



EXPRESS 4: Ro-pax

Shipbuilder: **Austal Pty Ltd**
 Vessel's name: **Express 4**
 Owner/Operator: **Molslinjen**
 Country: **Denmark**
 Designer: **Austal**
 Country: **Australia**
 Model test establishment used: .. **Vienna Model Basin Ltd.**
 Flag: **Denmark**
 IMO number: **9824564**
 Total number of sister ships already completed (excluding ship presented): **Nil**

January 2019 saw a new record set for Australian shipbuilder Austal, when it delivered the ro-pax catamaran *Express 4* to Danish ferry operator Molslinjen.

At 109m in length, *Express 4* is some 17.7m shorter than the 2005-built *Benichigua Express* – the longest vessel type Austal has designed and built. Yet at 11,345gt, the new fast ferry is more than 2,550gt larger than *Benichigua Express* and almost 1,000gt larger than the next largest Austal-built ship.

The ferry has an overall length of 109m, a waterline length of 105m, a moulded beam of 30.5m, a moulded depth of 7.6m, and a maximum draught of 3.4m.

Express 4 is based on Austal's proven catamaran platform but features a new optimised hull shape and reduced weight designed to deliver better performance and greater fuel efficiency. It is the first Austal design to feature two full car decks, which accounts for the large increase in gross tonnage over earlier vessels.

The car decks can accommodate 425 cars or 610 lane metres for trucks and 232 cars. The main vehicle deck has a clearance height of 4.6m while the mezzanine deck has a clearance of 2.1m. Maximum passenger capacity is 1,006 persons.

The vessel is fitted with four MAN Energy Solutions 20V 28/33D STC engines featuring sequential turbocharging and producing 9,100kW each at 1,000rpm. The power is transmitted through four ZF reduction gearboxes to four Wärtsilä LJX 1500 SRI waterjets. The arrangement gives a service speed of 40knots and during testing achieved a top speed of 47.8knots.

A similar vessel was ordered by Fjord Line of Norway to be built at Austal Philippines, using the same hull enhancements. In October 2019, Molslinjen contracted for an even larger 115m vessel that will have a slightly increased vehicle capacity and space for 1,610 passengers.

TECHNICAL PARTICULARS

Length oa: 109m
 Length bp: 105m
 Breadth moulded: 30.5m
 Depth moulded: 7.60m
 to main deck: 7.6m

Draught design: 3.9m
 Gross: 11,345gt
 Displacement: 2,500t
 Lightweight: 1,500t
 Deadweight: 1,000t
 Block co-efficient: 0.61
 Speed, service: 37knots at 75% MCR
 Bunkers (m³)
 Diesel oil: 598.512m³

Classification society and notations:1A HSLC
 R1 Ferry B EO
 Heel control equipment: Transom trim tabs
 Roll-stabilization equipment: Transom trim tabs

Propulsion
 Main engine(s)
 Design: MAN
 Model: 20V 20/33D STC
 Manufacturer: MAN
 Number: 4
 Type of fuel: Marine diesel oil
 Output of each engine: . 9,100kW @ 1,000rpm.
 Is this a diesel-electric or hybrid?:No

Gearbox(es)
 Make: ZF
 Model: 60000 NR2H
 Number: 4
 Output speed : 470rpm

Waterjet(s)
 Material: Stainless steel
 Designer/Manufacturer: Wärtsilä LJX1500
 Number: 4

Hydraulic Steering Layout:2 x mechanical
 linked jetivators

Main-engine generators
 Number: 4
 Make/type:Scania DI-09 074M
 Output/speed of each set: 250kW
 Stern appendages/special rudders: Trim tab

Mooring equipment
 Number: 1

Make: Hypac HHAW 12050
 Type: Hydraulic

Special lifesaving equipment:MES
 Number of each and capacity: 12 x 100
 person SOLAS B liferafts, 4 x 22m MES slides
 Make:LSA
 Type: LSA 100P SRL MK1 liferaft, 22m
 Mk2 slide
 If MES, vertical or sloping chutes?: ... Sloping

Vehicles
 Number of vehicle decks:Two fixed
 Total lane length: 610m (trucks)
 Total cars: 425
 Complement
 Officers: 3
 Crew: 22 (incl. officers)

Passengers
 Total: 1,006

Navigation and other equipment
 Bridge control system
 Make:Marinelink
 Type:Marinelink

Is bridge fitted for one-man operation?No
 Integrated bridge system: Yes
 Make:Marinelink

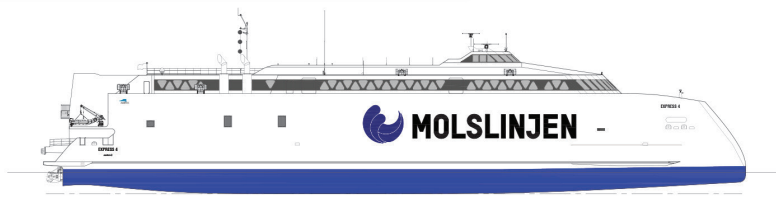
Radars
 Number:Two
 Make: Furuno S- Band Radar Model +
 FuRano X-Band
 Model(s): FAR3230S-SSD-BB 250W Solid
 State + FAR3210BB

Fire detection system
 Make: Aquip Systems

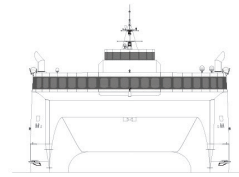
Fire extinguishing systems
 Cargo holds: N/A
 Engine room:CO₂
 Make/Type: Danfoss Semco
 Vehicle spaces:Drencher
 Make/Type: Minimax MXD
 Public spaces: Sprinkler
 Make/Type: Minimax MX-5

Efficiency
 Attained EEDI value:Exempt from EEDI
 Installed Fuel Meters: 1 – flow meter
 Energy Saving Technologies*:
 MARINELINK-Smart
 Performance Monitoring Regime: High
 frequency data

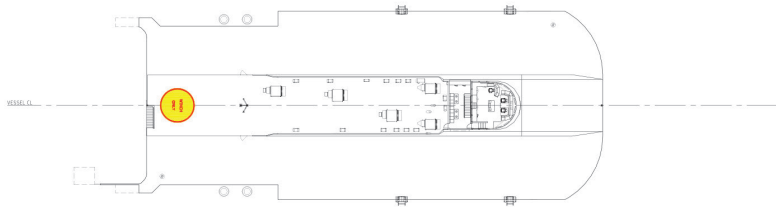
Contract date:29 June 2016
 Launch/float-out date:16 October 2018
 Delivery date:29 January 2019



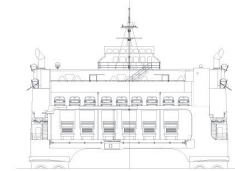
PROFILE



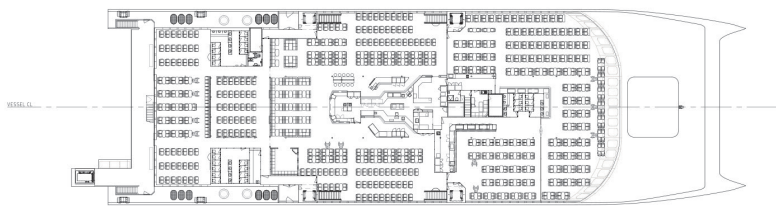
FORWARD ELEVATION



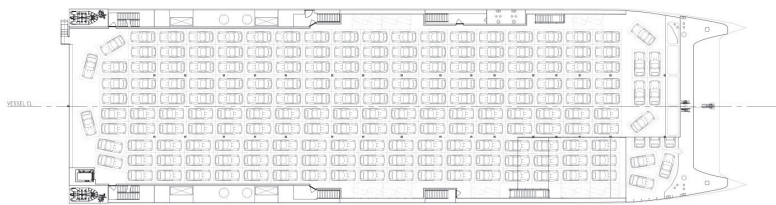
BRIDGE DECK



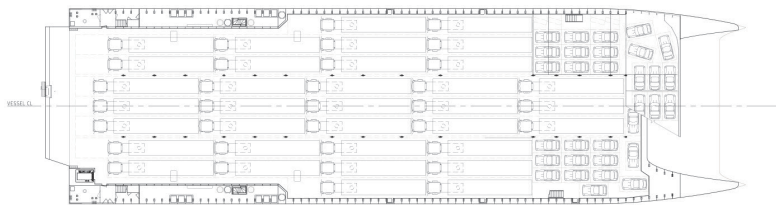
AFT ELEVATION



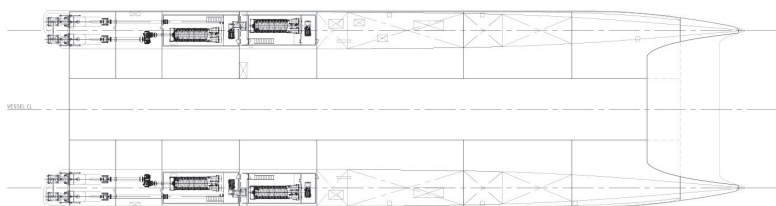
PASSENGER DECK



UPPER VEHICLE DECK



VEHICLE DECK



HULLS