Some components of the NASA refueling module for SSI have been made in Schio

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There is a piece of Schio on the International Space Station. The Scledense company Ecor International, in fact, has made some components installed in the space module Pcm Cygnus of the NASA, that comes to the International Space Station (Ssi) twice a year with a load of supplies, including food and experiments for astronauts.

The project was commissioned by Thales Alenia Space, partner of Northrop Grumman (American aerospace technology manufacturer), within a contract with the US space agency.

The Vicenza-based company, in particular, has made some **rigid shaped tubes in titanium alloy** which, once integrated, formed the **medium propulsion circuit**, necessary to pilot it during anchoring at the International Space Station. The activities included the design of functional equipment for the next bending phase with numerical control and 3D geometric control, thanks to a three-dimensional scanner system capable of detecting the correspondence between the characteristics of the physical components with those foreseen during the project. Finally, tests with fluorescent penetrating liquids have made it possible to verify the presence of any defects on the components, thanks to the application of a fluorescent product which by capillarity is able to detect micro cracks and breaks in the material.



"The construction of the pipes – confides the engineer **Rinaldo Rigon**, Ecor's aerospace key account manager and project manager – presented difficulties related to geometries, which were particularly complex. Indeed a single tube presented **curvatures with both fixed and variable radius**». "As often happens for driving circuits – adds the engineer **Piermario Campagnari**, aerospace operations manager and project execution manager – we were asked for a **high level of cleanliness and the absence of contamination** from external impurities, as well as very restrictive tolerances. In other words, all the work had to be precise and **accurate to the tenth of a millimeter**. This is why we are satisfied with the result achieved and now we are aiming to create new kits for the subsequent modules ».

Founded in 1976 in Schio by the entrepreneur Sergio Lucietto, **Ecor International SpA** specializes in the production of critical components and complex systems. It has 200 employees and a turnover of 45 million euros. It has production plants not only in Veneto but also in Campania and a **industrial research center** in the Modena area, **The International Campus Path**, which deals with the study of surface engineering, reliability engineering, additive manufacturing and joining technologies. The company's business areas include the food industry, aerospace and defense, advanced mechanics and industrial research.

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