

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 swings from side to side pulling lines to the tiller or wheel steering the boat.

All other designs of wind vane, the vane axis is inclined to the horizontal from 20 degrees (which is generally classified as horizontal) up to 90 degrees (ie vertical) and this causes the vane to feather when it deflects, limiting deflection depending on the amount the boat is off-course which is necessary to prevent over-steering. There is no direct automatic feed-back mechanism from pendulum swing to the vane.

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). As the pendulum swings it rotates the vane axis into wind until it feathers, limiting deflection and preventing over-steering. It does this only when it is needed, when the pendulum swings steering the boat. This added feed-back mechanism of the Hebridean gives it more control of the boat in difficult wind and wave conditions, particularly when running with the wind. The vane not only responds to the boat being off-course but also to adverse wave conditions, as indicated by pendulum swing.

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 is important in this design and is detailed in the plans obtained in the kit, including materials, fittings and instructions for assembly.

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).