

LNG pusher version A



LNG Fuelled Pusher 27m

The **LNG Fuelled Pusher** designed by Seatech Engineering Ltd is a new generation of inland high technology vessel. This environmental friendly pusher achieves the increasingly strict IMO emissions regulations keeping also all conventional pushers' functions. In variant A the vessel is equipped with movable accommodation containers which are completely separate part from machinery and workshop areas. Such solution enables ship adaptation to current requirements.

Seatech Engineering Ltd. design team concentrated efforts on designing completely LNG fuelled environmental friendly vessel which could achieve increasingly strict IMO emissions regulations pertinent to the sulphur content of fuel (coming into fore in 2015)

Till nowadays Heavy Fuel Oil is used as the main fuel in the maritime industry all over the world. This causes that high amounts of pollution are emitted to the environment. Liquefied Natural Gas technology is a good alternative to the fuels used today as when combusted admits of many emissions reduction: sulphur oxides (completely eliminated), nitric oxides (reduced by up to 90 %), carbon dioxide (reduced by 20 %), and particular matter (also eliminated).

Additional benefit is that LNG is much cleaner than marine fuel oil so LNG engine life is longer than a typical diesel engines and terms between maintenances are longer.

The major design challenge for LNG fuelled pusher was to create an inland pusher fitting new IMO regulations and keeping at once all characteristics conventional for existing small river pushers (pushing two barges in convoy with typical for pushers speed and range of work and bollard pull). The main target was finding compromise between the size and location of LNG tanks and small main dimensions of the pusher.





LNG Fuelled Pusher 27m

LNG pusher version A

This environmental friendly vessel is completely LNG fuelled pusher intended for inland waterways. Movable wheelhouse embedded on telescopic lift ensures easy passage under bridges of diversified heights and enables good visibility over barges while containers conveyance. For crew comfort increment all accommodation spaces are designed as independent from hull construction and separated from working areas (the noise and vibration levels reduction).

The pusher is designed in accordance with rules and regulations: DNV Rules, IMO: Interim Guidelines On Safety For Natural Gas-Fuelled Engine Installations In Ships, IMO: IGC Code, United Nations Inland Transport Committee: Recommendations on Technical Requirements for Inland Navigation Vessels.

Propulsion

main engines: 2 x Mitsubishi GS12R each 720 kW, propellers: 2 x pitch propellers in Kort nozzles, generator: 1 gas fuelled main generator, bow thruster is provided.

Tanks capacity

LNG tanks volume: 2x35 m³, potable water tanks volume: 8 m³, fore ballast tanks volume: 23 m³, aft ballast tanks volume: 70 m³

Vessel capacities

crew: 4 person, pushing convoy speed : 16/18 km/h, bollard pull (while 100% main engine power): 15 ton

Life saving appliances

gas detection system integrated with emergency shutdown system, fire fighting system, 1 rescue boat

Principal dimensions

Length o.a.: approx.27,20 m

Length of the hull: 27,00 m

Breadth: 9,45 m

Depth to the deck line: 2,70 m

Draught in nozzles axes: 2,8 m

Moulded draught: 2,3 m

Height above WL, wheelhouse in upper position: approx. 9,3 m

Height above WL, wheelhouse in base position: approx. 4,5 m





LNG pusher variant B

LNG Fuelled Pusher 27m

The **LNG Fuelled Pusher** designed by Seatech Engineering Ltd is a new generation of inland high technology vessel. This environmental friendly pusher achieves the increasingly strict IMO emissions regulations keeping also all conventional pushers' functions. In variant B the vessel is equipped with comfortable accommodation superstructure embedded on flexible layer. Accommodation compartment is completely separated from machinery compartments which enables to reduce noise and vibrations within.

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LNG pusher variant B

LNG Fuelled Pusher 27m

Principal dimensions

Length o.a.: approx. 27,20 m
 Length of the hull: 27,00 m
 Breadth: 9,45 m
 Depth to the deck line: 2,70 m
 Draught in nozzles axes: 2,8 m
 Moulded draught: 2,3 m

Height above WL, wheelhouse
 in upper position: approx. 9,3 m

Height above WL, wheelhouse
 in base position: approx. 4,5 m

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