



## DEFY INVENTOR

### DISRUPTIVE TECHNOLOGY

With its new disruptive "Zenith Oscillator" control system, the brand with the guiding star is revolutionising mechanical watchmaking. High frequency, chronometric precision, reliability and stability: the oscillator developed and patented by the Manufacture replaces the traditional sprung balance used for more than three centuries! Featuring a single element (compared with 30 or so components of a standard regulating organ), this high-tech device equips the new DEFY Inventor. A case made of lightweight titanium and Aeronith – an innovative aluminium-polymer composite – teamed with an architectural design: through the DEFY Inventor, Zenith is (re)inventing the watchmaking of tomorrow, in an entirely independent manner.

#### Taking on the future

Zenith announced right from the start that DEFY would write new chapters in its history. This contemporary, even futuristic saga – given that the brand's visionary gaze remains firmly fixed on the horizon – began in 2017 with the remarkable 100" of a second chronograph named DEFY El Primero 21. The same year, Zenith unveiled DEFY Lab, an 'archetype' regulated by a revolutionary oscillator developed by the Manufacture and issued in a 10-piece limited edition. Today, the 'specimen' is moving beyond laboratory stage and becoming the DEFY Inventor, produced in a run of several hundred units and equipped with its own patented regulating organ. Like its predecessor, DEFY Inventor offers superlative technical performance and a modern aesthetic composed of cutting-edge materials. With its chronometric precision, this avant-garde three-hand watch is now series-produced – an industrial tour de force – and stylised to appeal to urban aesthetes. A brief reminder of its outstanding assets.

#### Zenith Oscillator

Beating at the extremely high frequency of 18 Hz (compared to the usual 4 Hz usually) and endowed with a comfortable two-day autonomy, Defy Inventor owes its exceptional properties to a disruptive technology: the single-piece Zenith Oscillator developed and patented by the Maison. A strategic component that constitutes the ultimate achievement of an independent Manufacture capable of developing and producing a mechanical movement in its entirety, including its own regulating system! The result of an unprecedented scientific approach to the quest for performance, it has replaced the sprung balance used in mechanical watchmaking for three and a half centuries. This major innovation for the industry offers a number of benefits. Firstly, increased reliability, given that this unique ultra-thin element (0.5 mm) replaces the thirty or so components of a standard regulating organ and thus eliminates contact, friction, wear and deformation; and secondly, stability, since it is made of monocrystalline silicon and therefore insensitive to temperature variations and magnetic fields. In addition, its escape-wheel is made of flexible blades, a first in the watch industry. These exceptional qualities are triple certified: for magnetic insensitivity (ISO-764), thermal insensitivity (ISO-3159) and chronometric precision (TIMELAB – Foundation of the Geneva Laboratory of Horology and Micro-engineering). So much for the technical aspects, as we now turn to the design.

#### Urban legend

An innovative 'engine' has been teamed with an avant-garde exterior. DEFY Inventor is as architectural as it is organic. Like an animated being in a state of perpetual motion, its heart of a new genre pulsates on the dial side, beneath a sophisticated openworked construction. Its powerful stature is carved out from ultra-light materials: brushed titanium for the 44 mm diameter case, Aeronith for the textured bezel. This lightest aluminium composite in the world was developed using an exclusive high-tech process. Three times lighter than titanium, made of open-pore aluminium foam, stiffened with a polymer, Aeronith is easily forgotten when worn, while asserting a unique modern style.



The equally airy openworked dial forms a stylised propeller, of which the five 'blades/branches' evoke the Zenith star. Broad hours and minutes hands sweep over the mechanism, while a slender star-tipped central sweep-seconds hand – equipped with a stop-seconds system enabling ultra-accurate adjustment – marks off the seconds. In an ultimate touch of futuristic sophistication, the iconic DEFY Inventor is secured to the wrist by a black rubber strap with a midnight blue alligator coating.

#### **ZENITH: the future of Swiss watchmaking**

Since 1865, Zenith has been guided by authenticity, daring and passion in pushing the boundaries of excellence, precision and innovation. Soon after its founding in le Locle by visionary watchmaker Georges Favre-Jacot, Zenith gained recognition for the precision of its chronometers, which it has won 2,333 chronometry prizes in just over a century and a half of existence: an absolute record. Famed for its legendary 1969 El Primero calibre enabling short-time measurement accurate to the nearest 1/10<sup>th</sup> of a second, Zenith has since developed over 600 movement variations. Today, Zenith offers new and fascinating vistas, including 1/100<sup>th</sup> of a second timing with the Defy El Primero 21. Energised by newly reinforced ties with a proud tradition of dynamic, avant-garde thinking, Zenith is writing its future... and the future of Swiss watchmaking.

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### TECHNICAL DETAILS

Reference: 95.9001.9100/78.R584

### KEY POINTS

Monolithic regulating organ made of Silicon (compared with 30 or so components of a standard regulating organ)

Bezel made of Aeronith (the lightest aluminium composite in the world)

High frequency of 18Hz (129'600 VpH)

No need for lubrication

Insensitivity to magnetic fields

Triple certification:

- Insensitivity to magnetism (ISO-764)
- Insensitivity to temperature gradients (ISO-3159)
- Chronometer Certified by TimeLab

### MOVEMENT

Calibre 9100

Calibre: 14 ¼<sup>''</sup> (Diameter: 32.80mm)

Movement thickness: 8.13 mm

Components: 148

Jewels: 18

Frequency: 129'600 VpH (18 Hz)

Power-reserve: min. 50 hours

Finishing: Oscillating weight adorned with "Côtes de Genève" motif



### FUNCTIONS

Hours, minutes and central seconds  
(stop second mechanism)

### CASE, DIAL & HANDS

Diameter: 44 mm

Diameter opening: 35.5mm

Thickness: 14.5mm

Crystal: Domed sapphire crystal with anti-reflective treatment on both sides

Case-back: Transparent sapphire crystal

Material: Brushed titanium with Aeronith bezel

Water-resistance: 5 ATM

Dial: Blue Openworked

Hour-markers: Rhodium-plated, faceted and coated with Super-LumiNova® SLN C1

Hands: Rhodium-plated, faceted and coated with Super-LumiNova® SLN C1

### STRAP & BUCKLE

Black rubber with blue alligator leather coating

Titanium double folding clasp