

The Aprilia logo consists of the word "aprilia" in a white, lowercase, sans-serif font, centered within a solid red rectangular background.

APRILIA RSV4 1100 FACTORY AND RSV4 RR

**OUT OF AN EXTRAORDINARY PROJECT THAT NEVER STOPS GROWING, INTRODUCING THE FASTEST, MOST POWERFUL AND LIGHTEST RSV4 EVER
NEW 217 HP V4 ENGINE
EVEN MORE ADVANCED CHASSIS ARCHITECTURE AND BRAKES AND
REDUCED WEIGHT**

**THE RR VERSION, EQUIPPED WITH A 201 HP 1000 CC V4 ENGINE, IS
AVAILABLE IN TWO NEW AND ATTRACTIVE GRAPHIC DESIGNS. OPTIONAL
ADVANCED TRACK KIT**

Aprilia RSV4 has always set the bar in terms of sportiness and performance, the best example of just what can be accomplished drawing from the valuable experience of a winning Racing Department like Aprilia's which, in its brief history, has earned 54 world titles, seven of which in the World SBK championship. Skills honed on the track and transferred to the factory product to provide everyone with the same excitement that the motorbikes prepared by Aprilia Racing do.

Unmistakeable in its design lucidity and applied technology, the RSV4 is conceived around a **65° V4 engine** never before seen on a factory sport bike, a **frame** which is the heir to a dynasty that has won **18 titles and 143 Grand Prix races** in the 250 GP class, enhanced by **the most modern applied electronics systems to manage the engine and the bike's dynamic performance**. This is a true vocation of Aprilia, which was the first manufacturer to adopt the **Ride-By-Wire multimap** accelerator as standard equipment, but above all the first to patent the **APRC dynamic control system**, with the exclusive features of **self-calibration and wheelie control, in the spirit of maximum effectiveness at the service of top performance**.

Aprilia RSV4 1100 Factory

The RSV4 project has always pursued a stated goal: **to be the absolute best and fastest uncompromising superbike, the one that comes the closest to Aprilia racing bikes in terms of performance and effectiveness**. A premium product at the top of its category dedicated to extremely demanding customers who want top shelf performance and refined technical equipment, provided thanks in part to the use of prestigious materials like aluminium, titanium and carbon.

Aprilia RSV4 1100 Factory - the latest step in this evolutionary line - boasts exceptional performance combined with a racing frame and suspension and an **electronic controls package, both evolved even further**.

In line with the exclusivity of this model, the Aprilia Style Centre has worked hard to make the RSV4 1100 Factory unique and recognisable even by its colours and attention to detail. The colour combinations aim to enhance the exclusive nature of prestigious materials such as carbon (on the front mudguard, the side panels, the exhaust terminal guard and the aerodynamic winglets), in contrast with the titanium finish of the **street-legal Akrapovic exhaust terminal**, the same colour as the forged aluminium wheels. For the graphics of the superstructure, an attractive total matt black look was chosen that enhances all the beauty of the sculpture-like twin-spar frame and swingarm made of aluminium. Given the incredible performance



achieved by RSV4 1100 Factory, **for the first time on a factory superbike, Aprilia introduces aerodynamic winglets** on the fairing, thanks to the developments made by Aprilia Racing on the RS-GP prototype from which they are derived. The particular shape designed in the wind tunnel and the inclination at which they are mounted take advantage of the downforce of the channelled air to let the winglets increase stability at high speeds, contributing to decreasing the tendency for wheelies coming out of turns and at the same time increasing stability in hard braking.

Record performance for the Aprilia 1100 V4

With the introduction of RSV4 1100 Factory, Aprilia makes all the top performance a sport rider could desire available, combined with that character and inimitable sound of the V4 from Noale. There is no other powerplant of its kind that can boast a ten-year-long history of wins. A platform capable of satisfying the needs of the most advanced sport rider and also representing an exceptional base to develop a racing bike. After reaching the benchmark of 201 HP in the street-legal factory configuration in 2017, the V4 from **Aprilia reaches another evolutionary crossroads, increasing displacement to 1078 cc. This change was decided based on the experience and the outstanding feedback from critics and the public already obtained with this solution on the Tuono V4, the sport naked version of the RSV4 which went from 1000 to 1100 cc in 2015.**

The RSV4 1100 Factory engine displacement is achieved thanks to new pistons with bore that went from 78 to 81 mm; the 52.3 mm stroke remains unchanged with respect to the 1000 V4 engine that still powers the RSV4 RR. The compression ratio of 13.6:1 also remains unchanged. To improve wet sump lubrication, there is a new oil pump with greater flow capacity; the piston temperature has now been lowered thanks to the use of a double oil jet. The timing system boasts optimised intake valve timing, while the primary drive now counts on a longer ratio for fifth and sixth gear. The electronic injection system now uses a throttle valve support with a more aerodynamic profile in order to improve fluid-dynamic permeability. The Magneti Marelli 7SM ECU has a new specific map with limiter management set at 13,600 rpm. This brings maximum power to **217 HP at 13,200 rpm**, setting the bar in the category; maximum torque also benefits from these changes, obtaining a clear increase along the entire range of more than 10% compared to the 1000 cc engine and reaching a maximum value of 122 Nm at 11,000 rpm. This is a very important value that makes the RSV4 1100 Factory not only more effective in acceleration even from low speeds on the track, but also more thrilling to ride on the road. Last, but not least, the exhaust system was optimised, not only in the layout of the manifolds, but also adding the street-legal titanium Akrapovic terminal as standard equipment, significantly lighter than the previous unit. The new Aprilia RSV4 1100 Factory also benefits from finer calibration suited for the revamped performance of its APRC electronic controls package.

Chassis: even more effective going through corners and in braking

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Aprilia is known as one of the best chassis manufacturers in the world and the RSV4 represents the synthesis of the technical prowess Aprilia has acquired in top level world championships. A particularity which is still exclusive to the RSV4 RR and Factory (and which has always been a characteristic of the previous generations) is **the exceptional range of possible adjustments that the standard equipment chassis is able to provide**. In fact, the Aprilia is the only superbike that allows the rider to adjust the engine position in the frame, the headstock angle, the swingarm pivot and the rear end height, naturally in addition to the fully adjustable suspension. Just like a real racing bike.

The super popular and winning structure of the Aprilia RSV4 frame has remained unchanged and it takes advantage of the forged and moulded aluminium elements capable of guaranteeing exceptional performance, thanks in part to the perfectly balanced rigidity and torsional flexibility values. Precisely because of the wide range of possible adjustments provided by the frame, **the frame and suspension setup and the weight distribution on the RSV4 1100 Factory have been revisited**.

Thanks to new steering bushings (+ 3 mm both upper and lower), the inclination of the headstock decreases and the offset of the new steering yoke also changes, now reduced by 2 mm. This results in a 4 mm shorter wheelbase. The overall result is that it brings the front end closer to the rider, increasing the load on the front wheel (and therefore stability), but without decreasing agility. One of the points of excellence of the RSV4 (and unequalled to date by any other bike) has always been its performance in the delicate and important braking-turning-cornering speed phase which Aprilia has managed to further amplify on the RSV4 1100 Factory, not only thanks to the changes to the front end, but also thanks to the new setup of the **Öhlins NIX** fork, with 5 mm more travel (125 mm total), a choice that lets the rider corner even better. The suspension system is completed by two other prestigious **Öhlins** elements: the adjustable series **TTX** shock absorber and the steering damper, also adjustable. In order to guarantee and further increase stability coming out of turns, RSV4 1100 Factory has also undergone some changes to the swingarm which is now stiffer with a significant increase of yaw and torsion, guaranteeing more precision coming out of corners.

The braking system, already top shelf in the previous version, has also benefited from important upgrades: the **Brembo Stylema** front callipers, lighter and more efficient, take the place of the M50 callipers and are now fitted with pads with higher friction coefficient performance. The new brake callipers can be combined with the pair of **carbon air ducts** (similar to those used by Aprilia Racing on the RS-GP), which let you keep the operating temperature under control, ensuring the same exceptional braking performance even in the most extreme use. The kerb weight of the RSV4 1100 Factory with a full tank is **199 kg**, thanks to the introduction of the new titanium exhaust terminal and the new ultra light **Bosch lithium battery**.

APRC: APRC: from Aprilia, the cutting-edge in electronics

Aprilia RSV4 1000 RR and RSV4 1100 Factory are fitted with an exceptional dynamic controls package designed and patented by Aprilia. Each one of the two models benefits from a **specific calibration** of all the controls in line with the different performance levels the two bikes can boast. **APRC (Aprilia Performance**



Ride Control) is the well known dynamic control suite derived directly from the winning technology in world Superbike, one of the most complete and refined currently available on the market. The particular positioning and orientation of the inertial platform that governs the operation of the system allows for optimum possibilities of detecting the bike's dynamic conditions and, consequently, more effective electronic control strategies.

The fourth evolution of Aprilia's APRC is perfectly integrated with the electronic fine tuning guaranteed by the **full Ride-by-Wire throttle control** which is completely built-in and requires no other components for electronic throttle valve management. This provides clear benefits in terms of weight (compared to a traditional system, the savings can be quantified at 590 grams).

L'APRC, which comes as standard equipment on the Aprilia RSV4 RR and RSV4 1100 Factory includes:

- **ATC: Aprilia Traction Control, adjustable on the fly** (without having to release the throttle) to 8 settings thanks to a practical joystick, boasts high performance operating logic.
- **AWC: Aprilia Wheelie Control**, the **wheelie control** system that can be adjusted to 3 levels, has extremely precise operating strategies. **Wheelie control can be adjusted on the fly** without closing the throttle, like the ATC, thanks to the practical left side electric block.
- **ALC: Aprilia Launch Control**, for use on the track only, with 3 settings, uses highly effective **operating strategies**.
- **AQS: Aprilia Quick Shift**, the electronic gearbox that allows shifting without closing the throttle and without using the clutch, also equipped with the **downshift** function, to allow clutchless downshifting. Its open-throttle downshifting feature is exclusive.
- **APL: Aprilia Pit Limiter**, the system that lets you select and limit the top speed allowed in pit lane at the track or simply to make it easier to comply with posted speed limits on the road.
- **ACC: Aprilia Cruise Control**. Electronic management has allowed cruise control to be introduced, very convenient on longer trips because it lets you maintain the set speed without touching the throttle.

In addition to the fourth generation APRC system, RSV4 RR and Factory come from the factory standard with **advanced multimap Cornering ABS**, developed in collaboration with Bosch to guarantee not only extreme safety on the road, but also the best possible performance at the circuit. The 9.1 MP system, with truly contained weight and dimensions, is able to optimize braking and the ABS intervention in corners, thanks to a specific algorithm that constantly monitors various parameters such as lateral acceleration, the pressure applied to the front brake lever, the lean, pitch and yaw angle, modulating the braking action in order to better guarantee the ratio between deceleration and stability. The ABS system works in unison with the Aprilia RLM (Rear Liftup Mitigation) system that limits the lift of the rear wheel during more abrupt braking. Cornering ABS, fine tuned in accordance with Aprilia's specific indications, is adjustable to 3 levels of sensibility. Each of the three Cornering ABS maps can be combined with any of the **three engine maps** (Sport, Track, Race), allowing riders with different experience and skill levels to find the best possible



combination for their style. The three maps are “full power” and differ in the way they unload the power onto the asphalt of which the Aprilia V4 is capable in the two available configurations (1000 cc for the RR and 1100 cc for the Factory), in addition to the percentage of engine brake dedicated to them.

The **colour TFT instrumentation** is a true digital computer with exceptional display features, now **further improved thanks to increased brightness**. The two selectable screen pages (Road and Race, both with night and day backlighting) correspond to as many represented indexes. Available as an accessory for both the RSV4 RR and the RSV4 1100 Factory is **APRILIA MIA**, the Aprilia multimedia platform that lets you connect your smartphone to the vehicle via Bluetooth, introducing for the first time a true **corner by corner electronic settings calibration** system with data that can subsequently be downloaded to your laptop (or displayed directly on the smartphone) for analysis, just like they do at the races. APRILIA MIA is characterised by a new connection protocol that reduces smartphone battery consumption to a minimum, in addition to providing a wide range of circuits already mapped in which you can manage the electronic settings corner by corner, as well as user acquisition of a new circuit that is not in the list Aprilia has provided. APRILIA MIA also includes the **infotainment system**, introduced by Aprilia for the first time on the RSV4, to manage voice commands and incoming/outgoing telephone calls with your smartphone. These activities are also displayed and managed by the digital instrumentation.

Aprilia RSV4 RR

Aprilia RSV4 RR represents a top shelf technical platform, ready to provide the rider with a “race replica” performance and feeling. In order to support the most demanding riders, one of the available accessories Aprilia offers is the Track kit, **a package of prestigious parts that work together to improve many aspects of the RSV4 RR such as its weight, handling, aerodynamics and, last but not least, its appearance**. The MY19 version of RSV4 RR has not undergone any technical changes with respect to the previous version.

The inimitable character and performance of the 1.0 litre Aprilia V4

The primary and unique characteristics of this 999.6 cc gem of Italian technology, the ones that led to the creation of the best superbike of all times, are in common with the 1078 cc engine that powers the Factory version. This is the **world's first full scale production motorcycle with a high performance narrow V4 engine**, the most revolutionary and powerful engine ever built by Aprilia. An engine that has been made unmistakable because of the use of **“total” electronics**, because of its extremely compact size and light weight, to which the magnesium external housings, oil sump and cylinder head covers contribute. The narrow V architecture has made it possible **to make an engine that is extremely compact lengthways** which helps to centralise weights and to have an extremely high performance chassis. The timing system uses very particular kinematics: the chain camshaft drives only the intake camshaft which in turn drives the exhaust camshaft via a gear. This allows for

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extremely compact heads, to the advantage of the frame layout which, on the RSV4, is as compact as that of a Grand Prix bike. **the crankcase is monobloc with integrated aluminium cylinder liners** to ensure maximum rigidity and consistent performance. **The countershaft** dampens vibrations.

Power and maximum torque are respectively 201 HP at 13,000 rpm and 115 Nm at 10,500 rpm; bar-setting values that are joined by the one-of-a-kind sound that has always been the true soundtrack Aprilia V4 engines have always offered. Like the 1100 cc V4 of the Factory, the RR's 1000 cc also boasts ultra lightweight pistons fitted with segments that reduce the blow-by effect in order to combine high performance and reliability. There is also a honing treatment for the connecting rod heads that contributes to reducing friction. The valve return **springs** also guarantee reliability during heavier work loads, while the valves benefit from optimised timing. The gearbox has a **linear sensor** that guarantees impeccable shifting operation, while the RSV4 RR **exhaust system** has a silencer fitted with double lambda probe and integrated valve.

Chassis: Just like a real racing bike

Aprilia RSV4 is the representative par excellence of Aprilia tradition in packaging state of the art chassis architecture, thanks to the know-how acquired in top level world competitions. The frame with exceptional adjustment possibilities and the swingarm exploit pressed and cast elements welded to one another. The ration between torsional stiffness and flexibility is one of the secrets of the RSV4 chassis architecture's success. It is the same structure that equips the Aprilia RSV4 1100 Factory, although the latter boasts a different steering geometry.

The chassis architecture of the RSV4 RR is completed by a Sachs suspension trio (instead of the Öhlins equipment on the RSV4 1100 Factory), made up of a fork with 43 mm stanchions and a shock absorber with separate "piggy back" and a steering damper, the first two fully adjustable in all hydraulic functions and in spring preload (the shock absorber also has a centre-to-centre length adjustment that allows the height of the rear end to be changed).

On the RSV4 RR, Aprilia offers a pair of cast aluminium wheels and a Brembo braking system that is the absolute top of the line in this category: the front relies on a **pair of new 5 mm thick steel discs with a diameter of 330 mm**, gripped by the monobloc **M50 callipers** fitted with high friction coefficient brake pads.

Versions and colours

Aprilia RSV4 RR is available in **two attractive new colour schemes** on a black and grey base (Rivazza grey and Arrabiata black) **with red wheel rims**.

Aprilia RSV4 1100 Factory is the exclusive version that comes standard with latest generation Öhlins suspension systems, lightweight aluminium forged rims and the titanium Akrapovic exhaust terminal. It stands out for its dedicated **Atomico 6** graphics which highlight and enhance the use of precious technical materials such as carbon, thanks to the contrast with the total black matt paint. The upper steering yoke enhanced by the laser etched writing '1100 Factory' in contrast completes the features of the new RSV4.

Wide range of accessories

Aprilia has designed and developed a wide range of accessories so you can personalise your RSV4 RR and RSV4 1100 Factory. High quality selected items to increase performance, make them more attractive or more comfortable.

Slip-on racing exhaust: made by Akrapovic, this item has a titanium silencer and is approved for street use. The carbon slip-on version is also available, exclusively for track use.

Complete racing exhaust: this is an exhaust system complete with headers made by Akrapovic. the muffler is in carbon.

ECU: Engine control unit dedicated to track use, programmed with racing maps. To be used if exhaust systems other than the original are mounted (complete or only slip-on terminal. Street legal or not) not supplied by Aprilia.

Öhlins TTX shock absorber (standard on RSV4 1100 Factory): the TTX line is the most prestigious of the products offered by Öhlins (top and bottom attachments are in billet aluminium). They allow full and fine adjustment in all shock absorbing functions. They can be fitted with linear sensors to install telemetry.

Öhlins steering damper (standard on RSV4 1100 Factory): the fine adjustment of this item's hydraulics provides a front end that is always solid during the most violent acceleration.

Öhlins NIX Fork: (standard on RSV4 1100 Factory): top shelf performance on the track and on the road. A wide range of precision pre-load and hydraulic rebound and compression adjustments.

Components in carbon: Carbon components: fairings, mudguards and heel guards. Made in matte finished carbon fibre. They guarantee a sporty look and lower overall weight.

Front brake air intakes: these are easily installed on the front braking system, reducing temperatures and maintaining the same braking performance in situations of prolonged stress.

Mirror plugs: made from polyethylene, these are applied in place of the mirrors when using the bike on the track.

License plate hole cover: made of laser cut aluminium, this is applied after removing the license plate bracket when using the bike on the track.

Inverted racing gear lever: this is a mechanical element that inverts the gear shifting mode in order to improve performance on the track.

Forged rims (standard equipment on the RSV4 1100 Factory): made from aluminium with a forging process, these provide maximum resistance at a light weight, essential for increasing handling.

Aluminium racing levers: made in billet aluminium, they give the bike an even more aggressive look and reduce the weight of the factory component.

Mirror plugs: in high resistance plastic material. With laser engraved logos. Allow removal of the mirrors for track use.

Handlebar counterweights: made in billet aluminium. With black nylon plug and laser engraved logos. The particular construction hides the fixing screw.

Tank bag: this bag is made of technical fabric with carbon-look inserts. Tested and approved to resist oil, fuel, UV rays and not to compromise stability even at high speeds.

Adjustable license plate bracket: made in laser cut steel. Includes the LED licence plate light.

Motorcycle cover: made of breathable Lycra, this cover was designed to protect your bike from dust.

APRILIA MIA kit: this is the installation kit for the multimedia platform dedicated to the Aprilia V4 models made up of a Bluetooth control unit and all the wiring needed for installation.

APRILIA RSV4 1100 Factory: Technical Specifications

[in brackets the data referring to RSV4 RR]

Engine type	Aprilia longitudinal 65° V-4 cylinder, 4-stroke, liquid cooling system, double overhead camshafts (DOHC), four valves per cylinder
Bore and stroke	81 x 52.3 mm [78 x 52.3 mm]
Total engine capacity	1,078cc (999,6 cc)
Compression ratio	13.6:1
Maximum power at crankshaft	217 HP (159.6 kW) at 13,200 rpm [201 HP (148 kW) at 13,000 rpm]
Maximum torque at crankshaft	122 Nm at 11,000 rpm [115 Nm at 10,500 rpm]
Fuel system	Airbox with front dynamic air intakes. 4 Marelli 48-mm throttle bodies with 8 injectors and latest generation Ride-By-Wire engine management. Choice of three different engine maps selectable by the rider with bike in motion: Track, Sport, Race
Ignition	Magneti Marelli digital electronic ignition system integrated in engine control system, with one spark plug per cylinder and “stick-coil”-type coils
Starter	Electric
Exhaust	4 into 2 into 1 layout, two lambda probes, lateral single silencer with ECU-controlled bypass valve and integrated trivalent catalytic converter (Euro 4)
Alternator	Flywheel mounted 450 W alternator with rare earth magnets
Lubrication	Wet sump lubrication system with oil radiator and two oil pumps (lubrication and cooling)
Transmission	6-speed cassette type gearbox 1st: 39/15 (2.600) 2nd: 33/16 (2.063) 3rd: 34/20 (1.700) 4th: 31/21 (1.476) 5th: 34/26 (1.307) [31/23 (1.348)]

	6th: 33/27 (1.222) [34/27 (1.259)]
	Gear lever with Aprilia Quick Shift electronic system (AQS)
Clutch	Multi plate wet clutch with mechanical slipper system
Primary drive	Straight cut gears and integrated flexible coupling, drive ratio: 73/44 (1,659)
Secondary drive	Chain: Drive ratio: 41/16 (2.562)
Traction management	APRC System (Aprilia Performance Ride Control), which includes Traction Control (ATC), Wheelie Control (AWC), Launch Control (ALC), cruise control (ACC) and speed limiter (APT), all of which can be configured and deactivated independently
Frame	Aluminium dual beam chassis with pressed and cast sheet elements Available adjustments: <ul style="list-style-type: none">• headstock position and rake• engine height• swingarm pin height
Front suspension	Öhlins adjustable steering damper [Sachs non-adjustable steering damper] Öhlins NIX fork with \varnothing 43 mm stanchions and TIN surface treatment. [Sachs fork with \varnothing 43 mm stanchions]; Aluminium radial calliper mounting bracket. Adjustable spring preload and hydraulic compression and rebound damping. 125 mm [120 mm] wheel travel
Rear suspension	Double braced aluminium swingarm; mixed low thickness and sheet casting technology. Öhlins TTX monoshock with piggy-back, fully adjustable in: spring preload, wheelbase and hydraulic compression and rebound damping. [Sachs monoshock adjustable in: hydraulic compression and rebound damping, spring preload and centre-to-centre distance]. 120 mm [130 mm] wheel travel.
Brakes	Front: Dual 330-mm diameter floating stainless steel disc with lightweight stainless steel rotor and aluminium flange with 6 pins. Brembo Stylema [M50] monobloc radial callipers with 4 \varnothing 30 mm opposing pistons. Sintered pads. Radial pump and metal braided brake hose Rear: 220 mm diameter disc; Brembo calliper with two 32 mm separate pistons \varnothing . Sintered pads. Pump with integrated tank and metal braided hose
	Bosch 9.1 MP ABS with cornering function, adjustable to 3 maps equipped with RLM (Rear wheel Lift-up Mitigation) [can be disabled].



Wheel rims	Forged aluminium alloy wheels, completely machined, with 5 split spoke design. [Aprilia in aluminium alloy wheels with 3 split spoke design]. Front: 3.5"X17" Rear: 6"X17"
Tyres	Radial tubeless. front: 120/70 ZR 17 rear: 200/55 ZR 17 (alternative: 190/50 ZR 17; 190/55 ZR 17)
Dimensions	Wheelbase: 1439 mm [1441.6 mm] Length: 2052 mm [2055 mm] Width: 735 mm Saddle height: 851 mm [853 mm] Headstock angle: 24.5° [24.6°] Trail: 103.8 mm [101.9 mm] Weight: 199 kg [204 kg] kerb weight with a full tank of fuel; dry weight: 177 kg [180 kg]
Consumption	6.50 litres/100 km [6.67 litres/100 km]
CO2 emissions	155 g/km [156 g/km]
Fuel tank capacity	18.5 litres (including 4-litre reserve)