

Compression Test Jigs for Composite Materials

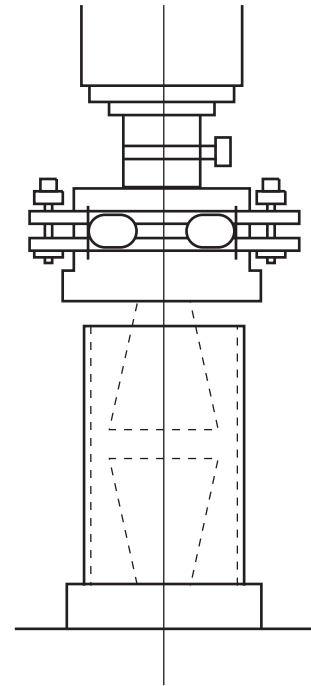
These test jigs incorporate wedge grips to apply a compressive force to a flat specimen as a shear force along the wedge grip-specimen interface. They are used for testing fiber-reinforced plastics and other composite materials. Two jigs are available: an ASTM D3410 compliant jig and an ISO 8515 and JIS K7076 (method B) compliant jig. A 100 mm (3.9 in) diameter spherically seated compression plate set is required to apply the compressive force to the jigs.

Both compression test jigs for composite materials consist of wedged grips, a grip-setting gauge, tapered sleeves, a cylindrical guide, and a specimen removal kit. The tapered sleeve and cylindrical guide provide stability to the jig and the tapering between the grip and the sleeve prevents chuck slippage, which ensures accurate testing.

Kits comprising a compression test jig for composite materials, a spherically seated compression plate set, and a compression and bending loading jig are available in some regions. Please contact your local Shimadzu representative for details.

Additional items needed for operation:

- 100 mm diameter spherically seated compression plate set



Relevant Materials

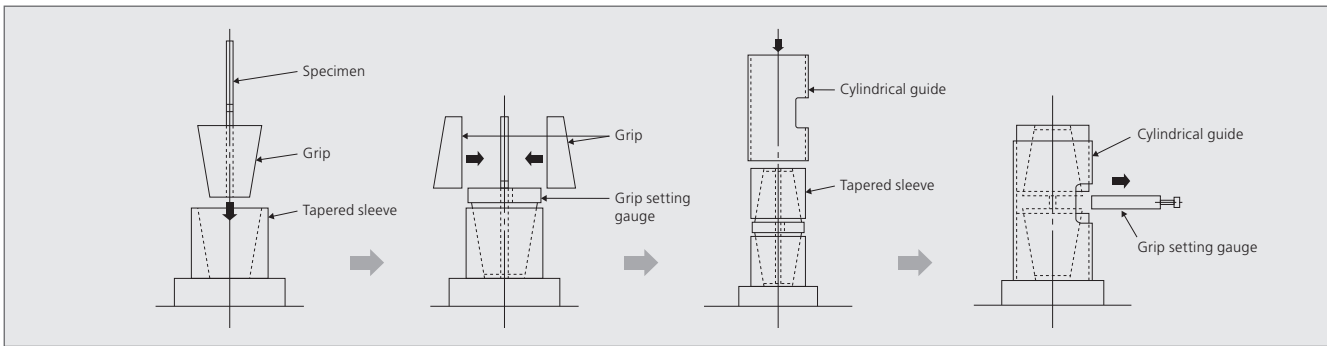
Plastics, Composites

Relevant Standards

ASTM D3410, ISO 8515, JIS K7076 (Method B)

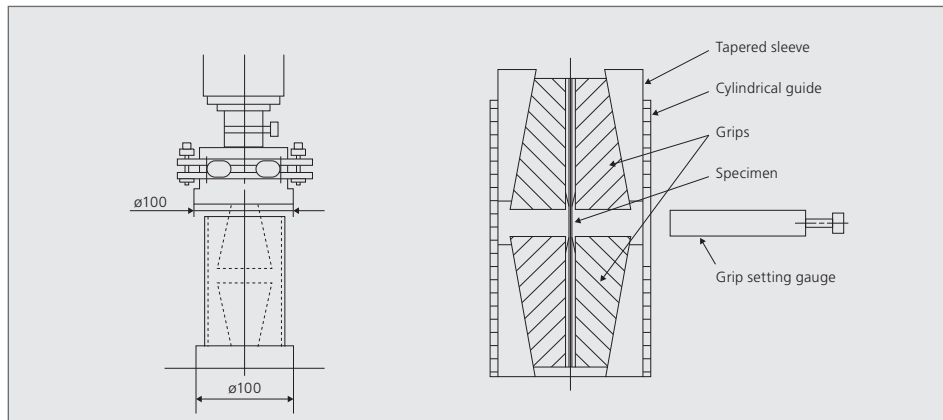
Operation

First, the lower tapered sleeve is placed at the center of the lower fixed compression plate to coincide with the testing axis. One side of the specimen is clamped by two halves of one grip and the grip-specimen assembly is inserted in the tapered sleeve. Next, the grip-setting gauge is placed on the grip, followed by placement of the two halves of the upper grip around the specimen. The second tapered sleeve is slotted over the upper grip before the cylindrical guide is placed over the whole assembly. Once in place, the grip setting gauge is removed. During testing, the upper spherically seated compression plate applies force to the jig and specimen.



Specification

Maximum Capacity			Applicable Specimen Diameter			Plate Diameter	Temperature Range	Upper Plate Mass
			Width	Length	Thickness			
kN	kgf	lbf	mm (in)	mm (in)	mm (in)	mm (in)	°C (°F)	kg (lb)
ASTM D3410 Compliant Compression Test Jig for Composite Materials								
20	2,000	4,400	6 to 12.5 (0.24 to 0.49)	108 (4.3)	1 to 2 (0.039 to 0.079)	100 (3.9)	0 to 40 (32 to 104)	3.8 (8.4)
ISO 8515 and JIS K7076 (method B) Compliant Compression Test Jig for Composite Materials								
20	2,000	4,400	6.5 (0.26)	134 (5.3)	2 (0.079)	100 (3.9)	0 to 40 (32 to 104)	3.8 (8.4)



Ordering Information

P/N	Description
Compression Test Jigs for Composite Materials	
343-09344	ASTM D3410 compliant compression test jig for composite materials
343-09344-01	ISO 8515 and JIS K7076 (Method B) compliant compression test jig for composite materials
Accessories	
346-50639-03	100 mm diameter spherically seated compression plate set

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