BOAT BUYING 101

An introductory guide through the boat buying journey.

Choosing a boat is an important decision.

You want to make sure you neither under-buy nor over-buy for your needs. The right boat comes down to several important factors. Having the resources and basic knowledge to ensure you are asking the right questions is step #1.

Boat Buying 101 outlines a series of considerations and glossary of technical terminology to help you choose the ideal boat for you or your club.

Brought to you by WinTech RACING

1

Understanding your program's status and goals are important points to factor when selecting the right Equipment & the Economic impact therein.

What are your program's current *Goals*?

- Are you a start-up looking to build a fleet from scratch?
- Are you an established program at a point of growth looking to improve your fleet?
- Are you an advanced program looking to be or stay highly competitive?

2

The specific user(s) of the boat impacts what hull Shape, and sometimes Size you want to consider.

What type of *User(s)* will row this new boat?

- Are they novice? Intermediate? Advanced/varsity?
- Learn to row, competetive, general recreational or fitness?
- What age range are the individuals: Scholastic/Youth, Senior/ Elite, Masters?

3

The body of water where the boat will be rowed impacts what hull Materials you may want to consider.

Where will the boat be rowed?

- Ocean/open water susceptible to large swells?
- An active river or lake exposed to large boat traffic, debris, bridges, other obstacles?
- Sheltered river or lake free of extreme traffic, debris, other obstacles?

4

The intended use of the boat also goes towards determining what hull Shape and Material are best.

What is the anticipated *Use* of this boat?

- Purely recreational
- To teach beginners
- Purely for training
- Training and racing
- Purely for racing

5

Much like clothing nomenclature (i.e. small, medium, large), boats come in different Sizes. Hull sizes are designed to suit rowers/crews of varying average weight, height, and skill level.

SUPER LIGHTWEIGHT (SLW) - Designed for lightweight women and juniors with good rowing skill. Novices might be better suited in a LW shell. Average crew of 120-140 lbs depending on model.

LIGHTWEIGHT (LW) - Ideal for lightweight women and men of any skill. Average crew of 155-175 lbs depending on model. Crews that weigh towards the upper limit might consdier the MW size.

MIDWEIGHT (MW) - Popular shell for open class women and mid-weight men. Average crew of 175-185 lbs depending on model. Crews that weigh towards the upper limit might consider the HW size.

HEAVYWEIGHT (HW) - This shell is designed for heavyweight men at all skill levels. Average crew of 210+ lbs depending on model. Especially tall crews might consider a Heavyweight-Stretched size.

HEAVYWEIGHT – STRETCHED (HW-S) - Designed for tall, heavyweight men at all skill levels. Each station length is 2" longer then the Heavyweight shell. Average crew of 210+ lbs depending on model.

6

Budget plays a big role in acquiring a major piece of equipment. Budget not only dictates what level boat you may choose, but can also whether Buying, Leasing, or Renting is best for you or your program.

- Consider buying when your long-term needs come first. Factors may include if the boat can be rowed by many crews for many years, financial impacts of wear & tear, and resale value.
- Consider leasing when you want to minimize your out-of-pocket expenses, or keep a full fleet up to date on a regular basis.
- Consider renting when short-term needs come first. Factors include fitting an unusually large or small crew, or higher than normal athletes, such as summer camps or early fall sessions.

7

The Materials and Construction method used to build a shell play huge roles in choosing the right boat. There are three primary materials used in rowing shell construction: Fiberglass, Kevlar®, and Carbon. These materials are used in two primary construction methods: Laminated Single Skin and Laminated Honeycomb Core. Combinations of materials and construction produce a range of hulls each suiting a particular type of rower/use and pricepoint.

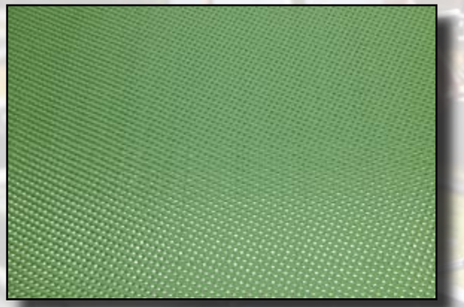
Materials / FIBERGLASS

A glass fiber reinforced plastic woven into a sheet for use in construction. Fiberglass is a resilient material at a lower cost than carbon or Kevlar®, but it's heavier. Great for learn-to-row and training boats where durability and affordabilty is the objective.

Materials / KEVLAR®

A proprietary DuPont synthetic fiber woven into fabric. Kevlar® has very high strength-to-weight ratio but is heavier and less stiff than carbon.

Kevlar® has better fatigue resistance than fiberglass and is less expensive than carbon. Great for training and race boats where a balance of performance and longevity is the objective.



Materials / CARBON

A fabric made up of thin carbon atom fibers. Carbon atom crystals are aligned in parallel to form a "thread." Thousands of threads are bundled together to form a tow (or "yarn"), which can be used alone called (uni-directional "A") or interlaced (woven "B").

Carbon fiber is known for it's high strength-to-weight ratio and exceptional stiffness, but is more costly and brittle than other options. Great for race boats where high-performance is the objective.

Materials / NOMEX® CORE

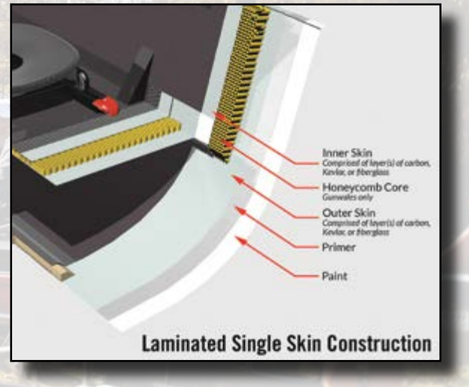
Nomex® core is a sheet of honeycomb cells made out of a proprietary DuPont aerospace-grade synthetic fiber. The cell structures allow it to be flexible, which makes it perfect for use in tight radius curves, such as boat hulls.

Nomex® is used when a high strength-to-weight ratio is the objective.

Construction / SINGLE SKIN

Laminated single skin construction consists of gluing together a combination of inner and outer layers of either fiberglass, Kevlar®, or carbon depending on desired hull characteristics. *(Imagine a shoe box where pieces of card stock are layered together.)* A strengthening core, such as Nomex® honeycomb, is often then used along the gunwales.

Single skin contruction is utilized in shells where keeping cost down is the objective.

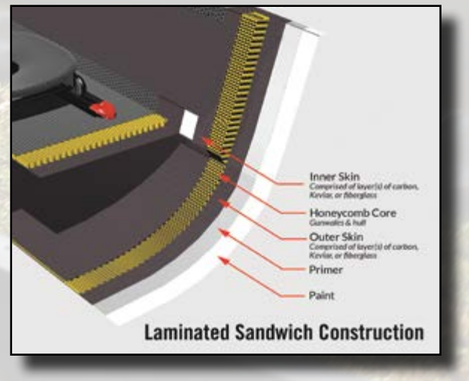


Laminated Single Skin Construction

Construction / SANDWICH

A laminated sandwich hull consists of an inner core component, such as Nomex® honeycomb, sandwiched between a combination of layers of fiberglass, Kevlar®, or carbon, depending on the desired hull characteristics. *(Imagine a piece of corrugated cardboard where sheets of card stock are glued to either side of a fluted center structure.)*

Sandwich construction is utilized in shells where a higher stiffness-to-weight ratio is the objective.



Laminated Sandwich Construction

8

The components that make up the primary "Touch Points" are the Rigger (hands), Seat (butt), and Foot Stretcher (feet). These ancillary parts come in several materials and constructions and produce varying levels of performance and price.

Components / RIGGER PLACEMENT

Out-Rigger

Mount on outside of boat in a standard 3-point structure. The hull typically features rib construction to support rigging and reinforce against flex stress. Out-riggers are a more affordable option but tend to result in heavier overall boat weight.

Cross Wing

Mount atop gunwales across each seat station just in front of foot stretcher. Hull is typically rib-less as riggers provide added flex stress stability. Wing riggers tend to cost a little more but reduce overall boat weight.

Bow-Mounted Wing

Similar to cross wing rigger except positioned across the gunwales behind each rower station. Bow mounted wing riggers tend to be more expensive but result in higher boat efficientcy and performance.

Components / RIGGER MATERIALS

Riggers are primarily constructed out of either woven carbon or anodized aluminum. With carbon riggers being lighter and stiffer at a higher price-point.

Components / SEATS

Seats are primarily constructed out of wood or woven carbon which impacts weight and cost. Carbon reduces overall weight but is more expensive.

Components / FOOT STRETCHERS

Foot stretchers are often made out of woven carbon or wood, and come with either clog straps (used with regular sneakers), or mounted shoes made from canvas and/or synthetic materials designed to be light, comfortable, and quick-drying.

9

Pulling it All Together.

Understanding your needs will help guide you and your local sales rep towards finding the perfect shell. While there are always exceptions, as general rule of thumb we recommend:

Learn-to-row/Novice: Probably best with single skin fiberglass for it's toughness and low cost. Stern-mounted aluminum wing riggers and wooden seats help keep costs down. Clog foot stretchers or canvas shoes will suit beginners well.

Intermediate Competitive: Probably best with sandwich Kevlar, with stern-mounted aluminum wing riggers for sweep boats or bow-mounted riggers when available for sculling. Wooden seats can be used to keep costs down, while carbon will provide some weight savings. Basic canvas shoes are perfectly suitable for intermediates.

Advanced Competitive: Probably best with sandwich carbon, with stern-mounted carbon fiber wing riggers for sweep boats or bow-mounted riggers when available for sculling. If in the budget, carbon seats and higher-end shoes further enhance performance.

WinTech has a wide range of boats to satisfy virtually every need. Contact your local rep today to get the conversation started and begin your own boat buying journey.

To download a digital copy of Boat Buying 101, visit:
www.wintechracing.com/go/boat-buying-download


WinTech
WinTech
RACING
PROOF IS IN THE PERFORMANCE