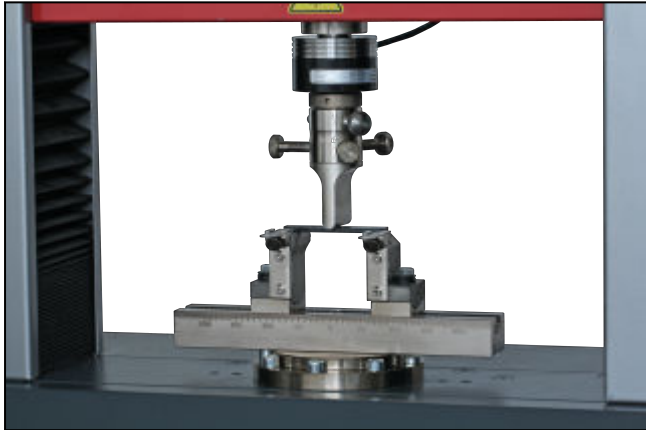


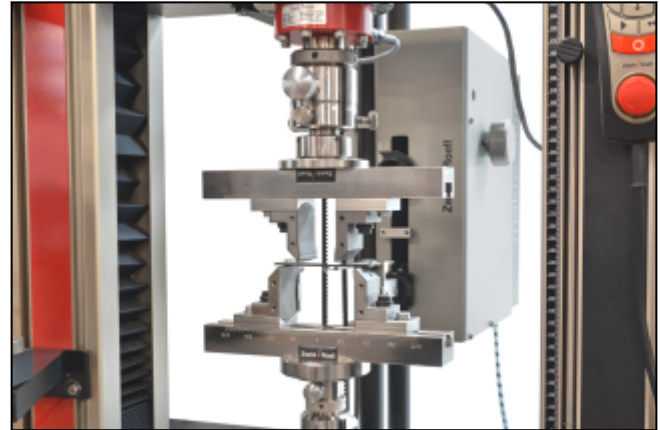
Product Information

3 and 4-point flexure test kits

CTA: 45191 157752



3-point flexure test kit with specimen



4-point flexure test kit with specimen

Applications

The flexure test kit for fiber composites features modular design and covers 3-point and 4-point flexure tests to the following standards:

- ISO 14125
- EN 2562
- ASTM D7264

3-point flexure test

Determination of flexure modulus

- 10 to 50 % Fmax (EN 2562)
- 10 to 25% Fmax (EN 2746)
- between two elastic limits (ISO, ASTM)

Ratio of span to thickness:

- 32:1 (ASTM)
- 20:1 for GFRP, 40:1 for CFRP (ISO)
- 16:1 for GFRP, 40:1 for CFRP (EN standards)

4-point flexure test

Determination of flexure modulus

- 0.05 to 0.25% of strain (ISO 14125)
- 0.1 to 0.3 % of strain (ASTM D7264)

Average span

- 1/3 of lower span (ISO 14125)
- 1/2 of lower span (ASTM D7264)

Ratio of span to thickness:

- 32:1 (ASTM)
- 22.5:1 for GFRP, 40.5:1 for CFRP (ISO)

Specimen material:

- glass-fiber-reinforced plastic (GFRP), carbon-fiber-reinforced plastic (CFRP)

Advantages and features

- Sturdy construction to avoid self-deformation of the test fixture
- Modular design allows retrospective upgrades.
- Reliable positioning of the specimen on the adjustable centering stop
- Accurate alignment of anvils and dies using the appropriate spacing gauge for exact parallelity
- Accurate centering of die and anvil
- High support blocks allow sufficient stroke for testing fiber composites.
- Easy changeover between 3 and 4-point flexure tests and different die and anvil radii.

3-point flexure test

- 3-point flexure tests are common and easy to perform.

4-point flexure test

- shear-force-free area between the force application points of the double die

Product Information

3 and 4-point flexure test kits

Required

The number of components required is determined by the standard and type of test to be applied. Where multiple standards or types of test are being used, components can be interchanged.

Item No.	Designation	ISO 14125		EN 2562	ASTM D7264	
		for 3-point flexure test	for 4-point flexure test	for 3-point flexure test	for 3-point flexure test	for 4-point flexure test
062364	Base unit	1x	2x	1x	1x	2x
062365	Centering stop	2x	2x	2x	2x	2x
310978	Adapter (top)	1x	1x	1x	1x	1x
318452	Connector (top)		1x			1x
Die						
062426	Die R3				(1x) ¹⁾	
316715	Die R5	1x			1x	
062416	Die R12.5			1x		
Anvil/die						
062414	Anvil/die R2	2x	4x			
062415	Anvil/die R3				(2x) ¹⁾	(4x) ¹⁾
062411	Anvil/die R5	2x	4x	2x	2x	4x
Spacing gauges						
062419	Spacing gauge, 40mm	1x				
062618	Spacing gauge, 50mm			1x		
062423	Spacing gauge, 80mm	1x				
062617	Spacing gauge, 80mm			1x		
062367	Spacing gauge, 45/15 mm R2		1x			
062432	Spacing gauge, 64/32 R2				(1x) ¹⁾	(1x) ¹⁾
062368	Spacing gauge, 66/22 R5		1x			
062434	Spacing gauge, 80/40 R2				(1x) ¹⁾	(1x) ¹⁾
062366	Spacing gauge, 81/127 R2		1x			
062445	Spacing gauge, 128/64 R2				(1x) ¹⁾	(1x) ¹⁾
062453	Spacing gauge, 160/80 R2				(1x) ¹⁾	(1x) ¹⁾
1065386	Spacing gauge, 128/64 R5				1x	1x
1065709	Spacing gauge, 64/32 R5				1x	1x
1065710	Spacing gauge, 80/40 R5				1x	1x
1065711	Spacing gauge, 160/80 R5				1x	1x

¹⁾ Validated for ASTM D7264 with date of issue 2006 and 2007. From issue date 2015 onwards R5 anvils/dies are used.

Technical data

Flexure test	3-point flexure test	4-point flexure test	
Test load, max. (Fmax)	10	10	kN
Span	40 to 160	40 to 160	mm
Double die spacing	-	15 to 80	mm

Product Information

3 and 4-point flexure test kits

Flexure test	3-point flexure test	4-point flexure test
Finish	rustproof - chemical nickel-plating	rustproof - chemical nickel-plating
Ambient temperature	-80 to +250	-80 to +250 °C
Upper connection	Adapter, 16 ^{H7}	TK 40 connector
Lower connection		TK 40 connector Flange T-slotted system Base crosshead