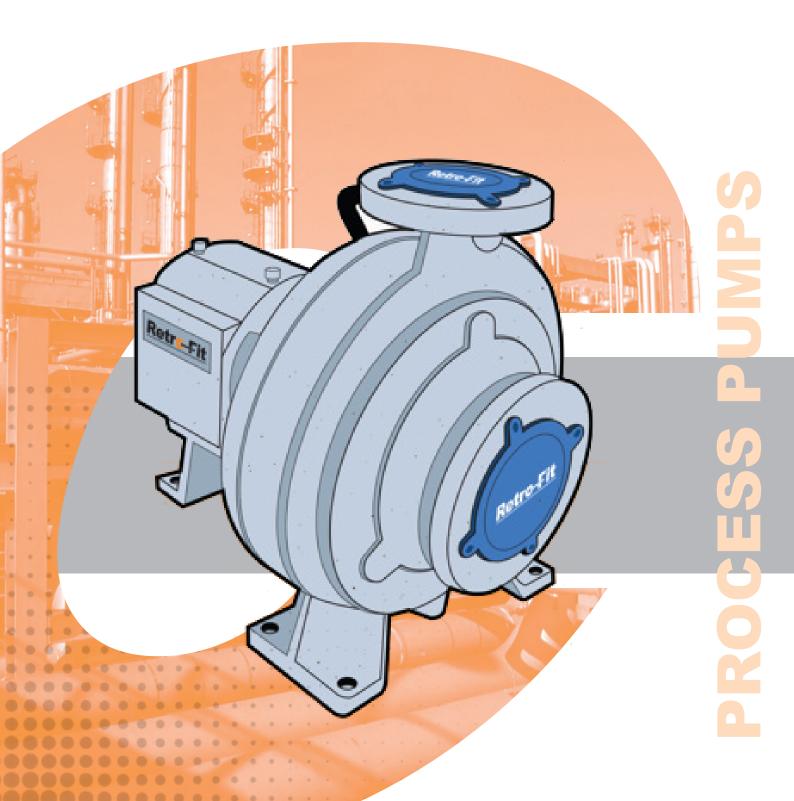


# ISP SERIES

**Process Pumps** 





#### General

## Redefining Efficiency and Reliability in Industrial Applications

Malcolm Thompson Pumps is the exclusive distributor of Retro-Fit pumps and pump parts, offering a compelling solution for optimising your specific industrial processes.

The ISP Series process pumps are top-tier products that provide superior performance and reliability. They are engineered to meet the highest industry standards, making them ideal for demanding processes in the mining, chemical, petrochemical, and general industrial sectors.

With their robust construction and advanced design, the ISP Series process pumps offer excellent efficiency, reduced maintenance costs, and enhanced durability. They are the perfect choice for upgrading existing systems, ensuring seamless integration and long-term operational excellence.

#### **Features**

- Low Maintenance Costs: The modular design simplifies maintenance tasks and reduces spare part requirements.
- Trusted Expertise: Proven track record across a diverse range of industries.
- Service-Friendly Design: User-friendly features for a quick and easy installation, with straightforward maintenance and service.
- Wide Range of Applications: High-performance hydraulics and material choices for versatility and dependability for the most demanding applications.
- Advanced Sealing Technology: Innovative shaft seals that ensure consistent operation and lower maintenance expenses.
- Self-Priming and Degassing Excellence: Cuttingedge technology for effortless self-priming and effective degassing.
- Robust Bearing System: Durable and straightforward bearing units available with multiple lubrication choices.
- Modular Design: Modular construction reduces spare part inventory and associated costs.

#### **Applications**

For handling pure, raw and stormwater as well as seawater in

- Oil & gas
- Power generation
- · Water treatment
- · Seawater desalination
- Marine and offshore engineering
- · Fire fighting systems
- Industrial water supply
- Power stations
- · Irrigation and drainage pumping stations
- Water works
- · Clean and lightly contaminated liquids
- · Viscous liquids
- Fibrous slurries
- Large solids containing liquids
- Gas containing liquids and self-priming applications



Mining



Commercial & Industrial



Gas Productio



#### **Cost Effective Retro-Fit Replacement Pump Parts**

- Retro-Fit pump parts offer a reliable and cost-effective solution.
- Our pump parts are interchangeable with leading brands like Sulzer, Ahlstrom, Goulds, and many more
- Guaranteed compatibility with existing equipment.
- Built to meet or exceed OEM standards for long-lasting performance.

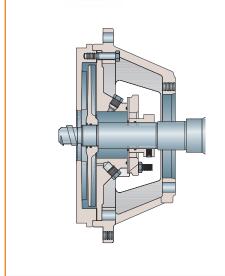


# **Shaft Sealing**

# **Dynamic Seal**

Dynamic Seal is specially designed for fibrous liquids such as paper stock and other difficult liquids. The Dyna-mic Seal requires no external sealing water. It is essentially maintenance-free and offers outstanding reliability.

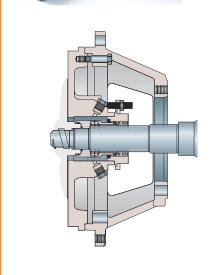




## **Mechanical Seal**

Various mechanical seal configurations are available. For difficult appli-cations "ready-fitted" seals are espe-cially recommended. For extremely corrosive applications, a ready-fitted seal can be selected with the same exact construction material as the pump casing itself.

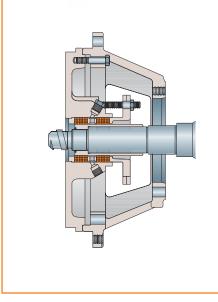




# **Gland Packings**

A gland packing with external flush-ing prevents the pumped liquid from precipitating into the sealing housing. The flushing liquid is mixed with the pumped liquid. Alternatively the ex-ternal flushing has an outlet connection.













## **Features and Benefits**

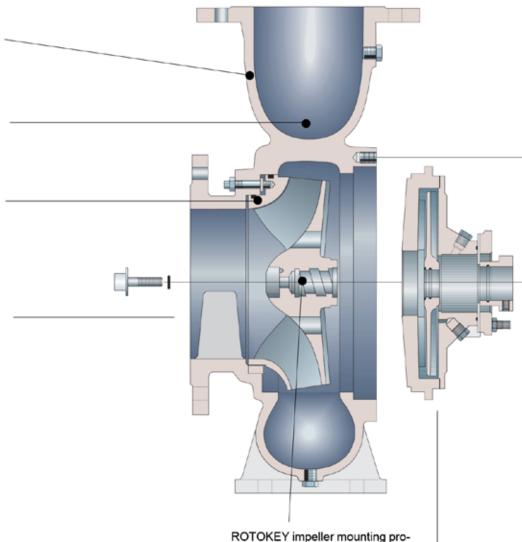
A double volute casing in larger pumps reduces radial forces and shaft deflection.

The self-venting, top centerline casing prevents air-lock in the top of the casing.

The sideplate is adjusted externally to maintain a constant impeller clearance and continuous high efficiency.

#### Hydraulics

Designed for pumping clean, abrasive or corrosive liquids especially stocks of various kinds.



vides strong, reliable power transmission. It is self-locking and reverse rotation safe. ROTOKEY facilitates the installation and removal of the impeller. It is not sensitive to axial loads created during pump operation

A wide selection of shaft seals is



#### Bearing Unit

Simplified heavy-duty bearing unit design ensures reliability.

#### Grease Lubrication

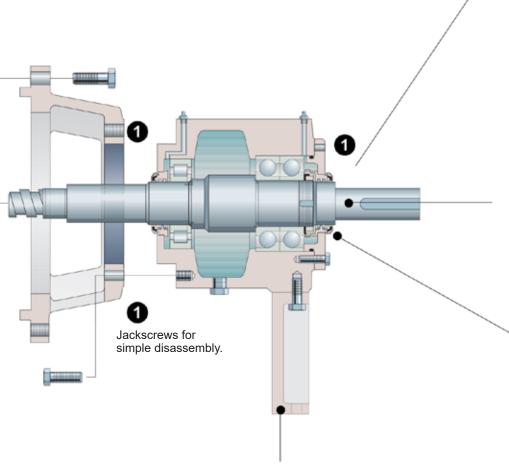
 temperature of pumped liquid max. 120 °C

#### Oil Lubrication

 temperature of pumped liquid max. 180 °C

Heavy-duty shaft. Deflection at stuffing box less than 0.05 mm. High strength duplex stainless steel is standard shaft material.

Non-contacting bearing protection for the combined advantages of labyrinth ring, deflector and lipseal. Lipseal protects in standstill position.



Strong and rigid bearing support foot improves mounting stability and maintains solid support.



# **Materials**

#### **Standard Material Combinations**

| Stainless Steel Design |                         |        | Nominal Chemical Composition %                    |           |           |           |           |           |  |
|------------------------|-------------------------|--------|---|-----------|-----------|-----------|-----------|-----------|--|
|                        |                         | C max. | Cr  | Ni        | Мо        | Cu        | N         |           |  |
| Duplex SS              | ASTM A890 Grade 3A      | 41     | 0.06  | 24.0-27.0 | 4.0-6.0   | 1.75-2.50 | -         | 0.15-0.25 |  |
|                        | ASTM A890 Grade 1B      | 4L     | 0.04  | 24.5-26.5 | 4.75-6.00 | 1.75-2.25 | 2.75-3.25 | -         |  |
|                        | ASTM A890 Grade 5A      | 4T     | 0.03  | 24.0-26.0 | 6.0-8.0   | 4.0-5.0   | -         | 0.10-0.30 |  |
| Austenitic SS          | ASTM A743 Grade CG-3M   | 4G     | 0.03  | 18.0-21.0 | 9.0-13.0  | 3.0-4.0   | -         | -         |  |
|                        | ASTM A743 Grade CN-7M   | 43     | 0.07  | 19.0-22.0 | 27.5-30.5 | 2.0-3.0   | 3.0-4.0   | -         |  |
| Martensitic SS         | ASTM A747 Grade CB7Cu-2 | 4E     | 0.07  | 14.0-15.5 | 4.5-5.5   | -         | 2.5-3.2   | -         |  |
| Other Design           |                         |        |   |           |           |           |           |           |  |
| Nickel Alloy           | A494CW-6M               | 4J     | 0.07  | 17.0-20.0 | balance   | 17.0-20.0 |           |           |  |
| Cast Steel Des         | sign                    |        |   |           |           |           |           |           |  |
| Cast Steel<br>material | ASTM A216-93 Grade WCB  | 46     | 0.30  | -         | -         | -         |           |           |  |
|                        |                         |        |   |           |           |           |           |           |  |
| <b>Material Altern</b> | natives for Other parts |        |   |           |           |           |           |           |  |
| Gasket material        | Klinger SIL C-4430      | 83     | Used in temperature range -40+160 °C and pH 2-12  |           |           |           |           |           |  |
|                        | PTFE/Glass              | 84     | Used in temperature range -190+240 °C and pH 0-14 |           |           |           |           |           |  |
| O-ring material        | EPDM                    | 92     | Used in temperature range -50+150 °C              |           |           |           |           |           |  |
|                        | FKM                     | 96     | Used in temperature range -20+210 °C              |           |           |           |           |           |  |

Other corrosion resistant cast steels available on special request.

# **Corrosive Resistant Thinking**

To ensure maximum reliability against corrosion we offer material selection options from high quality steel foundries.

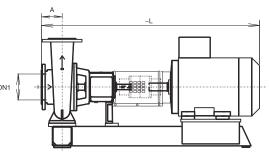
• All parts in contact with the pumped liquid can be produced from the same construction material as the pump casing. Materials available for this option are 41, 4L, 4T, 4G, 43, and 4J

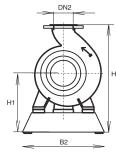


# **Main Dimensions**

Dimensions: ISO 2858 (up to size 200-400) Specifications

Stuffing box ISO 3069
Flange drilling Several flange drilling options according to valid standards.





|            |     |     |                  |                 |                 |     |      | Weight           |
|------------|-----|-----|------------------|-----------------|-----------------|-----|------|------------------|
| Size       | DN1 | DN2 | B2 <sup>1)</sup> | H <sup>1)</sup> | L <sup>1)</sup> | Α   | H1   | kg <sup>2)</sup> |
| ISP32-200  | 50  | 32  | 500              | 480             | 1240            | 80  | 300  | 125              |
| ISP40-200  | 65  | 40  | 500              | 480             | 1260            | 100 | 300  | 125              |
| ISP50-200  | 80  | 50  | 630              | 540             | 1330            | 100 | 340  | 160              |
| ISP65-200  | 100 | 65  | 630              | 640             | 1580            | 100 | 415  | 230              |
| ISP80-200  | 125 | 80  | 630              | 665             | 1600            | 125 | 415  | 240              |
| ISP32-250  | 50  | 32  | 630              | 620             | 1490            | 100 | 395  | 230              |
| ISP40-250  | 65  | 40  | 630              | 670             | 1710            | 100 | 445  | 250              |
| ISP50-250  | 80  | 50  | 630              | 640             | 1600            | 125 | 415  | 235              |
| ISP65-250  | 100 | 65  | 720              | 730             | 1820            | 125 | 480  | 275              |
| ISP80-250  | 25  | 80  | 720              | 760             | 1820            | 125 | 480  | 280              |
| ISP40-315  | 65  | 40  | 630              | 740             | 1700            | 125 | 460  | 280              |
| ISP50-315  | 80  | 50  | 720              | 800             | 2020            | 125 | 520  | 350              |
| ISP100-250 | 125 | 100 | 730              | 835             | 2290            | 140 | 555  | 420              |
| ISP125-250 | 150 | 125 | 730              | 910             | 2290            | 140 | 555  | 430              |
| ISP150-250 | 200 | 150 | 630              | 840             | 1670            | 160 | 465  | 340              |
| ISP65-315  | 100 | 65  | 730              | 835             | 2270            | 125 | 555  | 420              |
| ISP80-315  | 125 | 80  | 730              | 870             | 2270            | 125 | 555  | 410              |
| ISP100-315 | 125 | 100 | 730              | 915             | 2400            | 140 | 600  | 480              |
| ISP125-315 | 150 | 125 | 730              | 955             | 2400            | 140 | 600  | 500              |
| ISP100-400 | 125 | 100 | 720              | 820             | 1780            | 140 | 465  | 370              |
| ISP125-400 | 150 | 125 | 720              | 900             | 1860            | 140 | 500  | 400              |
| ISP200-250 | 250 | 200 | 730              | 980             | 2100            | 200 | 530  | 510              |
| ISP300-250 | 300 | 300 | 730              | 1175            | 2150            | 225 | 615  | 630              |
| ISP150-315 | 200 | 150 | 730              | 930             | 2100            | 160 | 530  | 460              |
| ISP200-315 | 250 | 200 | 730              | 980             | 2100            | 180 | 530  | 500              |
| ISP250-315 | 300 | 250 | 830              | 1175            | 2600            | 225 | 615  | 660              |
| ISP300-315 | 350 | 300 | 880              | 1365            | 2700            | 250 | 735  | 870              |
| ISP150-400 | 200 | 150 | 830              | 1005            | 2350            | 160 | 555  | 570              |
| ISP200-400 | 250 | 200 | 880              | 1175            | 2650            | 180 | 675  | 740              |
| ISP250-400 | 300 | 250 | 880              | 1295            | 2850            | 200 | 735  | 840              |
| ISP300-400 | 350 | 300 | 1160             | 1440            | 2900            | 250 | 770  | 1060             |
| ISP350-500 | 400 | 350 | 880              | 1645            | 2900            | 280 | 845  | 1190             |
| ISP400-500 | 400 | 400 | 1160             | 1770            | 2900            | 280 | 920  | 1420             |
| ISP100-500 | 200 | 100 | 880              | 1185            | 2700            | 180 | 685  | 740              |
| ISP150-500 | 250 | 150 | 880              | 1185            | 2800            | 180 | 685  | 780              |
| ISP200-500 | 250 | 200 | 1160             | 1330            | 2800            | 180 | 770  | 1000             |
| ISP250-500 | 300 | 250 | 1160             | 1400            | 2850            | 200 | 770  | 1060             |
| ISP300-500 | 350 | 300 | 1160             | 1590            | 3100            | 250 | 920  | 1110             |
| ISP400-600 | 500 | 400 | 1160             | 1850            | 3000            | 355 | 1000 | 1600             |
| ISP500-600 | 500 | 500 | 1160             | 2000            | 3000            | 355 | 1000 | 1780             |
| ISP100-625 | 200 | 100 | 1160             | 1330            | 2850            | 250 | 770  | 1130             |
| ISP200-600 | 300 | 200 | 1160             | 1415            | 2820            | 200 | 785  | 1250             |
| ISP250-600 | 300 | 250 | 1160             | 1495            | 2850            | 225 | 785  | 1330             |
| ISP300-600 | 400 | 300 | 1160             | 1645            | 2870            | 250 | 845  | 1410             |
| ISP500-700 | 500 | 500 | 1340             | 2100            | 3180            | 400 | 1100 | 2350             |
| ISP600-700 | 600 | 600 | 1340             | 2280            | 3180            | 420 | 1100 | 2350             |
| ISP400-750 | 500 | 400 | 1340             | 1960            | 3135            | 355 | 1010 | 2020             |

Max. dimensions for biggest IEC-motor required in standard operation
 With biggest steel baseplate and coupling but without motor. available with both metric and US standard dimensions with compatible fasteners and fittings. NOTE! Dimensions not to be used for construction.





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