SilentFlight - *DESiE*

Meanwhile there is no doubt that you can fly more than ten minutes using electric powered aeroplanes, especially motorgliders or ultralights. The new generation of Li-Polymer batteries and its derivates are powerful enough even for the LSA class.

We started our homebuilt »DESiE« in 1993. At that time my colleagues of the applied electrochemistry at the ICT (Fraunhofer Society) already developed a high power Li/LiCoO2 battery in their lab. So it was clear, that in near future the energy density of Li-Ion batteries could reach 200 Wh/kg.

Our airplane is uncompromisingly focussed on the efficient use of the provided energy storage. The tail-first configuration and the overall cleanness of the design give a forefeeling to what the glider may capable in flight.

With a »little help from outside« the maiden flight will be possible in 2012.

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SilentFlight
DESiE

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Wiesenstraße 42
76356 Weingarten (Baden)
E-Mail: info@silentflight-desie.de
Web: www.silentflight-desie.de

Design - MEDIAKREAKTIV

SilentFlight - *DESiE*

D*oppelsitziges*
E*lektro*
S*egelflugzeug*
i*n*
E*ntenkonfiguration*

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Technical Data SilentFlight *DESiE*

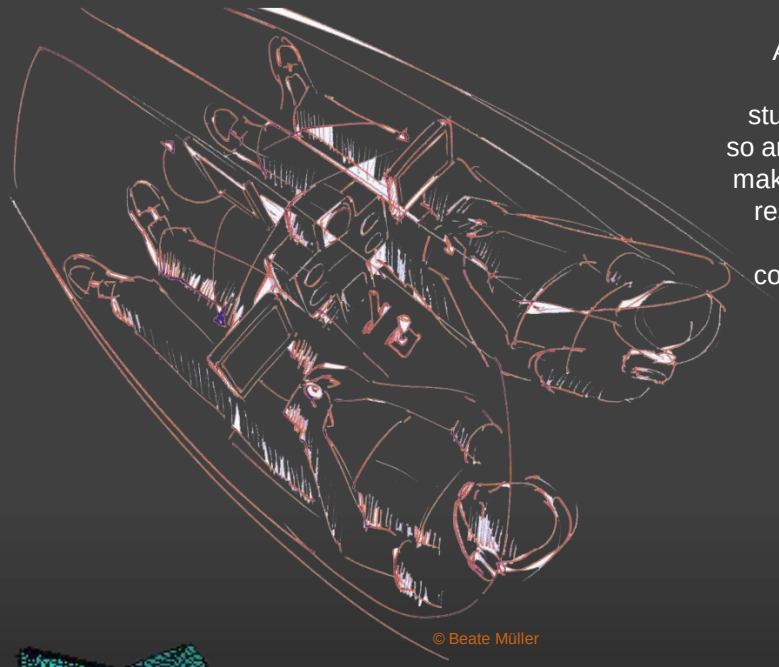
DIMENSIONS
Wing span - 20.8 m / 68.24 ft
Length - 5.45 m / 17.88 ft
Height- 1.69 m / 5.55 ft
Wing area - 17.04 m2 / 183.4 ft2
Aspect ratio -25

PERFORMANCE
Stall speed - 72 km/h / 38.7 kts
Minimum sink - 0.48 m/s / 94.5 ft/min
Max speed - 232 km/h / 124.8 kts
Climb rate * - 2.4 m/s / 472 ft/min
Best glide ratio - 47

WEIGHT
Empty weight- 374 kg / 824.5 lbs
All-up weight- 610 kg / 1344.8 lbs
Energy storage - 66 kg / 145.5 lbs
Wing loading max. - 35.8 kg/m2 / 7.33 lb/ft2

* at max. take-off-weight

ELECTRICAL DRIVE
Power - 22 kW / 29.9 hp
Propellerdiameter - 2.2 m / 86.6 in
Rotational speed max. - 1750 rpm



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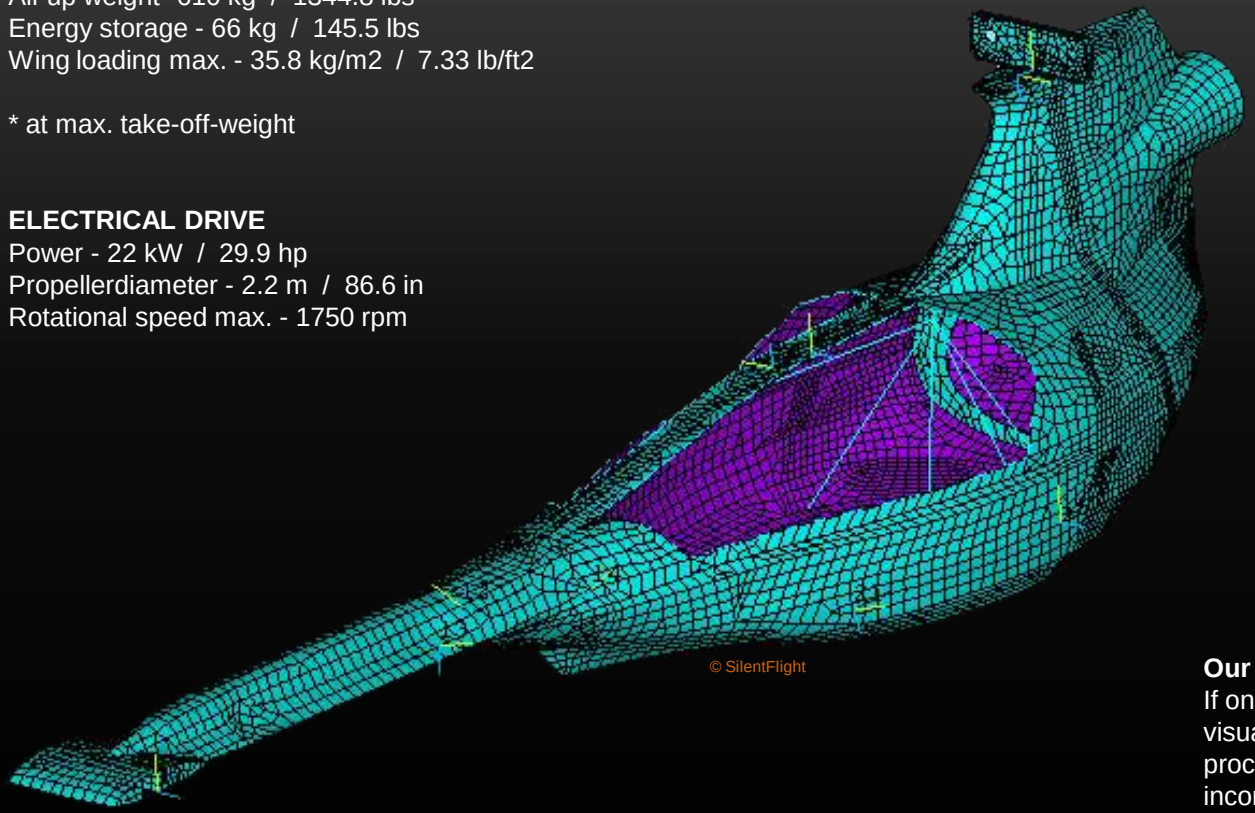
Cockpitdesign
At the AERO Friedrichshafen (GE) 2009, a young design student find the shape of DESiE so amazing that she suggested to make a cockpitdesign for us. The result is shown below and gave us the important input how it could work to slip into the seats without artistic movements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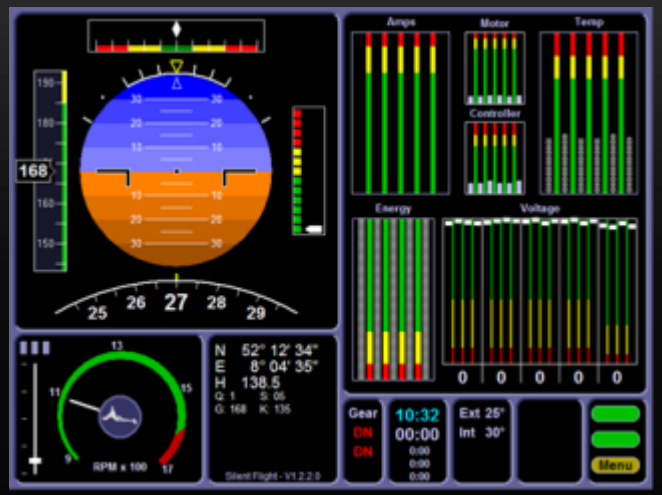

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Our Glasscockpitdesign
If one introduce new electric drive technologies you need also a self made visualisation for the control instruments and a corresponding software to process the multiple data. Our specialists Hans and Frank managed the incoming problems with great commitment.