

## Aerodynamics Specs

The following information is directly from ReVerie:

[http://www.reverie.ltd.uk/en/gallery/rearwing\\_06.php](http://www.reverie.ltd.uk/en/gallery/rearwing_06.php)

### Full Width S2 Elise/S2 Exige Rear Wings

New Exige S2/Elise S2 wide adjustable clam mounted wing will be 1650mm wide. Forces were calculated by factoring the CFD results from an 1800mm span run, the 1650mm wide clam mounted adjustable wing will give 837N downforce@100mph, drag 138N@100mph, 12°; AoA (AoA same as our fixed tailgate mounted wing).

The table below shows the results at 100 and 150 mph for a range of angles of attack.

AoA	Downforce (N)		Drag (N)	
	100 mph	150 mph	100 mph	150 mph
4	584	1314	88	198
8	728	1638	110	248
12	837	1883	138	311
16	923	2077	182	410

### Forces on Wing at Different Angles of Attack (AoA)

Single Element

All runs at 1400mm span

Air speed 44.7m/s (100mph) unless indicated (re = 1.08410E6)

AoA (°)	Downforce (N)	Drag (N)	L/D
4	495.7	84.6	5.86
8	617.4	105.6	5.85
12	710	132.5	5.36
16	783.6	174.8	4.48
18	711.3	252.6	2.82

### Effect of Speed on Rear Wing Forces

Single Element, with conventional endplate design

Runs at AoA max = 16°

Wingspan = 1800mm

Air Speed (mph)	Downforce (N)	Drag (N)	L/D
100	1014.6	200.1	5.07
150	2279.9	450.7	5.06

### Effect of 5mm Gurney on Rear Wing Forces

Single Element

Runs at AoA = 12°

Wingspan = 1800mm

Air Speed = 44.7m/s (100mph)

Downforce (N)	Drag (N)	L/D	
Without 5mm Gurney	890	170	5.24
With 5mm Gurney	1028.2	188.1	5.47

### Effect of Endplates on Rear Wing Forces

Single Element

Runs at AoA = 16°

Wingspan = 1800mm

Air Speed = 44.7m/s (100mph)

Downforce (N)	Drag (N)	L/D	
Conventional Endplate	1014.6	200.1	5.07
Notched Endplate Design	937.2	161.9	5.79