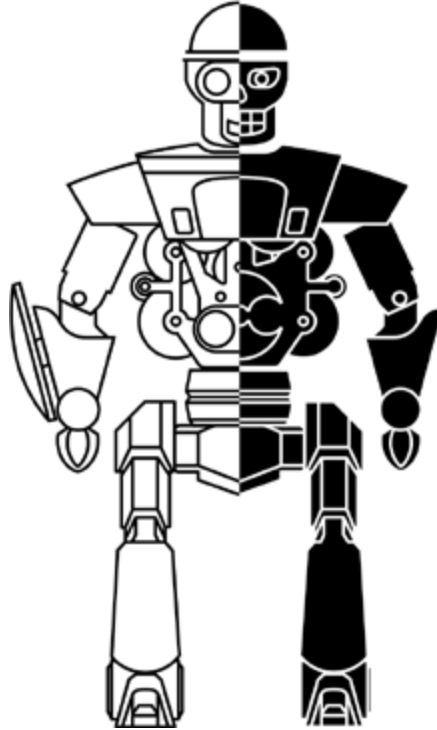
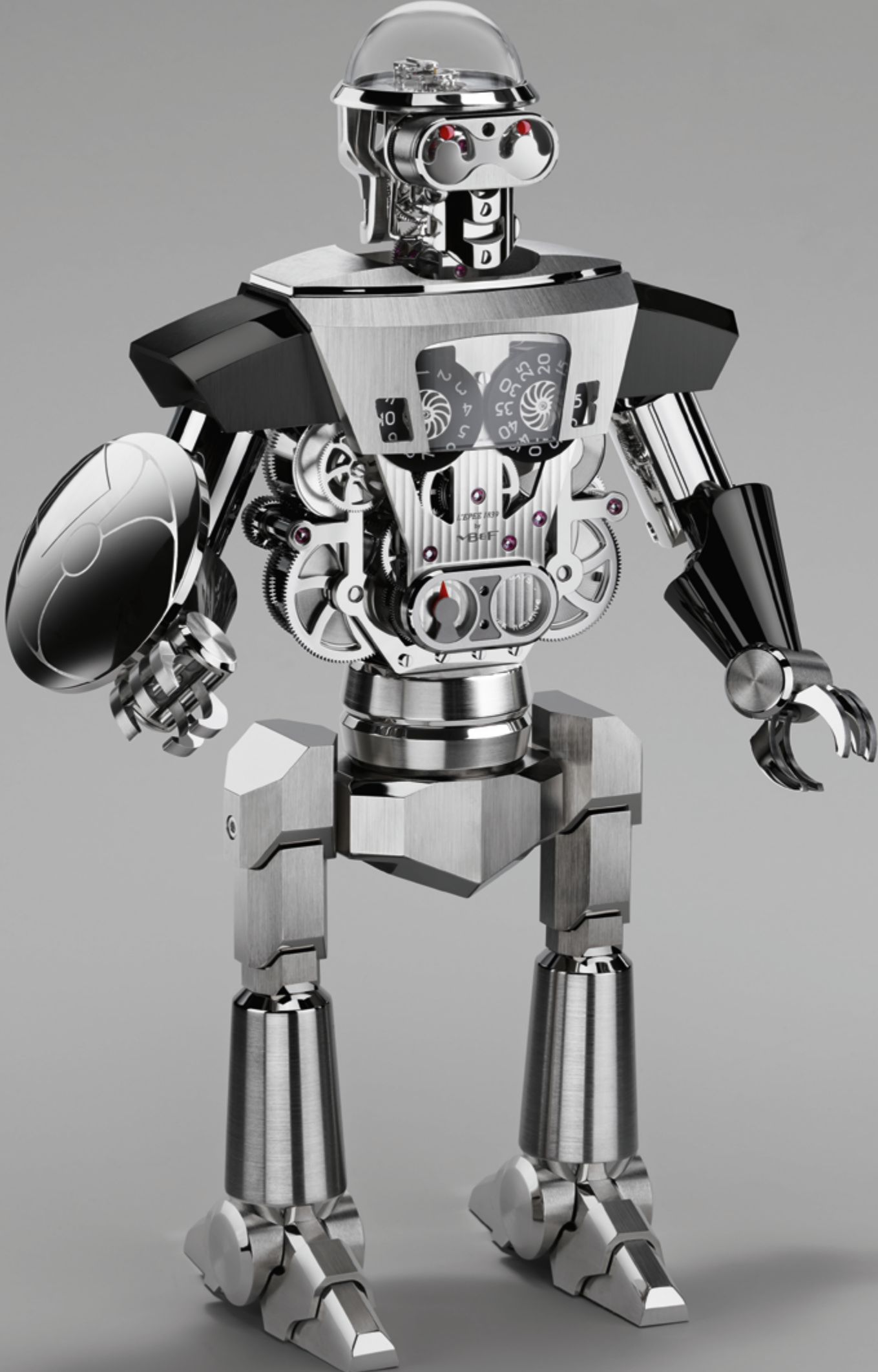


M&F + *L'EPÉE 1839*

BALTHAZAR

THE DUALITY OF MAN AND MACHINE





BALTHAZAR

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.

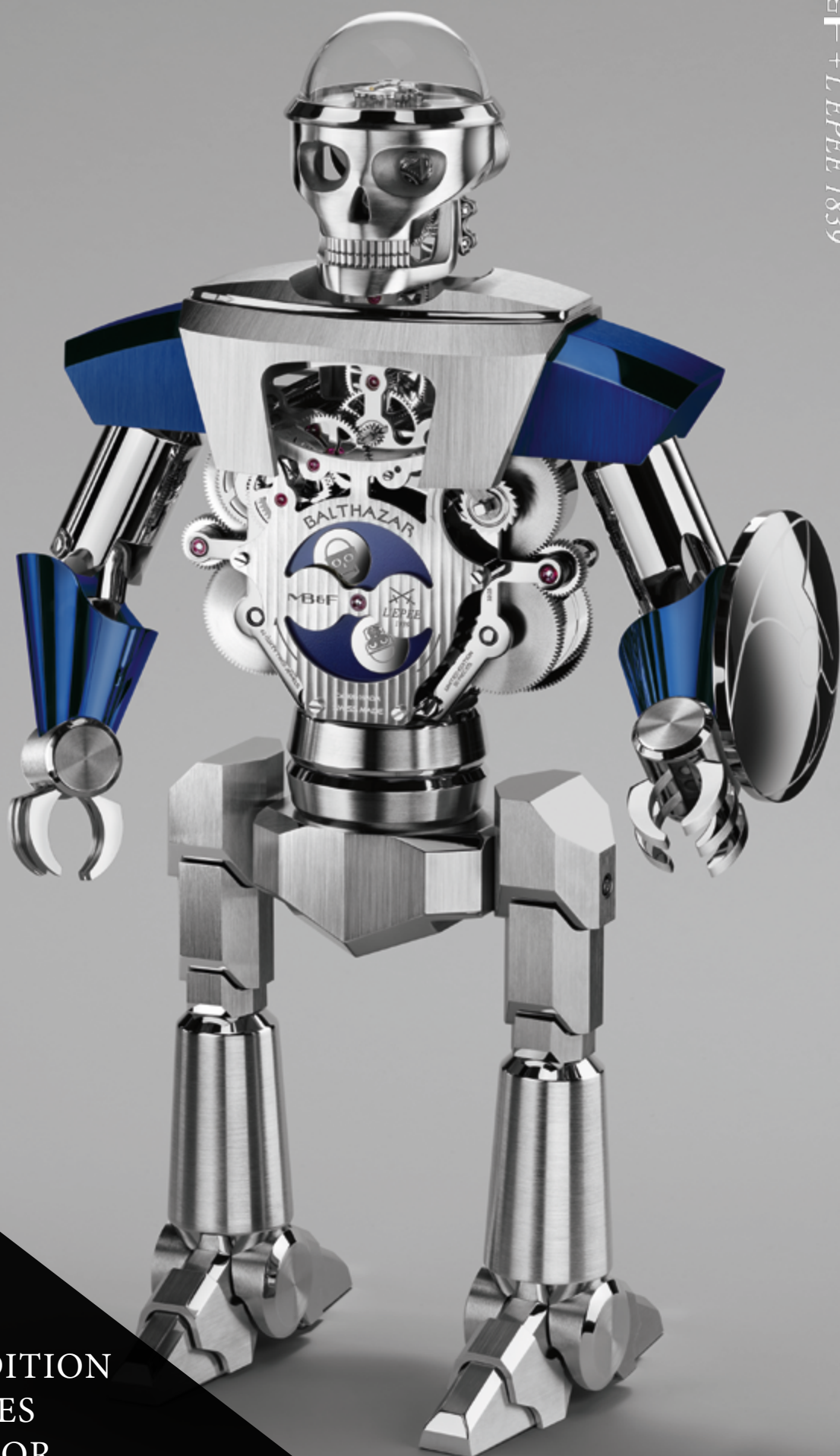
Balthazar rotates around the hips like the high-precision machine that he is; you can feel the miniscule bumps of each micro-roller as he turns, and each distinct notch when he rotates the full 180°. Then everything changes: smiling Balthazar becomes very dark, or vice versa.

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.

MB&F + LEPPE 1839



LIMITED EDITION
50 PIECES
PER COLOR



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'Épée had created for Melchior (MB&F and L'Épée 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 watchmaking 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'Épée 1839 are amazing, a joy to work with," says MB&F founder Maximilian Büsler. "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'Épée 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.

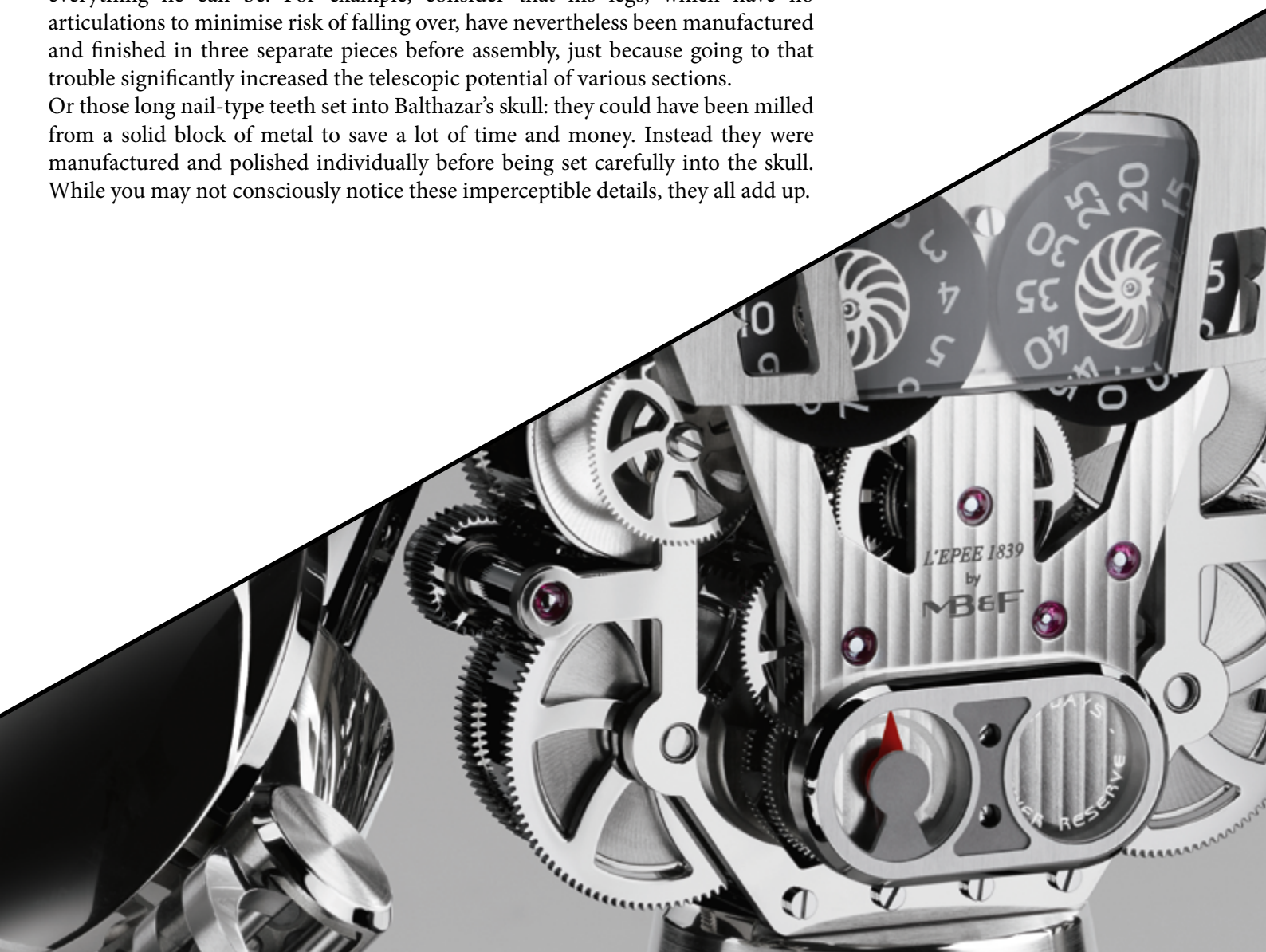
Balthazar's movement features a regulator (his brain) with an Incabloc shock protection system to minimise risk of damage to this critical component when the clock is being transported or moved. This type of shock protection is generally only seen in wristwatches.

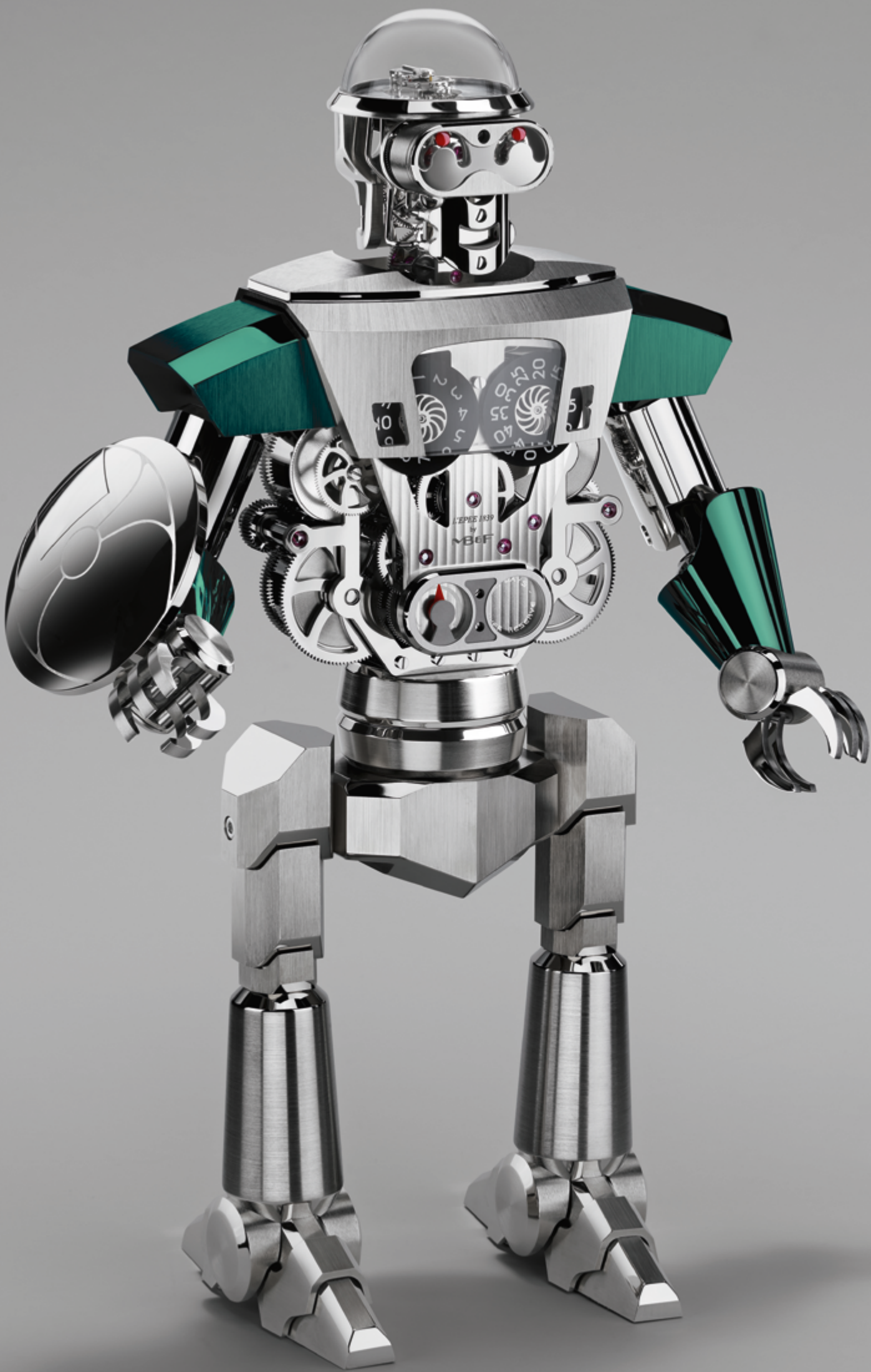
Balthazar's movement also features the same superlative fine finishing – Geneva waves, anglage, mirror polishes, sandblasting, circular and vertical satin finishing – seen on haute horlogerie wristwatches.

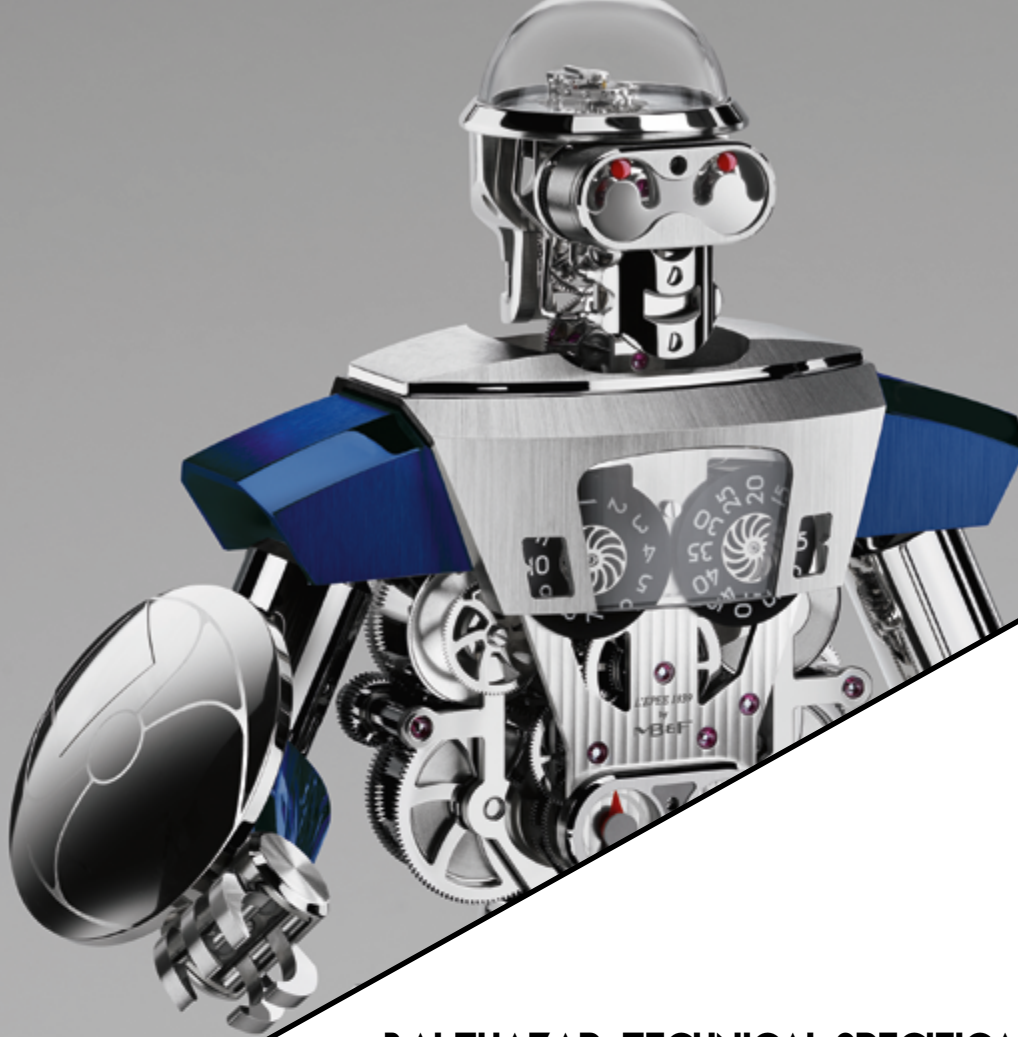
However, finely finishing a clock movement is more challenging than finishing a wristwatch because of the greater surface areas of the larger components. L'Épée CEO Arnaud Nicolas explains: "It's not simply a case of double the size of the components, double the time it takes to finish them. The complexity 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: 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, sandblasting, circular and vertical satin finishing and starburst decoration



BALTHAZAR'S BODY AND ARMOUR

Dimensions: 39.4 cm high x 23.8 cm wide (depending on position of the arms) x 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

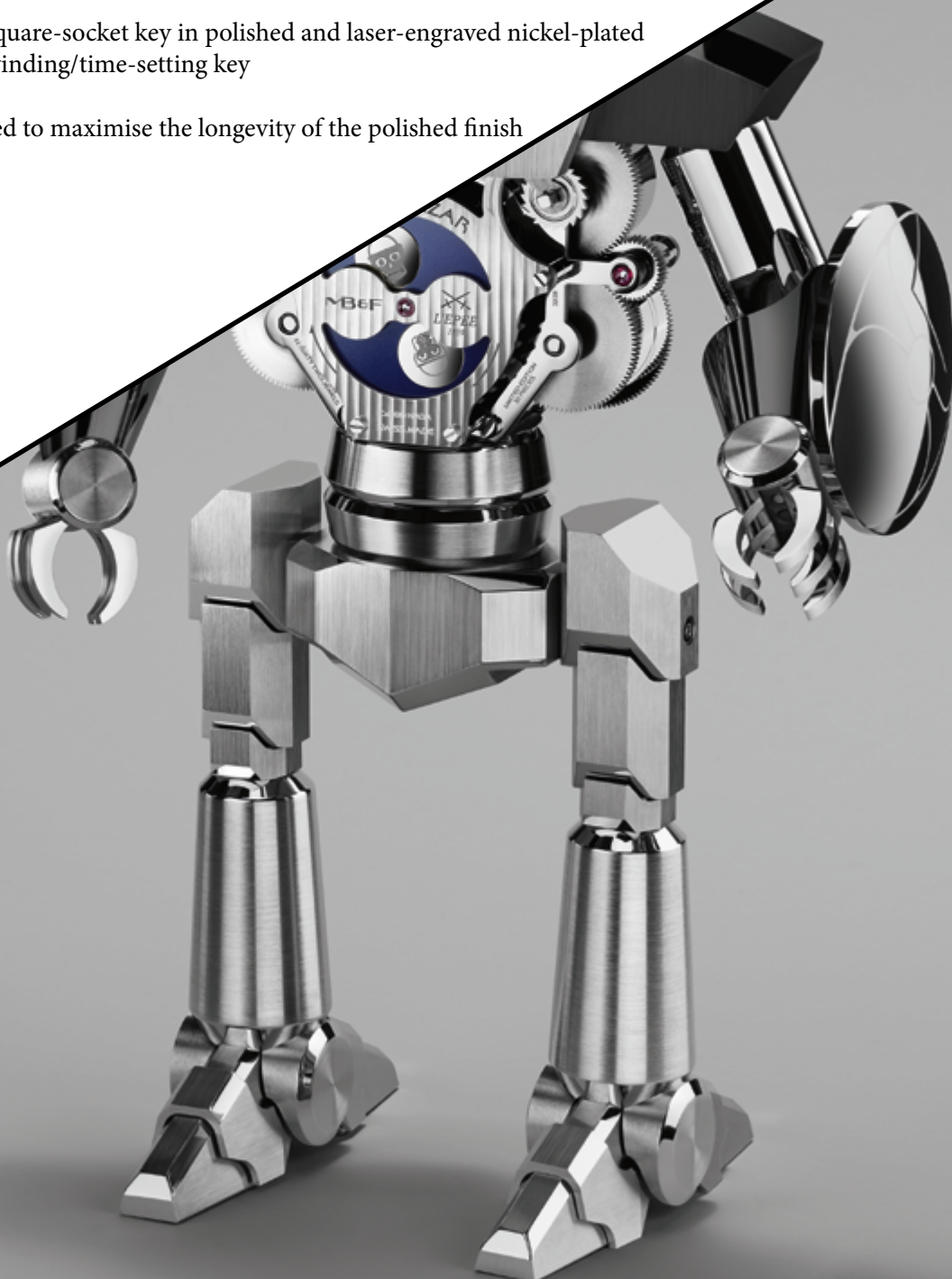
Shoulders and arms

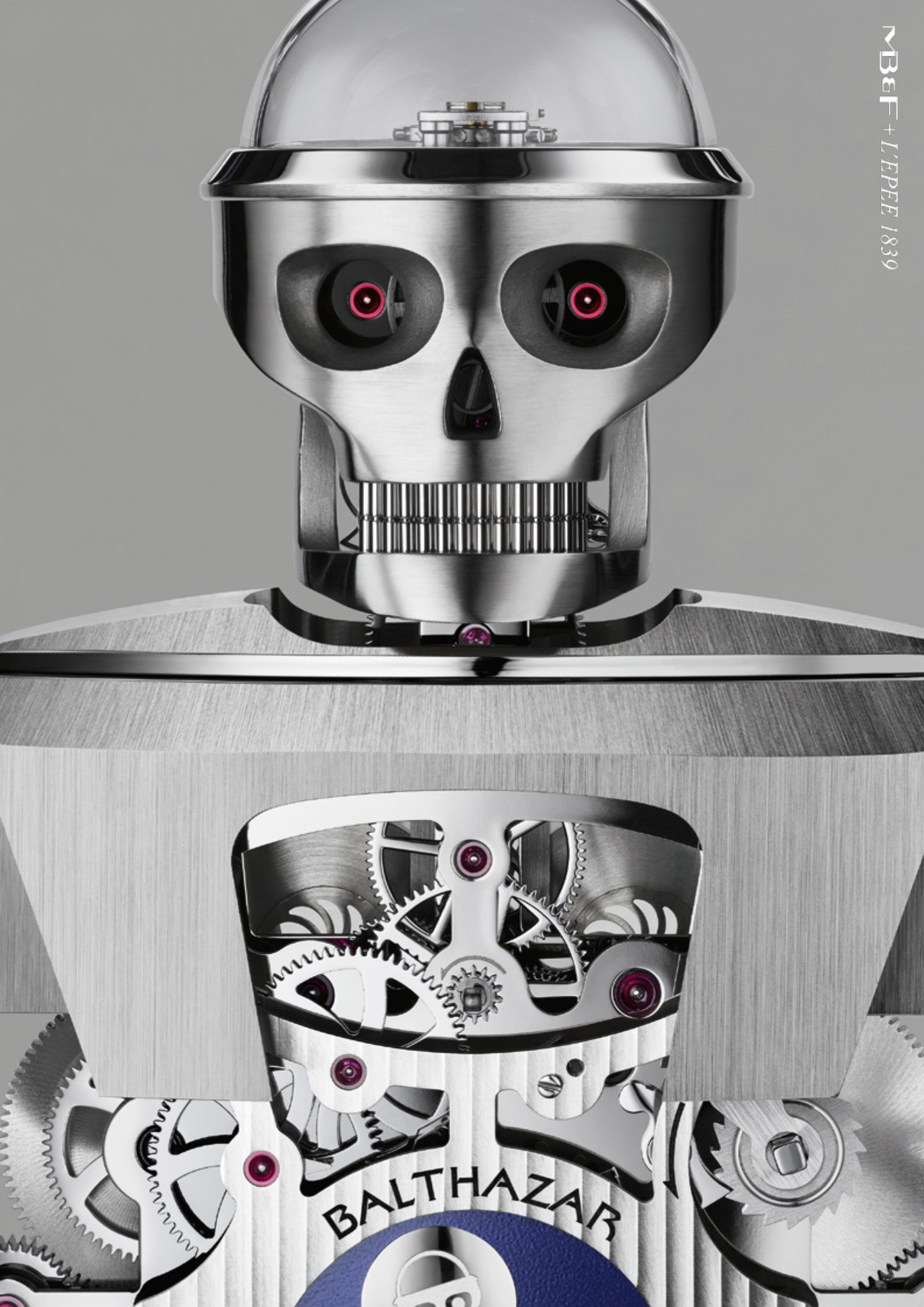
Articulation: pivot at arms/shoulders, rotation at the elbows, pivot lower arms with spring locking system

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

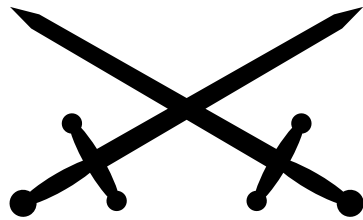
Key is palladium-treated to maximise the longevity of the polished finish





BALHAZAR





L'EPÉE

1839

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