TRIAC composites

VIETNAM

- **Composite Solutions for Global Industries** – Triac manufactures high-performance composite tooling (plugs and molds), products and parts for marine (commercial and pleasure – hulls, superstructures, masts, foils etc), mining, transport, law enforcement and commercial applications.
- Internationally owned and based in Vietnam, Triac has particular expertise working with carbon fiber, prepreg and other materials.

1st Cruising Trimaran to Antarctica
Rapido 53XS, Feb, 2026
Photo, M. Bourque











14 Oct 2026

# Rapido & Triac Composites

- Established in 2014
- Internationally owned, Hong Kong-based
- Responsible for development, marketing and sales of Rapido Trimarans and Catamarans

- Wholly owned by Rapido
- International management team and experienced Vietnamese workforce
- Advanced composite manufacturing facility in Ho Chi Minh City, Vietnam
- Manufactures Rapido vessels and composite products for third-party customers

**Exclusive Manufacturer**

Rapido Trimarans
Rapido Catamarans

**Third-Party Manufacturing**

Custom composite tooling, structures, components and complete vessels

# ADVANCED MANUFACTURING
# 7 Axis Kuka Milling Robot



Triac operates a 7-axis KUKA robotic milling system on a 23-metre track, providing the precision and reach required for large, complex composite tooling and components.

Applications include:

- CNC-machined plugs and moulds
- Complex three-dimensional surfaces
- Large-scale composite tooling
- Precision machining for custom components

In-house tooling capability gives Triac greater control over quality, production schedules and manufacturing costs.



# ADVANCED MANUFACTURING
## Autoclave and Composite Tooling







Triac combines advanced composite manufacturing equipment with in-house tooling expertise, enabling production of complex, high-performance components.

Key facilities include:

- Autoclave: 8.5m long × 1.8m diameter; maximum pressure 6 bar (0.6 MPa)
- Prepreg carbon fibre processing: For lightweight, high-strength structural components
- Vacuum infusion: For larger composite structures and components
- In-house plugs and moulds: For both one-off projects and repeat production

From tooling through to finished components, Triac maintains control over critical stages of the manufacturing process.

# ADVANCED MANUFACTURING
# CNC Machining and Prepreg Processing





Prepreg composite lay up into mold




Triac combines large-scale CNC machining, precision material preparation and controlled prepreg processing to manufacture high-performance composite components.

**CNC Machining & Cutting**

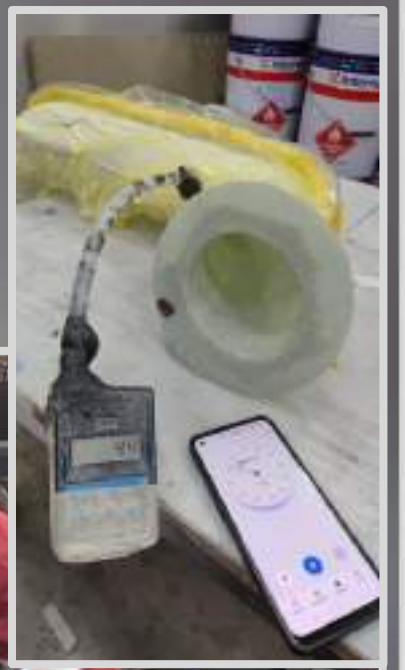
- 10-metre CNC machining table for large carbon fibre, foam and composite components
- Smaller CNC machine for precision cutting and preparation of composite materials
- Supports complex shapes, accuracy, repeatability and efficient production

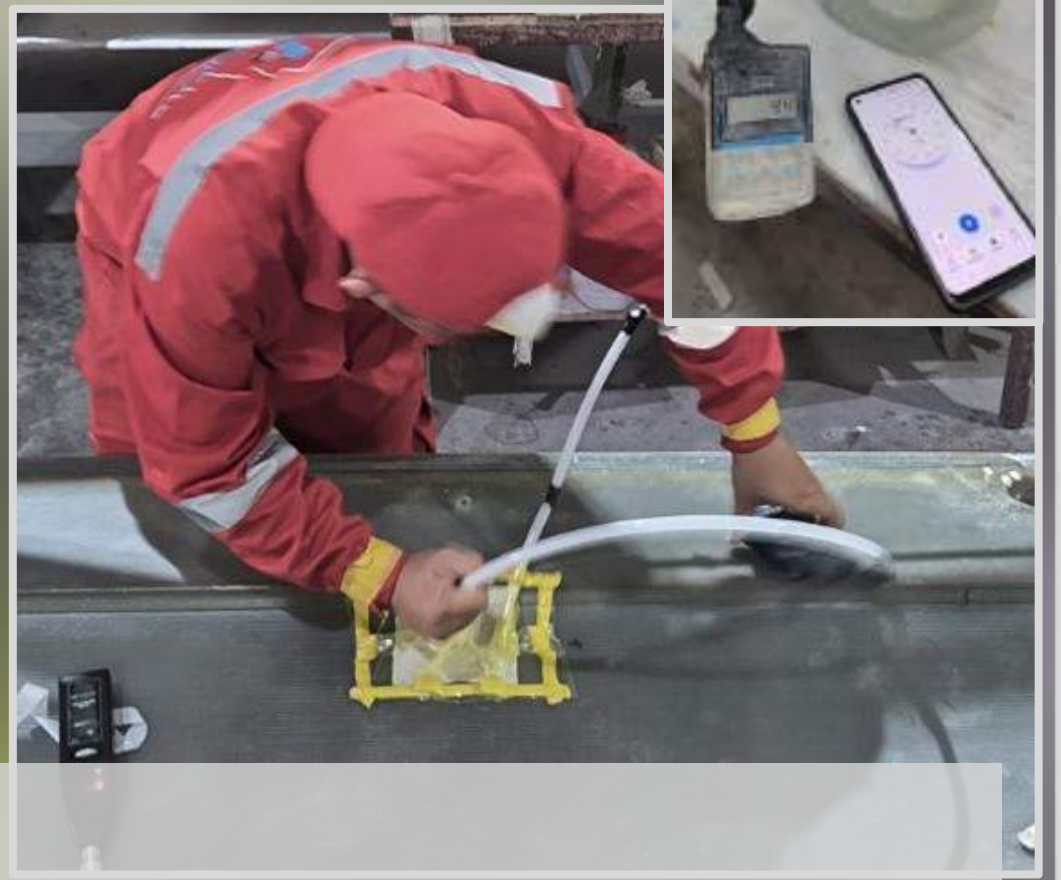
**Prepreg Clean Room**

- Dedicated, contamination-controlled environment for prepreg carbon fibre layup
- Minimises dust and contamination during processing
- Supports the manufacture of lightweight, high-strength composite structures

# ADVANCED MANUFACTURING
## Infusion and Pressure Testing







Triac uses vacuum infusion and pressure testing to manufacture and assess composite structures, from smaller specialist components to large-scale assemblies.

**Capabilities include:**

- Vacuum infusion of large, complex composite structures
- Controlled resin distribution for consistent laminate quality
- Pressure testing to assess component integrity
- Manufacturing processes suited to marine, commercial and industrial applications

These capabilities complement Triac's prepreg and autoclave processes, allowing us to select the most appropriate manufacturing method for each project.

# CUSTOM COMPOSITE TOOLING — Third-Party Manufacturing



*A hull is popped from the mold for a company in the US.*





Triac manufactures custom plugs, moulds and production tooling for international customers, including independent boatbuilders in the United States and Asia.

Capabilities include:

- Large-scale composite plugs and moulds
- Complex tooling produced using in-house robotic milling
- Tooling for one-off projects and repeat production
- Marine, commercial and industrial applications

From initial tooling through to production-ready moulds, Triac provides a comprehensive in-house manufacturing capability.

# ADVANCED COMPOSITE COMPONENTS
## Masts, Foils & Structures


Masts & booms


Beams & Struts


Centre daggerboard & T-foil rudder / E. Carausu

Triac manufactures highly engineered carbon-composite components for demanding marine applications, combining lightweight construction, structural strength and complex geometries.

**Products include:**

- Carbon fibre masts and booms
- Structural beams and struts
- Asymmetric C-foils and daggerboards
- T-foil rudders and lifting poles
- Custom high-performance composite components







Asymmetric C-foils generate hydrodynamic lift, reducing hull immersion and helping improve sailing performance.

# FROM COMPONENTS TO COMPLETE VESSELS




**From Individual Components to Complete Vessels**

Triac manufactures the composite tooling, structures and components for the entire Rapido Trimaran range, including the R40, R40 Racer, R50, R53XS, R60 and R63.

This includes:

- Carbon fibre masts
- Booms
- Structural beams
- Bulkheads
- C Foils
- T foil rudders; and
- Other highly engineered components.

All composite manufacturing and tooling is undertaken in-house, demonstrating Triac's ability to manage complex, integrated manufacturing projects.

# COMMERCIAL & SPECIALIST COMPOSITE MANUFACTURING



**Composite Control Consoles — Damen Shipyard's Tugboats**
Complex composite housings manufactured for commercial tugboats.
Ongoing, since 2023.



**Lightweight Composite Gangplanks**
High-strength, lightweight access structures for marine vessels.



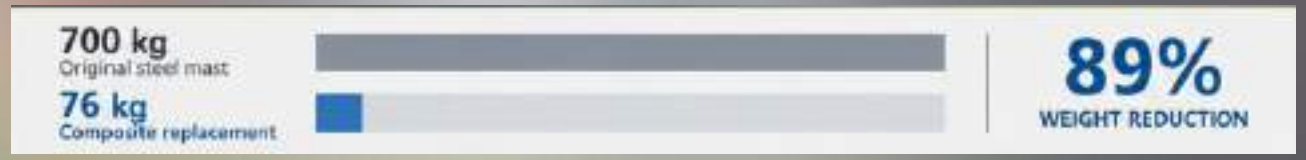


**Complex Composite Air Ducts - Aerospace**
Lightweight, intricately shaped ducting manufactured using prepreg glass fibre for aerospace client.



# CASE STUDY — From 700 kg to 76 kg

**Lightweight Composite Mast | 85 m Passenger Vessel**




**The Challenge**

An 85-metre luxury passenger vessel operating on the Mekong River required a mast that could be repeatedly lowered to pass beneath bridges.

Its original 700 kg steel mast imposed excessive structural loads, required crew assistance and relied on a problematic hydraulic lifting system.

**The Composite Solution**

Working with the client's engineering team, Triac manufactured a replacement mast using vacuum-infused E-glass and a structural PVC foam core.

**The Results**

- 89% lighter: 700 kg reduced to just 76 kg
- Compact electric actuator replaced the hydraulic ram
- Significantly reduced structural loads
- Safer, easier mast operation with less crew involvement
- Reduced maintenance and eliminated the risk of leaks from the previous hydraulic mast actuator

A relatively simple composite structure delivered substantial operational benefits.

# SPECIALIST COMPOSITE PRODUCTS



**Rail Transport Interiors**
Lightweight composite washrooms, wall panels, bunks and interior components.



**Industrial Ventilation Systems**
Carbon fibre ventilation tubes for mining and tunnelling applications.



**Custom Yacht-Quality Furniture**
Carbon fibre and teak furniture demonstrating precision finishing and craftsmanship.



**High-Performance Yacht Foils**
Advanced carbon-composite foils for large racing yachts.

# Rapido Trimarans. Built by Triac Composites



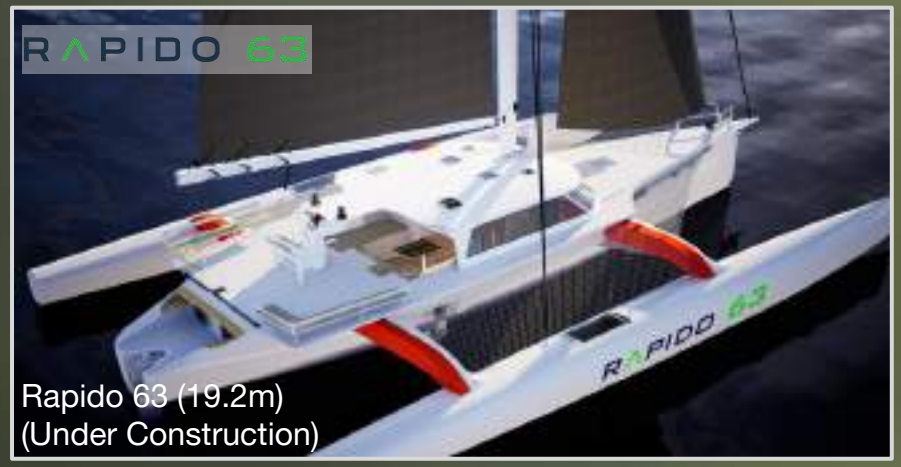
Rapido 60 (18.3m)



Rapido 50 (15.2m)



Rapido 53XS (16.1m)



Rapido 63 (19.2m)
(Under Construction)



Rapido 40 Racer (12.2m)



Rapido 40 Cruiser (12.2m)

MORRELLI & MELVIN
DESIGN • ENGINEERING • YACHT SALES

Designed by internationally recognised naval architects Morrelli & Melvin (USA), Rapido Trimarans are manufactured by Triac Composites in Vietnam using advanced composite construction techniques.

# RAPIDO 500 ECO
## Lightweight Composite Power Catamaran






The Rapido 500 ECO is a 15-metre power catamaran built by Triac Composites using lightweight composite construction.

Manufacturing highlights

- Lightweight composite hulls, deck and superstructure
- Approximately 7-tonne displacement, including batteries
- Complex structural assemblies and integrated interior components
- Well-built, comfortable and practical accommodation
- Lightweight construction makes the R500 ECO ideally suited to electric propulsion

By reducing vessel weight, Triac helps lower propulsion power requirements, making electric operation more practical and energy-efficient.

# LIGHTWEIGHT COMPOSITE INTERIORS — Comfort Without Excess Weight



Triac manufactures lightweight composite interiors for Rapido Trimarans, combining structural strength, practical functionality and comfortable accommodation. Using advanced composite construction and carefully selected materials, Triac maintains the weight discipline essential to high-performance sailing without compromising everyday comfort.

# OUR FACILITIES
# Ho Chi Minh City, Vietnam

Triac Composites operates from a dedicated manufacturing facility within the UniDepot Industrial Park in Ho Chi Minh City, Vietnam.

ISO 9001-certified.

**Facility highlights**

- Approximately 3,000 m² of manufacturing and warehouse space
- Established industrial park with controlled access and 24/7 security
- Fire protection and sprinkler systems
- River frontage with unobstructed access to the sea
- Located approximately 40 minutes from central Ho Chi Minh City

**The facility supports the manufacture, assembly and movement of large composite structures and components.**





# LET'S DISCUSS YOUR PROJECT

From one-off specialist components to ongoing manufacturing partnerships, Triac welcomes enquiries about your drawings, specifications, tooling and production requirements.




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