

RM 65-01

AUTOMATIC SPLIT-SECONDS CHRONOGRAPH

TECHNICAL SPECIFICATIONS OF THE RM 65-01 AUTOMATIC SPLIT-SECONDS CHRONOGRAPH

Available in Carbon TPT®, Red Gold and Carbon TPT®.

CALIBRE RMAC4: Skeletonised automatic winding movement with hours, minutes, seconds at 6 o'clock, date, split-seconds chronograph with 30-minute counter at 3 o'clock, 12-hour counter at 9 o'clock, function selector, rapid winding and variable-geometry rotor.

Case dimensions: 44.50 x 49.94 x 16.10 mm

MAIN FEATURES

POWER RESERVE

Circa 60 hours (±10%) without chronograph running.

Actual power reserve results will depend on the period of time the chronograph is utilised.

BASEPLATE AND BRIDGES MADE OF GRADE 5 TITANIUM

The baseplate is grey electroplasma treated and the bridges are black PVD and grey electroplasma treated. Grade 5 titanium is a biocompatible, highly corrosion-resistant and remarkably rigid alloy, which enables the gear train to function effortlessly. The alloy is 90% grade 5 titanium, 6% aluminium and 4% vanadium. This combination further increases the material's mechanical properties, which explains its frequent use in the aerospace, aeronautics and automotive industries. The baseplate of the RMAC4 calibre has been optimised for an extremely low weight/resistance ratio.

The skeletonised baseplate and the bridges were subjected to intensive and complete validation tests to optimise their resistance capacities.

SPLIT-SECONDS CHRONOGRAPH

The modern architecture of this movement enables for the consistent and rational arrangement of its constituent parts, avoiding unnecessary superimpositions and permitting the best possible use of the functions thanks to technical solutions.

The RMAC4 calibre is equipped with the latest-generation split-seconds mechanism developed by the engineers at Richard Mille. The new column wheel controls the different levers of the split seconds function and optimises the chronograph's operation. The 6-column wheel ensures optimised simultaneous movement, maximal function locking, and greater adjustment durability.

The virtually complete elimination of initial jumping in the chronograph seconds hand and reduced energy consumption of these mechanics are the fruit of a great number of studies leading to the design and manufacture of dedicated gear wheels and levers.



SPLIT-SECONDS CHRONOGRAPH OPERATION

Use

Start or stop the chronograph function via the pusher located at 2 o'clock. The hands are reset by pressing another pusher, located at 4 o'clock.

Split-seconds chronograph function

By pressing the pusher at 10 o'clock, you can stop the split-seconds hand to read an intermediate time while the chronograph is engaged.

Pressing the pusher again allows the split-seconds hand to rejoin the chronograph hand.

Split-seconds and second hands

These hands are located at the centre. The split-seconds hand has a blue arrow, while the seconds hand has an orange arrow. The tachymeter scale and minute counter are both on the upper flange, while the inner flange shows the 1/10th second scale.

30-minute totaliser

While the chronograph function is activated, the minutes passed are indicated by the subdial at 3 o'clock.

12-hour totaliser

The subdial located at 9 o'clock indicates the hours that have passed since the chronograph was started, up to a maximum of 12 hours.

FUNCTION SELECTOR

It is constructed with a highly specialised gearbox design for Winding, Date and Hand Setting functions. To shift back and forth through these different functions, use the pusher located at the centre of the crown until the desired function is selected. The hand located at 4 o'clock will indicate W, D or H accordingly.

DATE DISPLAY

Semi-instantaneous, placed in a vertical aperture at 11 o'clock.

RAPID WINDING MECHANISM

The rapid winding mechanism was developed in addition to the automatic winding and winding with the crown. It allows the barrel to be quickly rearmed in the event the watch stops. By pressing 125 times on the pusher at 8 o'clock, you allow the barrel to be fully reset. This function is ideal for quickly rearming the watch if not worn for a long time.

HIGH FREQUENCY BALANCE WITH VARIABLE INERTIA

Beating at 5Hz (36,000 vph), the fast-beating free-sprung balance offers better reliability in the event of shocks, movement assembly and disassembly, and also guarantees better chronometric results over an extended period of time, keeping a more accurate time. This new type of balance at Richard Mille can measure accurately to 1/10th of a second, ideal for a split-seconds chronograph watch under sporting conditions.

The regulator index is eliminated, and a more accurate and repeatable adjustment is possible thanks to 4 small, adjustable weights located directly on the balance.

SPLIT
RESET

RM65-01

RAPID
WINDING



VARIABLE-GEOMETRY ROTOR

The RM 65-01 uses a newly designed variable geometry to optimise the rotor's winding motion.

Rotor specifications:

- Central flange in grade 5 titanium
- Platinum weight segment
- Weight segment with 3 possible positions
- Brass wings
- Ceramic ball bearings
- Bidirectional winding system

This new and exclusive Richard Mille design makes it possible to effectively adapt rewinding of the mainspring to the user's activity level, in sporting or non-sporting environments.

By adjusting the 3-position weight, the rotor's inertia is modified to either speed up the winding process in the case of leisurely arm movements, or to slow it down during sporting activities. This invention allows the movement's winding mechanism to be optimised and personalised to the owner's lifestyle.

FAST-ROTATING BARREL (6 HOURS PER REVOLUTION INSTEAD OF 7.5 HOURS)

This type of barrel provides the following advantages:

- The phenomenon of periodic internal mainspring adhesion is significantly diminished, thereby increasing performance.
- Provision of an excellent mainspring delta curve with an ideal power reserve/performance and regularity ratio.

SPLINE SCREWS IN GRADE 5 TITANIUM FOR THE BRIDGES AND CASE

This permits better control of the torque applied to the screws during assembly. These screws are unaffected by physical manipulation during assembly or disassembly and age well.

MAIN FEATURES

- Movement dimensions: 31.78 x 29.98 mm
- Thickness: 8.69 mm
- Jewels: 51
- Balance: Glucydur®, 4 arms, moment of inertia 7.5 mg·cm², angle of lift 53°
- Frequency: 36,000 vph (5 Hz)
- Balance spring: AK3
- Index assembly: Triois n° 2



11-03M
SWISS MADE

RICHARD MILLE

RICHARD MILLE

WATER RESISTANT
50 METERS

TITANIUM

RM65-01 CA / 044

11-03M
SWISS MADE

CASE

The design and execution of the watch demonstrates a highly conceptual holistic approach to the movement, case and dial. As a result, everything has been constructed according to extremely rigorous specifications, in the manner of the analytical engineering methods used in the design of Formula 1 racing cars, where the chassis and the engine are developed in complete harmony.

For example, a casing ring is no longer used, and the movement is mounted on chassis mounting rubbers (ISO SW) fixed by grade 5 titanium screws. Features such as these are evidence of uncompromising workmanship.

The tripartite case is water resistant to 50 metres, ensured by 2 Nitrile O-ring seals. The case is assembled with 20 spline screws in grade 5 titanium and abrasion-resistant washers in 316L stainless steel.

CROWN

In microblasted, polished and satin finished grade 5 titanium with double seal O-ring and rubber collar.

INTERIOR FLANGES

In carbon fibre filled with an approved luminescent material.

DIAL

In sapphire (thickness: 0.35 mm) with anti-glare treatment (both sides), protected by 8 silicon braces inserted in the upper and lower grooves.

Counters in titanium.

CRYSTAL

Bezel side

In sapphire (1,800 Vickers) with anti-glare treatment (both sides).

Thickness: 1.50 mm

Caseback

In sapphire with anti-glare treatment (both sides).

Thickness: 1.20 mm at the centre; outer edges 2.04 mm

FINISHING

MOVEMENT

- Baseplate and bridges in titanium, wet sandblasted, PVD and electroplasma treated
- Anglage and polishing by hand
- Hand-polished locking sections
- Burnished pivots
- Diamond-polished sinks
- Pinions with undercuts
- Sandblasted and rhodium-plated, bevelled wheels

STEEL PARTS

- Sapphire-blasted surfaces
- Anglage and polishing by hand
- Screw slot and screws bevelled and polished with rounded and polished tip

WHEELS

- Concave chamfering with a diamond tool
- Circular-decorated faces
- Rhodium plating (before cutting the teeth)
- Minimal corrections applied to the wheels in order to preserve geometry and performance