



Press Information  **OMEGA**

# PREFACE

In 2009, OMEGA celebrates its pioneering spirit.

We join the world in commemorating the 40th anniversary of the first lunar landing. In doing so, we are reflecting on this event not only because it was among the most important scientific achievements in human history but also because it is a defining chapter in the biography of our brand. It was on the 21st of July in 1969 that an OMEGA Speedmaster was first worn on the moon. We are proud of the supporting role we played in this remarkable adventure. At Baselworld this year, we are introducing Speedmaster Apollo 11 "40th Anniversary" Limited Edition models in stainless steel and platinum which pay tribute to the day the Speedmaster Professional became the Moonwatch.

We are also celebrating a more recent trail-blazing milestone. It was in 1999 that we launched the first OMEGA watches fitted with the Co-Axial Escapement. Ten years later, our Co-Axial calibres, created entirely from inception, are driving the current revolution in mechanical watchmaking.

The Co-Axial Escapement reduces the friction among the parts that transmit energy to the other components, resulting in longer service intervals and, significantly, greater stability of the watch's performance over time. The mechanical watches in our main watch lines are now equipped almost exclusively with OMEGA Co-Axial chronometer calibres.

The OMEGA Seamaster 600, popularly known as the Ploprof, is a diving legend. Launched in 1970, it was created to withstand the pressures endured by divers working deep below the ocean's surface. In 2009, OMEGA is introducing an updated version – the Ploprof 1200M, powered by our Co-Axial calibre 8500 and water resistant to an astonishing 1200 metres.

OMEGA is as highly regarded for design excellence as for technological innovation. When the Constellation Manhattan was first introduced in 1982, its iconic "Griffes", or claws, made the Constellation one of the most instantly recognizable timepieces in the world. This year, we are launching the re-design of the line. The new Constellations still have the claws but the watches have been upgraded to attract a whole new generation of Constellation wearers.

In Fine Jewellery, the pieces in our new Griffes Collection are also distinguished by their Constellation-style "claws".

For more than 160 years, OMEGA been characterized by the pioneering spirit which has landed us on the moon, conquered the ocean's depths, led us to time 23 Olympic Games and re-defined the way mechanical watches will be made in the 21st century.

In 2009, we are proud to be highlighting this heritage at Baselworld.



Stephen Urquhart  
President of OMEGA

# 01

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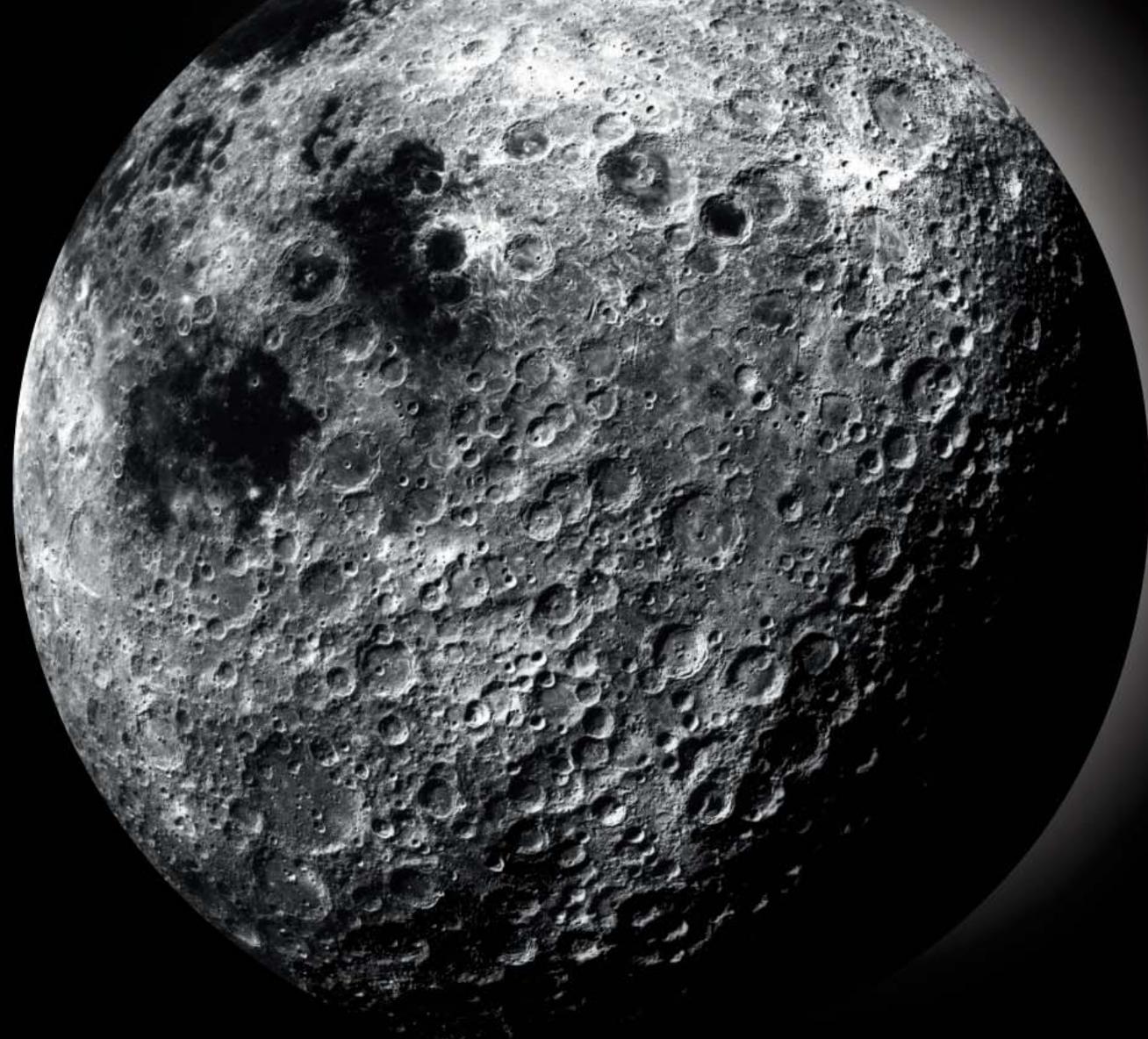
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HOW WE SPENT OUR  
SUMMER VACATION  
IN 1969

OMEGA CELEBRATES  
THE FIRST LUNAR  
LANDING



# HOW THE OMEGA SPEEDMASTER BECAME THE MOONWATCH THE NASA TESTS

The story of how the OMEGA Speedmaster became the Moonwatch – the only wristwatch approved by NASA for all manned space flights – has been re-told often enough that it is sometimes difficult to determine where the history ends and where the myth begins.

The true story, without embellishment, is so remarkable that it's worth a trip back to the 1960s to re-examine how the Speedmaster came to be considered in the first place, the nature of the strenuous tests to which it and four other chronographs were subjected and finally, how it was chosen over its competitors to accompany every manned space flight since the launch of the Gordon Cooper's Faith 7 mission as part of the Mercury program on May 15th, 1963.

## Chosen to compete

It all began in the early 1960s when two NASA officials anonymously visit several Houston jewellery stores, including Corrigan's, which at the time was the city's best-known watch and jewellery retailer.

The men from NASA bought a series of chronographs of different brands, charged with the task of finding the best watch available for their astronauts to wear in space.

The solo-flight Mercury space programme was almost completed (in fact, Wally Schirra had worn his own Speedmaster on his Mercury flight on the 3rd of October, 1962) and NASA was preparing for the Gemini (two-man) and Apollo (three-man) missions. There were plans for the astronauts on these missions to move about in space outside the ship. One of their key pieces of equipment would be a wristwatch which could withstand the difficult conditions of space.

Every time an astronaut suspended in the vacuum of space turned his wrist, the watch would suddenly come out of the shade and be exposed to the unfiltered rays of the sun and temperature increases of more than 100°C. On the moon, President Kennedy's and NASA's declared objective, things would be even tougher. Temperatures on the lunar surface fluctuate between -160° and +120°C.

A series of strenuous tests was devised to determine which watch was best suited to the extreme challenges of space.

NASA ordered two Speedmasters and two each of five other chronographs for "testing and evaluation purposes" on September 29, 1964 at a price of \$82.50 each at the exchange rate of the day – they retailed for CHF 415 in Switzerland. NASA stipulated that it required the watches by October 21, 1964.

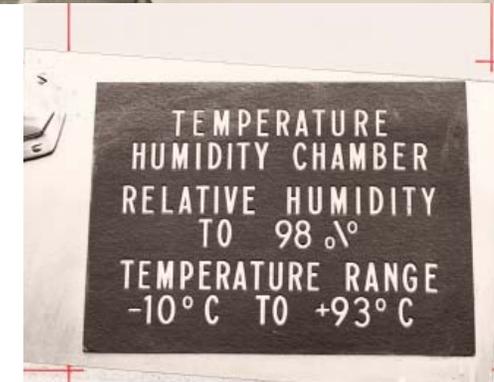
## The Qualification Test Procedures

When NASA received the watches, they were subjected to a series of stringent tests and pre-selection processes called the "Qualification Test Procedures". They can be summarized briefly:

- A. The watches will be wound immediately prior to each testing phase.
- B. The stopwatch (chronograph) feature should be operated during each test and during periods between tests. The stopwatch operation should be recycled immediately before and after each test and, when delays occur, at two- to six-hour intervals between tests.
- C. Time accuracy checks should be made before and after each test, at one-hour intervals during testing (when possible) and at two- to six-hour intervals between tests, if testing delays occur. At the start of each time-check period the chronograph should be started and the following data recorded for the start time:
  - Watch identification
  - Master time (hours, minutes, seconds)
  - Test watch time (hours, minutes, seconds)
- D. In conjunction with each time check, the watches should be inspected for damage to the case, crystal, dial and buttons, and for the presence of moisture underneath the crystal. Any irregularities in the watch's condition should be noted.
- E. A watch should be withdrawn from further testing if the following failures occur:
  - Complete watch operation failure with no restart capability
  - Complete stopwatch operation failure with no re-start capability
  - Two watch operation failures of any type even though re-start capability exists
  - Cracked or broken crystal
  - Broken winding stem or stopwatch controls.

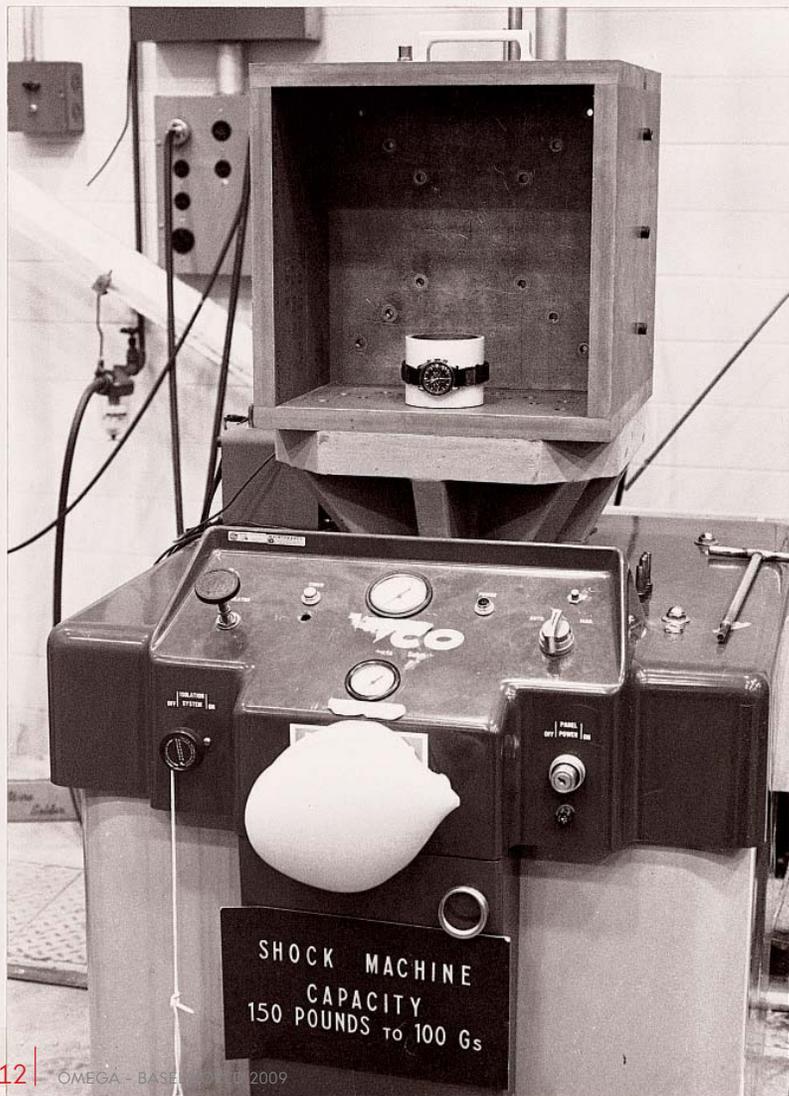
When accuracy checks are made during a testing period, the chronograph time measurement should not be stopped, but the following should be recorded:

- Watch identification
- Master time (hours, minutes, seconds)
- Test watch time (hours, minutes, seconds)
- Elapsed stop-watch time (hours, minutes, seconds)



# 3 AND THEN THERE WERE THREE

Only three watches out of six chronographs successfully survived this arduous pre-selection phase. The finalists were then subjected to 11 different tests – the most rigorous trials endured in the history of horology.



# THE MOST RIGOROUS TRIALS

- 1. High temperature**  
48 hours at a temperature of 160°F (71°C) followed by 30 minutes at 200°F (93°C). This under a pressure of 5.5 psia (0.35 atm) and relative humidity not exceeding 15%.
- 2. Low temperature**  
Four hours at a temperature of 0°F (-18°C).
- 3. Temperature-Pressure**  
Chamber pressure maximum of  $1.47 \times 10^{-5}$  psia ( $10^{-6}$  atm) with temperature raised to 160°F (71°C). The temperature shall then be lowered to 0°F (-18°C) in 45 minutes and raised again to 160°F in 45 minutes. Fifteen more such cycles shall be completed.
- 4. Relative humidity**  
A total time of 240 hours at temperatures varying between 68°F and 160°F (20°C and 71°C) in a relative humidity of at least 95%. The steam used must have a pH value between 6.5 and 7.5.
- 5. Oxygen atmosphere**  
The test item shall be placed in an atmosphere of 100% oxygen at a pressure of 5.5 psia (0.35 atm) for 48 hours. Performance outside of specification, tolerance, visible burning, creation of toxic gases, obnoxious odours, or deterioration of seals or lubricants shall constitute failure to pass this test. The ambient temperature shall be maintained at 160°F (71°C).
- 6. Shock**  
Six shocks of 40 Gs, each 11 milliseconds in duration, in six different directions.
- 7. Acceleration**  
The equipment shall be accelerated linearly from 1 G to 7.25 Gs within 333 seconds, along an axis parallel to the longitudinal spacecraft axis.
- 8. Decompression**  
Ninety minutes in a vacuum of  $1.47 \times 10^{-5}$  ( $10^{-6}$  atm) at a temperature of 160°F (71°C) and 30 minutes at 200°F (93°C).
- 9. High pressure**  
The equipment to be subjected to a pressure of 23.5 psia (1.6 atm) for a minimum period of one hour.
- 10. Vibration**  
Three cycles of 30 minutes (lateral, horizontal, vertical), the frequency varying from 5 to 2,000 cps and back to 5 cps in 15 minutes. Average acceleration per impulse must be at least 8.8 Gs.
- 11. Acoustic noise**  
130 db over a frequency range of 40 to 10,000 Hz, duration 30 minutes.

126,4%

MONOGRAPH SEB/2100039-002

PROJECT: APOLO

MANUFACTURER: OMEGA

EFFECTIVITY: S/c 10/ + SUBS.

65

1. DATE

2. ITEM NUMBER

3. DRAWING NUMBER

4. MANUFACTURER

5. EFFECTIVITY

6. LIFE LIMITS: G.M.D. TIME/CYCLES

7. PROJECT

8. OPERATING STORAGE

9. TIME/CYCLES

10. QC STAMP

11. SPECIAL HANDLING AND/OR SHIPPING INSTRUCTIONS

12. LOCATION

13. HISTORICAL EVENTS

14. TIME/CYCLES

15. QC STAMP

RECEIVED MSC BONDED STORAGE

RELEASED FROM BONDED STORAGE TO RAGAN PER TPS No. ECSD-1311

ENGRAVED PER

RECEIVED MSC BONDED STORAGE

RELEASED FROM BONDED STORAGE TO RAGAN PER TPS No. ECSD-19

ACCEPTED

OK TO SHIP

INSPECTED - ACCEPTABLE FOR S/C USE

OK TO SHIP

MSC Spec C 8 C/A

PER TPS No. 290

SHIPPED TO NAA % KSC, FLA.



09\*

# THE RESULTS

On March 1, 1965, the test results were complete. Three brands' chronographs had still been in the running. Of those, one brand's entry had stumbled on two separate occasions in the relative humidity test. In the course of the heat-resistance test it finally came to rest for good. The large seconds hand warped and was binding against the other hands.

The crystal of the second brand's chronograph had warped and come away from the case during the heat test.

The same unfortunate occurrence took place with a second model of the same make during the decompression test.

Only the OMEGA Speedmaster passed. At the time, NASA's testers wrote, "Operational and environmental tests of the three selected chronographs have been completed; and, as a result of the test, OMEGA chronographs have been calibrated and issued to three members of the GT-3 (Gemini Titan III) crews."

What sounds like a reserved, sober announcement was, in fact, the official decree that from that time forward, the OMEGA Speedmaster would be the only watch approved for all manned space flights and would become an inextricable part of the OMEGA legacy. As significant was a NASA communiqué dated March 1st, 1965 which said "... the astronauts show a unanimous preference for the Omega chronograph over the other two brands because of better accuracy, reliability, readability and ease of operation."

An ironic postscript: OMEGA only learned about the Speedmaster's journey into space after seeing a photograph of Ed White taken during America's first spacewalk as part of the Gemini 4 mission in June of 1965.

Source: NASA documentation and correspondence, 1961 -- 1965.

OMEGA CELEBRATES  
THE FIRST MOON  
LANDING WITH  
2 LIMITED EDITION  
WATCHES



# THE OMEGA SPEEDMASTER PROFESSIONAL MOONWATCH APOLLO 11 "40TH ANNIVERSARY" LIMITED EDITION WATCHES

The first manned lunar landing on the 20th of July, 1969 was one of the greatest, most dramatic scientific achievement in human history. Neil Armstrong stepped onto the moon's surface at 02:56 GMT on the 21st of July. Nineteen minutes later he was joined by Buzz Aldrin, who was wearing his OMEGA Speedmaster and a legend was born. An interesting footnote: the electronic timing system on the Lunar Module was not functioning correctly so Armstrong had left his watch in the Lunar Module as a reliable backup.

Two OMEGA Speedmaster Professional Moonwatch Apollo 11 "40th Anniversary" Limited Edition watches have been released to celebrate the adventure: one in stainless steel and sterling silver (7,969 pieces); the other in platinum and 18 Ct yellow gold (69 pieces).





# THE STAINLESS STEEL LIMITED EDITION

The distinctive timepieces are powered by OMEGA's calibre 1861, which shares its lineage with the calibre 321 used in the original Speedmaster Professional Moonwatch. The stainless steel casebody is delivered with a stainless steel bracelet which has been upgraded to include OMEGA's patented screw and pin system.

The black dial also recalls that of the Moonwatch with some key differences. The small seconds counter (sub-dial) is a medallion which features an adaptation of Apollo 11's famous mission patch: an eagle descends to the lunar surface with an olive branch representing peace in its claws. In the distance, far above the horizon, the earth is visible. The patch, interestingly, was designed by Michael Collins who remained in the Apollo 11 capsule as Command Module Pilot while his colleagues Armstrong and Aldrin were in the Lunar Module and on the moon.

The watch's hour, minute and the red-tipped chronograph seconds hands are coated with Super-LumiNova. The minute and hour chronograph counter hands are white and there is a brushed, rhodium-plated small seconds hand in attractive relief to the slightly recessed medallion on the counter.

# 02:56

GMT

Neil Armstrong stepped onto the moon's surface  
at 02:56 GMT on the 21st of July.



# ONE SMALL STEP

Below the words "OMEGA SPEEDMASTER PROFESSIONAL" on the dial, the legend 02:56 GMT – the exact time that Neil Armstrong made his "one small step" onto the moon – is displayed in red.

The 40th Anniversary Limited Edition's dial is protected by Hesalite, the same robust, shatter-proof acrylic crystal found on the original Moonwatch. Hesalite was ideally suited for use in space – there was no chance that it could break apart and send potentially dangerous fragments into the low-gravity environment. A small, distinctive OMEGA logo has been etched evocatively inside the Hesalite crystal.

The Apollo 11 "Eagle" mission patch is stamped on the caseback along with the words, "THE FIRST WATCH WORN ON THE MOON", the limited edition number (0000/7969), and "JULY 21, 1969", the date Armstrong and Aldrin first stepped onto the moon's surface at 02:56, the time which is printed on the dial.

The OMEGA Speedmaster Professional Moonwatch Apollo 11 "40th Anniversary" Limited Edition is delivered in a black presentation box that also includes a 42 mm sterling silver medal (the same diameter as the watch) featuring an engraving of the mission patch on one side with the words "APOLLO 11, 40th ANNIVERSARY". On the reverse side, the medal is engraved, "THE EAGLE HAS LANDED"; "LAUNCHED JULY 16 1969"; "LANDED JULY 20, 1969"; and "RETURNED, JULY 24, 1969" along with OMEGA's name and logo.

Also in the presentation box is a certificate of authenticity and an envelope containing a black polishing cloth with information commemorating the historic space flight.





# THE PLATINUM LIMITED EDITION A VERY LIMITED RELEASE WITH UNLIMITED LUXURY

A platinum version of the OMEGA Speedmaster Professional Moonwatch Apollo 11 "40th Anniversary" watch is also being released in an edition limited to 69 pieces. The casebody and screw and pin bracelet are made of platinum and the medallion on the small seconds counter is made of 18 Ct yellow gold as is the small seconds hand. The hour and minute hands as well as the 30 minute and 12 hour counter hands are made of platinum.

This elegant version of the watch is also delivered with a 42 mm 18 Ct yellow gold medal, in a limited and numbered edition, with the mission patch engraved on one side along with the words "APOLLO 11 40TH ANNIVERSARY". As with the sterling silver medal included with the stainless steel watch, the reverse side features the engraved legend: "THE EAGLE HAS LANDED"; "LAUNCHED JULY 16 1969"; "LANDED JULY 20, 1969"; and "RETURNED, JULY 24, 1969" along with OMEGA's name and logo.

The caseback features the mission patch in 18 Ct gold with the words "APOLLO 11 40TH ANNIVERSARY". Around the platinum outer ring of the caseback appear the words, "THE FIRST WATCH WORN ON THE MOON", "PT950" – a reference to the watch's platinum content, and "JULY 21, 1969", the date that Neil Armstrong and Buzz Aldrin stepped onto the lunar surface.

Like the stainless steel watch, the platinum version of the Speedmaster Professional Moonwatch Apollo 11 "40th Anniversary" features the shatterproof Hesalite crystal and the OMEGA calibre 1861 movement.

## 69 PIECES

A subtle reminder on the small medallion on the dial indicates just how special this watch is: the limited edition number (00/69) is engraved at the base of the small mission patch on the dial.

The platinum Speedmaster Professional Moonwatch Apollo 11 "40th Anniversary" Limited Edition are delivered in a striking wooden case with elegant ornamental marquetry. The limited edition number (00/69) is embossed on the top cover of the case along with the Apollo 11 mission patch. The steel feet are engraved with "1969", the year the Apollo 11 mission took place and "2009", the year the world commemorated its 40th anniversary and the year the watch was produced. The case also includes a certificate of authenticity.

These exquisite timepieces will initially be available exclusively at the OMEGA Boutique on Fifth Avenue in New York City when it opens later this year.





# OMEGA'S HISTORIC ROLE

Centuries from now, historians will continue to look back in wonder at the Apollo 11 mission. For the first time ever, human beings had left Earth, walked on another celestial body, and returned safely home. OMEGA will always be proud of the role it played in the greatest scientific adventure of all time.

1957



**The "Broad Arrow"**  
The first Speedmaster and first chronograph wristwatch with its timing-scale on the bezel as opposed to printed on the dial.

1965



**The Moonwatch "2"**  
The second Speedmaster model to be qualified by NASA and from 1965 had the word "Professional" printed on the dial.

1975



**The Apollo-Soyuz**  
This Speedmaster was limited to 500 pieces and was launched to mark the famous American-Soviet space rendez-vous.

1985



**The Moon-Phase**  
Twenty years after the Speedmaster began preparing to go to the moon, the moon came to the Speedmaster. This watch was produced in a series of 1300 pieces.

1994



**The Apollo XIII**  
Created to commemorate the 25th anniversary of the ill-fated Apollo XIII, it was the Speedmaster which provided the split-second precision required to ensure that the crew of the stricken craft got home safely.

2004



**From the Moon to Mars**  
Launched in 2004 to coincide with the American announcement. They planned to build a permanent space station on the Moon before 2020 to act as a launch sight for future manned missions to Mars.

2007



**The "50th anniversary Patch"**  
Created in a limited edition of 5957 pieces to commemorate the "Birth" of the Speedmaster in 1957.

1950

1960

1970

1980

1990

2000

# SPEEDMASTER TIMELINE

1969



**The gold Speedmaster**  
The first gold Speedmaster, created in a numbered edition. This watch was presented to astronauts on November 25th 1969 to celebrate the Apollo 11 moon landing.

1980



**The Apollo 11**  
This Speedmaster was launched in 1980 to celebrate the Apollo 11 mission. This watch was the first to use the 861L calibre and to have a glazed display back.

1999



**The 30th anniversary of Apollo 11**  
Launched in 1999 to mark the 30th anniversary of Apollo 11, this reference was the second Speedmaster Professional to have moon-phase indication and was only produced in white gold.

2003



**The "Snoopy Award"**  
Created in a limited edition of 5441 pieces to commemorate OMEGA's receiving the "Snoopy Award" for its contribution to getting the Apollo XIII team home safely in 1970.

2006



**The Apollo 15**  
Created in a limited edition of 1971 pieces to mark the 35th anniversary of the Apollo 15 mission on which the Lunar Rover Vehicle was used for the first time.

2009



**The 40th anniversary of Apollo 11**  
Made in a limited edition of 7969 pieces to mark the 40th anniversary of man's conquest of the moon.



THE RETURN OF A  
MYTHICAL DIVER:  
THE SEAMASTER  
PLOPROF



# THE OMEGA SEAMASTER PLOPROF 1200M

In 1970 OMEGA launched a watch which had been created to withstand the crushing pressures endured by divers working deep below the ocean's surface. It was the Seamaster 600, the so-called "Ploprof" (the first letters of **PLONGEURS PROFESSIONNELS** - the French words meaning "professional divers") and it was one of the most rugged, robust and seaworthy divers' wristwatches ever manufactured.

**The unmistakable Co-Axial Ploprof**  
Now OMEGA is introducing an updated version of the classic and instantly recognizable wristwatch. Equipped with a Co-Axial calibre 8500, the new Ploprof 1200M is, as its name suggests, water resistant to an astounding 1200 metres (4000 feet) and it artfully combines its ancestor's legendary features with OMEGA's state-of-the-industry Co-Axial technology.

The Ploprof's case cannot be mistaken for that of any other watch: the screwed-in crown is located at 9 o'clock under a protective buffer. Its unique positioning allows freer wrist movement and prevents any inadvertent manipulation.

# DESIGNED FOR DIVERS

The time and date adjustments are made by unscrewing the crown to release the protective buffer and then pulling the crown to the appropriate position. The Co-Axial calibre 8500 makes it possible to adjust the hour hand separately to accommodate different time zones or for the changes to daylight savings and back to standard time.

At the 2 o'clock position is the Ploprof's characteristic bezel-release security pusher with an orange anodised aluminium ring. Pressing the pusher allows the bezel to be rotated in either direction and then locked firmly in position, ensuring that it cannot be accidentally shifted during a dive. The Ploprof has an automatic helium escape valve located on the side of the case at the 4 o'clock position. This feature allows helium atoms to escape during decompression, and is particularly useful for professional divers operating from diving bells.



## TWO-PIECE ORIENTED CASEBACK

The casebody is made of brushed stainless steel and has polished bevels. The centre piece of the two-piece oriented caseback features background of straight, parallel waves with a polished OMEGA logo, the word "Seamaster" and the famous Seahorse on a matt surface. The centre piece is sealed in place with an outer screw-in ring with black-chromed engraving of "1200m/4000ft", "Ploprof", and "OMEGA 8500 Co-Axial Escapement."

The Seamaster Ploprof 1200M has a polished, lacquered black dial with an applied polished OMEGA name and logo. The word "Professional" has been transferred in white. The polished indexes are coated with white Super-LumiNova, as are the varnished hour and seconds hands. The oversized minute hand, which plays such an important role for divers, is crafted from orange aluminium and is coated with white Super-LumiNova. The Ploprof 1200M has a date window at the 4:30 position.





# ON YOUR WRIST; ON YOUR WETSUIT

The Ploprof 1200M is available either with a brushed mesh "Sharkproof" bracelet or on a rubber strap in a choice of black or orange. The bracelet, with its double extension system, is fitted with OMEGA's new diving safety clasp whose pinned links allow precise adjustments to 18 positions. It also features an extra divers' extension to 26 mm so that the watch can be worn comfortably over a diving suit.

The watch is delivered in a special black zippered presentation case made of neoprene – the material used in divers' wetsuits.

# RESPECTING THE PAST, DEFINING THE FUTURE

The OMEGA Co-Axial Ploprof 1200M bears a strong physical resemblance to its famous ancestor and it carries on the traditions of robust reliability and water resistance which have always defined OMEGA's divers' watches. But there are also some remarkable improvements: for example, the watch is driven by the OMEGA Co-Axial calibre 8500 with a free sprung balance. This movement, launched in 2007, was created from inception by OMEGA and is one of the key elements in the revolution in mechanical watchmaking which has been taking place at the company since 1999.

With the launch of the Seamaster Ploprof 1200M, OMEGA has re-introduced a mythical diving watch, combining the look which made it a legend with cutting-edge watchmaking features. It is sure to be one of the most welcomed and talked-about releases of 2009.



Two Seamaster Ploprofs: the 1970 model (above) and its 2009 successor.

# POWERING THE PLOPROF THE OMEGA CO-AXIAL CALIBRE 8500

In 1890 OMEGA produced the first-ever industrialized movement. 117 years later, the company took a step which was every bit as dramatic when it launched its revolutionary Co-Axial calibre 8500, the movement at the heart of the new Ploprof.

The calibre, featuring the OMEGA Co-Axial Escapement, heralded OMEGA as a leading presence in the elite field of mechanical watchmaking. Its 202 components were created in-house, from inception, using third millennium technology to ensure optimum performance.

Introduced on an industrial scale by OMEGA in 1999, the Co-Axial Escapement had been invented by master watchmaker Dr. George Daniels.

It is the watch's escapement which provides the regular transmission of energy to the mechanism. Together with the free sprung balance, the Co-Axial Escapement offers optimal stability to the watch's running rate over long periods and enhances the performance of the timepiece. In addition, due to the reduced sliding friction, the need for oil in this tiny component is nearly eliminated.

The automatic mechanism is driven by a highly efficient bi-directional rotor. The energy is then transmitted through two barrels providing the watch with an impressive power reserve of 60 hours. Adjusting the Ploprof when traveling through time-zones is simple as the hour hand can be moved separately from the minutes and seconds hands. The new Ploprofs, with their Co-Axial 8500 calibres, are COSC (Contrôle Officiel Suisse des Chronomètres) certified chronometers.







# 10 YEARS OF THE OMEGA CO-AXIAL ESCAPEMENT

# DRIVING THE REVOLUTION IN MECHANICAL WATCHES

When OMEGA launched its Co-Axial calibre 2500 in 1999, the entire mechanical watch industry was put on notice. The Co-Axial Escapement in the calibre was the first practical new mechanical watch escapement to be introduced since the English and Swiss lever escapements were invented in the 18th and 19th centuries respectively.

The operative word here is “practical”: in the decade following the launch of the first Co-Axial calibre, OMEGA introduced the state-of-the-industry escapements into every one of its watch lines, achieving chronometric performance standards previously unimagined for series-production mechanical watches.

Master watchmaker George Daniels, who invented the Co-Axial Escapement, said of his masterpiece, “It is intended to sustain the public affection for the mechanical watch during the 21st century.” It is well on its way to doing so.



In simple terms, the escapement is the heart of the mechanical watch, as it maintains the oscillations of the balance, the watch’s regulating mechanism. The OMEGA Co-Axial Escapement reduces the friction among the parts that transmit energy to the other components, resulting in a reduced need for servicing for the movement and, above all, greater stability of the watch’s precision over time.

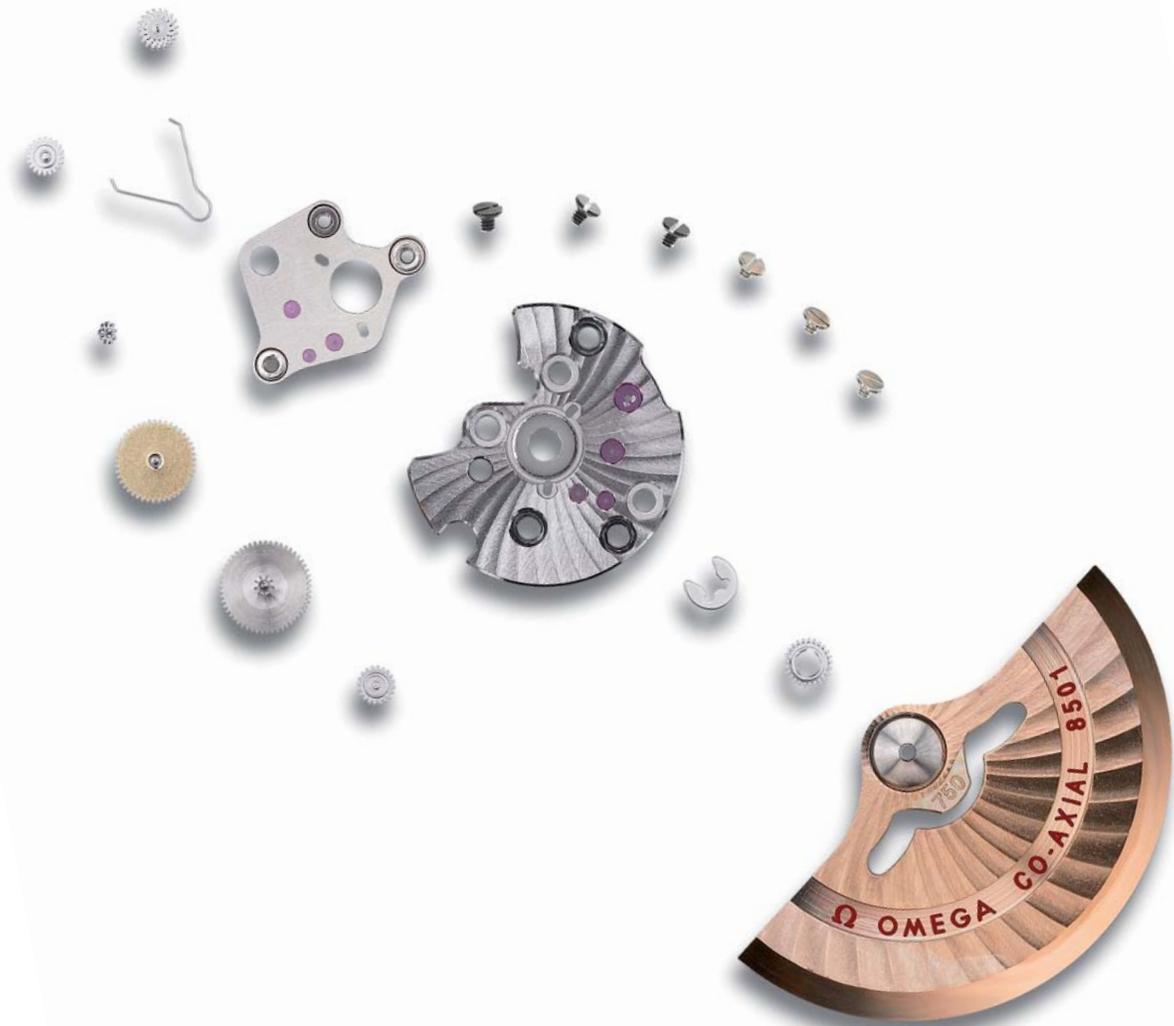
# OMEGA CO-AXIAL CALIBRE 8500/8501

OMEGA's launch of the Co-Axial calibre 8500/8501 in 2007 marked a dramatic step in the evolution of OMEGA's Co-Axial philosophy. For the first time, the company built an entire movement around the Co-Axial Escapement. Every one of its 202/201 parts was developed and produced in-house from inception. The movement's manufacturing processes were optimized for series-production readiness.

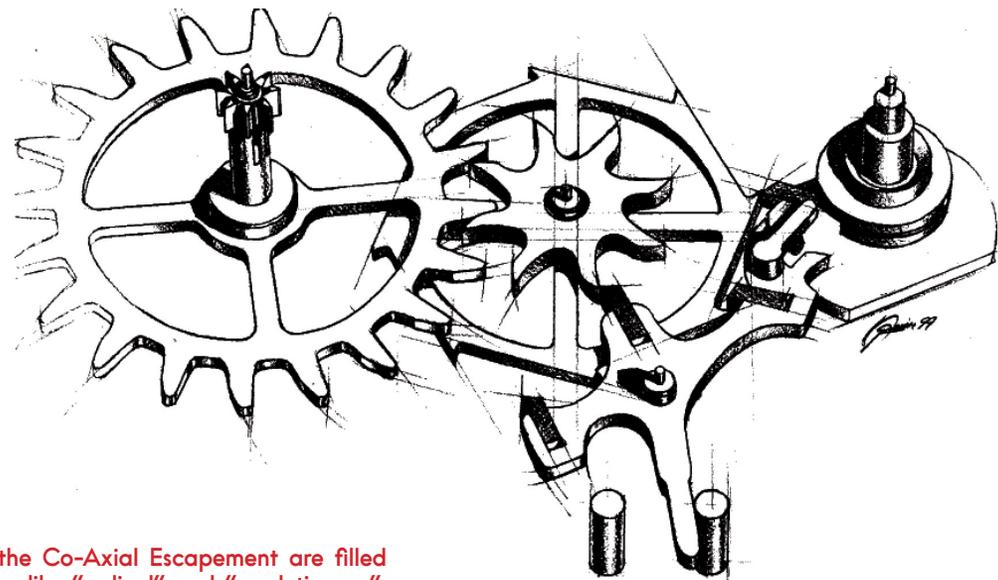
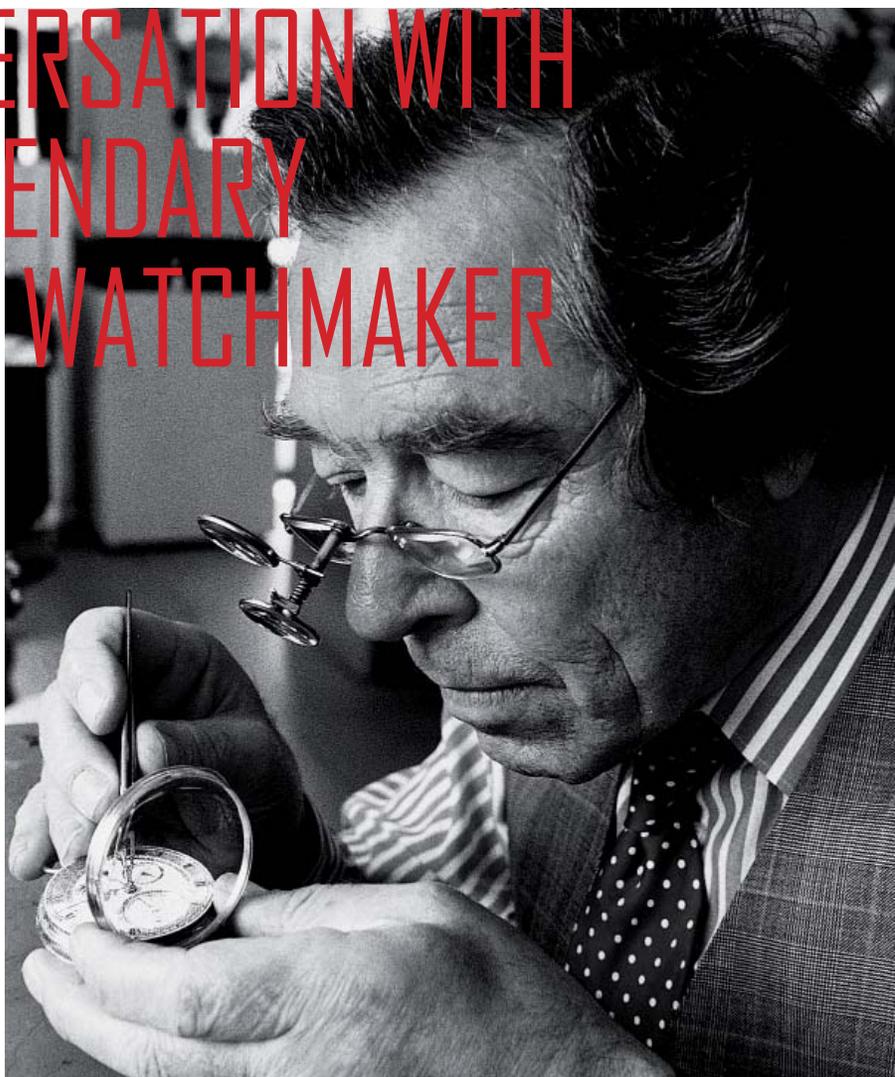
For OMEGA it was a return to its roots: the company had, in fact, been named for a serially-produced movement developed in-house in 1890. The introduction of the Co-Axial calibre 8500/8501 demonstrated boldly that OMEGA was back among the ranks of Swiss watch manufactures, companies which have designed and produced their own movements in-house.

The drama continued in 2008 with the launch of the Co-Axial calibre 8520/8521 designed especially for smaller watches and the Co-Axial calibre 8601/8611, a movement with an added instantaneous jump calendar complication.

The revolution in mechanical watchmaking which was signalled by the release of OMEGA's first Co-Axial movement in 1999 is a defining part of OMEGA – the brand intends, in time, to make the radical technology a part of each of its mechanical wristwatches, carrying on a 161-year tradition of horological excellence.



# DR. GEORGE DANIELS A CONVERSATION WITH THE LEGENDARY MASTER WATCHMAKER



**Texts about the Co-Axial Escapement are filled with adjectives like “radical” and “revolutionary”. Are you comfortable with these descriptions?**

I am comfortable with hearing the Co-Axial escapement described that way because it is, in fact, revolutionary and radical. The Co-Axial Escapement solves a problem which had been perplexing watchmakers for 500 years and that is the problem of lubrication.

**Is there room for another major breakthrough as dramatic – as radical and revolutionary – as the Co-Axial Escapement in mechanical watches?**

It might sound immodest to say it but I honestly don't think so. Mechanical watches have a long history and the challenges of improving them have been taken on by centuries of master watchmakers. The problems of the viscosity of lubrication and the need for lubrication caused by sliding friction had been addressed by watchmakers for hundreds of years and not solved until the introduction of the Co-Axial escapement.

Different materials may be used in the construction of certain parts of the movements but these won't affect a watch's fundamental performance in the way that the Co-Axial Escapement does.

**Will the Co-Axial Escapement, in time, be the most widely used escapement in the construction of new mechanical watches?**

The watch industry is by nature very conservative and slow to adopt new things. But basically, every maker who continues with other escapements will ultimately be trampled by the Co-Axial for the very simple reason that it's better. OMEGA have been able to show that the Co-Axial Escapement can be serially produced on a large-scale so while it will take some doing to convince the mechanical watch industry, it's just a matter of time.

### Are you surprised by the renewed popularity of mechanical watches?

No, I'm not surprised by the renewed popularity of the mechanical watch. I have often said that I've never been in doubt that the mechanical watch would survive and I started its revival with my first watch fitted with the Co-Axial escapement in 1969 in London.

My mantra has long been that the survival of the mechanical watch is ensured by its qualities: it's historic, technical, intellectual, aesthetic, useful and even amusing. These properties have sustained the popularity of mechanical watches through the ages and are bound to carry it well into the future. Having said that, a generation ago the mechanical watch was in need of improvements which would prevent its attractions from being overshadowed by quartz timekeeping.

That, in short, is one of the real benefits of the Co-Axial Escapement: it will play a major role of extending the popularity of mechanical watches into the 21st century and beyond.

### An article in the Financial Times said that you don't create detailed drawings of your watches until after their finished. Is that true? If so, do you improvise when you are making a watch?

It's true that I don't create the detailed drawings until after the watch is completed. Remember that none of the great watchmakers in the past worked from drawings! When I start a new watch, I have the whole thing in my head. It's possible that I will make some small revisions as I go along if I think of something which would be an improvement.

One of the problems with a detailed drawing of a

watch is that the width of a pencil line will sometimes be several times wider than the smallest parts of a watch movement.

I should point out that the exception is escapements. Because of the very small tolerances in an escapement – just a few thousandths of a millimetre -- detailed scale drawings are made of these. I've sometimes created a dozen drawings of an escapement in order to work out its maximum efficiency.

### A few years ago, Sotheby's assembled an exhibit of 36 of the 37 watches you've made. Do you have particular affection for any of these or do you love all your "children" equally?

There are two for which I have special affection. One is the Grande Complication watch which lives up to its name: it's a gold one-minute tourbillon with a slim Co-Axial escapement and every possible complication: minute repeating, instantaneous perpetual calendar, equation of time, phase of the moon, thermometer and indication of the reserve of winding. I still have that one, by the way. The other is the Space Traveller. It has an independent double-wheel escapement and also has a large number of complications: mean-solar and sidereal time, age and phase of the moon and equation of time indications.

None of these watches were commissioned. All were especially created for experimental purposes. When I started making watches, I had already taken the decision not to make watches to order but rather to make them entirely to my own design and satisfaction. I would sell them when, and if, a suitable client materialised.

### Traditional Escapement



### OMEGA-Daniels Co-Axial Escapement



### This year, OMEGA is celebrating the tenth anniversary of the first Co-Axial escapement in an OMEGA calibre. The escapements have been a part of your life for forty years. Are you pleased with OMEGA's interpretation and introduction of the escapement?

When OMEGA made the commitment to produce the Co-Axial Escapement at a series production level I was very pleased. They were brave enough to take on this revolutionary technology in the face of a lot of criticism and scepticism from the rest of the industry. At the time, there was no praise for OMEGA. I could sympathize with them because there had also been none for me when I invented the Co-Axial escapement.

Because it is very much my baby, I had intense discussions with a number of their technicians, especially in the beginning. We have collaborated for several years on the specification of the components to define the forms of the special tools needed for production. The Co-Axial escapement is more complex than the classic lever so I kept very close to the technicians during the run up to production. Working with others was a new experience for me and I have very much enjoyed the relationship that developed between OMEGA, its technicians and myself.

The end product is most satisfying to see working and it is of course a thrill for an inventor to see his aspirations fulfilled so perfectly. The performance has been remarkable, showing long-term day-to-day use that cannot be equalled by the classic lever escapement. OMEGA is to be commended for their courage in taking on the Co-Axial escapement and I wish them every success with it.

# Constellation



# The Constellation Collection

The re-design of an icon



## 1982 - The birth of a classic

In 1982, OMEGA launched a watch which introduced a particularly radical and enduring design concept. The watch was the Constellation Manhattan and its now-famous "Griffes" or claws placed it among the ranks of the world's most instantly identifiable timepieces. The Griffes were not only striking aesthetically, but were also highly functional in those days: they held the sapphire crystal and gasket firmly against the case, contributing to the watch's water resistance.

While the Griffes were initially introduced for their functionality, their individuality played a greater role in the Constellation's remarkable popularity than anyone could have imagined: they became the trademark which defined the watch line. A compelling argument could be made that if the dials were removed from most watches, only experts and enthusiasts would be able to tell them apart. Such was not the case with the OMEGA Constellation, which could be distinguished immediately from across a room and at any angle.

## 1995 - A Constellation milestone

In 1995 marked another milestone for the Constellation. That was the year that OMEGA started working with brand ambassadors, prominent among them supermodel Cindy Crawford. Cindy actively participated in the design selection process with OMEGA's watch specialists and the Constellation famously became "Cindy's Choice".

Those watches were the initial releases of a Constellation line which has, since its launch, been a favourite for OMEGA fans around the world.

Cindy's advertisements for the Constellation developed, over time, into OMEGA's My Choice campaign: an image of a popular OMEGA ambassador is displayed in the brand's posters and advertisements along with a photograph of a watch from Constellation family, and a text limited to the subject's name and the words MY CHOICE.





## 2009 - Evolution and revolution The re-design of an icon

The next phase in the evolution of this popular and recognizable wristwatch – OMEGA's re-design of the entire Constellation line – is one of the most eagerly anticipated global launches of 2009.

These new Constellations bear a strong family resemblance to their ancestors. The Constellation star is at the 6 o'clock position on each one and still have the famous claws which have been refined and updated. Their bracelets have the familiar horizontal link but the new "Mono Rang" structure, which feature butterfly clasps, have been re-engineered for maximum comfort.

The re-designed Constellations watches also have some features which set them apart from their forebears. The striking dials, in silver, champagne, white pearly mother-of-pearl, black, and brown, are enhanced by the supernova pattern emanating from the Constellation star – a dramatic design feature which was first introduced in 2008's Constellation 160 Years model. Their "Dauphine plume" hands are either rhodium plated or made of 18 Ct red or yellow gold and coated with Super-LumiNova.

All of the re-designed Constellations are water resistant to a depth of 100 metres.

## A nearly unlimited choice

The scope of this Constellation launch is unprecedented. With its upgraded features and updated design, its selection of dials and its diamond options, the appeal of the re-designed line will be extended to an even wider audience – there is at least one Constellation ideally suited to every wrist.

Like their predecessors, these Constellations are both sporty and elegant. The re-designed family has been created in five sizes: 24 mm, 27 mm, 31 mm, 35 mm and 38 mm. The two smaller models feature the OMEGA quartz calibre 1376; the 35 mm watches are available either with the quartz calibre 1532 or with OMEGA's Co-Axial calibre 2500. The 31 and 38 mm versions feature OMEGA's revolutionary in-house Co-Axial calibres 8520/8521 and 8500/8501 respectively.



## Carrying on a tradition of excellence

The re-designed Constellation line is a dynamic, contemporary upgrade of a watch family which is an essential part of OMEGA's heritage and is a worthy successor to its famous ancestor while proclaiming its own originality, design excellence and technical innovation.



# Constellation Luxury Edition...

...in the sky with diamonds

Every constellation in the universe has its brightest stars, and in OMEGA's Constellation line, nothing glitters more brilliantly than the opulent watches in the Luxury Edition.

The Luxury Edition has been created with a strong and vivid visual identity – the dials display a dramatic supernova structure which emanates boldly from the Constellation star at 6 o'clock.





## “Snow-set” round diamonds – respecting the geometry of the watch

The OMEGA Constellation Luxury Edition watches shimmer with round diamonds whose seemingly random distribution in an intriguing “snow setting” elegantly respects the geometry of each jewelled component of every watch.

The watches in the Edition have identical dials; there are however three distinct configurations of diamonds on their bracelets and cases. Each of these is offered in a choice of 24 mm and 27 mm case sizes fitted with the quartz calibre 1376 or a 31 mm case equipped with the OMEGA Co-Axial calibre 8421.

## Thousands of diamonds

The most spectacular of the models in the Constellation Luxury Edition glistens with thousands of diamonds in its snow setting.

These jewelled masterpieces, with their 24, 27 and 31 mm cases, dazzle with 7.60, 8.84 and 9.06 carats respectively. The diamonds pave the entire surface of each part of the watch: the dial, the case, the bezel, the claws, the crown and the bracelet.

## Diamonds in motion

The second Luxury Edition model has a bracelet which is partially set in round diamonds. Their lines extend organically from the supernova pattern on the dial and create a sense of motion leading beyond the dial and case to the bracelet. Also available in 24, 27 and 31 mm versions, they have 2.08, 2.83 and 3.59 carats of diamonds respectively.

## A world premiere - a black OMEGA logo engraved in the diamond

The Constellation Luxury Edition watches feature a world premiere. On the bracelet's distinctive butterfly clasp is a unique diamond - a black OMEGA logo has been engraved in the stone using a multiple-staged process involving laser-engraving. The result is a perfectly shaped mark engraved forever in the diamond.





### Understated elegance

The third version is configured with the same snow-set round diamonds on its dial, bezel, claws and crown but is presented on an elegantly understated bracelet in either 18 Ct red gold or 18 Ct white gold.

### The OMEGA Constellation Luxury Edition

The launch of OMEGA's 2009 re-design of its entire Constellation line is one of the most eagerly-anticipated events in the watchmaker's long history. The Constellation Luxury Edition was created to express the values of the new line in the most glamorous terms imaginable. The uncompromising luxury delivered in the Edition is represented by one of the most elegant wristwatch collections released in OMEGA's 161-year history.



# Constellation Griffes

## Fine Jewellery

### The power of timeless emotion

Omega's Constellation Griffes is made up of pieces which, while they are timelessly elegant, also have aesthetic links to contemporary fine jewellery design.

### Inspired by a legend

Inspired by OMEGA's Constellation wristwatch line, the jewellery in the Griffes collection features the famous claws which tightly grip a diamond-paved circular bezel whose shape confidently conveys perfection and eternity. Their 18 Ct gold settings are paved with sparkling diamonds which surround smoky brown quartz, clear white agate, or soft rose quartz.

## Diamonds, gold and stones

The collection includes rings in three different sizes as well as pendants, cufflinks, chains, bracelets and necklaces, all of which are available in compelling combinations of 18 Ct yellow, white or rose gold, diamonds and stones.

### The rings

The rings in the Griffes Collection are offered with settings in three sizes – 10 mm, 15 mm and 20 mm. Each ring size is available in four alluring configurations: white gold with rose quartz and diamonds; white gold with white agate and diamonds; rose gold with smoky brown quartz and diamonds; and yellow gold with smoky brown quartz and diamonds. The smallest setting is also available in the form of a pendant whose chain matches the gold in its setting.



## Bracelets

The collection includes leather bracelets in white crocodile leather with a steel clasp or in brown crocodile leather with a choice of rose or yellow gold-plated clasps.





## Necklaces

Necklace-chains with a length of 102 cm are also available in a choice of white, rose or yellow gold.

Both chains and bracelets can be enhanced by the addition of matching round elements. They are available in two sizes: 15 mm diameter with 2 diamonds or 20 mm diameter with 8 diamonds in choices of white, rose or yellow gold.

## Sautoirs

The Griffes Collection's sautoirs come in white gold, rose gold and yellow gold. These special pieces each have two elements – a large one with diamonds and a medium-sized one with quartz or agate.

## They belong together!

For the first time, OMEGA is launching an entire collection simultaneously all of whose pieces complement each other in a timeless, seductive jewellery line.

The background of the entire image consists of numerous curved, parallel lines that fan out from the right side towards the left, creating a sense of motion and depth. The lines are in various shades of gray, from light to dark, against a black background.

  
**OMEGA** [omegawatches.com](http://omegawatches.com)