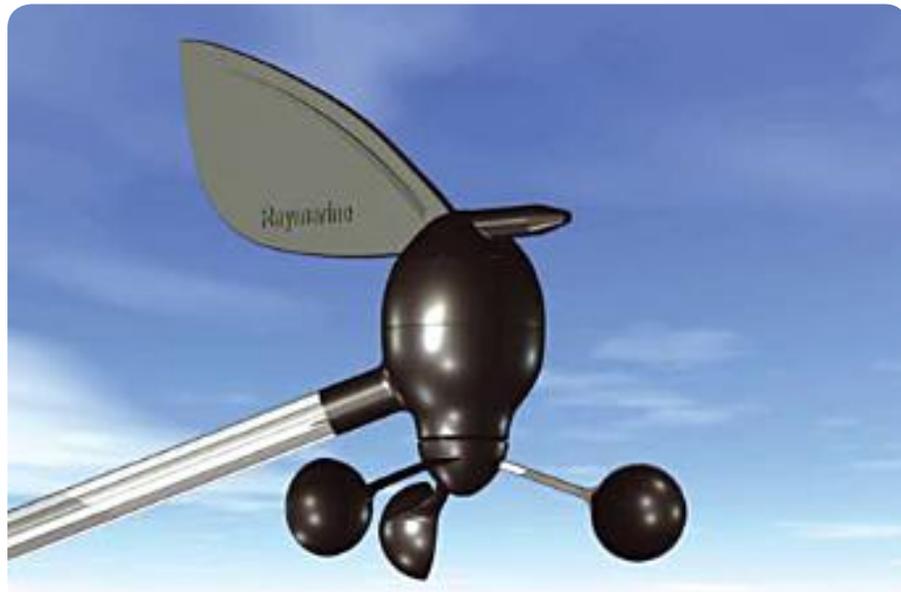

Marine industry

Raymarine

Engineering Consultancy Service

Shielded stainless steel deep groove ball bearings



Low friction bearings for anemometer

Raymarine, the world's leading manufacturer of recreational marine products, invited SKF to offer its expert engineering knowledge and experience in the design of a new anemometer for measuring wind speed. The design brief called for a low friction mechanism, including two spindles to enable both wind speed and direction to be measured. The system would also have to be protected from the effects of salt water to ensure a long maintenance-free service life.

In response to these requirements, SKF established a dedicated design team, including experts from different disciplines within the company, and set to work. Raymarine originally presumed that it would need a hybrid (ceramic) bearing for the spindle, but, after significant analysis and development work, SKF was able to offer a complete unit that comprised two shielded stainless steel deep groove ball bearings, a shaft, springs and a two-part, snap-together plastic housing. Shielded bearings were used instead of separate seals because additional seals would increase friction on the shaft. Finally, a labyrinth seal was incorporated, to prevent the ingress of water.

As well as answering the initial brief with a ready-to-mount, self-contained, maintenance-free design that exhibited low friction, the new solution from SKF offered additional benefits to Raymarine, including a minimal number of suppliers for the components of the anemometer, reduced logistics and lower administrative costs.

This project success was largely reliant on SKF's ability to call on specific expertise across many disciplines. The company was able to help with many aspects of the anemometer's evolution from design and development through to its manufacture and assembly. Thanks to a complete understanding of its Raymarine's needs, and significant research and development work, SKF was able to supply a new spindle assembly that both surpassed the customer's technical requirements, and did so cost-effectively.

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