

ACADEMY CHRISTOPHE COLOMB
HURRICANE GRAND VOYAGE

Charting a course towards the exceptional



ZENITH

SWISS WATCH MANUFACTURE
SINCE 1865

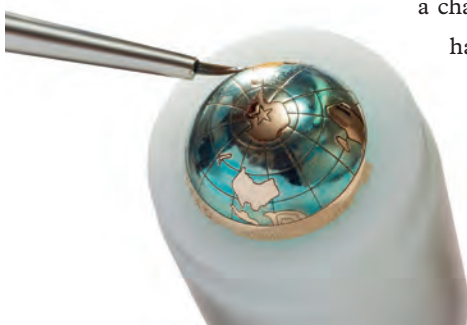


CHARTING A COURSE TOWARDS THE EXCEPTIONAL

THIS YEAR, THE MANUFACTURE IS PURSUING ITS TRIBUTE TO THE FAMOUS NAVIGATOR CHRISTOPHER COLUMBUS BY INTRODUCING THIS HEIR TO MARINE CHRONOMETERS IN A SPLENDID INTERPRETATION CALLING UPON THE FINEST ARTISTIC CRAFTS SUCH AS ENAMELLING, ENGRAVING AND MICRO-PAINTING. IT THEREBY EXPRESSES PERFECT MASTERY OF THESE HISTORICAL SKILLS THAT HAVE BEEN ADORNING ZENITH CREATIONS FOR ALMOST 150 YEARS. THIS EXCEPTIONAL ENTIRELY HAND-FINISHED MODEL ISSUED IN A 10-PIECE LIMITED EDITION IS ACCOMPANIED BY THREE MAJOR HOROLOGICAL DISCOVERIES: A PATENTED GRAVITY CONTROL SYSTEM; A FUSÉE AND CHAIN TRANSMISSION MECHANISM; AND AN EXCEPTIONAL FREQUENCY OF 36,000 VIBRATIONS PER HOUR.



The counterweight of the gravity control system is adorned with a micro-painted depiction of the Southern hemisphere.



A pioneering spirit, a love of challenges and a thirst for exploration: the very same passion and the same quest for uncharted horizons guided Christopher Columbus and Georges Favre-Jacot – the former when he set sail across the vast expanse of ocean to open up a westward route towards the Indies; and the latter when he founded Zenith in 1865 by inventing the very first industrial watch manufacturing company or “Manufacture”. Almost a century and a half later, the brand with the guiding star is still faithful to this pursuit of precision and innovation, as is notably illustrated by over 300 patents. The Manufacture proved this determination in 1969 by creating the legendary El Primero automatic movement, which is still the world’s most accurate series-made chronograph. Moreover, fine watchmaking is not confined to the realm of mechanisms. Confirming its tradition of refined watch exteriors, notably embodied in a number of enamelled pocket watches, Zenith once again delights collectors and connoisseurs of rare models by presenting the Academy Christophe Colomb Hurricane Grand Voyage – a limited edition that stands out from the rest of the line by its magnificent décor. It represented a challenge not only for the artisans, but also for the watchmakers and engineers who had to rework the movement. They occasionally pushed the boundaries of feasibility in seeking to accommodate these ornamental elements within the same 45 mm-diameter case in rose gold and beneath the same domed sapphire crystal – while making no compromises on precision and reliability. The result is a vivid illustration of Zenith’s creative daring and of its ability to combine a dream mechanism with exceptional decorative touches stemming from the most prestigious artistic crafts.



Technical sophistication reigns supreme on the front

Engraving is followed by the delicate art of applying the lacquer.



On the dial side, Zenith opted to give pride of place to the horological feats incorporated in the watch, while maintaining an open architecture providing a chance to admire its three original mechanisms in action: the barrel with its fusée and chain transmission (at 10.30 and 1.30), gyroscopic gravity control system, and the high-frequency regulating organ at 6 o'clock. Yet this technical, three-dimensional appearance does not preclude considerable aesthetic sophistication, as well as the use of the finest artistic crafts that Zenith is devoted to perpetuating. The three gold subdials (hours/minutes at 12 o'clock, small seconds at 9 o'clock, power reserve at 4 o'clock) are finely guilloché, enamelled in white and fitted with blued steel hands and screws echoing the grand watchmaking traditions. The plate has been entirely hollowed out by hand so as to leave only the Zenith logo and a flurry of stars standing out in relief; and the troughs thus created have been filled with midnight blue lacquer. The counterweight of the gravity control system has also been enhanced with a sophisticated and poetic touch by a hand-crafted micro-painted depiction of the Southern hemisphere.



***The back is
an open travel
invitation***

The back of the Academy Christophe Colomb Hurricane Grand Voyage springs a big surprise with a vividly coloured and lively evocation of the famous navigator's many adventures. This authentic miniature painting was created by the finest specialists in various artistic crafts using a sophisticated system of gold appliques fixed directly on the movement. In the foreground, on either side of the mechanism reminiscent of the gimbal suspension typical of marine chronometers, one may admire the finely engraved portrait of Christopher Columbus along with a sextant, the astronomical instrument serving to calculate longitude. The background bears a reproduction of the *Santa Maria*, the flagship with which Columbus sailed on his first voyage in 1492. The tiny manually cut-out and micro-engraved décor depicts the vessel in abundantly rich detail, particularly

The manually micro-engraved décor portrays the vessel in an amazing wealth of details.





In the foreground,
the finely engraved
portrait of Christopher
Columbus.



The various sails,
crafted in enamel
on a cloisonné base
using an engraved
champlevé technique,
are adorned with the
famous red cross.



in terms of the ropes and rigging. The various sails, crafted in enamel on a *cloisonné* base using an engraved *champlevé* technique, are adorned with the famous red cross – replaced on one of them by Zenith's famous guiding star in a nod to connoisseurs. Behind the sailboat, the going-train bridge has been chosen to represent the ocean with a background engraved with tiny waves and then coated with a layer of translucent lacquer. In the background, the barrel bridge opens up the horizon with a micro-painted décor depicting a sky divided into day and night. In a subtle detail, the watchmakers of the Manufacture have arranged the movement structure in such a way as to reveal a small gilded gear train evoking sunrise or sunset. Integrating this décor called for a wealth of ingenuity, including finding points to which the applique elements could be fixed, while reducing the movement thickness and the spaces between the calibre and the ornamentation to an absolute minimum (less than a tenth of a millimetre beneath the sails). Entirely hand-finished by artisans gifted with great dexterity, the fabulous adornment of the Academy Christophe Colomb Hurricane Grand Voyage makes each watch a unique work of art – and a true collector's watch.



*The quest for
precision at the
very heart of
the movement*

While Christopher Columbus pushed back the frontiers of the known world, this model named after him pushes the boundaries of time measurement by combining three mechanisms guaranteeing enhanced precision: a regulating organ with a high oscillating frequency (36,000 vibrations per hour) for dividing time into tenths of a second; a fusée and chain transmission system compensating for the inevitable variations in the force of a barrel while it is unwinding; and a patented gravity control module serving to neutralise the effects of gravity on the rate of a watch. In other words, it successfully solves the problems relating to actually wearing the watch (gravity) and to the length of time it can run independently (a drop in torque), while simultaneously ensuring remarkable precision in time measurement (linked to the oscillation speed of the balance). These feats are achieved by an exceptional movement comprising 939 parts, including 354 for the calibre itself that in turn houses the 173 elements of the gravity control module; while the fusée and chain system comprises 585 parts.



***Fusée and chain
transmission
ensuring constant
force***

As a mechanical watch gradually winds down, the movement loses amplitude (corresponding to the balance-wheel's angle of oscillation) and thus becomes less accurate. The fusée and chain transmission system serves on the contrary to keep the driving force perfectly stable throughout the full power reserve – with the helicoidal shape of the fusée compensating for the progress reduction in the force of the barrel.

The majority of 16th, 17th and 18th century pocket watches were equipped with a fusée, but today very few watch manufacturers are capable of transposing and fitting this mechanism within the confines of a wristwatch. With the Academy Christophe Colomb Hurricane Grand Voyage, stemming from two full years of development, Zenith has now entered this highly exclusive club.

Transmission between the barrel and fusée is handled by an 18 cm-long chain comprising 585 parts. This highly complex construction features alternating double and intermediate links. Once assembled, it is capable of withstanding a traction force of more than 3 kilos.

Throughout the power reserve, the mainspring transmits its energy to the fusée via a chain that wraps itself around the barrel. By adjusting the variations in tension, the fusée regulates the force that is passed on to the going train – and thence to the silicon escape-wheel fitted inside the gyroscopic carriage. While it takes more than 50 hours (the power-reserve duration) for the chain to wrap itself around the barrel, winding via the stem provides a fascinating sight. These few seconds enable the fusée and the barrel to turn in opposite directions so that the chain wraps itself back around the fusée.

The shape of the fusée was dictated by the optimal force that the Zenith master-watchmakers wished to give the barrel. Its grooved conical contours as well as its dimensions are the result of lengthy and particularly complex complications performed for each of the seven construction stages. This fusée could doubtless never have been created without the full integration of all professions (notably including movement prototype making) cultivated in the Manufacture Zenith, nor without the use of sophisticated equipment. Such is indeed one of the core strengths of an integrated Manufacture.



Gravity control: defying gravity

While fusée and chain transmission eliminates variations in isochronism (the equal duration of the oscillations), the Academy Christophe Colomb Hurricane Grand Voyage also cancels out another effect that is detrimental to the rate of a mechanical watch: the influence of gravity.

Working on the principle that keeping the regulating organ in a horizontal position engenders the best possible balance-wheel amplitude and thus results in optimal timekeeping precision, Zenith devised and patented a revolutionary module enabling the “heart” of the movement and the escapement to remain constantly in this position.

An avant-garde system brilliantly illustrating the creative daring of the Manufacture, the gravity control system is also a tribute to history, since it is inspired by the marine chronometers that Zenith used to produce, borrowing from these legendary instruments the principle of gimbal suspension introduced in the 16th century on marine compasses so that they would stay horizontal despite the pitching and rolling of the boat.

The gravity control system with its self-regulating gyroscopic mechanism serves to maintain the regulating organ in a permanently horizontal position whatever the angle of the wrist and thereby represents the ultimate evolution of the marine chronometer. The brand with the guiding star is the only watch manufacturer to master this system – duly rewarded in the “Best Complicated Watch” category at the 2011 Geneva Watchmaking Grand Prix – that it invented after five years of intense development.

A stylish presentation box

Such an exceptional model deserved to be presented to its best advantage. The Academy Christophe Colomb Hurricane Grand Voyage comes in a precious mahogany box featuring ox bone inlays and that can also serve as a humidor with a capacity of 80 cigars. In homage to Christopher Columbus, this box is adorned with a screen-printed motif on parchment-style papyrus reproducing Waldseemüller’s planisphere (1507), the first world map to mention the name “America”.

A magnificent ocean voyage and a splendid voyage to the heart of the infinitely small: with this limited edition combining fine watchmaking and artistic crafts, Zenith is setting out to conquer fascinating new horizons, inspired as ever by a blend of daring, authenticity and pleasure.



ACADEMY CHRISTOPHE COLOMB HURRICANE GRAND VOYAGE

- ★ 1ST CHRISTOPHE COLOMB MODULE WITH FUSÉE AND CHAIN TRANSMISSION
- ★ CONSTANT-FORCE FUSÉE AND CHAIN TRANSMISSION CONNECTED TO THE BARREL
- ★ TRIBUTE TO THE FAMOUS EXPLORER
- ★ HAND-CRAFTED GOLD ELEMENTS SCREWED TO THE MOVEMENT: MICRO-ENGRAVING, MICRO-PAINTING AND ENAMELLING ON A CLOISONNÉ BASE USING AN ENGRAVED CHAMPLEVÉ TECHNIQUE
- ★ 10-PIECE LIMITED EDITION

MOVEMENT

El Primero 8805, hand-wound
A unique gyroscopic mechanism that maintains the regulating organ in a perfectly horizontal position
Calibre: 16 1/2" (diameter: 37 mm)
Thickness: 5.85 mm
Parts: 354
Gyroscopic carriage composed of 173 parts
Chain made of 585 parts
Jewels: 53
Frequency: 36,000 vph (5 Hz)
Over 50-hour power reserve

FUNCTIONS

Off-centred hours and minutes at 12 o'clock
"Gravity Control" self-regulating module at 6 o'clock
Small seconds at 9 o'clock
Power-reserve indication at 3 o'clock
Fusée and chain transmission beneath the hours/minutes dial

CASE, DIAL AND HANDS

18-carat rose gold
Diameter: 45 mm
Thickness: 14.80 mm/21.80 mm (with domed sapphire crystal)
Cambered sapphire crystal glareproofed on both sides, domes protecting the Christophe Colomb module
Water resistance 3 ATM
Dial: 3 enamelled gold dials
Hour-markers: black lacquered
Hands: blued steel

REFERENCE

18.2211.8805/36.C713
Brown alligator leather strap with rose gold triple folding clasp



★
ZENITH
SWISS WATCH MANUFACTURE
SINCE 1865

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Founded in Le Locle in 1865 by a visionary watchmaker, Georges Favre-Jacot, the Manufacture Zenith earned swift recognition for the precision of its chronometers with which it has won 2,333 chronometry prizes in a century and a half of existence: an absolute record in terms of pocket watches, onboard timers and wristwatches. Having earned fame thanks to its legendary El Primero calibre – an integrated automatic column-wheel chronograph movement launched in 1969 and endowed with a high frequency of 36,000 vibrations per hour that ensures measurements accurate to the nearest 1/10th of a second – the Manufacture Zenith has since developed over 600 movement variations. All Zenith watches are fitted with an in-house Zenith movement and are developed by the Manufacture in Le Locle. The latter currently stands at the exact spot where its founder built the first company workshop, thus physically embodying a continuity that is a rarity in itself.