



The Maison Artistic Crafts

**The Master Enameller,
artisan of colour**



VACHERON CONSTANTIN
GENÈVE

The Master Enameller, artisan of colour

- A true alchemist, the master enameller works with powders and fire, perpetuating ancestral know-how to adorn watches ...
- Vacheron Constantin's master enameller is one of the few to master the secrets of *grisaille* enamel, a technique he approaches in an experimental manner.

"Enamelling is the art of embellishing and personalising exceptional watches, thanks to a range of unique techniques and skills: champlevé, cloisonné, basse taille, grisaille enamel, miniature painting, plique-à-jour or flinquage", as Vacheron Constantin's master enameller defines it.

This is an ancient art. Watchmakers adopted the various enamelling techniques as early as the 16th century, making these creations true works of art. Although vulnerable to shocks, enamel is a robust, almost unalterable material, whose vivid, shimmering colours give it rare and precious value in adorning watches and clocks. Geneva was the first to use it and the expertise of its artisans in this embellishment of timepieces date back to the 17th century with "Geneva enamels", a technique of miniature painting in *grand feu* enamel under a protective flux coating.

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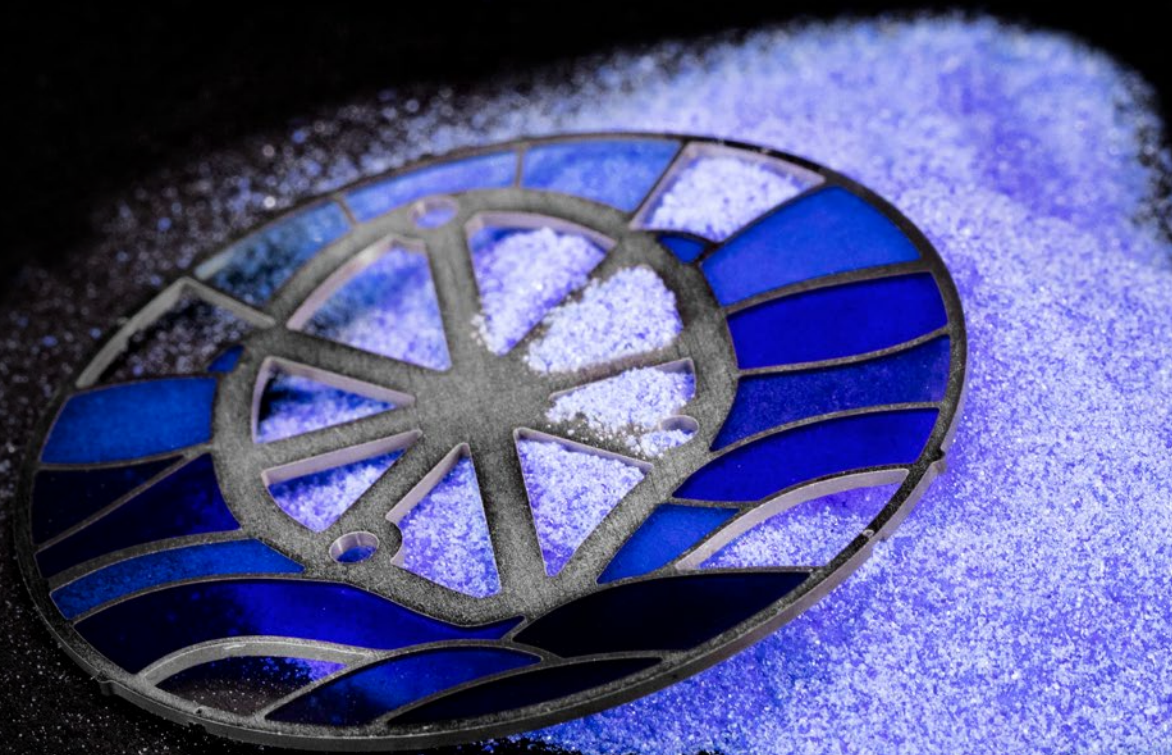
From its very beginnings in 1755, Vacheron Constantin fully participated in the artistic effervescence of the Age of Enlightenment. *"Enamelling is alchemy, a craft from another age that has its own secrets"*, points out Vacheron Constantin's master enameller. *"This mysterious aspect is like a Damocles' sword because, despite experience, the firing process entails permanent uncertainty."* Rather than manual intelligence, he prefers to evoke manual mastery. *"The art of enamelling requires calm, serenity and a certain ability to distance oneself"*, he says. *"The most important thing is to know how to interpret a client's request or that of the design studio. How to embellish them without changing them. That's the crux of the matter. It is the eye that controls the hand, with all the subjectivity that this can entail."*

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For 4,000 years, the art of enamelling has continued to embellish a wide variety of decorative objects. This technique requires consummate manual mastery as well as great experience of the basic materials – enamels and their composition – as well as the art of fire. Enamel is in fact a composite melting material, made from different minerals to which metallic oxides are added to obtain colour. It is generally used in the form of a powder which, in Haute *Horlogerie*, is applied to a metal base (copper, silver or gold) in thin layers successively fired in a kiln. The term *grand feu* enamel is used when the melting point is obtained at a higher temperature than conventional enamels, i.e. between 820°C and 850°C. “*The kiln process is always a magical experience that is difficult to control. All the enameller’s art is revealed in the fire*”, explains Vacheron Constantin’s master enameller.



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Whatever the technique involved, the enameller uses an extremely fine brush to apply the enamel powder in the chosen colour. After the first application of colour, the piece undergoes a first firing at around 800°C. Then the artisan continues his work by adding a second colour which requires a new passage in the kiln, repeating the operation as many times as necessary to cover the whole palette of colours of the motif to be created, with the constant concern of achieving these successive firings without altering the piece: a crack in the enamel, the emergence of micro-bubbles on the surface, colours which burn during a passage in the kiln inevitably destroy the work already done.

“The enameller’s art is revealed in the fire.”



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In order to practice his art, the Vacheron Constantin master artisan ensures he has the right enamel powders at his disposal; some of them, veritable historical alchemist's blends, date back a hundred years. For the Maison, enamelling is an artistic craft based on a heritage that has been scrupulously safeguarded over the centuries. Vacheron Constantin's enameller is thus one of the few to perpetuate the tradition of miniature painting and *grisaille* enamelling, considered the pinnacle of *Haute Horlogerie*.



Starting with a dark or black enamelled background, he first draws a motif by successively applying Limoges white dots to obtain shades of grey and chiaroscuro effects. "*It's a more artistic, more intuitive technique*", explains Vacheron Constantin's master enameller, a former enameller from Limoges, France, who has resurrected this art within the Maison. Each layer is fired for a period of time calculated to the nearest second, as any excess heat can potentially erase the design. The finesse of the *Grand Feu grisaille* enamel paint then reveals all the details, as in the *Métiers d'Art Hommage à l'Art de la Danse* series, where the slightest fold in the tutus, the velvety texture of a ribbon or the transparency of the tulle is revealed.

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The master enameller rarely reveals his secrets and his tools are also sacred. *"The enameller possesses more different materials than his guilloché, gemsetting or engraving colleagues: enamel first and foremost, as well as paints, gold leaf and gold wires, sable hair brushes and the kiln",* he explains. *"At Vacheron Constantin, we are fortunate to work in an atelier uniting all the artistic crafts and which enjoys considerable autonomy. We are masters of our own work and we are given the time required to exercise our art without constraints. This specificity is extremely valuable."* It is embodied in exceptional timepieces such as the unique Les Cabinotiers Tourbillon Jewellery – Sea Horse watch, whose dial combines various traditional crafts: the sea horse is made of *cloisonné* enamel with fins set on a partially *guilloché* dial background.

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Enamelling techniques

CHAMPLEVÉ

By far the oldest technique, applied in particular to the four watches in the Les Cabinotiers – the singing birds series, *champlevé* enamel consists of engraving the motif with a drypoint before filling the cavities thus formed with enamel. The enamels are then melted by successive firings at over 800 °C. The work is completed with a lapping-type polishing process which serves to level the material, and a glaze fire to give it a shine as well as a taut surface finish.



CLOISONNÉ

The *cloisonné* enamel technique consists in defining the outline of the motifs with the help of a gold or silver wire, itself fixed to its base with a glue, or gum tragacanth, which disappears during the firing. As exemplified in this one-of-a-kind Les Cabinotiers – La Caravelle 1950 model, the enamel is applied in successive layers in each of these cells so as to obtain the desired volumes and colours at the end of multiple firings. After the final firing, the surface is lapped and glazed to achieve the final result.

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PLIQUE-À-JOUR

This enamelling method is derived from the *cloisonné* method, here called “à jour” or “*plique-à-jour*”, but without a metallic base in the final state. The cells are glued to a thin copper base which is dissolved with acids after the glazes are fired. The disappearance of the background thus offers transparency effects identical to those produced by stained glass. These effects can be seen on the translucent backgrounds of the dials in the Métiers d’Art Les Aérostiers series.



MINIATURE PAINTING

This technique, highlighted in the Métiers d’Art Chagall & L’Opéra de Paris watch series, consists of hand-painting the desired motifs on a layer of baked enamel that serves as a base for the design. Applied in several thin layers and by colour, the paint is fixed in place by successive firings, the number of which increases in accordance with the complexity of the motif. Once the painting is complete, the artisan protects the work with a transparent enamel flux to give it brilliance and depth.

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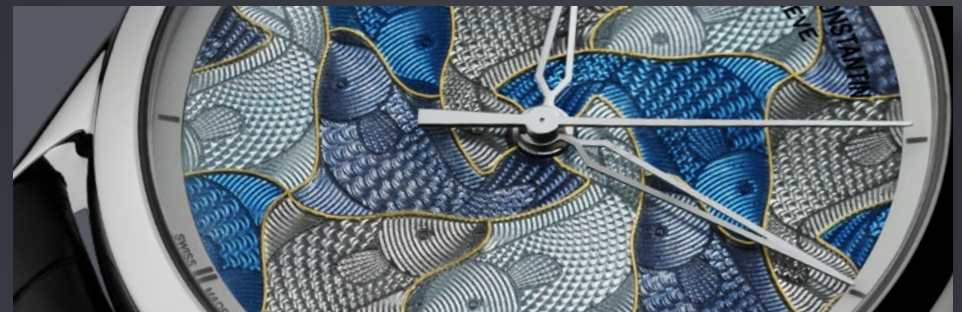
GRISAILLE

Grisaille enamelling consists of tracing a pattern from a dark or black enamel background by successive deposits of Limoges white – a pasty white enamel – to obtain shades of grey and chiaroscuro effects. Each layer is fired for a period of time calculated to the nearest second, as any excess heat can potentially erase the design. This masterful and rarely mastered technique can be seen on the watches in the Métiers d'Art Hommage à l'Art de la Danse series.



FLINQUÉ

This technique consists of covering a previously *guilloché* surface with transparent enamel, sometimes slightly coloured. This operation gives the piece a special sparkle by intensifying the play of reflections in the guilloché pattern. On the Métiers d'Art – Les Univers Infinis timepiece, Vacheron Constantin's master artisans have combined their skills to create a dial featuring both *guilloché* and *cloisonné* enamel.



TALLOW DROP ENAMELLING

When using the *cloisonné* or *champlevé* technique, the enamel is laid in the cells in several thin, slightly curved layers, since after each firing the enamel tends to sag. Generally, the piece is then stoned and covered with a flux. However, there is a technique known as tallow drop enamelling, as used on some of Vacheron Constantin's historical pocket watches, which consists of strongly curving the last layer of enamel so that it remains convex after firing.

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Watch selection

Yellow gold pocket watch with enamel painting (1810)

This 1810 pocket watch, the oldest enamelled piece in Vacheron Constantin's private collection, is an excellent example of the kind of timepieces made at that time, combining the talents of master artisans in the art of engraving, *guilloché* work, gemsetting and enamelling. The back of the yellow gold case is adorned with a miniature enamel painting depicting flowers against a landscape background. This perfectly executed masterpiece is surrounded by a finely chased gold arabesque delineating six pearl-encrusted motifs that stand out against a black enamel background. The gold case, pendant and clasp are delicately chased. This type of *Grand Feu* enamel miniature painting, spearheaded by Geneva, features the kind of inimitably accurate texture and play on colours that have shaped the reputation of watchmakers such as Vacheron Constantin.



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Yellow gold, miniature enamel and translucent enamel pendant watch (1908)

This pendant watch is worn on a chain combining yellow and white gold, diamonds and pearls. Its finely worked case, in translucent enamel on a *guilloché* background, features a floral theme, notably with subtle touches of miniature painted enamel, and applied floral motifs in platinum and diamonds. The miniature enamel here is finished to a standard that is hard to match, with bright, delicate colours and a smooth texture. The play of light combines with the translucent enamel technique to deliver soft, flowing, even organic forms. The openworking on the mainplate reminiscent of delicate lace work makes the enamelling craftsmanship even lighter and more precious.



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Egérie Creative Edition, black enamel (2022)

Inspired by Burano lace, this white gold watch combines watchmaking expertise with four artistic crafts including black enamel, the most delicate colour to master in the sense that any rough edges, micro-holes or micro-bubbles will stand out in the light. The black enamel is applied here on a *tapisserie* motif providing contrast and volume, but also using the *plique-à-jour* technique a cloud, creating a transparency effect.



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Métiers d'Art Fabuleux Ornaments – Indian manuscript (2014)

The Métiers d'Arts Fabuleux Ornaments series celebrates the ornamental beauties of the world from the decorative arts of many cultures. Four models combine several artistic crafts. A dozen master artisans have taken turns to display their talents by reinterpreting Ottoman architecture, Chinese embroidery, French lace and Indian manuscripts. Topped by a gemset bezel, a pink gold case frames a dial composed of ten enamel colours used to depict oriental-inspired flowers blooming against a blue sky backdrop surrounding the skeletonised movement. The contours of the decoration are *champlevé* to create cells separated by thin gold partitions designed to receive the enamels one by one. The foliage that is hand-engraved after enamelling represents the final and most delicate stage designed to enhance the brilliance of the timepiece without altering its intrinsic nature.

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Les Cabinotiers Minute repeater tourbillon – Flying Dutchman (2022)

The one-of-a-kind Les Cabinotiers Minute repeater tourbillon – Flying Dutchman watch pays tribute to the legend of the cursed captain who inspired Richard Wagner. To reproduce the raging sea under a full-moon sky streaked with lightning, the master artisan has created the motif in miniature painting according to the grand tradition of 17th and 18th century "Geneva enamels". In a second phase, the appearance of the ship is added in *grisaille* enamel, featuring a play of light and shade that translates the phantasmagorical universe of the legend. This particular phase requires great skill and dexterity, as any wrong move risks destroying the preceding two months of artisanal work.



Founded in 1755, Vacheron Constantin is the world's oldest watch Manufacture in continuous production for over 265 years, faithfully perpetuating a proud heritage of watchmaking excellence and stylistic sophistication through generations of master craftsmen.

At the pinnacle of Haute Horlogerie and understated elegance, the Maison creates timepieces with unique technical and aesthetic signatures, and an extremely high level of finishing touches.

Vacheron Constantin brings to life unparalleled heritage and a spirit of innovation through its collections: Patrimony, Traditionnelle, Métiers d'Art, Overseas, Fiftysix, Historiques and Égérie. It also offers its discerning clientele of connoisseurs the rare opportunity to acquire unique and bespoke timepieces by means of its "Les Cabinotiers" department.

#VacheronConstantin

#OneOfNotMany

