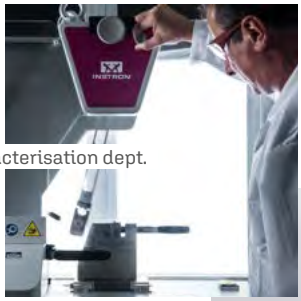

THE FUTURE
IS A CONTAINER
OF INNOVATION
iMiLOG
iMilani
innovative
italian
ideas









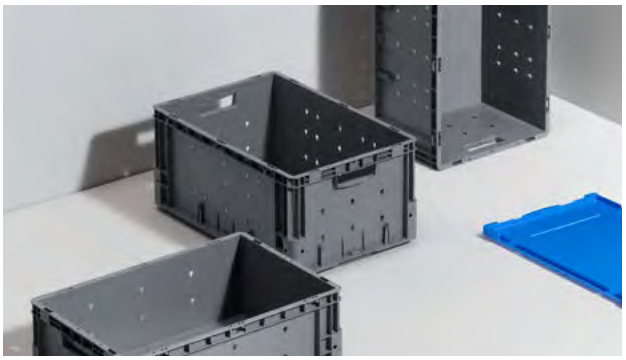


INDEX

# EVERY PRODUCT HAS A STORY TO TELL











We are people who see quality, innovation and sustainability as fundamental values of their business, inspiration to their behaviour and true substance of any modern vision. These are the values we base our daily work on, confident that they will not let us come unprepared to a future that is already here, with its demands for interaction, speed and mutual satisfaction between customer and supplier, partners today in the challenge of competition as never before.

These are the values of our present and our past, enrooted in **a business story started in 1929 by Mario Milani** and carried on by **Gianni Milani**, who, in 1972 understood the innovation potential of plastic containers as tools for a more rational management of company spaces.

Today it's up to the third generation to write the next chapter, with **Roberto Milani**, CEO of iMilani, who has conceived this new business project as a response to today's market need for a lean process, truly open space and open mind.

**Gianluca Marzano**, also CEO of iMilani, follows the technical, marketing and commercial offices with his twenty-years experience as CEO in companies in this field.

iMilani is impatient to meet today's challenges as a modern and trustworthy player, ready to fulfil the requirements of both the industrial world and the community. By adopting a policy of environmental protection, iMilani stands out as an eco-friendly company that puts at its core recycled and recyclable materials within a controlled production chain that develops entirely inside its premises.

iMilani wants to propose its customers a range of tailor made products to meet their specific needs. To serve this purpose iMilani has developed iMiCUBE, bin and container mass production for a wide range of purposes, and iMiLOG, a specialised production of bins aimed at the automated systems, both for cranes and minishuttles.

**iMilani is ready.**

**Roberto Milani**
*CEO*

**Gianluca Marzano**
*CEO*

# OUR WORK IS MADE OF TWO CORE IDEAS

## INNOVATION

**EVERYONE TALKS ABOUT INNOVATION.
WE LIKE TO MAKE IT HAPPEN.**

We strongly believe in this word, we put it into effect and place it at the heart of every design, every product and every process we create. Innovation requires research, dedication, skills and investments. These are the factors behind the constant growth of our presence in both national and international markets. We started in the 70s and we still have a strong desire and potential for further growth.

# INTEGRATION

## EVERYTHING IS PART OF A SYSTEM. DESIGNED TO WORK IN HARMONY.

Integration is a key concept in our business: every product must be integrated in all its parts using the most sophisticated automated systems available. We are currently researching how to improve the performance of our integrators, designing products that can adapt to new picking systems, tracking systems and anthropomorphic robot interaction systems. All this is part of the logic of Industry 4.0. and beyond.


PP silos.

# MATERIAL: POLYPROPYLENE AT ITS BEST

PP

## TOP QUALITY POLYPROPYLENE AND POLYPROPYLENE FOR FOOD PRODUCTS

Top quality polypropylene is a non-toxic, odourless plastic resistant to solvents and acids. It can be washed and sterilised and is water-resistant and non-hygroscopic. Its chemical and mechanical properties make it perfect for the manufacture of boxes and containers, which are ideal for handling in automatic warehouses.

**Food safety**

In the food sector, we have gained certification for food products with regard to the master that can be submitted to a metal detector. This ensures the ability to identify a plastic chip inside a packed food container, which was previously in direct contact with the box. This allows us to discard the package before shipping.

PP branching under presses.

## POLYPROPYLENE 5A

Polypropylene 5A is a compound obtained by blending top quality polypropylene with a percentage of polypropylene from selected recycled post-industrial material. This raw material allows to achieve high levels of mechanical performance in automated warehouses.

PP V0

## FIREPROOF POLYPROPYLENE – CLASS V0

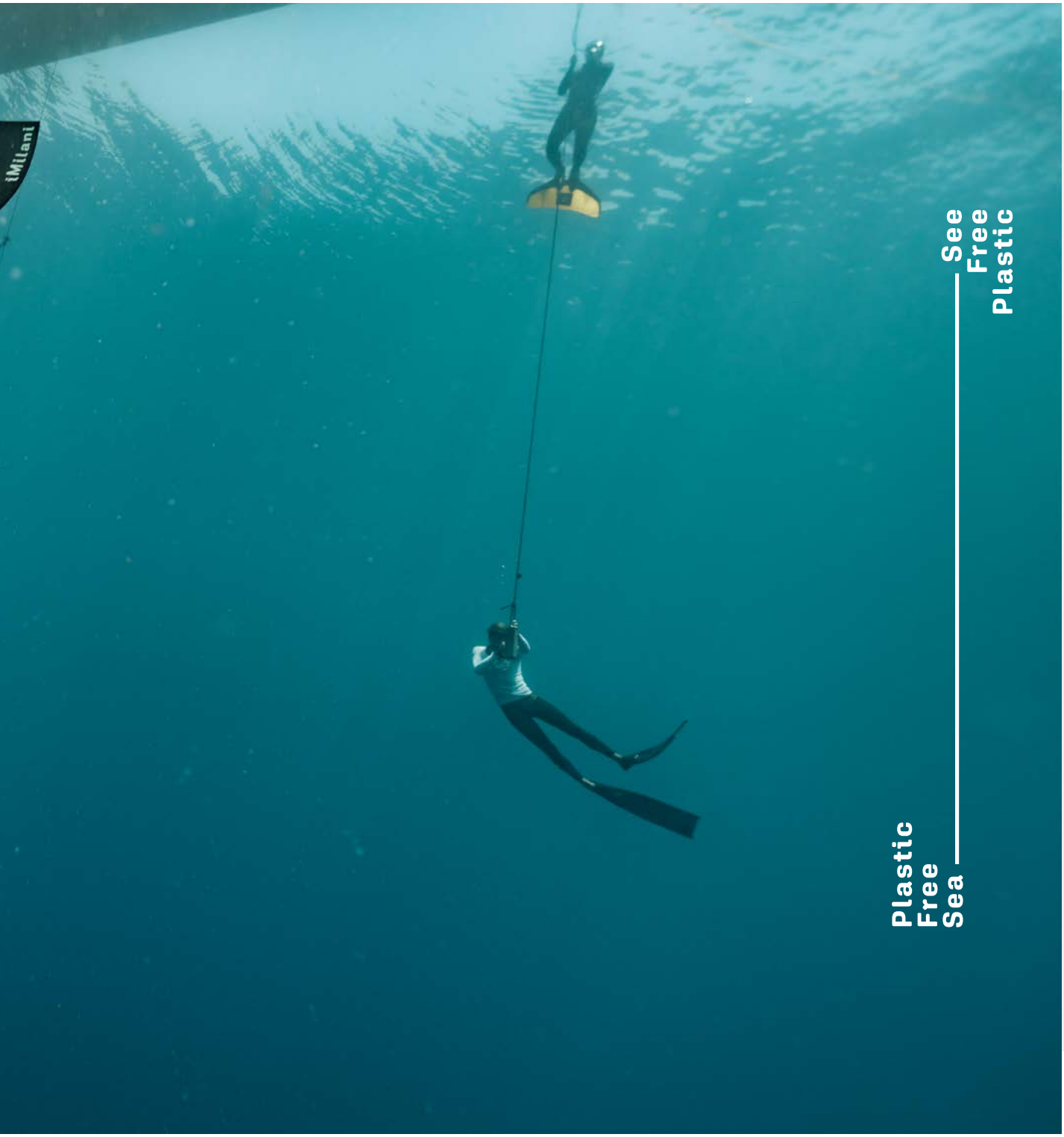
The fireproof polypropylene, available in different colours, ensures the prevention of the risk of fire in the automatic warehouse, a valid alternative where it is not possible to use traditional sprinkler fire-fighting systems.

ECOLOGY AND SUSTAINABILITY.

# BECAUSE THE EARTH IS THE MOST IMPORTANT CONTAINER

ALESSIA ZECCHINI
APNEA WORLD CHAMPION
WORLD RECORD HOLDER

Our planet is our biggest house. The very house where one day someone else will live, without even having planned it. It is a home to everybody, just perfect. This is how it is now, and this is how we must leave it when we go. Or maybe even better.
We want to make the same commitment when our plastic product will also come to the end of its life, and this might mean after 450 years.
The environmental protection is a priority, not an option. And we don't mean just the environment that surrounds us in our daily small world, but above all that immense expanse of water that covers more than 70% of the Earth's surface: the sea.




iMilani are committed to the recycling of post-consumer plastic with more than 1200 tonnes a year: a small contribution to "*Plastic Free Sea*".

However, plastic must not be seen as a monster, but as the clay of ancient peoples, ready to fulfil mankind's creative imagination, to take on shapes and purposes useful to our everyday life, setting our creativity potential free, "*See Free Plastic*".


Impact test
with pendulum.

## MATERIAL CHARACTERISATION DEPARTMENT.

# RAW MATERIALS AT THE CENTRE OF OUR ATTENTION

When materials arrive at our company, the first thing they encounter are our laboratories. Each new arrival is carefully checked and certified according to our strict quality standards, with composition tests and mechanical, thermal and functional tests. Only materials that pass these tests are placed in our silos.

When the products have been moulded and the plastic has stabilised, this is the time for further tests: bottom bending and box structure resilience. Only after this process takes place products are released from the plant and sent to customers.

## MELT FLOW TESTER

This is a testing machine that determines the Melt Flow Rate of plastic, in other words the fluidity properties of the raw material in accordance with ASTM and ISO international standards.
This value is extremely important during the raw material transformation phase, because thermoplastic materials are processed under pressure and at a certain temperature. The ability of these melted materials to flow under pressure at a certain temperature is essential to the science and technology behind polymers.

Melt Flow Tester.

Traction test.

## TRACTION TEST

During the product design phase, we need to optimise the usage of materials to create items that are strong, but also light and rigid at the same time. Two of the reference properties are elasticity and resistance to traction. The traction test is carried out using two vices that secure the extremities of specifically-shaped test pieces and subject them to traction. The test result is a value indicating the breakage or yield load of the raw material. When suitably measured with an extensometer, the test piece also provides the traction elasticity module. The machine is designed to carry out tests on a wide range of test pieces in accordance with ASTM and ISO international standards.

## IMPACT TEST WITH PENDULUM

For users of the materials, impact resistance is one of the most important properties. It provides an efficient assessment of the cost/performance ratio during product development and quality control.
Because components might yield when subjected to a force that is lesser than the critical breakage force, it is necessary to accurately determine the propagation of fractures following an impact. The pendulum machine is designed to carry out Charpy and Izod type tests on a wide range of test pieces in accordance with ASTM and ISO international standards.

Analysis laboratory / New raw material test


## MOULD DEPARTMENT.

# THE MOST INNOVATIVE INJECTION MOULDING IS MADE IN iMiLOG

**18 injection moulds** operating on **3 shifts**.
From moulding small parts to boxes sized 800 x 600 mm. The moulds are designed for the application of labels with an IML In-Mould Labelling system. This is used both for customisation and the application of barcodes, on-machine weighing and tolerance testing.

## THE PROCESS

The mixture of various “grains” and colours is heated until a homogeneous and mouldable paste is achieved. This is then inserted into the mould to create a product in the desired shape: a box, a finishing element or a mechanical part.

The presses and moulds are connected via silos, rollers, testing positions, technical and commercial information systems making up the company’s control and value chain. At the end of the process each product is tested and checked to ensure that there are no imperfections. The product is delivered to the customer only if just perfect.


NESTY
SPACE
ODETTE

# AND THE WINNER IS...
# **INNOVATION!**

**Tested like Nesty.**
**Innovative like Space.**
**Specific like Odette.**

These are iMiLOG's products for automatic warehouses.

In the following pages you will discover some of the most innovative features of our products.
They all have one thing in common: the ability to transform a simple plastic box into a reliable container for your products within the context of a logistical process that is now integrated both inside and outside the plant.

**Innovation and integration. This is iMiLOG.**

**NESTY.**

# THE VOID IS NO LONGER FRIGHTENING



## POLYPROPYLENE, ENGINEERING AND INNOVATION

The structure of these boxes is a truncated cone:

— when empty they fit one inside another, reducing their volume by 70%

— when full they can be safely stacked.

These properties make them perfect for maximising warehouse space and transport space. They are particularly useful for loads that return empty or in any case where the packaging needs to take up the least possible space.

Nesty is used as a loading unit in both automatic and conventional warehouses. In the latter case, it is equipped with opening windows for picking.

They can be handled by automatic destackers for systems that require filling and closure of the box on the line with a separate cover and paper labelling for shipping, as with pharmaceutical distribution systems, for example.

# COVER WITH TWO FLAPS: STACKABLE AND SAFE

The cover with two flaps offers a high level of safety and practicality. It is seamlessly integrated with the box and immediately available. Constant cross section geometry allowing to reduce the footprint of stacked boxes. Suitable for automatic closure where applicable.

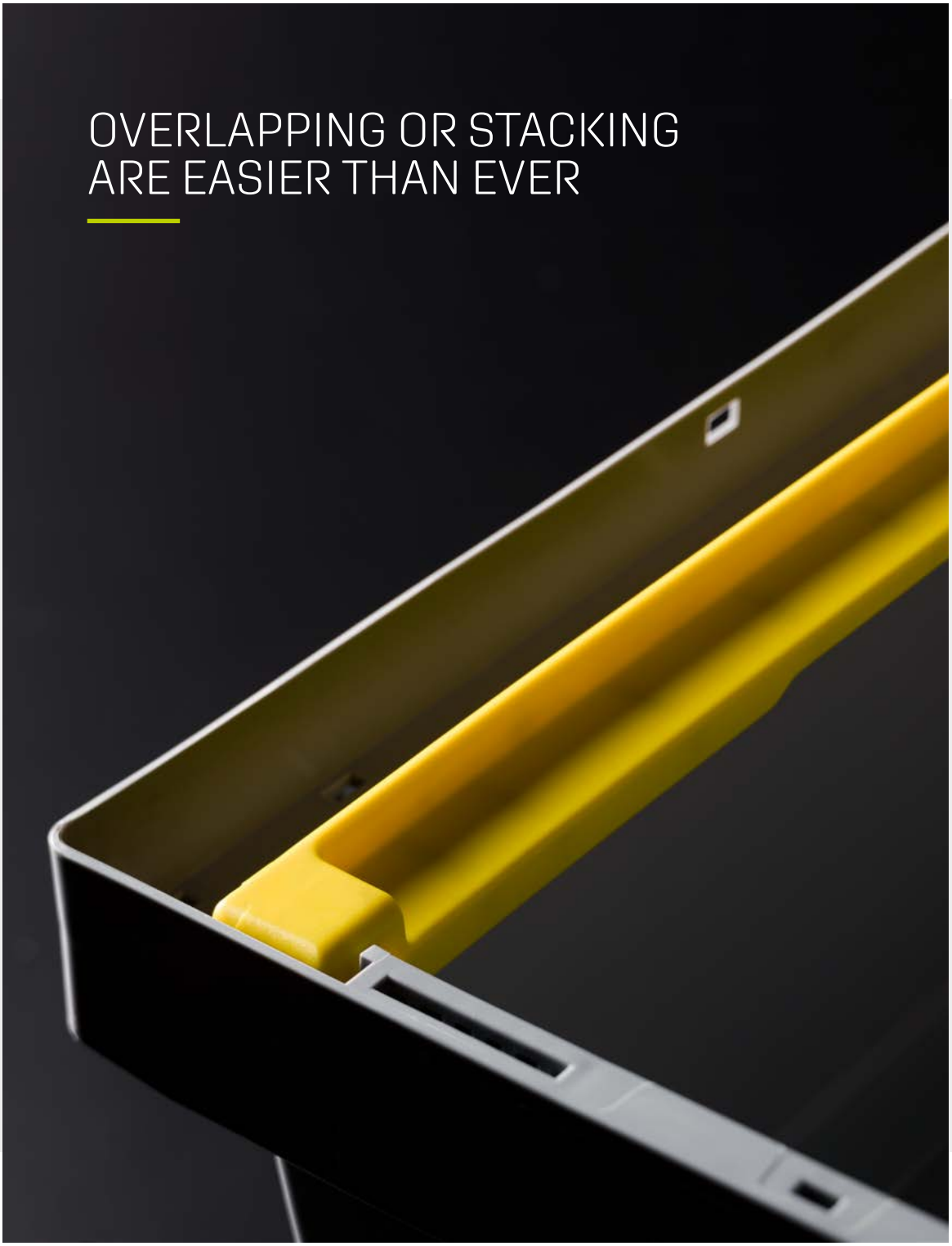
Detail of strong flap housings with enhanced locking.


Anti-opening single-use seal, with barcode and number in figures, can be applied to all types of cover.

Constant footprint geometry when stacked.

In addition to the single-use seal, strap-sealing can be used both on the short and long sides, featuring special hinges that prevent unauthorised removal of the strap-sealing. A further safety system is provided in the form of single-use seals customised with barcodes.

# OVERLAPPING OR STACKING ARE EASIER THAN EVER



Detail of overlapping support.

We have developed special supports for overlapping boxes without using separate or hinged covers. Translation allows boxes to be directly overlapped.

Rest and operating positions of support.

The translation supports do not reduce the capacity of boxes and can be combined with a separate cover. The special geometry of supports prevents accidental translation during overlapping.

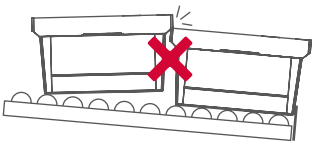
# LESS FOOTPRINT
# MORE SLIDING SAFETY, CUSTOMISATION AND IDENTIFICATION

Up to 75% less footprint when handling empty boxes. An extraordinary result achieved through a careful design.

Compared to other box models that save space when empty, Nesty ensures optimum use of interior space with smooth walls that are free of obstacles, which are normally present on other types of overlapping boxes.
The special geometry prevents the vacuum effect during automatic destacking.

The wedges on the edges of short sides ensure the stability of the box in the event of accidental interruptions during the advance of automatic rollers and conveyor belts.





The external surface of the bottom has a smooth frame and rounded edge, for a silent impact on the conveyor system rollers. Additionally, the surface of the central part is designed for increased adherence, ideal for safe transport over flat surfaces and conveyor belt ramps in ascent and descent.



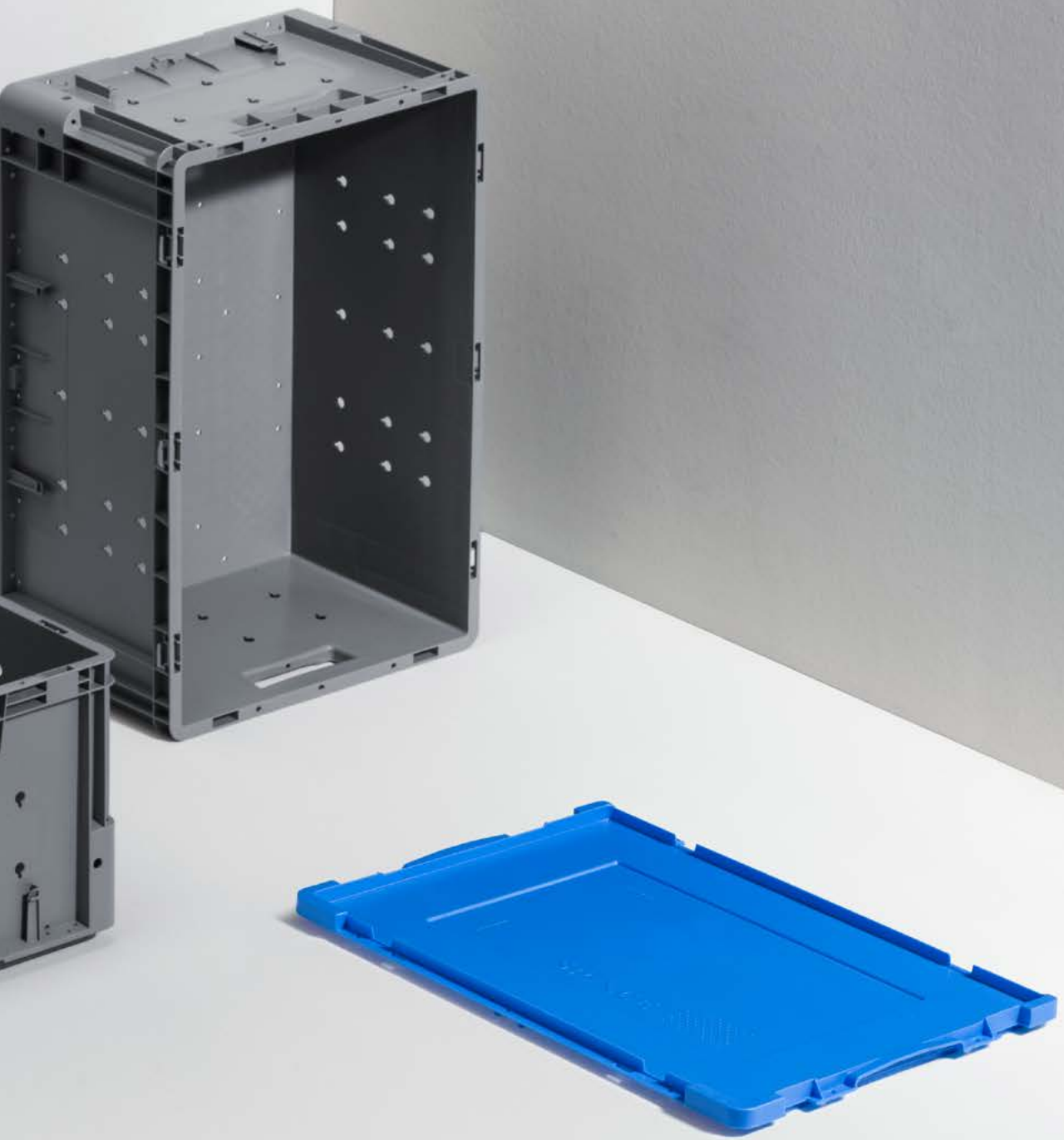

The box can be customised using the IML system choosing between up to 6 colours. A true added value, improving identification in external logistics processes. The autonomous interaction with identification systems within the material flow process lies at the core of 4.0 integrated logistics.
The use of barcode, QR and RFID systems immediately communicates the contents of box. The Excel file made available to the WMS pairs each barcode with the associated weight of the box. In this way, it is possible to further check the goods picked or present in the box during picking and inventory activities.

Waterproof full cover, suitable for automatic matching lids system.

**SPACE.**

# THE BOX
# THAT MAKES ITS WAY





We've called it Space because its strength lies in its broad inner dimensions. This result stems from the optimisation of the structural calculations in the context of a linear, pleasant and efficient design.

Space stems from the decade-long experience in plastic material moulding: it represents the state of the art in the industrial and logistical box and packaging sector.

Space is perfect for internal use in the factory, for manual use and in the mini-load and mini-shuttle systems. Allows internal partition up to 16 spaces with comb dividers, and compartmentation with additional containers insertable inside the box.

## LIGHT, REINFORCED AND SANDWICH BOX BOTTOMS.

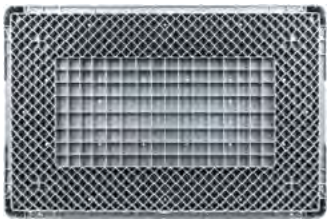


# WE WORK BETTER IN SILENCE

The Space iMiLOG programme includes 3 types of bottoms with different load-bearing capacities.

Flat bottom.

**Smooth bottom**
Load-bearing capacity of 20 kg and 200 kg with stacked boxes. Besides manual logistics, they are used in continuous-shelf automated warehouses.



Reinforced bottom.

**Reinforced bottom**
Load-bearing capacity of 50 kg, stacking capacity of 300 kg. Maximum bending 5 mm, when picked on the short side on mini-load systems. The specially-shaped bottom has a perimeter frame with 45° ribbing and a leading edge to minimise the noise impact on the rollers. The central part has perpendicular ribbing with different shapes, slightly concave, to offset the bending with a full load.

Sandwich bottom with view of internal ribbing detail.

**Sandwich bottom**
Load-bearing capacity of 120 kg with bending below 5 mm with full load. The bending is reduced to below 1 mm with 75 kg load-bearing capacity. Stacking capacity 300 kg. The perfectly smooth bottom and perimeter edge with leading section make the product extremely silent when transiting on the roller conveyor.

All the tests were conducted in conformity to the EN 13117 standard.
TÜV-certified noise measurements.

Open handle with internal radius of 6 mm for more comfortable manual handling.

# LOADING UNITS COMBINABLE IN EVERY DETAIL

Box centring holes

Anthropomorphic robot gripper insertion cavity and weight zero setters

Single-use seal insertion for use with cover

Mini-shuttle telescopic arms automatic gripping area

Slots for securing comb separators*

20 wall holes for sprinkler water drainage*

A5 document holder**

28 edge holes for washing water drainage*

Aid to remove documents**

Stabiliser pin insertion for comb dividers

Gripping aid on long side

39 bottom holes for sprinkler water drainage***

3 fastening points for hinged covers

10 fastening points for security seals for use with cover

Open handle for increased comfort or closed handle for greater capacity

* Can be closed on request and for each side of the box
** Removable on request and for side pair of the box
*** Can be closed on request, also partially

## REDISTRIBUTION OF THE WATER TO DIMINISH THE LOAD.

# ALLY OF WATER, RIVAL OF FIRE

The boxes have two groups of drainage holes:
— 39 holes on the bottom
— 20 holes on the walls

The opening of the holes on the bottom can be adjusted (partially or fully) so that the water can drain completely. If cardboard elements are inserted in the box, in case of fire the water used to extinguish it would not be able to drain completely through the holes on the bottom. This is where the 20 holes in the walls become useful: situated close to the bottom, they reduce the amount of liquid and thus the weight bearing on the metal structure.

Thanks to the arrangement of the holes, the water can be redistributed differently to the lower loading levels. This system favours the flow of water to areas that cannot be reached by the sprinkler due to the presence of boxes within the system. As a result, the holes in the boxes help to extinguish the fire more rapidly.

Sprinkler water drainage:
39 bottom holes
20 holes on the wall


Interaction with anthropomorphic robot.

## ZERO-GRAVITY LOAD BALANCING SYSTEMS AND ANTHROPOMORPHIC ROBOTS.

# RAPID PICKING, SAFE AND CERTIFIED HANDLING

On the upper edges of the boxes, along the short sides, there are four cavities for automatic or manual anchoring. If the box mounts a separate or hinged lid, it can still be handled using the slots along the lid's perimeter.
Handling of the box is certified thanks to laboratory tests conducted by the TÜV certification body with 120 kg load.

Anthropomorphic robot gripper insertion cavity and weight zero setters.


Mould logo.


Logo with up to 6 colours IML In-Mould-Labelling.


Logo with up to 6 colours IML In-Mould-Labelling + integrated barcode.

3M barcode on polyester support.

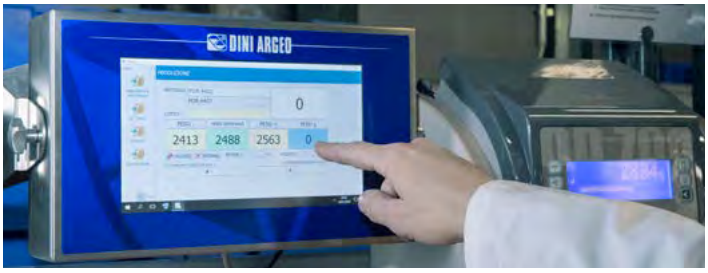
3M barcode on polyester support with RFID on the back of the label.

MOULD LOGO. IML LOGO. BARCODE. RFID. QR VOICE.

# THE BOX SAYS IT ALL

The graphic customisation of the box is a decisive factor:
- it indicates the owner
- it facilitates identification also during external logistics processes.

The autonomous interaction with identification systems within the material flow process lies at the core of 4.0 integrated logistics.
The use of barcode, QR and RFID systems helps to immediately communicate the box's contents. The Excel file made available to the WMS pairs each barcode with the relative weight of the box. In this way, it is possible to further ascertain the goods picked or present in the box during picking and inventory activities.




| Container number | Weight | Measure unit |
|---|---|---|
| 0300000000180004146 | 3717 | g |
| 0300000000180004146 | 3720 | g |
| 0300000000180004146 | 3713 | g |
| 0300000000180004146 | 3735 | g |
| 0300000000180004146 | 3740 | g |

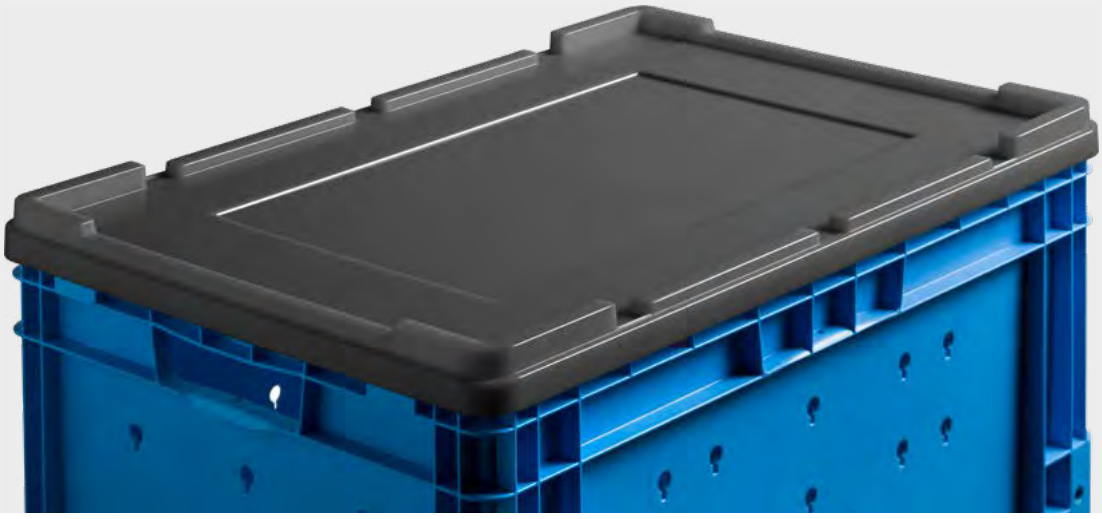
Excel file with box calibration and barcode.


Check barcode reading and congruence.

Separate cover.



Hinged cover.



Waterproof full cover.

## PROTECTION OF THE CONTENTS AGAINST:
## DUST, UNAUTHORISED ACCESS, FIRE-EXTINGUISHING LIQUID.

# UTMOST PROTECTION

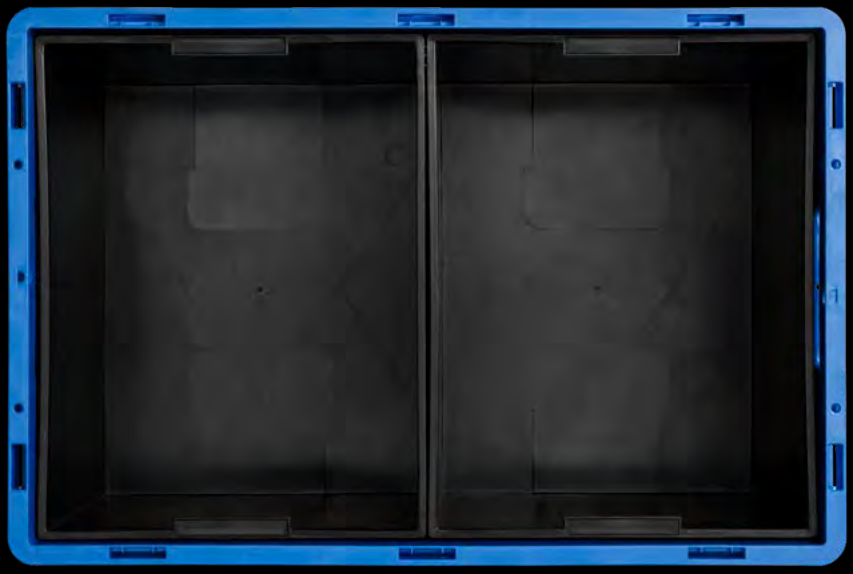
We know how important it is to protect the products in loading units.
To this aim, we have devised several solutions for any operational situation: from goods stored in mini-loads to those arriving from sub-suppliers.

Both the separate and hinged lids have opening handles on the short sides. Moreover, they can be sealed with straps on the long sides and with plastic and lead seals on the short sides. In both cases, the box can be handled with zero-gravity load balancers and anthropomorphic robots.
The full lid offers maximum protection of the contents against liquids, and can be strapped and sealed with plastic and lead seals. This is very important in automated warehouses: if water is prevented from entering the box, the weight bearing on the scaffolding will not increase.

A further advantage: the lid with two hinged flaps. Compared to the hinged lid, it occupies less space when open. When combined with iMiLOG disposable seals, it turns into an excellent opening dissuader as the products cannot be accessed without leaving a visible trace of the tampering.

Anti-opening single-use seal, with barcode and number in figures, can be applied to all types of cover.

Cover with two flaps, sealable.



2 compartments.

3 compartments.

4 compartments.

Barcode secured to handle.

## COMPARTMENT DIVIDERS AND INTERLOCKING DIVIDERS.

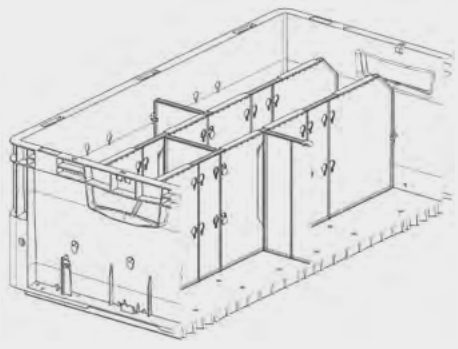
# HOW TO ORGANISE THE INTERNAL SPACE

If often occurs that low-rotation or extremely small products can get lost inside an overly large loading unit. To avoid increasing the locations inside an automated warehouse, we have created two specific solutions, both with an area reserved for attaching the relative barcode of the compartmented area.

— Compartmental boxes of various heights, to subdivide the boxes into 2, 3 or 4 compartments. The practical side handles guarantee optimal extraction.

— Comb dividers, with enhanced stability thanks to the slots in the walls and the pin on the bottom of the box.

Ergonomic picking handle.



The dividers can create different asymmetrical partitions.

**ODETTE.**

# OVER 40 YEARS OF WORK AND STILL AMAZING EVERYONE



These unmistakeable yellow boxes were designed and made for the ODETTE project (Organisation for Data Exchange by Tele Transmission in Europe). This organisation was set up in 1985 with the aim of creating harmonised standards for containers in order to manage and transport small volumes and quantities of goods.

A considerable number of large Italian and international businesses, particularly in the car industry, took part in this project. The close collaboration between European car industry managers gave rise to this type of box.


Reinforced bottom suitable for roller conveyors.
Side guides for horizontal handling.
Label holder.

## STRONG. STABLE. RELIABLE.

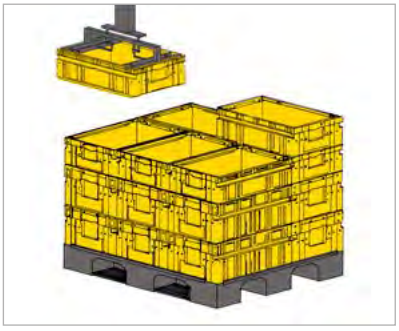
# THE CHOICE IS AUTOMATIC.

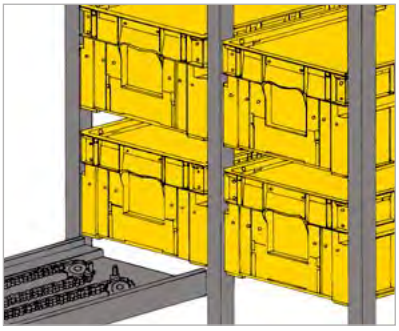
The special design creates the ideal features and conditions for automatic warehouses.

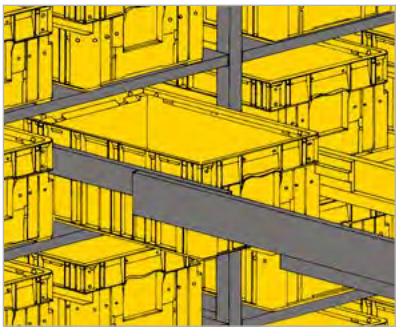
- High wall stability
- Reliability during overlapping
- Overall strength with loads greater than 50 kg and extremely low bottom bending

- Reinforced bottom suitable for all types of roller beds
- Side guides for horizontal handling
- Label holders

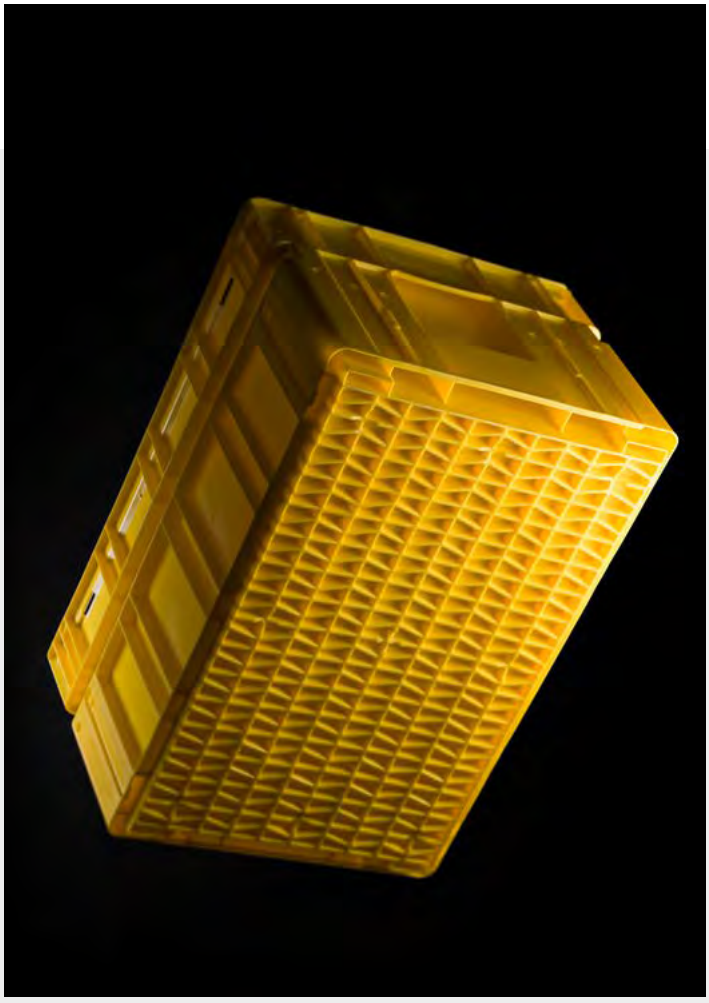
- Reinforced bottom suitable for roller conveyors
- The walls have horizontal and vertical guides for automatic handling







The sides have horizontal and vertical guides for automatic handling.



Reinforced bottom suitable for roller conveyors.


Safe manual handling thanks to the deep-drawn handle that avoids direct contact with the product inside the box.

The autonomous interaction with identification systems within the material flow process lies at the core of 4.0 integrated logistics.
The use of barcode, QR and RFID systems helps to immediately communicate the contents of the box. The Excel file made available to the WMS pairs each barcode with the associated weight of the box. In this way, it is possible to further check the goods picked or present in the box during picking and inventory activities.

## OUR QUALITY HAS BEEN CHOSEN BY:

## OUR BINS ARE INTEGRATED IN THE AUTOMATIC STORAGE PLANTS OF:

NESTY, SPACE AND ODETTE.

# WORKING WITH THEM IS A PLEASURE

## LET'S HEAR FROM THOSE WHO USE THEM.

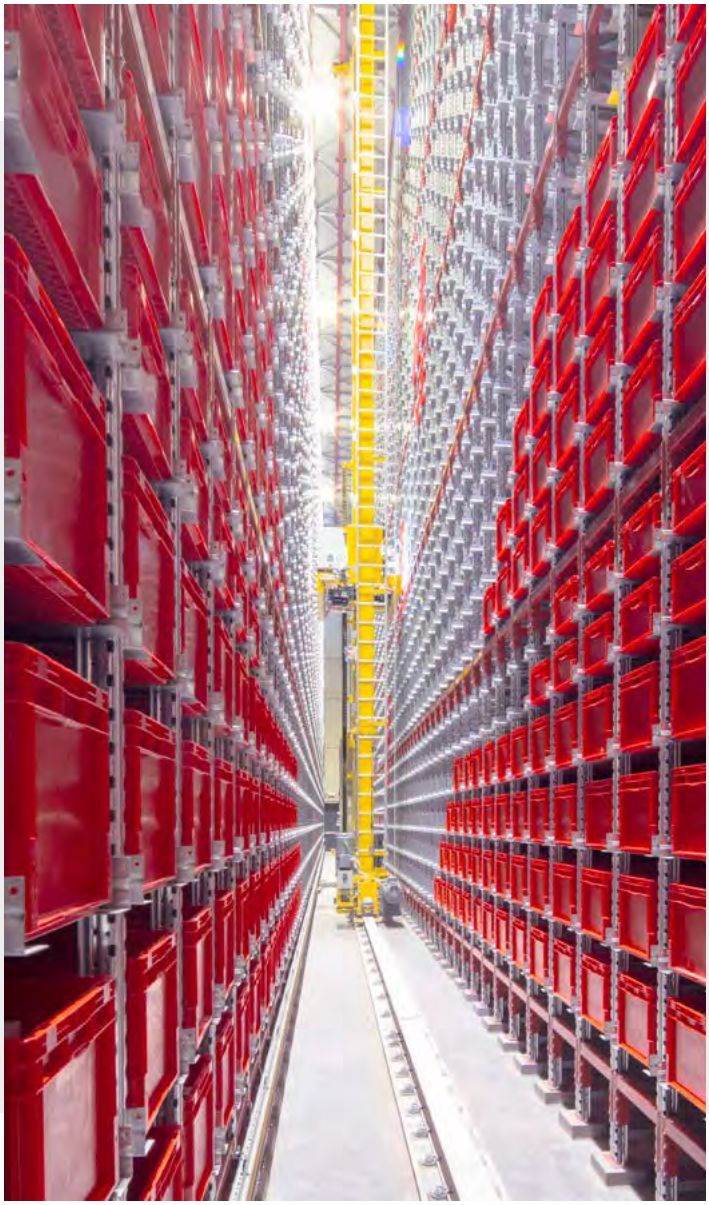
Many of our customers wanted to tell us about their experiences and satisfaction in using these boxes.

These people share our desire to always improve how we work. It has been a pleasure to talk with them about internal logistics at their companies and things to come.

Let's have a look at what they told us. Because we can always learn from other people.

BI ESSE
FORNITURE ELETTRICHE


In-out roller conveyors.



Automatic self-supporting warehouse with 3 stacker cranes handling 28.000 iMiLOG 600x400 mm Space boxes, 220 and 320 mm in height, with a 50 kg capacity and internal partitions. Another 2.500 iMiLOG Nest 600x400x320h mm boxes are used for distribution to BI ESSE subsidiaries.

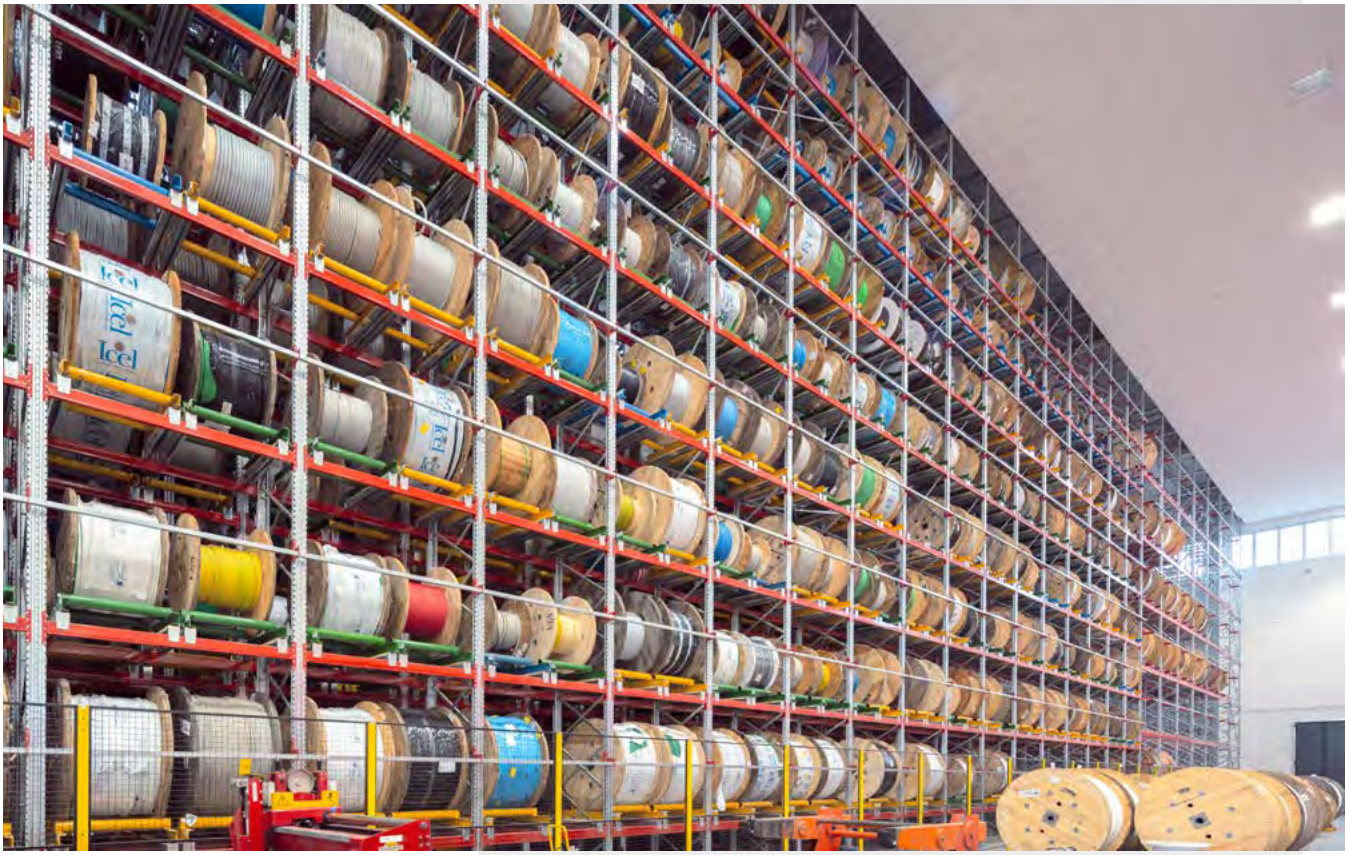
*" To deliver in little more than 12 hours "*

Automation partner:

CUBAR

www.cubar.it

Loading and picking bay.



Automatic warehouse for cable reels with dual depth stacker crane.



Automatic rewinder.

Reel warehouse conveyors.

**Competence, professionalism and service.**
Bi Esse is a reference point in the electrical goods distribution sector, with numerous sales outlets in Piedmont, Liguria, Lombardy and several countries in Eastern Europe.
Bi Esse customers everywhere enjoy the same level of staff competence, services and cutting-edge products.

**Energy without end**
Reliability and innovation: values that Bi Esse has always upheld, which is the reason why our customers choose us every time.
Their trust motivates all our staff, who are ready to satisfy any product request or design requirement.

**A present that looks proudly to the future**
Bi Esse has achieved important targets in over thirty years of business, and the choices made today are new points of departure for achieving other important goals, staying ahead of the curve whenever possible.
We have our qualified, motivated and well-organised staff at Bi Esse to thank for all this. We should also thank our partners for supplying quality materials that are both reliable and innovative. But, most of all, we have to thank our customers, who look to Bi Esse for our professionalism, tailored advice and prompt delivery.
We have achieved a lot together, and we look to the future together.

### *Why integrate an in-house automatic warehouse?*

An unstoppable business evolution aimed at the continuous improvement of customer services has led us to make a brave decision. The aim is to take a big step forward in terms of quality, making our business even more competitive and managing larger volumes of goods in less time.

### *What is the role of the automatic warehouse in your flow of goods?*

The automated warehouse will allow us to improve our performance in many key areas and processes. For example, the Cables department, with a warehouse that allows us to automatically manage approximately 1,500 cable reels used for the cutting service. But also, the miniload warehouse, with 3 stacker cranes and 30,000 locations, the beating heart of our logistics center hosting most of our items (10,000 picks per day).

### *What made you choose this type of automatic warehouse?*

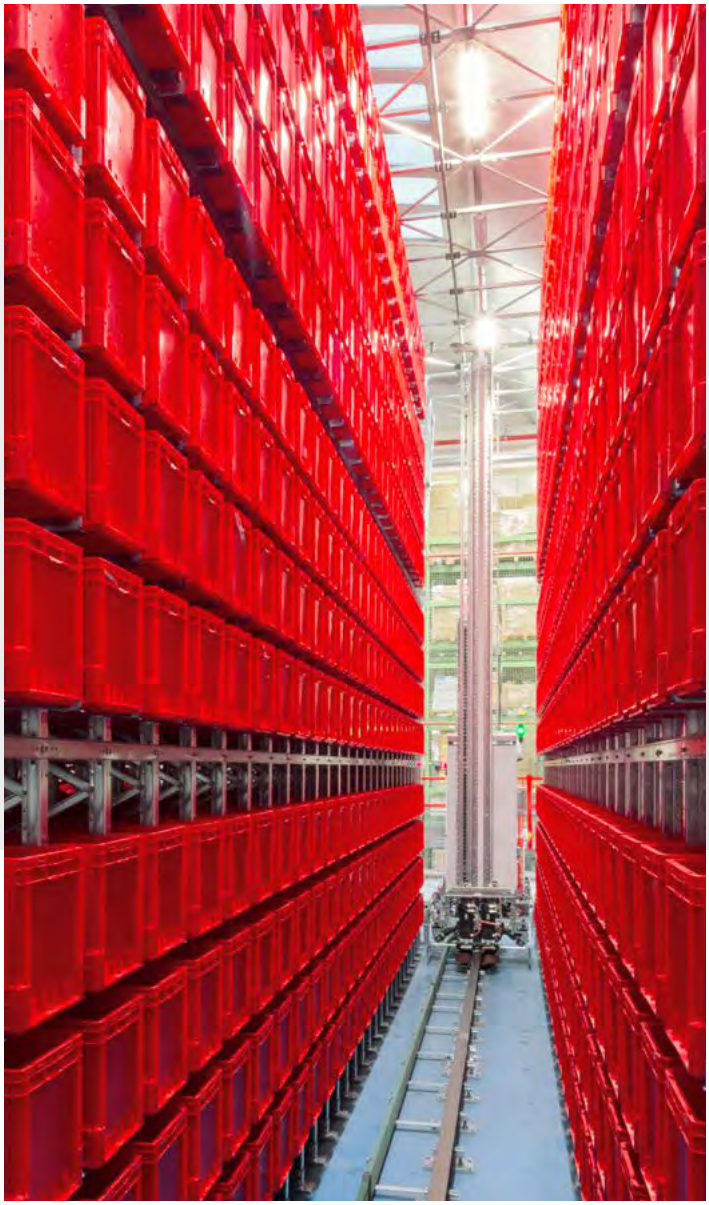
The laws that govern our marketplace are simple and yet implacable, our aim and our main priority is customer satisfaction. Nowadays, our customers require extremely rapid goods preparation and reduced shipping times. The result is that the daily volumes we currently handle were no longer possible to achieve with manpower alone. That is why we adopted a system allowing us to drastically reduce the workload of our operators, while at the same time guaranteeing the performance our customers demand and optimizing the space required for storing goods.

### *What is your vision of logistics in the future?*

Analysing how consumer demands have changed over the past few years, in the B2C and B2B marketplaces, we have noticed that despite there being different reasons for this, customers always want or need to receive the purchased goods almost immediately.
Consumers require to receive what they have purchased on-line in the shortest possible time, just as if they had bought it in a shop near their home. For businesses, though, a prompt delivery of goods is just necessary, in that they are required to complete work in less time than before, often faced with emergencies and unforeseen circumstances.
Therefore in terms of logistics today we have arrived at a point where goods are delivered in little more than 12 hours from when the order was placed. We have to maintain this level of service despite an increase in volumes.
We think that the last frontier of logistics can only be teleportation.

—
Logistica Bi Esse s.p.a.


*" Increasing productivity during the picking process "*



Automatic warehouse for boxes with 3 stacker cranes.

In-out roller conveyors.

The 3 stacker cranes handle 5.500 iMiLOG Space boxes sized 600x400x420h mm, with a 50 kg capacity.

Loading and picking bay.

GIMA is a market leading Italian company that has been manufacturing and selling medical goods for over 92 years, with a distribution network present in over 145 countries.

The company is highly aware of all possible demands of its customers, and is able to offer:
- Immediate availability of over 8,000 products, always in stock
- Guaranteed supply times
- Convenience due to a high quality/price ratio
- Rapid shipping times, worldwide

Quality support improving business performance for retailers. After many years as Italian distributor for large British, American and German brands we gained a lot of experience. In the past few years, GIMA has created its own product ranges, covering various medical specialties, such as gynecology, dermatology, vascular surgery, general surgery, otorhinolaryngology, veterinary science, pediatrics and many others.

GMA resellers have access to a wide range of products with immediate delivery, regardless of their location and with no limits on quantity.
These are just some of GIMA's potential customers:
- Wholesalers
- Distributors
- Pharmacies
- Acoustic centres
- Exporters
- Pharmaceutical companies

***Why integrate an in-house automatic warehouse?***

With respect to conventional warehouse systems, it saves a high percentage of space occupied at ground level, improving productivity during the picking process.

***What is the role of the automatic warehouse in your flow of goods?***

It is designed for the picking of high rotation products of small/medium size.

***What made you choose this type of automatic warehouse?***

The choice is part of a wider drive to improve the efficiency of our warehouses.

***What is your vision of logistics in the future?***

Integration and automation are the challenges that will allow us to further reduce delivery times.

—
Logistica Gima s.p.a.

metelligroup
AUTOMOTIVE PASSION



*" The future is now and today's choices will have an impact on tomorrow's opportunities "*

Self-supporting automatic warehouse for boxes with 2 stacker cranes and expansion option.

Manual warehouse for low rotation products.

The 3 stacker cranes handle 10.000 iMiLOG Space boxes sized 600x400 mm 220 mm in height and 18.000 boxes 280 mm in height, with a 50 kg capacity. Boxes are complete with barcode + RFID and colour logo with IML In-Mould-Labelling process.



Automatic pallet packing and unpacking station with anthropomorphic robot.

In-out roller conveyors.

6 Brands to satisfy the needs of different markets.

**METELLI**
Based in the Automotive district of Cologne, the Metelli brand is our original starting point since 1962. In a way, it embodies the capacity and skills of the entire group. This means that it boasts a larger range of products than any of our other brands.

**GRAF**
Born in Turin in the 1920s, Graf moved its plant to Rovato in the 1960's. In 2001, Metelli acquired 100% of the business, which since then has specialised in the production of water pumps for the independent spare parts market.

**CIFAM**
A testament to the founder's passion for design, CIFAM was originally a spin-off of the Metelli brand (in 1975). Today, CIFAM manufactures reliable hydraulic components, brakes and constant speed joints for transmissions.

**KWP**
A direct descendent of Graf, KWP (Kuhler Wasser Pumpen) was founded in 1983, and is famous for its water pumps. WP was the first brand to package its water pumps in cardboard boxes, while other continued to use plastic bags.

**TRUSTING**
The European leader in brake shoes joined the Metelli Group in 2014, along with its wide range of applications for Japan, Europe & Korea. The Trusting brand is also associated with innovation since it was the first brand to manufacture 100% asbestos-free brake shoes and assemble accessories only after the coating process.

**FRI.TECH**
Following numerous requests from the racing sector, Fri.Tech. joined efforts with several elite teams to develop a new clutch compound designed for race cars. The Piedmont-based company is now part of the Metelli Group, manufacturing brake pads for all cars and both light and heavy vehicles.

***Why integrate an in-house automatic warehouse?***

Starting from the concept of LOGISTIC CUSTOMER SATISFACTION we carried out a study aimed at improving customer order fulfilment, increasing efficiency, accuracy and timeliness, and reducing lead times. This study led us to reorganise the distribution methods for part of the Metelli group product range. Specifically, we concentrated products associated with braking systems into a single Distribution Centre through a requalification project in one of the plants in Cologne BS.

***What is the role of the automatic warehouse in your flow of goods?***

The requalification project included an automatic warehouse in addition to the installation of different types of shelf storage systems. This would allow us to guarantee an overall lead time for managing Class A working day customer orders with a good level of complete orders.

***What made you choose this type of automatic warehouse?***

In order to offer a performance in line with the data described above, both with current volumes and expected future volumes, we looked for the best automatic warehouse system integrators on the market. The one that best met our needs was Incas, which was suggested by TGW.

***What is your vision of logistics in the future?***

We created this modern logistical structure to meet irregular flow trends, changing sales strategies, the addition of new products and changes to distribution systems. The future is now and today's choices will have an impact on tomorrow's opportunities.

—
**Roger Falcone**
*Supply Chain Specialist*

OMCR®
STANDARD DIE COMPONENTS


Automatic warehouse with stacker crane for 5.682 iMiLOG Odette boxes sized 600x400x220h mm and 2.448 boxes sized 600x400x320h mm, with a 100 kg capacity.

*" Ready to tackle a future with fascinating challenges "*



Automation partner:

Logico
www.logi-co.it


Integration of automatic warehouse within the manufacturing area.



Loading and picking bay.

OMCR began operations almost 40 years ago, carrying out precision mechanical processes with a keen focus on customer satisfaction right from the very beginning. After having gained significant experience in different areas of mechanics, OMCR has specialised in the manufacture of standard parts for sheet metal moulds for the automotive industry, growing into a reference point for mould manufacturers worldwide.

Quality is the driving force behind all OMCR's activities. Our greatest strength is the passion and dedication that we put every day into resolving our customers' problems and meeting their needs.

OMCR has been manufacturing standard parts for sheet metal moulds for over 20 years and offers its customers around 12,000 products.
Thanks to the experience gained over the years, we have developed a strategy to satisfy requirements in terms of economic efficiency, product quality and rapid delivery, since the latter especially is increasingly demanded by the market.
Let's ask Domenico Zentilin, General Manager of OMCR, to talk about the choices that led the company to add an automatic warehouse to its manufacturing flow.

***Why integrate an in-house automatic warehouse?***

An automatic warehouse is essential for stocking and picking goods, rationally, precisely and quickly.

***What is the role of the automatic warehouse in your flow of goods?***

All products leaving the manufacturing department or incoming from external suppliers are loaded into the warehouse in order to have immediate visibility on our ERP system. All picking operations for items for sale or for the assembly department are carried out from the warehouse.

***What made you choose this type of automatic warehouse?***

In the past the business relied on vertical warehouses, but with increased volumes it became essential to install a new miniload warehouse for 8200 boxes (sized 600 x 400 x 220/320 mm) with a 100 Kg capacity, operating with two loading bays. One year after installation, we are very happy with the decision we made. Thanks to the excellent quality of the system made by LOGICO and the Space plastic boxes made by iMiLOG, we can rely on a system that allows us enjoy several benefits:
Networked operations in the context of industry 4.0, with real-time visibility for all company departments.
Rapidity and precision for loading and picking activities, thanks to the fast transport shuttle and item-counting loading cells in the bays.
Operating flexibility with the two loading/unloading bays. A safe and productive working method thanks to the option to insert lifting devices near the bays. Easy and efficient use of the available space.

***What is your vision of logistics in the future?***

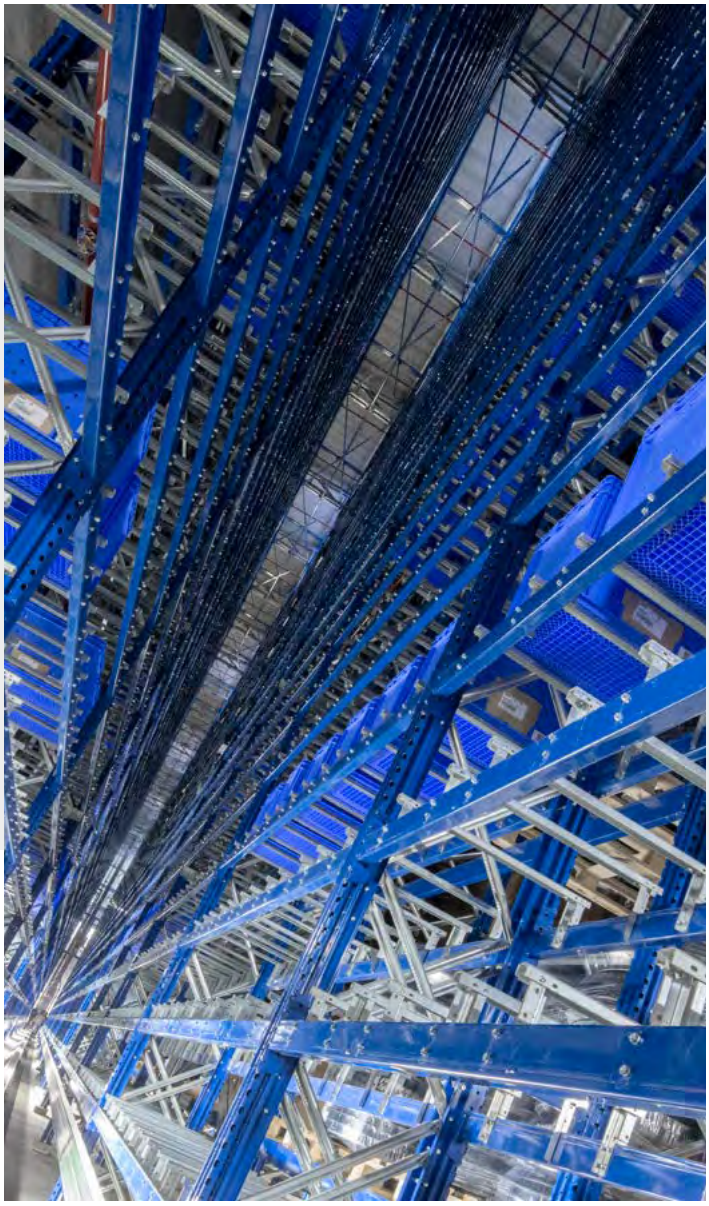
In addition to satisfying the needs of our customers with regard to the quality/price ratio, it has now become indispensable to offer a 360-degree service. In a world in which the need for customisation and quick response times is increasing, we believe it is essential to have a corporate structure that allows for a rapid, efficient and versatile operating system. In particular, it is becoming ever more important to ensure fast, precise and reliable delivery. We are ready to increase competitiveness and overcome any challenge that we are faced with in the future.

**Domenico Zentilin**
*General Manager*

TEAFLEX® ZX
INDUSTRIAL CABLE PROTECTION



*" Increase productivity, monitor material in real time, work in complete safety "*



Automatic self-supporting warehouse with stacker crane for 4.000 iMiLOG Space boxes sized 600x400 mm 420 mm in height, with a 50 kg capacity, and 500 boxes 320 mm in height, with a 120 kg capacity.

In-out roller conveyors.

Loading and picking bay.

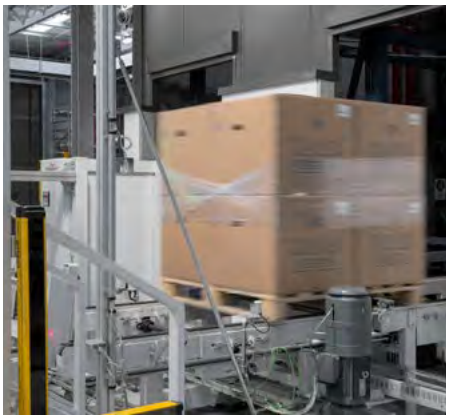
Automation partner:

trascar

www.trascar.it

Loading and pallet picking bays.





Pallet shuttle.

Automatic self-supporting warehouse for pallets with 2 stacker cranes.

Founded in 1972, Teaflex spa has grown over the years to become one of the leading companies for electrical cable sheaths. Teaflex spa is one of the world leading manufacturers of sheaths in polyamide, metal and PVC, with a worldwide distribution network.
With a combination of innovative design, research and development and specialised manufacturing techniques, Teaflex offers its customers a range of over 10,000 different products and different customised solutions for protecting cables.
Teaflex's added value lies in its ability to promptly satisfy customer requests and rapid delivery times.

### *Why integrate an in-house automatic warehouse?*

The modular nature of automated warehouses has allowed us to customise our vertical warehouse space, achieving the best solution at minimal cost. With the automatic warehouse, we can reduce search, picking and stocking times for goods. Space is used in the best way.
Our business has to deal with hundreds of orders every day. We need to know exactly where any particular product is in order to fulfil the order in the quickest possible time

### *What is the role of the automatic warehouse in your flow of goods?*

The decision to have an automated warehouse was made because it was necessary to intervene in order to improve profitability, increase work safety, increase product storage capacity, eliminate the risk of swapping products and offer a better level of service to our customers as well as achieving zero non-compliances caused by human error.

### *What made you choose this type of automatic warehouse?*

Thanks to the skills of Trascar, we chose an automatic warehouse allowing us to save floor space, increase productivity, monitor goods in real time and work in complete safety.

### *What is your vision of logistics in the future?*

The key to the future will be the ability to design, manufacture and sell even more items in limited volumes. The company needs to reduce management costs and increase operating efficiency in order to improve competitiveness. The futuristic vision of the warehouse, with human workers alongside robots, is now on our doorstep.
Business logistics must therefore innovate, using different levers:
- the reorganisation of spaces and structures;
- the revision of tools and equipment;
- the reorganisation of service suppliers and working methods.

Some of the main factors pushing logistics towards change are:

• the constant increase in the number of items managed in stock and the need to monitor stock levels in real time;

• the attention to productivity and precision when preparing orders;

• the need to reduce delivery times and lower delivery costs; the need to manage different sales channels, e-commerce above all, in the best way;
the development of green initiatives such as recycling and reducing the amount of raw materials used for packaging and deliveries; the reduction of delivery volumes, etc.

A change that will also have an impact on goods transport. Logistics companies will have to deliver few products all over in Italy and worldwide in a short space of time.
Technology is therefore a focal point that is forcing the sector to reorganise itself due to a change in consumer behaviour.
Customers ask for material in the shortest possible time, because they have no more interest in holding material in stock.
At the same time, there is much demand for innovation in logistics. Firstly, there is real-time track-and-trace, mobile access to logistical networks and quicker and simpler invoicing procedures to reduce times that are still too long.

—
**Federico Formenti**
*ceo*

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