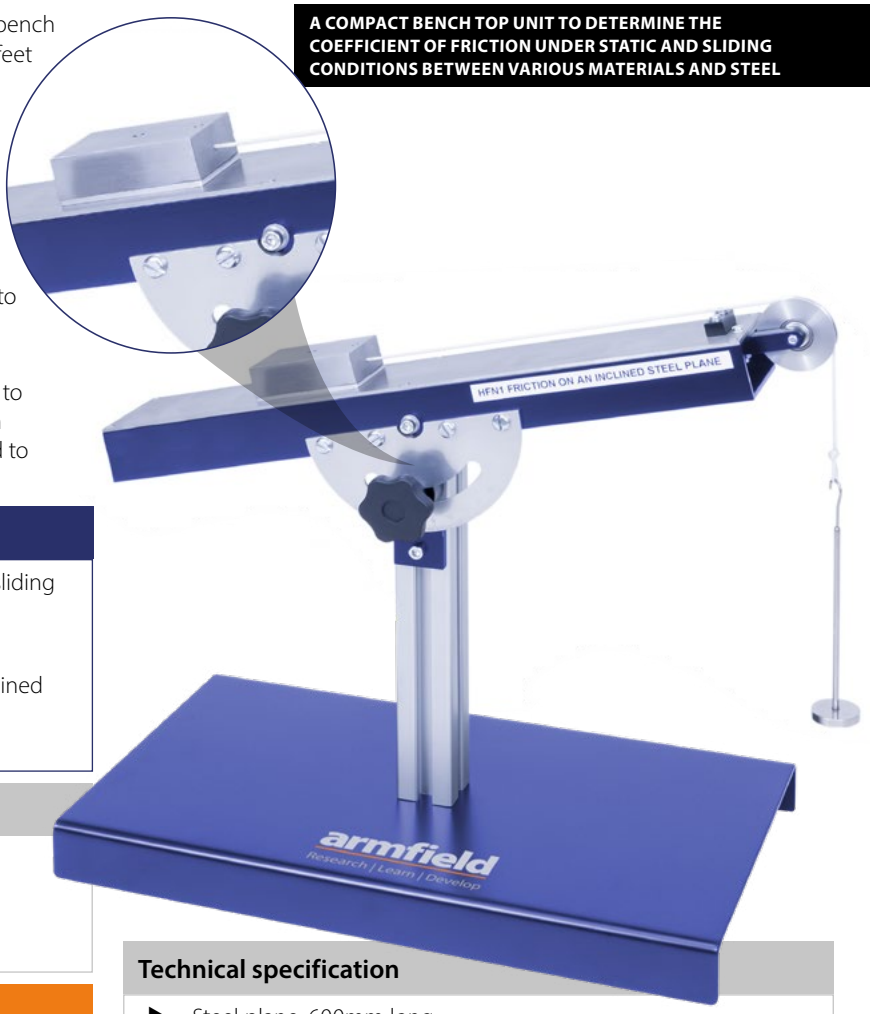
Friction on an Inclined Plane – SV900

A COMPACT BENCH TOP UNIT TO DETERMINE THE COEFFICIENT OF FRICTION UNDER STATIC AND SLIDING CONDITIONS BETWEEN VARIOUS MATERIALS AND STEEL

The Armfield SV900 Friction on an Inclined Plane is a compact bench top unit supplied with a sturdy aluminium base plate, non-slip feet and central vertical pillar. Pivoting on this base is a ground steel plane which can be locked in any angular position between ±45°, indicated on a semicircular protractor scale.

A number of composite slider trays are supplied, each having a pair of different materials attached. You simply turn over the trays to test one or the other. Each tray in turn is attached to a weight hanger and weights are added until the tray just begins to slide. The slider trays also allow for additional weight to be added changing the experimental scope.

The hanger cord pulls the tray up the sloping steel plane whilst passing over a pulley and bearing. The bearing reduces friction to ensure accurate results. The experiment may also be used as an exercise in equilibrium of forces, determining the force required to move the tray along the plane giving the coefficient of friction.



Experimental content

- To determine the coefficient of friction under static and sliding conditions between various materials and steel
- To verify the angle of friction for the material
- To measure the force required to move a body up an inclined plane against gravity and friction
- To show the equilibrium of forces on an inclined plane

Related laws

- Coefficient of Friction
- Static and Sliding Friction
- Angle of Friction
- Equilibrium of Forces

Requirements — Scale

- Sturdy benchtop

Features / benefits

- High quality, durable teaching apparatus
- Bench mounted
- Stainless steel 'inclined' plane
- ±45° Plane movement
- Seven different slider materials

Overall dimensions

Length	0.560m
Width	0.200m
Height	0350m
Packed and crated shipping specifications	
Volume	0.13m^3
Gross weight	21kg

Technical specification

- Steel plane: 600mm long
- Plane inclination range: ±45º
- Slider tray materials: aluminium, brass, nylon, steel, PTFE, Tufnol and wood
- 1 x Load hanger
- Weights set: 10 x 0.1N, 10 x 0.2N, 4 x 100g

Ordering specification

- SV900: Friction on an Inclined Plane
- 4 x Sliders
- 1 x Load hanger
- 1 x Spirit level
- 1 x 5m Spare cord
- 10 x 0.1N, 10 x 0.2N Weights
- 4 x 100g Weights
- Instruction manual

Ordering codes

- **SV900:** Friction on an Inclined Plane

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

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