## Wrist Water

THE PAST, PRESENT AND FUTURE OF FINE TIMEPIECES



MAY 2014



RICHARD MILLE

MATERIALS DRIVING INNOVATION

By Keith Flamer

## EXPECTATIONS

**BREVA'S** limited-edition Génie watches are like Doppler Radar on the wrist.



reva's Génie 01 possesses a prophetic aura. First, its "Génie" moniker suggests something magical. The "01" hints sequel models may be on the horizon. And its practical weather forecasting functions arrive in the nick of time, as unpredictable weather patterns continue to batter all regions of the United States season after season. Since that's the case, the Génie 01 should be on call as much as any American meteorologist.

The Breva Génie 01 made a splash in Geneva as a watch that forecasts the weather. But it's not a gimmicky timepiece at all. It's a rare and genuine mechanical curiosity. Exclusive to Breva, the Génie 01 is touted as the world's first wristwatch with time, altimeter, barometer and power reserve driven by a fully mechanical movement. Developed by watchmaker Jean-

François Mojon (Chronode) the proprietary movement is visible through the open dial and the transparent display case back. Génie 01 is a limited edition of 55 pieces in white gold and 55 pieces in pink gold.

The Breva Génie 01 displays the altitude, remaining mainspring power, and the barometer's weather forecasting functionality. Medium and small sub-dials indicate each function. Hours and minutes are displayed on a semi-transparent smoky brown sapphire dial at 8 o'clock with the small seconds on a miniature sub-dial below 12 o'clock. On a second semi-transparent sub-dial at 2 o'clock, graphic barometric pres-

sure icons forecast likely future weather conditions. An altimeter scale that can measure altitude from -300 to 5300 meters arcs the top perimeter of the main dial.

A 65-hour power-reserve indicator graces an engraved compass rose at 4 o'clock. At 5 o'clock, Breva stacks two extremely sensitive anaerobic capsules (one of which is visible) to measure the slightest changes in surrounding air pressure. This arms the watch with its unique forecasting capability. The barometric display ranges between 973 and 1053 hectopascals (hPa).

This barometric functionality was inspired by Evangelista Toricelli (a student







of Galileo Galilei), who invented the barometer in 1643. With similar spirit, Breva crafted the anaerobic capsules of memory metal (a Breva patent invention), which is lighter and stronger than aluminum with twice the flexibility as steel.

Three dual-purpose, chevron-engraved crowns power the complex proprietary Breva movement. The 9 o'clock crown sets the time and winds the watch. The 2 o'clock crown adjusts the barometric pressure scale while an inner pusher adjusts the altitude indicator position.

The 4 o'clock crown controls a locking ring that rotates 90 degrees to lock or unlock an air valve. In the unlocked position, the valve opens and accepts small amounts of air to equalize air pressure inside the case with exterior air pressure. A Teflon membrane filters moisture from the air before it enters the movement. A red indicator on the dial indicates when the valve is sealed.

Because altitude affects air pressure and weather, Breva placed a circular scale on the case back that displays the correlation between altitude and air pressure. The Breva Génie 01's finished movement is visible through a sapphire crystal, which reveals a vibrant oscillating balance wheel and compass roses rotating on the cap of the mainspring barrel.

## BREVA GÉNIE 02 AIR WATCH

As expected, hot on the heels of the Breva Génie 01 comes its spinoff sequel—the Breva Génie 02 Air Watch, which was announced at press time. The Breva Génie 02 Air Watch combines sophistication of mechanical craftsmanship with a high-performance altimeter. Breva considers it the perfect companion for high altitude enthusiasts such as pilots, skiers, mountain climbers, skydivers, paragliders, et al.

Breva's Génie 02 Air Watch show-cases another superbly-finished, 100%

Swiss-made proprietary movement (415 components) by Mojon (Chronode). The Breva Génie 02 Air has a similar design (multi-sub-dials, altimeter arc indicator, air pressure measuring anaerobic capsules) as Génie 01 but with a different execution. The Breva Génie 02 Air Watch features a high-precision arm which relays the air pressure to the altimeter which displays altitudes up to 5,000 meters (or 16,400 feet)—perfect if you're climbing Mount Blackburn in Alaska.

Engraved around the perimeter of the transparent case back, the movement is framed by the code names of many of the world's airports, along with their altitudes above sea level: GVA-430m, HND-6m; SYD-9m; JFK/LHR-24m; SIN-7m; DXB-19m; HKG-9m; GYD-3m; CDG-119m; MIA-2m. The Génie 02 Air is a limited

edition collection of 55 pieces in titanium, available with calibrations in either meters or feet. It retails for approximately \$132,000.

Breva's unique timepieces are the brainchild of Vincent Dupontreué, a business prodigy who began making and selling bracelets on the beaches of Corsica at age 11, and building and selling skateboard ramps at age 13. After stints in fashion, and an MBA, he launched his own high-end Swiss watch brand in 2010 (at age 33). He imagined a mechanical timepiece that forecasts weather while relaxing on Lake Como in northern Italy.

The name 'Breva' is inspired by 'La Breva,' a warm southern wind that contributes to the mild microclimate around Lake Como. While the Breva name translates well to the United States, the mild microclimates have escaped America recently.

According to Breva, predicting the weather isn't quite that simple because air pressure alone doesn't forecast the weather (knowing the air pressure just tells you what the weather is now, not what's coming). The change in air pressure is the prime predictor of weather that's coming.

In areas of relatively low pressure, air generally rises up, cools and condense into

water vapor that forms white fluffy clouds. However, if the air pressure is low enough, the winds will be stronger so the incoming air will rise even higher where the lower temperature of the air can no longer support denser water molecules, so they precipitate into rain, snow or even freeze as hail. In extreme cases, when the air pressure drops very low, massive amounts of air are forced upwards so fast that they spin to form whirlwinds, tornadoes, cyclones and hurricanes—which explains some recent weather patterns in the United States.

So it appears that Breva Génie 01 and the Breva Génie 02 Air Watch will work much harder in the harsher United States elements. Luckily, these watches are equipped to handle the pressure of high expectations. They may not be as precise as Doppler Radar but they are certainly more reliable than the untrained eye or the aching arthritic knee (which also responds to barometric pressure changes). At the very least, Breva's Genie 01 and Génie 02 Air also offers accurate time.

If only Breva's forecasting watches could help us understand what a polar vortex is. Perhaps only a future Breva Génie 03 could explain this inexplicable phenomenon.





