

IMPACT OF A JET MODULE HB100G



1 study

Features

- Utilises a clear plastic cylinder for viewing
- Ships with two deflectors
- Deflector diameter 48mm
- Digital force display

Description

The HB100G consists of a clear plastic cylinder in which a nozzle is housed. Pressurized water from the HB100 is forced through the nozzle that's aimed at a deflector on the upper surface. The impact of this jet of water causes a force on the deflector which magnitude depends on the shape and efficiency of the deflector. To measure the force exerted, a small load cell is connected to the top of the unit which connects to a digital display. To adjust the impact of the jet upon the deflectors, the flow rate of the water can be adjusted from the base unit. Conical (male & female), flat and hemispherical deflectors are supplied. The deflectors can easily be changed by detaching the load cell module. After impact, the water drains to the bottom of the enclosure and runs back into the storage tank of the HB100. This creates a sealed system in which the water is recycled. To ensure that the load cell is central with respect to the nozzle, screw adjustments are incorporated into the mounting point. The optional HB100K Flowmeter Module is required for operation of this module.

Related Laws/Applications

- Newton's Second Law

Learning capabilities

- Investigation of Jet Impact forces
- Influence of deflector form and geometry
- Influence of flow rate

Technical Specification

- Flat Deflector: 90°
- Hemispherical deflector: 180°
- Convex Deflector: 60°
- Deflector diameter: 48mm
- Digital Force Display: 0.01N resolution

Essential Ancillaries

- HB100/230
- or
- HB100/115
- HB100K

What's in the Box?

- Experimental module
- Digital Load Display
- Flat Profile
- Cone Profile
- Hemispherical Profile

Weights & Dimensions

- Weight: 10 kg (Without water)
- Length: 450mm
- Width: 300mm
- Height: 500mm

Essential Services

- HB100/230
- or
- HB100/115
- HB100K

Ordering information

To order this product, please call PA Hilton quoting the following code:
HB100G

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