

**Product information** 

# Universal testing machine inspekt duo





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#### General product description

With regards to standard-compliant material and component testing in the low load range Hegewald & Peschke MPT GmbH has developed the inspekt duo universal testing machine with two different test room heights. The inspekt duo is a cost-effective table-top machine of low weight and high bending stiffness suitable for tensile, compression and bending tests on various materials. In combination with the ergonomic design and the new brushless drive concept, a safe and fast measurement is guaranteed with the simplest operation both in the harsh production environment and in the sterile laboratory area.

#### **Essential characteristics**

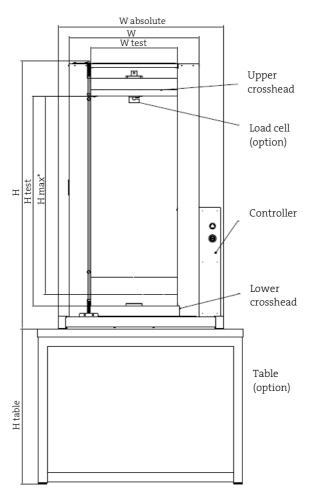
Dimensions in [mm]:

- Innovative brushless drive without gear drive
- Reduced noise pollution due to low engine speed and optimized frequency range
- Freely selectable control of crosshead travel, force or elongation
- High-precision force measurement by strain gauge load cell
- Compact workplace design
- Designed for both standing and seated work at the worktable due to very flat lower traverse and lateral arrangement of electronics
- Large machine base plate for the adaptation of accessories and the storage of tools or specimen
- Easy cleaning of the machine

|                                       | inpekt duo M | inspekt duo L |  |
|---------------------------------------|--------------|---------------|--|
| H (height)                            | 1305         | 1605          |  |
| H test (test room<br>height)          | 1025         | 1325          |  |
| H max * (max.<br>test stroke)         | 970          | 1270          |  |
| W absolute<br>(width with<br>control) | 8            | 04            |  |
| W (width)                             | 6            | 31            |  |
| W test (test room<br>width)           | <b>n</b> 420 |               |  |
| D (depth)                             | 631          |               |  |
| H table (height<br>table)             | 750-1050     |               |  |

\* Crosshead travel without grips, adapter

and load cell



## View universal testing machine with dimensions

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#### Frame and test room height

The two-spindle universal testing machine inspekt duo has two backlash-free ball screws in H-frame design with spindle protection and innovative brushless drive motor.

The newly developed testing machine is available in two different test room heights and can thus be optimally adapted to individual requirements.

Test room height: 1025 mm Especially tensile tests on plastics, metals (medium elongation) as well as compression and bending tests



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Test room height: 1325 mm Especially tensile tests on plastics, silicones, elastomers (very high elongations)

# Technical data:

| Test force tension/compression   | 5 kN   | 10 kN                       |  |
|--|--|-----------------------------|--|
| Test speed V   | 1.5 μm/min up to 1200 mm/min   | 0.8 μm/min up to 600 mm/min |  |
| Max. resolution of crosshead travel measurement  | <0.025 μm  | <0.012 µm                   |  |
| Mechanical construction  | 2 backlash-free recirculating ball scr   | ews, brushless drive        |  |
| Measuring range force  | In the range 0.4 - 100 % of nominal load class 1 (optional class 0.5)<br>depending on the force sensor used<br>(according to DIN EN ISO 7500-1, ASTM E4)         |                             |  |
| <b>Stiffness of the test frame</b><br>incl. deformation of the load cell<br>and tool adapter | 11 kN/mm   |                             |  |
| Electrical connection  | 115/230 V AC, 400 V A, 50/60 Hz, 5 - 40°C, 20 - 80% humidity   |                             |  |
| Weight   | inspekt duo M: 83 kg inspekt duo L: 88 kg  |                             |  |
| Data processing  | USB 2.0 interface or LAN, data transfer rate to PC: 200 Hz (50 Hz standard), internal data processing rate 1000 Hz (1ms)   |                             |  |
| Controller   | EDC 220  |                             |  |
| Application  | Testing of plastics, lightweight materials and components<br>Component and creep testing, elastomer tensile tests<br>Spring testing, foils, textile testing      |                             |  |
| Hint   | This testing machine series is not designed for connecting external electrical devices (e.g. temperature chambers) to the emergency stop circuit of the machine. |                             |  |



#### Necessary accessories

#### Standard load cells

including H&P-factory calibration class 1 acc. to DIN EN ISO 7500 with protocol (Class 0.5 optional, DAkkS calibration optional).

R-load cell

11-005-325

11-007-300 11-009-305

cross load stability up to 50%

up to class 0.5 acc. to ISO 7500

| S-load cell |                        | including H&P-factory calibration class 1 acc. to DIN EN ISO 7500 with protocol (Cl |             |  |
|-------------|------------------------|---|-------------|--|
|             |                        | Force measuring range   | S-load cell | R-load cell<br>cross load stability up to 100%<br>up to class 1 acc. to ISO 7500 |
|             |                        | 10 N  | 11-001-343  |  |
|             | R-load cell up to 100% | 20 N  | 11-001-348  |  |
|             | cross load stability   | 50 N  | 11-002-343  |  |
|             |                        | 100 N   | 11-003-343  |  |
|             |                        | 200 N   | 11-003-348  |  |
|             |                        | 500 N   | 11-004-343  | 11-004-305   |
|             |                        | 1 kN  | 11-005-343  | 11-005-350   |
| time.       |                        | 2 kN  | 11-005-345  | 11-005-352   |
|             |                        | 2.5 kN  | 11-005-347  |  |
|             |                        | 3 kN  | 11-006-340  |  |
|             |                        | 5 kN  | 11-007-340  | 11-007-350   |
|             |                        | 10 kN   | 11-009-340  | 11-009-355   |
| ۲           | R-load cell            | Adapters  |             |  |

| K-IOau Cell           | Aut    |
|-----------------------|--------|
| (for cl. 0.5 ISO7500) | Item r |

# number

#### **Optional accessories**



The safety door for the inspekt duo testing machine is made of transparent material. It is available in round design covering the whole test room (see left) or as front door sliding to the left.

| Item   | for inspekt duo M | for inspekt duo L |
|--|-------------------|-------------------|
| Sliding door, round, closed on all sides           | 19-008-210        | 19-008-220        |
| Safety door, front side                            | 19-008-310        | 19-008-320        |
| Safety door, front side with software surveillance | 19-008-312        | 19-008-322        |
| Safety door, back side and at the sides            | 19-008-340        | 19-008-350        |

## **Extensometers and holders**

12-xxx-001 für S-load cell 12-xxx-002 für R-load cell

| Extensometer holder |
|---------------------|
| 15-008-200          |
| 15-008-200          |
| 15-008-230          |
|                     |
| 15-008-220          |
|                     |
|                     |

## **T**-groove plates

The T-groove plates are used for larger specimens and for specimens requiring variable mounting points.

| 0 1         | 0              |  | 0 | 01 |
|-------------|----------------|--|---|----|
| Item number | Item           |  |   |    |
| 14-075-142  | T-groove plate |  |   |    |



# Workbenches

An ergonomically designed workplace with functional equipment is the basis for an efficient performance of tasks. In order to facilitate the design of the measuring workplace, we offer you the following accessories.

| Item number | ltem  |
|-------------|---|
| 19-008-804  | Color frame RAL 9006, 40 mm strong bench wood panel, cable gland, cable duct, working height adjustable from 0.75 to 1.05 m, load capacity up to 500 kg area load <b>W1m x D 0,9 m</b>                                    |
| 19-008-810  | Color frame RAL 9006, 40 mm strong beech wood panel, computer holder, cable gland, cable duct, working height adjustable from 0.75 to 1.05 m, load capacity up to 1250 kg area load W 1.5 m x D 0.9 m                     |
| 19-008-820  | Color frame RAL 9006, 40 mm strong beech wood panel, computer holder, cable gland, cable duct, working height adjustable from 0.75 to 1.05 m, load capacity up to 1250 kg area load <b>W 2 m x D 0.9 m with base unit</b> |

| Hand panel  |                  |
|-------------|------------------|
| Item number | Item             |
| 10-030-896  | Hand panel RMC 6 |