

# YANMAR



COMMERCIAL MARINE  
**SUCCESS STORIES**

# MS STØDIG



YANMAR 6EY22AW

## Yanmar powers the MS Stødig

Following the official ceremony on May 13th in Kvaløya, Norway's largest inland island, the MS Stødig has gone into service for operator Asbjørn Selsbane AS.

Stødig means steady, and she is the replacement for the original which was sold in 2020. She will operate in Northern waters hunting offshore mostly for white fish which will mainly be delivered fresh, or as live-fish. Stødig is also equipped for targeting shrimps as well as snow crabs, which will be frozen onboard.

The vessel is 39 meters long and 11.5 meters wide. Naval architect Kent Damgaard is director at Karstensens Skibsværft A/S. He says, "She is our newbuild 467, with the hull built in our Gdynia facilities, and propulsion comes courtesy of a Yanmar 6EY22AW rated at 1,370BHP at 900RPM, chosen in collaboration with the operator. It's an interesting time to be dealing with marine propulsion as we are facing the reality of the green transition.

Technical solutions for alternative fuels, even zero-emissions, are indeed available, but infrastructure and security of supply leaves a lot to be desired. Hence Stødig is designed, based on conventional fuels, but thoroughly optimised. This means looking for an improvement in economy in percentage increments. On this occasion we have made the best use of the torque available by installing a smaller engine geared down with a larger propeller. Taking the vessels service profile into close consideration, optimising towing performance in relation to fuel feed gives the least possible carbon impact. In addition, the vessel is fitted with a number of other features, helping reducing the carbon impact."



### 6EY22AW



RATED OUTPUT	885 - 1370 kW
RATED ENGINE SPEED	900 min <sup>-1</sup>
PISTON SPEED	9.60 m/s
CYLINDER BORE	220 mm
PISTON STROKE	320 mm
NO. OF CYLINDERS	6 in-line
MEAN EFFECTIVE PRESSURE	1.62 - 2.50 MPa
TYPE	4-stroke, Diesel

# RO SENJA



YANMAR 6EY22ALW

## Ro Senja to start work in Norway

The Ro Senja is currently on her way to the northern part of Norway, where she will be doing most of her work for client Salmar. Fully loaded, she weighs about 7,000 tonnes, and while emptied, she can reach a speed of up to 14 knots. She is a live fish carrier with an emphasis on fish welfare and hygiene. Project manager Mathias Tungevåg at designer Skipskompetanse says: “Although being quite similar to her sisters Ro Vision and Ro Venture, like them, she is, in fact, unique, being adapted for her client and its operational profile, and new equipment has been installed on board. She is specially designed for delicing operations and aims to achieve the best possible fish welfare.”

Generator power on board comes courtesy of 3 Yanmar 6EY22ALW sets. Tungevåg explains, “Ro Senja and all the other vessels in the LFC2020 range are equipped with a diesel-electric propulsion system. Ro Senja, along with Ro Vision and Ro Venture, also have a battery pack installed for peak shaving and backup. This system allows her to optimise the power generation for her needs in various modes of circulation, manoeuvring and cargo hold operations. Located in the engine room aft, the generator sets supply power to the switchboard, which distributes it to the electric propulsion motors, pumps and other equipment installed on board. They can also charge the battery, which can then be used to supply power during high power peaks for a limited time period, reducing the number of times the generators have to be started to supply sufficient power.”

Much thought goes into the choice of generator. Tungevåg continues, “To choose generators, one has to look at the various modes a vessel will operate in. Based on the required power in each of these modes, a setup allowing sufficient power in each mode can be made. The goal would be to have the generators operating at optimum load during all modes. On this kind of vessel with many different modes requiring different amounts of power, the combination of diesel generators with a battery has proven to be a good solution. The generators can mostly run at the most efficient load while the battery handles variable power requests to avoid having to start more generators for small extra power needs.

“For us, in cooperation with the owner and yard, durability is key when selecting generators. These live fish carriers operate year-round and need a reliable source of power. So far, Yanmar has proven to be an excellent choice, having been part of over 50 engine installations on vessels designed by Skipskompetanse.”

While diesel has ruled the roost for decades, credible alternatives are now on the horizon. “We’re keeping a close eye on the development of fuel alternatives and engines,” notes Tungevåg. “So far, it’s hard to pinpoint what will be the future technology, as many parties are eager to prove their ideas. Hydrogen, methanol and other fuels are likely to be part of future ship designs, but these options require access from the shore for effective use. For us, we are focusing on designing vessels like the Ro Senja with an effective hull and power setup. This is currently the most effective way to reduce emissions and costs in the near term while we are looking for the best long-term zero-emissions solution.”

### 6EY22(A)LW



GENERATOR CAPACITY	600 - 1425 kWe
RATED ENGINE SPEED (50HZ)	750 / 1000 min <sup>-1</sup>
RATED ENGINE SPEED (60HZ)	720 / 900 min <sup>-1</sup>
BORE X STROKE	220 mm x 320 mm
NO. OF CYLINDERS	6 in-line
MEAN EFFECTIVE PRESSURE	1.45 - 2.50 MPa
TYPE	4-stroke, Diesel



# ORCA YKA

## YANMAR 6EY22ALW & 6EY33W



### Yanmar powers the Orca Yka

Following the official naming ceremony at the shipyard Larsnes Mek. Verksted AS on March 26th, the MV Orca Yka will soon be on her way to South America to meet her new owner Naviera Orca Chile SA, where she'll be operating out of the port of Puerto Mont. Her primary role will be to serve the Chilean salmon farming market, and due to Chile's long and thin shape her and her 13-strong crew will be at sea for several weeks at a time, which is longer than usual for this type of operation.

The vessel was designed by Skipskompetanse AS, an independent Norwegian consultancy and ship design company. Project manager Mathias Tungevåg says, "Orca Yka is Larsnes's hull number 68, a 79.3m x 15m live fish carrier with a 2,800m<sup>3</sup> capacity and the option for smolt and salmon transport as well as freshwater treatment. She has been built using experience gained from previous vessels for the major Norwegian live fish carrier Rostein AS, which is also part owner of the Naviera Orca."

Yanmar is a key player in the story. Tungevåg explains, "Yanmar has been an important supplier and team member in the design of these live fish carriers. The company has been involved in 11 live fish carrier projects since we started with Ro Arctic. For these projects, Yanmar has supplied three or four engines, mostly 6EY22ALW diesel generator sets, but also two 2,999kW 6EY33W for Ro Sailor and Orca Yka more recently. Yanmar has been a close partner to Larsnes Mek Verksted AS since nov 1997 and to Skipskompetanse. The engines were found to be a good fit to the operational profile that was required. The Yanmar 6EY33W main propulsion engine with shaft generator includes flexibility with the option to vary the amount of power produced which provides optimal fuel consumption for the many different operations that these live fish carriers do. We can always operate at the most efficient power and RPM."



There are two Yanmar 6EY22ALW sets on the Orca Yka. Their primary role is to provide the power to the electric motors for manoeuvring, and also to power pumps, fish treatment equipment and essentials for the fish well-being like oxygen production, CO<sub>2</sub> removal and water circulation. For propulsion, Tungevåg continues, "On Orca Yka, unlike most of the other live fish carriers, the main propulsion engine is the 6EY33W, which when installed in her sister vessel Ro Sailor last year was the largest engine Yanmar has installed in Europe." The yard is completing the finishing touches and she'll be setting sail soon.

#### 6EY22(A)LW ↗



GENERATOR CAPACITY	600 - 1425 kWe
RATED ENGINE SPEED (50HZ)	750 / 1000 min <sup>-1</sup>
RATED ENGINE SPEED (60HZ)	720 / 900 min <sup>-1</sup>
BORE X STROKE	220 mm x 320 mm
NO. OF CYLINDERS	6 in-line
MEAN EFFECTIVE PRESSURE	1.45 - 2.50 MPa
TYPE	4-stroke, Diesel

#### 6EY33W ↗



RATED OUTPUT	2500 - 3360 kW
RATED ENGINE SPEED	750 min <sup>-1</sup>
PISTON SPEED	11.00 m/s
CYLINDER BORE	330 mm
PISTON STROKE	440 mm
NO. OF CYLINDERS	6 in-line
MEAN EFFECTIVE PRESSURE	1.77 - 2.38MPa
TYPE	4 stroke, diesel

# GÅSØ HØVDING



YANMAR 6EY22ALWS

## Wellboat with Yanmar gensets starts work

After passing her technical inspection, the wellboat Gåsø Høvding has gone into service. Build by Sefine Shipyard in Turkey according to a Møre Maritime design, the vessel is operating in Norwegian waters where she's transporting and processing fish. She's large, at 83.2 metres long and 30.9 metres wide, with a total well volume for fish storage of 7,500 cubic metres. She's been designed to process up to 1,000 tonnes of fish per hour, and because the well is so big, it exposes the fish to minimum stress. Mounted aft, there are six Yanmar 1,300kWe 6EY22ALWS gensets powering a variety of jobs.

New construction manager at owner/operator Frøy Einride Wingan says, "We chose Yanmar for the generators because the company has such a good reputation in the live fish carrier business. The engines are known to be very cost effective both for fuel consumption and maintenance."

Being a purpose-built specialist rather than a modification of an existing design has allowed the operators to optimise everything onboard. Wingan continues, "The generators run all the time. The jobs they do are extremely important both for the general safe operation of the vessel and the welfare of the fish."

They are powering azimuths, bow thrusters, circulation pumps, oxygen systems, delicing equipment and a fresh water production system in addition to the other common ship systems." There's a comprehensive electronics management system offering flexibility. Wingan explains, "The system is automated with control locally or direct from the wheelhouse, where the stop/start operation is mostly controlled. I predict this type of generator technology will be with us for a long time."

### 6EY22(A)LW



GENERATOR CAPACITY	600 - 1425 kWe
RATED ENGINE SPEED (50HZ)	750 / 1000 min <sup>-1</sup>
RATED ENGINE SPEED (60HZ)	720 / 900 min <sup>-1</sup>
BORE X STROKE	220 mm x 320 mm
NO. OF CYLINDERS	6 in-line
MEAN EFFECTIVE PRESSURE	1.45 - 2.50 MPa
TYPE	4-stroke, Diesel



# LARSNES MEK. VERKSTED

## YANMAR 6EY33W & 6EY22ALW

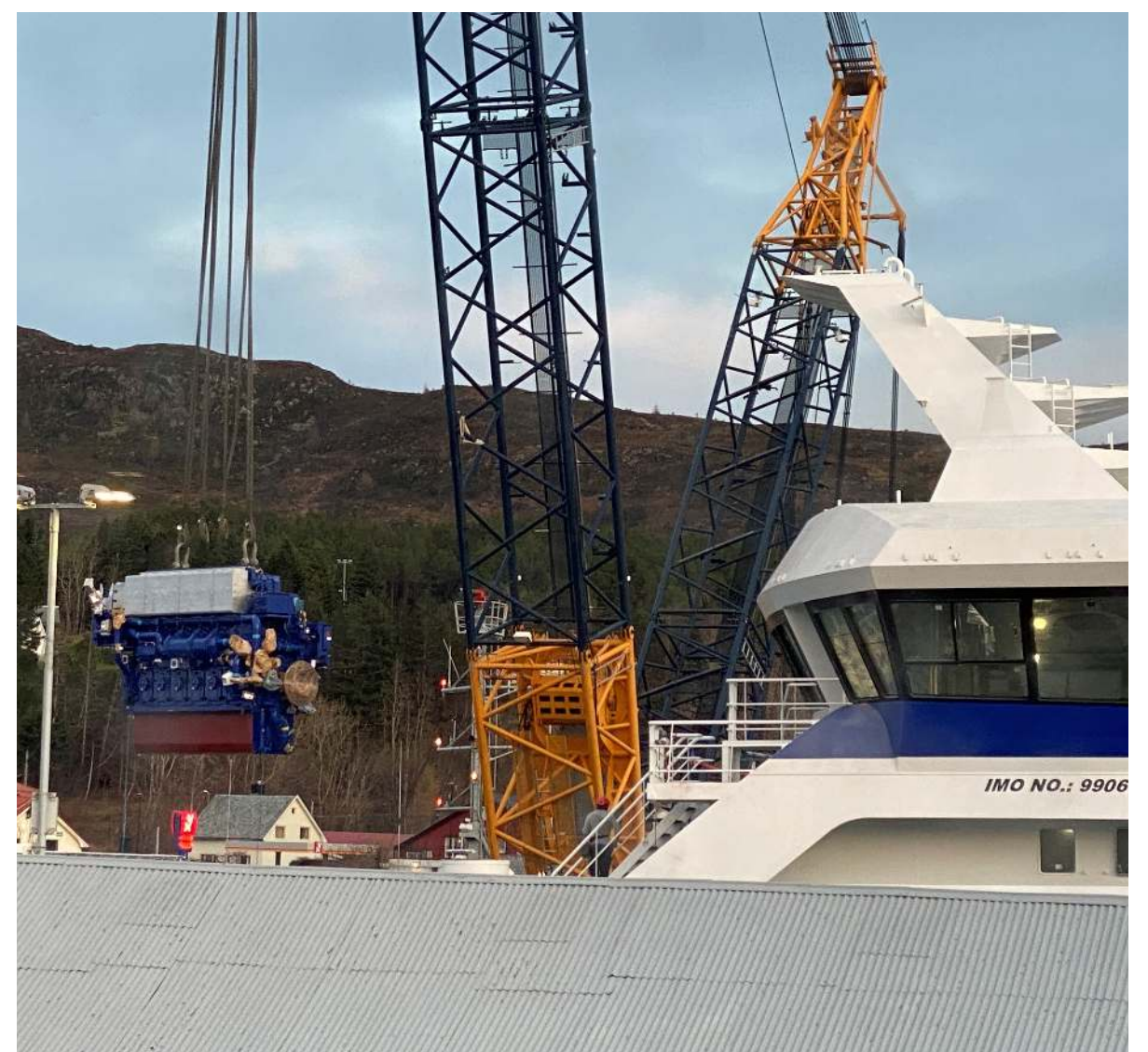
### YANMAR delivers 160th marine engine for Scandinavian fishing waters

YANMAR has delivered its 160th engine for the fishing industry in Scandinavian waters. More than 45 engines, including this one, have already found their way into Norway through shipyard Larsnes Mek. Verksted AS. A strong proof of the decades-long relationship and trust that exists between YANMAR, Larsnes Mek. Verksted and Norwegian shipbuilders, architects and shipowners.

This engine – the 2999 kW 6EY33W propulsion engine – is part of an order of two, and will be installed on a new wellboat ordered by Rostein AS for the transportation of salmon and smolt. The vessel was designed by Skipskompetanse AS in Norway. In addition to the main medium-speed propulsion engine, YANMAR also delivers two YANMAR 6EY22ALW diesel generator sets for generating reliable electrical power for essential supporting systems on board.

Already in 1998, Jarle Gunnarstein, CEO of Larsnes Mek. Verksted was one of the early adopters who recognized YANMAR's quality and imported the first YANMAR engines into Norway. "YANMAR has always proven to be a strong supplier of stable, reliable power to keep vessels going, even under the toughest conditions. The engines are economical, clean and long-lasting. We can always call on YANMAR's extensive technical expertise for service, maintenance, and installation, a high-precision job where sometimes we really have to push the limits of the engine."

The Norwegian fishing industry is known for its innovative strength and adoption of the latest technology. Eric Tigelaar, Department Manager of YANMAR Commercial Marine: "We are very fortunate and grateful to have such strong relationships in Norway. The advanced know-how and capabilities within Norwegian aquaculture and fisheries are extremely important for YANMAR. The Norwegian market challenges and motivates us to find solutions and further develop our marine engines, so that we are able to meet the expectations of our customers not only in Norway, but also worldwide."



#### 6EY33W



RATED OUTPUT	2500 - 3360 kW
RATED ENGINE SPEED	750 min <sup>-1</sup>
PISTON SPEED	11.00 m/s
CYLINDER BORE	330 mm
PISTON STROKE	440 mm
NO. OF CYLINDERS	6 in-line
MEAN EFFECTIVE PRESSURE	1.77 - 2.38MPa
TYPE	4 stroke, diesel

#### 6EY22(A)LW



GENERATOR CAPACITY	600 - 1425 kWe
RATED ENGINE SPEED (50HZ)	750 / 1000 min <sup>-1</sup>
RATED ENGINE SPEED (60HZ)	720 / 900 min <sup>-1</sup>
BORE X STROKE	220 mm x 320 mm
NO. OF CYLINDERS	6 in-line
MEAN EFFECTIVE PRESSURE	1.45 - 2.50 MPa
TYPE	4-stroke, Diesel

# STORMHAV

YANMAR 6EY17W

## New netter/longliner Stormhav has YANMAR power inside

The Norwegian fishing industry has a new jewel in the crown: the recently launched Stormhav, an almost 28-meter-long combined line and net ship. This netter/longliner replaces a 25-year-old vessel and represents a safer workplace for the crew and better conditions for onboard fish processing for shipowner Håkon-Inge Mjånes of Stormhav AS. The vessel is powered by a YANMAR 6EY17W medium-speed marine engine, providing reliable propulsion for safe and durable navigation at sea.

Stormhav AS has chosen YANMAR as the main engine supplier because of the good reputation in the marine market for reliability and durability. In close consultation with the authorised YANMAR dealer Verlo in Norway, Stormhav decided that the YANMAR 6EY17W marine engine, delivering 749kw at 1350rpm was the best fitting engine for their new vessel.

Stormhav is designed and developed by the maritime engineering company Seacon AS in Måløy with design designation SC28. The new vessel has 206 cubic metres of refrigerated/chilled fishroom space, capacity for 90 cubic metres of fuel and accommodation for a crew of up to 14. The vessels of the SC28 series are optimized with regard to regulations, and constructed with a strong focus on design, comfort, environment and catch quality.

Shipowner Håkon-Inge Mjånes shares his experience with his new vessel. "It is great for us to have a safer workplace, and get more out of the raw material. At the same time, we get more jobs on the same quota basis. We have increased from 9 to 24 people, divided into two shifts. It is a great development from when we started 15 years ago and were only three of us."

### 6EY17W



RATED OUTPUT	374 - 837 kW
RATED ENGINE SPEED	1450
PISTON SPEED	10.35/11.12 m/s
CYLINDER BORE	170 mm
PISTON STROKE	230 mm
NO. OF CYLINDERS	6 in-line
MEAN EFFECTIVE PRESSURE	1.06 - 2.21 MPa
TYPE	4-stroke, diesel



# GEIR



## Yanmar engines power new, hypermodern longlines in Norway

For the third time, the Norwegian operator HP Holmeset A.S. ordered a new longliner – called Geir – from the Norwegian naval architect Skipsteknisk. With an overall length of 61.80 meters and a width of 13.50 meters, the new longliner is one of the largest and most modern vessels of its kind. YANMAR supplied both the propulsion and auxiliary engines for this showpiece.

Geir is powered by the highly reliable YANMAR 6 in-line cylinder 6EY26W medium-speed 4-stroke engine generating a maximum output of 1,920 kW (2,610 hp) at 750 rpm. Geir's electrical power is generated by two YANMAR 6-cylinder, 6EY18ALW diesel generators with an output of 800 kW (1,088 hp), 750 kWe at 900 rpm. The engines were commissioned by our trusted Norwegian dealer Maritim Motor and together with Japanese colleagues the project took two years from signing to delivery of the vessel. A sign of trust, cooperation, outstanding quality of companies and products deliver a fresh fish on our plates.

The new Geir is Skipsteknisk's ST-156XL design. The ship is especially designed for longline fishing through a moonpool with a 70,000-hook autoline system. A moonpool is an opening in the base of the hull, giving access to the water below, allowing the crew to work protected from severe weather conditions. The fishing company and designer worked closely together to develop a highly efficient vessel, focusing on environmental footprint, working environment and quality of the final fish product.

The new longliner was built by Vaaglad Båtbyggeri in Norway. The hull was built by the Polish shipyard Stocznia Wisla. The vessel has a freezing capacity of 60 tonnes per day, a carrying capacity of 500 tonnes and can accommodate 22 people. Geir will be delivered in May 2020.



### 6EY26W



RATED OUTPUT	1471 - 1920 kW
RATED ENGINE SPEED	750 min <sup>-1</sup>
PISTON SPEED	9.63 m/s
CYLINDER BORE	260 mm
PISTON STROKE	385 mm
NO. OF CYLINDERS	6 in-line
MEAN EFFECTIVE PRESSURE	1.92 - 2.50 MPa
TYPE	4-stroke, Diesel

### 6EY18(A)LW



GENERATOR CAPACITY	360 - 750 kWe
RATED ENGINE SPEED (50HZ)	750 / 1000 min <sup>-1</sup>
RATED ENGINE SPEED (60HZ)	720 / 900 min <sup>-1</sup>
BORE X STROKE	180 mm x 280 mm
NO. OF CYLINDERS	6 in-line
MEAN EFFECTIVE PRESSURE	1.28 - 2.50 MPa
TYPE	4-stroke, Diesel



With a focus on personalization and attention to detail, Yanmar commercial marine works closely with ship designers, shipbuilders and fishing industry shipowners to understand their unique requirements and tailor engines and gensets accordingly.



## Each project is unique

YANMAR medium speed engines are being used in a variety of vessels operating in different applications and regions all over the world. Projects range from fishing and offshore vessel applications to live fish carriers and latest super modern hybrids. Each project is unique in terms of its design, requirement and operation, but one thing is consistent: these vessels are operated in the most severe conditions imaginable, including freezing blasts in the Arctic and fluctuating tropical temperatures at the equator. As a result, shipowners, designers and shipyards are increasingly looking to new solutions to achieve high efficiency during reliable engine operation.



### For ship designers

Yanmar empowers fishing ship designers with comprehensive power solutions and engines.

Partnering with Yanmar ensures tailored, reliable engines for optimal performance, delivering exceptional solutions that increase productivity and efficiency to satisfy customers.



### For shipbuilders

Yanmar offers reliable and high-performance engines to fishing shipbuilders. With seamless integration, optimized power and enhanced vessel capabilities, Yanmar engines ensure successful project completion, customer satisfaction and superior performance.



### For shipowners

Yanmar delivers dependable and efficient engine solutions to fishing shipowners. With increased reliability, improved fuel efficiency and overall vessel excellence, Yanmar engines guarantee successful fishing operations, maximizing profitability for shipowners and operators.



## Contact us

At Yanmar Marine we value our partnership with the fishing industry. For more information or enquiries click the button below.

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