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KNOLL
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Press Release for EMO 2019
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KNOLL Shows its Greatness

At EMO 2019, the world's trade show for metal processing, KNOLL Maschinenbau will present itself as a global player, whose conveyor and filtering systems, pumps, and transport systems are widely used in all important industrial nations. KNOLL supplies these not just as innovative components of machine tools, but also as stand-alone large central systems for cooling lubricant and chip management.

With large visual displays, KNOLL Maschinenbau will let trade show visitors see how this family-owned company headquartered in Bad Saulgau has grown – and how it assists customers around the world with its sales and service network and its own branch offices in key markets.

However, the company's growth has been more than just geographic. Its core business – systems for cooling lubricant and chip management – has also taken on new dimensions. In addition to the constantly enhanced standard components with which individual machine tools are equipped, in the meantime there are also numerous large central systems, which KNOLL plans and delivers to metal processing production operations. These systems are in a position to supply 30 and more machines with up to 12,000 l/min of extremely clean cooling lubricant. And modular system technology enables them to achieve still greater total output. Thanks to the digital displays, trade show visitors can also get an impression of this expertise.

KNOLL will present cooling lubricant on a somewhat smaller scale – but for that, live and on-site, in Hall 7, Booth C34 – in the form of a stand-alone solution for two-stage cooling lubricant filtration. After the trade show, this machine will be used by a customer in an HSS grinding shop. It contains a 240/AK5 MicroPur® filter, which is supplemented by a KNOLL KF 400-E compact filter with an endless

filter belt. It handles the task of chip pre-separation, making superfine filtration easier.

Innovative standard components

40 The basis of every large system is innovative standard components that are also used in many individual machines. These include the modular superfine **MicroPur®** filter, which is designed to remove residues from grinding processings, whether carbide metal, HSS or cast particles. At EMO, KNOLL will present the MicroPur® in the 120-F version, which contains two backflushable filter elements for approx. 120 liters of filter capacity. It is particularly cost-effective when working with the integrated KNOLL AK5 automatic concentrator, which reduces the carryover of oil and can ensure a residual moisture content in the settled material of less than or equal to 10%.

50 For a year, KNOLL Maschinenbau has offered the **LubiCool®** mobile high-pressure station for use on short and long automatic lathes. It supplies the cooling lubricant at up to 150 bar, which ensures short processing times and longer tool service life for short-breaking chips. Therefore, machines that are so equipped are suitable for even the most challenging of machining processes, such as machining high-alloy steels or titanium. The built-in belt filter with a filter fineness of up to 20 µm guarantees the cooling lubricant purity that is required for high-pressure applications.

60 At EMO, the "big brother" **LubiCool® L** will celebrate its premiere. It is designed for larger lathes and small and medium-sized processing centers that require higher flow volumes and flushing processes. Here, the high-pressure pump KTS 25-50 can be used with a TG 30 centrifugal pump for flushing. Optionally available for integration is a BS 40 lifting pump, which guarantees independent high-pressure and supply systems.

Both LubiCool® variants use the new **SmartConnect** operating concept, with which a small industrial PC is connected to the PLC system. Using a 7" touch display, the user can access the system, visualize states, check parameters, and thus change to manual mode.

Refreshingly different – the modular machine

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It is based on the structural principles of a processing center and thus serves as an ideal presentation platform for the many products that KNOLL offers for individual OEM plants: the modular machine. With it, KNOLL will display its **plate conveyor**, for example, which distinguishes itself through plates that are joined hinge-free so that it is suitable both for chip removal for wet and dry processing, as well as conveying small sheet metal parts.

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For applications that create very fine, lightweight chips, KNOLL has developed another complementary solution: an attached, self-priming BS 40 dirty water pump conveys the cooling lubricant that contains the chips into the so-called chip separator, which uses the cyclone principle to separate the chips from the cooling lubricant and store them in the ascending area of the conveyor belt. The pre-cleaned coolant flows directly to the filter system.

This is present on the modular machine in the form of a KF 150/650 **compact filter**. The universally applicable tower model belt filter saves space since the filter elements sits on the tank.

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As a conveyor alternative, the modular machine includes a **RKR return pumping station** with chip reducer, which demonstrates how cooling lubricant and chips can be transported away from the machine reliably, cleanly, and in space-saving fashion to a central separator/filter.

At EMO 2019, the modular machine will, for the first time, contain a **fluid cabinet**, which includes a pressure boosting system with KTS screw pump, valve technology, and control filter.

MMS instead of cooling lubricant

For many chipping applications, minimum quantity lubrication (MMS) is an alternative to using cooling lubricant. For this, KNOLL offers the modular **Controlube MMS system**, which works with injector technology and microprocessor control. The system developed by KNOLL already delivers a particularly fine aerosol within 0.1 seconds, which provides for improved process conditions, shorter processing times and lower costs. A core property of this MMS system is the oil quantity that can be regulated regardless of the air pressure; it is also available in the simplest Controlube model. Depending on requirements, the system can also be retrofitted process-specifically with additional modules and, for example, with a controllable air pressure of up to 20 bar.

KNOLL Maschinenbau at EMO 2019
in Hall 7, Booth C34.

Images:



B01_KNOLL_EMO2019_Zentralanlage

KNOLL plans and delivers large central cooling lubricant systems that are in a position to supply 30 and more machines with up to 12,000 l/min of extremely clean cooling lubricant. Images: KNOLL Maschinenbau



B02_KNOLL_EMO2019_MicroPur

KNOLL's modular superfine MicroPur® filter is designed to remove residues from grinding processings, whether carbide metal, HSS or cast particles, from the cooling lubricant.



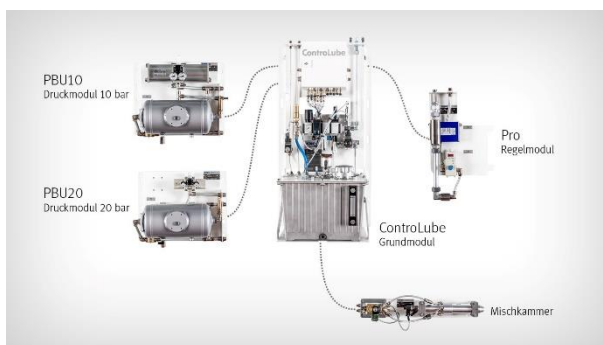
B03_KNOLL_EMO2019_Lubicool 2019

KNOLL's LubiCool® mobile high-pressure station provides the cooling lubricant at up to 150 bar, which ensures short processing times for short-breaking chips and longer tool service life.



B04_KNOLL_EMO2019_Plattenbandförderer P

The KNOLL plate conveyor is now available with a chip separator, which uses the cyclone principle to separate the chips from the cooling lubricant and places them in the ascending area of the conveyor belt. This way, it can be used for applications that create very fine, lightweight chips.



B05_KNOLL_EMO2019_controlube_de/en

KNOLL's modular ControlLube MMS system works with injector technology and microprocessor control. It delivers a particularly fine aerosol within 0.1 seconds, which ensures improved process conditions, shorter processing times and lower costs.



B06_KNOLL_EMO2019_Rückpumpstation RKR

The KNOLL RKR return pumping station with chip reducer transports cooling lubricant and chips away from the machine reliably, cleanly, and in space-saving fashion to a central separator/filter.

KNOLL Maschinenbau GmbH

KNOLL Maschinenbau ranks among the leading suppliers of systems for conveying and filtering chips and coolant in the metal machining industry. 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.

If you have questions on the text and illustrations, please contact k+k-PR GmbH. For further information regarding our company, technology and products, please contact KNOLL Maschinenbau GmbH directly.

We would welcome any publication.
No charge for printing. Sample of print requested to:

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