

ROAD TEST

BMW K1200R

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★ **WORLD FIRST TEST**

Revolutionary

What better way to blow away the final traces of BMW's super-sensible image? The 163bhp K1200R makes every other naked bike seem a bit ordinary...

BY TREVOR FRANKLIN PICTURES BY DOUBLED RED

BOLD, brash and 163bhp-ballsy, the new K1200R is not only way madder than anything previously produced by BMW – but by pretty much anyone, ever. A stripped-down version of the 167bhp K1200S sports tourer, it is a BMW that delivers awesome power and handling and, above all, fun! It may be hard to believe, but the K1200R is a bike for anyone and for every reason.

Let's talk about the adrenalin rush for starters. The engine is the same unit that powers the K1200S but with subtle differences. Peak power is down 4bhp to a claimed crankshaft-measured 163bhp, due to only one ram-air inlet tract supplying fresh, cool air to the airbox instead of the S-model's two. BMW had to put all the electronics that would normally be hidden within the sports tourer's fairing somewhere, and losing one duct was the trade-off.

But the missing horsepower makes no difference to the way the 1157cc lump delivers. It is still an incredible piece of kit, probably pushing 145bhp through the rear Bridgestone BT014 tyre. There's nothing else of the 'naked' genre that comes close.

Big blood rush comes when scorching to an easily achieved and indicated 158mph. Now if that isn't a blast, I don't what is. A change in the shaft drive final gearing ratio – like fitting a bigger rear or smaller front sprocket – to suit the lower top end output also means a quicker getaway from the lights.

But it's not all rage in this machine. There's a sensible side, too. Tractable delivery comes easily whenever the slower traffic of city life crops up. Open the throttle; move along slowly, close throttle, perfect. Only at the track testing stage, where the bikes were subjected to high revs and periods of instant closed throttle, can a slight hesitancy be felt with the gas wound on.

Its transmission is slick, too. Whether you're gunning the R through the bends or mashing flies at motorway speeds, you never notice the shaft drive.

BMW has shaft drive pinned. Like a correctly tensioned and lubed chain there's no noticeable reaction on or off the throttle or even under stress of down-the-box cog swaps at high revs. But first to

second changes are clunky affairs as there's a long throw of the lever to bypass neutral. A deliberate, exaggerated foot movement and a firm grasp of the clutch lever is needed for a bruise-free upper foot.

Considering the relatively hefty weight of 211kg is slung low in the frame for a low centre of gravity, the R is a surprisingly quick-steering bike – at low or high speed. The wider, forward placed bars help here as a lot of pull and push force can be put through them for rapid changes of direction. This also makes town work a cinch. It's not as easy as Triumph's freshly crowned king of nakedness the Speed Triple, granted. But then the 12 is so, so much more stable at speed.

Absolutely nothing flusters the K1200R's handling, at any angle. Manholes, angled bridge joins and fast corners are all taken with aplomb. Exactly how much aplomb depends on which optional extras you've paid for. Electronic suspension adjustment (ESA) costs £525, and adds rebound damping adjustment to the front WP shock (it's non-adjustable as standard) plus compression damping adjustment at the rear (which is tweakable for only pre-load and rebound as standard).

ESA allows you firstly to select a preload setting for riding on your own, with pillion or luggage, then, when you're moving, to toggle between 'comfort', 'normal' or 'sport' damping modes via a bar-mounted button.

The difference the rider feels between these modes is in the length of time (fairly quick, quicker and bloody quick) that the bike's suspension takes to recover after the shocks hit a big one. It's a truly marvellous system.

The Duolever front end is as per the K1200S but set at a steeper angle (11mm less trail than the S and a head angle reduced by 5°) for a sportier steering response. It's considerably lighter to steer at slow speed, and quicker steering on twisty roads – or on the track.

But although sharper-steering than the S, the R is just as supremely stable when the enormously powerful servo-assisted brakes are applied – thanks to the built-in anti-dive properties of the Duolever system. ABS is an option at £795 and removes any fear of locking the front wheel.

Continues over

'Absolutely nothing flusters the K1200R's handling - at any angle'



THE K1200R is concrete-stable at any speed or lean angle - which would normally mean lumbering steering, too. But this BMW is not even remotely normal...



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profoundly practical at
the same time. That's
some trick...

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WIN THIS BIKE

MCN will be giving you the chance to win a BMW K1200R over the next few weeks. Watch this space...



And it's a race bike too...

TO promote the sporting capability of the K1200R, BMW has replaced the Boxer Cup race series (with its Boxer-engined R1100S) which supported MotoGP events with the Power Cup – another one-make race series but for the K1200R.

The race bikes aren't radically changed from stock. The rear suspension is a WP race shock with manual adjustment for compression, rebound and pre-load. The rear ride height is raised by 20mm by use of new suspension linkages, which in turn means the Duolever fork has to be kicked forward to retain stability. The front shock is uprated with a

heavier spring and revised internals. The brakes are stock, but separate braided steel lines are used with a higher grade of brake fluid.

A Laser end can and revised ECU mapping ramps power output up to a claimed 173bhp at the crank. This new can plus stacks of carbon bodywork shave several kilos off the standard bike's 211kg.

And how does it perform? Like a sorted race bike. With Metzeler Racetec tyres warmed up it doesn't take many corners to realise how much further the K1200R can be pushed. Because of the bike's weight it's quite physical to throw about in

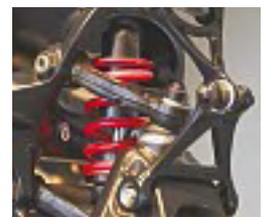
tighter turns. The long wheelbase also means it has a tendency to run wide on a neutral throttle so getting on the gas earlier to tighten the line and drive through the apex is necessary.

The revised suspension is delicious. The Duolever front end dips no further than the road bike even though braking is more vicious. Tyre wear was minimal.

BMW isn't saying yet when there'll be a Power Cup replica available, but it is expected they will market the race components – though for the moment all hands are working on official road bike accessories.



CARBON bits save on weight



WP race suspension at the front



DON'T ask if they do it in turquoise



Continued from previous page

But perhaps the biggest surprise is that the K1200R is comfortable and versatile, too. On paper it shouldn't be. The seat is narrower than that of the S, forces the rider 15-20mm further over the bars into semi-attack motocross style and there's no fairing to talk of. But the seat is padded and shaped to support all sizes of bottom; the tank is shorter, allowing you to sit closer to the bars without stretching, while the pegs are perfectly positioned for any size of rider.

As with all naked bikes, riding at consistent high speed should be a neck killer, but it isn't. The small fly screen deflects air-blast well. But the taller and wider sports screen does an even better job. You'd have to look hard to tell the difference between the two, as the bigger version doesn't detract from the bike's overall look.

The mirrors are brilliant, the dash readout (similar to that of the R1200GS) is fine although the speedo display could be bigger for at-a-glance looks and pillions also get a good deal in the comfort stakes. And when you add accessories like rack and panniers, BMW's unbeatable heated grips and, if you have to, take the option on a lower seat, anyone of any age can make full use of what the K1200R has to offer, that being sports riding, mile munching and above all, fun.



DUOLEVER front end has natural anti-dive action



The Power Cup machine feels like a proper sorted racer, not just a hopped-up road bike

WHERE'S IT AT? SUPER NAKEDS

TRIUMPH'S latest Speed Triple rules the roost as a manic A-road muggler, but that's all it rules. As a bike to ride and own then the BMW K1200R is now the final word.

- 1 **BMW** K1200R
- 2 **Triumph** Speed Triple
- 3 **KTM** Super Duke
- 4 **Aprilia** Tuono
- 5 **MV Agusta** Brutale S
- 6 **MZ** 1000SF
- 7 **Ducati** Monster S4R
- 8 **Benelli** TNT
- 9 **Kawasaki** Z1000
- 10 **Buell** XB12R Firebolt

VERDICT

IN 1999 Honda gave the world the XII, an unfaired Super Blackbird. It was pointlessly fast - you couldn't hang on to it after 80 miles of motorway speed. It was also overweight and had very basic suspension adjustment.

BMW was very aware that the K1200R could be tagged along the same lines. But the German firm has made the K1200R much more than a superbike that's lost its clothes.

With the superb fairing and seating arrangement, touring on the K1200R is possible. With the ESA system fitted sports riding is only a twist of the throttle away.

MCN SAYS

- ✓ Massive yet usable power delivery
- ✓ Astonishing handling and braking
- ✗ High price
- ✗ The really nice bits like ABS and ESA cost extra

BMW K1200R

★ ★ ★ ★ ★ **£9190**
COST:
POWER (claimed): **163bhp**
TORQUE (claimed): **94ftlb**
WEIGHT: **211kg**

Availability: Early June
Colours: Black/yellow (black engine), dark grey (silver engine), silver (black engine)
New for 2005: New model
Insurance group: 17 (tbc)
Info: 0800-777-119



TECHNICAL SPEC

Engine: Liquid-cooled 1157cc (79 x 59mm), 16v dohc, four-stroke, inline four. Fuel injection. Six gears
Chassis: Dual beam aluminium frame. Duolever front suspension with no adjustment as standard (£525 ESA option adds rebound damping adj). Paralever rear suspension with manual pre-load and rebound adj as standard (ESA adds compression) 2 x 320mm front discs with four piston calipers, 265mm rear disc with twin-piston caliper. (ABS £795 option). Tyres: 120/70 x 17 (F), 180/55 x 17 (R).

TECHWATCH

BY KEVIN ASH

HOW does a longer conrod increase power?



The pros and the conrods

A FAVOURITE trick of many bike engine tuners is to fit longer conrods. The stroke stays the same, as that's dependent on the throw of the crankshaft, and the bore's unchanged too of course, but still this often results in an increase in power, which at first sight is puzzling.

You do have to fit new pistons at the same time, otherwise the longer rods would push them so far up the bore they'd hit the cylinder head. Instead, the replacements have a gudgeon pin which sits higher up, so the piston crown stops at the same point as before. But even when these don't increase the compression ratio you still often get a power gain, with no increase in engine capacity, no change to the valve timing or size and therefore no increase in the amount of air and fuel which pass through the engine.

Some people put the improvement down to the fact that a longer conrod is at right angles to the crank when it's further down the bore, improving its leverage when cylinder pressure is high, or lower, or something...

Longer rods can improve mechanical efficiency, by reducing the size of the force thrusting the piston sideways against the cylinder wall, but it's not the most significant factor. The real gain comes from something even less obvious: the longer a conrod, the less its angle changes as the crankshaft rotates. At top and bottom dead centre, the conrod is vertical, but with the crankshaft half way between these two positions

the rod is at an angle to one side or the other. This angle decreases the longer the rod, which in turn means the piston remains near top and bottom dead centre for

'The longer a conrod, the less its angle changes as the crankshaft rotates'

longer as the crankshaft rotates. Engine designers say it has more "dwell" at these positions. At bottom dead centre it doesn't matter much, but at top dead centre on the combustion stroke, it means the peak combustion pressure is maintained for longer. This improves efficiency and means the burning gas isn't pushing against a piston which is already rushing away down the bore. It might not sound much, but it can mean an instant 10% power increase.

So why don't manufacturers do this in the first place? Two reasons: one is that they'd have to use pistons with higher gudgeon pins, which in turn means the rings are closer together. This is not ideal for road engines and demands stronger, more expensive pistons. The alternative is to make the engine taller to accommodate the longer rods, but in this case you run into packaging problems, always an issue with motorcycles and their limited space. So as with most engineering solutions, what you get is a compromise between engine size, life, cost and power.

MORE TECH NEXT WEEK