



2810 Series Flexure Fixture

Catalog Number 2810-250

Features

- Rated capacity: 500 kN (50000 kgf, 112500 lbf)
- Three-point flexure fixture with an optional conversion kit for four-point loading
- Conforms to ISO, ASTM, DIN, and many other standards
- Fully adjustable span distance to suit a wide range of specimen sizes
- Rollers free to rotate
- Interchangeable rollers for different specimen types
- Rugged design for minimum maintenance
- Temperature range: Ambient only

Description

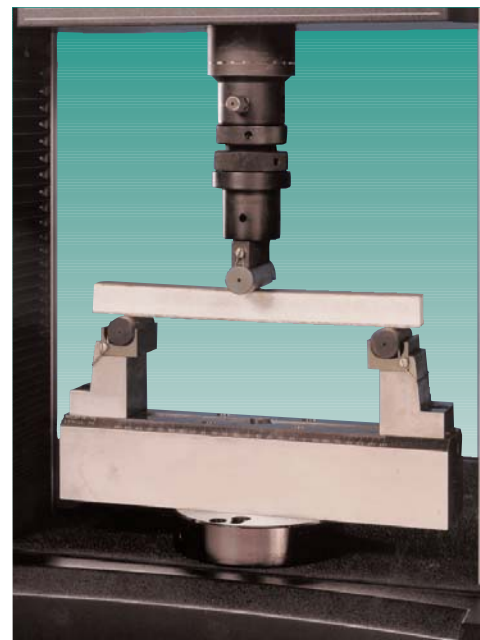
The flexure fixture allows a variety of flexural and fracture toughness tests to be performed, including determination of flexural modulus, flexural strength, and flexural yield strength. Easy-to-install, the three-point fixture can be modified with the optional conversion kit to provide a four-point bending conversion. The fixture includes a 100 mm (4 in) diameter upper anvil and two 50 mm (2 in) diameter lower anvils which are adjustable to accommodate specimens of different spans.

Principle of Operation

The specimen is supported on two precision machined fixed anvils of a defined radius. The force is applied either centrally (three-point) or at a defined distance either side of the center (four-point). The support beam is graduated lengthways in metric units for accurate positioning of the anvils equally spaced relative to the center line. This feature also applies to the four-point loading beam and anvils. Adjustable specimen stops are provided so that the specimen may be quickly and accurately positioned on the lower anvils.

Application Range

- Type of loading: Static flexure, cyclic flexural fatigue testing.
- Specimen materials: Plastic, metals, alloys, composites, ceramics, construction materials and other materials.
- Specimen shapes: Strip, bar, components.



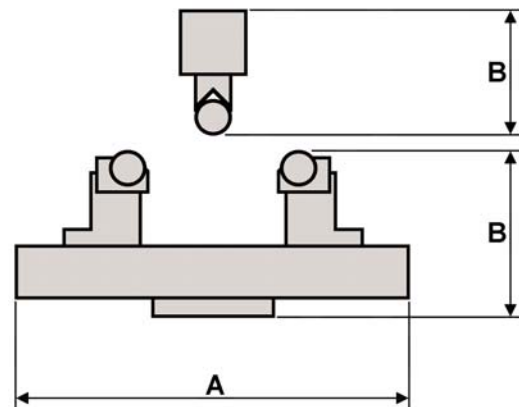
▲
Three-point flexure fixture - three-point loading

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Specifications

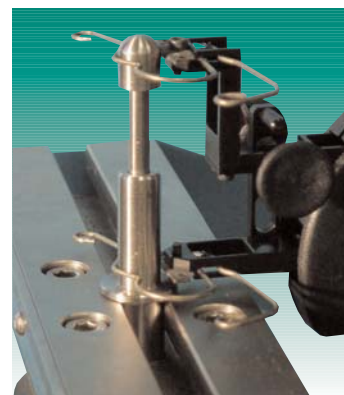
Catalog Number	2810-250
Maximum Dynamic Capacity	500 kN (50,000 kgf, 11,2500 lbf)
ROLLER DIAMETERS	
Lower Support Roller	50 mm (2 in) diameter
Upper Support Roller	100 mm (4 in) diameter
Span Distance (adjustable)	100 mm to 1000 mm (3.94 in to 39.4 in)
Maximum Specimen Width	150 mm (6 in)
MECHANICAL CONNECTION	
Upper	M72 x 3 female
Lower	M 72 x 3 female
Overall Width (A)	1300 mm (51.18 in)
Overall Height (B)	700 mm (27.56 in)
Overall Depth	228 mm (8.98 in)
Weight	750 kg (1650 lb)



▲ Flexure fixture dimensions

Accessories or Other Relevant Heading

Catalog Number	Application
2810-251	Conversion kit - three-point to four-point with 50 mm (1.96 in) diameter roller
2810-252	Adapt three-point upper roller to 50 mm (1.96 in) diameter (250 kN capacity)
2810-253	Adapt three-point upper roller to 25 mm (0.98 in) diameter (125 kN capacity)
2810-254	Adapt three-point lower roller to 25 mm (0.98 in) diameter (250 kN capacity) (One pair)
2810-255	Adapt four-point upper roller to 25 mm (0.98 in) diameter (250 kN capacity) (One pair)



▲ Deflectometer using clip-on extensometer



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