

### Breaking Strength and Elongation of Textile Fabrics (Grab Test)

The grab and modified grab tests determine breaking strength and elongation of wet or dry textile fabrics. A grab test is a tensile test where the center of the specimen width is gripped in the clamps. The modified grab test is similar - lateral slits are made mid-length of the specimen severing all yarns bordering that portion of the specimen held between the two clamps.

The grab test applies to woven, non-woven, and felted fabrics, while the modified grab test is used for woven fabrics. The method is not used for glass fabrics, knitted fabrics or high stretch fabrics.

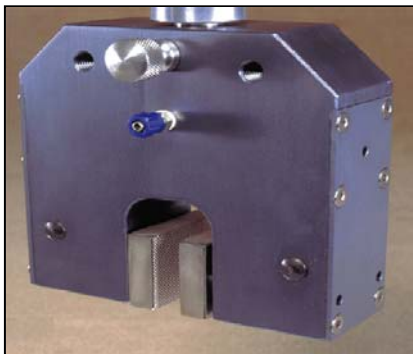
The grab test determines the effective strength of the fabric: the strength of the yarns in a specified width with fabric assistance from the adjacent yarns. It doesn't reflect yarn strength actually gripped between clamps. The modified grab test determines the breaking force of fabrics with constructions in which the application of tensile stress on ravel strip specimens produces further unraveling. It applies to high-strength fabrics.

Grab test: front grip face measures 1 inch by 1 or 2 inches, the longer dimension along the vertical.

Modified grab test: front grip face measures 1 inch by 2 inches, with the longer dimension along the vertical.



1000M Test System – see 650M, 200Q and 100P Series



G149 Air Driven Grips – see also G56G, G83 and G232 Series

#### Overall Test System Requirements

- Size System to generate highest expected load
- Select load cells for sample breaks at 10 to 90% of load cell range
- Define Jaws - Grab Test or Modified Grab Test with either rubber coated or smooth surfaces.
- Controller Requirements
  - Control test at 12 inches per minute.
  - Captures & Stores Break Force value
  - Captures & Stores Apparent Elongation
- Software (Optional)
  - See MStat Report Package