

Luana Costa

If automation is synonymous with ever-growing evolution, Sintech aims to give it a soul, by providing its clients with integrated solutions and industrial processes that are digitalised and interconnected throughout the supply chain, up to raw material suppliers. Sintech is an enterprise founded in 1994 that designs and manufactures machinery and automatic lines for industrial production, with the aim to optimise the production processes while reducing industrial costs. It specialises in assembly automation, testing, and functional checks for a wide variety of sectors, such as the automotive, medical, and electromechanical ones, down to consumer. “Last but not least, we develop high-level technologies for co-moulding, a sector dealing with moulding processes for particular plastic parts with metal inserts or other materials,” explained Claudio Sinico, Director of Sintech. This is an advanced technology, in which the Sintech automation presses, manages and controls the whole moulding process. Sintech’s strength is to create highly customised automation equipment for each product. “The customer knows its product better than anyone and can offer information that is crucial for the process development,” added the director. “Sintech takes on the tasks of devising and providing the best performing automation solution, thus creating an excellent technological partnership for development and co-engineering.”

In this field, constantly developing the components and technologies present on the market is a key factor. “Let us take the automotive sector as an example,” pointed out Daniele Brazzale, of the Italian commercial department. “There is an evolution going on in the component sector: the diesel technology is gradually giving way to petrol/hybrid or electric models. This field features several innovative components that require cutting-edge technological processes (such as assembly, measurement, monitoring, and testing operations, as well as the use of traditional robots, collaborative robots and interchangeable tools), which aim to achieve maximum automation flexibility.” What is more, Sintech is registered with the Register of Highly-Specialised Laboratories, accredited by the Ministry for University and Scientific and Technological Research, to perform implementation research: “Each machinery we manufacture features an innovative component.”

Sintech fully embraces the Industry

# Optimising the production processes

IN AN ERA WHERE AUTOMATION IS THE KEY TO INDUSTRIAL UPGRADING, INNOVATION IS THE ONLY STRATEGY FOR THOSE ENTERPRISES AIMING TO IMPROVE THEIR INTERNAL PROCEDURES. THE EXAMPLE OF SINTECH



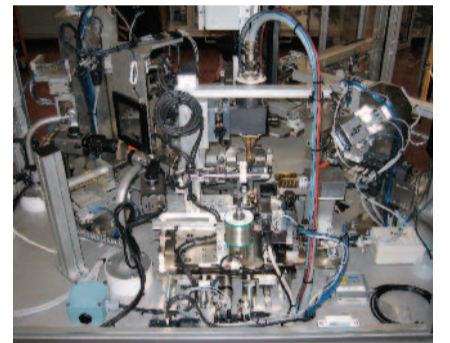
4.0 philosophy. “Our systems can be remotely programmed and maintained and feature smart sensors that, combined with our latest-generation software, allow us to supervise the process by means of wireless devices



and on the Internet, detecting the sensitive data of each product (traceability) and of the production as a whole.” Dr. Brazzale underlines that the way goods are produced is changing: “The development of assemblies and mechanical processing goes hand in hand with the sale of finished products: they have to streamline the route from supplier to customer.” In this regard Sintech has created assembly cells and lines keeping in mind a modular design, that is, devising production systems made of independent modular units (the so-called cyber-physical units), which can cooperate with men

## INDUSTRY 4.0 SOFTWARE

Sintech offers a software package for Industry 4.0 installations. The term “Industry 4.0” refers to a change in production systems, and more specifically to the use of M2M (Machine-to-Machine) connections to connect many independent devices, thus creating a network and reaching levels of connectivity once unimaginable. European countries are willing to endorse this revolution, since it would entail a significant change in the production process: relocation to cheap-labour areas would give way to collaborative robots and highly specialised workers, bringing the production centres back to Europe. The “Internet of things” proposed by Sintech is designed to monitor the whole automation process, including the collection of data, the traceability of the product, and the supervision of the production process in real time. This information can then be sent to the central IT system via network and the Internet, a procedure that we can define Collaborative Manufacturing.



Sintech is based in Quinto Vicentino (Vicenza, North-eastern Italy)

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and be retooled. What is more, they are networked with the other technological devices and can be customised to meet any production request. The enterprise is also heavily investing in the field of robotics. “We are carrying out studies and simulations on the possible field of applications of collaborative robots. These robots can work alongside human operators, as they are able to supply temporary replacement and to move freely, which make them similar to humans. The main objective is to relieve operators of certain repetitive and complex tasks, not to mention the robots’ high-level safety features that allow them to work alongside operators, limiting significantly the need for protective barriers. In order to increase the use of collaborative robots, in collaboration with its clients and with many interested enterprises Sintech has created a “demo” cell to identify and simulate the possible fields of application of this new technology, so as to certify the reliability of these robots in the production process.”

