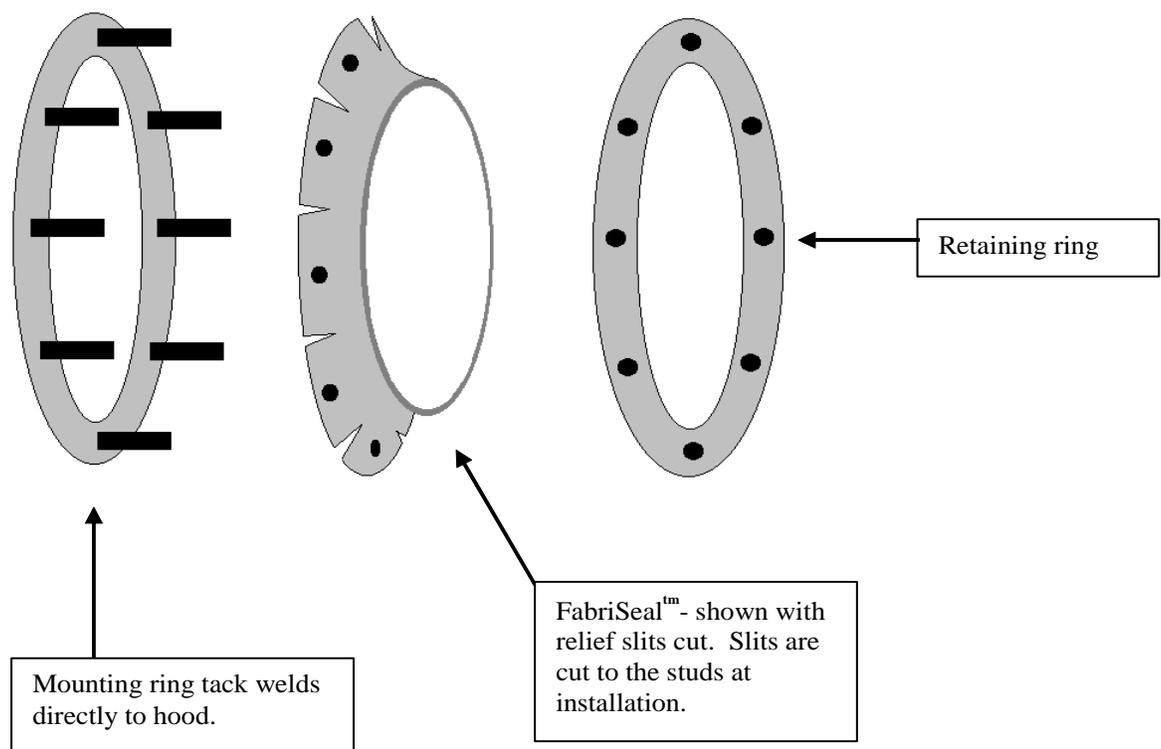


FabriSeal™ Installation Instructions



Seal assembly comes complete with the FabriSeal™, tension strapping and springs, and strap length adjustment clips.

Available as an optional purchase from Sutton Industrial Products (SIP): Mounting ring assembly comes complete with steel or stainless steel segmented mounting ring (including welded studs), segmented clamping ring, all nuts and lock washers.

Needed Tools:

- 1) Belt Sander or DA gun.
- 2) Grinder if weld bead or spatter is present on shell.
- 3) Sockets and wrenches to fit nuts and bolts of mounting assembly.
- 4) Cutting torch if existing bolts are badly rusted on.
- 5) Sharp knife or cut off wheel to cut bolt hole slits into seal.

Installation is as follows:

Optional Mounting Ring Assembly:

SIP will design the mounting ring that fits the seal for the application. This includes bolt circle spacing, number of mounting studs, and diameters of mounting flanges. The mounting ring can be fabricated by the customer however SIP cannot guarantee seal fit in this instance. **LOCATING THE MOUNTING RING ON THE HOOD OR DUST CHAMBER IS THE MOST IMPORTANT STEP IN SEAL INSTALLATION.** Having the mounting ring centered to the rotational axis of the kiln greatly affects seal life and performance.

Most kiln shells have a certain amount of ovality or run-out, which may be greater when shut down and cold. Thus, if the seal mounting ring is located by reference to a cold, stationary kiln, the seal may end up not concentrically mounted with the “dynamic” centerline of the hot, rotating kiln. To obtain the optimum placement for the mounting ring, the following procedure is recommended:

Obtain runout dimensions by placing a steady rest near the sealing surface of the kiln shell during normal operation. Measure the distance from the steady rest to the sealing surface at various points of rotation to get a representation of how out of round the sealing surface is. Mark each point of measure with a number and draw a sketch of the surface. This will allow you to determine a mounting point based on various measurements around the shell to get a good centering of the ring.

Centering provides for an even amount of wear 360° around the seal and will maximize seal life and performance. **The mounting ring is supplied in segments and the segments are oftentimes not identical.** Locate the match marks scribed into the ends of the ring segments and pair together. Lay out the ring on the ground to insure a concentric circle with equal bolt spacing between the segments. The mounting ring is then either welded or bolted onto the hood. Locate the ring within the mounting tolerance of centerline (+/- 1/8” typically). Once in position, tack or snug the ring segments onto the equipment until the full ring is in place. Measure the ID of the ring down to the sealing surface points of reference to make sure that the ring is properly aligned. Once the dimensions are verified, the mounting ring can be fully welded or bolted to the static hood, and the split line between the mounting ring segments can be fully welded together if desired. After the mounting ring is in place, seal installation may begin.

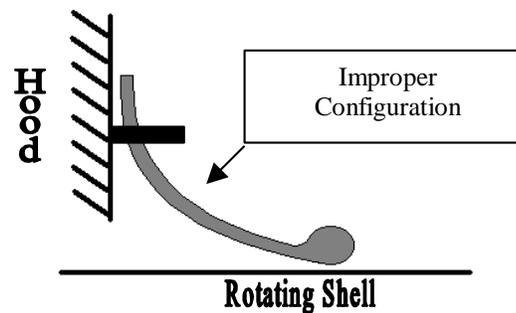
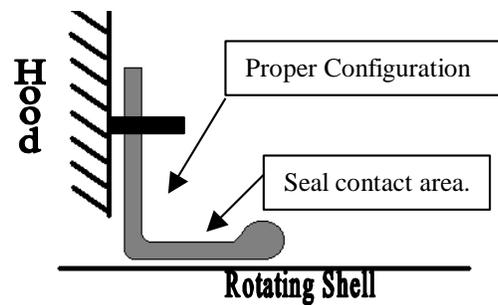
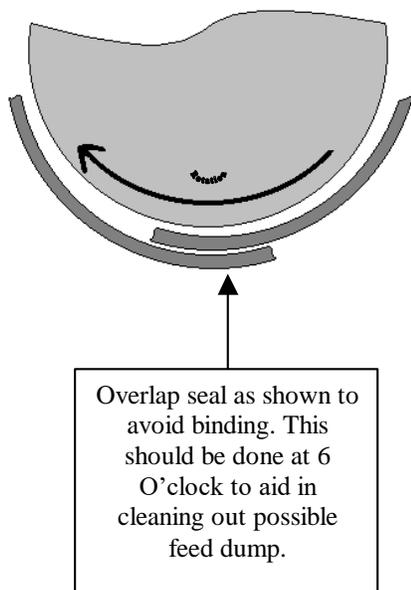
FabriSeal™ Installation:

- 1) Remove the old seal and replace any old mounting studs that are damaged.
- 2) Run a belt sander or grinder over the shell surface around the sealing area to remove any rust, weld spatter, beads, or product buildup. If the shell walks longitudinally during operation, sand the area also where the seal will ride. **Smooth the shell as much as possible as this will greatly extend the effective life of the seal.**
- 3) Fold the seal in half and mark the midpoint with a marker. Lace the yellow tension straps through the belt loops. The straps should be laced in from the ends of the seal to meet in the middle. Typically, there will be one segment for shell diameters up to 3', two segments for 3'-6' diameters, and three to four segments for shells over 6' OD.
- 4) Sling the seal over the shell such that the seal hangs evenly. The marked midpoint should be in the 12 o'clock position. This will allow the seal to overlap at the exact bottom of the shell to facilitate possible cleanout.
- 5) Starting at the top, position the seal such that it forms a 90-degree angle with the shell (see sketch pg. 3). The seal contact area should be about 2 ½” to 3”. Use a sharp knife, or for quickest results use an electric die grinder with high speed cut off wheel, and cut slits in from the outside edge of the seal making sure to only cut deep enough to fit over the mounting studs. This will “relax” the seal on the mounting ring as well as relieve any “pucker” on the shell surface. The outside edge of the seal does not have to be even with the mounting ring OD. It is ok if the seal sticks out from the ring a little bit.
- 6) Work your way down the sides evenly cutting mounting stud slits. As sufficient slits are made, clamp the seal in place with the clamping ring segments. As you progress toward the bottom, make sure there is **not** severe seal sag between the ring and the shell (This will cause the seal to wander on the shell and possibly invert back into the hood).
- 7) When the bottom is reached, make sure the overlap corresponds with the direction of rotation (see sketch pg. 3). If installed backwards, the seal will roll up and fail.

- 8) Lace the strap ends into the length adjustment clips. Affix the tension springs to the clips. Do not attach the springs to anything other than the strapping clips and vice versa. Do not hang weights from the springs or strapping. You can adjust the strapping length as needed.
- 9) Check for sag at the bottom of the seal. Pull the tension strapping just tight enough to ensure contact is made between the sealing surface and the seal.

The last step is highly recommended prior to operation.

- 10) Rotate the shell while pulling operating draft (if possible) to test the seal fit prior to firing and operation. Less draft and burner will be needed as a result of the seal. Observe the fit around the sealing surface and adjust accordingly. The seal only needs to make light continuous contact with the shell to be an effective seal. **Cranking it down tight to the shell does NOT enhance the sealing properties of FabriSeal™ as this will only cause the seal to wear much faster.**



General Notes:

FabriSeal™ is not designed to keep product in the system. Any feed dump will result in seal sag, premature wear, and failure. If feed dump is present, steps should be taken to correct the problem **prior to installing FabriSeal™**. When installed properly, the seal should last anywhere from 6 months to over 2 years, depending on the nature of the feed and of the system. Due to the vast differences in feed and system characteristics, SIP cannot offer guarantees on the lifespan of the seal. Please see attached Troubleshooting and FAQ sheet for additional information.

Improper installation adds additional stresses to the seal. This will lead to a decrease of the effective sealing area, a decrease in seal performance, a decrease in seal life, and a decrease in energy savings. If you have any questions concerning this FabriSeal™ installation, please call us at 1-844-351-5100.