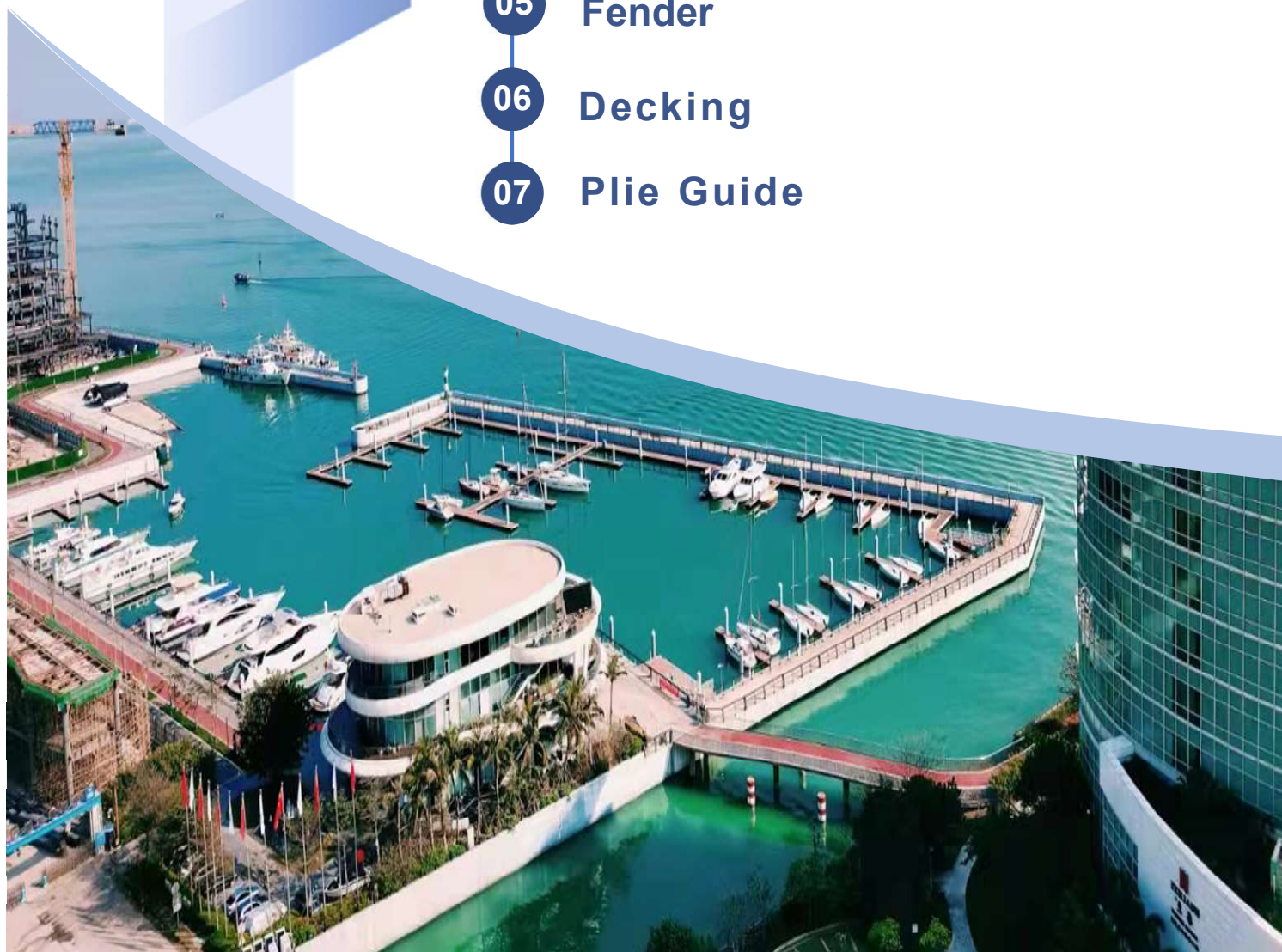




CONTENTS

- 01 Aluminum Alloy Dock System
- 02 Aluminum Alloy Walkway
- 03 Finger
- 04 Triangular Frame
- 05 Fender
- 06 Decking
- 07 Plie Guide

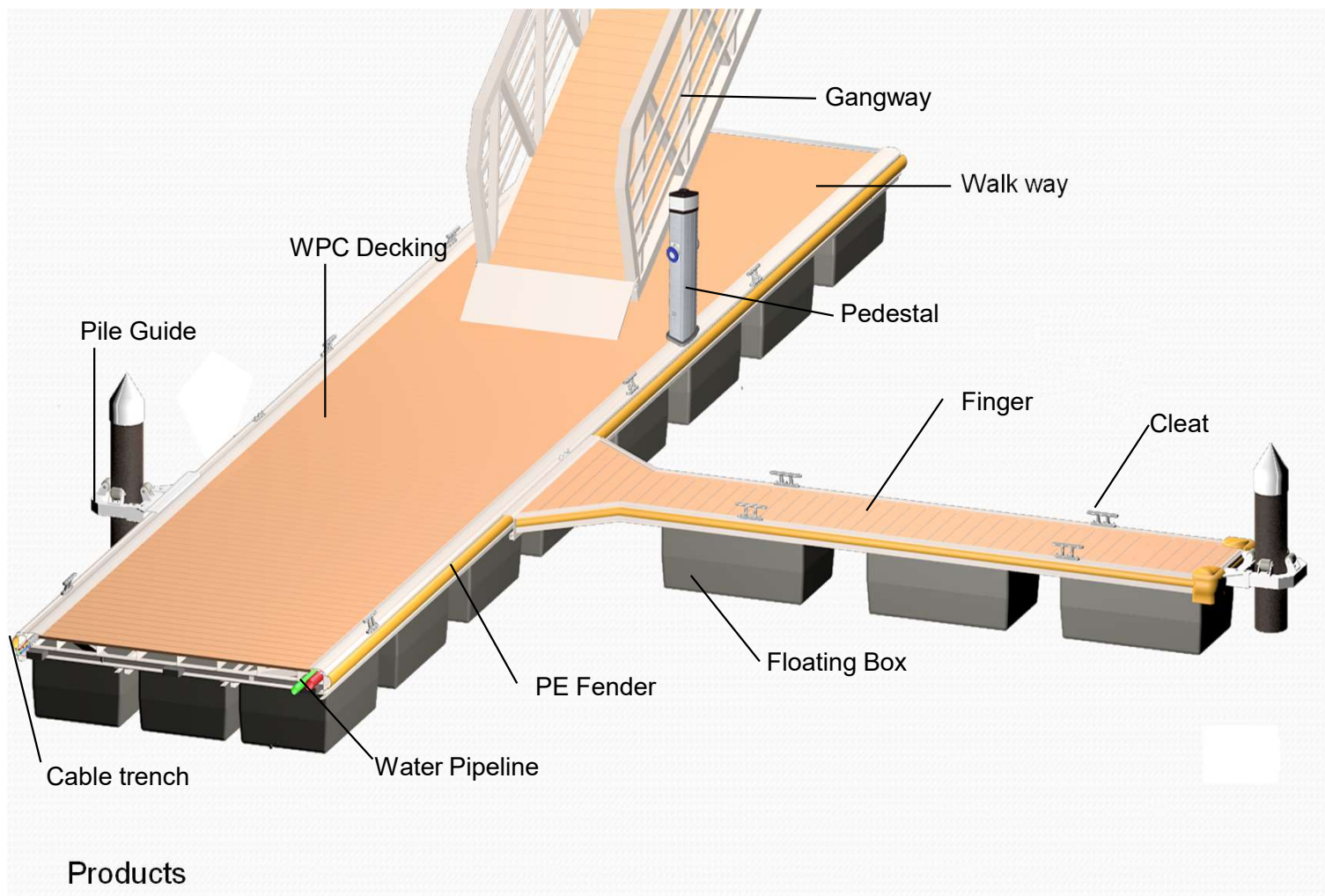




1. Aluminum Alloy Dock System - Standard

Structure Design Standards:

- Australian Standard Guidelines For Design of Marinas (AS3962-2001)
- For the Design, Construction and Operation of Coastal and Inland Marinas and Yacht Harbours
- Aluminum and aluminum alloys—Extruded rod/bar,tube and profiles (BS EN 755-2: 2008)
- Aluminum and aluminum alloys—Chemical composition and form of wrought products (BS EN 573-2:1995);
- Structural use of aluminum BS 8118 part1:1991
- Welding—Recommendations for welding of metallic materials—Part4:Arc welding of aluminum and aluminum alloys (BS EN1011-4)
- Other design references: different regional design codes and customers' customized requirements



Products

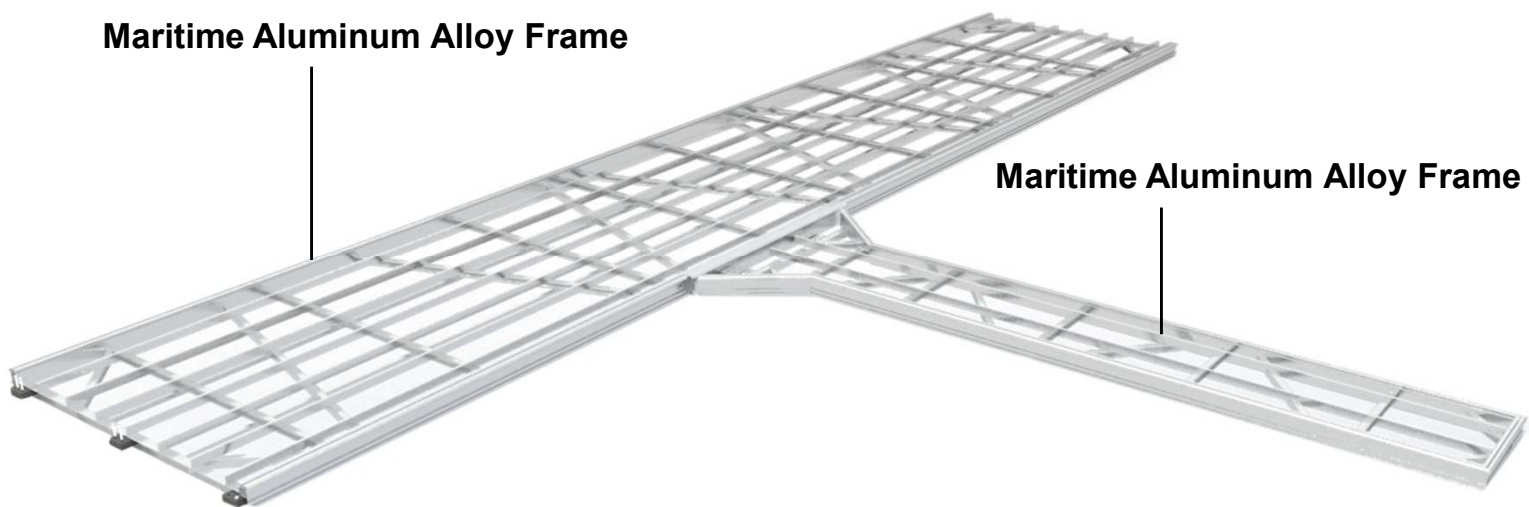
- Long life span
- Easy installation
- Beautiful appearance
- Standardized module
- Low maintenance



The aluminum alloy pontoon structure is mainly composed of four parts:

- Maritime aluminum alloy structural frame
- LLHDPE dock floats or concrete dock floats
- Anti-slip deck and accessories
- Anti-collision fender
- Water and electricity pipelines and facilities

Maritime Aluminum Alloy Structural Frame

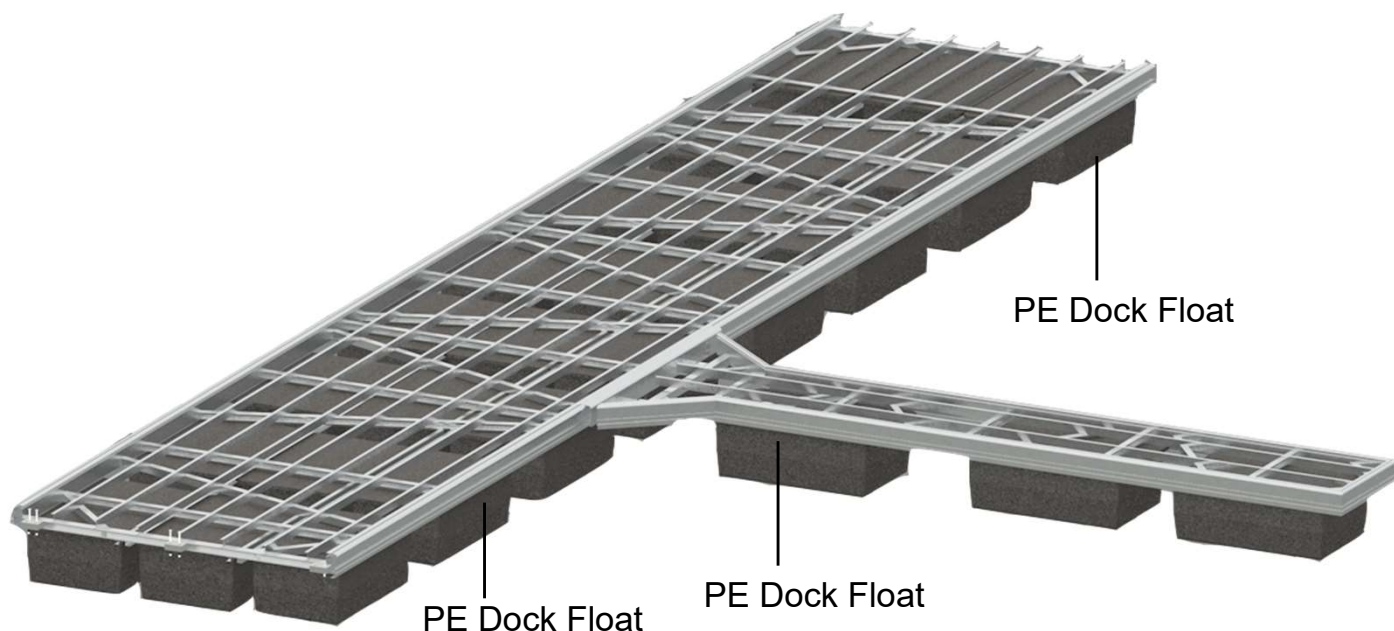


The main frame structure of the pontoon is made of 6000 series maritime aluminum alloy, which is with performance of high strength and good corrosion resistance as well as welded by Melt-inert Gas workmanship.

The whole structure mainly bears horizontal force and mooring force, and other components and facilities need to be installed on the frame.

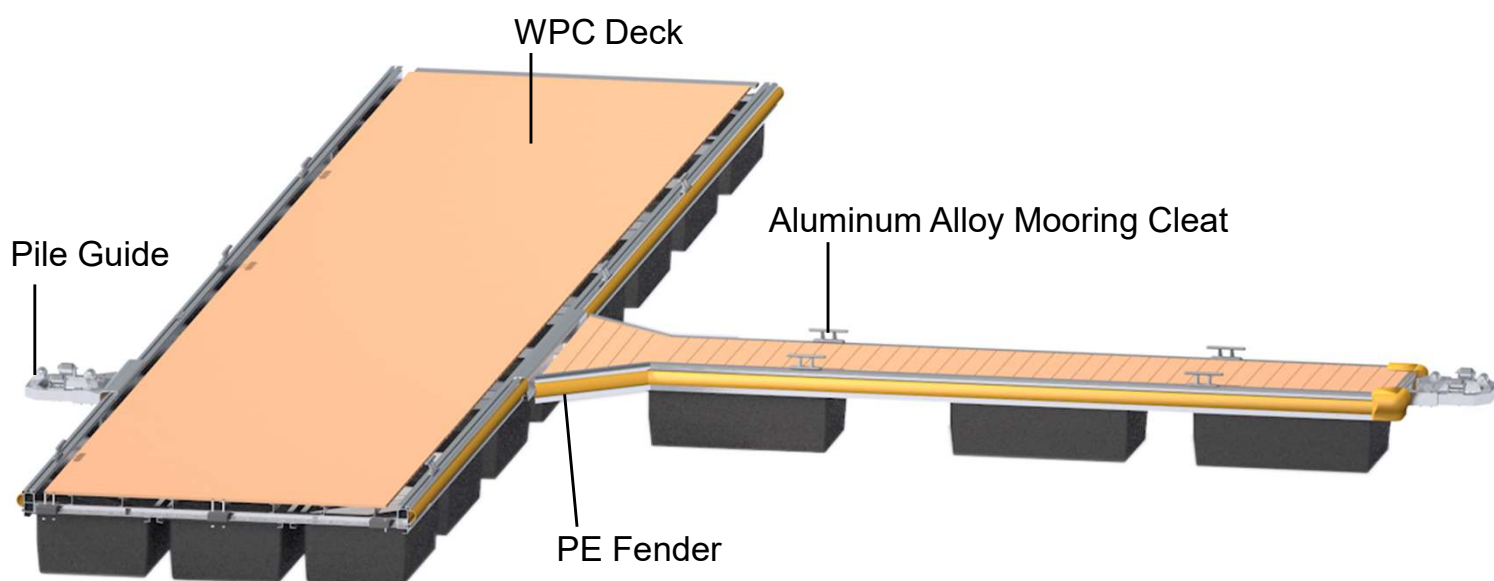


● Dock Float



The dock float is made of LLHDPE, and the average wall thickness of the float is more than 5mm. The dock floats are filled with 15kg/m³ EPS foam, which can provide enough buoyancy for the pontoon even under full load.

● Decking and Fittings

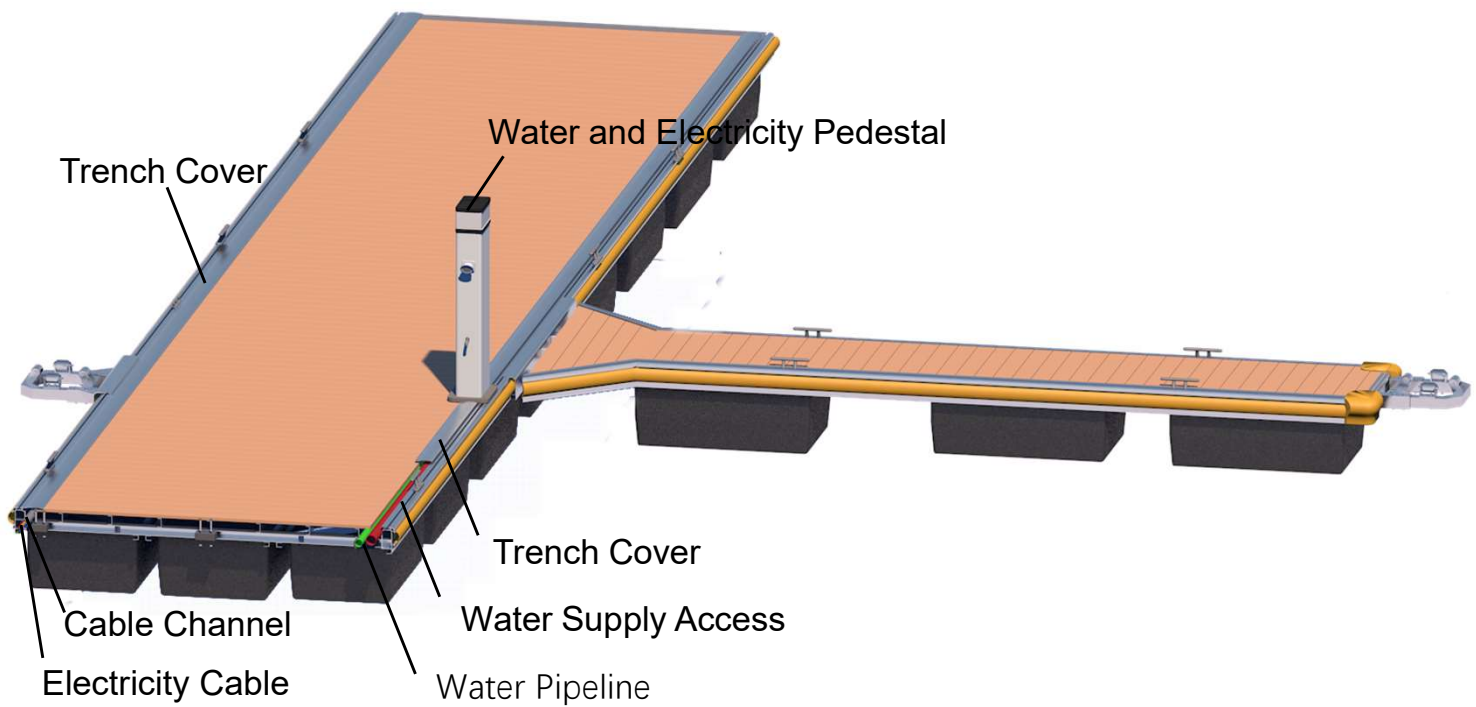


Pavement on the Structural Frame: WPC Deck(or PE Deck)

Upper Structural Fittings: Pile Guide(Pontoon Fixation Fitting), PE/Rubber Fender and PE Corner Sheath(Pontoon Protection Fitting), Aluminum alloy/Stainless Steel Mooring Cleat(Pontoon Mooring Fitting)



● Water and Electricity Facility

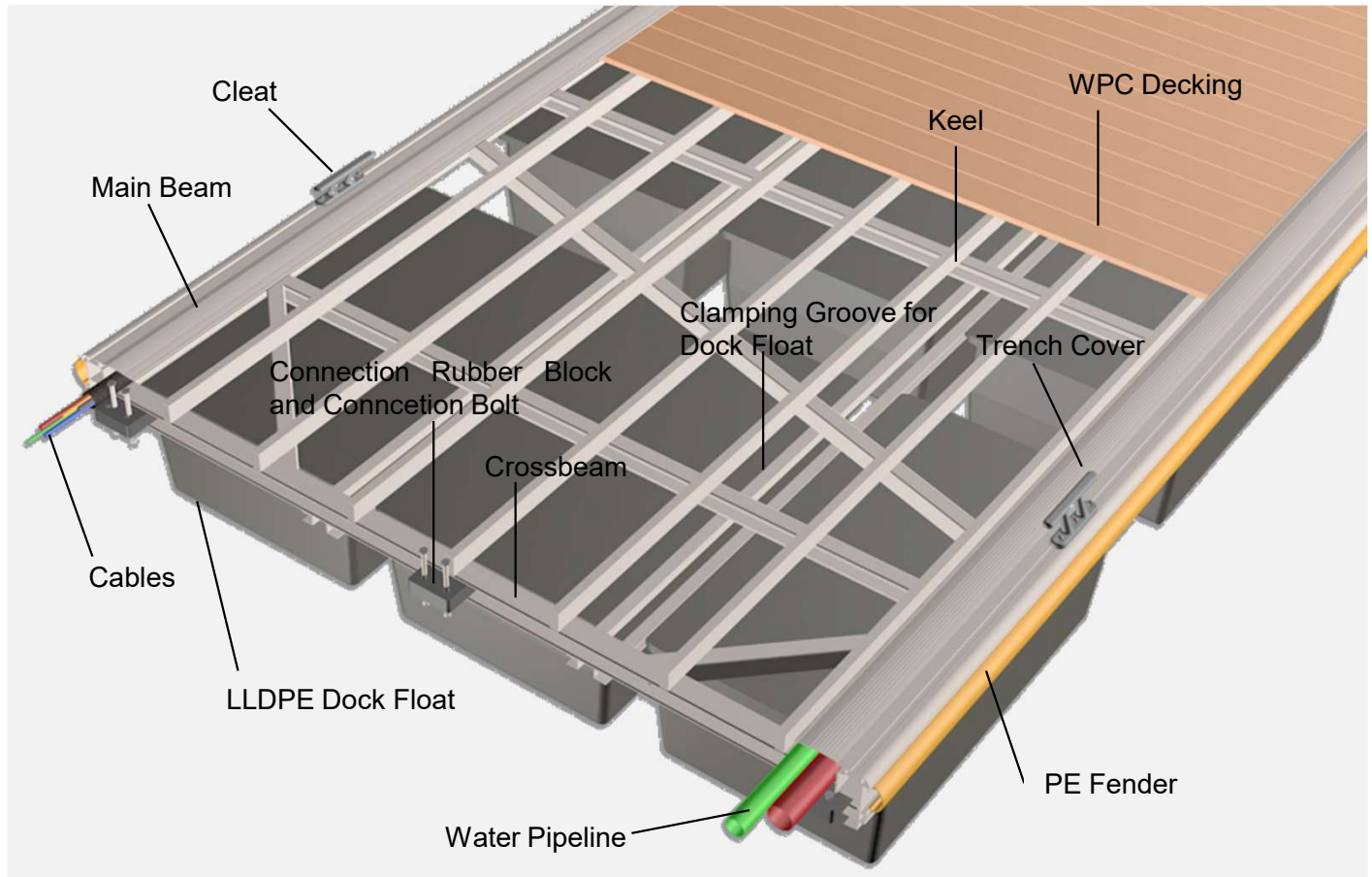


Water pipes and cable channels are reserved on both sides of the pontoon to provide service access for water and electricity pedestal. The reserved pipeline slots are paved by the 6000 series aluminum alloy trench cover, which is convenient for replacement and maintenance and plays the role of appearance decoration.

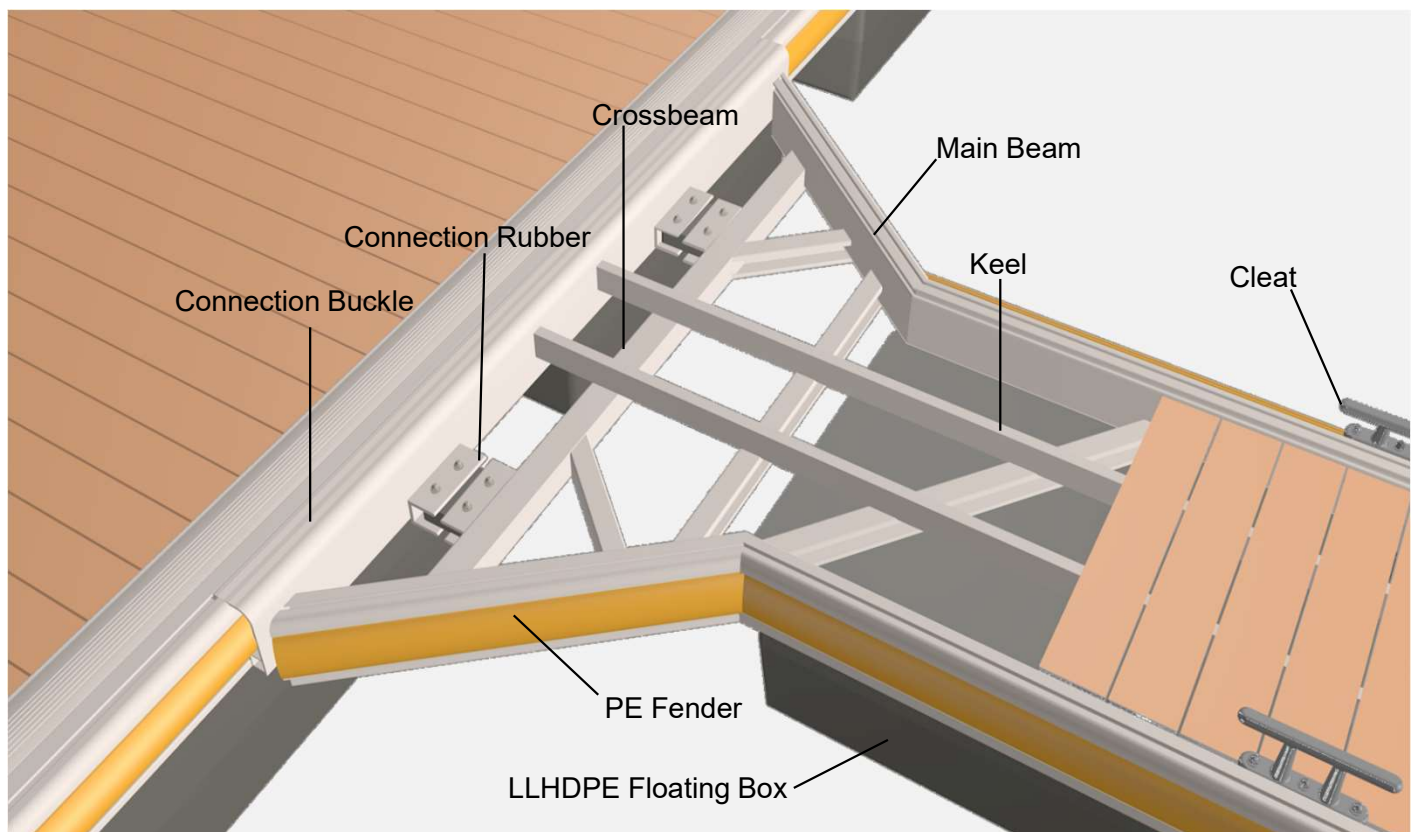


Aluminium Alloy Pontoon Structural Details

Walkway Structure

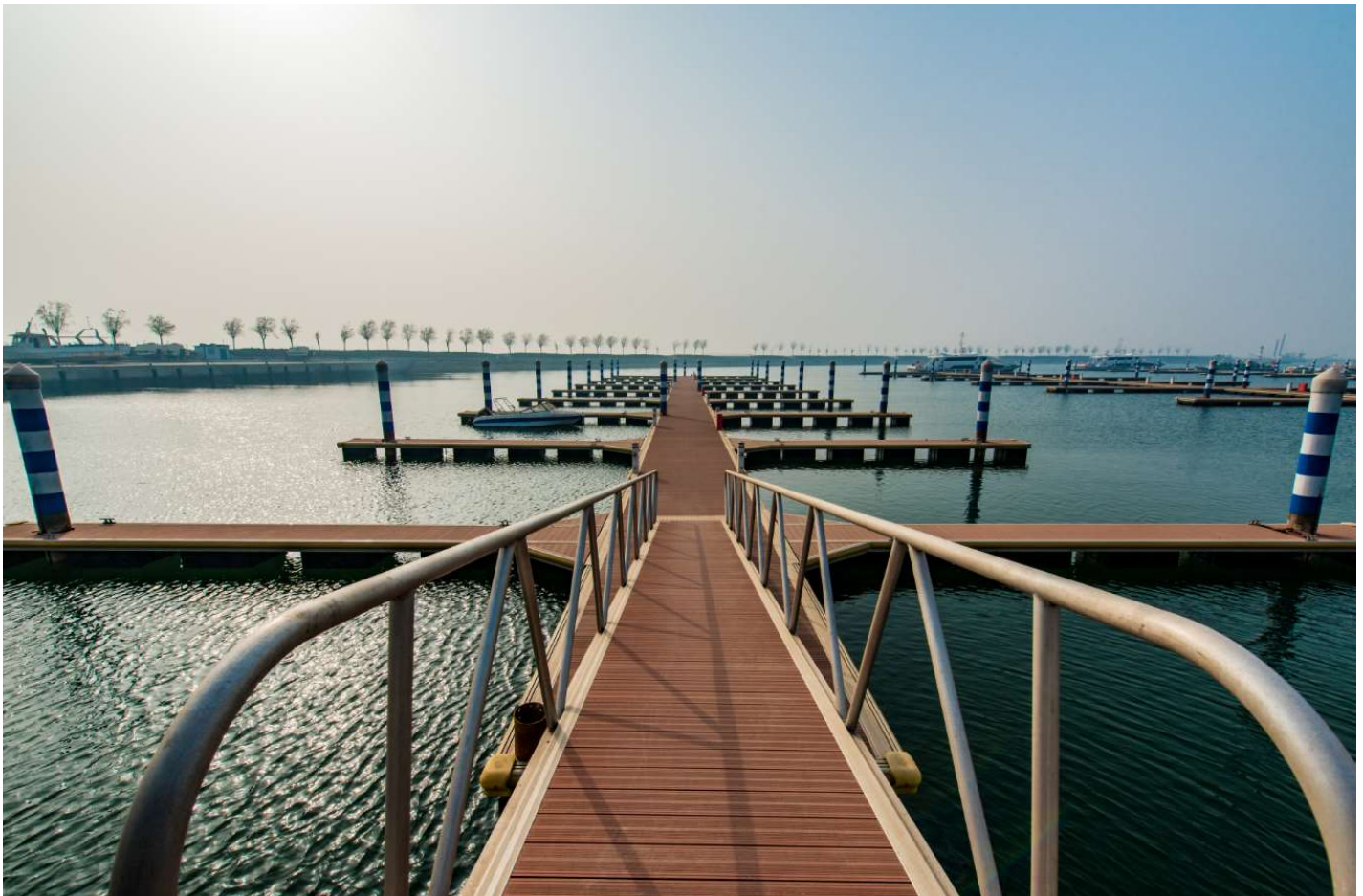
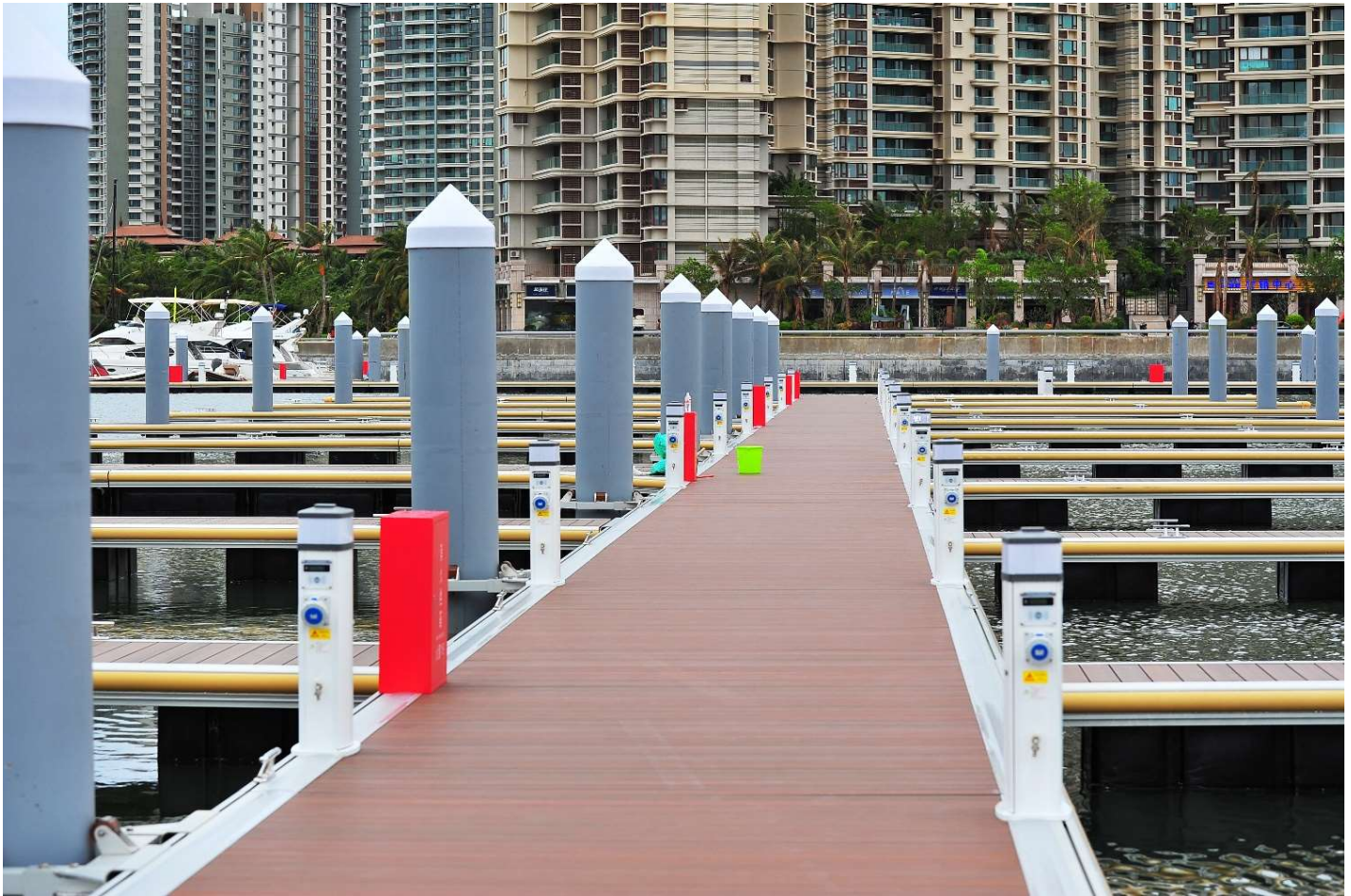


Connection Structures between Main and Finger Pontoon





Aluminum Alloy Pontoon System - Physical References

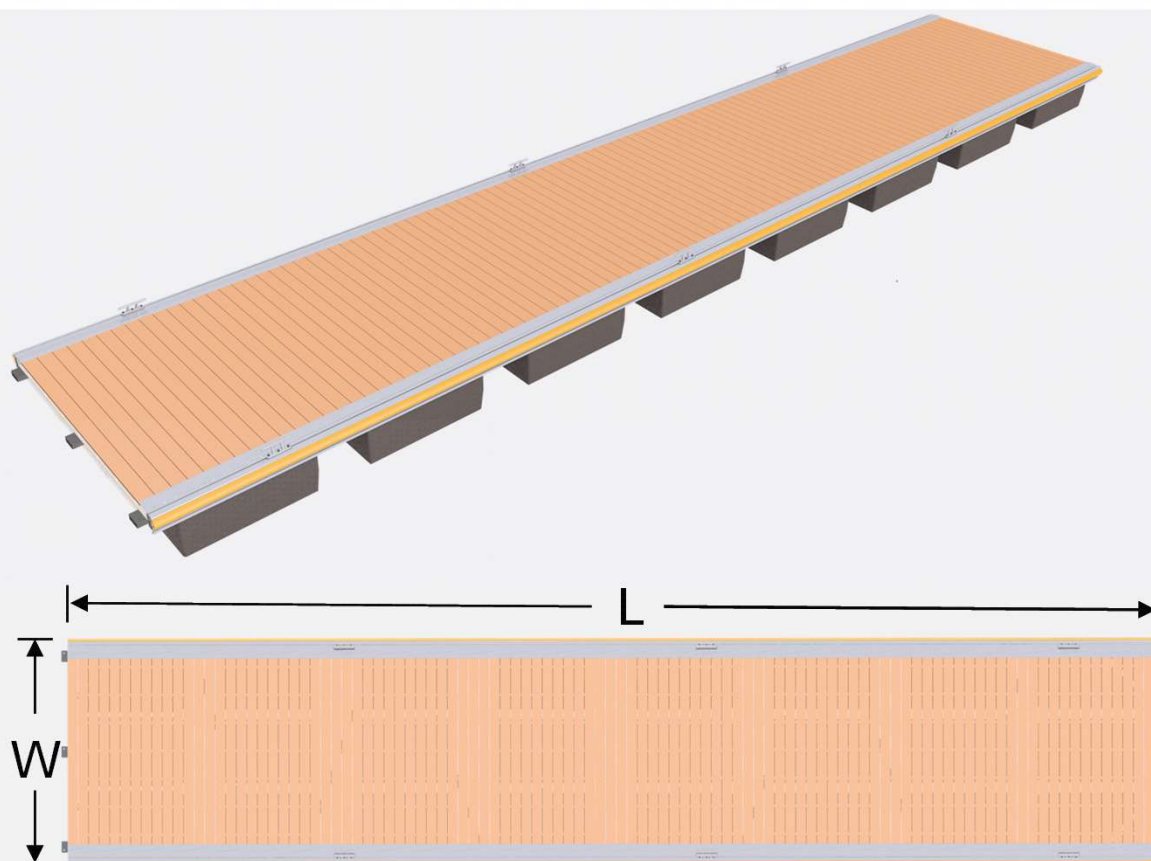




2. Aluminum Alloy Main Pontoon

Technical Specifications

- **Main Structure:** 6000 series marintime aluminum alloy extruded profile, MIG welding.
- **Manufacture References:** EN ISO 15614-2 & ASTM A370-2012
- **Dock Float:** Standard LLHDPE dock float (optional for concrete floating box)
- **Pavement:** Standard non-slip WPC/PE decking
- **Fender:** Standard PE/rubber fender, LLDPE corner sheath
- **Connection Bolt:** Standard 316 stainless steel material
- **Pontoon Connection:** Anti-fatigue and noise-free rubber composite elastic module
- **Mooring Cleat:** marintime aluminium alloy material(or 316 stainless steel material)



Standard Single Aluminum Alloy Pontoon Specifications Table

Item	Unit	ALM1800	ALM2000	ALM2500	ALM3000	ALM4000	ALM5000	Remarks
Pontoon Net Width	m	1.8	2	2.5	3.0	4.0	5.0	Without fender width
Pontoon Length	m	4~12						length of aluminium alloy structure
Width with Fender	m	1.87	2.07	2.57	3.07	4.07	5.07	Width with fender
Total Height	mm	720	720	720	720	720	720	subject to final design
Average Weight	kg/m	139	154	156	235	320	466	
Connection Joints	pcs	2	2	2	3	4	4	Joints between main pontoons
Live Load	kPa	3						
Freeboard	mm	450±50						Height from water surface to surface of pontoon
Joint Gap	mm	15						Connection gap between two pontoons



Aluminum Alloy Main Pontoon - Physical References

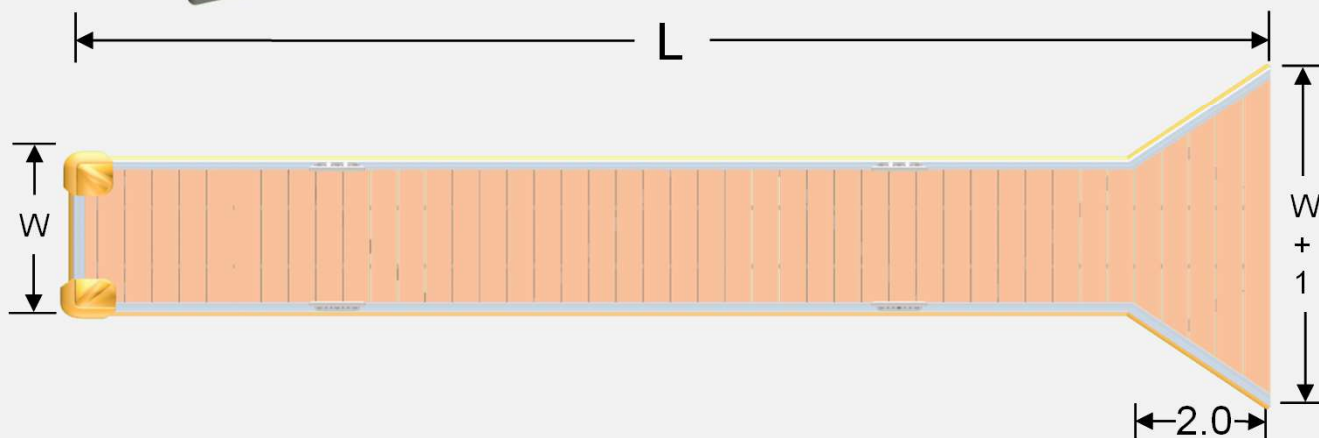




3. Aluminum Alloy Finger Pontoon - Y-Boom

Technical Specifications

- **Main Structure:** 6000 series marintime aluminum alloy extruded profile, MIG welding.
- **Manufacture References:** EN ISO 15614-2 & ASTM A370-2012
- **Dock Float:** standard LLDPE dock float (optional for concrete floating box)
- **Pavement:** standard non-slip WPC/PE decking
- **Fender:** Standard PE/rubber fender, LLDPE corner sheath
- **Connection Bolt:** at least hot-dip galvanized treatment
- **Pontoon Connection:** anti-fatigue and noise-free rubber composite elastic module
- **Mooring Cleat:** marintime aluminium alloy material(or 316 stainless steel material)



Standard Single Aluminium Alloy Finger Pontoon Specifications Table

Item	Unit	ALY0700	ALY0900	Remarks
Length	m	6~12		Length of aluminium alloy structure
Width	m	0.70	0.90	Without fender width
Width with Fender	m	0.77	0.97	Width with fender
Height	mm	660	660	subject to final design
Average Weight	kg/m	76	81	
Connection Joints	pcs	2		Joints between main pontoon and finger pontoon
Live Load	kPa	2		
Freeboard	mm	450±50		Height from water surface to surface of pontoon
Joint Gap	mm	15		Connection gap between two pontoons



Aluminum Alloy Finger Pontoon - Y - Boom Physical References

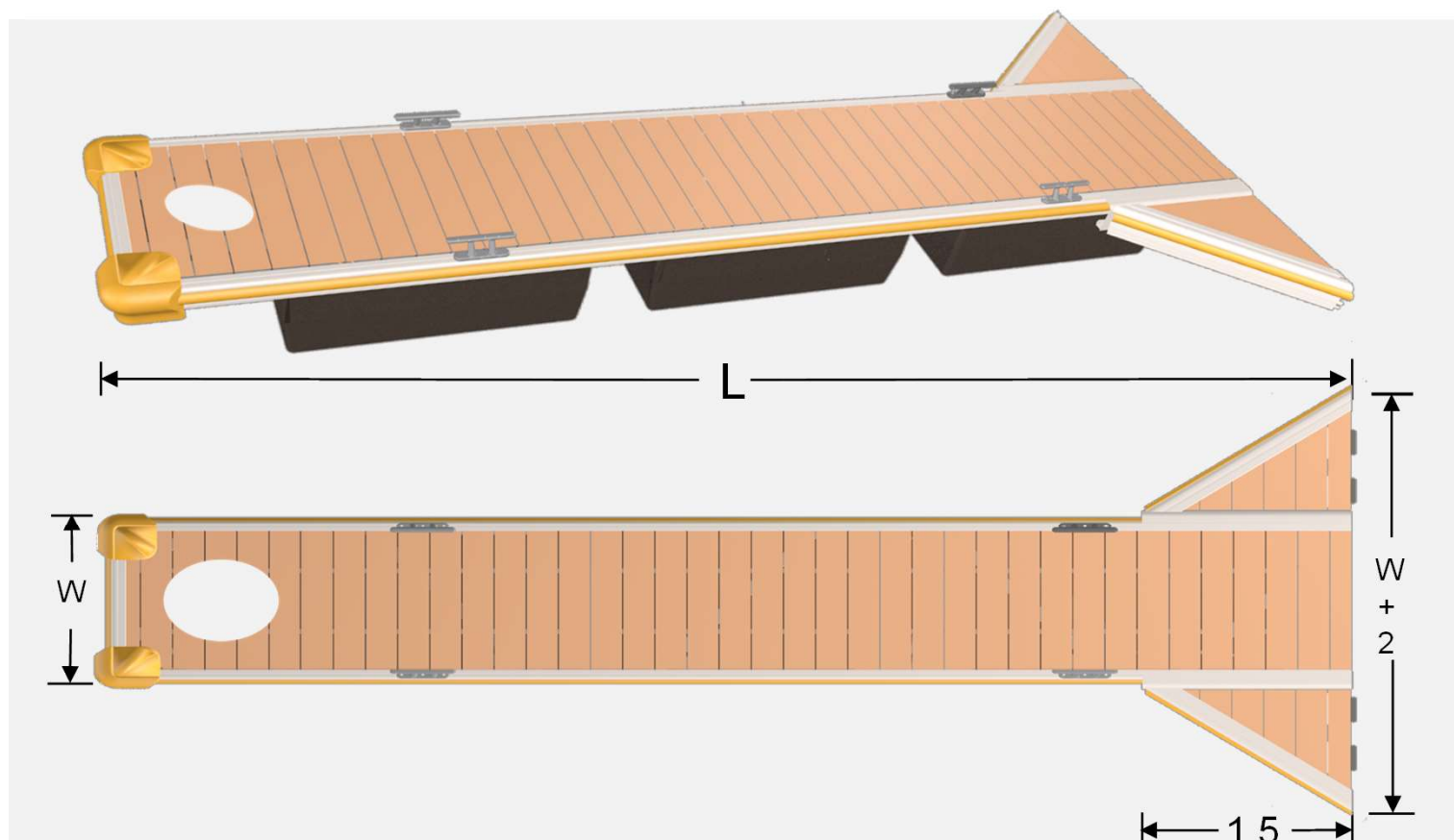




Aluminum Alloy Finger Pontoon - Standard Finger Pontoon

Technical Specifications

- **Main Structure:** 6000 series marintime aluminum alloy extruded profile, MIG welding.
- **Manufacture References:** EN ISO 15614-2 & ASTM A370-2012
- **Dock Float:** standard LLHDPE dock float (optional for concrete floating box)
- **Pavement:** standard non-slip WPC/PE decking
- **Fender:** Standard PE/rubber fender, LLDPE corner sheath
- **Connection Bolt:** at least hot-dip galvanized treatment
- **Pontoon Connection:** anti-fatigue and noise-free rubber composite elastic module
- **Mooring Cleat:** marintime aluminium alloy material(or 316 stainless steel material)



Standard Single Aluminium Alloy Finger Pontoon Specifications Table

Item	Unit	ALF1200	ALF1500	ALF1800	ALF2000	ALF2500	ALF3000	Remarks
Width	m	1.2	1.5	1.8	2.0	2.5	3.0	Width without fender
Length	m	can be customized						Length of aluminium alloy structure
Width with Fender	m	1.27	1.57	1.87	2.07	2.57	3.07	Width with fender
Total Height	m	0.63	0.63	0.63	0.63	0.63	0.63	Minimum height from bottom of the dock float to surface layer
Average Weight	kg/m	69	100	128	130	138	185	
Connection Joints	pcs	4						Joints between main pontoons(including joints with triangular frame)
Live Load	kPa	2						
Freeboard	mm	450±50						Height from water surface to surface of pontoon
Joint Gap	mm	15						Connection gap between two pontoons

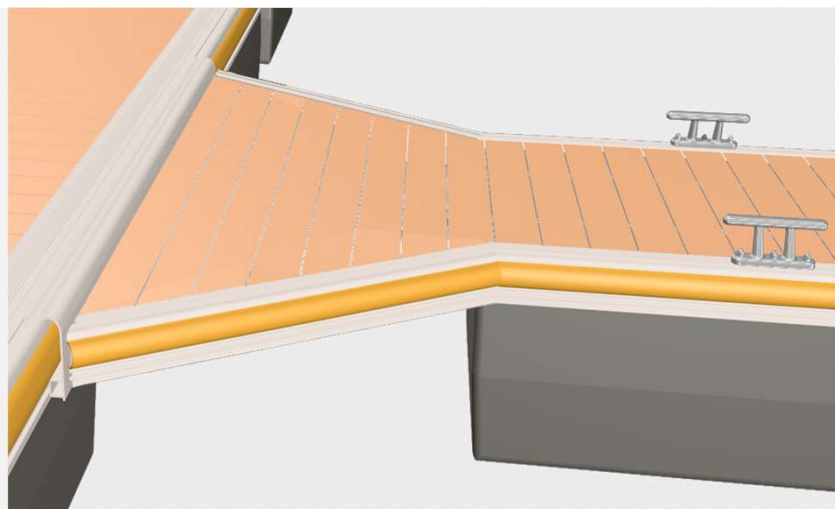


Standard Finger Pontoon - Physical References





4. Triangular Frame

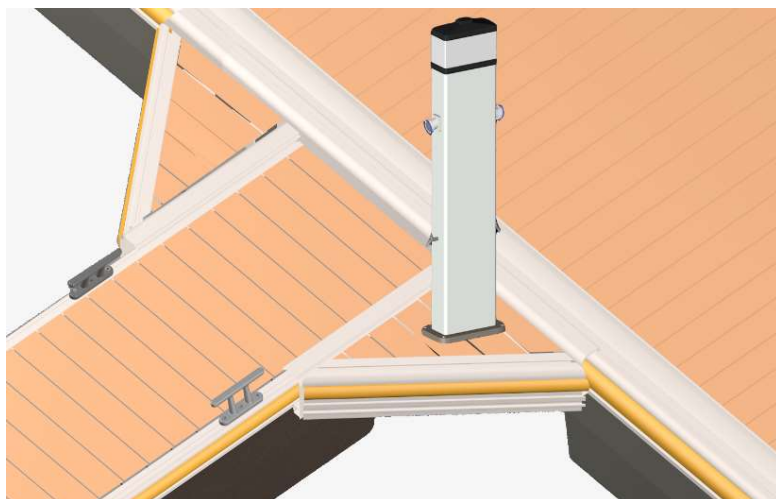


Triangular Frame Structure on Y-Boom:

- Triangular Frame Structure: 6000 series maritime aluminum alloy extruded profile, tripod and finger pontoon are integrally welded and MIG welded.
- The manufacturing process conforms to the standards of EN ISO 15614-2 and ASTM A370-2012.
- Paving: WPC non-slip plastic wood floor.
- Fender: PE fender is standard (or rubber fender is optional)
- Connection Bolt: at least hot-dip galvanized treatment
- Bolt-free connection between tripod and main pontoon.

● Standard Tripod Structure Frame on Finger Pontoon:

- Tripod structure: 6000 series maritime aluminum alloy extruded profile, tripod and finger pontoon are integrally welded and MIG welding.
- The manufacturing process conforms to the standards of EN ISO 15614-2 and ASTM A370-2012.
- Paving: WPC non-slip plastic wood floor.
- Fender: PE fender is standard (or rubber fender is optional)
- Bolt: 316 stainless steel.
- Bolt-free connection between tripod and main bridge.



Tripod Structure Frame on Finger Pontoon

Item	Unit	ALTF0520	Remarks
Length	m	2.0	
Width	m	0.5	
Height	mm	198	Height of bevel edge
Average Weight	kg/pcs	29	
Connection Joints	pcs	1	Joints between main pontoon and finger pontoon
Joints Gap	mm	15	Joints gap between two pontoons

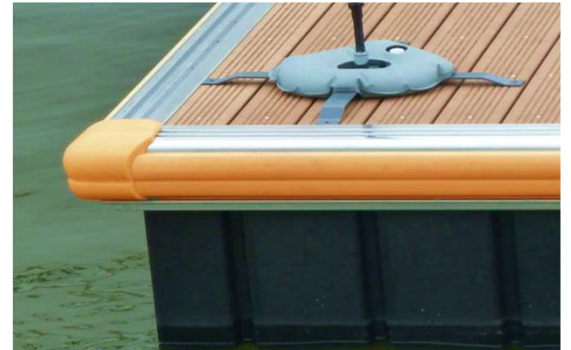
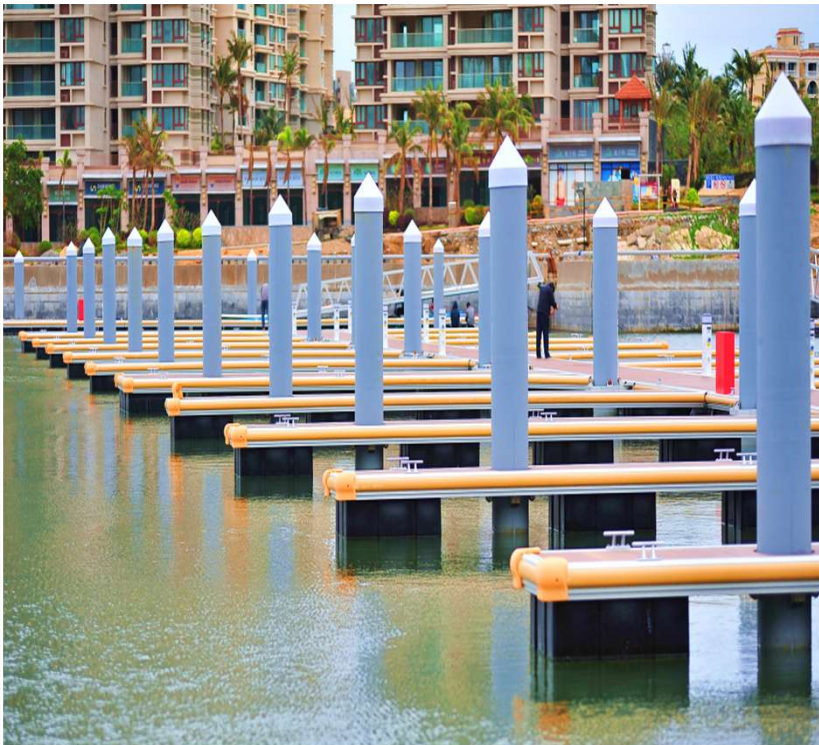
Standard Tripod Structure Frame on Finger Pontoon

Item	Unit	ALTF1515	ALTF1015	Remarks
Length	m	1.5	1.5	
Width	m	1.5	1.0	
Height	mm	218	218	Height of bevel edge
Average Weight	Kg/pcs	38	35	
Connection Joints	pcs	1		Joints between main pontoon and finger pontoon
Joints Gap	mm	15		Joints gap between two pontoons



5. PE Fender

- PE, durable material
- D-type design, good performance on elasticity and anti-collision.
- Buckle assembling, easy, quick, convenient to installation and maintenance
- Usage Conditions: -20°C to 40°C outdoors



PE Fender Specifications Table

Item	No.	Type	Material	Standard Color	Optional Color
Fender	ALFD-001	D80	PE	Yellow	Others

Min. Order of Customized Color: 300m



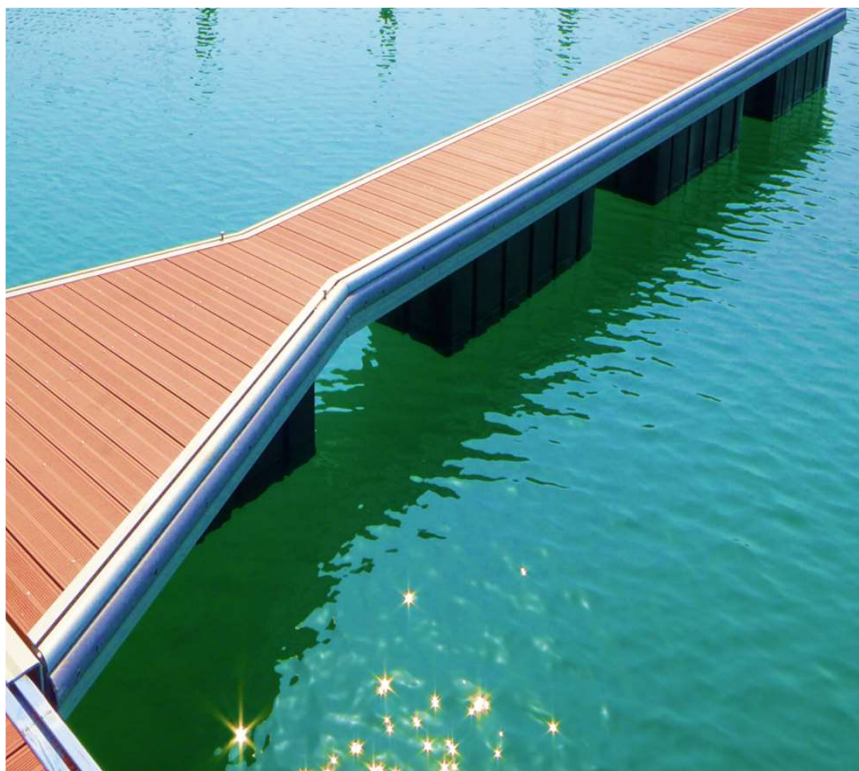
RAL COLOR CARD

 Yellow RAL1002



Rubber Fender

- Rubber material, wear-resistant, UV-resistant
- D-type design, strong energy absorption performance
- Usage Conditions: -20°C to 60°C outdoors
- Long servcie life



Rubber Fender Specifications Table

Item	No.	Specification	Material	Standard Color	Optional Color
Fender	AL-FD-02	D50	Rubber	Grey	Others
Fender	AL-FD-03	D70	Rubber	Grey	Others
Fender	AL-FD-04	D100	Rubber	Grey	Others

Min. Order of Customized Color: 300m



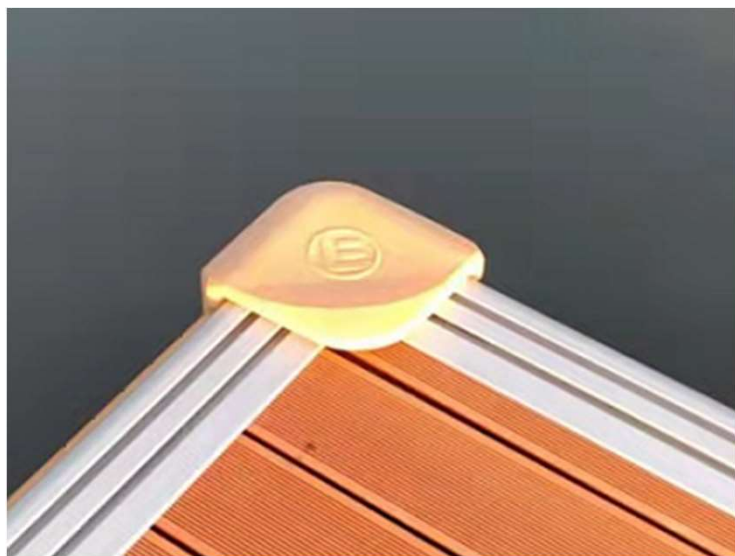
RAL COLOR CARD

- Grey RAL7035
- Black RAL9004
- White RAL9003



Corner Sheath

- Material: LLDPE, strong and durable
- Good decoration
- Fixed by hot-dip galvanized bolt, easy, quick and convenient to installation and maintenance
- Usage Conditions: -20°C to 40°C outdoors



Corner Sheath Specifications Table

Item	No.	Specifications	Material	Standard Color	Optional Color
Corner Sheath	ALFD-01-01	LLDPE Fender Fittings	LLDPE	Yellow	Others
Corner Sheath	ALFD-02-01	Rubber Fittings	LLDPE	Grey	Others



RAL COLOR CARD



Yellow RAL1002

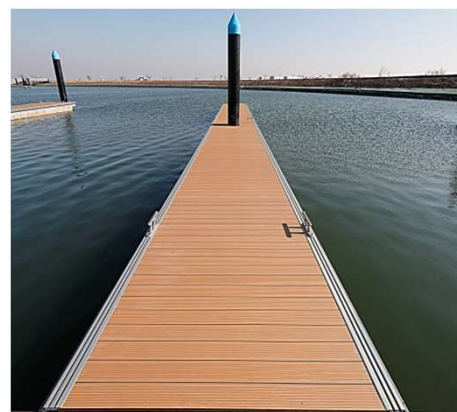


Grey RAL7035



6. WPC Decking

- Plastic wood floor extrusion molding, natural wood look and feel, beautiful.
- Choose from a variety of appearances and thicknesses.
- Wear-resistant, impact-resistant, corrosion-resistant, and not easily deformed.
- 100% environmentally friendly and recyclable.
- Fire and flame retardant
- Uvioresistant
- Easy installation and less maintenance.



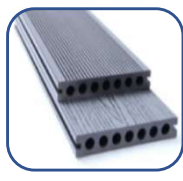
Marina WPC Decking Specification Table

Item	No.	Dimensions (Width*Thickness)	Material	Color	Standard Option
WPC Decking	ALDC-001	140*23mm	WPC	Customized	Circular hole hollow plate
WPC Decking	ALDC-001	150*23mm	WPC	Customized	Circular hole hollow plate

The dimensions can be customized under requirements.



Square Hole Hollow Floor



Circular hole hollow floor



Solid Floor Board

RAL COLOR CARD



Dark Grey
RAL7021



Black
RAL9005



Reddish Brown
RAL8004



Dark Brown
RAL8016



Red
RAL3012



Teakwood
RAL8025



Light Brown
RAL8028



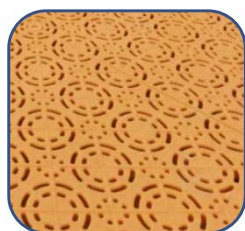
PE Decking

- Polyethylene standard floor module, 500*600*30mm
- Usage Condition: -20°C~ 40°C Outdoor
- Outdoor ultraviolet aging resistance reaches level 4.
- Hollow-out design, so that your wharf will no longer accumulate water.
- Advantages compared with wood flooring
- Feet comfortable, shock absorption, anti-skid, firm grid structure and strong bearing capacity.
- Ultraviolet resistance, impact resistance, abrasion resistance, easy cleaning, fire resistance, acid and alkali corrosion resistance.
- No cracking, no warping, no deformation, long service life.
- Simple installation and high efficiency.
- There are middle fasteners and corner fasteners, which are suitable for various installation environments;

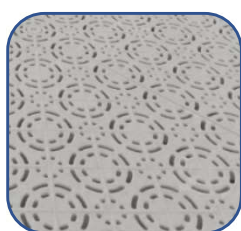


Marina PE Decking Specifications Table

Item	No.	Specifications	Material	Color	Optional
PE Decking	ALDC-P-001	500*600*30mm	Plastic	Yellow/Grey	Others



Yellow



Light Grey

RAL COLOR CARD



Yellow RAL1002

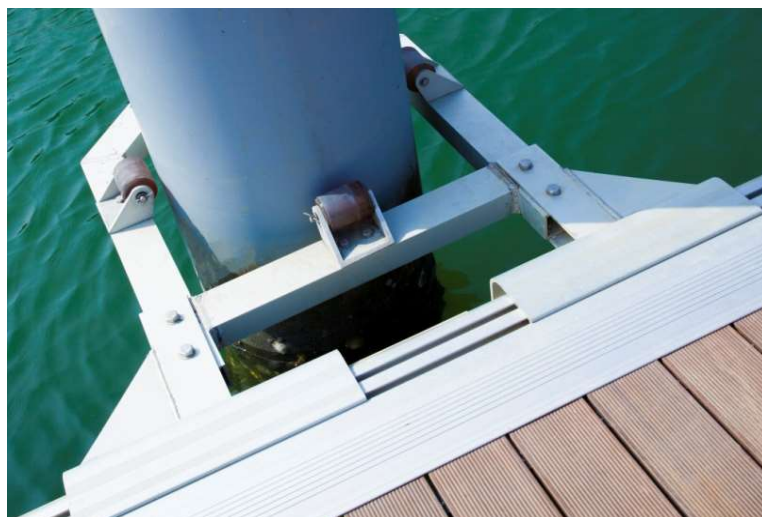
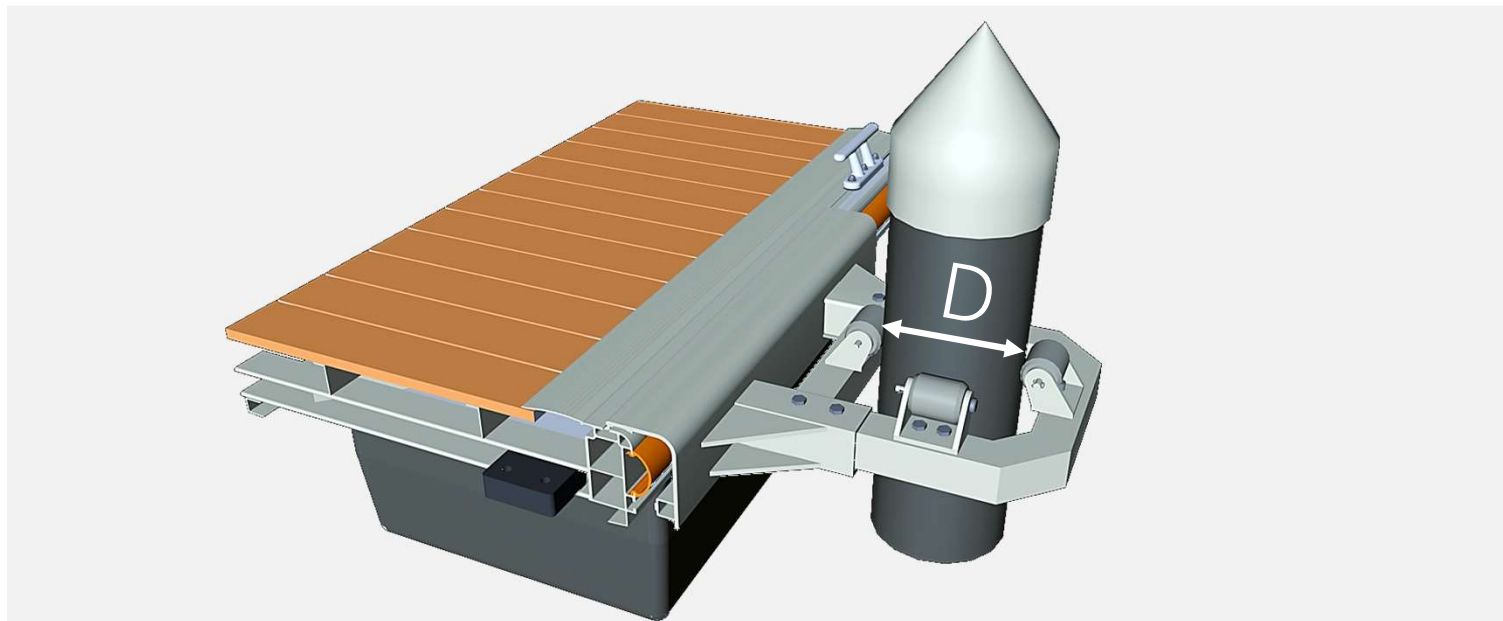


Light Grey RAL7035



Pile Guide

- The pile guide structure is made of 6000 series marintime grade aluminum alloy.
- The pile guide is connected with the pontoon to form a whole with high structural strength.
- Integral roller bracket, the roller is made of noise-reducing PU material.
- Connecting bolts: hot-dip galvanized or better materials are available.



Pile Guide Specifications Table

No.	D(mm)	Single Weight (kg)	Accessories
ALP305	305	29	can be customzied
ALP406	406	31	
ALP508	508	33	
ALP610	610	35	
ALP711	711	37	