

2022 SPECIAL EDITION



REP

NEWS



The Magazine of
the REP Group

**A DYNAMIC
GLOBAL
NETWORK**

**OUR K2022
STAND IN
DETAIL**

**AN OPTIMIZED,
AUTONOMOUS
WORKSHOP**

**PRODUCTION
GOES ELECTRIC**

K2022: Light for the industry at the end of the post-covid tunnel?

Since 2020, the foundations of global industry have been shaken, as the way we do business on a global scale has been challenged by:

- Mass absenteeism due to the pandemic, compensated by remote working;
- Manufacturing downtime due to lockdowns generating supply shortages not seen for decades;
- Disruption of intercontinental transportation routes exacerbating shortages and delays in production lines;
- Significant rises in the cost of goods and services due to scarcities after two decades of relative decreases.

New factors that were in the pipeline to drive competitiveness have now come to the fore:

- Process automation to reduce reliance on human resources, which have become less reliable in terms of availability;
- Geographically shorter supply chains;
- Energy efficiency of operations;
- Savings on raw materials and components integrated into product design along with production and transformation processes;
- Recycling this sector's emissions and waste into the economy itself, which all contributes to building a sustainable business activity.

As a global player in this global economy, REP is entering this new phase with a localized, multi-site organization and a range of products and services that respond to the new challenges facing the industry.

Some examples of these new developments will be exhibited at K2022, to illustrate how we can thrive in this post-covid world, by implementing solutions that are user-friendly and automated, enabling remote working, energy-saving, rubber recycling, etc.

We hope to succeed in helping the rubber transformation industry successfully navigate through this minefield of challenges.

We look forward to meeting you on our stand at K2022!

Helping the industry navigate through this new minefield of challenges.



Bruno Tabar
Chief Executive Officer
REP international

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REP international Group
Newsletter

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ELECTRIC COMPOSITE PRESS

Tung Yu Partnership

REP NETWORK NEWS



A FEW WORDS FROM OUR SALES DIRECTOR

Having a strong network is vital to our customers as well for our company. We want to be close, act fast and make things happen.

In the last 12 months we re-organized the sales department, enhanced our team globally and expanded the global footprint with a new range of electric machines and a new technical subsidiary in Italy.

We worked together on global projects and production systems to drive our customers success and support on improving sustainability along the way. The team and I will be pleased to talk with you in more detail what we can do for you!

Thorsten Just



With more than 60 years' expertise, REP continues to support clients, offering **solutions that are fully adapted to their requirements** and a wide range of **state-of-the-art presses** for molding rubber, thermoplastics and other types of elastomer.

Strengthened by a **global network** that now comprises **eight subsidiaries** (USA, Germany, Italy, Russia, Brazil, India and China) and **over thirty agents**, the REP Group is closely aligned with the needs of the market, offering a **responsive, high-quality service** to help each and every customer increase their **productivity** and become more **competitive**.



MARKET DEVELOPMENT DIVISION

A NEW DYNAMIC

Congratulations to Thorsten Just, Gérald Serero and Didier Chambouvet who are celebrating their first year in their new roles in the Market Development Division.

Thorsten Just became Director of our German subsidiary, REP Deutschland in 2018. He has now taken over the management of the Division as the REP Group's Director of Global Sales and Marketing.

Supporting in him in this role, **Gérald Serero** joined this growing team as Deputy Sales Director in September 2021.

He is also Export Manager for the Iberian Peninsula sales area.

Didier Chambouvet has joined the team of Sales Managers, with responsibility for Latin America, Northern Europe and the Middle East.



Didier Chambouvet, Gérald Serero and Thorsten Just

GERMANY



Welcome to **Julian Sommerey** who joined the **REP Deutschland** team a few months ago as **Team Leader Sales**. With the support of the Sales

Director, he is responsible for supervising and managing sales operations. With broad experience in the sector, Julian supports his team in achieving their targets and meeting customer requirements.

We wish Julian success and fulfillment in his new role!

UNITED STATES



We are delighted to introduce **Josh Brundage**, REP Corporation's new Territory Sales Manager for Eastern United States.

Josh brings vast experience as a Tooling Engineer and Process Manager. He is also well experienced to manage multiple, complex projects in the rubber injection molding sector.

We warmly welcome him to our American subsidiary and are sure that he'll be a great asset to our team.

ITALY

NEW INDUSTRIAL SUBSIDIARY

The addition of RPM, our new technical subsidiary, expands the breadth and depth of the REP network's range of products and services.

This Italian company, is specialized in manufacturing of **horizontal machines** for rubber and thermoplast processing, as well as **special derivative machines**, becomes the **eighth subsidiary** in the Group.



PROCESS & APPLICATION DEPARTMENT

THE TEAM IS EXPANDING

The Process and Application Department is expanding with the arrival of two new members.

Ludovic Moreira was appointed Department Manager in March 2022, to lead and drive the team's projects.

Romain Corbineau, our new Process Project Manager, will oversee the analysis and test phases of the injection process for client applications.



Ludovic Moreira and Romain Corbineau

Rubber and Plastic Machinery was founded in 2003 and is located in the province of Brescia (Italy). Its integration consolidates our presence in the horizontal press market on a global scale.

Read more on **page 14** of this magazine!



Process/Application Research and Development Engineer, **Rodrigo Diaz**, has been appointed **Project Manager** for **Devulcanization** and **REP Net 4.0** projects. This means we can offer our clients full support and customized advice on their development projects and any issues they encounter.



NATIONAL RECOGNITION FOR REP

REP is honored by the distinction awarded to our President, Mr. **Bruno Tabar**, who was elevated to the rank of **Knight of the National Order of Merit** upon the recommendation of Mr. Bruno Lemaire, France's Minister of the Economy, Finance and Recovery.

This distinction recognizes numerous achievements, including the contribution to France's international economic growth over 30 years, as well as our historically French expertise.





REP is delighted to be participating at K2022 in Düsseldorf, celebrating 70 years of K!

K2022 is the world's leading trade fair for the plastics and rubber industry.

This year, REP's theme is **high tech** and the environment. Discover the latest range of fully automated, electric, online presses for injection or compression molding.

We look forward to seeing you there!

OUR STAND IN DETAIL

1 EPG300 - ECOtronic short

ELECTRIC HORIZONTAL PRESS

Elastomer injection molding machine, including Industry 4.0 "SMART-WIRE" for optimal performance and increased competitiveness.



Read more on page 14

Watch a molding demonstration on our stand!

6 REP's new silicone stuffer

Close-up of all the new features and functionality of REP's latest silicone stuffer.

Read more on page 13



5 REP Pack 4.0 with 14 modules

MANUFACTURING SUPPORTED BY DIGITAL

Full range of online solutions for efficient management and optimized production, even remotely.

Accessible demonstration station on the stand.

REP Pack 4.0 





Messe
Düsseldorf

rep

RUBBER IN MOTION

ENJOY YOUR VISIT!

HALL 14
BOOTH B57

From October 19 to 26, 2022.

4 TUNG YU, TYC-30-E-PCD

ELECTRIC COMPOSITE PRESS



Read more
on page 15

Compression machine by our partner and co-exhibitor, Tung Yu. This technical innovation is fully electric to optimize production and provide “clean” operation for a more sustainable factory.



3 V710-G10 Core

USER-FRIENDLY, FULLY-EQUIPPED PRESS

Part of the G10 Core range, this V710 with insert loader offers a turnkey solution! It is fitted with an articulated arm to increase productivity and improved ergonomics.



Read more
on page 12

2 W510-G10 Extended

AUTOMATED MEDICAL PRESS

Machine from the Performance Range designed for the automated production of medical parts. It is built to integrate perfectly into the sensitive environments of regulated industries.



Live molding
on our booth!



Detailed description on
page 8 of the magazine

OUR PARTNERS AT THIS
EXHIBITION:



STÄUBLI



Tecnistamp





W510 EXTENDED, THE MEDICAL PRESS

Pharmaceutical companies have a constant need for accuracy and increased output without jeopardizing the highest standards of quality. REP has therefore developed a dedicated turnkey range to meet the requirements and resolve the issues linked to the design and demand of medical solutions.

INTEGRATION INTO REGULATED ENVIRONMENTS

The W510 press is fully designed to adapt to **sensitive environments** such as in the **pharmaceutical** and **medical** sectors.



It integrates perfectly into ISO Class 7 and Class 8 cleanrooms, and can be adapted to meet the most stringent regulations.

CLOSING UNIT		
Clamping force	kN	3,050
Heater Plates	mm	560 x 780
Distance between the columns	mm	730 / 470 mm
Max. opening stroke	mm	400
INJECTION UNIT		
Volume	cc	2,000
Pressure	bar	1,500



W510 Extended equipped with an automated unit

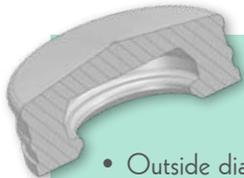
A FULL, ADAPTED SOLUTION

Outfitted with **Grade 304 Stainless Steel**, in accordance with the required **health and safety standards** for cleanrooms:

- **Corrosion- and detergent-resistant.**
- **Fewer germs and lower risk of contamination** in the parts produced.
- **Easier cleaning and disinfection**, while maintaining durability and all features.

100% automated

unit with robotic arm that enables **autonomous operation** at each stage of production. **Reduced risk of contamination**, with limited number of external interactions.



FEATURES OF THE SYRINGE PISTON:

- Outside diameter: 17 mm
- Height: 7 mm
- 146-cavity, injection-compression mold

MEDICAL MARKET CHALLENGES

Innovations for sterile production AND easy to clean! REP's experience and expertise in demanding sectors such as pharmaceutical and medical mean that you are guaranteed full support as we understand the problems that clients face and can offer tried and tested solutions.

SAFETY & QUALITY CONTROL

REP is fully committed to adapting to meet clients' needs and finding the optimal solution within the given constraints.

■ VISUAL COMPLIANCE TESTING

With its various **additional monitoring sensors** and vision control as part of the automated unit enable meticulous inspection of the end product.



A number of **customized checkpoints** and settings **guarantee the quality** of the molding. *Examples: Availability of sprues and vents, even spread of material, etc.*

■ PROCESS OPTIMIZATION



Process reviews and a **"Flashless"** configuration guarantee accurate molding **with no flashes or waste**. This makes production cleaner and more efficient.

CLEAN INTEGRATION & EASIER MAINTENANCE

Sterile production AND easy to clean!

■ INTEGRATES INTO SENSITIVE ENVIRONMENTS

The machine is coated with a material **that meets stringent hygiene requirements**, AND optional add-ons can be integrated into production.

Not only does automation improve performance, it also plays a vital role in keeping the molded parts **sterile and clean**.



■ REDUCED DOWNTIME

Automation – whether partial or full – **reduces the operator's open press intervention time**, thereby avoiding a contamination risk.

■ EASIER CLEANING

We use Grade 304 stainless steel because it meets the required standards for cleanrooms. Being **durable** (anti-corrosion, antibacterial and detergent-resistant) and **easy to clean**, it is the ideal coating.

RELIABILITY & PRODUCTIVITY

Invest in durable, robust equipment that is optimized for efficient output.

■ EQUIPMENT YOU CAN RELY ON

REP's expertise is demonstrated by the **robustness** and **longevity** of its equipment. Its **reliable, bespoke solutions** ensure top-quality production.

■ INDEPENDENCE IN THE WORKSHOP

All the REP Pack 4.0 modules enable real time monitoring and **greater responsiveness** for **flawless production**.



REP takes care to make its solutions flexible to fully adapt to customer needs and demanding work environments.

MORE AUTONOMOUS PRODUCTION

The subject of production plant automation within the industry is now more important than ever. REP has adapted its range of automated equipment, which now integrates customized turnkey units, to optimize ergonomics, productivity and performance for each customer.

AUTOMATION IS ADAPTED TO MEET THE SPECIFIC NEEDS AND GOALS OF EACH CUSTOMER

Infinite possibilities for the following operations:



Feed runner evacuation



Evacuation of flash and tear trims



Spray release agent and/or mold cleaning



Insert loading



Demolding of finished parts



Visual compliance testing

PARTIAL AUTOMATION

Demolding kit

These powerful, durable and scalable kits provide:

- High productivity throughout the cycle
- Optimal cleaning of cavity plates
- Demolding with ejection battery or runner evacuation system
- Parts demolding while other operations are ongoing, with single-plate or double-plate molds

Other kinematics are possible.

S05 2Y1000
Front kit



V710
Front kit



FULL AUTOMATION

Horizontal machine with brush system

Brush system can be used for each cycle:

- Enables mold surfaces to be cleaned
- Facilitates demolding of created parts
- Adjustable equipment that can be adapted to fit the space between the two mold halves
- Makes the production cycle automated and autonomous



Quality / Versatility / Productivity

Robotized unit

Read about an example on page 8 of the magazine.

Performance / Productivity / Quality



IN THE EYE OF THE ROBOT

As automation is currently one of the industry's drivers, we have decided to highlight our long-standing partnership with experts who set the standard in their field: **Mecatheil (M)**, automated machinery integration, and **Stäubli (S)**, supplier of mechatronic solutions.

What role(s) can automation play in a production environment?

M - Several factors may come into play, a **successful installation** is the **expected technical outcome** along with the **integration of participants** in the project. Although the primary role of automation is process improvement, robotization also means creating new jobs.

S - Automation helps to justify and generally **speed up production** processes.

It also means employees can be **released from dangerous or tedious tasks**, allowing them to work on value-add tasks instead.

To what extent can automation fulfill different types of applications and business sectors?

M - Automating operations improves **productivity, reliability**, availability and performance. Industrial robotics also has significant **environmental value-add**, partly due to its very favorable energy performance, and also thanks to process optimization.

S - All business sectors are facing **higher expectations** from consumers for products that are more and more diverse and personalized.

Robotics meets all these **production rate challenges** and provides efficiency, whilst offering options for **flexibility** on production lines.

How are your systems customized and adaptable to clients' needs?

M - With the need to produce parts that are ever **more complex** and shorter times to market encouraging the adoption of **agile engineering**, we can simulate and anticipate production operations and programming through **virtual implementation**.

S - Compatible with **clean environments** and offering straightforward integration that is easy and compact, Stäubli's range of 4-axis and 6-axis robotic arms is specially designed for the elastomer industry.

From injection to blowing, thermoforming to packaging, the range of robots offers efficient **solutions for all processes**.

What future developments can we expect to see in your respective fields?

M - Robotization and **Artificial Intelligence** will be at the heart of the next technological transition. We are also going to have to commit to a strong **CSR Policy** (Corporate Social Responsibility) for the future of our companies. Reducing our systems' **energy consumption** must be accompanied by **increasing the user-friendliness** of workstations. Mapping out evolving job roles and implementing training will be necessary for skills development.

S - Robotics is continuously developing, to **follow the evolving market** and changing requirements, With a view to localization and customer satisfaction, we are listening to our clients and partners to support them and offer them the most appropriate solutions.

Thanks to Mecatheil and Stäubli for sharing these interesting perspectives and excellent partnership working!



STÄUBLI

V710 CORE, THE ERGONOMIC PRESS

The G10 Core range has all the key features of the G10 generation with standard presses configured to meet the needs of each client. These cost-effective presses from the Lean range come with all of REP's key features and performance.

CLOSE-UP OF THE V710 CORE

From the Lean Range: G10 Core has all the key functionality of the G10 generation at optimum cost.

A line of standard presses configured to meet the needs of each client.

CLOSING UNIT		
Clamping force	kN	5,100
Heater Plates	mm	630 x 800
Min. mold	mm	40
Distance between plates	mm	1,045
Max. opening stroke	mm	500 / 830
INJECTION UNIT		
Volume	cc	5,000
Pressure	bar	1,500

V71C, IMPROVED ERGONOMICS

- Lower work surface height, 900mm shown.
- Greater distance between columns.
- Access to loading kept free.
- Ability to remove injection runners.
- Easier access to the compound feed zone.



Productivity / Quality / Ergonomics

MULTI-AXIS, ARTICULATED ARM FOR OPTIMAL LOADING!

Key advantages of this loading system:

INCREASED PRODUCTIVITY

Works in **parallel**, for optimized production cycles. **Reduces open press intervention times** and shortens heating times.

IMPROVED QUALITY

Quick cycles thanks to **simultaneous loading** of all inserts at a **controlled temperature**. Uniform curing across cavities. **Improved material bonding** thanks to the bonding agent.

ERGONOMICS

Assists with handling heavy loads and hazardous (hot) parts.

Articulated arm for compact, accurate and reliable handling.



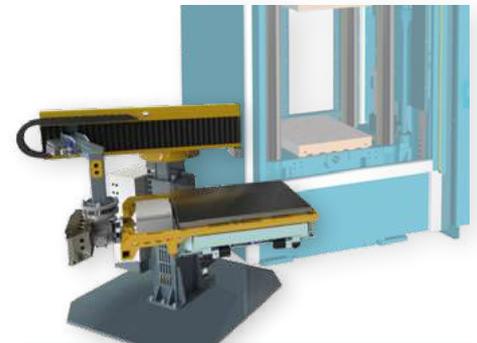
Flexible loading plate.



HAHN
AUTOMATION

Partner on this installation

V710 Core equipped with insert feeder



INSERT LOADER		
Loading capacity	kg	Up to 250 kg
Vertical stroke	mm	450
Stroke	mm	900 ⇄ 1,440

STATE-OF-THE-ART EQUIPMENT

The use of the silicone stuffer system has been developing for several years and, true to our capacity for adaptation, we have improved our solution to produce a new, even more efficient version. Its objective and basic process remain the same, with newly added functionality.



Laurent Terrier, Head of Product Development, tells us all about the new technology in REP's latest silicone stuffer.

Laurent TERRIER, could you remind us how a traditional silicone stuffer works?

LT - The silicone stuffer is a push system that allows paste compounds to be introduced into the extruder, as they cannot be fed in strips.

Which materials require this type of stuffer?

LT - Silicone-type materials are often too soft and supple to be fed past the extruder screw (intake is impossible even with talc; there is an intake issue, or even strip rupture).

The silicone stuffer resolves these feeder issues by guiding cakes of silicone to the extruder.

What are the key features of this new version?

LT - Various settings have been adjusted to enhance the existing process.



The general tried and tested functionality of the system has been retained:

- Using a **hydraulic cylinder** gives the best possible space/power ratio.
- Versatile equipment offers a great deal of **flexibility** and adaptability for different types of material.
- A **short, direct** connection between the cylinder and the extruder optimizes movement and gives a **good balance of power**, without any loss of pressure.

Yet we have also made **some enhancements**:

- The applied **pressure adjustment system**, which was previously manual;
- The cylinder **stroke check** and estimation of remaining material, thanks to analog measurement;
- The system **opening** with a far more powerful **hydraulic cylinder** and therefore a better speed control;
- The software has been upgraded, with more advanced functionality integrated into the interface.

Can it be used with different ranges and generations of press?

LT - REP's "standard" model of silicone stuffer has a capacity of **10 L**. It has been designed to **fit with all the machines** in the core range from V310 to V910.

There are other versions, from **1 L to 30 L**, to meet **more specific** requirements.

How long does it take to switch from silicone production to rubber?

LT - Just the time it takes to **assemble and disassemble** the system, which can be done in **less than 1 hour** by an REP service engineer or trained member of staff.

There is also an **REP support option** which allows clients without handling capabilities to be self-sufficient, and reduces the time it takes to make the conversion to **less than 30 minutes**.

What about maintaining the stuffer?

LT - The key part of maintenance is the cleaning, which takes more or less time, depending on which materials are used. Besides that, the system doesn't require any particular maintenance.

ELECTRIC HORIZONTAL PRESS

REP continues to broaden its range to produce more solutions that are more efficient and accurate. Today, we are introducing these new models of electric horizontal press. More user-friendly, accurate and competitive, they can be individually configured to meet each client's specific requirements.



ELECTRIC HORIZONTAL PRESSES FOR ELASTOMERS

Electric horizontal machine for the injection and vulcanization of elastomers (rubber and paste silicone). All the key features contained in **less than 4 meters**.

CLOSING UNIT		
Clamping force	kN	3,000
Distance between the columns	mm	625 x 625
Heating plate dimensions	mm	735 x 735
Max. opening stroke	mm	700/800
Min. mold	mm	50
INJECTION UNIT		
Volume	cc	397 ⇨ 4,000
Pressure	bar	1,530 ⇨ 3,500
SPACE REQUIRED		
Length x Width	mm	3,600 x 2,000
Max. height (with brushes)	mm	2,500 (4,400)

"SMART-WIRE" TECHNOLOGY

This industry 4.0 solution enables autonomous, online production. It equips the press with **smart technology**, giving it the capacity to **run itself**.

It can program itself, **self-adjust** (if parameters change), **self-diagnose** and production can be managed remotely at any time.



EPG300

ECOTRONIC
SHORT



Injection time



Optimized productivity



Cure time



COMPACT AND ERGONOMIC

Low space requirement, increased production and optimized process

PRODUCTIVITY, PERFORMANCE AND ELECTRIC

Efficient, fast and accurate

SUSTAINABLE AND ECO-FRIENDLY

Reduced energy consumption and contamination



Oil



Electricity consumption



Water



Waste



O-RING FEATURES

Dimensions: 765 x 200 mm

300-cavity

Direct injection mold

Automatic demolding with brushing



ELECTRIC COMPOSITE PRESS

Tung Yu, our long-standing partner in Taiwan, is making continued progress in innovative sustainable development with the introduction of an electric composite press. These high-precision, compression molding machines, which are energy-efficient and operate without any pollutants or chemical agents, broaden the product range and the options available.

A MORE SUSTAINABLE FACTORY

In a bid to become cleaner and greener, Tung Yu is introducing an innovative line of new electric presses.

Replacing the traditional hydraulic unit with a servomotor equipped with built-in drive screw results in significant energy savings and a reduced carbon footprint.

The main frame of the machine features a built-in drive screw with accurate control of the degassing distance.

The benefits of this system modification are:

- Reduced pressure loss
- Improved production output.

This fully electric, greener technology is ideal for precision molding, such as composite and electronic micro-components.

CLOSING UNIT

Clamping force	kN	3,000
Closing speed	mm/s	50
Power	kW	16
Heating plate size	mm	457.2 x 457.2

SPACE REQUIRED

Length x Width	mm	1,052 x 1,564
Max. height	mm	2,620

TYC-30-E-PCD



Increased production



Energy savings



Less water



Low noise level



Low maintenance



Safety sensor



Drive screw



Servomotor



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RUBBER IN MOTION

