Progress Group, 39042 Brixen, Italy

Mischek Systembau invests in the future of precast concrete production

Efficiency, digitalisation and sustainability are shaping our time, making continuous investment in the modernisation of production processes increasingly important from a strategic perspective. Mischek Systembau GmbH has been successfully active in industrial prefabrication for over 50 years and is considered a pioneer in this field in Austria, particularly as a leading supplier of precast concrete elements with integrated system components. Since 2004, Mischek has been part of the Strabag Group and thus part of a Europe-wide network of expertise in the construction industry.

Tradition and experience

Mischek Systembau looks back on more than five decades of experience in the production of precast concrete elements. Since its integration into the Strabag Group in 2004, the company has gained access to technological resources and an expanded market. Today, Mischek operates in three shifts and covers a wide range of precast concrete elements, including slab-shaped solid and semi-precast elements, as well as special precast elements with complex geometries. These special precast elements are characterised by a high degree of prefabrication. Managing Director Mathias Tabor explains: "A particular highlight is certainly the 'intelligence' of our precast elements. Our serial housing TETRIQX consists of standardised system components of the Mischek construction method, which are already factory production."

Technical excellence

In recent years, Mischek Systembau has continuously invested in machinery for automation and digitalisation. To increase productivity and value creation, the company continues to rely on its long-standing partnership with Progress Group. One of the latest investments is a Wire Centre for automated reinforcing-steel processing in the plant. Several reinforcement machines are fully integrated into the production process, including a Versa lattice girder welding machine, an MSR straightening and cutting machine and gripper units for transporting the bars and lattice girders.

The special feature of the lattice girder welding machine is that the top wire is pre-cut by a separate single straightening machine, while the bottom wire is changed automatically. This results in special lattice girders in which the wire diameter of the top and bottom wire differs. "The main reasons why we are constantly investing in automation are to increase value creation and reduce dependence on purchasing built-in components. This also leads to a complete elimi-

Managing Director of Mischek Systembau GmbH Mathias Tabor.

The lattice girders and reinforcing bars are placed precisely on the pallets using the grippers.

In the Wire Centre, reinforcing steel is processed and laid fully automatically from the coil.

nation of the need for storage areas and handling work," says Tabor. Thanks to high precision, reliability and flexible integration into the existing production line enable the company achieves a steadily increasing degree of automation while simultaneously manufacturing complex components and reducing material costs.

Long-standing cooperation

Back in 2008, Mischek invested in machines from Ebawe Anlagentechnik, the specialist for circulation plants in the Progress Group. In addition to the production of double walls and precast slabs with in-situ topping, a second circulation plant is used to manufacture solid precast elements. A groundbreaking investment followed in 2019 with the Tube Master pipe-laying robot. This machine is used to automatically lay cooling and heating pipes in the precast elements. This automation step results in higher process speeds and reduced personnel costs.

With the integration of the new reinforcement systems, several individual machines in the circulation plant were also renewed. Since 2025, the modern eCon Drive concrete spreader and machines for cleaning pallets and formwork have been in operation. The integrated machines in the circulation plant reduce manual work, minimise waste and save storage space.

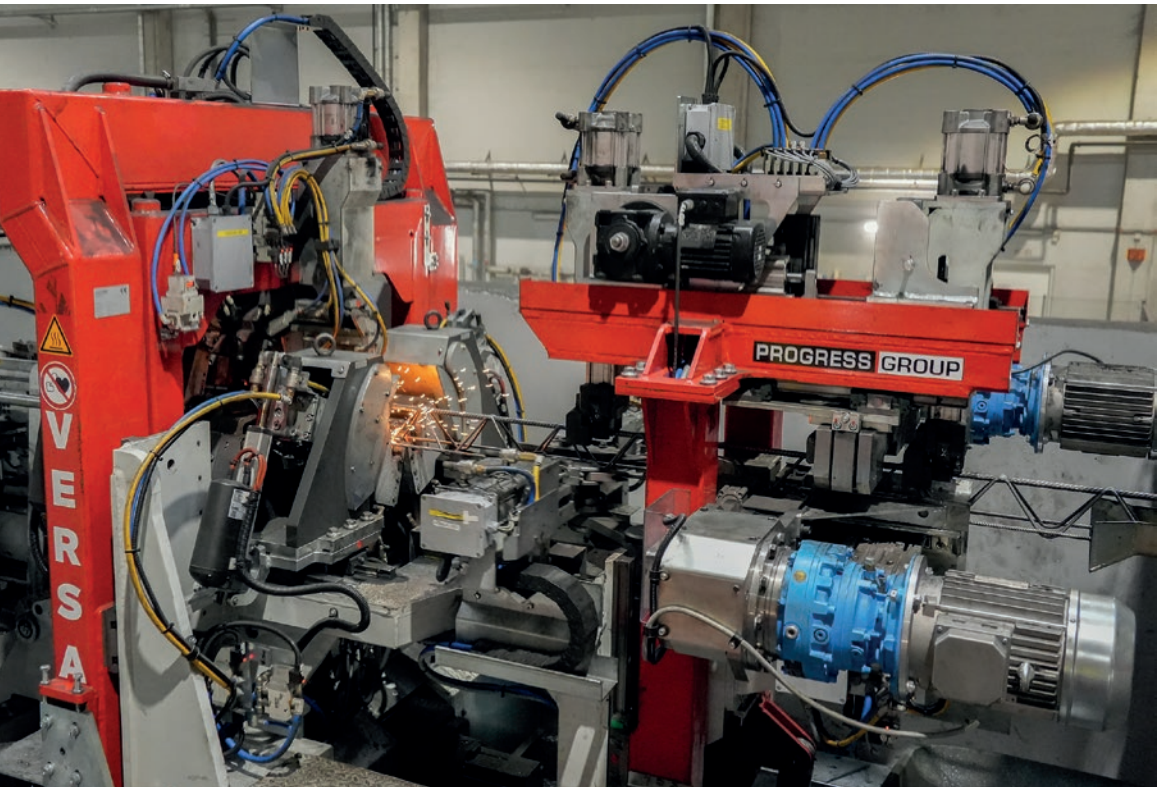
PROGRESS GROUP

Machinery for hollow core slabs

- Full turn-key provider for your prestressed production
- In-house engineering and software solutions
- Automated machines

Echo Precast Engineering designs and manufactures plants and machinery for the production of prestressed hollow core slabs – and more.

www.echoprecast.com



The new Versa lattice girder welding machine for the flexible production of lattice girders from coil.

Focus on digitalisation

In addition to hardware, digital production control plays a crucial role. The ebos® software solution from Progress Group enables data-based decisions-making through real-time production visualisation. Its intuitive operation optimises production planning and ensures smooth operations. Tabor explains: "The software plays a crucial role for us, as it provides large amounts of data and we use the corresponding evaluations to make data-based decisions." Flexible pallet allocation maximises productivity. Mischek also uses the vision. Image quality control system, which automatically captures and documents images of the pallet before casting – improving quality control and tracking of the built-in components.

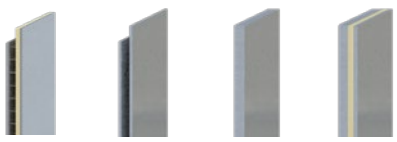
Tabor also emphasises: "As a technology group for construction services, Strabag focuses on automation and increasing the level of digitalisation. This is therefore of central importance to us as an industrial manufacturing company within the Strabag Group."

The special feature of the machine: Lattice girders with different wire diameters for the top and bottom chords.

The concrete spreader ensures even and precise discharge into the shuttered pallets on the production line.

PROGRESS GROUP

Carousel Plants

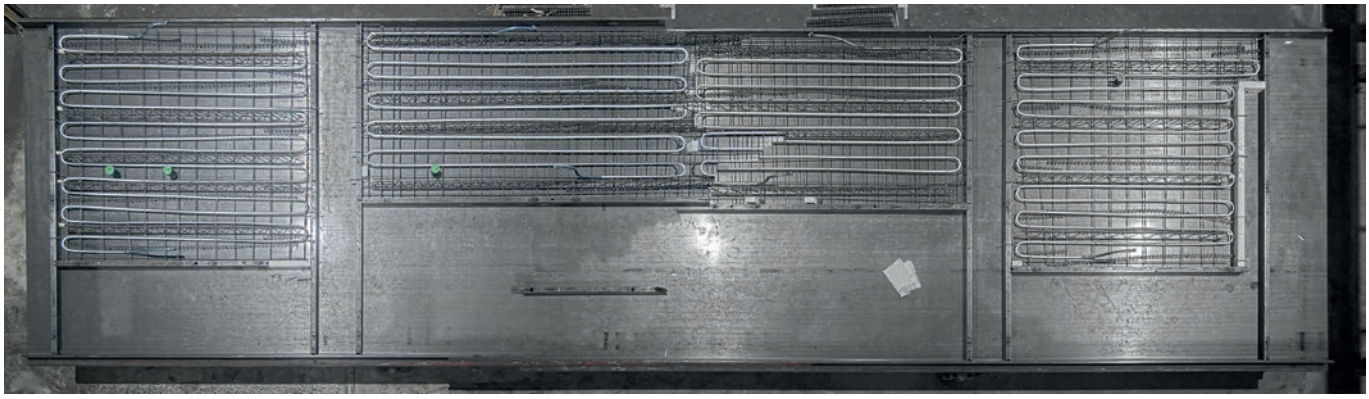


Highly automated precast solutions:

- Customized machinery
- Consulting services
- Integrated software solutions

EBAWE designs, engineers and installs complete production plants for the manufacture of the most varied precast concrete elements.

www.ebawe.de



With vision.Image, images are automatically captured and documented – for better quality control and traceability.

Looking to the future

Using the serial construction system TETRIQX, Mischek Systembau builds multi-storey residential units with a high degree of repeatability and predictability. The focus is on cost reduction, shorter construction times, sustainability and flexibility in residential construction. This strengthens Mischek's commitment on prefabrication and vertical range of manufacture. "Further developments are planned for the coming years, particularly with regard to the degree of automation and the expansion of our product range for many, many TETRIQX residential buildings throughout Austria," says Tabor.

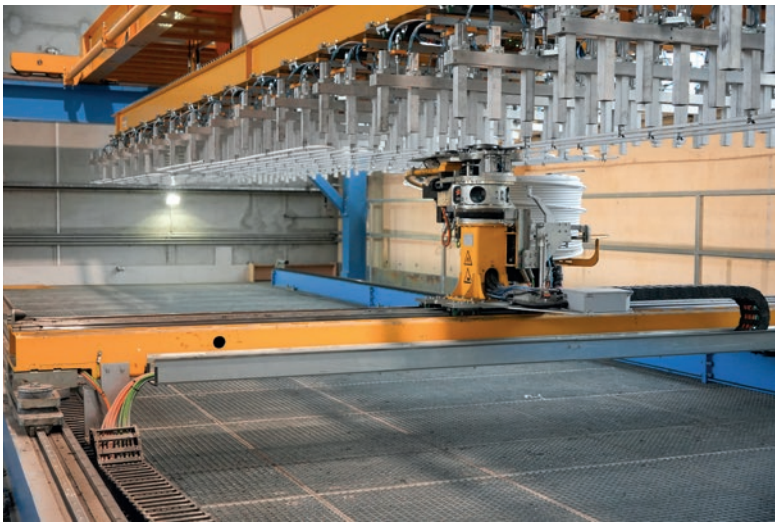
Strong partnership

For Mischek, the collaboration with the Progress Group is a key success factor. The company combines state-of-the-art production processes, a high degree of automation and consistently high efficiency. "The collaboration is characterised by transparency and openness, with both parties working on an equal footing. The competent exchange enables us to increase productivity and raise our level of digitalisation. The combination of technological expertise, tailored systems and digital solutions makes this collaboration a decisive factor for our future success."

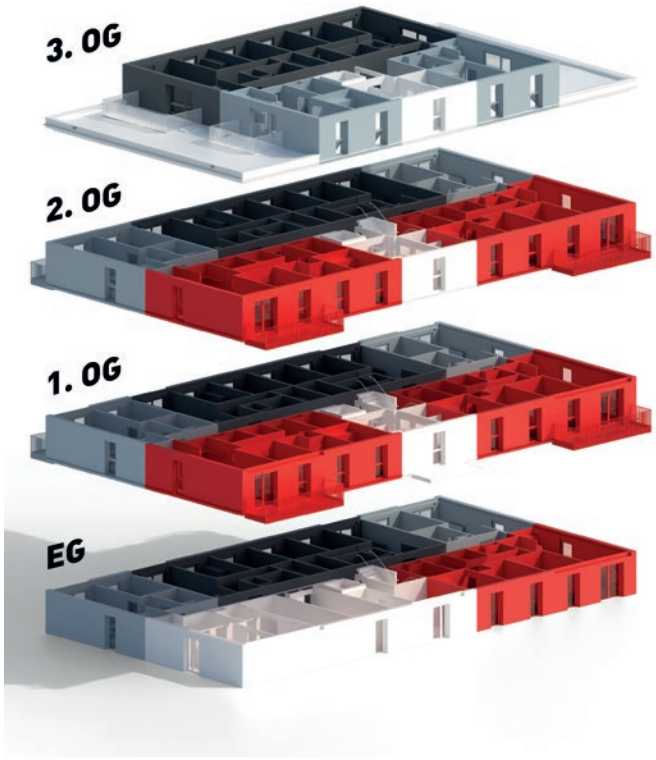
By investing in Progress Group machinery and software, the company is able to efficiently implement serial, sustainable construction in Austria and secure a leading position in industrial prefabrication. ■

Video about the report

Precast concrete elements from Mischek Systembau before transport to the construction site.



The Tube Master pipe-laying robot enables the automatic laying of heating and cooling pipes in precast concrete elements.



The Tetriqx serial housing system works like a construction kit, enabling the creation of multi-storey residential units.

PROGRESS GROUP sponsored the free download possibility of the pdf of this article for all readers of CPI. Please check the website *www.cpi-worldwide.com/channels/progress-group* or scan the QR code with your smartphone to get direct access to this website.

FURTHER INFORMATION

MISCHEK Systembau GmbH
Hugo-Mischek-Straße 10, 2201 Gerasdorf, Austria
systembau@mischek.at, www.mischek-systembau.at

EBAWE Anlagentechnik GmbH
Dübener Landstr. 58, 04838 Eilenburg, Germany
info@ebawe.de, www.ebawe.de

Progress Maschinen & Automation AG
Julius-Durst-Straße 100, 39042 Brixen, Italy
info@progress-m.com, www.progress-m.com

Progress Software Development GmbH
Julius-Durst-Straße 100, 39042 Brixen, Italy
info@progress-psd.com, www.progress-psd.com

Paul
Maschinenfabrik GmbH & Co. KG

Prestressing of precast concrete elements

PAUL supplies
- Prestressing installations incl. planning work
- Anchor grips
- Prestressing machinery (single-/multi-stressing jacks)
- Strand pushing and cutting equipment
- Automatic prestressing machines for railway sleepers
- Prestressing equipment for bridge construction (prestressing cables and stay cables)

The experts in Prestressed Concrete Technology.
stressing.paul.eu

Paul at YouTube
stressing-channel.paul.eu

Max-Paul-Str. 1
88525 Dürmentingen
Germany
☎ +49 (0) 7371/500-0
🖷 +49 (0) 7371/500-111
✉ stressing@paul.eu