Nidec

Measuring Quality

# Application Information

## Puncture Test

Measure the hardness or puncture resistance of a material.

A large variety of materials need to be able to withstand a specific threshold of puncture force in order to pass certain quality standards. Specifically Gypsum board, or drywall, must be tested in order to determine the ASTM Standard classification level of the product. ASTM C1629 provides details for classifying Abuse-Resistance Non-decorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels.

Quality Technicians needing to classify their products to this ASTM standard can utilize the Nidec-SHIMPO FG-M6PUNCTURE-ST adapter. Attaching this adapter to one of Shimpo's digital or mechanical force gauges creates an ideal testing kit for determining the indentation resistance.

The FG-M6PUNCTURE-ST adapter operation is quite simple. The outer shell of the FG-M6PUNCTURE-ST retracts as a load is applied to the test material. As the retraction of the outer shell occurs, the pin becomes exposed. The puncture test continues until the outer shell comes to a stop from contact with the base of the force gauge. The maximum force reading displayed on the gauge is the resultant puncture resistance of the test material.

The FG-M6PUNCTURE-ST combined with the Shimpo force gauge can be used to test puncture resistance on a multitude of materials such as: foam, cardboard, cork, tubing, membranes, baked goods, and even the ripeness of fruits or vegetables.

### *Equipment Used*

- *FG-M6PUNCTURE-ST accessory*
- *Any Shimpo Series Mechanical or Digital Force Gauge with recommended ranges of 20 lb (10 kg) to 100 lb (50 kg):*

**FG-M6PUNCTURE-ST Adapter**


**Puncture Adapter Retracted**


**Performing Puncture Test on Drywall**

**SEALS USA, Inc.**

**Instruments Division** Tel: (630)924-7138 Email: support@seals-usa.com