

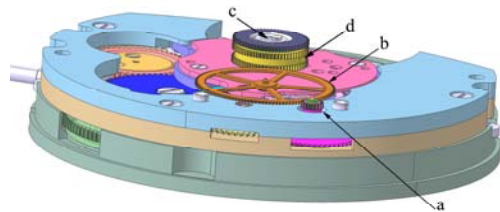
Calibre 4225G

Power-reserve indication on the winding rotor

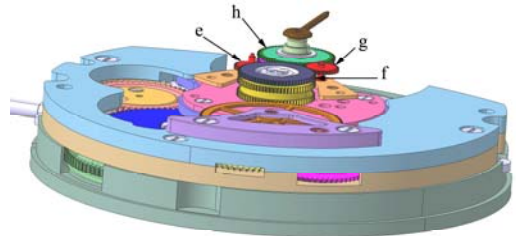
One problem with making complicated watches is how to fit a large number of indications on the limited surface of a dial. Blancpain's Research & Development teams have now come up with a way of displaying the power-reserve indicator on the back of the watch as an integral part of the winding rotor.

Power-reserve indications are provided by a planetary or differential gearing that correlates the winding rate of the ratchet with the unwinding rate of the barrel. The hand showing the power reserve is usually connected to the output of the differential.

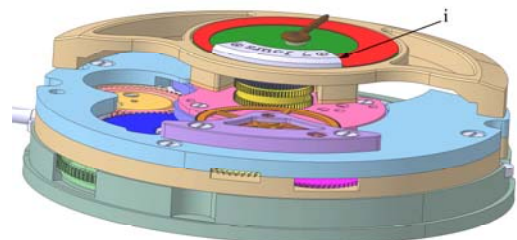
The first difficulty Blancpain had to overcome in developing this new system was to put the power-reserve indicator on the axis of the rotor. To achieve this, the staff of the differential (a) protrudes on the bridge side of the movement. A transmission wheel (b) takes its rotation over the winding-train bridge to the central axis of the rotor (c). A second wheel coaxial with the rotor, which is normally part of the self-winding system, serves to transmit the rotation to the wheel carrying the power-reserve hand through a pinion (e), which reverses the direction of rotation.



The second problem was to make the power-reserve indication easy to read; the power-reserve dial has to stay in the same position on a spinning rotor. This is achieved by adding a fixed wheel (f) on top of the coaxial transmission wheel. A pinion (g) reverses the direction of rotation and a supplementary wheel (h) carrying the dial is placed coaxially with the power-reserve hand. The system thus cancels out the rotation of the dial due to the winding rotor.



The third challenge was to secure the power-reserve indication when the barrel is fully wound. In this case, friction disconnects the gearing. The hand comes up against the applied buffer (i) allowing the dial to rotate. In this way the hand shows that the mainspring is fully wound, while eliminating any possibility of damaging the mechanism.



In a final touch, the appliqué (i) is fixed on the dial so that it hides the screw securing the rotor to its axle. This provides the fascinating illusion of the rotor floating beneath the sapphire-crystal caseback.

