

Tall Collar Tank Sump Singlewall



B421 Series – 42" Diameter
B481 Series – 48" Diameter





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



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 full body fittings and test reducers. 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.



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.



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 ½ gal Paste Kit (1)

OR

K-410 1 gal Paste Kit (1)



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

EP-S.75 Slurry ¾ gall Kit (1)

for inside tank collar channel



Acetone



Use clean, lint-free rags





1. PREPARING COLLAR & BASE

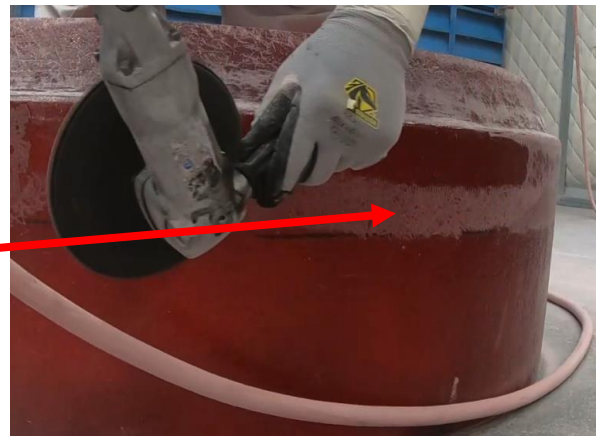
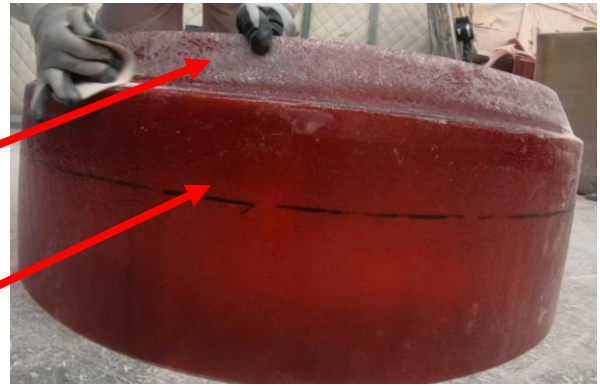
1. Abrade collar chamfer

2. Mark line for abrading collar face – 4”

3. Abrade collar face – 4” minimum

4. Remove debris and dust with acetone rag

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





2. TAPE AND PASTE SEAM

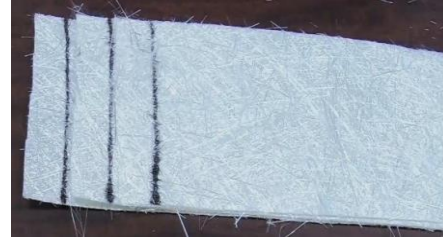
1. Set sump base on collar and level in desired position
2. When no paste is available and or large gaps, Apply tape firmly to seam
3. Mix paste with catalyst per instructions on bottle. Keep paste away from moisture.
4. Apply paste over seam with or without tape. If you have been supplied with sufficient paste NO tape is preferred. Proceed to lamination immediately



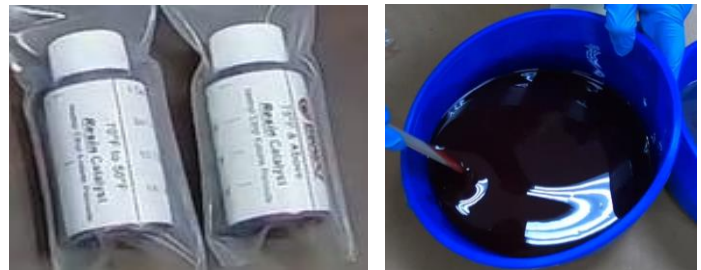


3. WETTING OUT LAMINATION

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 resin in bucket / temperature.*



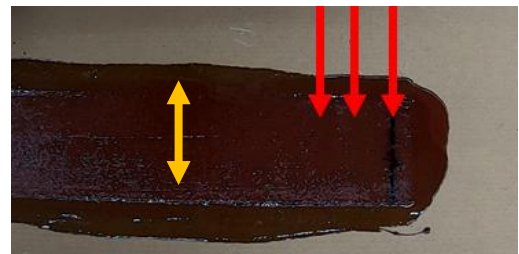
3. Wet out prep surface with resin.



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



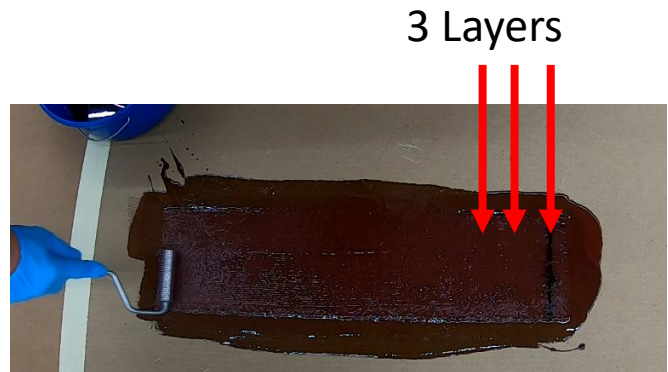
5. Lightly roll out air bubbles after laying down your three layers. Make sure your layers are highly saturated with resin.





4. LAMINATE SUMP BASE TO COLLAR

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



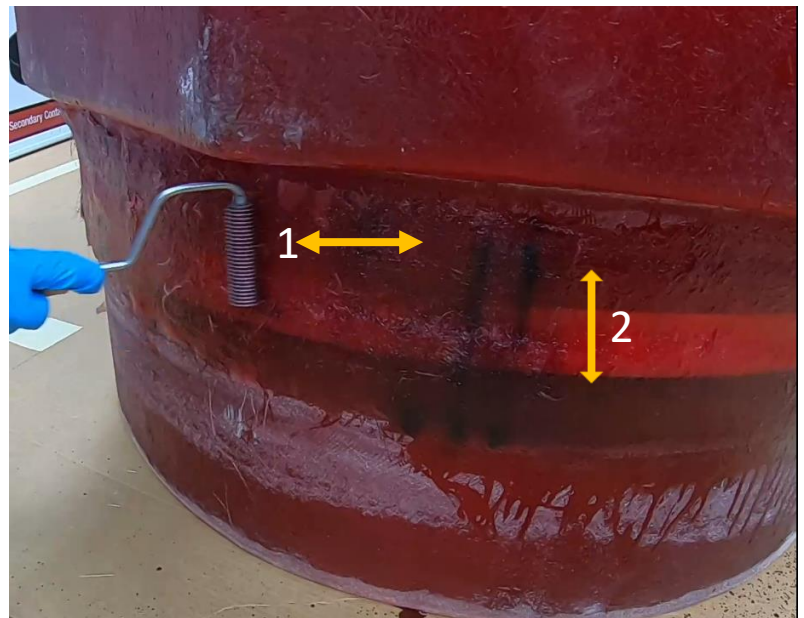
7. Overlap each layup mats section by 6" on the seam



8. Roll mat layers horizontally first to apply to surface. Then vertically roll out air bubbles to finish lamination

Hint: Do not over roll laminate or resin will dry out making it susceptible to air bubbles.

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





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 can of hardener before opening and 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. Mix EP-S slurry per directions
5. Pour into inside channel
6. Smooth out slurry
7. Let cure per instructions on page 12





6. MEASURING SUMP TOP

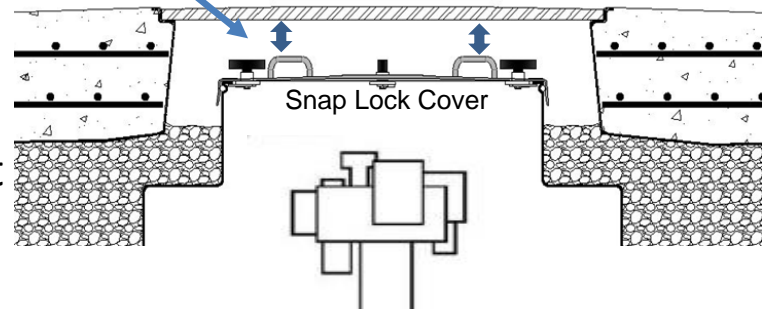
****NOTE**** Install fittings and piping before proceeding

1. Position sump top into sump base U-channel

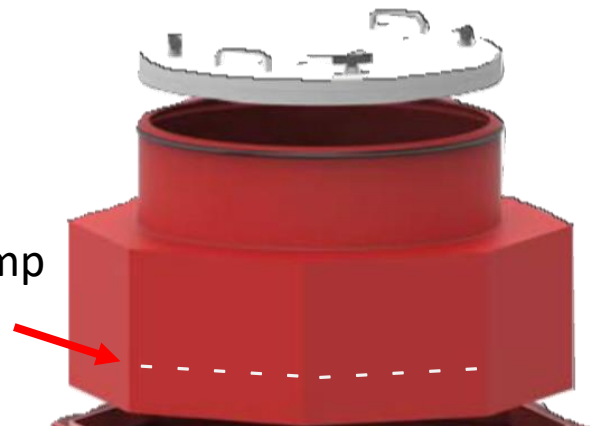


Min. Distance to drive over cover is 1 1/2"

2. Measure for at least 1 1/2" clearance from Top of Handle or highest point of sump lid to underside of manhole cover



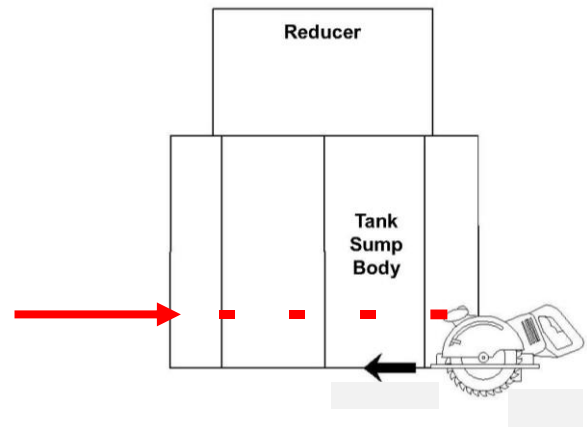
3. Measure & Mark bottom +/- 1/4" of sump top based on calculation from Step 2.





7. PREPPING SUMP TOP

1. Accurately Cut along marked bottom edge of sump top hat $\pm 1/4''$.



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



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



4. Clean U-Channel and sanded area of top hat with acetone.





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 can of hardener and 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 prepped pour channel



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





Epoxy 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

Less than 60°, Warm Epoxy to 80° before use

Epoxy will stop curing at 50°

Pre-heating components in cold weather is critical, Heat soak the following components accordingly, and devise a safe way to maintain an ambient temperature per the cure chart above:

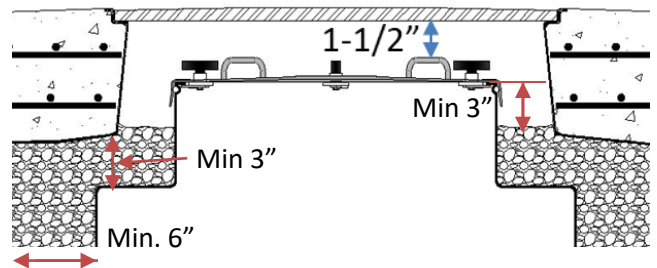
Pre-heat the sump wall to no more than ~150°F

Pre-heat each Bravo fiberglass fitting thoroughly ~150°F max.

Pre-heat the epoxy or EP-slurry to no more than ~80°F. DO NOT HEAT THE CATALYST!!

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)



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 viewing the current literature 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.



Trent Caster
Western Regional Sales Manager
tcaster@sbravo.com
303.359.8862

AK, AR, AZ, CA, CO, HI, ID, LA,
MS, MT, NM, NV, OK, OR, WEST TN, TX, UT, WA, WY

Bob Hyatt
Eastern Regional Sales Manager
bhyatt@sbravo.com
239.888.6565

AL, CT, FL, GA, IA, IL, IN, KS, KY, MA, ME, MI, MD, MO, NC,
ND, NH, NJ, NY, OH, PA, SD, SC, EAST TN, VA, VT, WI, WV

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