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Product Name :

Effect And Jet Flow

Product Code :

SLE/EA/08



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Description :

Effect And Jet Flow is an air-flow experiment module that shows the Coanda effect. A jet of air leaves an aerodynamically shaped nozzle, attaches to a nearby wall and follows it. The wall can be rotated to bend the jet through large angles, and a second wall lets the jet switch from side to side like a fluidic flip-flop.

Effect And Jet Flow module details

Parameter	Detail
Format	Experiment module, used with a separate air source such as an air flow bench
Jet source	Aerodynamically shaped nozzle
Attachment wall	Rotatable; shows the jet deflected through large angles
Second wall	Fits on the other side of the jet for flip-flop switching
Further investigations	Effect of sealing the walls; effect of adding a central splitter
Product code	SLE/EA/08
Minimum order	10 units
Dispatch	Usually within 7 to 10 working days
Manufacturer	ScienceLab (Jain Scientific Equipments Pvt Ltd), Ambala, India

Practicals with the wall-attached jet

Break-away angle. Supply air from a base unit such as the Modular Air Flow Bench and hold the flow steady with its control valve. Turn the attachment wall away from the jet in small steps and note the angle at which the jet lets go. Then turn the wall back slowly and note where the jet clings again.

Seeing the jet. Feed smoke from the Flow Visualisation smoke set into the air stream so the class can watch the jet bend along the wall. Lead the waste smoke away from the bench through ducting to a window or extraction point.

Fluidic flip-flop. Fit the second wall on the far side of the jet. The jet locks onto one wall and stays there. Give it a brief disturbance and it jumps to the other wall, where it remains. Repeat with the walls sealed and with the central splitter in place, and record how each change alters attachment and switching.

Jet force for comparison. A water jet on the Impact of a Jet Apparatus shows the momentum side of jet flow. Running both practicals in one session helps students separate the push of a jet from its tendency to follow a surface.

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