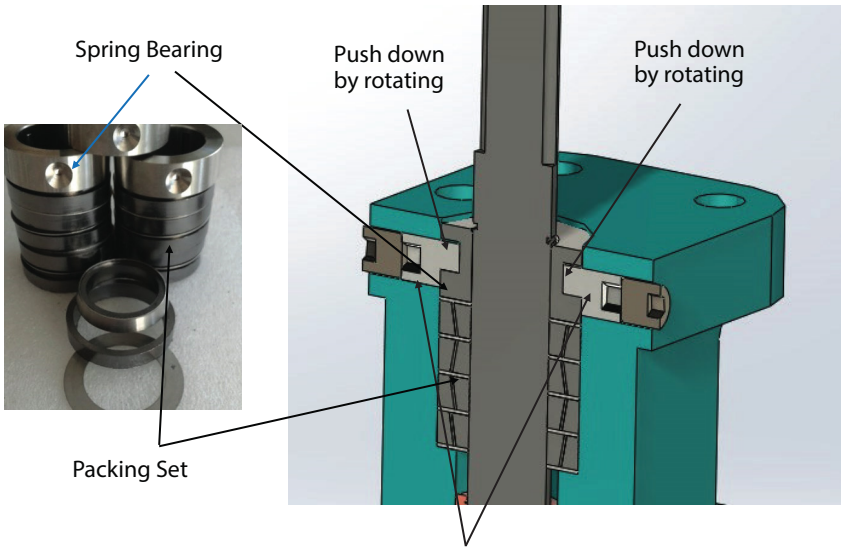
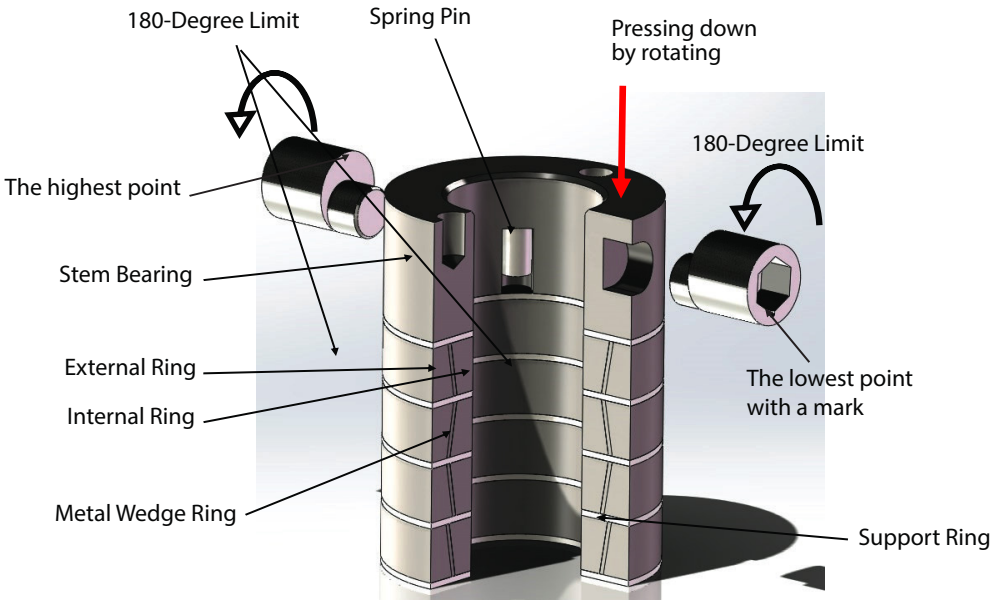
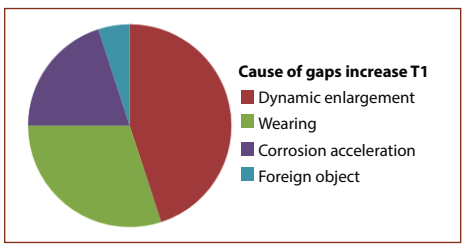
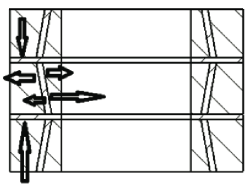
Smart Packing – FDS-622 Zero Emissions



Eccentric *Quarter-Lok*® to compress the packing by rotating from 0°–180°







Live loading with axial and radial forces

DESIGN FEATURES 1-5

- ***Smart Packing FDS-622*** – Our solution for EPA-2020 fugitive emissions requirements for both on-off and throttling applications under 100 PPM. API 622 is an on-off packing specification; API does not have a throttling specification currently. Our FDS-622 packing exceeds this requirement.
- **Eccentric Quarter-Lok® Plugs -** Designed to replace conventional packing gland bolts, which generate uncontrolled compression on the packing. ***Quarter-Loks®*** are located between the highest and lowest point in the plug for optimized compression. Once compression reaches the lowest point (rotated 180°), the packing needs to be replaced.
- **Causes of Packing Failure -** Dynamic enlargement, wearing from extensive cycling, corrosion and foreign object inclusion.
- ***Smart Packing (FDS-622)*** **includes:**

(1) Spring bearing to eliminate or reduce dynamic enlargement, due to the engineered clearance between shaft and bearing.

(2) A packing ring set, which includes internal packing rings, metal wedge rings, and external packing rings. The metal wedge rings generate inward and outward force to compensate wearing of the internal and external rings.

(3) To prevent galvanic corrosion, the metal support ring can be replaced with a zinc ring to protect the shaft.

(4) The metal support rings prevent foreign objects from getting into the packing rings.

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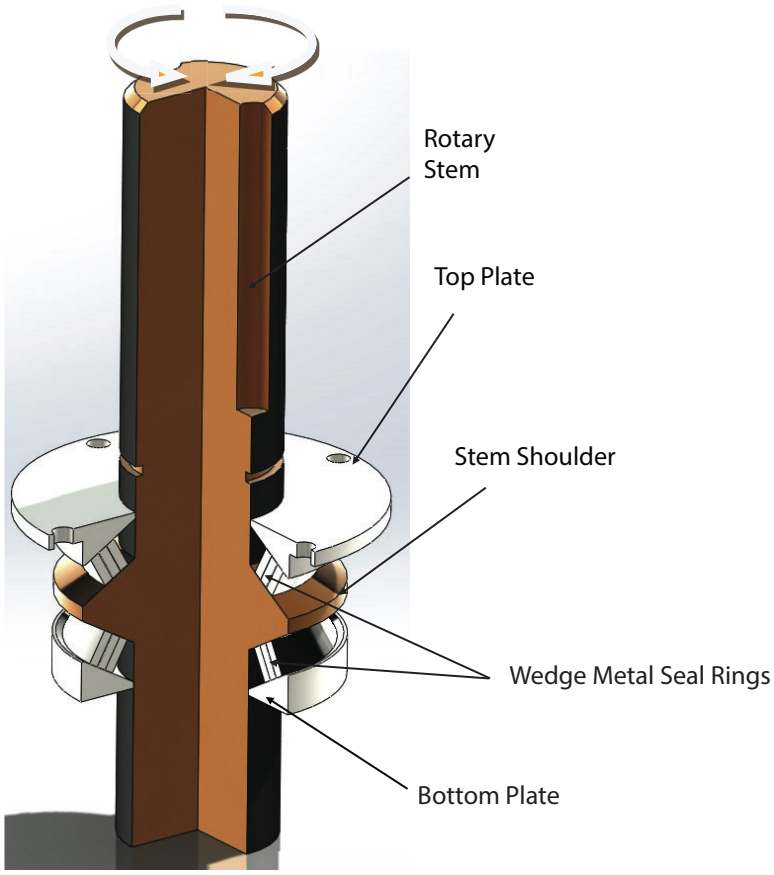
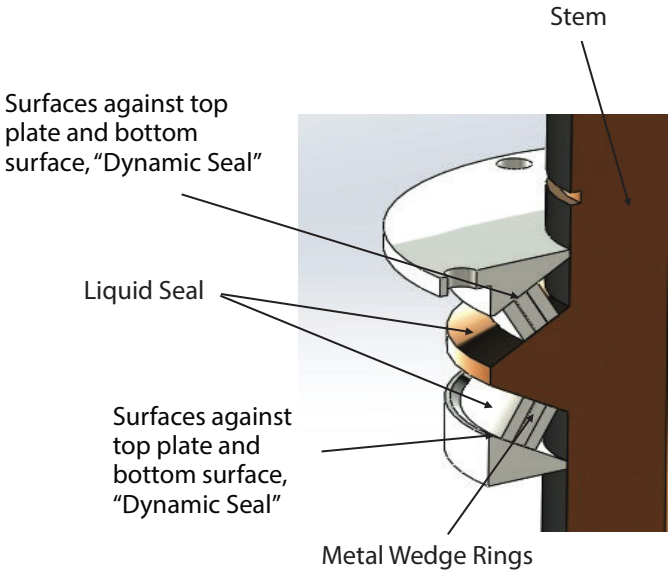
Packing-less Seal – Ultimate Stem Seal

Full Alloy Stem Seal





DESIGN FEATURES 1-6

- **The *Packing-less Stem Seal*** - This optional assembly is designed to seal the rotary stem at high temperatures 850°F up to 1800°F. When air is heated to 850°F and above, the graphite will suffer oxidation, becoming ash. Packing-less seal assemblies are all metal. The rotary shaft has a conical or spherical shoulder with a pair of wedge rings installed on top and bottom of the shoulder with top and bottom plates to support the top and bottoms of the wedge rings.
- **The Stem Seal Assembly** - Converts the dynamic seal between the stem shoulder and wedge rings into a static seal. The static seal between the wedge rings and top and bottom plates changes to a dynamic seal. The cavity of the stem assembly is filled with special high-temperature liquid to provide a liquid seal and lubricating properties while rotating.

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