OIL LIFTER <2>

(➡ FROM **OIL LIFTER <1>**)

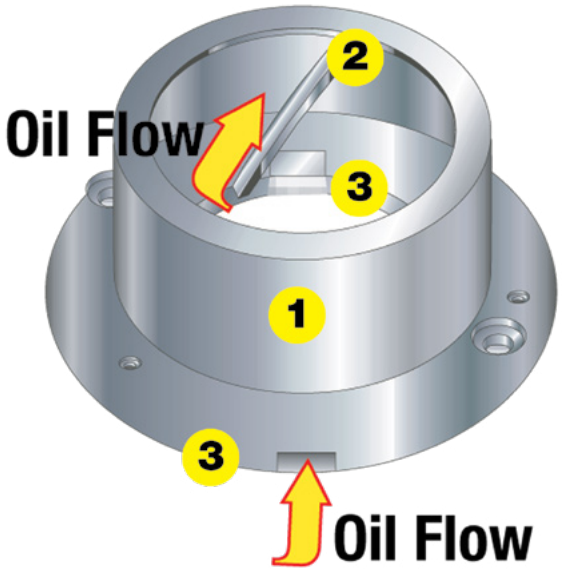

Figure 4

In order to solve the aforementioned problems, Tsurumi invented the oil lifter **(Fig. 4)** and has made it a standard feature on all pumps.

By providing positive lubrication to both upper and lower seal faces, this amazingly simple device turns wasted energy into added protection and increases the life expectancy of the mechanical seal. The principals of construction and operation is as follows: The Oil lifter consists of a cylindrical seal cage **(Fig 4, Item 1)** that attaches to the lower seal chamber intermediate. This encloses the mechanical seal completely, except for the upper seal faces **(Fig 5, Item 1)**. Located inside of the seal cage are two lifting vanes, **(Fig 4, Item 2)**. Adjacent to the lifting vanes there are two oil inlet ports **(Fig 4, Item 3)**. As the shaft and mechanical seal start to rotate, centrifugal force is imparted to the oil inside the oil lifter, forcing the oil up the lifting vanes. The oil is forced to the top of the oil lifter, exiting and providing positive lubrication to the upper seal faces. This action forces oil to be taken into the oil inlet ports causing positive lubrication to the lower seal faces, **(Fig 5, Item 5).**

This combined action causes heat to be dissipated evenly across the seal faces and extends seal life up to 10 times the normal life expectancy.

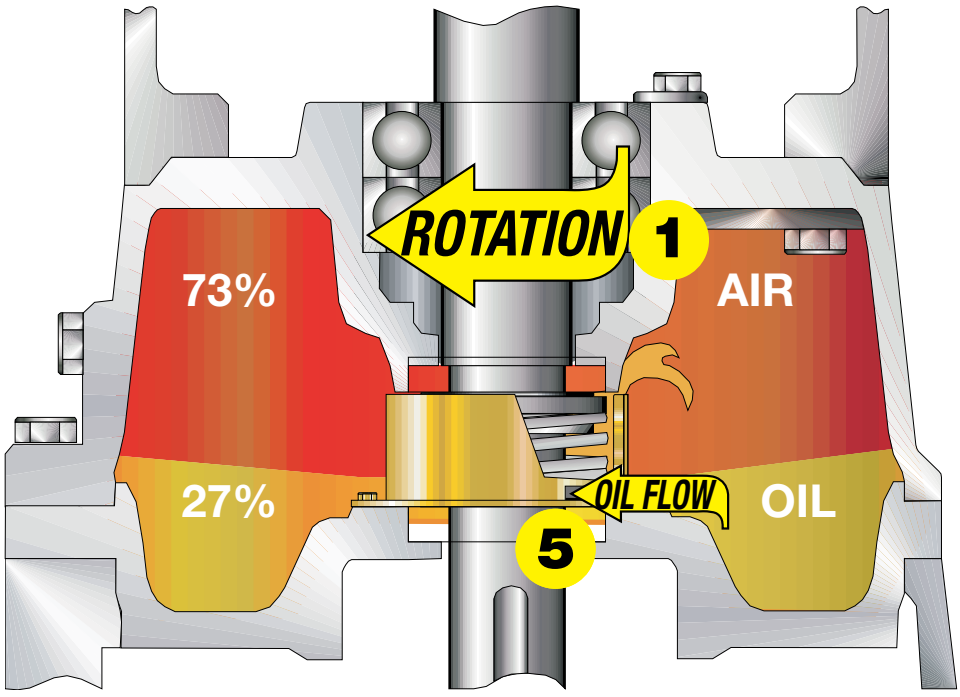

Figure 5