

Historic review

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The grand tradition of Patek Philippe chronographs

Chronographs have always played an important role in the broad spectrum of complicated timepieces that manifest Patek Philippe's horological virtuosity. Just a few years after the manufacture was established, it began to accrue expertise in short-time measurements and over a period of 150 years crafted numerous chronographs, most of which are on display in the world's most prestigious museum collections. The few historic exemplars on the market are highly coveted among connoisseurs.

Patek Philippe's chronograph heritage dates back more than 150 years

One of the earliest Patek Philippe chronographs was completed in 1856. It is pocket watch No. 10 051 with a large chronograph hand and jumping seconds (*seconde foudroyante*) in a subsidiary dial. It was already capable of timing events with an accuracy of one-fourth of a second. It did not have a zero-reset mechanism and needed a separate key to be readied for every measurement.

Starting in the mid 19th-century, a few specialists began to dominate the production of chronograph movements, among them the Victorin Piguet Fils manufacture. The company was founded in Geneva in 1880 but only three years later moved to the Vallée de Joux, a region that gradually evolved to become a stronghold for ultra-complex horological mechanisms. Victorin Piguet entertained a particularly privileged relationship with Patek Philippe, crafting some of the most intricate movement blanks in the company's history for pocket watches that would eventually bear the Genevan workshops' signature. However, all movement modifications as well as component finissage processes such as chamfering, perlage, polishing, and decorating were always performed in-house by Patek Philippe's master watchmakers.

The first Patek Philippe wrist chronographs

In 1923, Patek Philippe crafted its first wrist chronograph – a split-seconds chronograph, to be precise – on the basis of a small pocket watch movement blank. Around 1927, the workshops began to regularly produce wrist chronographs with and without the rattrapante function. They were presented in a wide variety of art-deco cases: round, square, rectangular, tonneau-shaped, and cushion shaped. The models without rattrapante function were classic monopusher or three-phase chronographs which allowed short-duration events to be timed with a single pusher in the winding crown. The sequence was start, stop, and reset. Their column wheels were already crowned with polished caps that to this very day adorn the controller of Patek Philippe's wrist chronographs and in the most recent models have even been endowed with a new function. The early chronographs also incorporated classic horizontal clutches and reset mechanisms with column-wheel-controlled hammers and heart cams. Needless to say, Patek Philippe transformed these chronograph calibers into true masterpieces of aesthetics as well. The edges of all bridges and steel parts are manually chamfered and polished. The flat components are artistically decorated with Geneva striping and perlage. The screw slots are



beveled, the teeth of steel wheels and the leaves of the pinions are individually smoothed and polished with hardwood disks. From the very beginning, the work involved in these meticulous finishing processes imposed a natural limit on the number of Patek Philippe wrist chronographs that the workshops could complete.

Transfer of ownership and a new chronograph caliber

The grand era of Patek Philippe wrist chronographs began in the 1930s. Additionally, 1932 marked a major transition point: Brothers Jean and Charles Stern acquired Patek Philippe from the last descendants of the manufacture's founders. After an in-depth analysis of the American market, they came to the conclusion that chronographs had a bright future. In 1934, the manufacture presented its Ref. 130 wrist chronograph with pushers at 2 and 4 o'clock. This model would be the archetype of Patek Philippe wrist chronographs for several decades. To provide a sustainable basis for chronograph production, the new owners, together with their technical director Jean Pfister, evaluated the market for chronograph blanks. They discovered the column-wheel caliber 23VZ built by Reymond Frères in the Vallée de Joux in an atelier that was renamed Valjoux SA in 1929. With a diameter of 13 lignes (about 28 millimeters) and a height of 5.85 millimeters, the size of the blank was ideal for wristwatches in those days. The escape and driving wheels were set on separate cocks, the index pointer received a swan's neck precision regulator, and the chronograph bridge obtained its distinctive three-arm form. In 1939, Patek Philippe introduced its first chronograph with the modified Valjoux caliber. It was made during a period of twenty-five years and constituted the heart of timepieces that today, if at all, are available only through the world's most prestigious auction houses. The caliber powered the Ref. 130 with rectangular pushers at 2 and 4 o'clock, the Ref. 1436 split-seconds chronograph, two chronographs with perpetual calendars (Refs. 1518 and 2499), the 1955 Ref. 2571 split-seconds chronograph with perpetual calendar, and the one-of-a-kind timepiece completed in 1940 that combines the chronograph function with Louis Cottier's ingenious World Time mechanism.

When the quartz crisis erupted and self-winding chronographs appeared in the 1970s, Valjoux SA saw the fate of caliber 23VZ sealed. Its production was discontinued in 1974. But having built up an inventory in a timely manner, Patek Philippe still had a sufficient number of movement blanks to sustain the production of Ref. 2499 chronographs with perpetual calendars until 1985. But as stocks neared depletion, alternate solutions were sought and an option was found not far away from Valjoux SA at ébauche maker Nouvelle Lémania SA. The era of caliber CH 27-70 began to unfold.

Patek Philippe elevates caliber CH 27-70 to the benchmark in haute horlogerie chronographs

The CH 27-70 had all the classic features such as manual winding, column-wheel control, and the horizontal clutch. But of course, this movement blank had to be totally reworked as well to meet Patek Philippe's strict standards. Nearly all supplied components were modified or replaced. For functionality and traditional reasons, the escape-wheel and fourth-wheel cocks, the chronograph bridge, as well as the configuration of the clutch lever were redesigned along the lines of the 1923 role model, the first wrist chronograph. Tooth profile and transmission ratio changes allowed the torque curve to be optimized and boosted the caliber's power reserve by 20% to 60 hours. Of course, the heart of the new movement is the Gyromax balance invented and patented by Patek Philippe as well as a hairspring with a Phillips overcoil. Thanks to its frequency of 18,000 semi-oscillations per hour (2.5 Hz), the chronograph hand can be stopped at increments of one-fifth of a second. These modifications are followed by all the finissage processes, including chamfering, polishing, graining, satin-finishing, and all the other manual decorations that make Patek Philippe calibers paragons of aesthetic beauty. As all other Patek Philippe movements of the era, this one was also hallmarked with the Geneva Seal.



In 1986, the profoundly enhanced caliber CH 27-70 ticked for the first time in the Ref. 3970 chronograph with perpetual calendar, a timepiece that instantly became an icon. It quickly became known as the world's most beautiful chronograph movement and convinced a growing number of watch collectors that waiting lists spanning several years were no deterrent. The Ref. 5070, without additional complications, followed in 1998. At the same time, rumors began to circulate that Patek Philippe was developing a chronograph caliber that would originate entirely in-house, like all its other manufacture movements.

Total independence with three proprietary chronograph movements

Indeed, the manufacture was contemplating such a development because the systematic quest for independence also implied total autonomy in the domain of chronography. However, its plans did not really begin to materialize until the beginning of the new millennium. When the kickoff occurred, several options were explored, including a classic configuration that would eventually supersede the CH 27-70, but also along the lines of a modern self-winding construction with a vertical disk clutch.

The first debut took place in 2005: the Ref. 5959 split-seconds chronograph with the CHR 27-525 PS movement. With a height of only 5.25 mm, it is the world's thinnest column-wheel controlled rattrapante caliber. These watches are crafted one by one and feature chronograph wheels with the new, patented tothing profile that optimizes power transmission and reduces friction. The CHR 27-525 PS is also the first chronograph movement built entirely in Patek Philippe's ateliers.

The next première took place in 2006. The whole world was expecting to be acquainted with the successor of the CH 27-70 but instead witnessed the launch of the Ref. 5960P Annual Calendar chronograph with a second proprietary development: the self-winding CH 28-520 IRM QA 24H chronograph caliber with vertical clutch, Annual Calendar, power-reserve display, and 24-hour indication.

Finally, in 2009, ten years of speculation came to an end. Patek Philippe celebrated the inauguration of its completely refurbished showrooms on Place Vendôme in Paris by presenting the CH 29-535 PS chronograph caliber. So the company now has its own manually wound chronograph movement with a classic column-wheel controller and masters all complications across the entire collection in-house. As far as the CH 29-535 PS is concerned, it embodies six patented technical innovations, including the tothing profile unveiled with the launch of caliber CHR 27-525 PS. Of course, these movements will display the Patek Philippe Seal from the very start. It is the hallmark introduced and published as a set of written directives by the Geneva-based manufacture last year to officially authenticate its benchmark quality standards.

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