

Product Information

Amsler HIT600F drop weight tester

CTA: 145616 171121



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Amsler HIT600F, tup holder with single masses

The universal drop weight tester for materials testing

Testing at low impact speeds of 2.2 m/s requires a larger drop weight; if testing at 6.6 m/s is required, acceleration is necessary. This drop weight tester caters for both situations, making it the perfect instrument to satisfy the requirements of a wide range of automotive industry specification standards. The feed and safety concept provides optimum operator convenience and safety. With this drop weight tester pre-conditioned test plates can be inserted and impacted in less than five seconds, allowing many puncture tests to be performed without the need to install a temperature chamber. The instrument can also be used for CAI, Charpy and Izod tests.

Applications

- Puncture test on plastics to ISO 6603-2 and ASTM D3763
- Accelerated puncture test on plastics in accordance with various automotive standards
- Puncture test on films to ISO 7765 -2
- Pre-damaging of fiber-reinforced composites (CAI) to ASTM D7136, DIN EN 6038 and AITM 1.0010

Advantages and features Operator-friendly

- Excellent test area accessibility
- No manual opening of safety devices in test area
- Easy, manual feed of cooled specimens
- Fast, safe, easy changeover between different configurations
- Automatic series mode in testXpert III allows series testing with no operator intervention between individual specimens
- Automatic lubrication of striker

Reliable test results

- High natural measuring frequency enables accurate test results.
- High data acquisition rate (4MHz) for all measurement channels allows excellent resolution for measured curves.
- Large transient memory allows measured values for brittle and ductile materials to be stored at full resolution.
- Full coverage of AITM 1.0010 energy ranges.

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Technical data

Type Item No.	Amsler HIT600F drop weight tester 08.0441	
Potential energy, without acceleration unit, max.	550	J
Potential energy, with acceleration unit, max.	670	J
Dimensions		
Height	2987	mm
Width, with operating unit and single mass holder	1370	mm
Overall width, safety door open	2120	mm
Depth	800	mm
Drop height, dependent upon the testing equipment, max.	1400	mm
Drop height, dependent upon the testing equipment, min.	50	mm
Drop weight, max.	40	kg
Drop weight, min.	2.04	kg
Impact velocity, dependent upon the testing equipment, max.	5	m/s at 1.4 m drop height
Impact velocity, dependent upon the testing equipment, min.	1	m/s
Force signal resolution	16	bits
Measured-value rate (force signal), max.	4	MHz
Weight, with typical accessories, approx.	1020	kg
Dynamic additional load, max., without acceleration	22.9	kN
Dynamic additional load, max., with acceleration	28	kN
Floor load (applied via the load frame surface)	10.4	kN/m ²
Concentrated load of the leveling feet	40.5	N/cm ²
Power input specifications		
Power supply	230	V
Phases	1Ph/N/E	
Current consumption, max. at 230 V	14.8	A
Power consumption (full load), approx.	3.4	kVA
Power frequency	50/60	Hz
Compressed air supply		
Pressure	5 to 8	bar
Compressed air consumption (compressed air) per impact or test	2	l
Required air-supply output-rate	600	l/min
Compressed air connection side	DN 7	
Maintenance unit	mounted on instrument	

Accessories required

Accessories for multiaxial puncture test

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Mass carriage with single masses for Amsler HIT600F

The mass carriage with single masses up to 40 kg and corresponding shock absorbing unit is required for multiaxial puncture tests.

Description	Item number
Mass carriage with single masses ¹⁾ Consisting of: 4.6 kg to 40.1 kg in 0.5 kg increments	08.0203
Shock absorbing unit for multiaxial puncture test	08.0205

¹⁾ Required: Shock absorbing unit for multiaxial puncture test

Striker lubrication

Description	Item number
Automatic lubrication of striker	08.0102

Clamping rings

Type	Standard	Dimensions Diameter, inner [mm]	Clamping sur- face	Scope of deliv- ery	Item No.
Clamping rings	ISO 7765-2, ISO 6603-2	40	Smooth	1 pair	08.0150
Clamping rings	-	20	Grooved	1 pair	08.0021
Clamping rings	ISO 6603-2	40	Grooved	1 pair	08.0022
Clamping rings	ASTM D3763	76	Grooved	1 pair	08.0023

Mounts for clamping rings

Description	Item number
Mount for clamping rings with 20 mm and 40 mm inner diameter.	08.0239
Mount for clamping rings with 76 mm (3") inner diameter.	08.0240

Impactor

- Easily interchangeable
- Replaceable tips
- Guarded axial terminal for measuring lead

Standard	Impactor tip Diameter [mm]	Nominal force F_{nom} [kN]	Item No.
ISO 6603-2, ISO 7765-2, ASTM D5628 Method FE	20	15	08.0099
ISO 6603-2	10	5	08.0097
ASTM D3763	12.7	10	08.0098

Accessories for CAI

Mass carriage with single masses for Amsler HIT600F

The CAI testing equipment is required for pre-damaging fiber composite plates.

Description	Item number
CAI testing equipment consisting of:	08.0164

All data at ambient temperature.

We reserve the right to make technical changes in the course of ongoing development.

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Description	Item number
<ul style="list-style-type: none"> - Anti-rebound device for avoidance of multiple impacts - Mass carriage with single masses of 2.04 kg to 10.2 kg - CAI drawer unit for CAI clamping device 	

Clamping device

Description	Item number
Clamping device for specimen pre-damaging to ASTM D7136, Boeing BSS 7260, DIN 65561, SACMA SRM 2R-94	08.0027
Clamping device for specimen pre-damaging to Airbus AITM 1.0010, ISO 18352, DIN EN 6038	08.0028



NOTE

The two sets of equipment can be interchanged by the customer, allowing both tests to be performed on one drop weight tester.

Impactor

- Easily interchangeable
- Replaceable tip
- Guarded axial terminal for measuring lead

Standard	Impactor tip Diameter [mm]	Nominal force F_{nom} [kN]	Item No.
Airbus AITM 1.0010, Boeing 7260, DIN 65561, ASTM D7136, EN 6038, ISO 18352	16	50	08.0182

Optional accessories

Acceleration unit for Amsler HIT600F

For higher speeds and energies

- Covers common automotive requirements
- Easy operation with ZwickRoell testing software

Description	Item number
Acceleration unit for Amsler HIT600F <ul style="list-style-type: none"> - Attainable impact velocity at 40 kg accelerated mass: 5.7 m/s - Potential energy, max. at 40 kg accelerated mass: 670 J - Attainable impact velocity at 5 kg accelerated mass: 7.6 m/s - Potential energy, max. at 5 kg accelerated mass: 145 J 	08.0101