

Probe Products

Application Guide

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Example Illustrations

Illustrations used in this guide for example sensor installations may contain components that are customer supplied and not included with the sensor. Please check with your Veeder-Root Distributor for recommended installation accessories.

Third Party Evaluations

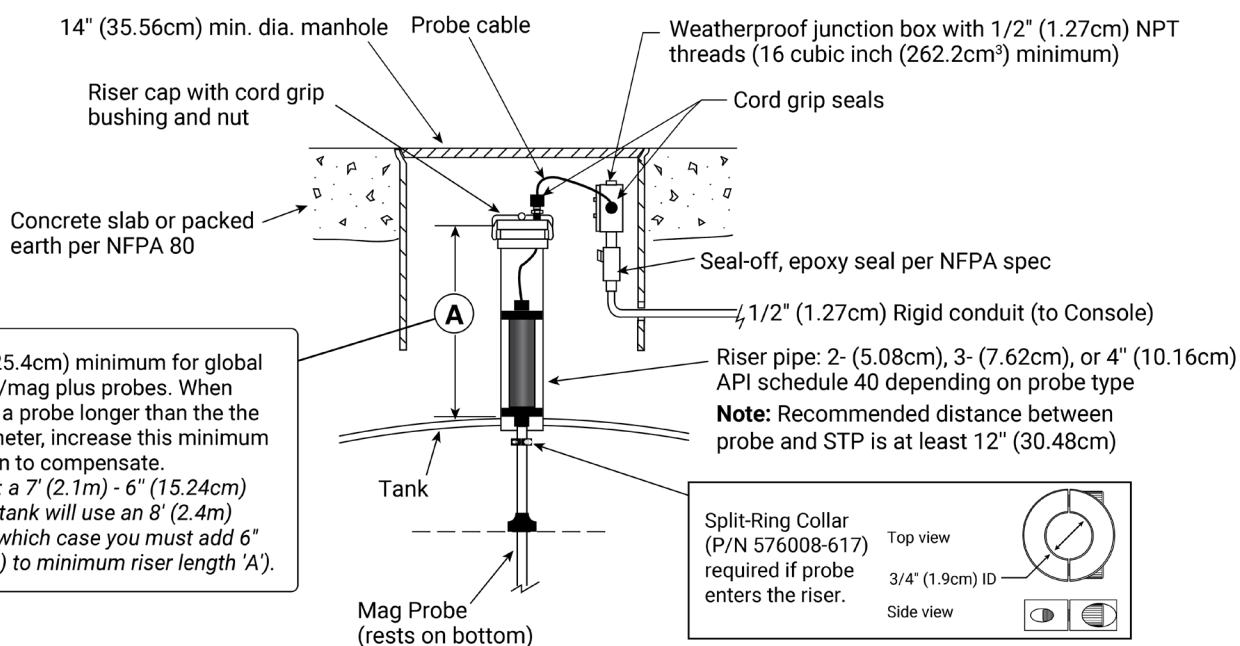
Third party evaluations of the Veeder-Root sensors contained in this application guide can be found under the Veeder-Root vendor name on the National Work Group on Leak Detection Evaluations (NWGLDE) website: <http://www.nwglde.org>


Probe Description & Product Application	Aluminum Mag Plus In-Tank Probe for Monitoring Gasoline, Retail Diesel Products & Water in both USTs and ASTs	
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Specific Products Monitored / Product Compatibility	Part # & Description	Approved Products	Monitoring Functionality Options
	Leak Detection / BIR - AccuChart Probes 1. 846396-1XX Aluminum (AL) In-Tank Probe with High Grade Polymer (HGP) Canister with Water Detection & 0.1 GPH Testing Capability, UL 2. 846396-2XX AL In-Tank Probe with HGP Canister with Water Detection & 0.2 GPH Testing Capability, UL 3. 846390-1XX AL In-Tank Probe with AL Canister with Water Detection & 0.1 GPH Testing Capability, UL 4. 846390-2XX AL In-Tank Probe with AL Canister with Water Detection & 0.2 GPH Testing Capability, UL	Gasohol (<=15% Ethanol)	0.1 GPH static in-tank testing for USTs only
		Gasoline with <=7% Methanol and 8% TBA	0.2 GPH static in-tank testing for USTs only
		Gasoline with <=15% MTBE	0.2 GPH Continuous Statistical Leak Detection (CSLD) for USTs only
		Gasoline with <=17% TAME	
		Leaded Gasoline	No Leak Detection/ Inventory Only
		Mineral Spirits	BIR – AccuChart for USTs only
		Premium Unleaded Gasoline	
		Regular Unleaded Gasoline	
		Gasoline with <=15% ETBE	
		Gasoline with <=12% TBA	
		Diesel (Fuel Oil #2)	
		Aviation Gas	
		Kerosene (Fuel Oil #1)	
Bio Diesel (Low Density)			

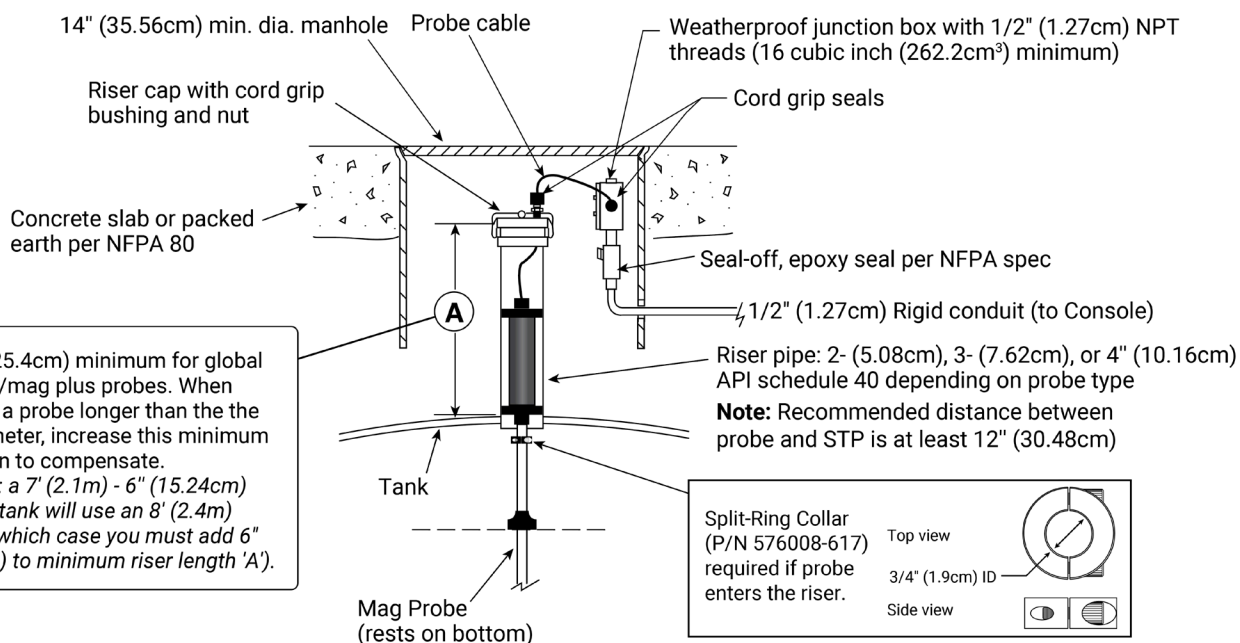
Console Compatibility	Maximum Probes / Console	Probe Interface Modules				
		Module Part #	Module Description	# of Modules per Console	# of Probe Inputs per Module	Availability
TLS-450PLUS (8600 Series) with TLS-XB installed (3 max per system)	64 (32 with BIR)	332812-001	Universal Sensor Module (USM) Interface for Probes, Sensors, and DPLLD	Up to 4	16	Sold Separately (either Factory Installed or as a Spare Module)
TLS4i (8601 Series)	4	No module required, probe input capability factory installed				
TLS4c (8601 Series)	2					
TLS-350/R/PLUS	16	329356-002	4-Input Probe Interface Module	4	4	Sold Separately (either Factory Installed or as a Spare Module)
TLS-300i	4	No module required, probe input capability factory installed				
TLS-300C	2					


	Part # & Description	Float Size	Cable Lengths	Min/Max Probe Length
Float Installation Kits	886100-XX0 Mag Plus Phase-Two Separation Float Kit	4" (10.16cm)	5' (1.5m), 10' (3.05m), 20' (6.1m)	48" (1.2m) - 144" (3.66m)
	846400-3X0 Mag Plus Gasoline Float Kit	3" (7.62cm)		
	846400-1X0 Mag Plus Gasoline Float Kit	2" (5.08cm)		
	846400-0X1 Mag Plus Diesel Float Kit	4" (10.16cm)		
	846400-3X1 Mag Plus Diesel Float Kit	3" (7.62cm)		
	846400-1X1 Mag Plus Diesel Float Kit	2" (5.08cm)		
Other Installation Accessories	312020-952 4" (10.16cm) NPT Riser Cap and Ring Kit for In-Tank Probes 330020-282 4" (10.16cm) Threaded NPT Riser Cap for In-Tank Probes			
Specifications	Product	Water		
Measurement Accuracy	+/- 0.0300" (0.762mm)	+/- 0.0300" (0.762mm)		
Resolution - One Sample Reading	+/- 0.002857" (0.072571mm)	+/- 0.002857" (0.072571mm)		
Minimum Measurement - 2" (5.08cm) Float Kits	3.23" (8.2cm)	0.867" (2.2cm)		
Minimum Measurement - 3" (7.62cm) Float Kits	3.04" (7.7cm)	0.630" (1.6cm)		
Minimum Measurement - 4" (10.16cm) Float Kits	3.04" (7.7cm) / 7.0" (17.78cm) for Phase-Two Float Kit	0.630" (1.6cm)		
Operating (Working) Temperature Range	-40 to +122°F (-40 to +50°C)			
Third Party Evaluation / Agency Listings & Links	UL, cUL, ATEX, IECEx http://www.nwglde.org/evals/veeder_root_j.html			
Product Installation Guide Link	https://www.veeder.com/us/technical-document-library			

Example Installation


Probe Description & Product Application	Density Mag Plus In-Tank Probe for Monitoring Gasoline & Diesel Products in both USTs and ASTs					
Specific Products Monitored / Product Compatibility	Part # & Description	Approved Products	Monitoring Functionality			
	Leak Detection / BIR - AccuChart Probes 1. 846396-7XX Aluminum (AL) In-Tank Probe with High Grade Polymer (HGP) Canister with Water Detection & 0.1 GPH Testing Capability, UL 2. 846396-8XX AL with HGP Canister with Water Detection & 0.2 GPH Testing Capability, UL 3. 846397-7XX Stainless Steel (SS) with HGP Canister with Water Detection & 0.1GPH Testing Capability, UL 4. 846397-8XX SS with HGP Canister with Water Detection & 0.2 GPH Testing Capability, UL No Leak Detection/Inventory Only Probes 1. 846397-9XX SS with HGP Canister with Water Detection & No Leak Detection/ Inventory Only, UL	Leaded Gasoline	0.1 GPH static in-tank testing			
		Gasoline with <=7% Methanol and 8% TBA	0.2 GPH static in-tank testing			
		Gasoline with <=15% MTBE	0.2 GPH Continuous Statistical Leak Detection (CSLD)			
		Gasoline with <=17% TAME	No Leak Detection / Inventory Only			
		Regular Unleaded Gasoline	BIR – AccuChart			
		Premium Unleaded Gasoline	Density Range = 700 - 800 kg/m ³			
		Gasoline with <=15% ETBE				
Gasoline with <=12% TBA						
Console Compatibility	Maximum Probes / Console	Probe Interface Modules				
			Module Part #	Module Description	# of Modules per Console	# of Probe Inputs per Module
TLS-450PLUS (8600 Series) - Minimum Software Version 5B with TLS-XB installed (3 max per system)	64	332812-001	Universal Sensor Module (USM) Interface for Probes, Sensors, and DPLLD	Up to 4	16	Sold Separately (either Factory Installed or as a Spare Module)
TLS4i (8601 Series) - Minimum Software Version 5B	4	No module required, probe input capability factory installed				
TLS4c (8601 Series) - Minimum Software Version 5B	2					

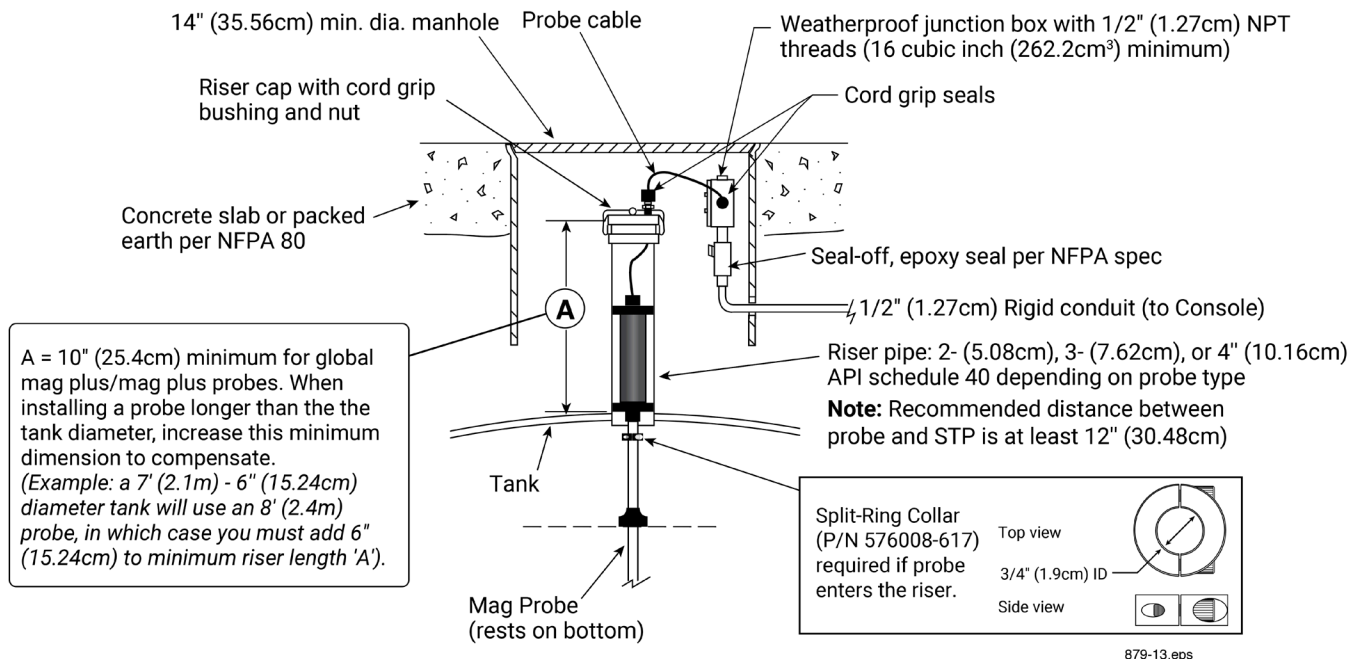
Form # & Description	Float Size	Cable Lengths	Min/Max Probe Length
Float Installation Kits			
886001-1X0 Mag-D Gasoline Float Kit	2" (5.08cm)	5' (1.5m), 10' (3.05m), 20' (6.1m)	48" (1.2m) - 144" (3.66m)
886001-1X1 Mag-D Diesel Float Kit	2" (5.08cm)		
Other Installation Accessories	312020-952 4" (10.16cm) NPT Riser Cap and Ring Kit for In-Tank Probes 330020-282 4" (10.16cm) Threaded NPT Riser Cap for In-Tank Probes		
Specifications	Product	Water	
Measurement Accuracy	+/- 0.0300" (0.762mm)	+/- 0.0300" (0.762mm)	
Resolution - One Sample Reading	+/- 0.002857" (0.072571mm)	+/- 0.002857" (0.072571mm)	
Minimum Measurement - 2" (5.08cm) Float Kits	8.00" (20.32cm)	0.87" (2.2cm)	
Operating (Working) Temperature Range	-40 to +122°F (-40 to +50°C)		
Third Party Evaluation / Agency Listings & Links	UL, cUL, ATEX, IECEx http://www.nwglde.org/evals/veeder_root_j.html		
Product Installation Guide Link	https://www.veeder.com/us/technical-document-library		


Example Installation


Probe Description & Product Application	Density Mag Plus In-Tank Probe for Monitoring Other Products in both USTs and ASTs					
Specific Products Monitored / Product Compatibility	Part # & Description	Approved Products	Monitoring Functionality Options			
	Leak Detection / BIR - AccuChart Probes 1. 846396-7XX Aluminum (AL) In-Tank Probe with High Grade Polymer (HGP) Canister with Water Detection & 0.1 GPH Testing Capability, UL 2. 846396-8XX AL In-Tank Probe with HGP Canister with Water Detection & 0.2 GPH Testing Capability, UL 3. 846397-7XX Stainless Steel (SS) In-Tank Probe with HGP Canister with Water Detection & 0.1 GPH Testing Capability, UL 4. 846397-8XX SS In-Tank Probe with HGP Canister with Water Detection & 0.2 GPH Testing Capability, UL No Leak Detection/Inventory Only Probes 1. 846397-9XX SS In-Tank Probe with HGP Canister with Water Detection & No Leak Detection/Inventory Only, UL	Diesel (Fuel Oil #2)	0.1 GPH static in-tank testing			
		Bio Diesel (Low Density)	0.2 GPH static in-tank testing			
		Bio Diesel (High Density)	0.2 GPH Continuous Statistical Leak Detection (CSLD)			
		Kerosene (Fuel Oil #1)	No Leak Detection / Inventory Only			
		Jet Fuel (Incl JP8)	BIR – AccuChart			
		Fuel Oil #4	Density Range = 700 - 800 kg/m ³			
		Diesel (Fuel Oil #2)				
		Aviation Gas				
Console Compatibility	Maximum Probes / Console	Probe Interface Modules				
TLS-450PLUS (8600 Series)- Minimum Software Version 5B with TLS-XB installed (3 max per system)		64 (32 with BIR)	Module Part #	Module Description	# of Modules per Console	# of Probe Inputs per Module
TLS4i (8601 Series) - Minimum Software Version 5B	4	No module required, probe input capability factory installed				
TLS4c (8601 Series) - Minimum Software Version 5B	2					

Float Installation Kits	Part # & Description	Float Size	Cable Lengths	Min/Max Probe Length
	886001-1X1 Mag-D Diesel Float Kit	2" (5.08cm)	5' (1.5m), 10' (3.05m), 20' (6.1m)	48" (1.2m) - 144" (3.66m)
Other Installation Accessories	312020-952 4" NPT Riser Cap and Ring Kit for In-Tank Probes 330020-282 4" Threaded NPT Riser Cap for In-Tank Probes			
Specifications	Product	Water		
Measurement Accuracy	+/- 0.0300" (0.762mm)	+/- 0.0300" (0.762mm)		
Resolution - One Sample Reading	+/- 0.002857" (0.072571mm)	+/- 0.002857" (0.072571mm)		
Minimum Measurement- 2" (5.08cm) Float Kits	6.367" (16.17cm)	1.495" (3.797cm)		
Operating (Working) Temperature Range	-40 to +122°F (-40 to +50°C)			
Third Party Evaluation / Agency Listings & Links	UL, cUL, ATEX, IECEx http://www.nwglde.org/evals/veeder_root_j.html			
Product Installation Guide Link	https://www.veeder.com/us/technical-document-library			

Example Installation

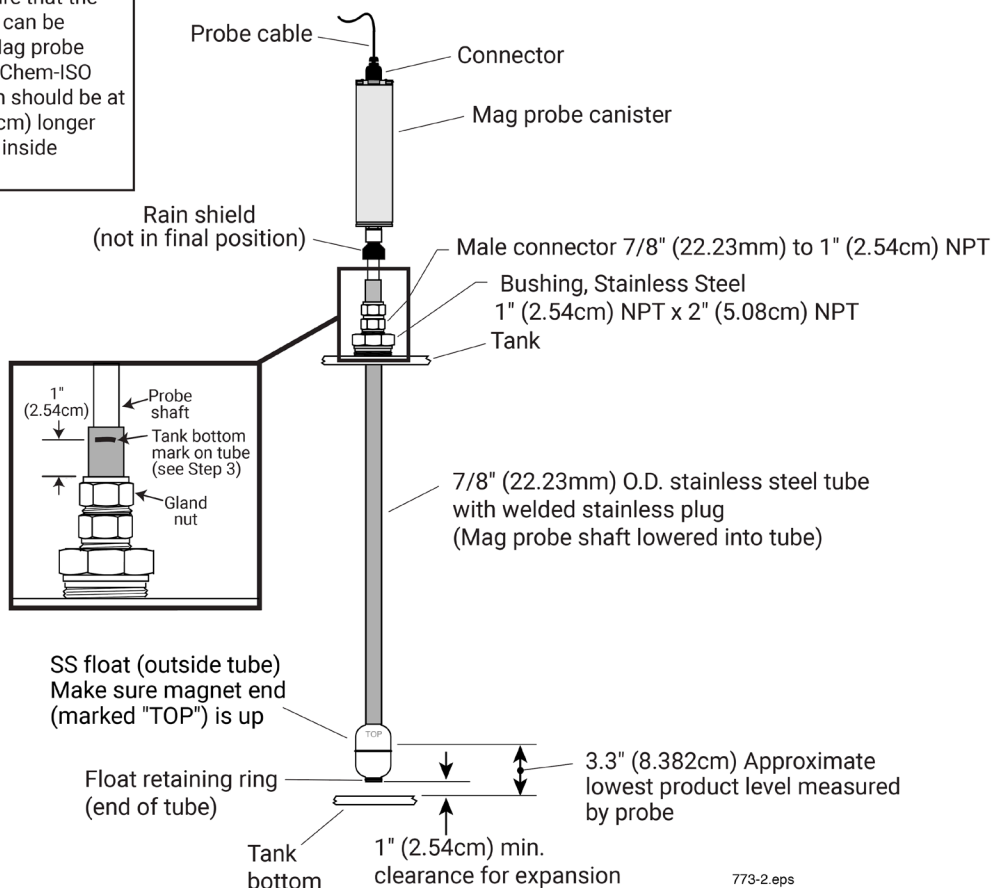


Probe Description & Product Application	Mag Plus In-Tank Probe for Monitoring Chemical Products in both USTs and ASTs					
Specific Products Monitored / Product Compatibility	Part # & Description	Approved Products	Monitoring Functionality Options			
	846397-6XX Stainless Steel (SS) In-Tank Probe with High Grade Polymer (HGP) Canister No Water Detection, UL	Acetone	No Leak Detection / Inventory Only			
		Xylene				
		Acetate (Ethyl, Butyl, n-Propyl)				
		Dichloromethane				
		Petroleum Naphtha				
		Isopropyl Alcohol				
		Dimethyl formamide				
		1-Butyl (butyl alcohol)				
		Butanol				
		Methyl Ethyl Ketone				
		Ethyl Benzene				
Methyl Isobutyl Ketone						
Console Compatibility	Maximum Probes / Console	Probe Interface Modules				
		Module Part #	Module Description	# of Modules per Console	# of Probe Inputs per Module	Availability
TLS-450PLUS (8600 Series)	64	332812-001	Universal Sensor Module (USM) Interface for Probes, Sensors, and DPLLD	Up to 4 - TLS-4XX	16	Sold Separately (either Factory Installed or as a Spare Module)
TLS4i (8601 Series)	4	No module required, probe input capability factory installed				
TLS4c (8601 Series)	2					
TLS-350/R/PLUS	16	329356-002	4-Input Probe Interface Module	4	4	Sold Separately (either Factory Installed or as a Spare Module)
TLS-300i	4	No module required, probe input capability factory installed				
TLS-300C	2					


Float Installation Kits	Part # & Description	Float Size	Cable Lengths	Min/Max Probe Length	Min/Max Chemical Tank Diameter
	331824-XXX Chemical-ISO Probe Inventory Only Installation Kits	2" (5.08cm)	5' (1.5m), 10' (3.05m), 20' (6.1m)	48" (1.2m) - 144" (3.66m)	42" (106.68cm) - 138" (350.52cm)
Other Installation Accessories	N/A				
Specifications	Product	Water			
Measurement Accuracy	+/- 0.0300" (0.762mm)	N/A			
Resolution - One Sample Reading	+/- 0.002857" (0.072571mm)	N/A			
Minimum Measurement - 2" (5.08cm) Float Kits	3.3" (8.382cm)	N/A			
Operating (Working) Temperature Range	-40 to +122°F (-40 to +50°C)	N/A			
Third Party Evaluation / Agency Listings & Links	http://www.nwglde.org/evals/veeder_root_j.html				
Product Installation Guide Link	https://www.veeder.com/us/technical-document-library				

Example Installation

*NOTE: to ensure that the probe/ tube kit can be installed, the Mag probe length and the Chem-ISO probe kit length should be at least 6" (15.24cm) longer than the tank's inside diameter.

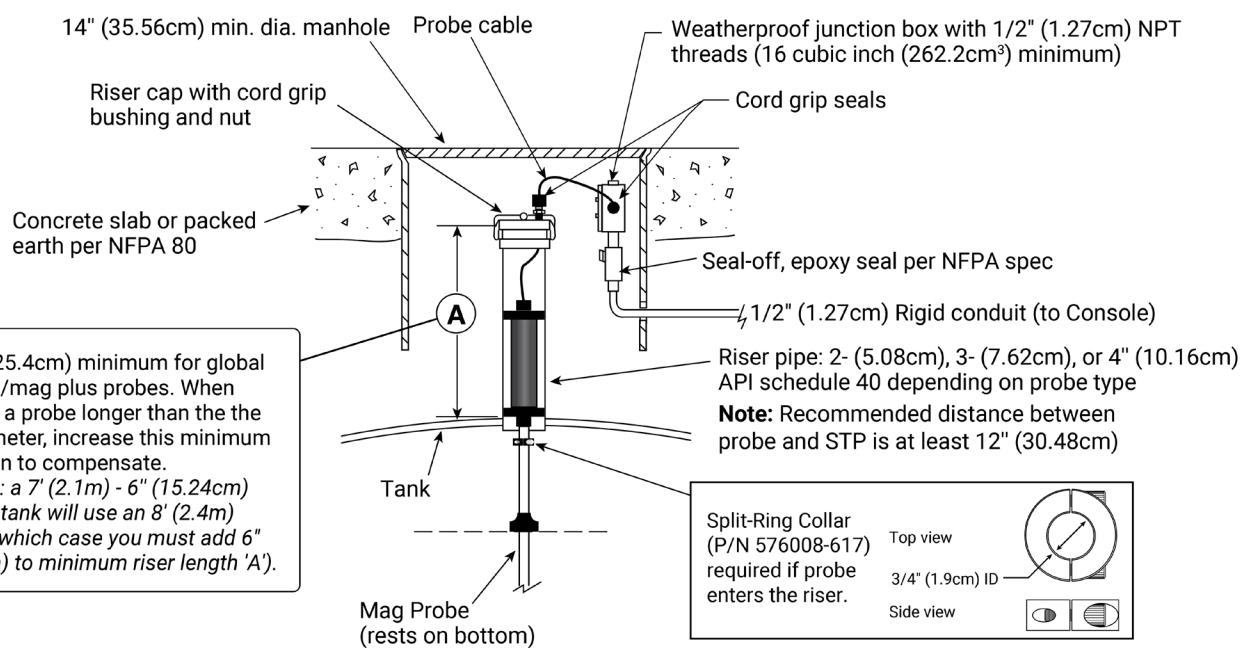



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Probe Description & Product Application	Mag Plus In-Tank Probe for Monitoring Light & Heavy Oil Products with & without Water Detection in both USTs and ASTs					
Specific Products Monitored / Product Compatibility	Part # & Description	Approved Products	Monitoring Functionality Options			
	No Leak Detection/Inventory Only Probes with Water Detection 1. 846397-3XX Stainless Steel (SS) In-Tank Probe with High Grade Polymer (HGP) Canister with Water Detection & No Leak Detection/Inventory Only, UL 2. 846391-3XX SS In-Tank Probe with Aluminum (AL) Canister with Water Detection & No Leak Detection/Inventory Only, UL	Motor Oil	No Leak Detection / Inventory Only			
		Gear Oil, 90W				
		Transmission Fluid				
		Bio Diesel (High Density)				
		Fuel Oil #4				
		Toluene				
	No Leak Detection/Inventory Only Probes with No Water Detection 1. 846397-6XX SS In-Tank Probe with HGP Canister with No Water Detection & No Leak Detection/Inventory Only, UL 2. 846391-6XX SS In-Tank Probe with AL Canister with No Water Detection & No Leak Detection/Inventory Only, UL					
Console Compatibility	Maximum Probes / Console	Probe Interface Modules				
		Module Part #	Module Description	# of Modules per Console	# of Probe Inputs per Module	Availability
TLS-450PLUS (8600 Series) with TLS-XB installed (3 max per system)	64	332812-001	Universal Sensor Module (USM) Interface for Probes, Sensors, and DPLLD	Up to 4	16	Sold Separately (either Factory Installed or as a Spare Module)
TLS4i (8601 Series)	4	No module required, probe input capability factory installed				
TLS4c (8601 Series)	2					
TLS-350/R/PLUS	16	329356-002	4-Input Probe Interface Module	4	4	Sold Separately (either Factory Installed or as a Spare Module)
TLS-300i	4	No module required, probe input capability factory installed				
TLS-300C	2					

Part # & Description	Float Size	Cable Lengths	Min/Max Probe Length
Float Installation Kits			
846400-0X4 Mag Plus Alternative Fluids Float Kit - No Water Float	4" (10.16cm)	5' (1.5m), 10' (3.05m), 20' (6.1m)	48" (1.2m) - 144" (3.66m)
846400-3X4 Mag Plus Alternative Fluids Float Kit - No Water Float	3" (7.62cm)		
846400-1X4 Mag Plus Alternative Fluids Float Kit - No Water Float	2" (5.08cm)		
846400-0X1 Mag Plus Diesel Float Kit	4" (10.16cm)		
846400-3X1 Mag Plus Diesel Float Kit	3" (7.62cm)		
846400-1X1 Mag Plus Diesel Float Kit	2" (5.08cm)		
Other Installation Accessories	312020-952 4" NPT Riser Cap and Ring Kit for In-Tank Probes 330020-282 4" Threaded NPT Riser Cap for In-Tank Probes		
Specifications	Product	Water	
Measurement Accuracy	+/- 0.0300" (0.762mm)	+/- 0.0300" (0.762mm)	
Resolution - One Sample Reading	+/- 0.002857" (0.072571mm)	+/- 0.002857" (0.072571mm)	
Minimum Measurement - 2" (5.08cm) Float Kits	3.23" (8.2cm)	0.867" (2.2cm)	
Minimum Measurement - 3" (7.62cm) Float Kits	3.04" (7.72cm)	0.630" (1.6cm)	
Minimum Measurement - 4" (10.16cm) Float Kits	3.04" (7.72cm)	0.630" (1.6cm)	
Operating (Working) Temperature Range	-40 to +122°F (-40 to +50°C)		
Third Party Evaluation / Agency Listings & Links	http://www.nwglde.org/evals/veeder_root_j.html		
Product Installation Guide Link	https://www.veeder.com/us/technical-document-library		

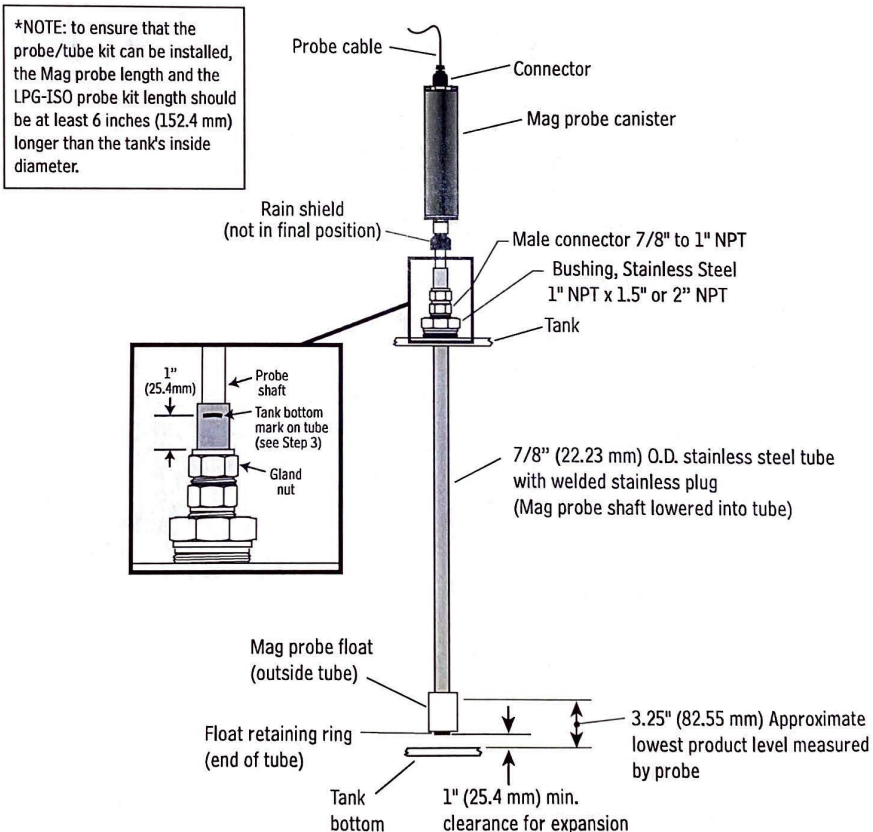
Example Installation




Probe Description & Product Application	<p>Mag Plus In-Tank Probe for Monitoring LPG Products in both USTs and ASTs</p>					
Specific Products Monitored / Product Compatibility	Part # & Description	Approved Products	Monitoring Functionality Options			
	1. 846397-6XX Stainless Steel (SS) In-Tank Probe with High Grade Polymer (HGP) Canister, No Water Detection, UL 2. 846391-6XX SS with Aluminum (AL) Canister, No Water Detection, UL	Liquified Petroleum Gas Propane	No Leak Detection / Inventory Only			
Console Compatibility	Maximum Probes / Console	Probe Interface Modules				
		Module Part #	Module Description	# of Modules per Console	# of Probe Inputs per Module	Availability
TLS-450PLUS (8600 Series)	64	332812-001	Universal Sensor Module (USM) Interface for Probes, Sensors, and DPLLD	Up to 4	16	Sold Separately (either Factory Installed or as a Spare Module)
TLS4i (8601 Series)	4	No module required, probe input capability factory installed				
TLS4c (8601 Series)	2					
TLS-350/R/PLUS	16	329356-002	4-Input Probe Interface Module	4	4	Sold Separately (either Factory Installed or as a Spare Module)
TLS-300i	4	No module required, probe input capability factory installed				
TLS-300C	2					

Float Installation Kits	Part # & Description	Float Size	Cable Lengths	Min/Max Probe Length	Min/Max Chemical Tank Diameter
	333083-XXX LPG-ISO Probe Inventory Only Installation Kits	1.5" (3.81cm)	5' (1.5m), 10' (3.05m), 20' (6.1m)	48" (1.2m) - 144" (3.66m)	42" (106.68cm) - 138" (350.52cm)
	333082-XXX LPG-ISO Probe Inventory Only Installation Kits	2.0" (5.08cm)			
Other Installation Accessories	N/A				
Specifications	Product	Water			
Measurement Accuracy	+/- 0.0300" (0.762mm)	N/A			
Resolution - One Sample Reading	+/- 0.002857" (0.072571mm)	N/A			
Minimum Measurement - 1.5" (3.81cm) Float Kits	3.25" (82.55mm)	N/A			
Minimum Measurement - 2.0" (5.08cm) Float Kits	3.25" (82.55mm)	N/A			
Operating (Working) Temperature Range	-40 to +122°F (-40 to +50°C)	N/A			
Working Pressure	375 psi	N/A			
Third Party Evaluation / Agency Listings & Links	http://www.nwglde.org/evals/veeder_root_j.html				
Product Installation Guide Link	https://www.veeder.com/us/technical-document-library				

Example Installation

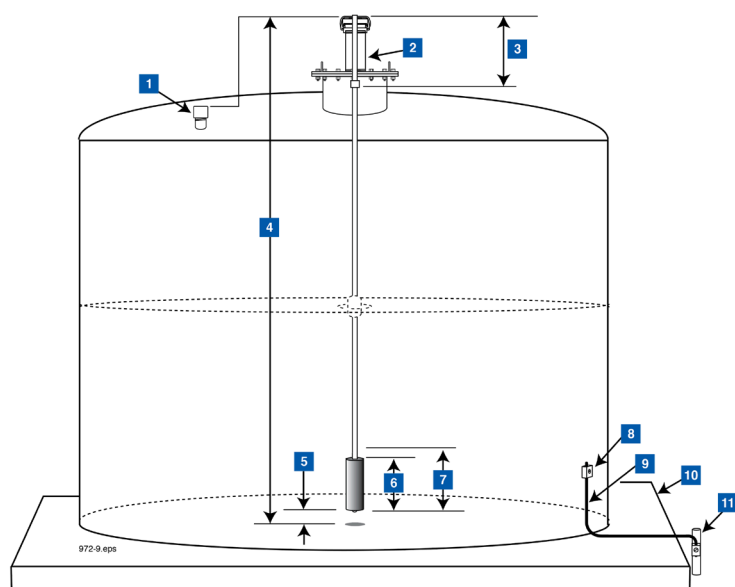


Probe Description & Product Application	Mag-FLEX In-Tank Probes for Monitoring Gas, Diesel, & Alternative Fluids in both USTs and ASTs	
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Specific Products Monitored / Product Compatibility	Part # & Description	Approved Products	Monitoring Functionality Options
		1. 0889591-4XX Mag-FLEX probe with gasoline & water floats, wired, UL/cUL	Gasohol (<=15% Ethanol)
	2. 0889591-5XX Mag-FLEX probe with diesel & water floats, wired, UL/cUL	Gasoline with <=7% Methanol and 8% TBA	
	3. 0889591-6XX Mag-FLEX probe with no water float, wired, UL/cUL	Gasoline with <=15% MTBE	
	4. 0889591-8XX Mag-FLEX probe for methanol tanks with no water float, wired, UL/cUL	Gasoline with <=17% TAME	
	5. 0889591-1XX Mag-FLEX probe with gasoline & water floats, wireless, UL/cUL	Leaded Gasoline	
	6. 0889591-2XX Mag-FLEX probe with diesel & water floats, wireless, UL/cUL	Mineral Spirits	
	7. 0889591-3XX Mag-FLEX probe with no water float, wireless, UL/cUL	Premium Unleaded Gasoline	
	8. 0889591-7XX Mag-FLEX probe for methanol tanks with no water float, wireless, UL/cUL	Regular Unleaded Gasoline	
	9. 0889561-4XX Mag-FLEX probe with gasoline & water floats, wired, ATEX	Gasoline with <=15% ETBE	
	10. 0889561-5XX Mag-FLEX probe with diesel & water floats, wired, ATEX	Gasoline with <=12% TBA	
	11. 0889561-6XX Mag-FLEX probe with no water float, wired, ATEX	Diesel (Fuel Oil #2)	
	12. 0889561-8XX Mag-FLEX probe for methanol tanks with no water float, wired, ATEX	Kerosene (Fuel Oil #1)	
	13. 0889561-1XX Mag-FLEX probe with gasoline & water floats, wireless, ATEX	Bio Diesel (Low Density)	
	14. 0889561-2XX Mag-FLEX probe with diesel & water floats, wireless, ATEX	Methanol *	
	15. 0889561-3XX Mag-FLEX probe with no water float, wireless, ATEX		
	16. 0889561-7XX Mag-FLEX probe for methanol tanks with no water float, wireless, ATEX		
* Applicable to 0889591-8XX, 0889561-8XX, 0889591-7XX, and 0889561-7XX part numbers only			

Console Compatibility	Maximum Probes / Console	Probe Interface Modules				Availability
		Module Part #	Module Description	# of Modules per Console	# of Probe Inputs per Module	
TLS-450PLUS (8600 Series) with TLS-XB installed (3 max per system)	64	0332812-001	Universal Sensor Module (USM) Interface for Probes, Sensors, and DPLLD	Up to 4	16	Sold Separately (either Factory Installed or as a Spare Module)
TLS4 (8601 Series)	12	No module required, probe input capability factory installed				
TLS4B (8601 Series)	6					
TLS-350/R/PLUS	16	0329356-002	4-Input Probe Interface Module	4	4	Sold Separately (either Factory Installed or as a Spare Module)
TLS-300i	4	No module required, probe input capability factory installed				
TLS-300C	2					

	Part # & Description	Float Size	Special Instructions	Min/Max Probe Length
Float Installation Kits	0330020-776 Kit – Low Level Water Float (1.9" for Gasoline)	4" (10.16cm)	Low level water float kits require a 4" tank opening and connect directly to the existing water float. Wall guide included.	5' (1.5m) - 72.1' (22m)
	0330020-777 Kit – Low Level Water Float (1.9" for Diesel)	4" (10.16cm)		
	0330020-824 Kit – Low Level Water Float (1.9" for Bio-Diesel)	4" (10.16cm)		
Other Installation Accessories	0848100-004 Over voltage protection device 1 per probe recommended 0576008-708 2" (5.08cm) NPT Adapter for installation of Mag-FLEX AST probes (req'd 1/probe)			
Specifications	Product	Water		
Measurement Accuracy	+/- 0.0800" (2.032mm)	+/- 0.12" (3.048mm)		
Resolution – One Sample Reading	+/- 0.02" (0.508mm)	+/- 0.02" (0.508mm)		
Minimum Measurement	+/- 7.3" (18.542cm) probe; 1.5" (3.81cm) float	+/- 5.5" (13.97cm) Std; 1.9" (4.826cm) low level		
Operating (Working) Temperature Range	-40 to +140°F (-40 to +60°C)			
Thermistors	5 Thermistors			
Product	Material			
Probe Canister	Stainless Steel 303			
Rigid Shaft Sections	Stainless Steel 304			
Corrugated Flexible Shaft & Floats	Stainless Steel 316 Ti			
Weight	Stainless Steel 303			
Magnet Casing	Conductive Plastic			
Third Party Evaluation / Agency Listings	http://www.nwglde.org/evals/veeder_root_j.html			
Product Installation Guide	https://www.veeder.com/us/technical-document-library			

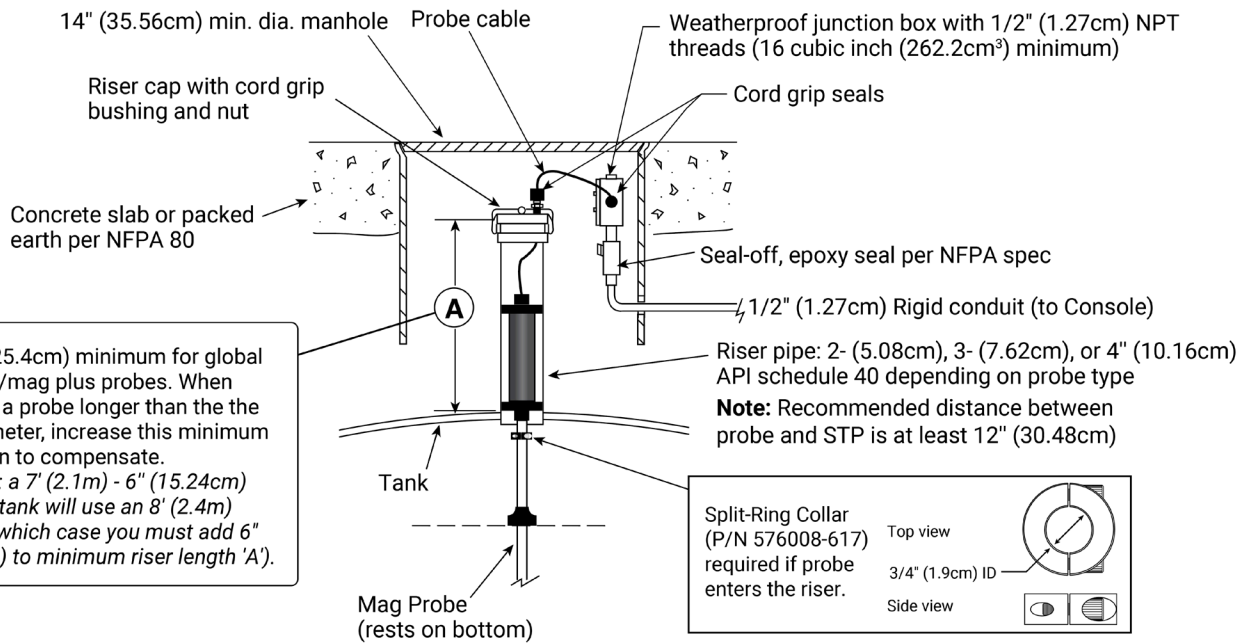
Example Installation



1. Insertion measuring point for 2" (5.08cm) pipe cap installations (top of pipe cap to tank bottom)
2. Insertion measuring point for 4" (10.16cm) riser pipe installations (top of riser pipe to tank bottom). Add 2" (5.08cm) for brass ring/and riser cap.
3. Null zone - typical all probes
4. Measured insertion length (always order smaller probe if measured insertion length falls between two probes in table)
5. Clearance off bottom
6. Weight length
7. Dead zone
8. Tank grounding bracket
9. Grounding cable
10. Concrete tank pad
11. Earth grounded electrode with cable bracket

Probe Description & Product Application	<p style="text-align: center;">Stainless Steel Mag Plus In-Tank Probe for Monitoring Alternative Fluids with No Water Detection in both USTs and ASTs</p>					
Specific Products Monitored / Product Compatibility	Part # & Description	Approved Products	Monitoring Functionality Options			
	<p>Leak Detection / BIR - Accuchart Probes</p> <ol style="list-style-type: none"> 846397-4XX Stainless Steel (SS) In-Tank Probe with High Grade Polymer (HGP) Canister with No Water Detection & 0.1 GPH Testing Capability, UL 846397-5XX SS In-Tank Probe with HGP Canister with No Water Detection & 0.2GPH Testing Capability, UL 846391-4XX SS In-Tank Probe with Aluminum (AL) Canister with No Water Detection & 0.1 GPH Testing Capability, UL 846391-5XX SS In-Tank Probe with AL Canister with No Water Detection & 0.2 GPH Testing Capability, UL <p>No Leak Detection/Inventory Only Probes</p> <ol style="list-style-type: none"> 846397-6XX SS with HGP Canister with No Water Detection & No Leak Detection/ Inventory Only, UL 846391-6XX SS with AL Canister with No Water Detection & No Leak Detection/ Inventory Only, UL 	Alcohol (<=100% Alcohol)*	A. 0.1 GPH static in-tank testing for USTs only			
		Fuel Oil #6	B. 0.2GPH static in-tank testing for USTs only			
		Propylene Glycol	C. 0.2 GPH Continuous Statistical Leak Detection (CSLD) for USTs only			
		Methyl Alcohol*				
		Methanol (<=100% Alcohol)*	D. No Leak Detection / Inventory Only for USTs & ASTs			
		ETBE (<=100% Ether)	E. BIR – Accuchart for USTs only			
		Ethanol (<=100% Alcohol) includes E85*	* Limited to E85 for ATEX probes			
		MTBE (<=100% Ether)				
		Used Oil				
		Ethylene Glycol				
		Windshield Washer Fluid				
DEF (AdBlue)						
Console Compatibility	Maximum Probes / Console	Probe Interface Modules				
		Module Part #	Module Description	# of Modules per Console	# of Probe Inputs per Module	Availability
TLS-450PLUS (8600 Series) with TLS-XB installed (3 max per system)	64 (32 with BIR)	332812-001	Universal Sensor Module (USM) Interface for Probes, Sensors, and DPLLD	Up to 4	16	Sold Separately (either Factory Installed or as a Spare Module)
TLS4i (8601 Series)	4	No module required, probe input capability factory installed				
TLS4c (8601 Series)	2					
TLS-350/R/PLUS	16	329356-002	4-Input Probe Interface Module	4	4	Sold Separately (either Factory Installed or as a Spare Module)
TLS-300i	4	No module required, probe input capability factory installed				
TLS-300C	2					

	Part # & Description	Float Size	Cable Lengths	Min/Max Probe Length
Float Installation Kits	846400-0X4 Mag Plus Alternative Fluids Float Kit - No Water Float	4" (10.16cm)	5' (1.5m), 10' (3.05m), 20' (6.1m)	48" (1.2m) - 144" (3.66m)
	846400-3X4 Mag Plus Alternative Fluids Float Kit - No Water Float	3" (7.62cm)		
	846400-1X4 Mag Plus Alternative Fluids Float Kit - No Water Float	2" (5.08cm)		
Other Installation Accessories	312020-952 4" (10.16cm) NPT Riser Cap and Ring Kit for In-Tank Probes 330020-282 4" (10.16cm) Threaded NPT Riser Cap for In-Tank Probes			
Specifications	Product	Water		
Measurement Accuracy	+/- 0.0300" (0.762mm)	N/A		
Resolution - One Sample Reading	+/- 0.002857" (0.072571mm)	N/A		
Minimum Measurement - 2" (5.08cm) Float Kits	3.23" (8.2cm)	N/A		
Minimum Measurement - 3" (7.62cm) Float Kits	3.04" (7.72cm)	N/A		
Minimum Measurement - 4" (10.16cm) Float Kits	3.04" (7.72cm)	N/A		
Operating (Working) Temperature Range	-40 to +122°F (-40 to +50°C)			
Third Party Evaluation / Agency Listings & Links	UL, cUL, ATEX, IECEx http://www.nwglde.org/evals/veeder_root_j.html			
Product Installation Guide Link	https://www.veeder.com/us/technical-document-library			

Example Installation



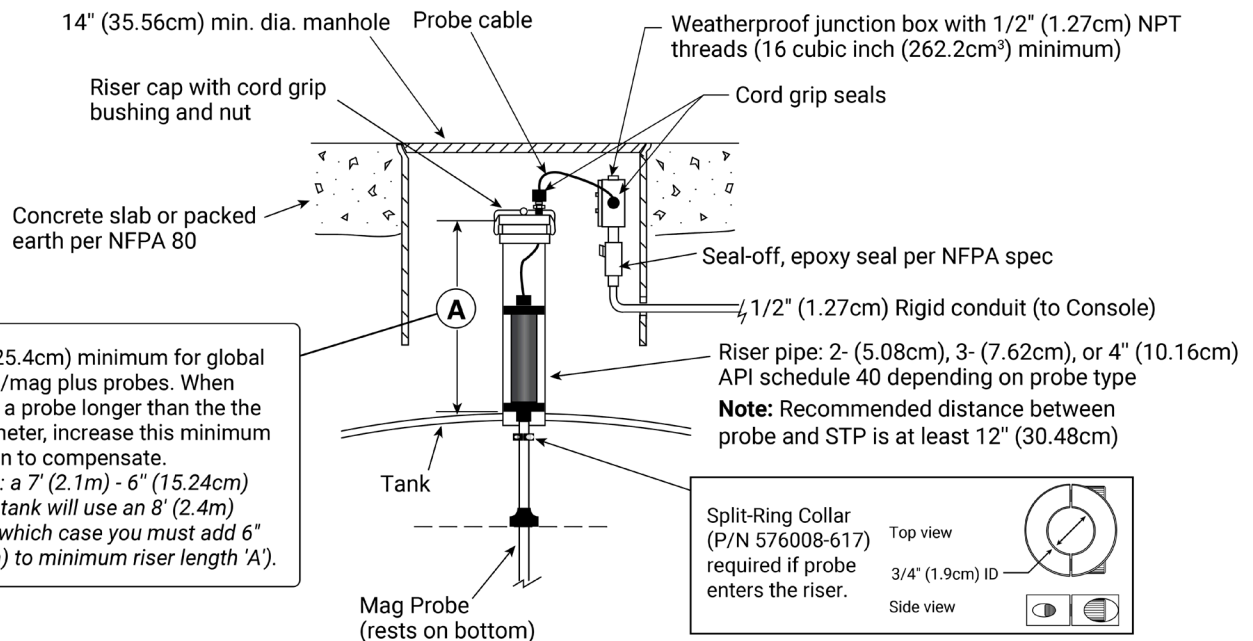
Probe Description & Product Application	Stainless Steel Mag Plus In-Tank Probe for Monitoring Gasoline, Retail Diesel Products & Water in both USTs and ASTs	
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	Part # & Description	Specific Products	Monitoring Functionality
Specific Products Monitored / Product Compatibility	Leak Detection / BIR - AccuChart Probes		
	1. 846397-1XX Stainless Steel (SS) In-Tank Probe with High Grade Polymer (HGP) Canister with Water Detection & 0.1GPH Testing Capability, UL	Gasohol (<=15% Ethanol)	A. 0.1 GPH static in-tank testing for USTs only
	2. 846397-2XX SS In-Tank Probe with HGP Canister with Water Detection & 0.2GPH Testing Capability, UL	Gasoline with <=7% Methanol and 8% TBA	B. 0.2 GPH static in-tank testing for USTs only
	3. 846391-1XX SS In-Tank Probe with Aluminum (AL) Canister with Water Detection & 0.1 GPH Testing Capability, UL	Gasoline with <=15% MTBE	C. 0.2 GPH Continuous Statistical Leak Detection (CSLD) for USTs only
		Gasoline with <=17% TAME	
	4. 846391-2XX SS In-Tank Probe with AL Canister with Water Detection & 0.2 GPH Testing Capability, UL	Leaded Gasoline	D. No Leak Detection / Inventory Only for USTs & ASTs
		Mineral Spirits	E. BIR – AccuChart for USTs only
	Premium Unleaded Gasoline		
	Regular Unleaded Gasoline		
	Gasoline with <=15% ETBE		
	Gasoline with <=12% TBA		
	Diesel (Fuel Oil #2)		
	Aviation Gas		
	Kerosene (Fuel Oil #1)		
	Bio Diesel (Low Density)		

Console Compatibility	Maximum Probes / Console	Probe Interface Modules				
		Module Part #	Module Description	# of Modules per Console	# of Probe Inputs per Module	Availability
TLS-450PLUS (8600 Series) with TLS-XB installed (3 max per system)	64 (32 with BIR)	332812-001	Universal Sensor Module (USM) Interface for Probes, Sensors, and DPLLD	Up to 4 - TLS-4XX	16	Sold Separately (either Factory Installed or as a Spare Module)
TLS4i (8601 Series)	4	No module required, probe input capability factory installed				
TLS4c (8601 Series)	2					
TLS-350/R/PLUS	16	329356-002	4-Input Probe Interface Module	4	4	Sold Separately (either Factory Installed or as a Spare Module)
TLS-300i	4	No module required, probe input capability factory installed				
TLS-300C	2					

Part # & Description	Float Size	Cable Lengths	Min/Max Probe Length	
Float Installation Kits	886100-XX0 Mag Plus Phase Separation Float Kit	4" (10.16cm)	5' (1.5m), 10' (3.05m), 20' (6.1m)	48" (1.2m) - 144" (3.66m)
	846400-3X0 Mag Plus Gasoline Float Kit	3" (7.62cm)		
	846400-1X0 Mag Plus Gasoline Float Kit	2" (5.08cm)		
	846400-0X1 Mag Plus Diesel Float Kit	4" (10.16cm)		
	846400-3X1 Mag Plus Diesel Float Kit	3" (7.62cm)		
	846400-1X1 Mag Plus Diesel Float Kit	2" (5.08cm)		
Other Installation Accessories	312020-952 4" (10.16cm) NPT Riser Cap and Ring Kit for In-Tank Probes 330020-282 4" (10.16cm) Threaded NPT Riser Cap for In-Tank Probes			
Specifications	Product	Water		
Measurement Accuracy	+/- 0.0300" (0.762mm)	+/- 0.0300" (0.762mm)		
Resolution - One Sample Reading	+/- 0.002857" (0.072571mm)	+/- 0.002857" (0.072571mm)		
Minimum Measurement - 2" (5.08cm) Float Kits	3.23" (8.2cm)	0.867" (2.2cm)		
Minimum Measurement - 3" (7.62cm) Float Kits	3.04" (7.72cm)	0.630" (1.6cm)		
Minimum Measurement - 4" (10.16cm) Float Kits	3.04" / 7.0" for Phase Sep.	0.630" (1.6cm)		
Operating (Working) Temperature Range	-40 to +122°F (-40 to +50°C)			
Third Party Evaluation / Agency Listings & Links	UL, cUL, ATEX, IECEx http://www.nwglde.org/evals/veeder_root_j.html			
Product Installation Guide Link	https://www.veeder.com/us/technical-document-library			

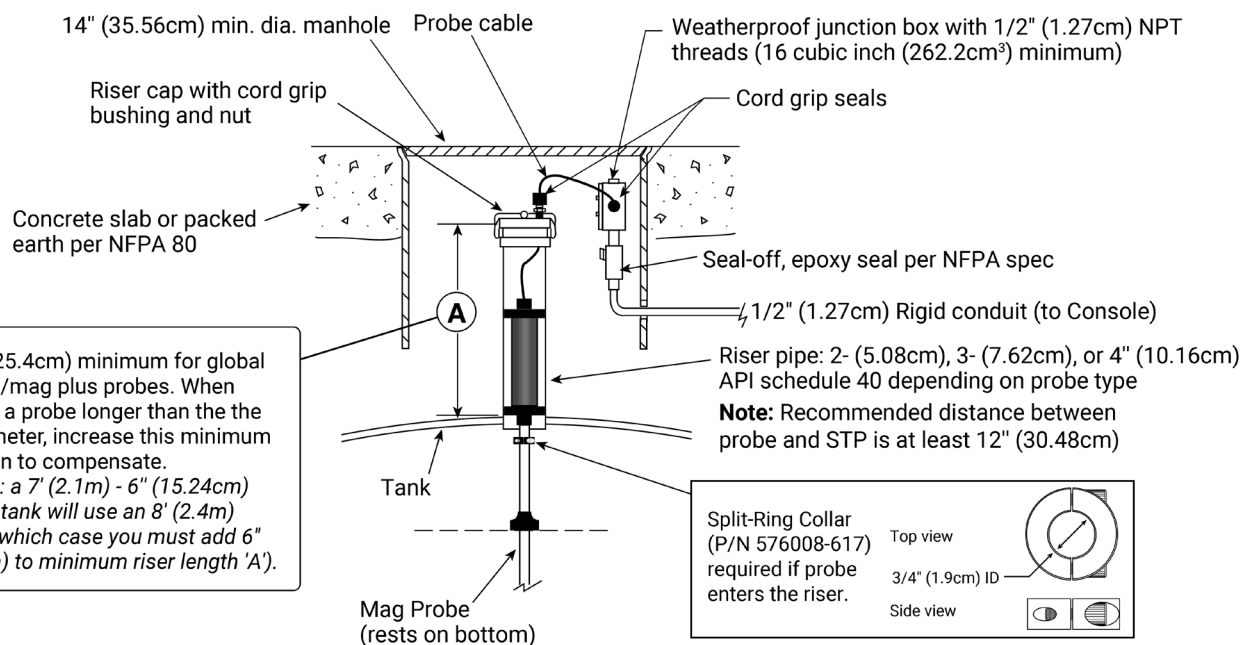
Example Installation



Probe Description & Product Application	Stainless Steel Mag Plus In-Tank Probe for Monitoring Jet Fuel Products with Water Detection in both USTs and ASTs					
Specific Products Monitored / Product Compatibility	<p align="center">Part # & Description</p> <p>Leak Detection with Water Detection</p> <ol style="list-style-type: none"> 846397-1XX Stainless Steel (SS) with High Grade Polymer (HPG) Canister with Water Detection & 0.1GPH Testing Capability 846397-2XX (SS) with (HPG) Canister with Water Detection & 0.2GPH Testing Capability 846391-1XX (SS) with Aluminum (AL) Canister with Water Detection & 0.1GPH Testing Capability 846391-2XX (SS) with (AL) Canister with Water Detection & 0.2GPH Testing Capability <p>No Leak Detection/Inventory Only Probes</p> <ol style="list-style-type: none"> 846397-3XX (SS) with (HPG) Canister with Water Detection & No Leak Detection/Inventory Only 846391-3XX (SS) with (AL) Canister with Water Detection & No Leak Detection/Inventory Only 	<p align="center">Approved Products</p> Jet Fuel (incl JP8) Jet Fuel (JP10)	<p align="center">Monitoring Functionality Options</p> A. 0.1 GPH static in-tank testing for USTs only B. 0.2GPH static in-tank testing for USTs only C. 0.2 GPH Continuous Statistical Leak Detection (CSLD) for USTs only D. No Leak Detection / Inventory Only for USTs & ASTs E. BIR – Accuchart for USTs only			
Console Compatibility	Maximum Probes / Console	<p align="center">Probe Interface Modules</p>				
TLS-450PLUS (8600 Series)	64	Module Part # 332812-001	Module Description Universal Sensor Module (USM) Interface for Probes, Sensors, and DPLLD	# of Modules per Console Up to 4	# of Probe Inputs per Module 16	Availability Sold Separately (either Factory Installed or as a Spare Module)
TLS4i (8601 Series)	4	No module required, probe input capability factory installed				
TLS4c (8601 Series)	2					
TLS-350/R/PLUS	16	329356-002	4-Input Probe Interface Module	4	4	Sold Separately (either Factory Installed or as a Spare Module)
TLS-300i	4	No Module required, probe input capability factory installed				
TLS-300C	2					
Float Installation Kits	Part # & Description		Float Size	Cable Lengths	Min/Max Probe Length	Min/Max Chemical Tank Diameter
846400-0X1 Mag Plus Diesel Float Kit			4" (10.16cm)	5', 10', 20'	48" (1.2m) - 144" (3.66m)	N/A
846400-3X1 Mag Plus Diesel Float Kit			3" (7.62cm)			
846400-1X1 Mag Plus Diesel Float Kit			2" (5.08cm)			
Other Installation Accessories	312020-952 4" (10.16cm) NPT Riser Cap and Ring Kit for In-Tank Probes 330020-282 4" (10.16cm) Threaded NPT Riser Cap for In-Tank Probes					

Specifications	Product	Water
Measurement Accuracy	+/- 0.0300" (0.762mm)	+/- 0.0300" (0.762mm)
Resolution - One Sample Reading	+/- 0.002857" (0.072571mm)	+/- 0.002857" (0.072571mm)
Minimum Measurement - 2" (5.08cm) Float Kits	3.23" (8.2cm)	0.867" (2.2cm)
Minimum Measurement - 3" (7.62cm) Float Kits	3.04" (7.72cm)	0.630" (1.6cm)
Minimum Measurement - 4" (10.16cm) Float Kits	3.04" (7.72cm)	0.630" (1.6cm)
Operating (Working) Temperature Range	-40 to +122°F (-40 to +50°C)	
Third Party Evaluation / Agency Listings & Links	http://www.nwglde.org/evals/veeder_root_j.html	
Product Installation Guide Link	https://www.veeder.com/us/technical-document-library	

Example Installation



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