Powered Aerobatics

WHAT IS A POWERED AEROBATICS COMPETITION?

The powered aerobatics contest is a highly demanding test of a pilot’s ability to fly a high-performance aeroplane very precisely and at extreme physical limits, while at the same time performing a sequence of demanding and exhilarating aerobatic figures. To avoid penalty points, the entire sequence must be flown within a 1km “box” of airspace and of course always above the minimum safety altitude.

WHAT DO YOU HAVE TO DO TO WIN?

The event is extremely competitive and the winning pilot will be the person who has performed the most precise and accurate aerobatic sequences of figures. Flying these figures correctly requires great concentration and piloting skills which must be complemented by a constant awareness of the position of the aircraft in the box, its altitude and the speed or energy available. The aerobatic event during the World Air Games will be conducted over a number of days, the final result being drawn from a cumulation of all sequence scores. The programme of sequences and manoeuvres is prescribed by CIVA, the FAI aerobatic commission, with both compulsory and pilot-innovated freestyle routines allowed.

HOW IS IT SCORED?

At this event the pilot’s performance will be graded by six independent and highly experienced judges who are positioned between 150 and 250 metres from the edge of the box, facing the main performance axis. The judges mark each pilot’s performance according to the accuracy of their manoeuvres and the positioning and flow of their sequence.

TELL ME MORE!

These astonishingly strong aerobatic aeroplanes weigh approximately 6-700kg and are fitted with engines that typically produce more than 300bhp; this makes them fast and highly manoeuvrable. As well as being physically demanding, aerobatics also presents extreme mental challenges – pilots must retain the ability to think clearly to plan their flying while performing throughout these high G sequences. On the ground before each flight the pilots will mentally visualise and rehearse the sequence they are about to perform by spinning and bending their body or moving their arms in order to commit the exact details of each manoeuvre and of course their correct order to memory.

Aerobatics is a physically demanding sport where pilots can experience both positive and negative G forces of up to ten times the gravitational pull of the earth, and the aeroplanes they fly are specifically designed to be able to withstand the extreme stresses that are involved. The manoeuvres performed may include rolls (along the longitudinal axis of the airplane), turns (sometimes whilst rolling) or looping figures and are described accurately in an extensive international catalogue. The need to control the aeroplanes with extreme accuracy in three dimensions requires a very high level of pilot skill.

“*A physical and demanding test of precision*”