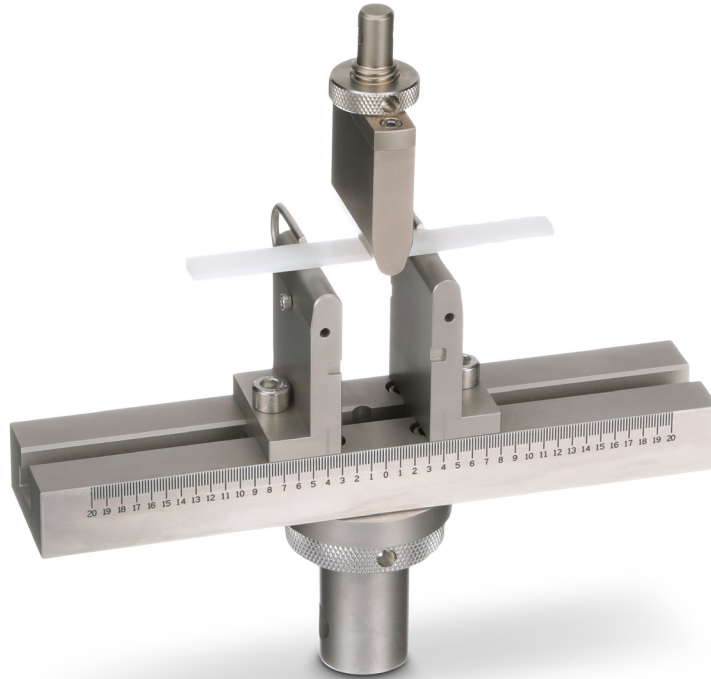


## 5 kN FLEXURE FIXTURE

Catalog Number 2810-40X Series



The 2810-40X Flexure Fixture series allows a variety of flexural and fracture toughness bond tests to be performed, including determination of flexural modulus, flexural strength, and flexural yield strength. Easy to install, the 3-point fixture can be modified with an optional conversion kit to provide a 4-point bending option.

The 3-point fixture includes a 10 mm (0.4 in) diameter upper anvil and two 4 mm (0.16 in) or 10 mm (0.4 in) diameter lower anvils that are adjustable to accommodate specimens of different spans. Deflection of the specimen can be measured either through crosshead displacement, or through the mid-span direct measurement deflectometer plunger with an extensometer for more precise measurement.

### PRINCIPLE OF OPERATION

The specimen is supported on two precision machine-fixed anvils of a defined radius. The force is applied either centrally (3-point) or at a defined distance on either side of the center (4-point). The support beam is graduated lengthwise in metric units for accurate positioning of the anvils and is equally spaced to the center line. The 4-point bend upper loading assembly is positioned the same way. The lower anvils have adjustable specimen stops to provide quick and repeatable specimen positioning.

### APPLICATION RANGE

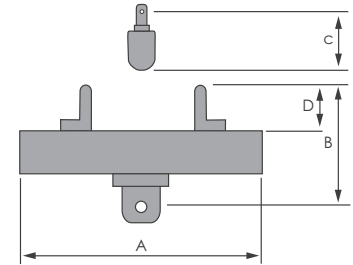
- Type of loading: Static flexure, cyclic flexure tests
- Specimen material: Plastics, metals, alloys, composites, ceramics and other materials
- Specimen shapes: Strip, bar, and components
- Common standards: ASTM D790, ISO 178, ASTM D6272 (4-point bend), ISO 14125

### FEATURES

- Rated capacity 5 kN (500 kgf, 1,125 lbf)
- 3-point flexure fixture with an optional conversion kit for 4-point loading
- Conforms to ISO, ASTM, DIN, and many other standards
- Fully adjustable span distance to suit a wide range of specimen sizes
- Adjustable stops for specimen widths up to 50 mm (2 in) for precise alignment
- Optional deflectometer plunger assembly
- Rugged design for minimum maintenance
- Temperature range: -100 to +350 °C (-148 to +662 °F)
- Compatible with AVE 2, AutoX750, clip-on (2630-107 or 2630-110) extensometers

## SPECIFICATIONS

2810-400	5 kN capacity flexure fixture. Includes 10 mm diameter upper anvil, choice of 2810-400A1 (10 mm) or 2810-400A2 (4 mm) lower anvil set
2810-401	4 mm diameter Anvil set for use with 2810-400, 2810-205
2810-402	10 mm diameter Anvil set for use with 2810-400
2810-405	4-pt bend upper assembly for use with 2810-400 lower fixture. Includes 2810-402 10 mm anvils, compatible with 2810-401 4 mm anvils



## BEND FIXTURES

		2810-400	2810-405
Maximum Capacity	kN	5	5
Temperature Range	°C	-100 to +350	-100 to +350
	°F	-148 to +662	-148 to +662
Upper Loading Anvils Diameter	mm	10	10 <sup>2</sup>
Anvil Depth (Maximum Specimen Width)	mm	50	50
Upper Span (4-pt bend)	mm	—	10 <sup>2</sup> - 97 <sup>3</sup>
Upper Fitting		6 mm Clevis Pin (Type O)	6 mm Clevis Pin (Type O)
Lower Fitting		0.5 in Clevis Pin (Type D)	—
Overall Width (A)	mm	234	—
Upper Anvil Height (C)	mm	76	106
Upper Anvil Weight	kg	0.3	1.42
Lower Fixture Height (B)	mm	139	—
Lower Support Weight (w/ anvils)	kg	3.31	—

## ANVIL SETS

		2810-400A1 2810-402	2810-400A2 2810-401
Lower Support Anvils Diameter	mm	10	4
Lower Fixture Specimen Span <sup>1</sup>	mm	10 - 194	4 - 188
Anvil Height (D)	mm	60	60
Single Anvil Weight	kg	0.26	0.26

## STRAIN ACCESSORIES

2810-403	Deflectometer for 2810-400. Requires suitable extensometer: AVE2, AutoX750, clip-on (2630-107 or 2630-110). Temperature range: -100 to +260 °C (-148 to +500 °F).
2810-406	Adapters for use of AutoX with 2810-400/2810-403/3119-300 pullrod

## Notes:

1. With 2810-403, minimum span is 23 mm + lower anvil diameter
2. 2810-405 sold with 10 mm anvils, also compatible with 4 mm diameter anvils
3. Maximum upper span with 4 mm anvils: 91 mm



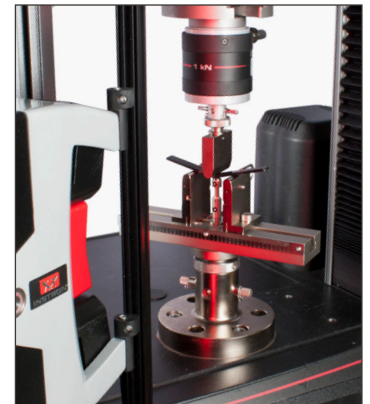
4-Point Bend Upper Fixture



Deflectometer And Clip-On Extensometer



Deflectometer and AutoX750 Automatic Contacting Extensometer



AVE 2 Advanced Video Extensometer and Deflectometer

[www.instron.com](http://www.instron.com)


Worldwide Headquarters  
825 University Ave, Norwood, MA 02062-2643, USA  
Tel: +1 800 564 8378 or +1 781 575 5000

European Headquarters  
Coronation Road, High Wycombe, Bucks HP12 3SY, UK  
Tel: +44 1494 464646