

GENESIS IN 7 ACTS OF THE FIRST HYBRID MECHANICAL-FLUID WATCH

Act I Expo 02. The Swiss national exhibition in 2002 is taking place around the Lakes of Neuchâtel, Biel and Murten. Lucien Vouillamoz is raving to his friends about the idea of designing a water watch, in the region of the three lakes and Watch Valley. The problem lies in how to replace the gravitational energy used in clepsydras or water clocks within a wearable, water-resistant wristwatch. The utopic idea was swiftly put on hold in the absence of a technical solution.

Act II Several years have gone by. The concept is still bothering Lucien Vouillamoz. He reconsiders it from a different angle - namely to create a fluid indicator of time, that is small and transportable and can be used in different ways, rather than a simple "water wristwatch". This thought process leads him to a completely new idea - involving using two flexible reservoirs attached to each end of the same capillary. This closed system is to comprise different coloured, non-miscible liquids in each reservoir. By compressing the first, its fluid is pushed into the capillary and indicates the time, while the other liquid expands in the second reservoir. The separation between the two liquids is ensured by the positive and negative polarity of the molecules in both, which would make them repel each other's edges like two magnets. No need for a piston in the tube. The questions of energy and congestion are solved in one go. The idea behind the future H1 is born.

Act III It's time to protect a simple but powerful idea. Lucien Vouillamoz sees the potential, but has no experience of patents. He calls upon his longtime friend, Patrick Berdoz, a serial entrepreneur and business angel highly experienced in the realm of intellectual property and launching innovative projects. After verifying the concept and conducting due diligence with his team of engineers, the latter invests the necessary funds for the initial validations of the project and makes his team of specialists available to Lucien. Together, they conduct the prior research and develop the first technical specifications, the first designs, and the preliminary registrations. The results are promising. Patrick continues to finance the entire project. Simultaneously, he contacts his friend Emmanuel Savioz. This specialist in the domain of high-tech start-ups is made responsible for the creation of HYT and raising the funds required to finance a prototype. Patrick also invites him to join him and Lucien in

founding and sitting on the board of HYT and its sister company, Preciflex. Thus begins the search for talent to start the watchmaking activities.

Act IV Following a year of R&D, the first prototype is created. The time is accurately indicated thanks to a rectangular capillary measuring 1.7/03mm, machined in a circle between two layers of plexiglass making up the watch glass. Created using rolling membranes, the flexible reservoirs are trapped in transparent cylinders. The force required to move the liquid is transmitted by a cam, which replaces the hour hand. The concept is demonstrated and the patents registered by Preciflex.

Act V 2010. A key meeting with Vincent Perriard, who is crazy about watchmaking and has already been involved in an attempt to use fluids - which actually won the 2008 Design Watch Prize at the prestigious Geneva Watchmaking Grand Prix. Because Vincent dreams of going even further, and Lucien Vouillamoz can provide the key to his dream - the technology!

And so, the technology is now in place. This means that the idea of a rectangular capillary machined into plexiglas has very quickly become a thing of the past, to be replaced by a borosilicate glass capillary around 11 cm in length with a tiny internal diameter of just 1 mm, an independent capillary through which the time - flowing in the truest sense of the word - can be read. Instead of flowing from rolling membranes, the fluids now come from high- strength, ultra-flexible bellows (technology used by NASA) which act as pistons to enable the fluid to move inside the capillary.

The project can take off.

Act VI An entire universe lies between a proof of concept and a luxury watch. To develop the movement for the future H1, HYT turns to Jean-François Mojon and his team at Chronode. For the liquid part, he advises Lucien Vouillamoz who pilots the reliability trials and the production, in conjunction with Helbling Technik. Meanwhile, CEO and HYT partner Vincent Perriard entrusts the design of the future H1 to the *Etude de Style* design company, headed by Sébastien Perret, which is already working on the H2, H3 and H4.

Act VII The orchestra is in place. Vincent Perriard obtains his movements from Chronode, while Preciflex, under the supervision of Lucien Vouillamoz, supplies the liquid components. The alchemy between these two unlikely worlds works perfectly. A year later, the first hybrid mechanical-fluid watch emerges.