# armfield

SOFTWARE INCLUDED WITH ALL F1-10 BENCH'S AS STANDARD

## F SERIES: BASIC FLUID MECHANICS

Complete Fluid Mechanics Laboratory – F1

## Impact of a Jet – F1-16-MKII



Water is discharged vertically through a nozzle to strike a target carried on a stem which extends through the cover.

The dead weight of the moving parts are counterbalanced by a compression spring.

The vertical force exerted on the target plate is measured by adding the weights supplied to the weight pan.

oplied with eight targets



striking 30° target on ster

**Experimental content** 

- ▶ Principle of linear momentum
- To investigate the reaction forces produced by the change in momentum of a fluid flow
- Measurement of the forces produced by a jet impinging on solid surfaces which produce different degrees of flow deflection

#### Description

The apparatus consists of a cylindrical clear acrylic fabrication with provision for levelling.

Water is fed through a nozzle and discharged vertically to strike a target carried on a stem which extends through the cover. A weight carrier is mounted on the upper end of the stem.

The dead weight of the moving parts is counterbalanced by a compression spring. The vertical force exerted on the target plate is measured by adding the weights supplied to the weight pan until the mark on the weight pan corresponds with the level gauge.

A total of eight targets are provided.

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Technical specifications (Requires Hydraulics Bench Service unit F1-10/F1-10-2)						
Nozzle diameter	8mm					
Distance between nozzle & target plate	40mm					
Diameter of target plate	36mm					
Target plate	120° target (cone)		30° target			
	180° hemispherical target		60° target			
	Flat target		Oblique 30/150°			
	CUP 135°		Oblique 45/135°			
Overall dimensions						
Length		0.325m				
Width		0.20m				
Height		0.50m	.50m			
Ordering codes						
► F1-16-MKII						
Issue: 2				Applica	ations	
URL: http://www.armfield.co.uk/f1			ChE ME	CE	IP	

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