

The future starts now

GO!

Achieving greater efficiency with systems engineering

*A guide to saving time, money and
sparing your nerves.*



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Bühler AG, based in eastern Switzerland, has become a global market leader in the cocoa and chocolate industry as a result of its machines and solutions.

Sales in 2019: CHF 3.3 bn Employees worldwide: 10,600

What did Bühler want to achieve with the new machine concept?

- Increased machine throughput
- Reduced installation times
- Fewer error sources upon activation

Bühler AG on the new machine concept and working with Murrelektronik:

- The decentralized installation concept helped to significantly reduce our refiners' production cycle times.
- There was a 60 % reduction in both the installation and connection of the electrical components.
- The size of the control cabinet was halved and the tricky process of detecting short circuits in long cable bundles was eliminated.
- We continue to benefit from the standardization of machine activation – ten years after it was introduced.
- The decentralized installation concept allows for intelligent and efficient engineering and is applied both to new series machines and individual retrofit systems.

Future innovation potential: IO-Link, diagnostic analysis tools



Finer S five-roll refiner

Products used:
Cube67 / MVK Safety



Pfiffner AG is a leading global manufacturer of high-volume rotary transfer machines. Precision and flexibility balanced with productivity, have made the company an important partner for innovative industries.



Annual Sales: €64,8 m



Employees: 260



Member: FFG Fair Friend Group

What did Pfiffner want to achieve with the decentralized machine concept?

Pfiffner is a pioneer in the use of decentralized installation technology. For over 20 years they have benefitted from its advantages including:

- Flexibility and scalability regardless of machine size and design
- Easy changeover to new workpieces with minimal setup times
- Shorter assembly times
- More economical solutions
- Increased machine availability
- Simplified assemblies with increased reliability
- Easy integration of handling device

Pfiffner on the decentralized machine concept and its collaboration with Murrelektronik:

- We can respond to customer needs without having to make changes to the control cabinet.
- Having consistent, cost effective solutions that meet all of the application requirements gives our electrical engineering team planning security while saving valuable development time.
- We appreciate how Murrelektronik worked with us to come up with the best and most flexible solution.
- End-to-end scalable system solutions, which save time from planning to installation.
- Detailed system diagnostics help installers and operators locate faults quickly and easily keeping machine availability high.



Products used:
MASi68, Cube67

Groupe Recomatic is a leading manufacturer of machines for complex surface finishing. Its customer base includes companies involved in watchmaking, medical technology, aerospace engineering, luxury goods, and other high-tech industries.



Employees: 90



Group companies: RECO, BULA, SWIS

What did Groupe Recomatic want to achieve with the new machine concept?

- A systemic concept for the installation of plug-and-play components
- Flexible incorporation of fieldbus peripherals and external handling devices
- Reduced installation efforts, saving valuable space and money during control cabinet construction
- Advancing mechatronic engineering within the company

Groupe Recomatic on the new machine concept and working with Murrelektronik:

- The expert advice given showed us how we could easily switch from single-core wiring to a modular, decentralized installation system.
- Installation and activation benefited from the use of premolded and fully tested connectors, reducing the work involved as well as potential errors.
- The flexible network architecture gives us complete planning freedom and expansion options that cater to future requirements, like the introduction of safety technology, IO-Link, and IoT.
- Innovative technologies, like wireless data transmission, can be easily achieved.

Future innovation potential:
PROFIsafe, IO-Link, IoT for diagnostic analysis



Rösler Oberflächentechnik GmbH has been involved in surface finishing for more than 80 years. As a global market leader, Rösler offers a comprehensive portfolio of machines, processing means, and services relating to mass finishing and shot blasting for all kinds of different sectors.

 Sales: € 300 m  Employees: 1,000

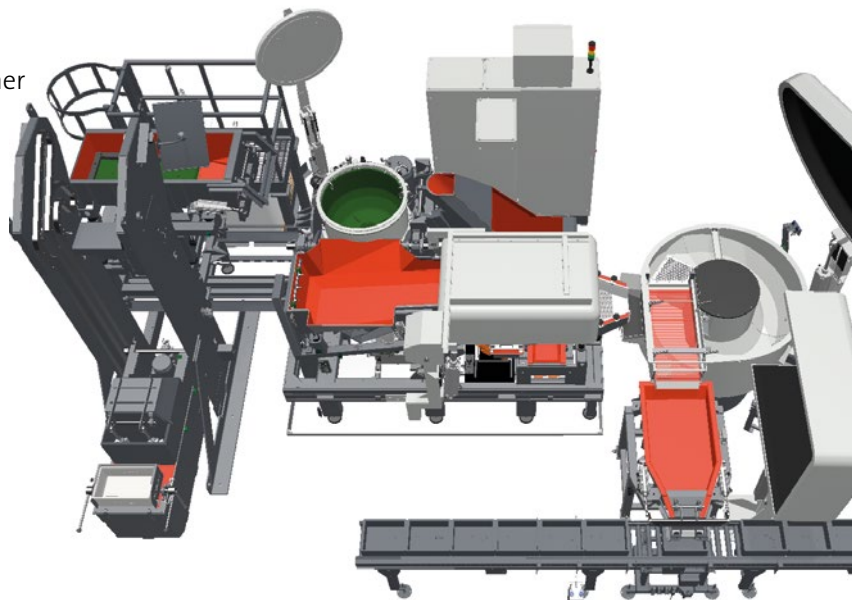
What did Rösler want to achieve with the new machine concept?

- A machine's modular assemblies can be defined by a plug-and-play installation concept and standardized cable installations. Errors can be minimized, resulting in shorter set up times.

Rösler on the new machine concept and working with Murrelektronik:

- The machine engineering was “mechatronized” on the basis of decentralized automation technology, which had a positive impact on the mechanical construction.
- Thanks to the Cube67 system and its compact I/O modules, terminal boxes were replaced and modular assemblies were defined which promote machine standardization.
- With the Machine Option Management (MOM) tool, planning the hard- and software is uniform and simple. Activation of the high-energy disk machines was shortened considerably.
- Since 2011, Murrelektronik has been a partner who is always available to help us find creative technical solutions for our systems.

Future innovation potential:
Expansion of this standardization to other machine types, simulation, cloud automation



SN Maschinenbau develops and produces horizontal form, fill, and seal (FFS) machines for a variety of applications and is a global market leader for pouch packaging machines.



Sales: > €40 m



Export percentage: > 75 %



Employees: 260



Machines/year: 60-80

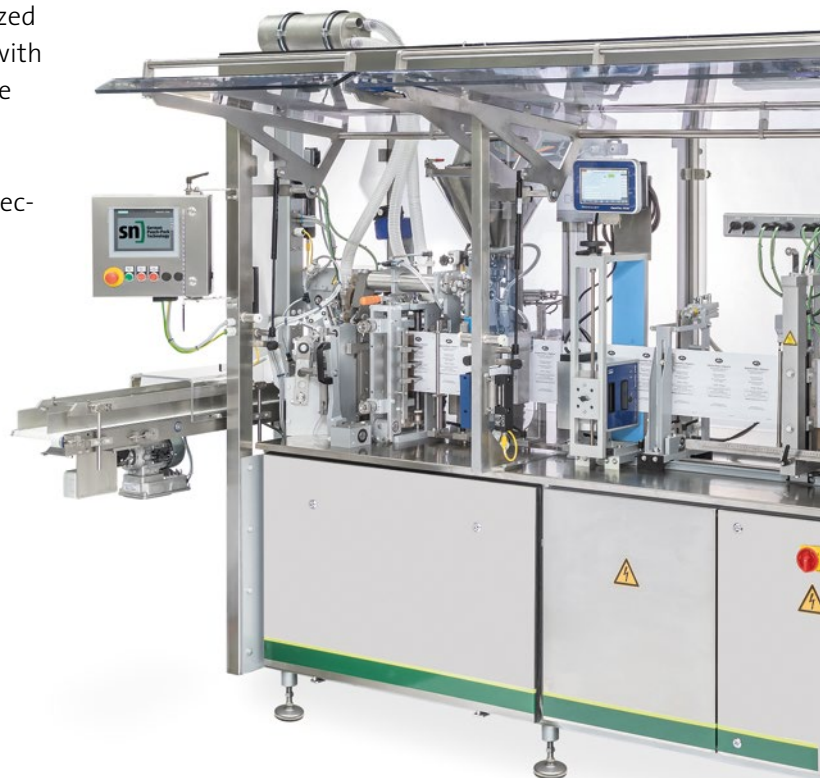
What did SN Maschinenbau want to achieve with the new machine concept?

- Economic and technological machine installation advantages
- Generation of functional assemblies using decentralized automation technology



SN Maschinenbau on the new machine concept and working with Murrelektronik:

- In terms of installation technology, decentralized automation meant replacing terminal boxes with compact SOLID67 I/O modules to make on-site installation safer and simpler.
- Standardized, modular assemblies make connections more efficient. A multiprotocol interface makes construction with function macros considerably easier while cutting down on processing time and avoiding errors.
- Preassembly benefits from electrical installation preparation and final assembly benefits thanks to plug-and-play interfaces that allow for direct IO-Link connection from the assemblies to the bus node.

Future innovation potential: IO-Link, diagnostic analysis tools



SOMIC Verpackungsmaschinen GmbH & Co. KG develops and builds packaging machines for the secondary and final packaging of food, confectionary, pet food, and more at three sites – Amerang and Haag in Germany and Eagen in the USA.

 Total group sales: > €50 m  Employees: approx. 400

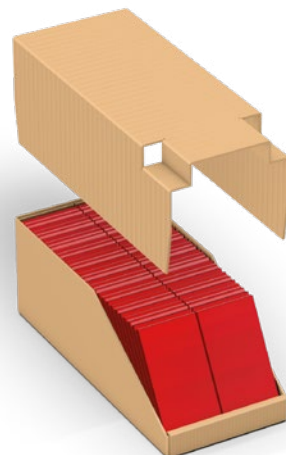
What did SOMIC want to achieve with the new SOMIC 424 machine concept?

- The aim was to create a new way of thinking about system engineering where machine installations are made up of modular, standardized components.

SOMIC on the new machine concept and working with Murrelektronik:

- Drawing on the mechatronic modular machine system, in place since 2010, and the introduction of standardized functional units, the task in hand was to incorporate the machine installation technology into this system.
- The idea of defining all of the machines' core functions as a structure made the installation, activation, diagnostic analysis, maintenance and servicing of the packaging machines easier.
- With its Cube system, Murrelektronik provided a template for the system technology. Connection of modules is standardized, using a hybrid cable. Preassembled M12 connectors make installation significantly easier and are standard within SOMIC's mechatronic modular system.

Future innovation potential: Simulation





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Talk to us!

We will happily develop a concept tailored to your needs and show you where you can find savings.

www.murrelektronik.com