





**BUOYS** 

Dock Marine is a market leader in navigation systems with a complete product range, manufactured to the highest standard and competitivley priced. Dock Marine has developed a new product range which is called Navigation Buoys.

Rotational moulded, DMB Navigation Buoys have three different diameter (DMB-1250 mm., DMB-1750 mm., DMB-2000 mm., DMB-2200 mm., DMB- 2500 mm., DMB-3000 mm., ) made from UV stabilized virgin polyethylene, extremely strong and high durability. A highly visible solution that does not require maintenance.

The 4 main parts are produced by rotational moulding technology and for longevity and increased safety that are PU filled to a density of 35 kg / m<sup>3</sup>. We only use SS-316 stainless steel fittings. There is a homogeneous thickness in rotation production technique proven by engineering studies and feature a consistant, avarage 15mm wall thickness.

The new design used on the tower walls have PE holes to relieve it of wind and wave pressure. The tower can be supplied as a spare or replacement part/s.

The PU into the main body parts which is 100% filled for uniform density. Thus, high compressive strength is provided throughout the body. This feature also provides constant floatation all conditions.

The ballast is made of hot-dip galvanized steel parts, designed and manufactured to provide effective stability and extremely strong structure. When it is combined with the Neo Flex Mooring System, which is also produced by Dock Marine, it provides controlled movement and high flexibility.

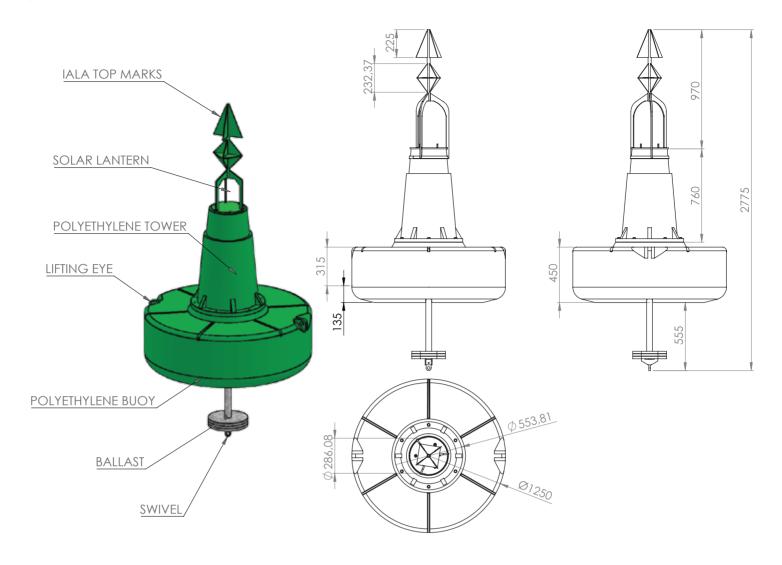
It can be produced in different colors according to IALA Standards.

Dock Marine System is able to find competitive solutions to different requirements of customers in various projects.

For more details of this project or of the extensive range of Dock Marine products please contact your local dealer or factory direct.



#### **DMB-1250 MM. DIA NAVIGATION BUOY**



#### **General Characteristics**

General Characteristics	
Colors	IALA recommendations
Focal Plane Height (Mm)	2300
Total Float Volume (Ltrs)	500
Nominal Freeboard (Mm)	315
Nominal Draft (Mm)	135
Maximum Mooring Load (Kg)	4000
Freeboard, Minimum (Mm)	-
Safe Working Load, (Person)	-
Submergence (Kg/cm)	11,25
Visual Area (M2)	1,62

#### **Physical Characteristics**

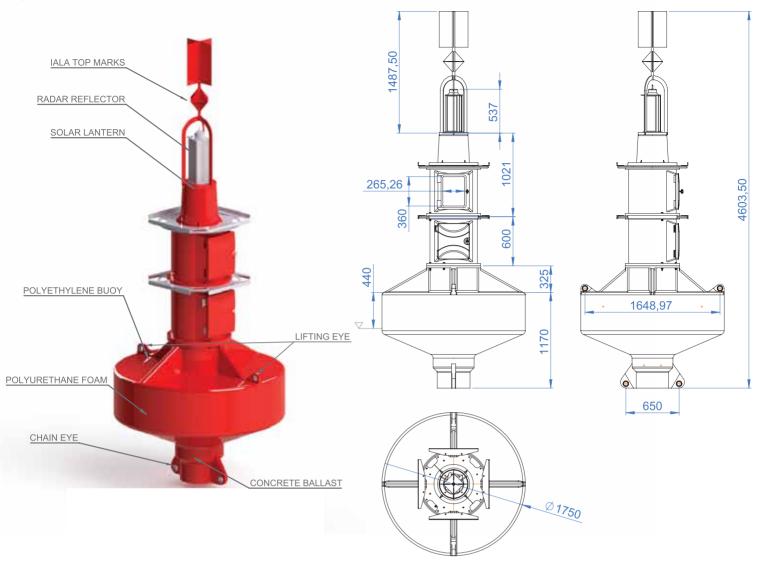
Material

	aluminum tower assembly with polyethylene boards, galvanised under sea metal section, marine grade aluminum top marks. 316-grade stainless steel fixtures.
Wall Thickness (Mm)	8
Ballast (Kg)	30
Filling	Closed-cell Polyurethane Foam (Float Section)
Height (Mm)	2600
Width (Mm)	1250
Mass (Kg)	110
Radar Reflector	Marine Grade Aluminum
Product Life Expectansy	>20 years
Warranty	5 years

Rotationally-moulded uv-stabilized virgin



#### **DMB-1750 MM. DIA NAVIGATION BUOY**



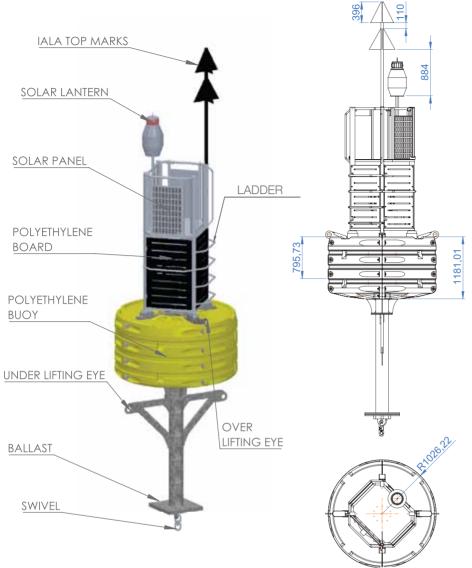
#### **General Characteristics**

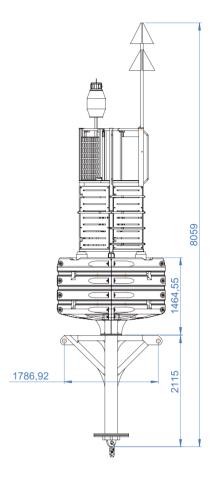
dictional characteriones	
Colors	IALA recommendations
Focal Plane Height (Mm)	2500
Total Float Volume (Ltrs)	1650
Nominal Freeboard (Mm)	440
Nominal Draft (Mm)	725
Maximum Mooring Load (Kg)	600
Freeboard, Minimum (Mm)	200
Safe Working Load, (Person)	2
Submergence (Kg/cm)	24
Visual Area (M2)	1,75

Physical Characteristics	
Material	Rotationally-moulded uv-stabilized virgin polyethylene float section, marine grade aluminum tower assembly with polyethylene boards, galvanised under sea metal section, marine grade aluminum top marks. 316-grade stainless steel fixtures.
Wall Thickness (Mm)	15
Ballast (Kg)	150
Filling	Closed-cell Polyurethane Foam (Float Section)
Height (Mm)	3960
Width (Mm)	1750
Mass (Kg)	436
Radar Reflector	Marine Grade Aluminum
Product Life Expectansy	>20 years
Warranty	5 years



#### **DMB-2000 MM. DIA NAVIGATION BUOY**





#### **General Characteristics**

Colors	IALA recommendations
Focal Plane Height (Mm)	4013
Total Float Volume (Ltrs)	3180
Nominal Freeboard (Mm)	650
Nominal Draft (Mm)	2910
Maximum Mooring Load (Kg)	5000
Freeboard, Minimum (Mm)	565
Safe Working Load, (Person)	2
Submergence (Kg/cm)	14.8
Visual Area (M2)	3.3

#### **Physical Characteristics**

Material	Rotationally-moulded uv-stabilized virgin
	polyethylene float section, marine grade
	aluminum tower assembly with polyethylene
	boards, galvanised under sea metal section,
	marine grade aluminum top marks. 316-grade

stainless steel fixtures.

Wall Thickness (Mm) 15 - 3/5 Ballast (Kg) 180

Filling Closed-cell polyurethane foam (float section)

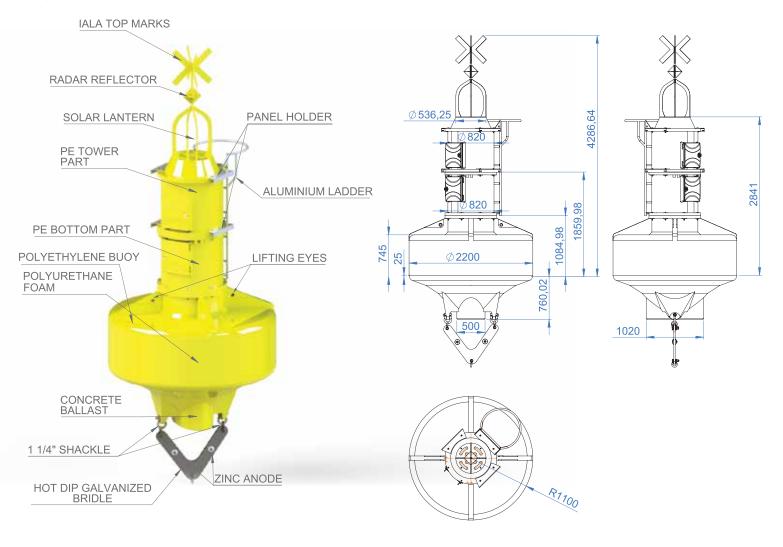
Height (Mm) 8059 Width (Mm) 2000 Mass (Kg) 1266

Radar Reflector Marine grade aluminum

Product Life Expectansy >20 years Warranty 5 years



#### **DMB-2200 MM. DIA NAVIGATION BUOY**



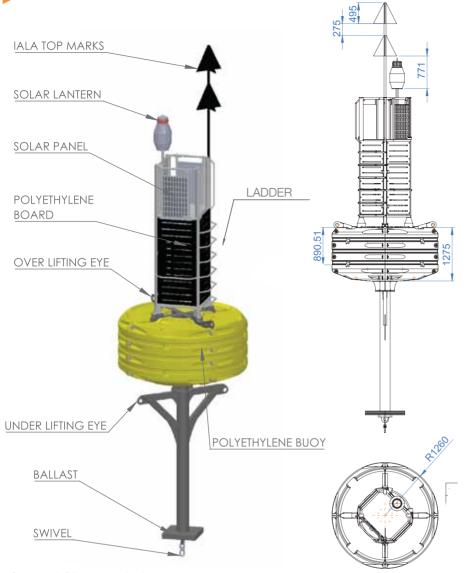
#### **General Characteristics**

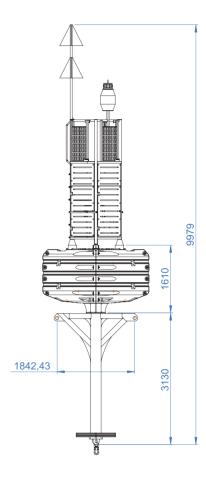
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Colors	IALA recommendations
Focal Plane Height (Mm)	4071
Total Float Volume (Ltrs)	1537
Nominal Freeboard (Mm)	600
Nominal Draft (Mm)	905
Maximum Mooring Load (Kg)	2000
Freeboard, Minimum (Mm)	530
Safe Working Load, (Person)	2
Submergence (Kg/cm)	38
Visual Area (M2)	5.61

Visual Area (M2)	5.61
Physical Characteristics	
Material	Rotationally-moulded uv-stabilized virgin polyethylene float section, marine grade aluminum tower assembly with polyethylene boards, galvanised under sea metal section, marine grade aluminum top marks. 316-grade stainless steel fixtures.
Wall Thickness (Mm)	15 - 3/5
Ballast (Kg)	350
Filling	Closed-cell polyurethane foam (float section)
Height (Mm)	4836
Width (Mm)	2200
Mass (Kg)	880
Radar Reflector	Marine grade aluminum
Product Life Expectansy	>20 years
Warranty	5 years



### **DMB-2500 MM. DIA NAVIGATION BUOY**





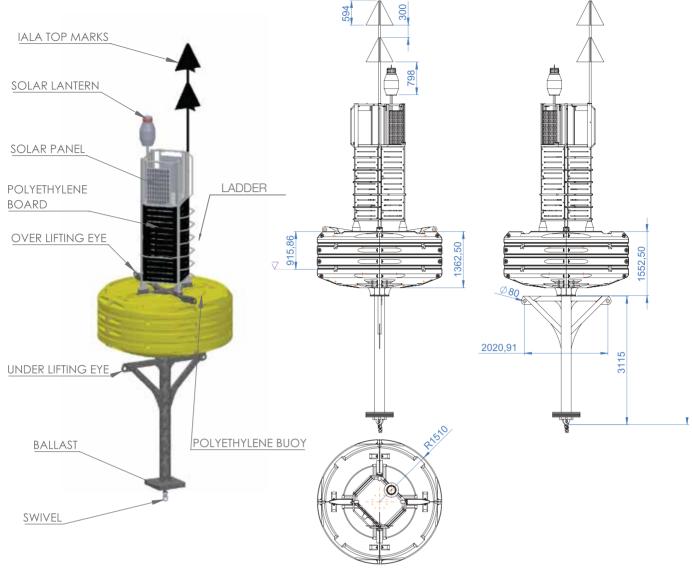
#### **General Characteristics**

Colors	IALA recommendations
Focal Plane Height (Mm)	4748
Total Float Volume (Ltrs)	5228
Nominal Freeboard (Mm)	765
Nominal Draft (Mm)	3845
Maximum Mooring Load (Kg)	5000
Freeboard, Minimum (Mm)	715
Safe Working Load, (Person)	3
Submergence (Kg/cm)	15.7
Visual Area (M2)	4.98

Submergence (Kg/cm)	15./
Visual Area (M2)	4.98
Physical Characteristics	
Material	Rotationally-moulded uv-stabilized virgin polyethylene float section, marine grade aluminum tower assembly with polyethylene boards, galvanised under sea metal section, marine grade aluminum top marks. 316-grade stainless steel fixtures.
Wall Thickness (Mm)	15 - 3/5
Ballast (Kg)	240
Filling	Closed-cell Polyurethane Foam (Float Section)
Height (Mm)	9979
Width (Mm)	2500
Mass (Kg)	1709
Radar Reflector	Marine Grade Aluminum
Product Life Expectansy	>20 Years
Warranty	5 Years



#### DMB-3000 MM. DIA NAVIGATION BUOY



#### **General Characteristics**

**IALA** recommendations Colors 4888 Focal Plane Height (Mm) 8000 Total Float Volume (Ltrs) 880 Nominal Freeboard (Mm) 3760 Nominal Draft (Mm) 5000 Maximum Mooring Load (Kg) 845 Freeboard, Minimum (Mm) Safe Working Load, (Person) 17.1 Submergence (Kg/cm) 7.16 Visual Area (M2)

#### **Physical Characteristics**

Material

Rotationally-moulded uv-stabilized virgin polyethylene float section, marine grade aluminum tower assembly with polyethylene boards, galvanised under sea metal section, marine grade aluminum top marks. 316-grade stainless steel fixtures. 15 - 3/5

Wall Thickness (Mm)

Ballast (Kg)

Closed-cell polyurethane foam (float section) Filling

5 years

300

10284 Height (Mm) 3000 Width (Mm) 2048 Mass (Kg)

Marine grade aluminum Radar Reflector >20 years

**Product Life Expectansy** Warranty

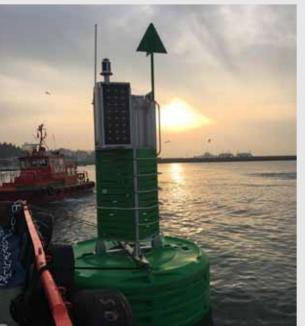








## **NAVIGATION BUOYS**





## **NAVIGATION BUOYS**

PMS navigation buoys are produced according to IALA standard and colours in 1,25m - 1,75m - 2m - 2,20m - 2,50m - 3m. the buoy is produced from high strength polyethylene material and can withstand rough sea conditions for many years.

- The float towers are easily changeable, wide steps and guardrails are produced to occupational health and safety standards.
- The body is produced from 4 parts and these parts can be separated from each other.
- The surface of the polyethylene body is non slip.
- The shaft passing through the body is manufactured from hot dip galvanizing.
- The inside of the polyethylene body is polystyrene or polyurethane filled.
- All connection bolts use 316L stainless steel.
- The swivel of the chain link is based on 5 tons of breaking force.
- Aluminium used in its surface is manufactured from sea water resistant material.
- Radar reflectors and beacons table are available.
- The battery room cover is completely waterproof.

Navigation bouys consist of IALA top mark, radar reflector, optional solar light, guard rail, battery room, lifting, shackle, rotational molded polyethylene body, ballast weight, center mill, and mooring connector.







#### **GENERAL CHARACTERISTICS**

	1,25 MT	1,75 MT	2 MT	2,2 MT	2,5 MT	3 MT
COLORS	IALA RECOMMENDATIONS					
FOCAL PLANE HEIGHT (MM)	2300	2500	4013	4071	4748	4888
TOTAL FLOAT VOLUME (LTRS)	500	1650	3180	1537	5228	8000
NOMINAL FREEBOARD (MM)	315	440	650	600	765	880
NOMINAL DRAFT (MM)	135	725	2910	905	3845	3760
MAXIMUM MOORING LOAD (KG)	495	600	5000	2000	5000	5000
FREEBOARD, MINIMUM (MM)	180	200	565	530	715	845
SAFE WORKING LOAD, (PERSON)	1	2	2	2	3	3
SUBMERGENCE (KG/CM)	11,25	24	31,4	38	49	70,6
VISUAL AREA (M2)	1,62	1,75	3,3	5,61	4,98	7,16

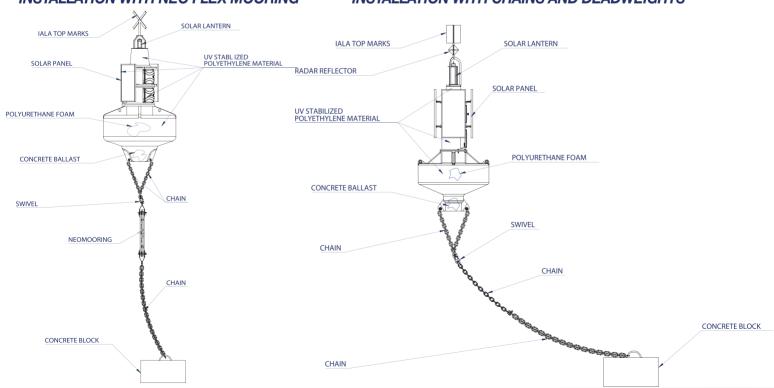
#### PHYSICAL CHARACTERISTICS

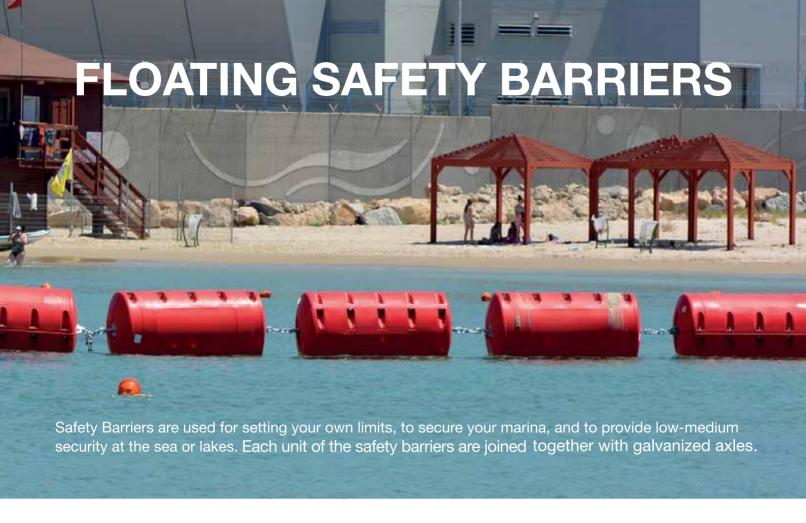
	1.25 MT	1.75 MT	2 MT	2.20 MT	2.5 MT	3 MT
MATERIAL	ROTATIONALLY-MOULDED LIV-STABILIZED VIRGIN POLYETHYLENE FLOAT SECTION AND TOWER, MARINE GRADE ALUMINUM TOP MARKS. (316-GRADE STAINLESS STEEL FIXTURES)		ROTATIONALLY-MOULDED UN-STABILIZED VIRGIIN POLYETHYLENE FILOAT SECTION, MARINE GRADE ALUMINUM TOWER ASSEMBLY WITH POLYETHYLENE BOARDS, GALVANISED UNDER SEA METAL SECTION, MARRINE GRADE ALUMINUM TOP MARKS.  316-GRADE STAINLESS STEEL FIXTURES	ROTATIONALLY-MOULDED UV-STABILIZED VIRGIN POLYETHYLENE FLOAT SECTION AND TOWER, MARINE GRADE ALUMINUM TOP MARKS. (316-GRADE STAINLESS STEEL FIXTURES)	ROTATIONALLY-MOULDED UN-STABILIZED VIRGIN POLYETHYLENE FLOAT SECTION, MARINE GRADE ALUMINUM TOWER ASSEMBLY WITH POLYETHYLENE BOARDS, GALVANISED UNDER SEA METAL SECTION, MARINE GRADE ALUMINUM TOP MARKS. (316-GRADE STAINLESS STEEL FIXTURES)	
WALL THICKNESS (MM)	8	15	15 - 3/5	15 - 3/5	15 - 3/5	15 - 3/5
BALLAST (KG)	33	150	180	350	240	300
FILLING	CLOSED-CELL POLYURETHANE FOAM (FLOAT SECTION)					
HEIGHT (MM)	2600	3960	8059	4836	9979	10284
WIDTH (MM)	1250	1750	2000	2200	2500	3000
MASS (KG)	110	436	1266	880	1709	2048
RADAR REFLECTOR	MARINE GRADE ALUMINUM					
PRODUCT LIFE EXPECTANSY	20 YEARS					



#### INSTALLATION WITH NEO FLEX MOORING

#### **INSTALLATION WITH CHAINS AND DEADWEIGHTS**





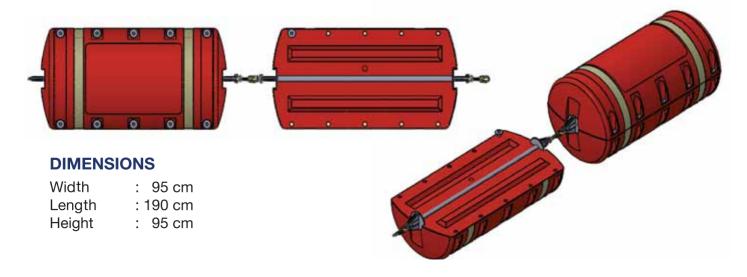
#### **FLOATING SAFETY BARRIERS**

Two safety boat barriers are connected to each other with galvanized chain and clamps. The system is fixed to the sea with anchors. The unique design of the safety barriers allows the customers to make specific configurations unique to the area in which.

Safety barriers are manufactured from polyethylene. This product is durable and UV resistant. Each unit is shock-resistant, as they are foam-filled; they are buoyant, unsinkable and are highly visible.

Safety Barriers can be used in places where high visibility is compulsory, such as big seas, open oceans, places with high waves, and output channels with strong currents and dams.

The pontoon is formed by the combination of several parts; therefore the damaged pontoon can be easily changed without interrupting the barrier's service and without the need for replacing the entire unit. unit. Standard or custom warning labels can be applied on to the product. It is offered in standard colors of yellow, orange and white. It is also available in custom colors.





# FLOATING SAFETY BARRIER AND BREAKWATER

#### **DUAL ASSEMBLY**



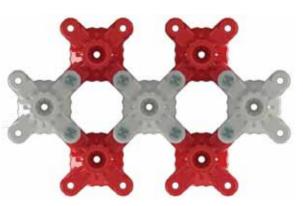
SINGLE ASSEMBLY



#### **FIFTH ASSEMBLY**



#### **SEVENTH ASSEMBLY**



Floating breakwaters provide solutions for specific wave periods in places such as harbors, fishermen's shelters, beaches, and coves. The floating breakwater breaks the energy of the waves that are present in the region where the breakwater is established and ensures that the shore receives the least force. The module can reduce the energy of the wave by up to 90% thanks to its shape and connections. The water does not change in its natural course or direction.

It can also be used as a security bar.



#### **CMS-056-BY**

Dimension: 115X50 cm Draft: 12,5 cm Freeboard: 102,5 cm



#### **CMS-055-BY**

Dimension: 80X35 cm Draft: 15 cm Freeboard: 65 cm



## PIPE FLOATERS

PMS pipe floaters are used in many kinds of marine industries, like dredging and drainage of waste materials.

We have 3 different sizes of pipe floaters with 600 liter, 800 liter, 1000 litre capacity. We can custom design and manufacture shape or size according to customer requirement.



CMS-060 CMS-034 CMS-035 CMS-061 CMS-038 Volume: 220 L Volume: 600 L Volume: 800 L Volume: 800 L Volume: 1000 L Weight: 24 kg Weight: 50 kg Weight: 60 kg Weight: 42 kg Weight: 76 kg Dia : 31,5 cm Dia : 56 cm Dia : 45,5 cm Dia : 50,5 cm Dia : 56,6 cm

The floaters are filled with PU (Polyurethane) or PS (Polystyrene) which ensures that even with cracks or damage, the pipes will continue to float.

The polyethylene body ensures resistance against corrosion and a life span three times that of concrete and steel floaters.

Colour Options

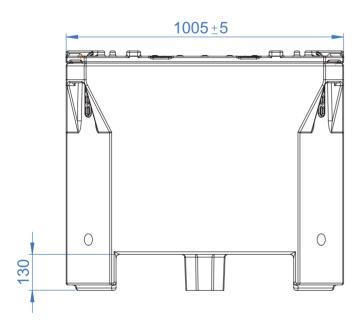


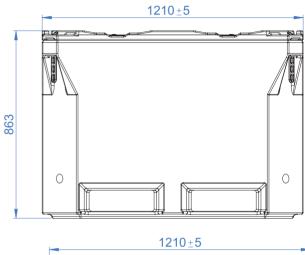
#### **INSULATED CONTAINER**

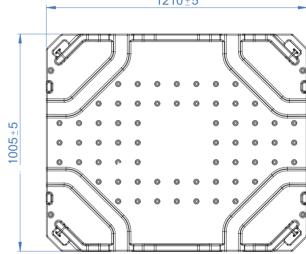
### Protect The Fish From the Risk of Physical Damage

#### **Products Advantages:**

- Manufactured in food grade Polyethylene Injected in Polyurethane.
- High isothermal capacity and high resistance.
- Stackable and supplied with lid or without lid.
- UV stabilised to maximise outdoor life;
- It does not change product's taste and smell.
- · Impact resistance is high.





















#### PMS POLIETILEN MAM. SAN. TIC. A.Ş.

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