

The Development Process of the Model 89 Take Down



At Big Horn Armory, we've always strived to push the boundaries of craftsmanship and innovation, and our latest release, the [Model 89 Take Down](#), is no exception. Inspired by our customer demand and our long-held desire to create what we consider the ultimate guide gun, the Model 89 Take Down brings together compactness, power, and durability in a way that pays homage to the past while utilizing modern materials and techniques.

The roots of this project trace back to the genius of John Moses Browning and his 1905 patent. As Greg Buchel, Founder of Big Horn Armory, explains, "Browning's 1905 patent, which eventually evolved into the Stevens take down 12-gauge, was the only design we found stout enough to handle the immense pressure of the .500 S&W cartridge. The simplicity and the increased bearing surface area of the spline approach, compared to interrupted thread designs, offered the strength we needed." With this foundation, we set out to modernize Browning's vision for the modern shooter.

The design process brought its own set of challenges. Chief among them was ensuring the perfect fit between the connector splines and the receiver splines. "The fit had to be tight, but not so tight that it would become difficult to take apart in the field," Buchel says. "That balance was key." Using modern steels like 17-4PH stainless steel, combined with a nitride finish, helped us achieve this. "The nitriding process adds both hardness and lubricity for long wear and ease of assembly, meaning that the parts can be mated without lubrication. This is important as any lubrication can attract dirt, which would make it harder to assemble the gun in the field."



Reworking Browning's design for the .500 S&W cartridge required careful adjustments to the size and material of certain components, but the fundamentals of the original concept remained intact. "We added material to the receiver ring around the splines to handle the increased pressure of the .500 S&W, but beyond that, the design was a perfect match," says Buchel. The entire process was relatively straightforward, thanks to modern CNC machining. "What used to require custom tooling and hours of manual work now becomes much more efficient and precise with CNC technology."

When it came to testing, we didn't cut corners. "We ran five proof loads in the original prototype, and its headspace increased by .002." After 15 more proof loads, there was no measurable change in headspace," Buchel recalls. "We knew we had a solid design, capable of enduring the repeated use that a guide gun demands."

One of the standout features of the Model 89 Take Down is the spline design itself. "There's nothing like it on the market today," says Buchel. "The length, width, and depth of the splines make the connection incredibly stable. There's so much surface area that the connection holds up even after repeated take-downs and reassemblies. Add to that the hardness of the nitriding process, and wear becomes a non-issue." [Watch](#)

[Episode 19](#) of BHA's Off the Bench series to see just how easy it is to disassemble the Model 89 Take Down: <https://www.youtube.com/watch?v=-JI1AA2pugA>.



The Model 89 Take Down also shines in its aesthetics and craftsmanship. "We wanted to stay true to the original lines of the Model 89 while adding material in the right places," Buchel explains. "But beyond looks, our craftsmanship comes through in the hand-fitting process. Every spline, every take down part is meticulously fitted by hand, making the ease of assembly and disassembly a real testament to our commitment to quality."



Designed for backcountry guides, hunters, and travelers, the Model 89 Take Down is for anyone who needs a powerful, compact rifle that can be broken down quickly and easily. "We've tested this rigorously in-house, and I'm confident that the uniqueness of the product, along with its connection to John Moses Browning's timeless design, will make this gun sell itself," says Buchel.

With the launch of the Model 89 Take Down, we're excited to bring something truly special to the world of big-bore lever-action rifles—an innovative firearm built on the shoulders of giants, but designed for the modern adventurer.



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