



# Wind of change



The latest addition to the Urwerk stable makes use of a patented revolving satellite complication, a trio of telescopic arms and a twin turbine winding system regulated by compressed air. Watchmaking was never supposed to be like this.

David Stone



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Much has been said about the divisions in modern watchmaking, about the growing gulf that has sprung up between the classical brands and the contemporary newfangled upstarts. Despite the multitude of shapes and sizes, brands will often fall into either one of these two camps. But while the classical approach operates on a strategy of emulating and perfecting traditional skills, contemporary watchmaking can, in theory, take designers anywhere.

Ulysse Nardin's Freak, with its movement rotating in place of watch hands, stands out as a good example of a mould breaking design, as does Richard Mille's 2001 RM001, which bore closer resemblance to a racing car engine than a watch. It was auteurs such as these that caused the decisive split from the canon of Breguet and Patek Philippe, and

few brands have pushed this unsanctified shift more than Urwerk.

### The big shift

The two key figures behind the brand come from vastly different backgrounds. Felix Baumgartner is a Swiss born, watchmaking extraordinaire, who owes much of his passion to the intense horological climate in which he was born. Martin Frei meanwhile is a gifted artist and designer, who brought no formal watchmaking experience to the table, instead provides a rich artistic sensibility, with a diverse and unconventional approach to form.

Martin Frei's creative impulse has enabled the brand to produce an iconic signature that sits comfortably outside the realm of anything that has come before it. Likewise, Felix Baumgartner's panoptic

grasp of watchmaking stretches the conventional limitations placed on the craft to ever-dizzier heights. The company is now just over ten years old and the most recent model, the Urwerk 202 aka Hammerhead, seriously unsettles the idea of classification - it is not recognisable as a watch, not in the familiar sense of the word.

The predecessors to this year's offering, at least as far back as the 103, exhibit various family traits. The sleek tonneau cases look like the hoods of a sports car, as they draw the eye down towards the "windscreen" display (it is not too much to imagine one of these in a wind tunnel with the fast darts of air flowing seamlessly over its streamline body). And while the indicators have changed from model to model, each display the curved sweep of minutes at the bottom of the dial, with the shifting hours moving from left to right.

The 202, like the 103 before it, has the dare-to-be-different beauty that renders it unquestionably Urwerk. This time the

case has taken on a much more angular construction, the distinct 'T' shape of the sapphire crystal gives the watch its "Hammerhead" stage name. However, where this model really excels itself is with the miniature revolution that is going on within.

### Time for a revolution

The groundbreaking calibre UR 7.02, which first appears in the 201 series released in 2007, has a revolving satellite system that uses a trio of rolling cubes, each with four hours marked upon the visible sides: 1/4/7/10, 2/5/8/11 and 3/6/9/12. The cubes also have their own telescopic minute hand that extends and retracts over the course of the hour. The current hour will appear on the active cube as it reaches the zero at the bottom right of the dial. At the same moment a telescopic arm reaches out and tracks the 60 minutes



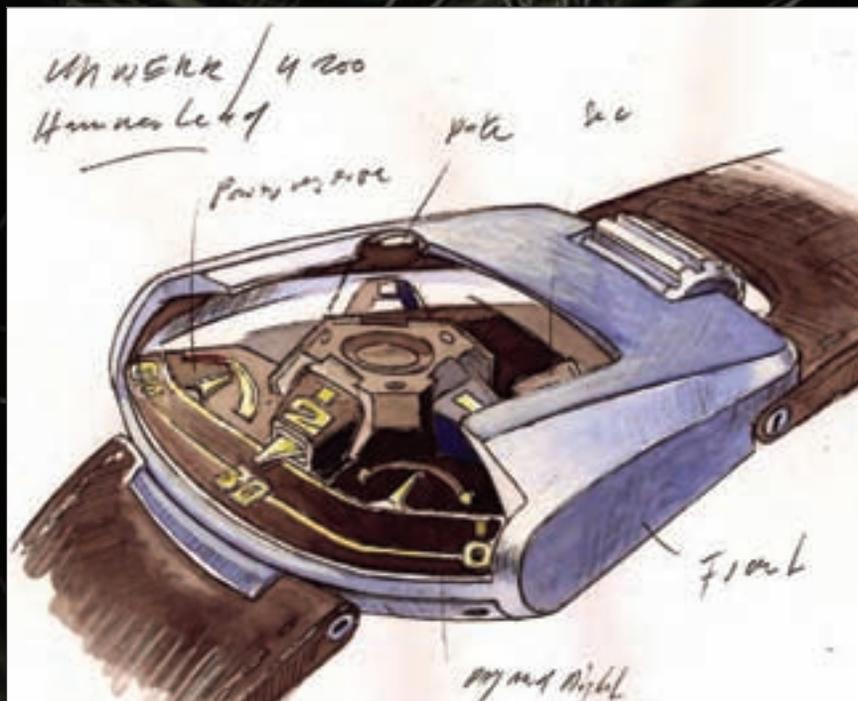
The automatic movement has a unidirectional winding system regulated by airflow through the twin turbines on the case back. The turbines can be adjusted by a three-position switch, which controls the speed that the automatic rotor spins.

## As mind-boggling and impressive as the revolving satellite system is, this is only half the story.



Urwerk founders, Felix Baumgartner and Martin Frei.

UR 202, codename "The Hammerhead", 2008.



clockwise across the dial to the bottom left. Due to the curved base of the watch, the minutes are displayed along three different straight-line vectors and so, for the telescopic arm to remain aligned, its length will adjust to suit the new angle. While this is happening on centre stage, the other two satellites move about their orbit, minute arms tucked away, before they take up position in the active spot.

The central rotating hub acts as a complex carousel and has been manufactured with the extreme precision and high tolerance that allows for the intricacies of the satellites and extending arms to run smoothly. The parts are micro-sandblasted, finished with a cashmere brush, hardened and then coloured with a treatment called "Blaktop".

These finer details leave the machine looking fantastic, but the main incentive for such care is for the resulting reduction in friction. Even the transporters, hidden under the satellite and which control the length of the minute arms by following the cam path, have a 0.005 mm coating of a treatment called MOVIC, which Urwerk's tribology research found effective in minimising the necessity for lubricating oil.

As mind-boggling and impressive as the revolving satellite system is, this is only half the story. The 202 Turbine Automatic has an astounding unidirectional winding system regulated by compressed air. The arrangement of the twin turbines borrow some of its ideas from the type of minute-repeaters that use air friction to slow down the striking mechanism and thus control the rate of chimes, although in this case the technique is refined and attached to the winding system to influence the rate of spin of the automatic rotor.

The UR 202 is available with cases in white gold, red gold, black PE-CVD platinum and AlTiN. The dial features hours and minutes; moon-phase indication; day/ night indicator.

## Change in the air

The twin turbines can be seen on the back of the watch and are controlled by a three-position selector switch. The switch lets the wearer adjust the amount of air flowing inside the case: with the choice of 'Free', restricted and 'Stop'.

With the setting on 'Free' air will pass through the spinning turbines and into a small reservoir chamber. This position is designed for normal, day-to-day movement, allowing the rotor to turn on its own accord.

The middle position shuts off the air chamber, forcing the turbines to compress air into a limited space and therefore reducing the rotor by a rate of about 35%. This provides a shock absorbing system designed for when the watch might be subjected to sudden knocks and bumps.

Finally, the 'Stop' position caters for those who expose their watch to extreme activity, by plugging both the turbines and the rotor, and thus preventing any winding. Had there been enough free space, the Urwerk team might have named this the rally driving/ skydiving/earth quake setting.

The turbine system, together with the satellite complication, will of course have the cynics muttering 'gimmickry' under their breath. Indeed, they are the sort of novel features that appeal to lovers of gadgets and high-class toys. But neither of these innovations are mere showy trifles; they both have a very real and very practical application. The dial is designed for readability and comfort, while the turbines reduce the wear of the unidirectional rotor. Thanks to the UR 202, Urwerk re-establishes their position at the head of the vanguard, but their oddity is an oddity designed to improve haute Horlogerie in general...only they've managed it with a style all of their own.



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