

Posidonia

MOORING AND TOWING MARINE EQUIPMENT

Low magnetic permeability equipment for MCMV

Having had a long experience in the shipping industry for more than 80 years , Posidonia is also becoming well known for the special equipment that must be installed on mine countermeasure vessels (MCMV) such as minesweepers, minehunters or drones.

All the equipment has to be as light as possible and have low magnetic permeability, but keep a high performance.

Posidonia is a leader in welded anchors and chains, reducing the weight on board by offering:

- Super High Holding Power anchors (PTW+ ®)
- Chains in high tensile steel Grade 3

Both in low magnetic permeability steel: a unique combination fully approved by shipping classification registers.



Low magnetic permeability has not to be confused with magnetism. It is the measure of the ability of a material to support the formation of a magnetic field within itself, typically represented by the (italicized) Greek letter μ (*).

The most common material that complies to the above is generally AISI 316L or 304L, but it doesn't exist in GRADE 3



* $\mu = \mu_r \mu_0$ (μ_r relative permeability) (μ_0 permeability of free space)

After several years of R&D Posidonia identified new materials, with a special manufacturing process to achieve GRADE 3 chains and keeping a very low magnetic permeability.

Several years ago the average magnetic permeability value was fixed at $\mu < 2,0$, nowadays the average required value is approx. $\mu < 1,38$.

We are now able to supply chains $\mu < 1,00$ and anchors $\mu < 1,09$

A medium/small MCMV with an average equipment number between 240-280 needs to be equipped with:

Option A (Grade 2+HHP)

12 lengths 27,5 meters stud link anchor chain, diameter 24 mm. grade 2
 breaking load kN 332 - proof load kN 237
 Total weight: 4260 Kg
 Total volume : 2,136 m3
 1 high holding power anchor Kg 585

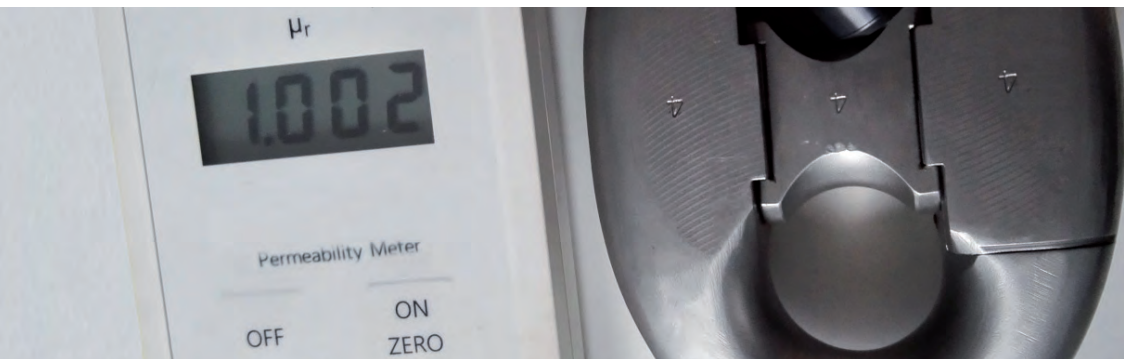
Total weight, anchor chains and fittings :
4887 Kg

Option B (Grade 3+SHHP)

12 lengths 27,5 meters stud link anchor chain, diameter 22 mm. grade 3
 breaking load kN 401 - proof load kN 280
 Total weight: 3528 Kg
 Total volume : 1,764 m3
 1 Super high holding power anchor Kg 390

Total weight, anchor chains and fittings :
3958 Kg

The difference of weight between Option A and Option B is approx.20% less and for higher equipment numbers even more.





PTW + ® Super High Holding Power Anchor.

Super High Holding Power anchors allow a weight reduction of 50% compared to an ordinary anchor.

The only one made in Italy by qualified workers.

Fully balanced and 10% shortened shank possible.
Type approved by most important shipping classification registers.



Studlink and studless anchor chains in Grade 2 and 3.

Fittings such as: anchor and kenter shackles, swivel forerunners and swivel crown shackles.

All available in Grade 2 and grade 3, in stainless steel or special low magnetic permeability material.

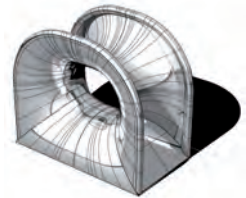
Deck equipment: panama chocks, smit brackets, double bollards, pedestal rollers, multiangle fairleads, ETS, quick release towing hooks, chain lockers and so on.

All Posidonia Anchors and Deck equipment can be FULLY customized and IACS approved.



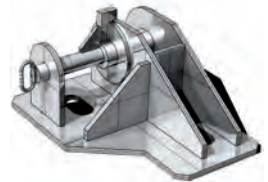
Double Bollard

High SWL- Low weight customizable dimensions and bollard height



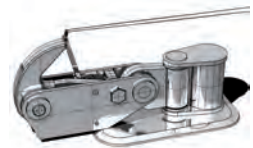
Panama Chock

High SWL
Available with watertight cover and openable top



Smit Bracket

Various designs up to 800t

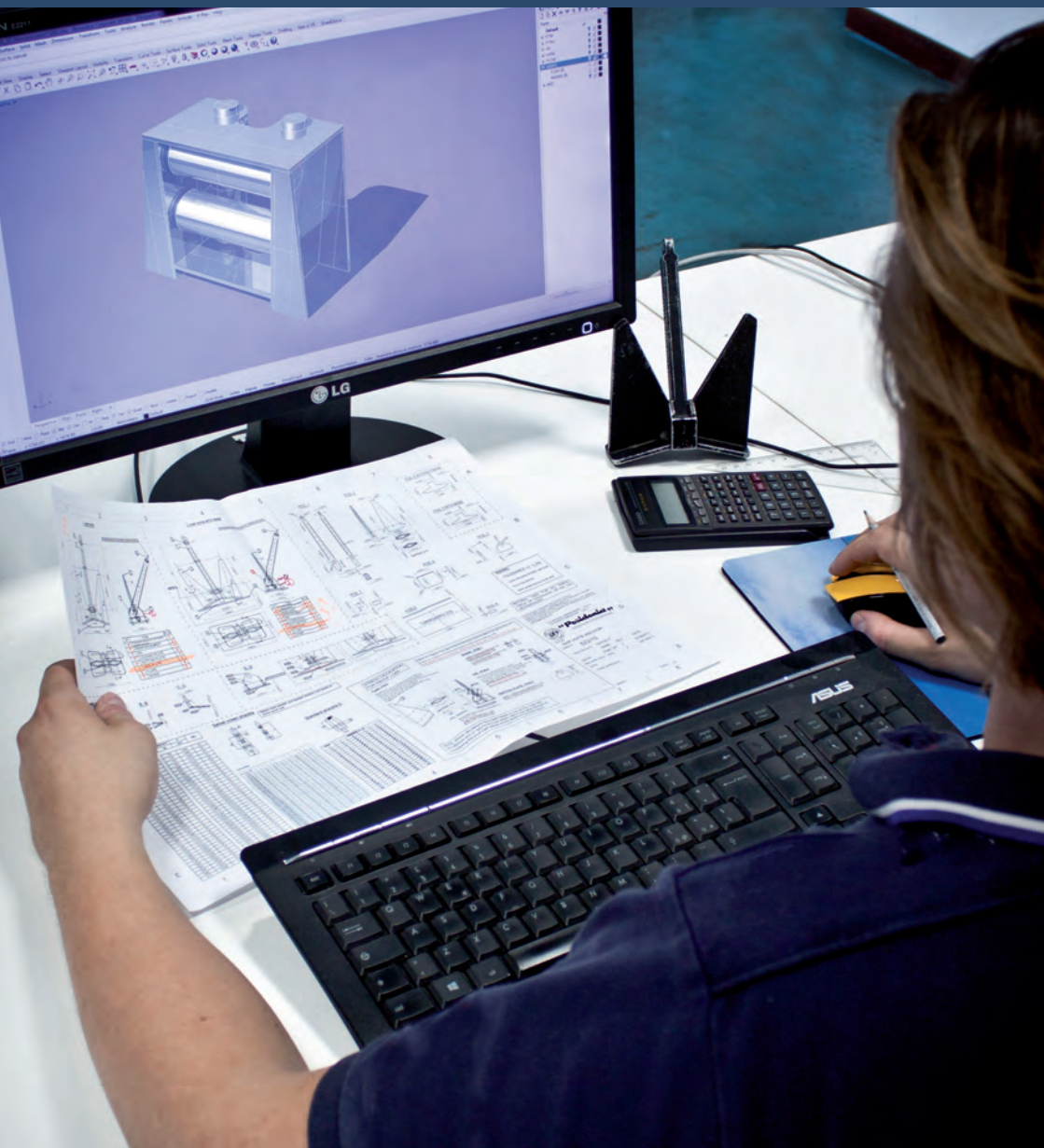


Quick Release Hook

Manual, pneumatic and hydraulic release.
Local and remote pull control.

Can't Find Your Deck Equipment?

No Problem, We Can Customize It As You Like.



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