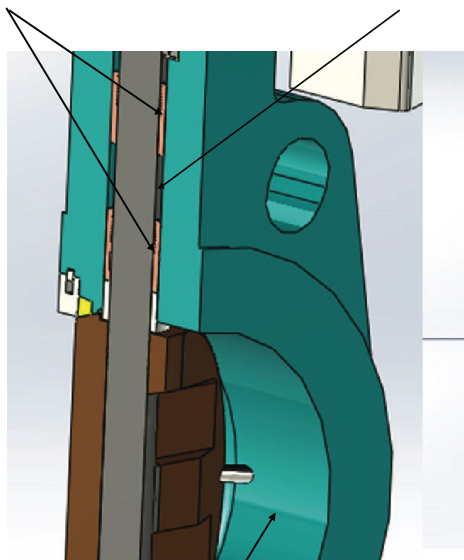


DESIGN FEATURES 1-4

# Axial Thrust Bearing-Liquid Seal & Buckle Pin

High-temperature seal body bushing

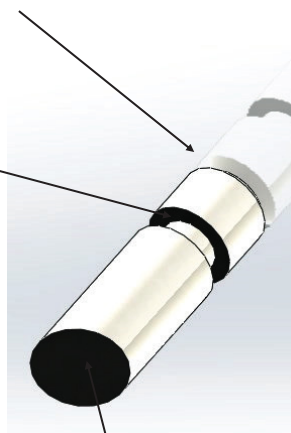
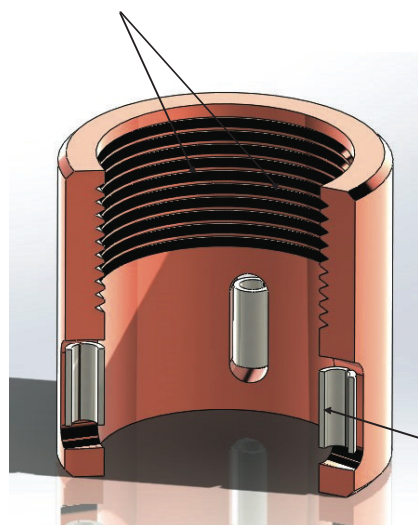
Liquid seal under high or low temperatures, zero emissions standard



Buckling Pin: for fast operation and high impact

PDC-axial bearing teeth with liquid seal

Buckling Groove



Contact Surface

Spring pins within our bearing to accept large axial movement and thermal change

- **Bushing and Buckle Pin** - Both dynamic devices deal with thermal cycling, and dynamic forces from fast-acting and overall rapid cycling.
- **PDC Axial Bearing** - Combines a custom thrust bearing, newly patented sealing mechanism and an added liquid seal as one component. Bearing teeth act as a layered liquid sealing mechanism and added shaft support at high temperatures. The grooves are filled with grease to provide sealing and lubrication to both the shaft and bushings. The spring pins support the shaft under both high and low temperatures, during periods of thermal expansion and impact force due to shaft side loading from dynamic forces on the disc.
- **Liquid Seal** - Injected in the bearing teeth and between the bushings as an added shaft seal and lubricant.
- **Buckling Pin** - Designed to absorb the impact of the disc in applications such as coking, sour gas and liquor isolation and control where the valve is rapidly closed or used to cut solid particle buildup on its metal seat. Buckling conditions occur way below yield strength, our buckling pin would not be damaged. It is designed to store 35% of the impact energy and greatly increase the seat longevity and bushing life.