Leistritz

Maritime

Screw Pump Solutions for Fleet Operation and Shipbuilding



pumps.leistritz.com

Built for high sea. Engineered for good.

Expertise, Engineering, Certification and Performance Parameters.

On-board experience

We work on board and below deck across ship systems. Our teams focus on practical, detail-oriented tasks and on-site support. The objective is durable answers and solutions designed for long-term reliability.

Quality, precision, innovation

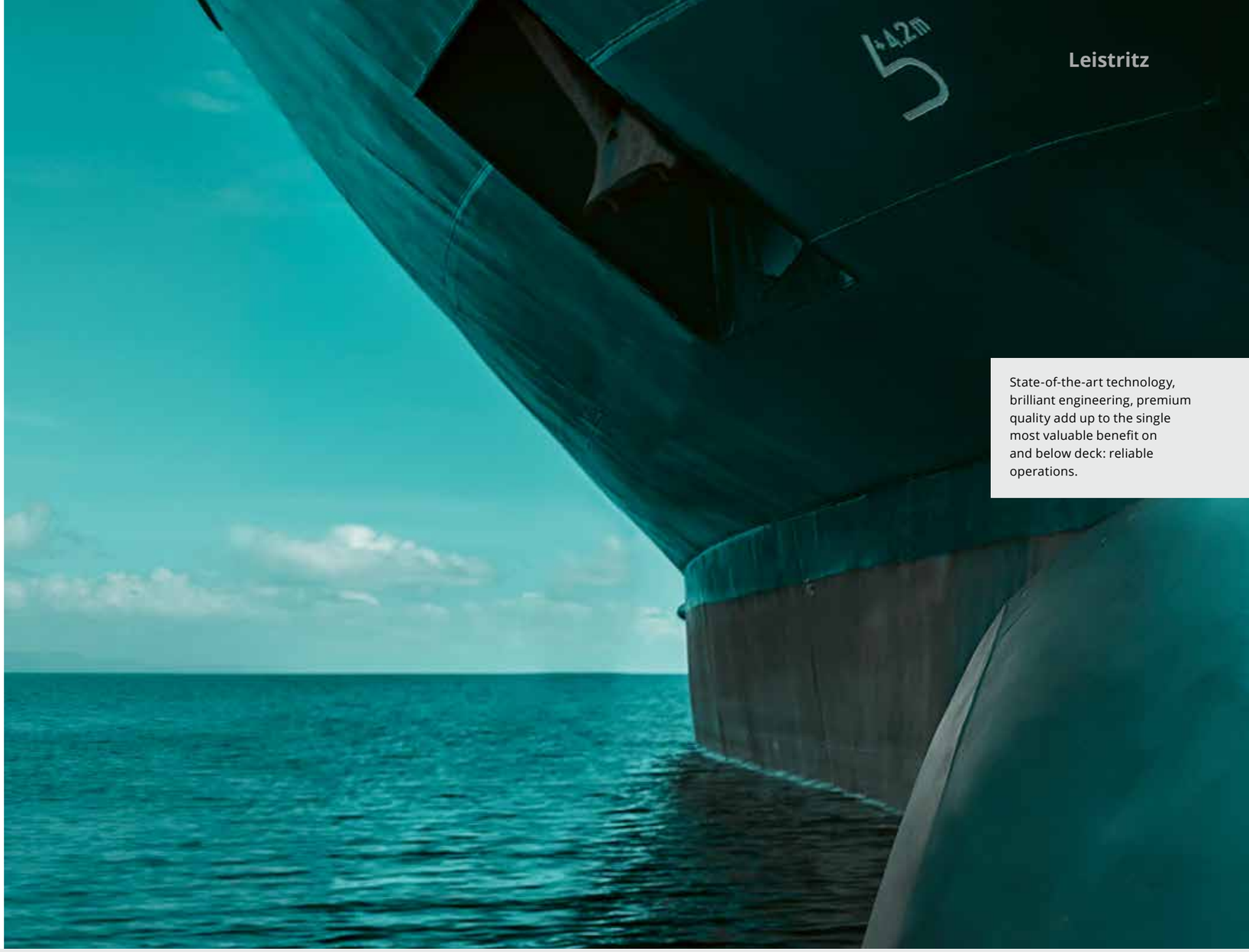
Quality, precision, and innovation guide our work. Core technologies are developed and manufactured in Germany. Production follows contemporary quality standards and tight tolerances. Our R&D focuses on new materials and optimised components to improve performance and service life.

Testing and validation

Our test facilities in Germany enable comprehensive pump testing under demanding operating conditions. This includes endurance and performance tests to assess efficiency, wear behaviour, and stability. The goal is reduced wear and smooth, reliable operation in service.

Approvals and certifications

Approvals and certifications are available as required by project and application, including major maritime classification societies such as ABS, Bureau Veritas (BV), DNV, Lloyd's Register (LRS), and RINA. Compliance with IMO/MARPOL requirements, including Annex VI (emissions), can be supported where applicable.



State-of-the-art technology, brilliant engineering, premium quality add up to the single most valuable benefit on and below deck: reliable operations.



Solutions for steering gears and pitch propellers



Solutions for ship fuel oil systems



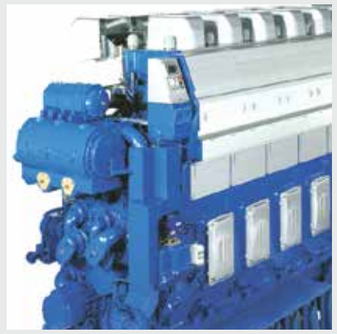
Solutions for ship engine lube systems



Tanker and cargo loading and unloading



Pump support for hydraulic devices



Customised screw pump systems

Solutions in store.

Keeping your product moving smoothly.

Loading and unloading cargo fluids from low viscosity diesel oil to high viscosity bitumen or molasses with easy to adjust delivery is daily exercise for the Leistritz pump task force.
Cast iron, nodular cast iron, cast steel and stainless steel outfits allow you to select the perfect finish for your fleet and your task.

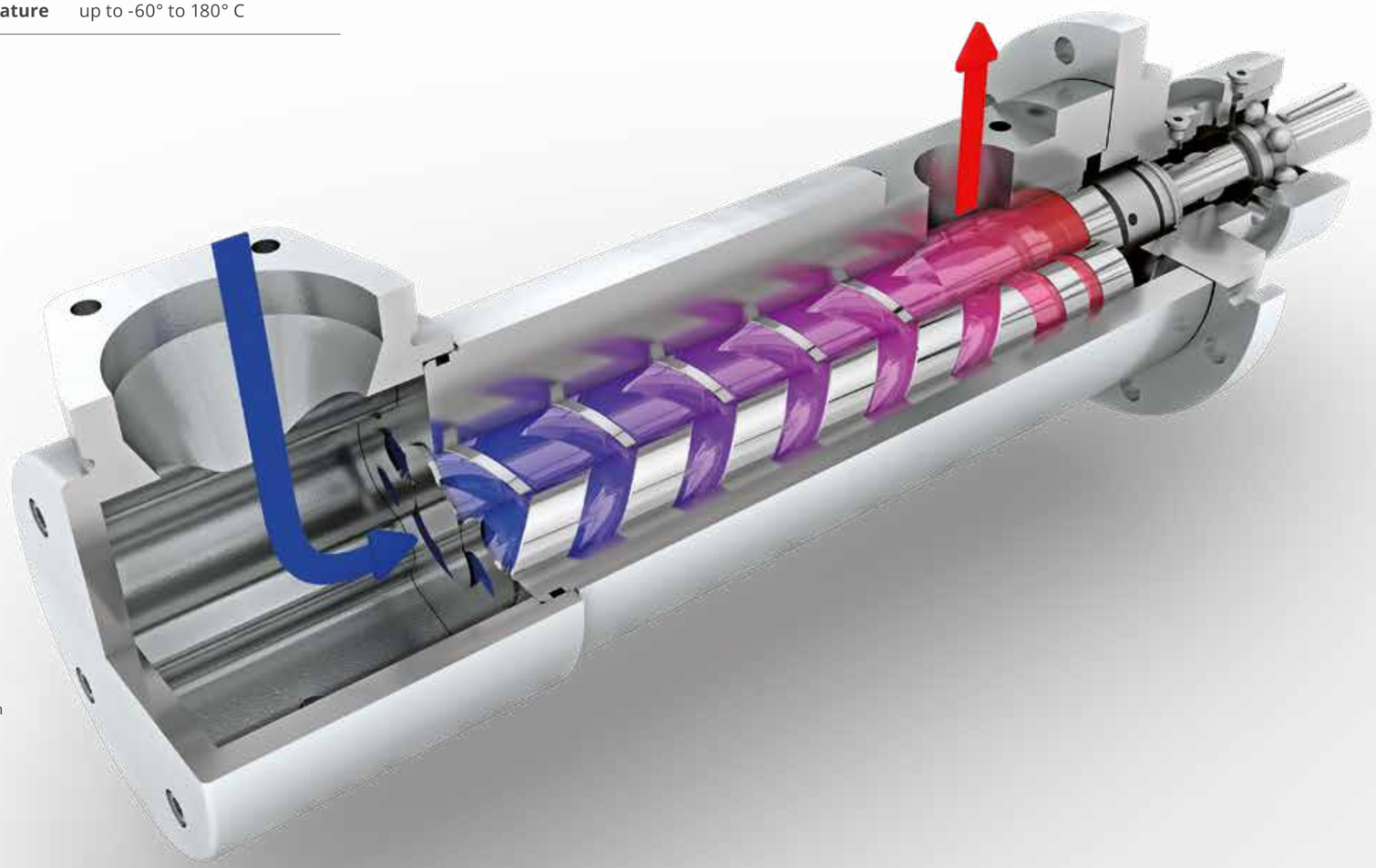
Flow rates	up to 5,000 m^3/h
Viscosities	up to > 3,000 cSt
Differential pressures	up to 100 bar
Operating Temperature	up to -60° to 180° C

Steering gears and pitch propellers

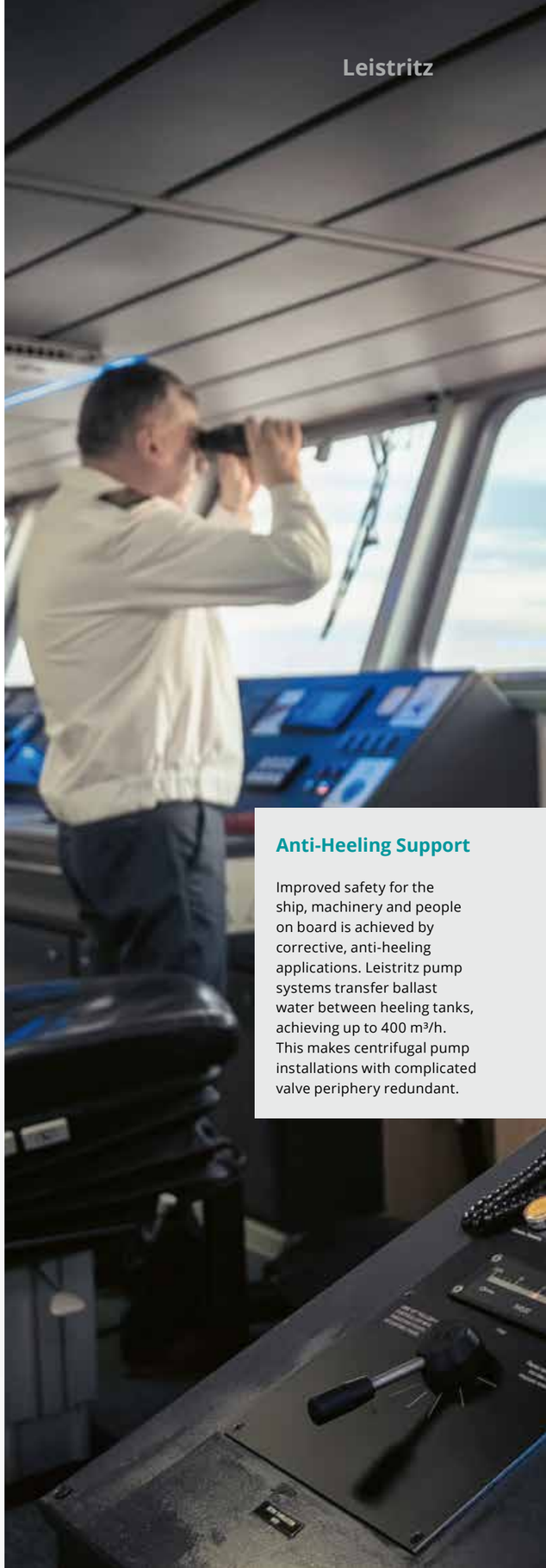
Leistritz screw pumps systems provide appropriate pressure to the actuator and contribute to safe operation and manoeuvrability of the vessel. Their reliability is legendary. And tested in the toughest of conditions.

Scope of Technical Options

- Frequency converter with air or water cooling
- Monitoring (PLC) for viscosity and temperature and automatic speed adjustment
- Alternative pump drive by hydraulic motor and/or gas tight bulk head
- Penetration sealing (type-approved) for installation of electric motor in “non ex area”
- Pump casing materials available for specified needs of pumped fluid: cast iron, nodular cast iron, cast steel, stainless steel



Hydraulic pump L3MF
for steering gears, pitch
propellers and winches



Anti-Heeling Support

Improved safety for the ship, machinery and people on board is achieved by corrective, anti-heeling applications. Leistritz pump systems transfer ballast water between heeling tanks, achieving up to 400 m^3/h. This makes centrifugal pump installations with complicated valve periphery redundant.

Moving cargo

Keeping your Fleet on Schedule. And Your Product on Time.

Cargo pump applications

The screw pump technology ensures almost pulsation-free discharge for fluids from low viscosity diesel oil to high viscosity crude oil or molasses.

Stripping pump applications

Leistritz submerged cargo pump solutions inside the barrel put their excellent suction ability to use. This helps strip piping line and tanks, even with highly viscous products. Your benefit: optimised cargo discharge time.

Solutions for bunkering tanks

Viscosities from 1 to 2,000 mm²/s in bunkering refueller tankers equipped with a blending station are handled without the need for an additional heating system.

Fuelling Power

Solutions for Fuel Systems
Leistritz screw pump systems serve as fuel oil supply and transfer pumps for boilers and separators. They handle heavy fuel oils as well as very thin diesels (low sulphur fuels). Serving as feeder and booster pumps, they run safely without maintenance, even with heavy fuel oil at temperatures above 120°C.

Solutions for Lube Oil Systems
Leistritz pumps ensure appropriate flow and pressure, smooth operations in rough seas, small installation space, reliability, robust design and long service life.

Leistritz customised solutions include this directly coupled lube oil screw pump. It ensures a consistent supply of lube oil in sync with the screw speed.



Tanker and cargo loading and unloading

The Leistritz scope of pumping solutions is designed to comply with MARPOL and other standards with resistance to sensitive and aggressive chemical cargo fluids and products. Cargo of nearly all viscosities – from kerosene to asphalt – can be unloaded and effectively stripped from tanks and suction lines. The pumps are designed as five-screw (or two-screw), single flow pumps for high-capacity unloading and stripping. Their function as circulation pumps also helps to keep viscous products flowable and on temperature during transportation.

Homebase for your peace of mind.

Leistritz Pump Technology: Who we are and what we do.

Saving you time and money, so you are free to concentrate on your business. Which is maritime operations. Never pumping. Let us take care of that for you.

Powered by performance

Backed by the world's largest range of screw pumps, our scope of supply embraces standard and custom-built solutions for all marine and navel applications.

We are big on innovation and technology, but even bigger on service. We're on site whenever and wherever you need us.

- Lube and fuel oil systems
- Pumping solutions for loading and unloading
- Special applications such as hydraulic pumps
- Solutions for dry and submerged operation



Solving problems before you have them

Pump solutions may not be exciting, but that's the point: running smoothly, you have no hassles and no costs where budgets are strapped and schedules tight. Our scope is our engineering pride, coming to grips with your fleet operations. It's not the pump, it's the people behind it that deliver solutions to problems before you have them.

Powered by your applications

We're on your side, even when we're not around. That's a sign that all is well. Our pump technology has a reputation for being indestructible, running 15, 20, even 30 years without a hitch.

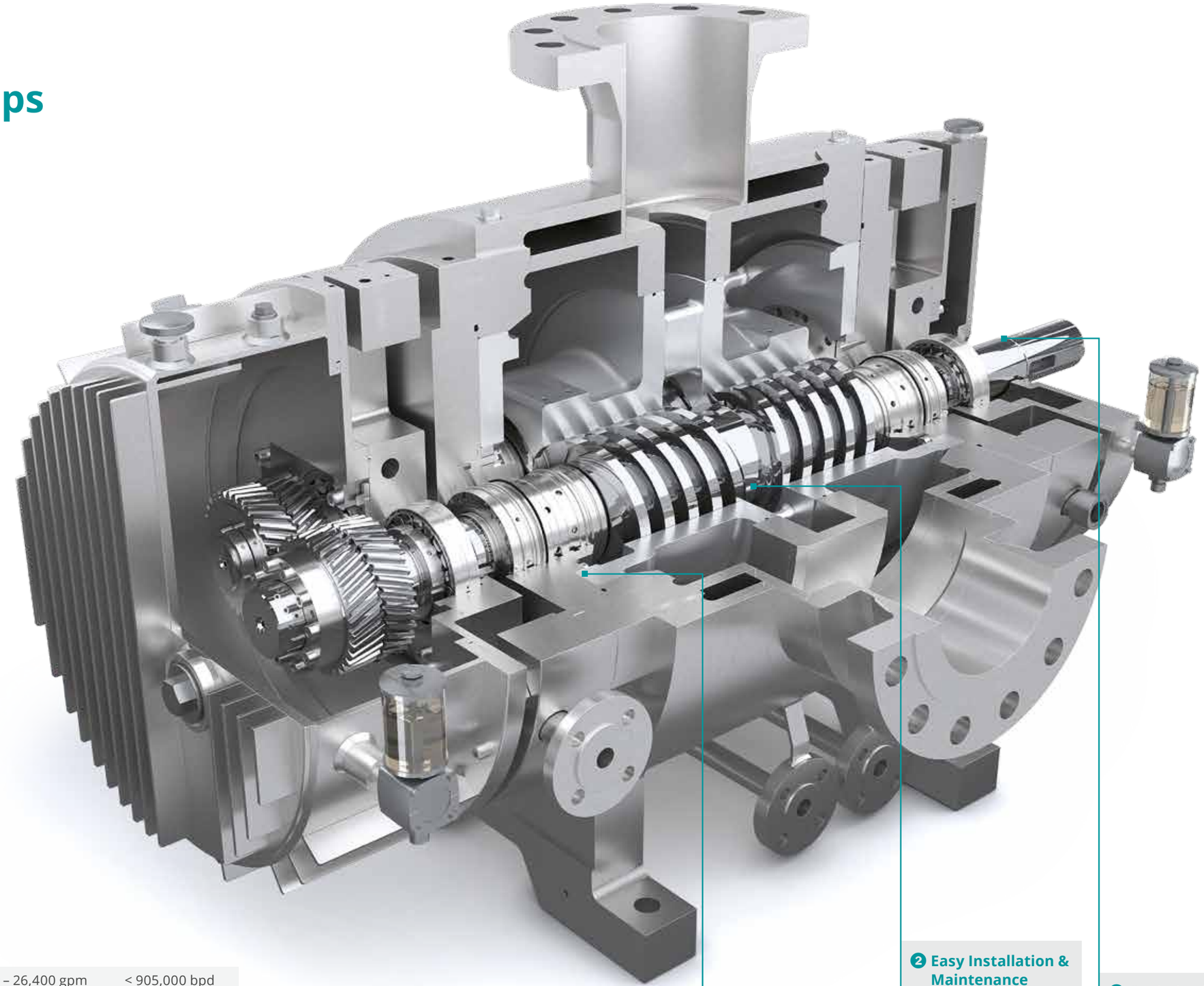
Leistritz Screw Pumps

The Performance Principle.

A convincing technological principle: screw pumps are positive displacement pumps with rotating ‚screws'. The product is displaced constantly and without any loss of lubrication or turbulence. The pump range includes both single double volute series for low, medium, high and ultra high pressure duty. What sounds simple is true high tech for reliability and smooth operation.

Benefits for your Oil & Gas lines

- Efficiency on CAPEX and OPEX
- Self-priming
- Constant pulsation-free liquid flow
- Broad viscosity spectrum
- Low life cycle costs
- Low NPSH required



Technical Data: Screw Pumps

Basic parameters			
Flow rate	200 – 6,000 m³/h	880 – 26,400 gpm	< 905,000 bpd
Differential pressure	10 – 280 bar	145 – 2,175 psi	
Gas volume fraction (GVF)		< 100%	
Operating temperature		180 – 350°C (356 – 662°F)	
Viscosity		10,000 – 150,000 cSt	

1 Plug-and-Play Operation

Self-priming, high efficiency, low operating costs.

2 Easy Installation & Maintenance

Optimised installation and easy maintenance thanks to only one shaft seal, magnetic drive (seal-free design) or interchangeable casing insert

3 Optimised Process Safety

Axially balanced rotors avoid forces on bearings. Dry run and solids capabilities.

Keeping your fleet on its feet

Setting the Pace. Changing the Game: FLEXCORE.

FLEXCORE, developed and made in Germany by Leistritz pump engineers, is revolutionising the way pumps are installed and operated. It turns 180°, faster than any rudder, switches pump direction as you need it and gives the same premium quality and peace-of-mind reliability for which Leistritz has earned acclaim.

What's in it for you? You optimise both CAPEX and OPEX, saving money and avoiding hassles. And if an unlikely problem does occur, all you do is exchange the cartridge. No costly downtimes. No complicated repairs. No spare part ordering. You are likely to forget the pump. And that makes us really happy.

- Available with nodular cast iron and steel casings
- 24-month warranty
- Made in Germany
- API compliant



Vertical or horizontal installation. Turns 180° either way. Flexible, exchangeable pump core for easy maintenance. Ideal for fuel and lube oil services on board.

Technical Data: FLEXCORE

Basic parameters	
Flow rate	6 flow rate categories between 7 - 564 l/min
Viscosity	1.1 to 2,500 mm²/s
Operating temperature	-10 to 180 °C
Differential pressure	1 to 40 bar
Suction pressure	max. 8 bar

Leistritz Pump Test Facility

Real field conditions. Faster start-ups.

Before your Leistritz pump ever reaches the field, it has to prove its performance under realistic conditions. Our hyper modern test facility in Nuremberg recreates Oil & Gas realities across any piping and drive configuration. Operated from a protected Remote Control Room and aligned with industry standards, it turns complexity into confident decisions, faster start ups, and lower project risk.

Why Operators Choose Leistritz

- Field true testing for upstream, midstream, downstream, and refinery interfaces without the field risk
- Confident decisions backed by high quality data and standards aligned protocols
- Shorter commissioning times and smoother start ups through validated set points and sequences

Built for Multiphase Reality

- Gas volume fraction and water cut control to mirror real well behavior (slugging, foaming, emulsions)
- Suction and discharge conditions set across wide ranges to test stability and resilience
- High Pressures, Volumes and Power are available





At our innovative state-of-the-art testbed you have the possibility to witness and inspect all details of your Leistritz pump.

Always at your side

Leistritz Global Pump Services for your Peace of Mind.

Leistritz Service is streamlined to meet the demands of your sites all over the world. We have your operations in view using state-of-the-art digital technology – supported by a global network of qualified partners close by. Our engineers support you in your production run to guarantee punctual start up and hassle-free operations. We train your operators hands-on. And on the job. Our service is yours to keep your production lines running as smoothly as clockwork.

Training, Services, Maintenance and Spare Parts: Home base for our global oil and gas operations is our special industry unit in the UAE. International service and support is provided from Service Stations in Nuremberg, Milano, Somerville, Chennai, Sharjah, Shanghai, Taicang and Singapore.

pumps.leistritz.com/en/service

At a glance

- Planning and design
- Plant commissioning
- Process optimisation
- Modernisation / upgrades
- Customer training
- Extended Warranty
- Support hotline
- Maintenance
- Digital / remote services
- Repair services
- Spare parts



Leistritz

LEISTRITZ Pump Technology
At Your Service, Globally.



Headquarters

Leistritz Pumpen GmbH
Markgrafenstraße 36-39
90459 Nuremberg
Germany

T +49 911 4306-9650
E pumps@leistritz.com

pumps.leistritz.com

Subsidiaries

Leistritz Italia srl
Milano, Italy

Leistritz Advanced Technologies Corp.
Allendale, NJ, USA

Leistritz Machinery (Taicang) Co., Ltd.
Jiangsu & Shanghai, China

Leistritz SEA Pte. Ltd.
Singapore

Leistritz Korea Co. Ltd.
Seoul, Korea

Leistritz India Pvt. Ltd.
Chennai, India
Vadodara, India

Leistritz Middle East (FZE)
Sharjah, United Arab Emirates

Distributor network for regional and local service

LP-5 en 12/25 300 onp