

Keeping the Chemicals Flowing

Screw pumps for the Chemical Industry





We understand chemicals.

Leistriz screw pumps and systems have a spotless track record in all sectors of the chemical industry. They are used for **safe, highly efficient and reliable pumping** of both low and high viscosity products. Thanks to the wide range of control, Leistriz pumps are ideal for the respective needs and process engineering requirements, e.g. when **conveying, dosing, recirculation in a process or in cleaning cycles such as CIP (Cleaning in Place)**.

What makes us unique is the world's largest range of screw pumps that master just about **any pumping task** for you. Powerful, flexible and highly efficient pump solutions in combination with our **broad process engineering expertise**, make Leistriz the right partner for your challenges.

Sophisticated pump solutions

Low- or high-viscosity media, media with toxic, flammable, water-polluting, chemically aggressive properties, or **high pressures**: We have efficient screw pump solutions for all these requirements - **from raw materials and intermediate products all the way to finished products**.

These include media such as:

- Isocyanates
- Polyoles
- Varnishes
- Resins
- Silicones
- Elastomer solutions
- Polymers

Our screw pumps cover the following range specifications:

VISCOSITY

<1 – 1,000,000 mPas

FLOW RANGE

0.1 – 5,000 m³/h

DIFFERENTIAL PRESSURE

0 – 250 bar

TEMPERATURE

-55 – +350°C

This is what we stand for:

Quality and efficiency

Our innovative and highly efficient pump solutions are based on a wealth of experience and in-depth know-how.

Reliability

Made in Germany! We supply robust, in-house manufactured pump solutions.

Safety

Leistriz pumps carry international equipment certifications and approvals for occupational health, safety and environmental standards.



Experience. Know-How.

Leistritz offers screw pumps tailored to the specific application. Our process specialists are renowned for creating sophisticated technical answers way beyond "off the shelf" offerings.

Application examples

Pump in reactor loop for producing polymers

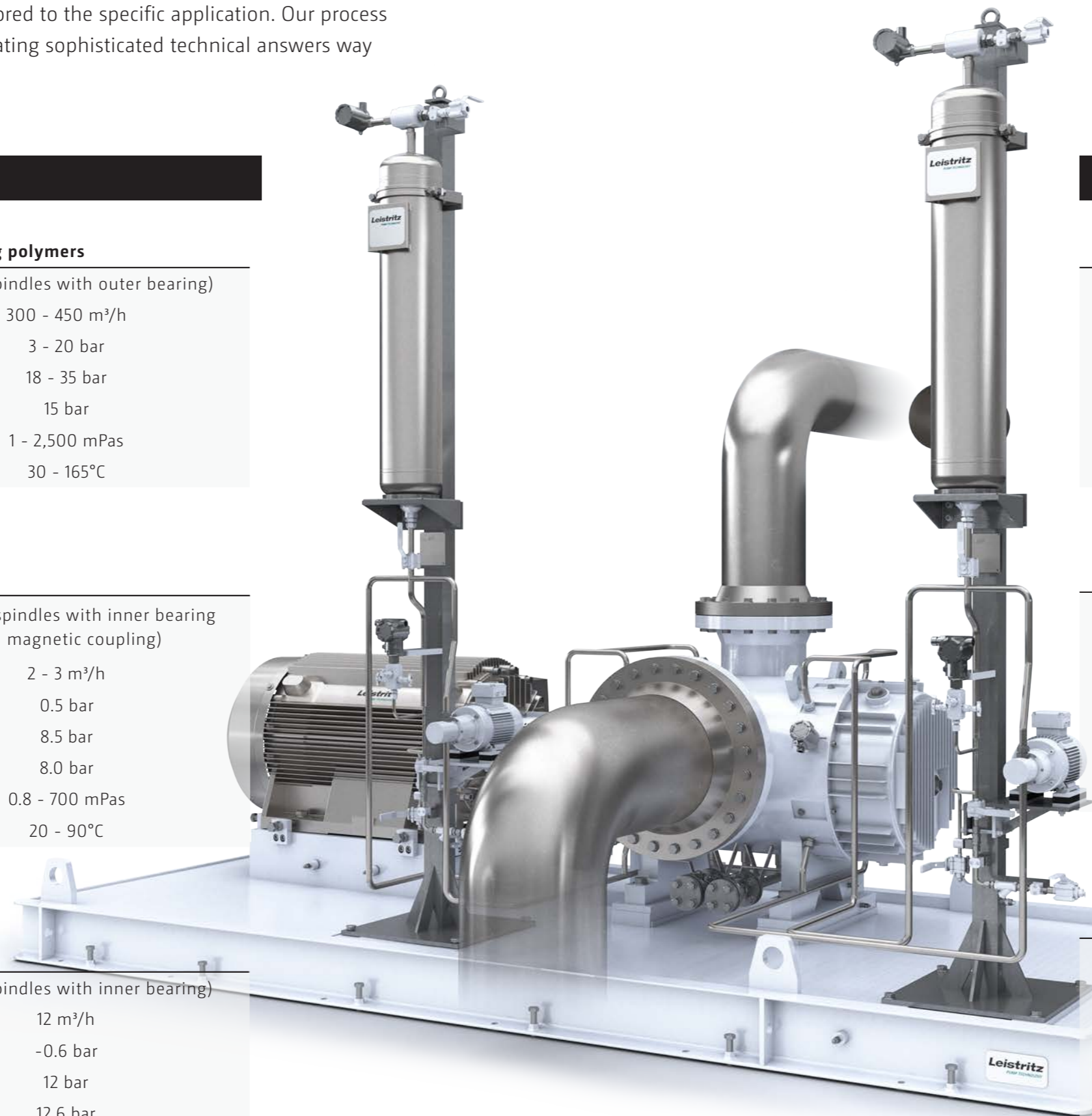
Pump type	L4 (two spindles with outer bearing)
Flow rate	300 - 450 m ³ /h
Pressure (suction side)	3 - 20 bar
Pressure (pressure side)	18 - 35 bar
Differential pressure	15 bar
Viscosity range	1 - 2,500 mPas
Temperature range	30 - 165°C

Dosing pump for isocyanates

Pump type	L3 (three spindles with inner bearing and magnetic coupling)
Flow rate	2 - 3 m ³ /h
Pressure (suction side)	0.5 bar
Pressure (pressure side)	8.5 bar
Differential pressure	8.0 bar
Viscosity range	0.8 - 700 mPas
Temperature range	20 - 90°C

Dosing pump for resins

Pump type	L2 (two spindles with inner bearing)
Flow rate	12 m ³ /h
Pressure (suction side)	-0.6 bar
Pressure (pressure side)	12 bar
Differential pressure	12.6 bar
Viscosity range	10,000 - 20,000 mPas
Temperature range	70 - 120°C



Our engineering excellence covers the entire spectrum: from the pump to the complete system.

Application examples

Process pump for elastomer solutions in hexane

Pump type	L4 (two spindles with outer bearing)
Flow rate	270 m ³ /h
Pressure (suction side)	1 bar
Pressure (pressure side)	12 bar
Differential pressure	11 bar
Viscosity range	0.3 - 2,000 mPas
Temperature range	30 - 85°C

Circulation pump for polyol

Pump type	L3 (three spindles with inner bearing)
Flow rate	30 m ³ /h
Pressure (suction side)	-0.5 bar
Pressure (pressure side)	15 bar
Differential pressure	15.5 bar
Viscosity range	500 - 3,700 mPas
Temperature range	20 - 60°C

Mixing plant for solvent- or water-based varnishes

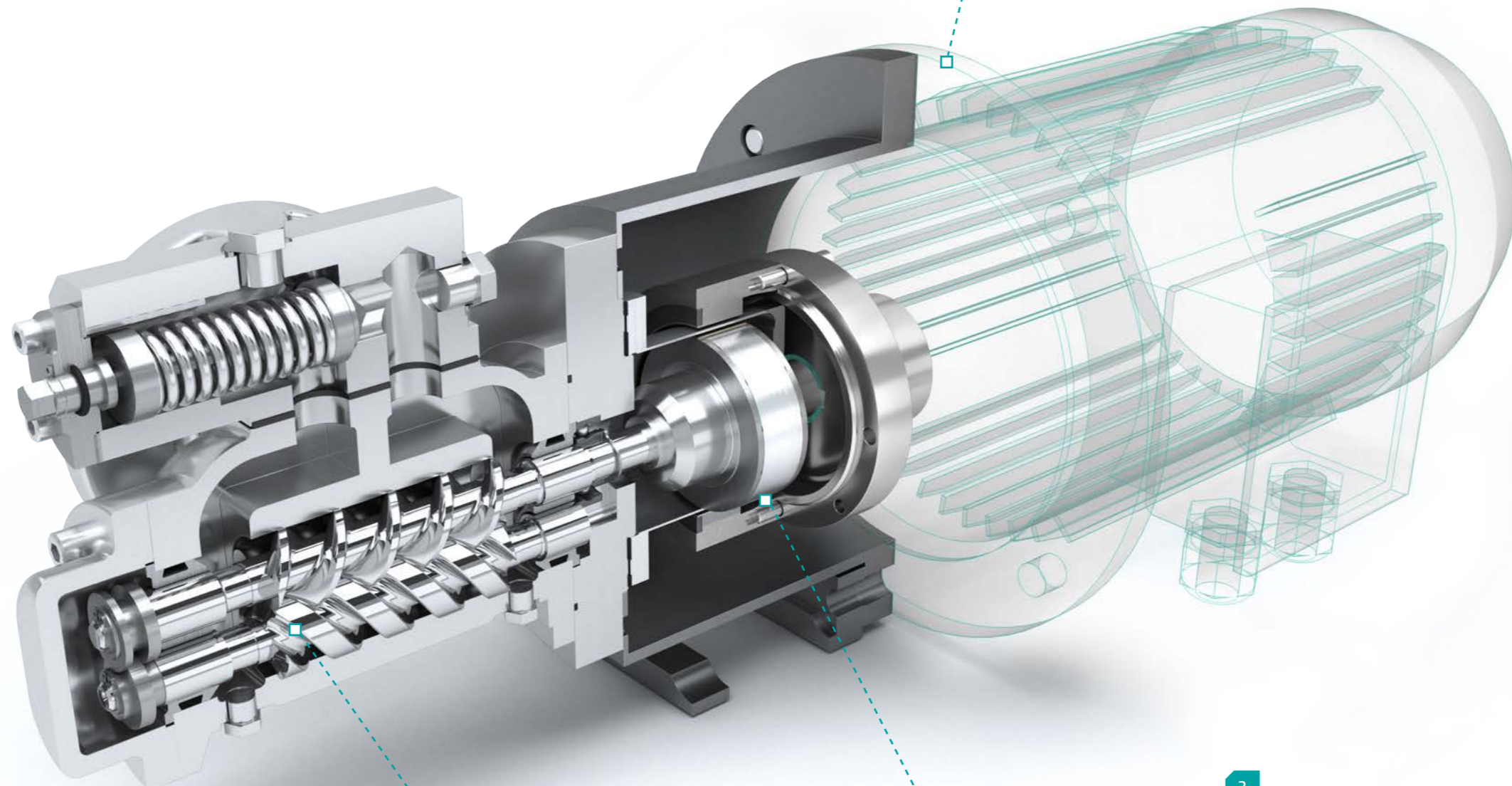
Pump type	L2 (two spindles with inner bearing)
Flow rate	15 - 30 m ³ /h
Pressure (suction side)	-0.4 bar
Pressure (pressure side)	8 bar
Differential pressure	8.4 bar
Viscosity range	1 - 5,000 mPas
Temperature range	20 - 90°C

The Leistriz solution.

Economic and flexible.

In chemical process engineering, screw pumps (as positive displacement pumps for the entire viscosity range) are indispensable thanks to their reliable hydraulic properties. Particularly in chemical applications, the **high suction force and gentle handling** of the pumped media are the outstanding features of this type of pump technology:

- **Low pulsation**
- **Gentle handling**
- **High efficiency**
- **Silent operation**
- **Dry run capability**
- **Extensive sensor monitoring as an option**



1

High speed range

Leistriz pumps can be adapted to a **variety of process conditions** thanks to a wide speed range. This variability also allows **CIP cleaning processes** to be run - a unique technical feature for the screw pump.

2

Pumping of demanding media

The material of a pump represents a key function for pumping chemically demanding and/or hazardous media. We cover the whole range from **standard materials to high-alloy special steels**.

3

Magnetically coupled

Leistriz has been using screw pumps with a **magnetic coupling** in very demanding applications for decades. Not only is the operation of this hermetically sealed version much safer than conventional technology, it also offers important additional advantages: **no emissions, easy installation, significantly reduced monitoring costs and reduced life cycle costs** compared to the operation with a double mechanical seal¹⁾.

SAFE FOR SURE

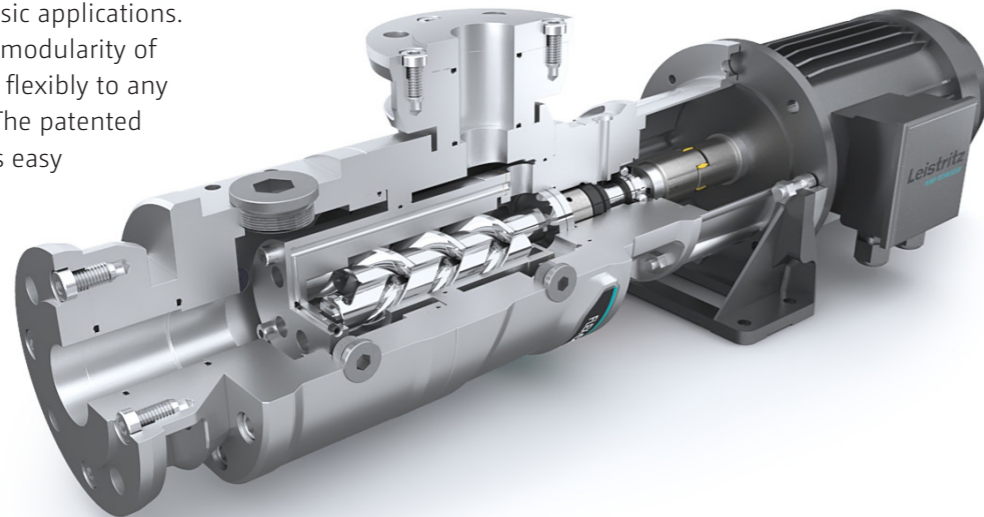
Handling demanding media calls for highest standards in safe operation. Conformity with **ATEX directives and TA-Luft conformity** (Technical Instructions on Air Quality) are part of our daily business.

¹⁾We also offer pump solutions including mechanical seal(s).

The accurate pump. For every application.

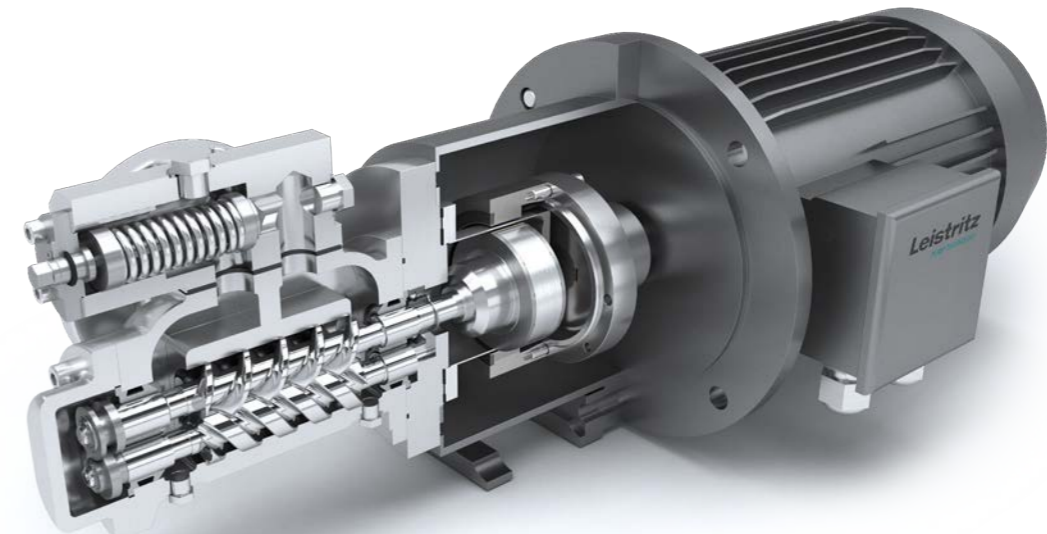
Compact line

FLEXCORE is the perfect screw pump for a wide range of basic applications. Thanks to the unique modularity of the housing, it adapts flexibly to any installation position. The patented pump insert facilitates easy and quick exchanges.



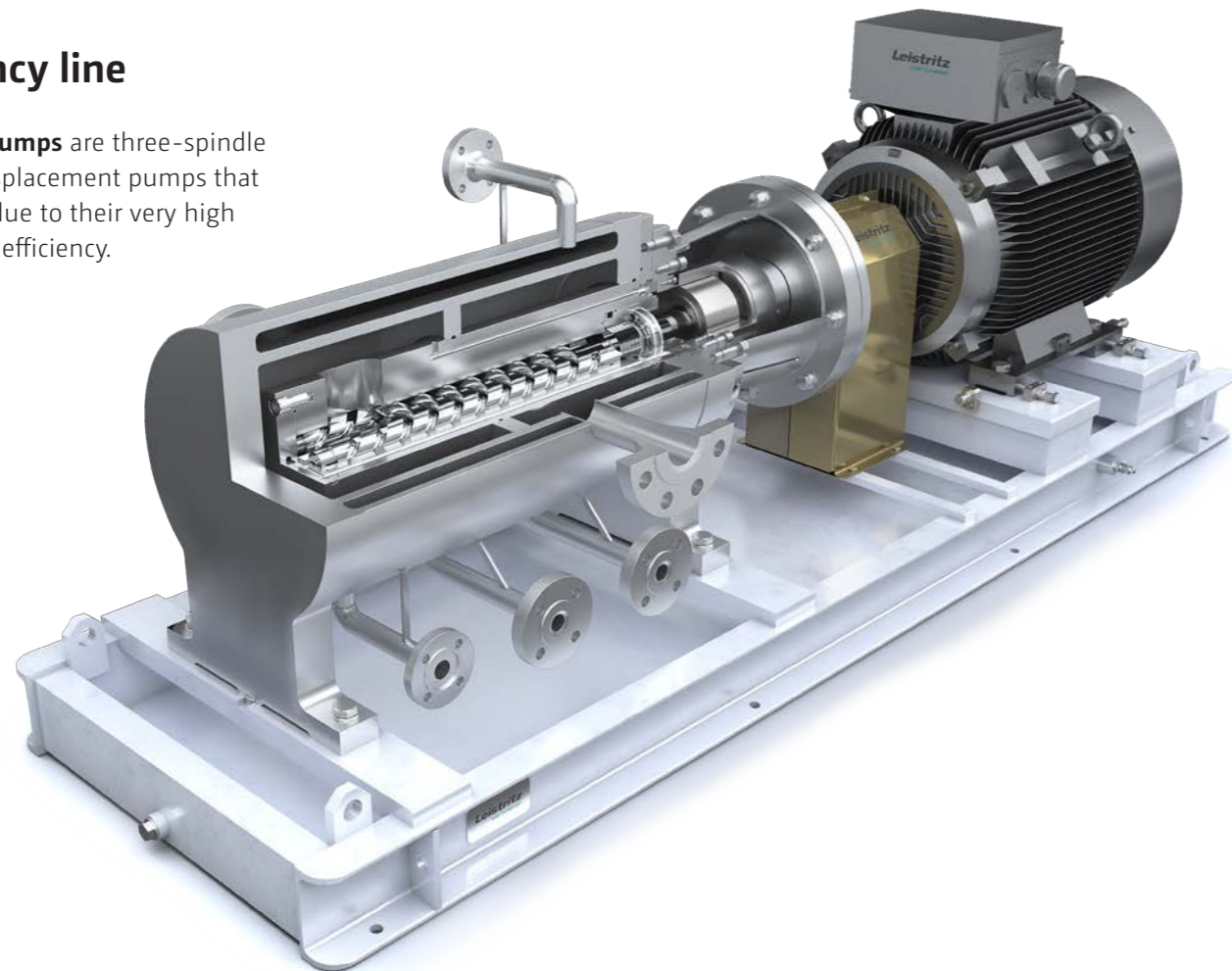
Power line

Screw pumps of the **L2 series** are two-spindle positive displacement pumps - most powerful when pumping non lubricating or abrasive media.



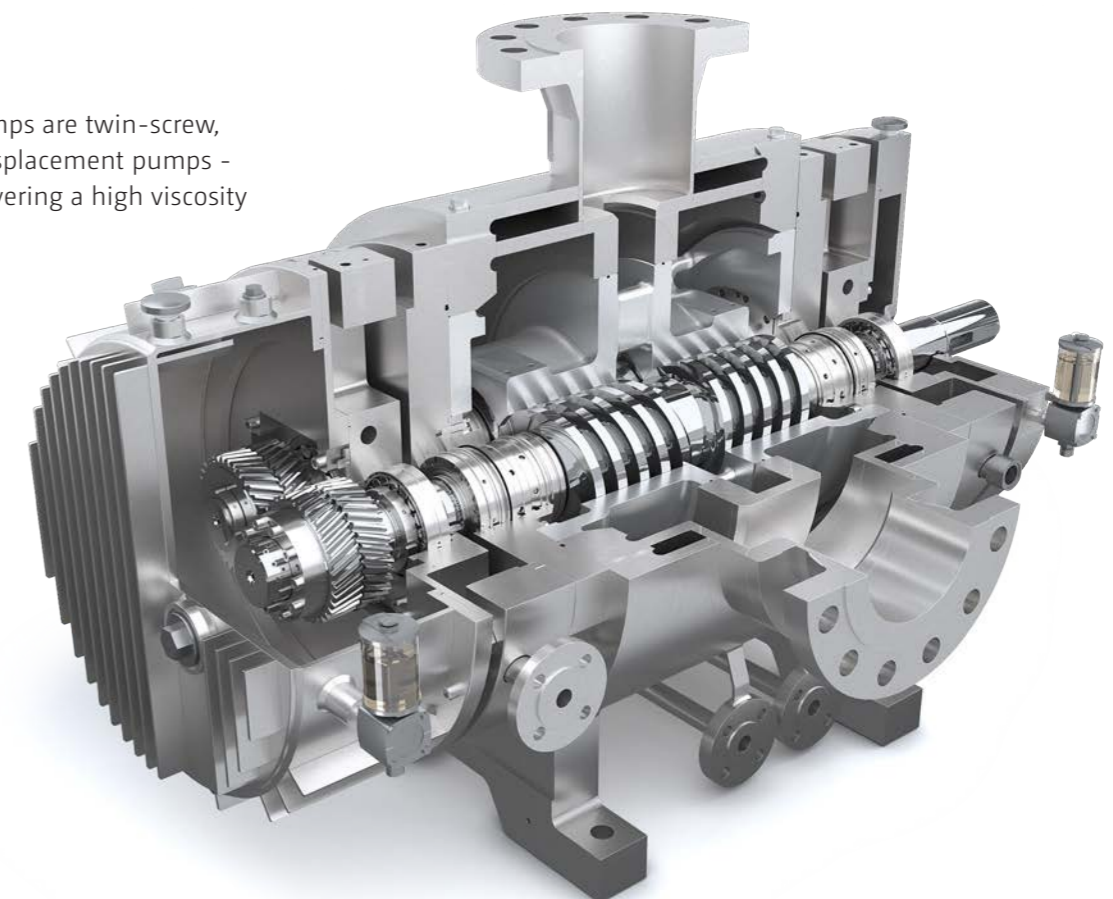
Efficiency line

L3 screw pumps are three-spindle positive displacement pumps that stand out due to their very high volumetric efficiency.



Agile line

The **L4 series** screw pumps are twin-screw, double-flow positive displacement pumps - ideal process pumps covering a high viscosity and temperature range.



YOU NEVER PUMP ALONE.

Leistriz Global Pump Services for your Peace of Mind.

Commissioning, support in operation

Leistriz 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. That's Germany, Italy, USA, India, the United Arab Emirates, China and, of course, Singapore.

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



www.leistrizcorp.com

You Never Pump Alone. Global Services for the Chemical Industry.

Leistritz Service is streamlined to meet the demands of your chemical production sites all over the world. We are at your side to safeguard the reliable, trouble-free operation of your production lines at all times. We have your operations in view using

digital technology – supported by a global network of qualified partners close by. "You never Pump alone" is our daily business – practised in the literal sense of the term.



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*Distributor network
for regional and local service*