



DUCATI PANIGALE V2

The twin-cylinder Panigale has been given a thorough makeover. Renamed the Panigale V2, it takes a totally new design, it features sophisticated electronics based on a 6-axis inertial platform and, thanks to a more comfortable rider seat and the suspension set-up, offers better yet safer sports performance while making road riding more enjoyable and user-friendly than ever. The name informs Ducati twin-cylinder enthusiasts that the bike is powered by the 955 cm³ Superquadro.

The extensive fairing gently embraces the monocoque frame, highlighting the compactness of the Superquadro twin-cylinder engine to create a bike that is visually more compressed and less intimidating than the Panigale V4.

Another key part of the Panigale V2 look is the single-sided swingarm and the new exhaust with extremely compact under-engine silencer and single-side end pipe. The clean lines typical of Ducati superbikes are enhanced by the traditional Ducati Red livery and black wheels.

The Panigale V2 thanks to chassis modifications combined with the new Pirelli Diablo Rosso Corsa II tires is more intuitive, agile and fun to ride, moreover a fine-tuning of the suspension hydraulic setting improve comfort in road use.

Now Euro 5 compliant, the 955 cm³ Superquadro engine delivers even more power (+5 hp) and torque (+2 Nm). With a maximum power of 155 hp at 10,750 rpm and a maximum torque of 104 Nm at 9,000 rpm, the Superquadro Euro 5 remains true to its nature: as user-friendly on the road as it is powerful - yet always under control - on the track. Valve play checks every 24,000 km and services every 12,000 km or 12 months.

Not even the comprehensive, cutting-edge electronics package - based on the 6-axis inertial platform - leaves the rider in any doubt that the Panigale V2 has thoroughbred sports blood running through its veins. The new electronics package raises active safety and dynamic control standards by adding the cornering function to the ABS, upgrading the quickshift so it now covers down-changes and including traction control, engine brake control and wheelie control.

As you'd expect, all controls are incorporated in the three Riding Modes (Race, Sport, Street) and can be adjusted via the new 4.3" colour TFT dashboard. Featuring a user-friendly graphic interface browsing menus, adjusting settings and identifying the selected Riding Mode couldn't be easier.



Panigale V2

Colour

- Ducati Red with black wheels

Main as-standard features:

- New design
- Euro 5 compliant 955 cm³ Superquadro engine
- Under-engine silencer with single side end pipe
- Aluminium monocoque frame
- Aluminium single-sided swingarm
- Fully adjustable 43 mm Showa Big Piston Fork (BPF)
- Fully adjustable Sachs shock
- Sachs steering damper
- Electronics package with 6-axis Inertial Measurement Unit (6D IMU): ABS Cornering EVO; Ducati Traction Control (DTC) EVO 2; Ducati Wheelie Control (DWC) EVO; Ducati Quick Shift up/down (DQS) EVO 2; Engine Brake Control (EBC) EVO
- Riding Modes (Race, Sport, Street)
- 17-litre steel tank
- Full-TFT 4.3" colour dashboard
- Full-LED headlight with DRL
- Two-seater configuration
- Braking system with Brembo M4.32 monobloc calipers
- Wheels with new 5-spoke design
- Pirelli Diablo Rosso Corsa II tyres (rear 180/60)
- Ready for: Ducati Lap Timer GPS (DLT GPS), Ducati Multimedia System (DMS), Ducati Data Analyser+ GPS (DDA+ GPS)



Design

The new Panigale V2 is a beefy yet compact bike of essential design with clear-cut lines that convey power without compromising classic Ducati superbike flair. Unlike 959 Panigale the Panigale V2 features the single-sided aluminium swingarm, the hallmark of every high-end sports Ducati. Gently moulded around the refined monocoque frame, the extensive fairing highlights the more compact twin-cylinder Superquadro engine (smaller in comparison to the Desmosedici Stradale), creating a bike that is visibly leaner and less intimidating than the Panigale V4.

Dominating the front end are the two large air intakes, the upper parts of which incorporate the full-LED headlight. The new intakes merge with the existing air feed layout via newly designed ducts that, delivery rates remaining equal, lose less pressure than the previous ones, thus boosting intake efficiency.

The headlight has been compacted with the express intent of giving the intakes themselves - especially with the bike at standstill - a more menacing air. Two specially shaped rims on the undersides of the air intakes speed up air inflow. The full-LED headlight consists of a Daytime Running Light (which creates a dual 'eyebrow' effect, highlighting the upper rim of the air intake) and two compact dipped beam / high beam LED modules.

The fairing has a 'dual layer' configuration: a main layer that extends upwards and merges into the tank via two sturdy struts, and a secondary layer that also acts as an air vent. This 'dual layer' solution revives the clean lines typical of Ducati sports bikes, famed for their full-fairing look. The fairing underside merges visually with the under-engine silencer, which terminates in an extremely compact right-side-only end pipe.

The tail is built on a steel Trellis subframe lined with plastic covers that runs from the vertical cylinder to the tailpiece, of winged, spoiler-like design. The tailpiece incorporates the full-LED tail light, also wing-shaped: while a one-piece assembly, the light has two distinct parts as per Ducati sports bike tradition. The Panigale V2 combines a traditional Ducati Red livery with black 5-spoke wheels of a Panigale V4-inspired design.

Ergonomics

Compared to the 959 Panigale, the Panigale V2 features upgraded ergonomics to improve comfort. The new seat affords the rider more longitudinal movement and enhances comfort thanks to the new padding. Footpeg positioning, instead, remains unaltered.



Engine

The 955 cm³ twin cylinder Superquadro engine complies with Euro 5 standards. Compared to the engine on the 959 Panigale it delivers an additional 5 hp and 2 Nm more of torque. It also features a new compact exhaust silencer, routed entirely underneath the engine. With a maximum power of 155 hp at 10,750 rpm and a torque of 104 Nm at 9,000 rpm, this twin cylinder engine delivers power smoothly and enjoyably on the road while remaining forceful - yet always under control - on the track.

Performance enhancement largely stems from the new injectors (two per cylinder, one above and one below the butterfly, larger, and re-angled) and the new inlet ducts which, delivery rates remaining equal, lose less pressure than their predecessors, thus boosting intake efficiency. Oval throttle body dimensions remain unchanged with an equivalent diameter of 62 mm. Throttle bodies are controlled independently of each other via a full Ride by Wire system.

The new silencer has a new internal layout and, back pressure remaining equal, abates noise spikes more easily. This has led to a considerable reduction in silencer bulk compared to its Euro 4 959 Panigale counterpart. The new silencer also houses two larger, enhanced-impregnation catalytic converters that allow compliance with Euro 5 emissions standards.

On the Panigale V2 the engine acts as a stressed member of the frame. Set 90° apart, the cylinders are banked rearwards around the crankshaft axis, resulting in a 21° angle between front cylinder and horizontal plane. The two cylinder heads and aluminium top covers feature a ribbed design to reduce mechanical noise. The crankcases are vacuum die-cast using Vacural® technology to optimise weight saving and ensure consistent wall thickness and increased strength. Crankcase cover, clutch cover and sump are all made of die-cast aluminium.

The Superquadro engine uses brass bushings for the crankshaft, lubricated with pressurised oil via ducting inside the crankcase. This ensures efficient lubrication of the crankshaft and rapid oil recovery thanks to a lobe pump that - as on MotoGP racing engines - lowers the pressure in the connecting rod casing. Operated by a shaft, in turn driven by a gear train, the pump keeps the casing zone underneath the pistons in a controlled, constant low pressure state, thus reducing the resistance encountered by connecting rod rotation at high engine speeds and ensuring efficient oil recovery at all engine speeds.

The compression ratio is 12.5:1. The 955 cm³ displacement is obtained with a 60.8 mm stroke and 100 mm bore, measurements that flawlessly combine good handling and fluid power delivery. A 100 mm bore allows for large valve diameters: 41.8 mm for the intake and 34 mm for the exhaust. The valves are controlled by a Desmodromic system with racing-derived rocker arms, 'super-finished' and with a special DLC (Diamond-Like Carbon) facing for reduced friction and increased fatigue strength.

Transmission features a six-speed gearbox with the Ducati Quick Shift up/down EVO 2 system and an oil bathed clutch. The latter has an anti-patter and progressive self-servo mechanism that compresses the friction plates when under drive from the engine without any extra effort required from the rider to release the clutch.



Chassis

Monocoque frame

The Panigale V2 frame consists of a compact, enhanced-strength die-cast aluminium monocoque structure that uses the Superquadro engine as a stressed member.

Attached directly to the cylinder heads, the monocoque frame protrudes forward to house the steering head bearings, contained in two aluminium bushes. In addition to working as a frame, the monocoque also acts as an air-box; it contains not just the air filter but also the throttle bodies and the fuel circuit, complete with injectors, and is sealed off by the steel fuel tank bottom.

The front-end geometry has 24° of rake and 95 mm of trail. At the rear, instead, the double-sided swingarm has been replaced with a sophisticated, fully die-cast aluminium single-sided swingarm. The bike has a 1,436 mm wheelbase and weight distribution is 52% at the front and 48% at the rear.

Suspension

The Panigale V2 features the 43 mm Showa BPF fork at the front, which provide full adjustability in spring pre-load, compression and rebound damping. The Showa Big Piston Fork (BPF) considerably improves damping control at low speed, ensuring lower-pressure oil feed and reducing the amount of fluid needed for compression and rebound adjustment. This results in improved suspension performance and significant weight savings compared to traditional fork types. A Sachs steering damper completes the front-end package. The rear suspension features a fully adjustable, Sachs monoshock, which reacts to the motion imparted by the die-cast single-sided aluminium swingarm via progressive-rate linkage. The shock absorber is side mounted to make the unit fully accessible for rebound and compression damping and spring pre-load adjustments.

Compared to 959 Panigale, the Panigale V2 has fork slide out by 2 mm and a new shock absorber 2 mm longer that together with the new Pirelli Diablo Rosso Corsa II tires make the bike more intuitive, agile and fun to ride, moreover a fine-tuning of the suspension hydraulic setting improve comfort in road use.

Wheels and tyres

The Panigale V2 has a 5-spoke, 3.5 inch wheel at the front and 5.5 inch wheel at the rear, both rolling on Pirelli Diablo Rosso Corsa II tyres: 120/70 ZR17 at the front and a nimble 180/60 ZR17 at the rear. Pirelli's first multi-compound bike tyre, the Diablo Rosso Corsa II combines racetrack performance with road versatility, making it just perfect for the Panigale V2. Multi-compound technology was developed out of Pirelli's experience in the World Superbike Championship. The result: dual-compound front tyres, with three different application zones, and tri-compound rear tyres with five application zones to optimise the contact patch and achieve top road and track grip under all surface conditions, dry or wet, at any lean angle. A new tread pattern with a slick shoulder zone optimises the contact patch and ensures more even wear. Aspect ratio and structure are also racing-derived and designed to maximise cornering agility and 'feel'.

Braking system

The Panigale V2 front brakes use twin M4.32 Brembo monobloc callipers actuated by master cylinders. The front calipers grip 320 mm discs, while a single 245 mm disc at the rear is gripped by a single Brembo calliper.



Electronics

Latest-generation electronics

The Panigale V2 features modern electronics based on a 6-axis inertial platform which instantly detects the bike's roll, yaw and pitch angles.

On the Panigale V2, the electronics package consists of:

- ABS Cornering EVO
- Ducati Traction Control (DTC) EVO 2
- Ducati Wheelie Control (DWC) EVO
- Ducati Quick Shift up/down (DQS) EVO 2
- Engine Brake Control (EBC) EVO

Operational parameters for each of these controls are associated by default with the three Riding Modes (Race, Sport, Street). Riders can personalise parameters to suit their riding style or restore the Ducati default settings.

ABS Cornering EVO

The ABS system on the Panigale V2 features the cornering function (which keeps the ABS working even with the bike leaned over) and has the same intervention logic and control as on the Panigale V4. ABS Cornering EVO can be set at three different levels to fully satisfy the needs of all riders, on road or racetrack, even under critical low-grip conditions.

Level 3 is intended for road use or in circumstances where there is little grip, ensuring safe, stable braking and keeping rear wheel lift under constant control during hard deceleration. Levels 2 and 1, instead, prioritise braking power and are better suited to sports riding on high-grip surfaces and racetracks.

Level 2 is recommended for amateur track riding; the system controls both the front and rear brakes, keeps the cornering function on but disables lift-up control to allow harder, sportier braking. Selecting Level 2 also enables the 'slide by brake' function, letting riders drift into the bends spectacularly, effectively and safely.

Level 1 is not the default setting on any of the Riding Modes: it must be deliberately selected as it is intended for on-track use by expert riders. It provides racing-standard ABS intervention on the front wheel only. Both the cornering and anti lift-up functions are disabled to generate maximum performance.

Ducati Traction Control (DTC) EVO 2

The new Ducati Traction Control (DTC) EVO 2 strategy is an offshoot of the Ducati Desmosedici GP18 and is already employed on the Panigale V4 R and V4 R SBK. In addition to interfacing with the 6-axis inertial platform and adapting intervention on the basis of wheelspin and lean angle, the software significantly improves out-of-the-corner power control thanks to a new 'predictive' strategy. Acting not just on the basis of instantaneous rear wheelspin but also its variation, it intercepts any loss of grip sooner and reduces peak wheelspin, ensuring faster, smoother intervention. All this means augmented out-of-the-corner stability (even in sub-optimal grip conditions), higher acceleration, better lap times and improved long run performance.



In addition to controlling spark advance and injection, the DTC EVO 2 system uses, in all situations not requiring fast intervention, the throttle body valves to maintain optimal combustion parameters and ensure more fluid engine response and control.

DTC EVO 2 can be set to 8 different levels (6 for dry conditions, 2 for wet), letting riders adapt control strategy to their individual riding styles and grip conditions to maximise performance.

Ducati Wheelie Control (DWC) EVO

The Panigale V2 is also equipped with the latest version of Ducati Wheelie Control (DWC) EVO. Using the data feed from the 6D IMU, this system keeps wheelies in check while maximising acceleration easily and safely. DWC EVO provides more accurate wheelie readings; it thus exerts more precise control to ensure the bike responds faster to rider input.

Ducati Quick Shift up/down (DQS) EVO 2

DQS EVO 2 with up/down function, developed for the Panigale V2, uses lean angle data to maximise bike stability when shifting gears through the bends.

In addition to minimising shift times, DQS EVO 2 allows clutchless down-shifts, making hard braking more effective than ever. The system includes a two-way microswitch built into the shift lever linkage; every time the gear shift is actuated, it sends a signal to the Superquadro engine control unit. Thanks to full Ride by Wire control, the system works differently for up-shifts and down-shifts, integrating spark advance and injection adjustment during up-shifts with an auto-blipper function during down-shifts.

Extent and duration of system operation are designed to ensure seamless shifting even during extreme track sessions; during down-shifts the system works in concert with the anti-patter clutch and Engine Brake Control (EBC).

DQS EVO 2 - another Panigale V4 R offshoot - reduces up-shift times, allowing the sportier high-rev gear shifts (over 9,000 rpm) typical of track riding and boosting shift stability during aggressive acceleration and cornering.

Engine Brake Control EVO (EBC EVO)

The EBC (Engine Brake Control) system was developed to help riders optimise bike stability under extreme turn-in conditions; it does so by balancing the forces applied to the rear tyre under severe engine-braking conditions. The Panigale V2 EBC EVO system, optimised according to lean angle, monitors throttle valve position, selected gear and Superquadro crankshaft deceleration during aggressive braking and adjusts throttle aperture to balance out the torque forces applied to the tyre.

Riding Modes

Riding Modes provide users with three different pre-set riding styles so that Panigale V2 performance can be adapted to rider, track/route and weather conditions. Each Riding Mode is associated with a different control parameter set-up: selecting a different Riding Mode, then, instantly alters the 'character' of the engine and electronic controls.

Race Riding Mode - As the name suggests, Race RM allows less experienced riders to enjoy top-end bike performance on high-grip track surfaces. Selecting Race gives the rider 155 hp, with direct Ride by Wire



throttle response. Race mode sets the electronics at a low intervention level but without compromising safety, with ABS set to level 2, lift-up control off and the 'slide by brake' function (which lets riders drift the bike into the corners safely) on.

Sport Riding Mode - Selecting Sport gives the rider 155 hp, with direct sport-style Ride by Wire throttle response. Electronic controls are set to give riders perfect dry road ride responsiveness. Rear wheel lift detection during braking is on and the ABS Cornering EVO function is set to maximise cornering performance.

Street Riding Mode - Street mode is recommended when riding on surfaces with poor grip. As with the Sport RM, this mode provides riders with 155 hp and progressive Ride by Wire throttle response. Electronic control settings ensure grip and stability to maximise safety.

Riders can, of course, personalise settings to suit their riding style and subsequently restore Ducati-set parameters. They can also enable ABS Level 1 (intended for on-track use by highly expert riders) which acts on the front wheel only and disables the cornering and lift-up functions to allow full-on braking performance.

Instrumentation

Instrumentation on the Panigale V2 features a 4.3" TFT display. Graphics and interface make menu browsing and adjustments easy while allowing more immediate identification of the selected Riding Mode. The Riding Mode interface clearly and immediately shows any changes being made to the settings. This is done thanks to the explanatory graphics of the system being adjusted and a graduated scale indicating whether the modification is better suited to performance or safety/stability.

Headlight, tail light and indicators

The front headlight assembly is extremely compact thanks to the adoption of two small LED low beam / high beam modules. The Daytime Running Light and the upper rim of the dual headlight assembly create a 'browed' look, the modern hallmark of Ducati sports bikes.

At the rear, instead, the full-LED tail light features a two-part design as per Ducati sports tradition. The dual red arch of the side light makes the Panigale V2 both unique and assertive. Front and rear LED indicators complete the lighting system.

Ducati Lap Timer GPS (DLT GPS)

The DLT GPS feature automatically records and saves lap times and displays them directly on the dashboard each time the bike crosses the finish line, the coordinates of which are set by pressing the flasher button. If a lap time is the best of the current track session, the Best Lap function causes it to flash for 5 seconds. At every lap - for a total of 30 consecutive laps - the DLT GPS records lap time, maximum speed and lean/yaw angles. The information can be displayed on the screen via the relative menu. DLT GPS is available as a Ducati Performance plug and play accessory.

Ducati Multimedia System (DMS)

The Panigale V2 can be used with the Ducati Multimedia System (DMS). This lets riders take incoming calls, select and listen to music or receive text messages via Bluetooth. When the rider mounts the motorcycle the smartphone automatically connects to the bike via Bluetooth, letting the rider control the main multimedia functions. The TFT display shows the music being played, the new text message icon or



caller's name. Phone call audio and music are transmitted to the helmet earpieces. DMS is available as a Ducati Performance plug and play accessory.

Ducati Data Analyser + GPS (DDA+ GPS)

The Ducati Data Analyser + GPS (DDA + GPS), allows assessment of bike and rider performance by showing traces for specific data items. DDA + GPS is a vital on-track performance monitoring tool. Not only does it automatically display and record Panigale V2 lap times, it also saves other data traces such as throttle opening, bike speed, engine rpm, selected gear, engine temperature, distance travelled, rpm and DTC. DDA + GPS is available as a Ducati Performance plug-and-play accessory.