

# BRUSHLESS 'Spec.' MOTORS 13.5T

## INTERNATIONAL FEDERATION OF MODEL AUTO RACING

Whilst sample Motors submitted have been found to conform with IFMAR rules for 'Spec' Brushless Motors, it is the responsibility of ALL competitors to ensure that the versions they use also comply with all IFMAR rules and requirements.

NOTE: Only Rotors listed (below) can be used at IFMAR WC events. They may differ from Rotors listed by other organisations.

DISCLAIMER: "IFMAR shall not be liable for special, indirect or consequential damages, loss of profits, production or commercial loss in any way connected with the approved products on this list. As IFMAR has no control over use, set-up, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, set-up or assembly the user accepts all resulting liability".

# IFMAR PRODUCTS LIST -- BRUSHLESS 'Spec.' MOTORS 13.5T. Issued: 19 July 2024.

NOTE: All Rotors (including Option Rotors) used in Motors added from 2021 onwards, MUST have the Rotor unique Part # on the external part of the shaft.

NOTES: Motors approved by IFMAR must comply with all current IFMAR Motor Rules. The following to aid Tech. Officers:-

Rule 5 details the years when the continually changing requirement for stator access was implemented.

Rule 7.2 - Laminate chamfers/deburring allowed to the winding-leg of only the end laminates, which must retain original overall width.

Rule 7.3 - No solid glue or filler can be added to the wires of the final winding assembly.

From 2015: Rule 7.4 (e). Rotors must be identified with manufacturers name/logo and Part Number and from 2021 all Rotors must have the 'listed' Part Number etched/stamped on the external area of the rotor shaft.				
Manufacturer Type/Range	Illustration only		Notes	
2024 IFMA	R PRODUCTS LIST BRUS	HLESS 13.5T 'Sp	ec.' MOTORS. Issued:	19 July 2024.
Team Exalt Phoenix Light Weight Part # EXA02125	ESZALT P	PHOENIX	Sensored system. Black end-plate has Wind on stator. Adjustable timing 0-6 magnetic, Al. retaining housing, stee bearings. Rotor with name, Part # on shaft:- EX Option rotor: EXAS2304.	0 deg. All screws shielded magnetic
2023 IFMAR PRODUCTS LIST BRUSHLESS 13.5T 'Spec.' MOTORS: Issued: 20 Aug. 2023				
BRUSHLESS 13.5T 'Spec' BELOW, KNOWN TO COMPLY WITH IFMAR RULES IN 2023				
Muchmore Fleta ZX V3 Type ER Part # MR- V3ZX135ERTM	Sixterior Annual Marketing of the Control of the Co	All screws magnetic, Al. re MUST have slots in both E	pen, Caps remove. Adjustable timing taining housing, steel shielded magne nd-Caps for stator measuring t # MR-FZR19XTM on shaft.	
Surpass Hobby Rocket RC V6M Lightweight Part # SUR 6513	THE SAME SAME SAME SAME SAME SAME SAME SAM	Adjustable timing 0/+60 de	two cut-outs for measuring. g. Wind & V6M Lightweight printed o taining housing, steel shielded magne c C75125 on shaft.	
Surpass Hobby Rocket RC V6 Part #	TRUCKE INC.			rews magnetic. Al.

Hoomark Team Zombie **EVO II** Part #

M-TZ-EVO2135T

SUR 6613



Sensored system. End-Caps remove. Adjustable timing 0/+60 deg. 4mm thick collector ring. Long body screws non-magnetic, timing plate screws magnetic, Al. sensor retaining housing, magnetic steel shielded bearings.

Rotor with: Name & Part # on shaft M-TZ-725125.

Option Rotor: M-TZ-725125T

Trinity Slot Machine Part # TEP 2021E



Sensored. Purple end-plate has Trinity & Slot Machine etched.

Wind and 'EFRA' on 'open' stator.

Adjustable timing 0-60 deg. Has stator access. Wind stamped on lower collector ring. All screws magnetic, Al. retaining housing, steel shielded magnetic bearings.

NOTE: Original version has EFRA marked in GOLD on stator.

Rotor with: Name & Part # on shaft TEP1119.

Later version has EFRA logo marked in WHITE on stator.

Rotor with: Name & Part # on shaft TEP1120.

Either Rotors are allowed.

**Team Powers** Actinium V5.0 Pt. # TPRBLM135100 ACT-V5



Sensored system. Black Al. one piece Can. 4 full length slots. Team Powers on End-Cap. Wind on stator. Adjustable timing 0-60. All 6 c/sk screws magnetic, Al. sensor housing, steel shielded bearings. Rotor with: Name, Part # TP125G-R50 on shaft

#### **BRUSHLESS 13.5T BELOW, KNOWN TO COMPLY WITH IFMAR RULES IN 2022**

Hobbywing Xerun V10 G4 Pt# 30401140



Sensored system. Black all Alu. End-Caps. Rotor with one Alu. bal. ring. Adjustable timing +30/+ 60 deg. Stator and wind visible. All screws magnetic, Al. retaining housing, steel shielded bearings.

Rotor with: Name & Part # on shaft 30820444.

Option Rotor: 30820416.

Nosram **XTEC** Nosram N22 Part # 920201



Sensored system. "Y" Wind. Black Al. End-Cap with XTEC. Adj. timing 0/60. Wind etched on stator, visable. Body screws non-magnetic, timing screws magnetic, steel shielded magnetic bearings. Rotor with: Nosram & Part # 920522 on shaft.

Option Rotor: 920521.

### 'Spec' BELOW, KNOWN TO COMPLY WITH IFMAR RULES IN 2021

Hoomark Team Zombie EVOT. Part # M-TZ-EVO135TT



Sensored system. Stator removes. Adjustable timing 0/+60 deg. 4mm thick collector ring. All screws magnetic, Al. sensor retaining housing, magnetic steel shielded bearings. Rotor with: Name & Part # on shaft M-TZ-725125.

Option Rotor: M-TZ-725125T

Ruddog RP542 Part # RP-0447



Sensored system. 4 side screws retain End-Cap. Timing insert with Ruddog. Adjustable timing 0/+60. Wind & RP542 on stator visible. 3mm colector ring. All screws magnetic, Al. sensor housing, magnetic steel shielded bearings. Stator bonded.

Rotor with: Name & Part #:- RP-0435 on shaft

Maclan MRR V3 Part # MCL1050



Sensored system. 3 side screws retain End-Cap. Timing insert with Maclan. Adjustable timing +20/+ 50. All screws magnetic. Al. sensor housing & horseshoe, magnetic steel shielded bearings. Stator removes with wind etched.

Rotor with: Name & Part # MCL4144 on shaft.

**Team Powers** Actinium V4.0 Pt. # TPBLM135100 ACT-V4



Sensored system. Black Al. one piece Can. 4 full length slots.

Team Powers on End-Cap. Wind on stator. Adjustable timing 0-60. Body screws nonmagnetic, timing screws magnetic, Al. sensor housing, steel shielded bearings. Rotor with: Name, Part # TP125G-R2 on shaft.

Option Rotor: TP123G-R2

### BRUSHLESS 13.5T 'Spec' BELOW, KNOWN TO COMPLY WITH IFMAR RULES IN 2020

Tekin Redline G4 SPEC-R Part # TT2763



Sensored system. "Y" Wind. Adj. timing 0/60. Machined Alum. Can, wind printed. Stator visable. All screws magnetic, Plastic sensor housing, magnetic steel shielded bearings. Rotor Part # TT2776 on shaft.

Performa p1 Radical Stock Part # PA9408



Sensored system. "Y" Wind. Stator removes. Adjustable timing 0/+40. Wind in screw slots. All screws magnetic, Al. retaining housing, steel shielded bearings. Rotor with: Name, Part # PA9356.

PRT Elec. PRT AIR Part # PRTAIRX135



Sensored system. "Y" Wind. Alu. Caps remove, PRT on End-Plate. Adjustable timing +30/+75. Good stator access. All screws magnetic, plastic sensor ass., magnetic steel shielded bearings located with brown 'O' ring.

Rotor with: PRT & Part # 125LVHT on shaft.

Option Rotor: 125SVHT

Konect K1 Elite Stock Part # K11901008	STOCK MELINE	Sensored system. "Y" Wind. Stator not bonded and removes for checking. Wind on stator visible. Adjustable timing 0/60. All screws magnetic, Al. retaining housing, magnetic steel shielded bearings.  Rotor with: Name & Part # K1/12.5C7.2 on shaft
SCORPION POWER RR-3420 Part # (ending) 7086984180	(E)	Sensored system. "Y" Wind. Stator not bonded but tight to remove. Wind on stator. Adjustable timing 0/60. All screws magnetic, Al. retaining housing, magnetic steel shielded bearings. Only later versions with no paint coatings on the stator ends are approved. Rotor with: Name & Part # 4897086984234
Ruddog RP541 Part # RP-0359		Sensored system. "Y" Wind. 4 side screws retain End-Cap. Timing insert with Ruddog & RP541. Adjustable timing 0/+60. Wind on stator visible. 3mm colector ring. All screws magnetic, Al. retaining housing, magnetic steel shielded bearings.  Rotor with: Name & Part # RP-0349.
Absima CTM V.3 Part # 2130060	Barrier debt in the state of th	Sensored system. Stator removes, access holes. Absima logo End-Cap, wind on stator. Adj. timing 0/50. Single collector ring. Body & timing screws non-magnetic, Al. retaining housing, magnetic steel shielded bearings.  Rotor with: Name & Part # CTM STK N42UH.
Reds Racing VX3 Std. Ver. Part # MTTE 0036 MTTE 0036C	0   VX3   VX3	Sensored system. "Y" Wind. Red Al. timing plate. Adjustable timing 0-50. Caps. remove, cut-outs for measuring stator. All screws magnetic, Al. sensor housing & retaining plate, magnetic steel shielded bearings.  Rotor with: name & Part # MSTE 0030.N  Motor with Part # ending with C has non-magnetic long body screws.
Reds Racing VX3 High Tor. Part # MTTE 0036T MTTE 0036P MTTE 0036PC	13.5T VX3	Sensored system. "Y" Wind. Red Al. timing plate. Adjustable timing 0-50. Caps. remove, cut-outs for measuring stator. All screws magnetic, Al. sensor housing & retaining plate, magnetic steel shielded bearings.  Rotor with: Name & Part # MSTE 0031.  4 versions submitted. Motor with Part # ending with:- 'T' has higher torque. 'C' has non-magnetic long body screws. 'P' has updated stator material.
Hoomark Team Zombie EVO. Part # M-TZ-EVO135T	PRO SPEC	Sensored system. "Y" Wind. Stator removes. Adjustable timing 0/+60 deg. 4mm thick collector ring. Body screws magnetic, timing screws magnetic, Al. retaining housing, magnetic steel shielded bearings.  Rotor with: Zombie & Part # M-TZ-725125 on shaft.  Option Rotor: M-TZ-725123
	BRUSHLESS 13.5T 'Spec' BELOV	V, KNOWN TO COMPLY WITH IFMAR RULES IN 2019
Corally Vulcan Stock Part # C-61111		Sensored system. "Y" Wind. Can with Vulcan Stock & wind on stator. Adj. timing 0-60 deg. Stator removes. All screws magnetic, Al. sensor housing. Steel shielded bearings. Rotor with: Name & Part #: 61130
Fantom ICON Torque Part # FAN19213T	H B C	Stator glued in one piece can. Wind on stator. Can has wind & ICON etched. Adjustable timing +20/+60 deg. No full length internal pins, one magnetic pin 1 dia. x 8 long. All screws magnetic. Bearings magnetic with steel shields.  Rotor with: Name, Part # FAN19585.
Surpass Hobby Rocket-RC V5R Part # SUR 51135	VSR STOCK WWW.	Stator removes. Adjustable timing 0/+60 deg. Wind etched on stator. 3mm colector ring. Body screws non-magnetic, timing screws magnetic, Al. retaining housing, steel shielded bearings. Steel body screws supplied with kit, allowed. Rotor with: Surpass, Part # C75125 on shaft. Option Rotor: C77123 on shaft.

Speedzone Part # SZBLS135	13.5T SPEEDZONE	One piece Can, stator removes. Adjustable timing 0/+60 deg. Wind etched on stator (hiden). All screws magnetic. Al. retaining housing, steel shielded bearings.  Rotor with: Name, Part # SZR125S, diameters on shaft.  Option Rotor: SZR125S-T, diameters on shaft.
United Sino Ent. ORCA Blitreme2 Part # MO18BT54135	BELTREME?	Sensored system. Stator bonded, has access holes. ORCA, Blitreme2 & wind etched on End-Cap. Wind on stator. Adj. timing +10/60. Single 3mm collector ring. All screws magnetic, Al. retaining housing, steel shielded bearings.  Rotor with: Name & Part #: RT18M125258.
RC Concept CR10 Part # 20410135		Sensored system. "Y" Wind. Stator bonded. Adjustable timing 0/+60. Wind etched on stator. All screws magnetic, Al. retaining plate, steel shielded bearings. Rotor with: Name. Part # 50126.
Hobbywing Xerun V10 G3R Pt # 30401130	13.51 — 15.20	Sensored system. "Y" Wind. Black Alu. End-Caps, plastic timing insert. Rotor with one Alu. bal. ring. Adjustable timing +30/+ 60 deg. Stator and wind visible. All screws magnetic, Al. retaining housing, steel shielded bearings. Rotor with: Name & Part # 30820411.  Option rotor: 30820416.  Later versions can have mounting end-cap chamfer plain aluminium with no black paint.
Revtech XFactor Part # REV1101	13.5T	Sensored system. Blue end-plate has Revtech & XFactor etched. Wind on stator. Adjustable timing 0-60 deg. Has stator access. Wind stamped on lower collector ring. All screws magnetic, plastic retaining housing, steel shielded magnetic bearings. Rotor with: Name & Part # TEP1119. Option rotor: TEP 1120.
RC Streamline WS Line Part # E19135		Sensored system. "Y" Wind. Sleeve with WS Line & wind on stator.  Adj. timing 0-60 deg. Has stator access. Body screws non-magnetic, timing screws magnetic. Al. sensor housing. Steel shielded bearings.  Rotor with: Name & Part # WSL540S
Motiv MC3 Part # MOV31013	MOTIVE CO.	Sensored system. Alu. timing plate with logo. End-Cap ass. removes. Adjustable sensor plate timing 0/+40 deg. Has stator access. Twin collector rings. All screws magnetic, full Al sensor housing, steel shielded bearings.  Rotor with: Name & Part # MOV1330.  Option Rotor: MOV1318.
LRP XTEC X22 Part # 520201		Sensored system. "Y" Wind. Black Al. End-Bell with XTEC. Adj. timing 0/60. Wind etched on stator. Body screws non-magnetic, timing screws magnetic, steel shielded bearings. Rotor with: LRP & Part # 520522, 12.5S on shaft.  Option rotor: 520521, 12.3S on shaft.  Later motors have two full length slots, and are allowed.
	BRUSHLESS 13.5T 'Spec' BELOW	I, KNOWN TO COMPLY WITH IFMAR RULES IN 2018
SMC Lowrider Part # SMCLR40135	Page CCE	Sensored system. "Y" Wind. No centre sleeve, End-Caps remove. Adjustable timing +10/+54 deg. Wind etched on stator. All screws magnetic, Al. retaining housing, steel shielded bearings.  Rotor with: Name & Part # LR712542
Sky RC ARES Pro. V2.1 Part #	ARESPRO	Sensored system. "Y" Wind. Stator removes. Adjustable timing +5/+55 deg. Wind etched on stator. All screws magnetic, Al. retaining housing, steel shielded bearings. Rotor with: Name & Part # SK-400003-20

SK-400003-58

Fantom ICON Pt. # FAN193131CON		Stator glued in one piece can, no hysol on outer edge. Wind on stator. Can has wind & ICON etched. Adjustable timing +20/+60 deg. Three internal steel pins 2.48 dia. All screws magnetic. Bearings magnetic with steel shields.  Rotor with: Name & Part # FAN19597.
Surpass Hobby Rocket V4S Stock Spec. Part # SUR7135	V4S STOCK WWW.	Sensored system. "Y" Wind. Stator removes. Adjustable timing 0/+60 deg. Wind etched on stator. Body screws non-magnetic, timing screws magnetic, Al. retaining housing, steel shielded bearings. Rotor with: Surpass, Part # C75125 on shaft. Option Rotor: C77123 on shaft.
Tekin Redline G3 SPEC-R Part # TT2698	13.5T	Sensored system. "Y" Wind. Adj. timing 0/60. Machined Alum. Can, wind printed. Stator visable. All screws magnetic, Al. retaining housing, steel shielded bearings.  Min. length 50.00mm.  Rotor with: Name & Part # 2722.  Option Rotor: 2721
Hobbywing Xerun V10 G3 Pt# 30401103	Xerruin —13.5T—  Accident to the Accident to t	Sensored system. "Y" Wind. Black Alu. End-Caps, plastic timing insert. Rotor with one Alu. bal. ring. Adjustable timing +30/+ 60 deg. Stator and wind visible. All screws magnetic, Al. retaining housing, steel shielded bearings.  Rotor Part # 30820018. Later motors 30820406.  Both rotors allowed.
Reedy S+Plus Part # 27403	S-PLUS	Sensored system. "Y" Wind. Alu. timing insert with 'R' logo, timing 0/+ 50 deg. Stator can be removed, wind etched on stator. All screws magnetic, Al. sensor housing & retaining plate, steel shielded bearings.  Rotor with: Name & Part # 27414 of shaft flat.
United Sino Ent ORCA Blitreme Part # OMB135BL	BLITREME  13.51  13.51	Sensored system. "Y" Wind. Stator bonded, has access holes. ORCA Blitreme & wind etched on End-Cap. Adjustable timing 0/60. Twin collector ring. All screws magnetic, Al. retaining housing, steel shielded bearings.  Rotor with: Name & Part # ORR425SO.
Arrowmax Dash R-Tune Part # DA740135		Sensored system. "Y" Wind. Stator removes. Adjustable timing 0/+60 deg. Wind on stator. All screws magnetic, Al. retaining plate, steel shielded bearings. (Non-magnetic body screws included with kit).  Rotor with: DASH, Part # - DA-730003. Shaft RSS125.
NOTE:	AND STEEL	ORE 01.11.17, WERE SUPPLIED WITH MAGNETIC SCREWS SHIELDED BEARINGS FITTED.
· ·		s the Motor Part # stated and contravenes Rule 7.7.  N KNOWN TO COMPLY WITH IFMAR RULES IN 2017
Maclan MRR V2 Part # MCL1033	Modon 13.5T	Sensored system. "Y" Wind. Black Can & End-Cap with logo. Nickel rotor with one Black Alu. bal. ring. Adjustable timing +20/+ 50 deg. Has stator access. Rotor Part # MCL4143.  Option Rotor: MCL 4144
Trinity Monster Max Horsepower Part # TEP 1505	MAX TRANSTY	Sensored system. 'Y' Wind. Green end-plate has Trinity & Monster Max etched. Stator sleeve with Trinity, M Max & Wind etched.  Adjustable sensor plate timing 0-60 deg. Has stator access. Wind stamped on lower collector ring.  Rotor with: Name & Part # TEP1112, later versions TEP1119. Either options allowed.
Motiv MCR Part # MOV101352S		Sensored system. "Y" Wind. Alu. timing plate with MOTIV logo. Both End-Caps remove. Nickel sintered rotor with black balance ring. Adjustable sensor plate timing +20/+50 deg. Has stator access.  Rotor Part # MOV1340

R1 Brushess Sensored system. "Y" Wind. End-Plate with R1 etched. Stator sleeve with wind. Rotor with black balance ring. Adjustable timing 0-60 deg. Has stator access. Collector ring 3mm Motor lab. thick. Motors with epoxy filled windings not approved. V16 etched on sleeve. Part # Rotor with: Name & Part # R1-125-720-002 R1-135B-125-V16 Option Rotor: R1-123-720-001 EFRA ver. Muchmore Sensored system. "Y" Wind. Al. timing plate, adjust. timing 0-50. Stator removes but can **FLETA** be seen through holes. Wind etched on stator. Shaft etched with rotor dia. 7X V2 Rotor with: Name & Part # MR-FZR 21Y. Part # Optional Rotor #: MR-FZR-18TI MR-V2ZX135ER Sensored system. "Y" Wind. Black Alu. Caps & Sleeve, PRT on End-Plate. Adjustable PRT Elec. timing. Caps remove. Wind marked on sleeve. Has stator access. AIRs 10 Rotor with: Name & Part # 125RSHT. Part # A10135S Option Rotor: 123RSHT Orion Vortex Sensored system. "Y" Wind. Black sleeve with removable Alu. End-Plates, all retained Ultimate Stock with long screws. Adjustable timing 0/+40. Wind etched. Two sensor plug. Rotor with: Name & part # ORI 41554. LW Option Rotor: ORI 41553 Part # ORI28369 BRUSHLESS 13.5T 'Spec' BELOW, KNOWN TO COMPLY WITH IFMAR RULES IN 2016 Orion Vortex Sensored system. Dark grey one-piece Can. End-Plate has Team Orion & wind marked, VST2 Pro. retained with five screws. Adjustable timing +/- 10. Two sensor plugs. Has stator access. Rotor with: Name & Part # ORI 41476 Mg. LW Option Rotor: ORI 41517 Part # ORI28330 Corally Dynospeed Sensored system, two ports. "Y" Wind. One end of stator visable but stator removes. Wind Spec. 3.0 etched on End-Cap. End-Cap Alum., adjustable timing, no numbers. Rotor with: Logo, Part # 61130 Part # C-61101 Tesla Sensored system. "Y" Wind. Blue Alu. Can & End-Caps. Timing insert with Tesla logo ΕP etched. Nickel sintered rotor with one Alu. bal. ring. Adjustable timing +20/+ 60 deg. Lams.visible. Part # Rotor Part # TS-194136 TS-194135T-S Sensored system. "Y" Wind. Black Alu. Can & End-Caps. Timing insert with Fenix DFV2 Fenix etched. Nickel sintered rotor with one Alu. bal. ring. DFV2-13.5 Adjustable timing +20/+ 60 deg. Lams.visible. Part. # Rotor Part # MF72-B FM00135-2 Option Rotor: MF72 Fenix Sensored system. "Y" Wind. Black Alu. Can & End-Caps. Timing insert with Fenix DFV DFV-13.5 etched. Nickel sintered rotor with one Alu. bal. ring. Adjustable timing +20/+ 60 deg. Lams.visible access with cap removed. Part # Rotor Part # MF72. FM00135 ESS 13.5T 'Spec' BELOW, KNOWN TO COMPLY WITH IFMAR RULES IN 2015

Reedy Sonic M3 Part # 255



Sensored system. "Y" Wind. Black Alu. Cap & Sleeve, Alu. timing insert with 'R' logo. Adjustable sensor plate timing 0/+ 50 deg. Caps remove and stator can be removed, wind etched on stator. Nickel sintered rotor with one Alu. balance ring. Rotor Part # 273. Optional Rotor: # 272.

Reedy Sonic M3 - SS 1S Part # 270	Sensored system. "Y" Wind. Black Alu. Cap & Sleeve, Alu. timing insert with 'R' logo. Adjustable sensor plate timing 0/+ 50 deg. Caps remove and stator can be removed, wind etched on stator. Nickel sintered rotor with one Alu. balance ring. Rotor Part # 272. Option Rotor: # 273.
G Force Super Extreme Part # G0150	Sensored system. "Y" Wind. Red Alu. Cap & Sleeve, Alu. timing insert with G logo. Adjustable sensor plate timing 0/+ 60 deg. Caps & sleeve remove, wind etched on stator. Nickel sintered rotor with one Alu. balance ring. Rotor Part # GF400003-54 Option Rotor: G0045 .
	P. Worsley. 19.07.24. (for IFMAR)