

# STAN-COR

## Concentric Casing Design

Unlike volute-type centrifugal pumps, the Stan-Cor solid, non-metallic ANSI pump uses a unique concentric casing. The concentric casing provides a constant equal distance between the pump casing and the impeller at all times during pump operation. This greatly reduces turbulence and vibration, thereby extending the life of the mechanical seal and bearings.

In a conventional volute casing pump, water turbulence and eddies are created as the impeller passes the restrictive cut water area in the casing. These hydraulic imbalances in turn cause the drive shaft to deflect, which increases the loading on the bearings and leads to premature mechanical seal failure. At near shut-off, the bearing loading is extremely high.

The Stan-Cor concentric casing design eliminates these excessive hydraulic imbalances. **It allows the pump to run anywhere between a few gallons per minute and full flow without undue shaft deflection.** Moreover, the design allows the

**Typical Volute-Type Centrifugal Pump**  
showing excessive turbulence and eddies



**STAN-COR Concentric Casing Pump**  
showing smooth flow pattern



Stan-Cor pump to handle abrasives much better than standard models.

The sharp, restrictive cut water area of most pumps is the focal point for corrosion and erosion. It is the place where abrasives first attack a pump. With lined pumps, the thin liner

is easily abraded away and the metallic backing exposed to the corrosive and abrasive forces of the product being pumped. The Stan-Cor concentric casing design, coupled with its solid homogenous non-metallic component, eliminates this problem area.

## Benefits of the Stan-Cor Pump Concentric Casing Design



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