



## Experience, Competence and Italian Quality: ZEC products are increasingly recognized internationally

*Founded in 1961 by Eugenio Zantelli, ZEC began in a small workshop in the municipality of Colorno, in Parma, Italy. Zantelli believed that the region, with its strong industrial tradition and culture, would be the perfect spot to establish the first manufacturing line of thermoplastic hoses in Italy. Zantelli started extruding Rilsan® tubing over 50 years ago, and business has been growing ever since. Today, ZEC SpA is one of the leading thermoplastic hose manufacturers in the European market, with an international presence that is growing every year. Hose + Coupling World had the pleasure of speaking with Simone Ferraresi, Export & Marketing Manager, and Dino Zantelli, Managing Director, about the origins of the company, its quality-first philosophy and ambition to lead the world in thermoplastic hose and tubing solutions.*

*By Jody Hewitt, Editor*

From the beginning, the ZEC brand has been synonymous with high-quality, flexible thermoplastic hoses and tubing for low, medium, high and very high-pressure applications.



*From left to right: Eugenio Zantelli – Founder & President and Dino Zantelli – Managing Director.*

Its main applications are hydraulics and pneumatics, but decades of building customer loyalty and confidence has resulted in exponential growth, both at home and overseas, leading to the development of more hose series, covering more and more applications, including agricultural and material handling, power generation, automotive, industrial automation, petrochemical, food processing, marine, refrigeration and water handling.

According to Ferraresi, the quality of its raw materials, continuous investment in production efficiency and machine upgrading, collaborative research & development strategy and customer-first philosophy have been the cornerstones of ZEC's success, allowing the company to thrive exclusively through word-of-mouth referrals.



"Because of our focus on quality and production, we have achieved much of our success through word-of-mouth referrals," explains Ferraresi. "Customer by customer, distributor by distributor. It is a very old school style of marketing, which is very effective and speaks to the quality of our products, but it takes a long time."

Now, with an eye to the future and a plan to become a global-leader in thermoplastics, the company is ready to get the word out about its superior quality products, state-of-the-art production capabilities and customized solutions.

#### Quality control and testing

All the raw materials entering ZEC's production departments are inspected and tested, complying with strict company quality control procedures, and certified in accordance with UNI EN ISO 9001-2015.

In the production departments, technical managers are responsible for verifying the accuracy of the technical specifications of each batch. The ZEC team uses a variety of other lab tools help to ensure that only the best and correct polymers will be used in the manufacturing process.

Throughout the process, batch testing (finished and unfinished products) for dimensions, BR, pressure, burst and traceability are carried out, and finished products are subjected to rigorous performance testing including impulse testing, abrasion testing, tension and climatic testing, and leak testing according to the application and specific customer requirements.



*Simone Ferraresi,  
Export & Marketing Manager.*

As a result of these processes, ZEC thermoplastic hoses are comparably lightweight, extreme compact overall OD resulting in a higher flow rate with the same diameter and offer excellent resistance to fatigue stress and alternating flexing and vibrations, long-term durability and versatility. "We work with increasingly higher quality standards," says Dino Zantelli, Managing Director. "Not just in terms of the product itself, but also

operational efficiency and workplace health and safety. Our processes have been structured to increase productivity and output, which keeps company costs down and allows us to offer competitively-priced, high-quality products. We operate under UNI EN ISO 9001-2008 guidelines, and we have invested considerable resources on certification processes by third-party accreditation bodies, because we believe it is not enough to claim that your product is high-quality—you must be able to prove it"

#### Custom-made solutions

In the early 1970s, under the direction of founder, Eugenio Zantelli, ZEC began researching and developing new and more sophisticated thermoplastic flexible hoses. As the demand for thermoplastics increased and expanded into more applications, ZEC adopted an R&D strategy that involved collaborating with its customers, identifying their challenges and pain points, and working together to develop custom-made solutions.

"Our research & development team works with customers to develop products that are tailor-made to a specific application or need. In our research lab, experiments, tests and trials are carried out by request using dedicated equipment," explains Ferraresi. "ZEC is continuously investing in last generation devices for process and product control."

"We maintain a close relationship with the end user," he continues. "There is really no better way to understand their needs and to find a possible solution than through direct communication. From there, it is a matter of carefully selecting the raw material and maintaining stringent quality control procedures throughout the production process, which allows us to produce high-quality thermoplastic products."



*Braiding Department.*





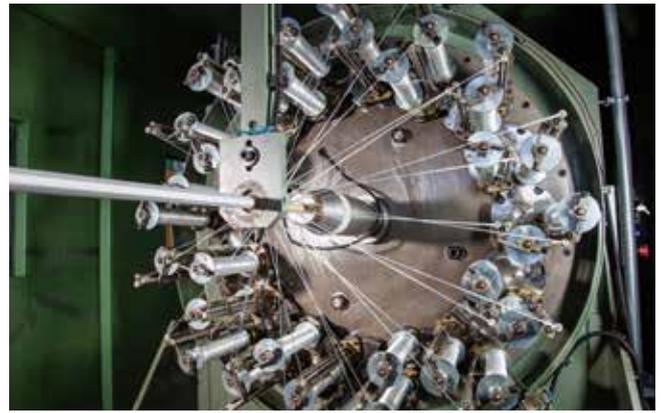
Some examples of ZEC's wide product selection.

Hose prime characteristics such as polymers, fibers and wires, weight, bursting pressure, compatibility together with "make-up" solutions like colors and branding are combined to create the perfect thermoplastic hose for a given application or customer, which is especially important to the company's many original equipment manufacturer (OEM) customers.

"Product consistency is a key element of our business," says Ferraresi. "Without the proper raw materials, and without the proper controls, it is much more difficult to achieve a consistent product. Consistency is hugely important, especially for OEMs, and we are very proud to have won the confidence of many OEM manufacturers of material handling equipment, trucks and trailers, cranes and telehandlers, developing dedicated hose solutions with and for them."

### PRODUCT RANGE, MATERIALS & APPLICATIONS

- ZEC hose and tubing products are available in a wide range of sizes (from 2 to 40mm), working pressures (from 5 to 1,280 bar) and, depending on the model, working temperatures (between -200 °C and +260 °C).
- For low pressure applications, ZEC's primary use materials are RILSAN® and PA12. Tubing range includes single, multiple or spirals made of PA12, PU, TPE, PELD and Fluoropolymers such as PTFE, FEP and PFA for high temperature applications.
- For medium, high or very high pressures, the ZEC product range includes fiber, wire, Aisi304 and Aramid braid solutions with a multitude of material combinations. ZEC also offers a wide range of colors, fittings, accessories and protective sheaths, to complete one of the widest ranges of conductive and non-conductive thermoplastic hoses in the market.
- Primary applications for ZEC products include general automation, fluid-power, lubrication, general industry, offshore, marine, automotive, water handling, food processing and refrigeration.



Fabric reinforcement process.

### Production capacity and fulfilment

In the current landscape, competitive pricing and lightning-fast fulfilment is increasingly becoming the expectation, rather than the exception. Customers, especially those responsible for supplying capital projects, need products yesterday. To compete on a global scale, manufacturers must make huge adjustments in the way they run their day-to-day operations to keep up with demand and fulfil orders as quickly as possible.

Eugenio Zantelli may have seen the tides turning as early as the 1990s, investing in new braiding machines that allowed the company to enter into high pressure markets such as greasing and fluid power applications. Today, ZEC has many different extrusion lines and braiding machines specialized for different materials and hose sizes, manufacturing over 40MLN/mts hoses per year.



Over 3500 pallets in stock in the logistic department.



1961 – First ZEC extrusion line.



Aerial view of two of ZEC's facilities in Colorno, Italy.

The sheer number of machines in use for production is a huge asset to the company in terms of speed and productivity, Ferraresi tells Hose + Coupling World.

"Say you have an extrusion line that needs to be shut down and prepared to be used for another material or another size of tubing or hose," he explains. "This takes time. You have to stop production while you change everything over. Imagine you have to do that several times over the course of a day or two. That is a huge amount of time you are losing that could be producing something. By having dedicated extrusion lines, we save all that time and, together with new computerization processes, we can overcome production peaks and reduce the time required to fulfill orders from anywhere in the world."

"These ongoing financial investments—machines, new plants and warehousing facilities— have allowed us to achieve a tremendous amount of flexibility in terms of production and delivery time," adds Ferraresi, "even when it comes to fulfilling customized solutions made to customers' specific technological requirements."

Today, ZEC is comprised of two production units and a logistics and management headquarters for a total of 16,000 m<sup>2</sup> in Colorno, Italy. The construction of a new 6,000 m<sup>2</sup> facility has already begun, which will bring ZEC facilities to a total of 22,000 m<sup>2</sup> and is expected to increase production capacity dramatically by 2019.

### Global expansion

In the 1990s, the second generation of Zantelli, Paolo and Dino Zantelli, worked to bring ZEC into its next growth phase by consolidating the domestic market and exploring the possibility of exporting globally. Under their supervision, ZEC saw the construction of its warehouse and logistics hub in Colorno, where over 3,500 pallets of raw materials and finished products could be stored, allowing ZEC to make a substantial leap. Today, export activities and global expansion goals are under the supervision of Ferraresi.

"The domestic market was and remains a very important market for ZEC," says Ferraresi. "In the beginning, we were very focused on the local market, which allowed us to thrive domestically but also motivated us to explore export market

activities and the potential there. Today, 65 percent of ZEC products are sold outside of the domestic market, in more than 90 countries worldwide. We have active distributors and consolidated networks in more than 50 countries, and sales representatives serving many of the major markets."

Part of that growth strategy involves a pilot project for a logistic hub in Uruguay. In South America, ZEC is exploring the possibility of being a leading player serving customers in this region even faster than it can from Colorno.

"We are still in testing mode for this project," explains Dino Zantelli, Managing Director. "We want to see if the value of a location in the market we want to serve will make a substantial difference in terms of service and fulfillment potential. At this time, it is a pilot project, but this could be just the beginning of our direct global presence, which in many cases is already very well represented by our official network."

We asked him how ZEC plans to achieve its goal of becoming a world-leader in thermoplastic hoses and accessories. In addition to continued investment in production capacity, quality raw material, and a solutions-based product development approach, Zantelli told us that investing in human resources is another part of its overall strategy.

"The next generation of technicians are very solutions-oriented; in my experience, they are very open to experimenting, to trying something new or doing something differently, which fits in well with our overall development strategy. They demonstrate an openness to the world and how it is changing, which will be very important as we move forward."

He continues: "We are not aware of the situations of our strongest competitors, but our ZEC is a 'warm beating heart' company, especially in the face of new challenges. We know that the most important thing is to do our very best to guarantee customers quality products at an acceptable price."



In loving memory of  
Paolo Zantelli 1965–2013

