



**TIGHTENING TECHNOLOGY &
JOINING EQUIPMENT**
Efficient & high quality



PRODUCT PORTFOLIO

THOROUGHLY CONVINCING



TIGHTENING

- ✓ Fixed spindles
- ✓ Hand-held screwdrivers (wired & wireless)
- ✓ Torque and angle wrenches
- ✓ Socket boxes
- ✓ Automatic feed systems for bolts
- ✓ Handling systems
- ✓ Preload force measurement



JOINING

- ✓ Various types of joining modules
- ✓ Safety brake
- ✓ Absolute position measuring of press-in travel
- ✓ Digital recording of press-in force



MEASURING

- ✓ Force measurement
- ✓ Displacement measurement
- ✓ Combined force/displacement measurement
- ✓ Friction value measurement



CONTROL

- ✓ All-in-one controller
- ✓ Production data collection
- ✓ Quality data collection
- ✓ Employee information systems
- ✓ Worker guidance



SERVICE

- ✓ On-site service
- ✓ Tightening services
- ✓ Machine capability tests



Predictive maintenance



Project planning for complete stations and systems



CONTROL UNIT

flexE12_4.0

Developed in-house, the PC-supported control and regulation units *flexE12_4.0* are at the heart of the EST product portfolio. Their modular structure enables the implementation of several different EST technologies such as tightening, joining, force and displacement measurements with just one control unit. In addition to the procedural and measurement functions, a soft PLC functionality is integrated that allows the user to integrate other participants into the assembly process without much effort.

The master/slave system architecture saves process-relevant data and parameters in a database, where they are managed centrally by the *flexE12 CM* master unit or a host computer. Optionally, both the master and slave units can be integrated into a switch cabinet (central) or positioned directly on the assembly island (decentralised). The master unit in the decentralised variant is available with a 10.4" touchscreen for quick and simple programming and visualisation.



FIXED SPINDLE

flexE12TOOL

Our high-quality *flexE12tool* drive spindles catch the eye with their maximised accuracy and durability. They include versatile output variants for precisely fitting geometries and include high-precision sensor technology to enable even highly complex tightening connections with the highest process reliability.

Available in a broad range of sizes, the EST fixed spindles are suitable for any torque range between 0.1 and 2,000 Nm. A variable, spring stroke and automatic detection of the connecting surface ensure maximum process accuracy at all times. An integrated data chip automatically detects the tool connected and enables hot plug and play functionality.



JOINING MODULE

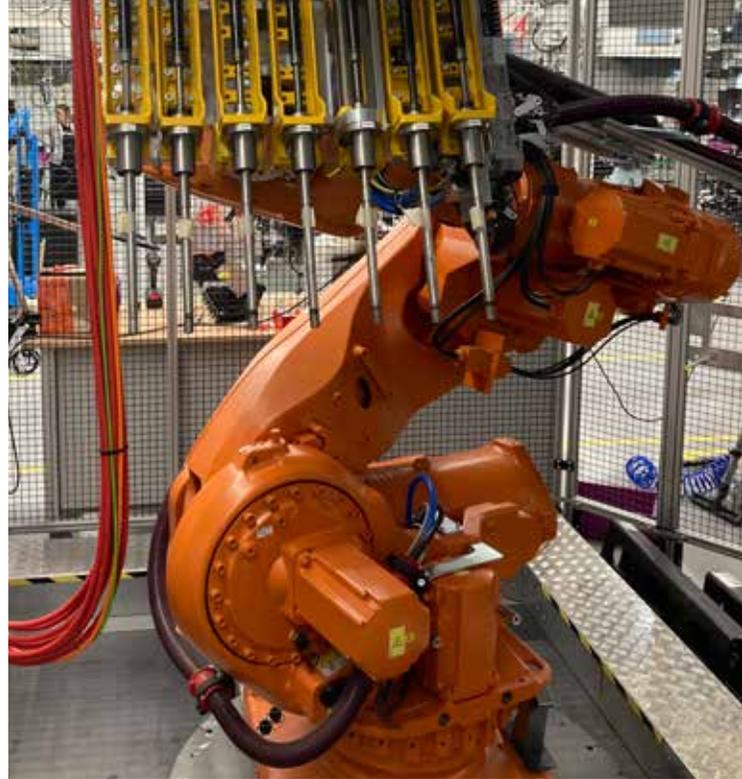
flexPRESS

The monitoring and analysis of joining processes, including documentation and traceability, is the basis for your production success. Our *flexPress* joining modules with linear actuator guarantee maximum precision, reliability and speed in your joining processes. Integrated sensor technology enables the precise determination of process parameters such as total displacement, force progression, offset depth and block force. A wide variety of monitoring and control functions (e.g. retrospective envelope curve analysis) and safety elements for optional integration such as a dual-circuit safety brake (Performance Level e according to EN ISO 13849-1) assure the highest standards of safety at all times.



○ ALL FROM A SINGLE SOURCE

- /// Project planning for complete systems
- /// Multi-technology
(tightening, joining, measuring)
- /// Open systems architecture
- /// Development partner for complex assembly processes
- /// One face to the customer



○ HIGH PERFORMANCE

- /// Short cycle times (< 6s)
- /// High speeds (up to 1,100 min⁻¹)
- /// Extremely high availability (> 99.95%)
- /// Maximum safety (Performance Level e)
- /// Fully automatic feed systems for bolts

○ EXTREMELY FLEXIBLE

- /// Up to 99 types per control unit
- /// Up to 999 programs
- /// Master PC for central data management
- /// Integrated soft PLC
- /// Broad variety of special functions available
(e. g. double hit, safety torque)





EST TECHNOLOGIE

**EFFICIENT, HIGH-QUALITY
AND INTELLIGENT SOLUTIONS**

- ✓ Tightening technology
- ✓ Joining equipment
- ✓ Production metrology
- ✓ Production data collection
- ✓ Quality data collection
- ✓ Employee information systems
- ✓ Control technology
- ✓ R+D partner for industry

EST Elektronische Schraub- + Steuerungstechnologie GmbH & Co. KG has been the system house for state-of-the-art tightening, joining and information technology within the SCHMID GROUP since 1994. The company is integrated into the SCHMID GROUP across all disciplines and can therefore access both their knowledge and service pool.

With around 30 employees and its headquarters in Aalen-Ebnat, EST TECHNOLOGIE serves the demanding development and implementation needs for future-oriented data, control and process engineering solutions. And this includes many different industries, but above all in the areas of automotive, heavy duty, agriculture, aerospace and mechanical engineering.

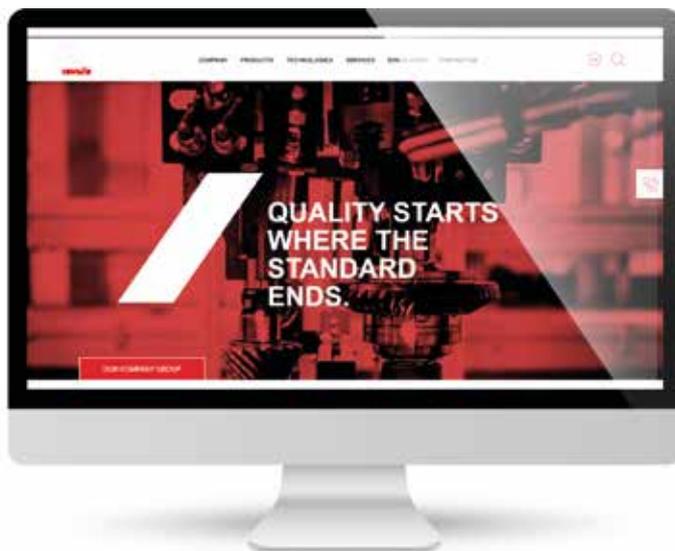


STRONG TOGETHER

THE SCHMID GROUP

As part of the international **SCHMID GROUP**, whose members also include the enterprises **EMIL SCHMID MASCHINENBAU**, **SCHMID CLEANTECH**, **SCHMID MACHINERY** and **SCHMID E-MOTIVE**, **EST TECHNOLOGIE** is in a position to access the shared knowledge and services pool when necessary. Taken together, we bring together all areas of expertise for the benefit of our customers and produce high-quality products.

With us, you can plan for success, exploit growth opportunities and strengthen your market position in the long term. We consistently attach great importance to confidential technology transfer with you.



VISIT US ONLINE FOR MORE INFORMATION

Learn more about the **EST TECHNOLOGIE** products and technologies at www.schmidgruppe.de



are companies of

