



How to Run a Flex RhinoBond® Job

THINK OUTSIDE THE SEAMS

With the Flex RhinoBond system, you have to think differently when it comes to scheduling and running your job, particularly when compared to a traditional mechanically attached installation.

These Best Practice recommendations are based on several years of Flex RhinoBond project observation and evaluation.

It should also be noted that for improved productivity, a minimum of two Flex RhinoBond tools should be used.

FASTENER INSTALLATION

Fasteners MUST be in a straight row in at least one direction. The more even the spacing, the easier they are to find under the membrane, and the faster the installation.



Straight – good



Random – harder to find

Snap chalk lies to layout grid pattern for corners, perimeter and field. Build an 8' template bar with grid measurements marked on it to speed up marking for chalk lines.

BEST PRACTICES

Fasteners must not be overdriven. They should be tight enough that you can not turn the plates with your hand. Overdriven fasteners are harder to find, and may result in a poor or partial bond.



Proper installation



Overdriven

Position membrane so seams do not pass directly over Flex RhinoBond plates. It is best to install the membrane so that the seams are between the rows of Flex RhinoBond plates. If a seam does pass directly over a plate, weld the seam and then bond the membrane to the Flex RhinoBond plate.

POWER REQUIREMENTS

WARNING: Do not plug Flex RhinoBond tool into generator until the generator is running at full speed and delivering stable power.

Unstable power during start-up increases the risk of damage to the Flex RhinoBond tool.

Each Flex RhinoBond tool should run on a dedicated 20A circuit, with no more than 100 feet of good quality (12 ga. min.) extension cord per tool. Do not plug the tools into a pigtail, and do not plug them into a 15A GFCI adapter. Generator power usually works better than house power because house power often requires longer extension cords. The tools are designed to run on 105-130V. If the cycle time lasts more than 8 seconds, check the power source.

Generators should be 5,000 watt (min.) with one 20A GFCI circuit per tool. Two tools (max.) per 5,000 watt generator. **NO OTHER TOOLS SHOULD BE PLUGGED INTO DEDICATED FLEX RHINO BOND TOOL GENERATOR DURING OPERATION.**



One cord per circuit and per tool



Do not use pigtails

Static interference. If there is a radio on the job site, you may hear interference (i.e. static) when the tool is operating. Don't worry, this is normal. The tool meets FCC transmission requirements for industrial tools, but can cause static interference under certain

BEST PRACTICES

circumstances, especially if the radio is plugged into the same circuit as the tool.

TOOL ALIGNMENT

For optimum weld quality, the Flex RhinoBond plate must be centered under the red dot on the foot of the tool within 1 inch. This is not hard to do if the operator pays attention. Best practice is for each new operator to have a grease pencil, and to outline the base of the tool on every 10th plate or so, to check the alignment. After checking the alignment several times, the operator will get the hang of it.



The tool must be centered properly over the plate

Train operators to develop the hand-eye coordination to align the tool consistently.

MAGNET ISSUES

Magnet alignment is important. Operators should make sure the magnet completely covers the plate. Misalignment will result in less than perfect welds.

Keep the membrane clean. Any debris on the top of the membrane can be pushed into the surface by the magnet during the bonding process. Use a leaf blower to eliminate all debris from the membrane surface prior to welding.

Keep the magnets clean. If a metal shard or other debris from the roof sticks to the magnet, it can make a mark in the membrane on every weld. Therefore, it's a good idea to periodically wipe the bottom of the magnet. As long as the operator and foreman are paying attention, this should not be an issue.

ALWAYS CALIBRATE THE TOOLS

Calibrate each tool at least once in the morning, and once after lunch, or whenever the temperature changes more than $\pm 15^{\circ}\text{F}$. Use a grease pencil to check alignment when calibrating. Use the up and down arrows on the Flex RhinoBond tool to change the power level, and set the tool to the level that provides a 100% bond. Be sure to allow test assemblies to cool completely before evaluating bond strength.



Evaluate bond strength through calibration

Accurately test weld. When making test welds, be sure to test the plates in the same assembly used in the actual installation. As an example, don't test the plate on a concrete deck if they are being installed on polyiso.

BEST PRACTICES

WELD IN STRAIGHT LINES

Operator #1 lines all of the magnets up on the first row. Operator #2 begins work on the adjacent row after the first operator completes the first five welds. This procedure helps make sure that the magnets remain on the plates for at least one minute. This method also minimizes motion and increases productivity.

Magnets from the first row are used by the second operator in the adjacent row. This procedure continues across the roof.



Work one row after another for maximum productivity

FLEX RHINOBOND STANDING SEAM RETROFIT PROJECTS

Night before:

Meet with foreman to discuss tool operation and project coordination. *This is KEY!*

Day of:

- Load roof
- Fill flutes
- Apply cover board
- Snap lines over purlins
- Apply fasteners and Flex RhinoBond plates
- Blow any debris off cover boards and plates with a leaf blower
- Roll out membrane (position sheets so seams do not fall on rows of plates)
- Let sheets "relax"
- Set seam welders for conditions and weld membrane seams
- Make sure generator is up to full speed and delivering stable power before plugging in Flex RhinoBond tool
- Calibrate Flex RhinoBond tools and start bonding plates
- Ballast any sections that don't get welded

Subsequent days:

- 2 guys with Flex RhinoBond tools finish welding membrane from the previous day
- All other guys in crew repeat the process above.

RESOURCES

Review Flex RhinoBond Owner's Manual for additional information.

CONTACT

If you have any questions or need more information, contact the **Flex Technical** or **Sales Department** at **1-800-969-0108**.