

BMW Group

U.S. Press Information

Fact Sheet: BMW U.S. Two-Man Bobsled for Team USA

BMW has collaborated with the USA Bobsled & Skeleton Federation (USBSF) to deliver a fleet of six new two-man bobsleds to the athletes of Team USA for use in the Sochi 2014 Olympic Winter Games. BMW has applied its world-class design and engineering expertise in hopes of helping Team USA chase its first Olympic gold medal in the event since 1936.

Below is a detailed list of some of the advancements made by BMW to the U.S. two-man bobsled. Input and feedback from athletes and coaches as well as the empirical knowledge of the U.S. Bobsled Team were critical to success. Please note that additional advancements critical to the success of the BMW U.S. two-man bobsled are kept confidential for competitive reasons.

Stronger-and Lighter Materials

- A key differentiator of the BMW bobsled is the use of lightweight materials like carbon fiber to optimize the sled's weight placement to distribute and balance the regulation-required weight.
- An autoclave cure has been applied to the carbon fiber laminate of the two-man bobsled which makes it stronger, lighter, and safer.

Aerodynamics

- The innovation most noticeable to the eye is the significantly smaller shape of the BMW bobsled. This shape maximizes aerodynamic efficiencies and also promotes optimal handling through a more centralized mass.
- BMW's development approach included tools such as computer aided modeling, computational fluid dynamics (CFD), full size wind tunnel testing, on track testing, and athlete scanings - each providing valuable feedback on the sled's aerodynamics that were factored into the final design of the sled.

Steering

- Combining pilot input with BMW's design insights, a balance has been achieved between the need for highly responsive, direct steering and a layout that is synchronized with the sled's aerodynamic shape.
- BMW also tailored the behavior of the steering system to ease the pilots' transition between the two and four man sleds.

EfficientDynamics

- BMW has employed a development methodology similar to its vehicles for the design of the BMW U.S. two-man bobsled; with a reliance on the principles of EfficientDynamics. This has resulted in speed advantages based on a number of optimizations which enable precision, efficiency, and performance from both the athlete and sled.