DEMON is an unmanned aircraft vehicle (UAV) designed to fly without using conventional ‘flaps’ (elevators or ailerons), using jet propelled blasts of air blown over the trailing edges of its wings to manoeuvre.

**BACKGROUND**

The demonstrator aircraft, which weighs approx. 90kgs and has a wingspan of 2.5m, undertook the first ‘flapless’ flight ever to be allowed by the UK Civil Aviation Authority on 17 September 2010.

Because it is designed to fly with no conventional elevators or ailerons, getting its pitch and roll control from technologies which rely on blown air, it requires much fewer moving parts, making it a lot easier to maintain and repair.

DEMON can fly parts of its mission by itself but, as it is currently an experimental vehicle, is not fully autonomous unlike, for example, BAE Systems’ MANTIS.

It was developed by BAE Systems and Cranfield University in the UK. It incorporates fluidic flight controls developed at Cranfield and Manchester Universities and flight control algorithms developed at Leicester University and Imperial College.

**ENGINE:** TITAN 390 N

**WINGSPAN:** 2.5 METRES

**WEIGHT:** 90 KILOGRAMS

**BODY:** CARBON FIBRE COMPOSITE