

SIDE-POWER

Thruster systems



No compromise!

Product features - Centennial series

CONFIDENCE BY CONTROL



Side-Power thruster systems Product features

There have always been several distinct features defining the benefits of the Side-Power thruster system, and with the "Centennial Series" thrusters, more important features have been added. This is a summary of the major product features found on Side-Power electric thrusters, in addition to the performance and reliability advantages.

Intelligent Power Control



Description:

The Sidepower unique thruster controller that intelligently protects the thruster from potential inherent problems as well as user faults. Includes several important safety features imperative in a product with such high power run by DC electric as a thruster.

Details:

- Provides delay between drive directions
- Monitors solenoid functions to reduce the chance of solenoid lock-in
- Will stop the thruster in case of a locked in solenoid, without extra user action and even without controlling a main switch.



Galvanic separation / insulation



Description:

The gearhouse / drive legs of most Sidepower DC Electric thrusters are now fully galvanically isolated / separated from the electric motor and motor bracket. This ensures that even if there is an accidental short circuit or a current leak for other reasons, the immersed parts are not effected as they could be with direct electric contact (eaten by electrolysis).

Details:

- Achieved by composite bushings around the bolts and beneath the washers and a bushing in the motor bracket electrically isolating the drive housing from the motor bracket.
- Available on DC electric models with flexible couplers only, where flex. coupler provides galvanic separation of the motor and gears shafts.



Ignition Protected



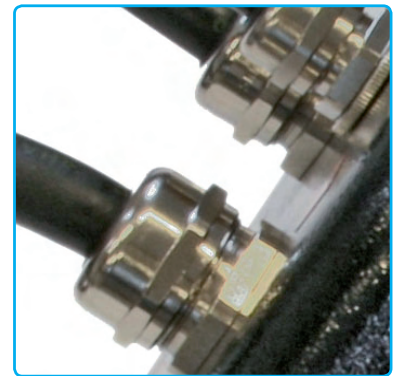
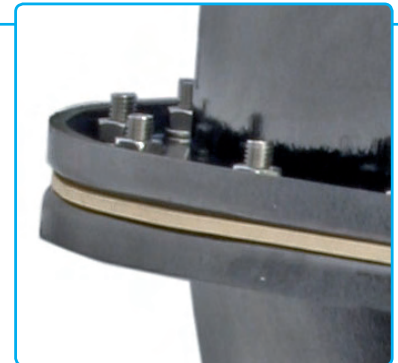
Description:

The Side-Power IP series thrusters are especially designed for use as stern thrusters in petrol/gasoline driven boats. The unique Ignition Protected design also make them very suitable for installation as stern thrusters where a high degree of water protection is often necessary.

All thrusters in the IP series meets the ISO 8846 standard for ignition protection.

Details:

- Certified to ISO 8846 Ignition Protected standards
- Water Proof (not for submerged mounting)
- Stainless cable seals
- Supplied with 1 m/3.28 ft main power cables and termination blocks for easy and safe installation
- Supplied with 1 m/3.28 ft sealed control cable and connector
- Ignition protected housing still retains serviceability for inside components



Q-prop



Description:

The new 5 blade special skew propellers are the result of over 2 years of development work and thousands of tests. They have been designed to reduce the noise level, while maintaining the exceptional efficiency of the old 4 blade Sidepower propellers. This goal was achieved, and we even chose to make a little bit more aggressive on some models, increasing the thrust on some thrusters about 5%. Please see individual information on each new thruster for more details.

Details:

- Noise reductions of up to 75% measured in controlled environments
- The expected and tested normal noise reduction in "average installations" 20-40%
- Will be delivered on all Sidepower models except the SP550
- Upgrade kits will become available for most "SP" series thrusters with special adaptors

Please note that we can not guarantee a noise reduction with the new propeller because of factors out of our control. In very unlikely circumstances, if the propeller tip frequency hits a resonance frequency in the boat, you might increase the noise.



Single propeller



Description:

A properly engineered single propeller system will be the most energy efficient thruster. Its compact design fits easily into narrow bows making it the perfect match for our smaller models. With more than 50.000 thrusters in use, the Sidepower single series system has proven its reliability.



Twin propellers



Description:

The twin propeller system can give more thrust than a single propeller system in the same tunnel diameter. This is our choice for our mid-range models where high thrust is required in a small tunnel diameter. Due to the compact design and high performance, the twin models have become the thrusters of choice among boat builders around the world.



Twin counterrotating propellers



Description:

Two counter rotating propellers can give the most thrust at a good performance ratio in a minimal tunnel diameter. This system is used in our larger thrusters for maximum power. The TC models are the favourite thrusters among leading boatbuilders for their high-end yachts.



Gravity Feed Lubrication

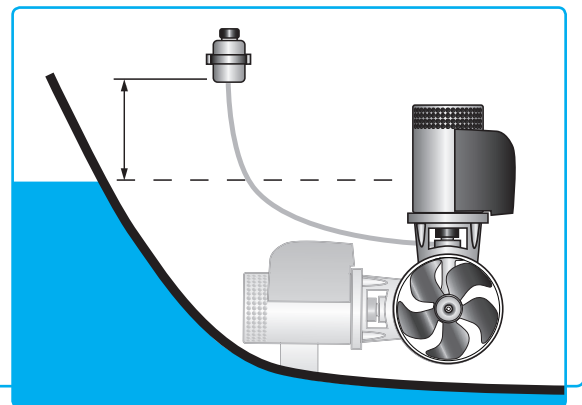


Description:

The thruster gearleg is filled with oil from a remote reservoir located above the waterline. This generates overpressure, making an effective seal against water intrusion in the gear leg.

Details:

- Separate oil reservoir placed above the waterline.
- Allows easy access for oil changes
- Having the advantage to be able to change oil in units used commercially, with hundreds of running hours per year.



Sealed Drive / Lifetime lubricated



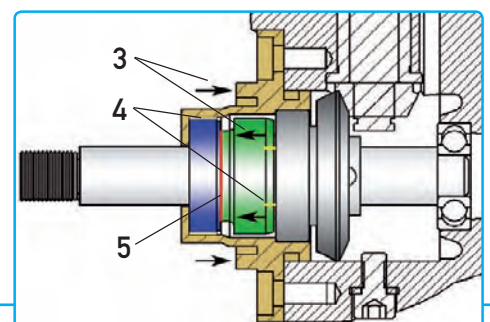
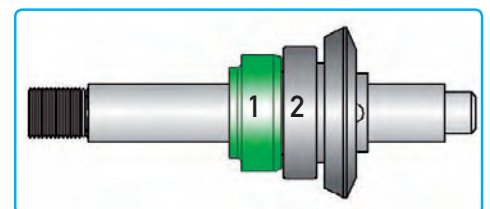
Description:

Sealed gear leg with long-life "mechanical" seal where polished ceramic and carbon surfaces form the only moving sealing surfaces, ensuring protection against damaging water intrusion into the gear leg. Pre-filled with special gear oil for lifetime lubrication

Details:

- "Mechanical" seals with surfaces of ceramic and carbon for ultimate security against water intrusion (similar to what is also known as "deep sea seals").

- 1) Shaft part of mechanical seal. It has an internal spring and rotates with the propeller shaft.
- 2) Ball bearing. The outer ring is fastened in the housing and the inner ring support the propeller shaft/crown gear and sealing part.
- 3) When the lid/housing part of the seal is fitted, the spring compress, pushing the ceramic and carbon surfaces together.
- 4) Both the shaft and lid parts of the seal assembly sits still in their seats with rubber seals, ensuring a secure seal against the shaft and housing
- 5) The polished ceramic and carbon surfaces form the only moving parts of the seal, ensuring sealing with a very high pressure resistance, thereby securing an extreme lifetime.



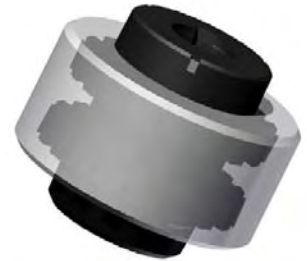
New flexible coupler

Details

- Flexible coupling in one piece
- Pre-mounted on electromotor
- Top and bottom in non-corrosive composite material
- Fits to gearleg shaft with key/keyway, no further assembly needed
- Direct replacement for old coupler

Description

The coupling is delivered in one piece, pre-mounted to the electromotor. The top and bottom part of the coupling that previously was separate metal parts, are now moulded in composite material as an integrated part of the coupling. One benefit given by the composite parts is that corrosion is eliminated, and the coupling will not "stick" to the motor shaft or gearleg shaft. The one-piece coupling obviously do not need attention to unwanted compression of the rubber part when fitting a lower coupling part. The coupling fits onto the gearleg shaft with the key/keyway, and there is no need to secure the coupling to the gearleg shaft with a set-screw, all this making up for a fast and easy assembly of motor/gearleg.



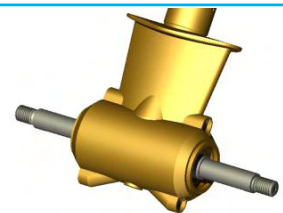
Revised gearleg/end caps

Details

- Slimmer design
- Redesigned end caps without "ears" protruding into the waterflow

Description

When the gearleg was redesigned for the new sealed bearings, attention was also given to the hydrodynamical details of the gearleg. First of all, the end caps was changed to a "screw-in" construction, getting rid of the fastening ears protruding into the waterflow. Loosening the drainplug at the bottom of the leg also helps with maintaining a good flow. Attention was also given to the gearleg as a whole, generally slimming all details to make it a even more streamlined gearleg.



Old gearleg



New end cap



Streamlined gearleg

Design upgrades

Details

- Redesigned bracket
- New label on relay covers
- New naming system

Description

The motorbracket on the T and TC models have been given a completely new design, giving a distinct impression of power, and keeping the material use to a minimum. We consider this an important factor for the "Side-Power quality feeling" - a visible way to show the kind of consideration Side-Power takes to details in constructing the perfect thruster; the difference is in the details!

For an easier overview of what features that are incorporated in each thruster, we've also redesigned the label on the relay cover to include the feature icons as described here as well as having a touch of the Side-Power design elements.

The "Centennial Series" is named by the new system introduced earlier this year. To easier identify the key features of a thruster, and to make way for further expansion of the range, the naming system has been revised to include the following elements; motor/drive type, nominal thrust/tunnel diameter and propulsion system (**SX XXX/XXX X**)

Motor/drive type is identified by the first two letters:

SE: Side-Power Electric or **SH:** Side-Power Hydraulic

The next part identifies **Nominal thrust in kg/tunnel diameter in mm** and the last letter describes the propulsion system:

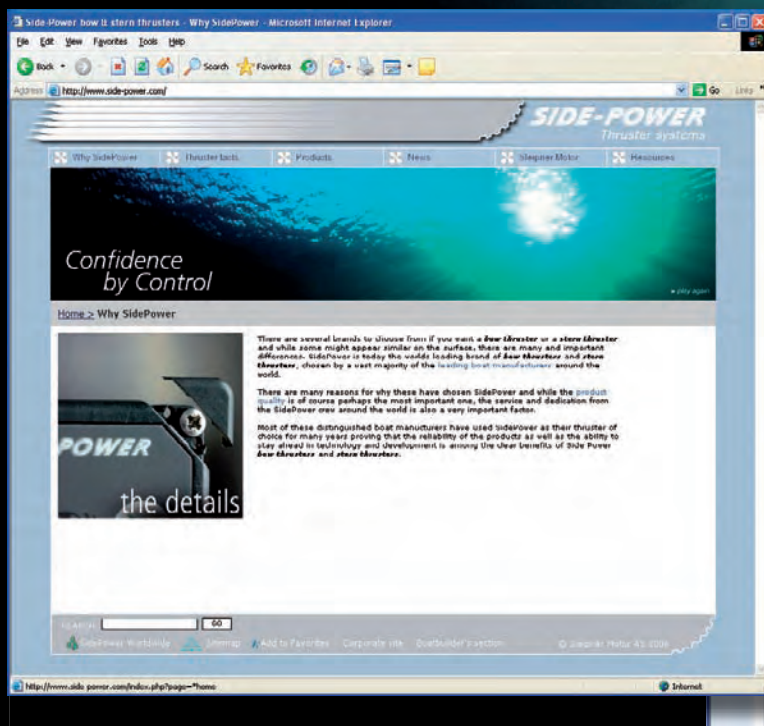
S: Single or **T:** Twin or **TC:** Twin Counterrotating.

Examples:

SE 60/185 S: SidePower Electric thruster, 60kg thrust in a 185mm tunnel, Single propeller propulsion system

SE 120/215 T: SidePower Electric thruster, 120kg thrust in a 215mm tunnel, Twin propeller propulsion system





Remember to check in at our webpages on a regular basis for the latest updates. You will find the latest information regarding our products, either on the main site with public access, or on the corporate side with access for dealers and distributors only.

www.side-power.com



This document may contain typographical errors, to which Sleipner Motor assumes no responsibility.

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