

Sizing of high lift devices using Parapy: output file

Saved at: 2020-05-08 11:56:24.405465

Planform file name: example_cant_attain

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.

With the given inputs, no valid design could be created to attain the required CL_{max}

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	= 0.2 m
sweep_deg	= 25.0 deg
dihedral_deg	= 5.0 deg
front_spar	= 0.2 x/c
rear_spar	= 0.6 x/c
outer_flap_lim	= 0.6 y/b
fuselage_radius	= 1.5 m
clmax	= 2.9
twist	= 0.0 deg
max_deflection	= 30.0 m/s
speed	= 100.0
airfoil_name	= ex1
flap_type	= Slotted

Output parameters:

CL_{max} clan	= 1.6
Delta CL_{max}	= 1.3
Flap hinge location	= 0.6 x/c
Flap deflection	= 30.0 deg
Stall AoA	= Unknown deg
Flaps per wing	= 2
Flapped wing area	= 0 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:

