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Product Name :

Flight Demonstration Wind Tunnel

Product Code :

SLE/EA/05



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Description :

Flight Demonstration Wind Tunnel holds a model aircraft that is free to rise and to pitch about its quarter-chord point, each motion independent of the other. As air speed changes, the model takes off, flies level, cruises and lands. An electronic display shows air speed, attitude, altitude, pressure and lift, while tufts on the wing reveal stall.

Flight Demonstration Wind Tunnel details

Parameter	Detail
Model motion	Vertical movement and pitch about the quarter-chord point, independent of each other
Flight phases simulated	Take-off, level flight, cruise and landing
Demonstrations	Aerofoil lift, stall, longitudinal stability and transient motion
Electronic display	Air speed, attitude, altitude, pressure and lift
Stall indication	Tufts on the wing show flow separation
Working section	Brightly illuminated
Model balance	Adjustable centre of gravity
Compatible recorder	Two Channel Recorder (SLE/EA/04)
Product code	SLE/EA/05
Minimum order	10 units
Dispatch	Usually within 7 to 10 working days
Manufacturer	ScienceLab (Jain Scientific Equipments Pvt Ltd), Ambala, India

Demonstrations on the free-flying model

Lift and take-off. Raise the air speed slowly with the model resting in the working section. Note the speed and the displayed lift as the model lifts off, then again in level flight and cruise. Lower the speed to bring it in to land and compare the readings on the way down.

Stall and separation. Watch the wing tufts as the wing works at steeper angles of attack. They lie flat while the flow stays attached, then flutter and point forward as it separates. Record the attitude at that moment and the drop in lift. For a fixed-model comparison, plot lift against angle on the Subsonic Wind Tunnel.

Stability and the centre of gravity. Move the centre of gravity forward, nudge the model and see how quickly it settles back. Repeat with the centre of gravity further aft. T dy diver moti

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