

## Pneumatic Side-Acting Grip for Lap-Shear Tests

Built to ISO 4587 — Adhesives — Determination of tensile lap-shear strength of rigid-to-rigid bonded assemblies



### OVERVIEW

Pneumatic side-acting grip for tensile lap-shear testing of bonded rigid adherends. Twin air cylinders close serrated jaw faces on the specimen with consistent, adjustable force, and a valve on the body opens and closes the jaws for fast, repeatable loading of single-lap joints.

### KEY FEATURES

- Twin pneumatic cylinders give constant, adjustable clamping force
- Serrated replaceable jaw faces for secure grip on metal adherends
- Valve on the grip body for one-hand open and close
- Open-front frame for fast specimen loading
- Offset jaw shims available to align single-lap joints

### TECHNICAL SPECIFICATIONS

|                     |                                                                |
|---------------------|----------------------------------------------------------------|
| Test method         | Tensile lap-shear, single-lap joint                            |
| Test type / loading | Tension                                                        |
| Specimens           | Rigid single-lap bonded specimens per ISO 4587                 |
| Load capacity       | 10 kN typical; higher capacities on request                    |
| Grip material       | Aluminum body, hardened steel jaw faces                        |
| Gripping surfaces   | Serrated, replaceable jaw faces                                |
| Actuation           | Pneumatic, twin cylinders; supply pressure sets clamping force |
| Machine connection  | Pin or threaded adapter, to suit customer frame                |

### APPLICATIONS

- Structural adhesives on metal
- Automotive and aerospace bonding
- Composite-to-metal joints
- Adhesive QC and surface-prep studies

### ABOUT THE STANDARD

ISO 4587 specifies a method for determining the tensile lap-shear strength of adhesive bonds between rigid adherends, typically metals, using a single-lap joint. The specimen is pulled in tension at constant speed until failure; the maximum force divided by bonded area is reported as lap-shear strength, along with the failure mode.

**Ordering & customization:** Specify adherend width and thickness, required capacity, air supply pressure and test machine connection when ordering. Grips are normally ordered as a pair.

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-ISO4587-PG