

F
SERIES

Fluid Statics and Manometry - F1-29

The right-hand manometer tube is separate from the other tubes and incorporates a pivot and indexing mechanism at the base that enables this tube to be inclined at fixed angles of 5°, 30°, 60° and 90° (vertical).

The reservoir incorporates a hook and point gauge with Vernier scale mounted through the lid that enables large changes in level to be measured with precision.

A vertical transparent piezometer tube through the lid of the reservoir enables the static head above the water in the reservoir to be observed when the air space above the water is not open to the atmosphere.



F1-29: Different inclination angles in the inclined manometer

Experimental content

- ▶ Demonstrating the behaviour of liquids at rest (hydrostatics)
- ▶ Showing that the free surface of a liquid is horizontal and independent of cross section or inclination of the container
- ▶ Effect of changes in air pressure above a liquid surface
- ▶ Measuring the level of a liquid using basic measuring techniques such as a scale, vernier depth gauge and inclined scale and the effect of parallax
- ▶ Measuring small changes in liquid level using a micro-manometer
- ▶ Measuring changes in liquid level using a Vernier hook and point gauge
- ▶ Using a single limb manometer / piezometer tube to measure head
- ▶ Using manometer tubes to measure differential pressure
- ▶ Using an inclined manometer to measure small pressure differences
- ▶ Using a 'U' tube manometer to measure pressure differences in a gas (air over liquid)
- ▶ Using an inverted pressurised 'U' tube manometer to measure pressure differences in a liquid
- ▶ Enlarged limb manometer
- ▶ Using liquids with different densities to change the sensitivity of a 'U' tube manometer
- ▶ Demonstrating the effect of trapped air on the accuracy of a manometer
- ▶ Demonstrating the effects caused by friction when a fluid is in motion

Overall dimensions

Length	0.425m
Width	0.15m
Height	1.09m



F1-29 Manometer



Technical specifications

Max depth inside reservoir	574mm
Inside diameter of reservoir	100mm
Scale length of manometer tubes	460mm

Ordering codes

- ▶ F1-29

UK office - email: sales@armfield.co.uk tel: +44 (0) 1425 478781 (for ROW)
USA office - email: info@armfield.inc tel: +1 (609) 208-2800 (USA only)

Issue: 2

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

Applications

ChE ME CE IP

We reserve the right to amend these specifications without prior notice. E&OE © 2022 Armfield Ltd. All Rights Reserved