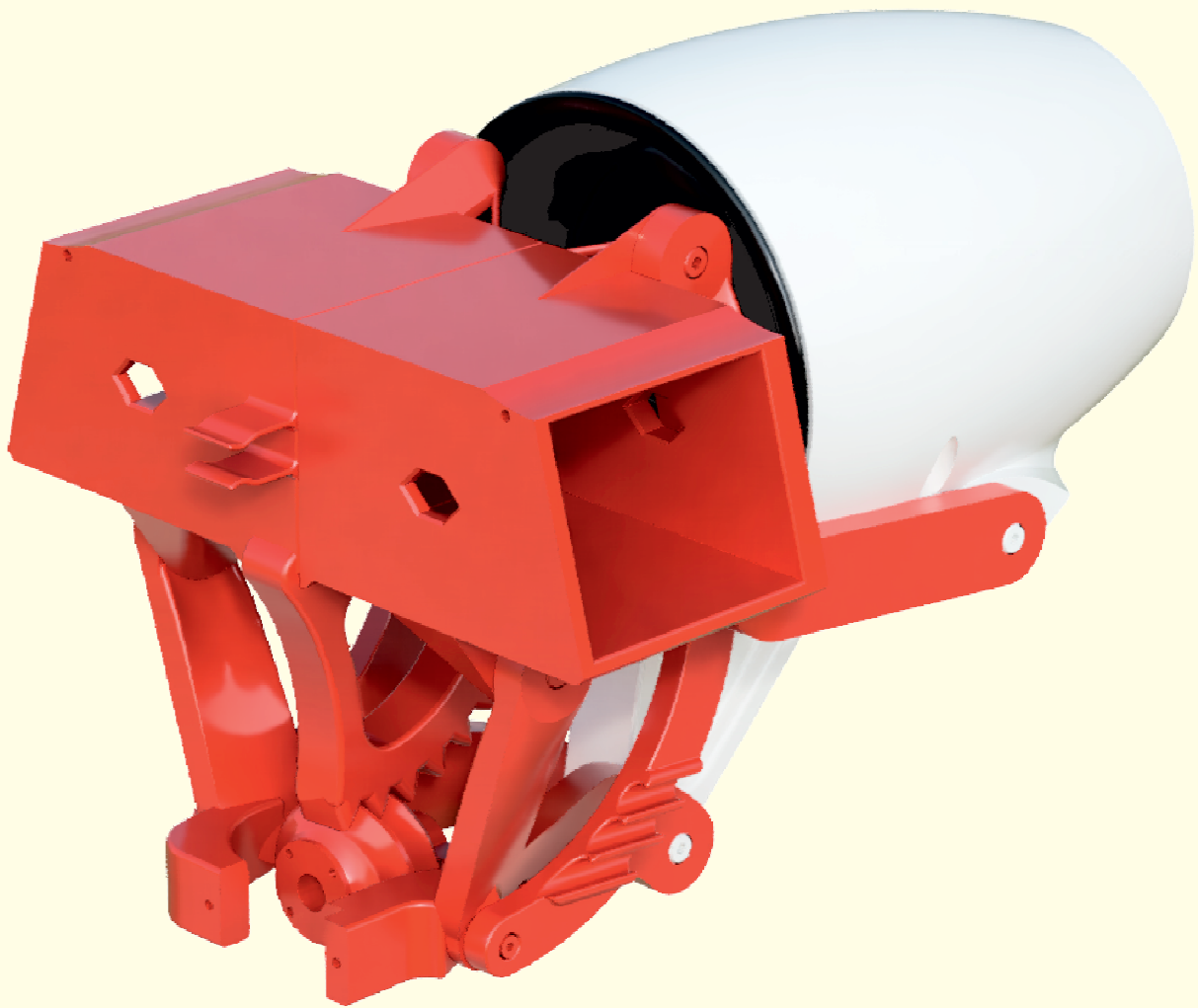# Retractable EDF
for DFS Habicht

Part Guide

Advantages and Disadvantages

With this upgrade, you can build a fuselage with a retractable EDF for your DFS Habicht. The contrast of a vintage glider with a „jet engine" is sure to grab the attantion all the flying field! The system was thouroughly designed to achieve maximum performance. Its greatest advantage is the very low cost as you only need a standard 9-gramm servo to power it. However, it also comes with its downsides, such as the increased weight of the fuselage resulting in a lower maximum G-loading. It is also a rather complex build. A great project for tinkerers!

| Pure glider	Front mounted propeller	Retractable 64mm EDF
+ lowest weight	+ the most versitile	+ absolute eye-catcher
+ the most scale and pure	+ ground takeoff possible with the includet wheels	+ great sound
+ no motor needed	+ allows you to save the plane if you drown at the slope	+ maintains scale look
- requires a towplane or ridge lift to get airbourne	- the propeller does look a bit ugly	- adds ~350 gramms to the fuselage which brings the maximum G-loading down to 6!

What you need

RC Components

1 additional
9-gramm servo

64 mm EDF
(EDF shells available for Powerfun
and FMS 64mm EDF)
50 Amp ESC
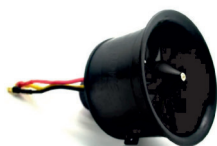
2 additional channels
(compared to pure glider)

2600mAh 4S LiPo
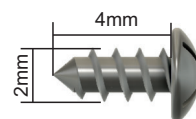recommendet

Screws / Hardware / Tools
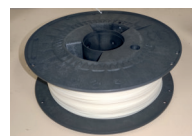
rubber bands

soldering iron

15 self tapping screws
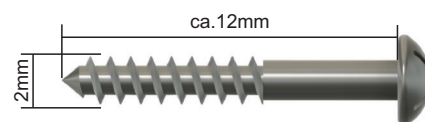

4mm
2mm

15cm servo wire

250 gramms PLA

3x 20cm motor wire

grease

2 self tapping screws

ca.12mm
2mm

1

Fuselage 5 EDF

Slicing Mode:	Surface
Rec. Material:	LW-PLA
Quantity:	1
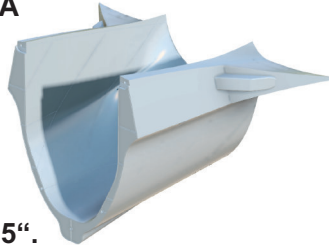
Note: Relaces „Fuselage 5".

Fuselage 6 EDF

Slicing Mode:	Surface
Rec. Material:	LW-PLA
Quantity:	1
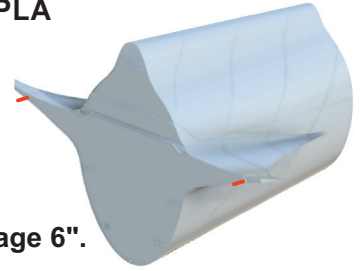
Note: Replaces „Fuselage 6".

EDF Door 1

Slicing Mode:	Surface
Rec. Material:	LW-PLA
Quantity:	1 normal, 1 mirrored
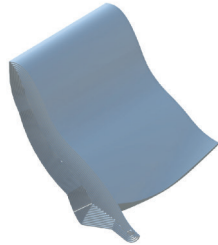
EDF Door 2

Slicing Mode:	Surface
Rec. Material:	LW-PLA
Quantity:	1 normal, one mirrored
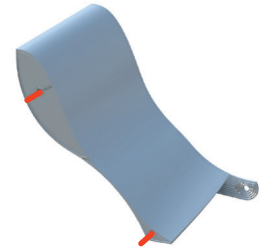
EDF Shell Top

Slicing Mode:	Normal
Rec. Material:	PLA
Quantity:	1
Walls:	1
Top/Bottom Layers:	3/2
Infill:	3% cubic
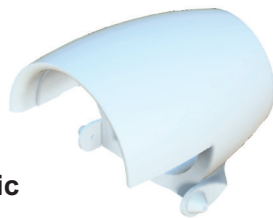
Note: Available for Powerfun and FMS 64mm EDF

EDF Shell Bottom

Slicing Mode:	Normal
Rec. Material:	PLA
Quantity:	1
Walls:	1
Top/Bottom Layers:	3/2
Infill:	3% cubic

Note: Available for Powerfun and FMS 64mm EDF

Sparbox EDF Right

Slicing Mode:	Normal
Rec. Material:	PLA
Quantity:	1
Walls:	2
Top/Bottom Layers:	4/3
Infill:	15%
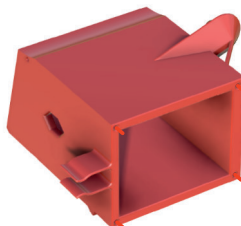
Note: Relaces „Sparbox Right". 3 levels of tolerance available.

Sparbox EDF Left

Slicing Mode:	Normal
Rec. Material:	PLA
Quantity:	1
Walls:	2
Top/Bottom Layers:	4/3
Infill:	15%

Note: Replaces „Sparbox Left". 3 levels of tolerance available.

Upper Arm R

Slicing Mode:	Normal
Rec. Material:	PLA
Quantity:	1
Walls:	2
Top/Bottom Layers:	4/3
Infill:	15%
Support:	Tree

Upper Arm L

Slicing Mode:	Normal
Rec. Material:	PLA
Quantity:	1
Walls:	2
Top/Bottom Layers:	4/3
Infill:	15%
Support:	Tree

Lower Arm R

Slicing Mode:	Normal
Rec. Material:	PLA
Quantity:	1
Walls:	2
Top/Bottom Layers:	4/3
Infill:	15%
Support:	Tree

Lower Arm L

Slicing Mode:	Normal
Rec. Material:	PLA
Quantity:	1
Walls:	2
Top/Bottom Layers:	4/3
Infill:	15%
Support:	Tree

Middle Arm R

Slicing Mode:	Normal
Rec. Material:	PLA
Quantity:	1
Walls:	2
Top/Bottom Layers:	4/3
Infill:	15%

Middle Arm L

Slicing Mode:	Normal
Rec. Material:	PLA
Quantity:	1
Walls:	2
Top/Bottom Layers:	4/3
Infill:	15%

Gear

Slicing Mode:	Normal
Rec. Material:	PLA
Quantity:	1
Walls:	2
Top/Bottom Layers:	4/3
Infill:	15%

Worm Gear

Slicing Mode:	Normal
Rec. Material:	PLA
Quantity:	1
Walls:	2
Top/Bottom Layers:	4/3
Infill:	15%

Worm Spacer

Slicing Mode:	Normal
Rec. Material:	PLA
Quantity:	1
Walls:	2
Top/Bottom Layers:	4/3
Infill:	15%

Note: Only needed if theres a gap between servo and worm gear. Adjust the hight to fit your servo.

Worm Holder

Slicing Mode:	Normal
Rec. Material:	PLA
Quantity:	1
Walls:	2
Top/Bottom Layers:	4/3
Infill:	15%
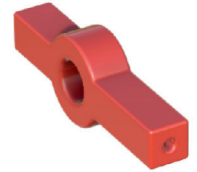
Potentiometer Holder

Slicing Mode:	Normal
Rec. Material:	PLA
Quantity:	1
Walls:	2
Top/Bottom Layers:	4/3
Infill:	15%

Potentiometer Adjuster

Slicing Mode:	Normal
Rec. Material:	PLA
Quantity:	1
Walls:	2
Top/Bottom Layers:	4/3
Infill:	15%

Washer Large

Slicing Mode:	Normal
Rec. Material:	PLA
Quantity:	8
Walls:	2
Top/Bottom Layers:	4/3
Infill:	15%
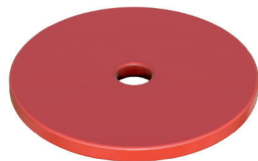
Washer Small

Slicing Mode:	Normal
Rec. Material:	PLA
Quantity:	4
Walls:	2
Top/Bottom Layers:	4/3
Infill:	15%

Hook

Slicing Mode:	Normal
Rec. Material:	PLA
Quantity:	2
Walls:	2
Top/Bottom Layers:	4/3
Infill:	15%

Build

Scan this code to get to the build video:

Or click this link:

https://youtu.be/ BeukYMHx_YI