



mechanical seals for the  
Pulp and Paper industry





## Mechanical Seals for Pulp & Paper Processing

The Pulp & Paper industry is developing at a dynamic pace. Growing environmental awareness, changing consumer behaviour and more aggressive competition mean that both the new and traditional markets are demanding ideas, innovative products and above all SERVICE.

Service has been the key to AESSEAL® success and is at the core of our corporate vision:

**“To give our customers such exceptional service that they need never consider alternative sources of supply.”**

Reinforced by our innovative products which are continually improving through design excellence, this helps us achieve superior performance in a very competitive industry.

The AESSEAL® Mechanical Seal range encompasses sealing solutions for equipment typically found in the Pulp & Paper industry. **These include designs for Stock Process Pumps, Refiners, Screens, Agitators, Knotters, Deflakers, Pulpers, Fan Pumps and Turboseparators to name but a few.**

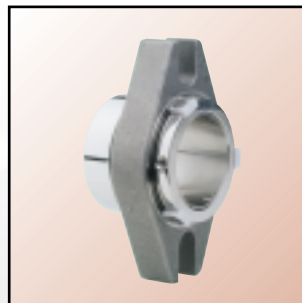


AESSEAL® Global Technology Centre, built to support over 30 branches and over 150 distributors worldwide.



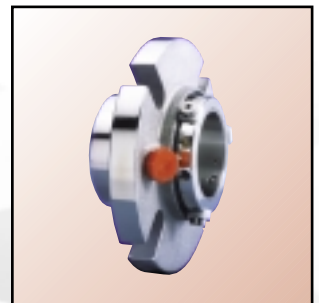
### SAI™

The Standard SAI™ component seal design is an internally mounted mechanical seal. It has balanced seal faces and multi-springs which are out of the product media and therefore free from clogging. The SAI™ is mainly used in large diameters to seal screens and hydropulpers.



### Convertor II™

The Standard Convertor II™ design is available in a wide range of seal face and elastomer combinations to suit individual process requirements. It is primarily used to seal water circulation and packed pumps where a round seal gland would not fit.

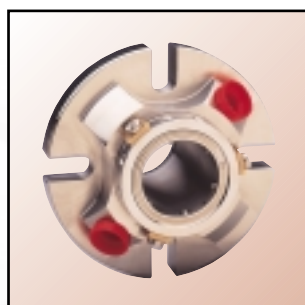


### SCUSI™

Self-aligning cartridge single seal which includes a flush port and balanced seal faces. With short outboard dimensions, the seal can be installed in confined spaces without equipment modification.

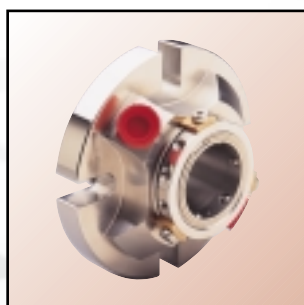
The AESSEAL® range of mechanical seals featured in this brochure can seal the following products as well as many more not listed. To choose a seal for your application call our technical department.

- |                     |                   |
|---------------------|-------------------|
| Acids               | Dispersant        |
| Ansilox             | Foul Condensate   |
| Bearing Oil         | Green Liquor      |
| Black Liquor        | Hot Condensate    |
| Brown Liquor        | Hot Dispersion    |
| Calcium Carbonate   | Hydrogen Peroxide |
| Calcium Stearate    | Latex             |
| Casein              | Paper Stock       |
| Chlorine Dioxide    | Plastic Pigment   |
| Clay Filler         | Protein           |
| Cooked Protein      | Raw Turpentine    |
| Defoamer            | Soap              |
| De-inking Chemicals | Tall Oil          |
| Delaminated Clay    | Water             |
| Demineralised Water | White Liquor      |
| Digesters Liquor    |                   |



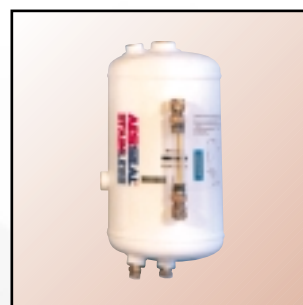
#### SMSS™

The Standard SMSS™ design has 316L Stainless Steel parts and monolithic seal faces. The SMSS™ design is available in a wide range of seal face and elastomer combinations to suit individual process requirements. It is used extensively in hot water and high pressure shower water applications. The SMSS™ is also available in an ANSI+ Gland format.



#### DMSF™

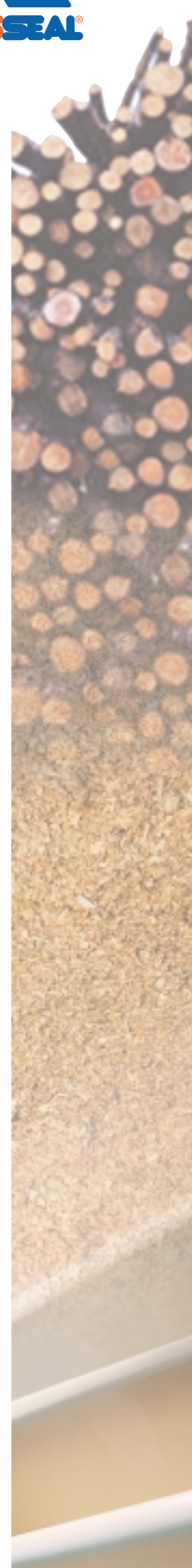
The Standard DMSF™ design has 316L Stainless Steel parts, monolithic seal faces and a unique patent pending bi-directional pumping scroll. The DMSF™ design is available in a wide range of seal face and elastomer combinations to suit individual process requirements. Batch digester applications can be reliably sealed with the product. The DMSF™ is also available in an ANSI+ Gland format.



#### Water Management Vessel System

The SSE10™ range of systems have over the years proven to be a highly successful, reliable and cost effective solution in the support of double mechanical seals in the Pulp & Paper industry.

This system eliminates water consumption and creates no effluent.

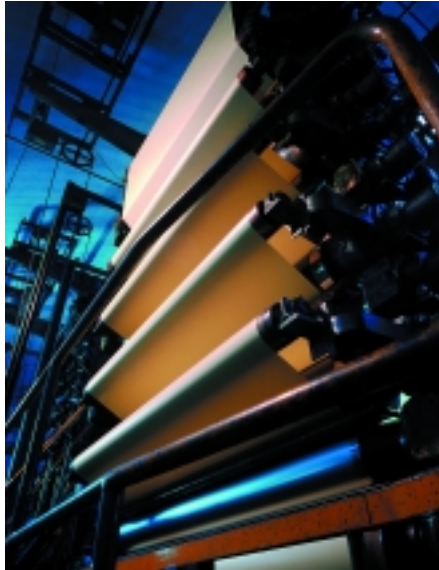






## Pulp & Paper Processing

### AESSEAL® set new Industry Service Levels for the Pulp & Paper Industry.



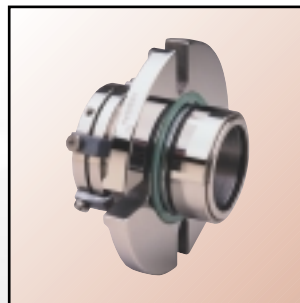
To improve service we offer complete sealing solutions and a Seal Management Program. This includes seal selection from our Pulp and Paper specific database, installation and continuous monitoring to track MTBF (Mean Time Between Failures). To demonstrate our confidence in the seal management program we can also make the following unconditional guarantees for contract customers.

- We guarantee to mechanically seal your plant at a total price 25% lower than the incumbent supplier or suppliers.
- 48 hour shipment of standard products or it will be provided free of charge.
- The standard warranty is "no work no pay". (Exactly what you would expect from any of your personal retail suppliers).



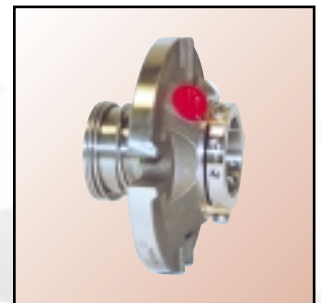
#### PCP™

Progressive cavity pump cartridge mechanical seals are inventoried in a variety of designs to suit specific pumps including Mono, Netzsch, Robbins & Myers (Moyno), Tarby, Continental, Seepex and Orbit. The gland design idealises the conditions at the seal faces, and can be supplied for all designs of progressing cavity pumps. Most progressive cavity pumps in the pulp and paper industry are found in coating kitchens.



#### Exotic CDSA™

The Patented bi-metal CDSA™ may be supplied in a variety of inventoried exotic alloy materials including Titanium, Alloy 400, Alloy 20 and a range of alternative alloys. The seal is employed in harsh environments such as bleach and acids plants. Single seals are also inventoried where all component parts are manufactured in the solid exotic alloy.



#### TPOC™

The AESSEAL® TPOC™ seal range is specifically designed for applications which benefit from the use of unbalanced seal face technology. This makes it ideally suited for some applications in the pulp and paper industry. Features include a non-clogging single coil spring and positive mechanical drive.

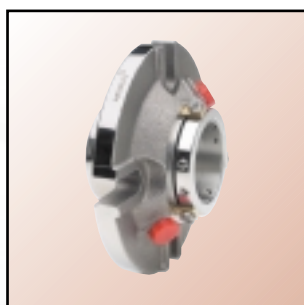
The solutions highlighted provide an indication of AESSEAL® products which meet the needs of the Pulp & Paper industry.

Each product is designed to enhance availability through modular design and also improve installation and servicing. The products are also designed to increase up time as well as MTBF (Mean Time Between Failures) for the equipment.

These product ranges have been developed only after extensive performance & field evaluation tests, conducted over many years.

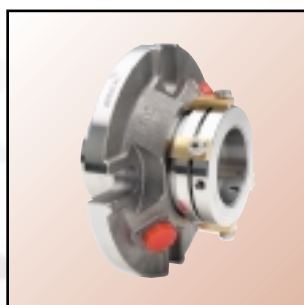
Innovative, Patented and Patent Pending products have been introduced for specific targeted areas within the Pulp & Paper industry.

These include exotic alloy technology for the chemical and bleaching mills, axial movement seals for refining equipment, and products with the ability to withstand cyclic product pressures as encountered in hot equipment such as digester liquor circulation.



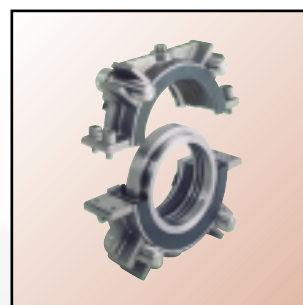
#### **CURC™**

The standard CURC™ is designed to optimize our patented self aligning technology. This seal includes flush, quench and drain ports. It is available to suit a wide range of process requirements and is typically used as the single seal of choice in a paper mill. The CURC™ is also available in an ANSI+ Gland format.



#### **CDSA™**

The Standard CDSA™ design has 316L Stainless Steel wetted parts and is available in a wide range of seal face and elastomer combinations to suit individual process requirements. The seal is typically used in the power generation area, digestion, and condensate processes. The CDSA™ is also available in an ANSI+ Gland format.



#### **RDS™ - Split Seal**

The Radially Divided Seal is a balanced stationary design with large internal clearances. The Patented assembled spring retainer means that the springs are retained in the gland. The rotary faces are designed with precision lapped separation technology (not cracked). The RDS™ is easy to install and is specifically designed for large diameter shafts typically found on water, stock chest agitators and fan pumps.

The SCUSI™, CURC™, CDSA™ and RDS™ above can be used to seal the majority of products within the Pulp & Paper industry.



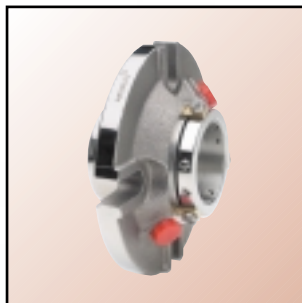


## Pulp & Paper “Standard Special” Seals

### Reasons to use AESSEAL® seals in your Plant:



- Seals reduce energy consumption by allowing the rotating shaft to spin more freely. Using traditional packing can be likened to driving a car with the emergency brake on. On average AESSEAL® can demonstrate a dramatic power saving over packing and so can vastly reduce costs.
- All US Pulp and Paper mills have to comply with Environmental Protection Agency directives. Seals reduce waste and reduce power consumption so directly assist in meeting these directives particularly on the reduction of effluent and water usage.
- Traditional packing causes shaft damage and leakage which will damage the surrounding machinery. Therefore the equipment has to be regularly stripped down and repaired. This is a very expensive process particularly when the lost production time is taken into account.



#### **Special CURC™/CDSA™ to suit the Goulds 3175 series pump**

This seal maximizes radial clearances internally and externally. The seal is fitted to the bare shaft so there is no stack up of tolerances which can lead to eccentric seal mounting. It is mainly used in stock transfer and liquor pumps.



#### **Saloseal™ to suit the Ahlstrom Salomix agitator range**

The advantages over traditional seals used on these agitators include: Modularity, improved by using the same gland for both single or double seal variants. Assembly is simple due to a full cartridge design. The shaft sleeve is a once only purchase.

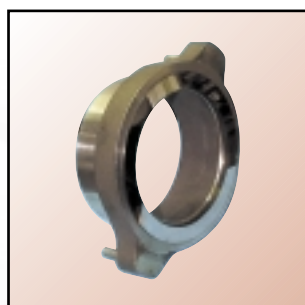
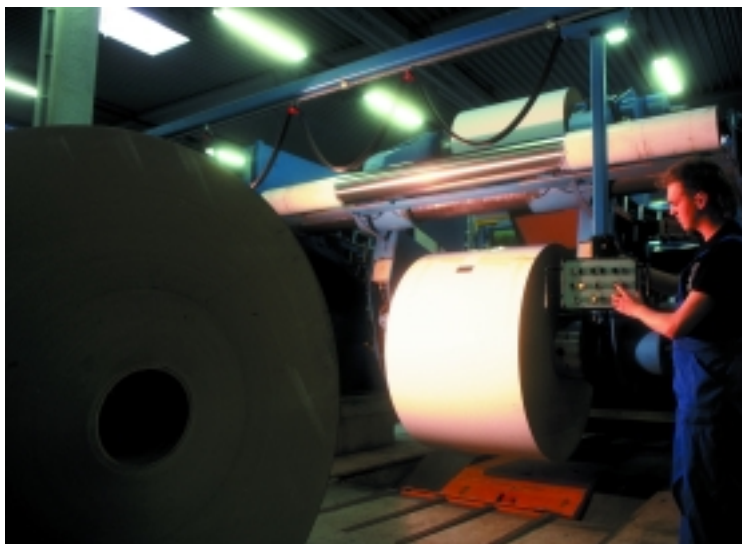


#### **GCS™ to suit Gyroclean Cleaners**

The patent pending back to back double seal is designed specifically for the Lamort Gyroclean light reject rotary cleaner. The seal incorporates an integral flow inducing bi-directional pumping ring to ensure effective barrier fluid circulation.

## AESSEAL® and Single Source Supply:

AESSEAL® are a major force within the sealing industry and have been recognised through numerous convergence agreements, successfully demonstrating our commitment to the Pulp and Paper Industry. Single source seal management (convergence) agreements are in place for single plants and for pulp and paper groups.



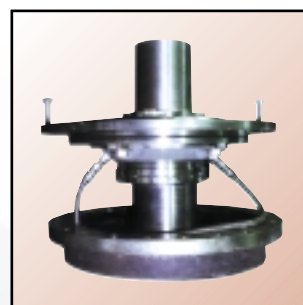
### SNOZ™ - Steam Nozzle Seal

The AESSEAL® steam nozzle seal unit is fitted with a tungsten carbide seal face. It is primarily used to seal steam on the drying rolls of the paper machine.



### IASC™ - Screen Seal

This seal employs standard, modular, inventoried AESSEAL® components, with a seal gland which retains fluid when the Screen is emptied. This avoids dry running of the tungsten carbide seal faces on equipment startup. The seal is specifically designed for vertical screen applications mainly used on stock and liquor screens in the pulp mill and paper machine areas.



### IADC™ - Screen Seal


























This screen seal design is a double seal available in a wide range of seal face and elastomer combinations to suit individual process requirements. This seal is used on screens and knotters. The modular two part gland and adaptor arrangement, reduces repair costs.





**ENVIRONMENTAL TECHNOLOGY**

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**INVESTOR IN PEOPLE**

**WINNER OF THE  
NATWEST  
SUNDAY TIMES  
COMPANY OF  
TOMORROW  
AWARD**

**USE DOUBLE MECHANICAL SEALS  
WITH HAZARDOUS PRODUCTS.  
ALWAYS TAKE SAFETY  
PRECAUTIONS**

- GUARD YOUR EQUIPMENT
- WEAR PROTECTIVE CLOTHING



**WARNING**

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