

Product Information

Amsler HIT230F for pre-damaging plates (CAI)

CTA: 45533 45512



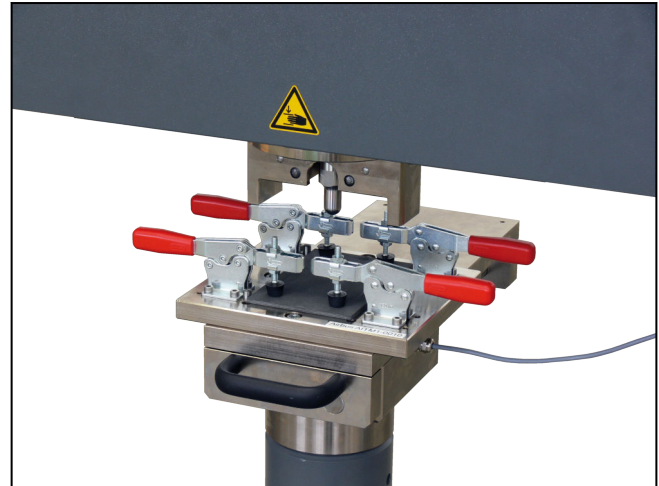
Amsler HIT 230F drop weight tester for pre-damaging plates (CAI)

Range of application

The Amsler HIT230F is ideally equipped for pre-damaging fiber composite plates

for the CAI (compression after impact) test currently used in the aerospace industry.

- Pre-damaging fibre-composite test plates for the compression after impact (CAI) test as per Airbus AITM 1-0010, Boeing 7260, ISO 18352, DIN 65561, ASTM D7136, EN 6038



CAI support fixture

Advantages and features

- Safe, easy, reliable operation.
- Good test-area accessibility.
- Design allows easy accessory changes.
- Intelligent safety system – no need to operate safety door when inserting specimens.
- Innovative force measurement chain design delivers very low-noise measured values, allowing detailed monitoring of the selective introduction of pre-damage.
- High (4 MHz) measured-value acquisition-rate combined with high (16-bit) resolution.
- Drop weight is raised automatically; drop height can be set to any required level from 0.1 m to 1 m.
- Precise, stepless damage-energy adjustment achieved by varying drop weight and drop height
- Accurate determination of actual impact speed shortly before point of impact.
- Mechanical device arrests drop weight after initial impact, preventing multiple impacts.

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Basic instrument includes:

- evaluation electronics
- safety shields (front and rear, front shield with side hinges, lockable by key, safety monitoring)
- anti-rebound device for avoidance of multiple impacts for weights up to 12 kg
- light curtain for accurate determination of impact velocity
- piezo load cell, Fmax 50 kN, with spherical impactor, diameter 16 mm, as per Airbus AITM 1.0010, Boeing 7260, DIN 65561, ASTM D7136, EN 6038 and ISO 18352
- slide carriage for CAI clamping fixture
- modular weight set, 8/16 kg, for setting damage energies from 10 to 20 joules

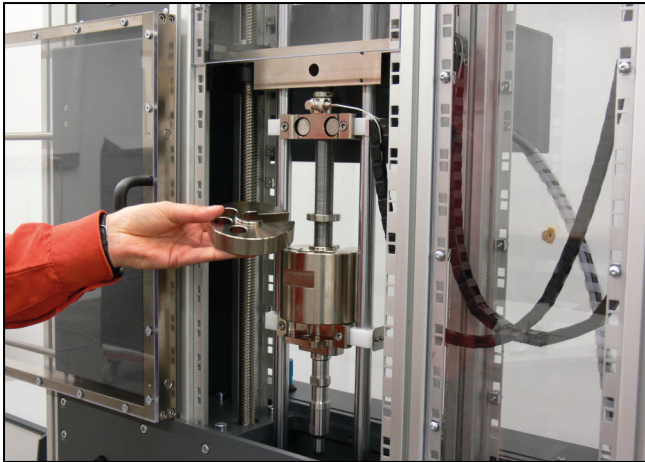
Technical data for basic instrument

Item No.	1044081	
Maximum energy	100	J
Dimensions		
Height	2600	mm
Width	1235	mm
Depth	695	mm
Drop height, maximum	1	m
Drop height, minimum	0,11	m
Drop mass, maximum	10,2	kg
Drop mass, minimum	2,04	kg
Drop velocity, maximum	4,4	m/s at 1 m drop height
Force signal resolution	16	bits
Measured-value rate (force signal), maximum	4	MHz
Clamping force	manual	
Weight	400	kg
Compressed air supply		
Supply pressure	6	bar
Air consumption, approx.	20	l/impact
Required air-supply output-rate	600	l/min
Service unit	mounted on instrument	
Required floor load capacity	20	kN/m ²
Leveling feet concentrated load	200	N/cm ²
Electrical supply data		
Electrical supply	100 ... 240	V (1 Ph, N, PE)
Power consumption (pre-load), approx.	0,5	kW
Power supply voltage	85 to 132 VAC or 170 to 264 VAC - automatic adjustment	

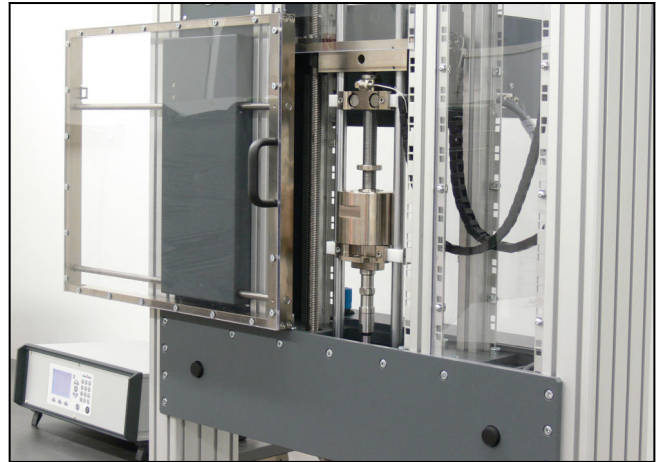
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Fast, easy weight changes

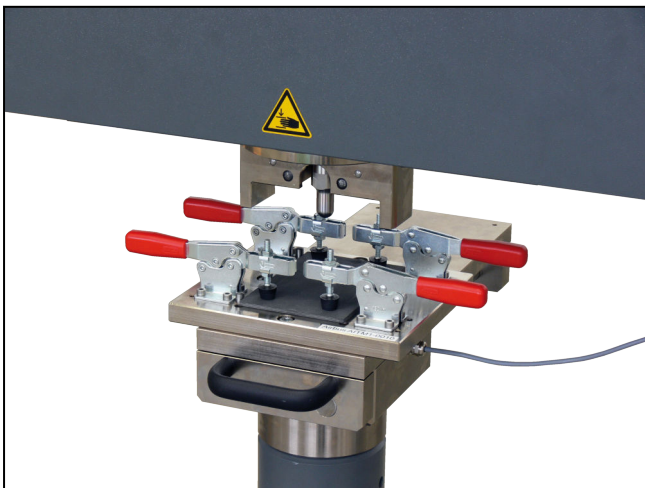


Safety device open

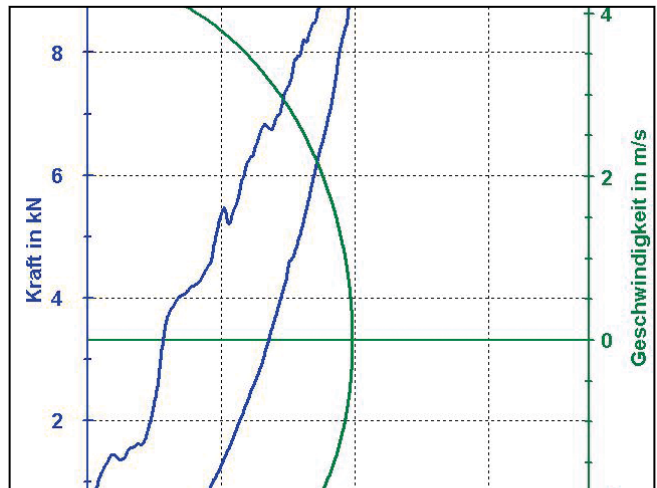
Accessories required

Description	Item number
Support fixture for ASTM D7136, Boeing BSS 7260, DIN 65561, SACMA SRM 2R-94	1044083
Support fixture for CAI specimens as per Airbus AITM 1.0010, ISO 18352, EN 6038	1044084

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CAI support fixture



Force/penetration diagram

Optional accessories

Two different fixtures are available for installation in a materials testing machine for the compression test to determine the residual strength of the specimen pre-damaged by the drop weight tester. In the case of the

ASTM and Boeing fixture, all four sides of the specimen are restrained, but not clamped. With the Airbus and ISO version of the compression fixture, the top and bottom are clamped, but the sides are only restrained.

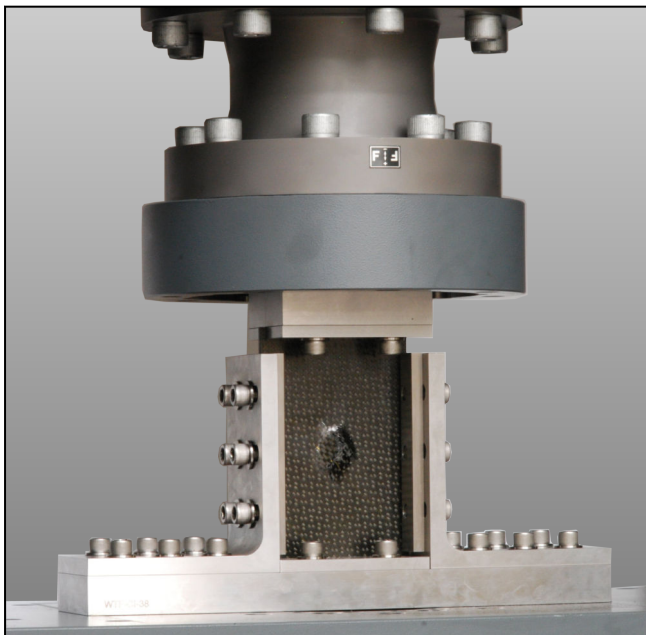
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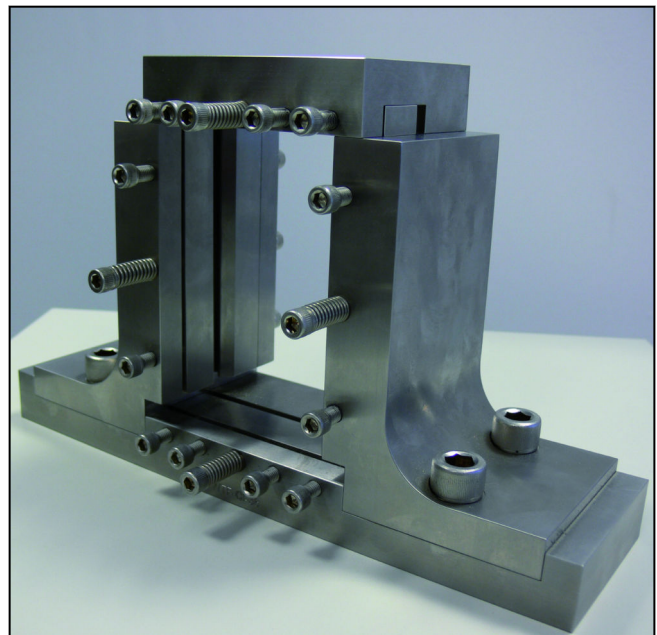
CAI compression fixture

Description	Item number
CAI compression fixture for static tests to ASTM D7136, Boeing BSS 7260, DIN 65561, SACMA SRM 2R-94	021298
CAI compression fixture for static tests as per Airbus AITM 1-0010, ISO 18352, EN 6038	021291

CTA: 45503 45504



Boeing version



Airbus version