



imet 03:
our single-column materials testing machine

They call these machines tensile testing machines or universal testing machines. We call these machines, as described in the DIN EN ISO 7500-1 standard, **materials testing machines**.

Such a static machine, in conjunction with clamping tools, measuring and control electronics and evaluation software, becomes a materials testing machine for tensile, compressive, bending, peeling, tearing, shearing, friction, puncture and mechanical tests in accordance with ASTM, ISO and other industry standards.

The drive takes place via a servo motor with gearbox, toothed belt drive and pre-tensioned ball screws.



imet 50:
one of our two-column materials testing machines

The basis of the materials testing machine, which is 100% made in Germany, is the load frame. As standard, the WPM is operated with a (lower) test room. The option of a second (upper) test room is available and can therefore be used for large and small forces. The working space width of 420 mm means an optional thermal chamber with a temperature range of -80°C to 280°C is possible.

The columns are made of specially drawn aluminum profiles with T-slots and offer a variety of mounting options. In most cases, WPM is used to perform destructive tests. The highest level of security for users and the testing system is ensured.

All safety requirements of the EC Machinery Directive are met and documented by an EC declaration of conformity.



ELECTRONICS

The measuring and control electronics regulate the force and path at 1kHz/2.5kHz. A connection to the computer is ensured through the LAN interface. The signal from the force sensor is converted via a 24 bit A/D converter. There are 8 digital inputs and outputs available.

VERNIER CALIPER SERIAL INTERFACE

External measuring equipment such as calipers can be connected via a USB port. This avoids errors when transferring the sample dimensions.



REMOTE CONTROLS



3 different remote controls are optionally available. Here we differentiate between the simple remote control with digipoti to move the traverse through to the complex remote control with emergency stop, a 4.3" TFT touch display and the option to control the WPM as a "standalone" system.

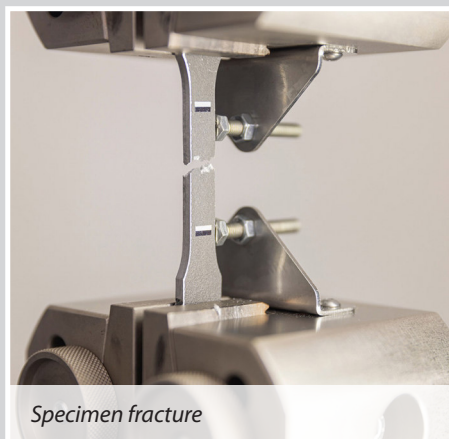
VIDEO EXTENSOMETER



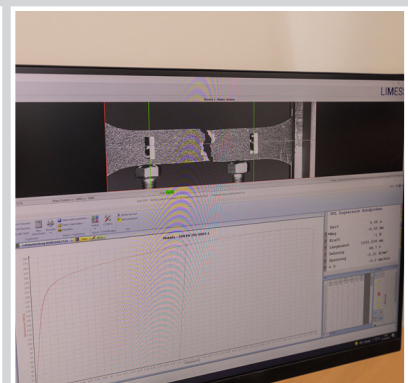
The LIMESS video extensometer

To measure the elongation of material samples, we use the non-contact video extensometer from the **German manufacturer LIMESS**. This is integrated into our electronics via a serial interface.

The non-contact measurement of linear elongation is not only important for steel or plastics, but also where contact with a sample is not possible, such as with foil or paper. The measuring range **does not depend on the sample length** and is up to 1000% elongation. Image fields from a few millimeters to a few meters are possible - thus also strain-controlled tests.



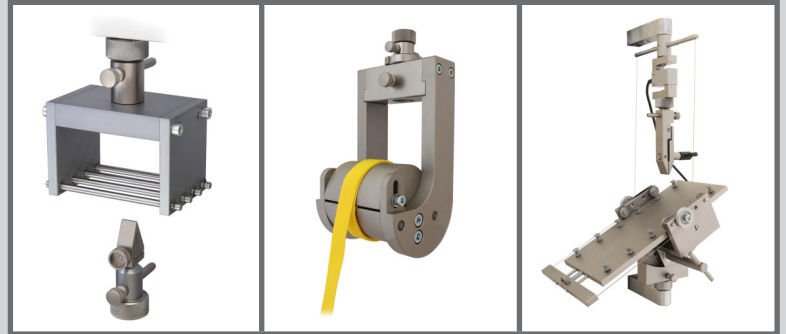
Specimen fracture



Software for fracture detection

TOOLS

There is a **very wide range of different tools** for testing materials in accordance with standards. Mechanically clamping tools, self-clamping wedge clamps, pneumatic clamping tools up to very large hydraulic clamping tools. Special tools for shearing, rubbing or pulling tests are also available. Ask us! We have the solution



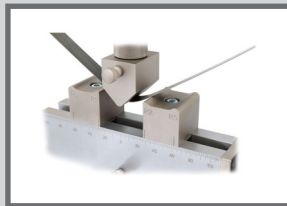
90-degree Peeling Tool

Strap Clamp

Peeling Tool



T-slot Plates



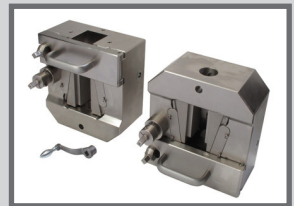
Three-Point Bending Tool



Pressure Plates

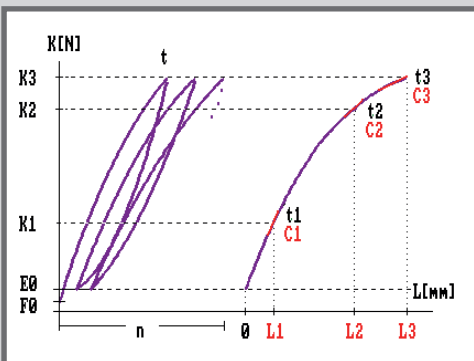


small Clamping Device

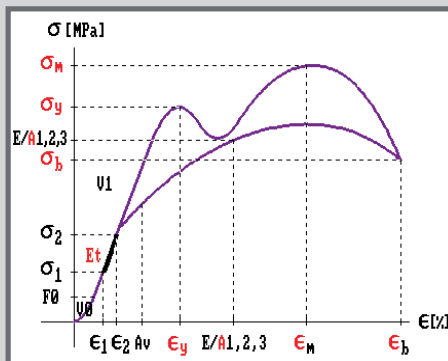


Large Wedge Clamping Device

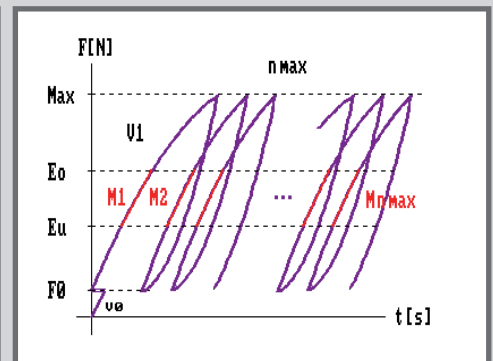
SOFTWARE



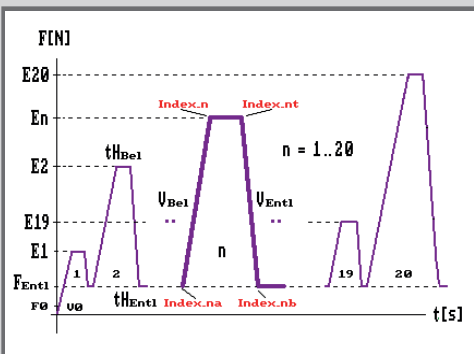
Spring Test



Plastic Tensile Test DIN EN ISO 527-1



Cyclic Loads



Tension/Compression Test

The **imet-TEST software** is divided into different methods. You only buy what you need. The software can be expanded quickly and easily at any time via a data connection (TeamViewer).

The individual methods are structured in such a way that e.g. B. all parameters are preset in the plastic standard DIN EN ISO 527-1. You check in accordance with standards **at all times!** Since the machine cannot detect what you are clamping into the tool, you can also check other materials using the same method.

	imet-03	imet-05	imet-10	imet-20	imet-30	imet-50	imet-100
Measuring range	3kN	5kN	10kN	20kN	30kN	50kN	100kN
Accuracy force sensor *1	Class 05 according to DIN EN ISO 7500-1 in the range of 1% to 100% of the force sensor's measurement range.						
Test chamber height *2 mm	900	1200	1200	1100	1100	1100	1100
Test room width mm	120	420	420	420	420	420	420
Resolution path μm	0,01	0,01	0,01	0,01	0,01	0,01	0,01
Speed mm/min	2000	2000	1400	1200	1000	1000	500
Traverse guide	Ball screw with support shafts.						
Sample rate closed loop	1kHz						
Electronics	10/100 Mbit LAN interface, 24-bit A/D converter, 8 x digital input/output, various manual controls, intelligent connectors for force sensor and traverse path with sensor detection.						
Power supply	230VAC/50Hz						
Power consumption kW	0,18	0,5	0,5	0,78	1,82	1,82	1,82
Temperature range °C	5°C/40°C						
Dimensions W x D x H (mm)	775 x 650 x 1565						
Weight (kg)	50	200	210	230	285	285	310