

## Titan Hydraulic Tensioning Pumps

Titan offers a complete line of Pneumatic and Electric powered Tensioning Pumps as well manually operated Tensioning Pumps.



**Titan makes a full line of Tensioning products, accessories and services to make your next bolting job an easy and cost effective experience.**

- Tensioning Hoses
- High Pressure Quick Disconnects
- Tensioning Pumps
- Couplers
- Multi-Tool configurations
- Ultrasonic Measuring equipment
- On Site Consulting



## Titan Patented O-Ring Technology



Titan announces a significant improvement in Hydraulic Bolt Tensioner performance. Our new tool sealing system minimizes the effort needed to retract the piston and eliminates leakage of oil past the seal.

Typically, Tensioners that were easy to retract leaked and Tensioners that didn't leak were difficult to retract. To overcome these serious shortcomings competitive tools have employed costly, bulky and heavy piston retraction mechanisms.

The new Titan seal achieves the perfect balance of physical properties necessary to achieve easy retraction without leakage.

The new seals are a two-piece self-energizing design with an 'O' ring machined from a special composite material that is self-lubricating with a very high wear resistance. The seals simply click into position and require no adjustment. Of course, with no leakage the tools provide a more consistent accurate and uniform operating pressure. This translates into faster performance and less down time with more accurate and uniform bolt loads being achieved.



Dependable • Fast • Efficient

# TITAN

**Hydraulic Tensioning**  
is an integral element for getting  
your bolting job done right, on time, every time<sup>SM</sup>



## ADDITIONAL PRODUCTS & SERVICES OFFERED

- Pneumatic & Electric Tensioning Pumps
- Manual Tensioning Pumps
- T Series Hydraulic Torque Wrenches
- LP Series Hydraulic Torque Wrenches
- Power Spreader Flange Spreaders
- Power Splitter Nut Splitters
- Air-Tite® Pneumatic & Electric Torque Wrenches
- Sockets & Accessories
- Ultrasonic Bolt Measurement
- Rentals For All Product Lines
- Equipment Service & Repair
- Calibration Service

Your Local **TITAN** Representative:



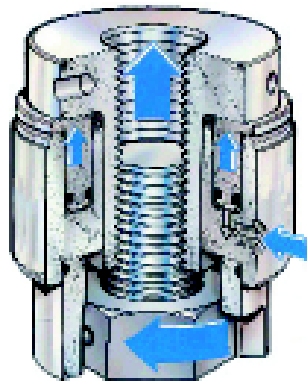
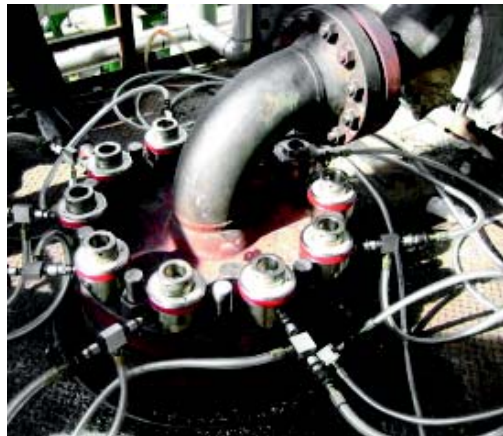
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## TITAN Hydraulic Bolt/Stud Tensioners

**Titan Hydraulic Bolt Tensioners** utilize hydraulic pressure to easily produce the forces necessary to effectively tension bolts and studs to their desired pre-load and ensure joint integrity. Once the Titan Hydraulic Tensioner is in place and screwed onto the bolt's thread over the standard nut, the required pressure is applied to stretch the bolt to its recommended preload. The nut is then screwed down, and the pressure is released. This transfers the load from the tensioner to the nut. The Titan Hydraulic Tensioner is then removed and is ready to use again. Any number of Titan Hydraulic Tensioners can be interlinked to provide even amounts of simultaneous tension over multiple studs or bolts as required. Produced from high strength alloy steel, the Titan Hydraulic Stud Tensioners are made in standard modular and dedicated configurations. They can also be specially designed and made to suit the specific requirements of a your unique application.



**Titan Hydraulic Tensioner applications** are found in many industries, including:

- Mining and quarrying
- Oil and gas industries
- Marine
- Power generation
- Offshore
- Agricultural
- Structural
- Heavy equipment in general industry
- Chemical plants
- Sub-Sea

**Titan Hydraulic Bolt/Stud Tensioning provides many advantages:**

- Reduces maintenance down time
- Requires little physical effort
- Gives reliable and precise bolt load
- Is user friendly
- Improves safety on the job
- Ideal for confined spaces and difficult locations
- Multiple tensioning for leak-free flange makeup
- Spring return option

**Titan Hydraulic Tensioners** are available in several models to suit your applications:

### DEDICATED - TTD Series



**Titan TTD Series Dedicated Thread Stud Tensioners** provide the answer to many of the fitting problems associated with using larger tensioning equipment. They are also ideal for single task applications which do not require interchangeability of thread sizes.

### MODULAR - TTM Series



**Titan TT Modular Stud Tensioners** are not dedicated to a single designated thread size and therefore can be used with a range of thread types and bolts in conjunction with suitable Adaptor Kits. Perfect for locations requiring a range of tensioning sizes. Available in standard and spring return.

### TITAN Sub-Sea Series



**TITAN Sub-Sea Tensioners.** Lightweight and compact. Simple and easy to use. Our Quick reaction nuts require Minimal effort. Highly visible and robust these tools feature patented low friction composite seals for Long life and Low maintenance. These high load tensioners are safe and reliable and provide optimum weight to load ratios. They feature a Long piston stroke. Easy diver handling and are ideally suitable for sandy conditions.

## Titan Multi-Stage Tensioning Tools



Titan Turbine Tensioning tools are slim, light weight Hydraulic Tensioners especially designed for the exacting specifications and limited geometry of wind turbine and combustion turbine applications.. They feature particular and carefully selected materials designed to give long service life. They are all spring return Tensioners thus avoiding the need of laborious Tensioner piston retraction. They are light and easy to use with easy access side entry ports, complete with quick disconnects.



### Advantages:

- Speed of operation
- Easy to use
- Gives reliable and precise tensioning
- Long service life
- Spring return
- ROBUST Nut Rotation system

### Kits Available For:

- VESTAS
- GAMESA
- GE Wind
- GE, WESTINGHOUSE & MITSUBISHI Combustion Turbines

## Titan Hydraulic Nuts



The Titan Hydraulic Nut is a precision engineered, high pressure, high performance, hydraulically operated bolt tensioning device that can be quickly and easily fitted. It is manufactured in a wide choice of high tensile strength materials to suit the required application. High temperature models available.

**Typical Hydraulic Nut applications are found in many industries, including:**

- Mining and quarrying
- Oil and gas industries
- Marine
- Power generation
- Steel & Aluminium
- Structural
- Heavy equipment in general industry



**The Titan Hydraulic Nut provides the following features:**

- Reduces maintenance down time
- Improves safety on the job
- Gives reliable and precise tensioning
- User friendly - fast to fit and remove
- Requires little physical effort
- Is ideal for confined spaces or difficult locations

## Titan Plate Heat Exchanger Assembly System

Use of Titan Plate Heat Exchanger Hydraulic Tensioners saves production, labor and maintenance costs over traditional methods.



- Use of varying sizes of split nuts gives great flexibility to the tools.
- They are easily positioned and quickly engaged in seconds.
- Even compression of the plates is guaranteed. Fast removal.



- No Galling
- No Thread Damage
- Effortless Removal
- Less Down Time