

# HydrX™ Fuel Conditioning System

## Requirements and Specifications

The **Veeder-Root HydrX Fuel Conditioning System** combats in-tank corrosion by providing continuous water removal within diesel underground storage tanks. HydrX unique design removes water from the lowest point in the tank, preventing water from stagnating on the tank bottom and breeding microbial contaminants. The integrated filtration removes entrained water, rust, sand, and microbial particulate from the fuel, polishing it before returning clean fuel back to the tank.



### ► EQUIPMENT REQUIREMENTS

#### **ATG Information:**

- TLS-450PLUS Automatic Tank Gauge (ATG) with software version 9R or higher
- Compatible with Mechanical Line Leak Detection (MLLD) and Digital Pressurized Line Leak Detection (DPLLD)

#### **STP Information:**

- Compatible with 4" STPs up to 4HP
- Veeder-Root Compatible STP Models: The Red Jacket®, The Red Jacket AG, and The Red Armor®
- FE Petro® Compatible STP Models: MagShell™ fixed speed and variable speed STPs with MagVFC™
- Manifolder STPs are not supported
- STP must have a spare port available
  - Confirm that siphon plug can be loosened
  - A one-way check valve will be provided with the Fuel Conditioner installation kit

#### **Site Information:**

- Ability to pull 4 wires in the high voltage conduit (2 high power wires, 1 neutral wire and 1 ground wire) and 2 Intrinsically Safe (IS) pairs
- There must be space in the control room for the wall-mounted Fuel Conditioning Controller (FCC), 8" H x 8.3" W x 6" D
- If there is Isotrol/DHI at the site, 1 spare input is required
- There must be the ability to bring AC power to the FCC on its own branch and breaker, and completed by a licensed electrician
- There must be a water/fuel waste stream to accept the water that is removed by the Fuel Conditioner and disposed of in accordance with local regulations

**Note:** Sump sensors are recommended with HydrX and may be required by local jurisdictions having authority

### ► TANK REQUIREMENTS

#### **Tank Information:**

- Diesel USTs less than or equal to 30,000 gallons
- Fiberglass Tanks; Consult Veeder-Root for Steel Tanks
- Tank diameter must be between 8' (96") and 10' (120")
- Manifolder tanks are not supported

### ► SUMP REQUIREMENTS

#### **Sump Information:**

- A sump diameter greater than or equal to 42" generally will have enough clearance. If smaller than 42", a fit test is required
- The Fuel Conditioner is 30" tall and will require 10" of clearance above the system to any fixed, immovable portion of the sump to service the filters. If the Fuel Conditioner fits in the center of the sump, directly under the sump lid, a 6" clearance to the sump lid is sufficient
- Spare 4" bung in tank top with clearance for a riser (and space for the Fuel Conditioner required)
- Ability to pull 4 wires in the high voltage conduit (2 high power wires, 1 neutral wire and 1 ground wire) and 2 Intrinsically Safe (IS) pairs

## IMPORTANT

The components of the HydrX Fuel Conditioning System are customized based on the unique configuration of each Diesel UST. In order to optimize the functionality of the Water Intake Device that accesses water from the lowest point in the tank, a completed Site Inspection Guide must be submitted to Veeder-Root Customer Service at [customerservice@veeder.com](mailto:customerservice@veeder.com) prior to ordering.

# HydrX™ Fuel Conditioning System Specifications

System Specifications				
<b>Fuel Compatibility</b>	100% Diesel, Biodiesel (B100), Biodiesel Blends			
<b>Operating Temperature</b>	-4°F (-20°C) to 122°F (50°C)			
<b>Storage Temperature</b>	-40°F (-40°C) to 158°F (70°C)			
<b>Installation Location</b>	STP Sump and Diesel UST			
<b>Relative Humidity</b>	0-100% (Condensing)			
<b>HydrX Wiring</b>	Wiring shall conform to the requirements defined in the HydrX Fuel Conditioning System Installation Manual 577014-446			
<b>Waste Water Capacity</b>	5 gallons			
<b>Filtration</b>	25 microns			
<b>Fuel Conditioner External Dimensions (inches)</b>	30 (H) x 15 (W) x 12 (D)			
Fuel Conditioning Controller (FCC)				
<b>FCC Display Specifications</b>	4" Touchscreen Color LCD			
<b>Customized Alarm Features</b>	Integrated with TLS-450PLUS ATG, as an external input alarm, allowing networked alarm notification and management			
<b>FCC External Dimensions (inches)</b>	8.0 (H) x 8.3 (W) x 6.0 (D)			
Approvals & Manuals		Component Approvals		
<b>Product Installation</b>	577014-446	<b>Solenoid Valve:</b> UL/cUL recognized components, reference UL/cUL E37780		
<b>FCC Setup Guide &amp; Operation</b>	577014-466	<b>Intrinsically Safe Sensors:</b> UL/cUL listed, reference UL/cUL MH11766		
<b>Fuel Conditioner Mag Probe Replacement Instructions</b>	577014-469	<b>FCC:</b> UL/cUL listed, reference UL/cUL E102542		
<b>Fuel Conditioner Sensor Replacement Instructions</b>	577014-470			
Fuel Conditioning System Components – First Time Installation Orderable Part Numbers				
Part Number	Description	Overall Length		
		7th Digit	8th Digit	9th Digit
860801-XXX	Water Intake Device (WID) for Fiberglass Tank with 1 Tube	143 to 600 (increments in 1 inch)  <i>Example: 860816-500 500" WID for 8' diameter fiberglass tank with 6 tubes</i>		
860813-XXX	WID for 8' Diameter Fiberglass Tank with 3 Tubes			
860816-XXX	WID for 8' Diameter Fiberglass Tank with 6 Tubes			
860823-XXX	WID for 10' Diameter Fiberglass Tank with 3 Tubes			
860826-XXX	WID for 10' Diameter Fiberglass Tank with 6 Tubes			
860780-XXX	Guide Tube	107, 113, or 135 (inches)		
860580-050	Fuel Conditioner (5 Gallon Water Holding Capacity)			
860400-001	Fuel Conditioning Controller (FCC) – 6' Cable			
330020-867	Kit – Fuel Conditioning System Riser – 15.5" Length			
330020-885	Kit – Valve Conduit			
332972-032	HydrX Software Feature Enhancement			
Part Number	Description	Options: A or B, C or D		
330020-875	Kit – TRJ Installation (Option A)	Option A or Option B		
330020-874	Kit – FE Installation (Option B)			
330020-880	Kit – Water Drain (Option C)	Option C or Option D		
330020-884	Kit – Water Drain Quick Coupling (Option D)			
Fuel Conditioning System Replacement Parts & Accessories				
Part Number	Description	Category		
330020-878	Kit – Manifold Hose	Replacement		
330020-876	Kit – Tank Return Hose	Replacement		
330020-868	Kit – Fuel Conditioner Filter Cartridges	Replacement		
330020-873	Kit – Replacement Probe	Replacement		
330020-872	Kit – Replacement Pressure Sensor	Replacement		
330020-871	Kit – RJ Siphon Port Adapter Assembly	Replacement		
330020-870	Kit – FE Siphon Jet Access Port Adapter Assembly	Replacement		
330020-882	Kit – Inlet Valve Service	Replacement		
330020-883	Kit – Outlet Valve Service	Replacement		
330020-855	Kit – Water Float, Diesel	Replacement		
330020-881	Kit – Adapter (90° Hose End Adapters)	Accessory		
330020-869	Kit – Alignment Bar	Accessory		

► If you have technical questions regarding the HydrX Fuel Conditioning System, contact Veeder-Root Technical Support by phone at **1.800.323.1799** or email at [technicalsupport@veeder.com](mailto:technicalsupport@veeder.com).