

## We have the solution!



You will find KNOLL Maschinenbau at AMB 2022 in Hall 8, Booth C40. Anyone who cannot wait until the trade fair or is unable to do so can look around on the homepage [www.knoll-mb.com](http://www.knoll-mb.com) and call up a great deal of detailed information there.

KNOLL has a suitable solution for all the requirements that involve conveying, filtering, pumping and automation in metalworking. Visitors to AMB 2022 can see this for themselves: In Hall 8, Booth C40, KNOLL will be presenting its wide range of innovative products and services for transporting and separating chips and cooling lubricants.

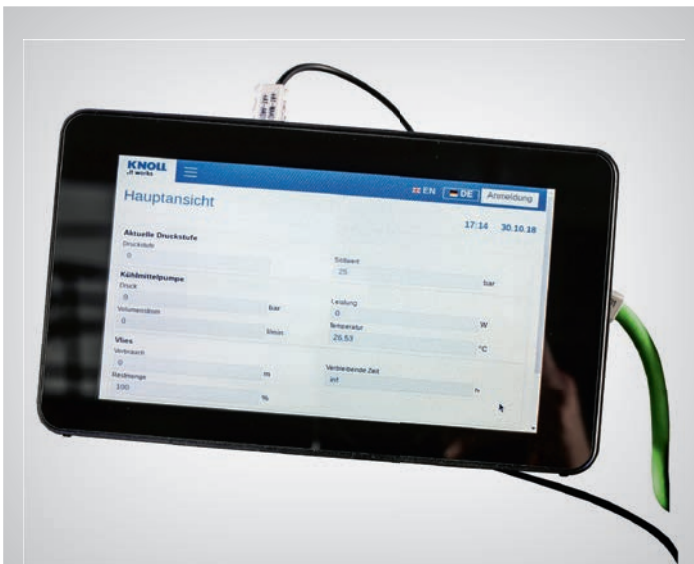
KNOLL Maschinenbau GmbH, Bad Saulgau, is a leading supplier of conveying and filtering systems, as well as pumps for metalworking. At the AMB trade fair in Stuttgart, according to the motto "You have the requirement, we have the solution!", the company will be showing how users can equip themselves with the latest technologies and developments for the economic production of tomorrow. Always in sight: the current challenges of our time, such as digitalization, automation and sustainability.

### Highlights at the KNOLL booth

Small but mighty: With SmartConnect, KNOLL has developed a new control concept that ensures uncomplicated, intuitive operation of its systems. The basis: A small industrial PC that can communicate with the systems PLC. For example, KNOLL uses it for equipping its entire retrofittable LubiCool® family of high-pressure units. As standard, the newly developed, modular KNOLL HydroPur hydrostatic filter systems are also

controlled and operated via SmartConnect. The same applies to the KNOLL AerosolMaster™ dry lubrication system. But SmartConnect is also available as an option for other KNOLL products, such as the MicroPur® ultra-fine filter systems.

While the smart control unit was previously operated via a small touch display unit attached to the respective device, a SmartConnect app is now available that runs on smartphones and tablets. It will celebrate its premiere at AMB 2022.



The new SmartConnect control concept: This allows various KNOLL systems to be operated easily and intuitively.

This app not only controls the respective application, it also provides the customer with maximum transparency over the entire process through the recorded operating data and its evaluation. It is suitable for monitoring, predictive maintenance and, if necessary, for complete coolant management (temperature, pH value, fleece supply, etc.).

## Customized solutions

Of course, the latest filter and pump developments will also be on display at the booth, such as the KNOLL LubiCool® family of high-pressure units mentioned above in the S, M and L variants, all of which are also suitable for retrofitting.

The newly developed KNOLL HydroPur filter systems, which can be configured precisely according to requirements thanks to their modular design, are groundbreaking. In the basic system, they consist of a tank and a filter head. Depending on requirements, standardised function modules can be selected with respect to pumps, coolers, pre-separators, etc. – for sim-



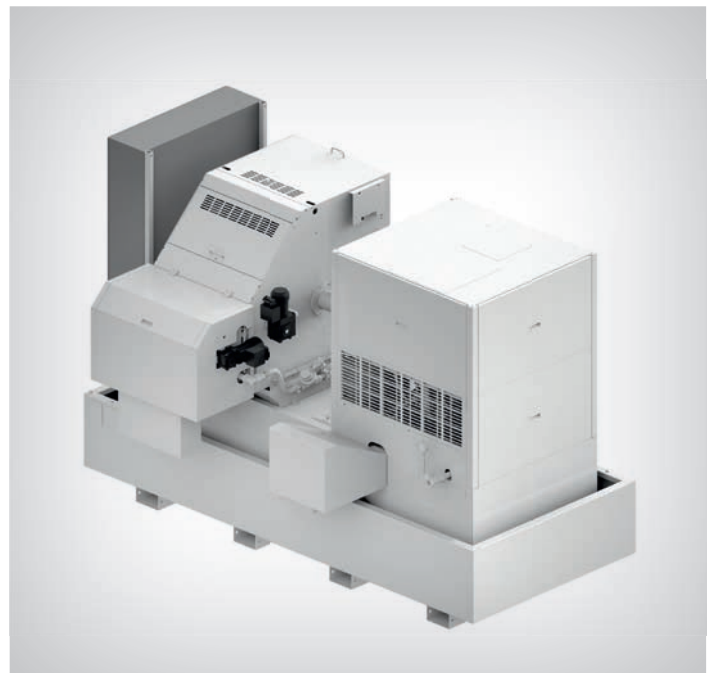
A highlight at the booth: the KNOLL LubiCool® high-pressure unit family. The "S" variant is so compact that it fits under a bar loader.

ple equipment through to the full version, which meets the most demanding requirements.

At the AMB, KNOLL will be demonstrating what ultra-fine filtration for grinding applications can look like in a model customer project: The system, which will supply two machines in the future, has a two-stage design. It contains a KNOLL KF-E compact filter for prefiltration and the MicroPur® ultra-fine filter as the core element.

## It all comes down to the details

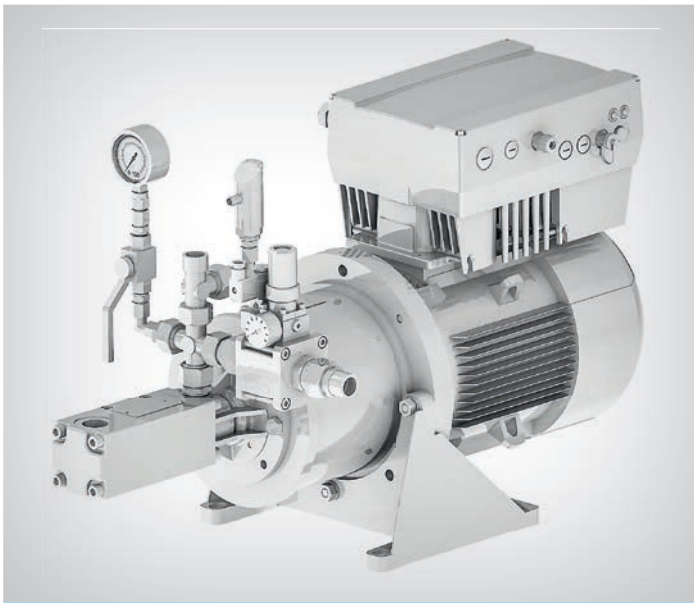
Also included is an optimized KNOLL slat conveyor, which can be used to remove chips in a wide variety of shapes as well as from a wide variety of materials and types of machining. There are various optional additions to this, for example, to free the chip rollers



Two-stage central system for KSS and chip management: It contains a KNOLL KF-E compact filter for pre-filtration and the ultra-fine MicroPur® filter as a core element.

that form between the chains. Also upon customer request, a robust, self-cleaning disc filter (350 µm or 500 µm) can be installed, which additionally removes chips and dirt from the cooling lubricant. KNOLL will also be presenting a pneumatic belt cleaning system. It ensures that even the finest and lightest chips adhering to the slat conveyor are blown off - at a negligible cost in energy. These options prevent swarf carryover into lifting tanks. They increase pump life and ensure lower fleece consumption in downstream filter systems. The slat conveyor operates largely free of malfunctions and maintenance, enables continuous production and is the ideal equipment for multi-spindle lathes and machining centres.

In addition, KNOLL will be showing how chip removal can be automated: A chip reducer cuts the chips and a self-propelled swarf trolley transports them to the disposal location. This is a set-up that is particularly efficient for unmanned shifts.

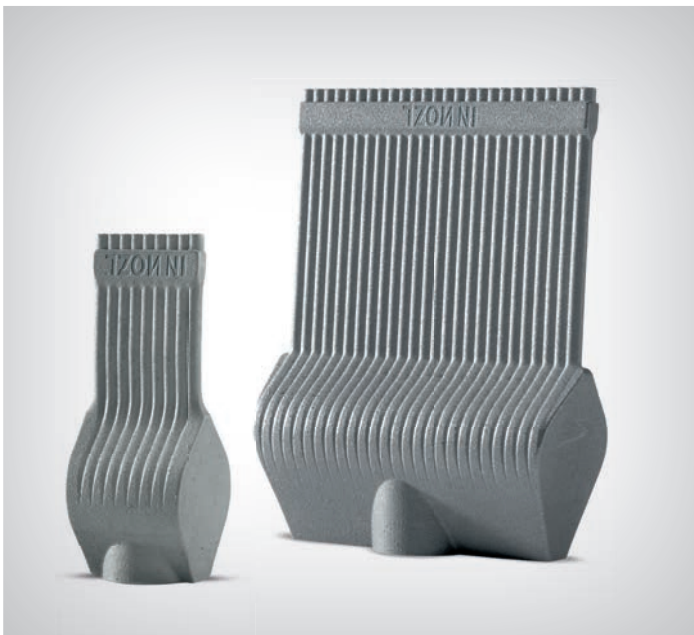


A successful basic component: The KNOLL KTS screw pump. It conveys KSS for high-pressure applications on machine tools.

## For the sake of the environment and the wallet

KNOLL has always been committed to energy efficiency and sustainability. From the complete centrifugal pump portfolio to the high-pressure pump, KNOLL offers all of its KSS pumps with frequency converters. Compared to a pump with a fixed pressure relief valve, up to 70 percent of the energy consumption can be saved. Using the example of the KTS screw pump, which has been tried and tested for almost 30 years, and the newly developed KTSL variant, KNOLL will be explaining at the AMB why frequency control pays off in several ways and quickly pays for itself.

Among the more recent products that have a huge impact on energy efficiency are the KNOLL INNOZL™ nozzles. These 3D-printed grinding nozzles, made of titanium or stainless steel, were



Newest products in the KNOLL portfolio: The 3D-printed INNOZL™ coolant nozzles made of titanium or stainless steel. The standard products INNOZL™ SL are available directly from stock.

specially developed for KSS in cylindrical, surface and centreless grinding, and reliably prevent thermal damage during the grinding process. They ensure that the coolant always reaches the contact zone at a constant flow rate, as well as speed and direction.

## It also works without coolant

A prime example of sustainability is the KNOLL AerosolMaster™ system, an alternative to the conventional use of coolant. The AerosolMaster™ is based on aerosol dry lubrication (ATS), in which the finest lubricating particles are fed directly to the cutting edge of the tool. In this way, the system prevents heat build-up in the machining contact zone. Against this background of low lubricant consumption, the supply and disposal costs are reduced to almost zero. And, as far as energy efficiency is concerned, the AerosolMaster™ systems show great potential: The energy consumption per machine is up to 60 percent lower compared to central KSS systems.



The KNOLL AerosolMaster™ 4000 ATS, with 30 selectable programs, is designed for machining processes that require many different aerosol quantities are required.

At AMB 2022, KNOLL will be presenting an advanced version of the AerosolMaster™ 4000 ATS. Using the same technical principle - with a new design - it has become even more user-friendly. Depending on the setting, it can be used in a variety of ways: as a tool saver, for the best surfaces or maximized feed.

## AMB 2022



### KNOLL Maschinenbau GmbH

KNOLL is the leading provider of conveyor systems, filtration units and pumps for metalworking. These transport and separate chips and cooling lubricants. The comprehensive product range offers systems for decentralised or centralised applications. Its Automation division deals with solutions for demanding assembly and logistics tasks. These include stationary transport systems with chain and roller conveyors. With the integration of handling units (robots, cobots) and transport robots (AGV), flexible systems are created from a single source.

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