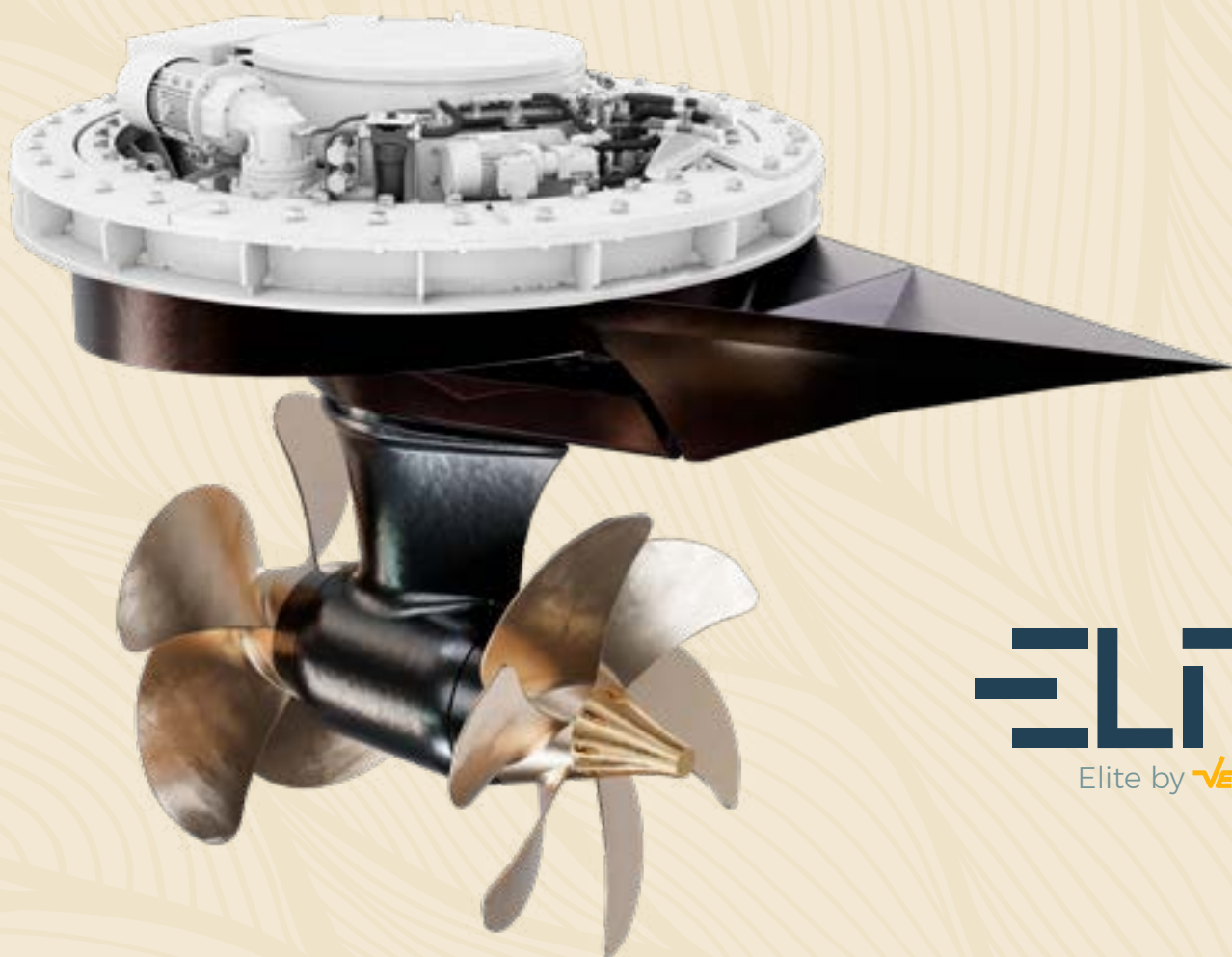
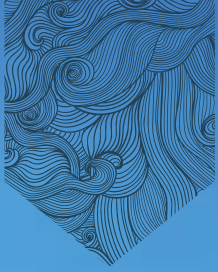


# ELITE™ YACHT PROPULSION SYSTEM

COMPACT.  
SILENT.  
SUSTAINABLE.



**ELITE™**  
Elite by **VETH**



## ELITE™ YACHT PROPULSION SYSTEM

COMPACT. SILENT. SUSTAINABLE.

Based on years of experience and fine-tuned for optimal performance, ELITE™ is a 360° thruster dedicated to the needs of modern yachting. Combining the best in Rolla's "S" Class Propellers and Veth's Contra Rotating technology with the successful Veth Integrated L-drive thruster, the ELITE™ series offers a wide range of benefits. Advantages include increased efficiency, extreme manoeuvrability, ultra-low noise and lower vibrations levels, combined with a compact build-in height that frees up space and offers flexibility in design.

ELITE™ is a versatile solution adjusted to the specific requirements of the individual yacht. It draws on proven technology to offer innovation that you can count on.



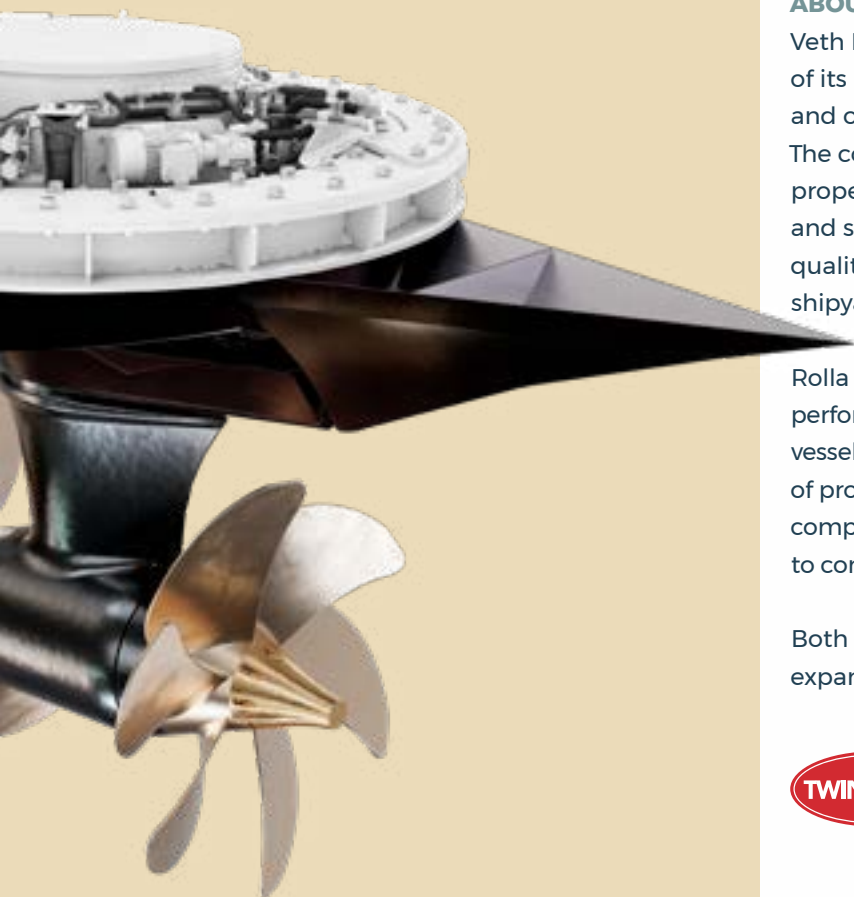


YACHT DESIGN BY  
**AZURE**



***“We’ve minimized pressure pulses on the hull by employing this design, which benefits from project-specific developed propellers, the headbox’s shape, and many other optimizations.”***

**NAVNEET CHADHA**, R&D HYDRODYNAMIC ENGINEER,  
VETH PROPULSION



#### **ABOUT US**

Veth Propulsion has a long history of successful installations of its innovative products on commercial vessels, both inland and offshore, as well as on dredgers, and on mega yachts. The company engineers and manufactures azimuth rudder propellers, thrusters and marine electronics. It also supplies and services diesel engines and generator sets. Since 1951, its quality equipment has been widely respected by end users, shipyards and naval architects worldwide.

Rolla SP Propellers is leading in propeller technology for high-performance pleasure and commercial craft as well as military vessels. Rolla offers a wide variety of services for every aspect of propeller design, manufacture and application. From complete hydrodynamic analysis and engineering capabilities to computational fluid dynamic (CFD) hull analysis to sea trials.

Both companies are part of Twin Disc, Inc. and continue to expand its worldwide sales and service network.







# IN TUNE WITH TODAY

EMPOWERING FUTURES





The topic of climate change and sustainability is top of mind in all sectors and walks of life currently. The yachting world is no exception. Increasing environmental awareness sees Owners demanding ever more efficiency for their yachting operation as they seek to preserve the pristine marine environments that offer them so much enjoyment.

Taking the most efficient features of our proven product range, demonstrated and perfected in operations over many years, Veth and Rolla created the basis for a new solution, in tune with the yachting world of today.



#### **SUSTAINABLE, SILENT AND READY FOR TOMORROW**

ELITE™ represents a fully electric thruster designed to enhance yacht efficiency while significantly lowering emissions. Moreover, it leverages advancements from Veth's Contra Rotating Z-drive and Integrated L-drive product lines to achieve optimal noise and vibration reduction. This improvement not only benefits marine ecosystems but also significantly enhances the onboard experience, serving as a reward for environmental stewardship. This ensures its preparedness for the future, regardless of the challenges that may arise.

#### **COMPACT FOR EXTRA FREEDOM**

A considerable advantage of the ELITE™ thruster is its compact nature. As a result, ELITE™ provides additional space onboard the yacht. With this, the designer is free to get to work, adding value to the yacht with extra room for toys and tenders, or an almost endless range of possibilities to make the Owner's dreams a reality.

#### **CLOSER TO THE WATER**

Additionally, being low in height, ELITE™ allows considerable lowering of the aft of the yacht. With this, the perfect beach club can be created, bringing those on board closer to the water with easier connection to sea and surroundings, maximising onboard enjoyment.

#### **TESTED TO PERFECTION**

ELITE™ has been tested extensively, using CFD and performance testing in the tank basin at MARIN (Marine Research Institute Netherlands). Based on these results, the technology has been optimized, focusing on the smallest details to increase efficiency and further reduce noise and vibration.



# COMPONENTS

## BUILDING BLOCKS OF INNOVATION

The optimized ELITE™ propulsion system ensures a light load on the propellers, leading to a multitude of benefits such as avoidance of cavitation, minimal noise and vibration levels, superior efficiency, and remarkable fuel economy, ultimately resulting in reduced emissions.

### **CONTRA ROTATING PROPELLERS**

The Contra Rotating Propellers used in the ELITE™ series generate a greater amount of thrust, resulting in improved acceleration and higher top speeds. In addition ELITE™ offers strong benefits in terms of efficiency, manoeuvrability and a comfortable user experience

### **IMPROVED FUEL EFFICIENCY**

ELITE's Contra Rotating Propellers align with the industry's increasing focus on eco-friendly solutions without compromising on performance. The ability to generate more thrust with less power translates into reduced fuel consumption. Yacht Owners can benefit from extended cruising ranges and reduced operating costs, while also contributing to environmental sustainability by minimizing their carbon footprint.

### **SUPERIOR MANOEUVRABILITY**

The configuration enables yachts to execute precise turns, pivot on the spot, and maintain better control in challenging situations. The increased agility and responsiveness enhance safety, making ELITE™ a valuable asset for yacht Owners and Captains seeking optimal control over their vessels.

### **SMOOTH AND QUIET OPERATION**

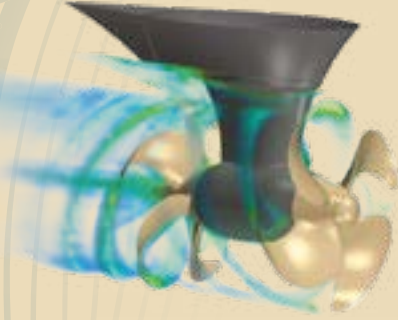
In addition to their performance benefits, Contra Rotating Propellers also offer a more comfortable and enjoyable user experience. These systems are known for their smooth and quiet operation, minimizing vibrations and noise levels. Yacht enthusiasts can revel in the tranquillity of their surroundings, allowing for more immersive experiences on the water.





### PM MOTOR

The ELITE™ thruster is driven by a permanent magnet (PM) motor, which is integrated as much in the design as possible, to ensure minimal build-in height. The design makes use of every millimetre, without compromising on the quality and reliability of the thrusters. On average, a PM motor is 40% to 60% more compact than an asynchronous motor. The application of PM motors, when combined with the special installation method, the alignment of the headsets and the adjustments to the control box, results in a very compact solution.



### REVAMPED TAIL

The ELITE™ series features an efficiently streamlined tail that has been optimized to facilitate the best possible water flow towards the second propeller. This innovative design, based on CFD calculations, results in decreased drag and reduced noise generation.



### CONTROL SYSTEMS

The system that controls the ELITE™ thruster consists of a redundant data bus and emergency stop and backup functions. The steering is controlled by a (multiple) electrical inverter system. With e-shafted levers, easy-to-read displays, implementation of compact operating positions and interfaces, the system can be tailored to specific project needs.

ELITE™ PROPULSION RATINGS	TYPE	INPUT POWER [KW]	INPUT SPEED [RPM]	PROPELLER DIAMETER FORE [M]	PROPELLER DIAMETER AFT [M]	
ELITE™ configurations are optimized for vessel speeds between 12 and 20 knots. For every speed and power application there is an optimum RPM and propeller diameter. All power ratings are 24/7 heavy duty under relevant class societies.	VL-250si-CR	350	1500	0.9	0.81	
	VL-450i-CR	500	1200	1.2	1.08	
	VL-700i-CR	600	900	1.35	1.215	
	VL-720i-CR	850	900	1.35	1.215	
	VL-900i-CR		1000	900	1.4	1.26
					1.45	1.305
					1.5	1.35
	VL-1250i-CR		1425	1000	1.65	1.485
					1.7	1.53
	VL-1550i-CR		2000	750	1.9	1.71
		2.0			1.8	
		2.5			2.25	

# WE MAKE YACHTS PERFORM BETTER



THE TWIN DISC FAMILY OF PRODUCTS



MORE ABOUT ELITE™