



INTI

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SMEs EXPORT

Argentine technology and innovation



PACKAGING AND STORAGE SOLUTIONS

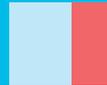


INSTITUTIONAL RELATIONS AND COMMUNICATIONS OPERATIONAL MANAGEMENT

Institutional Relations Deputy Management



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Introduction

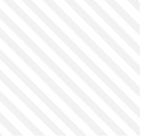


This edition will cover INTI's technical expertise and support geared to companies providing innovative solutions for the transportation, identification, and security of goods, packaging solutions, and storage systems.

INTI has a department that specializes in container, packaging, and logistics solutions. This area provides technical assistance to the productive sector in the selection, development, and assessment of container, packaging, and logistics systems suitable for appropriate physical distribution, always seeking to optimize the use of materials. In addition to conducting specific testing, research, and development projects that have applications in the industry, it is involved in knowledge transfer initiatives through several training courses.

In planning a strategy to reach international markets, knowing the product's characteristics and its packaging and distribution chain requirements proves necessary. Tests can help characterize and compare different materials or simulate the distribution chain to reduce costs resulting from breakage or loss of goods, which also avoids damaging the brand's image. In this regard, we invite you to learn more about some of our experiences.





Exporting Potential



DAPACK S.A., universal corner pieces for all types of openings



In Argentina, the paper and cardboard packaging industry stands out for its dynamic and forward-looking nature. In this context, industry players are committed to remaining at the forefront of technology, design, and product innovation. One such example is Dapack S.A. Seeking to set itself apart, the company sought INTI's assistance to develop universal-type corrugated cardboard corner protectors to safeguard aluminum openings, a unique product in the country with significant export potential.



In 2022, local corrugated cardboard production witnessed a robust growth of 5.69%, reaching an annual production milestone of 1,990 million square meters, a record-breaking achievement for the industry. Furthermore, per capita consumption of this product in 2022 increased by 5.58% compared to the previous year, totaling 43.2 square meters.

Fernando Palas, a member of INTI's Packaging and Logistics Department, says that Dapack S.A. is noteworthy for its sustainable vision and ongoing innovation. It manufactures corrugated cardboard corner pieces for protective packaging in the aluminum carpentry industry. Before, these products came in different sizes, depending on the profile size for window manufacturing. "The firm summoned us to work on



the study of a universal-type corner post, an endeavor approached from different perspectives and areas in an interdisciplinary manner between our department and the Rubber Technical Department. We researched the possibility of using adhesives, defining a new and more convenient product concept than the existing one on the market”, he says.

“We started with tests on different types of profiles and materials and worked on the blueprints and design prototypes for the corner protector. This initiative led to a 30% reduction in material usage compared to the tailor-made standards for each window type. We introduced a die-cutting feature, which renders the piece adaptable to the most convenient size. We determined that we would use micro-corrugated cardboard type E, as it optimizes the cost-performance ratio. Due to its structure, this material provides greater resistance to scratches, a common issue that surfaces of openings may encounter during transportation”, Mr. Palas adds.



The consumption of corrugating paper had an 8.33% growth in 2022, supported by a growth in domestic production (6.9%).

“INTI explored prospective markets and identified potential demand for a product with these characteristics in Chile, Uruguay, and Paraguay. In Argentina, only three companies manufacture cardboard corner units. However, none of them have a universal product, they only produce these items based on the size of the opening. I started to explore those markets through trips to each country. We will soon be setting up a corner unit sales office in Chile”, says Diego Angulo, the company’s director.

Furthermore, according to Esteban Ramírez, a member of INTI’s Assistance and Liaison department, upon finishing the corner post design, driven by its commitment to sustainability, the company sought an alternative to the elastic nylon stretch film. It aimed at an adhesive solution that would securely adhere the corner post to the opening while ensuring that, upon unpacking, it wouldn’t damage the paint on the opening. A market analysis showed two alternatives: a hot-melt adhesive and a double-sided tape. The former, which is applied on a surface by means of heat, features a liner with adhesive paper to prevent sticking to the product upon cooling. And the latter, the double-sided tape, is widely used in the carpentry industry. Based on a production strategy, the company decided to use the thermal-transfer, hot-melt adhesive.

“We are a sustainable business with an excellent capacity to solve packaging problems. For the past 23 years, our passion for what we do is what sets us apart. We are one of the few companies in the country that has been recognized throughout the years.

We have always had exclusive customers who trust our unique, sustainable, and high quality products. **Reaching foreign markets is our next challenge**, and I know we are ready to face it because we have the structure, the product, and the human capital”, Mr. Angulo concludes.



DAPACK S.A.

Rafaela, province of Santa Fe, Argentina

Manufacture of cardboard corner pieces for openings.

-Production plant: 1,200 m²

-Production lines:

- Wooden pallets and crates
- Phytosanitary treatment service for wood packaging
- Boxes and big box crates in small volumes for export
- Design and prototyping
- Universal corner pieces

-Production capacity: 36,000,000 universal corner pieces per year

• HS CODE (NCM):

-4823.90.99.920 Y / Other paper, cardboard, cellulose wadding and webs of cellulose fibers, cut to size; other articles of paper pulp, paper, cardboard, cellulose wadding or webs of cellulose fibers.





LABEL GROUP S.R.L., a leader in holographic and safety labels



Safety labels on containers and packaging are a vital element for ensuring people's integrity when using or consuming a product, thus promoting a trustworthy environment. They contribute to compliance with norms and regulations for safe commercialization since they provide essential information about the risks associated with the inadequate use or handling of the purchased good.

Label Group S.R.L. is a company that specializes in the manufacture and printing of customized labels, tapes, and self-adhesive seals that are marketed under its Open Pack trademark. Currently, this SME has the potential to expand its presence in foreign markets through customized holograms and security labels and forms.

In Argentina, Open Pack safety labels are part of all gasoline pumps, breathalyzers, ballot boxes, Vehicle Roadworthiness Tests (VTV) certificates as required for free circulation in some provinces, and the Mandatory Vehicle Inspection (RTO) that is required nationwide. The latter makes it possible to determine whether the vehicle meets the minimum conditions ensuring its safety and that of other people and the goods transported, as well as the indication of the regulatory pollution limits allowed.

INTI strengthened the company's capabilities through a management technology diagnosis. Open Pack's staff was trained in quality issues and continuous improvement processes. This helped improve its design production circuits, business vision, and final product,

according to Federico Carola, INTI's Management Technology advisor. Likewise, as referred by his colleague Andrea Seminario Vilca, "The company has several integrated management systems, focusing on 4.0 technology, geared towards an export business vision, and INTI has supported it through this process".

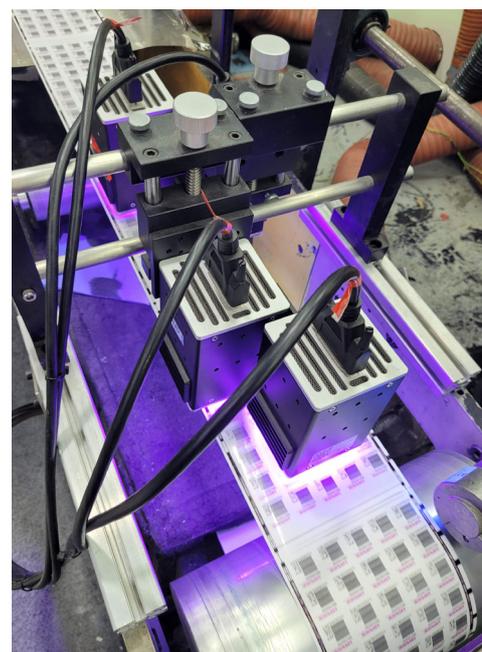
"We have been contacted from Australia since they needed a company in South America as a local partner to provide security labels for Brazil. We are also present in Paraguay, where we will soon set up a subsidiary, and we have been supplying Cuba's cell phone cards for years. We wish to continue consolidating our presence in these markets and enter the rest of Latin America", says Gabriel Szpektor, founding partner of the company.

Certified under the ISO 9001/2015 standards, the company supplies sealing labels for the Federal Administration of Public Revenues (AFIP), the Airport Security Police, the Argentine National Gendarmerie, and the Argentine Naval Prefecture. The Argentine National Food Safety and Quality Service (SENASA) places its security labels on barrels with honey for export, thus ensuring the quantity and quality of the contents, and the company is one of the three SMEs that provide tax labels for the National Seed Institute (INASE) used on packaging containing seeds for export. It also produces forms for international plant and animal transportation for SENASA.

"We are the first and only company in Latin America to manufacture hologram labels. These cannot be replicated even with a high-resolution scanner since the hologram requires specific tooling with high-definition laser technology. They can be produced in very small scales and with multiple designs, something that stands out in the foreign market", says Mr. Szpektor.

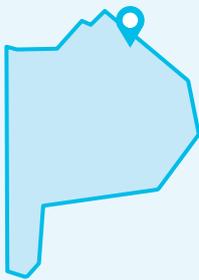
Among the types of security labels the company produces are ultra-destructive, traceability, multilayer, tamper-proof with hidden legend, invisible ink, holograms, flexographic printing, and with cuts. Such features make these variable prints impossible to replicate.

One of its latest acquisitions is the Mark Andy Hybrid equipment, unique in Latin America, which makes it possible to print digitally at high speed and with excellent definition.



Martín Torreblanca, INTI's technology liaison, comments that Open Pack is a model value-generating company that has always turned to this institution for solutions and technical assistance in different areas to improve aspects such as design, quality, management, and production.

“Open Pack provides solutions; even those that seem impossible come true. We are proud to be the only facilitators for a quality, sustainable product at very competitive costs in international markets such as Brazil, China, and Mexico, among others”, concludes Mr. Szpektor.



LABEL GROUP S.R.L. (Open Pack)

Martínez, province of Buenos Aires, Argentina

Manufacture of security, hologram, traceability, multilayer, tamper-proof, tapes, ultra-destructible, micro-cut, self-adhesive, promotional labels

-Production plant: 1,500 m²

• HS CODE (NCM):

-4821.10.10 / Printed with adhesives





FÁBRICA ESTANTERÍAS, standard and customized storage

With more than thirty years of experience, Manzano Tusnelda Alicia, better known under the trademark “Fábrica Estanterías”, is an Argentine company leader in standard and custom-made racks, gondolas, and metallic shelving.

The company has three main product lines:

- **Penetrable Racks:** Ideal for a large number of palletized homogeneous products with low turnover.
- **Dynamic Racks:** Ensuring seamless pallet rotation through the FIFO system, facilitated by a roller path enabling the pallets to move from one end to the other. They are suitable for palletized perishable products, providing productivity, efficiency, and positive results in handling and distribution.
- **White metal shelving:** Baked at 200 °C, these shelves are highly resistant to scratches and have an extended lifespan thanks to their thicknesses, which can withstand 50, 80, or 130 kg per shelf for storing large, heavy, or bulky items, depending on the model.

Daniel Martínez Kraemer, the head of INTI's Machining and Forming Processes Department from the Mechanics and Logistics Operational Submanagement, states that to ensure a superior quality product during the assembly of the racks at their destination, the Institute worked closely with the company to identify any assembly process errors. This collaborative effort involved conducting various tests and analyses for improved assembly quality in the final production process.

Effective packaging plays a crucial role when exporting products. Consequently, a versatile system is under



According to the Argentine Chamber of Corrugated Cardboard Manufacturers (CAFCO), as of January 2023, the industry's material usage percentages stand as follows: Cardboard paper at 33%, glass at 30%, metal at 20%, and wood at 18%.



development to accommodate the company's diverse product range, including gondolas, shelving, and racks. The primary goal is to shield the products from transportation-related risks while optimizing cargo space and mitigating costs and potential claims, as explained by Fernando Palas from INTI's Packaging and Logistics Department.



Pablo Daniel Romero, from INTI's Energy Efficiency Department, says they performed a numerical simulation of the company's furnace behavior and operation. They made an adjustment to ensure a real representation of the furnace's operation, followed by the calculation of optimal insulation. Moreover, they assessed air circulation near the furnace to ensure an adequate temperature in the working environment.

INTI approached the challenge in an interdisciplinary manner, addressing aspects such as the raw materials for its shelves, the packaging methods to be used to mitigate transportation risks, and the enhancement of energy efficiency in its production processes. These efforts collectively had a direct impact on the cost structure of the SME.

The company boasts a well-established track record of exporting to Brazil and now, considering cultural affinity, geographical proximity, and currency exchange rate advantages, they are eager to venture into the broader Latin American market.

Fábrica Estanterías was a trailblazer in two significant ways nationwide. Firstly, it pioneered packaging its products in boxes together with assembly manuals, setting a precedent in its industry. Secondly, it embraced online e-commerce platforms for marketing, providing clear and comprehensive information so that customers could easily understand product details and pricing. This commitment to transparency was validated by consistently ranking on the top search engine results for ten consecutive years, enabling the company to gather reliable customer feedback. According to Gabriela Caracciolo, Marketing manager, over 95% of comments are positive.

Luciana Caracciolo, a partner in the company, reflects, "We deeply engage with our customer's dreams and desires. We consistently meet their needs with high-quality products at competitive prices. Our most effective advertising is through word-of-mouth recommendations and our strong online presence for customer service and follow-up. Over the years, this approach has strengthened our position as one of the leading companies in our industry today".



FÁBRICA ESTANTERÍAS

San Martín, province of Buenos Aires, Argentina

Manufacturing of storage solutions

-Plant: 2,400 m²

-Production capacity: 122 tons per month of SAE 1010 DD LF steel

• HS CODE (NCM):

-9403.20.00.110X / Metal gondola

-9403.20.00.990R / Metal racks

-9403.20.00.190Y / Metal shelves





COLVEN S.A., vehicle safety and comfort across the world

Improving the quality of life of people who drive vehicles—trucks in particular—is a worldwide trend. COLVEN S.A. is an Argentine company with more than fifty years of experience in **developing equipment for safe and comfortable driving.**

With its innovative approach, the company sets itself apart. Four decades ago, it broke ground introducing **the first-ever engine protector for trucks**, featuring a system that shuts the engine down in response to critical vehicle situations. Elisandro Colussi, the company's engineering manager, comments that this system, known as **VIGIA**, is a global market leader, providing accurate and easy-to-interpret information through ongoing monitoring, thus saving on repair and maintenance costs. Currently, it powers some of the most relevant categories in Argentine motor racing.

The VIESA eco-cooler, a pioneer in the European market, has also remained a leader in sales and quality. It is one of the company's signature products, which are always designed to favor the sector's evolution. This is endorsed by Volvo's commitment to make this item its preferred accessory for its trucks. Another noteworthy product is the **VIGIA tire calibrator**, which keeps the preset tire pressure constant. Should tire pressure drop, it warns the driver and automatically activates inflation. "COLVEN boasts superior quality compared to the same product manufactured abroad. Unlike European models, which are equipped with non-engineered gearboxes, ours are crafted from polyamide and



reinforced nylon and intelligently determine which wheel requires inflation. The technology employed and the quality of the components outperform those found in any international market,” says Mr. Colussi. Finally, the **satellite tracking and remote data management system**, which tracks location, speed, direction, kilometers traveled, and stops made, aids in streamlining logistics control and operational cost management, thereby enhancing the overall profitability of operations. It sends the signal through a General Packet Radio Service (GPRS) connection and the location according to the Global Positioning System (GPS). Unlike international companies that manufacture off-the-shelf products, COLVEN’s tailor-made solutions are a cut above the rest.



With the support of its Extension Unit in Reconquista, province of Santa Fe, INTI identified COLVEN’s need to improve its production, commercialization, and export capabilities. To find a suitable solution, the Institute’s Containers and Packaging department tested the company’s products and helped develop a modular packaging design tailored to specific requirements and transport conditions.

This new packaging system developed in collaboration with INTI allows for more efficient use of cargo space, space optimization, and reduced logistics costs. It significantly reduces material and freight expenses by allowing more products within the same cargo space.

“Both the products and packaging prototypes were tested in the laboratory under critical transport conditions to ensure that they arrive in good condition to the customer.

We also conducted electromagnetic compatibility tests on the products to meet European standards for marketing in that region. Furthermore, we analyzed metallic components that might develop microcracks under adverse transport conditions. This analysis involved the microscopy and non-destructive testing laboratories from the Mechanical Analysis and Testing Department”, explains Fernando Palas, a member of INTI’s Packaging and Logistics Department.

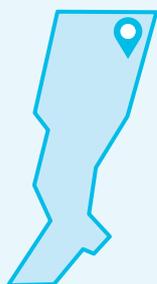
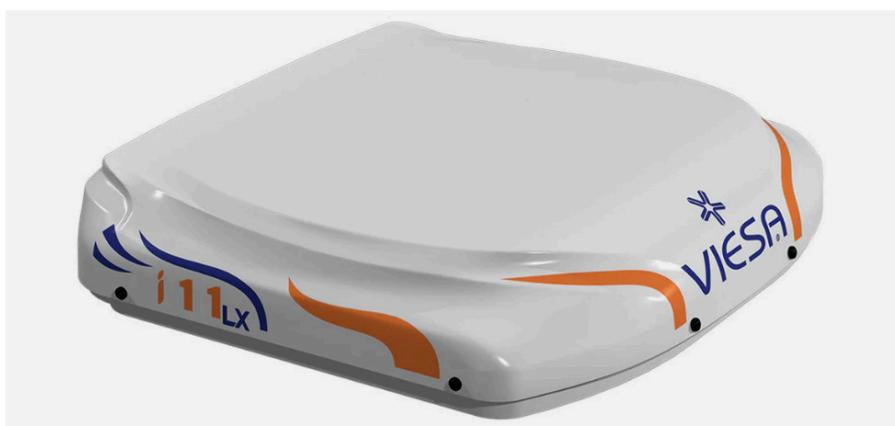


According to recent studies conducted by the European Environment Agency (EEA), the transition from plastic to corrugated cardboard prevents the release of 17 billion tons of non-recyclable plastic bags.

“Thanks to INTI, today it is possible to know whether the packaging will work and whether or not it will save costs and improve efficiency. In the past, it was up to the customers to say what the problems were. Indeed, INTI has raised the odds for the product to reach its final destination in one piece,” adds Mr. Colussi.

The company operates an electrical installation and assembly plant in Brazil. It runs an assembly facility for eco-friendly air conditioners in Italy and a marketing network in the United States, Spain, and Mexico.

COLVEN boasts an extensive track record of exports to various regions, including Latin America, Australia, the United States, Israel, South Africa, and the European Union. **“Currently, we are eager to enter the German market since we are confident that our global reputation shows our products’ superior efficiency, reliability, and quality. Our after-sales service extends across thirty countries on five continents. Additionally, given that the United States hosts the world’s largest truck market, we aspire to expand our presence there”**, comments Gabriela Colussi, the company’s marketing manager.



COLVEN S.A.

Guadalupe Norte, province of Santa Fe, Argentina

Manufacture of vehicle driving equipment.

-Plant: 7,000 m²

-Annual production capacity: 82,000 units.

• HS CODE (NCM):

-8479.60.00 / Eco-cooling equipment

-9032.89.81 / Tire calibrator

-9032.89.89 / Automatic engine protector



International Cooperation



INTI has been carrying out technical cooperation projects with countries in Latin America for more than 25 years. In key industries such as meat and dairy, metal mechanics, textile, chemical, packaging, biotechnology, or electronics, INTI contributed with its professionals to strengthen the state capacities of many agencies and partner institutions in Latin America and Africa.

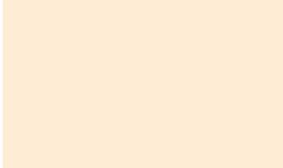
Recently, at the regional level, together with the Paraguayan Center for Productivity and Quality (CEPPROCAL), with whom INTI has a close institutional relationship as a member of the Latin American Network for Productivity, two training spaces were jointly organized for companies in that country: “Risk Management in Transport and Distribution for the Pharmaceutical Industry,” essential for regional trade in the post-pandemic agenda, and a specific course on “Tools to optimize logistic risks”; both of them in charge of INTI specialists from the Technical Direction of Transport and Logistics.

INTI, which has already carried out several technical missions to countries with similar productive realities,

focuses on knowledge transfer under three work pillars to boost competitiveness and export capacity: quality, technological development and innovation, and productivity.

INTI has also pioneered technical actions in Ivory Coast, where in line with the guidelines of Argentine foreign policy it has become a key player. For example, it laid the foundations for a Center for the Study of Containers and Packaging, promoted by the Ivorian Society of Tropical Technology (I2T), an agency from the National Ministry of Industry.

The knowledge transfer from INTI Argentina included training of I2T technicians in plastic, glass, wood, corrugated cardboard, and food packaging. It also encompassed technical advice for selecting laboratory equipment, the services to be transferred and offered to the private sector, and the strategy for approaching packaging manufacturers and users in the Ivorian market.



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