

RotoTrends

*Exploring the potentials of
rotational moulding in design*

Issue 8

Introduction

The evolution that has distinguished rotational moulding in recent decades is intimately related to the development of awareness of rotomoulding in the design world.

In other words, as the potential of rotomoulding becomes “common knowledge” amongst designers and producers the sophistication of their projects using our technology for industrial applications grows. RotoTrends explores the different potentials of rotational moulding showing case-histories where the roto technology is able to open new markets, developing innovative products and working successfully in new niches.

The projects developed in partnership with international design institutes, and the selected industrial products produced a faithful portrait of an industry constantly hungry for new ideas, eager to experiment with new shapes and new materials, sensitive to the international richness of globalization.

Rotomoulding is strategically placed as one of the key technologies for rethinking the industry according to today's needs for technology and performance.

Smart Cities and Intelligent Buildings

The use of drones and robots for the delivery of goods is something more than an idea or a project, in particular self-driving systems that move on land, thanks to research and the progress of technologies can already be operational and used both in public and private areas.

One of these examples is given by Yape, the autonomous two-wheeled robot created by the Italian start-up e-Novia already being tested about four years earlier in Cremona and in Fukushima in Japan, in what appears to be one of the most evolving cities in the world, and then in Frankfurt airport. Now Yape is used in a real delivery system in Milan.

Highly Innovative Logistics Partner

In the use of bellboy robots, the ecological aspect is not secondary, because they are technologies with low environmental impact, which do not release exhaust fumes and do not contribute to clogging circulation in the city.

Clearly, to obtain real advantages in reducing the environmental impact it will be necessary to imagine a large-scale use, and for self-driving systems it has been seen in recent years that the obstacles to mass adoption are often of a regulatory nature.

From a purely technological point of view, an experiment like that of Yape could have started even a few years ago (albeit with some limitations due to the lower diffusion of 5G, which is one of the technologies in play).



Yape

The autonomous robot for your everyday deliveries

production e-novia - Italy

YAPE is a self-driving ground drone operating in logistics and last mile delivery.

It can carry food and other products up to a weight of ten kilograms. Thanks to the 5G network, it can “perceive” the surrounding environment, communicate and move adaptively in space. Through an integrated sensor system, it can also send and receive information in real time and therefore be traceable at any time. Once arrived at its destination, it allows the opening of the container compartment by scanning a QR code. Yape enables a sustainable delivery system: the World Economic Forum has in fact included it among the Groundbreaking Bots destined to change the universe of home deliveries and last mile logistics.

With the self-driving droid Yape the experimentation for efficient and sustainable last mile deliveries kicks off. Yape moves within the residential district of UpTown Smart District in Milan, interacting with a multitude of subjects in heterogeneous and widespread conditions, to carry out the tasks assigned from time to time.

www.e-novia.it





> Yape is specifically designed to respect the specific conformation of Italian and European cities, allowing for a safe, silent, sustainable delivery system with low environmental impact.



> *The robot can transport, autonomously and adaptively in space, food and other products up to a weight of ten kilograms.*



> *Thanks to the 5G network, the perception of the surrounding environment can be increased.*



> *Through an integrated sensor system, it can also send and receive information in real time and therefore be traceable at any time.*

Weaving Process Market Outlook

Even though, in most cases, the weaving process is the same as it ever was — create a shed, insert the filling and beat up the pick — today's weaving machines are highly technical instruments featuring numerous innovations that have sped-up production, improved quality and saved energy.

Many of the latest developments in weaving machines have focused on automation, digital upgrades and innovative end products that add value including technical textiles, e-textiles and 3D structures.

Weaving is an ancient textile art and craft. Weaving technology has remarkably evolved from centuries old hand looms to the most modern shuttle-less high speed rapier and airjet looms.

Main Characteristics Technologic Innovations

Weaving technology has gone through number of changes in fast few years. A decade ago, need was faster and more productive machines. Today, the weaving machines are as fast as most yarn systems can handle.

In recent years demand has been for more automation, more versatility and for better quality fabrics. Apart from automation system, microprocessors revolutionized entire weaving process including all available weft insertion systems. It is true that increase in loom performance in any type of shuttleless loom beyond the levels prevailing a few years ago has been made possible only through electronics.

Leading manufacturers of projectile, rapier, airjet and waterjet looms have incorporated the advance technology in their machines which virtually can give any information connected with production, loom faults and design change.



OptiMax-i Connect Rapier Weaving Machine

production Picanol - Belgium

OptiMax-i Connect is the first specific weaving machine built with a rotomoulded outer frame. This machine is designed around the principle of “Intelligent Performance”: the design of an intelligent machine, combined with self-regulating software, which allows you to obtain the highest possible speed and the best performance under any conditions. With OptiMax-i Connect, the robust machine structure is combined with the proven pitch geometry and the most suitable gripper system for any application.

To this end, the Sumo drive concept has become even more energy-efficient. The proven Picanol concept combines two solid side frames connected by large cross-section longitudinal members. The beater is actuated by conjugate cams located below the fabric line to ensure uniform beating force over the full width. The structure consists of a metal frame completed by a series of rotationally molded elements which cover the mechanical parts and offer a coordinated and compact aesthetic of the machine.

www.picanol.be





> *The proven Picanol concept combines two solid sideframes connected by large-section cross rails.*



> *From detection of the filling yarn to the unique quickstep, all are designed throughout to handle the widest variety of weft yarns in the smoothest possible way.*

Reducing Carbon Footprints with Golf Carts

As with the automotive and transportation sectors, the global golf cart industry continues to evolve towards energy-efficient, long-lasting, and eco-friendly solutions.

Some manufacturers create vehicles using some of the cleanest manufacturing processes in the industry. The process complies with governmental guidelines, and their carts produce zero emissions.

The move towards planet-friendly golf-carts will continue in the 21st century and will represent one of the definers of the industry in terms of how new technologies get applied.

Golf Cart Applications Will Broaden and Expand

Around the world, golf carts continue to fill new roles. In India, the government uses them in public spaces to assist elderly populations and those with disabilities with their daily commutes.

In parts of the US, from Florida to California, golf carts mark an essential part of daily activities for the elderly and those living in planned communities. Some even see them as a way to make our streets safer for pedestrians.

How are golf cart manufacturers rising to meet these new transportation roles? By adding a variety of features designed to meet the needs of drivers and passengers alike.

These features render golf carts more comfortable for commutes and use on or near roadways. They include: Stereos, heaters, defrosters and hard doors. The trend toward golf carts as multipurpose vehicles will continue, resulting in other utilitarian transformations. Watch for an increased focus on golf cart durability and longevity of use moving forward, too.



Hauler 800X

One of the most innovative vehicle to take care of green

production Cushman - USA

The Hauler 800X approaches every job with the perfect mix of toughness and real-world utility. Every part of the Hauler 800X is designed to go the extra mile, then go 50 more. Complete with an 8.4 cubic-foot cargo bed, bench seating, lifted suspension, and improved surface tires, the Hauler 800X is available with a fuel-efficient 13.5 hp EFI gas engine or an ELiTE lithium powertrain activated by Samsung SDI battery technology.

The large container positioned on the rear of the vehicle is rotomolded in polypropylene and is designed to be used for multiple functions. In fact, the vehicle lends itself to being used on golf courses for the maintenance of playing fields or for the management of gardens and public green spaces.

Hauler 800X represents one of the most innovative and advanced multi-purpose vehicle solutions dedicated in particular to the care of green and cultivated areas, thanks to the numerous series of accessories available which make driving easier and allow the basic version to be customized according to multiple functions.

www.cushman.txtsv.com





> *The large container positioned on the rear of the vehicle is rotomoulded in polypropylene and is designed to be used for multiple functions.*



> *A flexible vehicle dedicated in particular to the care of green and cultivated areas.*



> *The Hauler 800X approaches every job with the perfect mix of toughness and realworld utility.*

New Trends in Innovative Wheelchair Design

People with limited mobility have relied on wheelchairs for centuries to help them get around. But not much has changed in wheelchair design over the last 200 years. Modern wheelchairs use the same basic design that was developed many years ago.

All of that is changing. New wheelchair inventions make use of new technology and futuristic wheelchair designs that better meet the needs of the people who use them.

While the most important function of a wheelchair is to provide mobility to people who cannot walk, this is not the only feature that's important in wheelchair design. For those who are long-term users of a wheelchair, a basic wheelchair won't be practical. These users need some customization and special features, so the chair provides them with maximum mobility, comfort, and independence. Designers are coming up with new concepts to address these needs.

Key Factors Production Criteria

A key fact designers are considering is that not every wheelchair user has the same abilities. Some wheelchair users can stand or even walk for short distances. These people have more options than those who don't have the use of either their arms or their legs. The important thing with wheelchairs is the design needs to be adjusted to the user. What the user can do is vital in deciding which wheelchair design will work the best for him.

As the technology advances, new features come into the mainstream. Other new wheelchair technologies use better materials, features, and parts. Newer designs use more lightweight materials or use new technologies for smart energy use, so wheelchair batteries last longer between charges. Some even use iPhone apps.

Still, other wheelchair designs focus on comfort. After all, if you're going to be sitting in the chair for long periods of time, comfort is vital. Chairs that adjust the angle of legs and back will help the user change position and avoid some of the problems that come with being immobile.



Omeo

Personal Mobility Device

production Omeo Technology,
New Zealand

design Kevin Halshall, New Zealand

Omeo is an innovative vehicle designed and built with the best safety and the most unique features of any self-balancing personal transportation device.

The Omeo's powerful two-wheeled self-balancing platform allows to interact with the world in a new way. With balance-based movements, Omeo users get to express their individuality in a way no other mobility device allows.

For everyday use, the Omeo comes in a standard set up designed to make the day easier. The compact footprint easily fits through standard doorways and lets you turn on the spot, whilst the hands-free movement makes carrying items and pushing objects effortless.

With class leading all-terrain capability, the Omeo will allow to get to places that were previously unreachable. A person can travel over uneven terrain, scale inclines and navigate troughs, while always remaining level in your seat.

Kevin Hallshall has designed a rotomoulded body which is completed with the insertion of the padded seat, the elements to drive the vehicle and the wheel system that allows it to move on multiple terrains.

www.omeotechnology.com





> *The Active Seat Control (ASC) system is a unique control interface from person to machine in which you control the direction, speed and braking through body movements.*



> *The Omeo has dual system backups to avoid mishaps and provide alerts (e.g. battery levels), as well as in built-in safety features that won't leave you stranded.*



> *Because the tyres have no crown and operate at low pressure, they provide a great feeling of suspension, a smooth ride and great traction including on soft sand, gravel and dirt.*

Protect the Coasts from Rising Seas

The progressive rise of the seas due to the melting of polar glaciers causes a series of increasingly important problems for the safety of coastal cities and, in particular, for historic cities.

To counter the rising water level and coastal erosion, governments are implementing numerous solutions, some very experimental while others are already more tested.

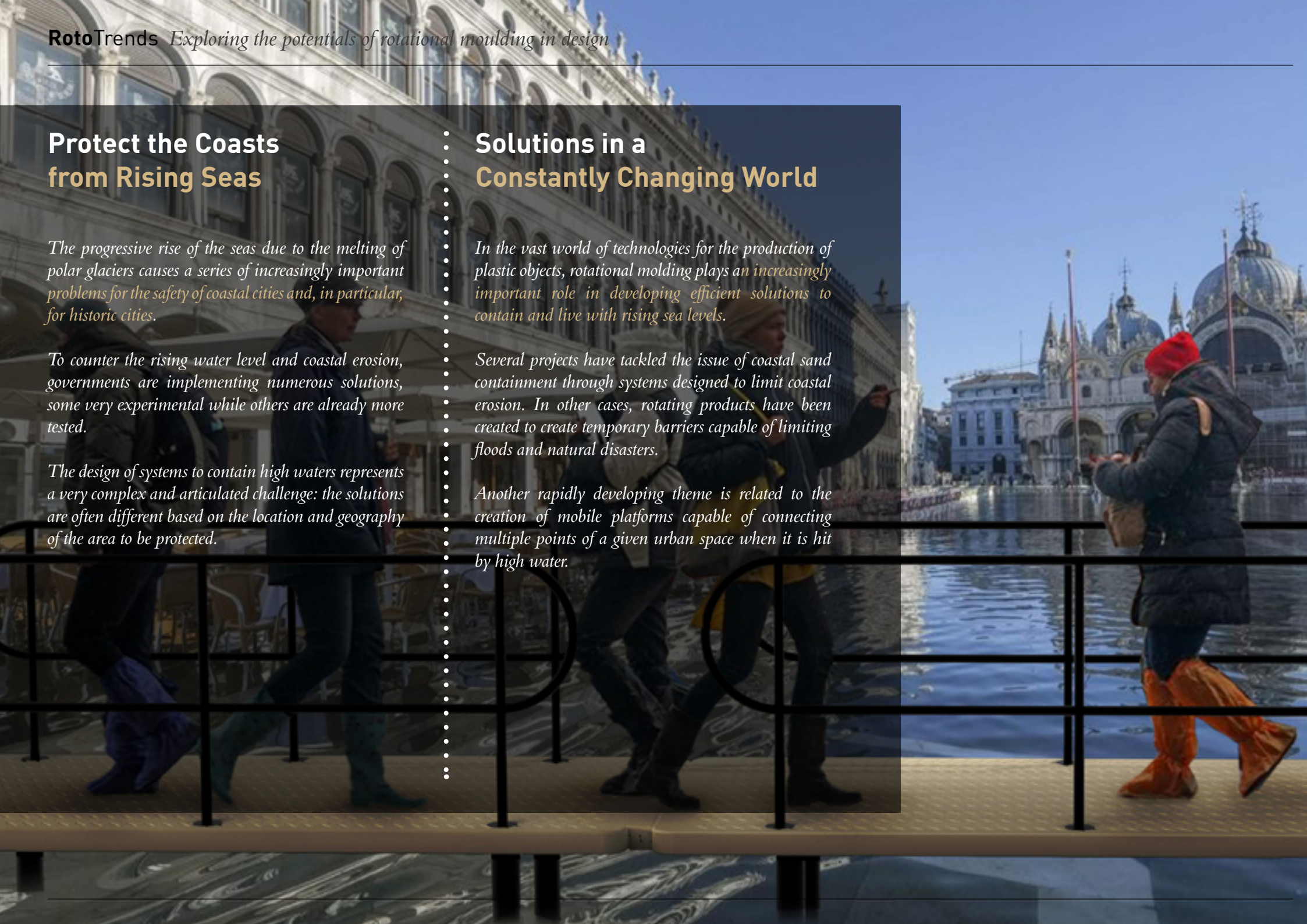
The design of systems to contain high waters represents a very complex and articulated challenge: the solutions are often different based on the location and geography of the area to be protected.

Solutions in a Constantly Changing World

In the vast world of technologies for the production of plastic objects, rotational molding plays an increasingly important role in developing efficient solutions to contain and live with rising sea levels.

Several projects have tackled the issue of coastal sand containment through systems designed to limit coastal erosion. In other cases, rotating products have been created to create temporary barriers capable of limiting floods and natural disasters.

Another rapidly developing theme is related to the creation of mobile platforms capable of connecting multiple points of a given urban space when it is hit by high water.



AquaPass

Moving with high water

design Akshata Bhurke, India
Domus Academy, Italy

In Venice, a city known for its picturesque canals, the occurrence of floods, often referred to as “high water”, is not uncommon. During periods of high tide and heavy rainfall, the water level in the lagoon surrounding the city can rise significantly, causing streets and squares to flood. To navigate through these temporary conditions of saturation, residents and visitors of Venice rely on various mechanisms, like walkways over water.

When floodwaters begin to rise, authorities quickly install specially designed walkways, known as “walkways.” Walkways are typically made from materials such as wood and metal, providing safe passage to work for Venetians. This system has a number of problems. For example, wood panels deteriorate rapidly due to moisture, fungi, bacteria and lack of maintenance and need to be replaced frequently. The Municipality of Venice has organized a competition of ideas for the replacement of these footbridges in order to improve the existing conditions. The project involves the construction of new rotomoulded platforms completed with a metal frame and telescopic legs.

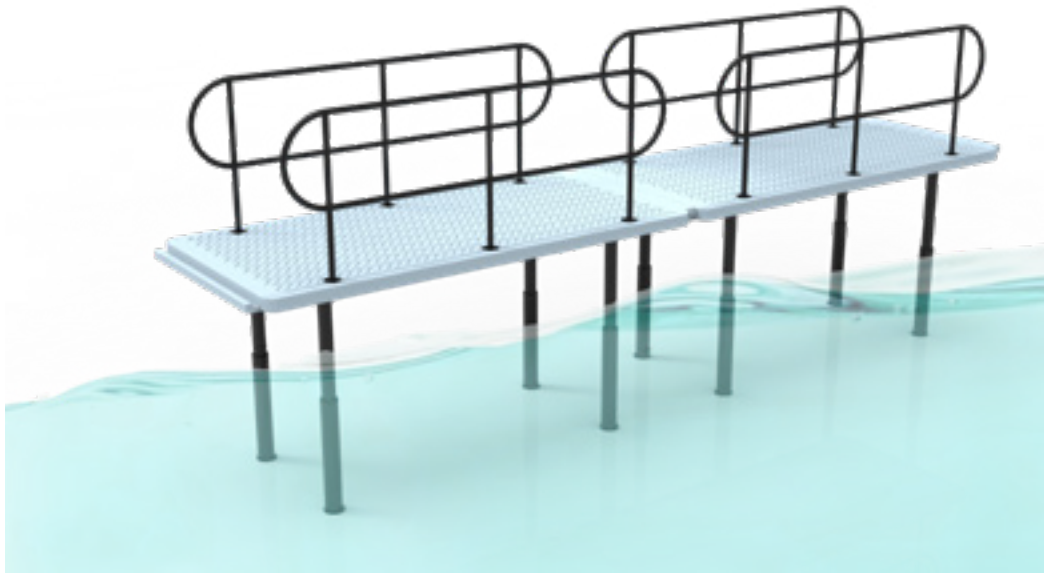
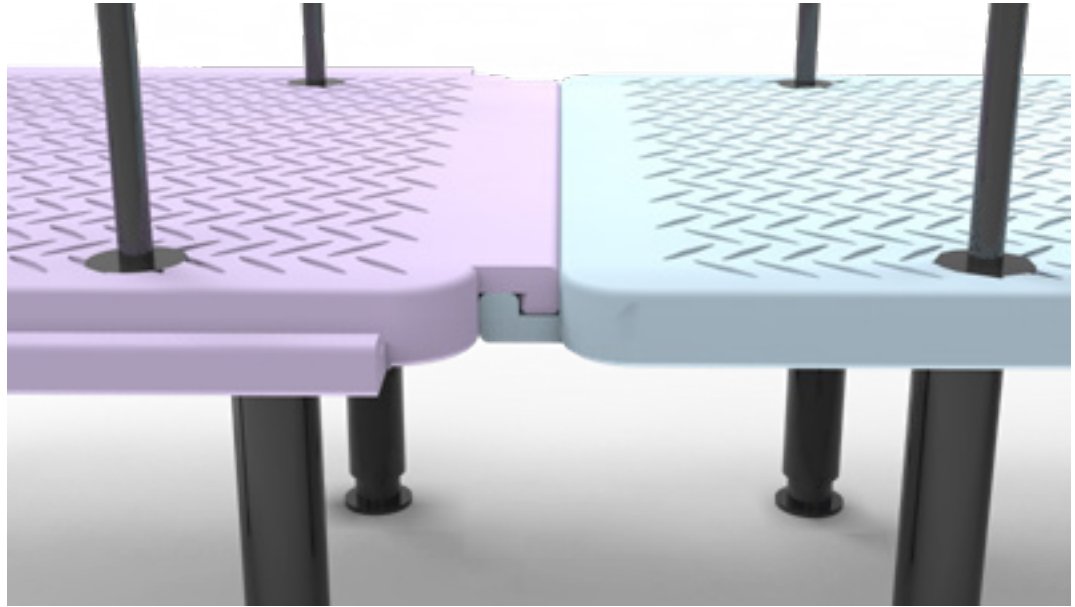
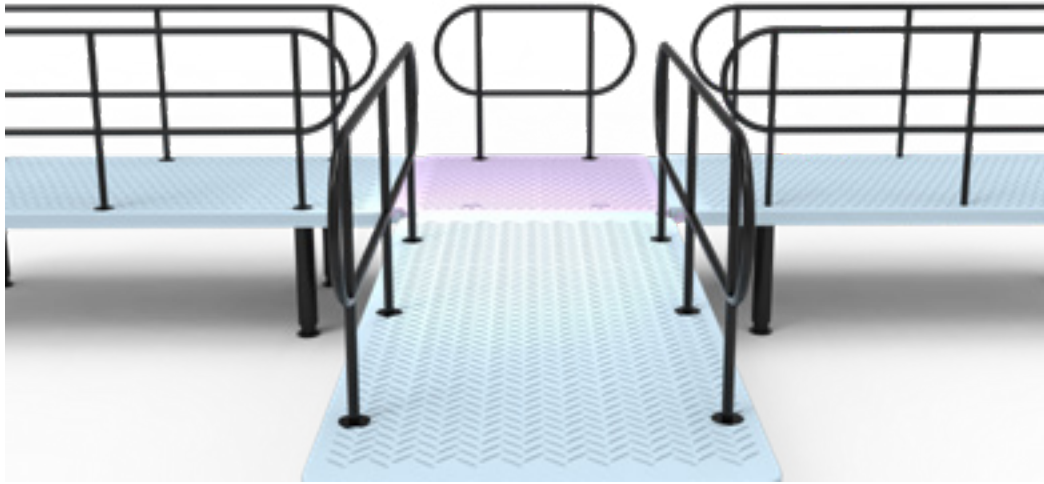
When not used for high water emergencies, these structures take on a second function and can be used as bases and tables for the numerous public events that the Municipality organizes in the lagoon city.

www.domusacademy.com





> *The rotomoulded platforms are modular to form different routes to connect areas of the city, allowing people to move with high tide.*



> *The HDPE platforms are complemented by a set of telescopic legs which allow them to be adapted to the water level. They can also be used as tables for public events.*



> *When not used for high tide, the platforms can be used to set up various outdoor events that the Municipality of Venice organizes.*

Preserving Plasma A Key Challenge

Blood storage is an important factor for the medical industry. For years, technological evolution and the introduction of new materials with increasing performance have made it possible to improve refrigerating environments, guaranteeing optimal plasma conservation even for prolonged periods.

The use of highly insulating materials represents a fundamental component for developing reliable solutions. Rotational molding represents an important technological resource capable of developing innovative solutions for the sector.

Main Performances Key Factors

The development of highly performing refrigerated containers passes through constructive solutions that mix different materials, from polyurethane foams that guarantee correct insulation from the external environment to rigid polymers that allow the creation of structural walls with correct bearing capacity.

The refrigerant products are developed with a view to creating a family including models with different capacities and volumes, in order to satisfy every specific request.

The plasma coolers can also be used in temporary environments such as, for example, in the case of health emergencies. For this reason, the fridges must have a particularly robust structure, resistant to stress.



Blood Bank Refrigerator

Solutions for safely storing plasma

production B Medical Systems,
Luxembourg

Throughout our 40+ years of experience, B Medical Systems has been creating innovative solutions to store and transport vaccines, blood components, laboratory specimens, etc across the world safely and reliably.

The portfolio includes blood bank refrigerators, plasma storage freezers, ultra-low temperature freezers, transport boxes for all blood components, and plasma contact shock freezers – an innovative patented technology ensuring fast freezing of blood plasma.

B Medical Systems' Plasma Storage Freezers are devices intended for the safe storage of your frozen blood plasma or blood components at temperatures below -27°C .

Specifically designed for blood banks, hospitals, clinical laboratories, and processing centers, the 5 upright freezers offer a wide variety in terms of volume storage and temperature requirements.

Polypropylene cabinets are injected with polyurethane foam providing strong thermal insulation. The one-piece cabinet is rotomoulded while the internal cavity includes LED lighting for lower energy consumption. The sealed gaskets and 4-layer glass window are designed to minimize cold air loss.

www.bmedicalsystems.com

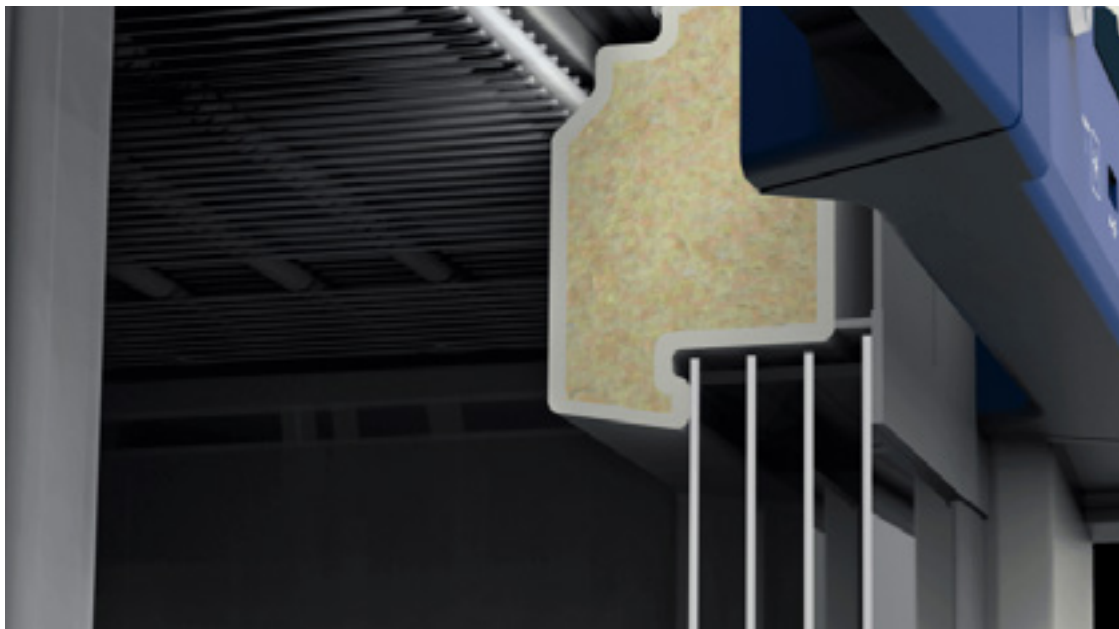




> *The refrigerator has a forced air cooling system for uniform and stable temperature distribution.*



> *The rotomoulded body has been designed to achieve a fast temperature recovery even in case of frequent door openings.*



> *The refrigerator is equipped with a safety thermostat preventing temperature below freezing.*



> *View of the production plant with the assembly of the rotomolded components.*

The Evolution of Spaces for Events

The environments dedicated to hosting events such as conferences, award ceremonies and shows are constantly evolving.

The trend is to develop these spaces through ever more flexible elements, capable of creating different configurations, of adapting to different situations.

Organizing a conference presents different challenges from organizing a show, and vice versa. In this sense, having versatile products that can be easily customized helps to create more functional and recognizable settings.

Design and Production Key Factors

Designing a podium means considering numerous functional and aesthetic elements. It is important that on a formal level it is a recognizable product, capable of enhancing the human figure of the speaker, without putting it in the background.

On a functional level, it must satisfy the need to integrate different types of devices (mobile phone, tablet) and to have adequate space for other objects such as glasses, pens and notebooks.

From an aesthetic point of view, the podium must have an image capable of adapting to different environments, without shouting its presence but proposing its own recognition and elegance.



BookVerge

The concept of book crossing

design Esha Patel, India
Domus Academy, Italy

The BookVerge represents a harmonious blend of technology, promoting literacy, green living and community engagement. Through the use of roto moulding, metal legs, and a lush garden of plants, this innovative book crossing unit offers durability, stability, and a visual feast for the senses. By promoting literacy and facilitating book exchanges. The Bookverge becomes a catalyst for intellectual growth and social interaction. It serves as a testament to our ability to repurpose materials and create eco-friendly solutions that benefit both individuals and the planet.

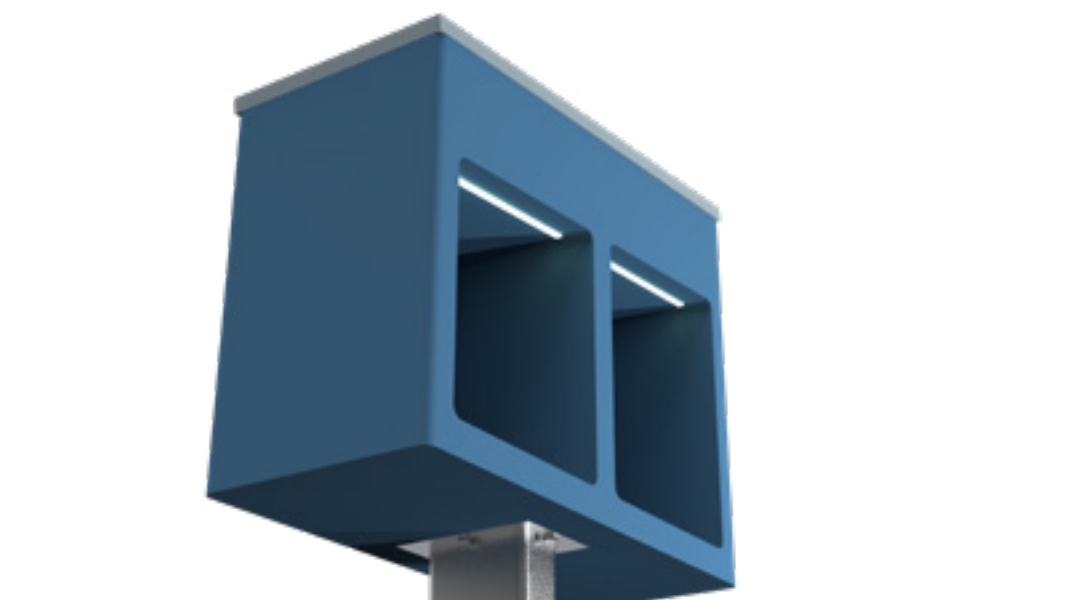
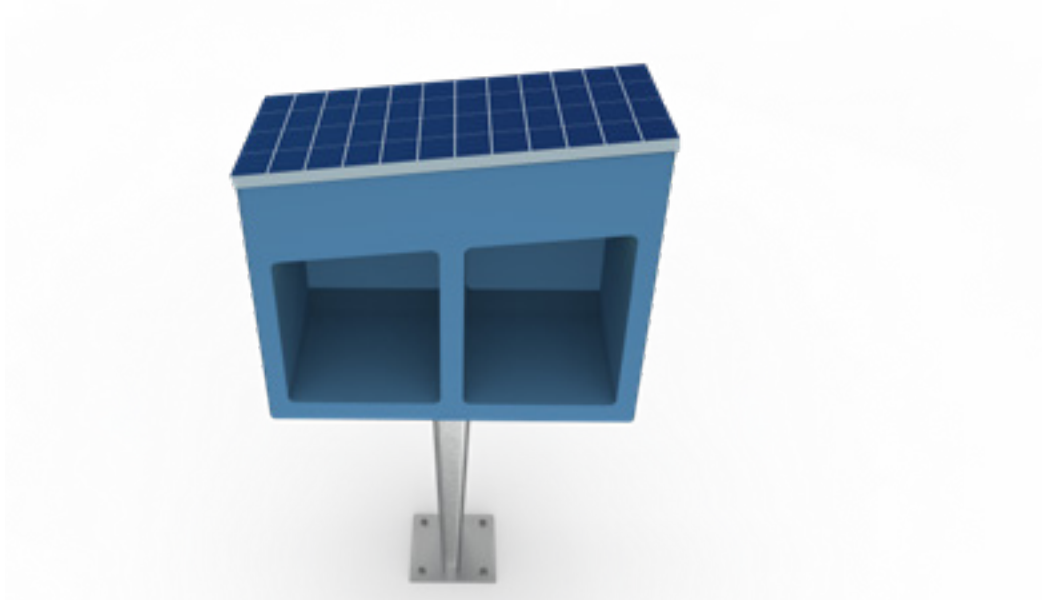
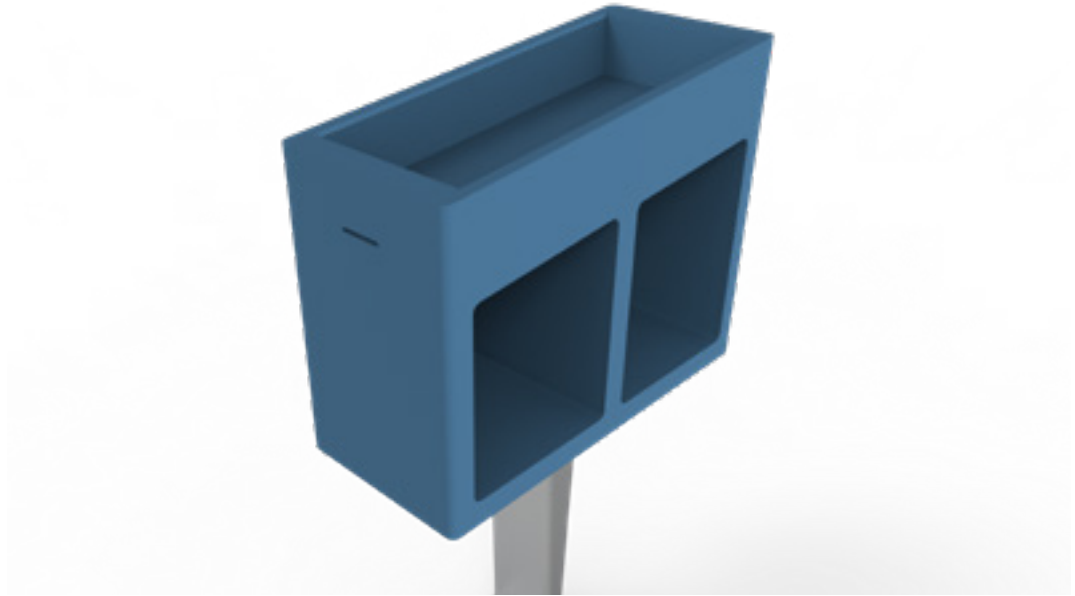
The concept of book crossing, where books are left in public places for others to find and enjoy, has gained popularity over the years. The Book Crossing Unit's primary body is crafted using the roto moulding technique, a highly versatile and efficient manufacturing method for plastic products. Roto moulding involves heating and rotating a hollow mould filled with plastic resin until it coats the entire interior, resulting in a seamless, durable, and uniform plastic shell. The use of roto moulding ensures that the unit is lightweight yet strong enough to withstand various weather conditions.

www.domusacademy.com





> *The project develops through two rotomolded parts: the front one with a vertical design in relief and the upper part for the speaker.*





> *The project develops through two rotomolded parts: the front one with a vertical design in relief and the upper part for the speaker.*



> *With the integration of solar panels and LED lights, this unit provides a secure and environmentally friendly solution for book sharing enthusiasts.*



> *The project develops through two rotomolded parts: the front one with a vertical design in relief and the upper part for the speaker.*

Electric Bodyboard Moving on the Water

An electric bodyboard is a type of board equipped with a motor that runs on rechargeable batteries. They are becoming increasingly popular in the US and anywhere in the world where people love the waters.

These bodyboards allow to move on the water without exerting too much effort and power. A fully-charged electric bodyboard can give you almost three to five hours of fun surfing sessions.

An electric surfboard can reach up to 70 km/h or 43.5 mph in the most powerful versions. The motor uses an electric propulsion system that is fully integrated into the board, producing near-zero-emissions and noise, and can be installed on short and long wave surfboards or SUP boards.

Electric Bodyboards Key Elements

The world of water sports and outdoor recreation has been transformed by electric boards – new electric battery technologies combined with watertight board structures.

The way of being in the water and the way of using this equipment is changing. Different types of electric boards, such as bodyboards, SUP boards, surfboards, or hydrofoils are expanding.

The hull of the board is characterized by an innovative design, different from traditional surfboards, with better hydrodynamic performance.

In some models, the surfer holds a cable connected to the bow of the board, which acts as an accelerator. In this way, the propulsive force can be modulated according to preference and need. In other models, there are no cables connecting the surfer to the board, but communication is made via a wireless connection of remote control that the surfer holds in his hand and which allows them to adjust the speed.



Kymera

Electric surfboard to run freely on the water

production Kymera, USA

design Jason Woods, USA

The Kymera Body Board is the perfect watercraft for a great fun day on the lake! The Award-winning Kymera Body Board is the World's First Electric Body Board. Powered by our lithium ion battery, the Kymera Body Board offers an eco-friendly alternative to those who don't want the hassle, noise or expense of a bulky heavy jet ski.

The Kymera's v-hull cuts through water with ease, and the shape of the hull makes fins unnecessary, improving safety and ease of transport.

Invented by Jason Woods, is the Kymera Body Board, the world's first line of electric jet body boards. The Kymera rotomoulded body board is capable of reaching speeds up to 25 miles per hour, and is lightweight at about 35 pounds making it easy to transport to the water by one person. Which means, you can get into the water and start the fun with no need for a ramp. A 1,000-watt RMS brushless motor propels it and the battery allows for an average 1 hour running time before a charge is needed. With an intuitive leaning steering mechanism with throttle control at the handle, it is easy for the individual to hop on, laydown and jet away.

www.kymera.com





> *Kymera is the next evolution in personal electric-powered sports.*



> *The Kymera electric body board has been recognized for helping lifeguards, sheriffs, fire departments, and military personnel do their jobs more effectively.*



> *Kymera's proprietary lithium ion battery provides the perfect balance of performance and runtime, and can be swapped out for a spare in just seconds.*

Basic and Natural Positive Energies

Magnetotherapy is a physical therapy based on the application of specific magnetic fields on the human body, indicated for the treatment of pain and also of inflammations and oedemas.

Clinical studies have demonstrated that magneto therapy can be effective in the treatment of osteoporosis and to promote both fracture sealing and soft tissue repair and healing.

Magnetotherapy is indicated for the non-invasive treatment of musculoskeletal pathologies, acting simultaneously in the oedema-contracture-pain triad, with reparative action on skin, muscle, and bone tissues.

Product Design Features

Designing and building a machine for magnetotherapy treatments represents a particularly complex and multifaceted challenge.

The comfort and condition of the patient during all phases of treatment must be considered as key elements: the machine must allow the individual to remain in the correct and optimal position, facilitating the preparatory phase as much as possible.

Furthermore, each structural element must be carefully studied and produced in the logic of the best functionality and ease of hygiene and cleaning.

Rotational molding offers numerous opportunities from this point of view and makes it possible to combine the aesthetics of the shape with the reliability of the molded pieces.



PMT Qs

The Potential of Magnetotherapy

production Asalaser, Italy

moulding: Moulding Service, Italy

PMT Qs is the ergonomic and easy to use device, equipped with trolley, bed and an innovative design, designed for the treatment of different body areas such as the spine, limbs, hips and shoulders, ensuring the utmost comfort to the patient during therapy.

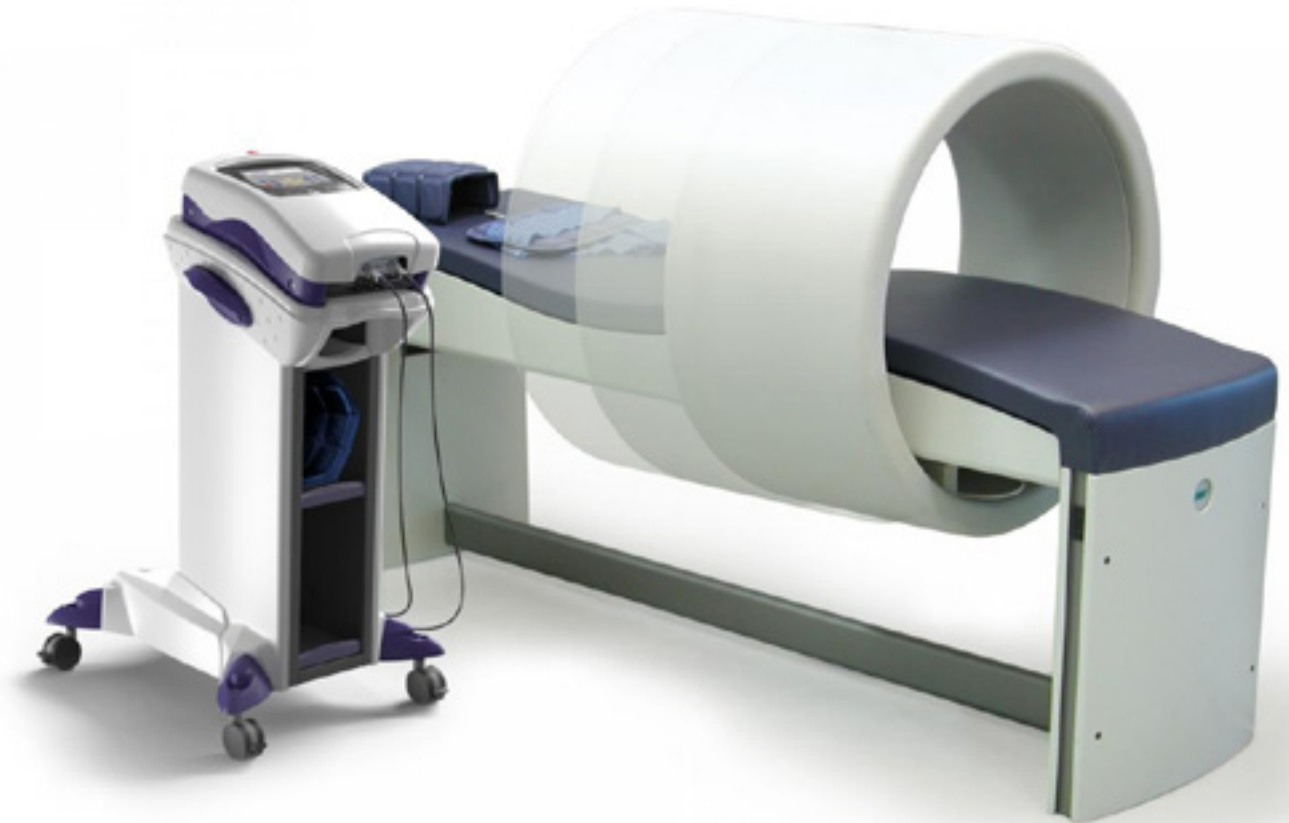
The PMT Qs devices generate pulsed magnetic fields at extremely low frequency (ELF - Extremely Low Frequency) and at low intensity, which are able to pass through the body, acting on all tissues (muscle, bone, nerve, epithelial, etc.). Effective even in depth, they are not invasive and do not cause pain.

PMT Qs allows applying magnetic fields in a direction parallel to the longitudinal axis of the body, through the use of solenoids, or perpendicularly to the surface to be treated, through the use of the Flexa applicators, particularly suitable for localised treatments thanks to their flexible conformation.

The solenoid consists of a rotomolded cylindrical body which is positioned on the area to be treated to return to its initial position at the end of the performance.

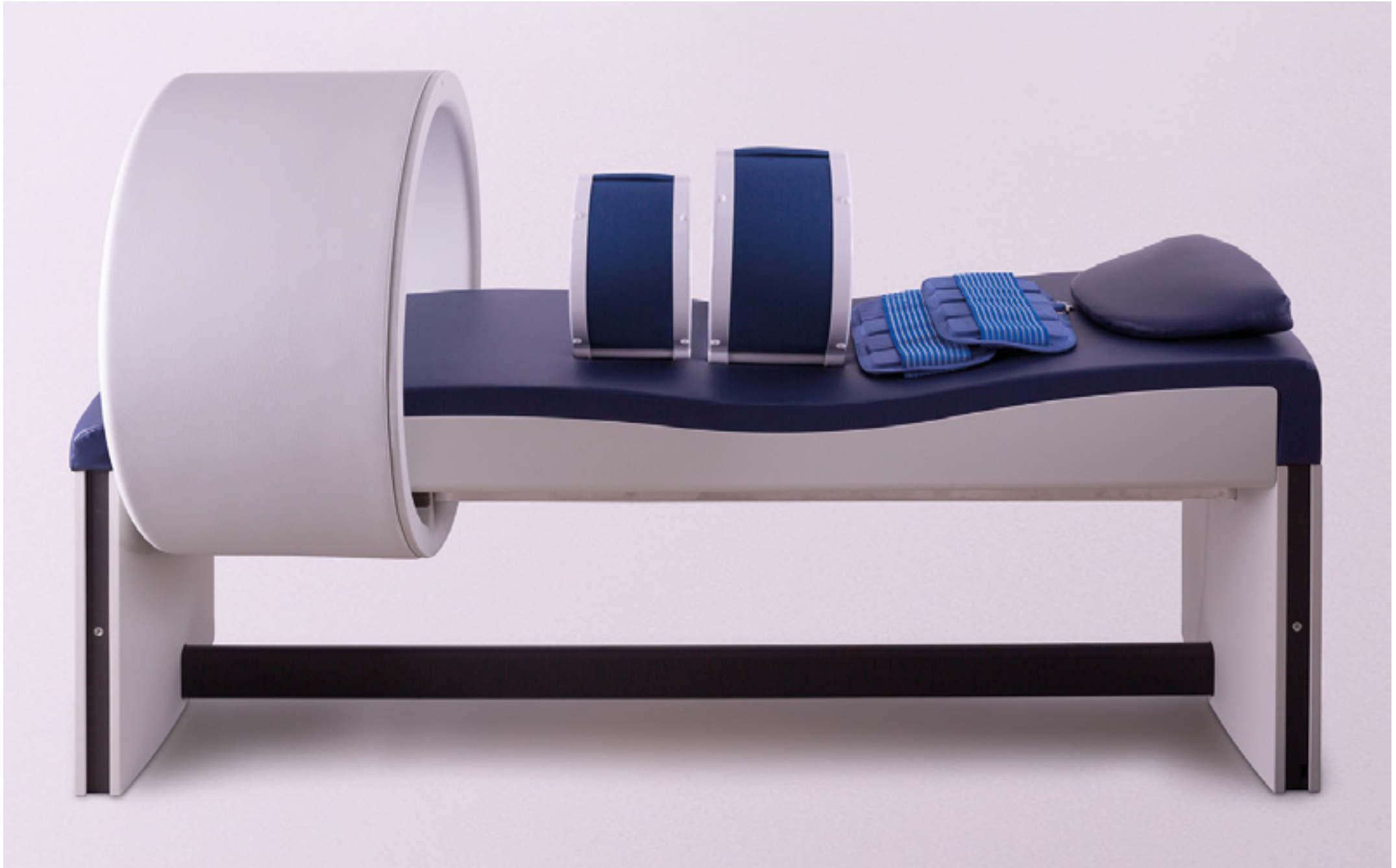
With the addition of optional accessories, it is possible to build different configurations, connecting up to 4 beds, two of which in automatic mode.

www.asalaser.com





> *PMT Qs allows applying magnetic fields in a direction parallel to the longitudinal axis of the body, through the use of solenoids.*



> *In the manual version the operator is facilitated in positioning the solenoid on the area to be treated thanks to the easy sliding allowed by the guides.*



> *The PMT Qs devices generate pulsed magnetic fields at extremely low frequency (ELF - Extremely Low Frequency) and at low intensity.*

Pediatric Bed A New Design Concept

*Designing a pediatric bed represents a particularly **complex challenge** because many important factors must be considered.*

*The design of these beds must include **soft shapes that make gripping as easy as possible** and avoid the risk of injury in physical contact.*

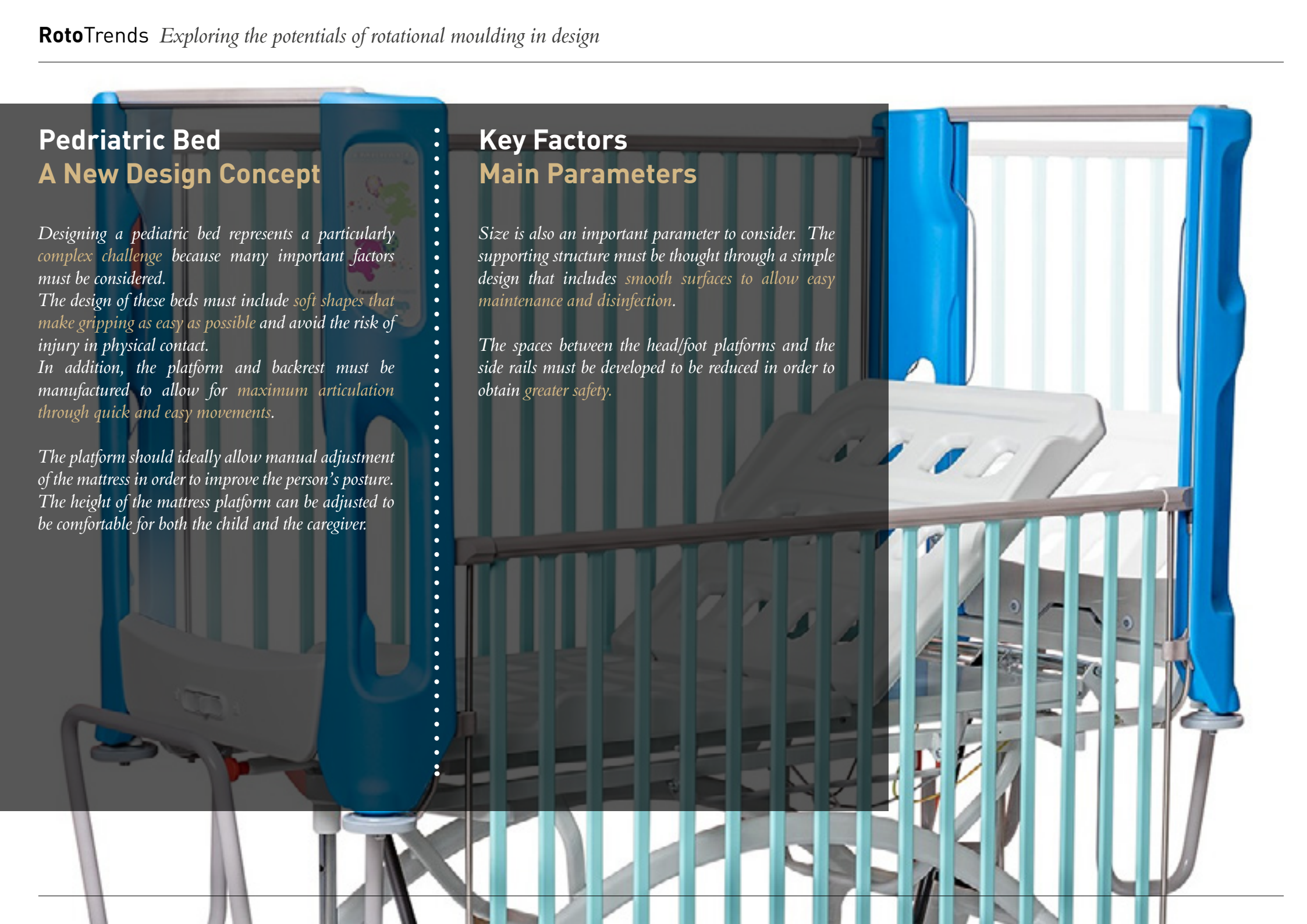
*In addition, the platform and backrest must be manufactured to allow for **maximum articulation through quick and easy movements**.*

The platform should ideally allow manual adjustment of the mattress in order to improve the person's posture. The height of the mattress platform can be adjusted to be comfortable for both the child and the caregiver.

Key Factors Main Parameters

*Size is also an important parameter to consider. The supporting structure must be thought through a simple design that includes **smooth surfaces to allow easy maintenance and disinfection**.*

*The spaces between the head/foot platforms and the side rails must be developed to be reduced in order to obtain **greater safety**.*



Embrace Advance Next

Pediatric Intensive Care Bed

production Favero Health Projects, Italy

The Embrace Advance Next bed extends electrically to adapt to children of all sizes.

Electric Trendelenburg and reverse Trendelenburg positions offer great flexibility in the positioning and care of the patient. If the child is feeling unwell, the highest position can be selected quickly and easily and it can be quickly reset in case of emergency. For safety reasons these controls can be locked-out by hospital staff. Back and pelvis sections are made with removable ABS cover while the platform is perforated to allow effective aeration of the mattress.

The siderails are telescopic and lengthen automatically with the platform for maximum side protection and increased patient safety. Electrically operated bed extender provides an increase in length of 28 cm and during extension the platform remains completely flat. Rotomoulded support struts are designed with simple, and clean lines for easy cleaning and disinfection. The quick and easy removal of head/foot boards allows easy access to the child in case of emergency.

www.favero.it





> *The quick and easy removal of head/foot boards allows easy access to the child in case of emergency.*



> *The siderails are telescopic and lengthen automatically with the platform for maximum side protection and increased patient safety.*



> *Rotomoulded support struts are designed with simple, clean lines for easy cleaning and disinfection.*



> *Mattress platform height may be adjusted electrically so as to be at the most suitable height for both child and operator.*

Mobile House Units A New Design Concept

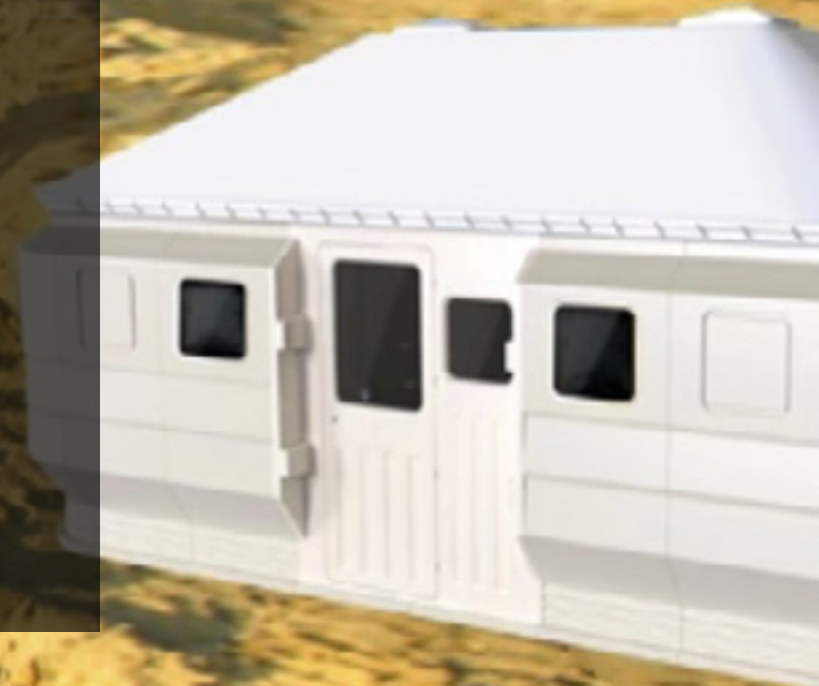
*Prefabricated housing units are experiencing a growing development thanks to the variety of for which they can be used. The use as **residential units** to be positioned, in particular, in tourist or temporary areas, allows these houses to be considered as a valid alternative to mobile homes such as campers and caravans.*

Furthermore, the flexibility of prefabricated structures allows them to be used even in the event of emergency situations such as natural disasters and particularly tragic events, guaranteeing shelter for people who have lost their first home.

Key Factors Goals

The possibility of disassembling the housing units by compacting the main elements in small spaces allows them to be transported easily by truck.

*This factor, combined with the relative ease of assembly, makes it possible to transform these units into an **extremely flexible and high-performance housing system**.*



Quick Cabin

Prefab House

production Fanda Roto, China

Quick Cabin represents a new living concept created through modular modules molded with rotational technology. The components made of HDPE are designed to facilitate assembly operations through a series of simple joints.

The rotomolded panels of the walls are completed with the addition of an internal layer of polyurethane foam which increases the thermal and acoustic insulation of the housing unit.

When not in use, the basic components can be dismantled, significantly reducing the overall dimensions. The structure makes it possible to create multiple configurations, from a single transportable home to a large pavilion.

www.fangdaroto.cn





> *The housing unit is made up of rotomolded HDPE panels that integrate accessory components such as windows, insulating layers and hinges.*



> *The modularity of the structure allows to obtain multiple configurations with applications ranging from the tourist sector to the industrial and military one.*



credits

E-novia, *Italy*
Picanol, *Belgium*
Cushman, *USA*
Omeo Technology, *New Zealand*
BMedical Systems, *Luxembourg*
Kymera, *USA*
Asalaser, *Italy*
Favero Helth Projects, *Italy*
Fanda Roto, *China*

Cover Pictures
courtesy Euro3Plast, *Italy*

Projects
Bahçesehir University, *Turkey*
Ecal, *France*
Istituto Europeo Design, *Spain*
UDK, *Germany*
Domus Academy, *Italy*
SJB-Institute of Technology, *India*
Seoul University, *South Korea*

Concept
Studio Giovanetti, *Italy*

affiliates



AFR - Association
Francophone du Rotomoulage



ARM - Association of
Rotational Molders



ARMA - Association of
Rotational Moulders Australasia



ANIPAC - The Mexican Plastic
Association



ARMSA - Association of Rotational
Moulders Southern Africa



ARM-CE - Association of Rotational
Moulders Central Europe



StAR - Society of Asian
Rotomoulders



Nordic ARM - Nordic Association
of Rotational Moulders



BPF - Rotational Moulders
Group



IT-RO - Italia Rotazionale



RPC-CPPIA



Rotopol Association