Wristwatches

2010 COLLECTION

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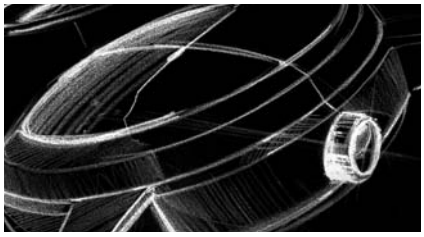

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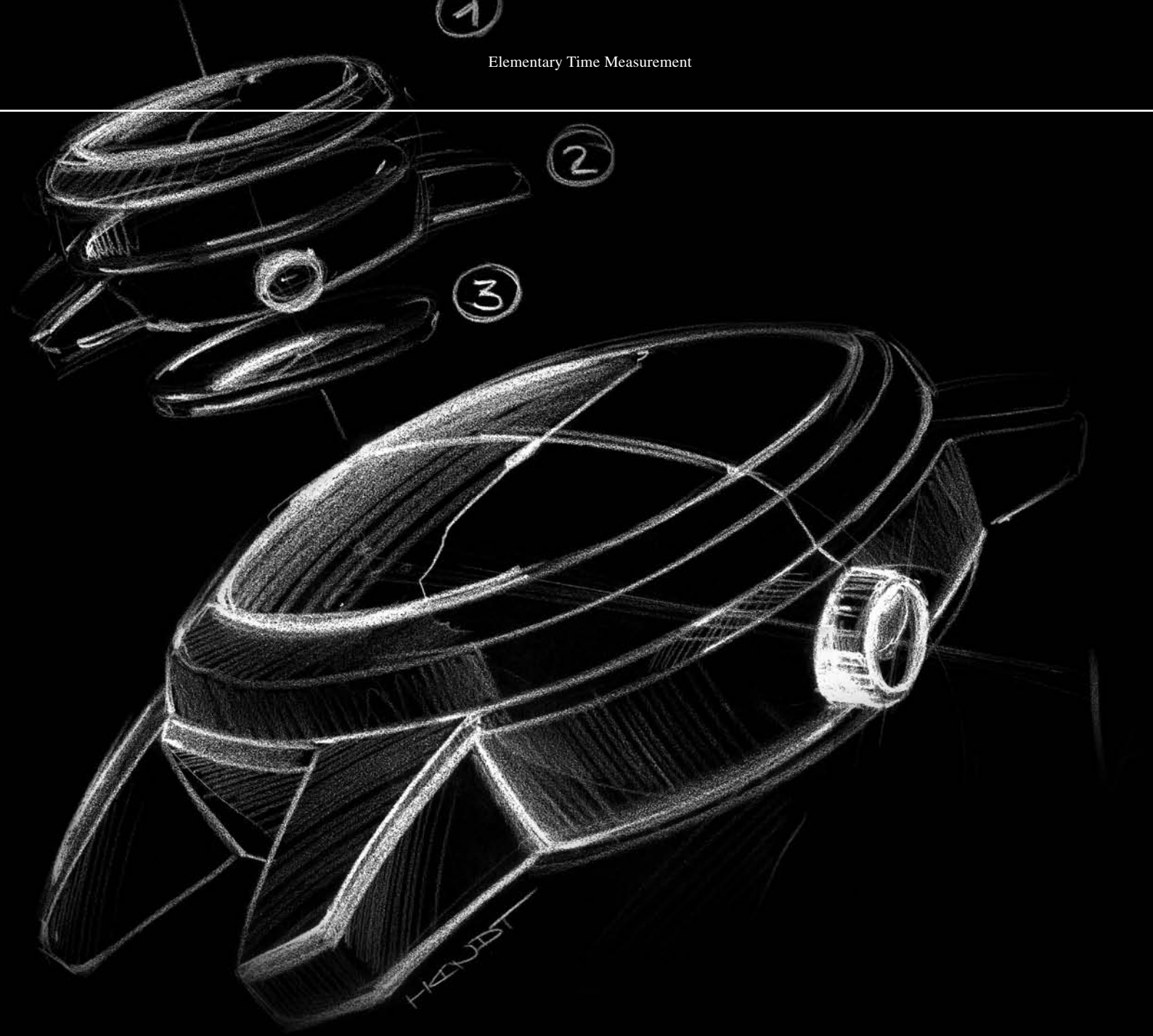
The Essence of a Mühle Watch: Elementary Time Measurement



The wristwatches produced by Nautische Instrumente Mühle-Glashütte stand out due to their clarity of display, excellent functionality and high precision.

Our S.A.R. models in particular demonstrate these excellent qualities every day, for example on the rescue lifeboats of the Deutsche Gesellschaft zur Rettung Schiffbrüchiger (German Maritime Search and Rescue Service), where the watch mechanisms also have to withstand extreme stress and strain. This is why we provide them with our patented woodpecker neck regulation, a particularly reliable and precise regulation.

As a result, every Mühle watch becomes a precision instrument with one main purpose: to measure time accurately and display it clearly. That's what we understand by elementary time measurement.

Nautical Virtues: Clear Display, Reliability, Precision

For 140 years the name "Mühle" has stood for precision and precision measuring. The foundation for this was laid by Robert Mühle who began manufacturing measuring instruments for the watchmaking industry in Glashütte in 1869. We are still devoted to precision measuring since 1994, however, in the form of nautical instruments, marine time systems and marine chronometers.

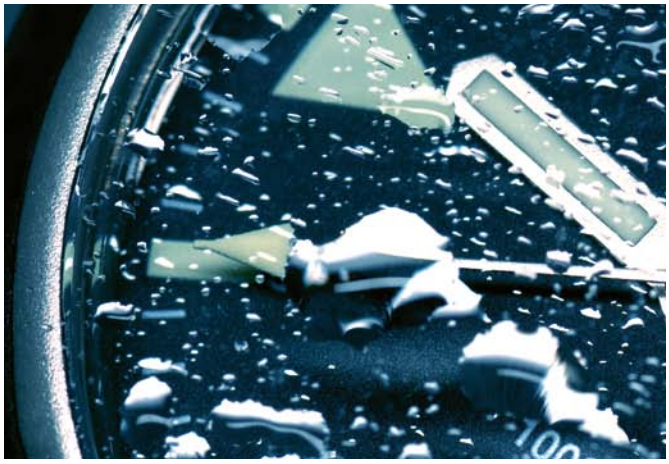
At sea, precision, reliability and optimum clarity of display are what count. It is therefore of paramount importance to add reliability to accuracy. That is exactly what we have done.

We make no distinction between the requirements to be met by timepieces used in professional navigation and those worn on the wrist. Therefore, we now also manufacture high-quality wristwatches bound by nautical principles and our family tradition.

Watches can be powered in various ways: battery-operated mechanisms are regulated by the oscillations of a quartz crystal. These run extremely accurately and are used in our marine chronometers and nautical instruments.

In our wristwatches we use only mechanical movements, which contain filigree parts that completely fascinate wearers. Moreover, they need neither a battery nor current, and therefore always serve their wearer reliably. And even if a mechanical movement will probably never quite match the precision of a quartz one, as regards accuracy we get about as close as humanly possible.

Our time measuring instrument for professional navigation: a marine chronometer manufactured to DIN 8319 by Mühle-Glashütte.



Instruments for Time Measurement: The Development of a New Mühle Watch

Just like our marine chronometers and marine time systems, our wristwatches are also instruments for measuring time. That's why they look as they do: plain and simple and with no frills, the only solution that allows you to read the exact time at a glance.

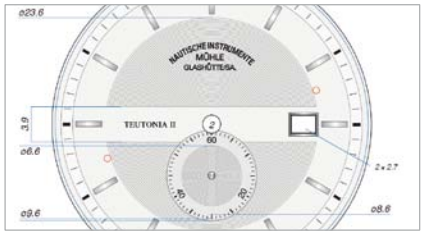
We see this as the elementary function of a watch, and the one which takes priority over all others. For this reason we concentrate on clarity of display, reliability and precision when developing our timepieces.

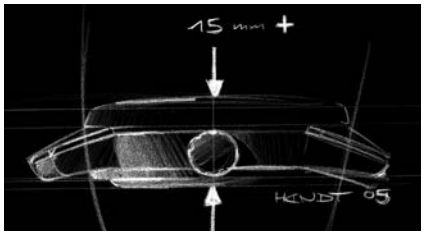
When developing a new watch, we start by designing the face. The most important thing to consider here is what the watch is to be used for. This determines whether we use a central or off-centre second hand, polished or luminous indices, and Arabic or Roman numerals.

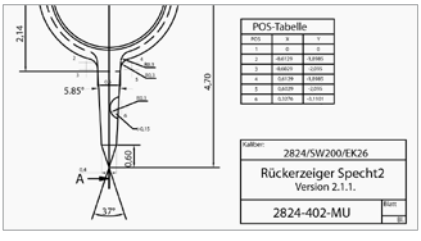
But we also have to give some thought to the case: How wide is the bezel? What about the transition between case and strap? What is the maximum permissible thickness of the watch? What water pressure will it have to withstand? We at Nautische Instrumente Mühle-Glashütte leave nothing to chance in order to ensure perfect clarity of display and functionality in our timepieces.

The watch mechanism is, of course, particularly important. For this reason we ourselves develop many of the components that are important for accuracy: for example our patented woodpecker neck regulation. In addition to the accurate fit of all the parts, regulation after assembly is of critical importance.

Clear display, reliability, precision: We take these nautical principles into account when developing the dial, case and parts of the movement.







Traditional Craftsmanship: The Development of a Mühle Watch

Precise Parts Manufacture

As soon as a new watch is finished in our heads and on the drawing board, the first prototypes are built and appraised. If we are satisfied with everything, we begin production.

We ourselves manufacture many parts which are important for the accuracy of our mechanisms. These include above all the woodpecker neck regulation and fitting balance cock. We also, however, design the automatic bridge, our rotor with its elaborately riveted rotating weight and the three-quarter plate with its attachments.

The parts are manufactured on CNC machining centres, which produce the parts that we design to an accuracy of one thousandth of a millimetre. Even though we are particularly proud of all the skilled manual work that goes into the manufacture of our watches, without these machines we would not be able to maintain our high quality standard. The machines supply us with high-precision blanks, which we then further process and finish.

Finishing and Assembling the Watch Mechanisms

As a small, independent family business we adhere to the stringent quality criteria of craft manufactoring. This is most obvious in the finish and assembly of the watch mechanisms we use – all work is completed manually.

We start out with field-tested raw mechanisms provided by reputable manufacturers. A Mühle watch, however, has to meet the highest standards as regards quality and precision. For this reason we disassemble the raw mechanisms completely, examine them thoroughly and optimize them. We pay particular attention to the core of the mechanism: the movement, consisting of the balance, balance spring, lever and escape wheel. A uniform rate is of extreme importance for the accuracy of a watch, so this is where we make the biggest technical changes. The balance is supported in the balance cock, which we produce ourselves, and equipped with our own fine regulation system.

After technical optimization, the mechanisms are carefully reassembled together with the parts finished by us, topped off by our both efficient and finely decorated Mühle rotor.

Typical Mühle parts: rotor, patented woodpecker neck regulation and three-quarter plate: description from p.12 on.

Regulation in Six Positions

After a mechanism has been completely assembled, the woodpecker neck regulation is used for exact setting of the rate. This regulation is carried out in six different positions, through which we simulate every possible wearing position on the wearer's wrist.

During regulation, time which the mechanism gains or loses in all six positions is measured using a time balance and is recorded exactly. After this we set the mechanism so as to ensure that the overall deviation is at its minimum. If there is any deviation at all, our watches should run very slightly fast. After all, our company philosophy is that anyone wearing a Mühle watch should on principle not arrive late. If anything, a little early – that is more polite.

Before the regulated mechanism can be inserted into its case, the face and the hands still have to be put on. All the added features, known as complications in the watchmaking industry, are now also checked again for accuracy. These include, for example, the data display and the stop function on our chronographs.

Meticulous Final Inspection

Our watches represent mechanical precision and reliability. To achieve both, we have to work extremely carefully at all stages. Between each work stage we carry out repeated tests and measurements to see if the work already completed meets our expectations. Our tradition demands this of us. After all, it was Robert Mühle who started manufacturing measuring instruments for the Glashütte watchmaking industry as early as 1869.

Before a watch leaves our premises, it undergoes a strict final inspection. This consists of a standard cycle of tests during which it has to provide full proof of its qualities.

This begins with a careful running-in phase during which it is automatically wound by a special watch winder. After it has been fully wound, we let it unwind completely and during this we carry out multiple tests to see if it keeps the rate values set by us for the different winding states of the spring barrel. In addition to other tests, the leak test is of course particularly important to us at Nautische Instrumente Mühle-Glashütte. To do this test, we subject the watch to over-pressure. Using highly sensitive measuring instruments we can detect even the smallest defects during this test.

The watch has to pass all the tests before the watch strap can be attached. And even after that, we do a final visual inspection test.

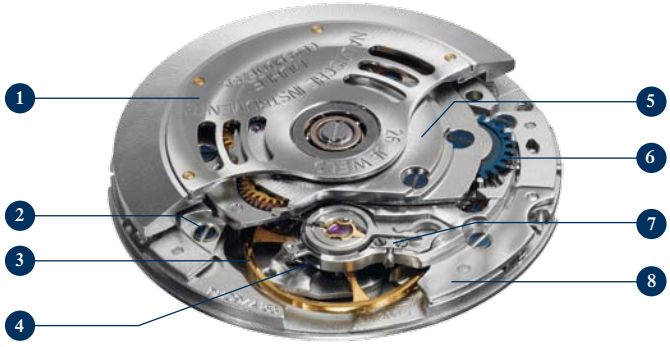
Characteristic Mühle Rotor: Using Gravity Efficiently

For a watch to function reliably and accurately over a long period of time, all of the component parts of the watch mechanism have to work together perfectly: from the drive via the gear train to the escapement and regulation. For this reason we have not only developed our own fine regulation, but also pay great attention to everything, starting with the rotor.

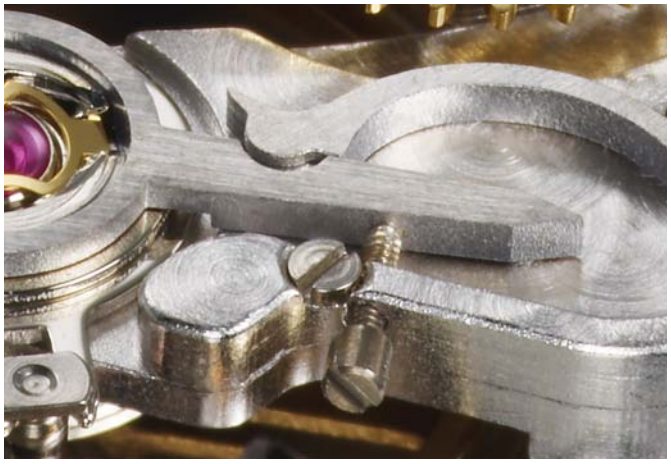
Our automatic watches are driven by the rotor. Set in motion by the wearer's arm movements, it uses its rotational force to wind the watch. For this to function efficiently, we design and manufacture the rotor ourselves on our own machines. For everything has to be absolutely right at this stage and manufactured to the closest possible tolerances.

Our Mühle rotor consists of an engraved middle segment and a special heavy metal semicircular ring which reinforces the tendency of the rotor to rotate downwards due to the earth's gravitational pull. Four gold-plated rivets connect this rotating weight to the outer circumference of the middle segment. We press a low-friction ball bearing into the middle of this segment as the constant movement puts a heavy load on the rotor bearing.

The rotor is not only one of the largest components in the mechanism; it also operates visibly on the back of the mechanism. In our opinion, such an important component of course deserves a suitable finish. The rotor is therefore nickelized or rhodanized, meaning that it is provided with a wafer-thin coating of one of the elements in the group of the platinum metals, giving it a silvery insensitive surface. Moreover, the middle segment is engraved with our lettering and given the Glashütte solarization.



Constructive and aesthetic special features of our movements: 1) Mühle rotor with engraving and Glashütte solarization, 2) blued screws, 3) Glucydur balance, 4) Nivarox 1 spiral, 5) automatic bridge with Glashütte solarization, 6) blued crown wheel, ratchet and automatic wheel with solarization, 7) patented woodpecker neck regulation, 8) balance cock construed for the woodpecker neck regulation.



Patented Woodpecker Neck Regulation: Precision under Harshest Conditions

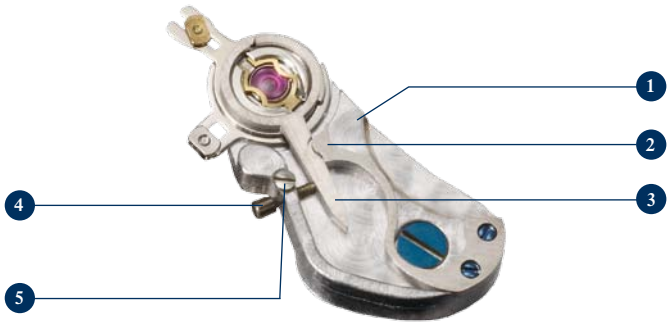
Our watches must always be reliable. This is why we at Mühle-Glashütte always do a little more than is actually necessary. For example, our woodpecker neck regulation is used in every Mühle watch, even those, which, unlike our S.A.R. Rescue-Timer, do not have to prove themselves in risky rescue operations.

We developed the fine regulation in 2003 to ensure the accuracy of our mechanisms even under the harshest conditions. With traditional fine regulation systems, more violent shocks may cause the index hand between the regulation screw and the counter-pressure spring to jump upwards. This may in turn change the position of the balance shaft or the watch's regulation.

By engaging in a semicircular shaped hollow in the index, our specially shaped woodpecker neck spring prevents the index hand from moving upwards. The index hand thus not only presses sideways against the fine regulation screw, but at the same time downwards on the balance cock.

We derived the name "woodpecker neck" regulation from the characteristic shape of the spring, which resembles the neck and head of a woodpecker. By analogy, we call the improved index hand "woodpecker neck hand".

The watch is regulated as usual by turning the fine regulation screw. This moves the woodpecker neck hand and increases or decreases the effective length of the balance spring. The typical momentum of the woodpecker spring allows very sensitive regulation of the watch. After regulation, the fine regulation screw is additionally held in position by a clamping screw.



Components of our patented woodpecker neck regulation: 1) specially shaped Mühle balance cock, 2) woodpecker neck spring, 3) woodpecker neck hand, 4) fine regulation screw, 5) clamping screw for the fine regulation screw.

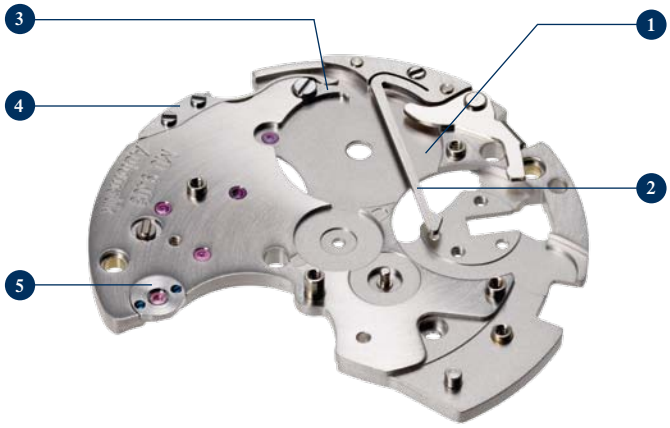
Newly Developed Three-Quarter Plate: Keeping Glashütte Tradition Alive

We at Nautische Instrumente Mühle-Glashütte provide our chronographs with a really special technical gem: our newly developed three-quarter plate.

The three-quarter plate is a typical feature of high-quality Glashütte watches. It is called this because it covers approximately three quarters of the movement, providing stable support for the spring barrel, crown and ratchet wheel as well as for the entire gear train.

As is tradition in Glashütte, we have equipped it with the classical Glashütte click, which keeps the pressure on the ratchet wheel down and thus minimizes signs of wear. Moreover, the three-quarter plate has a removable escape wheel bridge. This bridge not only looks very attractive with its red jewel and two blued screws, but it facilitates above all an inspection of the watch because the escape wheel and indeed the entire escapement can be removed and cleaned more easily.

Our three-quarter plate also enabled us to increase the durability, serviceability and aesthetics of the chronograph movements (ETA 7750/ETA 7753) that we use. And because we not only integrate our three-quarter plate into them, but also design the regulation, balance cock, automatic bridge and rotor ourselves, we stamp our own calibration mark MU 9408 on them with pride.



Components of the Mühle-Glashütte three-quarter plate: 1) three-quarter plate, 2) cam jumper, 3) detent pawl of the Glashütte click, 4) damper of the Glashütte stopwork, 5) removable escape wheel bridge.

Functional Aesthetics: Sensible Finishes for our Movements

We at Nautische Instrumente Mühle-Glashütte are first and foremost watchmakers. All the work we put into a watch mechanism is above all intended to make our timepieces more accurate and more reliable. So what we do to our watches is done not only for aesthetic reasons, but above all for functional reasons. We call this functional aesthetics.

All moving parts in a watch mechanism are subject to a certain amount of wear, but the less friction in the gear train, the less wear. For this reason, our metal surfaces are sealed, hardened and polished. It is precisely this very attractive polishing that lends the surfaces of levers and springs more density and tension – resulting in even higher accuracy.

Even the attractive color of our blued screws serves a function. For blueing, which is also called tempering, provides additional corrosion protection. Each screw undergoes a very special process. First of all, the screws are treated with different materials and abrasive or polishing agents in a five-stage polishing process. After polishing, the screws are heated to 300° Celsius, which gives them their attractive blue color.

In addition to this functional treatment we also, for traditional reasons, use different grainings to enhance the appearance of the mechanism, for example the Glashütte solarization. These grainings are, as a matter of principle, applied manually and make each watch unique. In the past they also had a particular function – to eliminate traces of machining caused during the manual cutting out or drilling of the parts.

Functional and aesthetic finishes at Mühle-Glashütte: 1) straight graining, 2) Glashütte solarization, 3) circular graining, 4) polishing, 5) blued screws, 6) perlage.

Nautical Wristwatches

Water is the source of all life. This life-giving element also forms the origin for our company as in 1994 we re-established the company founded by our ancestors and began making timepieces for professional navigation. Shortly afterwards, we made our first wristwatch under the name "Nautische Instrumente Mühle-Glashütte".

Water is also an element with awesome power. Rescue workers at the Deutsche Gesellschaft zur Rettung Schiffbrüchiger (German Maritime Search and Rescue Service) in particular often have to fight against it. We developed this line of watches for them and for everyone else who appreciates particularly resistant timepieces.

Just like every other Mühle watch, the watches in this line concentrate on measuring the time accurately and displaying it at a glance - only they do it a touch more robustly. And because water was the starting point of everything, our "Elementary Time Measurement" catalogue begins with our nautical wristwatches.

S.A.R. Rescue-Timer

When developing our watches we don't rely solely on our own know-how, but also allow ourselves to be influenced by others as well. Indeed, we even welcome it. The function and design of the S.A.R. Rescue-Timer, for example, were to a large extent determined by the captains in the German Maritime Search and Rescue Service. These captains control the rescue cruisers answering the call of duty to save sailors in distress in all kinds of weather.

This practical orientation resulted in an exceptionally robust watch able to meet any challenge. Apart from its ability to resist enormous water pressure, the 4 mm thick sapphire crystal particularly deserves special mention. In combination with the special shockproof automatic movement, this makes the S.A.R. Rescue-Timer an extremely dependable timepiece. The steel case with the crown at 4 o'clock, rounded for safety reasons, is also functional – after all, we don't want any seaman to get injured while being pulled out of the water or the lifeboat.

Since it was first developed, the S.A.R. Rescue-Timer has been in long-term operation on the 56 rescue cruisers of the German Maritime Search and Rescue Service, with which we still constantly exchange ideas and experience.

M1-41-03-KB

Movement: *SW 200, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Fast date correction. 38-hr power reserve.* ***Case:*** *stainless steel with rubber bezel. 4 mm thick, anti-glare sapphire crystal with internally ground loupe. Screw-in crown. Ø 42.0 mm; H 13.5 mm. Water-resistant to 100 bars. Rubber or stainless steel strap with extension and stainless steel safety clasp. Screwed strap attachment bridges.* ***Dial:*** *black. Super LumiNova hands and indices, intensely luminous.*

M1-41-03-MB

M1-41-03-MB

S.A.R. Flieger-Chronograph

To rescue people in distress at sea, a strong and reliable team is needed. For this reason, the rescue workers of the German Maritime Search and Rescue Service and rescue pilots from the German Navy regularly work together. The latter come in their Sea King helicopters to the aid of people in distress. What then was more logical than to compliment the S.A.R. Rescue-Timer with a watch for the SAR pilots?

The idea to develop such a watch came from the Sea King crews themselves. Even though their helicopters are equipped with the latest technology, the time shown on a wristwatch continues to form the basis for all time measurements necessary for navigation. The rescue pilots were therefore looking for a chronograph which would enable calculation of flight speeds, and at the same time be able to withstand the harshest of operating conditions. As a result, the S.A.R. Flieger-Chronograph (S.A.R pilots' chronograph) was born.

Pilots in particular must be able to read the time, or the elapsed time, reliably and at a glance. For easy differentiation between these two time functions, the chronograph pushers, the stop second hand and the minute and hour hands are marked in orange. This typical SAR signal color is also used to highlight the important 10-second scale between 12 and 2 o'clock, which facilitates short-time measurements to extrapolate speeds.

To further improve the clarity of display, we designed the watch bigger. This also explains why we have positioned the crown and pusher on the left, where they do not restrict the free movement of the wearer's hand. Equally important in this regard, however, is that we were able to place the start pusher at 8 o'clock. This makes it much easier to operate with the thumb and, thanks to its size, it can even be felt through pilots' gloves. All of these features make this timepiece the ideal pilots' watch. And indeed, from the very beginning the rescue pilots have been among its most loyal customers.

Specially marked 10-second scale: the scale can be used to take short-time measurements to extrapolate flight speed.

Movement: *MU 9408, automatic with woodpecker neck regulation, Glashütte three-quarter plate and characteristic surface finishes. Stop-second. Fast date correction. 48-hr power reserve.* ***Case:*** *stainless steel with unidirectional bezel. 2.5 mm thick, domed and anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 44.0 mm; H 16.2 mm. Water-resistant to 10 bars. Rubber strap with extension or stainless steel strap, stainless steel safety clasp. Screwed strap attachment bridges.* ***Dial:*** *black. Super LumiNova hands and indices.*

M1-41-33-MB

M1-41-33-KB

Marinus

Fans of extreme sports will love our Marinus, because this robust outdoor watch can take anything you throw at it. Its solid stainless steel case with screw back and 2.5 mm thick domed sapphire crystal is the main guarantor of this.

The crystal is anti-glare and allows wearers to view the clearly designed face at any time. The surfaces of the hands, numerals and indices are Super LumiNova coated, making them easy to read in the dark as well. The zero marker on the unidirectional bezel is also provided with a luminous point.

Moreover, the Marinus is not only water-resistant to 30 bars; it is also impervious to temperature changes and salt water. It therefore really is a credit to its name, which comes from the Latin and means "he who lives by the sea", or "belonging to the sea". As a result, the Marinus is therefore the perfect companion for sailors, surfers and everyone who, in their sporting or daily life, likes things a little more extreme.

M1-28-33-KB

Movement: *SW 200, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Fast date correction. 38-hr power reserve.* ***Case:*** *stainless steel with rubber bezel. 2.5 mm thick, domed and anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 42.2 mm; H 12.2 mm. Water-resistant to 30 bars. Rubber strap with extension or stainless steel strap, stainless steel safety clasp. Screwed strap attachment bridges.* ***Dial:*** *black or silver. Super LumiNova hands and indices.*

M1-28-45-MB

M1-28-25-MB

Rasmus

Rasmus is our divers' watch. As such, you can expect it to meet the highest requirements in terms of water resistance and reliability. Indeed, especially under water it is important to be able to measure time accurately – sometimes it is even a matter of life and death.

Functionality is, of course, a top priority for timepieces like this. That is why we developed it in collaboration with the German national apnea diving team, who dive down to 150 metres without underwater breathing apparatus.

Above all, perfect clarity of display is important. A clearly arranged face showing only the most important information was therefore a must for Rasmus. Equally practical, the hands are easy to distinguish because of their different forms and are intensely luminous. The bezel also has a luminous point to show the remaining diving time when diving with breathing apparatus. The point shows the beginning of a diving operation, while the minute hand measures the duration. To prevent the remaining diving time from being extended due to an inadvertent turn of the bezel, the latter can only be turned in an anti-clockwise direction. It engages perceptibly in each position and, thanks to fine pimples, can be operated even when the diver is wearing gloves.

And thus arose a timepiece on which you can always rely, both above and under water. That is why we named it Rasmus, after the patron saint of seafarers.

M1-28-18-KB

Movement: *SW 200, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Fast date correction. 38-hr power reserve.* ***Case:*** *stainless steel with magnetic field protection and automatic helium valve, unidirectional bezel. 3 mm thick, domed and anti-glare sapphire crystal. Screw-in crown. Ø 44.0 mm; H 16.9 mm. Water-resistant to 100 bars. Rubber strap with extension or stainless steel strap, stainless steel safety clasp. Screwed strap attachment bridges.* ***Dial:*** *blue, black, red or orange. Super LumiNova hands and indices, intensely luminous.*

Rasmus is also available with an orange face and bezel: reference number M1-28-17-KB.

M1-28-12-MB

M1-28-13-MB

Classical Timepieces

The earth is the foundation on which we all stand. However there is one spot on earth, namely Glashütte, to which we at Glashütte-Mühle are particularly attached. Here our company continues as a family owned business managed by the fifth generation.

The small town in the Ore Mountains is our home. Alongside our tradition it has made us what we are today: down-to-earth people with a penchant for straightforwardness and precision. Our timepieces are just like us. Especially in the case of our elegant and more luxurious watches we take care to ensure that they don't lose touch with their roots.

Earth is however not just home and fertile countryside, but also burning desert. Even our classical watches are therefore characterized by their power of resistance. After all, it is their job to tell the time reliably, no matter where and no matter when. That is what a watch is made to do and what we like to call "elementary time measurement".

Germanika I

Form follows function: when developing our Germanika models we consistently applied this principle. The result is four timepieces of purist design, which do not only display clear lines in their high-quality cases but also in their faces. This is particularly important in the case of the Germanika I with its additional chronograph displays, so that all the elements of a stopped or ordinary time can be taken in easily at first glance.

The intricately finished chronograph mechanism of the Germanika I allows precise time measurement. It contains all the features characteristic of a "Mühle" watch, from our woodpecker neck regulation to the newly developed three-quarter plate and the efficient Mühle rotor.

The functional design and the fascinating mechanical movement are also expressed through the name Germanika itself. It is a composite of "Germania" (the Latin name for Germany) and "Mechanik", which means mechanism, and thus in the truest sense of the word stands for a mechanical watch "Made in Germany".

M1-38-03-MB

Movement: *MU 9408, automatic with woodpecker neck regulation, Glashütte three-quarter plate and characteristic surface finishes. Stop-second. Fast date correction. 48-hr power reserve.* ***Case:*** *brushed/polished stainless steel. Anti-glare sapphire crystal. Concave sapphire crystal back. Screw-in crown. Ø 42.4 mm; H 15.6 mm. Water-resistant to 10 bars. Crocodile leather or stainless steel strap with stainless steel butterfly clasp. Screwed strap attachment bridges.* ***Dial:*** *silver or black. Applied indices. Super LumiNova coated hour marks and hands.*

M1-38-03-LB

M1-38-05-LB

Germanika II

If you're going on a journey ... you will find in Germanika II both a stylish and a useful travelling companion. This is not only ensured by the finely-matched choice of material and surface finish, but also by the display with a second time zone.

The second time zone can be set very easily using the crown and is displayed on a separate, slightly lower-lying, 24-hr subdial in the centre of the face. This means that local time and zone time are clearly separated from each other and are extremely easy to read off.

The subdial for the zone time has in addition been provided with a line, stretching from the 6pm to 6am marks. This assumes the function of a day/night display and signalizes immediately if someone can still be reached in the office.

M1-38-15-LB

Movement: *ETA 2893, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Second time zone/24-hr display. Stop-second. Fast date correction. 42-hr power reserve.* ***Case:*** *brushed/polished stainless steel. Anti-glare sapphire crystal. Concave sapphire crystal back. Screw-in crown. Ø 42.4 mm; H 12.3 mm. Water-resistant to 10 bars. Crocodile leather or stainless steel strap with stainless steel butterfly clasp. Screwed strap attachment bridges.* ***Dial:*** *silver or black. Applied indices. Super LumiNova coated hour marks and hands.*

M1-38-15-MB

M1-38-13-MB

Germanika III • Germanika IV

Pure understatement! If this can be said of any watch, then it certainly refers to Germanika III. At a first glance the beauty of this gem is determined by the principle that less is more. At a second glance, however, it impresses with its many lovingly applied details: for example the sophisticatedly shaped date window with its differently designed horizontal and vertical edges, which contribute to the special charm of the watch face.

The same of course applies to the Medium model in this family of watches: our Germanika IV with a case diameter of 34.6 millimetres.

But both of these timepieces also impress with their inner values: We finely decorate their movements and equip them with our patented fine regulation, our characteristic Mühle rotor and other parts developed by us.

M1-38-25-LB

Fig. on left: The intricately designed date window is only one indicator of the exquisite beauty of our Germanika models. Here the Germanika IV, reference no. M1-38-35-LB.

Movement: *SW 200, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Fast date correction. 38-hr power reserve.* ***Germanika III case:*** *brushed/polished stainless steel. Anti-glare sapphire crystal. Concave sapphire crystal back. Screw-in crown. Ø 42.4 mm; H 12.3 mm. Water-resistant to 10 bars. Crocodile leather or stainless steel strap with stainless steel butterfly clasp. Screwed strap attachment bridges.* ***Germanika IV case:*** *brushed/polished stainless steel. Anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 34.6 mm; H 10.9 mm. Water-resistant to 5 bars. Crocodile leather or stainless steel strap with stainless steel butterfly clasp. Screwed strap attachment bridges.* ***Dial:*** *silver or black. Applied indices. Super LumiNova coated hour marks and hands.*

M1-38-23-MB

M1-38-33-MB

Teutonia II Chronograph

The Teutonia II Chronograph is ticking evidence of how an elegant watch can be given a sporty touch. This is, of course, first and foremost due to the timekeeping function, as the totalizers of the hour and minute counters give the face its own special dynamics. The diagonal displays for the date and the weekday also contribute to this effect.

The finely equipped Teutonia II Chronograph certainly fulfills its role as an elegant watch for the world of business. The dials are intricately engine turned – which gives them a fine embossed relief-like design marked with a stamp. The design is completed by hand-applied indices bevelled on all four sides, and the blackened hands. The latter harmonize beautifully with the silver-colored face, whilst at the same time making the watch display very easy to read.

Movement: *MU 9408, automatic with woodpecker neck regulation, Glashütte three-quarter plate and characteristic surface finishes. Stop-second. Fast date and weekday correction. 48-hr power reserve.* ***Case:*** *brushed/polished stainless steel. Domed, anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 42.0 mm; H 15.5 mm. Water-resistant to 10 bars. Crocodile leather or stainless steel strap with stainless steel butterfly clasp. Screwed strap attachment bridges.* ***Dial:*** *silver, guilloche finish. Applied indices, blackened hands.*

M1-30-95-LB

M1-30-95-MB

Teutonia II Kleine Sekunde

Off-centre – but not off-balance: the positioning of the off-centre second hand at 6 o'clock and the Mühle lettering at 12 o'clock lend the face of the Teutonia II Kleine Sekunde a particularly harmonious appearance.

This balance is reinforced by the intricate guilloche finish with its lines of different thicknesses. We at Nautische Instrumente Mühle-Glashütte do not use these lines for decoration purposes only; they serve above all to subdivide the face and give it a very clear layout.

As with all Teutonia models, the indices are applied, i.e. they are put onto the face by hand. In combination with the both attractive and useful guilloche finish they reveal the core statement of this family of watches: plain elegance and down-to-earth luxury. A clear statement in the everyday world of business!

M1-33-45-LB

Movement: *ETA 2895, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Fast date correction. 42-hr power reserve.* ***Case:*** *brushed/polished stainless steel. Domed, anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 41.0 mm; H 11.0 mm. Water-resistant to 10 bars. Crocodile leather or stainless steel strap with stainless steel butterfly clasp. Screwed strap attachment bridges.* ***Dial:*** *silver, guilloche finish. Applied indices, blackened hands.*

Teutonia II Chronometer

We attach particular importance to the precision of our watches. For all those who would like this down in black and white, our product range includes the Teutonia II Chronometer. After all of the components have been completed technically and aesthetically, the mechanism carefully assembled and the precise adjustment with our own in-house fine regulation, we put the watch through a very thorough series of tests.

Every Teutonia II Chronometer movement is tested for 16 days at changing temperatures and in different positions for rate variations. The movement only receives official certification if it meets the very high standards set by the COSC chronometer control (rate values between -4 and +6 seconds in the different positions). After that, every Teutonia II Chronometer that leaves our premises has its certificate – giving its wearer the certainty of owning a chronometer which is both elegant and accurate.

M1-30-45-MB

Movement: *SW 200, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Chronometer certificate (COSC) Stop-second. Fast date correction. 38-hr power reserve. Case: brushed/polished stainless steel. Domed, anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 39.0 mm; H 11.9 mm. Water-resistant to 10 bars. Crocodile leather or stainless steel strap with stainless steel butterfly clasp. Screwed strap attachment bridges.* ***Dial:*** *silver, guilloche finish. Applied indices, blackened hands.*

Teutonia II Quadrant Chronograph

The nautical origins of our company are also reflected in an elegant watch family such as the Teutonia. Even our classical timepieces are first and foremost instruments for measuring time and have to measure up to the nautical virtues – clarity of display, reliability and precision. Thanks to our fine regulation and a high-quality case which is water-resistant to 10 bars, the Teutonia II Quadrant Chronograph has everything it takes to fulfill these requirements (for further special features of our quadratic case, see page 40).

With a rectangular chronograph in particular however, the challenge is to ensure that the seconds in a stopped time are easily readable even in the corners of the case. In our opinion it is no problem to combine a square-shaped case with the demand for an easy-to-read display, as the case dimensions and hand length ratio can still be designed to give the watch a very harmonious design.

Thus the Teutonia II Quadrant Chronograph is also a worthy champion of our nautical virtues – which, by the way, also finds expression in the name of the watch. In marine navigation, the word quadrant designates an area given by the ship's position and the system of coordinates used.

Movement: *MU 9408, automatic with woodpecker neck regulation, Glashütte three-quarter plate and characteristic surface finishes. Stop-second. Fast date correction with lowered pusher at 10 o'clock. 48-hr power reserve.* ***Case:*** *brushed/polished stainless steel. Anti-glare sapphire crystal. Transparent case back. Screw-in crown, 38.0 x 38.0 mm; H 14.0 mm. Water-resistant to 10 bars. Crocodile leather strap with stainless steel butterfly clasp. Screwed strap attachment bridges.* ***Dial:*** *silver, guilloche finish. Applied indices, blackened hands.*

M1-33-35-LB

M1-33-35-LB

Teutonia II Quadrant

Opposites attract – so they say. With the Teutonia II Quadrant this is certainly the case. The charming overall appearance of the watch is to a large extent due to the harmonious union of straight and round lines, pointed and rounded corners, brushed and mirror-polished surfaces.

This effect is most striking in the exciting contrast between the mirror-polished bezel and the middle section of the case with its manually applied vertical graining, while the alternation between pointed and rounded corners in the bezel itself also adds to the vibrancy of the watch.

The case's high-quality technical features match the fine aesthetic details and are designed for sturdiness and robustness. For optimal water resistance, its component parts are connected by eight small screws. The back, together with all the internal seals, is screwed to the bezel through the middle section of the case. The crown is also screwed-in for optimal water resistance. In addition non-scratch, anti-glare sapphire crystals ensure a clear view of the face at any time.

Two of the eight small screws which allow absolutely flat mounting of the rectangular backs of our quadrant models. These are an excellent example of our absolute refusal to compromise on robustness.

Movement: *ETA 2895, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Fast date correction. 42-hr power reserve.* ***Case:*** *brushed/polished stainless steel. Anti-glare sapphire crystal. Transparent case back. Screw-in crown. 38.0 x 38.0 mm; H 10.5 mm. Water-resistant to 10 bars. Crocodile leather strap with stainless steel butterfly clasp. Screwed strap attachment bridges.* ***Dial:*** *silver or black, guilloche finish. Applied indices, blackened or nickel-plated hands.*

M1-30-33-LB

M1-30-35-LB

Teutonia II Quadrant Medium • Teutonia II Medium

Our rather more delicate watches are also not only made for decoration purposes. They too are first and foremost time measuring instruments committed to our nautical virtues. We therefore use set limits with regard to the dimensions of a Mühle watch in favour of clarity of display.

Thus the side of the Teutonia II Quadrant Medium is 33 millimetres long and the diameter of the Teutonia II Medium is 34 millimetres. We considered this to be a good compromise between maximum possible readability and minimum possible dimensions for the more delicate wrist.

Moreover, both watches have the same high-quality features as the large members of this watch family: from the efficient Mühle rotor and precise woodpecker neck regulation of the mechanism to the non-scratch sapphire crystal and screw back of the case.

M1-33-25-LB

Teutonia II Quadrant Medium – Movement: *SW 300, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Fast date correction. 42-hr power reserve.* **Case:** *brushed/polished stainless steel. Anti-glare sapphire crystal. Transparent case back. Crown with double-0 seal. 33.0 x 33.0 mm; H 9.7 mm. Water-resistant to 5 bars. Crocodile leather strap with stainless steel butterfly clasp. Screwed strap attachment bridges.* ***Dial:*** *silver or black, guilloche finish. Applied indices, blackened or nickel-plated hands.*

Fig. on left: the Teutonia II Quadrant Medium with black face, reference no. M1-33-23-LB.

Teutonia II Medium – Movement: *SW 200, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Fast date correction. 38-hr power reserve.* ***Case:*** *brushed/polished stainless steel. Domed, anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 34.0 mm; H 11.7 mm. Water-resistant to 10 bars. Crocodile leather or stainless steel strap with stainless steel butterfly clasp. Screwed strap attachment bridges.* ***Dial:*** *silver, guilloche finish. Applied indices, blackened hands.*

M1-30-25-LB

M1-30-25-MB

Antaria Chronograph

We at Nautische Instrumente Mühle-Glashütte are realists. Actually we don't get carried away easily. But it is just not possible not to be charmed by this beautiful watch. That is why, without further ado, we derived its name from the brightest star in the Scorpio constellation: Antares.

The Antaria chronograph in particular is a credit to its namesake, and is a shining example when it comes to clarity of display and precision. Using nickel-plated hands and hour numerals, we have succeeded in making them stand out clearly from the silky shimmering face. The, for a chronograph, much-reduced minute graduation adds to the overall clarity.

Our MU 9408 chronograph movement is responsible for the accuracy of this watch. It is equipped with all the characteristic Mühle features: the efficient winding rotor, our patented fine regulation and the new three-quarter plate. These technical details are not only a functional highlight, but also an aesthetic one – which is why we have given the Antaria chronograph a particularly large sapphire crystal back. One look into the light-flooded interior is enough to make you fall i love with it immediately.

Movement: *MU 9408, automatic with woodpecker neck regulation, Glashütte three-quarter plate and characteristic surface finishes. Stop-second. Fast date correction. 48-hr power reserve.* ***Case:*** *brushed/polished stainless steel. Anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 42.0 mm; H 14.2 mm. Water-resistant to 5 bars. Russia leather strap with stainless steel butterfly clasp. Screwed strap attachment bridges.* ***Dial:*** *anthracite or opaline silver. Nickel-plated hour numerals. Hands coated in Super LumiNova.*

M1-39-07-LB

M1-39-05-LB

Antaria Kleine Sekunde

Together with a smaller star which orbits it, Antares forms a double galaxy. A family of watches named after Antares therefore simply has to have a model with a small second. Given that everything we do at Nautische Instrumente Mühle-Glashütte revolves around elementary time measurement, this dial division is even of double benefit.

When someone for example asks us the time, we normally give it in hours and minutes. A small second hand slips discreetly into the background as we register the most important figures indicating the time. On the other hand, for reasons of easy readability, we did not want to do without this indicator entirely. After all, the rate of the second hand tells us at a glance that the watch is functioning reliably.

Movement: *ETA 2895, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Fast date correction. 42-hr power reserve.* ***Case:*** *brushed/polished stainless steel. Anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 42.0 mm; H 9.8 mm. Water-resistant to 5 bars. Russia leather strap with stainless steel butterfly clasp. Screwed strap attachment bridges.* ***Dial:*** *anthracite or opaline silver. Nickel-plated hour numerals. Hands coated in Super LumiNova.*

M1-39-15-LB

M1-39-17-LB

Antaria Datum • Antaria Medium

The Antares star is more than 500 light years away from the Earth. Luckily, the Antaria Datum and Antaria Medium, which are named after it, are not beyond our reach. These watches are stars that you can quite simply take from the sky – for yourself and your special lady.

Their long-term reliability – a feature of all Mühle watches – ensures that you will get lifelong enjoyment out of these two timepieces. In concrete termes this means: scratch-proof sapphire crystal to give you an unhindered view of the dials, a robust and high-quality worked case for optimum protection of the carefully assembled mechanisms, and screw-in crowns for optimum water resistance.

M1-39-27-LB

Antaria Datum – Movement: *SW 200, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Fast date correction. 38-hr power reserve.* ***Case:*** *brushed/polished stainless steel. Anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 38.0 mm; H 10.4 mm. Water-resistant to 5 bars. Russia leather strap with stainless steel butterfly clasp. Screwed strap attachment bridges.* ***Dial:*** *anthracite or opaline silver. Nickel-plated hour numerals. Hands coated in Super LumiNova.*

Fig. on left: The Antaria Medium with anthracite face, reference no. M1-39-37-LB.

Antaria Medium – Movement: *SW 200, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Fast date correction. 38-hr power reserve.* ***Case:*** *brushed/polished stainless steel. Anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 33.5 mm; H 10.6 mm. Water-resistant to 5 bars. Russia leather strap with stainless steel butterfly clasp. Screwed strap attachment bridges.* ***Dial:*** *anthracite or opaline silver. Nickel-plated hour numerals. Hands coated in Super LumiNova.*

M1-39-25-LB

M1-39-35-LB

Sporty Instrument Watches

There is nothing we humans need more urgently than the air that we breathe. But even though clean and clear air is an elementary necessity of life, it is precisely in the air that we are least in our element. We move as a matter of course on land, or swim in water, but it took technical devices before we were able to conquer the skies.

Nevertheless, we are today able to cover extremely long distances in a very short space of time. To ensure that we don't lose our bearings in the process, we depend on precision measuring instruments.

Watches have always been closely linked with flying and are used, for example, in navigation. The watch face had to be designed with absolute clarity – just like the element in which we wanted to use the watch to find our bearings. Our sporty instrument watches breathe this spirit. Clear-cut and unadorned, they concentrate on the basic function of a watch, on "elementary time measurement".

Terranaut I

Classical elegance? Wrong. Restrained use of forms? Wrong. Optimal time display? Spot on! The Terranaut I is an instrument that makes no compromise.

The best example of its resolutely instrument design is the rotating function display instead of the small second. This signals immediately that the timepiece is functioning reliably. So who still worries about the second display? To get a time measurement in seconds from our chronograph, all you have to do is press the start pushbutton located at 2 o'clock.

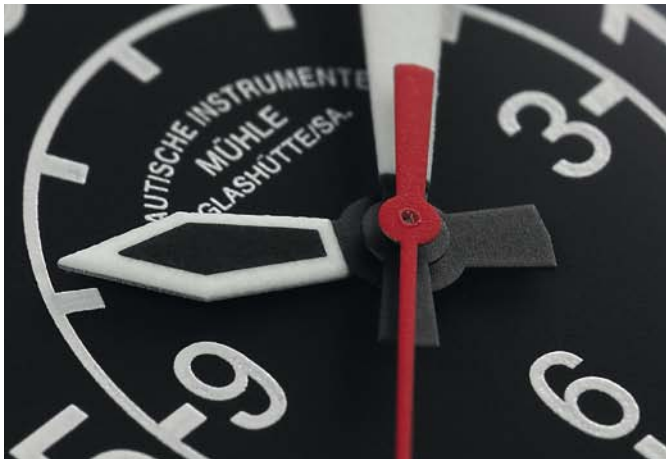
The other features of the watch are equally uncompromising. The brushed case takes no offence at slight scratches. Hand and indices, generously coated in luminous material, guarantee excellent readability at night. And – despite excellent camouflage – even olive green is one of the face colors available. There's no doubt about it: if there is any watch at all that will get you through any adventure, it's our Terranaut I.

M1-37-03-LB

Movement: *MU 9408, automatic with woodpecker neck regulation, Glashütte three-quarter plate and characteristic surface finishes. Stop-second. Fast date and weekday correction. 48-hr power reserve.* ***Case:*** *brushed stainless steel. Anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 44.0 mm; H 13.6 mm. Water-resistant to 5 bars. Russia leather strap with stainless steel pin buckle.* ***Dial:*** *black, grey or olive. Hour markers (on the black face) and hands coated in Super LumiNova.*

M1-37-05-LB

M1-37-07-LB



Terranaut II

The Terranaut II takes us back to an age when flying was still a real adventure. At that time a face design for pilots' watches arose in which the hour and minute displays were divided into two different scales completely separate from each other. By restricting the hour display to a noticeably smaller inner circle, it was possible to focus one's attention on the minutes and seconds which are so important in navigation.

In our "observation watch" we have given this design principle a typical Mühle look. We have achieved this by using a combination of two-color minute numerals, hands with increased contrast and very clearly delineated scales for the minutes and hours. The instrumental design is complemented by the precision typical of our nautical instruments. The Terranaut II thus also spans the gap between nautical science and aeronautics – between which there are a lot of similarities as far as time measurement is concerned, and not only in name.

M1-37-13/7-MB

Movement: SW 200, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Fast date correction. 38-hr power reserve. ***Case:*** *brushed stainless steel. Anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 44.0 mm; H 10.4 mm. Water-resistant to 5 bars. Stainless steel strap with butterfly clasp or Russia leather strap with stainless steel pin buckle.* ***Dial:*** *black or olive. Hour markers (on the black face) and hands coated in Super LumiNova.*

M1-37-13/4-LB

M1-37-17-LB

Terranaut III

As with all of our Terranaut models, we have also given this one a fresh color combination alongside its classical pilots' watch design. Nothing, however, distracts from the most important point – a precise indication of the time. Of course we wanted to ensure that the time can be read easily in the dark as well. For this reason the hands, the hour markers and the two dots next to the typical pilot triangle at 12 o'clock are Super LumiNova coated.

M1-37-23/7-MB

Movement: *SW 200, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Fast date correction. 38-hr power reserve.* ***Case:*** *brushed stainless steel. Anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 40.0 mm; H 10.0 mm. Water-resistant to 10 bars. Stainless steel strap with butterfly clasp or Russia leather strap with stainless steel pin buckle.* ***Dial:*** *black or olive. Hour markers and hands coated in Super LumiNova.*

M1-37-23/1-LB

M1-37-27-LB

Terrasport I

You don't have to take to the air with the Terrasport I, but it's nice to know you could. Just like our Terranaut models, this timepiece has all the advantages of a classic pilots' watch. These include not only the accurate mechanism, but also its robust 44 millimetre case and the easy-to-read, well-balanced dials. In addition to white and black, it also comes in antique copper, meaning that the Terrasport I also cuts a good figure on ceremonial occasions.

M1-37-33-LB

Movement: *SW 200, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Fast date correction. 38-hr power reserve.* ***Case:*** *brushed stainless steel. Anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 44.0 mm; H 10.4 mm. Water-resistant to 5 bars. Stainless steel strap with butterfly clasp or Russia leather strap with stainless steel pin buckle.* ***Dial:*** *black, white or antique copper. Numerals and hands coated in Super LumiNova.*

M1-37-31-LB

M1-37-38-MB

Terrasport II • Terrasport III

Sporty and discreet: this sums up the Terrasport II, with its 40 millimetre diameter, and its smaller sister, the Terrasport III which has a diameter of 34.5 millimetres. True to their instrument character, the focus of both these watches is on an easy-to-read face and a precision mechanism. For this reason we equip the movement with the typical Mühle components – above all with our patented woodpecker neck regulation.

Moreover, both timepieces are shining examples of how a clear-cut, unadorned time measuring instrument can captivate the beholder with some lovingly applied details. We have for example given the second hand a small luminous dot. This makes the uniform increments of the second hand visible even at night. During the day, the raised Mühle symbol on the screw-in crown is shown off to maximum effect.

M1-37-41-LB

Terrasport II – Movement: *SW 200, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Fast date correction. 38-hr power reserve.* ***Case:*** *brushed stainless steel. Anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 40.0 mm; H 10.0 mm. Water-resistant to 10 bars. Stainless steel strap with butterfly clasp or Russia leather strap with stainless steel pin buckle.* ***Dial:*** *black, white or antique copper. Numerals and hands coated in Super LumiNova.*

Fig. on left: The Terrasport III with a diameter of 34.5 millimetres, reference no. M1-37-51-LB.

Terrasport III – Movement: SW 200, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Fast date correction. 38-hr power reserve. Case: brushed stainless steel. Anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 34.5 mm; H 9.3 mm. Water-resistant to 5 bars. Russia leather strap with stainless steel pin buckle. Dial: black, white or antique copper. Numerals and hands coated in Super LumiNova.

M1-37-43-LB

M1-37-53-LB

29er Chronograph

What drives one person upwards drives another forwards: however in the air it is not only pilots who are in their element. As wind, air is also the driving force for the up-and-coming young sailors who, in their 29ers, compete in the Youth Championship Races of the DSV (Deutscher Segler-Verband – German Sailing Association). This small yawl is considered particularly fast, sporty and dynamic, making it the ideal name-giver for our 29er models. The only difference is that due to our intricate regulation we cure it of any inclination to go fast – in favour of accuracy.

In competitions, sportsmen and women will appreciate above all the timekeeping function of the 29er chronographs. It can of course be used not only in sailing, but also in horse races and car races, as well as the 5000 metre race.

The stop hand on the chronograph is red, which not only gives it a sporty look, but above all it makes it very easy to read the stopped time in seconds. The side protection of the screw-in crown also performs a double function. It adds to the dynamic appearance of the watch and effectively protects the crown from side knocks.

M1-25-43-MB

Movement: *MU 9408, automatic with woodpecker neck regulation, Glashütte three-quarter plate and characteristic surface finishes. Stop-second. Fast date correction. 48-hr power reserve.* ***Case:*** *brushed/polished stainless steel. Anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 42.4 mm; H 13.9 mm. Water-resistant to 10 bars. Stainless steel strap with butterfly clasp or Russia leather strap with stainless steel pin buckle.* ***Dial:*** *black or white. Applied indices. Hour markers and hands coated in Super LumiNova.*

M1-25-43-LB

M1-25-41-LB

29er Big • 29er

As a yawl, the 29er is a one-design boat. That means that all boats have more or less the same design – from the sail to the hull. The same applies to the 29er wristwatches. Despite different case diameters, the 29er and the 29er Big resemble each other like identical twins. And not only as far as their design is concerned – but also in terms of precision.

M1-25-33-MB

*29er Big – **Movement:** SW 200, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Fast date correction. 38-hr power reserve. **Case:** brushed/polished stainless steel. Anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 42.4 mm; H 11.3 mm. Water-resistant to 10 bars. Stainless steel strap with butterfly clasp or calf leather strap with stainless steel pin buckle. **Dial:** black or white. Applied indices. Hour markers and hands coated in Super LumiNova.*

Fig. on left: The 29er Big with a diameter of 42.4 millimetres, reference no. M1-25-31-LB.

29er – Movement: *SW 200, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Fast date correction. 38-hr power reserve.* ***Case:*** *brushed stainless steel. Anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 36.6 mm; H 10.4 mm. Water-resistant to 10 bars. Stainless steel strap with butterfly clasp or calf leather strap with stainless steel pin buckle.* ***Dial:*** *black or white. Applied indices. Hour markers and hands coated in Super LumiNova.*

M1-25-23-LB

M1-25-21-LB

City 99 • Lady-Matic 99

The City 99 is the SUV among our sporty instrument watches, giving you the same top service on a nightly tour through the big city jungle as on a weekend trekking tour. The wide bezel and solid case protect the movement well against knocks. The screw-in crown allows neither water nor dust to penetrate into the watch. In addition, the anti-glare sapphire crystal allows a clear view of the fine guilloche finish face, the applied indices and the luminous hands.

No doubt about it: the City 99 does a perfect balancing act between sportiness and elegance. This is precisely the reason why we have also developed a ladies' version of this watch: the Lady-Matic 99 with a diameter of 30 millimetres. The generously proportioned case is indeed larger than that of an average ladies watch, offering its wearer the easy-to-read display that has become one of our trademarks.

M1-99-43-MB

*City 99 – **Movement:** SW 200, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Fast date correction. 38-hr power reserve. **Case:** brushed/polished stainless steel. Anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 40.0 mm; H 10.0 mm. Water-resistant to 10 bars. Leather or stainless steel strap with stainless steel butterfly clasp. Screwed strap attachment bridges. **Dial:** black or white, guilloche finish. Applied indices. Super LumiNova coated hands.*

Lady-Matic 99 – Movement: *ETA 2671, automatic; Mühle version with own rotor and characteristic surface finishes. Stop-second. Fast date correction. 38-hr power reserve.* ***Case:*** *brushed/polished stainless steel. Anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 30.0 mm; H 10.2 mm. Water-resistant to 10 bars. Leather or stainless steel strap with stainless steel butterfly clasp. Screwed strap attachment bridges.* ***Dial:*** *black or white, guilloche finish. Applied indices. Super LumiNova coated hands.*

M1-99-41-LB

M1-99-71-LB

Limited Special Editions

Without fire, humankind would not have developed as it has. Fire provides heat. It enables us to smelt and forge metal, and therefore forms the basis of our mobility.

In order for humankind to benefit from this effect, the consuming power of fire has to be kept under control. This is probably also the reason why fire has become a symbol of human passion. After all, passion can only drive people to give top performance when it is kept in check by the power of reason.

The principle of the golden mean is also reflected in our limited special editions. On the one hand they are sought-after collector's items, into which we have put all of our passion for precision measuring, while, on the other hand, they retain their down-to-earth nature, because we ourselves transform them into reliable time measuring instruments. After all, a Mühle watch is not meant to be hidden from the world in a dark safe, but to accompany its wearer in the water, on land or in the air – as justified in our philosophy of "elementary time measurement".

Robert Mühle 1869 - 2009
A Homage to the Founder of our Tradition

We at Nautische Instrumente Mühle-Glashütte can look back on an eventful history and a rich tradition. Indeed, the name "Mühle" has stood for precision and precision measuring for five generations. The foundation for this was laid by Robert Mühle. In 1869 he set up a company in Glashütte, where he manufactured precision measuring instruments for the local watchmaking industry and watchmaking school.

140 years later, we are dedicating three elegant time measuring instruments to the founding father of our tradition. Each of these watches is limited to 300 pieces and equipped with exclusive features: their mechanisms for example have been provided with a coating of antique nickel and screws which have been finely polished by hand. Moreover, the bezels of the Robert Mühle Datum and Robert Mühle Medium are made of 14-carat red gold. Bearing in mind the occasion and Robert Mühle's importance to our company, this seemed only appropriate to us.

M1-10-65-LB

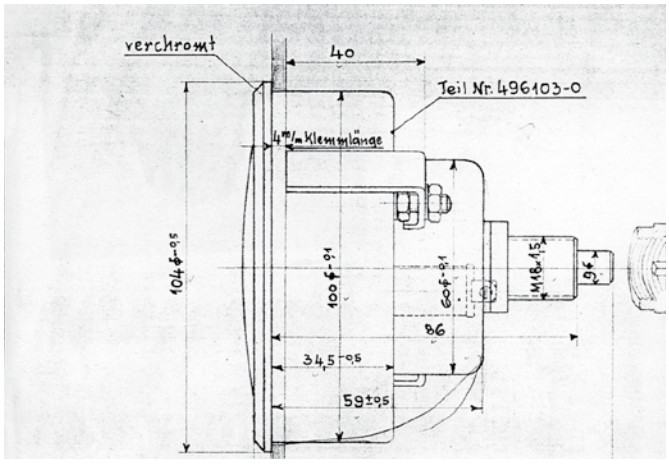
Robert Mühle Tag/Datum – Movement: *SW 220, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Quick date and weekday correction. 38-hr power reserve.* ***Case:*** *brushed/polished stainless steel. Anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 42.0 mm; H 13.0 mm. Water-resistant to 5 bars. Crocodile leather strap with stainless steel butterfly clasp.* Dial: *white. Applied numerals and indices.* ***Limited edition: 300 pieces.***

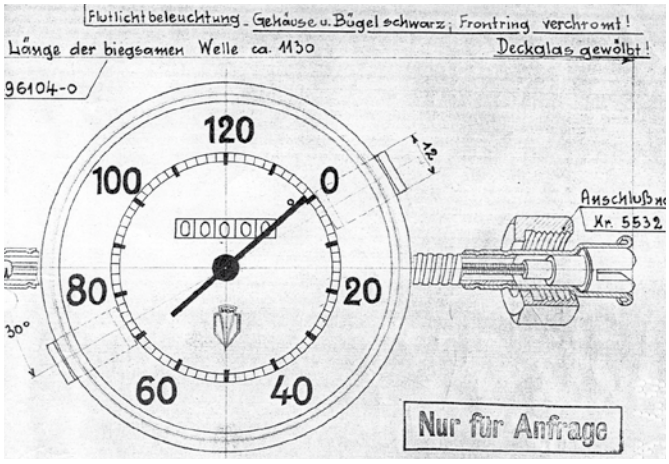
Robert Mühle Datum – Movement: *SW 200, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Quick date correction. 38-hr power reserve.* ***Case:*** *brushed/polished stainless steel; 14 carat red gold bezel, polished. Anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 38.0 mm; H 10.8 mm. Water-resistant to 5 bars. Crocodile leather strap with stainless steel butterfly clasp.* ***Dial:*** *ivory color. Applied numerals and indices. Gold-plated hands, numerals and indices.* ***Limited edition: 300 pieces.***

M1-10-75-LB

Robert Mühle Medium – Movement: *SW 200, automatic; Mühle version with woodpecker neck regulation, own rotor and characteristic surface finishes. Stop-second. Quick date correction. 38-hr power reserve.* ***Case:*** *brushed/polished stainless steel; 14 carat red gold bezel, polished. Anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 33.5 mm; H 10.8 mm. Water-resistant to 5 bars. Crocodile leather strap with stainless steel butterfly clasp.* ***Dial:*** *ivory color. Applied numerals and indices. Gold-plated hands, numerals and indices.* ***Limited edition: 300 pieces.***

M1-10-85-LB





Teutonia SC
Special Edition for the “Sachsen Classic”

Our relationship with the automobile industry goes back to the 1920s, when we supplied well-known carmakers such as Horch and DKW with car clocks and speedometers.

Almost a century later, we are back at the starting line: on the occasion of the “Sachsen Classic” international oldtimer rally we are following in the tracks of Saxony’s automobile pioneers and presenting our car clocks as wrist watches: the sporty Teutonia SC Edition 2009 and the Teutonia SC chronograph with additional tachymeter function.

M1-29-53-LB

Teutonia SC Edition 2009 – Movement: *SW 200, automatic; Mühle version with woodpecker neck regulation, own rotor and typical surface finishes. Stop-second. Fast date correction. 38-hr power reserve.* ***Case:*** *brushed/polished stainless steel. Domed, anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 39.0 mm; H 11.9 mm. Water-resistant to 10 bars. Leather strap with stainless steel butterfly clasp. Screwed strap attachment bridges.* ***Dial:*** *black, guilloche finish. Applied indices. Super-LumiNova coated hour and minute hands.* ***Limited edition: 180 pieces.***

Fig. on left: "Rob. Mühle & Sohn's" construction drawing for an automobile speedometer. The latter was developed in 1938 for the DKW brand which was integrated into the Auto Union AG.

Teutonia SC – Movement: *MU 9408, automatic with woodpecker neck regulation, Glashütte three-quarter plate and characteristic surface finishes. Tachymeter function. Second stop. Fast date and weekday correction. 48-hr power reserve.* ***Case:*** *brushed/polished stainless steel. Domed, anti-glare sapphire crystal. Transparent case back. Screw-in crown. Ø 42.0 mm; H 15.5 mm. Water-resistant to 10 bar. Leather strap with stainless steel butterfly clasp. Screwed strap attachment bridges.* ***Dial:*** *black or silver, guilloche finish. Applied indices. Super-LumiNova coated hour and minute hands.* ***Limited edition: 250 pieces in each face colour.***

M1-29-43-LB

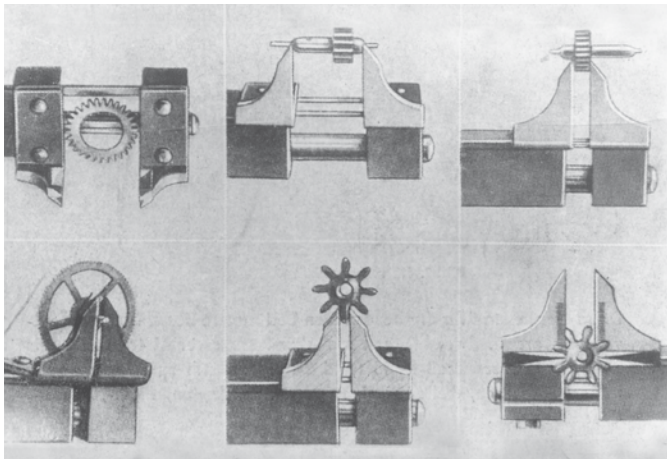
M1-29-45-LB

In Glashütte since 1869:
Five Mühle Generations

Mühle and Glashütte – a long story, in the truest sense of the word. For our family has been resident in this region for 700 years. One of our ancestors was even raised to the rank of baron. Thus we have had a family crest since 1629, and above all a family motto which states: "Neither through hope, nor through fear". This means that we are down-to-earth realists who tackle problems resolutely.

This is also precisely why we did not give up even when our company, which was founded in 1869, was threatened by world wars, socialism and expropriation. So today we can say with pride that the name "Mühle" has stood for precision and precision measuring for five generations already.

Our story started with the manufacture of measuring instruments, and nowadays we develop time measuring instruments. How did this come about? A long story, which is described briefly in this catalogue. The inclusion of this story was important to us. After all, it is the foundation of what Mühle stands for today: elementary time measurement.



First Generation: Robert Mühle

Our company's history begins with a brave decision made by Robert Mühle. He was born in 1841 in Lauenstein, only a few kilometres away from Glashütte. After his training at the watch manufacturer Moritz Großmann he took the risk and became self-employed: in 1869 he founded a company in Glashütte which manufactured precision measuring instruments for the local watch industry and the watchmakers' school.

In doing so he dedicated himself to what has always been the story of our family and our products up to the present day: precision measuring. At the same time, his measuring instruments were leading edge technology: for the aspiring Glashütte factories no longer used the Paris line, a traditional measuring unit, when manufacturing their watches, but the metric system, which had recently been introduced into the watchmaking industry. From 1869 on "Rob. Mühle & Sohn" built the measuring devices and instruments required for this new system.

With his precision measuring instruments, Robert Mühle therefore made an important contribution to Glashütte's good reputation as the centre of the German watchmaking industry. It was only because we worked with such precision all those years ago that others were also able to do so.

Fig. top left: *Robert Mühle (front row, seated fourth from left) with his employees.*
Fig. top right: *A drawing with examples of use of the tongs of the M15 multi-purpose measuring instrument.*
Fig. on right: *A mechanical precision dial gauge by the company "Rob. Mühle & Sohn", founded in 1869.*

Second Generation: Paul, Max and Alfred Mühle

Our ancestors soon won awards for the precision and quality of their measuring instruments. At an exhibition in Dresden for example they were presented with the "Gold Medal" of the year 1896 by the city.

Thanks to their good reputation, they were able to extend the manufacture of measuring instruments to a new field. In the decades after 1920, "Rob. Mühle & Sohn" supplied famous car makes such as Horch, Maybach and DKW with car clocks, speedometers and rev counters. Gears and drives as well as clock mechanisms and counters for technical and scientific purposes were also manufactured at Mühle in Glashütte.

Robert Mühle's sons Paul, Alfred and Max Mühle were thus able to continue managing the company along these successful lines. It was the chaos after World War II that put an end to this success story because, as with many other companies in Glashütte, the family business was expropriated and dismantled in 1945.

Fig. top left: *Glashütte in the winter of 1924. At that time Rob. Mühle & Sohn's product range included speedometers and car clocks (see also p. 72).*
Fig. top right: *The company and employees at the beginning of the 1940s under the management of Paul, Alfred and Max Mühle.*
Fig. on left: *A brochure explaining the technical benefits of the Mühle tachometers. Vehicles from the legendary carmaker Horch were also equipped with on-board instruments made by Mühle.*

Third Generation: Hans Mühle

The expropriation of the company, which had been operating successfully for more than 75 years, was of course a severe blow to the family. The company in its then form was completely broken up and parts of it were affiliated under the name "Messtechnik Glashütte" with the Zeiss-Werke in Jena.

It is thanks to the third generation that the name "Mühle" continued to be associated with precision measuring. As early as December 1945, Hans Mühle founded a new company which would later become the sole manufacturer of dial trains for pressure and temperature measuring instruments in East Germany. Within only a few years, the number of employees grew from three to the proud figure of 60.

Hans Mühle was born in 1903 to Paul and Elisabeth Mühle, and, after his studies, initially worked as an operating engineer. His close relatives ensured that he was born with a talent for precision measuring as his mother, whose maiden name was Stübner, came from a family who had made a name for themselves with chronometers used for the timing of beacons. When Hans Mühle died in 1970 his son Hans-Jürgen Mühle took over his father's business, which despite the political circumstances in East Germany was still privately owned.

Fig. top left: *Hans Mühle (1903-1970) at his desk in the new family business.*
Fig. top right: *A view of the production workshop in 1950.*
Fig. on left: *Hans Mühle's parents – Paul Mühle and Elisabeth Mühle, née Stübner.*

Fourth Generation: Hans-Jürgen Mühle

Hans-Jürgen Mühle (*1941) studied precision mechanics and optics in Jena before working for a supplier to his father's company. Thus he was very familiar with his father's work and was able to continue his lifework until our family suffered dispossession for a second time in 1972 and our company was initially transformed into a nationally-owned East German company (VEB) and later affiliated into the VEB Glashütter Uhrenbetriebe (Glashütte Watchmaking Plants).

Luckily Hans-Jürgen Mühle was able to continue working for the expropriated company. At the time of German reunification in 1990, he was sales manager of the VEB Glashütter Uhrenbetriebe. To integrate the company into the new economic system, he and four other colleagues were appointed managing directors. After carrying out this task, however, Hans-Jürgen Mühle left the Glashütter Uhrenbetriebe GmbH, as he saw his real calling in a different field.

It was towards the family business and the tradition of his ancestors that Hans-Jürgen Mühle felt an obligation. For this reason, he seized the opportunity in 1994 and set up the "Mühle-Glashütte GmbH nautische Instrumente und Feinmechanik" company where he wanted to devote all this attention again to precision work and precision measuring.

He applied to the manufacture of marine chronometers and wristwatches the knowledge that our family had acquired in this field. As sales manager at VEB Glashütter Uhrenbetriebe he had come into contact with this kind of measuring instruments. Since then our family has been manufacturing high-precision marine chronometers, marine time systems and other nautical instruments, and, two years later, we produced our first mechanical wristwatch.

Fig. top left: *Hans-Jürgen Mühle shortly after the new family business was established. Seen here assembling a ship's clock.*
Fig. top right: *At Mühle both old and new traditions are kept up. Thilo and Hans-Jürgen Mühle at the Hanse Sail in Rostock in 2005.*
Fig. on left: *Our patented woodpecker neck regulation and the S.A.R. Rescue-Timer were developed during the time when Hans-Jürgen Mühle was chairman of our family business (description on page 13 and page 18).*

Fifth Generation: Thilo Mühle

A passion for precision measuring has been driving our family for more than 140 years. The knowledge that we have accumulated in that time and the values to which our company is committed have always been passed on from father to son.

Thus Thilo Mühle (*1968) also followed in his father's footsteps, joining the family business in the year 2000. In keeping with our down-to-earth nature we at Mühle-Glashütte are, he first of all took over product development for our wristwatches. It was not until four years later that he became joint managing director together with his father, before finally becoming sole managing director in 2007.

His career path is prime example of what we at Nautische Instrumente Mühle-Glashütte understand by continuity, tradition and the passing on of knowledge. This understanding means we can ensure that none of the know-how put into the manufacture of our wristwatches, marine chronometers and nautical instruments is lost. It also leads to the canstant progression of our product development, as the next generation contributes new ideas.

Fig. top left: *Thilo Mühle is passionate about product development. Seen here assessing our Marinus outdoor watch.*
Fig. top right: *We attach particular importance to regulating our wristwatches in six different positions. This is carried out at technically excellently equipped workstations.*
Fig. right: *Our new three-quarter plate and practical S.A.R. pilots' chronograph are the latest developments created under the management of Thilo Mühle (description on page 14 and page 20).*

Chronicle 1869 - 2010

1869 Robert Mühle establishes the "Rob. Mühle & Sohn" company in Glashütte. Manufacture of precision measuring instruments for the local watchmaking industry and the watchmakers' school, e.g. for measuring gear wheel thicknesses.

From 1920 The production range is expanded to include tachometers, car clocks, rev counters and flow-rate meters. Manufacture of on-board instruments for companies including Horch and Maybach.

From 1930 The company manufacturs car clocks for trucks as well as on-board clocks with subsidiary second for use by the military as well as timepieces for motorbikes by Wanderer.

1945 Air raid on Glashütte.
Expropriation and dismantling of the family business by the Soviet occupying power.
Affiliation of what was left of the company, together with the remaining 20 percent of the equipment, into the Zeiss-Werke Jena under the name "Messtechnik Glashütte".

December 1945 Establishment of a new company by Hans Mühle, Robert Mühle's grandson. Production of measuring instruments and drive and escapement mechanisms for the photo and cinema industry; sole manufacturer in East Germany of dial trains for the pressure and temperature measuring industry.

1970 Hans Mühle passes away and the business is taken over by his son Hans-Jürgen Mühle.

1972 Expropriation and transformation into the nationally-owned VEB Feinmechanik Glashütte. Nevertheless Hans-Jürgen Mühle remains sales manager.

1980 Affiliation into the VEB Glashütter Uhrenbetriebe. Hans-Jürgen Mühle accepts a position in the sales department and later becomes sales manager.

1990 Political change in East Germany and reunification of the two German states. Transformation of the VEB Glashütter Uhrenbetriebe into a GmbH, a private limited company. Hans-Jürgen Mühle is named managing director together with four other colleagues.

1992 Hans-Jürgen Mühle leaves the Glashütter Uhrenbetriebe.

1994 Hans-Jürgen Mühle sets up a new family business under the name "Mühle-Glashütte GmbH nautische Instrumente und Feinmechanik". Manufacture of marine chronometers (in Glashütte tradition, with subsidiary second) and marine time systems. Production starts with two employees.

1996 The first wristwatch is launched under the "Nautische Instrumente Mühle-Glashütte" name.

2000 Thilo Mühle joins the family business and four years later becomes joint managing director together with his father.

2007 Thilo Mühle becomes sole managing director of Mühle-Glashütte GmbH.

2010 The family business starts the year 2010 with 47 employees, 30 of whom work in production.