

RELY ON EXCELLENCE

## LP-S

Mechanical seals | Mechanical seals for pumps | Engineered seals



### Features

- Integrated seal for Sulzer A pumps
- Single + Plan 11 flush
- Semi cartridge unit
- Balanced
- Independent of direction of rotation
- Static springs
- No dynamic O-Ring on shaft
- Rugged design
- Shrink-fitted seal faces
- Seal faces have a large clearance to the shaft
- Wear part cost minimized

### Advantages

- Individually integrated to equipment for best sealing result
- Straightforward and easy installation
- Static springs reduces influence of misalignment
- No damage of the shaft by dynamically loaded O-Ring
- Extended service life due to rugged design
- No brittle parts in contact with torque transmission pins
- Seal faces protected by strong steel parts and a large radial clearance
- The double, quench and single seals have the same wear parts on product side
- Reduces stock holding costs

### Operating range

Temperature:  
 $t = -20\text{ °C} \dots +140\text{ °C} (-4\text{ °F} \dots +284\text{ °F})$   
Pressure:  $p_1 \dots 25\text{ bar (363 PSI)}$   
Sliding velocity:  $v_g \dots 20\text{ m/s (66 ft/s)}$   
Stock content:  $\dots 4\%$

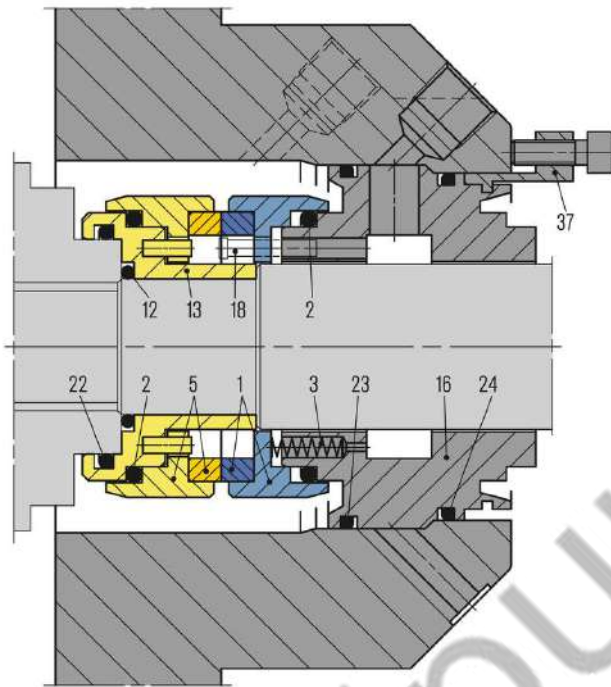
### Materials

Seal face: Silicon carbide (Q12), Carbon (A)  
Secondary seals:  
FKM (V), EPDM (E), FFKM (K)  
Metal parts: CrNiMo steel (G),  
Grade 5A (4T), SMO 654 (4U)

### Recommended applications

- Pulp and paper industry
- Chemical industry
- All clean none abrasive media
- Sulzer Ahlstar APP and APT centrifugal pumps

## RELY ON EXCELLENCE



Item	Description
1, 5	Seal face
2, 12, 22, 23, 24	O-Ring
3	Spring
13	Sleeve
16	Housing
18	Pin
37	Locking fixture

LP-S-UP Single seal  
 Ready-fitted for Ahlstar UP A MS21 range of pumps,  
 bearing unit A1-A6

## RELY ON EXCELLENCE

### Product variants

#### LP-S-UPF

Single seals for API Plan 11 with throttle acc. Sulzer design request, adapted for Sulzer A pump series.

#### LP-G-UP

Single seal for operation with unpressurised grease quench. Identically equal design to LP-S-UP however with quench housing at atmospheric side.

#### LP-S-S32-E10

Single seal adapted for Sulzer APP/APT Pumps.

#### LP-S-S32-F10

Single seal adapted for Sulzer APP/APT Pumps, for API Plan 11 with throttle acc. Sulzer design request.

#### LP-Q-S32-E20

Single seal for operation with unpressurised quench. Identical design with LP-S however with outboard lip seal at atmospheric side (installation length longer), adapted for Sulzer APP/APT Pumps.

#### LP-G-S32-E30

Single seal for operation with unpressurised grease quench. Identically equal design to LP-S-S32 however with quench housing at atmospheric side.

#### LP-S-SL

Single seal, adapted for Sulzer SL Mixers.

#### Further designs

available to fit in numerous other equipment from notable manufacturers for the Pulp- and Paper Industry e.g., Metso conical refiners, Andritz pressure screens and stock pumps.