

mega got the watch world's attention in 1999 when it introduced the co-axial escapement. Never before had a brand used anything other than a Swiss lever escapement in a serially manufactured wristwatch. At first, only specially modified ETA calibers were equipped with the new escapement, which was developed by George Daniels, but in 2007 it was also incorporated in Omega's first manufacture movement, Caliber 8500.

This movement finally provided enough space to construct the co-axial escapement on three levels, which further improved it. Omega followed up Caliber 8500 with a movement for an annual calendar (Caliber 8601) and one for use in ladies' watches (Caliber 8520).

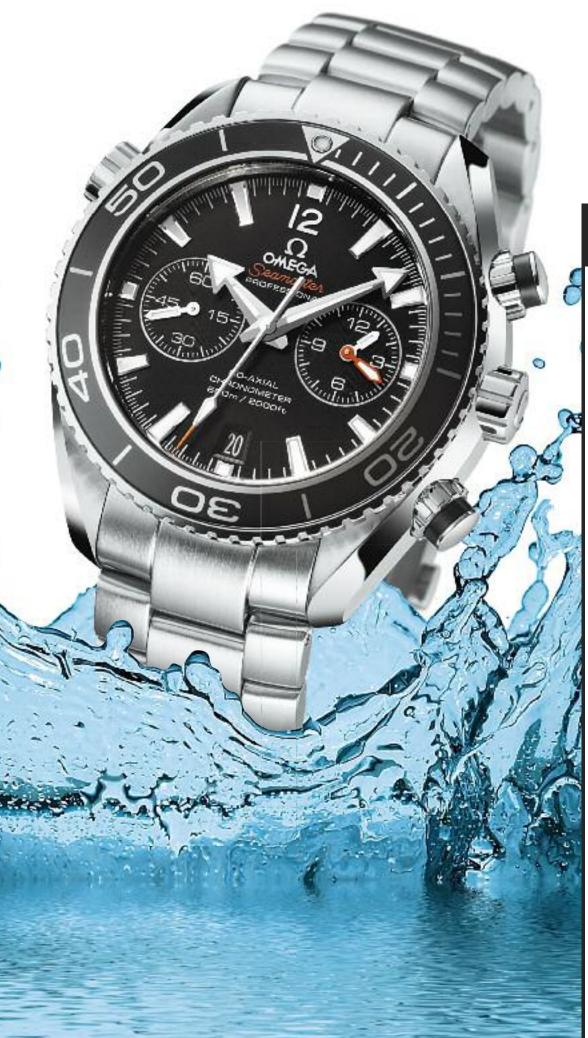
The company took its dedication to co-axial escapement movements to another level this year with the introduction of in-house chronograph Caliber 9300. The complexity of a chronograph movement makes it extremely difficult for a brand to develop and industrialize one of its own, but Omega accepted the challenge, and the successful result makes its debut in the brand's new Seamaster Planet Ocean.

The Seamaster Planet Ocean Chronograph continues a long tradition of Omega divers' watches, which began with the Omega Marine in 1932. The Seamaster line started in 1948. The Seamaster 300, which debuted in 1957, was particularly influential for the design of future Seamaster models, with its wedgeshaped, luminous indices, an arrowshaped hour hand with luminous coating and a rotatable bezel that snapped sequentially into place according to the markings on its minutes scale. These design elements continued in the Seamaster Planet Ocean collection, introduced in 2005. The hands (both of which are now arrow-shaped), the indices, and even the hour numerals and numerals on the divers' scale all echo the styling of the more-than-50-year-old model. But the new Planet Ocean doesn't look at all "retro": quite the contrary, it looks so distinctively up-to-date it could almost be described as trendy. The reasons include the orange accents on the elapsed-seconds hand, the elapsed-minutes hand and the Seamaster logo; the case's opulent diameter of 45.5 millimeters; the matte black ceramic bezel; and the case's refined shape with alternately polished and satinfinished surfaces. Incidentally, the ceramic used for the bezel has a hardness of 1,200 Vickers, which makes it almost five times more scratch-resistant than steel. The numerals and indices along its scale are made of chromium nitride.

DESPITE ITS LARGE SIZE and substantial weight (241 grams), this chronograph is surprisingly comfortable on the wrist, thanks largely to the flexible steel bracelet and the flat folding clasp, which is smooth on its inner surface. The outer side of the clasp is also smooth and flat, which unfortunately makes it susceptible to scratches, even though it has a satin finish. The bracelet is also completely satin-finished on its outer surface. The polished sides ensure that these different surfaces alternate, as they also do on the case. The bracelet isn't particularly complex, but it has a high-quality appearance. Furthermore, the model with the bracelet costs just \$200 more than the one with the rubber strap. A 2.5-cm-long extension piece folds out of the clasp, which means most divers can wear the watch over the sleeve of their diving suits.

The clasp is easily opened by pressing two lateral buttons. The rotating bezel





SPECS

OMEGA SEAMASTER PLANET OCEAN CHRONOGRAPH

Manufacturer: Omega S.A., Rue Stämpfli 96, CH-2504 Bienne, Switzerland

Reference Number: 232.30.46.51.01.001

Functions: Hours, minutes, seconds; date; chronograph with central seconds hand and combined 60-minute and 12-hour counter; bezel rotates in one direction only; helium valve

Movement: Omega 9300, automatic, chronometer; 28,800 vph; 54 jewels; two barrels; Nivachoc shock absorption; Glucydur balance; fine adjustment via weight screws on the balance; co-axial escapement; 60-hour power reserve; diameter = 32.5 mm; height = 7.6 mm

Case: Stainless steel, curved sapphire crystal with nonreflective treatment on both surfaces, fully threaded caseback with sapphire viewing window, threaded crown, water-resistant to 600 meters

Bracelet and clasp: Stainless steel, folding clasp with two buttons and fold-out extension piece

Rate results

(Deviations in seconds per 24 hours, without/with chronograph switched on):

Dial up	+2	+2
Dial down	+3	+3
Crown up	+6	+4
Crown down	+1	C
Crown left	+4	+4
Crown right	+2	+1
Greatest deviation of rat	e: 5	4
Average deviation:	+3	+2.3
Mean amplitude:		
Flat positions	277°	292°
Hanging positions	256°	262°

Dimensions: Diameter = 45.5 mm, height = 19 mm, weight = 241 grams

Variations: With orange aluminum bezel (\$7,700); on rubber strap with black ceramic (\$7,700) or orange aluminum bezel (\$7,500), steel with diamond bezel, on steel bracelet (\$20,600) or leather strap (\$20,500); titanium with leather strap (\$10,000) or titanium with titanium bracelet (\$10,500)

Price: \$7,900





moves just right — neither too smoothly nor too stiffly — although the sound it makes when it clicks into place doesn't inspire unconditional confidence.

The helium-release valve doesn't work automatically, but must be unscrewed by hand using the crown at 10 o'clock. However, this is only an issue for the handful of professional divers world-wide who spend time in pressurized chambers. Of course, Omega also makes watches with automatic helium release valves, such as the Ploprof.

The helium-release valve and the crown are threaded, but fortunately the push-pieces only look that way and need not be unscrewed before each use. The crown is easy to grasp and to extract. The watch has a stop-seconds function for tothe-second time setting, but there's no quick-reset mechanism for the date. As on all new Omega manufacture calibers, when the crown is in the middle position it resets the date display in either direction in hourly increments and without stopping the movement. This is a convenient feature when resetting the watch for a new time zone or when switching between standard time and daylight saving time. The date display car

be reset very quickly, especially because it also switches backward when the hour hand is reset counterclockwise.

Another special feature of this new chronograph caliber: the subdial at 3 o'clock tallies both 12 elapsed hours and 60 elapsed minutes. The elapsed time can be read intuitively, as on an ordinary clock face. The running seconds subdial at 9 o'clock contributes to a beautiful and symmetrical arrangement that also provides ample space for the date at 6 o'clock. The subdials were much closer toward the dial's center on this watch's immediate predecessor. The new movement has a diameter of 32.5 mm, ideal for this larger watch.

The large, arrow-shaped hands and wedge-shaped indices contrast boldly with the matte black dial. The white Super-LumiNova glows bright blue in the dark, except on the minute hand and the luminous index on the rotating bezel, where it shines in the more traditional greenish hue. Their matching color indicates that they are used together.

If you turn this watch over, you won't find the steel caseback with the famous seahorse emblem that has adorned Seamaster watches since 1958. Instead, there's a sapphire window offering a clear view of the movement, which definitely merits a good look.

Caliber 9300 has a column wheel to control the chronograph's functions. Apertures cut in the plate ensure that this component is clearly visible. The coupling mechanism is vertical and switches without delay. The embellishments are unconventional: the balance is coated with black chrome and the screws are also blackened. Geneva waves that widen spirally outward are Omega's characteristic finish: they adorn all of its manufacture calibers, including this one. The balance's bridge is also easily seen: since it's screwed on both sides, it's sturdier than a conventional balance cock, which is affixed on only one side. A plate covers most of the other mechanisms, including the chronograph mechanism, of which only a small part is visible.

Through a loupe, a sharp eye can discern the silicon hairspring and parts

SCORES

OMEGA SEAMASTER PLANET OCEAN CHRONOGRAPH

Bracelet and clasp (max. 10 points): The steel bracelet is sturdy and well-crafted, but its shape is rather simple. The folding clasp with safety buttons fits securely and has a practical extension piece.

Operation (5): While the movement is running, the screwed crown can be turned to reset the hour hand either forward or backward in hourly increments, thus conveniently resetting the date display, too. This watch has a stop-seconds function, smoothly working push-pieces and an easy-to-rotate bezel.

Case (10): The attractively alternating satin-finished and polished surfaces follow the curving lines of the case. The scratch-resistant ceramic bezel, exhibition back and high degree of water-resistance are also pluses.

Design (15): Very handsome styling, inspired by a historical watch, but modified for contemporary tastes.

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Legibility (5): Easy to read both night and day: the minute hand and the index on the divers' bezel glow green; the other indicators, including the small seconds and the chronograph hands, glow blue.

Wearing comfort (10): Considering its weight and thickness, the watch is still rather comfortable to wear.

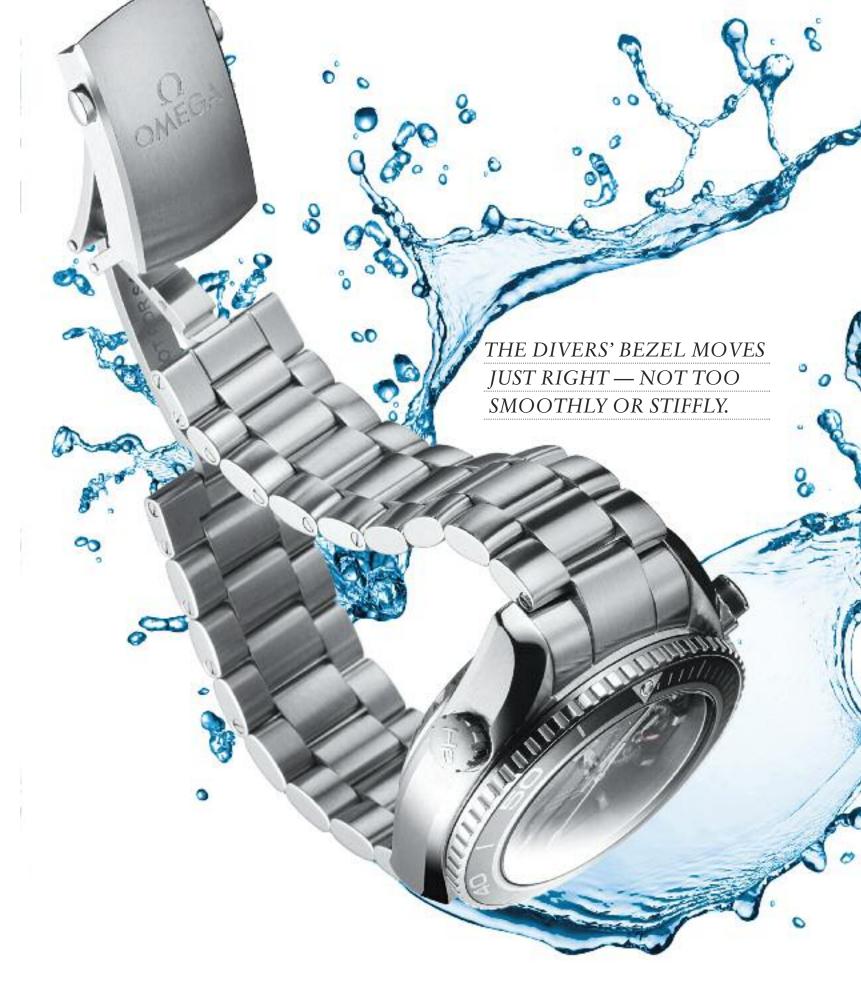
Movement (20): Caliber 9300 is a well-designed *manufacture* chronograph movement with a co-axial escapement, an antimagnetic silicon hairspring and precise, index-free fine adjustment.

Rate results (10): Very good rate performance, worthy of a chronometer, even with the chronograph switched on. 8

Overall value (15): Fairly priced for this level of quality.



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The divers' extension piece pivots from the clasp, enabling the watch to fit over the sleeve of a diving suit.

of the co-axial escapement. This movement was designed so that the escape wheel of the co-axial escapement has three rather than two functional levels and thus works more efficiently. Despite the obvious improvements made in Omega's *manufacture* calibers, the escapement still needs a thin film of oil; it cannot run entirely without lubrication.

There is no index necessary for fine adjustment. Gold nuts are screwed onto threads that are positioned along the rim of the balance and point toward its center, so the silicon hairspring, which resists shocks and is nearly unaffected by magnetic fields, is entirely free to breathe. The shock absorption has also been improved: the new Nivachoc shock absorbers increase the accuracy of the centering of the balance staff, thus reducing positional errors.

This caliber has a higher frequency than Caliber 8500 — 28,800 vph rather than 25,200 vph — which means the seconds hand advances through eight rather than seven steps each second. That's a more practical situation for a chronograph, because now each second along the dial's scale can have three strokes subdividing it into four increments. There isn't enough room for seven subdivisions and 3½ of them is a graphic impossibility.

The lengthy power reserve (60 hours) is a welcome feature. Omega achieved this with a reversing train that enables the rotor to wind the two serially arranged barrels in both its directions of motion. The rotor doesn't run in a sliding contact bearing as it does in Caliber 8500, but is instead borne by ball bearings. Fifty-four jewels minimize friction.

Like most Omega calibers, the 9300 is certified as a chronometer by the official Swiss testing authority, COSC. We rechecked and confirmed its chronometric accuracy with a Witschi Chronoscope X1 timing machine, which is capable of testing watches with co-axial escapements. (Most timing machines cannot, because a co-axial escapement generates an entirely different ticking sound than that produced by a Swiss lever escapement.) The greatest deviation among the various positions was five seconds, and the average deviation among the positions was +3 seconds per day. These values were even better with the chronograph switched on, when the amplitude also increased rather than declining. The Planet Ocean delivered a very good performance on the wrist, where it posted a slight daily gain of 2 to 2½ seconds.

The high-quality craftsmanship and the elaborately designed movement add to the watch's price. The Planet Ocean Chronograph with a steel bracelet costs \$7,900, a fair price for an Omega and especially for the Planet Ocean line, which has a very good reputation and a history of maintaining value over the years. Other divers' chronographs in steel cases with manufacture movements can cost twice as much, and cannot boast refinements like a silicon hairspring or a co-axial escapement. The Planet Ocean's only real downside is its heavy weight and thickness, although these are to be expected with such a wide case. Some wearers might even enjoy the extra weight on their wrists, which reminds them that they're wearing a watch; others might wish to spring for the more lightweight titanium version (\$10,000 on a leather strap, \$10,500 on a titanium bracelet). And of course, the weight of a divers' watch becomes almost unnoticeable when the wearer is under water.