

Applications:

Joining and assembly processes using presses must today be carried out safely and if possible without retrospective checking. Specified parameters which define the press process must be maintained during production. Only in this way can the quality and safety of the manufactured product be guaranteed. For this reason, TPC-MIDI is used wherever consistent joining processes are required, the progress of which has to be checked and if applicable documented by means of software.

TPC-MIDI monitors the press operation, compares the actual progress with the requirements and subsequently evaluates it. In this way, reject parts can be reliably detected and separated out.

TPC-MIDI can be used both with hand-operated presses and with pneumatic presses. In the case of pneumatic presses, the **MPS-1 TPC** controller is supplied together with a PLC onto which the type-tested two-hand MPS-1 safety controller is superimposed.

However, the TPC-MIDI is also available as a pure system component if a PLC environment already exists, e.g. in an automation system.

Die Advantages:

- TPC-MIDI can be programmed via the membrane keyboard or conveniently using the PC software.
- TPC-MIDI stores 8 different measuring programs
- 3 windows possible per program
- Modern curve evaluation via freely parameterisable windows
- 4 window types: Insertion, pass-through and block windows as well as an envelope curve.
- Force measurement directly in the force characteristic with DMS sensor developed especially for presses.
- Software for programming and saving measuring programs
- Documentation of each press operation

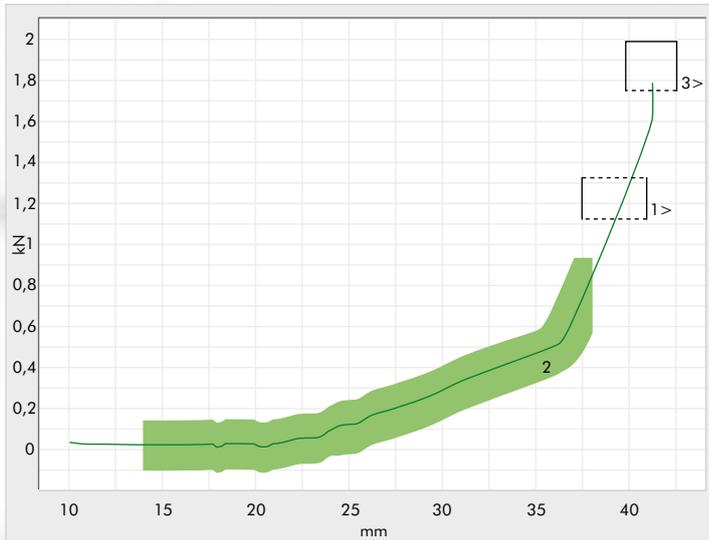


Laptop not included

DA 850-40-100 with MPS-1 TPC

Monitoring window

The following monitoring windows can be created with TPC-MIDI:



Pass-through window (1)

The force/displacement curve must pass through the window from the entry to the exit side as defined without one of the other window boundaries being infringed. The entry and exit sides can be freely selected.

Envelope curve (2)

The measuring curve must pass continuously through the envelope curve and must not infringe it. The envelope curve is taught by means of a teach-in process. Its X-axis parameters and the delta-Y, i.e. the force tolerance range, are defined subsequently.

Block window (3)

The block window monitors the final values of the press operation. With this type of window, the force/displacement curve must enter the specified entry side and must not leave the window again.

Programmable trigger points can be defined if the part geometry demands it. By programming the trigger point, the X-axis positions of the evaluation window are matched to the press operation and then refer to the trigger zero point.

We would be pleased to provide you with further information on the TPC-MIDI process monitor.



TPC-MIDI evaluation unit with software screenshot



Manual workstation with TPC-MIDI installed on an EP 500-40 toggle press