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MAGAZINE

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## BABY BOOMER

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**King Of Cool**

We find the coolest biker of all time



Mix a GP Mechanic with a V Max and what do you get?  
The most powerful, fastest bike Roland's ever ridden...

# BLACK MAX



that makes even a factory superbike look almost tame by comparison. During the year that he took to rebuild the Max, Kainzinger, who's based in the German town of Bürstadt near Frankfurt, detuned it slightly. That still left the big V4 delivering 198bhp and a thunderous 176Nm (127ft-lb) of torque to the back wheel via its ingenious chain-drive conversion.

What's more impressive is that in the right hands, this V-Max is totally at home on a racetrack. Kainzinger is a former national level roadracer and GP chief mechanic (Ralf Waldmann and Jochen Schmidt) turned upmarket tuner and specials builder. He likes to mix business with pleasure by going on track days at GP circuits such as Catalunya or Brno with the Max, and blowing stunned sports bike riders into the weeds. Then he pulls into the pits, parks the bike on its neat detachable alloy sidestand, and takes orders for everything from chassis

and engine bits to complete super-tuned specials. "If I haven't done good business by the end of the day, I haven't been trying hard enough," he grins.

The tale is totally believable when you take a look at the Max and its specification, let alone ride it, for this black bike is about as far removed from the lumbering standard Yamaha as it's possible to get. Thanks to scores of special parts and copious use of carbon and titanium, the Kainzinger Max weighs just 187kg dry – making it barely heavier than the best modern sports bikes, and 75kg lighter than a stock V-Max.

This bike's wheelbase is 1,410mm, just 5mm more than a FireBlade's and its steering geometry figures of 24 degrees of rake and 96mm of trail are right on the superbike average. Combine those dimensions with the Yamaha's substantially strengthened frame and top-quality cycle parts, and suddenly you can see why it's more than a match for most race-replicas.

The Yamaha's 1,680cc capacity comes from Cosworth pistons with huge 90mm diameters (standard is 76mm), running in new Nikasil-coated aluminium liners that just about fit inside the heavily machined cylinders. The pistons raise compression ratio from 10.5 to 13.6:1 and are held by Pankl titanium conrods. A modified BMW car radiator keeps the massive motor cool. ➤

**H**erbert Kainzinger had come to Italy's Misano racetrack to ride his fearsome 1,680cc V-Max special himself and hadn't planned to let anyone else out on it. But the local bike journalist was so persuasive that eventually Herbert relented. Mistake. At the start of his second lap the guy cranked into a left-hander and opened the throttle too quickly – sending himself into orbit, and Kainzinger's bike bouncing into the gravel-trap in a shower of splintering carbon-fibre. The crash was unforgivable, but easily explained – because this is a mental machine



**“...It makes more torque at tickover than a GSX-R750 at maximum revs...”**

Genuine carbon air-scoops commence the totally reworked intake system, feeding a power-boosting chamber inside the dummy carbon tank. A quartet of 41mm downdraft Keihins feed mixture to a radically reworked combustion chamber, via big titanium inlet valves which, since Herbert detuned the bike slightly, are operated by standard cams. The hand-formed titanium exhaust system ends in a pair of carbon cans on the right side.

The crankshaft and gearbox are essentially standard but the final drive system certainly isn't. Kainzinger's painstakingly-designed chain-drive conversion was produced by grafting a sprocket onto the end of the gearbox countershaft and devising an aluminium plate, complete with bearing, that supports the end of the countershaft while supplying much-needed rigidity to the surrounding area.

Similar ingenuity went into the rest of the chassis, notably with the black aluminium cross-plates that link the now solidly-mounted engine to the much-modified frame. Some of Yamaha's original steel tubes remain but most have been reworked or replaced, notably at the steering head where a custom-built adjustable headstock allows rake to be varied between 23 and 25 degrees.

Front forks are specially lengthened and modified WP upside-down units, and at the rear the Max wears a pair of shocks from German firm Technoflex. These are adjustable for both high-speed and low-speed compression damping, as well as the normal preload and rebound damping. PVM supplies wheels and brakes, a combination of magnesium 17-inch wheels, lightweight 320mm front discs and six-piston calipers.

From the rider's fairly tall seat the V-Max

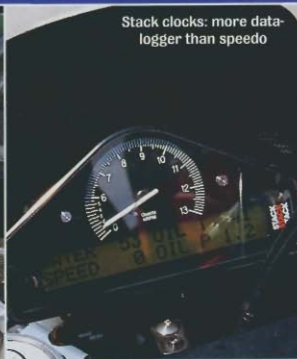
feels like no other bike on earth. Even before you start the engine, the tiny clutch and front brake master cylinders combine with the classy digital Stack instrument console (incorporating digital speedo, tachometer and various gauges), wide WP fork-tops, trick speed-sensitive Hyperpro steering damper, lashings of carbon and most of all the obvious lack of weight to make the Max feel seriously sporty. So too do the big motor's throaty V4 bark, and the way its titanium rods and lightened alternator help the revs pick up with startling speed given a blip of the throttle.

Having missed out on riding this bike a year ago due to its crash, I'd been looking forward to doing so ever since – but first impressions weren't what I'd expected at all. The huge, effortless power was instantly impressive, but on twisty country roads the Max wasn't very happy. It tracked imperfections in the road, occasionally twitched in annoyance and generally felt like a frisky racehorse complaining at being asked to go pony-trekking.

Ironically, given its slothful ancestry, the problem was simply that the Max was set up



Super-adjustable German Technoflex shocks



Stack clocks: more data-logger than speedo



PVM six-piston: nothing less would stop the bugger

for a racetrack and needed to be ridden much more aggressively. As soon as I left the car behind and upped the pace, the suspension began working properly and the whole bike felt infinitely better – although in the first couple of tight bends it responded to my nudge of the handlebars by flicking onto its side so fast that I had to make a quick correction to pick it up again...

The answer was to forget any notion that this Yamaha was related to a V-Max, and simply ride it like a sit-up-and-beg R1. Before long I was feeling totally at home charging up to a corner, applying the fiercely potent front brake with a light squeeze of the lever, and carving through the turn with the bike remaining totally under control, its suspension unfazed and its sticky Pirelli Dragon Corsas clinging on for dear life.

At higher speeds the handling was a revelation, far exceeding anything I'd imagined possible from a bike related to a V-Max. But even with race-compound 190-section rear tyre, a hot day and excellent road surface I was careful not to get carried away with the throttle on the way out of bends, because this bike can be seriously vicious. Kainzinger says it makes more torque at tickover than a GSX-R750 does at maximum revs.

There was so much engine performance available at almost any revs that I barely scratched the surface of the Max's

straight-line potential on the winding hill roads south of Frankfurt. The bike punched forward so hard that it jumped to well over 100mph almost instantaneously, the motor's balanced internals making it feel very smooth despite the absence of the standard Yamaha's rubber mounts. Given this bike's power-to-weight ratio and its broad spread of torque there's no way that any stock streetbike would get close to it in a straight line.

Despite fairly unhelpful aerodynamics top speed must be at least 180mph. "I've seen more than 300km/h (188mph) but it's not comfortable at that speed," says Herbert. "Before I detuned it I couldn't set up the carbs' main jets, because when I accelerated at 250km/h it just wheeled!"

What the V-Max really needed was the chance to stretch its legs on a wide stretch of tarmac with plenty of fast bends, so it was easy to see why Herbert spends much of his time caning it around the



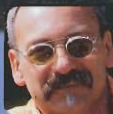
Tuners have wet dreams about curves like these. Me too, actually

grand prix circuits of Europe. The fact that the bike helps generate so much business gives him the perfect excuse, too – although he won't be responding to the many enquiries by building any similar V-Max based bikes, or even selling V-Max tuning parts.

"Owners of CBR900s and R1s are interested in technology, but V-Max owners are on a different wavelength – it's a waste of time dealing with them," he says. Nor is Kainzinger going to sell this unique machine, which is currently insured for \$48,000. "At a show in New York a guy came up and offered me US \$100,000 (\$62,000), but I turned him down."

After riding the amazing Kainzinger V-Max, it's not hard to understand why. **SB**

# BLACK MAX



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