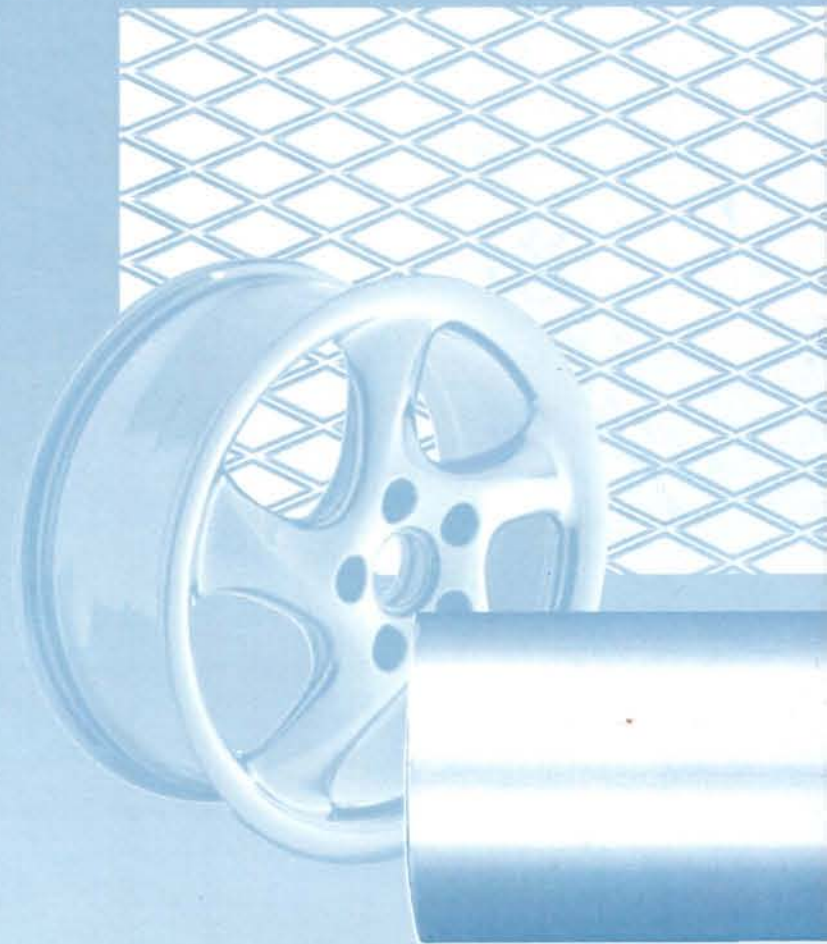
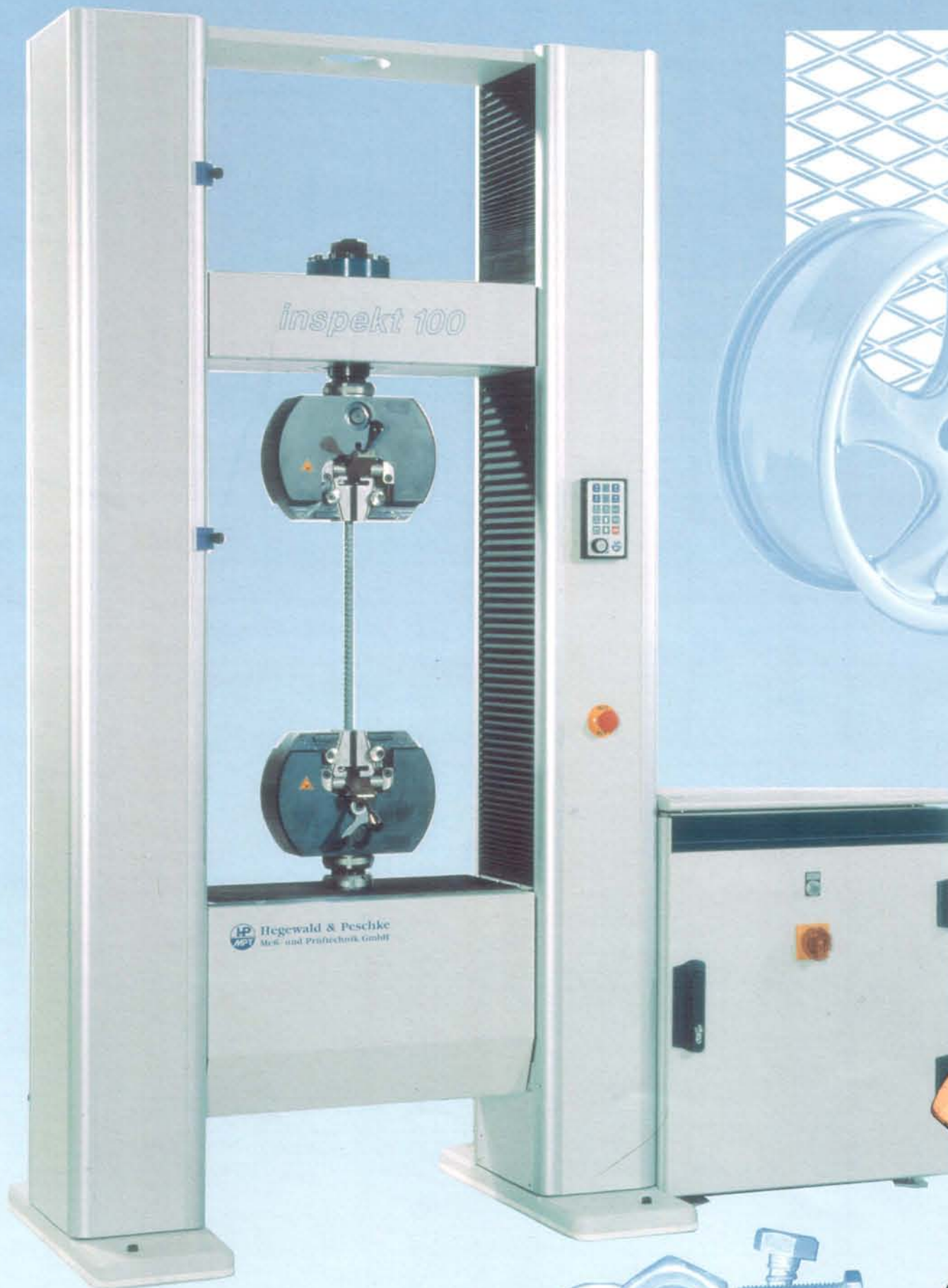


Universal Testing Machine Inspekt Series



Universal Testing Machine
Inspekt 100 kN



Hegewald & Peschke
Meß- und Prüftechnik GmbH



Universal Testing Machine Inspekt Series

Your expert partner In materials testing

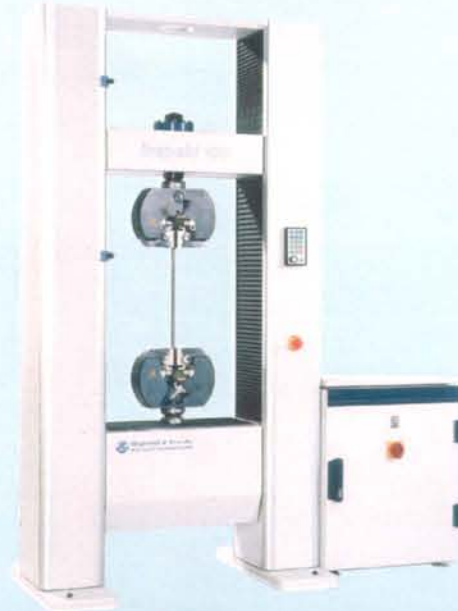
Hegewald & Peschke GmbH has been developing and marketing measurement and testing equipment since 1990. A highly qualified team of engineers, software developers and technicians ensures standard conformal implementation of your testing requirements.

The range of Hegewald & Peschke GmbH includes:

- Electromechanical universal test machines for test loads up to 600 kN
- Hydraulic universal test machines for test loads up to 2000 kN
- Hardness testers
- Modernising of universal test machines and hardness testers
- Furniture and component test stands

Naturally we offer the associated maintenance and calibration service for all of our equipment groups.

The screw bearings and nuts are non-play and preloaded and provide low friction for high dynamics in force translation and control.



The drive screws are protected from contamination by bellows.

The crosshead is also held in two massive guides to ensure high lateral stiffness.



Application laboratory at Hegewald & Peschke GmbH

Universal Testing Machine Inspekt

The load frames for the Inspekt series are offered in capacities of 100, 200, 250, 300, 400, 500 and 600 kN.

The axes are AC motor-driven using two screws (recirculating ball screws for up to 300 kN, or roller screws for 400 kN and above).

The digitally controlled drive on the Inspekt series ensures

- Exact, reproducible positioning
- Large, stepless speed range
- Extremely low crosshead speeds



Universal Testing Machine Inspekt 400 with hydraulic clamping tools

Force measurement

Force measurement is accomplished using a strain gauge based load cell.

The measuring electronics ensures Class 1 (optional 0.5) measuring accuracy to DIN EN ISO 7500 over a range of 0.4 to 100% nominal load.



Universal Testing Machine Inspekt Series

Measuring and control system

The measuring and control system for the Inspekt Series was specially developed for use in materials testing machines.

The controller for the Inspekt Series permits force, displacement and elongation testing. Communication with the PC is via an RS-232 interface. The controller is shipped standard in the following configuration:

- Force measurement channel
- Crosshead channel
- Expansion bus for 7 additional cards
- 16-key manual operation
- RS-232 interface to PC

The entire control and power electronics is protected from the environment in a rugged housing.

Tracability of the measured data

All test machines are calibrated at the factory before shipping. The calibration data for all measuring instruments are registered and written to the sensor plug of the strain gauge or the elongation measurement device.

When a gauge is replaced, the controller automatically reads out the corresponding calibration data. This eliminates the need for the user to perform calibration.

Safety equipment

This includes overload protection for the force transducers, electronic and mechanical crosshead travel limiting, and the internal check program for the machine.

Extensometers

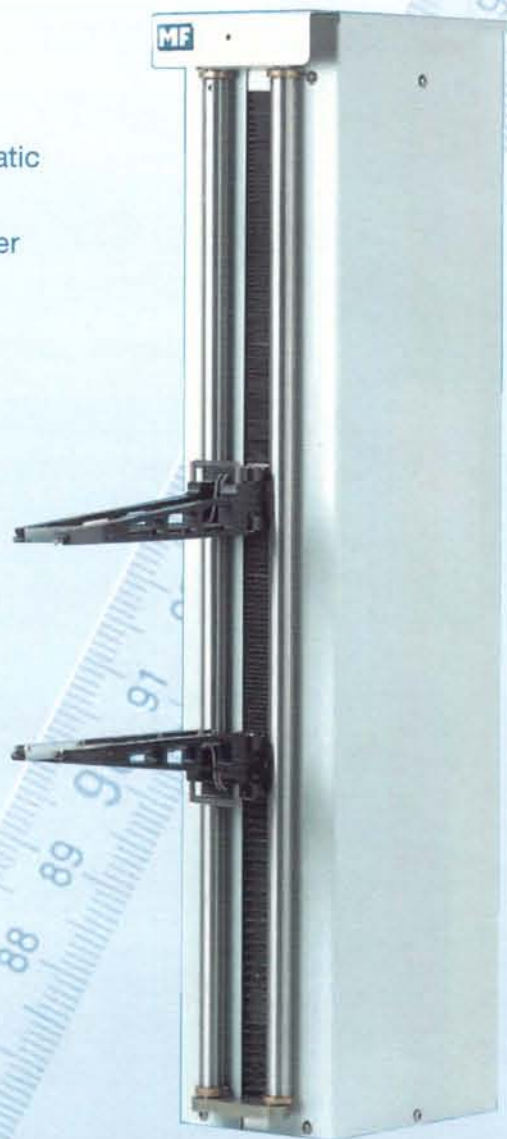
To determine the deformation directly on the sample, contacting and non-contact type systems are provided depending on the application.

Grips and Clamping tools

Selecting the right clamping tool is critical to the success of a test.

A wide variety of clamping tools is available for virtually any material and sample geometry.

Fully automatic
longitudinal
extensometer



Wedge type grips 100 kN with insert system
for additional clamping tools



Universal Testing Machine Inspekt Series

Special solutions

Special applications require testing systems which are specified and developed based on the customer's input and needs.

The consistent use of modern development and manufacturing tools allows us to offer cost-effective one-off versions or small lots.



Inspekt 500 kN universal testing machine for apex (vertex) pressure testing on fibreglass compound pipes with a maximum diameter of 3000 mm



Inspekt 600 kN-L horizontal testing machine for testing high-current insulators, machine fully enclosed with roller doors



Inspekt 600 kN PUM.A universal testing machine with four separate drives and screws for simulating molding processes



Hot tensile testing system for high temperature application



Universal Testing Machine Inspekt Series

LABMASTER Software

The LABMASTER software was developed especially for use in materials and component testing.

The software is used in conjunction with the Inspekt mini, Inspekt desk and Inspekt series as well as for retrofits.

The LABMASTER software runs under Windows 2000 XP¹⁾ as well as Windows NT²⁾.

The heart of the LABMASTER software is a powerful database in which all measured data and parameters are stored. (Interbase database server)

The LABMASTER software is available in the following versions:

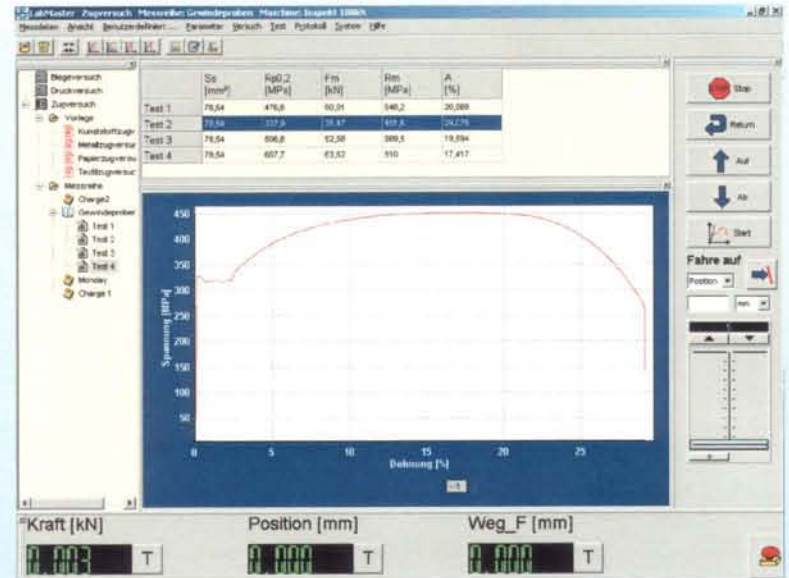
- **Light:** For simple applications (maximum force determination, force-displacement curves, paper testing, simple strength testing).
- **Basic:** For standardized pull, compression and bending tests.
- **Science:** Freely programmable test sequence, free results definitions for frequently changing testing requirements.

The LABMASTER software implements all the functions needed for the test sequence:

- Communication with the test system, measured data acquisition
- Automatic detection, checking and calibrating of all measuring sensors
- Test sequence parameterizing
- Graphics settings
- Log editor for creating user-defined result reports
- Interfaces for exchanging test and parameter data

The actual results are gathered according to the standard or test specification using a processor module integrated into the LABMASTER software, which contains all the result calculations of the specified testing standard.

Also available is a comprehensive, constantly expanded standards and requirements library.



Special attention was paid to simple, clear operation:

- Test parameter sets are saved to make immediate testing possible
- Online help for the test sequence and determining of results
- Master and user levels
- Remote service from H&P GmbH via remote control (option), fault elimination and help in parameterizing

The LABMASTER software also processes data from peripheral measuring devices over various interfaces. This means the LABMASTER can be used as a universal laboratory administration software package.

As an option the expanded data in- and export can be used for communicating with other systems.

The test can be recorded using the video recorder module. Here the test is recorded time-synchronous as a video and can be used for further processing or presentations.

The standard logging is expanded by the „Print in Word“ module. This module uses Microsoft Word templates to create the test log.

We are always happy to assist you in individual software solutions as well.

^{1), 2)} Registered trademarks

Universal Testing Machine Inspekt Series

Technical Data

Capacity	(kN)	100	150	200	250	300-1	300	400	500	600	
Mechanical construction		2 non-play recirculating type ball screws, 4 hardened guide columns, screw protected by bellows					2 non-play roller screw drives, 2 hardened guide columns, screw protected by bellows				
Travel range without tools	(mm)	1100					1320				
Overall stiffness	(kN/mm)	160	Referenced to machine, load cell and load inducement					340	380	480	580
Test area width	(mm)	610					750				
Crosshead crosshead speed	(mm/min)	0.01 - 1000	0.05 - 500	0.05 - 600	0.05 - 450	0.025 - 250	0.002 - 500	0.001 - 250	0.001 - 200	0.001 - 200	
Return speed		Vmax									
Drive		AC servomotor									
Force signal resolution		± 120.000 digits at 20 ms integration time (standard) ± 400.000 digits at 250 ms integration time									
Force measurement range		Over 0.4 - 100% of the nominal force of the force sensor Force measuring range Class 1 to DIN EN ISO 7500, optional Class 0.5									
Crosshead travel measurement		Incremental square-wave input with encoder monitoring, travel position is stored									
Resolution of crosshead travel measurement	(µm)	0.006	0.003	0.002			0.005		0.003		
Data acquisition card Extensometers		Carrier frequency 5 kHz, ± 100.000 at 20 ms integration time, usable as 10V input for external instruments									
Optional card		Data acquisition for analogue and digital elongation measurement devices or additional force measurement devices, as well as ± 10V input for external devices; analogue output for force and elongation signal; guard door option									
Standard functions Manual control		Start-Stop-Return, positioning with manual potentiometer, force-displacement-tare, opening and closing of clamping tools or extensometers									
Software interface		RS-232 PC connection, standard data transmission rate 20 ms, optional 2, 5, 10 ms									
Weight (without add-on parts)	(kg)	1050	1080	1180	1200		2050	2200	2300		
Power ratings		3/PE/400 V, 50 Hz, 4.0 kW					3/PE/400 V, 50 Hz, 4.0 kW				
Dimensions W x D x H	(mm)	1080 x 700 x 2150 600 x 900 x 750 (90 kg)					1250 x 900 x 2450 600 x 900 x 750 (95 kg)				
Test frame options		+ 250 / + 550 and on request					+ 250		On request		
· Extended length	(mm)	+ 140 and on request					----				
· Test area width	(mm)										
Additional options		Machine-compatible furniture/special versions for test frame dimensions and speed ranges									

Specifications subject to change. All data describe our products in general form. They do not represent any assurance of properties as defined by B 459, Clause 2 of the BGB German Civil Code and are not grounds for liability claims.

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