
# NOMOS GLASHÜTTE

The Bite Magazine was invited to a tour of NOMOS Glashütte in Berlin-Kruezberg and Glashütte in Germany.

For watch enthusiasts, a visit to Nomos Glashütte in Germany will present you with a very educated tour into how they create their iconic timepieces and movements. Their in-house design studio Berlinerblau GmbH located in Berlin-Kreuzberg, a two hour and ten-minute drive north of Glashütte, is where all the creative work that isn't directly related to constructing watches takes place. You'll also discover that the district of Kreuzberg is renowned for third wave coffee shops, galleries and independent stores for the modern revolutionist.

Whilst Glashütte and Kreuzberg may seem worlds apart, at NOMOS there is no difference and they work very well in harmony. The combination of 170 years of watchmaking tradition and modern design has led to nearly 140 awards for design, branding and quality. The good news is that the staff at NOMOS in Berlin is connected by their creativity and love of good design, as well as the mechanical watches that they make. So, you could imagine the great working relationships that take place at this watch company.

Interestedly, the design studio is located in a former industrial loft from the early 1900s, with ceiling-high windows, which on sunny days flood the whitewashed walls with light. Having long replaced the button-making machinery it once held with desks, meeting rooms and bookshelves, it still has an air of industrious activity. As you look around the open plan office, you will see features like a mosaic of multi-coloured Tetras covering a wall next to the entrance and hanging lights in the form of giant paper clouds designed by Frank O. Gehry.

At the design studio, we learned how they design the timepieces in a presentation given by Thomas Höhnel, Berlinerblau's senior product designer. The creative force behind NOMOS' sports model Ahoi, Höhnel is a graduate of University of the Arts in Berlin and Central Saint Martins in London and also works on the brand's straps, buckles, tools and packaging. "Like an architect who's always working to scale and only sees his design when it's complete, here it's the same thing [but] in the other direction – you always draw and think in large dimensions, but the watch will turn out to be relatively small."

The whole process of designing and creating the watch often take years, usually five, before it is ready to be worn on the wrist. Firstly, the designs are drawn up on a computer monitor or sometimes using the old-fashioned way of a sketchbook. When the general aesthetic has been agreed upon, the prototypes are built, first from plastic, then from brass, and finally from steel. Throughout the process, there are lots of conversations between the experts in Glashütte and the design staff in Berlin. Everything depends on the tiniest of details, even fractions of millimetres.

The NOMOS headquarters is housed in a former train station in Glashütte, a small town tucked away between forests and hills, south of Berlin and near Dresden. It is located in the eastern Ore Mountains, where the timepieces made here are world famous and the



## To Be Amongst the Watches

*Images courtesy of NOMOS Glashütte*

watchmakers also count among the very best of their kind. Having made timepieces for over 170 years, since 1845, it is said to be a tradition that is hard to find anywhere else in the world. NOMOS watches have many unique characteristics and are always of the very best quality.

History here shows that since the 15th century, the people in Glashütte lived on mining. When the silver and copper ore in the ground began to run out, the communities there became desperate. In 1845, the Saxon King Friedrich August II dispatched the master watchmaker Ferdinand Adolph Lange with the task of bringing a new era to Glashütte: to teach the people there how to make watches, and to establish a watch-making industry in the image of the Swiss; with engineers, toolmakers, manufacturers of dials, hands, and cases; with production based on the division of labour.

Although the two World Wars and the GDR (German Democratic Republic) period dealt huge blows to Glashütte and its industry, the knowledge and expertise of watch-making remained and grew stronger, thus it became synonymous with the best watches in the world and today is more renowned than ever before. In March 2014, NOMOS unveiled a new sensational creation with the heart of a watch's calibre, engineered and built by them. In watch-making, it is known as the escapement but at NOMOS it is called the swing system.

Founded by Roland Schwertner in 1990, NOMOS Glashütte is said to be the largest manufacturer of mechanical timepieces in Germany. The watches and calibres are exclusively developed and produced in the production hall in Glashütte's Schlottwitz district. And almost everything else is made by hand such as the milling plates, bridges and wheels, bluing screws, bevelling edges and finely regulating calibres. Only when high-tech is more precise than the handicraft and dependent on a thousandth of a millimetre will NOMOS Glashütte use machines.

Using the guidelines of the Deutscher Werkbund (German Work Federation), NOMOS designers like to keep the dials clean and the cases slender. Examples of this include the date ring which is mounted on rubies and set around the movement, making it a seamless addition to the calibre and keeping the watch both elegant and flat. Another watch-making skill is the crescent-shaped power reserve indicator which signals when a watch needs to be rewound. This mechanism comes with just a few extra components and has also been patented.

In 2005, their first in-house built automatic movement was created, making them one of the small leagues of watchmakers to make their own calibres. Then a

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few years later, the first NOMOS world time function, the DUW 5201 movement, came out which ticks inside both the Zürich Weltzeit and the Tangomat GMT models – making them de facto 24 watches in one. Working in cooperation with the Technical University of Dresden and the Fraunhofer Institute led to the development of their own gear wheel train and ensures that the latest discoveries about materials could contribute to their watch-making work.

As the heart and pacesetter inside the calibres of all mechanical timepieces, a watch cannot tick and tock without the escapement. There was a time when Glashütte watchmakers had the expertise needed to create these mechanisms but with the advent of the quartz revolution in the 1970s and 1980s, made the skills and equipment for the production effectively vanish from the town. NOMOS Glashütte decided to bring this much-needed skill back by liaising with the Technical University of Dresden to develop an escapement of their own.

Escapements are known to be incredibly fine components, with no other part within a mechanical watch reserving such a small margin of error. The balance itself and the balance spring must operate flawlessly in relation to each other's individual properties; the escape wheel teeth must be perfectly concentric—the tiniest miscalculation means the entire escapement will not function at all. In short: many years of intense studies, elaborate experiments, and failed prototypes lay ahead but a breakthrough was about to come forth for NOMOS Glashütte.

Finally creating the swing system, this was unveiled at Baselworld in 2014 and powered the NOMOS watch model Metro. The company realised they were officially capable of something that hardly any other company in the world was able to do: an in-house escapement, produced in series. "Managing to do this feels a little like landing on the moon," said NOMOS CEO Uwe Ahrendt. *FAZ*, the popular German newspaper, suggested that "even Apple were keeping a close eye" on the small watch-making company from Glashütte.

At the presentation given by Theo Prenzel, Deputy Head of Research and Development, and Head of Construction, we learned more about the NOMOS swing system, and the DUW 3001 and DUW 6001 movements. The DUW 3001 is an incredibly thin and yet highly precise piece measuring 3.2 millimetres in height. It has an efficiency of 94.2 percent, meaning that the friction loss is down to 5.8 percent. Whilst this neomatik calibre with automatic winding has been created in-house by hand, there are some elements of high-tech capacity in the motor.

It features a NOMOS swing system tempered with a blue balance spring and balance bridge fixed by screws on both sides. It has a stop-seconds mechanism, bidirectional winding rotor, Glashütte three-quarter plate, DUW regulation system adjusted in six positions, 27 jewels and tempered blue screws. The rhodium-plated surfaces have Glashütte ribbing and NOMOS perlage. With a diameter of 28.8 millimetres the DUW 3001 has a power reserve of up to 43 hours. This calibre can be found in models such as Minimatik, Metro, Tangente, Ludwig, Orion, Ahoi and Club Neomatiks.

DUW 6101 is the first neomatik calibre with a date design, measuring 3.6 millimetres in


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height and is extremely thin. Having the date placed traditionally and aesthetically on the edge of the dial, the date ring around the DUW 6101 allows for the greatest degree of freedom. The resulting aesthetic is innovative, highly individual, and harmonious. The new NOMOS date is not only easily legible; depending on the exact model, it is also up to three times larger than standard date windows, making it much easier to look at the date at first glance.

The date can be set quickly and easily in both directions, with only a few turns of the crown needed for any adjustment. The NOMOS swing system, in particular, ensures the high precision of the movement. This proprietary escapement, denoted by its tempered blue balance spring, is accompanied by several watch-making characteristics typical for Glashütte timepieces—such as the three-quarter plate, ribbing polish, and tempered screws. Theo demonstrated how the date mechanism works in the presentation. At times, it is not advisable to change the date manually, especially when no effect is registered.

A special sliding gear controls the movement of the cog wheels. It took eleven trials in the construction process to create. Now neomatik date is the first NOMOS calibre with three crown positions. In the home position, the watch can be wound by hand (if you like); in the second position, the date can be set forwards or backwards quickly; in the third position, you can set the time. It only takes the calibre 30 minutes to change the date, meaning the time frame in which the watch cannot be wound is 90 minutes—in other words, particularly small.

The DUW 6101 has virtually the same features as the DUW 3001, apart from the bidirectional winding rotor with gold-plated embossing and NOMOS perlage with golden engravings. Slightly larger in size, it has a diameter of 35.2 millimetres and a power reserve of up to 42 hours. This calibre can found in models such as the Tangente Neomatik 41 Update, Ludwig, Orion and Autobahn Neomatik 41 Date, and the Club and Tangente Sport Neomatik 42 Date. Theo also demonstrated how this calibre works in the movement.

The NOMOS Glashütte tour was a fascinating eye-opener and informative experience that gave you an insight into how watch-making is created. It made us appreciate the process and timescale that goes into each stage of creating a watch from the idea concept to the finished product.

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