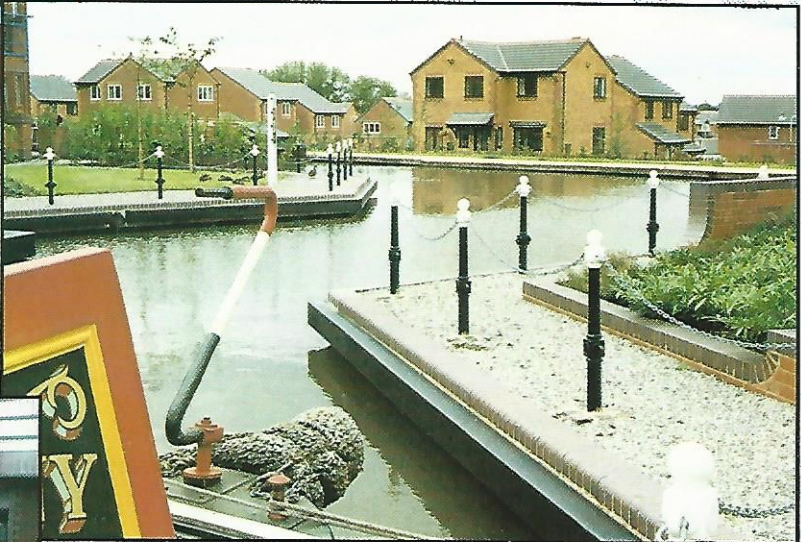


# BatMar

## Super Sliding Fender

**The High Impact  
Protector**



**Battley Marine**

East End House  
Billingford, Dereham  
Norfolk NR20 4RD

**Tel: (01362) 668641**

**Fax: (01362) 668930**

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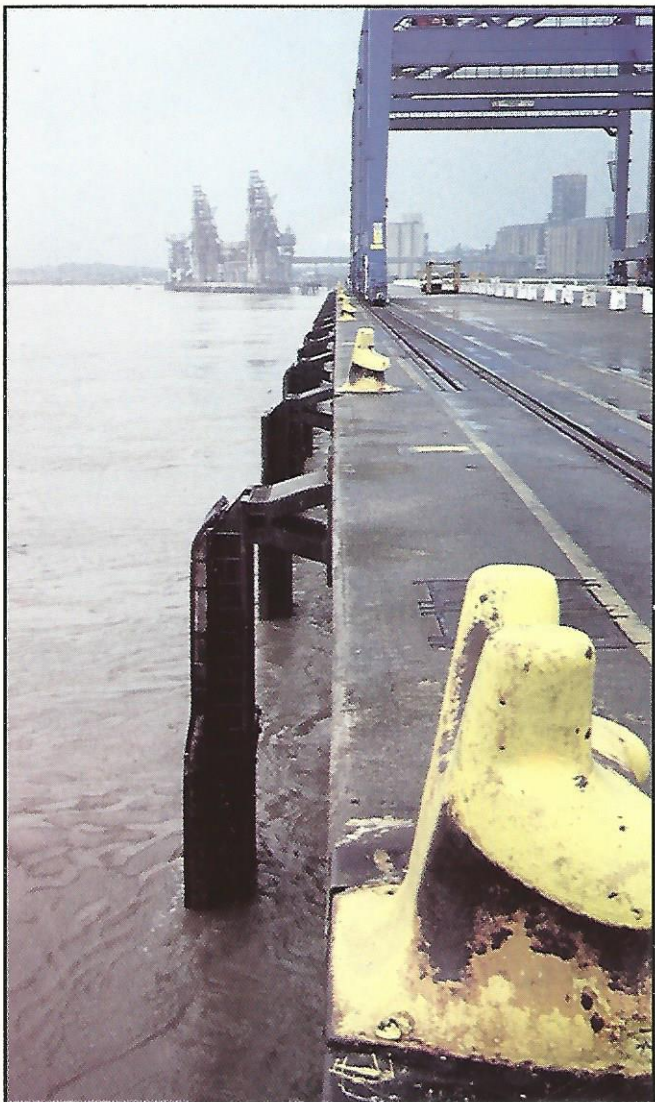
## Super Sliding Fender

Battley Marine of Norfolk, suppliers to the marine industry for twenty five years, have used their expertise to develop and manufacture the new **BatMar Super Sliding Fender**.

This versatile protection system can be used in a variety of ways, limited only by the imagination, to protect any structure, in contact with moving objects - for example - as crash barriers in car, lorry and bus parks, marine jetty and harbour protection and, as wall or loading bay protection.

### FAR STRONGER THAN RUBBER OR WOOD

Battley Marine have worked over the past three years with a leading University School of Polymer Studies, testing and analysing to develop this product. The result of their research is a solid sliding fender, many times stronger than rubber or wood, which can absorb high impact forces. The high standard polyethylene composition provides a barrier with first class sliding properties, substantial noise dampening, excellent abrasion and greater ultra violet resistance.



### LONGER WORKING LIFE - MINIMUM REPAIRS

Its strong weathering endurance guarantees a longer working life, thus ensuring maximum protection and minimum repairs to any structure. Unlike wood this product will not expand in water or splinter and does not tear like rubber. The low maintenance requirement is just one feature that makes the **BatMar Super Sliding Fender** an economic alternative to steel, rubber or wood.

### EASY TO FIX

Simply fixed with bolts, the fender can be sawn mechanically or by hand and can be pre-curved in our factory to your requirements.

### ENVIRONMENTALLY FRIENDLY

As we all become increasingly aware of the need to safeguard our planet, the **BatMar Super Sliding Fender** is an environmentally friendly answer to most fender protection problems.

## The Batmar Sliding Fender has proven its quality in many practical applications

**Batmar** Sliding Fenders are applied whenever friction between static and moving bodies (ship/fender) must be avoided by a separating layer (sliding fender) with good sliding properties, thus ensuring optimum protection to the ship and the building construction.

### LOWER MAINTENANCE

Experience has proven that installations protected by Sliding Fenders require substantially reduced maintenance compared to traditional materials.

### FIELDS OF APPLICATION

Applications of sliding fender include:

- fender in ports, harbours, jetties, and wharfs
- floating pontoons
- protection of locks, and lock gates
- lock gate sealing
- bulkhead protection
- floating dredges and lighters
- fender panels for ferry installations and tanker jetties
- fender for offshore structures, and vessels
- onshore lorry loading bays, and wall protection
- slipways
- dry-docks
- canals
- bridge protection



### THE MATERIAL STANDS OUT BECAUSE OF THE FOLLOWING PROPERTIES:

- High elongation at tear
- Water rejection, the material does not expand when put into water
- High chemical resistance, resistant to salt, fresh and brackish water, oil and chemicals
- Resistant to uv radiation, enhanced light and weathering stability, thus almost no aging
- Temperature resistant  $-40^{\circ}\text{C}$  up to  $+80^{\circ}\text{C}$
- Noise dampening effect
- Reduced specific weight ( $0.93\text{ g/cm}^3$ ) thus floating
- Excellent sliding properties, high wear and tear resistance, low abrasion
- Self lubricating

The product is ecologically conscious thus reducing the drain of precious hard woods from the World's Rain Forests

The following normal sizes are usually available ex stock: (other measurements on request)

| Width<br>mm | Height<br>mm | Length<br>mm | Weight<br>kg/m<br>approx | Possible Fixing Methods       |  |   |  |                                     |
|-------------|--------------|--------------|--------------------------|-------------------------------|--|---|--|-------------------------------------|
|             |              |              |                          | recommended<br>bolt dia<br>mm | Diameter<br>of countersunk<br>drilling<br>mm | Distance<br>between 1st<br>drilling<br>mm | Distance<br>between<br>and drillings<br>mm | Positioning<br>of drilling<br>holes |
| 100         | 50           | 5000         | 3.30                     | 10                            | 27/14  | 100                                       | 400  | in row                              |
| 140         | 70           | 5000         | 9.22                     | 12                            | 27/14  | 250                                       | 500  | in row                              |
| 180         | 70           | 5000         | 11.85                    | 12                            | 27/14  | 250                                       | 500  | staggered                           |
| 150         | 150          | 5000         | 26.00                    | 24                            | 60/27  | 250                                       | 500  | in row                              |
| 190         | 110          | 5000         | 19.70                    | 20                            | 53/23  | 250                                       | 500  | staggered                           |
| 200         | 80           | 5000         | 15.10                    | 16                            | 40/20  | 250                                       | 500  | staggered                           |
| 250         | 160          | 5000         | 37.60                    | 24                            | 60/27  | 250                                       | 500  | staggered                           |
| 300         | 100          | 5000         | 28.20                    | 24                            | 60/27  | 250                                       | 500  | staggered                           |
| 300         | 200          | 5000         | 84.60                    | 30                            | 70/32  | 150                                       | 400  | staggered                           |

### Technical Data

| Properties                                   | Test Methods           | Unit               | Value           |
|--|------------------------|--------------------|-----------------|
| Specific weight                              | DIN 53479              | g/cm <sup>3</sup>  | ~0.93/0.94      |
| Tensile strength                             | DIN 53465              | N/mm <sup>2</sup>  | > 12 -14        |
| Molecular weight                             | Light diffusion method |                    | ~ 200 000       |
| Notched impact strength (Notch value)        | DIN 53453              | mJ/mm <sup>2</sup> | without rupture |
| Ball indentation hardness                    | DIN 53456              | N/mm <sup>2</sup>  | >20             |
| Coefficient of friction (polyethylene/steel) | DIN 53375              |                    | 0.2             |
| Elongation at tear                           | DIN 53455              | %                  | 450             |
| Temperature Range                            | -                      | °C                 | -40 up to +80   |
| Shore hardness                               | DIN 53505              | Shore D            | 55-70           |

### Processing instructions

BatMar sliding fender can be processed without difficulty either mechanically with the usual band of circular saws of the woodworking industry or by hand with sharp and well set wood or metal saws. In addition BatMar sliding fender can easily be drilled, milled and planed with the respective equipment.

Use only sharp tools. In most cases normal tool steel is sufficient.

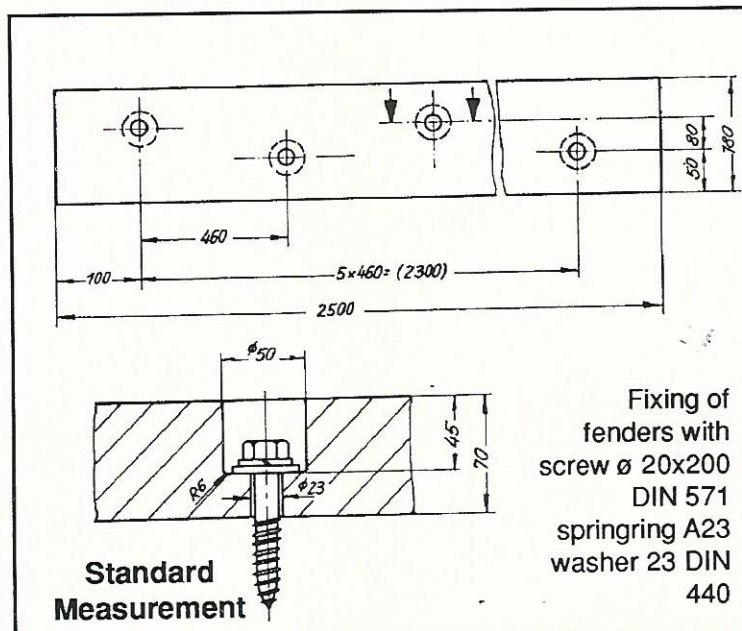
It is necessary to assure under all circumstances that the material does not get excessively hot.

For **sawing**, the usual band or circular saws of the woodworking industry can be used. The band saw blades can be about 10-30mm wide, In order to avoid jamming of the blades the teeth have to be set at 0.5mm. When using circular saws the blades can also have a setting of 0.5mm. The higher the number of revolutions the cleaner the cuts.

For **milling**, normal milling machines can be used. Milling tools with a coarse adjustment have a good chip removal. The feed should not be adjusted too high.

For **drilling** of larger diameters pointed drills are used. Local overheating can be avoided with the help of a proper chipping method and intermittent drilling. Should overheating occur on account of higher cutting speeds, cooling can be effected with compressed air or water.

For **planing** or panel planing, machines, as used in the woodworking industry, can also be employed with a high cutting speed. Furthermore, the material can easily be processed by a hand planer.



Fixing of  
fenders with  
screw  $\phi$  20x200  
DIN 571  
springring A23  
washer 23 DIN  
440

## Battley Marine

We can also supply:

**Fender Panels** made  
of high molecular  
polythene

Wide range of  
**Rubber Fender**, i.e  
**sheer Fender**,  
**cylindrical Fender**,  
**cell Fender**,  
**V-Fender** etc.  
**Pneumatic & Foam**  
**Floating Fender**

Please contact us and  
we will be pleased to  
discuss all your  
Fendering and Design  
requirements at our  
**NEW ADDRESS**

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