

# Guide to Fenders Fenders



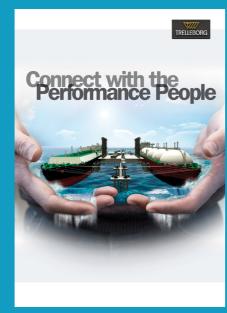
**PRODUCT GUIDE** 

## Performance People

The demanding nature of commercial ports and terminals means you need to connect with a partner that provides much more than technically superior products and technologies.

You need to work with a partner that combines best practice expertise gained through worldwide experience with a deep understanding of local requirements and regulations.







This global reach combined with feet on the ground local presence helps to make Trelleborg the Performance People that ensure solutions continually enhance your operations.

Connect with a partner that provides Performance Assurance services from conception to completion of every project and beyond to maintain and enhance port and vessel performance.

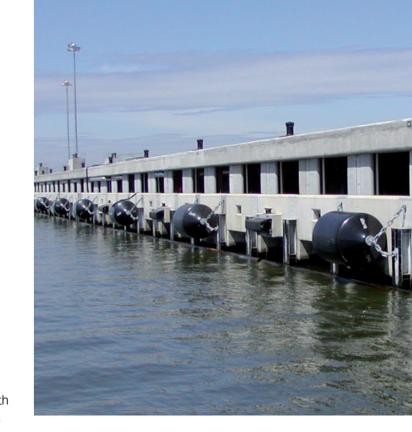
Connect with the Performance People, Trelleborg Marine Systems.

### **Guide to** Foam Fenders

This guide is about Foam Fenders and how they are best deployed, including the latest research on the use and effectiveness of Foam Fenders across the marine industry.

Rubber is the traditional material of choice for fenders, with solid and pneumatic designs covering a multitude of uses. However, floating foam fenders have significant advantages over both types of rubber fenders in many cases.

Guarantee performance by using the very best material for your application with our easy to use fender selector.



## Why foam?

#### SPEED

Foam fenders can be produced more quickly than solid rubber equivalents, making them ideal for new projects or temporary applications.

#### DURABILITY

Closed cell polyethylene construction means water ingress and punctures are impossible. Trelleborg foam fenders benefit from a unique construction method leading to an ultra tough skin, they can even be re-skinned after many years of service to gain a new lease of life.

#### LIGHTWEIGHT

Foam fenders are easier to install and transport due to their relatively low density. Even large fenders can be moved without using a crane.

#### VERSATILITY

Low or high reaction force options are available and surfaces are non-marking. These properties plus their buoyancy and compliance with many Navy specifications make Trelleborg foam fenders suitable for just as wide a range of applications as their solid rubber counterparts.

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## State of the market report

Trelleborg Marine Systems conducted a survey into the current state of the foam fender market, with the results indicating that foam fenders may be somewhat underutilised globally.

These hull conforming, easily installed fenders are not specified as widely as they should be and this could be leading to decision makers specifying rubber fenders when, in fact, foam would have been a more cost effective material, or better suited to the requirements of the project.

Of the port owners and operators surveyed in Trelleborg's Barometer Report 4, 77% had specified rubber fenders, whereas only 12% had specified foam. This reticence in the market with regards to specifying foam is somewhat surprising given the benefits that foam fenders boast, such as low hull pressure and quick installation and deployment times.

So, why not specify?

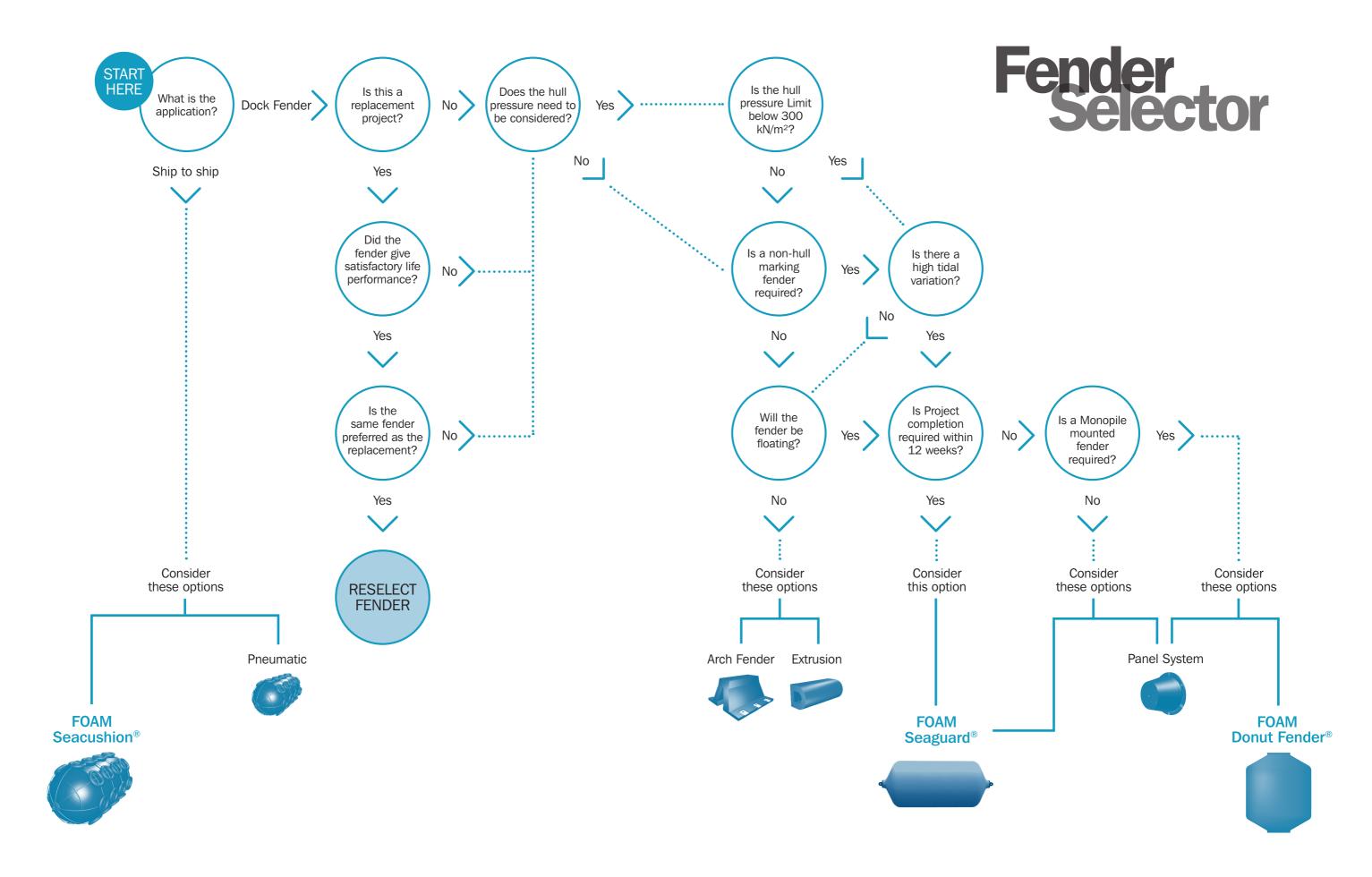
With so many specifiers used to stipulating rubber fenders in their project tenders, they're more inclined to stick to the status quo when purchasing replacements or installing new systems.



Although rubber fenders remain the preferable solution for some applications, Trelleborg wants to raise awareness of the viable alternative that foam can offer and the applications in which a foam fender might be a more cost effective, low maintenance or quickly installed solution.



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Trelleborg is a world leader in engineered polymer solutions that seal, damp and protect critical applications in demanding environments. Its innovative engineered solutions accelerate performance for customers in a sustainable way. The Trelleborg Group has annual sales of about SEK 21 billion (EUR 2.3 billion, USD 3.2 billion) in over 40 countries. The Group comprises five business areas: Trelleborg Coated Systems, Trelleborg Industrial Solutions, Trelleborg Offshore & Construction, Trelleborg Sealing Solutions and Trelleborg Wheel Systems. In addition, Trelleborg owns 50 percent of TrelleborgVibracoustic, a global leader within antivibration solutions for light and heavy vehicles, with annual sales of approximately SEK 15 billion (EUR 1.7 billion, USD 2.3 billion) in about 20 countries. The Trelleborg share has been listed on the Stock Exchange since 1964 and is listed on NASDAQ OMX Stockholm.

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