



Surface Drive Systems

 **SEAREX[®]**





The ultimate in surface-drive technology

CCN 102 Flying Sport

ZF SeaRex®

Embodying all our expertise in surface drive technology – both trimmable and fixed – the ZF SeaRex represents a most advanced surface-drive system. The integrated trim configuration as well as an innovative tie bar design are just two examples of the special attention ZF Marine has given to the driveline components of SeaRex. Operating now in more than hundred installations, the system has proven its efficiency both in naval and yacht applications. The drive system concept ensures unprecedented reliability together with low and easy maintenance over the entire lifetime of the vessel.

Meticulous attention to detail

ZF SeaRex was developed using modern 3D solid computer modelling with integrated structural FEA (Finite Element Analysis) to optimize geometry and stress resistance. Sea trials with instrumented drives allowed for stress monitoring under real conditions.

ZF Searex offers the best performance for high speed vessels in open sea, as well as in shallow waters, thanks to superior design and reduced hydrodynamic drag compared to conventional shaftline systems. The greater operating efficiency is not only related to high speed and low consumption, but also to the improved maneuvering capability due to vector thrust steering.

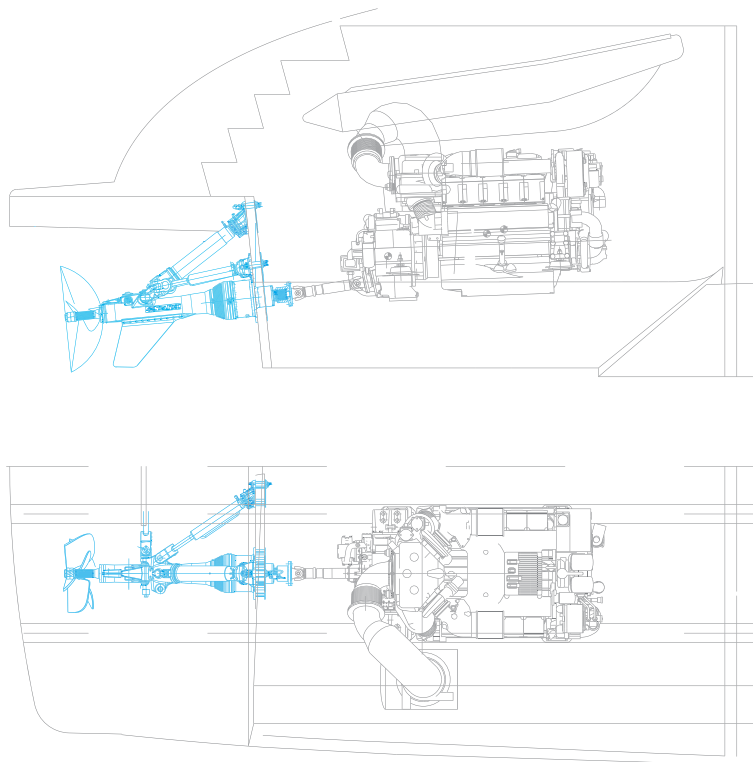
ZF Marine can offer a fully integrated propulsion system to the fastest vessels in the world for leisure, racing and governmental applications. Additionally in combination with ZF gearboxes, electronic controls, trim tabs and thrusters, the package ensures a flexible and modular scope of supply for a simplified and hassle-free installation.



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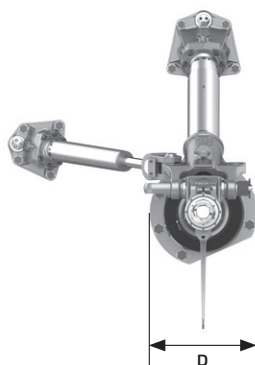
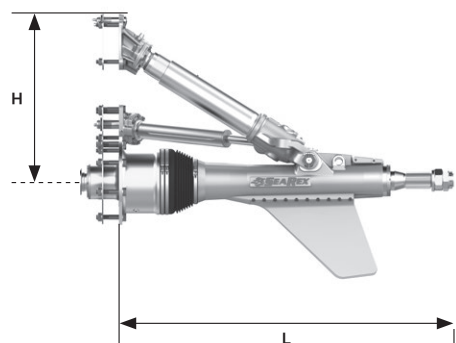
Key features of SeaRex design

- Propeller shaft manufactured with superior quality stainless steel
- Simplified installation procedure
- Integrated sensors require no external cabling
- No exposed external hydraulic lines or fittings
- Extremely compact design for the hydraulic unit
- Trim tabs, Autopilot and Tiller actuators can be added within the size of the main unit (stacking concept)
- Simple fine tuning adjustment of pistons speed



Dimensions and weights

(One shaft body assembly)



Options include:

- ATCS* (Automatic Trim Control System): Electronic control of surface drives and trim tab angle for easy and smooth planing and cruising. ATCS eliminates the need of manually operate the surface drives and trim tabs, resulting in optimal vessel performance at all times.
- ASCS* (Automatic Steer Control System): Electronic control and limitation of steering angle in relation to vessel speed.
- Electric and manual oil pumps for redundancy

* patented

| Model | Max. Input Torque | | Max. Input Power HP at prop. RPM | | Weight | | Diam. Propeller Shaft | | Transom Flange Diam. – D | | Mounting Height – H | | Overall Length – L | |
|---------------------|-------------------|--------|----------------------------------|-------|--------|-------|-----------------------|------|--------------------------|-------|---------------------|------|--------------------|------|
| | Nm | ftlb | 1,500 | 1,150 | kg | lb | mm | inch | mm | inch | mm | inch | mm | inch |
| Searex 120 S | 9,090 | 6,705 | 1,915 | – | 370 | 815 | 90 | 3.5 | 350 | 17 | 813 | 32 | 1,617 | 63.7 |
| Searex 130 S | 10,650 | 7,855 | 2,242 | – | 372 | 820 | 90 | 3.5 | 432 | 17 | 813 | 32 | 1,617 | 63.7 |
| Searex 140 S | 15,070 | 11,116 | 3,175 | – | 708 | 1,559 | 108 | 4.3 | 540 | 21.25 | 848 | 33.4 | 1,958 | 77.1 |
| Searex 160 S | 24,000 | 17,702 | – | 3,875 | 990 | 2,181 | 121 | 4.7 | 584 | 23 | 988 | 38.9 | 2,221 | 87.4 |

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