BFH SERIES

BAM FALL HAMMER SERIES

The BAM Fall Hammer (also known as BAM Impact Tester or BAM Drop Hammer) is designed to determine the sensitivity of explosive materials to the impact stimuli by a falling drop weight in accordance with the BAM procedure.

OZM Research manufactures four types of standard BAM Fall Hammers for measuring impact sensitivity of solid or liquid energetic materials (primary and secondary high explosives, propellants, pyrotechnics) and also other substances potentially sensitive to impact stimuli in the range of impact energies between 0.25 J and 100 J. Sensitivity of the most sensitive substances such as primary explosives or highly sensitive pyrotechnics can be measured in the range of impact energies from 0.025 J to 20 J on a specially developed BAM Fall Hammer **BFH PEx**.

APPLICATIONS

The sensitivity to impact stimuli is one of the most important characteristics of energetic materials defining their safety in handling, processing or transportation. Its determination is a necessary part of characterization of new explosives, modified formulations or manufacturing conditions. It is also used for defining influences of impurities or ageing, in the quality control of manufactured explosives, in surveillance of in-service explosives and in transport/storage classification of explosive materials.

ADVANTAGES & FEATURES

▶ Unique Drop-weight Exchange Window for safer, quicker and more convenient exchange of drop weights (**BFH 12A** and **BFH 12** only)

▶ Automated Lifting Mechanism remotely executes positioning, drop and collection of Drop Weight (**BFH 12A** only)

▶ Wide range of impact energies from 0.25 J to 100 J (seven drop weights from 0.25 kg to 10 kg)

▶ Drop weights are equipped with brass grooves to lower sliding friction

▶ High corrosion resistance of the critical parts

▶ Protective housing as a standard accessory

▶ Wide range of accessories

COMPLIANCE

OZM Research manufactures several modifications of this instrument in order to better fit different classes of explosive materials and different standards of testing, such as:

■ **UN Recommendation on the Transport of Dangerous Goods, Manual of Tests and Criteria** – [13.4.2 – Test 3(a)(ii)]; [13.4.6 – Test 3(a)(vi)]

■ **EN 13631-4:2002**

■ **Council Regulation (EC) No 440/2008**; A.14

■ **GB/T 21567-2008**

■ **STANAG 4489**

■ **MIL-STD-1751A**, Method 1015 (BAM impact test)

■ **MIL-STD-1751A**, Method 1012 & 1013 (Type 12 tools)

■ **EMTAP**, Manual of Tests, Test No 43

Drop-weight Exchange Window
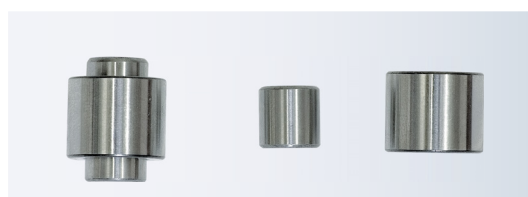
Steel cylinders and guide rings

Set of Drop Weights

BFH 10

STANDARD BAM FALL HAMMER

The **BFH 10**™ is fully functional standard model of BAM Fall Hammer, ideal for the customers who are looking for economy but still high-quality solution.

1.8 m

ADVANTAGES & FEATURES

▶ Remotely controlled Electromagnetic or Pneumatic release device

▶ Stainless steel guide rails

▶ Extra durable drop weights with corrosion-proof coating and modified to lower sliding friction

▶ Metric and logarithmic ruler

▶ Comply with all relevant international standards

BFH 12

IMPROVED BAM FALL HAMMER

The **BFH 12**™ is improved model of BAM Fall Hammer supplied by OZM Research. It is equipped with unique Drop-weight Exchange Window for safer, quicker and more convenient exchanges of the drop weights.

1.8 m

ADVANTAGES & FEATURES

▶ Remotely controlled Electromagnetic release device

▶ Drop-weight Exchange Window

▶ Drop height can be extended up to 2 meters

▶ Stainless steel guide rails

▶ Extra durable drop weights with corrosion-proof coating and modified to lower sliding friction

▶ Metric and logarithmic ruler

▶ Comply with all relevant international standards

▶ **OPTIONAL** Impact sensitivity of detonator in accordance with EN 13763-3:2002

▶ **OPTIONAL** Type 12 tools

OZM RESEARCH

VER 2025

BFH 12A

AUTOMATED BAM FALL HAMMER

The BFH 12A™ is the top model of BAM Fall Hammer supplied by OZM Research. It is equipped with automated lifting mechanism for remote controlled positioning, drop and collection of the drop weight.


1.8 m

The **BFH 12A** also introduces a unique Drop-weight Exchange Window for safer, quicker and more convenient exchanges of the drop weights.

ADVANTAGES & FEATURES

- ▶ Remotely controlled Electromagnetic release device
- ▶ Automated Lifting Mechanism
- ▶ Drop-weight Exchange Window
- ▶ Remote control with inbuilt guide for Bruceton Up-and-Down procedure and export to PC available
- ▶ Drop height can be extended up to 2 meters
- ▶ Stainless steel guide rails
- ▶ Extra durable drop weights with corrosion-proof coating and modified to lower sliding friction
- ▶ Metric and logarithmic ruler
- ▶ Comply with all relevant international standards
- ▶ `OPTIONAL` Impact sensitivity of detonator in accordance with EN 13763-3:2002
- ▶ `OPTIONAL` Type 12 tools

Remote control
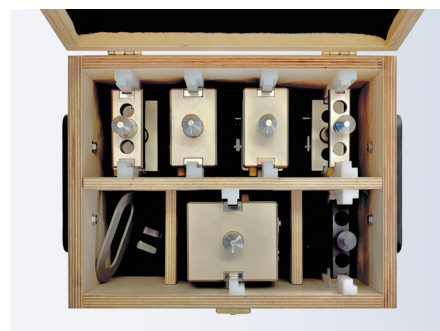
Storage case for drop weights

BFH Comparison – Main Features and compliance

	BFH 10	BFH 12	BFH 12A
Stainless steel guide rails	●	●	●
Protective housing in standard	●	●	●
Impact energy between 0.25 J and 100 J	●	●	●
Drop-weight Exchange Window	–	●	●
Automated lifting mechanism	–	–	●
Inbuilt guide for Bruceton Up-and-Down procedure	–	–	●
Standard drop height 100 cm	●	●	●
Optional drop height extension up to 200 cm	–	●	●
UN RTDG, Manual of Tests and Criteria, Test 3(a)(ii)	●	●	●
STANAG 4489, Annex C	●	●	●
EN 13631-4:2002	●	●	●
Optional Type 12 tools (MIL-STD-1751A, Method 1012)	○	●	●
Optional testing of detonators (EN 13763-3:2002)	–	●	●

● Applicable   ○ Limited use   – Not supported