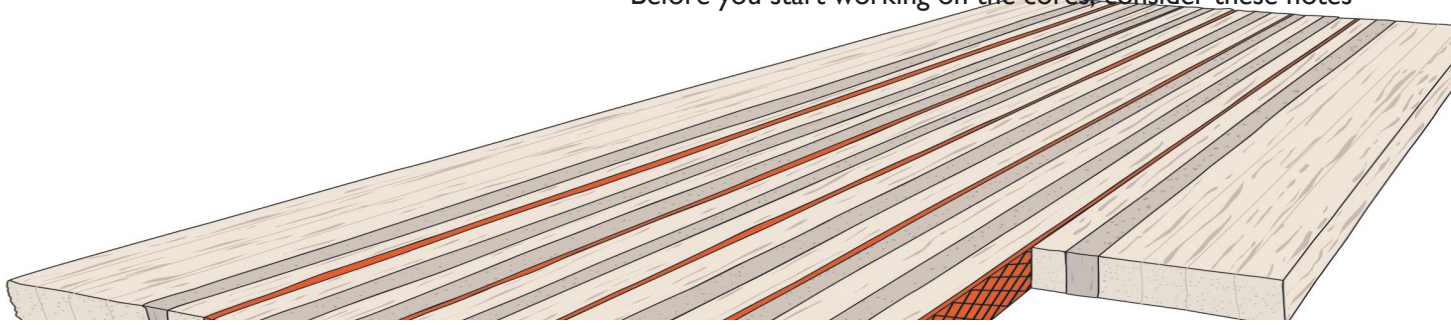
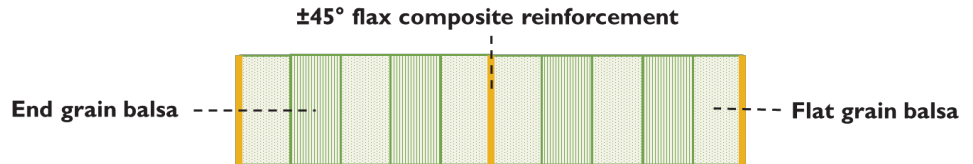


Before you start working on the cores, consider these notes



## Composition of the bCore D200

- The D200 product line is made from fully FSC certified novel BANOVA<sup>®</sup> balsa ply wood
- The composite shear webs are made from flax fibre composite layers. They are directly integrated into the core manufacturing process, thus no epoxy is used.



## How to calculate the right core thickness?

The bCores have a lower flexural stiffness than classical wood core. Therefore the bCore has to be slightly thicker in order to reach the same flex stiffness as with a standard wood core. For calculating the right thickness of the D200 you can use following core bending stiffness: **2160 MPa**

If you need help to calculate the right core thickness, we will be happy to do it for you. Please send the „profile calculation form“ to [julien@bcomp.ch](mailto:julien@bcomp.ch).

## How to machine the D200 bCores?

Near net-shape cores can be machined as standard wood planks but much faster, as you have less material to remove. Just take care to place the core at the right place on the machine. Please consider the following:

- Bcomp cores can be machined with high-speed wood working machines.
- Best results for shaping are obtained with belt sanding machines (40 to 80 standard grit sanding paper).
- For contour milling, climb milling has to be favored over conventional milling
- With CNC-milling, be careful with the transition from the stiff flax reinforcements to the softer wood.
- To improve fixation on a vacuum table you can use a high flow vacuum pump or a soft sealing joint under the core.
- After machining, cutting dust has to be carefully removed. The fibrous surfaces of the flax reinforcements obtained after machining enhance the core- -skin bonding, thus is on purpose.

## Processing with bCores

The manufacturing process of skis with Bcomp cores is the same as with classical wood cores. Following points have to be considered:

- Processing temperatures up to **150°C** and pressures up to **15 bar** can be used.
- The surface of the cores is quite porous. Thus, to minimize weight, the amount of resin used to glue the face has to be controlled. Typically, count on 100-150 g/m<sup>2</sup> resin for core-to-skin bonding. Additional resin will not improve the core-skin bonding.
- The bCores are compatible with standard resins, epoxies being ideal. All tests have shown exceptional core-face adhesion results, which is further increased thanks to the shear webs

## Binding reinforcement

Due to the light weight of the cores, it is very important to have a tough reinforcement material under the binding. If the reinforcement is not tough enough, the screws of the binding will be pulled out and even the upper face of the ski may be pulled off the core. Following binding reinforcement are recommended as examples:

- Use a stiff binding plate of ~3mm thickness. It can be made for example from hard ply-wood, cotton / phenolic resin plate, wood/ aluminium laminates. It has to be wider than the space between binding screws with a length of approx.200-250mm. Place a plate below front and rear binding, respectively. A pocket (in grey below) is then machined into the core to place the plate, and the plate glued in place while laminating the ski

