

The global magazine for hose & coupling producers, distributors and end users



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Flexible Choice*

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ZEC: 60 Years of Flexible Choice



The new technological manufacturing plant (left) and stock area (right).

2021 marks a very special year for the Italian company ZEC, and the Zantelli family that leads it. This year denotes their 60th anniversary of manufacturing thermoplastic hoses, firstly for the Italian market, and then increasingly for the world market.

Today, its broad range of hose and tubing products are sold in more than 90 countries worldwide. The company has active distributors and consolidated networks in more than 50 countries and sales representatives serving many of the major markets.

Even in these pandemic times, the company continues to grow and expand. Hose & Coupling World caught up with Mr. Dino Zantelli, Managing Director, and Mr. Simone Ferraresi, Export & Marketing Manager, to talk about the company's unique success story.

By John Butterfield

A Brief History

"Our company founder and my father, Mr. Eugenio Zantelli was visionary when he started-up ZEC in 1961," said Dino Zantelli. "He began by investing and starting up the business in a small workshop in the municipality of Colorno, in Parma, Italy, where he specialized in making tubing from plastic

polymers. He was a pioneer of his times, working at the forefront of these developments; ZEC was actually the first Italian company to produce SAE100-R7 standard hose type."

From the outset Mr. Zantelli looked to build up good supply chain partnerships because in the early 1960s



Dino Zantelli (Managing Director) and Eugenio Zantelli (President).

“These qualities have allowed ZEC to profit effectively and almost exclusively by word-of-mouth referrals,” added Mr. Ferraresi. “This is an old-school type of marketing, which nevertheless is very effective and tells everything about the quality of our products. It has only been in more recent years, as we have experienced a boom in terms of growth, ever increasing turnover, and a much broader global presence, that we have paid more attention to other forms of marketing to communicate the message about our superior quality products, state-of-the-art production capabilities, and customized solutions.”

Global Presence

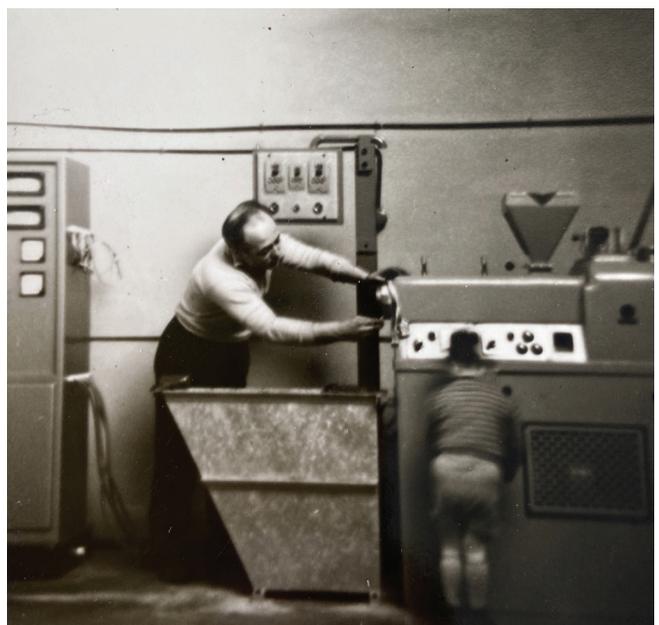
Building on the reputation ZEC has built, the second generation of Zantellis, Paolo and Dino Zantelli, have concentrated on moving ZEC to a further growth phase by not only consolidating the

the use of polymers was quite new and not easily obtained. Nevertheless, this situation provided him with the opportunity to prove himself with a relatively new product form.

Today, the company has grown to where 35% of its turnover comes from the Italian domestic market; the remaining 65% comes from all over the world. Many of the company’s customers and partners have been with ZEC right from the start, which says much about the company’s reliability, competence, and the guaranteed quality associated with its products.

Foundations of Success

“The foundation of our company’s success can be attributed to the quality of our raw materials, continuous investment in production efficiency, machine upgrading, a collaborative research & development strategy, and a customer-first philosophy,” said Mr. Zantelli.



Eugenio Zantelli and the young Paolo Zantelli working on the extrusion line in the 1970s.



company's position in the domestic market, but also by looking into possibilities to export globally. To achieve this, the brothers ensured that ZEC set up active distributors worldwide and consolidated its distribution networks so that today the company has a presence in more than 50 countries.

Quality and Flexibility in Production are Key

Simultaneously, the company continues to invest in its production processes, and in quality control and testing. All the raw materials entering the production departments are inspected and tested to guarantee they meet strict company quality-control guidelines and are certified in agreement with UNI EN ISO 9001-2015.

The technical specifications of each order batch are verified, and the production teams use diverse lab tools to ensure that only the most suitable and best quality polymers are used in the manufacturing process. Moreover, batch testing is carried out on all finished and semi-finished products for: dimensions, BR, pressure, burst, and traceability. Finished products are also subjected to rigorous performance and leak testing according to the specified application and customer requirements.

"Our production processes have been structured to increase productivity and output," commented Mr. Ferraresi. "These factors keep company costs down, making it possible for us to offer competitive prices and high-quality products."

"Since the 1990s, we have invested heavily in state-of-the-art machinery," explained Mr. Zantelli. "Today, we have around 190 machines used in our extrusion and braiding processes. The machines are specialized for different materials and hose sizes, manufacturing over 40 million meters of hose per year."

Certainly, having so many machines in use for production is a huge asset to the company in terms of speed, production, and flexibility. Shutting down an extrusion line so that it can be used for another

material -- for another size of hose and tubing, or for a different color of material -- takes time. "Because we have dedicated lines, we are able to save on time loss," commented Ferraresi. "Likewise, by integrating this advantage with new computerized processes, we are able to overcome production peaks and reduce the time required to fulfill orders, no matter where they come from in the world. This flexibility in order fulfillment provides us with the ability to support customers with many different items in a relatively rapid turnaround."

Product Range, Materials, & Applications

- ZEC hose and tubing products are available in a wide range of sizes (from 2 to 40 mm), working pressures (from 5 to 1280 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, AlSi304 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.

"Our reputation has gone before us. Running parallel to our rapidly expansion, we have also been approached by some significant OEMs to supply them with equipment," agreed Zantelli. "They not only need fast deliveries but also need to know that what they receive is of consistent quality."

Investments in the Pandemic

Unlike some companies, ZEC continued to invest during the pandemic, bringing more than 20 new braiders online in the last couple of years. The company has also invested in a new manufacturing facility with an area of 5,000 m².

As such, ZEC now has three production facilities as well as a facility used for stock, all located close to the company headquarters in Parma. Although it is not yet at full capacity, production has begun in the



The fabric braiding department (left) and new braiding capacity (right).



Marking the hoses.

new facility. The additional capacity is, nevertheless, needed as it is anticipated that production volumes will increase by 20% in 2022. The total area of all ZEC plants is 21,000 m².

The increase in exports over the last couple of years has led to further investments in additional staffing to keep in line with the company's expansion. Staff totals have increased from 120 to 140 people since 2019.

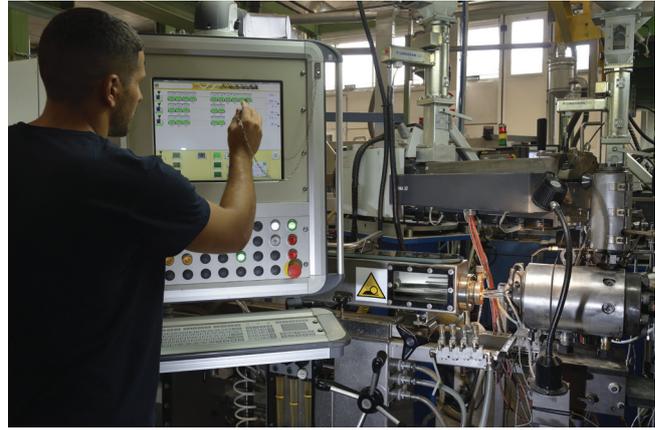
"The new generation of technicians we employ have the quality of being very solutions-oriented," said Mr. Zantelli. "They are open to trying new ideas, which fits well with our overall development strategy. They show a candid attitude to the world and how it is changing. This is important as we move forward, as applications are changing rapidly. For example, a crane or a forklift truck has a totally different design nowadays than 10 to 12 years ago. As such, our R&D team works with customers to develop products that are tailor-made to specific needs or to a specific application."

ZEC also finds it equally important to preserve a close relationship with its customers as this is the easiest way to achieve possible solutions to the challenges faced by consumers; there is no better way to understand their unique needs.

What the Future Holds

"We want to continue to increase our presence in all the major industrial regions around the world," stated Mr. Zantelli. This includes materials handling applications like forklifts and cranes, the water-jetting markets, as well as the Oil & Gas industry, and Industrial Refrigeration market.

Entering the green energy markets also holds a lot of potential for ZEC, especially in the industries connected to wind power, solar energy, and hydrogen. Additionally, the company sees growth possibilities in thermoplastic hoses that are produced



The latest generation extruding process.

for all types of high-pressure gas applications; a good example is CO₂, which recently became one of the most common and environmentally friendly gases for industrial and commercial refrigeration purposes.

"Thermoplastic hoses might be a niche market in that they only account for about 5% of the flexible hose market, but this share is continually growing and we want to be a part of this growth," said Mr. Ferraresi.

2022 will also see the company launching a new ultra-high-pressure hose and fitting range, widening the working pressure range of its existing portfolio.

"Our goal is to not only consolidate our presence in Italian market but to also consolidate our presence abroad by means of a more structured and global presence," stated Mr. Zantelli. "The market has changed a lot in the past years, and we will continue to follow trends as part of our strategy to stay one step ahead of developments; in this way we continue our success. We will continue to supply optimal solutions to our clients that enable them to fulfill their dreams."

Facts & Figures about ZEC

Estimated turnover 2021: €35M (+10% compared to 2019, ZEC's best year ever)

Meters of hose produced: Approx. 40 million meters of tubes and hoses per year

Employees: 140

Facilities: 21,000 m² spread over four facilities in Colorno. 16,000 m² of which is the manufacturing area.

Machines: Over 190 machines between extrusion and braiding

Manufacturing capacity: Increasing by a further 20% during 2022.

Industries: A broad perspective of industries including: general automation, fluid power, lubrication, general industry, offshore, marine, automotive, water handling, food processing, and refrigeration

Important markets for future:

- Fluid-power (material handling)
- Green energy (wind power, solar, natural gas, hydrogen)
- Industrial and commercial refrigeration.

