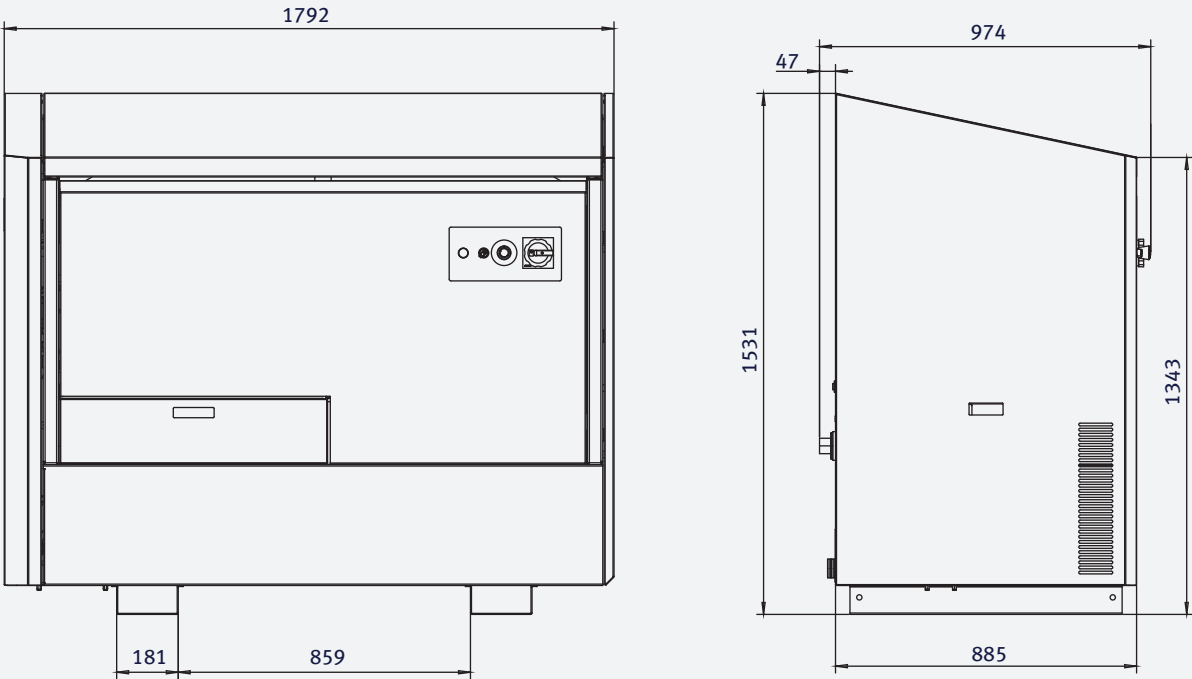


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LubiCool®-L

Dimensions and technical data



High-pressure pump connection cable	max. 7.5 kW
Transfer pump connection cable	max. 1.5 kW
Connected load flushing pump	max. 1.5 kW
Pressure range	Up to 80 bar
Volume flow	Up to 110 l/min (emulsion)
Grade of filtration	Up to 20 µm
Cooling lubricant	Emulsion, oil
Power supply	400 V
Tank capacity	430 l



Features

Benefits

Compact and modular	• Space-saving installation • Flexible and demand-driven configuration
Plug-and-play	• Quick installation • Easy to retrofit
High pressure up to 80 bar with optional second high-pressure pump or flushing pump	• Short-breaking chips • Reduced processing times due to higher cutting speeds • Long tool life • High flushing performance
Effective filtration via belt filter	• Reduced concentration of ultra-fine particles • Long service life of components and the cooling lubricant (CL)
Wear-resistant screw spindle pump	• Long service life and excellent reliability
Demand-based pump control	• Low energy costs • Low heat development • Long service life
Favourable price-performance ratio	• Short amortisation time

Areas of application

The KNOLL high-pressure unit LubiCool®-L is a compact high-pressure unit for machine tools, particularly for small and medium machining centres and lathes. The system cleans the cooling lubricant and supplies the machine with high and low pressure.

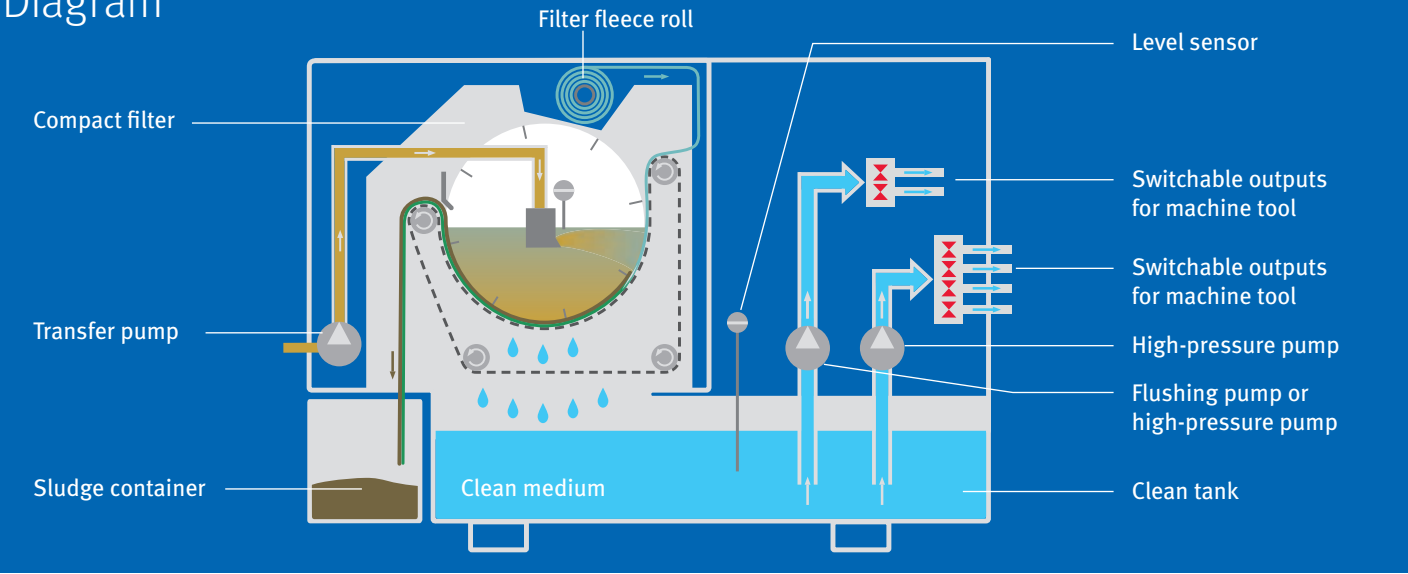
- It is suitable for
- demanding machining processes
 - machining difficult materials (e.g. high-alloy steels, titanium, copper, bronze)
 - high pressure requirements with increased volume of cooling lubricant
 - additional flushing requirements
 - original equipment and retrofitting

Description

1. The transfer pump conveys the dirty cooling lubricant from the machine tool into the compact filter.
2. The compact filter separate chips and foreign particles from the cooling lubricant, which flows into the clean tank cleaned.
3. The dirty filter fleece is collected in the sludge container.
4. The high-pressure pumps supply the machine tool with cleaned cooling lubricant through switchable outputs when required.
5. The optional flushing pump can operate different flushing processes via up to two switchable outputs.
6. The SmartConnect control is responsible for controlling, monitoring and visualising the system parameters.

The description contains optional equipment.

Diagram

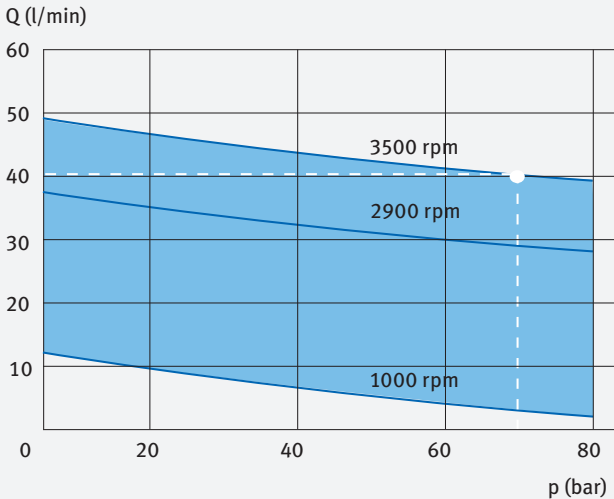


Pump characteristic curve

With the frequency control of the high-pressure pump, any operating point in the light blue area of the diagram is possible.

Example design

Medium: emulsion
Viscosity: 2 mm²/s
Pressure: 70 bar
Flow rate: 40 l/min



Equipment

Panelling	●
KNOLL compact filter KF (with filter fleece)	●
KNOLL screw spindle pump KTSL (high-pressure pump)	●
Transfer pump without frequency converter	●
KNOLL SmartConnect control including touchpad and LED status light	●
Interface cable (individual)	●
Clean tank	●
Sludge container	●
Fixed high-pressure outlet	●
Temperature sensor, WHG sensor	●
Additional KNOLL screw spindle pump KTSL (high-pressure pump)	○
Centrifugal pump (flushing pump)	○
Frequency converter for high-pressure pumps	○
1 or 4 outputs for first high-pressure pump	○
1 switchable output for second high-pressure pump	○
2 switchable outputs for flushing pump	○
Cooling (continuous flow cooler or plate heat exchanger)*	○
Customer tank level monitoring	○
Hose set	○
Pressure reduction for spindle flushing	○

- Basic equipment
- Optional
- * Required with two high-pressure pumps