



HULSMAN

HANDCRAFTED TIMEPIECES

Tourbillon Solstitium
In-house Movement



Machiel Hulsman, watchmaker, movement
designer and master of complications since 2013

AHCI
— DEPUIS 1985 —

After a successful career in IT Quality Management, I chose to pursue my true calling: watchmaking. Drawn by the depth, precision, and artistry of the craft, I made the deliberate decision to dedicate myself entirely to horology, leaving behind my previous profession to focus on creating timepieces of lasting significance. Here you can read more about my journey into watchmaking: <https://monochrome-watches.com/search/hulsman/>



This is where I love to be, working in my Atelier.

Over the past years, my focus has been devoted to the creation of entirely in-house movements and complications, each conceived, developed, and executed according to my own vision of horology.

This pursuit began with my first complication timepiece: a tourbillon. A watch defined by purity of design and mechanical expression, featuring jumping hours and retrograde minutes, shaped by my personal aesthetic language.

What began as a deeply personal creation soon resonated beyond myself. As appreciation for the design grew, a collector expressed the desire to acquire the prototype. I accepted, crafting the piece for him and engraving his initials onto the movement, transforming it into something uniquely his.

After delivering the original tourbillon, I was fortunate to present the piece at AHCI and other exhibitions, becoming an AHCI candidate with my work.

Following this milestone, several different commissions naturally emerged. Among these creations are timepieces displaying 38 time zones with automatic daylight saving adjustment, a triple axis tourbillon, designing the most complicated timepiece in the history and creating the easiest perpetual calendar in the world.

The Tourbillon Solstitium

The prototype shown in this document is made in white gold, not rhodium plated, giving the case a soft, off-white shine. The dial is made of silver and has a guilloché-pattern on the bottom half. The case is 39mm in width and 9.3mm in total height, including the sapphire crystal. The movement has 75 hours of power reserve, delivered by 2 mainspring barrels with slip-springs, making overwinding impossible.

Designed from scratch, made from scratch, created for the next generations!



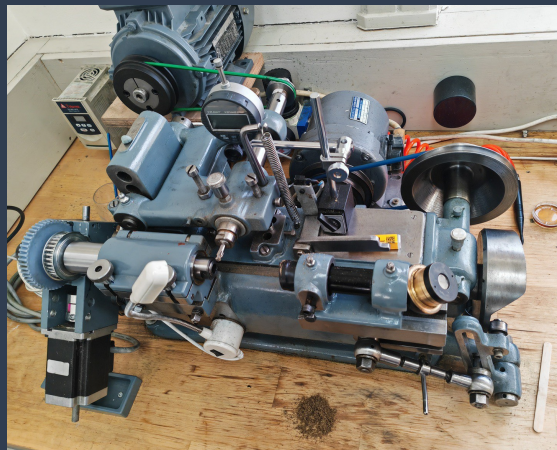
The 'original' Tourbillon
Solstitium - prototype

Making the Tourbillon Solstitium

The design started on paper, followed by CAD. All the calculations were done and the creation of the components started from plates of brass, steel bars and raw rubies. Every component was created from scratch on mostly manually operated machines. The gears, pinions and escape wheels are made from steel and brass bars on a 120 year old machine which I adapted for the work, as I did with many machines.



All the wheels feature my logo and 32 inward angles.



The upgraded 120 year old pinion cutting machine.



Shaping of the rubies

The Tourbillon

I designed the escapement, followed by the tourbillon cage. The balance wheel is made from gold plated Berillium Bronze and has gold weights. The cage was filed down by hand to an ultra-thin ring. The in-house escapement features a free-sprung balance oscillating at 21,600 vibrations per hour in a one-minute tourbillon, all fitted in a big, but light 14mm tourbillon cage. 2 Gold weights on the cage circumference are adjusted to balance the tourbillon out.



The case

The case is created using the lost-wax casting method, necessitated by the open lugs, an architectural feature that cannot be achieved through conventional machining. Following casting, the case undergoes extensive refinement on the lathe to achieve exact tolerances. It is then hand-finished using specialized tools, abrasives, and polishing techniques.

This process spans approximately three weeks, resulting in a case that is entirely shaped and finished by hand, imbued with a character no machine can replicate.



The hands

The case in white gold with open lugs (no Rhodium plating)

The hands are milled from carbon steel and subsequently shaped by hand with traditional files. They are refined using progressively finer abrasives before undergoing a hardening process, achieving exceptional durability. Once hardened, the hands are mirror-polished and thermally treated (annealed to blue) to receive the correct hardness.

A final polishing stage restores brilliance, resulting in a refined interplay between color, light, and finish.

Additional heat treatments allow for variations within the annealing spectrum, offering tones ranging from golden hues, to purple and deep blues. The whole process may very labour intensive, but the way the hands play with the light is quite spectacular.



The 'hidden' winding indicator

I wanted to incorporate another feature that I really like: a winding indicator. I did not want to add anything to the dial, so to keep the dial as clean as possible, I hid the indicator in the logo on the dial. The actual torque from the two mainsprings is measured. Once the torque becomes below a certain value, the indicator on the dial shows up in the logo. The upper part of the logo will turn red, telling you, you have reached the last 10% of power reserve. Once you wind the timepiece, the indicator will 'vanish'.



The lower tourbillon bridge

Every other Tourbillon Solstitium will have a different bridge design, according to the collector's wishes. The lower tourbillon bridge shown in the pictures was designed for the customer who bought the prototype. The 16mm circle can have different shapes inside, engravings, text, etc. We will design your bridge together to make your timepiece extra personal. You can co-create the design to make this timepiece your heirloom.



The lower tourbillon bridge depicting an ancient solar sign and wind directions



Example 1 (text)



Example 2 (shaped bridge)

The retrograde minutes and jumping hours

The prototype Tourbillon has proven its reliability over many years, but I wanted to make some changes from the learnings of the prototype.

A fundamental limitation of traditional retrograde system is its unidirectional nature. Adjusting it backwards beyond the '0' is either impossible or potentially even harmful to the movement.

This constraint became the starting point for innovation and technical improvements: what if the minutes hand could jump both ways?

The result is a newly developed system in which both the jumping hours and retrograde minutes can be adjusted forwards and backwards, a rare and technically demanding achievement, making the timepiece fully fool-proof.



The movement side with the lower tourbillon bridge showing an ancient solar sign and wind directions which can be changed according to your wishes.

This evolution required a modest increase in case height, bringing the total thickness to 9.3mm. However, this additional space allowed for a significant enhancement: the integration of bearings within the lever system that interacts with the snail cam.

Traditionally, this interaction generates friction and wear. By replacing sliding contact with rolling elements, energy loss is minimized, durability is improved, and long-term precision is enhanced.

Options

You can choose the combination you prefer to create your own timepiece!

The case:

The case will be available in white, yellow, rose gold and platinum.

The dial:

The dial color can be customized to any color requested.

The signature spade hands:

The Hulsman Timepieces hands can be heat blued (yellow, brown, purple as well), steel colored or match the case color.

Indexes:

Can match the color of the case, in steel or be heat treated to match the hands.

The movement:

The movement will showcase various finishing techniques on the bridges and mainplate, such as mirror-polished perlage, Côtes de Genève, circular graining, bead-blasted finishes, black-polish, etc.

The movement can be finished in white rhodium, black rhodium, yellow or rose gold.

The lower tourbillon bridge (visible on the back of the movement) can be changed to any desired design that we can work out together, giving the timepiece a personal touch.

A few examples in different case materials



The Subscription

Only a few will have the opportunity to join this journey. We will produce just 13 pieces, with number 0/12 being auctioned for local charity. This initiative allows us to support our community, including the athletics club, sports organisations and nature preservation efforts (such as De Veluwe and Van Meurs Park).

As a subscriber, you will receive updates, photos and video's throughout the process. Whatsapp will be our preferred communication channel.

You won't just witness the creation of your timepiece; you're also invited to the Atelier to help craft a component for your own timepiece! You'll follow the entire process and have the opportunity to make choices regarding decoration, aesthetic finishing and overall design. Here, you'll learn some of the real secrets of watchmaking!

To subscribe, please contact me by e-mail with your preferred choices for:

- Case color (rose gold, yellow gold, white gold or platinum),
- Dial, hands -and indexes colors,
- Preferred timepiece number (if still available)

The remaining finishes and details (like the lower tourbillon bridge design) will be discussed later. Since this is an in-house project, we can finalize these details until your components are being made. So, don't worry if you are not entirely certain about a colour or combination - there will be ample time to refine your choices throughout the process.

The timepiece will come with a service manual, so every experienced watchmaker will be able to service the watch in the future.

The delivery of the 12 timepieces will take between 2 and 2.5 years.

Financials

The price for each timepiece will be € 138.000,- excl. VAT/Ex-Works.

First ordered, first served!

- An initial downpayment of 50% (€69.000,- excl VAT, non-refundable) to confirm your order.
- A second payment of 25% (€34.500,- excl VAT) after one year.
- Final payment of 25% (€34.500,- excl VAT) prior to delivery.

Reservation, contact and banking details:

Ordering deadline & first payment to be made by Tuesday, september 1st 2026. After the first downpayment is done, your order will be confirmed.

Please send your contact details (full name, e-mail address and phone number) and selected options to: info@hulsman-timepieces.com

Payment information:

NL 79 RABO 0136 9606 93, in the name of Hulsman Timepieces BV in Heerde.
SWIFT-code (BIC): RABONL2U / RABONL2UXXX

Contact details:

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www.hulsman-timepieces.com/media/