

Direct Acting Tensioners



For floating drilling vessels

Our direct acting tensioners (DAT) maintain a constant vertical tension in the drilling riser. In floating vessels they compensate for the effects of heaving and rolling due to waves, currents, tidal water and wind and they allow for safe and efficient drilling.

For deep water applications, MHWirth's direct acting tensioners (DAT) are a high-capacity solution to compensate for strong motions. Compared to wireline tensioners, the system is mainly located in the moonpool area, thereby reducing the space needed on deck.

Our experts provide comprehensive support, right from the pre-engineering and tender phase. Simulating your specific rig layout and precise calculations is a vital part of this, resulting in the tensioning system that best meets your operational needs.

Our direct acting riser tension system provides the highest tension capacity in the market. Additionally, we have reduced load variation significantly with a design that allows for the shortest possible interconnecting piping length.

Through its design, our tensioner cylinders' packing box can handle extreme side loads. This is particularly

beneficial in heavy seas with large waves slamming on the riser. Additionally, it broadens the range of applications to lower waters with extremely low tensions.

Compared to other solutions in the market, our simple shackle-type tensioner connections on the top and bottom keep your maintenance at a minimum.

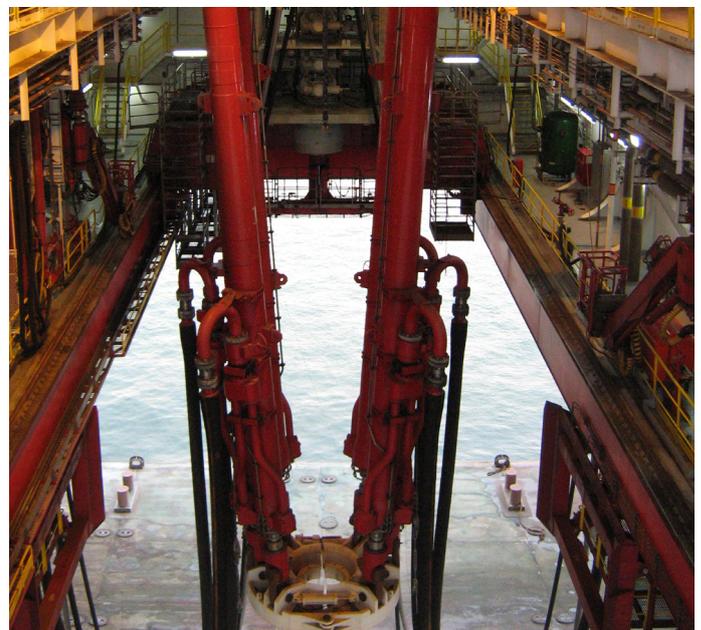
Our DATs are equipped with a field proven anti recoil system to ensure fast and safe emergency disconnection. The closure algorithm is based on simulations on disconnects in a wide range of operating conditions.

Additional Options

- Trip saver: Two skidding plates lock the riser assembly in a fixed position away from the well center and speed up your drilling operations in a safe manner
- Additional working pressure vessels can be added to further increase the tension capacity and extend the range of applications.

Benefits

- Expedient and valuable support all the way through the project
- The highest tension capacity in the market
- Minimal load variation
- Broad range of operating conditions due to the tensioner cylinders' packing box design and low load variations
- Simple shackle connections for minimal maintenance
- Compact trip saver (optional)



Technical Specifications

		DAT 4 000	DAT 5 000
Rated tension per cylinder according to API 16F (@ 25% stroke position from retracted)		463 kips (2 061 kN)	611 kips (2 720 kN)
Maximum tension limit per cylinder according to API 16F		650 kips (2 892 kN)	874 kips (3 890 kN)
Cylinder stroke length		50 ft (15 240 mm)	
Number of tensioners		6	
System tension capacity	Rated Mid stroke Max.	2 700 kips (12 300 kN) 3 000 kips (13 600 kN) 3 900 kips (17 300 kN)	3 600 kips (16 300 kN) 4 000 kips (18 160 kN) 5 200 kips (23 300 kN)
Working pressure		2 784 psi (192 bar)	
Design pressure		3 002 psi (207 bar)	
Weight, dry		712 000 lb (323 mT)	677 000 lb (307 mT)
Weight, operational		814 000 lb (369 mT)	772 000 lb (350 mT)
Design temperature, min./max.		-4/+113°F (-20/+45°C)	
Third party classification		ABS/DNV GL	

Data is subject to confirmation by the manufacturer.