



## 2013 DUCATI DIAVEL

### The shape of power and style

The Ducati Diavel was first introduced to an excited public at the 2010 Milan International Motorcycle Show and has since amazed motorcyclists the world over, collecting awards along the way to become one of Ducati's most desired models. The innovative machine combines decades of twin-cylinder heritage and Italian style and now completes an exciting 2013 line-up with the Diavel Strada, a brand new model that blends power cruiser performance with touring comfort and functionality. It stands alongside the Diavel Carbon, now exclusively in carbon red and the standard Diavel in three stunning new colour versions: The Diavel Dark in matte black with black-finished componentry and two "street-sport" schemes that introduce metallic blue or Ducati red with stylish white stripes, white wheels and special defining features.

Custom shop beauty, state-of-the-art technology, innovative design and extraordinary riding pleasure are masterfully blended into the Diavel, a motorcycle that has now set a new benchmark in the sport cruiser segment, just reward for the innovative designers and engineers that created it.

Built to have a commanding presence, though lightweight and agile like all Ducatis, the Diavel takes the man-motorcycle relationship to the next level in absolute comfort. For connoisseurs of technology, ABS, Ducati Traction Control and Ducati Riding Modes deliver a confidence-inspiring sophistication while stunning looks, 162hp and 205kg\* (452lb) of authentic Ducati performance drives a comfortable sport lifestyle that could only be dreamt of before.

Merging the worlds of power and style has never been achieved with such convincing precision. A specially engineered 240 section rear tyre combined with famous Ducati chassis technology serves up mind-blowing handling and lean angles which defy the laws of physics, whether carving through curves on your favourite road or just riding out for a night on the town.

\*Diavel Carbon version



## 2013 Diavel new models and features overview

### Diavel

- Body: Metallic blue or Ducati red with white stripe
- Frame: Matching Metallic blue or Ducati red
- Wheels: White
- Tank-side air-ducts in natural aluminium finish
- Carbon fibre radiator panels
- Vintage-style, horizontally-ribbed seat upholstery

### Diavel Dark

- Body: Matte black
- Frame: Matte black
- Wheels: Black
- Fork sliders with black DLC coating
- Tank-side air-ducts with black-anodised finish
- Black-finished silencers
- Black-finished foot control pedals, bars, mirrors and headlamp body

### Diavel Strada

- Body: Race titanium matte
- Frame: Racing black
- Wheels: Black
- Touring screen
- Higher handlebars
- Heated grips
- Touring seat
- Passenger back-rest
- 2 x Auxiliary power outlets
- Enhanced generator
- Side luggage
- Revised passenger footpegs
- Revised rear lighting assembly

### Diavel Carbon

- Body: "red carbon" (gloss red over matte carbon weave)
- Frame: Ducati red
- Wheels: Black. Marchesini, forged, turned and milled to expose the natural aluminium



## **NEW MODEL FOR 2013**

### **DUCATI DIAVEL STRADA**

#### **The adrenaline keeps on flowing**

The Diavel's power cruiser style is now further enhanced with touring comfort and functionality for riders who cross city limits in search of the open road. The new model, specifically designed for longer journeys, has been factory-accessorised with touring-friendly components that enable all-day riding comfort for both rider and passenger.

While the carefully designed screen blends effortlessly into the Diavel's sleek lines to provide improved wind protection, the rider's posture is further improved for long-distance with 15mm (0.6in) higher handlebars swept back towards the rider a further 60mm (2.36in) and larger, comfort-enhancing seats with revised foam cushioning. The addition of heated grips further underlines the attention given to rider-friendly detail and the higher-output generator that powers them also provides for two handy auxiliary power outlets intended for heated clothing or navigation accessories.

The passenger's ride has also been improved with a ride-relaxing back-rest and confidence-inspiring grab-rails. The Diavel's desire for touring practicality has been elegantly satisfied with 41 litres of stylishly shaped side luggage, fitted as standard equipment with revised passenger footpegs and rear lighting.

The Diavel Strada arrives in a sophisticated race titanium colour scheme with racing black frame and black wheels and side luggage.



## DIAVEL DESIGN

### Basic instincts

The Diavel project was born when Ducati designers applied their wish-list of bike “basic instincts” to a blank canvas. With a “what if?” approach to creating a dream bike, they sketched inspiring shapes which became a lower and longer motorcycle.

“The challenge of building a muscular silhouette over a pure-bred competition motor had to be met with determination and a delicate touch, and the result is a frontal area that looks like a power athlete on the starting blocks,” explained the team at Ducati Design responsible for the project. “With the front wheel kept close to the Diavel’s body and using the short tail of a sport bike, we were able to blend this muscular design with a chassis that matched.”

If the stance of a Streetfighter is that of “anger,” the stance of the Diavel is of readiness, dominance, and confidence bordering on superiority. With lateral radiators adding muscle to its broad “shoulders,” which then taper down across the engine and into the belly-fairing with oil cooler, the athlete took shape.

A massive 240 section rear tyre was a perfect example of how Diavel designers used a no-compromise attitude when applying their wish list of features. The sheer width of rubber communicates so much power and style that the R&D team vowed to find a way to make it handle - even if they knew the image would send a seismic shock through the industry.

Ducati’s philosophy for innovation has always been to push the boundaries of design in the name of exciting motorcycles. Sometimes “gut feelings” are what count, and having the strength to commit to them shows the kind of bravery that has guided Ducati to World Championships. The Diavel is a true Ducati, born from a passion for motorcycling and designed to deliver authentic Ducati performance in every respect.

### “Diavel”

The name “Diavel” was inspired by the Bolognese dialect word for “devil”. One day, early in the development process of the bike, the first prototype was assembled and wheeled out in front of a group of Ducati engineers and technicians who were viewing the complete motorcycle for the first time. One person looking from the rear of the bike saw its silhouette and exclaimed in Bolognese dialect: “Ignurànt comm’ al diavel!” Which means: “Evil, just like the devil!”

Reminiscent of how the “Monster” was named, the Diavel now follows the same Bolognese tradition, shaping the future of motorcycling while staying faithful to its heritage.



### **Rider and passenger comfort**

The Diavel's twin-level seat is wide, comfortable and beautifully shaped to fit the flowing lines of the machine and at 770mm (30.3in), has one of the lowest seat heights in the Ducati range. That low seating position, in addition to a low slung chassis set-up that weighs in at just 210kg (463lb) - 205kg (452lb) for the Diavel Carbon - enables the rider to get both feet on the ground for a sure-footed and confident stance. The seat also comes with a beautifully shaped and easily removable single seat cover, which is formed in carbon fibre on the Diavel Carbon.

While the Diavel Strada passenger footpegs fold conventionally to accommodate the side luggage, passengers of the Diavel and Diavel Carbon will appreciate the way the slender passenger footpegs ingeniously fold down from the rear sub-frame as well as the innovative, T-bar shaped grab-rail assembly, which slides out from the rear of the seat. Deployed from a mechanism under the seat, the grab-rail provides a comfortable and confidence-inspiring grip for the passenger, while the shape perfectly blends into the lines of the tail-piece when retracted. Both passenger-friendly features are crafted in forged aluminium and shot-peened for strength and uniform finish before being black anodised to become almost invisible when folded away.

### **Lighting**

While the Diavel Strada adopts conventional rear illumination appropriate for the standard equipment side-luggage, all other Diavel models use two clear vertical strips of LED lighting to provide tail and brake light illumination as well as directional indicators. The strips follow the precise line of the under-seat panelling, providing great visibility of the rear-end while keeping the external lines of the bike clean. The front directional indicators are clear lens LED strips mounted vertically down the leading edge of the lateral radiator covers. The headlamp gives the Diavel immediate Ducati identity and is supported by an aluminium outer body. The light uses high and low beam double reflectors to illuminate the road ahead, in addition to incorporating a horizontal strip of LED positioning lights for optimum visibility.

### **Innovative number plate mount**

Employing the double strip of multi-functional LEDs for the rear lighting of the Diavel required an innovative solution for the mounting of the number plate. The unique design uses mounts on the rear hub of the single-sided swingarm to extend an elegant and Ducati signature Trellis framework around the 240 section rear tyre, enabling a central mounting of the plate. The framework carries a hidden power feed to dedicated LED illumination for the number plate, eliminating any reliance on the main rear lights and creating a clean feature around the rear of the seat. This design solution represents the first of its kind and an example of the incredible attention to the Diavel's detail.



### **Fuel tank and air Intakes**

The Diavel's 17l (4.5 gal US) fuel tank represents an integral part of the bike's overall styling. Its wide, long lines sweep down from the headlamp assembly into the seat and rear sub-frame to create a seamless profile. While the focal point of the tank is the high resolution display panel, the steel tank skin and well-sculpted knee panels add a solid feel to the Diavel and a high tech composite look to the Diavel Carbon.

On each side of the front of the tank are massive air intakes formed in aluminium to feed the engine's large airbox. Their design is completely functional and contributes to the 162hp produced by the Diavel Testastretta 11° power plant.

### **Controls**

The Diavel handlebar shape and arrangement leaves the rider feeling comfortable and in command. Wide, tapered section aluminium bars with new custom designed, integral brake and clutch master-cylinders by Brembo complete with milled reservoir tops, provide a clean and minimalist set-up, while stylish, forged-aluminium supported mirrors deliver a generous view to the rear.

Switchgear control uses Ducati's minimalistic design with slim-line bodies housing easy-to-use switches and buttons and a unique weapons-like "trigger catch" that slides down to cover the starter button when activating the kill-switch. While the indicator cancel button doubles as a scroll-and-select for fast and easy Riding Mode changes, switches above and below serve to navigate the high-resolution display control panel.



## DIAVEL PERFORMANCE

### Diavel Testastretta 11° - ready for sport and cruise

The heart of the Diavel is the Ducati Testastretta 11°, which harnesses the famous 1198's immense power and makes it smooth and adaptable, a massive step forward in balancing high-performance with an enjoyable ride.

With its 162hp and colossal 94lb-ft (127.5Nm) of torque, the Diavel Testastretta 11° engine is all about authentic Ducati Desmodromic performance. The revised intake and exhaust ports combined with radical adjustment of the cam timing have enabled Ducati to achieve a fantastic torque curve at low rpm, which remains strong through a wider rev-range. The increase in bottom-end torque is managed by Ducati's Ride-by-Wire (RbW) system to considerably enhance the Diavel's effortless rideability, while ensuring plenty of power remains on tap for high-rpm riding.

For an engine with brute power on tap when needed and smooth, user-friendliness available for an effortless and comfortable ride, Ducati revised the configuration of the cam timing with particular focus on the valve overlap angle. The overlap angle is defined as the interval of crankshaft rotation, measured in degrees, during which both the intake and exhaust valves are open at the same time. This overlap occurs between the end of the exhaust stroke and the start of the intake stroke. High performance engines, which are subject to compromising smoothness for extreme power delivery, use high values of this parameter in order to benefit from the pressure waves to improve engine performance by maximising volumetric efficiency.

On the Testastretta 11° engine, this angle has been reduced from 41°, typically used in Superbike engines, and as a result, the fresh inlet charge flow is less compromised by the exiting exhaust gases, resulting in a much smoother combustion in addition to improved fuel economy and lower exhaust emissions.

The massive 58mm (2.28in) section exhaust headers lead the 2-1-2 system through power-enhancing equal lengths that enable the Diavel's efficient power delivery. The engine management system dedicates a lambda probe to each header, providing precise fueling via a large airbox, while the stylish cannon-style, vertically stacked silencers carry catalytic converters to provide Euro 3 conformity and electronically controlled mid-section valve optimises exhaust pressures throughout the rev-range.

Twin lateral radiators - positioned on either side of the bike - cool the Diavel Testastretta 11° engine. This unique feature combines with a new 64mm water pump impeller to increase flow rate by 35% at high rpm, enabling highly efficient cooling from the stylish air ducts.



The Diavel's gearbox uses high-strength materials to manage the increased power output and enhanced grip generated by the 240 section rear tyre, which also requires the use of a 16mm longer gearbox output shaft for drive chain routing.

The transmission features an oil bath clutch with "slipper" function and super-light feel at the lever. Its design uses a progressive self-servo mechanism that presses the plates together when under drive from the engine, enabling the reduction of the clutch spring rates. This results in a much lighter clutch lever at the handlebar, ideal in stop-start traffic or during long journeys. When the drive force is reversed (over-run), the same mechanism reduces the pressure on the clutch plates, enabling them to provide a race-like "slipper" action, which reduces the destabilizing effect of the rear-end under aggressive down-shifting and provides a much smoother feeling when closing the throttle or down-shifting under normal riding conditions. The Diavel's clutch and alternator covers are specially styled with enhanced detail and shaping and the cam belt covers with an aluminium mid-section.

### **24,000 kilometres (15,000 miles) between major services**

Constant investment in quality by design, advanced materials and engineering techniques have enabled the distance between major service intervals (valve clearance check) to be set to a highly competitive 24,000 kilometres (15,000 miles). This has been achieved with the introduction of new valve seat materials, improved combustion efficiency and temperature management designed into the Testastretta 11° engine.



## DIAVEL CHASSIS

### Frame assembly

The Ducati Trellis frame uses large diameter, light gauge tubing with two lateral die-cast aluminium sections that flow into the rear subframe. This achieves massive torsional rigidity while remaining lightweight and compact. The two sections form a rear-end structure by attaching onto either side of a complex technopolymer component. The long, die-cast aluminium, single-sided swingarm provides great “feel” at the rear-end with a wheelbase of 1590mm (62.6in) and a stance that provides lean angles of up to 41°.

### Suspension

The Diavel uses black-bodied 50mm Marzocchi front forks, fully adjustable for spring pre-load, compression and rebound damping. They are gripped by a slash-cut triple-clamp - cast aluminium for the lower and forged for the upper - with a rubber-mounted riser to tapered alloy bars. With a rake of 28°, trail of 130mm (5.12in) and an offset of 24mm (0.945in), the set-up provides a sure-footed and agile front-end for incredible handling and 70° of total steering lock for maximum manoeuvrability. The Diavel Dark and Diavel Carbon uses the same suspension as the Diavel, but with fork sliders black-finished in super low-friction diamond-like carbon (DLC).

All versions of the Diavel have a Sachs rear suspension unit slung low under the chassis in a horizontal position, operated by a progressive pull-rod linkage from the swingarm. Adjustable in compression and rebound damping, the unit uses a handy control for easy spring pre-load adjustment.

### Wheels and tyres

The Diavel rolls on stunning, custom 14-spoke wheels with machine-finished detailing. The front rim is 3.5x17, while the rear, which is “flow-formed” for enhanced structure and lightness, boasts a massive 8x17 rim. The Diavel Carbon has custom shop-finished, lightweight, forged, turned and milled rims by Marchesini that not only score an impressive total weight saving of 5.5lb (2.5kg), but also look spectacular. These highly intricate nine-spoke wheels highlight the delicate machining in natural aluminium set against a black finish.

Ducati’s technical partner, Pirelli, worked with the Diavel’s designers and engineers to develop the incredible Diablo Rosso II tyres. While the front uses a conventional 120/70x17 section with a tread pattern designed for enhanced wet weather performance, the 240/45x17 rear represents the latest innovation in tyre design with a sport-oriented profile being applied to custom-style width.

The massive rear employs bi-compound technology to enable high grip levels at full lean angle while providing high mileage and uses Enhanced Patch Technology (EPT) to maximise the contact patch at all angles. The tread pattern and compounds deliver great performance in all conditions, especially the wet.

This new design of tyre enabled Ducati to achieve the style they had envisioned for the Diavel without compromising the authentic Ducati performance of the chassis. This partnership of parallel development between chassis and tyre design has contributed massively to Ducati “changing the rules” in this segment.



## **Braking system & ABS**

The Diavel front brakes use Brembo's incredibly powerful Monobloc callipers, which deliver outstanding performance actuated by new integral alloy master cylinders with unique shape reservoirs sporting milled tops. The 4-piston, twin radially-mounted callipers grip 320mm discs, while a single 265mm disc on the rear is gripped by a two piston calliper, also by Brembo. The Diavel Carbon uses specially milled aluminium disc carriers which have natural aluminium coloured recesses machined around the weight saving cut-outs in contrast to the carrier's black finish around the centre. Typical of Ducati, these top-of-the-range components provide outstanding levels of braking and set a new benchmark in this category.

The system is equipped with the latest, most compact, Ducati Bosch-Brembo ABS system as original equipment on both versions, providing a major contribution towards performance control. Top Brembo components combined with Bosch ABS, the special Diavel chassis configuration and Pirelli's Enhanced Patch Technology (EPT) result in a braking performance even greater than that of the awesome Ducati Superbikes.



## DIAVEL TECHNOLOGY

### Lateral radiators

The technical solution employed for keeping the frontal lines of the Diavel clean was to place two highly efficient lateral radiators on both sides of the bike. These well-ducted units, located beneath the fuel tank, use aerodynamics to help draw air flow through the radiators and are assisted by high-flow electric fans when required. The design combines form and function to enhance the muscular shape of the bike.

### Split-level instrumentation

Even the Diavel's instrumentation is a masterpiece of cutting-edge technology. The upper LCD display is mounted on the bar-riser and provides main information such as speed and rpm, in addition to warning lights, time and temperature.

The lower, full colour Thin Film Transistor (TFT) display is styled into the fuel tank and provides an incredibly clear account of current Riding Mode, gear selection and DTC setting as well as total mileage and trips. Used on mobile phones and computers, TFT technology is a variant of LCD and displays easy-to-read high resolution graphics. The Diavel's TFT display goes one step further by using the sensitivity of its surrounding light to decide upon black or white background colour. When stationary, the lower display also doubles as the latest user-friendly control panel to personalise DTC and RbW settings within each Riding Mode before saving.#

### Hands-free ignition

The Diavel's ignition is actuated by an electronic key in the rider's pocket, which communicates with the motorcycle when within a distance of approximately 2 metres (6.5ft). The motorcycle recognises the dedicated key code and automatically enables the bike's systems. Pressing the key-on switch then activates all systems to "on" and the engine is ready to be started. The electronic key, which internally consists of a radio circuit, externally doubles as a mechanical flip-key, required to open the seat and fuel tank cap. When parking the motorcycle, an electronic lock can be actuated on the steering simply by applying full steering-lock and pressing the ignition-off button a second time.

### Ride-by-Wire

The Ride-by-Wire (RbW) system is an electronic interface between the Diavel's twistgrip and engine, which configures an ideal power response depending on the Riding Mode selected. The twistgrip no longer has a throttle cable connected directly to the throttle body butterflies, but instead delivers a signal to a control unit, which in turn operates the butterfly opening electronically. The RbW system uses three different mappings to regulate the power delivery: 162hp with a sports-type delivery, 162hp with a progressive delivery suitable for touring, and 100hp with progressive delivery for city use.



## **Riding Modes**

The Diavel incorporates the very latest in innovative Ducati technologies, including the recently introduced electronic Riding Modes. Selectable from the left-hand switchgear - even while riding - the choice of three pre-set modes are programmed to instantly change the character of the Diavel. The three modes are enabled by combining class-leading technologies such as Ride-by-Wire (RbW) and Ducati Traction Control (DTC).

The RbW system administers different mappings to regulate power delivery by interpreting the rider's throttle input, while the world-beating DTC uses eight levels of system interaction to enhance control by reducing rear wheel-spin under heavy acceleration. Although each mode has pre-set values of RbW and DTC, each of these two elements can be finely adjusted within each of the three Riding Modes and saved to create a personalised riding experience.

## **Sport**

The Sport Riding Mode provides the Diavel rider with an adrenalin-fuelled 162hp ride and enables the rider to have full-on throttle response for maximum acceleration. Ensuring the full Testastretta 11° experience, the Sport mode also lowers the DTC system intervention to level 1 for riders who prefer their performance a little closer to the traction limit.

## **Touring**

The Touring Riding Mode is also programmed to produce 162hp, however, with a smoother, more user-friendly power delivery. Rear end traction is enhanced by increasing DTC system intervention to level 3, specifically intended for an enjoyable and relaxing ride ideal for long distance and ensuring maximum comfort for both the rider and passenger.

## **Urban**

As riding on city streets can require more attention to the surroundings than to throttle inputs, the Urban Riding Mode instantly changes the Diavel to provide a manageable and confident ride. Power output is reduced to 100hp and DTC is further enhanced to level 5 to provide a higher system intervention during the most chaotic of stop-start traffic.



## **Ducati Traction Control**

The racing-derived Ducati Traction Control (DTC) is a highly intelligent system which acts as a filter between the rider's right hand and the rear tyre. Within milliseconds, DTC is able to detect and control rear wheel-spin, considerably increasing the bike's active safety and performance. DTC is an integral part of the pre-programmed Riding Modes on the Ducati Diavel and enables riders to fully enjoy the power of the Testastretta 11° engine.

The system offers eight levels of "sensitivity", each programmed with an amount of rear wheel-spin tolerance. These levels are in line with progressive levels of riding skills classified from one to eight. Level one is programmed to offer the least amount of interaction for sport-oriented riders, while level eight uses the most amount of interaction for complete confidence.

DTC levels are factory pre-set in each of the three Riding Modes, but can be individually customised and saved to suit the rider by accessing the new user-friendly set-up menu. A "default" option is available to easily return all settings to factory pre-sets.



## DUCATI DIAVEL CARBON

### Performance combined with style

The 205kg (452lb) Diavel Carbon embodies the true nature of the Diavel concept, where performance combines with style to celebrate Italian engineering at its best. Lightweight composites and milled aluminium components meld the two worlds of sport and style with features that are both visually beautiful and functionally high-performance.

The Diavel Carbon comes exclusively in stunning “red carbon” (gloss red over matte carbon) with red frame and rolls on black wheels, turned and milled to expose the natural aluminium below. While carbon fibre is used for the tank panels, single-seat cover and front mudguard to reduce weight and apply a race-like feature that runs deep in the DNA of Ducati, a low friction diamond-like carbon finish gives the Marzocchi fork sliders a spectacular look as well as performance-enhancing action.

Helping the Diavel Carbon to accelerate faster, stop sooner and change direction with even more agility is a valuable 5.5lb (2.5kg) saving of “unsprung weight” by using beautifully forged, lightweight Marchesini wheels. The wheels, which are finished in black, are machine-turned and milled for maximum weight reduction and intricately engineered decoration. The black disc carriers undergo a similar milling process to enhance the recess around the weight saving cut-outs, the natural aluminium colour contrasting effectively against the original black carrier.

### Diavel colours and defining features

The Diavel now offers three stunning new colour versions with special defining features. Two “street-sport” schemes introduce metallic blue or Ducati red with stylish white stripes, colour-matched Trellis frames and white wheels and feature tank-side air-ducts in natural aluminium and carbon fibre radiator panels, while the Diavel Dark in sophisticated matte black is further stealth-enhanced with DLC-coated black fork sliders, black-anodised tank-side air-ducts, and black-finished silencers, foot control pedals, bars, mirrors and headlamp body. Additionally, All three colour versions are also equipped with vintage-style, horizontally-ribbed seat upholstery.

The new Diavel Strada sports an elegant race titanium matte colour scheme, set against a racing black frame and black wheels with subtle black textured finish for the side luggage, while the Diavel Carbon, now exclusively in stunning “red carbon” (gloss red over matte carbon weave) with red frame rolls on black, forged wheels by Marchesini, turned and milled to expose the natural aluminium.