James Heal
Extraordinary Testing Solutions

FAQ

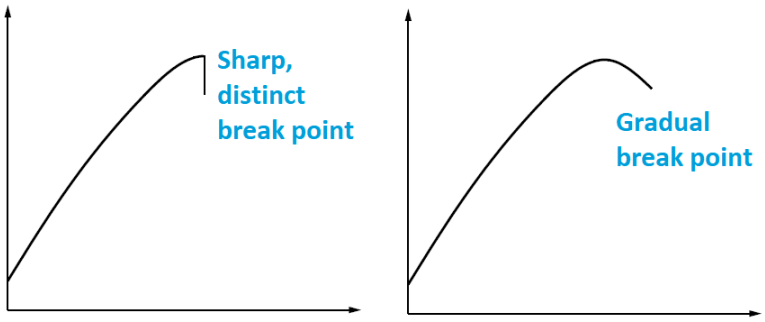
TestWise – What is Break Detection ?

Break Detection is a feature we use to save time, without it, the Titan operator would need to intervene and terminate the test manually.

Typically, Break Detection is used in breaking strength tests.

The principle is simple. If we set the Break Detection value to 10% then as the test progresses, the current force value is compared with the previous force value, if the current value is 10% or more less than the previous force value then a break is said to have occurred and the test is terminated.

The user may need increase or decrease the Break Detection value dependent upon the material being tested. Some materials have a sharp, well defined, and usually clearly observed break point. Some materials, on the other hand, may show a gradual degradation with the force decaying relatively slowly. Materials having a sharp or distinct (sudden) break point only require a Break Detection value of 5% or 10%, whereas other materials exhibiting a gradual break may need 20% or more.

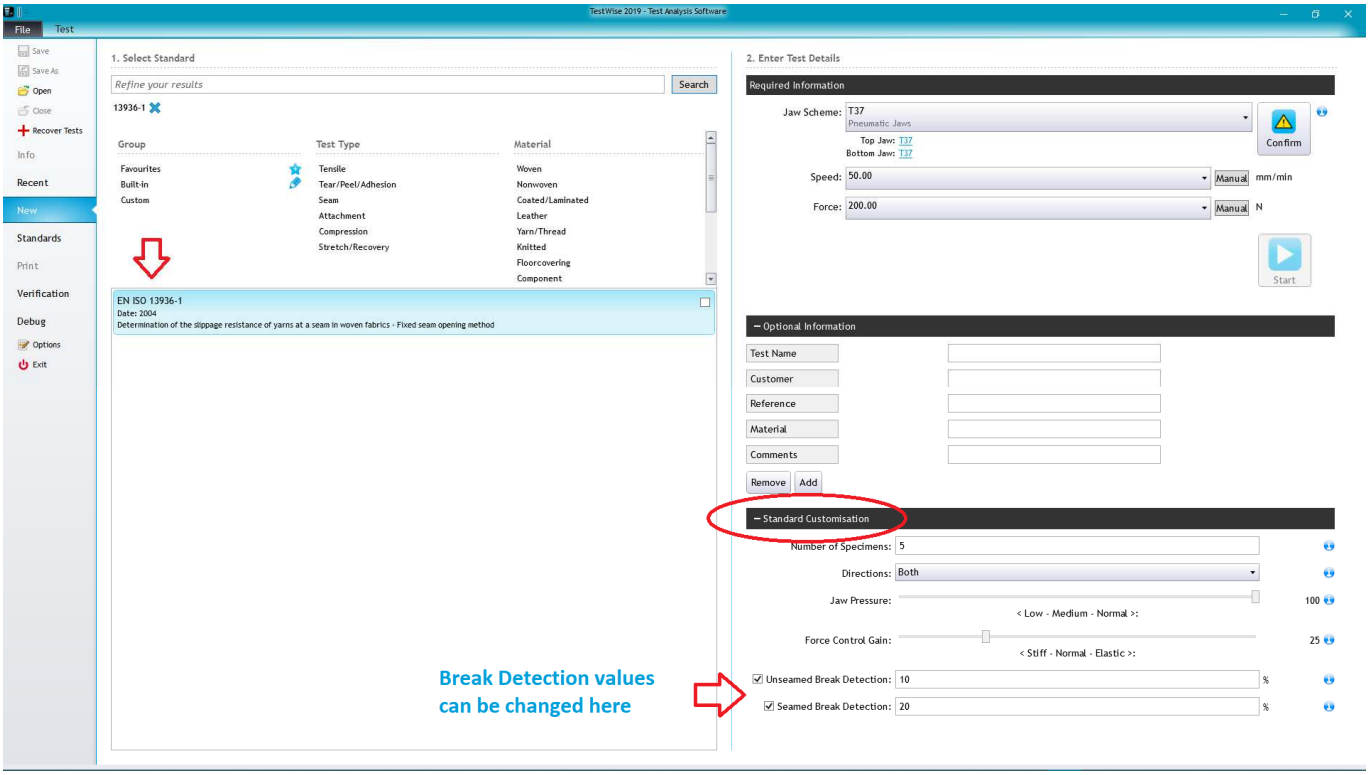


When testing composite specimens (e.g., seams, attached buttons, snap fasteners (poppers), etc), in order not to prematurely detect the break point, and allow for movement within the specimen, we often set the Break Detection to a high value. For example, when testing seam slippage using the fixed seam opening method (ISO 13936-1), we give the two parts of the specimen a different Break Detection value, typically 10% and 20% for the unseamed (fabric only) specimen and seamed specimen respectively. The higher value of 20% allowing for movement in the seam area of the specimen.

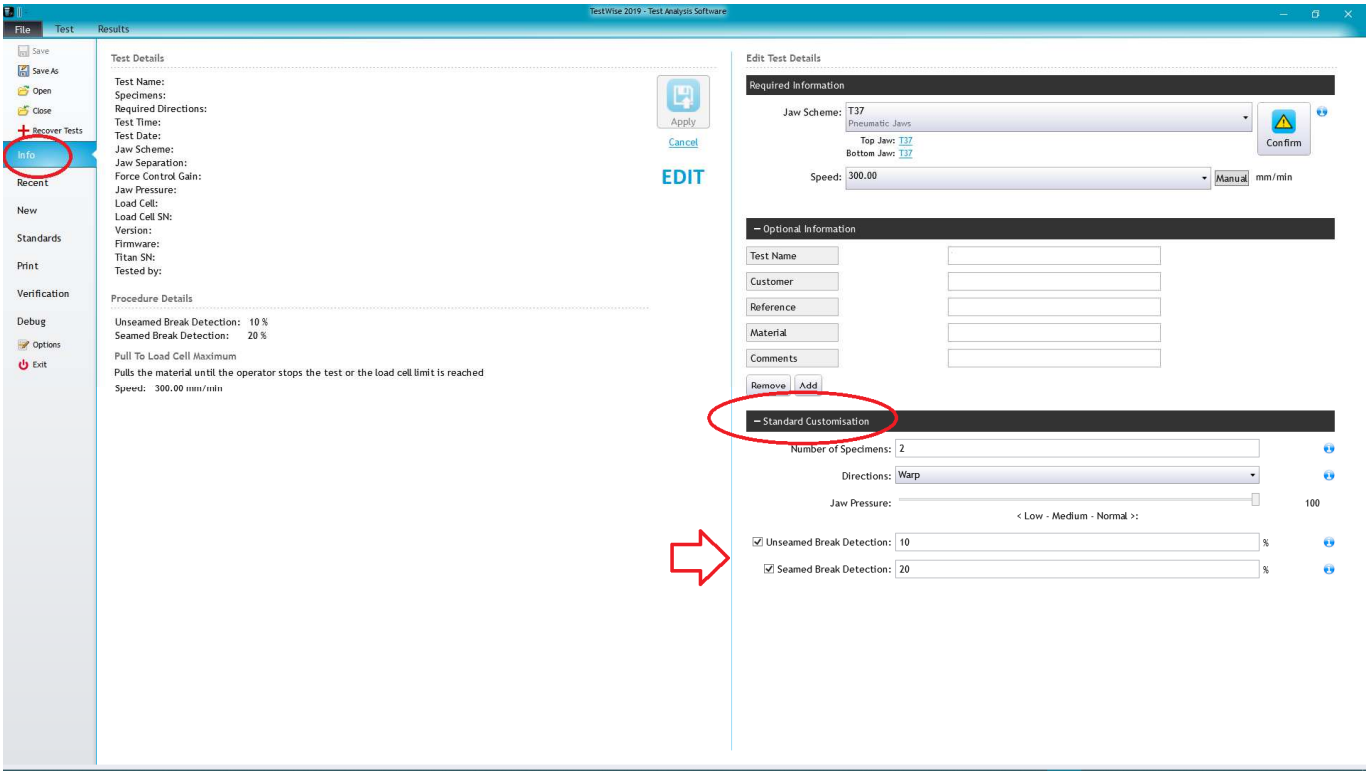
Break Detection values can be changed from the default settings before the test commences or between specimens. Only the final Break Detection value will be reported. See the screenshots on the next pages.

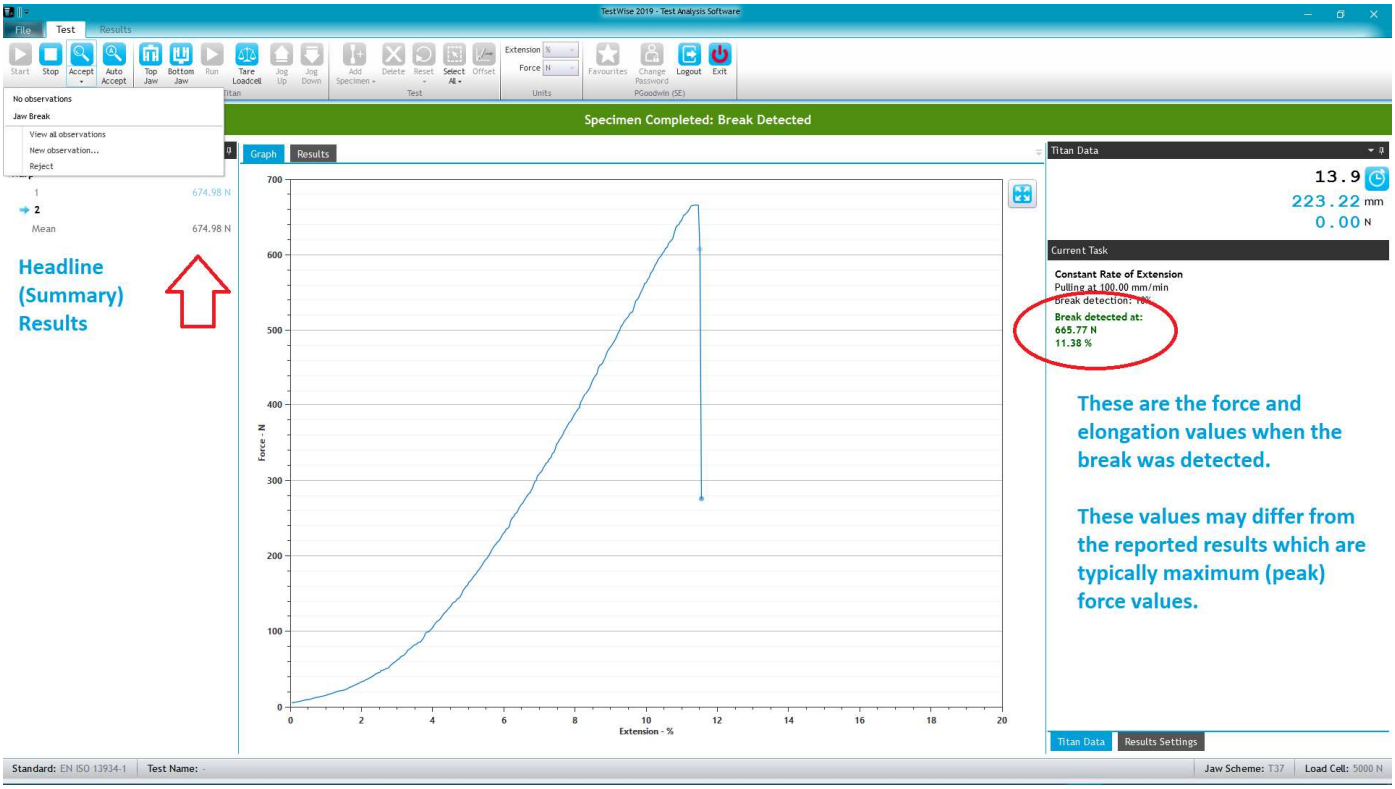
http://appsupport.james-heal.co.uk/support/home

To change Break Detection value before the test starts then go to Standard Customisation section while entering the test details:



To change Break Detection value during the test (between specimens), go to File > Info > Edit:





When TestWise detects a break it is saying that the break was detected when the force was 665.77 N and 11.38 % elongation, like co-ordinates on the force/extension curve.

The point at which the break was detected is not necessarily the same as the maximum force.

If the break occurs gradually or after the maximum force, or if the break is sharp (very sudden) then the maximum force has already been reached and the break will be detected while the force is reducing.

More often than not, the force at which the break is detected (the values shown in green) will be less than that reported as the Headline/Summary value and in the test report, as illustrated below: