

Wärtsilä Liquid Cargo Handling Simulators

Models



Liquid Cargo Handling Simulators (LCHS) are designed to train and certify crew members of liquid cargo tankers, gas carriers and terminals, as well as other staff responsible for the safe handling of cargo and the operation of auxiliary equipment.

Wärtsilä Liquid Cargo Handling Simulators includes the following models

Crude Oil Carriers



LCC Tanker

Aframax sized Large Crude Oil Carrier 116,000 DWT, 12 Cargo Tanks and 2 Slop Tanks, total capacity at 98%—127,511.91 m³.

| | |
|--|---------------------------|
| Length, overall | 248.92 m |
| Breadth, molded | 43.80 m |
| Depth, molded | 17.50 m |
| Design draught, molded | 14.925 m |
| GT | .61,342 tons |
| Cargo + slop tanks capacity at 98% | 127,511.91 m ³ |
| Ballast tanks capacity at 100% | 39,949.6 m ³ |
| Cargo pumps (steam driven). | 3 pumps |
| Ballast pumps (el/steam driven) | 2 pumps |



VLCC Tanker

Very Large Crude Oil Carrier 276,000 DWT. 15 Cargo Tanks and 2 Slop Tanks, total capacity at 98%—346,261 m³.

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|--|------------------------|
| Length, overall | 334.071 m |
| Breadth, molded | 58.00 m |
| Depth, molded | 31.25 m |
| Design draught | 22.3 m |
| Cargo+slop tanks capacity at 98% | 346,261 m ³ |
| Ballast tanks capacity at 100% | 104,040 m ³ |
| Cargo pumps (steam driven). | 3 pumps |
| Tank cleaning pump (steam dr.) | 1 pump |
| Ballast pumps (el. driven) | 2 pumps |

Oil Product and Chemical Carriers



Chemical Tanker

Chemical/product tanker, ship type 1, for carriage of liquid noxious cargoes. Parcel type cargo system with 28 Cargo Tanks including two Slop tanks and with Cargo Drain Tank, total capacity 23,731 m³ with Submerged hydraulic driven pumps in every tank.

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|--|-----------------------|
| Length, overall | 161.12 m |
| Breadth, molded | 23.0 m |
| Draught as Oil Tanker | 9.80 m |
| Draught as Chemical Tanker. | 9.95 m |
| Displacement (9.80) | 28,921 tons |
| DWT (9.80) | 21,570 tons |
| DWT (9.95) | 22,150 tons |
| Cargo tanks capacity | 23,731 m ³ |
| Ballast tanks capacity | 9,604 m ³ |
| Cargo pumps (hydraulic driven) | 28 pumps |



Product Tanker

Product/Oil Carrier designed to transport 5 types of cargoes simultaneously, including crude oil and oil products, vegetable oils and IMO type 3 chemicals. 10 Cargo Tanks and 2 Slop Tanks, total capacity 54,298 m³. Submerged hydraulic driven cargo pumps in every tank.

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|--|-----------------------|
| Length, overall | 182.50 m |
| Breadth, molded | 23.0 m |
| Depth, molded | 17.50 m |
| DWT (12.2) | 47,400 tons |
| Cargo+slop tanks capacity | 54,298 m ³ |
| Ballast tanks capacity | 21,726 m ³ |
| Cargo pumps (hydraulic driven) | 12 pumps |
| Ballast pumps (hydraulic driven) | 2 pumps |
| Heating system. | steam 80 °C |

Liquefied Gas Carriers



LPG Tanker

Ethylene/LPG Carrier. Two Type C cargo tanks, total capacity 8,476 m³. Semi-refrigerated liquefied gas carrier, (-104 °C, 6 bar gauge, 0.97 t/m³), type 2G.

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|---------------------------------|------------------------|
| Length, BP | 108.1 m |
| Breadth, molded | 18.6 m |
| Design draft | 7.4 m |
| DWT | 6,300 tons |
| Cargo pumps | 2 units |
| Ballast pumps | 2 units |
| Cargo Tank capacity | 8,000 m ³ |
| Ballast Tank capacity | 1,988.8 m ³ |



LNG Tanker Membrane

Liquefied Natural Gas Carrier with 5 membrane type cargo tanks. Ship type 2G (membrane tank, -163 °C, 70 kPa, 500 kg/m³).

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|---|-------------------------|
| Length, overall | 302.00 m |
| Breadth, molded | 50.00 m |
| Design draft, molded | 12.00 m |
| Cargo Tank capacity | 217,459 m ³ |
| Ballast Tank capacity | 72,676.8 m ³ |
| Cargo pumps (electrical driven) | 20 pumps |
| Ballast pumps (electrical driven) | 4 pumps |



LNG Tanker Spherical

Liquefied Natural Gas Carrier with 5 spherical (Moss type) cargo tanks. Ship type 2G (-163 °C, 0.25 bar, 500 kg/m³).

| | |
|---|------------------------|
| Length, overall | 293.0 m |
| Breadth, molded | 45.75 m |
| Displacement | 104,999 tons |
| Deadweight | 71,753 tons |
| Depth, molded | 25.5 m |
| Design draught | 10.95 m |
| Cargo tanks capacity at 98.5 % | 135,477 m ³ |
| Ballast tanks capacity at 100 % | 62,617 m ³ |



LNG Regasification Terminal

Terminal for the reception and storage of liquefied natural gas from ships. Stored LNG can be pumped out from storage tanks, vaporized and sent to the natural gas transmission system at required conditions of pressure and temperature.

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|----------------------------------|-----------------------------|
| Annual Average Output | .5bn Nm ³ /yr |
| Ship Unloading Rate | 12,000 m ³ /hr |
| Minimum Output Rate | 75,000 Nm ³ /hr |
| Maximum Output Rate | 656,000 Nm ³ /hr |
| Storage tanks capacity | .2 × 160,000 |

Wärtsilä Voyage

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