

BRAVO TANK SUMP COVER INSTALLATION INSTRUCTIONS



NOTICE

YOU MUST CLOSELY ADHERE TO ALL DIRECTIONS AND WARNINGS INDICATED ON THE PRODUCT OR CONTAINED IN THESE INSTALLATION INSTRUCTIONS.

- Warranty is void if there is any evidence of modification, abuse, negligence or improper installation.***
- For assistance please call Bravo for technical support at (800) 28-BRAVO. Outside the U.S.A. please call (323) 888-4133.***

SAFETY FIRST! S. Bravo Systems, Inc. urges you to carefully adhere to the normal safety procedures and precautions followed by your company. Please follow the mandates and compliances decreed by OSHA, local, State and federal regulations regarding the use of this product.

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.

CRITICAL DIMENSIONS

Part Number	Manhole Manuf.	Manhole O.D.	Ht.	Spill Bucket	Reducers Provided	Viewport
CPTS-33	Phil T.	36"	5-1/2"	Two, 16" O.C.	Yes	Yes
CPTDS-33	Phil T.	36"	5-1/2"	One, 8" Offset	Yes	Yes
COPWS-33	OPW	42"	4"	Two, 16" O.C.	No* (1)	Yes
COPWDS-33	OPW	42"	4"	One, 8" Offset	No* (1)	Yes
CCNIS-33	CNI	42"	5-1/2"	Two, 16" O.C.	CNI* (2)	Yes
CCNIDS-33	CNI	42"	5-1/2"	One, 8" Offset	CNI* (2)	Yes
CTS-33	All*(3)	-	3"	None	*(3)	No
CTS-37	All*(4)	-	3"	None	*(4)	No

*(1) For OPW Manufacture Spill Buckets, each Spill Bucket Requires:

OPW Part No: D02575M Shroud Boot
 H15188M Lower Clamp for Shroud Boot
 H15190M Upper Clamp for Shroud Boot

*(2) CNI Provides the Spill Bucket Reducer.

*(3) For CNI a 42" M.H. / OPW a 42" M.H. / Phil Tite a 36" M.H.
 All other Manufacturers must accommodate a min. 38" M.H. Skirt,
 and 35" Mounting Ring Opening.

*(4) All other Manufacturers must accommodate a min. 41" M.H. Skirt,
 and 39" Mounting Ring Opening.

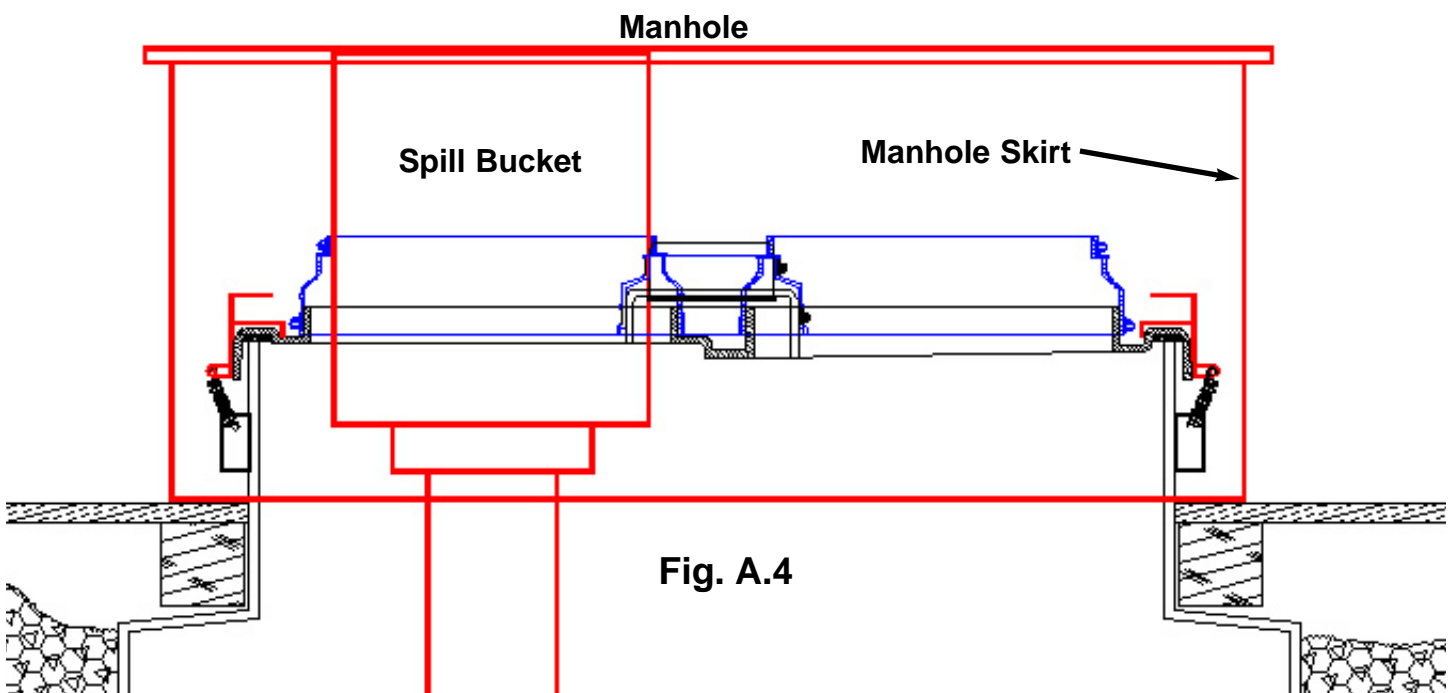
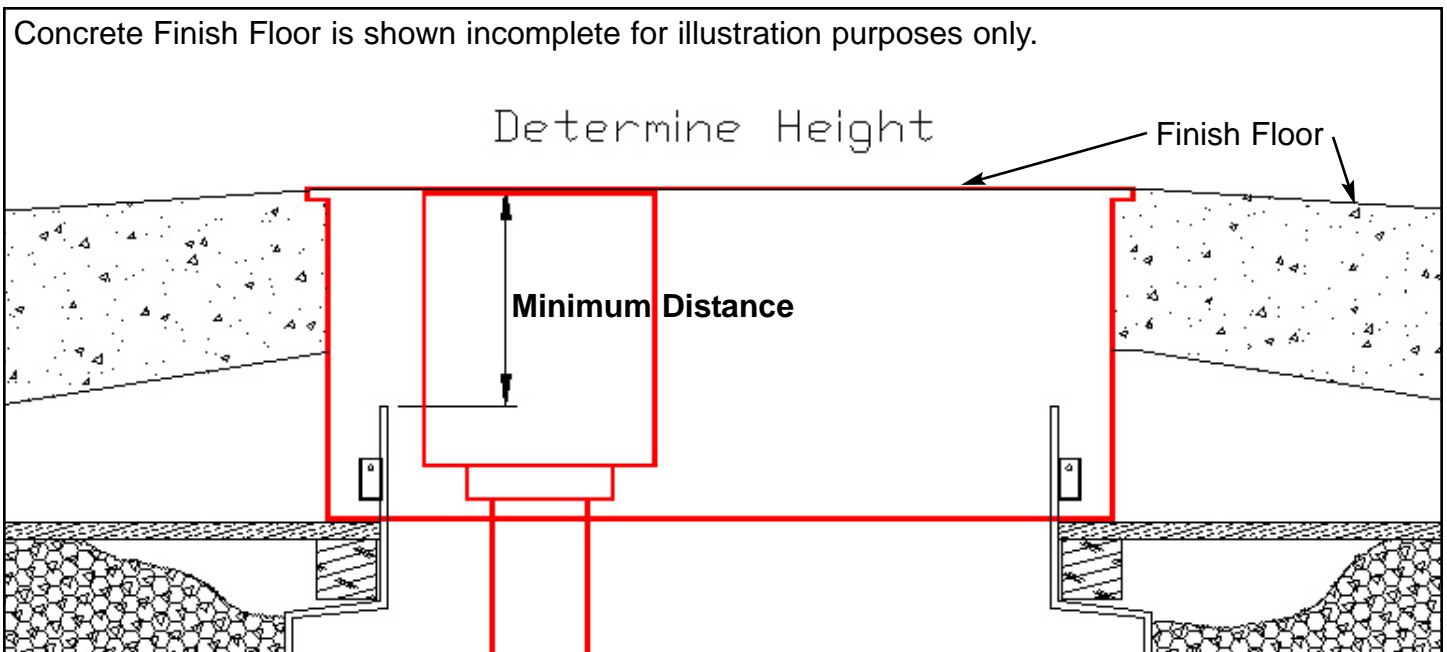


Fig. A.4

Setting Tank Sump Height

When determining your Tank Sump height, you **MUST** factor in the target distance **between the finish floor (concrete slab) and the TOP EDGE of the Reducer section** of the Bravo Tank Sump.
Refer above for Cover height dimensions.

For CNI Spill buckets	16" Minimum Distance
For OPW Spill buckets	8" Minimum Distance
For Phil-Tite Spill Buckets	11" Minimum Distance
Standard Turbine Covers	6" Minimum Distance



SECTION A Installing Sump Covers

Step A.1 - For the final installation of the Tank Sump Covers, ensure that any/all of the following operations have been completed:

- **Hydrostatic Monitoring System is in place (if applicable), and manometer is filled with interstitial fluid prior to backfill.**
- **Vacuum Monitoring System is in place (if applicable), and vacuum lines are connected and secure prior to backfill.**
- **Turbines and/or any electronic monitoring equipment must be installed.**
- **Spill buckets and fill risers must be in place and secure.**

Step A.2 - Dry Fit the Cover (Fig. A.2.1) and rotate it until the spill bucket holes align exactly. (Fig. A.2.2)

At this time, If you need a viewport, you must select which side you want the viewport on and cut it open with a 5 " Diameter holesaw. (Fig. A.2.2)

Step A.3 - Secure Cover to the reducer section of the tank sump with the factory installed fasteners. (Fig. A.3)

Step A.4 - Your fiberboard, plywood or other material should be in place around the tank sump. Dry-fit the manhole skirt, align it so that the manhole aligns correctly with the spill buckets, and secure the skirt to prevent movement. (Fig. A.4 on page 2)

Fig. A.2.1

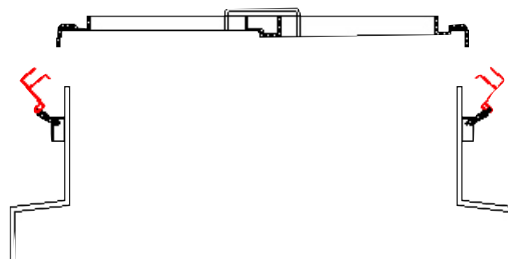


Fig. A.2.2

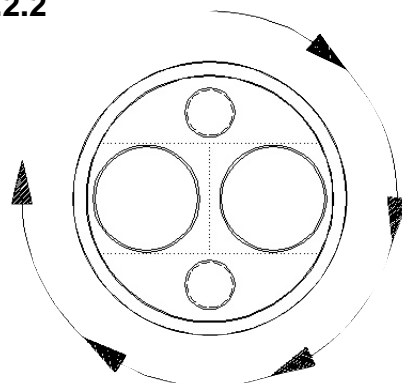


Fig. A.3

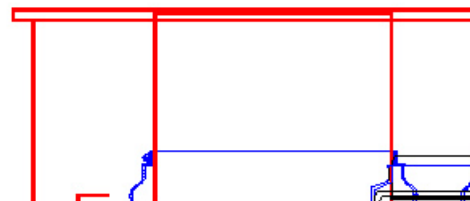
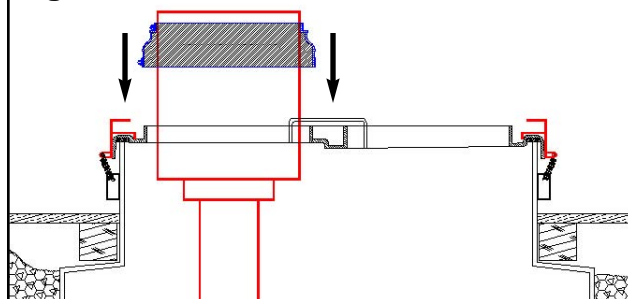


Fig. A.6



NOTICE

**IF USING CTS COVER
SKIP TO SECTION B**

Step A.5 - Ensure that any boots in or on the spill bucket assembly are in place and secure.

Step A.6 - Install Bravos boot to spill bucket and tighten using provided hose clamps.

NOTICE For **Phil-Tite** buckets, the Bravo rubber boot slides over the bucket to install. For **OPW** buckets, you must use their own shroud boot system and refer to and follow their Installation Instructions. For **CNI** buckets, CNI provides their own boot. Refer to and follow their Installation Instructions.

Step A.7 - Install Bravos boot and Viewport and tighten using provided hose clamps.

IMPORTANT

For bucket alignment and Installation to Manhole Cover, refer to your Manhole manufacturers Installation Instructions.

NOTICE

Bravo Systems Tank Sump Covers are engineered to contain vapors and/or moisture. However, the Tank Sumps DO NOT require ventilation by any means during operation.

S. Bravo Systems, Inc. Limited Warranty

S. Bravo Systems, Inc. ("Bravo") warrants to the original purchaser (the "Original Owner") that all containment systems sold by Bravo to Original Owner (the "Product"), when properly installed by a Bravo certified installer (the "Installer"), and maintained in strict compliance with Bravo's published instruction guidelines, shall be free from defects in material and workmanship for a period of one (1) year from the date of purchase (the "Warranty Period"). In the event of defect in material and/or workmanship of the Product during the Warranty Period, this warranty shall be limited to the repair and/or replacement, which shall be determined in Bravo's absolute and sole discretion, of the Product only and shall exclude all claims for labor or consequential damage in connection with such corrective measures.

This limited warranty shall not be applicable if installation, and replacement installation if needed, of the Product is performed by any installer other than a certified installer, in writing, by Bravo, or the Product is used in conjunction with any fittings or components not previously approved, in writing, by Bravo.

This limited warranty shall not be applicable to any defects in material and/or workmanship of the Product caused by (1) the intentional or negligent acts of the Original Owner, the Installer, or by any third party including, but not limited to, any modification and/or abuse of the Product, improper installation of the Product, failure to comply with Bravo's maintenance or installation guidelines for the Product, or (2) any condition not within Bravo's control including, but not limited to, any Act of God, fire, natural events, disasters, calamities, or occurrence.

If any fittings or components other than Bravo approved fittings or components are used in conjunction with any Bravo product, the warranty pertaining to these products is immediately void.

This limited warranty may not be modified without Bravo's prior written approval. If any provision of this limited warranty is held invalid or unenforceable, in whole or in part, the remaining portions of this limited warranty shall be severable and remain in effect.

No agent, independent contractor, employee, or representative of Bravo, including any certified Installer (collectively, "Bravo Representative"), has any authority to bind Bravo to any affirmation, representation, guarantee or warranty concerning the products sold under this limited warranty, and unless an affirmation, representation, guarantee, or warranty made by a Bravo Representative is specifically included within this limited warranty, it will not be enforceable by the Original Owner.

This limited warranty is made and entered into in the State of California, and shall in all respects be interpreted, enforced and governed under the law of said state. This limited warranty shall supersede all prior communications, either written or oral, and all previous agreements, if any, between the parties with respect to any subject matter hereof, and shall set forth the complete understanding of the parties with respect thereto.

IT IS EXPRESSLY AGREED THAT THIS LIMITED WARRANTY WILL BE IN LIEU OF ALL WARRANTIES WHETHER WRITTEN, ORAL, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE AND ALL OTHER OBLIGATIONS AND LIABILITIES ON THE PART OF BRAVO. The foregoing shall constitute Bravo's sole liability to the Original Owner and under no circumstances shall Bravo be responsible for any special, incidental, or consequential damages.