Vacuum Opening Force Fixture

Universal Testing System

The Vacuum Opening Force Fixture is designed to test the force required to open folding cartons or boxes. This simulates opening a folded carton or box during the filling process on the production line.

A system of an upper and lower fixture fitted with vacuum pumps are used to convert compressed air flow to suction. The existing air connections on the Vantage^{NX} can be utilized to turn on/off the vacuum. The lower fixture holds the flat sample in place, while the upper fixture pulls the carton to an open position.

This fixture can be customized for use with various sample sizes and shapes. Many options exist for suction cups depending on the material application as well.

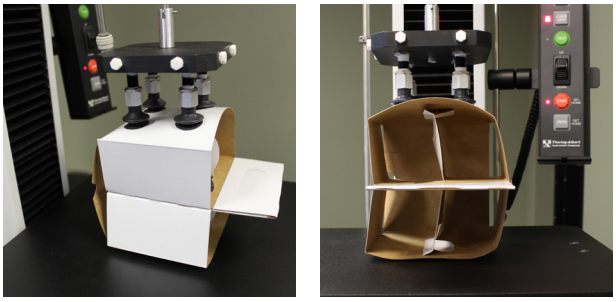
While the test is running MAP4 Materials Testing Software captures and reports the force and position raw data in a real-time graph. The software can be customized to report various results including average opening force, peak, force at a specified position, the position at a specified force, and other critical data.

It is easy to make a quick change from this fixture with the Vantage^{NX} Universal Testing machine. With additional grips, you can set up to measure additional test methods like tensile, COF, compression, puncture, and other adhesion methods.

The Vacuum Fixture can be adapted to test peel/seal strength of lids and films from cups and trays. Peel and Seal testing can be completed using the fixtures vacuum base to hold the sample in place and selecting the appropriate upper grip to peel/pull the film or lid when running the test. This can be used across many packaging applications primarily for food and medical packaging.

Ideal Material Applications:

- Folding Cartons
- Boxes
- Paperboard



▲ Lower & Upper Fixtures Utilitze Vacuum to Hold the Sample.

▲ MAP4 Software Real-Time Graph of Results

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