

Product Information

Device for G_{1C} tests on long-fiber-reinforced composites

CTA: 61318 133025



Fixture for G_{1C} tests on long-fiber-reinforced composites

Applications

These G_{1C} specimen-holders and loading blocks are used for measuring the energy release rates G_{1C} of long-fiber-reinforced composites in a DCB (Double Cantilever Beam) test arrangement. They are standardized according to the following standards:

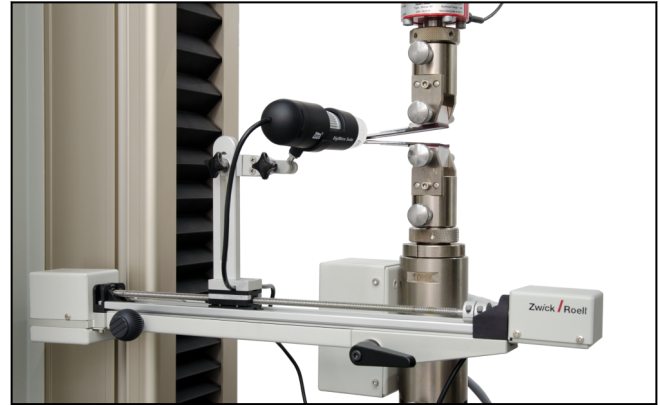
- ISO 15024

In this case, screw grips type 8133 or 8253 are used instead of the fixture shown above.

- DIN EN 6033
- ASTM D 5528
- AITM 1-0005
- AITM 1-0053
- BSS 7273

Function description

During test preparation the loading blocks are glued to the specimen. They are then hooked in the specimen holders via the $\varnothing 8$ mm connection hole.



Fixture for G_{1C} tests with video recording option

Tensile force is applied via the loading blocks, which generates a crack opening.

Advantages and features

- Easy specimen change
- The fixture without the video recording option can be used over a wide temperature range from -80°C to $+250^{\circ}\text{C}$.

Video recording option:

- Visual crack tracking with video recording option.
- Traceable measurement results thanks to subsequent, precise evaluation of the test sequence in video.
- The video camera is moved on movable carriages throughout the entire test along the crack propagation.

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Technical data

Item No.	1001540	
Test load F_{max}	2.5	kN
Connection, upper	Ø 20	mm
Connection, lower	Ø 20	mm
Ambient temperature	-80 ... 250	°C
Weight, approx.	0.21	kg
Scope of delivery	1 pair of specimen holders incl. 1 pair of loading blocks	

Accessories required

Description	ArticleNumber
10 pair of loading blocks for G_1C specimen, F_{max} 2.5 kN, mounting hole Ø 8 mm, specimen width 25.4 mm, block height 15 mm, block width 15 mm	1001542

Optional accessories

Description	ArticleNumber
Video recording option to visually record crack growth for video display in testXpert III <ul style="list-style-type: none">- Video resolution 160 x 120 to 1600 x 1200, 2 megapixels- Max. camera travel 235 mm - installation height 127.5 mm, width 452 mm, depth 185 mm- Can be used at room temperature- Including INC module	1007538