

CVSTOS

THE TIME KEEPER

TOURBILLON-S

Double Flying Tourbillon with Differential

CVSTOS was founded in 2005 and established in the heart of Geneva, the cradle of Swiss watchmaking, and has since its genesis relentlessly pursued innovation, searching for more efficient and precise timekeeping while adopting distinctive high-tech approach to watchmaking. Having developed industry groundbreaking technical solutions, such as the first anti-shock and 10 bars waterproof Minute Repeater and the Rattrapante Chronograph with a Mysterious Tourbillon which led to four patents registered.

In 2019, CVSTOS presents its new calibre the CVS8550 conceived in collaboration with Télôs Watch. This new addition to the Concept-S collection is the first movement with 2 Flying Tourbillons each turning at 4 hertz and added two new patents to CVSTOS list of technical advances.

The tourbillon and the perpetual quest for chronometrical efficiency

First introduced as a mean to produce a uniform average rate by eliminating the effects of poise in the balance of a pocket watch, the fact remains that, nowadays, gravity has no particular influence on the running of a contemporary timepiece. Still, the tourbillon is a horological complication that holds a fundamental place in the quest for chronometric perfection and remains a symbol of savoir-faire, intended to demonstrate a manufacture's know-how and technical capacity for miniaturization. As a rule, reducing the size of a mechanism also reduces its error tolerance which is why these mechanisms are so greatly valued and appreciated.

CVSTOS, inspired by the historical importance of this invention, was compelled to transgress today's chronometric and technical limitations and set in motion a R&D research aiming to create a more reliable and precise wristwatch tourbillon. The solution eventually lead to the manufacturing of the calibre CVS8550, a manual wound Double Flying Tourbillon with a Differential and the filling of two patents for this innovative new movement.

Ambitious and innovative horology

The idea of precision in watchmaking is inevitably associated with high frequencies, which provide an optimal timekeeping and better amplitudes; as such the concept of the CVS8550 was based on the coupling of two flying tourbillons each turning at 28'800 vibrations per hour or 4Hz. However, with higher frequencies, the greater are the movement's demands for power, so the first patent, addresses the calibre's energy reserves. Unlike standard movement construction, where each barrel is depleted one-by-one, the energy of the four barrels arrives in parallel to the differential, whose single task it that of synchronizing and to provide in equal measure and fluid supply of power to the tourbillons.

Nonetheless, the calibre remains subject to friction several times per second. Regularity and accuracy being absolute requirements, a second solution was put in place and with it a second patent. By replacing the traditional pivots, in which a differential traditionally is placed upon, by ceramic ball bearings, provided not only anti-shock properties but also allowed the differential to distribute continuously the enormous amount of energy and torque, which amount to 1.6kg, to the tourbillons, with diminished friction and consequent wear to the components.

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Movement's architecture – form follows function

The CVS8550 movement is constructed by four very specific levels. At its base, the main plate carrying the 4 parallel barrels and the transmission gear; the second, with the differential, the third level, far away from the main plate holding the two flying tourbillions and its specific blocks. The fourth level provides the display of time by means of the hour and minute hands as well as subsidiary seconds, which are calculated from the average timekeeping of both tourbillions.

This mechanical ensemble, of both aesthetical and technical nature, offers a three-dimensional and dynamic impression of suspended elements, via the openwork dial and open back. The massive free volume allows for the inclusion of the curved titanium bridge that carries the sculpted Arabic indexes and technically for both tourbillions to be positioned in line - placed at 9h and 3h - which traditionally is not technically possible due to the crown stem while conserving larger and visually impacting 16mm diameter tourbillon cages.

Twenty-five bespoke timepieces

The CVS8550 will be made available in a limited quantity of 25 movements and this extremely exclusive movement, fully manufacturer and conceived in Switzerland, will be fitted in bespoke designs only. Either choosing the Sea liner case, with its characteristic four porthole-shaped openings on the sides; or, the Challenge III case, with crown protections which reinforce the robust and sporty yet elegant design of this new case construction, the future bearer of this complex movement will be offered a wide array of possibilities in terms of material choices, ranging from red gold 5N, titanium or steel as well as different coloured PVD treatments, matching with also bespoke straps of astonishing colour and material combinations.

About CVSTOS

In the elite world of Swiss Haute-Horlogerie, there are some brands that instantly make an impact, leaving connoisseurs speechless: CVSTOS is one such brand. With a style that embraces a modern design approach, manifesting itself in the perfect balance between traditional watchmaking and state-of-the-art innovation adding an ultra-contemporary, yet sporty dimension to the most sophisticated traditional watchmaking complications.

Always a step ahead of time, Cvsstos, the avant-garde benchmark in high-end watchmaking, anticipates current trends, relentlessly pursuing growth by doing today what others will do tomorrow.

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TECHNICAL SPECIFICATIONS

Movement

Calibre	CVS8550, mechanical manual winding
Dimensions	35.55mm x 36.06mm
Thickness	10.10 mm
Jewels	55 rubies
Number of Components	387 components
Plates finishing	Sand blasted
Bridges finishing	Sand blasted, circular graining, bevelling and polished by hand

Barrels	Four barrels in parallel placed on the main plate
Barrels Finishing	Snail engraving

Tourbillons

Number of Components	54 components per cage
Weight	0.394 grams per cage
Dimension	16.20 mm each cage
Rotation	One rotation / 60 seconds
Balance	Titanium, variable-inertia with mean-time titanium screws

Power Reserve

60 hours

Frequency

28'800 vph (4Hz) each tourbillon