SR		Double Wall Primary Pip
C075A-MR		Double Wall Primary Pip
C10A-250		Double Wall Primary Pip
C10A-1000		Double Wall Primary Pip
C10A-SB	1"	Double Wall Primary Pip
C10A-SR		Double Wall Primary Pip
C10A-MR		Double Wall Primary Pip
C15A-250		Double Wall Primary Pip
C15A-500		Double Wall Primary Pip
C15A-1000		Double Wall Primary Pip
C15A-1225		Stick Pipe 1 1/2" 12 Piece
C15A-1233	1 1/2"	Stick Pipe 1 1/2" 12 Piece
C15A-1240		Stick Pipe 1 1/2" 12 Piece
C15A-SB		Double Wall Primary Pip
C15A-SR		Double Wall Primary Pip
C15A-MR		Double Wall Primary Pip
C20A-250		Double Wall Primary Pip
C20A-500		Double Wall Primary Pip
C20A-1225		Stick Pipe 2.0" Double
C20A-1233	2"	Stick Pipe 2.0" Double
C20A-SB		Double Wall Primary Pip
C20A-SR		Double Wall Primary Pip
C20A-MR		Double Wall Primary Pip
C30A-200		Call For Availability. 3
C30A-MR	3"	3" Double Wall Primar
C30A-SR		Call For Availability. 3



for All Fuels

gined Profile – enhanced
 Section performance
 Generation – enhanced
 ner

C10A-250	Double Wall Primary Pipe, 250'
C10A-1000	Double Wall Primary Pipe, 1000'
C10A-SB	1" Double Wall Primary Pipe 1.0" I.D. Short Box, 1' - 249'
C10A-SR	Double Wall Primary Pipe 1.0" Short Reel, 20' - 990'
C10A-MR	Double Wall Primary Pipe, Mega Reel, 2000'
C15A-250	Double Wall Primary Pipe, 250'
C15A-500	Double Wall Primary Pipe, 500'
C15A-1000	Double Wall Primary Pipe, 1000'
C15A-1225	Stick Pipe 1 1/2" 12 Pieces At 25', 12 per box
C15A-1233	1 1/2" Stick Pipe 1 1/2" 12 Pieces At 33', 12 per box
C15A-1240	Stick Pipe 1 1/2" 12 Pieces At 40', 12 per box
C15A-SB	Double Wall Primary Pipe 1.5" I.D. Short Box, 50' - 240', 10' increments
C15A-SR	Double Wall Primary Pipe 1.5" I.D. Short Reel, Less than 500', 10' increments
C15A-MR	Double Wall Primary Pipe, Mega Reel, 1010' - 1400'
C20A-250	Double Wall Primary Pipe, 250'
C20A-500	Double Wall Primary Pipe, 500'
C20A-1225	Stick Pipe 2.0" Double Wall 12 Pieces At 25', 12 per box
C20A-1233	2" Stick Pipe 2.0" Double Wall 12 Pc @ 33', 12 per box
C20A-SB	Double Wall Primary Pipe, 2.0" I.D. Short Box, 50' - 240', 10' increments
C20A-SR	Double Wall Primary Pipe, 2.0" I.D. Short Reel, 260' - 490', 10' increments
C20A-MR	Double Wall Primary Pipe, Mega Reel, 800', 510' - 800', 10' increments
C30A-200	Call For Availability, 3" Double Wall Primary Pipe, Lengths up to 200'
C30A-MR	3" 3" Double Wall Primary Pipe, 200' to Max 350'
C30A-SR	Call For Availability, 3" Double Wall Primary Pipe, Lengths up to 200'

Flexible Supply Piping

OPW FlexWorks flexible piping utilizes fully bonded, premium PVDF construction throughout to offer complete peace-of-mind protection, performance, installation ease and advantages over rigid and semi-rigid pipe.

Features & Benefits:

- ◆ Lower installation costs
- ◆ Eliminates the hassles – installation time and potential leak points of rigid pipe installations
- ◆ Easy installation – results in less installation time
- ◆ Eliminates burdensome cutting, fitting, and cleaning
- ◆ No adhesives – heat assists, curing problems or electrofusion welding of joints
- ◆ Easy to bend – no special fittings to install in order to make bends
- ◆ Eliminates potential underground leak points:
- ◆ No underground – fittings or joints
- ◆ No hand-built field joints
- ◆ All termination points are contained in sumps
- ◆ Termination joints precision swaged to simulate factory-made assemblies

Flexible Supply Piping

Primary Pipe
Outer Barrier
(PVDF)

Primary Pipe
Inner Barrier
(PVDF)

Double-Wall Flexible Piping:

UL-971 Listed, Integral Primary/Secondary, Normal Vent & Vapor Piping, Gasoline, Aviation & Marine Fuels:
A UL-listed, double-wall, flexible supply piping system designed for installation within Access piping, the outer containment pipe includes inner stand-off ribs to create a small interstitial space which allows for optimum fluid migration, continuous monitoring and easy periodic testing. This piping features an enhanced construction that meets the new UL971 standard. OPW's FlexWorks double-wall piping has both the primary and secondary containment pipe UL-listed and is labeled as follows: INTEGRAL PRIMARY/SECONDARY FOR MOTOR VEHICLE FUELS.

Ordering Specifications* - FlexWorks Dual Layer Access Pipe

Part #	Application	Minimum Bend Radius in. mm	Packaging	Dimensions				Box/Reel Size (in.)	Box/Reel Weight lbs. kg
				I.D. in. mm	O.D. in. mm				
C075A-250	Double-Wall Primary Pipe, ¾"	18	Box 250 ft	.75	1.18	29	44x44x25	134	61
C075A-1000	Double-Wall Primary Pipe, ¾"	18	Reel 1000 ft	.75	1.18	29	58x58x48	527	239
C10A-250	Double-Wall Primary Pipe, 1"	18	Box 250 ft	1.0	1.50	38	44x44x25	169	77
C10A-1000	Double-Wall Primary Pipe, 1"	18	Reel 1000 ft.	1.0	1.50	38	58x58x48	605	274
C15A-250	Double-Wall Primary Pipe, 1.5"	24	Box 250 ft.	1.5	2.00	51	38x45x30	240	109
C15A-500	Double-Wall Primary Pipe, 1.5"	24	Reel 500 ft.	1.5	2.00	51	58x58x48	605	274
C15A-1000	Double-Wall Primary Pipe, 1.5"	24	Reel 1000 ft.	1.5	2.00	51	58x58x48	980	444
C20A-250	Double-Wall Primary Pipe, 2"	36	Box 250 ft	2	2.50	63.5	63x63x33	192	87
C20A-500	Double-Wall Primary Pipe, 2"	36	Reel 500 ft.	2	2.50	63.5	68x68x48	770	349
C30A-200	Double-Wall Primary Pipe, 3"	72	Reel 200 ft	3	3.50	88	63x63x33	652	296

See our complete line of
DEF Compatible
Products on page 131

Product # _____ Size _____ Description _____



Veeder-Root
125 Powder Forest Drive
P. O. Box 2003
Simsbury, CT 06070-7684
USA
Phone: (860) 651-2700
Fax: (869) 651-2719

January 13, 2011

Concerned Regulatory Agency

Re: Veeder-Root Compatibility with E85

To whom it may concern:

Veeder-Root TLS branded automatic tank gauging products have UL listings for product safety. The wetted component materials used with the below listed products are deemed by Veeder-Root to be compatible with ethanol 85 applications.

<u>VR Part Number</u>	<u>Description</u>
848480-003	Pressurized Line Leak Detector
846391-4XX, 5XX, 6XX	Mag Plus Probes for Alternative Fluids without water detection
846400-004,304,104	Mag Float Kit (5" cable) for Alternative Fluids 4", 3" & 2" floats
846400-014,314,114	Mag Float Kit (10" cable) for Alternative Fluids 4", 3" & 2" floats
846400-024,324,124	Mag Float Kit (20" cable) for Alternative Fluids 4", 3" & 2" floats
794380-323	Position Sensitive Pan/Sump Sensor
794380-344	MicroSensor
794380-345	Interstitial Solid State Sensor for Fiberglass Tanks
794380-430	Interstitial Sensor for Steel Tanks

The following sensor is exposed to Brine and is not of concern in an E85 application.

794380-301 Hydrostatic Sensor

Please contact Veeder-Root Technical Support at 1-800-323-1799 with further questions.

Regards,

Bob Moss
VP Engineering

LIMITED WARRANTY

Underground Petroleum Storage Tanks

Xerxes Corporation ("Xerxes") warrants to owner ("Owner") that our underground petroleum storage tanks, if installed, used, and maintained in the United States or Canada in accordance with Xerxes' published specifications, installation instructions and operating guidelines, applicable supplemental materials, all applicable laws and regulations, and limited to storage of the products listed below at ambient temperatures or fuel oils, used in oil burning equipment, at temperatures not to exceed 150°F (65° C):

- 1) Will not fail for a period of thirty (30) years from date of original delivery by Xerxes due to natural external corrosion.
- 2) Will not fail for a period of thirty (30) years from date of original delivery by Xerxes due to internal corrosion, provided the tank is used solely, with or without tank water bottoms, to store the following products:
 - a. gasoline, jet fuel, aviation fuels, motor oils, motor vehicle waste oils, kerosene, diesel fuel, or fuel oils
 - gasoline with up to 20%, by volume, of methyl tertiary butyl ether (MTBE), ethyl tertiary butyl ether (ETBE), di-isopropyl ether (DIPE), tertiary butyl alcohol (TBA), tertiary amyl methyl ether (TAME), or tertiary amyl ethyl ether (TAEE)
 - b. gasoline and ethanol blended motor fuels (per applicable ASTM fuel standards)
 - E10 (90% gasoline and 10% ethanol)
 - E15 (85% gasoline and 15% ethanol)
 - E85 (85% ethanol and 15% gasoline)
 - other ethanol blends up to and including 100% ethanol
 - c. gasoline and methanol blended motor fuels (per applicable ASTM fuel standards)
 - M85 (85% methanol and 15% gasoline)
 - other methanol blends up to and including 100% methanol
 - Oxinol-50 waiver (90.5% gasoline and 9.5% Oxinol-50 comprised of a 4.75% methanol and 4.75% gasoline-grade tertiary butyl alcohol (GTBA) mixture)
 - Dupont EPA waiver (gasoline with 5% methanol and a minimum of 2.5% cosolvent – the blend may contain a maximum concentration of up to 3.7%, by weight, oxygen in the final fuel)
 - d. biodiesel fuel blends up to 100% biodiesel (per applicable ASTM fuel standards)
- 3) Will not fail for a period of thirty (30) years from date of original delivery by Xerxes due to structural failure (defined as spontaneous breaking or collapse caused by material defects in materials or workmanship).
- 4) Will meet Xerxes' published specifications and will be free of material defects in materials and workmanship for a period of one (1) year following the date of original delivery by Xerxes.

Xerxes warrants to Owner that all Xerxes-manufactured tank accessories, if installed, used and maintained in Canada or the United States in accordance with Xerxes' published specifications, installation instructions and operating guidelines, applicable supplemental materials, and all applicable laws and regulations, will be free of material defects in materials and workmanship for a period of one (1) year following the date of original delivery by Xerxes.

If any tank or accessory is to be removed from an installation, moved and reinstalled at Owner's new location and is intended for active service at the new location, the tank and accessories must be recertified by Xerxes to continue the balance of the limited warranty as originally extended.

The foregoing limited warranty does not extend to tanks or accessories ("individually and collectively Goods") damaged due to acts of God, war, terrorism, or failure of Goods caused, in whole or in part, by misuse, unlawful use, improper installation, storage, servicing or maintenance, or operation in excess of their rated capacity or contrary to their recommended use, whether intentional or otherwise, or any other cause or damage of any kind not the fault of Xerxes. Xerxes only warrants repairs or alterations performed by Xerxes or its authorized contractors performing work authorized in advance, in writing, by Xerxes. Xerxes does not warrant any product, components or parts manufactured by others. All consumable components including but not limited to o-rings and gaskets are excluded from this limited warranty.

Owner's sole and exclusive remedy for breach of warranty is limited at Xerxes' option to: (a) repair of the defective tank or accessory, (b) delivery of a replacement tank or accessory to the point of original delivery, or (c) refund of the original purchase price. No warranty claim will be considered without removing the tank and any accessory from the ground if Xerxes deems it necessary to evaluate a warranty claim. In the event of a breach of warranty claim, a claimant must give Xerxes the opportunity to observe and inspect the installation prior to the removal of any backfill below the tank top, and the removal of the tank and any accessory from the ground, or the claim will be forever barred. All claims must be made in writing within one (1) year after tank or accessory failure or be forever barred. ALL RIGHTS, OBLIGATIONS AND CLAIMS UNDER THIS LIMITED WARRANTY SHALL BE EXCLUSIVELY MADE AND DETERMINED IN THE COURTS OF, AND GOVERNED BY THE LAWS OF, THE STATE OF MINNESOTA, U.S.A., EXCLUDING ITS CONFLICT OF LAW PRINCIPLES.

THE FOREGOING WARRANTY CONSTITUTES XERXES' EXCLUSIVE OBLIGATION AND XERXES MAKES NO OTHER WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, WITH RESPECT TO THE GOODS, OR ANY SERVICE, ADVICE, OR CONSULTATION, IF ANY, FURNISHED TO OWNER BY XERXES OR ITS REPRESENTATIVES, WHETHER AS TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE. THE SELLER (XERXES) UNDERTAKES NO RESPONSIBILITY FOR THE QUALITY OF THE GOODS, EXCEPT AS OTHERWISE PROVIDED IN THIS CONTRACT. THE SELLER (XERXES) ASSUMES NO RESPONSIBILITY THAT THE GOODS WILL BE FIT FOR ANY PARTICULAR PURPOSE FOR WHICH YOU (OWNER) MAY BE BUYING THESE GOODS, EXCEPT AS OTHERWISE PROVIDED IN THE CONTRACT. THE REMEDIES SET FORTH IN THE ABOVE WARRANTY ARE THE ONLY REMEDIES AVAILABLE TO ANY PERSON OR ENTITY FOR BREACH OF WARRANTY OR FOR BREACH OF ANY OTHER COVENANT, DUTY, OR OBLIGATION ON THE PART OF XERXES. XERXES SHALL HAVE NO LIABILITY OR OBLIGATION TO ANY PERSON OR ENTITY FOR BREACH OF ANY OTHER COVENANT, DUTY, OR OBLIGATION UNDER THIS WARRANTY EXCEPT AS EXPRESSLY SET FORTH HEREIN. IT IS EXPRESSLY AGREED THAT THIS WARRANTY DOES NOT FAIL OF ITS ESSENTIAL PURPOSE. XERXES SHALL HAVE NO LIABILITY FOR COSTS OF INSTALLATION OR REMOVAL OF GOODS, ENVIRONMENTAL CONTAMINATION, FIRES, EXPLOSIONS, OR ANY OTHER CONSEQUENCES ALLEGEDLY ATTRIBUTABLE TO A BREACH OF WARRANTY, OR INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR OTHER DAMAGES OF ANY DESCRIPTION, WHETHER ANY SUCH CLAIM OR DAMAGES BE BASED UPON WARRANTY, CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER TORT, OR OTHERWISE. IN NO EVENT SHALL XERXES' TOTAL LIABILITY HEREUNDER EXCEED THE ORIGINAL PURCHASE PRICE OF THE GOODS WHICH GAVE RISE TO SUCH LIABILITY.

Consumer Notice: This warranty gives you (Owner) specific legal rights. You (Owner) may also have other rights which vary from state to state.

Oxinol™ is a trademark of Atlantic Richfield Company
Xerxes® is a trademark of Xerxes Corporation
ASTM® and ASTM INTERNATIONAL® are trademarks of the American Society for Testing and Materials.

XERXES®
a zcl company

Effective: June 1, 2015
United States

Magnetostrictive Probes for Alternative Fluids

Certified performance for inventory control and in-tank leak detection in fuel blends up to 100% alcohol

Veeder-Root offers two types of Magnetostrictive Probes for Alternative Fluids to provide highly accurate, trouble-free in-tank leak detection and inventory control in fluids of up to 100% alcohol. The Magnetostrictive Probe for Alternative Fluids with water detection is ideal for fuel blends with less than 20% alcohol. The Magnetostrictive Probe for Alternative Fluids without water detection has been developed for fluids up to 100% alcohol.

Series 8463 0.1 GPH Mag Probe for Alternative Fluids

The 0.1 GPH Mag Probe for Alternative Fluids 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.)

0.1 GPH Mag Probe and CSLD — Leak detection without shutting down your tanks!

CSLD, Continuous Statistical Leak Detection, is an advanced tank testing technology that makes full use of the TLS-300 and TLS-350(R)'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-300 and TLS-350(R) equipped with CSLD use the 0.1 GPH Mag Probe to continuously monitor fuel height and temperature information to detect idle times in the tank. During each idle time, data collected forms 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.

Series 8463 0.2 GPH Mag Probe for Alternative Fluids

The 0.2 GPH Mag Probe for Alternative Fluids provides the same reliable inventory control features and fluid compatibility as the 0.1 GPH Mag Probe for Alternative Fluids, but offers 0.2 GPH leak detection at a lower cost.

The 0.2 GPH Mag Probe for Alternative Fluids has also been third-party tested and certified to exceed U.S. E.P.A. standards for 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.)

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, Customer Service 800-873-3313 or your authorized Veeder-Root distributor.

Magnetostrictive Probes for Alternative Fluids are available in 0.1 GPH and 0.2 GPH Versions

Features & Benefits

- Non-corrosive, stainless steel tubing for long-life monitoring in fuels up to 100% alcohol
- Highly accurate Magnetostrictive measurement technology
- Fast accurate leak tests
- 0.1 GPH Mag Probe for Alternative Fluids is third-party certified to exceed U.S. E.P.A. performance standards for 0.1 GPH Volumetric Tank Tightness Testing
- 0.1 GPH Mag Probe for Alternative Fluids is compatible with TLS-300 and TLS-350R with CSLD for continuous statistical leak detection
- 0.2 GPH Mag Probe for Alternative Fluids is third-party certified to exceed U.S. E.P.A. performance standards for 0.2 GPH Automatic Tank Gauging
- 2", 3" and 4" Float Kits available



VEEDER-ROOT

Probe Models

Tank I.D.	Mag Plus Probes for Alternative Fluids with Water Detection Part No*			Mag Plus Probes for Alternative Fluids without Water Detection Part No*		
	0.1 GPH Leak Detection	0.2 GPH Leak Detection	Inventory Only	0.1 GPH Leak Detection	0.2 GPH Leak Detection	Inventory Only
4'	846391-101	846391-201	846391-301	846391-401	846391-501	846391-601
5'	846391-102	846391-202	846391-302	846391-402	846391-502	846391-602
5'4"	846391-103	846391-203	846391-303	846391-403	846391-503	846391-603
6'	846391-104	846391-204	846391-304	846391-404	846391-504	846391-604
7'	846391-105	846391-205	846391-305	846391-405	846391-505	846391-605
7'6"	846391-106	846391-206	846391-306	846391-406	846391-506	846391-606
8'	846391-107	846391-207	846391-307	846391-407	846391-507	846391-607
9'	846391-108	846391-208	846391-308	846391-408	846391-508	846391-608
9'6"	846391-117	846391-217	846391-317	846391-417	846391-517	846391-617
10'	846391-109	846391-209	846391-309	846391-409	846391-509	846391-609
10'6"	846391-110	846391-210	846391-310	846391-410	846391-510	846391-610
11'	846391-111	846391-211	846391-311	846391-411	846391-511	846391-611
12'	846391-112	846391-212	846391-312	846391-412	846391-512	846391-612
2.0M	846391-113	846391-213	846391-313	846391-413	846391-513	846391-613
2.5M	846391-114	846391-214	846391-314	846391-414	846391-514	846391-614
2.67M	846391-116	846391-216	846391-316	846391-416	846391-516	846391-616
3.0M	846391-115	846391-215	846391-315	846391-415	846391-515	846391-615
Custom Length	846391-199	846391-299	846391-399	846391-499	846391-599	846391-699

*Float kits must be ordered separately from probes, water floats not recommended for fuel blends with >20% alcohol

Floats Match Table

Product	Probe	Functions	Float Kit
Gasoline (<=20% Alcohol)	Mag Plus Probe for Alternative Fluids with Water Detection P/N 846391-1xx or -2xx	Inventory: Yes Leak Detection: Yes Water detection: Yes	Gasoline Float Kit P/N 846400-xy0* (*see note for definition of xy below)
	Inventory Only Mag Plus Probe for Alternative Fluids with Water Detection P/N 846391-3xx	Inventory: Yes Leak Detection: No Water detection: Yes	
Alcohol / Ethanol (<=100% Alcohol, including E85) Methanol (<=100% Alcohol) ETBE (<=100% Ether) MTBE (<=100% Ether) Used Oil	Mag Plus Probe for Alternative Fluids without Water Detection P/N 846391-4xx or -5xx	Inventory: Yes Leak Detection: Yes Water Detection: No	Alternative Fluids Float Kit P/N 846400-xy4* *Notes: x=0 -> 4" floats x=1 -> 2" floats x=3 -> 3" floats y=0 -> 5' cable y=1 -> 10' cable y=2 -> 20' cable
	Mag Plus Probe for Alternative Fluids without Water Detection P/N 846391-6xx	Inventory: Yes Leak Detection: No Water Detection: No	
Fuel Oil #4 & #6 Fuel Oil #4 & #6 Ethylene Glycol Propylene Glycol Windshield Washer Fluid	Mag Plus Probe for Alternative Fluids without Water Detection P/N 846391-6xx	Inventory: Yes Leak Detection: No Water Detection: No	

Leak Test Performance (Third Party Certified for all TLS-3xx Consoles*)

PROBE	TEST TYPE	P(D)	P(FA)	TEST TIME
0.1 GPH Mag Probe	0.1 GPH	99%	1%	3 Hours
0.1 GPH Mag Probe	0.2 GPH	99%	<.1%	2 Hours
0.1 GPH Mag Probe w/CSLD	0.2 GPH	99%	<.1%	Continuous
0.2 GPH Mag 2	0.2 GPH	99%	<.1%	2 Hours

Veeder-Root reserves the right to change product specifications without advance notice. Please ensure that you are using the latest version of product literature.



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