

PMH
PETTER'S MARINE
HYDRAULICS
NORWAY



THRUSTERS



EXCELLENT PERFORMANCE HIGH RELIABILITY IN A COST EFFICIENT WAY

PETTER'S MARINE HYDRAULICS has since 1988 manufactured and delivered over 1000 thrusters to the off-shore, fishing, shipping and aquaculture industries. Thrusters are essential in providing good vessel control in docking, at slow speed, in narrow water maneuvering, emergency steering and position keeping. Our thrusters provide high efficiency and can be adapted to any type of hull. PETTER'S MARINE HYDRAULICS' thrusters are made for operations in demanding environments and tough conditions, providing EXCELLENT performance and high RELIABILITY in a COST EFFICIENT way.



Fixed pitch propeller, optimized of the thruster dimension and motor power.

PETTER'S MARINE HYDRAULICS has through the last decades developed a series of thrusters to be included in our standard "off the shelf" products, available on short-time-delivery basis. However, we also design and manufacture thrusters to customer specifications, which then are tailored to provide optimum efficiency for that specific vessel. Our line of products consists of hydraulic thrusters from a small and compact 15HP unit up to a robust and powerful 500HP unit, together with electric thrusters from 110kW to 370kW. All our standard thrusters are available in steel, aluminum and fiberglass. We also make special adjustments to our design upon customer's request, where some parameters can be manipulated to fit the current hull design. In the year 2000, PETTER'S MARINE HYDRAULICS delivered a record breaking fiberglass thruster of 300HP, and in 2013 we aim to introduce a 500HP fiberglass thruster to the market.

We offer two thruster designs; ST and STR.

STR-DESIGN

The STR-thrusters has a conventional straight tunnel design, with an angular transmission and a motor oriented orthogonally to the thruster tunnel. The angular transmission makes the thruster ideal for mounting underneath the main propeller shaft. The STR-design is available both for hydraulic and electric motors.



ST-DESIGN

The ST-thruster is easily recognized by its compact design, angled tunnel and straight drive shaft. The great advantage of this thruster design is its low complexity, with few parts and low maintenance requirements. The lack of a big and bulky angular transmission allows for more water to flow unobstructed through the tunnel, increasing its efficiency. The fact that the thruster is angled in a downward angle proves to be its biggest advantage. Installing ST thrusters in catamaran or trimaran hulls assures that the water jet is pushed underneath the neighboring hull and not straight into it, dramatically reducing its efficiency. The thruster design is very compact and can be fitted in the narrowest of hulls. The ST design is available with hydraulic motors and in steel, aluminum and fiberglass tunnels.

FIXED PITCH

Fixed pitch propellers are standard on all our thrusters, where each propeller is optimized to the thruster design. Fixed pitch propellers requires less space than adjustable ones, allowing more water to flow through the thruster tunnel, providing more thrust. The great advantage with fixed pitch propellers is the low level of complexity; making it long lasting, low maintenance and reliable, but most important of all: low cost.



ST120-500-SH thruster

HYDRAULIC OR ELECTRIC?

Hydraulic thrusters have the advantage of being more compact than electric ones, where the hydraulic motor is rather small in comparison. This gives great advantages when fitting the thruster in a narrow spaced hull with little or no room to spare, a challenge often met when retrofitting a thruster in an old hull. Hydraulic pumps and oil tanks can then be installed remote to the thruster in a more suitable location onboard. On the other hand, electric motors do not require big and noisy pumps and pipelines, together with oil spill and space consuming tanks. Performing electric installations are in general easier and less time consuming than hydraulic installations, and requires less maintenance when in use.



Samson Transporter, an offshore personnel transport vessel equipped with PETTER'S MARINE HYDRAULICS thrusters.

ST design

- Angular tunnel
- Direct drive shaft
- Low complexity
- Low maintenance
- Hydraulic drive
- Adaptable to any hull
- Steel, aluminum and fiberglass



STR design

- Straight tunnel
- Angled gear
- Low complexity
- Low maintenance
- Hydraulic or electric drive
- Especially suited for mounting under the main propeller shaft



PETTER'S MARINE HYDRAULICS aims to satisfy our customers by providing reliable products at a reasonable price, together with excellent performance and customer support.

For the customer that demands a little bit more, PETTER'S MARINE HYDRAULICS offers a support contract that ensures 24/7 technical phone support and on-site support within 24 hours if a breakdown or malfunction should occur. We also offer service contracts for periodic maintenance of all equipment, including software updates.

ST DESIGN - TECHNICAL DATA

Device	ØTunnel (inner)	Power	Max RPM	Prop. Blades	Fixed pitch	Thrust
ST25-15-x	250 mm	15 HP	2200	3	Yes	>120 kg
ST35-30-x	350 mm	30 HP	1700	3	Yes	>250 kg
ST45-50-x	455 mm	50 HP	1330	3	Yes	>400 kg
ST60-80-x	630 mm	80 HP	1200	3	Yes	>650 kg
ST65-160-x	675 mm	160 HP	820	4	Yes	>1300 kg
ST80-150-x	830 mm	150 HP	700	3	Yes	>1200 kg
ST100-300-x	1050 mm	300 HP	550	4	Yes	>2400 kg
ST120-500-x	1250 mm	500 HP	450	4	Yes	>4000 kg

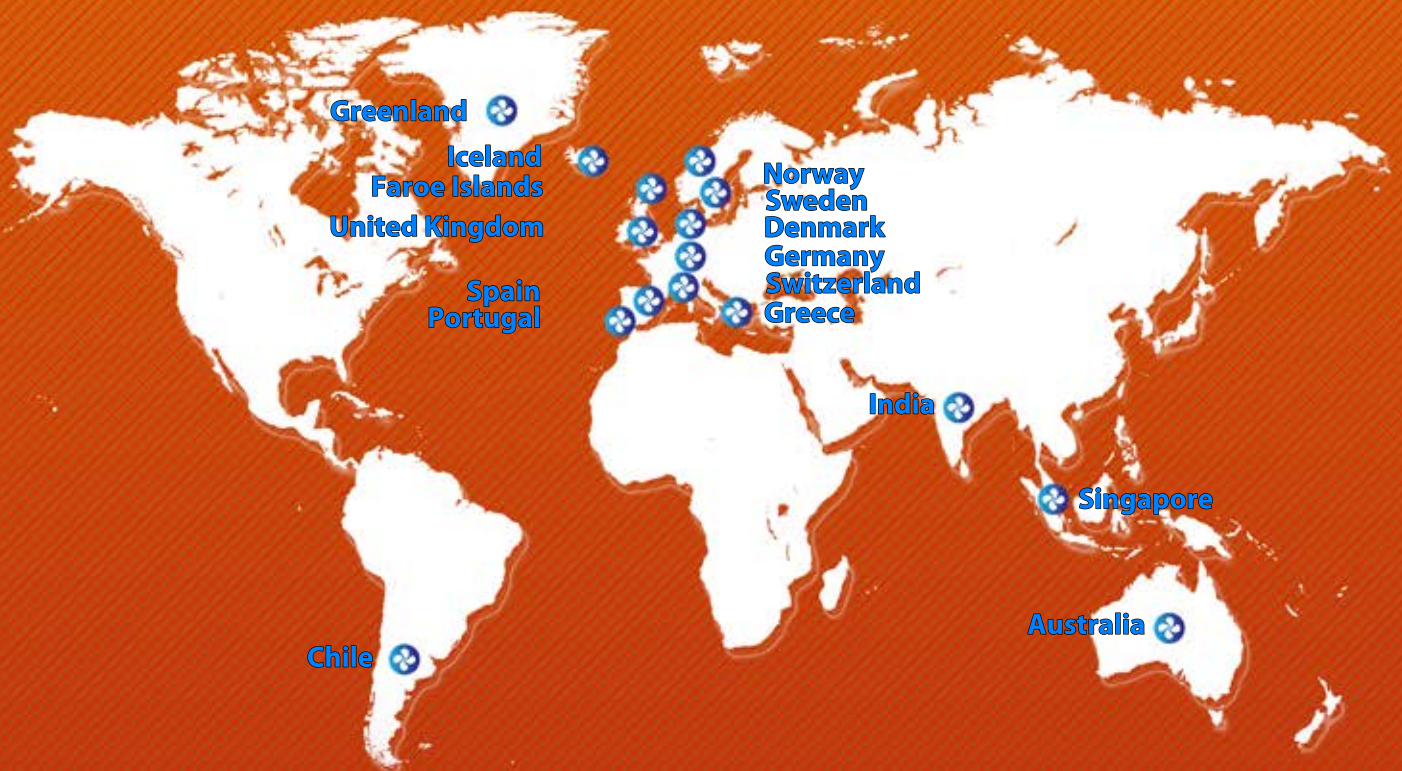
STR DESIGN - TECHNICAL DATA

Device	ØTunnel (inner)	Power	Max RPM	Prop. Blades	Fixed pitch	Thrust
STR80-150-xH	840 mm	150 HP	700	3	Yes	>1200 kg
STR80-150-xE	840 mm	120 kW	700	3	Yes	>1200 kg
STR80-250-xH	840 mm	250 HP	830	3	Yes	>2000 kg
STR80-250-xE	840 mm	200 kW	830	3	Yes	>2000 kg

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