



CVM, Inc.

Custom Machine Builders

7059-J Commerce Circle * Pleasanton, CA * 94588
Phone: 925.847.8808 * Fax: 925.847.9635 * www.cvmcvm.com

OPERATING INSTRUCTIONS FOR THE CVM SATURATOR

Set-up of Saturator shall be supervised and checked by the properly trained foreman. Equipment should be located in a well-ventilated and well-lighted area.

CALIBRATION

- The gap width adjustment is made by turning (in unison) the handles attached to the threaded rods. Use shims/feeler gauge to measure the gap. A quarter turn will result in an approximately 0.125mm (0.005 inch) change in the roller opening width.
- Gap to be measured and set for a ratio of 0.8:1.0 of epoxy to fabric by *weight*.
- Use the table below to determine the starting gap width. The starting gap width may also be taken as the dry fabric thickness. Too narrow of a gap will “crush” the fabric and too wide of a gap will result in “dripping wet” fabric.
- E-glass fabric is saturated when it appears clear and you can “see” through it. The surface of the carbon fabric will have a sheen to it and still appear to have some texture when it is saturated.
- A good way to check proper saturation is to periodically check the resin/fabric usage ratios. All of the epoxy that is recommended for a given square meters (footage) of fabric should be used up.
- Once the correct gap is determined, tighten the locking nuts on the adjusting bolts.
- The gap widths should be checked at the beginning of each day in case the rollers shifted during use.

Recommended Starting Gap Widths

Adjustments may be necessary to achieve the correct epoxy/fabric ratio.

Saturating with Sikadur Hex 300		Saturating with Sikadur Hex 306	
Sika Wrap Hex Fabric	Roller Gap*	Sika Wrap Hex Fabric	Roller Gap*
100G/107G	45 mils	100G/107G	67 mils
103C	44 mils	103C	67 mils
230C	14 mils	230C	20 mils

*Gap width set at room temperature (68°F / 20°C) - large temperature variations will effect the viscosity of the epoxy and therefore the gap width.

**40mils = 1mm

SATURATING

- Have pre-cut fabric ready or fabric roll secured on rod.
- Have mixed epoxy ready in pourable containers.
- Keep scissors and/or utility knife near.
- Have extra PVC winding tubes near. Note that the winding tube can be “sleeved” with a slightly larger diameter PVC tube cut in to convenient fabric-width lengths.

EXHIBIT A



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- Adjust epoxy dams to the correct width for fabric.
- “Prime” the rollers by pouring a bead of epoxy in the center of the rolls and while slowly cranking the rollers (inward).
- Pass the fabric over the top bar, in-between the counter and through the rollers. Take-up the saturated fabric onto the PVC winding tube.
- Slowly crank the saturator at an even pace.
- Keep epoxy reservoir full during saturation by continuously pouring epoxy onto the rollers on both sides of the fabric.
- Use the counter to measure out the desired length and then squarely cut the saturated fabric. Cutting saturated fabric discourages fraying and scissors tend to work better than a utility knife.
- Remove the take-up roller (PVC winding tube). Either use the take-up roller or the “sleeve” to unroll the saturated fabric onto the area of application.

CLEAN UP

- **IMPORTANT** - always turn the rollers in reverse during cleaning to avoid getting your fingers caught in-between the rollers.
- Remove excess resin from the rollers using a squeegee or by running thin cardboard through the rollers.
- Wipe down the entire CVM Saturator using clean rags wetted with MEK solvent (or equivalent).

SATURATOR CHECK LIST AFTER CLEANING:

- Main rollers are free of resin (#1)*
- Darn and dam holders(#2) are free of resin.*
- Feed shaft (#3) is free of resin*
- Feed shaft holders (#4)are free of resin and slide easily back and forth.*
- The counter (#5) is free of resin and in working order.*
- All levers (#6-8) are free of resin and rotates easily.*
- Pipe clamp (#9) can easily be pulled in and out.*
- Wheels move easily and brakes are in working order.*

CRATE CHECK LIST

- Wood intact.
- Straps in good condition.
- Fastening loops intact.