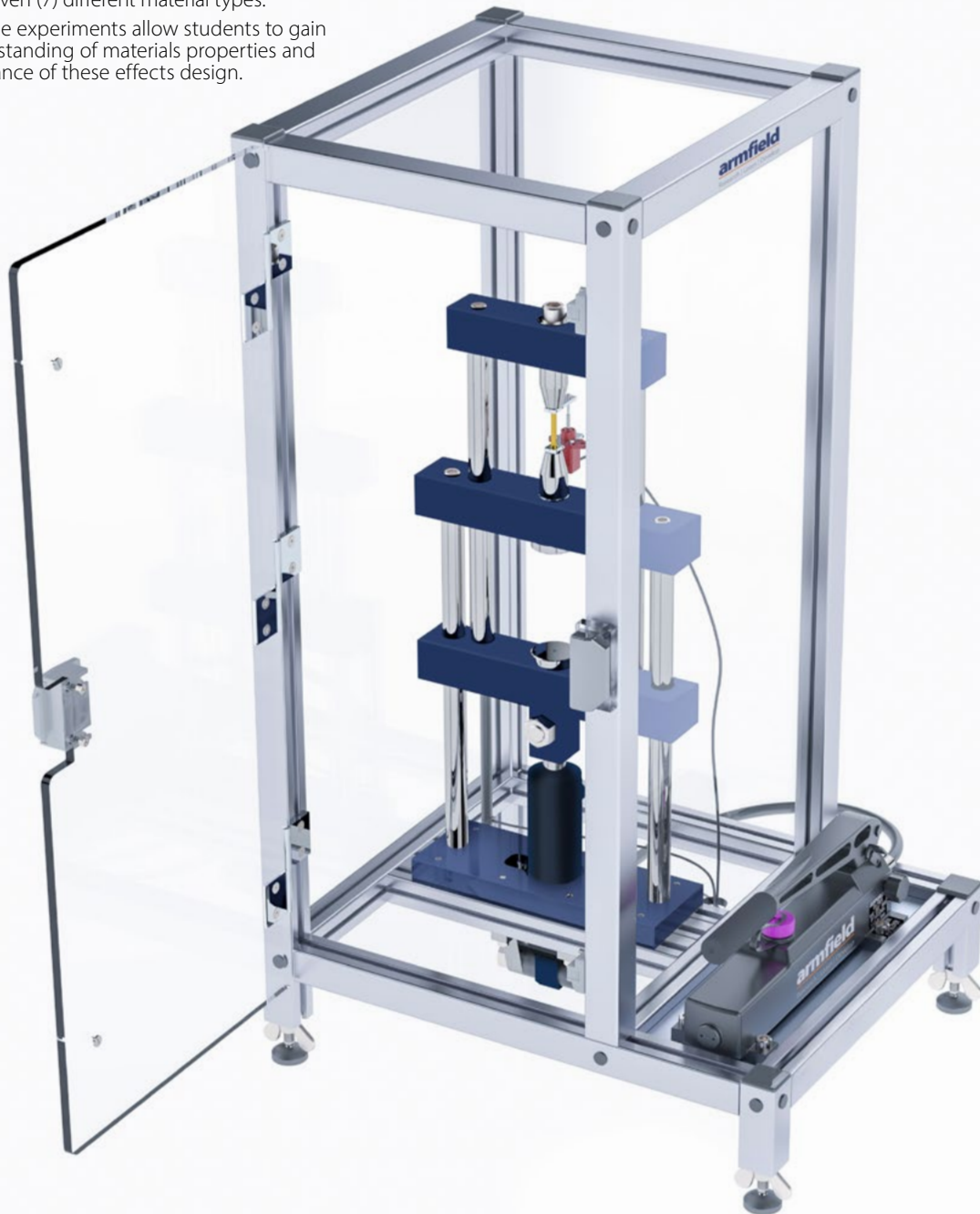


The SV805 is a modular, flexible, compact, safe, materials tester allowing students to conduct up to six (6) experiments on seven (7) different material types.

The results of these experiments allow students to gain a thorough understanding of materials properties and how the performance of these effects design.

MODULAR MATERIALS TESTER ALLOWING STUDENTS TO CONDUCT UP TO SIX EXPERIMENTS ON SEVEN DIFFERENT MATERIAL TYPES



### Experimental content

- ▶ Tensile and compression testing
- ▶ Shear (*unsymmetrical, symmetrical shear both supported and unsupported*)
- ▶ Recording of stress-strain diagrams
- ▶ Modulus of elasticity testing
- ▶ Percentage elongation
- ▶ Deep draw testing
- ▶ Three-point bending
- ▶ Hardness testing

UK office - email: [sales@armfield.co.uk](mailto:sales@armfield.co.uk) tel: +44 (0) 1425 478781 (for ROW)  
USA office - email: [info@armfield.inc](mailto:info@armfield.inc) tel: +1 (609) 208-2800 (USA only)

Issue: 1

URL: <http://www.armfield.co.uk/structures>

Applications

ME CE IP

We reserve the right to amend these specifications without prior notice. E&OE © 2022 Armfield Ltd. All Rights Reserved

## Description

The SV805 is a modular, flexible, compact, safe, materials tester allowing students to conduct up to six (6) experiments on seven (7) different material types.

The results of these experiments allow students to gain a thorough understanding of materials properties and how the performance of these effects design.

The fully enclosed unit allows safe 360° viewing maximising visibility for large class sizes.

Data relating to elongation, extension and applied force is fed directly into the AIU Armfield interface. The software supplied with the AIU Armfield interface unit captures and stores the data to allow further data manipulation and processing.

## Requirements

## Scale



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

- ▶ PC with a USB port, running Windows 7 or above

## Features / benefits

- ▶ Apparatus fully enclosed behind safety guard
- ▶ Compressive and Tensile Testing as standard
- ▶ Supplied with Tensile & Compression specimens as standard
- ▶ Tensile Specimen Elongation measured on actual specimen for increased accuracy
- ▶ 100mm mechanical stroke
- ▶ 6 optional experiments available
- ▶ 7 replacement test specimens available

## Ordering specification

- ▶ 1 x Base unit
- ▶ 1 x Pair tensile grips
- ▶ 1 x Pair compression plates
- ▶ 4 x Levelling feet
- ▶ 1 x Ear defender & safety glasses
- ▶ 30 x Tensile specimens (10 each of Aluminium, Brass & Steel)
- ▶ 1 x Linear potentiometer
- ▶ 1 x Set of tools
- ▶ 1 x Flight case
- ▶ Spare oil
- ▶ 2 Year spares
- ▶ Instruction manual
- ▶ Packing list
- ▶ Test sheet

## Overall dimensions

Length	0.502m
Width	0.630m
Height	0.800m

## Packed and crated shipping specifications

Volume	0.97m <sup>3</sup>
Gross weight	140kg

## Related laws

- ▶ Young's Modulus
- ▶ Hooke's Law
- ▶ Poisson's Ratio
- ▶ Modulus of Elasticity
- ▶ Shear Modulus
- ▶ Material Hardness (*Brinell Method*)
- ▶ Beam Bending Theory
- ▶ Planar Moment of Inertia
- ▶ Deep Drawing

## Essential accessories/equipment

- ▶ **AIU:** Armfield Interface Unit (Sold separately)

## Graphing detail



## Related products

- ▶ **SV805-1:** Set of 40 Tensile Test Specimens (10 x Steel; 10 x Aluminium, 10 x Brass, 10 x Titanium)
- ▶ **SV805-2:** Brinell Hardness Test Set, comprising Indentor and 16 specimens (4 Steel, 4 Aluminium, 4 Brass, 4 Copper)
- ▶ **SV805-3:** Bending Device Test Set including 5 specimens (2 Steel, 2 Aluminium, 1 Brass)
- ▶ **SV805-4:** Compression Plates
- ▶ **SV805-5:** Symmetrical Shearing Test Set including 5 Copper Shear Specimens
- ▶ **SV805-6:** Measuring Magnifier for Brinell
- ▶ **SV805-7:** Asymmetrical Shear Test Set (Inc. 5 x Copper Shear Specimens)
- ▶ **SV805-8:** Set of 16 Copper Shear Specimens
- ▶ **SV805-9:** Spring Testing Set
- ▶ **SV805-10:** Set of 16 Compression Test Specimens (Inc. 8 x Wooden, 8 x Plastic Specimens)
- ▶ **SV805-11:** Set of Bending Test Specimens
- ▶ **SV805-12:** Device for Deep Drawing
- ▶ **SV805-13:** Deep Drawing Test Specimens
- ▶ **SV805-14:** 16 x Hardness 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

- ▶ **SV805:** Universal Materials Tester, 35kN
- ▶ **AIU:** Armfield Interface Unit (Sold separately)

Armfield standard warranty applies with this product

## Knowledge base

- > 28 years expertise in research & development technology
- > 50 years providing engaging engineering teaching equipment

Benefit from our experience, just call or email to discuss your laboratory needs, latest project or application.

An ISO 9001:2015 Company



[armfield.co.uk](http://armfield.co.uk)

## Aftercare

Installation  
Commissioning  
Training  
Service and maintenance  
Support: [armfieldassist.com](http://armfieldassist.com)