

## Sizing of high lift devices using Parapy: output file

Saved at: 2020-05-08 09:48:52.195758

Planform file name: RJ\_100

The HLDs were sized using the  $CL_{max}$  computed by external analysis using xfoil and AVL  
External analysis was carried out

### Input parameters:

wing_span	= 13.1 m
root_chord	= 4.35 m
taper_inner	= 0.759
taper_outer	= 0.469
kink_position	= 5.0 m
flap_gap	= 0.0 m
sweep_deg	= 18.0 deg
dihedral_deg	= -2.0 deg
front_spar	= 0.2 x/c
rear_spar	= 0.6 x/c
outer_flap_lim	= 0.7 y/b
fuselage_radius	= 1.78 m
clmax	= 2.4
twist	= -3.0 deg
max_deflection	= 30.0 m/s
speed	= 62.8
airfoil_name	= 4415
flap_type	= Slotted

### Output parameters:

$CL_{max}$ clan	= 1.5908
Delta $CL_{max}$	= 0.8092
Flap hinge location	= 0.85 x/c
Flap deflection	= 30.0 deg
Stall AoA	= 16.5 deg
Flaps per wing	= 2
Flapped wing area	= 7.0813 m <sup>2</sup>

### Other parameters

Mach number	= 0.1831
Kink chord	= 3.3016 m
Tip chord	= 1.5485 m

### Cross section of airfoil with the flap system:

