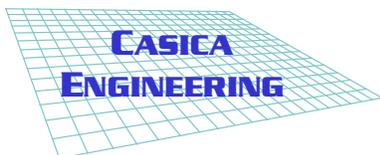


INSTALLATION INSTRUCTIONS FOR GLASS-IN MEMBRANE VENT INSERT

1. These instructions are for installing the insert into the blank and then laminating the cloth directly over it (same as many side fin boxes). It is much stronger to do it this way than after hotcoating, as some cloth will remain over the insert after sanding and will hold it in the EPS foam better.
2. Mark the position of the vent is on the deck, directly on the stringer (or centerline) about 3/4 the length of the board from the tail. Do not locate mid-board or in the tail area if using a single vent. If using two vents, locate the second about 4-5" from the front of the center finbox on the deck.
3. Lightly centerpunch the hole location. Drill using a 1-1/4" diameter plunge router. The depth of the hole should allow the insert to be set in until 1/2 of the angled portion is above the foam or 13/16" deep (see drawing). The best router bit is Amana Tool #41450, which has cutters on the bottom and sides.
4. The specified hole diameter allows very little clearance between the insert and the foam, so a runny mix of micro-balloon filler is needed with the epoxy. The insert (as well as any other embeds - fin boxes, leash plugs, etc) can be set in the blank with the epoxy / micro-balloon mixture used for sealing the blank at the same time.
5. Apply the round label to the recess in the insert. Apply the mixed epoxy to the sides of the insert and install in the hole. Wipe any excess that oozes up around the top of the insert creating a fillet around the outside. Hold the top of the insert down with tape or a weight until the epoxy cures.
6. Laminate the board going directly over the insert. There is no need cut away the cloth after cure. Hotcoat normally.
7. As the hotcoat is sanded, sand directly over the insert until flush with the deck. Leave the masking label in place until after glossing and polishing, then pop it out with a flat screwdriver.
8. Drill the venting holes into the EPS core per the drawing as applicable.
9. The black vent element (plastic bolt) must be very carefully installed as it is easily broken. Only install using a 16mm socket and extension (no handle). Make certain that the socket is fully over the entire head of the element and not just the cap; if not the cap will break off. Tighten to 1/2 ft-lb only, just slightly more than hand tight, just enough to compress the O-ring.

MAINTENANCE:

- Do not wax over the vent. Keep wax, sand, debris away from the recessed area.
- Rinse the vent after use with fresh water using low pressure to remove any salt crystals, sand, etc from the recessed area.
- Venting the board will greatly reduce problems with EPS/hollow-core heat expansion, but it is not an immunization. Keep the board out of direct sun exposure, and use a reflective bag. Do not keep the board in a closed vehicle during high temperatures.



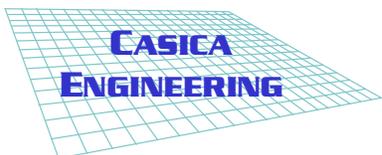
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INSTALLATION INSTRUCTIONS FOR RETRO-FIT MEMBRANE VENT INSERT

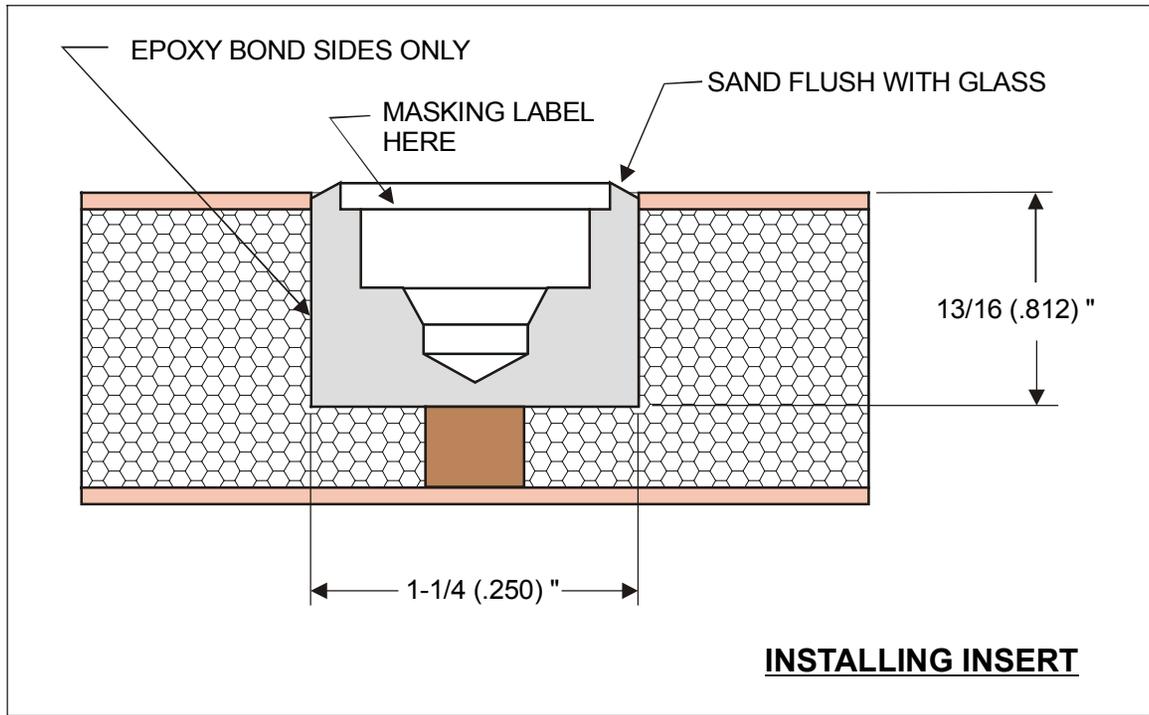
1. The position of the vent is on the deck, directly on the stringer (or centerline) about 3/4 the length of the board from the tail. Do not locate mid-board or in the tail area.
2. Lightly centerpunch the hole location. Drill using a 1" diameter Forster bit (preferred), a hole saw with a very short pilot bit (like for FCS plugs), or a 1" plunge router. The depth of the hole can be 5/8 – 3/4".
3. Prep sand 1-1/2" diameter using 100 grit paper at the center mark.
4. The specified hole diameter allows very little clearance between the insert and the foam, so no filler is needed with the epoxy. Use 5 minute epoxy to minimize exothermal heating as the epoxy cures.
5. Apply the mixed epoxy halfway up sides of the insert and the underside of the flange. Install in the hole. Wipe any excess epoxy that oozes up around the top of the insert creating a fillet around the flange. Put some wax paper and a weight on top of the insert to hold it down until the epoxy cures.
6. The black vent element (plastic bolt) must be very carefully installed as it is easily broken. Only install using a 16mm socket and extension (no handle). Make certain that the socket is fully over the entire head of the element and not just the cap; if not the cap will break off. Tighten to 1/2 ft-lb only, just slightly more than hand tight, just enough to compress the O-ring.

MAINTENANCE:

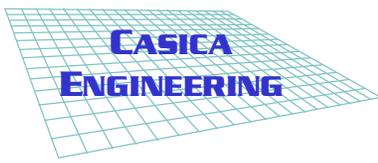
- Do not wax over the vent. Keep wax away from the recessed area.
- Rinse the vent after use with fresh water using low pressure to remove any salt crystals, sand, etc from the recessed area. The vent element should be replaced every two years if constantly used, or if it is damaged in any way. Contact us for replacement elements.
- Venting the board will greatly reduce problems with EPS/hollow-core heat expansion, but it is not an immunization. Keep the board out of direct sun exposure, and use a reflective bag. Do not keep the board in a closed vehicle during high temperatures.



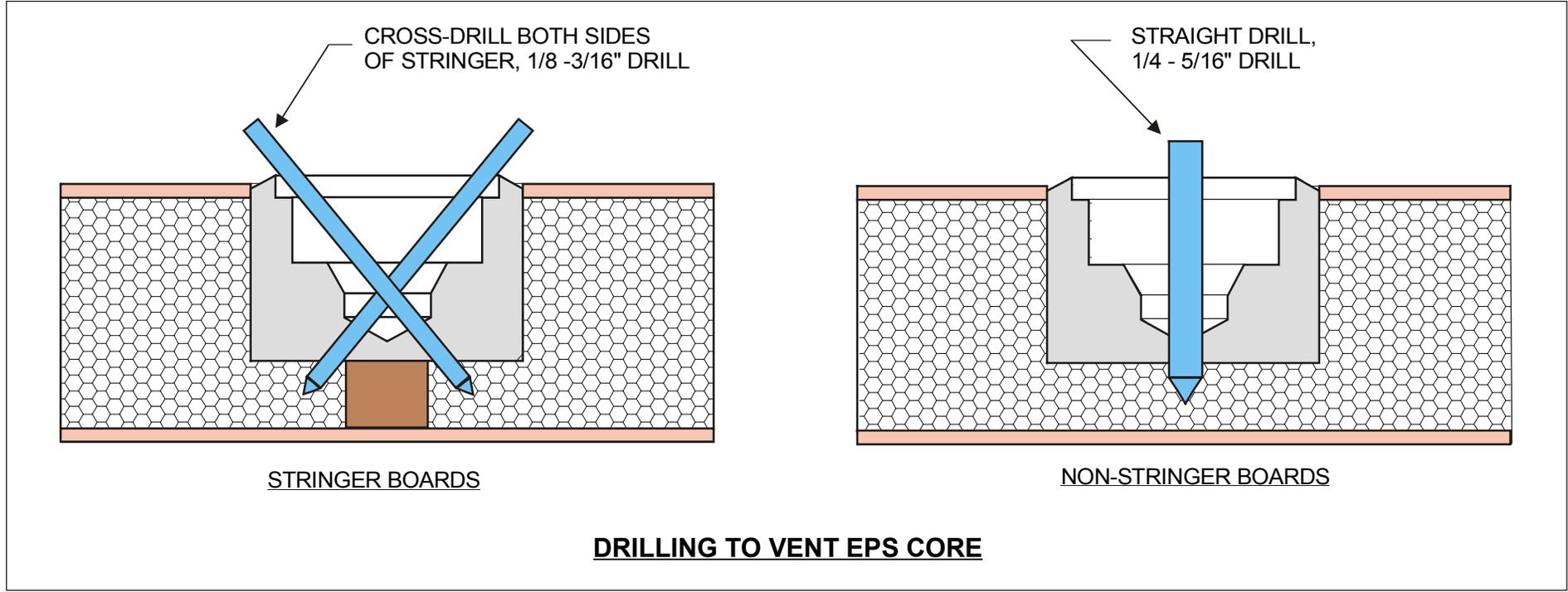
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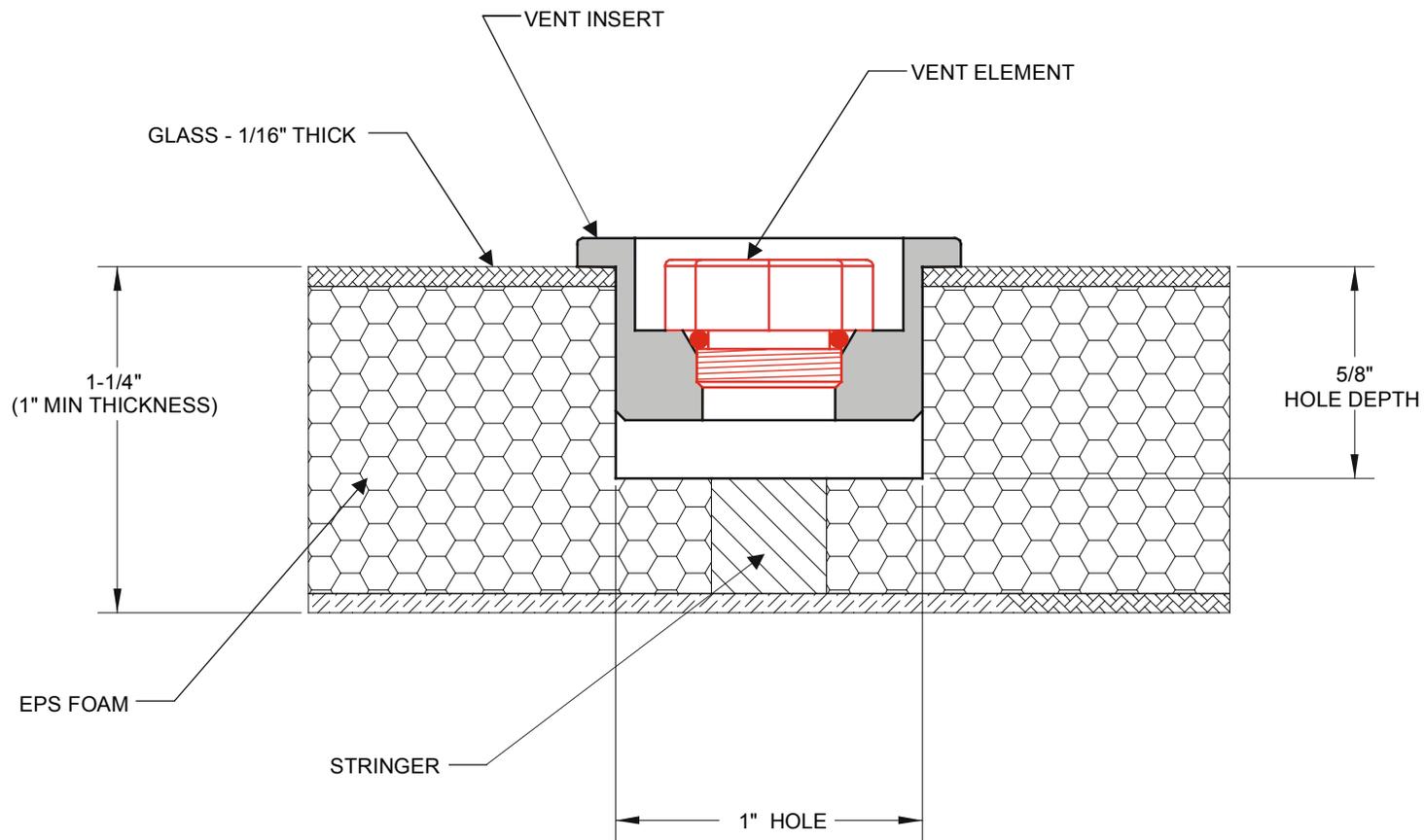


INSTALLATION: GLASS-IN VENT INSERT

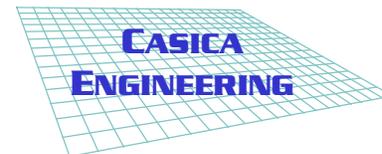


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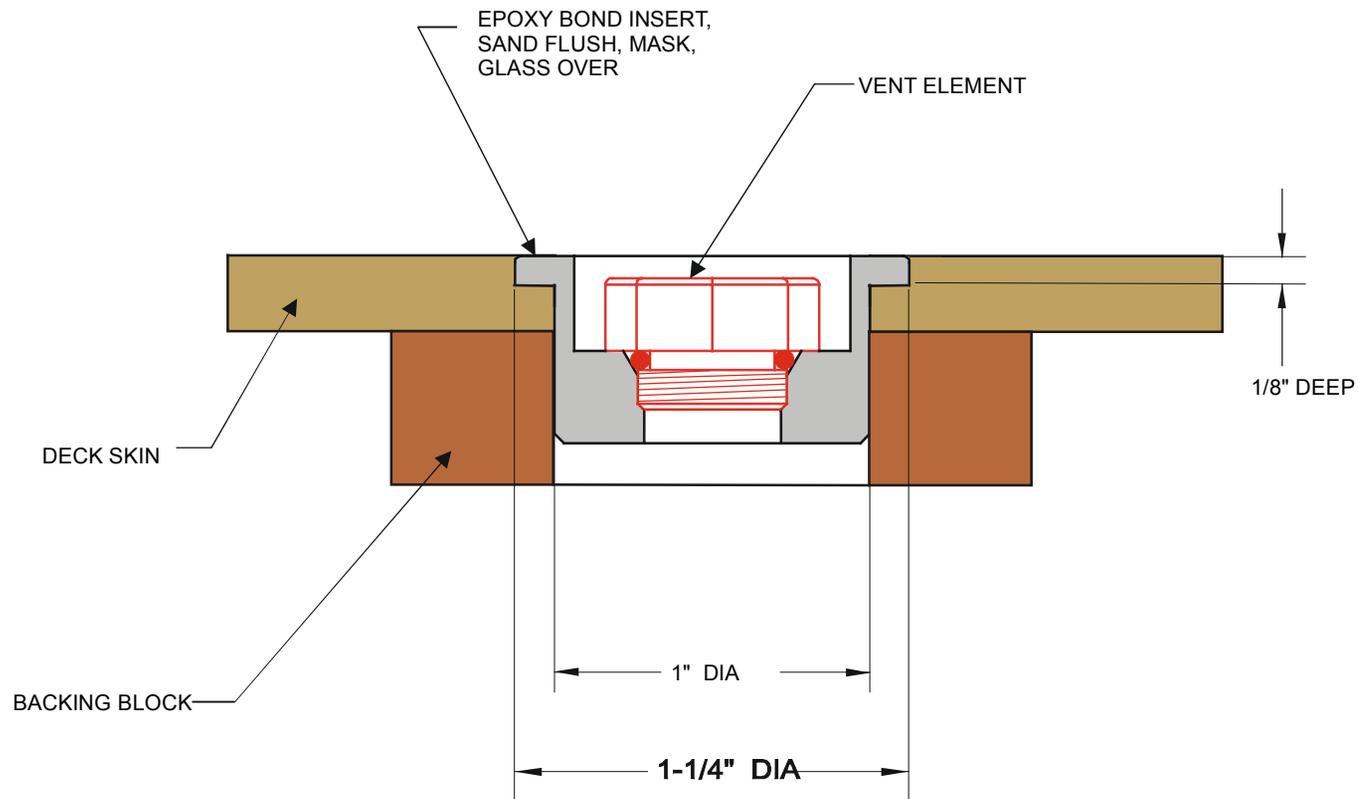




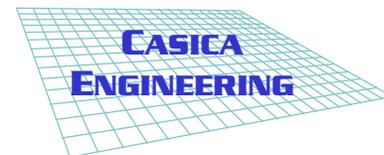
INSTALLATION: RETRO-FIT VENT INSERT



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HOLLOW-WOOD INSTALLATION: RETRO-FIT VENT INSERT



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VENT INSERT STYLES

GLASS-IN STYLE

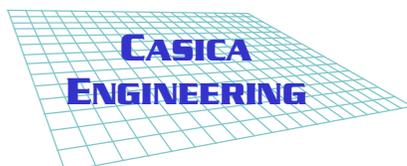


VENT ELEMENT

RETRO-FIT STYLE



GLASS-IN STYLE INSTALLED



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W.L. GORE MEMBRANE VENT SPECIFICATIONS

Membrane Characteristic

Hydrophobic and Oleophobic

Oil Rating 3 (AATCC 118-1997ASTM)

Water entry pressure of the membrane ≥ 0.6 bar/60 sec

Ingress Protection class of the installed POV/M12x1

IP65 - Water jets

IP67 - 1 meter water submersion for 30 minutes

IP69K - High pressure spray

Temperature Resistance (DIN IEC 68-2-14, Na)

Cycle test Cycles 400

$T_{\text{dwell}}=20$ min, $t_{\text{change}}<10$ sec.

POV/M12x1 vents are designed for service temperature range of -40°C to 125°C .

UV and Climate Resistance

Industrial climate test (DIN 50-0-18) Test criteria SFW 2.0 S Cycle 9

UV and climate resistance: other than a little yellowing of the top surface, no significant change in mechanical characteristics.

Salt Spray Test (DIN 50-0-21)

No penetration of salt crystals through the membrane into the housing.

85/85 Storage Test (DIN IEC 60068-2-3: 85°C , 85% r.H. dwell time 1000 hours)

No significant change in mechanical characteristics.

Typical Airflow @ $dp=70\text{mbar}$: 400 ml/min

