























**Marine fendering**  
for quality rubber protection

**FenderTec**  
marine fendering

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**Marine Fendering – for quality rubber Protection**

FenderTec has more than 50 years’ experience in producing various technical rubber products. We specialize in manufacturing marine fenders for the protection of portsidles, loading bays, tugboats, workboats and other vessels.

FenderTec has standard fenders available, but custom-made products can also be provided according to customer requirements, produced with the best quality rubber. All rubber marine fenders can be cut into different lengths, drilled or pre-curved as required. With production and service facilities in Europe, FenderTec can deliver qualitatively interesting solutions in a short period of time.

**Why FenderTec marine fenders?**

- Thoroughly tested and proven quality rubber
- Wide variety of standard fenders
- Custom-made fenders according to customer requirements
- Pre-curved, drilled or custom lengths as per installation requirements
- European quality with fast delivery



**Markets**

Our products are used by a wide range of clientele from several industries, including tugboat builders and operators, pontoon builders, harbors and the off-shore industry.

The product range of FenderTec includes a broad range of marine rubber and rubber fenders for various applications. Most of these products are available in stock or can be provided with short delivery terms.

**Central Stock & Worldwide Shipping**

FenderTec has an extensive central range of stock available in Europe for fast dispatching all types and sizes of rubber fenders.

With its European sales office and central warehouse located nearby the port of Rotterdam in the Netherlands and with local partners across the globe, FenderTec is synonymous with the best quality rubber fenders, worldwide shipping, short lead times and custom solutions.

All standardized types and sizes and client specific batches of rubber marine fenders can be provided from central stock locations to ensure short lead times.



## MADE TO ORDER



### Made to order

In addition to standard fender products, FenderTec also manufactures a variety of custom-made fenders and profiles for different applications.

Custom moulded products and extrusions of varying hardnesses and rubber qualities have been produced in the rubber factory for more than 50 years. FenderTec has access to compression, injection and extrusion machines and new rubber shapes and rubber metal connections are produced and reconditioned in moulding presses. The extruder can produce a wide range of quality rubber profiles based on customer drawings.

Our team is very experienced and they are capable of providing suitable solutions for any custom requirements.

FenderTec provides high quality, flexible and cost effective solutions with short lead times. FenderTec can provide the ideal solution for all of your needs, including prototypes and small or large volumes. We offer a one-stop solution for all of your requirements.



## SERVICES • DRILLING & CUTTING



### Services

FenderTec provides all kinds of services related to rubber fenders. In order to facilitate fast delivery we can work on rubber fenders in our production area.

### Drilling & cutting

The guillotine and the sawing machine are used to cut marine fenders into the required lengths. Ends can be bevelled and holes can be drilled into virtually any shape of rubber marine fenders.

Standard fenders, such as D-section fenders and Delta fenders, can be predrilled and provided from stock. Customer-specific fenders with drilled holes can be supplied with short lead times.

### Pre-curved cornerbends

With extensive experience in small and large cornerbends, Fendertec provides cornerbends in different qualities of rubber to meet customer requirements. Most type rubber fenders can be delivered according to pre-arranged radius.

Production of the rubber products is in compliance with ISO9001 certification





**Repair market**

FenderTec is a supplier of marine rubber and rubber fenders across the globe. Besides a broad range of standard fenders and customer-specific fenders, FenderTec also has an extensive stock of fenders available for repair.

At FenderTec we understand the importance of short lead times for repair jobs. It is often important to get repair jobs done as soon as possible as the time that a ship has to lay in a dock is costly. For this reason FenderTec has a broad range of standard fenders and customer specific fenders available in its extensive range to be able to meet fast delivery requirements.

Do you need replacements for tugboat, workboat or other vessels or constructions? All fender replacements are widely available from stock. Replacements and all common types of fenders can be delivered from central stock locations with short lead times and worldwide shipping.



REPAIR MARKET



D fenders are the commonly used rubber bumpers across the world and they are produced by means of extrusion in an extensive range of designs and sizes. The flat back of this type of fender facilitates the easy installation of D fenders on various surfaces for the protection of ships and docks.

### Types

There are three standard types of D fenders available:

- DD fender. Provided with a D-shaped inner chamber
- DC fender. Provided with an O-shaped inner chamber
- DS fender. Without an inner chamber

FenderTec produces a wide range of D fenders in the most common sizes. D fenders are kept in stock in all sizes for fast delivery. Non-standard sizes and customer specific versions can also be produced with short lead times. Smaller D fenders are also available in longer lengths and in various colours (non-marking).

### Processes

D fenders can be fitted by means of bolts and or strips in various manners: horizontally, vertically or diagonally. The mounting holes required are made through the side or through the top and bottom of the fender. FenderTec finishes the fenders in accordance with your requirements

and drawings. D fenders can also be produced vulcanized with required radiuses, which allow them to be fitted properly to a circular bow or stern. D fenders can be provided in specified lengths and the ends can be bevelled.

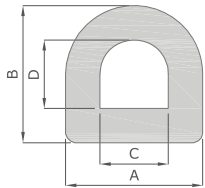
### Applications

D fenders are widely used in various sizes and designs on:

- workboats
- tugboats
- pilot boats
- fishing boats
- pontoons
- quays
- piers
- loading bays
- car parks trucks
- building interiors



# D FENDERS



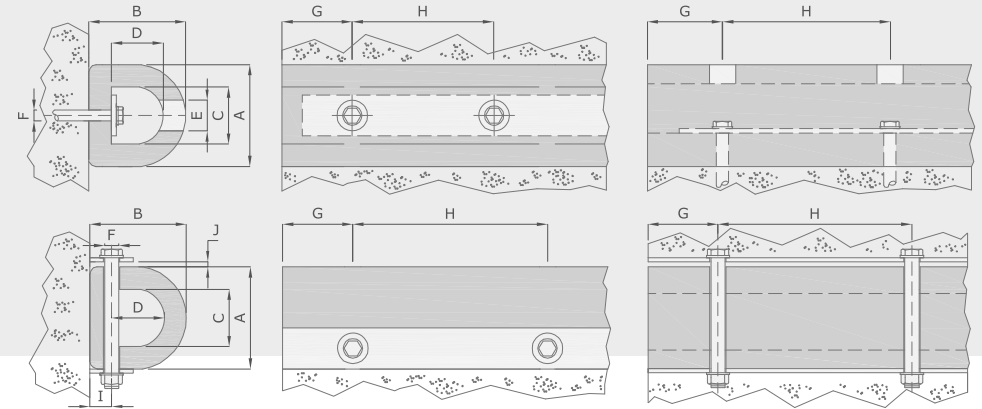
Standard dimensions

A (mm)	B (mm)	C (mm)	D (mm)	Weight (kg/m)
42	27	27	13	1
50	60	20	30	3
80	70	50	30	5
100	95	60	48	8
125	125	60	60	13.5
150	150	75	75	19
200	150	100	80	24
200	200	100	100	34
250	200	125	100	41
250	250	125	125	53
300	300	150	150	76
350	350	175	175	103
380	380	190	190	122
400	400	200	200	136
450	450	225	225	160
500	500	250	250	210

Other non-standard dimensions available on request.



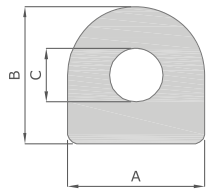
Mounting methods and dimensions



A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G	H	I (mm)	J (mm)	Flat bar	Bolt size
42	27	27	13	20	10	70-110	150-250	15	6	15x3	M8
50	60	20	30	20	10	70-110	150-250	20	8	15x3	M8
80	70	50	30	30	15	90-130	200-300	20	8	35 x 5	M12
100	95	60	48	30	15	90-130	200-300	25	10	40 x 5	M12
125	125	60	60	40	20	110-150	250-300	25	10	50 x 6	M16
150	150	75	75	40	20	110-150	250-300	30	12	60 x 8	M16
200	150	100	80	50	25	130-180	300-400	35	12	80 x 10	M20
200	200	100	100	50	25	130-180	300-400	45	15	80 x 10	M20
250	200	125	100	60	30	140-200	350-450	50	15	90 x 12	M24
250	250	125	125	60	30	140-200	350-450	50	20	90 x 12	M24
300	300	150	150	60	30	140-200	350-450	60	25	110 x 12	M24
350	350	175	175	75	35	140-200	350-450	70	25	130 x 15	M30
380	380	190	190	75	35	140-200	350-450	80	30	140 x 15	M30
400	400	200	200	75	35	140-200	350-450	80	30	150 x 15	M30
450	450	225	225	75	35	140-200	350-450	90	30	150 x 15	M30
500	500	250	250	90	45	160-230	400-500	100	30	180 x 20	M36

General guidelines for mounting. For reference purposes only.

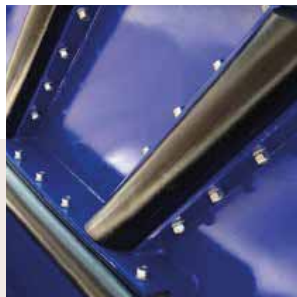




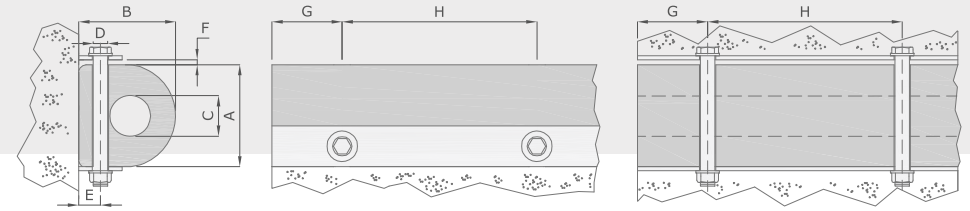
Standard dimensions

A (mm)	B (mm)	C (mm)	Weight (kg/m)
100	100	50	10
125	125	50	15
150	150	65	20.6
200	200	75	38.5
250	250	100	59.0
300	300	125	83.7
350	350	150	113
400	400	200	137
450	450	225	165
500	500	250	214

Other non-standard dimensions available on request.



Mounting method and dimensions

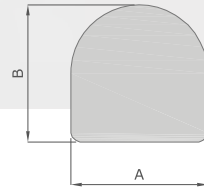


A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G	H	Flat bar	Bolt size
100	100	50	15	20	10	90-130	200-300	50 x 6	M12
125	125	50	20	25	10	110-150	250-350	50 x 6	M16
150	150	65	20	30	12	110-150	250-350	60 x 8	M16
200	200	75	25	45	15	130-180	300-400	80 x 10	M20
250	250	100	30	50	20	140-200	350-450	100 x 10	M24
300	300	125	30	60	25	140-200	350-450	110 x 12	M24
350	350	150	35	70	25	140-200	350-450	120 x 12	M30
400	400	200	35	80	30	140-200	350-450	130 x 15	M30
450	450	225	35	90	30	140-200	350-450	130 x 15	M36
500	500	250	35	100	30	140-200	350-450	130 x 15	M36

General guidelines for mounting. For reference purposes only.





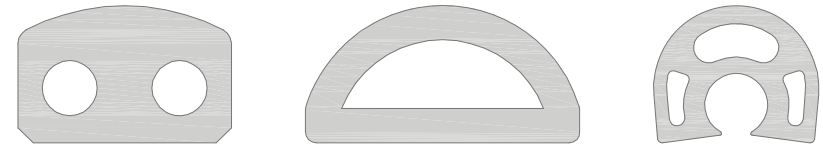


Standard and Mounting dimensions

A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F	G	Flat bar	Bolt size	Weight (kg/m)
100	100	25	15	10	90-130	200-300	50 x 6	M12	11.0
125	125	25	20	10	110-150	250-350	50 x 6	M16	19
150	150	30	20	12	110-150	250-350	60 x 8	M16	24.8
200	200	45	25	15	130-180	300-400	80 x 10	M20	44.2
250	250	50	30	20	140-200	350-450	100 x 10	M24	69.0
300	300	60	30	25	140-200	350-450	110 x 12	M24	99.4
350	350	70	35	25	140-200	350-450	120 x 12	M30	135.2
400	400	80	35	30	140-200	350-450	130 x 15	M30	176.6
450	450	90	35	30	140-200	350-450	130 x 15	M36	226
500	500	100	35	30	140-200	350-450	130 x 15	M36	280

Other non-standard dimensions available on request. General guidelines for mounting. For reference purposes only.

Special D fender forms



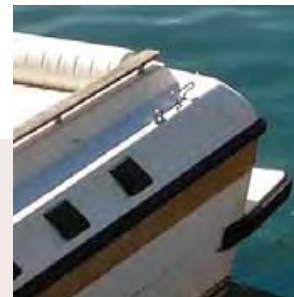
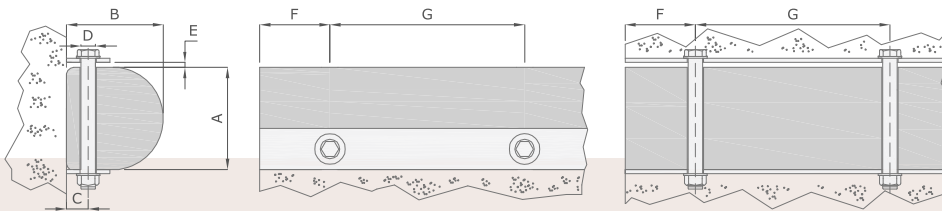
Other types and non-standard dimensions available on request.

Small fender profiles



Other types and sizes available.

Mounting method





The delta fender is a proven effective rubber profile for use in both marine and industrial markets and they can be used for various purposes, both inside and outside. This type of fender has a minimal contact surface and they are easy to assemble. A properly mounted delta fender has the capacity to absorb high levels of energy through the presence of a relatively large hollow chamber.

### Types

FenderTec produces a standard range of delta fenders. The most common dimensions of delta fenders are kept in stock and can therefore be delivered at short notice. Customer specific sizes and designs can also be produced with short lead times. Many types of delta fenders can be produced in longer lengths and in other colours (non-marking).

### Processing

Delta fenders are generally mounted against a construction or wall with the flat bottom. The mounting holes required are made through the top and bottom of the fender. This part of the production is done according to your requirements and drawings. Delta fenders can also be produced vulcanised in a specific radius to ensure that it fits properly around a bow or stern of a ship. Most Delta fenders can be provided in specified lengths and the ends can be bevelled.

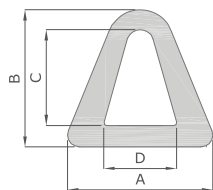
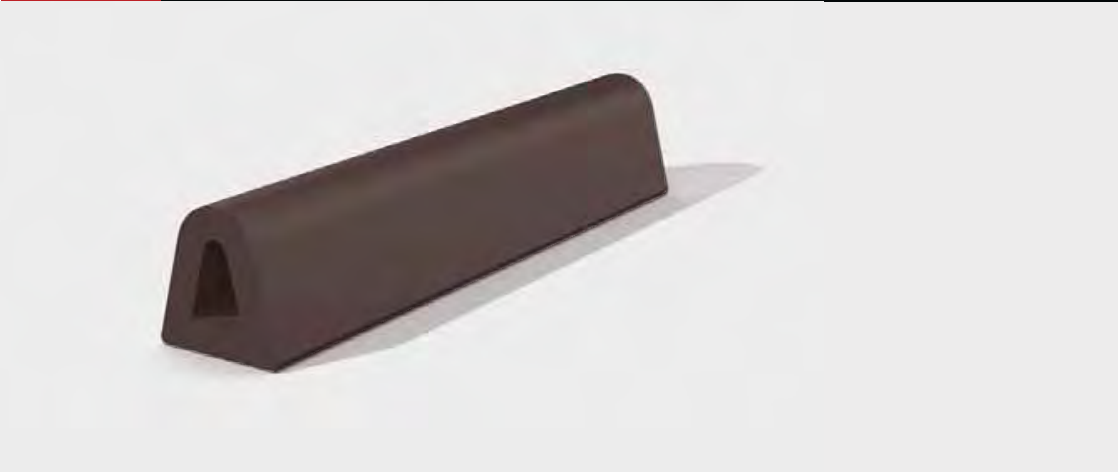
### Applications

Delta fenders are multifunctional and they can be used in various projects:

- various types of boats
- quays
- pontoons
- piers
- car parks
- warehouse and shop fittings
- bodyworks



# DELTA FENDERS

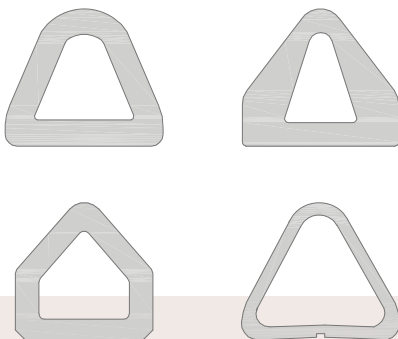


Standard dimensions

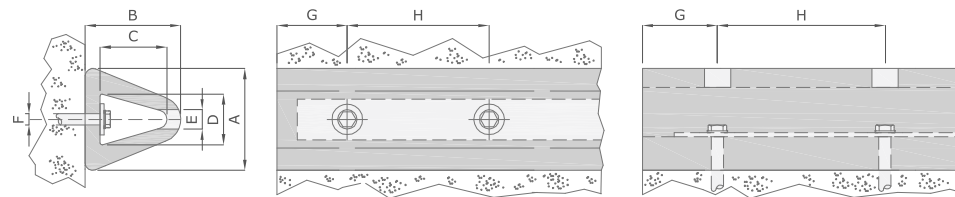
A (mm)	B (mm)	C (mm)	D (mm)	Weight (kg/m)
60	50	40	30	2.2
80	75	45	40	3.1
110	100	65	68	7.4
150	130	80	75	13.5

Other non-standard dimensions available on request.

Various Delta fenders



Mounting method and dimensions



A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G	H	Flat bar	Bolt size
60	50	40	30	20	10	70-110	150-250	15 x 3	M8
80	75	45	40	30	15	90-130	200-300	35 x 5	M12
110	100	65	68	30	15	90-130	200-300	40 x 5	M12
150	130	80	75	40	20	110-150	250-300	60 x 8	M16

General guidelines for mounting. For reference purposes only.





Square fenders are produced in various designs and sizes and they can be used for a wide range of purposes. The production takes place by means of extrusion. When compared to D- fenders, square fenders are used when a more rigid and stronger bumper is required for use in more severe conditions.

### Types

Three standard types of square fenders are available:

- SC fender. Provided with an O-shaped inner chamber
- SD fender. Provided with a D-shaped inner chamber
- Solid Square fender. Without an inner chamber

FenderTec produces square fenders in a standard range and most common sizes are kept in stock and can be delivered at short notice. Customer specific sizes and designs can also be produced with short lead times. Square fenders with a smaller dimension can be produced in very long lengths and in other colours (non-marking).

### Processing

Square fenders can be mounted in several ways by means of bolts and/or strips. The mounting holes required are made through the side or through the top and bottom of the fender. The fenders are finished in accordance with your requirements and drawings. Square fenders can also

be produced vulcanised in a specific radius to ensure that it fits properly around a bow or stern of a ship. Square fenders can be provided in specified lengths and the ends can be bevelled.

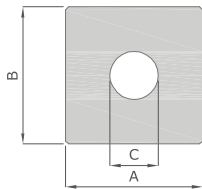
### Applications

As is the case with D fenders, square fenders can be used for a wide range of applications:

- workboats
- tugboats
- pilot boats
- fishing boats
- quays
- pontoons
- piers
- loading bays
- car parks



# SQUARE FENDERS

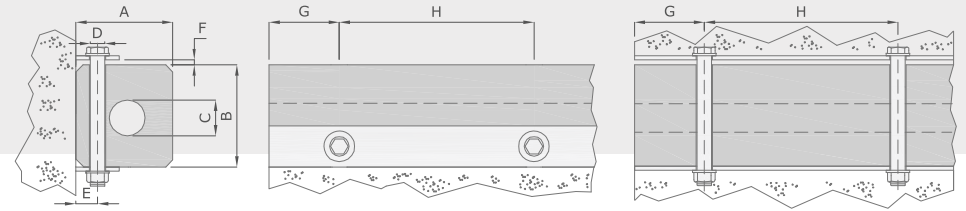


Standard dimensions

A (mm)	B (mm)	C (mm)	Weight (kg/m)
100	100	50	10.1
150	150	65	23.6
200	200	75	43.8
200	200	100	39.5
250	200	100	52.0
250	250	100	67.2
300	250	100	82.6
300	300	125	93.0
350	350	175	121
400	400	200	158
500	500	250	247

Other non-standard dimensions available on request.

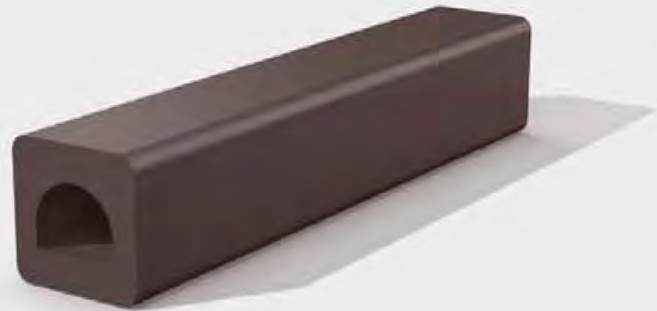
Mounting method and dimensions



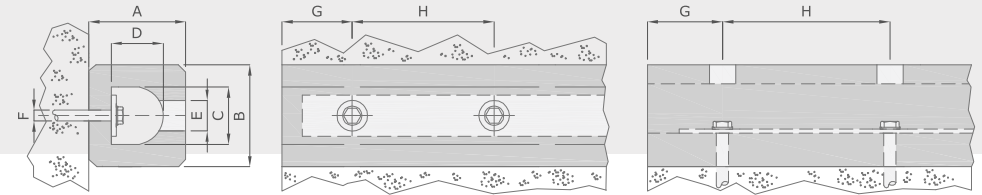
A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G	H	Flat bar	Bolt size
100	100	50	15	20	10	90-130	200-300	50 x 6	M12
150	150	65	20	30	12	110-150	250-350	60 x 8	M16
200	200	75	25	45	15	130-180	300-400	80 x 10	M20
200	200	100	25	40	15	130-180	300-400	80 x 10	M20
250	200	100	30	45	20	140-200	350-450	90 x 10	M24
250	250	100	30	50	20	140-200	350-450	100 x 10	M24
300	250	100	30	50	25	140-200	350-450	100 x 10	M24
300	300	150	30	60	25	140-200	350-450	110 x 12	M24
350	350	175	35	65	25	140-200	350-450	120 x 12	M30
400	400	200	35	70	30	140-200	350-450	130 x 15	M30
500	500	250	45	90	40	150-230	400-500	150 x 20	M36

General guidelines for mounting. For reference purposes only.

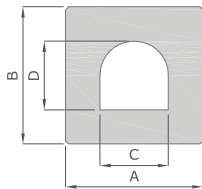




Mounting method and dimensions



Standard dimensions

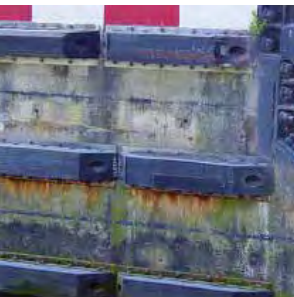


A (mm)	B (mm)	C (mm)	D (mm)	Weight (kg/m)
100	100	50	45	9.9
150	150	70	65	22.7
200	150	90	65	30.8
200	200	90	95	39.8
250	200	120	95	49.4
250	250	120	120	61.1
300	250	140	115	75.0
300	300	125	135	92.0
400	400	200	200	153
500	500	250	250	239

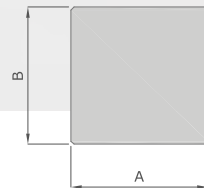
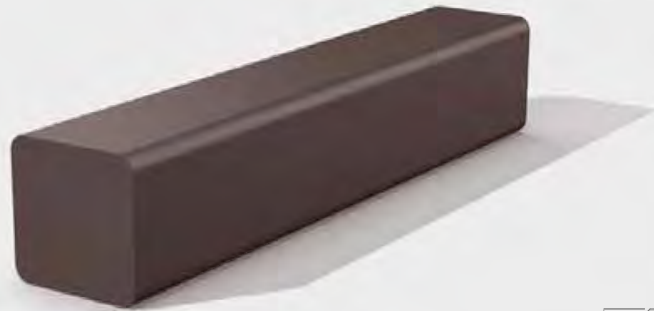
Other non-standard dimensions available on request.

A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G	H	I (mm)	J (mm)	Flat bar	Bolt size
100	100	50	45	30	15	90-130	200-300	25	10	40 x 5	M12
150	150	70	65	40	20	110-150	250-300	30	12	50 x 8	M16
200	150	90	65	50	25	130-180	300-400	45	15	70 x 10	M20
200	200	90	95	50	25	130-180	300-400	40	15	70 x 10	M20
250	200	120	95	60	30	140-200	350-450	45	20	90 x 12	M24
250	250	120	120	60	30	140-200	350-450	50	20	90 x 12	M24
300	250	140	115	60	30	140-200	350-450	50	25	100 x 12	M24
300	300	125	135	60	30	140-200	350-450	60	25	100 x 12	M24
400	400	200	200	75	35	140-200	350-450	70	30	150 x 15	M30
500	500	250	250	90	45	160-230	400-500	90	40	180 x 20	M36

General guidelines for mounting. For reference purposes only.



## SOLID S FENDER

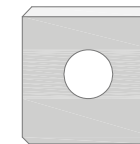
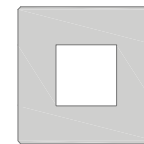


### Standard and Mounting dimensions

A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F	G	Flat bar	Bolt size	Weight (kg/m)
100	100	25	15	10	90-130	200-300	50 x 6	M12	12
150	150	30	20	12	110-150	250-350	60 x 8	M16	27
200	200	40	25	15	130-180	300-400	80 x 10	M20	48
250	250	50	30	20	140-200	350-450	100 x 10	M24	75
300	300	60	30	25	140-200	350-450	110 x 12	M24	108
350	350	65	35	25	140-200	350-450	120 x 12	M30	147
400	400	70	35	30	140-200	350-450	130 x 15	M30	192

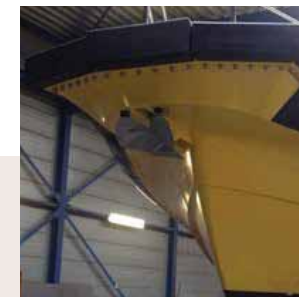
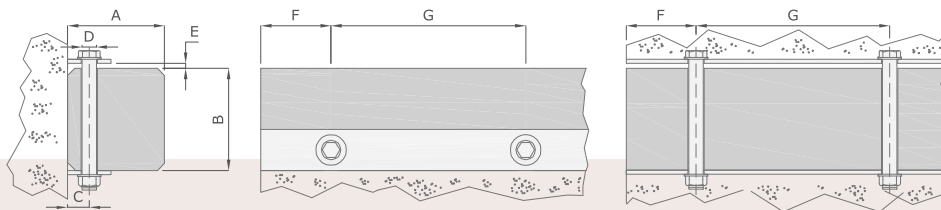
Other non-standard dimensions available on request. General guidelines for mounting. For reference purposes only.

## SPECIAL SQUARE FENDER FORMS



Other types and sizes available.

### Mounting method and dimensions





Of all the different types of rubber fender profiles, cylindrical fenders have been in use for the longest period of time already. This type of fender is well capable of absorbing forces and loads. The wide choice of sizes and lengths also make them highly effective and suitable for the protection of the quays for the mooring of large and small vessels. Cylindrical fenders provide protection for embankments and they are also commonly used on the bows or sterns of tugboats and workboats. These fenders are easy to install and maintain and they can be replaced when necessary.

**Types**

FenderTec produces cylindrical fenders with smaller diameters by means of extrusion, while larger fenders are produced by wrapping highly wear-resistant rubber around a mandrel. Cylindrical fenders are produced in different sizes, ranging from Ø 100 mm up to a diameter of 2000 mm. Standard sizes of up to a diameter of 400 mm are kept in stock by FenderTec and can be delivered at short notice.

**Processing**

Cylindrical fenders can be attached to a wide variety of structures and in different manners. Installation is relatively simple and they can be mounted horizontally, vertically or diagonally using chains or rods. Cylindrical fenders can be provided in specified lengths and the ends can be bevelled.

**Applications**

Cylindrical fenders are widely used in various sizes and designs on:

- workboats
- tugboats
- quays
- pontoons
- piers

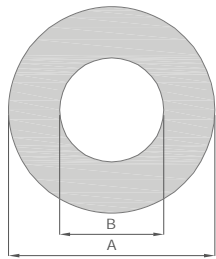
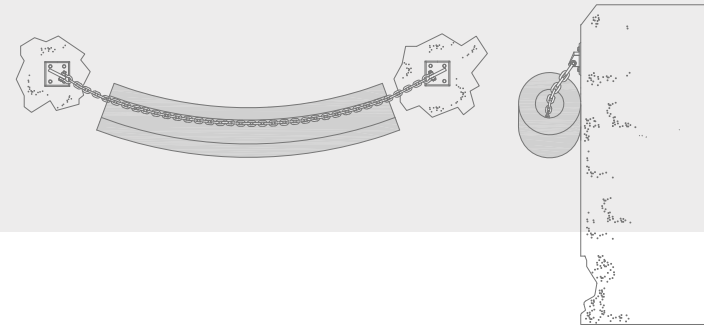


# CYLINDRICAL FENDERS





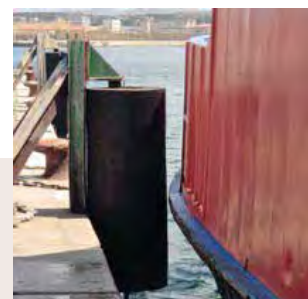
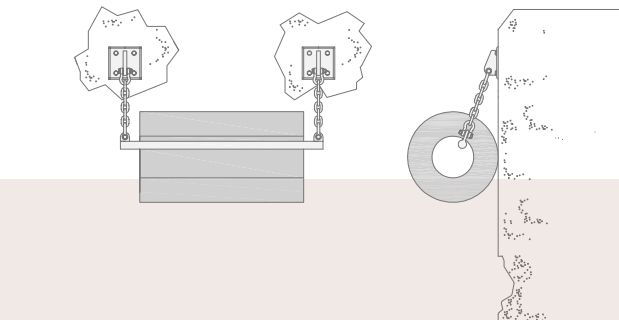
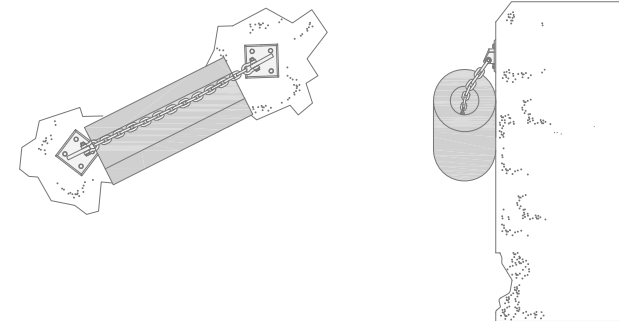
Mounting methods



Standard dimensions

A (mm)	B (mm)	Weight (kg/m)
100	50	7.2
150	75	16.3
200	100	29.0
250	125	45.3
300	150	65.2
380	190	105
400	200	116
450	225	147
500	250	181
600	300	255
800	400	453
1000	500	707
1200	600	1018
1400	700	1386
1400	800	1245
1500	750	1591
1600	800	1810
1800	900	2273
2000	1200	2414

Other non-standard dimensions available on request.





# COMPOSITE FENDERS



Composite fenders consist of a rubber profile with a wear resistant UHMW-PE coating with a low coefficient of friction. The two materials are connected to each other by means of vulcanisation to form a permanent connection. The rubber profile absorbs energy while the UHMW-PE coating provides low friction and appropriate sliding properties. Composite fenders are suitable for the protection of various types of ships and quays, especially where a bumper is required with a wear-resistant surface with low friction properties.

#### Types

FenderTec produces a standard range of composite fenders in block, keyhole and trapezoidal form. The most common dimensions are kept in stock and can therefore be delivered at short notice. Non-standard sizes and customer specific versions can also be produced and delivered with short lead times.

#### Processing

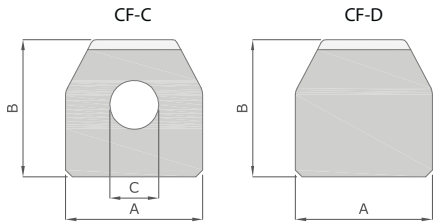
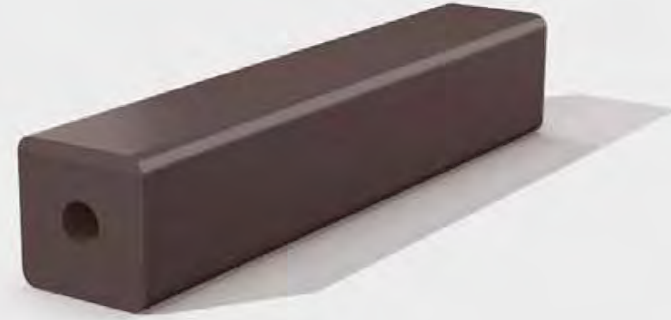
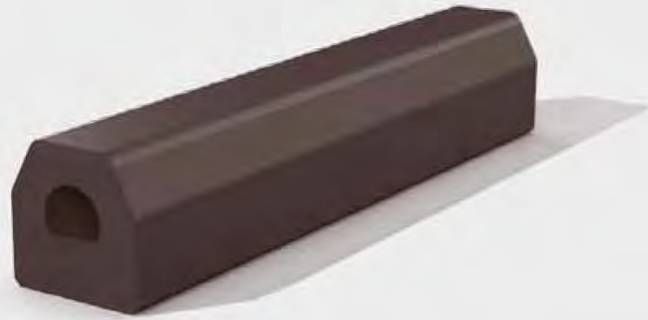
Composite fenders are normally mounted between two strips or in a U-beam. The required mounting holes are made through the side of the fender. Composite fenders can be supplied in any desired length and the ends can be bevelled.

#### Applications

Composite fenders are widely used in various sizes and designs on:

- workboats
- barges
- tugboats
- pontoons
- water locks
- ports
- quays
- piers

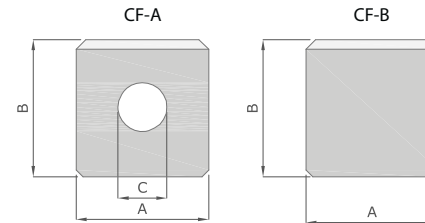




Standard dimensions Trapezium

A (mm)	B (mm)	C (mm)	Weight (kg/m) CF-C (w/bore)	Weight (kg/m) CF-D (solid)	Top (mm) UHMW-PE
80	80	42	5.4	7	10
100	100	45	8.4	11	10
120	120	62	12.2	15.8	12
150	150	73	19.7	24.8	15

Other non-standard dimensions available on request.

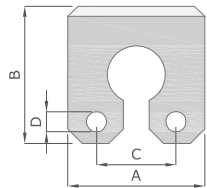


Standard dimensions Block

A (mm)	B (mm)	C (mm)	Weight (kg/m) CF-A (w/bore)	Weight (kg/m) CF-B (solid)	Top (mm) UHMW-PE
100	100	30	10.3	11.1	20
150	150	65	21.5	27	20
165	125	65	19.2	24.8	20
200	200	75	40.2	48	25
200	200	100	36.2	48	25
250	250	100	60.2	75	30
300	300	125	92.1	108	30

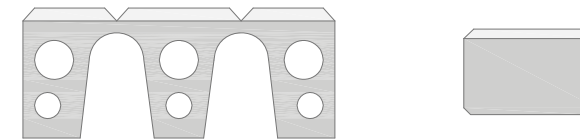
Other non-standard dimensions available on request.

Standard dimensions Keyhole



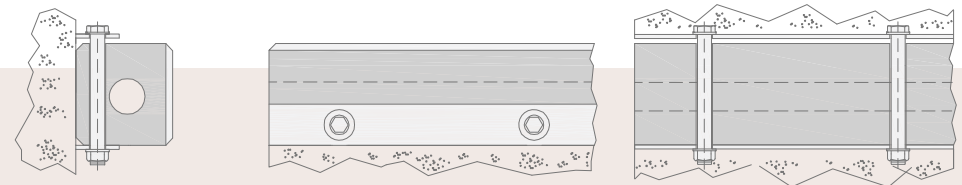
A (mm)	B (mm)	C (mm)	D (mm)	Weight (kg/m)	Top (mm) UHMW-PE
200	200	130	35	30	28
250	250	150	50	49	33
300	300	180	60	76	33
350	350	210	70	109	33

Other non-standard dimensions available on request.



Other types and non-standard dimensions available on request.

Mounting method



General guidelines for mounting. For reference purposes only.





# KEYHOLE FENDERS

Keyhole fenders are used worldwide and they offer very reliable protection for the bow of a vessel or for the wall of a quay. This type of fender is characterised by the keyhole-shaped opening on the inside and it is used in areas where large forces must be absorbed. Keyhole fenders are strong and they can be produced with a curve. The two mounting holes facilitate easy and accurate installation.

### Types

Standard keyhole fenders are produced by length or as a block and they are made from highly wear-resistant rubber. Lengths are produced by means of extrusion and blocks by means of compression-moulding. Keyhole fenders are produced with a flat face or a grooved face, depending on the friction and/or grip required. As with the composition fender this type of fender can also be produced with an UHMW-PE surface layer. FenderTec keeps most standard sizes in stock for fast delivery. Custom sizes can also be supplied on request with short lead times. Keyhole fenders, W fenders and M fenders are not interchangeable.

### Processing

Keyhole fenders are relatively easy to install. In general they are mounted vertically with fixing pins through the two standard holes. Keyhole fenders can be provided in specified lengths and the ends can be bevelled if required.

If the fenders are longer than one meter an opening for a support strip can be added.

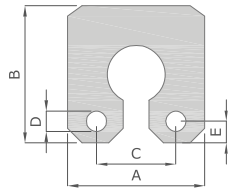
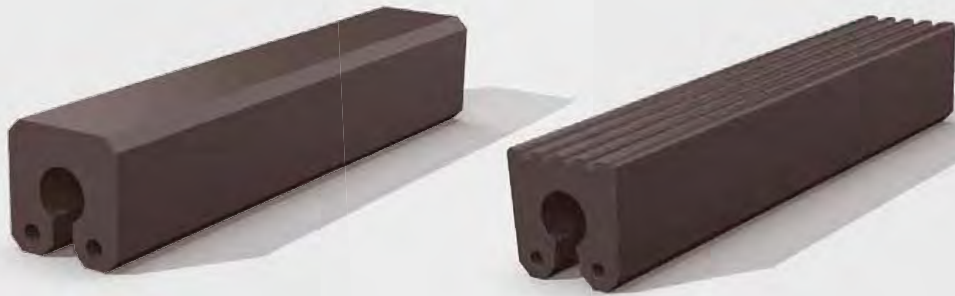
### Applications

Keyhole fenders are widely used in various sizes and designs on:

- tugboats
- barges
- workboats
- quays
- piers
- bridge sections



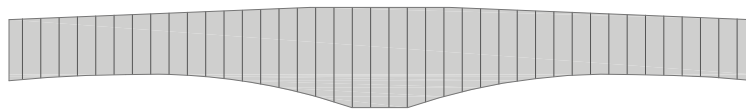
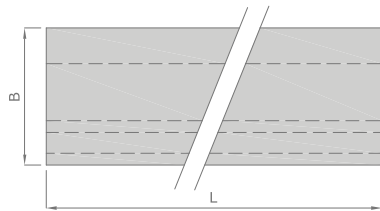
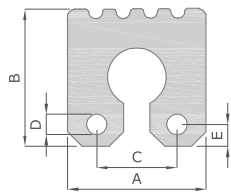
## KEYHOLE FENDER LENGTH



### Standard dimensions

A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Weight (kg/m)	Length max. (mm)
100	100	70	16	16	8	2000
200	200	130	28	35	33	2000
250	250	150	33	50	54	2000
300	300	180	33	60	80	2000
350	350	210	33	70	114	2000

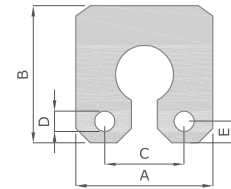
Other non-standard dimensions available on request.



Bow fenderset can be delivered to size



## KEYHOLE FENDER BLOCK

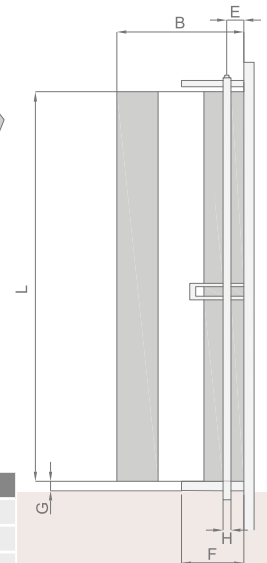
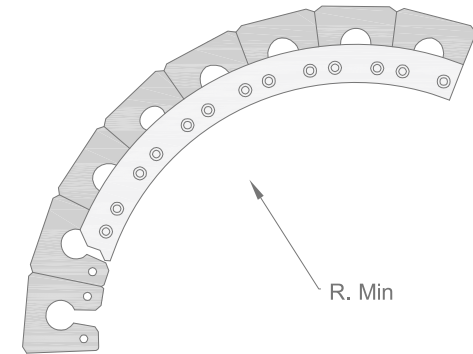


### Standard dimensions

A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Weight (kg)	Length max. (mm)
200	200	130	28	35	7	200
250	250	150	33	50	13	250
300	300	180	33	60	24	300
350	350	210	33	70	40	350

Other non-standard dimensions available on request.

### Mounting method and dimensions



B (mm)	E (mm)	F (mm)	G (mm)	øH (mm)	L max. (mm)	Radius min. (R)
200	35	100	15	ø25	2000	450
250	50	125	20	ø30	2000	600
300	60	150	20	ø30	2000	800
350	70	175	25	ø30	2000	1000

General guidelines for mounting. For reference purposes only.



W fenders are designed for use in extreme conditions and to absorb excessive bumps and knocks. This type of fender is very suitable for application on the bow and stern of tugs, workboats and icebreakers. The grooves on the top of the fender provide extra grip and low pressure while pushing. With two flexible legs also allow for easy installation of the W fender with a large or small radius by means of guide rods.

### Types

W fenders are made from extremely durable rubber. Lengths are often no longer than 2000 mm and they are produced by means of compression-moulding. The most common dimensions are kept in stock and can therefore be delivered at short notice. W fenders, M fenders and keyhole fenders are not interchangeable.

### Processing

W fenders are relatively easy to install. Attachment is often done with the help of fixing pins through the two standard holes. W fenders are available in various lengths and they can be cut at an angle. If the fenders are longer than one meter an opening for a support strip can be added.

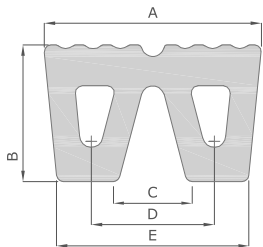
### Applications

W fenders are used to protect:

- tugboats
- workboats
- icebreakers
- barges
- supply boats
- corners of quays
- bridge sections



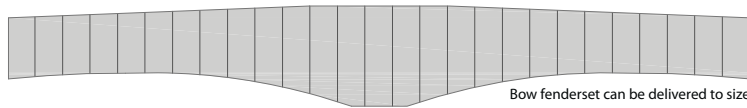
# W FENDERS



Standard dimensions

A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Weight (kg/m)
320	200	100	180	280	51
400	250	110	220	350	81
480	300	135	265	420	120
500	360	125	260	370	156
500	400	170	295	420	165
500	450	90	250	420	180

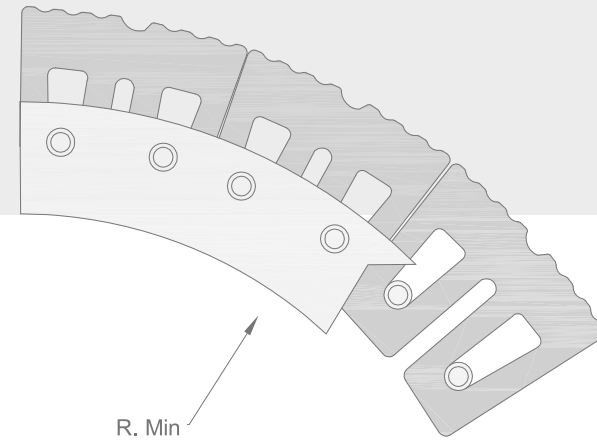
Other non-standard dimensions available on request.



Bow fenderset can be delivered to size



Mounting method and dimensions



A (mm)	B (mm)	F (mm)	G (mm)	øH (mm)	I (mm)	L max. (mm)	Radius min. (R)
320	200	100	20	ø25	67	2000	600
400	250	120	20	ø30	75	2000	800
480	300	140	20	ø40	90	2000	900
500	360	140	20	ø40	90	2000	900
500	400	150	20	ø40	90	2000	1000
500	450	150	20	ø40	95	2000	1000

General guidelines for mounting. For reference purposes only.





M fenders are widely used on the bow or stern of boats or on the corners of docks or pontoons. The M shape of this fender provides flexibility and it can therefore easily follow the contour of a bow or stern. This type of fender has a wide and flexible contact surface. The grooves on the top provide extra grip and three flexible legs to ensure good contact and sturdy attachment. M fenders can be mounted on a small radius and they are relatively lighter than W fenders. The three mounting holes in M fenders facilitate easy and accurate installation.

### Types

M fenders are produced from an extremely durable type of rubber. Lengths are often no longer than 2000 mm and they are produced by means of compression-moulding. The most common dimensions are kept in stock and can therefore be delivered at short notice. M fenders, W fenders and Keyhole fenders are not interchangeable.

### Processing

M fenders are relatively easy to install. Mounting often takes place with the help of fixing pins through three standard openings. M fenders are available in various lengths and they can be cut at an angle. If the fenders are longer than one meter an opening for a support strip can be added.

### Applications

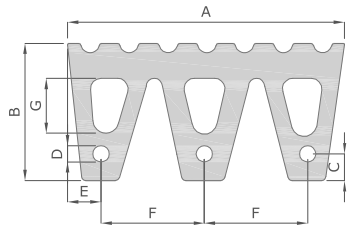
M fenders are used to protect:

- tugboats
- workboats
- icebreakers
- barges
- supply boats
- pontoons
- corners of quays
- bridge sections



# M FENDERS

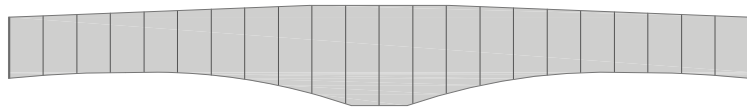




Standard dimensions

A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Weight (kg/m)
240	100	25	20	23	95	14,3
240	120	35	13	33	90	20
400	200	40	23	50	150	56
500	250	50	27	60	190	89
600	300	60	33	70	230	132
800	400	80	44	95	305	235

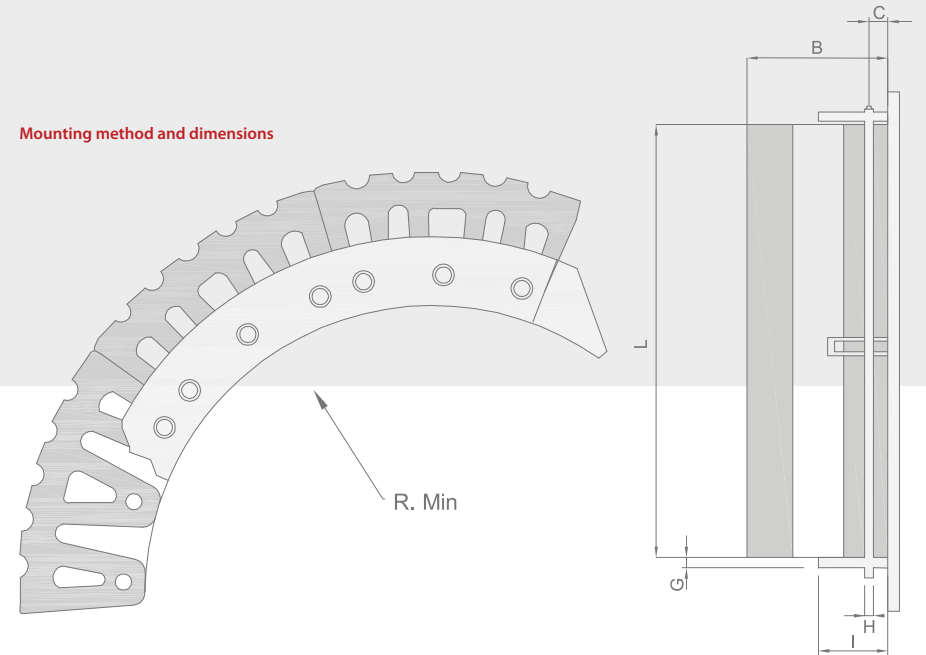
Other non-standard dimensions available on request.



Bow fenderset can be delivered to size



Mounting method and dimensions



A (mm)	B (mm)	C (mm)	I (mm)	G (mm)	øH (mm)	L max. (mm)	Radius min. (R)
240	100	25	50	6	ø18	1500	400
240	120	35	60	8	ø12	1000	400
400	200	40	100	15	ø20	2200	450
500	250	50	125	20	ø24	2200	550
600	300	60	150	20	ø30	2100	650
800	400	80	150	20	ø40	1550	900

General guidelines for mounting. For reference purposes only.





# CYLINDRICAL BOW & STERN FENDERS

Cylindrical fenders on tugboats and workboats are often mounted on bow and stern mounted as the main push fenders. These fenders are often used on the bow in combination with Keyhole, M or W fenders. FenderTec produces this type of fender by means of a winding process up to a diameter of 1000 mm. If required they can be provided with tapered ends for better attachment to the ship and with grooves for additional attachment with chains or nylon straps.

#### Types

FenderTec produces cylindrical bow & stern fenders from a very durable rubber. Depending on the diameter of the fender unit lengths of up to 10 metres can be provided. Connection plugs can be used to make longer lengths. The maximum diameter of this type of fender is 1000 mm. Most cylindrical bow & stern fenders can be customised according to customer specifications.

#### Processing

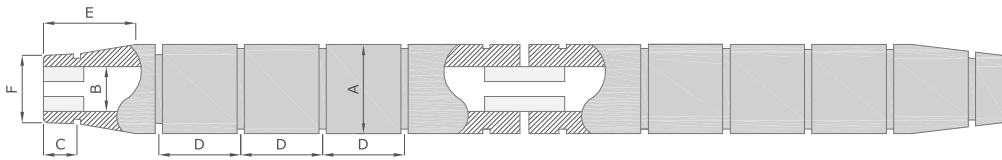
Cylindrical bow & stern fenders with a diameter up to 500 mm are attached to a vessel by a chain through the round chamber. Fenders with a larger diameter are provided with grooves in the circumference of the fender for additional mounting options with the aid of nylon straps or cables.

#### Applications

Cylindrical bow & stern fenders can be used for the following purposes, depending on the customer:

- tugboats
- workboats
- icebreakers
- supply boats





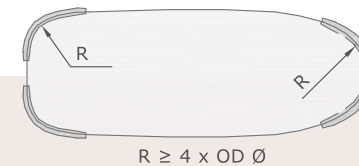
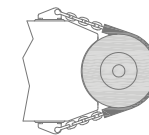
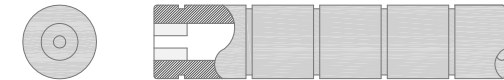
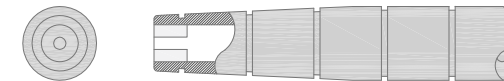
Standard dimensions

A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Weight (kg/m)
250	125	200	570	500	190	45.5
300	150	225	600	700	225	65.2
380	190	280	650	800	280	105
400	200	300	670	800	300	116
450	225	300	700	850	350	147
500	250	300	730	900	375	181
600	300	350	800	900	450	255
800	400	350	930	1000	600	453
900	450	350	1000	1100	675	573
1000	500	350	1060	1200	750	707

Other non-standard dimensions available on request.

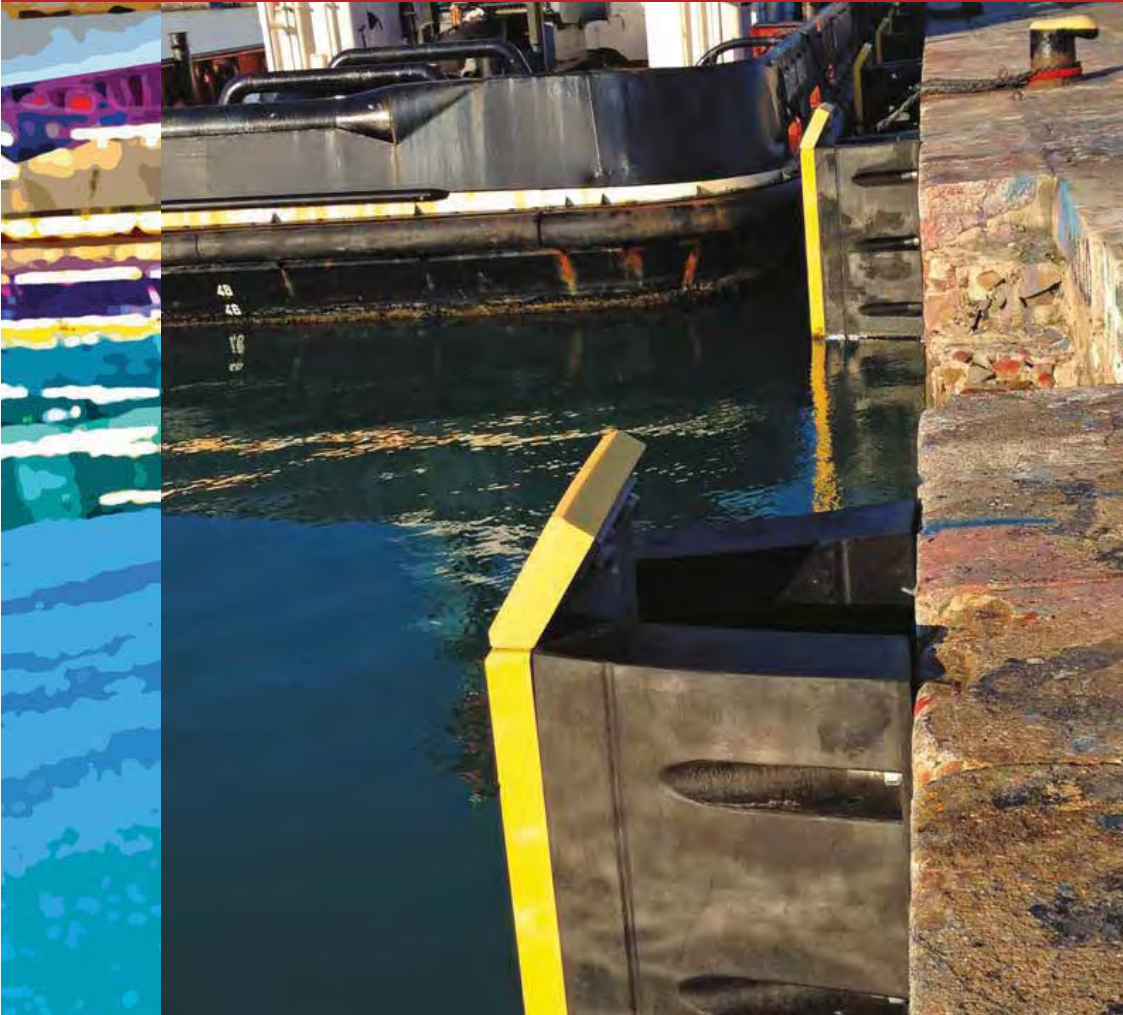


All cylindrical bow & stern fender sizes to be produced in accordance with customer specifications. Any requests with grooves and tapered ends can be fulfilled.



$$R \geq 4 \times OD \ \varnothing$$





Arch and element fenders have been successfully used across the world for many decades already. The relatively simple and very strong construction and durable rubber quality of these fenders provide very good protection for quay walls and corners.

### Types and processing

Arch fenders consist of a single part and they are available in various heights and widths. The base of this type of fender consists of a steel plate with mounting holes for bolts which is vulcanised inside the rubber. As standard fenders are delivered made entirely from rubber, but if required an UHMW-PE surface layer can also be added. Arch fenders can be mounted either horizontally or vertically using bolts. The ends can be angled or bevelled. FenderTec produces arch fender corners to protect quay corners, which are custom-made according to customer requirements.

Element fenders are available as standard in various sizes and, as with arch fenders, they are produced in a mould. Both ends are fitted with steel plates, which is vulcanised in the durable rubber. The steel plates contain mounting holes for attachment to walls and panels. The panel on the front side can consist of a UHMW-PE sheet or a steel panel.

### Applications

Arch and element fenders are made to measure and they are used for the protection of:

- corners and walls of quays
- ports

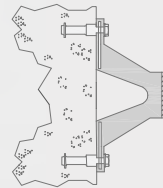


# ARCH & ELEMENT FENDERS

## ARCH FENDER



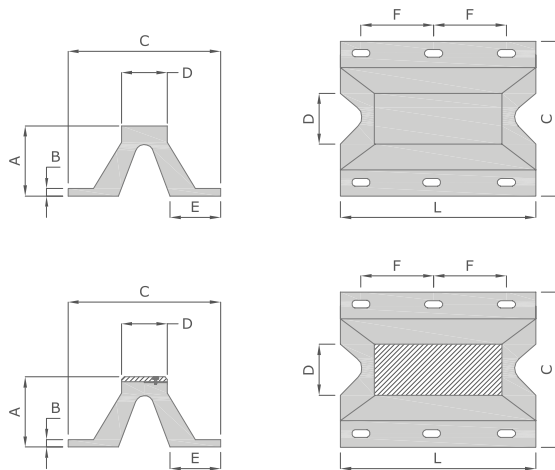
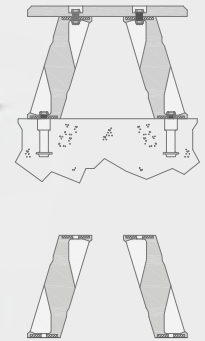
Mounting method Arch fender



## ELEMENT FENDER



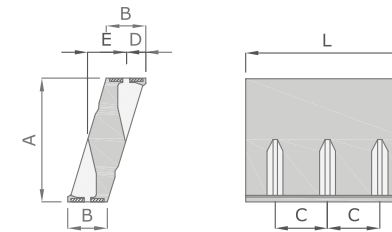
Mounting method Element fender



Standard dimensions

A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	L (mm)	Top (mm) UHMW-PE	Weight (kg/m)	Weight (kg/m) with Top UHMW-PE
150	16-20	326	98	108	500	3000	30	28	35
200	18-25	422	130	142	500	3000	30	48	62
250	20-30	500	163	164	500	3500	30	69	90
300	25-32	595	195	194	500	3500	40	107	128
400	25-32	808	260	266	500	3500	40	185	217
500	25-32	981	325	318	500	3500	50	278	352
600	28-40	1160	390	373	500	3000	50	411	488
800	41-50	1550	520	499	500	3000	60	770	871
1000	50-62	1850	650	580	500	3000	60	1289	1390

Other non-standard dimensions available on request.



Standard dimensions

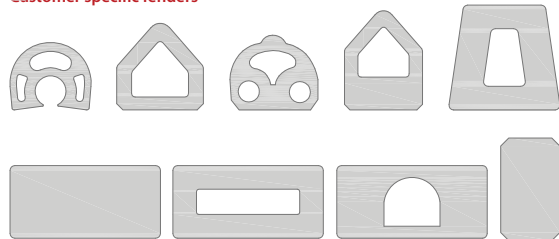
A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	L (mm)	Weight (kg/m)
300	94	300	47	93	600 - 1500	27 - 68
400	125	500	63	124	750 - 3000	50 - 198
500	158	500	87	142	750 - 3000	84 - 334
550	172	500	87	170	750 - 1500	100 - 200
600	188	500	87	199	750 - 1500	115 - 230
750	235	500	118	230	750 - 1500	180 - 359
800	250	500	129	240	800 - 2000	214 - 536
1000	322	500	162	310	800 - 2000	346 - 864
1250	401	500	202	388	800 - 2000	511 - 1278

Other non-standard dimensions available on request.

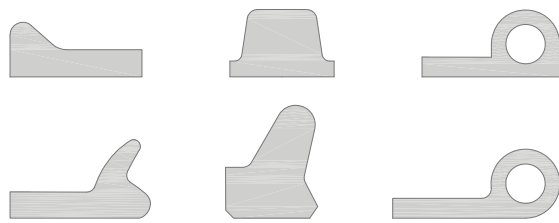




**Customer specific fenders**



**Customer specific sealing profiles**



More types and sizes available.



FenderTec specialises in developing customised rubber fenders and profiles and we are able to produce a wide variety of fender profiles based on customer requirements, on the back of experience and knowledge gained over more than 50 years.

**Types**

Fenders and profiles are produced in accordance with plans and/or models using various qualities of rubber. A wide variety of types and sizes is possible. FenderTec is capable of producing and delivering with short lead times. Products are normally produced in black, but other colours (non-marking) can also be provided.

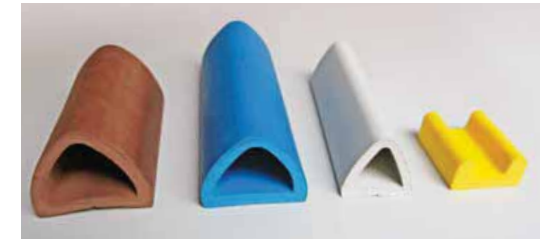
**Processing**

Customer-specific fenders and profiles are mounted depending on the type and shape. Fenders can also be produced vulcanised with a radius required by the client to ensure that it fits properly around a bow or stern of a ship. Fenders can be provided in specified lengths and the ends can be bevelled if required.

**Applications**

Custom fenders and profiles can be produced in various sizes and types for the following applications:

- sloops
- fishing boats
- workboats
- rescue boats
- pontoons
- dredging industry
- off-shore industry
- loading bays
- carparks
- warehouse and shop fittings
- bodyworks





Wing fenders are D fenders that are further developed. They are often used as an alternative for the protection of vessel walls, docks and piers. This type of fender is generally mounted in a profile, which creates a bumper that is highly resistant to various forces. Wing fenders are easy to install and replace when necessary.

**Types**

Standard wing fenders have an O-shaped inner chamber, but in some cases wing fenders of produced without an inner chamber (solid).

FenderTec produces wing fenders in a standard range and most common sizes are kept in stock and can be delivered at short notice. Customer specific sizes and designs of wing fenders or other colours (non-marking) can also be produced with short lead times.

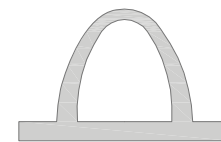
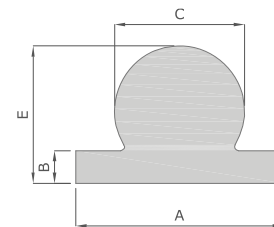
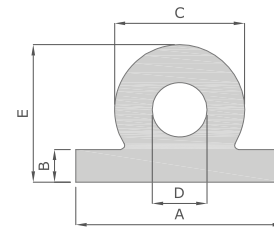
**Processing**

Wing fenders are usually mounted between two steel angles, which is a strong type of construction that is also easy to install. This type of fender can also be attached by means of two rows of screws or it can be glued on with a special sealant. We can provide the required mounting holes. Wing fenders can also be produced vulcanised with a specific radius to ensure that it fits properly around a bow or stern of a ship. Most wing fenders can be provided in specified lengths and the ends can be bevelled.

**Applications**

Wing fenders are widely used in various sizes and designs on:

- workboats
- tugboats
- pilot boats
- quays
- piers
- warehouses



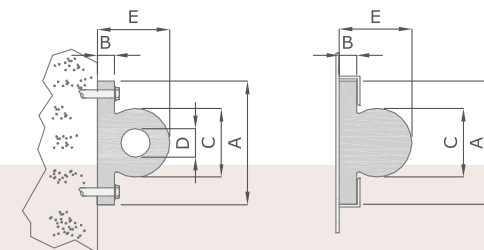
Other types and sizes wing fenders available on request.

**Standard dimensions**

A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Weight (kg/m) with bore	Weight (kg/m) solid
180	25	100	50	100	11	13
215	30	150	75	150	20	26
245	30	150	75	150	21	27
280	40	200	100	200	36	40
320	40	200	100	200	38	48
370	50	250	125	250	57	72
410	50	250	125	250	60	78

Other non-standard dimensions available on request.

**Mounting methods**



## FENDER BARS



Fender bars are very strong, they are capable of absorbing great forces and there are very versatile.

### Types and processing

FenderTec produces fender bars in different shapes, sizes and lengths made from durable rubber or high-quality marine grade polyurethane. This type of fender is a moulded product.

Rubber fender bars are fitted with a steel plate at the bottom, which is vulcanised inside the rubber. The steel plate contains mounting holes so that the fender bar can easily be attached to any type of construction.

Polyurethane fender bars have a number of advantages over rubber versions, e.g. polyurethane provides higher wear resistance and lower friction. The bars can also be produced in a variety of striking colours at non-marking quality.

### Applications

Fender bars are used to protect:

- ports
- quays
- corners of quays



## PUSH KNEE & PROTECTION PLATES



Protection plates are mainly used for the protection of barges and quay walls. This type of fender consists of a steel plate with a durable vulcanised rubber layer of various thicknesses. These protection plates are particularly suitable when the distance between boats or between boats and quays must be as little as possible.

### Types

FenderTec produces push knee and protection plates according to customer specifications and/or drawings for barges or docks. Durable rubber is vulcanised on steel plates for use on barges. With quay protection plates the steel plate at the rear is vulcanised inside the rubber.

### Processing

Protection plates can easily be attached to the desired construction by means of bolts or in the case of barges it can be welded onto a construction.

### Applications

Protection plates are custom delivered for the protection of:

- barges
- tugboats
- quays
- ports
- water locks







# FENDERS FOR DRAG HEAD PROTECTION



Strong rubber fenders can prevent damage in rough conditions or in the event of a collision between the drag head and the hull of the ship. These fenders are used in different versions, to prevent damage to the hull of the ship, the drag head and the gimbal ring.

#### Types and processing

Depending on the type and the size of the drag head, the following fenders can be used:

- V fenders
- House-shaped fenders
- Keyhole blocks
- D fenders

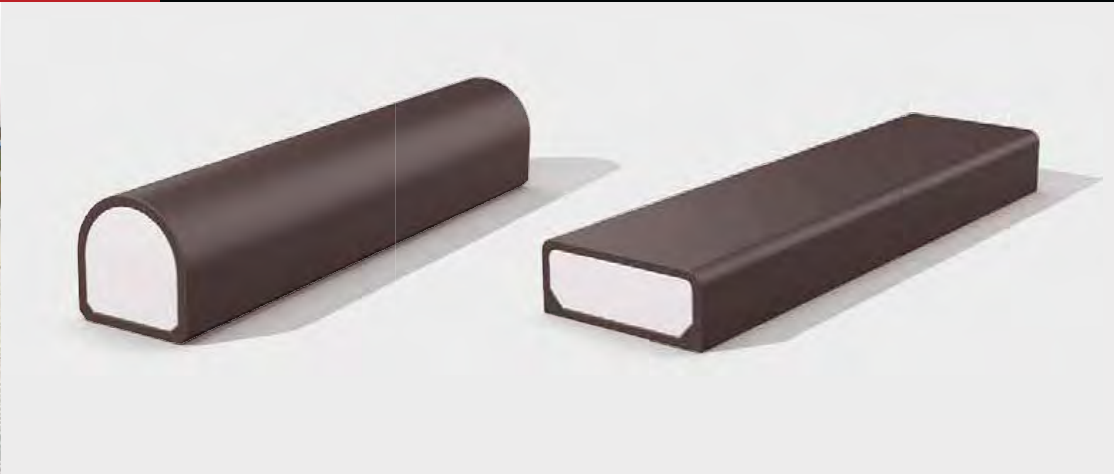
This type of fender is mounted on the one side of the drag head. If the drag head is used on both sides of the ship, fenders can also be mounted on both sides of the drag head. Drag head fenders are produced from highly wear-resistant rubber. V fenders and House-shaped fenders undergo additional treatment at FenderTec and they can also be vulcanised at a predetermined angle. All fenders can be provided with mounting holes to facilitate attachment to the drag head or gimbal ring using bolts.

#### Applications

These types of fenders are used in various formats for the protection of:

- drag heads
- gimbal rings





Polyurethane is increasingly used for the production of fenders as it provides a number of advantages over rubber. Polyurethane is extremely durable, it has lower friction and lower specific gravity. The material is also non-marking and it can be produced in various striking colours.

The advantage of foam fenders is that the reaction to compression is much lower. This type of fender is used on fast moving vessels on which weight also plays an important part. Fixed length polyurethane fenders are produced through mould casting.

Besides fenders that are completely made of polyurethane, this material can also be combined with foam.

**Applications**

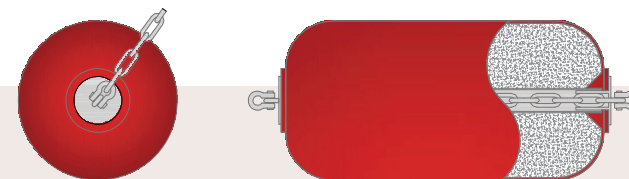
Polyurethane and foam fenders can be used for:

- tugboats
- catamarans
- workboats
- rescue boats
- pilot boats

**Types and processing**

Polyurethane foam fenders have a skin made from polyurethane and they are filled with foam. The skin is wear-resistant and it has low frictional resistance. The core has a high density and thus readily absorbs energy.

Foam fenders in different shapes and sizes



More types and sizes available.



Your local representative:

