

Indentation Load Deflection Indentation Force Deflection

Properties of Flexible Cellular Materials—Slab, Bonded, and Molded Urethane Foams

(Structural Foam)

Reference Standards: ASTM D3574

This test method includes a variety of tests that provide information regarding the mechanical behavior of slab, bonded and molded urethane foams used under compressive loads. These tests make it possible to compute firmness, compressibility, tear resistance and tensile properties of materials used in mattresses, automotive seat cushions and furniture.

Foam Testing of IFD variables (indentation force deflection) using 1000CM test system.

A wide range of load frames is available for different sample sizes.



www.testresources.com

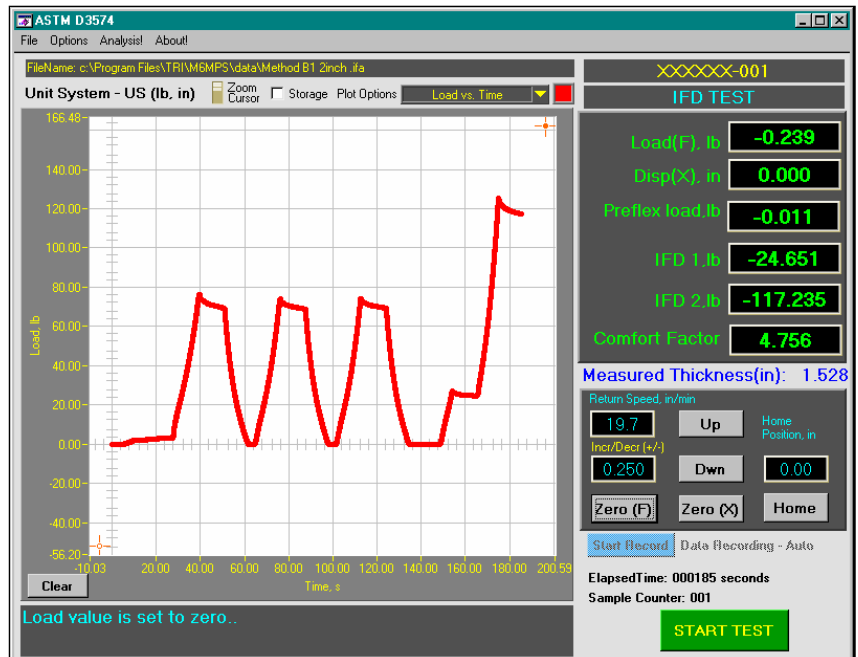
Call 800 430 6536

Typical Configuration

- Box Style Test Machine or Dual Column Universal Test Machine
- Load cell sized to test samples
- M Plus Software
- M Plus D3574 Module
- G223 Indenter Foot – various sizes



Dual Column 2000M Universal Test Frame with IFD fixtures

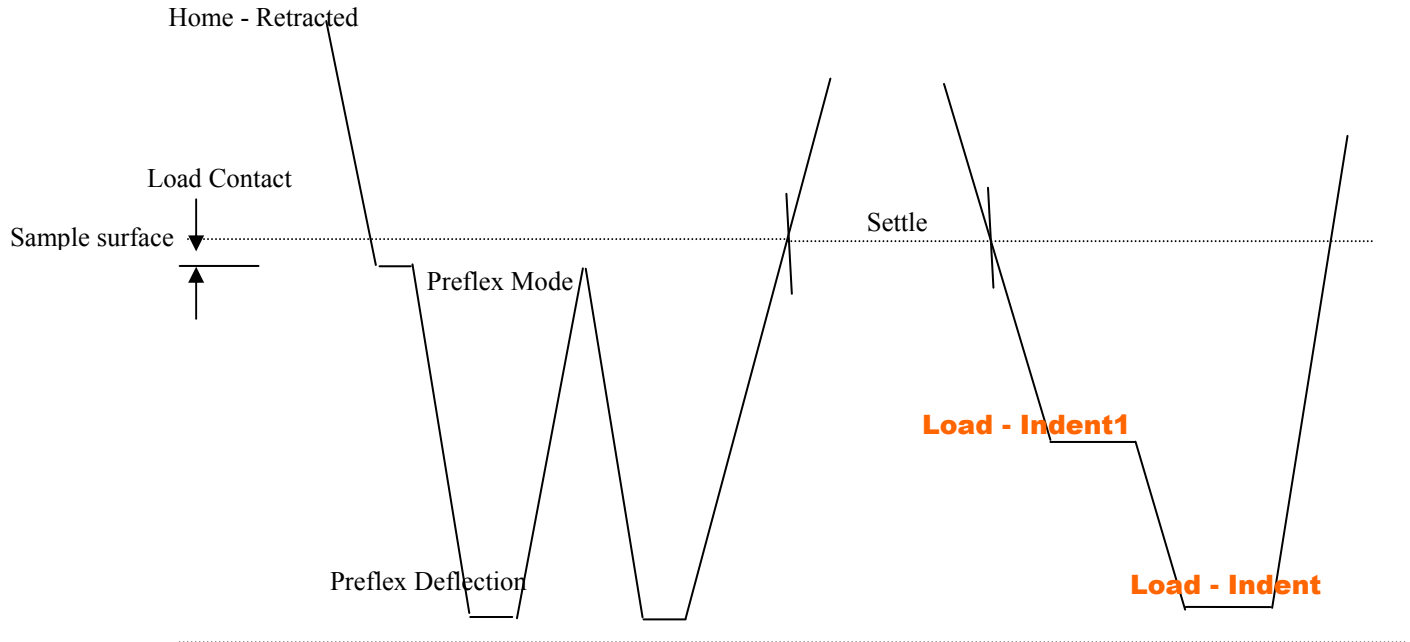


M Plus Software for IFD test

M Controller features two modes to choose from:

PC based Mode – includes standard controller firmware with M Plus Software. This package allows users to perform a wide range of tests using standard tensile and compressive software modules, including an IFD mode on foam products and materials. The M controller includes a LCD display with operator input keypad.

Standalone Mode – embedded firmware executes all test tasks and at the conclusion of the test, final results are presented. Standalone parameters shown below:



Set up parameters

Parameter	Example	Description
Initial Thickness	4.00	Default or measured mode
Settle Time	6	0 to 15 minutes
Contact Force	1	0.1 to 5 lb
Preflex Speed	9.44	0 to max inches/min
Preflex Dwell	10	0-20 sec
Preflex Deflection	77	50 to 90%
Indent Speed	1.96	0 to max inches/min
IFD1	25	5 to 95%
IFD2	65	5 to 95%
IFDT	60	seconds
Flimits	650 pounds	Set maximum load value for test.