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INTRODUCTION

STELVIO 1200 4V: the pleasure of riding at the top.

The Stelvio Pass is a winding path that like a snake coils up shrouded by the shadow of the Ortles massif, strangling it with 84 hairpin bends that link, at an altitude of 2758 metres, Valtellina with Venosta Valley. For riders, but not only for them, this asphalt stretch built in 1855 is a legendary route that combines the difficulty of a rugged track with a massive natural beauty, resulting in a riding experience of extraordinary intensity.

For Moto Guzzi, it is a historical test stretch, where the benefits of chassis features chosen, resistance and decelerating power, engine response and suspension absorbing capacity can be tested. A frequent test bench where the new Mandello's creature, taking its first steps, caused instant astonishment due to its dynamics and the pleasurable ride offered. So much so, that it seems quite natural to summarise the design talent and technical intuitions instilled in the new maxi-enduro by Moto Guzzi, with the images and sensations of a place, where the riding pleasure is enriched by the feeling of adventure, sport challenge, extreme tourism: the Stelvio Pass.

Moreover, the new Moto Guzzi Stelvio 1200 4V has been designed and developed to brave any destination, devouring kilometres of roads and even off-road surfaces. This *multipurpose* capability is evident at first glance. Inspired by off-road bikes, Stelvio 1200 4V breaks the traditional, austere look of models in this market segment by introducing new intense shapes and a dynamic energy that evokes the feeling of adventure, long routes, the most extreme use. Slender and streamlined in the lower part, highlighted by refined aluminium spoke wheels and the technology seen in the powertrain and final transmission, the Moto Guzzi Stelvio 1200 4V is compact and robust in the upper part, revealing the care taken to obtain the best ergonomics for the rider.

They are sculptured shapes that stress the numerous design details to respond to an active and intense use, such as the presence of a powerful double front headlight assembly, the windshield and the adjustable seat, the ample section of chassis guides, the aluminium exhaust silencer, the careful assessment for passenger and luggage transport.

This design concept has been designed to stress the throbbing heart of Stelvio 1200 4V, the unmistakable 90° transversal V-twin engine in its most functional "*quattrovalvole*" (four valves) version. Strong, powerful, dominant in its action, Stelvio 1200 4V is now streaking along European roads in three different colour concepts: red Corsa for the classic sportsman; Black Guzzi for those who prefer tradition, and Lunar white, the most *glamorous* colour of the moment.



STYLE:

Shapes of dynamic energy.

Stelvio 1200 4V marks the return of Moto Guzzi to the Maxi-Enduro segment, a motorcycle concept developed on the echoes of the great popularity of African marathons. An austere motorcycle, dominated by impressive tanks strongly integrated to the fairings that extend until the engine is almost hidden, by the undoubtedly fascinating as well as irrational image when adventure does not have the equator as its horizon, but just crossing an urban centre or riding along main roads leading towards weekend or holiday destinations.

Starting from this premise, Moto Guzzi has developed a stylistic idea as a countertrend, highlighting the dynamic energy expressed by the mechanics and the chassis at sight, with tight-fitting panels, with clean cuts and sharp lines, able to give the vehicle a sensation of lightness and power, in an ensemble of solid elegance and class. Stelvio 1200 4V immediately captivates with its front end look- two side-by-side headlamps with convex lens create a three-dimension effect that makes the machine look compact, also helped by the effect created by the satin reinforcement in anthracite colour. This solution is also applied to the mudguard and tank rear, which not only creates an original aesthetic design but also protects surfaces from gravel as well as reinforces the image of a vehicle resistant even under the most demanding situations. The light fairing emphasises numerous prismatic elements and concave surfaces, and a careful aerodynamic study is perceived at the assembly formed by the adjustable shield on the top fairing plus the contoured but capacious tank. An evident characteristic in the front view is the predominance of two auxiliary air deflectors highlighted with silver paintwork and metal louvres, designed to direct fresh air to cylinders. The top fairing, matching the double headlight assembly paraboles, forms a shape that deviates the aerodynamic load when riding at high speeds. The peculiar *blow moulding* technology was used to produce the tank and helps to minimise dimensions and weight according to the (18-litre) capacity. Moreover, it includes a fantastic glove-box that can be unlocked from the handlebar and is atop the saddle, which, by covering the grooves, avoids direct contact with the rider's legs to ensure superior riding comfort. Once you are seated on the saddle, finely upholstered with non-slip material, it is quite noticeable there is more space for both rider and passenger's comfort. The rider saddle height can be adjusted to two positions, 820 mm or 840 mm from the ground, whereas the passenger, besides being seated on a thick and spacious seat, can count on a solid and comfortable handhold seat strap.

Even more aggressive from the forecarriage, the rear end look is dominated by the hi-tech aspect of the rear light with complex surface curve and LEDs, and by an important enhanced aluminium double tail silencer that evokes solidness and power.



COMFORT:

Sensation of inner wellbeing

Stelvio 1200 4V is a tourer, that can also be used off-road, and with excellent performance on asphalt. These characteristics emerge immediately once you are seated on the bike, where the perception of carefully-designed ergonomics can be felt straightaway: saddle, footrests and handlebar form a perfect triangle for all users. Moreover, for the perfectionists, there is still room for minor adjustments: windshield, saddle height (820 or 840 mm), handlebar inclination, levers, pedals, also for professionals, set screws to adjust hydraulic compression/rebound damping of suspensions.

In a matter of seconds, everything is at the right place to face any challenge, from city traffic to the most inaccessible off-road paths. In motion, reduced vibration and an efficient aerodynamic protection ensure riding comfort for rider and passenger as well, ideal to tackle long trips. Among the most appreciated features for everyday use, there is a glove-box to the left-side of the tank that can be unlocked from the handlebar and even, if your are wearing gloves. The instrument panel features complete and easily visible gauges- a white-background rpm indicator that incorporates efficient service warning lights, long range lights (optional), and a dash display that provides plenty of information about the vehicle operation and diagnosis, a fuel level indicator, average and current consumption, average speed, trip time, maximum speed peak reached and, as heated handgrips may be fitted upon request, the heating level of handgrips can also be seen.

The Stelvio 1200 4V is a class leader, as a result of an elegant aesthetic appearance, is also enhanced by features which, while fulfilling a stylistic function, set new parameters in terms of effectiveness and safety.

Some examples are the headlight assemblies, highly reliable and effective, manufactured with technology borrowed from the automotive industry, fittings for the panniers are integrated to the passenger handgrips and the luggage racks, design elements expressing the versatility and calling for adventure and touring of the Stelvio 1200 4V model.



CHASSIS

Designed for non conventional paths.

You should not be misled by its luxury off-road appearance: the Stelvio 1200 4V features driving effectiveness superior to the average of many road motorcycles, since it is equipped for the unexpected and able to withstand any off-road driving strains.

The secret is the new upper twin spar frame, made of high-strength steel, with 2.5mm thick directional tubes, where the engine is anchored through six connecting points, two more than in usual frames, which give high rigidity to the assembly at twisting moments.

Chassis positions have been defined to facilitate handling, a headstock with a 27° inclination for a 125mm trail, improved by a 1535mm wheelbase which guarantees impeccable steering precision.

Suspensions, pieces of fine workmanship adjustable not only during preloading but also for the hydraulic response at compression and rebound damping, offer an immediate and clear response to handlebar pressures. The front end is controlled by a solid upside-down Marzocchi fork, with 50mm and 170mm travel stems, whereas at the rear, suspension kinematic mechanisms with progressive rising rate are moved by a Boge unit that works on a 155mm stroke.

The refinement of the suspension department guarantees a neutral setting at all times. When going out of a bend, and the action of the 105 horsepower generated by the new "Quattrovalvole" engine is requested, or when braking, under the quick deceleration generated by the three-disc Brembo braking system. And either for its effectiveness or its aesthetic value, there stands out a system consisting of radially-mounted calipers engaging onto a couple of fully drilled discs for better heat dissipation.

Splendid spoke wheels assembled with Ber rims and Alpina spokes at Moto Guzzi are ideal for Pirelli Scorpion tubeless tyres. They are 110/80, on a 19-inch front wheel and the 180/55/17 *oversize* for the rear wheel, which guarantees a truly sporting supporting surface.

Even when considering chassis elements, where the overall assembly is what really counts, Stelvio 1200 4V is not afraid of comparisons.



ENGINE AND TRANSMISSION.

Record-breaker by nature.

Stelvio has been developed with the new "Quattrovalvole", the most advanced evolutionary milestone of the mythical 90° transversal V-twin engine. An engine that has evolved beyond recognition even for the most loyal passionate, and that marvel due to its contents and performance, the highest of the category.

A design that has absolutely revolutionised Mandello's twin-cylinder mechanics, with more than 75% of new components. In all, 563 new parts have been designed to allow this 90° V-twin engine to have a single overhead camshaft distribution system, which controls 4 valves per cylinder.

A great example of mechanics, unique in the motorcycle panorama thanks to its lucid design structure, obtained by light and smooth sliding masses, moving alternately, the thermodynamic study and fuel supply in order to enhance functions, reliability and smooth operation aiming at a new quality standard.

The new lighter crankshaft, 3-ring forged pistons and very light valves with 5-mm stems supported by cone-section springs that eliminate resonance and power losses at high speeds, emerge among the most valuable components present.

Lubrication and cooling are ensured by two pumps fitted in tandem in order to obtain smaller dimensions and are activated by three gears that make lubricant flow along a channel, separated from the cylinder head, to reach the exhaust pipe, where the highest temperature is found, and feed cooling jets placed under the piston. In order to house these new components, a completely new crankcase is necessary, to offer smaller dimensions and an integral front bench support with bushing, while the rear one has a new flange and a more effective oil feeding system. The most seducing element of the new "Quattrovalvole" is, surely, the modern design of cylinders, more compact with cooling finning oriented to riding direction. Consequently, head covers have been redesigned by adding, apart from the "Quattrovalvole" identifying abbreviation, a floating system that further cushions the silent action of the distribution system, controlled by "Morse" chains and supplied with hydraulic tensioners and tensioning pads. Fuel supply has also been subject to important innovations, with throttle bodies well over Ø 50-mm and new IWP 189 injectors.

In the Stelvio configuration, the Quattrovalvole receives an original exhaust system which, thanks to the increase of the silencer internal volume, made in aluminium, optimises the engine performance at low and average speeds, generating a maximum power of 105 CV at 7500 rpm and a 11 kgm torque at 6400 rpm. These numbers offer a clear idea of the new Stelvio 1200 4V potential.



MAIN CHARACTERISTICS

DESIGN

- Double high-/low-beam headlight assembly with convex surface lenses.
- Half-fairing with integrated air deflectors and turn indicators.
- Front mudguard with spoiler and integrated fork stems protection.
- Manually adjustable windshield.
- Blow-moulding process tank with integrated protective superstructure.
- Rider saddle adjustable to two positions with skidproof upholstery integrated to the tank.
- Passenger saddle with adapted seating and skidproof upholstery.
- Glove-box with unlocking control on the handlebar.
- Aerodynamic under-sump protection lug.
- Engine side bulkheads with metal grid
- Luggage supporting frame integrated, with passenger grab handles unit and luggage carrier.
- Tubular footrest supports.
- Full black "Quattrovalvole" powertrain.
- Aluminium hexagonally cross-sectioned silencer with Moto Guzzi customised double bottom.

ENGINE

- "Quattrovalvole", 90° V-twin, 1200
- Single overhead camshaft timing system.
- Single plate clutch.
- New exhaust system with double superimposed helical outlet.
- New crankcase with incorporated front bearing support with bushing.
- New valves with Ø 5-mm stem.
- New 55% rigid crankshaft.
- New Asso 3-ring forged pistons.
- New conical valve springs.
- Head with independent oil cooling circuit.
- Oil cooling jets to piston.
- New cooling oil pump with pressure-relief valve.
- New lubrication oil pump coaxial with the cooling pump.
- Three gears for oil pump and timing shaft control.
- New type of connecting rod bushings.
- Silent Morse type chains for camshaft control.



- Hydraulic chain tensioners and tensioning pads.
- New Ø 50-mm throttle body.
- New IWP 189 Marelli type injectors
- Floating head covers to cushion noise.
- Transmission with compact reactive cardan shaft drive.
- 6-gear gearbox.
- Euro 3
- New high performance exhaust system.

CHASSIS

- Double cradle frame of high-resistant steel with 6 points for engine connection.
- Upside-down front fork with 50-mm stems, adjustable preloading and hydraulic damping with radially-mounted caliper.
- Shock absorber with preloading and rebound adjustment.
- Rear suspension with progressive articulation single arm.
- Front brakes, radially mounted with 4 opposed pistons and 320-mm discs.
- Rear 282-mm disc brake, floating caliper with two parallel pistons.
- Tubeless spoke wheels with aluminium Ber rim and Alpina spokes.
- Rear tyre 180/55/17 Pirelli Scorpion.
- Front tyre 110/80/19 Pirelli Scorpion.



ENGINE AND TRANSMISSION.

ENGINE

Type	: 90° V-twin engine, 4-stroke
Cooling	: through air and oil and an independent cooling pump
Engine capacity	: 1,151 cc
Bore and stroke	: 95 x 81.2 mm
Compression ratio	: 11: 1
Timing system diagram (1-mm checking clearance)	: intake valve opening 36° BTDC intake valve closing 62° ABDC exhaust valve opening 58° BBDC exhaust valve closing 30° ATDC
Maximum power	: measured with a 1.5 mm rocker arms/valve control clearance 77 kW (105CV) at 7,500 rpm
Maximum torque	: above 108 Nm at 6,400 rpm
Fuel supply / Ignition	: Multipoint sequential electronic ignition, Magneti Marelli IAW5A phased, alfa-n system; two Ø 50mm throttle bodies, Weber IWP 189 injectors, lambda probe.
Start-up	: Electric
Spark plugs	: NGK PMR8B (Long Life)
Exhaust system	: stainless steel, 2-in-1 type, three-way catalytic converter with lambda probe
Type approval	: Euro 3

TRANSMISSION

Gearbox	: 6 gears
Gear ratio values	: 1st 17/38 = 1 : 2.235 : 2nd 20/34 = 1 : 1.700 : 3rd 23/31 = 1 : 1.348 : 4th 26/29 = 1 : 1.115 : 5th 31/30 = 1 : 0.968 : 6th 29/25 = 1 : 0.862
Primary transmission	: with helical teeth, ratio 26/35 = 1: 1.346
Final drive	: Compact reactive cardan shaft drive system called CA.R.C.; double joint and floating bevel gear pair, ratio 12/44 = 1 : 3.666
Clutch	: single-disc with integrated anti-vibration buffer



CHASSIS

Chassis	: tubular in high-strength steel with integrated engine
Wheelbase	: 1,535 mm
Trail	: 125 mm
Headstock angle	: 27°
Steering angle	: 34°
Front suspension	: fork with Ø 50mm inverted stems, fully adjustable (spring preload and hydraulic compression and rebound damping) with radially-mounted brake calliper
Front wheel travel	: 170 mm
Rear suspension	: single arm with rising-rate leverage, single shock absorber with hydraulic rebound damping adjustment and knob spring preloading set screw.
Rear wheel travel	: 155 mm
Front brake	: double stainless steel floating disc, Ø 320 mm, radial calipers with 4 opposed pistons
Rear brake	: fixed stainless steel disc, Ø 282 mm, floating caliper with 2 parallel pistons
Wheels	: Tubeless with spokes
Front rim	: 2.50" x 19"
Rear rim	: 5.50" x 17"
Front tyre	: 110/80 R19"
Rear tyre	: 180/55 R17"

ELECTRICAL SYSTEM

System voltage	: 12 V
Battery	: 12 V – 18 Ah
Alternator	: 12 V – 550 W

DIMENSIONS

Length	: 2250 mm
Width	: 1025 mm
Height	: 1475 mm (windshield high position)
Saddle height	: 840 mm
Minimum height from ground	: 210 mm
Dry weight	: 214 kg
Kerb weight.	: 251 kg
Fuel tank capacity	: 18 litres
Reserve	: 4.5 litres



ACCESSORIES.

The importance of details.

With company, on long motorway stretches, in winter or on the mountains, in streets or off-road, there is always the right solution to have enhanced safety, greater load capacity or an additional elegant touch.

Solutions to protect mechanical parts:

Engine guard kit

The engine guard is made in treated and painted steel to ensure an effective engine protection in case of fall at low speeds. Moreover, it is prepared to fit an optional additional light support and an aluminium sump guard.

Aluminium sump guard kit

The aluminium sump guard is made of a 3 mm thick high resistance alloy that ensures an efficient protection against strokes or grit raised by the front wheel. It also ensures an optimal cooling of the engine. It can be mounted even if the engine guard is fitted.

CA.R.C Protection kit.

The protection for the CA.R.C (Italian for compact reactive cardan shaft drive) is made in treated and painted steel to protect the transmission from potential accidental bumps.

Solutions for carrying luggage.

Side panniers

Moto Guzzi Stelvio set of panniers is characterised by the bodywork paintwork and its 60-litre volume. The pair of cases has been made with extreme care of practicality and finishings. The system to fasten them to the motorcycle has been designed to be perfectly integrated to the motorcycle line, thanks to the dedicated pannier supports integrated into the tail, and its passkey makes it practical and functional.

Tank pannier kit

The tank bag kit comprises a special tank cover with clamps to the chassis and a tank bag appropriately moulded. The bag can be easily removed or lifted to refill the tank, thanks to a fast-release lock, and it has a mapholder and two side pockets. A practical bum-bag purchased separately can be fitted on the tank cover instead of the pannier.



Tank bum-bag

Practical bum-bag to be hooked on the tank cover supplied with the tank bag. It allows the rider to keep small objects as an alternative to the bag.

Solutions to enhance comfort and riding safety.

Navigator installation kit

The specific support to install the TomTom Rider 2 navigator is made in fully milled aluminium and is supplied with specific screws. The motorcycle electrical system is already pre-installed with a special power supply connector.

Electronic anti-theft device

It is supplied with double engine lock and 3-axis inertial sensor, with double variable code radio control, fully resinated and self-powered. The pre-installation makes the fitting on the special support easy and quick.

Additional light kit

Thanks to the wide and powerful light beams (110W), the wildest paths can be faced with the best visibility. They are made in magnesium alloys and they are ready to be fitted thanks to the electrical system pre-installation. They are fixed to the specific supports made in powder-coat painted steel. They are approved for road use.

Handgrip heating kit:

Cold weather is not going to prevent owners from wanting to ride the STELVIO 1200 4V. The handgrip heating kit allows to choose between 3 different levels of temperature by simply pressing a button. Information about the on/off condition and selected temperature are shown on the display.

LIFESTYLE

For those who not only ride, but also live the Stelvio, clothing is available to ensure maximum comfort and protection in all riding situations.

Stelvio Set

Set of Jacket and Trousers made in Cordura® in collaboration with Dainese. D-Dry waterproof lining and removable thermo-lining. Composite pads for shoulders, elbows, knees and shinbones, ice leather inserts, pre-installation for back protector. Adjustable neck, waistline and wrists, metal Moto Guzzi logo and stitchings on the back and thigh.

Available in models for men and women, sizes from 40 to 58.