

Product Information

Drop Weight Tester HIT230F for tests on plastics

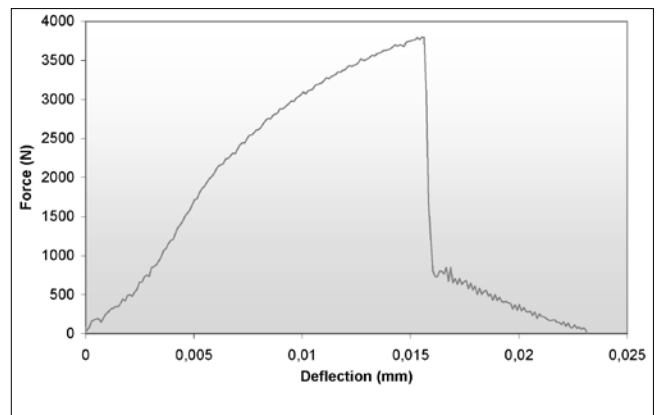


The drop weight tester HIT230F has been developed in close cooperation with our customers. This has allowed the requirements of both research and development and quality assurance to be fulfilled. It is designed for the performance of multiaxial impact tests on plastics.

The range of applications includes material characterisation of standard specimens, established Standards of research and development.

Advantages/Characteristics

- Simple and safe operation
 - Good accessibility to the test area
 - Flexible design with simple interchanging of test accessories
 - Intelligent protection system – operation of a safety door is not necessary to place a specimen in the tester
 - Innovative specimen clamping system enables fast and simple gripping of the specimen
 - Testing in a wide temperature range is possible without installing an expensive temperature chamber in the test frame
 - Inexpensive, external temperature conditioning and/or existing equipment can be used
- The innovative design of the entire force measurement chain leads to a low noise measurement data. This allows a reliable determination of the materials characteristics to be achieved from the force-deformation curve
 - High specimen throughput due to ergonomic specimen clamping and protective unit.
 - Automatic lifting of the drop weight with stepless adjustment of the height from 0.1 m to 1 m
 - High test data acquisition rate (4 MHz) with simultaneous high resolution (16 bit)



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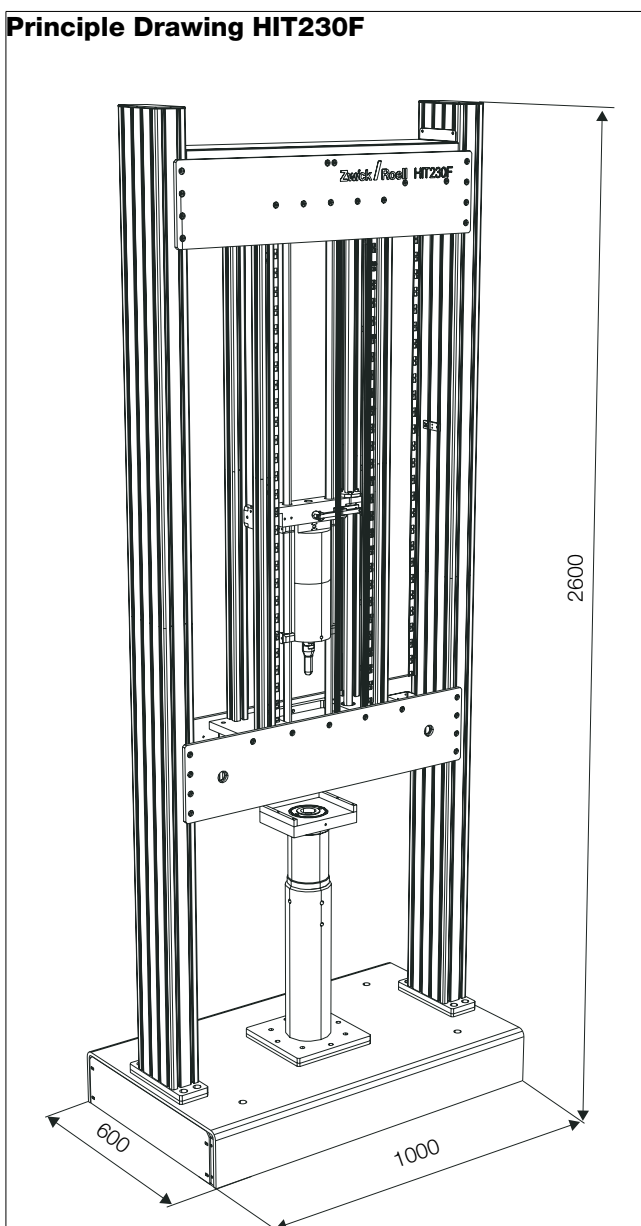
The main applications are:

- Multiaxial impact test to ISO 6603-2, ASTM D 3763, ASTM D 3029 (Method B) at room temperature and in expanded temperature range

Available options

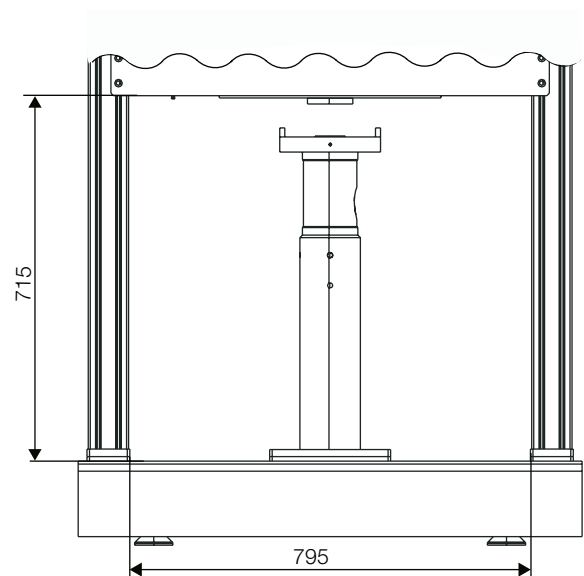
- Various sensors and tup dimensions with protected axial connection of the measurement cables
- Holders for ISO and ASTM specimen
- External tempering box

Principle Drawing HIT230F



External tempering box for tempering impact specimen

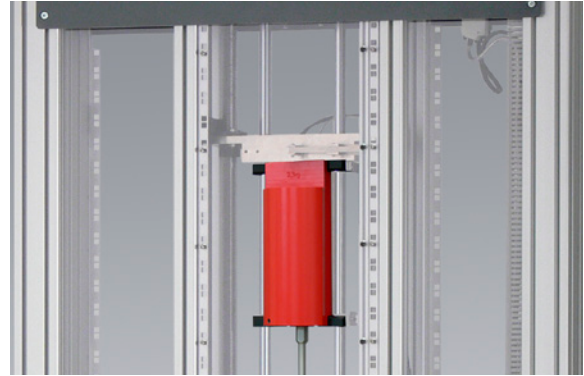
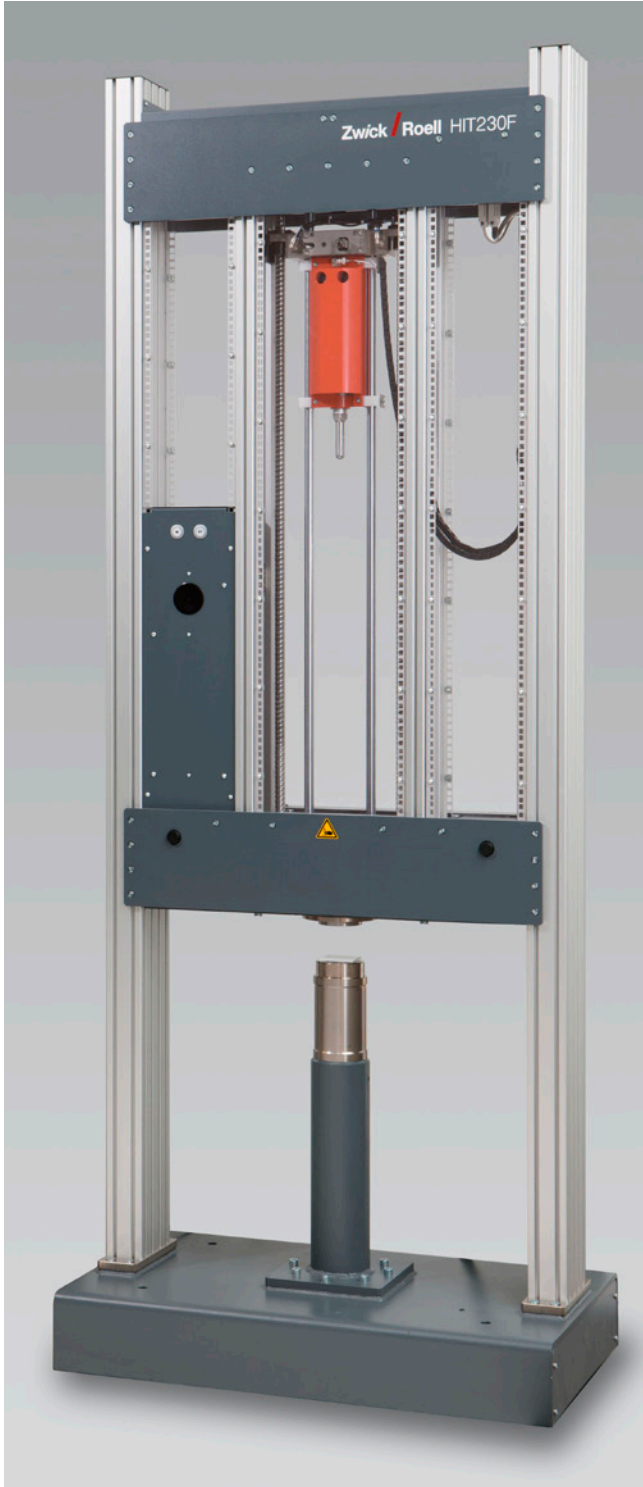
Dimensions of the test area



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Description of the drop weight tester



Motorized lifting of the falling weight, pneumatic escapement



Flexible specimen clamping: facilitating quick changes from ISO to ASTM tools



Secure two handed operation

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Data	Value
Basic instrument	
Drop height	Program controlled via motor drive, adjustable from 0.11 m to 1 m
Speed range	up to 4.4 m/s at 1 m (0.2406 ft/s at 39.4 inch) fall height
Speed measurement	before striking, via optical measuring unit
Energy range	up to 230 Joule (169.6 ft-lb)
Resolution of load signal	16 Bit
Aquisition rate (load signal)	up to 4 MHz
Required floor loading	20 kN/m ²
Point loading of the feet	200 N/cm ²
Specimen clamping	pneumatic with secure two handed operation
Contact force specimen clamping	6-9 kN
Compressed air	Supply pressured 6 bar, air supply approx. 20 l/impact, Required: Power output of compressed-air supply 600 l/min
Maintenance unit	is mounted directly on the instrument
Dimensions H x W x D	2600 x 1000 x 600 mm
Weight	400 kg
Mains connections	
Voltage supply	85 to 132 VAC or 170 to 264 VAC – automatic setting
Power consumption	500 VA

Basic instrument for tests on plastics

Description	Item number
HIT230F, instrumented drop weight tester, inclusive of electronics	048404
Already included in the scope of supply:	
- Fixed makrolon protective shields (front and rear)	
- Drop weight 23.5 kg	

Accessories

Description	Item number
Piezo load cell Fmax 9 kN with half-sphere striker dia. 10 mm according to ISO 6603-2	752084
Piezo load cell Fmax 15 kN with half-sphere striker dia. 20 mm according to ISO 6603-2	011336
Piezo load cell Fmax 15 kN with half-sphere striker dia. 12.7 mm (1/2") according to ASTM D 3029 (Method B) and ASTM D 3763	011346
Clamping rings, inner diam. 20 mm, riffled clamp surface (scope of supply 1 pair)	011352
Clamping rings acc. to ISO 6603-2, inner diam. 40 mm, riffled clamp surface (scope of supply 1 pair)	011350
Clamping rings acc. to ASTM D 3763, inner diam. 76 mm, riffled clamp surface (scope of supply 1 pair)	011354
Anvil for ISO specimens, including tool for unclamped tests	011357
Anvil for ASTM specimens, including tool for unclamped tests	011358
testXpert® II Basic Program (in English)	014985
testXpert® II Software: Master Test Program for running instrumented and non-instrumented impact tests	377008
testXpert® II Software: Standard Test Program instrumented puncture test acc. to ISO 6603-2	048119
testXpert® II Software: Standard Test Program instrumented puncture test acc. to ASTM D 3763	048121
Specimen cooling box	326225
Temperature range -40 °C to 0 °C, control accuracy: ± 3K (at 0 °C), ± 1K (at -40 °C), cooling time from +20 °C down to -40 °C approx. 70 min (dep. on content of cooling box), capacity: approx. 16 l	