Orifice & Mouthpieces Apparatus

Brand **Master Science**



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The Orifice & Mouthpieces Apparatus is a versatile setup designed to determine the coefficient of discharge (Cd) for orifices and mouthpieces. It is widely used for experimental studies in fluid mechanics and hydraulics. The apparatus provides a practical understanding of fluid flow measurement through orifices and mouthpieces, enabling accurate calculations of discharge rates.

KEY HIGHLIGHTS

- Ease of Use
- Sump tank for water collection and recirculation.
- Additional Information

Request a Quotation
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Overview

An orifice is an opening in the side or bottom of a tank, typically with a closed perimeter, that allows fluid to discharge.

Key Benefits

ROBUST BUILD

Ease of Use

FUNCTIONALITY

A 0.5 HP centrifugal pump ensures continuous water supply to the supply tank, with flow control managed via a bypass valve.

Equipped with an X-Y gauge for measuring the coordinates of the jet, allowing accurate determination of the velocity coefficient (Cv) for the orifice.

Universal fixtures for mounting various types of orifices and mouthpieces, including:

CONVERGENT MOUTHPIECE

Measuring tank with a suitable capacity or a calibrated water flow meter.

Sump tank for water collection and recirculation.

Additional Information
A mouthpiece is a short tube fitted to a circular opening in a tank, facilitating controlled fluid discharge. This apparatus is designed to experimentally determine the coefficient of discharge for both orifices and mouthpieces. It is equipped with mechanisms to measure discharge rates and other related parameters.

Technical Specifications

PARAMETER	SPECIFICATION
ComponentSpecifications	
Supply Tank Dimensions0.4 m × 0.3 m × 0.5 m (H)	
Orifice Sizes8 mm, 10 mm	
Mouthpiece TypesLID = 4, LID = 1, Borda's, Convergent	
Pump0.5 HP with bypass valve	
Measuring TankSuitable capacity or calibrated flow meter	
Jet Measurement GaugeX-Y coordinate system	
Sump TankSuitable capacity	

Applications

Determination of the coefficient of discharge (Cd) for orifices and mouthpieces.

Analysis of fluid flow rates and velocity coefficients (Cv).

Practical study of orifice and mouthpiece hydraulics in academic and industrial research.