

KNOLL34

The Company Magazine | Edition 34 | 2023

CONVEYING

FILTERING

PUMPING

AUTOMATION

Editorial

The 2023 reporting year was heavily influenced by external factors which also have an influence on our business and the overall economy in Germany. These include the high energy costs, the skills and labour shortage, as well as a high level of taxes and duties. On top of this, there are regulations and bureaucracy, the persistently high inflation and the higher interest rates. Another aspect is related to the fact that the warehouses are full due to the interrupted supply chains over the past two years and this is why there is also a certain buying resistance.

Nevertheless, we can be satisfied with the 2023 financial year. Turnover has risen significantly once again. Particularly for tool manufacturing we were able to impress with our MicroPur® filter systems and acquire some major contracts. We supplied the central chip disposal with crushing and drying as well as the central cooling lubricant filter system for high-quality reactor components with high chip volume. Chip reducers and chip drying via centrifuges complete this large-scale project.

Our new digital CRM (Customer Relationship Management) is much more than a tool for managing

customer data. The applications include data management, customer care, analyses & KPIs, sales, marketing and service, among others. The satisfaction of our customers and prospective customers in particular should improve considerably in the future. CRM has already been in use in marketing since July and is expected to be released for sales in February 2024.

In the myKNOLL customer portal we simultaneously automate and accelerate other business processes in the business customer sector. For this purpose, we offer our customers an online shop that is open around the clock: request, ordering, shipping, payment and returns – all processes are simple and fast. Customers can register systems and retrieve documents such as operating instructions, spare parts lists and drawings. There is also the option to initiate service tickets. The implementation will take place at the start of the second quarter in 2024.

Our automation solutions are in great demand, specially for food processing systems. We also use these systems for the assembly of products in the area of

energy production and storage. A novelty is that we will act as an integrator in the future. Apart from conveyor belts, we also supply automated guided vehicles and the respective robots.

We experienced a highlight week in the company at the middle of June: We started the week with the press meeting and the international sales meeting. Then we welcomed 500 customers and suppliers in Bad Saulgau during a 3-day in-house exhibition. The event week was topped off with the staff open day. Our employees celebrated on site and were able to show their families their company and workstation. We were particularly happy with the 700 children who fully enjoyed the day.

KNOLL continues to expand internationally: The groundbreaking ceremony in North Carolina, America is a long time coming. It finally took place in August and the excavators started moving. A large production plant spanning 2500 m² is being built and will be ready for occupation after a construction period of 12 months. The relocation from Madison Heights (Michigan) to Dallas (North Carolina) will take place in 2024.

And we are particularly thrilled that our customers continuously reveal prospects and opportunities for growth. In view of our product portfolio and our expertise, we are convinced that we can not only hold our own in the market, but also continue to develop. Despite the difficult general conditions, we are very optimistic about the coming business year.

The politicians must now show the willingness to improve the factors presented. In doing so, they should also reduce the private tax rates and duties. Because more net income means more money in household budgets. This increases consumer behaviour and ultimately stimulates the economy.

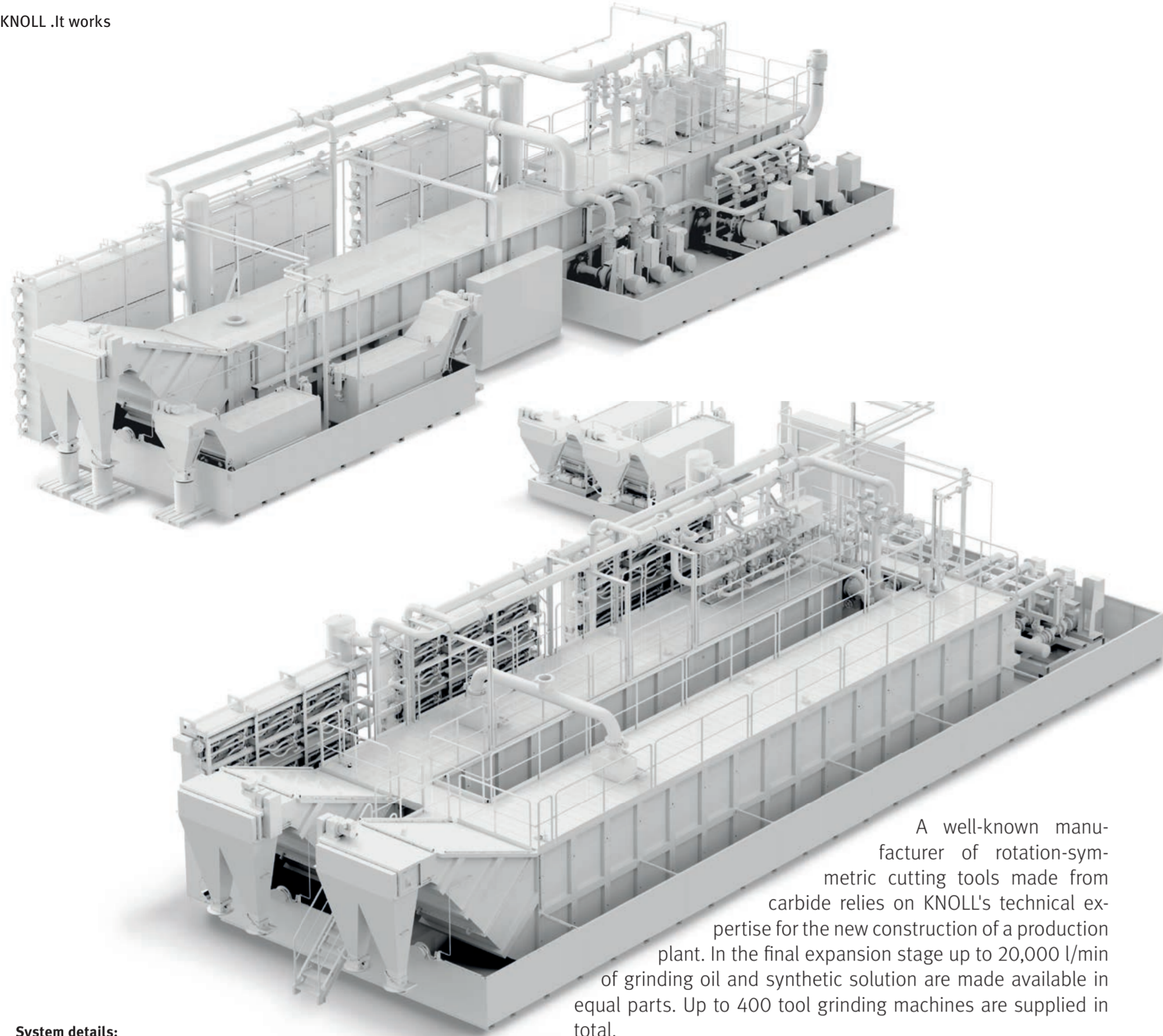
We would like to thank all of our employees as well as our loyal customers and business partners. We hope you enjoy reading our corporate magazine.

Matthias Knoll

Jürgen Knoll



Excellent disposal



A well-known manufacturer of rotation-symmetric cutting tools made from carbide relies on KNOLL's technical expertise for the new construction of a production plant. In the final expansion stage up to 20,000 l/min of grinding oil and synthetic solution are made available in equal parts. Up to 400 tool grinding machines are supplied in total.

System 1 (at the very top): Central system for grinding oil with 5,000 l/min, can be expanded up to 10,000 l/min.

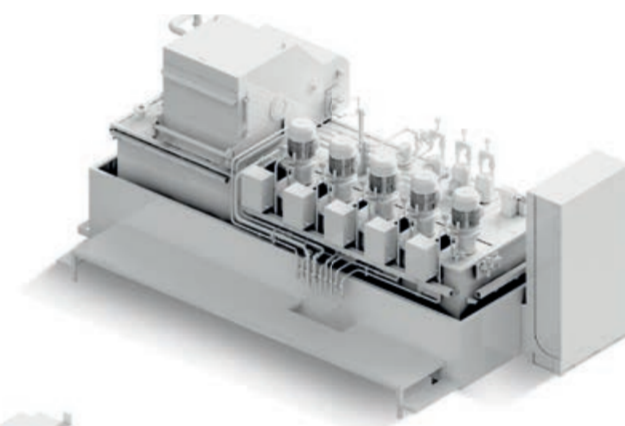
System 2 (top): Central system for synthetic grinding solution with 10,000 l/min.

System details:

- High cooling lubricant quality through full flow cleaning to filter quality $\leq 5 \mu\text{m}$
- Efficient filter process due to complete degassing and optimum sedimentation of solids
- Highest reliability due to redundancy of the function-relevant components and modular design with reserve capacity
- Monitoring by means of remote access and monitoring of system parameters
- Regular monitoring of the filter quality through in-house lab analytics

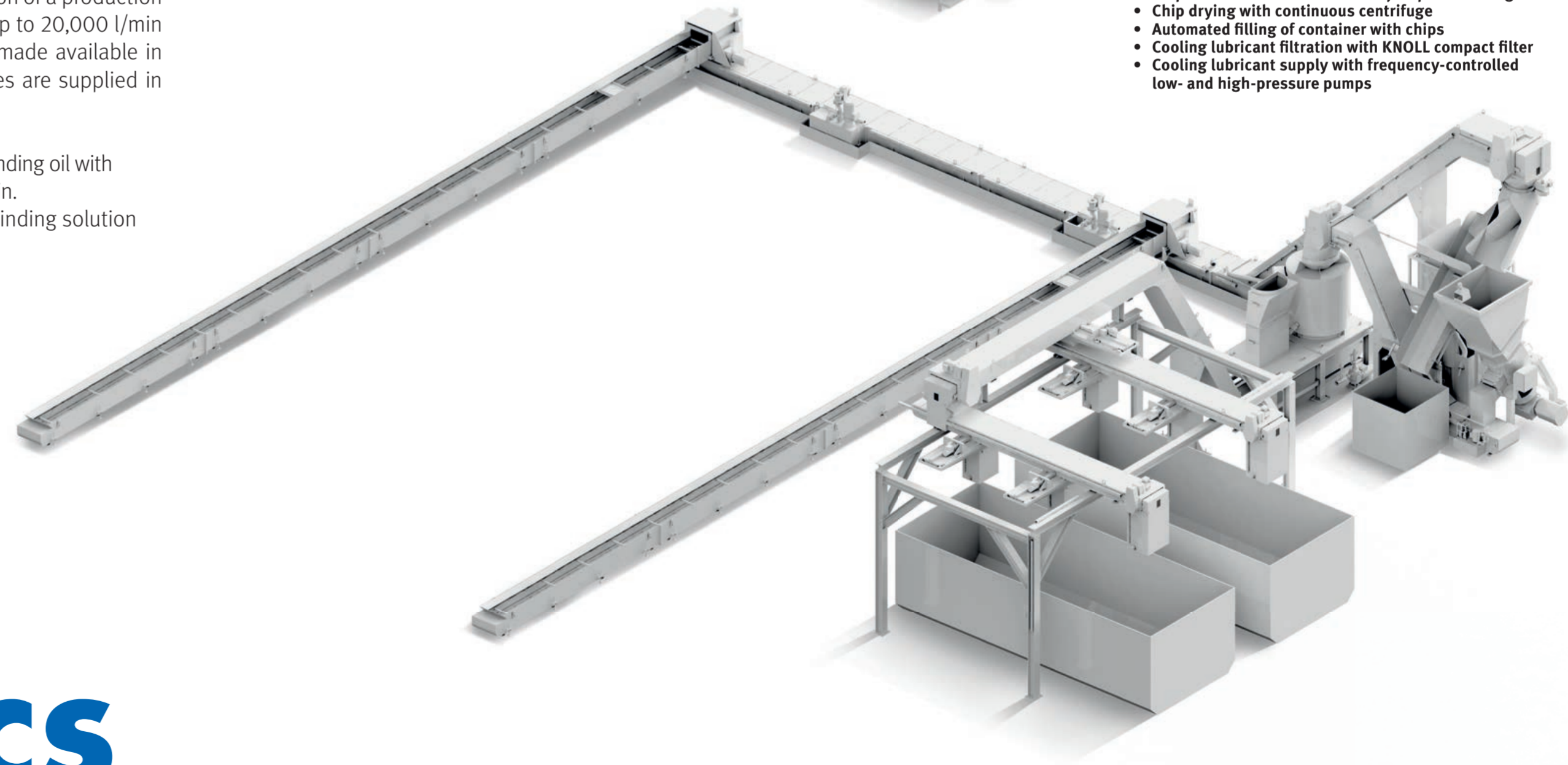
Large components with a diameter of 11 m and chip volume of 1,800 kg/h (6,000 l/h) are processed for high-quality reactor systems. KNOLL supplied the central chip disposal with crushing and drying as well as the central cooling lubricant filter and supply system. 2 chip conveyors, each 20 m long, transport the chips to a 20 m long collecting conveyor. The subsequent chip processing system crushes, dries and conveys the chips into a truck container.

Material: Steel, stainless steel



System details:

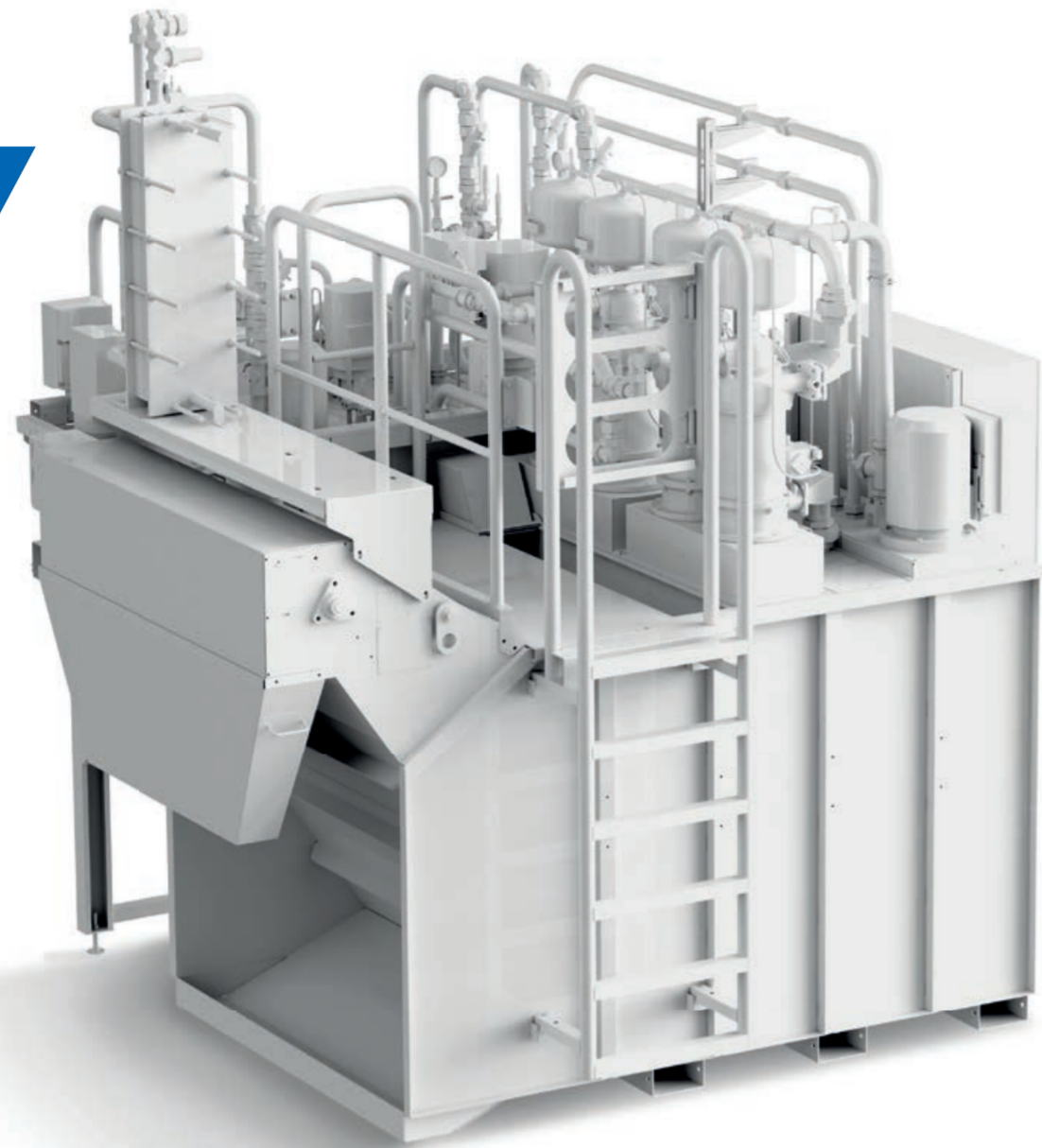
- Heavy-duty chip conveyor
- Chip reduction with automatic reject part discharger
- Chip drying with continuous centrifuge
- Automated filling of container with chips
- Cooling lubricant filtration with KNOLL compact filter
- Cooling lubricant supply with frequency-controlled low- and high-pressure pumps



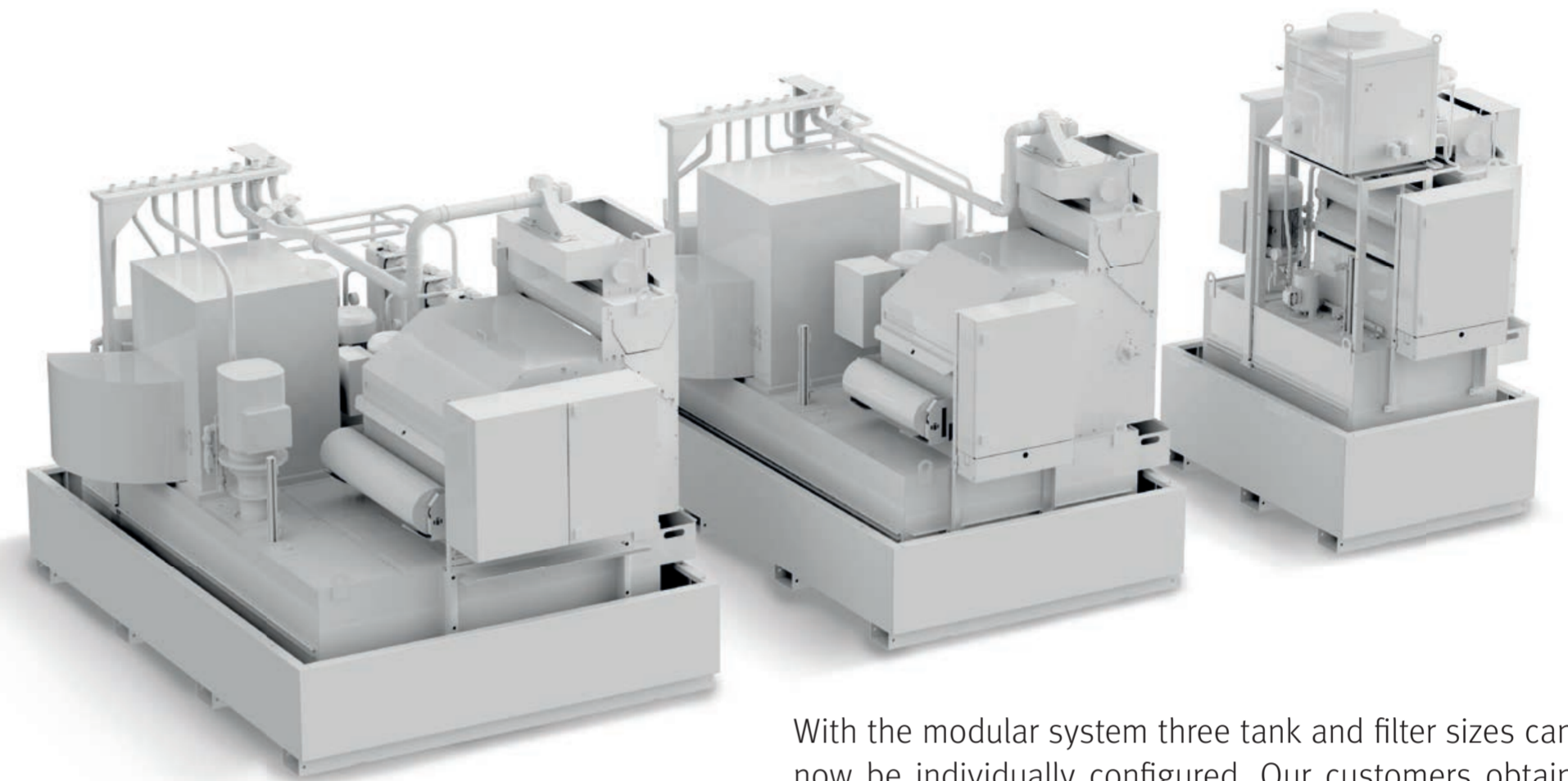
Familiar with all topics

Only the very best

A precise supply for large quantities of minute precision parts is conveyed for the manufacture of watches and microtechnology components. Watch blanks are manufactured in batches of up to 1,000,000 pieces for mechanical watches. KNOLL provides the group supply systems of several high-output transfer machines. It was important to meet high efficiency requirements in terms of energy (all installed pumps with frequency control/all pumps with pressure and flow monitoring), cooling lubricant temperature (stabilisation) and filtration (multi-stage filtration using TURBO filter).

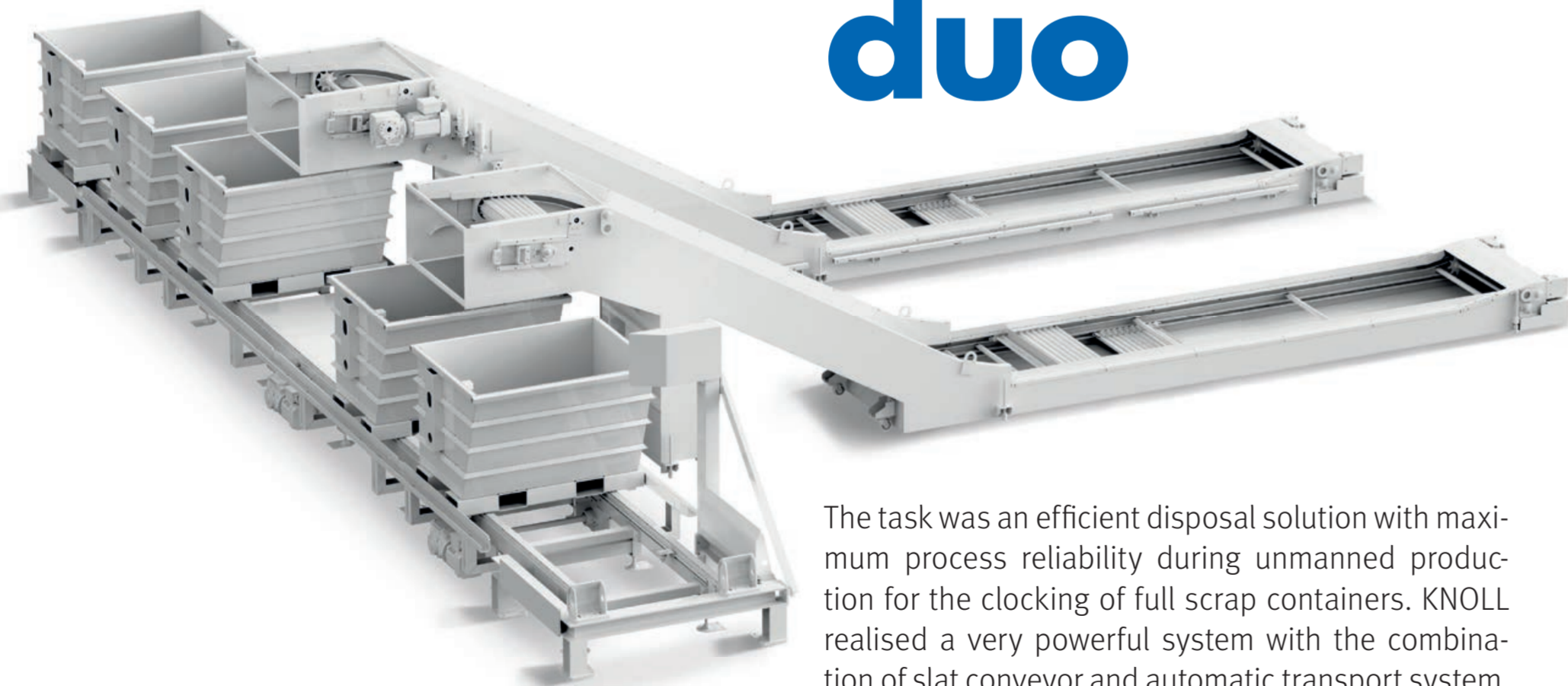


Ideal for series



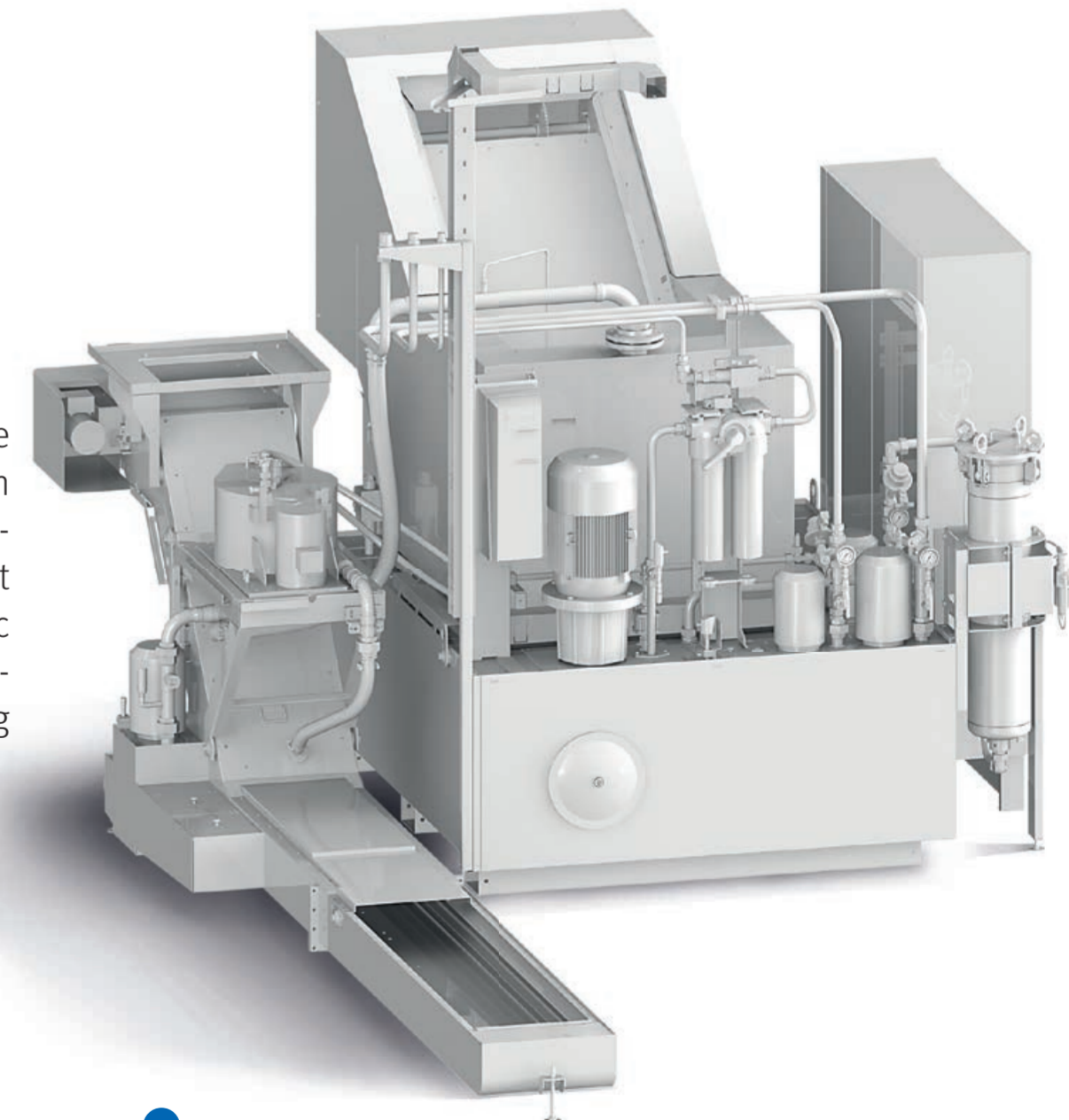
With the modular system three tank and filter sizes can now be individually configured. Our customers obtain the right system for every requirement.

Powerful duo

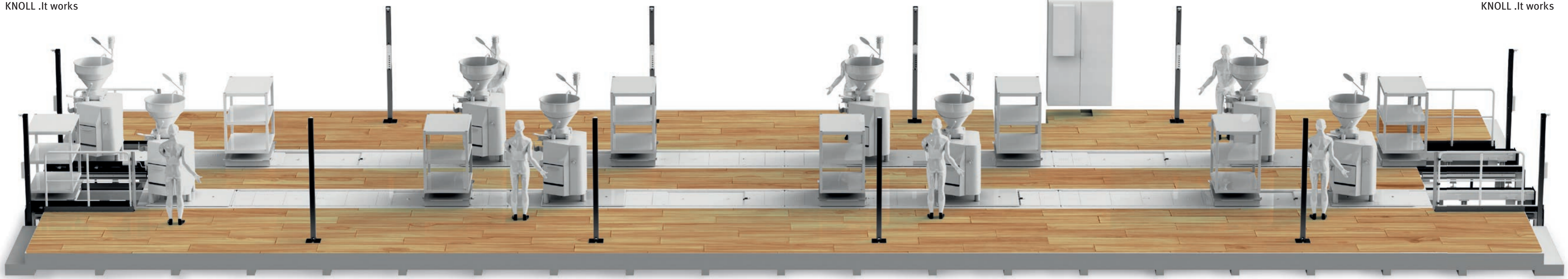


The task was an efficient disposal solution with maximum process reliability during unmanned production for the clocking of full scrap containers. KNOLL realised a very powerful system with the combination of slat conveyor and automatic transport system.

The processing of metallic high-performance materials presents significant challenges on every conveyor and filter system. A combination of the wear resistance of the scraper belt conveyor, the fine filtration using a hydrostatic filter, UniPur and the fluid centrifuge in the bypass flow guarantee process reliability during unmanned production.



Safe combination

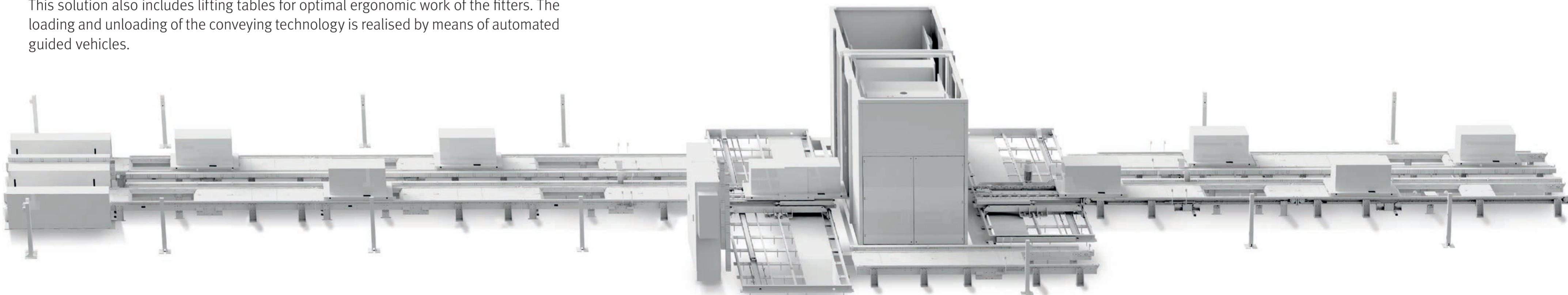


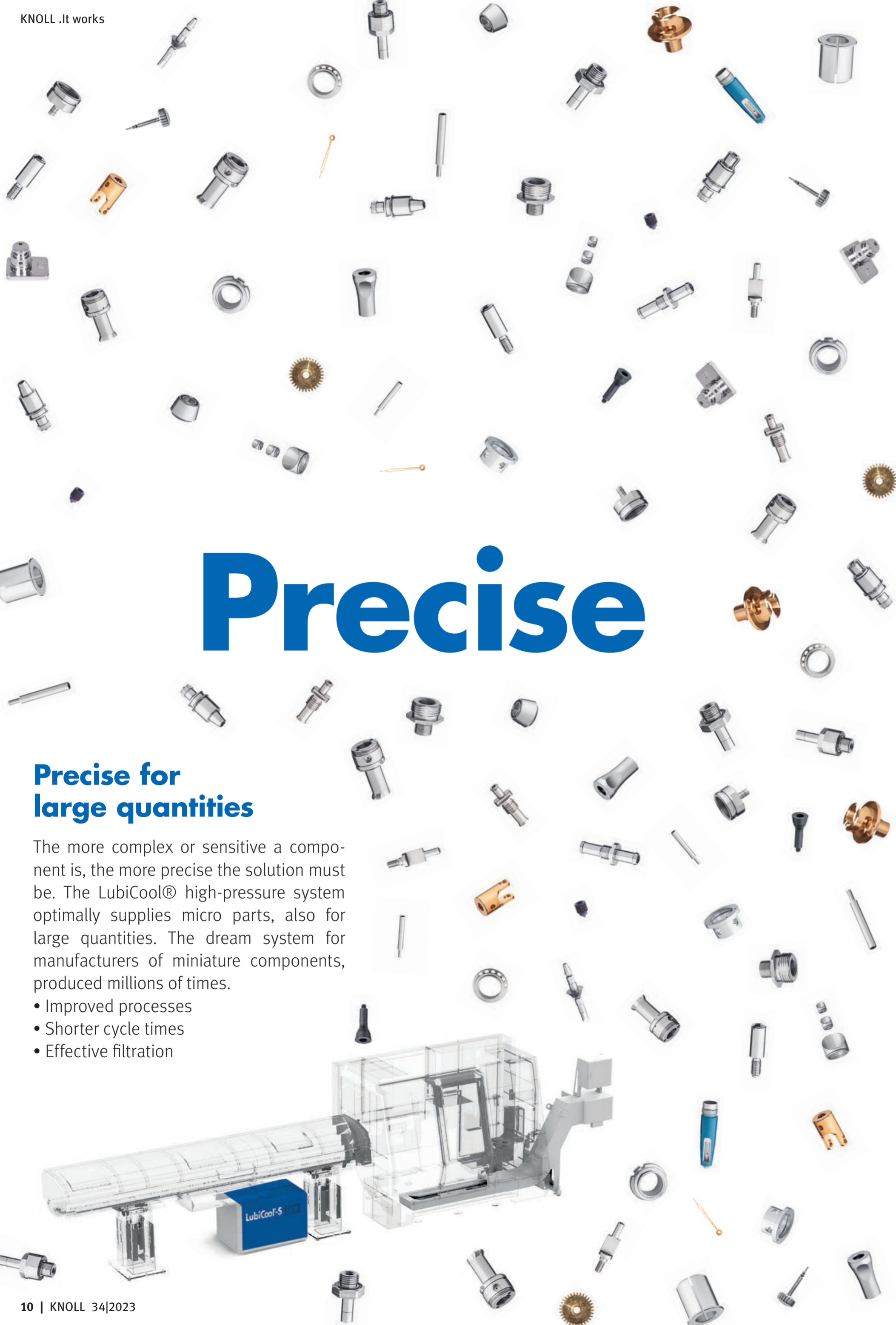
KNOLL designed the optimal ergonomic automation solution for a Swabian company that produces systems for food processing: A wooden pedestal without tripping hazards for the conveying technology enables pleasant working. Integrated lifting tables for fitters also improve the ergonomics. The material platform follows the assembly platform. This means the fitter always has the right materials within gripping distance. At the end of the assembly line the assembly platform is full and the material platform is empty.

Automation Food

Automation Energy

For a renowned company in the area of energy production KNOLL designed two conveying lines for the automation solution due to high quantities. A highly automated system with testing process is installed as an intermediate step. A contingency plan for the ejection of parts that are deemed not ok during the testing is integrated here. This solution also includes lifting tables for optimal ergonomic work of the fitters. The loading and unloading of the conveying technology is realised by means of automated guided vehicles.





Precise

Precise for large quantities

The more complex or sensitive a component is, the more precise the solution must be. The LubiCool® high-pressure system optimally supplies micro parts, also for large quantities. The dream system for manufacturers of miniature components, produced millions of times.

- Improved processes
- Shorter cycle times
- Effective filtration

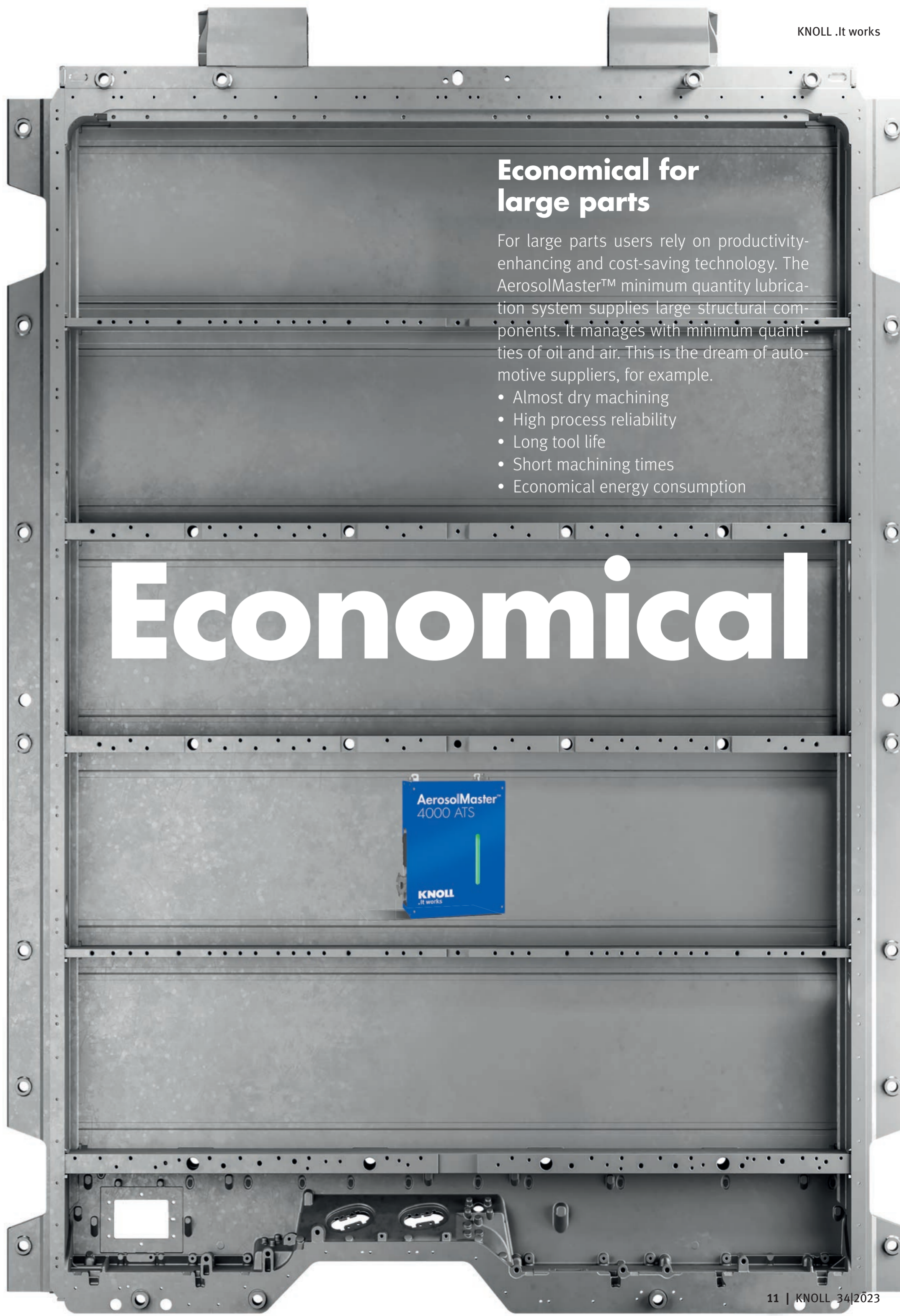


Economical for large parts

For large parts users rely on productivity-enhancing and cost-saving technology. The AerosolMaster™ minimum quantity lubrication system supplies large structural components. It manages with minimum quantities of oil and air. This is the dream of automotive suppliers, for example.

- Almost dry machining
- High process reliability
- Long tool life
- Short machining times
- Economical energy consumption

Economical



Sustainability is an operational principle and ideally considers ecological, economical and social aspects equally. This means using no more resources than it is possible to grow again, regenerate or make available again in the future. KNOLL is fully aware of its responsibility in this regard.

2013

The first certification in the area of environmental management in accordance with DIN EN ISO 14001 reinforces the commitment to environmental responsibility. It also recognises KNOLL as an environmentally-conscious and sustainable company.



2018

New construction of the energy-efficient administration building K1. It combines the highest standards for sustainability, ergonomics and innovation and maximises working comfort.



2008-2020

Energy-efficient heating and cooling with geothermal energy: Groundwater wells supply heat pumps for the climate control of halls and offices.

2012-2022

Realisation of energy-saving potential: Implementation of LED lighting in the entire company.



2023

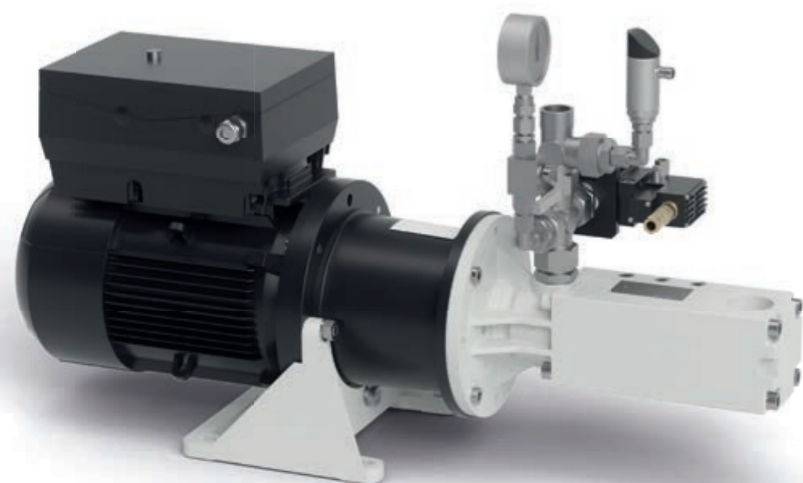
Increasing independence from external energy supply sources through the expansion of photovoltaic system to 1,456 MWp. This would be enough for 365 average 4-person households.

Suitable for grandchildren

2017

Introduction of the KNOLL E-Pass for KTS pumps: Energy-saving potential of up to 70 % with simultaneous reduction of cooling capacity, wear and noise emissions gives our customers maximum benefits.

KNOLLE-PASS



2019-2021

Our production is becoming more sustainable: Energy saving through 30 new control cabinet coolers as well as the use of controlled compressed air compressors for heat recovery, use of solvent-free hydro varnishes for VOC saving.

2021

Focus on energy autonomy and security: Expansion of photovoltaic system to 760 kWp, this corresponds to 190 average 4-person households.





**LET'S
KNOLL
TOGETHER
12.-17.06.23
OpenHouse
Supplier day
Staff open day**

In June KNOLL organised a one-week in-house exhibition for customers, suppliers and press representatives. On the last day all employees were invited with their families and around 700 children. A sincere thank you to the staff for their tremendous efforts – the week received consistently positive feedback. KNOLL showed its best side and presented the large product portfolio in the representative production halls. Everything was perfectly accompanied by a friendly reception and knowledgeable guided tours of the company.



Lots going on, staying cool.

At the **Dreh- und Spantage trade fair for the machining industry in Villingen-Schwenningen** at the end of March KNOLL presented the Aerosol-Master™ minimum quantity lubrication system with SmartConnect control as well as the LubiCool® high-pressure system in S and M versions.

A highlight in April was the joint stand with Nuosun at **CIMT in Beijing**. Here KNOLL China showcased the new pump developments for the first time, the BS 40 block pump and the new series of KTSL screw spindle pumps. The visitors were very interested in the KF compact filter and the LubiCool® high-pressure system.

At **Automatica in Munich** at the end of June KNOLL impressed with the automated guided vehicles, the accumulating roller conveyor with integrated lifting table and the "mobile conference table" (ground chain transport system TS-Z). A large, blue elephant was the undisputed star of the trade fair stand. It was set down on an accumulating roller conveyor on an automated guided vehicle.

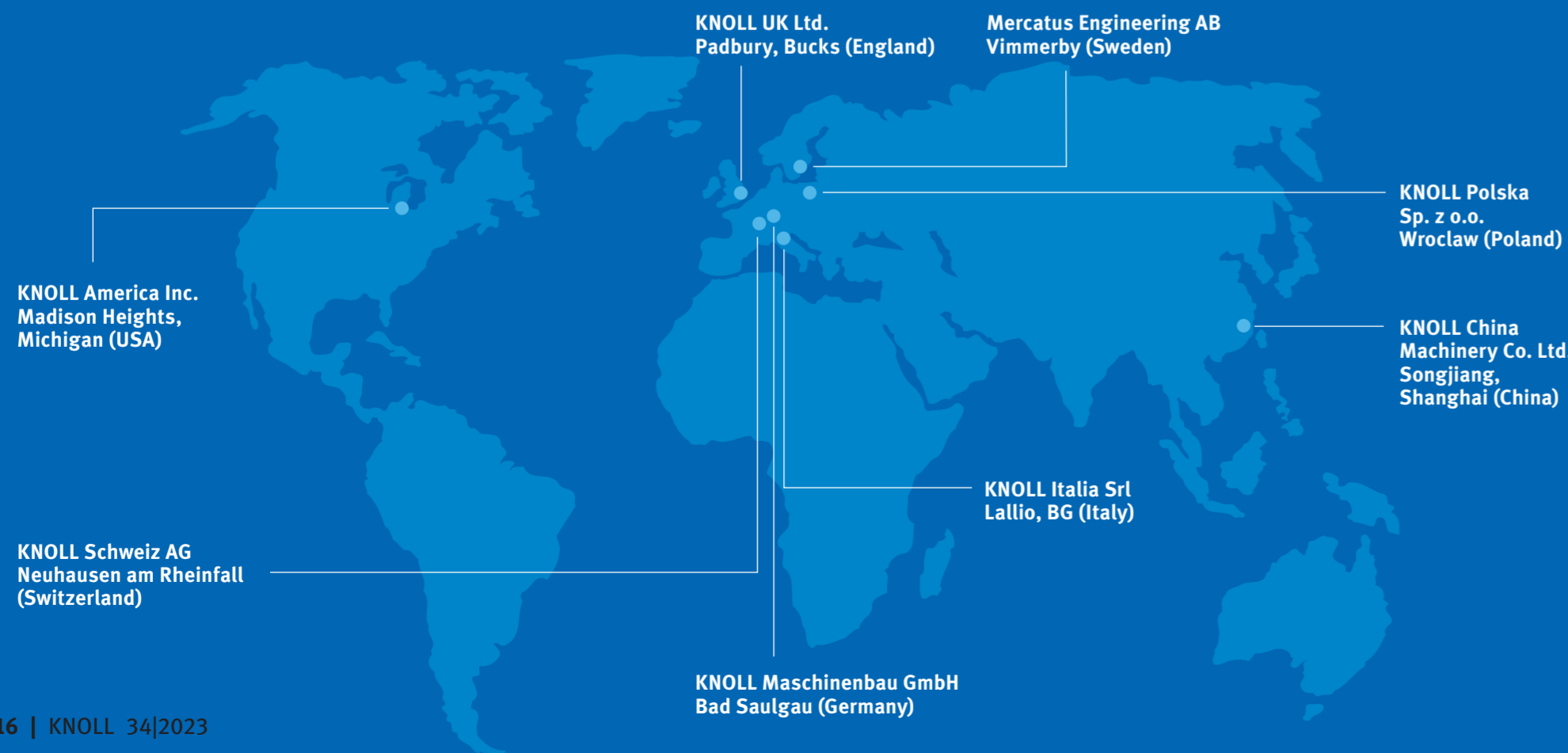
For **EMO in Hanover** in September KNOLL also focussed on digital elements in addition to haptic exhibits. The virtual insights offered interested parties the option to follow processes in the products live.





Location synergy effects

KNOLL USA relocates from Madison Heights in Michigan to Dallas in North Carolina. Growth at the old location was only possible to a limited extent due to the general conditions. The new location boasts excellent infrastructure. For example, Charlotte Airport is only 30 minutes away and it is possible to reach 80 % of all KNOLL customers in the USA within 24 hours if required. Numerous OEM customers are directly on site. A number of European companies are located in the emerging economic region – this also promises synergy effects. The good climate and the high quality of life are further advantages. The production area of KNOLL USA in Dallas will be approx. 2500 m² and offers space for 20 employees in the office and 20 employees in assembly. KNOLL has seven subsidiaries worldwide and employs over 1200 staff.



A new building for service at the KNOLL headquarters in Bad Saulgau is currently in the planning stage. 800 m² of office space on two levels offers room for around 60 employees. A highlight is the training room. It is dimensioned so that complete systems can be provided for service training. The in-house KNOLL trainers are already looking forward to it.

Planned Filmed

The success story of KNOLL, visual and with explanatory texts, in only four minutes – available on YouTube since June. Portfolio, corporate philosophy and global market presence are presented in an entertaining manner. It's definitely worth a visit!





Congratulations!

We congratulate the following members of staff on 25 years of service: Andreas Arnold, Walter Binanzer, Hans-Peter Bodenmüller, Heinz David, Michael Dehm, Alexander Dreher, Alexander Ebe, Tobias Engenhardt, Petra Fiebrich, Bernhard Grandy, Alexander Hecht, Kurt Hohl, Alexander Kleiber, Peter Lang, Jürgen Laux, Alexander Ludwig, Elke Michels, Frank Müller, Martina Reiner, Thomas Roth, Köksal Sanli, Christian Scheffold, Josef Schlee, Jürgen Schweda, Tobias Stotz, Bruno Zimmermann, Achim Zink. Congratulations to the following people on their 40th anniversary: Matthias Knoll, Hans-Walter Lacher, Kurt Rieder, Angelika Tröster, Tayfun Uzunpolat. We wish the following members of staff well as they enter retirement: Nikolai Eichholz, Brigitte Rambacher, Josef Schlee. Not in pictures: Andreas Arnold, Nikolai Eichholz, Hans-Walter Lacher, Thomas Roth, Josef Schlee.



On 1 September 2023 we extended a warm welcome to (m/f/d):

- 9 industry mechanics
- 2 machine & plant operators
- 1 construction mechanics
- 2 cutting machine operators
- 5 mechatronics engineers
- 3 electrical engineers in production engineering
- 3 industrial electricians
- 3 technical product designers
- 4 industrial clerks with additional qualification in technology
- 1 IT specialist for system integration
- 1 DHBW student in electrical engineering automation
- 1 DHBW student in production & management
- 1 DHBW student in construction & development
- 1 DHBW student in information systems
- 1 DHBW student in industrial engineering
- 1 student, Ulm model

Welcome





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