WHAT IS CLAIMED IS:

1. A method of installing an elastomer band as a protective edge seal around a portion of a semiconductor substrate support used for supporting a semiconductor substrate in a plasma processing chamber, comprising:

expanding an elastomer band into a circular shape having a diameter greater than a diameter of a mounting groove within the substrate support;

clamping the elastomer band in the expanded shape between a base ring and a clamp ring;

placing the elastomer band over the substrate support in the expanded shape; and

releasing the elastomer band from between the base and the clamp rings, which contracts the elastomer band into the mounting groove of the substrate support.

2. The method of Claim 1, further comprising prior to releasing the elastomer band into the mounting groove, positioning the elastomer band adjacent to the mounting groove.

3. The method of Claim 1, wherein the step of expanding the elastomer band is performed using a loading member, which seats the elastomer band between an upper surface of the base ring and a lower surface of the clamp ring.

4. The method of Claim 1, further comprising uniformly expanding the elastomer band into the circular shape and uniformly contracting the elastomer band into the mounting groove.

5. The method of Claim 1, further comprising after releasing the elastomer band from within the base and clamp rings into the mounting groove, adjusting the elastomer band to move the elastomer band into the mounting groove where needed.

~~6. The method of Claim 1, further comprising after releasing the elastomer band from within the base and clamp rings into the mounting groove, pressing an embedding tool against the elastomer band and compressing the elastomer band into the mounting groove to ensure that the elastomer band is fully seated in the mounting groove.~~

~~7.~~1. An annular installation fixture adapted to mount an elastomer band in a mounting groove around a semiconductor substrate support used for supporting a semiconductor substrate in a plasma processing chamber comprising:

an installation unit comprising:

a top ring, the top ring having one or more internal threads;

a clamp ring;

a base ring, the base ring having one or more external threads, which are configured to receive the one or more internal threads of the top ring, and upon tightening of the top ring onto the base ring, the elastomer band is clamped between the clamp ring and the base ring; and

a latch and release mechanism, which releases the elastomer band into the mounting groove by un-clamping the elastomer band from between the clamp ring and the base ring; and

a loading member, which positions the elastomer band within the installation unit between the clamp ring and the base ring.

~~8.~~2. The annular installation fixture of Claim ~~7~~1, wherein the clamp ring is an annular ring having an upper section and a lower section, which forms a step on a lower surface of the clamp ring, and wherein the elastomer band is clamped between the clamp ring and an upper surface of the base ring.

~~9.~~3. The annular installation fixture of Claim ~~7~~1, wherein the latch and release mechanism includes a first handle attached to an outer edge of the top ring, a second handle attached to an outer edge of the base ring, and a latch mechanism, which secures the top ring to the base ring.

~~10.~~4. The annular installation fixture of Claim ~~9~~3, wherein the latch mechanism includes a spring-loaded latch, which has a lever, which engages a series of teeth on an outer portion of the top ring.

~~11.~~5. The annular installation fixture of Claim ~~7~~1, wherein the top ring includes an annular member, which includes an outer section and an upper section, the upper section extending from an upper edge of the outer section and inward, and wherein the outer section includes the one or more internal threads, which are configured to receive the one or more external threads on the base ring.

~~12.~~6. The annular installation fixture of Claim ~~11~~5, wherein the top ring includes an extension spring, which engages the latch and release mechanism on the base ring to rotate the top ring in an opposite direction upon de-clamping of the clamp ring.

~~13.~~7. The annular installation fixture of Claim ~~12~~6, wherein the base ring is an annular member having the one or external threads on an outer surface of the annular member, which are configured to engage the one or more internal threads of the top ring.

~~14.~~8. The annular installation fixture of Claim ~~13~~7, wherein the base ring includes an upper annular projection at an inner end of an upper surface of the annular member, and one or more compression springs extending upward from the upper surface of the annular member to a height greater than the annular projection.

~~15.~~9. The annular installation fixture of Claim ~~7~~1, wherein the clamp ring is made of polytetrafluoroethylene (PTFE).

~~16.~~10. An elastomer band installation kit comprising:

an annular installation fixture adapted to mount an elastomer band in a mounting groove around a semiconductor substrate support comprising:

an installation unit comprising:

a top ring, the top ring having one or more internal threads; a clamp ring;

a base ring, the base ring having one or more external threads, which are configured to receive the one or more internal threads of the top ring, and upon tightening of the top ring onto the base ring, the elastomer band is clamped between the clamp ring and the base ring; and

a latch and release mechanism, which releases the elastomer band into the mounting groove by un-clamping the elastomer band from between the clamp ring and the base ring; and

a loading member, which positions the elastomer band within the installation unit between the clamp ring and the base ring; and

a curved embedding tool adapted to press the elastomer band into the mounting groove in the substrate support, the tool comprising a curved surface that is curved in a concave manner, and has a radially extending portion, which pushes the elastomer band into the mounting groove.

~~17.~~11. The elastomer band installation kit of Claim ~~16~~10, further comprising one or more elastomer bands having a polygonal cross section which tapers inwardly.

~~18.~~12. The elastomer band installation kit of Claim ~~16~~10, further comprising an o-ring pick.

~~19.~~13. The elastomer band installation kit of Claim ~~16~~10, wherein the clamp ring is an annular ring having an upper section and a lower section, which forms a step on a lower surface of the clamp ring, and wherein the elastomer band is clamped between the step and an upper surface of the base ring.

~~20.~~14. The elastomer band installation kit of Claim ~~19~~13, wherein the latch and release mechanism includes a first handle attached to an outer edge of the top ring, a second handle attached to an outer edge of the base ring, and a latch mechanism, which secures the top ring to the base ring.