

The logo features a dark blue, stylized shape resembling a double-headed arrow or a lens, with a central point and tapering ends. The word "PIEZOTEST" is centered within this shape in a bold, grey, sans-serif font.

PIEZOTEST

PRECISION ON DEMAND

Systems for Testing Piezoelectric Materials and Devices



d₃₃ PiezoMeter System

All systems give front panel reading of d₃₃

High repeatability, better than 1% on all systems

Variable test force and frequency

Suitable for all materials – ceramics, polymers, thin films and composites

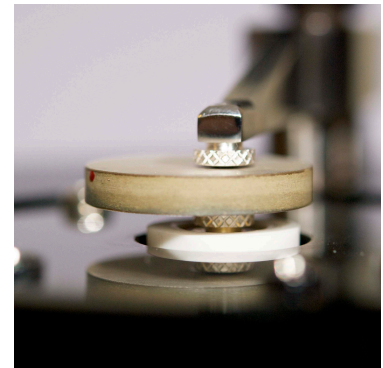
Highest available resolution – 0.01pC/N (PM200 & PM300)

Stand alone or PC-Connected Operation

Force Gauge Option available for **soft or delicate materials**

Options to test **d₃₃, g₃₃, d₁₅, g₁₅, capacitance, tan delta, permittivity**

Options for production testing with **volume handling systems**



Repeatability
Precision

Convenience

Versatility

Quality

Integration

Accuracy

d_h PiezoMeter System



The d_h PiezoMeter uses a pressure vessel to completely surround the device under test. Low-frequency air pressure is used to act upon the sample, and charge is collected on the internal terminals. Accurate readings are given for d_h , g_h , and sensitivity. The computer displays d_h and g_h in pC/N, in the same way that the standard PiezoMeter displays readings for d_{33} and g_{33} . The sensitivity is also given as dB relative to 1V/ μ Pa, the standard for most transducer specifications.

For delicate materials, this method also has the advantage that pressure at any given point on the sample is extremely low.

For additional information kindly refer to our Global Contact Information page.

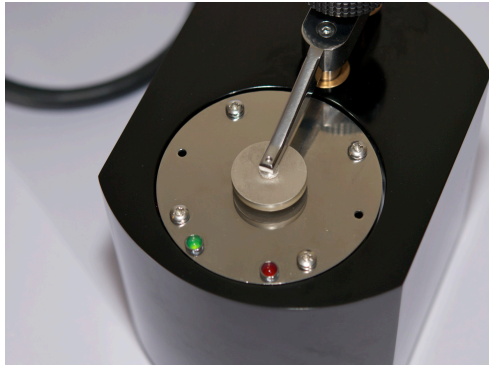
Applications:

- Low-frequency testing of materials and transducers.
- Applicable in research and development or production.

Features:

- Direct measurement of d_h , g_h and sensitivity
- Also measure capacitance and dielectric loss
- PC driven operation
- Suited to most devices with metallised electrodes or wire terminals.





Force Indicator Option

When testing very soft or delicate samples, readings can be influenced by the static force used to clamp the sample.

Force indicator allows convenient replications of the standard 10N clamping force for measurement consistency. Additional indicator shows when a force of 12N has been reached, in order to warn against over-tightening of the mechanism, and possible damage to delicate samples.

Temperature Monitoring Option

This option displays both ambient air temperature and temperature at the internal piezoelectric reference sample located inside the equipment. As piezoelectric parameters can be dependent on temperature, this is another step to ensure the very best accuracy and repeatability.

T1 (Chassis Temperature)

T2 (Internal Reference)

23C / 31C : HI/d33+C
Memory No: 001

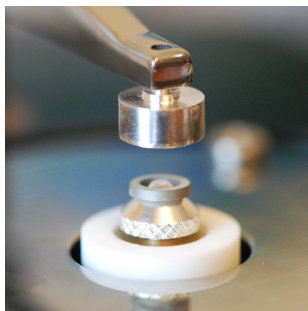
Digital Force Gauge Option

For very delicate or soft materials it is sometimes necessary to test using very low force. The Digital Force Gauge option gives a front panel indication of the exact force used to clamp the sample.

This makes possible very high repeatability, even with very low clamping force and very soft materials.

St.F: 10.1 N
d33: -64.6 pC/N
C: 254 pF
Tδ: 0.0518

PiezoMeter System



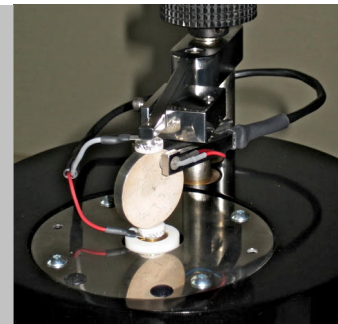
d₁₅/q₁₅ Adaptor Option

A d₁₅ adaptor is available for various sizes of ring-shaped piezoelectric actuators. Other adaptors may be designed and manufactured on request.

When used with a Windows PC and the computer software supplied, measurement of capacitance and $\tan \delta$ and real-time calculation of g_{15} and ϵ_{r11}^T may also be carried out.

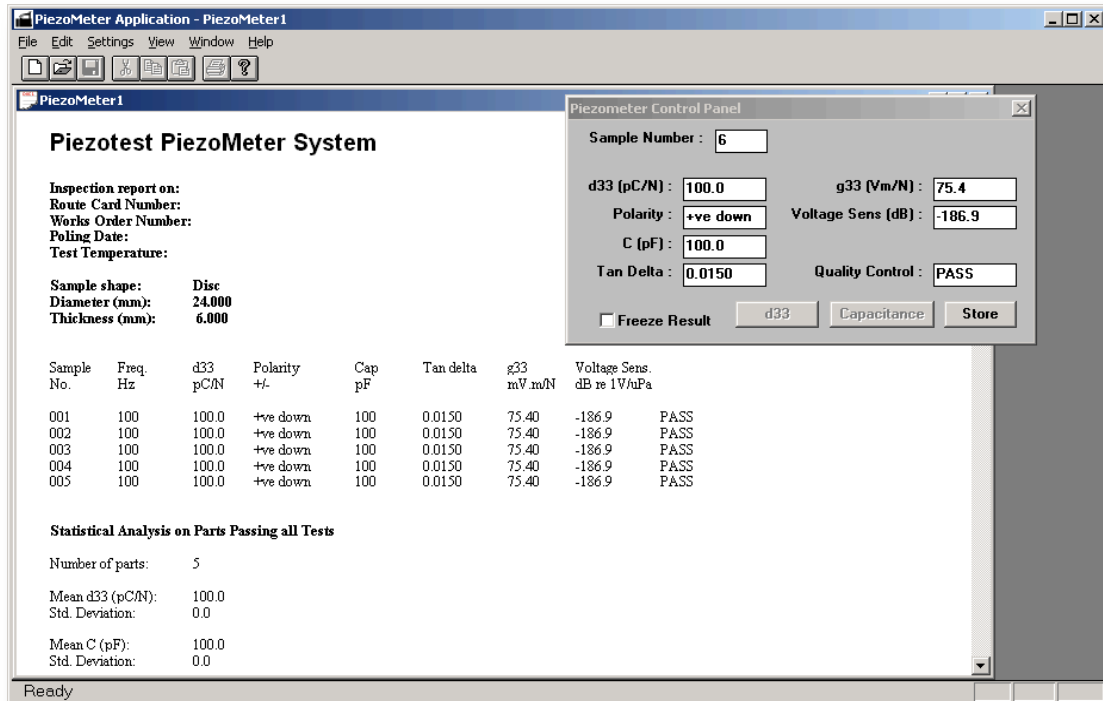
d₃₁/q₃₁ Adaptor Option

By allowing application of force perpendicular to the direction of polarization and charge measurement, this adaptor allows measurement of the d₃₁ parameter of a variety of shapes including disc and rectangular plates.



For additional information, a quotation or to arrange a demonstration, please refer to our Global Contact Information page.

Analysis Software



For each application, a simple software package, available from Piezotest, allows *full operation of the Piezometer using a Windows PC*. This gives *real time calculations, display and storage of all measurements*, including derived constants.

For production and goods-inwards quality control purposes, it is possible to set upper and lower boundaries for all the main parameters, to allow for 'pass' and 'fail' conditions. Statistical analysis may be carried out where samples meet the 'pass' criteria.

Third party software, such as LabVIEW or Radiant Vision, are supported via a simple protocol on an industry standard RS232 connection.

For additional information, a quotation or to arrange a demonstration, please refer to our Global Contact Information page.

Choose the System that's right for you

PiezoMeter System Selection

| PiezoMeter Model | PM100 | PM200 | PM300 |
|--|--------|--------|--------|
| | | | |
| d ₃₃ very low range (0 to 10pC/N, 0.01pC/N resolution) | No | Yes | Yes |
| d ₃₃ low range (0 to 100pC/N, 0.1pC/N resolution) | Yes* | Yes | Yes |
| d ₃₃ high range (0 to 2000 pC/N, 1pC/N resolution) | Yes | Yes | Yes |
| d ₃₃ very high range (0 to 10000 pC/N, 10pC/N resolution) | No | Yes | Yes |
| Variable test frequency | Yes | Yes | Yes |
| Variable test force | No | Yes | Yes |
| Capacitance | No | No | Yes |
| Dissipation (Tan delta) | No | No | Yes |
| d _h Hydrostatic Pressure Head | No | No | Option |
| d ₃₁ Adapter | No | Option | Option |
| d ₁₅ Adapter | Option | Option | Option |
| Static Force Indicator | Option | Option | Option |
| Direct Print-out capability with PC Printer | Yes | Yes | Yes |
| Computer Interface | Yes | Yes | Yes |
| Windows Software Support | Yes | Yes | Yes |

For additional information, a quotation or to arrange a demonstration, please refer to our Global Contact Information page.

PIEZOTEST

PRECISION ON DEMAND

For global sales or technical inquiries,
please contact:-

Piezotest Pte. Ltd.
10 Anson Road
#31-10 International Plaza
(S)079903
Singapore

Email: sales@piezotest.com

Tel. +65 6224 9005
Fax. +65 6224 9945

Global contact information

*World wide, for additional
information, a quotation or to
arrange a demonstration.*

For India, please contact:-

Nikunj Eximp Enterprises Pvt. Ltd.
Sri Joravar Bhavan 93
Maharshi Karve Road
Marine Lines
Mumbai 400 020
India

Email: info@nickunjgroup.com

Tel. +91 (0) 22 2219 0300
Fax. +91 (0) 22 2206 0415
Contact: Mr Amit Tiwari

For Japan, please contact:-

Alpha Corporation
PO Building 3F
3-103 -3 Tsuga, Wakaba-Ku
Chiba 264-0025
Japan

Email: alpha@lake.ocn.ne.jp

Tel. +81 (0) 43 235 2731
Contact : Mr Norio Ito

For European Union, please contact:-

Piezotest
Unit 204
2 Old Brompton Road
London SW7 3DQ
United Kingdom

Email: sales@piezotest.com

Tel. +44 (0) 20 7748 2248
Fax. +44(0) 20 7748 2249

For Taiwan, please contact:-

Veginean Technology Co, Ltd.
3F,NO75, Sec 2 Mincyuan E. Rd.
Jhongshan District
Taipei City 104
Taiwan (ROC)

Email: james@vgt.com.tw

Tel. +886 (2) 2992 8556
Fax. +866 (2) 2992 8556
Contact : Mr. James Tseng

For Korea, please contact:-

SM Tech Inc.
Room 523, Samho Tower, 1122-10,
Ingye-Dong, Paldal-Gu, Suwon-Si,
Gyeonggo-Do, 442-835
Korea

Email: smjang55@chol.com

Tel. +82 (0) 31 226 1283
Fax. +82 (0) 31 601 3059/+82 (0) 31
221 1698
Mob. +82 (0) 10 5217 9962
Contact : Mr Semin Jang

For China, please contact:-

GiantForce Technology Co., Limited
C-1318/1317, YuanJing International
Mansion, Yunjing East Road No.1,
Tongzhou District, Beijing, Post Code :
101101
P.R.China

Email: giantforce@gmail.com

Tel. +86 10 57348010 /
Fax. +86 10 57185691
Mob. +86 18601200848
Contact: Mr. Shawn Li

PIEZOTEST
PRECISION ON DEMAND