Floating-Roller Peel Fixture for Structural Adhesives

Built to ISO 4578 — Adhesives — Determination of peel resistance of high-strength adhesive bonds — Floating-roller method



OVERVIEW

Floating-roller peel fixture for measuring peel resistance of high-strength adhesive bonds between a flexible and a rigid adherend. The rigid panel is supported by free-turning rollers in a pivoting frame while the flexible strip is pulled away by the lower grip, holding a constant peel angle around the roller.

KEY FEATURES

- Free-turning rollers on pinned shafts for low-friction peeling
- Pivoting side plates let the roller assembly self-align with the peel
- Rigid square spigot with cross-pin for direct load-cell mounting
- Compact, ground steel construction for metal-to-metal bonds
- Use with a wedge or screw grip on the opposite crosshead

TECHNICAL SPECIFICATIONS

Test method	Floating-roller peel
Test type / loading	Tension; flexible adherend peeled around roller
Specimens	Bonded rigid/flexible metal panels per ISO 4578
Load capacity	5 kN typical; higher capacities on request
Fixture material	Hardened, corrosion-protected steel
Rollers	Ground rollers on bearing shafts, retained by circlips
Machine connection	Square spigot with cross-pin, to suit customer frame
Compatible frames	Electromechanical universal test machines

APPLICATIONS

- Structural adhesives on metals
- Aerospace bonded assemblies
- Automotive body-in-white adhesives
- Adhesive development and qualification

ABOUT THE STANDARD

ISO 4578 specifies a floating-roller method for determining the peel resistance of high-strength adhesive bonds between a rigid and a flexible adherend, typically metal-to-metal. The flexible adherend is peeled from the rigid one over a roller at constant speed; average peel force per unit width over the peel length is reported.

Ordering & customization: Specify specimen width and adherend thicknesses, required capacity, lower grip and test machine connection when ordering.

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-ISO4578-PF