

CARBONICS

Advanced Composite Engineering & Manufacturing for Marine & Industrial Applications



GOETZ MARINE TECHNOLOGY PRODUCT BULLETIN • NUMBER THIRTEEN 1999

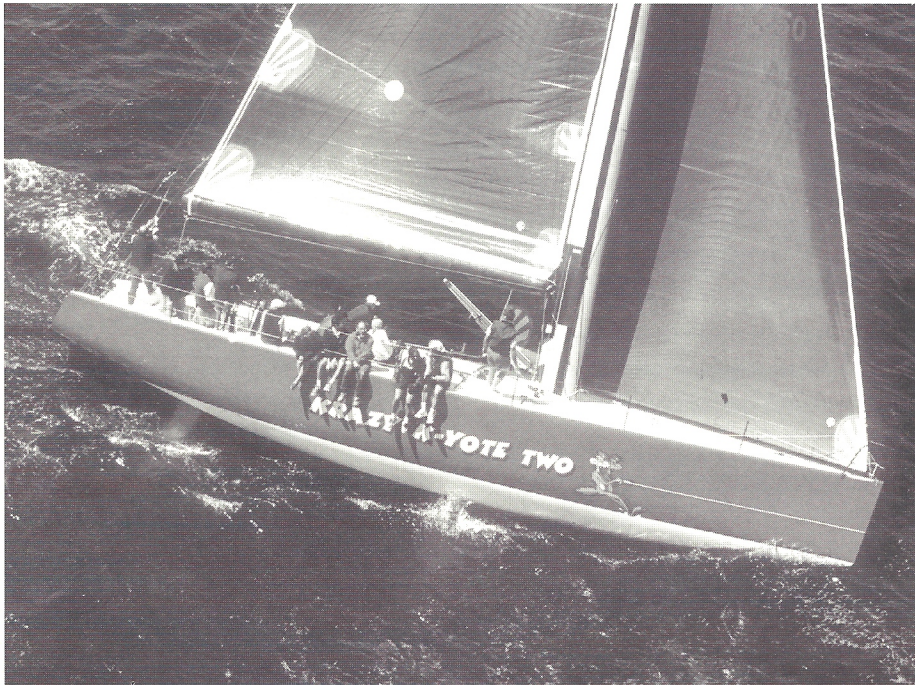


Photo: forster@yachphoto.com

Goetz Custom built and Goetz Marine sparred Crazy K-Yote Two shows off her colors on Narragansett Bay.

FREE STANDING CARBON WING MAST ON IMS 50 ANOTHER FIRST FOR GOETZ TEAM!

When the design team for a breakthrough IMS 50 footer needed an innovative spar builder, they came to GMT. The boat, Crazy K-Yote Two, newly released from Eric Goetz's Custom Boatshop, was purpose-built as the big boat entry for the French Admiral's Cup Team. GMT Chief Engineer & President David Schwartz worked closely with Naval Architect Juan Kouyoumdjian to develop the manufacturing methods to produce the unique spar. Throughout the collaborative effort GMT's expertise in complex composite construction enabled the theoretical principals of

the rig to become reality.

The central structure of the spar is a carbon I beam made from unidirectional pre-preg cured under vacuum at elevated temperature. Kevlar and glass fore and aft fairings create the wing shape to the spar. The aerodynamic foil of the spar reduces turbulence in the airflow over the mast increasing upwind performance. In addition, the mast is designed to twist allowing the leading edge of the spar/mainsail to assume a tight upwind angle to the wind.

Sail trials were successfully con-

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GOETZ REACHES ACROSS THE POND

Expanding its marketing and sales effort to include Europe, GMT has formed a partnership with SAILTEC, GmbH of Hamburg, Germany. Sailtec will represent GMT's range of carbon spars for the new yacht and retrofit markets. Sales of Goetz's other products: carbon rudders, foils, passerelles and custom composite structures will also be handled by the German company.

Founded in 1984 by Christian Gnass, a well known European offshore racer with 25 years in the industry, Sailtec has grown into one of Europe's major manufacturer's representatives. Gnass's goal has been to provide sales and service for manufacturers offering high-tech masts, rigs and sail handling systems.

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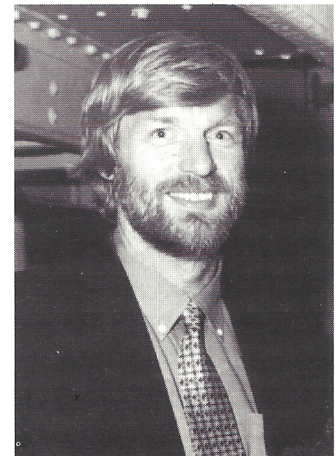


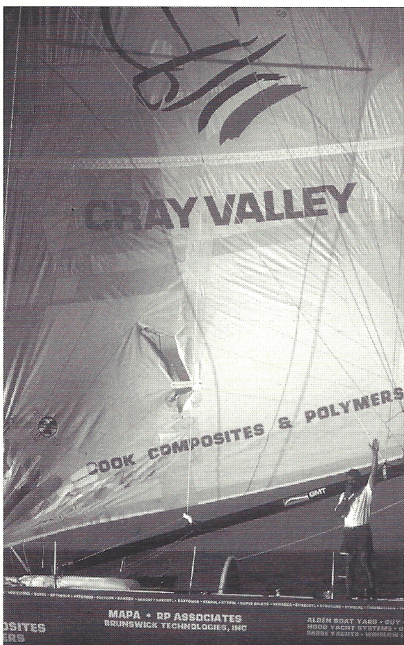
Photo: Dooly Gnass

Sailtec's Christian Gnass will represent Goetz Marine Technology's carbon spars in Europe.

AROUND ALONE FINALE: GMT SALUTES J.P. MOULIGNE

In his most challenging and final leg, Jean-Pierre Mouligne sailed into Charleston last May winning Class II of the Around Alone and the admiration of all following the race. The fact that his victory was so decisive (winning three of four legs) can be attributed to J.P.'s preparation and his equipment. He came to GMT because Goetz has by far, the best record of providing lightweight carbon masts and rudders that don't fail. Solo circumnavigators put their boats and gear to the ultimate test: crash jibes with the runners on the wrong side, knockdowns past ninety degrees (often while surfing down huge waves at 20 knots) with boom and spreaders buried. In a race where attrition due to mast failures played a major role GMT masts passed the test with flying colors. Congratulations J.P. on a great race!

Photo: Billy Black



Goetz carbon spars helped Jean-Pierre Mouligne walk away with First Place in 1998/99's Around Alone.

GMT's FREE STANDING CARBON WING MAST (cont from Pg 1)



Photo: forster@yachtphoto.com

Beating to weather Crazy K-Yote Two's GMT built free standing carbon wing mast provides optimal headsail sheeting angles and fast tacks.

GMT NEWS

As always GMT parts find themselves on some of the winningest race boats on the course. This season has been no different. Starting in April GMT sparred AVATAR (Bruce King 70) won her class at the Antigua Classics Regatta and SCEPTERED ISLE (Alden/Derecktor-Goetz 63) finished second in Antigua Sailing Week. Newly commissioned REINDEER (Paine/Lindsay-Morris 48) placed 3rd in the Annapolis-Newport race to be followed by an overall victory in the Monhegan Island race in August. In Admiral's Cup Big Boat action, Goetz built IDLER (USA) came 3rd while BREEZE (ITA) placed 5th, both were equipped with GMT carbon rudders and wheels. Send us your GMT powered race results and we'll include them in the next CARBONICS!

GMT is turning fifteen! In 1984 we started building the world's lightest and most reliable carbon parts

ducted on Narragansett Bay in late May prior to shipping to the U.K. Upwind the spar performed admirably with hardly any athwartships deflection (see photo page two) and little fore and aft pumping. David and Juan were pleased with the amount of twist the spar exhibited on the wind affording a higher angle of upwind sailing. The absence of side rigging provided tighter sheeting angles and lightning fast tacking maneuverability. Running before the breeze the boat was fast. The main boom can run well forward of ninety degrees since there are no shrouds. The only disappointment came months later when due to some last minute rating changes the boat was heavily penalized and never competed in the CMAC.

such as rudder stocks, quadrants and wheels. Goetz Marine Technology quickly gained a reputation for excellence. The boats we equipped won races, while many composite parts from other shops simply failed. GMT rudder equipped boats have won every major sailing regatta possible. That success enabled Goetz to become the first carbon spar builder to equip performance cruising yachts in 1990. GMT has amassed the best safety record in the industry. Our commitment to building the finest most reliable spars continues today. We welcome the challenge to make the next fifteen years as successful as the last!

GMT has just completed a spar for a Jim Antrim designed and James Betts built solo 50 footer for Bob Gay. Goetz was selected to build this rig because our spars have successfully completed and won global races for the past 6 years. The boat,

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NEW PROJECTS

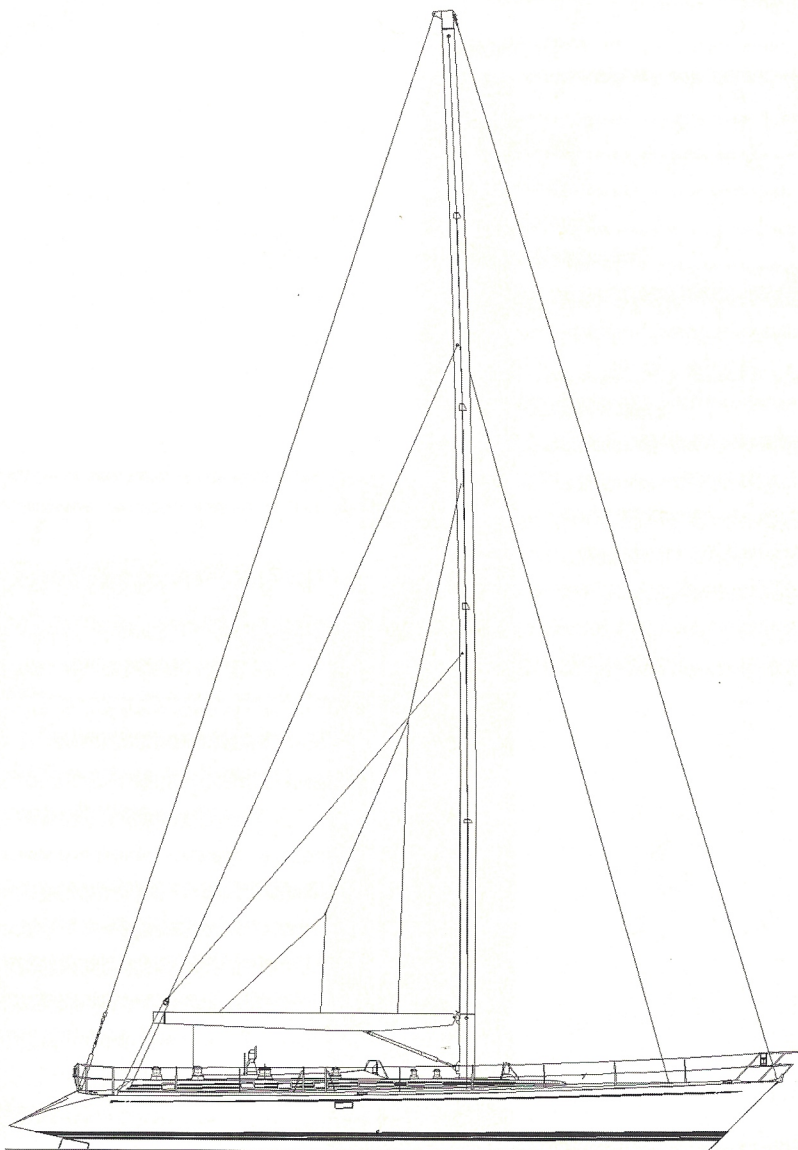
Another GMT equipped classic took to the water recently in Thomaston, ME at the Lyman Morse Boatbuilding Co. (see photo p.3) WINDWALKER, a Ted Hood designed 60 foot sloop, sports an 83 ft. triple spreader carbon mast with in boom furling. All Navtec rod rigging and hydraulics were supplied by Bay Sailing Equipment who worked closely with the GMT team and supplied on site service to ensure a perfect mast and rigging installation. Nearing completion in the shop is a spar for a 73 foot Morrelli and Melvin catamaran undergoing a complete re-rigging including custom PBO rigging from Regnart Composites. Soon to begin construction is the complete rig package for a new Swan 68 set for a Spring 2000 launching in Finland. In addition to the 102 foot four spreader spar, the yacht will be equipped with a custom carbon Park Avenue style boom. Due later in 2000 is the spar for a Dieter Empacher designed 70 footer presently under construction at Brooklin Boat Yard. The boat will feature electrically driven composite in-boom furling.

GMT's Special Projects Division which typically produces composite parts for industries outside the marine environment continues to be working at a furious pace. A custom composite shower assembly for a BBJ737 is nearing completion with a second unit for a 737 and one for a Gulfstream IV aircraft waiting in line. GMT has been working closely with a manufacturer of sophisticated imaging equipment for the medical field for the past six months. The results have been tremendously successful with the completion of prototype and production runs of carbon parts surpassing the clients' expectations.



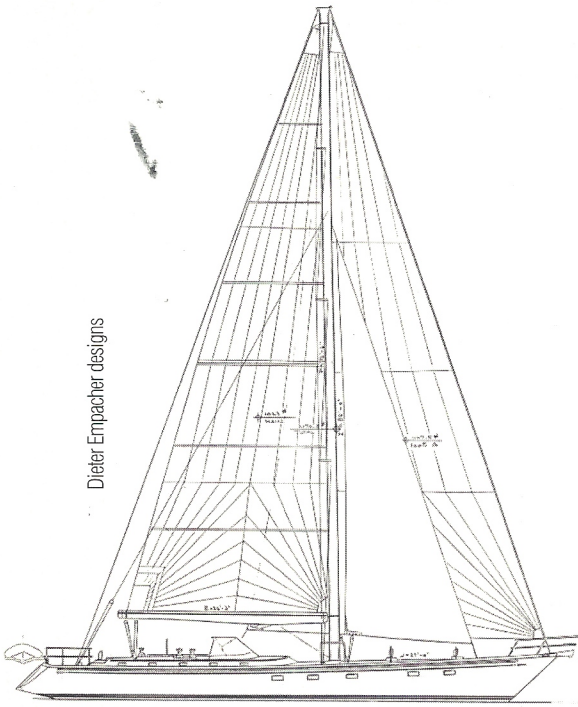
Photo: Billy Black

WINDWALKER, Goetz sparred Hood 60 recently launched at Lyman Morse's Thomaston yard combines speed with elegance.



Nautor's Swan

Nautor's Swan 68 CC performance cruiser will feature a Park Avenue style boom to go along with her 102 ft. GMT carbon spar.



Dieter Empacher designs

Currently under construction at Brooklin Boat Yard, this Dieter Empacher designed 70 footer will feature complete GMT carbon rig and composite boom furling.

GMT NEWS

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named ASCEND, will compete in the 2000/01 Vendee Globe non-stop race around the world. Following the finish of that race Bob's partner Fred Hess will sail her in the 2002/03 Around Alone. Aside from the program's unusual schedule, the boat features a watertight carbon mast designed to withstand 23 psi at the masthead in a capsized position. To achieve watertight integrity all hal-yards are external, the carbon spreader bars are fixed in place, and microtangs are seated in bonded through mast compression tubes. The mast is stayed with Nitronic 50 rod and Kevlar supplied by Ocean Yacht Systems and Aramid Rigging, respectively. ASCEND will be commissioned later this year at KKMI in Pt. Richmond, CA.

GOETZ REACHES ACROSS THE POND

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With a territory encompassing Scandinavia, Germany, Holland, Austria and Switzerland, Sailtec should make an immediate impact for GMT.

"Our partnership with Sailtec will enable GMT access to the growing carbon spars market in Europe," said GMT Director of Marketing Ben Sprague. "We look forward to working with Christian and providing our customers with a quality carbon spar product and first class, on site service."

MORE CARBON DOCTORS RECOMMEND A HIGH FIBER DIET

Goetz equipped racers and cruisers enjoy performance gains from reduced weight aloft.

BOAT	WEIGHT SAVED	BOAT	WEIGHT SAVED
Pura Vida III (Hinckley 52)	350 lbs.	Reindeer(BBW/Morris48)	197 lbs.
Born of Water (67 ft)	290 lbs.	Retriever (Alden 52 ketch)*	100 lbs.
Chimera (Alden 60 yawl)	500 lbs.	Spirit of Aeolus (53)	275 lbs.
Pacific Challenge (60)	220 lbs.	Brooklin B.Y. 39 ft. sloop	120 lbs.
Afterglow (Hinckley 43)	288 lbs.	Sceptered Isle (D/G 63)	400 lbs.
Carinthia (Morris 46)	200 lbs.	Jeanneau 452	172 lbs.
Runagate (Morris 46)	200 lbs.	Windwalker (Hood 60)	485 lbs.
Belon (Hinckley 50)	400 lbs.	Valkay (Rhodes 56 MS)	235 lbs.
PRB (Finot Open 60)	100 lbs.	Freedom 45 (2)	220 lbs.
Magnificent 7 (J 27)	60 lbs.	Bonnehomme Richard(End.35)	141 lbs.
Hinckley Sou'wester 42	217 lbs.	Freedom 40 (5)	900 lbs.
Lorelei (Hinckley Pilot)	70 lbs.	Panacea (Hinckley Pilot)**	65 lbs.
Windweaver (Clark86 ketch)	800 lbs.	Freedom 35 (3)	300 lbs.

Total weighed saved since 1990.....26,680 lbs.

* Increased main mast height 5.5 ft. ** Increased mast height 2 ft.

GMT Response Card

Name

Address

City State Zip Code

Telephone Fax E-mail

Please add my name to the Carbonics mailing list.
Please send me more information on the following products.

Composite rudder Carbon spinnaker pole

Carbon fiber mast

Boat type



Goetz Marine Technology

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