

Subject: Contribute coordinates of DU 80-176 and DU 80-141 airfoil
From:
Date: 3/4/2022, 10:17 AM
To:

Hello Prof. Michael Selig,

I would like to contribute coordinates of DU 80-176 V1 and DU 80-141 to the airfoil database. Those two airfoils were designed by Delft University in 1981 for sailplane applications. The profiles are based on Wortmann FX 61-163 and FX 60-126 airfoil. Those were designed in such a way that just by adding material to the surface an existing wing could be modified to the new airfoil. Wind tunnel tests and flight tests of the airfoils were conducted on an ASW-19B sailplane, Pajno V 1/2 Rondine was the only model that put the airfoils into practice.

According to the research of Delft University, the drag decreased over 10 percent at low lift coefficients and the maximum lift coefficient increased slightly, although drag increased slightly at around 1.25 lift coefficient compared to the original Wortmann airfoil. The stalling behaviour on the ASW-19B test plane was described as very gentle, and the minimum flight speed with wing surface entirely wetted in flight did not change compared to the clean wing.

The coordinates of airfoils are retrieved from *On the design of some airfoils for sailplane application*. L. Boermans, H. Selen. Delft University of Technology. Technical Soaring, Vol 7, No 1, 1981. Website: <https://journals.sfu.ca/ts/index.php/ts/article/view/963>

The coordinates files are in the attachment.

Sincerely,
WANG Ziyin

—Attachments:—

DU 80-141.dat	2.2 KB
DU 80-176 V1.dat	2.2 KB