

Proseal®



 **ProTest**

Finally, tray sealing and peeling defined

WHAT IS A GOOD SEAL?

We are often asked the question:
'What defines a good seal?'

Whilst existing test equipment is able to test the burst strength of a seal and the limits of the pressure or weight it may support, until now, there has been no available equipment able to measure the 'peelability' of a tray.

Our new piece of equipment, **ProTest**, is able to do just that: analyse, record and report the force required to peel a lid from a tray, enabling the user to determine if the seal strength is suitable for the product's life-cycle.



ProTest takes the guessing out of tray sealing and peeling:

The **ProTest** is an automated lid peeling device, designed to measure and report the resistance offered by the film as it separates from the tray during the moment of lid peeling.

With its easy setup, the user can specify the strength of peel required for the specific product, process, material or environment of their production facility.

Having a **ProTest** on site gives up-to-date, line-by-line seal integrity analysis, cutting out the need to send samples off-site for costly, third-party testing.

The **ProTest** is capable of retaining, displaying and outputting test data, allowing the user to export the information. Once exported it's possible to **compare up to five test results against one another** simultaneously, in a variety of formats.

Reports are initially generated for review on the machine's built-in, 12-inch, high-definition touchscreen. Alternatively, this data can be quickly exported via Ethernet or USB device.

The exported data provides the user with **traceability records and the assurance of peel strengths maintained throughout production**. The understanding of peel strength both before and during the production process can be a **priceless tool in solving any seal issues**.

ProTest is designed with a user-friendly interface for simple operation. The unit is robust, self-contained and very simple to operate, requiring only 1200mm x 400mm of bench space and a 3 pin 230v power supply.



LID PEELING DEFINED

A peelability test is achieved in five easy steps:

- Switch on the unit
- Choose which tray from your production you wish to test
- Secure it, using the specially designed film clamp and tray support
- Fill in some details to identify the materials and parameters before testing
- Press go

By employing a ProTest unit, the user is able to establish their own **Peelability Metrics** for the specific tray size, tray material, film, and process.

To fully understand the results produced by a ProTest unit, Proseal have established a set of **Peelability Metrics** to break a single peel down into four stages of assessment:

1. PI- PEEL INITIATION

To obtain the initial separation an increased weight of draw is required at a 45 degree angle between the tray and film.

2. PC- PEEL CONSTANT

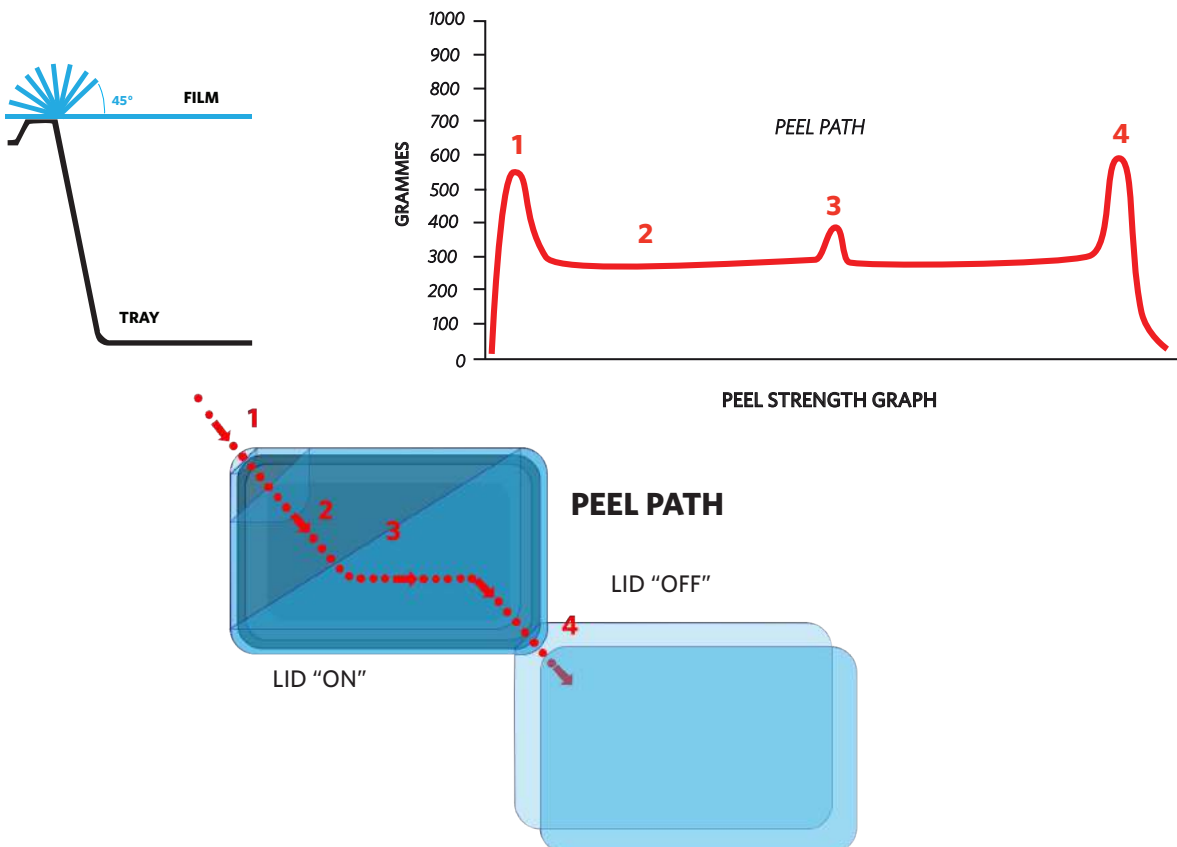
A lower weight of draw is required as the film peels along the straight edges of the tray.

3. PCC- PEEL CORNER CONSTANT

The draw weight increases slightly as the film reaches the corners diagonally across the tray.

4. PE- PEEL END

This is the last draw of the film which increases as the last corner of bond is separated.



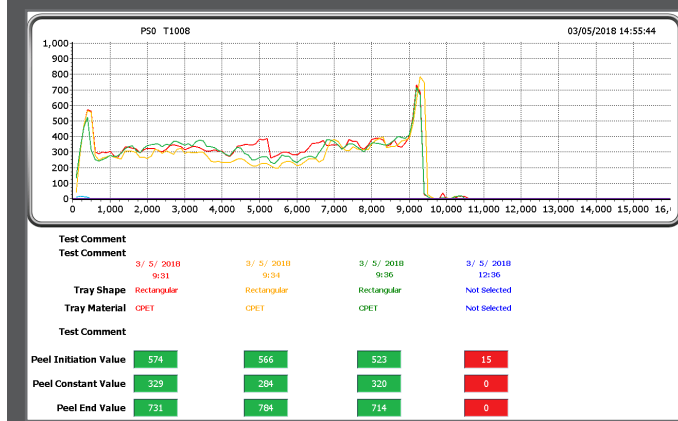
Before a tray goes into production on a Proseal tool, we will have established its individual **Peelability Metrics**, using the **ProTest** to create a baseline datum for **defining 'a good seal'** and its material performance.

LID PEELING APPLIED

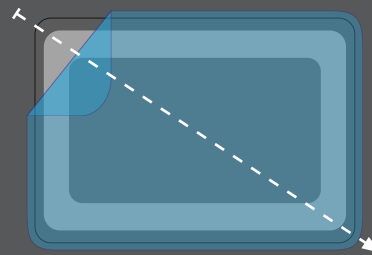
Patterns begin to emerge when repeat testing is performed. These patterns are identified as the **Peelability Metrics** of that specific tray and lidding combination when sealed to the correct standard required for production.

These Peelability Metrics can be used as guides of what to expect from a particular tray.

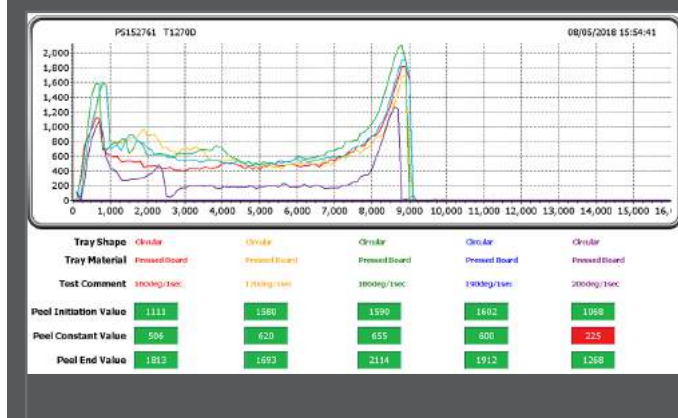
Below are some examples of these:



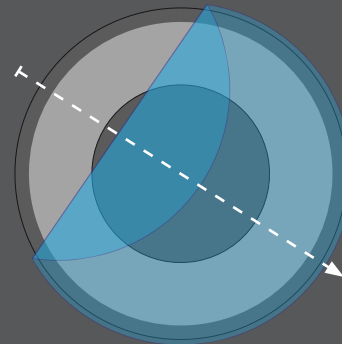
Rectangular tray



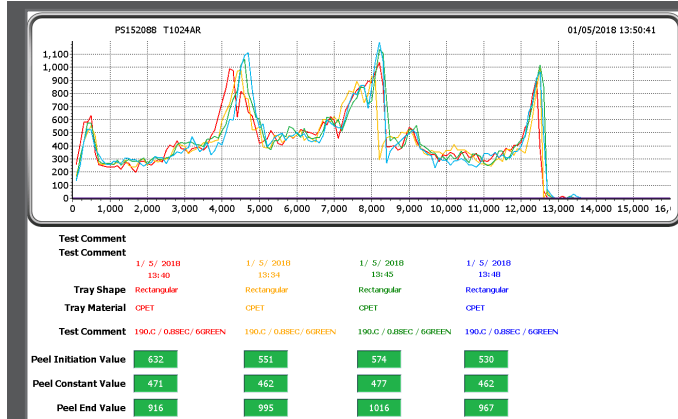
This graph displays the kind of results we would expect to see from a standard rectangular tray.



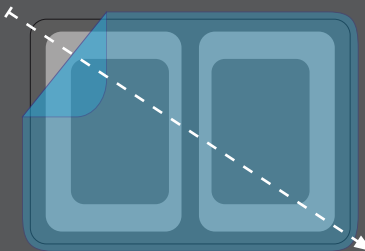
Circular tray



The high **Peel Initiations (PI)** shown here reflects the greater force required for the large seal radius.

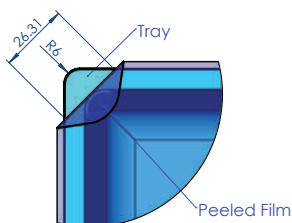


Two Cavity tray

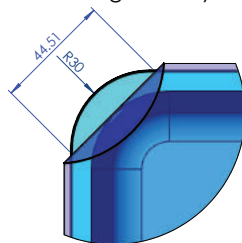


The multiple peaks shown here represent multiple Peel Initiations over the two cavities.

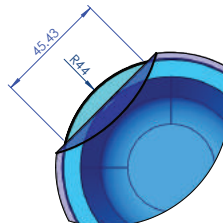
6mm Corner Radius Rectangular Tray



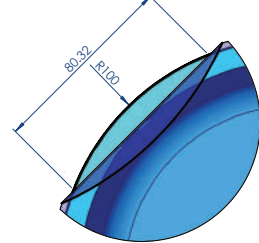
30mm Corner Radius Rectangular Tray



88mm Diameter Circular Tray

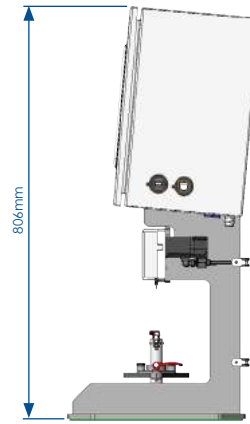
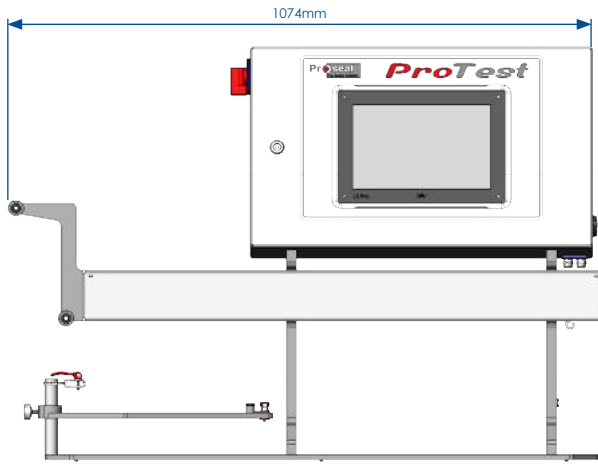


200mm Diameter Circular Tray



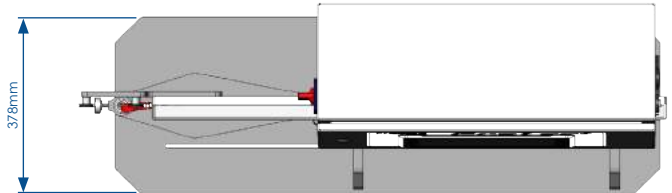
TECHNICAL SPECIFICATION

Compact, bench-top testing equipment suited to any working environment.



ProTest Specification

Height	806mm
Length	1074mm
Width	378mm
Weight	51kg
Electrical Supply	230v

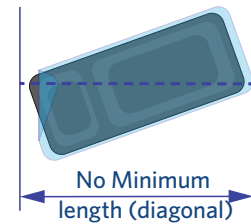
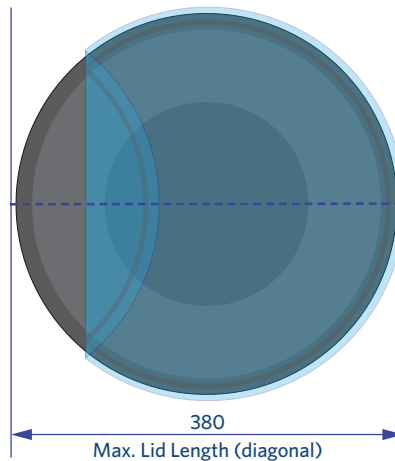
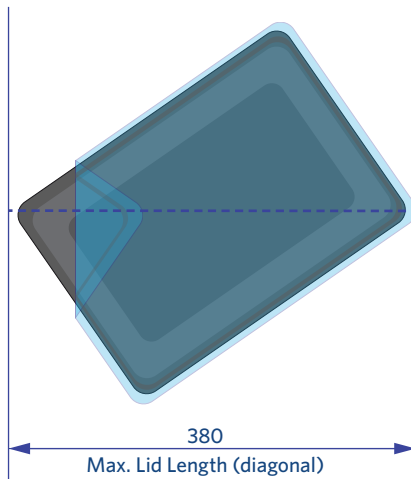


Tray Capacity

Tray Depth Max	120mm
Diagonal Pull Max	380mm

ProTest is designed to be flexible to suit the vast majority of trays used in the market place.

The maximum pull the machine is capable of is a diagonal tray diameter of 380mm. There is no limit to the shape of the tray, or a minimum diameter required.



The maximum lid-peeling diagonal distance



READY MEAL | C-PET



POULTRY | POLYPROP



READY MEAL | SMOOTH WALL FOIL



PRODUCE | A-PET

TEST KITCHEN



At Proseal we love a challenge and with our world-class, heat-sealing technology, packaging specialists, and Test Kitchen, we can help you produce samples for retailer product launches, shelf-life trials and seal integrity testing.

Proseal can be relied upon to help facilitate a smooth product launch and all of this is done without the investment in costly machinery. To fulfill our promise, we invite customers and guests to bring their products to our test kitchen where we are able to replicate the necessary production pack conditions.

We can offer many types of sealing trials, including Modified Atmosphere Packaging. For reliability and pack security we have up-to-date gas analysis equipment and a Package Leak detector on site; which can be used for all flexible and rigid packaging.

With the ability to seal over 18,000 variants of tray shapes and sizes, allied with suitable top films we are armed to help and advise new and old users in this ever developing sector.

