

OCEAN CUSHION™ Foam Filled Marine Fender with Chain & Aircraft Tire Nets

The Ocean Guard™ Netless Foam-Filled Marine Fender is a unique and innovative fendering system, providing high-energy absorption with a relatively low reaction force. Its heat laminated foam core allows it to reliably and safely absorb large amounts of energy when its compressed. The closed cell aspect of the energy absorbing foam allow the fender to be fully functional even if the skin has been accidentally punctured.

PERFORMANCE FEATURES

HIGH ENERGY ABSORPTION

The foam-filled Ocean Cushion™ Fenders, with chain & aircraft tire nets, are also designed to provide a high rate of energy absorption with a relatively low reaction force.

Typically, Ocean Cushion™ foam-filled fenders, when compared to similar sized pneumatic fenders, absorb a greater amount of energy with up to 40% less reaction force.

LOW REACTION FORCE

Ocean Cushion™ Fenders, has the same low reaction force feature as our Ocean Guard™ Fenders producing a smoother, gentler berthing than hard rubber bucking fenders.

The gentle sloping reaction curve of the Ocean Cushion™ foam-filled fenders produces a lower frequency of peak reaction force or hull pressure during normal berthing conditions.



LOW MAINTANANCE

Unlike pneumatic fenders, Ocean Cushion™ foam-filled fenders are not inflated with air. The foam filled construction requires no air pressure or safety valves to maintain.

LARGE STANDOFF

Ocean Cushion™ Fenders can provide a standoff unmatched by many fendering systems. The chain & aircraft tire nets increase the diameter of the fender body achieving a standoff of up to 16 ft.



RELIABLE AND SAFE PERFORMANCE

The closed cell foam core construction of Ocean Cushion™ Fenders insure that the fender will perform even when it is cut or punctured, when you need it most. It will not deflate like pneumatic fenders.

CONSTRUCTION FEATURES

FOAM CORE

Ocean Cushion™ foam-filled fenders are also constructed with a resilient energy absorbing closed cell cross-linked polyethylene foam core which is heat laminated into a one piece, solid foam core. The same heat lamination process used in our Ocean Guard™ fenders, produces a thermal bond between the layers of foam which is stronger than the foam itself which, will not delaminate even under the most abusive berthing conditions.



REINFORCED ELASTOMERIC SKIN

The energy absorbing foam core is protected by a tough, thick nylon filament tire cord reinforced elastomer skin. The reinforcing filaments are continuously wound in a helix pattern through up to 90 % of the elastomer skin. This continuous reinforcement of the elastomer skin greatly increases the tensile and tear strength of the skin.



CHAIN & AIRCRAFT TIRE NET

The Ocean Cushion™ foam-filled fender uses a heavy duty chain and aircraft tire net, assembled with thicker walled aircraft tires. The tires are placed on all fender surface areas including flats and ends to provide maximum protection of the fender skin.

Rubber sleeves are used on the exposed chains at both ends of the fender for additional protection. Galvanized long link longitudinal chains begin and terminate on a steel end fitting which will be connected with galvanized screw pin shackles, which are passed through holes in the tires.

The lateral chains are inter connected to the longitudinal chains also through the tires and locked in place with shackles. The chain & tire net is also designed to allow for the replacement of a section of the chain or tire.



OCEAN CUSHION™ STANDARD CAPACITY FOAM FILLED FENDERS WITH CHAIN & AIRCRAFT TIRE NETS



ENGLISH SIZES							
FENDERS		STAND OFF		STANDARD CAPACITY			
SIZE		DIAMETER		ENERGY ABSORPTION		REACTION FORCE	
ENGLISH	METRIC	UNCOMPRESSED		@ 60% COMPRESSION		@ 60% COMPRESSION	
ft x ft	m x m	ft	m	ft - kips	ton-m	kips	tons
3 x 6	0.92 x 1.83	4.1	1.2	37	5	61	28
4 x 6	1.22 x 1.83	5.3	1.6	66	9	72	33
4 x 8	1.22 x 2.44	5.3	1.6	88	12	107	49
5 x 10	1.53 x 3.05	6.5	2.0	176	24	167	76
5 x 16	1.53 x 4.88	6.5	2.0	306	42	291	132
6 x 12	1.83 x 3.66	7.5	2.3	295	41	232	105
7 x 14	2.13 x 4.27	8.5	2.6	477	66	322	146
8 x 12	2.44 x 3.66	9.8	3.0	520	72	206	93
8 x 16	2.44 x 4.88	9.8	3.0	718	99	406	184
9 x 14	2.75 x 4.27	10.8	3.3	740	102	292	132
9 x 18	2.75 x 5.49	10.8	3.3	980	136	469	213
10 x 16	3.05 x 4.88	11.8	3.6	1048	145	478	217
10 x 20	3.05 x 6.10	11.8	3.6	1,377	190	635	288
11 x 18	3.35 x 5.49	12.8	3.9	1,407	195	596	27
11 x 22	3.35 x 6.71	12.8	3.9	1,814	251	769	349
12 x 24	3.70 x 7.30	13.8	4.2	2,336	323	944	428
13 x 26	3.96 x 7.90	14.8	4.5	2,916	403	1,094	496
14 x 28	4.27 x 8.53	15.8	4.8	3,594	497	1,255	569

METRIC SIZES							
FENDERS		STAND OFF		STANDARD CAPACITY			
SIZE		DIAMETER		ENERGY ABSORPTION		REACTION FORCE	
METRIC	ENGLISH	UNCOMPRESSED		@ 60% COMPRESSION		@ 60% COMPRESSION	
m x m	ft x ft	m	ft	ft - kips	ton-m	kips	tons
1.00 x 1.50	3.3 x 4.9	1.3	4.4	35	5	50	23
1.00 x 2.00	3.3 x 6.6	1.3	4.4	50	7	74	34
1.20 x 2.00	3.9 x 6.6	1.6	5.3	67	9	81	37
1.35 x 2.50	4.4 x 8.2	1.8	5.9	109	15	117	53
1.50 x 3.00	4.9 x 9.8	2.0	6.4	162	22	162	73
1.70 x 3.00	5.6 x 9.8	2.2	7.1	203	28	173	78
2.00 x 3.50	6.6 x 11.5	2.5	8.1	326	45	246	112
2.00 x 4.00	6.6 x 13.1	2.5	8.1	383	53	259	117
2.20 x 4.50	7.2 x 14.8	2.7	8.7	518	72	354	161
2.50 x 4.00	8.2 x 13.1	3.0	10.0	579	80	336	152
2.50 x 5.50	8.2 x 18.0	3.0	10.0	867	120	502	228
3.00 x 6.00	9.8 x 19.7	3.5	11.6	1,283	177	645	293
3.30 x 4.50	10.8 x 14.8	3.8	12.6	1,049	145	475	215
3.30 x 6.50	10.8 x 21.3	3.8	12.6	1,676	232	749	340
3.30 x 10.6	10.8 x 34.8	3.8	12.6	2,862	396	1,300	590
4.20 x 8.40	13.8 x 27.6	4.8	15.6	3,461	479	1,208	548

** ACTUAL VALUES FOR ABOVE SIZES MAY VARY +/- 15% DUE TO VARIATIONS IN MATERIALS, SPEED OF COMPRESSION, TEMPERATURES AND TOLERANCES.

Ocean Cushion foam filled fenders are also available in other sizes and capacity models, Low Reaction, High, Extra High, and Super High Capacity.