



Poly Marine Fender Systems



*The ultimate choice for **Heavy duty** applications*

- » Exceptionally strong, premium-quality fender systems engineered for maximum performance
- » Highly collision-resistant and exceptionally durable
- » Delivering up to 80% increased toughness
- » Unmatched resilience in the most demanding conditions



Engineered for Extremes. Trusted to Protect.

For over 30 years, Poly Marine Fender Systems has combined advanced polymer technology with marine engineering expertise to deliver best-in-class vessel and quayside protection solutions. Originally engineered for the demanding Oil & Gas sector, our fender systems are designed to perform reliably under the most extreme offshore and heavy-duty operating conditions.

Our ultra-strong fender systems are manufactured using a unique production process that ensures exceptional resilience, maximum energy absorption, and outstanding long-term durability. The specially engineered polymer materials are developed to withstand extreme impact forces while also resisting continuous friction and wear between moving surfaces. The result is a lightweight yet exceptionally robust fendering solution with an extended operational lifespan and minimal maintenance requirements. By significantly reducing weight compared to traditional fender systems, Poly Marine solutions contribute directly to improved vessel stability, enhanced fuel efficiency, increased wear resistance, and superior overall performance.

Our fender systems are trusted across a wide range of demanding marine applications, including tugboats, salvage and supply tugs, workboats, pushers, pilot and patrol vessels, ferry's, crew tenders, all-weather lifeboats, defense and fast rescue crafts, windfarm support vessels, heavy-duty RIBs, and research & survey vessels. We also specialize in quayside protection systems, pontoons, friction segments, floating mooring buoys, and bollard and rope protection solutions.





Why choose Poly Marine Fender solutions

KEY FEATURES

Ultra-Strong & Exceptionally Durable

Engineered for the most demanding heavy-duty marine operations and proven in the harshest environments. Our fender systems are trusted by the Dutch Pilot Organization in the Port of Rotterdam and all their other locations. Designed to maintain maximum operational capability in extreme weather and high-impact conditions, these fenders deliver outstanding collision resistance, superior wear resistance, exceptional energy absorption, and an extended operational lifespan.

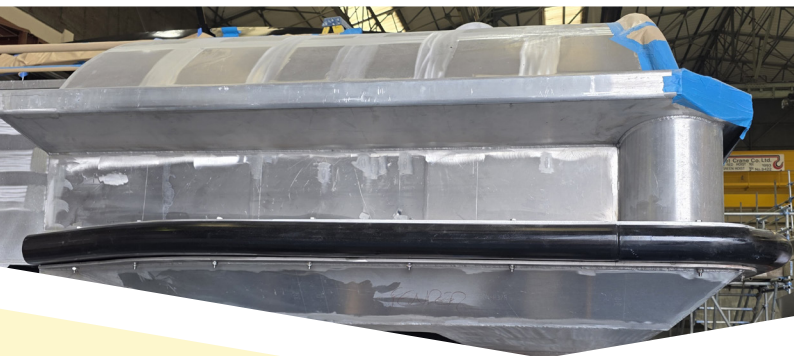




Superior Efficiency Through Reduced Weight, Less Downtime, Enhanced Buoyancy & Energy Absorption

Engineered to deliver over 40% weight reduction compared to traditional rubber fender systems while significantly enhancing energy absorption, toughness, and durability. The reduced weight contributes to increased passenger capacity, improved fuel efficiency, enhanced vessel performance, and greater onboard comfort during berthing and alongside operations.

With up to 80% greater toughness, our advanced lightweight fender systems provide outstanding impact resistance and energy absorption while improving vessel stability and operational efficiency. Enhanced tear-out, rip-out, and snagging resistance further ensures superior reliability and long-term performance in demanding marine environments.





Unmatched Resilience & Significant Cost Savings

Unmatched Resilience & Significant Cost Savings – Our unique production process ensures high-performance resilience, outstanding energy-absorbing capacity, and a low coefficient of friction for optimum performance under the most demanding conditions. The superior wear resistance delivers a service life up to 2–4 times longer than traditional rubber fenders, resulting in minimal maintenance, near-zero repair costs, and significantly reduced operational downtime.

A strong example of the operational and lifecycle cost savings achievable with Poly Marine Fender Systems is provided by the implementation within the Dutch Maritime Pilots' Organization fleet. Following integration of the system, the operational deployability envelope of the pilotage vessels increased by approximately 35%, effectively extending safe and reliable operations from Sea State 4 to Sea State 5 conditions.





Offshore-Grade Quality

Manufactured in accordance with the highest offshore industry standards, our unique production process ensures exceptional performance, optimal resilience, and long-term reliability in the harshest marine environments.

All standard polyurethane products are manufactured in accordance with ISO 9001-certified quality management procedures, ensuring consistent process control, traceability, and product performance. This high-quality manufacturing process is fully supported by our in-house production and R&D laboratory facilities, enabling continuous material validation, compound optimization, and performance testing.

Our fender systems are not manufactured using conventional off-the-shelf polyurethane formulations. Instead, proprietary polyurethane compounds have been specifically engineered to optimize the mechanical and operational characteristics required for demanding marine applications. Key material properties include high elongation at break, superior tensile strength, excellent abrasion resistance, and long-term durability under cyclic loading and harsh environmental conditions. These engineered compound characteristics contribute directly to enhanced energy absorption, structural integrity, and extended service life of the fender systems.

Engineered for simple integration across a wide range of vessel types, our fender systems are fully compatible with all major hull materials, including aluminum, composite, steel, and HDPE.

Available in Multiple Mounting Configurations, Including Pinned, Bonded, Strap-Mounted, and Steel Wire Systems.



Advanced Protection & Long-Term Reliability

Engineered for continuous operation in the harshest marine and offshore environments, our fender systems provide exceptional resistance against UV exposure, saltwater corrosion, and extreme weather conditions. Unlike traditional materials, our advanced polymer technology does not degrade in seawater and is highly resistant to marine growth, ensuring the system maintains its structural integrity, appearance, and performance over time.

The non-corrosive and low-maintenance properties significantly reduce cleaning, repair, and replacement requirements, while the superior wear resistance and environmental durability contribute to an extended operational lifespan and lower total cost of ownership.





Proven Performance Endorsed by Professionals

“As one of the world’s busiest ports, Rotterdam operates continuously, 24 hours a day, 365 days a year. The Dutch Pilot Organization relies on a fleet of 17 high-speed, twin waterjet pilot tenders operating throughout the Netherlands’ major ports, with 4–5 vessels in Rotterdam alone performing approximately 300 pilot transfers per week.

The original Discovery-class pilot tenders (40 GRT) were equipped with a fender system based on Ø280 mm HDPE pipe integrated into an aluminium fender casing with foam inserts. Under intensive operational conditions, these vessels incurred average annual fender repair costs of approximately €8,000 per vessel.

The subsequent generation of pilot tenders (60 GRT) utilized the same fender design. However, due to the increased vessel displacement and higher operational loads, maintenance requirements increased significantly, resulting in substantially higher repair costs and extended periods of operational downtime.

The demanding operating profile highlighted the need for a more durable, impact-resistant fender solution capable of withstanding continuous high-frequency berthing operations while reducing maintenance requirements, repair costs, and vessel downtime.”





“The Poly Marine Fender System has consistently delivered outstanding long-term performance, allowing scheduled fender maintenance to be eliminated entirely. The system’s durability and wear resistance have resulted in service lives matching the operational lifecycle of the vessels, significantly reducing maintenance interventions, downtime, and total cost of ownership. This proven reliability is demonstrated through more than 14 years of successful operation with the Dutch Pilots (Loodswezen).”

“After one year of intensive operation, the fender system displayed exceptional wear resistance with no visible signs of deterioration. Deflection was consistently low, confirming the system’s robustness and durability, while a marginal reduction in stiffness could further enhance impact absorption performance.”

Michiel, Svitzer Netherlands





Engineered Material Combinations

Through advanced material engineering and carefully combined and optimized core structures, our fender systems provide superior impact absorption, optimal contact surface and long-term durability without compromising vessel aesthetics or performance. The high-quality, non-absorbent closed cell core materials prevent water ingress and eliminate unnecessary weight gain over time, ensuring consistent performance in demanding marine environments. Our standard systems operate reliably in temperatures from -30°C to +55°C. Custom temperature specifications are available on request.



Flexible & Easy Mounting Solutions

Designed for simple and efficient installation, our fender systems can be supplied with a wide range of customized mounting solutions to suit specific vessel and operational requirements, including pinned, bolted, bonded, wire-mounted, and strapped configurations for secure integration and reliable performance.

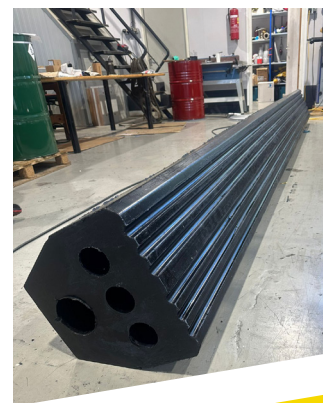
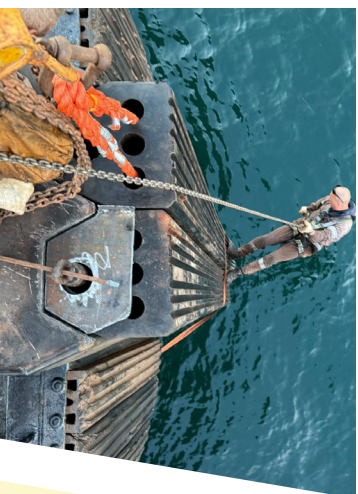


Custom-Made Protection. Engineered Without Limits

At Poly Marine Fender Systems, every fender system can be individually engineered and manufactured to match the vessel's hull shape, operational requirements, and design vision with absolute precision.

Whether a project requires specialized shapes, increased strength, or complex custom configurations, our tailored solutions combine superior protection with outstanding impact absorption and wear resistance. By integrating advanced engineering with high-performance polymer technology, we enhance both vessel aesthetics and operational functionality while delivering maximum durability and long-term performance.

Whether based on 2D CAD, 3D CAD, physical templates, or on-site measurements, we support both new-build projects and refit applications. By carefully optimizing material properties, we ensure the perfect balance between flexibility, contact surface, durability, and hull conformity.





Wide range of Colours and Hardness Profiles for Every Marine Application

Poly Marine Fender Systems has the capability to manufacture polyurethane fender systems in a broad range of colours and material configurations to meet specific operational, functional, and identification requirements for different marine applications.

Application-specific proprietary polyurethane compounds are available in hardness ranges from 72 Shore A to 90 Shore A, allowing precise optimization of impact energy absorption, stiffness, wear resistance, and structural performance to suit specific operational load profiles and vessel interface conditions. By tailoring the compound characteristics, varying levels of contact pressure, friction, and surface resistance can be achieved, ensuring optimal performance, durability, and protection across a wide range of marine applications.

The engineered elastomer compounds are characterized by high elongation at break, excellent abrasion resistance, and superior hydrolysis resistance, ensuring long-term mechanical stability and durability in demanding marine environments involving continuous cyclic loading, saltwater exposure, UV radiation, and varying temperature conditions.



Off-the-shelf availability of standard fender parts ensures short lead times and fast deployment.

Off the Shelf <48 Hours Ex. Works			
Fender	Height x With (mm)	Length (mm)	Weight (Kg/m)
D100HD-EP	100x100	3000	6,42
D150MHD-EP	150x150	3000	9,88
D250	250x250	3000	23,5
D300SHD-S-EP	300x300	3000	44,4
T120	120x80	4000	4,48
T150	150x120	4000	6,14
T200	200x120	4000	6,8
R200x150EP	200x150 foam filled	5000	11,58
P150	150x200x50	2600	11,75
P200	200x200x50	2600	17,58

*Off the shelf fenders are only available in black



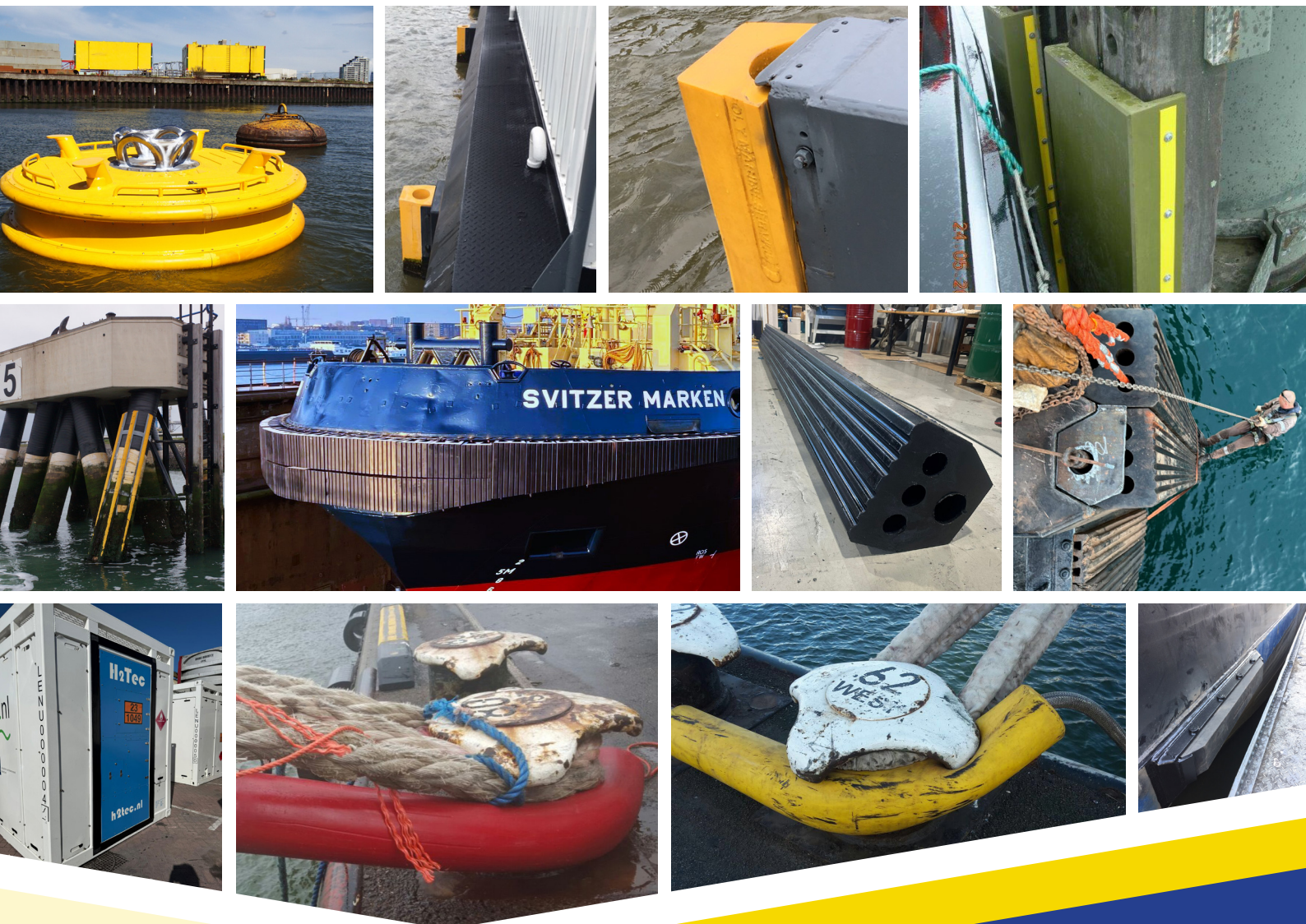


Advanced Marine Specialties Built for Tough Working Conditions

In addition to our high-performance fender systems, Poly Marine also offers a comprehensive range of specialised marine protection and mooring solutions designed for operation in demanding and heavy-duty maritime environments. Our portfolio includes floating mooring buoys, modular pontoons, quayside protection systems, wear plates, mooring protection, custom-engineered bow fenders, door protection for special containers, bollard and rope protection solutions and friction segments.

All systems are developed using the same engineering principles and high-grade polyurethane technologies applied throughout our fender product range, ensuring exceptional durability, impact resistance, and long-term operational reliability under continuous exposure to harsh marine conditions. These solutions are specifically engineered for intensive commercial, offshore, pilotage, and port operations where performance, safety, and minimal maintenance requirements are critical.

Please find the available options and configurations below.





Sustainability & Responsibility

At Poly Marine Fender Systems, sustainability is not an afterthought — it is an integral part of the way we design, engineer, and manufacture our fender systems. We are committed to creating high-performance solutions with a minimal environmental footprint, combining innovation, durability, and responsible production practices. Through the use of recyclable materials, energy-efficient manufacturing methods, and advanced engineering principles, we actively contribute to a more sustainable maritime industry — without ever compromising on quality, strength, or performance.

We reduce our environmental impact by:

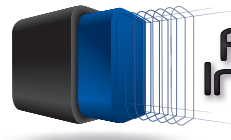
- **Using recyclable, long-life materials**
Extending product lifespan while reducing raw material consumption and unnecessary waste.
- **Implementing energy-efficient production processes**
Minimizing energy usage throughout every stage of manufacturing.
- **Reducing material waste through precision engineering**
Applying advanced production techniques and lean manufacturing principles for maximum efficiency.
- **Designing with purpose and functionality**
Optimizing protection, weight, and performance with minimal excess material.

Our ambition is clear: to support a cleaner, smarter, and more efficient future for the maritime industry — one advanced fender system at a time





**Poly Marine
Fender Systems**



**Fender
Innovations**

A STRONG PARTNERSHIP

Meet Fender Innovations Group.

Poly Marine Fender Systems B.V. is specialized in highly durable, heavy duty, impact-resistant polyurethane fender systems for demanding marine applications for crew tenders, Pilot vessels, Tug boats, salvage and supply tugs, workboats, pushers, pilot vessels, crew tenders, all-weather lifeboats, fast rescue craft, windfarm support vessels, heavy-duty RIBs, and research & survey vessels. We also specialize in quayside protection systems, pontoons, friction segments, floating mooring buoys, and bollard and rope protection solutions.

Fender Innovations B.V. specializes in lightweight, flexible, custom-made fender systems and specials for fast rescue boats, lifeboat tenders, superyacht tenders, and heavy-duty RIBs.



WORKBOATS

Exceptionally lightweight, incredibly strong—built for demanding performance at sea.



SEARCH AND RESCUE

When every second counts—rely on the best in performance and protection.



WINDFARM SUPPORT

Durable, dependable, and designed for maximum grip and safety.



SUPERYACHTS/TENDERS

Elegant, flexible, and precisely tailored to your vessel.

Together, we combine innovation, durability, and craftsmanship to deliver high-performance maritime protection solutions without compromise.



**Poly Marine
Fender Systems**

Ultra strong fenders systems
engineered for **Heavy duty** applications

CONTACT & QUOTES

Find out more

Fender Innovations and PolyMarine Fender Systems can offer a complete solution based on your needs and requirements. Contact us for information.

Polymarine Systems

Energieweg 46
3133 EC Vlaardingen (NL)
info@polymarinefendersystems.nl

+31 (0)10 59 179 81 (Production)
+31 (0)22 37 64 170 (Sales)
www.polymarinefendersystems.nl



Fender Innovations

Westrak 240
1771 SV Wieringerwerf (NL)
info@fenderinnovations.nl

+31 22 37 64 170
www.fenderinnovations.nl



Follow us on LinkedIn and Facebook

Follow Poly Marine Fender
Systems on LinkedIn:

