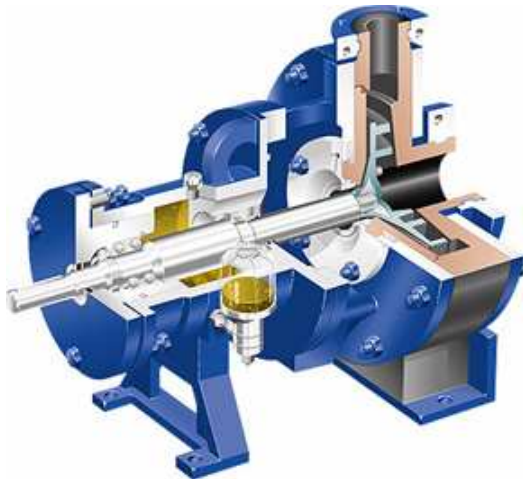


# Stan-cor Centrifugal Pumps Principles of Design



Typical Volute-Type Centrifugal Pump  
showing excessive turbulence and eddies



STAN-COR Concentric Casing Pump  
showing smooth flow pattern



- Solid Kynar or PTFE heads to eliminate permeability and liner separation problems
- Concentric casing design for better flow patterns than other centrifugal pumps– less erosion, turbulence, longer seal life, reduced shaft deflection
- Handles high temperatures to 325° F.
- Compact design features including heavyduty drive shaft, adjustable bearing supports, and large capacity oil bath ensure low maintenance, durable performance for the toughest fluid applications
- Back pull-out design for easy servicing

## **Heavy-duty Bearings**

Stancor's duplex angular contact thrust bearings in the rear withstand far greater radial and axial thrust than conventional bearings.

## **Bearing Housing**

External adjustment of rear bearing housing is used to set impeller clearance ensuring zero end play for maximum mechanical seal life.

## **Optimized Shaft Design**

Optimized shaft design features maximum diameter-to-length ratio, minimal overhang, and extra heavy-duty support to minimize shaft deflection and associated seal wear.

## **Oil Bath Reservoir**

Oil bath reservoir with overflow sight glass keeps bearings fully lubricated.

## **Seal Options**

- Chesterton
- John Crane
- Flowserve

## **Materials of Construction**

Kynar 370, a carbon filled PVDF material is thermally stable to maintain tight dimensions.

For severe corrosives or high temperatures, solid glass filled TFE PTFE is also available.

## **Impeller**

Molded from solid Kynar 370 or TFE PTFE, Stancor semi-open tapered impellers are machined to the exact diameter required to control performance.

Additional back pump out vanes produce low stuffing box pressures and keep seal area clear of debris.

## **Casing**

Stancor pumps have a concentric casing (see illustration at right), which greatly reduces turbulence and vibration, extends seal and bearing life, eliminates excessive hydraulic imbalances and allows the pump to run anywhere between a FEW GPM to maximum flow without undue shaft deflection. The design allows the Stancor pump to handle abrasives much better than standard open impeller centrifugal pumps