# RotoTrends

*Exploring the potentials of rotational moulding in design*

*Issue 6*

ARMO
ASSOCIATION OF ROTATIONAL MOULDING ORGANISATIONS

## 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.*

## Evaporative Air Cooler Market Outlook

*The global evaporative air cooler market is estimated at USD 6.7 Billion in 2022 and is forecast to reach USD 10.8 Billion by 2032, growing at a CAGR of 4.8% from 2022 to 2032.*

*Fact.MR- a market research and competitive intelligence provider, foresee a thriving growth in evaporative air coolers demand. The global evaporative air coolers market is expected to grow at 4.8% CAGR during 2022-2032 and surpass the value of USD 10 Bn by the end of 2032. The global home appliances market is expected to reach a valuation of USD 170 Bn by the end of 2022, which is expected to hold about 4% of market share.*

*Increasing awareness of global warming, rising global temperatures, intensified adoption of home cooling appliances, and consistent product innovations are few of the prime drivers impacting future growth of the evaporative air coolers market. The rise in spending power of consumers in developing regions, and changing attitudes towards luxury lifestyle are encouraging adoption of air cooling systems.*

## Key factors Design Criteria

*Evaporative cooling is a method of converting hot air into a cool breeze using the process of evaporating water. There are two essential requirements for evaporative cooling: 1) a wetted surface (supplied by filter pads) and 2) A source of moving air (supplied by a blower powered by an electric motor).*

*The technology is a versatile and energy-efficient alternative to compressor-based cooling. Compared to air-conditioning, the evaporative cooling can fully satisfy building cooling loads using one-fourth the energy of conventional equipment. Evaporative cooling is especially appropriate for spaces with high outside air ventilation requirements such as workshops, locker rooms, kitchens, or shops. Compressor cooling is often too expensive to operate for these applications.*

*While the basics of evaporative cooler design and operation are simple, there are a number of guidelines that govern cooler performance and life. To achieve the best possible performance and life, evaporative coolers must incorporate design features that are compatible with and perform to the limits of these principles.*

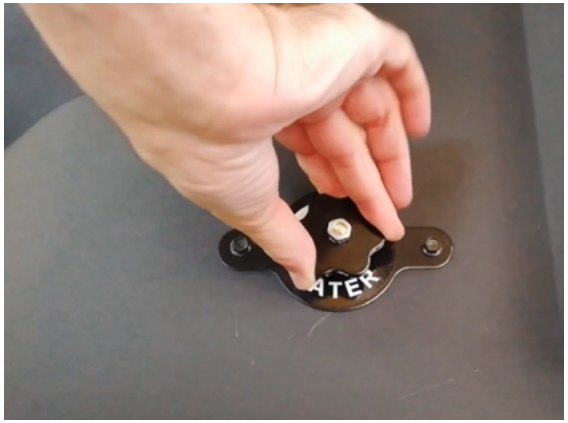
# Evaporative Cooler BC 341

production Dantherm Group - Denmark
rotomoulding Moulding Service - Italy

*BC 341 represents the new portable air cooling with integrated UV light that removes any risk of virus and bacteria disinfection. With its minimal energy consumption, the BC 341 is ideal for cooling of areas up to 400m2 that are unfit for traditional A/C.*
*The heart of the evaporative cooling system is the cooling pad where the water evaporates and the air passing through the pads is cooled. Evaporative cooling pads are manufactured from fluted cellulose sheets that are glued together. The material is chemically impregnated with special compounds to prevent rot and ensure a long service life and easy maintenance.*
*A given volume of air at a certain temperature and pressure is capable of absorbing and holding a certain amount of water vapour. If that volume of air contains 50% of the moisture it is capable of holding, it means that is at 50% relative humidity.*
*The main constructive innovation consists in the realization of the external body through rotational molding: compared to many other models on the market made of metal sheet, BC 341 maintains a strong and impact-resistant structure.*
*The cooler is able to increase humidity by 2 to 5%, depending on temperature and humidity in the environment you want to cool.*

*www.danthermgroup.com*

> *Gigantic cooling pads*

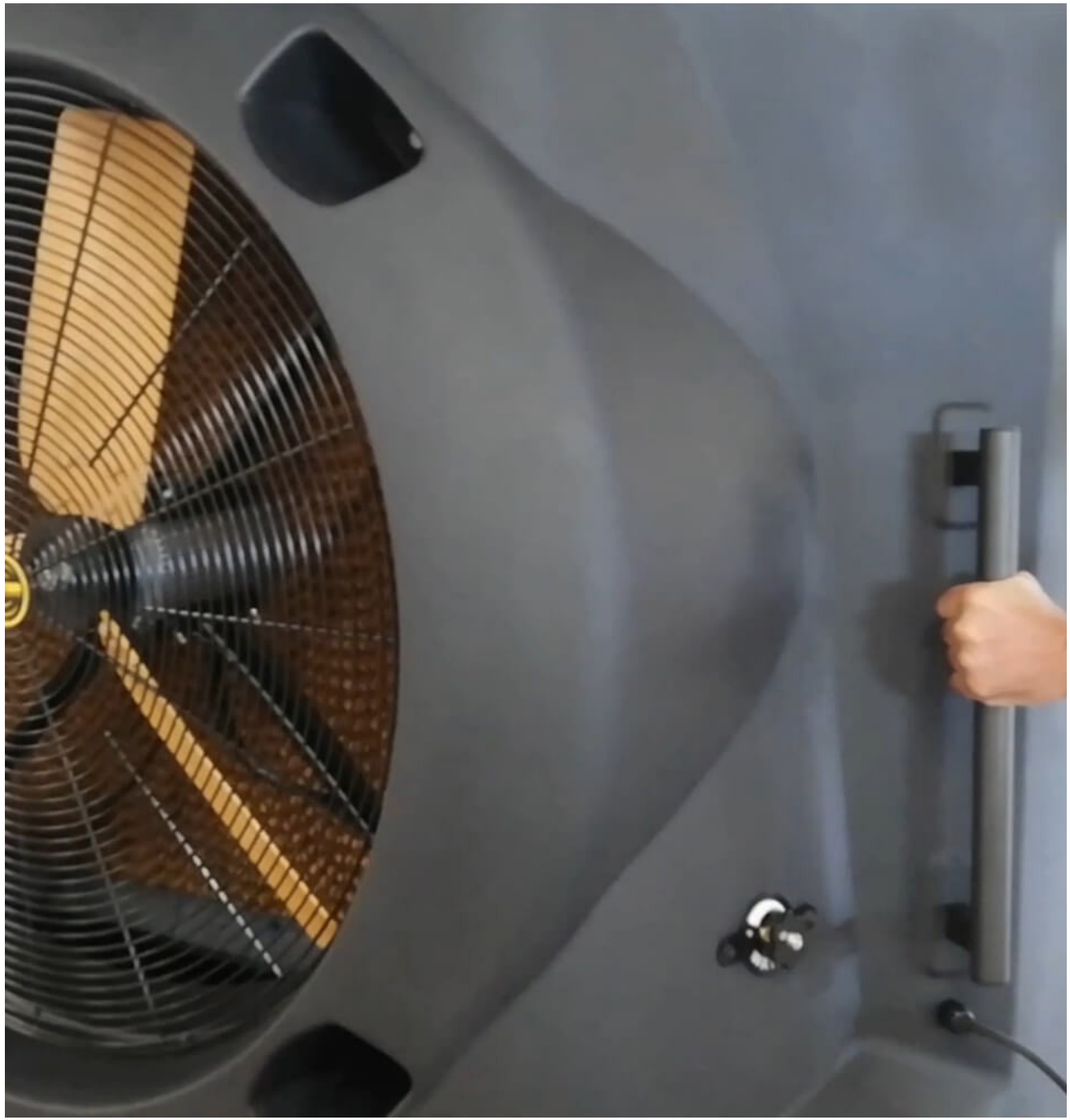


> *Simple water selection*

> *Non-stop water*

MASTER

KHS
MASTER



> *The cooler is suitable for many uses in different industrial fields as automotive, building, general industry and production, military and aereospace, events and temporary structures*

> *Keay features and benefits of evaporative cooling*

## Asphalt Rollers
## Market Outlook

*Due to the COVID-19 pandemic, the global Asphalt Rollers market size is estimated to be worth USD million in 2022 and is forecast to a readjusted size of USD million by 2028 with a CAGR of % during the review period. Fully considering the economic change by this health crisis, Asphalt Rollers types accounting for % of the Asphalt Rollers global market in 2021, is projected to value USD million by 2028, growing at a revised % CAGR in the post-COVID-19 period. While Application segment is altered to an % CAGR throughout this forecast period.*

*China Asphalt Rollers market size is valued at USD million in 2021, while the US and Europe Asphalt Rollers are USD million and USD million, severally. The proportion of the US is % in 2021, while China and Europe are % and % respectively, and it is predicted that China proportion will reach % in 2028, trailing a CAGR of % through the analysis period. Japan, South Korea, and Southeast Asia are noteworthy markets in Asia, with CAGR %, %, and % respectively for the next 6-year period. As for the Europe Asphalt Rollers landscape, Germany is projected to reach USD million by 2028 trailing a CAGR of % over the forecast period.*

## Key factors
## Design Criteria

*Upgrading your fleet is an important way your company can stay competitive. With new equipment, comes new technologies and enhancements that help members of your crew work more comfortably and more efficiently.*

*When it comes to asphalt rollers and road compaction, technology has been increasing steadily for years, improving performance and increasing the value of these machines on the jobsite. Rollers have been adapted to keep up with regulations, operator demand and with the ways our roads are being designed.*

*One technology that has been progressing over the years is Intelligent Compaction (IC). These systems feature an accelerometer-based measurement system, as well as GPS, infrared temperature sensors, and an on-board computer that provides real-time compaction information to the operator. There have been many advancements in IC over the past few years aimed at reducing the guesswork in the paving process but many contractors still have not adopted this technology. As a result, manufacturers are continually evolving these systems to meet contractor needs.*

# Asphalt Rollers BW

Producer Bomag - Germany

*Whoever constructs roads, shapes landscapes, or carries out other earthworks projects needs to master at least one thing: compaction. In keeping with this motto, Bomag has been developing, designing and building compaction equipment for 60 years. The aim is to make each new model generation a little better, more economical and productive than the previous generation. The traditional metal sheet coverings are progressively replaced by a rotomoulded shells which guarantee resistance to physical and mechanical stress and allow greater integration with the vehicle shape.*
*The rotomoulded hood makes it possible to rationalize the space in the engine compartment and significantly expand the area of the cabin.*
*The cab has a spacious design with excellent all-round vision. When in use for longer periods, the ergonomic seat position provides fatigue-free driving. The steering wheel is adjustable to suit every operator. The visual lane assistant allows the driver to compact edges or lane to lane with ease.*
*Through its particular design, the driver always has everything easily under control. No hieroglyphics, no confusion, no puzzles: the operating concept is self-explanatory with clearly arranged controls. Clear symbols identify the function and provide information fast about all important machine features.*

*www.bomag.com*

*> Spacious cab with sound and vibration insulation*

*> Excellent all-round view and adjustable steering wheel*

> *When in use for longer periods, the ergonomic seat position provides fatigue-free driving.*

## Anti Erosion Barriers
## Main Trends

*With sea levels rising, coastal landmasses have been placed on a collision course with Mother Nature. Worldwide, coastal regions are highly populated, and coastal real estate is very desirable and very costly. At the same time, severe coastal storm events have resulted in loss of life and destruction of coastal structures and land masses.*

*Sea level rise history is very clear, and scientists worldwide are in agreement that this trend will continue. Globally, sea levels rose approximately 10 inches from 1880 to 2011. And, alarmingly, the rates are accelerating.*

*Along the East Coast of the United States, for example, current sea level rise estimates vary, with a range of 1 to 5 feet predicted by the year 2100. Such projections are, of course, not popular. In some cases, reactions have included outright denial.*
*However, the scientific community is in agreement that sea level rise will continue to threaten vulnerable coastal landmasses.*

## Key Factors
## Best Practices

*Without a doubt, coastal erosion control practices have been heavily influenced by the low-impact development movement.*

*For years, land was developed with no regard for the impact on adjacent property. When large land areas were paved and covered with other impervious surfaces, the predictable result was increased site runoff volume and negative impacts on downstream real estate. Low-impact development stresses the need for more responsible site development with a goal of limiting discharges to historic levels. This can be done and is being done.*

*In effect, today's land developers are asked to do the opposite of what they did 50 years ago. Yesterday's goal was to drain all sites as quickly as possible; today's is to slow down offsite flows to minimize their negative downstream impacts.*
*Therefore, it is not surprising that the most effective and promising coastal erosion control practices and technological innovations attempt to work in harmony with nature and not against it.*

# Modular Anti Erosion System

production Teti - Italy
rotomoulding Moulding Service - Italy

*Teti is an innovative company born with the aim of exploiting an exclusive patent conceived by the same administrator, capable of intervening on the coastal erosion of the beaches which are a natural asset for everyone and an instrumental asset for operators in the bathing sector. This ideation has the ability to completely reverse the erosion process up to a nourishment of the beaches in simple, economic, natural terms and within the reach of operators in the sector.*
*Contrary to traditional systems, the shape of the rotomoulded element facilitates the flow and advancement of the wave while hindering its outflow, resulting in a barrier to the removal of sand and granules from the surface layers of the beach lapped by the waves and, moreover, braking its flow, forces the suspensions contained in the starting wave to decant, acting as a sedimentary trap.*
*The entire system is composed of elements which, in addition to their operational value, combine the possibility of being easily installed during the winter period and removed during the bathing period without the aid of mechanical handling equipment, either by land or by sea. The flexibility of the module allows it to be allocated and adapted to any geographical area.*

*www.thebabypoint.com*

> *The modular system aims to keep the sand on the shoreline, which would otherwise be dragged and dispersed into the sea due to run-off.*

> *The system is able to decant the suspended sand contained in the wave, making it deposit on the same shore line, giving rise to the nourishment phenomenon.*

## Caravan Market
## Market Outlook

*The global camping and caravanning market will expand at a CAGR of 7.6% over 2020-2030.*
*RV camping and backpacking segment likely to register growth during forecast period.*

*- Europe remains the largest shareholder in the global camping and caravanning market and the East Asian and South Asian regions are likely to register high growth rate.*

*- Infrastructural and facility developments at camping grounds impacting the market positively.*

*- Rising disposable incomes resulting in increase spending in domestic holidays likely to fuel market growth.*

*- Increasing popularity of outdoor recreational activities likely to impact positively to the market growth.*

## Key Factors
## Design Criteria

*A camper van has to meet the following design requirements:*

*- The interior must be able to hold an oblong block of at least 170 cm in height over a length of at least 200 cm and a width of at least 90 cm*

*- The interior is the space behind the driver's and passenger seats, in which the facilities should be fitted.*

*- The table, or its mounting, may be designed in such a fashion as to allow the table to be removed simply.*

*- These beds may be created using the seats, but not using the driver's and passenger seats.*

*- A fixed kitchen unit with a work surface that is at least 60 cm high, equipped with built-in (removable) water facilities with a sink, a tap and a drain.*

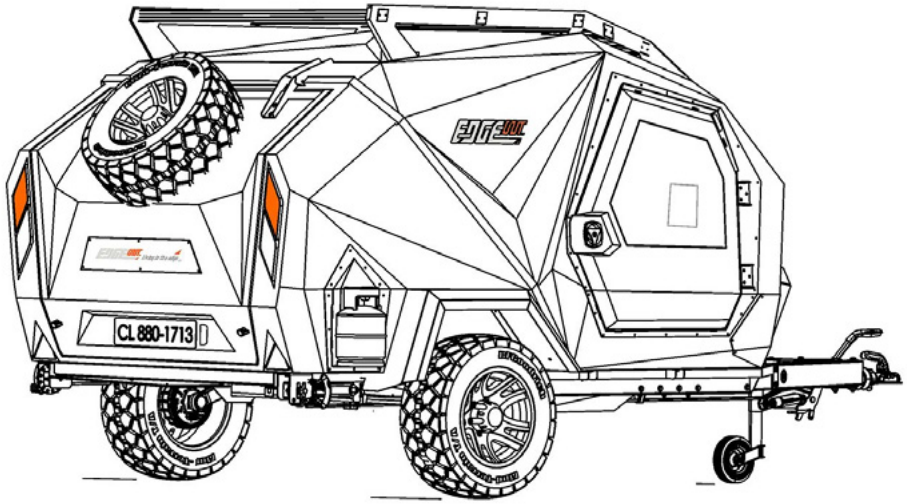
# Edgeout Teardrop

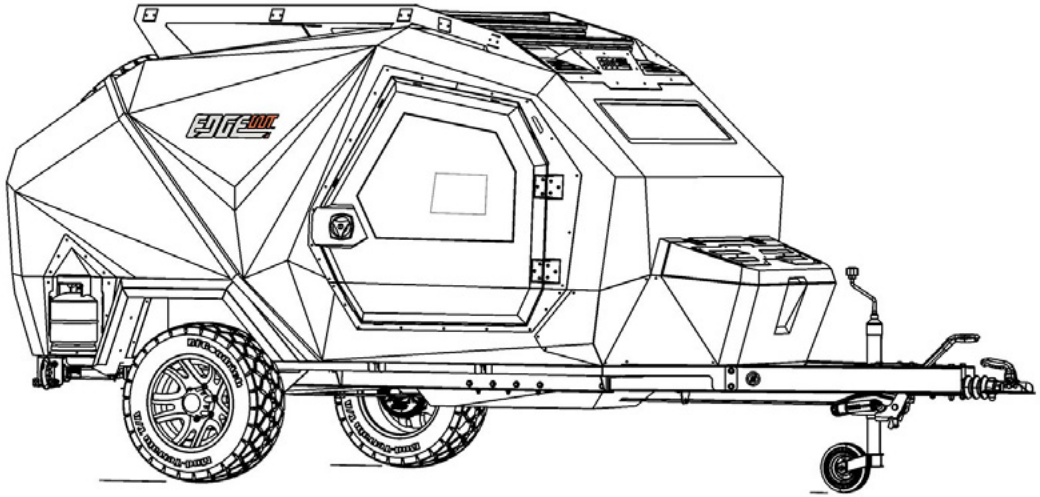
producer Edgeout, South Africa
design RKid, South Africa

*The new Edgeout Teardrop, a 4,565-mm long compact hard-body camper, is the "world-first molded LLDPE (Linear low-density polyethylene) composite teardrop," as claimed by the South African manufacturer.*
*Edgeout collaborated with the experts in rotational molding 4WVR plastic products and industrial design firm RKID to introduce the latest camper to production earlier in the year.*
*The Edgeout consists of two separately moulded units – a sleeping cabin and a kitchen at the back. This robust, low-maintenance trailer sleeps two (a rooftop tent as an optional extra can sleep two more).*
*Alongside the side doors windows, a roof window is perfect to enjoy stargazing from the bed. Storage choices comprise a nosecone in the front with shelves, drawers, and cupboards to store things in the rear kitchen and around the sleeping space.*
*The rotomolded frame is set on a galvanized chassis equipped with torsion bar suspension, electric brakes, and 15-in alloy wheels.*

*www.edgeout.co.za*

> *The rotomolded frame is set on a galvanized chassis equipped with torsion bar suspension, electric brakes, and 15-in alloy wheels.*





> *The Edgeout consists of two separately moulded units – a sleeping cabin and a kitchen at the back.*

## The Future Of The Fashion Retail

*With a focus on meeting increased demand for inclusivity and personalization through technology, ethical and eco-friendly business practices, and engaging customer experiences, these are the trends set to shape the future of fashion retail.*

*The demand for personalized retail experiences is growing. Some 80% of consumers now expect retailers to accommodate their preferences, with brands turning to technology to reshape their customer experience.*

*Artificial intelligence, in particular, is playing a leading role. In stores, trendsetters such as Amazon are exploring the potential of cashier-less checkouts that streamline the buying process. This technology tracks customers, recognizes the products they select, and bills them automatically as they leave.*

## Key factors Goals

*The layout of a retail clothing store helps customers to see products easily and makes browsing the store more comfortable.*

*It can also help you protect your inventory. A good retail layout can attract foot traffic and make it easy for first-time customers to find what they are looking for. Consider the customer and your profitability when you are designing the layout of your clothing shop*

*Spotlights on clothing displays and mannequins are perfect to make the items for sale stand out. Indirect lighting is a system that provides ambient light without shining the beams directly at the subject.*

*A comfortable dressing room looks as a key area that has its own central seating area for customers. A large dressing room area not only makes it easier for clients to get their friends' opinions on the clothes they are considering, it makes it easier to monitor customer activity.*

# New York Bulgari Store

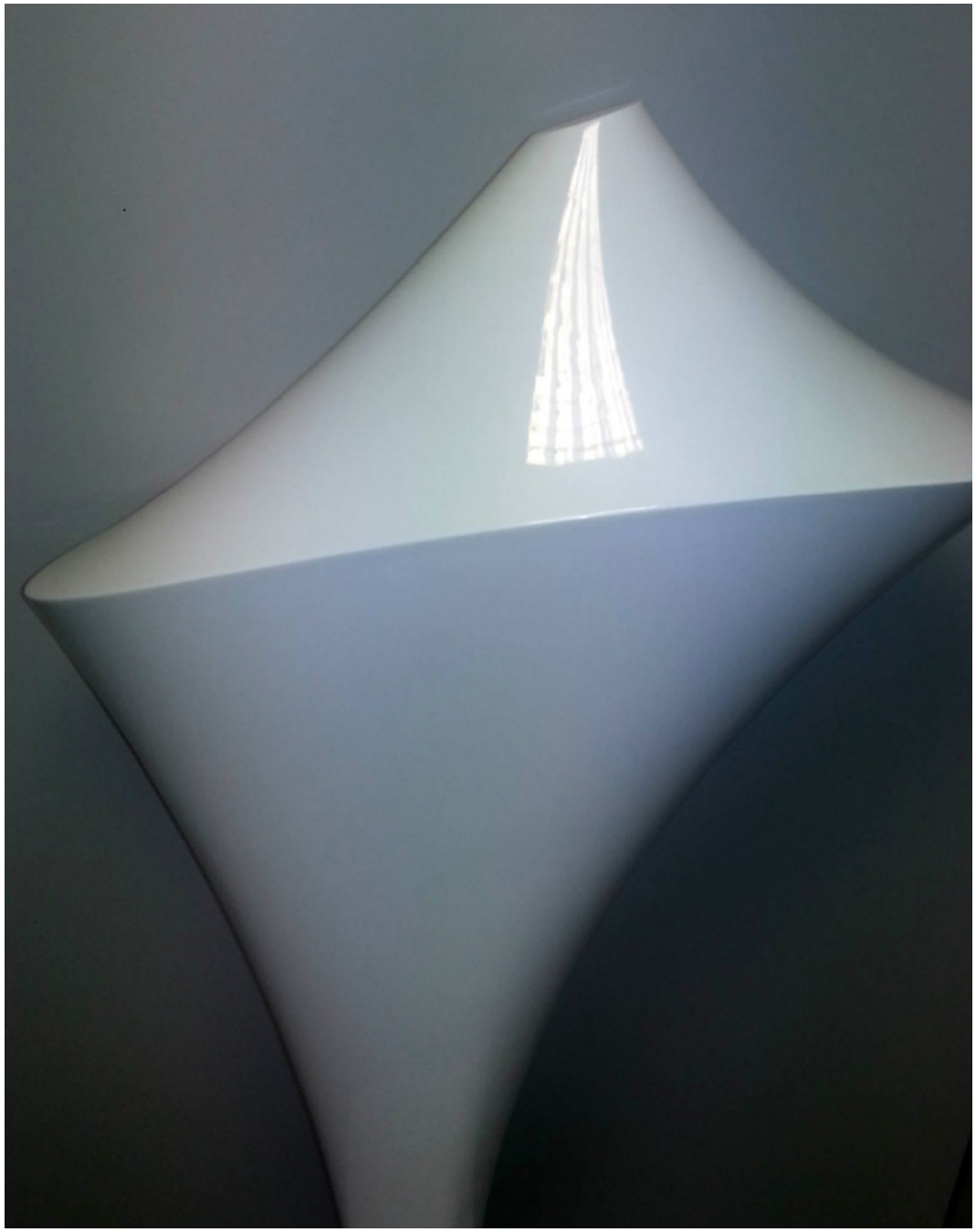
production Bulgari, Italy
design Marco Piva, Italy
rotomoulding  Moulding Service, Italy

*Designed like a theatrical stage front, the shop windows for luxury brand Bulgari were based on the just-launched diva jewels collection. The New York store expresses dynamic possibilities for using ceramics, and as part of a continuing cooperation between italian architect Marco Piva, the rotomoulded geometric display stands reference the shapes and colors of the famous jewels.*
*Formed with a narrow base, the energetically expanding cases are also reminiscent of a champagne flute, symbolic to special moments and events. Appearing to tilter over, their form is free-standing, ballasted inside and anchored to the underlying platform. The suspended rotational moulded pieces above elegantly flow downwards, with some serving as lamps for the items below. a backdrop of customized amethyst and rubellite shantung sliding silk panels, help to evoke a cinematic and theatrical image, acting as a frame for the centerpieces. Ceramic, cloth and metal blend together to create a playful interaction between the shapes, lights and colors projected.*

*www.bulgari.com*

BVLGARI

OWN BUILDING
BVLGARI



## The Evolution of the Rotomoulded Surface

*In addition to great freedom in the forms, rotational molding offers wide possibilities of customization of surfaces, with different finishes. This opportunity represents a valuable resource for companies and professionals who develop design articles for lighting.*

*Each rotomoulded product is the result of the continuous and constant evolution of polymer and additive processing technologies, to make it possible to create the most sophisticated aesthetic effects.*

*Each surface processes such as polishing, satin, embossing, knurling, give a special character to the diffused light.*

## Key factors Advantages

*One of the many advantages of custom rotomoulding is that you can tailor the surface finish of your product to suit your needs and requirements.*

*From smooth and shiny to textured and rough, rotomoulding can help you achieve a variety of colours, styles, and finishes at a relatively low cost.*

*With rotomoulding, you can achieve a number of different finishing textures that add depth and dimension to your product. Textures are an easy way to enhance the aesthetic appeal of your products and create tactile surfaces with intentional character.*

*Consistent textures are reliably achieved, even in large production runs, by applying techniques directly to the mould.*

## Moleskin

production Serralunga, Italy

*Moleskin is a craftsmanship that comes from the history of Serralunga and specifically from the experience in leather processing.*
*With the spirit of research and innovation that has always characterized the evolution of the company, the company present some of our products with an unprecedented appearance at the sight and unexpected to the touch.*
*A process that recalls the precious moleskin fabrics, sturdy, warm and comfortable fabrics, surfaces to touch and comb like a deerskin.*
*With Moleskin, the strength and quality of outdoor furniture get dressed in a refined and at the same time traditional elegance.*

*www.serralunga.com*

*> Host Bath Collection*

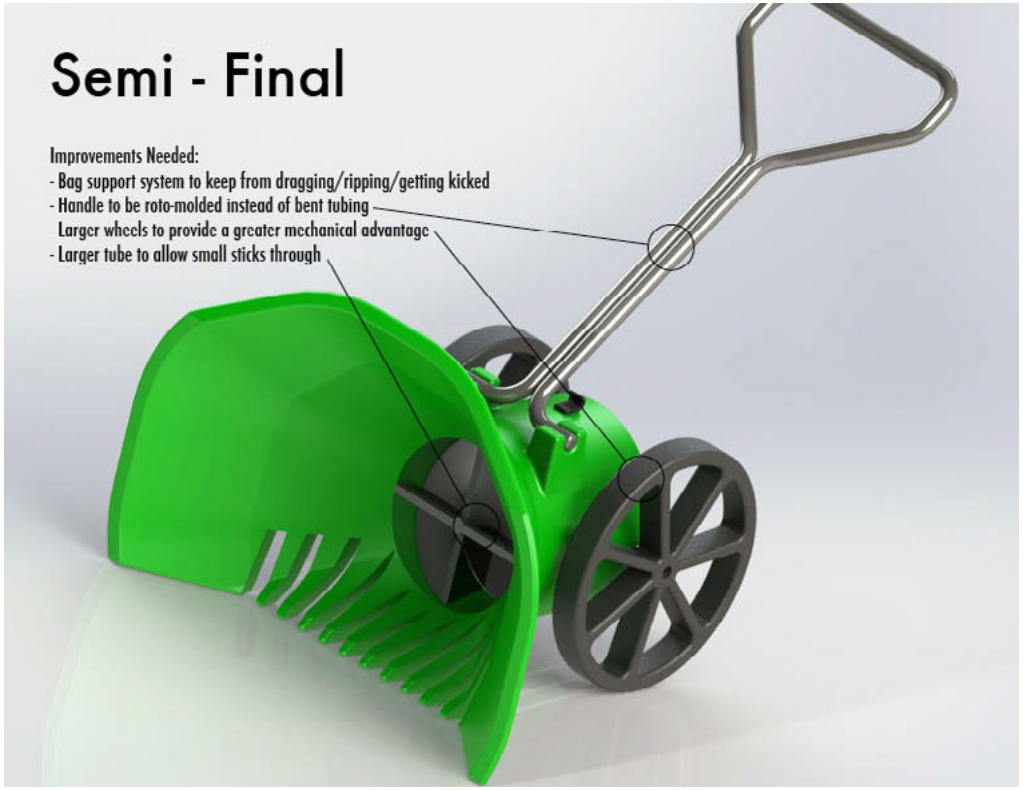
Inaspettabile al tatto
MOLESKIN

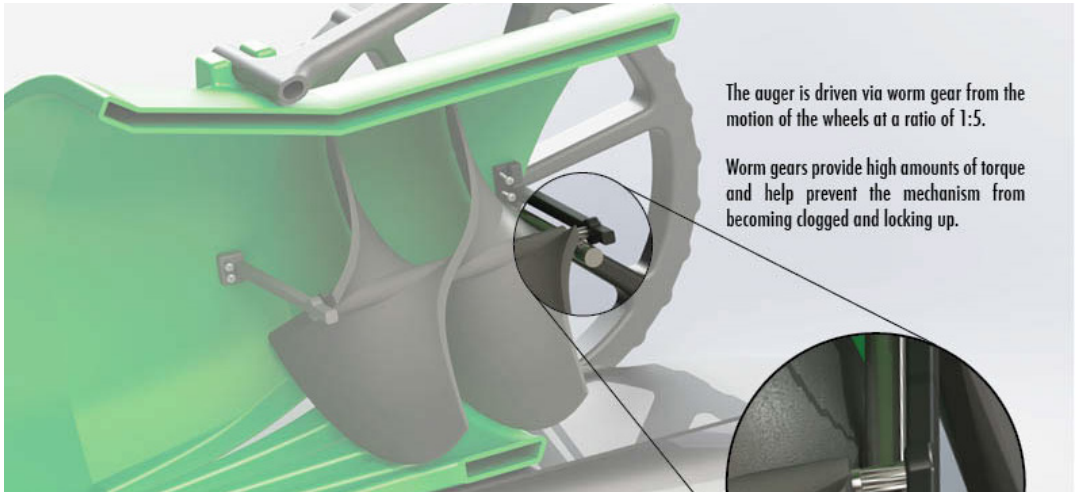
# Leaf Dozer

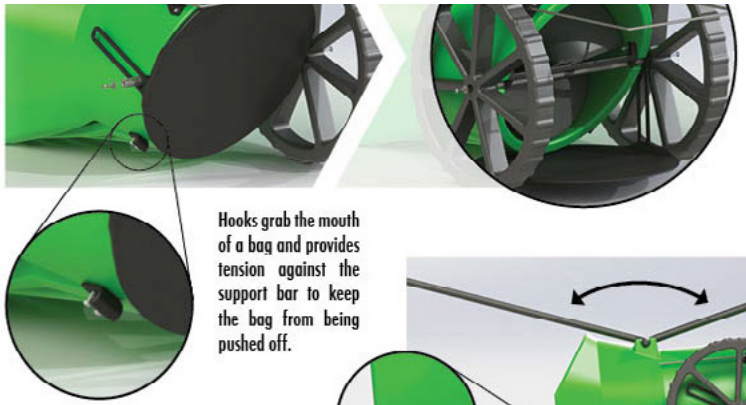
design Gaelan Evans,
GRAE Designs, USA

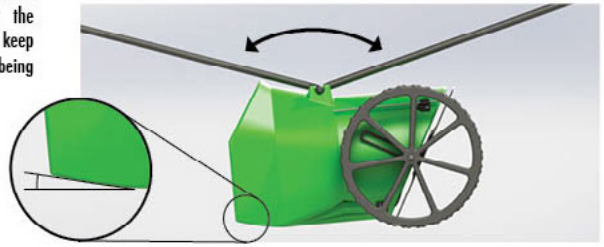
*The project stems from the idea of using the potential offered by rotational molding by applying them to a little explored type of product, generally made using other technologies.*
*The mouth of the rotational container is wide enough to be able to collect a certain amount of leaves while the top is designed to facilitate the passage of the leaves from the ground to the container.*
*The rotational body is connected to the metal arm to move easily on the ground, with a large central handle.*

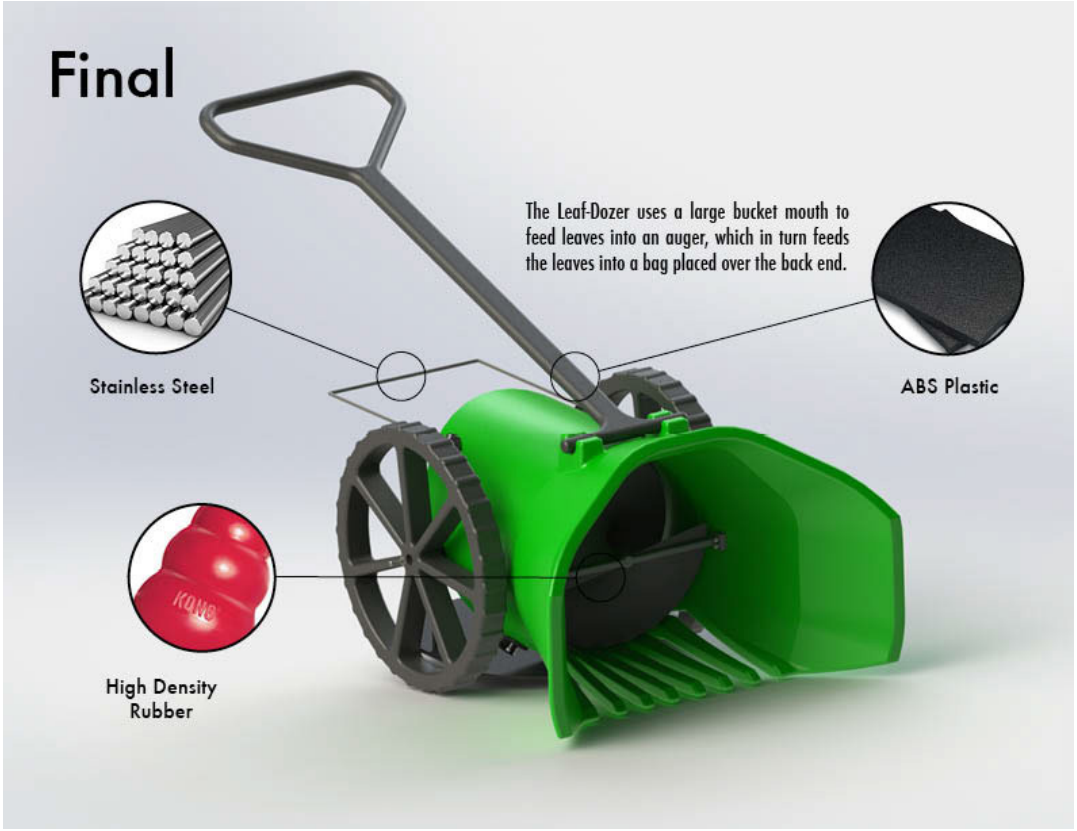
*www.grae.design*


Semi - Final
Improvements Needed:
- Bag support system to keep from dragging/ripping/getting kicked
- Handle to be roto-molded instead of bent tubing
Larger wheels to provide a greater mechanical advantage
- Larger tube to allow small sticks through


The auger is driven via worm gear from the motion of the wheels at a ratio of 1:5.
Worm gears provide high amounts of torque and help prevent the mechanism from becoming clogged and locking up.


Hooks grab the mouth of a bag and provides tension against the support bar to keep the bag from being pushed off.


Angled front lip keeps the Dozer from digging in or getting stuck on small debris.


Final
Stainless Steel
The Leaf-Dozer uses a large bucket mouth to feed leaves into an auger, which in turn feeds the leaves into a bag placed over the back end.
ABS Plastic
High Density Rubber

## Driving Safety Tips

*Urbanites may go an entire lifetime without ever facing the challenge of driving through mud. But for the rest of us, the soothing patter of rain at night means we have to face varying degrees of quagmire the next morning. For some, the first sign of spring is the dirty, gray snowbanks melting away into rivers of mud. We've either learned to deal with it or become entombed by it.*

*So what do you do? Where do you go for advice if you're about to venture from the dry pavement of the city into the mud-coated countryside and still drive safely? Those off-roaders who go in search of it, like the Holy Grail, are some of the best sources of advice. While their techniques for driving through mud are valid, the major difference between them and us is the equipment. The tires don't have huge lugs that grip mud with the consistency of peanut butter. And we don't have winches to haul us out if we fail to make it to the dry side.*

## Driving In Mud

*In relative terms, the easiest mud to survive is shallow, defined as 2 inches deep or less. But don't be deceived – even shallow mud can combine the characteristics of an ice rink and quicksand.*

*With any luck, you'll be entering this shallow mire at low speed. If you hit mud at speed, your vehicle can take on the characteristics of a luge on an ice chute. The key is to give the tires a chance to bite into the mud and find traction on the hard surface underneath.*

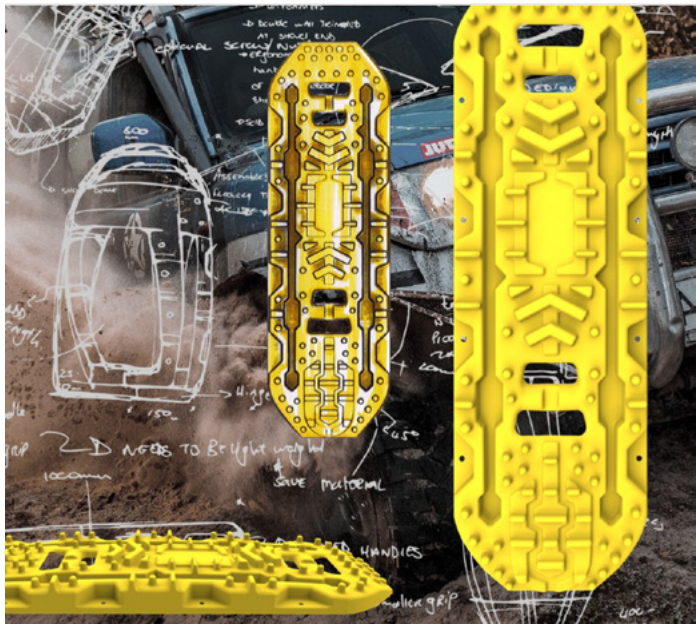
*The main tips concern the driving of the vehicle: it is preferable to keep the line through the mud as straight as possible; turning the wheels causes more resistance. It is also essential to have specific tools that can be positioned under the wheels to facilitate adherence and allow the car to resume the road.*

# 4x4 Recovery Trax

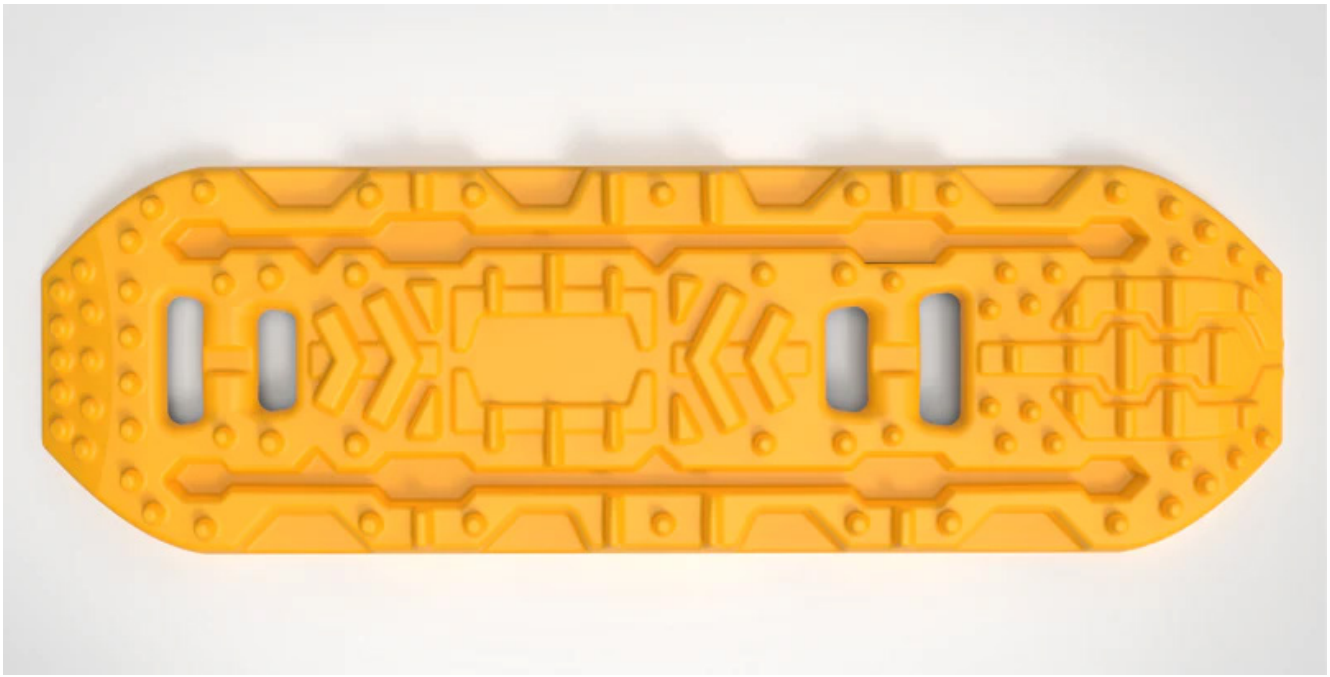
design Ryk Botes
production Pioneer Plastics, South Africa

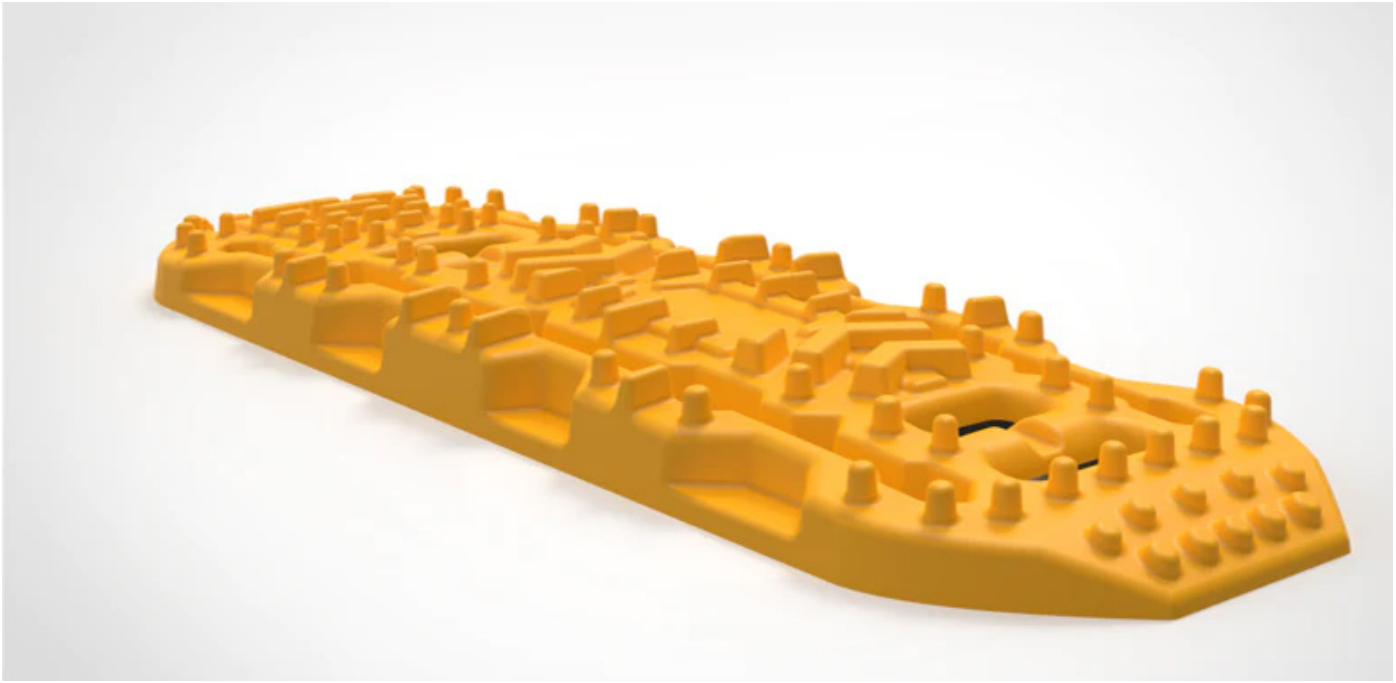
*The project stems from the idea of developing a functional tool to help drivers overcome particularly muddy and sandy roads. Very often, when the vehicle gets trapped, makeshift vehicles, wooden planks or iron elements are used. In this case, thanks to the properties of rotational molding, a polyethylene element is created that can be easily transported by placing it in the compartment or on the roof.*
*The particular shape of the surface increases the grip of the wheels and decreases the risk of skidding, facilitating the exit of the car from the ground.*

*www.pioneerplastics.co.za*



*> The particular shape of the object is designed to facilitate the grip of the tires.*





## Lodge Hotel
## Key Trends

*The Covid-19 pandemic has dominated the hospitality industry over the past two years as lockdown and worldwide restrictions forced bars, restaurants and hotels to diversify in order to survive. In addition to impacting core business strategies, the pandemic also caused many venues to make significant changes to their layouts and interior design to create compliant spaces that inspired confidence in their guests. Although restrictions are now easing, our trend forecasts for 2022 predict that some of these design changes are here to stay alongside further innovations that fit with our new normal.*

*The pandemic is not the only global issue that is set to influence hotel and lodge design trends in 2022. Glasgow's COP26 summit in November 2021 served to bring the climate crisis to the fore and reinforce the message that we must act now if we are to achieve the goals laid out by the conference. This has led to a move towards more sustainable design and materials as well as a focus on energy efficiency within hospitality projects.*

## The Great Outdoors
## Features

*The new 2022 trends led to outdoor hospitality spaces becoming premium real estate as socialising al fresco became the preferred option. This trend towards outdoor drinking, dining and entertaining is set to continue into 2023 as hotels create spaces that are luxurious and comfortable as well as functional all year round. From designer heaters and retractable rain covers to rustic fire pits and hygge-inspired faux fur blankets, many venues have designed weatherproof outdoor spaces that are as desirable in the depths of winter as in the height of summer.*

*Both the Covid-19 pandemic and the move towards sustainability are contributing to a trend for hard-working multifunctional spades. 2020 and 2021 saw our homes having to take on the roles of offices, gyms, leisure spaces and everything in between and this trend is migrating across to hotel interiors. The pandemic changed the way many people work which gave rise to the work from hotel trend, but now it's becoming clear that these working routines are here to stay and so many hotels are redesigning to fit these changing needs.*

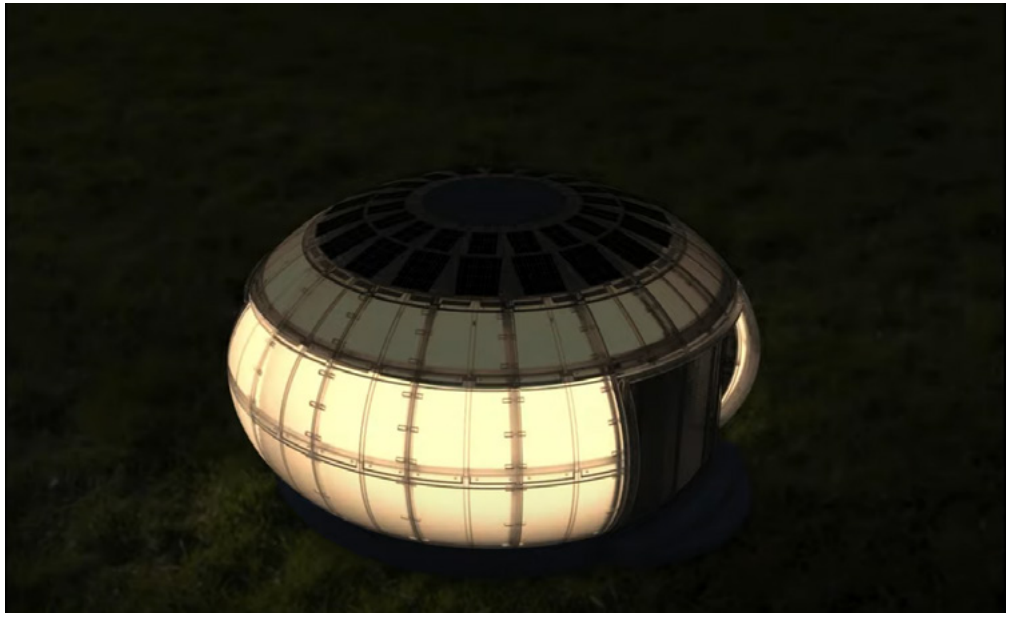
# Galaxy House

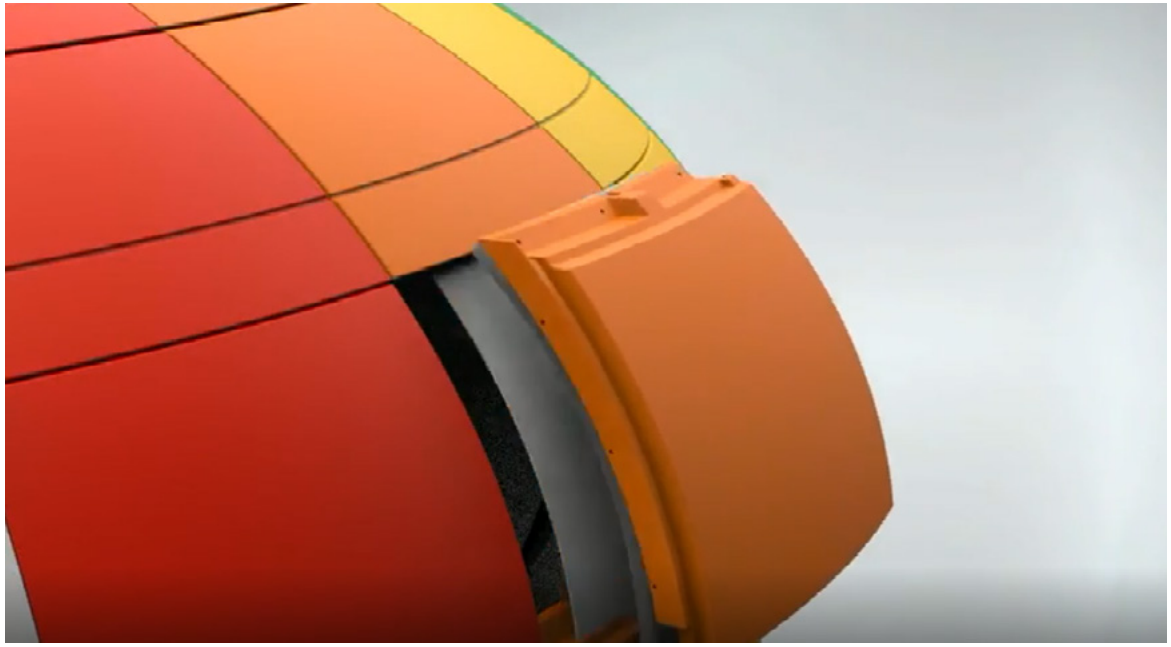
production BST Tech, China

*Galaxy House represents a new series of housing structures designed to be placed in multiple environments, from seaside resorts to hillside resorts. The supporting structure is made of steel on which a series of panels molded with rotational technology are mounted.*
*The satin and mass-colored finish of the panels allows you to create special light effects in the dark, illuminating the entire capsule and making it very visible even from a distance.*
*A ventilation system allows you to keep the environment healthy.*
*The internal environment is equipped with small rooms to satisfy the primary functions, while the entire structure is positioned on a base raised from the ground level, which allows it to rotate 360 °.*

*www.bst-tech.cn*

> *The opal white structure of the house comes to life in the dark through the interior lighting.*





> *The rotomoulded modules are screwed to the steel structure and are available in multiple mass colors.*

## Road Sweepers
## A New Design Concept

*Road sweepers are vehicles that are used to keep roads, pavements and other hard surfaces clean and free from debris. Road sweepers either clean with brushes or with air.*

*Conventional road sweepers use jets underneath the vehicle body to spray water onto the road surface. This helps to loosen particles and reduce airborne dust.*

*Brushes then scrub the dirt off the surface, while a cylindrical broom-like brush sweeps the debris onto a conveyor belt which leads to a storage container, or hopper, inside the vehicle. Alternatively, a vacuum mechanism may suck up the debris.*

## Key Factors
## Goals

*Typically, the brushes are capable of spinning at around 4,000 revolutions per minute (rpm).*
*Regenerative road sweepers use a hydraulic system that forces air into a swirling effect inside a contained sweeping head. A negative pressure on the suction side is then used to suck the debris into the hopper. The truck is fitted with filters that use centrifugal separation to clean the air of the debris, allowing the air to be reused.*

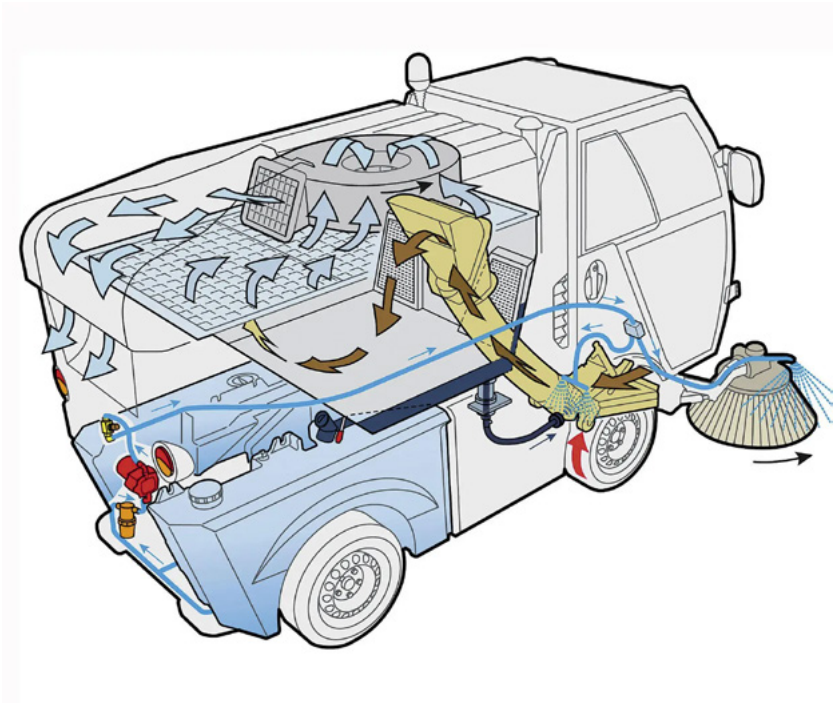
*These road sweepers are often noisier than conventional sweepers, as an extra engine is required to power the vacuum pump.*
*Many modern road sweepers are PM10 certified, which means they are capable of collecting and holding particulate matter as small as 10 µm (micrometres), which is often a leading cause of stormwater pollution.*

## City Cat 1000

production: Bucher, Switzerland

*The CityCat 1000 is the product of years of experience in developing and manufacturing compact sweepers for professional applications. With its slender frame, this compact sweeper is the ideal solution for cleaning all confined spaces and areas with limited access. It's a machine for sweeping larger premises, car parks, shopping centres, factory sites and housing estates.*
*The chassis consists of a welded frame with sprung axles, the front axle being fitted with coil springs and shock absorbers and the rear axle with double cone springs. Optimum axle load distribution ensures safety and comfort even when performing complex manoeuvres, such as mounting and dismounting kerbs and operating on slopes.*
*The two rotational moulded polyethylene tanks supplying clean water to the water spray jets on the brushes and suction nozzle are designed to maximise productive time on site. A special construction ensures that water remains in the recycled water tank when the hopper is emptied. This integrated water recirculation system results in drier loads and increases the supply of water for sweeping, thereby extending on-station time.*

*www.bucher.com*



*> The two rotomoulded polyethylene tanks supplying clean water to the water spray jets.*

*> A special construction ensures that water remains in the recycled water tank when the hopper is emptied.*

> *The CityCat 1000 is powered by an environmentally friendly, high-torque diesel engine.*

## Light Equipment for Asphalt Compaction

*The compact, versatile units are indispensable for day-to-day use on the most frequent applications in repair and maintenance works, earthworks, asphalt and paving.*

*Their growing diffusion is mainly due to the constant research and evolution that has led them to be tools at the service of operators, capable of facilitating work and guaranteeing greater precision in carrying out the work.*

## Key Factors Features

*The hinged guide handle should be mounted on a large "silentblock" rubber supports. This would reduce hand-arm vibrations.*

*Furthermore, optional comfort grips should be designed to reduce vibration between the operator's hand and arm. This solution facilitates the work and allows a better control of the machine.*

*The belt guard will provides the operator with permanent protection from injury and the fully enclosed design results in fewer repairs.*

# Single Direction Vibratory Plate BP

production Bomag - Germany

*Power, performance and innovation are the distinguishing features of the nine models of one-way vibratory plates produced by Bomag. The plates can be used in many fields of application: For carrying out earthmoving works, for laying asphalt and paving. They are also suitable for repairing roads and agricultural roads, for the construction of pipelines and trenches and for gardening.*
*The removable rotomoulded water tank has a larger capacity and is even equipped with a level indicator. No scuffs on the asphalt surface when turning and the model ensures a perfect surface finish.*
*The transport handles guarantee a safe grip on all models for loading. The V-belt guard, standard on all models, provides the operator with permanent protection from injury and the fully enclosed design results in fewer repairs*

*www.bomag.com*

> *The roto moulded water tank is equipped with a level indicator.*

> *The hinged guide handle is mounted on effective "silentblock" rubber mounts which reduce hand/arm vibrations to the minimum.*

## credits

Bomag, *Germany*
Bucher, *Switzerland*
Bulgari, *Italy*
BST Tech, *China*
Dantherm, *Denmark*
Edgeout, *South Africa*
Moulding Service, *Italy*
Teti, *Italy*

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SJB-Institute of Technology, *India*
St. Martins School, *Great Britain*

Concept
Studio Giovanetti, *Italy*

## affiliates ARMO

- 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