

SINGLE WORKSTATION WITH INTEGRATED ASSEMBLY PRESS

- Integrated Force-Distance monitoring for optimal quality assurance
- Precise and flexible assembling, pressing and jointing for a broad area of applications



MODULAR CONFIGURATION, PRECISE MANUFACTURING

The Single Workstation is a stand-alone unit, servo controlled and with highest precision measuring. Quality assurance for every part assembled is offered by the integrated force-distance monitoring. The workstation is characterised by its modular design that allows for flexible handling.

The heart of the workstation is the PROMESS Elektro-mechanical Assembly Press. It is available in different dimensions and specifications, depending on the requirements of the customer. Further components are configured accordingly:

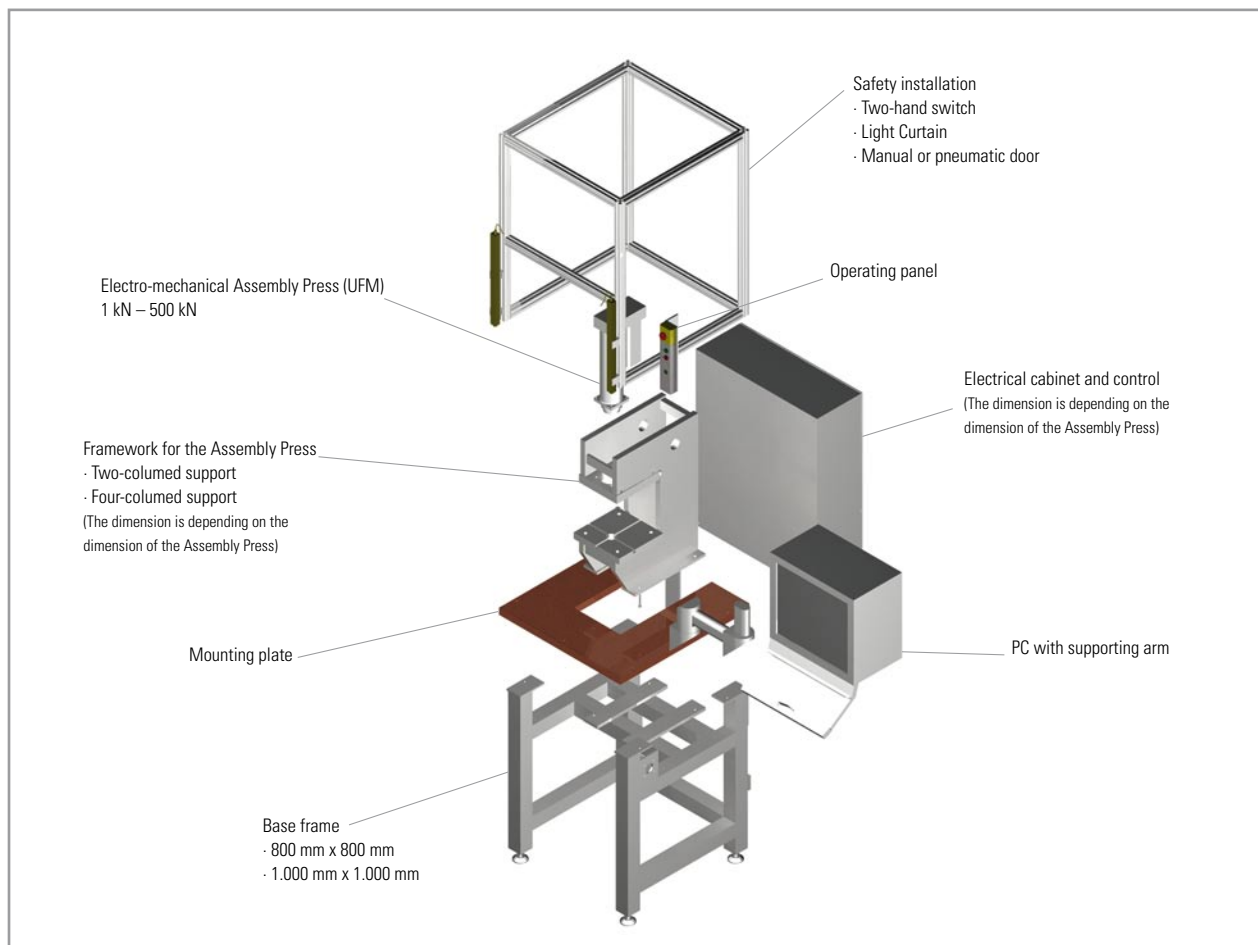
Mounting plate, base frame, framework for the Assembly Press, safety cover with safety installation, electrical cabinet and control, operating panel and a PC with supporting arm.

Operator and operational safety is assured by a category 4 safety installation around the assembly area. A safety zone

protects access to the press area. In addition a two-hand switch, a light curtain, a manual or pneumatic door assure the safety of the operator while inserting and removing the component.

The PROMESS SINGLE WORKSTATION is suitable for demanding assembly and test applications and offers to the user countless advantages:

- Integrated force-distance monitoring for optimal quality assurance for every part assembled
- The result of the press process is displayed immediately
- Due to numeric control no mechanic blocks are needed and no control valves have to be adjusted
- Highest positioning and repeatability accuracy during the operation
- Modular design allows for an individual workstation
- Storage of all quality relevant data



PROMESS ELECTRO-MECHANICAL ASSEMBLY PRESS

SET-UP OF THE MECHANICS

The robust mechanics of the electro-mechanical assembly units are put together from the following components:

Press housing, Ball/Roller gear drive, Force transducer, Axial bearing, Press ram, AC-Servomotor

For units with angled motor the synchronous belt connects the motor with ball/roller gear drive directly and guarantees the greatest possible positioning accuracy of up to 0,001 mm.



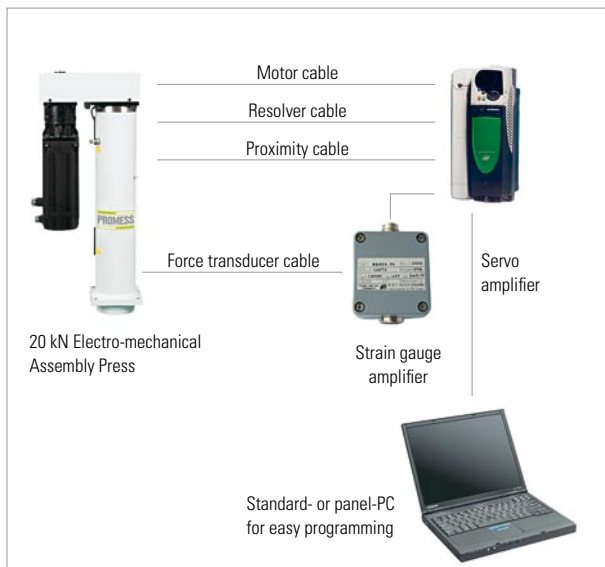
THE CONTROL: MODULAR AND NETWORKABLE

The mechanics are triggered via a power amplifier with an integrated NC-Module. The Riskprocessor fitted in the NC-Module takes over control and monitoring of the assembly unit. It can be programmed comfortably and easily with the PROMESS software using a standard PC.

BUS SYSTEMS:

Ethernet, Profibus, Can Open, Interbus, DeviceNet, CT-Net

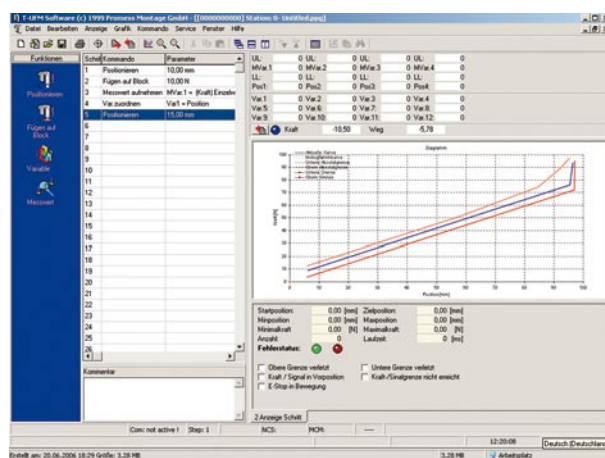
Integrated quality assurance due to process monitoring and documentation. The force-distance course of a process is displayed on the monitor. Process values are compared with an envelope, monitored and stored. For serial production the necessary quality assurance data is available for the user in the PC program.



THE SOFTWARE

The visualization and programming of the process takes place using a PC. An easy to understand and visually clear interface under Windows 2000/XP provides trouble-free and simple operation. All important information and functions are clearly shown in the main menu. A precise compensation against bending torque is offered in the software.

Parameters and input details necessary for programming can be processed quickly using a very simple and self-explanatory windows technology. Creating a program is very easy. Different function windows are used one by one to insert the process data until the whole program is set up. All program steps with their specific functions are displayed in the main window.



ELECTRO-MECHANICAL ASSEMBLY PRESSES (UFM)

Dimensions and specifications

MODUL UFM	Force [kN]	Stroke [mm]	Vmax [mm/s]	Art.-No.
UFM	3	100	120	374003
UFM	5	200	240	374005
UFM	12	200	240	374012
UFM	20	180	150	374020
UFM	20	350	230	374023
UFM	30	180	150	374021
UFM	30	350	230	374030
UFM	40	180	150	374040
UFM	40	330	240	374043
UFM	60	180	150	374060
UFM	60	330	240	374065
UFM	80	180	150	374081
UFM	80	330	200	374091
UFM	100	330	200	374103
UFM	150	400	145	374151
UFM	240	350	120	374243
UFM	300	350	100	374291
UFM	500	400	70	374294

Further dimensions upon request.

APPLICATION EXAMPLES

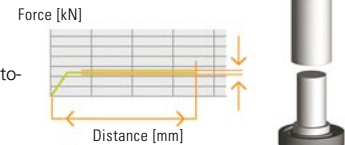
Many Electro-mechanical Assembly Units are working in heavy industrial use all over the world. The application areas for the assembly units are diverse:

- Pressing rotors into sheet metal packages
- Pressing rubber dampers into metal bearings
- Setting and testing springs
- Molding rings to exactly 0.001 mm
- Pressing winding packages into the housing
- Use in riveting technology as well as in butt-welding plants
- Crimping of electrode
- Pressing bearing jewels into clockwork mechanism
- Assembling of injektors, bending of valves

A close relationship with our well-known customers in the automotive and electrical industry leads to a continuous improvement and the extension of the functionalities and performance of our products. As an innovative company we are constantly searching for new opportunities of use for our customers.

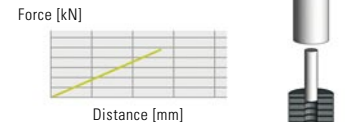
PRESSING

bearings in at a distance without stops with monitoring of the pressing force.



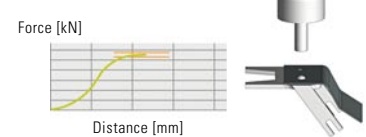
JOINTING

rotor shafts with exact press in position.



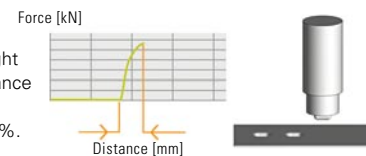
RIVETS

with programmed pressing force.



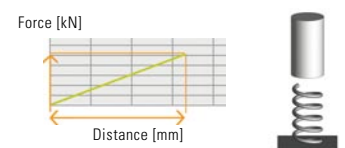
MOLDING/SHAPING

detection of the part height and relative shaping distance repeat accuracy of the programmed force of $\pm 1\%$.



SPRING TESTING

Measuring and reporting the spring resistance in certain positions and with monitored linearity.



SCOPE OF SUPPLY:

Single Workstation with Electro-mechanical Assembly Unit, NC-Module, Servodrive and Operator Software

ACCESSORIES:

Foot pedal, Handwheel, Operator Panel, Integration of external Sensors, Supporting Arm and Panel PC

SERVICE:

Installation and Start-up support, Pre-Tests, Maintenance, Process analysis, Consulting