

HOROLOGICAL MACHINE N°6 ALIEN NATION

Four *Pièces Uniques* combining mechanical complexity, extreme artisanship and a near-to-impossible case in sapphire crystal.

The year is 2017, and the visitors have landed. The MB&F Horological Machine N°6 Alien Nation is an intergalactic vessel piloted by a silvery-skinned captain and his quintet crew, enigmatic explorers ready to brave a new world.

Some might even say that the visitors landed a long time ago, in 1947, to be exact. It was 70 years ago that an unidentified flying object crash-landed in Roswell, New Mexico, sparking wild tales of alien visitations and government cover-ups. The nuclear age was slowly but surely giving way to the space age, and science fiction was becoming modern myth.

Hence, the crew of HM6 Alien Nation are not unfamiliar to us, even if they may have come from a different solar system. Tales of little green men with oversized craniums and shiny black eyes populate the realm of extraterrestrial science fiction and our imaginations. In addition, those passionate about mechanical watchmaking, particularly the strain of modern independent watchmaking that MB&F embodies, will feel deep affinities with the concept of being a community apart, a tribe with its own codes and culture.

The first two series of HM6, the Space Pirate and Sapphire Vision, were unmanned vehicles. This year, MB&F decided it was time to put someone in the captain's seat. MB&F founder Maximilian Büsser says, *"I first came to love watches because I saw them as these machines that were imbued with life."* HM6 Alien Nation is the literal expression of this metaphor. Its alien inhabitants are not passive passengers; they scurry around the HM6 engine, fixing the turbines in the aft, adjusting the gears, hand on throttle, scanning the space ahead. Even when frozen into micro-sculptures of white gold, they are bursting with energy (except for one particularly large fellow, loafing in a corner just out of sight of his captain).

Each of the six aliens is individually modelled and hand-sculpted in white gold by engraver Olivier Kuhn. The arms and necks of the aliens are finer than grains of sand, each alien requiring up to 34 hours to complete. Count more than a month of full-time work for the crew of six.

As would befit spacecraft coming from an alien civilisation with highly sophisticated technology, HM6 Alien Nation is completely transparent, being formed entirely of sapphire crystal with reinforcing elements in Grade-5 titanium. To be precise, 12 separate blocks of sapphire crystal requiring up to 510 hours of machining and polishing. During the process, breakage is unfortunately frequent, often reducing hundreds of hours of work to zero... And then comes the assembly: the 12 crystals must come together perfectly to present a seamless whole.

Alien Nation's crystal-clear skin reveals the radical HM6 engine, the result of 3 years of intense development: a highly complex, totally unconventional construction of 496 finely-finished components. Topped by a 60-second flying tourbillon with retractable shield, the mechanism drives twin hour and minute domes rotating perpendicularly to the movement. Regulating turbines are coupled to the winding rotor. The interior of Alien Nation is shot through with thick bands of high-performance luminous material called AGT Ultra.

There will be four unique pieces of HM6 Alien Nation, differentiated by their accent colours: green, blue, purple and turquoise. Each one is on a mission to seek out a new home on this planet. The truth may be out there, but the course of the MB&F Horological Machine N°6 Alien Nation is locked on Earth.

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THE HOROLOGICAL MACHINE N°6 SERIES

MB&F launched Horological Machine N°6 in November 2014, all biomorphic curves and brushed metal in its inaugural edition, known as Space Pirate. Just over a year later, at the beginning of 2016, the HM6 Sapphire Vision followed, with the uppermost and lowest sections of the case in transparent sapphire crystal, sandwiching a centre segment of platinum or red gold.

The initial sparks of inspiration for HM6 came from a 1970s and 1980s Japanese anime TV series called *Capitaine Flam*, featuring the eponymous captain and his improbably bulbous spaceship. Though ostensibly set in the future, the aesthetic of *Capitaine Flam* was closely associated with contemporary designers such as Luigi Colani and his love of curved, organic forms. Horological Machine N°6 borrows against this decidedly provocative design philosophy, delivering unexpected sensuality in a biomimetic shell of brushed titanium.

The Sapphire Vision edition of HM6 took graphic elements from a travel icon of the 1950s and 1960s — American Greyhound buses of the so-called *Streamline Moderne* era, with their lateral grooves and bright metal sidings.

Every aspect of the HM6 engine is constructed to intersect neatly with this retro-modernist take on space travel and technology, from the sleek whirling turbines with curved fins to the cinematic flying tourbillon with its manually operable shutters. The signature MB&F battle-axe appears in two places in the HM6 engine — in single-headed form for the rotor, and double-headed for the upper tourbillon cage.

There were 68 pieces of HM6 Space Pirate (50 in titanium and 18 in red gold/titanium) and 20 pieces of HM6 Sapphire Vision (10 each in red gold and platinum). Including the four unique pieces of the Alien Nation edition, there are currently only 92 pieces of Horological Machine N°6, making HM6 considerably rarer than a UFO sighting.

And for those keeping count, this means that there are only eight more HM6 engines left to go.

THE HM6 ENGINE

An audacious exterior deserves an equally revolutionary movement. If the HM6 engine looks like no other movement out there, it is because there is no other movement like it out there. No less than 496 finely-finished components make up the highly complex movement.

Each turbine comprises two hemispheres; two sets of curved fins coming together to shield the movement from the rough and tumble of daily wear. The turbines are coupled to the winding rotor, providing sufficient air drag to slow the rotor down should its moment of inertia rise above a certain level. As a result, the self-winding system is effectively also self-regulating, which has the advantage of increasing the longevity of the movement.

This is the second tourbillon movement to emerge from MB&F and the first flying tourbillon to do so. A flying tourbillon is a delicate beast at the best of times — which is why they rarely venture far from the movement plate. In contrast, the flying tourbillon of the HM6 engine projects high above the movement, overcoming issues of stability (especially pertinent where the heart of the movement and the source of its chronometric ability is concerned). The HM6 engine defers to the laws of nature in one respect, by providing its flying tourbillon with a retractable shield that can be deployed to minimise the oxidising effects of UV radiation on the oils that lubricate the regulating organ.

The twin domes of the hour and minute indications on the HM6 engine are machined to paper-thin dimensions, an incredibly difficult process that is possible only through the prior expertise gained by MB&F in creating Horological Machine N°3. The domes rotate on a plane perpendicular to the rest of the movement, creating additional levels of mechanical complexity.

The HM6 engine was created over three years of intensive development by the MB&F engineering team together with the eponymous founder of David Candaux Horlogerie Créative.

THEY CAME FROM OUTER SPACE

Each of the six aliens on Horological Machine N°6 Alien Nation is individually modelled and then hand-sculpted in white gold by accomplished engraver Olivier Kuhn of Atelier-Création Kuhn. Each one takes up to 34 hours to complete, which adds up to over a month of full-time work for the HM6 engine's crew of six.

Conventional machining, which is used for all other watch components, is unfeasible in this instance due to the extreme irregularity of the alien bodies and the excessive dimensional variations between contiguous points — for example, going from the large head to the slender neck and then back to a wide torso. The arms of the aliens can measure as little as 0.25mm in diameter, with the neck not very much thicker at 0.3mm. In comparison, the average grain of sand has a diameter of 0.5mm.

Depictions of aliens are as varied as the stories that contain them, from the endearing, wide-eyed, fit-in-a-bicycle-basket extraterrestrials of Spielberg to menacing Giger-esque Xenomorphs. Having grown up in the late 1960s and 1970s, when popular theorising about Roswell and Area 51 was at its peak, Maximilian Büsser had no hesitation about what kind of aliens would inhabit Horological Machine N°6.

IN A CRYSTAL SHIP

Except for some titanium reinforcing elements, which also serve as strap attachment points, the case of Horological Machine N°6 Alien Nation is made entirely of sapphire crystal. Up until recently, sophisticated shapes such as those used in HM6 would have been impossible to achieve in sapphire crystal.

The creations of MB&F have pushed the limits of possibility in this field ever since the days of Horological Machine N°2 Sapphire Vision. Horological Machine N°3 Frog, with its hemispherical “eyes” and Horological Machine N°4 Thunderbolt, with its double-arched case window, followed with ever more ambitious designs in sapphire crystal.

Horological Machine N°6 Alien Nation is formed out of 12 separate blocks of sapphire crystal, which come together to present a seamless whole. The entire process takes up to 510 hours, not including their assembly. During the incredibly difficult machining and polishing process, breakage is unfortunately frequent; in one instance, a crack appeared after more than 300 hours of work, instantly reducing months of work to zero.

The final result is a clear expression of technical and manufacturing success.



HOROLOGICAL LAB

WITH A COSMIC GLOW

Highlighting the extreme transparency and smooth curves of the Horological Machine N°6 Alien Nation case are carefully placed bands of luminous material. At the top of the luminosity scale are the AGT (Ambient Glow Technology) Ultra strips that run along the inner peripheral edge of the case middle.

This high-tech material — with its startling, near-electric levels of glow — was first exploited in watchmaking by the designer James Thompson (aka Black Badger); it was previously used by MB&F in the HMX Black Badger and Starfleet Machine Black Badger editions. The four unique pieces of HM6 Alien Nation each feature a different colour of AGT Ultra: green, blue, purple and turquoise.

For smaller areas in which precise application is required, Super-LumiNova is used. The upper surfaces of the turbine fins, dial markings, friction wheel, the MB&F logo and the upper tourbillon cage are lined with Super-LumiNova, coloured to match the corresponding hue of AGT Ultra in each piece.

Even in strong light, the different pieces of HM6 Alien Nation are distinguishable from each other. The water-resistance gaskets, visible at the case joints, are coloured to reflect the colour of the luminous material used within each piece. And at night, Horological Machine N°6 Alien Nation comes to life with an intense glow from out of this world.

HM6 ALIEN NATION – TECHNICAL DETAILS

4 unique pieces (blue, green, turquoise and purple)

Engine:

Three-dimensional horological engine developed exclusively for HM6 by MB&F with David Candaux

Flying tourbillon with retractable semi-spherical titanium shield

Platinum 950 battle-axe automatic winding rotor matching the version: green for the green version, blue for the blue and turquoise and purple for the purple.

Twin aluminium turbines with Super-LumiNova driven by winding rotor

Power reserve: 72 hours

Balance frequency: 2.5 Hz / 18,000 bph

Number of components: 496

Number of jewels: 68

Functions/indications:

Hours and minutes on separate semi-spherical aluminium indications

Left crown opens/closes tourbillon shield; right crown for time setting and winding

Dual turbines regulate the automatic winding rotor

Specificity of HM6 Alien Nation:

Aliens: manufactured in white gold. There are 5 different aliens inside the movement and 1 on the case.

AGT Ultra (Ambient Glow Technology): Internal circumference highlighted by the 4 slats in solid AGT Ultra.

Super-LumiNova: applied on the turbines, dials, friction wheel, the MB&F logo on the top of the movement and the tourbillon's bridge battle-axe. Green Super-LumiNova on the green version and blue on the purple, blue and turquoise versions.

Gaskets: Gaskets matching the AGT Ultra colour. Blue gasket for the AGT blue, green with the AGT green, purple with the AGT purple, and light blue for the turquoise AGT.

Case:

Complete sapphire crystal case with some reinforcing elements in grade 5 titanium.

Dimensions: 51mm x 50mm x 22.7mm

Number of components: 95

Water resistance: 30m / 3atm

Strap & Buckle:

Grey hand-stitched alligator strap with stiches matching the gasket's colours. Custom designed folding buckle in titanium.

'FRIENDS' RESPONSIBLE FOR HM6 ALIEN NATION

Concept: Maximilian Büsser / MB&F

Product design: Eric Giroud / Eric Giroud Design Studio

Development and production management: Serge Kriknoff / MB&F

R&D: Guillaume Thévenin and Ruben Martinez / MB&F

Movement development: MB&F with David Candaux

Sapphire case: Sebastien Sangsue and Gregory Esseric / Sebal

Manufacturing of the aliens: Olivier Kuhn / Atelier Création Kuhn

Profile-turning wheel/pinion/axis: Dominique Guye / DMP and Yves Bandi / BANDI

Steel spring + turbine aluminium: Alain Pellet / Elefil

Tourbillon: Dominique Lauper / Precision Engineering

Retractable shield: Benjamin Signoud / AMECAP

Plates and bridges: Rodrigue Baume / Damatec, Georges Auer / Mecawatch, Benjamin Signoud / AMECAP

Platinum winding rotor: Denis Villars / Cendres et métaux, Pierre-Albert Steinmann / Positive Coating

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

Movement assemblage: Didier Dumas, Georges Veisy, Anne Guiter, Emmanuel Maitre and Henri Porteboeuf / MB&F

In-house machining: Alain Lemarchand and Jean-Baptiste Prétot / MB&F

Quality Control: Cyril Fallet / MB&F

After Sales Service: Thomas Imberti / MB&F

Buckle construction and production: Dominique Mainier / G&F Châtelain

Specific crown of the shield mechanism: Jean-Pierre Cassard / Cheval Frères SA

Metallisation of hour and minute domes: Roland Rhyner / Econorm

Semi spherical hour and minute: Natéber

Strap: Olivier Purnot / Camille Fournet

Super-LumiNova: Aurora Amaral Moreira / Panova

AGT Ultra: James Thompson / Black Badger

Presentation case: Olivier Berthon / ATS Atelier Luxe

Production logistics: David Lamy and Isabel Ortega / MB&F

Marketing communications: Charris Yadigaroglou, Virginie Meylan and Juliette Duru / MB&F

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Product photography: Maarten van der Ende

Portrait photography: Régis Golay / Federal

Website: Stéphane Balet / Nord Magnétique, Victor Rodriguez and Mathias Muntz / Nimeo

Film: Marc-André Deschoux / MAD LUX

Texts: Suzanne Wong

MB&F – GENESIS OF A CONCEPT LABORATORY

In 2015, MB&F celebrated its 10th anniversary – and what a decade it was for the world's first ever horological concept laboratory: 10 years of hyper-creativity; 11 remarkable calibres forming the base of the critically acclaimed Horological Machines and Legacy Machines for which MB&F has become renowned.

After 15 years managing prestigious watch brands, Maximilian Büsser resigned from his Managing Director position at Harry Winston in 2005 to create MB&F – Maximilian Büsser & Friends. MB&F is an artistic and micro-engineering laboratory dedicated to designing and crafting small series of radical concept watches by bringing together talented horological professionals that Büsser both respects and enjoys working with.

In 2007, MB&F unveiled its first Horological Machine, HM1. HM1's sculptured, three-dimensional case and beautifully finished engine (movement) set the standard for the idiosyncratic Horological Machines that have followed: HM2, HM3, HM4, HM5, HM6, HM7, HM8 and HMX – all Machines that tell the time, rather than Machines to tell the time.

In 2011, MB&F launched its round-cased Legacy Machine collection. These more classical pieces – classical for MB&F, that is – pay tribute to nineteenth-century watchmaking excellence by reinterpreting complications from the great horological innovators of yesteryear to create contemporary objets d'art. LM1 and LM2 were followed by LM101, the first MB&F Machine to feature a movement developed entirely in-house. The year 2015 saw the launch of Legacy Machine Perpetual featuring a fully integrated perpetual calendar. MB&F generally alternates between launching contemporary, resolutely unconventional Horological Machines and historically inspired Legacy Machines.

As well as Horological and Legacy Machines, MB&F has created space-age MusicMachines (1, 2 and 3) in collaboration with music box specialist Reuge; and with L'Épée 1839, unusual clocks in the form of a space station (Starfleet Machine), a spider (Arachnophobia), a rocket (Destination Moon) and three robot clocks (Melchior, Sherman, and Balthazar). In 2016, MB&F and Caran d'Ache created a mechanical rocket-pen called Astrograph.

And there have been distinguished accolades reminding us of the innovative nature of MB&F's journey so far. To name a few, there have been no less than 4 Grand Prix awards from the famous *Grand Prix d'Horlogerie de Genève*: in 2016, LM Perpetual won the Grand Prix for Best Calendar Watch; in 2012, Legacy Machine No.1 was awarded the Public Prize (voted for by horology fans) and the Best Men's Watch Prize (voted for by the professional jury); and in 2010, MB&F won Best Concept and Design Watch for the HM4 Thunderbolt. In 2015 MB&F received a Red Dot: Best of the Best award – the top prize at the international Red Dot Awards – for the HM6 Space Pirate.