

Product Information

Amsler HIT1100F / HIT2000F drop weight testers

CTA: 171150 171145



Amsler HIT1100F, puncture test



Amsler HIT1100F, helmet test

Materials and component testing with a single instrument

Testing components often places particular demands on a drop weight tester. The impact surfaces of the component are often not exactly at right angles to the impact direction, necessitating sturdy guides for the tup-holder. Many components have to be secured in special holders; the drop weight tester is equipped with a T-slotted platform for this purpose, enabling flexible fixture positioning. If tests are to be performed at low or elevated temperatures, the entire test arrangement must be accommodated in a temperature chamber. The Amsler HIT1100F and HIT2000F drop-weight testers are optimized for this situation; with the appropriate fixtures they can additionally be used for many standardized materials tests.

Applications

- Components testing
- 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
- Charpy test to ISO 179-2
- Izod test to ISO 180 and ASTM D256

Advantages and features

Reliable test results

- Sturdy guides make these drop weight testers ideal for components testing
- High natural frequency measurement enables exact test results

Flexibility

- Mounting platform with T-slots allows flexible mounting of various test arrangements.
- The drop weight tester can be equipped with a temperature chamber and an acceleration unit as options.

Product Information

Amsler HIT1100F / HIT2000F drop weight testers

Type	Amsler HIT1100F drop weight tester	
Item No.	08.0154	
Potential energy, without acceleration unit, max.	287	J
Potential energy, with acceleration unit, max.	1126	J
Dimensions		
Height	3270	mm
Width	1400	mm
Width, safety door open	2600	mm
Depth	920	mm
Depth with extended temperature chamber (accessory)	1650	mm
Test area		
Height	740	mm
Width	880	mm
Depth	650	mm
Drop height, dependent upon the testing equipment, max.	1000	mm
Drop height, dependent upon the testing equipment, min.	50	mm
Drop weight, max.	29.3	kg
Drop weight, min.	9.3	kg
Impact velocity, max.	4.4	m/s
Force signal resolution	16	bit
Measured-value rate (force signal), max.	3	MHz
Weight, with typical accessories, approx.	1450	kg
Specific floor load (point load of the leveling feet)		
Static		
Based on typical accessories	131	kN/m ²
Static and dynamic		
Without acceleration	169	kN/m ²
With acceleration	284	kN/m ²
Floor loading		
Static		
Based on typical accessories	11	kN/m ²
Static and dynamic		
Without acceleration	14	kN/m ²
With acceleration	24	kN/m ²
Power input specifications		
Power plug	CEE 7 (ground contact)	
Power supply	230	V
Phases	1Ph/N/E	
Permissible voltage fluctuation	±10	%
Power consumption (full load), approx.	2	kVA
Power frequency	50/60	Hz
Compressed air supply		
Compression	6 to 8	bar
Compressed air consumption (compressed air) per impact	10	l
Required air-supply output-rate, min.	100	l/min

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Amsler HIT1100F / HIT2000F drop weight testers

Type	Amsler HIT1100F drop weight tester
Compressed air connector plug	DN 7
Maintenance unit	Mounted on instrument

Type	Amsler HIT2000F drop weight tester	
Item No.	08.0171	
Potential energy, without acceleration unit, max.	431	J
Potential energy, with acceleration unit, max.	2044	J
Dimensions		
Height	3870	mm
Width	1400	mm
Width, safety door open	2600	mm
Depth	920	mm
Depth with extended temperature chamber (accessory)	1650	mm
Test area		
Height	740	mm
Width	880	mm
Depth	650	mm
Drop height, dependent upon the testing equipment, max.	1500	mm
Drop height, min.	50	mm
Drop weight, max.	29.3	kg
Drop weight, min.	9.3	kg
Impact velocity, max.	5.4	m/s
Force signal resolution	16	bit
Measured-value rate (force signal), max.	3	MHz
Weight, with typical accessories, approx.	1600	kg
Specific floor load (point load of the leveling feet)		
Static		
Based on typical accessories	144	kN/m ²
Static and dynamic		
Without acceleration	201	kN/m ²
With acceleration	442	kN/m ²
Floor load (applied via the load frame surface)		
Static		
Based on typical accessories	12	kN/m ²
Static and dynamic		
Without acceleration	17	kN/m ²
With acceleration	37	kN/m ²
Power input specifications		
Power plug	CEE 7 (ground contact)	
Power supply	230	V
Phases	1Ph/N/E	
Permissible voltage fluctuation	±10	%
Power consumption (full load), approx.	2	kVA
Power frequency	50/60	Hz

Product Information

Amsler HIT1100F / HIT2000F drop weight testers

Type	Amsler HIT2000F drop weight tester	
Compressed air supply		
Compression	6 to 8	bar
Compressed air consumption (compressed air) per impact	20	l
Required air-supply output-rate, min.	100	l/min
Compressed air connector plug	DN 7	
Maintenance unit	Mounted on instrument	

Accessories required

Mass carriage with single masses for Amsler HIT1100F

Description	Item number
Mass carriage with single masses for Amsler HIT1100F Consisting of: 9.3 kg to 29.3 kg in 1 kg increments	08.0156

Mass carriage with single masses for Amsler HIT2000F

Description	Item number
Mass carriage with single masses for Amsler HIT2000F consisting of: 10,07 kg to 30,07 kg in 1 kg steps	08.0365

Clamping unit

Description	Item number
Clamping unit, pneumatic - including mount for clamping rings - for gripping of the specimen for puncture tests - Temperature range: -40 to 70°C	08.0346
Clamping unit, manual - including mount for clamping rings - for gripping of the specimen for puncture tests - Temperature range: -70 to 140°C	08.0361

Clamping rings

Type	Standard	Diameter, inner [mm]	Clamping surfaces	Scope of delivery [pair]	Item No.
Clamping rings	ISO 7765-2	40	Smooth	1	08.0173
Clamping rings	-	20	Grooved	1	08.0324
Clamping rings	ISO 6603-2	40	Grooved	1	08.0161
Clamping rings	ASTM D3763	76	Grooved	1	08.0162

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Impactor

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

Standard	Impactor tip [mm]	Nominal force F_{nom} [kN]	Item No.
ISO 6603-2, ISO 7765-2	Ø 10	9	08.0158
ISO 6603-2, ISO 7765-2	Ø 20	15	08.0083
ASTM D3763	Ø 12,7	15	08.0159

Testing equipment for Charpy and Izod

The testing equipment consists of a mount, test fixture, load cell and impactor.

Description	Item number
Mounting for test tools	08.0345
Charpy test tool ¹⁾ - for tests to ISO179-2 - including specimen centering	08.0347
Izod test tool ¹⁾ - for tests to ISO180 - including specimen centering	08.0348
Impactor for replaceable tips	08.0144
Charpy impactor tip ²⁾	08.0169
Izod impactor tip ²⁾	08.0170

1) Required: Mounting for test tools

2) Required: Impactor for replaceable tips

Optional accessories

Acceleration unit for Amsler HIT1100F

For higher speeds and energies

- Easy operation with ZwickRoell testing software

Description	Item number
Acceleration unit for Amsler HIT1100F - Attainable impact velocity at 29.4 kg accelerated mass: 8.75 m/s - Potential energy, max. at 29.4 kg accelerated mass: 1126 J - Attainable impact velocity at 9.3 kg accelerated mass: 14.1 m/s - Potential energy, max. at 9.3 kg accelerated mass: 926 J	08.0082

Acceleration unit for Amsler HIT2000F

For higher speeds and energies

- Easy operation with ZwickRoell testing software

Description	Item number
Acceleration unit for Amsler HIT2000F	08.0172

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Description	Item number
<ul style="list-style-type: none">- Attainable impact velocity at 29.4 kg accelerated mass: 11.8 m/s- Potential energy, max. at 29.4 kg accelerated mass: 2044 J- Attainable impact velocity at 9.3 kg accelerated mass: 19.4 m/s- Potential energy, max. at 9.3 kg accelerated mass: 1745 J	

Temperature chamber for Amsler HIT1100F and Amsler HIT2000F

For tests at low and high temperatures

Description	Item number
Temperature chamber for Amsler HIT1100F and Amsler HIT2000F <ul style="list-style-type: none">- Inner dimensions 400 x 400 x 400 mm- Temperature range -70 to 180°C- LN2 is required for cooling	08.0087