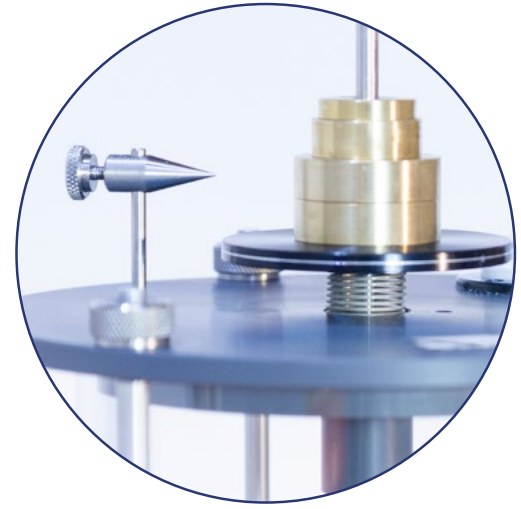


### Impact of a Jet – F1-16

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.



F1-16: Counter balancing compression spring



#### 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 five targets are provided.

#### Technical specifications (Requires Hydraulics Bench Service unit F1-10/F1-10-2)

Nozzle diameter	8mm
Distance between nozzle & target plate	20mm
Diameter of target plate	36mm
Target plate	180° hemispherical target
	120° target (cone)
	flat target
	30° target
	60° target

#### Overall dimensions

Length	0.325m
Width	0.20m
Height	0.50m

#### Ordering codes

- ▶ F1-16

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USA office - email: [info@armfield.inc](mailto:info@armfield.inc) tel: +1 (609) 208-2800 (USA only)

Service and maintenance support: [armfieldassist.com](http://armfieldassist.com)

Issue: 2

URL: <http://www.armfield.co.uk/f1>

Applications

ChE ME CE IP

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