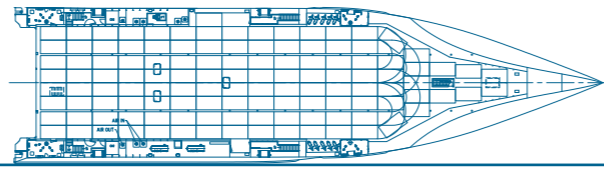


AUSTAL TRIMARAN TECHNOLOGY



THE TRIMARAN ADVANTAGE



Design flexibility, fuel efficiency, unrivalled operability, improved passenger comfort. These are just some of the proven advantages of Austal's patented trimaran technology.

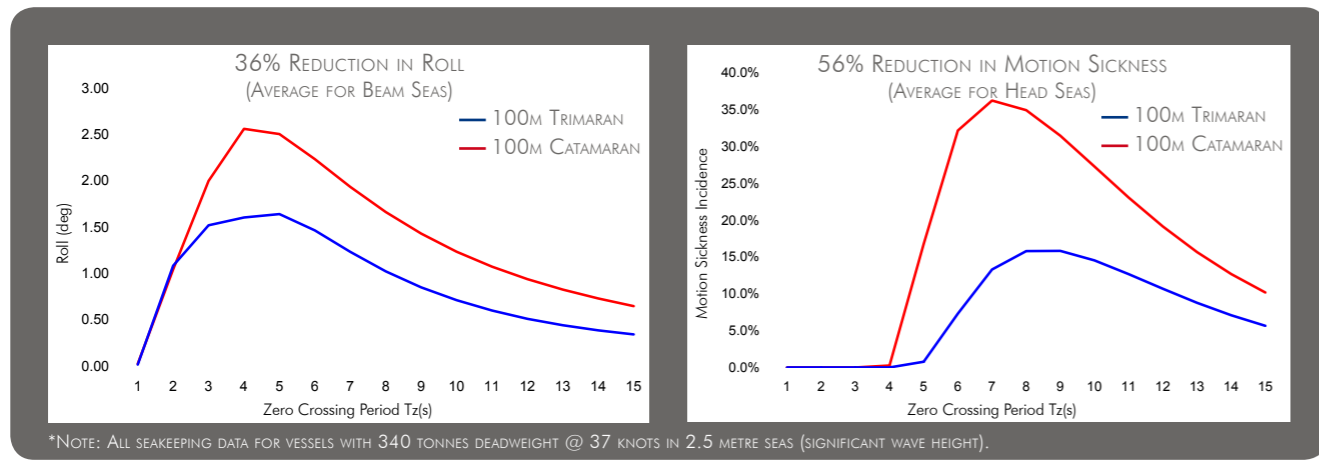
Most traditional high speed craft are either catamaran (two-hulls) or monohull (one hull) designs. Austal's unique trimaran design consists of three hulls – one long slender middle hull and two side supporting hulls.

This unique three-hulled arrangement combines the softer roll of monohulls with the low resistance, stability and carrying capacity of catamarans to deliver performance beyond that of traditional high speed craft.

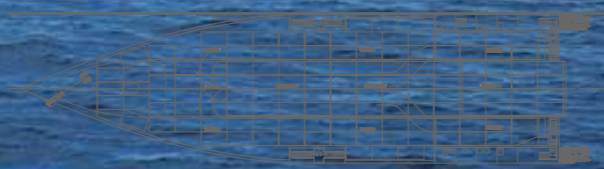
Proven in both commercial and defence operation, the trimaran's slower roll means lower accelerations experienced by passengers and crew – significantly reducing seasickness.

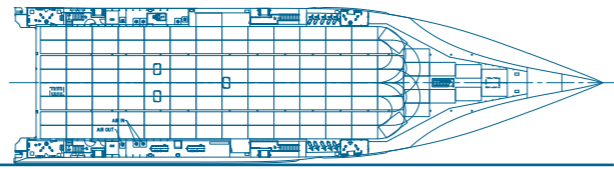
Compared to other high speed craft, the trimaran offers;

- GREATER speed for the same installed power
- IMPROVED fuel consumption when operating at the same speeds
- GREATER comfort when operating in the same sea conditions (less seasickness)
- ABILITY to operate in higher wave heights
- ABILITY to maintain higher speeds in waves
- REDUCED incidence of tunnel slamming
- REDUCED waves created behind the vessel which reduces impact on the environment



- DEPENDABLE** - DEVELOPED, DESIGNED AND BUILT BY THE EXPERTS
- LOW OPERATING COSTS** - BURN LESS FUEL THAN ALTERNATIVE HULLFORMS
- BETTER SERVICE RELIABILITY** - MORE OPERATING DAYS AND FEWER DELAYS
- MEETING YOUR NEEDS** - SUITABLE FOR A RANGE OF VESSEL SIZES AND TYPES
- NEW OPPORTUNITIES** - OPERATE WHEN AND WHERE OTHER FAST SHIPS CANNOT
- FEWER COMPROMISES** - ENHANCED SEAKEEPING NO LONGER DEPENDS ON SIZE
- GREATER PASSENGER AND CREW APPEAL** - A MORE COMFORTABLE RIDE, MORE OFTEN
- THE DISCERNING CHOICE** - CHOSEN BY LEADING COMMERCIAL AND DEFENCE OPERATORS





THE PROVEN SOLUTION

Successfully proven in commercial operation for over half a decade and now chosen by the US Navy to form part of its next generation fleet, the Austal trimaran hull form offers proven benefits.

The original Austal trimaran resulted from a three-year research and development program to create a new hullform to revolutionise the performance and operability of large high speed craft.

Since her delivery in 2005, Austal's inaugural 127 metre trimaran vehicle ferry "Benchijigua Express" has continued to highlight the advantages of trimaran technology to commercial operations. Despite operating along the roughest of the Canary Islands routes, "Benchijigua Express" has proven her ability to deliver passengers to their destination in comfort whatever the weather.

Sea keeping has been called the forgotten factor in the fast ferry market. Routes being considered for fast ferries today are typically longer and more exposed than the routes of yesterday.



Dedicated Research and Development team.



102 metre trimaran under construction.

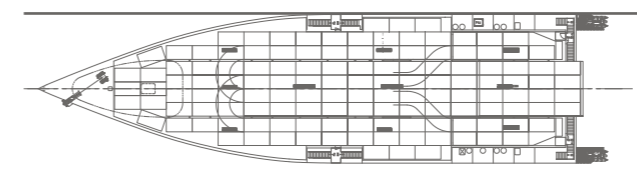


127 metre Littoral Combat Ship "Independence" preparing for launch.

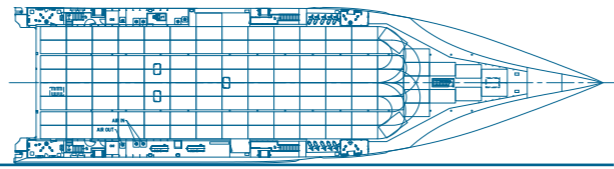
The expectations of comfort demanded by passengers are higher today than a few years ago. Ferries that are comfortable and seaworthy attract loyalty from the passengers who are also looking for a *super ferry* feel on fast ferries. Competition from short haul cut price airlines has further increased the pressure on the ferry market share.

Over the last decade, builders of fast ferries have supplied larger and larger vessels with more deadweight carrying capacity, A secondary effect of the increase in size has been the improvement in the vessel's sea keeping ability. However this has occurred as a consequence of the development and has not been its prime objective.

The trimaran hull form allows Austal to decouple capacity from the length and sea keeping of the vessel. This is an important characteristic for operators who have a rough sea route and a low deadweight requirement.



NEXT GENERATION 102 TRIMARAN



Taking trimaran technology to a new level, Austal's next generation 102 metre trimaran offers additional innovations and improvements, particularly with regards to passenger comfort. Building on the success of Austal's previous trimarans, the 102 metre design improves seakeeping, fuel efficiency, passenger comfort and operational reliability.

As well as maximising efficiency, the unique hydrodynamic hull form and three engine propulsion train deliver a speed of 39 knots (at 90% MCR) with 340 tonnes deadweight.



102 M PRINCIPAL PARTICULARS	
Length overall:	102.0 m
Beam (moulded):	27.4 m
Hull draft (maximum):	4.5 m
Passengers:	1,165 in 3 lounges
Cars:	254 (4.5 x 2.35 metres)
Truck lane metres:	188 plus 145 cars
Trucks:	12 tonne double wheel axle
	9 tonne single wheel axle
Speed:	39.0 knots
	(90% MCR, 340 tonnes deadweight)

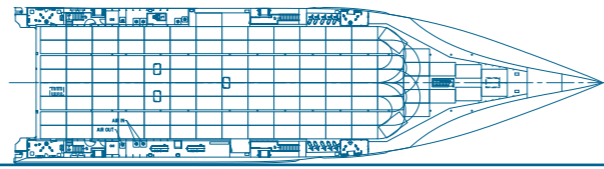
"Many concepts which have been very promising in calm water and low sea states have encountered considerable problems in higher waves.

MARINTEK has over the last 20 years tested more than 200 different high speed craft concepts for customers around the world, including monohulls, catamarans, multihulls, Surface Effect Ships and foil assisted vehicles...The Austal trimaran is the most advanced high speed concept we have been involved in regarding speed, size and rough weather behaviours."

MARINTEK, NORWAY



BENCHIJIGUA EXPRESS



The most significant vessel to arrive on the fast ferry market in recent years, "Benchijigua Express" was delivered in 2005 to Spanish ferry operator Fred Olsen, S.A and continues to successfully service the Canary Islands.

Austal's inaugural trimaran has earned a reputation for its ability to deliver passengers to their destination in comfort whatever the weather. With a roll motion more akin to a large conventional steel ferry, the vessel has introduced new levels of passenger comfort along a route known for its challenging conditions.



BENCHIJIGUA EXPRESS PRINCIPAL PARTICULARS

Length overall:	126.7 m
Beam (moulded):	30.4 m
Hull draft (approx.):	4.2 m
Passengers:	1,291
Vehicles:	341 cars
Heavy vehicles:	450 truck lane metres & 123 cars
Speed (100% MCR):	40.5 knots

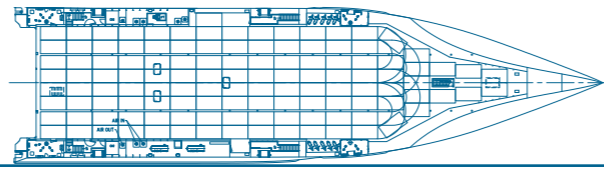
"(The vessel) Will improve overall efficiency in terms of passenger capacity, deadweight and freight lane metres by more than 35%. At the same time passenger comfort will increase by 25% to 40% depending on the routes we operate.

This trimaran should, for us, be the solution for many years to come and could very well set the standard for a new generation of large fast ferries. We believe our customers deserve the best. "

FRED OLSEN, S.A.



LITTORAL COMBAT SHIP (LCS)



Delivered to the US Navy in 2009, the 127 metre Austal-designed and built Littoral Combat Ship (LCS) "USS Independence" is a new breed of surface combatant.

With its proven trimaran hull form, the vessel offers superior sea keeping, manoeuvrability and endurance to travel 4,300 miles at 18 knots. The vessel also boasts three mission module zones, the capacity to carry any two mission modules simultaneously, and a flight deck larger than any other surface combatant.

LCS PRINCIPAL PARTICULARS

Length:	127 m
Beam:	31.4 m
Hull draft (max):	4.5 m
Mission bay:	11,000 m
Speed:.....	40 knots
Range:	3,500 nm
Crew:	40
Aviation:	2 x SH-60 or 1 x CH-53



"LCS will have the capability to secure the littoral regions upon which communities rely on for food, transportation and for their well-being, and to protect critical chokepoints in the global supply chain, to launch unmanned air, underwater and surface vehicles that will keep our trade at sea and our men and women ashore safe from harm."

ADM GARY ROUGHEAD, CHIEF OF USA NAVAL OPERATIONS

MISSION CONFIGURATIONS

- Anti-mine warfare (MIW)
- Anti-submarine warfare (ASW)
- Surface warfare (SUW)
- Future mission capabilities
- Special operations (Spec Ops)
- Intelligence, surveillance & reconnaissance (ISR)
- Humanitarian assistance / disaster relief (HA/DR)

