

Senner To Start Supplying Z-Drive Units For Inland Waterway Operators

BY FRANK MCCORMACK

Karl Senner LLC has been at the forefront of the marine industry for more than 45 years. In 1972, the company became the exclusive North American distributor and service provider of Reintjes Marine Gearboxes, which quickly became widely renowned for their quality and toughness; the partnership remains strongly intact to this day.

“Our grandfather sold the very first Reintjes gearbox in North America to the Gonsoulins of Lebeouf Towing in 1967,” said Chris Senner, leader of the company’s sales and marketing efforts and the grandson of company founder Karl Senner. “The inland marketplace has been a core focus of our business since its inception, and remains so to this day.”

Karl Senner LLC is also the exclusive distributor and service provider of Steerprop azimuth thrusters throughout the U.S., Mexico and Bahamas; a partnership reaching back to the founding of Steerprop Ltd. in 2000. Karl Senner LLC has since delivered close to 200 Z-drive systems for offshore vessels to date.

As of January 2015, Karl Senner LLC also represents EPD (Electronic Power Design) for marine in North America. The company now offers electrical equipment for all diesel electric and hybrid needs.

Changing Marketplace

Karl Senner LLC is well-known throughout the inland waterways for its sales and support of Reintjes Reduction Gearboxes that drive conventional shafts and fixed propellers. As new technologies are invented and evolve, industries often change.

The company has long believed that inland waterway operators would embrace Z-drive technology for the advantages of maneuverability, efficiency, safety and reliability.

Anticipating this market shift, in the 1990s, Steerprop’s engineers began researching the use of Z-drives throughout the waterways of South America, where inland Z-drive vessels had been in operation for many years. There, they gained a tremendous amount of knowledge about unexpected challenges they faced, and how to prevent them. Because of this and other studies, Steerprop focused its core design around reliability and longevity. For the past seven years, Karl Senner LLC has partnered with multiple naval architects to develop and design inland vessels that can utilize the benefits of Steerprop Z-drives in the most effective and reliable way.

The inland waterways certainly present their own set of concerns, but Senner believes through proper analysis they have addressed many of these concerns; using the Steerprop product they have designed a system that significantly reduces the risks of problems, and increases the ability to fix problems if they arise—thus delivering a more reliable asset to the operator.

“We believe it is important to specifically design the vessel so that the Steerprop Thrusters can be utilized to their fullest potential,” Chris Senner said. “It is equally important select the correct product for the application, size it correctly,



Stern view with cutaway showing Z-drive units.

and have a service partner you can rely on with a healthy stock of spare parts available in case you need them.”

Vessel Design

Proper implementation starts with vessel design, and different operating environments call for different requirements. Together with various naval architects, Karl Senner LLC has analyzed critical aspects of vessel design including (but not limited to) water flow, shaft lines, serviceability, draft restrictions, weight, redundancy, mounting angle, open wheel vs. nozzle and sizing the appropriate equipment for the application.

Karl Senner, president and also the grandson of company’s founder, said, “We’ve gone through complete vessel designs ... and worked with naval architects to help design an ideal boat to accommodate the benefits of our Steerprop Z-drives.”

For companies interested in outfitting new vessels with a Steerprop Z-drive unit, representatives from Karl Senner LLC can consult with designers to ensure boats are constructed to function well with Z-drives from the start.

“Our two main product lines are strategically aligned both in design philosophy and reputation; Reintjes and Steerprop both design products for strength and longevity, and their reputations are simply a byproduct of that,” said Chris Senner.

After 15 years’ experience installing and servicing Steerprop Z-drives offshore, Karl Senner LLC is confident Steerprop will prove ideal for the inland market as well.

“Steerprop’s forte is designing units for heavy ice conditions,” Karl Senner said. “Our forte is supporting equipment on the river. Our company has been supporting river operators for 48 years; we know the demands, and we know what it takes to support it.”

A few benefits of Steerprop design are the following:

- Steerprop units are designed for the longest time between overhauls (TBO) on the market—15 years. This is due to larger dimensioning of internal components to reduce load and wear. With several units now approaching 15 years in operation in the Gulf of Mexico, this TBO is

well on its way to being proven.

- Steerprop housings are steel-fabricated (as opposed to cast). Steel fabricated housings are more resilient to impacts than cast, more likely to bend than crack on impact, lighter than cast, and easier to repair if needed.

- The Steerprop HJ3 Nozzle can deliver 5 to 6 percent more bollard pull than and conventional K19A nozzle, and improve efficiency by 10 to 15 percent at speed.

- Steerprop uses an IHC Supreme 4 seal system on the propeller shaft, a quadruple ring-type lip seal commonly found on dredging equipment, designed to handle silt. The three channels of the seal system can be monitored, and used as an early detection system before water can infiltrate into the unit. Both propeller shaft and steering seals have been designed for easy serviceability.

On a 2,000–2,600 hp. triple-screw pushboat utilizing Z-drives, Steerprop would offer the SP10(D) unit, of which they have delivered 213 units to date. Karl Senner LLC currently stocks parts in inventory to support these units.

Integrating Experience And Knowledge

With more than 45 years supporting the demands of the inland waterways, 15 years servicing and stocking parts for Z-drives offshore, and more than seven years studying vessel design with multiple architects, Karl Senner LLC is a well-poised partner to implement Z-drives into the inland waterways.

“Our reliable support expanded the company from the inland market to offshore,” Karl Senner said. “As demand grew offshore, we expanded our product offering to Z-drives, and supported them with the same philosophy as the Reintjes product line. Now that inland is embracing Z-drives, we know that our experience in both fields should make us an ideal partner for the inland market in a new capacity.”

Parts and Service

The Senner brothers also ensure that the company offers the same level of service and parts availability for Steerprop that customers know and trust from their support of the Reintjes product line.



Steerprop Z-drive.

“We consider ourselves a service company. We are a resource for spare parts, complimented by quick and effective service turnarounds from factory authorized service technicians,” Karl Senner said. “We now carry a little over \$20 million in spare parts inventory in New Orleans for both product lines.”

Karl Senner LLC prides itself on its ability to react quickly effectively by means of knowledgeable service technicians, and the wide array of parts they carry in stock. The company stocks all wearable and long lead-time items, including slewing rings, gear sets, seals, seal liners, clutch components, electronics for the control systems and more.

“We believe that is critical to regularly stock these parts to support our customers appropriately. We take it upon ourselves as a company to invest these items so that we can react immediately when the customer needs us; neither of us should be waiting on long lead-time parts” said Chris Senner.

In addition to its service center in Kenner, La., Karl Senner LLC also has a facility in Paducah, Ky., capable of working on Z-drives. The company also recently purchased property in Houston with plans to be up and running there by 2016.

Safety And Training

Karl Senner LLC recently built an on-site Safety and Training Facility. The company holds regular classes for continuing education and safety awareness. KS Service Technicians are continuously trained to meet the latest standards and requirements for their OEM Certification, and promote safe working environments.

The Senners concluded, “We pride ourselves in knowing what it takes to support our customers, from the initial design, through construction/commissioning, service/overhaul life, until the day the vessel is decommissioned. We know the demands of the inland rivers and are prepared to support it accordingly. Our philosophy is pretty simple; we consider our customers long-term partners. Our company is resource that can assist in design, to deliver the most reliable propulsion systems, and support our products better than anyone else.”