CROSSBOW BUYING GUIDE FOR FIRST TIME BUYERS
WHY YOU SHOULD CONSIDER CROSSBOW HUNTING

ALLOWED IN 49 STATES (CÔMON OREGÔ!)

EXTREME GROWTH IN PAST 10 YEARS

$3M (2005)

$140M (2015)

SIMILAR TO A GUN BUT WITH LESS RECOIL

MUCH LESS GAME-SPOOKING NOISE

LESS PRACTICE IS REQUIRED TO BE PROFICIENT BETTER FOR PEOPLE WITH BUSY SCHEDULES

EXTEND YOUR SEASON INTO ARCHERY SEASON

WARMER, MORE ENJOYABLE WEATHER TO BE OUT IN THE WOODS

DEER ARE LESS SPOOKED AND STILL IN THEIR NORMAL PATTERNS CALM DEER = EASIER HUNTING

NOT AS PHYSICALLY DEMANDING AS BOWHUNTING
INTERESTED IN PURCHASING A CROSSBOW BUT DON’T KNOW WHERE TO START?

WE’VE GOT YOU COVERED. LEARN THE BASICS OF A CROSSBOW AND WHAT YOU SHOULD PAY ATTENTIONS TO WHEN BUYING YOUR OWN.

1. WHY DO I WANT A CROSSBOW?
Do you want to use your crossbow primarily for target shooting or for hunting? Certain features on a crossbow lend themselves better to one market or the other. Speed, bow weight, and draw weight are not essential to target shooting, but can make a big difference in a hunt. As long as your scope is sighted in properly and the target distance is within reason, your accuracy for target shooting will not be affected by other features of the bow.

CROSSBOW ANATOMY
2. SHOULD I GET A COMPOUND CROSSBOW OR A RECURVE CROSSBOW?

A recurve crossbow, or a traditional crossbow, has a more basic design than its compound counterpart. Its simplicity means that it is easier to maintain; strings can be replaced virtually anywhere without the help of a bow shop or bow press (which is especially beneficial if you live far away from your nearest bow shop). Recurves are also generally lighter than compounds, making it easier to carry when traveling far distances on foot or climbing up a treestand. However, a recurve bow often propels bolts (crossbow arrows) at a slower speed than a compound and is wider, making maneuvering difficult in a treestand or blind. The trigger mechanism in a recurve also holds the entirety of the peak weight when the bow is in the cocked position, which greatly reduces its serving life. Recurve crossbows are also more difficult to cock, but like a compound bow, this can be made easier with a cocking aid device.

Compound bows have a narrower frame thanks to the pulley system attached to the limbs. Energy is stored in the pulley system, comprised of cams and with fixed modules, to make the bow more powerful and fast. Even at the same draw weight, a compound bow will shoot much faster than those of a recurve due to the dynamics of the bow. Increased speed equals increased accuracy in longer shots, and increased accuracy means that you will be able to successfully harvest game at ethical hunting distances. However, speed isn't the only thing you should consider. We will discuss that more later.

The intricate cam system on compounds add to the crossbow in a number of ways. It allows the limbs on a compound to be shorter, giving the crossbow a smaller profile and added mobility in tight areas. It also increases the dynamics of the bow, meaning you can use limbs that require less draw weight to reach the same speed of a recurve equipped with limbs of a much heavier draw weight. Lighter limbs mean that the crossbow is easier to cock. Harnessing all of that stored energy requires an aluminum riser hefty enough to handle that. This is the reason compounds are more nose heavy, which can make shouldering the bow (to hold the crossbow ready in shooting position) awkward at times. However, if something should go awry with your bow, it will need to be taken in to a professional bow shop for maintenance and repair. If you still can't decide which to choose, try both styles out. Sometimes, the way a bow feels is the most important factor.
3. WHAT SHOULD YOU LOOK FOR TO MAXIMIZE SPEED?

In a crossbow, the speed of the bolt (the arrow) is determined by the draw weight, cam dynamics, kinetic energy, power stroke (the distance the bow string travels from resting position to drawn locked position in the trigger's jaw), and bolt weight and spine. Your best bet for getting a faster bow is to up your draw weight. Probably the biggest concern for speed is due to the sound a crossbow makes when fired, resulting in what's commonly called "string jump," a term used in hunting big game. The noise sets off the natural instinct of big game to flinch, effectively causing poor shot placement or even a miss. The faster the bolt gets to the target, the greater chances of it hitting its intended mark.

Speed, however, isn't everything; there are many other factors that have an effect on the crossbow's performance. The cam's dynamics coupled with the power stroke and arrow weight are important factors that determine the crossbow's performance. In a controlled setting, maximizing the cam's dynamics and its draw weight, to an arrow weight and the arrow's spine would offer maximum speed, accuracy and penetration for that specific bow. This can be achieved in the practice range, testing for the best combination.

There is also a false sense that speed equals power, but this is not entirely accurate. Let's take a look at it from another angle. If you were hit in the chest by a ping-pong ball traveling at 100 mph that would hurt, but if you were hit in the chest by a bowling ball traveling merely half that speed, well, that could kill you. What's more important is that you should first realize that there is no standardized criteria to measure of speed of a crossbow for manufacturers. You have to rely solely on the manufacturer to provide adequate and accurate data of the bolt. Did the manufacturer measure the speed using a super lightweight arrow to achieve higher results? The fact is, any crossbow shooting over 300fps (feet per second) using a 425 gr arrow will take down most big game at under 50 yards. That equals about 85 ft/lbs of kinetic energy (KE) \[(KE=\frac{mv^2}{450,240})\] which is more than enough kinetic energy for hunting any big game in North America. Some data actually reflects that a mere 55 ft./lbs. of kinetic energy is adequate for harvesting most all big game.
4. DOES THE CROSSBOW FIT YOUR FRAME AND STATURE?

Before anything else, a crossbow must be comfortable for the shooter. Fitting a crossbow to one’s stature is as important as picking out shoes for the fit of one’s feet. A crossbow not fitted properly, will likely mean inaccurate shots and disappointing results. The strength of the shooter must be taken into consideration for two reasons. The first is cocking the crossbow. Many crossbow companies have created cocking mechanisms that aid in the cocking of a bow, helping shooters cock higher weighted limbs with ease, but there is still an aspect of physical strength involved. The longer the power stroke, the longer one’s arms must be, as this is directly associated directly with the cocking length. A 12-inch power stroke is vastly shorter than an 18-inch power stroke, making the latter more challenging for someone of a shorter stature. Second, it’s important to be able to shoulder the crossbow for a sustained period of time. The overall weight of the crossbow should also be taken into consideration for this reason. You don’t want a crossbow that is difficult to hold up to a point where your aim is compromised.

5. WHAT SIZE CROSSBOW SHOULD YOU GET?

What must first be determined, is the intended use of the crossbow. If you are planning on using your crossbow for target shooting, size is irrelevant. If used for hunting, size does matter. In the case of a hunting crossbow, smaller is better, so look for the shortest distance from outside one limb tip to the other limb tip. A more compact crossbow offers more mobility, especially laterally. In a treestand or ground blind, there is already very little room for maneuvering, and a large crossbow can make a tight space even tighter. Be mindful that when a crossbow is cocked the limb tip distance is at it minimum. Once deployed, the limbs return back to its at-rest position where that span is larger. There is less chance one will hit the side of the blind or a limb with a compact crossbow than a wider version.
6. WHAT SHOULD I LOOK FOR TO HELP REDUCE THE NOISE OF A CROSSBOW?

Crossbows are louder than compound bows for two main reasons. First, a majority of vertical compound bows shoot at least 5 grains per pound or more arrow, where crossbow have less 3 grains per pound. The lighter the projectile, the more the limb vibration when fired, and the limb vibration is what generates the sound. Second, most crossbows are at least twice the draw weight of a vertical compound bow. All that energy creates tremendous vibration, which translates into noise. When looking for a crossbow, look for string suppressor systems and limb vibration dampeners to help with the suppressing the noise. Compound crossbows are typically a quieter shot than recurves.

7. WHAT TYPE OF SCOPE SHOULD I LOOK FOR?

In sighting in, the goal is to zero in on a specific distance, say 20 yards, with the top dot or reticle (crosshairs). Once this is achieved, the remaining dots or reticles will automatically be properly aligned at their respective distances.

A single dot or reticle sighted at a specific yardage is good only for that distance, and other distances have to be estimated by the dot or reticle location on the target. A scope with multiple dots or reticles is more accurate if you plan on shooting a variety of distances. Some scopes have illuminated dots or reticles in both green and red illumination. These illuminations are for early dawn and dusk when lighting is poor as they allow you to see your target more clearly. Scopes come in a variety of powers, from zero power to 4.5 power (referred to as 4.5X). They also come in various fields of vision, from narrow to wide. These features are all selected preferences by the crossbow shooter. See illustration below to better understand dots and reticles.
8. WHAT SHOULD I LOOK FOR IN A TRIGGER?
Choosing a trigger is an entirely personal matter, but not all triggers are created equal. Some shooters like a light trigger, a pull weight with no creep, while others prefer a creep in the trigger and a final heavier pull weight to deploy. Some crossbows are equipped with something in the middle. Gun hunters typically enjoy the light pull with no creep as they are, from mere habit, expecting the recoil. The no creep, light trigger pull affords them better accuracy as this eliminates “the flinch” factor.

9. WHAT TYPE OF WARRANTY SHOULD I LOOK FOR?
Warranties vary greatly in the industry, but should be carefully looked at before you make your purchase. A crossbow warrantied for any mechanical malfunction developed other than from misuse, or damage, is vital. Having said that, a duration should be established that is realistic and sustainable by the manufacturer, such as 3-year non-transferable warranty. The barrel, riser, trigger mechanism, cams, limbs and limb pockets should also be covered during this warranty period. Strings, cables, accessories such as scope, quiver, bolts and decoration, should not be covered as they are subject to wear. Many manufacturers boast that they offer a Limited Lifetime Warranty on their crossbows, a great “smoke screened” warranty, which actually has so many exceptions, that the average buyer believes his entire bow is covered forever, when in fact, it has almost no coverage.

Many reputable manufacturers have reasonable warranties with standardized durations covering most any mechanical issue. Traditionally, the more the bow costs the better the warranty is, because it is typically consistent with how well the bow is made. You will find that crossbows manufactured in Asia provide little warranty support, if any. Warrantied items are likely to take a long time to arrive also since they are being shipped from another country, typically by boat.
**10. HOW DO I KNOW IF I AM BUYING A QUALITY CROSSBOW?**

The truth of the matter is that quality crossbows are expensive to manufacture and will result in a higher costing product. The phrase “you get what you pay for” is especially true in the weapons market. If a deal seems too good to be true, it probably is. Your crossbow is the last thing you want to malfunction on you. Search for bows made with high quality materials and factory tested. Typically, a better warranty equates to a high quality crossbow because the manufacturers have confidence in the product they are creating. Check online reviews and do your research about the company beforehand.

Probably the most overlooked aspect of a crossbow is its durability. Some crossbows, especially those made in other countries, are made of low quality plastics because they are cheaper to produce. You should also seriously consider the amount of stored energy (defined as, potential elastic energy) that is released during firing their crossbow (where it transitions to kinetic energy), and just how long it can stand up to that ongoing punishment. Quality crossbows made of carbon fiber composite and aircraft aluminum will surely outlast a bow made of nylon-reinforced plastics. Furthermore, temperatures have a more dramatic effect on plastics, softening and distorting in extreme heat, and become very susceptible to fracture in extreme cold, where carbon fiber composites and aircraft grade aluminum are virtually unaffected by such conditions. It just takes once to accidently strike, drop, or mishandle your crossbow, and you could be replacing it.
11. WHAT KIND OF ACCESSORIES SHOULD I CONSIDER?

The first accessory you should consider is a bow case. There are generally three types of cases available for crossbows: a hard case, soft case and a hybrid case.

The hard case is typically made of a molded ultra-high-strength polypropylene copolymer resin, or aluminum with a soft foam interior and comes in a variety of configurations to accommodate the crossbow design one needs. There is generally a configuration inside for arrows and accessories. These cases are extremely durable and can withstand most abuse.

The soft case is typically made of polypropylene also known as "Cordura," a material recognized mostly in the luggage industry. Typically these cases are fitted with a foam protective interior. These cases are far less expensive than hard cases or hybrid cases, and are zipper-closed with a separate arrow and accessory compartment. There durability is low but do provide protection from outside elements including dust, dirt, and moisture.

The newest case in protection is known as a hybrid case. These cases are made of EVA, ethyl vinyl acetate, a very lightweight yet very durable property perfect for transportation. They are molded in a variety of configurations to fit most crossbows. These cases are equally expensive as hard cases, and like hard cases, can be locked with their latch mechanism. Their internal configurations typically include places for accessories such as arrows, quivers, scopes and cocking aids.

The next accessory (technically, although this is really an essential to a crossbow) are bolts. How you choose your bolts will literally make or break your shot, so be sure to pay attention to what kind of bolt you are buying. Your draw weight and power stroke should determine your arrow weight. Too light of a bolt can cause porpoising, meaning the bolt bends during deployment and flight which will compromise its accuracy. Also, too much bend can cause the arrow to snap on deployment, which may cause serious injury to the shooter or even death. Read the manufacturer’s recommendations in the owner’s manual or seeks a bow technician familiar with that particular crossbow when choosing bolts. Crossbow bolts are generally available in 20-inch and 22-inch lengths. The length is determined by the power stroke. Their weights and spines are usually indicated on the arrow itself.

Most crossbows are bought already equipped with a scope, bolts, field tips, quiver, and cocking aid. Hunting broadheads are purchased as an accessory separately, and are selected by generally by the owner’s preference. Most manufacturers recommend fixed broadheads for their crossbows as many mechanical broads deploy during actuation and may change the flight of the bolt.

Be mindful of the fact that broadheads can fly much different than field tips. It is recommended that once your bow is sighted in using an established grain field tip, use the same grain broadhead and see if it flies the same as your field tip. If your broadheads hit far from the bullseye, you may wish to consider trying another broadhead until you find one that is consistent.
12. ANYTHING ELSE I SHOULD KNOW BEFORE BUYING A CROSSBOW?

One thing to keep in mind when purchasing your crossbow is to determine where and how many dealers are located nearby for service. Also note where the crossbow is manufactured in the interest of time to get replacement parts or warranty service.