

LAP SHEAR FIXTURES

2501-803

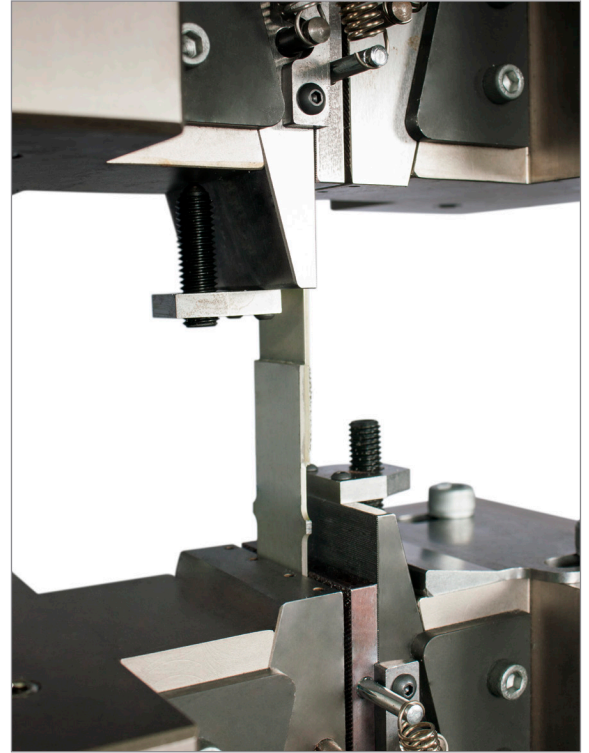
Obtaining accurate and consistent results from lap shear testing requires aligning the center of the adhesive bond with the axis of the test machine load string. The Instron® 2501-803 Lap Shear fixtures, for use with 2716-028/030 Precision Manual Wedge Grips, provide a simple way of ensuring consistent alignment and hence repeatable lap shear test results.

PRINCIPLE OF OPERATION

The unique design of the Lap Shear Fixture turns the standard symmetrical wedge action grip into an asymmetrical, one-sided wedge grip. With the fixture installed, the grip closes on the specimen while keeping the centerline of the load string aligned with the adhesive bond-line of a single lap-shear specimen. By keeping the bond-line centered, peeling forces on the specimen are minimized and the test results are as accurate and consistent as possible.

The Lap Shear Fixture can be changed in minutes without the use of special tools. Installing the fixture does not alter the alignment of the grips and exact axial alignment is restored when the standard faces are re-installed. This allows your lab operators to spend more time testing and less time adjusting and verifying load string alignment.

With the Lap Shear Fixture installed, it isn't necessary to use double lap shear specimens or to perform time-consuming specimen prep, such as bonding additional tabs to move the adhesive bond-line in to the center of the loading axis.

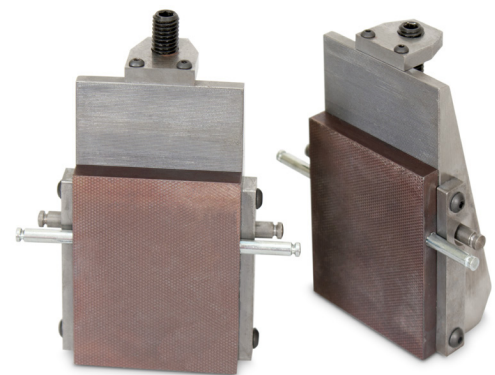


FEATURES AND BENEFITS

- 100 kN (22,000 and 56,000 lbf) capacities
- Unique design places the adhesive bond-line in the center of the load string, minimizing peeling forces that can have a dramatic influence on measured bond strengths
- Adjustable bond-line thickness compensation
- Modular design that can be installed in a matter of minutes without tools
- Fixture does not change grip alignment and the validity of any alignment certification (e.g. Nadcap)
- Wide temperature range of -80 to +250 °C (-112 to 482 °F)

APPLICATION RANGE

- Single lap shear adhesive bond tests on a variety of substrate materials including composites, metals, and plastics over a range of temperatures
- Type of loading: tensile, static, and tension-tension cyclic tests; not suitable for high-cycle dynamic fatigue tests



SPECIFICATIONS FOR 2501-803

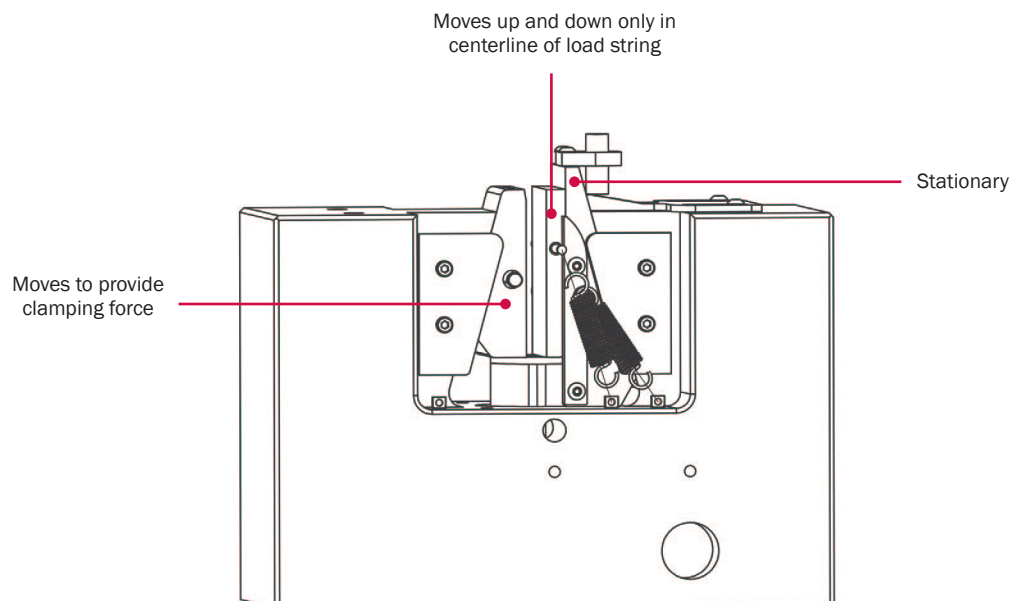
Maximum Force Capacity		Surface	Dimensions (W × H)		Maximum Bondline Thickness		Substrate Thickness + 1/2 Bondline Thickness Range		Compatible Grip Faces (see note)
kN	lbf		mm	in	mm	in	mm	in	
100	22,000	Diamond	60 × 75	2.36 × 2.95	6	0.236	0 - 5	0 - 0.197	2703-363 or 2703-366
		Serrated					2.5 - 7.5	0.098 - 0.2950	2703-364 or 2703-367
		25 TPI					7.5 - 12.5	0.295 - 0.492	2703-365 or 2703-368

Note: Substrate and bondline thickness range depends upon the grip face used

ADDITIONAL ACCESSORIES

2703-710

Replacement Faces for 100 kN Lap Shear Fixture for (2501-803)


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