

# Shooting Sports

## Gun stock design: the valuable contribution of an expert supplier

Posted by [Alberto Franchini](#) on September 16 2021 - Reading time: 5 minutes



The gun stock has three important functions:

- structural
- ergonomic
- aesthetic

Each one needs specific and rigorous study and development processes, depending on the purpose of the arm.

In this article, we will discuss how a correct inlet design can influence the quality of the arm and the precision of the stock as well as the role of the manufacturer.

### Looking for a precise gun stock? Here are our considerations

During the design phase of a target or hunting/shooting arm, sharing information between the designers of the arm, e.g., those who produce actions and barrels, and the stock is essential. They must define the **purpose of the product**, its structural characteristics, its use, and ergonomics.

Considering the **structure of the gun stock**, development of the internal parts designed to hold the mechanics must be carefully projected.

The manufacturer must consider the **precise tolerances** and necessary support to absorb recoil during the shooting phase. If the recoil is too strong, a shooter's hands and shoulders may get tired and become unstable, causing a less accurate shot.

A competent manufacturer must guarantee:

- the gun stock's long life (it cannot break after a few shots)
- the constant shooting accuracy (MOA)
- the right recoil absorption

You need a producer that can **assist you and your client** during every step of the process, from the design phase to manufacturing, which will ensure a product that corresponds to your clients' standards delivered on time at a **competitive price**.

GAIN A COMPETITIVE EDGE IN THE GUNSTOCK MARKET:

- > satisfy your **clients' expectations**
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### Today, clients ask for perfect products

The experience of the **gun stock designer** is therefore critical for the success of the product. Creativity and expertise, however, must be supported by the **right measurement technologies** and **deep quality tests** to ensure maximum precision.

For this reason, the manufacturing company should make all its technical resources available to the designer through **innovative digital tools** that complete the project and make it impeccable.

Those companies that can develop such advanced and state-of-the-art projects have invested a lot in the most **innovative machines and tools** that let them perform the right measurement of each component and all the essential quality tests.

### Bedding the gun stock can contribute to improving accuracy

One of the most useful ways to guarantee the **structural functionality** of the stock is by introducing **aluminium or carbon fiber insert**. The insert can be just a "pin" or a more solid and stable bedding on which the barrelled action is mounted to **protect the stock from recoil shocks** and preventing it from becoming deformed.

When the rifle mechanism is placed directly into the gun stock, after a series of shots, the recoil movement may create a slight gap between the barrelled action and the stock. This gap will affect the stability of the rifle and eventually its accuracy.

Bedding becomes an **integral part of the stock**, making it steady while shooting, avoiding any kind of movement. In this way, **accuracy is more consistent**, and the shooter is more likely to be successful.

The combination of wood and aluminium or carbon fiber requires **knowledge and competency** of the supplier as well as the right tools and specific glues to guarantee a **durable product**.

Wood, in fact, is a difficult material to manage, as you must consider **specific and precise tolerances** during the design phase and avoid any negative consequences affecting accuracy.

Bedding is therefore a **delicate, long, and costly procedure** for the manufacturer to perform, so the risk is if he employs flawed methods to accelerate the process, resulting in poor performance.

### Sophisticated tools are essential to get perfect products

Another aspect to consider during the design phase is **alignment of the mechanics on the stock** to ensure perfect assembly and let the barrel float freely during the shot.

The action, in fact, moves and vibrates with every shot within the stock; if the barrel can't move properly each shot, the bullet will always have a different trajectory, hitting the target in a different way and even missing it (poor MOA).

Respecting wood tolerances is fundamental to get a **perfect floating barrel** that moves freely but in the right way.

A manufacturer that uses **sophisticated metrology software** based on blue light **3D scanning technology** can guarantee perfectly made products.

### Ensure that your supplier makes specific field tests before distribution

Accuracy and precision of the shot do not depend only on the ability of the shooter. Stability of the arm's mechanism, respect of the tolerances, and perfect assembly of all the components are necessary to guarantee a **perfect shooting experience**.

That is why before distribution your supplier should make specific **field tests** to ensure the quality of the arm and the stock.

A high-quality gun stock that **suits the shooter perfectly** can guarantee top performance.

**Minelli S.p.A.**, thanks to its modern and innovative machinery and expert team, can guarantee resistant, durable, and beautiful gun, rifle and carbine stocks.

We can assist you during the design phase to create a unique gun stock **completely customizable** according to your and your clients' preferences and needs.

We can also provide **fully bedded products** where the aluminum component is processed together with wood at the same time. In this way, we can create a **unique block of material** (wood + aluminum) completely integrated. This makes gun and rifle stocks much more **solid and resistant**.

If you have an idea or a project in mind, contact us right now. We will be glad to help you!

Topics: [gunstocks](#), [outdoor](#), [custom gun stocks](#)

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- > create **unique** firearms
- > be **competitive**



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