

K-SIM ENGINE



KONGSBERG



WÄRTSILÄ 12RT-FLEX 82 CONTAINER L11-I

The simulated ship is a Panamax container ship of 4800 TEU, with reefer capacity 800, propelled by a Wärtsilä 12RT-flex 82C lowspeed common-rail engine with a maximum continuous power output of 54240 kW at 102 rpm. The propulsion machinery is based on one Wärtsilä RTflex82C, low speed, 12 cylinder configuration, 2-stroke, turbocharged, reversible diesel engine.

Kongsberg Engine Room Simulators

Our engine room simulators provide realistic, hands-on experience in a ship-like environment. Systems include vital components, such as main engine remote control, engine-room local panels, controllers, engine telegraph, alarm systems, power supply switchboards, engine sounds etc.

We have an extensive model library of different propulsion plants and engines types, certified by the engine manufacturer as exact simulations.

Our library includes models of diesel engines such as MAN B&W, Wärtsilä, Sulzer, Pielstick, MaK and MTU as well as gas turbine, diesel electric, water jet and steam propulsion plants.

Our systems can be easily networked with our full ship's bridge simulator for total ship training.

Model Description

The model is based on real engine data which makes the dynamic behavior of the simulator close to the response of a real engine.

The electrical power plant includes three (3) diesel generators, on shaft generator, a steam turbine generator, and one emergency generator. The steam plant includes an oil fired boiler as well as an exhaust boiler. Control room operator station and panels and bridge and steering panels are included.

Fulfilling the requirements

K-Sim Engine is designed to meet the STCW 10 requirements and the Det Norske Veritas Standard for Certification No. 2.14 as of January 2011.

The flexible nature of K-Sim Engine allows functions or equipment to be added at any time. We also provide the documentation required to obtain certification.

MODEL FEATURES & DETAILS

Main Engine Data

| | |
|-------------------------|------------------------|
| Type | Wärtsilä 12RT-Flex 82C |
| Cylinder bore. | 82 cm |
| Piston stroke | 265 cm |
| No. of cylinders | 12 |
| No. of air coolers | 6 |
| No. of turbochargers | 3 |
| MCR | 54240 kW |
| Corresp. Eng. speed | 102 rpm |
| Mean indicated press. | 19.5 Bar |
| Scavenge air press. | 2.3 Bar |
| Turbocharger speed | 9000 rpm |
| No. of propeller blades | 5 |
| Propeller pitch | 1.08 P/D |
| Spec. fuel consumption | 167 g/kwh |
| Fuel specification | 730 cSt (50 degC) |

Vessel's Main Particulars

| | |
|-----------------|----------|
| Length overall | 296.00 m |
| Breadth moulded | 32.20 m |

| | |
|-------------|------------|
| TEU | 4200 |
| Draught | 12.7 m |
| Dead-weight | 62000 tons |
| Speed | 25 knots |



MODEL MAIN SPECIFICATIONS

The following dynamic models and features are included:

- Sea & LT/HT fresh water systems
- FW generator
- Electrical power plant, Incl. diesel, shaft and turbo generators
- Start & service air compressors
- Incl. compressor intermediate coolers and emergency compressor*
- Electrical power and pump management
- Manual and automatic
- Battery charging system
- Steam plant, incl. oil fired boiler and exhaust boiler
- Diesel/heavy fuel oil systems
- Incl. tanks, separators, viscosimeters*
- Lubricating oil systems
- Common rail system, incl. servo oil and control oil system.
- Lubricating oil. separators
- Stern tube systems
- Propeller servo LO system
- Thermal oil heating system

- CPP bow thruster
- Steering gear/autopilot
- Incl. double acting IMO type steering gear and ship course control*
- Turbo charger systems
- Main engine control system, incl. bridge, ECR and local control
- Main engine control air system
- FO high pressure system, fuel leak detector and fuel distributor priming valves
- Cylinder indication diagrams, sankey diagram, load diagram and generator phasor diagram
- Piston ring monitoring
- ME bearing system
- Air ventilation system
- Bilge wells & bilge separator
- Air conditioning plant
- Sewage treatment plant
- Incinerator plant
- Cathodic protection system

Specifications subject to change without any further notice.

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