

HydrX™ Fuel Conditioning System

Site Inspection Guide

This guide will help you determine the correct configuration of the HydrX Fuel Conditioning System for your site. Review and fill out this document in order to pinpoint the HydrX part numbers required. If any issues are encountered during your site inspection, please contact Veeder-Root Technical Support for further assistance.

► RECOMMENDED MATERIALS

1. "True to Size" Fit Test Model
2. Tape Measure
3. Tank Stick
4. Camera or Smartphone

► SUBMITTAL REQUIREMENTS

With your Purchase Order, submit:

1. Completed Site Inspection Guide
2. As-built tank drawing or tank elevation drawing

► EQUIPMENT REQUIREMENTS

Site Information:

Site Name: _____

Site Address: _____

- ☐ Ability to pull 5 wires in the high voltage conduit (2 high power wires, 2 neutral wires, and 1 ground wire) and 2 Intrinsically Safe (IS) pairs
- ☐ A spare 4" bung on the manway lid with enough clearance for the Fuel Conditioner
- ☐ Two open spaces in the gas electrical panel to accommodate a 15-Amp switched neutral

ATG Information:

- ☐ TLS-450PLUS Automatic Tank Gauge (ATG) or TLS4 ATG with TLS-XB Expansion Box and software version 10.F or higher to support all HydrX functionality
- ☐ Mechanical Line Leak Detection (MLLD)
- or** ☐ Digital Pressurized Line Leak Detection (DPLLD)
- ☐ A Universal Sensor Module (USM) with 2 unused inputs and a Universal Input/Output Module (UIOM) with 3 unused relay outputs and 1 unused High Voltage Input

Note: If a DPLLD is being used, then one additional High Voltage Input is not needed

STP Information:

- ☐ Veeder-Root Compatible STP Models: The Red Jacket®, The Red Jacket AG, and The Red Armor®
- or** ☐ Veeder-Root Compatible 6" STP Model: The Red Jacket Maxxum®
- or** ☐ FE Petro® Compatible STP Models: Compatible with MagShell™ fixed speed and variable speed STPs with MagVFC™
- ☐ STP must have a spare pressure port available

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



► **EQUIPMENT REQUIREMENTS (CONTINUED)**

Tank Information:

- ☐ Diesel Storage Tanks less than or equal to 30,000 gallons
- ☐ Tank diameter must be between 4' (48") and 12' (144")
- ☐ Fiberglass or steel tanks are supported

Line manifolded and siphon manifolded tanks with STPs are supported. Siphon manifolded tanks without STPs are not supported.

Tank Material:

- ☐ Fiberglass
- ☐ Steel Permatank
- ☐ Steel Act-100
- ☐ Other

Tank Manufacturer:

- ☐ Xerxes
- ☐ ZCL
- ☐ CSI
- ☐ Other

Tank Diameter:

Fill in the blank as it can range from 4' to 12'

Total Tank Capacity:

Total Compartment Tank Capacity:

Provide the capacity of the compartment that will have the HydrX installed

POS Information:

- ☐ Invenco by GVR Passport® Point of Sale System
- ☐ DEX (Digital Experience Exchange)
- ☐ Other

HydrX Information:

Select one of the HydrX Fuel Conditioner models below:

- ☐ HydrX 250D, 2.5-Gallon Waste Water Capacity



- ☐ HydrX 500D, 5-Gallon Waste Water Capacity



Additional Information:

Select one of the options for voltage and frequency below:

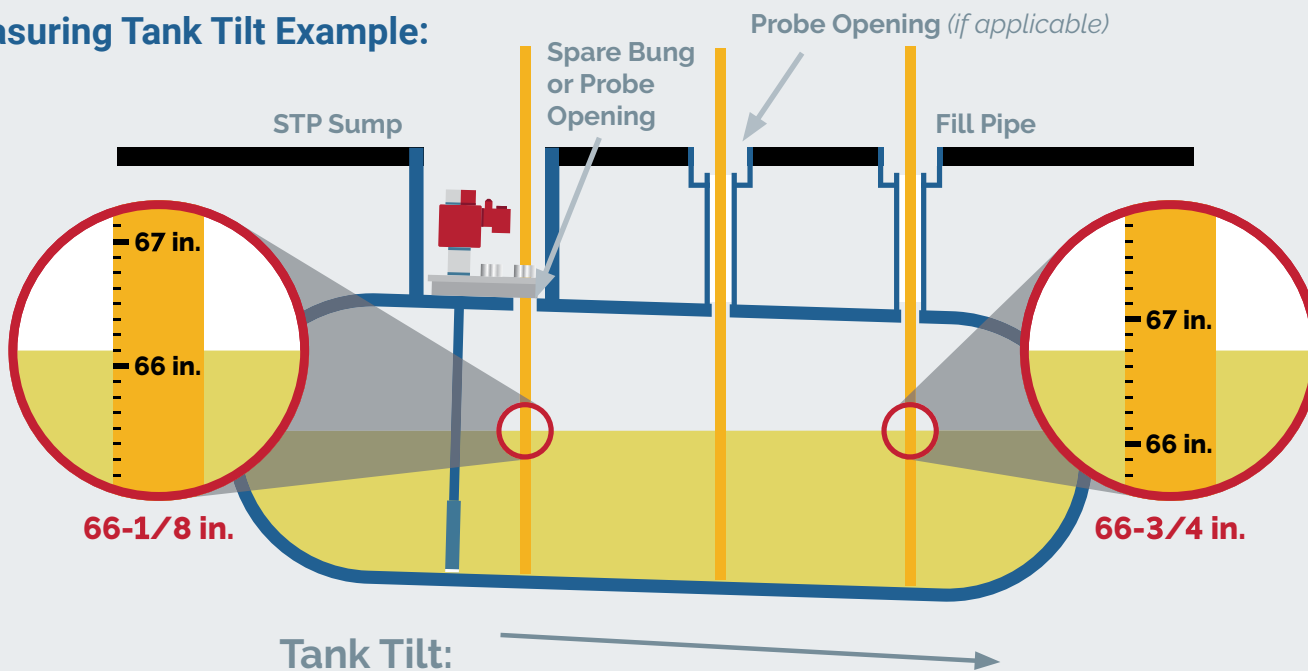
- ☐ 120VAC/60Hz/Single Phase/UL
- ☐ 240VAC/60Hz/Single Phase/UL
- ☐ 240VAC/50Hz/Single Phase/UL

► TANK MEASUREMENTS

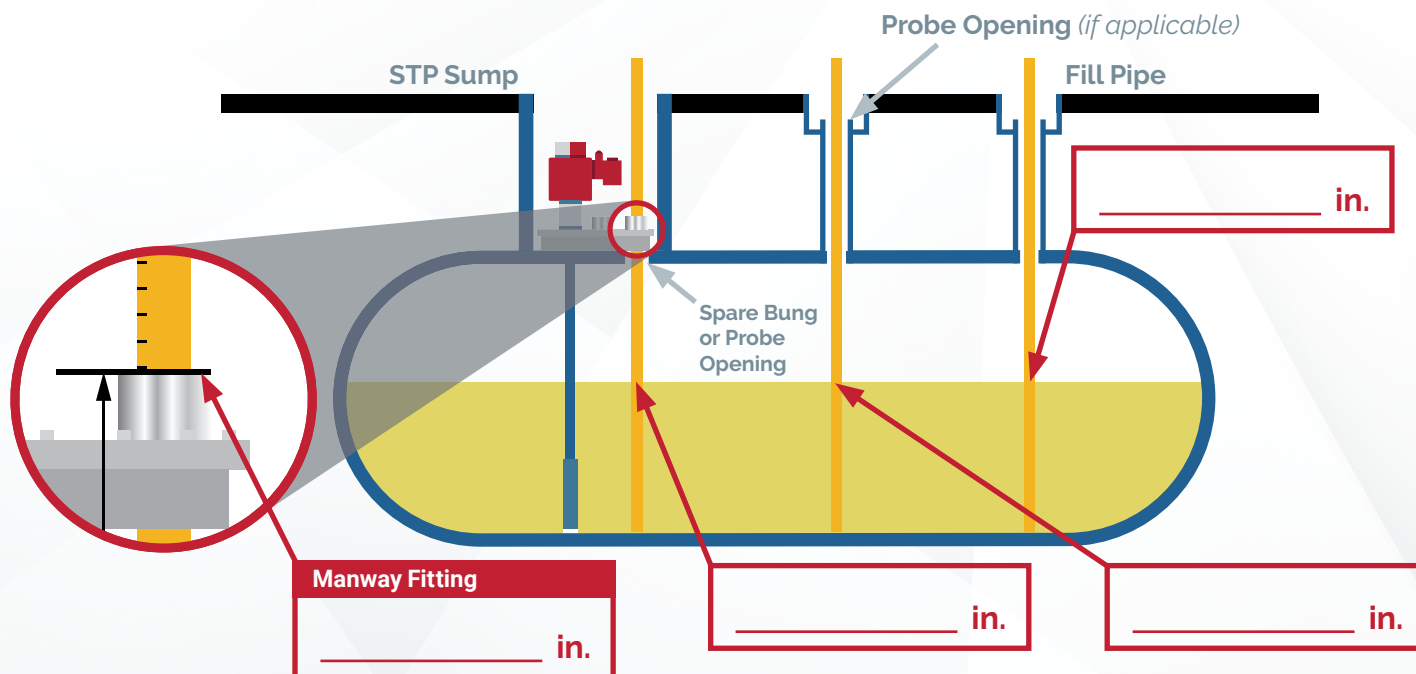
The components of the HydrX Fuel Conditioning System are customized based on the unique configuration of your tank. In order to optimize the functionality of the Water Intake Device, precise tank measurements are required. Please follow the instructions below.

- 1 Please include a precise measurement for the fuel line on the stick in order to interpret any possible tank tilt that might be occurring:

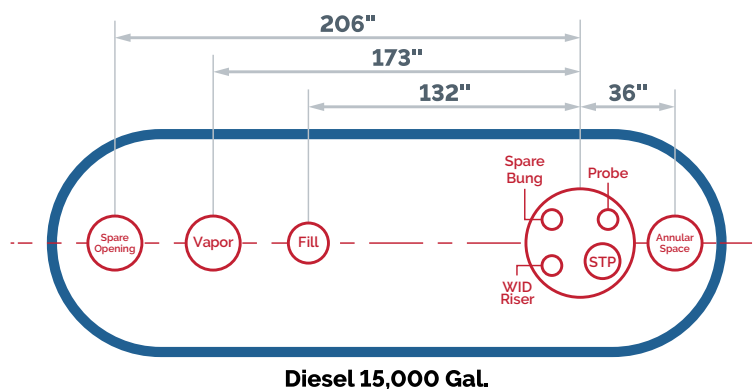
Measuring Tank Tilt Example:



Stick the tank at the **Probe Opening in the STP Sump**, at the **Fill Pipe**, and at the separate **Probe Opening (if applicable)** to determine tank tilt. Place the stick heights on the tank diagram below next to each location to the nearest eighth of an inch. Please be as precise as possible. An additional measurement from the bottom of the tank to the top of the **Manway Fitting** will also be needed. (This dimension may be obtained from the tank drawing if detail is available.)

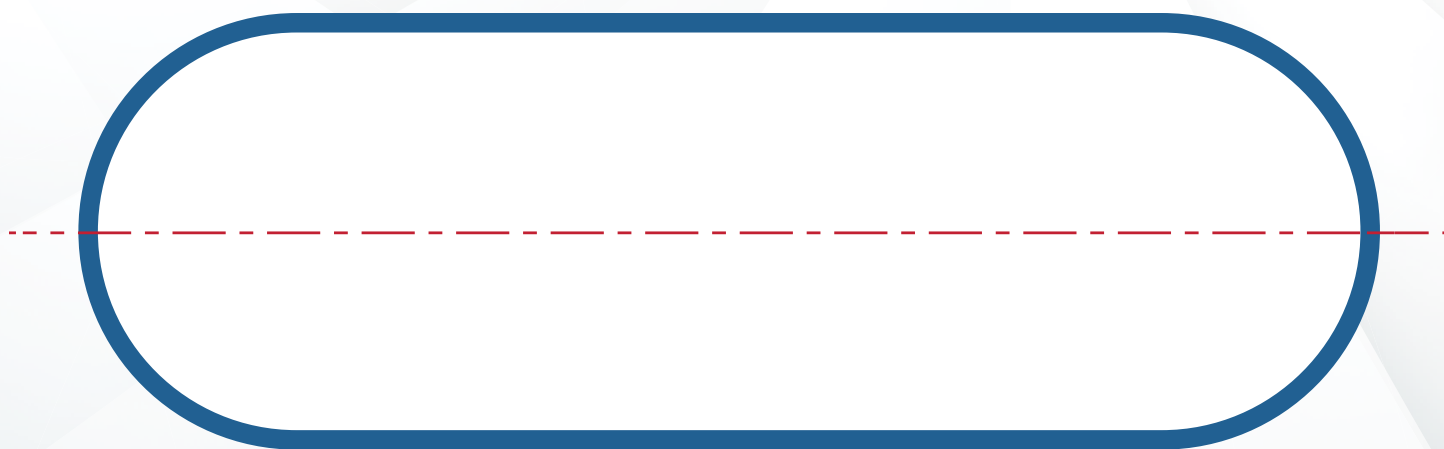


► EXAMPLE MEASUREMENTS – SINGLE TANK

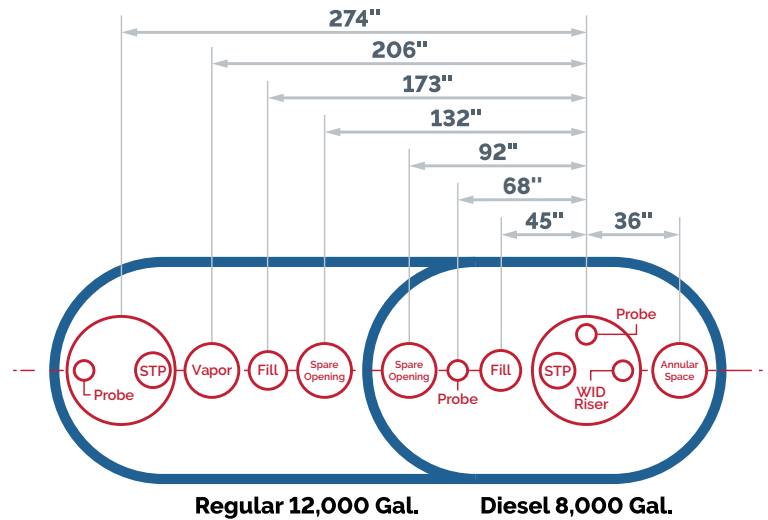


► TANK LAYOUT MEASUREMENTS – SINGLE TANK

Using a blank tank, please draw and label each opening in the space provided below (i.e., Sump, Fill, Probe, Vapor, Annular Space).
Provide measurements (in inches) from the center point of the manway to the next opening.

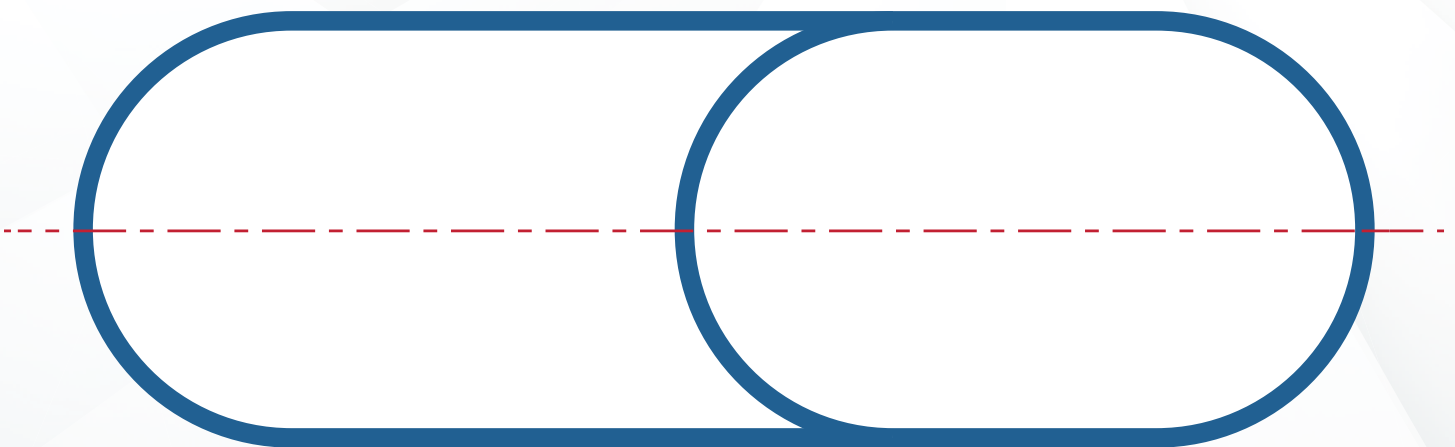


► EXAMPLE MEASUREMENTS – COMPARTMENT TANK



► TANK LAYOUT MEASUREMENTS – COMPARTMENT TANK

Using a blank tank, please draw and label each opening in the space provided below (i.e., Sump, Fill, Probe, Vapor, Annular Space). Provide measurements (in inches) from the center point of the manway to the next opening.



2

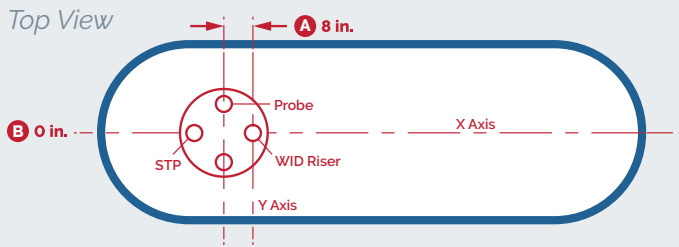
Please input your WID Riser configuration using the tank diagram below:

The following measurements are critical to properly size the WID. Contact Veeder-Root Technical Support with any questions.

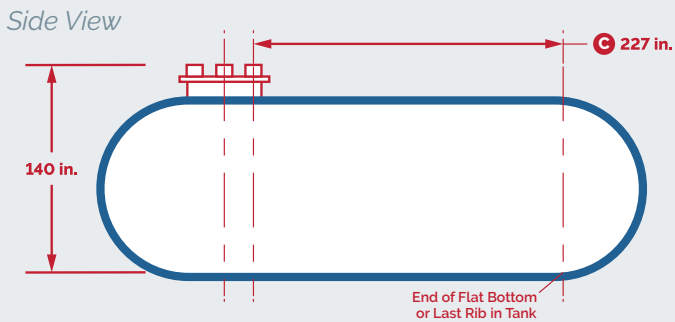
- A. The center of the **WID Riser** to the centerline of the **STP Sump** in the X direction.
- B. The center of the **WID Riser** to the centerline of the **STP Sump** in the Y direction.
- C. The center of the **WID Riser** to the **End of Flat Bottom or Last Rib in Tank** towards the direction of the tank tilt.
Obtain from tank drawing.

If you have a situation where the probe and fill tube are down the centerline, the WID should be in a bung that is offset from the centerline.

Example 1:

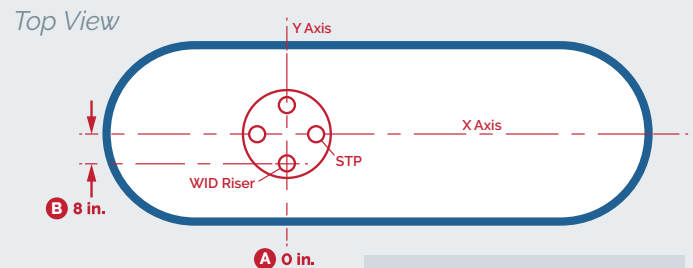


WID Riser Position: 3

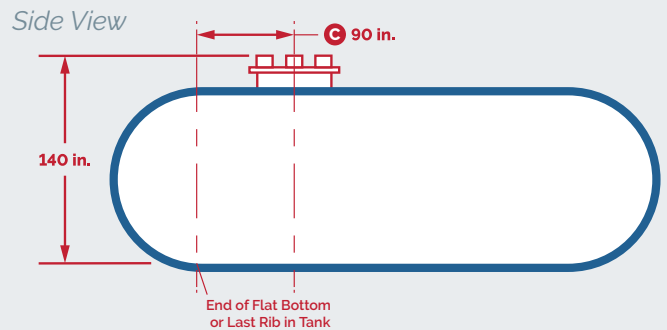


Tank Tilt: ☐ ← ☒ → ☐ ↔

Example 2:



WID Riser Position: 5



Tank Tilt: ☒ ← ☐ → ☐ ↔



Input WID Riser Location and Dimensions A, B, and C (in inches) in the spaces provided

Top View

WID Riser Position (1-9): _____

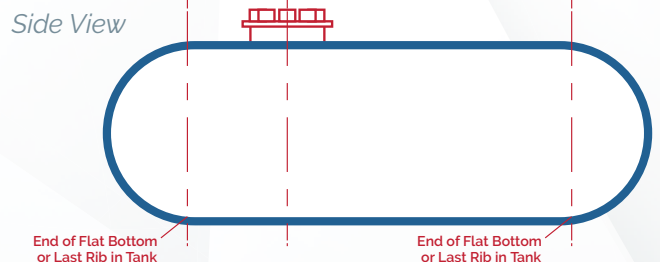
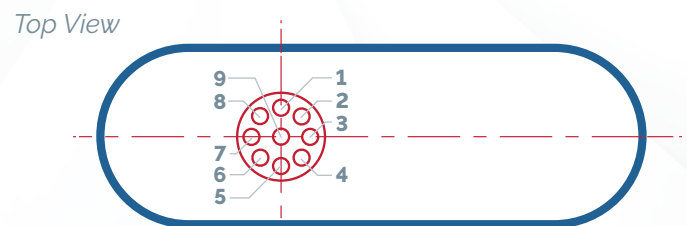
Dimension A: _____

Dimension B: _____

Side View

Dimension C: _____

Center of WID Riser to the End of Flat Bottom or Last Rib in Tank. Obtain from tank drawing.



Tank Tilt: ☐ ← ☐ → ☐ ↔

Reference #1 in the Tank Measurements section on page 3

DIESEL STP SUMPS

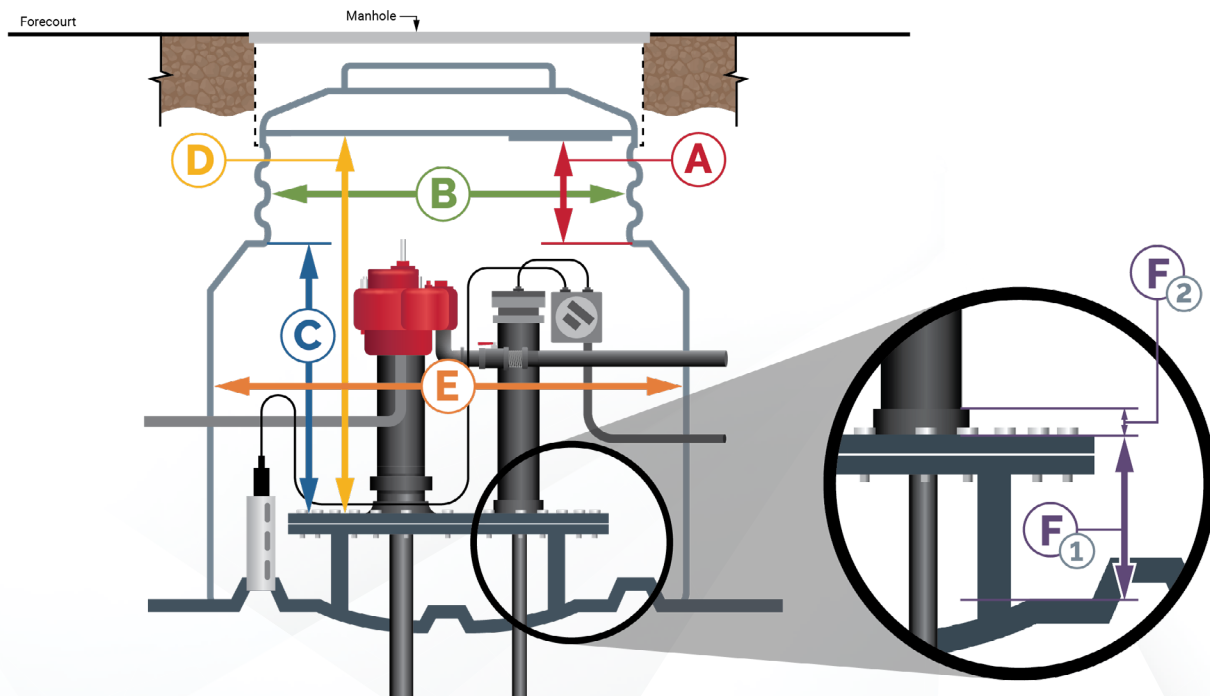
► SUMP REQUIREMENTS

- A sump diameter greater than or equal to 42" generally will have enough clearance. If smaller than 42", pay close attention to the Fuel Conditioner space requirements defined in step 4.
- The Fuel Conditioner comes in two models: HydrX 250D with a 2.5-gallon waste water capacity that is 23" tall and HydrX 500D with a 5.0-gallon waste water capacity that is 30" tall. It requires 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.

► SUMP MEASUREMENTS

The HydrX Fuel Conditioning System will require a certain amount of clearance in the STP Sump. Therefore, precise sump measurements are required. Please follow the instructions below.

3 Please fill in your sump measurements based off of the required dimensions listed in the lines below:



- A** Tapered Opening to Fiberglass Lid Opening _____ in.
- B** Upper Ring Diameter _____ in.
- C** Bulkhead Cover to Tapered Opening _____ in.
- D** Bulkhead Cover to Upper Opening _____ in.
- E** Inside Sump Diameter _____ in.
- F** ① For Steel Tanks, Height of Manway from Tank Outer Diameter _____ in.
② For Steel Tanks, Height of Fittings from Manway _____ in.

4 Ensure that you have enough space in the sump for the Fuel Conditioner by measuring from the intended riser, where it would be mounted, to other possible interferences:

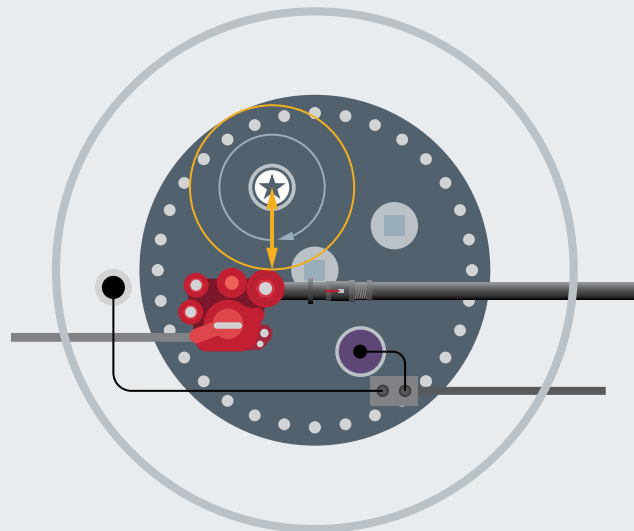
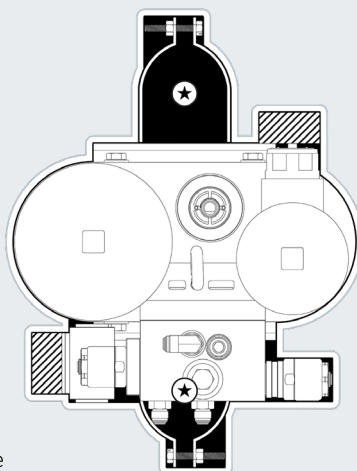
Note: The probe riser is represented by the purple circle below

USING THE "TRUE TO SIZE" FIT TEST MODEL

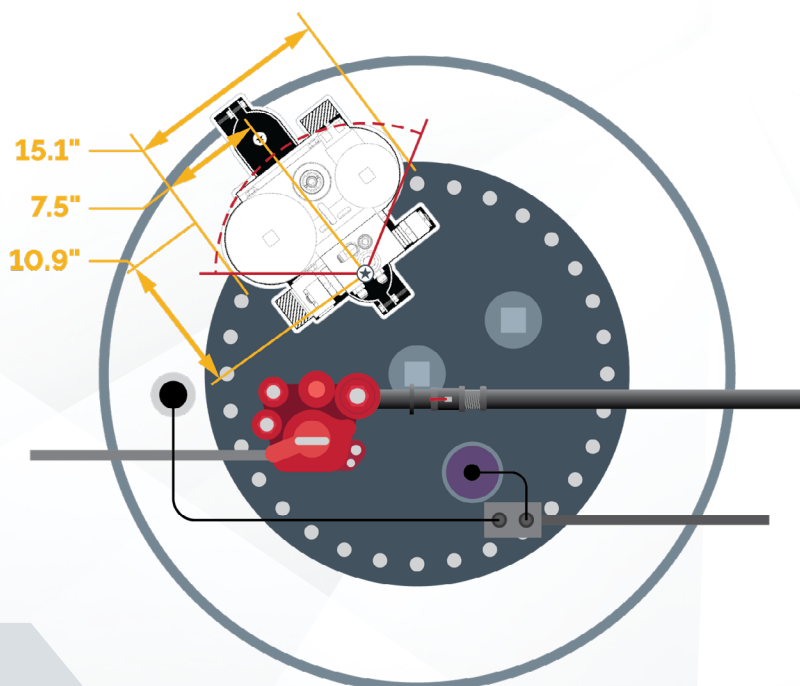
The "True to Size" Fit Test Model can be used to assist in finding possible interferences which could get in the way of your future Fuel Conditioner installation. Distributors can order HydrX Fit Test Model - 5 Pack (490-12-03188) on Veeder-Root's Mimeo Marketplace at no charge.

Note: The star on the model is an indication to where the center of the riser is located

Circle the model (using the star as a pivot center point) around the riser to check for any interferences that the Fuel Conditioner might come in contact with when installed in the sump. The Fuel Conditioner can be mounted to a riser from either side, so the clamps on the fit test model can be bent out of the way to determine the preferred mounting position.



Observe the Fuel Conditioner measurements in the example below. Take a top down picture of the sump using the "True to Size" Fit Test Model in place over the intended bung.



★ Center of Riser

- ▶ If you have questions regarding this Site Inspection Guide, contact Veeder-Root Technical Support by phone at **+1.800.323.1799** or email at technicalsupport@veeder.com.
- ▶ Enter your measurements on veeder.com/us/hydrx-system-configurator to determine the HydrX part numbers needed for your site. Then, submit your completed Site Inspection Guide with your order to Customer Service at customerservice@veeder.com.