









## FEDERAÇÃO PORTUGUESA DE RÁDIO MODELISMO AUTOMÓVEL







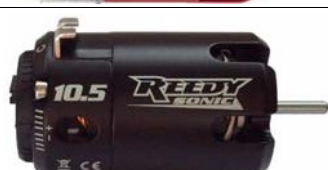




Motors shown on this list are "Known to Comply" with EFRA 2013 Rules for Brushless 'Spec.' 10.5T Motors.

This list is for reference only and should not be considered to be comprehensive. Products from other manufacturers may also comply with EFRA rules. Before using a motor not on this list, please bear in mind it is the competitors responsibility to ensure that any motor used complies with EFRA rules. It may be necessary to dismantle any unknown motor to check its legality, which is known to be a destructive process for most Brushless motors. Samples may be submitted for checking by EFRA officials before the event. If found to comply with the rules then they will be added to this list.

**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 Rule - App.3, 2.2(9), which requires access to the stator to allow measurement and visual appraisal of the laminates.				
Team Epic	ReVtech Killshot Pt # REV1600. (Std. Ver.)		Sensored system. "Y" Wind. End-Plate with Revtech etched. Stator sleeve with ReVtech & Wind painted, later versions not depicted with 't'. Nickel sintered rotor with one purple balance ring, 12.3 dia, 7.2 core. Adjustable sensor plate timing 0-80 deg. Has stator access.	17.03.14
SkyRc	Ares Pro Competition 10.5 Stock Spec SK-400003-33		Sensored system. "Y" Wind.. Aluminium End-Plate with Ares Dual sensor port engraved Adjustable timing . Sintered rotor, 12.5 dia, 7.2 core Alum. Stator 10.5 Turns engraved & Stator sleeve with wind etched no balance rings..	17.03.14
Hobbywing	Xerun V10 Pt. # 30401020046		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. (NOTE: early versions may not comply with stator access requirements).	06.01.14
Mtroniks	MX-1 Pt. # MTMX105		Sensored system. "Y" Wind. Anodised Alum. End-Plates & Stator Sleeve, with wind printed. Fixed timing. Nickel sintered rotor with one hollow balance ring, 12.5 dia, 7.2 core. Stator visible via. Sleeve slots.	06.01.14
Turnigy Trackstar	9192000036		Sensored system. "Y" Wind. Red Aluminum Motor Can. Red End-Plate Adjustable timing . Sintered rotor, 12.5 dia, no balance rings..	05.11.13
Toro	SK-400003-06		Sensored system. "Y" Wind. Orange Aluminium Motor Can. Black End-Plate with TORO engraved Adjustable timing . Sintered rotor, 12.5 dia, no balance rings..	13.09.13
Muchmore	FLETA ZX Pt # MR-FZX105		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 Blue drilled balance ring. Rotor 7.2 core, 12.5 dia.	29.07.13
Nosram	Pure 2 Evolution Spec. Racing Pt.# 91834		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.	08.07.13

Team Wave	Eclipse # TW2011-105		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.	24.06.13
ORCA	ORCA TX Pt. # OTM 105TX		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.	17.06.13
Corally	Corally Pro Silver 10.5T 399105		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, 12.4 dia, 7.18 core. Stator visible via. Sleeve slots. Also supplied with all Red S/Print decal.	17.06.13
LRP	X20 10.5T Spec. # 50834		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.	22.04.13
Tekin	Redline GEN2 10.5T # TT2399		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, 12.5 dia..	01.04.13
Reedy	Reedy Sonic Mach 2 # 234		Sensored system. "Y" Wind. Black metal End-Bell at Term. End, with adjustable timing 0-45. Black Can/Sleeve. Stator separates. Nickel sintered rotor with drilled balance ring, 12.5 dia, 7.2 core # 956. Optional rotors:- # 954, # 955.	25.03.13
Savox	Savox SX.1 # SAV- BLH3650 991740		Sensored system. "Y" Wind. Aluminium casings. Slot for stator access included. Main sleeve removes, stator spigoted into fixed casing. Savox X1 & wind etched. End-Plate moulded, adjustable timing. Rotor has no balance ring.	25.03.13
Team Orion	VST2 Pro Stock 10.5. # ORI 28250		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.	15.02.13
Motors below this level were checked before the implementation of EFRA Rule - App.3, 2.2(9), which requires access to the stator to allow measurement and visual appraisal of the stator laminates. (Some versions do allow stator access).				
Horizon Hobby	Dynamite Platinum 10.5T # DYP 1010		Sensored system. "Y" Wind. Black Alluminium End-Plate at Term. End, with adjustable timing. Wind etched on Term. Sleeve, Stator mould & Stator Lams. Stator separates. Nickel sintered rotor with drilled balance ring, 12.5 dia, 7.2 core.	20.08.12
Hobbywing	Xerun Pt. # 90040091		Sensored system. "Y" Wind. Polished Aluminium End-Plates, Hobbywing etched. Fixed timing. Blue stator sleeve with 10.5T & 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.	13.08.12

Orion	Vortex VST Pro Stock 10.5. # ORI 28233		Sensored system. "Y" Wind. Grey one-piece Can. Grey End-Plate retained with four screws, adjustable timing. Wind etched. Nickel sintered rotor, 12.5 dia, 7.2 core, no balance rings.	16.04.12
Dualsky	Track & Field Z5 10.5T Pt # 53649		Sensored system. "Y" Wind. Silver Sleeve & Mounting-Plate. Z5, 10.5T, Track&Field etched on sleeve. Black Alu. End-Plate & retaining ring. Adjustable timing 7 - 27 deg. Nickel sintered rotor with no balance ring, 12.5 dia, 7.2 core.	16.04.12
Team Epic	ReVtech R-Power Pt # REV1050		Sensored system. "Y" Wind. Copper colour Aluminium End-Plates, ReVtech painted. Blue stator sleeve with ReVtech & Wind painted. Nickel sintered rotor with one purple balance ring, 12.45 dia, 7.2 core. Adjustable sensor plate timing. Mounting Plate with 3 x 5.9mm slots.	12.03.12
Vampire	Vampire Type AB+ Bloodline Pt. # VR-3105		Sensored system. "Y" Wind. Black Plastic End-Plate at Term. End, with adjustable timing. Sensor plug horizontal. Light-Red End plates. Wind etched. Nickel sintered rotor with no balance rings, 12.5 dia, 7.21 core.	12.03.12
Graupner	GM Brushless PRO. Pt. # 97410. 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-540A105		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.
Reedy	Reedy Sonic Pt. # 943		Sensored system. "Y" Wind. Black Plastic End-Plate at Term. End, with adjustable timing. Black Can/Sleeve. Wind etched. Stator separates. Nickel sintered rotor with drilled balance ring, 12.5 dia, 7.2 core. Later version has more timing graduations detailed & relocated pointer.	04.07.11 09.04.12
Speed Passion	Competition 3.0 MMM Version Pt.# SP000037		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.	04.07.11
Team Powers	Plutonium Pt.# TP-BLM-105100PL		Sensored system. "Y" Wind. Black Aluminium End-Plates, Team Powers etched. Gun-Metal stator sleeve with 10.5T etched. Nickel sintered rotor with no balance ring, 12.32 dia, 7.28 core. Adjustable sensor plate timing.	16.05.11
Viper	Viper VST Pt. # 8VST 105001		Sensored system. "Y" Wind. Red Aluminium End-Plates, VST & 10.5T etched. Black grooved stator sleeve. Black sintered rotor with no balance rings, 12.5 dia, 7.35 core. Adjustable timing.	16.05.11
HPI	Flux Pro. Pt. # 101731		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



PRT	PRT Limited Edition. Pt.# PRT 2011 105HT DTM		Sensored system. "Y" Wind. Black Aluminium End-Plates, PRT etched. Black stator sleeve with 10.5T etched. Black sintered rotor 12.4 dia, 7.20 core. Optional rotor 12.25 dia., 7.20 core Rotor with one balancing ring. Adjustable timing.	09.02.11
Graupner	GM Brushless PRO. Pt.# 97350 2011 version.		Sensored system. "Y" Wind. Gun-Metal Aluminium End-Plates, GM-Racing etched. 5 timing threads. Gun-Metal stator sleeve with S10.5T & Pt.# etched. Side entry sensor plug. Black sintered rotor, 12.4 dia, 7.22 core. Rotor with one balancing ring.	31.01.11
Speed Passion	3.0 - 10.5R Pt.# SP1C105V3 1Cell		Sensored system. "Y" Wind. Gun-Metal Aluminium End-Plates, SP & 10.5T etched. Gun-Metal stator sleeve with SP10.5T & 1Cell etched. Black sensor board. Black sintered rotor with one balance ring, 12.2 dia, 7.21 core. Adjustable timing 0-10.	31.01.11
ORCA	ORCA RX2 Pt. # OBM105X2		Sensored system. "Y" Wind. Gun-Metal End-Plates, RX2 & 10.5T etched. Gun-Metal sleeve with RX2 & 10.5T etched. Black rotor, one balance ring, 12.2 dia, 7.22 core. Adjustable sensor plate timing. Optional rotor OMA123PX 12.2mm nickel. Mounting Plate 3 x 6mm holes & chamfer.	31.01.11 31.12.11
Trinity	Trinity D3 Pt. # TEP1050		Sensored system. "Y" Wind. Gun-Metal Aluminium End-Plates, Trinity etched. Black stator sleeve with D3 & 10.5T etched. Nickel sintered rotor with one balance ring, 12.3 dia, 7.22 core. Adjustable sensor plate timing.	31.01.11
Dualsky	Track & Field. Pt. # 53352		Sensored system. "Y" Wind. Aluminium End-Plates plus Blue ring. Track & Field moulded on timing plate. Adjustable timing on sensor mounting. Stator sleeve with 10.5 etched. Nickel plated sintered rotor, 12.4 dia, 7.20 core with 21mm Al. fan.	14.06.10
Team Powers	Team Powers Brushless 10.5 Turns Pt. # TPBLM 105100		Sensored system. "Y" Wind. Black Aluminium End-Plates, Team Powers etched. 5 outer timing threads, 3 sensor mount threads. Black & Gold stator sleeves with 10.5T etched. Nickel plated sintered rotor, 12.3 dia, 7.22 core. No balancing rings.	12.04.10
Graupner	GM Brushless PRO. Pt.# 97290 2010 version.		Sensored system. "Y" Wind. Gun-Metal Aluminium End-Plates, GM-Racing etched. 5 timing threads. Gun-Metal stator sleeve with S10.5T & Pt.# etched. Side entry sensor plug. Black sintered rotor, 12.3 dia, 7.22 core. Rotor with one balancing ring.	01.02.10
LRP	X12 Vector Stock Spec. Pt.# 50832		Sensored system. "Y" Wind. Black moulded End-Bell with XTEC. Sleeve etched "10.5 Turns". Black Sintered rotor, 12.5 dia, 7.1 core. Rotor shaft, Black. Manufacturers 'grooved' Al. End-Bell with name engraved allowed at terminal end. Optional green rotor 50639 12.2, 7.1 core. Later versions have rotor shaft stamped.	23.11.09 31.01.11 28.05.12
Nosram	Pure Evolution Spec. Racing Version. Pt.# 91831		Sensored system. "Y" Wind. Black moulded End-Bell with XTEC. Sleeve etched "10.5 Turns". Black Sintered rotor, 12.5 dia, 7.1 core. Rotor shaft, Black. Manufacturers 'grooved' Al. End-Bell with name engraved allowed at terminal end. Optional green rotor 90639 12.2, 7.1 core. Later versions have rotor shaft stamped.	23.11.09 31.01.11 28.05.12
Speed Passion	3.0 - 10.5R Pt.# SP138105V3		Sensored system. "Y" Wind. Light Gun-Metal Aluminium End-Plates, SP & 10.5T etched. Light Gun-Metal stator sleeve with SP10.5T etched. Black sensor board. Black sintered rotor with one balance ring, 12.3 dia, 7.22 core. Adjustable timing 0-10.	05.10.09

Novak	Ballistic Pt. # 3610		Sensored system. "Y" Wind. Black Al. End-Plate with NOVAK etched. Stator sleeve with 10.5T label. Nickel plated sintered rotor, 12.3 dia, 7.22 core. 3/16 Bearing at Pinion end. Blue plastic denoting 10.5. Adjustable timing. Vented End-bells # 5925 approved.	07.09.09 18.06.12
WAVE	WAVE Linear Pt.# TW2001-105		Sensored system. "Y" Wind. Black Aluminium End-Plates with SP etched under label. Black stator sleeve with 10.5T etched. Black sintered rotor, 12.3 dia, 7.22 core. Rotor with one balancing ring.	16.03.09
Graupner	GM Brushless PRO. Pt.# 97290		Sensored system. "Y" Wind. Dark Gun-Metal Aluminium End-Plates, GM-Racing etched. Dark Gun-Metal stator sleeve with S10.5T & Pt.# etched. Black sintered rotor, 12.3 dia, 7.22 core. Rotor with one balancing ring.	02.03.09
Tekin	Tekin Redline 10.5T Spec. Pt. # TT2253 (Etched Can)		Sensored system. "Y" Wind. Red Aluminium mounting plate. Black moulded End-Bell with Tekin. Grooved Al. bonded stator sleeve with 10.5T etched. Nickle plated sintered rotor, 12.5 dia, 7.26 core. No balance rings.	15.12.08
Speed Passion	Speed Passion Stock Pt. # SPF105		Sensored system. "Y" Wind. Black Aluminium End-Plates with SP 10.5T. Black stator sleeve with 10.5T engraved. Black sintered rotor, 12.3 dia, 7.25 core. Rotor with one balancing ring.	08.09.08
LRP	Vector X11 Stock Spec. Pt. # 50830		Sensored system. "Y" Wind. Black moulded End-Bell with XTEC. Blue anodised ring. Chamfered mounting face. Sleeve etched "10.5 Turns". Sintered rotor, 12.3 dia, 7.35 core. Rotor shaft, Black. Manufacturers 'slotted' End Plates (std. & thin versions) allowed at pinion end. Manufacturers later 'grooved' Al. End Plate with name engraved allowed at terminal end.	09.06.08 19.07.08
Novak	SS Pro. Pt. # 3410		Sensored system. "Y" Wind. Black moulded End-Bell with NOVAK. Blue plastic ring. Mounting face with or without chamfer. Stator marked "10.5 Turns". Nickel Plt. Sintered rotor, 12.3 dia, 7.25 core. Rotor shaft with plain bevel at pinion end.	14.04.08 28.04.08
Nosram	Spec.' Storm Evolution Pt. # 91830		Sensored system. "Y" Wind. Black moulded End-Bell with XTEC. Blue anodised ring. Chamfered mounting face. Sleeve etched "10.5 Turns". Sintered rotor, 12.3 dia, 7.35 core. Rotor shaft, Black. Manufacturers 'slotted' End Plates (std. & thin versions) allowed at pinion end. Manufacturers later 'grooved' Al. End Plate with name engraved allowed at terminal end.	07.04.08. 19.07.08.

João Martinho. (Delegado Eléctricos) 29.01.14.