

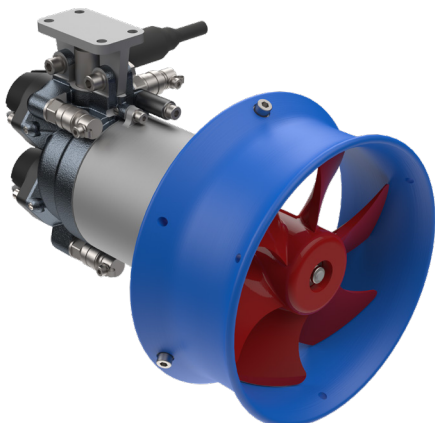
Brushless DC Thrusters

FET's Sub-Atlantic product line offers a comprehensive selection of brushless DC thrusters. These thrusters have been successfully integrated into Sub-Atlantic observation and light work class ROVs for nearly two decades, earning a reputation for reliability, longevity, and flexibility. FET continues to collaborate with multiple third-party ROV manufacturers, ensuring seamless integration of the SPE thruster range into their vehicle builds. Furthermore, FET remains committed to ongoing development and enhancement of this product in the years to come.

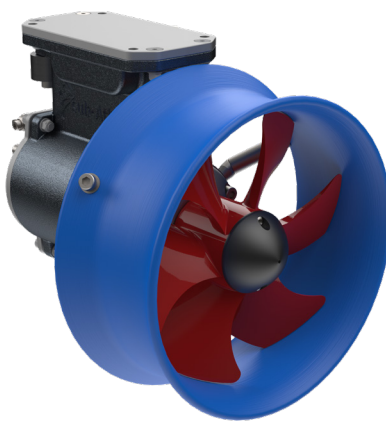
Whether for research, exploration, or industry applications, Sub-Atlantic thrusters are the optimal choice for underwater operations.

Features

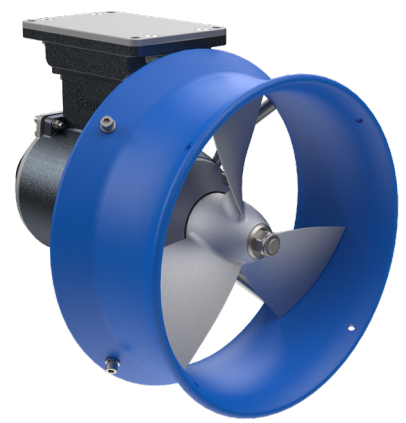
- Obs class and light work-class thruster technology
- High reliability, rugged and lightweight design
- Unique Statorshield™ technology
- Continued operation in the event of shaft seal failure
- Forward/reverse thrust within 5-10% band
- PCB standardisation (the same PCB will be fitted to FET and SA-P thrusters)
- Enhanced over current and over temperature protection
- Ultra-low noise emissions
- Improved thruster response
- Direct drive reliability (no gearbox)
- RS485 serial control as standard across all models
- Various connector options available
- Speed, current, temperature and direction feedback (via serial comms)
- 300 VDC and 600 VDC options
- FET variant suitable for new builds and highly-sensitive survey equipment
- SA-P variant suitable for legacy ROVs



SPE-075
[1.25 kW]

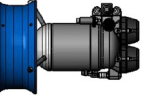
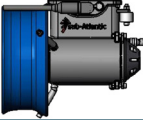
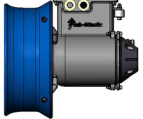


SPE-180
[2.5 kW]



SPE-250
[5 kW]

Brushless DC Thrusters

Image	Thruster Model FET & SA-P	Propeller Diameter	Maximum Bollard Thrust	Nominal Motor Supply	Weight in Air	Weight in Water
	SPE-75	144 mm 5.7 inches	26 kgf 57 lbf	300 Vdc & 600 Vdc @1.25kW	4.3 kg 9.5 lbs.	3.0 kg 6.6 lbs.
	SPE-180	178 mm 7.0 inches	45 kgf 99 lbf	300 Vdc & 600Vdc @2.5 kW	6.6 kg 14.5 lbs.	4.5 kg 9.9 lbs.
	SPE-250	246 mm 9.7 inches	100 kgf 220 lbf	600 Vdc @5kW	14.2 kg 31.3 lbs.	8.0 kg 17.6 lbs.

STATORSHIELD™ TECHNOLOGY EQUATES TO RELIABILITY

Subsea thrusters are prone to water entering through the shaft seal and causing short circuit failure of the stator windings. Statorshield technology eliminates this problem by the introduction of an internal sealed diaphragm located between the rotor and stator, creating two separate isolated and sealed volumes (Rotor cavity and Stator cavity). Water cannot reach the stator and electronics through the shaft seal preventing catastrophic failure due to shaft seal leakage. Operation can continue until the machine is recovered when the rotor cavity can then be flushed, seals replaced, and the unit refilled with oil.

INNOVATIVE SHAFT SEALING

FET thrusters incorporate our proven ceramic wear ring technology used on all our current electric and hydraulic thrusters. The ceramic ring provides a durable hard surface that prevents wear to the shaft and the resultant seal damage and consequential flooding.

INTEGRAL DRIVE ELECTRONICS

All thrusters come equipped with integral drive electronics housed within their structure. The electrical connections include a main DC power input and a control signal, while the control is analog (ranging from +5Vdc to -5Vdc), or Serial RS485. The logic supply is 12Vdc or 24Vdc.

DEPTH RATING

The thrusters are currently rated for 3,000 meters (10,000 feet), a limitation imposed by the integral oil-compensated drive electronics.

PRESSURE COMPENSATION

Both the Rotor and the Stator cavities are compensated separately. The rotor cavity benefits from an integral compensator located at the rear of the thruster. In contrast, the stator cavity requires compensation through a separate external unit. FET offers a range of compensators to address these requirements.

ULTRA-LOW NOISE EMISSIONS

Recent improvements in motor technology, combined with updated control circuitry, have led to a significant reduction in noise emissions across all our SPE thrusters. Furthermore, the FET product line is specifically designed for use with sensitive survey equipment.

The specification details are illustrative and are for marketing purposes only. Actual equipment may be different as a result of product improvement or other reasons. Specific interface and performance information should be reconfirmed at time of order placement.

Contact Us:
Aberdeen: +44 (0) 1224 798660
Houston: +1 713 351 7900
Kirkbymoorside, York +44 (0) 1751 431751
Brazil: +55 22 3737 0690

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