

Grande Sonnerie

In titanium - Millésimé

Patented hand-wound movement and striking-mechanism

Full striking-mechanism with automatic winding

Petite and Grande Sonnerie timepiece • minute repeater on demand
by crown mounted pusher • striking modes selection by pusher •
grande and petite sonnerie, silence • striking power reserve •
Tourbillon 24 Secondes • hours and minutes • small seconds • movement power reserve

Movement

Movement dimensions

- Diameter: 36.40 mm
- Thickness: 11.13 mm

Number of parts

- Timepiece: 935 parts
- Movement: 855 parts
- Cage tourbillon: 86 parts
- Weight of the cage: 0.37 g

Number of jewels

- 85
- Olivé-domed jewels in gold chatons

Chronometric power reserve

- 72 hours

Barrels

- Two coaxial series-coupled fast-rotating barrels (1 turn in 3.2 hours), one of which is equipped with a slipping spring to avoid excess tension

Balance wheel

- Variable-inertia with gold mean-time screws (10 mm diameter)

Frequency

- 21'600 vibrations/hour

Balance spring

- Phillips terminal curve
- Geneva-style stud

Main plates

- Nickel silver, spotted, with polished bevelling and countersinks, straight-grained flanks, nickel-palladium treatment

Bridges

- Nickel silver, frosted and spotted, with polished bevelling and countersinks, straight-grained flanks, nickel-palladium treatment
- Flat black polished steel tourbillon bridge, with polished bevelling and countersinks, straight-grained flanks

Tourbillon

- Inclined at a 25° angle, 24-seconds rotation
- Light alloy cage pillars
- Titanium cage bridges
- Gold counterweight

Gearing

- Involute circle profile
- Tangential inclined gear on fixed wheel and profiled teeth on escape wheel pinion

Movement and striking-mechanism displays

- Hours and minutes
- Small seconds on a sector
- 72-hours power reserve on a sector
- Three striking modes:
 - GS (Grande Sonnerie) strikes the hours and quarters in passing
 - PS (Petite Sonnerie) strikes the full hours in passing
 - SL (Silence) does not strike in passing
- Striking power reserve on a sector

Striking-mechanism

Acoustic

- One-piece cathedral gongs on three levels, two notes, visible through the tourbillon's lateral window, flat black polished steel gongs block, with polished bevelling and countersinks
- Two flat black polished steel visible hammers, with polished bevelling and countersinks
- Flat black polished hammers bridge, with a raised polished engraving, with polished bevelling and countersinks, straight-grained flanks
- Silent speed regulating governor
- Dedicated striking barrel maximising hammer force and striking power reserve (about 20 hours in Grande Sonnerie mode)
- Striking rhythm optimised without pause

Mechanism

- Visible on movement side, straight-grained or circular-grained steel, with polished bevelling and countersinks, straight-grained flanks
- Protected with eleven securities, for example when striking is in progress, when time setting, when the dedicated striking barrel is wound down...
- Minute repeater striking hours - quarters - minutes, down to the minute

Automatic winding (only for striking-mechanism)

- Oscillating weight in platinum with relief-engraved texts, flat black polished, with polished bevelling, straight-grained flanks
- Flat black polished gold central plate with relief-engraved "GF" logo, polished bevelling and countersinks, straight-grained flanks
- Gold peripheral plate, circular-grained, engraved and lacquered "Grande Sonnerie" with polished bevelling and countersinks
- Flat black polished gold decorative plate with relief-engraved text, with polished bevelling and countersinks, straight-grained flanks, with a screwed gold chaton



Exterior

Case

- In titanium with asymmetrical convex synthetic sapphire crystal
- Transparent back with asymmetrical convex synthetic sapphire crystal
- Lateral window with shaped synthetic sapphire crystal
- Three-dimensional, variable geometry-shaped lugs
- Raised polished engraving "Grande Sonnerie" and "Greubel Forsey" on a hand-punched background
- Gold security screws
- Hand-polished bezel, caseband and caseback
- White gold modes selection pusher, with a raised engraving on a hand-punched background
- Hand-engraved individual number

Case dimensions

- Diameter: 43.50 mm
- Height: 16.13 mm

Water resistance of the case

- Water-resistant 3 atm - 30 m - 100 ft (standard NIHS 92-20/SN ISO 22810:2010)

Crown with pusher

- In white gold with engraved GF logo

Dial

- Multi-level in gold, black colour
- Window showing the hammers and the gongs
- Gold hour markers
- Gold display sectors
- Gold GF logo

Hands

- Hours and minutes in gold with Super-LumiNova, small seconds and power reserve in polished gold
- Striking modes and striking power reserve in polished gold

Strap and clasp

- Hand-sewn alligator
- Titanium folding clasp, engraved with the GF logo