

# Installation Instructions

## Stainless Steel Swivel Barbed Coupling (SBC)

### 1.5" and 2.0"

**IMPORTANT:** Please read these warnings and the assembly instructions completely and carefully before starting. Failure to do so will void all warranties and may cause product failure, or result in environmental contamination due to liquid leakage into the soil, creating hazardous spill conditions.

**NOTICE:** All OPW products must be used in compliance with all applicable federal, state, provincial and local laws, rules and regulations. Product selection is the sole responsibility of the customer and/or its agents and must be based on physical specifications and limitations, compatibility with the environment and material to be handled. All illustrations and specifications in this literature are based on the latest production information available at the time of publication. Prices, materials and specifications are subject to change at any time, and models may be discontinued at any time, in either case, without notice or obligation.

**Standard Product Warranty:** OPW warrants solely to its customer that the following products sold by OPW will be free from defects in materials and workmanship under normal use and conditions for the periods indicated: FlexWorks Primary Pipe-10 years from date of manufacture; All products certified to California 2001 Standards—1 year from date of manufacture or from date of installation registration (not to exceed 15 months from date of manufacture); All other products—1 year from date of manufacture.

OPW's exclusive obligation under this limited warranty is, at its option, to repair, replace or issue credit (in an amount not to exceed the list price for the product ) for future orders for any product that may prove defective within the applicable warranty period. (Repairs or replacements are subject to prorated warranty coverage for remainder of the original warranty period). Complete and proper warranty claim documentation and proof of purchase required. No products may be returned to OPW without its prior written authority.

This limited warranty shall not apply to any FlexWorks or VAPORSAVER™ product unless it is installed by an OPW attested installer. This limited warranty also shall not apply to any FlexWorks, VAPORSAVER™ or other OPW product: unless all required site and warranty registration forms are completed and received by OPW within 60 days of installation; unless all piping connections are installed with a nationally-recognized or state-approved leak detection device in each tank and dispenser sump (which are not for storage and from which all discharge hydrocarbons must be removed, and the systems completely cleaned, within 24 hours); unless testable sumps utilize FlexWorks pipe and access fittings; unless a sump inspection log or an EPA recommended/required checklist is maintained and the results are furnished to OPW upon request; and unless OPW is notified within 24 hours of any known or suspected product failure and is provided with unrestricted access to the product and the site. This limited warranty also shall not apply to any product which has been altered in any way, which has been repaired by anyone other than a service representative authorized by OPW, or when failure or defect is due to: improper installation or maintenance (including, without limitation, failure to follow FlexWorks Quick Reference Manual Installation Guide and all product warning labels); abuse or misuse; violation of health or safety requirements; use of another manufacturer's, or otherwise unauthorized, substances or components; soil or other surface or subsurface conditions; or fire, flood, storm, lightning, earthquake, accident or any other conditions, events or circumstances beyond OPW's control.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND SPECIFICALLY THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

**INTRODUCTION:** OPW Fueling Containment Systems Swivel Barbed Couplings are designed to be used with FlexWorks piping and must be installed within a containment sump. When using FlexWorks double wall flexible piping, **be sure the cut is straight and clean.**

#### BEFORE INSTALLING

1. Read all instructions carefully.
2. Inspect barbed surfaces of fittings for loose debris or damage which may have occurred during shipping.
3. See Page 3 for Testing Procedures.
4. Refer to the FlexWorks Piping Manual for additional information.

#### INSTALLATION

##### Step 1

Always cut the FlexWorks piping according to the type of fitting being used.

To cut the pipe, measure from the shoulder of one fitting to the shoulder of the corresponding fitting and cut pipe to that length.

**NOTE: To avoid a miscut, always be sure to measure your pipe length twice and then cut the pipe.**

Always cut the FlexWorks pipe squarely to the desired length using the FlexWorks Pipe Cutter.

##### Step 2

Insert the piping into the sump through the entry boot. Remove or loosen riser pipe. Install the swivel nut and insert onto the Tee Fitting using pipe thread sealant that is UL approved for the type of fuel you are using (see note below).

**IMPORTANT: Only use UL Approved pipe sealant for the type of fuel you are using. TELFON TAPE IS NOT AN APPROVED THREAD SEALANT.**

Be sure the "O" ring on the insert is clean and free of debris and that it has lubricant on it. **See Figure 1.**



### Step 3

Install the pipe onto the Barbed end. The pipe will stop at the pipe stop. **Do not use lubricant. Use liquid soap if needed. See Figure 1.**



### Step 4

Position the clamp's interlock lip into the groove behind the barbed fitting's swivel nut. Be sure the nut is fully forward to expose the interlock groove. **See Figure 1.** Make sure that the clamp pads are clean and free of debris. **DO NOT** put any lubrication on the clamp pads.

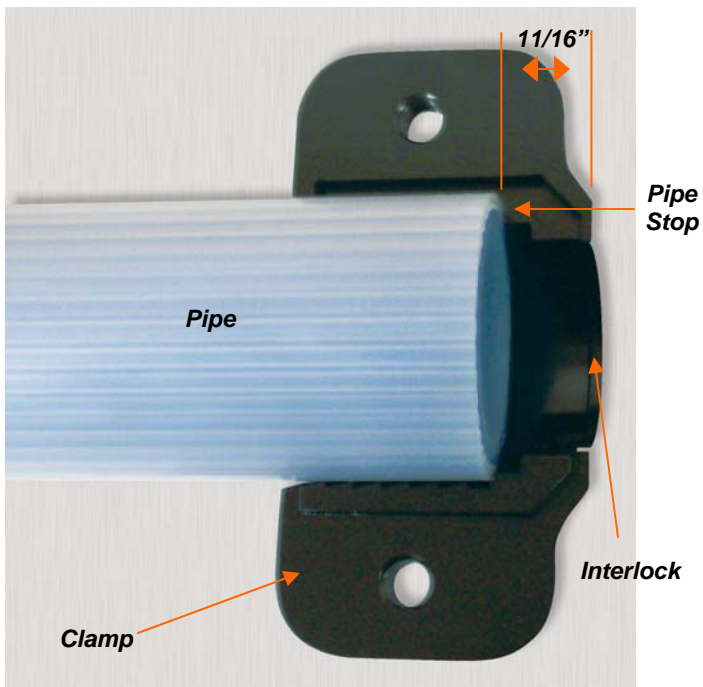


### Step 5

Alternately tighten the clamp bolts until the clamp segments meet, being sure to keep the clamp segments parallel to each other. Be sure clamp lip works into the interlock. **Torque to 70 foot/pounds.** If an impact wrench is used, verify proper torque setting is achieved. Clamp flanges are virtually line to line.



**NOTE: Re-tighten clamp after a period of 24 hours to insure proper sealing.**



### Retrofit Sites

On retrofit sites such as TCI pipe replacements, piping may enter the sump at an angle. In such cases, a crowbar or strap may need to be used to align the pipe with the fittings. Piping entering the Swivel Barbed Coupling **MUST NOT** go past the pipe stop on the insert. If necessary, pull the pipe back 1/8" from the pipe stop before installing the clamps to the fitting.

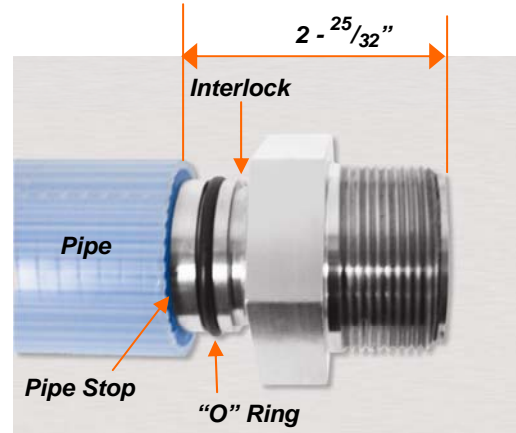


Figure 1

### Testing Procedures

#### Interstitial Tube Assemblies

The Swivel Barbed Couplings attached to the ends of the flexible supply pipe sections have threaded (1/8" NPT) interstitial access ports on their clamp for connection to Interstitial Tube Assemblies that come in various lengths. All tube assemblies are fitted on each end with 1/8" NPT brass compression fittings.

#### Test Tubes (TTT-2536)

Test Tubes are connected to the Swivel Barbed Couplings located within tank sumps and the last dispenser sump in a series piping run. These 36" (900mm) long tubing assemblies are used to provide a means of air pressure integrity testing of the pipe interstitial space after installation. They can be cut to any desired length. They are used as another means of testing the interstitial space when installed inside a terminating dispenser sump. When not used for testing purposes, they may be plugged or left open depending on the pipe interstitial monitoring application.



#### Connector Tubes

Connector Tubes are connected to the Swivel Barbed couplings located within dispenser sumps and are 12" long. Installed inside junction dispenser sumps, connector tubes are used to interconnect the interstice of one pipe section to the next by bypassing the junction safety valve.



**Interstitial Tube Connections for installation of Interstitial Tubes if tubes are to be taken out after install testing:**

The steps required for temporarily connecting the connector tubes and/or test tubes to the threaded interstitial access ports of the double wall swivel couplings is as follows:

**Step 1:** Apply Teflon tape to only the NPT threads of the adapter.

**Step 2:** Thread the adapter into the NPT threaded interstitial access port.

**Step 3:** Cut the tube evenly to the desired length

**Step 4:** Slide the compression nut onto the tubing

**Step 5:** Slide the ferrule onto the tubing

**Step 6:** Insert tube end into preinstalled adapter

**Step 7:** Slide down and thread on compression nut to adapter by hand

**Step 8:** Complete tightening compression nut with a 1/2" wrench.

**Interstitial Tube Connections for installation of Interstitial Tubes if tubes are to remain on coupling after install testing:**

The steps required for permanently connecting the connector tubes and/or test tubes to the threaded interstitial access ports of the double wall swivel couplings is as follows:

**Step 1:** Apply a gas grade pipe dope to the NP threads of the adapter.

**Step 2:** Thread the adapter into the NPT threaded interstitial access port.

**Step 3:** Cut the tube evenly to the desired length

**Step 4:** Slide the compression nut onto the tubing

**Step 5:** Slide the ferrule onto the tubing

**Step 6:** Insert tube end into preinstalled adapter

**Step 7:** Slide down and thread on compression nut to adapter by hand

**Step 8:** Complete tightening compression nut with a 1/2" wrench.



*Fully Installed*



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