
Habring

A watchmaking no man's land?

We are fortunate to live and work in an area of the Alpe-Adria region, an area pampered by nature. Carinthia, Styria, neighbouring Slovenia and Friuli, the north-easterly countryside of Italy, together shape a region, which has developed under the preservation of traditions, taste and quality. Despite different native languages, the people who live here are unified by an understanding for indigenous, authentic and genuine products whose secrets will be handed down from generation to generation within small family businesses.

We appreciate this tremendous abundance that surrounds us all every day. Many years ago we faced the question of whether our products reflect to the rules and regulations imposed by our employers in those times. The answer was very sobering and has allowed the desire to search for this authenticity, which appears to have been lost over the years, to flourish in us.

At the same time, the idea is not entirely new: These values were quite commonplace when the production of wearable, mechanical watches first commenced. In the times of Abraham Louis Breguet and his contemporary and employee Joseph Thaddäus Winnerl, a Styrian by birth, one would go to the watchmaker and have a watch made to the stipulated requirements. Then, the craftsman first devised the desired product and assembled it to some extent over years of detail work, vigorously supported by his helpers, into a functioning ensemble.

The industrial revolution and its aftermath have considerably changed this approach to watchmaking. Not only were production methods, quantities and production costs turned upside down, but also the brand gained greater importance. Brands have become a part of today's consumer world and many stand for exceptional quality and grandeur. Alongside this world of brands there is also the world of "Anti-brands". These are the small producers and family businesses that do not aspire to worldwide fame, but rather take pleasure in developing and manufacturing a perfect product according to their own preferences.

Immerse yourself into the world of Habring² and let yourself be carried away, sensitised and perhaps inspired. You will not only get to know what brings us pleasure but also read things which will not normally be found in any other comparable work. Simply authentic and genuine.

Who are we?

Allow us to introduce ourselves: Maria Kristina Habring & Richard Habring. When we started to turn our first concept into reality after many years of development, the question arose: “What shall we call our baby?” It would have been simple to search for an old brand name, re-register it and convene the past traditions of the former founder. But that would have been too easy. What could come closer than our family name? But what was missing was a symbol of visible equality. After all, we are not only a married couple but also business partners of equal standing.

Of course, Habring² is not a factory; we consider ourselves a manufacturer in the original meaning of the word. Accordingly, the correct translation would be, “Made by hand.” Our ever-growing young team has supported us since 2004.

However, let us get back to Habring²: Both of our full names would have taken too much space on the dial and therefore significantly influenced the design. So, we came up with the “2” in superscript format as an ideal symbol for what we wanted to convey. The result is Habring². In the meantime, the “2” also signifies the potential contained in every Habring². More about that in the following chapters.

Know-how from Austria

Suitability for daily use: Habring² watches are completely suitable for daily use; they are robust and reliable companion for many years. They are waterproof, shockproof and robust enough to cope with any situation their owners encounter in their day to day lives.

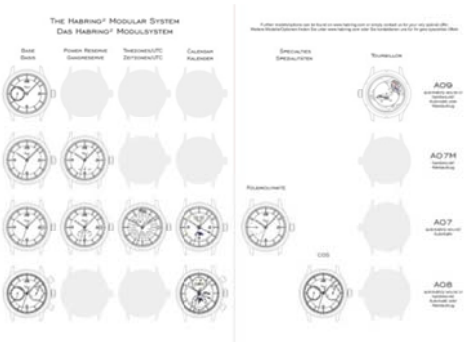
Quality control: Habring² watches are made by hand at our manufacturing facility in Völkermarkt, Carinthia, and subsequently subjected to detailed adjustment. Along with self-manufactured parts, we also use individual parts manufactured by specialists in Austria, Germany and Switzerland in accordance with our plans and specifications.

Longevity: Several moving parts come into play,in particular the wheels, the movement-regulating assembly parts such as the so-called escapement and the balance wheel procured from Swiss serial production. Alongside tried and tested reliability, this also guarantees the availability of spare parts in the long term.

Exclusiveness: All Habring² models are limited to a maximum of 12 pieces per year. Each and every Habring² is made to order, whereby the future owner specifies the desired features and functions and influences the appearance. Whether classically elegant, sporty or suited for evening attire, low-key or very visible - the options are manifold.

Customer orientation: All Habring² models underlie a modular system. This system, comparable to a construction kit, allows us to take into account customer wishes to a higher degree. Along with many different watch “faces”, there are equally as many functions for selection.

As a grand novelty in today's world of watchmaking, Habring² offers this creational possibility not just prior to the purchase of the watch. After all, requirements can change even years after the acquisition of a watch, and every Habring² owner has the possibility to retrofit desired additional functions or mechanisms (technical feasibility must obviously to be taken into account).



Classic Design: The Habring² model portrays a classic and timeless design that has its roots in the late 1930s. Available casing materials are 316L stainless steel, 18 carat rose gold, 548PD white gold and anti-allergenic and lightweight titanium. Whilst the classic Habring² with its casing diameter of 42mm and depth from 10mm counts primarily among the larger watches, the opportunity to order selected models in a 36mm casing is available as of 2011.

More volume = greater reliability: The size of both in the 42mm and 36mm model is not influenced by fashion alone. Although wrist watches have increased in size by about 15% since the 1990s, the increase in the dimensions of Habring² watches is founded in inner values. A constant, precise and reliable movement is the reason behind a slightly deeper watch as opposed to a super flat watch, as the latter is subject to tighter physical limitations. But the casing itself also plays a role as it encloses the highly complex and valuable movement, since – as with a nutshell – the thicker the shell, the better protected the contents. This is also why every Habring² has a slightly thicker scratchproof watch glass made from synthetic sapphire.

Spoilt for choice: Size brings a further convenient spin-off in addition to robustness: Good readability. Long-lasting pleasure is pre-programmed into a Habring² together with an emphasis on clear and conservative design. After all, it's not only watches that get older. The choice of possible dial colours is extensive. Each face is unique, be it classic white or cream, metallic silver, grey, blue, black, copper or brown, or the fascinating shimmer of mother-of-pearl in varying colours. Uniqueness, just as in real life.

Exclusive mechanical movements: Habring² assembles all its movements exclusively in its own studio. Functional modules and constructional systems such as the tourbillons, for example, the jumping second or the COS (crown operation system) are all developed and realised in-house. The latter are actually patented and found exclusively in Habring² watches. Habring² creates the perfect finish – the traditional decoration of movements – by hand, sometimes using antique appliances and in accordance with old lore. In addition to classic sunburst dials, stripe dials, perlage or cloud dials there are also plane polishes, chamfers and satin finishes. We also offer a very special decoration on request: The free-hand style of the engraver.

All Habring² models are automatically powered exclusively by mechanical movements. The future owner has the choice between manual and automatic winding. The manual winding version is supplied with energy by turning the winding crown whilst the automatic movement generates its energy with the help of a centrifugal mass from the movement energy of the wearer. The so-called power reserve – the timespan for which a watch runs when fully wound – is usually between 40 and 48 hours.

Maintenance: Mechanical watches should be serviced from time to time. This includes the annual water tightness inspection and possible replacement of the casing seal, comparable to the inspection and replacement of window screen wipers on a car. Testing water tightness takes a mere 20 seconds and, together with a short visual inspection, gives immediate information on the condition and possible necessities.

The term service also refers to an inspection that should occur at regular intervals of once every 5 years. This includes disassembling the movement for the purpose of removing worn (aged) lubricants from individual parts and re-lubricating them. Proper maintenance guarantees the timely identification and prevention of possible wear.

Every Habring² is delivered together with a set of spare parts. In addition to all of the necessary seals the set also includes are a winding crown, a few spring bars and a set of hands. Thus, each Habring² is independent of spare parts delivery and the associated waiting times – after all, Habring² watches are meanwhile found on every continent.

Mechanical watches are "Organic": In general, in the times of more mature consumers, the highly valued mechanical watch of today can be viewed in a very different light. Whilst the wearable mechanical watch can look back on more than 500 years of development history, the technology behind it has changed very little in the last few years. A Habring² is therefore just as reliable as great-great-grandfather's proverbial pocket watch that simply keeps on running. The availability of spare parts is guaranteed for more than 30 years and therefore nothing stands in the way of longer usage over generations, provided regular maintenance is ensured.

Positive eco-balance: Our processes are also environmentally friendly. The necessary cleaning of the movement during the course of a value conservation service at Habring Uhrentechnik OG is performed using bio-degradable cleaning materials. In principle, valuable watches and their mechanical movements are exclusively finished with durable metals. Brass and copper alloys are used for the movements alongside with tempered steels. When considering the recycling aspect a mechanical watch offers a much more favourable ecological balance than a quartz watch, which – along with its difficult to recycle electronic components – usually contains heavy metal batteries.

The preference for suppliers in Austria and neighbouring countries has its origins in a desire for sustainability and shorter routes of transport. In this connection, small to medium-sized family businesses with a similar structure are perfect partners with comparable requirements and goals. All components are calculated and produced on the basis of fair considerations; together we create and maintain jobs in Europe.

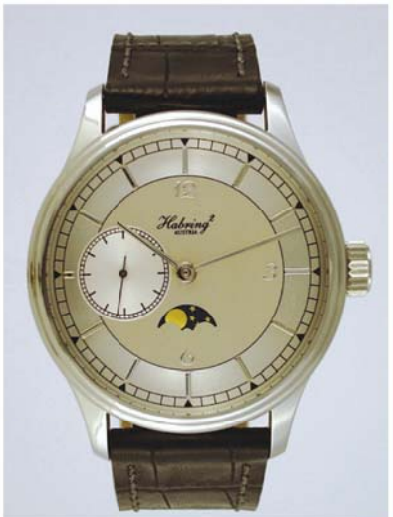
Watchmaker – Occupation with a future? For many years the profession of the watchmaker in Austria has been a dying trade due to the historical development of moving “away from production and towards repair”. The training of young watchmakers is in decline. Both training centres have difficulty in finding the necessary minimum number of students. In addition, the requirements demanded of the younger generation are high. Technical understanding, a steady hand and patience are just a few of the basic prerequisites. The biggest hurdle is that, after 3 ½ or 4 years of training, the graduates have only acquired a very basic knowledge. A high level of personal diligence is then necessary for many years to gain the experience that is indispensible for handling high value mechanical watches.

Sustainability – not just with regard to the product: Habring Uhrentechnik OG provides a practical apprenticeship for trainees under real conditions, enabling them to perfect their skills. In turn, this has enabled some employees to remain in Carinthia.

Time

It began in 2004 with a simple 3-hand watch that separately displayed hours, minutes and seconds following the classic archetype. A pure display of time, or “time only”, as it became known in international watch forums.

A change of model resulted in a new movement for the “Time only”, whereby the seconds were changed from the 6 o’clock position to the 9 o’clock position. Along with greater added value it also represents greater potential. In the meantime, the second generation of “time only” has a few minor “useful complications” to choose from. A large and very readable date function at 3 o’clock, the display of moon phases and a power reserve display – the amount of still available drive energy – make the “Time Only” to a “Time-Date”, “Time-Moon”, or “Time-Reserve.”



The facts:

- Available in stainless steel, titanium or gold casing in 42mm diameter, or in stainless steel with 36mm casing upon request
- Dials in silver with rhodiated, rose gold or blue appliqués; in black, blue or bronze with rhodiated appliqués
- Movement calibre A09M, upon request with additional displays such as date, power reserve or moon phases

Conclusion: The classic Habring² for purists and beginners.

The little Habring²

The primary function of every watch casing is to protect the movement. The casing, the sapphire face and the base section enclose the complicated technology like armour. The dimensions of the casing are determined directly by the size of the movement. The consistent use of robust and reliable movements with a diameter of 36mm has led to the familiar 42mm casing of the complete Habring² line.

The movements of the second generation with a diameter of just 30mm now make it possible to offer a casing with smaller dimensions without jeopardising the robustness or renowned reliability of a Habring².

Its dimensions of just 36mm make it an ideal alternative for those who prefer the classic casing size. The "small Habring²“ is a choice option for selected models and variants of bigger brothers and sisters. It is especially suitable for movements that have a slightly flatter design and therefore support the harmonious overall impression of the watch and enable the use of casings with a height of less than 10mm despite housing a mechanism that is both reliable and suitable for everyday use.

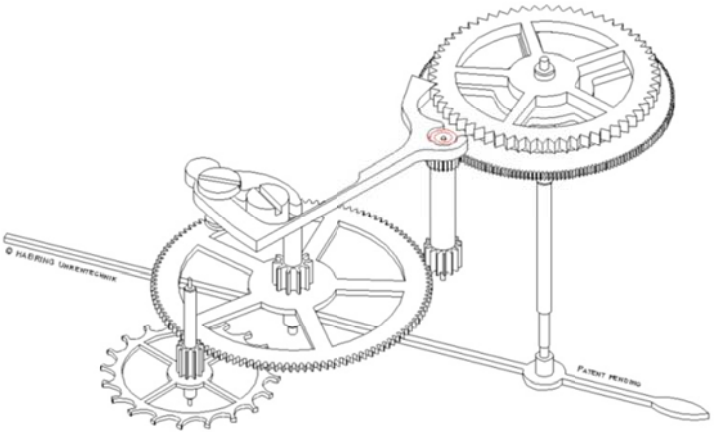
The facts:

- Stainless steel casing with a diameter of 36mm, available on request for the models "Time" and "Jumping Second" in their respective basic versions
- Dials analogue to the variants available for each model
- Movement calibre A09M, A09MD or A09MS

Conclusion: The classic Habring² for anyone who feels the 42mm variant is too big for their wrist.

Jumping Second

The main characteristic of the basic version of second model in the history of Habring² is its tidy and clear dial. All hands turn at the centre of the dial including the seconds hand. Whilst this doesn't depict a speciality in watchmaking, it is the movement of the seconds hand that indicates the passing of time. This is not the familiar, more or less continuous pace but, in the true meaning of the words, a jumping pace. What is normally associated with quartz watches was in fact state-of-the-art long before their appearance. Jumping seconds were already realised in pocket watches in the 18th century.



They then sank into oblivion and did not experience a renaissance until they were rediscovered by physicians in the 1950s: The usual manual pulse measuring method was simplified by the use of such time-keepers, or so-called “Doctor’s watches”.

The fascinating jumping movement of the seconds hand happens as the result of a constant preload of a single small spring that releases the seconds hand tip within fractions of a second, speeding it from one marker to the other in a precise cycle of seconds. The French description for this is “seconde morte”, which can only be inadequately translated as “dead second.” Incidentally, the technical implementation of the Habring² jumping second is patented worldwide.

The jumping second is also complemented with additional functions to choose from: Date display at 3 o'clock, power reserve, 2nd time zone or world time display, or a full calendar function that, along with the date, shows the weekday, the month and the current moon phase.

The facts:

- Available in stainless steel, titanium or gold casing with a 42mm diameter; the basic version is also available in stainless steel with a 36mm diameter upon request
- Dials in silver with rhodiated, rose gold or blue appliqués; in black and grey with rhodiated appliqués and superluminova coating; in white with rose gold appliqués
- Movement calibre A07M or A07, upon request with additional displays such as: date, power reserve, 2nd time zone or world time display, full calendar function

Conclusion: The Habring² with the little secret known only to its owner.

Foudroyante

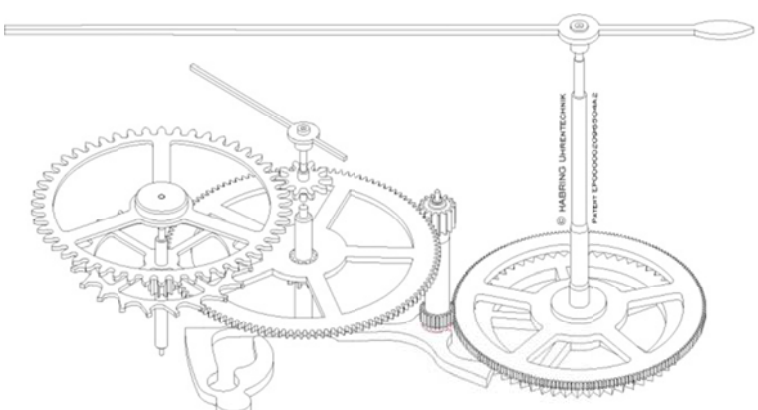
In the medical sense the term foudroyant means “starting suddenly, eruptive and quickly passing”, but it can also be interpreted into the watchmaker’s language as a hand that performs one revolution per second with similar movements. This movement is accompanied by the jumping seconds hand in the Habring²-Foudroyante. The two complementary hands together display and share the passing of time in synchrony, much in keeping with the motto “Seize the day – every second counts!” Whilst such a sub-seconds hand was an existing component part of earlier pocket watches, its combination with the jumping second is a unique and a world first. After all, technically speaking, it is a great challenge to successfully implement an axis with an attached hand that completes an incredible 86,400 revolutions per day.

Two years' development accompanied by excessive testing were necessary to bring the resistance of such a component against wear and tear up to the standard of the remaining movement.

The facts:

- Available in stainless steel, titanium or gold casing in 42mm diameter
- Dials in silver with rhodiated, rose gold or black appliqués; in blue and grey with rhodiated appliqués
- Movement calibre A07F

Conclusion: The Habring² for philosophers, but also for those for whom nothing can pass too quickly.



Chrono Sport

Chronographs are watches that can hold time spans. “Chronograph” translates as “time recorder” and, in actual fact; among the first chronographs were those that marked the end of a time span on a dial with an ink spot.

Today, the usual hour and minute display at the centre and the small, continuously running second hand at 9 o’clock are accompanied by the chronograph second hand at the centre and the 30 minute hand at 3 o’clock.

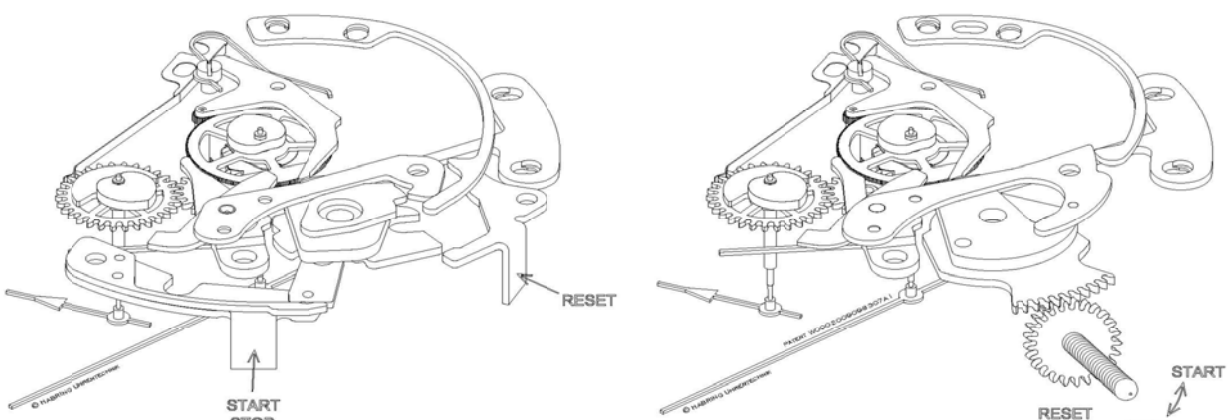
Start and stop is implemented using the button at 2 o’clock and resetting to zero with the button at 4 o’clock. Of course, the Chrono Sport can total stop times.



The facts:

- Available in stainless steel casing in 42mm diameter
- Dials in silver with blue or rose gold appliqués, with rhodiated appliqués and superluminova coating; in blue, black or grey with rhodiated appliqués and superluminova coating as well as in pure white and cream with blue appliqués.
- Movement calibre A08

Conclusion: The Habring² for athletes, but also for wearers who only want one reliable stopwatch to boil eggs for breakfast, for example.



Chrono COS

“COS” is short for “Crown Operation System” and signifies Habring²’s worldwide registered patent, the “Stop” function, controlled not by the classic button but rather by turning the crown. Additionally, you will see on the previous page the comparison with a conventional chronograph control.

This functionality is reminiscent of the combined on-and-off switch with the volume control of old radio sets. A light rotation of approximately 45° anti-clockwise with an audible click is enough to start the chronograph. The same motion in the opposite direction will also stop it. The Chrono COS can total stop times and, by simply turning the crown past the stop position against resistance, the counter will be reset.

The Chrono COS has not only done away with the buttons and associated drill holes in the casing, thereby reducing the risk of water penetration, but also with the common tiny jolt of the seconds hand at the start. In conventional chronographs this is caused by the required pressure point of the button and results in counter inaccuracies in range of tenths of second, be they significant or not. Thanks to the silky smooth operation of the Chrono COS this forgivable weakness of classic chronographs now belongs in the past.

As of mid 2011 the Chrono COS will also be available as a reduced model. The common face of the chronograph will also disappear along with the buttons. Whilst the constantly running seconds hand is completely omitted, the minutes hand appears in a new robe, namely as a 60 minutes hand from the centre. The Habring² Chrono COS ZM (ZM stands for “central minutes counter”) is thus the first and only additions chronograph of high value with the appearance of a classic three-handed watch.

The facts:

- Available in stainless steel, titanium or gold casing in 42mm diameter
- Dials in silver with blue or rose gold appliqués, with rhodiated appliqués and superluminova coating as well as in pure white and cream with blue appliqués
- Movement calibre A08COS

Conclusion: The athlete in evening dress. The well-known double-zero agent will envy you when he thinks about what is concealed under your shirt cuffs.

Chrono COS ZM

The Chrono COS ZM represents the consistent further development of the idea behind the Habring² Chrono COS: reduction to the bare essentials.

This escalation does away with not only the buttons but also with the familiar face of the chronograph. Whilst the constantly running seconds hand is omitted completely, the minute hand appears in a new robe, namely as a 60 minute counter from the centre. The Habring² Chrono COS ZM (ZM stands for “central minutes counter”) is thus the first and only additions chronograph of high value with the appearance of a classic three-handed watch.

The facts:

- Available in stainless steel, titanium or gold casing in 42mm diameter
- Dials in silver with gold-plated, rhodiated, rose gold or blue appliqués and superluminova coating as well as in pure white with rose gold appliqués
- Movement calibre A08COSZM

Conclusion: a more understated chronograph is simply inconceivable

Tourbillon 3D

The Tourbillon 3D from Habring² sets itself apart from classic constructions above all through its anti-magnetic copper beryllium tourbillon carriage, and also through the “flying” bearing of the filigree carriage which sets new standards in tourbillon design. Whilst flying bearings (this is the watchmaker’s term for a cantilevered or one-sided bearing) were more technically delicate and vulnerable in the past, the micro ball bearing which serves the Habring² Tourbillon 3D, is highly resistant against vibrations and shocks. This is what makes the art of watchmaking robust and suitable for everyday use.

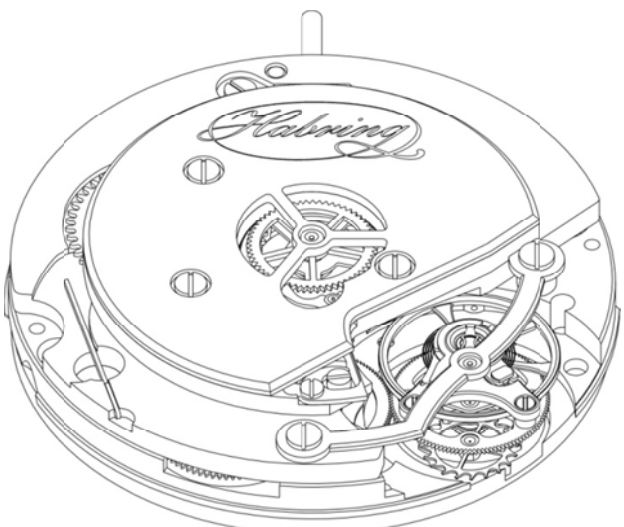
The facts:

- Available in stainless steel, titanium or gold casing in 42mm diameter
- Dials in silver or black each with rhodiated or rose gold appliqués
- Movement calibre T6498
- Available as an “open face” model with visible movement front

Conclusion: High quality watchmaking skill interpreted into everyday life.

The Tourbillon 3D with its classic cage clearly visible from the dial face is not the only Tourbillon from Habring². The unique modular system of Habring² movements makes it possible for other models to benefit from the “whirlwind.” The more compact and modern design is classically supported beneath a bridge construction can only be admired through the glass base. Please refer to our separate brochure “Habring² - The Modular Watch” for movements/models that can be equipped with a tourbillon. We will be pleased to send this to you upon request.

(Sample picture on the right: The Habring² calibre A09MST with jumping seconds and tourbillon)



The true story of the tourbillon

The “Crown” of watchmaking was invented in 1795 by Abraham Louis Breguet to – in simple words – balance the influence of gravity on the components responsible for regulating movement. These parts – the anchor wheel, the anchor and the balance wheel - are located in a cage which turns a full circle on its own axis.

One of the keys to high-precision mechanical watches is the equilibrium of the balance wheel, i.e. a centre of gravity, which ideally lies perfectly in the centre of rotation, similar to a gyroscope. Of course, Abraham Louis Breguet and his contemporaries were capable of perfectly balancing the wheels of that age, in a similar way that we balance car tyres today. So,why all the effort?

Looking at things somewhat closer, the metallurgical possibilities were way behind what they are today. The physical length adjustment of steel coil springs used at the time led to the movement running fast or slow; this was equalised by so-called compensatory balance wheels. The collar of these wheels were two semi-circular bimetallic strips of steel and brass; thus, the diameter of the balance wheel changed in response to changes in temperature, counteracting the behaviour of the springs. The problem lay in the production of these bimetal balance wheels. A prefabricated steel collar was dipped into liquid brass to apply the required brass coating. This insufficient hardness of the brass coating was remedied with mechanical compaction in the form of hammering. However, this resulted in stresses, which caused both bimetallic semi-circles to work differently under changes in temperature.

The centre of gravity of the balance wheel that was perfectly balanced at room temperature moved with heat and cold; we should remember that watches in those days were not yet worn on the wrist but rather carried in a pocket. The resulting inaccuracies of the movement annoyed Breguet so he devised the tourbillon mechanism to compensate them.

Today, wheel balance springs are finished from special alloys, unthinkable in the days of Breguet due to lack of technology. These springs work in turn with wheel balance collars made from copper beryllium, which has led to far less temperature dependencies for oscillating systems. So, it would appear that today the tourbillon is technically outdated. Not quite! Ultimately, despite all efforts to perfectly balance the balance wheel, a marginal difference in cycle remains solely because of the different layers of the unilaterally “breathing” balance wheel spring.

Even though these differences are even more marginal than those of the former bimetallic wheel balances, the tourbillon still successfully counteracts them to this day. An increased precision in comparison to conventional wheel balance systems is therefore given, even though the difference lies under one second per day.

Unchanged is the unique visual appearance of the tourbillon, which is all but the heartbeat of the movement turned inside out.



Custom-made models

Our revolutionary modular system allows us to cater specifically for client wishes like no other watch manufacturer. Not only is every Habring² made to order, our clients also have - if they so wish - the possibility to help shape the appearance and functions of their Habring².

Two casing sizes (42mm and 36mm), different casing materials, a large selection of possible dial materials and colours and a further, much bigger, selection of watch straps leave no desires unfulfilled.

Additionally, there are 4 exclusive and entirely different basic movements built by Habring² that can be equipped with various additional functions.

Would you like a Habring² with feminine attributes? You've come to the right place at Habring². We will package your time into your personal timepiece whether elegantly feminine or distinctively masculine. At Habring² you will find your true companion.

For further information please ask for our "Habring² - The Modular Watch" brochure (possible technical restrictions reserved!). Custom-made models can incur additional costs due to equipment requirements, etc.

The history of Austrian clock-making

Prior to the Industrial Revolution, the art of clock-making was at home in many regions of Europe. In recent decades Switzerland, Japan and – since its reunification – Germany have been looked upon as the classic clock-making countries; however, history tells us of other countries that were once considered strongholds of the art, including England, France, Russia, the USA and Austria.

The following compilation does not claim to be exhaustive but is limited to a few particularly outstanding personalities or events relating to Austria. It focuses on the manufacture of clocks – whether as a trade or on an industrial level – and not on related activities such as repairs, etc.

1551 first documented mention of a clock-maker in Graz

1564 Development of the Graz "Landhausuhr" (country house clock)

1770 Josef Geist, founder of the first Austrian clock manufacture in Graz, is born in Vienna

1789 Establishment of a "clock manufacture" in Vienna by relocating 93 clock-makers and associated tradesmen originating from Geneva with state support provided from Konstanz; its name: "Imperial and Royal Privileged Clock Factory of Geneva"

1799 Josef Thaddaeus Winnerl, the inventor of the so-called "Chronoscope" – a predecessor of the chronograph – is born in Mureck

1800 Dissolution of the "Imperial and Royal Privileged Clock Factory of Geneva" due to a lack of commercial success

1815 Winnerl relocates to Graz having spent six years as an apprentice in the trade; founding of "Geist und Jäckle"

1824 Josef Geist dies in Graz. His son-in-law and business partner Bernhard Jäckle acquires his clock-making factory in Graz and subsequently manages it together with his two brothers

1828 "Gebrüder Jäckle" produce 2,000 clocks

1830 Clock-maker Simberth Höfler from Völkermarkt/Carinthia is appointed in Graz as master clock-maker

1836 "Gebrüder Jäckle" produces 5,000 clocks and maintains customer relations reaching as far as England, New York and Philadelphia, in addition to many major cities in Germany, Italy and the Levant

1829 Winnerl relocates to Paris and becomes an independent clock-maker following periods of employment with various others including Breguet

1841 Having worked with Winnerl for four years, Ferdinand Adolph Lange returns to Glashütte and establishes the region's clock-making industry in 1845

1844 Chronometer manufacturer Winnerl receives a knighthood from the French Legion of Honour and publishes some of his works

1850 Winnerl is appointed to the Observatory in Paris

1859 Freedom of trade is declared under new trade laws introduced in Austria. The clock-maker guilds and their protected privileges are a thing of the past

1860 "Georg Jäckle", successor to "Gebrüder Jäckle", manufactures 1,557 clocks that are sold in the capital cities of Austria, Saxony, Prussia and Italy

1860 Only 24 clock-makers remain as members of the Graz guild

1868 Winnerl manufactures the first electric pendulum clock

1883 The classification of trades (including that of the clock-maker) still applicable today is introduced

1890 Austria's clock-making industry more or less vanishes into thin air

1917 Karl Satori (1871 - 1954) invents the fused quartz rod compensation pendulum

To describe the manufacture of specific clocks such as masterpieces and similar would go beyond the scope of this article. The records of the clock-makers of Graz reviewed by Lukas Stolberg list a total of 342 names up to the year 1890, including a few who manufactured a number of clocks. A list of 2,500 Viennese clock-makers compiled by Kaltenböck contains names less than a dozen manufacturers active at the start of the 20th century.

Sources:

Lukas Stolberg: „Die Steirischen Uhrmacher“ (1979); Frederick Kaltenböck: „Die Wiener Uhr“ (1988); Claterbos, F. H. van Weijdom: „Viennese Clockmakers and what they left us – Geschichte und Technik der Wiener Uhren und Wiener Uhrmacher (1979)“

Further information, for instance on clock movements, technical details, the modular system of the Habring² and answers to other frequently asked questions can be found at our website www.habring2.com.

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