

CENTIGRAPHE SOUVERAIN

36,000 KM/H AT YOUR FINGERTIPS

THE ART TO CONVERT 6KM/H IN 36.000KM/H

François-Paul Journe's spectacular new watch, the Centigraphe Souverain, is a mechanical chronograph unlike any other that has ever been made before.

The hand-wound mechanical movement of the Centigraphe indicates elapsed times from a 100th of a second to 10 minutes, visible on 3 dials, each with a time scale in red and a tachometer scale in black.

The tachometer scales convert time units for 1 kilometre into speeds ranging from 6 km/h —walking pace — to 36,000 km/h, well above the escape velocity of a rocket going into low-level orbit.

The indications

The 100th of a second hand revolves around the dial in one second on a scale marked in hundredths of a second. Theoretically it is possible to time an object moving at 36,000 km/h with the tachometer on the watch face, on which 36'000 is facing the 10 on the 100th of a second scale.

On the dial at 2 o'clock, the hand revolves once every 20 seconds on a time scale divided into seconds. The external tachometer scale indicates speeds.

The third dial, at 6 o'clock, graduated for 10 minutes, has a similar tachometer scale with speeds corresponding to 20-second markers. Thus, for example, a kilometre travelled in three minutes 40 seconds represents a speed of 16.4km/h (to within a decimal).

Patented ergonomic chronograph

The chronograph is started, stopped and zeroed by a rocker at 2 o'clock in the case band, instead of the usual buttons on either side of the crown. This ergonomic design, perfectly fitted to the wristwatch, is patented.

Patented chronograph mechanism

A second patent was granted for the mechanism's ingenious configuration, which effectively isolates the chronograph from the timekeeping function. This means the balance amplitude is unaffected when the chronograph is running.

The hands of the 100th of a second counter, the 20 seconds, and the 10 minutes hand are driven by 2 different wheel trains, themselves driven by the centre of the mainspring (system patented for the Sonnerie Souveraine).

The 1-second counter and the 20-seconds counter are driven by two wheel trains on either side of a single intermediate wheel driven by the barrel arbor (patented for the Sonnerie Souveraine).

Another separate train of wheels, also driven by the barrel arbor, drives the 10-minutes hand.

1/100th second recorder hand

The 100th of a seconds hand, released by the watch's escapement, makes one revolution of the dial per second. A wheel mounted on the escape wheel (4th wheel of the going train) releases the arbor to which the hand is fitted. The seconds are driven by the going train from the barrel, and by the energy of the chronograph train, as transmitted by the barrel arbor.

One ingenious feature of the 100th of a second is that it may be stopped anywhere along its one-second journey around its dial, even between two 100th-second divisions, enabling a fractional reading.

This is achieved by vertically disengaging the pinion of the 100th of a second hand from that of the escapement, which presses on the pivot shank and acts as a brake.

Return to zero

The 20-seconds hand and the 10-minutes hand arbors are zeroed by hammer levers acting on snail cams. The 100th of a second hand is stopped at zero by a beak protruding from its pinion, which presses on a lever and thus blocks the chronograph train.

Maintaining power and power reserve

The barrel features a maintaining power system in order to ensure that the driving force does not decrease during winding.

The mainspring supplies at least 80 hours of power reserve without the chronograph, and 24 hours with the chronograph running.

The Centigraphe, an atypical Godfather: Jean Todt

For the creation of the **Centigraphe**, things happened slightly differently than for other creations. I met Jean Todt through the ICM Foundation, and during the course of our meetings we discussed the ideal chronograph for the world of car racing.

Research I carried out over 15 years ago for the creation of an exponential chronograph quickly showed me that a chronograph with 3 hands revolving at different speeds was a good starting base. I followed up with research on chronograph pushers, on questions of the balance of power in the movement, requirements, and energy loss, and I made use of a patent registered for the Sonnerie Souveraine. I patented 2 additional innovations concerning motricity. I am proud that Jean Todt has agreed to be the Centigraphe's Godfather.

The Centigraphe Contributes to the Medical Research of the ICM

In purchasing the Centigraphe, you are also supporting the medical research carried out by the ICM – Institute of Brain and Spinal Cord in Paris - to help fight brain and spinal cord diseases such as Alzheimer's, Parkinson's, and Multiple Sclerosis...

Along with Professor Gérard Saillant, Luc Besson, Jean Réno, Jean Todt, Michelle Yeoh and Michael Schumacher, amongst others, François-Paul Journe has committed to donating 30% of the profits from the sale of each Centigraphe to the ICM, with no time limit.
(www.icm-institute.org)

CENTIGRAPHE - Technical Specifications

Movement

Calibre 1506
Manual winding
Movement in 18K rose gold
50 jewels

Dimensions of the Movement

Overall diameter: 34.40mm
Casing-up diameter: 34.00mm
Overall height: 5.60mm
Height of hands: 1.45mm
Height of winding stem: 2.69mm
Diameter of stem thread: S1.20mm

Balance

Free-sprung balance
Four adjustable inertia weights
Anachron balance spring
Mobile stud holders
Pinned GE stud
Spring pinned to the collet
Frequency: 21,600v/h (3Hz)
Inertia: 10.10 mg/cm²
Angle of lift: 52°
Amplitude: 0h dial up: > 320°
24h dial up: > 280°

Escapement

In-line lever escapement
15-tooth escape wheel

Indications

Central hours and minutes
One-second chronograph: hand at 10 o'clock
20-seconds chronograph: hand at 2 o'clock
10-minutes chronograph: hand at 6 o'clock

Chronograph

Separate chronograph train driven by directly from the mainspring
1/100th second readout

Power Reserve

Over 80 hours with the chronograph stopped
24 hours with the chronograph running

Finishes

Circular stripes on the bridges
Circular graining on the baseplate
Polished screw heads with chamfered slots
Pegs with polished rounded ends
Straight-grained steel work

Case

Platinum or 18K red Gold
Diameter: 40.00mm
Total height: 10.70mm

Control

Rocker arm to start, stop and zero the chronograph
Three-position winding crown
Position 0, disengaged
Position 1, winding
Position 2, time-setting

Number of Parts

Movement without dial 284
Cased up with strap 324