FiberBow 5.3 - Full Total Carbon fiber

Dear Athlete,

Thank you for choosing FiberBow 5.3.
Even if this choice shows your good archery knowledge, we kindly recommend you to read very carefully this handbook.

FiberBow 5.3 - Technical features:

- Material: carbon fibres constituted by “Pre-peg” texture.
- Riser height: 23”.
- Grip: wood.
- Net weight: about 530 g

Important notice:

Please, remember that you have to take care in setting up your bow: the limbs have to be properly pushed inside the pocket until they touch the tiller bolt.
Once the limbs have been put inside the pocket you can pull back the string to settle them, but remember that you have not to release the string as the bow could be damaged by this action, as well as the limbs.
The FiberBow riser as well as the other archery equipment have to be carefully checked before each training session.

Notice

A bow is a potential weapon and it have to be use only in specialized facilities.
AT SPORT SAS cannot be considered responsible for an use that is not in accordance with the regulations of archery or if the FiberBow 5.3 is used by people who do not fit for archery. The user must use this riser only after reading this manual. Moreover, the user pledge himself to use properly this product in accordance with the security regulations, under his own responsibility.
AT SPORT SAS decline all responsibility for damages occurred to people, animals or goods due to an incorrect use of its equipment.

FiberBow 5.3 – The ideal choice for who want the best technology.

FiberBow 5.3 is an absolutely innovative riser from several points of view. The most surprising peculiarity of this riser is its weight: its net weight is 630 grams and it is manufactured in “Full Total Carbon Fiber”: it has a remarkable resistance along the fibres direction and an excellent vibration dumping system.

The Pockets: the pockets of the riser have been manufactured taking care of appearances, as it shows their winning look, but always focusing on their function and resistance.
The back side of the pocket has been engineered to assure the total absence of torsions. The internal roundness of the pockets is finished by hand, so that there could be some imperfections: the possible roughness does not influence the alignment of the tiller bolts as they are put inside drilled and threaded by digital machine tools housings.

Central stabiliser bushing: the central stabiliser bushing is threaded and it pass throughout the riser to assure better weight distribution, easier set-up and customisation of bow stability.

Stratified materials: Full Total Carbon Fiber
Fiberbow riser has been manufactured with a tubular carbon system: this is a tubular structure constituted by oriented fibres carbon coats so that they can contrast the traction and release forces and vibrations. This is not just “covered material”, but a good looking and really efficient riser.

Important: the roughness of some surfaces does not represent a manufacturing defect, but it shows the riser value and its uniqueness, as every single riser is finished by hand.

Why did we choose carbon fibres?

Each kind of material has three structural characteristics: resistance (the force that it can tolerate before breaking), stiffness (how much it bends under a certain force), and specific weight (which is the weight of a given volume of material).

In our sport the most common materials are steel and aluminium. Steel has a specific weight and a resistance three times higher than aluminium. Both steel and aluminium are homogeneous materials, and it means that they have the same characteristics towards each direction.
The carbon fibres are different as they are really thin and they need another specific material to be joined together.
This material is called matrix and it usually is a polymer like an epoxide resin.

The carbons fibres have excellent structural characteristics: their stiffness is comparable with steel (but there are the so called “high modulus fibres” which are stiffer than steel), and their weight is remarkably lower than aluminium. Another important difference between carbon fibres and the other materials is in their own nature.
A metal structure which is subjected to an unidirectional force has the same properties even towards all the other directions, also where there is no need. Using carbon fibres the material can be engineered so that we can obtain the characteristics that we want only towards the directions that we need.
So we can considerably reduce the waste of material to realize our riser.

Throughout the structural properties calculation it is possible to obtain a remarkable weight saving in comparison with the use ofmetal materials.
But there is much more: if stiffness is the requested characteristic, with well engineered carbon fibres it is possible to obtain a remarkable weight saving compared to an aluminium structure with the same thickness.
In the end, we can define the carbon fibre as a stiff, light and very resistant material.
As the carbon fibres are really thin, they can easily be disposed to support a specific force, on a particular structure, in the most efficient way.
In other terms, if with the carbon fibres is the material itself that can be engineered, when with the metals we can only modify their external shape.
This is a very important characteristic as it happens very often that the forces on a particular structure go towards few directions, and with carbon fibres we can optimize the manufacturing process to obtain the maximum weight saving.

May the sunbeams cause any problem to FiberBow 5.3?

The carbon fibres are insensitive to UV rays, which are the negative elements of the sunbeams. On the other hand the resin which compose the matrix could be sensitive and may change its colour if exposed to a prolonged exposition to the sunlight.
First of all, we have to consider that the resins don’t have the same sensitivity to UV rays.
The polyester, vinylister and epoxide resins have different behaviours if exposed to UV rays.
The manufacturers have improved today’s resins by the use of new additives which make the resins less sensitive to UV rays than some times ago.
The varnish used to cover this riser has been chosen among the best protective varnishes available, the same which are commonly used by car manufacturers to protect their cars from the colour variations that can be generated by the UV rays.
Thanks to this particular kind of paints today’s cars don’t suffer the colour change anymore.

The carbon fibres can be electro-conductive?

There can be problems with lightning?

The carbon fibres are better electro-conductive than glass fibres or Kevlar, but they are really worst in comparison with metals. Moreover, the resin whose the matrix is composed is an excellent insulator.
When a carbon product has been well laminated all its fibres are covered (and insulated) by the resin, so that it can't be an electro-conductor.
Even in case of a not well laminated carbon product, which has some exposed fibres (not covered by the resin), it could be a bad electro-conductor if compared to a similar aluminium or steel product.

For which concerns lightening, we can see that even a bad electroconductor like a tree can be hit. The shape of the object is actually the main responsible in this case. The sharp, thin shapes should be safe from this kind of risk and then, there is no reason to consider two objects, with a similar shape but made of different materials (steel or carbon fibres, for example), having different reactions in case of lightning.

Even if we suppose that carbon fibres are a good electro-conductive material, the "Pre-peg" texture used to manufacture this riser made them completely insulated thanks to the properties of the epoxide resin which compose the matrix.
Besides, these kind of industrial "Pre-peg" carbon texture has a controlled resin level which made its surface insulated.

Some aluminium components have been used to avoid the galvanic corrosion: in this case the most innovating factor is the insulating glue coat between the carbon and the metal, which is also used in the holes where the screws have been put. In this way every seepage risk is avoided as like as any possibility of galvanic corrosion.

FiberBow 6.3 set-up

Brace height suggested range:

FiberBow 5.3 - 23”

Long limbs (70”)	Medium limbs (68”)	Short limbs (66”)
22.5 ~ 24.8 cm	21.5 ~ 23.5 cm	20.5 ~ 22.5 cm
8-7/8” ~ 9-3/4”	8-1/2” ~ 9-1/4”	8-1/16” ~ 8-7/8”

Tiller height settings:
You need a 5 mm wrench and another object which is 2 mm thick to set the tiller height.
You can also increase the power up to the 10 % of what is written on your limbs. We recommend you not to exceed this limit.

How to adjust centering:
In case of twisted limbs ask your shopkeeper for the eccentric tiller bolt (available upon request) to adjust your limbs alignment.

CAUTION:

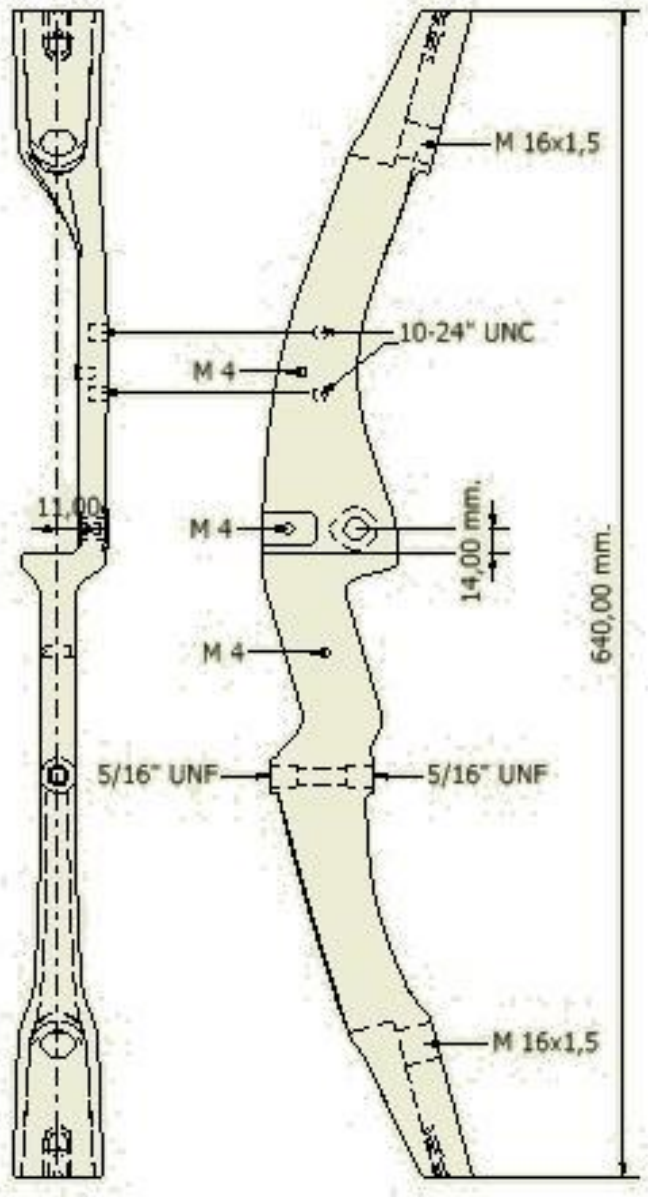
Do not remove the screw over this limit in order not to damage the seat pin of the limbs: this damage nullify the warranty.

Guarantee:
AT SPORT SAS guarantees the FiberBow 5.3 for the period in according to the rules of law from the date of delivery and it exclude those component parts which are subjected to the wear and the tear of time as like as limbs, cables, metallic, plastic and rubber parts. The guarantee starts on the date of purchase which have to be demonstrated by the invoice or the fiscal receipt. We recommend you to keep safe the document which prove the purchase as the guarantee is not valid without it.

This guarantee excludes all the damages occurred to people or properties.

For every claim we kindly ask you to go and see only the dealer where the product has been purchased.

STRUCTURAL DIMENSIONS



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