PATEK PHILIPPE
GENEVE

Press release

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Reference 5308G-001
A new Quadruple Complication for connoisseurs

Having made its global debut as a limited edition in platinum on the occasion of the Patek Philippe Grand Exhibition "Watch Art" Tokyo in 2023 (5308P-010), Reference 5308 is entering the manufacture's current collection. A true feat of miniaturization and energy management, this self-winding Quadruple Complication unites a minute repeater, a split-seconds chronograph endowed with two new patented mechanisms and an instantaneous perpetual calendar with aperture displays. The new caliber R CHR 27 PS QI movement with optimized performances greets the world in an elegant white-gold case with pierced lugs, harmonizing with an-ice-blue sunburst dial.

In 2008, Patek Philippe reaffirmed its supreme mastery of the Grand Complications by launching as a feature of its regular collection Reference 5207, an innovative timepiece uniting a minute repeater, a tourbillon and an instantaneous perpetual calendar with aperture displays whose original concept was confirmed by two patents (caliber R TO 27 PS QI). With its modern design, enhanced by a sporty touch, this wristwatch was the first of a new breed of Grand Complication in regular production, intended for daily wear.

In 2011, the manufacture continued this saga of exceptional pieces by presenting Reference 5208, a self-winding watch combining a minute repeater, a mono-pusher chronograph and an instantaneous perpetual calendar with aperture displays. The first Patek Philippe Triple Complication wristwatch to include a chronograph, Reference 5208 also stood out as one of the rare ultra-complicated watches to be self-winding. To enable the caliber R CH 27 PS QI movement to fulfill all its functions precisely and reliably, the manufacture's engineers had to innovate, notably by placing the chronograph mechanism between the base movement (with minute repeater) and the perpetual calendar module –which proved an extremely complex task. In 2017, a unique version of this Triple Complication in titanium (5208T-010), donated to the charitable auction Only Watch, went under the hammer for 6.2 million Swiss francs.

From the Triple to the Quadruple Complication

Yet again, Patek Philippe has chosen to push back the frontiers of the great watchmaking art, by endowing this timepiece with a new additional function, and no minor one at that: a split-seconds, or *rattrapante*, (*rattraper*: to catch up) mechanism: an exceptional device that ranks–alongside the minute repeater and the tourbillon – as one of the top three most difficult horological complications to produce. It takes a highly sophisticated mecanism to control a second sweep chronograph hand that can be stopped in order to measure an intermediate time (or keep a reference time) and then released so that it overtakes the other sweep seconds hand in a fraction of a second and the two superimposed hands continue to circle the dial as one. Destined for devotees of *haute horlogerie*, the new self-winding Reference 5308 thus unites four complications of which three (minute repeater, instantaneous perpetual calendar and the split-seconds function) are already considered Grand Complications in their own right.

PATEK PHILIPPE SA GENEVE
Chemin du Pont-du-Centenaire 141 – 1228 Plan-les-Ouates
P.O. Box 2654 – CH – 1211 Geneva 2 – Switzerland
Tel. + 41 22 884 20 20 – Fax + 41 22 884 25 47 – www.patek.com

A true feat of miniaturization and mastery of the forces to which the tiny parts are subjected, it stands out by the extreme complexity and density of its construction –notably the four concentric sweep hands with their particularly long staffs–while respecting all the directives of the Patek Philippe Seal, including the criteria for rate accuracy, strengthened in 2024: variations in rate must now lie within a range of -1 to +2 seconds per 24 hours.

A new caliber with optimized performances

The addition (between the base movement and the chronograph module) of a split-seconds mechanism, a voracious consumer of energy, represented a formidable challenge for the manufacture's engineers. In particular, the specifications required that the volume of the new movement remain as compact as possible, with minimum extra thickness. Mission accomplished: despite the 80 parts needed to add the split-seconds function (799, compared with 719 on the caliber R CH 27 PS QI), the new caliber R CHR 27 PS QI saw an increase in thickness of only 1.93 mm (12.28 mm versus 10.35). For optimal integration of the split-seconds function (which consumes as much energy as the chronograph mechanism when the latter is running), the designers decided to boost the movement's performance by taking action at several levels. The barrel spring torque was increased by means of a strip spring in a thicker, tougher material and a smaller barrel arbor –making it possible to keep an identical spring length, number of turns and power reserve (minimum 38 hours – maximum 48 hours with the chronograph stopped). This increase in the barrel torque to manage the split-seconds mechanism made it necessary, by chain reaction, to increase the inertia of the balance so as to ensure better rate stability by avoiding "knocking" phenomena (shocks in the escapement, when the amplitude of the balance is too high). As regards the off-center mini-rotor in 22K gold, this was replaced by a mini-rotor in platinum –a metal whose greater mass made it possible to increase the winding power and thus rewind without encumbering the new barrel.

A new patented system, eliminating friction of the chronograph wheel

To reduce energy consumption, the designers also turned their attention to the split-seconds chronograph by developing two innovations for which they have filed patent applications. The first concerns the coupling system. In a horizontal-clutch chronograph, the connection between the seconds wheel and the chronograph wheel (which carries the sweep seconds hand) is made via the clutch wheel actuated by the clutch lever. To avoid any vibration of the sweep hand, the usual chronograph wheels are equipped with a friction spring that exerts a slight braking effect –which consumes energy. Patek Philippe has eliminated that friction by replacing the usual conventionally toothed clutch wheel with an innovative system of backlash-compensation wheel. Manufactured by the LIGA process (lithography, electroplating and molding) this nickel phosphorus component presents an avant-garde design with long slotted teeth, each incorporating a tiny strip spring 18 microns thick that grips the teeth of the chronograph wheel, thus removing any risk of the sweep second hand's vibrating – with no need for adjustment. A meeting of tradition and innovation that perfectly reflects the Patek Philippe spirit. This principle recalls that of the patented anti-backlash wheel driving the seconds pinion, launched in 2019 in the new self-winding base caliber 26-330 (introduced in the Calatrava Weekly Calendar Reference 5212A-001). Furthermore, the profile of the teeth and the strip springs was entirely revised for optimal adaptation to a horizontal-clutch chronograph mechanism, with a view to enhanced performance and reliability.

A new patented mechanism for isolating the split-seconds hand

The second patented innovation concerns the split-seconds mechanism, located beneath the chronograph module. In conventional split-seconds mechanisms, when the split-seconds hand is stopped (the jaws of the clamps close) for the read-out of an intermediate time, the split-seconds lever continues to rotate around the chronograph heart-piece –creating friction that consumes energy. In the new system developed by Patek Philippe, an isolator mechanism enables this lever to be raised, separating it from the chronograph mobile. This prevents the stopping of the split-seconds mobile from influencing the amplitude of the balance –and thus the reliability of the movement, as well as its power reserve when the chronograph is engaged. Patek Philippe has already designed systems for isolating the split-seconds lever, for the manually wound caliber CHR 29-535 PS Q in 2012 (split-seconds chronograph and perpetual calendar Reference 5204) and caliber CHR 29-535 PS in 2015 (split-seconds chronograph Reference 5370). On the new Reference 5308G-001, the entire construction was revised to reduce the thickness of the isolator mechanism as much as possible, by means of a concentric dual-lever operating mode.

A mono-pusher split-seconds chronograph

The monopusher chronograph with column wheel and horizontal clutch, distinguished by its particularly slender construction, displays 60-minute and 12-hour counters at 3 o'clock and 9 o'clock respectively. Its single pusher at 2 o'clock enables the user to actuate the start, stop and re-set functions successively (a 3-step chronograph). The split-seconds hand, equipped with its own column wheel, is operated by the pusher at 4 o'clock. A single pressure stops the split-seconds hand; a second pressure re-starts it, whereupon it catches up with the running sweep hand. This process of stopping and re-starting the split-seconds hand may be repeated at will while the chronograph sweep-seconds hand is in action. At the end of the timing event, the user actuates the pusher at 2 o'clock to stop the two hands conjointly and reset them to zero.

A minute repeater chiming on two gongs

The minute repeater chiming on two classic gongs offers the legendary sound quality of the Patek Philippe chiming watches –Grand Complications that are the fruit of an expertise reserved for the elite of master watchmakers. This highly sophisticated system of tiny racks, snails, hammers and gongs, actuated by the slide-piece set into caseband at 9 o'clock, strikes, on demand, the hours on the low-pitch gong, the quarters by alternating strokes (high and low pitch) and the minutes elapsed since the last quarter on the high-pitch gong. It takes great experience, dexterity and a perfectly trained musical ear to obtain that "Patek Philippe sound" sought after by connoisseurs. Thierry Stern, president of the manufacture, personally listens to the chime of each minute repeater watch emerging from the workshops, before deciding whether it can be delivered to its lucky owner.

The sophistication of an instantaneous perpetual calendar with aperture displays

The instantaneous perpetual calendar with aperture displays, a feat reserved for a very select number of timepieces, benefits from the same exclusive mechanism, distinguished by two patents, introduced in 2008 in Reference 5207, and found again in 2011 in Reference 5208. This system, which alone accounts for 220 of the 799 parts comprising the movement, enables the jumps of the indications in 30 milliseconds in the four day/date/month/leap year apertures, even with a residual power reserve of ten hours. The task was made still more complex by the use of disk displays, since the mechanism must set in motion much greater masses than would a display by hands. The instantaneous display demands perfect energy

control, to retain the disks and then release them in one go. A large lever comprising 15 parts, some of them mobile (first patent) ensures a precise jump of all the displays at the same instant. A design with two complementary jumper springs acting in opposite directions (second patent) ensures that the energy deployed for each change remains constant, despite large differences in the displacement angles –from the jump of one day at the end of months with 31 days to the jump of four days at the end of the month of February in non-leap years. This avoids any incomplete jumps caused by lack of power or by indications' jumping too far owing to surplus energy.

A Ice-blue sunburst dial combining elegance and legibility

The new Quadruple Complication Reference 5308G-001 features an elegant Ice-blue sunburst dial presenting faceted applied hour markers and faceted dauphine-style hands, all in white gold with blue metallization. The accent is on legibility, ensuring that the thirteen indications controlled by the caliber R CHR 27 PS QI movement stand out clearly. The perpetual calendar's day, date and month displays appear in three apertures arranged along an arc between 10 o'clock and 2 o'clock, in an inlaid frame of white gold with blue metallization –with a slightly larger aperture for the date, the most important piece of information. Completing these calendar displays are two round apertures for the day/night indication at 8 o'clock and the leap-year cycle at 4 o'clock, both indispensable when setting the calendar.

A white-gold case with skeletonized or open worked lugs

To house this exceptional mechanism, Patek Philippe chose white gold. Endowed with the same design and diameter (42 mm) as Reference 5208, this classic, understated case, hand polished throughout, is distinguished by its concave bezel and skeletonized lugs. The watch is delivered with two interchangeable case backs, one in sapphire crystal, the other in white gold. Its refined allure continues through to an alligator-leather strap in shiny navy blue equipped with a new, patented triple-blade fold-over clasp in white gold, ensuring comfort and security.

Patents for caliber R CHR 27 PS QI

New patents

• **Anti-backlash clutch wheel** (European patent EP 3492779A1)
This system of an anti-backlash clutch wheel avoiding any vibration of the chronograph sweep-seconds hand makes it possible to eliminate friction of the chronograph wheel- and thereby to save energy.

• **Isolation of the split-seconds hand** (European patent EP 3179318A1)
This isolator mechanism makes it possible to raise the split-seconds lever when the split-seconds hand is stopped instead of allowing it to continue its course around the chronograph heart-piece, and thereby to reduce energy consumption.

Patents taken over from caliber R TO 27 PS QI (Reference 5207, 2008)

• **Timepiece with a calendar mechanism** (European patent EP 1734419 A1)
This system of a large lever with an original and complex shape, comprising 15 parts, some of which are mobile, enables simultaneous and instantaneous actuation of all the perpetual calendar indications.

• **Device actuating in its fall a large lever controlling the display of an instantaneous perpetual calendar in a timepiece equipped with a perpetual or secular perpetual calendar mechanism** (Swiss patent 01080/07)
This system endowed with two jumper springs of equal power acting in opposite directions makes it possible to advance the date disk, at the change of the month, with a constant force, regardless of the duration of the elapsed month (28, 29, 30 or 31 days).

Technical data

Quadruple Complication Reference 5308G-001

Movement:	Caliber R CHR 27 PS QI Self-winding mechanical movement. Minute repeater chiming on two classic gongs. Monopusher split-seconds chronograph with 60-minute and 12-hour counters. Subsidiary seconds. Instantaneous perpetual calendar with day, date, month, leap year and day/night indication in apertures. Moon phases.
Diameter:	32 mm (base movement with minute repeater and chronograph 28 mm, additional instantaneous perpetual calendar module 32 mm, additional split-seconds module 32 mm)
Height:	12.28 mm (base movement with minute repeater and chronograph 5.23 mm, additional instantaneous perpetual calendar module 2.75 mm, additional split-seconds module 4.30 mm)
Number of parts:	799
Number of jewels:	67
Power reserve:	With chronograph stopped: min. 38 hours – max. 48 hours
Winding rotor:	Mini-rotor in platinum, unidirectional winding
Frequency:	21 600 semi-oscillations per hour (3 Hz)
Balance :	Gyromax®
Balance spring:	Spiromax® (in Silinvar®)
Balance spring stud:	Adjustable
Functions:	Two-position crown: • Pushed home: to wind the movement manually • Pulled out: to set the time
Displays:	By hands: • Hours and minutes from the center • Chronograph hand (sweep seconds hand) from the center • Split-seconds hand (sweep seconds hand) from the center • Chronograph 60-minute counter at 3 o'clock • Chronograph 12-hour counter at 9 o'clock • Subsidiary seconds at 6 o'clock By apertures: • Day between 10 and 11 o'clock • Date at 12 o'clock • Month between 1 and 2 o'clock • Moon phase at 6 o'clock • Day/night indication at 8 o'clock • Leap year at 4 o'clock
Push pieces:	• Chronograph pusher at 2 o'clock (3-step monopusher: start, stop and reset to zero) • Split-seconds pusher at 4 o'clock (stop and re-start)

Correctors:	• Day between 11 and 12 o'clock • Month between 12 and one o'clock • Moon phase between 5 and 6 o'clock • Date between 6 and 7 o'clock Delivered with a corrector stylus in ebony encrusted with 18K white gold
Slide piece:	Set into the caseband at 9 o'clock and used to actuate the minute repeater
Hallmark:	Patek Philippe Seal
Features	
Case:	White gold with pierced lugs Delivered with two interchangeable case backs, one in sapphire crystal, the other in solid white gold Not water-resistant, protected against humidity and dust
Case dimensions:	Diameter: 42 mm Width (from 3 to 9 o'clock with crown): 46.19 mm Length (across lugs): 52.11 mm Total height (sapphire-crystal back to lugs): 17.71 mm Height (crystal to crystal): 17.71 mm Width between lugs: 22 mm
Dial:	18K white gold with Ice-blue sunburst 11 baton-style applied hour markers in 18K white gold with blue metallization Triple-faceted dauphine-style hour and minute hands in 18K white gold with blue metallization Subsidiary seconds hand in 18K white gold with blue metallization Chronograph hand in steel, painted white Split-seconds hand in steel, painted white Baton-style 60-minute and 12-hour counter hands in 18K white gold Railway-track minute scale transfer printed in white on the periphery of the blue opaline dial Inlaid frames in 18K white gold with blue metallization, diamond polished, for the date, day and month apertures
Strap:	Alligator leather with large square scales in shiny navy blue with patented triple-blade fold-over clasp in 18K white gold