MARINE SYSTEMS | ENGINEERING PACKAGE

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I would like to take this opportunity to introduce you to our Golden Floating Dock Systems. Our systems range from light-duty residential to mega-yacht marina capacity. Our dock systems come in both aluminum and concrete applications. Our hope is that this introduction will give you the knowledge and understanding of our dock systems so that you may consider Golden Marine Systems in your next project's design specifications. Enclosed, for your review are brochures, overview drawings, and photos of past project respective of the dock system.

Golden is a Florida corporation and is located in North Fort Myers. The company principal, Bill Golden, has been in the marina industry for over 40 years. Over the years Golden has been leading the way with new and innovative marine products and projects. Many of these have received industry accolades and awards.

The present facility consists of 56,000 + sq. ft. of manufacturing floor space and administrative offices. All engineering, drafting, and manufacturing is done in house and does not utilize any subcontractors. The manufacturing processes are regulated under strict policies and procedures under ISO 9000:2015 guidelines. At present, Golden Marine has 80 staff members with responsibilities ranging from design, engineering, manufacturing, sales, administration, managerial, safety, and quality assurance.

All staff are vetted for their expertise and trained monthly in safety, new techniques, six sigma practices.

We are always available to lend support and answer any questions you may have to help you design your next project around a Golden product.

Thank you in advance for reviewing the enclosed materials provided. I would like to follow up within the next week to assure that you have received our package and answer any questions you may have. If you need to contact me prior to my follow up, please do not hesitate to contact me at 239.337.4141.

Kindest regards, Michael Shanley, President



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CONCRETE SYSTEM

PATENT # 6,250,945

FLOTATION MODULE

- Design is a polyethylene plastic shell encasing a closed-cell EPS (expanded polystyrene) core.
- The polyethylene is specially treated to resist UV deterioration.
- The EPS foam core has a weight of .95-1.10 lb. per cubic ft. conforming to ASTM standard specification C-578.
- The EPS foam has a water absorption rate of less than 1 percent in twenty-four hours, with a maximum of three (3)

the percent by volume as tested by ASTM method C-272.

CONCRETE SURFACE

- Air-entrained Portland Cement Type I conforming to ASTM C 150.
- The reinforced concrete surface has a minimum thickness of 2 inches with structural ribs 5 $\frac{1}{2}$ " thick.
- The walking deck is poured in one monolithic pour over a galvanized welded wire reinforcement that meets ASTM

standard A-185 or polymerized glass fiber reinforced concrete is used with a compression strength of 5,000 psi. at 28-

days with flexural strength minimum of 1,500psi when tested in accordance with ASTM C 1018.

• The surface is trowel finished with a broom non-skid texture that is applied transversely to the walking surface creating

a long-lasting slip-resistant finish.

- The floating module allows for an individual concrete pour or the insertion of a pre-stressed, pre-cast concrete slab.
- Concrete design options also include the choice of concrete colors and stamped patterns.

UTILITY RACE COVERS

• Service trough covers are custom knurled 6061-T6 grade aluminum. Service troughs are secured with a 300 series stainless screw.

CONCRETE SYSTEM

PATENT # 6,250,945

ALUMINUM WHALER

- 6061-T6 grade aluminum
- The extrusion is designed with track systems to allow for adjustable cleats, pile guides, and finger piers
- Aluminum whalers come predrilled at 12" intervals to accept the thru rods
- The extrusion measure at 8" h x 3.5" w. To further reinforce the extrusion a 2" x 2" custom channel is inserted then bolted in by thru rods
- All whalers, fascia, or any other member which is subject to foot traffic, will be flush with the concrete walking surface. US Patent #6,205,945

THRU-ROD CONNECTIONS

- All thru-rods are ³/₄" thread diameter, hot-dipped galvanized steel (Stainless Steel rods can also be used as an additional cost)
- The rods travel through the floatation module at 12-inch intervals encased in ³/₄" inch PVC sleeves cast in the concrete
- Thru-rods are also placed through each module within six (6) inches of each end of the unit and within six (6) inches of each aluminum whaler splice.

PILE GUIDES

- 300 series stainless steel with stainless steel pins and cotter keys
- The rollers are comprised of UHMW
- External pile guides options are 300 series stainless steel or 6061-T6 aluminum construction
- All hardware for each is a 300 series stainless steel.



MATERIAL:		
CEMENT FINE AGGREGATE COARSE AGGREGATE ADMIXTURES EUCON AIR MIX ADMIXTURES PLASTOL 431	ASTM C150 TYPE II ASTM C33 ASTM C33 ASTM 260 ASTM C494	
<u>CEMENT:</u>		
STRENGTH (ASTM C31 LAB CURED):	5000 PSI	
 BATCH WEIGHT PER CUBIC YARD CEMENT (ASTM C150 TYPE II) SAND (ASTM C-33) SSD 1/2" NORLITE AGGREGATE FIBER REINFORCEMENT WATER EUCON AIR MIX - 250 PLASTOL 341 AIR CONTENT SLUMP EQUILIBRIUM AIR DRY UNIT WEIGHT 	752 LBS 13665 LBS 675 (DRY) LBS 1LB 36.9 GAL .02+/02 OZ/CWT 4.0 OZ/CWT 6.5% 5+/-1" 113+/-4PCF 6450	MAIN DOCK SHOWN FILLED
REINFORCING STEEL: WELDED WIRE MESH: CONFORMS TO ASTM A496 HOT DIPPED GALVANIZED	5 GRADE 60	
 10" OVERLAP 		
WHALER SYTEM: 6061-T6 MARINE GRADE ALUMIN PILE GUIDE: 316 SERIES STAINLESS STEEL STRUCTUR W/ HPDM ROLLERS	NUM RE AND HDW	INTERNAL PILE GUIDE SEE SHEET 15
RUB RAIL: 4" X 6" PT LUMBER/STAINLESS STEEL HDV	W\	
PSF 100PSF FREEBOARD 20" NOMINAL DD FREEBOARD 18" NOMINAL LL BERTHING LOAD 6000 LBS IMPACT MOORING LOAD 4000 LBS LATERAL LOAD CONCENTRATED LOAD 500LBS OVER 10' X 10' AR	20" NOMINAL DL 18" NOMINAL LL 6000 LBS IMPACT 4000 LBS LATERAL LOAD 500 LBS OVER 100 SQFT AREA	





PATENT# 6,250,945

	FLOAT SPECIFICATIONS					
	FLOAT ENCASEMENT:					
	DENSITY (ASTM D-1505) MELT INDEX (190DEG/2.16 KG ESCR (100/LGEPAL, F-50, AST/ TENSILE STRENGTH AT YIELD, 2 ELONGATION AT BREAK (AST/ FLEXURAL MODULUS (1% SEC. LOW TEMPERATURE IMPACT (BRITTLENESS TEMPERATURE (A HEAT DISTORTION TEMPERATURE	G, ASTM D-1238 M D-1693 B) "/MIN (ASTM-63 M D-638) ANT, ASTM D-79 ARM STD -40DE STM D-746) JRE (ASTM D-64) 38) ?0) :G F.) 8)		0.937 G/CC 125 G/10 MIN 1000 HRS 2750 PSI 600% 109000 PSI 68 FT.LBS -90 C 63 C	
	ALL UNITS ARE ROTATIONALLY MOLDED FOR SEAMLESS, ONE-PIECE CONSTRUCTION AND A NOMINAL WALL THICKNESS OF 0.200 INCHES. UNITS ARE MADE USING LINEAR LOW DENSITY VIRGIN POLYETHELENE RESIN CONTAINING UV RAY INHIBITORS AND CARBON BLACK PIGMENT TO PROTECT AGAINST UV DETERIORATION IN COMPLIANCE WITH FDA TITLE 21. UNITS ARE SUITABLE FOR OUTDOOR USE WITH RESPECT TO EXPOSURE TO UV LIGHT, WATER EXPOSURE, IMMERSION AND FIRE IN ACCORDANCE WITH THE UNDERWRITERS LABORATORY'S CLASS 746C AND FLAME CLASS UL-94HB. THEY ALSO MEET ASTM D1988-04 FALLING DART IMPACT TEST.					
	<u>EPS FOAM:</u>					
	DENSITY (ASTM C-303) THERMAL RESISTANCE (ASTM @ 25 DEG F. @ 40 DEG F. @ 75 DEG F. @ 110 DEG F. COMPRESSION RESISTANCE A FLEXURAL STRENGTH (ASTM C WATER VAPOR PERMEABILITY WATER ABSORPTION (ASTM C DIMENSIONAL STABILITY OXYGEN INDEX (ASTM D-2863 COEFFICIENT OF THERMAL EX FLASH IGNITION TEMPERATUR AUTO-IGNITION TEMPERATUR BTU CONTENT (ASTM NFPA 25	C-177 OR C-51 AT YIELD OR 109 (-203) (ASTM E-96) C-272) 3) PANSION (ASTM E (ASTM D-1929 (ASTM D-1929 (9)	8) & DEFORM M D-696) ?)	ation (astm d-1621)	0.90 MIN LB/FT. 3 4.20 MIN R FOR 1 INCH 4.00 MIN R FOR 1 INCH 3.60 MIN R FOR 1 INCH 3.25 MIN R FOR 1 INCH 10.0 PSI MIN 25.0 PSI MIN 5.0 MAX PERM-IN 4.0% BY VOL MAX 2.0% MAX 24.0% MIN 0.000035 IN/IN/DEG F. 824 DEG F 896 DEG F 17425 BTU/LB	
	ALL UNITS ARE FILLED WITH POLYSTYRENE (EPS) BEADS STEAMED TOGETHER TO LIMIT WATER ABSORBTION AND PROVIDE A SOLID CORE FOR STRUCTURAL INTEGRITY. EPS CONTENTS HAVE A 0.9-1.2LBS/CU.FT DENSITY WITH A WATER ABSORPTION NOT TO EXCEED 3LBS/CU.FT IN ACCORDANCE WITH THE HUNT 7 DAY WATER ABSORPTION TEST. EPS CONTENTS CONFORM TO ASTM C-578 UL STANDARDS. ALSO PASSES UL 1975 AND ASTM E84 TESTS IN REGARDS TO FIRE RESISTANCE.					
				GOLDE	17611 EAST STREET	
			÷ 1	Marine Systems	239-337-4141 mshanley@Goldenmarinesystems.com	
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ALUMINUM WHALER (PATENT PENDING)









ALUMINUM WHALER (PATENT PENDING)





ALUMINUM WHALER (PATENT PENDING)





ALUMINUM WHALER (PATENT PENDING)





PATENT# 6,250,945 ALUMINUM WHALER (PATENT PENDING)



TYPICAL INTERNAL PILE GUIDE





OPTIONAL EXTERNAL PILE GUIDE



PATENT# 6,250,945 ALUMINUM WHALER (PATENT PENDING)

	DEBURR AND REMOVE ALL SHARP EDGES UNLESS OTHERWISE SPECIFIED:	GOLDEN Marine Systems LL	N. FORT MYERS, FL 33917 239-337-4141 MSHANLEY@GOLDENMARINESYSTEMS.COM
	DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL	COMPREHENS PROJECT CONCRETE DOCK	SIVE OVERVIEW
I THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF GOLDEN MARINE SYSTEMS, LLC, ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF	(3) PLACE DECIMAL ±.001 INTERPRET GEOMETRIC TOLERANCING PER: ANSI Y14.5	CUSTOMER GMS MATERIAL SEE BOM	60.25 LBS NONE
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SERIES 950 ALUMINUM

- For Small Boat Marinas to Mega Yacht Marinas
- Double Track Extrusion
- Adjustable Cleats
- Pile Guides
- Finger Piers
- 3/16 Inch Thick Webbed Extrusion
- All materials are of the highest-grade marine alloys including 6061 T6 aluminum for the structures and 300 Series marine grade stainless steel for all connecting components.
- The design features of the floating docks allow for easy installation or future modifications.
- The ease of dock installation helps reduce constructions cost by minimizing the man-hours required to install.
- Ability to add additional sections, finger piers, pile guides or accessories (pedestals, lighting, handrails, flag post, canopy posts) by utilizing custom made connection brackets.
- Cleats can be easily moved or replaced without the need to remove boards or thru-bolts.



SERIES 950 ALUMINUM

- All floats are polyethylene with polystyrene EPS closed-cell foam. The floats are attached to the extrusion utilizing all marine-grade stainless steel bolts and locking nuts.
- Polyurethane rubber noise-free connectors for connecting dock sections are rated at 12,000 PSI. Each dock section has at least two connectors bringing the strength factor to a minimum of 24,000 PSI. The connectors are flexible and allow the dock system to articulate during storm or wave events. This prohibits the rigid binding of the dock system.
- Various decking is available including natural hardwoods, composite, aluminum pavers, and polyethylene decking panels which allow light to seep through. All decking fits easily into the system allowing for easy replacement if damaged.
- Various fenders are available including natural hardwoods, composite, PVC, Vinyl, and HPDM rubbers.
- Utility access panels are available that allow easy access to all utilities both during installation and periodic maintenance needs.
- Various types and cleats are available that range in sizes from 10" to 20." The cleats are also marine grade cast aluminum allow which allows for durable strength and long life.
- All materials are manufactured in the U.S.A, Fort Myers, Fl by certified aluminum fabricators under ISO-9001 2015 standards, policies, and procedures.

















SERIES 850

ALUMINUM

SERIES 850 ALUMINUM

- For Small Boat Marinas to Large Boat Marinas
- Single Track Extrusion
- Adjustable Cleats
- Pile Guides
- Finger Piers
- 3/16 Inch Thick Web Extrusion
- All materials are of the highest-grade marine alloys including 6061 T6 aluminum for the structures and 300 Series marine grade stainless steel for all connecting components.
- The design features of the floating docks allow for easy installation or future modifications.
- The ease of dock installation helps reduce constructions cost by minimizing the man-hours required to install.
- Ability to add additional sections, finger piers, pile guides or accessories (pedestals, lighting, handrails, flag post, canopy posts) by utilizing custom made connection brackets.
- Cleats can be easily moved or replaced without the need to remove boards or thru-bolts.



SERIES 850 ALUMINUM

- All floats are polyethylene with polystyrene EPS closed-cell foam. The floats are attached to the extrusion utilizing all marine-grade stainless steel bolts and locking nuts.
- Polyurethane rubber noise-free connectors for connecting dock sections are rated at 12,000 PSI. Each dock section has at least two connectors bringing the strength factor to a minimum of 24,000 PSI. The connectors are flexible and allow the dock system to articulate during storm or wave events. This prohibits the rigid binding of the dock system.
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- All materials are manufactured in the U.S.A, Fort Myers, Fl by certified aluminum fabricators under ISO-9001 2015 standards, policies, and procedures.



















SERIES 9 ALUMINUM

- For Residential to Small Boat Marinas
- All materials are of the highest-grade marine alloys including 6061 T6 aluminum for the structures and 300 Series marine grade stainless steel for all connecting components.
- The design features of the floating docks allow for easy installation or future modifications.
- The ease of dock installation helps reduce constructions cost by minimizing the man-hours required to install.
- Ability to add additional sections, finger piers, pile guides or accessories (pedestals, lighting, handrails, flag post, canopy posts) by utilizing custom made connection brackets.



SERIES 9 ALUMINUM

- Various decking is available including natural hardwoods, composite, aluminum, brick pavers, and polyethylene decking panels –which allow light to seep through. All decking fits easily into the system allowing for easy replacement if damaged.
- All floats are polyethylene with polystyrene EPS closed-cell foam. The floats are attached to the extrusion utilizing all marine-grade stainless steel bolts and locking nuts.
- Various fenders are available including natural hardwoods, composite, PVC, Vinyl, and HPDM rubbers.
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HARBOR COVE







GANGWAYS

- ADA Compliant Hand Rails
- Various Decking Options
- Angle Hinged Attachment

- Transition Plate
- Equipped with Nylatron Rollers
- Optional Wear Plates



CLEAT OPTIONS

- For Residential to Mega Yacht Marinas
- Cleats can be easily moved or replaced without the need to remove boards or thru-bolts.
- Golden has a range of cleat sizes for small boats to mega yachts. These sizes are 12 inches, 16 inches and 18 inches.
- Cleats in large quantities can be personalize with company or marina name
- Our cleats are adjustable with our concrete floration system, 850 Serues and 950 series
- Cleats can easily be removed or replaced without the need to remove boards or thru-bolts



DOCK STABILIZERS

- A multi-level pile guide with rollers spaced at dock level and a calculated distance above dock level depending on the floating dock load requirements. The typical distance above is two feet. The pile diameter is not limited.
- The roller system is also adjustable to assist in leveling the dock. The material utilized is 6061-T6 aluminum, 300 series stainless steel hardware, and HDPE or Nylatron rollers.
- Materials utilized can also be stainless steel or steel or galvanized metals.
- The frame of the dock stabilizer is shrouded by a 6061-T6 aluminum cowling for aesthetics and to prohibit any safety issues.
- The dock stabilizer creates leverage and stiffening property to keep a floating dock stable and level. The Golden Floating Dock Stabilizer can also be utilized for wave attenuation floating docks to assist in stabilization to minimize heaving and wave

deflection and further dampen wave action.

Summary of uses:

- Floating Dock Stabilization
- Floating Dock Leveling
- Wave Attenuator Stabilization
- Wave attenuator Leveling











ISO 9001:2015 Certified and CE Approved Manufacturer 17611 East Street, North Fort Myers, FL 33917 Tel: 239. 337. 4141 | Fax: 239.337.4482 | Toll Free: 888.909.5438 www.goldenmarinesystems.com

WHEN IT'S DONE RIGHT, IT'S GOLDEN!