

Sizing of high lift devices using Parapy: output file

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Planform file name: test_planform1

The HLDs were sized using the CL_{max} of the clean wing provided by the user in the main file.
No external analysis was carried out.

Input parameters:

wing_span	= 15.0 m
root_chord	= 6.0 m
taper_inner	= 0.7
taper_outer	= 0.3
kink_position	= 4.0 m
flap_gap	= 0.3 m
sweep_deg	= 25.0 deg
dihedral_deg	= 5.0 deg
front_spar	= 0.2 x/c
rear_spar	= 0.7 x/c
outer_flap_lim	= 0.6 y/b
fuselage_radius	= 1.5 m
clmax	= 2.0
twist	= 0.0 deg
speed	= 100.0 m/s
airfoil_name	= ex3
flap_type	= Fowler

Output parameters:

CL_{max} clan	= 1
Delta CL_{max}	= 1.0
Flap hinge location	= 0.81 x/c
Flap deflection	= 45 deg
Stall AoA	= Unknown deg
Flaps per wing	= 2
Inner flap area	= 40.9558 m ²
Outer flap area	= 60.2894 m ²

Other parameters

Mach number	= 0.2915
Kink chord	= 4.2 m
Tip chord	= 1.26 m

Cross section of airfoil with the flap system:

