

## Product Information

### Automatic Testing of Metals: „Portal“ Specimen Feeding



Pic 1: Automatic Specimen Feeding „Portal“ for testing of hot strip

#### Automated tensile testing on metals

The „Portal“ construction for automatic specimen feeding allows the fully automatic performance of tensile testing on metals according to EN 10002-1.

The system shown consists of a 50 kN materials testing machine (Zwick Z050) as well as an automatic feeding system, in light portal construction, with a three-axis specimen feeding system. The additional measurement stations such as cross-section measurement instrument, roughness measurement instrument, coating thickness measuring instrument as well as a hardness tester, complete the testing system. The specimen magazine can accept 400 specimen. Removal of specimen remains, with good/bad sorting, is possible with corresponding pre-sets. The portal construction allows the specimen gripper to be driven to the side to give the operator free access so that manual testing can be performed.

Loading of the specimen magazine is performed from the back, outside of the danger zone.

Use of a bar-code-reader guarantees automatic and error free identification of the specimen.

The measured test results are transferred to a Host computer system for documentation and production control.

The easy to learn, and operator friendly applications programme, Zwick testXpert, controls the complete system.

The integration of several testing units in one system brings the advantage of great time savings and therefore, fulfills the demand of low testing costs.

Any Zwick testing machine from 10 kN to 2000 kN can be integrated into the system.

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Pic 2: Cross-Section measuring and barcode-reader



Pic 3: Roughness measuring unit and double-sided measurement

#### Main uses of automatic specimen feeding

- \* The modular system makes an economical adaptation to specific customer requirements possible
- \* Elimination of subjective influences through the high positioning accuracy of the automatic specimen feeding
- \* The order of testing can be controlled by the operator with individual loading of specimen and free selection of where the specimen gripper picks up the specimen
- \* Exact centering of the specimen in the cross-section measurement unit and the ball-shaped sensor arms, makes determination of the specimen thickness and width possible
- \* The universal and easy operation of the automatic testing system is guaranteed through collection of all system functions in the operational masks of the Zwick user's software testXpert

#### Further advantages of the automatic specimen feeding

- \* Reproducibility of the testing requirements even over a long operating time, no influences through different operators
- \* Secure documentation and statistical long-term control of process and production to comply with DIN ISO 9001

- \* Unmonitored testing ("ghost shift"), loading of the system by untrained personnel possible
- \* "All from one source": Zwick takes over everything from consultation until service, for the testing machine as well as for the automated specimen feeding
- \* The Zwick maintenance and calibration service is officially recognised by the Physical-Technical Institute (PTB) as a DKD-calibration laboratory. Zwick is thereby authorised to check materials testing machine on location and issue DKD calibration certificates for the measurement units for force and extension measurements.

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