

WATCH

08:2011 | WATCHJOURNAL.COM

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THE WATCH MAGAZINE REDEFINED

origins Some of the rarest meteorites on earth represent heavenly bodies in a constant-motion reference to the astronomical basis of time.

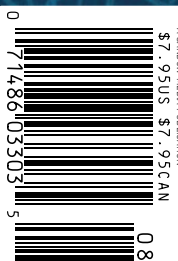
universality Art and science inspire both the watch's distinctive aesthetic and its sophisticated LM27 movement, based on a vintage caliber.

LOUIS MOINET ASTRALIS

unification The watch's alliance of complications brings together a tourbillon, split-seconds chronograph and 24-hour planetarium.

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WATCH JOURNAL REVIEW

GRÖNEFELD ONE HERTZ | HAUTE HORLOGERIE FROM THE NETHERLANDS

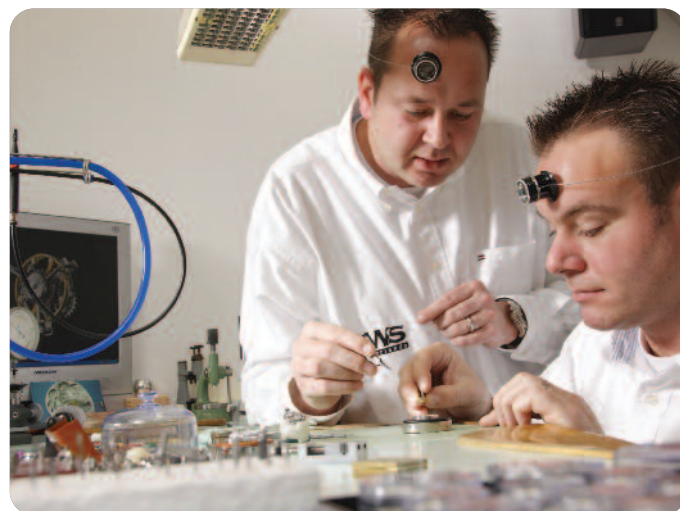
TEXT BY: FRANK GEELEN

Not all *haute horlogerie* comes from Switzerland.

Two watchmakers from the Netherlands, brothers Tim and Bart Grönefeld, were trained in the land of watchmaking and then worked behind the scenes for some of the most prestigious watch brands. But recently, they have presented watches under their own name, and, during this year's Baselworld, the world's biggest watch fair, they presented the Grönefeld One Hertz, featuring a deadbeat seconds complication—and a large seconds subdial that places emphasis on this extremely rare attribute.

TICKS LIKE QUARTZ

Mechanical wristwatches are usually recognizable by their sweep seconds hands. The typical seconds hand actually makes between five and 10 tiny steps each second. This is the result of a balance vibrating at a frequency of 2.5 Hz to 5 Hz. A wristwatch with deadbeat seconds (*seconde morte* in French) has a seconds hand that advances in full steps of one second each, instead of the apparently smooth sweep seconds hand. This was a very respected mechanical complication before quartz movements—which also tick off one full second at a time—made their appearance. Then, a smooth sweeping seconds hand



became the visible difference between quartz and mechanical wristwatches.

DEADBEAT SECONDS

Technically, the deadbeat seconds complication is incredibly difficult to realize. Although a mechanical movement is very small, the forces at work in these micro

wonders can be huge. And this is especially the case with a deadbeat seconds mechanism. While the balance vibrates at a certain regular frequency, the power to move the seconds hand has to be stored, and it can only be released once every second, resulting in the jump of the seconds hand. This storing and releasing of power creates huge power

LOW FREQUENCY

The name of the Grönefeld One Hertz refers to the standard international unit of frequency, defined as the number of cycles per second of a periodic phenomenon. One Hertz simply means one cycle per second and refers to the motion of the watch's deadbeat seconds hand.

fluctuations, which influence the watch's accuracy. However, the Grönefeld One Hertz features an *independent* deadbeat seconds mechanism, and this eliminates these negative influences on the watch's rate.

UNIQUE AMONG WRISTWATCHES

Watches with deadbeat seconds are a rare breed already, but the Grönefelds' creation is unique among wristwatches. The One Hertz has two mainspring barrels with separate gear trains. One is dedicated to the hour and minutes hand, and the other is dedicated to the deadbeat seconds hand. The two mainspring barrels are wound simultaneously via the crown, which features an innovative push mechanism for switching between winding and setting. A small hand at 3 indicates whether the watch is in winding or setting mode. A power reserve indicator at the top of the seconds dial keeps track of the 72-hour power reserve. The wristwatch measures 43 mm in diameter and has sapphire crystals on both the dial side and the back; the latter displays the watch's gorgeous proprietary movement, Caliber G-02. The watch is offered in two versions. The One Hertz 1912 commemorates the Grönefelds' grandfather, who began his watchmaking career in 1912, and is limited to 12 pieces in stainless steel, priced at €29,500 each. The One Hertz Dune is rose gold with a maroon dial and is limited to 20 pieces, priced at €49,500 each. gronefeld.nl

