

**EM**

**FACTOR**



**TWO VERSIONS  
1.8/2.5**

EXPLORE THE SILENCE

FACTOR<sup>2</sup>

EM

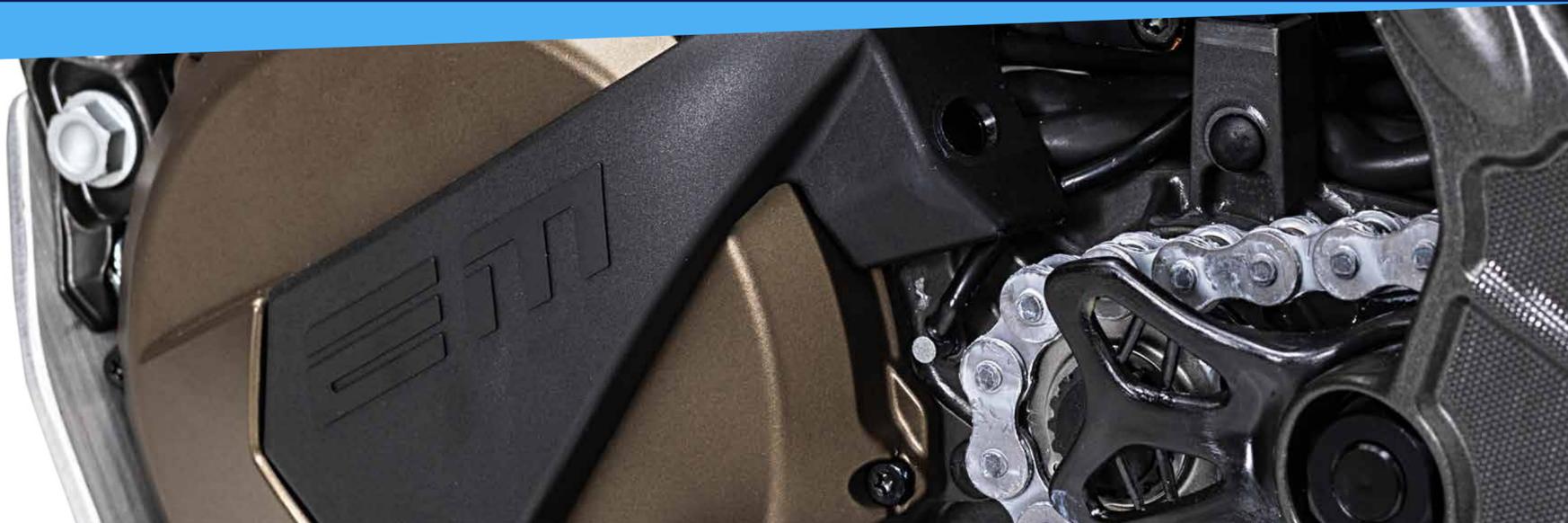


**EM**



**FACTOR**  **AVAILABLE IN 2 VERSIONS**  
**1.8 / 2.5**

# THE STORY



## FACTOR-E

It all started in ELECTRIC MOTION's R&D department. After 15 years of exquisite experience in electric propulsion in the off-road sector and more specifically in trials, our ambition was to offer 'THE' trial bike of the market.

The origins of this powertrain date back to 2021. Since then, our engineering teams and Marc COLOMER in particular, have been working hard designing, testing, improving, optimizing and enhancing the reliability of this brand-new powertrain. Marc

COLOMER, former Trials World Champion, is in charge of bike development working closely with EM expert design engineers. 3 years of research, data analysis, laboratory tests, trials on different tracks, tested by riders of all levels right up to the very highest... everything has been done to design the best trial powertrain unit ever made.

For EM, this propulsion had to be the most efficient at the highest level but also the most accessible, and only electric power can achieve this.



**MORE POWER**

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**MORE TORQUE**

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**LIGHTER**

# FACTOR-e



## THE POWER

The most powerful model ever designed by EM has pure performance!

EM has designed a new engine offering inertia, torque (1400Nm) and power (up to 18kW) simply unmatched in trials! The arrival of the 4-speed gearbox offers unlimited possibilities in both areas - trials and excursion.

The battery is 100% new and has been designed by

our very own engineering department. With new-generation Li-Ion, the performance and lifespan of the battery exceeds all possible expectations. In addition, there's now a brand new long-range 2500Wh version... in the same size battery case!

The bike offers a pre-programmed mapping system but is also 100% customizable with EM Connect. The Epure FACTOR-e is accessible to all!

# DÉJÀ 4 PODIUMS EN COMPÉTITION



# FACTOR



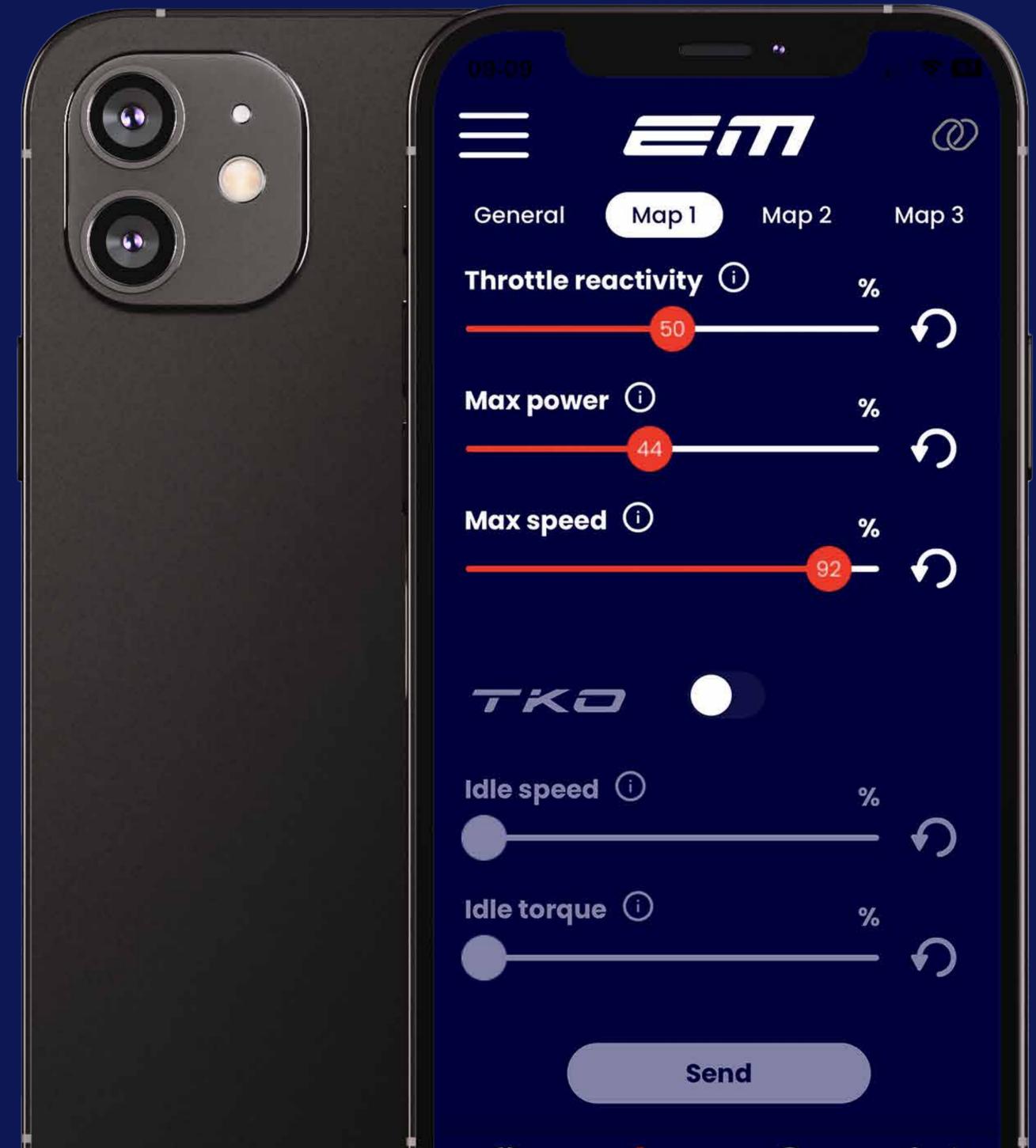
\*85km/h off-road on private land.  
\*\* According to EU homologation test No 134/2014 the distance covered and speed depend on riding conditions and motorcycle configuration.

	<b>MAX SPEED*</b>	<b>RANGE**</b>	<b>WEIGHT</b>	<b>GEARS</b>	<b>TORQUE</b>	<b>ROAD LEGAL</b>
<b>2.5</b>	<b>85 KM/h</b>	<b>50 KM</b>	<b>75 KG</b>	<b>4</b>	<b>1400 NM</b>	<b>125CM3</b>
<b>1.8</b>	<b>85 KM/h</b>	<b>38 KM</b>	<b>73 KG</b>	<b>4</b>	<b>1400 NM</b>	<b>125CM3</b>

# EM CONNECT

FACTOR-e IS EQUIPPED WITH THE MOBILE CONNECTIVITY APPLICATION

- All-new connectivity via the EM mobile app (ios & Android, depending on the list of compatible devices).
- Access to all important information about your EM motorcycle and your rider profile.
- Customize the settings of your EM motorcycle with an engine behavior configurator to adapt your EM's performance to suit the terrain, your riding style and skill level.
- Lock and unlock your EM motorcycle.
- Contact interface, EM news and real-time diagnostics



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# THE NEWS

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# NEW ENGINE



## MADE IN EM

The Epure FACTOR-e is equipped with a new powertrain designed 100% by EM. Innovative, it combines two technologies:

1. The advantage of an electric motor with instant low-end torque.
2. A power profile similar to a fuel bike, combining performance and driving pleasure.

This engine has an unmatched power-to-weight ratio (3.3kW/kg), an engine speed capable of reaching 14000rpm, power of up to 18kW, torque of 1400Nm in first gear, all in a specially designed oil

pan to integrate this motor. The high-performance rotor is surrounded by a carbon sleeve to hold the magnets in at extreme rotation speeds. The air-cooling system has been designed to provide homogeneous and controlled heat dissipation. Engine noise has been optimized to provide a very quiet and pleasant transmission, thanks to reduced friction.

Last but not least, the engine's 40% extra inertia gain strongly enhances the roundness and power of the engine. Performance is incredible and accessible to all, particularly thanks to the bikes mapping.



# NEW BATTERY <sup>1.8</sup><sub>2.5</sub>

**NEW WATERPROOF  
QUICK CONNECTORS**

**NEW CHARGING PLUG**

**NEW CONNECTION  
SYSTEM BY PCB + BUS-BAR**

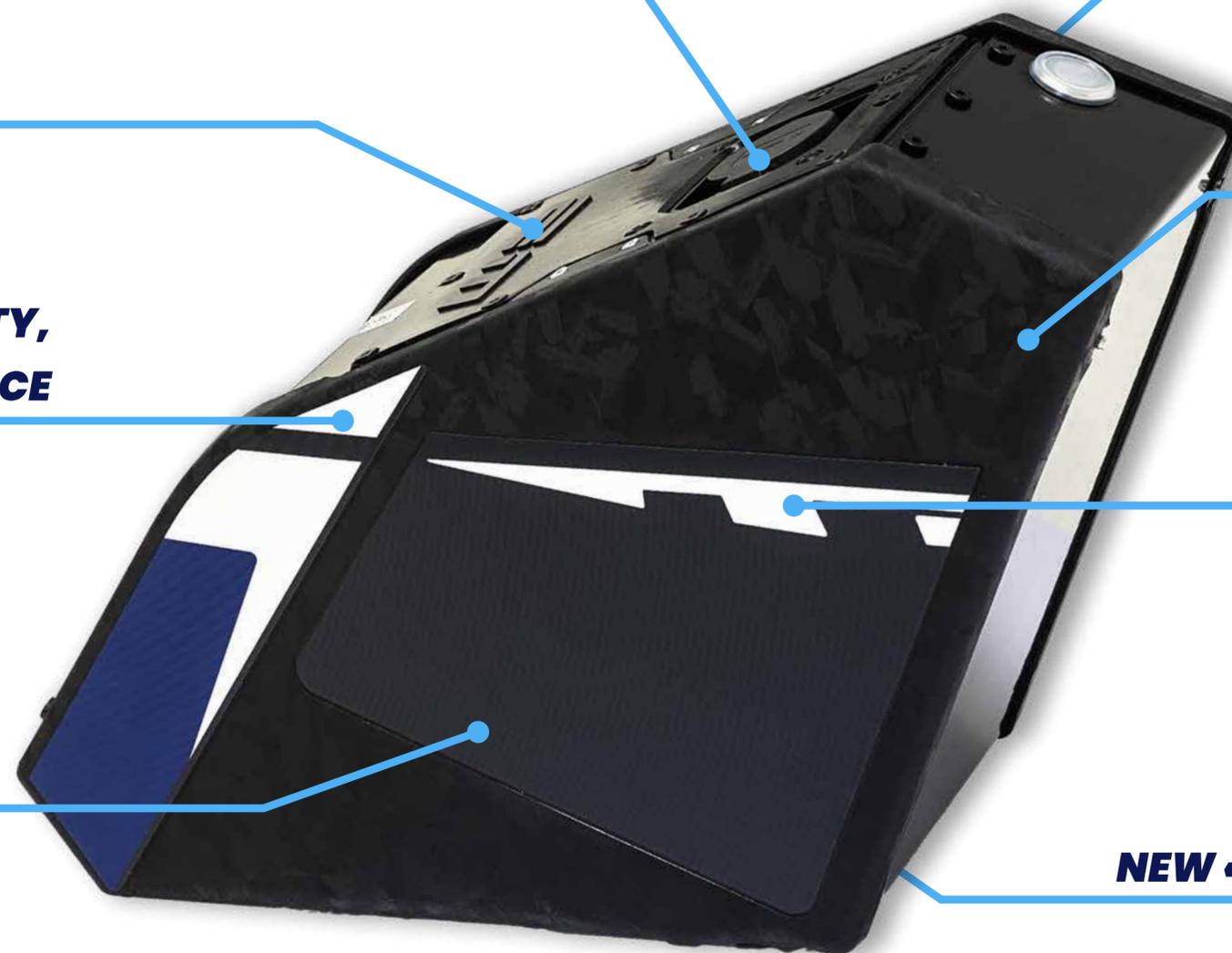
**NEW CASING**

**ENHANCED SOFTWARE, GREATER SAFETY,  
LONGEVITY AND PERFORMANCE**

**NEW SIDE PROTECTION**

**NEW LI-ION TECHNOLOGY**

**NEW « BATTERY SWAP » SYSTEM**





## ***HUGE RANGE***

***Our previous-generation battery offered one of the best weight-to-range ratios. But at EM, we're determined to maintain our technological lead with this new battery, developed in France at our factory.***

***The latest Li-Ion technology has been integrated by our R&D teams, along with a new PCB + Bus-bar connection system. All the software***

***has been improved for more safety, longevity and performance.***

***New casing, new side protection, new charging socket, new waterproof quick connectors, new «battery swap» system... everything has been redesigned and revised and revised to ensure the best performance, final touches and durability.***



# NEW GEARBOX

## INNOVATION

The 4-speed gearbox is an essential asset - not only for performance, but also for control and precision. This innovative gearbox allows the rider to adapt to the bike's behavior depending on the type of track, offering a versatile use:

### **1st (Trial):**

Trials sections with clear steps and obstacles, precision is essential and the bike becomes dynamic and reactive.

### **2nd (Natural Trial):**

The bike is more progressive, with more control and more grip in the obstacles, especially in the preparation before and after obstacles. Traction is accentuated, with a speed more suited to natural obstacles and/or long climbs.

### **3rd (Mixed):**

This gear has been designed for mixed use - for both trial and excursion. (We get the same behavior as our Epure Race model). This gear is also ideal for beginners, who can get their marks without using the gearbox.

### **4th (Excursion):**

Ideal speed for riding between long lap trial sections and excursions thanks to its top speed and driving pleasure, allowing the rider to cruise at a comfortable speed on a trickle of throttle with appreciable mid to high rpm power whilst reducing power consumption. The huge acceleration capacity combined with the gearbox, offers infinite possibilities!



***The huge acceleration capacity combined with the gearbox, offers infinite possibilities! The Epure FACTOR-e is equipped with a new secondary transmission with 520 chain and a reinforced swing arm to subsist with the 1400Nm of torque. Finally, the use of this gearbox also***

***means lower energy consumption in fast use, efficiency being one of the priorities of this new propulsion unit. The engine alone weights 5kg. The propulsion unit, inertia, clutch, gearbox, sensors, oil pans, is 3kg lighter than our former propulsion unit.***

# NEW CLUTCH

*A new engine, gearbox, but also a new clutch.*

*Equipped with a triple-disc hydraulic diaphragm system, this new clutch gains in precision and responsiveness, and can handle the power and torque of the brand new engine.*



# SUSPENSIONS

*The new TECH shock used by the best riders in the world, developed by Marc COLOMER and approved by Gael CHATAGNO is installed on the Epure FACTOR-e.*

*This shock provides optimized traction and precise rear-end feeling.*

*It comes with two settings, one for rebound adjustment (24 clicks), and one for spring preload (from 1mm to 10mm max).*

*The whole suspension system has been redesigned in line with the new weight and weight distribution.*





## ***NEW FRAME***

*Our specialist team also worked on the frame for the new Epure FACTOR-e.*

*The steering-column assembly has been redesigned and stiffened to further enhance steering precision and the triple clamps have new offsets for a more dynamic front end.*

# NEWS



## **NEW COCKPIT:**

- New main interface via central TFT display, even more information and improved ergonomics
- S3 trial grip
- Grey Neken handlebars



## **ERGONOMY AND DESIGN:**

- New engine guard / optimized engine guard pad for better stability and angle of attack.
- New design
- New plastic color
- New anodized wheels "grey/blue"
- Grey Neken handlebar
- New cut from the mass grey triple clamps

### **NEW CONTROLLER:**

- *New latest generation controller, new processor*
- *Heat sink developed for better performance*
- *New software integrating engine speed drop management*
- *Completely reworked settings, we still feature the 3 different maps to adapt engine behavior as precisely as possible to each track and user, which can be fine-tuned and adjusted by the rider via the EM Connect app.*



## ***DIMENSIONS***

Seat height	670mm
Wheel base	1325mm
Ground clearance	320mm
Footrest height	360mm
Width	825mm

## ***STOCK EQUIPMENTS***

MAPS	3(unlimited)
FRB	
TKO	
EM Connect	
Charger case	
TFT screen	
Flywheel	

## ***OPTIONS***

PRBR	
25A charger	
EM handguards	

## ***ENGINE***

Nominal power	6kW
Peak power	12kW

## ***GEARBOX***

Clutch	triple-disc hydraulic
Gears	4





## **TECHNICAL SHEET**

Frame	15CDV6
Front brake	182mm discs / 4 pistons racing
Rear brake	150mm discs / 2 pistons racing
Front rim	Morad trial 1.6"x21" Racing
Rear rim	Morad trial 1.85"x18" Racing
Tires	Michelin X11
Front suspension	TECH ALU racing front fork 175mm
Rear suspension	TECH suspension TJ2

## **BATTERY**

Energy	Li-ion
Voltage	50,4V
Capacity	*1800/2500Wh
Weight	**11kg
Charger	15A
Charging time	***2h30
Mini charging temperature	0°C

\*2500Wh for version 2.5

\*\*13kg for version 2.5

\*\*\*3h15 for version 2.5

**EM**



**FACTOR 3**



## CYCLE PART

<b>FRONT BRAKE</b>	182mm discs / 4 pistons racing
<b>REAR BRAKE</b>	150mm discs / 2 pistons racing
<b>FRONT RIM</b>	Morad Trial 1.6"x21" Racing
<b>REAR RIM</b>	Morad Trial 1.6"x18" Racing
<b>TIRES</b>	Michelin X11
<b>FRONT SUSPENSION</b>	TECH alu racing front fork
<b>REAR SUSPENSION</b>	TECH suspension TJ2

## BATTERY

<b>ENERGY</b>	Li-ion
<b>VOLTAGE</b>	50.4V
<b>CAPACITY</b>	*1800/2500Wh
<b>WEIGHT</b>	**11kg
<b>CHARGER</b>	15A
<b>CHARGING TIME</b>	***2h30
<b>MINI CHARGING TEMPERATURE</b>	0°C

## ENGINE

<b>NOMINAL POWER</b>	5Kw
<b>PEAK POWER</b>	18Kw
<b>MAPS</b>	3 (unlimited with EM connect)

## EQUIPMENTS

FRB  
TKO  
EM CONNECT  
CHARGER CASE  
TFT SCREEN  
FLYWHEEL

## OPTIONS

PRBR  
25A CHARGER  
EM HANDGUARD

\*2500Wh for version 2.5

\*\*13kg for version 2.5

\*\*\*3h15 for version 2.5



LET'S RACE!

FACTOR<sup>2</sup>



## **ELECTRIC MOTION**

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Electric Motion draws the attention of all motorcyclists to the importance of wearing the prescribed protective equipment  
(approved helmet, gloves, jacket, trousers and boots) and the need to ride responsibly, in accordance with the highway code.  
The purchase and use of a motorbike requires compliance with the instructions and warnings of the user's manual.  
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