

Geneva Watch Week, April 2024

Lederer presents the new Central Impulse Chronometer with a diameter of 39mm

A challenge, both technical and aesthetic – elegantly resolved.

A delicate undertaking that required a thorough rethinking of the movement – and further optimized it in the process.

A watch whose exterior aesthetic refinement reflects its interior mechanical excellence.

After winning the prestigious Innovation Prize at the Grand Prix d'Horlogerie de Genève in 2021, Lederer's celebrated Central Impulse Chronometer is back in the spotlight. Today, the watch not only continues to impress with its avant-garde mechanism – which has been further refined – but also with its new, more sober aesthetic, presented in a 39mm diameter case.

This new creation marks a complete reinvention of the CIC's technical innovation and design, pushing the boundaries of established conventions while preserving the tenets of traditional watchmaking expertise. Its updated appearance offers a modern and refined elegance, in sync with current trends.

**Creative freedom, innovation,
and unparalleled precision.**

Initially presented in a 44mm case, this horological masterpiece embraces a new era with a smaller, more contemporary 39mm size. This evolution is not merely a matter of size; it marks a significant mechanical advance with the introduction of a new triggering system for the constant-force remontoirs, designed and developed in-house at Lederer's Saint-Blaise (Neuchâtel) workshop.

Lederer's CIC 39 embodies creative freedom and technical precision, delivering a new contemporary elegance. Every aspect, from the 18% reduction in the movement's thickness to the new synchronization of the seconds hands, represents a significant technical challenge, expertly mastered.

This new offering highlights Lederer's dedication to maintaining the genuine spirit of its legacy, simultaneously advancing the frontiers of technical innovation.

At Lederer's *Manufacture* in Saint-Blaise, excellence is the standard. Leveraging its autonomy and savoir-faire, Lederer extends the limits of watchmaking traditions, while ensuring its essence and the core values remain intact.

"When you alter the geometry of an escapement, there are significant technical implications and it triggers a domino effect. Developing the Central Impulse Chronometer in a 39mm size was not merely about reducing the diameter; the movement's height had to be brought down, too, to preserve the aesthetic balance. So this project went quite a ways beyond simple refinement or thinning out safety margins; that would have jeopardized the movement's stability and reliability. In fact, every aspect and detail had to be meticulously assessed as to whether a redesign was warranted. Thanks to these very minute and very precise adjustments, we were able to reduce the movement's thickness by more than 1mm, approximately 18% of its original size, which in itself is remarkable," Bernhard Lederer explains

For Bernhard Lederer, the challenge was as much technical as it was aesthetic. Mastering the complexity of fitting all components perfectly within a smaller diameter—ensuring they not only fit but also work seamlessly together, all while maintaining harmonious proportions and achieving the necessary finesse – to him, it was akin to navigating the fine line between what's imaginable and what's achievable.

Reducing the diameter from 44mm to 39mm was a delicate endeavor, necessitating a profound redesign of the movement. Beyond raising the bar for precision and ingenuity, this process also opened new realms of creative freedom, unlocking a space for expression with even more possibilities of refinement. Here, reducing was not merely a matter of shrinking; on the contrary, it involved pushing the boundaries further, thinking differently, developing, and finding solutions to deliver uncompromising aesthetics and exceptional exactness.

**Everything about this watch reveals
the passion and authentic vision of Bernhard Lederer**

The difference in diameter is immediately obvious; less so the real highlight: the new detent mechanism for activating the remontoirs. Developed entirely in-house, this redesign significantly enhances the watch's reliability and performance.

It represents a notable advancement beyond the previous system, which was governed by a Wankel disk on the seconds wheel. Although it was engineered to minimize interference, it was not immune to disruptions, however minimal they might be. In the new mechanism, activation occurs directly within the winder, reducing the force required to engage the system by a factor of 9. This innovative approach not only elevates quality, precision, and reliability to unprecedented levels, but it also introduces a contemporary masterpiece that pays tribute to the great watchmaking tradition.

"As a result of this modification, the flow of force to the escapement is even smoother, ensuring exceptional precision and regularity throughout the duration of the power reserve," explains Bernhard Lederer.

Inspired by Louis-Abraham Breguet's pioneering work on the 'natural escapement' and George Daniels's innovative 'Independent Double Wheel Escapement' design, Bernhard Lederer revisited the escapement from a modern perspective. The inherent limitations of these innovations – the natural escapement was too heavy to ensure reliable performance and the Independent Double Wheel Escapement, while powerful, was only applicable to pocket watches – led Bernhard Lederer to develop a new geometry, aimed at adapting the novel escapement for everyday use.

To achieve this, Lederer installed two independent escape wheels at the end of two separate gear trains, each equipped with its own 10-second constant-force remontoir. These wheels operate alternately, achieving a remarkable symmetry.

With a detent mechanism that is absolutely one of a kind –its profile, its rubies, its lift angle, its direct central impulse – and therefore theoretically perfect, the result is a truly extraordinary system. This design minimizes friction and ensures the balance wheel receives energy with optimal timing, enhancing isochronism and stability.

From the outset, a frequency of 3 Hz was chosen because a watch worn on the wrist has to contend with shocks that impact the movement's regulating components. These components must resume their operation as quickly as possible after each shock, a crucial requirement for ensuring optimal precision under wearing conditions.

An ingenious mechanism ensuring unparalleled precision over the entire duration of the power reserve

The two escapement wheels, operating independently of each other, are each linked to a seconds counter. While the two seconds hands are also independent of each other, they are permanently synchronized, showing no drift in relation to each other until the end of the power reserve is reached.

This is made possible by an ingenious new mechanism that activates exclusively towards the end of the power reserve, bringing the entire watch to a halt. Thanks to this subtle system, which can recognize when the remontoir is no longer wound, the Central Impulse Chronometer 39mm is protected from a loss of precision that occurs as energy decreases at the end of the power reserve. This ensures the perfectly synchronized positioning of the two seconds hands from full to empty.

Durability – the other fundamental aspect in designing a Lederer watch

Besides ensuring unrivalled precision and uncompromising aesthetics, Bernhard Lederer has also made it a point of honor to ensure the watch's exceptional durability.

In his days as a restorer, he encountered numerous so-called 'progressive' watch movement designs, created according to the wishes and financial means of the individuals who commissioned them. What struck him was the absence at the outset of an overall architectural plan for these calibers. Consequently, repairing them was often akin to puzzle work, occasionally proving quite a headache.

Thus, for the Central Impulse Chronometer 39mm, the movement's architecture has been clearly mapped out, enabling even a watchmaker who is unfamiliar with the watch to get his bearings and work with it. Each component has been carefully rethought so that the bridges and cocks can be removed and reassembled individually, simplifying service operations and thereby ensuring its flawless functioning for future generations.

The Lederer mindset: in-house excellence as standard

Next to watchmaking engineering, the other essential aspect of Bernhard Lederer's philosophy centers on aesthetics. Indeed, he has always conceived his watches as being works of art whose outward refinement must reflect their mechanical perfection – as creations whose designs are destined to withstand the test of time, without losing any of their strength or beauty. Over his 40-year career, Bernhard Lederer has established a sober, elegant style that harmoniously blends character and discretion, distinctiveness and timeless allure.

The round 39 mm case, in either white or rose gold, is characterized by soft and elegant lines. Its slender polished bezel maximizes visibility into a dial designed as a true masterpiece of watchmaking art, reflecting a stunning three-dimensional approach both in its design and aesthetics. Far from a mere flat dial, it stands out for its volume and depth, mirroring the complex architecture and sophistication of the movement encased within. This perfect integration between dial and movement emphasizes the importance of visual and functional harmony in watch design.

The choice of raised lettering and the deliberate look of the minute track speak to his attention to stylistic details, which here infuse the dial design with a youthful vibrancy. The tens-of-minutes numerals are framed in a way that adds a subtle dynamic while the coherence between the hands and indices contributes to harmonious readability and aesthetics.

At the Lederer *Manufacture* in Saint-Blaise, which employs over 25 people, dials, hands, and indexes, too are manufactured in-house

An interesting aspect of this dial's design lies in Manufacture Lederer's ability to also produce its own dials, hands, and indices in-house, thus ensuring not only exceptional quality but also adherence to delivery schedules. The integrated manufacturing of these components, which are usually outsourced, reflects the brand's commitment to uncompromising excellence and independence.

The open seconds counter at 11 o'clock, with its hand sweeping counterclockwise, bears the inscription 'Dual Chronometer,' highlighting the two mechanisms central to the Central Impulse Chronometer. Watch enthusiasts who appreciate the watch's functional duality will appreciate this detail, which underscores the mechanism's complexity and superior performance.

The other seconds counter, positioned at 8 o'clock, with its hand rotating clockwise, has been deliberately 'closed' to enhance overall readability and to avoid competing with the visual impact of the constant-force winding mechanism, a feature that further amplifies the precision and innovation at the core of this creation.

The 'Lederer' signature, carefully inlaid in a cartouche at 5 o'clock, adds a further dimension of depth to this masterpiece. The letters, as if in bas-relief, reinforce the watch's identity while underlining its exclusive character and attention to detail.

On the case back, a second sapphire crystal, domed and beveled – an element as challenging to craft as the watch's front crystal – provides an exceptional view of the movement's architecture. Three-dimensional, symmetrical, oblique, and open-worked, this design offers a visual feast. The barrel, gear train, winding mechanism, escapement, and balance wheel bridges are all skeletonized, showcasing slender geometric shapes.

Indeed, the variety and remarkable execution of finishes, both above and below – including polishing, beveled and recessed angles, frosting, engraving, satin finishes, and both matte and polished surfaces – elevate the movement's spectacular symmetry.

Independence and artisanal *savoir-faire*

The engineering prowess embodied by the Central Impulse Chronometer 39mm, which was entirely conceived and created at the Lederer Manufacture in Saint-Blaise by the shores of Lake Neuchâtel, is matched only by its exceptional finish.

Bernhard Lederer is one of the few independent watchmakers who has been able to build, over the years, a manufacturing enterprise that today counts over 25 collaborators. This affords Lederer the freedom and autonomy to manufacture watches of exceptional quality, at the highest level of craftsmanship. Equipped with state-of-the-art CNC machines and other essential tools, every trade necessary for the creation of a complete wristwatch is represented and mastered within the *Manufacture Lederer*. Virtually all components are made in-house, including the watch hands, which are hand-crafted.

A symbol of harmony and precision as well as a celebration of the blend between tradition and innovation, the Central Impulse Chronometer 39mm is a masterpiece by a dedicated and discreet watchmaker whose technical excellence and compelling design are underpinned by meticulous craftsmanship and exceptional finishes.

The Central Impulse Chronometer 39mm is available in white gold with a blue dial (galvanic treatment), and in rose gold with a dial in shades of gray. The two models are limited to a series of 20 pieces each.

International Media Relations:

289 Consulting (Switzerland)
Aude Campanelli
aude.campanelli@289consulting.com
T +41 78 637 16 91

Specifications

Name:	CENTRAL IMPULSE CHRONOMETER (CIC) 39MM
References:	CIC 9016.60.302 (white gold, blue dial) – limited series of 20 pieces CIC 9016.50.303 (rose gold, gray dial) – Limited series of 20 pieces
Functions:	Hours, minutes, seconds
Case:	18K white gold or 18K 5N rose gold
Diameter:	39mm
Thickness:	10.75mm
Case back:	Open, sapphire crystal with anti-reflective treatment
Water Resistance:	3 ATM, 30 meters
Movement:	Mechanical with manual winding, dual impulse escapement
Number of components:	212
Number of jewels:	36 rubies
Frequency:	21,600 vibrations per hour (3 Hz)
Diameter:	35mm
Thickness:	4.95mm
Specific features:	Two independent barrels Two independent gear trains Two constant-force mechanisms Two independent escapement wheels
Winding and setting:	Winding stem with two positions: Position 1: manual winding Position 2: time setting Stop-seconds for time setting
Finishes:	All component decorations by hand Fine satin-finishing, top and bottom surface graining, bead blasting, hand-polished and beveled edges, inner and outer angles, bridges, main plate straight-grained and beveled by hand on the top and bottom surfaces, mirror-polished steel components.
Power reserve:	38 hours
Strap:	Black or brown leather, saddle-stitched
Retail price:	CHF 136,800 (excluding VAT)