

CB1000R



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2008 Press Information



Introduction

Stunning Performance Naked style, breathtaking acceleration, light, responsive handling and invigorating thrills at every twist of its throttle. The new CB1000R packs full-blooded litre-class Super Sports performance into a compact, spare and muscular-looking form that speaks of good times and fast friends, blasting down the avenue in search of excitement in the bright lights.

Sales of large-displacement Naked models, and particularly big-bore Performance Naked machines have rapidly grown over the last several years, and now attract a wide cross-section of both new and experienced riders attracted to their uncomplicated style and sharp focus on the pure basics of motorcycle riding enjoyment. These riders are not only looking for exciting top performance, they also place high value on comfort, user-friendliness and distinctive styling that heightens their sense of pride in the bike they ride.

For years now, Honda's popular lineup of Performance Naked motorcycles have consistently set the stage for exciting riding fun coupled with slim, lightweight proportions and cool, attractive looks that set hearts on fire. Introduced in 2002, Honda's Hornet 900 commanded a leading role in the litre class of the Performance Naked segment, featuring distinctive Hornet styling, lithe, responsive handling and the powerful midrange acceleration of its retuned CBR900RR Fireblade engine. The times, however, have caught up with the Hornet 900, as have tightening exhaust emissions regulations, and the time was right to start with a clean slate and chart a new future for Honda's Performance Naked flagship.

Gauging recent trends in the litre-class European street bike scene, Honda's development team set out to create a bold new statement in Performance Naked design, incorporating many of the latest innovations developed for its cutting edge line-up of high-performance Supers Sports corner-carvers. Setting their sights on crafting a startling new look of Naked aggression that delivers up hard-charging performance and swift handling highlighted by compact proportions and light weight, the team put together a whole new concept in cool streetbike style that sets pulses racing. Prowling the avenues or even standing still, the exciting new CB1000R will surely write a whole new chapter in Performance Naked motorcycle design for years to come.



Development Concept

In conceptualising their new Performance Naked street scorcher, the CB1000R's development team set out to convey the powerful impression of performance in a bike that looks fast even standing still. Looking to create a bike that can be just as fun and thrilling to ride casually prowling around the streets of the city as tearing up the twisties outside of town, the team adapted recently developed and proven engine and chassis components that could together provide the desired range of top performance in a compact configuration that more people could fully enjoy.

As sketches were drawn and ideas developed, the team gradually began to focus on a guiding theme that could express the image of a downtown party bike. One that could drop in and meet the friends at the local hangout, attract admiring looks and comments with its distinctive design and superb quality of parts and execution, and then take off in a roar of wheel-lifting power and performance to back up its impressive looks: a "Bar Star and Twist King."

With this fun-loving image firmly in mind, the CB1000R's development team set about making a compact, great-handling mid-sized runabout that packs an eye-opening punch of exhilarating litre-class acceleration with each and every twist of its throttle. One that offers smooth, easy control even in dense traffic, yet is always ready to back up its wildcat looks with quick dashes of pleasure-producing power and nimble handling along winding roads that anyone would want to enjoy again and again.

The CB1000R's list of exciting features include:

Styling Features

- Coolly sophisticated 'Bar Star' image with exciting Performance Naked style.
- 'Mass forward' design concept positions rider forward, as emphasised by short, compact tail cowl.
- Eye-catching high-tech-look parts integrated with sophisticated overall design that grabs attention.

- Angular-looking, semi-underslung stainless steel exhaust system lowers centre of gravity for lighter, more responsive handling and an exhilarating sound.
- New-design triangular multi-reflector headlight integrated into compact bikini cowl with unique LED position light.
- Attractive 17" wheels featuring impressive swept 4-spoke designs.
- Magnesium cylinder head and ACG covers for reduced engine weight.

Performance Features

- Compact, lightweight 998cm³ liquid-cooled fuel-injected inline-4 engine based on 2007 CBR1000RR Fireblade, but retuned for stronger low-to-midrange performance.
- Light-action hydraulic clutch can be engaged at less than 2,000rpm without fear of engine stalling.
- Advanced gravity die-cast aluminium Mono-Backbone frame.
- Swift-handling, fully adjustable 43mm inverted front fork.
- Lightweight and rigid single-sided cast aluminium Pro-Arm swingarm supported by adjustable Monoshock rear suspension.
- Wide, high-performance Super Sports-class radial tyres.
- Lightweight 310mm floating front disc brakes with radial-mount 4-piston callipers. 256mm dual-piston calliper rear disc brake.
- Combined-ABS version features 3-piston front brake callipers and advanced antilock brake system for confident control in all braking situations.



Styling

For those who relish the attention that comes with riding a true performer, and the performance to back it up, the totally new CB1000R features stunning styling, breathtaking engine performance and comfortably quick handling in a compact litre-class road burner that anyone can enjoy.

The new CB1000R features a dynamic, hard-edged design that immediately grabs attention with its unmistakable look of muscular performance. As cool to look at as it is a blast to ride, its lightweight form shows off its sharply styled bodywork and sculpted mechanical parts to riveting effect. The CB's bold styling projects a wild 'Bar Star' image with cool, sophisticated lines that evoke a big jungle cat poised and ready to pounce on its prey. Much of this aggressive impact is embodied in the CB1000R's distinctive 'mass-forward' orientation, which positions the rider slightly forward and seemingly above its dynamic inline-four engine. Its short and slim tail cowl and brawny forward-tilted fuel tank and side cowls further convey an image of awesome 'Twist King' street performance. Mechanical parts like its magnesium head and ACG covers and natural finish aluminium pivot plates exude a high-tech look of purposeful performance, accentuated by the eye-catching array of nickel-plated Allen-head bolts that describe the outer perimeters of the engine's side covers.

The new CB1000R's remarkably short and slim seat and tail cowl takes obvious design cues from the newly redesigned CBR1000RR Fireblade and Honda's powerful RC212V MotoGP racer before it. Its compact form locates the rider closer to the steering head, for a riding position that shifts the CB1000R's balance of weight slightly forward onto its front tyre, achieving a greater feeling of crisply responsive control along the winding roads that sports bike riders love so well.

Up front, the CB1000R's compact bikini cowl surrounds a brilliant new three-corner shaped multi-reflector headlight with a distinctive LED position lamp integrated into its 'chin'. Behind that cowl resides an eye-catching, high-tech, fully digital meter panel featuring three large LCD readouts of all operating information. Even its tachometer features an instantly responsive multi-segment LCD readout of engine speed displayed in a wide, sweeping bar that extends across the entire upper side of this compact unit. Below, a large, high-performance inverted front fork complements a robustly styled single-sided Pro-Arm swingarm, while both support stylish 17" swept 4-spoke wheels that provide a strong accent on the CB1000R's exciting performance potential.



Colouring Concept

Following its stunning appearance, the next thing to leave a strong impression about the new CB1000R is its size, or lack of it. Remarkably, the CB1000R looks and feels more like a compact mid-sized sportbike than the full-bodied litre-class performer it really is. Once seated aboard, its compact form and easy reach to both the ground and its controls are simply extraordinary in this class of Naked road machines. Its comfortable seat narrows at the front with a shape that smoothly integrates with its side covers and cast aluminium pivot plate, offering a slim and pleasurable position for fully satisfying riding enjoyment. Behind the roomy, tapered seat, the CB1000R's sleek and compact upswept tail cowl, supported by a strong and rigid cast aluminium rail, confidently carries a pillion passenger and integrates an attention-getting LED taillight into the underside of its tail. A long and slim moulded plastic arm extends out from under the seat cowl to provide support for the licence plate holder and rear indicators.

The new CB1000R will debut on the streets of Europe in four colour variations that emphasise its proud mix of cool urban style and powerful performance. A wild metallic green stands out with a shimmering hue that highlights the CB's uniquely poised street-wise style. In deep pearlescent black, the CB1000R exudes the sharp-eyed sense of looming big-cat menace as it prowls the night streets of the big city. A brilliant pearlescent white strongly provides a strong, attractive contrast with the CB's dark metallic engine, wheels and body parts for an enhanced look of excitement, while a neutral metallic silver accentuates the CB1000R's mechanical attractiveness with quiet strength.

Colours

- Dragon Green Metallic
- Pearl Nightstar Black
- Pearl Cool White
- Sword Silver Metallic

Engine

The new CB1000R's compact yet powerful 998cm³ liquid-cooled fuel-injected inline-four engine ably delivers the breathtaking power and brilliantly responsive performance one expects from a litre-class street performer. Its high-energy thrust of excitement is generated from a direct descendant of Honda's race-winning Super Sport powerhouse, the exceptional 2007 CBR1000RR Fireblade, winner of the 2007 World Superbike Championship.

Like the mid-displacement Hornet, the CB1000R's mill has been tuned for maximised low-to-midrange performance that produces stronger power and sharper acceleration in the lower reaches of its rev range and more full-bodied torque that pulls hard at each twist of the throttle. However, unlike the CBF1000, the new CB1000R's engine has been tuned for stronger, more exciting power that extends further up the powerband, resulting in nearly 30% stronger performance that is both breathtaking and smoothly linear in its delivery. Features such as an IACV (intake air control valve) keep excessive torque reaction and jerky low-speed performance to a minimum, ensuring smooth, enjoyable operation from start to finish.

Combine all this with the CB1000R's significantly lighter weight and more compact form compared to other bikes in its class, and the result is eye-popping excitement at every twist of its throttle. Power and torque that roll up smoothly and effortlessly from a standing start, and lunge for the horizon when called upon to deliver.

All this power gets to the rear wheel through a light-action hydraulic clutch that takes full advantage of the engine's strong low-end torque to allow it to be engaged at engine speeds of less than 2,000rpm without fear of engine stalling. Even the transmission was re-engineered to achieve remarkably smooth operation, starting with an easy click, instead of clunk, into first gear.

Maximised Torque for Maximised Excitement

For many people, the term 'torque', as related to 'power' is difficult to conceptualise, especially the seemingly contradictory idea that torque can actually be increased by reducing maximum power. Maximised power would obviously seem to be a primary objective of any motorcycle engine design, as bigger numbers would equate with bigger performance and by extension a bigger fun factor. However, that's not always the case, especially with multi-cylinder engines which tend to produce their maximum power at much higher engine speeds than singles and twins.

Rather than peak power, it is torque, especially in the midrange, that is the real 'power' experienced when the throttle is opened. That strong thrust of acceleration you feel pulling at the handlebars and pressing you firmly back in the seat are the signs of powerful torque working to produce maximum excitement, rather than just maximum power generating big numbers. In racing, it is torque that pulls a motorcycle quickest out of the corners or up the hills. On the street, it is the same torque that gives you the most exhilarating feeling of brute power and acceleration. The sooner it kicks in, the greater your visceral enjoyment and excitement at hitting the gas.

This is also the wide area in the engine's power zone where the vast majority of riders spend most of their time, since this is where the most satisfying rush in motorcycling lies. Peak power is fine for racers and those who live on the edge, but it is torque that you really feel and depend on for that swift, breathtaking rush of acceleration to get you away from city traffic lights and down the road in a hurry. And it is this torque that the new CB1000R's development team set out to fully maximise in its engine's development and tuning.

The result is a widely satisfying thrust of acceleration that comes on strong throughout the powerband. With the new CB1000R, just twist the throttle and go; no waiting for the revs to pick up and wind their way into a taller sweet spot. In fact, with its lighter weight contributing to a stronger power-to-weight ratio, the new CB1000R delivers a more dynamic thrust of acceleration throughout its powerband than any other machine in its class, and stronger even than some bikes with a significant displacement advantage. But don't take our word for it. Throw a leg over, grab hold of the throttle and find out for yourself.

Mass-Centralising Low-Slung Exhaust System

Like the 2007 Hornet, one of the main goals in the design of the new CB1000R was achieving optimised mass centralisation for quicker, more neutral handling. One of several important factors in a motorcycle's weight distribution is its exhaust system, and like the 2007 Hornet and 2008 CBR1000RR Fireblade, the new CB1000R features a low-slung system that concentrates most of its weight and mass directly under the engine. This results in significantly quicker response to steering inputs, especially felt when leaning quickly over for tightly executed turns, or side-to-side through a series of tight esses.

The system's exhaust headers reach straight down from the engine's exhaust ports to join together at the lower front corner of the engine, where two exhaust pipes enter the large primary muffler and catalyser system positioned under the engine and rear portion of the main frame. The exhaust then folds around and reaches back through a sleek, angular, upswept extension that contains the main silencer, and exits behind the swingarm pivot, through a uniquely styled tailpipe.

Maximum cornering clearance was also a critical element in the design of the CB1000R's exhaust, and the angular form of this stainless steel system was specially designed to be well out of contact area when cornering hard to the right. The CB's single-sided Pro-Arm swingarm also plays a role in this design by freeing up ample clearance room for the compactly configured system.

The system's built-in oxygen sensor and 300-cell catalyser element combine with the engine's advanced fuel injection system to ensure low emissions that easily conform with strict current EURO-3 regulations while maintaining strong and smooth performance throughout the engine's wide powerband.

Chassis

For a compact, lightweight mid-displacement class form that contributes to sharper overall performance, the new CB1000R is built on a rigid Mono-Backbone frame like that first introduced on the 2007 Hornet. This innovative gravity die-cast (GDC) aluminium frame features relatively simple construction, yet maintains optimal structural strength by holding the engine as a stressed member in a rigid diamond configuration. The frame's three hollow cast sections (front head pipe, backbone and swingarm pivot) are welded together in a highly compact shape that wraps around the engine, achieving lighter weight than conventional steel tube designs, and providing exceptional strength and rigidity for sharper yet smoother handling and instantaneous response to changes of direction.

Mass-Forward Construction

In order to achieve the sharper, more responsive handling desired in this new litre-class Performance Naked, the new CB1000R was designed from the ground up to be one of the lightest, most compact and well-balanced street bikes in its class, with a silhouette and proportions more common to mid-displacement sportbikes. Common to most of Honda's recent high-performance road bikes, emphasis on optimal mass centralisation plays a fundamental role in the new CB1000R's top riding performance. Its heavier components, notably its engine, main frame sections and exhaust system, were positioned as close as possible to the machine's rolling centre of mass while those sections located farther away from its centre were designed for as light weight as possible.

Full Sports Bike Suspension Systems

Like its high-performance Super Sports cousin, the Fireblade, the CB1000R is supported up front by a sturdy and responsive 43mm inverted HMAS cartridge-type front fork that delivers superbly responsive handling through tight corners and uneven sweepers for confident control that rivals many more performance-oriented machines. Providing 120mm of smoothly damped wheel travel, its fork tubes are also fully adjustable for preload, compression and rebound damping, affording customisable control over riding performance.

At the rear, an adjustable Monoshock damper takes up position between the CB's impressive single-sided cast aluminium Pro-Arm swingarm and the back of the frame to provide 128mm of smoothly damped travel for assured handling balanced with compliant comfort.

High-Performance Wheels and Brakes

Like Honda's top Super Sports riding machines, the new CB1000R's dynamically styled 4-spoke cast aluminium wheels mount high-performance Z-rated Super Sports tyres including an impressively wide 180/55 17" radial rear tyre. Providing outstanding performance to back up their distinctive looks, these tyres further ensure precisely responsive high-speed cornering control for exhilarating street riding capability. Held in place by four bolts the CB's Pro-Arm mounted rear wheel further accentuates its cool urban looks in the area beneath its short, upswept tail cowl.

Fast bikes need strong brakes, and in its basic configuration, the new CB1000R mounts an impressive pair of radial-mount four-piston front callipers like those fitted to Honda's race-winning CBRs. These lightweight yet powerful callipers grip wide 310mm drilled floating discs for high-performance braking control on par with the hottest Super Sports. At the rear, mounted to its eye-catching Pro-Arm swingarm is a compact dual-piston calliper slowing a 256mm disc for a superior balance of smoothly responsive braking control.

Optional Combined-ABS Version

The new CB1000R is also available in an advanced Combined-ABS configuration that features the powerfully reassuring braking control of Honda's long-proven Combined Brake System coupled with the smooth, confidence-inspiring operation of its popular Antilock Brake System. Visually, the only major difference between the CB1000R's standard and Combined-ABS versions are its front callipers and lower fork castings. Replacing the standard version's high-performance radial-mount 4-piston callipers are a set of responsive three-piston callipers gripping the same 310mm floating rotors. Each wheel also mounts a small pulsar ring, which is constantly monitored by the Antilock Brake System.



Equipment

The ABS portion of the CB1000R's highly effective Combined Antilock Brake system operates in precisely the same way as Honda's other ABS-equipped models. When braking over uneven or slippery road surfaces, this high-accuracy system instantly reacts to the most minute variations in the relative speed of the two wheels, predicting and counteracting tyre slip before it occurs. With precise control, this system maintains just enough brake pressure for smooth and steadily controlled deceleration that greatly enhances confidence in the CB1000R's ability to stop quickly and surely.

Its proven Combined Brake System links the rear brake pedal to both the compact dual-piston rear brake calliper and the centre piston of its right-side three-piston front brake calliper to provide a measured balance of front brake control whenever the rear brake is firmly used. An inline delay valve ensures that light operation of the rear brake, such as when trailing through a corner, has little or no effect on front brake operation.

Stronger pressure applied to the rear brake pedal results in just enough front brake engagement to provide a more effective balance of front and rear braking forces for smoothly controlled operation. The remaining five pistons of the two three-piston front brake callipers are controlled in a conventional manner by the hand brake lever and provide reassuringly strong braking control to match the CB1000R's aggressive sportbike riding capability.

Aggressive and confident sportbike riding also requires strongly assured braking performance, and the CB1000R's advanced Combined-ABS version provides an exceptional level of smoothly responsive braking control to give all riders more confident stopping power in situations where optimal braking capability is crucial.

Honda Ignition Security System (HISS)

Like most of Honda's larger displacement motorcycles, the new CB1000R is also fully equipped with the highly capable Honda Ignition Security System (HISS), which features a fail-safe electronic interlock to prevent the engine from being started by anything other than the machine's two original keys, thus providing effective protection against ride-away theft. Designed to totally disable the engine at the very heart of its ignition system, the HISS system cannot be bypassed by hot-wiring the ignition or exchanging the ignition switch module.

Optional Equipment

Honda Access will be supplying the new CB1000R with an assortment of optional parts and accessories to accentuate its bold, attractive style and extend its range of operating versatility. These accessories include:

- A colour-matched rear seat cowl that snaps into place to accentuate the CB1000R's purposeful street-brawling look.
- A luxuriously finished Alcantara seat.
- A decorative crankcase cover set.
- A decorative fuel tank cap cover.
- A selection of lightweight and stylish carbon fibre parts specially developed for the new CB1000R.
- A selection of decorative panels.
- A compact alarm unit with motion detector, siren and back-up battery to provide extra protection against vandalism and theft. A low-consumption sleep mode protects battery from drainage.

Specifications

General		
Model		CB1000R
Mold Type		ED-type
Engine		
Type		Liquid-cooled 4-stroke 16-valve DOHC inline-4
Displacement		998cm ³
Bore x Stroke		75 x 56.5mm
Compression Ratio		11.2 : 1
Idling Speed		1,200min ⁻¹
Oil Capacity		3.6 litres
Fuel System		
Carburation		PGM-FI electronic fuel injection
Throttle Bore		36mm
Aircleaner		Dry, cartridge-type paper filter
Fuel Tank Capacity		17 litres (including 4-litre LCD-indicated reserve)
Electrical System		
Ignition System		Computer-controlled digital transistorised with electronic advance
Ignition Timing		5° BTDC (idle) ~ 50° BTDC (10,000min ⁻¹)
Sparkplug Type		NGK: IMR9E-9HES (NGK); VJH27ES (DENSO)
Starter		Electric
Battery Capacity		12V / 8.6AH
ACG Output		350W
Headlights		12V, 55W x 1 (low) / 60W x 1 (high)
Drivetrain		
Clutch		Wet, multiplate with coil springs
Clutch Operation		Hydraulic
Transmission		6-speed
Primary Reduction		1.604 (77/48)
Gear Ratios	1	2.538 (33/13)
	2	1.941 (33/17)
	3	1.579 (30/19)
	4	1.363 (30/22)
	5	1.217 (28/23)
	6	1.115 (29/26)
Final Reduction		2.750 (44/16)
Final Drive		#530 O-ring sealed chain
Frame		
Type		Mono-backbone; cast aluminium

Chassis		
Dimensions	(LxWxH)	2,090 x 775 x 1,090mm
Wheelbase		1,445mm
Caster Angle		25°
Trail		99mm
Turning Radius		2.8m
Seat Height		828mm
Ground Clearance		130mm
Suspension		
Type	Front	43mm inverted HMAS cartridge-type telescopic fork with stepless preload, compression and rebound adjustment, 120mm cushion stroke
	Rear	Monoshock with gas-charged HMAS damper featuring 10-step preload and stepless rebound damping adjustment, 128mm axle travel
Wheels		
Type	Front	Closed-section 4-spoke cast aluminium
	Rear	Closed-section 4-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 4-piston (*Combined 3-piston) callipers, floating rotors (*ABS) and sintered metal pads
	Rear	256 x 5mm hydraulic disc with dual-piston calliper (*ABS) and sintered metal pads

* Combined-ABS version