

CRANFIELD IMPACT CENTRE HIGH ENERGY CAPACITY DROP TOWER RIG

A high energy capacity and relatively high velocity drop tower rig, currently located at Silsoe, and to be re-located at Cranfield Impact Centre, would enhance centre's capability for research and development. This will be in addition to the existing direct services provided to the bus and coach industries for compliance with the R66 Regulation for bus/coach rollover.

The rig will provide the capability to test for dynamic responses of sections and joints for both metallic and composite materials. It would also benefit MSc and PhD students across the campus for their group and research projects.

The rig's energy capacity, in conjunction with the existing static test bed facilities, will be of interest to companies such as Corus and TATA which provide materials for road side furniture. It is suitable for the road side EN 1317 barrier development and certification, a compliance approach adopted by both the EU and the US Federal Highways Agency. The test data in conjunction with computer modelling can then be used for validation and in road side accident reconstruction

Currently there are only few places in the UK that can conduct high energy capacity dynamic drop tests and none of them are located at a University. This places Cranfield University in a unique position to provide a testing facility that will be used for many years to come.

Specifications for the Drop Tower are:-
Min carriage weight 50kg
Max carriage weight 300 kg
Max carriage drop height 2.5(3.5m above ground)
Max speed 7 m/s

