

**TECHNICAL DESCRIPTION:**

The Impact of a Jet apparatus demonstrates the force produced by a jet of water as it strikes a flat plate or hemispherical cup, which can be compared to the momentum flow rate in the jet. To extend the range of investigations, the 120° conical plate and 30° angled plate are included. The Impact of a Jet consists of a transparent cylinder containing a vertically tapered nozzle and a test plate. The cylinder is on legs and mounts on the top of the hydraulic bench. The nozzle, supplied by the hydraulic bench, produces a high-velocity jet of water which hits the test plate. The test plate connects to a weigh beam assembly with jockey weight which measures the jet force. A drain tube in the base of the cylinder directs water back into the hydraulic bench, allowing accurate flow rate measurement. All test plates are all easily interchangeable, taking only a few seconds and needing no tools. To perform experiments, students level the apparatus and zero the weigh beam assembly. They set the flow from the hydraulic bench to maximum, and measure the jet force. They reduce the flow from the hydraulic bench in several increments. At each increment they record the force of the jet on the plate and the flow rate. They then repeat the experiments for different test plates. Students compare their experimental results to those calculated from theory, working out charts of rate of force on plate and rate of delivery of momentum.

REQUIREMENT FOR OPERATION:

- Digital Hydraulic Bench

TECHNICAL SPECIFICATION:

- Nett dimensions and weight: 740 mm high x 420 mm wide x 310 mm and 7 kg
- Approximate packed dimensions and weight: 0.176 m³ and 14 kg
- Flat plate: 74 mm diameter, normal to and coincident with the jet axis
- Hemispherical plate: 60 mm diameter
- Conical plate: 75 mm diameter 120°
- Angled plate: 75 mm diameter 30°
- Ancillaries (included): All necessary pipe clips and tubing

SCOPE OF DELIVERY:

- 1 Self-contained "Impact of a jet" Apparatus
- 1 Instruction Manual consisting of experimental procedures, block diagram etc.

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.



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