



Eyes on the Horizon

i TAG Heuer's Concept Watch project is proving to be a stroke of genius - if only because of the acres of coverage the project has garnered both in the specialist press and beyond. It's simply too good a story not to tell. And even if press coverage was the prime mover, who could possibly care when the outcome has been watches such as the Calibre 360 and the V4? But, of course, there is much more to the project than PR value, even if CEO Jean-Christophe Babin was smart enough to see the upside early. In realising the V4's outrageous belt-drive concept, TAG has been forced to engineer from first principles, constantly innovating. As a result, the brand is already several steps ahead of the game.

James Gurney



QP was visiting the LVMH campus on the edge of La Chaux-de-Fonds to learn of the latest developments on the V4 and the Calibre 360 chronograph - a visit that turned into a seminar on how TAG Heuer works and the surprisingly central role of the Concept Watch project in the company's future. Even Babin himself was the first to admit that he failed to predict quite how all-embracing the V4 development project would become - but more of that later.

Although most of the space at TAG Heuer is predictably dominated by production and assembly studios, the upper floors of the building are a step away from the usual - nothing dramatic, just a much looser, more collegiate feel than is found at other watch houses. It's less rigid, less boxed-in, with fewer barriers between different functions.

Product Director Stephane Linder and Product Developer Thomas Houlon were our guides for the day, on a mission to explain. Once the obligatory Powerpoint presentation on brand history was dealt with as swiftly as form allows, Linder got to the point: "Now that everyone is good at marketing, the key difference between brands is coming back to the product." A bit rich coming from TAG Heuer perhaps, but who could possibly be better qualified to make the point? To be honest, it was a point made using Powerpoint again, but with a critical difference - the presentation had something interesting and new to impart: just how TAG Heuer sifts and chooses between the competing ideas it constantly generates. Ultimately, TAG has spotted a shift in the market that creates a new space for the company; a chance for TAG Heuer to edge closer to the likes of Patek Philippe and Girard-Perregaux.

(Above) Product Director Stephane Linder runs through the V4's prototype components at TAG's HQ in La Chaux-de-Fonds. (Photo: Ken Kessler)

(Left) The hi-tech jigsaw puzzle that is V4. A model of the 'shuttle' winding system can be seen at the near edge of the tray. (Photo: Ken Kessler)



Spot the difference: the Monaco V4 in progress (left; photo by Ken Kessler) and as unveiled to the press at Baselworld 2004.

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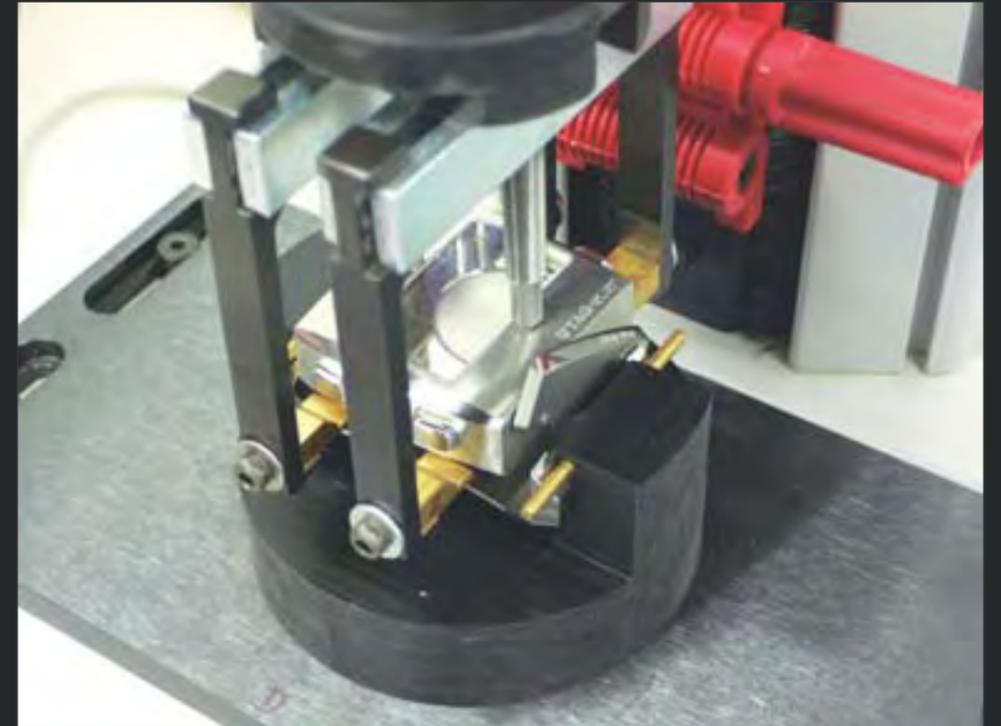
Those well versed in the hierarchy of watch houses will, no doubt, be choking at the idea. It is as if Ford was to suddenly decide that its brand should move closer to Mercedes-Benz. Except it isn't. For one thing, TAG Heuer has a generation of customers who are clearly both loyal and comfortable with the steadily rising ambitions of the house. The success of the Carrera and Monaco lines and the enormous interest in the V4 is ample proof of this. The idea of a Carrera in pink gold would have been all but unthinkable even 10 years ago. So this is not quite Patek or G-P territory as yet, but the direction is crystal clear.

Square one

But back to the V4, the original reason for QP's visit. The first point to make is that this is a concept that will definitely hit the market in one form or another. While sceptics are thinner on the ground than when the convention-defying watch was first unveiled at Basel in 2004, Thomas Houlon is ready to admit the vast scale of problems yet to be solved with V4's revolutionary belt transmission system. Houlon has overall responsibility for

the project's development and was almost pleased to outline the difficulties ahead. The idea is so different from normal movement design that the team has had to do something quite rare in this business - actual engineering.

With a conventional watch movement, the accumulated knowledge and the wide parameters of known quantities mean that returning to first principles is rarely necessary. With the V4 however, no one knew how the drive belts would perform in any of the hundreds of variable situations likely to be experienced - one key parameter being the problem of maintaining tension along the length of the drive-belt. Houlon's team set about creating an analytical model, then went and booked some heavy-duty number crunching on a super computer. To save time, they limited the number of variables allowed to 2,500, split between values for tensility, friction, temperature variations, etc. Armed with the results, prototype parts were made, including the 0.007 mm diameter polymer belts themselves, which are cut by low-temperature femto-wavelength lasers, and several



(Left) One of the Calibre 360 chronograph's first homes is this pink-gold Carrera (€10,995), as unveiled at Basel this year. Limited to 500 pieces, the design differs significantly from the very first model launched in 2005 (featured on the cover of Issue 15) - most obviously in the removal of the Côte de Genève 'engine-block' dial motif. The bold 05-60 indexes remain however.

(Above) One amazing piece of technology employed by TAG Heuer in its product development is a 3D resin printer. Essentially, one can 'print out' a plastic model of any 3D computer rendering, to give the designer a feel for his design. (Photo: Ken Kessler)

(Opposite page, far right) Another TAG Heuer concept watch finally hitting the shelves is the Monaco Sixty Nine. Here, its unique reversible case is being tested at TAG's facility in Switzerland. (Photo: Ken Kessler)



(Above) The intended arrangement for the V4's rubber belts, which replace wheels at several stages throughout the going train.

components produced by a 3D resin printer. The team then set about seeing if the computer had given them any answers they could actually work with.

According to Houlon, the current prototype set-up is highly efficient in terms of delivering power from the mainsprings, actually losing less energy than a typical ETA-derived gear train. The belt system even shows good positional stability. Unfortunately, other factors are making the rate fluctuate unacceptably for reasons that Houlon's constrained stochastic analysis has yet to reveal. And he's not entirely sure that the V4 will work as currently conceived. Perhaps naïvely, I have more faith. You only have to see the pleasure in Houlon's eyes as he describes the work he's doing and the machines he has to play with.

Frontier watchmaking

Even if major surgery is required to make the V4 work, developments are already having an effect on other projects either in development or already coming to the market. The V4's most visible legacy is the new Monaco case being used for the 360 LS, which contains TAG's other recent concept - the fully functional one-hundredth-of-a-second Calibre 360 chronograph. Other effects are less visible, being concerned with the development or acquisition of new suppliers, materials and techniques. Most importantly though, the V4 is keeping important minds focused on the horizon.

Later on, while Jean-Christophe Babin was holding court, the same point was made, though couched this time in historical terms. "It's a way of avoiding a re-run of the 1970s; a way to

avoid the blindness that killed so much of the industry when quartz arrived." In other words, it wasn't quartz that did for so many companies, but the failure to see and exploit the changes as they appeared.

"TAG's mission is to push new ideas - almost in the manner of the S-Class," said Babin, having announced that his mission was to "glorify TAG Heuer". "[The constant development of] new techniques means less exposure to dead-end

directions. TAG Heuer has developed a market following over the last 20 years and tracked it closely with the aim of matching the growing sophistication of tastes. The key being to innovate with in-product lines, à la Porsche 911, then to try new ideas."

The results are there for all to see: the Calibre 360 chronograph, once an ambitious prototype, is now a production movement, currently in two models: a Carrera and the new Monaco 360 LS. 

Further information: TAG Heuer, Tel: 0800 037 9658, www.tagheuer.com