APRILIA DORSODURO 900

THE SUPERMOTARD FROM APRILIA EVOLVES WITH THE SOLE OBJECTIVE OF PROVIDING MAXIMUM RIDING FUN.

A POWERFUL TWIN-CYLINDER WITH 90 NM OF TORQUE COMBINED WITH BAR-SETTING CHASSIS ARCHITECTURE ENHANCES ITS DISTINCTIVE CHARACTERISTIC AS A FUN BIKE

FULL MULTIMAP RIDE-BY-WIRE, TRACTION CONTROL AND ABS ROUND OUT A TECHNICAL PACKAGE PAR EXCELLENCE

Aprilia Dorsoduro is the fun bike par excellence. Born out of an ingenious intuition by Aprilia, it was built with the sole objective of providing the most possible road riding fun, drawing from the best characteristics of sport bikes and supermotards. The result is a bike with advanced technical solutions, agile and with performance at the top of its category. A truly special bike, achieved not only thanks to Aprilia's skills in packaging particularly efficient chassis architectures combined with high performance powerplants, but also thanks to collaboration with the Aprilia Racing Department, capable of earning a total of 54 world titles in the most difficult and selective competitions where they have participated, 7 of which in the world Supermoto championship.

Dorsoduro 900 is born out of Aprilia's solid tradition in this motorcycle segment and it is a true **thrill generator**. The exclusivity is also due to its original and innovative technical choices, like the mixed steel trellis/aluminium plates frame with excellent handling and tight cornering characteristics. The 90° V-twin engine puts a smile on the rider's face every time the throttle is twisted, thanks to the **characteristics of maximum torque and power** that amplify its personality. The fine electronic management that includes, besides the Ride-by-wire multimap accelerator, traction control and ABS, complete the technical equipment on the Dorsoduro 900.

The design: the balancing point between form and function

The Aprilia Dorsoduro 900 project places riding fun at the centre of its focus: for this reason, the superstructures are reduced to the minimum indispensable, as anything that is not essential for performance and maximum riding pleasure has been foregone. The technical elements, on the other hand, play a fundamental role, becoming a fundamental part of the design. It is not just the hand guards on the handlebar and the number plate on the front that highlight the close bond with the racing world. The shape of the centre area, the one that most involves the rider during sporty riding, also highlight the design created to achieve optimized and compact dimensions that allow the rider to find the right feeling straight away. Aprilia engineers achieved this result by designing a long and flat saddle, clearly derived from the sports world, capable of ensuring the most effective riding position at all times and allowing plenty of room for longitudinal movement.
The tail is one of the most representative aesthetic aspects of the Dorsoduro: sleek and slender, it also houses the double exhaust, a solution that allows for excellent proportional symmetry and weight distribution.
The frame and the cylinder head covers, painted red, are yet another sporty feature. Gritty finish combines with the graphics in the **Adrenalinic Silver** colour scheme.

Powerful V-twin engine

Starting from the 750 cc 90° V-twin engine base, well-known and popular because of its character and reliability, Aprilia developed a **900 cc unit** with the goal of obtaining more torque and response at low and medium rpms for a thrilling riding experience. The Aprilia V-twin was therefore revisited in numerous details to achieve this purpose. The **engine capacity was obtained by increasing the stroke** from 56.4 mm to 67.4 mm and leaving the bore unchanged (92 mm). By so doing, maximum power now peaks at 95.2 HP at 8,750 rpm, but more important is the maximum torque value that goes from 82 Nm at 4,500 rpm on the 750 cc V-twin to **90 Nm at 6,500 rpm** on the 900 cc V-twin, a value that is truly at the top of its category. It should be noted that, despite the fact that maximum torque peak for the 900 cc V-twin is reached a higher rpms, the torque curve is actually flatter and always higher than the 750 cc predecessor. This operation allowed for an increase in acceleration response and pick up, all to the advantage of riding fun, without limiting the proverbial reliability of the powerplant in any way, shape or form.
Although the architecture remains unchanged - 90 degree angle between the two cylinders, as well as a timing system with four valves per cylinder, dual overhead cam and liquid cooling - the engine has undergone various changes: an important operation aimed at **reducing friction** was carried out on the pistons, completely redesigned and now characterized by a special anti-friction feature on the mantle, whereas the pins have led to a lightening of the alternated parts in motion. The crankshaft is balanced differently
A **more efficient semi-dry carter internal lubrication circuit** reduces losses of power due to shaking and keeps consumption and temperature of the lubricant to a limit, thereby eliminating the need for an oil radiator. The engine also uses **efficient injectors**: improved fuel/air mixture spray achieved through the increase of fuel pressure benefits consumption and emissions, thereby contributing to the engine's compliance with the limits established by the Euro 4 emissions standard. This result is also achieved thanks to the exhaust system, fitted with a double oxygen sensor. The Aprilia Dorsoduro 900 engine is also fitted with an automatic decompresser which makes it easier to start in low temperature conditions.
The load on the clutch lever has decreased by 15%, all to the advantage of comfort with a clutch that has been completely revamped in all of its components, whereas the primary drive reduction ratio has been changed to optimize exploitation of the available power. Aprilia Dorsoduro 900 is **also available in a limited-power 35 kW version**, ideal for newly licensed riders.

Electronic management

Electronic engine management is now handled by the more powerful Marelli 7 SM ECU, the same hardware used on the V4 bikes from Noale, that dialogues with the **full Ride-by-wire electronic accelerator system**, completely built into the throttle grip. This system allows even more accurate management of the fuel/air mixture and the injection throttle valve opening based on numerous parameters including engine speed, gearbox position, air flow (in quantity and speed), throttle grip and temperature, with great benefits in terms of smooth riding without opening/closing jerks, containment of harmful emissions and fuel consumption. The engine is, therefore, always able to distribute the ideal torque and provide the best acceleration, all to the advantage of a satisfying and fun ride. The system also allows **a weight reduction of 550 grams** compared to the previous Ride-by-wire that equipped the Dorsoduro 750. The sophisticated electronic management also provides the possibility of changing the engine mapping, radically changing the character of how the power it is capable of developing is unloaded onto the ground. The **Sport** setting provides an immediate and aggressive throttle response; the **Touring** logic provides a smoother response, ideal for touring and daily use, whereas the **Rain** map reduces available power to about 70 HP and is therefore ideal in the event of difficult weather conditions or on slippery road surfaces. Mapping can also be changed at any time, even on the fly, by simply pressing the engine start button.
Dorsoduro 900 comes with **Aprilia traction control** system with sensitivity adjustable to three levels (it can also be disabled) to limit rear wheel spin by acting on ignition and the injection throttle valves. The Dorsoduro 900's Aprilia Traction Control system is combined with a **Continental two-**

channel ABS system with developed calibration in order not to take anything away from the sporty ride. The ABS feature can also be disabled. The **electrical system** places the engine control and management systems in communication with the **colour TFT digital instrumentation**. The compact unit with a 4.3-inch screen contains a wealth of information that is always highly legible thanks to its capacity of adapting the background and font colours based on the conditions detected by the light sensor. The information displayed includes: rev counter, speedometer, selected gear indicator, coolant temperature, selected engine map and clock. Using the practice MODE joystick on the left hand electrical block, you can navigate through the menu and scroll/ adjust the following parameters: odometer, traction control level, ABS ON (only when not in movement), MENU (only when not in movement), Trip A, Trip A time, Trip A maximum speed, Trip A average speed, Trip A average consumption, Trip B, Trip B time, Trip B maximum speed, Trip B average speed, Trip B average consumption, instantaneous consumption, Km ridden in reserve.
One of the optional features is the AMP installation kit, the Aprilia multimedia platform that connects a smartphone to the vehicle to provide an exceptional quantity of information useful for the ride: the instrumentation lets you view all the data related to incoming/current calls on the screen, as well as information related to the use of an intercom or any audio files that you may be playing.

Chassis architecture: better handling and control

All Aprilia bikes have always been considered a point of reference for their excellent chassis architecture. The Dorsoduro 900 chassis provides high characteristics of efficiency, balance, a tight ride and precision even in extreme track riding, but at the same time it is easy and intuitive for daily use. These qualities are the merit of the particular layout of its various elements.
The frame takes advantage of the know-how Aprilia has developed in racing competitions, drawing deeply from the experience gained on the mixed structures used in the Supermoto world championship. The trellis upper part in steel tubing (now painted red, like the saddle support frame) is combined with wide spread aluminium lateral plates using special, high-resistance bolts. The result is an extremely rigid and lightweight structure, the best solution for taking full advantage of the revamped capacity of the 900 cc V-twin, with an aesthetic impact that communicates light weight, extremely high technical content and Italian style. Another strongly distinctive technical feature is the lateral and inclined positioning of the shock absorber, a unit that is adjustable in spring preload and hydraulic rebound. This solution has created precious space for an optimum exhaust manifold layout, without having an impact on the length of the bike and without stressing the shock absorber thermally. The aluminium swingarm is sized to withstand the asymmetrical stress due to the lateral positioning of the shock absorber and it boasts the torsional stiffness and elasticity characteristics indispensable for precision at rest and the ride feeling in transitory stages.
On the Dorsoduro 900 a **Kayaba fork** makes its début (combined with forged aluminium steering yoke plates), 450 grams lighter, adjustable in spring preload and better capable of withstanding the stress of sport riding and absorbing bumps on the road surface, providing control in aggressive riding and greater comfort for those more relaxed rides. The overall improved performance of both the Dorsoduro 900 suspension systems is also due to the **pair of three-split-spoke wheels, more than 2 kg lighter** than those that equipped the Dorsoduro 750. Reducing the gyroscopic effect increases handling and acceleration, as well as providing benefits for suspension performance because of the reduction of unsprung masses.
The Dorsoduro 900's top shelf chassis structure is completed by a sport-derived braking system. The front end relies on radial 4-piston callipers and a pair of 320 mm steel floating discs, lightweight and capable of guaranteeing reduced braking distances and excellent modulability. The 240 mm rear disc is gripped by a single-piston calliper. Both the front and rear systems have metal braided brake lines derived from the aeronautic sector, which eliminate the annoying buffering effect of conventional lines and guarantee precision and resistance to force.

Original Aprilia accessories range: for sport and touring

A wide range of accessories dedicated to sport and touring is available for the Dorsoduro 900 as well. The former highlight the sport soul and the unmistakable Aprilia racing character: parts in billet aluminium components, such as brake and clutch fluid reservoir covers, brake and clutch levers and high qualify finish CNC mirrors. The accessories dedicated to touring increase the comfort of the Dorsoduro 900, such as the comfort saddle, side panniers and the tank side bags. As with the other Aprilia motorcycles, the Aprilia Multimedia Platform is available which, thanks to Bluetooth connectivity and the interface with handlebar controls and the TFT display, allow the rider to manage and share all the trip information, from data on more sporty riding to touring-related information, with indications on consumption, routes and trip speeds, grip conditions and Aprilia service centre locations.

Aprilia Dorsoduro 900 – Technical Specifications

Engine type	**Aprilia *V90*** Longitudinal 90° V-twin engine, 4-stroke, liquid cooled, double overhead camshaft with mixed gear/chain timing system, four valves per cylinder, Ride-by-wire system
Fuel	Unleaded petrol
Bore and stroke	92 x 67.4 mm
Total engine capacity	896.1 cc
Compression ratio	11.5:1
Maximum power at crankshaft	95.2 HP (70 kW) at 8,750 rpm
Maximum torque at crankshaft	90 Nm at 6,500 rpm
Fuel system	Integrated engine management system. Injection with 3-map Ride-by-wire throttle valve opening management (Sport, Touring, Rain)
Ignition	Digital electronic, integrated with the injection
Starter	Electric
Exhaust	100% stainless steel 2-in-1 exhaust system with three-way catalytic converter and double oxygen sensor
Alternator	450 W at 6,000 rpm
Lubrication	Wet sump
Gearbox	6 speed, drive ratio: 1st 14/36 (2.57) 2nd 17/32 (1.88) 3rd 20/30 (1.5) 4th 22/28 (1.27) 5th 23/26 (1.13) 6th 24/25 (1.04)
Clutch	Multiplate wet clutch, hydraulically operated
Primary drive	Straight cut gears, drive ratio: 40/69 (1:1.73)
Secondary drive	Chain. Drive ratio: 15/44 (1:2.93)
Frame	Modular tubular steel frame fastened to aluminium side plates by high strength bolts. Dismountable rear frame
Front suspension	Upside-down fork, stanchions ∅ 41 mm. Adjustable hydraulic rebound damping and spring preload. Wheel travel 170 mm.

Rear suspension	Aluminium alloy swingarm Hydraulic shock absorber with adjustable extension and spring preload Wheel travel 160 mm.
Brakes	**Front**: dual ∅ 320 mm stainless steel floating discs. Radial, four-piston callipers. Metal braided brake hose **Rear**: ∅ 240 mm stainless steel disc. Single piston calliper. Metal braided brake hose. Continental two-channel ABS system.
Wheel rims	Aluminium alloy **Front**: 3.50 X 17" **Rear**: 6.00 x 17"
Tyres	Radial tubeless tyres; **Front**: 120/70 ZR 17 **Rear**: 180/55 ZR 17
Dimensions	Max. length: 2185 mm Max. width: 905 mm Wheelbase: 1515 mm Max. height: 1185 mm Saddle height: 870 mm Trail: 108 mm Headstock angle: 26°
Weight	212 Kg (kerb weight with full fuel tank)
Consumption	5,599 l/100 km (WMTC cycle)
CO2 emissions	131 g/km (WMTC cycle)
Fuel tank capacity	12 litres