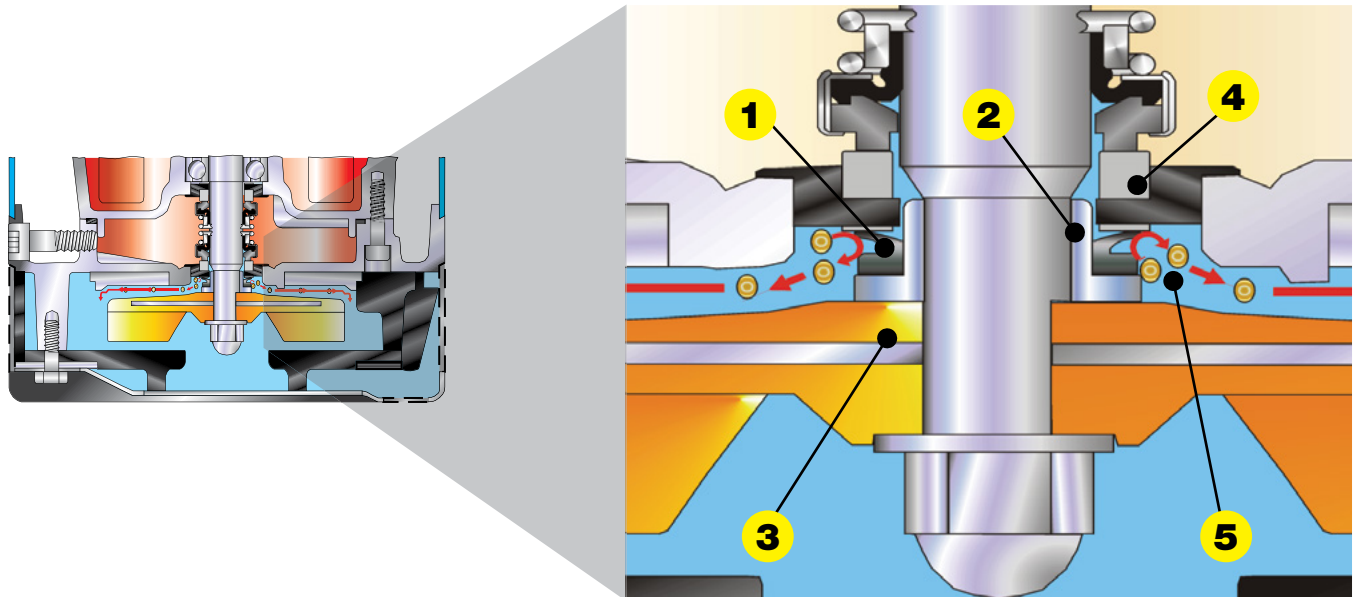


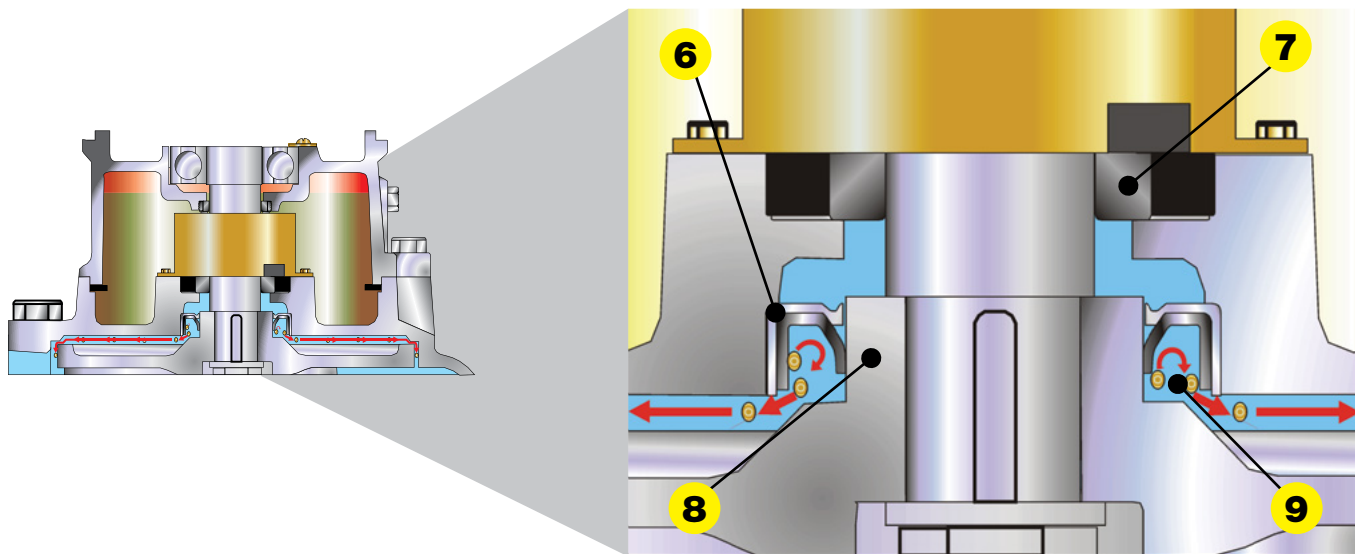
MECHANICAL SEAL PROTECTION DEVICES

In addition to supplying the most durable mechanical seals, Tsurumi incorporates two different seal protection devices to prevent abrasive particles from entering into the area of the bottom seal faces.

"V" RING, This design consists of a special "V" Ring **1** stainless steel shaft sleeve **2** . The "V" Ring rotates with the shaft sleeve and the impeller and the impeller **3** . The upper lip of the "V" Ring runs against the bottom surface of the bottom seal face **4** . The design of the "V" Ring is such, that as it rotates, abrasive particles are expelled back into the flow and away from the seal faces **5** .



LIP SEAL, This design consists of one or more lip seals **6** , mounted in a chamber below the bottom seal faces **7** . The lip seal is stationary. The impeller hub **8** rotates against the flexible lip of the lip seal. The design is such, that abrasive particles are expelled back into the flow and away from the seal faces **9** . Large sewage and wastewater pumps incorporate a shaft sleeve that rotates against the lip seals.



Note: Please check the individual product bulletin for the design incorporated in each series.