

Precision Aero Products

Precision F3A Contra Drive (V1)

Precision Aero Products Pty Ltd

ABN 34603116123

Tel: +61 0478909530

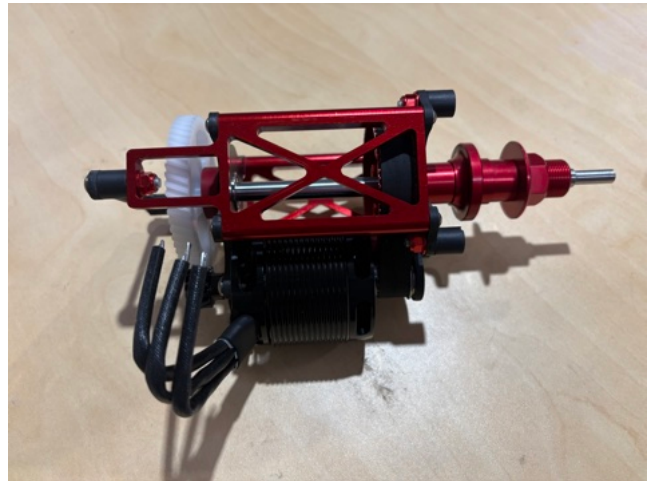
<http://www.precisionaeroproducts.com.au>

sales@precisionaeroproducts.com.au



Instruction Manual

Thank you for choosing to purchase a Precision Aero Products Precision F3A Contra Drive. This product is proudly designed and partially manufactured in Australia by Precision Aero Products. The Precision F3A Contra Drive incorporates all our knowledge about belt/gear reduction systems. Particular attention has been paid to the mounting system to provide both stability and quietness. The motor is also orientated to maximise cooling efficiency. The motor is also 15-20mm further forward compared to other contra drives. Interestingly, should you need to replace the main shaft, this can be done with the drive still in the model.



We use EGODRIFT motors exclusively in our drives. Based on our testing, we believe EGODRIFT motors are superior. The Precision F3A Contra uses a 550KV 4025EC Eclipse Series motor.

The Precision F3A Contra Drive is comprised of the following items:

- Precision F3A Contra Drive Assembly (1).
- Titanium M4 x 8mm Cap Head SS Screw (4).
- Collet Assembly (1).
- This Instruction Manual (1).

***Custom firewalls and drill jigs are possible. Contact Precision Aero Products with your specific requirements.**

In this manual we talk about cutting and or sanding plywood and working with composite materials and adhesives. It is imperative that you use appropriate personal protection equipment (PPE) when working with these materials and chemicals. This includes (but is not limited to) safety glasses, respiratory mask and rubber gloves.

Safety Precautions:

- Electric motors can cause serious harm or injury. During initial testing/setup of your drive, we suggest running it without a propeller fitted.
- Only use balanced, undamaged propellers.
- Ensure all loose wiring is safely kept away from the rotating motor and belt drive.
- The propeller nut tightness should be checked after five (5) flights. Some propeller hubs can compress a little causing a loose prop.
- If excessive vibration is detected **stop** and check your propeller and ensure all drive mounting fasteners are tight. If unsure, ask us for support.

ESC Types:

The drive has been tested with D3 F3A ESC, JETI Mezon 95 OPTO Light, JETI Spin99, Futaba/OS MC9100A. **We highly recommend the D3 F3A ESC.** The ESC should be capable of handling 100A and 10S batteries.

ESC Settings:

- Timing 9-15 degrees.
- 10 Poles.
- Ratio 4:1.
- Brake starting point 15%. Adjust as required.

D3 F3A ESC Specific Settings:

- Timing 15 degrees.
- 10 Poles.
- Ratio 4:1.
- 4,300 RPM*.
- Spool-up Speed - Default.
- Brake on stop - OFF.
- Idle RPM Normal Flight 1,200 RPM*.
- Idle RPM Landing 5-600 RPM*.
- Idle RPM Spin 5-600 RPM*.
- We recommend using a telemetry sensor such as the Unisens-E made by SM Modellbau. This will give you very good information on the drive system performance such as Amps, RPM, Capacity used, Volts etc. You can also set alarms to prevent putting a flat battery in your model or forgetting to change a flown battery.

* Adjust the D3 RPM settings to suit.

Suggested Propellers:

- Falcon 23" x 20" Front and Rear.
- Falcon 24" x 20" Front and Rear (Calm Conditions).

Spinners:

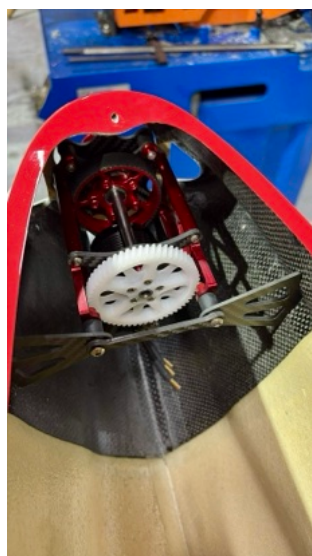
The drive is deliberately not supplied with spinners as there are a number of options. Falcon and Adverrun spinners are compatible with the Precision F3A Contra Drive. Falcon spinners will require a small modification to the rear back plate. We can do this for you free of charge.

Installation:

There are a couple of options regarding materials used for installation. We suggest using an AC Ply Firewall & AC Ply Rear support side parts. This is the quietest material. You can also use carbon fibre. The front mounting rubbers are on the same centres as our Precision F3A Drive and PCK.

We strongly suggest laminating the inside of your fuselage nose with light weight (120-150g/sqm) carbon cloth. This will improve the strength and rigidity of the nose area. Some models will come with carbon in the nose already.

Below are some photos showing the installation into a Proteus WC by Hui Yang.



Below is a picture showing how good the cooling is in this airframe.



We can supply a firewall, rear support and installation jig to suit your airframe. Please contact us for details.

Warranty:

The warranty period is twelve (12) months from the date of purchase. This warranty covers workmanship and materials. Crash damage is not covered nor is obvious misuse or modification to the drive or motor.

If you have any questions in relation to the use of this product, please feel free to contact us at: sales@precisionaeroproducts.com.au
