







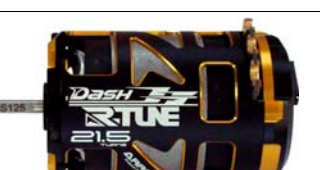
EUROPEAN FEDERATION RADIO CONTROLLED AUTOMOBILES

**Samples of Motors included on this list have been checked for compliance to EFRA 2018 Rules:
For Brushless 'Spec.' 21.5T Motors.**

**Only Motors included on this list, can be used at EFRA Sanctioned events (EC or GP), for:
The Motor Class designated for the event.**












Whiist sample Motors submitted have been found to conform with EFRA 2018 rules for 'Spec' Brushless Motors, **it is the responsibility of ALL competitors to ensure that the versions they use also comply with all EFRA rules and requirements.**

NOTE: These motors differ from Brushless 'Modified' Motors.

Motor Builder	Type/ Range	Illustration only	Notes	Approval Date
Motors below this level must comply with EFRA Rules :- App.4, 4.8 & 4.9 which requires access to stator to allow measurement and visual appraisal of the laminates. Also 4.16, which requires the Rotor to be marked with Name or Logo & Part #.				
Tekin	Redline G3 SPEC-R Part # TT2696		Sensored system. "Y" Wind. Adj. timing 0/60. Machined Alum. Can, wind printed. Stator visable. Magnetic screws, Al. retaining housing, steel shielded bearings. Min. length 50.00mm. Rotor with name & Part # 2722. Option rotor: 2721	23.04.18
Hobbywing	Xerun V10 G3 Pt # 30401105		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. Magnetic srews, Al. retaining housing, steel shielded bearings. Rotor Part # 30820018	23.04.18
Surpass	Rocket V3 Pro Stock. Part # SUR6215		Sensored system. "Y" Wind. Stator bonded, has access. Adjustable timing 0/+45 deg. Wind etched on stator. Non-magnetic screws, Al. retaining housing, steel shielded bearings. Rotor with Surpass, Part # C74125 on shaft.	05.02.18
Reedy	Reedy S+Plus Part # 27401		Sensored system. "Y" Wind. Alu. timing insert with 'R' logo, timing 0/+ 50 deg. Stator can be removed, wind etched on stator. Magnetic screws, Al. sensor housing & retaining plate, steel shielded bearings. Rotor with name & Part # 27414 of shaft flat.	15.01.18
Tianco	ORCA Blitreme Part # OMB215BL		Sensored system. "Y" Wind. Stator bonded, has access holes. ORCA Blitreme & wind etched on End-Cap. Adjustable timing 0/60. Twin collector ring. Magnetic screws, Al. retaining housing, steel shielded bearings. Rotor with name & Part # ORR425SO.	15.01.18
Reds Racing	VX2 Part # MTTE 0024		Sensored system. "Y" Wind. Red Al. timing adjuster. Adjustable timing 0-50. Stator removes & has wind etched. Magnetic screws, Al. sensor housing & retaining plate, steel shielded bearings. Rotor with name & Part # MSTE0017. Option rotor MSTE 0018	15.01.18
Arrowmax	Dash R-Tune Part # DA740215		Sensored system. "Y" Wind. Stator removes. Adjustable timing 0/+60 deg. Wind on stator. Magnetic screws, Al. retaining plate, steel shielded bearings. Non-magnetic screws included with kit. Rotor with DASH:- Part # - DA-730003. Shaft RSS125.	01.01.18 19.02.18







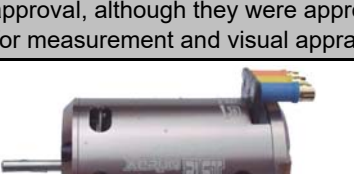


NOTE: ALL MOTORS SUBMITTED BEFORE 01.11.17, WERE HOMOLOGATED WITH NON-MAGNETIC SCREWS AND STEEL SHIELDED BEARINGS FITTED.







Changing these items invalidates the Motor Part # stated and contravenes App.4 Rule 4.6.

Maclan	MRR V2 Part # MCL1035		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.	16.10.17 20.11.17
Trinity	Monster Max Horsepower Part # TEP 1507		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.	16.10.17 09.04.18
Fantom	Fantom FR-1 v3 Pt. # FAN19415S		Sensored system. "Y" Wind. Stator glued in sleeve. Sleeve with wind etched. Adjustable timing +20/+60 deg. Has stator access no hysol on outer edge. Wind etched on stator. Rotor with name, Part # - FAN19597.	16.10.17
Motiv	MCR Part # MOV102152S		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	28.08.17
R1 Brushless Motor Lab.	R1 Part # R1-215B-125-V16 BRCA & EFRA		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 thick. Motors with epoxy filled windings not approved. V16 etched on sleeve. Rotor with name & Part #: R1-125-720-002 Option rotors: R1-123-720-001	24.07.17
Muchmore	FLETA ZX V2 Part # MR-V2ZX215ER		Sensored system. "Y" Wind. Al. timing plate, adjust. timing 0-50. Stator removes but can be seen through holes. Wind etched on stator. Shaft etched with rotor dia. Rotor with name & part #. Rotor Part #: MR-FZR 21Y. Optional rotor #'s: All MR-FZR :- 18TI, 19Z, 21TIZ, 21Z	10.07.17 31.10.17
PRT Electronic	PRT AIRs 10 Part # A10215S		Sensored system. "Y" Wind. Black Alu. Caps & Sleeve, PRT on End-Plate. Adjustable timing. Caps remove. Wind marked on sleeve. Has stator access. Rotor with name & Part # 125RSHT. Option rotor: 123RSHT	31.05.17
PRT Electronic	PRT AIR 10 Part # A10215		Sensored system. "Y" Wind. Black Alu. Caps & Sleeve, PRT on End-Plate. Adjustable timing. Caps remove. Wind marked on sleeve. Has stator access. Rotor with name & Part # 125RSHT. Option rotor: 123RSHT	15.05.17
Hobbywing	Xerun Justock 3650 G2 Pt # 30408007		Sensored system. "Y" Wind. Black Alu. Can & End-Cap with Justock 3650G2. Nickel sintered rotor with one Alu. bal. ring. No timing adjustment. Stator and wind visible. Rotor Part # 30820007 stamped 7-12.5-A.	15.05.17
R1 Brushless Motor Lab.	R1 Part # R1-215B-125-V15 BRCA & EFRA		Sensored system. "Y" Wind. End-Plate with R1 (only) etched. Stator sleeve with wind. Rotor with black balance ring. Adjustable timing 0-60 deg. Has stator access. Collector ring 3mm thick. Motors with epoxy filled windings not approved. Rotor with name & Part #: R1-125-720-002 Option rotors: R1-123-720-001, R1-125-720-001	13.02.17 03.04.17
Fantom	Fantom FR-1 v2 Pt. # FAN19475S		Sensored system. "Y" Wind. Stator glued in sleeve. Sleeve with wind etched. Adjustable timing +20/+60 deg. Has stator access but hysol on ends. Wind etched on stator. Rotor with name, Part # - FAN19591. Option Rotor: FAN19590.	23.01.17

Orion	Vortex Ultimate Stock XLW (2016) # ORI28375		Sensored system. "Y" Wind. Small dia. Black sleeve with removable Alu. End-Plates, all retained with long screws. Adjustable timing 0/+40. Wind etched. Two sensor plug. Rotor has name & part # ORI 41553. Option Rotor: ORI 41554	23.01.17 13.02.17
Maclan	MRR Part # MCL1017		Sensored system. "Y" Wind. Black Can & End-Cap with copper timing plate & logo. Nickel rotor with one red Alu. bal. ring. Adjustable timing +20/+ 60 deg. Stator removes easily. Rotor Part # MCL4075. Optional rotors # MCL4076 & MCL4093.	16.01.17
Tianco	ORCA RT Pt. # OMT215RT		Sensored system. "Y" Wind. Black Can & E/Cap. Stator has access slots. Stator accepts 14.5mm gauge. ORCA RT & wind etched on End-Cap. Adjustable timing +/-50. Rotor with name & Part # ORR425S0. Option rotors:- ORR --- 325S1, 233SL, 238SL, 253SL, 258SL.	16.01.17
Reds Racing	VX Part # MTTE 0013		Sensored system. "Y" Wind. Red metal End-Plate at Term. End, with adjustable timing 0-45. Black Can/Sleeve. Stator separates & has wind etched. Rotor with Green drilled balance ring Part # MSTE0016. Optional rotors:- # MSTE0009, MSTE0010	19.12.16
Hobbywing	Xerun V10 G2 Pt # 30101109		Sensored system. "Y" Wind. Black Alu. Can & End-Cap, moulded timing insert with logo moulded. Nickel sintered rotor with one Alu. bal. ring. Adjustable timing +20/+ 50 deg. Stator and wind visible. Rotor Part # 30820007 stamped 7-12.5-A. Option Rotor: # 30820015 stamped 7-12.5-U-B Option End-Cap, timing +30/+60 # 30820054	21.11.16 12.12.16 21.11.16
Team Powers	Actinium Pt. # TPBLM 215100 ACT-V2		Sensored system. "Y" Wind. Black Aluminium Sleeves & End-Plates. Stator with wind etched & visible. Nickel sintered rotor with no balance ring. Has stator access. (UK Spec. label not mandatory). Rotor with name, Part # TP125G-R	24.10.16
Fantom	Fantom FR-1 Type M Pt. # FAN19505S		Sensored system. "Y" Wind. Stator glued & spigoted in sleeve. Sleeve with wind etched. Adjustable sensor plate timing +20/+60 deg. Has stator access. Wind etched on stator. Rotor with name, Part # - FAN19591. Optional Rotor: FAN19590	08.08.16 05.12.16
Corally	Dynospeed Spec. 3.0 Part # C-61103		Sensored system, two ports. "Y" Wind. One end of stator visible but stator removes. Stator has wind etched. Wind etched on End-Cap. End-Cap Alum., adjustable timing, no numbers. Rotor with logo, Part # 61130	08.08.16
Motiv	M Code Part # MOV10215S		Sensored system. "Y" Wind. Alu. timing plate with MOTIV logo. Mounting Cap removes. Nickel sintered rotor with no balance ring. Adjustable sensor plate timing 0/+50 deg. Has stator access. Rotor part # MOV1315	18.07.16
Tesla	Tesla EP Part # TS-194215T-S		Sensored system. "Y" Wind. Blue Alu. Can & End-Caps. Timing insert with Tesla logo etched. Nickel sintered rotor with one Alu. bal. ring. Adjustable timing +20/+ 60 deg. Lams.visible. Rotor Part # TS-194136	07.07.16
Ruddog	Ruddog RP540 Part # RP-0015		Sensored system. "Y" Wind. Silver Alu. Can & End-Caps. Timing insert with Ruddog etched. Nickel rotor with one Alu. bal. ring. Adjustable timing +20/+ 60 deg. Lams.visible with wind visible on stator. Rotor Part # RP-12.5-7.2	30.05.16
Fenix	Fenix DFV2-21.5 Pt. # FM00215-2		Sensored system. "Y" Wind. Black Alu. Can & End-Caps. Timing insert with Fenix DFV2 etched. Nickel sintered rotor with one Alu. bal. ring. Adjustable timing +20/+ 60 deg. Lams.visible. Rotor Part # MF72-B Option rotor: MF72	19.05.16

Tekin	Redline Gen3 Part # TT2703		Sensored system. "Y" Wind. Black Alum. Timing plate 2.5mm above red ring.. Adj. timing 0/60. Machined Alum. Can with wind printed. Stator visible via. slots. Rotor with one brass balance ring Part # 2721. Option rotors: 2719, 2722	16.05.16
Tekin	Redline Gen3 Part # TT2702 RPM		Sensored system. "Y" Wind. Black Alum. Timing plate 2.5mm above red ring.. Adj. timing 0/60. Machined Alum. Can with wind printed. Stator visible via. slots. Rotor with one brass balance ring Part # 2721. Option rotors: 2719, 2722	16.05.16
Turnigy	Trackstar V2 Pt # 80122		Sensored system. "Y" Wind. Stator slides from sleeve.Sleeve with wind etched. Adjustable sensor plate timing 0-50 deg. Has stator access. Wind etched on stator. Rotor with name, sizes & Part #. Rotor Part # 919000281	16.05.16
EZpower	EZ Kicker EZBR221		Sensored system. "Y" Wind. Gun-metal End-Plates & Sleeve. Adjustable red timing ring. Nickel sintered rotor with Red hollow balance ring marked EZ. Caps & sleeve remove, has stator access. Rotor Part # EZBR233	23.03.16
Fenix	Fenix DFV-21.5 Pt. # FM00215		Sensored system. "Y" Wind. Black Alu. Can & End-Caps. Timing insert with Fenix DFV etched. Nickel sintered rotor with one Alu. bal. ring. Adjustable timing +20/+ 60 deg. Lams.visible access with cap removed. Rotor Part # MF72.	18.01.16
Team Epic	ReVtech 24K Pt # REV1803		Sensored system. "Y" Wind. End-Plate has Revtech etched. Stator sleeve with ReVtech & Wind etched. Adjustable sensor plate timing 0-60 deg. Has stator access. Wind stamped on lower collector ring & visible. Rotor with name & Part # TEP1112. Optional rotor # TEP1118.	23.11.15 14.11.16
Motors below this level must comply with EFRA Rule - App.4, 4.8 & 4.9, which requires access to the stator to allow measurement and visual appraisal of the laminates.				
King Golden	Speed Passion V4.0 21.5R #SP001233		Sensored system. "Y" Wind. Black End-Plates & Sleeve with wind etched. Nickel sintered rotor with one Purple balance ring, 12.5 dia, 7.1 core. Adjustable timing 0 -40 deg. Has stator access.	9.3.15
Tianco	ORCA RX3 Part # OMR215X3		Sensored system. "Y" Wind. Black Can & E/Cap. Complete stator removes. Has stator access slots. ORCA RX3 & wind etched on End-Cap. End-Cap Alum., adjustable timing. Rotor with black balance ring 12.4 dia., 7.2 core. Part # OTR124ST	10.11.14 25.05.15
Wurks	Wurks Part # R1-215-125-V7		Sensored system. "Y" Wind. End-Plate with R1 Wurks etched. Stator sleeve with Wind painted. Nickel sintered rotor painted Black, no balance ring, 12.4 dia, 7.2 core. Adjustable sensor plate timing 0-60 deg. Has stator access. Single collector ring at 'pinion' end of stator. Motors with Twin collector rings and/or epoxy filled windings not approved.	27.10.14 16.12.15. 26.10.16
Reds Racing	VX Part # MTTE 0008		Sensored system. "Y" Wind. Red metal End-Plate at Term. End, with adjustable timing 0-45. Black Can/Sleeve. Stator separates & has wind etched. Rotor with Black drilled balance ring MSTE0010. Optional rotors:- # MSTE0009, MSTE0016	19.05.14 06.07.16
Team Epic	ReVtech Killshot Pt # REV1603R		Sensored system. "Y" Wind. Copper colour Aluminium End-Plates, Revtech etched. Blue stator sleeve with ReVtech & Wind painted. Nickel sintered rotor with one purple balance ring, 12.3 dia, 7.2 core. Adjustable sensor plate timing 0-80 deg. Has stator access. Optional rotor TEP 1112 approved.	17.03.14 07.04.14

Hobbywing	Xerun V10 Pt. # 30401020049		Sensored system. "Y" Wind. Black Alu. Can & End-Cap, moulded timing insert with logo printed. Nickel sintered rotor with one Alu. balance ring, 12.5 dia, 7.2 core. Adjustable sensor plate timing -20/+ 50 deg. Stator and wind visible via. sleeve slots.	3.3.14
Muchmore	FLETA ZX Pt # MR-FZX215		Sensored system. "Y" Wind. Black metal End-Bell with plastic timing plate, with adjustable timing 0-45. Black Can/Sleeve. Stator separates. Nickel sintered rotor with Green drilled balance ring. Rotor 7.2 core, 12.5 dia. Optional rotor MRFZR11 allowed. Aluminium timing-plate MR-FZAT fitted to later versions.	29.07.13 14.05.14 05.08.14
Team Wave	Eclipse # TW2011-215		Sensored system. "Y" Wind. Black Alum. End-Plates. Adj. timing. Black Alum. stator sleeve with wind etched. Nickel sintered rotor with one plain balance ring, 12.5 dia, 7.17 core, marked 125-R. Stator visible via. Sleeve slots.	24.6.13
Corally	Corally Pro Silver 21.5T 399215		Sensored system. "Y" Wind. Plain Alum. End-Plates. Adj. timing. Plain Alum. stator sleeve with wind etched. Nickel sintered rotor with one Black balance ring, 12.3 dia, 7.18 core. Stator visible via. Sleeve slots.	17.6.13
Tianco	ORCA TX Pt. # OTM 215TX		Sensored system. "Y" Wind. Dull Grey Aluminium casings. Main sleeve removes. Has stator access slots. ORCA TX & wind etched. End-Plate moulded, adjustable timing. 12.5mm Rotor no balance ring, shaft marked 125S-N. Option 123S-N. 12.3mm. Option EndPlate OME111TX allowed. New sensor Ass. CAS-0220TX-30 fitted.	10.06.13 10.03.14 20.07.14.
LRP	X20 21.5T Spec. # 50864		Sensored system. "Y" Wind. Black moulded End-Bell with XTEC. Fixed End-Sleeve etched with wind. Sintered rotor, coloured Black, with 1 balance ring. Grey stator moulding. Rotor shaft Black stamped 12.5-25. Slot for stator access. Optional Green rotor # 50639 approved.	22.04.13 28.12.15
Tekin	Redline GEN2 21.5T # TT2402 & TT2403		Sensored system. "Y" Wind. Black Alum. End-Plates, not joined. Adj. timing. Alum. Can with wind etched. Stator visible via. Sleeve holes. Nickel sintered rotor with one brass balance ring. Rotor 7.14 core. 2402=12.25 dia. 2403=12.5 dia.	1.4.13
Team Orion	VST2 Pro Stock 21.5. # ORI 28253		Sensored system. "Y" Wind. Grey one-piece Can. Black Aluminium End-Plate retained with five screws, adjustable moulded timing plate. Wind etched. Nickel sintered rotor, 12.5 dia, 7.1 core, no balance rings. Optional 12.4 dia, 7.2 core.	25.3.13
Motors below this level retain approval, although they were approved before implementation of EFRA Rule App.4, 4.8 & 4.9, (requiring access to stator for measurement and visual appraisal of laminates). Some motors do allow stator access.				
Hobbywing	Xerun Pt. # 90040151		Sensored system. "Y" Wind. Polished Aluminium End-Plates, Hobbywing etched. Fixed timing. Blue stator sleeve with 21.5T & Pt.# etched. Sleeve & EndPlates also Gunmetal colour. Side entry sensor plug. Nickel sintered rotor, 12.4 dia, 7.2 core. Rotor with one balancing ring.	13.8.12
Vampire	Vampire Type AB+ Bloodline Pt. # VR-3215		Sensored system. "Y" Wind. Black Plastic End-Plate at Term. End, with adjustable timing. Sensor plug horizontal. Green End plates. Wind etched. Nickel sintered rotor with no balance rings, 12.5 dia, 7.21 core.	12.3.12
Graupner	GM Brushless PRO. Pt. # 97421. 2012 version.		Sensored system. "Y" Wind. Alum. Mounting-Plate with 3x5mm holes and 3 radiused slots. Plastic End-Cap with GM moulded. Adj. timing. Gun-Metal stator sleeve with Wind & Pt.# etched. Side entry sensor plug. Nickel rotor marked GM Stock, 12.51 dia, 7.24 core.	31.12.11

Thunder Power	Z3R-S Part # TPM-540A215		Sensored system. "Y" Wind. Black Plastic Moulding at Term. End, with adjustable timing. Red Can/Sleeve with silver end cover. Wind etched on stator. Stator separates. Nickel sintered rotor with drilled red balance ring, 12.25 dia, 7.2 core. Optional Rotors:- Blue or Green balance ring.	17.10.11. 16.04.12
Speed Passion	Competition 3.0 MMM Version Pt.# SP000040		Sensored system. "Y" Wind. Dark Gun-Metal Aluminium Sleeve & End-Plates, SP etched. Sleeve with Wind & MMM etched. End-Plates with grooves. Red sensor board. Black sintered rotor with one balance ring, 12.3 dia, 7.2 core. Adjustable timing 11-20 deg.	4.7.11
Viper	Viper VST Pt. # 8VST 215001		Sensored system. "Y" Wind. Red Aluminium End-Plates, VST & 21.5T etched. Black grooved stator sleeve. Black sintered rotor with no balance rings, 12.5 dia, 7.35 core. Adjustable timing.	16.5.11
Tekin	Tekin Redline 21.5T Spec. Pt. # TT2250 (Etched Can)		Sensored system. "Y" Wind. Red Aluminium mounting plate. Black moulded End-Bell with Tekin. Grooved Al. bonded stator sleeve with 21.5T etched. Nickel plated sintered rotor, 12.4 dia, 7.11 core. No balance rings.	11.4.11
HPI	Flux Pro. Pt. # 101734		Sensored system. "Y" Wind. Black Aluminium End-Plates, HPI etched. Black stator sleeve with Wind etched. Nickel sintered rotor, 12.5 dia, 7.2 core. Adjustable timing. Optional rotor - 12.2 dia, 7.2 core, Nickel plt. Optional rotor 107252 - Mag & shaft Black.	28.03.11 07.05.12
Graupner	GM Brushless PRO. Pt.# 97361 2011 version.		Sensored system. "Y" Wind. Gun-Metal Aluminium End-Plates, GM-Racing etched. 5 timing threads. Gun-Metal stator sleeve with S21.5T & Pt.# etched. Side entry sensor plug. Black sintered rotor, 12.4 dia, 7.21 core. Rotor with one balancing ring.	31.1.11
Trinity	Trinity D3 Pt. # TEP1057		Sensored system. "Y" Wind. Gun-Metal Aluminium End-Plates, Trinity etched. Black stator sleeve with D3 & 21.5T etched. Nickel sintered rotor with one balance ring, 12.25 dia, 7.20 core. Adjustable sensor plate timing.	31.1.11
Graupner	Brushless PRO. Pt. # 97301		Sensored system. "Y" Wind. Dark Gun-Metal Aluminium End-Plates, GM-Racing etched. 5 timing threads. Dark Gun-Metal stator sleeve with S21.5T & Pt.# etched. Side entry sensor plug. Black sintered rotor, 12.3 dia, 7.2 core. Rotor with one balancing ring.	21.12.09
Speed Passion	3.0 - 21.5R Pt.# SP138215V3		Sensored system. "Y" Wind. Light Gun-Metal Aluminium End-Plates, SP & 21.5T etched. Light Gun-Metal stator sleeve with SP21.5T etched. Black sensor board. Black sintered rotor with one balance ring, 12.3 dia, 7.22 core. Adjustable timing 0-10.	12.10.09

Paul Worsley. (EFRA Elec. Chairman). Last update 23.04.18.