

# CBR600RR ABS



New piston, cylinder head and muffler improve mid-range torque delivery, giving enhanced drive out of corners on track and on the road.

Compact, attractive and highly practical instrument panel features a new ABS indicator.

Fuel-injected DOHC liquid-cooled inline-4 engine is compact, lightweight, mass centralised and features a new high resistance valve lifter.

Stylish new oval-shaped indicators with clear lens and orange bulb enhance the aggressive and purposeful styling lines.

Distinctive, low-profile Line Beam headlights.

Redesigned titanium exhaust with new tailpipe and inner pipe shape achieves lighter weight and features CBR1000RR Fireblade technology.

Ground-breaking electronically-controlled "Combined ABS" for Super Sports overcomes the problem of pitching caused by the short wheelbase of a sportsbike, providing superb stability and controllability as well as excellent deceleration without interference to sports riding.

New monoblock front brake calliper saves weight.

New undercowl, more precise sculpting and new air vents create a highly effective airflow for enhanced stability.

Weight savings in the engine, exhaust and chassis ensure the CBR600RR remains the the lightest machine in its class.



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**2009** Press Information



## Introduction

The stunning new 2009 CBR600RR is set once again to stretch the boundaries of dynamic and visual motorcycle performance. Combining peerless speed on the race track with impeccable road-going manners, the supremely compact and potent new machine allows an ever-wider range of riders - from near-novice to expert - to thrive and excel in the saddle. And for 2009, the exciting addition of optional electronically-controlled "Combined ABS" puts the CBR600RR right at the forefront of enhancing confidence in motorcycle safety.

Now in its fourth generation, the 2009 machine builds on the heritage of blistering pace and supreme control set in 2003 by the first CBR600RR - and, like a fine wine made from the purest ingredients, it's improving with age. Clearly influenced by, and using technology derived from, Honda's MotoGP campaign, the machine benefits from the common DNA it shares with the World Championship winning RC211V and this year's contender, the RC212V. With its twin philosophies of ultra light weight and easy, precise handling, the CBR600RR stands out from the crowd, with every rider able to feel the pleasure of the Super Sport experience, even if they're not an expert Super Sport rider.

With key technical enhancements for 2009, the CBR600RR reasserts its position as the leader in this most competitive of classes, with improved performance both as an accessible road-going machine and a proven race winner. Among the changes for 2009 are updates to the CBR600's ultra-compact engine which have improved the torque from 8,000 rpm to 12,000 rpm to give even better driveability and flexibility. The fairing has been improved to enhance stability, and exciting new colour schemes are designed to attract a wider range of image-conscious riders.

For 2009, Honda continues to lead the way in the world of high performance sports machinery by introducing the option of electronically-controlled "Combined ABS" on the CBR600RR for the first time. Proven to be a significant aid in emergency braking situations, the availability of Combined ABS on the 2009 CBR600RR once again demonstrates Honda's commitment to the continuous improvement of motorcycle confidence, while offering maximum choice to its customers.

In order to fit Combined ABS on such a sport-oriented machine, Honda has developed a brand new system suitable for the special demands of Super Sports riding. While not designed to be a performance enhancement for riding at maximum pace on the track, Honda's electronically-controlled "Combined ABS" is a huge step forward in motorcycle ABS, which has not been seen before on such a high performance sports motorcycle.

With the enhanced security and confidence that go hand in hand with Combined ABS, the riding pleasure of the CBR600RR will now be opened to even more riders.



## Development Concept

With an all-new CBR600RR launched in 2007, the model once again leapt to the forefront of this most intensely fought class of motorcycling. Exceptional performance on the race track was coupled with a "rightness" and ease of use which could not be equalled by its rivals.

For the 2009 update, the goal for Honda's development team has once again been to enhance a machine capable of the fastest, most intense track riding, while also maintaining and augmenting its ability to deliver a controllable and naturally easy road-riding experience. The designers have once more held true to the three goals of "Lighter Weight for Ultimate Control", "Ultimate Fun on Winding Roads" and "Fastest on Track, Fastest Everywhere".

## Styling

The CBR600RR's sleek and minimalist styling offers the optimum combination of wind protection and aerodynamic efficiency, providing both comfort to the rider and maximum performance at all speeds. For 2009, subtle but significant changes have been made to the fairing with a new undercowl, more precise sculpting and new air vents added to create a more effective airflow at medium and high speeds. The effect of this is to enhance machine stability, especially in longer, high-speed corners. Although this has involved the addition of some material, the overall weight of this year's CBR600RR remains the same as the previous model. This has been achieved by careful weight savings in the engine, exhaust and chassis. At an amazingly low 184kg kerb weight, it remains the the lightest machine in its class.

The CBR600RR's aggressive and purposeful styling lines are further enhanced by sleek, new indicators at the front and rear. With a clear lens and orange bulb, the oval-shaped indicators match those often fitted as an aftermarket addition by fashion-conscious owners. Well, now they're fitted as standard.

These complement the distinctive pair of low-profile Line Beam headlights in projecting a modern image that's in keeping with its racing roots. These lightweight, ultra-sleek units feature compact, high-illumination multi-reflector designs projecting through clear lenses to provide a brilliant view of the road ahead.



## Colouring Concept

This superb road and track machine will be launched in four sensational new colour variants that underline its world-leading capabilities and emphasise the black frame and agile profile.

The main colour (standard/non-Combined ABS version only) is an unprecedented Limited Edition aimed squarely at the urban and intensely fashion-conscious market. It combines a cool white base with striking electric blue fairing, front cowl and rear cowl graphics. The front cowl and fairing feature a new and stunningly original CBR Limited Edition logo, enhanced with a highly detailed graphic design that reflects both 'graffiti-esque' splashes and a cityscape at night. The design also contains a subtle 600RR logo featured in a repeated pattern that's very much like carbon fibre. Fresh and contemporary, it will appeal to a wide range of riders who are not necessarily attracted to the Super Sports market, and presents the CBR600RR's accessible riding qualities to a whole new following.

The main colour for the ABS version is a heady white/red/blue tricolour featuring a shimmering night-sky blue that is subtly reminiscent of Repsol blue. The brake pins on this version are titan-coloured, making an impressive contrast with the new Sherry Topaz Brown Metallic brake calliper.

The lime green version is a daring and eye-catching direction that grabs and holds the attention, and emphasises the new CBR600's fresh and sporty hi-tech image.

The fourth colour choice is a more classic Graphite Black with contrasting Italian Red stripes on the rear cowl, front cowl and tank. Again, the emphasis is on the CBR's impressive sports heritage and, like the others, it proudly bears a CBR logo that stirs thoughts of its CBR1000RR kinship.

- Pearl Sunbeam White/ Italian Red/ Pearl Siren Blue ('Tricolour')

### Colours

- Pearl Sunbeam White (Limited Edition)
- Graphite Black / Italian Red
- Graphite Black / Bright Lime Green Metallic



## Engine

The searingly quick 600cc liquid-cooled inline-4 powerplant at the heart of the CBR600RR has a well-deserved reputation for delivering cutting-edge Supersport performance along with excellent levels of driveability. The result is race-winning performance on the track and all-round flexibility on the road. Extremely light and superbly compact, the engine's efficient power delivery and potency encapsulates the spirit of the CBR600RR, while being right at the heart of the bike's philosophy of mass centralisation.

With Honda's PGM-DSFI Dual Sequential Fuel Injection System constantly metering the precise fuel requirements, the motor provides a seamless progression of power from tickover right up to the higher reaches of the rev range.

For 2009, changes have been made to the piston, cylinder head and muffler to improve the torque delivery in the range of revs between 8000-12000 rpm. This all-important extra "mid-range" gives improved drive out of corners both on track and on the road, increasing the flexibility of the motor and making the CBR600RR both faster and easier to ride. The engine also gets an innovative new high resistance valve lifter, specially developed for reduced surface pressure and maximum durability. This was achieved by replacing the conventional casting with a nitride compound layer plus an oil pit. The titanium exhaust has been redesigned, particularly the tailpipe and inner pipe shape. It also receives a new popup valve system, the same as the one used in the CBR1000RR Fireblade.

The super-effective ram-air induction system, based on the World Superbike Championship winning VTR1000 SP-2, ensures a high pressure feed of cool, dense air to the CBR600RR's airbox, allowing for maximum engine performance as speeds increase.

The engine is equipped with a knock sensor that maintains optimum spark advance during mid-to-high speed operation and constantly

monitors combustion performance. Should the knocking of detonation be detected, the system automatically retards the spark advance just enough to eliminate the problem. Even when used with low octane fuel, it instantly retards timing until any signs of detonation or knock disappear, and then gradually advances the timing again to a point just short of the knock zone, thus maintaining optimal combustion characteristics at all engine speeds.

The CBR600RR's transmission also capitalizes on the engine's performance characteristics for stronger acceleration and greatly reduced gear lash felt during transitions between acceleration and deceleration. The result is a much smoother and more instantly responsive riding experience than that found on virtually any other machine in its class.

Fuel is held in an 18-litre fuel tank - the largest capacity of the Supersport class - allowing the CBR600RR rider to extract the maximum riding satisfaction between fill-ups.



## Frame

The Fine Die-Cast frame has set a new standard for the Supersport 600 class and remains unchanged for 2009, offering the combination of rigidity and precisely-engineered torsional flex that gives the CBR its legendary control and handling prowess.

High quality 41mm inverted HMAS cartridge-type forks ensure the front wheel can follow the finest undulations of the road or track, while absorbing bumps and providing the controlled and comfortable platform that's needed for riding at all speeds.

At the rear is Honda's pioneering Unit Pro-Link suspension - the same type of system used in Honda's MotoGP racer. Combined with a relatively long swingarm, this technically advanced system isolates the frame from the stresses generated by conventional suspension systems, while allowing for improved weight distribution and enhanced mass centralisation.

The compact dimensions of the CBR600RR remain unchanged, with an amazingly short 1375mm wheelbase forming the basis of the machine's athletic agility and responsive handling. Meanwhile Honda's ground-breaking HESD electronic steering damper preserves the machine's stability at all speeds, while allowing for light and easy low-speed handling.

## Brakes

The CBR600RR's brake set-up features advanced, radially mounted 4-piston callipers and 310mm front disks which give sensational stopping power and ultimate finesse.

For 2009 a new, lighter monoblock front calliper is fitted.

At the rear, a 220mm disc is gripped by a single-piston calliper for precise control.

### **Electronically-Controlled "Combined ABS"**

The demands of a braking system for a Super Sport machine are different and more exacting than those of a more conventional road-going motorcycle.

Brakes on a road-going machine will most often be used only to a moderate level of intensity, with maximum braking reserved for emergency situations or perhaps very occasional fast rides. In these circumstances a Combined ABS can be designed to deal with extreme braking as an emergency, rather than as a regular occurrence. The upshot of this is that Combined ABS on a road-based machine can be relatively intrusive to the rider - because in theory they will only use it in an emergency situation and will not mind.

The story is very different for a Super Sports machine, where extreme braking can be considered as one of the bike's regular performance requirements. A system that was insensitive or became invasive whenever a rider neared the upper limits of braking performance would be unsatisfactory. In short, for a Super Sports machine, a Combined ABS must allow the rider to brake very close to the limit before activating, and when it does, the reduction in braking force must be very smooth in order not to unsettle the machine, or rider.

It is for this reason, along with the possibility of adding weight, that Combined ABS has not been fitted to sports machines. Until now, that is.

## Equipment

In addition the extreme pitching forward of weight under braking, which enhances the braking ability of the front wheel while reducing traction from the rear, calls for a very subtle and advanced system in order to provide an acceptable level of performance from a Super Sport braking system.

Honda's new electronically-controlled "Combined ABS" provides just this level of performance. In exhaustive testing, both on the road and racetrack, development riders have found that the system exceeds their demands and out-performs the rider's ability to brake on most occasions. An average ("non-expert") rider using a conventional braking system needs several braking attempts to attain braking performance approaching that of the Combined ABS. An expert rider using a conventional system will need fewer attempts to reach a similar level. However, only in an example such as a racetrack situation, where an expert rider repeatedly brakes into the same corner was it found that the tester could outperform the Combined ABS.

The confidence benefits are tremendous for riders of all skill levels, especially on public roads, where riding circumstances differ vastly.

### Instrument Panel

The CBR600RR's instrument panel design is compact, attractive and highly practical. Its tachometer features large, easily distinguished odd numbers and smaller even numbers for easier recognition and differentiation. There's also an ABS indicator, as well as providing high-visibility LCD readouts of vehicle speed, odometer, trip meter fuel gauge and clock. Brilliant ISO-marked LED indicator lights are positioned around the perimeter of the panel. The instrument panel comes alive when the ignition key is switched on with an eye-catching startup routine that flashes the indicators and sweeps the tachometer needle.

### Honda Ignition Security System (HISS)

The CBR600RR is secured by Honda's highly effective HISS anti-theft system. A fail-safe electronic interlock prevents the engine from being started with anything other than the motorcycle's two original keys. Totally disabling the engine at the very heart of its ignition system, the system cannot be bypassed by either hot-wiring the ignition or exchanging the ignition switch module.



## Optional Equipment

Honda Access Europe will also provide the new CBR600RR with an extensive range of optional equipment which has been specially designed to complement all aspects of its road and track performance. These include:

- A 70% black-tinted, WVTA approved windscreen which accentuates the CBR600RR's aggressive, race-ready image. Height is same as the factory standard model.
- A colour-matched pillion seat cowl that snaps into place to accentuate the CBR600RR's keen, competitive look. The cowl features a 4-way adjustable cushion, a 3D CBR logo and Honda Racing logos on either side, and leaves easy access to the underseat space.
- A selection of specially designed carbon-fibre parts, including a front mudguard that also protects the lower front fork tubes, a rear wheel hugger that protects chassis internals and an exhaust guard. All parts guarantee flawless Honda quality fit and finish and feature the Honda Racing logo.
- A motion and vibration-sensitive AVERTO alarm kit that deters potential thieves with a loud, piercing siren. The kit features 8 sensitivity settings and a 'sleep mode' that prevents the battery from draining when not in use.
- A tilting tubular steel paddock stand that lifts the motorcycle by the end of its swingarm to facilitate cleaning and rear wheel maintenance.
- A carbon-fibre-look protective tank pad and fuel lid cover set adorned with the HRC logo. A matching meter panel and top bridge cover are also available.
- An attractive racing sticker set that includes fairing and wheel stickers.

# Specifications

General	
Model	CBR600RR ABS
Mold Type	ED-type
Engine	
Type	Liquid-cooled 4-stroke 16-valve DOHC inline-4
Displacement	599cm <sup>3</sup>
Bore x Stroke	67 x 42.5mm
Compression Ratio	12.2 : 1
Max. Power Output	88.1kW / 13,500min <sup>-1</sup> (95/1/EC)
Max. Torque	66Nm / 11,250min <sup>-1</sup> (95/1/EC)
Idling Speed	1,400min <sup>-1</sup>
Oil Capacity	3.5 litres
Fuel System	
Carburation	PGM-DSFI electronic fuel injection
Throttle Bore	40mm
Aircleaner	Dry, cartridge-type paper filter
Fuel Tank Capacity	18 litres (including 3.5-litre LCD-indicated reserve)
Electrical System	
Ignition System	Computer-controlled digital transistorised with electronic advance
Ignition Timing	Independent 4-cylinder 3D-mapped computer control
Sparkplug Type	IMR9C-9HES (NGK); VUH27D (DENSO)
Starter	Electric
Battery Capacity	12V / 8.6AH
ACG Output	343W
Headlights	12V, 55W x 1 (low) / 55W x 1 (high)
Drivetrain	
Clutch	Wet, multiplate with coil springs
Clutch Operation	Mechanical; cable-actuated
Transmission	6-speed
Primary Reduction	2.111 (76/36)
Gear Ratios	2.750 (33/12)
	2 2.000 (32/16)
	3 1.666 (30/18)
	4 1.444 (26/18)
	5 1.304 (30/23)
	6 1.208 (29/24)
Final Reduction	2.562 (41/16)
Final Drive	#525 O-ring sealed chain
Frame	
Type	Diamond; Fine Die-Cast aluminium

Chassis	
Dimensions	2,010 x 685 x 1,105mm
Wheelbase	1,375mm
Caster Angle	23° 55'
Trail	98mm
Turning Radius	3.2m
Seat Height	820mm
Ground Clearance	135mm
Kerb Weight	194kg (F: 99kg; R: 95kg)
Max. Carrying Capacity	180kg
Loaded Weight	374kg
Suspension	
Type	Front 41mm fully adjustable inverted HMAS cartridge-type telescopic fork, 120mm axle travel
	Rear Unit Pro-Link with gas-charged remote reservoir damper, adjustable spring preload and compression and rebound damping, 130mm axle travel
Wheels	
Type	Front Hollow-section triple-spoke cast aluminium
	Rear Hollow-section triple-spoke cast aluminium
Rim Size	Front 17M/C x MT3.50
	Rear 17M/C x MT5.50
Tyre Size	Front 120/70 ZR17M/C (58W)
	Rear 180/55 ZR17M/C (73W)
Tyre Pressure	Front 250kPa
	Rear 290kPa
Brakes	
Type	Front 310 x 4.5mm dual hydraulic disc with radial-mount 4-piston callipers, floating rotors, ABS and sintered metal pads
	Rear 220 x 5mm hydraulic disc with single-piston calliper, ABS and sintered metal pads