BRAVO
PROBLEM SOLVED

INSTALLATION GUIDE

Transition Sumps Series B500, B600, B700 Singlewall

Part #'s
500 Series - B501-S, B501-S-200, B501-S-220, B501-S-222, B503-S-22220, B503-S-22222
600 Series - B601-S, B601-S-200, B601-S-220, B601-S-222, B603-S-22220, B603-S-22222
700 Series - B701-S, B705-S, B751-S, B755-S, B711-S, B715-S, B761-S, B765-S

Step by step installation

Step 1 – Positioning and Leveling to Grade
Step 2 – Underground Pipe Penetration
Step 3 – Above Ground Piping Application
Step 4 – Fitting Integrity Test
Step 5 – Install Drainage Lines
Step 6 – Backfill and Concrete
Step 7 – Racking System
Step 8 – Trouble Shooting Repair

Epoxy cure cycle. Full cure cycles vary depending on site conditions. Note that epoxy will not cure at temperatures below 40°F. See epoxy jar for more details.

SAFETY FIRST

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.

LISTED
UL 2447

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.

HOW TO INSTALL TRANSITION SUMPS SERIES B500, B600, B700 - SINGLEWALL

STEP 1 – POSITIONING AND LEVELING TO GRADE

1. Before placing the transition sump in position, shovel a wide bed of pea-gravel (at least 2" to 3") under each transition sump to support the weight and help prevent movement / shifting during installation of piping and other components.
2. Transition sump frame should be a minimum 1” above grade; depending on style of transition box, see below. The transition box should not be installed so water will collect around the lid.
3. Secure/pin the transition box in place after setting position so it does not shift or move.
   The lid to each transition sump/cover when dry fit needs to be:
   B500 - **Planter style -** should be positioned – at least 2” above planed soil level
   B600 - **Walk Over -** vent box – at least 1” above the finish grade
   B700 – **Flush Mount/ Drive over** –1” from finish grade.
   Make sure vent box is level allowing for accurate vertical rack system.

STEP 2 – UNDERGROUND PIPE PENETRATION

1. When installing a transition sump, use the front wall to bring in pipes which need to align with the above ground fittings installed on the platform of the transition box. Plan the interior space so the transition from underground piping to above ground piping is smooth.
2. Determine piping centerlines and mark sump walls for entry fitting locations. Plan the fittings layout so that the O.D.’s of any fitting are at least 1” away from any edge.
3. Preparation of the fiberglass surface is key to a successful installation, follow fitting manufacturers’ installation instructions. After preparing the fiberglass wall, wipe it with an acetone rag to remove any loose debris.
4. Bravo secondary containment does not have a gel coat but should be abraded to expose raw fibers so the adhesive will bond properly.

STEP 3 – ABOVE GROUND PIPING APPLICATION

1. The above ground piping should follow the site plans and be secured per site specifications. If the Bravo rack system is being used, it will be sized for the transition sump. RS-501 is untiled with B501 and RS-503 and used with B503.
2. Follow pipe manufacturers’ installation instructions to install the primary piping and/or vent lines. The long vertical pipes should not be installed until the transition sump has been secured in concrete.
3. The above ground compression fittings pre-installed on the transition sump have gaskets that have been greased. The compression gaskets will need to slide over top of the vertical piping. Double check they are debris-free and grease remains on the gasket to assist with ease of installation.
4. The compression nut needs to be slid down the pipe similar to the compression gasket. The compression nut needs to be secured to the compression fitting and secured by hand tightening. To torque down, use the Bravo compression nut only, take 1/2 to 1 complete turn beyond hand-tight. There is not a need to over-tighten the compression nut, compression will be achieved with the turn amount specified above.

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STEP 4 – FITTING INTEGRITY TEST

1. Sump must be supported from the bottom, 2”-3” (2” min.) of pea-gravel.
2. Before hydrostatic testing, remove debris from interior of the sump; make sure the full cure cycle has occurred for all adhesives.
3. Fill with water to 4” above the highest penetration or side wall seam.
4. Visually check all fittings at the 6 O’clock position prior to testing; follow local regulations and state guidelines.
5. Perform hydrostatic test, fill and observe all bonded areas, observe for full test observation period.
6. New installation look for leaks at the sealed joint, fittings, and all edges and corners; monitor for one hour; if the change is more than a 1/8”, the integrity test has failed, and further investigation is required.

STEP 5 – INSTALL DRAINAGE LINES on B600 and 700 Series

1. For the PVC drainage kit to be installed onsite, B600 has two drain tubes and B700 will have 4 drain tubes. Drain tubes need to extend to the pea-gravel which should be 6” to assist with water drainage.
2. With the B600 series, the drain kit can also be installed to have drainage through the walkway and into the planter. The drain line will extend flush to the curb. Pipes drain to either the sidewalk or to ground on both sides of the transition sump. Be careful not to clog or otherwise seal the perforated PVC drain pipes with the concrete pour or other construction materials.

STEP 6 – BACKFILL AND CONCRETE

Do not remove square caps from rack sleeves until after concrete has been poured and firmly set.

1. Prior to pouring concrete, ensure the correct about of pea-gravel is in place for the transition sump being installed. Having adequate back fill around the transition sump and 4-6” of pea-gravel next to the sump for good drainage is important.
2. The transition sump should be above finish grade so the concrete can be sloped away from the sump opening to redirect water flow.
   The lid to each transition sump/cover when dry fit needs to be:
   B500 - **Planter style -** should be positioned – 2” above planed soil level
   B600, **Walk Over -** vent box – 1” above the finish grade
   B700 –**Flush Mount/ Drive over** –1” from finish grade
   Make sure vent box is level allowing for accurate vertical rack system.
3. The forecourt or sidewalk should be a minimum of 6” or what the building code specifies. The concrete anchoring flange on each side of the sump will be approximately in the middle of the slab (3 ¾”).
4. When installing a rack system on to the transition sump. ensure proper supports are anchored in the concrete anchors on each side of the transition sump.

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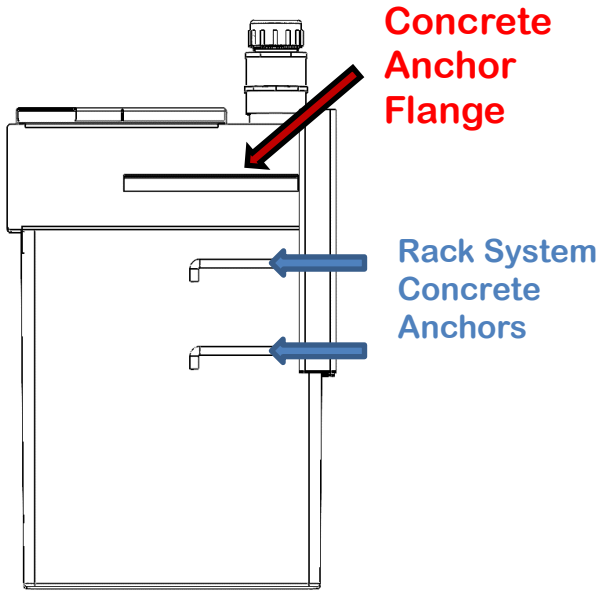
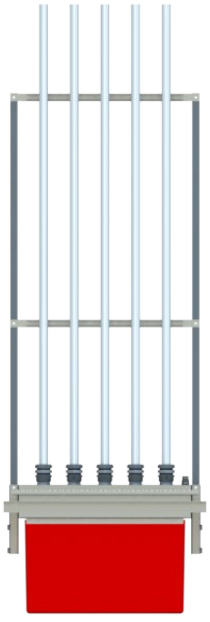
STEP 7 – RACKING SYSTEM

1. The Bravo rack system are the vertical supports and are 2-piece unit. When setting the rack system ensure that all connecting points are securely tightened when the installation is complete.
2. The rack system is not installed until the concrete and finish concrete work is completed.
3. If installing a rack system into the transition sump, ensure proper support is there for the vertical load. Each B500 has 2 concrete anchors on each side of the transition sump to aid in securing to the rack foundation. The anchors will be located at 9 ¾" and 16 ¾" on the side of the drop tube to mount the rack system.
4. The concrete foundation to support the rack system will be approximately 18" x 20" x 10" or what is specified by local building code.
5. After concrete has set, remove square caps from rack sleeves and assemble rack system. Drop rack into square tubing, or rack sleeves, secure, and seal off rack cross/brace and fasteners with urethane sealant.
6. Use a urethane sealant around the top edges of the joint to deter water penetration.

7. Fasten to vent box. Install vertical riser pipe to appropriate height, according to local regulatory requirements. Secure pipes using pipe clamps to the rack system.





STEP 8 – TROUBLE SHOOTING REPAIR

Leak around a fitting (flange to wall, flange to fitting body).

1. Inspect the identified leaking location; define the area to repair.
2. Abrade repair location per manufacturers' specification, this area should extend outside the identified leak by 1" on all directions.
3. Remove loose dust with acetone rag leaving the repair area free of debris.
4. Apply Bravo Epoxy EP100RF beveling epoxy from the wall to the installed fitting; use a rag with acetone to remove and smooth epoxy leaving a clean repair that can be inspected.
5. Use the Schrader valve to apply vacuum to sump interstice; draw the epoxy into the void from the fitting installation; apply vacuum of 4"- 6"Hg using Schrader valve on fitting body.
6. Inspect the repaired area and over-coat with additional epoxy to ensure the vacuum level did not create a hole in the repair.
7. Allow to cure under vacuum.

Leak at the flange to the pipe and/or secondary pipe if the fitting.

1. Follow the steps in the repair above "leak around the fitting", except at step 6, pull vacuum from the secondary port of the fitting; ensure that the other end of the secondary pipe is closed
2. Connect the Venturi to the Schrader valve and allow vacuum to build; do not exceed the pipe manufacturers' vacuum limits; achieve 4" – 6"Hg on the secondary to assist in the repair adhesion to the fiberglass area.
3. Once the full cure cycle has occurred, the repair can be tested; ensure the repair has been successful by performing a positive pressure test.

WARRANTY

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 containment systems sold by S. Bravo Systems, Inc. are warranted to be free from defects in material and workmanship for a period of one year from date of purchase. This warranty will be limited to the repair and replacement of Bravo parts only and will exclude all claims for labor or consequential damage. No other express warranties given and no affirmation of S. Bravo Systems, Inc. or its agents and/or representatives, by words or action, will constitute a warranty. It is expressly agreed that this warranty will be in lieu of all warranties of fitness and in lieu of the warranty of merchantability.

This warranty is void if there is any evidence of modification, abuse, negligence, or improper installation. If any fittings or components, other than S. Bravo systems approved fittings or components, are used in conjunction with any S. Bravo systems product, the warranty pertaining to these products is immediately void.

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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SAFETY FIRST

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

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