



Shock Tactics

A Master from the school of hard knocks

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Jaeger-LeCoultre has taken its Master Chronograph to new extremes. Better suited to the wrist of a mountain biker than Jaeger's usual executive clientele, this horological hard-man is clad in an air-cushioned double shell developed specially. Dubai provided a suitably dramatic backdrop as the Le Sentier manufacture lifted the lid on its vertical shock absorption technology earlier this year, and *QP* was taking avid notes.

Say it quietly, but the time-served image of watchmaking being centred on the skills of a few revered and experienced masters is being eclipsed. Take Jaeger-LeCoultre for example - the apotheosis of horological purity; guardian of tradition and possessed of centuries of watchmaking experience in its Le Sentier ateliers. But visitors to the company's headquarters will find as much interest at the CAD stations as the benches where the watchmakers work - though you might find

the latter to be a little more talkative. Coming to the fore is a collaboration between engineers and designers, both responsible for the face of Jaeger-LeCoultre's latest creations.

Portable status

Jaeger's launch of the Master Compressor Chronographs, in the very untraditional setting of Dubai, was all design and engineering. At the initial presentation, the talk was of extreme shock-resistance and

(Previous page) The 'Extreme World' Master Compressor Chronograph in platinum (£13,200). Contains Jaeger's new shock-absorption system, as well as the new chronograph vertical coupling system present in both Compressor Chronograph models.

(Above) Steel-cased Extreme World model, with rubber strap (£7,400). The rubber and leather straps are interchangeable, thanks to a new pawl-and-ratchet release device, activated by a button on the caseback.



Calibre 752, as found in the Master Compressor Chronograph Extreme World. Along with the caliber 751, these are Jaeger-LeCoultre's first automatic chronograph movements.

the images were of free-fall jumpers, making it all seem more like the launch of a new snowboard or para-wing. This confusion was deliberate.

The watch is meant for a generation that expects suspension as standard on its mountain bikes; whose cell-phones are the always latest model; that wonders why iPods still need wires to connect. This is about educated, discerning and deliberate consumerism; an impression more than born out by the reactions of journalists present. While the Europeans tended to react more or less well to the watch, the contingent from Singapore were far more enthusiastic. They explained why:

Buying cars is simply not an option there, even for the more successful young professionals, as the taxes and limitations are just too much. Watches have stepped in and become the portable status symbol of choice. But not just any watch. The

values most appreciated are, as with cars here, contemporary design and technical cleverness - hence the popularity of Richard Mille in those parts. The Master Compressor Chronograph fits that bill perfectly.

Fit for extremes

To a large extent, the design speaks for itself. It follows closely the pattern set out by existing models in the Compressor range, with modern fonts and high-contrast subdials. Designer, Magali Metray, talked in some depth about influences ranging from architects, Le Corbusier and Richard Meier, to less obvious names such as Joan Miro. But the principle guide in Metray's brief was to express what the watch actually does.

Jaeger-LeCoultre's impeccable horological past and particular reputation for making chronographs (if more historical than current) meant that it was a

The air cushion absorbs upwards of 50% of the force from vertical shocks - those that traditional devices are least adapted to cope with.

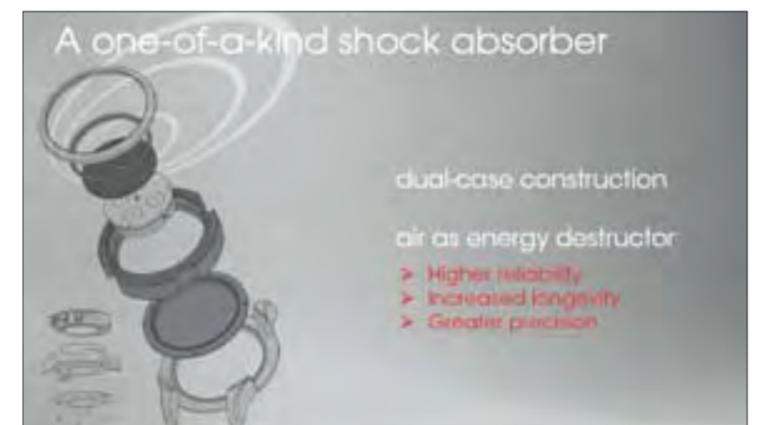
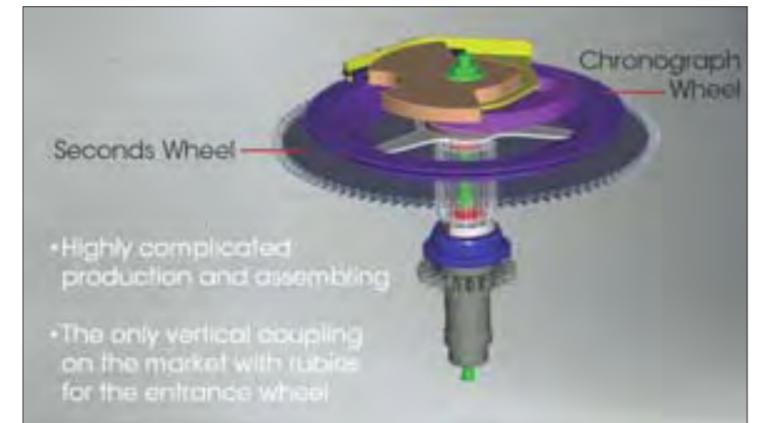
certainty that Jaeger-LeCoultre would be out to impress. And the watchmakers and engineers have delivered in no uncertain terms, delivering technical innovations ranging from refined vertical coupling devices engaging the chronograph train, to the extreme shock resistance built into the Extreme World variant.

Look closely and you will see that Extreme World's case is essentially a single piece, with the movement enclosed in a separate shell dropped into the outer case. This arrangement is the basis of a shock resistance system that sets a new standard for sports watches. If this sounds like a bold claim, rest assured it is based on an impressive specification. Jaeger claims that the air cushion that supports the titanium inner shell can absorb at least 50% of the force of vertical shocks - precisely those that traditional devices such as the sprung jewel bearings are least adapted to cope with.

While most shocks that a sports watch is likely to receive are momentary, typically lasting no more than a quarter of a second, the force peaks can be quite extreme. According to Jaeger-LeCoultre, its research showed that common shocks range from 100 G at the moment when a golf driver hits the ball, 300 G using an ice axe, to a repetitive 500 G while mountain biking. By way of scale, it was pointed out that it takes approximately 1,000 G to fracture the wrist. And to prove that the figures quoted for the watch bore a relation to reality, Jaeger-LeCoultre's technicians had a watch rigged up to an accelerometer, allowing everyone the chance to test both how tough the watch is and how hard they can bang a table.

Verticality

Internally, the watch has more than enough technical innovation to justify the high-tech design of the exterior. The movement is based on the 'auto-tractor' design introduced last year which features advances such as ceramic ball bearings for the rotor assembly and a variable inertia balance wheel that Jaeger says is more robust



(Top) CAD drawing of the vertical coupling device, which allows the chronograph wheel to engage gently and precisely with the principal movement.

(Centre) Column-wheel arrangement for the new Master Compressor Chrono.

(Bottom) The shock-absorption system: the Extreme World's titanium case is laid on a two-part base comprised of a shaft for the lower part and a bezel for the upper part.



Watches are portable status symbols in Singapore. The values most appreciated are, as with cars here, contemporary design and technical cleverness. The Master Chronograph fits that bill perfectly.

(left) Pink-gold version of the new chronograph (£11,400). Pink-gold bracelet available as an alternative to the chocolate-brown strap.

(Below) The Master Compressor Chronograph in steel (£4,900). The revolutionary crown compression keys have mutated into compression buttons, at 2 and 4 o'clock for the new chronographs.

against both shock and wear than an index for adjusting the rate. It is also generally preferable to alter the wheel rather than the spring, as the screws do not have the 'memory' that tensed metal has.

Particular to the new calibre 751 and 752 (for the Master Compressor Chronograph and Master Compressor Chronograph Extreme World models, respectively) is the vertical coupling system for the column-wheel chronograph control, which has the advantage of making the system engage more quickly and precisely than systems using sliding pinions or wheels. The vertical system also has the advantage of not being subject to adjustments that can be thrown out by a shock.

The four workshops that Jaeger-LeCoultre ran after the initial press conference provided a real insight

into the depth of detail and thought invested in the new chronographs, from 'compressor push-pieces' to a quick-change strap system. The message was clear: this is not just another watch.

While many of the new elements in the Compressor Chronographs are highly effective, they are often solutions that have not previously seen the light of day for simple cost reasons, and this is where Jaeger-LeCoultre is relying on belief rather than knowledge. Will there be a market for a high-technology mechanical chronograph that comes with both high-tech looks and a high-end price? The unforeseen success of the Compressor line suggests the answer is yes. In the meantime, you can swing the platinum outer case version at anyone who still says Jaeger-LeCoultre is just about the Reverso. ○



Further information: Jaeger-LeCoultre, Tel: 0800 587 3420, www.jaeger-lecoultre.com