



Modern Skeletons

Skeleton watches—timepieces that reveal the intricate tangle of cocks, bridges and wheels of a mechanical movement—have been around for centuries. The difference today is that, while early skeletons featured elaborately engraved latticework, new models exude a hard-edged technical character aimed at 21st-century horological gearheads. These three are remarkably thin, a quality that poses extreme challenges in skeletons since cutting away material weakens bridges and stress points.

When Audemars Piguet marked the 40th anniversary of its flagship Royal Oak collection with a skeleton interpretation of the 1972 original Ref. 15202, or “Jumbo” (center), it used its automatic Calibre 5122 movement, which is structurally designed for skeletonization and measures only 3.05 mm thick. Limited to 40 pieces in platinum, the Openworked Extra-Thin Royal Oak includes a date function, which is typically absent on skeletons because the date disc covers too much of the inner workings. A transparent sapphire disc with printed numbers overcomes the issue and creates a ghostlike effect on the perimeter.

“We’ve approached this in a more technical way with a lot of sharp, straight lines, some of which feed off the lines of the case, so there is a sort of visual prolongation of the case into the movement,” says Octavio

Garcia, Audemars Piguet’s chief artistic officer, of the design’s effect.

Piaget claims two world records for its new Altiplano Ultra-Thin (right): the world’s thinnest self-winding skeleton model (5.34 mm) and thinnest self-winding skeleton movement (2.40 mm). The company invested three years of research and development in the Calibre 1200S movement, which has curves extending across the main plate and bridges to ensure the delicate framework would be sufficiently firm.

“We tried to play with much flatter surfaces,” says CEO Philippe Léopold-Metzger, “and we created a contrast between the white aesthetic of the movement itself and the platinum micro rotor, which is blackened by a galvanic treatment, as well as black screws and black hands.”

A pioneer of the modern skeleton, Richard Mille utilizes treated grade-5 titanium for the bottom plate, bridges and balance cock of the Extra Flat Automatic RM033 to enhance the strength and rigidity of the thin skeletonized movement. Mille compares his integrated engineering methods to those used in the design of Formula 1 cars. Certainly, the skeleton design gives us an unimpeded look under the hood at these complex horological engines.

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—L. K.