

LMX 161

TECHNICAL
DOCUMENTATION
2023



 **LMX BIKES**
ELECTRIC FREERIDE

ABOUT LMX BIKES

Workshop located in Jonage (Rhône, France), 15 min from Lyon

BPI French Tech certified, LMX has been manufacturing **freeride electric two-wheelers** since 2014

KNOW HOW ⇒ **Design - Manufacturing - Assembly** *Made In* 

MISSION ⇒ Offer **high-performance, light** and **accessible** products, while respecting an **excellent offroad reliability**

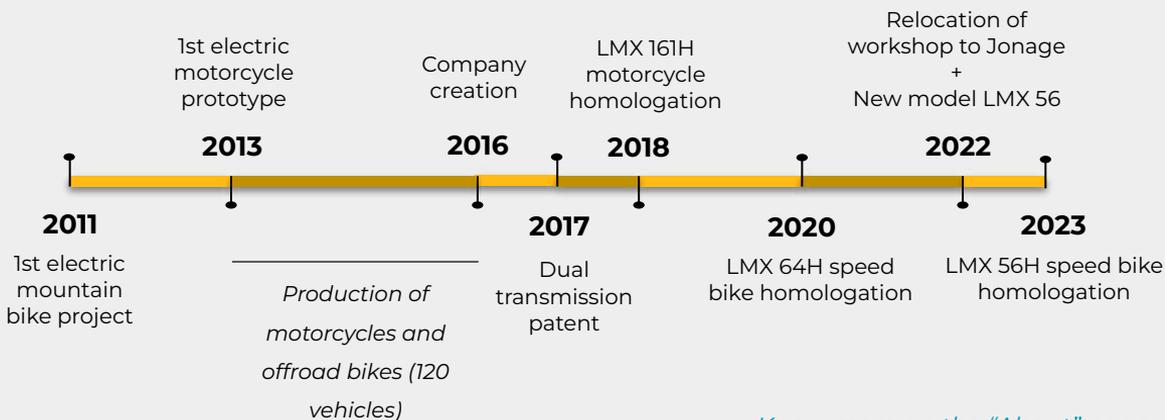


“

Our team shares the same vision of an electric future for motorsports.

Thanks to the solid technical foundations of our two models, we regularly deploy new ranges to adapt our products to the uses of all our customers. ”

Adam Mercier, director of LMX Bikes



[Know more on the "About" page](#)

THE LMX TEAM

LMX is a team of enthusiasts who work every day with the aim of growing the company to offer drivers ever more innovative and efficient vehicles.

Maintaining our independence and developing our know-how are part of LMX's daily missions. Thus, we take care of the design, manufacture, assembly, sales, marketing and maintenance of the LMXs in-house.

A real diversity of professions and know-how

DESIGN/R&D

MANUFACTURING

ASSEMBLY

MARKETING/COM

SALES DEPARTMENT

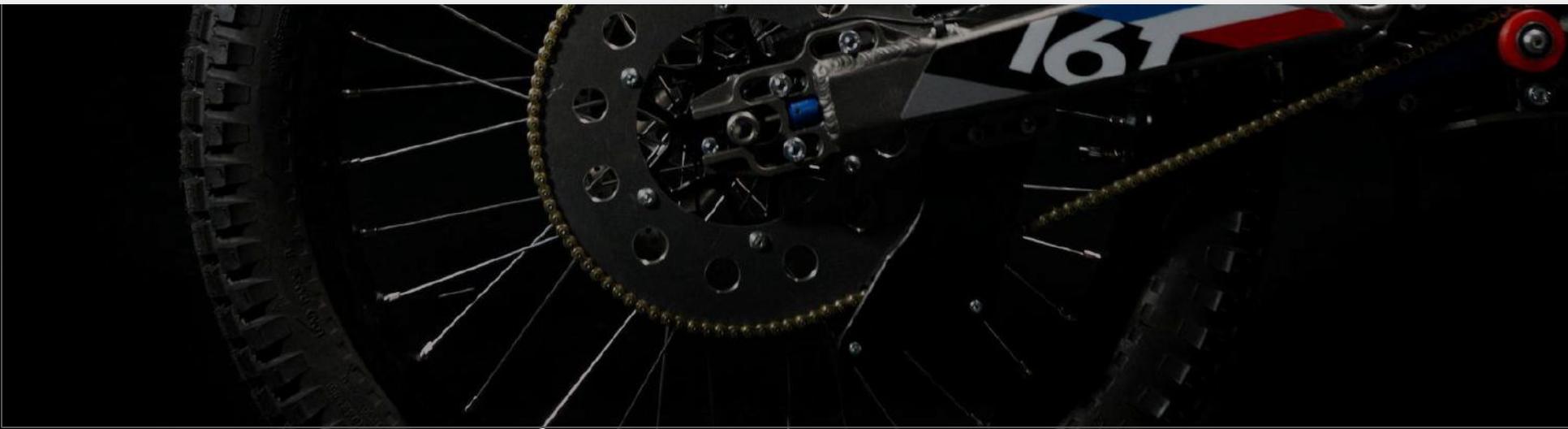
MAINTENANCE

ACCOUNTING





FRENCH INNOVATION AT THE SERVICE OF SPORTING PLEASURE



THE LIGHTEST FREERIDE MOTORCYCLE ON THE MARKET



45 kg

Easy loading on a bike rack



3,100 W engine power
(6,000 W peak)



2,000 Wh battery capacity
Autonomy assistance between 45-70 km
Approved for 63 km

Electric motorization: 2 modes



Freedom of movement
Silent in the field
Limited operating and maintenance costs



161 MXR offroad 85 km/h

No need for a motorcycle license

“

The lightest freeride motorcycle on the market !

Twice lighter than its thermal equivalent, the LMX 161 is nonetheless a powerhouse.

Thanks to its ease of handling, it offers the sensations of piloting an ATV downhill, with performance comparable to that of an 85cc motocross for the technical sections.

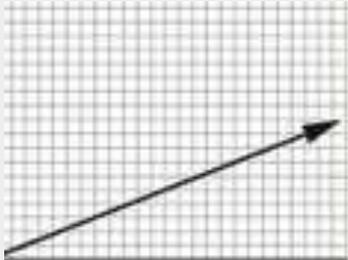
The absence of engine noise and vibrations also allows you to focus on trajectories, improvisation and fun. "

Adam, director of LMX Bikes

[Know more about the LMX 161](#)

TECHNOLOGY : 2 DRIVING MODES

“The two driving modes of the LMX T61 offer you real versatility during your outings and real offroad sensations !”



- MODE 1 : **the ECONOMY mode**
- MODE 2 : **the BOOST mode**

ADVANTAGES

- Versatile engine
- Choice of modes according to the terrain and your needs
- Economy mode to extend your outings and not dwell on the battery level
- BOOST mode to overcome all obstacles
- Engine braking on downhill



LMX 161 : THE ULTRALIGHT 2-PURPOSE MOTORCYCLE

The accessibility of the LMX 161 makes it a perfect ally for all your outings, whether they are leisure or sports !

“ *I want to walk around everyday without constraints* ”

Thanks to its accessible piloting and its featherweight, you can have fun with the LMX 161 during your leisure outings, without constraints. Its electric motor facilitates maintenance (washing, greasing, inflating the tires) and simplifies your life.

With the LMX 161, you no longer need a special license to experience the sensations of the motorcycle, the Road Safety Certificate is enough !



“ *I want to rediscover the sensations of an all-terrain motorcycle* ”

“This bike is a real bike”... adding the power !

With its 6,000 W peak and 2,000 Wh battery, concentrate solely on trajectories, improvisation and sporting pleasure, with guaranteed sensations on the ground.

BATTERY PACKS ASSEMBLED IN LYON

The LMX 161 battery packs are assembled manually by our workshop team from 160 Samsung 18650 lithium-ion cells. Each cell is tested before being integrated into the pack, to ensure unparalleled battery reliability.

Then comes the spot welding of the cells in the pack, then the integration of the BMS (Battery Management System) and temperature sensors. The finished battery is then charged and undergoes a full discharge test to verify proper operation.



INTENSIVE USE OF 6061-T6 ALUMINIUM

The chassis, swingarm and rear buckle are made from aircraft grade aluminum. One of the main advantages of this material is its high resistance to corrosion, stress and fatigue. LMX vehicles can therefore withstand falls and withstand shocks.

Aluminum is also an infinitely recyclable material, unlike carbon. Thus, the use of this material is therefore at the heart of the philosophy of LMX Bikes.

POWER TRAIN

Brushless central motor

Peak power 6.3 KW / 8.5 hp (acceleration equivalent to a 85cc cross country, 125cc trial)

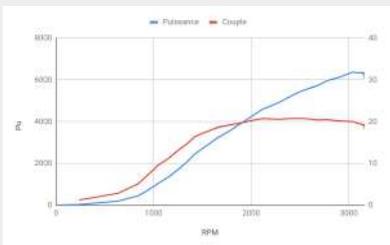
Nominal power 3.1 KW / 4.2 hp

Max power 20 Nm at the engine, **156 Nm at the wheel**

Maximum torque 43 Nm at the engine, **330 Nm at the wheel**

ECU : 180A brushless controller

Air cooling



BATTERY

160 lithium-ion cells (Samsung 18650)

Capacity 60V / 34 Ah, 2 kWh

Weight : 10 kg

Autonomy all-terrain between 45 and 70 km
(2h00 - 3h00 driving)

Approved for 63 km

Full recharge 3h00. Recharges to 80% in 90 minutes

500 charge-discharge cycles up to 70% of initial capacity

600 W external charger - 230 V power supply

Removable, easy and quick replacement

CONSUMPTION

150 A peak

7 bar battery gauge display

Ride by wire handle accelerator

Cost of a recharge : € 0.25



FRAME

Frame material / rear buckle / swingarm

6061-T6 Aluminum (aviation quality)

Full frame weight : 6.5 kg

Wheelbase 1310 mm

Caster angle 65 °

Saddle height (adjustable) : 880 - 920 mm



SUSPENSIONS

DAMPER

DNM RCP2

Connecting rods

215 mm travel

Settings : compression, rebound and preload



TIRES AND WHEELS

FRONT WHEEL

Rim 2.50 x 26 "

Tire **26 "x 3" DURO**

REAR WHEEL

Rim 1.4 x 19 "

Tire **19 "x 2.75" type trial**

LMX V3 hub with double row of balls (4 bearings)

EQUIPMENTS

Lightweight **steel footrest**

Reinforced chain CZ Karting

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