

BFH-12 IMPROVED BAM FALL HAMMER (IMPACT TESTER)

Product Datasheet

Improved BAM Fall Hammer (Impact tester) BFH-12 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 tester BFH-12 is equipped with an unique accessory - **Drop Weight Exchange Window** which allows to quicker, safer and more comfortable interchange of drop weight compared to standard BAM impact testers. No more dangerous climbing on the top of the concrete base of the tester or on a step ladder for interchanging of the drop weight. The interchange takes place in convenient position at a height of about 1.2 m from the bottom of the instrument (1.6 m from the lab floor if the instrument is placed on a concrete base 40 cm high).

Impact tester BFH-12 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 (*drop weight exchange window*) and safety (*remotely controlled weight releasing device and shielded protective box*).

Its applicable wide range of impact energies (from 0.5 to 100 J) allows to measure impact sensitivity of large variety of energetic materials from sensitivite primary explosives to relatively insensitive secondary explosives or other dangerous tested substances.

MAIN IMPROVEMENTS

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

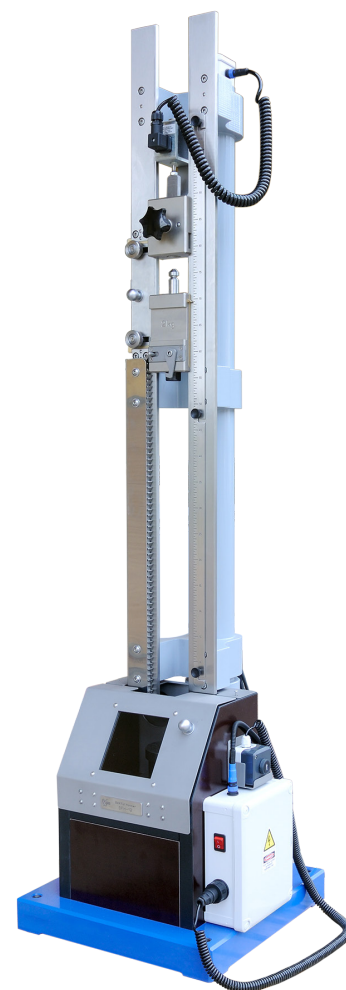
- Unique drop weight exchange window
- Drop weights with brass grooves for friction reduction
- Electromagnetic or pneumatic releasing device operated via remote control
- Protective box as a standard accessory
- Robust design with exposed parts made of stainless steel (e.g. guide rails and tooth rack)
- File plates - consumables for alternative testing of impact stimuli
- Wide range of accessories
- Standard consumables at favourable prices

APPLICATIONS

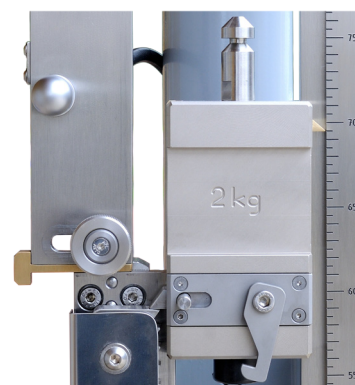
Sensitiveness to impact stimuli is one of the most important characteristics of energetic materials defining their safety in handling, processing or transportation.

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

- UN Recommendation on the Transport of Dangerous Goods, Manual of Tests and Criteria, United Nations, New York, 2003 [13.4.2 Test 3(a)(ii)]
- STANAG4489: Explosives, Impact Sensitivity Tests
- MIL-STD-1751A: Safety and Performance Tests for the Qualification of Explosives (High explosives, Propellants, and Pyrotechnics)
- 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



Drop Weight Exchange Window



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TECHNICAL PARAMETERS

| | |
|-------------------------|---|
| Standard drop weights: | 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: | 0.5 – 100 J |
| Standard sample volume: | 40 mm ³ |

STANDARD INSTRUMENT PARTS

| | |
|--------------------|--|
| BFH-12 | BAM Fall Hammer BFH-12 - 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 weight 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 box with front polycarbonate window |
| BFH-MGS | Standard metric ruler |
| BFH-SAP | Starting set of essential parts of main anvil <i>SS locating ring; SS locating plate; intermediate anvil 26x26 mm</i> |
| BFH-Cons | Starting set of consumables Steel cylinders (200 pcs); Steel guide rings - premium (100 pcs) |

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): | 60 x 176 x 62 cm |
| Package gross weight: approx. | 365 kg |
| Custom code: | 9031 80 98 |

INSTALLATION REQUIREMENTS

| | |
|---|---|
| Space requirements: | W x L x H: 450 x 450 x 1800 mm; Weight: approx. 300 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) | |

Set of 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-RDP | Pneumatic releasing device |
| 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-SS-0.5/1.0 | Stainless steel sieve, calibrated (sieve mesh 0.5 or 1.0 mm) |
| BFH-DW-CAL | Drop weight calibration by notified body |

Steel guide rings and cylinders

