

Wind vane design by www.windvaneselfsteering.co.uk

What makes the Hebridean different to all other wind vanes?

The frame on which the vane deflects is not fixed to the boat (unlike all other wind vanes) but pivots in a socket that is fixed. The frame also supports the pendulum which, when it swings from side to side, pulls lines to the tiller or wheel steering the boat.

All other designs of wind vane have the vane axis inclined to the horizontal from 20 degrees (which is generally classified as horizontal) up to 90 degrees (ie vertical) and this is why the vane feathers when it deflects. As a result vane deflection is limited and depends on the amount the boat is off-course, which is necessary to prevent over-steering.

The vane axis of the Hebridean by contrast is horizontal. (It only becomes inclined when the boat heels but this also can be adjusted to maintain sensitivity). A vane deflecting on a horizontal axis does not feather when it deflects, and is therefore unlimited. However as the pendulum of the Hebridean swings, it rotates the vane axis into wind. It is then that the vane feathers, limiting deflection to prevent over-steering, and is the unique feature of the Hebridean. It is positive feed-back from pendulum swing to the vane, giving the wind vane more control of the boat in difficult wind and wave conditions particularly when running with the wind. See how the vane base rotates as the pendulum swings in some of the videos.

What other advantages of the Hebridean?

Because the vane and the pendulum are both connected to the same frame (which pivots in a socket fixed to the boat) the push rod connection between the two is easy for DIY construction. The push rod swings with the pendulum. It is the geometry of the frame which creates the positive feed-back and is detailed in the plans obtained in the kit which includes materials, fittings and instructions for assembly.

(The materials are prepared to help with drilling and shaping them to the accuracy required. The frame is made of wood but all other materials are stainless steel or carbon fibre)

The wind vane is designed to be easily repaired, even while at sea (if ever it needs it).

Steering is manual at the stern, but remote steering by lines to worm and cog has been fitted by Hebridean owners according to their own designs.

All the metal components of the wind vane are prefabricated by laser in 316 stainless steel and are ready for bolting on to the wooden frame.

Basic wood-work skills and tools are all that is required. The push rod and vane are carbon fibre, and the kit also includes all the necessary fastenings.

There are no expensive extras such as "welding". The wind vane is robust, but is designed to be easily repaired even while at sea (if ever it needs it).