

# 250 kN FLEXURE FIXTURE

Catalog Number 2810-206



The 250 kN flexure fixture allows a variety of flexural and fracture toughness bend 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 an optional conversion kit to provide a four point bending conversion.

The fixture includes a 100 mm diameter upper anvil and two 50 mm diameter lower anvils which are adjustable to accommodate specimens of different spans. Deflection of the specimen can be measured either through crosshead displacement, or for more precise measurement use the mid span direct measurement deflectometer plunger with clip on extensometer.

## PRINCIPLE OF OPERATION

The specimen is supported on two precision machined rollers of defined radius. The force is applied either centrally (three-point) or at a defined distance either side of the centre (four-point). The support beam is graduated lengthways in metric units for accurate positioning of the rollers equally spaced to the center line. This feature also applies to the four-point loading beam and anvils.

## FEATURES AND BENEFITS

- Maximum capacity 250 kN (25,000 kgf, 56,200 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, diameters for different specimen types
- Optional deflectometer plunger assembly
- Rugged design for minimum maintenance
- Temperature range: -100 °C to +350 °C (-148 °F to +660 °F)

## SPECIFICATIONS

Maximum Capacity	kN	250
	lbf	56,200
Specimen Width	mm	0 - 100
Support Span	mm	100 - 600
Mechanical Upper fitting	-	M48 × 2 RH (Type II)
Mechanical Lower fitting	-	M48 × 2 RH (Type II)
Lower Fixture Length (A)	mm	900
Lower Fixture Height (B)	mm	290
Upper Fixture Height (C)	mm	180
Fixture Depth	mm	101
Lower Support Diameter	mm	50
Upper Support Diameter	mm	100
Weight	kg	130
	lb	286
Temperature Range	°C	-100 to +350
	°F	-148 to +660

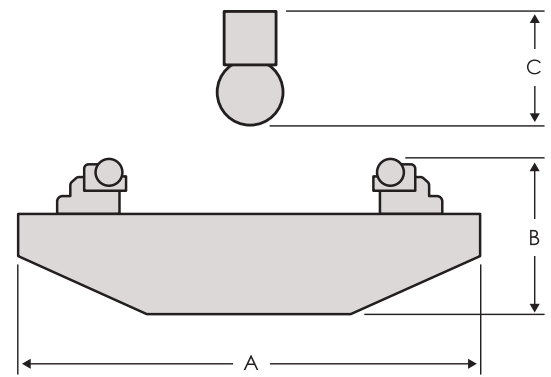
Note: Scope of supply - One test fixture

## ACCESSORIES AND APPLICATIONS

2810-201	Bend fixture conversion kit, three-point to four-point, for use with 2810-206. Converts 2810-206, three-point bend fixture to four-point. Upper span is adjustable from 50 mm to 200 mm. Includes two 50 mm diameter rollers.
2810-202	Upper roller for three-point loading, 50 mm diameter (125 kN capacity)
2810-203	Upper roller for three-point loading, 25 mm diameter (62.5 kN capacity)
2810-204	Lower rollers, 25 mm diameter (125 kN capacity) (1 pair)
2810-205	Upper rollers for four-point loading, 25 mm diameter (125 kN capacity) (1 pair)

## Notes:

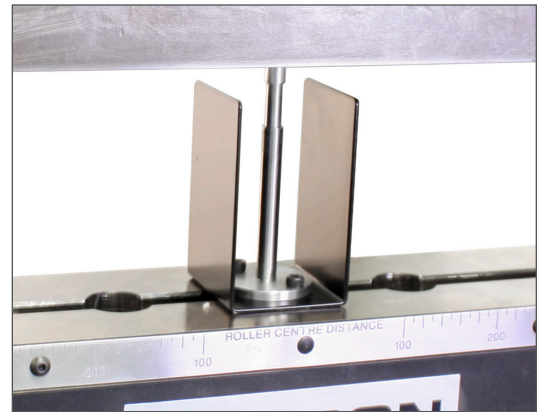
- Lower rollers are supplied with 50 mm diameters. Other appropriate sizes are optional. \*Custom rollers diameters may be supplied.
- Deflectometer plunger requires a suitable clip-on extensometer for measurement. Extensometer is not included in the deflectometer package.  
Plunger Travel:- 30 mm Overall Height:- 91 mm
- Extensometer will determine temperature range of four-point configuration.
- To carry out fracture toughness tests a suitable 2670 series COD gauge is required.



Flexure fixture dimensions



2810 Roller Support



Deflectometer

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