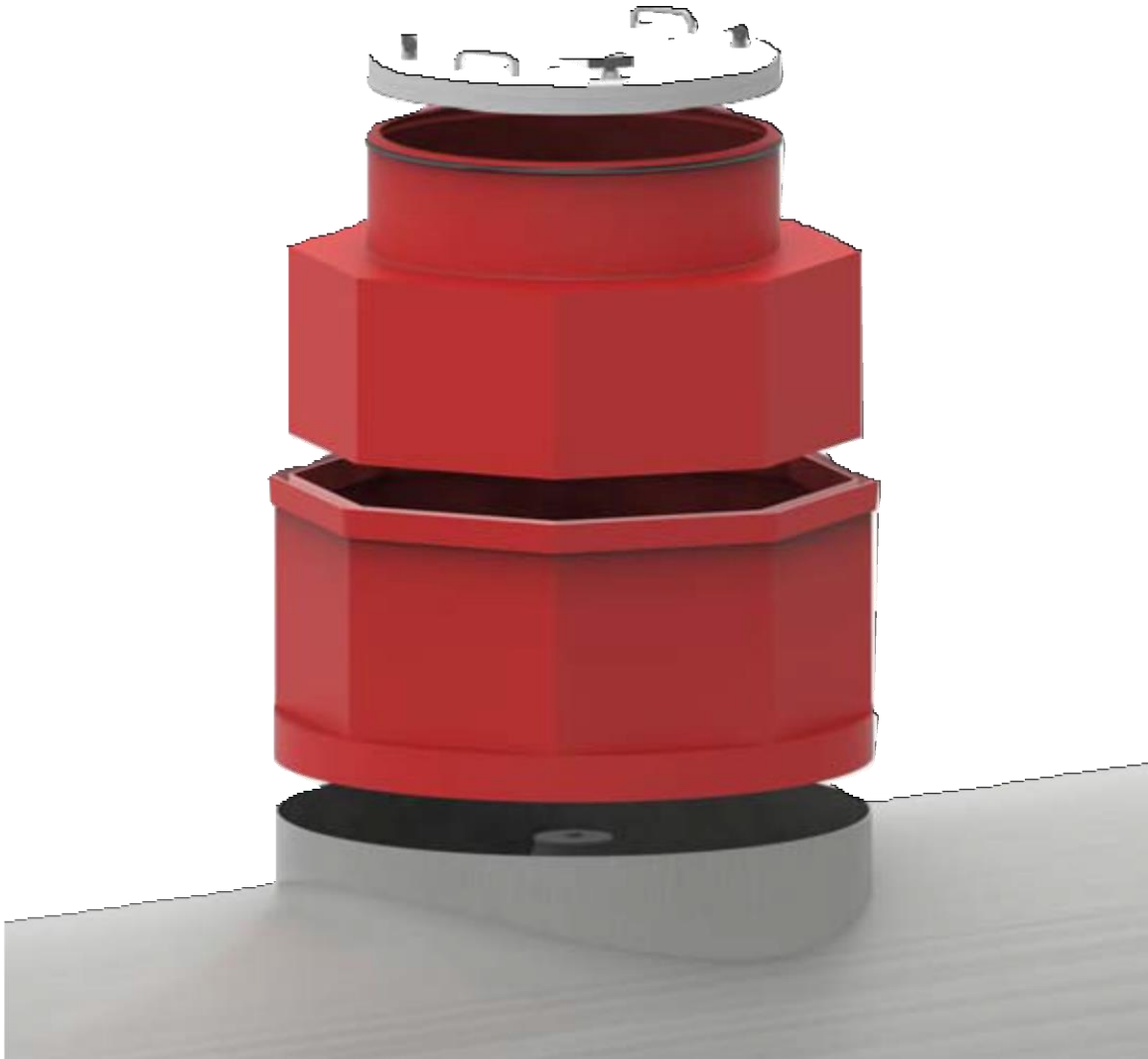


Collar-Mount Tank Sump Singlewall



B421 Series – 42" Diameter
B481 Series – 48" Diameter
B487 Series – 48" Diameter x 42" Collar





TABLE OF CONTENTS

Required Items.....P 3

Step 1 – Preparing Collar.....P 4

Step 2 – Tape and Paste Seam.....P 5

Step 3 – Wetting-Out Lamination.....P 6

Step 4 – Laminating Sump Base to Collar.....P 7

Step 5 – Measuring Sump Top.....P 8

Step 6 – Prepping Sump Top.....P 9

Step 7 - Installing Sump Top.....P 10

Step 8 – Install Snap Lock Lid.....P 11

Warranties and Disclaimers.....P 12

When using and installing Bravo products, please consult local, state and federal regulations. Installers of Bravo products must be Bravo-certified.



Safety First. S. Bravo Systems, Inc. recommends adherence to standard safety procedures and precautions provided by your company and to follow the regulations and compliances by OSHA, local, state and federal regulations regarding the use of this product.



Epoxy cure cycle and full cure cycles vary depending on site conditions. In weather conditions below 50°F, heat will be needed to cure epoxy used for the installation of Bravo components. Do not heat the fittings above 150°F. Extremely high temperatures can damage entry fittings and cause test ports to leak. Do not test until full cure cycle has been achieved.

UL2447 is the standard for secondary containment and covers sumps and lids, sump fittings and sump accessories. Products are tested in accelerated conditions that have long term use in environments with extreme heat and cold, aggressive biofuel and ethanol blends, and extreme soil environments.



Required Items

T-400 Tool Kit (1)



K-401 Lamination 1 gal Kit, 45' fiberglass matting

OR

K-402 Lamination 2 gal Kit, 90' of fiberglass matting



K-410.5 1/2 gal Paste Kit (1)

OR

K-410 1 gal Paste Kit (1)



EP-S1.0 Slurry 1 gal Kit (1)

EP-S.75 Slurry 3/4 gall Kit (1) for inside tank collar channel



**Paste is used as a filler for smooth lamination and is NOT a bonding agent*

Use clean, lint-free rags

Acetone





1. PREPARING COLLAR & BASE

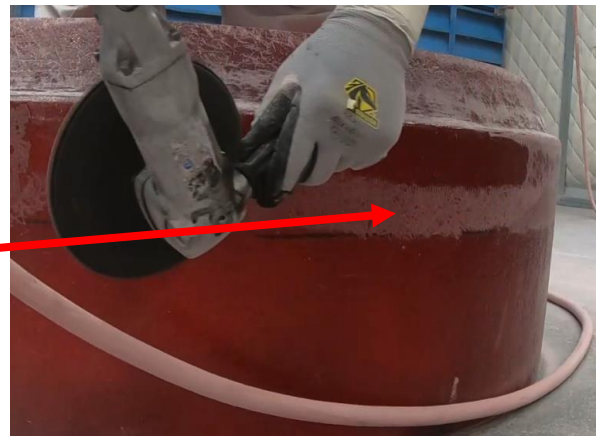
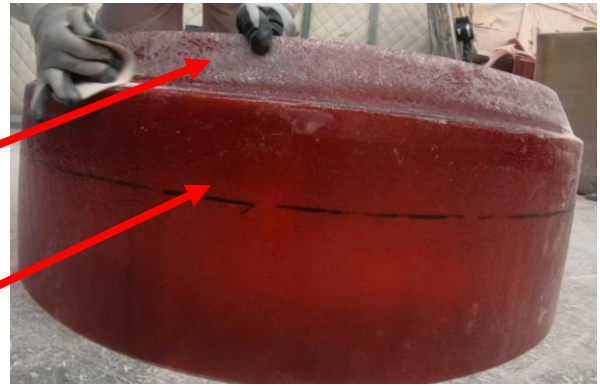
1. Abrade collar chamfer

2. Mark line for abrading collar face – 4”

3. Abrade collar face – 4” minimum

4. Clean debris with acetone-soaked rag

5. Prep Sump base round collar section per steps 1-4 above





2. TAPE AND PASTE SEAM

1. Set sump base on collar and level



2. When no paste is available and or large gaps, Apply tape firmly to seam



3. Mix paste with catalyst per instructions on bottle. Keep paste away from moisture



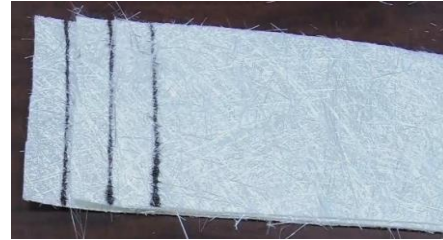
4. Apply paste over taped seam





3. WETTING OUT LAMINATION

1. Always keep fiberglass product dry and away from moisture. Cut or tear matting into 18"-24" strips (3)



2. Work with resin in ½ gallon increments.

(For higher temps reduce resin & Keep your work area out of direct sunlight).

Add catalyst according to bottle based on site condition.



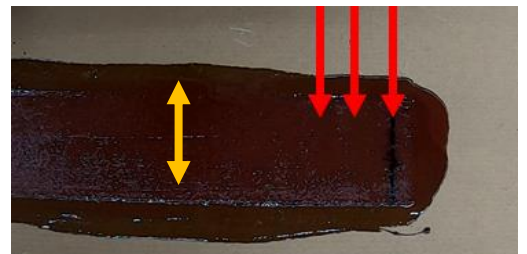
3. Wet out prep surface with resin.



4. Fully saturate & wet out each layer of glass mat with resin and offset each layer by 1".



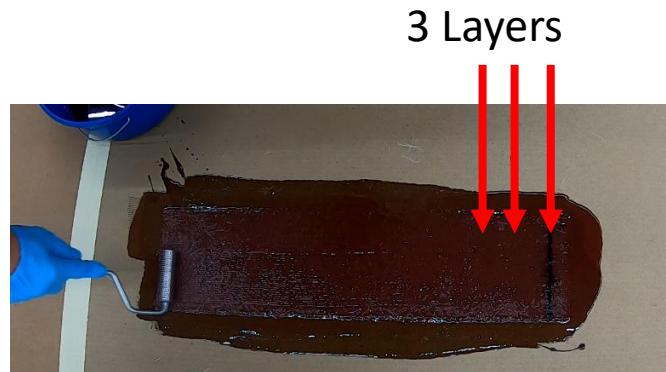
5. Lightly roll out air bubbles after laying down your three layers. Make sure your layers are highly saturated with resin.





4. LAMINATE SUMP BASE TO COLLAR

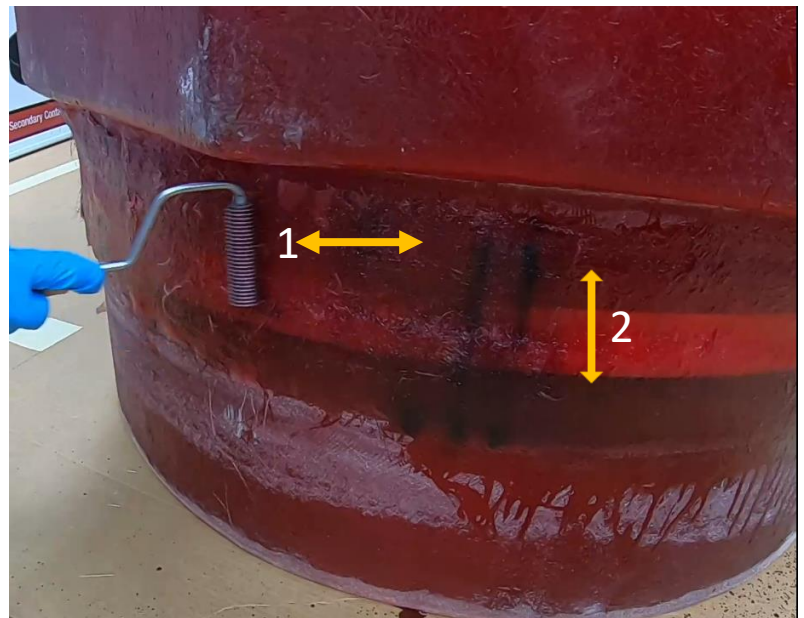
6. Gently pick up the three layers of laminate and carefully place mat centered on seam.



7. Apply each section of layup mats overlapping 6" on centered seam.



8. Roll mat layers horizontally first to apply to surface using light pressure to avoid squeezing out resin. Then vertically roll out air bubbles for smooth finish lamination. Ensure edges are sealed to walls.



9. Let cure before proceeding to fitting installation. See your lamination kit for cure times based on site conditions.



5. INSIDE POUR TO COLLAR

REQUIRED GROUT MIXING TOOL!

Length 16", Blade 3-1/4" (Sold Separately at Local Hardware)



1. Break up the center of slurry using heavy screwdriver. Then proceed to use grout mixer to blend clumpy slurry into a uniform consistency.



2. Shake hardener can prior to opening. Add all hardener to the slurry mix



3. Using the grout mixing tool, mix side to side and top to bottom until consistent color and texture.



Note: swirls in image means you are not finished mixing.

4. Pour into inside channel
5. Smooth out slurry
6. Allow slurry to fully cure before fitting installation





6. MEASURING SUMP TOP

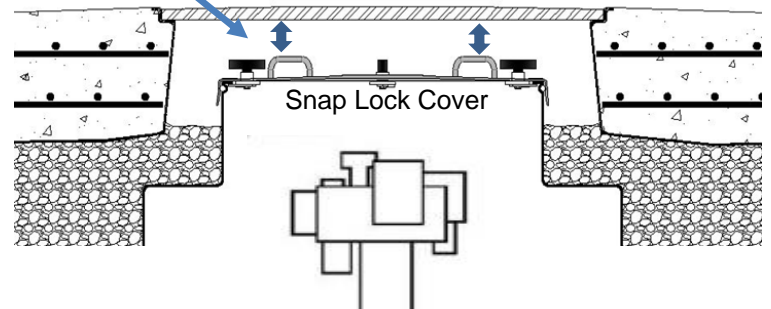
****NOTE**** Install fittings and piping before proceeding

1. Dry fit sump top into sump base U-channel

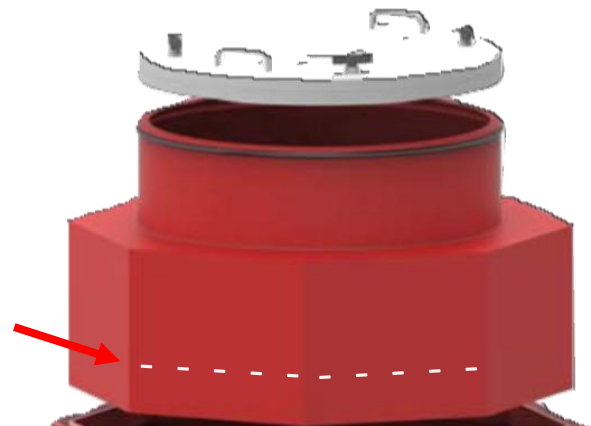


Min. Distance to drive over cover is 1 1/2"

2. Ensure there is a minimum of 1 1/2" clearance from highest point of sump lid to underside of manhole cover



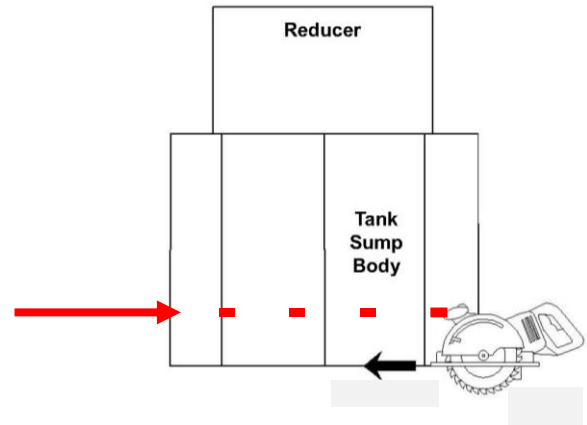
3. Cut bottom of sump top to desired height for required clearance





7. PREPPING SUMP TOP

1. Make a consistent level cut along marked bottom edge of sump top



2. Sand 3" from bottom edge inside and outside of sump top



3. Sand the entire inside of sump base U-channel.



4. Remove debris from U-Channel and sanded area of top hat and clean with acetone soaked rag.





8. INSTALLING SUMP TOP

REQUIRED GROUT MIXING TOOL!

Length 16", Blade 3-1/4" (Sold Separately at Local Hardware)



1. Break up the center of slurry using heavy screwdriver. Then proceed to use grout mixer to blend clumpy slurry into a uniform consistency



2. Shake hardener can prior to opening. Add all hardener to the slurry mix



3. Using the grout mixing tool, mix side to side and top to bottom until consistent color and texture.



Note: swirls in image means it requires further mixing

4. Pour into prepped pour channel



5. Immediately set sump top in pour channel and lift and set back down to fully seat into slurry and allow slurry to fully cure





Epoxy Surry Cure Time Chart and Backfill Requirements

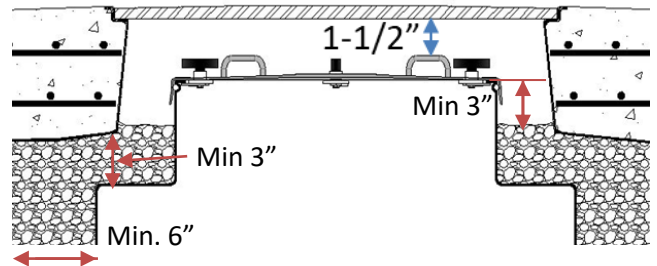
Ambient Temperature, (F°)	Work Time in minutes	Cure Time in hours
60°	45 min	6 Hours
70°	30 min	3 Hours
80°	25 min	2.5 Hours
90°	15 min	2 Hours

Epoxy cure cycle and full cure cycles vary depending on site conditions. In weather conditions below 60°F, heat will be needed to cure epoxy used for the installation of Bravo components. Do not heat the fittings above 150°F. Extremely high temperatures can damage entry fittings and cause test ports to leak. Do not test until full cure cycle has been achieved.

Pre-heat the sump wall to no more than ~150°F
 Pre-heat each Bravo fiberglass fitting thoroughly ~150°F max.
 Pre-heat the epoxy base or EP-slurry base to no more than ~80°F. **DO NOT HEAT THE HARDENER!!**

2. Clearance and Backfill

Measure minimum 1 ½” clearance from Sump lid’s highest point to underside of manway cover. Minimum of 3” of lid clearance from top reducer to backfill. 3” approved backfill between Manway skirt and sump shoulder. Minimum 6” approved back fill external of sump.



Approved Backfill, Pea Gravel - (particle size must be not less than 1/8 inch or more than 3/4 inch) Washed stone or crushed gravel (angular particle size required to be not less than 1/8 inch or more than 1/2 inch)

3. Snap-Lock Lid Maintenance



Apply grease to seal at a minimum 3 month basis but ideally at every monthly inspection. Gasket are replaceable if they wear out.
 (OR-SL32, OR-SL36, OR-SL39)



WARRANTY SINGLEWALL TANK SUMP

All Bravo products MUST be installed by a Bravo Certified contractor. Information contained in all Bravo literature is subject to change without notice. Bravo does not assume responsibility for liability for loss, damage or expenses resulting from installation, operation use or maintenance from this manual. By installing this product, you agree to S. Bravo Systems warranty terms.

LIMITED WARRANTY

All Bravo products MUST be installed by a Bravo Certified contractor. Information contained in all Bravo literature is subject to change, to ensure you are view the current literate located on the Bravo website Bravo does not assume responsibility for liability for loss, damage or expenses resulting from installation, operation use or maintenance from this manual. By installing this product, you agree to S. Bravo Systems, Inc's warranty terms. All Bravo products are subject to complete warranty information located on the S. Bravo Systems, Inc. website located at www.sbravo.com.

UL Sump Containment Rating: Primary

UL 2447 LISTED

Sump Type: **Tank Sump**
SINGLEWALL

Maximum Burial Depth: 84"

Liquid Rating: Automotive Fuels

- Must be installed by an S. Bravo Systems, Inc. certified installer. Installation by non-certified personnel will void the warranty and may result in damage or leaks.
- Install in accordance with S. Bravo Systems, Inc. installation guides.
- Use only OEM recommended fittings and accessories.
- Failure to use recommended accompanying sump products in the complete assembly may cause damage or leaks.



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