Hook and Loop Fastener Dynamic Shear Test Fixture

Built to ASTM D5169 — Standard Test Method for Shear Strength (Dynamic Method) of Hook and Loop Touch Fasteners



OVERVIEW

Test fixture for the dynamic shear strength of hook and loop touch fasteners. Engaged hook and loop tapes, prepared with a standardized closure method, are gripped at opposite ends and pulled apart parallel to the engagement plane, measuring the force needed to slide the components apart in shear.

KEY FEATURES

- Wide jaw faces clamp the full fastener tape width
- Upper and lower grips aligned for a pure in-plane shear pull
- Faces that hold backing without crushing the hooks or loops
- Pairs with a closure roller for consistent engagement
- Lightweight design for low-force load cells

TECHNICAL SPECIFICATIONS

Test method	Dynamic shear strength of hook and loop fasteners
Test type / loading	In-plane tensile shear of engaged tapes
Specimens	Engaged hook and loop strips, per ASTM D5169
Load capacity	1 kN standard; higher capacities on request
Fixture material	Steel or aluminum, corrosion-resistant finish
Gripping surfaces	Serrated or rubber-lined faces sized to tape width
Machine connection	Clevis pin or threaded adapter, to suit customer frame
Compatible frames	Electromechanical universal test machines

APPLICATIONS

- Hook and loop fastener tapes
- Apparel and footwear closures
- Medical straps and orthotics
- Automotive and aerospace trim fasteners

ABOUT THE STANDARD

ASTM D5169 measures the dynamic shear strength of engaged hook and loop touch fasteners. The two components are overlapped and engaged under controlled conditions, then pulled in opposite directions along the plane of engagement on a tensile machine. The maximum force is reported as shear strength. It is used for product specification and quality control of fastener tapes.

Ordering & customization: Specify tape width, required capacity and test machine connection when ordering. Closure rollers available.

Specifications are typical and may vary by configuration; confirm at time of quote. Users should refer to the current edition of the standard for test procedures. Part ref. UGC-D5169-PF