

Pelagic Fishing Vessels



With a reference list of more than 200 fishing vessels built, Wärtsilä Ship Design has a world leading position in this field. Our extensive know-how and use of best practices forms the basis for our being at the forefront in the design of sophisticated purse seiners and pelagic midwater trawlers.

Our philosophy is to design vessels that owners and skippers tell us they need. We utilize the most appropriate equipment and the most efficient and best fishing gear. All our fishing vessels are based on well-proven designs, they achieve the best possible performance, and feature the highest levels of safety.

Our pelagic fishing vessels are currently sailing for owners in Norway, Ireland, Scotland, The Netherlands, Denmark, Sweden, Iceland, Russia and the Faroe Islands, among others.

We offer conceptual designs, detail designs, and complete engineering packages for all kinds of pelagic fishing vessels.

ALL OF OUR DESIGNS FEATURE:

- Optimized hull/propulsion interaction to achieve the best possible level of efficiency, and low fuel consumption
- An environmental profile, thanks to the machinery configuration, efficient hull lines, and fish waste recovery system
- Excellent seakeeping capabilities, based on our extensive experience and studies for all operational modes and load conditions
- Low noise level
- Cost efficient construction resulting from the optimized main deck and superstructure



PELAGIC FISHING VESSELS

- There are two methods used in pelagic fishing; purse seining with a purse seine net, or trawling using pelagic mid-water trawls with trawl doors.
- Our offering for pelagic fishing vessels includes either combined vessels, using the above mentioned fishing methods, or just one of them. We divide them into “Pelagic Purse Seiners/Trawler” and “Pelagic Freezer Trawler” categories.
- The size of these vessels ranges between 50 m and 120 m in length, with a carrying capacity of 1000 tonnes to 4000 tonnes of fish, and a machinery solution producing engine power from 3000 kW to 8000 kW, with gen-sets of up to 2 x 2000 kW, for the biggest vessels.

PELAGIC PURSE SEINERS/TRAWLERS



SPECIFICATION IN BRIEF

Length over all:	86.30 m
Length between perp:	76.00 m
Breadth:	17.60 m
Depth to 1st deck:	10.20 m
RSW capacity:	3200 cu. m
Fuel oil:	580 cu. m
Main engine:	Wärtsilä 9L32 4500 kW
Propulsion power:	7500 kW
Aux. engine:	Wärtsilä 8L26 2720 kW
Trawl winches rapp pull:	90T

SPECIFICATION IN BRIEF

Length over all:	74.20 m
Length between perp:	65.10 m
Breadth:	15.20 m
Depth to 1st deck:	9,20 m
RSW capacity:	2320 cu. m
Fuel oil:	490 cu. m
Main engine:	Wärtsilä 9L32 4500 kW
Aux. engine:	Yanmar 6EY18AL 2 x 750 kW
Trawl winches Karmoy pull:	90 tonnes

SPECIFICATION IN BRIEF

LNG VERSION

Length over all:	74.20 m
Length between perp:	65.10 m
Breadth:	15.20 m
Depth to 1st deck:	9,20 m
RSW capacity:	1640 cu. m
Fuel oil:	490 x cu. m
Main engine:	Wärtsilä 9L32 DF 4500 kW
Aux. engine:	Wärtsilä 9L20 DF 1600 kW
Trawl winches karmoy pull:	90 tonnes

PELAGIC FREEZER TRAWLERS



SPECIFICATION IN BRIEF

Length over all:	120.00 m
Length between perp:	106.20 m
Breadth:	20.20 m
Depth to 1st deck:	12.20 m
Fish hold:	5000 cu. m
RSW capacity:	650 cu. m
Fuel oil:	1400 cu. m
Main engine:	Wärtsilä 16V32 8000 kW
Aux. engine:	Wärtsilä 6L26 2 x 2000 kW
Trawl winches karmoy pull:	120 tonnes

SPECIFICATION IN BRIEF

Length over all:	115.00 m
Length between perp:	102.60 m
Breadth:	20.00 m
Depth to 1st deck:	12.85 m
Frozen fish hold:	8600 cu. m
RSW capacity:	770 cu. m
Fuel oil:	1430 cu. m
Main engine:	Wärtsilä 16V32 8000 kW
Aux. engine:	Wärtsilä 9L20 2 x 1800 kW
Trawl winches karmoy pull:	100 tonnes

2 SPEED GEAR AND PTO

The Wärtsilä engine features excellent fuel efficiency, even at lower engine loads. Wärtsilä's 2 speed gearbox enables lower propeller speeds with optimised propulsion efficiency, while still using the nominal engine power for the shaft alternator. This results in lower costs than when using high speed generating sets.

2 SPEED GEAR AND PTO / PTI - HYBRID PROPULSION

The combined Diesel-Electric and Diesel-Mechanic Propulsion System improves efficiency. The possibility to generate power from both main engines and gen-set(s) provides the flexibility needed to optimize engine loads.

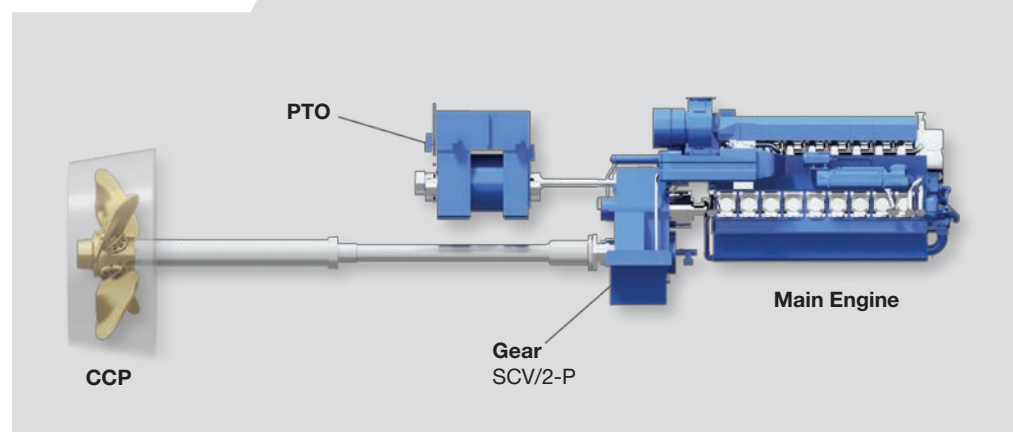
- Increased reliability and redundancy
- The system enables optimal engine loads and subsequent lower fuel consumption/emissions.
- When operating under the most common conditions, the direct drive machinery has low transmission losses
- The system enables increased propeller efficiency at low propeller rpm (GB speed 2) when full power is not needed
- Can be optionally equipped with Battery back-up (peak shaving will reduce ME fuel consumption and maintenance costs)

2 SPEED GEAR

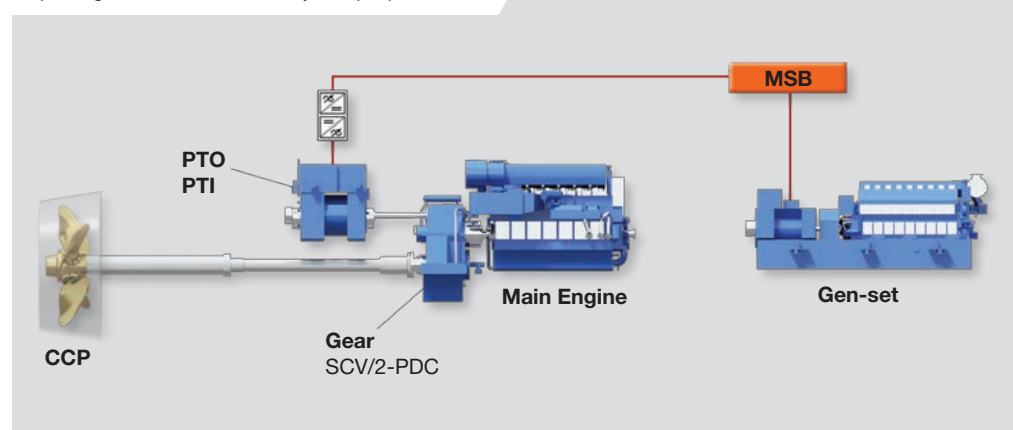
Designed to serve vessels having multiple operational modes and/or reduced transit speeds, these gears cover a power range from 2 MW to 13 MW.

- Reliable performance with low transmission losses
- System enabler for vessels with variable operational modes and/or a need for a redundant propulsion system
- Two selectable propeller speeds at 100% engine speed
- PTO power uninterrupted when changing propeller speeds
- Easy to operate with mode changes from the bridge
- Lower noise levels for onboard comfort and ecological friendliness

2 speed gear and PTO



2 speed gear and PTO / PTI - hybrid propulsion



FUTURE SOLUTIONS

Hybrid propulsion using batteries is currently also an option for Wärtsilä designed fishing vessels. Battery technology is now available to the marine market and the battery system has recently been included as part of our portfolio.

Batteries can deliver power instantly, thereby notably improving the load taking capacity of the power systems without stressing the gensets.

BENEFITS OF ENERGY STORAGE

OPTIMIZED ENGINE OPERATION

Energy storage supports being able to operate the engines at optimal fuel consumption.

REDUCED ENGINE TRANSIENTS

Energy storage can be used to reduce the transient loads in engines, which cause increased fuel consumption and emissions. By introducing batteries we maintain fuel efficiency and environmental sustainability, while at the same time lowering maintenance costs.

Experience and recent successes

OCEAN STAR



Owner	Mewstead LLP
Yard	Nauta Shipyard
Delivery year	2017

WÄRTSILÄ SCOPE OF SUPPLY

Ship design
Main engine
Propulsion
Gear
Seals and bearings

HARVEST



Owner	Hardaus AS
Yard	Fitjar Mekaniske Verksted AS
Delivery year	2014

WÄRTSILÄ SCOPE OF SUPPLY

Ship design
Main engine
Propulsion
Gear

MEKHANIK SERGEY AGAPOV



Owner	Robinzon Ltd
Yard	Drydocks World Singapore
Delivery year	2014

WÄRTSILÄ SCOPE OF SUPPLY

Ship design

ØSTERBRIS



Owner	Østerbris AS
Yard	Cemre Shipyard
Delivery year	2014

WÄRTSILÄ SCOPE OF SUPPLY

Ship design
Main engine
Propulsion
Gear