

**WILLOUGHBY AQUASURF®
SOLID SURFACE
SHOWER BASE**

**INSTALLATION AND
OPERATION MANUAL**

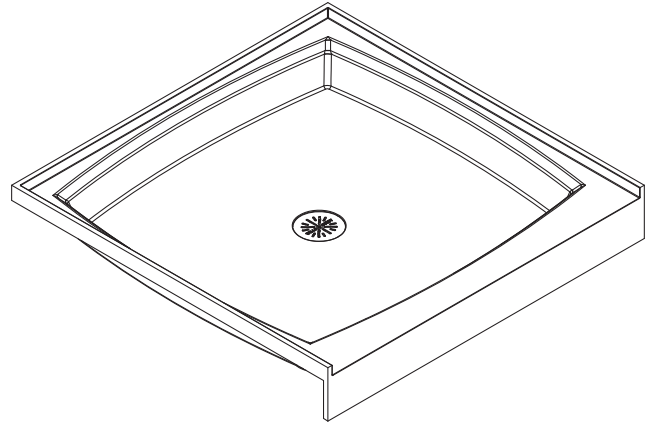
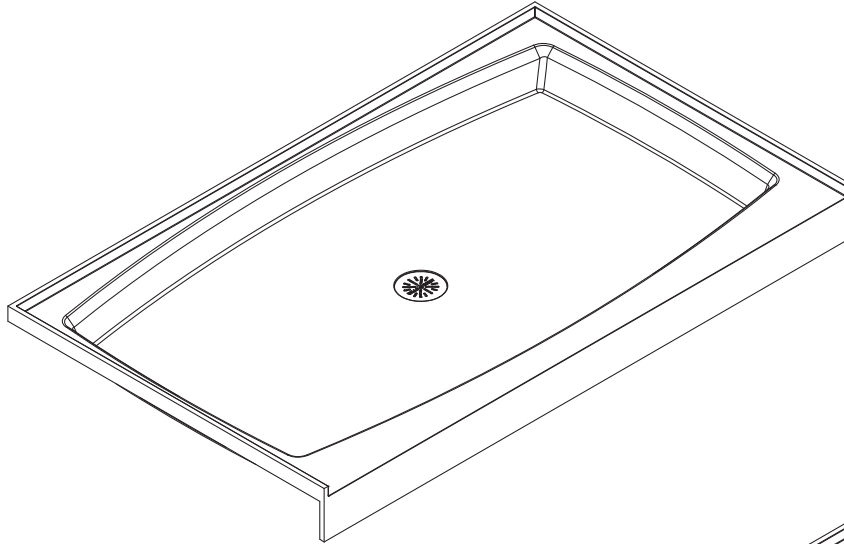


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PRE-INSTALLATION INFORMATION

Introduction to Solid Surface:

Willoughby Aquasurf® Solid Surface Products are molded, cast, and/or shaped surface components manufactured from homogeneous blends of resins, mineral fillers, and colorants.

Aquasurf® Solid Surface Products combine superior durability (including stain-, impact-, and burn-resistance) with luxurious appearance in non-porous, easily cleaned, low-maintenance components. Products provide attractive, integrated surfacing solutions for showers, restrooms, locker rooms, elevators, and wet walls.

Aquasurf® Solid Surface Products are well-suited to both Commercial and Institutional applications. Whether installed in a school, hospital, dormitory, or long-term care facility, the inherent properties of polymer-based solid surface products offer resistance to potentially-damaging chemical agents, abuse, and vandalism.

Recommended Uses and

Basic Limitations:

While Aquasurf® Solid Surface Products and components are designed to perform to typical solid surface product standards under normal use, do not specify or use Aquasurf® components and products where common sense would dictate it an unsafe or environmentally unfriendly construction material.

Design considerations include:

- Aquasurf® Solid Surface Products should not be specified for use in below-grade applications.
- Although Aquasurf® products are manufactured with a proprietary UV stabilizer, the solid surface can be damaged from over-exposure to direct sunlight and/or the elements.
- Special considerations should be made for use in wet wall applications or where moisture might become trapped behind panels.
- Extreme temperature contrasts can affect product performance and characteristics. Installation in a controlled environment is desirable and should be taken into consideration.

Aquasurf® Solid Surface Products are engineered to resist most commercial chemical agents. However, contact with extremely caustic chemicals and environmentally harmful solvents may cause undesirable effects. The extent of damage to the product and the possibility of repair will be dependent on length of contact.

PRE-INSTALLATION INFORMATION (Continued)

Installation Disclaimer:

This Willoughby Industries-provided Installation and Operation Manual gives step-by-step instructions that will work for most, but not all, types of Aquasurf® Solid Surface shower installations. This Manual is intended for use by persons possessing applicable technical knowledge at their own discretion.

Follow all instructions applicable to the installation:

Willoughby Industries does not assume any responsibility for personal injury or damage to equipment due to an improperly installed Aquasurf® Solid Surface Product.

Material Handling:

NOTE: Gloves are recommended when handling large Solid Surface sheets or components to protect against cuts from sharp edges.

1. Before loading, inspect all Solid Surface sheets and cast components; make sure all colors match and that all components are in good condition.
2. Use a soft material such as carpeting or a blanket to protect the components, especially edges, from damage during delivery. Insert thick paper or cardboard between the Solid Surface sheets to protect surfaces while in transit.
3. Once the materials have been delivered to the worksite, store all materials in a safe place to prevent damage prior to installation.

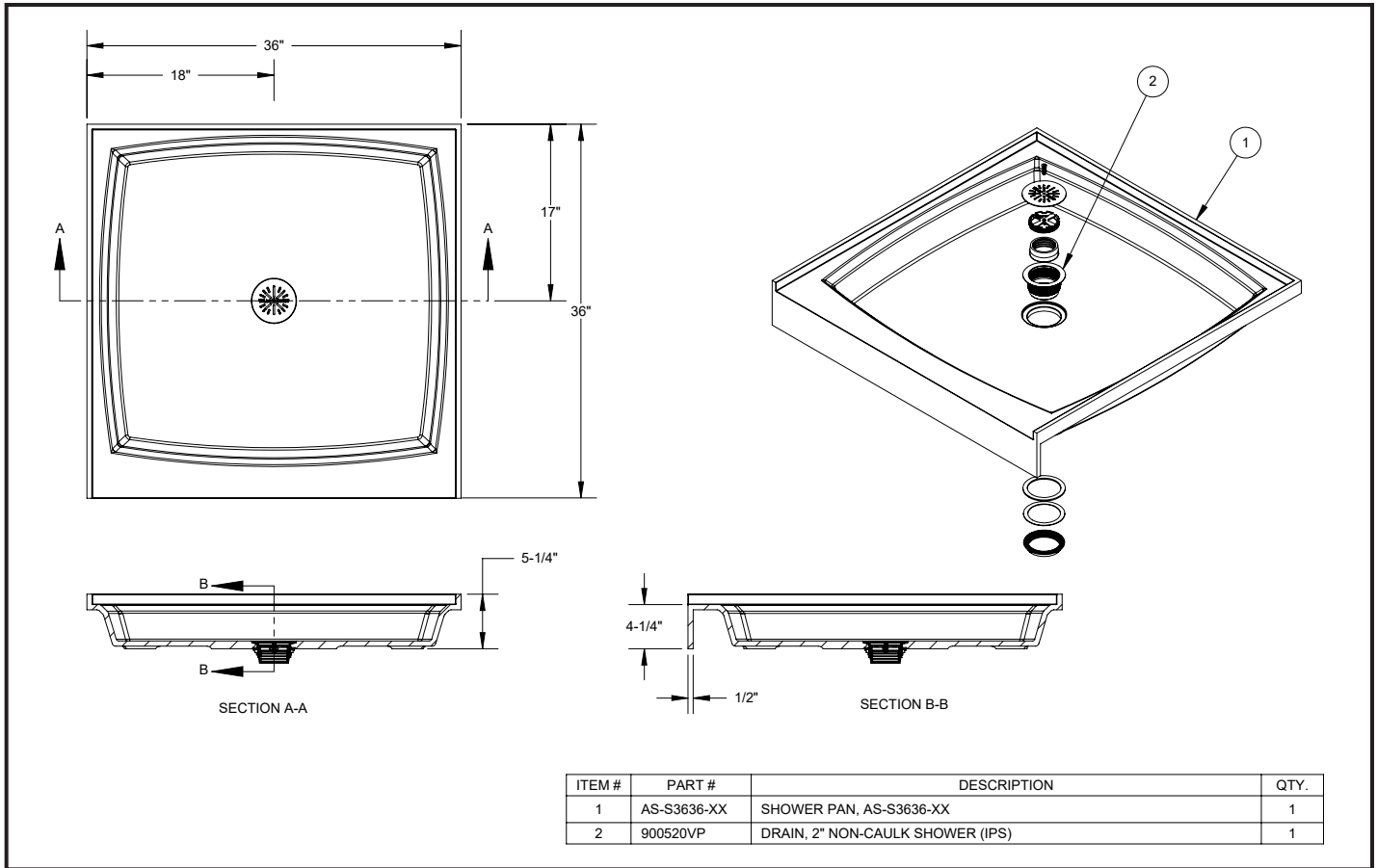
PRE-INSTALLATION INFORMATION (Continued)

Installation Precautions:

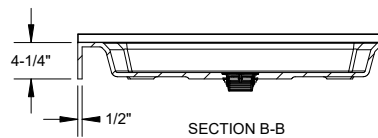
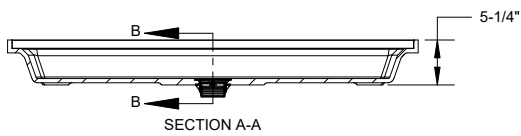
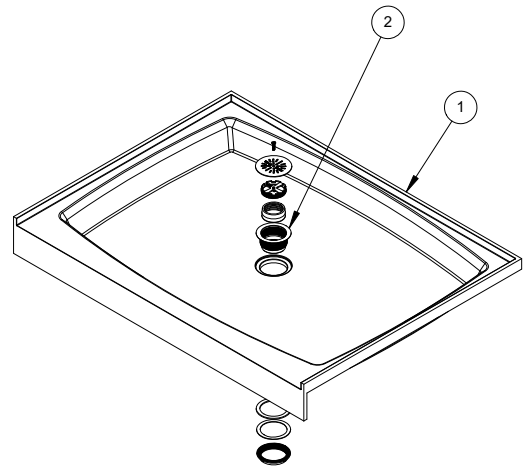
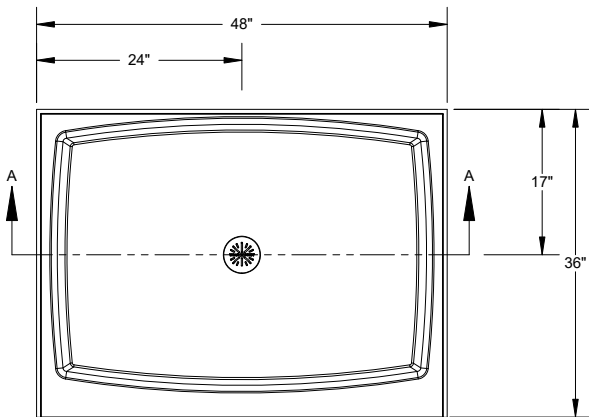
When installing an Aquasurf® Solid Surface shower base, follow these recommendations to ensure a sound, long-lasting installation:

- **Read all instructions before beginning installation** of the Aquasurf® Solid Surface shower product. Contact Willoughby Industries if you have any questions regarding installation.
- Separate all parts from packaging and make sure all parts are accounted for before discarding any packaging material. If any parts are missing, do not attempt to install the Aquasurf® Solid Surface shower product until you obtain the missing parts.
- Before beginning installation, all supply, drain, and waste piping must be completed according to specified rough-ins. If you have not received rough-in details, please contact Willoughby Industries.
- Ensure all plumbing or electrical work beneath the floor and inside the walls is finished prior to installation of the shower floor.
- While Aquasurf® Solid Surface Products are engineered to standard dimensions, make sure to measure the actual Solid Surface shower base before building or modifying framework.
- The floor under the Solid Surface shower base and the adjacent wall surface must be free of dirt, film, residue, or anything that could prevent the mortars and/or construction adhesives from properly bonding.
- The floor must be level in both directions (front-to-back and side-to-side) to ensure the shower base will drain properly.
- Do not install products directly on any surface that is, or may become, wet or damp.
- **As a rule, allow minimum 1/8" expansion allowances.**

PHYSICAL DIMENSIONS- AS-S3636

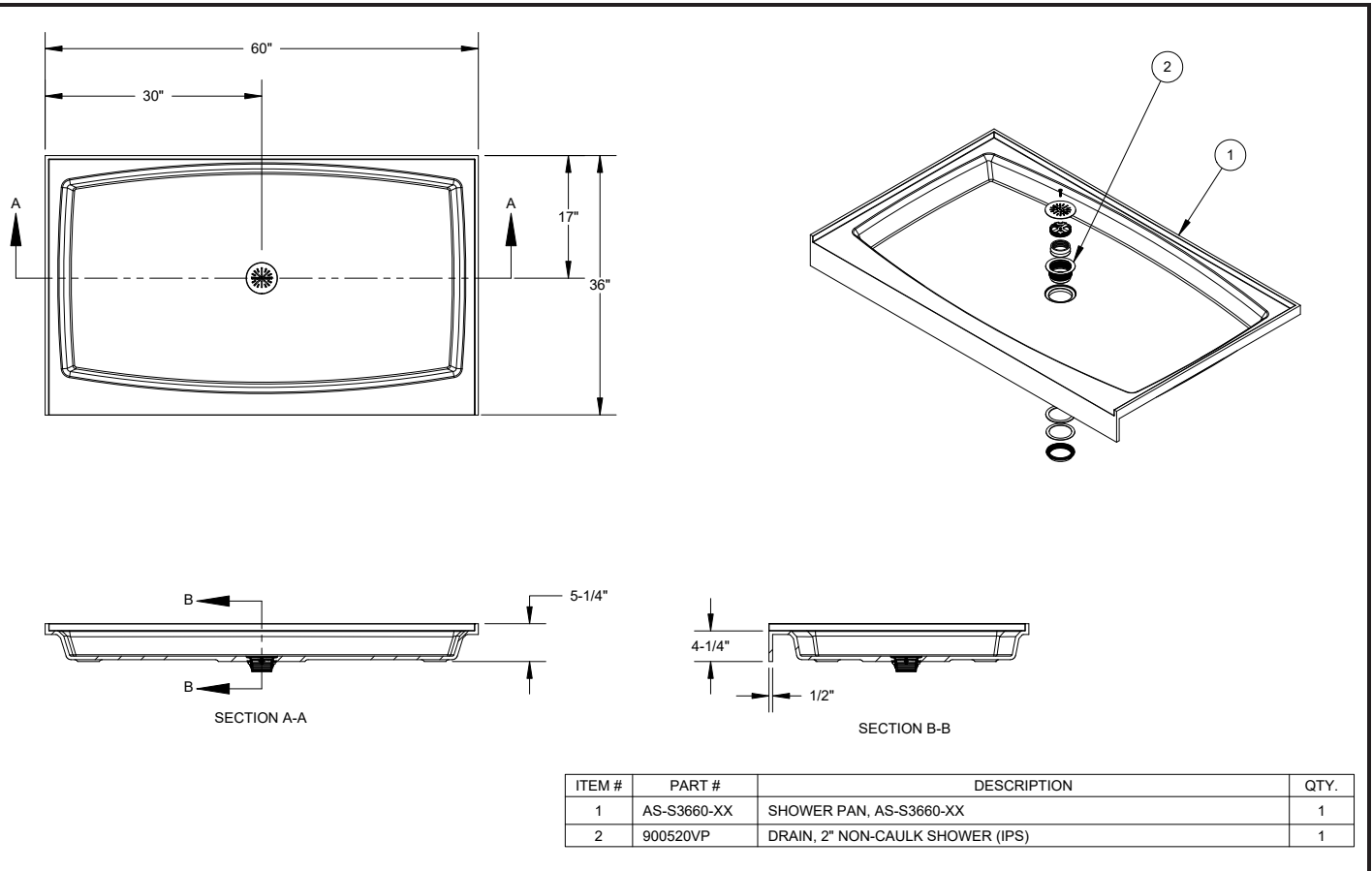


PHYSICAL DIMENSIONS- AS-S3648



ITEM #	PART #	DESCRIPTION	QTY.
1	AS-S3648-XX	SHOWER PAN, AS-S3648-XX	1
2	900520VP	DRAIN, 2" NON-CAULK SHOWER (IPS)	1

PHYSICAL DIMENSIONS- AS-S3660



RECOMMENDED EQUIPMENT AND SUPPLIES

Power Tools:

- ½" Electric Drill -with compatible Drill Bits and 1" Hole Saw
- Circular Saw -with Carbide-tipped Saw Blades
- Belt Sander -with 80 to 220 Grit Sanding Belts
- Router -with compatible Carbide Bits and Straightedge Guide

NOTE: ALWAYS WEAR SAFETY GLASSES WHEN WORKING WITH POWER TOOLS.

Accessory Tools:

- Safety Glasses
- Caulking Gun
- Saw Horses with (3) 2x4 x 8' support rails
- Common Carpentry Tools, including:
File, Scribe or Pencil, Compass, Square, Level, Tape Measure, Hammer, Nails, Shims, Extension Cord, ETC.
- Clean-up Tools and Supplies, including:
Masking Tape, Putty Knife/Caulk Remover Tool, Denatured Alcohol, Wiping Cloth, ETC.
- Blanket, Padding, or Commercially-available Tub Protector to protect solid surface from scratches

Building Supplies:

- Thin-set/Mortar
- Appropriate Construction Adhesives and Caulking
- Framing Materials appropriate to the installation

Additional Tools and Supplies:

These items are not required but can ease installation and reduce installation time:

- Random Orbital Sander
- 1x1 and/or 1x2 Wood Bracing Strips
- Construction Shims

INSTALLATION INSTRUCTIONS

Step 1: Framing for Shower Base

1. Before building or modifying any structural framework, measure the actual overall dimensions of the Solid Surface Shower Base that is being installed (**SEE FIG. 1**):

WIDTH (A): _____"

DEPTH (B): _____"

2. Determine what THICKNESS of SHEATHING MATERIAL will be used in the installation (if applicable), and subtract for the Shower Base LIP to find the GAP measurement (space between the framework or existing wall surface on all sides, including the Front, of the Shower Base):

THICKNESS: _____" - LIP: _____" = GAP: _____"
(GAP must be $\geq 1/8"$; increase THICKNESS if needed)

3. Add the GAP measurement, MULTIPLIED BY (2), to the WIDTH (A) measurement and DEPTH (B) measurement. The RESULT measurements will give the framework opening needed for the installation:

RESULT WIDTH (C) =

WIDTH (A): _____" + (2 X GAP: _____") = _____"

RESULT DEPTH (D) =

DEPTH (B): _____" + (1 X GAP: _____") = _____"

SEE FIG. 2 FOR MEASUREMENT EXAMPLE USING 5/8" MOISTURE-RESISTANT DRYWALL SHEATHING MATERIAL:

4. Use the RESULT measurements to build or modify adequate framework to support the enclosure around the Shower Base, including sheathing, Solid Surface Wall Panels, filler materials, accessories, etc.

(**SEE FIG. 3 ; FRAMEWORK BY OTHERS, SHOWN FOR REFERENCE ONLY.**)

5. Once framework has been completed, carefully test-fit the Shower Base into the framework to make sure it fits properly with the needed GAP around the Shower Base edges.

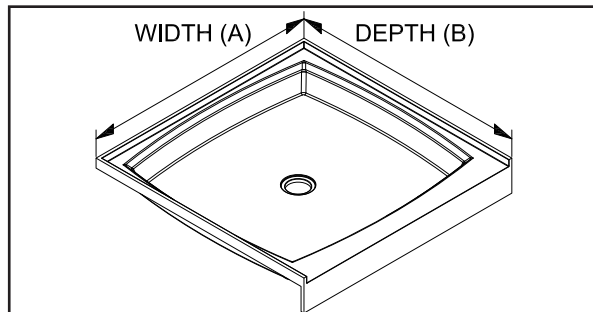


FIG. 1- SHOWER BASE MEASUREMENT

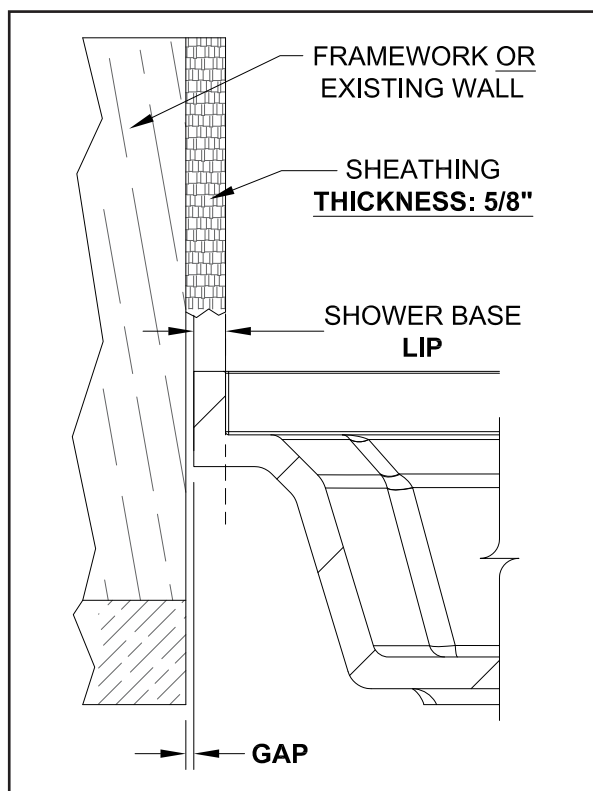


FIG. 2- GAP MEASUREMENT EXAMPLE

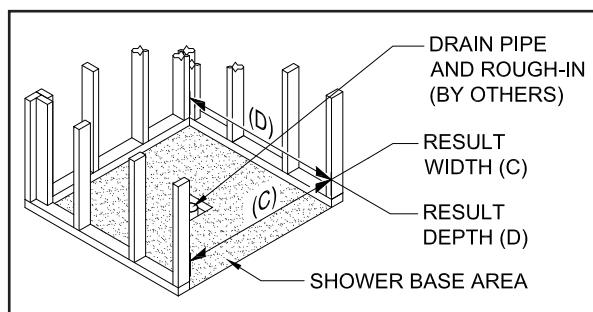


FIG. 3- FRAMEWORK DIMENSIONS

INSTALLATION INSTRUCTIONS (Continued)

Step 2: Drain Assembly

1. If not completed by this time, install the rough-in plumbing for the drain pipe. The Shower Base is designed for use with a 2" no-hub type drain. Make sure drain pipe is free of nicks, cuts, or burrs using fine sandpaper or steel wool; this will help the drain to seal properly.
2. Remove the drain cover from the Shower Base drain and set aside for later installation.
3. Disassemble the Drain Assembly as shown (**SEE FIG. 4**). Set aside the Internal Threaded Compression Ring and Drain Compression Sleeve; they will be installed later.
4. Apply appropriate silicone caulk to the drain opening lip on the shower base (**SEE FIG. 5**). Insert the Drain Body through the drain opening, fit the Rubber Drain Gasket and Anti-Friction Washer to the underside of the Drain Body, and secure with the External Drain Compression Ring. Tighten Ring enough to compress the Rubber Drain Gasket.
5. Test-fit the Shower Base into the framework opening again to make sure the installed Drain Assembly aligns with the drain pipe while still allowing the proper GAP around the Shower Base edges.

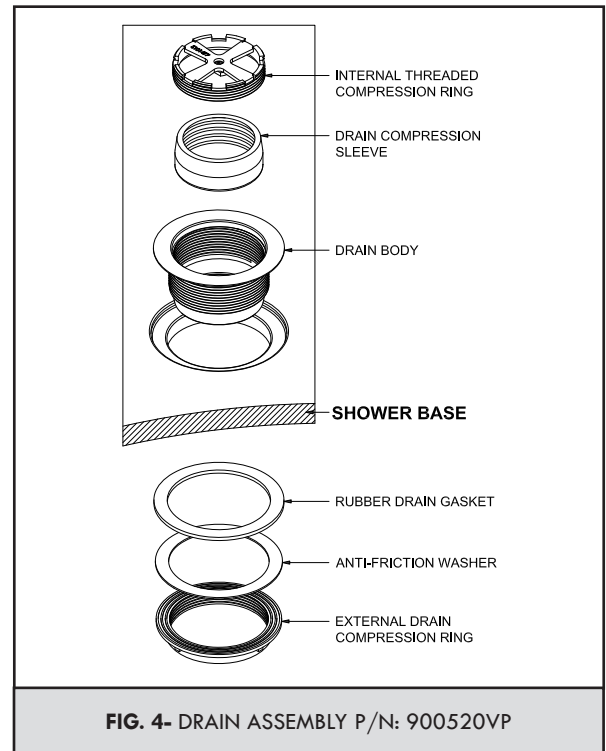


FIG. 4- DRAIN ASSEMBLY P/N: 900520VP

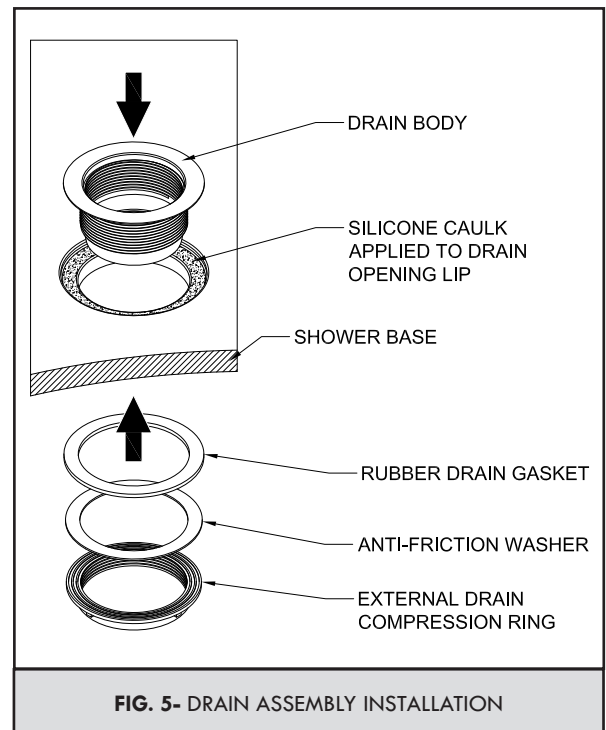
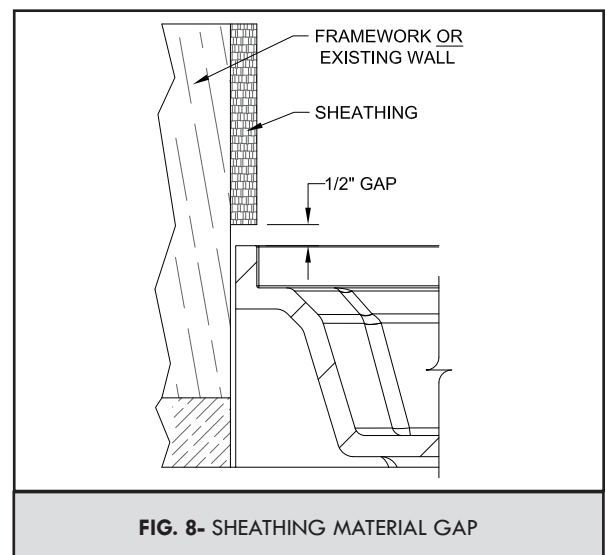
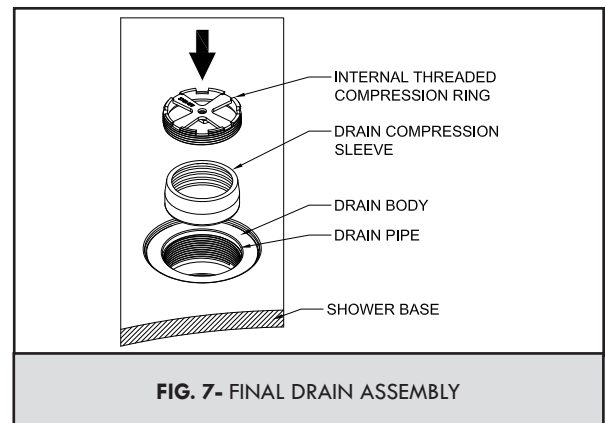
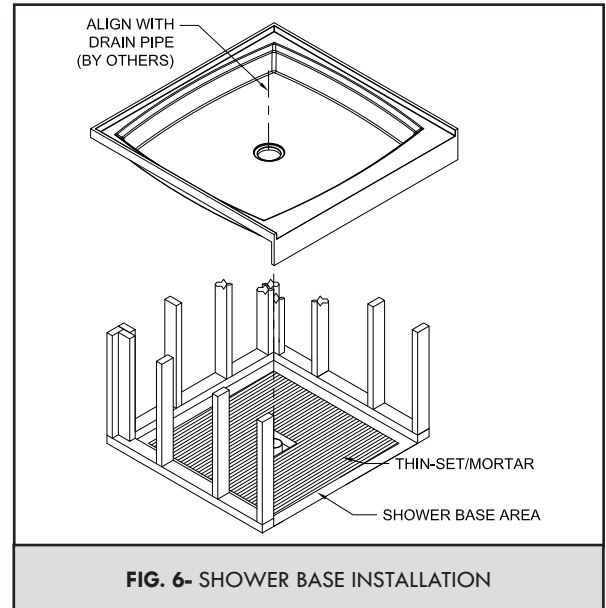


FIG. 5- DRAIN ASSEMBLY INSTALLATION

INSTALLATION INSTRUCTIONS (Continued)

Step 3: Shower Base Installation

1. Remove the Shower Base from the framework opening.
2. Mix and spread an adequate layer of Thin-set/Mortar inside the framework, with a 2" minimum distance from the framework edge (**SEE FIG. 6**). Use enough Thin-set/Mortar to evenly cover the area under the Shower Base. Place the Shower Base into the framework opening and align the Drain Assembly with the drain pipe. Once aligned, firmly press the Base into the layer of Thin-set/Mortar.
 - Allow the proper GAP around the Shower Base edges. (Shims can be custom-cut and used as spacers.)
 - Make sure the side and back flanges of the Shower Base remain parallel with the framework/surface. (Shims can be custom-cut and used as guides.)
3. Level the Shower Base in all directions and allow the Thin-set/Mortar to set for the recommended set time to secure the Shower Base in place (typically 24 hrs. minimum).
4. Once securely set, finish installing the Drain Assembly (**SEE FIG. 7**). Lubricate the drain pipe and Drain Compression Sleeve, slide the Sleeve over the pipe, and tighten the Compression Ring to seal the drain. Make sure the drain seals properly to prevent leaking.
5. Cover the Shower Base with cardboard, padding, or blankets to protect against damage if installing a shower wall.
6. If installing sheathing material for the shower wall, **allow for Plumbing Outlets and make sure there is a 1/2" vertical gap between the sheathing material and the Base to prevent water damage from wicking (SEE FIG. 8).**



CARE AND MAINTENANCE

Aquasurf Solid Surface Care

Aquasurf® surfaces may be easily cleaned using conventional cleaning agents such as ammonia-based liquid cleaner (glass cleaner).

Dry stains on a matte finish can be removed with a 3M Scotch-Brite gray scouring pad or a mild abrasive cleaner.

To remove burns or scorches:

1. Sand with an appropriate coarse grit sandpaper followed by fine grit (220) sandpaper.
2. Following sanding, use a 3M Scotch-Brite gray pad (or equivalent) to match the finish of the sanded area to the surrounding surface.
3. If needed, give the repaired area a final buffing to match polished surfaces.

Accidental nicks or chips can be repaired with special patch kits available in all Aquasurf® colors; contact Willoughby Industries for more information.

Avoid exposing Aquasurf® surfaces to strong chemicals such as acetones, paint removers, sulfuric acids, or hydrochloric chemical cleaners. Exposure to strong chemicals may result in permanent damage to Aquasurf® surfaces.

WARRANTY

Aquasurf® Solid Surface Products are a homogeneous blend of resins, mineral filler, and colorant manufactured for panels, molded/shaped products, and components. Aquasurf® Solid Surface products provide a luxurious appearance with the durability of stain-proof, impact-resistant, burn-resistant material with ease of maintenance and cleaning.

Willoughby Industries, Inc. warrants to commercial and institutional purchasers only that each unit will be free from defects in workmanship and materials under normal use and service upon the following terms and conditions.

The period during which Aquasurf® components are warranted as follows:

1. Aquasurf® solid surface components are warranted for 2 years from date of shipment.
2. All other components warranted for 1 year from date of shipment.

This warranty does not cover installation or any other labor charges and does not apply to any components damaged by accident, abuse, improper installation or improper maintenance. This warranty does not cover any installation that did not comply with national, state and local building, plumbing or electrical codes. The warranty is limited to replacing or repairing at Willoughby's option, transportation charges prepaid by the purchaser, any Aquasurf® component or part which upon our inspection shall be deemed as defective within the limitations of this warranty. The replacement or repair of defective units as stated in this warranty shall constitute the sole remedy of the purchaser and the sole liability of Willoughby Industries, Inc. Willoughby Industries, Inc. shall not otherwise be liable under any indirect damages caused by defects in the repair or replacement thereof.

This warranty only extends to commercial and institutional purchasers and does not extend to any others, including consumer customers of commercial institutional purchasers. This warranty is in lieu of all other warranties, expressed or implied, including implied warranty of merchantability or fitness or a particular purpose or otherwise.