

trial
Magazine

SECTION **76**

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Magazine



TRIALE WORLD CHAMPION
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ELECTRIC
MOTION

POSTER INSIDE
TRIALE

AUGUST-SEPTEMBER 2019
ISSUE 76 • UK: £4.99



CATCH UP



FACTORY VISIT



PROTOTYPE



Pure innovation



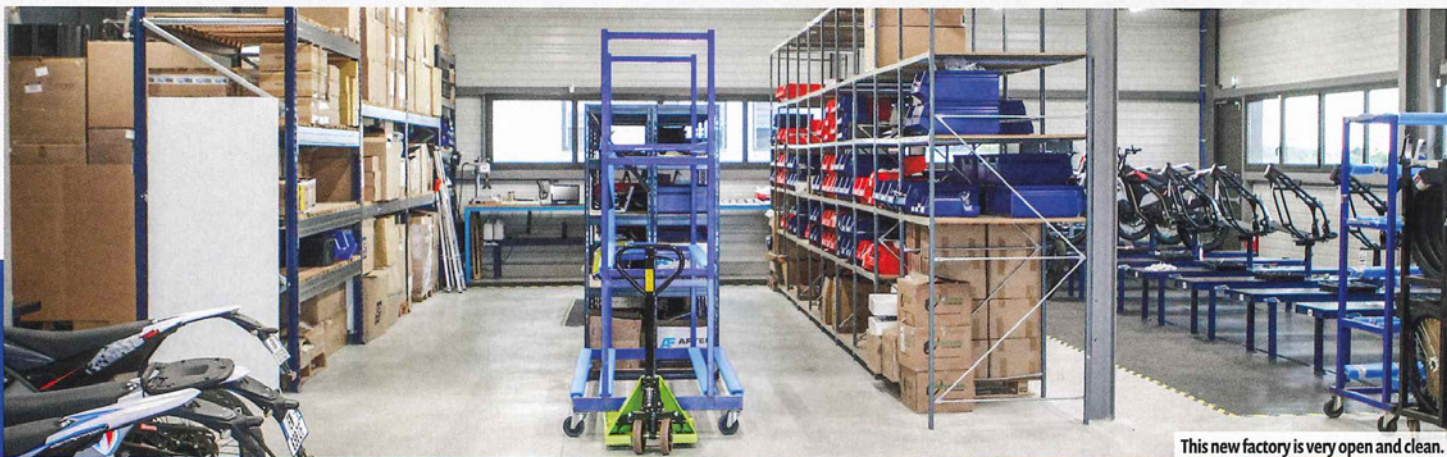
In front of the invited press and trade Christophe Bruand puts on a superb display of the Electric Motion models.

It was in the shadow of the suburbs of Montpellier at Castrie that the second generation of the most innovative electric motorcycle available, the Electric Motion, was presented, at their new factory in early June. The most technologically advanced ePure Race model is the first electric trials motorcycle in history to have air-front forks as standard and is also fitted with a diaphragm clutch. Our test rider Bastien Vallee, who tried the former model, was more than excited to put this one to the test. With more than 1,500 units sold in 20 countries, the Electric Motion EM5.7 is bowing out. Now two 'families' of machine are united under the same 2020 model range. All EM models share the same frame and transmission. The ePure models all get the battery technology, same power and durability, whereas the Escape model, which represents half the sales of the whole brand, gets a higher-quality battery.

WORDS: RODOLPHE SABATIER TRIAL MAGAZINE FRANCE AND JOHN HULME • PICTURES: RODO.



All the enthusiastic members of staff at Electric Motion were more than happy to answer any questions on this exciting new model range.



This new factory is very open and clean.

Two families

The ePure was released all most one year ago, during the French GP in Auron. It is the 'Pure' trials model, which is offered in three different versions. The 'Escape' is the trail version of the range. Both share the same technological base, which is directly inspired by the Christophe Bruand prototype used in the FIM TrialE World Championship in 2018. The 'Lite' model is the entry-level machine with basic wheel and suspension, steel 'Tech' forks at the front and an Olle rear shock. The 'Sport' model is very close to the Bruand prototype with high-end wheels, sprockets, chain and suspension including the very new M4 air front forks, CNC machined triple clamps and a R16V Olle rear shock. And then here comes the surprise package with the all-new 'Race' model. It's the same as the 'Sport', but with a real hydraulic diaphragm clutch, the same as you will find on the petrol-powered machines currently available from the other manufacturers.

Frame

The frame is at the cutting edge of technology with its middle section micro-fused. It is fabricated with 15CDV6 steel, which is only 1mm Ø and weighs less than 5kg. This steel is usually used for prototypes only and is very rare on stock production models.

Suspension

Both the Lite and Escape models share the same basics at the front and rear with the Tech/Olle suspension combination, whereas the Sport and Race use more high-end components with the M4 air front forks and the fully adjustable R16V Olle rear shock which offers a weight saving of 1kg on the standard model. The CNC black anodised triple clamps offer higher rigidity and improved looks, and also gives the machine the lightest front-end feeling on the market.

Transmission

It's different from on Bruand's prototype machine, in that it is now manufactured in Italy. Selection is perfect, the design is new, and the package is much smoother than it was before. The quality of the frame and the transmission allows it to use a new motor mounting, making it run even more smoothly.

Battery

The same battery that was used on Bruand's machine is fitted, held in



Production of the new models is well under way.



New avenues for increased sales are on the agenda, including the police force.



Our test rider Bastien Vallee believes the future is already here with the 2010 Electric Motion range.

position by three screws. It weighs around 10kg, more or less the same as the old one, but the physical size has been reduced, and the power is so much better. EM claims 43km of power for the ePure against the 26km of the former 5.7 model, and 61km for the Escape against 38km previously. "The goal is to enable trial riders to do three laps of a 10km course attempting hazards like they have done before on the petrol motorcycles" explains Leo Finiels, the young and enthusiastic spokesman for the brand. The battery is also very easy to switch compared to before. Leo comments: "We now can hire out batteries for one-off events where you need more power, such as classic events in France, for example. The idea is you don't have to buy one because they cost 2,000 euros" he added.

Weight

The ePure Sport and Race models lose 5kg and 4kg and are at the FIM limit of 70kg. "We have made huge gains, that's a fact, but more important is the mass location," says Leo. The machine's dimensions are very close to that of a fuel aspirated model. According to Leo, what makes the new models better is the handling compared to other machines on the market. "Extraordinary," he told us. For sure, he is a little biased, but still. "I was looking forward to trying the clutch version because as a trials rider, you rely on the clutch to 'jump' for example. And then, when I tried it, that's when I realised how well it handled as well".

Clutch

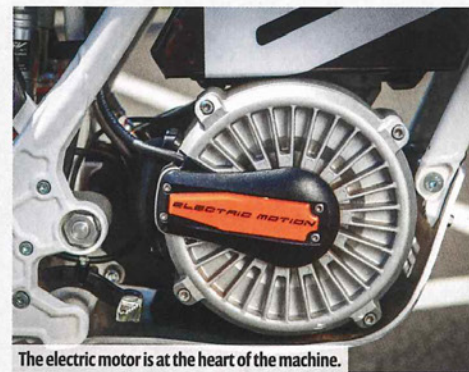
What's most notable between the Lite/Sport duo and the Race model is the clutch. The first two keep their switchable PELS/PRB system – the left lever can be an electric brake or a progressive switch, but it can't make the engine rev – while the Race gets a full-on clutch and a mass of inertia. The diaphragm clutch is very close to that of a Gas Gas GP model. EM even admits that this is where the idea came from. It allows for more intuitive riding, just like any normal motorcycle we know. The master cylinder is a hydraulic Braketec one, like on many machines on the market. Now, with this clutch, you can make the machine 'rev' just before a big obstacle, for example.

Power

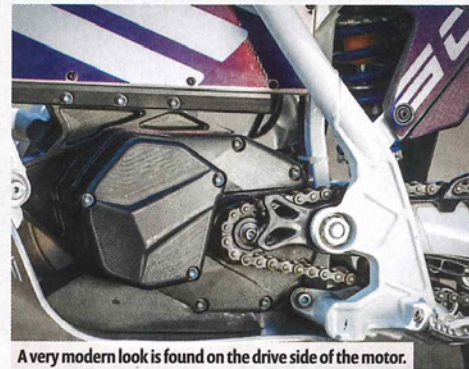
The power goes from 5kW to 6kW, with a 'peak power' of 11kW. Torque is also progressing by 100Nm at the rear wheel, now with 600Nm. Regarding the Escape, the torque has been voluntarily limited at 450Nm. Both models also increase their top speed by 5km/h: 60 to 65km/h for the trials and 70 to 75km/h for the Escape. Charging time is also increased... 3 hours 20 minutes for the trials model and 4 hours 15 minutes for the Escape. A fast battery charger at an affordable price should be available soon as an option.

On test Electric Motion

ePure Sport/Race, Escape: The future is already



The electric motor is at the heart of the machine.



A very modern look is found on the drive side of the motor.



Quality components can be found in all areas of manufacture.



Smooth well-thought-out styling can be found for rider comfort on the Escape model.

here. This title comes directly from the mouth of our test rider Bastien Vallee. We were expecting a lot from the ePure, and yes, it delivers. That's the electric model we were all waiting for. The first thing you notice when you ride is the clutch, which shouldn't be used in the same way as on a petrol motorcycle. You hardly have to use it, in fact; much less than on a normal one, just on very short run-ups before an obstacle. But it completely changes the character of the EM. The engine doesn't pull very high, but it has a ton of power and torque at the bottom end. The mechanical clutch engages very well and allows all the power to get to the ground.



Electric Motion ePure Race Model 2020

Top chassis

Other positive points are in the new chassis, with the battery lower and further backward compared to the old one. You just don't feel the 10 kilos from the battery. On pivot turns, little jumps or positioning yourself, everything feels in place. Combined with the new M4 fork, the machine seems very light and very easy to handle. The rear Olle shock also works fine, giving grip to the rear wheel even when not set up to my weight and level of ability. I felt better on this machine than on a two- or four-stroke one. Even the aesthetics are very clean: not full of stickers everywhere, no colours, the machine is just simple and beautiful.

Sport

The Sport model is the perfect way to learn the electric method of riding. You have to rely on the torque a lot, rather than revving it. When you shut the throttle the engine doesn't stop right away, like on the former version. That's because of the flywheel, which is available as an option. For an average rider that option is a must-have; almost better than the clutch on the Race model. If your level is higher and you attack more significant steps and such, you may need the clutch, however. The three different electrical maps are very efficient. The blue one is for everybody; the green one is the easiest for hobby riders and the red one for the top guns with significant power. Before, you would twist the throttle wide open and hope for the best. Now you can hear the revs growing so that it is easier to know where you are in terms of the power band. It makes a big difference for the most advanced riders. We saw Christophe Bruand doing obstacles he could not manage without the clutch. Sure there is a learning curve in adapting, but it comes quickly and then it feels like normal again.

Escape

The Escape looks bulky at first. It makes you wonder how it will handle the hazards. But when you get on it, everything falls into place. The riding position is okay for a trial or an enduro rider. As a trials rider, I'm not used to having a seat, but it didn't bother me at all. It handles very well and is not out of place for easy trials riding. The engine has less torque but pulls well compared to the ePure.



Electric Motion ePure Escape Model 2020

Simply put, it is not made for the same purpose, but this model is still efficient and can pull wheelies if you want to. The three different electrical maps are mellower than the Race version. And with this engine, you really don't need the hydraulic clutch.

The EM team

There is a whole team of enthusiasts behind this EM brand. Christophe Bruand is a great test rider and the experienced Marc Colomer, who joined the team not long ago, will bring all his knowledge to the table. I really think we'll see more and more of these machines at every level in the trials world.

The cost?

They are cheaper than a factory-model two- or four-stroke. And we know people like to put the latest aftermarket parts on their machines. With the EM there's no tuning to be done. The price seems fair in regards to the technology involved. I even thought to myself when I saw the prices that the models are actually affordable!

PRICING

2020 Electric Motion ePure Lite	£6,595.00
2020 Electric Motion ePure Sport	£7,595.00
2020 Electric Motion ePure Race	£7,995.00
2020 Electric Motion ePure Escape	£8,495.00

Price includes VAT. Price correct at time of print.

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ELECTRIC MOTION: ePURE LITE/SPORT/RACE 2020 SPECIFICATIONS

Motor	Nominal Power: 6kW
Peak Power	11kW
Wheel Torque	600Nm
Cooling	Air
Transmission	1 Forward Gear
Electrical settings	3 Maps: ePure Sport model only, Progressive Electric Lever System; ePure Race model only, Hydraulic Controlled Diaphragm Clutch and Flywheel
Maximum Speed	65km/h.
Battery	Li-ion
Voltage	50.4V
Capacity	1,875Wh
Weight	10.5kg
Charger	15A
Charging Time	100% - 3 Hours 20 Minutes
Range	100-240 Minutes @ 43km.
Chassis	Tubular Steel 15CDV6
Suspension	Lite Only: Front, Tech 39mm Ø: Travel, 175mm; Sport and Race Only: M4 39mm Ø: Travel, 175mm
Rear Suspension	Olle 16V
Travel	170mm
Brake Rotors	Front: 180mm Ø; Rear: 142mm Ø
Wheels	Front 2.75" x 21"; Rear: 4.00" x 18"
Tyres	Michelin X11.
Weight	Lite, 73kg; Sport, 70kg; Race, 71kg
Wheelbase	1,325mm
Seat Height	670mm
Ground Clearance	320mm

ELECTRIC MOTION: ePURE ESCAPE 2020 SPECIFICATIONS

Motor	Nominal Power: 6kW
Peak Power	11kW
Wheel Torque	450Nm
Cooling	Air
Transmission	1 Forward Gear
Electrical Settings	3 Maps: Progressive Electric Lever System; Flywheel
Maximum Speed	75km/h.
Battery	Li-ion
Voltage	50.4 V
Capacity	2,620Wh
Weight	14 kg
Charger	15A
Charging Time	100% - 4 Hours 15 Minutes
Range	160-290 Minutes @ 61km.
Chassis	Tubular Steel 15CDV6
Suspension	Front: Tech 39 Ø mm; Travel, 175 mm; Rear: Olle R16V; Travel, 170mm
Brake Rotors	Front: 180mm Ø; Rear: 142mm Ø
Wheels	Front: 2.75" x 21"; Rear: 4.00" x 18"
Tyres	Michelin X11.
Weight	77kg
Wheelbase	1,325mm
Seat Height	810mm
Ground Clearance	320mm.