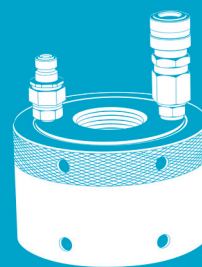
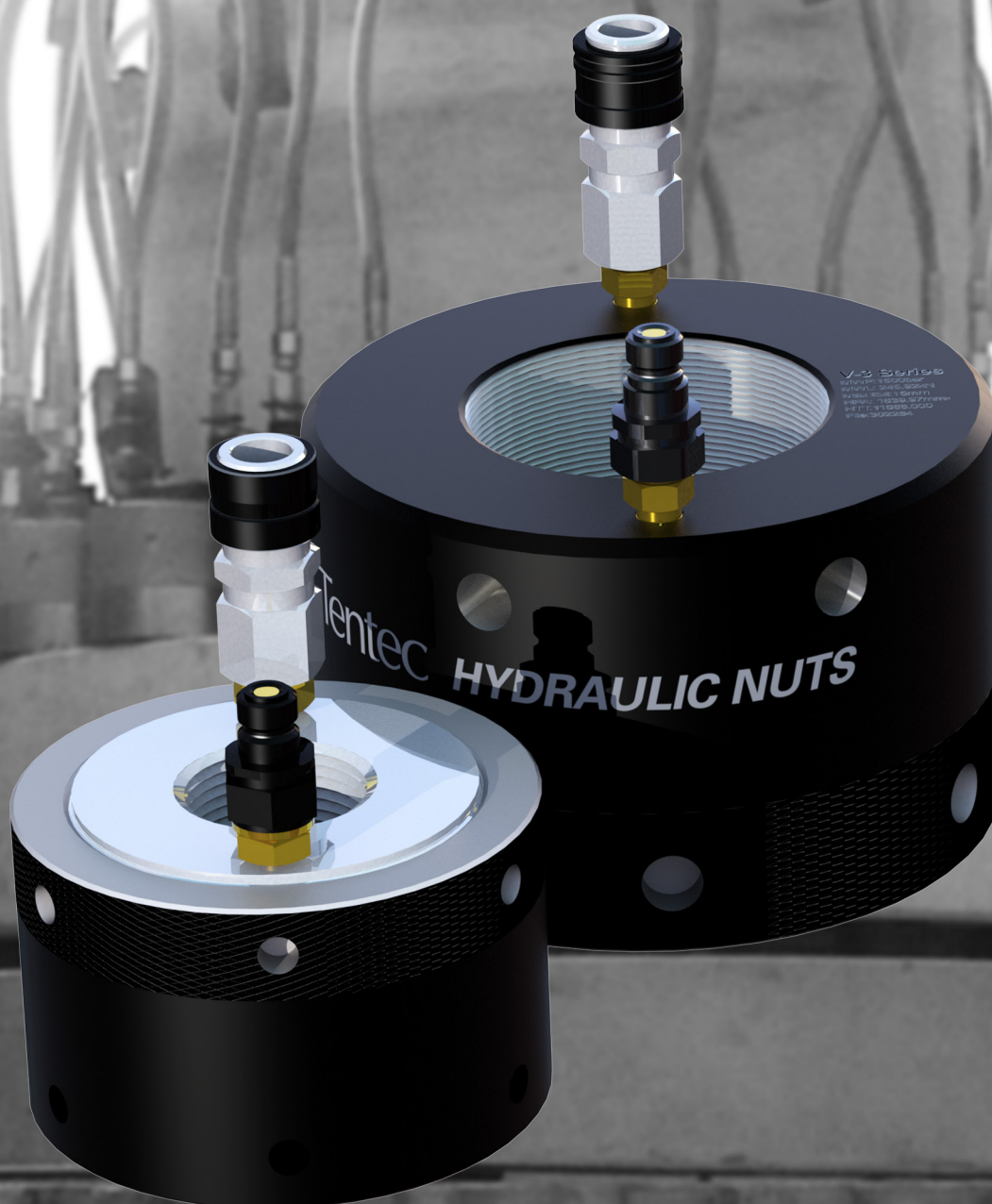


# TENTEC HYDRAULIC NUTS



The worldwide standard for hydraulic nuts.

Atlas Copco



# TENTEC HYDRAULIC NUTS TYPE - BOTTOM COLLAR

Hydraulic pressure is applied simultaneously to each Tentec Nut. All frictional factors connected with conventional bolt tightening methods are alleviated since Tentec Nuts apply a direct axial force to the bolt which generates a bolt elongation. This elongation/tension is permanently retained by means of the load retaining collar. Tentec Nuts have been designed to be as compact as possible, in order to allow adjacent fitment on as many applications as possible. In most cases they are designed to produce a residual bolt stress of 45000 lbs/in<sup>2</sup> (310N/mm<sup>2</sup>) which is more than adequate for most bolted joint applications. As pressure is applied to the Tentec Nuts not only does the bolt elongate but also joint compression occurs. Since many applications incor-

## BOLT TIGHTENING SOLUTIONS

*We have many years experience of designing bespoke bolt tensioning tools for instances where standard hydraulic nuts are not suitable. Contact us for more information*

porate some form of gasket, this joint compression can be substantial, in order to withstand this joint compression all Tentec Nuts are capable of considerable piston movement. This allows the Tentec Nuts, in most cases, the ability to tension a complete joint in only one pressurisation sequence, which can result in extremely high time savings.

### Hydraulic Connections

User configurable quick release connections. Side and top connections available

### Nut Body

Designed with considerable allowable ram movement. Refer to column S below

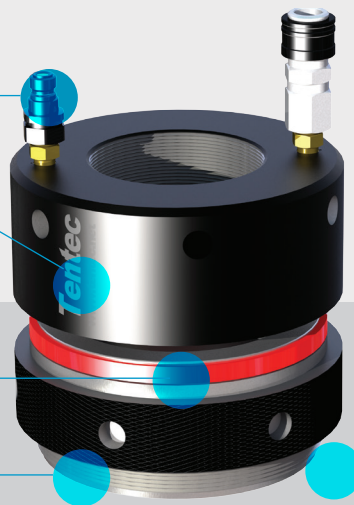
### Hydraulic Seals

Proven seal technology ensures many 1000's of tool pressure cycles

### Load Collar

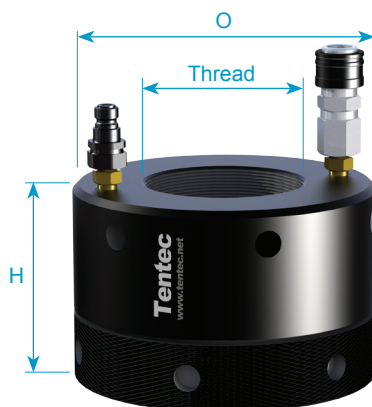
### Threaded Ram

Interfaces with the load collar to retain bolt load



## TECHNICAL SPECIFICATIONS

**Maximum Working Pressure = 2275bar**



| Part No   | Thread | Thread | Part No   | Bolt Load |       | O   | H   | S  |
|-----------|--------|--------|-----------|-----------|-------|-----|-----|----|
| Inch      | Inches | Metric | Metric    | kn        | Tons  | mm  | mm  | mm |
| BCHN:0875 | 7/8    | M22    | BCHN:0022 | 190       | 19.1  | 54  | 48  | 5  |
| BCHN:1000 | 1"     | M24    | BCHN:0024 | 205       | 20.6  | 57  | 44  | 5  |
| BCHN:1125 | 1 1/8  | M27    | BCHN:0027 | 220       | 22.1  | 60  | 48  | 5  |
| BCHN:1250 | 1 1/4  | M33    | BCHN:0033 | 265       | 26.6  | 67  | 51  | 5  |
| BCHN:1375 | 1 3/8  | M36    | BCHN:0036 | 325       | 32.6  | 73  | 54  | 6  |
| BCHN:1500 | 1 1/2  | M39    | BCHN:0039 | 373       | 37.5  | 78  | 56  | 6  |
| BCHN:1625 | 1 5/8  | M42    | BCHN:0042 | 424       | 42.6  | 83  | 58  | 6  |
| BCHN:1750 | 1 3/4  | M45    | BCHN:0045 | 445       | 44.6  | 86  | 60  | 6  |
| BCHN:1875 | 1 7/8  | M48    | BCHN:0048 | 523       | 52.5  | 93  | 70  | 8  |
| BCHN:2000 | 2      | M52    | BCHN:0052 | 629       | 63.1  | 102 | 71  | 8  |
| BCHN:2250 | 2 1/4  | M56    | BCHN:0056 | 781       | 78.3  | 112 | 75  | 8  |
| BCHN:2500 | 2 1/2  | M64    | BCHN:0064 | 941       | 94.4  | 124 | 86  | 8  |
| BCHN:2750 | 2 3/4  | M68    | BCHN:0068 | 1042      | 104.5 | 131 | 90  | 8  |
| BCHN:3000 | 3      | M72    | BCHN:0072 | 1246      | 125.1 | 144 | 94  | 10 |
| BCHN:3250 | 3 1/4  | M80    | BCHN:0080 | 1607      | 161.3 | 159 | 104 | 10 |
| BCHN:3500 | 3 1/2  | M90    | BCHN:0090 | 2027      | 203.4 | 176 | 114 | 10 |
| BCHN:3750 | 3 3/4  | M95    | BCHN:0095 | 2160      | 216.7 | 182 | 118 | 10 |
| BCHN:4000 | 4      | M100   | BCHN:0100 | 2466      | 247.5 | 200 | 124 | 15 |
| BCHN:4500 | 4 1/2  | M110   | BCHN:0110 | 2814      | 282.4 | 215 | 136 | 15 |
| BCHN:5000 | 5      | M125   | BCHN:0125 | 3820      | 383.4 | 244 | 148 | 15 |
| BCHN:5500 | 5 1/2  | M140   | BCHN:0140 | 4954      | 497.1 | 272 | 164 | 15 |
| BCHN:6000 | 6      | M150   | BCHN:0150 | 5655      | 567.5 | 290 | 176 | 15 |

# TENTEC HYDRAULIC NUTS TYPE - TOP COLLAR

Top Collar Hydraulic Nuts feature the same benefits as the Bottom Collar type Hydraulic Nuts. The Top Collar derivative is ideally used where the nut is sunk into a pocket or spot face. The load retaining collar is situated at the top of the hydraulic nut allowing for easy access by the user.

## Safety & Reliability

Integrated into the design of each hydraulic nut are enhanced safety features including mechanisms to remove the hazard of over-stroking the hydraulic rams. All Tentec hydraulic nuts feature a mechanism which directs oil flow away from the operator in the instance the ram is over-stroked and exhausts oil harmlessly into the internal section of the nut.

## Seal Technology

Over the years Tentec has developed a class leading high pressure seal technology. This innovative seal technology is industry proven and offers many 1000's of reliable and safe pressure cycles.

### Hydraulic Connections

User configurable quick release connections. Side and top connections available.

### Load Collar

### Threaded Ram

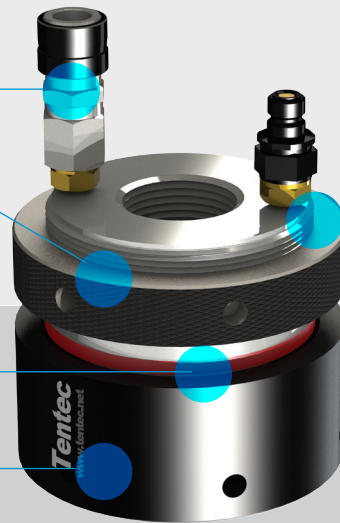
Interfaces with the load collar to retain bolt load.

### Hydraulic Seals

Proven seal technology ensures many 1000's of tool pressure cycles.

### Nut Body

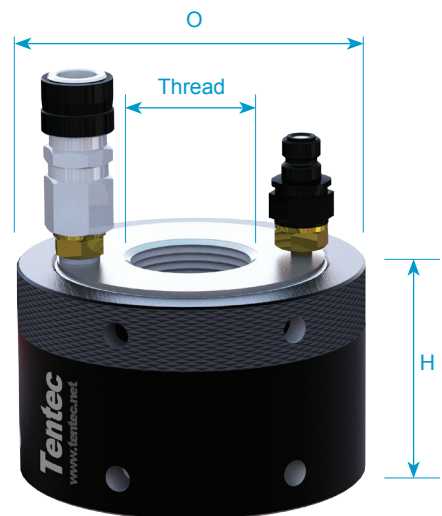
Designed with considerable allowable ram movement.



## TECHNICAL SPECIFICATIONS

**Maximum Working Pressure = 2275bar**

| Part No   | Thread | Thread | Part No   | Bolt Load |       | O   | H   | Ram Stroke |
|-----------|--------|--------|-----------|-----------|-------|-----|-----|------------|
| Inch      | Inches | Metric | Metric    | kN        | Tons  | mm  | mm  | mm         |
| TCHN:0875 | 7/8    | M22    | TCHN:0022 | 190       | 19.1  | 54  | 40  | 5          |
| TCHN:1000 | 1      | M24    | TCHN:0024 | 205       | 20.6  | 57  | 44  | 5          |
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| TCHN:1875 | 1 7/8  | M48    | TCHN:0048 | 523       | 52.5  | 93  | 64  | 8          |
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| TCHN:2500 | 2 1/2  | M64    | TCHN:0064 | 941       | 94.4  | 124 | 81  | 8          |
| TCHN:2750 | 2 3/4  | M68    | TCHN:0068 | 1042      | 104.5 | 131 | 89  | 8          |
| TCHN:3000 | 3      | M72    | TCHN:0072 | 1246      | 125.1 | 144 | 96  | 10         |
| TCHN:3250 | 3 1/4  | M80    | TCHN:0080 | 1607      | 161.3 | 159 | 104 | 10         |
| TCHN:3500 | 3 1/2  | M90    | TCHN:0090 | 2027      | 203.4 | 176 | 114 | 10         |
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| TCHN:4500 | 4 1/2  | M110   | TCHN:0110 | 2814      | 282.4 | 215 | 138 | 15         |
| TCHN:5000 | 5      | M125   | TCHN:0125 | 3820      | 383.4 | 244 | 150 | 15         |
| TCHN:5500 | 5 1/2  | M140   | TCHN:0140 | 4954      | 497.1 | 272 | 168 | 15         |
| TCHN:6000 | 6      | M150   | TCHN:0150 | 5655      | 567.5 | 290 | 174 | 15         |



Designs and specifications are subject to change without notice or obligation. Read all safety instructions in the manual before usage.



## WHY USE HYDRAULIC NUTS?

### Consistent

Using multiple Hydraulic Nuts on a bolted joint gives a much improved uniform bolt load across all bolts.

### Axial Bolt Load

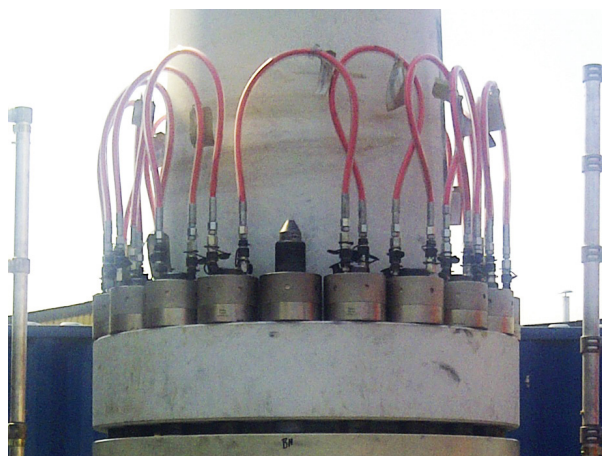
Bolt load is applied axially to the bolt. Inconsistencies such as friction, bending and lubricant are not a factor when using Hydraulic Nuts. No torsional stresses are involved.

### Fast Tensioning

Multiple Hydraulic Nuts offer a quick and accurate method of tightening a bolted joint.

### Accurate

Bolt load is directly proportional to the pressure applied to the Hydraulic Nut.



## TENTEC BOLT TIGHTENING SOLUTIONS



ISO 14001



BS OHSAS 18001



ISO 9001



Engineering Construction Industry Training Board  
APPROVED PROVIDER

FPAL  
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