

First ride

LIVING THE (AMERICAN) DREAM

Erik Buell, the innovative engineer who turned Harley-Davidsons into sportsbikes, returns with a new V-twin. And this time he means business...

The new American

Words Simon Hargreaves | Photography Stuart Collins



dream



AS EACH OF the cereal bowl pistons fling themselves up and down the bores like jubilant fist pumps, you can't help but smile at the EBR 1190RX's liberated, machine-shop spontaneity. It feels like it's making this up as it goes along. It probably is. From the pulsating vibration shaking a milled alloy footrest to freedom somewhere in turn two, to the oily tang of hot metal and steam rising from the big V-twin. From the half inch bolt thread poking out from the cantilever rear shock mount, to the ramshackle blurring of meaty slugs firing from the two-into-one-into-two-into-one exhaust, the RX looks, feels and goes like a 170bhp and 92lb.ft carnival of controlled mechanical chaos. It's not uncivilised, but I'm pretty sure it doesn't always wash its hands after it's taken a piss.

And boy, is it fun.

With 54% of its 202kg wet weight biased to the front end, the bike slithers about on the soaking track as vast gobbets of torque snap the rear 190/55 free at every corner exit, slewing the back end out of line until the bike's brain rolls off ignition and holds the slide in a sine wave of alternating grip levels.

In these conditions – new tyres, wet track, low speed – the EBR's 21-stage traction control is on high alert, algorithms going crazy, predicting anything between too much and just right intervention – but never not enough. I lean on it the way an old man leans on a stick; kick it away and we'd both fall over.

Meanwhile the RX's wide, flat seat and committed riding position, firmly supportive Showa big piston forks and Showa shock, snappy steering

and tight brakes soak up all my spare attention. Aiming the EBR at speed is easy, but at low speed the bars get heavy enough to make my wrists ache. I keep eyeing the steering damper across the hollowed top yoke, wishing it was adjustable.

But this is brain-boiling, wide-eyed fun on an industrial scale, and the EBR is waywardly, haphazardly brilliant. Compared to the Ducati Panigale's taller, sophisticated scholar of pugilism, it's a squat, bare-knuckle, power-punching street brawler.

So welcome one and all to the debut of the Erik Buell Racing 1190RX. We're on a hastily arranged visit to Varano circuit, halfway between Milan and Bologna. It's a narrow, slightly dog-eared track with tatty pits, muddy infield and plenty of up-close tyre walls. A series of short straights are linked by chicanes with a tight, first-gear complex at one end. Looks like it'd be a hoot in the dry.

But it's not. It chucked it down overnight and the track's changes of surface include grip-free overbanding, highly polished corners and apex dips puddled from the relentless downpour. In the wet, it's about as welcoming as the Somme.

If that isn't worrying enough, the brand, spanking new EBR 1190RX has zero miles on either its motor or its Pirelli Diablo Rosso Corsas. The whole test has been assembled at the last minute and could go terribly wrong for all concerned. It's a risky way to showcase a new bike.

Especially when it's your first. Because the 1190 RX marks the road bike return of Erik Buell. His new company, EBR (Erik Buell Racing), was established when Harley-Davidson shut down Buell in the



'Compared to the Panigale, the 1190RX is a bare-knuckle, power-punching street brawler'

financial crisis of 2009. Freed from management politics (but unable to use his name!), Erik set up EBR to make the bikes he'd always wanted to.

He started with the 1190RS, a hand-built run of just over 100 bikes to satisfy US race homologation and compete in AMA Superbike (it finished fifth in 2012 and eighth in 2013). There were two versions: standard (£24,000) and carbon-fibre (£26,400). Only 10 made it into Europe, in the hands of collectors.

The EBR 1190RX is a development of the RS, redesigned for the road and costing a more reasonable £15,000. And, now backed by Hero MotoCorp of India, the world's largest motorcycle manufacturer (six million units last year), Erik Buell can truly build what he likes. No more excuses.

But the 1190RX is still recognisably Buell-ish. A racer at heart, Erik has retained the chassis ideas from his old bikes that make sense: fuel in the frame spars means the dummy fuel tank is a massive airbox, rim-mounted single front disc reduces unsprung and steered mass, and an underslung exhaust helps centralise mass. And he's ditched the ideas that didn't make sense: Harley insisted on a belt final drive, but it limited sustained speeds and high power outputs so the RX has a chain. Harley never wanted a full fairing. The RX is a sportsbike, so it has a full fairing.

And, of course, the engine isn't a Harley. It's a modern 1191cc, 8v, 72° V-twin making a measured, Panigale-

esque 170bhp at 10,350rpm and mammoth 92lb.ft @ 7800rpm. Stick that in your shovelhead.

Buell's last Harley-owned bike, the 1125R, used a watercooled, 8v, 125bhp Austrian Rotax V-twin, which was pleasant enough but underdeveloped. EBR bought the design rights from Rotax, modified it, changed almost everything. Parts come from Europe and are bolted together at EBR's Wisconsin plant.

EBR's changes to the Rotax lump include 3mm wider bores and reshaped piston crowns and cylinder heads to give higher revs and more power. Like the 1125, unbalanced 72° twin, primary vibes are still tamed by a large crank counterweight and two balance shafts and the EBR's valvetrain runs off-set inlet cams, opening one titanium inlet valve fractionally sooner than the other to promote mixture swirl for a better burn. This efficiency may or may not be responsible for the Buell's claimed 52mpg at cruising speeds, and the ease with which it passes EU and US emissions regs, though it's almost certainly responsible for the 92lb.ft!

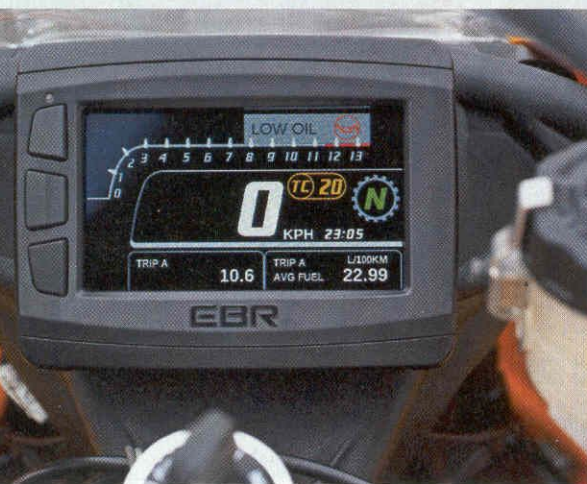
Just as importantly, EBR have spent time refining the RX's fuelling



ABOVE
Bar-mounted steering damper is unadjustable

ABOVE LEFT
Shows a shock is bolted directly between frame and swingarm with no linkage

LEFT
TFT screen is bright and clear, and is the key to adjusting the traction control



WHEELS AND TYRES

Cast aluminium rear wheel is a hubless design. The thin-walled spokes make up three triangles per side of the rim, with the hollow 'hub' holding them together (Erik Buell is quoted as saying the walls of the wheel hub showed no structural benefit, so designed them out). The result isn't exactly pretty but is said to be extremely light. The front wheel is less skimpy, but the spokes are wafer thin. It looks like a 125 from the disc-less side.

FRAME AND SWINGARM

As per the earlier Harley-backed 1125R and previous Buells, the massive cast aluminium frame spars are hollowed out and are used as the bike's fuel 'tank'. The filler cap is set in bracing just behind the headstock. This frees up the fuel tank area to be used as an airbox – the bigger, the better. The aluminium swingarm no longer has to carry oil, so it's a hollowed-out, deeply braced C-section shape. The magnesium rear subframe weighs a mere 2kg.



EXHAUST

Completely redesigned for the 1190RX and claimed it plays a significant part in increasing midrange flexibility. Headers are flattened, but this is probably more for space saving than power. The collector box has a quarter wave tuner (one quarter the wavelength of the exhaust wave), which keeps noise down and boosts midrange. Exhaust pulses pass into a pair of secondary pipes before exiting through the single can.

ENGINE DIMENSIONS

The 1190RX has been bored-out by 3mm compared to the old Rotax motor, but stroke length remains the same. Power-wise, the EBR 1190X is a 1191cc 72° V-twin making a real 170bhp at 10,350rpm and 92lb.ft @ 7800rpm. Bore and stroke are 106 x 67.5mm and compression ratio is a steep 13.4:1, which is closer to the 105 x 69mm, 13.5:1 of KTM's 1195cc, 75° 155bhp RC8R than the higher-revving 112 x 60.8mm, 12.5:1 of the 175bhp 90° Ducati Panigale.

ENGINE TOP END

The EBR's top end features eight titanium valves driven by twin overlaid cam sprockets, with the inlet cam driven by a camchain and the exhaust cam sprocket geared off it in exactly the same way as the Rotax 1125R motor. As per the 1125R, the 1190RX uses finger followers. Controlled Swirl Induction, in which a staggered inlet cam opens one titanium valve slightly before the other, promotes turbulence in the mixture for more complete combustion.

ENGINE BOTTOM END

With the same crank, triple balance weights, gearbox and gear ratios (all of them – only the final drive ratio is different – the 1125R was belt drive, after all), oil capacity and hydraulic vacuum assisted wet slipper clutch, it's fair to say the 1190RX's bottom end is, if not identical to, then pretty similar to the Buell 1125R motor. Conrods are forged steel, not the titanium items fitted to the exotic 1190RS racer, which competed in AMA Superbike in 2012 and 2013.

DASH

Thin film transistor (TFT) screen gives a bright, full-colour readout. Main display includes speed, traction control level, gear position, revs, oil warning, clock, odometer and trip, plus selected fuel consumption readout. Submenu has clock adjustment, unit selection, lap timer, service information, brightness settings, traction control settings, and live data displays for service engineers. Traction control is easily located and adjusted, but not on the move.

SUSPENSION AND BRAKES

Fully adjustable Showa big piston forks, with rebound and compression screws at the top of each leg, and a preload adjuster at the bottom. The rear Showa uses a cantilever design, with the shock bolted directly between swingarm and frame with no rising rate linkage. Eight-piston Nissin front caliper grips a 386mm rim-mounted disc, enlarged over the same system used on the 1125R which was criticised for overheating – hence the cooling ducts.

and engine management. Under-resourced or hastily developed modern engine systems are often plagued by hesitant power delivery and unpredictable throttle control as engineers struggle to balance transient throttle loads with emissions-friendly air/fuel ratios. Getting it right first, or second, or third time isn't easy – ask anyone from MV Agusta to Triumph to Yamaha.

But EBR have done a fine job with the RX, making even the tricky task of negotiating an unfamiliar track on tip-toes do-able. Finding the right balance of gas is straightforward enough not to be noticeable. In a word, it's direct – tweak the cable throttle and a pair of bellmouths straight from the Dartford tunnel school of engineering draw two CBR600's-worth of atmosphere over their event horizons into a raging suck-squeeze-bang-blow beneath.

But the EBR is also curiously old-school. It lacks features like ABS (coming soon), anti-wheelie, quickshifter and variable engine modes, and its traction control isn't accelerometer based; with a rear wheel acceleration and crank sensor it sounds similar to MV's traction control which, given they were both



owned by Harley at the same time, might not be so surprising. On a wet track, it's effective enough. But you can only adjust it at standstill, and not from the bars; you have to go through a couple of menus on the screen.

As the day goes on the track stays wet but I feel more and more

ABOVE
Two-into-one-into-two-into-one (keep up at the back) exhaust system is said to boost midrange

confident. It's not harshly aggressive like an MV F4, or overwhelmingly, demandingly powerful like a Panigale. Its riding dynamic is more like a heavier, less subtle Aprilia RSV4. With added vibration.

The EBR is a passionate machine, powered by personality as much as petrol. And it's a bike born on a workbench, not a production line, spannered-up by men with cutting oil in their veins, swarf in their hair and grease under their nails.

It's a new kind of American dream.

SPECIFICATIONS 2014 EBR 1190RX



ENGINE

Type	1191cc, liquid-cooled, dohc, 8v, 72° V-twin
Bore x stroke	106 x 67.5mm
Fuelling	Fuel injection
Claimed power	170bhp @ 10,350rpm
Claimed torque	92lb.ft @ 7800rpm

CHASSIS

Frame	Aluminium twin-spar
Front susp	Showa BPF 43mm, usd, fully adjustable
Rear susp	Showa monoshock, fully adjustable
Front brakes	386mm rim-mounted disc with eight-piston radial caliper
Rear brakes	208mm disc with twin-piston caliper
Rider aids	21-level traction control

DIMENSIONS

Wheelbase	1409mm
Rake/trail	2.4°/96.5mm
Wet weight	202kg (claimed)
Seat height	826mm
Fuel capacity	17.1 litres

BUYING

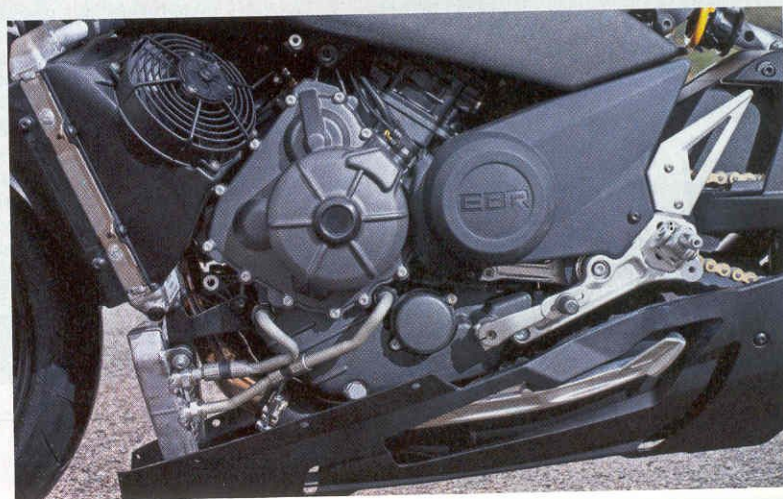
Price	£15,000
Contact	info@ebracing.com



BELOW
Throttle bodies are connected to your right hand via a good old-fashioned cable



ABOVE
Buell has retained the trademark single rim-mounted disc on the front



RIGHT
There's not much carried over from the old Rotax