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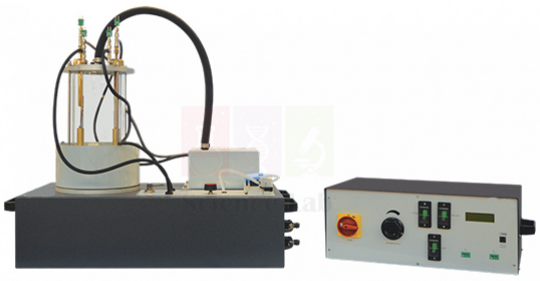
Product Name :

Filmwise And Dropwise Condensation And Boiling

Product Code :

SLE/EA/11



Description :

Filmwise And Dropwise Condensation And Boiling (Product Code: SLE/EA/11) is a phase-change heat transfer apparatus used to demonstrate boiling and condensation inside a partially filled glass vessel in engineering laboratories. Students vary the current through a resistance wire heater in the water to move between boiling regimes, while two water-cooled vertical cylinders act as condensing surfaces. It is made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, an OEM engineering lab equipment manufacturer, at its own factory in Ambala, India.

Specifications

Parameter	Detail
Test vessel	Partially filled glass vessel in which both heating and condensing take place
Heater	Heater coil (resistance wire heater element) in the water, with adjustable current
Heater wire temperature	Reaches significantly higher than 100 °C
Boiling regimes observed	Subcooled boiling (small bubbles form and rise); nucleate boiling (large bubbles form and rise); unstable and stable film boiling (a vapour blanket forms and radiation becomes important)
Condensing surfaces	Two water-cooled vertical cylinder specimens
Condensation measurement	Heat transfer found from the cooling water flow rate and its temperature change at each cylinder
Product code	SLE/EA/11
Manufacturer	Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM
Country of origin	India (made in Ambala, Haryana)

What Is the Filmwise and Dropwise Condensation Unit Used For?

For boiling experiments, students raise the heater current in steps and watch the water move from subcooled boiling, through nucleate boiling, to film boiling, where a vapour blanket surrounds the wire and radiation starts to matter. Because the vessel is glass, the whole group sees each regime form instead of inferring it from numbers alone.

For condensation work, vapour condenses on the two water-cooled vertical cylinders, and the cooling water flow rate and temperature change at each cylinder give the heat transferred. The name refers to the two condensation modes taught with it: filmwise, where condensate spreads as a continuous film, and dropwise, where it gathers as separate droplets. Raise the current gradually and let each condition settle before logging, a habit that suits any college buying engineering lab equipment in India for heat transfer courses.

OEM Manufacturer

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