**L4 SCREW PUMP SERIES**

Screw Pumps & Systems
PUMP TECHNOLOGY

With experience and passion

Leistritz is the first address when it comes to the application of screw pumps. After all, the company, with its headquarters in Nuremberg, is one of the pioneers in the field of screw pumps: more than 90 years ago, it was Paul Leistritz, who used the twin screw pump for the first time to pump lube oil for steam turbine bearings. What started out small in 1924 is now a globally active company with more than 300 employees, which has the widest product range in the field of screw pumps. Leistritz Pump Technology has branches in all important markets, such as the USA, China, Singapore, Dubai, India and Italy. Leistritz customers benefit from valuable know-how in various industries and applications.

» Leistritz is the only producer in the world to offer the complete range of screw pumps. «

PUMP FACTS

The intelligent design of the Leistritz screw pumps offers enormous advantages over other pump technologies, like:

➤ low-pulsation pumping of the fluid
➤ extremely low vibration and noise
➤ high flow rates
➤ pumping a wide range of viscosities
➤ low-wear operation
➤ long service life
L4 SCREW PUMP
Superior technology & intelligent design

Low pressure on seals → long service life

Low-pulsation pumping of the fluid

Compact design → minimum shaft deflection

Grinded and hardened profile → high quality
L4 PUMPS
TECHNICAL FEATURES

**PUMP CASING**
- Welded design with materials from carbon steel to stainless steel and up to duplex steel
- Casted design with materials from grey cast iron to nodular cast iron and up to cast steel
- Economic and slim design for reduced weight
- ANSI & DIN flanges possible
- Various flange sizes and positions
- Drain and vent connections

**SPINDLES**
- Single bar stock for maximum stiffness
- Case-hardened steel (1.7139), nitrided for max. hardness
- Tungsten carbide or stellite coating available for high wear resistance
- Side by side arrangement for excellent lubrication capabilities of spindle, bearings and seals
- Smooth running with reduced bearing load
**Technical features**

**TIMING GEARS**
- External double helical gear for efficient power transmission
- Oil lubricated by internal or external circulation
- Oil cooling if required
- Smooth running

**MECHANICAL SEAL**
- Seal design acc. to API 682
- Installation in suction area
- Unbalanced or balanced design
- Single acting mechanical seal
- Double acting mechanical seal with seal supply system acc. to API

**BEARINGS**
- Self-aligning roller bearings on DE and NDE side
- Oil lubricated bearings (and gear) as an API 676 demand for better lubrication of the shaft seals
- External lube oil cooler and systems for special applications possible

**INSTALLATION / DRIVE**
Delivery of complete skids incl.:
- Common baseplate
- Electric motors, hydraulic motors or combustion engines
- Flexible spacer type couplings
- Variable speed drive
- Instrumentation
Overview L4 pumps

**DESIGN AND OPERATION L4 PUMPS**

L4 Pumps are selfpriming screw pumps with two screws in double volute and hydraulically balanced design. The drive torque is transmitted from the double helix drive screw to the likewise double helix idler screw via herringbone gears. The screws rotate closely meshing but without contact in the spindle bore of the interchangeable pump casing insert. As a result of the special profile geometry sealed cavities are formed which transport the pumped liquid continuously with low shear and without turbulences from both suction chambers axially to the discharge chamber. For optimum strength and low shaft deflection both drive screw and idler screw are manufactured from single piece bar stock.

### DISCHARGE PRESSURE AND FLOW RATE

<table>
<thead>
<tr>
<th>Bar</th>
<th>PSI</th>
<th>m³/h</th>
<th>l/min</th>
<th>GPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>2901</td>
<td>142</td>
<td>416</td>
<td>110</td>
</tr>
<tr>
<td>180</td>
<td>2611</td>
<td>120</td>
<td>380</td>
<td>101</td>
</tr>
<tr>
<td>160</td>
<td>2321</td>
<td>100</td>
<td>350</td>
<td>92</td>
</tr>
<tr>
<td>140</td>
<td>2031</td>
<td>80</td>
<td>320</td>
<td>84</td>
</tr>
<tr>
<td>120</td>
<td>1741</td>
<td>60</td>
<td>300</td>
<td>76</td>
</tr>
<tr>
<td>100</td>
<td>1451</td>
<td>40</td>
<td>280</td>
<td>68</td>
</tr>
<tr>
<td>80</td>
<td>1161</td>
<td>20</td>
<td>260</td>
<td>61</td>
</tr>
<tr>
<td>60</td>
<td>871</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>High pressure: H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bar</td>
</tr>
<tr>
<td>200</td>
</tr>
<tr>
<td>180</td>
</tr>
<tr>
<td>160</td>
</tr>
<tr>
<td>140</td>
</tr>
<tr>
<td>120</td>
</tr>
<tr>
<td>100</td>
</tr>
<tr>
<td>80</td>
</tr>
<tr>
<td>60</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Medium pressure: M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bar</td>
</tr>
<tr>
<td>200</td>
</tr>
<tr>
<td>180</td>
</tr>
<tr>
<td>160</td>
</tr>
<tr>
<td>140</td>
</tr>
<tr>
<td>120</td>
</tr>
<tr>
<td>100</td>
</tr>
<tr>
<td>80</td>
</tr>
<tr>
<td>60</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Low pressure: N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bar</td>
</tr>
<tr>
<td>200</td>
</tr>
<tr>
<td>180</td>
</tr>
<tr>
<td>160</td>
</tr>
<tr>
<td>140</td>
</tr>
<tr>
<td>120</td>
</tr>
<tr>
<td>100</td>
</tr>
<tr>
<td>80</td>
</tr>
<tr>
<td>60</td>
</tr>
</tbody>
</table>

Flow rate
## Overview L4 pumps

### L4NG/L4MG/L4HG - modular pump: pages 8-13

<table>
<thead>
<tr>
<th>No. of spindles</th>
<th>Pressure ranges</th>
<th>Design</th>
<th>OD Drive screw</th>
<th>Bearing</th>
<th>Mounting</th>
<th>Heating</th>
<th>Mounting flange</th>
<th>Inlet-outlet</th>
<th>Relief valve</th>
<th>Shaft sealing</th>
</tr>
</thead>
<tbody>
<tr>
<td>L 4</td>
<td>N</td>
<td>M</td>
<td>H</td>
<td>G</td>
<td>C</td>
<td>O</td>
<td>T</td>
<td>A</td>
<td>H</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>116 115 117 118 220 210 310 345 405 450</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L 4</td>
<td>N</td>
<td>M</td>
<td>H</td>
<td>G</td>
<td>C</td>
<td>O</td>
<td>T</td>
<td>A</td>
<td>H</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>106 126 140 164 210 240 280 310 365 450</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L 4</td>
<td>N</td>
<td>M</td>
<td>H</td>
<td>G</td>
<td>C</td>
<td>O</td>
<td>T</td>
<td>A</td>
<td>H</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>100 116 128 150 186 220 256 295 330 365</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### L4NC - compact design pump: pages 14-15

<table>
<thead>
<tr>
<th>No. of spindles</th>
<th>Pressure ranges</th>
<th>Design</th>
<th>OD Drive screw</th>
<th>Bearing</th>
<th>Mounting</th>
<th>Heating</th>
<th>Mounting flange</th>
<th>Inlet-outlet</th>
<th>Relief valve</th>
<th>Shaft sealing</th>
</tr>
</thead>
<tbody>
<tr>
<td>L 4</td>
<td>N</td>
<td>M</td>
<td>H</td>
<td>G</td>
<td>C</td>
<td>O</td>
<td>T</td>
<td>A</td>
<td>H</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>115 112 230 295 345 395 450</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### L4NO - cargo pump: page 16

<table>
<thead>
<tr>
<th>No. of spindles</th>
<th>Pressure ranges</th>
<th>Design</th>
<th>OD Drive screw</th>
<th>Bearing</th>
<th>Mounting</th>
<th>Heating</th>
<th>Mounting flange</th>
<th>Inlet-outlet</th>
<th>Relief valve</th>
<th>Shaft sealing</th>
</tr>
</thead>
<tbody>
<tr>
<td>L 4</td>
<td>N</td>
<td>M</td>
<td>H</td>
<td>G</td>
<td>C</td>
<td>O</td>
<td>T</td>
<td>A</td>
<td>H</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>126 164 230 212 256</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### L4NT - submerged pump: page 17

<table>
<thead>
<tr>
<th>No. of spindles</th>
<th>Pressure ranges</th>
<th>Design</th>
<th>OD Drive screw</th>
<th>Bearing</th>
<th>Mounting</th>
<th>Heating</th>
<th>Mounting flange</th>
<th>Inlet-outlet</th>
<th>Relief valve</th>
<th>Shaft sealing</th>
</tr>
</thead>
<tbody>
<tr>
<td>L 4</td>
<td>N</td>
<td>M</td>
<td>H</td>
<td>G</td>
<td>C</td>
<td>O</td>
<td>T</td>
<td>A</td>
<td>H</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>96 140 186 240</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**L4NG, L4MG, L4HG MODULAR PUMP**

**GENERAL USE**
Leistritz Screw Pumps L4NG/MG/HG are self-priming rotary positive displacement pumps for pressure ranges of 16 bar (232 psi), 40 bar (580 psi) and 150 bar (2175 psi) suitable for the transport of lubricating and non-lubricating, low and high viscous liquids with abrasive particles.

**USER ADVANTAGES**
- Maximum allowable rotor deflection limited to 50% of radial clearance between rotor housing and rotor → highest process safety
- Interchangeable liner → easy maintenance, low costs
- Special rotor design available
  - Minimized pulsation
  - Optimized NPSHR
- Low axial flow velocity → excellent priming
- Suitable for dry running → maximized process safety

**MODULAR SYSTEM**
The components of the low, medium and high pressure pumps are produced as a modular system. Pump casings, bearing covers, bearings, mechanical seals, mechanical seal installation parts and the timing gears are interchangeable among pumps of different sizes.

For installations with different pump sizes and designs the modular system for the Leistritz L4 series twin screw pumps permits simple and economical keeping of a spare parts inventory.

The modular system covers both liquid and multiphase pumps of the Leistritz L4 series.
**PERFORMANCE CHARACTERISTICS**

### L4NG - OPERATING CONDITIONS
- **Flow rate max.:** 5,000 m³/h (22,000 GPM)
- **Differential pressure max.:** 16 bar (222 psi)
- **Viscosity max.:** 150,000 cSt
- **Temperature max.:** 350°C (662°F)

![Graph showing L4NG performance characteristics](image)

### L4MG - OPERATING CONDITIONS
- **Flow rate max.:** 3,900 m³/h (17,160 GPM)
- **Differential pressure max.:** 40 bar (580 psi)
- **Viscosity max.:** 150,000 cSt
- **Temperature max.:** 350°C (662°F)

![Graph showing L4MG performance characteristics](image)

### L4HG - OPERATING CONDITIONS
- **Flow rate max.:** 2,000 m³/h (8,800 GPM)
- **Differential pressure max.:** 150 bar (2,175 psi)
- **Viscosity max.:** 150,000 cSt
- **Temperature max.:** 350°C (662°F)

![Graph showing L4HG performance characteristics](image)
L4NG, L4MG, L4HG

APPLICATIONS

Oil & Gas
- pipeline pumps
- pipeline start-up pumps
- produced water pumps
- pumps for chemical injection
- pumps for upstream slop and drain systems

Tank Storage
- loading/unloading pumps
- circulation pumps
- transfer pumps
- stripping pumps
- cargo pumps
- tank cleaning pumps

Chemical and Petrochemical Industry
- circulation pumps
- transfer pumps
- stripping pumps
- export pumps

Power Generation and Fuel Oil Systems
- unloading pumps
- transfer pumps

Shipbuilding
- loading/unloading pumps
- transfer pumps
TECHNICAL INSTALLATIONS

OIL & GAS INDUSTRY
Used as:
↗ Pipeline booster pumps
Pumped liquid:
↗ Crude oil
Flow rate:
↗ Q = 180 m³/h [793 GPM]
Differential pressure:
↗ ΔP = 60 bar [870 psi]

TANK STORAGE
Used in:
↗ Tank storage in Singapore
Pumped liquid:
↗ Various black and white products
Flow rate:
↗ Q = 2,000 m³/h [8,806 GPM]
Differential pressure:
↗ ΔP = 11 bar [160 psi]

CHEMICAL INDUSTRY
Used in:
↗ Chemical plant in the Netherlands
Pumped liquid:
↗ Polymer
Flow rate:
↗ Q = 876 m³/h [3,857 GPM]
Differential pressure:
↗ ΔP = 48 bar [696 psi]

POWER PLANT
Used in:
↗ Fuel oil power plants
Pumped liquid:
↗ Heavy fuel oil
Flow rate:
↗ Q = 876 m³/h [3,857 GPM]
Differential pressure:
↗ ΔP = 48 bar [696 psi]
MULTIPHASE PUMP SYSTEMS

**DESIGN AND OPERATION**

Leistritz multiphase pumps are rotary positive displacement pumps based on twin screw pump technology and built in accordance with the requirements of API 676. This makes twin screw multiphase pumps particularly suitable for the handling of non-lubricating products with high gas fractions, contaminations and crude oils with low gravity.

Leistritz twin screw multiphase pumps are designed to handle untreated well flow with gas fractions (GVF) between 0 and 100%. In order to maintain a dynamic seal between the screw packages and the pump casing at high GVF rates a small liquid flow must be provided at all times. An external liquid management system for continuous liquid injection guarantees uninterrupted operation with high GVF content and gas slugs and ensures dissipation of the compression heat.

The size of the external liquid management system can be adapted to the actual operating conditions.

**BENEFITS OF MULTIPHASE TECHNOLOGY**

- The entire well flow is handled with one machine
- Low inlet pressures allow extended well life and increased production
- High pressure capability to boost the well flow to remote processing facilities
- Reduction of artificial lift requirements due to low permissible inlet pressure
- Decrease of the production time
- Low shear, non-emulsifying pumping
- Gas handling capability (GVF) up to 100%
- Elimination of flaring
- Low capital investment costs and quick payback due to production increase
- Low operational and maintenance cost
- Ideal for installation on offshore platforms due to small footprint and low weight

**LEISTRITZ SYSTEM SUPPLY**

- Leistritz multiphase pump
- Single or double acting mechanical seals
- Customized liquid management system
- Skid type baseplate
- Electric motors / combustion engines / gas or diesel engines
- Flexible all metal coupling with non-sparking coupling guard
- On-skid instrumentation
- On-skid piping with manually or actuator operated block valves, suction filter, check and pressure relief valve
- Lube and seal oil systems
- Variable speed drives
- PLC, low and medium voltage switch gears, MCC, UPS
- Remote control systems
- Container for installation of the multiphase pump skids and the control equipment
**TECHNICAL INSTALLATIONS**

**OFFSHORE ON A WELLHEAD PLATFORM IN THE GULF OF MEXICO**

Used as:
- Multiphase pump

**Gas volume fraction:**
- GVF = 97.2 % [3,870 GPM]

**Flow rate:**
- Q = 879 m³/h

**Differential pressure:**
- ∆P = 17.25 bar [250 psi]

**CONTAINERIZED LEISTRITZ MULTIPHASE PUMP IN A PERMAFROST AREA IN KAZAKHSTAN**

Used as:
- Multiphase pump

**Gas volume fraction:**
- GVF = 86.6 %

**Flow rate:**
- Q = 175 m³/h [770 GPM]

**Differential pressure:**
- ∆P = 38 bar [551 psi]

**LEISTRITZ MULTIPHASE PUMP INSTALLATION ON AN OIL FIELD IN CENTRAL AFRICA**

Used as:
- Multiphase pump

**Gas volume fraction:**
- GVF = 56 %

**Flow rate:**
- Q = 395-1,000 m³/h [1,739-4,402 GPM]

**Differential pressure:**
- ∆P = 7.3- 56.2 bar [105-915 psi]

**LEISTRITZ MULTIPHASE PUMP WITH INSULATION ON A CALIFORNIAN OIL FIELD**

Used as:
- Multiphase pump

**Gas volume fraction:**
- GVF = 97 %

**Flow rate:**
- Q = 966 m³/h [4,253 GPM]

**Differential pressure:**
- ∆P = 14.8 bar [214 psi]
**L4NC COMPACT DESIGN PUMP**

**GENERAL USE**
The new compact screw pump design for the oil & gas industry!
With focus on tank farm applications such as transfer, stripping, loading and unloading pumps. Developed for low capital expenditure (CAPEX) combined with highest efficiency and reliability for optimized operational expenditure (OPEX)

**USER ADVANTAGES**

**Pump casing:**
- Economic and slim design for reduced weight

**Spindles:**
- Single bar stock for maximum stiffness

**Timing gears:**
- External double helical gear for efficient power transmission

**Mechanical seal:**
- Single acting seals

**Bearings:**
- Self-aligning roller bearings on DE and NDE side

---

**L4NC - OPERATING CONDITIONS AND PERFORMANCE CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Flow rate max.</th>
<th>5,000 m³/h 22,000 GPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Differential pressure max.</td>
<td>20 bar 290 psi</td>
</tr>
<tr>
<td>Viscosity max.</td>
<td>10,000 cSt</td>
</tr>
<tr>
<td>Temperature max.</td>
<td>100 °C 212 °F</td>
</tr>
<tr>
<td>Casing design pressure</td>
<td>25 bar 362 psi</td>
</tr>
</tbody>
</table>

---

**Flow rate**

<table>
<thead>
<tr>
<th>Pump size</th>
<th>Flow rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>450</td>
<td>5000 m³/h (22 000 GPM)</td>
</tr>
<tr>
<td>395</td>
<td>4000 m³/h (17 600 GPM)</td>
</tr>
<tr>
<td>345</td>
<td>3000 m³/h (13 200 GPM)</td>
</tr>
<tr>
<td>295</td>
<td>2000 m³/h (8 800 GPM)</td>
</tr>
<tr>
<td>230</td>
<td>1000 m³/h (4 400 GPM)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Differential pressure [bar]</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
</tr>
<tr>
<td>0</td>
</tr>
</tbody>
</table>
**APPLICATIONS**

- **Oil & Gas**
  - pipeline pump • pipeline start-up pump • produced water pump • chemical injection pump

- **Tank Storage**
  - loading/unloading pump • circulation pump • transfer pump • stripping pump • cargo pump • tank cleaning pump

- **Chemical and Petrochemical Industry**
  - transfer pump
**L4NO CARGO PUMP**

**GENERAL USE**
The Leistritz screw pump series L4NO is a self-priming positive displacement pump for a pressure range up to max. 16 bar, suitable for transporting abrasive and non-abrasive, lubricating and non-lubricating fluids.

**APPLICATIONS**
- **Power Generation**
  - transfer pump · supply pump · waste oil pump
- **Shipbuilding**
  - cargo pump · unloading pump · transfer pump
- **Chemical and Petrochemical Industry**
  - transfer pump

**POWER PLANT (COMBINED CYCLE)**

- **Used as:**
  - Unloading pump

- **Pumped liquid:**
  - Light fuel oil

- **Flow rate:**
  - \( \dot{Q} = 156 \text{ m}^3/\text{h} \) [686 GPM]

- **Differential pressure:**
  - \( \Delta P = 5 \text{ bar} \) [72 PSI]

**OPERATING CONDITIONS AND PERFORMANCE CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Max Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow rate max.</td>
<td>1,250 m³/h</td>
</tr>
<tr>
<td></td>
<td>5,503 GPM</td>
</tr>
<tr>
<td>Differential pressure max.</td>
<td>16 bar</td>
</tr>
<tr>
<td></td>
<td>232 psi</td>
</tr>
<tr>
<td>Viscosity max.</td>
<td>15,000 mm²/s</td>
</tr>
<tr>
<td>Temperature max.</td>
<td>180 °C</td>
</tr>
<tr>
<td></td>
<td>356 °F</td>
</tr>
</tbody>
</table>

**Flow rate**

- 1,500 m³/h [6600 GPM]
- 1,000 m³/h [4400 GPM]
- 500 m³/h [2200 GPM]
Leistritz screw pumps of the series L4NT are submerged rotary positive displacement pumps for pumping corrosive liquids, or liquids with solid content, liquids containing gases and liquids of high and low viscosity.

**APPLICATIONS**
- Oil and Gas Industry: closed and open drain pump - transfer pump - slop pump
- Shipbuilding: unloading pump
- Chemical and Petrochemical Industry: transfer pump - circulation pump

**OIL & GAS INDUSTRY**

**Used as:**
- Slops & drains pump

**Pumped liquid:**
- Mixtures of water, hydrocarbons and solids

**Flow rate:**
\[ Q = 145 \text{ m}^3/\text{h} \quad [638 \text{ GPM}] \]

**Differential pressure:**
\[ \Delta P = 3 \text{ bar} \quad [43 \text{ PSI}] \]

**L4NT - OPERATING CONDITIONS AND PERFORMANCE CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Flow rate max.</th>
<th>500 m³/h</th>
<th>2,200 GPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Differential pressure max.</td>
<td>16 bar</td>
<td>225 psi</td>
</tr>
<tr>
<td>Viscosity max.</td>
<td>100,000 cSt</td>
<td></td>
</tr>
<tr>
<td>Temperature max.</td>
<td>150°C</td>
<td>212°F</td>
</tr>
<tr>
<td>Installation depth max.</td>
<td>10 m</td>
<td>32.8 ft</td>
</tr>
</tbody>
</table>

**Graph:**
- Flow rate vs. Differential pressure [bar]

**Chart:**
- Pump size: 500 m³/h (2,200 GPM), 400 m³/h (1,760 GPM), 300 m³/h (1,320 GPM), 200 m³/h (880 GPM), 100 m³/h (440 GPM)
Rising demands on pump manufacturers regarding wear protection, service life or flow rate require the use of state-of-the-art machine technology and process chains that are ideally coordinated with one another. These are the prerequisites to facilitate the high-quality manufacturing of pump components.

To accomplish this high standard, we produce the screws and housings, i.e. the core elements of the Leistritz pumps, ourselves in Germany - under the aspect of the ultimate precision and with a high level of production knowledge vertical integration. This is particularly due to the symbiosis of the various products of the Leistritz Group in the form of superior materials know-how and in-house metal processing technologies, such as whirling. In addition to our numerous machines, it is particularly our team that convinces our customers with its well-founded expertise and extensive manufacturing know-how.
## PUMP RANGE

<table>
<thead>
<tr>
<th>SERIES</th>
<th>USE FOR</th>
<th>PUMP TYPE</th>
<th>PERFORMANCE DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>L2N</td>
<td>Low pressure duty, suitable for transport of slightly abrasive and corrosive, high or low viscous fluids with poor or good lubricity.</td>
<td>Flow rate: 900 m³/h (3,960 GPM), Pressure: 16 bar (232 psi), Viscosity: 100,000 cSt, Temperature: 280°C (536°F).</td>
<td></td>
</tr>
<tr>
<td>L3N</td>
<td>Low pressure duty, suitable for transport of non-abrasive lubricating fluids.</td>
<td>Flow rate: 700 m³/h (3,100 GPM), Pressure: 16 bar (232 psi), Viscosity: 15,000 cSt, Temperature: 180°C (356°F).</td>
<td></td>
</tr>
<tr>
<td>L3M</td>
<td>Medium pressure duty, suitable for transport of non-abrasive lubricating fluids.</td>
<td>Flow rate: 300 m³/h (1,320 GPM), Pressure: 80 bar (1,160 psi), Viscosity: 10,000 cSt, Temperature: 280°C (536°F).</td>
<td></td>
</tr>
<tr>
<td>L3H</td>
<td>High and ultra high pressure duty, suitable for transport of non-abrasive, slightly abrasive and corrosive, high or low viscous fluids with poor or good lubricity.</td>
<td>Flow rate: 200 m³/h (880 GPM), Pressure: 280 bar (4,060 psi), Viscosity: 10,000 cSt, Temperature: 280°C (536°F).</td>
<td></td>
</tr>
<tr>
<td>L3V</td>
<td>Low pressure duty, suitable for transport of slightly abrasive and corrosive, high or low viscous fluids with poor or good lubricity.</td>
<td>Flow rate: 1,700 m³/h (7,500 GPM), Pressure: 10 bar (145 psi), Viscosity: 100,000 cSt, Temperature: 280°C (536°F).</td>
<td></td>
</tr>
<tr>
<td>L3U</td>
<td>Low pressure duty, suitable for transport of non-abrasive lubricating fluids.</td>
<td>Flow rate: 700 m³/h (3,100 GPM), Pressure: 16 bar (232 psi), Viscosity: 15,000 cSt, Temperature: 180°C (356°F).</td>
<td></td>
</tr>
</tbody>
</table>

This list offers a general overview of the standard pump range by Leistritz. Various options and systems are individually configured according to customer requirements and tested on our test bench (drive power up to 4 MW) in Nuremberg.
PUMP TECHNOLOGY
Available for you all over the world

USA
Leistritz Advanced Technologies Corp., Allendale

GERMANY
Headquarters
Leistritz Pumpen GmbH, Nuremberg

CHINA
Leistritz Machinery (Taicang), Co., Ltd., Taicang

ITALY
Leistritz Italia srl., Milan

UNITED ARAB EMIRATES
Leistritz Middle East FZE, Dubai

INDIA
Leistritz India Pte. Ltd., Chennai

SINGAPORE
Leistritz SEA, Pte. Ltd., Singapore

Leistritz Pumpen GmbH | Markgrafenstrasse 36-39 | D 90459 Nuremberg | Germany
Phone: +49 911 43 06 - 0 | Fax: +49 911 43 06 - 490 | pumps@leistritz.com
www.leistritz.com