SV SERIES

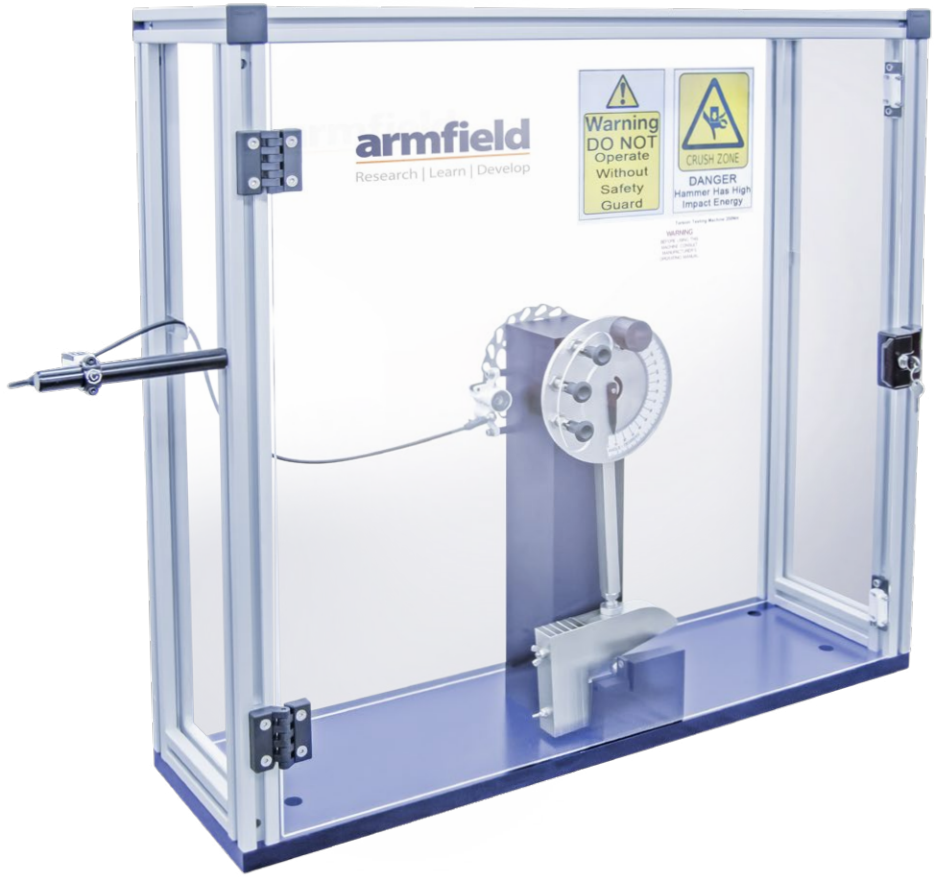
Strength of Materials

Pendulum Impact Tester (25J Impact Energy) – SV804

A sturdy bench top mounted unit for the study of notched bar (Charpy) impact strength tests.

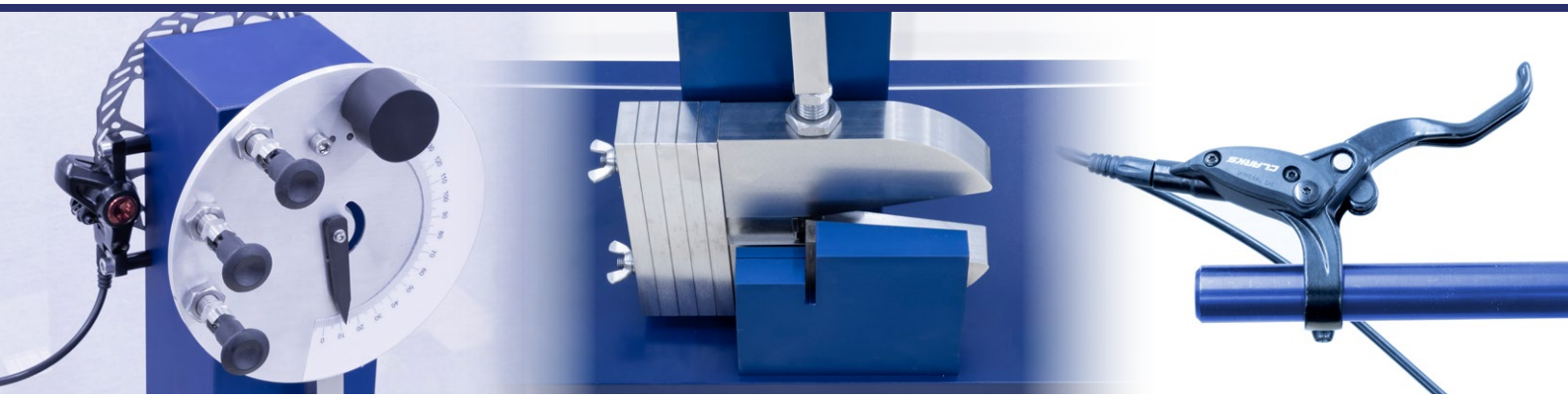
The base plate has an anvil and pillar which have replicable impact profiles for supporting the notched specimens prior to testing.

BENCH TOP MOUNTED UNIT FOR THE STUDY OF NOTCHED BAR (CHARPY) IMPACT STRESS



A number of test specimens are provided, with further specimens available separately (SV804-1).

The specimens are manufactured to specific notched specifications (British Standards EN 10045-1 (1990) and come in aluminium and brass.



Experimental content

- To determine notched impact energy absorption
- Notched bar impact strength, Charpy test
- Observe and evaluate fracture surface characteristics from broken samples
- Understand the influence of notched shape and cross-sectional area on the notched bar impact
- Understand the influence of materials and their properties on notched impact

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Issue: 1
URL: http://www.armfield.co.uk/structures
Applications
ME CE IP

Description

A sturdy bench top mounted unit for the study of notched bar (Charpy) impact strength tests. A heavy base plate with protective guard surrounds all the components, the guard has a lockable door for ease of access when setting the test but also security whilst not in use.

The base plate has an anvil and pillar which have replicable impact profiles for supporting the notched specimens prior to testing.

A heavy hammer swings on a pre-defined radius, set by the hammer arm. The initial energy of the hammer can be varied by changing the starting weight and/or the start height of the hammers' swing. Height variation can be varied between 3 set positions. As the hammer swings through its radius, it impacts on the specimen and the distance it travels passed the specimen is measured on an integral scale shown in degrees. A brake system stops the hammer swing after impact of specimen.

A pointer travels with the hammer upon specimen breakage, thus indicating the change in angle from start position to highest point after fracture. The marker remains in position following specimen fracture to enable the value to be recorded. This can then be used to calculate the amount of energy absorbed by the specimen.

The release of the hammer is controlled with a plunger. A push block is situated on the protractor face, this facilitates a two handed operation and keeps the user away from the swinging arm for full safety.

A number of test specimens are provided, with further specimens available separately (SV804-1). The specimens are manufactured to specific notched specifications (British Standards EN 10045-1 (1990)) and come in aluminium and brass.

Requirements	Scale
1Ph	

Electrical supply: 110/120V, 60Hz or 220/240V, 50Hz

Technical specification

- Capacity: 6.75J (min) to 25J (max)
- Aluminium and brass specimens (10 of each)
- Specimen Cross Section: 10 x 7.5mm, Up to 10mm x 10mm and down to 10mm x 5mm
- Bearing Support Span: 75mm
- Notch Cross Section of Standard Samples: 10 x 5.5mm
- 3 x Starting Positions
- 6 x Possible starting weights of hammer head
- Specimens, Impact tip and Impact plates to British Standards EN 10045-1 (1990)

Overall dimensions	
Length	0.935m
Width	0.255m
Height	0.875m
Packed and crated shipping specifications	
Volume	0.59m^3
Gross weight	120kg

Related laws

- Charpy Test
- Impact Testing
- Strength of Materials
- Potential Energy
- Impact Energy
- Energy Conversion
- Fracture
- Absorbed Energy
- Gravity
- Notched Specimens

Features / benefits

- High quality, sturdy 25J Charpy Impact Tester
- Apparatus fully enclosed behind safety guard
- Lockable door and brake mechanism
- Three set positions for impact hammer
- Mass of impact hammer adjustable
- Brake system to stop hammer swing
- Ideal for small groups of students
- Two metal specimen sets supplied as standard to EN 10045-1 (1990)

Ordering specification

- 5 x Hammer weight
- 2 x Latch keys
- 10 x Aluminium specimen
- 10 x Brass specimen
- 1 x Spanner
- 1 x Hex wrench set
- Instruction manual
- Packing list
- Test sheet

Recommended accessories / equipment:

- SV804-1: Optional set of 10 Brass and 10 Aluminium Test Specimens

Operational conditions

- **Storage temperature:** -10°C to +70°C
- **Operating temperature range:** +10°C to +50°C
- **Operating relative humidity range:** 0 to 95%, non-condensing

Ordering codes

- **SV804** Pendulum Impact Tester (25J Impact Energy)

Armfield standard warranty applies with this product