

CTL 022 – BAM Fallhammer Test Apparatus Data Sheet



An instrument for determining the sensitivity of powders, liquids and gels to impact stimuli

Some powders are deliberately manufactured with such highly energetic behaviour e.g. in military applications, but occasionally it is an unexpected property of a new material. For regulatory compliance there are a number of screening tests which have to be performed on new materials in order that they can be safely transported. One such screening is a BAM Fallhammer test, which measures sensitivity to mechanical impact force.

This apparatus is defined in the United Nations Handbook "Recommendations on the Transport of Dangerous Goods – Manual of Tests and Criteria" and also in the European Commission Handbook "Classification, Packaging and Labelling of Dangerous Substances in the European Union Part 2 – Testing Methods". This apparatus also appears in the Defence Ordnance Safety Group, Energetic materials Testing and Safety Policy Committee Manual of Tests Volume 1 Test 43A.



BAM Fallhammer Apparatus

Benefits

- Excellent for screening products for sensitivity to impact stimuli in order to determine whether an explosive has been developed by accident
- Excellent screening tool for classifying a product for UN transport and EU packaging and labelling classification
- Simple to use electromagnetic drop weight release mechanism
- Robust design

Functional specification & deliverables

- Solid cast steel base block.
- Main 100 mm diameter anvil.
- A centring ring for locating the intermediate anvil on the main anvil
- 2 Intermediate 26 mm diameter anvils.
- 2 locating ring with orifices for gas release.
- 200 steel cylinders (roller bearings) – (chargeable extra with new apparatus)
- 50 rubber 'O' rings for steel cylinders (liquid testing only)
- 100 steel collars for steel cylinders locating – (chargeable extra with new apparatus)
- Upper to lower cylinder distance gauge for 1-2mm sample gap required for liquids.
- A central column with guides (graduated scale) ready set for correct height.
- A 1 kg drop weight carrier assembly.
- A 1 kg weight already fitted to 1 kg drop weight assembly for a 2 kg overall weight.
- A 5 kg drop weight carrier assembly.
- A 5 kg weight already fitted to 5 kg drop weight assembly for a 10 kg overall weight.
- A drop weight electromagnetic release device.
- An electromagnetic power supply distribution box together with electromagnet 12 V supply cable, 100-120 V, 220-240 V mains inlet supply cable and remote handset for weight release.
- Electromagnetic safety pin
- A 40 mm³ sample loading spatula.
- A polycarbonate protective shield.
- A comprehensive instruction manual.

Optional extras

- Additional sets of BAM Fallhammer collars and rollers (quality/tolerance checked).
- Bespoke custom weights or other requirements may be possible (please enquire).

DEKRA Organisational & Process Safety

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