



# THE TOOLS YOU WILL NEED TO BUILD A WOODEN BOAT

By Mikkel Pagh

## On buying new or used tools

When industrialization kicked in in the early 20th century, the quality of woodworking hand tools started to drop dramatically. Until machines took over, hand tools were an absolute necessity for professional craftsmen, so they had to be very high quality in order to be efficient and durable enough.

Since the 1950s, a lot of extremely poor quality hand tools have been produced, which I believe is one of the reasons that a lot of people these days feel that hand tools are inefficient and outdated.

Luckily, starting in the 1980s, some independent tool manufacturers such as Lie-Nielsen and Lee Valley started to produce very high quality replicas of traditional hand tools. Because these tools are produced using modern milling equipment, they might actually be even better and more precise than the best vintage tools.

So if you buy used hand tools, you will get the best quality if you buy tools from before 1950. Some of the most sought-after Stanley planes are from around 1900.

If you buy new tools, you have better options than ever before. A lot of small manufacturers make absolutely wonderful tools. But a lot of the poor quality tools are still being produced, and they are - honestly - a waste of money. So make sure to buy the best quality you can afford, and buy it from a quality supplier. If your budget is low, but you have time to spare, great bargains on vintage tools can still be made in flea markets and online.

## Quality tool suppliers:

These are a few of the tool suppliers that I have used. They all sell high quality tools. I am not affiliated with them in any way. I have mainly used European suppliers, which is why these suppliers dominate the list. If you know of other good suppliers than the ones listed, please let me know!

- Dictum (Germany): [www.dictum.com](http://www.dictum.com)
- Dieter Schmid Fine Tools (Germany): [www.fine-tools.com](http://www.fine-tools.com)
- Rubank Verktygs AB (Sweden): [www.rubank.se](http://www.rubank.se)
- Snedkerværktøj (Denmark): [www.snedkervaerktøj.dk](http://www.snedkervaerktøj.dk)

- No 10 Klassisk Håndverktøy (Norway): [www.no-10.no](http://www.no-10.no)
- Axminster (England): [www.axminstertools.com](http://www.axminstertools.com)
- Classic Hand tools (England): [www.classichandtools.com](http://www.classichandtools.com)
- Lee Valley/Veritas (USA): [www.leevalley.com](http://www.leevalley.com)

## THE TOOL LIST

The list below is what I consider the minimum tools you will need to build a small wooden boat. You might have access to other tools that will prove useful, but in order to keep things simple and to keep costs down, I have kept the list as stripped-down as possible.

### Measuring and marking:

*NOTE: All measurements in the Fiddlehead plans are in imperial feet and inches. While you could convert all these measurements into metric, I recommend that you use the Imperial measurements directly to avoid mistakes.*

- Sharp pencil and a good eraser
- Imperial tape measure at least as long as the boat
- Imperial folding rule e.g. Hultafors model 61
- Combination square
- Sliding bevel
- Pencil compass
- String
- Plumb bob
- Level

### Hand saws

- Back saw (e.g. a Japanese dozuki)
- Hand saw (e.g. a Japanese kataba)
- Hacksaw, for cutting metal parts

### Edge tools

- Wide chisel (25-50mm or 1-2inch)
- Narrow chisel (max 15mm or 5/8 inch)
- Block plane, preferably a rabbet block plane. Lie-Nielsen makes a wonderful model, but it is not cheap. More affordable models are available from Dictum, Juuma, Kunz and Axminster - or you could find a vintage tool.
- Spokeshave, preferably with a rounded sole.

### Sharpening supplies

- A fine and a coarse sharpening stone. I use DMT diamond stones (one coarse and one extra-fine) for ease of maintenance. But any waterstone or oilstone will work just as well. To get started on a budget, a combination waterstone such as the Sun Tiger 1000/6000 or equivalent would be a good option.
- A strop with honing compound. Because my finest stone (DMT diamond stone) is only 1200 grit, I use a leather strop charged with Veritas honing compound to get

the final polish. If you use the 6000 grit waterstone mentioned above, the strop will not be necessary.

- A honing guide. I recommend the "Eclipse" style honing guides, also known as double jaw honing guides.

## Drilling and fastening

- A set of good wood drill bits 1-10mm. Especially the small sizes (1-3mm or 1/16"-1/8") will be used a lot. If you can get the small sizes in 1/2mm or 1/32" increments it is great, because it will allow you to drill more precise pilot holes for your fastenings.
- A countersink
- A cordless drill. A small 12v model will provide plenty of power.
- Bits. You will need straight slotted bits for the bronze screws. Make sure you have a few different sizes to match the different screws.
- Screwdrivers for slotted screws
- A bench hammer
- A heavy lump hammer (or a backing iron) for clenched nailing

## Clamps

Get as many clamps as you can - they will only make life easier.

- 2-4 (or more) small one-hand clamps are convenient as extra hands when you work alone.
- 4 (or more) regular F-clamps are needed for doing glue-ups. A capacity of at least 50cm or 18 inches is good, because that will allow you to glue up relatively big panels.

## Various

- Utility knife
- Pliers
- Caulking gun
- Varnish and paint brushes
- A file or rasp with a flat and a rounded side
- A rat tail file or rasp

## Machinery

- Band saw
- Bench grinder
- Thickness planer
- (Hand circular saw or jigsaw)

*Note: I consider the machinery noted above necessary to build a wooden boat. However, you do not necessarily need to own these tools yourself. The rough milling of your wood, for example, could be done at a local carpentry or boatbuilding shop. However: A small band saw with a quality 12mm/1/2" blade is a big convenience when doing the curved cuts for your boat. A bench grinder will save you a lot of time when grinding away the inevitable nicks and dings you will get in your plane irons.*