

# AST 80

## DUAL CARTRIDGE SEAL



### Field Rebuildable

No more waiting for seal repairs, and no more worries about installing exchange seals that might have previously held hazardous materials, because the AST 70 is easy to rebuild on site using standard tools.

### Instantaneous Leakage Control

The barrier fluid between the two seals of the AST 80 eliminates startup failures caused by lack of lubrication at the seal faces, and by contamination from the pumped fluid.

### Built-in Environmental Control

Use the barrier fluid to cool hot products, to heat thick and crystallizing products, and to keep air away from sensitive products.

### Easy replacement on split case and vertical pumps

No pump teardown required. Just slide the seal over the end of the shaft.

The AST 80 Seal is two seals packaged in one compact, unitized cartridge assembly for easy installation. Since it is double balanced, it can be used in three ways:

**Double Seal:** With barrier fluid pressure higher than product pressure, the AST 80 prevents leakage of toxic or hazardous fluids into the environment. The barrier fluid provides lubrication to seal gases and non-lubricating fluids.

**Tandem Seal:** By using a buffer fluid with pressure lower than process, the AST 80 can reduce pressure differential across a single set of seal faces.

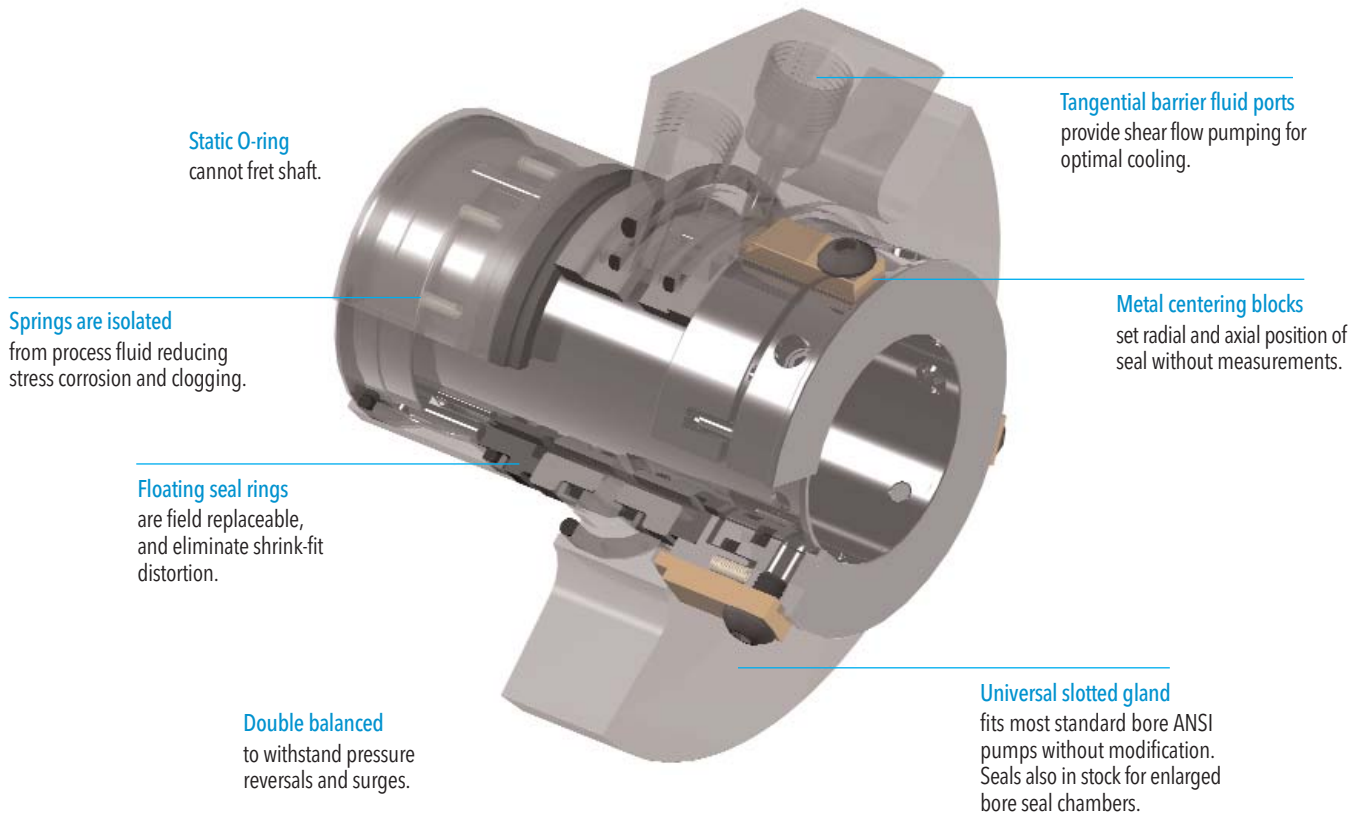
**Spare Seal:** With unpressurized buffer fluid, the outboard seal of the AST 80 runs "at idle" as a standby seal. If the inboard seal fails, the outboard seal provides primary protection, eliminating unscheduled shutdown of batch processes.

ADVANCED SEALING  
TECHNOLOGY

Reliable Sealing for Rotating Equipment



# AST 80



Static O-ring  
cannot fret shaft.

Springs are isolated  
from process fluid reducing  
stress corrosion and clogging.

Floating seal rings  
are field replaceable,  
and eliminate shrink-fit  
distortion.

Double balanced  
to withstand pressure  
reversals and surges.

Tangential barrier fluid ports  
provide shear flow pumping for  
optimal cooling.

Metal centering blocks  
set radial and axial position of  
seal without measurements.

Universal slotted gland  
fits most standard bore ANSI  
pumps without modification.  
Seals also in stock for enlarged  
bore seal chambers.

## OFF THE SHELF...

AST 80 seals are available off-the-shelf to fit most ANSI pumps, including enlarged bore pumps, without modification.

## ...or ENGINEERED

AST 80M seals are built to tolerate the radial motion, end play, and vibration in mixers, agitators, slurry pumps, and other rugged services, and are available for shaft sizes from 3.000 to 6.000 inch.

## MATERIALS OF CONSTRUCTION

Metal components:	316 Stainless Steel standard; Alloy 20, Titanium, and Hastelloy C-276 <sup>1</sup> available
Inboard rotating seal ring:	Carbon-Graphite or Graphite-Loaded Sintered Silicon Carbide
Outboard rotating seal ring:	Carbon-Graphite
Stationary seal ring:	Sintered Silicon Carbide or Tungsten Carbide
Springs:	Hastelloy C-276
O-rings:	Fluoroelastomer, EPDM, Aflas <sup>2</sup> , or Isolast <sup>3</sup> perfluoroelastomer

## OPERATING LIMITS

Pressure:	28 in (710 mm) Hg vacuum to 400 PSIG (28 bar) maximum, depending on shaft size and speed.
Temperature:	To 500°F (260°C), depending on O-ring elastomer limits in fluid sealed

Notes: <sup>1</sup>Trademark of Haynes International Inc., <sup>2</sup>Trademark of Asahi Glass Co. Ltd., <sup>3</sup>Trademark of Busak+Shamban