MOTO GUZZI UNLOCKS THE FUTURE WITH V100 MANDELLO, AN EXAMPLE OF MOTORCYCLING INNOVATION

V100 MANDELLO IS PACKED WITH RECORD-BREAKING TECHNOLOGY: THE FIRST BIKE IN THE WORLD TO OFFER ADAPTIVE AERODYNAMICS; THE FIRST MOTO GUZZI EQUIPPED WITH SEMI-ACTIVE SUSPENSION, INERTIAL PLATFORM, CORNERING ABS AND QUICK SHIFT

A BRAND-NEW CONCEPT OF MOTORCYCLE 'ALL-ROUNDER', COMPACT, SPORTY BUT COMFORTABLE, IT RIDES LIKE A ROADSTER WITH THE TRAVELLING VOCATION OF A TOURER

INTRODUCING THE NEW COMPACT BLOCK ENGINE, A MODERN AND SOPHISTICATED TWIN THAT BOASTS EXCITING PERFORMANCE AND MOTO GUZZI CHARACTER

Moto Guzzi celebrated its 100th anniversary in 2021 but, more than just a prestigious milestone, the company took this as a base on which to start building its next century of history. A future that is already mapped out and that will see Moto Guzzi continue to build magnificent motorcycles that are authentic and bold in character, dedicated to the Guzzisti and all those keen to belong to the Moto Guzzi family. Modern motorcycles brimming with charm that flaunt cutting-edge technology to guarantee both fun and safety and that are proudly 'made in Italy', at the factory in Mandello del Lario, which continues to be the epicentre of passion for Moto Guzzi. A legendary production site that will take on a brand-new guise thanks to an ambitious project to restructure, expand and develop it over the coming years, for a location open to all, in which the passion for the eagle brand is shared. A new industrial vision based on the concepts of environmental sustainability and an efficient use of resources carefully balancing tradition, engineering and design.

One step towards 2121 has already been taken, a step that is more of a bold stride towards the future, given the reach of the new Moto Guzzi V100 Mandello. “100” as in the first century, was a period of passion, skill, innovation, and success, both sporting and commercial, which allowed for the building of some of the world most beautiful and best-loved motorcycles. “100” also refers to the second century that has just begun. The “100” indicates, as is Moto Guzzi tradition, the size of the new, more moder engine and the basis for a series of new generation motorcycles that will come to light in the coming years.

Starting from a blank page and with real freedom of imagination, Moto Guzzi has come up with a bike that is very modern in its style and content, both innovative and unmistakable. It combines those traditional Moto Guzzi values of sport and travel in one single vehicle. **And so it is that V100 Mandello opens a new chapter, in every respect, interpreting the sport-touring world in an innovative way and with fresh vision. The compact dimensions and dynamic sports riding typical of the best roadsters is combined with the comfort and protection of a touring bike, thanks to the technology and aerodynamic solutions it adopts.** V100 Mandello stands out for its originality, eluding any kind of classification: not a compromise, but the ultimate synthesis of categories that, until now, were considered diametrically opposed.

The two versions differ in terms of their graphics and content, and while Moto Guzzi V100 Mandello is packed with standard equipment, Moto Guzzi V100 Mandello S further raises the level of equipment and technology.

Character and authenticity in an enduring design

It is innovative not only in concept and technology, but also in its elegant, sporty design, which expresses simplicity and strength and is conceived to outlast passing trends. Like all Moto Guzzi, the design of the V100 Mandello **showcases the engine**, unique and inimitable, but the built-to-last style is far from nostalgic, giving the typical cornerstones of Moto Guzzi language a very modern twist. This is clear from the forms of the tank, which appear to be shaped directly by the muscular engine heads, the under-seat side panels, the slits of which are a direct reference to the legendary 1976 Le Mans 850, and the top fairing, a tribute to the 1981 Le Mans 850 III. Once again, **Moto Guzzi proves to be one of few global manufacturers that need look no further than its own tradition for style inspiration**. The challenge that Moto Guzzi Centro Stile designers faced was both complicated and fascinating. They set out to ensure the V100 Mandello remained as compact as possible, concealing all its technology within the narrow body and tasking these systems with ensuring rider protection and comfort, so as to transform the motorcycle into a real tourer. The identity of the new Moto Guzzi is immediately clear and unmistakable, however you look at it. Head-on, the DRL of the LED light cluster traces the outline of the eagle, while side-on, the fully visible engine design is an integral part of the bike's style, like a diamond nestled in a ring. The rear stands out for the design of the taillight unit, inspired by the afterburners of aircraft engines and similar to that successfully used on the V85 TT. One aspect that is immediately clear is the **attention to detail**, significant and sophisticated, in line with the reputation of the brand and the expectations of the demanding public to which it is dedicated. And the high level finishes don't stop with the body, every last centimetre of which is satisfying to look at and touch with your hands, but extend to the liquid-cooled engine, designed to be admired in its entirety. The very discreet positioning of the radiator and the absence of any visible rubber tubing, as well as painstaking work on the electronics system to conceal all wiring, enhance the sheer beauty of the mechanics.

The revolutionary “compact block” twin

V100 Mandello showcases many important technological innovations. It is the first motorcycle to offer adaptive aerodynamics, and the first motorcycle to adopt advanced electronic solutions such as the six-axis inertial platform, cornering ABS, semi-active suspension, and quick shift, to name just a few of the most significant features. It is also the first Moto Guzzi to début the new engine known as **“compact block”**, the technical characteristics of which are modern and sophisticated. The initial project goals were clear, to design a very modern engine in terms of its construction and performance, while respecting the traditional architecture of the 90° transverse V-twin, a one-of-a-kind, which guarantees inimitable torque delivery and sound. **A compact, lightweight engine to obtain an agile, sporty chassis**; powerful, with a bold character and rich in torque, it is designed to equip a series of models and be able to flank Moto Guzzi through the next decades of its life, in accordance with the increasingly strict anti-pollution regulations; in line with the

needs of contemporary riders who seek excitement with every twist of the throttle but who are increasingly aware of fuel consumption and maintenance costs. This is why technicians opted for a **brand new design**, which does not share even one component with previous engines built in Mandello.

A **90° transverse V-twin with liquid cooling and double overhead camshaft with finger followers controlled with a chain and four valves per cylinder.** The effective engine capacity is 1042 cc, while the bore-stroke values are 96 x 72 mm. The new crankcase exploits wet sump lubrication, with a crank chamber that is separated from the oil pan by a reed valve. This system allows for a lower engine, thanks to a shallower oil pan, thereby saving on space and lowering the masses to the benefit of handling. In addition, reducing the lubricant in the crank chamber makes for less friction and, therefore, lower fuel consumption, while also contributing to limiting the dimensions. A real effort has been made to reduce inertia to a minimum (up to 50% less with respect to the previous 1200 8V engine), so as to reduce the weight and ensure a prompt response. A counter-rotating crankshaft does not serve to balance first order forces, which are already perfectly balanced thanks to the 90° architecture, but to reduce the overturning torque to the benefit of rideability, eliminating any unwanted reaction when accelerating or decelerating. The addition of this component has also allowed for a smaller, more lightweight crankshaft, benefiting overall compactness and performance. The external crankcases are designed to have a structural function, strengthening the frame by way of six fastening points. The rider footpegs are also affixed to the crankcases with the interposition of some rubber pads, the exceptional engine balance preventing any vibration.

The brand new design has allowed for **a truly compact engine,** 103 mm shorter than the V85 TT small block and lighter than the 1200 8V, the last 'four valve' to be produced by Moto Guzzi. An important contribution is also made by the new hydraulic multi-plate wet clutch with anti-juddering system, more robust, reliable, compact and lightweight than the single-plate dry clutch adopted until now. Even the alternator adopts a new and more advantageous position, no longer placed frontally but inside the V of the cylinders.

The new twin also stands out from all the engines recently built in Mandello del Lario for its **cylinder heads, which are rotated by 90°,** a decision that increases legroom and rationalises the positioning of components in the intake and electronic injection systems. The two throttle bodies have shorter, straighter high turbulent ducts that can optimise the supply of air/fuel mix to the combustion chambers with clear benefits in terms of power, delivery and consumption, as well as the reduced emission of polluting gases. The adoption of a double overhead camshaft with finger followers allows for more aggressive valve lift laws, which benefits performance but also makes for ideal combustion, by eliminating any fuel waste. Contributing to this is the Ride-by-Wire electronic control, which ensures delicate throttle management without any kind of on-off effect when opening/closing. The new and more efficient powertrain is also significantly quieter than that of previous 1200 8V engines. Rotation of the cylinder heads has allowed for the design of an exhaust system with two curvy manifolds that merge into a dual-outlet exhaust tip. The manifolds have carefully designed protectors to deviate hot air flow away from the rider's legs.

The **six-speed gearbox** exploits the patented technology of the first two gears with reduced free play, already used on the V85 TT, which eliminates any delay in shifting for smooth, rapid gear changes, but is totally new in that it is designed specifically for this engine. And the prompt response that low inertia and very rapid gear shifting affords has allowed for the **quick shift** to be introduced on a Moto Guzzi engine for

the first time. This electronic device supports the rider when engaging the gear and up-shifting to ensure lightning-fast shifting without use of the clutch.
Performance is overtly sporty, with a maximum power of **115 HP at 8700 rpm** and maximum torque of **105 Nm at 6750 rpm**, with **82% already available at 3500 rpm** and the limiter set at no fewer than 9500 rpm. Data that effectively showcases the character and power of the new engine, gutsy and with real drive already at low speeds, and able to offer a riding experience worthy of the Moto Guzzi name. That said, the modern design has also allowed for an engine with **restrained consumption (4.7 l/100 km)** and favourable maintenance costs, with a **scheduled service interval of 12,000 km.** The cardan final drive makes use of an **aluminium single-sided swingarm** now positioned on the left side. The transmission shaft outlet, now much lower, and the very high longitudinal development of the swingarm allow for full control of the lift effect when the throttle is first opened with no need to use reaction rods on the swingarm, for smooth riding in both acceleration and deceleration as with a chain drive but with all the advantages of the cardan (less maintenance and greater cleanliness). This system is unique in that there is only one universal joint on the swingarm pivot tilted by 6° in order to ensure the central area of the bike remains very narrow, reducing weight and benefiting ergonomics, and also for the fact that the bevel gear is positioned at 84° (and not 90° like all other Moto Guzzi), to allow the swingarm to accommodate a generous 190/55 tyre, mounted on a 6" rim, which once again highlights the sports attitude of the new Moto Guzzi.

Chassis architecture: for sport and touring

The sports attitude of V100 Mandello is not just down to the performance of the new engine, but also the qualities of the compact, easy to handle chassis that promises excitement through the turns and great stability over long distance, characterised by real feeling with the front wheel, which translates into fun and riding pleasure. Technical choices that are the result of a design culture for which the Piaggio Group motorcycle brands have always stood out. Such wonderful, fulfilling riding is essentially the result of optimum weight distribution and the lowering of masses, permitted by the architecture of the engine and the 17-litre fuel tank that extends under the seat. But it is also thanks to the particular layout of the **steel tube frame that exploits the engine as a load-bearing element** to achieve just the right rigidity to ensure stability and riding precision while also reducing the weight. A 1475 mm wheelbase and headstock angle of 24.7° translate into agility and sports attitude on winding routes.
And its touring attitude is boosted thanks to the significant comfort that the generous saddle, just 815 mm from the ground, and active, relaxed riding position afford. The adoption of a single variable-section aluminium handlebar is in line with the philosophy of the model, perfect for ensuring control during sports riding while also offering a higher and more relaxed riding position when touring.
Two-person travel is at the base of the project, and the passenger can count on a large, well padded portion of saddle and practical grab handles, the seating position making for a pleasurable, relaxing ride. **One ingenious addition is the case fastening system** (available in the extensive dedicated accessories catalogue) that needs no additional support and leaves the overall aesthetic unchanged when not in use, thus saving on weight and minimising any lateral bulk. To affix cases, the user need simply lift the passenger seat and position the case hooks in the dedicated housing.

The suspension and brakes also guarantee sports riding fun and control as well as safety and comfort over longer distances. Moto Guzzi V100 Mandello adopts a Kayaba 41 mm fork with adjustable rebound and spring preload. The shock is by the same manufacturer and can be adjusted in its rebound and spring preload via the practical manual control. Its sloped positioning has been studied and refined to offer progressive intervention and sensitivity when it comes to absorbing any bumps in the road surface. Moto Guzzi V100 Mandello S also makes use of the advanced **Öhlins Smart EC 2.0 semi-active suspension system**, which can read the asphalt and adapt bike setup accordingly, moment by moment. The ECU that governs the Öhlins Smart EC 2.0 suspension has access to all the bike's electronic systems, meaning it is able to recognise all riding phases and adapt calibration of the fork, shock absorber and steering damper hydraulics thanks to the development of an algorithm, the fruit of collaboration between Öhlins and Moto Guzzi. The system effectively adjusts the suspension hydraulics settings, moment by moment, to ensure the best possible setup in all conditions. In addition, its increased ability to mirror any unevenness in the road heightens the level of comfort and riding pleasure.

The particular technology of the Smart EC 2.0 semi-active suspension system allows simple and customised calibration of the fork and shock absorbers with two operating modes, **semi-active and manual**, both of which can be selected using the buttons on the handlebar. **Two maps**, **Comfort and Dynamic**, adjust the suspension in different ways and select the semi-active contribution. The first is designed to offer maximum comfort while travelling and is also suitable for everyday riding, thanks to its greater ability to absorb imperfections in the road surface. The Dynamic mapping is designed to support sports riding on the road, ensuring very controlled bike behaviour, ideal for the kind of winding roads riders enjoy so much.

In manual mode, on the other hand, the two maps offer two types of predefined calibration without semi-active assistance, in the same way that conventional multi-adjustable suspension systems operate. In both semi-active and manual mode, and within each of the two aforementioned logic maps, the user still has the possibility to fine tune suspension calibration based on personal taste and riding style. The OBTi (Objective Based Tuning Interface), visible on the colour TFT instrumentation of Moto Guzzi V100 Mandello S, makes for intuitive setting operations. The OBTi operating logic is based on the goals the rider wants to achieve during each riding phase: for example, greater support during braking if the rider wants more controlled bottoming of the **NIX** fork, or greater support in acceleration if they want more support from the **TTX** shock absorber when opening the throttle. Manual adjustment of the shock (via the practical manual control) and fork spring pre-load is also possible.

At the front, the Brembo braking system sees radial callipers act on a pair of 320 mm floating steel discs. The handlebar cylinder is also radial, as is that of the clutch (both have levers that are adjustable in their distance from the handlebar). The rear brake counts on a 280 mm disc served by a two-piston calliper. Both Moto Guzzi V100 Mandello versions are equipped with Pirelli Angel GT II tyres.

The first in the world with adaptive aerodynamics

Moto Guzzi technology contributes to increasing both comfort and air protection, with the world-first adoption of an adaptive aerodynamics system that **automatically**

adjusts the position of deflectors on the sides of the litre tank depending on the speed and selected Riding Mode. A step into the future to make a technology as yet unexplored in the two-wheeled sector available to everyone, so as to contain the overall dimensions and offer protection and comfort only when needed and requested by the rider. The electronic-adjust top fairing and fully opened deflectors reduce air pressure on the rider by 22%, bringing V100 Mandello closer to the level of protection afforded by larger and decidedly less sporty touring models. This is the result of hundreds of hours spent on simulations using CFD (Computational Fluid Dynamics) calculation software and in the wind tunnel, as well as extensive fine tuning on the road of course.
The system is part of a first-rate electronics package, which incorporates the **Ride-by-Wire** electronic accelerator for the careful management of performance and consumption, the advanced **Marelli 11MP ECU** and the **six-axis inertial platform**. The latter, thanks to the accelerometers and gyroscopes it contains, is able to recognise the bike's condition with respect to the road, recording and processing the riding inputs and sending the data to the ECU that effectively attends to the control parameters. The six-axis platform exploits the full potential of the **Cornering ABS,** developed in collaboration with Continental to ensure maximum safety on the road. The system is able to optimise braking and ABS intervention through the corners, thanks to a specific algorithm that constantly monitors various parameters such as lateral acceleration, the pressure applied to the front brake lever, and the lean, pitch and yaw angle, modulating the braking action in order to better guarantee the ratio of deceleration to stability.

Four Riding Modes: Tour, Rain, Road and Sport, each of which manages three different types of engine mapping, four levels of traction control, two levels of engine braking, the opening of the side deflectors and, on the V100 Mandello S version, even calibration of the Öhlins Smart EC 2.0 semi-active suspension. Moto Guzzi technology does not just aim to provide a safe and exciting ride, but also facilitate life on-board. The rider need only select the Riding Mode that best suits their riding requirements in order to benefit from the best automatic adjustment of the electronic parameters, which can also be personalised so that every rider can find their preferred settings.

Tour: the Riding Mode designed for distance. Engine brake intervention (MGFM) is significant, to aid deceleration by closing the throttle; power delivery (MGCM) is progressive (level 2 of 3); traction control (MGCT) is set to the third of four levels. In selecting this mode, the lateral deflectors fully open when exceeding the 70 km/h threshold (the threshold can be set to a different speed). The setup of the Öhlins Smart EC 2.0 suspension on the V100 Mandello S is adjusted to level 2 (Comfort).

Rain: all electronic intervention is adjusted to effectively tackle the difficult weather conditions. The engine brake is heavily present; power delivery is very gentle (level 3 of 3); traction control is at the maximum level for total safety when accelerating. In this mode, the lateral deflectors remain open to maximise rain protection at all speeds. The setup of the Öhlins Smart EC 2.0 suspension on the V100 Mandello S is adjusted to level 2 (Comfort).

Road: the intervention logic favours road riding. The engine brake is heavily present; power delivery (MGCM) is progressive (level 2 of 3); traction control (MGCT) is set to the second of four levels. In this mode, the lateral deflectors remain closed, but the

rider can decide to open them at a given speed. The setup of the Öhlins Smart EC 2.0 suspension on the V100 Mandello S is adjusted to level 1 (Dynamic).

Sport: electronic adjustment is set so as to ensure the best sports riding experience. The engine brake is minimal; power delivery (MGCM) is more direct and sporty (level 1 of 3); traction control (MGCT) is set to the least invasive level (1 of 4). In this mode, the lateral deflectors remain closed, but the rider can decide to open them at a given speed. The setup of the Öhlins Smart EC 2.0 suspension on the V100 Mandello S is adjusted to level 1 (Dynamic).

The **threshold for the opening of the lateral deflectors** can be adjusted by the rider to a speed other than the originally foreseen 70 km/h, within a range between 30 and 95 km/h. They will automatically close when the speed drops 20 km/h below the opening threshold to avoid continual opening and closing, in traffic or when travelling at precisely the threshold speed for example.
Air protection is also ensured with the **electronic-adjust top fairing**. Using a practical button on the left electronics block, the rider can raise the fairing, which has a generous maximum travel of 90 mm. It functions independently from the Riding Modes, so that every rider can adjust it based on their particular stature and needs.

The standard equipment is rounded out with the **full LED light cluster with DRL**, the **"bending lights"** system (a pair of additional lights in the parabolas illuminates the inside of the turn, increasing visibility when leaning), the **USB port** located in the storage compartment beneath the passenger seat and **cruise control**. The **5" TFT colour instrumentation** is very comprehensive, providing data such as fuel level, air temperature, cooling liquid temperature, selected gear, residual range and instantaneous consumption. **Moto Guzzi MIA**, the multimedia platform that allows a smartphone to be connected to the instrumentation via Bluetooth, extends its functions. Moto Guzzi MIA includes both the infotainment system for management of the voice assistant, phone calls and music via the intuitive handlebar controls, and the GPS function, which allows the rider to view directions directly on the instrument panel once a destination is set on the smartphone.

Versions and colours

V100 Mandello is available in two versions, which differ in terms of trim.
Moto Guzzi V100 Mandello comes packed with standard equipment, including the full LED lighting system with DRL and all the electronics described thus far, including adaptive aerodynamics. The Kayaba suspension is mechanically adjustable. The dedicated colour schemes are: **Bianco Polare**, an elegant matte white shade paired with matte gold rims, and **Rosso Magma**, complete with bright red rims.
In addition, there is the magnificent **V100 Mandello Aviazione Navale**, a limited edition made up of just 1913 numbered units to commemorate the strong bond that has endured for more than a century between Moto Guzzi and the Italian Navy. In fact, the origins of the eagle with outstretched wings, the unmistakeable emblem of Moto Guzzi right from its foundation in 1921, lie in the shared military bond of founders Carlo Guzzi and Giorgio Parodi, in the Air Service of the Royal Navy during World War One. Indeed, it was during the conflict that the two friends, along with pilot Giovanni Ravelli, decided that they would go into building motorcycles after the war. However, Ravelli was never able to see his dream come true as he was the victim of

an accident in 1919. Guzzi and Parodi chose the eagle as the symbol partly to keep the memory of their friend alive. This exclusive version flaunts a dedicated livery, inspired by the F-35B fighter jets supplied to the Marina. The graphics faithfully trace those of the aircraft, with the naval insignia on both sides of the top fairing, which is also enhanced with the typical “jet intake” stripes. The livery is also enriched with the low-visibility tricolour rosette on the sides of the fuel tank, the Naval Aviation crest and the "Gruppo Aerei Imbarcati" (Deployed Aircraft Group) logo.
The standard equipment package includes the **TPMS tyre pressure sensor** and **heated hand grips**, while the serial number is laser-engraved onto the handlebar riser. Each bike comes with a **dedicated bike cover** and a **commemorative plate.**
The premium version is called **V100 Mandello S** and is characterised by an even more lavish trim that includes Öhlins Smart EC 2.0 semi-active suspension, quick shift, heated hand grips, TPMS (tyre pressure indicator) and the Moto Guzzi MIA system. This version has two dedicated colour schemes. **Verde 2121** is the most iconic, taking up the green and grey used on the 8 Cilindri, the world's most famous racing bike, while **Grigio Avanguardia** flaunts the sportiest, most on-trend colour. Both versions come with matte black painted rims.

A vast range of accessories to suit every need

Moto Guzzi has fine tuned a series of very well-finished accessories that can heighten the comfort, safety and functionality of the V100 Mandello.

Rigid side cases: these are installed on the bike without any additional support and have a painted cover. The left case has 30-litre capacity, and the right 29-litre capacity. Both can accommodate a full-face helmet and are opened using the bike ignition key.
Top box: complete with cover to match the cases, it has 37-litre capacity and incorporates a back rest in the same material as the saddle.
Rear luggage rack: useful for transporting items (up to 12 kg) and fastening the top box. Resistant and powder coated.
High windscreen: tested in the wind tunnel to ensure greater protection, its surface is now 35% larger.
Comfort heated seat: indispensable when taking on the coldest climes. It can be adjusted via the handlebar controls according to three different temperature levels. Complete with a 3D Net insert that makes it very comfortable. Also available in versions that are 20 mm higher and 15 mm lower.
Passenger comfort seat: complete with 3D Net padding to ensure greater comfort when travelling.
Heated hand grips (as standard on V100 Mandello S): fundamental when riding in winter, they require no additional electronic controls and can be adjusted according to three temperature levels.
Engine guards: resistant protective tubes, powder coated in the same colour as the frame. They protect the engine in case of a fall.
Head protectors: made of billet aluminium, these protect the cylinder heads from any accidental impacts.
Centre stand: a sturdy parking support, which is also useful when carrying out bike maintenance.
Auxiliary light kit: additional LED lights to increase the light beam.

USB port: in addition to the standard port to allow for the charging of more than one external device.
TPMS: indicates tyre pressure on the instrumentation panel (as standard on the V100 Mandello S).
Moto Guzzi MIA: the multimedia platform that allows a smartphone to be connected to the instrumentation panel via Bluetooth, extending its functions (as standard on the V100 Mandello S).
Quick shift: the electronic system that allows the rider to engage the gear and up-shift without using the clutch (as standard on V100 Mandello S).
Electronic anti-theft system: to install on the original electrical system with no need for modifications. Complete with remote control.

Moto Guzzi V100 Mandello [and Mandello S]: technical specifications

ENGINE

Type	Liquid-cooled 90° transverse V-twin. Double overhead camshaft timing with finger followers and four valves per cylinder
Engine capacity	1042 cc
Bore and stroke	96 x 72 mm
Compression ratio	12.6 : 1
Maximum power	115 HP (84.6 kW) at 8700 rpm
Torque	105 Nm (10.7 kgm) at 6750 rpm
Fuel system	Electronic injection; 52 mm double throttle body, Ride-by-Wire
Fuel tank capacity	17 litres (including 3.5 litre reserve)
Emissions compliance	Euro 5
Consumption (WMTC cycle)	4.7 l/100 km

CO2 Emissions (WMTC cycle)	118 g/km

TRANSMISSION

Clutch	Hydraulic multi-plate wet clutch with anti-juddering system
Transmission	6 speed [6 speed with electronic quick shift system]
Primary drive	Straight cut gears and integrated flexible coupling, gear ratio: 31/48 (1.548)
Secondary drive	Cardan shaft: Drive ratio: 12/38 (3.166)
Command management	3 engine mappings (MGCM), 2 levels of engine brake control (MGFM), 4 levels of traction control (MGTC), cruise control. 4 Riding Modes (Tour, Rain, Road, Sport), [quick shift]

CHASSIS ARCHITECTURE

Chassis	High strength steel tubular frame
Front suspension	Hydraulic telescopic 41 mm USD fork, adjustable in spring preload and rebound [Öhlins Smart EC 2.0 semi-active fork, 43 mm USD with superficial TIN treatment, fully adjustable]
Front wheel travel	130 mm
Rear suspension	Aluminium single-sided swingarm with left-hand single shock, adjustable in spring preload, via a knob, and in rebound [Öhlins Smart EC 2.0 semi-active single shock that is fully adjustable and complete with spring preload adjustment via a knob]
Rear wheel travel	130 mm
Brakes	Front: 320 mm double floating disc in stainless steel, Brembo radial callipers with four opposed pistons and a metal trellis tube Rear: 280 mm stainless steel disc, Brembo two-piston floating calliper Continental ABS with cornering function
Wheels	Aluminium alloy
Front wheel rim	3.5” x 17”
Rear wheel rim	6.0” x 17”
Front tyre	Radial tubeless 120/70 - R17”
Rear tyre	Radial tubeless 190/55 - R17”

ELECTRICAL SYSTEM

A/C generator	550 W
System voltage	12 V
Battery	12V – 12 Ah

DIMENSIONS

Length	2125 mm
Width	835 mm
Wheelbase	1475 mm
Seat height	815 mm (accessories: low seat 800 mm; high seat 835 mm)
Headstock angle	24.7°
Trail	104 mm
Dry weight	212 kg
Kerb weight*	233 Kg ** Weight with motorbike ready for use, with all operating fluids and 90% fuel.*