TRAINING SEMINAR

ABOUT US

Operating as a family owned corporation, Western Fiberglass brings over 30 years of experience to the petroleum industry. We are based in Santa Rosa, CA.

Our objectives:

- **Outstanding customer service**
- **Flexibility to meet every need**
- **Superior products**

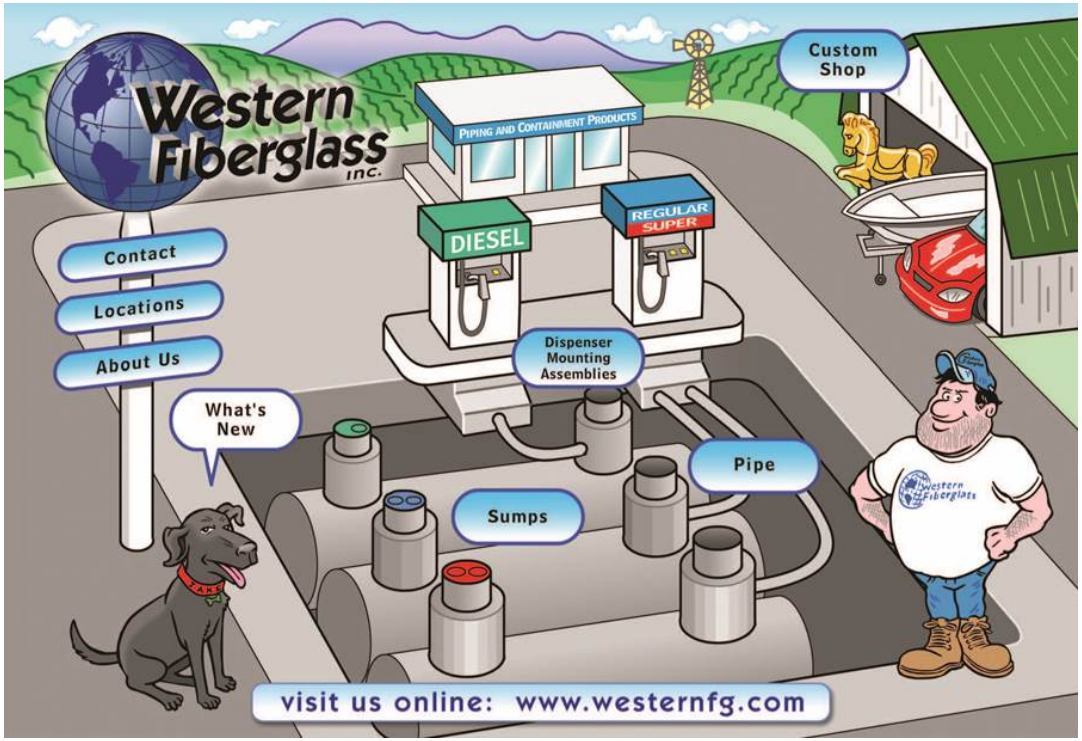
Contact Us!

707.523.2050, sales@westernfg.com, www.westernfg.com

PRODUCTS

We make sumps and accessories for your entire site!

- **Co-Flex Piping**
- **Co-Flow Monitoring**
- **Cuff Fittings**
- **Dispenser Sumps**
- **Tank Sumps**
- **Transition Sumps**
- **Vapor Pots**
- **Vent Sumps**
- **Custom Designs**



Questions? 707.523.2050

CERTIFICATIONS

WESTERN FIBERGLASS, INC.
TRAINING CERTIFICATION

PRESENTED TO:

Rick Misquez

Has Successfully Completed a Training Course In:

Co-Flex Piping, Co-Flow Hydrostatic Monitoring, Cuff Fittings, Tank Sump Lamination

Western Fiberglass

This 1st *Day of* January 2016

Certification Valid For 2 Years From Issue Date

Courtney van Amstel

Signature

You must obtain a Western Fiberglass Training Certificate every 2 years.

BEFORE YOU BEGIN

- **Upon arrival to the jobsite, inspect all parts to be sure they arrived in good condition. Please notate any damage on delivery paperwork and contact WFG.**
- **Ensure all parts are clean and dry.**
- **Always follow local laws and regulations.**

TANK SUMPS

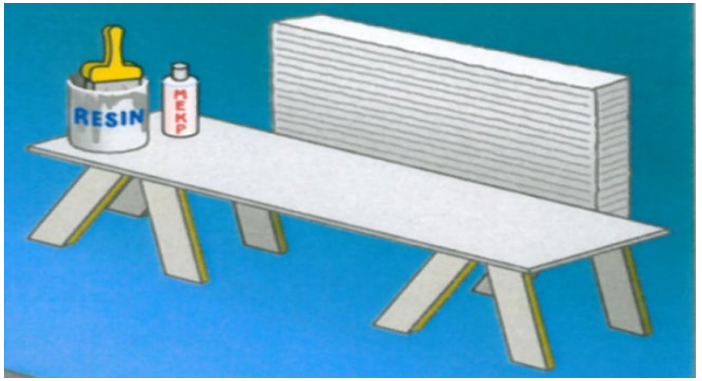
Materials Needed:

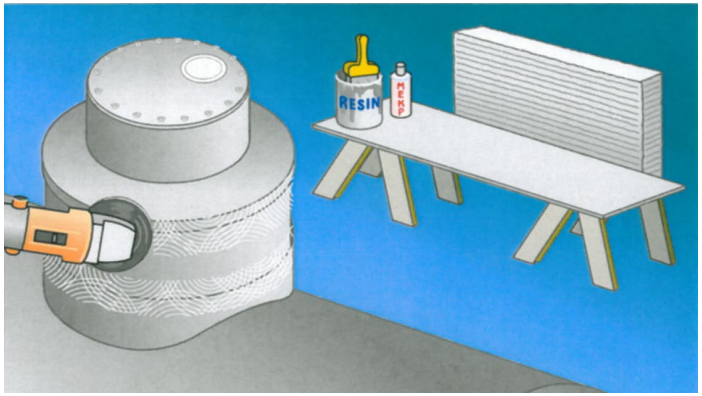
- **Bond Kit**
- **Roller**
- **Squeegee**
- **Acetone**
- **36 grit Sandpaper**
- **Mixing bucket**
- **4” Paint Brush**
- **Latex Gloves**
- **Dust Mask**

Bond Kit includes: Resin, Mat, Catalyst and Putty.

TANK SUMPS

Lay out fiberglass mat for each seam to be bonded.



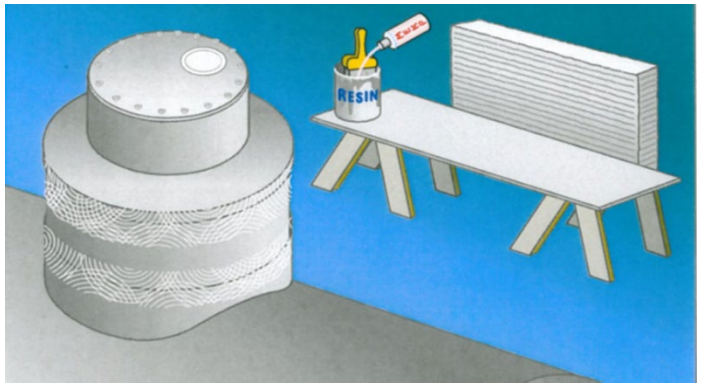


Using disk sander, scuff all seams 4” to each side of where you are bonding.

TANK SUMPS

Working in small batches, catalyze Putty.

Using squeegee, apply putty to seam, covering all fasteners and filling all gaps.

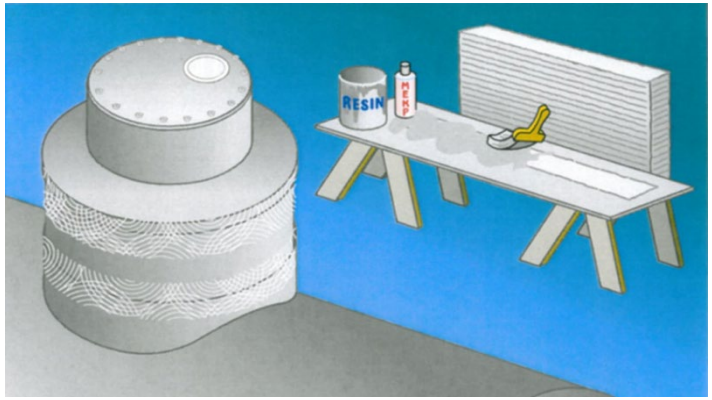


Hardener ratio at 70 degrees and 30% humidity is 1 ounce per gallon.

TANK SUMPS

Working in small batches, catalyze Resin.

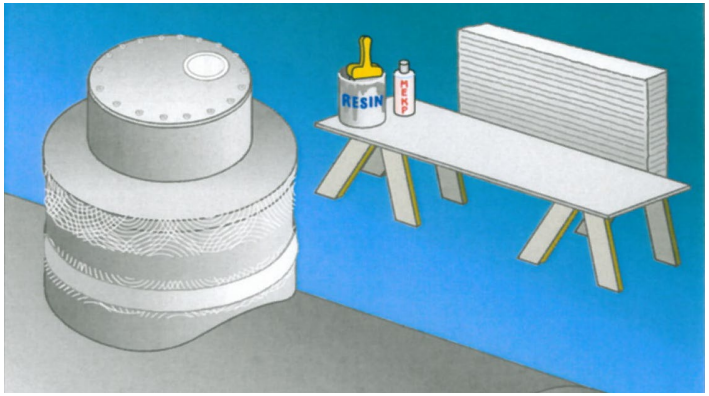
Wet-out or soak Mat with Resin.

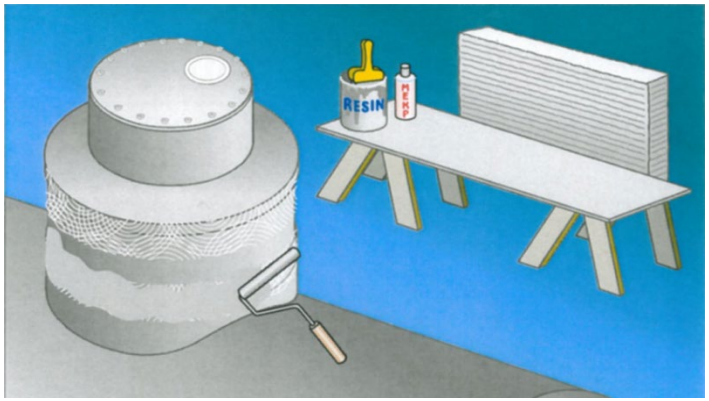


Hardener ratio at 70 degrees and 30% humidity is 2 ounces per gallon.

TANK SUMPS

Apply pre-soaked mat to seam.

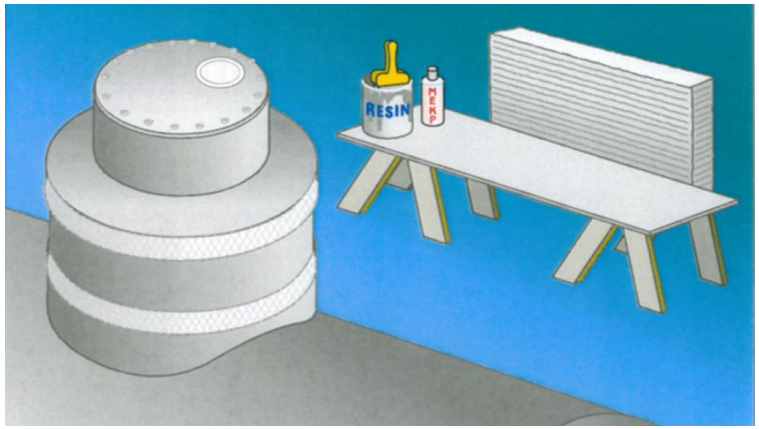




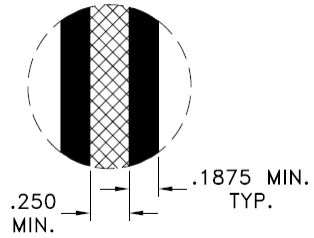
Roll out air bubbles gently.

TANK SUMPS

Depending on temperature, seam will harden within ½ hour.



DOUBLE WALL DETAIL



If bonding double wall sump, repeat process on inside of sump.

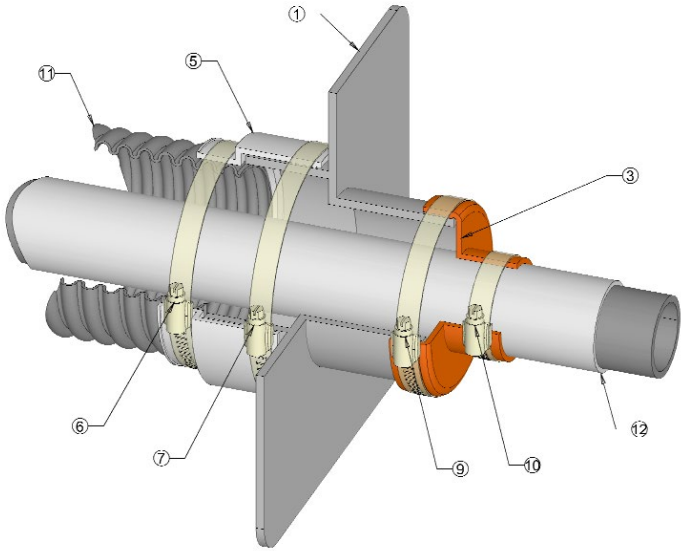
TANK SUMPS

Test single wall sumps with water for a period of 24 hours.

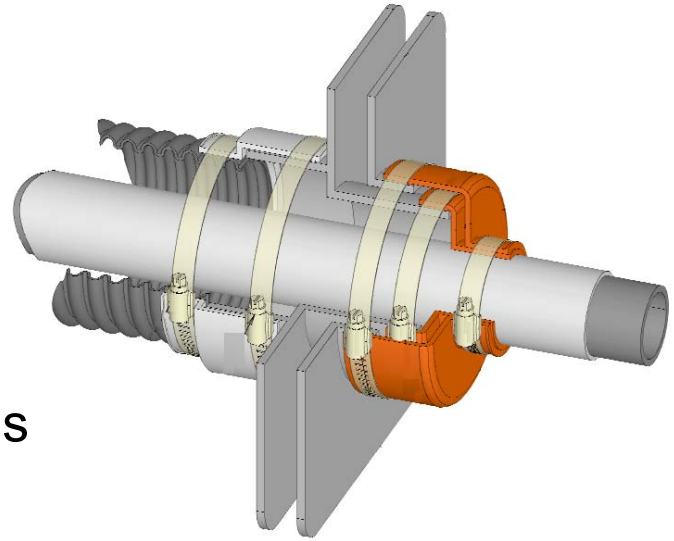
Test double wall sumps by pressurizing sump to 2 psi for a minimum of 1 hour. Sump may also be tested by vacuum (5 bars) or hydrostatically.

CUFF FITTINGS

Split Repair Too!



Single Wall Applications



Double Wall Applications

CUFF FITTINGS

Fittings can be pre-installed at no additional charge!

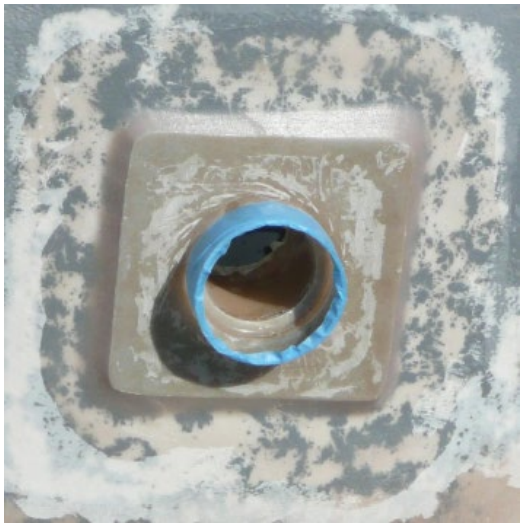
We will provide a cuff template to locate your entry locations.

CUFF FITTINGS

- Sand surface 4” greater than cuff plate.
- Mark and drill entry locations.
- Insert mmobilize cuff plates using catalyzed putty.

CUFF FITTINGS

Smooth edges of cuffs using catalyzed putty in preparation for bonding.



Bond cuff in place following fiberglass bonding procedure (see Tank Sump lamination).

Allow to cure for 2 hours.

CUFF FITTINGS

- **Apply ¼” bead of Methyl Methacrylate (DWAC600) on the ridges of boot and cuff.**
- **Slide the boot onto the cuff plate and rotate a ¼ turn.**
- **Tighten clamp just until snug.**

The bonder will get rubbery and feel dry to the touch in approximately 30 minutes.

CUFF FITTINGS

Insert pipe into the cuff from the outside of the sump.

On inside of sump, tighten clamps on the cuff boot until snug around the pipe.

Do not exceed 60 inch pounds torque on the clamp.

CO-FLEX PIPING

New! Do not heat pipe.

Tools Needed:

- **5/16” Nut Driver**
- **3/8” Torque Wrench**
- **7/16” Deep Socket**
- **Pipe Stripper**
- **Hook Blade**
- **Lube Bonder & Gun**
- **Screw Gun**
- **White Lithium Spray Grease**

CO-FLEX PIPING

To measure a run of pipe:

1) **Measure between the 2 pipe fittings, add 6” and cut.**
2) **Measure Rockguard to length and cut.**
3) **Insert Co-Flex pipe into Rockguard and set in trench.**

CO-FLEX PIPING

Measure 4” from end of pipe and mark.

CO-FLEX PIPING

Place the Pipe Stripper on the pipe with the blade end away from the end of the pipe.

CO-FLEX PIPING

- Tighten the collar slightly.
- Turn the Pipe Stripper clockwise. If hard to turn, loosen slightly.
- Use caution- stripper may want to corkscrew.
- Turn 360 degrees, tighten slightly and repeat procedure.
- Repeat 2-3 times.

CO-FLEX PIPING

NEW FOR 2020!

We no longer recommend that you heat the pipe.

CO-FLEX PIPING

- **Using a hook blade, place hook in the small iteration of the secondary.**
- **Carefully cut the outer secondary up to the 4” mark.**

USE CAUTION!

Keep knife at a 45 degree angle to prevent cutting the primary.

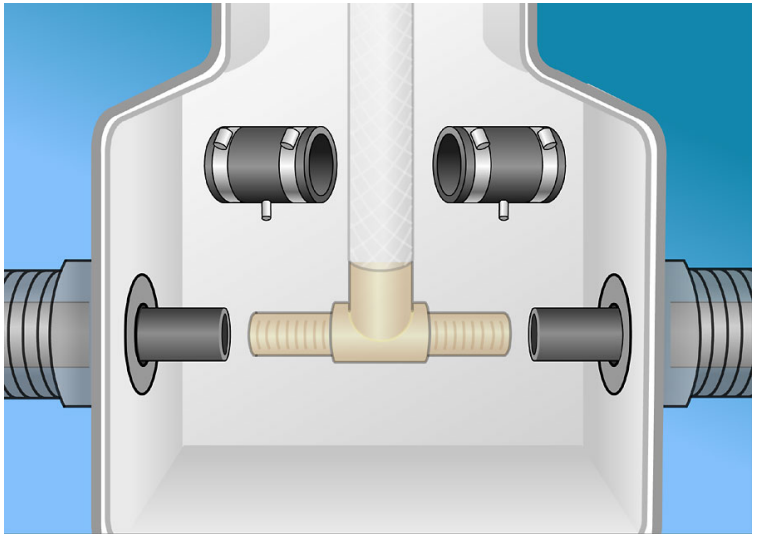
Always cut away from your body to avoid injury.

CO-FLEX PIPING

Tear off the outer secondary at the 4” mark.

CO-FLEX PIPING

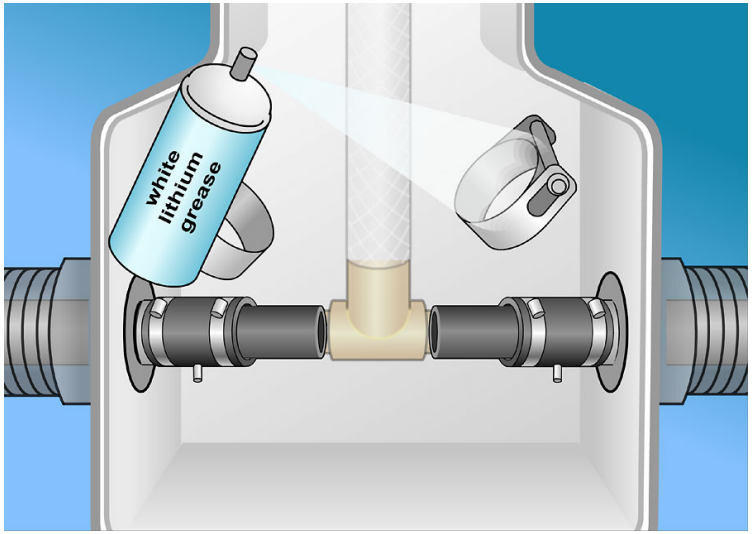
Place test boot over the pipe.



CO-FLEX PIPING

Spray the inside of Pipe Clamps (bolt too) with White Lithium Grease.

Place the Clamps onto the Pipe with the bolts in opposite directions.

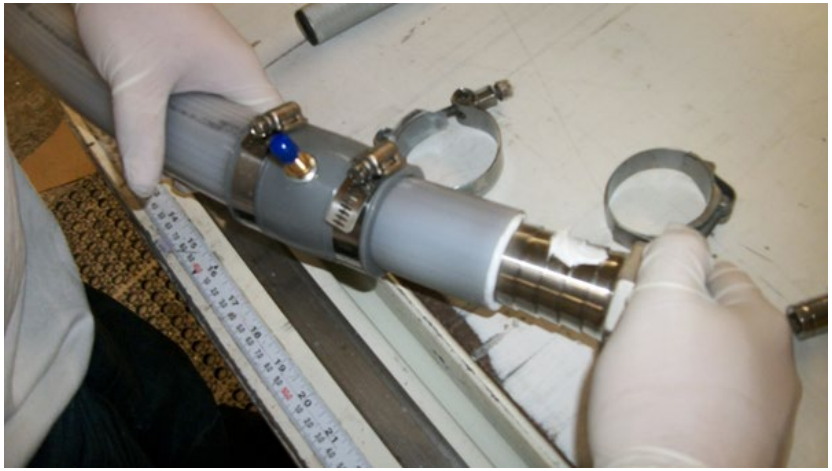


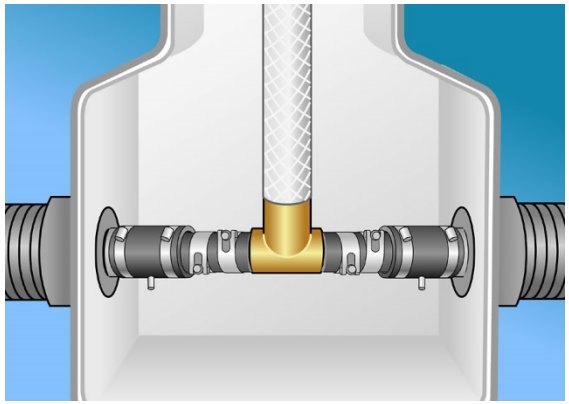
CO-FLEX PIPING

Place ¼” bead of Lube Bonder around the 2nd barb from the end.

CO-FLEX PIPING

Insert pipe onto barbs until you are past the last barb.





- **Note the pipe fitting has been inserted completely.**
- **Note the direction of the bolts on the clamps.**

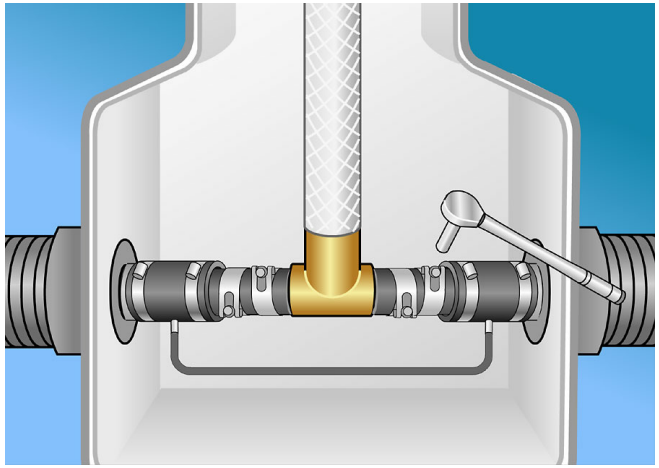
CO-FLEX PIPING

- Place the 1st Clamp ¼” from the end of the Pipe.
- Place the 2nd Clamp ¼” from the 1st Clamp.
- Tighten Test Boot.

Tighten slowly, moving the screw gun back and forth to prevent pinching the Pipe.

Do not over tighten!

CO-FLEX PIPING



Torque nuts on both clamps.

Note: ¾” and 1” Co-Flex use only 1 clamp.

After pipe has cooled, re-torque nuts.

Torque Specs:

¾” Co-Flex, 60 inch pounds

1” Co-Flex, 80 inch pounds

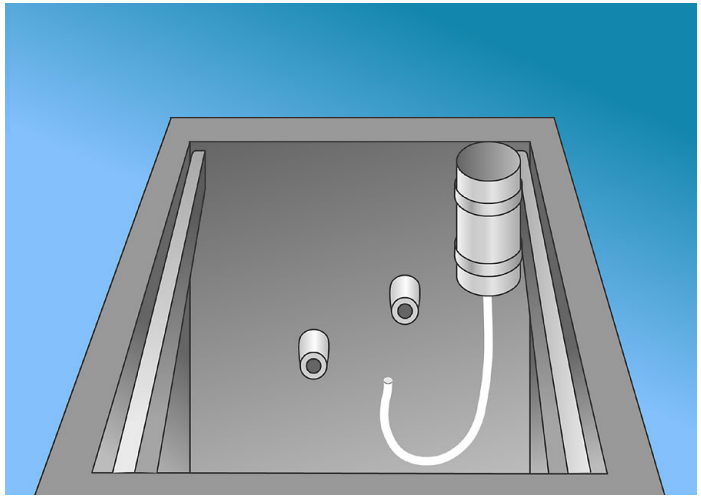
1.5” Co-Flex, 100 inch pounds

2” Co-Flex, 120 inch pounds

Test Boots, 60 inch pounds

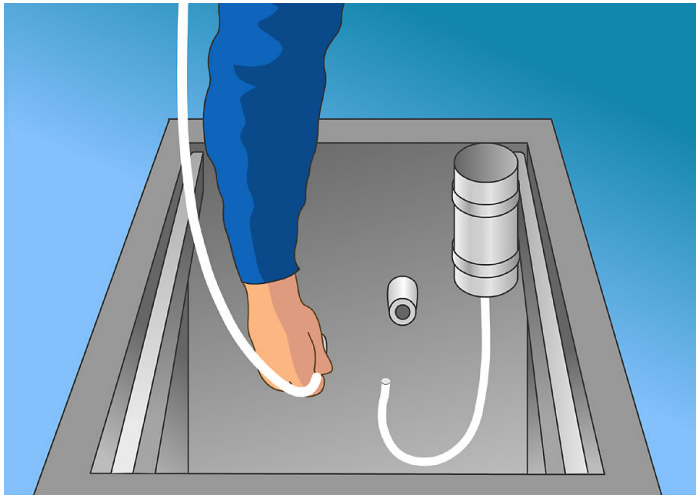
CO-FLOW SYSTEM

- Install mounting bracket to inside wall of sump with hardware provided.
- Mount reservoir to bracket.
- Connect test tube to reservoir using fitting provided.
- Ensure tube is long enough to reach bottom port.



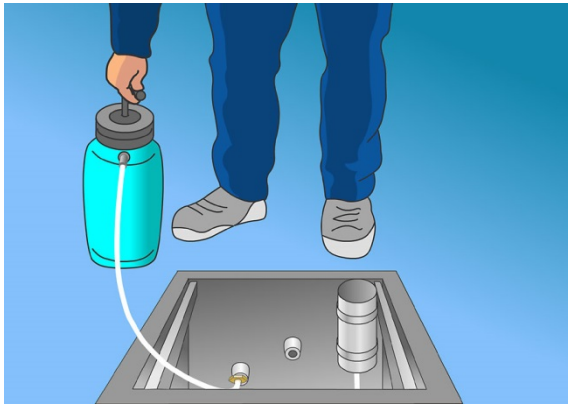
CO-FLOW SYSTEM

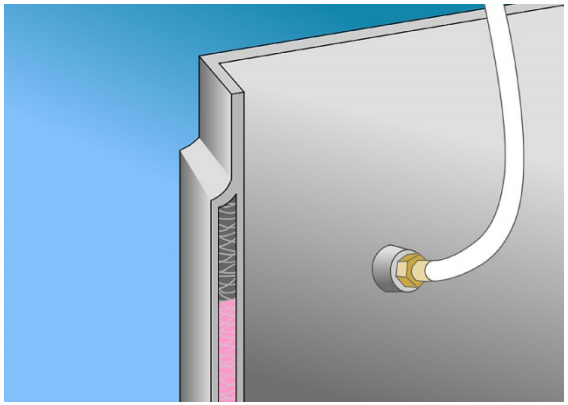
- Connect pump transfer hose to lower reservoir valve.
- Open upper reservoir cap.



CO-FLOW SYSTEM

Pump fluid into system.

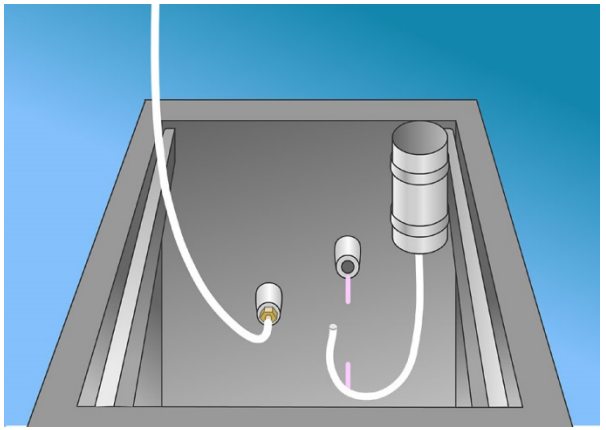


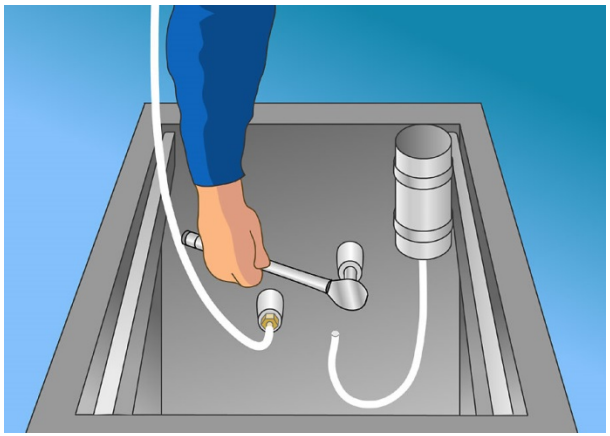


As you pump, fluid will fill the interstitial space.

CO-FLOW SYSTEM

When fluid starts to come out of the top port, install plug.

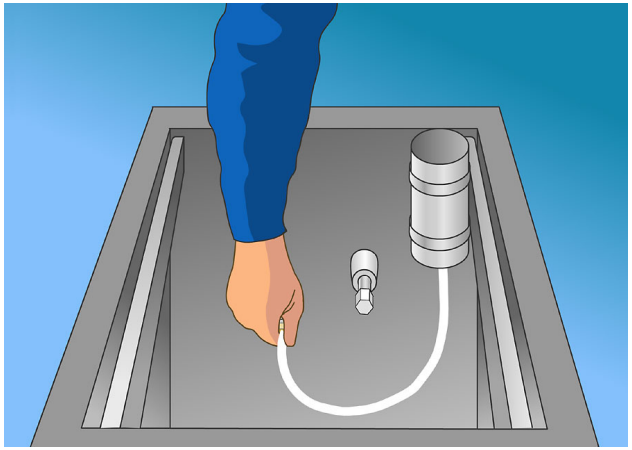


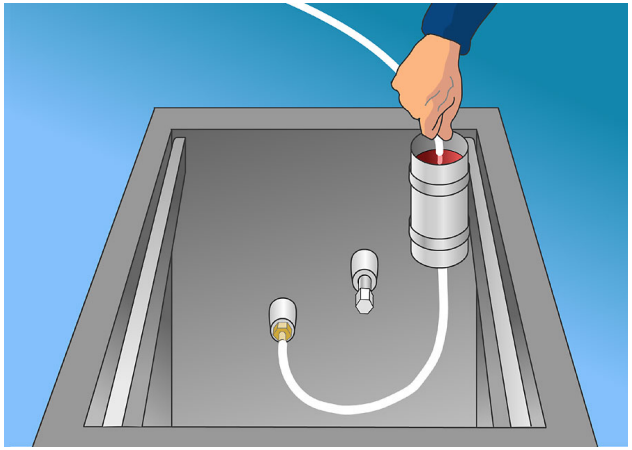


Remove pump hose.

CO-FLOW SYSTEM

Attached canister hose to bottom fill port.





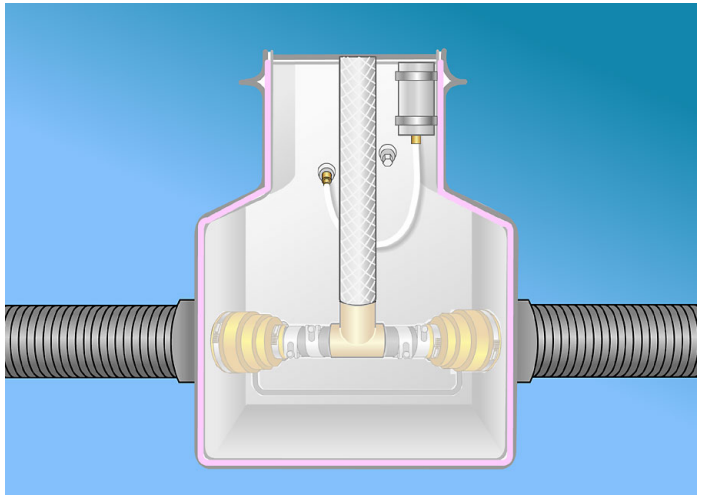
Fill canister until fluid is just below site glass.

CO-FLOW SYSTEM

Insert and install level monitor according to manufacturer's installation instructions.

Allow fluid to settle for 24 hours and adjust level accordingly.

Inspect system bi-annually.



Western Fiberglass, Inc.

INSTALLATION EXAM

Prior to installation, installers must study this tutorial and submit testing exam to Western Fiberglass. Upon completion, a training certificate will be issued to certify you have successfully passed the exam.

1) When using a sump in conjunction with a containment collar, does the sump need to be bonded to the collar?

Yes _____ No _____

2) Are sump reducers simply slip fitted to the sump body?

Yes _____ No _____

3) To prepare for bonding, does the entire sump surface need to be sanded?

Yes _____ No _____

4) Under normal conditions, the hardener ratio for resin is (1) ounce per gallon?

Yes _____ No _____

5) If additional resin is needed, can you substitute resin from another manufacturer?

Yes _____ No _____

Western Fiberglass, Inc.

INSTALLATION EXAM

6) On a completed seal, is it satisfactory to see some air bubbles within the laminate?

Yes _____ No _____

7) Do you lubricate the lid gasket prior to installation?

Yes _____ No _____

8) Is it satisfactory to bond piping directly to sump?

Yes _____ No _____

9) Is backfill necessary when burying fiberglass sumps and piping?

Yes _____ No _____

10) Is a common testing procedure on single wall sumps to test with water?

Yes _____ No _____

11) Do training certificates expire?

Yes _____ No _____

12) When filling the Co-Flow system, do you fill from the top hole?

Yes _____ No _____

Western Fiberglass, Inc.

INSTALLATION EXAM

13) Do you sand the surface before installing a Cuff Fitting?

Yes _____ No _____

14) When bonding a Cuff boot, is Methyl Methacrylate optional?

Yes _____ No _____

15) The torque rating for 1.5" Co-Flex is 80 inch pounds?

Yes _____ No _____

16) Do you install pipe fittings all the way to the last barb?

Yes _____ No _____

17) Can you use heat to make Co-Flex more pliable?

Yes _____ No _____

Upon completion, please fax this exam to 707-523-2046 or email to sales@westernfg.com.

COMPLETED BY: _____ PHONE: _____

COMPANY NAME: _____

MAILING ADDRESS: _____