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The science of speed

Exactly like a racing bike at the start of a new championship season, the Panigale V4 MY20 presents new features across every technical area, from the chassis to the engine, electronics package for the management of various functions, aerodynamics, the setting, weight distribution, suspension calibration and even the Ducati Performance accessories. All round change. For the better.

The Panigale V4 MY20 is more agile and enjoyable, reaches the apex faster and is stable in acceleration, even at full lean. A more high-performance production sports bike that is also easier and more intuitive.





A "user-friendly" bike, it is intuitive and easy to ride. This was undoubtedly one of the toughest goals to achieve with the Panigale V4 MY20, as offering non-professional riders the chance to control the performance of a real racing bike requires full exploitation of current technology.

At the same time, it is a bike with a stiff, easy to tune chassis, equipped with an engine that, already in its standard configuration, appears kitted out for Superbike racing, agile and lightening quick to turn in and reach the apex, as only a racing bike knows how. This means it can satisfy the needs of professional riders who will find little to improve on the technical front, and many adjustments that ensure the new Panigale V4 MY20 is 'made to measure'. Achieving outstanding results has never been within such close grasp of a production bike.

The Desmosedici Stradale engine

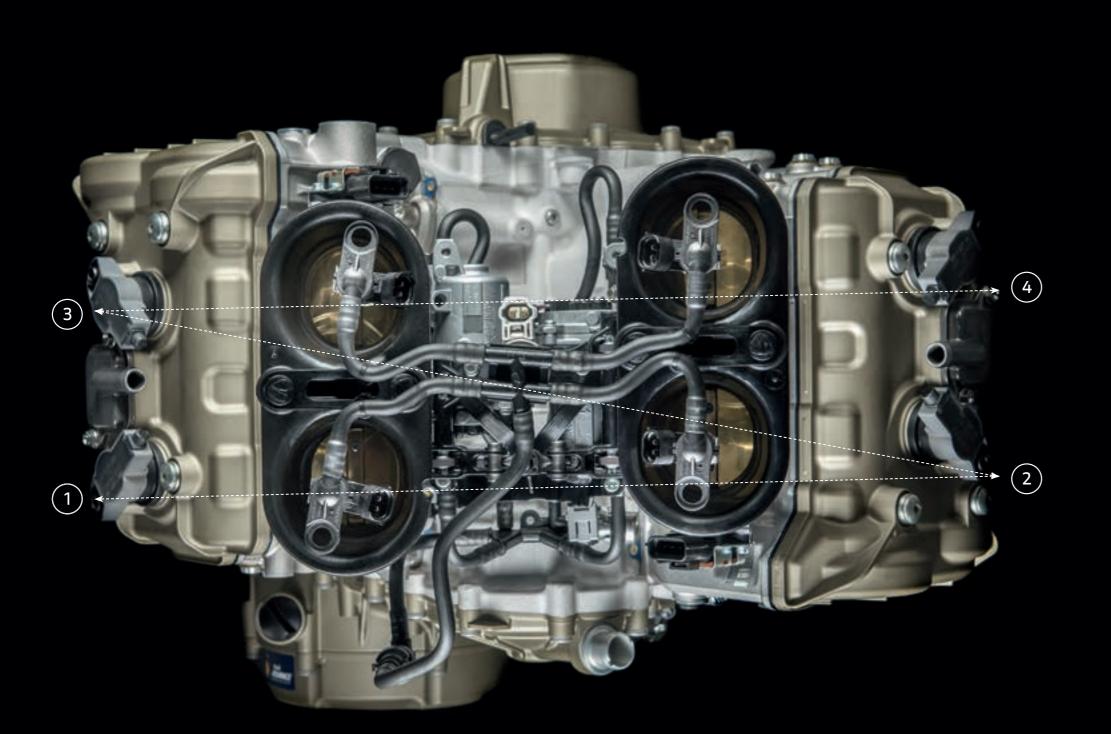
The new Panigale V4 2020 features new, specially developed Ride by Wire system mappings with several torque delivery control settings. Track-dedicated RbW mapping aligns rider demand with delivered torque more closely, resulting in smoother, more predictable throttle response.

The new torque delivery control strategy lets the rider stabilise more easily on the desired throttle aperture through and out of the corners. In addition, linearization of the torque curve in 1st, 2nd and 3rd gear varies depending on the selected Power Mode to minimise stability loss during acceleration.

The Panigale V4 is powered by the 1103 cc Desmosedici Stradale (banked 42° back from the horizontal), a MotoGP-derived 90° V4 with Desmodromic timing, a one-of-a-kind engine featuring a counter-rotating crankshaft and Twin Pulse firing order. The engine can deliver 214 hp at 13,000 rpm and a torque of 12.6 kgm at 10,000 rpm, making for awesome road riding.

The engine is designed around the Desmodromic system, a feature that contributes to ensuring that the Ducati is the fastest prototype in the reigning class of the world championship. With this high-rotation engine, the "Desmo" achieves its maximum technical value, reaching levels of sophistication, compactness and lightness never seen before on a Ducati.





On street bikes the crankshaft rotates in the same direction as the wheels. In contrast, in MotoGP, a counter-rotating crankshaft that rotates in the opposite direction is commonly used. The Desmosedici Stradale has borrowed this technical solution to compensate for part of the gyroscopic effect produced by the wheels, making the bike more agile when changing direction.

This geometry, combined with the 90° V engine layout, allows for a particular kind of firing order, the so-called "Twin Pulse". The peculiarity lies in the rapid firing of the two cylinders on the left side and then on the right side of the motorcycle. In the timing chart, the ignition points are at 0°, 90°, 290° and 380°. This particular firing order gives the V4 a sound that is very similar to that of the Desmosedici MotoGP.

The active (firing) phases of cylinders on either side of the engine (left and right) are very close together, with ignition points at 0°-90°-290°-380°. This is a tried and tested solution that boosts traction when accelerating out of a turn.

The crankshaft is a typical race component, counter-rotating with respect to the wheels and compensating in this way for any wheel lift during acceleration. Created in forged, case-hardened aluminium, it turns with the interposition of bearings (being monolithic) on three journals, while the valves are aerodynamically shaped to "cut" the lubricant with as little energy expenditure as possible, despite the semi-dry casing. Thanks to the introduction of so-called idle wheel on the primary driveline, it is counter-rotating, thus turning in an anticlockwise direction and generating gyroscopic effects during acceleration that are the opposite of those produced by components that rotate clockwise, thus limiting the tendency to wheelie.

The wet clutch, lightweight and compact, reduces disc disengagement load, and therefore the force required on the lever thanks to a progressive self-servo mechanism.

Gear shifting is carried out with support of the Ducati Quick Shift electronic system, mapped with shifting times and logics for quicker, more efficient gear changes, whether the rider is up-shifting or aggressively down-shifting.



True chassis perfection

One key feature of the new Panigale V4 MY20 is the introduction of the Front Frame. Built according to Ducati Corse specifications for the R version, changes to the suspension set-up result in a higher centre of gravity, an increased chain pull angle and improved use of suspension travel. Thanks to these modifications, the bike is easier to lay into the corner when you ease off the brakes, gets to the apex faster, soaks up any pits or ripples more effectively and behaves more neutrally out of the corner.

The aluminium alloy front end is the same as that of the Panigale V4 R but less stiff, a structural change that comes directly from Ducati Corse. The new machine finished front aluminium plates make for a more flexible fork support section, a choice that results in greater front end 'feel' for the rider.

The swingarm angle with respect to the ground is increased, as is the effect of chain pull in acceleration, meaning less rear suspension compression (so-called "squat"), which stabilises the Panigale through the longest, fastest turns.

The Panigale V4 is equipped with a 43 mm Showa Big Piston Fork (BPF) that provides fully adjustable spring pre-load and compression and rebound damping. The fork bodies house chrome stanchions to which Brembo radial callipers are affixed. The front package is completed with a Sachs steering damper. The rear boasts a fully adjustable Sacks shock absorber, attached to one side of the Desmosedici Stradale engine with a forged aluminium bracket.

The Panigale V4 S comes complete with an Öhlins NIX-30 fork, rear Öhlins TTX36 shock and an Öhlins steering damper with event-based control system. On these versions, the suspension and steering damper are controlled by the second-generation Öhlins Smart EC 2.0 system.

On both versions, the fork and single-sided swingarm have softer, less pre-loaded springs, resulting in more efficient use of suspension travel to even out pits and ripples on the asphalt. Reduced fork stiffness translates into boosted

load transfer to the front wheel during braking, for easier, more intuitive turn-ins, especially for the less expert rider.

The Panigale V4 mounts die-cast aluminium wheels with a 5-spoke design, while the Panigale V4 S is equipped with 3-spoke forged aluminium alloy wheels.

The wheels mount Pirelli DIABLO™ Supercorsa SP tyres, 120/70 ZR17 at the front and a revolutionary 200/60 ZR 17 at the rear. The latest version of the DIABLO™ Supercorsa SP, in its 200/60 ZR 17 size, is already widely used for the slick product in the FIM Superbike World Championship and represents a real generational leap in the field of replica racing tyres.

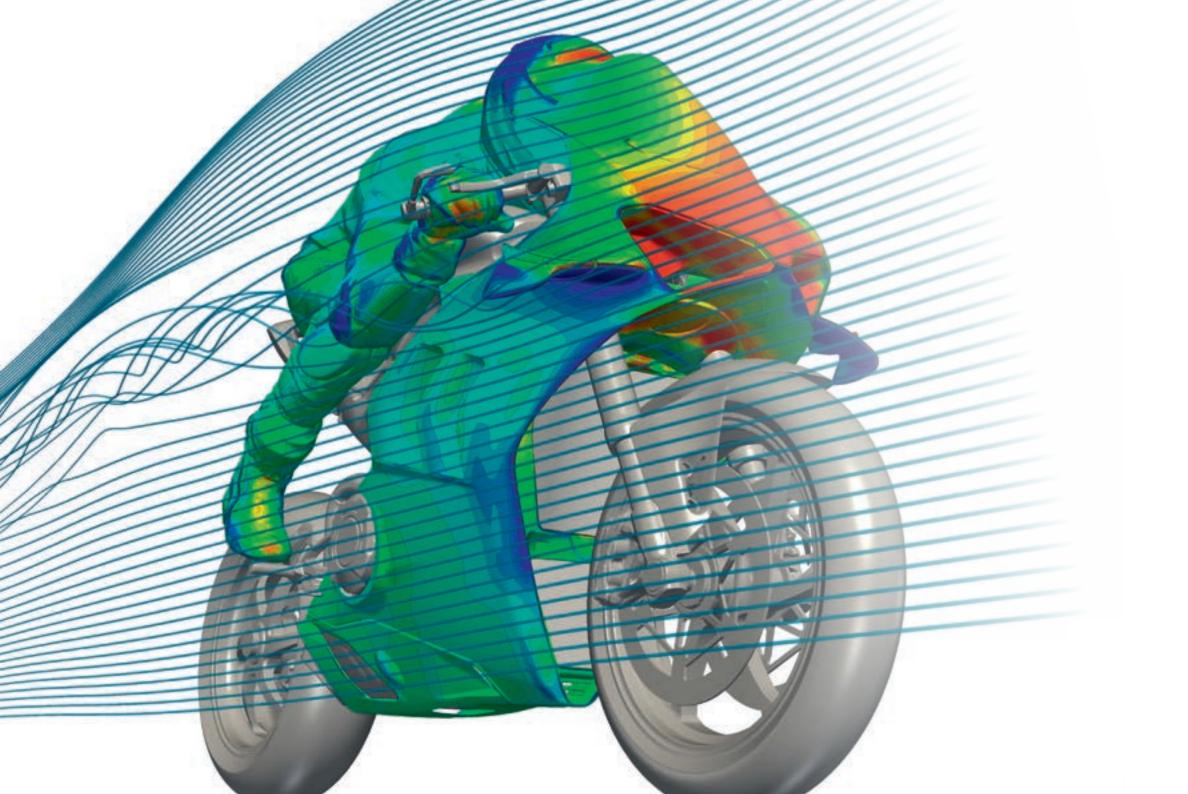
Innovative rear tyre profiling maximises the contact patch at maximum lean and takes full advantage of the employed dual compound design, which adopts the same SC2 compound used for racing slicks in the shoulder zone to provide race-grade grip, yet still guarantees the strength and versatility needed for road riding.



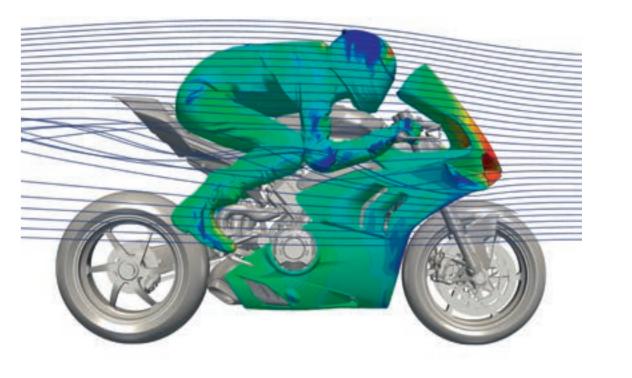
MotoGP-derived brakes

Mechanically-speaking, braking involves 330 mm steel discs and Brembo Stylema monobloc callipers, mounted with radial attachment to the light alloy feet of the chrome fork stanchions. Cornering ABS Bosch EVO is confirmed, allowing the rider to make adjustments depending on the situation and riding style, and is uniquely equipped with the "Only Front" function that frees the rear wheel from any electronic filter while retaining Cornering ABS at the front.





Aerodynamics package



+30 kg (42%) of downforce at the front wheel at 270 km/h

The brand-new Aero aerodynamics package inherited from the V4R comprises "wings" that derive from those used on Ducati MotoGP bikes until 2016, the year in which the championship regulation imposed strict limitations on these components. The aerodynamic appendages of the new Panigale V4 rely on "winglets" and "strake", profiles used for aeroplane wings that improve overall aerodynamic efficiency and generate considerable downforce. The higher, more angled top fairing, wider lateral fairings, and new air vents on the sides of the fairing all make for increased downforce, +30 kg at a speed of 270 km/h.

Greater aerodynamic protection
Greater stability at high speeds
Greater stability in and out of the corners
Greater sensitivity at the front wheel
Less tendency to wheelie
Less tendency for front wheel lock during braking
No impact on top speed

Tailor-made racing electronics

Despite being a fearsome "time machine" on track, the Panigale V4 is still a very high-performance production sports bike. Its full power and speed cannot be expressed on the road of course, but a rider can still enjoy its dynamic qualities in total safety thanks to the three Riding Modes and dynamic safety and "vehicle control" systems. Three ABS Cornering EVO settings adapt system performance to the track, with settings 2 or 1, the latter incorporating the Only Front function, with ABS active at the front wheel even at full lean, while the rear is left free from any control. Option 3 is suited to road use or low-grip surfaces.





Part of the traction control strategy of the Desmosedici GP18 MotoGP bike has already been used on the V4R and the Panigale V4 R SBK and is now made available for the V4 MY20. The DTC EVO 2 exploits a "predictive" type of strategy that significantly boosts power management even in situations of low grip, where the rear wheel is in a controlled slide.

This is achieved thanks to a new electronics strategy and precision of recognising the position of the bike in space, executed by the 6-axis platform. This inertial platform has also allowed for the addition of slide control, something we see with MotoGP riders when the rear tyre produces that blue smoke.



Essentially, acting like the DTC EVO 2 on injection and throttle aperture, DSC (Ducati Slide Control) ensures slide angles remain within safe limits, even when a rider requires power while leaning out of a corner. The impossible brought to a possible level.

Updates to response strategies and speed have been applied to the DWC EVO (Ducati Wheelie Control) and Ducati Power Launch (DPL) systems.

The DQS EVO 2 with up/down function, developed for the new Panigale V4 2020, uses lean angle data to maximise bike stability when shifting gears through the corners. The electronic EBC EVO (Engine Brake Control) can be adjusted to work effectively with the anti-patter clutch (both the standard wet system, or the dry system, available as a Ducati Performance accessory).



TFT dashboard

Ducati was the first motorcycle manufacturer to use an instrument cluster with full TFT (Thin Film Transistor) colour display, with the 1199 Panigale in 2012. With the Panigale V4, Ducati sets a new standard, launching a bright, high definition (186.59 PPI - 800xRGBx480) full TFT 5" display with modern eye-catching graphics. Instrumentation development has prioritised readability and easy function access.

The brand-new dashboard is dominated by the round 'virtual' rev counter on the right, marking a clean break with the past and drawing inspiration from high-end automotive production. Desmosedici Stradale revs are displayed within a 1000-15,000 rpm interval by a needle gauge. Movement of the latter is accompanied by a white trail that acts as a 'shift light', changing colour from white to orange and then red as the rev limit approaches.

Two different lay-outs are available: 'Track' highlights lap times and makes the rpm range used on tracks much more visible; 'Road', instead, replaces lap times with info

on the Ducati Multimedia System (DMS) and the rpm scale is more appropriate for the rev ranges used on public roads. For improved readability, indications for (digital) top speed, selected Riding Mode and selected gear retain the same position on both layouts.

As well as offering the classic menu with total mileage covered, Trip 1, Trip 2, consumption, average consumption, Trip Fuel, Trip Time, average speed, air temperature, Lap On/Off (only in "Track" mode), Player On/Off (only in "Road" mode), the Panigale V4 dash also has another menu at the bottom right which can perform two functions: display/indication of parameters linked to the set Riding Mode or quick modification of DTC, DWC, EBC and DSC parameters. Lastly, Panigale V4 indicators are of the 'auto off' type, which means they switch off automatically after completing the turn or, should an indicator be tripped accidentally, switch off after the bike has travelled in a straight line for a certain distance (from 200 to 2000 metres depending on how fast the bike is going when the indicator is switched on).





Riding Modes

Riding Modes provide users with three different preset riding styles so that Panigale V4 performance can be adapted to the rider, the nature of the track/route and the weather conditions. Changing the Riding Modes (choosing between Race, Sport and Street) instantaneously changes the character of the engine, the electronic control parameters and, on the new "S" version, the suspension set-up too. Riders can, of course, personalise parameters to suit their riding style and subsequently restore Ducati factory settings.

Race Riding Mode

As the name suggests, Race RM has been developed for expert riders who want to harness the full potential of the new Panigale V4 2020 on high-grip racetracks. By selecting Race, the rider can count on 214 hp, with direct Ride-by-Wire throttle response and, on the new "S" version, a very firm suspension set-up to optimise performance.

Race mode sets the electronics at a low intervention level, but without reducing safety: to maximise braking performance, the ABS only intervenes at the front wheel, though the Cornering function remains on at all times.

Sport Riding Mode

Selecting Sport mode gives the rider 214 hp, with direct sport-style Ride by Wire throttle response and, on the new "S" version, a sport style suspension set-up. Electronic control settings allow even less experienced riders to enjoy effective, spectacular handling.

In Sport mode, for example, the Slide by Brake function is engaged, allowing riders to drift into corners safely. Rear wheel lift detection during braking is on and the ABS Cornering function is set to maximise cornering performance.

Street Riding Mode

Street Riding Mode is recommended when riding the Panigale V4 on the road. As with Sport Riding Mode, this RM gives the rider 214 hp and progressive Ride by Wire throttle response; on the new "S" version it features a suspension set-up that is well suited to bumpy or pitted roads. Electronic control settings ensure grip and stability to maximise safety.

Servicing and maintenance

Safety as standard

Ducati's continuing commitment to design, research and development has the precise objective of guaranteeing state-of-the-art motorcycles characterised by the highest degree of active safety. It is with racing performance in mind and a view to increasing the level of control during the most difficult riding that we continue to develop systems that are always at the cutting edge.

On the Panigale V4, the ABS Cornering EVO system manages every braking phase, even with the bike leaned over, a situation in which the engine brake is controlled by Engine Brake Control EVO, which carefully regulates the braking torque. The acceleration phase is controlled by Ducati Traction Control EVO, Ducati Wheelie Control and Ducati Slide Control. Systems that allow for maximum performance, in total safety, aboard the most powerful production sports bike Ducati has ever built.

More value to your passion

With Ever Red, the quality and reliability of the Ducati brand remain your inseparable travelling companions over time. Ever Red is the exclusive Ducati warranty extension programme. With its activation you can continue to feel protected for 12 or 24 months beyond the expiration of the Ducati Warranty (24 months). Ever Red includes roadside assistance for the entire coverage period and no mileage limits. In this way you can ride for all the kilometres you want, even abroad, enjoying your Ducati without any worries.

To find out if the Ever Red extension is available in your country and for further information contact your Ducati dealer or visit ducati.com.

Endless excitement

In designing each bike, Ducati constantly strives to ensure maximum reliability while reducing service costs. A commitment that has seen the intervals for the main Desmo Service, in which valve clearance is checked and adjusted if necessary, extended to 24,000 km (15,000 mi) for the Panigale V4. Even the simplest of checks, such as the Oil Service, are extended to 12,000 km (7,500 mi) or 12 months.

A considerable interval for such high-performance engines, which only confirms the high quality standards adopted in terms of material selection and R&D processes. Ducati continuously invests in the technical training of its dealers. The specific skills offered by the official Ducati Service network ensure that all those operations needed to keep every Ducati in perfect condition are thoroughly executed, while advanced equipment such as the Ducati Diagnosis System allows the software on each Ducati to be updated with the latest eleases, ensuring that the electronics continue to perform at the maximum level.

Always by your side

One of Ducati's main goals is to offer every Ducatista the chance to enjoy unlimited and safe travel all over the world. To achieve this aim, Ducati offers a "fast delivery" original spares service, with delivery in 24/48 hours across 85% of the areas in which it operates. With a distribution network that covers more than 86 countries, thanks to 718 official Dealers and Service Points*, choosing a Ducati means you can travel worry free and in total freedom, wherever the road may take you, and count on support from our extensive Dealer network that ensures Ducati quality and professionalism is always close at hand.

718 Authorised dealers and service points

86 World countries

*Information updated as of July 2019







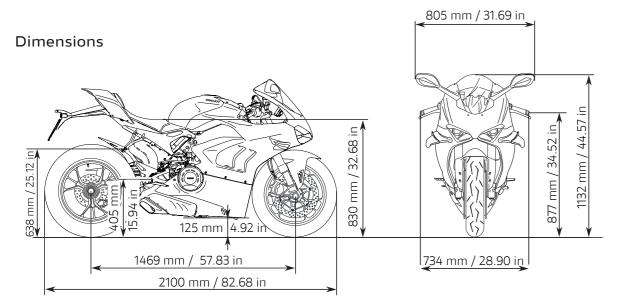




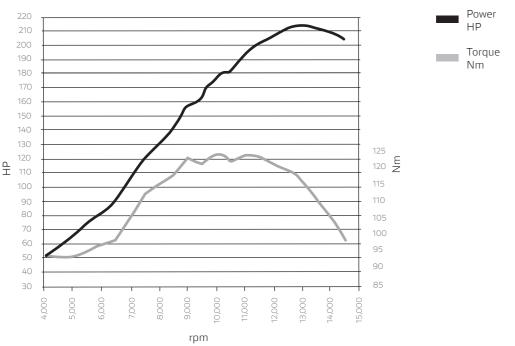


Technical data and equipment

PANIGALE V4



Power and torque



Engine	
Engine	Desmosedici Stradale 90° V4, counter-rotating crankshaft, 4 Desmodromically actuated valves per cylinder, liquid cooled
Displacement	1,103 cc
Bore X stroke	81 x 53.5 mm
Compression ratio	14.0:1
Power *	157.5 kW (214 HP) @ 13,000 rpm
Torque *	124.0 Nm (91.5 lb-ft) @ 10,000 rpm
Fuel injection	Electronic fuel injection system. Twin injectors per cylinder. Full Ride-by-Wire elliptical throttle bodies. Variable length intake system.
Exhaust	4-2-1-2 layout. Two lambda probes and two catalytic converters
Transmission	
Gearbox	6-speed with Ducati Quick Shift (DQS) up/down EVO 2
Primary drive	Straight cut gears; ratio 1.80:1
Ratios	1=38/14 2=36/17 3=33/19 4=32/21 5=30/22 6=30/24
Final drive	Chain; Front sprocket 16; Rear sprocket 41
Clutch	Slipper and self-servo wet multiplate clutch with hydraulic control

Chassis	
Frame	Aluminium alloy "Front Frame"
Front suspension	Fully adjustable 43 mm chromed steel upside down (USD) Showa BPF fork
Front wheel	5-spoke light alloy, 3.50" x 17"
Front tyre	Pirelli Diablo Supercorsa SP 120/70 ZR17
Rear suspension	Fully adjustable Sachs damper. Single-sided aluminium swingarm
Rear wheel	5-spoke light alloy, 6.00" x 17"
Rear tyre	Pirelli Diablo Supercorsa SP 200/60 ZR17
Wheel travel (front/ rear)	120 mm (4.7 in) - 130 mm (5.1 in)
Front brake	2 x 330 mm semi-floating discs, radially mounted Brembo Monoblock Stylema® (M4.30) 4-piston callipers. Cornering ABS EVO
Rear brake	245 mm disc, 2-piston calliper with Cornering ABS EVO
Instrumentation	Next generation digital dashboard with 5" TFT colour display

Dimensions a	and weights
Dry weight	175 kg (386 lb)
Weight in running order	198 kg (436 lb)
Seat height	830 mm (32.48 in)
Wheelbase	1,469 mm (57,8 in)
Rake	24.5°
Front wheel trail	100 mm (4 in)
Fuel tank capacity	16 l - 4.23 gallon (US)
Number of seats	Two-seater
Safety and t	echnical equipment

Safety and technical equipment

Riding Modes, Power Modes, Cornering ABS EVO, Ducati Traction Control (DTC) EVO 2, Ducati Wheelie Control (DWC) EVO, Ducati Slide Control (DSC), Engine Brake Control (EBC) EVO, Auto tyre calibration

Ducati Power Launch (DPL), Ducati Quick Shift (DQS) up/down EVO 2, Full LED lighting with Daytime Running Light (DRL), Sachs steering damper, Quick adjustment buttons, Auto-off indicators

Passenger seat and footpegs kit

Ducati Data Analyser+ (DDA+) with GPS module, Ducati Multimedia System (DMS), Ducati Lap Timer GPS (DLT GPS) and anti-theft system

Warranty 24 months, unlimited mileage

Maintenance 12,000 km (7,500 mi) / 12 months service intervals

Valve clearance 24,000 km (15,000 mi) (Desmo Service) check

Standard Euro 4 CO₂ Emissions 165 g/km



* equal to 18,000 miles.

Kilometres refer to the first Desmo Service, i.e. when the valve clearance is checked and adjusted if necessary.

* The power/torque values indicated were measured on a static testing bench according to type-approval standards and match the data read during the type-approval tests as listed on the vehicle's log book. Max power @ 12,500 rpm for US market only.

** Only for countries where Euro 4 standard applies.

PANIGALE V45





Panigale V4	Panigale V4 S
9	9

Öhlins Smart EC 2.0 system	-	~
Front suspension	43 mm Showa BPF fork	43 mm Öhlins NIX30 fork
Rear suspension	Sachs shock absorber	Öhlins TTX36 shock absorber
Steering damper	Sachs	Öhlins
Racing style hand grips	-	~
Lithium ion battery	-	~
Wheels	In lightweight alloy	Marchesini forged aluminium
Front mudguard colour	Ducati Red	Black
Dry weight	175 kg	174 kg
Kerb weight	198 kg	195 kg









- NIX30 Öhlins fork with event-based mode controlled by Öhlins Smart EC 2.0
- 2 Marchesini aluminium forged wheels

3 Öhlins Smart EC TTX36 damper

PANIGALE V4

PANIGALE V45







Accessories



For more information about the Ducati Performance range, technical specifications and instructions, refer to a Ducati Dealer or visit the Accessories section of the ducati.com website .











- 2 Carbon heel guard. Adjustable rider footpegs in aluminium
- 3 Dry clutch kit. Carbon dry clutch cover







4 Carbon tank cover. Billet aluminium tank cap

- 5 Carbon chain guard.
- 6 Carbon protection for generator cover



1 Racing seat in technical fabric.









3 Brake lever protection.

4 Carbon swingarm guard.





1 Panigale V4 Tyre Warmer Set

For more information about the accessories range, technical specifications and instructions, visit a Ducati Dealer or the Accessories section of the ducati.com site.

This product is designed exclusively for race bikes ridden on a closed racetrack. Its use on public roads is forbidden by law.

Apparel

Ducati Corse |D |air® K1 Racing suit with airbag system

Ducati Corse V3
Full-face helmet

Ducati Corse C3 Leather gloves











Race

Chair

Ducati Corse Speed 2
Full-face helmet

Ducati Corse C4
Racing suit

Ducati SuMisura

Ducati SuMisura is a project created especially for Ducati enthusiasts so that they can customise the layout or fit of their suit and make it a perfect match for their body shape. You can create a suit that is unique and exclusive to be manufactured on a highly specialised production line. Use the configurator on the ducatisumisura.com website to design your SuMisura suit.

Ducati Corse |D |air® C2 Racing suit with airbag system

Ducati Corse |D |air® K1 Racing suit with airbag system

Ducati Corse Carbon 2
Full-face helmet

Ducati Corse V5 Air Racing Boots







DC Power

Short-sleeved polo shirt

DC Power

T-shirt

Maui

Sunglasses

Rome

Sunglasses

For more information on the apparel collection go to a Ducati Dealership or visit the site ducati.com.



Key to simbols





This accessory is approved for road circulation in Europe.

This accessory cannot be used/sold in United Kingdom

For racing use only. The product marked with this symbol can only be used on competition vehicles. Use outside a competition track of motorcycles equipped with this product is prohibited by law. Verify any further restrictions with the relevant race course. Motorcycles equipped with this accessory are prohibited from operating on public

This accessory cannot be used/sold in Japan.

OK EU

Silencer type-approved according to European Standard 2005/30/EC.

A AnodizedRedM MattBlackF TintedSilver

T Clear



ducati.com

Riding a motorcycle is the most exciting way to enjoy the road, and offering the utmost safety to the motorcyclist is Ducati's commitment. Ducati bikes are increasingly easy to handle, reliable and better equipped to guarantee maximum safety and enhance riding pleasure. Technical clothing is made with more and more advanced materials for adequate protection and increased visibility. The safety of motorcyclists is Ducati's commitment. For more information visit the safety section of the Ducati site (www.ducati.com).

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Actual fuel consumption may vary based on many factors, including but not limited to riding style, maintenance performed, weather conditions, surface characteristics, tyre pressure, load, weight of the rider and the passenger, accessories.

Ducati indicates the dry weight of the motorcycle excluding battery, lubricants and coolants for liquid-cooled models. The weights in running order are considered with all operating fluids, standard equipment and the fuel tank filled to 90% of its useful capacity (UE regulation no. 168/2013). For more information visit www.ducati.com. December 2019.