

BFH 12A AUTOMATED BAM FALL HAMMER (IMPACT TESTER)

Product Datasheet

Sensitiveness to impact stimuli is one of the most important characteristics of energetic materials defining their safety in handling, processing or transportation.

Automated BAM Fall Hammer (Impact tester) BFH 12A is used to measure impact sensitivity of solid or liquid energetic materials (i.e. high explosives, propellants, pyrotechnics or primary explosives) and other substances suspected to be sensitive to impact stimuli according to BAM standard procedure.

The BFH 12A is equipped with an automated lifting mechanism for remote controlled positioning, dropping and collection of the drop weight. The BFH 12A introduces a unique Drop Weight Exchange Window for safer, quicker and more convenient exchanges of the drop weights.

The BFH 12A is designed to fulfill all corresponding international standards of testing with special attention paid to precision (*low-friction brass grooves of drop weights; stainless steel guide rails; calibrated set of drop weights*), comfortable use (*automated lifting mechanism*) and safety (*remotely controlled weight releasing device and shielded protective housing*).

It's applicable wide range of impact energies (from 0.25 J to 100 J) allows to measure impact sensitivity of large variety of energetic materials from sensitive primary explosives to relatively insensitive secondary explosives or other dangerous tested substances.

ADVANTAGES & FEATURES

The impact tester BFH 12A has several remarkable enhancements which improve comfort of use, reliability, safety and service life of the tester:

- Unique Drop Weight Exchange Window for safer, quicker and more convenient exchange of Drop Weights
- Automated Lifting Mechanism remotely operates positioning, fall and collection of Drop Weight
- Protective Housing
- Wide range of impact energies from 0.25 J to 100 J
- Six Drop Weights from 0.25 kg to 10 kg
- Drop weights equipped with brass grooves for reduced sliding friction
- Pneumatic or electromagnetic releasing devices for remotely controlled drop weight fall
- File Plates as alternative consumables
- Wide range of accessories
- Premium quality consumables at cost effective prices

COMPLIANCE

BFH 12A is designed to comply with requirements of the following standards of testing:

- EN 13631-4:2002 Explosives for civil uses. High explosives Part 4: Determination of sensitiveness to impact of explosives
- European Commission Directive 92/69/EEC, Method A14: Explosive properties
- UN Recommendation on the Transport of Dangerous Goods, Manual of Tests and Criteria, United Nations, New York, 2010 [Test 3(a)(ii)]
- STANAG4489
- Energetic Materials & Assessment Policy Committee Manual of Tests, Volume 1, Issue 4, Nov 2007 (EMTAP TESTING); Test No 43
- MIL-STD-1751A: Safety and Performance Test for the Qualification of Explosives (High Explosives, Propellants, and Pyrotechnics), Method 1015: BAM Impact Test Apparatus
- GB/T 21567-2008: Dangerous goods – Test method for impact sensitivity of explosive substance



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TECHNICAL PARAMETERS

Drop weights:	0.25; 0.5; 1; 2; 5 and 10 kg (other weights available upon request)
Maximum drop height:	1 m (other heights available upon request)
Impact energies:	0.25 J - 100 J
Standard sample volume:	40 mm ³

STANDARD INSTRUMENT PARTS

BFH-12A	Automated BAM Fall Hammer BFH 12A - main components
BFH-ERD	Electromagnetic releasing device 220 - 240 V / 50 Hz or 110 - 120 V / 60 Hz
BFH-DCW	Drop weight exchange window
BFH-DW0.5/1/2/5/10	Drop weights 0.5/1/2/5/10 kg
BFH-SP-3	Set of sampling spoons for solid substances - 5, 10 and 40 mm ³
BFH-WB	Protective housing with front polycarbonate window
BFH-MGS	Standard metric ruler
BFH-SAP	Starting set of essential parts of main anvil SS locating ring; SS locating plate; intermediate anvil 26x26 mm
BFH-Cons	Starting set of consumables Steel cylinders (200 pcs); Steel guide rings - premium (100 pcs)

Set of standard drop weights



MAIN OPTIONAL ACCESSORIES

BFH-A	Spare intermediate anvil 26 x 26 mm (60 HRC)
BFH-CR	Spare locating ring with orifices for gas release
BFH-CR100	Spare locating plate
BFH-SHW-1/2	Spare cylindrical striking head for drop weight (fit for 1 kg / 2 kg to 10 kg drop weight)
BFH-DW0.25	Drop weight 0.25 kg
BFH-FPH	File plate holder (to hold the file plate on the main anvil)
BFH-LGS	Logarithmic ruler (fit for testing in accordance with STANAG 4489)
BFH-DW-CAL	Drop weight calibration by notified body

CONSUMABLES

BFH-SC-100	Set of steel guide rings - premium, 100 pcs 16 x 13 mm (D x L), all surface are polished
BFH-SR-200	Set of steel cylinders, 200 pcs 10 x 10 mm (D x L)
BFH-FP-100	Set of file plates, 100 pcs 20 x 20 x 5 mm (W x L x H)
BFH-OR-50	Rubber ring for liquid substances, 50 pcs

SHIPPING DATA (STANDARD)

Package dimensions (W x L x H):	197 x 62 x 65 cm ; 80 x 60 x 73
Package gross weight: approx.	400 kg
Custom code:	9031 80 38

INSTALLATION REQUIREMENTS

Space requirements:	W x L x H: 450 x 450 x 2000 mm; Weight: approx. 320 kg
Concrete block with dimensions of	700 x 700 x 400 mm for placing the instrument
Power input requirements:	220 - 240 V / 50 Hz or 110 - 120 V / 60 Hz
Local exhaust (replaceable by the Ex-proof suction device BFH-EPS as an optional equipment)	

Drop weight 0.25 kg

