For the first time ever, a metal 3D-printed part is used in a production series vehicle. The 2018 BMW i8 Roadster component proves its viability by being technically sensible and cost effective. The 3D-printed bracket, which is 44% lighter than the baseline, attaches the convertible roof-cover and enables it to fold and unfold over the vehicle. 3D-printing improved the bracket’s stiffness tenfold over an injection-molded version. The optimized bracket supports the roof-cover, which is many times heavier than the bracket itself, and successfully keeps displacements to a minimum to prevent the cover from collapsing during the opening process.

**Category:** Module

**Application:** 2018 BMW i8 Roadster

**Weight Savings:** 44%

Lighter than previous component

**Methodology:** Manufacturing Process