

High pressure unit LubiCool®-L

**KNOLL**  
.It works

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## Properties

Compact and modular

Plug-and-Play

High pressure up to 90 bar with optional flushing pump

Effective filtration via belt filter

Wear-resistant screw spindle pump

Demand-driven pump control

Attractive price-performance ratio

## Benefits

- Space-saving installation
- Flexible and demand-driven configuration

- Fast installation
- Easy retrofitting

- Short-breaking chips
- Reduced processing times due to higher cutting speeds
- Extended tool life
- High flushing performance

- Reduced concentration of ultra-fine particles
- Long service life of components and the cooling lubricant (CL)

Long service life and process reliability

- Lower energy costs
- Lower heat development
- Longer durability

Short amortization time

## Application

The KNOLL high pressure unit LubiCool®-L is a compact high pressure unit for machine tools, particularly for small and medium machining centers and lathes. The system cleans the CL and provides the machine with high pressure.

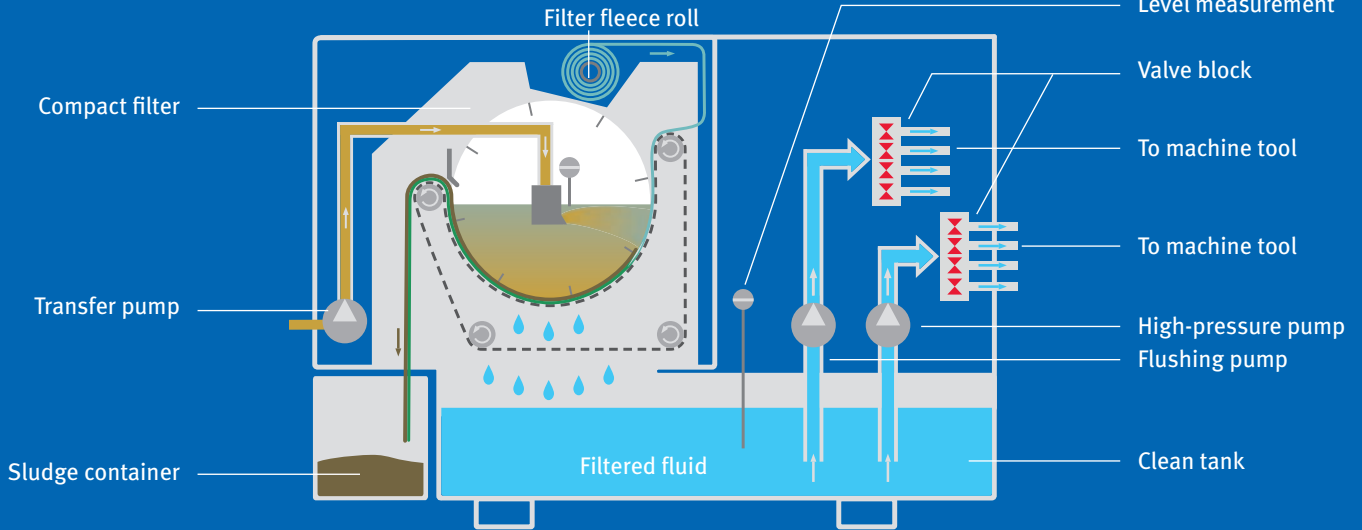
It is suitable for

- Demanding machining processes
- Machining difficult materials (e.g. high-alloy steels, titanium, copper)
- High pressure requirements with increased volume of CL
- Additional flushing requirements
- Original equipment and retrofitting

## Description

1. The transfer pump or the lift pump of the chip conveyor conveys the dirt CL from the machine tool into the compact filter.
2. The compact filter separates chips and the soiling from the CL, which flows in the clean media tank.
3. The dirty fleece is collected in the sludge container.
4. The high pressure pump provides the machine tool demand-driven with cleaned CL through switchable outputs.
5. The optional flushing pump can operate different flushing processes via up to four switchable outputs.
6. The SmartConnect control takes over control, monitoring and visualization of the system parameters.

# Scheme

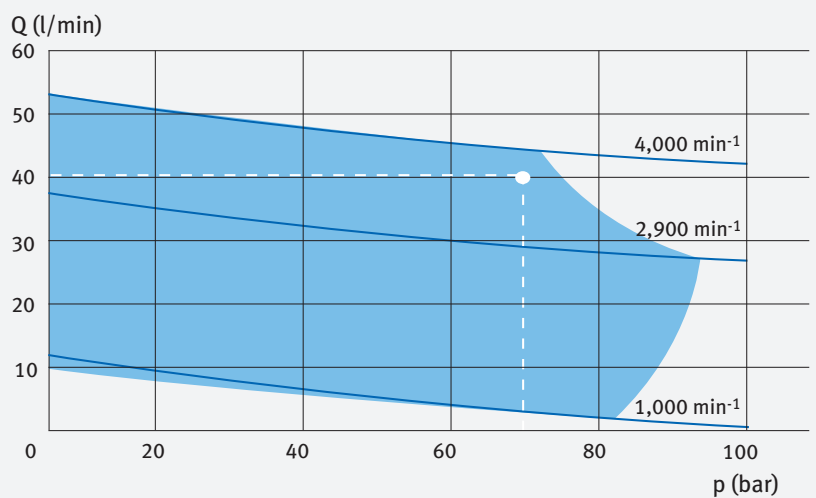


## Pump characteristic curve

With the optional frequency control, every point within the diagram in the light blue area is possible.

### Layout example

Media: Emulsion  
 Viscosity: 2 mm<sup>2</sup>/s  
 Pressure: 70 bar  
 Delivery rate: 40 l/min



## Equipment

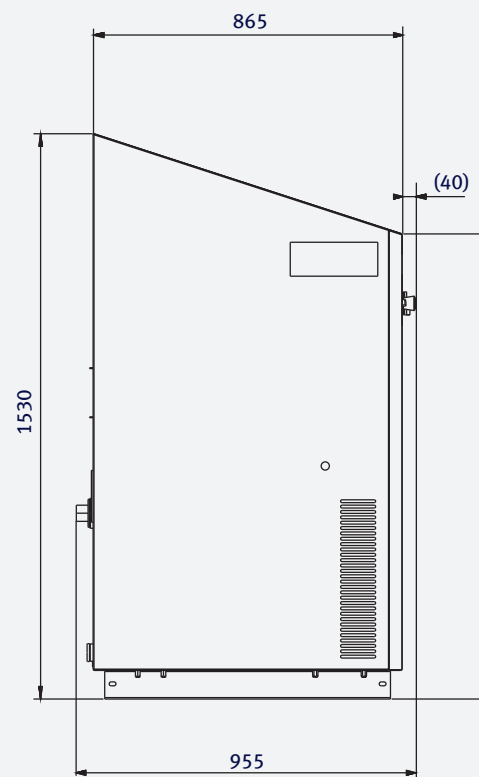
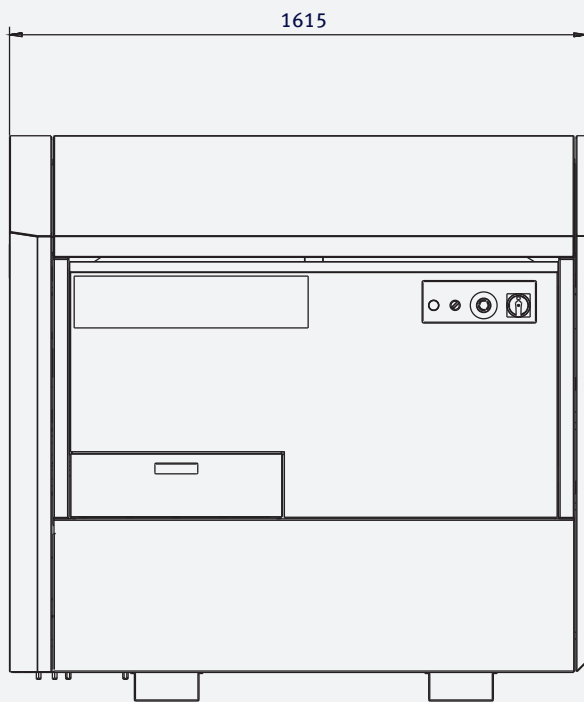
- Paneling
- KNOLL compact filter KF (with filter fleece)
- KNOLL screw pump KTS (high-pressure pump)
- KNOLL SmartConnect control incl. touchpad and LED-status light
- Interface cables (individual)
- Clean tank
- Sludge container
- Fixed high pressure outlet
- Transfer pump with frequency inverter
- Centrifugal pump TG (flushing pump)
- Switchable output high-pressure pump 1 or 4
- Switchable output flushing pump 4
- Frequency inverter for all pumps
- Cooling (continuous flow cooler or plate heat exchanger)
- Temperature sensor
- WHG-sensor
- Chip conveyor control
- Hose set
- Pressure reduction for spindle flushing

● Standard equipment  
 ○ Option

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LubiCool®-L

## Dimensions and technical data



Connected load high-pressure pump	max. 7.5 kW
Connected load transfer pump	max. 2.2 kW
Connected load flushing pump	max. 1.5 kW
Pressure range	Up to 100 bar
Volumetric flow	Up to 150 l/min
Filter fineness	Up to 20 µm
Cooling lubricant	Emulsion, oil
Power supply	400 V
Tank capacity	360 l
Dimensions (L x W x H)	1615 x 865 x 1530 mm