Test Equipment & Accessories

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The tensile testing devices, Teston and Teston Mini Digital, are small and compact testing devices, designed for examining joints and seams in sealing membranes in peel tests, sheer tests and tensile tests on a construction site and/or in the workshop.

**Teston**

- Output of tensile test curve on the display and printer
- Saving of the data in excel format
- Output on normal printer also possible

**Teston Mini Digital**

<table>
<thead>
<tr>
<th>Technical data:</th>
<th>Teston</th>
<th>Teston Mini Digital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (mm) (L/W/H)</td>
<td>860 × 430 × 170</td>
<td>1120 × 80 × 186</td>
</tr>
<tr>
<td>Weight</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Voltage (V)</td>
<td>100 - 250</td>
<td>90 - 264</td>
</tr>
<tr>
<td>Frequency (Hz)</td>
<td>50/60</td>
<td>50/60</td>
</tr>
<tr>
<td>Test speed (mm/min)</td>
<td>10 - 150 freely selectable</td>
<td>10 - 100 mm/min</td>
</tr>
<tr>
<td>Driveway (mm)</td>
<td>290</td>
<td>(10 : 20 :50 given fixed)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>500</td>
</tr>
<tr>
<td>Order No.:</td>
<td>5113061</td>
<td>Order No.: 5113058</td>
</tr>
</tbody>
</table>

Technical modifications reserved.
Compressed Air Testing Devices

Weld Test Die
With the weld test die, samples with a thickness of 6 mm can be stamped out. The samples are dimensioned according to DVS 2225 part 4 (German Welding Society guidelines).
Order No.: 5200275

Handy Tension Testing Device
- for manual peel and tensile tests of the welding seam
- enables optimal adjustment of the welding machine
Order No.: 5200171

Compressed Air Testing Device DLP -10
- quick and uncomplicated testing of welding seams with testing channel
- complete with tongs, manometer, lever tap, connection for recording device and compressed air connection
- optionally available for accuracy class 1.0
Order No.: 5201650

Compressed Air Testing Device with Test Needle
- quick testing of the welding seam in sealing in membranes at the construction site
- optionally available for accuracy class 1.0

Order No.: 5201706
accuracy class 1.0 and calibration documents

Photo above:
Order No.: 5201700

Photo below:
With connection for recording device
Order No.: 5201705

Test Needle - Stable Version
Order No.: DX073
Measuring Devices

Thickness Measuring Device
- measurement of material strength of pipes, foils and plastic sealing membranes
Order No.: 5200172

Digital Thermometer
- For checking the hot gas temperature and the temperature of the welding filler;
- Required according to DVS guideline 2207-4.
Order No. 5200200
(incl. immersion sensor and case)

Accessories:
- Insertion probe (dimensions) 1.5 mm; length 130 mm
Order No.: 5200199
- 3 mm; length 130 mm
Order No.: 5200197
- Surface probe
Order No.: 5200198

Heat Measurement Station
- Safe method of taking temperature measurements which are exact and reproducible
- Exact control according to DVS 2207-3 (independent of device and speed welding nozzle)
- Scope of delivery: measurement stands, air sensor, retaining pins for 3, 4 and 5 mm nozzles
Order No. 5200173

Seam Tester
Order No.: 5201320

Technical Data

<table>
<thead>
<tr>
<th>Technical Data</th>
<th>GTM 1100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measuring range</td>
<td>-50 to +1150°C</td>
</tr>
<tr>
<td>Measuring accuracy</td>
<td>1°C</td>
</tr>
<tr>
<td>Display</td>
<td>13 mm high LCD</td>
</tr>
<tr>
<td>Power supply</td>
<td>9 Volt</td>
</tr>
<tr>
<td>weight</td>
<td>approx. 200 g</td>
</tr>
</tbody>
</table>
High-Frequency Spark Tester PST100
- fast and safe testing of the density of welding seams, containers or manufactured coatings
- non-contact spark generation
- maintenance free
- integrated stabilisation switch
- independent operation in case of fluctuations in the mains voltage

Order No.
5200228 PST100 with rod electrode
5200229 PST100 set in case

Technical Data PST100

| Voltage   | V    | 230   |
| Frequency | Hz   | 50 - 60 |
| Power     | W    | 30    |
| Output voltage | KV | 5 - 55 |
| Output frequency | KHz | 100  |
| Weight    | Kg   | 1.0   |
| Marking   | CE   |       |

Picolino Vacuum Pump
- for operation of the test bells
- pumping speed of 8 m³/h with a clear intake
- complete with carriage, main switch, 2 m connection cable with plug

Order No.: 5226100

Technical Data Picolino

| Voltage   | V    | 230   |
| Power     | kW   | 0.35  |
| Air output | l/min | 133  |
| Static pressure | bar | 0.15  |
| Negative pressure / 0.85 | 90% vacuum |
| Weight    | Kg   | 11.5  |
| Air connection | banjonet coupling |
| Dimensions | mm   | 230 × 150 × 250 |
The vacuum test bells were originally developed in the industrial sector for the seam testing of plastic sealing membranes. These devices then found other applications like the testing of plastic or steel containers and plastic or steel tubs.

The tightness testing of apparatus and installations using the ventilation method with vacuum bells pertains to the preferred applied tightness test according to information sheet ZfP1 of DECHEMA (Society for Chemical Engineering and Biotechnology).

In the industrial sector, the guidelines of the DVS 2225 part 4 para. 6.5.3 (German Welding Society) are valid. The detection sensitivity of the ventilation method with vacuum bells is between 10^-3 to 5 \cdot 10^-4 \text{ mbar} \cdot \text{l} \cdot \text{s}^-1 and is therefore more exact than tightness testing with liquids or high voltage.

For comparison: The detection sensitivity with water, possibly with addition of colouring is approx. 0.5 \text{ mbar} \cdot \text{l} \cdot \text{s}^-1, that with petroleum or oil is around 10^-1 \text{ mbar} \cdot \text{l} \cdot \text{s}^-1.

The test method with vacuum is applicable in nearly all cases, even in instances where, for reasons of the stability of the test object, testing according to the positive pressure method is no longer possible.

Apart from that, the tightness test dealt with here is a non-destructive material test.

The determination of the leakage rate with this kind of tightness test requires further steps.

The usual unit used for the leakage rate of gasses is "millibar times Liter per second" (mbar \cdot \text{l} \cdot \text{s}^-1). Leakage rates in liquids are given, for example, in cm\(^3\) \cdot s^-1 or sometimes g \cdot s^-1. A leak with a leakage rate of 1 \text{ mbar} \cdot \text{l} \cdot \text{s}^-1 exists, for example, if, in the case of an evacuated space with a capacity of 1 \text{l}, the pressure per second increases by 1 \text{ mbar} (prerequisite of constant temperature).

To determine the leakage rate, the testing head must be equipped with a tightly closing shut-off device, for example, a ball value on the vacuum connection. Then the test bells are placed on the area to be tested and evacuated as usual. After reaching the testing pressure, the shut-off device is closed and the vacuum pump is switched off at the same time.

The time is measured with the closing of the shut-off device. Depending on the size of the leak, the pressure increase will be read off the Manometer in a time span of 10 to 30 s. The capacity of the test bell No. 305 is 8 \text{l} in testing state.

The specific leakage rate can be calculated from the measured values according to the following formula:

\[
L = \frac{\Delta p \cdot V}{t}
\]

$$\Delta p = \text{measured difference in pressure in mbar}$$

$$V = \text{content of test bell in testing state (No. 305: 8 l)}$$

$$t = \text{measured time in sec.}$$
Vacuum seam testing systems are used for testing any container surfaces and sealings. Thanks to the highly elastic seal, testing of mutually perpendicular surfaces is possible also in the case of minor angular misalignment.

A tissue-reinforced PVC hose is available as a connecting piece between the vacuum compressor and the test bell jars.

**Order no.: 5200340**

![Image of vacuum seam testing system](image1)

700x220 mm long  
**Order no: 5200300**

360 mm round  
**Order no: 5200305**

Inside corner, bottom 1/8  
**Order no: 5200310**

**All testing bells also available with 1.0 accuracy.**

Fillet weld, inside 2/8  
**Order no: 5200315**

Outside corner, bottom 3/8  
**Order no: 5200320**

Inside corner, top 5/8  
**Order no: 5200325**

Outside edge 6/8  
**Order no: 5200330**

Outside corner, top 7/8  
**Order no: 5200335**
Half day welding courses in our training facilities - 24 hour repair service.

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