



K-1 Outfitting Selection Guide

General Information:

At River Elf, we offer our boats for sale with various options regarding outfitting. We utilize á la carte pricing on our website to give you some control of the cost and determine how much additional work you will have left to do once your boat arrives. Use this guide to help you decide which options are right for you.

You can purchase our kayaks “empty” which include only the following essential elements already installed: cockpit rim, grab loops, minicell pillars, carbon pillar guides, carbon bow shock absorber, ACB pillar sleeve, ACB anchor points, and security ring. No other outfitting is included. This is our cheapest option and essentially leaves you, the buyer, with a “blank canvas” onto which you do all of the parts sourcing, outfitting, and customization yourself.

Our most expensive option is a “fully outfitted” boat. With this selection, you choose from our menu of components and we do all of the outfitting for you. Your boat is **almost** ready to go upon arrival. The only thing left for you to do is to make some minor customizations (adding or subtracting some foam here or there) to get a tight but comfortable custom fit.

Most of our customers choose something in between an “empty” boat and a “fully outfitted” boat. This allows you to choose the parts and installation options that make the most sense to you (from a cost perspective). It also reflects the reality that some outfitting is best left done by the end user to ensure a perfect custom fit to your body. Detailed, step-by-step, installation instructions are available on our website for all of our self-install parts.

One of the advantages of composites over plastic boats is that it is very easy to permanently add outfitting parts, loops, straps, etc. to the inside of your boat without having to drill through the hull. With care and patience, you can quickly become adept at using composite materials and learn to customize your boat in a very sophisticated manner.

While C-1'ers are more accustomed to self-outfitting and á la carte pricing, some kayakers may also prefer having more control over the outfitting of their composite boat. Thus, to be consistent in our pricing structure, we are also offering similar minimum cost choices for kayak purchases.

Finally, if you are new to composite boats, you may want to revisit your current approach to outfitting and what you consider necessary. Customize your boat to fit **your** body without worrying whether anyone else will fit in it. Think about weight minimization. Experiment. Find what works for you.

For example, take a look at composite freestyle and slalom kayaks and examine how they are outfitted. These boats are usually shipped “empty” and are never off-the-shelf, ready-to-paddle upon arrival. There is a reason for this. The end users of these high performance boats understand the need for weight minimization while customizing their fit to achieve the highest possible outcomes in national and international competition.

A similar mindset can also be applied to river running.

Having said that,

River Elf is pleased to offer the first complete outfitting system designed for recreational *composite* kayaks!

What this means is that we have taken extreme care in developing a kayak outfitting system that balances the need for comfort, adjustability, and robustness with weight minimization.

Use the following guide to help you decide how you will approach your outfitting and which River Elf components are right for you.

Foot Rest Options:

At the heart of our standard outfitting system is our newly patented Adjustable Cinching Bulkhead.

Designed with composite kayaks in mind, our ACB foot rest assembly offers bulkhead functionality and adjustability in a very light weight package. Foot rest systems designed for plastic kayaks typically employ metal rails screwed into the side of the hull to support the bulkhead. Our system uses flexible webbing and a floating bulkhead to accomplish the same task.



Using flexible straps as the support mechanism allows the bulkhead to be adjusted “on the fly” while remaining seated in the boat.

Imagine being able to pop your skirt, reach into your boat and loosen the tension on your foot rest to stretch your legs during a calm section of water between rapids. The bulkhead snaps into the bow when the straps loosen.

When the next rapid approaches, pull the straps (cinching your bulkhead back tight into place) and secure your skirt back to the rim. Voila, you’re ready to go again - all of this without ever having to exit the boat!!

If someone wants to try your boat, it’s easy for them to hop in and adjust the bulkhead to their leg length – creating an immediate custom fit without ever having to fool with tools or disassembly.



Our ACB system has the added benefit of utilizing a full size minicell pillar in the bow for maximum support of the deck and hull.

The bulkhead consists of a horizontal support onto which large carbon fiber pedals are attached. To best fill the space on each side of the pillar, we offer several different size pedals. We will help you choose the ones most appropriate for your height (leg length) and your selected boat cut.

Our Adjustable Cinching Bulkhead system comes fully installed upon delivery. We do not offer the parts for self install. However, new pedals can be obtained from us if the boat changes hands to someone whose size differs significantly from the original owner.



Foot Rest Options (alternatives):

For those wishing for a more traditional bulkhead without the moving parts, we also offer a fixed platform bulkhead. We use the same pedal/support bulkhead mechanism that is utilized in our ACB system, pass it through the pillar and affix it permanently to the sides of the boat. We will select pedals that completely fill the boat cavity and yet position it so that the bulkhead is a little long for your height. Foam can then be added to the pedals to create a tight custom fit.

As with the ACB system, our stationary platform bulkhead is not available for self install.

The final foot rest option that we offer is to *not include one*. In this case, you will be given a boat with an “empty” bow into which you can install a foot rest system to your liking. However, your boat will come with a bow pillar, carbon shock absorber, and carbon pillar sleeve permanently installed. We feel that these are necessary for proper support of the deck and hull and to offer future outfitting flexibility. We do not offer our boats without these in place.

For the “no foot rest option”, some folks choose to install carefully cut custom foam blocks into the bow. These blocks form a solid soft bulkhead that has several benefits. They add extra support to the bow deck and hull, they provide a thick layer of shock absorption during impact, and they add extra flotation to the bow.

Seat Options:

We offer two seat options for our kayaks – a carbon/kevlar bucket seat (available in two different back support heights) and a backless seat that can be fitted with a backband.

The seat will come already installed at the trim balanced “sweet spot” for most average sized boaters. However, it is also fitted with additional pre-drilled screw holes to adjust the seat for and aft to fine tune the trim to your liking.

Unless instructed otherwise, we ship our seats with some foam already installed to provide cushioning, warmth and grip. You may find it necessary to add more foam to get the fit just right.



Carbon Bucket Seat

Our carbon/kevlar backless seat is designed to be easily fitted with a backband of your choosing. We recently have been fitting our backless seat with an IR Reggie Backband (for an extra cost) but virtually any backband can be engineered to work with our seat.



Carbon Backless Seat with IR Reggie Backband

The final seat option that we offer is to *not include one*. In this case, you might consider creating a custom foam seat for weight minimization (similar to what is generally used in composite freestyle boats) or try installing one of the many other seats (both plastic and composite) that are currently available new or used.

However, we strongly recommend that you use one of our carbon seats as they are designed to add significant structural support to our boats.

Seat Hip Pads:

We are now charging an extra fee for our custom hip pads as they require substantial time to cut and create by hand. These include a set of 0.5” tapered shims to form a tighter fit (if necessary).

If you want to sculpt your own pads, we will be happy to include unshaped “blank” foam with our seats at no additional charge.



Thigh Blocks:

Typical thigh tabs that extend flat and flush off the cockpit rim usually require a bulky piece of foam to keep the knee from sliding laterally out of the brace. Our composite thigh blocks curve outwards and downwards to create a cupped brace that keeps your knees locked under the deck.



If you decide to include thigh blocks with your boat order, we strongly recommend that you install them yourself to ensure that the fit is correct. We also recommend that you tweak your seat position (for trim in whitewater) before installing your thigh blocks as the installation is a permanent addition to your boat. Instructions are included on our website to guide you through the process. We can install these for you but cannot guarantee the placement unless you are available to sit for a fitting.

As an alternative to our composite thigh blocks, we are now offering a foam version that can be glued in without any glass work involved.

Both versions include large neoprene foam pads to affix under the deck and over the installed blocks.

Stern Shock Absorber:

Included in all of our boats is a carbon bow shock absorber. The shock absorber serves two purposes. It locks the front of the bow pillar into place and provides a rigid support during extreme impact. The shock absorber is affixed to the underside of the deck and “floats” where it contacts the hull. This allows the hull to flex during minor impact. In the case of extreme impact, the shock absorber will engage fully with the hull surface and transfer the impact energy into the deck providing a rigid support to the boat beyond that available with a minicell pillar alone.



We normally do not include a shock absorber in the stern. The stern is equipped with a full minicell pillar. Our carbon seats also provide additional rigid support to the back of the cockpit area. However, to impart maximum support in the most extreme conditions, you may want to opt for an additional shock absorber installed in the stern. Note: our shock absorbers are not available for self install.