



State of Illinois
Office of the State Fire Marshal

Checklist for Documenting UST Compatibility

SUBMIT THIS FORM WITH SUPPORTING DOCUMENTATION ATTACHED.

ALL COMPONENTS MUST BE LISTED IN DETAIL, & COMPATIBILITY DOCUMENTATION MUST CLEARLY IDENTIFY THE COMPONENTS.

Facility where equipment is located:

Facility Number: _____
Facility Owner: Speedway, LLC
Facility Name: Speedway #100996
Street Address: 555 South Bolingbrook Dr
City: Bolingbrook
County: Will

UST Information:

Tank ID Number: 2
Tank Material: Steel _____
FRP X
Single Wall _____ Double Wall X
Tank Volume: 6,000
Tank Product: E-85

Complete the checklist below, listing compatibility determination, method used and description. **All answers must be "YES" and supported with a sufficient description or supporting documentation** in order for your UST system to demonstrate compatibility with the blended fuel/biofuel product.

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)
TANK	NO	☒	B	Double-wall underground storage tanks. Manufacturers letter.
PIPING	NO	☒	B	NOV Fiberglass Systems Ameron Dualoy 3000/L & Red Thread IIA. UL MH9162 Franklin Fueling UPP. ULMH25274
CONTAINMENT SUMPS	NO	☒	B	Containment Solutions Single-wall Containment Sump. manufacturers letter. Franklin Fueling UPP Dispenser Sump. UL MH62435
PUMPING EQUIPMENT	NO	☒	B	Franklin Fueling model STPAG. UL MH6262. Wayne Helix Dispenser. UL MH1821

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	☒	B	Franklin Fueling EVO 550 TM Systems: FMP-ULS Sump Sensor, LS-500 ELLD, FMP-LL3 Tank probe
SPILL PREVENTION EQUIPMENT	NO	☒	B	OPW 1C-3101P Spill Container. UL MH27236
OVERFILL PREVENTION EQUIPMENT	NO	☒	B	OPW 71-SOM Overfill Prevention Valve. UL MH21147
GASKETS & SEALS (installs after 10/13/18)	NO	☒	B	Wayne Helix Dispenser
JOINT DOPES & ADHESIVES (installs after 10/13/18)	NO	☒	B	Gasolia E-Seal Thread Sealant. UL MH682

Methods:

- Certification or listing of UST system equipment or components by a nationally recognized, independent testing laboratory for use with the regulated substance stored.
- 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.

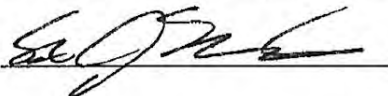
In order to be in compliance with the 2015 federal UST regulation compatibility requirements for storing biofuels, you must keep documentation of compatibility of the UST system components listed on this page as long as you store the fuel.

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: Steve Bennett

date completed: 12/16/19

signature: 

position/title: President

August 2, 2019

Steve Bennett
Project Manager/ Estimator
Uni-Pump, Inc.

Dear Mr. Bennett,

Franklin Fueling Systems has determined that INCON Series Probes and sensors specifically the FMP-ULS and FMP-HFS and all FMP-LL3-XXX probes to be compatible with Fuel Ethanol, also known commercially as E85, containing 51 % to 83 % ethanol by volume under UL-971, file MH25274.

Sincerely,



Loren Swalheim
Director, Global Technical Services
Franklin Fueling Systems



August 2, 2019

Steve Bennett
Project Manager/ Estimator
Uni-Pump, Inc.

Dear Mr. Bennett,

Franklin Fueling Systems has determined that Fuel Ethanol, also known commercially as E85, is compatible with LS-500, LS500/E line leak pressure transducers used for Electronic Line Leak Detection (ELLD) on EVO 550, EVO 5000, TS-550, TS-5000 tank monitoring consoles.

Sincerely,

A handwritten signature in blue ink, appearing to read "Loren Swalheim", with a long, sweeping horizontal line extending to the right.

Loren Swalheim
Director, Global Technical Services
Franklin Fueling Systems



August 1, 2011

Fuel Storage Compatibility

This letter applies to all fiberglass fuel storage products manufactured since the inception of Containment Solutions, Inc. (CSI) on 1/1/1995 including:

- Single-wall underground tanks
- Double-wall underground tanks
- Triple-wall underground tanks
- ReTank® (In situ double-wall tank upgrade)
- BTU® (Bio fuel Tank Upgrade for fluid compatibility)
- Single-wall tank sumps
- Double-wall tank sumps

CSI single, double, and triple wall tanks are listed by Underwriters Laboratories Inc., under UL Standard 1316 - *Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols, and Alcohol-Gasoline Mixtures*.

All of the above Containment Solutions' products are compatible for use with the following fuels and fuel blends:

- Gasoline, jet fuel, aviation gasoline, motor oil (new or used), kerosene, diesel motor fuel
- Alcohol-gasoline blend motor fuels
 - Gasoline-ethanol blends with up to 100% ethanol
 - Gasoline-methanol blends with up to 100% methanol
- Biodiesel-diesel blends with up to 100% biodiesel (B100 per ASTM)
- Oxygenated motor fuels with up to 20% (by volume) 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)
- Diesel fuel oil

For more information on CSI products or CSI Field Services contact:

Containment Solutions

1-877-CSI-TANK

sales@csiproducts.com

www.containmentsolutions.com

Sincerely,

A handwritten signature in blue ink, appearing to read "Ron Shaffer".

Ron Shaffer

Vice President Sales & Marketing

Containment Solutions, Inc.

OPW FCS Product Compatibility Matrix 2018

OPW FCS Products	Description	Standard Fuels: ≤15% Ethanol Gasoline ≤5% Bio-Diesel*	High Ethanol Content Gasoline: 15-100% Ethanol	High Biodiesel Content 5-20% Biodiesel*	High Biodiesel Content 5-100% Biodiesel*	Av-Gas / Jet Fuel	Kerosene / Fuel Oil	DEF (Diesel Exhaust Fluid)
CXXA Double Wall Piping	Double Wall Primary Piping	X	X	X	X	X	X	X
DPC Series	Double Wall Pipe Couplings	X	X	X	X	X	X	
SPC Series	Single Wall Pipe Coupling	X	X	X	X	X	X	
SBC Series	Stainless Steel Swivel Bolt On Coupling	X	X	X	X	X	X	X
SMA-1515, SMA-1520, SMA-2020, SMA-3030	E-Coated Male Adaptors	X	X	X	X	X	X	
SMA-7575, SMA-1010	Swivel Male Adaptor (Brass or Zinc Plated)	X					X	
STF-1515, STF-2020, STF-2215, STF-2020	E-Coated Swivel Tees	X	X	X	X	X	X	
SFA-7575, SFA-1010	Swivel Female Adaptor (Brass or Zinc Plated)	X					X	
SEF-1515, SRE-2015, SEF-2020, SEF-3030	E-Coated Swivel Elbows	X	X	X	X	X	X	
Polyethylene and Fiberglass Sumps**	Dispenser, Tank, Loop, and Transition Sumps	X	X	X	X	X	X	X
REF Series Entry Fittings**	Entry Fittings	X	X	X	X	X	X	X
DEB and EBF Series**	Entry Boots	X	X	X		X	X	X
1-2100 Series / Multiports / 1-2200 Series	Spill Containers	X	X	X	X	X	X	***
FibreTite Multiports	Spill Containers	X	X	X	X	X	X	***
101BG-Series	Spill Containers	X	X	X	X	X	X	***
1-3100 Series (Edge)	Double Wall & Single Wall Spill Container Series	X	X	X	X	X	X	***
60V Series	Vapor Line Shear Valve	X	X	X	X	X	X	
10 Series	Emergency Shut Off Valve	X	X	X	X	X	X	
10 Plus Series	Emergency Shut Off Valve	X	X	X	X	X	X	
60V-DEF	DEF Series Shear Valve							X
615ALP Series	Fill Swivel Adaptor	X	X	X	X	X	X	
633T-8076	Fill Adaptor	X	X	X	X	X	X	
61VSA Series	Vapor Swivel Adaptor	X	X	X	X	X	X	
1611AVB-1625	Vapor Adaptor	X	X	X	X	X	X	
634TT-7085-EVR	Fill Cap	X	X	X	X	X	X	
1711T-7085-EVR	Vapor Cap	X	X	X	X	X	X	
634LPC-040	Low Profile Fill Cap	X	X	X	X	X	X	
1711LPC-0300	Low Profile Vapor Cap	X	X	X	X	X	X	
62M Series	Monitoring Probe Cap	X	X	X	X	X	X	X
6150 & 7150 Series	Overfill Valve	X				X	X	
61SOM & 71SOM Series	Overfill Valve Anodized	X	X			X	X	
7150-B Series	High BioDiesel Overfill Valve	X	X	X	X	X	X	
6111 & 61TP Series	Tank Bottom Protectors	X				X	X	
61T Series	Drop Tubes	X				X	X	
61T-SS Series	Stainless Steel Drop Tube	X	X	X	X	X	X	
61T-DEF Series	Stainless Steel DEF Drop Tube							X
233 Series	Extractor Valve	X	X	X	X	X	X	X
FCXX Series	Stainless Flex Connectors	X	X	X	X	X	X	X
53VML/30MV Series	Ball Floats	X	X	X	X	X	X	
523V Series	Pressure Vacuum Vent	X	X	X	X	X	X	X
623V Series	Pressure Vacuum Vent	X	X	X	X	X	X	X
723V Series	EVR Pressure Vacuum Vent	X	X	X	X	X	X	X

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

** Compatible for Short Term Containment of Fluid

*** Drain plug versions compatible with DEF if installed with Stainless Steel Drop Tube between Nipple and Fill Adapter

≤ Refers to less than or equal to the fuel standard rating for percentage of content



MagShell™

ALCOHOL GASOLINE
UL APPROVED FOR
0-85% ETHANOL

TOTAL SYSTEM SOLUTIONS

FUEL COMPATIBILITY REFERENCE GUIDE

A listing of all products listed by nationally recognized, independent testing organizations for underground storage tank system compatibility with blended fuels.

NOT ALL PRODUCTS REQUIRE INDEPENDENT LISTINGS FOR COMPATIBILITY

Franklin Fueling Systems offers a wide range of additional products not found in this guide that have been self-tested for compatibility.

Service Station Hardware

Brands: EBW™, FLEX-ING™, PHIL-TITE™

Product	Models	UL/ULC File #	UL/ULC/CARB Standard	Gasoline / Ethanol Blends			Diesel / Biodiesel Blends		Heating Fuels	
				Up to E10	Up to E15	Up to E85	Up to B5	Up to B20	Kerosene	Fuel Oil
Shear valves	662 Series	MH9253	UL842, UL842A, UL842B	UL/ULC	UL/ULC	UL	UL/ULC	UL	UL/ULC	UL/ULC
Autolimiter overfill prevention valve	708 Series	MH21090	CAN/ULC-S661	ULC	ULC		ULC		ULC	ULC
Defender Series OPVs	708 Series	MH21091	VR-101	ULC	ULC		ULC		ULC	ULC
Drop tubes	782 Series		VR-101	CARB		CARB				
Swivel fill and vapor adapters (brass)	SWF & SWV Series		VR-101	CARB						
Swivel fill and vapor adapters (stainless steel)	SWF & SWV Series		VR-101	CARB		CARB				
Fill adapter cap	77720102		VR-101	CARB		CARB				
Vapor adapter cap	304 Series		VR-101	CARB		CARB				
Fill adapter	778303	MH25961	UL2583	UL	UL	UL	UL	UL		
Probe cap adapter kit	90037-E		VR-101	CARB		CARB				
Well caps	950 Series	MH25961	UL2583	UL	UL	UL	UL	UL		
PV Zero	407215901	MH21190	UL2583	UL	UL	UL	UL	UL		
Vapor shear valves	362 Series	MH9253	UL842	UL	UL		UL		UL	UL
Anti syphon valve (below ground)	636 Series	MH17159	UL842, ULC/ORD-C842	UL/ULC	UL		UL/ULC		UL/ULC	UL/ULC
PV vents	802 Series	MH25961	UL2583	UL	UL	UL	UL	UL		
Flexible connectors	FF Series	MH25059	UL2039	UL	UL	UL	UL	UL		
Above ground spill containers	706 Series	MH21091	CAN/ULC-S663-11	ULC	ULC		ULC		ULC	ULC
Warden overfill prevention valve		MH21090	CAN/ULC-S661-10	ULC	ULC		ULC		ULC	ULC
Emergency vents	803 Series	MH25961	UL2583, ULC-S631	UL	UL	UL	UL/ULC	UL	ULC	ULC
Anti syphon valve (above ground)	605 & 606 Series	MH17159	UL842, ULC/ORD-C842	UL/ULC	UL		UL/ULC		UL/ULC	UL/ULC
Pressure regulator valve	664-302	MH17159	UL842, ULC/ORD-C842	UL/ULC	UL		UL/ULC		UL/ULC	UL/ULC
Field replaceable spill containers	85000 Series	MH21091	CAN/ULC-S663	ULC	ULC		ULC		ULC	ULC
Below ground spill containers	702, 703, 705, 715, 725	MH21091	CAN/ULC-S663	ULC	ULC		ULC		ULC	ULC
Defender Series direct bury spill containers	705 Series	MH21091	CAN/ULC-S663	ULC	ULC		ULC		ULC	ULC
Defender Series multiport spill containers	DMP Series	MH21091	CAN/ULC-S663	ULC	ULC		ULC		ULC	ULC

NOTES

Compatibility is valid for products purchased after March 1, 2016.

Products that were purchased prior to March 1, 2016 may or may not be compatible.

Please contact Franklin Fueling Systems to ascertain compatibility.

Listing is generic in nature and is intended to provide overview of compatibility with blended fuels.

Franklin Fueling Systems follows independent third party standards where available.

Franklin Fueling Systems tests for compatibility if 3rd party standards are not available.

Customers desiring more information on whether their system is compatible should contact Franklin Fueling Systems directly.

Precise information on the original equipment manufacturer date is absolutely essential to determine compatibility.

Generic compatibility listing does not imply products are compatible with blended fuels irrespective of the year of manufacture and installation.

On other compatibility questions not covered by this listing, written approval on product compatibility is needed from Franklin Fueling Systems.

UL = UL Listed

ULC = UL Canada Listed

CARB = California Air Resources Board

Piping & Containment Systems

Brand: APT™

Product	Models	UL/ULC File #	UL/ULC Standard	Gasoline / Ethanol Blends				Diesel / Biodiesel Blends		Heating Fuels Fuel Oil
				Up to E10	Up to E15	Up to E85	E100	Up to B5	B100	
Flexible pipework & fittings	XP Series	MH17457	UL971/ULC-S660	UL/ULC	UL/ULC	UL/ULC	UL/ULC	UL/ULC		UL/ULC
Polyethylene tank sumps	TSD, TSM, TSS Series	MH27175	ULC/ORD-C107	ULC						ULC
Polyethylene dispenser sumps	LMM, LBD, LMD Series	MH27175	ULC/ORD-C107	ULC						ULC
Polyethylene transition sumps	TS, IPS, AST Series	MH27175	ULC/ORD-C107	ULC						ULC
Fiberglass tank sumps	TMA, TDA, TM, TD Series	MH27175	ULC/ORD-C107	ULC						ULC
Fiberglass dispenser sumps	LMM & DHW Series	MH27175	ULC/ORD-C107	ULC						ULC
Entry boots (flexible)	DEB, FEB, FDB, DBB, DDB, FBB Series	MH27175	ULC/ORD-C107	ULC						ULC
Entry boots (rigid)	REB, RDEB, REB-R, RDEB-R, REB-C, REB-C-R, FWEB Series	MH27175	ULC/ORD-C107	ULC						ULC

Piping & Containment Systems

Brand: UPP™

Product	Models	UL/ULC File #	UL/ULC Standard	Gasoline / Ethanol Blends				Diesel / Biodiesel Blends		Heating Fuels Fuel Oil
				Up to E10	Up to E15	Up to E85	E100	Up to B5	B100	
Semi-rigid pipework & nickel/brass fittings	UPP	MH25274	UL971, ULC-S660	UL/ULC	UL/ULC	UL/ULC	UL/ULC	UL/ULC	UL	UL/ULC
Semi-rigid pipework & flange fittings	UPP & 90 Series	MH25274	UL971, ULC-S660	UL/ULC	UL/ULC	UL/ULC	UL/ULC	UL/ULC	UL	UL/ULC
Semi-rigid pipework & flange fittings	UPP & 06 Series	MH25274	UL971, ULC-S660	UL/ULC	UL/ULC	UL/ULC	UL/ULC	UL/ULC	UL	UL/ULC
Semi-rigid pipework & flange fittings	UPP & DN Series	MH25274	UL971, ULC-S660	UL/ULC	UL/ULC	UL/ULC	UL/ULC	UL/ULC	UL	UL/ULC
Semi-rigid pipework & stainless steel fittings	UPP & SS Series	MH25274	UL971, ULC-S660	UL/ULC	UL/ULC	UL/ULC	UL/ULC	UL/ULC	UL	UL/ULC
Electrofusion couplers, elbows, & elbows	UPP	MH25274	UL971, ULC-S660	UL/ULC	UL/ULC	UL/ULC	UL/ULC	UL/ULC	UL	UL/ULC
Polyethylene dispenser sumps	DS3617 ENCORE & DS3617 OVATION	MH27175	ULC/ORD-C107	ULC			ULC			ULC
Electrofusion entry boots	304, 303, 305 Series	MH25274	UL971, ULC-S660	UL/ULC	UL/ULC	UL/ULC	UL/ULC			
Entry boots (flexible)	DEB, FEB, FDB, DBB, DDB, FBB Series	MH27175	ULC/ORD-C107	UL/ULC			UL/ULC			ULC
Test boots	49 Series	MH25274	UL971, ULC-S660	UL/ULC	UL/ULC	UL/ULC	UL/ULC		UL	
Electrofusion fittings	02, 03, 04, 08, 10, G3, G4, G8 Series	MH25274	UL971, ULC-S660	UL/ULC	UL/ULC	UL/ULC	UL/ULC		UL	

NOTES

Compatibility is valid for products purchased after March 1, 2016.

Products that were purchased prior to March 1, 2016 may or may not be compatible.

Please contact Franklin Fueling Systems to ascertain compatibility.

Listing is generic in nature and is intended to provide overview of compatibility with blended fuels.

Franklin Fueling Systems follows independent third party standards where available.

Franklin Fueling Systems tests for compatibility if 3rd party standards are not available.

Customers desiring more information on whether their system is compatible should contact Franklin Fueling Systems directly.

Precise information on the original equipment manufacturer date is absolutely essential to determine compatibility.

Generic compatibility listing does not imply products are compatible with blended fuels irrespective of the year of manufacture and installation.

On other compatibility questions not covered by this listing, written approval on product compatibility is needed from Franklin Fueling Systems.

UL = UL Listed
ULC = UL Canada Listed

Submersible Pumping Systems

Brand: FE Petro™

Product	Models	UL/ULC File #	UL/ULC Standard	Gasoline / Ethanol Blends			Diesel / Biodiesel Blends			Heating Fuels	
				Up to E10	Up to E15	Up to E85	Up to B5	Up to B20	B100	Kerosene	Fuel Oil
4" submersible turbine pumps	STP Series	MH6262	UL79	UL/ULC			UL/ULC			UL/ULC	UL/ULC
4" submersible turbine pumps	STPAG, IST, STPAP, ISTAP Series	MH6262	UL79, UL79A, UL79B	UL/ULC	UL	UL	UL/ULC	UL	UL	UL/ULC	UL/ULC
4" mechanical line leak detectors	STP-MLD+G	MH17450	UL842	UL/ULC			UL/ULC			UL/ULC	UL/ULC
4" mechanical line leak detectors	STP-MLD+AG	MH17450	UL842, UL842A, UL842B	UL/ULC	UL	UL	UL/ULC			UL/ULC	UL/ULC
4" mechanical line leak detectors	STP-MLD+D	MH17450	UL842				UL/ULC			UL/ULC	UL/ULC
4" mechanical line leak detectors	STP-MLD+BD	MH17450	UL842, UL842A, UL842B				UL/ULC	UL	UL	UL/ULC	UL/ULC
6" submersible turbine pumps	STP Series	MH6262	UL79	UL/ULC			UL/ULC			UL/ULC	UL/ULC
6" mechanical line leak detectors	STP-MLD-HC	MH17450	UL842	UL/ULC			UL/ULC			UL/ULC	UL/ULC
6" mechanical line leak detectors	STP-MLD-HCD	MH17450	UL842				UL/ULC			UL/ULC	UL/ULC

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Dispensing Systems

Brands: HEALY™, FLEX-ING™, EBW™

Product	Models	UL/ULC File #	UL/ULC Standard	Gasoline / Ethanol Blends			Diesel / Biodiesel Blends Up to B5	Heating Fuels	
				Up to E10	Up to E15	Up to E85		Kerosene	Fuel Oil
400 Series vapor recovery nozzles	400 Series	MH18438	UL2586	UL	UL				
600 Series vapor recovery nozzles	600 Series	MH18438	UL2586	UL	UL				
700 Series vapor recovery nozzles	700 Series	MH18438	UL2586	UL	UL				
800 Series vapor recovery nozzles	800 Series	MH18438	UL2586	UL	UL				
900 Series vapor recovery nozzles	900 Series	MH18438	UL2586	UL	UL				
FLEX-ON™ hardwall hose	FLHFR Series	MH13484	UL330, CAN/ULC-S612	UL/ULC					
FLEX-ON™ softwall hose	FLXSW Series	MH13484	UL330, CAN/ULC-S612	UL/ULC					
FLEX-ON™ marina hose	FLXBM Series	MH13484	UL330, CAN/ULC-S612	UL/ULC					
FLEX-COLD cold weather hose	FLXCW Series	MH13484	UL330, CAN/ULC-S612	UL/ULC					
Ethanol hose	FLXE Series	MH2853	UL330, CAN/ULC-S612	UL/ULC	UL	UL			
Vapor recovery hose (low permeation)	75B Series	MH13484	UL330, CAN/ULC-S612	UL/ULC					
Low permeation hose (conventional)	FLHLP Series	MH2853	UL330, CAN/ULC-S612	UL/ULC					
Vapor recovery break away valve	8701VV	MH18281	UL567	UL					
Vapor recovery break away valve (swivel)	8701	MH18281	UL567	UL					
Safety sever break away valve (conventional)	69 & 79 Series	MH13686	UL567, CAN/ULC-S644	UL/ULC	UL/ULC				
Dispenser-mounted vacuum source	VP1000-5 Series	MH49882	UL79	UL	UL		UL		UL
Dispenser-mounted vacuum source	VP1000-220 Series	MH49882	UL79	UL	UL		UL		UL
Dispenser-mounted vacuum source (suction)	VP1200-1 Series	MH49882	UL79	UL	UL		UL		UL
Clean air separator	9961 Series	MH15389	UL60079	UL					
Hose adapters	CX6 Series	MH49881	UL567	UL			UL	UL	UL
Flow limiters	1301 & 1302	MH17159	UL842	UL			UL	UL	UL
Dispenser retrofit kits	ZO Series	MH25102	UL87	UL			UL	UL	UL
Utility nozzles	402 Series	MH6265	UL2586	UL	UL		UL	UL	UL
Manual utility nozzles	498 Series	MH6265	UL2586	UL	UL		UL	UL	UL

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UL = UL Listed

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Fuel Management Systems

Brands: INCON™

Product	Models	Gasoline / Ethanol Blends		Diesel / Biodiesel Blends			Heating Fuels Kerosene
		Up to E10	Up to E85	Up to B5	Up to B20	Up to B100	
Leak detection probes	LL2 Series	FFS	FFS	FFS	FFS	FFS	FFS
Inventory probes	LL2-I Series	FFS	FFS	FFS	FFS	FFS	FFS
Transducers	TS-LS500	FFS	FFS	FFS	FFS	FFS	FFS
Transducers	TS-LS300	FFS	FFS				FFS
Universal liquid sensor	TSP-ULS/UHS	FFS	FFS	FFS	FFS	FFS	FFS
Discriminating interstitial sensor	FMP-DIS	FFS	FFS	FFS	FFS	FFS	FFS
Level sensor	FMP-HLS	FFS	FFS	FFS	FFS	FFS	FFS
Monitoring well sensor	TSP-MWS	FFS	FFS	FFS	FFS	FFS	FFS
Discriminating interstitial sensor	FMP-DIS	FFS	FFS	FFS	FFS	FFS	FFS
Electro-optic interstitial sensor	FMP-EIS	FFS	FFS	FFS	FFS	FFS	FFS
Discriminating magnetostrictive sensor	FMP-DMS	FFS	FFS	FFS	FFS	FFS	FFS
Discriminating dispenser sump sensor	FMP-DDS	FFS	FFS	FFS	FFS	FFS	FFS
Discriminating turbine sump sensor	FMP-DTS	FFS	FFS	FFS	FFS	FFS	FFS
Secondary containment monitoring	TS-SCM	FFS	FFS	FFS	FFS		FFS
Dispensing cutoff system	S404	FFS	FFS	FFS	FFS	FFS	FFS

NOTES

FFS = Franklin Fueling Systems

Compatibility is valid for products purchased after March 1, 2016.

Products that were purchased prior to March 1, 2016 may or may not be compatible.

Please contact Franklin Fueling Systems to ascertain compatibility.

Listing is generic in nature and is intended to provide overview of compatibility with blended fuels.

Franklin Fueling Systems follows independent third party standards where available.

Franklin Fueling Systems tests for compatibility if 3rd party standards are not available.

Customers desiring more information on whether their system is compatible should contact Franklin Fueling Systems directly.

Precise information on the original equipment manufacturer date is absolutely essential to determine compatibility.

Generic compatibility listing does not imply products are compatible with blended fuels irrespective of the year of manufacture and installation.

On other compatibility questions not covered by this listing, written approval on product compatibility is needed from Franklin Fueling Systems.

franklinfueling.com

3760 Marsh Rd. • Madison, WI 53718, USA

Tel: +1 608 838 8786 • Fax: +1 608 838 6433

Tel: USA & Canada +1 800 225 9787 • Tel: UK +44 (0)1473 243300

Tel: Mex 001 800 738 7610 • Tel: FR +33 (0)1 69 21 41 41 • Tel: CH +86 10 8565 4566

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**



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.

- ◆ **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 7150M is EVR Approved for E85

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**

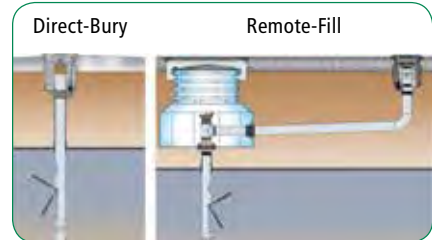
The new 7150 is a two-stage, positive shut-off valve, providing completely automatic operation with no pre-checks to perform, no resets, and no overrides to be broken or abused. The valve closes when the tank level rises to 95% capacity and provides a special bypass valve so the tank can be filled to 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
C05117	Lower Tube
D02508	Vapor-Tight Inlet Tube
C03899M	Non-Vapor-Tight Inlet Tube
D02508	Vapor-Tight Inlet Tube (Blue)

7150 Ordering Specifications

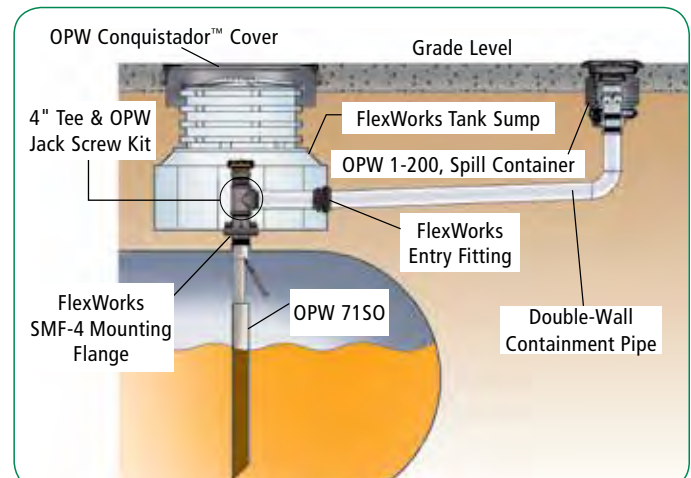
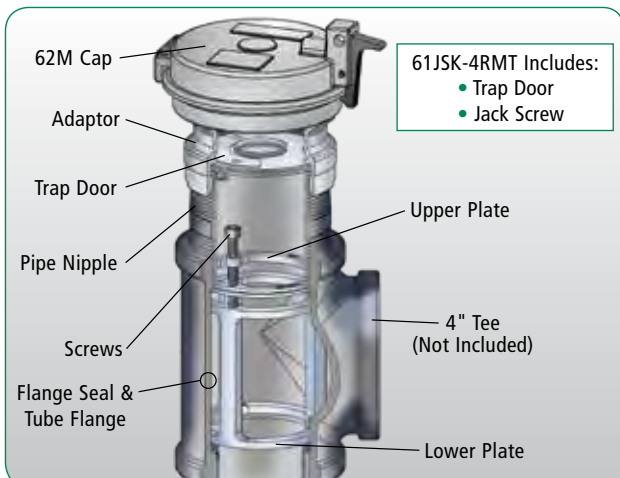
Product #	Description	Bury Depth		Tank Diameter		Upper Tube Length		Lower Tube Length		Overall Length		Max. Riser Length		Max. Nominal Tank Dia.		Max. Actual Tank Dia.		Weight	
		ft.	m	ft.	m	in.	m	in.	m	in.	m	in.	m	in.	m	in.	m	lbs.	kg
7150-400CB*	Vapor-Tight Overfill Valve	5	1.5	8	2.4	60	1.5	83	2.1	155 ³ / ₄	3.9	53 ¹ / ₂	1.4	96	2.4	107	2.7	16	7
7150-410CB*	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
7150-420CB*	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**

*ULC B100 Compatible

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.





Below Ground Products Fuel Compatibility Matrix

Updated 12/2018

OPW FCS Products	Description	Standard Fuels: ≤15% Ethanol Gasoline ≤5% Bio-Diesel*	High Ethanol Content Gasoline: 15-100% Ethanol	High Biodiesel Content 5-20% Biodiesel*	High Biodiesel Content 5-100% Biodiesel*	Av-Gas/ Jet Fuel	Kerosene/ Fuel Oil	DEF (Diesel Exhaust Fluid)
CXXA Double Wall Piping	Double Wall Primary Piping	X	X	X	X	X	X	X
DPC Series	Double Wall Pipe Couplings	X	X	X	X	X	X	
SPC Series	Single Wall Pipe Coupling	X	X	X	X	X	X	
SBC Series	Stainless Steel Swivel Bolt On Coupling	X	X	X	X	X	X	X
SMA-1515, SMA-1520, SMA-2020, SMA-3030	E-Coated Male Adaptors	X	X	X	X	X	X	
SMA-7575, SMA-1010	Swivel Male Adaptor (Brass or Zinc Plated)	X					X	
STF-1515, STF-2020, STF-2215, STF-2020	E-Coated Swivel Tees	X	X	X	X	X	X	
SFA-7575, SFA-1010	Swivel Female Adaptor (Brass or Zinc Plated)	X					X	
SEF-1515, SRE-2015, SEF-2020, SEF-3030	E-Coated Swivel Elbows	X	X	X	X	X	X	
Polyethylene and Fiberglass Sumps	Dispenser, Tank, Loop, and Transition Sumps	X	X	X	X	X	X	X
REF Series Entry Fittings	Entry Fittings	X	X	X	X	X	X	X
DEB and EBF Series	Entry Boots	X	X	X		X	X	X
1-2100 Series / Multiports / 1-2200 Series	Spill Containers	X	X	X	X	X	X	***
FibreTite Multiports	Spill Containers	X	X	X	X	X	X	***
101BG-Series	Spill Containers	X	X	X	X	X	X	***
1-3100 Series (Edge)	Double Wall & Single Wall Spill Container Series	X	X	X	X	X	X	***
60V Series	Vapor Line Shear Valve	X	X	X	X	X	X	
10 Series	Emergency Shut Off Valve	X	X	X	X	X	X	
10 Plus Series	Emergency Shut Off Valve	X	X	X	X	X	X	
60V-DEF	DEF Series Shear Valve							X
61SALP Series	Fill Swivel Adaptor	X	X	X	X	X	X	
633T-8076	Fill Adaptor	X	X	X	X	X	X	
61VSA Series	Vapor Swivel Adaptor	X	X	X	X	X	X	
1611AVB-1625	Vapor Adaptor	X	X	X	X	X	X	
634TT-7085-EVR	Fill Cap	X	X	X	X	X	X	
1711T-7085-EVR	Vapor Cap	X	X	X	X	X	X	
634LPC-040	Low Profile Fill Cap	X	X	X	X	X	X	
1711LPC-0300	Low Profile Vapor Cap	X	X	X	X	X	X	
62M Series	Monitoring Probe Cap	X	X	X	X	X	X	X
61SO & 71SO Series	Overfill Valve	X				X	X	
61SOM Series	Overfill Valve Anodized	X	X			X	X	
71SOM Series	Overfill Valve Anodized	X	X	X	X	X	X	
71SO-B Series	High BioDiesel Overfill Valve	X		X	X	X	X	
6111 & 61TP Series	Tank Bottom Protectors	X				X	X	
61T Series	Drop Tubes	X				X	X	
61T-SS Series	Stainless Steel Drop Tube	X	X	X	X	X	X	
61T-DEF Series	Stainless Steel DEF Drop Tube							X
233 Series	Extractor Valve	X	X	X	X	X	X	X
FCXX Series	Stainless Flex Connectors	X	X	X	X	X	X	X
53VML/30MV Series	Ball Floats	X	X	X	X	X	X	
523V Series	Pressure Vacuum Vent	X	X	X	X	X	X	X
623V Series	Pressure Vacuum Vent	X	X	X	X	X	X	X
723V Series	EVR Pressure Vacuum Vent	X	X	X	X	X	X	X

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

*** Drain plug versions compatible with DEF if installed with Stainless Steel Drop Tube between Nipple and Fill Adapter

≤ Refers to less than or equal to the fuel standard rating for percentage of content

Dualoy® 3000/LCX Product Data

Applications

Rigid fiberglass coaxial fuel handling systems requiring Underwriters Laboratories Listing for integral primary and containment piping conveying the following fuels:

- Motor Vehicle (MV)
- Aviation and Marine A&M)
- High Blend (HB)
- Bio-Diesel
- Concentrated (CT)
- Diesel Exhaust Fluid

Description

Dualoy 3000/LCX rigid fiberglass coaxial piping is a cost-effective solution for contained piping systems. LCX is used for product delivery lines in underground fuel handling systems to convey fuel from the tank to the dispensers. Dualoy 3000/LCX pipe is UL Listed for use with motor vehicle (MV), high blend (HB), concentrated (CT) and aviation and marine (A&M) fuels. Based on currently known tests, **NOV Fiber Glass Systems found this product to be suitable for conveying all blends of biodiesel and ethanol type fuels and the conveyance of DEF.**

The LCX pipe is manufactured as an integral unit. The primary is made of chemically inert, non-permeable, fiberglass reinforced epoxy resin which is inherently resistant to deterioration due to water and microbial attack. This layer is covered with a porous layer to provide the small volume interstitial space, which facilitates rapid leak detection. Then, the containment layer, comprised of the same material as the primary, is wound over the primary and porous layers.

The containment system is installed with custom designed clamshell containment fittings. Both the primary and containment systems are bonded for long-term, reliable performance.

- Dualoy 3000/LCX containment fittings are typically bolted in place while the adhesive cures.
- Dualoy 3000/LCX reduces installation and inspection time dramatically, retaining system integrity.
- Dualoy 3000/LCX double wall design significantly improves impact resistance over single wall pipe.
- Dualoy 3000/LCX systems provide true double wall design which permits rapid communication through the interstice.

Listings and Approvals

The rigid fiberglass piping used in Dualoy 3000/LCX is Listed in the United States with Underwriters Laboratories for nonmetallic underground piping for MV, HB, CT and A&M fuels under File No. MH9162. Dualoy 3000/LCX pipe and fittings are also Listed with Underwriters Laboratories of Canada for Petroleum Products and Oxygenated Fuels (File CMH715). Underwriters Laboratories has also approved Dualoy 3000/L and Dualoy 3000/LCX for use with MTBE fluids.

Performance

Primary operating pressures to 200 psig (13.8 bar)

Continuous operating temperature to 150°F (66°C)

Containment system pressures to 50 psig (3.45 bar)

Individual system components may not have the same ratings as the pipe. Refer to the detailed product information for the specific components to determine the pressure rating for the system as a whole.

Composition

Primary pipe: Filament-wound fiberglass reinforced epoxy pipe with integral epoxy liner. When classified in accordance with ASTM D2310 and ASTM D2996, the pipe meets the following cell limits: RTRP 11CF1-5420.

Pipe containment: Filament-wound fiberglass reinforced epoxy pipe.

Interstitial space: Dry, graded glass beads secured in place with adhesive backed tape.

Fittings: Compression molded or filament-wound fiberglass reinforced epoxy primary fittings. Containment fittings are molded.

Adhesive: PSX™ •20 or PSX™ •34 ambient-cure, two-part epoxy for all services (including alcohols and MTBE).



EGVV7.MH27236

Tank Accessories for Flammable and Combustible Liquids Certified for Canada

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Tank Accessories for Flammable and Combustible Liquids Certified for Canada

[See General Information for Tank Accessories for Flammable and Combustible Liquids Certified for Canada](#)

OPW FUELING CONTAINMENT SYSTEMS INC

MH27236

3250 U S RTE 70 BUSINESS W
SMITHFIELD, NC 27577 USA

Spill Containment Devices in 19 L capacities for use with petroleum products only, Model(s) P761C-FLDV, P761C-FLPL

Spill containment devices, for aboveground storage tanks, Model(s) 06211, 06221

Spill containment devices, for underground storage tanks, Model(s) 1WW-3VVXYZS-T-50, where WW = A (Aluminum Cover), C (Cast Iron or Ductile), SC (Sealable Cover, Cast Aluminum), PC (Plow Ring Rain Tight Cast Iron or Ductile), PSC (Plow Ring Sealable Cover, Cast Iron); VV = 1 (5 gallon), 15 (15 gallon), 7 (5 gallon, steel cover); X = 0 (no gauge), 1 (float gauge), 2 (sensor), 3 (float and sensor), 4 (non-discriminating sensor), MA - mixed alcohol compatible sensor can be added to the end of the product number; XX = 0 (5 gal), 05 (5 gal Slip On), 15 (15 gal), 55 (15 Gal Slip On); Y = 1 (single wall, cast iron 2100 style base), 2 (double wall), 3 (single wall, cast iron 3100 style base); U = 0 (flange adaptor), 4 (no flange adaptor, 4" thread); YY = Blank (composite base), C (Cast Iron Base); Z = D (drain valve) or P (plug); S = B (British thread), Blank (NPT); T = O (orange ring and/or cover), R (red ring and/or cover), W (white ring and/or cover), Y (yellow ring and/or cover); 50 - 50 ft of wires.

Spill containment devices, for underground storage tanks, Model(s) FL Series, (Cover Diameter)(Color)-(Port Style)(Port Spacing)(Bucket Style)-SK (size)-(Port Cover Color/Style); Cover Diameter = 90 (38.5" Diameter), 100 (44" Diameter); Color = Gray, Black, Gray-HD (Heavy Duty), Black-HD (Heavy Duty); other colors available: Green, Orange, Purple, Red, White, Yellow, etc.; Port Style = MP (Dual Port), OF (Offset Port), CF (Center Port); Port Spacing = 16 (16" centers), 8 (8" centers), 816 (16" centers, one cap), 55 (550 mm centers), 27 (275 mm off centers); Bucket Style = S (new sealed FL style bucket), SE (old sealed EVR style P bucket); Skirt size = 12 (12" skirt), 18 (18" skirt), 12-TI (12" Taper In Skirt), 10-46 (10 Flared), 10 (10" Skirt); Port Cover = RSC (Red/Orange SC Sealable aluminum port covers); Color/Style WSC (White/Orange SC sealable aluminum port covers), YSC (Yellow SC sealable aluminum port covers), R (Red/Orange FC-11 composite port covers), W (White/Orange FC-11 composite port covers), Y (Yellow FC-11 composite port cover). Other colors available BL = Black, BU = Blue, G = Gray, GR= Green, O = Orange, P = Purple, etc. Dual port covers normally include indicated colour and orange. RETRO can be added after the FL Color designation indicating that a frame and skirt are not included.

Spill containment devices, for underground storage tanks, grade installation, Model(s) 101BG-21XXYY, 1WW-21XXYY-Z-T, 1WW-22XXUZS-T, 1WW-2400YY, OPW 6591B, OPW 7111SS-CS

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August 23rd, 2018

Adam Barker
Engineer | Speedway LLC
500 Speedway Drive, Enon, OH 45323
Phone: 937-863-7507 | Cell: 937-510-7508
Email: adbarker@speedway.com

Dear Mr. Barker,

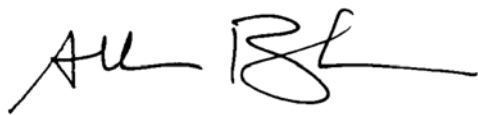
Franklin Fueling Systems certifies that our UPP piping system is certified to be compatible with Fuel Ethanol, also known commercially as E85, containing 51 % to 83 % ethanol by volume under UL-971, file MH25274. Our poly and fiberglass containment range are certified to meet the ASTM D5798 standard which has a provision for compatibility with high blend ethanol within the UL 2447 listing.

Per ASTM D5798 within the scope section 1.3 This specification formerly covered Fuel Ethanol (Ed70-Ed85) for Automotive Spark-Ignition Engines, also known commercially as E85. The nomenclature "fuel ethanol" has been changed to "ethanol fuel blends" to distinguish this product from denatured fuel ethanol Specification D4806. To facilitate blending of ethanol fuel blends that meet seasonal vapor pressure requirements, a new lower minimum ethanol content has been established.

For more information on ASTM D5798 follow the link below:

<https://www.astm.org/Standards/D5798.htm>

Sincerely,



Allan Busch
Senior Product Manager – Piping & Containment Systems
Franklin Fueling Systems

Leading The Way In E85 Underground Storage Tank Equipment Solutions



We've extended our line of approved Phase 1 Vapor Recovery E85 Products for USTs to include these exciting NEW products – all are CARB/EVR Approved!

NEW 71SOM

- ◆ 71SOM-412C Overflow Prevention Valve
- ◆ 61VSA-MA Vapor Recovery Swivel Adaptor
- ◆ 61SALP-MA Fill Swivel Adaptor
- ◆ 71JSK-44MA Jack Screw Kit
- ◆ 71JSK-4RMT Remote Fill Jack Screw Kit
- ◆ 62M-MA Monitoring Cap
- ◆ 61T-SS-0412 and 0417 Drop Tube

Welcome to our Extended Line of CARB EVR Approved E85 UST Products



If you're handling E85, it's time you get to know the entire line up of OPW CARB EVR Approved E85 UST Equipment. From our 2100 and EDGE Series spill containers to our innovative NEW 71SOM Overfill Prevention Valve, you can count on legendary OPW quality and performance to make sure you're covered!

Regardless of whether or not you are in a CARB EVR required area for E85, you can rest assured that OPW UST E85 products meet the most stringent EPA regulations for spill containment and vapor tight integrity so you are doing all you can do to help keep the air pure and the water clean at your site.



1 634TT-EVR Fill Cap

- Heavy duty and corrosion resistant Duratuff® body eliminates rust and oxidation for a long, maintenance-free life



2 634LPC Low Profile Top-Seal Fill Cap

- Designed for tight installations where the clearance between the top of the fill adaptor and the underside of the spill container cover is limited
- Rugged iron lever provides a positive cam-action that seats the cap firmly in the adaptor groove for a water and vapor-tight seal



3 FSA-400 Face Seal Adaptor

- Provides a flat, true sealing surface on threaded pipes where a gasket seal exists per EVR requirements.
- Installs on fill pipe riser below the spill container to provide a true sealing surface for the drop tube flange on the overfill prevention valves



4 1711T-EVR Vapor Recovery Caps

- Installs on the vapor recovery adaptor, when not in use, to prevent vapors from escaping and to prevent water, dust and debris from entering the tank
- Constructed of Duratuff® to help prevent corrosion



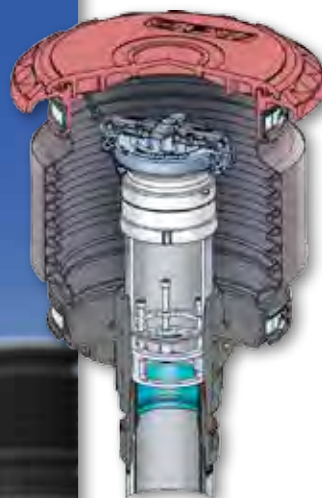
5 OPW 1711LPC Low Profile Top Seal Vapor Cap

- Designed for tight installations where the clearance between the top of the vapor adaptor and the underside of the spill container or manhole cover is limited
- Rugged iron lever provides a positive cam-action that seats the cap firmly in the adaptor groove for a water and vapor tight seal



6 233 Series Extractor Fitting

- Designed for use with all OPW 53VML Ball Float Vent Valves that include an extractor cage



NEW 61VSA-MA Vapor Recovery Swivel Adaptor



- Nickel Coated Brass construction for durability, consistent swivel torque, and reliable vapor tight sealing

NEW 61SALP-MA Fill Swivel Adaptor



- Nickel Coated Brass construction for durability, consistent swivel torque, and reliable vapor tight sealing

NEW 71JSK-4RMT: Remote Fueling Jack Screw Kit



- Nickel Plated Aluminum
- Works in conjunction with our 71SOM for remote fueling applications

NEW 71JSK-44MA Jack Screw Kit

- Plated Aluminum Construction
- Includes cages for both cast iron and composite base spill containers



14 NEW 71SOM-412C Overflow Prevention Valve

- Constructed of nickel plated aluminum, anodized aluminum, stainless steel and other compatible materials; no exposed bare aluminum
- Stainless steel lower tube included, no epoxy needed in field
- Designed for tanks up to 10 ft bury and 10 ft in diameter
- Robustly designed for long term vapor-tight performance in aggressive fuels

15 NEW 61T-SS-0412: 4" by 12 ft Drop Tube

- Stainless Steel Construction, 12 ft Length

NEW 61T-SS-0417: 4" by 17 ft Drop Tube

- Stainless Steel Construction, 17 ft Length



16 NEW 62M-MA: Monitoring Cap

- Anodized aluminum construction
- Includes 3/8" Pipe Plug and 3/8" Grommet Fitting
- Compatible with 1/2" Grommet (sold separately)



7 EDGE Series EVR Spill Containers

- OPW EDGE™ Double Wall Spill Containers install in the same space as single wall buckets
- Delivers best-in-class features that significantly improve reliability, installation, testing and serviceability-ease.



8 1-2100 EVR Series Spill Containers

- Designed to prevent spilled product from entering the soil near the fill and vapor return riser connection
- Help prevent soil contamination and groundwater pollution



9 500 Series (511 / 521) EVR Multiport

- Features flush-mounted manhole lid and raised dual dam and groove spill container ring with P511-EVR Buckets using OPW 1-2100 Style Thread-On Spill Containers
- All Fill Ports in these spill containers feature an enhanced 1DK-2100-EVR vapor tight drain valve
- Available in Composite or Cast Iron bases with 5-gallon buckets





OPW is committed to the long-term sustainability of our world. Every product we build is about enabling operators to provide a safer, cleaner, greener environment for themselves and their customers. Our CARB EVR Approved E85 UST products are an example of this commitment. Whether or not you are in a region required to comply with CARB regulations, you can rest assured, your OPW products are helping you keep your environment clean.

Ordering Specifications - Product Side

Product No.	Description
71SOM-412C	Vapor Tight Overfill Prevention Valve for Alcohol
71SO-TOOLCT	7150 Installation Tool
71JSK-4RMT	Remote Fueling Jack Screw Kit E85 EVR Approved
71JSK-44MA	Jack Screw Kit for Cast Iron Base Spill Buckets E85 EVR Approved
634TT-7085-EVR	Top Seal Fuel Cap E85 EVR Approved
634LPC-0400	Low Profile Fill Cap E85 EVR Approved
61SALP-MA	Fill Swivel Adapter E85 EVR Approved
61T-SS-0412	4" by 12 ft Drop Tube E85 EVR Approved
61T-SS-0417	4" by 17 ft Drop Tube E85 EVR Approved
FSA-400-S	Face Seal Adaptor E85 EVR Approved
233 Series	Extractor Fittings E85 EVR Approved
EVR EDGE Series	Spill Container E85 EVR Approved
EVR 2100 Series	Spill Container E85 EVR Approved
EVR 6511/6521 Series	Multiport with 1 Series Thread on Spill Containers E85 EVR Approved

Ordering Specifications - Vapor Side

Product No.	Description
1711T-7085-EVR	Top Seal Vapor Cap E85 EVR Approved
1711LPC-0300	Low Profile Vapor Cap E85 EVR Approved
61VSA-MA	Vapor Recovery Swivel Adaptor E85 EVR Approved
62M-MA	Monitoring Cap E85 EVR Approved
EVR EDGE Series	Spill Container E85 EVR Approved
EVR 2100 Series	Spill Container E85 EVR Approved
EVR 6511/6521 Series	Multiport with 1 Series Thread on Spill Containers E85 EVR Approved





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QLWA.GuideInfo Containment Sumps, Fittings and Accessories for Fuels

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[Containment Products for Flammable and Combustible Liquids] (Transfer Pipe, Containment Sumps and Pipe / Sump Accessories) Containment Sumps, Fittings and Accessories for Fuels

[See General Information for Transfer Pipe, Containment Sumps and Pipe/Sump Accessories](#)

GENERAL

This category covers containment sumps, and associated sump fittings and sump accessories intended for below-grade or at-grade use in commercial (public) or private (fleet) automotive fueling-station applications. The combination of these sump products are intended for use as an enclosure for housing of, access to, and interface with, underground piping, connector piping, and other fueling system components (such as pumps, valves, sensors, wiring, etc.), in addition to providing temporary leak or spill containment of liquid fuels. Details of individual sump product types, features and ratings are identified under **SUMP PRODUCT TYPES** and **SUMP PRODUCT RATINGS** below.

These sump products are intended to be installed and used in accordance with the manufacturer's instructions and one or more of the following codes:

ANSI/NFPA 1, "Fire Code"

ANSI/NFPA 30, "Flammable and Combustible Liquids Code"

ANSI/NFPA 30A, "Code for Motor Fuel Dispensing Facilities and Repair Garages"

"International Fire Code" (published by the International Code Council)

Other codes or federal or state regulations of the Authority Having Jurisdiction

These sump products are intended to be field assembled by qualified persons in accordance with the manufacturer's instructions and, for continued leak-resistant service, require periodic inspection and maintenance or replacement.

SUMP PRODUCT TYPES

Containment Sump Types

The following containment sump types of metallic, nonmetallic or composite constructions for specific applications are identified in the individual certifications, together with the applicable containment, location and fuel rating:

Tank Sump — Sumps intended for installation above underground flammable-liquid-storage tanks, typically connecting to a tank manway or riser pipe.

Dispenser Sump — Sumps intended for installation below flammable-liquid-dispensing equipment, typically connecting to a dispenser frame.

Transition Sump — Sumps intended for access to liquid or vapor piping runs, manifolds, fittings or valves in a fueling system.

Fill, Vent or Fill/Vent Sump — Sumps intended for housing of fill, vent or both pipe ends, drain valves, gauges or monitors connected to the tank.

Sump Fitting Types

The following sump fitting types intended for installation with sumps for liquid-tight connections between the wall and pipe and specific applications are identified in the individual certifications, together with the containment and fuel rating:

Sump Penetration Fitting — Fittings intended for sealing underground pipe penetrations through the sump wall.

Sump Termination Fitting — Fittings intended for connecting underground pipe terminations ending at the sump wall.

Sump Internal Fitting — Fittings intended for connection of working components inside the sump, such as valves, but not directly to the sump wall.

Sump Test, Monitor or Test / Monitor Fitting — Fittings intended for either periodic testing or continuous monitoring of the sump and/or pipe, or both.

Sump Accessory Types

The following sump accessory types intended for installation with any sump type for specific applications are identified in the individual certifications, together with the fuel rating:

Sump Cover — Rigid structural plate for at-grade use over the sump top intended to limit sump access, resist water entry and support vehicle loading.

Sump Lid — Cap for below-grade use over the sump top intended to limit sump access, resist water entry and support working loads.

Sump Frame — Frames intended to provide structural support of the sump walls and/or components above or in the sump.

Sump Bracket — Brackets intended to provide structural attachment points to the sump wall or sump frame for components inside the sump.

Sump Chase Pipe — Soil pipe intended to provide a leak-resistant, structural conduit for routing underground carrier pipe to and from the sump.

SUMP PRODUCT RATINGS

The following containment, location, use, and fuel ratings are additionally marked on applicable sump product types and indicated in the individual certifications.

Containment Ratings

Primary — Single-wall sump or fitting construction intended to temporarily contain any liquids leaking from pipe, valves or other liquid-conveying components housed inside or above the sump, and resist entry of fluids from outside or above the sump.

Secondary — Double-wall sump or fitting constructions intended to temporarily contain liquids from leaking components inside or above the sump, and resist entry of fluids from outside or above the sump, and provide fluid communication and monitoring capabilities.

Coaxial — Double-wall fitting constructions suitable for connection to integral primary/secondary pipe and/or secondary sumps with a defined interstitial space that provides fluid communication and monitoring capabilities through the fitting.

Location or Use Ratings

Below Grade — Sumps suitable for installation below the earth's surface are marked "Maximum ____ burial depth."

At Grade — Sumps suitable for installation at the earth's surface are marked "At grade use only."

Repair or Replacement — Fittings additionally marked "Repair" or "Replacement" are intended for repair over, or replacement of, damaged fittings in in-use sumps.

Fuel Rating

Automotive Fuels — Only those fuels formulated in accordance with 40CFR80, "Regulation of Fuels and Fuel Additives," and meeting the following ASTM fuel specifications and blend limits:

ASTM D975 diesel with or without biodiesel blends up to 5% (B5)

ASTM D7467 diesel with biodiesel blends between 6% - 20% (B6 - B20)

ASTM D4814 gasoline with low-ethanol blends up to 10% (E10)

ASTM D5798 gasoline with high-ethanol blends between 51% - 83% (E51 - E83)

Mid-range gasoline/ethanol ASTM D4814 and ASTM D5798 blends between 11% - 50% (E11 - E50)

PRODUCT IDENTITY

One of the following product identities appears on the product:

Dispenser Sump for Automotive Fuels, Primary Containment for At-grade Locations

Dispenser Sump for Automotive Fuels, Primary Containment for Below-grade Locations

Dispenser Sump for Automotive Fuels, Secondary Containment for At-grade Locations

Dispenser Sump for Automotive Fuels, Secondary Containment for Below-grade Locations

Fill Sump for Automotive Fuels, Primary Containment for At-grade Locations

Fill Sump for Automotive Fuels, Primary Containment for Below-grade Locations

Fill Sump for Automotive Fuels, Secondary Containment for At-grade Locations

Fill Sump for Automotive Fuels, Secondary Containment for Below-grade Locations

Fill/Vent Sump for Automotive Fuels, Primary Containment for At-grade Locations

Fill/Vent Sump for Automotive Fuels, Primary Containment for Below-grade Locations

Fill/Vent Sump for Automotive Fuels, Secondary Containment for At-grade Locations

Fill/Vent Sump for Automotive Fuels, Secondary Containment for Below-grade Locations

Tank Sump for Automotive Fuels, Primary Containment for At-grade Locations

Tank Sump for Automotive Fuels, Primary Containment for Below-grade Locations

Tank Sump for Automotive Fuels, Secondary Containment for At-grade Locations

Tank Sump for Automotive Fuels, Secondary Containment for Below-grade Locations

Transition Sump for Automotive Fuels, Primary Containment for At-grade Locations

Transition Sump for Automotive Fuels, Primary Containment for Below-grade Locations

Transition Sump for Automotive Fuels, Secondary Containment for At-grade Locations

Transition Sump for Automotive Fuels, Secondary Containment for Below-grade Locations

Vent Sump for Automotive Fuels, Primary Containment for At-grade Locations

Vent Sump for Automotive Fuels, Primary Containment for Below-grade Locations

Vent Sump for Automotive Fuels, Secondary Containment for At-grade Locations

Vent Sump for Automotive Fuels, Secondary Containment for Below-grade Locations

Sump Internal Fitting for Automotive Fuels, Primary Containment for Repair

Sump Internal Fitting for Automotive Fuels, Primary Containment for Replacement

Sump Internal Fitting for Automotive Fuels, Secondary Containment for Repair

Sump Internal Fitting for Automotive Fuels, Secondary Containment for Replacement

Sump Internal Fitting for Automotive Fuels, Coaxial Containment for Repair

Sump Internal Fitting for Automotive Fuels, Coaxial Containment for Replacement

Sump Monitor Fitting for Automotive Fuels, Primary Containment for Repair

Sump Monitor Fitting for Automotive Fuels, Primary Containment for Replacement

Sump Monitor Fitting for Automotive Fuels, Secondary Containment for Repair

Sump Monitor Fitting for Automotive Fuels, Secondary Containment for Replacement

Sump Monitor Fitting for Automotive Fuels, Coaxial Containment for Repair

Sump Monitor Fitting for Automotive Fuels, Coaxial Containment for Replacement

Sump Penetration Fitting for Automotive Fuels, Primary Containment for Repair

Sump Penetration Fitting for Automotive Fuels, Primary Containment for Replacement

Sump Penetration Fitting for Automotive Fuels, Secondary Containment for Repair

Sump Penetration Fitting for Automotive Fuels, Secondary Containment for Replacement

Sump Penetration Fitting for Automotive Fuels, Coaxial Containment for Repair

Sump Penetration Fitting for Automotive Fuels, Coaxial Containment for Replacement

Sump Termination Fitting for Automotive Fuels, Primary Containment for Repair

Sump Termination Fitting for Automotive Fuels, Primary Containment for Replacement

Sump Termination Fitting for Automotive Fuels, Secondary Containment for Repair

Sump Termination Fitting for Automotive Fuels, Secondary Containment for Replacement

- Sump Termination Fitting for Automotive Fuels, Coaxial Containment for Repair
- Sump Termination Fitting for Automotive Fuels, Coaxial Containment for Replacement
- Sump Test Fitting for Automotive Fuels, Primary Containment for Repair
- Sump Test Fitting for Automotive Fuels, Primary Containment for Replacement
- Sump Test Fitting for Automotive Fuels, Secondary Containment for Repair
- Sump Test Fitting for Automotive Fuels, Secondary Containment for Replacement
- Sump Test Fitting for Automotive Fuels, Coaxial Containment for Repair
- Sump Test Fitting for Automotive Fuels, Coaxial Containment for Replacement
- Sump Test/Monitor Fitting for Automotive Fuels, Primary Containment for Repair
- Sump Test/Monitor Fitting for Automotive Fuels, Primary Containment for Replacement
- Sump Test/Monitor Fitting for Automotive Fuels, Secondary Containment for Repair
- Sump Test/Monitor Fitting for Automotive Fuels, Secondary Containment for Replacement
- Sump Test/Monitor Fitting for Automotive Fuels, Coaxial Containment for Repair
- Sump Test/Monitor Fitting for Automotive Fuels, Coaxial Containment for Replacement
- Sump Bracket Accessory for Automotive Fuels
- Sump Chase Pipe Accessory for Automotive Fuels
- Sump Cover Accessory for Automotive Fuels
- Sump Frame Accessory for Automotive Fuels
- Sump Lid Accessory for Automotive Fuels

RELATED PRODUCTS

Flexible connector fuel pipe used in sump applications is covered under Flexible Connector Piping for Fuels ([QLWV](#)).
Underground metallic and nonmetallic fuel piping used in underground applications is covered under Piping, Flammable Liquid, Underground ([QLXT](#)).

ADDITIONAL INFORMATION

For additional information, see Transfer Pipe, Containment Sumps and Pipe/Sump Accessories ([QLVW](#)), Containment Products for Flammable and Combustible Liquids ([ECPR](#)) and Flammable and Combustible Liquids and Gases Equipment ([AAPQ](#)).

REQUIREMENTS

The basic requirements used to investigate products in this category are contained in [UL 2447](#), "Outline of Investigation for Containment Sumps, Fittings and Accessories for Fuels."

UL MARK

The Certification Mark of UL on the product is the only method provided by UL to identify products manufactured under its Certification and Follow-Up Service. The [Certification Mark](#) for these products includes the UL symbol, the words "CERTIFIED" and "SAFETY," the geographic identifier(s), and a file number.

Alternate UL Mark

The Listing Mark of UL on the product is the only method provided by UL to identify products manufactured under its Listing and Follow-Up Service. The Listing Mark for these products includes the UL symbol (as illustrated in the Introduction of this Directory) together with the word "LISTED," a control number, the appropriate containment sump, sump fitting or sump accessory type (as specified under **SUMP PRODUCT TYPES** above), and the appropriate containment, location, use, and fuel ratings (as specified under **SUMP PRODUCT RATINGS** above).

* * * * *

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XFLO™ FUEL METER



Xflo™ Fuel Meter

Save fuel, save time, save money.

Without accurately-calibrated dispensers, you could be unintentionally giving away fuel every time customers fill their tanks. The new Wayne Xflo™ Meter can make this a thing of the past. With fewer moving parts and additional calibration points, the Xflo Meter sets the standard in metering accuracy. It's not only accurate, it's also 20-30% faster than traditional piston meters. And faster, more accurate transactions mean more profit to your bottom line.

Wayne
FUELING SYSTEMS

Xflo™ Fuel Meter

Save fuel, save time, save money.

So accurate, you may never have to calibrate it again

With the Xflo Meter, expect more accurate metering and less frequent calibration. In both lab and field tests, the Xflo Meter demonstrated no discernible drift after metering millions of litres of fuel — all were still perfectly calibrated. That means potential fuel savings of up to thousands of litres per year.

Peerless performance and uncompromised control

The Xflo Meter's phenomenal accuracy and throughput are the result of revolutionary engineering and precision manufacturing. Wear and tear are minimized thanks to the Xflo Meter's design, featuring fewer moving parts and sealing surfaces. This limits the possibility of meter drift. The Xflo Meter also has multiple calibration points, providing you with better accuracy across the entire flow range.

Extraordinarily adaptive

The Xflo Meter is both accurate and tough, making sure your investment lasts for years. Building on our tradition of dependable products, the Xflo Meter's efficient hydraulic design features tandem screw rotors made of hardened bearing steel in a compact housing. This rugged design is perfect for varied fuel environments. The Xflo Meter is built to handle millions of litres over its lifetime, in all flow conditions, fluid temperatures, densities and viscosities, and to be used with the same fuel types compatible with traditional piston meters.



- Increase profits by eliminating fuel loss: save potentially thousands of litres every year.
- Protect your investment: virtually eliminate recalibration costs.
- Expect field-proven performance: over 3,000 meters successfully installed using similar/comparable technology.
- Improve your throughput: Wayne's fastest meter ever.

Astonishing performance, outstanding security

At today's fuel prices, securing your investment is more important than ever. High-speed serial communication to the iGEM pump computer and a lack of exposed gear sets make the Xflo Meter highly resistant to tampering. Employing unique calibration tables and serial numbers that must be recognized by the iGEM enhances transaction security.

Customer-centric innovation since 1891

Wayne engineers designed the Xflo Meter module to mount in the same form factor as existing iMeters installed in our recent dispenser models. This makes it easy to replace meters in existing dispensers with iGEM electronics (Global Star™, Ovation®, Global Ovation®). The Xflo Meter is available for use with E85 and Ultra High Capacity applications, with future plans for use in LPG applications.

www.wayne.com

Austin, Texas, USA | Malmö, Sweden | Rio de Janeiro, Brazil | Shanghai, China

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Wayne
FUELING SYSTEMS



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

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.

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

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

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		

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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EWTVMH1821 Flammable Liquid Dispensing Devices, Power Operated

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Flammable Liquid Dispensing Devices, Power Operated

[See General Information for Flammable Liquid Dispensing Devices, Power Operated](#)

WAYNE FUELING SYSTEMS LLC

MH1821

3814 JARRETT WAY
AUSTIN, TX 78728 USA

Remote controls, Models 410, EM-72. Model designation may be suffixed. Model designation may also be prefixed 1, 2, 10, 20, 30, A, C, E, R and/or SPE.

Model 3/G followed by 2 or 7, followed by 0 or 2, followed by 0, 1, 2 or 4, followed by 1, 2, 3, 4, 7, 8 or 9, with or without D, with or without one or more suffixes 1, 2, 8, 9, B, D3, D4, G, I, J, K, K1, L, M, O, P1, Q, R, S, S1, S2 or S3, followed by one or more suffixes 2, 3, B, C, E, H, I, I2, J, K, L, P, U, D1, D2, D3, D4, D5, D6, D7, D8, D9 or D10.

Models 3/G2 or 3/G7, followed by 0 or 2, followed by 0, 1, 2 or 4, followed by 1, 2, 3, 4, 7, 8, or 9, with or without D, with or without one or more Suffixes 1, 2, 8, 9, B, D3, D4, G, H, I, J, K, K1, L, M, O, P1, Q, R, S, S1, S2, S2, S3, or US3, followed by one or more Suffixes 2, 3, B, C, E, H, I, I2, J, K, L, U, D1, D2, D3, D4, D5, D6, D7, D8, D9 or D10

Model E followed by 3/G2 or 3/G7, followed by 2, followed by 0, followed by 1, 2, 3, 7 or 8, followed by D, with or without one or more Suffixes 1, 2, 8, G, H, J, K, K1, P1, R, S, S1, S2, S3, or U, followed by one or more Suffixes E, H, I, I2, J, K, L, X, D1, D2, D3, D4, D5, D6, D7, D8, D9 or D10 for use with E85.

Global Vista Series 3/V390X/1, where "X" may be replaced by D1, D3, D4 or D5. Models may be with or without Suffix 2, D2, D3, H, J, M, N, O, P, R, S, U or W and may be additionally Suffixed Q, QY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors, etc.

Global Vista Series 3/V399X/1, where "X" may be replaced by D1, D3, D4 or D5. Models may be with or without Suffix 2, D2, D3, H, J, M, N, O, P, R, S, U or W and may be additionally Suffixed Q, QY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors, etc.

Global Vista Series 3/V490X/1, where "X" may be replaced by D1, D3, D4 or D5. Models may be with or without Suffix 2, D2, D3, H, J, M, N, O, P, R, S, U or W and may be additionally suffixed Q, QY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors, etc.

Global Vista Series 3/V595a/1, where "a" may be replaced by D1, D3, D4 or D5. With or without suffix 2, D2, D3, H, J, M, N, O, P, R, S, U, W and may be additionally suffixed Q or QY. An additional suffix may be added to indicate special graphics, colors, etc.

Global Vista Series 3/V590a/1 or 3/V591a/1, where "a" may be replaced by D1, D3, D4 or D5. With or without suffix 2, D2, D3, H, J, M, N, O, P, R, S, U, W and may be additionally suffixed Q or QY. An additional suffix may be added to indicate special graphics, colors, etc.

Global Vista Series 3/V387a/1, where "a" may be replaced by D1, D3, D4 or D5. Models may be with or without Suffix 2, D2, D3, H, J, M, O, P, R, S or W and may be additionally Suffixed Q, QY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors, etc.

Global Vista Series 3/V388a/1, where "a" may be replaced by D1, D3, D4 or D5. Models may be with or without Suffix 2, D2, D3, H, J, M, O, P, R, S or W and may be additionally Suffixed Q, QY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors, etc.

Global Vista Series 3/V389a/1, where "a" may be replaced by D1, D3, D4 or D5. Models may be with or without Suffix 2, D2, D3, H, J, M, O, P, R, S or W and may be additionally Suffixed Q, QY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors, etc.

Global Vista Series 3/V580a/1, where "a" may be replaced by D1, D3, D4 or D5. Models may be with or without Suffix 2, D2, D3, H, J, M, O, P, R, S or W and may be additionally Suffixed Q, QY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors, etc.

Global Vista Series 3/V585a/1, where "a" may be replaced by D1, D3, D4 or D5. Models may be with or without Suffix 2, D2, D3, H, J, M, O, P, R, S or W and may be additionally Suffixed Q, QY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors etc.

Harmony Series, Model H3/V followed by 590DX, where X may be replaced by 1, 3, 4 or 5, with or without suffix 2, with or without E, followed by G and U, with or without D2 or D3, followed by Q or S.

Ovation Series, Model B, R, HL or HS followed by 1 or 2, followed by 1, 2, 3, or 4, followed by 1, 2, 3, 4 or 5, followed by 1 or 2, followed by 1 or 2,

followed by 0, 1, 3, 4, 5, 6 or 7, followed by C, D, or S, followed by 0, 1, 2, 3 or D6, may be followed by one or more of the following option suffixes 2, 6, 7, 9 (for use with E25 or B20), E, G, H, I, J, K, L, L1, M, P, S, T, or U, may be followed by one or more of the following option suffixes A, C, D, F, F1, G, H, L, M, N, O, R, R3, U, V, W, W1, X, Y or Z.

Vista Series 3/V387a/G, where "a" may be replaced by D1, D3, D4 or D5. Models may be with or without suffix 2, 7, D2, D3, H, I, J, M, O, P, R, S or W and may be additionally suffixed Q, QY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors, etc.

Vista Series 3/V388a/G, where "a" may be replaced by D1, D3, D4 or D5. Models may be with or without suffix 2, D2, D3, H, I, J, M, O, P, R, S or W and may be additionally suffixed Q, QY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors, etc.

Vista Series 3/V389a/G, where "a" may be replaced by D1, D3, D4 or D5. Models may be with or without suffix 2, D2, D3, H, I, J, M, O, P, R, S or W and may be additionally suffixed Q, QY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors, etc.

Vista Series 3Y/V390X/G, where "Y", if present, may be replaced by C and, where "X" may be replaced by D1, D3, D4 or D5. Models may be with or without suffix 2, 7, D2, D3, H, I, J, M, N, O, P, R, S, U or W and may be additionally suffixed Q, QY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors, etc.

Vista Series 3Y/V399X/G, where "Y", if present, may be replaced by C and, where "X" may be replaced by D1, D3, D4 or D5. Models may be with or without suffix 2, D2, D3, H, I, J, M, N, O, P, R, S, U or W and may be additionally suffixed Q, QY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors, etc.

Vista Series 3Y/V490X/G, where "Y", if present, may be replaced by C and, where "X" may be replaced by D1, D3, D4 or D5. Models may be with or without suffix 2, 7, D2, D3, H, I, J, M, N, O, P, R, S, U or W and may be additionally suffixed Q, QY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors, etc.

Vista Series 3/V580a/G, where "a" may be replaced by D1, D3, D4 or D5. Models may be with or without suffix 2, D2, D3, H, I, J, M, O, P, R, S or W and may be additionally suffixed Q, QY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors, etc.

Vista Series 3/V585a/G, where "a" may be replaced by D1, D3, D4 or D5. Models may be with or without suffix 2, D2, D3, H, I, J, M, O, P, R, S or W and may be additionally suffixed Q, QY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors, etc.

Vista Series 3Y/V590a/G or 3Y/V591a/G, where "Y" if present, may be replaced by C and/or X and, where "a" may be replaced by D1, D3, D4 or D5. With or without suffix 2, D2, D3, H, I, J, M, O, P, R, S, U, W and may be additionally suffixed Q or QY. An additional suffix may be added to indicate special graphics, colors, etc.

Vista Series 3Y/V595a/G, where "Y" if present, may be replaced by C and/or X and, where "a" may be replaced by D1, D3, D4 or D5. With or without suffix 2, 7, D2, D3, H, I, J, M, O, P, R, S, U, W and may be additionally suffixed Q or QY. An additional suffix may be added to indicate special graphics, colors, etc.

Vista Series 3/V394.

Models DS1/374, -384 with suffix -1L/19.

Model DL/380-1 followed by suffix letters L or U. May also be additionally suffixed -/19.

Model DL385-1L/19 with or without suffix R.

Models HS/V386, HS/V387, HS1/V386, HS1/V387, HS1/V388C1 followed by D1, D3, D4, D5 or D6, with or without suffix A, C, F1, F2, H, K, L, R, S, W, Z4, Z5, Z6 and/or Z8, with or without a suffix or letter.

Model HS3/V followed by 2 or 3, followed by 8, followed by 7, 8 or 9, followed by C, D or S, followed by 1, 3, 4, 5, 7 or 8 with or without one or more of the following suffixes 4, 7, H, I, J, L, M, O, P, R, S or W and may be additionally suffixed Z4, Z5, Z6, Z7 or Z8, with or without additional suffixes.

Models V387a/G, V388a/G, V389a/G, where "a" is replaced by D1, D3, D4 or D5. Models may be additionally suffixed.

Model V490a/G, where "a" is replaced by D1, D3, D4 or D5. Models may be additionally prefixed and/or suffixed.

Model V580a/G, where "a" is replaced by D1, D3, D4 or D5. Models may be additionally prefixed and/or suffixed.

Model V585a/G, where "a" is replaced by D1, D3, D4 or D5. Models may be additionally prefixed and/or suffixed.

Model G3 followed by 390D, 397D, 399D, 490D with one or more suffixes B, G, P, S, T, Z4, Z5, Z6, Z7, Z8 followed by one or more suffixes H or I.

Model G4 followed by 390D, 397D, 399D, 490D, with one or more suffixes B, G, P, S, T, Z4, Z5, Z6, Z7, Z8, followed by one or more suffixes G or I.

Model G620 or G520, followed by 1, 2 or 3, followed by D, with or without one or more of the following suffixes 2, 5, 7A, 7B, 8, G, J, K, M, Q or Z, with or without one or more of the following suffixes A, B, C, F, H, J, M1 or W1.

Model G620 or G520, with prefix E, followed by 1, 2 or 3, followed by D, with or without one or more of the following suffixes 2, 5, 7A, 7B, 8, G, J, K, M or Z, with or without one or more of the following suffixes A, B, C, F, H, J, M1 or W1, for use with E85.

Model G610, followed by 1, followed by D, with or without one or more of the following suffixes 2, 7A, 7B, 8, J, K, Q or Z, with or without one or more of the following suffixes J, W1, S, S1 or S2.

Model G610 with prefix E/, followed by 1, followed by D, with or without one or more of the following suffixes 7A, 7B, 8, J, K or Z, with or without one or more of the following suffixes J, W1, S, S1 or S2, for use with E85.

Model HS4/V, followed by 2 or 3, followed by 8, followed by 7, 8 or 9, followed by C, D or S, followed by 1, 3, 4, 5, A, B, C or D, with or without one or more of the following first suffixes 4, A, C, I, J, L, M, N, N1, O, P, R, S2, Z4, Z5, Z6, Z7 or Z8, with or without one or more of the following second suffixes 1, 9, F, H, K, L, O, P, R, R3, Q1, U1, U2, U3, V, V6, V7, W, Y1, Z or ZY.

Model 4/V, followed by 3, 4 or 5, followed by 8 or 9, followed by 0, 1, 5, 7, 8 or 9, followed by D, followed by 1, 3, 4, 5, 6, 9, A, B, C, D, E, F, G or H,

with or without one or more of the following first suffixes 2, C, D2, D3, E, G, I, J, L, M, N, N1, O, P, Q, R, S2, U, X, Z4, Z5, Z6, Z7 or Z8, with or without one or more of the following second suffixes 1, 5, 6, 7, 9, A, B, F, H, K, L, N, P, R, R3, Q1, U1, U2, U3, V6, V7, X, W, Y1, Z or ZY.

Ovation Series, Model E, followed by B or R, followed by 1 or 2, followed by 1, 2 or 3, followed by 1, 2, 3, 4 or 5, followed by 1 or 2, followed by 1 or 2, followed by 0, followed by D, followed by 0, 1, 2, 3 or D6, may be followed by one or more of the following option suffixes C, D, E, H, I, J, K, L, M, M2, N, P, R, R3, S, T, W, W1, X, Y, 6 or 7, for use with E85.

Helix Series, Models H or S, followed by N, W or L followed by LM, LU or I, followed by 1, 2, 3 or 4, followed by 1, 2, 3, 4 or 5, followed by 1, 2, 3 or 4, followed by 1 or 2, followed by M, P and/or R, V.

Helix Series, Models H, followed by N or W, followed by LM or LU, followed by 3 or 4, followed by 5, followed by 3 or 4, followed by 3, followed by E, followed by M, P, and/or R. Suitable for use with E85.

Helix Series, Models H or S, followed by N, W, or L followed by LM, LU, or I, followed by 1, 2, 3, or 4, followed by 1, 2, 3, 4, or 5, followed by 1, 2, 3, or 4, followed by 1 or 2, followed by K, followed by M, P and/or R. Suitable for use with E25 and B20.

Satellites, Models HS/V287S1, HS/V287S/4, HS/V288S1, HS/V288S/4, HS/V387S1, HS/V388S1.

Self-contained, Models 410, EM-72. Model designation may be suffixed. Model designation may also be prefixed 1, 2, 10, 20, 30, A, C, E, R and/or SPE.

Global Vista Series 3/V390X/1, where "X" may be replaced by P1, P3, P4 or P5. Models may be with or without Suffix D2, D3, H, J, M, N, O, P, R, S, U or W and may be additionally Suffixed Q, QY, V, VY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors, etc.

Global Vista Series 3/V399X/1, where "X" may be replaced by P1, P3, P4 or P5. Models may be with or without Suffix D2, D3, H, J, M, N, O, P, R, S, U or W and may be additionally Suffixed Q, QY, V, VY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors, etc.

Global Vista Series 3/V595a/1, where "a" may be replaced by P1, P4 or P5. With or without Suffix D2, D3, H, J, M, N, O, P, R, S, U, W and may be additionally suffixed Q or QY. An additional suffix may be added to indicate special graphics, colors, etc.

Global Vista Series 3/V590a/1, where "a" may be replaced by P1 or P4. With or without Suffix D2, D3, H, J, M, N, O, P, R, S, U, W and may be additionally suffixed Q or QY. An additional suffix may be added to indicate special graphics, colors, etc.

Global Vista Series 3/V387X/1, where "X" is replaced by P1, P3, P4 or P5. Models may be with or without Suffix D2, D3, H, J, M, O, P, R, S or W and may additionally be Suffixed Q, QY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, color, etc.

Global Vista Series 3/V389X/1, where "X" is replaced by P1, P3, P4 or P5. Models may be with or without Suffix D2, D3, H, J, M, O, P, R, S or W and may additionally be Suffixed Q, QY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, color, etc.

Vista Series 3/V387X/, where "X" is replaced by P1, P3, P4 or P5. Models may be with or without suffix D1, D2, D3, H, J, K, M, O, P, R, S or W and may additionally be suffixed Q, QY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors, etc.

Vista Series 3/V389X/, where "X" is replaced by P1, P3, P4 or P5. Models may be with or without suffix D1, D2, D3, H, J, K, M, O, P, R, S or W and may be additionally suffixed Q, QY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors, etc.

Vista Series 3Y/V390X/G, where "Y", if present, may be replaced by C and /or X and, where "X" may be replaced by P1, P3, P4 or P5. Models may be with or without suffix D2, D3, H, I, J, K, M, N, O, P, R, S, U or W and may be additionally suffixed Q, QY, V, VY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors, etc.

Vista Series 3Y/V399X/G, where "Y", if present, may be replaced by C and, where "X" may be replaced by P1, P3, P4 or P5. Models may be with or without suffix D2, D3, H, I, J, K, M, N, O, P, R, S, U or W and may be additionally suffixed Q, QY, V, VY, Z4, Z5, Z6, Z7 or Z8. An additional suffix may be added to indicate special graphics, colors, etc.

Vista Series 3Y/V590a/G, where "Y", if present, may be replaced by C and/or X and, where "a" may be replaced by P1 or P4. With or without suffix D2, D3, H, I, J, K, M, O, P, R, S, U, W and may additionally be suffixed Q or QY. An additional suffix may be added to indicate special graphics, colors, etc.

Vista Series 3Y/V595a/G, where "Y", if present, may be replaced by C and/or X and, where "a" may be replaced by P1, P4 or P5. With or without suffix D2, D3, H, I, J, K, M, O, P, R, S, U, W and may be additionally suffixed Q or QY. An additional suffix may be added to indicate special graphics, colors, etc.

Vista Series 3YV591a, where "Y", if present, may be replaced by C and/or X and where "a" may be replaced by P1, P4, P7 or P8. With or without Suffix D2, D3, H, I, J, K, M, N, O, P, R, S, U, W and may be additionally suffixed Q, or QY. An additional suffix may be added to indicate special graphics, colors, etc.

Model 3/G, followed by 2 or 7, followed by 0 or 2, followed by 0, 1, 2 or 4, followed by 1, 2, 3, 4, 7, 8 or 9, followed by P with or without one or more suffixes 1, 2, 8, B, D3, D4, H, J, K O, P1, Q, R, S, S1, S2 or S3, followed by one or more suffixes 2, 3, B, C, E, G, H, I, I2, J, K, L, U, W, D1, D2, D3, D4, D5, D6, D7, D8, D9 or D10.

Model G3 followed by 390P, 397P, 399P, 490P with one or more suffixes B, G, P, S, T, Z4, Z5, Z6, Z7, Z8 followed by one or more suffixes G, G1, H or I.

Model G4 followed by 390P, 397P, 399P, 490P, with one or more suffixes B, G, P, S, T, Z4, Z5, Z6, Z7, Z8, followed by one or more suffixes G, G1 or I.

Model G620 or G520, followed by 1, 2 or 3, followed by P, with or without one or more of the following suffixes 2, 5, 7A, 7B, 8, D3, D4, G, J, K, M, Q or Z, with or without one or more of the following suffixes A, B, C, F, H, J, M1 or W1.

Model 387U with prefix DL2/ or DL3/.

Models V387a/G, V388a/G, V389a/G, where "a" is replaced by P1, P3, P4, P5 or P6. Models may be additionally suffixed.

Model V390a/G, where "a" is replaced by P1, P3, P4 or P5. Model may be additionally prefixed and/or suffixed.

Model V397a/G, where "a" is replaced by P1, P3, P4 or P5. Model may be additionally prefixed and/or suffixed.

Model V399a/G, where "a" is replaced by P1, P3, P4 or P5. Models may be additionally prefixed and/or suffixed.

Model 1/V389X/, where "X" is replaced by P1, P3, P4 or P5. Models may be with or without suffix D1, D2, J, K, M, O, P, R, S, W and may additionally be suffixed Q, QY, Z4, Z5, Z6, Z7, Z8. An additional suffix may be added to indicate special graphics, color, etc.

Series 1Y/V390a/G, where "Y" if present, may be replaced by C and/or a and, where "a" may be replaced by P1, P3, P4, P5, P7 or P8. Models may be additionally suffixed.

Series 1Y/V395a/G, where "Y" if present, may be replaced by C and/or X and, where "a" may be replaced by P1, P4, P5, P7 or P8. Models may be additionally suffixed.

Series 1Y/V399a/G, where "Y" if present, may be replaced by C and, where "a" may be replaced by P1, P3, P4, P5, P7 or P8. Models may be additionally suffixed.

Series 1Y/V590a/G, where "Y" if present, may be replaced by C and/or X and, where "a" may be replaced by P1, P4, P7 or P8. Models may be additionally suffixed.

Models HS/V386, HS1/V386, HS/V387, HS1/V387, HS1/V388B1 followed by P1, P3, P4, P5 or P6, with or without suffix A, C, F1, F2, H, K, L, R, S, W, Z4, Z5, Z6 and/or Z8 with or without a suffix digit or letter.

Model 4/V followed by 3 or 5, followed by 8 or 9, followed by 0, 1, 5, 7, 8 or 9, followed by P, followed by 1, 3, 4, 5, 6, 9, A, B, C, D, E, F, G or H, with or without one or more of the following first suffixes 2, C, D2, D3, E, G, I, J, L, M, N, N1, O, P, Q, R, S2, U, X, Z4, Z5, Z6, Z7 or Z8, with or without one or more of the following second suffixes 1, 5, 6, 7, 9, A, B, F, G, H, K, L, N, P, R, R3, Q1, U1, U2, U3, V6, V7, W, X, Y1, Z or ZY.

Helix Series Models H or S, followed by N, W or L followed by LM, LU or I followed by 1, 2, 3 or 4, followed by 1, 2, 3, 4 or 5, followed by 1, 2, 3 or 4, followed by 1 or 2, followed by S with or without M and/or P.

Last Updated on 2018-02-06

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ADVANCED PROTECTION SUBMERSIBLE TURBINE PUMPS

Available as a factory installed option on STPAG and IST biofuel compatible submersible turbine pumps, Advanced Protection defends STPs from accelerated corrosion caused by the acetic byproduct of microbial activity.

Highlights

- Powder-coated and E-coated finishes protect exterior cast surfaces from accelerated corrosion.
- Stainless steel fasteners, riser, variable length column pipe and coupler protect against corrosion and provide long service life.
- UL and cUL listed.

Ordering Information

A typical turbine model designation has up to five components to define the pump being supplied as follows:

STP XXXXX Y-A-B

STP = Basic Model Designation (IST for variable speed models)

XXXXX = Factory Installed Options (Model designations may include one or more of the following characters in alphabetical order.)

AP = Advanced protection with coated exterior cast surfaces, stainless steel fasteners and piping, alcohol-gasoline compatible)

F = Floating suction adapter (1 1/2" NPT female adapter)

H = High pressure deadhead output (150 and 200 models only)

K = Intake filter screen (IFS, factory installed to PMA)

M = MagShell™ (flow enhancing, expanded PMA shell)

R = Model R check valve (24 psi relief/22 psi reset for PLLD)*

W = Model W check valve (16 psi relief/13 psi reset for PPM4000)*

Y = Pump Motor Horsepower Rating

33 = 1/3 hp fixed speed

200 = 2 hp fixed speed

75 = 3/4 hp fixed speed

VS2 = 2 hp variable speed**

150 = 1 1/2 hp fixed speed

VS4 = 4 hp variable speed***

A = Model Length

VL1 = Variable length range #1

VL2 = Variable length range #2

VL3 = Variable length range #3

B = Riser Pipe Length

Riser pipe length is expressed as two numeric characters that indicate the total length of the riser in inches. Riser pipes are available from 7" to 60" in 1" increments (additional charge for risers 31" or longer).

Notes:

*If not otherwise specified, all STP models are supplied with standard model check valve (40 psi relief /35 psi reset for MLD, TS-LS300, and TS-LS500).

**Implied on IST models unless VS4 is specified.

*** IST models only.

(Advanced Protection STP shown with MLD+ and IFS, sold separately)

Ordering Information continued

Advanced Protection Submersible Turbine Pumps

Model	Description	Model Length Range*
ISTAPMVS4-VL1	4 hp AP variable speed with MagShell™	64"-92"
ISTAPMVS4-VL2	4 hp AP variable speed with MagShell™	95"-156"
ISTAPMVS4-VL3	4 hp AP variable speed with MagShell™	127"-218"
ISTAPM-1	2 hp AP variable speed with MagShell™	59"-87"
ISTAPM-2	2 hp AP variable speed with MagShell™	90"-151"
ISTAPM-3	2 hp AP variable speed with MagShell™	122"-213"
STPAPM200-VL1	2 hp AP fixed speed with MagShell™	63"-91"
STPAPM200-VL2	2 hp AP fixed speed with MagShell™	94"-154"
STPAPM200-VL3	2 hp AP fixed speed with MagShell™	126"-217"
STPAPHM200-VL1	2 hp AP high pressure fixed speed with MagShell™	63"-92"
STPAPHM200-VL2	2 hp AP high pressure fixed speed with MagShell™	94"-155"
STPAPHM200-VL3	2 hp AP high pressure fixed speed with MagShell™	126"-218"
STPAP150-VL1	1-1/2 hp AP fixed speed	60"-88"
STPAP150-VL2	1-1/2 hp AP fixed speed	91"-152"
STPAP150-VL3	1-1/2 hp AP fixed speed	123"-214"
STPAPH150-VL1	1-1/2 hp AP high pressure fixed speed	61"-89"
STPAPH150-VL2	1-1/2 hp AP high pressure fixed speed	92"-152"
STPAPH150-VL3	1-1/2 hp AP high pressure fixed speed	124"-215"
STPAP75-VL1	3/4 hp AP fixed speed	57"-86"
STPAP75-VL2	3/4 hp AP fixed speed	88"-149"
STPAP75-VL3	3/4 hp AP fixed speed	120"-212"

Notes:

1. Remove "M" from model number for non-MagShell™ pump motor assembly (where applicable).
2. STPAP/ISTAP models are listed for compatibility 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.
3. All models are supplied with a standard check valve unless factory option "R" or "W" is specified.
4. All above ISTAP models can only be powered by a MagVFC™. 4 hp models require three-phase incoming power supply, 2 hp models can be supplied with single- or three-phase incoming power.
5. All above STPAP models require single-phase, 208-230 VAC, 60 Hz incoming power.
6. 4" riser pipe, if supplied locally, must be 4½" OD by 3/16" WT tubing.
7. For riser pipe lengths 31" to 60", adder charge applies.

*Model length (A) defined as the dimension from the turbine manifold bottom to the 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

Ordering Information

Field Installed Options

Model	Description
5874202800	MagVFC™, 2 hp or 4 hp variable frequency controller, one required per IST
400137908	Syphon check valve (when ordered with STP)
400818921	STP-CBS, single-phase control box with lockout switch, 110 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 (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 110 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.

FE PETRO®

A Franklin Fueling Systems Brand

franklinfueling.com

3760 Marsh Rd. • Madison, WI 53718, USA

Tel: +1 608 838 8786 • Fax: +1 608 838 6433

Tel: USA & Canada +1 800 225 9787 • Tel: UK +44 (0)1473 243300

Tel: Mex 001 800 738 7610 • Tel: FR +33 (0)1 69 21 41 41 • Tel: CH +86 10 8565 4566



TECHNICAL DATA

2013

Description

A dark green, opaque, viscous, non-hardening, textured paste with PTFE.

Type

Slow-drying, soft-setting, non-toxic, brushable, without grit. Cures by solvent evaporation providing a durable, long-lasting seal that can be easily disassembled.

Typical Uses

Especially designed for ethanol blended gasoline

Including E10, E20 & E85.

Substrates

Can be used on brass, copper, stainless steel, aluminum, black pipe, tin, galvanized pipe, ABS plastic, CPVC, nylon, PVC, polyethylene, polypropylene and more.

Chemical Resistance

Excellent resistance to ethanol blended gasoline, kerosene, petroleum solvents, diesel fuel, propane, butane, LPG, water, cutting oils. NOT oxygen.

Set Time

None. For immediate service
Dries to the touch 48-72 hour

Packaging

Available in 1/4 pint, 1/2 pint and pint cans with brush-top lids.

For Chemical Emergency, Spill, Leak,
Fire, Exposure or Accident Call:

CHEMTREC - Day or Night. 1-800-424-9300

KEEP OUT OF THE REACH OF CHILDREN

Product Data Sheet

Safety

Contains no lead, is non-toxic, not a skin sensitizer, and is non-corrosive.

Shelf Life: One year in original containers, when stored at room temperature at or below 80°F (27°C)

Wt./Gal.: 11.35 lbs

Color: Medium/Green

Clean Up: Hand cleaner or alcohol.

Temperature Range

-100°F to 600°F (-73°C to 316°C)
Allow to dry thoroughly before exposing to high temperatures. Remains usable in sub-zero weather.

Pressure Range

Up to 10,000 psi when sealing liquids and up to 3,000 psi with gases. Allow to dry, if possible, before subjecting to pressure.

The information presented is in good faith, but no warranty is given, nor are results guaranteed. Federal Process has no control over physical conditions surrounding application conditions. Federal Process disclaims any liability for untoward results.



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