

# **WIND TUNNEL TEST RESULTS OF THE INVERTED JOINED WING AIRPLANE FLYING MODEL**

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The inverted joined wing is an unconventional airplane configuration consisting of two lifting surfaces similar in terms of area and span. Contrary to the most frequently analysed joined wing configuration, the inverted joined wing configuration has a front lifting surface attached at the top of the fuselage, whereas an aft one is attached at the bottom. Both lifting surfaces join each other either directly or with application of wing tip plates (box wing). Reasons for such a unique design will be described in this paper. An airplane model in this configuration was designed and tested by the consortium led by the Institute of Aviation. This paper will reveal the results of investigations conducted in a wind tunnel with measurement diameter of 5m. The model is also used for flight testing. Therefore, the wind tunnel results were used to simulate flight characteristics, to prepare the pilot for the first flight. That is why data in this paper will be presented in the way convenient for the UAV pilot. That is also why the paper will include a few comments on the model design.



*Inverted Joined Wing Airplane Flying Model tested in the wind tunnel of the Institute of Aviation*