

Horological Machine N^o 4 Final Edition

HM4 Final Edition – Easy to see, virtually impossible to catch!

Stealth. If you look at any plane or boat designed with stealth in mind, they usually look to all intents and purposes anything but inconspicuous. And the stealthier they are, the more strikingly – radar excepted – obvious they are.

Lockheed's sensational F-117 Nighthawk was the world's first operational stealth aircraft. While visually unmistakable, the F-117's flat, faceted panels reflected radar away from detection and its dark surfaces blended seamlessly with the night sky. The Nighthawk was also revolutionary in the fact that its structure was a mix of aluminium and titanium.

Like the iconic F-117, HM4 Final Edition features square angular panels, dark surfaces and high-tech titanium. It looks fast. It looks menacing. And to date there have been no reports of a Final Edition being picked up by radar, so that's the 'stealth' box ticked as well.

The aviation-inspired case and engine of Horological Machine No. 4 – first launched in 2010 – are one. This 2013 'Final Edition' case blends high-tech titanium for its lightweight and strength with a sapphire centre section offering a view into the engine. Black PVD provides the titanium with its shadowy cloak of concealment without blocking the light playing off the contrasting matte and highly polished surfaces.

The HM4 engine is the culmination of three long years of development. Each of the 300-plus components – including the regulator and even the screws – was developed specifically for this anarchistic calibre. Horizontally configured dual mainspring barrels drive two vertical gear trains, transferring power to the twin pods indicating hours/minutes and power reserve.

But describing HM4's engine through its mechanical functionality is like describing Renoir's work through the chemical composition of his paint. Only careful contemplation enables full appreciation, and the sapphire case section and display panels top and bottom allow full access to the flawless fine finishing of HM4's intricate and vibrant micro-mechanics.

The sleek aerodynamic form of HM4 has its roots in Maximilian Büsser's childhood passion for assembling model plane kits, though none looked remotely as futuristic as these. The striking transparent sapphire section of the case requires over 185 hours of machining and polishing to transform an opaque solid block of crystal into a complex, exquisitely curved panel allowing the light to come in and the beauty of the HM4 engine to stand out. Every component and form has a technical purpose; nothing is superfluous and every line and curve is in poetic harmony. Articulated lugs ensure supreme comfort. Highly legible time is a fringe benefit.

HM4 Final Edition is an elusive limited edition of just eight pieces. It closes the book on the HM4 series, which was limited to only 100 movements over all models.

Horological Machine N^O4 Final Edition

Inspiration and Realisation

A long childhood passion for assembling model aircraft had Maximilian Büsser's walls, cupboards and ceiling covered in small aircraft of every description. Planes were what he saw last thing at night and then again first thing each morning. Many boys sketch supercars and fast planes, but few have the drive and determination to make their dreams come true. Büsser created MB&F to do just that. HM4 was born of the child's fantasy and the man's tenacity.

Engine

HM4's engine was entirely designed and developed by MB&F over three years of intensive work. Each of the 311 components was developed specifically; no off-the-shelf components could be used due to the extreme nature of its architecture.

Two mainspring barrels connected in parallel provide 72 hours of energy and they transfer their power to the dual jet-turbine-like indication pods via vertical gear trains. Visible through a shaped sapphire display panel on the top of the case, a distinctive streamlined cock supports the balance, its centre cut away to reveal as much of the oscillating wheel as possible and validating the "kinetic" in MB&F's "kinetic art".

A work of art rewards when viewed from different angles and Horological Machine N^O4 is no exception. Turning the machine over reveals a panorama of meticulously finished micro-engineering through the sapphire sections. In a playful *trompe l'oeil*, what at first glance appears to be a micro-rotor in the form of MB&F's iconic battle-axe is actually a bridge.

Indications

For a timepiece not developed specifically to tell the time, HM4 performs that role superbly. In fact, with its highly legible dials perpendicular to the wearer's wrist, Horological Machine N^O4 might be described as the perfect pilot's or driver's watch.

On the left pod, the power reserve is clearly indicated by a skeletonised hand echoing MB&F's battle-axe motif. On the right, hours and minutes are displayed by bold, arrow-tipped Super-LumiNova filled hands. The two aviation instrument-styled instrument indications are directly controlled by their own crown: one to wind/re-fuel the tanks, the other to set the time.

Case

Inspired by aviation, the case of HM4 imparts speed, power, technology and refinement in equal measure. Visually, the case is composed of three parts: two streamlined jet-turbine-styled pods supported by a horizontal section housing the engine, which is clearly visible through transparent sapphire display panels and the central section of the case itself. Technically there are also three main sections, which include the dials and articulated front lugs; a central section in sapphire offering unprecedented 360° access to the superbly finished engine; and an aft section tapering down to the dual crowns.

More than 185 hours of intricate machining and meticulous polishing are required to turn an opaque solid block of sapphire crystal into the clear, light-filled atrium of the central

case section, which reveals part of the HM4 engine and engineering details.

The contrasts of matte with highly polished surfaces under the black PVD, stealthy straight lines with seductive curves, and rigid forms with articulated arms, sets HM4 Final Edition apart from anything visible (or not) on land, sea, or air!

Horological Machine N^o4 Final Edition

HM4 Final Edition is a limited edition of 8 pieces in blackened titanium

Engine:

Three-dimensional horological engine developed 100% by MB&F

Manual winding with two mainspring barrels in parallel

Power reserve: 72 hours

Balance frequency: 21,600bph/3Hz

Number of components: 311

Number of jewels: 50

Functions:

Hours, minutes and power reserve indicator

Hours and minutes on right dial, power reserve indicator on left dial

Separate crowns for time setting and winding

Case:

Grade 5 titanium coated with black PVD

Dimensions: 54mm wide x 52mm long x 24mm high

Number of components: 67

Articulation of lugs: 3°

Sapphire crystals:

Five sapphire crystals: 2 x dials, 1 x central case section, 2 x display panels (top and bottom)

Strap & Buckle:

Hand-stitched calfskin strap with titanium/white gold custom-designed folding buckle attached to articulated lugs

'Friends' responsible for the HM4 Final Edition

Concept: Maximilian Büsser / MB&F

Product Design: Eric Giroud / Eric Giroud Design Studio

Technical and Production Management: Serge Kriknoff / MB&F

R&D: Guillaume Thévenin / MB&F

Movement Development: Laurent Besse and Béranger Reynard

Movement manufacturing: Daniel Uhlmann / Azurée Technologies, Nicolas Broquet /
Broquet

Décolletage, Yann Ryser / Tital

Hand-finishing of movement components: Jacques-Adrien Rochat and Denis Garcia of
C-L Rochat, Frédéric Saulcy / STS

Movement assemblage: Didier Dumas, Georges Veisy, Alexandre Bonnet and Bertrand
Sagorin-Querol of MB&F

Case and buckle construction and production: Jean-Pierre Kohler and Lionel Gavignet
of Profusion, Martin Stettler / Stettler,
Dominique Mainier and Bertrand Jeunet
of G.F.Châtelain

Dials: François Bernhard and Denis Parel of Nateber, Aurora Moreira / Panova

Hands: Pierre Chillier, Isabelle Chillier and Félix Celetta of Fiedler

Strap: Olivier Purnot / Camille Fournet

Presentation box: Olivier Berthon / Berthon & Co

Production logistics: David Lamy / MB&F

Marketing communications: Charris Yadigaroglou, Virginie Meylan and Eléonor
Picciotto / MB&F

M.A.D. Gallery: Hervé Estienne / MB&F

Sales: Alexandre David and Patricia Duvillard / MB&F

Graphic Design: Gérald Moulière and Anthony Franklin of GVA Studio

Product Photography: Maarten van der Ende

Portrait Photography: Régis Golay / Federal

Webmasters: Stéphane Balet and Guillaume Schmitz of Sumo Interactive

Texts: Ian Skellern

MB&F - The Genesis of a Concept Laboratory

The projects that gave Maximilian Büsler the most pleasure and personal satisfaction during his fifteen years managing prestigious watch brands were those working with talented independent watchmakers. An idea for his own personal utopia emerged: that of creating a company dedicated solely to designing and crafting small series of radical concept watches in collaboration with talented professionals he both respected and enjoyed working with. The entrepreneur in Büsler brought the idea to reality.

MB&F is not a watch brand, it is an artistic and micro-engineering concept laboratory in which collectives of independent horological professionals are assembled each year to design and craft radical Horological Machines. Respecting tradition without being shackled by it enables MB&F to act as a catalyst in fusing traditional, high-quality watchmaking with cutting-edge technology and avant-garde three-dimensional sculpture.

MB&F's first timepiece, Horological Machine N⁰1 (HM1) was delivered from 2007 and introduced the concept of three-dimensional architectural horology. This was followed by HM2 in 2008 and HM3 in 2009, which were both inspired by science fiction. The year 2010 heralded the HM4 Thunderbolt, considered by many to be MB&F's most audacious machine to date. Legacy Machine N⁰1 introduced a new traditionally inspired line in 2011, while the 1970's inspired HM5 On the Road Again was launched in 2012.

MB&F is independent people creating for independent people.

Biography– Maximilian Büsler

Maximilian Büsler was born in Milan, Italy, before moving at an early age to Lausanne, Switzerland where he spent his youth. Growing up in a multi-cultural environment and family – his father was a Swiss diplomat who met his mother, an Indian national, in Bombay – led Büsler to develop a cross-cultural, broad-based approach to life and to business.

In July 2005, at the age of 38, Büsler created the world's first horological concept brand: MB&F (Maximilian Büsler & Friends), in which he is now partnered with Serge Krikhoff. Büsler's dream with MB&F is to have his own brand dedicated to developing radical horological concepts by working in small, hyper-creative groups composed of people he enjoys working with.

Entrepreneurship is Maximilian Büsler's forte. In 1998, when only 31, he was appointed Managing Director of Harry Winston Rare Timepieces in Geneva. During his seven years there Büsler developed the company into a fully-fledged and well respected haute horlogerie brand by developing the strategy, products, marketing and worldwide distribution, whilst integrating design, R&D and manufacturing in-house. The results were a 900 per cent increase in turnover and the positioning of Harry Winston as one of the leaders in this very competitive segment.

Maximilian Büsler's love for high-end horology was nurtured by his first employer, Jaeger-LeCoultre. During his seven years in the senior management team during the 1990s, JLC strongly increased its profile and multiplied its turnover by a factor of ten. Büsler's responsibilities at Jaeger-LeCoultre ranged from Product Management & Development to Sales & Marketing for Europe.

Büsler graduated in 1991 with a Masters in Microtechnology Engineering from the Swiss Federal

Institute of Technology, Lausanne.

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