

# BRAVO B-17, B-33 & B-34 BASIC UNIFITTINGS™ INSTALLATION INSTRUCTIONS



## IMPORTANT!!

READ THESE INSTRUCTIONS - KEEP FOR FUTURE REFERENCE

### NOTICE

- For single wall sumps designed for FRP pipe only, do not use for flexible secondary piping.
- Adhere to all directions and warnings indicated on the product or contained in these instructions.
- The containment box should be installed only by a qualified contractor.
- Warranty is void if there is any evidence of modification, abuse, negligence, or improper installation.



**BRAVO BASIC UNIFITTINGS CAN  
NOT BE INSTALLED ON FIBERGLASS  
DOUBLEWALL SUMPS**

### 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 the *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 its 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 components, are used in conjunction with any S. Bravo Systems product, the warranty pertaining to these products is immediately void.



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# UNIFITTING INSTALLATION INSTRUCTIONS

**B-17**

**Tools required. Drill bit 1/4" diam & 5/16" diam, template, hole saw, sandpaper and 5/16" & 7/16" wrench.**

**1-** Locate center of all pipe/conduit, if possible, on flat section of containment box make sure all fittings will not interfere with each other. Drill a 1/4" diameter hole at the fitting center. Fasten UniFitting template (See FIG 1-A and/or FIG 2-A) with 1/4" bolt through the center. Drill one of the 5/16" holes on template and fasten a 5/16" bolt to fix the template in position, drill all the holes in the template. Repeat this process for all other UniFittings.

**2-** To penetrate, use properly sized hole saw (see table below).

<b>Unifitting</b>	<b>Hole Saw</b>	<b>Min. Space C/L to C/L</b>
B-17 (See Fig1-B)	2-1/2"	4-1/4"
B-33 (See Fig 2-B)	4-1/2"	6-1/4"
B-34 (See Fig 2-B)	6"	7-3/4"

After drilling opening, sand rough edges with 60 grit.

**3- USE "T-FS-SAND-KIT" TO ABRASE OUTER WALL FLAT**

**4-** Cutting steps on the B-17 boot requires inserting a rigid conduit inside the fitting. Proceed to cut away from your body with utility knife. Apply Vulkem sealant to Interior fiberglass wall where the fitting meets the wall. (See FIG 1-C and/or FIG 2-C) Insert rigid compression ring with chamfers from inside over bolt holes. (See FIG 1-D and/or FIG 2-D).

**5-** The chamfers on compression ring must be placed against the Interior Alcryn boot of the fittings. Apply vulkem generously between each component that will seal. Start threading the nuts by hand. Then tighten the rest with 7/16" wrench. Use a torque wrench at a maximum torque setting of **5 foot pounds (60 lb. inches)**. **Warning: Do not over torque nuts.**

**6-** Insert the appropriate sized pipe or conduit into the Alcryn boot from outside of the containment box. After the pipe or conduit has been positioned and tested, fasten the **S.S. band clamp around boot tightening to 4 foot pounds (48 lb-inches)** on inside of box. Install protective inserts over each threaded bolt end. Apply Vulkem sealant generously to the inside nut and bolt areas, leave no metal exposed.

Backfill with approved peagravel per pipe manufacturers specifications.

**Angled Entries:** The UniFitting is flexible enough to allow pipe and conduit from entering the containment box at an angle of 10° in any direction.

**Offset Entries:** The UniFitting allows pipe and conduit to enter the containment box at an offset of 1/2" in any direction.

**Round (curved) Surface Entries:** The UniFitting can be installed on round surfaces with a minimum diameter of 30". The installation procedure is the same as described above except that each bolt hole must be drilled to 3/8" diameter to compensate for the curvature of the sump.

