

INNOVATIONS

ISSUE
124

Hennecke customer magazine for technologies and trends on the polyurethane market

Thinking up new things.
Doing new things.



#nextgenstore

Hennecke is revolutionizing
sales and machine configuration





**TOGETHER WE SHAPE
THE FUTURE OF
THE PU INDUSTRY**

Dear customers, dear business partners,

For the Hennecke GROUP, sustainability and ESG are at the heart of everything we do. They are an integral part of the Hennecke Business System and have been firmly anchored in our corporate philosophy since 2019. Our responsibility extends far beyond the boundaries of our own company. We help our customers and partners in the PU industry to achieve their corporate goals – for example, with regard to improved resource conservation, more efficient use of energy or the minimization of waste. Constant innovation and the ongoing optimization of our products and services help you to achieve sustainable success, both economically and ecologically.

As a long-standing specialist in the PU world, we not only accompany you throughout the entire operating life of your systems, but also support you from the very first contact. Together with you, we develop tailor-made solutions that perfectly align with your needs and requirements. These partnerships across the entire product life cycle are based on trust and cooperation and are a central part of our corporate philosophy. Our broad service portfolio, such as our offers in the areas of Pre-Production Solutions and Service Consulting, is specifically designed to support you with individual solutions for your specific needs (see reports on pages 18 and 22).

As part of our continuous development, we rely on innovative strategies to meet changing market requirements. One example of this is our platform strategy for single metering machines. This allows us to flexibly integrate innovative features and at the same time respond efficiently to rising costs in many markets, thus counteracting the general trend towards higher prices. This way, you benefit from increased performance and an optimized price-performance ratio that sets new standards in the industry (see report on page 26).

Digitalization is another key element of our sustainability strategy. With the NEXT-GEN Store, the world's first online configurator for metering machines, we are revolutionizing machine purchasing. With the help of artificial intelligence, among other things, it enables our customers to quickly and efficiently identify the right machine with the right equipment. A second series was recently added to the NEXT-GEN Store. More will follow in the course of the 4th quarter of 2024. This includes the IMPACT MK2, our new definition of the entry-level class for metering machines (see report on page 13).

I would like to invite you to read this issue to find out about our latest developments and innovations in the above-mentioned topics and look forward to shaping the future of the PU industry together with you.

Best regards,

Thomas Wildt,
CEO Hennecke GROUP

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UPCOMING TRADE FAIRS

FOAM EXPO EUROPE
December 03–05, 2024,
Stuttgart/Germany

JEC WORLD
March 04–06, 2025, Paris/France

ISH
March 17–21, 2025, Frankfurt/Germany

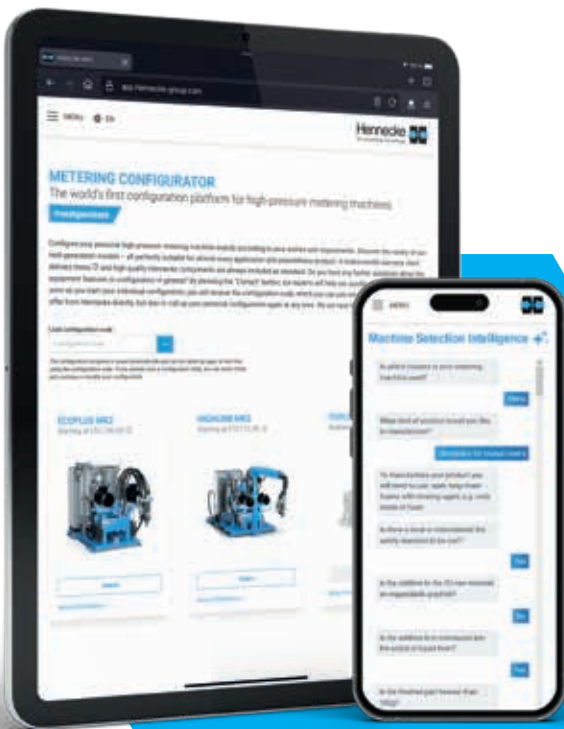
PU TECH
April 09–11, 2025, New Delhi/India

INTERZUM
May 20–23, 2025, Cologne/Germany

UTECH LAS AMERICAS
June 03–05, 2025, Mexico City/Mexico

FOAM EXPO NORTH AMERICA
June 24–26, 2025, Novi/USA

K 2025
October 08–15, 2025,
Düsseldorf/Germany



With AI support in seconds to the right metering machine: Hennecke's Machine Selection Intelligence.



NEXT-GEN STORE

HENNECKE IS REVOLUTIONIZING SALES AND MACHINE CONFIGURATION

The NEXT-GEN Store is the first online configurator for polyurethane metering machines and is setting new standards for digital sales channels in the area of capital goods. Similar to a vehicle configurator, which allows you to put together your dream car exactly according to your own requirements and wishes, this now is also available for Hennecke's metering machines. At a time when transparency and flexibility are crucial for purchasing decisions, Hennecke offers a comprehensive solution with the NEXT-GEN Store and at the same time takes a significant step towards digitizing the polyurethane industry.

Hennecke's pioneering role

Online trading is already an established standard for numerous consumer goods. In the area of capital goods, however, this is still the exception and a rarity in global mechanical engineering. Reason enough for Hennecke to take on the pioneering role in this field too. The NEXT-GEN Store can be accessed directly from the start page of the Hennecke website and, thanks to its fully responsive design, can be used optimally on PCs and laptops as well as on all mobile devices. Hennecke also makes it extremely easy for its global customers to access the offer: "We have deliberately decided to allow access to the platform without registration in order to allow all customers and partners worldwide to easily explore our metering machines and their numerous features as well as the pricing," explains Torsten Spiller, Director Global Marketing & Communication at Hennecke.

Gradual expansion of the machine range

The NEXT-GEN Store was launched at the beginning of the year with the high-pressure metering machine ECOPLUS MK2. The HIGHLINE MK2 was recently added, and in the fourth quarter of 2024 the range will be supplemented by the new entry-level metering machine IMPACT MK2. "Our top class will follow at the beginning of 2025 with the TOPLINE MK2. With its extensive equipment options and versatile application possibilities, this model is a real challenge," reports Jens Winiarz, Senior Director Sales Metering & Composites at Hennecke. Hennecke is deliberately also addressing younger target groups

who gather information online on their own and make purchasing decisions independently. "The digital natives are well informed and know exactly what they need and want – and in the beginning that is usually not a sales talk with a customer advisor," adds Torsten Spiller.

AI-supported machine selection

A central element of the NEXT-GEN Store is the AI-controlled Machine Selection Intelligence, underlining Hennecke's leading position in digital transformation. This smart tool enables the user to specify the desired semi-finished product or end product to be manufactured before configuring a specific machine series, whereupon the artificial intelligence asks further targeted questions in order to specify the area of application and find the right metering machine. "The AI identifies the right machine, the right mixhead and the right nozzles within seconds," explains Jens Winiarz enthusiastically. The AI is particularly helpful for users who are unsure which machine best meets their requirements. The Machine Selection Intelligence uses extensive databases of components and raw materials to recommend the ideal machine system. By asking specific questions, for example whether the product requires special features such as fire protection properties, the tool guides the user to the right solution with just a few inputs. This enables the metering machines to be precisely tailored to the customer's needs, because the system finds the optimal result for almost every PU product with its individual properties.

Focus on user-friendliness and transparency

In addition to the upstream, intelligent selection, the platform naturally offers a simple and quick configuration of the machines. The first step is to select the country in which the metering machine is to be used. This is essential, as the guidelines and specifications can differ greatly from country to country. “We are very proud that we have managed to set up a single global NEXT-GEN Store despite the regionally different machine versions,” says Jens Winiarz. The platform provides extensive details about the technical specifications of the machines and the possible configurations. Step by step, it informs the user for example about options that can be used to save energy and which options reduce maintenance costs. User-friendly additional options can also be configured directly, such as the optional REMOTE HMI function, which allows a difficult-to-access machine to be conveniently controlled via Wi-Fi using a mobile device or even a smart TV.

Efficient ordering process

For the entry-level models IMPACT MK2 and ECOPLUS MK2, the platform immediately shows the final price of the individually assembled machine – a clear sign of Hennecke’s commitment to maximum transparency. In addition, customers are immediately informed about the expected production times, which enables them to plan better. After defining the individual settings and features, the user receives their own configuration code, which can be used to call up the desired configuration at any time.

Numerous customer benefits

The NEXT-GEN Store gives users a quick, location- and time-independent overview of Hennecke’s metering machines and a comprehensive comparison of the standard machines and their functions. During configuration, a corresponding 3D model is created in real time. This is crucial for another innovative highlight of the store: the ability to view the individually configured machine system directly at the intended location at the customers own production using Augmented Reality (AR). The image is accurate to the centimeter. This makes planning much easier and minimizes the risk of making wrong decisions, as the machine is visualized true to scale at the planned location. “The platform speeds up the ordering process considerably. Once the customer has configured their machine system, it usually takes less than two days to receive an order-ready quotation,” explains Jens Winiarz. And if a customer cannot find a required function or has a question, Hennecke’s metering machine specialists can be reached at any time via a contact button for the individual configuration.

The NEXT-GEN Store is therefore more than just an online configurator – it is part of the digital transformation in mechanical engineering. Hennecke will continuously expand its range and, in addition to integrating further metering machines, will also increase the range of functions in order to make the selection and purchase process as simple and efficient as possible. The polyurethane experts are familiar with new standards: not only in the machine technology itself, but also when it comes to modern and transparent sales. ■



YOUR NEXT-GEN METERING MACHINE IN JUST A FEW STEPS

1. GENERAL INFORMATION



2. METERING LINE

3. MIXHEAD

4. PIPING

5. WORK TANK



6. CONTROL SYSTEM

7. ADDITIONAL EQUIPMENT

8. EQUIPMENT PACKAGES

9. CONFIGURATION COMPLETED



PU APPLICATIONS IN BATTERY TECHNOLOGY

MAXIMUM PERFORMANCE AND SAFETY FOR THE HEART OF ELECTROMOBILITY

The mobility revolution also benefits from Hennecke's know-how. Electric drives are becoming increasingly popular in cars, but the transport industry is also starting to rethink things. A key element in this technological change is the battery: it forms the heart of every electric vehicle and largely determines its range, safety and service life. But the demands on batteries are high. They must be robust, withstand external influences, offer efficient thermal management and at the same time meet the highest safety standards. This is where the versatile polyurethane applications come into play, which are being co-developed by Hennecke, a leading provider of PU technologies. "Our solutions make a decisive contribution to maximizing the performance and safety of batteries in electric vehicles," says Jens Geuer, Head of R&D Process Technology at Hennecke's Sankt Augustin site.

Robust protection against external influences

Due to their weight and size, batteries in electric vehicles are usually installed in the underbody of the vehicle. This position is ideal for the vehicle's center of gravity, but makes them vulnerable to external impacts, be it from stones being thrown up, bumps in the road or accidents. Effective underbody protection is therefore essential.

For cars and vans, modern underbody systems are used that consist of particularly light and at the same time very robust materials such as carbon fiber or glass fiber fabrics. These materials are processed using the wet compression moulding (WCM) process. The fiber fabric is soaked with a polyurethane or epoxy resin reactive mixture and shaped into the desired form. The result is a lightweight but high-strength and crash-relevant protection for the battery that does not increase the weight of the vehicle unnecessarily and thus helps to reduce environmental pollution. The JETLINE is particularly suitable for the production of these underbodies, as it is tailor-made for the efficient production of fiber-reinforced structural components using WCM. An additional alternative is the STREAMLINE MK2, which offers a wide range of process-related applications and also enables the WCM process. The great advantage of these two methods is that they use fiber orientations that are defined in advance and determined by simulation. This enables manufacturers to precisely simulate the crash-relevant impact behavior and implement it in the finished component.

Efficient thermal management

One of the biggest challenges in developing batteries for electric vehicles is thermal management. Batteries must operate within an optimal temperature range to ensure high performance and a long service life. Too high temperatures run the risk of overheating, while low temperatures severely affect the vehicle's range. Efficient temperature management is crucial to not only maximize performance, but also extend battery life and minimize the need for replacement, saving resources and reducing environmental impact. Hennecke uses the Composite Spray Moulding (CSM) process, in which insulating cooling loops are applied to the underbody using a polyurethane spray process. The spray coat is usually applied by high-pressure metering machines from the TOPLINE series, which are specifically designed for the PU Composite Spray Moulding process. Another option for implementation is the RIM process (Reaction Injection Moulding). Both processes ensure a precisely defined foam layer that has excellent insulation properties and thus enables precise temperature control of the batteries. This leads to more efficient battery performance and a longer service life, which also promotes the sustainable use of resources.

At the center of attention when it comes to range, safety and service life: electric vehicle batteries.





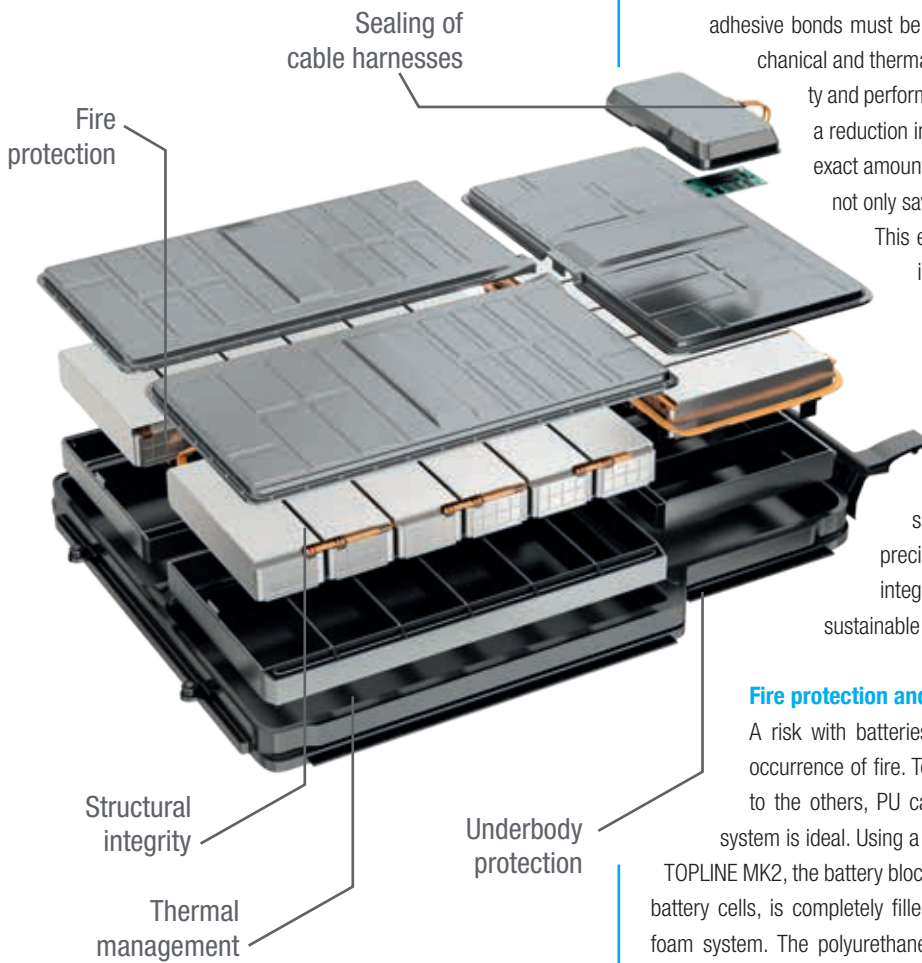
“Through intensive cooperation with our customers and the continuous development of innovative solutions in the Hennecke TECHCENTER, the Hennecke GROUP pursues a holistic approach that is focused on sustainability and resource conservation and is firmly implemented in our sustainability strategy. With our technologies, which set new standards for performance and safety, we are actively shaping the future of electromobility and are an indispensable partner for environmentally friendly and sustainable production solutions.”

Sabine Rudolf,
Senior Director Global Hennecke Business System & ESG





THE BATTERY – THE HEART OF AN ELECTRIC VEHICLE



Precision and safety in battery production

Another critical element in battery production is the safe and precise connection of the individual battery components. Highly reactive two-component raw material systems are used to do this, which are applied in tiny amounts in so-called adhesive beads. This task requires the highest precision, as the adhesive bonds must be extremely resilient in order to meet the mechanical and thermal requirements. In addition to improving safety and performance, high-precision dispensing also enables a reduction in material usage. By using the adhesive in the exact amount required, material waste is minimized, which not only saves costs but also helps to conserve resources.

This efficient use of materials reduces the ecological footprint of production and supports the sustainable goals of manufacturers. "In the machine portfolio, the new MICRO SERIES is ideally suited to this demanding task. Thanks to its special ability to apply even the smallest quantities with high precision, it ensures that the batteries are bonded safely and precisely," explains Jens Geuer. This precise application not only ensures the structural integrity of the batteries, but also promotes a more sustainable production method.

Fire protection and secure sealing

A risk with batteries that should not be underestimated is the occurrence of fire. To prevent a fire from spreading from one cell to the others, PU casting technology with a fire-retardant foam system is ideal. Using a high-pressure metering machine such as the TOPLINE MK2, the battery block, which often contains hundreds of individual battery cells, is completely filled with foam and sealed with a high-density foam system. The polyurethane foams not only offer effective fire protection, but also contribute to the structural integrity of the battery housing by

“Battery technology is developing rapidly. But Hennecke is always at the forefront, offering innovative solutions to new challenges.”

Steve Tetzlaff,
Regional Sales Manager at Hennecke

completely filling it and sealing it against external influences. Several variants are available in which the polyurethane system can be injected into either an open or a closed mold.

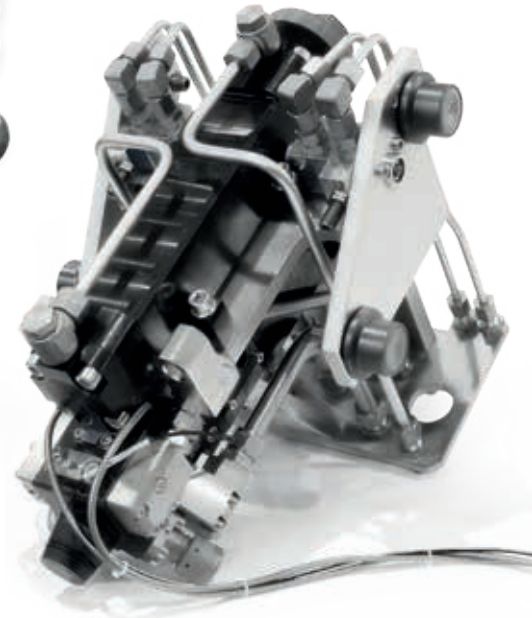
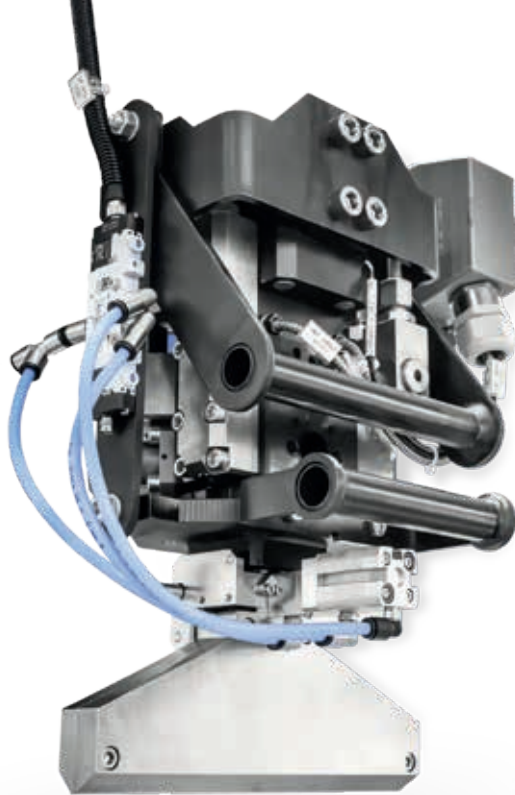
Cable grommets: protecting the vehicle's lifelines

In addition to the batteries themselves, protecting the electrical wiring in electric vehicles also plays an important role. The so-called cable grommets, which serve as a connection between different cable harnesses, must be particularly robust and durable. Hennecke relies on the proven high-pressure metering technology of the MK2 series to produce polyurethane cable grommets that meet the highest requirements. These cable grommets are not only water and gas-tight, but also ensure that the cable harness is securely fixed, even under difficult conditions.

Always one step ahead

"Battery technology is developing rapidly. But Hennecke is always at the forefront, offering innovative solutions to new challenges," reports Steve Tetzlaff, who, as Regional Sales Manager at Hennecke, is in constant contact with customers and users in the industry. The versatile applications of polyurethane in battery technology make a decisive contribution to the safety and performance of electric vehicles and make Hennecke an indispensable

partner for the mobility industry. Manufacturers can therefore rely on long-lasting, safe and efficient solutions that play a key role in shaping the future of electromobility. ■



Core component for efficiency and quality: Mixhead technology for WCM and HP-RTM applications.



The Hennecke metering machine portfolio includes several systems for all relevant applications in the field of battery production.

JFLEX EVO

INCREASED FLEXIBILITY, COMFORT AND SAFETY

SLABSTOCK PRODUCTION WITH CONTINUOUSLY VARIABLE FOAMING WIDTH

With the JFLEX evo, Hennecke presents a further development of its successful JFLEX series. The new system generation for continuous production of slabstock foam sets new standards in terms of flexibility, efficiency and product quality.

The JFLEX evo builds upon the concept of the tried and tested JFLEX and optimizes this in vital areas: continuous adjustment of foam widths, improved rise-plate geometry, a standard FLAT-TOP system and integrated walkways along both sides of the foaming tunnel.

Continuous adjustment of the foaming width

A particular highlight of the JFLEX evo is the continuous adjustment of the foam width, which makes the production of a range of products highly flexible and efficient. The quick and convenient adjustment option significantly reduces the set-up time and makes the precise adjustment of the required widths between 1,550 and 2,300 mm possible. This significantly reduces side-trim and noticeably increases raw material efficiency. "We have already revolutionized the market with slow-running continuous slabstock machines with the JFLEX and its established characteristic J-Pipe retaining zone. With the continuous width adjustment integrated into the JFLEX evo, we now offer our customers another innovative feature that enables them to respond to constantly changing market requirements with maximum flexibility and uncompromisingly high foam quality," explains Daniel Krämer, construction engineer at Hennecke.

The FLAT-TOP system included as standard ensures evenly formed foam blocks and allows the pre-set foam widths to be adjusted in a matter of seconds. This reduces trimmings and increases raw material efficiency, whilst simultaneously ensuring a homogenous cell structure and high-quality foams.

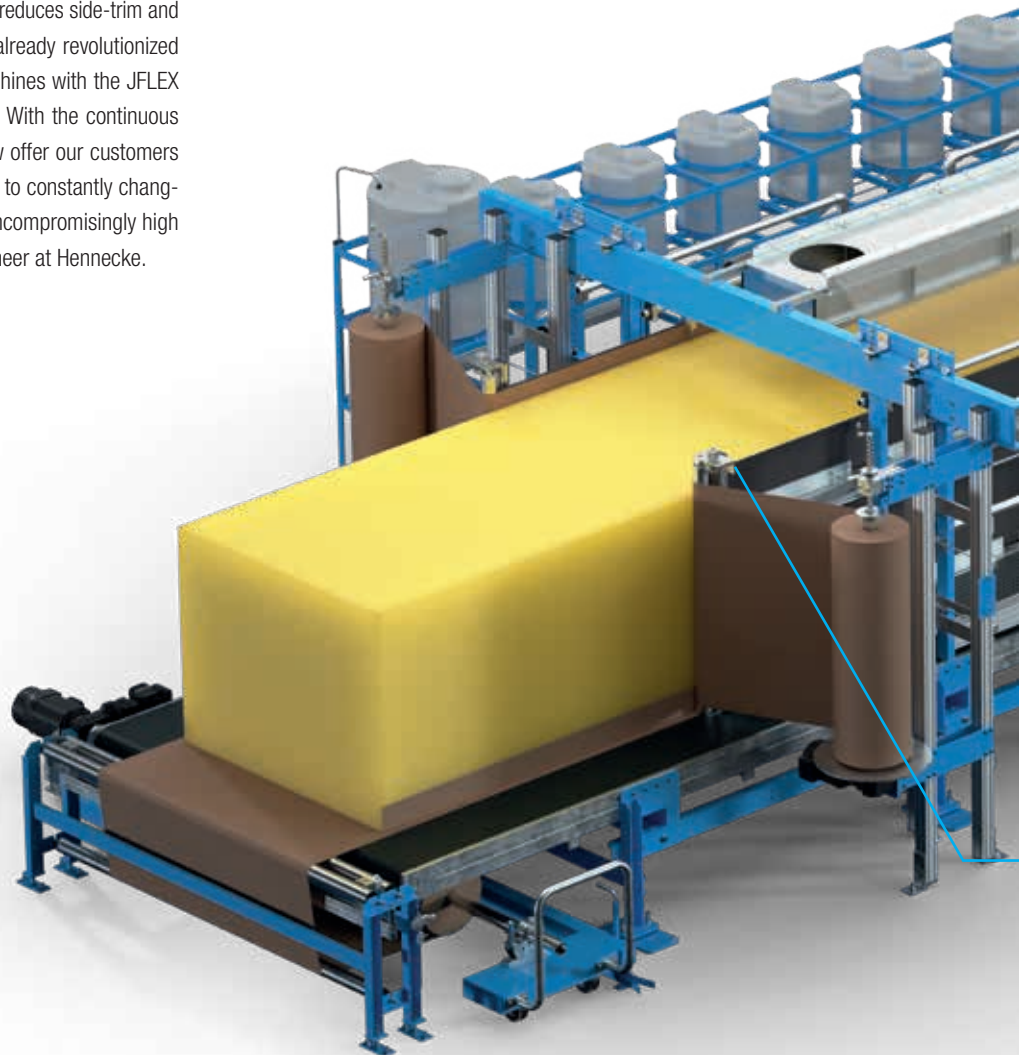
Increased safety and operating comfort

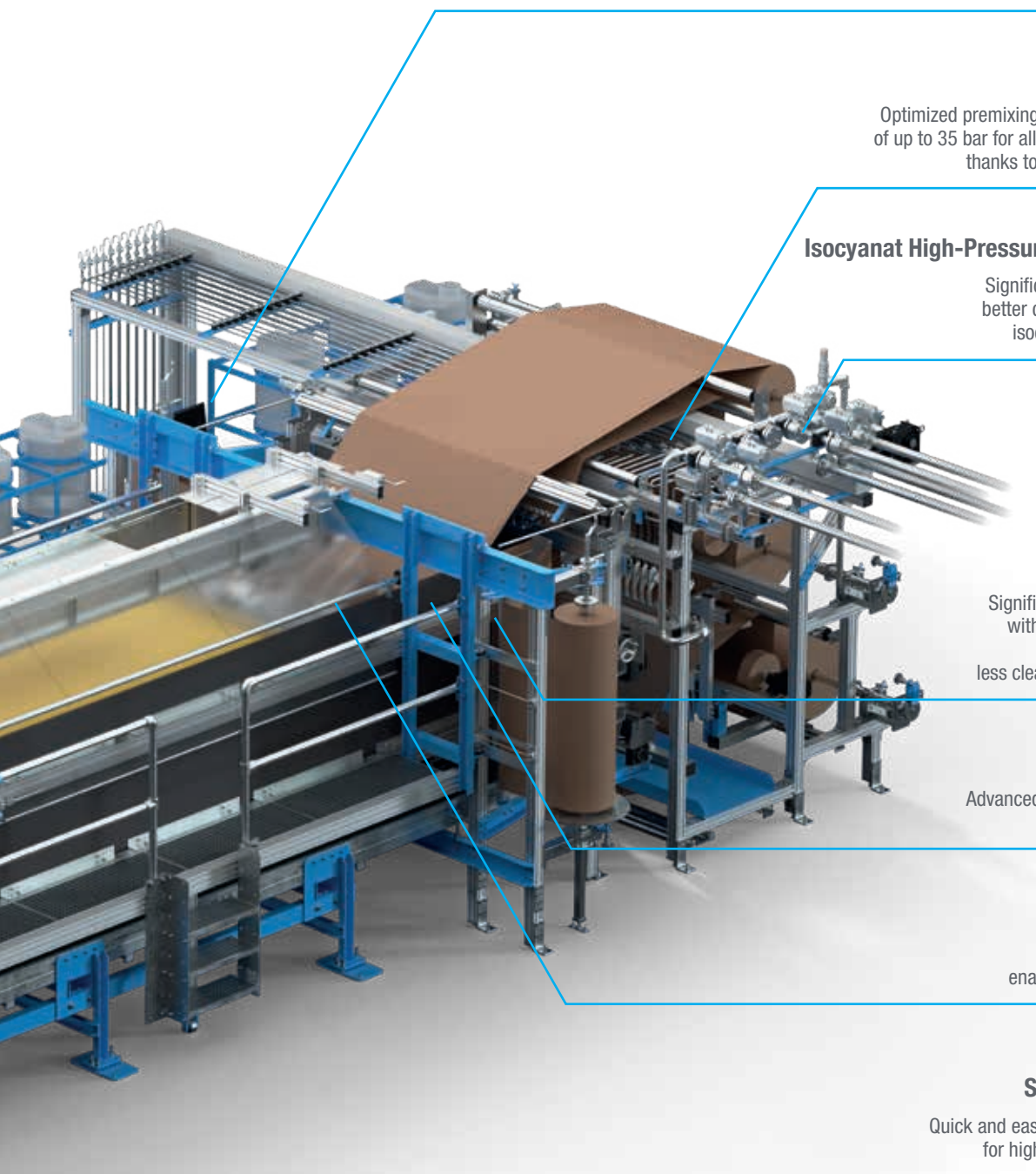
The JFLEX evo also impresses with optional walkways along both side walls. These enable maximum seamless and secure monitoring of the production



JFLEX EVO AT A GLANCE

- TOTAL OUTPUT RATE:
120 kg/min
- PRODUCTION SPEED:
approx. 0.9–3.0 m/min
- FOOTPRINT:
Plant length: 12,000 mm
Plant width: 4,500 mm
Plant height: 3,000 mm
- MAX. FOAMING HEIGHT:
1,250 mm
- FOAMING WIDTH:
1,550–2,300 mm





FOAMWARE System Control

Intelligent automation with powerful hardware, intuitive user guidance, many standard tools and useful plug-ins

High Pressure Metering

Optimized premixing thanks to high-pressure metering of up to 35 bar for all additives and increased efficiency thanks to pneumatically controlled injectors

Isocyanat High-Pressure Injection (up to 120 bar)

Significantly improved chemical reaction, better control of cell size and reduction of isocyanate consumption by up to 5 %

Liquid-Laydown System

Significantly improved production quality with fewer voids, more efficient use of raw materials and considerably less cleaning compared to trough systems

Rise-Plate Section

Advanced density and hardness distribution and optimized cell structure

Flat-Top System

Ensures a square block shape and enables a homogeneous cell structure

Step-free width adjustment

Quick and easy adjustment of the foaming width for highly flexible and efficient production

The ultra-compact system with a 54 m² footprint and a height of 3 meters saves valuable production space and can be installed almost anywhere.

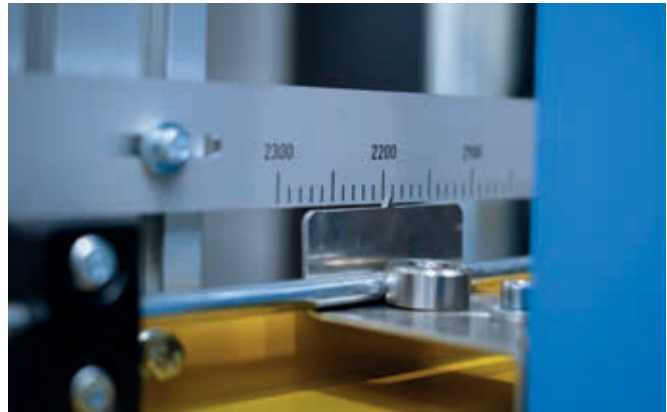
process at all times. The SMARTINJECTORS included in the standard scope of delivery offer greater process stability. These are software-controlled pneumatic valves that act as injectors for the additional components required for foam production. Using the SMARTINJECTORS, it is now possible to add or exclude all additional materials found in the system metering scope fully automatically and based on software, depending on the formulation of the foaming process. This automation simplifies operation and at the same time increases operating safety.

Automated process control

The JFLEX evo is operated via the latest version of the intuitive FOAMWARE software, which is specially tailored to the requirements of slabstock foam manufacturers. The standard scope of delivery includes a range of functions, such as the display of flow charts, process charts, and calibration history, as well as other tools for an effective analysis of nominal and actual values. The clear graphic display of the “Magic Eye” facilitates seamless monitoring of all generated pressures and quick recognition of potential irregularities.

All advantages of the tried and tested JFLEX concept

The JFLEX evo is based on the successful JFLEX concept, which makes the advantage of continuous production possible for foamers with an average production volume. “We have received lots of positive feedback for the JFLEX from our customers and incorporated this into the new JFLEX evo. The further de-



The quick and convenient adjustment option significantly reduces the set-up time and makes the precise adjustment of the required widths between 1,550 and 2,300 mm possible.

velopment of the system – just in time for its 10-year anniversary – is therefore also a sign of our constant gratitude for our customers,” reports Karim Nabulsi, Sales Manager at Hennecke. At the heart of the system is the combination of the innovative J-Pipe retaining zone, the rise-plate, and Hennecke’s high-pressure technology. The ultra-compact system with a 54 m² footprint and a



The J-Pipe retaining zone ensures optimal foam qualities with a homogeneous cell structure. The SMARTJECTORS minimize error tolerance and increase operational safety.

“The further development of the system – just in time for its 10-year anniversary – is therefore also a sign of our constant gratitude for our customers.”

Karim Nabulsi,
Sales Manager at Hennecke

height of 3 meters saves valuable production surfaces and can be used almost anywhere – a great advantage against conventional continuous slabstock machines. Thanks to the plug and play concept, the system can be built and put into operation quickly. The low conveyor speed facilitates the continuous production of high-quality slabstock foams with a total length of the system of only around 12 meters. Furthermore, it ensures the highest efficiency and production quality, reduces the duration of formulation changes and makes extremely short color transitions possible. During production, only very short start and end blocks are created, noticeably reducing waste.

Hennecke once again emphasizes its position as a leader in innovation in polyurethane processing technology with the JFLEX evo. The system offers foam manufacturers a future-proof solution that enables them to flexibly adapt their production to constant new requirements and simultaneously benefit from the advantages of continuous production. In addition, Hennecke supports users in making optimal use of the JFLEX evo through comprehensive support services. ■



IMPACT MK2

THE NEW DEFINITION OF THE ENTRY-LEVEL CLASS

RELIABLE AND EFFICIENT PREMIUM TECHNOLOGY
AT AN EXTREMELY ATTRACTIVE ENTRY-LEVEL PRICE

Hennecke is making it easier to enter the premium world of PU metering machines and has subjected its compact and efficient IMPACT series to a comprehensive overhaul. The machine has been modernized and the entry-level price has been significantly reduced. To this end, the variant portfolio has been streamlined and standardized and production has been optimized in order to focus on core competencies. Thanks to these measures, Hennecke can now offer the IMPACT MK2 at an attractive price without sacrificing the proven Hennecke quality.

Technology in a nutshell

The IMPACT is a classic entry-level model for PU applications that has been tried and tested for over 20 years and is widely used in the European, African and Latin American markets in particular. As part of the Next-Generation revision of the single metering machine lineup, Hennecke has also subjected the low-pressure metering machine to a comprehensive overhaul. The prototype was first presented to the public in July at PU China and immediately received a lot of positive feedback,“ reports Jens Winiarz, Senior Director Sales Metering & Composites at Hennecke. Interested parties will be able to order the IMPACT MK2 in the course of the fourth quarter of 2024.

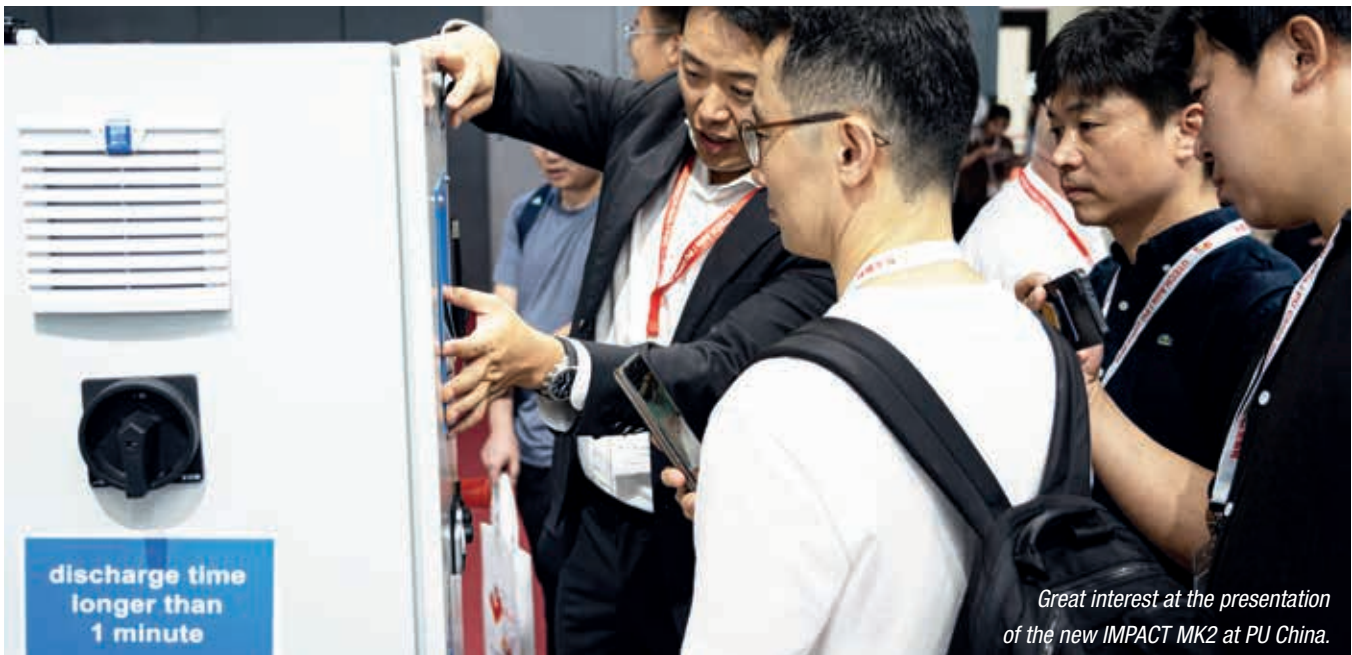
Focus on key applications

The main focus of the revision was to be able to offer the machine at a significantly lower price without compromising Hennecke's high quality standards. This goal was achieved: Based on customer and user feedback as well as its own research, Hennecke analyzed, evaluated and redefined the main areas of application of the existing IMPACT. “In doing so, we focused on the areas of

application that are relevant to the majority and were able to consolidate some variants that are rarely requested,“ explains Jens Winiarz. In the future, the IMPACT MK2 will be available in three sizes, each with two mixing ratios (1:1 and 2:1), which cover the majority of customer requirements. By standardizing the portfolio, optimizing production and revising the supply chain structure, significant savings in production costs were achieved, benefitting Hennecke customers.

Significant price reductions in the entry-level range

The IMPACT MK2 is also being sold through new channels. On the one hand through external distributors and on the other hand through the new NEXT-GEN Store on the Internet, where interested parties can easily configure and request their metering machine online with just a few clicks. Both variants create price advantages that are passed on to customers. In addition, when revising the design, attention was also paid to optimizing the machine for shipping, so that shipping will be significantly cheaper in the future and several IMPACT MK2 can even be shipped in one standard container. All of the measures together



have a significant impact on the price, as Pia Diekmann, Sales Manager Metering Machines, reports: "We are proud to be able to offer the IMPACT MK2 at an extremely attractive starting price. With this ultra-compact entry-level device, even smaller companies and users can benefit from Hennecke's premium quality and highest production standards."

Innovative upgrades in control and resource efficiency

But anyone who thinks that the IMPACT MK2 is a much simplified version of the previous model due to fewer options is completely wrong. As part of the update to the Next-Generation, the metering machine has received many innovations that are unparalleled in this price range. First and foremost is a premium 7-inch SIMATIC HMI, which offers the ideal environment for Hennecke's FOAMATIC on its powerful CPU. The innovative and intuitive control platform,

which is also based on the latest SIMATIC components in addition to the input device, has decisive advantages in the areas of visualization and data analysis. FOAMATIC offers the operator maximum performance and fast access for a wide variety of applications and takes the control to a new level compared to the previous PLC. This not only makes the control more convenient, but – depending on the production scenario – also more efficient and safer. Like all Next-Generation machines, the IMPACT MK2 now also has Hennecke's Blue Intelligence. With "Blue Intelligence", Hennecke combines a range of measures for mechanical, thermal and hydraulic efficiency. These enable the user to use energy and raw materials more economically. For example, with the IMPACT MK2, this includes the optional standby mode, which saves valuable energy resources during every production break or during longer interruptions and at the same time enables production to be resumed quickly.

Maintaining the tried and tested

Of course, the tried and tested properties of the popular IMPACT series have remained unchanged. For example, the robust and reliable ULTIMIX low-pressure mixheads. These not only ensure homogeneous mixing of the reactive components, but as an optional feature will also enable the direct metering of colors into the mixing chamber in the future. Thanks to their ceramic sealing arrangement, which is automatically lubricated during the casting phase, the ULTIMIX mixheads are easy to maintain. The reliable metering system, with its precise and independently controlled gear metering pumps driven by asynchronous motors, has also remained unchanged. Frequency converters ensure that the pump speed is precisely controlled. The focus is also on easy handling and reducing maintenance times, which is why the machines have an integrated cleaning cycle, for example.

With the successful revision of its proven classic IMPACT, Hennecke has succeeded in raising the entry-level of metering machines to a new and contemporary level. The IMPACT MK2 is therefore the ideal solution for companies looking for a reliable entry-level metering machine for a wide range of PU applications. ■



IMPACT MK2 AT A GLANCE

- TOTAL OUTPUT: 6–1,087 cm³/s
- MACHINE VERSIONS:
1:1 (50/50, 670/670, 1000/1000)
2:1 (50/25, 670/335, 1000/500)
- CONNECTED LOAD: 8–22 kw
- FOOTPRINT: 2.72 m² (1,700 mm x 1,600 mm)
- DAY TANKS: 100 l
- AVAILABLE MIXHEADS:
ULTIMIX C12, ULTIMIX C60, ULTIMIX C80

HX PUMP AS A RETROFIT

FOR METERING MACHINES AND FOR PU SYSTEM TECHNOLOGY

With the HX pump series, Hennecke developed the first axial piston pump designed exclusively for polyurethane applications. The pump series, originally introduced for the NEXT-GEN single metering machines, has now also been approved as a retrofit for existing metering machines and systems.

The focus of the in-house development was a precise, highly efficient and future-proof metering line that offers real added value in the processing of polyurethane. The HX series is manufactured by Hennecke itself, which guarantees continuous delivery availability.

Can be used in numerous systems

“The HX has proven itself very well in the NEXT-GEN metering machines. Based on these positive experiences, the pumps are now also approved for our retrofit business so that existing machines and systems can also benefit from their outstanding properties,” explains Lars Etschenberg, Head of Operational Excellence Engineering. The innovative HX series can be used not only in single metering machines, but also in the wet end of PU production systems, taking them to a new level. These include molded foam and sandwich panel systems as well as systems for technical insulation and refrigeration systems.

Why is it worth upgrading to the HX?

“There are many reasons for switching to the HX pump. The exchange process is usually smooth and can be done within a short time,” reports Eugen Kern,

Team Leader Service Sales at Hennecke. The HX series has a significantly optimized pump housing that enables maximum bearing flushing. This allows efficient heat dissipation and thus prevents the reactive media from heating up, even at high ambient temperatures. The pump housing can withstand a pressure of up to 16 bar, which ensures optimal heat dissipation even at high pre-pressures. The choice of materials and surface treatment were specially designed for use in the field of polyurethane foam systems and offer a high level of protection against abrasive and corrosive media. The pump design results in optimized suction behavior, which is a noticeable advantage, especially with highly viscous components. Depending on the area of application, the HX pump can be supplied with low pre-pressures, therefore omitting the use of pre-pumps.

Predictive maintenance and sustainability

The HX series is equipped for the direct installation of pressure and temperature monitoring and is also prepared for a retrofittable distance sensor. This signals when preset wear limits have been reached, enabling predictive maintenance of the pump systems. The new HX scores highly also in terms of sustainability: the increase in efficiency leads to an optimized energy balance of the entire system and lower noise emissions. The pump also enables the problem-free processing of modern raw material systems based on bio- or re-polyols. “The HX is not only a perfect replacement for the discontinued HL pump series, but also offers the user real added value,” concludes Eugen Kern. “We advise our customers to choose the upgrade during the next maintenance measure. The retrofit is a worthwhile investment that quickly pays for itself.” ■



HX PUMP AT A GLANCE

- SIZES: HX06, HX12, HX28
- MAX. PERMITTED PRE-PRESSURE: 16 bar
- VISCOSITY RANGE: up to 8,000 mPas
- VOLUME: 200 cm³
- FLOW CAPACITY: 25 cm³/s–770 cm³/s
- SPEED RANGE: 300–1,800 U/min
- NOISE LEVEL: 75 dB



THE ONE-STOP SOLUTION PANELMASTER STEEL

ECONOMICALLY SUSTAINABLE PRODUCTION OF STEEL SANDWICH PANELS

With more than 150 sandwich panel lines installed worldwide, Hennecke-OMS is a leading supplier in the industry and is known for its innovative strength and reliability. The state-of-the-art PANELMASTER STEEL systems have been established for years in the highly efficient production of steel sandwich panels. These are particularly valued in industrial and cold storage construction due to their excellent insulating properties and durability. The system technology has now been further developed in many areas in order to meet the increasing demands of the market even better.

The Group's internal efforts in the run-up to the extensive update go much further than customers would initially expect. Targeted investments in the Hennecke GROUP's Sandwich Panel Excellence Center, which is also the headquarters of Hennecke-OMS near Milan, and intensive cooperation with the Hennecke GROUP's business units in Germany and China have enabled decisive progress to be made in recent months. This progress not only increases plant performance, but also local production capacities and internal efficiency considerably.

Turnkey solution in the sandwich panel market

What sets Hennecke-OMS apart from other manufacturers is its consistent approach of offering complete turnkey solutions. This means that customers receive a plant system that integrates and coordinates all production steps – from material preparation to the packaging of the finished sandwich panels. PANELMASTER STEEL systems thus form the basis for efficient and highly automated production, in which all the equipment and systems involved are optimally synchronized both mechanically and in terms of automation. In addition, turnkey solutions significantly reduce complexity for the manufacturer and enable a central point of contact for all technical matters. Such a comprehensive production solution is made possible by the bundled know-how

within the Hennecke GROUP, whereby the locations in Germany, China and the Excellence Center in Italy each specialize in different core areas of the overall plant. "The close integration between the specialists involved around the globe and within the Excellence Center here in Italy enables us to develop and manufacture the core components of our systems ourselves. This not only gives us full control over quality, but also the flexibility to react quickly to our customers' requirements," emphasizes Andrea Mariani, President of the Business Unit Italy. This approach not only offers a competitive advantage, but also ensures greater independence from external suppliers and significantly speeds up processes once an order has been placed.

Own task force and far-reaching investments at Hennecke-OMS

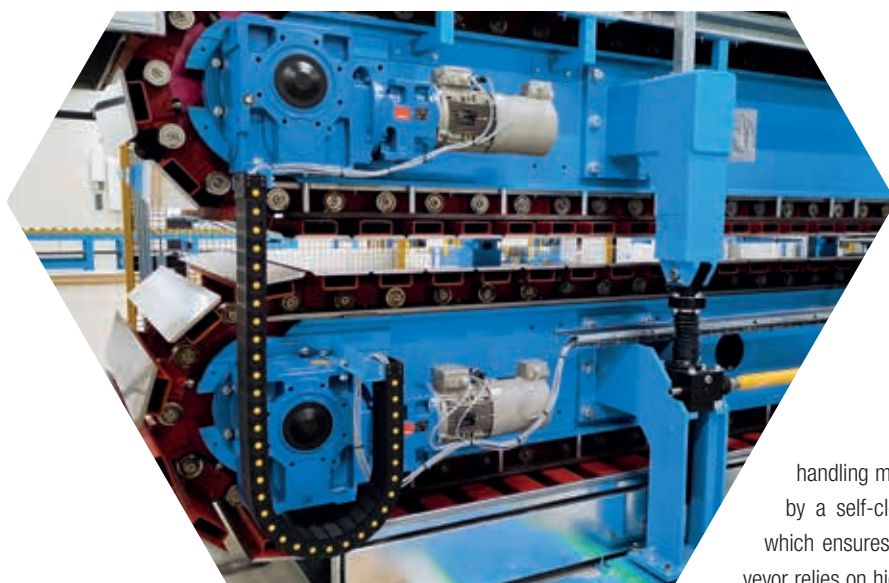
As part of the continuous development and optimization of production capacities, the Hennecke Production System (HPS) was successfully implemented at the Hennecke-OMS site: As part of the "Hennecke 2.0" transformation, this involved expanding the production area by a whole 1000 m² and introducing new automated logistics processes. These measures led to a significant increase in efficiency of up to 20 percent and considerably improved the material flow within production. In addition, a dedicated task force was set up. The team consists of experienced experts from all Hennecke GROUP departments

Outfeed section with focus on maximum gentle handling of the panels.



“The close integration between the specialists involved around the globe and within the Excellence Center here in Italy enables us to develop and manufacture the core components of our systems ourselves.”

Andrea Mariani,
President of the Business Unit Italy



Highly flat belt plates from in-house production: The PANELMASTER STEEL double conveyor belt.

handling much easier and safer. Mixing and metering is carried out by a self-cleaning mixhead with a patented recirculation system, which ensures consistent raw material savings. The double belt conveyor relies on highly flat belt plates from in-house production and a new efficient heating system, which reduces energy consumption. In the outfeed section, vacuum grippers and other protective systems enable maximum gentle handling of the panels. The modernized system control offers flexible batch composition and comprehensive production analyses that improve traceability and ensure quality. Thanks to various internal preliminary tests, commissioning at the customer's premises has also been optimized.

involved and coordinates the internal processes within the global group of companies. The task force also ensures that all departments work together efficiently in order to achieve the goals that have been set. Andrea Mariani explains: “As a company, we have invested a lot of time, effort and money to redesign decisive production areas and become more efficient and competitive. We are focusing on strict TCO (Total Cost of Ownership) measures in order to offer our customers lasting added value. The HPS formed the basis for this process and enabled significant efficiency gains and cost reductions.”

Technical excellence down to the last detail

The advantages of establishing the HPS and the significantly optimized cooperation of all specialists involved in the sandwich panel product area formed the basis for a fundamental revision of the design of the entire PANELMASTER STEEL line and cover several key areas that are crucial for the highly efficient production of a wide range of sandwich panels with rigid facings. Among other things, the system is characterized by hands-free coil operation, which makes

Individually adaptable

The modular design of all sections within the PANELMASTER STEEL production line enables Hennecke-OMS to adapt the plant flexibly to a wide range of customer requirements. Whether it is a question of increasing production capacity, specific product specifications or reducing operating costs – PANELMASTER STEEL systems offer solutions for a wide range of challenges. With the optimizations at the site in Italy and the numerous further developments in the field of steel sandwich plant technology, Hennecke-OMS has shown that it continues to set the pace in the market for sandwich panel lines. The combination of technical precision, harmonized automation throughout and fully integrated production makes PANELMASTER STEEL one of the most advanced production solutions on the market. Thanks to the successful implementation of the measures and the resulting increase in efficiency, Hennecke-OMS is not only able to meet the increasing demands of customers, but also to offer future-oriented solutions for the construction industry. ■

FROM THE IDEA TO THE PRODUCT – THE **TECHCENTER** AS THE KEY TO PRODUCT DEVELOPMENT



The Hennecke technical center offers a comprehensive platform that supports customers from the initial concept phase to series production. The development of new products in particular requires much more than just pure manufacturing technology. This highly specialized center combines the latest manufacturing technologies with in-depth process engineering and chemical know-how to realize innovative product ideas.

Development partner for customer requirements

Hennecke's TECHCENTER is geared towards processing a wide range of requests. Customers from the polyurethane industry as well as companies from outside the industry turn to the PU specialists to overcome technical challenges. The range of tasks is diverse: Often it involves the substitution of materials – keyword “vegan leather” – or the implementation of new regulatory requirements, for example when a flame-retardant material can no longer be used and an alternative is required. ESG requirements are also of increasing interest, for example to produce pure products that facilitate recycling and increase sustainability or in the area of effective insulation. “We regularly receive requests that require both technical and chemical expertise,” explains Sven Strobel, Process Engineer at Hennecke and project coordinator. “We see ourselves as development partners: Our job is to work on these complex issues in an interdisciplinary manner and to jointly develop processes that meet the specific requirements of our customers.”

Interdisciplinary expertise

The Technical Competence Center offers customers significant added value through the collaboration of a multidisciplinary team that consists of process engineers as well as chemists. “With seven employees, we have more than 150 years of combined know-how in PU technology and cover all relevant aspects of material and process development,” says Sven Strobel. This in-depth expertise enables the development of tailor-made solutions based on a deep understanding of both the process engineering and chemical processes. “Our strength lies in the interdisciplinary collaboration between our on-site specialists and our network of external partners such as raw material suppliers and tool manufacturers,” adds Jens Geuer, Head of R&D Process Technology. “This combination of different areas of expertise enables us to develop precise and efficient solutions.”

“Our strength lies in the interdisciplinary collaboration between our on-site specialists and our network of external partners such as raw material suppliers and tool manufacturers.”

Jens Geuer, Head of R&D Process Technology

The TECHCENTER is equipped with state-of-the-art process technology that covers almost all PU processing technologies, including rigid, flexible and integral skin foams, elastomers and epoxy resin systems. Specialized applications such as RIM, RRIM, SRIM and HP-RTM are also developed and optimized in the technical center. The laboratory furthermore enables detailed material analyses and the fine-tuning of formulations.

5-stage process for series production

In order to efficiently meet the different requirements of customers, Hennecke has developed a structured 5-stage process that covers the entire development cycle from the initial idea to product series readiness. Of course, the company attaches particular importance to the highest level of confidentiality and the protection of its customers' intellectual property throughout the entire process.

Foundation for innovative strength

Hennecke's technical center offers comprehensive equipment for the development and optimization of PU applications on an area of 1000 square meters. In addition to the latest process and process technology, the laboratory also enables material analysis and optimization. The services include process development, raw material testing under near-series conditions as well as

product development and optimization. Customers benefit from an interdisciplinary approach that combines all relevant specialist knowledge to create tailor-made solutions. The TECHCENTER is of course not just a service unit, but also forms the backbone for the continuous development of Hennecke's own products and technologies. "The innovation center is the core of our research and development," explains Thomas Scheffler, Vice President Corporate Development. "Not only do we develop customized solutions here, we also create all new processes and machines that strengthen our own innovative power." ■



SERIES PRODUCTION IN FIVE STAGES

STAGE 1

Requirements analysis and idea generation

In the first phase, the customer's requirements are recorded and analyzed in detail. This includes the evaluation of specific challenges and the feasibility test. Typical examples of application include the substitution of an existing material, the production of pure products or the development of new components.



STAGE 2

Process and material development

This phase includes the development and adaptation of processes as well as the selection of suitable materials. This includes a check of which production facilities and processes can be used optimally and which chemical requirements are necessary. Close cooperation between all those involved is necessary in order to define the limits of the planned application.



STAGE 3

Integration and partnerships

The development process is expanded by integrating specialized partners such as toolmakers and raw material suppliers. Kick-off meetings serve to coordinate between all those involved to ensure that the material and process requirements are optimally met. The TECHCENTER plays a central role in evaluating feasibility and carrying out initial technical tests.





Hennecke supported the Singapore-based company Keshet Agritech Pte. Ltd. in the development of an innovative insulation application based on rigid polyurethane foam.

“All contact persons at Hennecke were important companions for us during the entire process. They have shown remarkable flexibility, which is crucial for a project with a high degree of innovation and specific challenges due to its scale. The expertise of the Hennecke team played a crucial role in conducting pioneering trials as our product is a unique development. Their valuable suggestions, creative working methods and daily hands-on involvement have been instrumental in achieving the desired results. The machines used in Hennecke’s TECHCENTER also proved to be extremely efficient and met our requirements in terms of processing different component sizes and polyurethane quantities.”

Serene Lim,
Sustainable Capital Management at Keshet Agritech Pte. Ltd.

STAGE 4



Validation and prototyping

The fourth step involves validating the developed processes by producing and testing prototypes. This includes using various technical processes to produce sample components. These are then subjected to a series of tests, also with the support of selected partners, to ensure suitability for series production and compliance with all essential specifications.

STAGE 5



Production integration and system installation

In the final phase, the production process is refined to such an extent that smooth integration into series production is guaranteed. The system technology is adapted to the customer’s specific requirements and prepared for use in production. Then, the finished production system is handed over to the customer, accompanied by comprehensive instruction and support during the start-up phase.

OUR TECHCENTER



SERVICE CONSULTING

HENNECKE'S NEW SERVICE TO INCREASE EFFICIENCY, QUALITY AND SUSTAINABILITY

One company is struggling with inexplicable quality fluctuations in production, another manufacturer is suffering from a consistently high scrap rate. And the next one wants to know how to optimize its existing systems to save energy and raw materials. To meet all of these challenges, Hennecke has expanded its service portfolio to include the Service Consulting product. This means that a broad range of customers have access to in-depth expert knowledge and tailor-made solutions that can be used to achieve sustainable competitive advantages.



With the introduction of Service Consulting in the area of 360°ENVIRONMENTAL SERVICES, the expert in polyurethane machine and plant technology is making its know-how available to its customers for process optimization and production reliability. "Regardless of whether it is about specific production problems, general resource efficiency or the optimization of machine performance – we have decades of experience and in-depth knowledge in all areas of PU applications. We would like to make this available to our customers even after commissioning," explains Nils Baumann, Sales Specialist Customer Value Service at Hennecke, the new offer in the sustainably oriented portfolio of 360°Service.

Process analysis from start to finish

Nils Baumann reports on a producer who was struggling with a scrap rate of over 30 percent and was unable to locate the error. The situation was particularly urgent because scrap caused high losses every day in highly complex components. Hennecke's experts were called in to conduct a detailed analysis of the production process and determined that the error was in a completely different location than the manufacturer had previously assumed. This enabled them to develop helpful solutions in the area of the specific design of the molds from a third-party provider, among other things, and thereby drastically reduce the scrap rate. Due to the enormous cost savings from eliminating the error, the investment paid for itself within a very short time.

Individual and tailor-made solutions

"The countless production scenarios of polyurethane processors are as varied as the problems that arise," explains Martin Krupp, R&D process engineer at Hennecke. That is why there are no standard solutions. Thanks to the profound, interdisciplinary know-how of the PU specialists, highly specific and customized solutions are developed. "These include precise machine settings, using and conditioning raw material systems, advising on environmental influences, and training operators," says Krupp.

Optimizing production processes

The Service Consulting focuses on improving product quality, reducing production costs and at the same time increasing production stability. Through a comprehensive and holistic analysis of the entire production process – both in process technology and in chemical processes – and the interdisciplinary know-how of the service specialists, solutions are found that are often outside the producers' field of vision. This was also the case with another PU processor, says Nils Baumann: They only achieved optimal results within a small production window of around two hours. Before and after this, defects accumulated and product quality fluctuated considerably over the course of the day. The process analysis by the Hennecke specialists covers both process technology and chemical processes. They quickly identified the fluctuating ambient temperatures as the primary cause, as these have a significant influence on the



Close cooperation with customers, e.g. for high-precision machine settings.



extremely reactive media. “The next step was to analyze the chemicals, examine the mixing ratios and determine the optimal parameters of the system in terms of pressure and temperature,” reports Nils Baumann. With the detailed specifications provided by the external experts, the manufacturer was able to adapt its process technology, condition the raw materials accordingly, and train the operating personnel to achieve consistently high product quality ever since.

Comprehensive range of services

The new service from Hennecke offers comprehensive optimization of machine performance, advice on innovative core components, sustainable process improvements and the identification and elimination of avoidable production costs and sources of error. The offer also includes tool optimization, chemical advice and increasing production stability. This leads to more efficient and sustainable production, which helps users to reduce their costs. “The focus is on reducing the use of raw materials, saving energy, avoiding cuttings and rejects and minimizing disposal costs,” explains Jens Geuer, Head of R&D Process Engineering at Hennecke. The savings achieved in this way amortize the service costs in a short time.

Independent process consulting also for beginners

For this reason, the Service Consulting team is also requested even if there are no specific problems. As external experts, they look at the production process objectively and independently. “Because even what was good for many years can now often be made even more efficient, more economical and simply better thanks to new findings and innovative retrofit solutions,” says Jens Geuer. Service Consulting thus ensures sustainably optimal quality and at the same time extends the best possible use of the existing system technology. In addition, the experienced team also supports companies in their search for an optimal solution if they do not yet have a concrete idea of which machine or process solution is suitable for them due to a lack of experience or unclear production requirements. The goal is always a highly efficient and resource-saving production process that gives customers a sustainable competitive advantage.

Consulting process: Security for customers

“Companies that use Hennecke’s Service Consulting are on the safe side and always benefit from the offer,” assures Nils Baumann. In a non-binding and free preliminary discussion, a service specialist will gather details about the existing initial situation. Only when there is a concrete prospect of success will a transparent offer with a detailed description of the service be drawn up, which the company can accept and thus commission the service. Of course, absolute confidentiality is guaranteed. After the process analysis and evaluation, the customer receives his individual solution proposals. A detailed final report ensures a stable and cost-efficient production process in the long term. ■

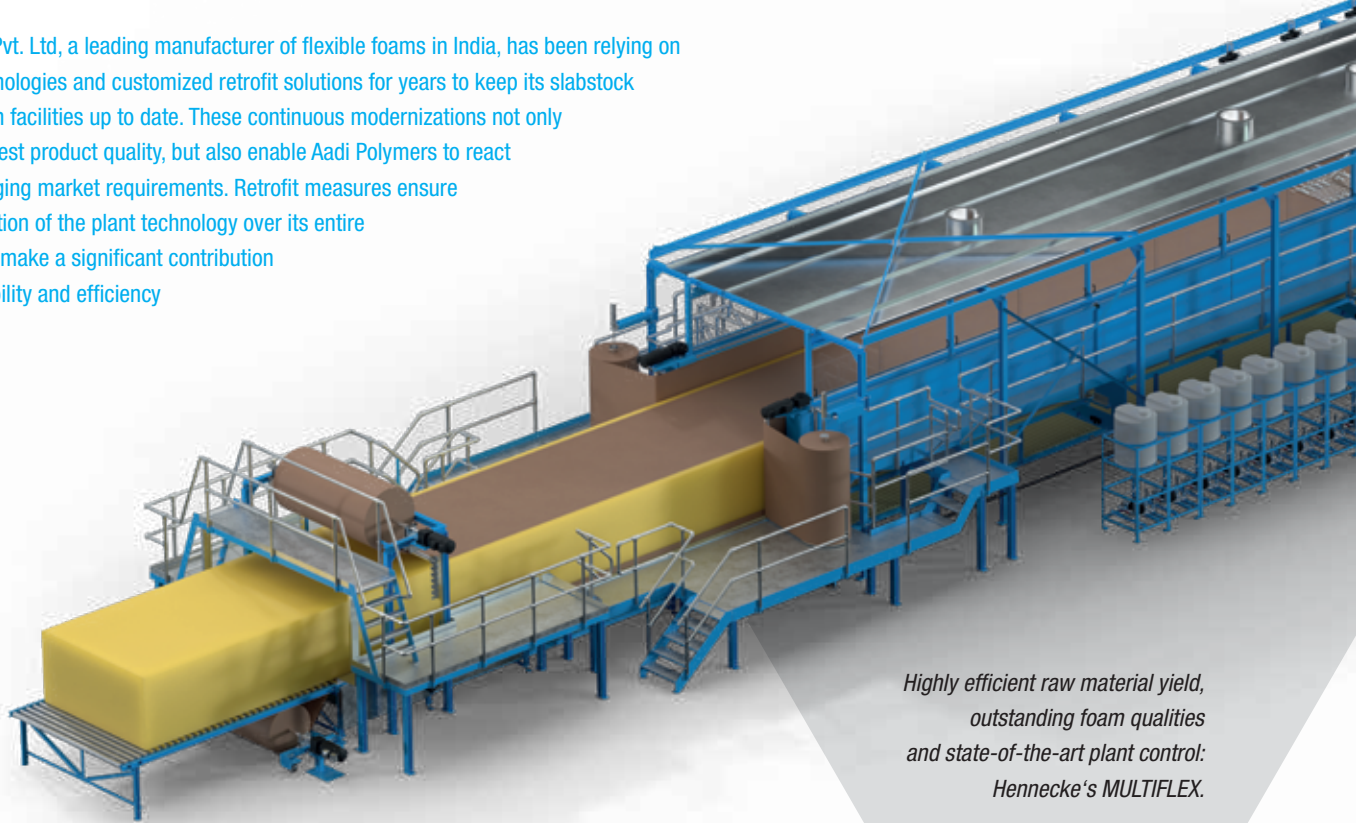


Process analysis for process engineering and in particular for chemical processes.

EFFICIENCY AND FLEXIBILITY

HOW AADI POLYMERS IS EXPANDING ITS MARKET POSITION THROUGH RETROFIT MEASURES

Aadi Polymers Pvt. Ltd, a leading manufacturer of flexible foams in India, has been relying on innovative technologies and customized retrofit solutions for years to keep its slabstock foam production facilities up to date. These continuous modernizations not only ensure the highest product quality, but also enable Aadi Polymers to react flexibly to changing market requirements. Retrofit measures ensure optimum utilization of the plant technology over its entire service life and make a significant contribution to the sustainability and efficiency of production.



Highly efficient raw material yield, outstanding foam qualities and state-of-the-art plant control: Hennecke's MULTIFLEX.

Since its foundation in 2009, Aadi Polymers Pvt. Ltd. based in Greater Noida near New Delhi, has established itself as one of the leading manufacturers of foams in India. The product range includes foams for various industrial applications, especially for the furniture and bedding industry. An in-house laboratory ensures that the quality of the products is continuously checked and further developed. New foam types and densities are developed here to meet the individual requirements of customers.

Strategic investments for the highest quality

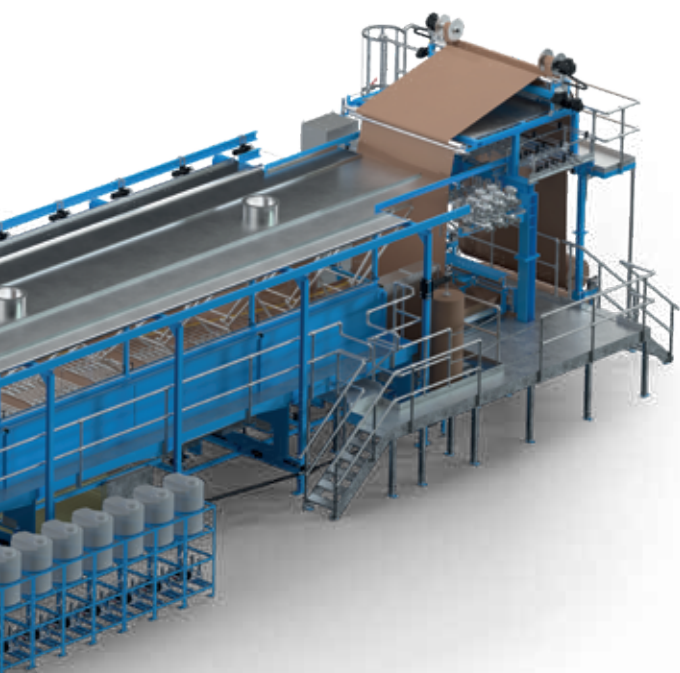
In 2015, Aadi Polymers decided to relocate from Sikandrabad to Greater Noida to create more space for expansion. This move was accompanied by significant investments in advanced technology, including a MULTIFLEX production line. "Henneckes high-pressure systems are the first choice for continuous slabstock production and provide me, and therefore my customers, with reliable, consistently high quality. They are also known for their durability and long

service life," says Lokesh Jain, Director Aadi Polymers Private Limited. This investment underlines the company's commitment to producing the highest quality – and it has quickly paid off: "The investment in this Hennecke plant has dramatically increased our turnover and production capacity and has allowed us to grow in ways we could not have imagined before. I think the increase in our company's efficiency and production level clearly shows whether the investment has paid off or not," explains the Managing Director.



"Henneckes high-pressure systems are the first choice for continuous slabstock production and provide me, and therefore my customers, with reliable, consistently high quality."

Lokesh Jain,
Director Aadi Polymers Private Limited



Retrofit measures for future-proof plants

Close contact with the Hennecke service team is another success factor for Aadi Polymers. The employees of Hennecke's 360°Service accompany the company throughout the entire service life of the machines and provide support in adapting to changing market requirements. This enables Aadi Polymers to adapt its production facilities to new challenges in a targeted manner. Back in 2016, the Managing Director of Aadi Polymers decided on the first of several retrofit measures. First, a block height measuring system was installed. This system uses sensors and lasers to reliably measure the block height and makes a significant contribution to consistent product quality. "The systems can be flexibly adapted to the respective production requirements and are therefore suitable for a wide range of applications. They can also be subsequently optimized through various retrofit measures, so that we retain a high degree of flexibility," says Lokesh Jain.

Control system upgrade with FOAMWARE

The system received a comprehensive upgrade in 2022 when the control system was upgraded to the modern FOAMWARE. Not only the software was replaced, but also the hardware: the free-standing control panel with a SIMATIC quad-core industrial PC of the latest generation and a 32-inch UHD monitor enables ergonomic working and a good overview of all process parameters at all times. The intuitive FOAMWARE control software combines numerous functions with a user-friendly interface. "The software makes it easier for operators to manage and control production processes without extensive training. It can also be adapted to specific production requirements, which allows us to tailor the software precisely to our own processes and needs." The clear display of all relevant production data, the extensive calibration modules, the tank level control and the 'Magic Eye' function, which immediately detects and visualizes metering deviations and irregularities in the running process, were particularly impressive.



*More production capacity, more turnover:
The MULTIFLEX in use at Aadi Polymers.*

Retrofitting: A solution for the future

The market is constantly placing new demands on manufacturers who have to respond to them. Hennecke offers customized retrofit solutions to keep production plants up to date with the latest technology. In addition, plants can always be adapted to changing market requirements, allowing companies to react flexibly. Retrofitting with an additional metering line, for example, opens up the possibility of expanding the product portfolio at a later date and tapping into new target groups. Ordering, installation and commissioning are carried out in close coordination with Hennecke's local sales and service teams. This enables manufacturers to operate older systems economically and sustainably, while at the same time benefiting from new innovations and technical advances. Retrofitting is an ideal solution for ensuring that systems that are characterized by a long service life are always optimally utilized. Both hardware and software upgrades play an important role here. The replacement of individual components and the integration of new technologies help to keep production efficient, safe and sustainable.

Long-term partnerships for optimal results

Hennecke's service specialists see themselves as long-term partners of manufacturers and producers in order to achieve optimum results. Continuous developments can be implemented, particularly in the areas of production quality, safety and sustainability, which ultimately also lead to cost savings in raw materials and energy costs. "Even if the plant seems to have been running well for years, there are often new developments and innovations that turn a 'good' into a 'better' and also enable savings," recommends Thomas Walterscheid, Hennecke Service Sales, to plant operators. ■



Aadi Polymers headquarters in Greater Noida, India.

NEW PLATFORM STRATEGY FOR SINGLE METERING MACHINES

EFFICIENCY AND FLEXIBILITY THROUGH STANDARDIZATION

Henneke GmbH is consistently advancing the modernization of its portfolio of high-pressure metering machines. By introducing a new platform strategy based on the standardization of components, the company is pursuing the goal of both increasing flexibility for customers and reducing production costs. This strategic orientation, which is being implemented gradually, affects all high-pressure metering machines and marks a significant step towards more efficient and customer-oriented production.

Objectives and background

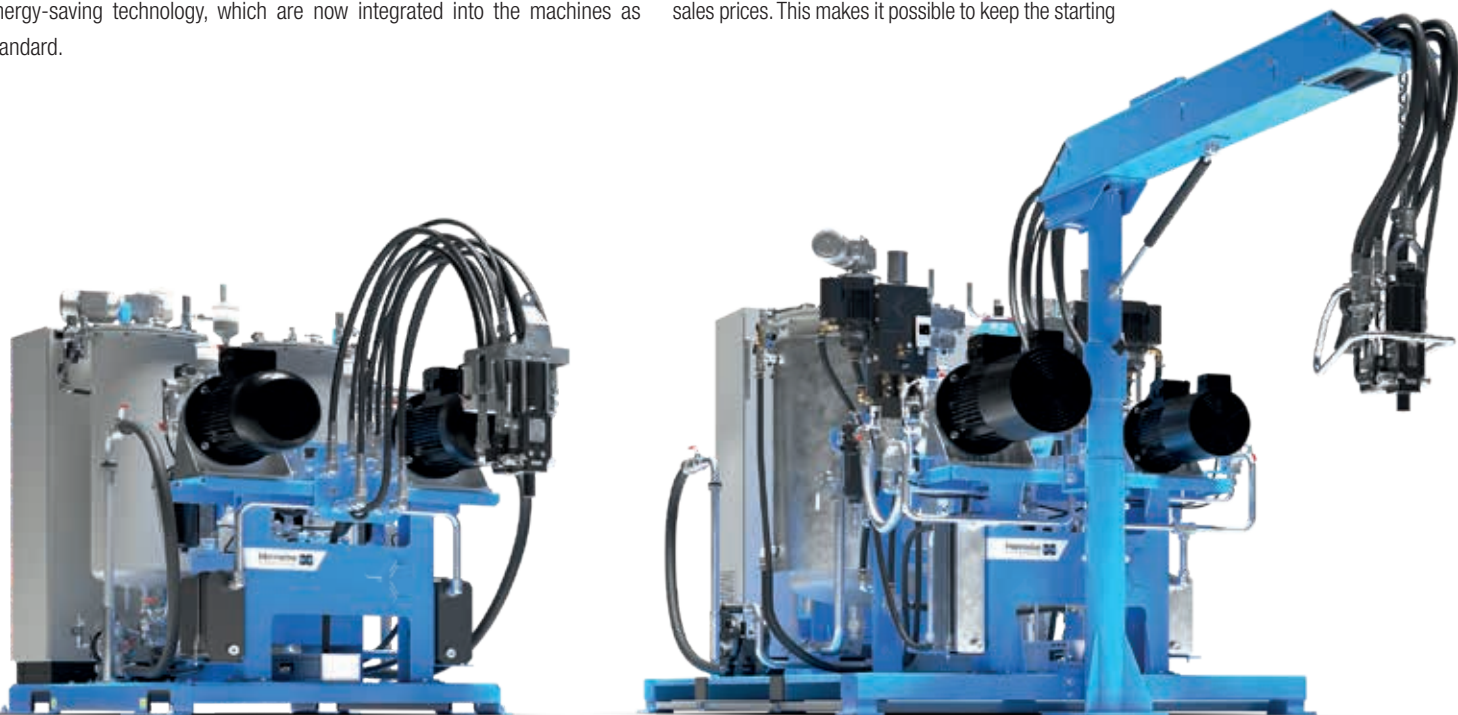
The development of Hennecke's platform strategy is a direct response to customers' increasing demands for flexibility, productivity and cost efficiency. By switching to Next-Generation technology in its machines, Hennecke ensures that customers benefit from the latest technological advances without having to forego individual solutions. The strategy aims to standardize production while also serving specific customer needs through standardized modules.

One example of the implementation of this strategy is the gradual conversion of the high-pressure metering machines to Next-Generation technology. Based on extensive investments in metering machine assembly and the accompanying introduction of the Hennecke Production System (HPS) at the Sankt Augustin site, the first decisive steps were taken in 2022. The high-pressure metering machines of the new MK2 series were equipped with a wide variety of intelligent features. These include, for example, the FOAMATIC machine control system, remote access options, IoT preparation and the Blue Intelligence energy-saving technology, which are now integrated into the machines as standard.

Standardization as a central element

An essential part of the platform strategy is the standardization of components and the introduction of the common parts principle. Hennecke has managed to drastically reduce the number of different components in its machines and to use more common parts across platforms. In the Next-Generation series, the number of parts used was reduced by 38 percent, and in the case of the key components, by as much as 45 percent. This leads to significant cost savings, as fewer different parts have to be produced and stored. At the same time, in-house production of key core components, such as the HX pump series, was expanded. This means a high degree of independence from suppliers, further cost savings and fast production and delivery times. And all this with increased quality and performance!

This reduction in parts also has other positive effects: Contrary to the market trend and the high inflation rate in many countries, Hennecke can also clearly reflect these cost savings in its extremely competitive sales prices. This makes it possible to keep the starting



NEXT GEN METERING MACHINE

price for an ECOPLUS MK2 high-pressure metering machine permanently low. In addition, customers benefit from higher availability and noticeably shorter delivery times. Standard models such as the ECOPLUS MK2 and the HIGHLINE MK2 can be delivered from the factory within just eight weeks and even complex machines such as the TOPLINE MK2 have a delivery time of just twelve weeks.

Flexibility through platforms and models

The platform strategy is based on the three basic platforms: TOPLINE, HIGHLINE and ECOPLUS. Each of these platforms has specific properties that are tailored to different application areas and customer requirements. The TOPLINE MK2 platform offers the greatest flexibility as it enables the integration of multi-component systems and multiple mixheads, among other things. This modular expandability makes the TOPLINE MK2 the preferred solution for complex production processes with a high level of automation that require flexible adaptability.

The HIGHLINE MK2 platform allows a maximum of two mixheads, which is optimally designed for numerous cycle time-optimized applications. The ECOPLUS MK2 offers a high degree of standardization, but does not have an automation interface, so that the focus here is on manual foaming processes in particular. This makes the ECOPLUS MK2 a good choice for customers

who are looking for a reliable but easy-to-use machine. The ECOPLUS MK2 is a perfect entry-level machine into the high-pressure world, with all its strengths, especially for users who have reached their limits with low-pressure technology.

All machines were launched in their basic configuration in 2022 and 2023 and are already successfully being used by numerous Hennecke customers around the world. Based on the platform strategy, Hennecke is now taking the next step and gradually integrating its metering machine portfolio for more specific applications into the three existing, state-of-the-art MK2 platforms.



HIGHLINE MK2 NEXT GEN METERING MACHINE TI SERIES

First model: the HIGHLINE MK2 TI SERIES

The first step is the planned conversion of the previous TOPLINE HK TI, whose Next-Generation successor will soon be introduced as the HIGHLINE MK2 TI SERIES. "TI" stands for "Technical Insulation", an application area that focuses on automated production scenarios for cooling devices and a wide range of technical insulation applications. The conversion shows how Hennecke is integrating existing models into the new platform strategy in order to offer customers a more flexible and at the same time more cost-efficient product portfolio. "The platform strategy enables us not only to optimize existing machines, but also to develop new models that meet specific market requirements," explains Jens Winiarz, Senior Director Sales Metering & Composites at Hennecke. "The machines of the old design are systematically discontinued and transferred to structured service support," Winiarz continues.

Additional machine variants possible

The platform strategy will enable the development of new platform variants in Hennecke's extensive metering machine portfolio in the future. For example, the new variants of the proven MICROLINE micro-quantity metering machine can be implemented as MICRO SERIES based on the TOPLINE and HIGHLINE platforms. This flexibility gives Hennecke the option of manufacturing machines that are exactly right for specific customer requirements without compromising on quality. This is because the platform, together with various core components, forms the basis for every machine derivative, but is absolutely flexible with regard to many other key components. An ECOPLUS MK2 platform can also be equipped with premium components for the most complex applications without exception.

Ceremonial unveiling of the HPS visualization to mark the launch of the new production system by Rolf Friedli, Chairman of the Advisory Board Hennecke GROUP and Thomas Wildt, CEO Hennecke GROUP (from left to right).





FOAMATIC



NEXT-GEN metering machines are equipped with a wealth of intelligent features.

High cost efficiency

Through standardization and the associated cost reduction, Hennecke offers its customers machines that counteract the general trend towards rising prices despite noticeably better equipment. “We have succeeded in reducing production costs to such an extent that, adjusted for inflation, some of our machines have even become cheaper,” emphasizes Jens Winiarz.

Another advantage of the new platform strategy is the increased ease of maintenance of the machines. By standardizing the components and reducing complexity, servicing work can be carried out more quickly and easily. This leads to less downtime and thus to greater availability of the machines in the production process.

Introduction of a new nomenclature

In order to communicate the platform strategy clearly and simply, Hennecke is introducing a new nomenclature for its high-pressure metering machines. Future models will initially bear the platform name, followed by the defined area of application (for example, as previously mentioned, “TI” for Technical Insulation) and the addition “SERIES”.

In addition to the new trade names, a new eight-digit type designation, called the model code, is also being introduced, which provides all relevant information about the machine at a glance. This structure makes it possible to immediately

recognize the essential technical features of the machine and makes it clearly identifiable. This facilitates communication between customers and service employees, and allows them to know immediately exactly which machine is involved. Misunderstandings are avoided and coordination processes are accelerated.

Continuous development

With the introduction of the new platform strategy, Hennecke is taking a further step towards efficient and customer-oriented production. Through consistent standardization and the introduction of a clear nomenclature, Hennecke not only offers its customers competitive prices, but also greater flexibility and ease of maintenance. “We are convinced that this strategy forms the basis for our future success and offers our customers real added value,” says Jens Winiarz.

In the coming years, Hennecke will continue to expand its platform strategy and continuously modify and expand its portfolio of high-pressure metering machines. “Our customers can look forward to innovative product extensions to the NEXT-GEN series, which are both technically and economically impressive,” says Winiarz, referring to Hennecke’s website and global social media channels. Here, Hennecke always keeps its customers up to date on all developments and new solutions. ■

PERFECT SERVICE SUPPORT WITH 360°CONNECT

COMPREHENSIVE UPDATE WITH OPTIMIZED USER EXPERIENCE IN THE SERVICE PORTAL



The Hennecke GROUP is continuing to drive its digital transformation. The 360°CONNECT service portal recently received a comprehensive update and was rolled out worldwide for all products of the Hennecke Polyurethane Technology brand. With numerous functions and improvements, the portal offers Hennecke customers a significantly optimized user experience and even more opportunities to use their machine and plant technology efficiently and receive perfect service support.

Improved security and usability

The update of the 360°CONNECT service portal initially focused on key security aspects such as comprehensive data protection and improved encryption of the connections. At the same time, user-friendliness was significantly increased and the design of the portal was adapted. "We used the update to noticeably improve the user experience and modernize the design. Numerous aspects were taken into account," is how Alexander Breyer, Specialist Digital Services at Hennecke, explains the measures. One innovation is the switch to a fully responsive design for all areas of the portal. This enables users to easily use the portal from mobile devices and, for example, to resolve service tickets directly at the system. This makes the technicians' daily work much easier, as they can document and process problems directly on site.

Functional webshop with discount

The 360°CONNECT service portal offers numerous functions that are specifically tailored to the needs of users. In addition to ticket management, which ensures that service requests are processed quickly and efficiently, the new, integrated webshop offers customers the opportunity to order spare parts for their specific Hennecke machines or systems directly. The webshop shows

the system elements in a 2D or 3D view, which makes selecting the required parts much easier. System-specific spare parts packages with basic wear parts such as filter elements, nozzles and other components that ensure the machines operate properly at all times are also particularly interesting.

Jan Mertens, E-Commerce Specialist at Hennecke, highlights the advantages of the webshop: "The customer is shown the availability and prices of the required parts directly. Thanks to the fully digitalized process, they also benefit from faster delivery when ordering via the webshop compared to the traditional method." As a special bonus, Hennecke is offering a discount of up to 5 percent on orders placed via the portal until the end of 2024. "We are continuously expanding the functionality of the webshop. For example, an EDI connection is currently being planned, which will allow orders and invoices to be exchanged digitally and integrated into the company's own inventory management system in a time-saving manner," adds Jan Mertens.

Up-to-date documentation and personalized information

Another important feature of the 360°CONNECT Service Portal is the comprehensive documentation of the machines and systems. All documents and

instruction manuals, including those from third parties, are stored in the portal and are regularly updated so that customers always have access to the latest version.

For new machines, the documentation is now only available digitally via the portal, which makes the management and use of this information much easier. But existing customers also benefit from the digital solution: Even for older systems that have been in operation for several years, the latest documentation is available after registering in the portal. "It is also advisable for existing customers with an older system to register in the 360°CONNECT Service Portal in order to take advantage of the benefits," recommends Alexander Breyer.

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Jan Mertens, E-Commerce Specialist at Hennecke

In addition, the portal offers personalized news that is tailored to the customer's respective machines and systems. This means that users are always kept informed of all relevant updates, innovations or possible retrofit solutions. The portal also provides information about possible training courses. These can be booked directly online to ensure that the staff are optimally prepared to operate the machines.

Outlook and future expansions

Another planned functionality is the ability to track the production or delivery status of ordered machines and systems in real time. This gives the customer a precise overview of the current progress of their machine order at any time. The update of the 360°CONNECT Service Portal was initially implemented for all Hennecke GmbH machines. Implementation for all machines and systems of the other brands within the Hennecke GROUP will follow in the fourth quarter of 2024. The revised Service Portal now offers Hennecke GROUP customers an even more functional platform to manage their machines efficiently and benefit from improved service.

Interested parties are welcome to seek individual advice to learn about the new functions. This also applies to existing customers, who can register in

OUR 360°CONNECT SERVICE

Find out more about your options in our 360°CONNECT service portal.

just a few steps and benefit directly from the advantages. Regardless of whether new or existing customer: registration and use of the account in the 360°CONNECT Service Portal are of course free of charge. For a single user as well as for multiple users per customer. ■

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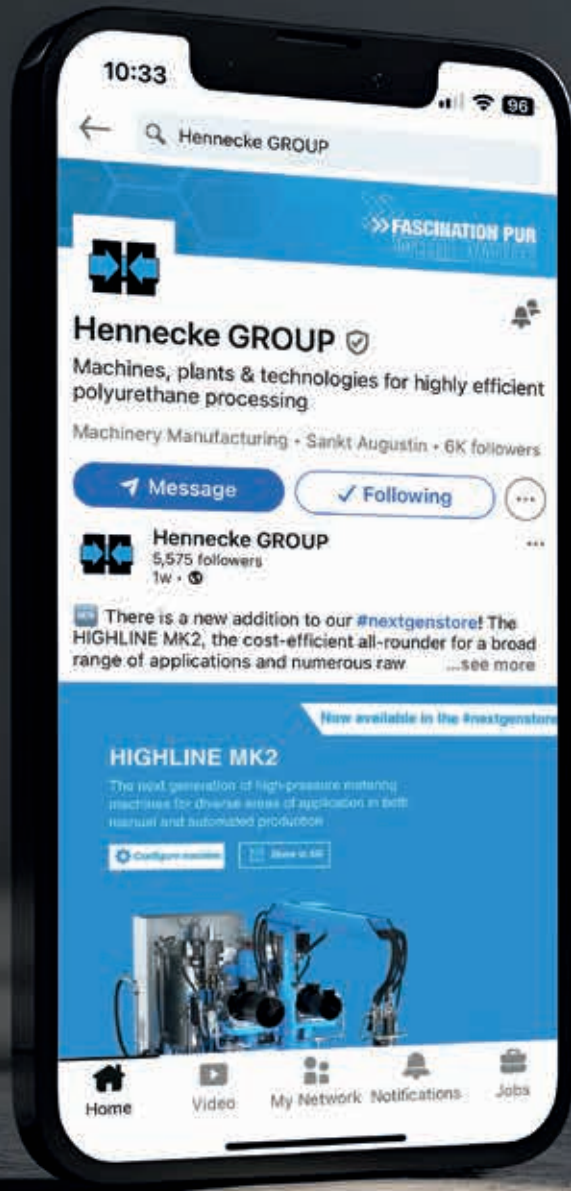
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