



HEADS UP

Here at Enduro Extreme we recently converted to an Arai VX3 helmet. That prompted Arai to offer us an invite to check out their test facility in Holland. What we saw there made us all the more impressed with their product, but also very concerned over EU helmet testing...

words & images: Jon Bentman

My head weighs 4.7kg, I'm told. If you wear a size 58 (medium) helmet yours will too. Bigger heads will weigh a bit more, smaller heads a little less. Any which way, that's a lot of weight – picking up a metal headform of the exact size and weight of a 58 head it was a shock just how heavy it feels. I'm telling you it's a lot, drop it on your foot and you'd know about it. I've new respect for my neck muscles now. And I've a bit more of an appreciation of the issues faced by helmet manufacturers – keeping noggins protected isn't easy.

At their European base at Hoevelaken near Amsterdam in Holland, Arai has a test facility that recreates the helmet testing processes as operate here in Europe (we test to the ECE 22-05 standard) and in the USA, (the Snell M 2005/2010). Given that it's not practical to start throwing a man in a helmet down the road, into a wall or under a bus, then the tests are done Beeker lab style, with drop weights and computers. As well the helmets, with the headforms in, are dropped onto 'anvils' – metal forms made flat, hemispherical and edge. A penetration test is made

with a 3kg metal cone that falls three metres. And let me tell you, every one of the tests makes you shudder. René Steenbeek, who conducts much of the in house testing, assures that these tests represent no more than a 30mph impact, but by heck the noise, the force – it's a shock.

LOW STANDARDS?

One aspect that came through very clear very soon, was Arai's concern that the EU standard of testing – and in fact the UK government-funded alternative called SHARP, too – are really not all that they could be. You could say that they're fundamentally flawed, or you could say they haven't set the bar high enough. Now Arai were understandably coy about this, and sensing a political minefield we're pretty coy about it too. But, judging by the outcome of tests witnessed on this visit, there is a reason why so many helmets achieve the ECE standard – and it's not on account of industry-wide impeccably high standards.

We can't go whistle-blowing here, and that wasn't Arai's intention either – and we can't afford the law-suits –



but from what we could see it's the fixed point impact measuring points in the ECE test (front, top, back and sides) that allow manufacturers to make helmets with, well, selected strong points. Ever wondered how those fancy cropped and cut, air-cooled scooter lids can sport the same ECE approval as a top of the range full-face? Well, check where the cuts and vents come – yeah, away from the known ECE impact test points. A good brand of flip-front lid, as

preferred by touring types, also failed horribly on one test conducted at Arai but yet again sported an ECE sticker. And some (unscrupulous) helmet manufacturers of cheap lightweight full face lids (off-road) can sidestep the entire frontal impact test by declaring the helmet NP – having a non-protective lower face cover (you can identify this by checking the helmet's strap – if it reads NP on the orange label sewn onto the strap it's been tested as an open face lid).

The Snell tests appear more thorough given the Americans expect a helmet to withstand test impacts over a test area that constitutes anywhere on almost the entire shell, not just fixed points.

THINK ABOUT THIS

Arai left their biggest shock to last. They took a helmet (made by a reputable competitor) made for a child and subjected it to a standard ECE impact test. The helmet passed but really only just – the shock passed to the head was far higher than their Arai helmet in the same conditions. They then moved the helmets on the jig, to a non-standard test position, and again the Arai was okay, but the other helmet failed not just miserably but fatally. If you've a

kid – I've a kid – and you watch this test then you will tear-up.

The ECE helmet testing rules were designed to protect us, to set a standard – a worthy principle. But like so many things EU, the translation into action (it would seem) falls far short of the utopian ideal. We can't suggest any definitive advice here, but what we would say is don't blindly go on the ECE stamp as proof of quality. To make helmets light, to make them super-vented, to make them super-bling often comes at a cost to the helmet's protective qualities. Price, as ever, remains a very good indication of quality. The more you pay the more protection, by and large, you'll receive. It pains us to repeat the old maxim, but 'if you've got a ten dollar head, buy a ten dollar hat'. >



ARAI – NO TEN DOLLAR HAT

An Arai helmet is 100% hand made and each one takes 20 hours to make, start to finish. Given a plastic injection moulded helmet shell can be pressed in 30-seconds and then fitted out in a matter of a few minutes more, you can immediately understand Arai's (high) price point. And if you really think about it, half a week's labour, the materials, the machines, the factory rent, the power to heat the ovens – these helmets start sounding like good value. Very good value when you see just how well they do in tests.

Bearing in mind Arai has become such a global brand, it comes as a surprise that the company is still family owned and run. Hirotake Arai founded the company in 1937 and his son Michio (or Mitch), now 74, is the current president. His son Akihito, 39, also looks set to follow in his fathers' footsteps. There are no big fancy city types, no financial gurus – you can imagine they'd close

the plant down – just a family team, supported by a European based distributorship, with a dedication to quality and protection.

And of course the helmets are all still made in Japan, at their Saitama plant. We were taken through the process of construction step by step (in Holland), and to say its painstaking would be an understatement. Making the shell is an exacting process, involving super-heated moulds and fibreglass and – of necessity – unprotected hands and arms it's no job you or I would want. Every step, from shell to multi-density foam liner, to paint, to graphics is the work of a master craftsman being quality controlled by another master craftsman. Craftsmen who are proud of their work – each shell bears the autograph of its maker.

So many top racers wear Arai, including nearly all the Formula One grid. It's not coincidence, it's not a marketing coup – it's based on providing top quality top protection...]



WE'RE REALISTS

Bit of an Arai promo, this? Yes, it is, but when you see, meet and speak to the people, when you become familiar with their product, it's a strong man who resists becoming a convert.

We found their impact testing demonstrations highly informative and at times shocking. Their message of best-protection isn't unfounded. But balanced against that, talking from first-hand experience, your editor here used to road race and

in three 80-100mph crashes wrote off a Shoei, an FM and a Bell. I'm still here. A couple of years ago I smacked a Shark SXR hard into tarmac at 50mph while riding a supermoto and suffered not so much as a headache. So were not saying exclusively buy Arai, but we are saying – in agreement with the guys at Arai – pay attention to what you're buying and wearing, your helmet is doing one of the biggest most important jobs in looking after your wellbeing. Choose well.

