

## YAMADA Model – Engines

This Flyer is written for the scale-model-builder and the F3A pilots, who depend on high performance engines. Despite the advanced technology, the lipo cells who power bigger than 1,6m aircrafts ( wing span ) are still quite expensive. Even accumulators like Flight Power F3A 10S 5,3 Ah have not enough power for a full program pattern in F3A . Depending on wind conditions this might be a disadvantage as seen during the F3A areobatic world chamionship in Portugal 2009. Five out of ten aircrafts in the Final have been combustion engines. The first three pilots on the podest flew YAMADA DZ 170 cdi ...

Price incl. electronic ignition and mount **Sfr. 1'130.-**



### **YS DZ170 cdi**

The engine DZ 170 cdi was especially developed for F3A aerobatics competition. The DZ 170 cdi delivers high performance; with an Engel Prop 19x11 it reaches 7'500 rpm on ground.

- \* Crankcase supercharging system
  - \* Direct injected system
  - \* Convenient fuel pump adjustment
  - \* High horsepower output with long service life
- DISPLACEMENT : 27.95cc
  - BORE : 34.0mm
  - STROKE : 30.8mm
  - WEIGHT DZ170cdi :1062g
  - DZ 170 cdi with M:1167g

## Power Fuel

The never ending discussion about methanol engines burning expensive propellant is an old story. I fly myself with Lipo's since 7 years. Beside an Angel 30 and 50 there is as well an OXAI Beryll. This F3A full size is driven through a Plettenberg XTRA evo with Phoenix HV-85 brushless controller and 10s LIPO. For the latest technology – a 10s/5Ah/45C Lipo – the costs are for one set between Sfr. 1'000.- and 1'200.- depending on the manufacturer. The weight is in between 1'000 and 1'200 gr . For to fly several times I need at least 3 to 4 sets. ( Despite the Current Generator burning Gaz )

I consider to use about 8 cans a 5 liters per year ( flying a lot ) The costs for 8 cans are about Sfr. 500.- . The calculation for 3 sets of mentioned Lipo's is about Sfr. 3'000.- being on the low end. This amount has to be spent in advance, not taking in account to loose noticeable power after 30 cycles already. Flying, heats the Lipo's and before loading again, you better let them cool down slowly. Otherwise the amount of life cycles and the performance decrease faster.

After three years Sfr. 1'500.- ( combustion engine ) stand against Sfr. 3'000.- ( Lippo ) . After my opinion the combustion engine is still the cheaper and better choice in terms of performance. The fact that in the close future ( approx. 5 years ) the electric will be equal; no doubt.

The measures on ground has been made with the following mixture:

20 % Nitro  
15 % Aerosave III  
65 % Methanol

Please read as well the following pages :  
<http://www.patternflyer.com/troy/?p=89>

my own webpages :

[www.yamada.li](http://www.yamada.li)  
[www.hatori.ch](http://www.hatori.ch)

Through the electronic ignition an early explosion is avoided. Therefore the DZ 170 cdi does not backfire as other glow engines do... ( you should not run the engine to lean though )

Up to now I was able to enjoy an outstanding service from Mr. Yamada and Miss Hatori. As I fly since forty years glow engines I never experienced such a good service... The asian's obviously have a different perception about customers.

If it is of interest for a group of people I would be glad to demonstrate this outstanding engine...

Please don't hesitate to ask questions; you can ask in French as well.

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