

UNIVERSAL 225MM + 300MM + 310MM LOW DRAG + 310MM HIGH DOWNFORCE CARBON REAR WING

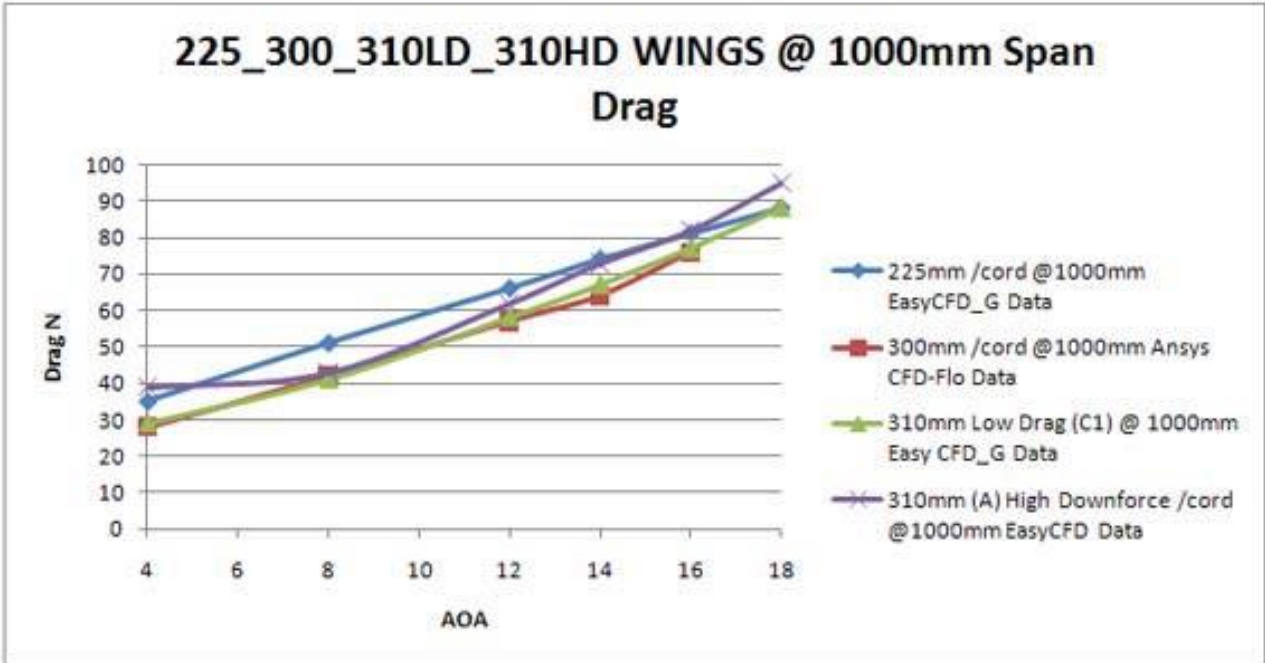
The 225mm & 300mm profile wings have been designed for Reverie Ltd by aerodynamics writer and designer Simon McBeath (author of Competition Car Aerodynamics) and analysed using Ansys CFD-Flo software. Data shown on the relevant tech documents for these wings are from Ansys CFD-Flo.

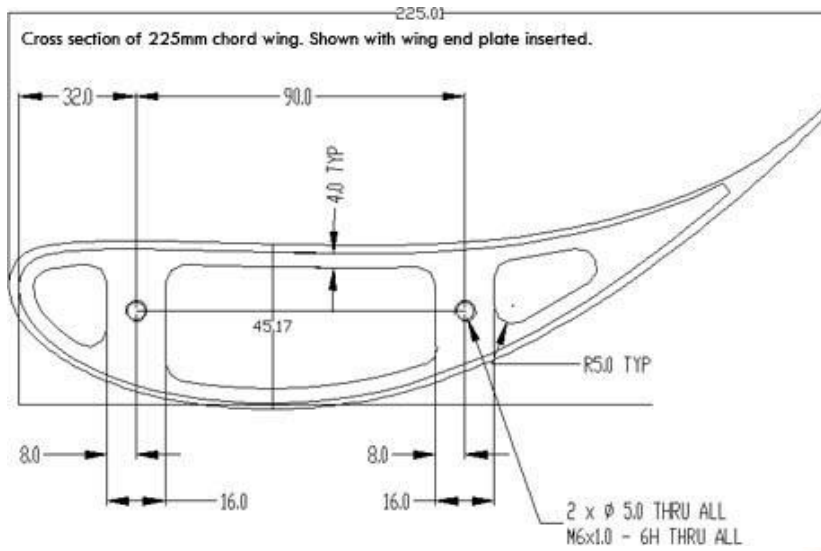
The 310mm low drag and 310mm high down force profile wings have been designed by Reverie engineers and analysed using EASY CFD_G. All the profiles listed above have been meshed and loaded into EASY CFD_G to give comparisons shown below.

The wing profiles were designed to give a range of downforce levels from moderate to reasonably high, depending on the deployed angle of attack and chosen span, with very good efficiency in terms of downforce to drag ratio. The 225mm & 310 low drag profiles work well as a single element or combine nicely with a flap into a dual element wing.

*** Data marked in red show that the wing has either stalled or was close to stalling and has been omitted from the graphs ***

| | 225mm Data Easy_CFD_G Data 1000mm Wingspan | | | | 300mm Ansys CFD-Flo Data 1000mm Wingspan | | | |
|-----|---------------------------------------------------|----------|------|--------------|------------------------------------------------------------|----------|------|--------------|
| AoA | Downforce (N) | Drag (N) | L/D | BHP Absorbed | Downforce (N) | Drag (N) | L/D | BHP Absorbed |
| 4 | 401 | 35 | 11.5 | 2.1 | 403 | 28 | 14.4 | 1.7 |
| 8 | 453 | 51 | 8.9 | 3.0 | 521 | 42 | 12.5 | 2.5 |
| 12 | 500 | 66 | 7.6 | 3.9 | 605 | 57 | 10.6 | 3.4 |
| 14 | 517 | 74 | 7.0 | 4.4 | 619 | 64 | 9.6 | 3.8 |
| 16 | 530 | 81 | 6.5 | 4.8 | 617 | 76 | 8.3 | 4.4 |
| 18 | 534 | 88 | 6.1 | 5.2 | - | - | - | - |
| | 310mm Low Drag Easy CFD_G Data 1000mm Wingspan | | | | 310mm H/Downforce Force Easy CFD_G Data 1000mm Wingspan | | | |
| AoA | Downforce (N) | Drag (N) | L/D | BHP Absorbed | Downforce (N) | Drag (N) | L/D | BHP Absorbed |
| 4 | 403 | 29 | 11.5 | 1.7 | 473 | 39 | 12.1 | 2.3 |
| 8 | 518 | 41 | 8.9 | 2.4 | 613 | 43 | 14.3 | 2.6 |
| 12 | 613 | 58 | 7.6 | 3.5 | 673 | 62 | 10.9 | 3.7 |
| 14 | 648 | 67 | 7.0 | 4.0 | 763 | 73 | 10.5 | 4.4 |
| 16 | 678 | 77 | 6.5 | 4.6 | 802 | 82 | 9.8 | 4.9 |
| 18 | 695 | 88 | 6.1 | 5.2 | 828 | 95 | 8.7 | 5.7 |

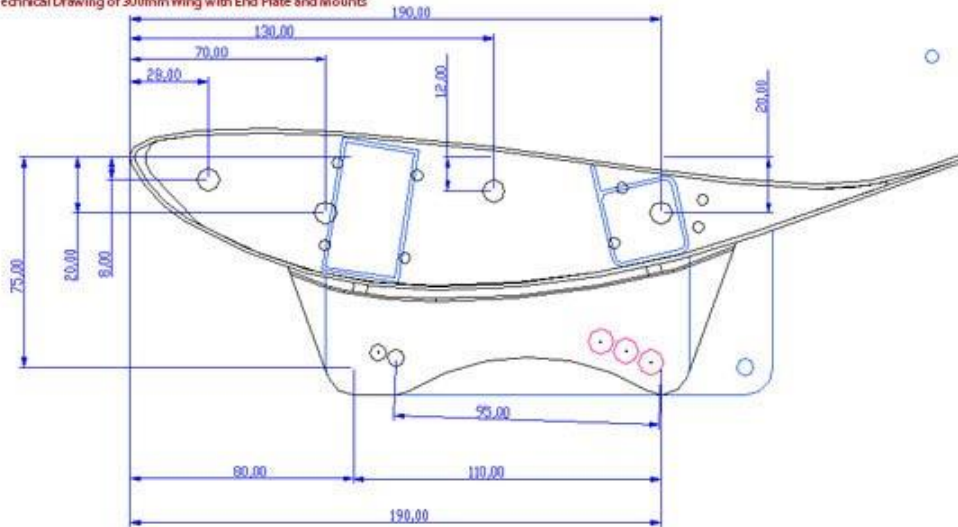




225mm Chord wing cross section showing internal longitudinal supports.



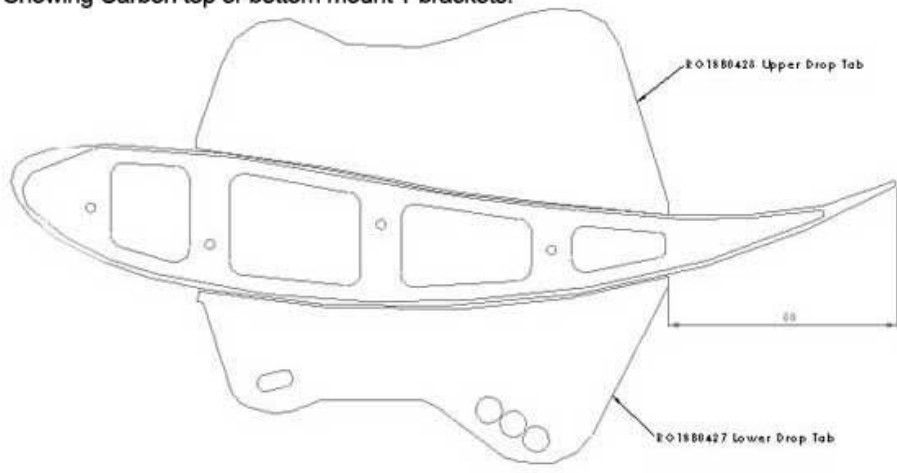
Technical Drawing of 300mm Wing with End Plate and Mounts



300mm Chord Wing Showing Internal Longitudinal Stringers



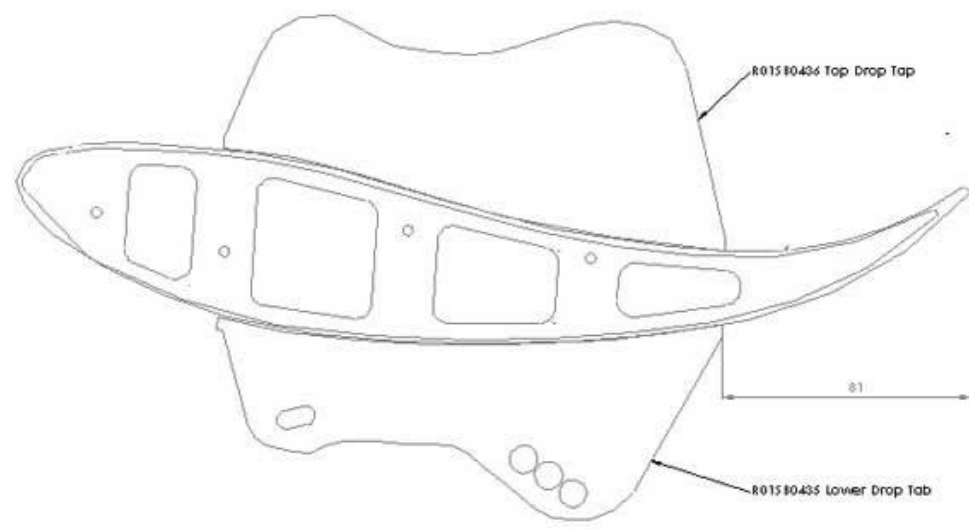
310mm Low Drag wing cross section drawing
 Showing Carbon top or bottom mount T brackets.



310MM Low Drag Chord wing cross section showing internal longitudinal supports.



310mm High Downforce Wing cross section drawing
 Top and Bottom T mount brackets shown



310MM HDownforce Chord wing cross section showing internal longitudinal supports.



Figure 5-1 *Wing terminology.*

Image courtesy of Simon McBeath
Competition Car Aerodynamics

