

### Small Bollards, cleats and rings

The **small bollards** of stainless steel or hot-dip galvanized iron are suitable for fixing on the pontoon.

For the mooring of small boats we offer **cleats** and **rings** made up of galvanized steel, stainless steel and aluminium alloy, for fixing on the jetty or quayside.

We provide various designs and sizes of bollards with nominal strength capabilities from 4Tn until 30Tn.



## FEATURES

### Small Bollards

#### **Stainless steel bollards:**

- AISI 316 stainless steel, welded with arcotig.
- Fitted with base plate for fixing onto the jetty or quayside.
- Possibility of customizing the top with a laser logo under request.
- Glossy surface.

#### **Galvanized iron bollards:**

- Cast hot dip galvanized iron.
- Fitted with base plate for fixing.
- Fibreglass cap included. Personalized on request.

### Cleats / Rings

#### **Cleat:**

- Aluminium alloy obtained by melting in a mould.
- AISI 316 stainless steel .
- For fixing to dock.

#### **Galvanized steel mooring rings:**

- Hot-dip galvanized steel.
- With fixing elements to the jetty or fixing plate to the quayside.

#### **Stainless steel mooring ring:**

- AISI 304 stainless steel .
- With fixing elements to the jetty or fixing plate to the quayside.

## Small Bollards, cleats and rings



Stainless steel Bollards		
Technical Characteristics		
Ø (mm)	Height (mm)	Type
60	120	S
80	160	M
120	240	L
150	350	XL
180	400	XXL

The maximum strength indicated for mooring bollards is considered valid only if the supporting structures (quayside, jetty and moorings) can ensure equal resistance than the bollard.



Melted iron Bollards			
Technical Characteristics			
Base (mm)	Height (mm)	Weight (Kg)	Tons nominal (t) Q
160	160	7.5	from 4 to 5
210	210	16.1	from 8 to 10
320	320	42.0	from 15 to 20
460	460	110	from 25 to 30

Aluminium alloy / AISI 316 Stainless steel Cleats			
Technical Characteristics			
Application	Height (mm)	Width (mm)	Material
Pontoon	110	320	Aluminium
Pontoon	110	320	Aluminium
Finger	110	320	Aluminium
Finger	110	320	Aluminium
Pontoon	110	320	AISI 316 stainless steel
Finger	110	320	AISI 316 stainless steel



Mooring ring for fixing to the pontoon			
Technical Characteristics			
Ø Ring (mm)	Ø internal (mm)	Ø Fixings (mm)	Material
20	100	M24 x L = 65	Hot-dip galvanized steel
20	100	M24 x L = 65	304 stainless steel



Mooring ring for fixation to quayside			
Technical Characteristics			
Ø Ring (mm)	Ø internal (mm)	Hole (mm)	Material
20	100	Ø14 4No. hole	Hot dip galvanized steel
20	100	Ø14 4No. hole	304 stainless steel

