

ZENITH - FELIX BAUMGARTNER PARTNERSHIP

PREPARING TO BREAK THE SOUND BARRIER WITH THE HUMAN BODY





The partnership agreement between Zenith and Felix Baumgartner, the Austrian pilot, champion parachutist, and record-setting BASE jumper, was signed. The project, called Red Bull Stratos, involves jumping out of a capsule suspended in the stratosphere from a balloon at an altitude of over 36.5 km, some four times higher than passenger planes generally fly. In taking this plunge, Baumgartner intends to smash four world records: the highest manned balloon flight, the highest leap, the longest freefall and, for the first time in history, breaking the sound barrier with the human body. Just as importantly, he will also provide new research data to advance aerospace safety. Zenith Manufacture is one of the main sponsors of this extremely dangerous mission. The Swiss watchmaker wanted one of its timepieces to be the first to break the sound barrier, proving once again its reliability under extreme conditions.

Freefall from the Stratosphere Contract Signed in Le Locle

Zenith CEO Jean-Frédéric Dufour and Felix Baumgartner signed a partnership agreement associating the Swiss watchmaker with this exploit, which is driven by Red Bull and a stellar team of scientists and specialists. The mission will send a capsule suspended from a helium balloon to the outer limits of the stratosphere, at an altitude of more than 36.5 km. Baumgartner will then attempt a freefall reaching speeds of over 1,100 km/h, exceeding Mach 1. The mission pilot will be protected during his fall by a pressurized space suit.

A Leap into the Unknown

"This is truly a leap into the unknown. No-one can predict how the human body will respond when it crosses the sound barrier," explained Felix Baumgartner in Le Locle. To prepare for this mission, the pilot is working closely with the current holder of the high-altitude jump record, Joe Kittinger, a retired US Air Force colonel.

The Supersonic Flying Man

Air resistance is much lower in the stratosphere than at lower altitudes, which will allow Felix Baumgartner to accelerate quickly; he will attempt to reach more than 1,100 km/h within the first 37 seconds of his freefall to break the speed of sound before gradually being slowed by increasingly dense air. Controlling his body position despite such intensely rapid acceleration will be an extraordinary feat.





Zenith, a Pioneering Spirit

This mission in the stratosphere will test the reliability of Zenith watches under the most extreme conditions: temperature, pressure, speed, friction, impacts, etc. If the jump is successful, Zenith will be the first to have a watch cross the sound barrier in direct contact with the external environment. Zenith CEO, Jean-Frédéric Dufour, explains what spurred him to participate in this mission: "The expression 'pioneering spirit' best defines what Zenith is all about. We have often been forerunners in unexplored domains. It is this ability to come up with new ideas, then push through with new technical developments before anyone else, that is most fascinating at Zenith. Our watches have participated in some of the grandest human adventures: explorer Roald Amundsen's discovery of the North and South Poles, Mahatma Gandhi's peaceful fight for India's independence, the laying of the foundations of ecology by the learned Prince Albert Ist of Monaco, Louis Blériot's Channel crossing, John F. Kennedy's political action, the soccer exploits of Michel Platini, one of the greatest players in the history of the game, and French physician Jean-Louis Étienne's solo balloon flight over the North Pole. The brand's new ambassador, Felix Baumgartner, is made of the same stuff as these pioneers. He has a project: to be the first human to expose his body to a speed of Mach 1. We were attracted to the idea: in assisting him in his dream, we would become the first supersonic watch. In Le Locle, our watchmakers are working to develop a model specially adapted to this mission: the Zenith El Primero Stratos!"

Date of the Supersonic Jump

Felix Baumgartner plans to perform his supersonic jump sometime before the end of 2010. The exact date will be announced later.

Information, follow-up, photos

www.zenithwatches.wordpress.com



Felix Baumgartner

Codename B.A.S.E. 502

Profession Stunt Coordination, Freefall Camera, Skydiving, B.A.S.E. Jumping.

Place of Birth / Residence Salzburg, Austria.

1997 World Champion title for B.A.S.E. jumping in West Virginia, USA.

1999 World record: B.A.S.E. jump, from the petronas Twin Towers in

Kuala Lumpur, Malaysia (1,479 feet).

World record: lowest B.A.S.E. jump from the Christ the Redeemer

statue in Rio de Janeiro, Brazil (95 feet).

2001 Nominated for the World Sports Awards in London, Royal Albert Hall.

Category: Extreme sports.

2003 Channel Crossing, Dover to Calais.

First to cross the English Channel in a wingsuit (32,808 feet).

2004 B.A.S.E. jump into a 623-foot deep cave: Marmet Cave in Velebit

National Parc, Croatia.

World record: B.A.S.E. jump from the highest bridge in the world,

Millau Bridge, France (1,125 feet).

2007 B.A.S.E. jump off one of the world's tallest buildings: 101 Tower,

Taipei, Taiwan (1,669 feet).



Technical inset

The Technology

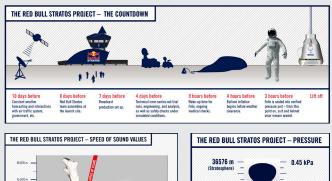
Technology is essential to the success of this type of mission. At the stratospheric altitude where Felix Baumgartner is expected to break the sound barrier, pressure is about 100 times lower than on Earth. For the human body, the difficulties in descending rapidly though such an environment are somewhat similar to those encountered by deep-sea divers who need to surface quickly – but even more extreme.

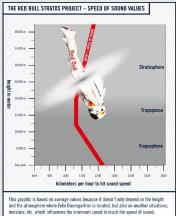
The Space Suit

At altitudes from 20 km to the jump height of 36.5 km, the difference in air pressure between the body and the outer atmosphere would cause Felix Baumgartner's body fluids to "boil" with vapor bubbles without a pressurized space suit. The suit, which is like a second skin, ensures constant pressure equal to that found at an altitude of 10,600 meters. The fireproof external material also provides insulation from the extreme cold, which may plunge to -56°C or less during the fall. His helmet, weighing 3.63 kg, provides a constant flow of oxygen. The air Baumgartner exhales is evacuated into the suit.

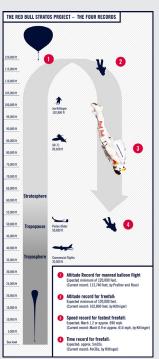
The Balloon

The balloon has a volume of 850,000 cubic meters (ten times more than Joe Kittinger's balloon). It is composed of a heavy-duty polyethylene envelope, just 0.02 mm thick. Although the material is thinner than plastic packaging, the balloon itself is enormous (the size of a football field), and weighs over 1,300 kg!











Technical inset

The Capsule

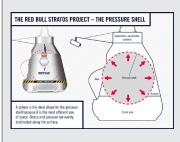
The capsule is shaped like those used by astronauts to return to the atmosphere. It is pressurized, and Felix Baumgartner will remain seated for the two and a half to three hours it will take to make the ascent. If anything prevents him from jumping, Baumgartner can safely return to Earth in the capsule, which is equipped with three parachutes for its descent and landing.

The Chest Pack

The chest pack contains vital measuring instruments: a transmitter-receiver connected to the helmet, GPS beacons to monitor position, a remote-measurement device, and a high-definition camera with a 120° angle. The pack will also contain an inertial sensor to provide data on the altitude (position/angle) and spin. The world record accreditation authority will examine data captured by the chest pack to verify Felix Baumgartner's achievements.

The Parachutes

Felix Baumgartner's personal parachute system contains a main parachute, composed of nine cells, which he plans to open 1524 meters from the ground. He will also have an emergency parachute. Another important safety element is the drogue stabilization chute, which will be automatically deployed if Baumgartner is exposed to over 3.5 G for six seconds.











Press kit and photos downloadable from this link:

www.zenithwatches.wordpress.com















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