

**Hydraulic universal testing machine  
Inspekt 500-H-F  
with integrated hydraulic clamping tools**

**inspekt 500-H-F**



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| <b>Mechanic design</b>                     | <p>Servo hydraulic testing machine with integrated hydraulic clamping tools</p> <p>The lower crosshead is guided by two fixed spindles which are linked to the machines base.</p> <p>The lower crosshead can be moved by an electromotor to arrive at the distance to the upper crosshead that is required for the individual tests.</p> <p>The upper crosshead is connected to the machine bench via two supporting pillars. The bench is mounted to the piston of the hydraulic cylinder and ensures load transmission to the upper crosshead.</p> <p>Limit switches ensure that the oil pump is switched off when the crossheads come too close.</p> <p>The hydraulic power unit consists of the oil pump, the oil tank, the strainer, and hydraulic and electro hydraulic servo-valves.</p> <p>The entire unit is placed in the lower part of the measuring and controlling unit.</p> <p>A detector converts the crosshead movement into electric impulses which are then displayed digitally on the controller unit.</p> <p>Force measuring is done by a high-precision pressure measuring cell which is installed in the hydraulic cylinder.</p> |
| <b>Standard functions (with PC)</b>        | <p><b>Load, displacement and extension controlled operation</b></p> <p>Overload protection, automatic force calibration</p> <p>Control panel for manual mode</p> <p>Specimen fracture detector, Return-function</p> <p>High precision positioning of the crosshead is done by a motor.</p>   |
| <b>Nominal load</b>                        | 500 kN   |
| <b>Test space width x depth</b>            | 650 mm x 650 mm  |
| <b>Test speed</b>                          | Max. 80 mm/min   |
| <b>Stroke</b>                              | 250 mm   |
| <b>Measuring range</b>                     | class 1 0,4% - 100% nominal load according to DIN-EN-ISO7500   |
| <b>Load resolution</b>                     | +/- 120.000 digits at 20ms integration time / +/- 400.000 digits at 250 ms   |
| <b>Stroke measurement</b>                  | Optical encoder, resolution 0,01 mm  |
| <b>Manipulating speed of the crosshead</b> | 450 mm/min   |
| <b>Software interface</b>                  | RS 232   |
| <b>Data transfer rate</b>                  | 50Hz (Standard) / optionally 500Hz via special software add-on module  |
| <b>Optional measuring channels</b>         | Option for 7 data acquisition boards for analogue/digital in-/output for load, displacement, extension measuring devices, and also as a +/-10V input for external devices, in- and output for controlling of external devices, guard door option   |
| <b>Size HxWxD</b>                          | Load frame: (1060x700x2900) mm, control container: (700x800x1070) mm   |
| <b>Weight</b>                              | Load frame: 2600 kg, control container: 90 kg  |
| <b>Integrated clamping tools</b>           | <p>Tensile tests:</p> <p>Integrated hydraulic clamps for round samples 12-30 mm diameter and flat samples 0-30 mm thick and maximum 60 mm wide</p> <p>Pressure tests:</p> <p>Pressure-plate diameter 120 mm</p>  |