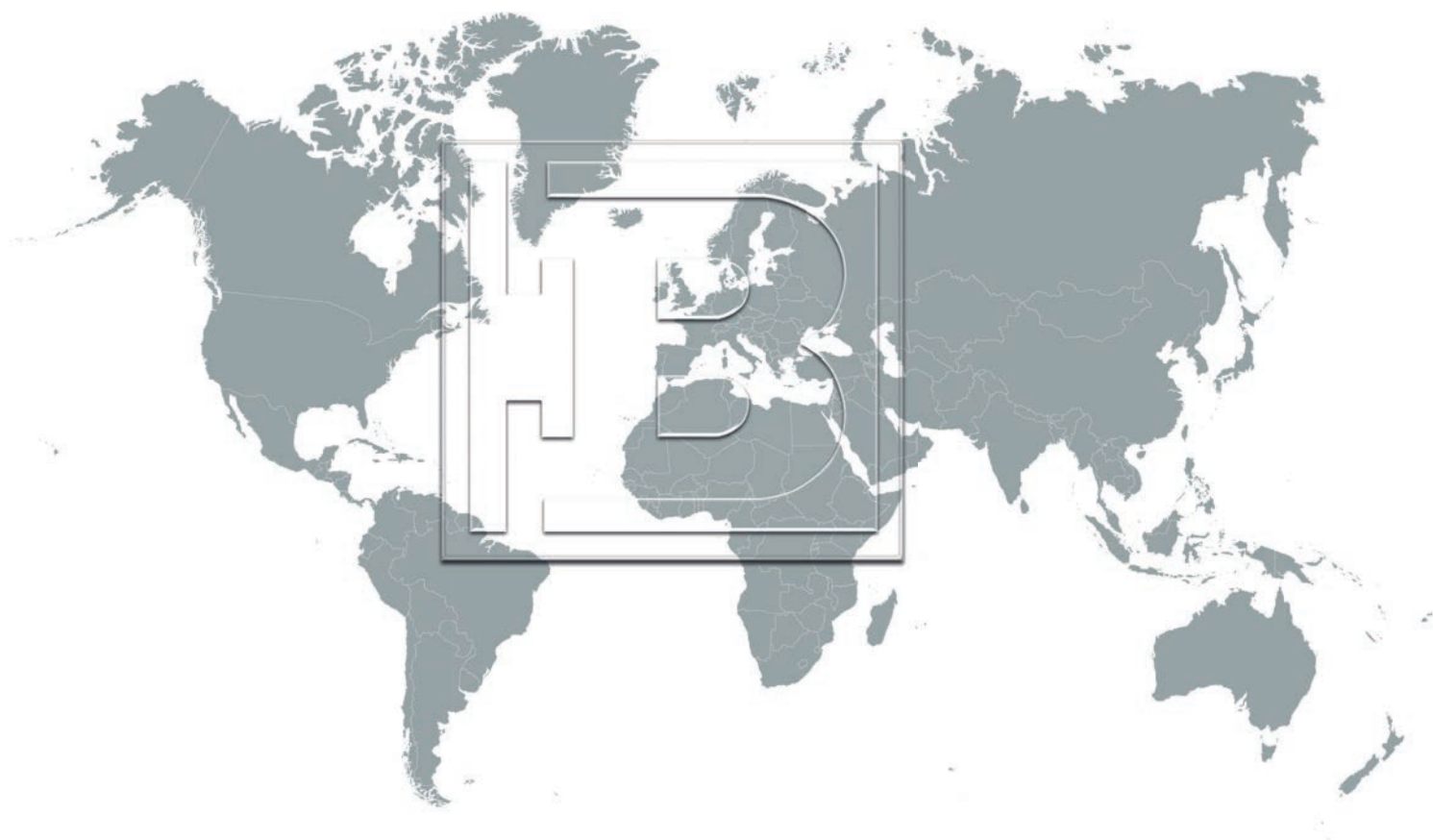


# Twin Screw Pumps Series SLW



# ITT Bornemann - The Pump Pioneer



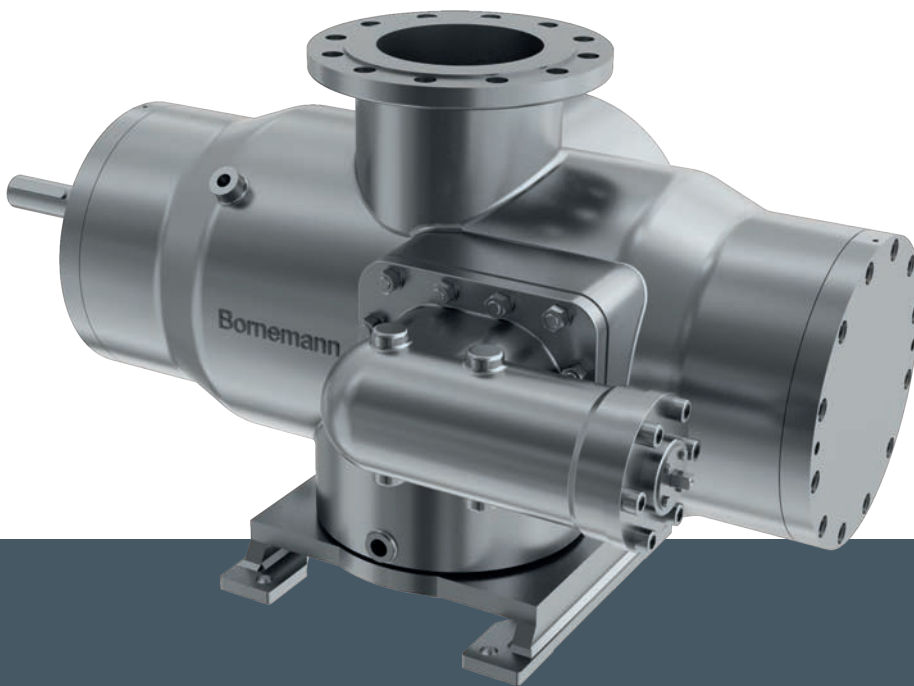
We are ITT Bornemann, the first to market German based supplier of Twin Screw Pumps and an established worldwide leader of numerous groundbreaking pump developments. Originally founded in 1853, we joined ITT Corporation in 2012, a diversified leader of highly engineered solutions for the energy, transportation and industrial markets.

Founded in 1853, Bornemann has achieved and secured a leading position worldwide with its ground-breaking pump developments over the decades. Aside Energy, several other industries are served, e.g. chemical, petroleum, marine as well as food & pharmaceutical applications. More than 140,000 Pumps and Systems are installed worldwide and operating successfully.

# Bornemann SLW Series

Bornemann's SLW Series is a Positive Displacement Single Volute Twin Screw Pump with 10 sizes available and various materials and designs for application-optimized solutions. The SLW is working with both, external and internal bearings. It is specifically designed to serve the growing demands of hermetically sealed pumps as well as less rotating shaft seals compared to conventional Twin Screw Pumps.

## Markets and Applications



## Operating Principle

The conveying elements of Bornemann's SLW Series consist of two screws, forming closed chambers with the pump casing. They are not only product conveying elements, but also transmitting torque. This eliminates requirement of Timing Gears resulting in less wear parts. The rotation of the feed screws causes the pumped medium in the chambers to move continuously along the screw axis from the suction to the discharge nozzle.

## User Advantages:

- Simple and robust design
- Product lubricated, internal bearings
- Single volute pump, one suction channel
- Three optional bearing designs available
- Gearless design
- Hydraulically balanced
- Nozzle configuration 'L' or 'Inline' available



# SLW - Pump Features

## Nozzle Arrangement/Configuration

'L' or 'Inline' Design

## Bearing Design

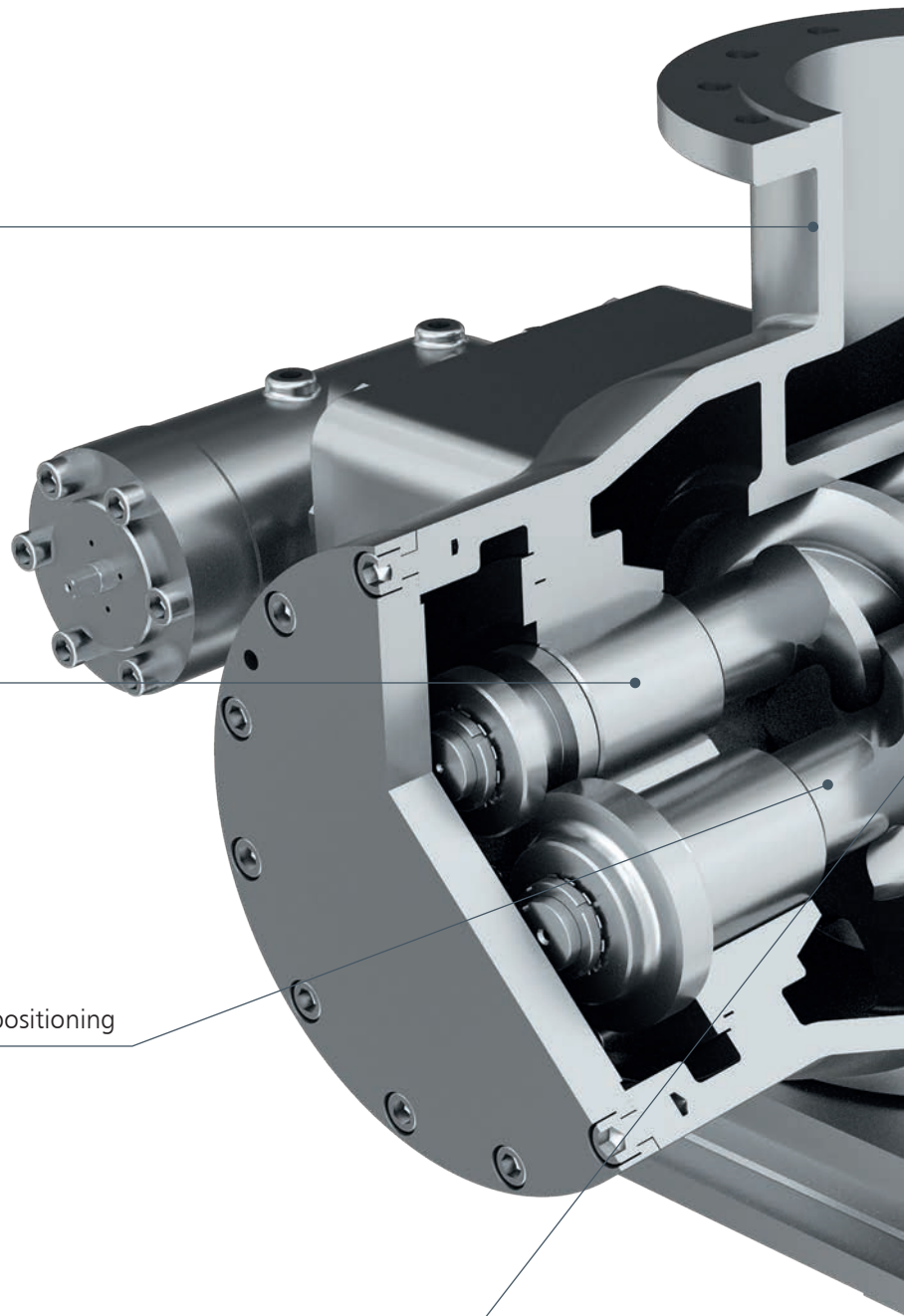
Product lubricated  
Radial Sleeve Bearings with infinitive service life

## Rotors/Casing

Optimized suction capabilities by innovative Rotor positioning

## Rotors

Pump hydraulic with optimized geometry and high volumetric efficiency





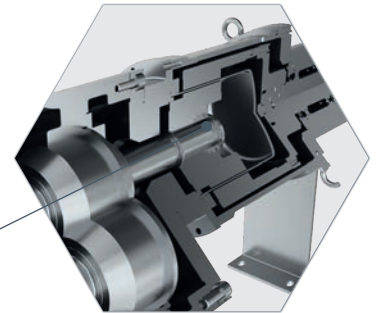
**Bearing Design**

Roller Bearing, supporting axial position of rotor set

**Sealing**

One mechanical seal only  
or

sealless design



**Materials of Construction**

Wetted, pressurized parts GP240GH, 1.4408, EN-GJS-400  
Rotors: surface hardened 1.7149 or 1.4571

**User Advantages by Design**

ATEX, Pressure Equipment Directive (PED) and TA Luft compliant

High Delivery Rate and Wide Pressure Range

Low shear, Low Noise Emission, Low Pulsation

Fast & Easy Maintenance

Reverse Flow Direction possible

High MTBF - Long Service Life

Zero Leakages, Hermetically Sealed

High suction lift

High Efficiency - Even for High Viscous Products

# SLW - Product Portfolio & Operating Envelope

## SLW-I (Internal Bearing Design)

The bearing housing is an integral part of the pump casing, bearings are product lubricated.



### Advantages

- Compact & Simple Design
- Competitive Alternative for Clean and Lubricating Products
- No External Lubrication Required

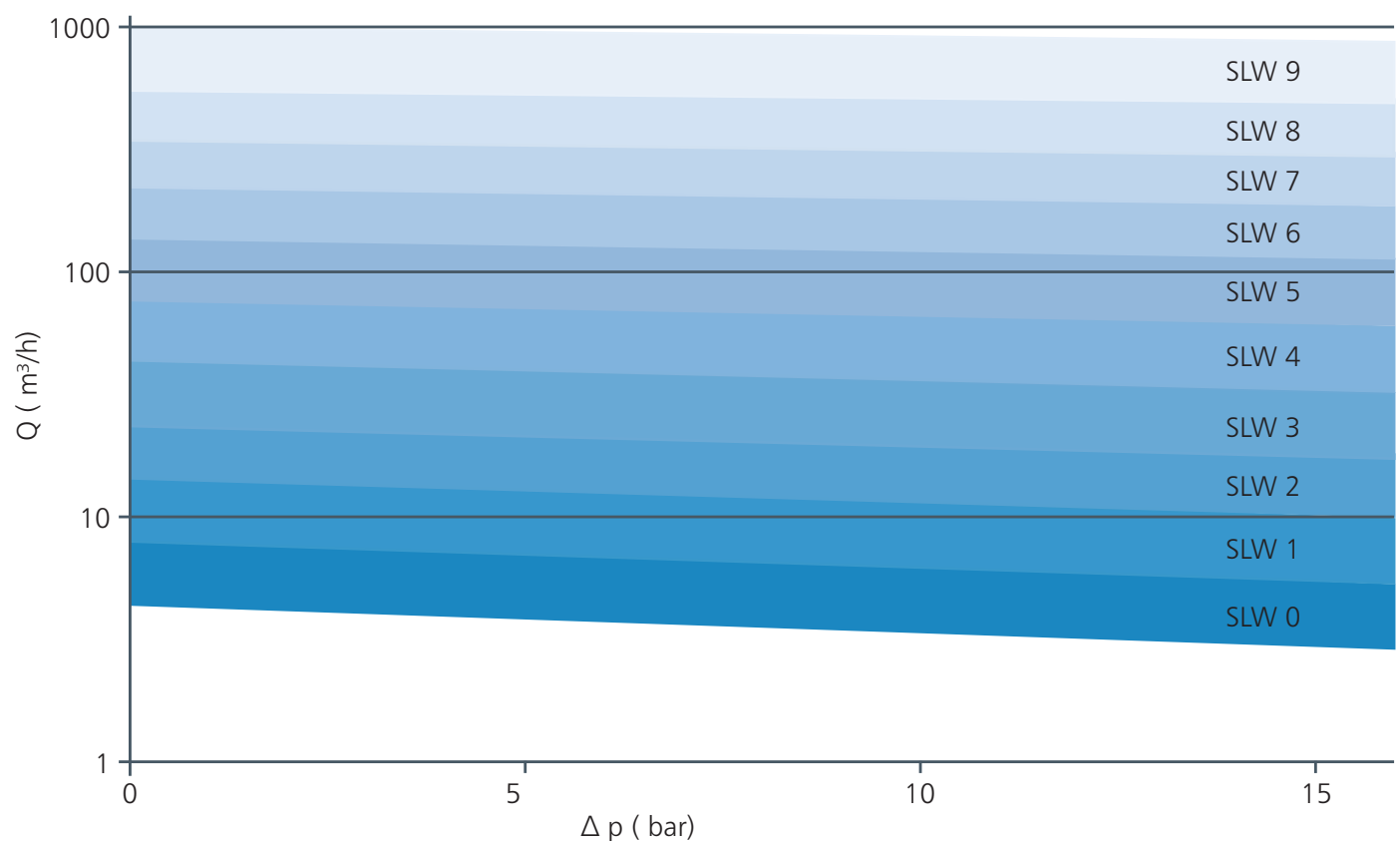
## SLW-E (External Bearing Design)

The bearing is mounted externally, for high pressure and high temperature applications.



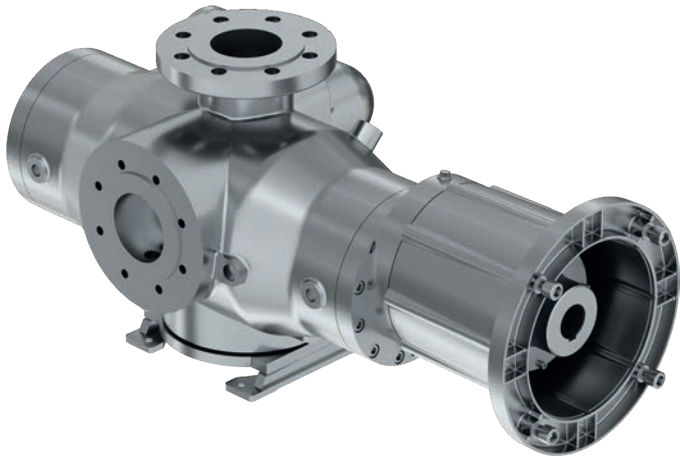
### Advantages

- Robust Design for High Performances
- Product-Independent Bearing Configuration
- High Temperature Operation



## SLW-M (Magnetic Coupling Design)

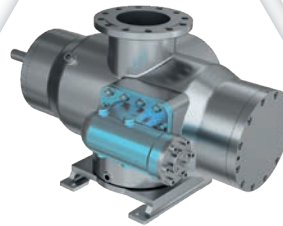
A magnetic coupling serves for leakage-free operations. With this pump, Bornemann serves the market of Hermetically sealed pumps.



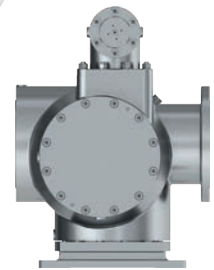
### Advantages

- Environment-Friendly Hermetic Design
- Use in Hazardous Atmospheres
- Increased Safety by Closed Containment

### Further Options



Internal Bypass Valve



Inline Design

#### Safe Operation



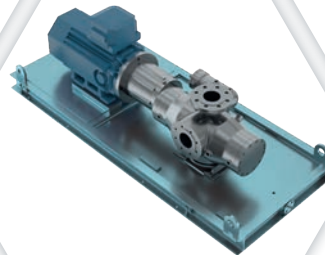
Monitoring of Hydraulic Balance



Easy Heating / Cooling Design



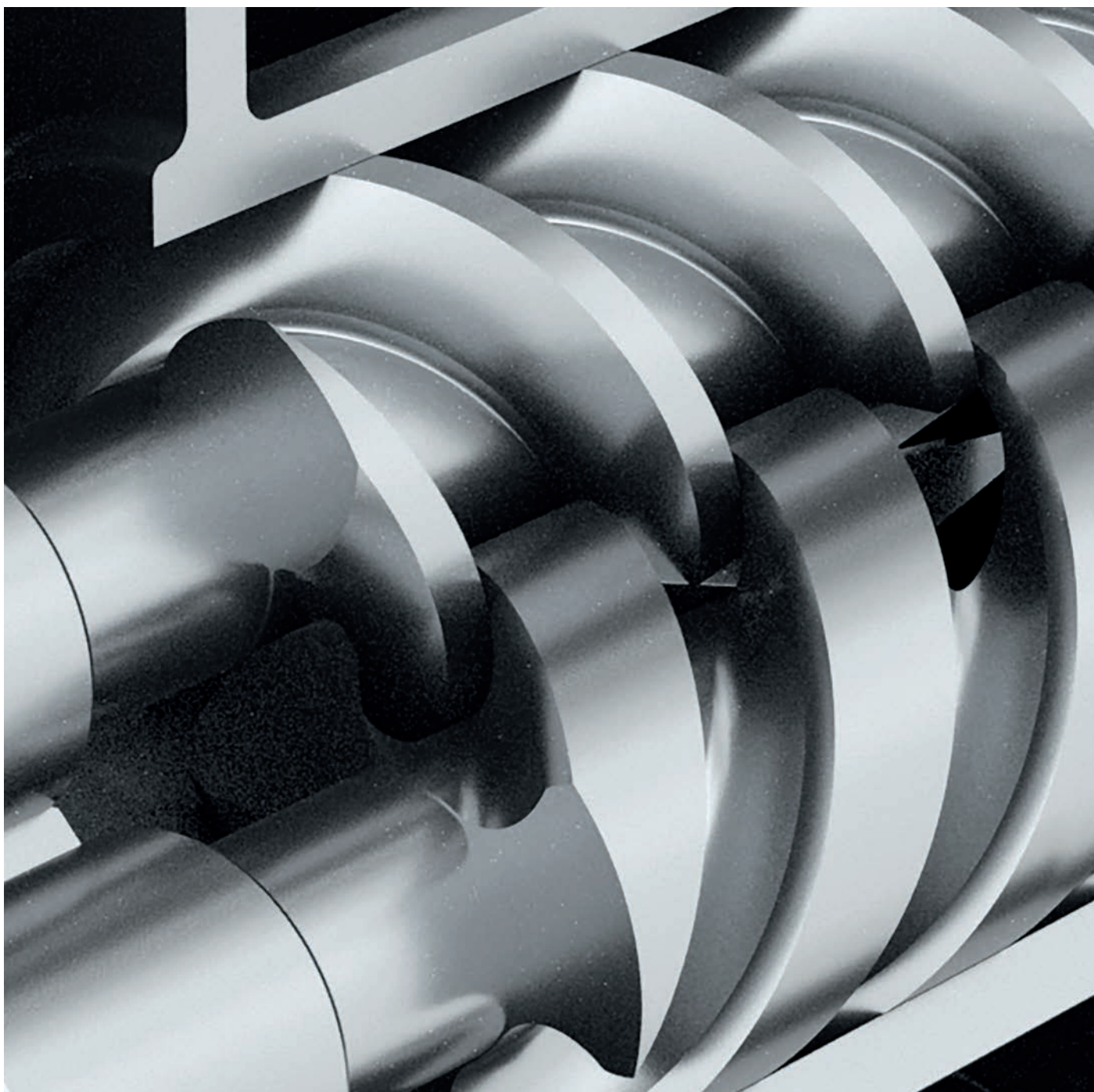
Full Heating Jacket



API Compliance

|            | Max. Flow        |       | Max. Differential Pressure |     | Max. Viscosity     |     | Max. Product Temperature |     | Max. NPSHR |
|------------|------------------|-------|----------------------------|-----|--------------------|-----|--------------------------|-----|------------|
|            | m <sup>3</sup> h | gpm   | bar                        | psi | mm <sup>2</sup> /s | cSt | °C                       | °F  | m          |
| <b>SLW</b> | 1.000            | 4.400 | 40                         | 580 | 100.000            |     | 300                      | 572 | -8,5       |





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