

## Press release

**Patek Philippe Geneva  
October 2014**

### **Patek Philippe Chiming Jump Hour Ref. 5275 Resonant time in a triple jump**

**The Chiming Jump Hour Ref. 5275 is a commemorative Patek Philippe watch that enriches the manufacture's 175th anniversary with considerable elegance and finesse, but also with verve and musical poetry. This timepiece, presented in a classic tonneau-shaped case, combines three jumping indications with an acoustic indication at the top of every hour. A feast for eyes and ears, it incorporates four patented mechanisms.**

A closer look at the Chiming Jump Hour reveals that the seconds hand jumps from one scale marker to the next in one-second steps. Otherwise, everything remains unhurried on the gold dial with the floral motif. But as soon as the seconds hand reaches the 60, the minute hand also jumps from one minute marker to the next. And finally, once an hour, the digital display in the aperture at 12 o'clock jumps to the new hour precisely at the same moment when the seconds and minute hands advance. A soft tone can be heard at this moment: the Chiming Jump Hour indicates the top of each hour acoustically as well. The watch pays tribute to the Ref. 3969 with a jumping digital hour which was launched in 1989 on the occasion of Patek Philippe's 150th anniversary. It also illustrates how much the manufacture's technical prowess and expertise have progressed during the past 25 years. The Chiming Jump Hour Ref. 5275 is being crafted in a limited anniversary edition of 175 pieces.

#### **A mechanical triad**

Jumping time indications are complications characterized by a high level of mechanical complexity. A brief digression: In conventional mechanical watches, the hands move continuously in step with the balance. In most watches, it oscillates at a frequency of 21,600 or 28,800 semi-oscillations per hour, corresponding to 6 or 8 oscillations per second. With every semi-oscillation, the balance allows the escape wheel to rotate by one tooth, and this motion is transferred to the hands by the going train. The hands move forward incrementally. The seconds hand makes this cadence apparent, but the stepwise motion of the minute and hour hands is barely discernible.

The Chiming Jump Hour also has a balance, and it performs 8 semi-oscillations per second. However, the energy is not directly transferred to the seconds hand. Instead, it is accumulated in a storage mechanism that only releases it to the fourth wheel when the eighth semi-oscillation takes place. Analogously, the power stored during a time interval of 60 seconds must be delivered to the minute hand instantaneously, and the same process occurs after 60 minutes when the digital hour display needs to be advanced as well. This particular moment



involves a handicap: an hour disk is heavier than an hour hand and thus needs more power to move. But even more energy is needed, since a small hammer strikes a gong at the top of every hour. This aptly illustrates that a watch with three jumping indications plus an hour strike is a remarkable accomplishment in energy management.

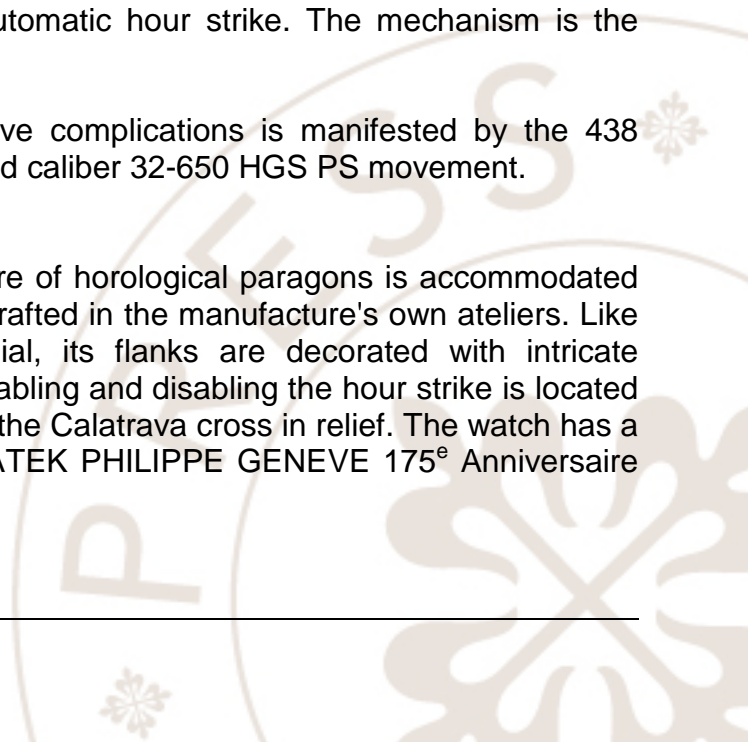
### **A new anniversary caliber**

This feat was achieved in an ingenious way with the new manually wound caliber 32-650 HGS PS movement. During a period of four years, the in-house ateliers developed mechanisms that could not only store the energy needed for the jumping indications but would also synchronize the jumps of the seconds, minutes, and hours with extreme accuracy. Three patent applications were filed for these solutions. The most conspicuous part is the seconds lever made of Silinvar<sup>®</sup>, a derivative of silicon. It is connected to a spring which stores the energy of the eight semi-oscillations of the balance that make up one second. With a beak, the lever engages with a wolf-tooth Silinvar<sup>®</sup> wheel which in turn meshes with the fourth wheel. After every sequence of eight semi-oscillations, the lever is lifted. The wolf-tooth wheel advances by one tooth and moves the fourth wheel by 6 degrees, which causes the seconds hand to jump forward by one second. The high-tech Silinvar<sup>®</sup> material was chosen for the lever and the wolf-tooth wheel because of its low mass and the nearly friction-free, highly energy-efficient contact between the beak and the wolf tooth. This is an inestimable advantage for such a challenging venture with three synchronously jumping indications. The fourth wheel itself carries a snail cam that allows a ruby pallet to drop over the peak after each full revolution. Via a lever, it briefly releases the center wheel, allowing it to turn clockwise by 6 degrees concurrently with the fourth wheel. The seconds and minutes jump simultaneously. As soon as the center wheel has also performed a complete revolution, the hour disk is advanced by one hour, together with the jumps of the seconds and minutes. It moves forward by 30 degrees because the disk has 12 hour numerals to maximize its legibility. When the hour jumps, this also triggers a small hammer that strikes a gong wrapped around the movement. The top of every hour is thus automatically announced with a gentle tone. This is a homage to the proud tradition of Patek Philippe's chiming timepieces that contributed significantly to the brand's unique reputation. A slide in the case flank at 10 o'clock can be used to isolate the hammer and disable the automatic hour strike. The mechanism is the subject of the fourth patent application.

The substantial effort invested in these attractive complications is manifested by the 438 meticulously finished parts contained in the refined caliber 32-650 HGS PS movement.

### **The commemorative watch in gala attire**

This latest milestone in Patek Philippe's repertoire of horological paragons is accommodated in a tonneau-shaped platinum case that is also crafted in the manufacture's own ateliers. Like the periphery and the minute circle of the dial, its flanks are decorated with intricate engravings of floral motifs. The small slide for enabling and disabling the hour strike is located at 10 o'clock. The fluted platinum crown features the Calatrava cross in relief. The watch has a solid platinum case back with the engraving "PATEK PHILIPPE GENEVE 175<sup>e</sup> Anniversaire 1839 – 2014".





At 12 o'clock, the gold dial features an aperture for the digital hour indication. The minute hand revolves in the off-center minute circle that dominates the top half of the dial. The scale is graduated with black Arabic numerals as well as black minute index dots. The prominent seconds subdial at 6 o'clock has a black railway track scale, black Arabic numerals, and a black nickel-plated Breguet-style hand. These displays are fresh proof of the sublime manufacturing quality upheld by Patek Philippe. Because they are jumping indications, it is very important that they be precisely aligned in their quiescent positions: the hour numeral in the middle of the dial, the minute hand exactly on a minute marker, and the tip of the seconds hand strictly in line with a railway track graduation.

The Patek Philippe Chiming Jump Hour Ref. 5275 is worn on a shiny black alligator strap secured with a platinum fold-over clasp. It bears the engraved inscription "PATEK PHILIPPE 1839 – 2014" as well as an engraved Calatrava cross in the middle.





## Technical data

### Chiming Jump Hour Ref. 5275 limited to 175 watches

<b>Movement</b>	Caliber 32-650 HGS PS Manually wound mechanical movement, jumping seconds, jumping minutes, and jumping digital hours, automatic hour strike
Diameter:	32.6 mm
Height:	6.5 mm
Number of parts:	438
Number of jewels:	75
Power reserve:	Min. 48 hours, max. 53 hours
Balance:	Gyromax <sup>®</sup>
Frequency:	28,800 semi-oscillations per hour (4 Hz)
Balance spring:	Spiromax <sup>®</sup>
Balance spring stud:	Adjustable
Functions:	2-position crown – Pushed in: To wind the watch – Pulled out: To set the time and stop the seconds hand  Hour strike slide with 2 positions: Position 1: Hour strike enabled Position 2: Hour strike disabled
Displays:	With hands: Minutes and hours In an aperture: Digital hour
Hallmark:	Patek Philippe Seal
<b>Features</b>	
Case:	Tonneau-shaped, in platinum 950, sapphire-crystal glass, solid-platinum back with the engraving “PATEK PHILIPPE GENEVE 175 <sup>e</sup> Anniversaire 1839 – 2014” Case not water-resistant but protected against moisture and dust
Case dimensions:	Width x length: 39.8 x 47.4 mm Height (crystal to lugs): 11.78 mm Height (crystal to back): 11.30 mm Width between lugs: 22 mm



- Dial: 18K solid gold, silvery opaline, with embossed floral motif in minute circle and on periphery  
Satin-finished off-center minute circle with black Arabic numerals  
minute marker dots  
Hour aperture at 12 o'clock over white hour disk with black Arabic numerals  
Subsidiary seconds at 6 o'clock with railway track scale and black Arabic numerals  
Black nickel-plated Breguet-style hands for the minutes and seconds
- Strap: Hand-stitched alligator leather with large square scales, shiny black, platinum fold-over clasp with the engraved inscription "PATEK PHILIPPE 1839 – 2014" as well as an engraved Calatrava cross in the middle





**Patek Philippe Chiming Jump Hour Ref. 5275  
Patents and innovations**

Patent: Isolation of hour strike mechanism

Innovative mechanism that does not merely allow the automatic hour strike to be disabled but also totally disconnects the strikework mechanism from the movement.

Patent: Jumping mechanism with coaxial wheels (jumping second)

Innovative mechanism for jumping time indications that no longer requires springs and levers but instead precisely controls the jumps of the seconds hand via a wheel train. Thus, it is based exclusively on rotation and eliminates the need for reciprocation.

Patent: Jumping mechanism with coaxial wheels (jumping hour)

Innovative mechanism for jumping time indications that no longer requires springs and levers but instead precisely controls the jumps of the hour disk via a wheel train. Thus, it is based exclusively on rotation and eliminates the need for reciprocation.

Patent: Mechanism for synchronizing two jumping indications

This mechanism assures that the seconds and minute hands jump with absolute synchronicity as soon as the seconds hand jumps from second 59 to second 60.

