

2009

Supersport



YZF-R1

YZF-R6



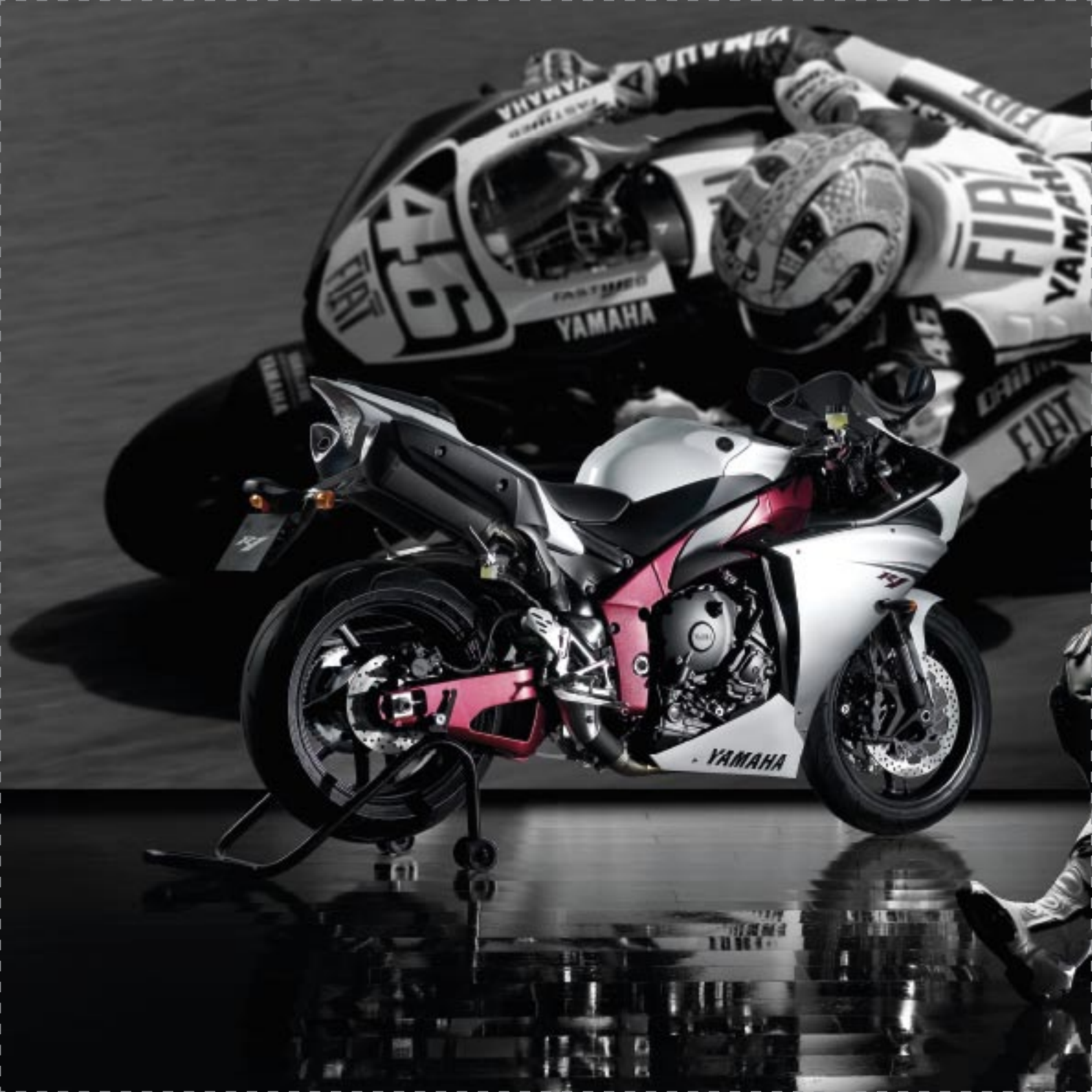




R-Series

Pure performance

Professional riders performing on a closed track





The new YZF-R1 isn't just a great technological advance, nor is it merely our best-ever 1,000 cc supersport bike. It is a new kind of supersport performance, a whole new wave of supersport riding excitement.

At the heart of this transformation is radical, breakthrough technology – a MotoGP-derived short-stroke engine with crossplane crankshaft that delivers uneven firing intervals. This engine delivers totally different feel, offering brilliantly linear power delivery and allowing the rider to find traction like never before. Just ask Valentino Rossi, he uses a similar crossplane crank in his YZR-M1 MotoGP bike.

The secret to this new engine isn't just awesome horsepower, it's the way the uneven firing intervals offer superb throttle linearity, so there's a superb connection between the rider's throttle hand and the rear tyre. Because there's no use having all the power in the world unless you can really feel it.



yzf-R1

Born from MotoGP

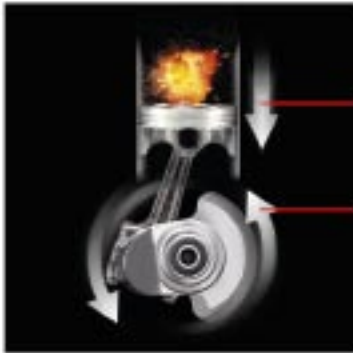


Top right: Inside the MotoGP-winning Yamaha M1



YZF-R1

Core confidence



When you lay down the power on the new YZF-R1 you feel exactly what's going on at the tyre contact patch. It is the remarkable level of control made possible by such feedback that makes the R1 out of the ordinary.

This R1 uses a revolutionary crossplane crankshaft with MotoGP-style firing interval (270° - 180° - 90° - 180°) that totally transforms the feeling of riding an inline four supersport bike, allowing the rider to find excellent traction.

The crossplane crankshaft produces 'combustion' torque, which allows the rider to 'feel' the rear tyre, rather than 'inertial' torque which confuses the throttle-tyre connection. Thus the new R1 generates astonishing traction feel. At the same time the engine feels and sounds smoother, with an unforgettable, growling exhaust note, so riding feels sweeter.

The new R1, producing 182 PS and 115.5 Nm, is here to introduce you to a whole new world of riding excitement that no other supersport machine can deliver.

*Top left: X-ray view of engine
Centre left: Crossplane crankshaft*



Professional rider performing on a closed track





Professional rider performing on a closed track



When it comes to supersport performance, much of our Art of Engineering genius goes into creating the perfect corner performer. And if you ask any racer what's the secret to real cornering speed, they will tell you it's smoothness.

Riding well is all about feeling front and rear traction as you enter and exit corners. Only once you have that feel, can you discover real confidence. This is the confidence that the YZF-R1 delivers. Like its awesome traction-feel engine, the short-wheelbase, long-swingarm frame was created using valuable lessons learned in MotoGP.

Our engineers redesigned the lightweight die-cast aluminium Deltabox frame spars and truss-type swingarm with ideal rigidity balance for maximum traction feel, maximum drive force and superbly controllable steering. And they specified a 190/55R rear tyre for excellent traction feeling. Upgraded six-piston caliper front brakes complement the new engine and chassis. Suspension is multi-adjustable, for riding style and for road/track conditions, and the new 43 mm front fork features independent left/right cushioning that offers improved damping performance and enables easier settings adjustment, according to rider preference.



YZF-R1

*The real art is
the lean angle*



Top right: Aluminium Deltabox frame

Centre right: 2-way adjustable rear suspension

Bottom right: Six-piston caliper with lighter front brake



YZF-R1

*Electrify your
supersport ride*



The R1's cutting-edge electronics work together to create a unique breadth and vividness of performance that perfectly complements the crossplane crankshaft engine. YCC-I (Yamaha Chip Controlled-Intake) electronically adjusts the length of the four intake funnels for perfect intake performance right across the rpm range. YCC-T (Yamaha Chip Controlled-Throttle) uses a 32-bit ECU to control throttle-valve opening for instantaneously responsive and superbly smooth power.

The engine also features twin injectors, titanium intake valves, forged aluminium pistons, ceramic composite-plated cylinders, slipper clutch and a D-mode Map that works in association with the YCC-T.

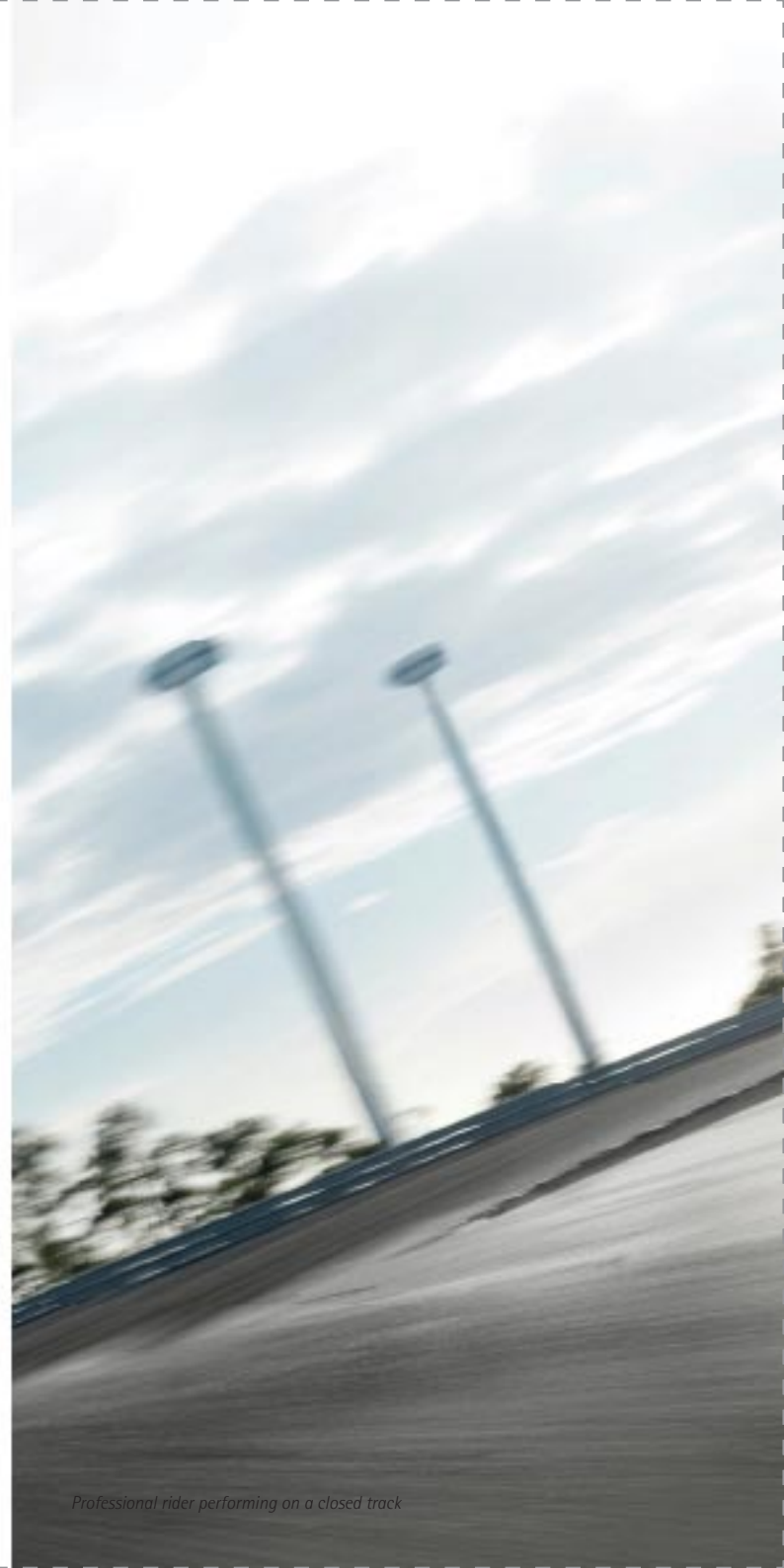
The D-mode Map allows you to choose out of three modes (standard, A and B) the performance profile that best suits the riding conditions. Standard mode for optimum all-round performance, A mode for sharper engine response and B mode for a gentler response to the rider's throttle inputs. Just push the switch on the handlebar.

The new YZF-R1: ride it, believe it.

Top left: YCC-I

Centre left: Throttle body with YCC-T

Bottom left: Instrument panel with D-Mode display



Professional rider performing on a closed track







The new R1's sculptured bodywork expresses the machine's radical, mass centralized design: this is a densely packaged motorcycle that produces awesomely concentrated performance. From its Cobra-eyed front end all the way to its short, upswept mufflers and 190/55R rear tyre, the R1 proves the designer's maxim: function is beauty. This is high-performance transformed into visual perfection. This is Yamaha Art of Engineering in extremis.

The fairing's aerodynamic outer skin and layered inner skin use airflow to maximum advantage to enhance dissipation of engine heat. The twin projector headlights with solenoid-operated high/low beam – a first on a production motorcycle – are more compact and offer a better spread of illumination. Even the fuel tank has been redesigned for enhanced mass centralization and more consistent handling as fuel load decreases. The new R1: designed to win.



YZF-R1

*The brave
new world*



*Top right: Short upswept muffler
Centre right: Projector headlight
Bottom right: Redesigned fuel tank*





The YZF-R6 takes the 600 supersport concept to the ultimate extreme. This motorcycle was born on the racetrack to excite like no other 600, with MotoGP-bred technology tuned to deliver outstanding engine and chassis performance. Which is why the R6 looks totally at home in the pit lane.

The R6's ultra-high-revving short-stroke motor unleashes dazzling power, electrified by our state-of-the-art electronic control systems YCC-I (Yamaha Chip Controlled-Intake) and YCC-T (Yamaha Chip Controlled-Throttle). The chassis delivers razor-sharp, ultra-responsive handling developed through our World Championship racing programmes. Everything about the R6 is geared towards ultimate cornering excitement, towards getting man and machine to work as one for an adrenaline-pumping ride every time.



YZF-R6

Catch the extreme





YZF-R6

Every millisecond counts

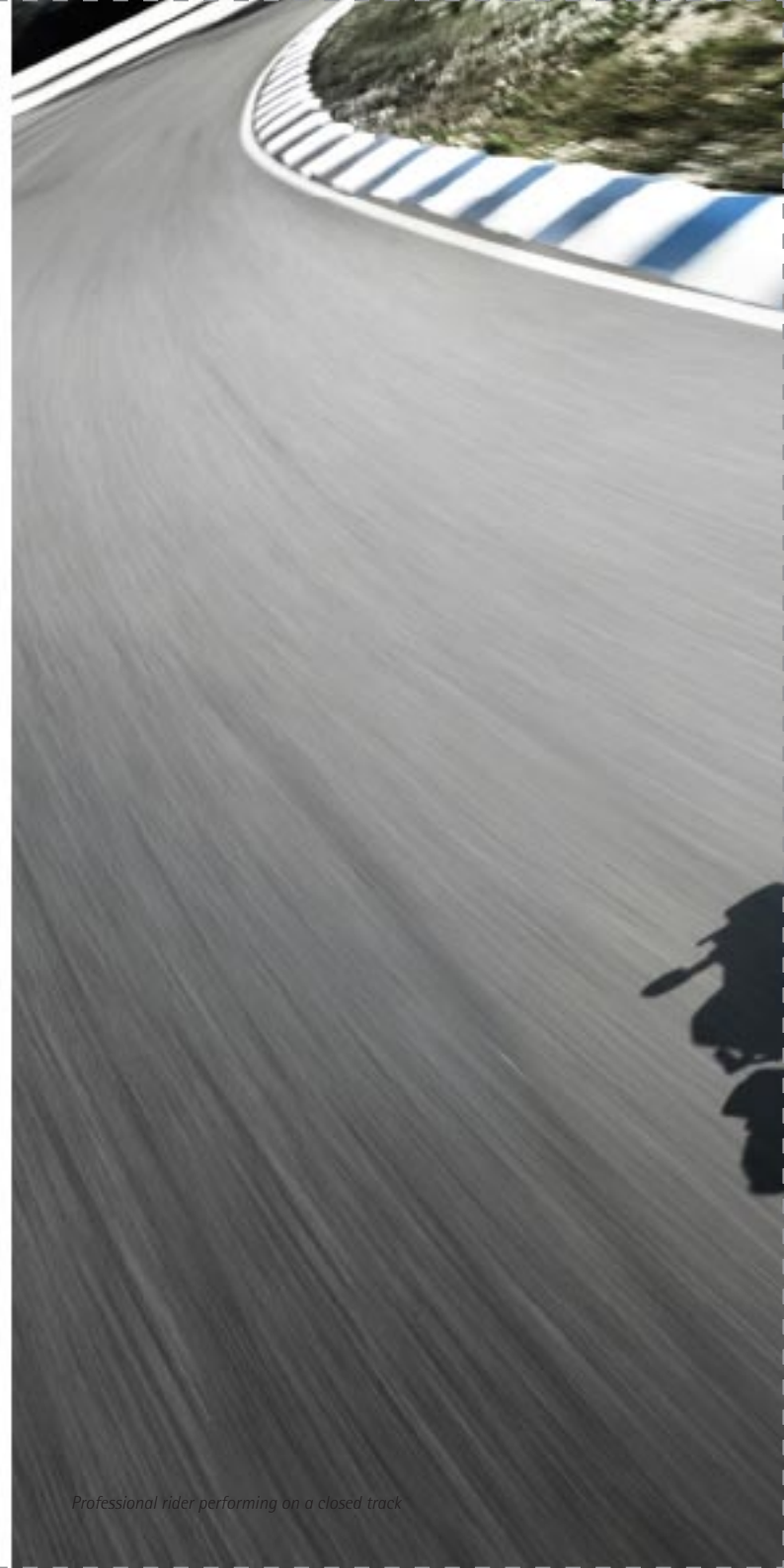


This is R6 race-bred performance.

It's head under the bubble down the main straight, shifting gears, focusing on the fast-approaching Turn One as the engine revs eagerly to peak rpm. Hard on the brakes, down a couple of gears, feel the slipper clutch keep the rear end nicely in line, feel the front end giving you all the feedback you need to flick into the turn with confidence. In an instant you're at the apex, holding your line perfectly, ready to get on the throttle...

Aluminium Deltabox frame and aluminium swingarm with MotoGP-inspired rigidity balance for razor-sharp handling and amazing feedback. Monoblock radial-mount front brake calipers for brilliant braking feel. Four adjustable suspension (pre-load, high-speed compression, low-speed compression and rebound damping) plus adjustable ride height for individually tailored chassis behaviour. R6: know how to attack corners.

*Top left: Aluminium Deltabox frame
Centre left: Radial-mount front brake caliper
Bottom left: Adjustable rear suspension*



Professional rider performing on a closed track





Professional rider performing on a closed track



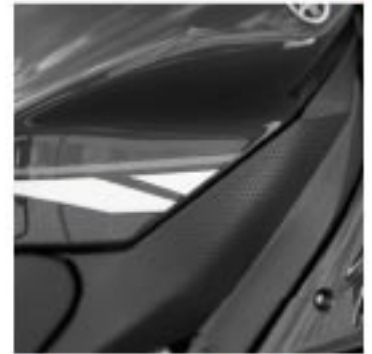
You're at maximum lean now, feeling the front end gripping the road, aiming at the corner exit, bringing on the throttle, confirming rear end traction, then hard on the throttle all the way to the kerb...

This is where the R6's YCC-T makes the difference, making 1,000 calculations per second to deliver instantaneous acceleration and optimum drive torque. This is where the YCC-I electronic air intake kicks in too, the electronically variable intake funnels widening the R6's powerband for faster, smoother corner exits. And then you're heading down the next straight, the ultra-aerodynamic bodywork with winglets and super-slim tail cowlings cutting through the air, the MotoGP-style titanium muffler playing its racetrack music. R6: know how to win.



YZF-R6

max out





R6

YAMAHA



The R6 is engineered to perform at the limit, which is why its specs are straight out of the pit lane. The R6's compact, lightweight 16-valve engine is the pinnacle of 600 performance with free-revving power and a 129 PS peak output! That kind of power takes some serious race-developed technology like special low-friction engine internals, ceramic composite-plated cylinders, titanium valves, twin injectors, straight air-induction system, 13.1:1 compression ratio, close-ratio six-speed gearbox and a torque-boosting EXUP exhaust.

The R6 makes the most of that unreal performance with a chassis that personifies Yamaha's Art of Engineering concept. Check out the gorgeous, lightweight five-spoke wheels, ultra-light magnesium rear subframe, trick digital/analog dash with lap timer, and most of all the aggressive, mass forward aerodynamic body shape that tells everyone that this 600 really is like no other. But get this... the real beauty is in the riding.



YZF-R6

*Engineered for
the edge*



Top right: Slipper clutch

Centre right: Digital dashboard

Bottom right: Compact lightweight 16-valve engine





When your obsession is engineering the finest supersport bikes on the planet, there's only one place to test technology to the limit: the racetrack. Yamaha motorcycles are tested in World Championship competition by the world's greatest riders. We built our reputation by winning world titles with some of racing's greatest heroes like Giacomo Agostini, King Kenny Roberts, Wayne Rainey and Valentino Rossi.

Yamaha's racing spirit fires our R-Series supersport development programme. The lessons we learn in MotoGP, World Superbike and World Supersport allow our engineers to bring you cutting-edge, race-developed technology. And if you want to turn your R1 or R6 into a full-on racetrack weapon, Yamaha Motor Engineering's YEC range of race parts are the only officially approved racing kit parts for R-Series bikes. Used by Yamaha's winning teams in World Superbike, World Supersport, superstock and endurance, this in-house-developed gear is now available to the non-factory rider. Full details at www.yamaha-racingparts.com



R-Series

*The racetrack is
our development
department*







Yamaha's R-Series isn't only about high-performance supersport motorcycles, it's a high-performance lifestyle. Which is why we don't just stop at the bikes, we have created a superb range of accessories, riding gear and branded clothing that fit the R-Series spirit. Our genuine Yamaha accessories allow owners to personalise and tailor their YZF-R1 and YZF-R6 to their individual riding lives. Choose from a full range of bolt-ons: alternative screens, single-seat covers, roller protectors, and front and rear stands. There's trick clothing too: one/two-piece leathers, gloves, paddock jacket, T-shirts and much, much more. Full details from your local Yamaha dealer or at www.yamaha-motor-acc.com



R-Series

The new race



*Top right: Double bubble screen YZF-R6
Centre right: Roller protector
Bottom right: Single-seat cover YZF-R1*



YZF-R1 – Competition White (BWC1)



YZF-R1 – Yamaha Blue (DPBMC)



YZF-R1 – Midnight Black (SMX)

ENGINE

Type	Liquid-cooled, 4-stroke, forward-inclined parallel 4-cylinder, 16-valves, DOHC
Displacement	998 cc
Bore x stroke	78.0 x 52.2 mm
Compression ratio	12.7:1
Max. power	133.9 kW (182 PS) @ 12,500 rpm
Max. torque	115.5 Nm (11.8 kg-m) @ 10,000 rpm
Lubrication system	Wet sump
Fuel supply system	Fuel injection
Clutch type	Wet, multiple-disc coil spring
Ignition system	TCI
Starter system	Electric
Transmission system	Constant mesh, 6-speed
Final transmission system	Chain

CHASSIS

Frame	Aluminium Deltabox
Front suspension	Telescopic forks, Ø 43 mm
Front wheel travel	120 mm
Rear suspension	Swingarm
Rear wheel travel	120 mm
Front brake	Dual discs, Ø 310 mm
Rear brake	Single disc, Ø 220 mm
Front tyre	120/70 ZR17M/C (58W)
Rear tyre	190/55 ZR17M/C (75W)

DIMENSIONS

Overall length	2,070 mm
Overall width	715 mm
Overall height	1,130 mm
Seat height	835 mm
Wheelbase	1,415 mm
Min. ground clearance	135 mm
Wet weight (including full oil and fuel tank)	206 kg
Fuel capacity	18 litres
Oil capacity	3.73 litres



YZF-R6 – Yamaha Blue (DPBMC)



YZF-R6 – Racing Red (VRC1)



YZF-R6 – Midnight Black (SMX)

ENGINE

Type	Liquid cooled, 4-stroke, forward-inclined parallel 4-cylinder, 16-valves, DOHC
Displacement	599 cc
Bore x stroke	67.0 x 42.5 mm
Compression ratio	13.1:1
Max. power	94.9 kW (129 PS) @ 14,500 rpm
Max. torque	65.8 Nm (6.7 kg-m) @ 11,000 rpm
Lubrication system	Wet sump
Fuel supply system	Fuel injection
Clutch type	Wet multiple-disc coil spring
Ignition system	TCI
Starter system	Electric
Transmission system	Constant mesh, 6-speed
Final transmission system	Chain

CHASSIS

Frame	Aluminium die-cast Deltabox
Front suspension	Telescopic forks, Ø 41 mm
Front wheel travel	115 mm
Rear suspension	Swingarm (link suspension)
Rear wheel travel	120 mm
Front brake	Dual discs, Ø 310 mm
Rear brake	Single disc, Ø 220 mm
Front tyre	120/70 ZR17M/C (58W)
Rear tyre	180/55 ZR17M/C (73W)

DIMENSIONS

Overall length	2,040 mm
Overall width	705 mm
Overall height	1,100 mm
Seat height	850 mm
Wheelbase	1,380 mm
Min. ground clearance	130 mm
Wet weight (including full oil and fuel tank)	185 kg
Fuel capacity	17.3 litres
Oil capacity	3.4 litres

2009

Supersport

www.yamaha-motor-europe.com



Disclaimer:

Always wear a helmet, eye protection and protective clothing. Yamaha encourage you to ride safely and respect fellow riders and the environment. Images shown in this brochure depict professional riders performing under controlled conditions. Specifications and appearance of Yamaha products as shown here are subject to change without notice and may vary according to requirements and conditions. For further details, please consult your Yamaha dealer.



YAMALUBE



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