



DESCRIPTION

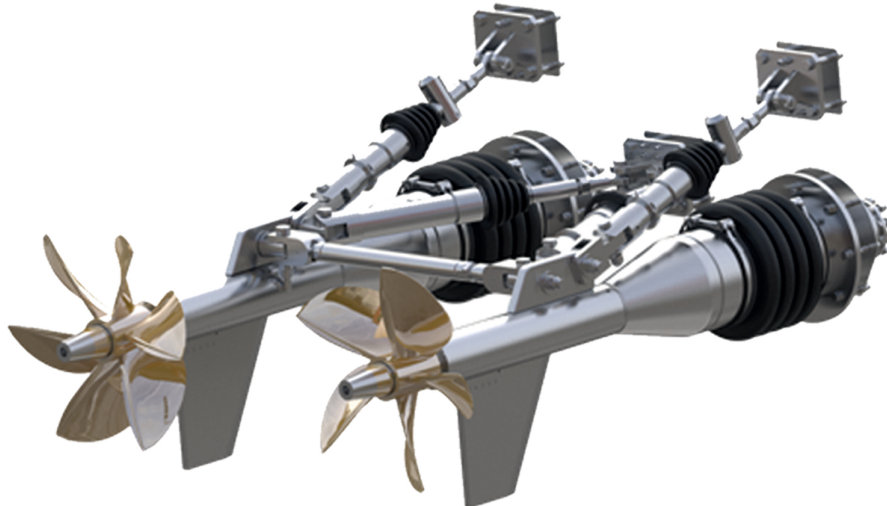
Marine tech. surface-drive system (MTS) is designed by Iranian engineers of MIO to be used in all high speed craft. It has three types of design that make it suitable for all kinds of boat transom. MTS can be used for all types of pleasure crafts as well as the most demanding sport boat applications, by choosing the appropriate gear ratio and propeller to match the respective hydrodynamic characteristics of the hull and the performance characteristics of the engine. It can also be easily fitted to any boat transom which could accommodate a typical stern-drive or inboard driveline with shaft angle between 30 – 100. This is a great benefit for boat builders who need to fit the propulsion system according to the customers' preference. When the hull is finished, Marine Tech surface drive design and production process are considered throughout the design and development of this product and careful attention is paid to ensure the desired goals related to functional operation, ease of maintenance, reliability and efficiency. The design is developed using modern 3D solid computer modelling with integrated structural Finite Element Analysis to optimize the design geometry and design stresses. In addition, the drivelines instrumented prototypes are bench tested under representative loading conditions.

The technical feature is trimmed (+40- -100). It has the ability to trim up and down. The MIO Steerable Surface Drives allows the propeller draft to match the engine horsepower output; thus more power is converted in producing thrust, while the engine is operating closer to its rated power curve. Propeller draft can be adjusted while underway, achieving the optimum thrust angle in any load and sea condition.

The Steerability is ($\pm 15^\circ$). Steering control and response is maximized when the propellers function is in the directional force. MTS steerable surface drives directly set the propellers angle in the appropriate direction of motion. The MTS systems can close-haul the turn, with greater control than fixed shaft drives; and the manoeuvrability is the best at any speed. Steering is power assisted via an engine driven pump located on the engine. For safety reasons a double power steering pump installation is always suggested.

Advantages:

1. Propeller shaft manufactured with superior quality stainless steel
2. Simplified installation procedure
3. shaft trim angle $\pm 15^\circ$ Steering angle 15 - 30% speed increase over conventional systems
4. 15 - 30% increase in fuel efficiency
5. Shallow water maneuverability
6. Reduced cavitation on Propellers
7. Positive thrust steering - superior maneuverability
8. Greater flexibility of engine placement
9. Less vibration - smoother running condition
10. The proven performance and reliability for all crafts ranging from 30 up to 100 meter



SPECIFICATIONS

Technical Specifications and Latest Production Condition:

Model	MTS-ST15	MTS-ST18
Engine Power Input (HP)	1500	1800 ~ 2000
Input Torque (N.m)	Up to 5500	Up to 9000
Trim Angle	14	15
Weight	350	440
Steering Angle	30	30