

### Basic Features

- Stainless Steel body with 1.75" outside diameter. Will fit into wells down to 2" (schedule 80).
- Internal chamber volume of 1.3L (0.35 gal).
- Maximum depth below ground surface of 1000ft.

### Other Features

- Compatible with BESST's full line of Panacea Pumps.
- Compatible with Timer Control Unit for pump cycle automation.
- Compatible with Zone Isolation Sampling Technology (ZIST).

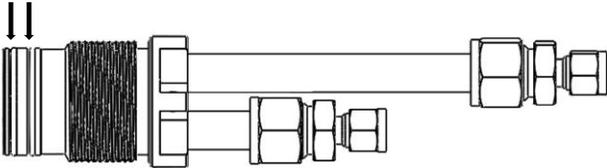
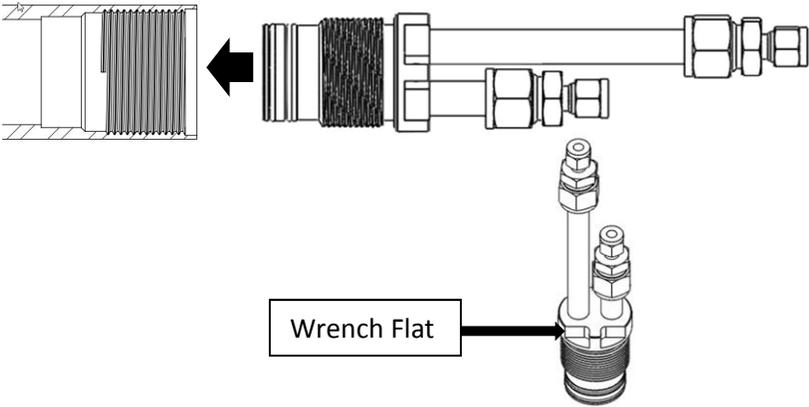
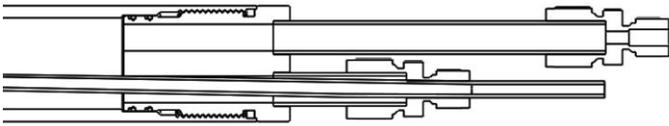
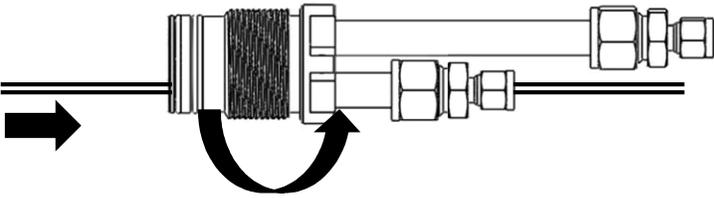
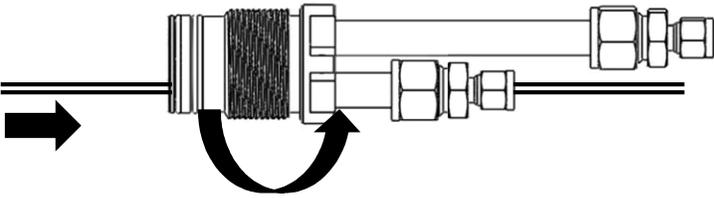
### Specifications

Body Construction	Stainless Steel
Chamber Length (ft.)	5
Assembled Length (ft.)	6
Outer Diameter (in)	1.75
Weight (lbs.)	17.5
Maximum Pressure (psi)	500
Maximum Working Depth (ft BGS)	1000
Minimum Submergence (ft)	5
Internal Volume (L)	1.3
Standard Tubing OD (in)	1/4, others available
Coaxial Tubing Material	Nylon
Seal Material	Buna-N
Gas Compatibility	Nitrogen, Compressed Air
ZIST Compatibility	2" and 4"



### Rigid Volume Booster Precautions For Safe Use

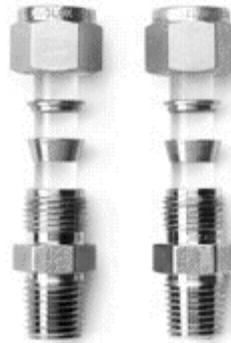
1. Never disassemble the Volume Booster while it is connected to a pressurized source.
2. Never operate the Volume Booster past its specific maximum pressure.
3. Never use tube ferrules other than those provided by BESST INC Inc. or authorized distributor.
4. Never disconnect the pump from the Volume Booster while it is pressurized with gas.
5. Always make sure the Volume Booster is secured to a support line before deploying.

<b>Rigid Volume Booster Assembly</b>	
<p><b>Step 1:</b> Ensure that both Volume Booster endcaps have O-rings installed in the O-ring grooves indicated by the arrows.</p> <p>O-ring size is -.027.</p>	
<p><b>Step 2:</b> Install one end cap onto the chamber of the Volume Booster.</p> <p>Hand tighten the end cap until you begin to feel resistance. Use a 1 inch wrench on the flats of the end cap to tighten until flush fit. Do not over tighten.</p> <p><b>CAUTION:</b> Do not hold the tube stems on the end cap while tightening.</p>	
<p><b>Step 3:</b> Thread a length of 1/4" OD nylon tubing through the shorter port on the installed endcap. Approximately 1 ft. of tubing should protrude from each end.</p>	
<p><b>Step 4:</b> Before installing the second endcap onto the chamber, thread the 1/4" tubing through the shorter port, starting from the inside.</p> <p>A simultaneous pushing and twisting motion will be required to thread the tubing through the fitting.</p>	
<p><b>Step 5:</b> Install the second endcap onto the chamber as previously in Step 2.</p>	

**Step 6:**

Place the nut, back ferrule, and front ferrule onto the nylon tube. Rotate the nut finger-tight. Tighten nut 1.25 turns to ferrule the tube.

NOTE: This connection will need to be removed when re-threading the Volume Booster. Be sure to include some slack in the line within the chamber so the tube can be cut and replaced.

**Rigid Volume Booster connections and deployment**

**Step 1: Connecting the Volume Booster to a Panacea Pump.**

The longer stem on the end cap is the gas line, and the shorter stem is the sample return line. Use a short length of 1/4" high pressure nylon tubing to connect the longer port on the Volume Booster to the gas connection on the Panacea Pump.

The tubing threaded through the Volume Booster can be directly connected to the sample return connection on the Panacea Pump.

A support cable should be used to connect the Volume Booster to the Panacea Pump.



Photo showing the the tubing connections between a Panacea P125 and the Rigid Volume Booster.

**Step 2: Connecting the Volume Booster to tubing.**

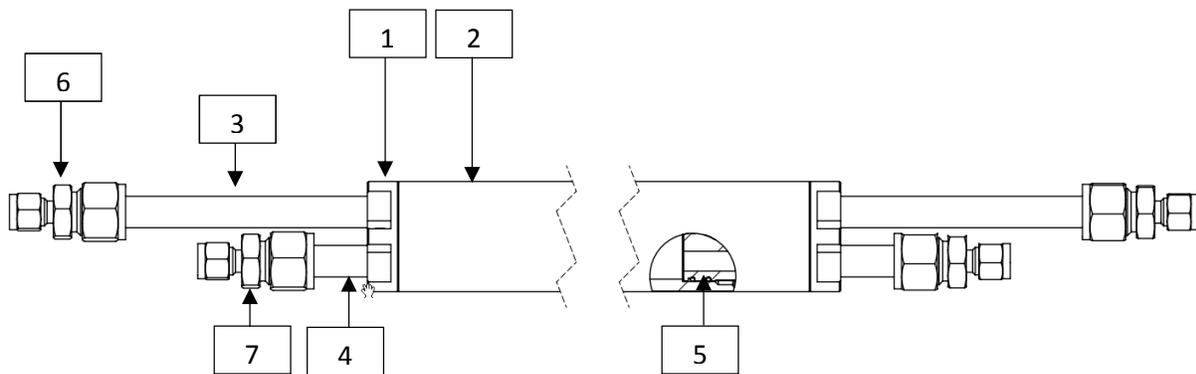
The longer stem on the end cap is the gas line, and the shorter stem is the sample return line. Connect the gas line on the Volume Booster directly to the gas line tubing. Use a 1/4"x1/4" compression fitting to connect the sample return lines.

A 1/16" stainless steel support cable should be installed through the cable holes in the end cap. Attach the deployment cable to the loop with a quick link or other secure method. The deployment cable should be short enough so that the weight of the Volume Booster is supported by the cable, rather than the tubing.



Photo of stainless steel support cable.

Step 3:  
Deploy the Panacea Pump and Rigid Volume Booster to the desired sample depth. If the pump and VB is to be suspended in the well, be sure to hang the weight on the support line and not the tubing.



Number	BESST Part Number	Part Name	Quantity
1	VB-R-175-0501	VBR Top	2
2	VB-R-175-0502	VBR Chamber 5ft	1
3	VB-R-175-0503	VBR Gas Tube	2
4	VB-R-175-0504	VBR Sample Tube	2
5	VB-R-175-0505	VBR O-ring -027	4
6	VB-R-175-0506	VBR Connector	2
7	VB-R-175-0507	VBR Through Tube Connector	2