# Appendix to Vember Build Manual re adjusting the length and beam

As stated in the body of this Manual, the length of your kayak can be adjusted by changing the spacing of the temporary forms. The plans download includes the plans for the standard Vember with 300 mm spacing, and the Vember Expedition, with 330 mm spacing. For other lengths the below table gives some suggested spacing

|  |  |  |  |
| --- | --- | --- | --- |
| Spacing | Length |  |  |
| 340 | 5508 |  |  |
| 330 | 5346 | Vember Expedition | |
| 320 | 5184 |  |  |
| 310 | 5022 |  |  |
| 300 | 4860 | Vember |  |
| 290 | 4698 |  |  |
| 280 | 4536 |  |  |
| 270 | 4374 |  |  |
| 260 | 4212 |  |  |

In addition, the bow and stern forms must be stretched or shortened longitudinally by the chosen percentage. This has been done for you for Vember and the Expedition version in the downloads, but for other lengths you will need to change the x-axis dimension (along the keel) by the chosen percentage, while retaining the y-axis dimension (vertically). Some printers offer this facility. Alternatively, the A4/letter downloads include offset measurements for the bow and stern templates.

The beam of the kayak can be adjusted by changing the percentage print of the paper plans of the temporary forms. Both Vember and the Expedition version use a beam of 546 mm (21.5 inches), but the below table gives some suggested scaling for other beam measurements:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | Print % | Beam |  |  |  | | 110 | 601 |  |  |  | | 108 | 590 |  |  |  | | 106 | 579 |  |  |  | | 104 | 568 |  |  |  | | 102 | 557 |  |  |  | | 100 | 546 | Vember | |  | | 98 | 535 |  |  |  | | 96 | 524 |  |  |  | | 94 | 513 |  |  |  | | 92 | 502 |  |  |  | | 90 | 491 |  |  |  | |

If you are using the continuous roll printing facility, this will alter the dimensions of the bow and stern forms, and you will wish to correct the length along the x-axis, as described above. If you changing both the length and the beam then you will have to correct for changes in the dimensions in both axes. The need for this will vary according to the facilities of your printer option. An example of this procedure is a local experienced paddler who intends to build a Vember Expedition with the beam reduced by 10%. The form spacing remains at 330mm, and the form plans are downloaded at 90% scale for the reduced beam. The bow and stern forms must then be corrected. The 10% reduction in freeboard can be reversed by adding an extra strip at the gunwale level during construction, if desired.