



U10 Tourbillon Lumière heralds the rebirth of Swiss watch brand Angelus

Swiss watch brand Angelus has returned to the forefront of contemporary high-end watchmaking with the launch of the U10 Tourbillon Lumière. Boasting a radically deconstructed movement, the U10 Tourbillon Lumière features hours, minutes, dead beat seconds and a one-minute flying tourbillon, plus a 90-hour linear power reserve indicator on the case profile. The clean, modernist displays pay tribute to Angelus' acclaimed travel clocks as well as taking cues from iconic industrial designs and designers of the 1960s and '70s.



U10 Tourbillon Lumière

Exclusive Angelus A100 movement, hours, minutes, central dead beat seconds, one-minute flying tourbillon, linear power reserve indication, hand-wound, translucent-grey concave sapphire dial and black outer ring, BO-988 specific annealed stainless steel case, dimensions 62.75 mm x 38 mm x 15 mm

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Powering the U10 Tourbillon Lumière is an innovative, finely finished, in-house calibre complete with oversized, one-minute flying tourbillon, which is offset from the movement. The assertive, sculpturally-shaped case – in special annealed steel – features seven sapphire crystals. Visible from five sides in its own sapphire crystal showcase, the circular ballet of the tourbillon is on full display.

The imaginatively engineered movement, visible also through the display back, pays homage to Angelus' 19th-century origins as a premium movement maker. The inspiration for the name U10 Tourbillon Lumière derives from the light (*lumière* in French) streaming through the three-dimensional sapphire windows and illuminating the mesmerizing tourbillon.

The story of Angelus began in 1891 when brothers Albert and Gustav Stolz founded the Angelus watchmaking *manufacture* in Le Locle, Switzerland. The company quickly became renowned for developing and manufacturing pioneering movements and timepieces, both for itself and for other brands.



Foursome

1937 Angelus launches the Foursome compact table clock, featuring an 8-day power reserve, automatic calendar, barometer, and thermometer.

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Chronodato

1942 Angelus launches the world's first series chronograph with calendar. Initially christened the Chronodate, then Chronodato from 1943 onwards.

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Over the past century, Angelus earned an illustrious reputation for creating exceptional chronograph and multi-complication wristwatches, multi-display travel clocks, and alarm watches, as well as a groundbreaking 8-day movement which was also used by other brands such as Panerai. Along the way, Angelus achieved a number of watchmaking world-firsts, including, first series wristwatch chronograph with calendar, the first wristwatch chronograph with big date, first wristwatch with alarm and date, first automatic repeater wristwatch, and first fully waterproof repeater wristwatch.

Along with many other prestigious brands, Angelus found it difficult to compete with the arrival of quartz watches and the company ceased operations in the late 1970s.

After lying dormant for more than 30 years, Angelus has now been revived by Manufacture La Joux-Perret, which has spent four years developing the next generation of visionary timepieces, the first of which is the U10 Tourbillon Lumière. This has been developed by the new Angelus team. The Angelus' *manufacture* in La Chaux-de-Fonds is just a stone's throw from where the Stolz brothers established their original *manufacture*.

The U10 Tourbillon Lumière is available in a limited edition of 25 pieces in stainless steel, which launches the Angelus Urban collection.



The U10 Tourbillon Lumière in detail

A timepiece of glorious contrasts

Four years in the making, the U10 Tourbillon Lumière not only upholds the Angelus tradition of creating extremely inventive timepieces boasting finely-finished, in-house movements with long power reserves, it is also a timepiece of glorious contrasts.

On one hand the U10 Tourbillon Lumière is classic *haute horlogerie*. Its dead beat seconds complication – where the second hand advances in full steps of one second – derives from 18th-century pocket watches; the movement bridges and plates are in traditional nickel-silver that is bevelled and polished; and the traditional 2.5Hz / 18,000 vph of the screwed balance with Breguet-overcoil is a throwback to some of Angelus' early pocket watches.



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And yet, the modernist display, innovative engineering and state-of-the-art materials and finishing ensure that the U10 Tourbillon Lumière can equally be viewed as a paragon of cutting-edge, contemporary watchmaking.

Flying tourbillon on full show thanks to deconstructed movement and duplex case

The configuration of the manual-winding calibre is decidedly avant-garde, with the tourbillon positioned far outside of the movement, displayed alone as a dazzling mechanical sculpture in its own sapphire crystal vitrine.

Angelus' Head of Development Sébastien Chaulmontet reveals that the configuration of the tourbillon was his starting point when designing the U10 Tourbillon Lumière.

He says: *"We always first think of the final design of the watch that we wish to create. For the U10 Tourbillon Lumière, we wanted a large tourbillon displayed on its own in a sapphire showcase. In order to realize the design we had to develop a new movement from scratch, with the tourbillon configured apart from the rest of the movement. The case and the movement then went through several phases of development so that they worked perfectly together, both technically and visually, before arriving at the final, emphatically sculptural, result."*



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The generously-proportioned – 62.75 mm x 38 mm x 15 mm – case, which took over two years to develop, features no fewer than seven sapphire crystals. All the crystals are bevelled, polished and subtly protrude from the case, creating expressive three-dimensionality.

Four of these crystals – including one wrapping 90° over the end of the case – surround the tourbillon, allowing unfettered views to the beating heart of the timepiece. The large windows also let light flood in and shine a spotlight on this mechanical centrepiece. The vitrine aspect of the tourbillon space is cleverly enhanced by light-absorbing, matte black PVD finish on the interior walls encasing the tourbillon.

The stainless steel used to make the case is BO-988 specific steel. This annealed steel is of a higher quality than the usual 316L steel found in timepiece cases because it contains fewer impurities, is less liable to corrode and is more biocompatible. Its finer grain size allows for a better standard of polishing and higher level of finish.

State-of-the-art movement materials, long power reserve and high precision

With its generous 16.25 mm diameter, the hand-polished tourbillon cage is crafted from weight-saving stainless steel, while titanium has been chosen for the tourbillon bridge due to its strength, low density and shock-absorbing qualities. The flying tourbillon configuration does not need an upper supporting bridge and offers unimpeded views to the top of the regulator. The combination of nickel-silver, titanium and stainless steel in a series watch movement is unique.



A100

Exclusive Angelus A100 movement, one-minute flying tourbillon

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Supporting the two mainspring barrels (which are in series for better timekeeping precision) is a bridge featuring a high-tech laser-engraved, satin-finished, criss-cross pattern. The two ratchets are also laser-engraved and enamelled.



A large diameter one-minute tourbillon requires significant energy, which is amply supplied by the dual main spring barrels. When fully wound, the Angelus A100 calibre provides a very healthy 90 hours of optimal power. The two mainspring barrels are optimally sized in a special ratio for a flatter torque curve, which maximizes accuracy throughout for the full 90 hours.



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The crown, purposefully oversized for ergonomic winding, is inset neatly into the case in harmony with the case's contours.



Modernist design cues

The design of the U10 Tourbillon Lumière's indications and case architecture are in part inspired by the multi-display travel clocks Angelus was renowned for between the 1930s to the '60s. Angelus pioneered the concept of displaying a range of information on different dials with dedicated windows for each indication.

There is also an evident tip of the hat towards the sculptural minimalism and clean, sober aesthetic propounded by German and Italian industrial design pioneers who rose to prominence in the 1960s and '70s.

Recognizable in the design of the hour-minutes-seconds display and tourbillon vitrine is the influence of the borderless convex screen of the Doney 14 transistor TV designed by Richard Sapper and Marco Zanuso for Brionvega. The perpendicular kink in the large wrap-over crystal of the tourbillon vitrine is also reminiscent of the shape of Sapper and Zanuso's Algol television for the same company.



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Without curved corners to soften its strong lines, the U10 Tourbillon Lumière's assertive case would effectively resemble a box – linear and blocky. However, the Angelus design team looked to the great Dieter Rams for inspiration when conceiving the case architecture and duly took rounded design cues from the likes of Rams' SK55 and Pcs 45 record players and SK 2 radio for Braun. The influence of Rams' clear zoning of functions is also evident in the way the U10's indications are discretely set out.

Finally, the U10 Tourbillon Lumière's steel case spreads out generously either side of the black strap, almost dwarfing the alligator leather fixation. Its large, rounded silvery appearance is not dissimilar to the classic Arco lamp and Spirale ashtrays of Achille Castiglioni which resemble oversized, highly-polished globules. The U10's case captures this sense of sculptural curvaceousness found in Castiglioni's designs. The U10's discrete displays also evoke the modularity of the RR126 stereo system that Castiglioni designed with his brother Pier Giacomo.



Indications and displays

The hour and minute hands – brushed finished, rhodium-treated and filled with black Super-LumiNova that glows blue in the dark – are actually set into the concave dial made of grey-tinted sapphire. Like the interior of the tourbillon vitrine, the walls of the dial recess have also been bead-blasted to a matte finish and then black treated. Tiny holes drilled into the dial at 12, 3, 6 and 9 o'clock and filled with Super-LumiNova create bright white markers.

In a neat touch highlighting the meticulous thought that has gone into every aspect of the U10 Tourbillon Lumière, the dead beat seconds hand rotating flush with the top of the dial features a counter weight on its short end that encircles the Angelus graphic logo when it passes 12 o'clock. Each passing second marked by the hand aligns perfectly with the radial white lines printed onto the dial.

While the dead beat seconds hand's step-by-step motion is the result of a traditional horological complication, the stepped seconds is also reminiscent of quartz watches. Indeed, Angelus has deliberately sought to evoke the era of quartz watches, which also have stepped seconds. Angelus' Sébastien Chaulmontet explains:

"Seeing the design of the U10 Tourbillon Lumière's dial – which is inspired from the era of quartz watches – you wouldn't expect a sweeping seconds hand," he says.

"This timepiece has dead beat seconds to honour an historically important horological complication but also to evoke the jump of the second in a quartz movement.

"What's more, and as a touch of irony, we are imitating the very technology that signalled the death knell for Angelus, as well as many other prestigious Swiss brands, in the 1970s. Against the odds, mechanical watches have survived; Angelus has survived and is now back. So the U10 Tourbillon Lumière is our little wink at – and snub to – history."

Completing the indications on the side of the case is the intuitive linear power reserve featuring a rhodium-treated hand filled with black Super-LumiNova that glows blue in the dark.



U10 Tourbillon Lumière Technical Specifications

Movement

Calibre A100, one-minute flying tourbillon movement

Hand-wound

Jewels: 38

Dimensions: 52.10 mm x 30.40 mm

Thickness: 7.50 mm

Power reserve: 90 h, double barrel

Frequency: 2.5Hz / 18,000 vph

Tourbillon: 16.25 mm cage diameter, Swiss lever escapement, screwed balance and hairspring with Breguet overcoil

Functions: hours, minutes, central dead beat seconds, one-minute flying tourbillon, linear power reserve indication

Movement decoration: nickel-silver movement, rhodium treated with *haute horlogerie* finishing: satin-finished main plate with laser engraved pattern, satin-finished bridges with chamfered and polished edges, plate dial side with sunray satin-finish, circular satin-finished wheels, screws with bevelled and mirror-polished heads, two laser-engraved and enamelled ratchets

Tourbillon finishing: bead-blasted and satin-finished titanium tourbillon bridge, entire tourbillon cage with hand-chamfered and polished edges and either satin-finished or mirror-polished surfaces

Dial

Colour: translucent-grey coated concave sapphire and black outer ring

Double white (C1) Super-LumiNova dots at 12 o'clock

Single white (C1) Super-LumiNova dots at 3, 6 & 9 o'clock

Hour, minute & power reserve hands: brushed-finished, rhodium-treated, with black Super-LumiNova that glows blue in the dark

Dead beat seconds hand: white lacquered

Case

Material: BO-988 specific annealed stainless steel, bead-blasted and treated with black PVD on the inside

Dimensions: 62.75 mm x 38 mm

Thickness: 15 mm including sapphire crystals

Sapphire crystals: 7 in total, treated with anti-reflective coating

Back: see-through sapphire crystal

Water-resistant: 30 m



Strap and buckle

Strap: hand-stitched black alligator leather

Buckle: stainless steel folding buckle

Limitation and reference

Limited edition: 25 pieces

Reference: 0LUAS.B01A.C001F

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<http://www.angelus-watches.com/march-presscorner/>

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