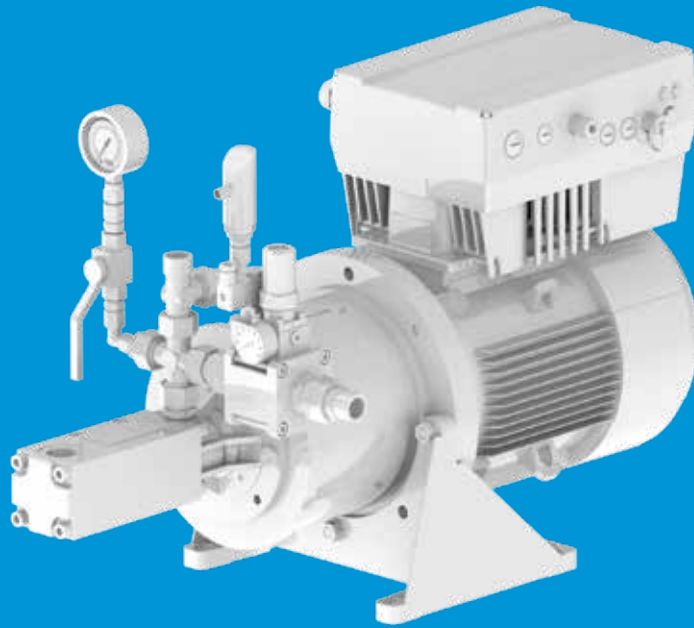


The savings option for pumps

Frequency control reduces energy expenditure and spares the pump



Dry installed
frequency-controlled
screw pump

Energy efficiency is not just environmentally-friendly, it also reduces costs. This is why KNOLL offers all of its cooling lubricant pumps, from the complete centrifugal pump line to the KTS high-pressure pump, with optional frequency inverters.

With the KNOLL KTS screw pump, a self-priming displacement pump, the energy savings potential is especially clear: if it has a frequency inverter, called the PQ-Tronic at KNOLL, which ensures variable pressure (P) and flow rate (Q) with optimal speed control, the savings as compared to a pump with a fixed pressure limiting valve is up to 70% of the energy consumption.

This means that quick amortization can be expected. Thanks to the frequency-controlled drive of the pump, there is also a smaller release of heat into the cooling lubricant and the ambient air. In addition, the pump is spared by optimal operation, which increases its service life.

The advantages of electronic control of pressure and volumetric flow can also be realized in existing cooling lubricant systems, for KNOLL can retrofit frequency inverters. Anyone who is not sure whether this makes economic sense can use the KNOLL E-Pass. With this quick and easy measurement method, KNOLL employees on-site determine the energy savings that can be achieved. In the end, the user receives an energy log and a quotation with cost/benefit analysis and amortization time.

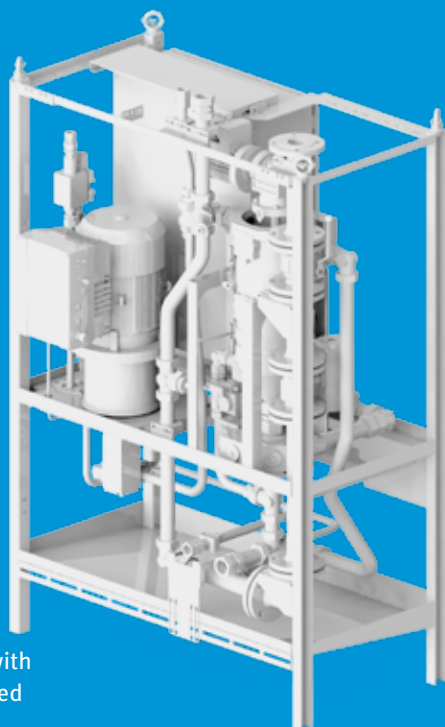
Frequency control pays off time after time

The KNOLL PQ-Tronic enables the specification of any pressure from 0 to 150 bar. Thanks to the frequency control of the drive motor, the speed of the pump unit changes automatically (up to 4500 min^{-1}), as does its power. A pressure sensor together with an electronic PID control ensures the specified pressure (target value) independent of the amount used. Numerous advantages arise from this:

- Energy savings between 50 and 70%
- Preset pressure with the M-function
- Low pulsation conveyance
- Smooth starts and stops
- No power peaks during startup
- Speed adaptation to reduce noise
- Minimization of wear
- Reduced heat release into the medium

Investments in frequency inverters pay off

KNOLL offers its cooling lubricant pumps, from the complete centrifugal pump line to the KTS high-pressure pump, with optional frequency inverters. As compared to a pump with fixed pressure limiting valve, this can save up to 70% of the energy consumption. Furthermore, there is also a smaller release of heat into the cooling lubricant and the ambient air. In addition, the pump is spared by optimal operation, which increases its service life.



Pressure booster with frequency-controlled screw pump set up in dry installation



KNOLL Maschinenbau GmbH

KNOLL Maschinenbau ranks among the leading suppliers of systems for conveying and filtering chips and coolant in the metal machining industry. Its displacement pumps are also used in the chemicals and foodstuffs industries. Highly-flexible transport systems complete the KNOLL product portfolio. Thanks to its comprehensive product range, the company is able to implement complete systems and system solutions incorporating central or localised functions. Since 1970 the name KNOLL has been associated with innovation, progress and growth.