

BUSINESS MONTRES

LA LETTRE INTERNATIONALE DES MARCHÉS HORLOGERS & joaillerie ●●●

17 April 2009 - THE FRIDAY MESSENGER: follow-up from Basel and tennis balls...



... FOR SOME MASTER WATCHMAKERS WE SPOKE TO AT BASEL, IT'S AS IMPORTANT AS BREGUET'S INVENTION OF THE TOURBILLON!

While a tourbillon requires at least a minute to compensate for the possible effects of gravity, the Harmonious Oscillator allows almost instantaneous correction due to the interlinking of the balances and the asymmetric deployment of the balance springs.

This construction requires extreme precision in the machining of the balance wheels – however the specialist workshops of Franches-Montagnes take incredible pride in ensuring that these few tiny yet crucial microns are perfectly accurate!

... THEY'VE ARRIVED (AT LAST!) THE FIRST IMAGES OF THE MOST ADVANCED WATCHMAKING INNOVATION AT BASELWORLD: the double toothed balance – officially known as the "harmonious oscillator" – from Rudis Sylva, a brand present in the The Watch Factory area. An innovation which, during the brand's pre-production premieres, aroused the eager curiosity of today's finest master watchmakers, in particular Philippe Dufour and the Ulysse Nardin and Chopard teams (among many others).

It must be said that Rudis Sylva and Jacky Epitoux's team have chosen to fly in the face of all the principles of traditional watchmaking, which require the balances to oscillate as freely as possible. This "harmonious oscillator" uses a system with two balances - and a single escapement - each meshing with the other. The idea came from Mika Rissanen, a young master watchmaker trained in the prestigious houses, but was passed on to Rudis Sylva to be developed in line with its non-conformist vision of new generation watchmaking. Two toothed balances: never before seen in watchmaking micromechanics, in particular due to the asymmetric deployment of the balance springs in all positions, with the first

oscillations causing a type of resonance. Apparently, this mechanism is more precise than the tourbillon or classic carousel, with optimal adjustment in all positions and minimal variation in the amplitude differences in these positions.

Additional technical details for experts:

- Two complete toothed balances are interlinked. This combination ensures the same amplitude. The symmetry and energy of the balance springs are constantly opposed, enabling instantaneous average correction in the vertical position, which eliminates the effect of gravity.
- Frequency: 21,600 vibrations/hour (3 Hz).
- The cage (17.4 mm) rotates 360 degrees in 60 seconds.
- 2 flat balance springs, asymmetric deployment.
- 2 specifically shaped toothed balances made from special material.
- 1 escapement with 1 lever positioned at 90 degrees.
- Hand-wound mechanism with a power reserve of approximately 50 hours.

Image above: the double toothed balance. Other images will be available in the coming days, however the first production run of these watches is almost ready to be delivered to the Asian markets, which will be the first to receive it...