



Bosch Rexroth and TRUMPF develop novel kinematics for modular expandable machine tool.

Innovative machine concept for maximum flexibility

The innovative kinematics of the TruPunch 1000 offers TRUMPF customers a completely new level of flexibility: Step by step, the punching machine for the entry-level segment can be expanded to a multifunctional combined machine. The result of this evolution: The TruMatic 1000 fiber, a cutting-edge laser machine that punches holes, bends tabs, forms threads and ensures extensive parts handling.

“Delta Drive” – the jointly developed drive, control and safety concept is another milestone of this ten-year development partnership. Because punching head and die as well as the orthogonal sheet only move in one direction, not only the installation area but also the effort for parts handling are reduced. This way, new functions such as sorting or targeted storage can now be realized without any additional systems. A further proof of the solution competence of Bosch Rexroth: The software-based safety concept for monitoring the six real and two virtual axes, including the important laser function “Safe Cam at Tool Center Point“.

Drive, control and service from one source

Fast and with high precision, the powerful CNC platform IndraMotion MTX controls all real and virtual axes. The decentralized drive solution IndraMotion MLD calculates the transformation of the kinematics. At highest performance, cutting gaps from up to 0,05mm are thus possible. And the energy concept? Further developed, with regenerative IndraDrive M – HMV-R eco supply and capacitive intermediate storage. Thanks to the Rexroth engineering framework IndraWorks, TRUMPF minimizes the effort for programming, parameterizing and implementation.

Challenge

Innovative drive, control and safety concept for a modular punch/laser machine.

Solution

Bosch Rexroth as development and system partner: Components and service from one source.

Result

“The machine concept, developed together with Bosch Rexroth, opens up new possibilities for us in engineering.”

*Stefan Kerscher, TRUMPF
Werkzeugmaschinen GmbH*



Solved with

- ▶ IndraMotion MTX
- ▶ IndraMotion MLD
- ▶ IndraDrive M – HMV-R eco

