JETTYGUARD



ENERGY-ABSORBING CONTACT

# Floating Fenders

FOAM-FILLED PNEUMATIC




Offshore pneumatic fender handling - artistic rendering.

# Foam-filled *Floating Fenders*



Yellow foam-filled fender shown in our workshop.

A floating contact system for vessel and berth interfaces.

## Construction and supply details

| | |
|---|---|
| **Core** | Thermal-laminated, 100% closed-cell foam core |
| **Outer layer** | Tough nylon-filament-reinforced polyurethane epidermis |
| **End interface** | Embedded end fittings |
| **Performance tolerance** | ±10% |

Confirm core density, skin thickness and end-fitting details for the selected configuration.

# Foam-filled fender dimensions

Nominal outer diameter and length are shown in millimetres.



Black foam-filled fender, full product view.



Red foam-filled fender, full product view.

PRODUCT DIMENSIONS

## Outer diameter and length

| Model | Outer diameter (mm) | Length (mm) |
|---|---|---|
| JFF 500x1000 | 500 | 1000 |
| JFF 600x1200 | 600 | 1200 |
| JFF 1000x1500 | 1000 | 1500 |
| JFF 1000x2000 | 1000 | 2000 |
| JFF 1350x2500 | 1350 | 2500 |
| JFF 1500x3000 | 1500 | 3000 |
| JFF 1700x3000 | 1700 | 3000 |
| JFF 2000x3500 | 2000 | 3500 |
| JFF 2300x4000 | 2300 | 4000 |
| JFF 2500x5500 | 2500 | 5500 |
| JFF 3000x5000 | 3000 | 5000 |
| JFF 3300x6500 | 3300 | 6500 |
| JFF 4500x9000 | 4500 | 9000 |
| JFF 6000x8000 | 6000 | 8000 |

# Reaction and energy reference

Standard and high performance reaction and energy values.

PERFORMANCE

## Performance by model

| Model | Standard reaction (kN) | Standard energy (kNm) | High reaction (kN) | High energy (kNm) |
|---|---|---|---|---|
| JFF 500x1000 | 67 | 10 | 79 | 14 |
| JFF 600x1200 | 89 | 15 | 116 | 19 |
| JFF 1000x1500 | 173 | 47 | 227 | 61 |
| JFF 1000x2000 | 254 | 68 | 329 | 88 |
| JFF 1350x2500 | 418 | 152 | 543 | 197 |
| JFF 1500x3000 | 596 | 244 | 774 | 317 |
| JFF 1700x3000 | 618 | 282 | 801 | 366 |
| JFF 2000x3500 | 845 | 454 | 1099 | 591 |
| JFF 2300x4000 | 1088 | 643 | 1415 | 836 |
| JFF 2500x5500 | 1516 | 1022 | 1943 | 1398 |
| JFF 3000x5000 | 1788 | 1464 | 2326 | 1904 |
| JFF 3300x6500 | 2731 | 2421 | 3550 | 3148 |
| JFF 4500x9000 | 4726 | 4779 | 6533 | 6586 |
| JFF 6000x8000 | 8139 | 7320 | 11318 | 9520 |

Performance tolerance: ±10%.



Protective surface application in progress.

# From core to finished units

Core, end connections, surface application and finished units.



Foam cores with central end fittings in our workshop.



Foam cores arranged in our workshop.



End plate, eye connection and outer surface.



Protective coating application in our workshop.



Red finished fenders arranged together.



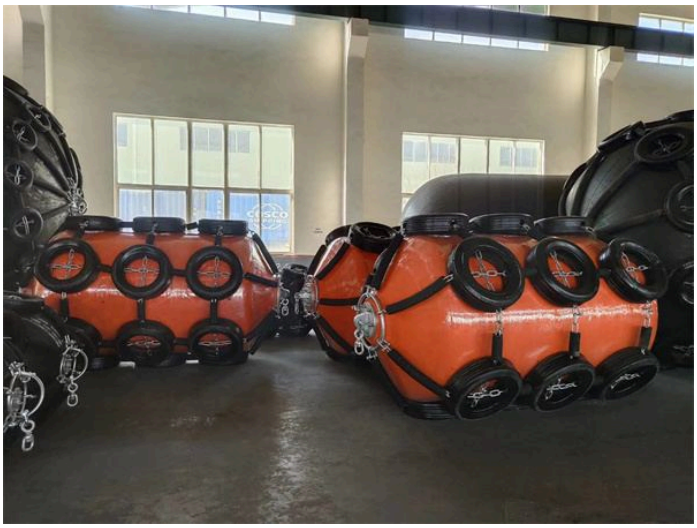
Fender ends arranged in a row.

# Finished product forms

Examples of finished foam-filled fenders in different visible configurations.



Red foam-filled fender shown in our workshop.



Foam-filled fender with netting visible.



Sling-type foam-filled fender.



Red fender with end eyes.

# Berth and vessel interfaces

Application photographs show foam-filled fenders at marine structures and terminal berths.



Foam-filled fender suspended beside a marine structure.



Foam-filled fenders positioned along a quay wall.



Foam-filled fender at a port berth.



Foam-filled fenders at a ferry terminal.

# Pneumatic *Floating Fenders*



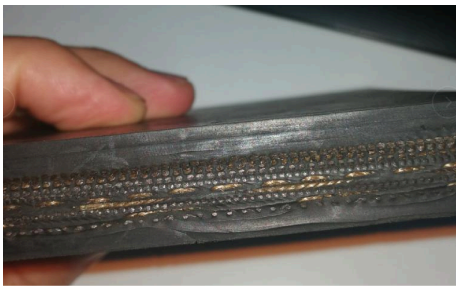

4.5 × 9.0 m moulded pneumatic fender in our workshop.



Moulded pneumatic fender end-flange detail.



Flange detail with protective covering visible.



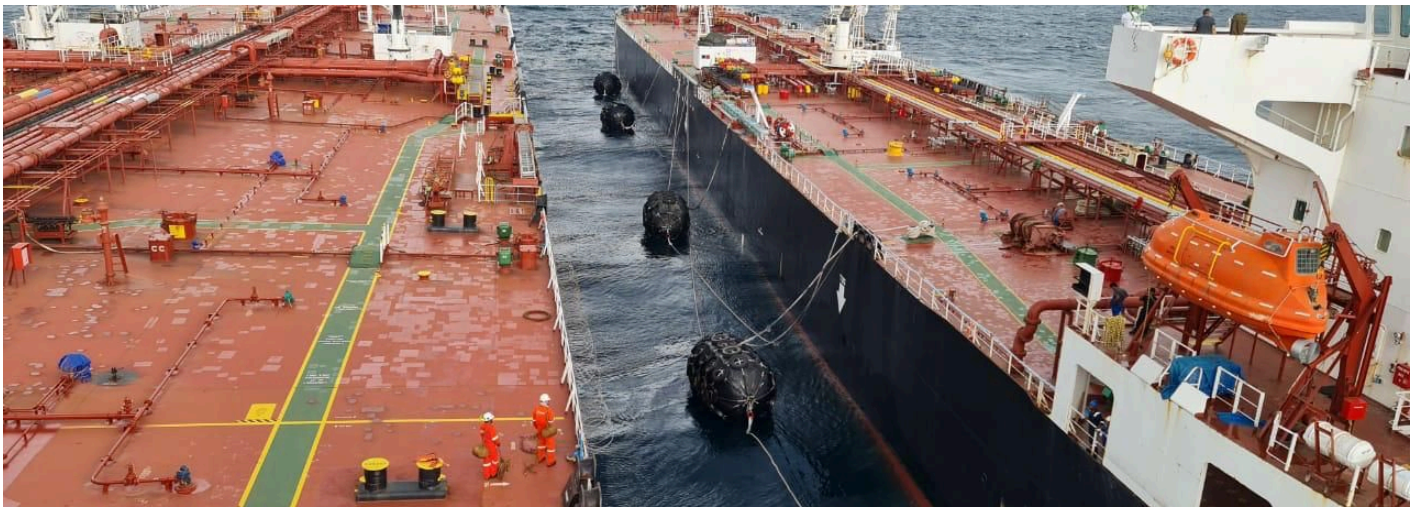
Pneumatic fender rubber cross-section detail.

Construction and component specifications depend on the selected model and order configuration.

# Pneumatic fender dimensions

Base model codes identify dimensions. Specify the pressure-series suffix -50 or -80 separately.

| JettyGuard model | Diameter (mm) | Length (mm) |
|---|---|---|
| JPF0510 | 500 | 1000 |
| JPF0610 | 600 | 1000 |
| JPF0715 | 700 | 1500 |
| JPF1015 | 1000 | 1500 |
| JPF1020 | 1000 | 2000 |
| JPF1220 | 1200 | 2000 |
| JPF1325 | 1350 | 2500 |
| JPF1530 | 1500 | 3000 |
| JPF1730 | 1700 | 3000 |
| JPF2035 | 2000 | 3500 |
| JPF2540 | 2500 | 4000 |
| JPF2555 | 2500 | 5500 |
| JPF3345 | 3300 | 4500 |
| JPF3365 | 3300 | 6500 |
| JPF33106 | 3300 | 10600 |
| JPF4590 | 4500 | 9000 |
| JPF45120 | 4500 | 12000 |



Floating fenders between vessels during ship-to-ship operations.

# Pneumatic fender performance

Guaranteed energy absorption (GEA) and reaction force at GEA for 50 and 80 kPa initial internal pressure.

## 50 and 80 kPa series

| Nominal size D×L (mm) | Model 50 kPa | GEA 50 kPa (kNm) | Reaction at GEA 50 kPa (kN) | Model 80 kPa | GEA 80 kPa (kNm) | Reaction at GEA 80 kPa (kN) |
|---|---|---|---|---|---|---|
| 500×1000 | JPF0510-50 | 6 | 64 | JPF0510-80 | 8 | 85 |
| 600×1000 | JPF0610-50 | 8 | 74 | JPF0610-80 | 11 | 98 |
| 700×1500 | JPF0715-50 | 17 | 137 | JPF0715-80 | 24 | 180 |
| 1000×1500 | JPF1015-50 | 32 | 182 | JPF1015-80 | 45 | 239 |
| 1000×2000 | JPF1020-50 | 45 | 257 | JPF1020-80 | 63 | 338 |
| 1200×2000 | JPF1220-50 | 63 | 297 | JPF1220-80 | 88 | 390 |
| 1350×2500 | JPF1325-50 | 102 | 427 | JPF1325-80 | 142 | 561 |
| 1500×3000 | JPF1530-50 | 153 | 579 | JPF1530-80 | 214 | 761 |
| 1700×3000 | JPF1730-50 | 191 | 639 | JPF1730-80 | 267 | 840 |
| 2000×3500 | JPF2035-50 | 308 | 875 | JPF2035-80 | 430 | 1150 |
| 2500×4000 | JPF2540-50 | 663 | 1381 | JPF2540-80 | 925 | 1815 |
| 2500×5500 | JPF2555-50 | 943 | 2019 | JPF2555-80 | 1317 | 2653 |
| 3300×4500 | JPF3345-50 | 1175 | 1884 | JPF3345-80 | 1640 | 2476 |
| 3300×6500 | JPF3365-50 | 1814 | 3015 | JPF3365-80 | 2532 | 3961 |
| 3300×10600 | JPF33106-50 | 3067 | 5257 | JPF33106-80 | 4281 | 6907 |
| 4500×9000 | JPF4590-50 | 4752 | 5747 | JPF4590-80 | 6633 | 7551 |
| 4500×12000 | JPF45120-50 | 6473 | 7984 | JPF45120-80 | 9037 | 10490 |

# Pneumatic pressure data · 50 kPa

Internal pressure, endurance, safety-valve and test values for the 50 kPa configuration.

## 50 kPa pressure conditions

| Model | Nominal size (diameter × length mm) | Internal pressure at 0% deflection (kPa) | Internal pressure at 60% deflection (kPa) | Minimum endurable pressure at 0% deflection (kPa) | Minimum endurable pressure at 60% deflection (kPa) | Safety-valve setting (kPa) | Test pressure at 0% deflection (kPa) |
|---|---|---|---|---|---|---|---|
| JPF0510-50 | 500 x 1000 | 50 | 132 | 300 | 462 | - | 200 |
| JPF0610-50 | 600 x 1000 | 50 | 126 | 300 | 441 | - | 200 |
| JPF0715-50 | 700 x 1500 | 50 | 135 | 300 | 473 | - | 200 |
| JPF1015-50 | 1000 x 1500 | 50 | 122 | 300 | 427 | - | 200 |
| JPF1020-50 | 1000 x 2000 | 50 | 132 | 300 | 462 | - | 200 |
| JPF1220-50 | 1200 x 2000 | 50 | 126 | 300 | 441 | - | 200 |
| JPF1325-50 | 1350 x 2500 | 50 | 130 | 300 | 455 | - | 200 |
| JPF1530-50 | 1500 x 3000 | 50 | 132 | 300 | 462 | - | 200 |
| JPF1730-50 | 1700 x 3000 | 50 | 128 | 300 | 448 | - | 200 |
| JPF2035-50 | 2000 x 3500 | 50 | 128 | 300 | 448 | - | 200 |
| JPF2540-50 | 2500 x 4000 | 50 | 137 | 350 | 480 | 175 | 250 |
| JPF2555-50 | 2500 x 5500 | 50 | 148 | 350 | 518 | 175 | 250 |
| JPF3345-50 | 3300 x 4500 | 50 | 130 | 350 | 455 | 175 | 250 |
| JPF3365-50 | 3300 x 6500 | 50 | 146 | 350 | 511 | 175 | 250 |
| JPF33106-50 | 3300 x 10600 | 50 | 158 | 350 | 553 | 175 | 250 |
| JPF4590-50 | 4500 x 9000 | 50 | 146 | 350 | 511 | 175 | 250 |
| JPF45120-50 | 4500 x 12000 | 50 | 154 | 350 | 539 | 175 | 250 |



Floating fenders between vessels during ship-to-ship operations.

Use the applicable 50 kPa or 80 kPa pressure data for the selected configuration.

# Pneumatic pressure data · 80 kPa

Internal pressure, endurance, safety-valve and test values for the 80 kPa configuration.

## 80 kPa pressure conditions

| Model | Nominal size (diameter × length mm) | Internal pressure at 0% deflection (kPa) | Internal pressure at 60% deflection (kPa) | Minimum endurable pressure at 0% deflection (kPa) | Minimum endurable pressure at 60% deflection (kPa) | Safety-valve setting (kPa) | Test pressure at 0% deflection (kPa) |
|---|---|---|---|---|---|---|---|
| JPF0510-80 | 500x1000 | 80 | 174 | 480 | 609 | - | 250 |
| JPF0610-80 | 600x1000 | 80 | 166 | 480 | 581 | - | 250 |
| JPF0715-80 | 700x1500 | 80 | 177 | 480 | 620 | - | 250 |
| JPF1015-80 | 1000x1500 | 80 | 160 | 480 | 560 | - | 250 |
| JPF1020-80 | 1000x2000 | 80 | 174 | 480 | 609 | - | 250 |
| JPF1220-80 | 1200x2000 | 80 | 166 | 480 | 581 | - | 250 |
| JPF1325-80 | 1350x2500 | 80 | 170 | 480 | 595 | - | 250 |
| JPF1530-80 | 1500x3000 | 80 | 174 | 480 | 609 | - | 250 |
| JPF1730-80 | 1700x3000 | 80 | 168 | 480 | 588 | - | 250 |
| JPF2035-80 | 2000x3500 | 80 | 168 | 480 | 588 | - | 250 |
| JPF2540-80 | 2500x4000 | 80 | 180 | 560 | 630 | 230 | 300 |
| JPF2555-80 | 2500x5500 | 80 | 195 | 560 | 683 | 230 | 300 |
| JPF3345-80 | 3300x4500 | 80 | 171 | 560 | 599 | 230 | 300 |
| JPF3365-80 | 3300x6500 | 80 | 191 | 560 | 669 | 230 | 300 |
| JPF33106-80 | 3300x10600 | 80 | 208 | 560 | 728 | 230 | 300 |
| JPF4590-80 | 4500x9000 | 80 | 192 | 560 | 672 | 230 | 300 |
| JPF45120-80 | 4500x12000 | 80 | 202 | 560 | 707 | 230 | 300 |



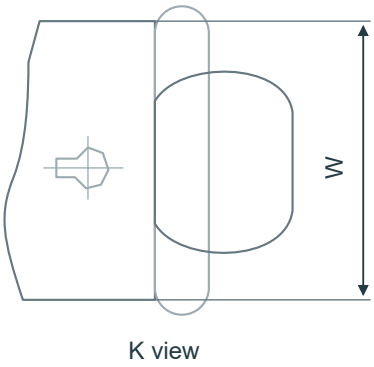

Floating fenders between vessels during ship-to-ship operations.

Use the applicable 50 kPa or 80 kPa pressure data for the selected configuration.

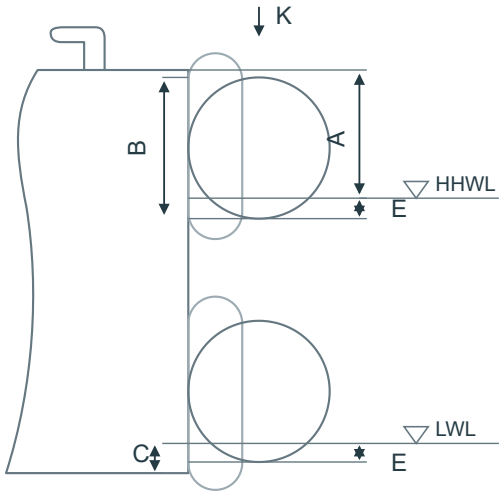
# Installation dimensions and waterline

Use the reference dimensions with the selected model and the project installation drawing.

The supporting structure must be high enough to support the fender during impacts.




K view




Installation dimension schematic. Not to scale; confirm the project arrangement.

## Installation dimensions

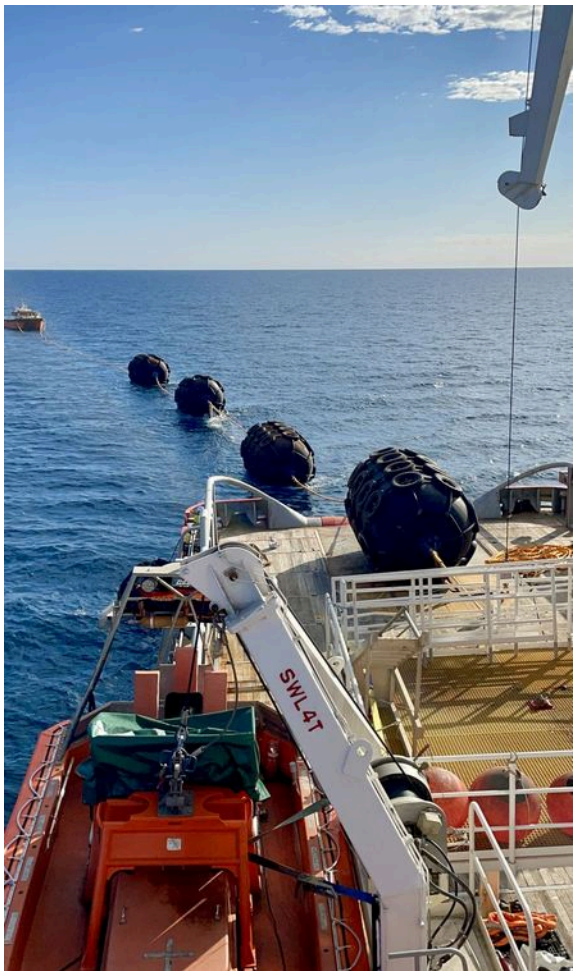
| Nominal size D × L (mm) | A (mm) | B (mm) | C (mm) | E (mm) | W (mm) |
|---|---|---|---|---|---|
| 500x1000 | 440 | 340 | 140 | 150 | 1300 |
| 600x1000 | 540 | 420 | 140 | 160 | 1300 |
| 700x1500 | 540 | 400 | 260 | 280 | 1950 |
| 1000x1500 | 860 | 660 | 280 | 310 | 1950 |
| 1000x2000 | 890 | 690 | 250 | 280 | 2600 |
| 1200x2000 | 1090 | 850 | 290 | 320 | 2600 |
| 1200x2400 | 1120 | 880 | 290 | 280 | 3000 |
| 1350x2400 | 1270 | 1000 | 270 | 310 | 3250 |
| 1500x3000 | 1430 | 1130 | 290 | 330 | 3900 |
| 1700x3000 | 1620 | 1280 | 320 | 370 | 3900 |
| 2000x3500 | 1910 | 1510 | 370 | 430 | 4550 |
| 2200x4500 | 2140 | 1690 | 410 | 480 | 5600 |
| 2500x4000 | 2460 | 1960 | 400 | 470 | 5200 |
| 3300x6500 | 3350 | 2690 | 430 | 520 | 8450 |
| 4500x9000 | 4680 | 3780 | 460 | 590 | 11700 |

**PROJECT FIT-UP**

Review HHWL/LWL, fender movement and contact position over the operating range. Confirm clearance to hull, quay, fittings and adjacent structure; verify the selected size and installation dimensions on the project drawing.

# Handling and vessel-side use

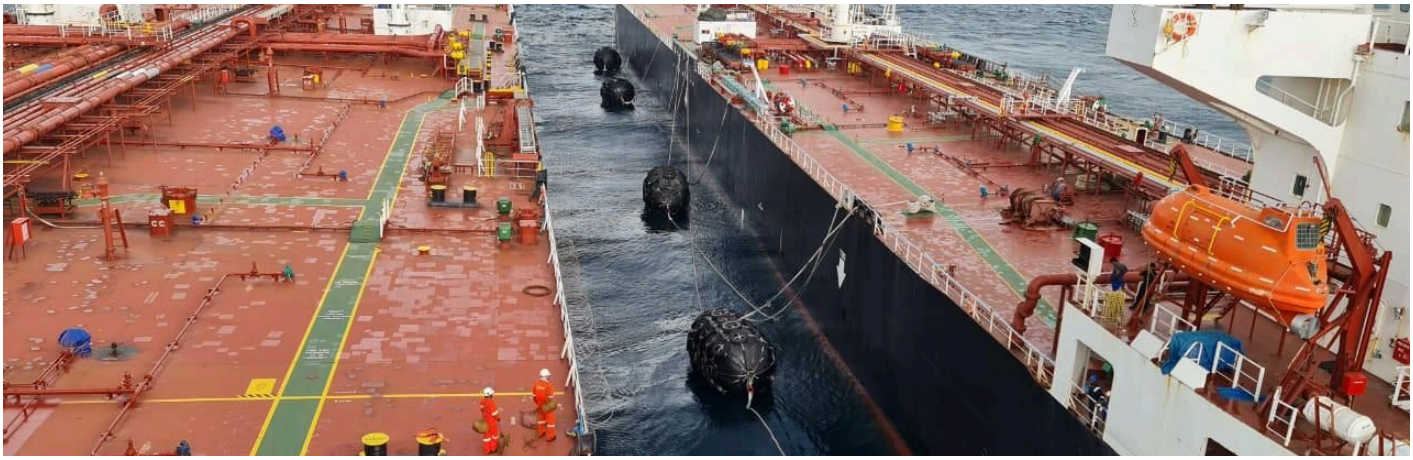
Pneumatic fenders during offshore handling, port staging and ship-to-ship operations.




Pneumatic fender being handled beside a vessel offshore.



Pneumatic fenders staged at port before deployment.



Floating fenders between vessels during ship-to-ship operations.

# Selection, deployment and maintenance

Use the selected product size and pressure condition with the vessel interface and project duty.



Orange foam-filled fenders with lifting loops.

## Review through the operating cycle

| Review item | Project confirmation |
|---|---|
| Before selection | Confirm size, contact arrangement, operating duty and required performance basis. |
| Pressure series | For pneumatic fenders, identify the specified 50 kPa or 80 kPa configuration; keep pressure data separate. |
| Deployment | Confirm attachment, handling access, movement and operating clearances. |
| Before use | Check the outer surface and fittings against product instructions; check pressure for pneumatic fenders. |
| After abnormal contact | Inspect the outer surface and fittings; record damage and pneumatic pressure where applicable. |
| Inspection interval | Set the interval from the project specification and service conditions. |

Use the applicable 50 kPa or 80 kPa pressure data for the selected configuration.

PROJECT ENQUIRIES

# Send Your Enquiry Now.

info@jettyguard.com jettyguard.com

Jettyguard Engineering Technology (Chongqing) Co., Ltd.

Foam-filled fender between a vessel and quay.