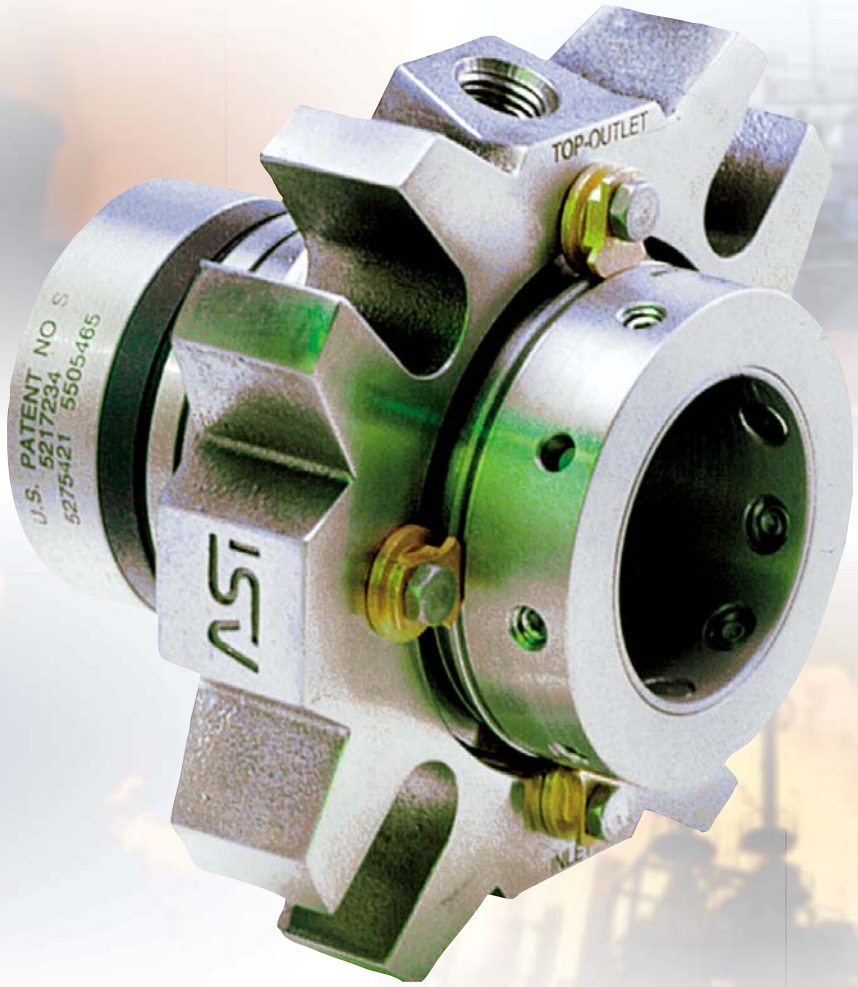
Model 595

The Benchmark for Environmental Safety



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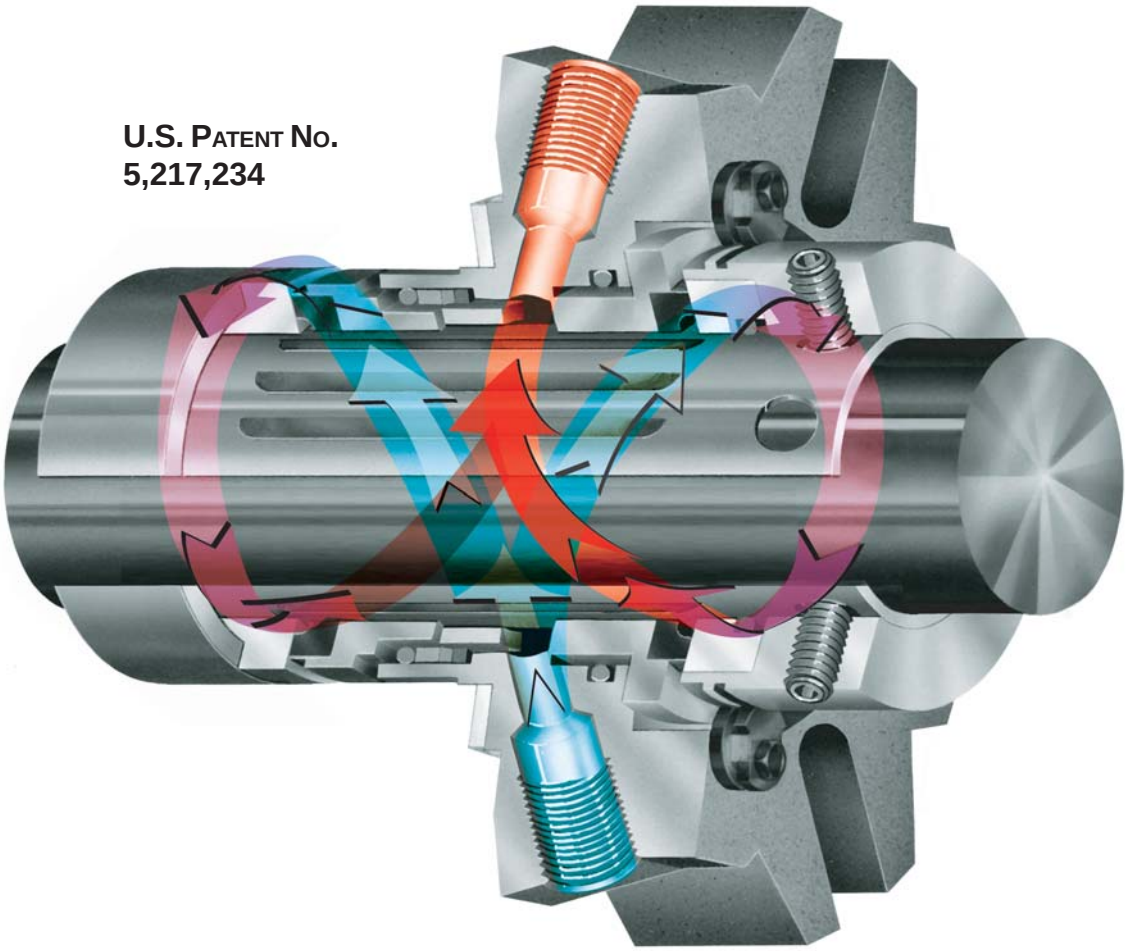
Only the Model 595 offers a patented self-circulation heat removal system; the first seal pumping system that actually removes heat from the sealing faces while providing maximum movement of liquid within a compact design.

U.S. Patent No. 5,217,234



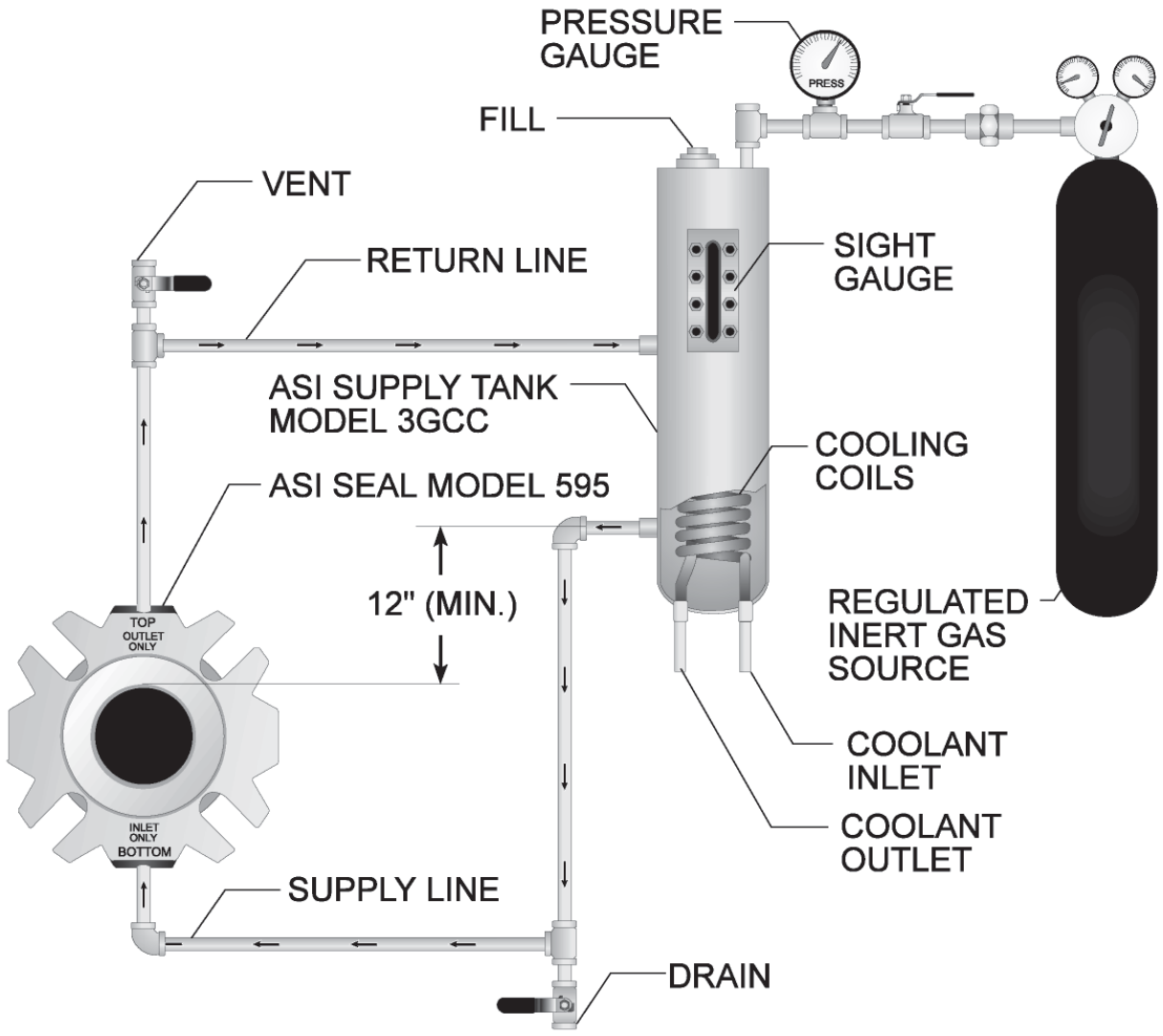
Increased Seal Life

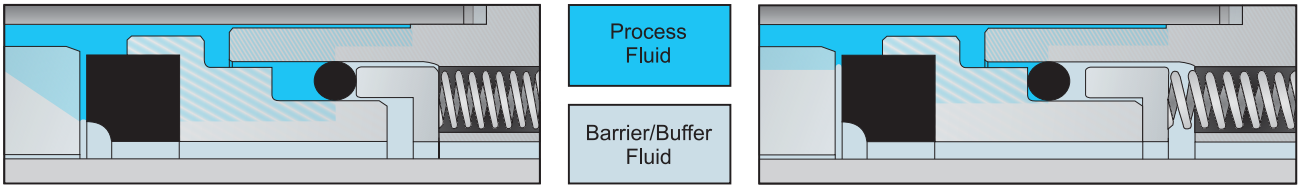
Only the **ASI Model 595's** patented pumping device extends the full distance between the inboard and outboard seal faces, which allows the seal to remove heat from the faces while it is circulating fluid. This protects the rotary seal face o-ring (typically the "weakest link" in most pumping designs) guaranteeing optimum seal life and superior seal performance.

Application Versatility

The **Model 595**'s pumping feature is engineered into a convenient, cartridge mounted seal which fits all standard ANSI pumps and stuffing boxes with cross-sections as small as .312"(sizes 1.125" - 1.375" inclusive). This patented design also enables the **Model 595** to successfully perform in vertical applications and provides ideal usage in gas pressurized barrier fluid systems.

Closed Loop Pressurized Barrier Fluid System for ASI Model 595





Non-Pressurized Double Seal Operation-
Stuffing box pressure higher than buffer fluid

Pressurized Double Seal Operation-
Barrier fluid pressure higher than process fluid

The Model 595 can be used as a double seal, pressurized or unpressurized. The mechanism controlling closing force to the inboard seal face is completely automatic and regulated by the differential of pressure between the process and barrier/buffer fluid. This protects both the environment and the seal from failure due to over or under-pressurization. Additionally, this provides the flexibility to meet pollution standards and safety regulations, as well as lengthening seal life, by adjusting the barrier/buffer fluid pressure to meet specific seal needs.

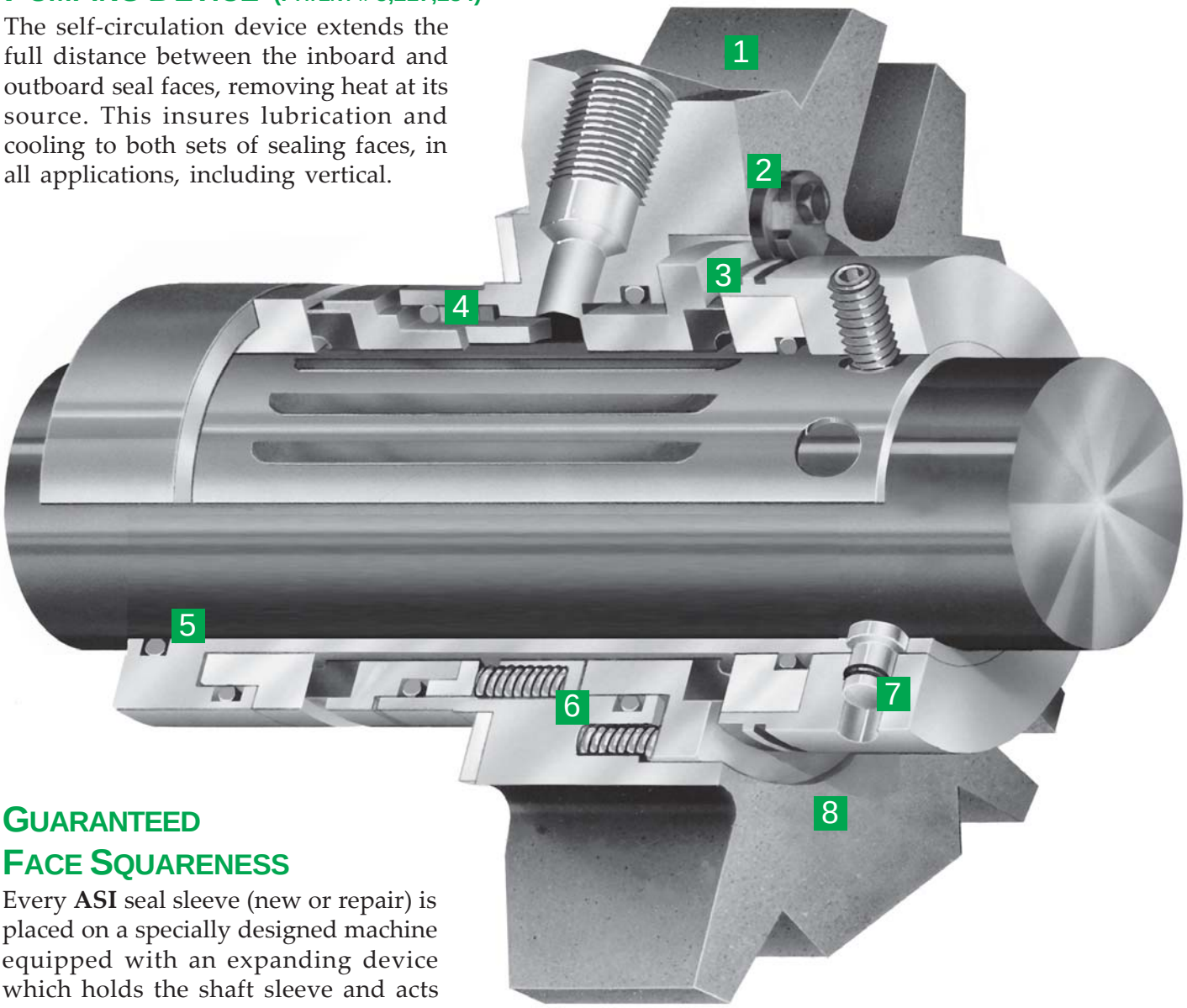
Custom Built Performance...

Environmental Protection

The combination of the Model 595's reciprocal balance and patented heat removal circulation system create a seal unsurpassed in controlling hazardous emissions.

Pumping Device (Patent # 5,217,234)

The self-circulation device extends the full distance between the inboard and outboard seal faces, removing heat at its source. This insures lubrication and cooling to both sets of sealing faces, in all applications, including vertical.



Guaranteed Face Squareness

Every **ASI** seal sleeve (new or repair) is placed on a specially designed machine equipped with an expanding device which holds the shaft sleeve and acts exactly the same as the pump shaft. The nesting surface for the back of the rotary face is then machined at a perfect right angle to the axis of the pump shaft. This, in conjunction with a closely controlled bore v. length ratio, guarantees perfect face squareness every time, every seal, for all **ASI** assemblies as well as all **ASI Encore** repairs.

Universal Design

1 Stress-Resistant Gland Plate

Eliminates bending tendency which can result in seal face misalignment, face gasket leakage, and "jamming" of seal components. **ASI**'s unique gland extends beyond the outboard seal face, protecting the seal faces against accidental damage, while providing a safety shield for plant personnel.

2 Assembly Cams

ASI's Handy-Cams™ not only align the seal, but protect against damage in handling and upon installation, all with the ease of one-step disengagement.

3 Metal Encased Seal Faces

Both inboard and outboard faces are encased, protecting plant personnel and the environment from catastrophic seal face failure.

4 Hydraulic Balance

Seals can operate at higher pressures without overheating.

5 Longer Seal Life

All o-rings and secondary sealing surfaces are virtually static under normal service conditions and are not required to adjust for misalignment, which provides longer seal life.

6 Isolated Springs

Inboard springs are removed from the fluid and cannot clog from sediments in the pumpage. Outboard springs are removed from barrier fluid, providing extra protection in case of barrier fluid contamination.

7 Safe-T-Stud™ (Patent # 5,275,421)

ASI's unique drive studs aid in precision alignment and transmit torque from the shaft to the lock collar, a feat virtually impossible with set-screwed alignment devices. These studs actually operate from the inside out, which means they can not be mistaken for set screws (and accidently loosened) as with dog point set screws; nor can they loosen due to vibration or centrifugal force, as with retaining rings. And, unlike most seal alignment devices which protect the seal in only one direction, all of **ASI**'s alignment devices protect the seal both axially and radially.

8 Compact Cartridge Mounted Design

The **Model 595**'s cartridge mounted design permits use in smaller ANSI pumps without equipment modification - including those with 5/16" cross-section stuffing boxes. The self-contained unit provides simplified installation, as mechanics are not required to make critical installation measurements. Also, impeller clearance adjustments can be made without any interruptions in service; the cartridge mounted design makes disassembly of the pump to make such adjustments unnecessary.

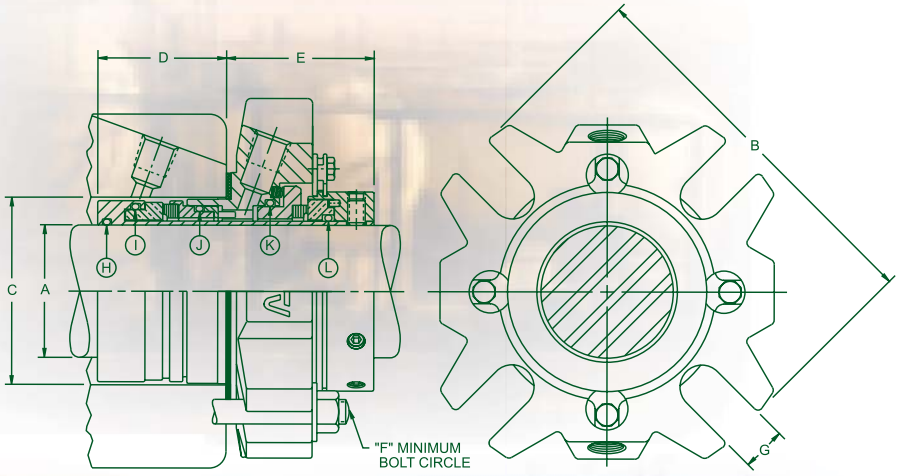
MATERIALS OF CONSTRUCTION

METAL PARTS[1]
Standard Metal Parts- 316ss
Standard Springs- Hastelloy® C
Standard Set Screws- 316ss

FACE MATERIALS[1]
Stationary Face- High Quality Carbon Graphite
(Tungsten and Silicon Carbide Also Available)
Rotary Face- Silicon Carbide

SECONDARY SEALS[1]
Standard O-ring Materials- Fluorocarbon, EPDM or Aflas®

[1]Other Materials May Be Specified

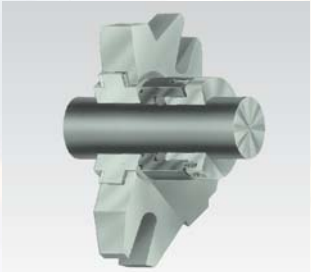


595 DIMENSIONAL DATA

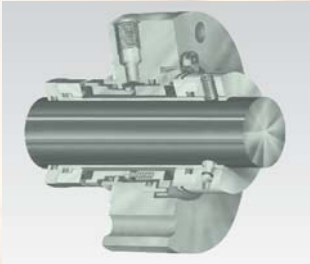
A	B	C		D	E	F			G	H	I	J	K	L
		MIN	MAX			3/8"	1/2"	5/8"						
1.000	4.19	1.75	1.88	1.44	2.09	2.81	-	-	.44	120	029	127	130	124
1.125	4.19	1.75	1.88	1.44	2.09	2.81	-	-	.44	122	029	127	130	124
1.250	4.19	1.87	2.00	1.44	2.09	2.97	-	-	.44	124	030	129	132	126
1.375	4.19	2.00	2.13	1.44	2.09	3.13	-	-	.44	126	031	131	134	128
1.500	5.50	2.25	2.50	1.83	2.09	3.63	3.75	-	.63	128	135	134	137	130
1.625	5.50	2.37	2.62	1.83	2.09	3.63	3.75	-	.63	130	138	136	139	132
1.750	5.50	2.50	2.75	1.83	2.09	3.66	3.78	-	.63	132	139	138	141	134
1.875	5.50	2.62	2.88	1.83	2.09	3.75	3.88	-	.63	134	141	140	143	136
2.000	6.00	2.75	3.00	1.83	2.09	4.00	4.13	4.25	.69	136	143	142	145	138
2.125	6.00	2.87	3.13	1.83	2.09	4.13	4.25	4.38	.69	138	146	144	148	140
2.250	6.00	3.00	3.25	1.83	2.09	4.25	4.38	4.50	.69	140	148	146	149	142
2.375	6.50	3.12	3.38	1.83	2.09	4.38	4.50	4.63	.69	142	150	148	150	144
2.500	6.50	3.25	3.50	1.83	2.09	4.50	4.63	4.75	.69	144	151	150	151	146

ASI has designed a selection of mechanical seals for virtually all industrial applications

The Model 500
Single Inside Seal



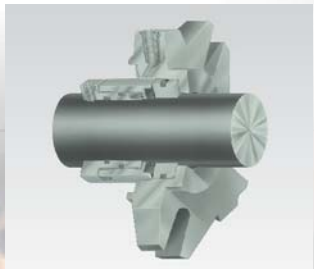
The Model 505
Single Outside Seal



The Model 600
Double Cartridge Stationary Seal

The Model 585
Single Cartridge Stationary Seal

The Model 590
Double Cartridge Stationary Seal



The Model Sd-3
Single Inside Seal

Hastelloy is a trademark of Hayes Int'l, Inc., Aflas is a trademark of Asashi Glass Co., Ltd.

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