All-carbon Contenders

Duncan Busby concludes his guide to Carbon Express arrows with a look at its all-carbon outdoor arrow range

Now that the indoor season is coming to an end and we are starting to move back outdoors again, you may want to start the season by investing in the best and most accurate equipment you can get your hands on. Taking out the same tired arrows you've been using year after year can significantly affect the results you get at the target; did you ever miss the centre without knowing why? Arrows that don't hit where you expect may have deteriorated in strength and straightness since you bought them, and you may also find that they are more at risk of damage; constant impact on most conventional styles of shaft can cause cracks and bends after only a short period of time.

Replacing these shafts will not only give you the opportunity to increase your scores, but investing in a set that are less likely to suffer these effects may also save you money in the long term. In this article I continue my guide to Carbon Express with an introduction to its outdoor arrow range. I'll explain the unique build and technology that makes Carbon Express my arrow of choice, as well at that of many other Team GB compound archers.

Why choose carbon?

As you may know, most modern arrows fall into one of three main construction types; aluminium (made entirely out of aluminium), carbon (made entirely from carbon) and aluminium/carbon composite (an aluminium core wrapped with carbon). Traditionally the type most frequently used by outdoor target archers have been aluminium/carbon shafts, as they generally gave the best combination of weight and diameter for accurate long-distance shooting. However, they are not without their faults. The aluminium core can bend after being shot into tough targets, leading to either the carbon exterior splitting or your high-precision arrow flying with a wobble, and over time the aluminium can lose some of its spine, meaning that the arrows you shoot the most will become weaker than the ones less well used, leaving you with an unmatched dozen; and these common failings can have surprisingly negative effects on your results.

Up until now carbon shafts had been overlooked by many outdoor target shooters due to their typically lightweight and large diameter designs, but Carbon Express has re-written the rule book when it comes to all-carbon arrows and thanks to its unique manufacturing and sorting process it has created a range of all-carbon arrows that blow the competition away.

Why Carbon Express?

Carbon Express constructs its arrows through a tightly controlled computerised manufacturing process using only the highest grades of carbon fibre for each shaft. This makes them super tough and durable even after heavy use and repeated impacts into the toughest of targets. I have personally been able to use the same dozen arrows for more than a season without noticing a decline in my group sizes and without breaking a single arrow in the target.

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Nano-Pro

The Nano-Pro is simply the best 100 per cent carbon target arrow in the world! It is Carbon Express's slimmest shaft, designed to be lightweight and strong. Its small diameter virtually eliminates cross-wind drift and is perfect for outdoor target and field competitions. The stiffest 350 spine measures just .212 inches in diameter and weighs only 9.5 grains per inch.

Built from what's referred to as 46-ton carbon, this incredibly durable arrow recovers fast out of the bow while delivering the flattest trajectory and greatest long-range accuracy of all the arrows in the Carbon Express range.

In the four years I have used the Nano-Pro, I have achieved seven national records and have twice been ranked UK number one; I would not trust any other arrow in competition. These arrows are used by the world's best archers to win numerous world titles and achieve countless national and world records.

Medallion-Pro

For the budget-minded, the Medallion line of arrows gives a slim diameter all-carbon arrow for a fraction of the price. The Medallion-Pro is the flagship model in the series; it features 30-ton carbon for enhanced performance, overall strength and improved recovery. Economy does not mean compromise, the stiffest 410 spine boasts a .238-inch diameter and weighs only 8.5 grains per inch, and its perfect weight-to-size ratio makes it the ideal mid-range target arrow for the cost-conscious archer.

Nano-XR

Introduced in 2007, the Nano-XR was the first target arrow engineered from 40-ton carbon. It delivers superior long range accuracy, strength and consistency shot after shot. Its ultra-small diameter dramatically reduces cross-wind drift and is the ideal arrow for all target and field shooters. The stiffest 380 spine measures just .214 inches in diameter and weighs only 9.0 grains per inch. In side-by-side tests, the Nano-XR has consistently out-performed comparable aluminium core carbon arrows in durability, recovery out of the bow, consistency and speed. You won't find a tougher, more accurate arrow for the price.

Medallion-XR

The Medallion-XR is the sister model to the Medallion-Pro. It incorporates 24-ton carbon in a slim diameter shaft, making it the perfect entry-level arrow for the aspiring target and field archer. With a wide variety of spines available, this economical arrow is ideal for use with low poundage bows and for young archers looking to get their first set of all-carbon shafts.

Nock collar

Carbon Express's exclusive sorting process is unique to arrow manufacturing and it guarantees it has the best matched arrows on the market. It is the only brand to laser sort its premium shafts to make sure every arrow in a set has the same spine tolerance; since spine consistency is the number one factor in arrow performance and tight grouping you can be sure that these arrows will hit where you aim them.

Carbon Express also laser checks the straightness of every arrow to make sure they meet the strictest straightness tolerances in the industry, and uses a fully automated electronic system to precisely match the weight of each arrow in a boxed set, taking consistent performance to an even higher level.

The Design

Tuning a non-parallel shaft to your bow can be a tricky process. This is because the thickest part of the shaft, where the arrow gets its spine from, is either in the middle of the arrow (in the case of a barrelled shaft) or at the rear (in the case of a tapered shaft). This gives you almost endless options when tuning the arrow to your bow; do you cut the shaft from the front, the back, or both?

Carbon Express only makes parallel shafts, meaning that the arrow's diameter is the same throughout its length. As there is no stiffer or weaker part of the shaft, you can affect the spine by cutting the length from either the front or the back without dramatically changing the balance or performance of the arrow. Why risk ruining a set of expensive composite arrows by cutting them in the wrong place? Setting up your arrows has never been so quick and easy.

The Components

Once you have chosen your shafts, you'll need to complete your setup. Carbon Express's comprehensive range of components are precision made from high grade materials to offer a variety tuning and build options for a truly individual arrow to suit any budget.

Points

Carbon Express offers three outdoor arrow point options: the stainless steel point is precision made from 440 steel and is available for the Nano-Pro, Nano-XR and Medallion-Pro shafts. It's specifically designed with a parabolic shape to make it easier to pull from the target and, in the case of recurve archers, to draw through the clicker. It features precision break-off segments to allow for customisation from 120 grains to 80 grains.

Medallion-XR point system

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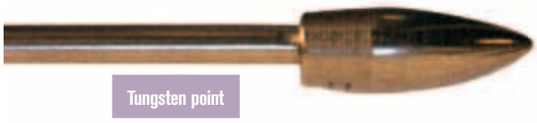
A1 Tool steel point



Tungsten point

The A-1 steel point is the strongest point in the range, made from high quality machine tool steel that will not bend. Machined to the tightest tolerances in the industry, it is designed to withstand the toughest targets and the hardest impacts, and it features precision break-off segments from 120 grains down to 90 grains. The tool steel point is available for the Nano-Pro and the Nano-XR range of arrows.

Carbon Express's premium high density tungsten point is compact in design, and, made from 92 per cent pure tungsten, has the highest concentration in the market. Perfect for long distance shooting, it is also weight adjustable with precision break off segments from 120 grains down to 90 grains. It is only available for the Nano-Pro range.

Last but not least, Carbon Express offers a point specifically designed for the Medallion-XR range of arrows – the Medallion-XR point is made from steel, features a parabolic design and comes with a threaded weight which screws into the back of the point. This allows you to change the overall weight of the point, and it also has several break-off sections for further customisation and tuning, which is a great option for beginners or juniors who are constantly changing and growing with their arrows.

Pin adapters

Pin adapters are available for every arrow model, and are the most accurate way to attach a nock to your shaft. Made from aircraft grade aluminium in the case of the Nano series, these pins also protect your arrows from rear impact damage. They fit all standard pin nocks.

Nock collars

This unique creation from Carbon Express is designed to protect your arrows from rear impact damage. The nock collar fits over the end of the shaft and is held in place with the pin adapter. Made from premium grade aluminium and weighing only 1.3 grains, these tiny additions can make a difference in the target without affecting the tune or performance of your arrow.

Over the years these nock collars have saved so many of my arrows from damage – and I'm always surprised by their strength and ability to stop the back of the arrow from cracking when I shoot a particularly tight group. I've also seen increasing numbers of archers using these collars on composite shafts to prevent breakages.

Nocks

Carbon Express offers two different nock options: the Soma pin nock, precision-made from extra strong poly-carbonate and will fit on any standard pin adapter. It comes in a choice of two inner throat sizes to ensure perfect string fit and is available in five different colours. This is my personal choice of nock; they are extremely accurate and durable and I have never had any unexpected cracks or breakages in the years I have been using them.

The second option is the post nock; this one-piece nock, comprising of a tool steel pin moulded inside a precision plastic nock, is designed for archers who do not wish to use a pin adapter. The design gives the nock superior strength and durability and is available for the Nano-Pro and Nano-XR range of arrows.

Are these arrows right for me?

Although some archers have reservations about shooting all-carbon shafts in the UK, because of their unneccesary restriction at certain venues, they are not restricted at any world record status tournament. It's a common misconception that when an all-carbon arrow breaks it creates many hazardous splinters. In my experience after testing my own unusable shafts I've found that when put under enough pressure Carbon Express arrows break cleanly with little or no splintering, whereas composite arrows are more likely to produce significant fragments when broken, an effect of their carbon over-layer separating from the aluminium core. You shouldn't have any concerns about losing these arrows; we've all missed the target at some point for one reason or another and in my experience I have found that my all-carbon arrows are just as easy to find with a metal detector as any composite shaft since they do have metal components.

The prices for the majority of the Carbon Express range are comparable to other arrows on the market. The Nano-Pro currently costs a little more than its equivalent composite shaft in the UK, but in my opinion this is a good investment. The build quality and durability of the Nano range ensures that these arrows will last for many seasons without losing spine or succumbing to cracks or bends, and arrows that last longer will save you money in the long term. There is a price to suit every archer, so no matter what range of arrows you choose you will not have to compromise.

If you have always used the same arrows in the past do not be put off from trying something new. The Carbon Express outdoor line-up offers similar arrow dimensions and applications to its largest competitors, so it should be fairly easy to choose a shaft that corresponds to your needs.

Since the Carbon Express ranges are all parallel in design, the arrow spines will differ from those of the barrelled or tapered shafts you're used to, but the spine charts are simple to use and will make choosing your first all-carbon set-up easy. You may also discover an improved arrow flight, as if you are using incorrectly cut non-parallel shafts you may be unknowingly affecting your results.

For archers who wish to switch over but worry about the availability of information, guidance and support is on hand not only from your local stockist but from the CX Pro Staff around the UK; I have many years of experience with these arrows and I'm happy to advise any archer interested in the range.

Why not give Carbon Express a try this season? You may be surprised at just what you can achieve!

Soma post nock

Where to buy

The Archery Company:
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www.merlinarchery.co.uk
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