



Innovative Linear Motion Technology for 3D roll forming

Maximum performance in the smallest of spaces

Whether it be in architecture, the aircraft industry or automotive manufacturing: 3D roll forming is a flexible way to form long sheets of metal in a single step. Together with Bosch Rexroth, the Swedish machine manufacturer Ortic is taking advantage of the benefits of this cost-effective, mobile alternative to pressing. The demands on linear motion systems as key components are particularly high. The high-performance, durable PLSA Planetary Screw Assembly is a highlight here.

The building profiles which the mobile roll former from Ortic forms on the construction site can be up to 150 meters long. The work performed by the numerous individually controlled rolling frames in succession is perfectly coordinated. Even the high-strength steels used in automotive production can be handled as required and with all the desired properties. However, the forces involved, some of which can be very large, need to be calculated in advance with great precision and transmitted to the profile sheet in an exact manner. For this end-to-end motion chain, Bosch Rexroth together with Ortic developed a complete electromechanical solution – with everything from the Linear Motion Technology and drive systems without control cabinets to software.

Top-class Planetary Screw Assemblies

With this innovative complete solution, Ortic achieves the highest possible concentrations of force, travel speed and precision right next to the rolling process. In addition to profiled rail systems, ball screw assemblies and electromechanical cylinders, the compact PLSA Planetary Screw Assembly is also used for this purpose: with a top travel speed of 50 m/min and dynamic load capacities of up to 544 kN, the durable building block has a high power density and is a key component when it comes to the positioning accuracy and repeatability of Ortic's 3D roll formers. The Swedish machine manufacturer also relies on the global competence and spare parts network of the Bosch Rexroth service as a further pillar for the international success of its 3D roll forming technology.

Challenge

Electromechanical solution for dynamically transmitting large forces in an extremely compact form.

Solution

Developing the complete motion chain: from the Linear Motion Technology and servo drive system to the control system and the software.

Result

"Together, we make the most of our roll forming technology. We will continue to work closely with Bosch Rexroth in the future." Johan Eriksson, CEO, Ortic AB



Solved with

- ← Innovative Linear Motion Technology including PLSA
- ← IndraDrive Mi drive solution without a control cabinet
- ← Construction, simulation, programming and service