



SIHI^{multi} – Modular multistage pumps



STERLING FLUID SYSTEMS GROUP

SIHI multi

Backed by its 70 years of application and manufacturing knowledge in the field of ring-section multistage pumps, Sterling Fluid Systems has developed its new **SIHI^{multi}** range in order to address today's needs of industrial and process applications, namely increased performances and reliability combined with reduced life-cycle costs.

The result is an innovative pump design integrating an advanced modular concept for high flexibility and interchangeability of parts. Several unique design features ensure enhanced performance and reliability, while closely matching duty conditions.

Applications

- Waterworks and Water supply
- Boiler feed
- Pressure boosting
- Irrigation
- High pressure cleaning
- Heating
- Condensate systems
- Reverse osmosis
- Process and Chemical
- And many more...



Water distribution



High pressure



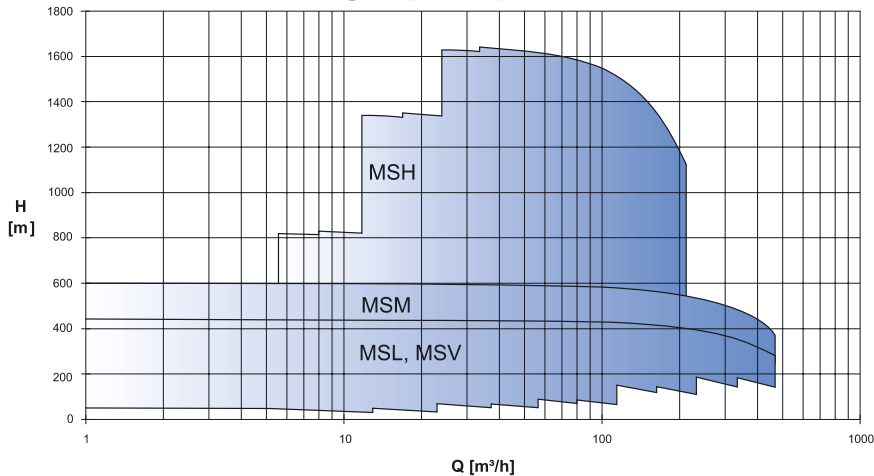
Process and Chemical

STERLING

SIHI



Modular multistage pumps



The **SIHI^{multi}** range of horizontal or vertical, ring-section multistage pumps are for high pressure applications and meet the technical requirements of ISO 5199 / EN 25199.

By adopting an advanced modular design, the number of parts is reduced whilst maximising interchangeability. Optimal selection of impeller diameter and diffuser size ensures that the pump closely matches the required duty conditions.

For the MSL, MSM and MSV range the axial thrust is balanced by a newly designed and patented drum system that does not need tight, wear-sensitive running clearances to efficiently control re-circulation flow in the balance line.

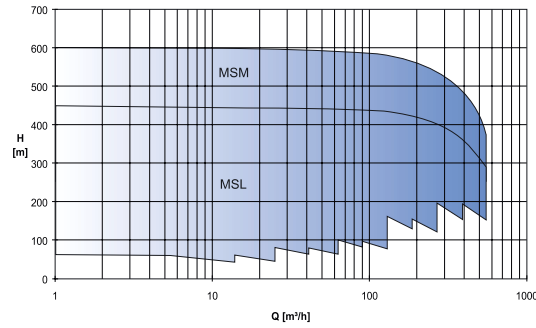
The MSM range is designed for high pressure applications and the axial thrust is balanced by the combination of the drum and disc.

The **SIHI^{multi}** range have optional design features available including: various nozzle positions, choice of shaft sealings, a stage reduction capability, a balance disc lift-off capability and inboard and outboard anti-friction bearings.

more ... for less ...

- **Reduced life-cycle costs**
 - Enhanced efficiency with innovative axial thrust balancing
 - Only one shaft seal
 - Lower power consumption
 - High reliability
- **Ease of maintenance**
 - Simple dismantling and assembly
- **Minimised wear**
 - Reduced usage of spare parts costs
- **Global service network**
 - Established local Service Centres around the world

Performance Range



Suction Position

Adaptable design allows for either radial or axial suction.

Discharge Position

Adaptable design allows different radial positions to be selected.

New Design of Balance Drum System

This new, patented design combines a balance drum with a self-adjusting throttling device.

The benefits include:

- greatly reduced re-circulation flow in the balance line
- same balanced drum system for different number of stages
- high efficiency, lower power consumption
- lesser wear rate as this system does not rely on tight, wear-sensitive clearances to control the re-circulation flow

Suction Impeller

First stage impeller ensures reliable operation with low NPSH conditions.

Product Lubricated Sleeve Bearing

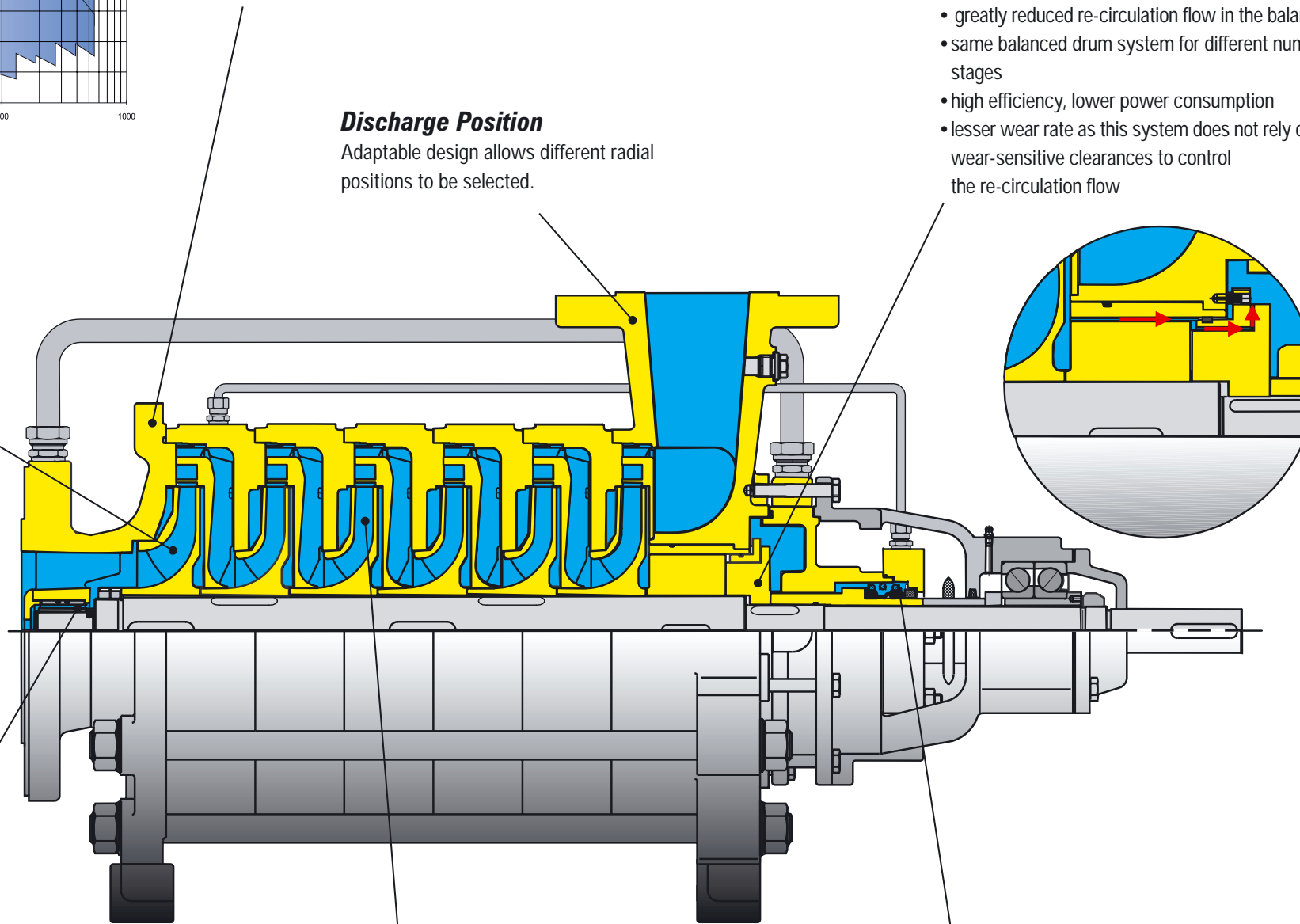
Self-aligning bearing for higher reliability.

Modular Design

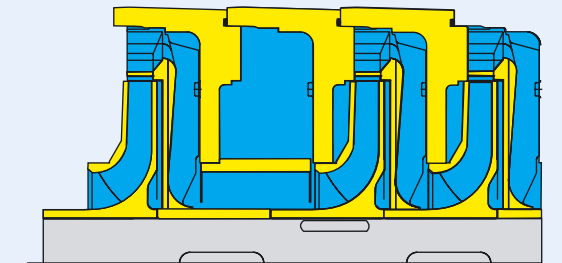
Modular geometry of impellers / diffusers permits optimal hydraulic design matching all duty conditions.

Shaft Sealing

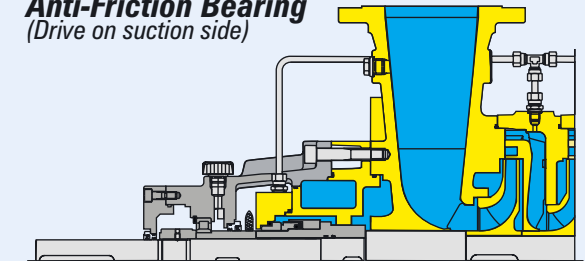
- uncooled or cooled single-acting mechanical seal
- uncooled double acting mechanical seal
- uncooled or cooled packed gland



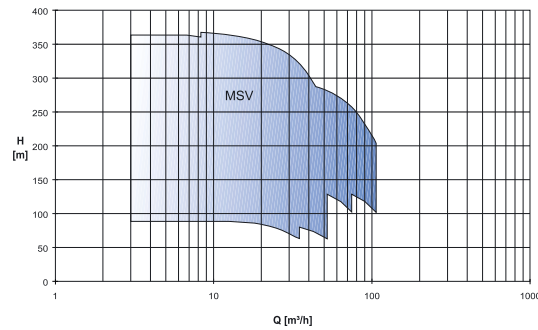
Destaging Device



Inboard and Outboard Anti-Friction Bearing (Drive on suction side)



Performance Range



Discharge Position

Adaptable design allows different radial positions to be selected.

Modular Design

Modular geometry of impellers / diffusers permits optimal hydraulic design matching all duty conditions.

Suction Position

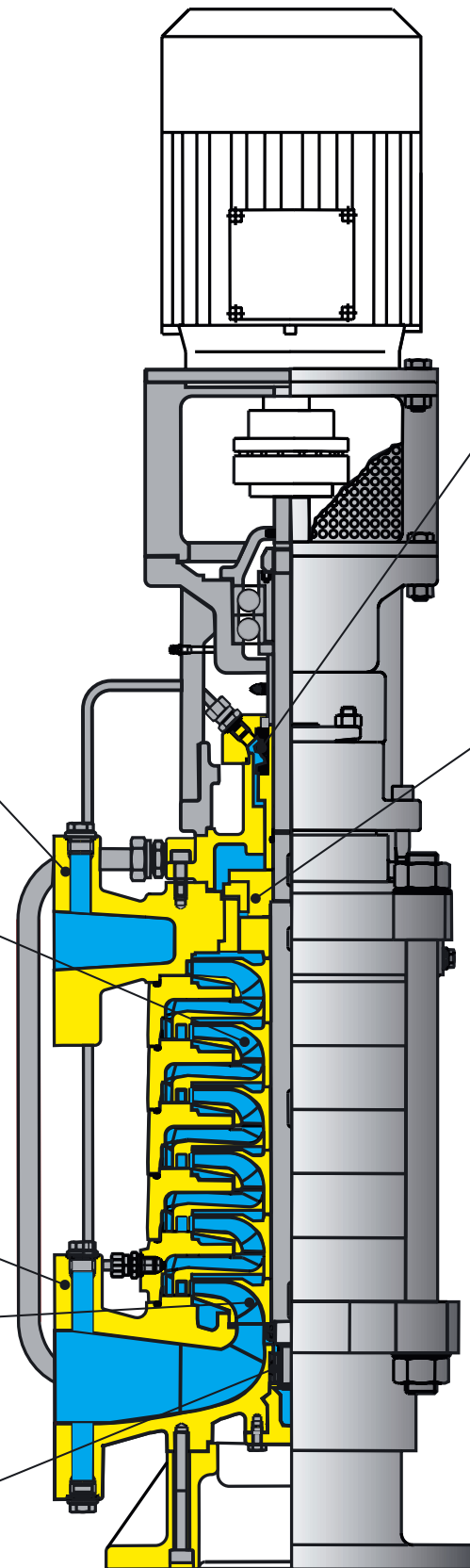
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Suction Impeller

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Product Lubricated Sleeve Bearing

Self-aligning bearing for higher reliability.



Shaft Sealing

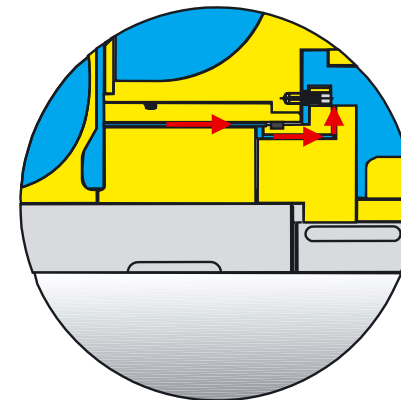
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New Design of Balance Drum System

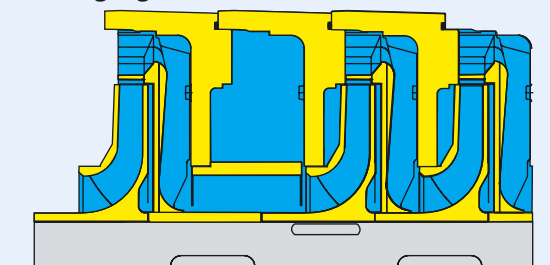
This new, patented design combines a balance drum with a self-adjusting throttling device.

The benefits include:

- greatly reduced re-circulation flow in the balance line
- same balanced drum system for different number of stages
- high efficiency, lower power consumption
- lesser wear rate as this system does not rely on tight, wear-sensitive clearances to control the re-circulation flow

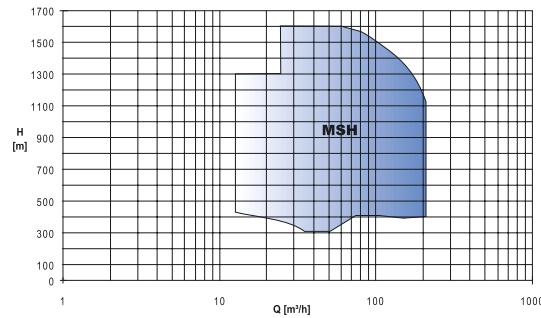


Destaging Device



SIHI^{multi} - Type MSH

Performance Range



Suction Position

Adaptable design allows for either radial or axial suction.

Impellers

Long hubs provide stable fit to shaft, even at changing operating temperatures.

Discharge Nozzle

Large diameter provides low flow velocity and quiet operation. Different nominal pressure stages are available.

Oil Lubricated Inboard Roller Bearing

External cooling is possible for severe operating conditions.

Suction Impeller

First stage impeller ensures reliable operation with low NPSH conditions.

Product Lubricated Sleeve Bearing

Self-aligning bearing for higher reliability.

Modular Design

Modular geometry of impellers / diffusers permits optimal hydraulic design matching all duty conditions.

Axial Thrust Balancing

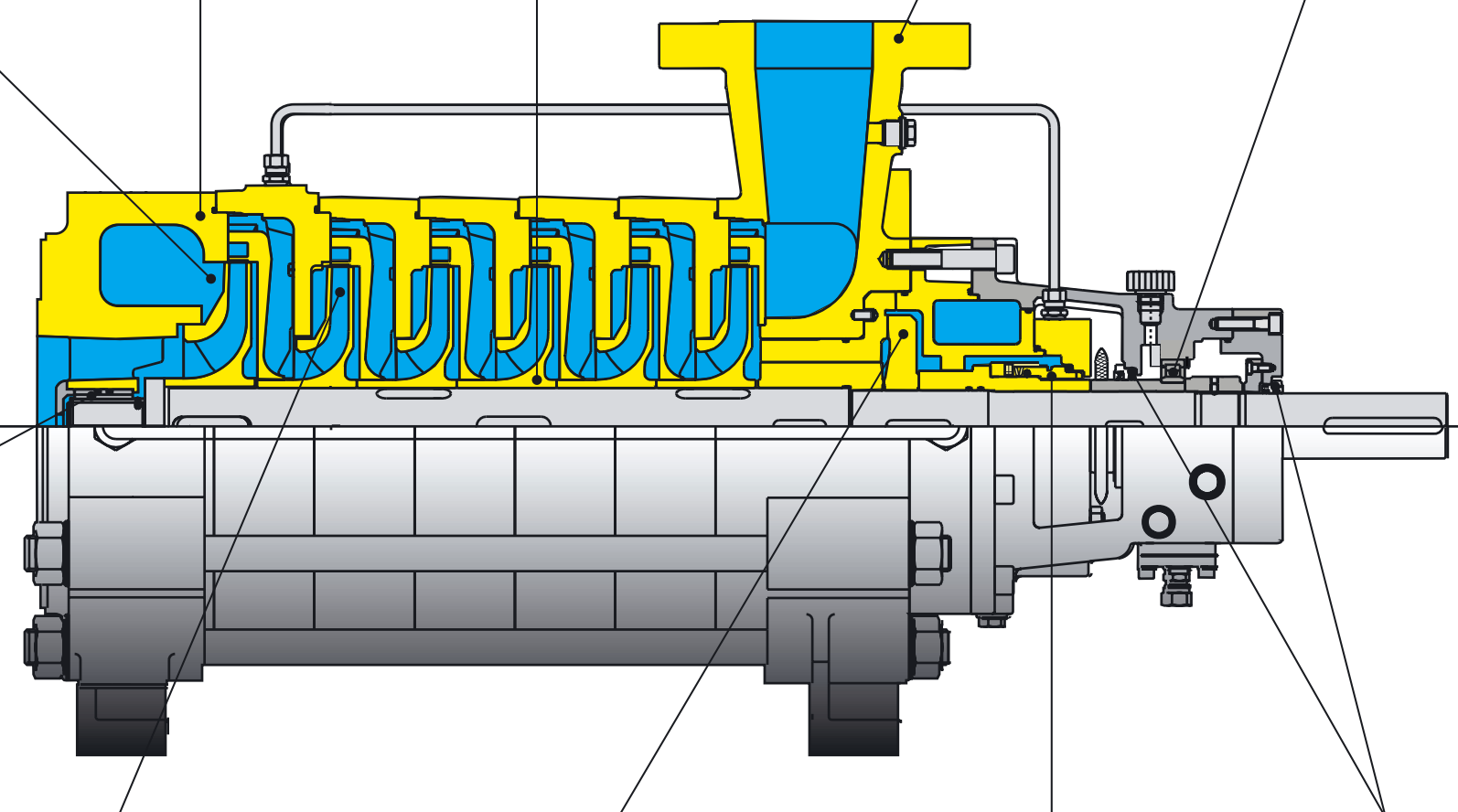
Proven combination of the drum and disc balances hydraulic axial thrust over the entire operating range.

Shaft Sealing

- uncooled or cooled single-acting mechanical seal
- uncooled or cooled packed gland

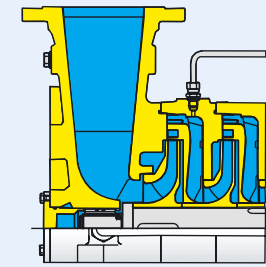
Labyrinth Seals

Bearing protection to serve extended life.

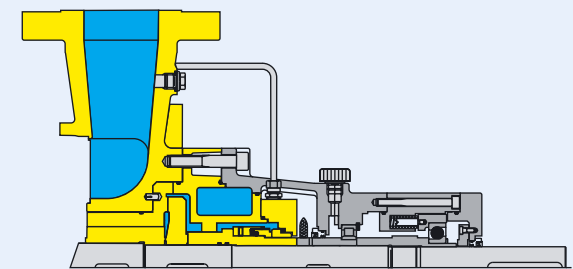


Options

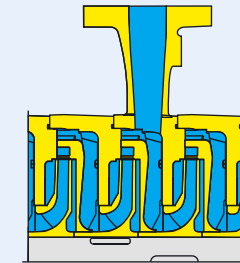
Radial Inlet



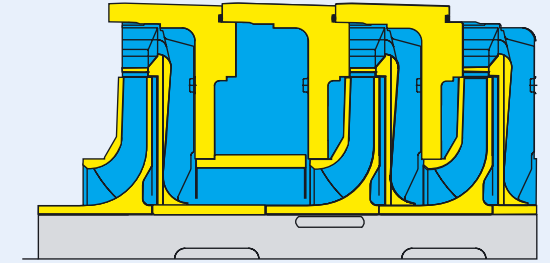
Balance Disc Lift-Off Device



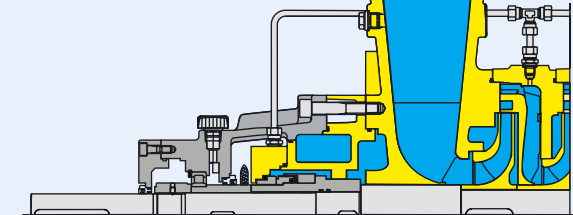
Interstage Bleed-Off



Destaging Device



Inboard and Outboard Anti-Friction Bearing (Drive on suction side)



SIHI^{multi} - Options

Nozzle Position MSL, MSM, MSH (viewed from discharge side)

Discharge Casing



radial horizontal left



radial top



radial horizontal right

every combination of suction and discharge casing is available

Suction Casing



axial



radial horizontal left

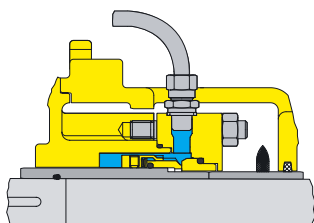


radial top

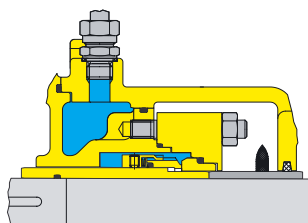


radial horizontal right

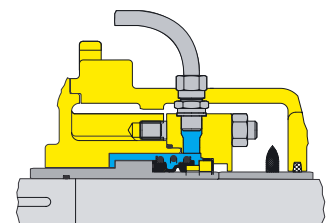
Shaft Sealing (Mechanical seal arrangement)



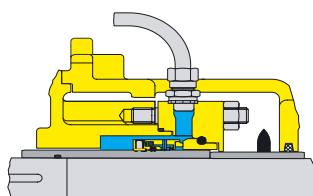
uncooled, balanced



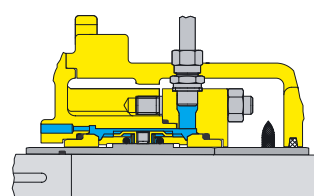
cooled, balanced



uncooled, unbalanced

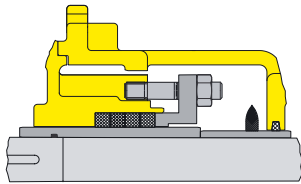


uncooled, balanced
STERLING^{GNZ} seal

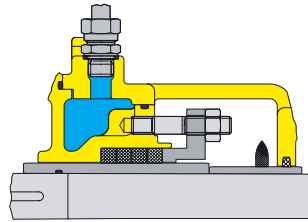


uncooled, double back-to-back

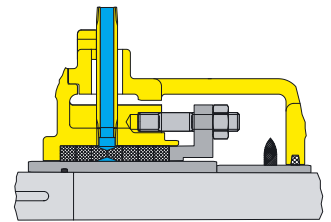
Shaft Sealing *(Packed gland arrangement)*



uncooled



with jacket-cooling



with external flushing

Performance Range	MSL,MSM	MSV	MSH
Capacity	max. 450 m ³ /h	max. 120 m ³ /h	max. 250 m ³ /h
Head	max. 630 m	max. 400 m	max. 1600 m
Speed	max. 3600 rpm	max. 3600 rpm	max. 3600 rpm
Temperature	-10 °C to +180 °C (optional 200 °C)	-10 °C to +180 °C	-10 °C to +180 °C
Pressure Rating	max. 63 bar	max. 40 bar	max. 160 bar

Materials

Suction Casing	Cast Iron, Ductile Iron, Stainless Steel, Chrome Steel
Stage Casing	Cast Iron, Ductile Iron, Stainless Steel, Chrome Steel
Discharge Casing	Cast Iron, Ductile Iron, Stainless Steel, Chrome Steel
Impeller, Diffuser	Cast Iron, Bronze, Stainless Steel
Shaft	Chrome Steel, Duplex

Special materials are available on customers request.

more ... for less ... - please contact us !