

VOL 17

47° NORTH

DELTA MARINE





02 CELEBRATING 50 YEARS

Delta celebrates a milestone: 50 years of innovation, building many of the world's most beloved and time-tested creations. With a nod to the past, Delta looks ahead toward future generations of history-making construction.

06 MEET ALBATROSS

Let us let you in on a big secret. Get a sneak peek at *Albatross*, the largest ever Delta in tonnage, and second longest in feet. This magnificent 237-foot motor yacht will surely make waves wherever she travels.

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Learn about the 174-foot yacht currently under construction. Project 174046 will be a beautifully rendered family-oriented yacht that's custom built for adventure.

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Celebrating

FIFTY-YEARS

of artistry, craftsmanship & inspiration

MASTERS OF INNOVATION SINCE 1967

From the earliest days, Delta's mission has always been one of innovation. Conceived in 1967 by brothers Ivor and Jack Jones, the duo set out to build fiberglass commercial fishing vessels for the demanding waters of the Pacific Northwest and Alaska. The Jones brothers, who still run Delta today, saw an opportunity to replace an aging fleet of wooden boats with modern, low-maintenance fiberglass vessels.

In the next twenty-five years, Delta earned a reputation for building seaworthy, reliable vessels that held their value. From 1967 to 1992, Delta delivered over 800 commercial vessels, including seiners, gill netters, pilot boats, and charter boats. The Delta 58' is still the benchmark against which Alaskan seiners are judged.

Delta began its move into the yachting market in 1984, with the construction of a 70' motor yacht based on a successful Delta crabbing hull. The first of this series was built for a knowledgeable yachtsman planning a demanding circumnavigation. This voyage was given extensive coverage by the yachting press, and Delta emerged as a new contender in the luxury motor yacht market.

The eventual transition from the commercial world to pleasure yachts was made possible by two far-reaching decisions. First, Delta expanded their original family-owned site to create an 18 acre ship yard on the Duwamish River. As the size

and number of vessels under construction steadily grew, Delta erected a series of larger fabrication buildings. The second key to Delta's successful transition to yacht building lay in Delta's commitment to its people. By staffing the largest and strongest in-house yacht engineering department in North America, Delta ensured that quality and reliability would be designed into each custom project.

Today on 25 acres, Delta has more than 275,000 square feet of manufacturing and office space. This includes a specialized high bay assembly building, a paint booth capable of accommodating Delta's largest yachts, a modern warehouse, three refit bays, an attractive office building, and shop spaces supporting all of the shipyard trades. This clean, modern facility is both an efficient workplace and a powerful tool for convincing potential customers of Delta's commitment to quality.

With yachts currently under construction for customers all over the world, and the capability to build yachts up to 100-meters in length, Delta's most important value has remained unchanged; to provide the finest custom yacht manufacturing and services — with an owner's vision and desires at heart. With gratitude and appreciation, the always forward-thinking Delta team looks ahead, dreaming, conspiring, planning and building the next groundbreaking creations certain to inspire the world.

The Early Years

SEATTLE BROTHERS IVOR AND JACK JONES,

Seattle Brothers Ivor and Jack Jones, record-setting race boat drivers, launched Delta Marine, with a goal of creating the finest and hardest fishing boats for the demanding waters of the Pacific Northwest and Alaska. Delta began its move into the yachting market in 1984, with the construction of a 70' motor yacht and Delta emerged as a new contender in the luxury motor yacht market.

SALLY ANN, A MODEL OF EXCELLENCE

With *Sally Ann*, Delta launched their first full displacement composite motor yacht over 150 feet. This yacht earned them the prestigious Best Full-Displacement Motor-Yacht award from Showboats magazine in 1996.

GALLANT LADY QUIETLY DOMINATES

Gallant Lady featured one of Delta's hallmark design principles: the ultimate in quiet, vibration-free cruising. To ensure the peacefulness of the four suites onboard, floors and walls were suspended from the structural frame on special vibration-absorbing mounts. Ambient sound was further dampened through high-tech construction techniques that employed an innovative layering of acoustic materials.

Delta Today

DELTA IS A LEADER IN COMPOSITE YACHT CONSTRUCTION,

pioneering the use of composite superstructures on metal-hulled yachts. Their ability to deliver excellence on every project and their reputation for building seaworthy vessels with the highest standards of quality and luxury is built on hundreds of years of collective experience. Delta's refit and repair facility has come into its own as well. Numerous major yacht refits have been successfully completed in recent years, thanks to their expansion of services and staff.

1967

DELTA MARINE IS LAUNCHED BY IVOR AND JACK JONES

1989

FIRST DELTA OVER 120 FEET. SHE STILL PROUDLY CRUISES THE OCEANS TODAY, NOW KNOWN AS MARLINDA

1985

BUILDING ON THE PERFECTION OF THEIR GAME-CHANGING COMMERCIAL FISHING VESSELS, DELTA INTRODUCED THEIR FIRST 70-FOOT PLEASURE YACHTS

1996

SALLY ANN, DELTA'S FIRST YACHT OVER 150 FEET [SEE INSET]

2001

LAUNCH OF 161-FOOT GALLANT LADY, THE FIRST DELTA TO FEATURE THEIR GROUNDBREAKING ALUMINUM HULL AND COMPOSITE SUPERSTRUCTURE [SEE INSET]

2004

DELTA DELIVERS THE EVER POPULAR 163-FOOT MOTOR YACHT TRITON. THIS HIGH-ADVENTURE EXPEDITION YACHT FEATURES A TRULY ONE-OF-A-KIND TENDER DEPLOYMENT SYSTEM

2006

THE WORLD DEBUT OF LAUREL—AT 240 FEET, SHE WAS THE LARGEST YACHT BUILT IN NORTH AMERICA SINCE 1931 AND THE FIRST EVER YACHT WITH A STEEL HULL AND COMPOSITE SUPERSTRUCTURE

2016

SHROUDED IN SECRECY, DELTA DELIVERED THE 237-FOOT ALBATROSS, THEIR LARGEST YACHT IN TONNAGE TO DATE

A magnificent mystery

ALBATROSS

one of the largest Deltas ever takes to the sea

A SNEAK PEAK

Over the years, Delta has had the privilege to work on some groundbreaking projects shrouded in secrecy. One spectacular example, the 240-foot *Laurel*, was a yacht that catapulted Delta into a new league and put American yacht building back into the limelight. Historically, American builders led the industry in the early 1900's creating the largest yachts in the world, including the 270' *North Star* in 1853 and the 278' *Caroline* built in 1931. But as remarkable as an accomplishment that *Laurel* represents, the world knew very little about her until she graced the waters, at the behest of her owners. With her striking blue hull and classic lines, she is an addition to North America's list of legendary builds that still holds true today. The secrecy in her conception and creation adds to her allure. One of the many reasons clients choose Delta is their expertise in innovation as well

as their unparalleled skill in delivering extraordinary service and discretion. Over the years, they've earned a reputation as specialists for owners who want to create the custom yacht of their dreams, but expect and deserve utmost privacy.

Flash forward to 2016, there's not much that can be reported about the latest masterpiece from Delta, but the image of *Albatross* speaks for itself. Bold, robust, and strikingly handsome, the 237-foot motor yacht is the largest in tonnage — and second-largest Delta motor yacht ever built. Like *Laurel*, she surely holds a place in the record books for one of the most prestigious deliveries coming out of North America and certainly, a crowning achievement for Delta. While specific details are required to be kept secret, *Albatross* is guaranteed to be turning heads wherever she travels. And like the world's most compelling beauties, her mystery is part of her mystique.





PROJECT 174046

Delta is thrilled to announce a very special new build currently underway, a 174-foot, high-performance motor yacht with an aluminum hull and composite superstructure. Classic styling, family comfort and advanced technology share the heart of this project's design brief.



“Building at home, in the U.S., was very important to the Owners, and Delta was the premier choice based on its history, facility, and family-style business model. Delta’s unique ability to build a metal hull and composite superstructure was also a big factor.” — PROJECT 174046’S CAPTAIN MITCHELL HEATH



CONVERTIBLE OUTDOOR SPACES

Lose furnishings allow for multiple gathering and entertainment areas. Each deck offers dining-accessible bars, plenty of lounging areas and tables for al fresco meals with service from 10-14.

PROJECT 174046’s captain and owners are collaborating closely with the Delta Design Group and Seattle-based designer Jonathan Quinn Barnett to create a yacht built for supreme family comfort.

The exterior styling has classical influences and, “maintains the elegance of a long, low yacht that is more hull in appearance than house — like many early 20th century designs — while still achieving greater usable guest space,” says Barnet, who was contracted from the onset of the project for both interior and exterior design.

Within the voluminous interior, Barnett is creating an atmosphere of casual elegance. What he terms “new American Classicism”, defined by multiple contrasting veneers, stones with paint finishes, and an avoidance of any built-in appearance to the furnishings. Soaring ceilings feature prominently aboard, and Delta’s engineering and design team worked with the designer to incorporate maximum headroom throughout. Yet another unique feature, Barnett says the clear height of the doors required close coordination with Delta’s engineering and design team to accommodate fire doors and self-closing mechanisms that are fully functional and discrete.

SEPARATE AREAS FOR SHADE AND SUN

The sundeck features a 13-foot walk-up teak bar that services a jetted pool with a shallow mosaic-tile sunning beach section and a waterfall feature. Pocket doors separate a forward lounge seating and viewing space that features a discrete crew access service hatch with stairs leading into the pilothouse.



LOA	174.9' / 53.3 M
LWL	155.4' / 47.4 M
BEAM	34' / 10.3 M (EXTREME)
DRAFT	7.8' / 2.4 M (HALF LOAD)
ENGINES	(2) MTU 16V4000M73L, 3,860 BHP @ 2,050 RPM
SPEED / CRUISE	19.4 KNOTS / 15 KNOTS
FUEL CAPACITY	23,800 US GALLONS / 90,090 LITERS
RANGE	3,600 NAUTICAL MILES @ 12 KNOTS
GENERATORS	(2) NORTHERN LIGHTS 130 EKW, (1) NORTHERN LIGHTS 92 EKW
STABILIZERS	QUANTUM QC-1800 2-FIN WITH XT
BOW THRUSTER	OYS H-0600-T
WATER-MAKERS	DOMETIC
FRESH WATER CAPACITY	5,300 US GALLONS / 20,060 LITERS
HULL MATERIAL	ALUMINUM
OWNER AND GUESTS / CREW	12 COMMERCIAL / 14 PRIVATE
CLASSIFICATION	LLOYD'S MALTESE CROSS 100 A1 SSC YACHT G6 MONO
BUILDER / YEAR	DELTA / 2017

To ensure performance for this sleek yet voluminous vessel, Delta specified twin MTU 16V4000M73L engines of 3,860 BHP each. A 24,900 USG fuel capacity will offer long-range cruising. “I’ve always been a fan of things that go fast,” says Delta’s Marine Engineer Daniel Filonowich. “So the fact that we are installing a combined 7,720 total propulsion horsepower in this project makes it exciting but challenging to fit all of the larger supporting equipment into the vessel, as well as controlling the acoustics of all of that power.”

This yacht showcases many of the technical innovations for which Delta is known. Not only does she sport a beautiful aluminum hull that supports a well-engineered composite superstructure, this high-performance build presents her technical side with a state-of-the-art pilothouse featuring an all-glass touchscreen bridge console.

ENDLESS SUMMER

With an abundance of beautiful indoor and outdoor spaces, Endless Summer revels in hospitality, adventure and oceanic pleasure.



PERFECT HARMONY

Just a few of the activities to choose from include kite boarding, diving, paddle boards, hover boards and even a fly boot! And for those who don't feel like choosing a sport, the water slide or inflatable island may be the way to go.

LOA	164.0' / 49.99 M
LWL	145.5' / 44.3 M
BEAM	29' / 8.81 M (EXTREME)
DRAFT	7.96' / 2.43 M (HALF LOAD)
ENGINES	(2) MTU 12V4000M65, 1800 BHP @ 1800 RPM
SPEED / CRUISE	16 KNOTS / 12.0 KNOTS
FUEL CAPACITY	15,322 US GALLONS / 58,000 LITERS
RANGE	3,600 NAUTICAL MILES @ 12 KNOTS
GENERATORS	(2) CATERPILLAR C7.1 125 EKW (1) CATERPILLAR C4.4 99 EKW
STABILIZERS	QUANTUM QC-1500 2-FIN WITH XT
BOW THRUSTER	AMERICAN BOW THRUSTER, TRAC-24"
WATER-MAKERS	DUAL NEPTUNE SERIES 5000 GPD
FRESH WATER CAPACITY	2,450 US GALLONS / 9,274 LITERS
HULL, SUPERSTRUCTURE MATERIAL	COMPOSITE
OWNER AND GUESTS / CREW	12 COMMERCIAL AND 14 PRIVATE / 10
CLASSIFICATION	ABS, A1 COMMERCIAL YACHTING SERVICE, AMS, MCA LY3

Constructed in all composite, with a semi-displacement hull, this 164-foot motor yacht is the result of the combined efforts of Washington yards, Delta and Christensen. The classic lines and noble stature of her exterior are accentuated by a gray hull and off-white superstructure.

Stepping aboard, you immediately notice her customization and integration with the water. Included in the transom is a custom 8-foot x 8-foot transformer, or deployable swim platform. Just inside the lazarette is a highly detailed water sports area where guests can choose from an assortment of water activities from the relaxing to the full extreme. Each deck is large and expansive with a variety for outdoor dining and entertainment areas to choose from. Perhaps one of the most unique features is a 10-foot long fold-down balcony off the starboard side bridge deck that can accommodate a hammock or even double air chairs to enjoy

the changing view. Inside, the décor is soothing and serene while completely luxurious. Guest accommodations include a full-beam master forward on the main deck with office, vanity, his and hers wardrobes and an exquisite inlaid marble shower. Below deck are five large staterooms including a VIP, two large king-berths, a convertible queen with two Pullmans and a double with two Pullmans as well.

Endless Summer will begin her journey cruising the beautiful Pacific Northwest and Alaska before heading south to the explore the vast Pacific ocean.

PARTNERS IN INSPIRATION

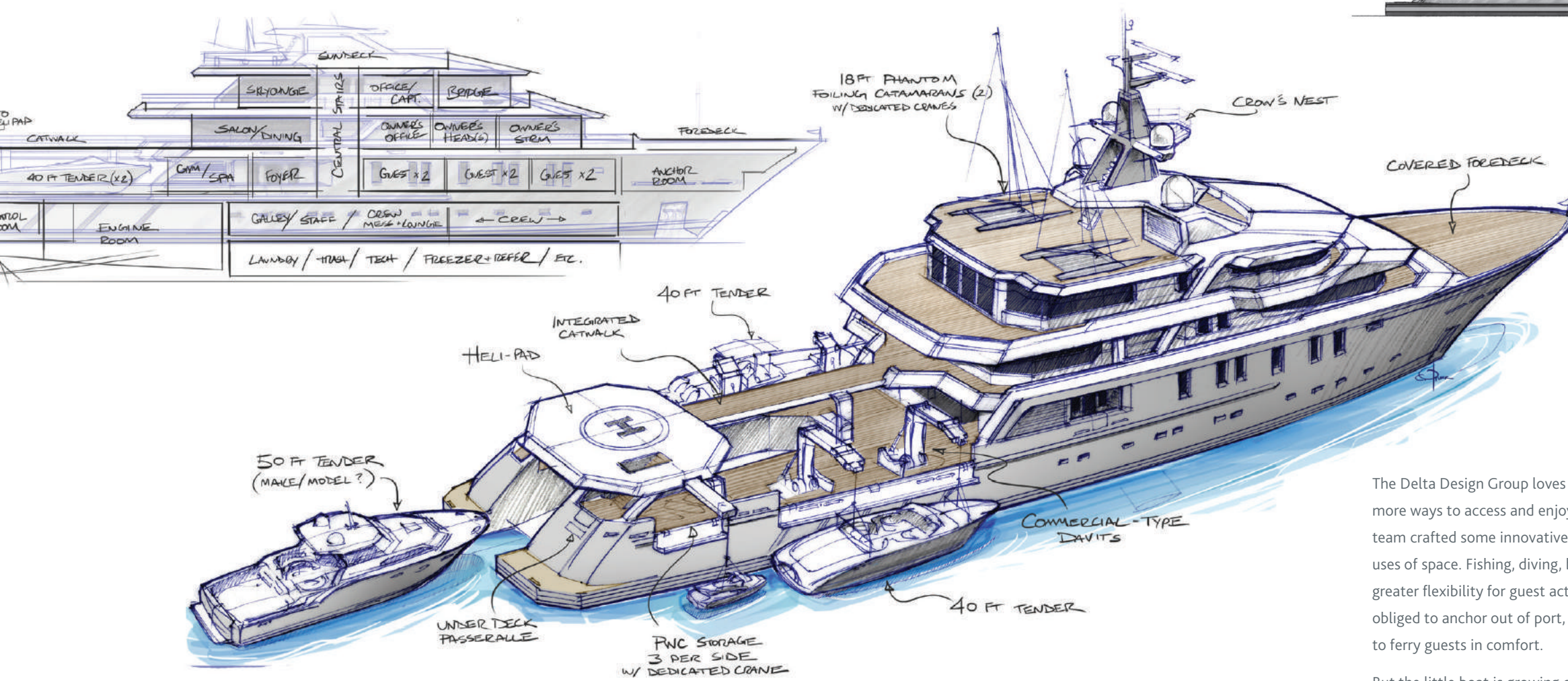
*The Delta Design Group is constantly working on their next big ideas
based on customers' input and desires. Their elegant expedition yacht concept
showcases the perfect balance of modernity and classic design,
with a soul for adventure.*



LOA: 92 METERS (301' 10")
BEAM: 14.2 METERS (46' 6")

“This 72m concept is a combination of wish lists from recent clients — both owners and captains. There seems to be a lot of interest lately in the notion of carrying all your toys with you.”

— CHRISTIAN OLIVER, LEAD DESIGNER, DELTA DESIGN GROUP



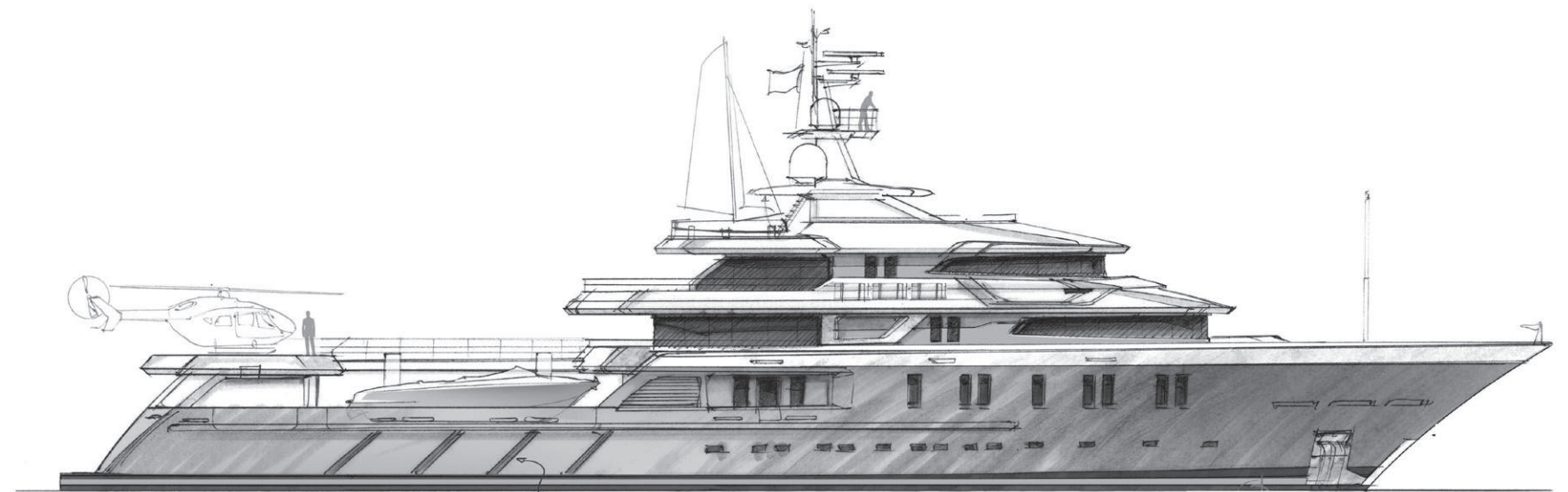
TENDERS GO ULTRA LUXE

The last decade has seen the number of custom tender builders blossom as owners order ultra-luxurious limousine and open boats to match the mothership. The car industry has even gotten in on the action with Mercedes, Bugatti and Aston Martin recently unveiling day boats, presumably to complement your Chiron or DB11 but also very stylish tenders for the super yacht set.

The Delta Design Group loves a challenge. Responding to many owners' requests for more ways to access and enjoy the water with an abundance of tenders, the design team crafted some innovative approaches to carrying the most toys with the wisest uses of space. Fishing, diving, beachcombing, shopping — more tenders means greater flexibility for guest activities. And as yachts get more super in size, often obliged to anchor out of port, it's paramount to have a substantial people-mover to ferry guests in comfort.

But the little boat is growing disproportionately compared to the big boat, requiring some design ingenuity to successfully incorporate it on board. The Delta Design Group took on this challenge, creating a 72-meter expedition concept that carries a 50-footer and much, much more.

In addition to handling exterior and interior design services for Delta clients, the team is always working on something. Christian Oliver, lead designer, likes to have a concept on his desk at all times. "I found that it really stimulates the imagination and spurs some interesting energy with clients," says the 12-year veteran of Delta.



The team started by considering launching methods for a 50-foot tender. "It's such a heavy boat that if you try to lift it, it just wants to spin and a couple crewmembers holding lines won't be able to stop it." A slipway solves this dilemma. Another advantage of this location is it frees up space where a garage would normally be so there is room for a really functional lazarette. Moving some mechanical equipment to this area would also give more volume to the guest areas forward.

Of course, no toy-carrier is complete without a helicopter, yet fitting a commercially certified helipad on a yacht isn't easy. Placing it aft on this concept gives a chopper plenty of maneuvering room with 300 degrees of access and safe separation from the superstructure. A crane extends on either side of the pad to launch the personal watercraft stowed underneath and a catwalk leads directly to the owner's deck forward.

For the interior space planning, the Delta Design Group drew upon another trend of late, a focus on a healthy lifestyle. They used the main deck aft for a gym, spa and fitness club with large doors that fully open for al fresco yoga or dining. The primary salon moves up a level where there are the best views aft, not impeded by the toy-laden main deck.

Perched up top are two racing catamarans to pit against each other. "Not having to de-rig them was a big concern, so we put them on the sun deck," says Oliver.

Even higher up is something the team is getting more requests for: a crow's nest. It's a great spot to watch all the action below. All of this is contained within a vessel of rugged character, one with a purposeful, masculine aesthetic ready to take on the world — and have a lot of fun doing so!

MAXIMIZING ACCESS AND OPTIONS

A pair of 40-foot tenders is launched from the main deck by sturdy, commercial-style davits. A pair of doors at the transom fold out, the swim step's center section submerges, and the larger tender can be winched with a trailer system.



Improving on

PERFECTION

there's no project too complex for Delta's Refit & Repair

Experienced owners know what they want. And when shopping for a yacht, it can be hard — if not impossible— to find the one that satisfies everything on the wish list. One element they often want to change is the stern area.

"The way a yacht is used can be identified by how the stern is set up," says Graeme Heys, manager of Delta's refit and repair division and an ex-commercial and superyacht captain. "Some like to dive or sportfish or just love a good seagoing boat with a buttoned-up transom."

Indeed, extending a yacht isn't about getting a longer boat — it's about transforming the space to improve the experience on the water. "Every owner we talk to finds tremendous value in the cost of an extension, especially if you are missing just a bit of space," says Delta's lead designer, Christian Oliver.

Delta Marine's refit facility has completed many such projects, including the 2009 World Superyacht Award winner for best refit, *Stampede, ex-Princess Gloria*, which gained 12 feet and a fishing cockpit. Delta's skillful team of naval architects judiciously extended the full-displacement hull form aft with a curved transition that also provided lift to the stern at higher speeds. "The captain reported some gain in fuel economy due to the extended length and improved running trim," says Jay Miner, chief naval architect. And the owner, an avid fisherman, has a superb spot to cast a line.

An extension doesn't have to be particularly long or complicated to make a big impact on a yacht's usability. And the most common type of a yacht extension is a stern one. Mid-body extensions are quite rare among yachts, more common in

the commercial world where the midsection design is uniform fore and aft, making inserting a new section straightforward. On occasion, yachts employ bow extensions.

Another consideration is structural; modifications have to be evaluated by the applicable regulatory agency to verify rule compliance. Stability is a concern, but not a significant one when it comes to stern extensions, according to Miner. Finally, gross tonnage needs to be reviewed to make sure the additional volume doesn't push the yacht past a regulatory limit, such as over 500 GT ITC, or for US-flagged yachts, past the 300-ton threshold.

Delta's advantage lies in its workforce and its first-class facility, which handles yachts up to 100 meters. "There is so much experience in our workforce," says Heys. "Many of our workers have been in new construction for years. It's the best of both worlds: guys who build new yachts with the latest in technology and efficiencies working side by side with guys who come up with real-world solutions to modify a yacht in the most expedient and user-friendly manner."

The process starts with the design team. Working together to come up with a reasonable amount of extension while maximizing the technical spaces — creating a new look that is as stylish as it is functional, seamlessly blending with the original design to look as if it were always that way.

Delta's refit division can extend any make of yacht, but for obvious reasons Deltas are their favorites. "They are built well and we know how they were built. The same people that had a hand in building it are all here working with us as we modify it," says Heys. "We love it when a Delta comes home."



Truly Expansive Thinking

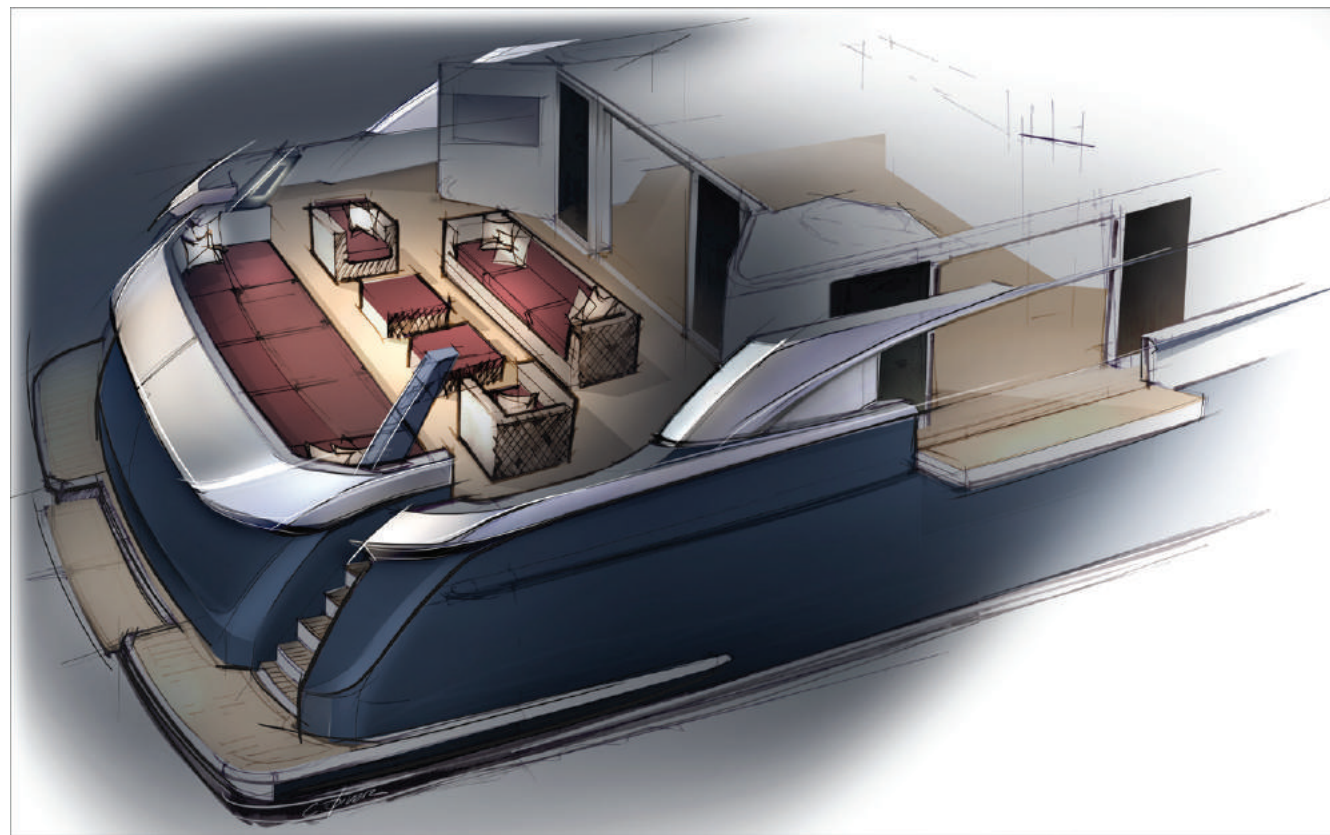
An open-air entertainment area is created with brilliant fold-down bulwarks. It's a cost-effective solution that maximizes the outdoor living areas. The placement of bi-parting glass panels further enhance the design. Utilizing a popular design trend, the deck's teak floors extend into the interior spaces, forming a seamless and harmonious indoor-outdoor oasis.

BALANCING ACT

To create harmony between a long swim platform and the main aft deck, Delta suggests creating a stepped arrangement, borrowing from the platform to make a transition level between the aft deck and swim platform for fishing and lounging with a unimpeded view aft.

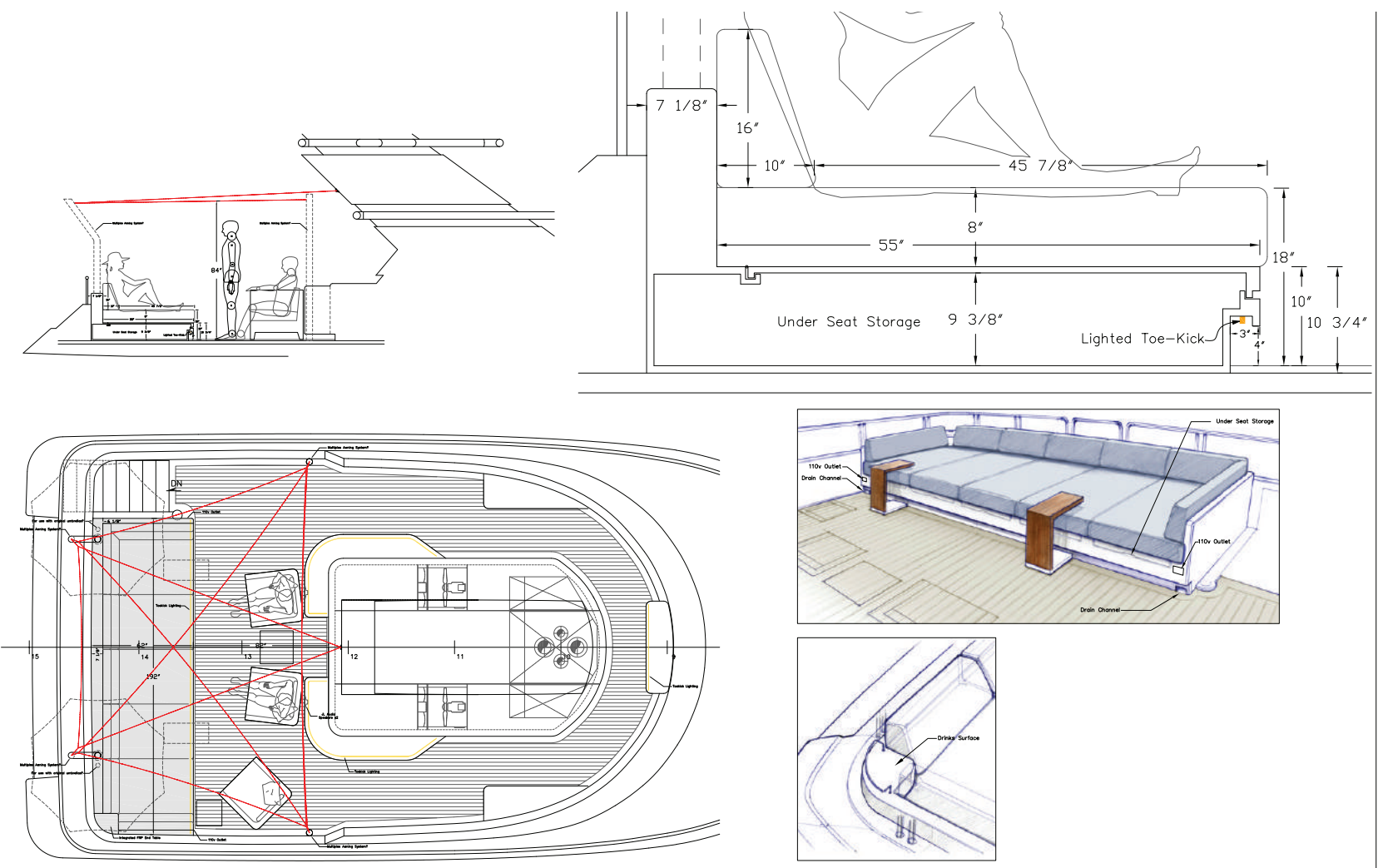
EXTENDED POSSIBILITIES

The refit involving one of the recently purchased Deltas was driven by a desire for a deeper connection to the water and easier access to the swim step and tender. The original yacht was voluminous, built for privacy without much outdoor space. The tender garage had been a utility space. Delta built an entirely new transom with a bigger garage that doubles as a beach club. Several meters were added to the main aft deck to accommodate large parties for al fresco dining and the upper aft deck grew as well to keep proportions in check.



“Delta Marine is well versed in all of these considerations and handles complex refits with ease, having design, engineering and production all on site. The refit division has experience building extensions in all materials: aluminum, steel and composite. There are some special considerations for composites but we are quite familiar with those matters.”

— JAY MINER, CHIEF NAVAL ARCHITECT, DELTA DESIGN GROUP



AN EYE ON PERFORMANCE

If the running gear is not moved, there is a limit to how much extension is feasible without affecting vessel handling in following seas. There's no exact formula to follow; the size of the rudders helps determine this. "Delta has always favored generous rudder area, so the same percentage of hull extension on one of our boats may be less successful on a yacht where the rudders were designed to the lower end of the acceptable size range," says Miner.

Where In The World?

Marama arrived in Bermuda in May for the events leading up to the America's Cup. They were treated to an island of exquisite natural beauty, wonderfully friendly locals, and a welcoming yacht community. *Marama* enjoys additional responsibilities as mothership to the fishing vessel *Flyer*. Her owners stayed for the three fishing tournaments that compose the 2017 Bermuda Triple Crown: Bermuda Billfish Blast, Bermuda Big Game Classic and the Seahorse Angler's Club Billfish.

the
VOYAGE
continues

vol.
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47° NORTH

DELTA MARINE





Dear Friends of Delta,

We hope you enjoyed your summer and experienced some wonderful times on the water. We're excited to share with you Volume 16 of our newsletter *47° North*. Our latest issue features a whole new look—we hope you enjoy the new design along with reading about all the recent happenings at Delta. We also have a beautiful new look on the way for our website. We are excited to share it with you soon.

Inside this newsletter you will first look at our latest delivery, ONIKA. We're so proud of this collaborative accomplishment with her owners and our design team—she's a truly spectacular jewel in the Delta crown, brimming with elegance and perfection. Her owners spent the summer enjoying British Columbia and Alaska for her maiden voyage; she's making a stop at Delta before she sails off towards warmer weather.

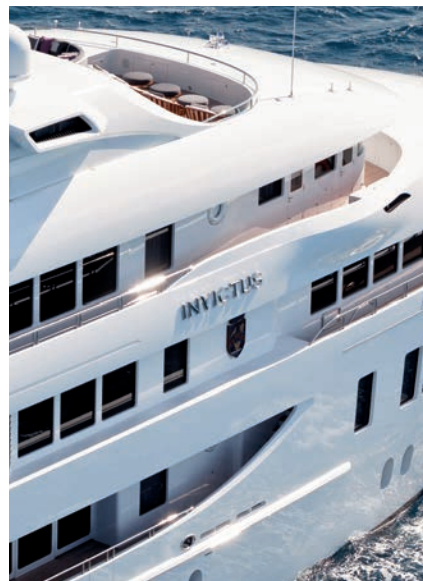
You'll also find an informative technical article by Jay Miner, Delta's Chief Naval Architect. Jay shares some fascinating details about composite construction and how Delta incorporates our innovative and proprietary process when creating our yachts. Finally, we provide a sneak peek into the TRITON refit—all the details of her fabulous makeover and what she's up to now.

More than anything, we hope you enjoy the newsletter and updates from your friends here at Delta. If I can provide more information or answer any questions, please let me know. If your plans bring you to Seattle, please stop in for a visit. We'd love to show you the yard and some of our projects under construction.

Best regards,

A handwritten signature in cursive script that reads 'Michelle Jones'.

Michelle Jones
DIRECTOR OF MARKETING



02

MEET ONIKA

Launched this spring, ONIKA is making quite a name for herself. Enchanting from every vantage point, this true gentlemen's yacht is already a scene-stealer.

07

CHALLENGING CONVENTION

Using the best of traditional boat building, and turning it up several notches with advanced technology and fabrications: Delta shares new ways to lead in composite construction.

12

A NOVEL CONCEPT

There are no limits to the imaginations of the brilliant minds in our Delta Design Group. They share the story of a concept yacht that is bound to inspire the best of dreams.

16

TRITON MADE NEW

A classic Delta yacht comes home, and gets a full makeover. Learn about TRITON's beautiful transformation at her restorative visit to our Refit & Repair yard.

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AROUND THE DELTA WORLD

Send us your exotic snapshots and favorite photos of your adventures around the world, and we'll share them with the whole Delta community.

MEET ONIKA

Delta's latest delivery, during her inaugural cruise to Alaska. The owners enjoyed their time aboard admiring the beautiful scenery and vast landscape of Alaska. ONIKA returned home to Delta at the end of the summer season before making her journey down the Pacific Coast.





OFF TO SEE THE WORLD

ONIKA's launch in May was a glorious day of celebration among Delta employees and their families alongside the proud new owners.

ONIKA: Delta's Newest Crown Jewel

Meet ONIKA, a 40-meter superyacht from Delta with a new high-efficiency hull design that embodies the simple elegance and warmth of a true gentleman's yacht.

At first glance you'll notice her distinctive profile; her bow has a long overhang with enough flare to keep the decks dry, giving the pleasing appearance favored in traditional yacht styling. The Delta Design Group worked from a brief that was as much about performance as it was style. "Below the waterline the hull form has round bilges with a bulbous bow and long easy run to enhance comfort and reduce fuel consumption. Much attention was paid to the flow line patterns along the hull surface to ensure that all appendages were precisely aligned," said Delta's Chief Naval Architect, Jay Miner. "The propeller tunnels are well blended into the hull, with a gentle transition resulting from studies conducted both by computational flow dynamics (CFD) as well as a traditional series of physical model tests in a tow tank facility."



LOA	133' / 40.5 M
LWL	119' 2" / 36.3 M
BEAM	29' / 8.8 M (EXTREME)
DRAFT	7' / 2.1 M (HALF LOAD)
GROSS TONNAGE	464 ITC & 264 US REGULATORY
ENGINES	(2) CAT C32 ACERT 1600 BHP @ 2300 RPM
SPEED / CRUISE	16 KNOTS / 13.5 KNOTS
FUEL CAPACITY	14,720 US GALLONS / 55,721 LITERS
RANGE	4,000 NAUTICAL MILES @ 12 KNOTS
GENERATORS	2 X NORTHERN LIGHTS M1064H 99 KW
STABILIZERS	QUANTUM QC-1200
BOW THRUSTER	ABT TRAC 2
WATER-MAKERS	WMSQ-3000 GDP
FRESH WATER CAPACITY	2,450 US GALLONS / 9,274 LITERS
HULL AND SUPERSTRUCTURE MATERIAL	COMPOSITE
OWNER AND GUESTS / CREW	6 / 8
CLASSIFICATION	LLOYD'S MALTESE CROSS 100 A1 SSC YACHT G6 MCH
NAVAL ARCHITECTURE	DELTA DESIGN GROUP
EXTERIOR STYLING	DELTA DESIGN GROUP
INTERIOR SPACE PLANNING	DELTA DESIGN GROUP
INTERIOR DESIGN	DELTA DESIGN GROUP
BUILDER / YEAR	DELTA / 2014

“The new Delta hull design combines the best in long-range passage-making capability and fuel efficiency, along with moderate draft to allow the owner access to the shallower water destinations that otherwise might not be accessible.”

— JAY MINER, CHIEF NAVAL ARCHITECT



Her interiors were designed to be beautiful and welcoming, winning over guests at first glance. Step inside, and you're greeted by a dramatic entry and central staircase. The gorgeous marble floors with inlaid blue sodalite contrast with raised panels of Khaya mahogany. Her intricately carved handrails and metal-adorned newel posts anchor the base of the stairs, completing the beautiful first impression.

The spell continues as you travel her lower decks featuring paneled walls of clear, straight-grained German Spessart oak, finished naturally to a light honey color. Dressers and feature furniture pieces are elegantly bow and serpentine shaped, meticulously detailed in mahogany and chestnut burl with Anigre inlay. On the upper deck, the skylounge is an arresting mix of luxurious materials and craftsmanship. Large windows and light colors brighten the space, highlighting the German oak, antique white bookcase, and teak planked floors. The mix of traditional components and materials lends a British West Indies relaxed ambiance.

Characterized by the same elegance as the interior, the decks flow gracefully from bow to stern and provide exquisite accommodations for outdoor living. Using her owners' love of al fresco entertainment as inspiration, ONIKA was designed with an abundance of comfortable vantage points to fully enjoy the beautiful surroundings. The sun deck is a complete outdoor living area, with forward-facing settees, a dining table for eight, a bar and TV as well as room for chaise lounges, and an outdoor shower to cool down. A pair of tenders, 18' and 12', are stowed on the aft bridge deck, able to launch to either side. On the main deck, there is dining for six, and teak chairs and a lounge in a comfortable residential setting.

Powered by twin Caterpillar C32 main engines, ONIKA has a 4,000 nautical mile range at 12 knots and a maximum speed of 16 knots. Quantum Zero Speed stabilizers ensure a nice gentle ride both at anchor and underway. Her Northern Lights generators are equipped with catalytic soot traps for reduced emissions. Also included is a hydraulically activated fold-down mast, designed and custom built by Delta. The final result is a handsome design with the ability to cross oceans efficiently, in great comfort and unforgettable style.

CHALLENGING CONVENTION

There are centuries of wisdom that we as ship builders venerate. Yet, when it comes to the status quo as it relates to construction—especially regarding new technologies and the opportunities afforded by remarkable composite structures—Delta's engineers prefer to blaze new trails.





Challenging the Conventional

By nature shipbuilders are traditionalists. For a science based on centuries of empirical knowledge, it is only natural. Given the risks involved with miscalculation—and history provides many nautical examples—it only makes sense for caution to be a guiding principle when venturing into fresh territory.

However, caution cannot replace innovation if the art of shipbuilding is to advance. That is why Delta Marine has long been an advocate for the incorporation of composite structures into the menu of options when large yachts are conceived and designed. This advocacy goes back to a time when the idea of a large composite marine structure was considered a novelty. In recent years

we have seen a gradual acceptance of composites in large yachts turn into a full embrace by the progressives of the industry. The creation of the yacht INVICTUS illustrates the maturity of the technique when a marriage of all of the primary yacht building materials—steel, composite, and aluminum—is used to their best advantage without prejudice and preconception.

There are few human creations more complex than a large yacht. It is a daunting challenge to create in essence a floating work of art, constructed to the highest standard of any luxury product, and take it to sea and subject it to the most demanding forces of nature. Behind the gleam and glamour exists a platform of

Example of the continuous molded shape, especially seen here in the wing station.

unique technical solutions, addressing the many competing priorities of a modern yacht: strength, weight, durability, ease of maintenance, speed, endurance, acoustics and vibration, fire protection, corrosion, climate control, large spans, convenience, and of course cost. Certainly, where initial cost is a primary consideration, many solutions are well served by steel or aluminum. There is much institutional knowledge that favors the use of these materials, and they have long been accepted as the template for large yacht construction (i.e., steel hull, aluminum superstructure). However, to overlook composites as an alternative is to miss an opportunity to improve the overall product.

One of the most attractive aspects of composite structures is their superior performance in resisting the corrosive attack of the marine environment. The chemistry of these materials is completely compatible with the paint and finishes applied to the exterior of the yacht. That is one important reason why the large external structures on main deck and above on INVICTUS were selected to be composite. There is a particular advantage to using composites in portions of the exterior where there are many outfitting details such as door and window openings, hardware attachments, etc. Inevitably the insidious nature of salt water attacks the smallest avenue of intrusion. On metal yachts, rust and blistering are a perpetual problem in these areas, as every fitting that connects the metal below the paint and fairing to the outside elements is an opportunity for corrosion. This can lead to extended downtime and increased costs for the yacht in yard maintenance periods.

Another distinct advantage of composites lies in their suitability for creating complex shapes that are problematic for metal construction. If it can be conceived in a 3D computer model, it can be created in a composite part. While many concepts typically begin with a designer's hand-sketch, the process quickly evolves to a computer-generated representation that can be refined and manipulated in a virtual environment. This electronic model supports the automated manufacturing process for constructing the mold. Delta utilizes a 5-axis mill with numerically controlled robotics to produce totally custom molds from which high-accuracy parts are readily built. This is an opportunity for the designers to expand their creativity, and a way for yacht builders to make their ideas a reality.

With the advent of advanced fibers, first the aramids (Kevlar) and then carbon fiber, it is now possible to build with materials that are incredibly strong and light. Delta takes advantage of these unique properties to introduce the right material for the right component. The structure of INVICTUS incorporated increasing amounts of composite materials as their respective positions progressed from keel to masthead, since the benefits of lightweight construction are greatest where weight savings become most important. The shipyard has partnered with its fabric suppliers to develop tailored constructions of carbon and E-glass textiles that are optimally suited to their needs. As a result, the opportunity to develop a light laminate structure that addresses the precise direction and magnitude of a load is greatly enhanced.

Another significant advance in composite construction has been the development of more environmentally friendly processes. The classic production method for decades was the process of manually applying catalyzed resin into an open mold with sequential layers of fiberglass material. Each layer required a separate cure cycle, and the associated volatile chemicals were released to the atmosphere. The current process, known in general terminology as resin infusion, utilizes a system where all of the resin is introduced inside of a closed vacuum bag in a single chemical catalyzation and cure (exotherm). This produces a superior composite laminate, and at the same time reduces the release of volatiles to the atmosphere to almost nil. It is interesting to note that the aerospace industry, long a leader in advanced composites technology, is now seriously studying a move to resin infusion for large structural parts. Where other more labor-intensive production methods have been the norm in aerospace, this may be a case where the marine industry has been at the front in developing cost-effective approaches to high-quality composites manufacturing. In fact, Delta has hosted a visit from a technical representative of an aircraft manufacturer to witness a large infusion.

Delta's largest infusion to date has exceeded 20,000 kg in a single exotherm, a part measuring 50m in length. At this scale, managing the manufacturing process is even more critical. In the case of composites it is more complex, because the materials produced can be tailored with different fiber types and orientations, different resin systems, and sandwich cores of varying densities and thicknesses. This represents a greater variety of options from metals, where you might select one or two types of steel or aluminum alloy for the entire structure. In any event, the failure of any one of the four key elements listed above can lead to failure of the entire system. In the case of resin infusion, one of the biggest assignments is the requirement to apply the vacuum membrane over the entire laminate in an effectively continuous piece, install scores of resin supply tubes from a manifold system, and draw a near perfect vacuum over a part that may measure 50 meters in length and have an area of 500

square meters or more. Such a commitment is not for the cavalier—large-scale infusion is a single-chance process, and a failure can be extremely costly. A deliberate and meticulous process is the only path to success.

One of the questions that comes up when the subject of composites is raised is “Don’t composites burn?” The answer is yes, like many other materials used in yacht building, including aluminum. However, the governing agencies involved in certifying large yachts recognize the use of both composites and aluminum with proper fire protection evaluated under a steel-equivalency standard. Where a properly demonstrated and documented comparable safety is provided (such

as insulation and sprinkler systems), the use of composite materials has been accepted in structural applications, including Commercial Yacht Code compliant vessels over 50m and 500 GT ITC delivered by Delta, of which INVICTUS is the most recent. In some cases these insulation systems were approved based on proprietary testing of commercially available products in certified laboratories using techniques and configurations developed in-house at Delta.

Marrying the competing priorities, multiple materials, processes and complex geometries to produce the final overall vessel structure becomes a complicated task. The advent of computer based Finite Element Analysis (FEA) has

Done successfully, the optimal solution will remain invisible to the end user. When one walks aboard INVICTUS, the focus is on the beautifully sculpted exterior, the impact of the dramatic headroom, and the grand spaces, not the technical complexities of what was required to accomplish these features. The application of composite materials played an important role in this success. While the development of new regulations such as the Passenger Yacht Code (PYC) continues to challenge the use of composites in the very largest size of yachts, Delta continues to participate in the rule-making process as an advocate for their application. This dialogue has been constructive and positive. We expect, based on the past experience we have had with Class and Flag, that they will remain open to properly supported technical solutions. Delta will continue to challenge the conventional.



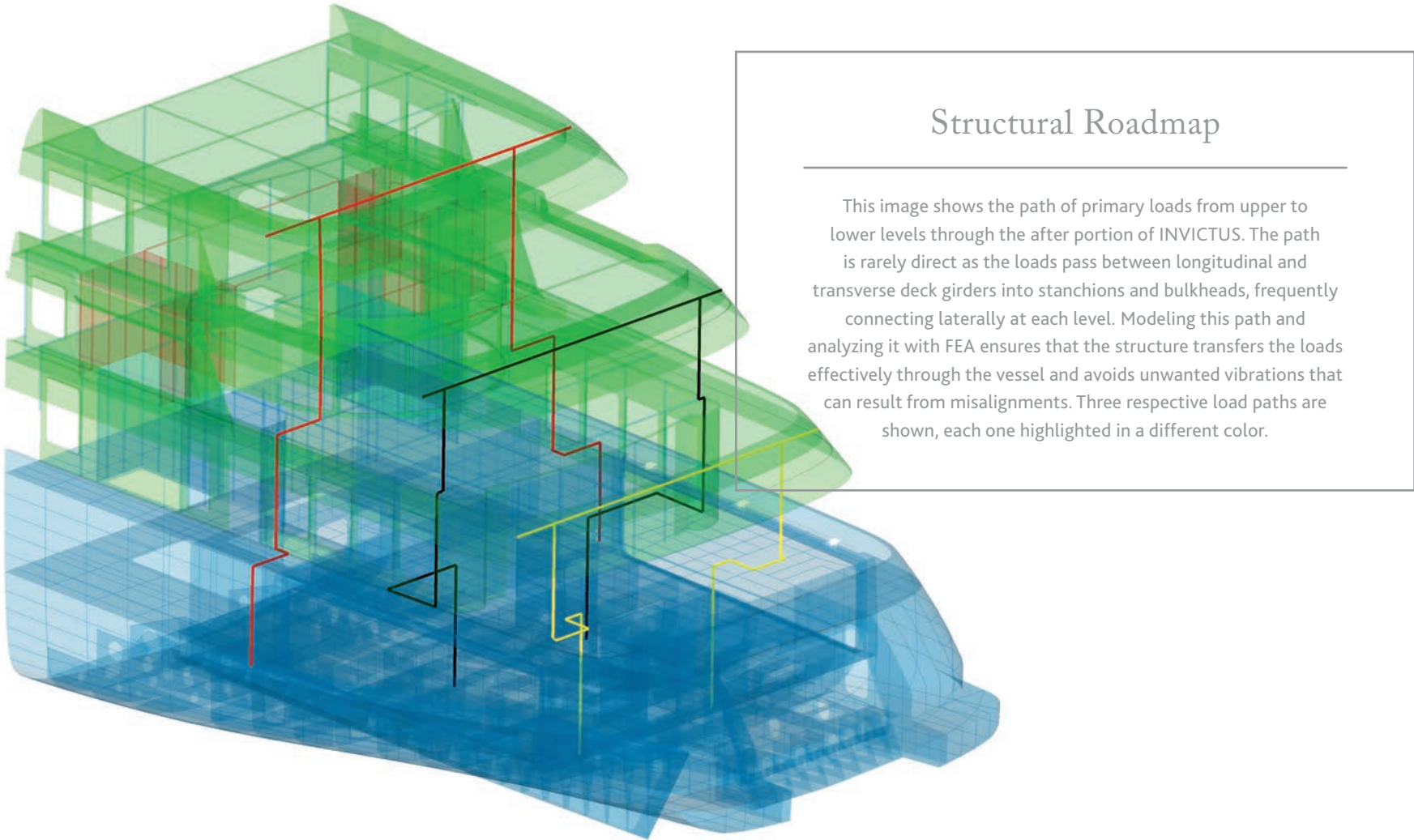
Sample of resin-infused carbon fiber taken from a structural girder on a Delta yacht. The density of this high-strength composite material is half that of aluminum.

Every manufacturing process requires adherence to quality standards to ensure the best result. These standards must cover multiple categories, any of which can lead to compromises of the product. Regardless of whether a shipyard is producing in steel, aluminum or composite, you need the following to be successful:

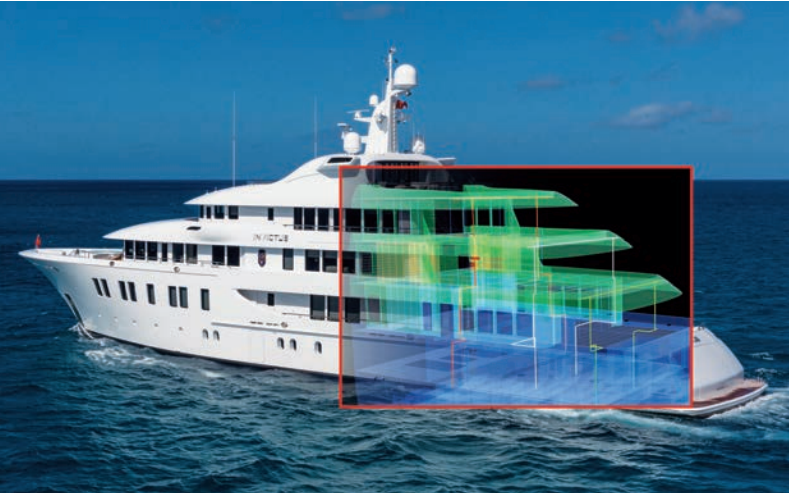
- 1) QUALIFIED MATERIALS
- 2) A CONTROLLED ENVIRONMENT
- 3) RIGOROUS ADHERENCE TO THE MANUFACTURING PROCEDURES
- 4) TRAINED INDIVIDUALS

immeasurably improved the ability of structural engineers and naval architects to predict the strength and stiffness of every component of the vessel in the design stage. This powerful tool allows us an opportunity to change the selection of materials and modify geometry to optimize the overall design. Early in design Delta looked at the general arrangement of the yacht and developed a rational approach to engineer the major structural elements of the hull and deckhouse. First, all of the loads imparted into the yacht were identified and applied according the Regulatory Body Rules (in the case of INVICTUS, Lloyd’s Register) as well as first-principles engineering, and resolved through a matrix of connections from masthead to keel. This is what we refer to as the “Structural Road Map.” Once the roadmap is developed, an FEA model is built to analyze in

detail the best way to accommodate those loads. Frequently the client’s ideal general arrangement may be far removed from an optimized structural layout. That is to be expected in this industry and part of what makes the design process interesting and challenging to the naval architect. The use of a computerized model of the loads and resulting stresses and deflections permits an easy iterative process of optimization, where the properties of the materials can be modified and substituted to determine the best overall solution to meet the client’s needs and the structural imperatives.



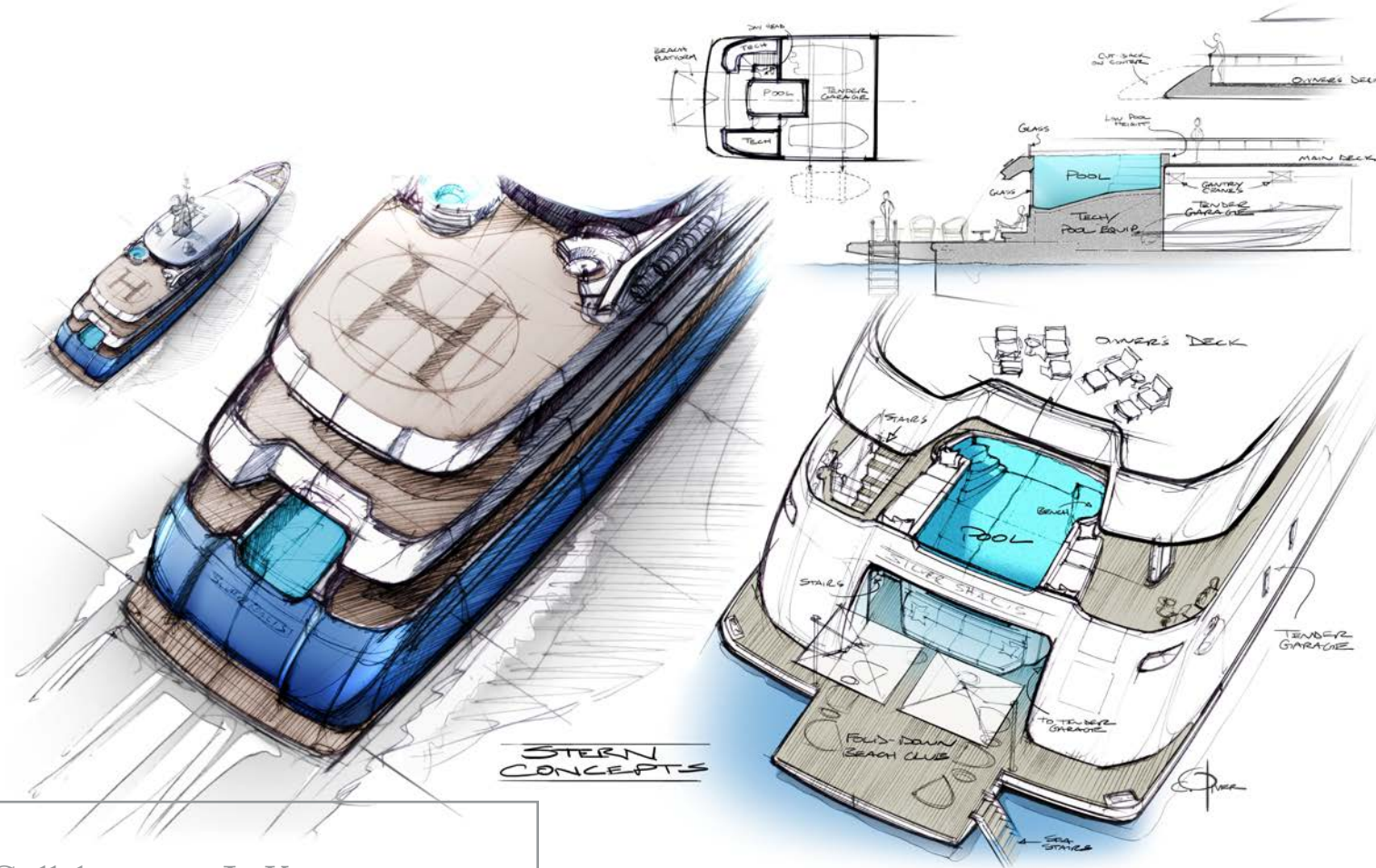
“The conventional view serves to protect us from the painful job of thinking.”
— JOHN KENNETH GALBRAITH





DREAM IN MOTION

Delta's new 67-meter concept is designed to offer maximized features in a compelling package. Touch-and-go helicopter landing capability and twin 8.5 meter tenders allow immediate and superior access to the best of travel possibilities. Formidable in size, with room for 14 guests and 20 crew, this project's features include multiple entertaining spaces, sizable storage, and the ability to provision for extended occasions.

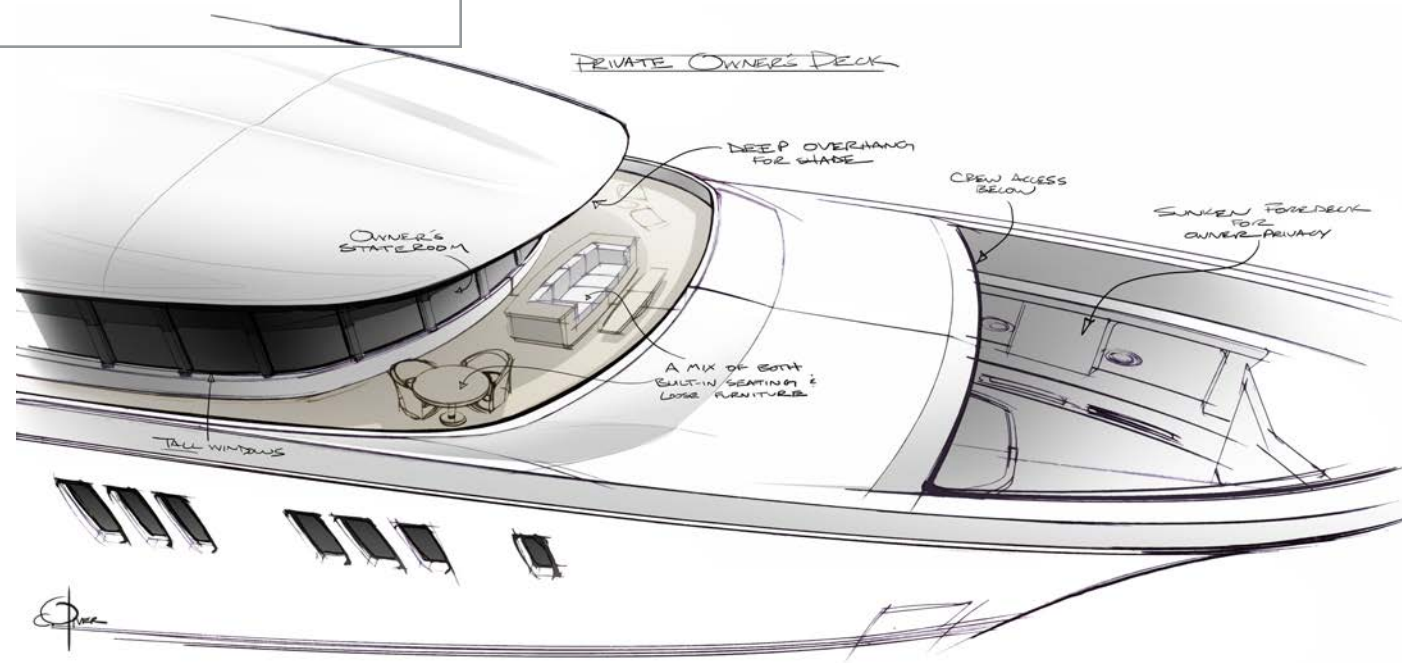


Collaboration Is Key

When you work with Delta, our projects kick off with design of a general arrangement and profile, which evolve as we tailor the design of the yacht to suit your wishes. Through correspondence and meetings, the process molds the yacht into your vision, both functionally and aesthetically. The Delta Design Group will happily manage the entire design, or act in a supporting role assisting your own designer. You can choose our level of involvement. The end goal always remains the same: to deliver the finest yacht imaginable.

LIVING LARGE

The owner's suite, located on the upper deck, faces forward to the horizon with nearly 1200 sq. ft. of living space. The forward owner's patio allows for private lounging while moored stern-to.



WATER WORLD

Dominating the design of the stern is a 15ft long, 9ft wide swimming pool. An underwater window in the pool provides natural light to the beach club area below.

“Two styling directions are presented, with both classic and modern directions proposed. Balanced proportions and handsome, timeless lines describe both silhouettes. The final touches of an owner's personal style are all that's required to craft a truly bespoke statement.”

— CHRISTIAN OLIVER, DESIGNER



PINNACLE OF LUXURY

Aft of the bridge is a full-beam fitness center, with sizable sliding doors leading out to the large heli-deck. It is envisioned to be a sun-lover's space, with low bulwarks allowing guests to take the view from chaises, lounge chairs, or the hot tub.



CELEBRATORY CRUISE

TRITON's new owners just finished cruising British Columbia and Alaska (pictured below) and are making their way toward the Northwest Passage.



A New Classic

One of the services Delta customers truly appreciate is our dedicated Refit & Repair yard, located on our facility. Many members of our team have spent time in new construction as well as refit, using the skills and building techniques that Delta yachts are known for. This advanced knowledge helps immensely, as we're able to deal with real-time issues in an effective and efficient means, providing creative, cost-effective solutions while executing the highest levels of work.

And to us, there's nothing like revisiting with a true friend. TRITON, our 2004 163-foot delivery, came to Delta with a very specific mission: to make her feel and look brand new again. This is one of our favorite kinds of challenges! And we were the perfect place to make this happen, in part because of our knowledge of the original build and the owner's desire to restore it to its original condition. This six-month project featured exceptional collaboration between the owner's rep and Delta, delivering results within the budget and time frame, and ultimately, the owner's utmost satisfaction.



01
TRITON's interior refit included refinishes and replacement of soft goods and carpets, but the overall integrity of the design was maintained.

“TRITON arrived at Delta for her refit after sailing thousands of miles around the world. She left Delta after her refit heading for the Arctic Circle to go over the top of the world, transiting the Northwest Passage.”

— GRAEME HEYS, REFIT YARD MANAGER

Q&A

WHAT IS DELTA'S METHOD OF COST CONTROL?

We provide the owner's representative weekly cost tracking, which allows for real-time project tracking. Our model is a collaborative effort with the owner's team to evaluate the project scope and final project cost.

HOW DO YOU MANAGE GROWTH OF SCOPE?

To avoid "scope creep," we use a detailed work list and try to stick to that list. Naturally, over the course of the refit, discoveries may be made where additional projects could be included in the scope. Unless it is a critical system, we might consider including it in the next yard period.

WHY CHOOSE DELTA?

Our amazing facility, skilled workforce, a truly competitive labor rate worldwide, the support of Delta Design Group, and a great location both here in the Pacific Northwest and as the gateway to Alaska.



01
TRITON features a country kitchen with fabulous nook for eating breakfast and engaging with the chef.

02
The launch was a great event with family and friends, and a surprise of a live Country Western band.

03
Refit Manager Graeme Heys and Service Manager Don Van Pay celebrate at the launch party.

04
TRITON's versatile skylounge integrates the best of indoor and outdoor living.

05
The refit included upgraded bridge electronics and a new computer network system.



Where Have You Been?

We'd love to see what you've been up to—share your adventures with us!
Send us photos of you and your crew enjoying the best of travel
from the vantage point that can only be found on a Delta.
Maybe you'll see them in our next newsletter!





COMMITMENT TO EXCELLENCE

EACH DELTA
DELIVERY IS
AN ACHIEVE
MENT TO BE
CELEBRATED



LOCATION _____



Inspiration often begins at home, and for Delta, there have been considerable advantages to growing an organization in a part of the world that's both a technology capital and an international center for large composite projects. Seattle is host to some of the most inventive companies ever conceived, including Microsoft, Boeing, and Starbucks. Boeing and Delta are both leaders in the Northwest's exciting tradition of composite innovation.

Seattle is renowned for being an influential urban center with easy access to spectacular natural beauty, including myriad charming islands dotting Puget Sound, magnificent Mount Rainier, the Olympic and Cascade mountains, plus the Olympic Peninsula's rain forest. In addition to some of the world's most stunning scenery, the Pacific Northwest abounds in wildlife, and is home to three orca whale pods and more bald eagles than anywhere in the continental United States. It's the ideal starting point for exploring Alaska — and many owners have set out from the Delta docks toward beautiful British Columbia, or sailed the Pacific toward sunny climes including Mexico and beyond.



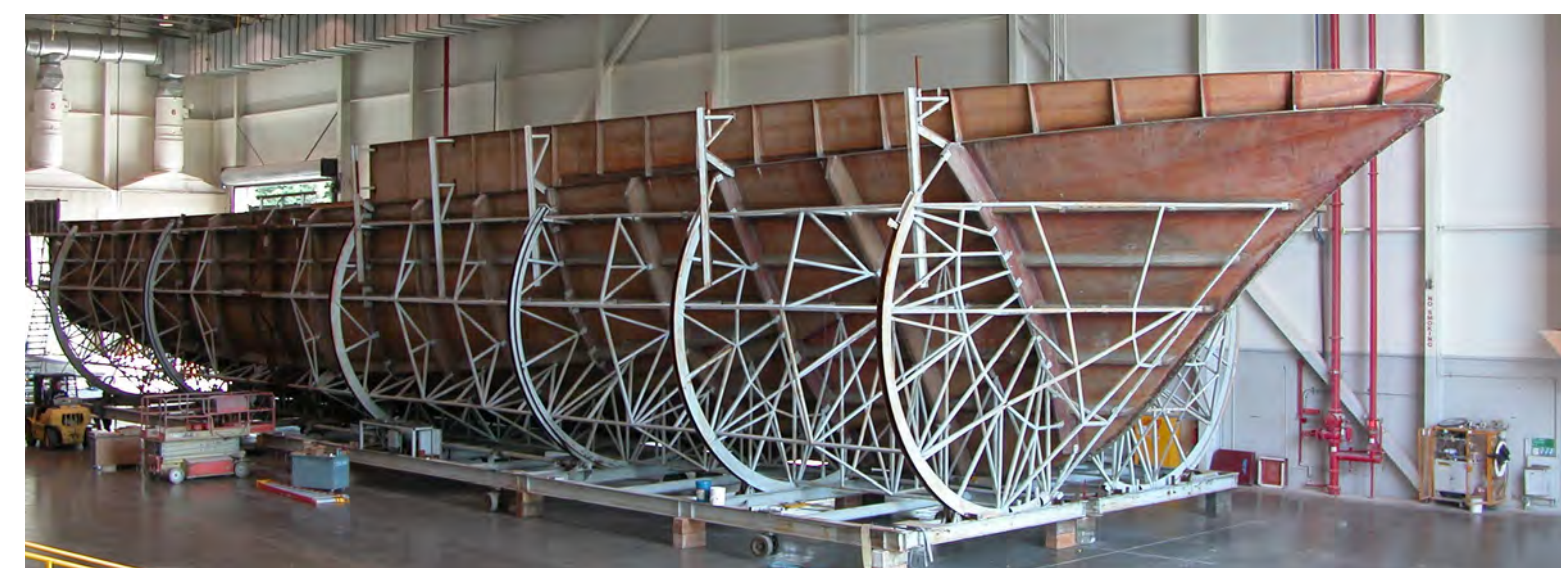




Located on a sprawling 25 acres, Delta has nearly 300,000 square feet of covered manufacturing space in a state-of-the-art facility. The company prides itself on housing all the marine trades on site, and sources as many American-made products and supplies as possible. It's Delta's successful formula to produce the finest quality work. Thanks to this comprehensive and connected facility, Delta team members have a fluency about ongoing projects that is unmatched. The shipyard is one of the most advanced, and Delta continually updates equipment and invests in new processes and technology in order to provide customers the most progressive and superior manufacturing ability. Delta is also an excellent custodian of the environment and the waterway where the work is performed. It ensures manufacturing is done indoors and manages its waste stream with the utmost care. In all ways, the Delta facility represents the best of metal and composite construction for yachts up to 100 meters.

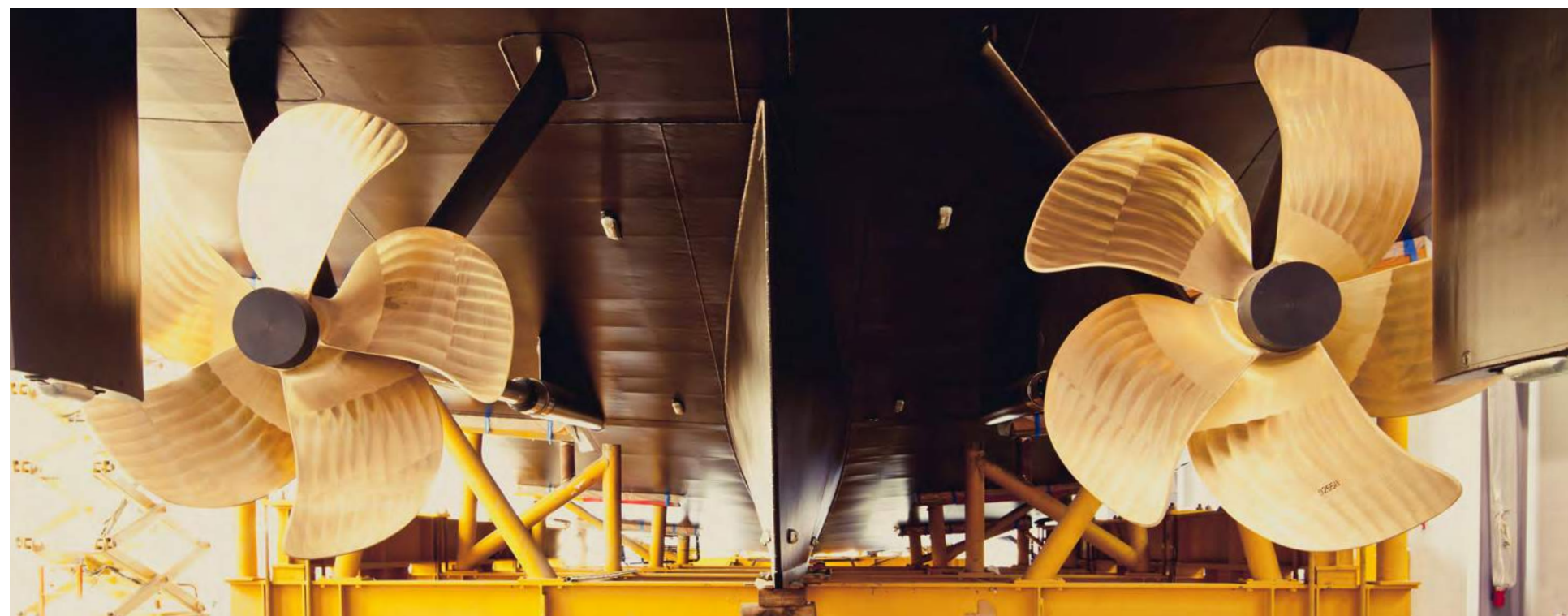
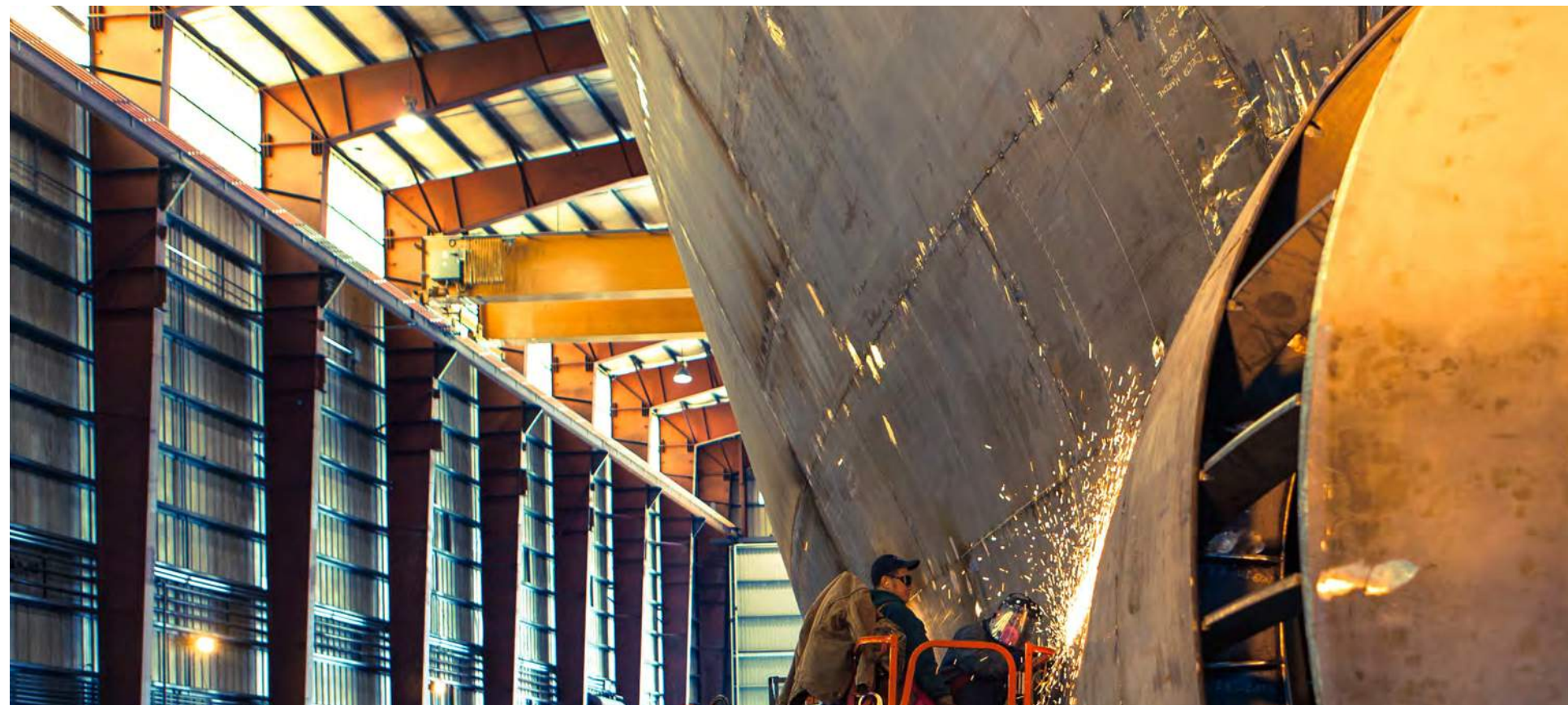
TO CREATE A
WORK OF ART
YOU BEGIN
WITH THE RI
GHT TOOLS





INSPIRATION: FIND IT
THROUGHOUT OUR FACILITY
AND IN OUR VERY FIBER



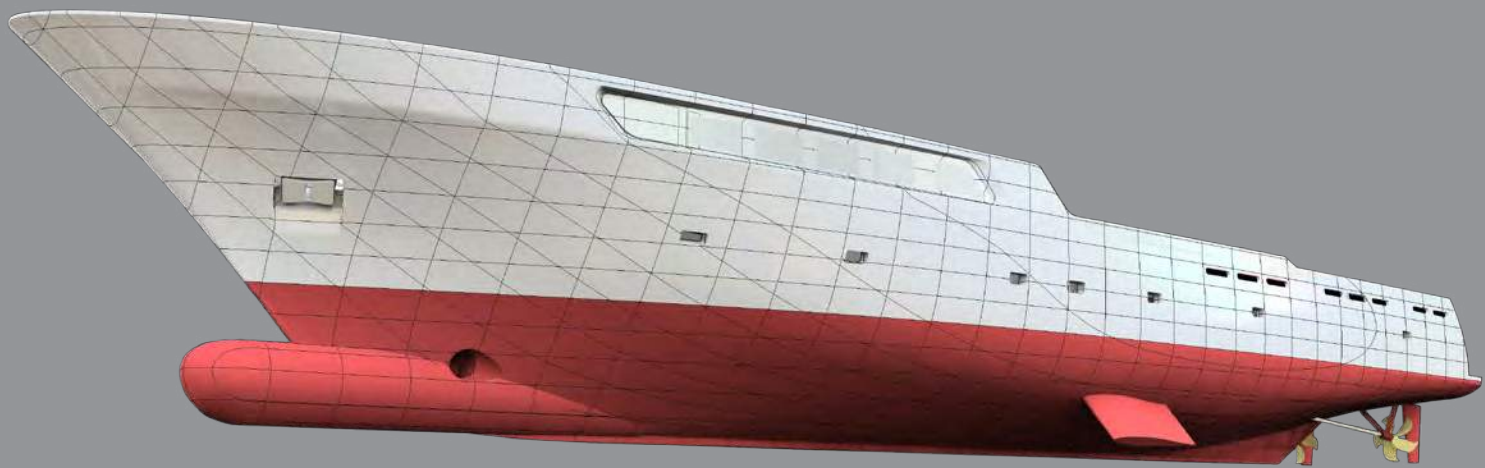


EXTRAORDINARY CRAFTSMANSHIP HAPPENS WHEN YOU COMBINE THE EYE OF AN ARTIST, THE HEART OF A FANATIC, THE BRAIN OF A GENIUS, AND HANDS OF A MAGICIAN. While technology and superlative manufacturing processes have certainly played a role in Delta's success, there is no greater resource at Delta than its team. By hiring and retaining the industry's top talent, Delta attracts the highest caliber artisans and craftsmen, with many second-generation family members joining the team. From fine carpentry to mechanical and electrical installation and the highest quality paint jobs in world, all work is completed here on-site where Delta can manage and deliver the high-quality yacht construction it promises. As Delta continues to grow and evolve, it adds professionals and field experts who share Delta's unified goal: to craft the world's finest yachts, while providing individualized, impeccable service.

CRAFTSMEN



PUT OUR VIS
ION SKILL AN
D EXPERTISE
TO WORK





WITH INCREDIBLE SKILL, IMPECCABLE PRECISION, AND LIMITLESS IMAGINATION, DREAMS ARE REALIZED — THE DELTA DESIGN GROUP. Delta offers an impressive in-house engineering and design team, the Delta Design Group. This beautiful state-of-the-art studio is a hub of inspiration for owners, captains, and collaborative partners. Delta's naval architects, marine engineers, and designers have extraordinarily accomplished backgrounds and decades of experience in both metal and composite shipbuilding; most impressively, they're the industry leaders in technical integration of metal hulls with composite superstructures. On the creative side, clients appreciate the team's skill and imagination and the ability they have to bring to life ideas and designs, from simple hand-drawn sketches to fully developed 3D renderings. Collaboration is Delta's strongest suit — while they offer the highest caliber naval architecture and design services, they can also work seamlessly with an outside team of an owner's choosing, ensuring the highest quality and reliability for all projects.



A JOURNEY OF EXTRAORDINARY BEAUTY AWAITS





Delta prides itself on providing exceptional service and maintenance for the entire ownership of one of its yachts. In particular, Delta's customers love and appreciate its full-service Refit & Repair facility. Whether it's mechanical or technical repairs, painting or refinishing, new interior work or expansions, Delta can handle any project, big or small. The facility features covered refit bays and a marine Travelift capable of lifting 440 tons, along with the support of the Delta Design Group. In addition to refit and repair work performed in Seattle, Delta offers excellent customer service and warranty in any part of the world. With every new yacht, Delta provides a dedicated point of contact with unequalled knowledge of the systems and construction, and can assist in anything from day-to-day operations to a full refit.

SERVICE AND WARRANTY

AT YOUR SERVICE AND ALWAYS BY YOUR SIDE



A WORK OF BRILLIANCE
A PERSONAL MASTERPIECE
THE ADVENTURE BEGINS







THE DELTA STORY CONTINUES TO BECOME GREATER WITH
EVERY NEW YACHT COMMISSIONED

For more than 40 years, Delta’s most important value has remained unchanged. Delta provides the finest custom yacht manufacturing and services — with an owner’s vision and desires at heart. This is a lasting commitment. As new generations of professionals join the ranks and unprecedented technologies enhance their capabilities, Delta remains steadfast in its goal to produce world-class yachts that are truly beyond compare.

