

automation

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Extrusion





The cutting edge of cutting technology

The new Duet 200 is an innovative automatic inline planetary cutting machine in the Duet series. It cuts and chamfers PP, HDPE and PVC-U pipes with a diameter up to DN 200, automatically performing double-cycles of simultaneous cutting at high extrusion speeds. SICA is a family-run company specialized in machinery and service for the plastic pipe extrusion industry. Several technology patents, a strong focus on engineering and a skilled team of technicians have established SICA as a trusted name in the cutting machines market.

Photo © SICA

Extrusion



The standard model comes equipped with a disc and chamfer. Alternatively, SICA offers a Duet/K model for swarfless knife cutting and a Duet/C model for chamfering and knife cutting without producing chips and dust inside the pipe. These two models are particularly ideal for high-productivity PP lines and those producing double-socketed pipes.

In-depth testing and continuous product development performed directly in extrusion lines have helped the Duet series set new standards for performance efficiency and reliability. These machines are equipped with innovative low-wear cutting tools that maintain extremely high quality and consistent cutting over time while drastically reducing maintenance requirements.

Fast & Flexible

The new Duet's innovative design and cutting method is patented by SICA and allows the machines to achieve even higher hourly production rates – cutting up to 1650 pieces/hour at a length of 150 mm + socket or 1250 pieces/hour at 1000 mm + socket. Moreover, the machine is able to change pipe length on the fly. To achieve such impressive capabilities, SICA needed to boost the machine's reactivity beyond the industry standard and provide extremely flexible control.

Since 2001, SICA has relied on the B&R Power Panel, which provides all the functionality of a control PC in the space of a single panel, as its operator interface. The compact dimensions of the Power Panel allow for a sleeker control cabinet and help reduce the overall footprint of the system. These versatile touch screen units provide intuitive graphical operation while also handling the sophisticated logic required by the demanding capabilities of the Duet line.

The Power Panels are connected to the standard X20 I/O system, which collects signals from throughout the entire machine and links them to the other parts of the production line. These devices were selected not only because they fulfill SICA's requirements for computational power, compactness and number of integrated I/O channels and communication interfaces but also due to their attractive cost/performance ratio.

Proven in the field

Years of experience with B&R products and extensive testing in the field have provided SICA with hard evidence of the performance that can be achieved with this integrated automation system while also confirming that B&R is able to provide all the necessary

Video: Inline planetary cutting machine Duet 200C in action



"The quality of the electronics supplied by B&R was not the only reason we selected their control systems, however. Our close collaboration with the local B&R technical department and their prompt support allow us to develop products very quickly."

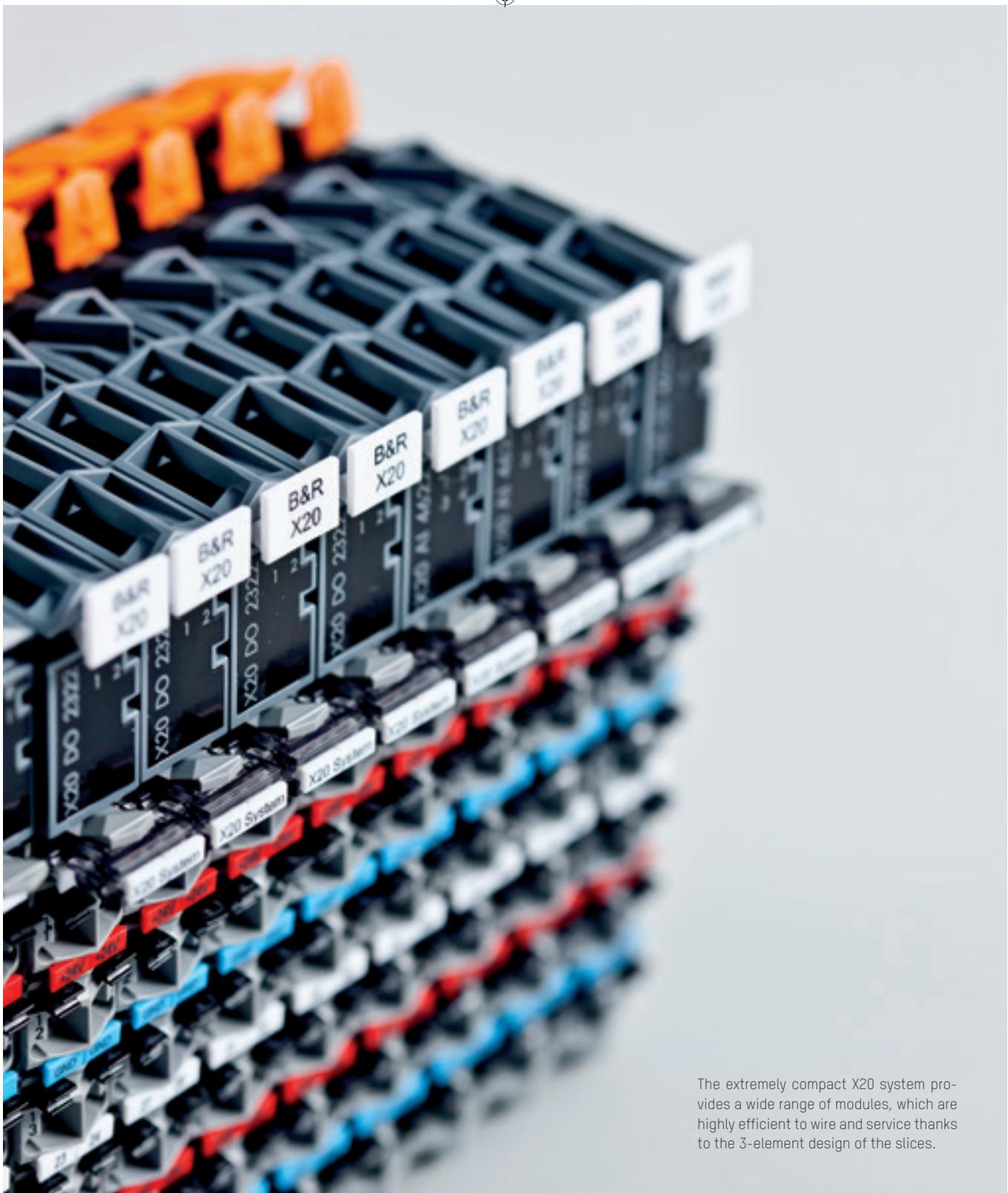
Franco Gatti
Software & Automation Manager in SICA

flexibility for this class of machines. There is, in fact, only one way to obtain such flexibility: through complete harmonization between the machine, the operator interface and the control system. The flexibility of its Duet machines is what allows SICA to implement the wide variety of customizations to meet the special requests of its customers.

The quality of the electronics supplied by B&R was not the only reason SICA selected their control systems, however. "Our close collaboration with the local B&R technical department and their prompt support allow us to develop products very quickly," says Franco Gatti, software & automation manager at SICA.



The new Duet's innovative design and cutting method allow the machines to achieve higher hourly production rates and to change pipe length on the fly.



The extremely compact X20 system provides a wide range of modules, which are highly efficient to wire and service thanks to the 3-element design of the slices.

The flexibility of the Duet machines also reduces a wide variety of customizations that SICA puts in place following the specific requests from the customers.

Exclusively clean

Waste reduction, efficient utilization of raw materials and machine cleanliness are important topics in the plastic industry. SICA takes these issues seriously, with every aspect of their machines remotely affected by these concerns thoroughly optimized – so much so that the company can rightfully boast that

their cutting technology solutions reduce plastic waste to an absolute minimum.

At the K trade fair, SICA will be presenting advanced research and development efforts applied to bellling and cutting machines which focuses on green technology in order to help pipe producers do their part for generations to come. In fact, the three machines on display at the K show are excellent demonstrations of SICA's commitment to conserving raw materials and keeping the environment clean and safe. ←