WeRoll

The new magazine by ARMO

Exploring the qualities of rotational moulding

Issue **04.2026**

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Johan Potargent: ***The Automation Revolution***

Frank Gehry: ***Deconstructivist Poetic***

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Editorial

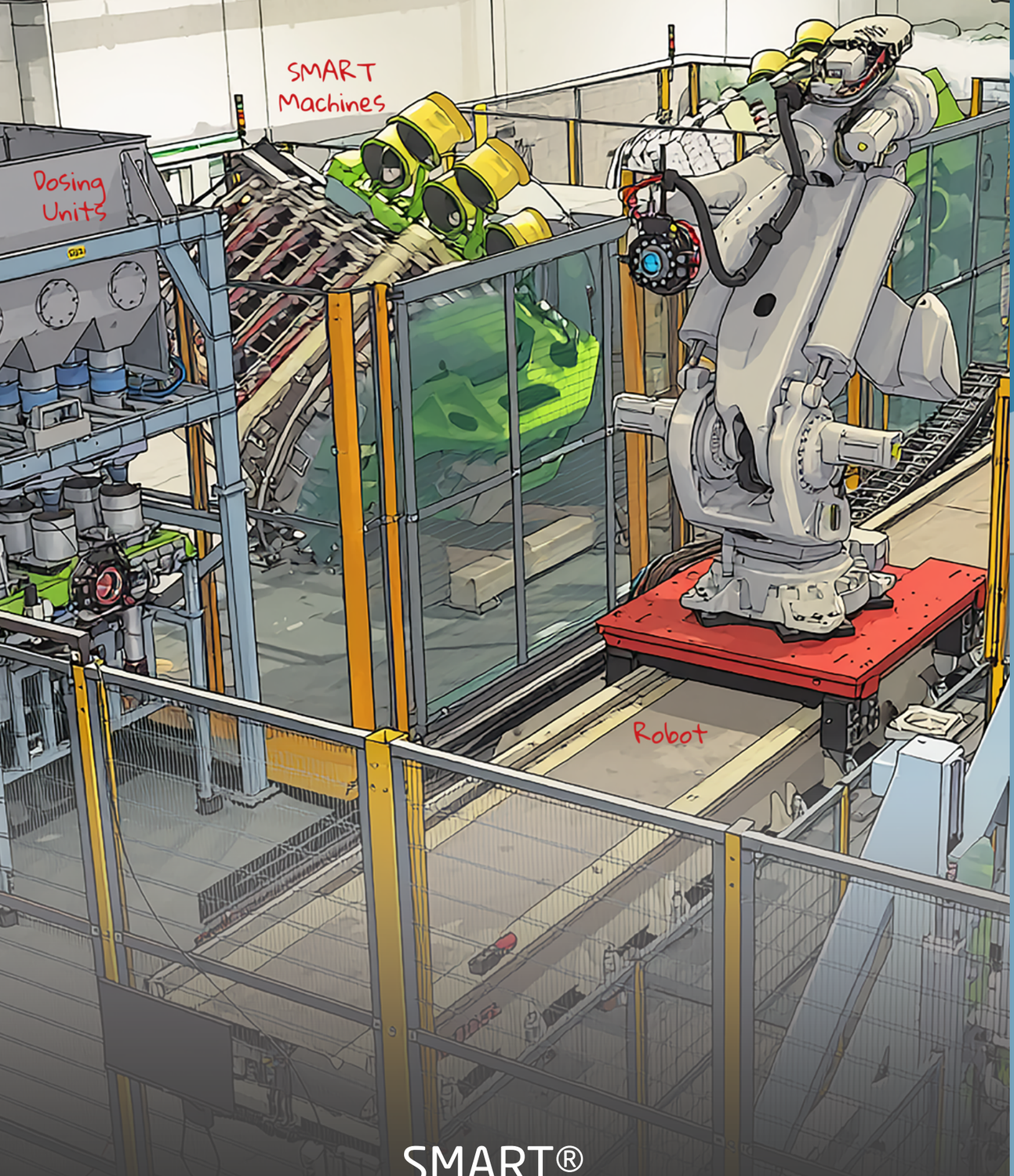
The Challenge of Innovation

by Riccardo Giovanetti - WeRoll magazine

Automation and robotics are certainly the core elements of the new production method through rotational moulding. Their strength lies not only in their ability to optimize productivity but also, and above all, in their ability to spare operators the most arduous and manual labor, which still represents a significant portion of the activity alongside machines. This enormous revolution triggers a series of effects that ultimately call into question the role of humans within the production cycle and require a new reorganization of the supply chain. But the constant evolution of rotomoulding towards new quality standards focuses not only on production aspects but also comprehensively involves all the other factors that contribute to improving the quality of moulded products. The performance qualities of polymers are certainly a key element in making products increasingly capable of delivering maximum performance even in extreme environmental conditions, as in the case of the snow generator project featured in this issue. And design, understood as a complex process capable of transforming an intuition into a concrete solution, constitutes an essential factor in creating innovative and contemporary objects, capable of challenging current trends and lasting a long time.

This new issue of WeRoll takes a 360° look at the complexity of the ongoing transformations affecting every single part of production, including the importance of accessories, which are increasingly crucial to achieving quality production results.
The challenge of modernity plays out on multiple levels and involves every qualifying element of the process. The ability to find the best balance between all the aspects at play gives rise to a new level of innovation that will become increasingly successful today and tomorrow. All players operating in this world are tasked with best interpreting these new challenges.

Enjoy reading!



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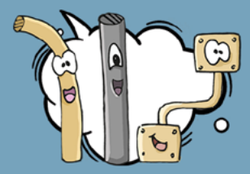

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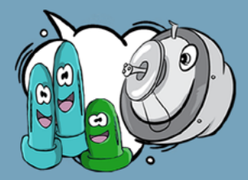

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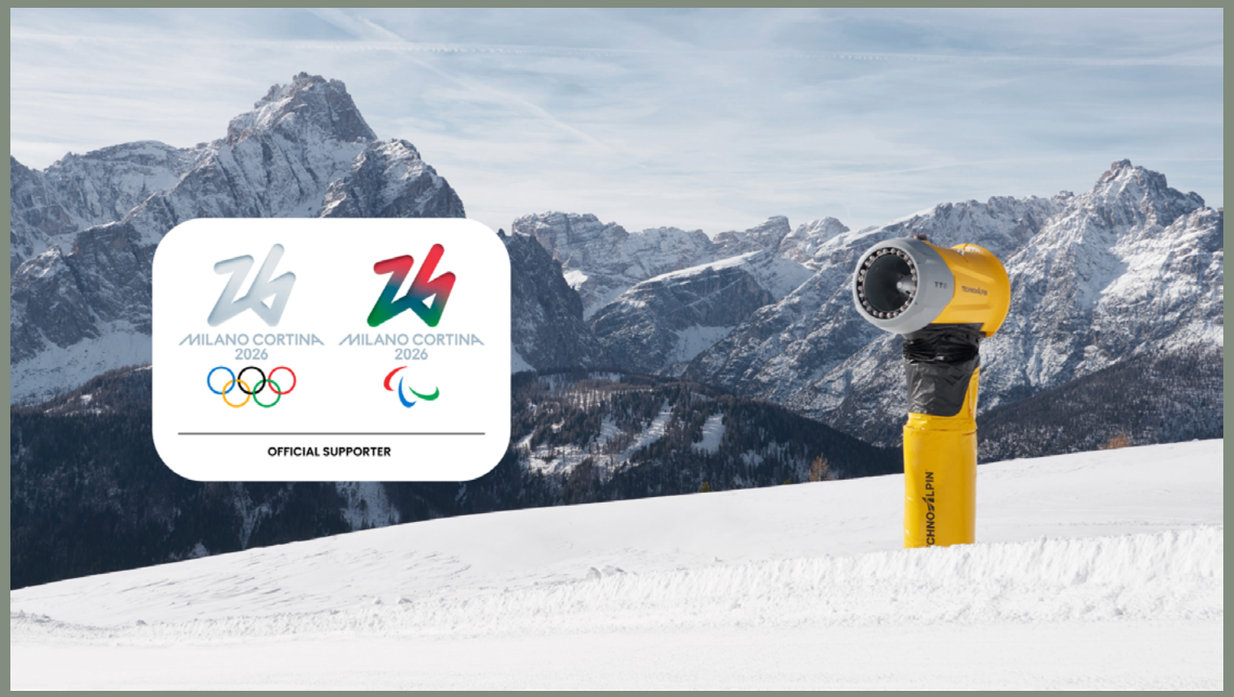
1. Telling the Product

mmdesign

TechnoAlpin, Bozen, Italy

TT10: Tower Power



GOLD AWARD

www.technoalpin.com

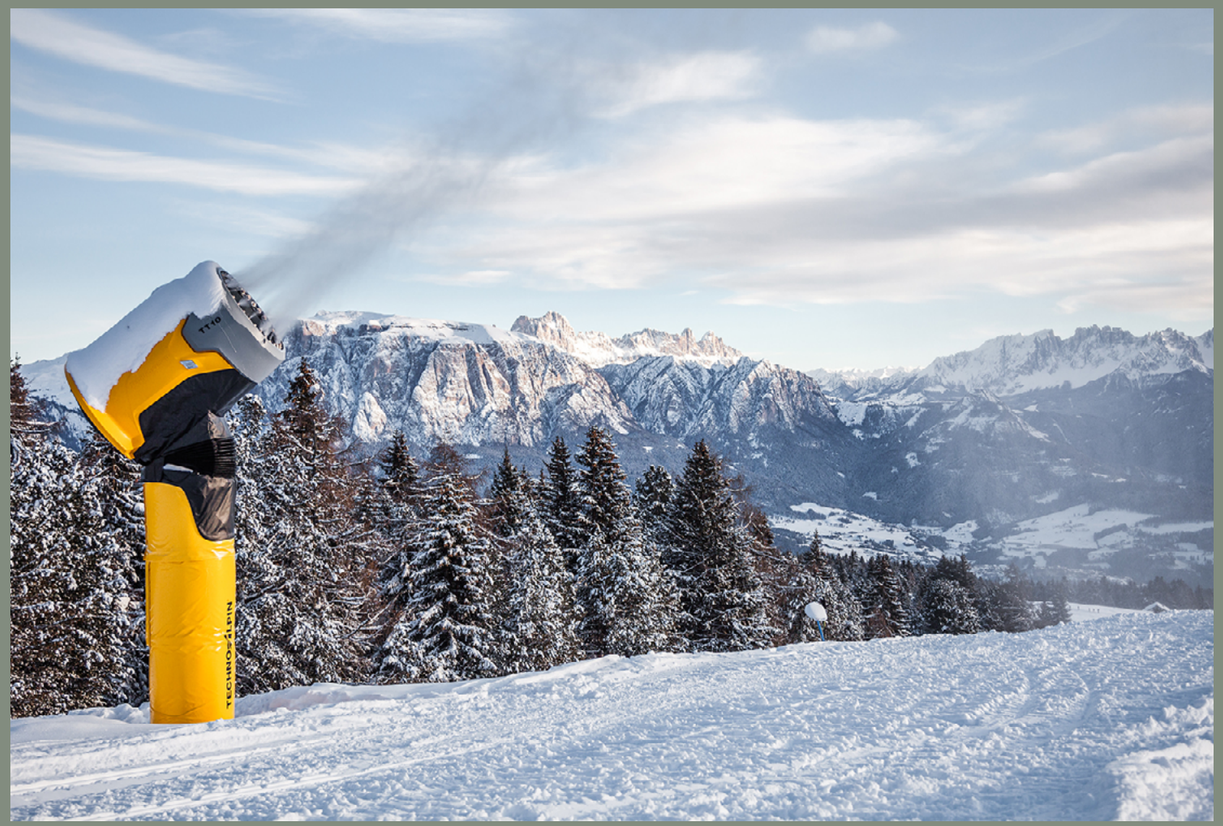
Text by Roberto Gonne

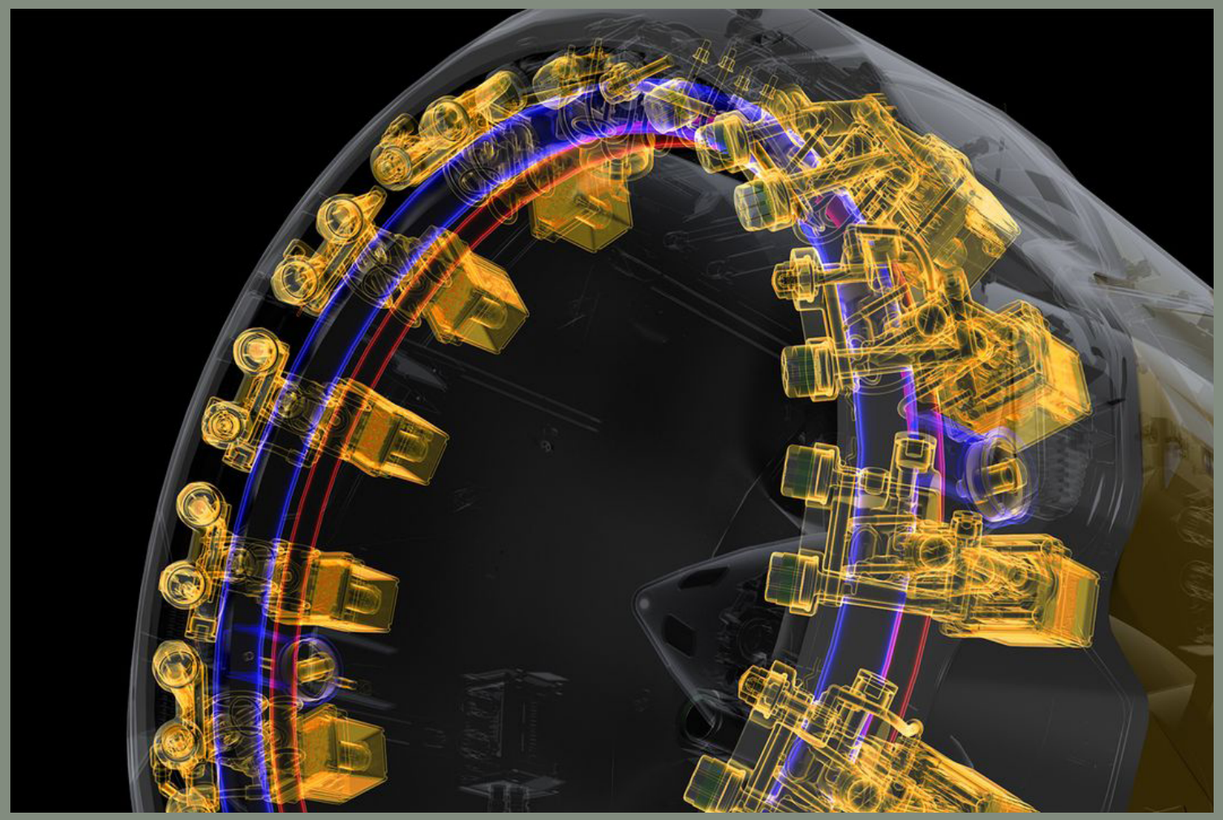
The upcoming Milan-Cortina Winter Olympic Games represent a challenge to ensure consistent snow cover on the ski slopes even in less than ideal weather conditions. The TechnoAlpin fan guns and snow guns boast pioneering features which put them at the cutting edge of snow production. The fan guns are endowed with innovative and efficient technologies as a result of painstaking research and development such as ceramic quadrijet nozzles and oil-free compressors. TechnoAlpin offers a wide selection of fan guns for varying demands and different types of terrain.

A Project Between Technology and Aesthetics

TechnoAlpin, a leading company in this sector, has developed a technology that allows the collection of water during the warm seasons and its use during the cold seasons to ensure the correct snow coverage of the slopes and thus avoid unpleasant accidents to skiers. Each snowgun must be positioned in such a way that it can work at its best. TT10's design is innovative because it combines turbine and support tower, creating a single body. Furthermore, the tower, being covered with a technical textile material and padded, avoids problems due to accidental impacts.
The shape of the TT10 expresses the sense of power of this snow-producing generator thanks to the front lines that blend into the rotomoulded front crown. Furthermore, in the lower part, a particular elastic material allows the movement of the gun up or down. The front crown can be released to allow access to the nozzle area, while the tower can be folded down to allow easy maintenance by technicians. The new tilting tower made of steel and covered in textile material, on the other hand, combines the advantages of a tower-mounted machine with the maintainability of a mobile fan generator.

“The distinctive, powerful shape and smooth transition between the various materials enhance functionality while the ingenious tilting mechanism makes the device easier and more ergonomic to use.”





Performance at the Highest Level

The TT10 is a snowmaking product with above-average features: the nozzle valve technology allows for optimal energy efficiency and resource conservation. The air cooling system ensures unsurpassed snow production, especially at extreme temperatures, while the nucleators with double ruby inserts guarantee the best snow quality for years to come. The TT10 can be fully customized to limit the cost of unused features and ensure perfect performance in any conditions.

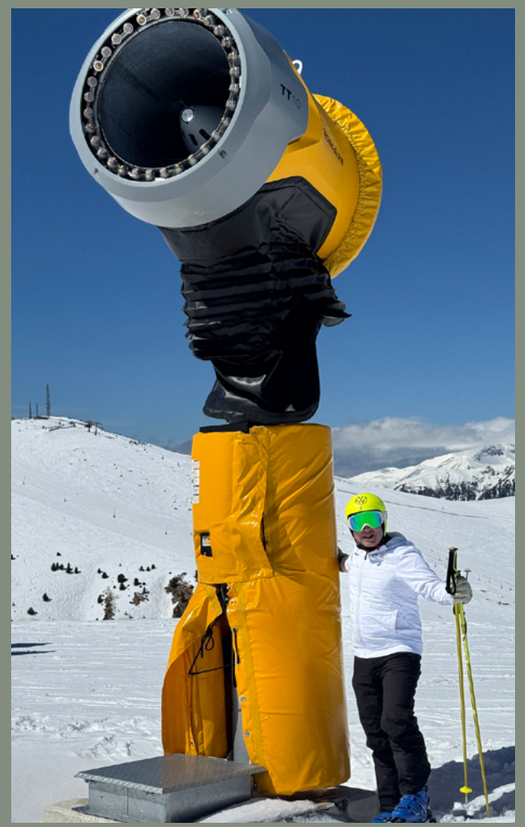
The First Snow Gun on a Tilting Tower

The TT10 design was developed by mmdesigned, and its innovative nature was recognized in 2022 with the prestigious iF GOLD DESIGN AWARD. Only the 73 most deserving projects, from nearly 11,000 submissions, were honored with the highest recognition, the Gold Design Award.

TT10 is the world's first snow gun to be mounted directly on a tilting tower. It convinced the 132-strong panel of judges of its innovative, overall concept and appealing design: "This snow gun features a tiltable tower that facilitates easy access for maintenance purposes to all components, including the nozzle valve, compressor and turbine motor. The distinctive, powerful shape and smooth transition between the various materials enhance functionality while the ingenious tilting mechanism makes the device easier and more ergonomic to use."

The TT10 won the award in the Product discipline, Industry/Tools Category. The iF DESIGN AWARD is one of the most prestigious international design awards. In winning this award, TechnoAlpin has once again proven its pioneering role on the snowmaking market, and one that is not limited merely to the technological aspects but also produces appealing designs.

The innovative new tiltable tower turns the TT10 into a snow gun which combines the advantages of a tower-mounted machine with the maintainability of a mobile fan gun.

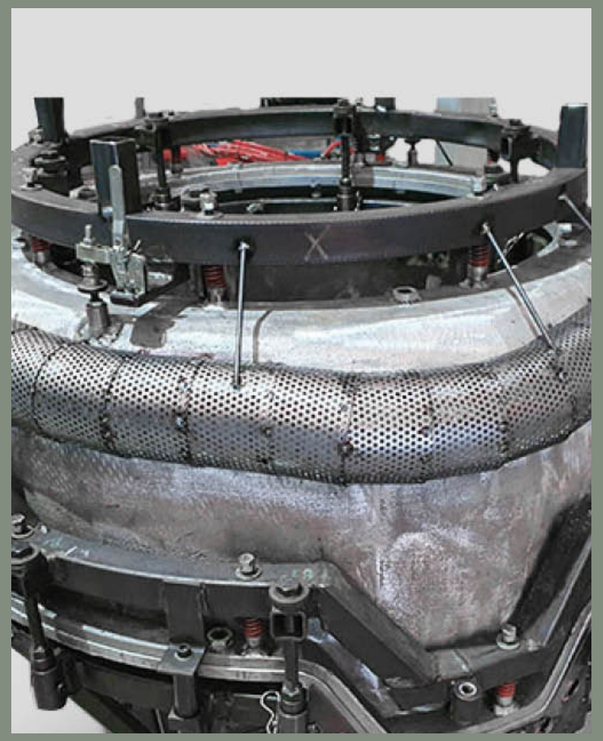


Tiltable Tower

The innovative new tiltable tower turns the TT10 into a snow gun which combines the advantages of a tower-mounted machine with the maintainability of a mobile fan gun. The tower can simply be tilted to allow access to the nozzle ring and motor. The need for a ladder is therefore completely eliminated. The elevated position of the snow producer is advantageous in allowing high snow output and a large effective radius. The steel tower is extremely strong and sturdy and consists of a fixed column and a tilting column, which enables servicing at ground level. The snow gun can be lowered with a lifting cylinder for maintenance work.

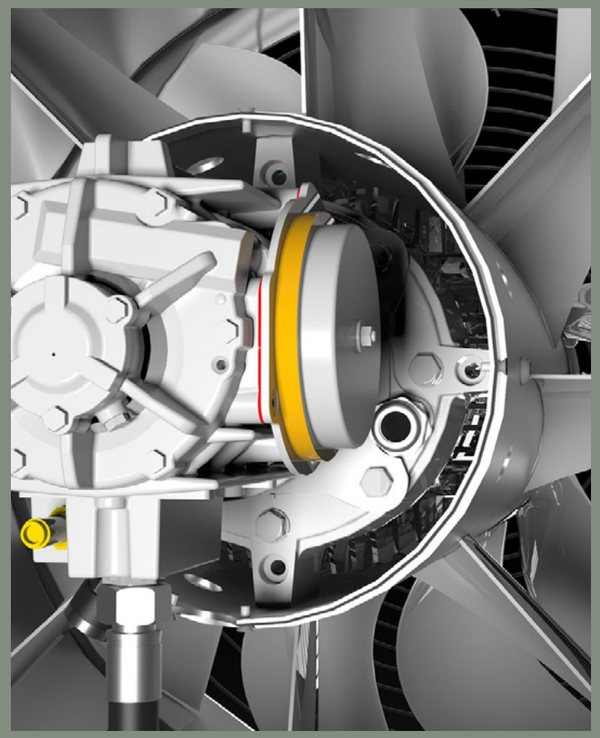
A Completely New Nozzle Valve System

The nozzle valve technology, completely redesigned for the TR10, is also used for the TT10. The central valve block is replaced by individually controllable single valves. Highly innovative and perfectly coordinated, each nozzle block on the nozzle ring is controlled by its own valve. More valves bring more advantages.
Resource efficiency: The loss of water on actuation of the various valves is prevented through the use of compressed air to discharge the nozzles. The excess water is integrated directly into the air jet and then converted into snow.
Operational safety: The innovative nozzle valve design completely eliminates the need for the central valve block and front discharge. This prevents the formation of ice in front of the machine and greatly increases operational safety.
Technical reliability: Thanks to the intelligent valve circuit, the valves can replace each other in the event of a failure, ensuring that the required number of nozzles is always open.



The turbine and compressor on the TT10 are driven by a single electric motor for an even smoother output of compressed air.

Lanulfi assisted TechnoAlpin in product development and the creation of rotational moulds.



The fan and compressor on the TT10 are driven by just one electric motor.

All TT10 nucleators come standard with two ruby inserts that enable consistent production of the highest quality snow.

2. Inside Matter

Johan Potargent

AMS Belgium BV, Bilzen, Belgium

The Automation Revolution

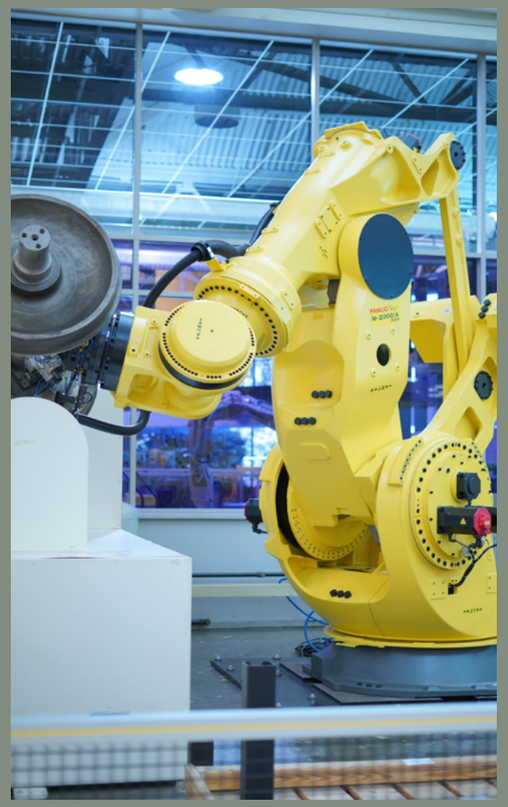
www.ams-innovation.com

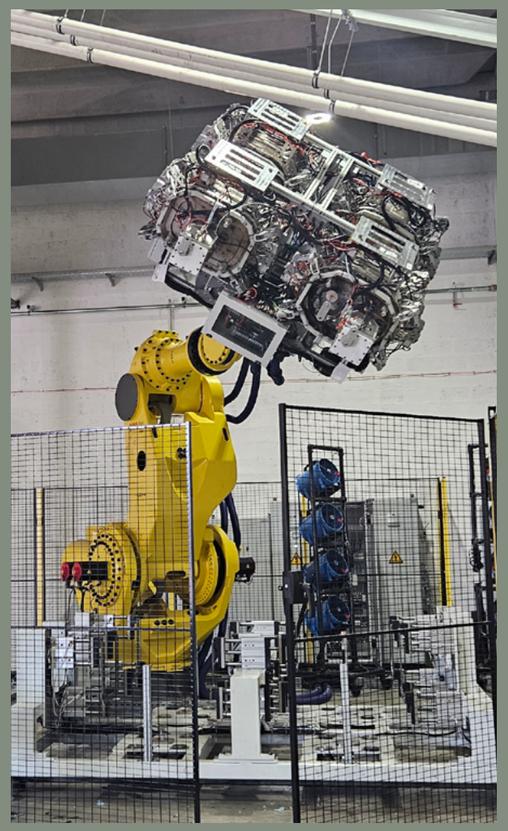
Interview by Elena Chechet

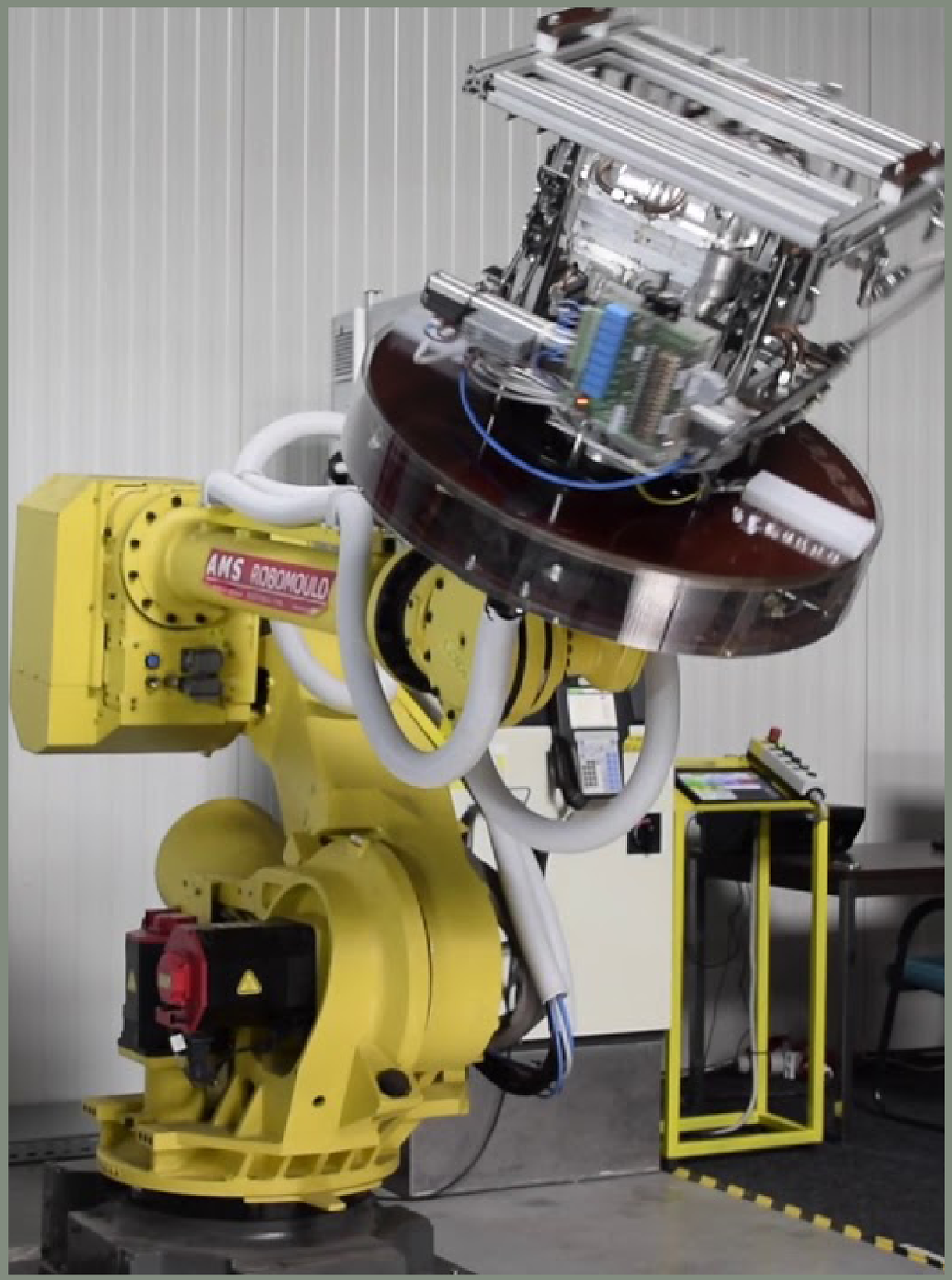
Let's start by talking about your origins: when was AMS Robotics Belgium founded and how has it evolved over the years?

AMS started in 2006 as a main global supplier for the automation in the automotive industry. As a tier 1 supplier AMS programmed production lines for Porsche, Mercedes, Audi, Volvo, Ford, BMW, ... and this all over the world. We've programmed yearly big projects with over +600 robots/line and +40 plc-systems/line.
Bringing the production quality and in cycle time was the main issue. And with all these new car models it was always challenging as new manufacturing processes had been integrated yearly and also new robot types.
AMS started local offices and was for instance the 1st European company to start a 100% fully owned subsidiary in Shanghai in 2008. Shortly after offices started up in South Africa, Hungary, The Netherlands, Slovakia, ... always with the same idea to follow and support our customer local. Many of these offices have been temporary as after the completion of the job we've moved on to other and new locations. Only in China we've stayed longer as the booming car industry and setup of new factories kept ongoing.
Outside the automotive industry we've automated new production lines in the food industry, Friesland Campina for cheese manufacturing, or logistic handling cells for warehouse applications. In that period we've also managed to take over some Dutch and German companies in this specific automation field and the growth was significant.

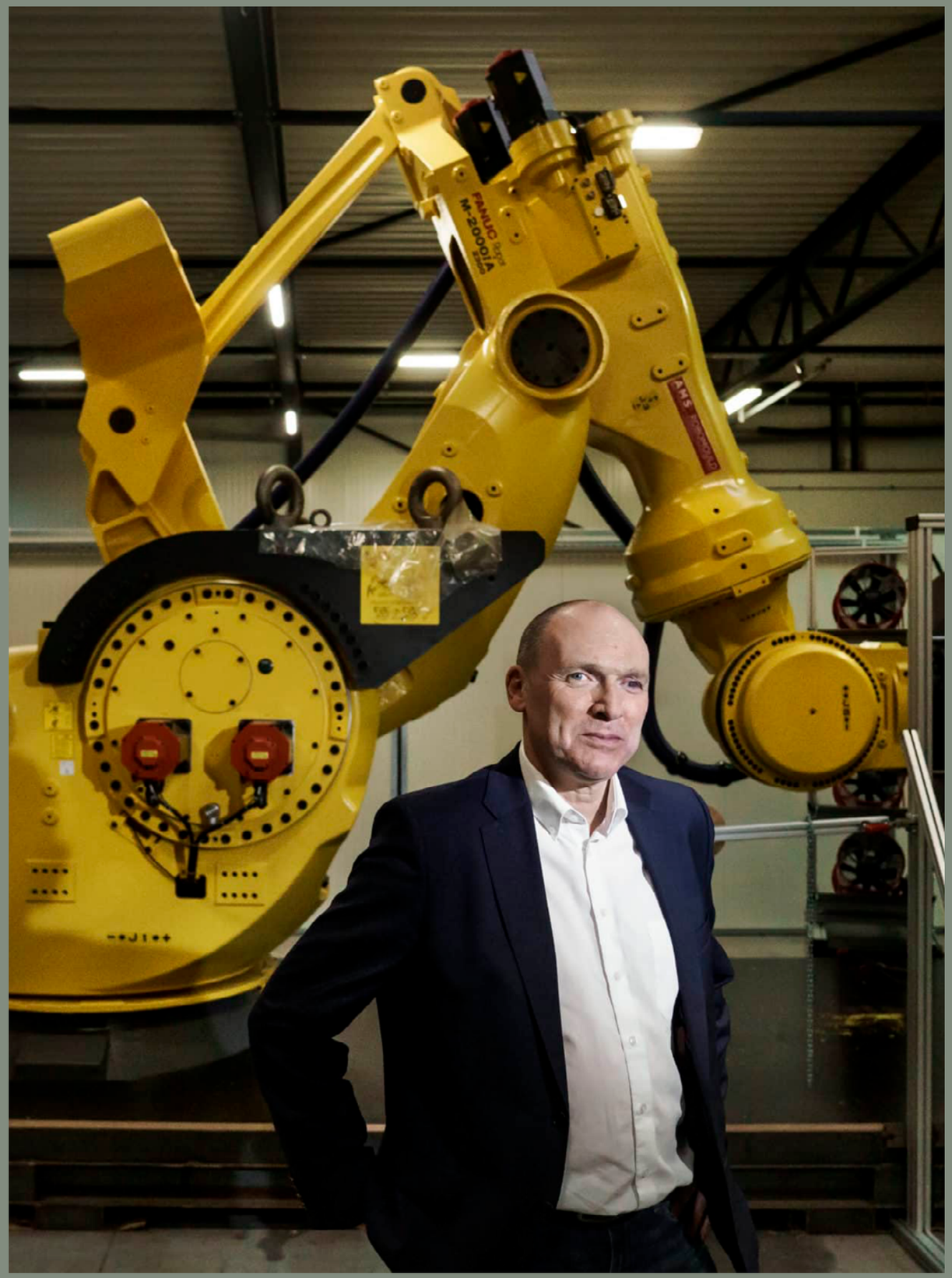
When was the first large-scale application developed and in which industry?







“The AMS Robomould application was born in 2013 from the request of a Dutch customer who wanted to produce 1 million high-end flowerpots per year. With traditional rotational molding, this would never have been possible.”



The AMS Robomould application started in 2013 with the question from a Dutch customer willing to produce 1 Mio high end flowerpots yearly. With traditional rotomoulding that would have never been the possibility. So together with Plastigi Belgium, responsible for the part quality, we've invented a fully automated manufacturing system based upon robotics as that's in the DNA from AMS. It's still our biggest client today with over 18 machines installed and running. So the 1st project with the 1st robot integration in rotational moulding has been started in the year 2013. After the start up of these systems with that visionary customer we've noticed that there was a potential to automate the rotomoulding business industry. We've decided at that moment to create our own AMS Robomould Manufacturing Technology, globally patented it. The next step was an intensive R&D project in house at with our local customers (Belgium, France, The Netherlands at that moment) to improve the product output quality and to reduce the cycle time of the manufacturing process. A new era was born and it was the beginning of a journey. Today AMS is your global full service and automation supplier for all your projects in the rotomoulding business. Our systems can do the fully automated process from material supply (hopper systems) to automated demoulding of the product and if needed trimming or cutting with robotic systems. All integrated in 1 production cell so no operators are need to manufacture your products at the fastest cycle time and highest quality level. Production can take place of your skin-foam-skin products 24/7.

You were among the first companies to introduce robotics into rotational molding: what are the main production advantages your technology offers?

AMS was the 1st company to bring the robotic system

“The challenge indeed for the rotomoulding industry is to grow “outside” the actual business from watertanks, flower pots, design parts .. but more into hightech end products used for the H2 hydrogen technology, or car body parts, or airplane industry with new ideas as combinations from carbon fiber or not, fire retardant .”

into the rotomoulding business for the rotational moulding process. And all this based upon a fully electric system with direct mould heating, so a "green-manufacturing-technology" and no CO2. A sustainable technology and ready for the future.

Controlling thicknesses within the rotationally molded part has always been a crucial challenge for improving product quality: how does robotic molding contribute to achieving this important goal?

Controlling of the thickness has been achieved by using + 32 thermocouples/product and + 100 electrical heating channels. They're all in a closed loop system and updating via an own developed wireless system every 100msec the information for the manufacturing system. But also extra valves can be controlled by this IO box so we easily can apply air, vacuum, nitrogen or other gasses and functions into the process.

For many decades, robotics was primarily associated with the automotive industry: does Robomould today represent a driver of innovation applicable to a wide range of products across multiple industrial sectors?

AMS has indeed always been a leader in the setup of production processes in the automotive industry and this knowledge we're using today in the automation of the rotomoulding industry. Not only for the process but also for the safety used in you production cell. All is based upon CE and risk analysis studies to keep your people and operators safe as well.
The challenge indeed for the rotomoulding industry is to grow "outside" the actual business from watertanks, flower pots, design parts .. but more into hightech end products used for the H2 hydrogen technology, or car body parts, or airplane industry with new ideas as combinations from carbon fiber or not, fire retardant

“During my career in robotics, now +40 years, they’ve never been a job killer. Instead, until now they’ve been a job creator. Many companies survived thanks to the higher production and constant quality output and could mange to get extra orders”

material layers on your products, skin-foam-skin applications ... But, important is to bring these high end products in an automated manufacturing method to ensure the highest quality. And of course, don't forget to use more and more recycled materials as in a few years from now this will become more and more important.

The robotics revolution has often been associated with fears that it represents a solution that eliminates the need for manual labor: do you agree with this, or do you see robots as a way to upgrade human labor with more specialized roles and functions?

During my career in robotics, now +40 years, they've never been a job killer. Instead, until now they've been a job creator. Many companies survived thanks to the higher production and constant quality output and could mange to get extra orders in. So out of studies done in Belgium in the automotive industry and their tier 1 suppliers each installed robot created jobs for 3,7 extra people. So we should not be afraid of the robotic system but we should embrace him to keep our jobs local. In the actual global volatile macro-economic environment it will be the most important for the future to automate your process to keep your company profitable. And don't just have a look at 1 production spot or intensive labor project in your company. Dare to have a look at the complete in house production process from part design, to engineering, to manufacture, .. and link and automate them all together. Not single small spots in your factory but have a helicopter view all over the factory and take a timeline of 5 years to really automate your complete setup and process.

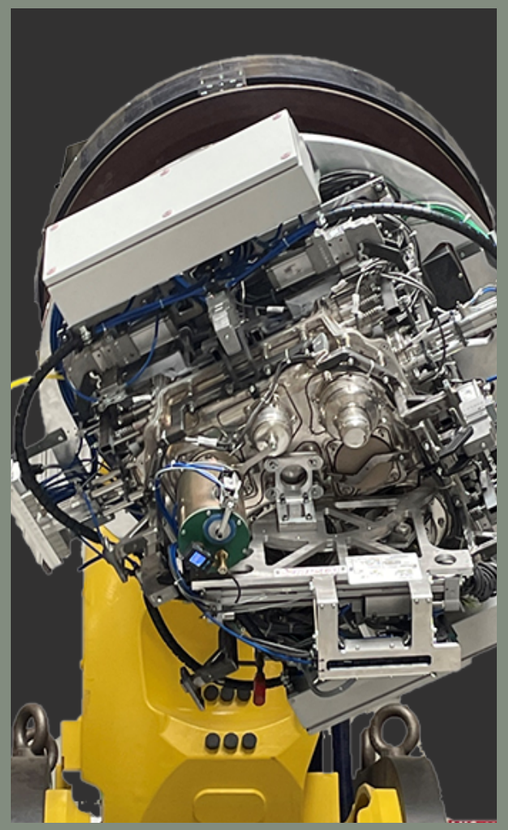
Given the decreasing cost of work performed by robots compared to human labor, do you believe that the use of robots represents a historic opportunity for many European and American companies to repatriate significant production to their own countries?

The actual possibilities of the new robotics systems and the approach towards humanoid robotic systems will give a complete new approach towards jobs in factories. Have loads and dirty (hot) manufacturing process environments will no longer be accepted by people. With our manufacturing system and due to the use of the direct (electrical) mould heating process we don't have the issue for instance anymore of +40° Celsius next to the machine for the operator. Or as we're demoulding fully automated the mould opening has been done fully automated without interruption and without using a steel tube or wrench to force the opening of the mould. So no longer moulds will be destroyed by opening/closing.

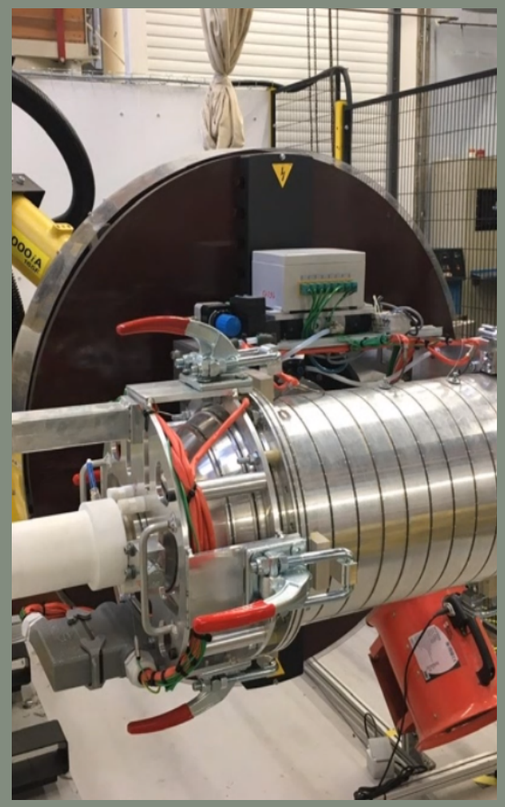
Can the introduction of robotics in a rotational molding company be limited to installing a single robot to perform a specific task, or should it be accompanied by a complete redefinition of the internal organization to avoid productivity bottlenecks?

Always best is to install a complete cell and to do as much as possible tasks automated as that will not disturb the complete process. That gives also the highest output and the shortest cycle time. So before starting the automation process please reconsider also the maintenance and in house service department as it might be possible that a higher level of engineer and maintenance guy might be needed. To keep your fully automated equipment up and running with the highest OEE.

The innovative role of robotics also fits well with the development of alternative energy: this is the case, for example, with your significant activity in the production



“The AMS Robomould system is foreseen from a fully automated tool exchange system. Without manual interaction. So, you give the system a “play-list” in the morning and the system will use out of its warehouse the correct tool and will manufacture the requested product.”



of rotomolded containers for hydrogen transport. Would you like to tell us about it?

The liner of a H2 tank can "only" be produced at the highest quality level with electrical moulds and automated equipment. Doing the manufacturing of liners in PA will anyhow be difficult on traditional machinery and equipment but you'll never achieve an overall thickness within the requested tolerances. For prototyping, no issue to manufacture traditional, but serial production needs fully automated electrical equipment. We're gathering also all manufacturing data in a database and this information goes for each produced product direct into the MES system from the customer. All parts and data must be traceable. And this information must be kept digital for minimum the next 10 years.

The rotational molding industry also includes many small and medium-sized companies: does the introduction of robotics make sense and have advantages even for smaller companies?

The AMS Robomould system is foreseen from a fully automated tool exchange system. Without manual interaction. So, you give the system a "play-list" in the morning and the system will use out of its warehouse the correct tool and will manufacture the requested product. The tool exchange can be done within 1 min fully automated. And the system recognizes the tool so the appropriate recipe will be used with the correct material, temperature curves, air or vacuum into the tool, ...

Finally, looking ahead 10-15 years, how do you see the evolution of robotics in rotational molding? What might be the next concrete steps for this industry?

The ban on using fossil heating systems in rotational moulding processes will give a push into the use of electrical moulds. And as people are so difficult to get (and to keep, and more costly) the automation level will increase.
But it will be on dedicated parts with a higher added value. The market for bigger watertanks is another market... but the demand for a shorter cycle time, higher quality, less and greener energy, ... will give an extra push into the new rotational moulding market. Possible also with some consolidations the market will move to a market segment with a higher output and more diverse products.
AMS Robomould is ready for new challenges into a global market, with global partnerships, open for licensed users and partners. An intensified search the next years for new customers and products in the Middle East, Asia, India, Australia and New Zealand ... but for sure in the short term a next step in USA.
So we're reaching out to you and feel free to join our Robomould Technology community or propose cooperation models and get in touch with us.
Our target is the support into the setup into new products, new ideas, the delivery of turnkey full automated rotomoulding manufacturing cells. Sustainable, based upon green technology. At AMS we're moving the 5 next years into the NextGen setup which will be covered by Laurens, my son, as announced at the ARM CE meeting recently, so we've a continuity and growth possibility for the next 20 years again!

A bright future together.

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3. Design Protagonists

Frank Gehry

Gehry Partners LLP, Los Angeles, USA

Deconstructivist Poetic

www.foga.com

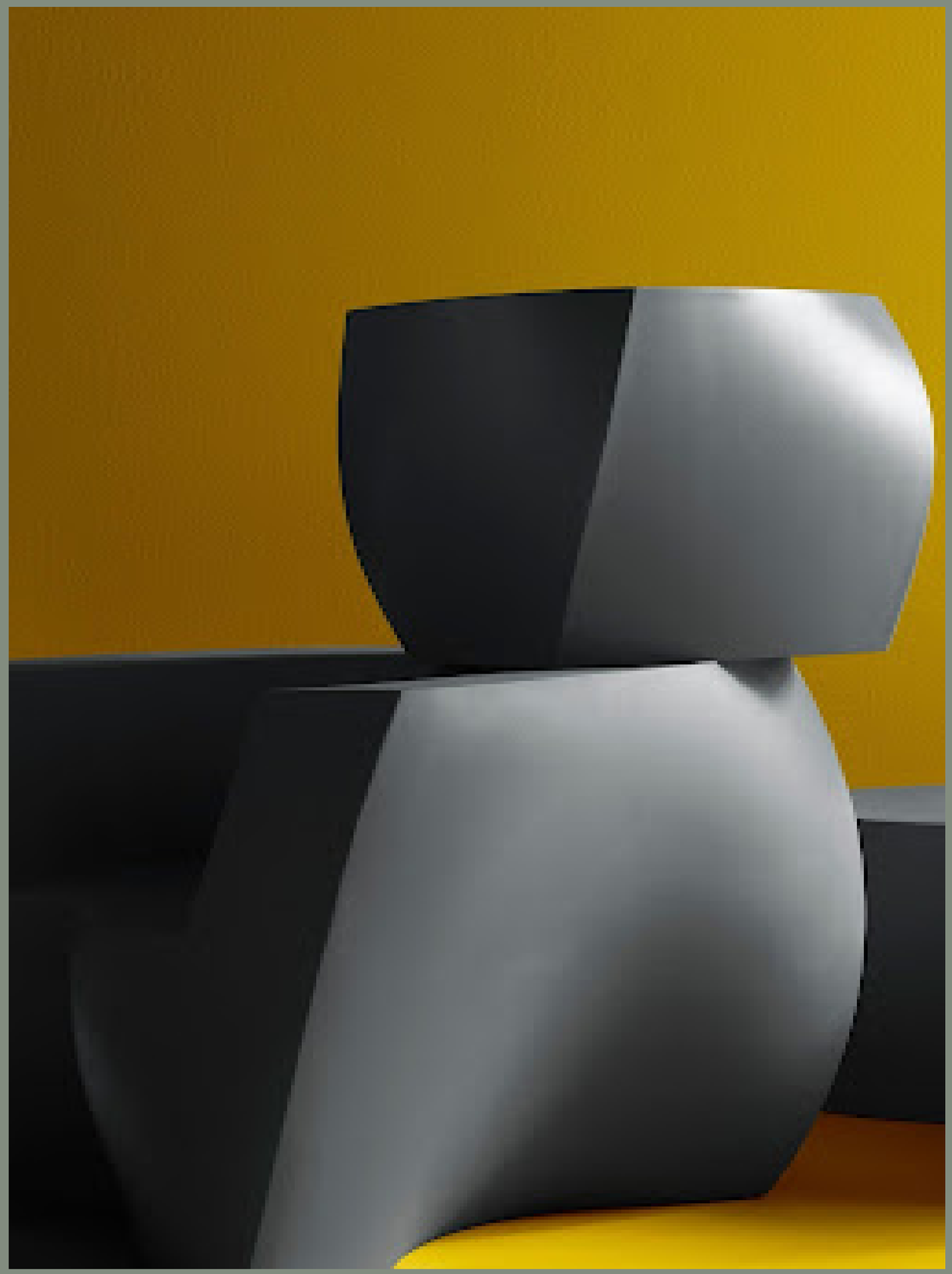
Text by Riccardo Giovanetti

On December 5, 2025, the world of architecture and design mourned the passing of Frank Gehry, the celebrated Canadian-born architect who had lived in the United States for decades, responsible for many powerful and globally recognized projects. In this issue of WeRoll, we pay tribute to his work by retracing the birth and evolution of one of his most iconic designs, the Frank Gehry Collection, designed in 1992 for Heller and produced entirely through rotational moulding.

Experimenting with Different Materials

Frank Gehry, is considered to be one of the most important representatives of architectural deconstructivism, due to his widely demonstrated interest in a process of breaking down buildings into volumetric units to then reassemble them according to apparently illogical criteria which favour oblique lines, and often made with combinations of diverse and unusual materials – from metal netting to undulating sheet metal, to complex titanium-based alloys – according to practices which recall techniques such as collage.

Arguably one of the most important architect of the contemporary era, Frank Gehry's unique style has been difficult to categorize. While his early work was rooted in modernism, his later projects consciously rejected modernist tropes. Experimenting with a wide range of materials, from inexpensive mass-produced objects to futuristic titanium, his buildings are playful and surprising, yet functional. Gehry has designed numerous iconic buildings, including the Guggenheim Museum Bilbao, the Walt Disney Concert Hall, and the Biomuseo in Panama City, which have become world-renowned attractions in their own right.



A flexible technology was needed, capable of interpreting the articulation of forms and translating them into objects that would stand the test of time and be aesthetically pleasing.

Much More Than Just a Simple Seat

When Frank Gehry met Alan Heller, founder of the American furniture brand Heller, an extraordinary collaboration was born. "We can take your architecture and transform it into furniture," Heller proposed, fascinated by Gehry's unique and recognizable style. This was a complex challenge, given that the formal image of Gehry's architecture transcended the classical rational logic of orthogonal and geometric lines, developing instead through a set of articulated forms that seemed to float in the air, defying the principles of statics. A flexible technology was needed, capable of interpreting the articulation of forms and translating them into objects that would stand the test of time and be aesthetically pleasing.

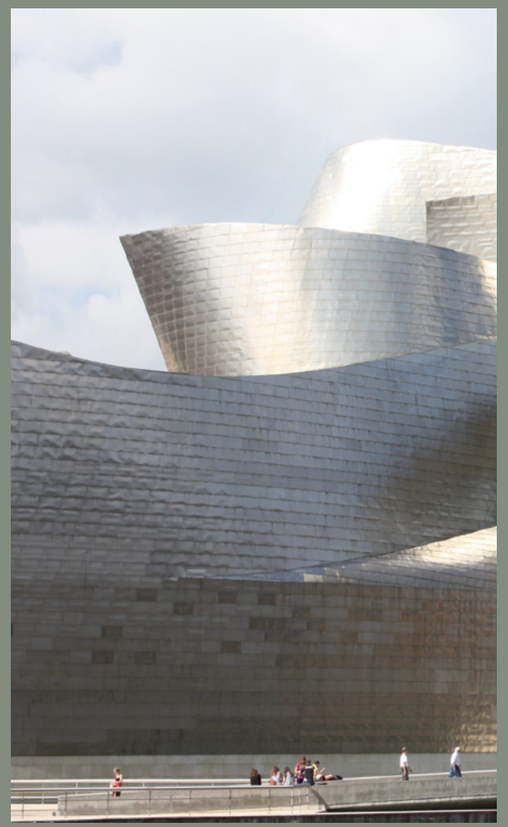
To verify the size and shape of each product, initial wooden prototypes were created, which also served to test the ergonomics of the seat and the available support space on the stool and sofa.

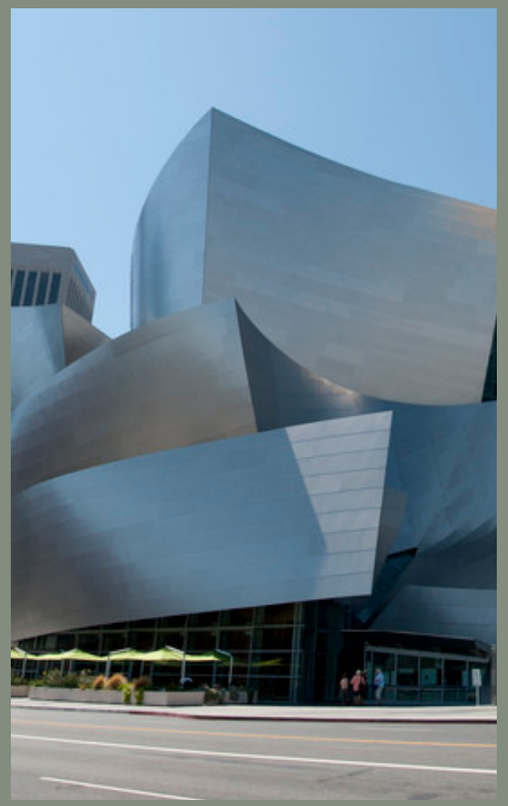
To test the dimensions and shape of each product, initial wooden prototypes were created, which also served to test the ergonomics of the seat and the available space on the stool and sofa.

The idea of exploiting the potential of rotational moulding to create Gehry's collection quickly emerged as the best possible solution for a number of reasons. First, rotational moulding allowed to faithfully replicate the curvilinear forms that characterize Gehry's design, providing a faithful representation of the initial idea. Furthermore, the creation of hollow polyethylene bodies allowed to increase the functionality of these products, extending them to both interior and outdoor spaces.

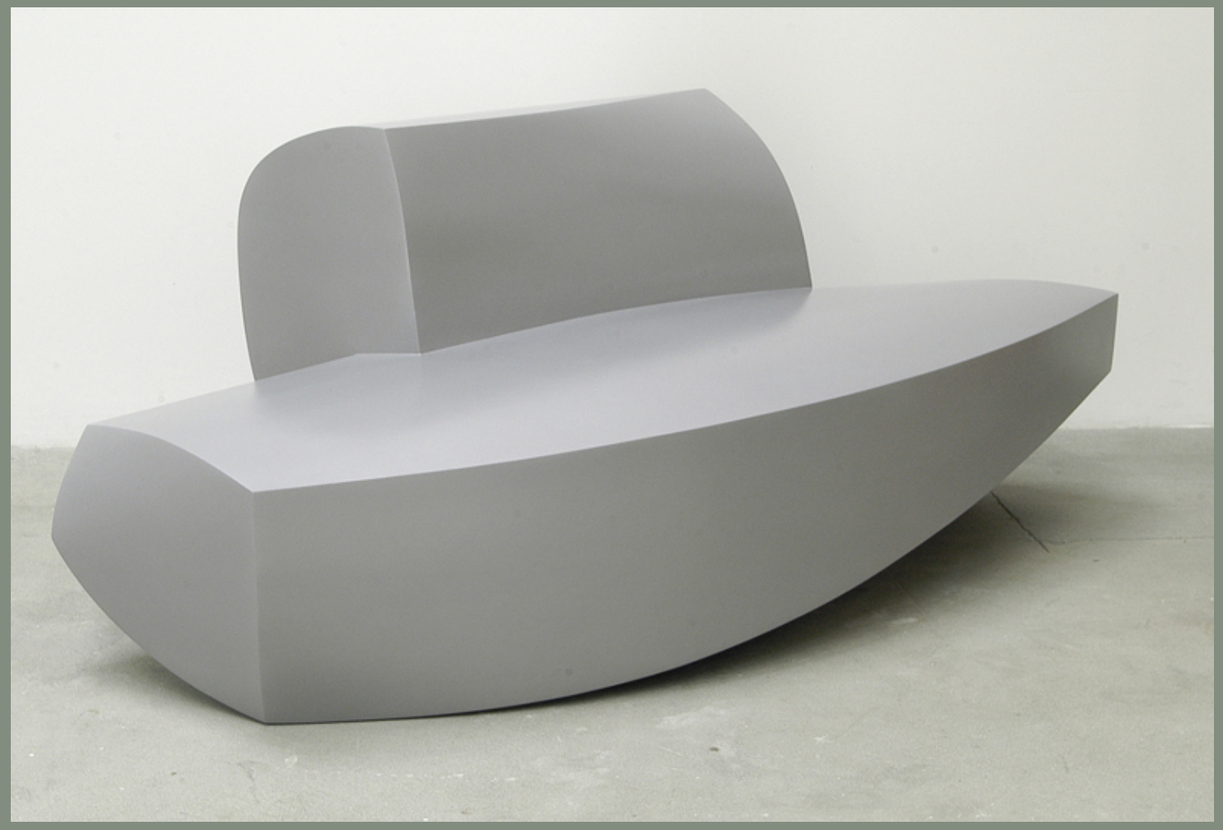
The seating surface of each piece in the collection has been designed with a slight slope that allows rainwater to drain away when placed outdoors.

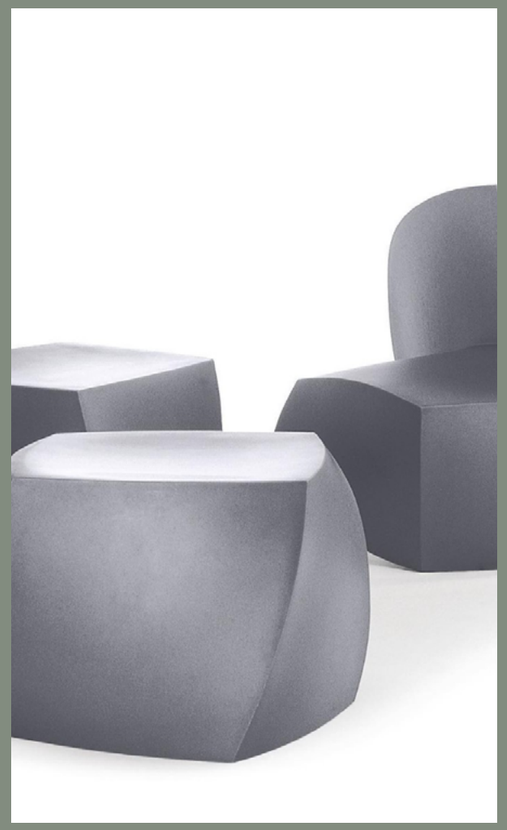
Heller's collection represents a manifesto of Gehry's





Since its inception, Frank Gehry's collection has established itself as an icon of contemporary design and even today, many decades later, it maintains its relevance and innovative power intact.





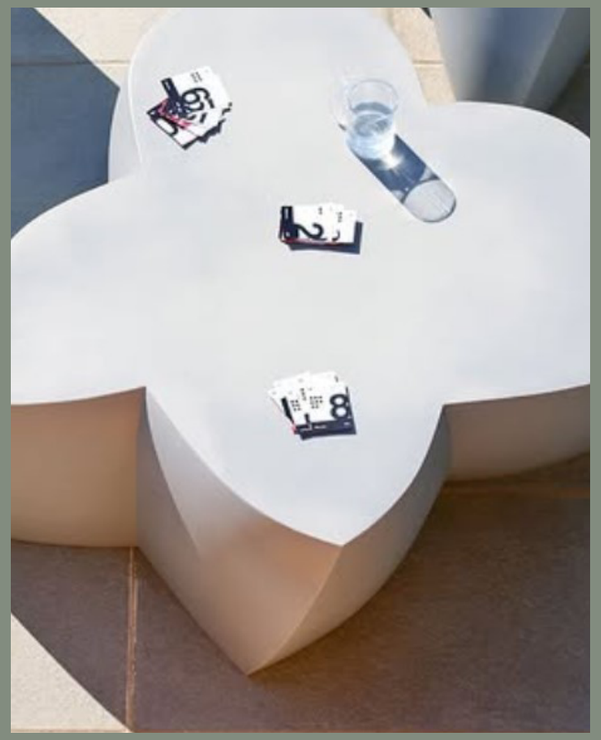
design philosophy, a small-scale reproduction of his architectural vision that has clearly been developed over the years in major international urban areas.

The Unique Style of a Free Spirit

As with the project for the Museum in Weil Am Rhein, Germany, designed in those years, in this collection for Heller, Gehry abandons the idea of material collage and opts for the monomateriality of rotomoulded polyethylene, mass-coloured in gray. The focus shifts to the dramatic lighting effects created by the introduction of curved volumes and planes, creating one of the first examples of Gehry's sculptural architecture, inspired by the Futurist plasticity of figures such as the Futurist artist Boccioni.
Since its inception, Frank Gehry's collection has established itself as an icon of contemporary design and even today, many decades later, it maintains its relevance and innovative power intact. Heller's new entrepreneurial direction has led to a reinterpretation of Gehry's collection through the introduction of new, bright shades that give each piece of furniture a fresh innovative image.
Frank Gehry taught us that architecture, like design, can be an original and alternative adventure beyond imagination, that nothing is ever taken for granted in conceiving a space or an object, that what we consider consolidated can be subverted beyond all rules, that chaos, more than order, can be a harbinger of unexpected formal solutions. In this sense, the architect's work has helped reinforce the idea that architectural thought, when it travels the undetermined paths of empiricism, yields unpredictable results, capable of playing a fundamental role at the social, economic, as well as cultural levels.

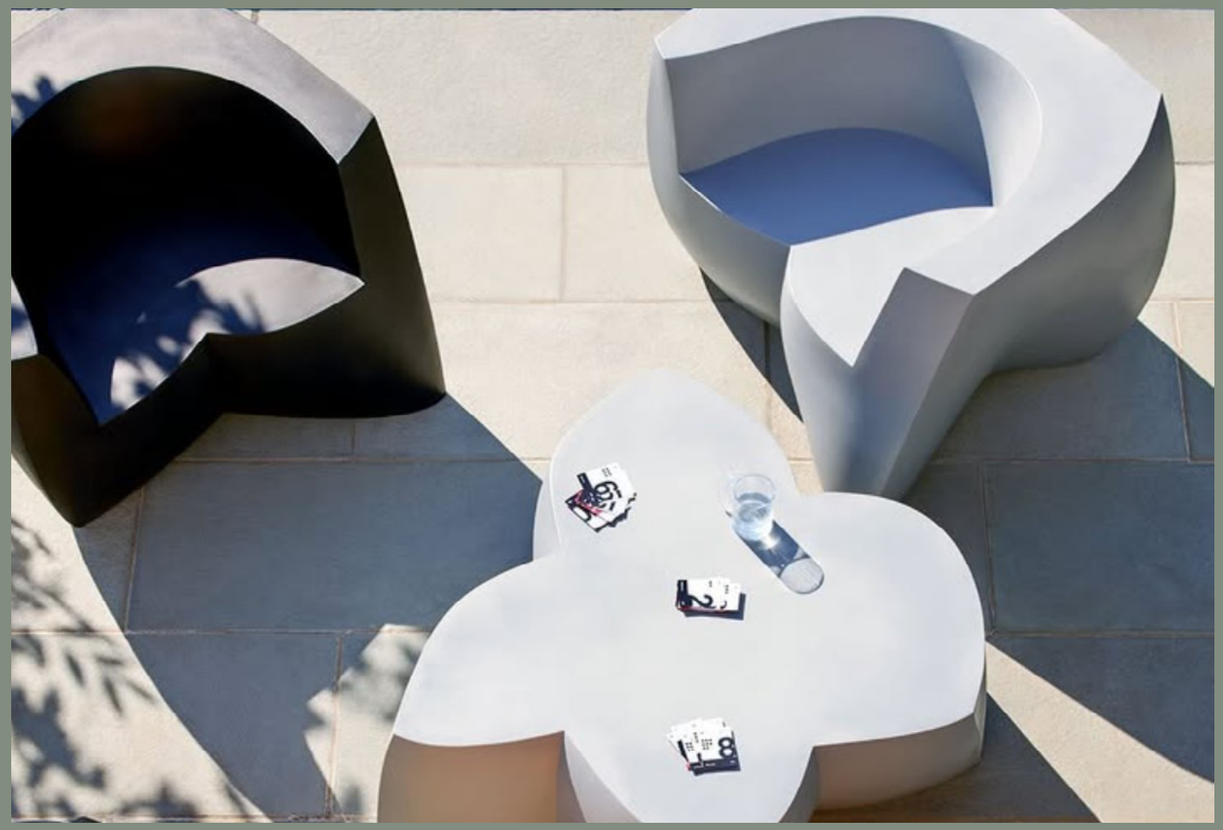
Each piece that makes up Gehry's collection changes image depending on the point of view.

The edges with slight fillets help to emphasize the articulation of forms that characterizes each of Gehry's projects.



The designer revolutionizes the rational idea of thinking about seating by introducing a new formally complex forms.

The introduction of rotational technology has allowed us to propose the collection for both internal and external uses.



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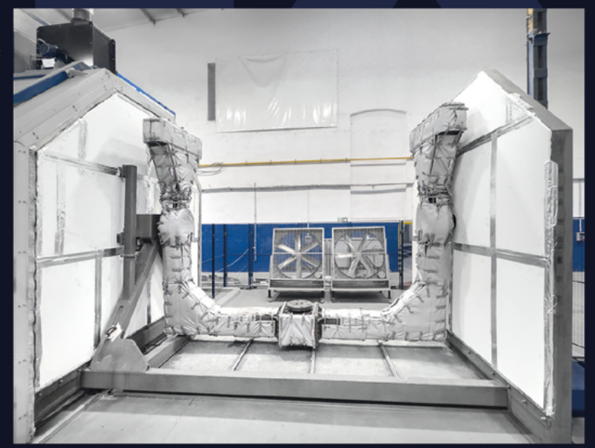

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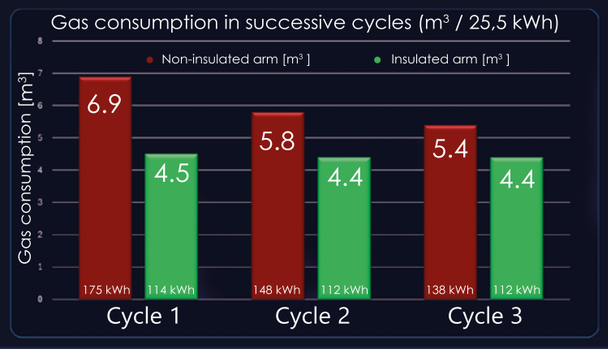

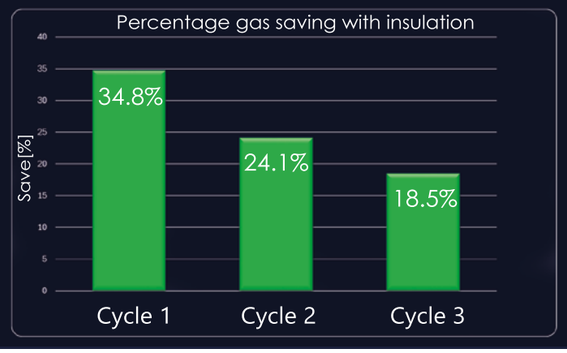

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Venkit Mahadevan

PolymerLink, Mumbai, India

Solutions Before Materials

www.polymerlink.net

Text by Elena Chechet

PolymerLink is a Joint Venture between Malaysia-based PolymerLink and India-based Maxpol. How do you see the development of rotational moulding in these two geographical areas?

Rotational moulding in India and Southeast Asia is at a very important stage of growth. In India, we are seeing rapid expansion driven by infrastructure development, water management, sanitation, agriculture, and industrial storage applications. Southeast Asia, including Malaysia, is experiencing strong momentum in value-added, export-oriented, and technically refined rotomoulded products. These two regions complement each other extremely well—India brings scale and strong domestic demand, while Southeast Asia contributes process maturity and design sophistication. Together, they form a solid foundation for long-term, sustainable growth in the rotomoulding industry.

Your company is not only a polymer producer but also a service provider, assisting partners from concept to final product. How does this strengthen your role in the industry?

This integrated approach allows PolymerLink to function as a true solution partner rather than just a material supplier. By supporting our customers right from material selection and part design to processing optimization and on-site troubleshooting, we help reduce development cycles, improve product performance, and ensure consistent quality. This collaborative way of working builds long-term trust, encourages innovation, and strengthens relationships across the entire value chain.

"While the core process is well established, there is significant growth potential in advanced materials, improved process control, multilayer structures, foams, functional additives, and automation."

How do you see the near future of rotational moulding: a mature technology or one with further growth potential?

Rotational moulding has certainly not reached its peak. While the core process is well established, there is significant growth potential in advanced materials, improved process control, multilayer structures, foams, functional additives, and automation. The near future will see rotomoulding expanding further into technically demanding, performance-driven applications.

Looking 10–15 years ahead, what trends will most characterise the rotational moulding industry?

Key trends will include the development of specialty polymers, lightweight structures, energy-efficient processing, increased digitalisation, and sustainability-driven material innovation. We also expect wider adoption in sectors such as electric mobility, infrastructure, renewable energy storage, and smart urban solutions, supported by better design tools and simulation technologies.

Technological evolution has increased product sophistication. What is your view, particularly regarding the automotive sector?

The automotive sector represents a strong opportunity for rotational moulding, especially for non-structural, functional, and fluid-handling components. Advances in material performance, dimensional stability, and surface finish now enable rotomoulded parts to meet demanding automotive standards. This is particularly relevant for electric vehicles, off-road vehicles, and utility applications, where durability and weight optimization are critical.

The industry has entered several niche markets. Is there still room for further growth?

Absolutely. Many industries are still underexplored by rotational moulding. Areas such as thermal insulation, chemical containment, defence, marine applications, medical logistics, and custom industrial enclosures offer clear growth opportunities. As designers and engineers gain deeper understanding of the process, new and innovative applications will continue to emerge.

How important is spreading knowledge about rotational moulding? Does a shared industry culture support growth?

Knowledge dissemination is fundamental to industry growth. A broader understanding of rotomoulding capabilities among designers, engineers, and decision-makers directly drives adoption. Industry forums, publications, training programs, and collaborative platforms help elevate rotomoulding from a niche manufacturing process to a strategic production solution, supporting sustainable growth for the sector.

Sustainability is a key challenge. How does PolymerLink address this?

Sustainability is embedded into PolymerLink's development philosophy. We focus on material efficiency, longer product life cycles, recyclable formulations, and energy-conscious processing solutions. Our work in lightweighting, foam technologies, and specialty materials helps reduce overall material consumption while maintaining performance—supporting both environmental responsibility and our customers' long-term sustainability goals.

5. Quality Productions

Dhanu Patell

Reinhardt Teknik, Vadodara, India

Innovation as Strategic Element

www.reinhardtindia.com

Interview by Sarah Morrison

Reinhardt's entrepreneurial journey is based on an unprecedented alliance between German know-how and Indian potential, which has produced a new generation of high-quality machinery...

Our entrepreneurial adventure began in 1992 when, together with Shivinder Chawla, we founded a small company, Rotoform, specializing in the production of rotational moulding ovens. Since then, our business has gradually grown, quickly becoming an international benchmark. Today, Reinhardt is present in over 50 countries worldwide with more than 420 machines installed.
A pivotal moment in our development was when Shiv boldly faxed Mr. Reinhardt in Germany, proposing a partnership that would combine German expertise with the growing potential of Indian industry.
Our mutual friend, Mr. Roelf Van der Wijk, accompanied us to the Reinhardt plant in the picturesque Black Forest, Germany. Roelf was a legend in the industry: a man of great humanity and philanthropy, always eager to help others. During that visit, we were handed two thick folders of projects. At first, the complexity of the projects seemed overwhelming. But after a night of reflection by a river, we realized that opportunities like this come once in a lifetime. We accepted the challenge, with the full support, training, and guidance of the Reinhardt family.

From the very beginning, your approach has been to invest in research to offer technological solutions based on the use of renewable energy...

Sustainability has always been a key element of our business development. From this perspective, we have helped introduce new high quality standards in India,

“Rotational moulding offers us the opportunity to introduce new, innovative applications, often replacing products made with other technologies and repurposing the entire production system to create more efficient and long-lasting solutions.”

where a healthy work environment is now an equally important factor in achieving high-quality rotational moulding. Today, we manufacture a range of fully electric machines and are constantly working on research and development to reduce carbon emissions by making our plants increasingly environmentally friendly.

What does each new machine produced around the world represent for you? Is it the repetition of a pattern or the development of customized technological solutions?

For us, each new plant represents a new challenge as we seek to combine our partner's needs with the potential offered by rotational technology. Our approach is based on creating customized production systems capable of long-term performance and ensuring high quality standards. Rotational moulding offers us the opportunity to introduce new, innovative applications, often replacing products made with other technologies and repurposing the entire production system to create more efficient and long-lasting solutions.

If you try to imagine the future ten to fifteen years from now, what are the trends that, in your opinion, will most characterise the world of rotational moulding?

I believe that knowledge sharing is key today and will be increasingly so in the near future. For us, the development of new machines begins, first and foremost, with a deep understanding of our partners' needs, which are never the same but vary based on a series of parameters. Working internationally, we've realized the strategic importance of being open-minded and able to communicate with every

“In many emerging countries, rotational molding is finding fertile ground for development and growth, thanks to the production flexibility it offers combined with the ability to produce quality products at relatively low investment costs.”

moulder, whether based in India, South America, Africa, or anywhere in Asia. Rotational moulding represents a great opportunity to improve productivity internationally. This is the main challenge and opportunity we face now and in the coming years.

Another concept you introduced was what you call One-Stop Solutions...

We now supply rotational moulds and provide complete support to our partners, directly following the entire installation process. We also invest significant time and energy in training, organizing specific courses to show plant workers how to optimize production by managing the machines effectively. All this allows us to create a cohesive network that we nurture through a continuous exchange of information with our partners.

In recent years the rotational moulding industry has progressively occupied various market niches with new products: is there room for further growth in the sector?

Rotational moulding certainly offers great potential for developing both established applications such as tanks and hollow containers, as well as introducing innovative new products. In many emerging countries, rotational moulding is finding fertile ground for development and growth, thanks to the production flexibility it offers combined with the ability to produce quality products at relatively low investment costs.

Are there any particularly significant examples in your entrepreneurial journey regarding technological innovation applied to products?

Among the most interesting experiences, I'd like to highlight Rapido, a unique technological solution we developed in collaboration with David Firth and the Australian company Rapid Plastics. Using this unique machine, we can produce enormous rotomoulded containers ranging from 22,000 to 32,000 liters in just 30 minutes, achieving a daily output of 15 tons with just four operators. Customised air flow, wireless communication, and wireless controls reduce the number of connections drastically and increase reliability. Multi-fuel, hybrid technologies and fully electric ovens are a big step towards using green energy, without investing in new moulds.

What innovations have you introduced in the world of automation based on renewable energy?

We created a new generation of fully electric moulding machines, which were first adopted by Saeplast and Rotovia to produce fish boxes with a consumption of just 1.1 kWh per kg of polymer. These innovations help increase productivity by offering high-quality, long-lasting products. We manage to combine the need for mass production with the importance of optimizing polymer material consumption. Reinhardt India is not just about building machines — it is about building ideas, friendships, and a sustainable future.

Is there equally important software support behind these hardware innovations?

Our machines are built with deep integration between these two fundamental components, hardware and software, to ensure ongoing support and constant performance monitoring. Each load-bearing component of our machines undergoes FEA analysis, allowing us to simulate their performance during the production cycle.

6. Global Vision

Alison McKeand, Katia Zoppetti

Dram, Milano, Italy

The Key Role of Accessories

www.dramsrl.com

Interview by Elena Chechet

Looking at the evolution of rotational moulding over the past few decades, Dram has certainly played an important role in raising awareness throughout the entire supply chain about the importance of accessories, which impact the quality of the final product and the efficiency of the systems.

Alison: It wouldn't make sense for us to offer products that our partners could find just around the corner, so we specialize in offering unique solutions from multiple continents. We've thus assembled a catalog of exclusive products that are extremely useful for companies in the sector.

Katia: Over the years, we've helped highlight the importance of accessories within the rotational moulding industry. This has helped foster a general awareness of the role of accessories, which are often crucial to achieving high-quality production.

What is the historical role of accessories in the development of rotational molding?

Katia: Through the introduction of multiple accessories, the rotational moulding industry has evolved significantly, exploring new product types and adding an ever-increasing level of sophistication. In just a few decades, we've gone from producing simple rotationally molded containers to creating extremely complex objects that would be impossible to produce without the use of certain accessories.

Alison: For example, the role of heat pipes has allowed us to deliver large amounts of heat to areas the oven airflow doesn't reach. These thermal conductors are extremely effective and easy to install on the mold. Their use is gradually evolving: initially, they were mainly used inside

“Rotational moulding is a relatively new technology that sometimes requires a relatively long time to understand the potential of a solution before fully adopting it.”

existing moulds to improve their performance, while today, new products are designed from the outset to adopt these solutions and allow for better heat distribution during molding.

Traceability of rotomoulded products is an increasingly central requirement for a growing number of moulders: what is your opinion on this?

Katia: Traceability is increasingly becoming less of an option and more of a standard for rotomoulders. And this phenomenon is no longer limited to the automotive industry, which already boasts a consolidated tradition in this regard, but is gradually extending to many other industrial sectors.

Alison: From this point of view, permanent graphics represent a reliable and efficient solution for customizing products with a long lifespan and the ability to resist impacts and atmospheric agents.

How does your relationship with companies develop? Are you involved from the initial design phase of a new product, or do you intervene primarily when a specific need arises?

Alison: Especially in the beginning, our role was primarily to provide "band-aids" to treat production problems. Obviously, the optimal situations are those in which we are involved during the development of the new product, thus being able to provide valid solutions to optimize the production cycle.

Katia: Having consolidated our relationships with companies over time allows them to get to know us better and understand precisely what we can offer in terms of services. Dram is now first and foremost a service company, and only then a commercial company.

What are the main requests coming from the world of rotational moulding? Are they related to the need to improve the aesthetic appearance of products or are they primarily aimed at solving technical problems?

Alison: There are solutions, such as vents, that are increasingly popular among moulders today; the same goes for heat pipes, which are now an established standard for most companies. Rotational mouding is a relatively new technology that sometimes requires a relatively long time to understand the potential of a solution before fully adopting it.

Are there any differences in the use of accessories between Italian companies and your customers abroad?

Alison: There are certainly countries where rotational moulding has already reached a high level of sophistication, such as in many Western European countries. Eastern European countries, on the other hand, represent a rapidly and constantly evolving world that continues to improve by adding new product types and therefore investing increasingly in quality.

For years, you've invested heavily in internationalization, participating in the industry's major global events. How important do you think this approach is for your business's growth?

Alison: Participating in international events means having the opportunity to physically meet our partners, listen to their needs, and share practical advice and solutions. Even though we increasingly live in an era of remote communication and often digital relationships, in-person meetings are still a fundamental element for building lasting, deep collaborations and for fully understanding customer needs.

A key aspect of a company like ours is improving communication, facilitating moulders' understanding of specific technical solutions. Our mission is to educate companies, help them fully understand the potential of specific products, and simultaneously act as ambassadors in the field for the companies we represent.

Katia: Our mission is to bring our clients closer to the technical solutions we offer: it's not simply a matter of language, but, above all, a question of culture and knowledge. We consider the companies we work with as allies, and therefore we invest a large portion of our time in supporting them, visiting them regularly, and understanding their technical needs.

Let's now shift our attention to some more general topics: what do you think are the trends that will most characterize this sector over the next few decades?

Alison: I believe automation is a constantly growing and consolidating trend, which will increasingly allow companies to replace growing portions of their labor with machines. One of the major challenges facing the industry today is the difficulty of retaining specialized personnel: companies often face constant staff turnover, which ultimately slows productivity. Through increasingly automated systems, it is possible to significantly increase production capacity, extending it to 24/7.

Katia: One of the distinctive features of rotational moulding lies in its intrinsic production flexibility. Currently, the most automated solutions don't seem to offer a certain level of production versatility, and therefore I believe the path forward should be to mass production, offering the combined benefits of find automated solutions capable of meeting diverse production needs with high flexibility.

The topic of rationalizing energy consumption has represented a very pressing general challenge in recent years: what is your point of view?

Alison: The post-Covid energy crisis sparked hope that this would represent an opportunity for companies to evolve toward less energy-intensive and more sustainable solutions. A few years later, I must admit that this moment was short-lived, and therefore the issue is still far from being resolved.

Finally, a question about the composition of your team: you're a very close-knit, all-female team, and you've made this a key aspect of your communication: what does it mean to work daily in a predominantly male-dominated sector?

Katia: I really enjoy working at Dram, where our female team is very close-knit and complementary. At the same time, I believe that the foundation of everything is the need to demonstrate expertise, understanding problems, and engaging in collaborative dialogue with companies.

Alison: I'd really like our industry to stop talking about men and women and instead focus on people. What matters is the skills each individual demonstrates, their ability to interpret situations and offer thoughtful, feasible solutions. This is our role, and we work towards it every day with passion and expertise.

7. Telling ARMO

Abder Haifi

AFR - Association Francophone du Rotomoulage

Sharing Knowledge

www.rotomoulage.org

Interview by Corinne Lambert

What are the main objectives of the AFR association?

AFR objectives are to gather all rotational molding actors within their area, to discuss their main concerns and main achievements. AFR strives to bring answers to their members. The AFR aims to grow, learn, share, interact, and take into account the needs of its members. Its philosophy is to remain independent, representing all its members and providing them with services such as technical and economic monitoring and training sessions.

What are the main challenges that this sector has to face in order to further develop the technology?

All actors are now using recycled material to meet European guidelines, but now technology allows us to manufacture premium products with recycled material. The next step is to impose this technology as a strong alternative to other technologies. Then we need to advertise to a larger scope as now the technology is mature enough to answer new needs with more constraints.

In recent years the rotational molding industry has progressively occupied various market niches with new products: is there room for further growth in the sector?

As explained above, the technology is mature enough to reach new markets occupied by injection or blow moulding. The market niches will remain to rotational moluding as other technologies aren't able to respond this specific market, mainly due to tooling cost and part size or thickness.

“The step is already made; the future of rotational moulding is to grow to manufacture very complicated shapes with a high quality even on cosmetic purpose.”

If you try to imagine the future ten to fifteen years from now, what are the trends that, in your opinion, will most characterise the world of rotational moulding?

Rotational moulding delivers strong large products in the past, but now the trends go more on technical parts as hydrogen tanks, car or trucks parts, and revealed as furniture designer's manufacturer. The step is already made; the future of rotational moulding is to grow to manufacture very complicated shapes with a high quality even on cosmetic purpose.

In today's highly globalised world, how important is the sharing of information between the different associations involved in rotational moulding?

Every country grows differently, development of technologies, experience or sometimes very specific markets (as an example Canada with canoe or small boats); but all of us are facing almost same issues as energy cost, material cost; recruitment, environmental requirements. Sharing those problems helps to bring solutions which benefit all members. At that time we did not act as competitors but as team members, if more actors of rotational molding grow, the business will grow for all others.

Training is one of the key activities to increase knowledge of rotational moulding among new generations of workers and professionals in the industry: how does AFR work in this respect?

This topic is key in our business, this technology as a significant part of craftsmanship which brings the value of each product manufactured. Despite the evolution of technology, work is still rather physical, creating a dislike from new generation for that kind of job. AFR effort to bring solutions by advertising, linking with engineers' schools to promote our technology. AFR brings rotational molding suppliers during masterclasses which offer solutions to reduce those physical constraints.

You regularly organize conferences, as you did a few months ago. How important are these opportunities to connect national companies with international speakers?

At AFR, most of members are French speakers, and this is the name of the association. With AFR we do not have many connections with international, but many Europeans, Africans are members of AFR, then the link to international is done with ARMO through their Directors. Then AFR voice is represented in all ARMO meetings or conferences, almost 5 or 6 times a year.

Do you believe rotational moulding could be a valid alternative for rethinking certain products previously made with other materials and technologies?

I'm convinced that rotational moulding is more than a simple alternative, and technically some products could be made only with this technology. Rotational moulding is a guarantee of strength and durability, and it's probably an answer to environmental protection issues by bringing products to the market that will still be around in 50 years.

8. Key Companies

Rotovia

Dalvik, Iceland

International Leadership

www.rotovia.com

Profile

Rotovia is an international manufacturer of rotomoulded plastic solutions with more than 50 years of experience in rotational moulding. The company operates a multi-site manufacturing network across Europe and North America, combining local industrial expertise with a strong international footprint. Rotovia develops both custom moulding projects and proprietary product solutions.

Alongside its custom moulding activities, the company develops and manufactures solutions through its own brands, including VARIBOX, Sæplast and iTUB, reflecting different applications of rotational moulding within the Rotovia Group.

Manufacturing footprint in Europe and North America

Rotovia's production sites span several countries, including sites in Poland, Germany, the Netherlands, France, Spain, Iceland, Canada and Mexico. Each location contributes specific technical expertise and industrial experience to the company's overall manufacturing capabilities.

This multi-site structure supports flexibility, resilience and consistent quality, while enabling knowledge exchange across different production environments and applications.

Responsible approach and long-term perspective

Sustainability is an integral part of Rotovia's manufacturing approach. The company focuses on designing products for durability, long service life and reuse, while continuously improving material efficiency and energy performance across its operations. Circular solutions, recycling initiatives and responsible resource management form key elements of Rotovia's long-term industrial perspective.

9. International Events

ARMO

Affiliation of Rotational Moulding Organisations

Calendar

www.armo-global.org

Rotopol 2026

Wroclaw, Poland May 14 – May 15, 2026

This year's 10th Rotopol Conference will focus on the theme "New Trends in Rotational Moulding". As every year, the meeting will be attended by renowned speakers from Polish and abroad, as well as representatives of Polish and foreign rotomoulding companies.
www.rotopol.pl

StAR Annual Rotomoulding Conference & Trade Show 2026

Delhi, India Feb 2 - Feb 4, 2026

From 2 to 4 February 2026, StAR will hold its annual conference in Delhi. The event will be accompanied by a trade fair offering opportunities to meet with companies and participants.
www.starasia.org

ARMO General Conference

Baveno, Italy Sep 26 - Sep 28, 2027

ARMO is pleased to announce that its next general conference will be held in Baveno, northern Italy, from September 26 to 28, 2027.
More details and information on this major event dedicated to the world of rotational molding will be available soon.
www.armo-global.org

10. Affiliates

AFR - Association Francophone du Rotomoulage www.rotomoulage.org

ARM - Association of Rotational Molders www. rotomolding.org

ARMA - Association of Rotational Moulders Australasia www.rotationalmoulding.com

ANIPAC - The Mexican Plastic Association www.anipac.org.mx

ARMSA - Association of Rotational Moulders Southern Africa www.armsa.co.za

ARM-CE - Association of Rotational Moulders Central Europe www.rotational-moulding.de

StAR - Society of Asian Rotomoulders www.starasia.org

Nordic ARM - Nordic Association of Rotational Moulders www.nordicarm.org

BPF - Rotational Moulders Group www.bpf.co.uk

IT-RO - Italia Rotazionale www.it-ro.it

RPC-CPPIA www.crotomolding.com

Rotopol Association www.rotopol.pl

ARMO

www.armo-global.org

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