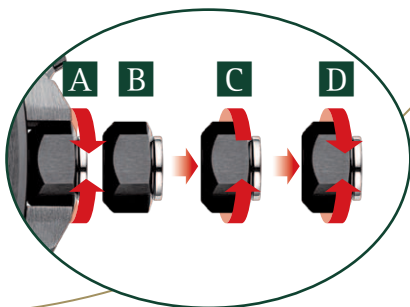


INSTRUCTIONS FOR USE  
MODE D'EMPLOI

# TOURBILLON AND CHRONOGRAPH

CALIBRES 2912 AND 2933  
HAND-WOUND

AUDEMARS PIGUET  
*Le Brassus*



ENGLISH

ENGLISH

Quick-link contents page.

Simply click on the relevant title or subheading to following the link to your chosen section.

Click on the white «English» to return to the main contents page.

## GUARANTEE AND CARE

All details concerning the guarantee and care instructions of your watch are provided in the certificate of origin and guarantee attached.



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## Introduction

# THE MANUFACTURE AUDEMARS PIGUET

## THE VALLÉE DE JOUX: CRADLE OF THE WATCHMAKER'S ART

In the heart of the Swiss Jura, around 50 kilometres north of Geneva, nestles a landscape which has retained its natural charm to this day: the vallée de Joux. Around the mid-18th century, the harsh climate of this mountainous region and soil depletion drove the farming community settled there to seek other sources of income. With their high degree of manual dexterity, inexhaustible creativity and enormous determination, the inhabitants of the Vallée, known as Combiens, were naturally drawn to watchmaking.

Due to their high quality, the movements they produced acquired great popularity with the Geneva firms which used them to create complete watches.

From 1740 onwards, watchmaking developed into the principal industry of the vallée de Joux. This region was thus transformed, as an 1881 chronicle put it, “into a land of milk and honey, in which poverty has rapidly disappeared”.



## TWO NAMES FOR A GREAT ADVENTURE

In 1875, two young men passionate about Haute Horlogerie – Jules Louis Audemars and Edward August Piguet – decided to pool their skills to design and produce watches with complications in the vallée de Joux, the cradle of Haute Horlogerie. Determination, imagination and discipline led them to instant success. A branch in Geneva was their next move in about 1885 and new commercial links were forged at the 1889 Paris World Exposition, where they exhibited complication pocket watches. The Audemars Piguet factory continued to expand as the years went by. Its creations represented major milestones in the history of Haute Horlogerie, like the first minute repeater wristwatch in 1892 and the smallest five-minute repeater movement ever made in 1915.

From 1918 onwards, the founders passed the reins of the business onto their sons, who in turn perfected their expertise in manufacturing men's and ladies' wristwatches as well as designing new sophisticated,

ultra-thin movements. Perseverance and initiative were the watchwords: while the Wall Street crash in 1929 was a bitter blow, the company directors were soon designing so-called skeleton watches before embarking on chronograph production. But this new momentum was abruptly interrupted by the Second World War. Re-organisation was necessary in the aftermath of the conflict. The factory focused on creating top-of-the-range items in keeping with its tradition of innovation. A strategy that would prove its worth, especially since it was backed by outstanding creative daring.



Audemars Piguet continued to build on its now international reputation with creative designs. 1972 saw the launch of the Royal Oak, the first, immediately successful high-quality sports watch in steel, followed in 1986 by the first ultra-thin tourbillon wristwatch with automatic winding. The creative spirit of the Manufacture has not faltered since, offering aesthetically original timekeepers with outstanding movements. Thus it brought watches with complications back into fashion at the end of the 1980s, launching its extraordinary Tradition d'Excellence collection in 1999. All the signs of a bold spirit rooted firmly in tradition and auguring well for the future.

## About the watch

### CALIBRES 2912 AND 2933

The Audemars Piguet Calibres 2912 and 2933 qualify as an extraordinary exploit. These hand-wound movements, with double barrel providing an exceptional power reserve of about 237 hours, combine a tourbillon and an extremely refined chronograph mechanism.

#### TOURBILLON

The most outstanding watchmakers have been striving to improve timing accuracy since the second half of the 18th century. The desire to achieve an identical setting for a timepiece in all positions is a major challenge. Under the Earth's pull, the tiniest variations in equilibrium have a negative influence on the regulating part (balance/balance-spring) when positioned vertically, thus causing running differences in the watch.

In 1801 the watchmaker Abraham Louis Breguet thought up a tourbillon regulating system that balanced the running differences in all positions.

The operating principle has remained largely the same to this day: the escapement parts (wheel, pallet and balance) are held in a movable frame rather than being fixed in the movement. By rotating on its axis every minute with the escapement parts, this frame

enables all the parts to change position constantly, thereby offsetting the running differences caused by the effects of gravitation.

185 years later, in 1986, Audemars Piguet successfully fitted this system for the first time into a production wristwatch with an ultra-thin automatic mechanical movement. The Manufacture in Le Brassus has since built on this success by presenting many tourbillon models combined with all watch complications.

The Manufacture, still one of the select few mastering the secrets of this complication, offers more than 25 different tourbillon movements.





## About the watch

### CHRONOGRAPH

We are often called upon to be able to measure the time separating two events. This makes the chronograph an indispensable instrument. A watchmaker from the Vallée de Joux - Adolphe Nicole - invented the modern chronograph, lodging the first patent for this complication in 1844.

Since its founding in 1875, Audemars Piguet has been developing and making some of the most sophisticated and efficient chronographs in the world. While the tourbillon and chronograph both faithfully reflect this philosophy, dating back over one hundred years, the movement makes its own mark with an exclusive chronograph mechanism, showcasing one of the Brassus Manufacture's latest advances in reliability and precision.

The chronograph mechanism features a new, highly effective coupling lever. This provides dual gearing adjustment to ensure greater accuracy, an exclusive Audemars Piguet innovation that also prevents the chronograph hand from jumping when the start function is activated.







Moreover, the 30-minute counter is equipped with a practical device enabling a semi-instant jump of the chronograph minute hand within an interval of approximately half a second. The advantage of this system lies in the facilitated time measurement reading, since the transition from one minute to the next occurs rapidly and gives a clear indication of the number of minutes elapsed.

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#### TACHOMETER

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In watchmaking, the tachometer is a graduated dial that allows you to determine the average speed taken to cover a given distance, generally 1,000 metres.

This speed is usually expressed in km/h and is read directly on the dial via the chronograph hand. Your watch allows you to read speeds from 60 to 600 km/h.

## About the watch

### BARRELS

Barrel no. 1 is equipped with a modern stopwork; only the optimum torque of two springs is therefore used, thus ensuring a more regular and accurate rate.

The most widespread stopwork is known as the "Maltese Cross" and was designed for four to six barrel rotations only. The Audemars Piguet system allows a total of 19,75 rotations, thereby greatly improving the consistency of the force supplied, the reserve and the running precision.

The watch is also fitted with a dynamometric crown that prevents overstress on the stopwork and breaking the stem by forcing.

Fig. 1: Position of the wheels after full winding of the movement, i.e. after around 160 rotations of the crown, causing the finger-piece of stopwork to meet (lock) (at the point indicated by the vertical arrow).

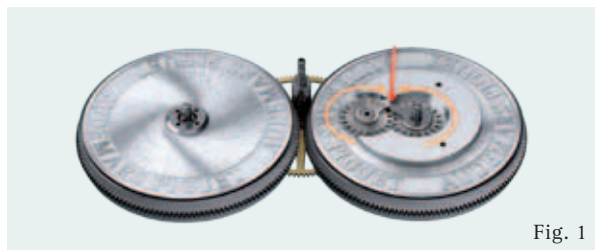


Fig. 1

Fig. 2: Position of the wheels when winding the movement the gearing and the numbers of teeth are calculated so that the two finger-pieces of stopwork only meet (lock) once after 19,75 rotations of the barrel.

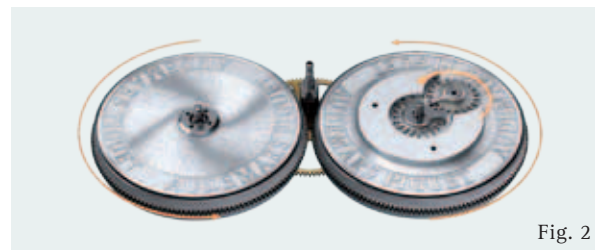


Fig. 2

Fig. 3: Position of wheels after the movement has been running for 10 days, i.e. still with about three barrel turns of pre-winding. The direction of rotation and position of the finger-pieces of stopwork, as well as the function of the locking system, are shown in the diagram.



Fig. 3

## Watch description

### VIEWS OF THE MOVEMENT

Calibre 2912



Caseback side



Dial side

#### TECHNICAL DATA OF THE MOVEMENT

Total thickness: 10.67 mm

Total diameter: 34.60 mm

Frequency: 21,600 vibrations/hour (3 Hz)

Number of jewels: 30

Power reserve: approx. 237 hours (10 days)

Built-in barrel winding after approx. 160 turns of the crown

Hand-wound

Balance with variable inertia screws

Breguet balance-spring

Mobile stud-holder

Number of parts: 328

#### SPECIFICITIES

Integrated chronograph movement

Chronograph mechanism with column wheel

30-minute counter

Shockproof system to ensure the chrono-timing precision

Locking gear Stopwork

Twin barrels in parallel

Anodised aluminum bridges

Manual finishing on both bridges and mainplate

Manual finishing of the cut out parts (polished bevels, grained finishing on top and Matt "brouillé" finishing underneath)

## Watch description

### VIEWS OF THE MOVEMENT

Calibre 2933



Caseback side



Dial side

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Total thickness: 10.67 mm

Total diameter: 34.60 mm

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## Use of functions

### WATCH INDICATIONS AND FUNCTIONS

(see figure on the inside cover)

In chronograph mode, your watch can measure times to 1/6 second and up to 30 minutes.

- ① Hour hand
- ② Minute hand
- ③ Chronograph hand
- ④ Chronograph minute hand (up to 30 minutes).
- Ⓔ Pushpiece of the chronograph function  
Push once: start  
Push again: stop
- Ⓕ Pushpiece to return to zero

Your watch is fitted with a four-position crown:

- Ⓐ Crown in “screwed down” position
- Ⓑ Crown in neutral position
- Ⓒ Crown in manual winding position
- Ⓓ Crown in position for setting the time

**Caution:** the crown must be unscrewed to access the different settings. Afterwards, carefully screw it back into position **Ⓐ** to ensure water resistance.



## Use of functions

### SETTING THE TIME

Always unscrew the crown to access the different settings. The unscrewed crown will automatically position itself at **B**.

Pull the crown to position **D**. You may now set the time by winding in either direction without risk of damaging the movement. It is advisable to set the hand five minutes past the desired time and then to move it back to the exact time. This allows the gears to re-align themselves, thus ensuring optimal precision.

Push the crown back to position **B** and retighten it carefully in position **A** to ensure water-resistance.

### WINDING THE WATCH

Always unscrew the crown to access the different settings. The unscrewed crown will automatically position itself at **B**. Pull the crown to position **C**.

Your watch with tourbillon and chronograph is equipped with a manual winding mechanical movement.

We recommend that it is fully wound once a week, after at most 8 days (approx. 192 hours) by turning the crown clockwise. In this way, the movement keeps enough energy to ensure optimal running precision.

The crown is fitted with a disconnecting-gear system that protects the barrel mechanism. This prevents potential damage when the watch is fully wound and too much force is applied. When fully wound, the crown uncouples and no longer drives the stem. A certain resistance remains, however, from the uncoupling mechanism.

To fully wind the watch after it has stopped, you need to make 19,75 turns of the barrel, which is equivalent to approx. 160 turns of the crown.

Push the crown back to position **B** and retighten it carefully in position **A** to ensure water-resistance.

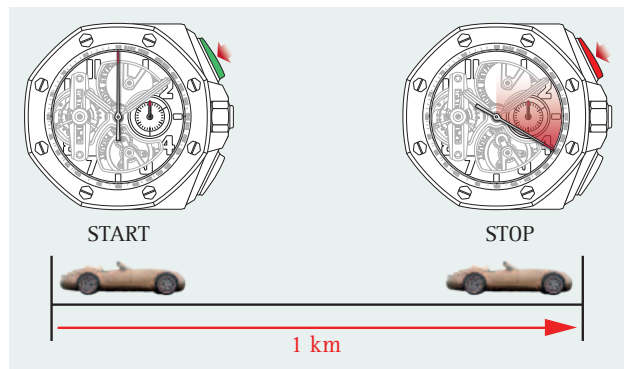




## Use of functions

### USING THE TACHOMETER

The tachometric scale associated with the chronograph function enables speed read-off. Engage the chronograph (START) and stop the chronograph after 1 kilometre (STOP). The value indicated by the chronograph hand on the tachometer scale corresponds to the average speed over 1 kilometre.



For example:

If the time lapse between (START) and (STOP) equals 20 seconds, the average speed – read on the tachometer scale – is 180 km/h (fig. 1).

If the lapse is 30 seconds, the average speed is 120 km/h (fig. 2).

If 40 seconds were needed to cover one kilometre, the average speed would be 90 km/h (fig. 3).

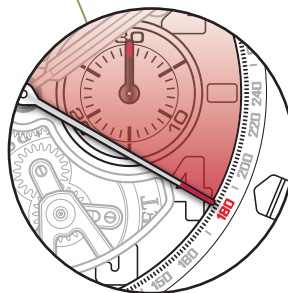


fig. 1

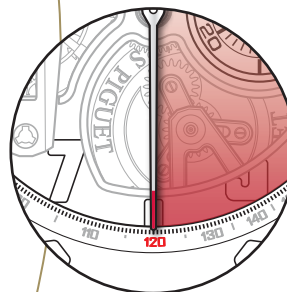


fig. 2

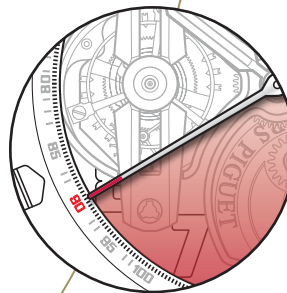


fig. 3

