

WORDS  
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# THIN ON TOP

The challenge to produce the world's  
thinnest watch shows no sign of abating



Brands including Piaget are pushing technological boundaries when it comes to producing thinner watches than ever before



**The jury of the Grand Prix d'Horlogerie de Genève recently honoured the accomplishments of 16 of the finest watches presented in the past 12 months. Among them was Piaget's Altiplano Chronograph, which added to the Swiss brand's tally of world records in the field of ultra-thin watches. Piaget is known for two things; some of the world's most glorious jewellery watches – and ultra-thin timepieces.**

**W**hen it was presented at luxury watch trade show SIHH in January 2015, the Altiplano Chronograph became the world's thinnest manually wound, flyback chronograph, measuring just 8.24mm between its front and back sapphire crystals, housing an in-house chronograph movement just 4.65mm deep.

Of course horological complications usually equate to added movement depth. Watch movements are traditionally built in layers; timekeeping first, followed by any additional complication such as chronograph or even automatic winding. So it follows that the very slimmest timepieces in the world will also be the most simple – in other words manually wound, time-only watches.

This is the reason that ultra-slim and dress watches are almost always mentioned in the same breath. Dress watches, by horological convention, should display hours and minutes – small seconds at a push – and by nature of intended use should be slim and stylishly discrete.

In 2013 Piaget celebrated its 140th anniversary by unveiling the Altiplano 900P, at the time the world's thinnest mechanical watch measuring just 3.65mm from front to back. Piaget took an innovative approach to minimising unnecessary depth by using the underside of the caseback as the watch's mainplate, combining case and movement in a way that hadn't ever been attempted before.

But Piaget is not alone in its ultra-thin endeavours. This year has seen a favourable return to classical watch design and the more diminutive dimensions they entail – perhaps as a counter movement to the previous trend towards oversized watches.

Emergent German watch brand Nomos has been ploughing funding into research and development over the past few years, first with a technical study of the Swiss lever escapement – which resulted in its Swing System escapement last year – and more recently an entirely new movement, the DUW 3001, which can be found inside its Neomatik collection. When conceiving their new in-house designed and manufactured movement, Nomos ranked its depth, or lack of, as one of its fundamental principles, alongside timekeeping precision, of course.

It took Nomos three years to create a movement 3.2mm thick, with just 1mm between the mainplate and traditional Glashutte three-quarter plate in which to fit its gear train. The only way for Nomos to do this was to improve engineering tolerances by up to 50 per cent, allowing the company to produce smaller components more accurately.

But creating an ultra-thin movement isn't an easy task. Change one dimension by even a fraction of a millimetre and it has a resulting effect on its other properties. In the case of the DUW 3001, Nomos found that the thinner mainspring they required would not provide enough energy for an acceptable power reserve. Rather than use a larger barrel or even twin barrels, which would have added to the diameter of the movement, Nomos decided to make its movement more energy efficient. A standard automatic movement loses something like 20 per cent of its energy during the path from winding of the mainspring to the moving of its hands through inefficiencies. By comparison, the DUW 3001 is just five per cent inefficient.

However, when it comes to ultra-thin watchmaking neither Piaget nor Nomos can match the phenomenal, century-old achievements of Jaeger-LeCoultre, then still known as LeCoultre & Cie, when the venerable watch company produced what is still the slimmest mechanical watch mechanism of all time.

This incredible achievement was provoked by Paris-based watchmaker Edmond Jaeger in 1903, who had been making great leaps in producing ultra-slim calibres. Swiss contemporary and third generation company boss Jacques-David LeCoultre answered the challenge in a period of collaboration that would eventually lead to the formation of Jaeger-LeCoultre in 1937. LeCoultre & Cie produced a series of ultra-slim movements including minute repeaters and chronographs, but it was the 145 Calibre in 1907 that was destined to enter the history books. The Lépine pocket watch movement was just 1.38mm thick and was produced in small numbers until the 1960s.

This year Jaeger-LeCoultre re-established its preeminence in the field of ultra-thin when it shaved 0.05mm off of Piaget's 2013 record with its Master Ultra Thin Squelette. The watch measures just 3.6mm from front to back and contains the 1.85mm deep Calibre 849. The £43,000 watch serves as a fitting tribute to its record-breaking predecessor and also takes the coveted title of the slimmest mechanical watch in production today.