

The background image shows two large, dark-colored donut fenders floating in greenish water. Each fender has a lighter, cylindrical top section. In the background, a white and blue striped boat is visible, and further back, a city skyline with various buildings is seen under a clear sky.

# Donut Fenders

## Characteristics

1. Proportional load deflection curve Low shear forces
2. Self-adjusting to changing water levels Low installation costs
3. Generally maintenance free
4. Individual drafts can be controlled by counterweights

## Applications

Locks and dry dock entrances, corner protection, turning dolphins, areas with large tidal variations or bridge protections, other monopile structures submarine jetties

## What is Donut Fender ?

The Donut Fender is a specific type of Foam Filled Fender. It is designed to simply roll over a fixed column. Due to its structure, the fender floats up and down with the fluctuating water levels and spins when vessels berth and slide along the donut fender. The Donut Fender is designed with a 100% closed cell EVA foam core, a reinforced tyre cord fabric lining and elastomer skin, with low friction pads at the internal steel core.

Donut Fenders are available in diameters from 1,000 mm to 6,220 mm and a maximum pile diameter of 610 mm to 4,388 mm. Additionally, mooring crowns, counterweights (for sub-marine applications) or other features like protective nettings can be added.

The foam density, coating skin thickness, pile/fender diameter and also the height of the donut fender can be changed as per to customer request. Jerryborg would be pleased to receive the engineering design allowing us to produce the correct type, size and overall layout of the Donut Fender for you.

## Technical Parameter Table of Donut Fender

Fender Size D [mm]	Max. Pile Diameter [mm]	Low Capacity*		Standard Capacity*		High Capacity*	
		Energy [kJNm]	Reaction [kN]	Energy [kJNm]	Reaction [kN]	Energy [kJNm]	Reaction [kN]
1,270	610	4.2	68	7.2	116	11.3	182
1,450	710	5.4	77	9.2	131	14.4	206
1,520	762	6.2	82	10.5	140	16.5	220
1,780	914	8.3	95	14.1	162	22.1	254
1,910	995	9.6	103	16.4	175	25.7	275
2,030	1,067	10.9	109	18.6	186	29.2	292
2,210	1,185	13.1	120	22.3	204	35.0	320
2,290	1,219	13.9	124	23.6	210	37.1	330
2,490	1,345	16.5	135	28.0	229	44.0	360
2,540	1,372	17.2	138	29.3	234	46.0	367
2,790	1,524	20.8	151	35.3	256	55.4	402
2,970	1,639	23.6	161	40.1	273	63.0	429
3,050	1,676	24.8	165	42.1	280	66.1	440
3,300	1,829	29.1	179	49.5	304	77.7	477
3,450	1,933	32.1	188	54.6	319	85.7	501
3,530	1,981	33.6	192	57.2	327	89.8	513
3,810	2,134	38.8	206	65.9	350	103.5	550
3,960	2,241	42.4	215	72.1	366	113.2	575
4,060	2,286	44.2	220	75.1	374	117.9	587
4,220	2,388	47.8	229	81.3	389	127.6	611



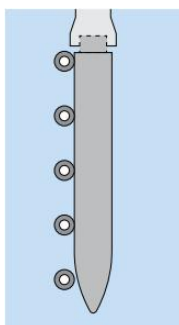
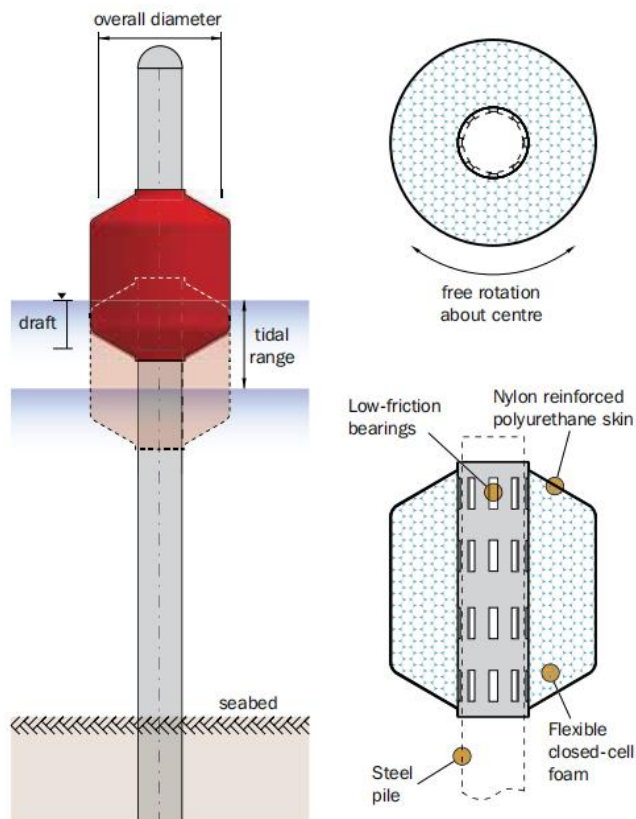


Open water donut fender

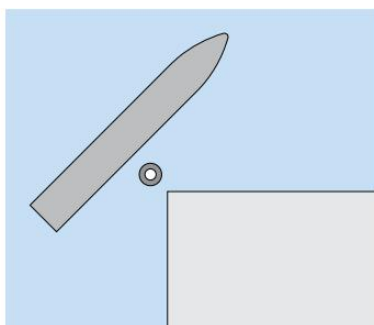


General cargo terminal

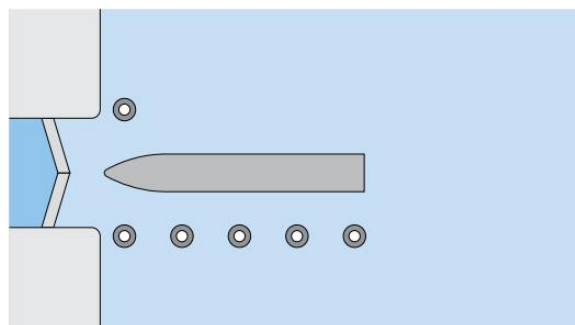
## Donut Fender General Drawing & Application



Breasting dolphins



Corner protection

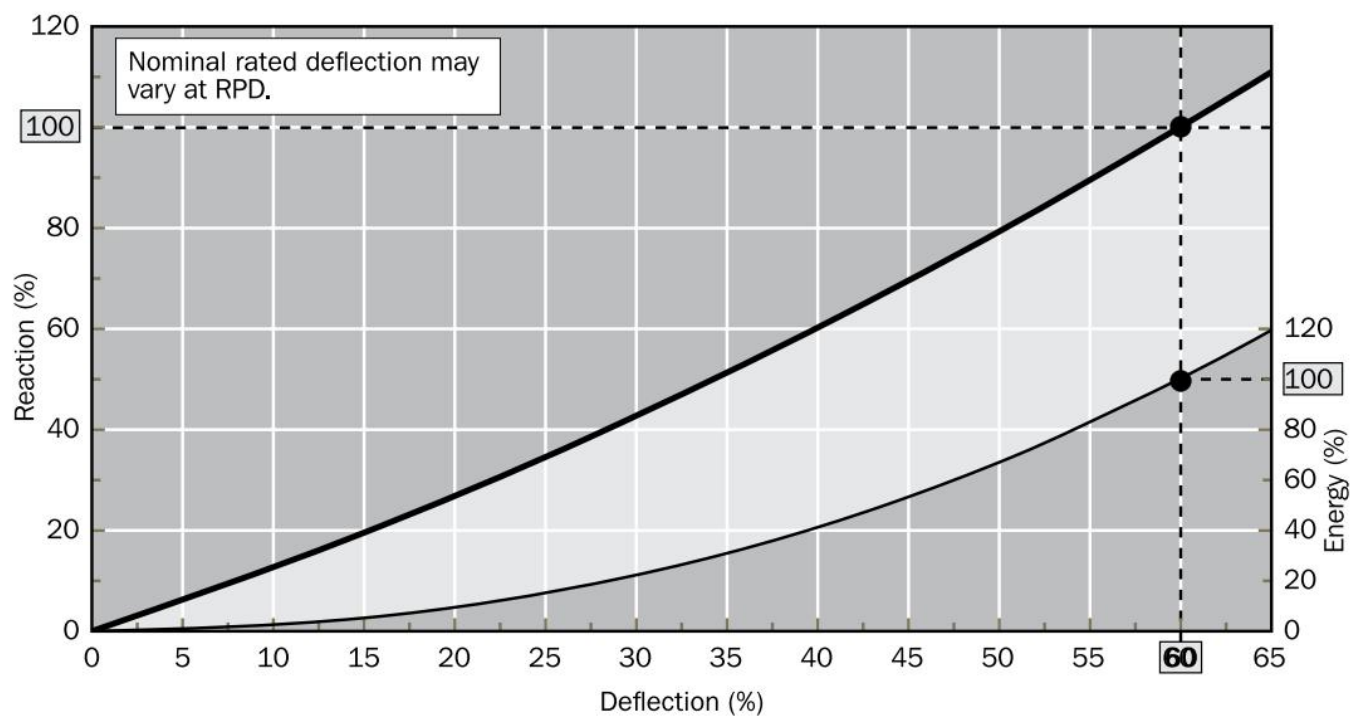


Guiding structures

**Qingdao Jerryborg Marine Machinery Co., Ltd**

Add: No.1, Xishanqian, Jimo District 266200, Qingdao City, China. WhatsApp: +8613881986406 E-mail: [sales@jerryborgmarine.com](mailto:sales@jerryborgmarine.com)

## General Performance Curve of Donut Fender



Note: Standard manufacturing and performance tolerance:  
Energy: 100%, Reaction: 100%, Tolerance:  $\pm 15\%$

## References



Ø 2.4 m x 2.6 m

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Donut fender in our factory



Installation of donut fender



Donut fender with protective cover

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Add: No.1, Xishanqian, Jimo District 266200, Qingdao City, China. WhatsApp: +8613881986406 E-mail: [sales@jerryborgmarine.com](mailto:sales@jerryborgmarine.com)