

# M/V CARMEN



The LCTC (Large Car Truck Carrier) m/v CARMEN with her 227.8 meters and 74,258 gross tonnage has a capacity of 7,879 cars or a combination of 3,508 cars and 432 buses. The vessel is built to the highest class

of Lloyd's Register of Shipping with the following designations: +100A1 Vehicle Carrier, Movable Decks, "deck no. 1, 3, 5 and 8 strengthened for Roll on Roll off cargo" +LMC, UMS, IWS, NAV1 and IBS.

## TECHNICAL SPECIFICATIONS

Length over all	227.8 m	Number of car decks	13 (of which 5 are movable)
Length between perpendiculars	219.3 m	Capacity deck area	~66,600 m <sup>2</sup>
Beam, moulded	32.26 m	Capacity of car units*	7,879
Air draught, ab. ballast water line	44.1 m	Capacity of cars/buses	3,508/432
Height to upper deck	34.7 m	Engine	Doosan/MAN B&W 8S60ME-C8
Draught, design/max	10.3/11.3 m	Built	Daewoo Shipbuilding & Marine Engineering, DSME #4457, 2011, Okpo, Rep. of Korea
Deadweight at maximum draft	31,166 t	Call sign	SMGW
Gross Tonnage	74,258	IMO Number	9505027
Net Tonnage	26,158	Flag	Swedish
Stern ramp width	9.5 m	Owner	Wallenius Lines AB, Sweden
Stern opening height	6.5 m	Operator	Wallenius Wilhelmsen Logistics
Stern ramp capacity	320 t		

\*)

RT 43 units (one RT43 gross unit ≈ 8.40 m<sup>2</sup>)

### Deck and Ramp system

Heavy cargo units may be loaded on the strengthened 1st, 3rd, 5th and 8th decks. Decks no. 2, 4, 6, 7 and 9 are divided into liftable sections allowing a variable cargo mix. These deck sections are hoisted and lowered by means of a mobile deck-lift.

The vessel has two loading ramps located on starboard side, one perpendicular side ramp and one stern quarter ramp arranged at a 27° angle to the centre line to allow for simple operation of long vehicles.

Deck no. 5 is the general cargo entrance deck, however the 6th may also be accessed via the side ramp permitting two separate cargo flows during loading and discharging.

### Anchoring/Winches

The deck machinery consists of two combined windlass/mooring winches and six conventional mooring winches. There is a provision crane on upper deck with a capacity of five tons for bringing supplies and spare parts.

### Cargo Ventilation

Fans are distributed along the vessel on upper deck providing good ventilation, in the main holds air volume can be changed at least 20 times per hour.

### Machinery

The engine room installation meets the requirements for the class notation Unattended Machinery Room (UMS) which also means the main engine can be remotely operated from the bridge or the engine control room. The main engine is a B&W 8S60ME-C8 electronically controlled directly reversible marine diesel with constant pressure supercharging and a maximum output of 19,040 kW at 105 rpm.

A high efficiency flap rudder together with a bow tunnel thruster (about 30t) is contributing to the vessel's high manoeuvrability.

In a separate compartment of the engine room there are two 450 V, 60 Hz, 1,700 kW AC-generators installed each powered by a STX/MAN-B&W diesel engine, type 9SL21/31H. In addition the vessel is equipped with a 1,100 kW shaft generator and an emergency diesel generator with a capacity of 215 kW.

### Navigational Equipment/Bridge

The wheelhouse design, including bridge wings, is of totally enclosed type and fully air-conditioned and allows for a 360° view. A modern Integrated Navigational Console, INC, with Automated Navigation and Track keeping System (ANTS) and an electronic chart-system (ECDIS) together with radars with anti-collision computers (ARPA) makes this Pilot/Co-pilot main console arrangement well adopted for the demanding work of operating in high traffic areas. This complete bridge lay-out is the result of several external and in-house ergonomic studies.

The radio equipment is fitted with satellite communication (Inmarsat C + Fleet broadband) and fulfilling

the Global Maritime Distress and Safety Systems rules (GMDSS). Internet communication through installed VSAT-system is available for the entire crew.

### Interior

The one tier accommodation is located on top of the garage deck far away from the engine room. Much effort has been put into providing good common spaces with high standard interior design and extra sound insulation between the cabins. Beds are provided for a possible complement of 38 persons.

A dedicated ISPS-office is located on deck 5 close to the stern ramp and gangway.

### Fire safety and life saving arrangements

The vessel is equipped with portable fire extinguishers and a fire main with hydrants. Additionally the cargo holds and the engine room is equipped with a CO<sub>2</sub>-system of "total flooding type". A fixed local application fire extinguisher system of water mist type is installed for protection of main and auxiliary machinery, boiler and fuel oil purifiers.

The free-fall life boat, capable of carrying 38 persons, is located aft. The 7.5 m water jet driven Rescue Boat is located in a dedicate recess on dk. 8 (PS) to increase safety during launching. There are also four 20-person life rafts and in addition one survival-suit for each crew member.

### Environmental performance

A low profile accommodation and wheelhouse combined with a front windscreen has been adopted to reduce the vessel's wind profile, together with an enthalpy heat exchanger in the air-con system and the compact twisted leading edge flap-rudder improvements in fuel consumption are made.

A "State of the Art" ballast water treatment system, Pure Ballast, fulfilling IMO's "Convention on Ballast Water Treatment" is installed.

Part of the cargo space has been sacrificed to provide the vessels with protected bunker oil tanks.

A main engine with improved combustion grants lower NOx emissions. Electronically controlled cylinder oil lubricators have reduced the use of cylinder oil to a minimum.

The vessel has an effective bilge water separator system, fulfilling MARPOL 73/78 Annex 1 including a White Box for computerised logging.

A Green Passport, as described in the IMO's "Guidelines on Ship Recycling", 2003, is issued by Lloyd's Register providing information on all materials and substances known to be potentially hazardous. Systems for waste sorting and recycling are implemented. The use of chemicals has been reduced to a minimum and the chemicals used are approved according to the strict requirements in our "white list".