DTA Small Wind Tunnel

Overall Size: Approx. 3 m long x 1 m wide

Working section Approx. 0.4 x 0.4 m area where transparent windows are.

Airflow Control: Uses Two model aircraft props/motors and controllers. Max airspeed can achieve 30-40 km/h, Should be able to control around 5 m/s for experimentation.

Ancillaries: Is setup to be controlled via a model aircraft RC controller. Battery powered (12/24 V) DTA has used standard Pb acid batteries.

System breaks into several sections so could be shipped to UC. However shipping costs may not be cheap. Potentially the Fan section could be shipped with a new working section made at UC. Alternatively the tunnel could be used at DTA, or a similar type rig could be made or sourced at UC. A simple fan system with a basic tunnel is not too hard to build.

Adaptation for Ash injection. A system to inject ash after the fans would need to be developed. At a flow rate of 5 m/s at 10 mg/m3 you are looking at having to meter in around 0.45 g/min. This might be controllable.

In addition you would need to seal the gaps in the tunnel better and use some type of filter on the outlet to capture the ash.





