

ENGINEERING SUBLIMATED BY ART.

22th of December 2022, Geneva, Switzerland

* World premiere of the new Haute horology brand LABAILS
* Introduction of the brand’s very first timepiece: *Temerity*
* Introduction of the patent-pending Energy Management Optimization System
* Featuring a low-frequency tourbillon, a high-frequency chronograph and an innovative and exclusive energy management optimization system for watches with complications
* Power reserve: up to 5 days for primary function / up to 5 hours for measurement
* Display accuracy for the chronograph: 0.05 seconds
* The highest level of finishing applied to the 600+ parts of the watch
* Full sapphire case
* Exclusive: only 10 pieces will be produced
* Price: CHF 2.2 million (net)

Introduction

“*In 2017, I decided to create my Haute horology brand because of two sides of my personality that I had never managed to bring together until then: my intellectual interest for mechanical engineering and my desire for artistic beauty.*

*I am very proud to say that, five years later, we achieved what I dreamed of.*

*Today we introduce our very first product, but more importantly, we set the standards of our brand.*

*At LABAILS we deploy the highest level of mechanical engineering, we push the limits and we bring innovations. Every part of our timepieces, every material, every shape is designed with a purpose. In that sense our timepieces are resolutely technical, complex and engineering focused.*

*But we deeply believe that this technicity can be - and should be - extraordinary beautiful as well. That is the reason why one can see in our timepieces these two worlds co-existing in harmony: ostentatious, implacable mechanics, sublimated by a constant search for artistic beauty.*

*Through the work of our colleagues: designers, watchmakers, technical experts and artisans, we aspire to develop an extreme mechanical engineering and to transcend it to elevate our timepieces to the rank of a work of art.*

*I truly believe that our first timepiece “Temerity” bears witness to this vision and I hope that our work and efforts will get to touch you. After all, despite all efforts to improve the beat of our watches, there is no better rhythm than a heartbeat.”*

*Alexandre LABAILS*

- The concept -

When we start from a blank page, the great advantage is being able to do everything we want. We developed *Temerity* as a sports watch and what is a better complication for a sports watch than a chronograph?

In the case of *Temerity*, we wanted a tourbillon chronograph.

But we wanted our chronograph to be special. We wanted it to be able to time events with a fine measurement without suffering from the high-frequency defects.

High-frequency, crucial for a fine measurement, impacts severely the energy consumption and can have a long-term impact on the precision of the primary function. The usual solution to the problem is to create two distinct kinematic chains, one for the primary function, one for the chronograph. This does not only result in a loss of useful space in a highly limited volume but, more importantly, also in a loss of useful energy because in such an architecture, one energy source is permanently dedicated to a secondary function which is occasionally used.

Therefore, an optimized solution had to be found and we found it. We created a unique architecture focused on energy management with two kinematic chains in one: the primary one dedicated to the hours-minutes function and the secondary one, optional, dedicated to a high-frequency chronograph. This architecture is managed via an exclusive and innovative Energy Management Optimization System developed by LABAILS.

- The primary function -

The primary function of the watch is to display hours and minutes.

To ensure this function, *Temerity* regulates it via a 3Hz escapement and balance-wheel system embedded in a 60-seconds Tourbillon.

This choice optimizes the power reserve (low-frequency oscillations) and limits the negative effects of the gravity on the isochronism of the function.

In order to prevent possible inertia disparities during the calibration of the regulator, we call for a variable-inertia balance-wheel equipped with 4 adjustment screws.

The stop-second mechanism added to the 60-seconds-Tourbillon’s cage allows the user to accurately adjust the time with a marker embedded on the cage.

- The 5-hundredths-of-a-second chronograph –

The measurement of short times always has been a challenge for mechanical horology.

The choice to dedicate a high-frequency regulator with a 10Hz balance-wheel to this function allows *Temerity* to time events whose duration of up to 5 hours with a display accuracy of 5 hundredths of a second.

The 10 Hz-regulator fully oscillates 10 times per second, it means the escapement wheel changes position 20 times per second (72’000 times per hour); in other words, it changes position every 5 hundredths of a second.

In order to prevent possible inertia disparities during the calibration of the regulator, we use a variable-inertia balance-wheel equipped with 4 adjustment screws.

In order to facilitate reading the measurement, three hands are positioned on three separate dials: one for the jumping minutes, one for the seconds and one for the 5 hundredths of a second. This latter is divided into three one-second segments; therefore the 5-hundredths-of-a-second hand rotates at an angular speed of 120° per second, the perfect compromise, at this frequency, between speed, fluidity of motion and readability.

In order to reach this rotation speed, the hands of the chronograph are made of aluminum. This extremely lightweight metal, which has a density of only 2,7 g/cm3, allows us to optimize the torque-rotation speed relationship by reducing the inertia of the hands.

The pitch of the 5-hundredths-of-a-second hand is directly controlled by the high-frequency regulator, consequently it is the finest duration measurable with *Temerity*.

The chronograph function is controlled by two push buttons: Start/stop & Reset. When started, the vertical clutch system (controlled by a column wheel) of the chronograph allows the hands to be driven with a better precision, to ensure a perfect start.

- Up to 5 days of power reserve -

Despite a high-frequency chronograph function, its unique architecture focused on the energy management combined to two barrels allows the *Temerity* to offer up to **5 days** of power reserve for the primary function.

This long power reserve is only possible thanks to the exclusive and patent-pending system developed by LABAILS called Energy Management Optimization System: EMOS.

- EMOS, the innovative system -

The conceptual choice to dedicate a kinematic chain to a secondary function to increase the display accuracy is not new, especially for chronograph functions. However, for LABAILS, the choice to dedicate an energy source to this secondary function which will be used only occasionally is a conceptual error.

The exclusive and innovative system developed by LABAILS, EMOS allows the user to manage how the main energy source is used via a gear switch located at 9H, which proposes two modes:

* In Eco mode (energy saving mode), the energy source is fully dedicated to the primary function. The energy consumption is low. The high-frequency kinematic chain is inactivated; therefore, the high-frequency balance wheel is motionless.
* In Sports mode, the energy source continues to supply the primary function but also supplies the secondary function. The high-frequency balance wheel is operating, allowing the user to use the chronograph to time events. The energy consumption in this mode is high so, in order to prevent the primary function from stopping, when the remaining power reserve reaches 24 hours, the high-frequency balance-wheel is automatically inhibited. We call it the main power reserve safety system.

The desynchronization between engaging the Sports mode and starting the chronograph was designed on purpose because essential. It gives the few tenths-of-a-second needed for the high-frequency balance wheel to reach its nominal oscillation regime and therefore gives the chronograph the ability to measure with its full accuracy as soon as it is started.

- Adaptive power reserve indicators -

In order to track the energy consumption of the two functions, *Temerity* embeds two distinct power reserve indicators.

The first one is dedicated to track the energy level of the primary function in real-time, whether in Eco or in Sports mode, meaning that this indicator will adapt its course depending on the use of the secondary function.

The second one is exclusively dedicated to the Sports mode and tracks the energy consumption of the high-frequency regulator. When in Eco mode, the high-frequency regulator is inactivated, therefore this indicator doesn’t display “zero” but displays this fact instead.

Both of these power reserve indicators are powered by planetary differentials.

- User-experience focused -

*Temerity* has definitely been designed for the user’s comfort with a relentless attention to detail for ergonomics:

* A total expected weight of only 92 grams (without strap) for more than 600 parts thanks to the use of lightweight technical materials
* Ergonomic case designed according to the shape of a wrist
* Push buttons and crown providing a large support surface to reduce the pressure sensation and a slight disbursement of material to capture fingertips in the best possible way
* Chronograph measurements are displayed on three different dials to enable the user to quickly and intuitively read the measured time.

- Design, the search for artistic beauty –

*“Temerity’s design is the result of my inability to choose between engineering and aesthetics. Therefore, I knew I had to do both and, of course, at the highest level possible.”*

*Alexandre LABAILS*

The extreme engineering-focused movement developed by the brand could have been the driveline of the design and the shape of the watch as well. But on the opposite, we wanted to contain this extreme mechanism with a design with clean lines. Temerity is pure mechanics draped in both soft and sharp shapes reflecting the duality of this exceptional watch. The closer we look, the more we witness the mechanical beast living in the depth of the watch. Equivalently, the further away from the movement our eyes look, the more we see the precious side of this extraordinary timepiece.

In many regards, Temerity seems to be sculpted by the wind, as if this timepiece was born in a wind-tunnel. Its design, all curved, confers a contrast with the ostentatious mechanics of its movement.

The waterdrop-shaped indexes on the periphery reinforce this feeling as if a force, emanating from the center of the watch, was pushing them toward the exterior. Their curvy shape contributes to appease the edginess of the hands they are related to.

- The praise to sapphire -

Mankind has always wanted to understand and to replicate nature in its perfection.

One of these many fascinations concerned gem stones, so beautiful and sadly so rare in the natural environment. In 1902, the French chemist Auguste Verneuil made a breakthrough by inventing a process to produce synthetic ruby crystals, followed in 1911 by a process to produce synthetic blue sapphires.

Thanks to his work and that of many others, the synthetic sapphire, made of aluminum oxide crystals (Al2O3, also called Corundum), is now known for its extraordinary hardness: 9 on the Mohs scale.

This hardness is so high that the machining process requires nothing less than diamond tools, diamond being one of the very few materials on Earth able to scratch it.

This extraordinary difficult to shape material was chosen by LABAILS in a fully white transparent configuration for the case in order to let in as much light as possible to illuminate the mechanics from every side.

The very specific design of the case requires hundreds of hours of work to produce only one case.

- Cutting-edge savoir-faire -

Based in Le Locle, in Switzerland, the watch manufacture Chronode, led by the master watchmaker Jean-François Mojon, is the technical workshop of the brand. The fearlessness and the talent of these watchmakers are key allies in order to be able to propose such complex and innovative timepieces.

In order to make the concept become real, the brand also made the choice to work hand-in-hand with a local network of expert suppliers, generally small companies or artisans who share the same passion and enthusiasm for haute horology, and who cultivate, like us, the highest level of expectations in their field of expertise.

Working this way at the very beginning, with the best experts and cutting-edge technology, allows the brand not to be limited in its creativity and to push forward the limits of the possible.

According to the demanding specifications of the brand, our expert suppliers will produce different parts of the watch. These parts will be decorated and finished by artisans honouring the highest standards of watchmaking tradition. Exceptional craftsmen will spend up to hundreds of hours per movement in order to reach the brand’s expectations. Each part has to meet the beauty standards defined by the brand before highly qualified watchmakers assemble the movement with the utmost care.

In the end, the movement and the watch will pass a very strict and final quality control protocol before leaving our workshops and being delivered to its future owner.

- Make-to-order -

*Temerity* by LABAILS is an extraordinary timepiece. The tremendous complexities of the movement and the sapphire case generate an extremely difficult and long production process which requires the deployment of the best watchmaking expertise throughout the process. Therefore, only 10 pieces will be produced and only upon request.

- Specifications[[1]](#footnote-1) -

**MOVEMENT**

Architecture:

* Dimensions (L x w x h) : 32 x 36.25 x 11.6 mm
* Weight: 20,68g
* Number of parts: 551
* Tourbillon cage: 35 parts, 0.38g
* Number of jewels: 65; polished beveling of housing bore

Hours & Minutes function:

* Regulating organ: 60-second Tourbillon with stop-second system, 3Hz regulating organ (21’600 alt/h; 8.30mm diameter; incabloc shock protection), variable-inertia balance-wheel with gold adjustment screws
* Hands: rhodium plated with Super-Luminova, chamfered, polished and satin-finished
* Rehaut: sky-blue yttrium aluminum garnet, polished
* Indexes: rose gold (18K) with Super-Luminova

Chronograph function:

* Regulating organ: High-frequency regulating organ (10Hz / 72’000 alt/h; 8mm diameter; incabloc shock protection) with two stop-second systems, variable-inertia balance-wheel with gold adjustment screws
* Chronograph function (start/stop/reset): three dials and three hands: jumping minutes, seconds, 0.05 seconds
* Dials: sapphire, polished, engraved, lacquered
* Hands: aluminum (density 2.7), rose gold plated, satin-finished

Energy Management:

* Energy source: two parallel barrels with slipping springs to avoid excess tension
* Manual winding
* Energy Management Optimization System with to modes: Eco & Sports
* Fast-rotating barrels: 1 turn in 24 minutes in Sports mode
* Power reserve: Up to 120 hours (full Eco mode)
* Chronograph power reserve: Up to 5 hours (full Sports mode)
* Two adaptive power reserve indicators
* Main power reserve safety system activated when 24 hours are remaining

Bridges & main plate:

* Titanium
* Microblasted, satin-finished, polished beveling, polished, polished wording inscriptions

Gearing:

* Involute circle profile
* Finishing: circular satin-finished, rhodium plated, polished beveling, polished

**CASE**

* Dimensions (L x w x h) : 51.95 x 48 x 16.8 mm
* Water resistance: 5 ATM
* Full sapphire case: polished, laser engravings
* Crown: rose gold (18K) and sapphire, polished, microblasted, laser engraved logo
* Push buttons and gear switch: rose gold (18K), polished, microblasted
* Sapphire glasses with anti-reflective treatment on both sides

**STRAP**

* Material: FKM
* Width: 20 mm
* Fixing inserts in titanium
* Pin buckle: rose gold (18K), polished, satin-finished, microblasted

- The brand -

It was relatively late that Alexandre LABAILS discovered the world of watchmaking in 2016 at the age of 25. However, it was a discovery impossible to ignore as it resonated in him. A strong enough resonance to make him quit everything less than one year later to begin the incredible journey of building his own brand.

A perfectionist and passionate about mechanics, this French engineer specialized in aeronautic engines, coming from a family of musicians and artists found in Haute horology his ultimate way of expression.

Coming from nowhere, unknown to the watchmaking industry, he nevertheless cultivates the desire to create watches among the most extraordinary in the world. Nothing is too complicated, nothing is too beautiful. He sets no constraints to achieve his purpose, despite the very long development times and costs that such an approach requires.

His passion, his ambition and his vision have brought some of the best talents of Swiss watchmaking to work with him. Five years later, this work allows the brand to introduce its very first product.

In defiance of any obstacle, he named it *Temerity*.

- The founder -

Alexandre LABAILS was born in 1991, in Paris area, France. He grew up in a modest family of musicians and artists. At 23 years old, he graduated from the French school: Ecole Supérieure des Techniques Aéronautiques et de la Construction Automobile (ESTACA), as a mechanical engineer specialized in aeronautics engines.

He then worked for 3 years in engineering consulting, managing teams of project managers who coordinated industrial projects of automotive and aeronautics companies such as Dassault, Renault, AVL, Airbus and others.  
At the age of 25, he discovered fine watches for the first time and fell in love with this product.

For a year, in parallel with his job, he was learning, reading technical watchmaking books and documentations, and working on first concepts to officially launch his project to build an Haute horology brand in 2017. He didn’t know it at the time, but it would lead to the creation of one of the most ambitious projects in the watchmaking industry.

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1. *These specifications are expected technical specifications. Evolutions can occur during production process. Final technical specifications will be communicated at a later stage.* [↑](#footnote-ref-1)