

Mechanical Seal Design:

Mechanical Face seals are fitted in Groove of retaining housing groove, to form the sealing at the adjoining faces. Metal faces are precision Lapped. The ramp angle of Seal and Housings are slightly different and form a wedge for the rubber ring to slide into and form a compressed profile giving load on the seals and making it intact.

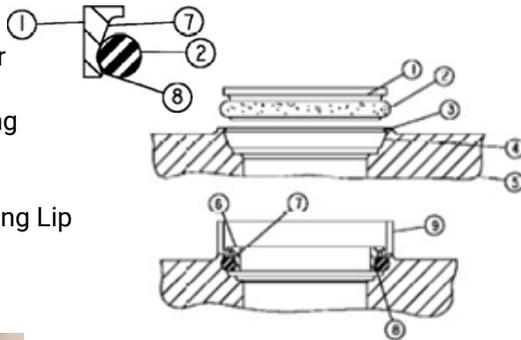
Terminology:

RUBBER O - RINGS

METAL FACE SEAL



1. Seal Ring
2. Rubber Toric
3. Housing Retainer
4. Housing Ramp
5. Seal Ring Housing
6. Seal Ring Face
7. Seal Ring Ramp
8. Seal Ring Retaining Lip
9. Installation Tool



Housing Preparation:

The housing components that contact the rubber toric rings (3 and 4 a) must be free from foreign particles, etc) before installing the seal. This should be done using a lint free wipe and a non-petroleum based sol- vent especially

Housing Preparation continued:

SAP Parts Seal-O -Fix Spray. Dry with a clean wipe. Re- move any foreign material from the rubber torics (2), the ramps (7) and the lips (8) of both seal rings.

Place the rubber torics on the metal seal ring at the bot- tom of the seal ring ramp and against the bottom of the seal ring ramp and against the, retaining lip.



Make Sure the O-Rings remain straight on the rim and not squeezed or twisted as it may lead to improper installation of the float seal.

Approved Assembly Lubricants:

Seal-O-Fix Spray / Isopropyl Alcohol* Follow all the safety practices for handling volatile solvents. Do not use any other oil that leaves oil film or do not evaporate.

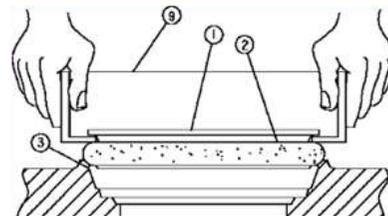


Seal Installation Tool :

Below is how the Seal installation tool looks like. It con- sists of two semicircular sections to push the O -ring in the housing groove and one guide ring which locates the two halves symmetrically & establish an assembly tool.

Duo Cone Seal Installation Process:

It is always recommended the Duo Cone / Metal Face float Seals must be installed using proper Installation Tool only.



Steps By Step Seal Installation:

1. Arrange Right Duo cone Seal, Installation Tool, Seal -O-Fix Spray, Mallet, Lint Free Cloth, etc. as shown below before starting actual seal installation in the housing cavity.



2. Check you are using appropriate tool part number, and design provided by SAP Parts for the Seal. Note: - Each seal has different Tool. Check Seal face, O-Ring & housings are clean and free from any mechanical damage, dent etc.



3. Apply Seal-O-Fix on Seal face and clean the Seal using Lint Free Wipe. Ensure the seal face be thoroughly cleaned and no fine particles of dust should remain on it. Employ the spray on the O-Ring circumference, this gives sufficient lubrication for Seal to fit in the cavity of Housing.



4. Put the O-Ring on the Seal Ramp and check it is properly sleeved, Check there is no skewing or twisting of O-Ring.

Steps By Step Seal Installation continued:

5. Hold the O-Ring on the Seal Ramp and engage the Lip of the tool between the gap of O-Ring and seal face inside the circular guide way groove of the Tool.



6. Bring the edges of clamp close to each other and tighten the check nut provided on tool so as to hold the seal firmly in the clamp formed.

7. This makes the Seal Guided in the Install Tool.

Installation of Seal inside the Housing Groove



1. For installation of Seal, arrange a cleaned Seal & cleaned ,wiped housing .Put the Seal on the Housing.
2. Hold the O- Ring in the Fixture and form the tool guide assembly as explained above.
3. Hold the Seal and O-Ring Firmly and see O-Ring is not twisted. Locate the seal & tool on groove opening.
4. Press the fixture with even load on on the Guide Plate, and experience the O -Ring insertion jerk, inside the housing. Small Rings can be manually fixed, for big rings apply even and gentle pressure around the rim of guide plate using wooden mallet.



CAUTION!!!

The Rubber O-Ring can twist if it is not wet all around during installation or if there are burrs and fins on the retaining ramp of housing. Twist, mis alignments, and bulges of O-ring will result in seal failure. If the seal is not installed correctly, remove it from housing and repeat the process.



1. Never use Rubber O- Rings with Blow holes/ damages.



2. Never allow Sealing surface be dirty, it should be cleaned well before Assembly.



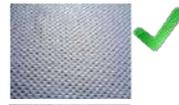
3. Never try hammering on sealing surface and never use sharp tools to locate the O-Rings.



1. Clean the Sealing Surface thoroughly before installation.



2. Use Seal -O-Fix Spray



3. Check for Sealing edge free from dust, dirt, hair etc.



4. Always use Only Lint free Wipes/Cloths, Never use tissue Pa- per or cotton waste.

5. While completing the final assembly of the unit, make sure that both seals are in correct housings together. High impact can scratch or break the seal components.