

Altherr Lexikon English Version

Term	Explanation
A	
a.m	Abbreviation for the Latin words ante meridiem (meaning: before noon) and describes the period from 00:00 midnight to 12:00 noon. A common way of describing time in most English-speaking regions. The USA in particular, as well as various former colonial areas, use the 12-hour format.
Accuracy	Deviation from a norm within a specified period of time. With wristwatches, usually seconds per day, seconds per week or seconds per month. The closer the accuracy is to zero, the more precisely the movement works. Many factors, such as the age of the watch, temperature, moisture, magnetism or damage influence the accuracy of a watch.
Acrylic	Also: plexiglass, plastic glass. The basic component is PMMA (polymethyl methacrylate). Average scratch resistance is 3-4 Mohs. This means that acrylic glass is not particularly scratch-resistant, but very break-resistant, which is why it is still used in models from many manufacturers despite the actual superiority of sapphire glass. Vintage-inspired models in particular benefit from the nature of the acrylic glass, as extremely curved (domed) watch glasses can be made.
Alarm Function	Special function of some movements, which remind the wearer of a previously set time with a signal. These signals can be acoustic (shrill, ringing) or haptic (hum, vibrate) in nature. Wrist alarm clocks have lost their popularity these days, but are still used in some models by some manufacturers. Jaeger-LeCoultre and their MemoVox series are considered representative.
Aluminium	Abbreviation: Al. Chemical element belonging to the earth metals. The low weight and the softness allow aluminum to be used in parts of watch straps as well as cases (less often watch movements).
Analogue Display	Even and gradual display. In the case of wristwatches, described by the steady movement of the hands. Jumping displays are referred to as digital.
Annual Calendar	A mechanism that requires the date to be set once a year in February, but is otherwise able to differentiate between 30 and 31-day months. Occasionally also called full calendar.
Anti Reflective Coating	A steamed on layer of anti-reflective coating prevents strong light reflections and keeps a watch legible under most angles and lighning situations. Most AR coatings can be found under the crystal. If also applied onto the crystal it may show visible scratches since it often is not as hard and resistant as the underlying sapphire glas.
Antimagnetic	Antimagnetic movements are encased in cages or similar made of soft iron in order to be resistant to external magnetic fields. Such magnetic fields can emanate from large machines (MRT, CT, power pylons, etc.) as well as from cell phones, laptops or magnetic closures on handbags in everyday life. In addition to the casing of the clockwork, the use of anti-magnetic materials, such as silicon, gives movements an improved resistance to magnetic fields. Magnetized watches may run imprecisely or even lose their function. Watchmakers and jewelers have special devices to demagnetize watches.
AR Coating	See „Anti reflective coating“
Art Déco	Style period between the 20s and 40s of the 20th century. Generous, elegant and yet distinctive lines characterized fashion, furniture, jewelry and much more. Often there are simple, angular shapes with vertically arranged elements. The term “classic modern” is often used synonymously. Jaeger-LeCoultre's Reverso is a prime example.
Assortiment	Watchmaker's terminology. The Assortiment (french) includes those parts of a watches movement that form individual units. Nowadays Assortiment often describes the escapement – including escape wheel, balance, the lever and the mounting bridges. The Assortiment usually can be viewed and handeled seperately from the Ebauche, which itself consitsts of baseplate, the gear train, the winding unit and some other components.
Atomic Clock	Timepiece in which the measuring process is based on the vibrations of certain atoms. These atoms are excited to vibrate by electromagnetic fields or pumps. Atomic clocks have the ultimate in accuracy and are often used as a reference value.
Automatic Watch	Watch, which gets its kinetic energy by the movement of a winding rotor with its winding mass.
Azuré	Circular decorative engraving on dials and subdials. Distinctive "record corrugation".
B	
Baguette Cut	French "la bague" means "the stick". Baguette translates as “little stick” and stands for a special diamond cut in the watch and jewelery industry. Due to their parallel facets, baguette diamonds play less with the light than diamonds with a brilliant cut and are therefore usually more reserved. Baguette stones are usually about three times as long as they are wide and are characterized by their rectangular shape.
Baguette Movement	A narrow movement arranged on two levels, which is mostly used in graceful ladies' watches with automatic drive or manual winding. Baguette movements can also be found in smaller men's watches, often with a rectangular case.
Balance	Developed by Christiaan Huygens around 1665. The vibrating “heart” of a watch, which generates a movement defined over time. This movement is implemented by a gear train, which in turn dictates the representation of the time on the dial. It fulfills the same purpose as a pendulum, for example on a grandfather clock. So that the vibrations can be kept constant, the balance is excited by the so-called escapement by the mainspring in fixed periods. The balance wheel performs so-called half oscillations, which are used by the manufacturers to indicate the frequency of the built-in movement.
Balance Cock	Suspension of the balance. The balance cock is opposite the lower work plate and together with it forms the two bearings for the shaft of the balance. So it is the upper part of the balance construction.
Balance Shaft	Pin, which forms the center and thus the axis of the balance wheel. The balance wheel as well as the hairspring and the lever disk (plateau) are attached to the balance shaft. The balance shaft (and thus the entire balance) is mounted between the base plate (below) and the balance cock (above).

Term	Explanation
Balance Spring	Embedded in the balance wheel, both parts together form an oscillatable element, from whose oscillation frequency the measurement of time is derived. Can be made from different materials to positively influence the accuracy, such as silicon.
Balance Wheel	Fine wheel surrounding the balance spring. May contain oscillating weights and screws for adjustment.
Barometer	A barometer measures the static-absolute air pressure. Weather trends and differences in altitude can thus be recognized. Barometers are mostly used in lavishly equipped digital watches, as well as military service watches. The information is shown on a display.
Barrel	The barrel contains the mainspring and stores the energy needed to drive the movement. In watches with a extended power reserve one may find double barrels.
Base Plate	Base plate of a watch movement, which carries other components. The base plate, together with the bridges, forms the so-called raw work (ebauche).
Bearing Stones	Exclusively synthetically produced rubies, which reduce the friction as bearings of moving parts of the movement and thus prevent wear. The more complicated a clockwork, the more jewels are needed. The number of stones installed is often seen as a quality feature of a clockwork, but this does not necessarily have to be correct. Classic bearing stones are called cap stones, whereas synthetic rubies can also be used as anchor pallets.
Bezel	Part of the case around the watch glass. Protects both the glass and the case itself. Can be permanently installed or rotatable in one or two directions. Depending on the area in which the clock is used, there are simple decorative bezels (smooth or in different patterns) and scaled bezels. The latter include diver bezels, tachymeter bezels, slide rule bezels, GMT / time zone bezels, world time bezels, yacht timer bezels, pulsometer bezels, and a some more.
Bicompax	Originally a modified, now established modification of the Tricompax. Bicompax describes the layout of a chronograph with two (bi) subdials, each at three or nine o'clock.
Big Date	See „Date"
Blued	Thermal blueing refers to the process of slowly heating steel to around 300 ° C. In the course of this process, the material is gradually covered with a delicate, blue-shimmering oxide layer. The blueing is one of the many refinements when making a watch. The hands and screws of the clockwork are often blued.
Bluetooth Watch	Electronic watches that receive or send data from third-party devices via the wireless Bluetooth connection technology. Modern electronic sports watches and smartwatches usually have Bluetooth technology.
Breguet Hairspring	Balance spring, the last turn of which is bent upwards at an angle. Invented by Abraham-Louis Breguet in 1795, a Breguet hairspring ensures a more even movement of the hairspring and thus less rate deviation depending on the spring tension. Simply put, a Breguet hairspring optimally centers the vibrations in every position.
Breguet Hands	Watch hand design designed by Abraham-Louis Breguet. It is characterized by a slim hand body, which is separated from the fine needle tip by a perforated circle. Classically, these types of hands are made of blued steel. They are now also used by other manufacturers outside of Breguet watches.
Bridge	(Precious) metal part, which attaches at least one axis/shaft (or pin) of a gear wheel from above. It is often decorated because it offers a large enough surface.
Brilliant Cut	A round diamond that is cut with 57 circular-conical facets. Through this faceting, diamonds play intensely with the light and make them sparkle strongly in direct comparison to baguette diamonds. Jewelry set with brilliant cut diamonds can often be recognized by the strong level of light reflections.
Bronze	A material that has now become popular in the watch industry, which corrodes on contact with the skin and the ambient air and takes on a new appearance over time. Every bronze watch therefore becomes unique over time. In order not to let the patina become too uncontrolled and to avoid contact reactions with the skin, many manufacturers cover their bronze with a protective film.
Brushing	See „Satination“.
Butterfly Clasp	Double folding clasp. Allows a particularly wide opening of the bracelet on each side of the clasp.
C	
Cabochon	Ornamental stone with a round cut. Often found as a capstone on winding crowns, for example on Cartier watch models such as the Cartier Tank.
Caliber / Movement	Name for the movement that is built into a watch. Originally a unit of measurement (caliber) for the diameter of the movement that it needed to fit into the case.
Caliber / Movement	See „Movement“.
California Dial	See „Index“.
Cam Chronograph	See „Chronograph“.
Cam Chronograph	See „Chronograph“.
Carat	Describes both the weight of gem stones and the fineness of precious metals in two fundamentally different ways. In gem stones, 1 carat equals 200 mg and thus 5 carats = 1 gram, in precious metals 24 parts equals 100%. Karat indicates the proportion of the pure precious metal in the alloy. For example, 18 corresponds to 75% of 24. For example, 18 carat gold contains 75% pure solid gold and is therefore also called 750 gold - according to the fineness units, which refer to 1000 parts.
Carbon	Carbon fiber material. Is used in cases and dials and is characterized by many properties that have been adapted to modern requirements. These include: stiffness, breaking strength, tensile strength and particularly noticeable lightness.

Term	Explanation
Carbon Fiber	Also: carbon. Very modern, break-proof and light material for the manufacture of cases and dials. Some concept or prototype watches also use carbon parts in their movements.
Caroussel	Complication developed by the Danish Bahne Bonniksen, which is based on Abraham-Louis Breguet's tourbillon. Its construction is more robust than the classic tourbillon. A carousel design developed by Richard Lange received a patent in 1899. In contrast to the tourbillon, whose cage is only driven by the fourth wheel behind it, the carousel is driven in two ways. A gear wheel turns the carousel, another drives the escapement. With a carousel, even more precise rate values can be achieved than with a tourbillon thanks to a balanced distribution of force.
Caseback	The bottom of a watch that closes the case from below. Can be solid or transparent and in the latter case consist of sapphire glass or plastic glass. Is either screwed on, pressed on or fixed by screws and gives the movement of the watch a more or less pronounced protection depending on the method and seal used.
Center Wheel	Cogwheel of a watch movement that moves the minute hand. Due to its translation, it rotates completely once within 60 minutes.
Central Second, Center Seconds	A seconds hand mounted centrally on the dial shows the advancing seconds. A distinction must be made between the indirect central seconds and the small seconds.
Ceramic	Modern material, which is used in cases, bezels and also dials. There are different mixtures that have different properties. Particularly noteworthy is the enormous scratch resistance and the rich, three-dimensional color tones that can be achieved. In its manufacture, ceramics are fired at temperatures above 900 ° C.
Chaton	An important component of a movement. Circular, perforated piece of metal, which is let into a hole. In this hole, bordered by the chaton, rests a bearing stone (pivot jewel), which in turn serves as a bearing for the tip of a wheel axle (pin). Chatons are either pressed in or fastened with screws. Chatons can be found on the plate, the bridges and sometimes the balance cock. A classic example are chatons made of gold, which were used in pocket watches. Hand-wound movements from A. Lange & Söhne impressively depict the golden chatons around the storage stones.
Chronograph	From the Greek "chronos" for "time" and "grapho" for "I write". Essentially designates a stopwatch. The chronograph function is the most popular complication in wristwatches. Characteristic is the case anatomy with (mostly) additional pushers next to the crown and small sub-dials (totalizers) for displaying the permanent second, the chronograph minute and the chronograph hour. The chronograph second hand replaces the central second hand and is in the zero position at twelve o'clock as long as the chronograph is not operated. The continuous, permanent second is displayed on a small totalizer. With a chronograph you can not only stop times, but also determine speeds, distances and much more with appropriately scaled bezels. A distinction is made between column wheel chronographs, which control the function of the chronograph via a column wheel with nine teeth and cam lever mechanism chronographs.
Chronometer	Particularly accurate watch movement. Movements receive a chronometer certification with a maximum rate deviation of -4 to +6 seconds per day. An official chronometer has to be confirmed and certified by the Swiss observatory "Officiel Suisse des Chronometres COSC". The raw movements are tested outside their cases in five different positions, three temperatures and a humidity of 24%. Some manufacturers have their own, sometimes stricter criteria they use to test their watches in their own laboratories. Germany has had its own test laboratories since 2006, which are operated by the LMET and SLME. This test center is located in an observatory in Glashütte. No raw movements are tested there, but the fully cased up watches. LMET and SLME certificates are therefore considered to be particularly strict and precise.
Chronometer Certificate	Certificate by the COSC for very precise watches. See „chronometer“.
Chronometry	Generic term for all subject areas that deal with time measurement.
Cintrée	Further development of the tonneau case. There is an curvature at 3, 6, 9 and 12 o'clock, whereas classic tonneau cases are only curved at 6 and 9 o'clock. Franck Müller has been trend-setting for Cintrée-Curvex cases.
Click	Wheel with serrated teeth, in which a pawl engages and thus only enables a unidirectional direction of rotation. Mounted on the barrel, the ratchet wheel prevents the spring from suddenly discharging.
Click (Barrel Click)	Consists of ratchet wheel, pawl (click), click spring and ratchet spring. Prevents the mainspring from relaxing on its own.
Clous De Paris	An elaborate type of dial decoration. The guilloché or embossing creates small squares that give the dial a grid pattern. The term “horseshoe nail pattern” is also used. The best-known representative is the Royal Oak by Audemars Piguet with its “Grande Tapisserie” dial.
Clutch	Mechanism that uses angled teeth to ensure that turning the crown clockwise takes the clutch wheel with it and winds the watch. Turning counterclockwise, however, does not take the clutch wheel with it. Pulling out the crown decouples this mechanism and allows, for example, the time or date to be set.
Co-Axial	A special type of escapement that was developed by George Daniels and refined by Omega and made suitable for the masses. Since 1999, Omega has increasingly equipped its catalog with co-axial movements. In contrast to regular, free anchor or Swiss lever escapement, the friction and thus the wear is considerably reduced and requires little or no lubrication. The first watch with this technology made available to a larger market was the Omega De Ville Co-Axial. Grand Seiko's Double Impulse Escapement is based on a similar principle.
Co-Axial Escapement	see „Co-Axial“
Cock	Part of the base movement. In contrast to the bridge, a cock is only attached to one side of the plate and has a floating end, similar to a crane. Usually attaches wheels, balance and / or lever.

Term	Explanation
Column Wheel	Tower-shaped column wheel of a chronograph, which makes the operation of the chronograph function precise and crisp. It synchronizes all switching processes within the chronograph caliber and is now seen as a quality feature of a chronograph due to its expensive and complicated production. In the early days, column wheel mechanisms were the common technology found in chronographs. In the end, however, they were almost completely replaced by cam operated chronographs, which were much simpler and cheaper to manufacture. Only a few manufacturers stuck to the column wheel as a "historical chronograph mechanism". Column wheel chronographs today represent, in simple terms, the “upgrade” compared to a set chronograph, although from a purely technical point of view neither of the two variants can be described as superior. Especially Patek Philippe however manufactures extremely high end cam chronographs to this day.
Complication	Additional mechanical function of a watch. Strictly speaking, even the second hand is considered a complication, but is rarely counted as such. Examples of some complications are: date display, chronograph, power reserve display, moon phase, alarm function, annual calendar, perpetual calendar, world time, second time zone, repeater hammer mechanisms, tourbillon, pressure displays and much more.
Constant Force (Force Constante)	Constant force mechanisms ensure that there is a constant amount of winding energy released from the mainspring no matter how tightly or loosely it is wound. Usually fully wound springs release energy quicker and slower when the power reserve comes to an end. This may result in timing deviation. Constant force mechanisms release bursts of energy from the barrel in fixed intervals to ensure optimal timekeeping. Examples are the Force Constante movements of F.P. Journe using a Remontoir d’Égalite as well as the Fuse & Chain mechanism used in the Logical One by Romain Gauthier.
Côtes De Genève	Decorative cut made of wide, parallel stripes that run vertically. This type of decoration can be found on parts of watch movements, such as the rotor or the bridges and the balance cock.
Countdown Timer	Stopwatch running backwards, which generates a signal tone when it reaches 0.
Crown	Part of the clock on the side of the case. Mostly cylindrical and with ribbing for a good grip. Can be available in different sizes depending on your needs and demands on the watch. Used to set the time and usually the date. Often found screwed down into the case in sports watches for increased water resistance. For hand-wound watches, it is used to wind the mainspring by turning it.
Crown Winding	Manually supplying energy to the mainspring by turning the crown.
Crystal	Transparent cover that covers the dial from above and closes the case. Despite the designation “watch glass”, this term includes plastic as well as Plexiglas, mineral glass and sapphire glass.
D	
Date	The date of the day is shown on the dial. Is done either in analog form by indicating a pointer (pointer date) or digitally as a number on a rotating date disc. If the complete date is displayed in just one window (example: 31), we speak of a simple date. However, if there is a separate window for each digit (example: 3 1), one speaks of a panorama date or large date.
Dead Beat Seconds	See „Jumping Seconds“
Decompression Timer	Serves as orientation for divers to allow the ascent from great depths to happen in a controlled manner. This is important to prevent decompression sickness. Watches with this function often have a corresponding scale on the dial. An example would be the Mido Ocean Star Decompression Timer.
Desk Clock	Clocks that became popular in the 16th and 17th centuries for placing on furniture. Today, table clocks are more used for design and interior decoration. A well-known representative is the Amos from Jaeger-LeCoultre.
Digital Watch	A clock that shows the respective digits directly instead of showing the time via Position of the hands. This does not necessarily have to be electric. Mechanically operated clocks can also have a digital display of the time. A popular example here is A. Lange and Söhne Zeitwerk. In common parlance, however, a digital watch often means a battery-operated quartz watch with a digital display, such as a Casio G-Shock.
Dive Watch	Probably the most popular category of sports watches. Originally developed for use in diving, it is now a popular fashion accessory. Diving watches are characterized by the following criteria: Robust construction, high water resistance of at least 200 m, screwed crowns, unidirectional rotating diving bezels, steel, rubber or textile straps, high readability under all conditions, predominantly brushed cases and strap links. In Germany, only ISO-certified diving watches may be sold as actual sports instruments. The newly fulfilling DIN-8306 criteria are: 1. Tested water resistance up to 20 bar, corresponding to a diving depth of 190 meters, 2. Clear readability from a distance of 25 cm from the time, selected diving time, functioning of the watch - even in the dark and Period of time (timer or bezel). A distinction must be made between diving watches and so-called "divestyle watches", which take on the look of diving watches, but are not suitable for diving.
Diving Bezel	Left unidirectional (unidirectional) rotatable ring that sits on the case. Diver bezels usually count from 0 to 60 and allow the wearer to align the pip with the minute hand. In this way, the advancing time can now be precisely recorded, which helps divers to observe their decompression time. The one-sided rotating mechanism also ensures that inadvertent adjustments always result in a supposedly longer diving time, thus avoiding the risk of underestimating the actual diving time. In any case, surfacing can be started in good time. In everyday life, events of up to an hour can be conveniently and easily timed.
DLC	"Diamond Like Carbon". Hard, robust and mostly dark coating for watch cases and parts. Is more scratch-resistant than PVD and also anti-allergenic.
Domed	A domed watch glass has a curvature and thus differs from the flat watch glasses that are popular nowadays. Acrylic glass in particular can easily be domed and is therefore found above the dials of vintage or vintage-inspired wristwatches. Even bezels can be described as domed in their shape.
Double Barrel	Two barrels connected in series, through which an above-average power reserve can be achieved.
Double Impulse Escapement	see „Co-Axial“

Term	Explanation
Dress Watch	Classy, rather conservative watch that can be worn with a shirt and suit. Mostly on a leather strap, more rarely on a steel bracelet, dress watches usually have simple, calm dials with few functions. In addition to the hour and minute hands, the classic dress watch has a second hand at most. Reading (tracking) the second on festive occasions used to be considered impolite.
Drive / Impulse	The drive provides a clock with the energy it needs. In mechanical watches, weights or springs act as a drive element. Electric clocks work using magnetic fields from coils or motors. The common drive for mechanical wristwatches is the mainspring, which is housed inside the barrel.
Drive Train	All wheels, which, connected in series, transmit the power from the barrel to the balance. These include the minute wheel, third wheel, fourth wheel and the escape wheel itself. The English nomenclature is also often used, which is why it is listed in the following in the same order: center wheel, third wheel, second wheel, escape wheel. For watches with a decentralized second hand, this is controlled via a change wheel (minute wheel).
E	
Ebauche	A raw movement without escapement system, which, however, already has shafts and the gear train.
Echappment	French for „escapement“. Usually means Balance, balance wheel and lever/pallet fork.
Eco Drive	Introduced by the japanese manufacturer Citizen Eco-Drive movements get their energy from solar panels which are integrated into the dial. Those watches are especially popular amongst divers since the caseback has not to be unscrewed to change the battery which may lead to a loss in water resistance.
Eight-Day Movement	Movement with a running time / power reserve of at least one week. Most watches that are equipped with such movements have a double barrel to be able to generate the required energy and need a manual winding, as no rotor can supply this energy on its own.
Enamel	Melted sand which gets infused with oxygen to achieve very plastic, almost synthetic looking surfaces. Can be seen in a wide variety of colours.
Engine Turning	Also: „cloud pattern“ or „perlage“. Type of metalworking and finishing. Small, rotating grinding wheels are brought into contact with the surface of base plate, bridges or balance cocks and give the parts a "cloudy" pattern.
Escape Wheel	Part of the oscillating system of a clockwork. The pallets of the armature engage the teeth of the escape wheel.
Escapement	See „Oscillating Sysntem“
ETA Calibre	ETA S.A. is a Swiss movement manufacturer on whom many watch companies rely for whole movements or individual parts. ETA is the most important company in that specific niche. Only very few manufacturers can say that they never used ETA parts. Many nowadays popular movements were originally based on ETA calibers or ebauches. ETA movements are known to be well engineered, robust and easy and cost efficiently to repair. Most watchmakers in the world are schooled on ETA movements. Founded in 1793 ETA today is part of the Swatch Group.
F	
Facetteted cut	Way to polish diamonds and gem stones. Facetts reflects and distort the light to achive characteristig shimmering.
Fauxtina	Coming from the french term <i>faux</i> meaning <i>fake</i> or <i>wrong</i> . Combined with the term <i>patina</i> this neologism describes artificially aged watch components and elements such as the lume. It gives modern watches an aged look.
Flieger Watch / Pilots Watch	Flieger watches (or pilots watches) were developed in the early 20th century and especially suited the needs of pilots and air craft operators. Those timepieces are characterized by high contrasts on the dial, easy and instantaneous legibility, broad hands and indices, an oversized crown for easy operation and a trianguar twelve o'clock indicator. Modern day pilots watches also contain plenty of lume and may shocase additional functionality like chronographs, timing bezels and GMT complications.
Flyback	Complex mechanism for chronograph watches. Operatiing the chronograph pusher resets the running chronograph and instantaneously restarts it without the loss of time keeping. By this exacts lap times or intervalls can be measured. A flyback function replaces the stopping, resetting and restarting of the chronograph hand with a single push.
Fold Over Buckle	Part of the clasp of watches with a safety bar. Is folded over after the clasp clicks to prevent accidental opening.
Folding Clasp	Popular safety mechanism in watch bracelets. Sometimes even found on leather straps. Both individual halves of the bracelet can be folded and unfolded at a central hinge-system which allows for safe handling of the watch since the braceletts ends never are fully seperated. For extra safety a fold-over buckle might be found.
Free Sprung Balance	See „Regulation“.
Fusé And Chain	Watches with Fusé and Chain - power transmission compensate for the inevitable loss of drive energy of a balance spring. This construction is one of the so-called "Constant Force Mechanisms". The energy delivered to the gear train remains the same over the entire course of the gear autonomy. When the force of the mainspring is transmitted to the barrel, the Fusé and Chain mechnism compensates for the successive deviations. Extremely rare to find and highly complex to manufacture. A nice example is the Logical One by Romain Gauthier.
G	

Term	Explanation
Gasket	Sealing rings (gaskets) ensure tightness against moisture, water and dust. They can be found at least on the case back, on the crown and around the watch glass. For watches with a chronograph function, also on the corresponding pushers. Various plastics are used to manufacture the sealing rings. Sealing rings are subject to a relatively high rate of wear, as the plastics can become brittle and porous over time when they come into contact with water and / or cleaning agents, as well as sun and heat. With every revision the seals are checked again and the sealing rings are greased.
Gear Train	The movement of a wristwatch consists of multiple wheels. The escapewheel connects to the third wheel, which drives the minute hand. The second wheel connects the third wheel to the adjacent first wheel, which drives the minute hand. A reduction gear wheel connects the first wheel to the hour wheel. <u>Seen from the balance the order is as follows</u> : Balance wheel - escape wheel - 3rd wheel (drives seconds hand) - 2nd wheel - 1st wheel (drives minutes hand) - reduction gear wheel - hour wheel (drives hour hand).
Geneva Seal	Also: Geneva hallmark. Quality seal of the Geneva testing office for watches. Exclusively reserved for watches that have received their complete manufacture, assembly and adjustment in the Canton of Geneva. Is considered an extremely high seal of quality.
Geneva Stripes	See „Côtes De Genève“
Glashütte Rule	Unwritten code of honor in the Glashütte. Means that only those clocks are allowed to indicate the name of the city as the place of origin if their "predominant value added share" was located in Glashütte.
Glashütte Stripes	Also: Glashütte stripes. Stripe-shaped decorative grinding for rotor, bridges, balance cock and possibly the plate. Glashütte counterpart to "Côtes De Genève".
GMT	Greenwich Mean Time. Prime Meridian. Former universal time, set to the local time of the London parish of Greenwich and astronomically based on the position of the sun. Today local time in London. The GMT concept has largely been replaced by UTC (Universal Time Coordinated), but is used on the dials of many watch manufacturers to indicate that the watch can display a second time zone. In watchmaking, GMT is representative of a time zone complication.
Grande Complication	Watch models that combine a multitude of complications and are therefore a sign of high horological craftsmanship. There is no fixed number of complications a watch must have to be called a Grande Complication. Well-known models, such as the Patek Philippe Sky Moon Tourbillon 5002 or IWC Portuguese Grande Complication, however, have more than a dozen different complications.
Grande Sonnerie	Type of repetition hammer mechanism based on the sequence of strikes. A big bell is struck first to indicate the current hour. This is followed by double strikes for every quarter of an hour that has passed. (Example: 3 deep single beats, 2 light double beats, 8 light single beats correspond to: 3 o'clock + 30 minutes + eight minutes = 3:38 a.m.).
Greenwich Mean Time	See „GMT“.
Guilloche	Pattern applied by machine or by hand to the dial, which consists of curved or straight, intersecting lines. These patterns are also rarely found on cases made of precious metals.
H	
Hand Winding	Manual form of the watch winding. By turning the crown, the main spring is tensioned and prepared to transfer its stored energy to the movement. A few watches, like earlier pocket watches, have a specially designed key to wind the spring on the back of the case. A well-known example is the A. Lange und Söhne“Lange 31“. This mechanism gives the watch a power reserve of 31 days.
Hand Wound Movement	See „Hand Winding“
Haute Horlogerie	French for “fine watchmaking”. Specifically describes the ability to create sophisticated complications. Often synonymous with a largely independent and integrative manufacture, for the manufacturing of parts and cases in small-scale and manual work.
High Beat	Often stylistically "Hi Beat". High beat movements exceed 36,000 vibrations per hour (5 Hz) in their beat frequency and allow the second hand to glide smoothly.
Hour Repitition	An acoustic signal sounds to show the full hours. See also “repetition”.
Hybrid Watch	Wristwatch that uses both analog and digital, or mechanical and electronic displays and techniques. Can be found in many smartwatches that use the optics of mechanical timepieces.
I	
Incabloc	The best known method of shock protection for a watch movement. Protects the balance pins from breaking in the event of a fall or impact. A capstone covered by an elastic spring (plate) sits on the tip of the pin. In the event of impacts in the vertical direction, this spring plate allows a certain amount of freedom of movement upwards and downwards. Lateral impacts are compensated for by the shape of the stone lining. The conical shape allows the stone and the journal to swing to the left and right.
Index	Means the numbers and symbols which are used to indicate the time by the hands. Can be Arabic numbers (1,2,3,...), Roman numerals (I, II, III,...), a mixture of both (California Dial), or any other symbols. Round indices, line indices or bar (baton) indices are popular. Indices can be painted, printed or applied (applied).
Indication	Device located on the dial to indicate the passage of time. These include, for example, the moon phase or a calendar. Chronograph functions are displayed on so-called totalizers/sub dials.
Indirect Central Seconds	Sometimes this occurs in movements that were designed with a decentralized, small second, but were later converted to a central second hand. The second hand is driven separately from the gear train that drives the rest of the clockwork.
J	
Jewel	See „Ruby“.

Term	Explanation
Jumping Hours	Digital hour display on a dial. One (or possibly several) rotating disk(s) show the progressing hour in a window. A popular example is the Oris Atelier Jumping Hour, but also the A. Lange & Söhne Zeitwerk.
Jumping Seconds	Synonym: Dead Beat Seconds or Seconde Morte. Complication of a mechanical watch in which the natural, high-frequency sliding of the second hand is inhibited in such a way that it ticks like a quartz watch. Extremely complex to construct and testifies to high horological skills. Often understood as an understatement, as it looks like a quartz watch at first glance. The independent master watchmaker F. P. Journe is known for this mechanical work of art.
K	
Kinetic Watch	Quartz watches, which draw their energy from the movement on the wearer's arm, are similar to mechanical watches. A small generator generates voltage to drive the functions.
L	
Leap year	A year occurring every four years in which February has 29 days instead of 28 days. Thus the calendar year is synchronized with the astronomical year. In the watchmaking trade, leap years have always presented watchmakers with special challenges when it comes to building mechanical calendars. This problem was solved with the development of the perpetual calendar, which recognizes leap years and represents the month of February with 29 days.
Leap Year Indicator	See “Perpetual Calendar”. The leap year is often marked as such by a small indicator on the dial.
LED (Display)	Light Emitting Diode. Technical name for an electro-optical display.
Lever	Essential part of the escapement of a movement. Provides the connecting piece between escape wheel and balance shaft. The anchor/lever receives the impulse from the escape wheel and passes it on to the balance. At the same time, a precise time keeping is guaranteed by the escapement and the gear train, the motion of which is determined by the vibrations of the balance.
Lever Escapement	Invented by George Graham in 1715. Inhibition takes place by means of an anchor equipped with pallets. The Swiss lever escapement common today was a further development made by Thomas Mudge and represents a free lever escapement. In its function, the escape wheel gives the anchor a movement impulse. While one point of the armature engages in the teeth of the escape wheel, the other end is driven forward. Then this movement changes in the opposite direction. The anchor moves like a seesaw. There are different types of anchor escapement, but they are all similar in their principles.
Limitation	Numerical limitation of a watch in its edition. Often presented on special occasions, such as anniversaries, ceremonies, or the like and coveted by collectors. A distinction is made between limited editions due to numerical limitation and limited production due to restricted production capacity.
Linen	Old, duodecimal measure of length in watchmaking. A line corresponds to 2.2558 mm and is derived from the "Paris foot" (3247 mm) basic unit of measurement that was used in the past.
Liquidmetal	Patented amorphous alloy from Liquidmetal Technologies, consisting of zirconium, titanium, copper, nickel and beryllium. Also called “metallic glass” and, after cooling, it has a hardness level three times higher than that of stainless steel. The material is used in skis, tennis or baseball bats. The original liquid metal and related alloys are also used in watches. Particularly noteworthy are watches from Omega.
Local time	Legal time within a time zone (example Central European Time in Germany). Local time differs from true local time, as this represents the time that is displayed on site by a sundial and can differ even within the same time zone. To simplify matters, however, the time of all places in a time zone is given as "local time".
Lume	Applied color, which can be either self-luminous (radium, tritium) or luminescent (Superluminova (Omega, Breitling, etc.), Chromalight (Rolex), Lumibrite (Seiko)). The difference between self-luminous and photoluminescent luminous mass is mainly in the radioactivity. While radioactive substances optically radiate by themselves, phosphorescent colors are charged by exposure to light. It is primarily used on sports watches or sporty, elegant watches. Older clocks in particular use radioactive luminous material, which, using the example of tritium, has to be identified by a "T" on the dial.
M	
Magnetic Field Protection	See „Antimagnetic"
Magnetization	See „Antimagnetic"
Manufacture	From the Latin “manus” for “hand” and “factura” for “to make”. A manufacturing company essentially describes the transition from solo craft to a multi-employee business. In the watch industry (as well as many other industries) the manufacture stands for special dedication, care and manufacturing quality and stands in contrast to mass production. The term “manufacture caliber” or „inhouse movement“ appears particularly frequently, denoting a movement that has been developed entirely by hand, built in individual parts, assembled and adjusted. These movements are mostly tailored to a special model, which is why they enjoy a very good reputation and oppose the “off the peg” mass produced movements (see ETA movement).
Manufacture Caliber	See „Manufacture“.
Marine Chronometer	Clock with excellent precision (chronometer), which can be used to navigate ships, aircraft, space crafts, etc.
Marine Chronometer	Very precise and finely regulated clock on board ships, but also airplanes, space shuttles, etc. Serves for navigation and position determination and must therefore be precise and reliable.
Mechanical Watch	Watch that works by gears that get their energy from a non-electric winding mechanism. Mechanical watches are traditionally equipped with a manual winding mechanism. If watches are equipped with a winding mass (on a rotor) to generate energy, one speaks of an automatic watch.
Mesh	See „Milanaise"

Term	Explanation
Microbrand	Not specifically defined. Describes a small, often not yet firmly established watch brand. Both the number of employees and the number of watches manufactured per year are well below the industry average. As a rule, microbrands rely on the supply of parts and movements from outside in their production. Short official channels and direct marketing are also characteristics of a microbrand. In an interview with the Altherr jewelers, the microbrand expert Florian Bach defined microbrands as generally small-scale brands with a market-related or a geographical focus.
Microrotor	Space-saving construction of the rotor, which is integrated into the movement instead of sitting above or in front of it (central rotor). Must have the property with its relatively low mass to wind up the main spring in order to supply the movement with energy.
Milanaise	Type of bracelet, consisting of finely interwoven metal wires. Also called mesh. Milanese bracelets ensure a high level of comfort and have an elegant, but also sporty look.
Military Watch	Mission watch that cannot be clearly distinguished from pilot watches. Characterized by easy readability, simple handling, high robustness and precise rate accuracy. Contrasting, simple dials with large hour markers and wide hands are characteristic.
Mineral Crystal	Inexpensive, scratch-resistant and robust material for watch glasses. Harder than plexiglass, but not as hard as sapphire glass.
Minute Repeater	Indication of the time on demand via an acoustic signal by a repeater hammer mechanism. A highly complex mechanism and a sign of high horological skills. A distinction is made essentially between hour repeater, quarter repeater, half-quarter repeater, five-minute repeater and minute repeater. Pressing a slide on the case wall energizes the mechanism and activates it. The two most popular striking patterns are the Petite Sonnerie and the Grande Sonnerie. See also „Repitition“.
Minuterie	A track with minute markings surrounding the dial. Either only dashed, or with 5-minute numbers. A design classic is the so-called "railroad minute track", which is reminiscent of railroad tracks in its appearance. The minute lines are framed by two continuous lines at each end and resemble a ladder with rungs (approximate representation: ▤)
Mohs	The Mohs scale classifies materials based on their hardness from 1 (very soft) to 10 (very hard). To create the scale, Friedrich Mohs rubbed different materials against each other and observed their wear. MOH is a unit for specifying material hardness. Examples are: 1 - limestone, 2 - gypsum, 2.5 - silver, 3 - gold, aluminum, copper, marble, 3.5 - plexiglass, acrylic glass, plastic glass, 4 - iron, 5 - mineral glass, 5.5 - hard porcelain , Steel, lapis lazuli, 6 - hardened steel, 6.5 - opal, moonstone, 7 - quartz, rock crystal, onyx, zircon, 8 - carbide, emerald, hardlex watch glass, 9 - ruby, sapphire, corundum (sapphire glass), 10 - diamond.
Monopusher	A type of chronograph in which all operating functions (starting, stopping, resetting) of the stopwatch function are carried out via a single pusher. Often this is integrated into the crown and gives the watch a minimalist look. Complicated to manufacture and a testimonial of high manufacturing skills.
Moon Phase	A moon phase is measured at 29.5 days and indicates how far the moon has advanced in its orbit around the earth. Since the moon always has a different angle to both the sun and the earth, depending on its position, it presents itself in different light forms (new moon, full moon, half moon, increasing, decreasing, etc.). A moon phase display allows the observer to determine the exact progression and appearance of the moon and is a mechanically complex mechanism to be implemented. The moon phase that can be read on clocks mostly refers to viewing from the northern hemisphere. Since a moon orbit can be measured at 29.5 days, it follows that the moon appears in the sky about 50 minutes later every day (24 hours divided by 29.5).
Mother Of Pearl (MOP)	Fine, shiny mineral deposit that can be found on the inner walls of mussels. Occasionally used in the watch industry on the surface of dials. English: Mother of Pearl.
Movement	Term for the entire mechanism inside a clock or watch, which provides the time display and drives all the complications built into the watch. Movements in wristwatches can be automatic, hand-wound or quartz-driven.
N	
Neo Vintage	Classification of the age of a watch that is not precisely defined. Since the terms vintage, neo-vintage and modern shift as the years progress, one speaks more of the characteristics of a watch than of the exact year of manufacture. Neo-Vintage therefore mostly describes watches from the period of upheaval in terms of technology, materials and industrial standards from the beginning of the 1990s to the early 2000s, or the period of upheaval between a new and an old industrial standard. Currently (as of 2021) watches from 1990-2005 are commonly referred to as Neo-Vintage. While earlier years of manufacture gave the timepieces the nickname "Vintage". If you are in the same decade as the year of manufacture of the watch, it is usually referred to as a modern watch. Clues for the classification are, for example, the change from tritium to phosphorescent luminous material, from aluminum to ceramic bezel inserts, from simple closures to complex locking mechanisms, from plexiglass to sapphire glass, the transition of hollow to solid end-links and much more.
Nickel	Often allergenic, silvery-white metal. Stainless steel contains a small amount of nickel. Since 1990, white gold has been required by law to be nickel-free.
Nivarox	Material for the manufacture of balance springs. Denotes an alloy of iron, nickel, chromium, titanium and beryllium. Has very good anti-magnetic and thermo-compensating properties. Nivarox is now the registered brand name of the Swatch-Group manufacturer of oscillating systems and their parts.
O	
Observation Watch / Observatory Watch	Synonym: B-Uhr (german for Beobachtungs- (observation) watch). Wrist or pocket watch, which was originally intended for navigational purposes. The main characteristics of an observation watch are unmistakable readability, thanks to simple dials with high contrasts, as well as uncomplicated handling.
Onyx	Black gem from South America and Madagascar.

Term	Explanation
Oscillating System	Essential part of a mechanical movement. Consists of the balance spring and the surrounding balance wheel, which together - attached to the balance shaft - can produce oscillations. Precisely speaking, a regulator for regulation is also part of the oscillation system. The oscillation frequency of the balance wheel determines the exact rate of a watch. The energy supplied from the barrel is finely dosed and passed on to the oscillating system via the escape wheel, lever and lever disc (all three parts of the escapement). The oscillation system and the escapement system are therefore inextricably linked.
Oscillation / Vibration	Movement limited by two endpoints. For example, if a balance wheel makes eight vibrations per second, it performs 28,000 vibrations per hour. The higher the oscillation frequency, the smoother hand movements are observed. High vibration frequencies reduce the power reserve. Achieving a high vibration frequency, a long power reserve and good accuracy at the same time is the goal of every watchmaker.
P	
Palladium	Precious metal and material in the watch industry. The first watch made of palladium dates back to 2005 and was made by Parmigiani Fleurier. Palladium naturally has a brilliant white tone and is therefore not dependent on a coating with rhodium for refinement. Palladium and gold alloys create white gold. As a material, palladium is very corrosion-resistant, lighter than platinum and harder than gold.
Panorama Date	See „Big Date“.
Patina	The natural aging process of a dial and its structures, as well as other parts of a watch. The colors used to paint the dial itself, as well as the luminous material on the hands and indices, as well as the material of the case or the bezel, are decisive for the manner in which it ages. See also “Tritium”. Oxidation also gives bronze a typical patina.
Pellaton Winding	Automatic winding system designed by IWC’s technical director Albert Pellaton in 1946. Developed ready for series production in 1950, many other well-known manufacturers used this innovative and highly efficient automatic. After a modification, a revised, even more efficient variant of the Pellaton mechanism has been installed since 2007.
Perpetual Calendar	Highly complex mechanism able to display the correct date up until the year 2100 (usual setting intervall is about 100 years). The complex mechanics consider and recognize long and short months, leap years and february the 29th. Often times perpetual calendars also include a moonphase.
Perpetual Calendar	See "Perpetual Calendar“.
Petite Sonnerie	At the full hour, the number of hours is struck on a big bell, regardless of the quarter of an hour. Outside the full hour, the quarter of an hour - usually with a double strike - is indicated on two bells.
Pilots Watch	See „Flieger Watch“.
Pin Buckle	The most classic type of watch closure. A Pinbuckle and hole system fixes the watch on the wrist.
Pivot	See „Shaft“.
Platinum	Extremely corrosion-resistant, easily malleable material. Is traded as the most valuable precious metal. The origin of the name can be found in Spanish ("little silver"). First used in jewelry by Louis Cartier in 1850. The largest platinum deposits are found in South Africa, Russia and Canada. Characteristic of platinum is its so-called "dark gloss" in a pure, highly polished state.
Plexi Glass	See „Acrylic Crystal“.
Pocket Watch	Very original form of the portable watch. The age of pocket watches began with the invention of the spring drive in the early 15th century. Often worn on a chain in a waistcoat or tuxedo pocket, they also had a spring cover that covered the dial when not in use. From around 1930, pocket watches were largely replaced by wristwatches.
Pointer Date	Analog display of the date of the day and possibly also the month with the aid of a pointer that rotates around the axis once in 31 days (days) or 12 days (month). Often the pointer date is implemented as a ring on the outside of the dial, which is provided with the numbers 1-31. A centrally mounted pointer now points to the corresponding number on a daily basis. A popular example can be found in the Oris Big Crown Pro Pilot Pointer Date.
Power Reserve	Also: running time. Time that a watch can work autonomously after it has been fully wound until the second hand has stopped.
Pulsometer	Auxiliary scaling, which can quickly and reliably determine the pulse rate of a living being. Thanks to pulsometers, there is no need to stop the time while counting the pulse beats at the same time. As a rule, 15 pulse beats are counted from the moment at which the second hand passes the 12 o'clock (start of the puslometer scale). The position of the pointer after 15 counted pulse beats gives the heart rate.
Push Down Crown	See „Screw Down Crown“.
Pusher	Control element of a watch or a bracelet, which performs a certain function when actuated. On the folding clasp of a bracelet, actuation causes opening. Pressing the pushers of a watch with chronograph function starts and stops the stop function or resets it.
PVD	Stands for "Physical Vapor Deposition". Vapor deposition process for coating watch cases or parts. Gives the material 2 to 4 times the hardness of hardened steel.
Q	
Quarz Crisis	Dark chapter in mechanical watch history from around 1970 to 1985. Inexpensive quartz watches from the Far East that could be mass produced were the benchmark for innovation, reliability and accuracy and were traded as the future of the watch market. Many traditional Swiss manufacturers did not manage to face this flood on an equal footing and had to file for bankruptcy. The wave of factory closures led to the loss of many - especially smaller - companies that were no longer able to establish themselves even after the resurgence of mechanical watches a few years later. The quartz crisis, which the initiator Japan dubbed the quartz revolution, is still wrongly responsible for the often bad reputation of quartz-driven watches today.

Term	Explanation
Quarz Watch	Watch with a quartz crystal as a generator (oscillator). Thanks to modern semiconductor technology, these watches can often be built very inexpensively and energy-efficiently. The first commercial quartz wristwatch went on sale in the form of the Seiko Astron Caliber 35A on Christmas 1969. This was still very expensive at the price of a small car, but thanks to Seiko's rapid progress, three key technologies were developed shortly afterwards, which made the manufacture of quartz watches unbeatably cheap: tuning fork-shaped quartz resonators, integrated CMOS circuits and stepper motors. These three pillars still essentially determine quartz technology today. High-end quartz models are enjoying increasing popularity and now coexist with mechanical watches.
Quick Set Date	Crown position specially defined for adjusting the date. The date of the day can be adjusted without having to repeatedly move the hour hand past twelve o'clock.
R	
Rail Road Minute Track	See „Minuterie“.
Rattrapante	Also “split seconds”. Double-hand chronograph, which enables intermediate times to be stopped. When the chronograph is started, two chronograph seconds hands, which are exactly on top of each other, begin to move. If you now press the “stop pusher”, only one of the two hands stops while the other moves unaffected. In this way, intermediate times, intervals or time differences can be precisely determined. The eponymous (French: "Ranttrapante" means "catch up") function is also that another pusher operation causes the hand that was stopped first to catch up with the hand that ran away and to continue running in parallel with it. Rattrapante chronographs are demanding in their manufacture and are therefore considered to be a particularly valuable complication and a sign of the highest horological skills.
Red Gold	Gold alloy with a content of 58% (580 red gold) or 75% (750 red gold) pure gold, each with 38% copper + 4% silver, or only 25% copper alloyed. Red gold is stronger and redder in color than rose gold.
Regatta Timer / Yacht Timer	Since boat races start on the open sea, the helmsmen and women need to maneuver their boat to the start line without crossing it. In modern regattas, the estimated time for this is usually ten minutes. Watches with a regatta timer complication provide a clear and easy-to-read 10-minute countdown timer. In individual cases also divided into 5 minute steps. A common method is to use separate scales (Rolex Yachtmaster 2) or filling circles (Frederique Constant Yacht Timer Regatta Countdown).
Register	Also: sub-dial. Small chronograph dials and hands used to show chronograph times.
Regulation	Regulating the to the highest possible accuracy. Fine adjustment of the mechanical oscillation system by a professional watchmaker (with some models also possible to be done by oneself). The aim is to keep the daily rate deviation as low as possible and thus make the watch accurate. Watches are regulated in different positions. In most conventional watch movements, a regulator is moved, which tensions or relaxes the balance spring depending on its position. Higher end movements are often regulated by adjusting screws or other masses in the balance wheel, which influence the imbalance of the balance, but not the length of the balance spring. This is a much more demanding method and gives rise to the term „free sprung balance“. Balances that are not regulated by shortening or lengthening the spring but by adjustment of masses in the balance itself are referred to as "free sprung".
Regulation Position	Positions in which movements (or fully assembled and cased up watches) are checked for accuracy and regulated. Depending on the position, various forces act differently on the clockwork. The standard is to regulate a clockwork in five positions.
Regulator	Originally used in early pendulum clocks, the term “regulator” in wristwatches describes a special layout of the dial. There is only a central minute hand, while both the hour and the second are shown on separate, small sub-dials.
Remontoir	Elaborate and extremely sophisticated mechanism, which can significantly improve the accuracy of a watch and is counted among the Force Constante or Constant Force mechanisms. This is done by installing an additional mechanism, which always releases a constant amount of energy from the barrel. In this way, the driving force remains constant over the entire length of the spring tension. The driving force is thus kept stable. Particularly noteworthy are some watches from F. P. Journe’s, such as the Tourbillon Souverain model line.
Repetition	Indication of the time on demand via an acoustic signal by a repeater hammer mechanism. A highly complex mechanism and a sign of high horological skills. A distinction is made essentially between hour repeater, quarter repeater, half-quarter repeater, five-minute repeater and minute repeater. Pressing a slide on the case wall energizes the mechanism and activates it. The two most popular striking patterns are the Petite Sonnerie and the Grande Sonnerie.
Retrograde	A hand that runs counterclockwise backwards. Watchmaking gimmick which is rarely used. However, the retrograde second is often encountered, in which the second hand initially runs regularly for half a minute (0 - 30 seconds) before it snaps backwards at high speed and the scale runs a second time to complete one minute. This process is repeated 2880 times for a day of 24 hours.
Rhodination	
Rhodium	Metallic material which is used as a coating for dials or watch movement parts for the purpose of finishing. Gives them a bright, silvery shimmering hue. The process of finishing with rhodium is called rhodium plating.
Roman numerals	Representation of the numbers 1 - 12 as: I, II, III, IV, V, VI, VII, VIII (rarely also IIX), IX, X, XI and XII. Is used in fine watches in the "Dresswatch" category, and more rarely in sports watches.
Rose Gold	Gold alloy with contents of approx. 30% to approx. 90%. The main components are gold, silver and copper, some of which occur in the following rose gold alloys: 333 rose gold (33.3% gold, 21.7% silver, 45% copper), 375 rose gold (37.5% gold, 20% silver, 42% copper), rose gold 750 (75% gold, 9% silver, 16% copper). In order to give the material additional hardness, aluminum is also often added. Thanks to its components, the alloy has a bright sheen.

Term	Explanation
Rotating bezel	Rotatable ring located around the watch glass. Scaled differently depending on the type and task of the watch. There are 60 minute timer scales on diving bezels or twelve and 24-hour scales on GMT bezels. A special type of scaling can be found on slide rule bezels of pilot's watches. Diver's bezels can only be rotated unidirectionally.
Rotor	See „Winding“.
Rubber	German: Kautschuk. Formerly made from vegetable sap, rubber-like material. Comes from the Indian "cao ochu", which means "tear of the tree". A distinction is therefore made between natural rubber and synthetic rubber. Is used in the watch industry in particular for the bracelets of sports watches. Can also be found less often in and around bezels, pushers or the links of the metal bracelet as shock absorbers.
Ruby	Rarely real, mostly synthetic ruby, which is used as a cap or pivoting stone to reduce the friction of the pins and shafts of the wheels. Also known as pivot-jewels.
S	
Sapphire	Nowadays a synthetically manufactured material, which is used as sapphire crystal in watches.
Sapphire (Gem)	Gemstone with a hardness of 9 on the Mohs scale. Occurs in the colors blue, green and yellow. Contrary to all expectations, real sapphire is not used in sapphire crystal.
Satination	Also "brushing". More or less fine matt silk gloss, which is made by processing (precious) metals. In the processing of watch parts and cases, this is usually offset by polishing, which gives the surface a reflective appearance. Sports- and tool watches often have brushed cases and bracelets, as these are much less prone to scratches than those with polished surfaces.
Screw Down Crown	In contrast to the conventional push-in crown, the crown stem can be screwed into the case. This primarily serves to improve water resistance and is therefore to be found in sports and diving watches. Before the crown and thus the movement can be operated, the crown must be unscrewed from the flank of the case. On the other hand there are push-in crowns, which only have to be pulled out to enable the functions to be set. A screw-down crown guarantees watches optimal protection from water, moisture and dust. Most sports watches of today are equipped with a screw-down crown. It was first introduced in 1929 in the Rolex “Oyster”.
Screwed balance / Free Sprung Balance	A variant of the balance wheel of a mechanical movement, reserved exclusively for high-quality movements. Seldom used nowadays, balance screws helped, especially in the early days, a sometimes significant improvement in accuracy. Screws are attached to or in the balance wheel to compensate for any imbalance or to regulate the oscillation frequency of the balance wheel. Turning the screws inwards reduces the balance's moment of inertia; It swings faster. However, if you turn it out of the balance wheel, the balance wheel swings more slowly. Since nowadays even conventional balances have to meet very precise regulations, the manufacture of screw balances is rarely worthwhile and mostly serves the purpose of indicating a high-quality watch. Not to be neglected is the optically enhancing aspect. A. Lange & Söhne Saxonia is a good example.
Second Time Zone	See „GMT“.
Second Wheel	The wheel that moves the second hand as part of a drive train. Has a corresponding translation, which allows it to complete one full revolution per second.
Sellita Caliber	Complete: Sellita Watch CO. SA. Swiss manufacturer of watch movements. For many years they built movements based on Ebauché works by ETA SA. For a number of years (2014), ETA has been legally allowed to gradually reduce the scope of the works delivered to competing companies and to discontinue them entirely from 2020. ETA's former assembly company Sellita is now increasingly establishing itself with its own Swiss-made watch movements, which are used in many watches.
Service	Maintenance, overhaul and possible repairs to a watch and its movement. Often carried out at regular intervals, which can be specified by the manufacturer in order to keep the warranty. Revisions are an important process in the maintenance of the watch and in order to guarantee longevity and lasting function, as well as accuracy. Depending on the manufacturer and model, a revision costs less than € 100 up to several thousand euros. Many watches can and should only be overhauled at official dealers with appropriately trained personnel.
Shaft	Rod-shaped component for mounting rotating parts such as the balance wheel or gears, but also for forwarding and converting rotary movements. Since shafts are subject to high stress due to constant movement, they are stored in special bearing holes covered by synthetic cap stones with little friction and shock-proof. A Pivot is an important part of a watch movement. It somehow describes the end of a shaft and is stored in a bearing covered by a cap stone. Exposed to high wear.
Shock Protection	See „Inca Bloc“.
Silicium	Light and robust material, which is used in the balance springs of modern watches, but also occasionally in the anchor/lever and escape wheel. Gives the affected parts a high degree of robustness, antimagnetism, temperature resistance and longevity and thus improves the overall accuracy of the watch. It also requires less maintenance.
Silver	Chemical element symbol "Ag" (Latin argentum). In addition to gold and platinum, the most important precious metal for jewelry production. Mohs hardness 2.7. Can be used in various alloys to achieve desired properties. Very resistant to acids and oxygen and reacts to contact with sulfur compounds with a characteristic "tarnishing".
Skeletonized	Exposing the movement as a whole or in part to allow visibility through the dial through the front of the watch. Usually, the balance wheel or the gear train are exposed in order to allow the wearer to look inside a mechanical watch.
Small Second	A seconds hand that does not share its base with the minute and hour hands, but is positioned off-center on the dial. There is usually a so-called “small second” at six or nine o'clock on a separate sub-dial. This type of display is considered to be very classic in dress watches and is indispensable in chronographs.
Small seconds	Also “decentralized second”. The second hand does not share its origin with the hour and minute hands, but works on a separate indicator - usually located at six o'clock.

Term	Explanation
Smart watch	Mobile, electronic wristwatch that is worn on the wrist. Usually has a function to display the time, but in addition to this there are additional functions and sensors. Most smartwatches can be connected to a mobile phone to collect personal data or to mirror the functions of the phone on the wrist.
Solar Powered	Battery-operated watches, which are continuously supplied with energy via solar cells on the dial. A well-known manufacturer of this type of watch is Citizen. Solar drives are used especially in professional diving watches, as this saves opening the case to change the battery, which in some circumstances would result in a loss of water resistance.
Sonnerie	Complicated mechanism which - interconnected via a separate gear train - shows the time on request with the aid of acoustic signals. Small hammers strike hours, quarters of an hour and minutes on bells, gongs or vibrating parts of the case wall. The type of acoustic time reproduction is called repetition.
Sports Watch	When talking about mechanical watches, "sports watch" nowadays usually means watches that are especially resilient in everyday life and that can be used for sporting activities due to certain properties (choice of material for the case or bracelet, shock protection, water resistance, scratch resistance). In a broader sense, digital watches that have been specially designed for sporting activities, e.g. equipped with a heart rate monitor, weather indicator or the like, are actual sports watches.
Spring	A spring is an essential part of a watch movement. It is used in the mainspring, the balance spring and as shock protection. Spiral springs have the ability to absorb energy and release it again through relaxation. The mainspring supplies the movement with energy. It is wound manually with the crown or by an automatic winding mass and a rotor. It sits inside the mainspring barrel and is fixed at center.
Spring Bar	The springbar fixes the strap or the bracelet onto the case. It usually needs a spring bar tool to remove it for exchanging straps. Quick-Release systems which allow for toolfree removal of the springbar and strap have become increasingly popular.
Spring Drive	Patented development by the Japanese luxury watch manufacturer Grand Seiko. Spring Drive movements combine the mechanics of a mechanical wristwatch with the precision of a quartz watch. The drive comes from a main spring, which is tensioned either by a rotor or a manual winding. Regulated by a tri-synchro-regulation system, the spring relaxes in a controlled manner. A rotor at the end of the gear train, together with a winding block, converts the released energy into electricity - similar to a bicycle dynamo. The winding block in turn generates an electromagnetic pulse which regulates a so-called glide wheel. The glide wheel, which rotates eight times per second, ensures a minimal daily rate deviation. In addition, this rotation activates a circuit and a connected crystal oscillator, which, through its vibrations, sets a cycle that is continuously compared with the speed of rotation of the gliding wheel. This prevents the glide wheel from working too quickly. If this happens anyway, it is gently slowed by an autonomous magnetic brake. All of this creates the “jerk-free” gliding of the second hand, which is typical for Spring Drive movements, and ensures an almost unrivaled precision.
Stainless Steel	Most popular material used in almost all parts of a mechanical watch. Stainless steel needs to contain a minimum of 10,5% of chromium. Altering this ratio or mixing in additional metals gives the steel a variety of characteristics. Chromium influences corrosion resistance, nickel protects against acid induced damage. 316L stainless steel by far is the most popular and contains both, chromium and nickel.
Sterling Silver	Alloy of silver (92.5%) and 7.5% copper. The copper can optionally be replaced with other metals in the alloy. The fineness of sterling silver is accordingly 925/1000.
Stones	The term “stones” describes mostly synthetically produced rubies, which form a low-friction refutation for the pins of the moving parts of a wristwatch. Due to their nature, they reduce wear and tear. The more moving parts a watch movement has, the more stones are usually used. In addition to their function as bearing stones, synthetic rubies are also used as cap stones or pallet stones for the anchor in the escapement. See also „Ruby“.
Stop Seconds	Function of many movements. Pulling the crown out to the last position to set the time decouples the gear train and stops the second hand. This enables the time to be set to the second using a reference time.
Stop Watch	Time measurement accurate to the second. See also "Chronograph".
Striking mechanism	See „Repeater“.
Stripes	Mostly parallel stripes on flat parts of watch movements. Also known as the Geneva Stripes (Côte de Genève) or Glashütte Stripes.
Super Luminova	Luminova is the luminous paint developed by the Japanese manufacturer Nemoto & Co. Ltd. In contrast to tritium, for example, it does not contain any radioactive substances. Super-LumiNova is a further development of the Luminova by the Swiss manufacturer TriTec and offers a stronger and longer-lasting luminosity. These luminescent substances are stimulated by the radiation and thus the energy of light.
Swans Neck Regulator	Variant of fine adjustment. A swansneck-shaped steel spring, together with a regulator and an adjusting screw, enables particularly fine adjustment of the movement. This serves to improve the accuracy.
Swiss Lever Escapement	Most common escapement in wristwatches. This falls under the “free lever escapement”, which enables the balance to swing freely after losing contact with the lever.
Swiss Made	Designation of origin for products from Switzerland. In the case of industrial products and consumer goods, the Federal Act on the Protection of Brands and Indications of Origin provides that at least 60% of the manufacturing costs and manufacturing steps arise / must take place in Switzerland. The Association of the Swiss Watch Industry is continuously working to tighten these rules. The 60% applies to electronic watches, while a limit of 80% has been in force for mechanical watches since 2013. In 2017, however, a generalization was again reduced to 60% vertical integration. In protest, the Swiss traditional watch manufacturer H. Moser & Cie. in the same year presented a wristwatch made from Swiss cheese.
T	
Tachymeter	Mostly located on a bezel to measure the speed with the help of the chronograph seconds hand. If you start the chronograph while passing a route marking and stop it after passing another after 100 m or 1000 m, for example, the speed can be determined precisely with the help of the tachymeter scale.

Term	Explanation
Tantalum	Silver-shimmering heavy metal. Less common than gold, hypoallergenic and extremely stable. Due to its properties, tantalum is difficult to work with and is rarely used. Well-known users are Omega and Hublot.
Telemeter	The telemeter scale on the bezel or dial is used to measure distances. A practical example: A light signal (flash) marks the starting point of the measurement or the activation of the chronograph. An acoustic signal (thunder) marks the end point or the stopping of the chronograph. The determined value is multiplied by the speed of sound (333 m / s) to determine the distance of the cause. In wars, it was possible to determine the distance between the front lines between the difference in times between seeing the flash of the muzzle and hearing the bang.
Third Weel	See „Drive Train“.
Three quarter bridge	One of the trademarks of A. Lange and Söhne from Glashütte. With the exception of the balance wheel and the escapement, every mechanical component of the watch is stored under the three-quarter bridge, which covers 75% of the movement. Compared to constructions with several bridges, the three-quarter plate offers increased stability. It has its origin in pocket watches.
Time Zone	see „GMT“
Timing deviation	Time (usually in seconds) by which the watch deviates from its normal rate every day. Literally means the "inaccuracy" of a watch.
Titanium	Hypoallergenic and very light material, which weighs 40% less than stainless steel with the same volume. Rapid oxidation reactions cover titanium with a matt oxide layer, which gives it its velvety, organic appearance.
Tonneau	French "ton". Describes a popular and even one of the oldest forms of watch cases. It resembles a barrel with two convex sides and parallel, flat sides.
Tool Watch	Timepiece that has been specially designed for one purpose (e.g. diving). Tool watches are characterized by a very robust construction and practical complications.
Top Wesselton	Degree of purity of a diamond. Top Wesselton describes the second best color of a diamond.
Touch Screen	Interactive screen that lets users interact directly with the content displayed by touching the elements. Instead of a mouse pointer, the computer inside a device equipped with a touchscreen is controlled by touching it with a finger.
Tourbillon	French for "whirlwind". This was the invention of Abraham Louis Breguet from 1801 as the ultimate solution to compensate for position-related timing deviations in pocket watches. Due to the fixed position in only one position in the wearer's vest pocket, the force of gravity worked continuously in the same direction on the balance wheel. With a tourbillon, the balance wheel, opened in the so-called tourbillon cage, usually rotates around itself once per minute and constantly changes its position relative to gravity. Nowadays tourbillons are mostly a sign of watchmaker's skills, as wristwatches are usually not statically tied to one position during the day, but rather move continuously in space. Variants of the classic minute tourbillon are, for example, the half-minute tourbillon or the flying tourbillon.
Tricompax	Today symbolic of a chronograph dial layout with three (tri) registers at three, six and nine o'clock, it originally referred to a watch model from Universal Genève: the Tri-Compax. The special arrangement is considered aesthetic and particularly attractive.
Tritium	Radioactive luminescent material, which used to be applied to indexes and hands. Corresponding watches were marked with a "T" on the dial. Today, although they have been largely replaced by synthetic phosphorescent luminescent materials, watches with a tritium coating are very popular with collectors. The reason for this is that the tritium changes color to warm cream and brown tones over the years. The natural aging processes on the dials of watches are called patina in their entirety.
Tungsten	Tungsten is a rare metal found naturally on Earth almost exclusively as compounds with other elements. The jewelry industry makes rings of sintered tungsten carbide, tungsten carbide/metal composites, and also metallic tungsten. Tungsten is a very dense heavy metal with enormous heat resistance and resistance to stress and corrosion. Can be found in case parts, movement parts or as a coating. However, it is used very rarely overall.
Tuning Fork Watch	A mechanism first presented by Bulova, which was developed in 1953. An electrically powered tuning fork ensured outstanding accuracy values. The Bulova Accutron is the most popular representative of tuning fork watches and went on sale in 1960.
U	
UTC	see „GMT"
V	
Valjoux 7750	The ETA Valjoux 7750 is probably the best-known and most frequently installed chronograph caliber of all. Introduced in the early 1970s, it has always been continuously developed. The somewhat rough feeling when pressing the chronograph pushers is characteristic, as the 7750 does not have a column wheel, as was usually the case until then. This made it possible to save costs (column-wheel chronographs were more complex to manufacture) and larger quantities of mechanical timepieces could be produced in order to counteract the quartz crisis. The layout on the dials is also characteristic. The day of the week with the current date can be found at three o'clock, the other three chronograph registers are arranged at six, nine and twelve o'clock. Variants with or without a date and with a variable number of registers exist. Many manufacturers modify the movement for their own needs.
Vickers	Next to the "Mohs scale" the second most popular way of indicating the hardness of materials. An equilateral pyramid made of diamond is pressed into a material with the tip first under standardized pressure. The imprint that is left defines its hardness on a scale. In contrast to the Mohs method, in which materials are scratched against each other, the Vickers method is particularly suitable for very small samples, as well as coatings and surfaces.
Vintage	See „Neo Vintage“

Term	Explanation
VVS	Indicates the degree of purity of a diamond. Stands for "very very small inclusions". Inclusions are very difficult to see even at ten times the magnification. Only IF (internally flawless) and FL (flawless) diamonds are purer than VVS.
W	
Watch Winder	Electrical apparatus that can hold one or more watches in order to move them. The autonomous, constant movement of the watches ensures constant drive and prevents the watch from stopping during long periods of non-wearing. Watch winders find their significant relevance in automatic watches without additional manual windings, perpetual calendars or major complications, which, due to their complicated mechanisms, can only be readjusted with great effort if they should stop. Apart from that, they are a popular piece of furniture for displaying clocks.
Water Resistance	Property of a wristwatch that significantly determines its suitability for everyday use. Manufacturers usually state the water resistance of their watches in meters or in bar. A water resistance of 100 m corresponds to 10 bar. It is important to know that this information has only withstood a pressure test in a laboratory and does not represent any information about the actually possible diving depths. For example, if you point the jet of a garden hose at a watch or move it quickly through a bathtub, 10 bar pressure or more can be reached quickly without the watch being submersed 100 m or deeper. Watches up to 30 m are not considered waterproof, but at most splash-proof. A water resistance of 50 m usually allows showering. 100 m water resistance make a watch suitable for surface swimming. From 200 m you can speak of a watch that is ready to dive (for saturation diving). By definition, diving watches must also meet other criteria. See also "diving watches". DANGER! The data given here are only to be interpreted as guidelines and not as recommendations. If in doubt, contact the watch manufacturer.
White Gold	Precious metal alloy of the following composition: gold / palladium (65-80% / 35-20%) or gold / nickel (33.3-75% / 66.6-25%). Depending on the desired color, copper or zinc can also be added. White gold is a German development from 1912 (Pforzheim). Back then it was intended as a more cost-effective substitute for platinum for jewelry making, but white gold is very popular today because of its understated character. It is usually indistinguishable from stainless steel at a glance.
Winding	Tensioning of the mainspring. In the past with special keys, the watch is nowadays is manually wound using the crown. One speaks of manual winding (classic mechanical winding). An automatic winding, also self-winding, happens via a rotor with a winding mass, which moves analogously to the movement of the watch (usually on the wrist) and thus winds the spring. This centrifugal mass is usually in the form of a semicircular rotor, which is attached either centrally (central rotor) or decentrally (microrotor). Depending on the construction, a rotor winds on one side (unidirectional) or on both sides (bidirectional).
Winding shaft	The crownshaft/winding Shaft is a shaft that connects the crown and the movement. The mainspring is wound/tensioned by turning crown. The date is often also interconnected via the winding shaft.
World Timer	Watches with a world time complication show at least two time zones on their dial. The reference is Greenwich Mean Time (GMT). See also "GMT".
Worldtime	see „GMT“.
Y	
Yacht Timer	See „Regatta Timer“.
Yellow Gold	Material made of precious metal. Available with pure gold contents of 33 - 99%. In practice, at least one other substance is usually added to the pure gold. The resulting alloy can be adjusted to specific requirements, such as hardness, workability or castability. Silver and copper are the most commonly admixed metals.
Yttrium	Mostly found in yttrium-zirconium ceramics, which give them an enormous breaking strength compared to conventional ceramics.
Z	
Zirconium	See „Yttrium“.
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