

## About Your Mechanical Seal

Mechanical seals are most often used for sanitary pumps. Not only are these types of seals sanitary, they are also very durable and, if needed, can be easily replaced. The mechanics behind this type of seal involve pressure creating a seal between the seal faces and adding a thin layer of liquid lubrication to prevent heat and friction. Secondary seals are added to prevent leakage around the two seal faces.

Main features often seen with mechanical seals include a primary rotating seal face on the shaft, as well as a primary stationary seal face on the housing. Also, a secondary seal on the rotating seal and shaft, as well as a secondary seal on the stationary seal and housing. They also feature a means to maintain pressure on the seal faces when the pump is not being used. Last, they often feature a means of adjusting and maintaining the working length of the seal.

The function of the primary seals is to protect the housing or backplate and shaft from wear. A mechanical seal uses two different primary seals. One is a stationary seal which is located on the housing or backplate. The second is a rotating seal which is located on the shaft. Both primary seals' faces are very smooth in texture to help prevent friction. When the pump is active the pressure of the liquid being pumped forces the seal faces to press together. When the pump is not active, however, another source of pressure is needed to keep the seal faces pressed together. Often this other source of pressure is a spring, a series of springs, or an o-ring. Secondary seals are placed between the rotating primary seal and the shaft, as well as between the stationary seal and housing. Secondary seals are used to prevent excessive leakage; however, note that slight leakage between the two primary seals is needed to lubricate the seals.