

The Big Daddy

At 46 millimeters in diameter, 15.8 millimeters tall, and weighing in at 150 grams, the new high flyer from IWC is just about the biggest of the big watches on today's market. ALEXANDER LINZ had the opportunity to conduct the first test of The Big Pilot's Watch from IWC.



A new sensation in
the watch world:
The Big Pilot's
Watch from IWC.

TEST: IWC BIG PILOT'S WATCH

IWC has come up with another technically interesting and distinctively different watch to add to its impressive lineup. Allow us to refresh your memory: Recent newcomers include the Deep One diver's watch with its built-in bathymeter (depth gauge) and the new Portuguese 2000 with its big, IWC-made, *manufacture* Caliber 5000 for seven days of power reserve. This year's debutante is "Die Grosse Fliegeruhr," or The Big Pilot's Watch, which bears reference number 5002. If you get a chance to see one of these timepieces in all its grand dimensions, you'll wonder if you can indeed strap it to your wrist. Its diameter, thickness, and weight give this behemoth the dimensions of a solidly crafted pocket-watch rather than a modern wristwatch. However, thanks to companies like IWC and Panerai, ideals of beauty in the watch world have shifted in recent years towards bigger wristwatches, so once you get over your first impression

that the watch is too damn large you'll start to admire its beauty. Once you strap it on, all doubts about its dimensions vanish without a trace. A gentle forward swing of the forearm, a return swing backwards, just to be sure that this large watch will fit under your shirt cuff, and before you know it, you feel as though you and The Big Pilot's Watch have been friends for years.

The direct ancestor on which the newcomer from Schaffhausen, Switzerland is patterned is the legendary Caliber 52 s. c. (s.c. stands for *seconde au centre*, i.e. centrally axial "sweep" seconds-hand), which dates from 1940. Commissioned by the German and British admiralities, IWC designed this caliber to meet the needs of navigators at sea and in the air. Only 1,200 Caliber 52 s.c. movements were

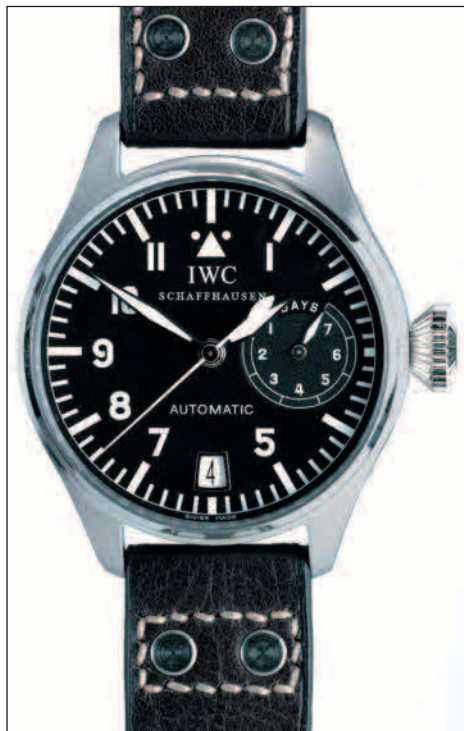
You'll find yourself lamenting the efficiency with which The Big Pilot's Watch winds itself, as manually winding it is a sensual pleasure.

built, approximately 1,000 as large-format pilot's watches and the remaining 200 as pocket-watches for use as deck watches. Constructed to satisfy the strict military criteria, these navigator's watches (so-called "B watches, class 1") were individually tested at the German naval observatory. A genuine innovation in those days was the soft iron inner case that protected the movement against the ill effects of excessive magnetism in the cockpits of fighter planes and other military aircraft, a requirement specified by the military procurements offices on both sides of the English Channel. Collectors may be interested to learn that alongside IWC, similarly large, top-quality pilot's watches were also built during the war years by A. Lange & Söhne, Laco, Stowa, and Wempe in Hamburg.

The Caliber 5011 is immaculately crafted and beautifully decorated. The second cover, which is part of the soft iron inner case, is readily visible.



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The large, distinctively designed dial is highly legible thanks to its generously proportioned displays and the antireflective treatment that's been given to both the inner and outer surface of the sapphire crystal.



The ancestor of The Big Pilot's Watch: the Caliber 52 s. c. from 1940.

The Big Pilot's Watch is the brainchild of Pius Brida (left) and Kilian Eisenegger.



We were curious to find out what impelled IWC to create a new watch in the spirit of the big pilot's watches of yesteryear. Here's what Pius Brida, director of product development at IWC, said in answer to our query:

"The Caliber 5000, which we presented two years ago inside our limited-edition Portuguese 2000, was only the kickoff. From the very beginning, it had been clear to us that we wouldn't construct a self-winding movement for use solely inside one Portuguese model, but that we would use it as the inner life for a whole family of big watches. During the initial phases of the design process, we had already given the base caliber everything it would need so that it would be able to power many other kinds of watches in the future." Brida continues: "Strictly speaking, we're the only manufacturer that can feasibly build such a large watch with ultramodern technology." Looking back at the recent history of pilot's watches from IWC, you can see that the only thing that was lacking was a worthy successor to the by-gone Caliber 52 s. c. If IWC had added The Big Pilot's Watch to its collection at an earlier date, it would have had no other option but to encase inside it either a pocket-watch movement of IWC's own making or the big ETA Caliber 6497/6498. If you ask us, IWC was wise to wait until it had developed a commensurate caliber of its own. This way, aficionados and collectors who acquire The Big Pilot's Watch

An inner case made of soft iron protects the movement against magnetism.

are buying a genuine *manufacture* item.

The Big Pilot's Watch pays attention to even the smallest details. Its new Caliber 5011 improves on the 5000 by adding a date display and shifting the

seconds indicator to the center of the dial. A small change was also made in the rotor of the automatic winding system: the golden insignia that adorned the rotor and was visible through the transparent back of the limited-edition Portuguese 2000 has been eliminated from the rotor of the 5011. Kilian Eisenegger, head of development at IWC, explained to us that comprehensive aging and stress tests have been conducted on the caliber ever since its production first began. The total ordeal consists of 30 steps that we were originally asked not to divulge. After lengthy negotiations with head of development Eisenegger, we were able to persuade him to permit us to describe a small selection of the more interesting tests. Not every caliber in the production run is subjected to this elaborate procedure; instead, the engineers orient themselves according to the number of units produced and test a precisely predefined number of movements in order to be sure that no substandard items slip through.

The following tests, as well as others not mentioned here, are conducted on watches that have first been artificially aged, then subjected to impact testing.

TEST: IWC BIG PILOT'S WATCH



Hard at work in the Caliber 5011's final assembly atelier, watchmaker Julia Viecenz scrutinizes the Nivarox 1 balance-spring with its characteristic Breguet curvature.

1. Stress from extremely strong magnetic fields (> 4.8 kA/m)
2. Low temperatures (48 hours at 0° C.)
3. Thermal cycles (168 hours in cycles of 4 hours each, heating to 50° C. and cooling to 0° C. in each cycle)
4. Temperature test at high humidity (96 hours at 50° C. and 90% humidity)
5. Temperature test in extremely dry air (48 hours at 50° C.)
6. Variable extreme temperature tests (10 repetitions in cycles of 1 hour each, heating to 50° C. and cooling to 0° C. in each cycle; 24 hours in cycles of 4 hours each, heating to 60° C. and cooling to -10° in each cycle; 24 hours in cycles of 4 hours each, heating to 70° C. and cooling to -20° in each cycle)
7. Plastic and dial test under ultraviolet light (120 hours)
8. Water-resistance test submerged in saltwater (72 hours)
9. Artificial aging with moderate blows (blows generated by a Cyclotest device at room temperature during a 72-hour time period; the watch is kept inside a box, within which it has 1 to 2 cm of play)
10. Extreme shock test (strong blows generated by a device at room temperature during a 16-hour period; the watch is kept inside a box, within which it has 10 to 12 cm of play)
11. Shock test NIHS 91-10, 91-20 with 5 kilograms (standardized shock test with a pendulum having at its lower end a 5-kilogram weight which swings through a 90° arc and strikes directly against a particular location on the watch. The shock generated in this test corresponds to the impact suffered by the watch after an uninterrupted fall onto a stone floor from a height of ca. 1.5 meters.)

Advantages

- + Perfect quality
- + Interesting *manufacture* caliber
- + Unusually large size

Disadvantages

- High price
- The date jumps to the next digit one minute before midnight

DATA PAGE

The Big Pilot's Watch from IWC

Manufacturer: IWC International Watch Co. AG, Baumgartenstrasse 15, CH-8201 Schaffhausen.

Model: The Big Pilot's Watch.

Reference number: 5002

Functions: Automatic movement with one barrel, power-reserve display, date display, hours, minutes, and centrally axial "sweep" seconds-hand. The movement is mechanically halted after 168 hours (7 days).

Movement: IWC Caliber 5011; 38.2 x 7.44 mm; 334 components; 53 construction groups; 44 jewels; Incabloc shock absorption; rapid adjustment for the date display; stop-seconds function.

Gear train: 57 meshing wheels (special feature: fourth-wheel beneath the escape wheel). An additional (eight-day) wheel gives this movement more wheels than are present in a conventional gear train; indirect large seconds and indirect minutes (both pinions are propelled outside the direct flow of energy through the train).

Barrel: Drum made of aluminum-S-Korofestal (AlMgSi1), warm-hardened, anodized, the toothing is separately screwed on, mainspring with bridle made of Nivaflex 1, barrel/minute-wheel ratio = 1 to 15; after having been fully wound, the barrel will completes ca. 13.6 revolutions; one revolution of the barrel = 15 hours of power reserve; theoretical power reserve = 13.6 x 15 hours = 204 hours (8.5 days); ca. 12 rotations of the oscillating weight = 1 hour of power reserve.

Power-reserve display: Differential train with entries for winding and running, plus exit for the power-reserve display; the movement is mechanically halted after 168 hours (7 days).

Winding: Pellaton click-winding system, identical with the system used in the IWC Caliber 8541 via sprung-borne rotor, cam, ruby rollers, and two pawls on the winding-wheel; step-down ratio = 175 to 1.

Escapement: Two-arm screw balance with 16 weight screws and two regulating eccentrics on the arms of the balance (an IWC specialty); feuille de sauge (sage leaf or bird's tongue) arm shape. Balance, lever, and escape wheel are identical with the ones used in the IWC Caliber 89. Nivarox 1 balance-spring with Breguet curvature. "Chronometer" quality. 18,000 v/h = 2.5 hertz.

Fine adjustment: Stud-bearer and tail of regulator are adjusted via an eccentric (identical with the construction used in the IWC Caliber 8541).

Date: Conventional, jump-type, date display (switching process requires ca. 1 hour); rapid forward adjustment via the crown; last manual date adjustment possible before movement exhausts its power reserve after 168 hours.

Decoration: Bridges and movement plate are nickel-plated; engravings are gold-plated; côtes circulaires decoration; oscillating weight has IWC's typical "Probus Scafusia" engraving; sun pattern on edge of movement plate, crown-wheels, ratchet-wheel, cover of barrel, and differential wheel.

Case: Stainless steel with screw-in back, sapphire crystal is antireflective on both its faces; soft iron inner case (dial, movement-holder ring, and inner back) protects the movement against ill effects of magnetic fields; screwed crown; water-tight to 60 meters. Matte black dial with Arabic numerals, white indices, noctilucent, covered with Superluminova C1. Hands crafted in original arrow shape as was used in 1940 on the first "Big Pilot's Watch," skeletonized, filled with Superluminova C1.

Wristband and clasp: Buffalo leather, dark brown, with rivets like those used in 1940 on the first "Big Pilot's Watch." Folding clasp with secure button-type closure.

Recommended service interval: 5 years.

Results of running test: (deviations in seconds per 24 hours when fully wound)

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|-----------------------------|------|
| Dial up: | 0 |
| Dial down: | 0 |
| Crown left: | +1 |
| Crown up: | +2 |
| Crown down: | 0 |
| Greatest deviation of rate: | +2 |
| Average deviation: | +1 |
| Average amplitude: | 291° |

Dimension: Diameter = 46 mm; height = 15.8 mm; weight = 150 grams.

Special feature: The platinum version is limited to 500 specimens.

Price: \$9,900. \$35,900 for platinum version.





Georges Kern took the reins at IWC in early 2002.

The above list isn't complete, but even without explicitly mentioning the other tortures to which IWC's testers subject their watches, you can be quite sure that these people are very serious indeed about ensuring the stamina and reliability of the Calibers 5000 and 5011. The testing procedure, which is quantified on a 30-point scale, was also used last year to verify the sturdiness of the new GST Chronograph Rattrapante and Perpetual Calendar models.

Under Kilian Eisenegger's direction, IWC's technicians mathematically calculated the Caliber 5000 last year. The gear train and the winding mechanism were re-examined and quantified. The results are noteworthy and they confirm the high quality of the work that former director Kurt Klaus and his design engineers performed. Eisenegger explains: "With regard to its degree of efficiency, its expected rate of wear, and the dimensioning of its components, this caliber performs very close to the optimum. Our recalculations were made possible by continual improvements in CAD programs and by the faster computers that are

The new caliber is modeled after the legendary Caliber 52 s. c. from the 1940s.

now finally available to us here in Schaffhausen. Not so very long ago, a supercomputer would have been needed to do these elaborate calculations." We'd like to add that, in order to be absolutely sure that no errors had been made, IWC also sent the movement to an independent and respected Swiss simulations specialist. That specialist's number crunching yielded the same satisfying results as IWC's research.

Elaborately constructed cases have always distinguished the family of IWC's pilot's watches. A soft iron inner case protects each movement from magnetic influences. An independent institute confirmed the effectiveness of this protection, which it quantified up to 32,000 A/m without functional loss. By way of comparison, the norm value for "ordinary" antimagnetic watches is 4,800 A/m. IWC's pilot's watches are also protected against sudden loss of pressure in the cabin of an aircraft. An elaborate process and a special plastic insulator are used when the domed sapphire crystal, which is antireflective on both sides, is pressed into place in the case. If the two parts weren't so well joined to one another, a sudden loss of cabin pressure would cause the crystal to jump out of the case and possibly burst.

The Big Pilot's gigantic crown posed another challenge for the design engineers. They tried to imagine what might happen if this heavyweight timekeeper fell crown-first onto a hard surface or if the crown were to strike against a sharp corner. They wanted to be sure that none of the watch's smaller components would break, even under extreme stress. The massively dimensioned tube (which is soldered to the case) and the equally clever insulating system (the threads of the screwed crown are located inside in the "dry area") combine to guarantee that sufficient resistance to breakage is there if you ever happen to need it.

The Big Pilot's Watch handsome and uncommonly thick leather wristband likewise required a new technology to prevent it from being stiff and inflexible. The inner layer of a leather wristband is typically made either of leather or a cardboard-like material. This filling makes "shoe soles" of this large size look good, but their level of wearing comfort is of-

ten abysmally low. Furthermore, extra-large wristbands often develop cracks on their upper surface because an ordinary leather strap simply isn't sufficiently flexible to cope with all the demands of life on the wrist. IWC solved this problem by rejecting conventional filling materials and inserting a special silicon-like plastic. Even the sprung crosspiece that affixes the wristband to the case has been inserted through the silicon rather than merely being wrapped under a thin piece of leather at the end of the wristband. The extra effort paid off: this is the thickest, supplest, and most flexible leather wristband that we've ever worn.

Our impression of the quality leaves no wishes unfulfilled. Everything is exactly right on this IWC watch. The craftsmanship of the huge case is immaculate. There are no sharp edges or corners, nothing that could irritate your skin or catch on a loose thread. Not even the oversized crown poses a comfort hazard. In fact, this crown fits so perfectly between your fingers that you'll find yourself lamenting the efficiency with which The Big Pilot's Watch

TEST RESULTS

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|---|------------------|
| Wristband and claps (max. 10 points): | 10 |
| Very thick but extremely soft, hand-sewn, buffalo leather wristband with folding clasp. | |
| Operation (5): | 5 |
| Exact and problem-free setting; crown clicks very neatly into its middle position. | |
| Case (10): | 9 |
| Massively worked and very heavy steel case with interested details, including a screw-in back. | |
| Design (15): | 14 |
| Clear design in typical pilot's watch look with eye-catching, diamond-shaped crown. | |
| Legibility (5): | 5 |
| Good legibility of the time under all conditions. | |
| Wearing comfort (10): | 8 |
| A very heavy and large wristwatch, but it nonetheless offers a good level of wearing comfort. | |
| Movement (20): | 17 |
| IWC <i>manufacture</i> Caliber 5011 with automatic winding and seven-day power reserve; beautiful, robust, and uncommonly interesting from a technical point of view. | |
| Result of running test (10): | 10 |
| Slightly "plus" in all positions; a mere one second "plus" per day; very stable rate. | |
| Overall value (15): | 12 |
| Very costly! But a genuine "must have" for anyone who collects extraordinary watches. Its resale value will probably be quite high. | |
| TOTAL: | 90 points |



The case of the Big Pilot's Watch is lovingly detailed.

winds itself, as manually winding and setting this timepiece is a sensual pleasure. Excellent legibility practically goes without saying on such a capacious dial. The time is always instantly and correctly readable, even if the angle of incident light is problematic or darkness reigns.

Now let's return to the issue of wearing comfort. Naturally, this is an extra-large wristwatch and a heavy one too, but after a few days on the wrist, you'll soon become accustomed to its grand dimensions. How did it feel afterwards when we strapped on an ordinary wristwatch? Suffice it to say that if you don't ask, we won't tell.

Michael Bernaschek, a master watchmaker and our long-term adviser, devoted his attention this time around to the craftsmanship of

the movement and the interior of the case. "The Caliber 5000," Bernaschek says, "has since become an old friend, although we seldom see one in our workshop because thus far no Caliber 5000 has developed any serious problems. I especially like the new version with a sweep seconds-hand and a date display because you can justifiably describe it as a genuine Big Date. As far as I can see from the standpoint of the present day, it looks as though we probably won't see the Caliber 5011 very often in our workshop either. All in all, the craftsmanship is very impressive."

All that remains for us to do now is to consider the cost-benefit ratio. The stainless steel

version retails for \$9,900 and the platinum version sells for \$35,900. Need we say that that's not cheap? IWC has placed this watch in the upper price limit, but the aficionado who parts with the requisite cash receives a truly special watch in exchange. The quality and design of The Big Pilot's Watch are incomparable, and its limited-series production ensures that it will remain a very exclusive item. We certainly won't be the first to point out that the things in life which are genuinely worth owning almost always have an usually high price. But, if that weren't the case, then what would we look forward to, or save our pennies for? In our humble opinion, the pleasure of owning this watch, or even contemplating future ownership, definitely makes it worth your time to put aside a few dollars every now and then.