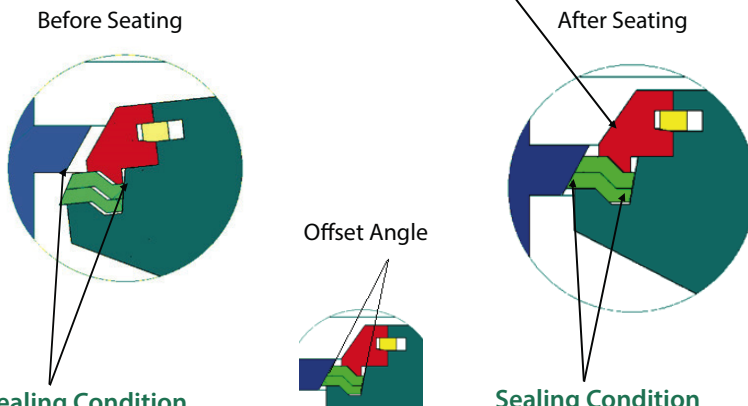
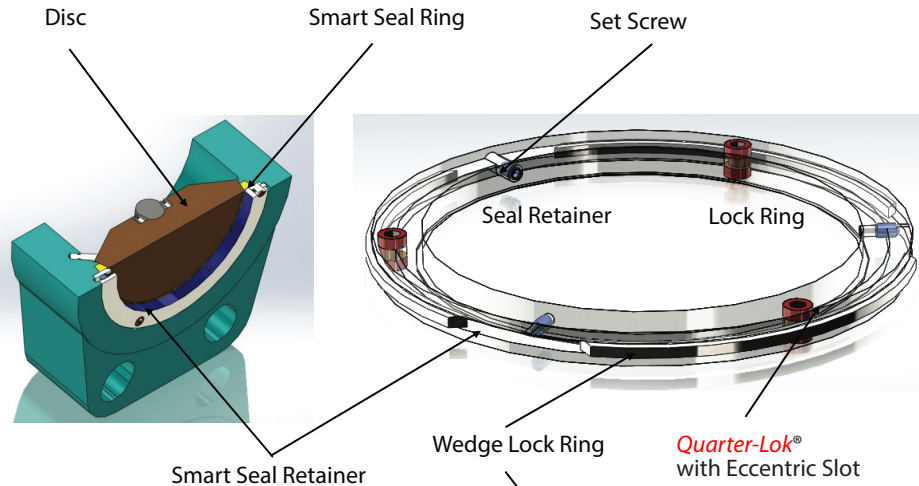


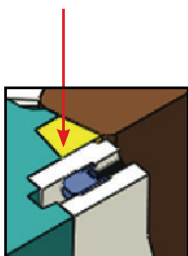
Smart Seat Technology



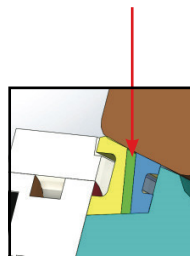
Non Sealing Condition
 Inside conical surface and outside conical surface are under no compression

Sealing Condition
 Outside conical surface and inside conical surface are under compression, much like a Belleville spring

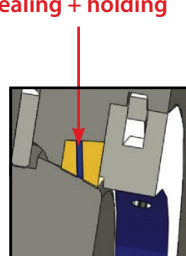
Solid ring
Cutting + controlling



Metal laminated ring
Cutting + sealing



Composite ring
 Nonmetal + metal + nonmetal
Sealing + holding



DESIGN FEATURES 1-2

- **The unique *Loaded Seal***® - Is a breakthrough in seat-sealing design. It seals with compression on the ID conical surface and OD conical surface without using gaskets. Unlike a convectional ID or OD seat with front or back sealing, the *Loaded Seal*® ID surface angle is offset from the OD surface angle, with more compression, more sealing occurs. Their opposing angles, acting as a Belleville spring, keep constant compression force to compensate for thermal cycling, seat wear and media pulsations. The seal ring is not compressed when the disc is in the open position, giving the seat a prolonged lifespan.

- **The Seal Retainer** - Is designed to hold the seat-seal ring at a preset position, not under a preset force, with *Quarter-Loks* and setscrews to hold the lock-ring position between the body groove and the cover groove. The cover ring has a wedge against the wedge surface of the body groove (***Dual Wedge Technology***®). As the *Quarter-Loks* rotate, pushing the lock against the seal; the set screws further push the lock ring. The redundant locking system will withstand high vibrations, thermal shock, and even rapid thermal cycling. The self-retaining set screws are extremely user-friendly when servicing the valve, maintaining constant even torque and in conjunction with the *Quarter-Loks*, it is the most reliable seat-sealing system on the valve market.

Smart Seat Technology®

Is Available in Three Versions:

- Composite Soft Polymer
- Laminated Alloys
- Solid Alloy