MiniFlex CLD

a measurable difference...

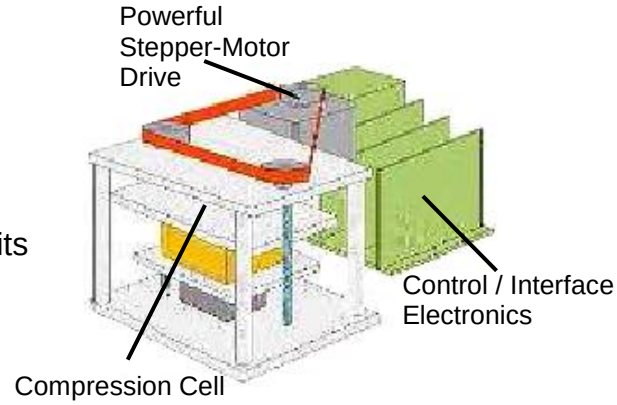
Why measure foam hardness?

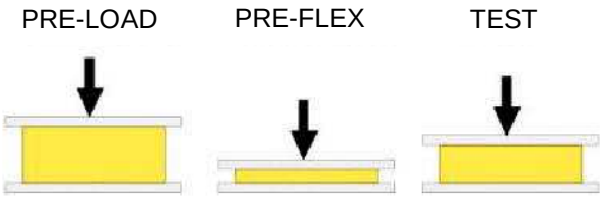
All foamers measure the density of their product. Not all foamers, however, measure foam hardness. Foam hardness has a major influence on the comfort factor of the furniture, bedding or automotive product in which it is used. Variation in hardness is one of the most common complaints from customers.

Trying to judge the hardness of a foam sample by hand-feel is almost impossible. Every person will have a different opinion. To ensure consistent Quality Control of foam production, it is necessary to have an industry recognised foam hardness test procedure that will give an accurate, recordable value.

The foam industry measures foam hardness by various different tests. These can be grouped as either ILD (Indentation Load Deflection) or CLD (Compression Load Deflection) type tests.

The test procedure first measures the thickness of the foam sample (pre-load). It is then compressed 3 times to 30% of its original thickness (pre-flex) at a defined speed.
Finally, the sample is compressed to 60% of its original thickness and the force necessary to do this is measured and recorded. This force, normally expressed as pressure in kilopascals (kPa), is the hardness value.





Applications:

- Flexible cellular polyurethane
- Latex foam
- Rubber Foam
- Foam components

Features:

- Bench top instrument
- Fully automatic operation
- Test area of 10cm x 10cm x 5cm thick
- Auto Calibration feature
- Stepper Motor Drive (up to 40kg force)
- Compression Load Range: 0-400N
- Compression Thickness Resolution: Better than 0.25mm
- Accuracy better than +0.5%

Applicable Standards:

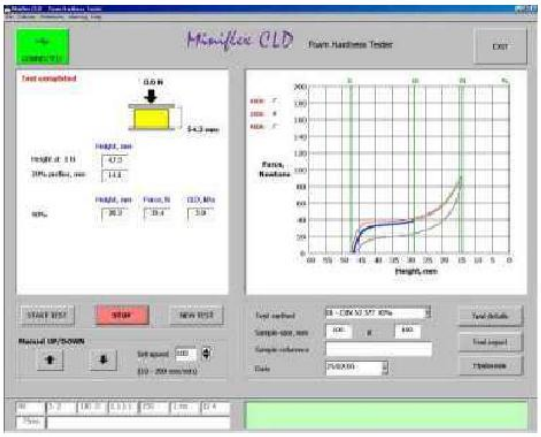
- AS 2282.8
- AS 2281
- ASTM D3574
- ISO 3386: 1984
- GB 10807
- JIS K 6400

10 - 11 Colrado Court
Hallam, Victoria 3803 Australia
Ph: +61 3 9708 6885
Fax: +61 3 9708 6770
Email: idm@idminstruments.com.au
Web: www.idminstruments.com.au

During the final pre-flex cycle, measurements of the shapes of the compression and recovery curves are automatically recorded. The area under each curve represents the work done and energy recovered during this cycle. The difference between these two areas, expressed as a percentage, is the “hysteresis loss”. This hysteresis loss is a useful guide to the resiliency, or quality of the foam. Foams which recover more quickly after use will have a lower hysteresis loss.

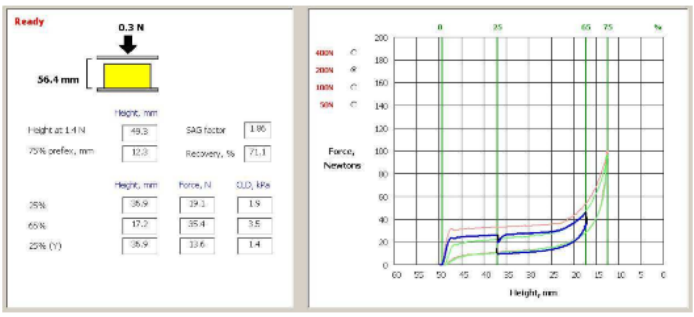
Software Features:

- Controlled via standard USB connection
- Windows based software *(Windows XP, Windows Vista, Windows 7 operating systems)*
- Test parameters displayed with graph simultaneously.
- Up to 20 Test Methods programmable
- Printable Reports generated in Adobe Acrobat® pdf format
- Auto Save feature
- Real time graphic display of data
- Selectable graphical display presentation
- Calibration File to calibrate the instrument
- Statistical analysis
- Overlay display of data curve possible during test



Benefits:

- Compact & Portable unit
- Up to 20 stored testing procedures
- Printable reports
- Simple operation
- Fast results
- Accurate



Connections:

- **Universal Input:** 110 - 240VAC

(please specify when ordering)

Dimensions:

- **H:** 160mm
- **W:** 140mm
- **D:** 200mm
- **Weight:** 4kg

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Hallam, Victoria 3803 Australia
Ph: +61 3 9708 6885
Fax: +61 3 9708 6770
Email: idm@idminstruments.com.au
Web: www.idminstruments.com.au