



VEEM GYRO UPDATE HIGHLY SUCCESSFUL VG1000SD SEA TRIAL RESULTS POTENTIAL MARKET SIZE US\$14.6BN

Highlights:

Sea Trials:

- The first ever VG1000SD VEEM Gyro, the world's most powerful marine gyrostabilizer, has been installed and commissioned on a 50m Damen FCS5009 offshore supply vessel in the Gulf of Mexico
- Sea trials of the VG1000SD VEEM Gyro on the FCS5009 resulted in roll reduction measurements exceeding customer expectations
- VEEM is now in discussion with Damen and other customers regarding further orders for VG1000SD units

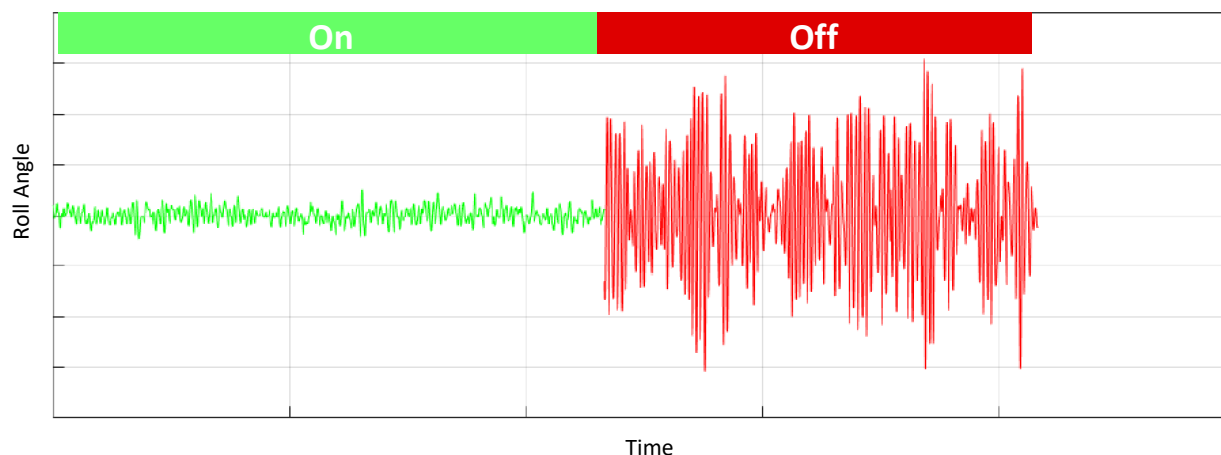
Market Size

- The total global order book for the commercial, defence and superyacht markets is 1,769 vessels which represents a potential new build market of over US\$1.1bn for sales of VEEM Gyros
- The total current fleet size of commercial, defence and superyacht vessels in the 24m to 90m range is 33,682 vessels which represents a potential retrofit market for sales of VEEM Gyros of over US\$13.5bn
- VEEM expects to exceed its gyro sales of 1H FY21 with the current order book at \$3.1m and YTD sales of \$5.7m (as at 30 April 2021)
- VEEM's Managing Director, Mark Mioceovich, will host a webinar to present an update on the above on Thursday 13 May, 11.00am AEST with [registration available here](#)

VEEM Limited (ASX: VEE) ('VEEM' or 'the Company'), a designer and manufacturer of disruptive, high-technology marine propulsion and stabilization systems for the global luxury motor yacht, fast ferry, commercial workboat and defence industries, is pleased to provide an update on both the completion of sea trials for the first ever VG1000SD VEEM Gyro installation and finalisation of an estimate of the current total potential market for VEEM Gyros.

Sea Trials of VG1000SD

The first ever VG1000SD VEEM Gyro, the world's most powerful marine gyrostabilizer, was retrofit onto the "MV Leonardo", a Damen built FCS5009 vessel owned by Naviera Integral, an offshore oil field supply contractor in the Gulf of Mexico. Commissioning and sea trials were then held in April 2021 during normal offshore operations in the Gulf of Mexico. During the sea trials roll motion data was recorded with roll reduction measurements exceeding customer expectations. The chart below shows the significant impact of the VEEM Gyro during the trials.



Anecdotally, Damen representatives and crew on board during the trials were very impressed with the vessel comfort and performance when the VEEM Gyro was turned on.

Damen, VEEM and Naviera Integral are all pleased with the result which affirms the significant benefits the VG1000SD VEEM Gyro will provide to commercial offshore operators. These results will now be used by Damen to recommend the installation of a VEEM Gyro when marketing their FCS range of vessels.

VEEM and Damen have a three year supply agreement under which Damen will offer the VEEM Gyro range as an option on its FCS vessels (refer to the ASX release of 30 October 2020).

The VG1000SD VEEM Gyro (now named the VG520/1000SD) is the most powerful marine gyrostabilizer in the world generating 1000 kN.m of stabilizing torque and 520 kN.m.s (kilonewton metre seconds) of angular momentum. There is no alternative to the VG1000SD in the large heavy-duty marine stabilization market.



The MV Leonardo with the VG1000SD VEEM Gyro installed on the deck (below the yellow crane boom) ahead of sea trials.

VEEM Managing Director Mark Mioceovich said: *“The performance of the VG1000SD VEEM Gyro in significantly reducing the roll of the 50m vessel for Damen and Naviera Integral during the sea trials, while not a surprise, is very pleasing given this is the maiden installation of the VG1000SD model and the size of the offshore support vessel fleet around the world.*

“Following on from this result, and given the enquiries we have been receiving, we are expecting orders for the VG1000SD VEEM Gyro to increase over the coming months as other offshore operators seek the economic benefits of enhanced stabilization in their offshore operations.”

Market Update

VEEM has now completed a market estimation for its VEEM Gyro range across the commercial, superyacht and defence segments. In summary the total current vessel order book comprises of 1,769 vessels representing a potential market size of US\$1.1bn for VEEM Gyros. The retrofit market, represented by the current fleet size of 33,682 vessels is estimated at US\$13.5bn. Combined this is a total potential market of US\$14.6bn. The tables below show the breakdown between segments and Attachment 1 provides further detail on the data including assumptions.

Table 1. VEEM Gyro Potential Market – Order Book Vessels

Vessel Size (length)	Superyacht ¹ Order Book	Commercial ² Order Book	Defence ³ Order Book	Total Order Book	VEEM Gyro Model ⁴
24 - 30m	281	164	-	445	VG52/120SD (prev. VG120SD)
30 - 45m	262	331	37	630	VG70/145SD (prev. VG145SD)
45 - 60m	95	148	20	263	VG100/200SD & VG140/260SD (prev. VG260SD)
60 - 75m	47	157	26	230	& VG520/1000SD (prev. VG1000SD)
75 - 90m	25	158	18	201	VG520/1000SD (multiple)
Total	710	958	101	1,769	

Table 2. VEEM Gyro Potential Retrofit Market - Vessels

Vessel Size (length)	Superyacht ¹ Fleet	Commercial ² Fleet	Defence ³ Fleet	Total Fleet	VEEM Gyro Model ⁴
24 - 30m	4,929	7,229	480	12,638	VG52/120SD (prev. VG120SD)
30 - 45m	3,273	8,349	720	12,342	VG70/145SD (prev. VG145SD)
45 - 60m	721	3,063	831	4,615	VG100/200SD & VG140/260SD (prev. VG260SD)
60 - 75m	221	2,027	298	2,546	& VG520/1000SD (prev. VG1000SD)
75 - 90m	89	1,277	175	1,541	VG520/1000SD (multiple)
Total	9,233	21,945	2,504	33,682	

VEEM Managing Director Mark Miocevic said: “The market data demonstrates an extremely large potential market for VEEM Gyros. The retrofit market alone is estimated at US\$13.5bn with the current market order book representing a further 1,769 vessels with a market value of US\$1.1bn. This demonstrates the potential for sales of VEEM’s Gyro range to continue to grow at a very significant rate over the coming years.”

VEEM Managing Director, Mark Miocevic, will host a webinar on Thursday 13 May 2021 at 11.00am AEST to present an update of the Company’s gyros and potential market size. Registration is available at:

https://us02web.zoom.us/webinar/register/WN_aLzpRqTOReuKzClgRsJOtQ

1. For superyacht market detail, source and assumptions refer to slide 9 attached.

2. For commercial market detail, source and assumptions refer to slides 6 - 8 attached.

3. For defence market detail, source and assumptions refer to slide 5 attached.

4. This table groups vessels in to sizes that would typically be suited to a particular Gyro model. This is for guidance only and it should be noted that optimal Gyro sizing can depend on many vessel factors, including hull shape, stability characteristics, displacement, available space and intended usage profile.



This ASX announcement was authorised for release by VEEM Managing Director, Mark Mioceovich.

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ABOUT VEEM LIMITED (ASX: VEE)

VEEM Ltd is a designer and manufacturer of disruptive, high-technology marine propulsion and stabilization systems for the global luxury motor yacht, fast ferry, commercial workboat and defence industries. VEEM's market leading Gyrostabilizers significantly reduce the rolling motion of vessels in waves, increasing on-sea time and improving personnel safety and efficiency in a wide range of ocean conditions.

VEEM is also a successful producer of high-performance propellers, fin systems and specialised components delivering consistent profits, cash flow and dividends while also reinvesting in research and development for new products and processes.

Proudly headquartered in Perth, Western Australia, VEEM operates from a 14,700 sqm purpose-built fabrication and manufacturing facility, including Australia's largest non-ferrous foundry. VEEM employs approximately 180 staff in Australia, including graduates and apprentices, and maintains a highly skilled research and development team in-house. Celebrating its 50th anniversary in business in 2018, VEEM listed on the Australian Securities Exchange in 2016. www.veem.com.au

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VEEM GYRO UPDATE

ATTACHMENT 1

POTENTIAL MARKET SIZE

12 MAY 2021

VEEM Gyro Market Segments

Commercial



Potential Market Size:
Order book – US\$0.7bn
Fleet – US\$9.6bn

Defence



Potential Market Size:
Order book – US\$0.1bn
Fleet – US\$1.4bn

Superyachts



Potential Market Size:
Order book – US\$0.3bn
Fleet – US\$2.5bn

Total Potential Gyro Market Size US\$14.6bn

Total VEEM Gyro Potential Market Snapshot – Order Book

Vessel Size (length)	Superyacht ¹ Order Book	Commercial ² Order Book	Defence ³ Order Book	Total Order Book	VEEM Gyro Model ⁴
24 - 30m	281	164	-	445	VG52/120SD (prev. VG120SD)
30 - 45m	262	331	37	630	VG70/145SD (prev. VG145SD)
45 - 60m	95	148	20	263	VG100/200SD & VG140/260SD (prev. VG260SD)
60 - 75m	47	157	26	230	& VG520/1000SD (prev. VG1000SD)
75 - 90m	25	158	18	201	VG520/1000SD (multiple)
Total Vessels	710	958	101	1,769	
Potential Gyro Market	US\$0.3bn	US\$0.7bn	US\$0.1bn	US\$1.1bn	

1. For superyacht market detail, source and assumptions refer to slide 9.

2. For commercial market detail, source and assumptions refer to slides 6-8.

3. For defence market detail, source and assumptions refer to slide 5.

4. This table groups vessels in to sizes that would typically be suited to a particular Gyro model. This is for guidance only and it should be noted that optimal Gyro sizing can depend on many vessel factors, including hull shape, stability characteristics, displacement, available space and intended usage profile.

Total VEEM Gyro Potential Retrofit Market Snapshot

Vessel Size (length)	Superyacht ¹ Fleet	Commercial ² Fleet	Defence ³ Fleet	Total Fleet	VEEM Gyro Model ⁴
24 - 30m	4,929	7,229	480	12,638	VG52/120SD (prev. VG120SD)
30 - 45m	3,273	8,349	720	12,342	VG70/145SD (prev. VG145SD)
45 - 60m	721	3,063	831	4,615	VG100/200SD & VG140/260SD (prev. VG260SD)
60 - 75m	221	2,027	298	2,546	& VG520/1000SD (prev. VG1000SD)
75 - 90m	89	1,277	175	1,541	VG520/1000SD (multiple)
Total Vessels	9,233	21,945	2,504	33,682	
Potential Gyro Market	US\$2.5bn	US\$9.6bn	US\$1.4bn	US\$13.5bn	

1. For superyacht market detail, source and assumptions refer to slide 9.

2. For commercial market detail, source and assumptions refer to slides 6-8.

3. For defence market detail, source and assumptions refer to slide 5.

4. This table groups vessels in to sizes that would typically be suited to a particular Gyro model. This is for guidance only and it should be noted that optimal Gyro sizing can depend on many vessel factors, including hull shape, stability characteristics, displacement, available space and intended usage profile.

Defence/Security Market Snapshot

Data source: Public Data

Vessel Size (length)	Operating Fleet Total Vessels# (excl. order book)	Order Book Total Vessels#	Operating Fleet Patrol Boats only^ (excl. order book)	Order Book Patrol Boats only^	VEEM Gyro Model*
24 - 30m	480	-	321	-	VG52/120SD (prev. VG120SD)
30 - 45m	720	37	336	21	VG70/145SD (prev. VG145SD)
45 - 60m	831	20	263	20	VG100/200SD & VG140/260SD (prev. VG260SD)
60 - 75m	298	26	88	23	& VG520/1000SD (prev. VG1000SD)
75 - 90m	175	18	57	8	VG520/1000SD (multiple)
Total	2,504	101	1,065	72	
Potential Gyro Market	US\$1.4bn	US\$0.1bn	US\$0.5bn	US\$0.1bn	

*This table groups vessels in to sizes that would typically be suited to a particular Gyro model. This is for guidance only and it should be noted that optimal Gyro sizing can depend on many vessel factors, including hull shape, stability characteristics, displacement, available space and intended usage profile.

All defence/security vessels includes vessels between 24. and 90m (including patrol boats). Excludes China, Hong Kong, North Korea and a number of smaller countries with very small fleets where data was not considered reliable.

^ Includes Offshore, Coastal, Fast and Riverine Patrol Vessels. Same assumptions as in # above.

Commercial¹ Retrofit Market Snapshot – Operating Fleet

Data source: IHS Markit Maritime and Trade

Vessel Size (length)	Offshore ¹	Miscellaneous ¹	Fishing ¹	Dry/Cargo/ Passenger ¹	Total	VEEM Gyro Model ²
24 - 30m	104	5,253	1,753	119	7,229	VG52/120SD (prev. VG120SD)
30 - 45m	764	4,506	2,425	654	8,349	VG70/145SD (prev. VG145SD)
45 - 60m	1,210	394	1,043	416	3,063	VG100/200SD & VG140/260SD (prev. VG260SD)
60 - 75m	686	192	843	306	2,027	& VG520/1000SD (prev. VG1000SD)
75 - 90m	701	123	273	180	1,277	VG520/1000SD (multiple)
Total	3,465	10,468	6,337	1,675	21,945	
Potential Gyro Market	US\$3.0bn	US\$2.7bn	US\$2.8bn	US\$1.1bn	US\$9.6bn	

1. Refer to slide 8 for assumptions, details and definitions on the data.

2. This table groups vessels in to sizes that would typically be suited to a particular Gyro model. This is for guidance only and it should be noted that optimal Gyro sizing can depend on many vessel factors, including hull shape, stability characteristics, displacement, available space and intended usage profile.

Commercial¹ Market Snapshot – Order Book

Data source: IHS Markit Maritime and Trade

Vessel Size (length)	Offshore ¹	Miscellaneous ¹	Fishing ¹	Dry/Cargo/ Passenger ¹	Total	VEEM Gyro Model ²
24 - 30m	6	130	26	2	164	VG52/120SD (prev. VG120SD)
30 - 45m	31	257	29	14	331	VG70/145SD (prev. VG145SD)
45 - 60m	26	72	35	15	148	VG100/200SD & VG140/260SD (prev. VG260SD)
60 - 75m	87	13	46	11	157	& VG520/1000SD (prev. VG1000SD)
75 - 90m	72	31	42	13	158	VG520/1000SD (multiple)
Total	222	503	178	55	958	
Potential Gyro Market	US\$0.3bn	US\$0.2bn	US\$0.2bn	US\$0.05bn	US\$0.7bn	

1. Refer to slide 8 for assumptions, details and definitions on the data.

2. This table groups vessels in to sizes that would typically be suited to a particular Gyro model. This is for guidance only and it should be noted that optimal Gyro sizing can depend on many vessel factors, including hull shape, stability characteristics, displacement, available space and intended usage profile.

Commercial Market Assumptions

Data source: IHS Markit Maritime and Trade

Criteria for the dataset - self-propelled, oceangoing, light displacement <3,000t, single-hull. Vessels built before 2000 are excluded for all types except Offshore >60m which excludes vessels built before 2010.

Ship types included:

“Offshore” includes Offshore Support Vessel, Crew/Supply Vessel, Platform Supply Ship, Standby Safety Vessel, Accommodation Ship, Offshore Tug/Supply Ship, Diving Support Vessel, Anchor Handling Tug Supply, Pipe Layer, Pipe Carrier, Pipe Layer Crane Vessel and Pipe Burying Vessel

“Miscellaneous” includes Work/Repair Vessel, Tug, Lighthouse Tender, Crane Vessel, Salvage Ship, Utility Vessel, Patrol Vessel (eg. Coast guard, fisheries etc, excludes those included in the defence market segment), Research Survey Vessel, Cable Repair Ship, Training Ship, Fire Fighting Vessel, Hospital Vessel, Search & Rescue Vessel, Icebreaker, Crew Boat, Buoy Tender, Supply Tender, Buoy & Lighthouse Tender, Exhibition Vessel, Pilot Vessel, Waste Disposal Vessel, Pollution Control Vessel, Mission Ship, Cable Layer, Icebreaker/Research, Effluent carrier, Theatre Vessel, Tank Cleaning Vessel, Anchor Handling Vessel, Pile Driving Vessel, Incinerator, Mooring Vessel and Trans Shipment Vessel

“Fishing” includes Fishing Vessel, Fishery Support Vessel, Fishery Patrol Vessel, Fish Carrier, Fish Factory Ship, Fishery Research Vessel and Fish Farm Support Vessel

“Dry/Cargo/Passenger” includes Passenger Ship, Passenger/Ro-Ro Ship (Vehicles), General Cargo/Passenger Ship, Passenger/Cruise and Passenger/Ro-Ro Ship (Vehicles/Rail)

The following status are included:

Fleet - In Service/Commission, Launched, In Casualty Or Repairing, Converting/Rebuilding. Laid-Up vessels are not included

Order Book - Keel Laid, Projected, Under Construction, On Order/Not Commenced

Data is as at 18 April 2021.

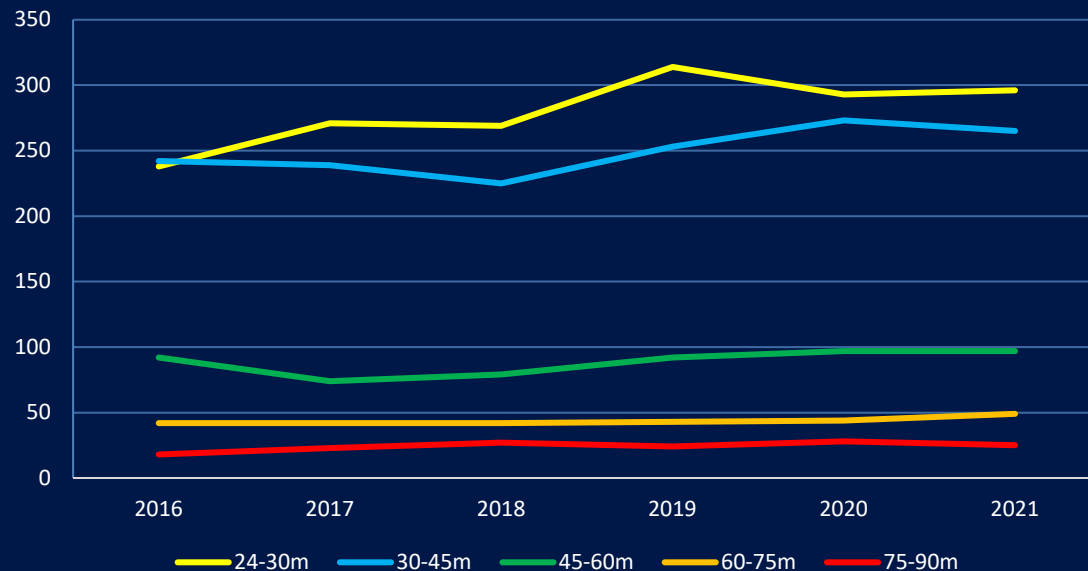
Superyacht Market Snapshot

Data source: SuperYacht Times

Current order book of 710 vessels represents a target market of over US\$260m for VEEM Gyro Sales. Fleet growth over the past five years has been 2.7% (CAGR).

Current addressable superyacht operating fleet of 9,233 vessels provides a large retrofit market. Fleet size increased 1.7% during 2020.

Construction book of superyachts by size (1 Jan 2021)



Vessel Size (length)	Operating Fleet Total Vessels	Order Book 1 Jan 2021	VEEM Gyro Model*
24 - 30m	4,929	281	VG52/120SD (prev. VG120SD)
30 - 45m	3,273	262	VG70/145SD (prev. VG145SD)
45 - 60m	721	95	VG100/200SD & VG140/260SD (prev. VG260SD)
60 - 75m	221	47	& VG520/1000SD (prev. VG1000SD)
75 - 90m	89	25	VG520/1000SD (multiple)
Total Vessels	9,233	710	
Potential Gyro Market	US\$2.5bn	US\$0.3bn	

*This table groups vessels in to sizes that would typically be suited to a particular Gyro model. This is for guidance only and it should be noted that optimal Gyro sizing can depend on many vessel factors, including hull shape, stability characteristics, displacement, available space and intended usage profile.