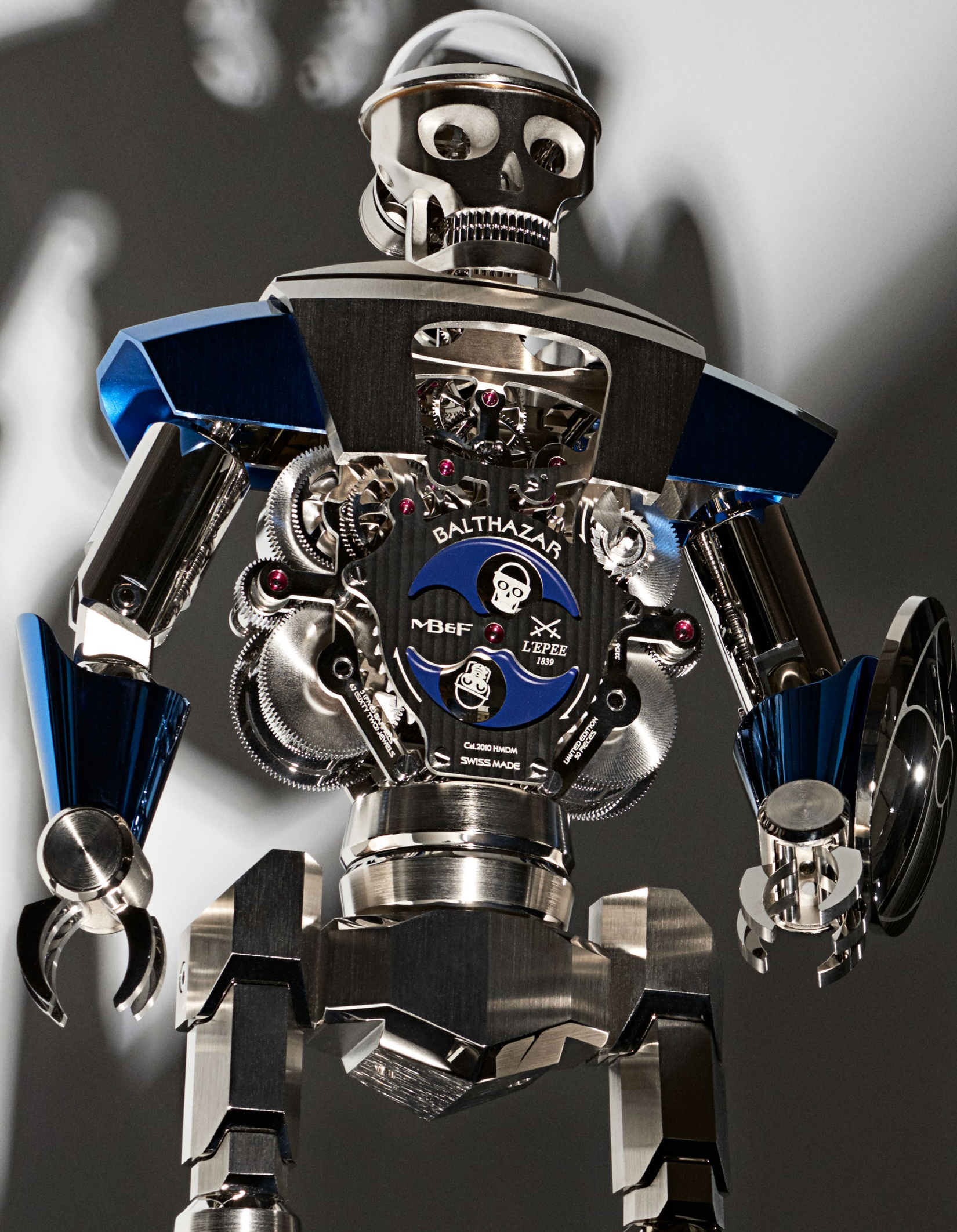


# BALTHAZAR

MB&F + L'EPÉE 1839







# BALTHAZAR

## THE DUALITY OF MAN AND MACHINE

### SUMMARY

**BALTHAZAR – A ROBOT-CUM-TABLE CLOCK**

**THE NAME 'BALTHAZAR'**

**TECHNICAL SPECIFICATIONS**

**L'EPÉE 1839**

**MB&F / GENESIS OF A CONCEPT LABORATORY**

### SUMMARY

Balthazar is a sophisticated and imposing high-precision robot clock displaying jumping hours, retrograde seconds and a 35-day power reserve. Weighing in at over eight kilograms (18 pounds) and standing nearly 40 centimetres tall (16 inches), Balthazar is composed of 618 beautifully finished, micro-engineered components.

But beware... there is also a dark side to Balthazar, as there is in all of us.

Rotate his torso 180 degrees and discover a terrifying Balthazar, along with a dual hemisphere moon phase indicator that should help you anticipate the evolutions of your mood. To quote Darth Vader in Star Wars, "If you only knew the power of the dark side."

Light side: boasting a month-busting 35 days of power reserve, Balthazar's clockwork displays "slow" jumping hours and trailing minutes via two discs on the chest, while the power reserve indicator is located on his belly. This side of Balthazar may be serene, but he is still always on guard: his red eyes, which continually scan the surroundings, are actually 20-second retrograde displays.

Moving higher still to Balthazar's "brain" under the polished glass dome, we find the precision regulator of the clockwork. The animated balance constantly oscillates to let you know that while he may be standing still, Balthazar is always calculating.

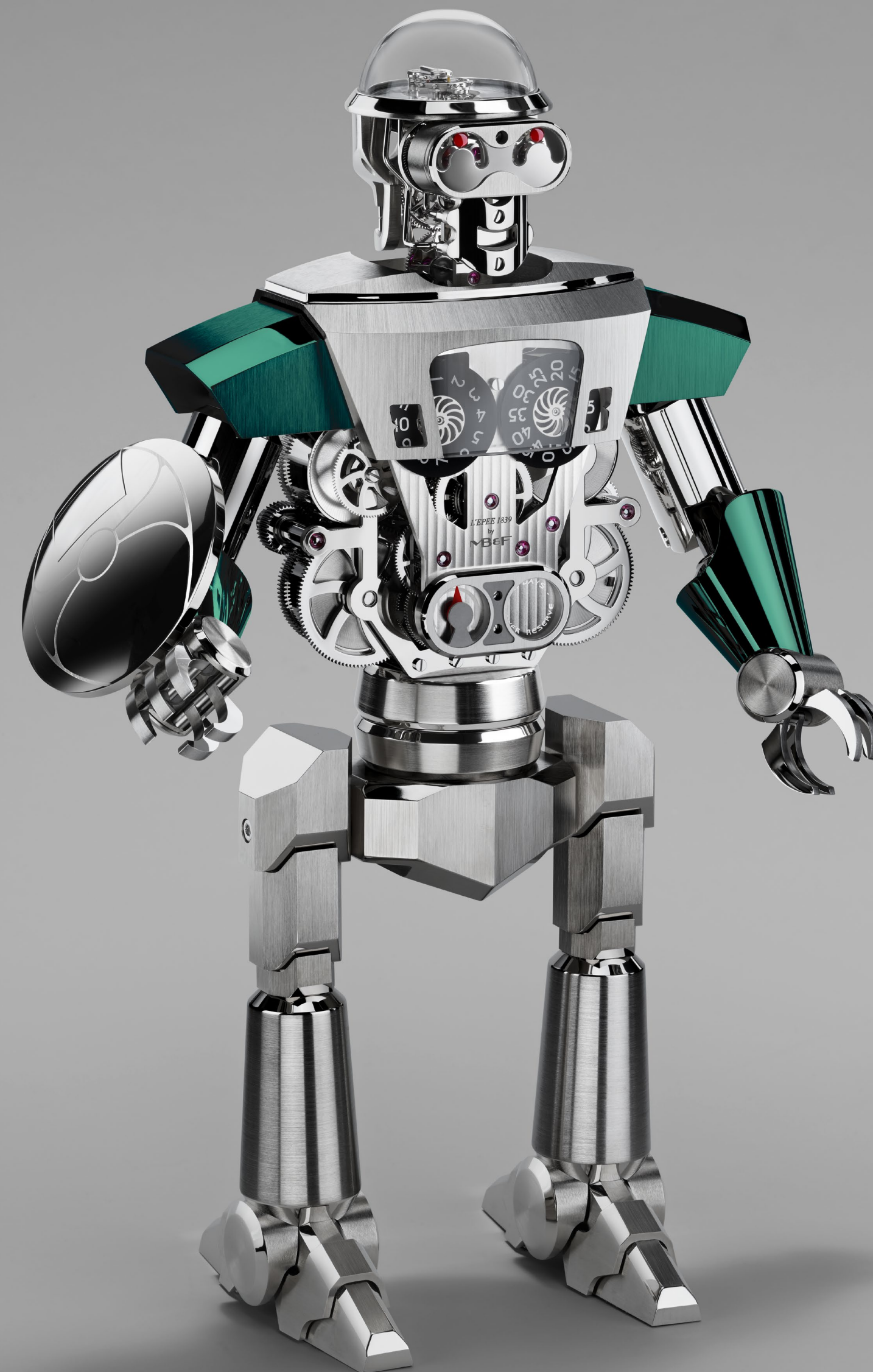
Balthazar rotates around the hips like the high-precision machine that he is; you can feel the miniscule bumps of each micro-roller as he turns, and each distinct notch when he rotates the full 180°. Then everything changes: smiling Balthazar becomes very dark, or vice versa.

Dark side: The absolute nature of Balthazar's darkness is revealed by the cold hard skull with menacing teeth and deep-set ruby-red eyes. But it's not all threat here as Balthazar's chest also contains a moon phase display accurate for 122 years. You can adjust the moon phase manually, providing one of many of Balthazar's tactile pleasures.

Balthazar does more than display horological events: as well as rotating around the hips, his arms articulate at both the shoulders and the elbows, and his hands can clasp and hold objects.

Finally, Balthazar's shield conceals and protects the secret of his awesome power: an integrated clock-winding and time-setting key.

**Balthazar is available in limited editions of only 50 pieces per colour in black, silver, blue or green armour.**



### FOR FURTHER INFORMATION

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# BALTHAZAR

## THE DUALITY OF MAN AND MACHINE

#### BALTHAZAR – A ROBOT-CUM-TABLE CLOCK

Balthazar doesn't just look like an incredibly solid piece of complex high-precision micro-engineering, he is just that: an incredible 618 components go into the construction of his body and clockwork, which are more pieces than in most complicated wristwatches.

Developing Balthazar's movement required such significant modifications to the previous movement that L'Epée had created for Melchior (MB&F and L'Epée first cobranded robot-clock) that it is basically a new movement. As well as the addition of a double hemisphere moon phase complication, Balthazar is around 30% taller than Melchior so an additional gear train was required to connect the regulator with the rest of the clockwork.

Surprisingly, because of Balthazar's size – and he is even heavier than he looks – manipulating any of Balthazar's joints and even the moon phase indication is extremely tactile. Moving anything on this robot is like gently closing the door on a high-end German sedan; it's the type of feel that requires much more than excellent high-precision micro-engineering capability, it requires caring deeply about touch, sensations, and even sounds from the outset. Balthazar is built to watch-making precision by a team that cares deeply, you can feel it.

Balthazar is full of surprises: joints move in ways that astonish (and it's astonishing that some move at all); motions feel so wonderfully better than you expect that you want repeat them again and again. The build quality continually surprises and it's hard to emphasise just how solid Balthazar feels. Then there is yet another surprise: the double-depth square-socket winding/time-setting key integrated neatly into the shield, which naturally slips in and out of its concealed niche with horological precision.

And for those who look very carefully into those eerie, ruby-red, Terminator-style eyes set deep into Balthazar's skull, there is an ultimate surprise perfectly illustrating just how seriously the team takes the notion of form-follows-function. Those red eyes are actually the ruby bearings that support the 20-second retrograde eye displays on the other side of his face.

*"L'Epée 1839 are amazing, a joy to work with," says MB&F founder Maximilian Büsser. "They always step up to the plate, no matter how original, how challenging the design".*

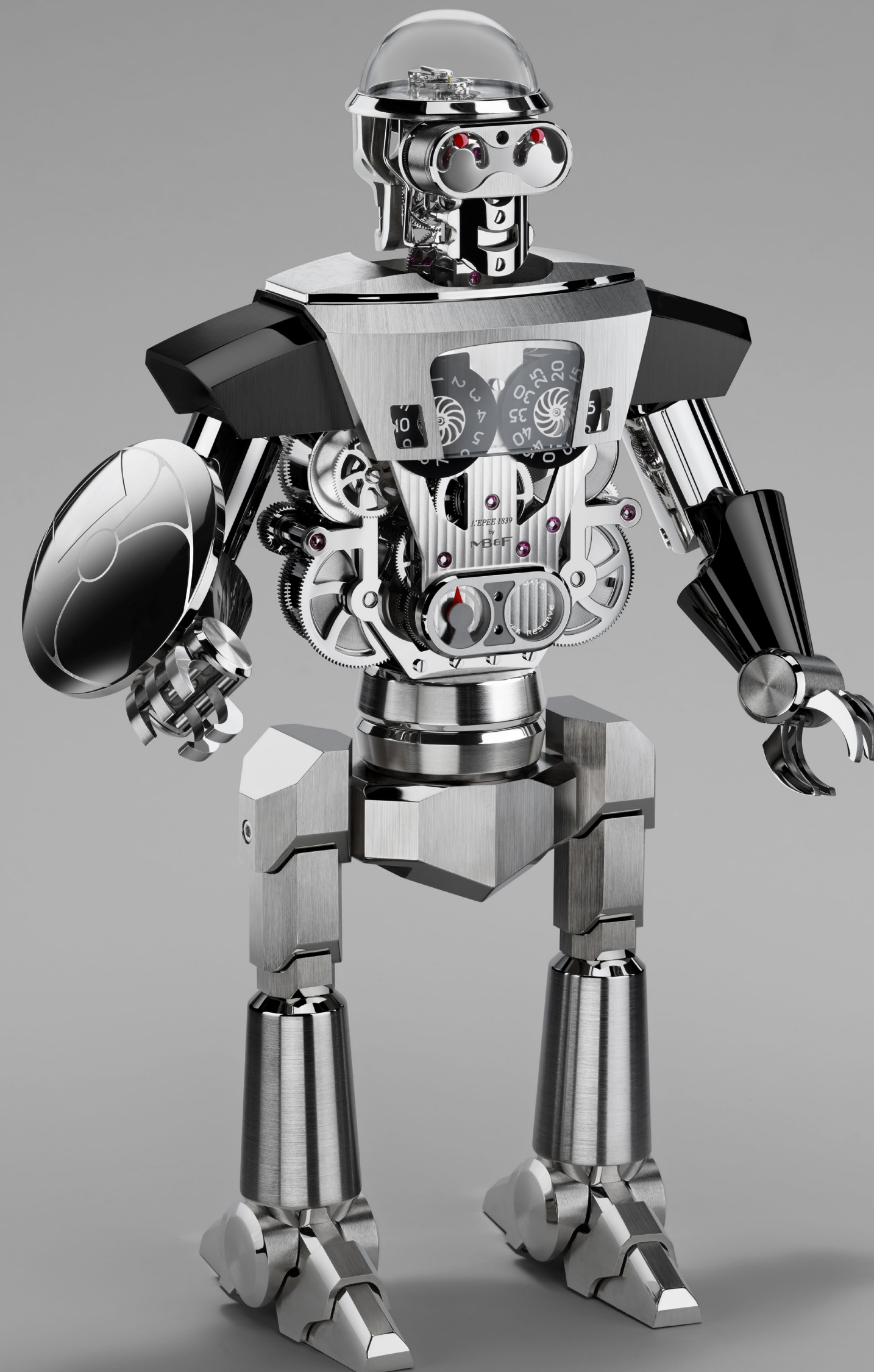
With a normal jumping hour indication, between five minutes to the hour and five minutes past it can be difficult to know if the jump has occurred or not. So L'Epée developed a 'slow' jumping hour, which sees the hour disc remain static for 55

minutes and then – rather than jump instantly and risk the jump being missed – start to turn five minutes before the hour. The jump is so gradual that it can be easily seen.

Balthazar's movement features a regulator (his brain) with an Incabloc shock protection system to minimise risk of damage to this critical component when the clock is being transported or moved. This type of shock protection is generally only seen in wristwatches.

Balthazar's movement also features the same superlative fine finishing – Geneva waves, anglage, mirror polishes, sand-blasting, circular and vertical satin finishing – seen on haute horlogerie wristwatches. However, finely finishing a clock movement is more challenging than finishing a wristwatch because of the greater surface areas of the larger components. L'Epée CEO Arnaud Nicolas explains: *"It's not simply a case of double the size of the components, double the time it takes to finish them. The complexity increases exponentially. For polishing, for example, you need to apply the same pressure as when finishing a watch movement but on a much larger surface. Any variation in that pressure will show up in the finishing, so a skilled and steady hand is required to apply uniform pressure."*

Much time, attention and work goes into ensuring that Balthazar is absolutely everything he can be. For example, consider that his legs, which have no articulations to minimise risk of falling over, have nevertheless been manufactured and finished in three separate pieces before assembly, just because going to that trouble significantly increased the telescopic potential of various sections. Or those long nail-type teeth set into Balthazar's skull: they could have been milled from a solid block of metal to save a lot of time and money. Instead they were manufactured and polished individually before being set carefully into the skull. While you may not consciously notice these imperceptible details, they all add up.







# BALTHAZAR

## THE DUALITY OF MAN AND MACHINE

### THE NAME 'BALTHAZAR'

Fictional robots often possess monikers sounding like acronyms or reference numbers – think of HAL 9000, C-3PO or Dr. Who's K-9 – but, interestingly, Maximilian Büsser christened this 21st-century robot with the old world name 'Balthazar'.

Balthazar – along with Melchior and Caspar – was one of the names of the three wise men, or magi, from biblical lore. But this robot clock was named Balthazar for another reason. Maximilian Büsser explains: *"In the Büsser family, for over five centuries from the 1400s onwards, every eldest Büsser son was either called Melchior or Balthazar. It alternated. My grandfather was called Melchior and hated it, so he had everybody call him Max, which is how I became a Max. My grandfather hated the Melchior-Balthazar thing so much that he put an end to this 500-year-old tradition by calling my father Mario... Now, a century later, I happen to love the names Melchior and Balthazar!"*

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MB&F / GENESIS OF A CONCEPT LABORATORY

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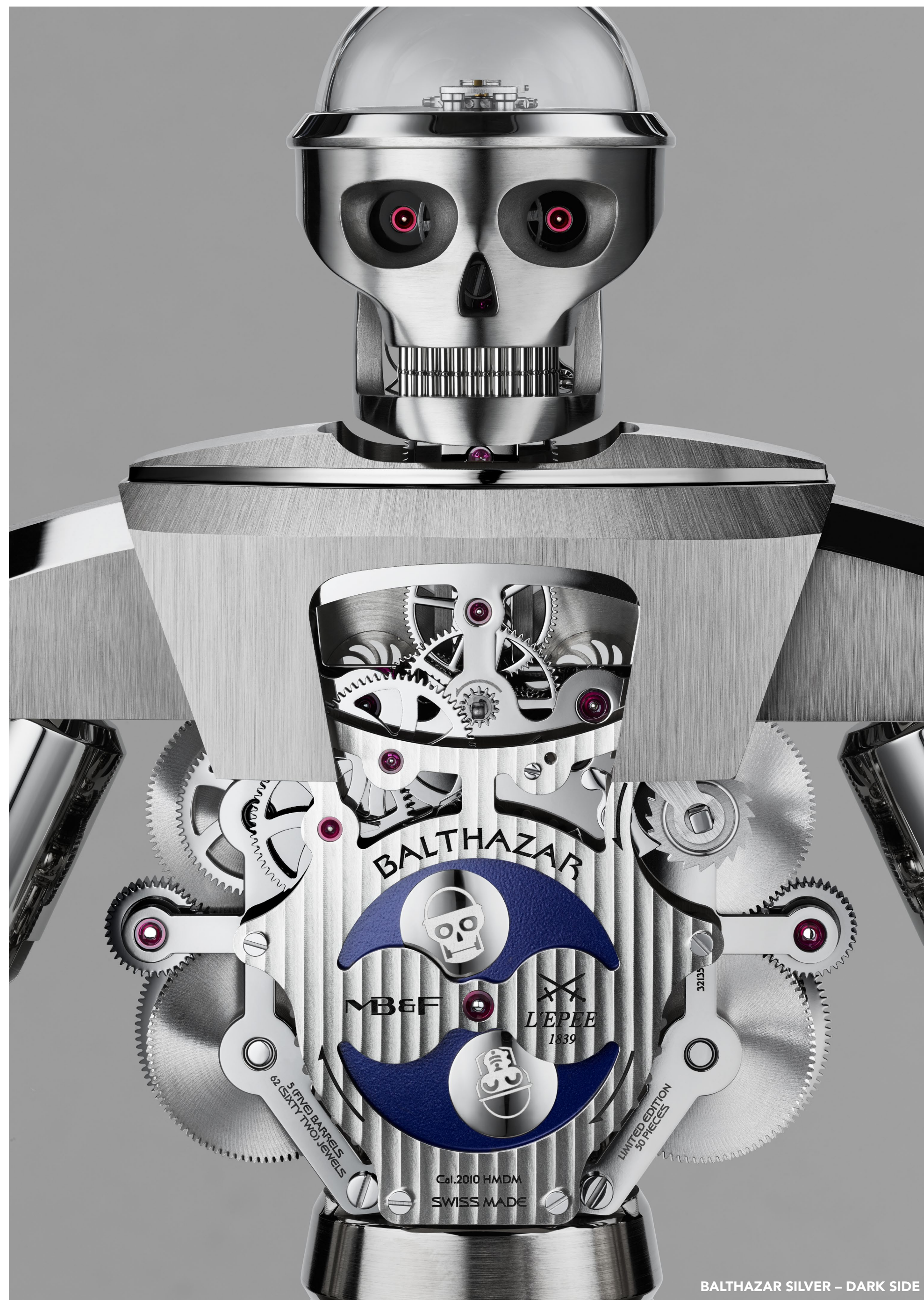
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# BALTHAZAR

## THE DUALITY OF MAN AND MACHINE

### TECHNICAL SPECIFICATIONS

Balthazar comes in limited editions of 50 pieces per colour in black, silver, blue or green armour plates.

#### DISPLAYS

«Slow» jumping hours and sweeping minutes: twin discs on the chest feature MB&F's signature numerals and respectively display hours and minutes

20-second retrograde second display in eyes: red «pupils» in each eye scan over 20-second intervals and indicate seconds

35-day power reserve indicator: dial on the belly provides intuitive view of remaining energy

Double hemisphere moon phase indicator: phases of the moon are displayed on a disc on the «dark side» chest

#### MOVEMENT

L'Épée 1839 in-house designed and manufactured movement.

Balance frequency: 18,000 bph / 2.5Hz

Barrels: 5 in series

Power reserve: 35 days

Movement components: 405

Jewels: 62

Incabloc shock protection system

Clockwork in palladium-plated brass and stainless steel

Manual-winding: double-depth square socket key sets time and winds movement; when not in use the key integrates into a dedicated slot in the shield

Movement finishing includes Geneva waves (moon phase and power reserve bridges), polishing, sand-blasting, circular and vertical satin finishing and starburst decoration

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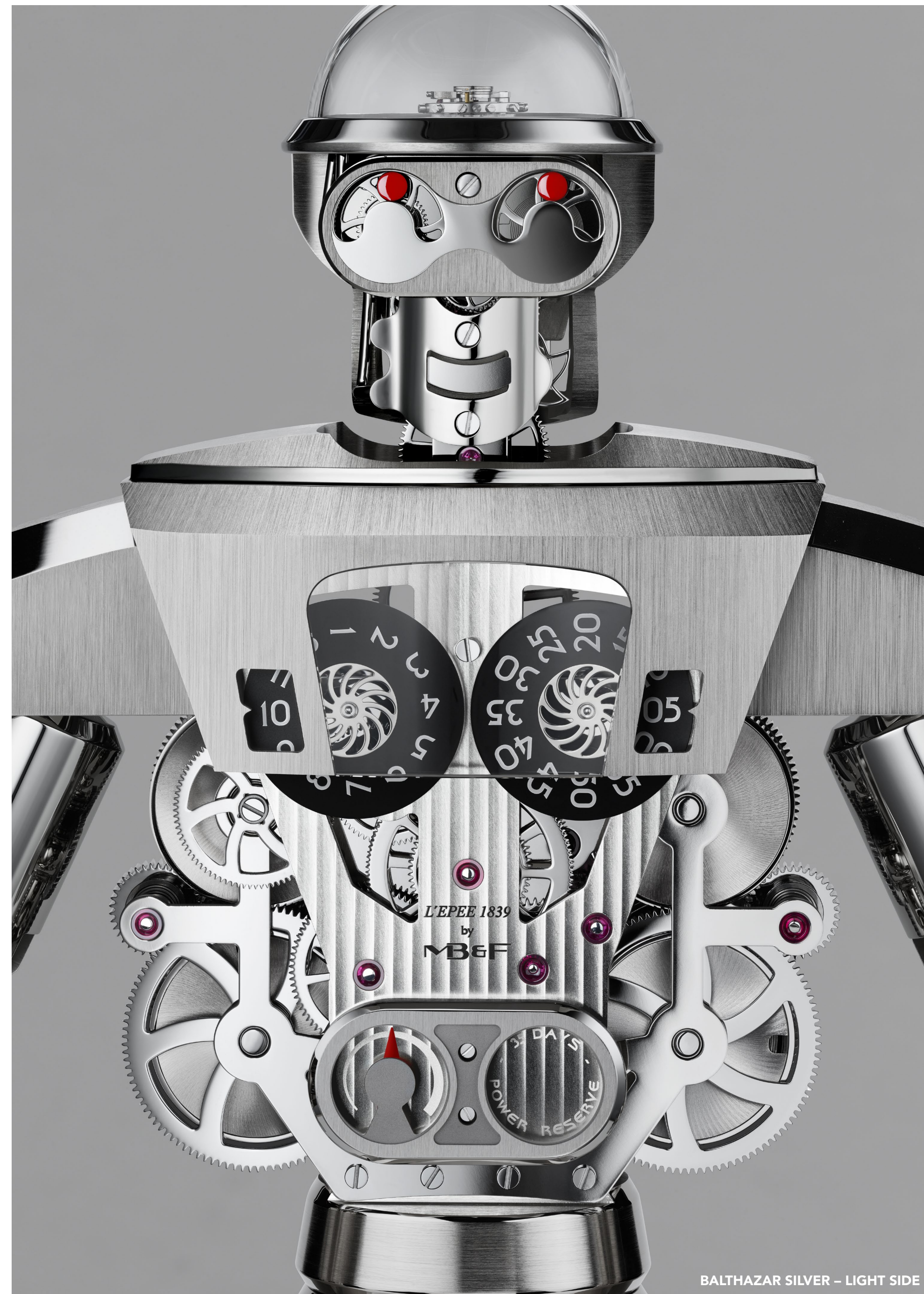
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# BALTHAZAR

## THE DUALITY OF MAN AND MACHINE

### TECHNICAL SPECIFICATIONS

#### BALTHAZAR'S BODY AND ARMOUR

Dimensions: 39.4 cm high × 23.8 cm wide (depending on position of the arms) × 12.4 cm (boot size)

Weight: 8.2 kg

Body/armour components: 213

Movement main plate in palladium-plated polished brass

#### HEAD

**Dome:** polished glass secured via polished and bevelled palladium-plated brass bezel, circular brushed finish around escapement

**Skull:** nickel-plated bronze with brushed and sandblasted finishes

**Teeth:** each tooth milled in stainless steel and polished before being mounted into the skull individually

**Eyes:** 20-second retrograde seconds display in stainless steel painted with red lacquer

#### TORSO

Breastplate in three pieces, breast and two CVD colour-treated shoulder pads

Hours, minutes, and power reserve indicators on one breastplate, moon phase display on the other.

Protective plate in sapphire crystal.

#### HIPS

Rotate on precision ball bearings with spring click to indicate and hold at resting positions

Balthazar's centre of gravity is low around the hips to minimise any risk of being knocked over

#### LEGS

Each leg weighs 1.5 kg.

Each femur is in 3 parts to reinforce the look of telescopic-potential and armour plating

Legs, shins, and feet in nickel-plated brass

#### SHOULDERS AND ARMS

**Articulation:** pivot at arms/shoulders, rotation at the elbows, pivot lower arms with spring locking system

**Fingers:** on each hand, two fingers cross into the other three so that the hands can clasp

**Shield:** double-depth square-socket key in polished and laser-engraved nickel-plated brass with integrated winding/time-setting key

Key is palladium-treated to maximise the longevity of the polished finish

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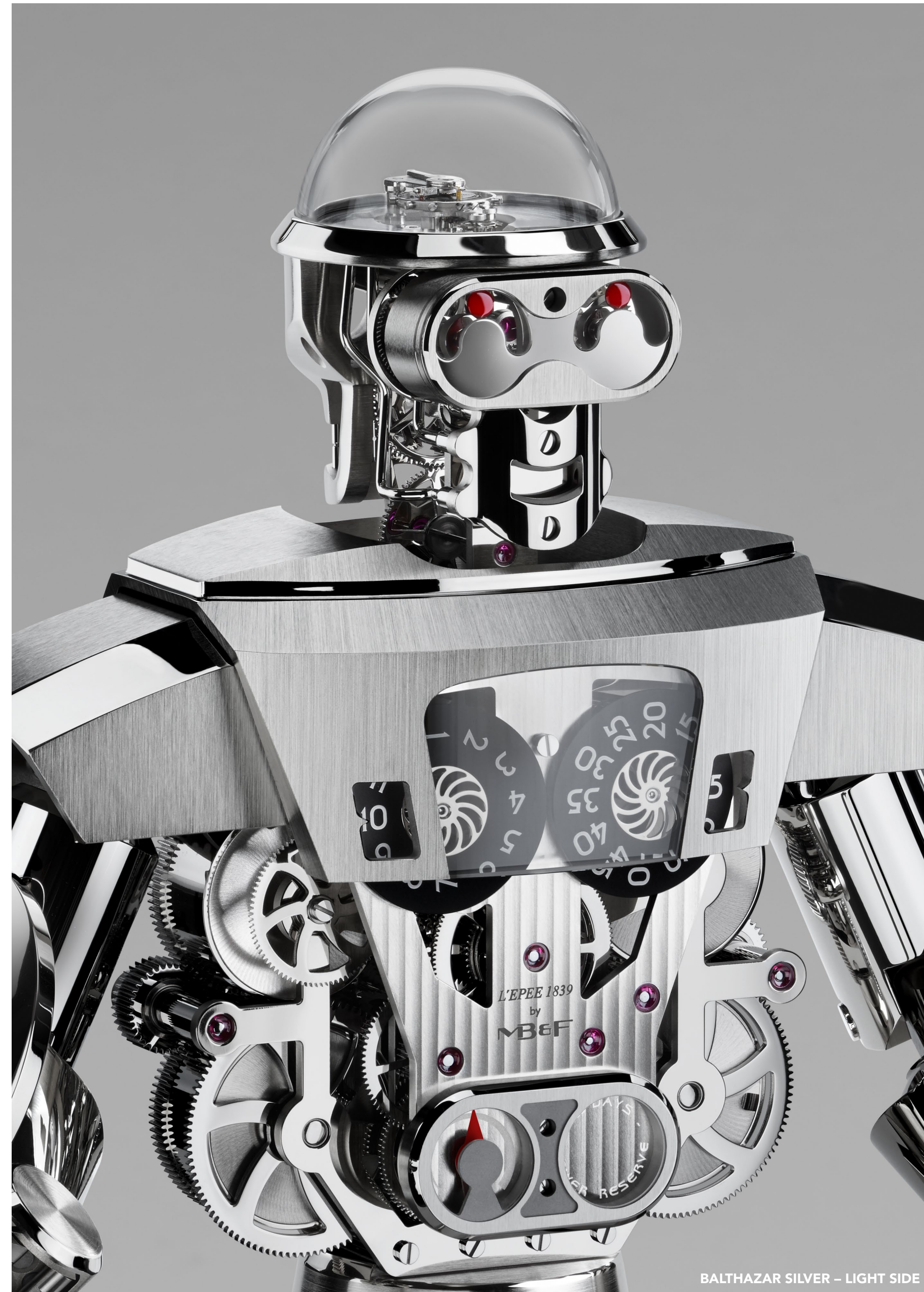
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BALTHAZAR SILVER – LIGHT SIDE





# BALTHAZAR

## THE DUALITY OF MAN AND MACHINE

### L'ÉPÉE 1839 – THE PREMIER CLOCK MANUFACTURE IN SWITZERLAND

For more than 175 years, L'Épée has been at the forefront of clock making. Today, it is the unique specialised manufacture in Switzerland dedicated to making high-end clocks. L'Épée was founded in 1839, by Auguste L'Épée, who set up the business near Besançon, France to make music box and watch components.

From 1850 onward, the manufacture became a leading light in the production of 'platform' escapements, creating regulators especially for alarm clocks, table clocks and musical watches. By 1877, it was making 24,000 platform escapements annually. The manufacture became a well-known specialist owning a large number of patents on special escapements such as anti-knocking, auto-starting and constant-force escapements and the chief supplier of escapements to several celebrated watchmakers of the day. L'Épée has won a number of gold awards at international exhibitions.

During the twentieth century, L'Épée owed much of its reputation to its superlative carriage clocks and, for many, L'Épée was the clock of the influential and powerful; it was also the gift of choice by French government officials to elite guests. In 1976 when the Concorde supersonic aircraft entered commercial service, L'Épée wall clocks were chosen to furnish the cabins, providing passengers with visual feedback of the time. In 1994, L'Épée showed its thirst for a challenge when it built the world's biggest clock with compensated pendulum, the Giant Regulator. At 2.2 m high, it weighs 1.2 tons – the mechanical movement alone weighs 120 kg – and required 2,800 man-hours of work.

L'Épée is now based in Delémont in the Swiss Jura Mountains. Under the guidance of CEO Arnaud Nicolas, L'Épée 1839 has developed an exceptional table clock collection, encompassing a range of sophisticated classic carriage clocks, contemporary design clocks and avant-garde horological sculptures. L'Épée clocks feature complications including retrograde seconds, power reserve indicators, perpetual calendars, tourbillons and striking mechanisms – all designed and manufactured in-house. Ultra-long power reserves have become a signature of the brand as well as superlative fine finishing.

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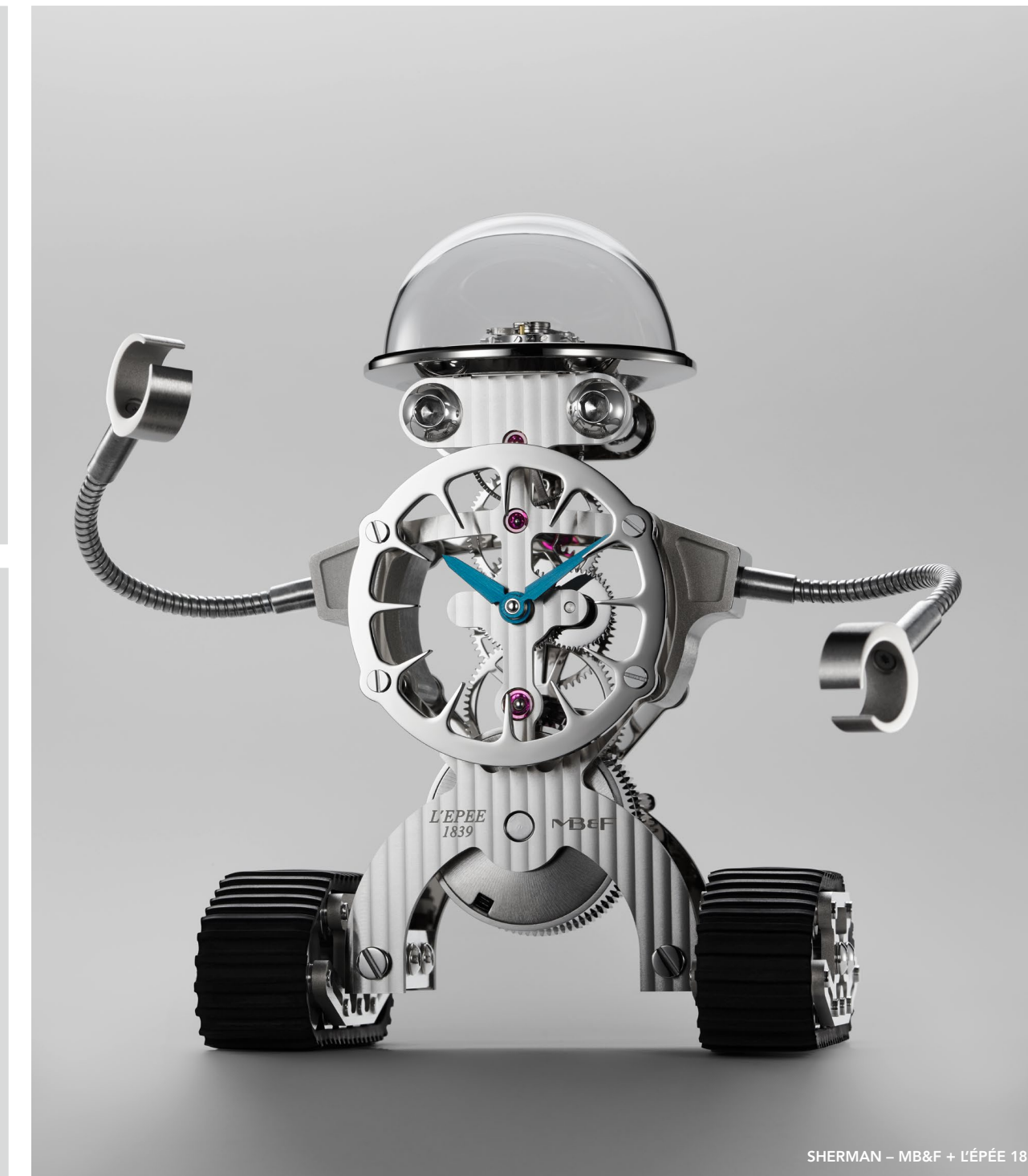
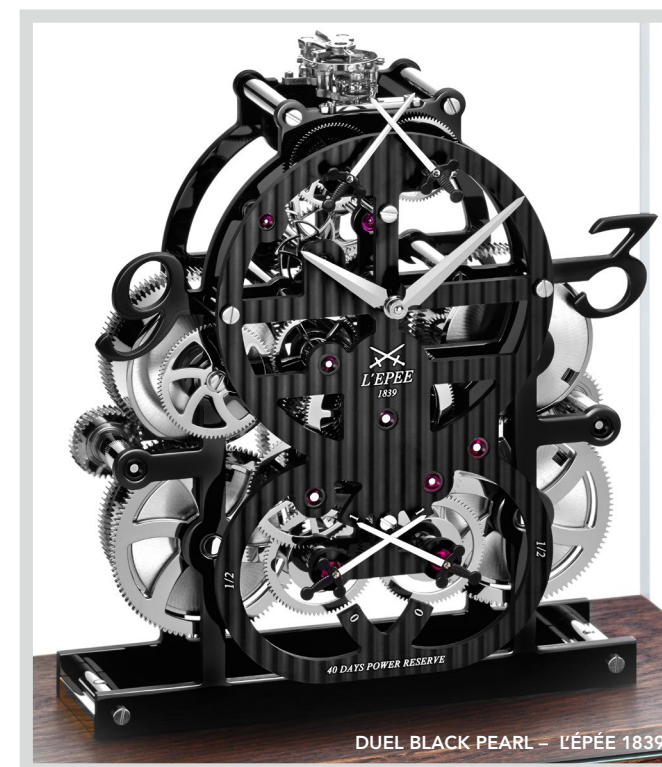
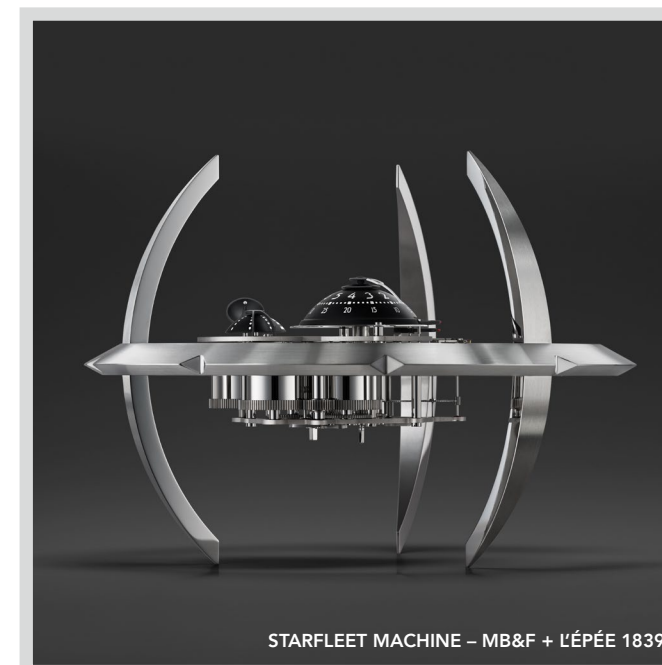
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### MB&F / GENESIS OF A CONCEPT LABORATORY

In 2015, MB&F celebrates its 10th anniversary and what a decade it has been for the world's first ever horological concept laboratory: 10 years of hyper-creativity; 10 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 their first Horological Machine, HM1. HM1's sculptured, three-dimensional case and beautifully finished Engine inside set the standard for the idiosyncratic Horological Machines that have followed: HM2, HM3, HM4, HM5, HM6 and HMX – all Machines that tell the time, rather than Machines to tell the time.

In 2011, MB&F launched their round-cased Legacy Machine collection. These more classical pieces – classical for MB&F, that is – pay tribute to 19th 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.

Since then, MB&F alternate between launching contemporary, resolutely unconventional Horological Machines and historically-inspired Legacy Machines.

And there have been distinguished accolades to remember along the journey so far. To name a few, at the Grand Prix d'Horlogerie de Genève in 2012, MB&F were awarded the Public Prize (voted for by horology fans) and the Best Men's Watch Prize (voted for by the professional jury) for Legacy Machine N°1. At the 2010 Grand Prix, MB&F won Best Concept and Design Watch for the HM4 Thunderbolt. Last but not least, in 2015 MB&F received for the HM6 Space Pirate a "Red Dot: Best of the Best" award – the top prize at the international Red Dot Awards.

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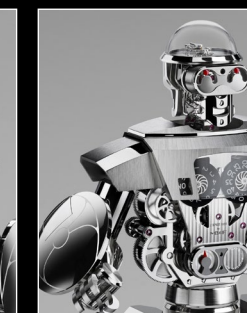
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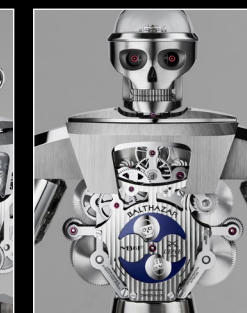
### THE MACHINE



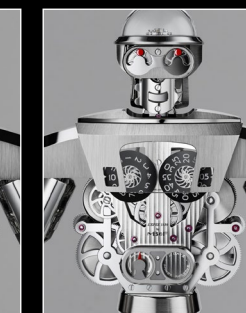
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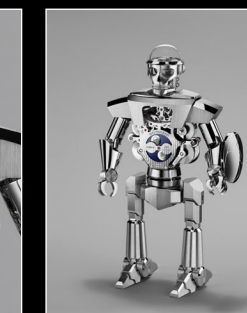
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CLOSE-UP 1 LIGHT



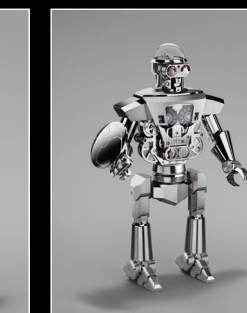
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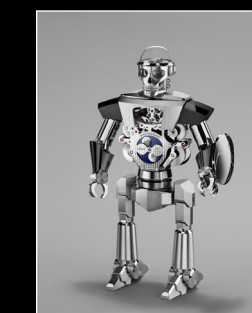
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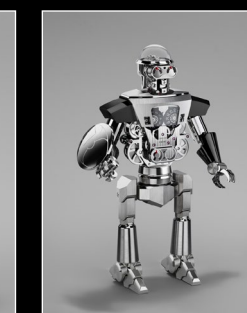
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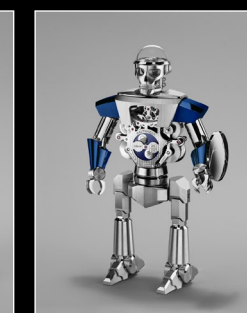
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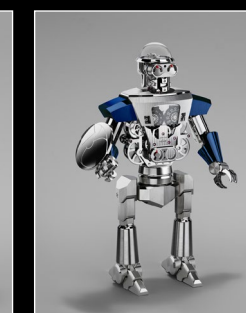
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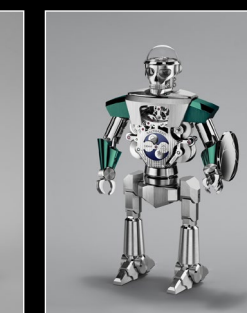
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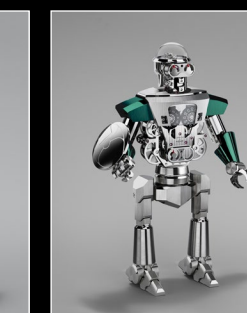
BALTHAZAR BLUE  
DARK



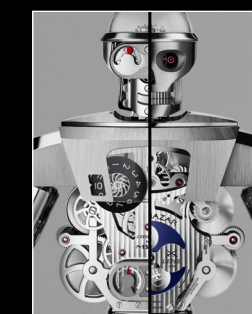
BALTHAZAR BLUE  
LIGHT



BALTHAZAR GREEN  
DARK



BALTHAZAR GREEN  
LIGHT



BALTHAZAR  
LIGHT/DARK COMBO



BALTHAZAR IN SITU LIGHT



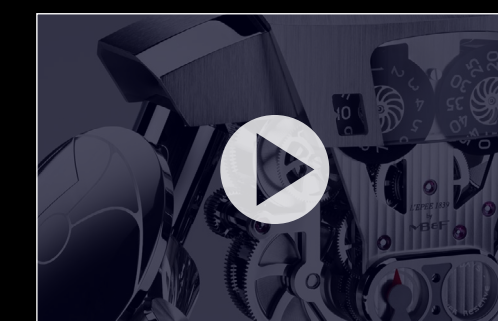
BALTHAZAR IN SITU DARK

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