



BRUCE **ANCHOR**

BRUCE ANCHOR TENSIONER

Strength and efficiency in a compact package

The Bruce Tensioner is a compact one-piece chain-clutching device for pre-tensioning chains attached to opposed anchors or piles.

The Bruce tensioner is a single piece chain-clutching device designed to cross tension two opposing anchor lines of a mooring spread simultaneously, reducing the time and cost of installation, compared to single line installation methodology.

- **FAST:** Works fast and allows the tensioning of drag anchors in only minutes
- **LIGHT:** Delivers with a smaller footprint than other solutions. This small device - 1 to 3.5mT total weight of equipment - can be airfreighted
- **COMPACT:** May be operated by an AHV winch, eliminating the need for a crane barge
- **EFFICIENT:** The vertical load applied to the tensioner provides three times the load to the horizontal anchor lines on the seabed. It acts effectively as a windlass at the seabed
- **VERSATILE:** Available in sizes to accommodate the chain size of the mooring lines – from 76mm to 120mm
- **ADAPTABLE:** with a track record of several decades in the oil and gas industry, the Bruce Tensioner is ideal for the floating offshore wind industry
- **EASY-TO-USE:** Negotiates stern rollers and passes end links and kenter links easily. Fully supports chain links internally to avoid stress damage
- **STRONG:** with a cast steel construction proven for over 20 years, it can preset drag embedment anchors to the full design load of a mooring system



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Bruce Anchor is a Moorings and Anchors brand in Acteon's Engineering, Moorings and Foundations division

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Available for rent.

We can supply a tensioner to fit any chain size.

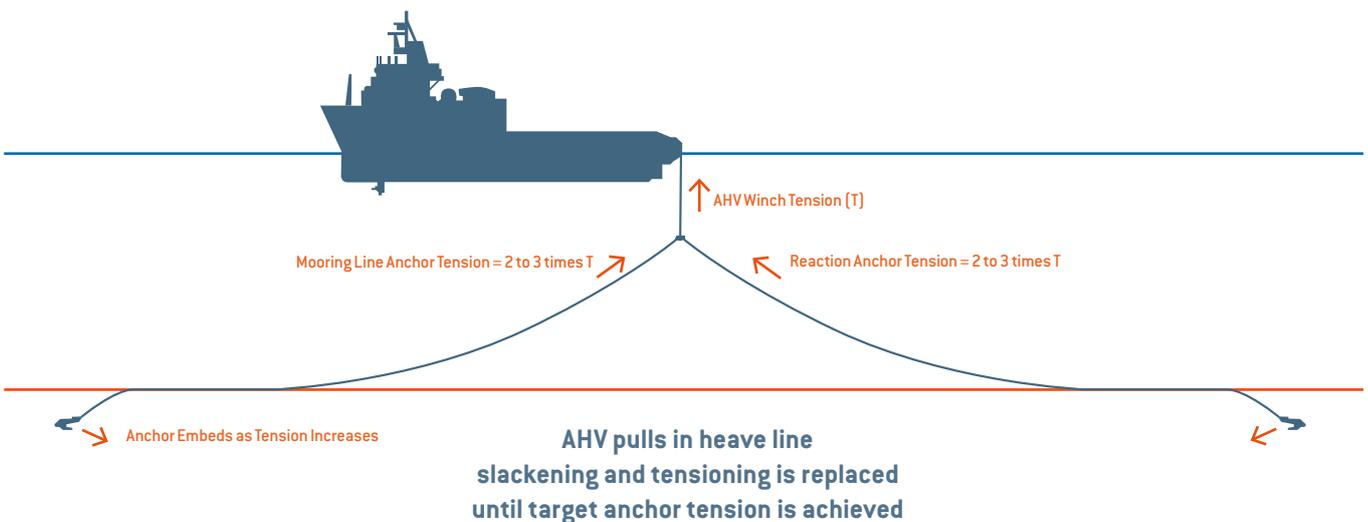
Chain size mm	Length (L) mm	Height (H) mm	Weight kg
76	1,135	520	900
96	1,418	650	2,000
114	1,702	780	3,500

All tensioning blocks are tested at 500t proof load
No limit to water depth

How it works

The two opposing mooring lines to be tensioned, are known as the 'active' and 'passive' line.

1. The active line is passed through the centre of the tensioner, with the passive line connected to the unit, via a loadcell which is connected to the rear of the tensioner, via a shackle.
2. There is also a retrieval line connected to the padeye on the opposite side of the unit.
3. The tensioner is then lowered to the seabed. Once on the seabed, the unit is then heaved back towards the surface, causing the active chain to lock into the tensioner.
4. The heaving motion applied, now starts to apply tension to the two mooring lines and the anchors will start to embed.
5. Once the tensioner reaches a certain heave height, it is lowered back to the seabed and the heaving process is then repeated.
6. The heaving process is repeated until the anchors are installed to their required load.
7. The tension's measuring link is connected to a load measuring unit on the vessel, which provides real time load readings during the tensioning process.



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