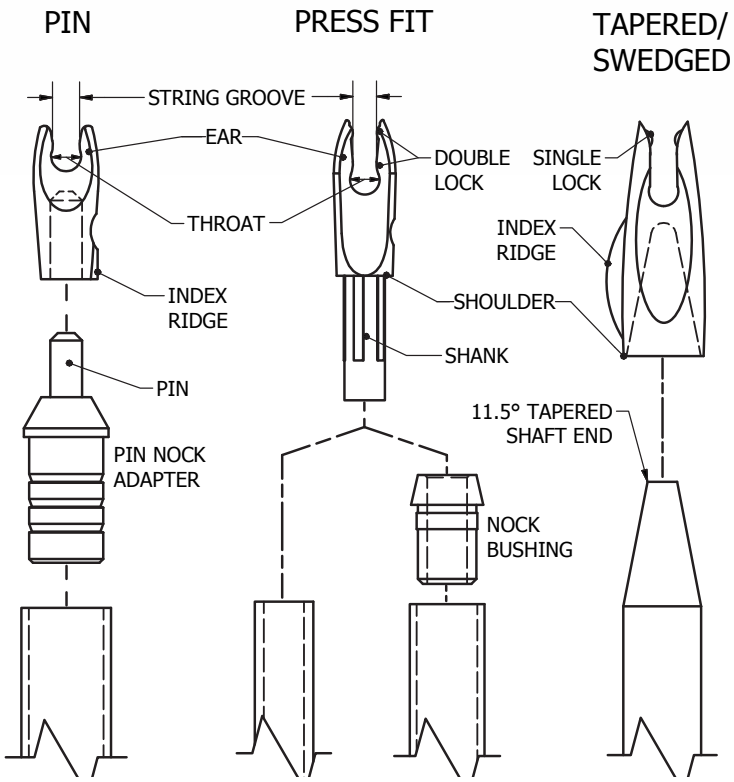
The Nock Guide

The Modern Nock



Choosing the Right Nock

Application	Recommended* Nock	Reason
3D	Pin, but hunting nocks are commonly used as well	Pin nocks are much less likely to “Robin Hood” in tight-group shooting situations due to the metal Pin adapter
Bowfishing	Legend	Rugged and simple, perfect for tapered fiberglass shafts
Crossbow	Flat, Halfmoon	Designed to handle the rigors of firing high-speed bolts
Hunting	Signature, A, Blazer, F, H.E.	The double-lock ensures the nock will not fall off the string if the bow is drawn down
NASP	Legend, F	Durable and easy to install on most NASP shafts
Target	Pin	Easiest way to nock larger-diameter “Line splitter” shafts
Traditional	Classic, Legend, T	Perfect for swedged/tapered aluminum and wood shafts

*These recommendations are guidelines only and do not necessarily reflect all usable combinations

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Glossary of Terms

Double Lock- Two sets of small nubs in the string groove that "snap" the nock onto the string
Ears- The two protrusions of the nock that clip onto the bow string
Index Ridge- A small rib on one side of the nock that helps an archer orient the arrow by feel
Nock Bushing- An adapter used to fit relatively small press fit nocks into larger arrow shafts
Pin- The short metal post that a Pin Nock is pressed onto when installed
Pin Nock Adapter- The metal insert necessary to install a Pin Nock on a hollow shaft
Shank- The part of some nocks that fits inside of an arrow shaft or nock bushing
Shoulder- The base of the nock that sits flush against the end of the shaft or adapter
Single Lock- A single set of nubs in the string groove that "snap" onto the bowstring
String Groove- The space between the ears of a nock, measured at the narrowest point
Swedged Shaft- An arrow shaft with a tapered end
Tapered Shaft End- An 11.5° cone at the end of a swedged arrow shaft ideal for a snug fit with glue-on nocks
Throat- The bottom of the string groove where the string sits during shooting

Installing Nocks

There are 3 kinds of nocks, all which require a slightly different approach: Press fit nocks, pin nocks, and tapered/swedged nocks.

Press Fit Nocks

There are many methods for installing nocks, most of which are NOT recommended as they have a tendency to damage nocks. Never do the following: Push the nock ears against a hard surface, use pliers to twist into place, or bite the nock. Instead, always use a plastic indexing tool to insert and index your nocks. We recommend using the Bohning Nock Indexing Tool, the Deluxe Broadhead Wrench, or the Nock-Out Tool. Using bowstring wax on press fit nocks can be useful for indexing, especially if the nock fit is very tight. Simply apply a small amount of wax to the nock shank and rotate the nock as you insert it into the arrow shaft. Continue rotating the nock to the proper index position to match the fletchings. Never glue press fit nocks. If your nock fit is too loose, we recommend using Teflon Tape around the nock shank to ensure a tighter fit.

Pin Nocks

Using hot-melt adhesive for inserting Pin nock adapters: Caution: Do not touch hot surfaces or adhesives with bare skin. Always wear heat-resistant gloves and eye protection when performing this task.

Hold the pin nock adapter by the pin with pliers and heat over a small flame. Heat hot-melt adhesive stick with flame until it glosses over (just before melting). Apply heat again to adapter while applying the stick of melted adhesive to it. Be sure to apply adhesive all the way around the adapter insert. Press pin nock adapter into arrow shaft while rotating one complete turn around. Wipe off excess hot melt material.

Refer to the Technical Bulletin on Bohning Insert Iron™, Ferr-L-Tite®, and Cool Flex™ for more information on installing Pin Nock adapters. Once the adapter is securely installed in the shaft, fully seat a Pin Nock over the pin using the Bohning Nock Indexing Tool and rotate it to the correct index position.

Tapered/Swedged Nocks

These are the only nocks that should ever be glued in place. Typically these nocks are installed prior to fletching (if applicable) so indexing is not usually a concern during installation. To install, simply apply a 3-4 drops of Bohning Blazer® Bond Instant Glue or Instant Gel to the tapered surface at the end of the shaft. Use caution as these adhesives bond to skin instantly! Using light pressure, twist the swedged nock onto the tapered end, gradually increasing the pressure until the nock has been rotated one full turn. This twisting action ensures the glue evenly spreads between the shaft and the nock, providing the best possible bond. If indexing is required (e.g. for bowfishing shafts or pre-fletched arrows) continue turning the nock until the correct orientation is achieved before the glue dries. Wipe up any excess glue with a paper towel or cotton swab.

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Inspecting Your Nock

The smallest nick or crack in your nock can lead to major failure on your next shot. Just like your arrow shaft, it is important to inspect your nock before every shot. Nock damage may occur at the target when subsequently shot arrows hit them. For example, if you graze one of your arrows and a small nick the size of a pin point is now near the shoulder of your nock. It may not look like much, but that nick may be just the tip of the proverbial iceberg. Minuscule cracks not visible to the naked eye may be radiating from that nick deep into the nock. If left unnoticed, those small cracks could propagate into a major fracture zone the next time it is fired, which could harm both you and your equipment. When in doubt, remove it, and replace the nock.

Built for Speed

Not all nocks are created equal. With today's bows edging ever closer to 400 FPS, your nock will need to handle forces like never before. At Bohning we have dedicated time, research, and put our expert knowledge to work to produce nocks that will withstand the rigors that faster bows produce. Contact area with the bowstring plays a major role in a nock's longevity at high speeds. Nocks with a saddle-shaped throat tend to focus all of the bowstring's force onto one point in the very center of the curve as shown in Figure 1. The problem with this common design choice is that focusing so much force onto such a relatively small area may lead to rapid deformation of the nock throat. This is noticed as a "V" shape in what normally should be a perfectly circular nock throat. This "V-ing" is a visual indicator of what the bowstring is doing to the nock—essentially wedging it apart. As the V becomes more and more pronounced, the ears of the nock spread further apart, until it reaches the point where it will no longer snap onto the string.

The solution to this problem lies in the throat geometry much more so than the nock material itself. Nocks with a half-pipe style throat (Figure 2) distribute the force of the bowstring over a broader

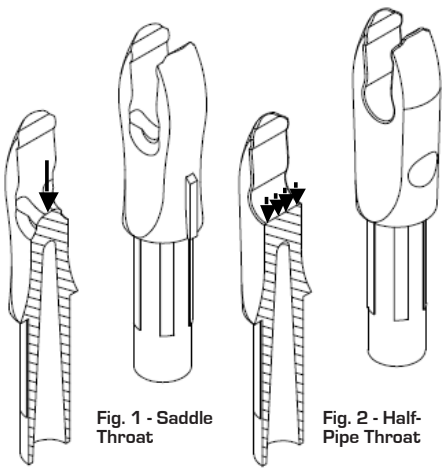

Fig. 1 - Saddle Throat

Fig. 2 - Half-Pipe Throat

area. This change in geometry effectively transmits the same amount of force to the arrow, without deformation to the throat or spreading of the ears. The photo to the right shows two nocks, the first with ears in proper position due to correct nock geometry. The second nock shows throat deformation and spreading of the ears.


Nock 1: Normal ear positioning
Nock 2: Ear spreading

Rigorous Testing

At Bohning, we proudly stand behind our products and our nocks are no exception! Bohning nocks are pushed to the limits in testing—in the lab, at the range, and in the field. Likewise, we put our competitor's products through the same gauntlet of tests. Anybody can say their nock is the best on the market, but here at Bohning we know the importance of having accurate data to back it up and ensure our nocks can keep up with any bow speed. Testing includes shooting each sample nock 1000 times at over 300 feet per second (FPS) with close inspection after each shot (shown to the left). Shear and compression testing is conducted in the lab to check for potential quality issues such as brittleness, cracking, and high-stress areas (show to the right). Any foreseeable nock problem is taken into account at Bohning and resolved through a continuous process of engineering, research, and testing.

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Key Points

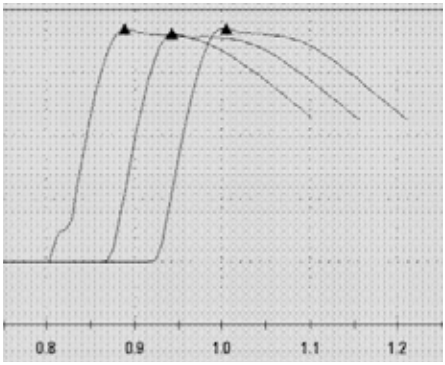
Know your nock:
What you need and how to install it correctly.

Nock inspection is important for the safety of every archer.

Bohning nocks are shot 1000 times at speeds exceeding 300 FPS.

Today's bows continue to get faster: Bohning has nocks that can keep up.

Shot tracking sheet



Side by side nock compression testing

Bohning Nocks

	Nock Type	Double Lock?	Weight (grains)
Press-fit	Blazer®	✓	10.3
	Signature		12.7
	A	✓	7
	F	✓	6
	H.E.	✓	7.7
Pin Bushing	Pin		3
Tapered	Classic		12
	Legend		10.5