

## 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 100<sup>th</sup> 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 100<sup>th</sup> 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 100<sup>th</sup> 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 100<sup>th</sup> 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 100<sup>th</sup> 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 (4<sup>th</sup> 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 100<sup>th</sup> of a second is that it may be stopped anywhere along its one-second journey around its dial, even between two 100<sup>th</sup>-second divisions, enabling a fractional reading.

This is achieved by vertically disengaging the pinion of the 100<sup>th</sup> 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 100<sup>th</sup> 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](http://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/cm<sup>2</sup>  
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