

Product Name :
Cavitation Demonstration Apparatus

Product Code :
FLDM0004



Description :

Cavitation Demonstration Apparatus

Technical Specification :

The Advanced self-contained apparatus to demonstrate and observe the basic principles of cavitation and its implications on the performance of hydraulic machines and systems.

This accessory consists of a circular Venturi-shaped test section manufactured from clear acrylic to enable visualization inside the section.

As the flow of water increases the pressure at the throat falls in accordance with the Bernoulli equation until a limit is reached corresponding to the vapour pressure of the liquid.

At this low pressure small bubbles of vapour form then collapse violently as the pressure raises again downstream – a process called cavitation.

Bourdon gauges indicate the pressure upstream of the contraction, inside the throat and downstream of the expansion in the test section.

Flow control valves upstream and downstream of the test section enable the flow and pressure to be adjusted, enabling cavitation to be clearly demonstrated.

FEATURES:

Circular Venturi-shaped test section manufactured from clear acrylic for full visualization of cavitation

Observation of the phenomenon of cavitation in a liquid (by reducing the liquid to its vapour pressure)

Observation of air-release due to dissolved gases in a liquid

Demonstration of reducing cavitation by increasing the static pressure in a liquid

Three Bourdon gauges indicate the static pressure upstream of the contraction, inside the throat and downstream of the expansion in the test section

Comparison of theoretical and actual pressure at cavitation conditions

Flow-control valves upstream and downstream of the test section enable flow conditions to be optimized for the demonstration of cavitation

Quick-release fitting for easy connection to Hydraulics Bench

Educational software available as an option

The pump includes electrical protection and the water tank includes a splash cover to prevent water spillage.

SPECIFICATION:

Upstream pressure gauge:

Diameter: 63mm

Range: 0 to 1 bar

Throat vacuum gauge:

Diameter: 100mm

Range: -1 to 0 bar

Downstream pressure gauge:

Diameter: 63mm

Range: 0 to -1 bar

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