DEFENCE DATA SHEET



One of Western Australia's largest defence contractors

- Over \$200 Million defence contracting since 1987
- VEEM is at the forefront of global marine stabilisation technology development.
- Long-term supplier to the world's marine defence platforms including to Austal's US warship program.
- Supplying propellers, fin systems and gyrostabilisers to the world's superyacht, offshore work vessel and patrol boat markets.
- VEEM Gyrostabilizers increase on sea time, personnel safety and weapons performance in a wider range of sea conditions.

VEEM Ltd was listed on the ASX in 2016 with the view to commercialise a range of large gyrostabilizers for the world's superyacht, offshore work vessel and patrol boat markets.

VEEM is a successful producer of propellers, fin systems and specialised components for the aerospace, oil and gas, and defence industries.

Headquartered in Perth, Western Australia, VEEM operates from a 10,500 sqm manufacturing and fabrication facility in Canning Vale, comprising Australia's largest non-ferrous foundry, CNC machine shops, fitting shops, pattern shops, welding shops and design and administration offices.

VEEM employs 180 staff in Australia including graduates and apprentices and maintains a highly skilled research and development team in-house. VEEM will celebrate its 50th anniversary in 2018.

VEEM Defence - Since 1987, VEEM has completed more than \$200 million in defence work including the Oberon Class Submarines, Pacific Patrol Boats (PPB) first series, Destroyer Escorts DE's, Fremantle

Class Patrol Boats, ANZAC Frigates, Collins Class Submarines, Joint High Speed Vessels, Littoral Combat Ships (USA), Armidale Patrol Boats (USA), Cape Class Patrol Boats, Air Warfare Destroyers, Pacific Patrol Boats (PPB) second, series, Supacat High mobility off road vehicles as well as the Government of Kuwait.

VEEM supplies to leading defence contractors including ASC, Austal, Rolls Royce and Supacat. VEEM is an accredited Australian Defence Industrial Security Program provider.



VEEM Gyrostabilizers - VEEM Gyrostabilizers reduce the rolling motion of vessels in waves. Developed specifically for superyachts, commercial work vessels and patrol boats, VEEM Gyrostabilizers increase on sea time, personnel safety and weapons performance in a wider range of sea conditions

https://veemgyro.com/



VEEM Propellers – VEEM Propellers Lead the World in fixed Propeller Technology https://veempropellers.com/

VEEM Engineering – VEEM's 24/7 manufacturing facility has a wide range of capabilities that allow for the production of specialised components for the aerospace, oil and gas, and defence industries requiring strict adherence to a wide variety of standards.

http://www.veem247.com/

The future of stabilisation

VEEM Gyrostabilizers are the future of stabilisation. VEEM gyros are large quietly spinning flywheels installed in the vessel hull that, by Euler's law of physics, reduce the rolling motion of the vessel at rest or underway. VEEM produces a range of gyrostabilizers suitable for offshore workboats, patrol boats and superyachts from 70 to 3000 tonnes, with an annual potential global market estimated at AUD\$1billion.

Whether you want to increase work boat productivity through more working days on the ocean, improve personnel safety and weapons performance on military platforms, or just want to enjoy quietly and smoothly floating around in the ocean on your yacht, VEEM gyros deliver.



VEEM Managing Director Mark Miocevich with VEEM Gyrostabilizers at the manufacturing and fabrication facility in Perth, Western Australia.

See video of VEEM gyros at work here https://www.youtube.com/channel/UCjBt9Ac6iPXk2G0DgKhELBQ

VEEM Interceptor™ Propeller Technology

VEEM Interceptor™ technology has revolutionised high-powered shaft-line propeller applications. The cost of lifting a vessel and repitching a propeller is very high. This cost has to be absorbed by many vessel builders and operators wanting to maximise performance and meet class and engine manufacturers' requirements. VEEM Interceptor™ technology eliminates this significant cost because pitch can be changed while the boat is in the water.



Shipbuilding & Defence

- VEEM has completed defence work for the Australian Government's Oberon and Collins Class Submarines, ANZAC Frigates, Air Warfare Destroyers, Pacific Patrol Boats, Armidale Class Patrol Boats and the US Government's Littoral Combat Ship and Joint High Speed Vessels.
- As Austal Ships developed its range of world beating aluminium ships in the 1990s, VEEM developed superior hollow bronze castings for ride control ailerons (French for 'fin') and associated components. This relationship has been developing for 20 years with VEEM now supplying 15 tonne castings for Austal's US warship program.
- In May 2018, the VEEM Gyro VG260SD was selected by Friere Shipyard (Spain) as the roll stabilisation system for a 42m fishery patrol vessel for the Government of Kuwait.

- The announcement follows confirmation that a contract to supply gyrostabilizers, including our largest VG1000SD, was secured with Damen, Europe's second largest shipbuilder. Sea trials are underway off Rotterdam, Holland in June with confirmation of preliminary orders expected in July.
- VEEM products are supplied to some of the world's leading shipbuilders and marine suppliers including ASC, Austal, Rolls Royce, Volvo, Supacat and Wartsila. VEEM propellers and fin systems are in use on recreational, commercial and defence platforms globally.

Improving vessel operability and crew endurance

Patrol boats spend a large proportion of operational time at low speeds where traditional fin stabilisers do not work effectively. VEEM Gyrostabilizers significantly improve vessel operability and crew endurance, performance and comfort. Not only do VEEM Gyros provide excellent roll stabilisation while underway, they work even better at low speed and at zero speed while drifting or at anchor.

Specific advantages of VEEM Gyrostabilizers for patrol boats include:

- Increased operational availability and safety of tender launching
- Reduced tender launching and retrieval time
- Maximised availability of the fleet
- Improved crew endurance and performance
- Maximised weapons accuracy
- Improve safety and efficiency of all operations at sea
- Removed need for external roll fins
- Eliminated risk of fin grounding, net damage or weed snagging
- Reduced subsea acoustic signature
- Increased access to shallow littoral patrol areas
- No dry-dock requirement for maintenance



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