## PiezoMeter System PM300H Technical Specification

### Piezoelectric Tests

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Range</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>d₃₃ - High Range</td>
<td>10 to 2000 pC/N</td>
<td>± 2% ± 1 pC/N</td>
</tr>
<tr>
<td>d₃₃ - Low Range</td>
<td>1 to 100 pC/N</td>
<td>± 2% ± 0.2 pC/N</td>
</tr>
</tbody>
</table>

### Test Frequency

- **Frequency:** 30 Hz to 300 Hz
- **Setting:** In steps of 1 Hz
- **Accuracy:** ± 0.5 Hz

### Dielectric Tests

<table>
<thead>
<tr>
<th>Capacitance Range</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 pF to 0.1 uF</td>
<td>± 2% ± 1 pF</td>
</tr>
</tbody>
</table>

### Clamping Force

Static force of approximately 10 N used to grip the sample.

### Pressure Amplitude

Testing is by means of an oscillating force of between 100 and 1000 Pa.

### Dielectric Tests

#### Capacitance

- **Capacitance Range:** 10 pF to 0.1 uF
- **Accuracy:** ± 2% ± 1 pF
- **Test Frequency:** 1 kHz

#### Tan δ

- **Tan δ Range:** 0.0000 to 0.2000
- **Accuracy:** ± 2% ± 0.0001

### General Operation

#### Response Time

- d₃₃: Typically 5 seconds to achieve 1% of final reading
- C and tan δ: Typically 2 seconds to achieve 1% of final reading
- d₃₃, C and tan δ: Typically 10 seconds to achieve 1% of final readings

### Sample Size

<table>
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<tr>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 mm in polarisation direction.</td>
</tr>
<tr>
<td>45 mm perpendicular (i.e. maximum diameter of a symmetrically supported disc is 90 mm)</td>
</tr>
</tbody>
</table>

#### Maximum sample mass:

- 1 Kg with standard suspension.

#### Remote Operation

The PiezoMeter may be controlled by a computer equipped with Windows 98, Windows 2000, or Windows XP. A free serial port is required. All PiezoMeter functions may be controlled, including test frequency and measurement range.

#### Remote Interface

Industry standard RS-232 interface, configured as data terminal equipment (DTE) using 9 pin D-connector as for a standard PC.

#### Power supply

- 220-240V a.c. 50Hz 0.5A or 110-120V a.c. 60Hz 1A

#### Temperature Limits

- Storage: 0°C to 50°C
- Operating: 10°C to 40°C

### Physical dimensions

- Electronics unit: 342 x 260 x 70 mm.
- Force unit: 145 x 150 x 175 mm.
- Total weight: Approx. 15 Kg.

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**For more details, or to arrange a demonstration, contact:**

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Specification correct at 1st January 2013. Piezotest reserves the right to change specifications without notice when necessary.