

Customized LADOIRE II Chronograph
Hyperbolic 72
(Helvet Mechanic)



MICHAEL BROWN



THE BLACK KEYS

Valjoux Manufacture movement base, Reymond Frères SA.

Customized LADOIRE II Hyperbolic 72 Chronograph (Helvet Mechanic).

52° lift angle, 18'000 alt/h frequency.

Caliber 72.

29.50 mm diameter, 10.95 mm height (after modifications).

1950's period.

Bridges with T-type geometry, for a flatness optimization on the escapement.

50 hours power reserve.

Titanium case (TA6V GRADE 5 NORM WNR 3.7165), 316LX stainless steel screws.

CHRONOGRAPH HANDLING BY THE PUSHERS

Some chronographs have a single pusher fixed on the case middle or inside the O winding crown.

In this case, the pusher has three functions: start, stop and reset. It is not possible to restart the chronograph after stopping without first resetting it to zero. This three-function device is no longer suitable for wristwatches.

Nowadays, most chronographs are equipped with two pushers, one of which controls one function and the other two functions.

The advantage of this arrangement is that after the chronograph is stopped, it is not necessary to reset it to zero to start it again.

The table below summarizes the most common functions:

PUSHERS FUNCTION			
Type	Pusher	Function	Process
1	A	1 2 3	Start Stop Reset
2	A B B	1 1 2	Start Stop Reset
3	A A B	1 2 1	Start Stop Reset
4	A B O	1 1 1	Start Stop Reset
5	A O A B	1 1 2 1	Start Stop of the split-seconds hand Stop of the chronograph hand Reset

CHRONOGRAPH WITH HOUR COUNTER

Time reading of an observation to 1/5th second.

Time measurement of an observation until 30 minutes.

Time measurement of a phone conversation.

Time measurement of an observation until 12 hours. (F)

For each full circle of the minute counter hand, i.e. 30 minutes, the hour counter hand crosses the space between two divisions, equating to half an hour.

The reset is simultaneous for all three hands.

As a technical requirement for the development of our case, we created our own Helvet Mechanic integrated correction system, called inverse kinematic return.



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Valjoux Manufacture movement base before and after transformations by our team:

BEFORE :



AFTER :



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Logo marking after going through our workshops:

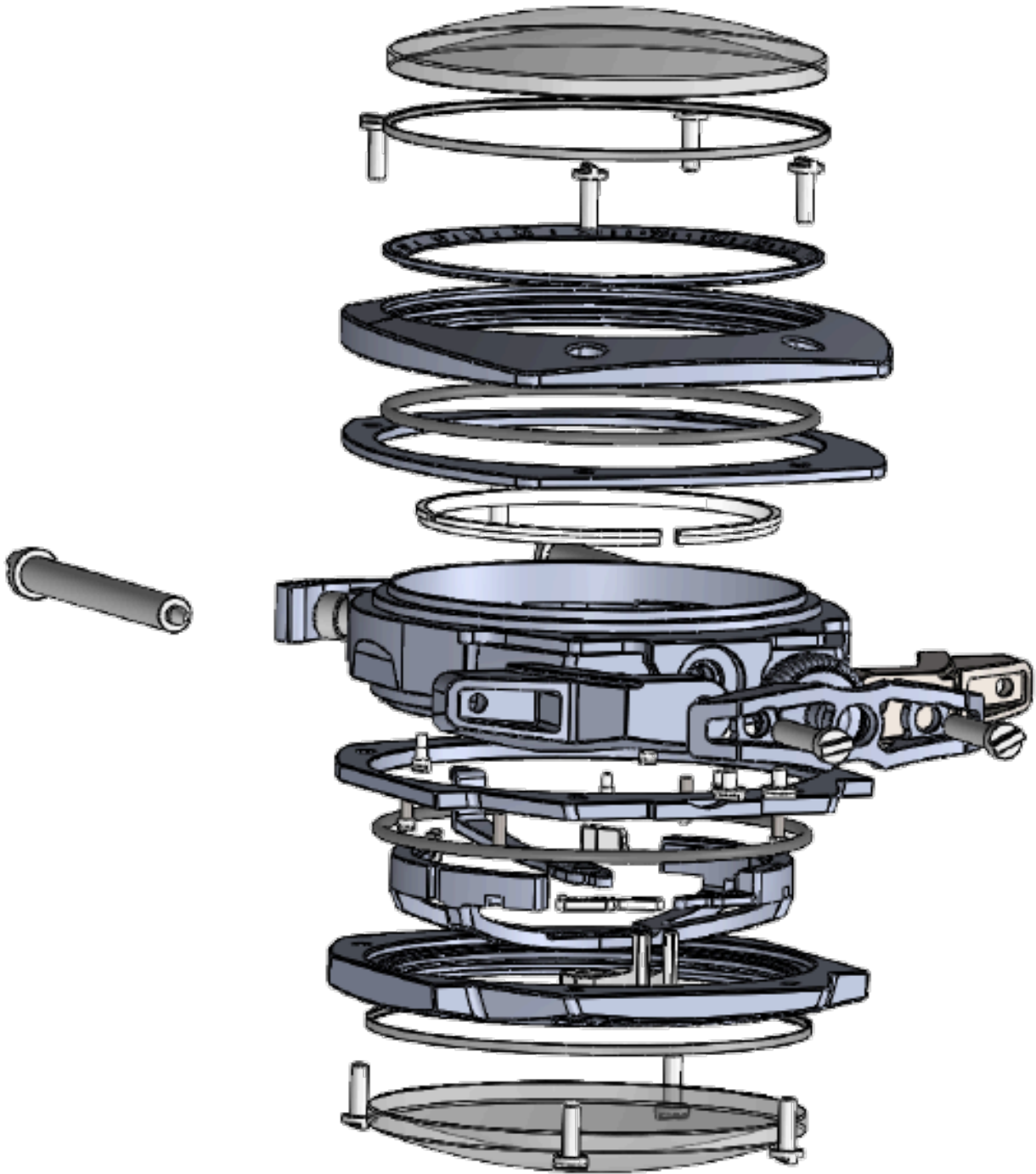


Balance bridge and cog bridge modifications:



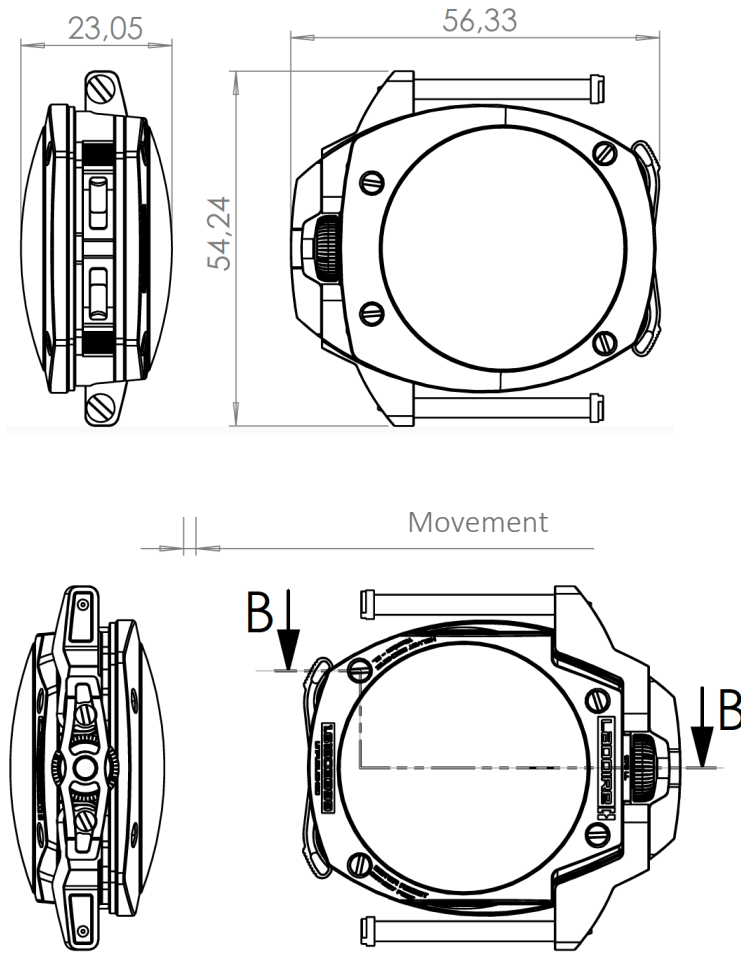
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Case structure, technical view of the case's stacking and geometry.
316LX stainless steel screws.

Titanium case (TA6V GRADE 5 NORM WNR 3.7165), 316LX stainless steel screws.



The development of our case required more than 1 500 hours of teamwork at the research department.

The single-arm horn innovation on two positions at 0° and 13°, allows a thin ergonomic adjustment and an ideal support on our client's wrist. The bracelet consists of four parts per strand (at 12 o'clock and 6 o'clock). Its inserts, one in Titanium and the other in an organic shape memory material, required 300 hours of work and development.

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Single-arm horn system, Helvet Mechanic innovation.

Variable adjustments, thin adaptation to the wrist of its owner, from 0° to 13°.

Horns with range positioning, screwed crown protection with central guide.

Crown with progressive sealing (300 meters) and guided centering.

Case's view at 3 o'clock:



Case's view at 12 o'clock:



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Titanium buckle on a LADOIRE II bracelet integrated to the single-arm system (Helvet Mechanic innovation).



Like the case's horn, the innovation of the single-arm buckle allows a thin ergonomic adjustment and an ideal support on our client's wrist. This buckle required more than 400 hours of development and three machining sessions before obtaining such a technicality balance.

Titanium buckle (TA6V GRADE 5 NORM WNR 3.7165), 316LX stainless steel screws.

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The hyperbolic counter-shape and interrupted curve dials are made of 41 components, whose stacking generates a dynamic whole.

This technique widely used in jewelry allows to play with colors, densities and finishes, bringing a strong visual identity to our dials.

The hands recall the cut-off codes of the 30's, a dear to us neoclassical touch.

This approach extends to the movements and brings harmony to the structure of the timepiece.



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The case is made by a master saddler, with the best skins selected by our tanner with an ancestral know-how.

A two-year warranty is given on each of our Opus. It will be renewed every two years if we have it in hand on the anniversary date of delivery. (The first delivery will be offered).

3 finishes levels will be offered to you:

Level 1: Ours, the 2021-2022 collection.

Level 2: Yours, with the possibility to change colors and finishes of the model of your choice.

Level 3: Yours, with this time the possibility to operate on the geometry of the components, as well as colors and finishes.

*Price on request.

Helvet Mechanic Spirit