



Projekt/ Project: Sea Harrier (AV 8A) Version: 1.0 (11.2022)

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Spezifikationen und Zubehör/ Specifications and list of components:

Spannweite/ Wingspan:	900 mm
Länge/ Length:	1.150 mm
Flächenbelastung/ Wing load:	Nicht berechnet/ Not calculated
Luft-Geschwindigkeiten/ Air speeds:	50km/h - 200 km/h (gemessen/ measured)
Haupt-EDF/ Main-EDF:	JP 90mm, 6S 1750KV (CW)
Hauptluftführung/ Main ducting:	Pegasus style
Gewicht/ Weight:	2. 4– 2.6 kg (STOL version), 2.8 – 3.0 kg (VTOL version)
Stand Schub / Horizontal thrust:	Appr. 2.5 kg (STOL version)
Vertikaler Stand Schub/ Vertical thrust:	Appr. 4.0 kg (VTOL version)
Haupt-Lipo/ Main-Lipo:	Goaneng 6S LiHV, 100C/ 200C, 4.500 mAh
Regler/ ESC:	200A - APD HV 200F3 (14S)
Spannungsversorgung/ BEC:	Seperate 8A -10A UBEC
Seitenruder Servo/ Rudder servo:	1 x VEGA KMST XV 8-309
Querruder Servo/ Ailierons servo:	2 x VEGA KMST XV 8-309
Höhenruder Servo/ Elevator servo:	1 x KST X12-508
Landklappen Servo/ Flaps servo:	2 x VEGA KMST XV 8-309
Empfänger/ Receiver:	8 Channels (STOL version), 9 Channels (VTOL version)
Vektorsteuerung/Thrust vectoring:	4 x Hitec MD-65-MG (programmierbar/ programmable)
EZF Bug/ Front gear retract:	1 x servoless Mini Retract (3,5kg)
Lenkung Bugservo/ Front gear servo:	1 x Tower Pro MG90S Micro Servo
EZF Haupt/ Main gear retract:	1 x servoless Mini Retract (3,5kg)
EZF Fläche/ Wing gear retract:	2 x servoless Mini Retract (2kg)
Vorderer Impeller/ Front EDF:	(VTOL version) - 1 x QX Motor, 50 mm - 5.000KV
Hinterer Impeller/ Back EDF:	(VTOL version) - 1 x QX Motor, 50 mm - 5.000KV
Flächenimpeller/ Wing EDF:	(VTOL version) - 2 x QX Motor, 30 mm - 7.000KV
Yaw Servo/ Yaw servo:	2 x Micro servo Torcster NR-54 MG
Stabi-Lipo/ Leveling-Lipo:	(VTOL version) – Intellect 3S LiHV, 120C, 4.200 mAh
Stabi-System/ Leveling system:	KK2.1.5 board – “OpenAero V1.6” flashed (VTOL version)
Flugstabilisierung/ Flight Controller:	Topacc NX3 – 3D flight controller (opt. Spektrum AS3X)
Telemetrie/ Telemetry:	Pitot tube – Spektrum SPMA9588

Hinweise:

Die hier gelisteten Komponenten sind Empfehlungen des Projekteigentümers, die ausgesucht und getestet wurden, um ein optimiertes Schub-Gewichtsverhältnis darzustellen, bei gleichzeitiger verlässlicher Funktionalität der Komponenten. **Die Druckdateien sind auf diese Komponenten ausgelegt!**

Notes:

The components listed are the project owners recommendations that have been selected and tested to provide an optimized thrust-to-weight ratio while maintaining reliable component functionality. **The print files are designed for these components!**

Sea Harrier detailed Partlist

How to use:

In reason that direct links can change, please use the given Keywords for your search engine. If you can't find the explicit product, you can also choose one with equivalent technical data. More details you will find on the Youtube tutorials: [Rene Rosentraeger](#)

Parts / Material needed for all versions

Part / Material	Amount	Keyword for Search/ Direct Link
LW-PLA	1,2kg	LW-PLA (colorFabb)
PLA	200g	PLA (colorFabb)
Carbon Roving 1600tex	10m	Carbon Roving 1600tex
Epoxy Resin + Hardener	200g	Epoxy Resin + Hardener
Carbon Rod 1,5mm	4m	Carbon Rod 1,5mm
Carbon Tube 3mm	0,5m	Carbon Tube 3mm
Carbon Tube 4mm	0,5m	Carbon Tube 4mm
Carbon Tube 5mm	0,5m	Carbon Tube 5mm
Super Glue Thin, Medium, Thicke	30g each	Super Glue Thin, Medium, Thicke
Accelerator for Superglue	100ml	Accelerator for Superglue
Sand Paper	1m	Sand Paper 80Grid, 120Grid
Magnets 5x5x5	15	Magnets 5x5x5
Magnets 5x5x2	20	Magnets 5x5x2
Miniature ball bearing	2	Miniature ball bearing 10x15x4 with flange - F61700 ZZ or
4x3 mm Aluminium Tube	0,1m	4x3 mm Aluminium Tube
M5 x20mm Nylon Screw	1	M5 x20mm Nylon Screw (Wing fixation)
M5 Nut Nylon	1	M5 Nut Nylon (Wing fixation)
M4 x20mm Nylon Screw	4	M4 x20mm Nylon Screw (Inlet part fixation)
M4 Nut Nylon	4	M4 Nut Nylon (Inlet part fixation)
Electrical Components for all versions		
90mm EDF	1	EDF Ducted Fan JP Hobby 90mm + 6s Motor 1750Kv (CCW)
ESC's	1	for STOL and catalpult version: JP Hobby Mantis 150A HV ESC 6-12S OPTO or JP Hobby 160A ESC 6-14S (UBEC 10A) for VTOL: APD HV 200F3 14s for F3B
Elevator Servo	1	8- 12 mm Servo with metal gear 4kg/cm min. torque, 0,09
Ail Servo	2	8-10mm Servo with metal gear, 1,2kg/cm min. torque, 0,08
Flap Servo (optional)	2	8-10mm Servo with metal gear, 1,5kg/cm min. torque, 0,15
Rudder Servo	1	8-10mm Servo with metal gear
BEC for RX-power	1	Just in case it is not included on the ESC; 5,5-6V min. 5A
Servo Wire Extensions	10	Servo Wire Extensions with 5-30cm

3 Axis Gyro	1	3 Axis Gyro - Plane Flight Controller
Linkage		
Fork heads	6	Fork heads plastic M2 - 1.6 mm
Ball joints	10	Ball joints M2 - 3 mm M1.6
Ball joints	2	Ball joints M2 - 3 mm M2
M2 threaded rod	0,5m	M2 threaded rod
Retracts and wheels for STOL version		
Retract mechanic not steerable (main gear)	1	3,5 kg, 40g retract
Retract mechanic steerable (nose gear)	1	3,5 kg, 40g retract
Retract mechanic (wing gears)	2	2,0 kg, 25g retract
Front and main wheel (up to 55mm x 18mm)	2	1,75" Rubber Wheel or Foam Wheel, 2,00" Rubber Wheel or Foam Wheel
Wing wheels (up to 35mm x1 4mm)	2	1,00" Rubber Wheel or Foam Wheel, 1,25" Rubber Wheel or Foam Wheel
Steel wire for front wheel	0,5m	0,5 - 1,0mm steel wire
Nitrile Rubber Rings (gear suspension)	14-24	Nitrile Rubber Ring kit
Carbon rod 3mm	0,2m	Carbon rod 3mm
Carbon rod 2mm	0,2m	Carbon rod 2mm
Specials for STOL/ VTOL version		
Nozzle Servo	4	Hitec MD65MG
Nozzle Servo	1	DPC-11(Hitec Universal-Servoprogrammer)
Steel Balls	12	3,5mm steel balls
Specials for VTOL version		
30mm EDF	2	30mm EDF, Recommended: QX 30mm EDF
40mm EDF	1	40mm EDF
50mm EDF	1 or 2	50mm EDF, Recommended: QX 50mm EDF