



## KRAL W Series.

The screw pump for cooling lubricants.

# KRAL Screw Pumps for Cooling Lubricants.

Customized solutions are possible too.



## Special requirements.

Compared to other pump principles, screw pumps have outstanding properties. They pump continuously, with low pulsation, quietly and achieve a high flow rate even with a small installation volume. Cooling lubricants are difficult liquids. They have a very low viscosity of only approx. 1 mm<sup>2</sup>/s, must be conveyed at high pressure and contain abrasive dirt, usually metal residues. Thanks to the innovative design, especially the housing materials, the advantages of the KRAL screw pump can be utilized for cooling lubricants.

## Dirt? No Problem!

Metal residues in cooling lubricants are abrasive and cause damage through wear. Without precautions, the barrel housing, the spindles and the ball bearing would be affected. KRAL coats the barrel housing with a resistant polymer. The plastic can absorb particles to a limited extent. Depending on the liquid, other materials can also be used. In addition, the pump has a lifetime-lubricated outer bearing that does not come into contact with the medium.

## Operating conditions and materials.

Delivery rate:	15 to 280 l/min.
Max. differential pressure:	120 bar.
Max. inlet pressure:	16 bar
Viscosity:	> 1 mm <sup>2</sup> /s.
Max. temperature:	Up to 180 °C.
Installation:	Wet or dry.
Housing:	EN-GJS-400.
Spindle housing:	EN-GJS-400, polymer-coated or other material options.
Screws:	Steel, nitrided.
Filtration:	Min. 70 µm.



## High pressure with low viscosity.

Cooling lubricants are pumped at high pressures of up to 120 bar. This is the only way to ensure sufficient cooling and clearing of drill holes, for example. The pump's compensating cylinder has throttling grooves to reduce the leakage rate. This keeps the efficiency high. The spindle material and the housing coatings are matched to the sliding properties so that low-viscosity media can be pumped.

## Installation options.

The KRAL cooling lubricant pump can be supplied for dry and wet installation. A mounting flange is already provided for vertical wet installation.

## Technical Data and Dimensions.



Technical data.		15-20	32-42	55-74-85	105-118
<b>Delivery rate</b> 2,900 min <sup>-1</sup> , 40 bar, 1 mm <sup>2</sup> /s	l/min	up to 25	up to 60	up to 120	up to 180
<b>Max. differential pressure</b>	bar	120	120	120	120
<b>Max. temperature</b>	°C	180	180	180	180
<b>Viscosity</b>	mm <sup>2</sup> /s	> 1	> 1	> 1	> 1
<b>Max. rotation speed</b>	min <sup>-1</sup>	3,500	3,500	3,500	3,500
<b>Max. inlet pressure</b>	bar	16	16	16	16

Dimensions.		15-20	32-42	55-74-85	105-118
<b>Connection pressure side</b>	inch	SAE ¾"	SAE 1"	SAE 1 ½"	SAE 1 ½"
<b>Connection suction side</b>	inch	thread 1"	thread 1 ¼"	thread 2"	thread 2"
<b>Shaft journal</b>	mm	19 x 35	19 x 35	28 x 50	28 x 50
<b>Connection diameter pump bracket</b>	mm	125	125	160	160
<b>Connection diameter tank mounting</b>	mm	185	185	220	220
<b>Total length</b>	mm	395	450	560	586

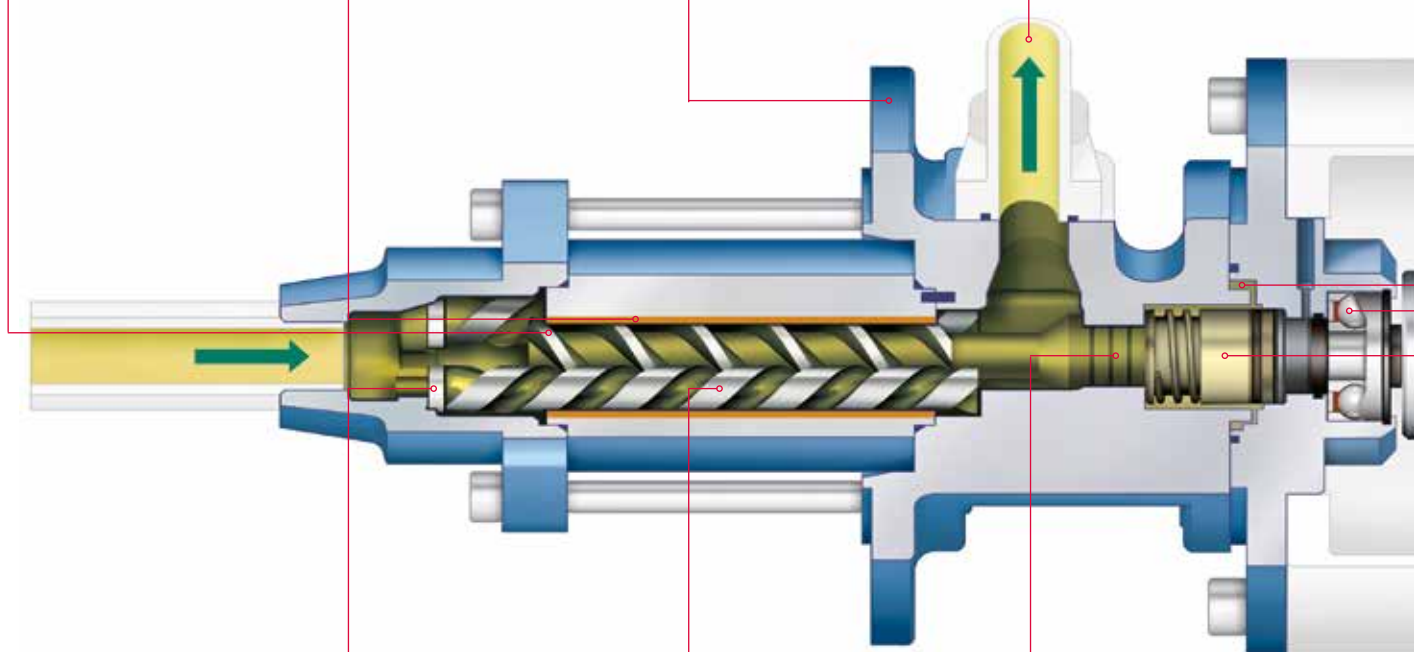
# Optimal Technology for Customer-specific Requirements.

■ With long spindles, the high pressure of up to 120 bar is achieved.

■ Depending on the liquid, you can choose between a cast iron housing without coating, a polymer coating or other materials and surface treatments can be selected.

■ The flange is prepared for mounting on a container.

■ When mounted on a container, the pressure connection is located above the container lid. When mounted on a container, the pressure connection is located above the container lid.



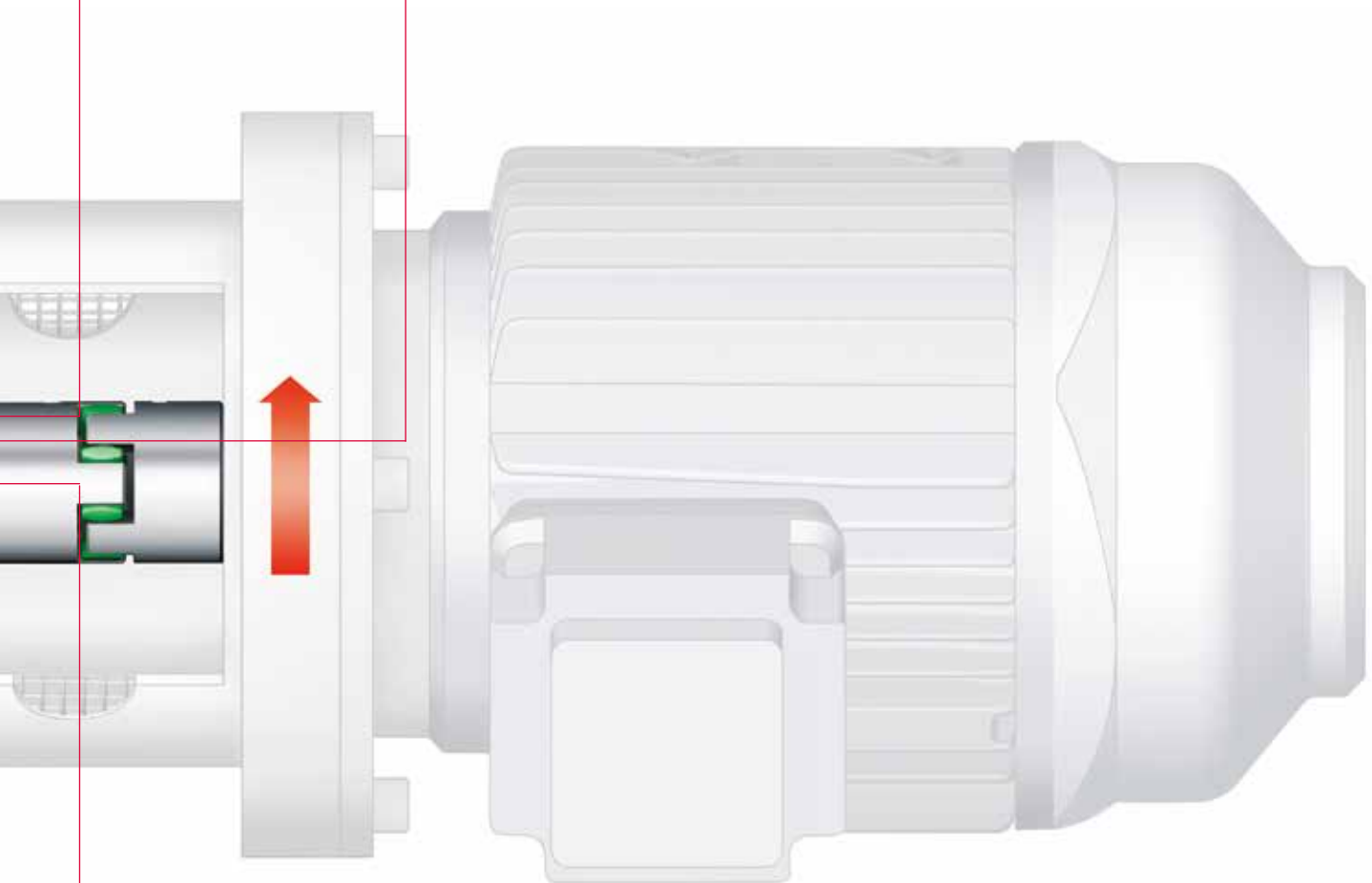
■ Hydrodynamic axial thrust balancing reduces wear and noise.

■ Spindles made of special steel.

■ The balancing cylinder has throttling grooves to optimize the power density by reducing the leakage rate.

■ Internal leakage return is particularly important for dry installation.

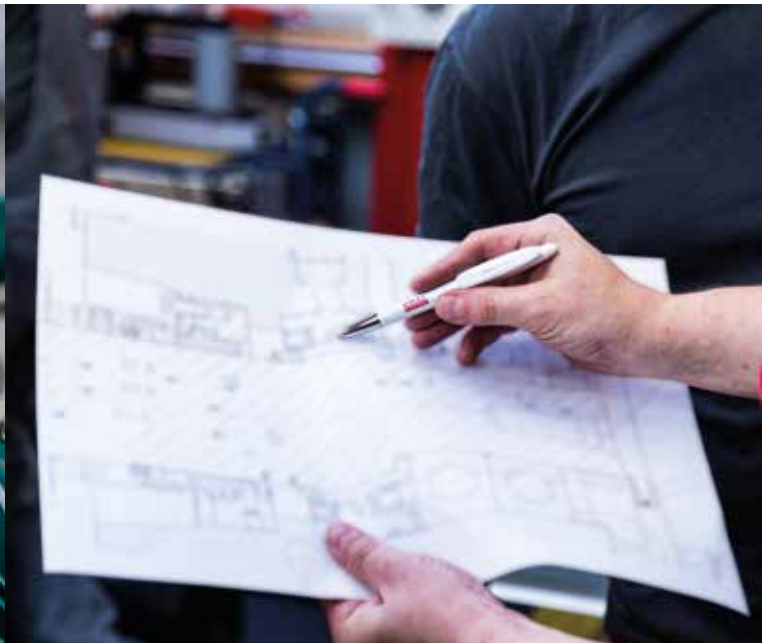
■ The lifetime-lubricated outer bearing does not come into contact with the liquid.



■ A DIN mechanical seal is standard. The pump can optionally be fitted with a shaft seal.

## Service From A Single Source.

Short reaction times. Fast and competent.



### **Installation and commissioning.**

We can help you install and commission your KRAL products upon request. Professional installation and optimal deployment of the pumps are prerequisites for error-free operation. Our technicians not only know our products; they also know how the system affects the pump and can configure the latter accordingly for optimal performance.

As a customer, you benefit from our wealth of experience, because we've commissioned large numbers of KRAL pumps at our customers' premises.

### **Training.**

KRAL training provides you with in-depth knowledge on installing, commissioning, and maintaining your KRAL product. You receive expert information from the manufacturer on how to install and commission your KRAL product properly, and you learn about various applications and utilization limits. You also learn to identify and rectify faults based on actual damage profiles.

We lead you through a professional maintenance routine and show how you can reduce your product's operating costs. The training can be held either at our headquarters in Lustenau or at your premises, upon request.





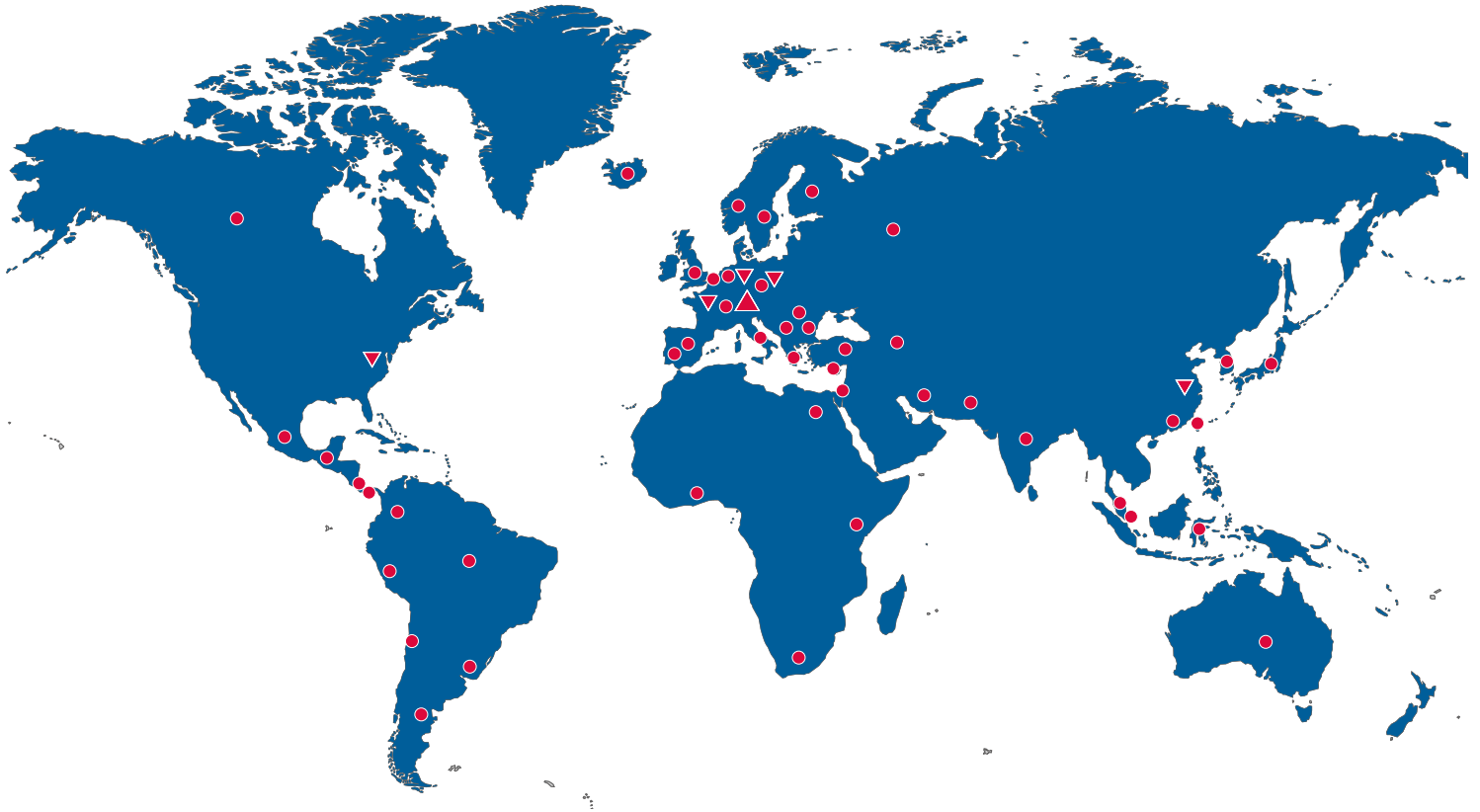
### **Maintenance and repair.**

Downtime can generate substantial costs. Increase the operational safety and minimize the life-cycle costs of your KRAL product through the preventative maintenance services provided by our competent service team. When a breakdown occurs, our service technicians react quickly and arrive at your premises in no time. When you make a repair shipment, confirmation of receipt is sent to you as soon as the shipment arrives. Each time a repair is made, we send you a comprehensive technical report together with detailed images.

We perform maintenance work and repairs at our headquarters in Lustenau, Austria or at your premises, upon request. And the genuine KRAL parts we use guarantee the highest standards of quality.

### **Spare parts.**

KRAL pumps meet the highest quality standards. To ensure those standards are maintained, you should only use genuine KRAL parts as spare parts. They guarantee that your pumps maintain a high level of quality, continue to operate smoothly, and last a long time.



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