

# FLOATING FENDERS

## Pneumatic Rubber Fender---50/80type

Molded product, standard ISO 17357-1: 2014



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### SHANDONG LONGAO RUBBER CO.,LTD.

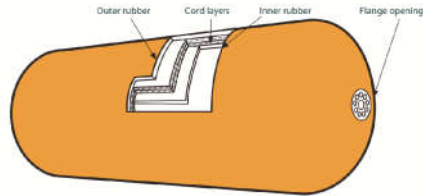
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## STRUCTURE OF PNEUMATIC RUBBER FENDER FOR SHIP



**Outer rubber layer:** is a special blend of natural Rubber and additives to create a super tough protective covering. This outer layer protects the cord layers and the inner rubber layers from abrasion, punctures, and other external forces.

**Synthetic-tyre-cord layer for reinforcement:** is multiple layers of synthetic-tyre-cord fabric, which maintains the internal air pressure of the fender. There are advantages for synthetic-tyre-core layer's fatigue-resistance performance and pressure-holding performance.

**Inner rubber layer:** is a natural latex blend to create a robust, and flexible seal.

## PNEUMATIC FENDER PERFORMANCE TABLES

Specifications		Initial Pneumatic pressure 0.05MPa					Initial Pneumatic pressure 0.08MPa				
D	L	R	GEA	Sphere-Weight	Safety Value Setting Pressure	Testing pressure	R	GEA	Sphere-Weight	Safety Value Setting Pressure	Testing pressure
(MM)	(MM)	(KN)	(KJ)	KG	KPA	KPA	(KN)	(KJ)	KG	KPA	KPA
500	1000	64	6	36	--	200	85	8	40	--	250
600	1000	74	8	42	--	200	98	11	47	--	250
700	1500	137	17	70	--	200	180	24	79	--	250
1000	1500	182	32	100	--	200	239	45	127	--	250
1000	2000	257	45	145	--	200	338	63	175	--	250
1200	2000	297	63	185	--	200	390	88	218	--	250
1350	2500	427	102	270	--	200	561	142	314	--	250
1500	3000	579	153	380	--	200	761	214	403	--	250
1700	3000	639	191	470	--	200	840	267	512	--	250
2000	3500	875	308	700	--	200	1150	430	670	--	250
2500	4000	1381	663	1190	175	250	1815	925	1273	230	300
2500	5500	2019	943	1400	175	250	2653	1317	1514	230	300
3300	4500	1884	1175	1940	175	250	2476	1640	1967	230	300
3300	6500	3015	1814	2470	175	250	3961	2532	2518	230	300
3300	10600	5257	3067	2960	175	250	6907	4281	4090	230	300
4500	9000	5747	4752	4980	175	250	7551	6633	5316	230	300
4500	12000	7984	6473	6060	175	250	10490	9037	6508	230	300

**Note:** 1. Figures on the table comply with requirements of ISO17357.  
 2. Special sizes are available upon request.  
 3. The weight is the fender weight (excluding protective sleeve), with weight and counter force error  $\pm 10\%$ .  
 4. Reaction force (KN) and guaranteed energy absorption (GEA) at deflection  $60\% \pm 5\%$ .

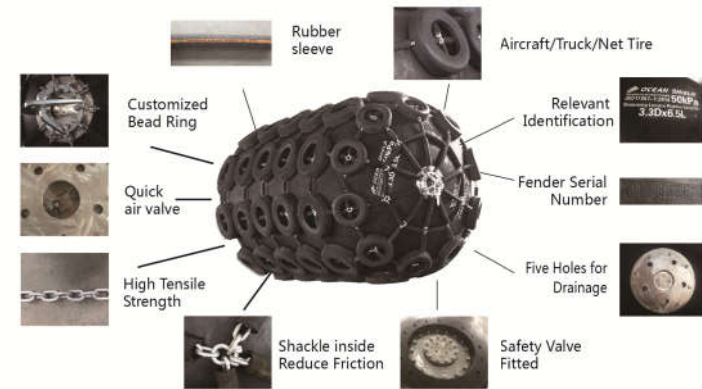
### Net-type fender



### Sling-type fender



### The details



### Protective net type



We can provide different customized protective net and offer a range to meet all needs:

- \* Light weight net to meet ship's crane and davit limitations.
- \* Heavy duty nets to cope with harsh sea conditions and high snatch loads.
- \* Non-marking tyre nets for navy and cruise ship applications.
- \* Rope nets for ultra lightweight applications.
- \* Stainless steel net for non-magnetic requirements.

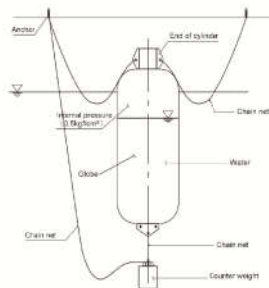


## Introduction of our pneumatic floating fenders:

- \* Fully compliant with ISO 17357 standard, manufacture with mold, difference with traditional hand-make product.
- \* Diameters ranging from 300 mm to 4,500 mm and length ranging from 500 mm to 12,000 mm.
- \* The product is divided into three parts : Constructed with an inner rubber layer, reinforcing cord layers and outer rubber layer.
- \* Comprehensively tested for material , size, appearance, airtightness and and hydrostatic pressure irregularities.
- \* Correctly evaluated for angular and durability performance.
- \* Complete with up-to-date certification for DNV ISO 17357-2014.
- \* Clearly marked with all relevant identification in the body.
- \* High security, fitted safety valve for fenders of 2.5m diameter upwards.
- \* High shock absorption, low counter force, high reliability and enhance port ability.
- \* Optional end fittings for the better suitable of applications.



## Semi Submersible Pneumatic Rubber Fender



The Semi Submersible Pneumatic Rubber Fender can be water-ballasted and injected with compressed air to accommodate different operational applications and requirements, the water depth of fender can be changed by adjusting fresh water quantity.



The molded product is different from the traditional handmade products.



Because it can be vacuum folded which saves space and transportation costs.



Large size fenders have valves: the small air valve, a globe valve and a safety valve are equipped, the small valve serves for an air-check, the globe valve having a one touch joint coupler serves for air charge and release, and the safety valve serves for releasing excess internal pressure when the fender is accidentally over compressed.



Fenders of diameter 2500mm and larger are equipped with a safety valve for releasing excess internal pressure when the fenders are over-compressed. Pneumatic 50 has safety-valve pressure setting of 175Kpa. It will release air automatically when the inner pressure is larger than 175Kpa. Pneumatic 80 has safety-valve pressure setting of 230Kpa.

## TEST EQUIPMENT



Vulkameter      Electronic tensile Testing machine      Mooney viscometer      High temperature aging test chamber      Ozone aging test chamber      Aging test chamber



Durability      Puncture-resistance      Angular compression      Parallel compression



Hydraulic bursting test



Chemical experimental instrument



## CUSTOMER SERVICE

- \* Guaranteed for five years against defects in workmanship and material.
- \* Free repair during the guarantee if come out quality issues.
- \* We provide rental and discount with recycle service.
- \* The lifespan of our fenders is longer than 15 years.

## Certifications:

