BALL
OFFICIAL STANDARD
Since 1891
*Accuracy under adverse conditions*

## Engineer II Volcano

***Pioneering the revolutionary mumetal watch case for supreme anti-magnetic protection***

True to its pioneering reputation, BALL Watch Company presents the Engineer II Volcano, a new model composed of materials never before used in the world of watchmaking.

For many years BALL Watch has focused its research and development strategy on improving the reliability of its watch movements. The accuracy of a mechanical watch is easily affected by the magnetic fields to which we are exposed almost constantly in everyday life. The briefest of contacts with an artificial magnet may be enough to magnetize an automatic movement and cause the complete stoppage of the mechanism. According to accepted standards in watchmaking, an automatic watch is deemed "anti-magnetic" when its operation can resist a magnetic field of at least 4,800 A/m without its accuracy being subsequently affected by more than 30 seconds per day.

Volcanoes are a perfect environment for research and exploration, particularly admired by modern-day adventurers. These natural wonders are a source of inspiration for the technicians responsible for research and development at BALL Watch Company. The links between volcanoes and magnetic fields inevitably led our researchers to create enhanced anti-magnetic protection for our timepieces.

After perfecting a retractable anti-magnetic diaphragm made of mumetal, BALL Watch devoted its efforts to developing this protection further by incorporating this material in the components of the watch case. The case-band of the Engineer II Volcano is made up of superimposed layers of carbon and mumetal, a patented composite material used for the first time in watchmaking. The case, cast in Switzerland, displays a textured carbon appearance reminiscent of lava from a volcano that has cooled to form volcanic rock.

Carbon is a material with excellent resistance to scratching and impacts and only weighs about 50% as much as the steel customarily used for watch cases, a significant gain in itself in terms of lightness on the wrist. Due to these properties, it is a highly prized construction material, particularly in the aeronautical and automobile industries. Mumetal is an alloy of nickel, iron, copper and molybdenum with very high magnetic permeability, which enables it to attract and deflect static or low-frequency magnetic field lines, against which other methods of attenuation are relatively ineffective. That gives this alloy anti-magnetic properties far superior to those of the soft iron usually employed in watchmaking. It is used to make magnetic shielding for industry, research and high technology. Thus the revolutionary structure of the mumetal case of the Engineer II Volcano allows an extremely high protection against magnetic fields.

This model is designed in an elegant combination of colors inspired by volcanic rocks. The black carbon case, 45 mm in diameter and 12.4 mm thick, gives the watch an especially sporty and contemporary look. The dial is predominantly slate-gray, with subtle touches of red like the lava of a volcano. The indexes and the hour and minute hands are furnished with 15 tubes of luminous $H_3$ gas, used on all BALL Watch models. This cutting-edge Swiss technology is a hundred times more powerful than other luminescence techniques commonly used in watchmaking.

The Engineer II Volcano has a Swiss BALL RR1102-C automatic movement, certified by the COSC (Official Swiss Chronometer Testing Institute), and displays hours, minutes, seconds, day and date. This watch can withstand impacts of up to 5,000 Gs and is water-resistant to 100 meters. An anti-reflective sapphire crystal and a screw-down crown constitute the other notable features of this watch. The fashionable look of the watch can be completed with a NATO strap in gray and black stripes.

Today, more than ever, BALL Watch is continuing its journey and asserting its role as a key protagonist in the exploration of modern time and the evolution of watchmaking history.

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## *Engineer II Volcano* Automatic Series

| | |
|---|---|
| **Model Number:** | NM3060C-NCJ-GY \| NM3060C-PCJ-GY |
| **Movement:** | Automatic caliber BALL RR1102-C<br>Chronometer certified COSC |
| **Functions:** | 15 micro gas tubes on hour, minute, second hands and dial for night reading capability<br>Shock resistant to 5,000Gs<br>Patented anti-magnetic protection<br>Water resistant to 100m/330ft<br>Hours, minutes, sweep seconds, day and date |
| **Case:** | Patented Mumetal & Carbide composite<br>Ø 45mm, height 12.4mm<br>Anti-reflective sapphire crystal<br>Screwed-in crown |
| **Band:** | Canvas strap with standard buckle or rubber strap with standard buckle |
| **Dial:** | Grey |

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