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What is TOP-LOCK® Multi-jackbolt tensioners

Multi-jackbolt tensioners also called superbolt or supernut, according to the structure of commonly usage which is an innovative technology for directly replace conventional nuts and bolts. Multi-jackbolt tensioners can be threaded onto a new or existing bolt, stud, threaded rod or shaft. The main thread serves to position the tensioner on the bolt or stud against the hardened washer and the load bearing surface. By tightening the jackbolts, transfer the preload evenly into the main thread and, consequently, onto the joint. The main thread is tightened in pure tension.



Why popularize TOP-LOCK® Multi-jackbolt tensioners

The strength of the bolt (fastening force) is increased by the bolt diameter square, the required torque is increase by its diameter cubic. Bolt is greater than 1 inch in diameter, use manual wrench is difficult to effectively achieve its pre-tightening force. To achieve higher pre-tightening force, rely on other means, blow wrench, lifting wrench provide pre-tightening force is very dangerous, heating rod requires a lot of time. Inaccurate prestressing force exerting often leads to thread lock. Hydraulic stretching has the same problem as mentioned. Besides, also increased the trouble for apply different location of the bolts to retrofit.

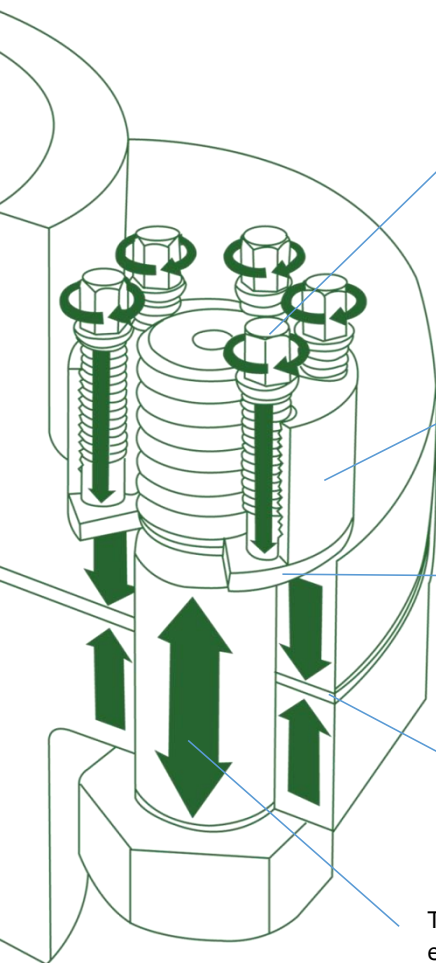
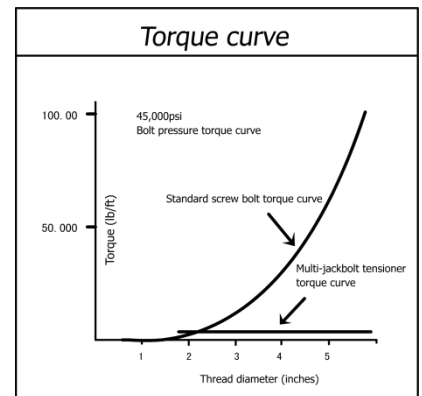


The structure of TOP-LOCK® Multi-jackbolt tensioners



How TOP-LOCK® Multi-jackbolt tensioners work

| Multi-jackbolt tensioner and hydraulic wrench torque comparison table | | | |
|---|--------------------|---|---|
| Thread size inches | Bolt load (pounds) | Hydraulic wrench required torque Pounds per foot torque | Tensioner MTX series required Pounds per foot |
| 1 | 48,600 | 716 | 14 |
| 1-1/2 | 98,400 | 2,173 | 25 |
| 2 | 175,200 | 5,160 | 57 |
| 3 | 428,400 | 18,925 | 114 |
| 4 | 806,400 | 47,497 | 114 |
| 5 | 1,008,000 | 74,214 | 189 |
| 6 | 1,209,600 | 106,868 | 189 |



By tightening the jackbolts, a strong thrust (axial) force is generated. This thrust force is directed against a hardened washer. Jackbolts have a small friction diameter and can therefore create a high thrust force with relatively little torque input.

The loads are transferred through the nut body which is positioned on the main thread by hand.

A hardened washer is used to transfer the force while protecting the flange face.

The thrust (axial) force of many jackbolts and the opposite reaction force of the main bolt head create a strong clamping force on the flange.

The thrust (axial) force from the jackbolt creates an equally strong reaction force in the main bolt.



Characters of TOP-LOCK® Multi-jackbolt tensioners

Character1, Small torque generated big pre-tightening force.

Bolt level: 8.8

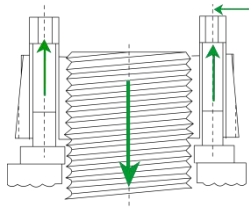
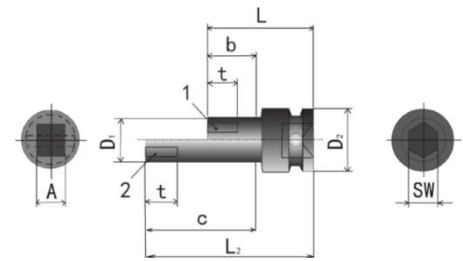
M64 * 6

Regular hexagonal nut

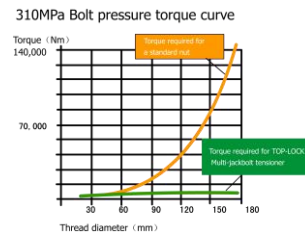
14 '300 nm

TOP-LOCK® Multi-jackbolt tensioner

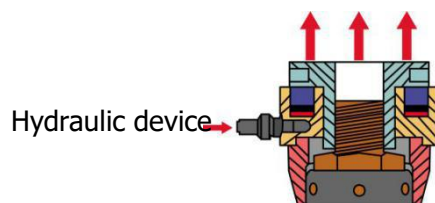
315 nm



Relatively small torque
generated load enough



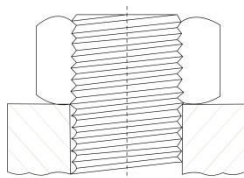
Character2, small installation space



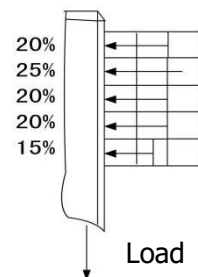
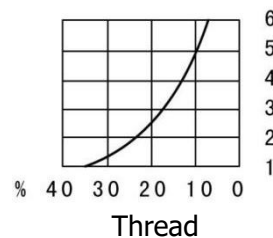
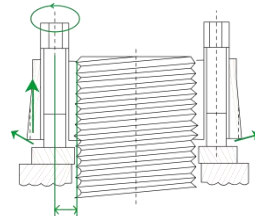
TOP-LOCK® Multi-jackbolt tensioner



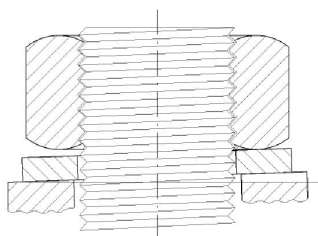
Character3, load distribution is more homogeneous for nut body



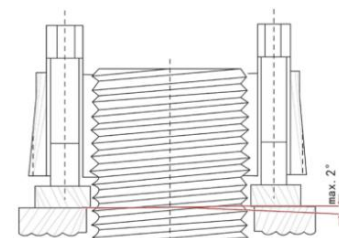
Regular hexagonal nut



Character4, radial deflection are smaller



The main thread deformation or fracture



The axial load is average
distribute in the main thread

Characters of TOP-LOCK® Multi-jackbolt tensioners

Preload simple, time-saving and efficient

Only ordinary hand wrenches or pneumatic wrenches are required to preload or remove large parts. The operation is very convenient, fast, save time(can save more than 60% time than using traditional bolt fastening preload method) and efficient.

Reliable for preloaded and lock

The unique locking design completely solve the disadvantages of the traditional locking reliability, relying on its own special locking structure, even under the condition of high temperature, high pressure and strong high-frequency vibration can effectively prevent the preloaded artifacts losing.

Safe

Effectively avoid many accidents which from the traditional preloaded method. Can be operated and installed in unfavorable pre-tightening places, such as: Overhead, high altitude and bad environment nuclear island, etc.

Economic and practica

TOP-LOCK® Multi-jackbolt tensioners can be used repeatedly, meanwhile no traditional or special preloaded tools are needed for installation, thus greatly reduces the cost of preloaded, the truly energy consumption.

Tightening in pure tension

Multi-jackbolt tensioner preload artifact with pure tension, no torque twisted to each other from the load of nuts and bolts, effectively prevent the occurrence of undesirable phenomenon, such as the thread wear, buckles and locked. Also can eliminate the possibility that the nut mush into bearing surface caused by the nut with the main bolts not completely vertical. Centerline of main bolt within five degrees may be offset to compensate.

High precision preloaded and uniform tension

The accuracy of the Multi-jackbolt tensioner pre-tightening force are much more accurate than any traditional and special preloaded tools, can reach 90-95%, at the same time prestressing tension change is small (only 4-5%), which for the bolt pre-tightening tension between uniform interface is especially important for sealing flange or pressure vessel, it can keep the flange interface uniform pressure, effectively prevent leakage.

Rich preloaded elastic

Multi-jackbolt tensioner pre-tightening artifacts, can increase the elasticity of preloaded bolt connection system of four bolt diameter equivalent, for general bolt connection system, the equivalent elastic increased by 50-100%, due to the increase of the elastic greatly prolong the service life of the connecting bolts.

Flexible preload enhances bolt bearing capacity

When Multi-jackbolt tensioner preloaded artifacts, between Multi-jackbolt tensioner and the main bolt generated relative force, forming a circumferential stress. Under the stress effect, bottom diameter expanding, the upper diameter narrower, the micro deformation increased of number of the stress threads meanwhile made the stress release in the main bolt and the nut effective thread uniformly, avoiding stress concentration, enhancing the bearing capacity of bolts, eliminating the possibility of a screw fracture.

Operation suitable for small space

The space for application of Multi-jackbolt tensioner preloaded is smaller than the space for traditional or special tools for preloaded operation. Some special space and equipments which special tools can't operate, such as: compact structure, narrow space, special operating position, Multi-jackbolt tensioner can be used widely.

Detect preloaded parameter convenient, read data intuitive and accurate

Intuitive rapid detection of bolt pre-tightening force, pre-tightening torque and preloaded elongation by taking ultrasonic bolt detector in the bolt on test interface. Synchronous read, more accurate, more efficient than liquid distribution test preloaded system pressure value of the parameter. Greatly improving the comprehensive technical performance of large-scale mechanical parts assembly preload and preloaded detection efficiency.



Classifications of TOP-LOCK® Multi-jackbolt tensioners



Bolt-style tensioners

Bolt-style tensioners are used in a wide variety of applications where a nut-style tensioner and stud combination does not fit or is not the preferred solution.

Advantages:

- Has all of the preload and low torque advantages.

- Requires less head diameter and therefore less space than nut-style tensioner.

- Requires smaller installation space.

- Reduces the number of parts versus stud and nuts.

- Small head dimensions can fit into tight countersinks or space restrictions.



Nut-style multi-jackbolt tensioners

Nut-style multi-jackbolt tensioner suitable for mechanical fastening applications, according to their own strength condition can be used for the high strength bolt or screw, according to their own material and structure can be used in different working condition of the environment, it is a nut type tensioner which suitable for large hexagonal nut usage for all places.



Flexnuts

Flexnuts are suitable for through hole applications, which is a reactive nut that is able to flex elastically. Under certain load, Flexnuts can flex at the bottom and at the top. This helps relieve stress concentrations and increases the fatigue life of the stud/bolt. Since Flexnuts are reactive nuts to be used opposite tensioners, they never torqued directly to achieve preload.

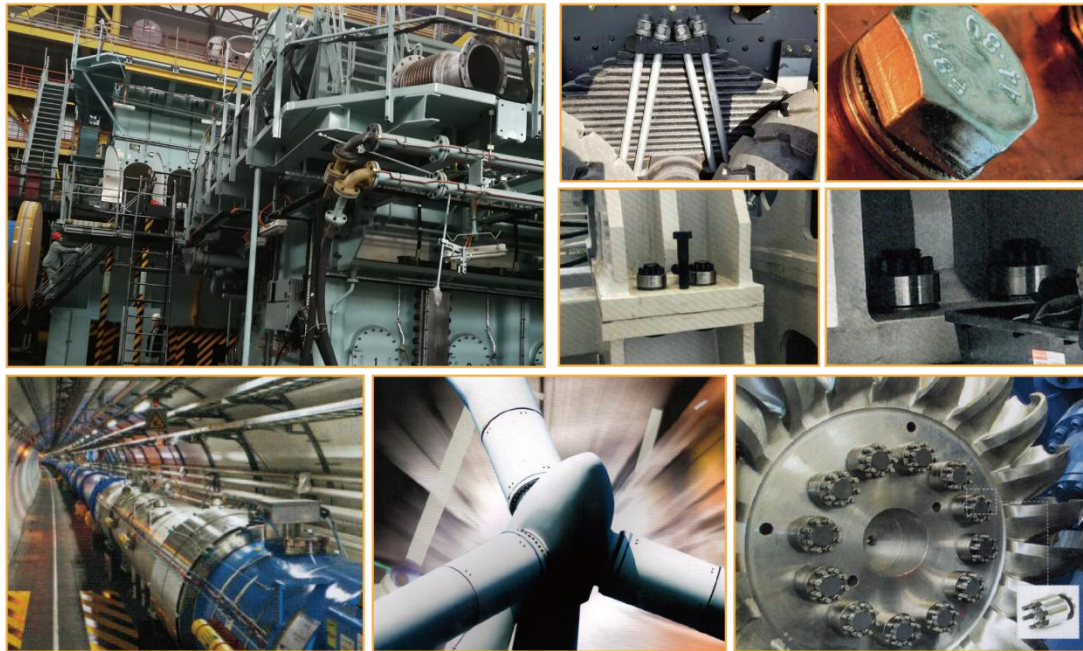
Advantages:

- Under load, they ensure an equal load distribution on the thread of the bolt / stud.













- Adds elasticity in the joint, increases the fatigue life of the bolt / stud.








Applications of TOP-LOCK® Multi-jackbolt tensioners

The nuclear industry、Aerospace engineering、Wind power generation、Hydroelectric power、Petrochemical、Steam turbine、Shipbuilding、Transportation



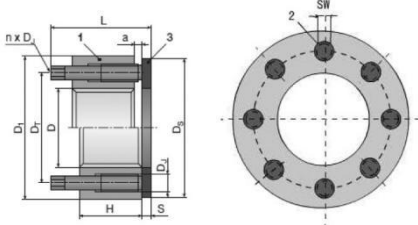
Selection table for TOP-LOCK® Multi-jackbolt tensioners

| Type | | Application | Size range (Metric) | Size range (Inch) | Bolt strength depends on size | Suitable temperature | Lube for jackbolts |
|---------|---|--|---------------------|-------------------|---|--|---|
| TLGT |  | For a wide variety of general industry applications. Suitable for common grade studs/bolts | M16-M160 | 3/4" -6" | 400 to 1000Mpa 60 to 145ksi | -40 to 250°C -50 to 500°F Solutions for lower temperatures are available on demand | JL-G or JL-AS size>M100/4" is TLGTX serie, use JL-M |
| TLGTS |  | New Super High-Strength Global Tensioner for extreme-strength bolts. | M16-M100 | 3/4" -4" | 400 to 1200Mpa 60 to 175ksi | -40 to 250°C -50 to 500°F Solutions for lower temperatures are available on demand | JL-G or JL-AS |
| MSB |  | For general mechanical applications: suited for medium strength bolts and studs; fit in the same space as heavy hex nuts; feature hex-head jackbolts | M16-M160 | 3/4" -6" | 400 to 750Mpa 60 to 100ksi | -10 to 250°C 0 to 500°F | JL-G or JL-AS |
| MSG |  | For higher bolt loads on general machinery applications; fit in the same space as heavy hex. Use with high-strength bolts and stud | M16-M160 | 3/4" -6" | 400 to 1000Mpa 60 to 145ksi | -40 to 250°C -50 to 500°F Solutions for lower temperatures are available on demand | JL-G or JL-AS |
| TLSB8 |  | Bolt-style tensioners for applications with tapped holes; fit in tight spaces; external hex for installation and removal. | M16-M160 | 3/4" -6" | 350 to 650 Mpa 50 to 95 ksi | -10 to 250°C 0 to 500°F | JL-G or JL-AS |
| TLSB12 |  | Similar to TLSB8 boltstyle tensioners; for high-strength. | M20-M90 | 3/4" -3-1/2" | 550 to 850 Mpa 80 to 125 ksi | -10 to 250°C 0 to 500°F Solutions for lower temperatures are available on demand | JL-G or JL-AS |
| TLH650 |  | Replace standard hex nuts at temperatures up to 350° C (650° F). | M20-M125 | 3/4" -5" | 310Mpa 45ksi Cross-sectional area depending on thread stress | -10 to 350°C -50 to 650°F | JL-G or P37 |
| TLH650T |  | Replace most castle nuts at 350° C (650° F) for tight spaces. | M24-M100 | 1" -4" | 310Mpa 45ksi Cross-sectional area depending on thread stress | -10 to 350°C -50 to 650°F | JL-G or P37 |
| TLSJ |  | For applications involving limited eadroom or thread engagement. | M20-M160 | 3/4" -6" | 100 to 450Mpa 15 to 65ksi | -10 to 250°C 0 to 500°F | JL-G or JL-AS |
| TLSJX |  | Similar to TLSJ but for higher preloads:moly/ubricated set screws. | M20-M160 | 3/4" -6" | 300 to 650Mpa 45 to 95ksi | -10 to 250°C 0 to 500°F | JL-M |
| TLSSJX |  | To match countersink dimensions of standard socket head cap screws. | M20-M100 | 3/4" -4" | 350 to 800Mpa 50 to 115ksi | -10 to 250°C 0 to 500°F | JL-M |
| TLNM/NI |  | Interchangeable with many standard series lock nuts;ideal for positioning bearings or clamping entire shaft assemblies. | M30-M160 | 1" -6-1/4" | 20 to 90Mpa 3 to 15ksi | -10 to 250°C 0 to 500°F | JL-M |

| | | | | | | | |
|--------|---|---|----------|------------|-------------------------------|--|---------------|
| TLSMX |  | Replace standard OEM mill motor armature nuts;available for most standard motor frame sizes. | M30-M160 | 1" -4" | 100 to 250Mpa 15 to 35ksi | -10 to 250°C 0 to 500°F | JL-M |
| TLSX8 |  | Reactive nut for through-hole applications. Adds elasticity to bolted joints. Use in combination with MSB or TLSB8 | M20-M160 | 3/4" -6" | 400 to 750Mpa 60 to 100ksi | -10 to 250°C 0 to 500°F | -- |
| TLSX12 |  | Similar to TLSX8, but use in combination with MSG or TLSB12. | M20-M160 | 3/4" -6" | 400 to 1000 Mpa 60 to 145ksi | -40 to 250°C-50 to 500°F Solutions for lower temperatures are available on demand | -- |
| TLCN |  | Suitable for reciprocating compressor crosshead; Special installation procedures will simplify bolting. | M36-M160 | 1-1/2" -6" | 210Mpa 30ksi | -10 to 250°C 0 to 500°F | JL-M or P37 |
| TLSP |  | Designed to match the countersunk head hole size of the piston end nut replacement Designed to match the countersunk head hole size of the piston end nut replacement | M36-M160 | 1-1/2" -6" | 210Mpa 30ksi | -10 to 250°C 0 to 500°F | JL-G or P37 |
| TLMR |  | For rotating equipment; with captive jackbolts | M16-M125 | 3/4" -5" | 300 to 550Mpa 45 to 80ksi | -10 to 250°C 0 to 500°F | JL-G or JL-AS |
| TLMRA |  | Captive countersunk jackbolts "armored" for harsh environments, also good for coupling bolting. | M20-M125 | 3/4" -5" | 350 to 650Mpa 50 to 95ksi | -10 to 250°C 0 to 500°F | JL-G or JL-AS |

MSB-M16x

TOP-LOCK® nut-style tensioners (Standard)



| Model | Nut body F (MM) | | | | | | | Jackboltss E (MM) | | | | | Hardened washer G (MM) | | High total (MM) | Quality of the standard product (kg) | Preload nom M (NM) | torque nom F (KN) | Preload capacity max (KN) |
|----------------|-------------------|----------------|----------------|----------------|-------------------------------|-------------|--------------------------------|-------------------------------|------------|------------------|-----------------------|-------------|-------------------------------|-------------|-----------------|--------------------------------------|--------------------|-------------------|---------------------------|
| | Thread diameter D | Commonly pitch | | | Outer diameter D ₁ | Thickness H | Center distance D ₁ | Pitch*diameter D ₂ | Quantity n | Opposite side SW | Length L ₁ | Clearance a | Outer diameter D ₃ | Thickness s | | | | | |
| | | P ₁ | P ₂ | P ₃ | | | | | | | | | | | | | | | |
| MSB-M16x.../W | M16 | 2.0 | 1.5 | 1.0 | 34 | 16 | 25 | M6×0.75 | 4 | 5 | 30.00 | 6 | 32 | 3 | 33 | 0.11 | 14 | 73 | 94 |
| MSB-M20x.../W | M20 | 2.5 | 1.5 | 1.0 | 38 | 16 | 29 | M6×0.75 | 6 | 5 | 30.00 | 6 | 38 | 4 | 34 | 0.14 | 14 | 110 | 140 |
| MSB-M22x.../W | M22 | 2.5 | 1.5 | 1.0 | 41 | 16 | 31 | M6×0.75 | 6 | 5 | 30.00 | 6 | 41 | 4 | 34 | 0.16 | 14 | 110 | 140 |
| MSB-M24x.../W | M24 | 3.0 | 2.0 | 1.5 | 44 | 16 | 33 | M6×0.75 | 8 | 5 | 30.00 | 6 | 43 | 4 | 34 | 0.19 | 14 | 145 | 185 |
| MSB-M27x.../W | M27 | 3.0 | 2.0 | 1.5 | 50 | 24 | 39 | M8×1.00 | 6 | 6 | 40.00 | 6 | 50 | 5 | 45 | 0.35 | 36 | 215 | 285 |
| MSB-M30x.../W | M30 | 3.5 | 2.0 | 1.5 | 53 | 24 | 42 | M8×1.00 | 6 | 6 | 40.00 | 6 | 53 | 5 | 45 | 0.37 | 36 | 215 | 285 |
| MSB-M33x.../W | M33 | 3.5 | 2.0 | 1.5 | 59 | 24 | 45 | M8×1.00 | 8 | 6 | 40.00 | 6 | 59 | 5 | 45 | 0.48 | 36 | 285 | 380 |
| MSB-M36x.../W | M36 | 4.0 | 3.0 | 1.5 | 66 | 32 | 51 | M10×1.25 | 6 | 8 | 52.00 | 8 | 66 | 5 | 57 | 0.76 | 72 | 345 | 460 |
| MSB-M39x.../W | M39 | 4.0 | 3.0 | 1.5 | 70 | 32 | 54 | M10×1.25 | 8 | 8 | 52.00 | 8 | 70 | 5 | 57 | 0.90 | 72 | 455 | 610 |
| MSB-M42x.../W | M42 | 4.5 | 3.0 | 1.5 | 75 | 32 | 57 | M10×1.25 | 8 | 8 | 52.00 | 8 | 73 | 5 | 57 | 1.01 | 72 | 455 | 610 |
| MSB-M45x.../W | M45 | 4.5 | 3.0 | 1.5 | 83 | 38 | 63 | M12×1.25 | 8 | 10 | 62.00 | 10 | 81 | 6 | 68 | 1.48 | 131 | 700 | 935 |
| MSB-M48x.../W | M48 | 5.0 | 3.0 | 1.5 | 85 | 38 | 66 | M12×1.25 | 8 | 10 | 62.00 | 10 | 85 | 6 | 68 | 1.50 | 131 | 700 | 935 |
| MSB-M52x.../W | M52 | 5.0 | 3.0 | 2.0 | 94 | 38 | 70 | M12×1.25 | 8 | 10 | 62.00 | 10 | 89 | 6 | 68 | 1.80 | 131 | 700 | 935 |
| MSB-M56x.../W | M56 | 5.5 | 4.0 | 2.0 | 100 | 38 | 76 | M12×1.25 | 8 | 10 | 62.00 | 10 | 95 | 6 | 68 | 2.00 | 131 | 700 | 935 |
| MSB-M60x.../W | M60 | 5.5 | 4.0 | 2.0 | 107 | 38 | 78 | M12×1.25 | 10 | 10 | 62.00 | 10 | 100 | 6 | 68 | 2.30 | 131 | 875 | 1170 |
| MSB-M64x.../W | M64 | 6.0 | 4.0 | 2.0 | 113 | 53 | 87 | M16×1.50 | 8 | 14 | 84.00 | 12 | 112 | 8 | 92 | 3.65 | 315 | 1270 | 1690 |
| MSB-M68x.../W | M68 | 6.0 | 4.0 | 2.0 | 117 | 53 | 91 | M16×1.50 | 8 | 14 | 84.00 | 12 | 117 | 8 | 92 | 3.85 | 315 | 1270 | 1690 |
| MSB-M72x.../W | M72 | 6.0 | 4.0 | 2.0 | 120 | 56 | 95 | M16×1.50 | 8 | 14 | 84.00 | 9 | 120 | 8 | 92 | 4.00 | 315 | 1270 | 1690 |
| MSB-M76x.../W | M76 | 6.0 | 4.0 | 2.0 | 132 | 56 | 100 | M16×1.50 | 12 | 14 | 84.00 | 9 | 127 | 8 | 92 | 5.10 | 315 | 1900 | 2530 |
| MSB-M80x.../W | M80 | 6.0 | 4.0 | 2.0 | 132 | 56 | 103 | M16×1.50 | 12 | 14 | 84.00 | 9 | 127 | 8 | 92 | 4.80 | 315 | 1900 | 2530 |
| MSB-M85x.../W | M85 | 6.0 | 4.0 | 2.0 | 137 | 56 | 108 | M16×1.50 | 12 | 14 | 84.00 | 9 | 137 | 8 | 92 | 5.10 | 315 | 1900 | 2530 |
| MSB-M90x.../W | M90 | 6.0 | 4.0 | 2.0 | 145 | 59 | 113 | M16×1.50 | 16 | 14 | 91.00 | 13 | 140 | 8 | 99 | 6.00 | 315 | 2530 | 3380 |
| MSB-M100x.../W | M100 | 6.0 | 4.0 | 2.0 | 164 | 61 | 123 | M16×1.50 | 16 | 14 | 91.00 | 11 | 152 | 8 | 99 | 7.80 | 315 | 2530 | 3380 |
| MSB-M110x.../W | M110 | 6.0 | 4.0 | 2.0 | 177 | 79 | 139 | M20×1.50 | 12 | 17 | 115.00 | 16 | 172 | 10 | 125 | 11.40 | 645 | 3150 | 4200 |
| MSB-M120x.../W | M120 | 6.0 | 4.0 | 2.0 | 189 | 81 | 149 | M20×1.50 | 16 | 17 | 115.00 | 14 | 179 | 10 | 125 | 13.00 | 645 | 4200 | 5600 |
| MSB-M125x.../W | M125 | 6.0 | 4.0 | 2.0 | 194 | 81 | 154 | M20×1.50 | 16 | 17 | 115.00 | 14 | 190 | 10 | 125 | 13.50 | 645 | 4200 | 5600 |
| MSB-M130x.../W | M130 | 6.0 | 4.0 | 2.0 | 205 | 94 | 159 | M20×1.50 | 18 | 17 | 130.00 | 16 | 202 | 10 | 140 | 17.50 | 645 | 4700 | 6300 |
| MSB-M140x.../W | M140 | 6.0 | 4.0 | 2.0 | 215 | 94 | 169 | M20×1.50 | 20 | 17 | 130.00 | 16 | 215 | 10 | 140 | 18.70 | 645 | 5250 | 7700 |
| MSB-M150x.../W | M150 | 6.0 | 4.0 | 2.0 | 225 | 94 | 179 | M20×1.50 | 20 | 17 | 130.00 | 16 | 225 | 12 | 142 | 20.00 | 645 | 5250 | 7700 |
| MSB-M160x.../W | M160 | 6.0 | 4.0 | — | 234 | 107 | 189 | M20×1.50 | 24 | 17 | 150.00 | 23 | 234 | 12 | 162 | 24.10 | 645 | 6300 | 8400 |

MSB-075

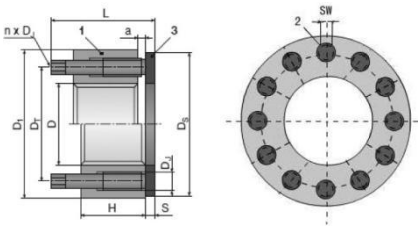
| Model | Nut body(in) | | | | | | | Jackbolts E (in) | | | | | Hardened washer G(in) | | High total (in) | Quality of the standard product (Lb) | Preload nom M (Lbft) | torque nom F (Lbf) | Preload capacity max (LBF) |
|---------------|------------------|----------------|----------------|----------------|--------------|-----------|-----------------|------------------|----------|---------------|--------|-----------|-----------------------|-----------|-----------------|--------------------------------------|----------------------|--------------------|----------------------------|
| | Thread diameterD | Commonly pitch | | | Out diameter | Thickenss | Center distance | Pitch*diameter | Quantity | Opposite side | Length | Clearance | Outer diameter | Thickness | | | | | |
| | | P ₁ | P ₂ | P ₃ | | | | | | | | | | | | | | | |
| MSB-075-.../W | 3/4 | 10.0 | 16 | — | 1.47 | 0.70 | 1.32 | 1/4-28 | 4 | 3/16 | 1.25 | 0.24 | 1.50 | 0.13 | 1.38 | 0.31 | 14 | 20400 | 27200 |
| MSB-087-.../W | 7/8 | 9.0 | 14 | — | 1.60 | 0.70 | 1.26 | 1/4-28 | 6 | 3/16 | 1.25 | 0.24 | 1.63 | 0.13 | 1.38 | 0.34 | 14 | 30600 | 40800 |
| MSB-100-.../W | 1 | 8.0 | 12 | 14 | 1.90 | 0.93 | 1.46 | 5/16-24 | 6 | 1/4 | 1.52 | 0.20 | 2.00 | 0.19 | 1.71 | 0.68 | 27 | 48600 | 64800 |
| MSB-112-.../W | 1-1/8 | 7.0 | 8 | 12 | 2.08 | 0.93 | 1.59 | 5/16-24 | 6 | 1/4 | 1.52 | 0.20 | 2.13 | 0.19 | 1.71 | 0.79 | 27 | 48600 | 64800 |
| MSB-125-.../W | 1-1/4 | 7.0 | 8 | 12 | 2.25 | 0.94 | 1.75 | 5/16-24 | 8 | 1/4 | 1.52 | 0.19 | 2.38 | 0.19 | 1.71 | 0.92 | 27 | 64800 | 86400 |
| MSB-137-.../W | 1-3/8 | 6.0 | 8 | 12 | 2.46 | 1.20 | 1.94 | 3-8/24 | 6 | 5/16 | 1.93 | 0.25 | 2.50 | 0.19 | 2.12 | 1.40 | 49 | 73800 | 98400 |
| MSB-150-.../W | 1-1/2 | 6.0 | 8 | 12 | 2.70 | 1.20 | 2.01 | 3-8/24 | 8 | 5/16 | 1.93 | 0.25 | 2.75 | 0.19 | 2.12 | 1.70 | 49 | 98400 | 131200 |
| MSB-162-.../W | 1-5/8 | 6.0 | 8 | 12 | 2.96 | 1.20 | 2.20 | 3-8/24 | 8 | 5/16 | 1.93 | 0.25 | 2.88 | 0.19 | 2.12 | 2.01 | 49 | 98400 | 131200 |
| MSB-175-.../W | 1-3/4 | 5.0 | 8 | 12 | 3.08 | 1.42 | 2.38 | 3-8/24 | 8 | 3/8 | 2.24 | 0.28 | 3.13 | 0.25 | 2.49 | 2.53 | 75 | 129600 | 172800 |
| MSB-187-.../W | 1-7/8 | 6.0 | 8 | 12 | 3.59 | 1.60 | 2.74 | 1/2-20 | 8 | 7/16 | 2.60 | 0.40 | 3.50 | 0.25 | 2.85 | 4.07 | 114 | 175200 | 233600 |
| MSB-200-.../W | 2 | 4.5 | 8 | 12 | 3.59 | 1.60 | 2.74 | 1/2-20 | 8 | 7/16 | 2.60 | 0.40 | 3.50 | 0.25 | 2.85 | 3.87 | 114 | 175200 | 233600 |
| MSB-225-.../W | 2-1/4 | 4.5 | 8 | 12 | 3.95 | 1.60 | 3.00 | 1/2-20 | 8 | 7/16 | 2.60 | 0.40 | 3.75 | 0.25 | 2.85 | 4.51 | 114 | 175200 | 233600 |
| MSB-250-.../W | 2-1/2 | 4.0 | 8 | 12 | 4.45 | 2.10 | 3.43 | 5/8-18 | 8 | 9/16 | 3.30 | 0.45 | 4.50 | 0.31 | 3.61 | 7.82 | 233 | 285600 | 380800 |
| MSB-275-.../W | 2-3/4 | 4.0 | 8 | 12 | 4.70 | 2.10 | 3.69 | 5/8-18 | 8 | 9/16 | 3.30 | 0.45 | 4.75 | 0.31 | 3.61 | 8.36 | 233 | 285600 | 380800 |
| MSB-300-.../W | 3 | 4.0 | 6 | 8 | 5.20 | 2.10 | 3.95 | 5/8-18 | 12 | 9/16 | 3.30 | 0.45 | 5.00 | 0.31 | 3.61 | 10.30 | 233 | 428400 | 571200 |
| MSB-325-.../W | 3-1/4 | 4.0 | 6 | 8 | 5.45 | 2.20 | 4.15 | 5/8-18 | 12 | 9/16 | 3.56 | 0.35 | 5.00 | 0.31 | 3.61 | 11.04 | 233 | 428400 | 571200 |
| MSB-350-.../W | 3-1/2 | 4.0 | 6 | 8 | 5.70 | 2.30 | 4.40 | 5/8-18 | 16 | 9/16 | 3.56 | 0.51 | 5.50 | 0.31 | 3.87 | 12.62 | 233 | 571200 | 761600 |
| MSB-375-.../W | 3-3/4 | 4.0 | 6 | 8 | 6.20 | 2.40 | 4.65 | 5/8-18 | 16 | 9/16 | 3.56 | 0.41 | 5.50 | 0.31 | 3.87 | 15.08 | 233 | 571200 | 761600 |
| MSB-400-.../W | 4 | 4.0 | 6 | 8 | 6.45 | 2.60 | 4.90 | 5/8-18 | 18 | 9/16 | 3.88 | 0.53 | 6.00 | 0.31 | 4.19 | 17.31 | 233 | 642600 | 856800 |
| MSB-425-.../W | 4-1/4 | 4.0 | 6 | 8 | 6.95 | 3.00 | 5.33 | 3/4-16 | 16 | 5/8 | 4.38 | 0.50 | 6.40 | 0.38 | 4.76 | 23.41 | 390 | 806400 | 1075200 |
| MSB-450-.../W | 4-1/2 | 4.0 | 6 | 8 | 7.20 | 3.00 | 5.58 | 3/4-16 | 16 | 5/8 | 4.38 | 0.50 | 6.65 | 0.38 | 4.76 | 24.44 | 390 | 806400 | 1075200 |
| MSB-475-.../W | 4-3/4 | 4.0 | 6 | 8 | 7.45 | 3.20 | 5.83 | 3/4-16 | 18 | 5/8 | 4.68 | 0.60 | 6.90 | 0.38 | 5.06 | 27.13 | 390 | 907200 | 1209600 |
| MSB-500-.../W | 5 | 4.0 | 6 | 8 | 7.70 | 3.30 | 6.08 | 3/4-16 | 20 | 5/8 | 4.68 | 0.50 | 7.15 | 0.38 | 5.06 | 28.83 | 390 | 1008000 | 1344000 |
| MSB-525-.../W | 5-1/4 | 4.0 | 6 | 8 | 8.45 | 3.70 | 6.58 | 3/4-16 | 22 | 5/8 | 4.98 | 0.40 | 7.65 | 0.38 | 5.36 | 40.06 | 390 | 1108800 | 1478400 |
| MSB-550-.../W | 5-1/2 | 4.0 | 6 | 8 | 8.45 | 3.70 | 6.58 | 3/4-16 | 22 | 5/8 | 4.98 | 0.40 | 7.65 | 0.38 | 5.36 | 37.56 | 390 | 1108800 | 1478400 |
| MSB-575-.../W | 5-3/4 | 4.0 | 6 | 8 | 8.95 | 4.00 | 7.11 | 3/4-16 | 24 | 5/8 | 5.38 | 0.50 | 8.15 | 0.38 | 5.76 | 46.26 | 390 | 1209600 | 1612800 |
| MSB-600-.../W | 6 | 4.0 | 6 | 8 | 8.95 | 4.00 | 7.11 | 3/4-16 | 24 | 5/8 | 5.38 | 0.50 | 8.15 | 0.38 | 5.76 | 43.32 | 390 | 1209600 | 1612800 |

Used for general mechanical artifacts and can be used for medium and high strength bolt or screw.

Such as: mining equipment, anchor bolt, gear box, platform, crusher, engine, compressor, extrusion machine, etc.

MSG-M16X

TOP-LOCK® nut-style tensioners (High strength)



| Model | Nut body F (MM) | | | | | | | Jackbolt ss E (MM) | | | | | Hardened washer G (MM) | | High total (MM) | Quality of the standard product (kg) | Preload nom M (NM) | torque nom F (KN) | Preload capacity max (KN) |
|----------------|-------------------|----------------|----------------|----------------|----------------|----------|-----------------|--------------------|----------|---------------|----------------|-----------|------------------------|-----------|-----------------|--------------------------------------|--------------------|-------------------|---------------------------|
| | Thread diameter D | Commonly pitch | | | Out diameter | Thickens | Center distance | Pitch*diameter | Quantity | Opposite side | Length | Clearance | Outer diameter | Thickness | | | | | |
| | | P ₁ | P ₂ | P ₃ | D ₁ | H | D _T | D _J | n | SW | L ₁ | a | D _s | s | L | | | | |
| MSG-M16x.../W | M16 | 2.0 | 1.5 | 1.0 | 34 | 16 | 25 | M6×0.75 | 6 | 5 | 30.00 | 6 | 32 | 3 | 33 | 0.12 | 14 | 110 | 140 |
| MSG-M20x.../W | M20 | 2.5 | 1.5 | 1.0 | 38 | 17 | 29 | M6×0.75 | 8 | 5 | 30.00 | 5 | 38 | 4 | 34 | 0.15 | 14 | 145 | 185 |
| MSG-M22x.../W | M22 | 2.5 | 1.5 | 1.0 | 41 | 17 | 31 | M6×0.75 | 8 | 5 | 40.00 | 5 | 41 | 4 | 34 | 0.17 | 14 | 145 | 185 |
| MSG-M24x.../W | M24 | 3.0 | 2.0 | 1.5 | 47 | 24 | 36 | M8×1.00 | 6 | 6 | 40.00 | 6 | 47 | 4 | 44 | 0.30 | 36 | 215 | 285 |
| MSG-M27x.../W | M27 | 3.0 | 2.0 | 1.5 | 51 | 24 | 39 | M8×1.00 | 8 | 6 | 40.00 | 6 | 50 | 5 | 45 | 0.37 | 36 | 285 | 380 |
| MSG-M30x.../W | M30 | 3.5 | 2.0 | 1.5 | 54 | 24 | 42 | M8×1.00 | 8 | 6 | 40.00 | 6 | 53 | 5 | 45 | 0.38 | 36 | 285 | 380 |
| MSG-M33x.../W | M33 | 3.5 | 2.0 | 1.5 | 62 | 32 | 48 | M10×1.25 | 6 | 8 | 52.00 | 8 | 61 | 5 | 57 | 0.70 | 72 | 345 | 460 |
| MSG-M36x.../W | M36 | 4.0 | 3.0 | 1.5 | 66 | 32 | 51 | M10×1.25 | 8 | 8 | 52.00 | 8 | 66 | 5 | 57 | 0.79 | 72 | 455 | 610 |
| MSG-M39x.../W | M39 | 4.0 | 3.0 | 1.5 | 72 | 32 | 54 | M10×1.25 | 10 | 8 | 52.00 | 8 | 70 | 5 | 57 | 0.97 | 72 | 570 | 760 |
| MSG-M42x.../W | M42 | 4.5 | 3.0 | 1.5 | 76 | 32 | 57 | M10×1.25 | 12 | 8 | 52.00 | 8 | 73 | 5 | 57 | 1.10 | 72 | 685 | 915 |
| MSG-M45x.../W | M45 | 4.5 | 3.0 | 1.5 | 81 | 38 | 62 | M12×1.25 | 8 | 10 | 62.00 | 10 | 80 | 6 | 68 | 1.40 | 131 | 700 | 935 |
| MSG-M48x.../W | M48 | 5.0 | 3.0 | 1.5 | 85 | 38 | 66 | M12×1.25 | 10 | 10 | 62.00 | 10 | 85 | 6 | 68 | 1.54 | 131 | 875 | 1170 |
| MSG-M52x.../W | M52 | 5.0 | 3.0 | 2.0 | 94 | 38 | 70 | M12×1.25 | 12 | 10 | 62.00 | 10 | 90 | 6 | 68 | 1.80 | 131 | 1050 | 1400 |
| MSG-M56x.../W | M56 | 5.5 | 4.0 | 2.0 | 98 | 38 | 74 | M12×1.25 | 12 | 10 | 62.00 | 10 | 94 | 6 | 68 | 1.93 | 131 | 1050 | 1400 |
| MSG-M60x.../W | M60 | 5.5 | 4.0 | 2.0 | 107 | 59 | 83 | M16×1.50 | 8 | 14 | 91.00 | 13 | 106 | 8 | 99 | 3.70 | 315 | 1270 | 1690 |
| MSG-M64x.../W | M64 | 6.0 | 4.0 | 2.0 | 113 | 59 | 87 | M16×1.50 | 10 | 14 | 91.00 | 13 | 112 | 8 | 99 | 4.10 | 315 | 1580 | 2100 |
| MSG-M68x.../W | M68 | 6.0 | 4.0 | 2.0 | 117 | 59 | 91 | M16×1.50 | 12 | 14 | 91.00 | 13 | 117 | 8 | 99 | 4.30 | 315 | 1900 | 2530 |
| MSG-M72x.../W | M72 | 6.0 | 4.0 | 2.0 | 121 | 59 | 95 | M16×1.50 | 12 | 14 | 91.00 | 13 | 120 | 8 | 99 | 4.50 | 315 | 1900 | 2530 |
| MSG-M76x.../W | M76 | 6.0 | 4.0 | 2.0 | 132 | 61 | 102 | M16×1.50 | 16 | 14 | 91.00 | 11 | 127 | 8 | 99 | 5.60 | 315 | 2530 | 3380 |
| MSG-M80x.../W | M80 | 6.0 | 4.0 | 2.0 | 133 | 61 | 103 | M16×1.50 | 16 | 14 | 91.00 | 11 | 127 | 8 | 99 | 5.40 | 315 | 2530 | 3380 |
| MSG-M85x.../W | M85 | 6.0 | 4.0 | 2.0 | 139 | 61 | 108 | M16×1.50 | 16 | 14 | 91.00 | 11 | 137 | 8 | 99 | 5.80 | 315 | 2530 | 3380 |
| MSG-M90x.../W | M90 | 6.0 | 4.0 | 2.0 | 145 | 61 | 113 | M16×1.50 | 16 | 14 | 91.00 | 11 | 140 | 8 | 99 | 6.30 | 315 | 2530 | 3380 |
| MSG-M100x.../W | M100 | 6.0 | 4.0 | 2.0 | 157 | 61 | 123 | M16×1.50 | 16 | 14 | 91.00 | 11 | 152 | 8 | 99 | 7.00 | 315 | 2530 | 3380 |
| MSG-M110x.../W | M110 | 6.0 | 4.0 | 2.0 | 177 | 61 | 133 | M16×1.50 | 20 | 14 | 91.00 | 11 | 163 | 8 | 99 | 9.00 | 315 | 3150 | 4200 |
| MSG-M120x.../W | M120 | 6.0 | 4.0 | 2.0 | 189 | 81 | 149 | M20×1.50 | 18 | 17 | 115.00 | 14 | 179 | 10 | 125 | 13.10 | 645 | 4700 | 6300 |
| MSG-M125x.../W | M125 | 6.0 | 4.0 | 2.0 | 194 | 81 | 154 | M20×1.50 | 18 | 17 | 115.00 | 14 | 190 | 10 | 125 | 13.70 | 645 | 4700 | 6300 |
| MSG-M130x.../W | M130 | 6.0 | 4.0 | 2.0 | 205 | 94 | 159 | M20×1.50 | 20 | 17 | 130.00 | 16 | 202 | 10 | 140 | 17.60 | 645 | 5250 | 7000 |
| MSG-M140x.../W | M140 | 6.0 | 4.0 | 2.0 | 215 | 94 | 169 | M20×1.50 | 22 | 17 | 130.00 | 16 | 215 | 10 | 140 | 18.89 | 645 | 5750 | 7700 |
| MSG-M150x.../W | M150 | 6.0 | 4.0 | 2.0 | 225 | 94 | 179 | M20×1.50 | 22 | 17 | 130.00 | 16 | 225 | 12 | 142 | 20.10 | 645 | 5750 | 7700 |
| MSG-M160x.../W | M160 | 6.0 | 4.0 | — | 226 | 107 | 189 | M20×1.50 | 24 | 17 | 150.00 | 23 | 220 | 10 | 160 | 20.80 | 645 | 6300 | 8400 |

MSG-075

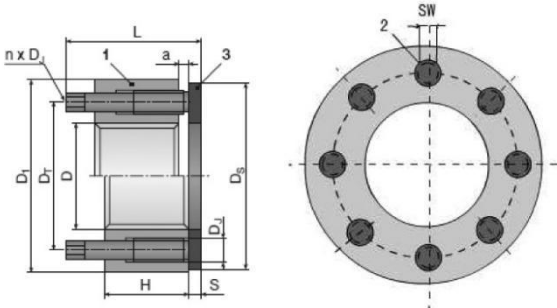
| Model | Nut body F(in) | | | | | | Jackboltss E(in) | | | | | Hardened washer G(in) | | High total (in) | Quality of the standard product (Lb) | Preload nom M (Lbft) | torque nom F (LBf) | Preload capacity max (LBf) | |
|---------------|---------------------|----------------|----------------|----------------|----------------|------------|------------------|-----------------|-----------|----------------|-----------|-----------------------|-----------------|-----------------|--------------------------------------|----------------------|--------------------|----------------------------|-------------|
| | Thre ad diam eter D | Commonly pitch | | | Out dia met er | Thicke nss | Center distan ce | Pitch*di ameter | Quant ity | Opposi te side | LenTLGT h | Clearanc e | Outer diamet er | | | | | | Thic knes s |
| | | P ₁ | P ₂ | P ₃ | | | | | | | | | | | | | | | |
| MSG-075-.../W | 3/4 | 10.0 | 16 | – | 1.47 | 0.70 | 1.13 | 1/4-28 | 6 | 3/16 | 1.25 | 0.24 | 1.50 | 0.13 | 1.38 | 0.31 | 14 | 30600 | 40800 |
| MSG-087-.../W | 7/8 | 9.0 | 14 | – | 1.70 | 0.70 | 1.26 | 1/4-28 | 8 | 3/16 | 1.25 | 0.24 | 1.63 | 0.13 | 1.38 | 0.39 | 14 | 40800 | 54400 |
| MSG-100-.../W | 1 | 8.0 | 12 | 14 | 1.90 | 0.93 | 1.46 | 5/16-24 | 6 | 1/4 | 1.52 | 0.20 | 2.00 | 0.19 | 1.71 | 0.68 | 27 | 48600 | 64800 |
| MSG-112-.../W | 1-1/8 | 7.0 | 8 | 12 | 2.08 | 0.93 | 1.59 | 5/16-24 | 8 | 1/4 | 1.52 | 0.20 | 2.13 | 0.19 | 1.71 | 0.78 | 27 | 64800 | 86400 |
| MSG-125-.../W | 1-1/4 | 7.0 | 8 | 12 | 2.32 | 1.20 | 1.81 | 3/8/24 | 6 | 5/16 | 1.52 | 0.25 | 2.38 | 0.19 | 2.12 | 1.30 | 49 | 73800 | 98400 |
| MSG-137-.../W | 1-3/8 | 6.0 | 8 | 12 | 2.46 | 1.20 | 1.92 | 3-8/24 | 8 | 5/16 | 1.93 | 0.25 | 2.50 | 0.19 | 2.12 | 1.42 | 49 | 98400 | 131200 |
| MSG-150-.../W | 1-1/2 | 6.0 | 8 | 12 | 2.80 | 1.42 | 2.13 | 7/16/20 | 8 | 3/8 | 1.93 | 0.28 | 2.75 | 0.19 | 2.43 | 2.11 | 75 | 129600 | 172800 |
| MSG-162-.../W | 1-5/8 | 6.0 | 8 | 12 | 2.96 | 1.42 | 2.26 | 7/16/20 | 8 | 3/8 | 1.93 | 0.28 | 2.88 | 0.19 | 2.43 | 2.29 | 75 | 129600 | 172800 |
| MSG-175-.../W | 1-3/4 | 5.0 | 8 | 12 | 3.20 | 1.42 | 2.38 | 7/16/20 | 12 | 3/8 | 2.24 | 0.28 | 3.13 | 0.25 | 2.49 | 2.80 | 75 | 194400 | 259200 |
| MSG-187-.../W | 1-7/8 | 6.0 | 8 | 12 | 3.59 | 1.60 | 2.74 | 1/2-20 | 8 | 7/16 | 2.60 | 0.40 | 3.50 | 0.25 | 2.85 | 4.07 | 114 | 175200 | 233600 |
| MSG-200-.../W | 2 | 4.5 | 8 | 12 | 3.70 | 1.60 | 2.74 | 1/2-20 | 12 | 7/16 | 2.60 | 0.40 | 3.50 | 0.25 | 2.85 | 4.24 | 114 | 262800 | 350400 |
| MSG-225-.../W | 2-1/4 | 4.5 | 8 | 12 | 3.95 | 1.60 | 3.00 | 1/2-20 | 12 | 7/16 | 2.60 | 0.40 | 3.75 | 0.25 | 2.85 | 4.59 | 114 | 262800 | 350400 |
| MSG-250-.../W | 2-1/2 | 4.0 | 8 | 12 | 4.45 | 2.30 | 3.43 | 5/8-18 | 12 | 9/16 | 3.30 | 0.51 | 4.50 | 0.31 | 3.87 | 8.64 | 233 | 428400 | 571200 |
| MSG-275-.../W | 2-3/4 | 4.0 | 8 | 12 | 4.70 | 2.40 | 3.69 | 5/8-18 | 12 | 9/16 | 3.30 | 0.41 | 4.75 | 0.31 | 3.87 | 9.45 | 233 | 428400 | 571200 |
| MSG-300-.../W | 3 | 4.0 | 6 | 8 | 5.20 | 2.30 | 3.95 | 5/8-18 | 16 | 9/16 | 3.30 | 0.51 | 5.00 | 0.31 | 3.87 | 11.33 | 233 | 571200 | 761600 |
| MSG-325-.../W | 3-1/4 | 4.0 | 6 | 8 | 5.45 | 2.30 | 4.15 | 5/8-18 | 16 | 9/16 | 3.56 | 0.51 | 5.00 | 0.31 | 3.87 | 11.79 | 233 | 571200 | 761600 |
| MSG-350-.../W | 3-1/2 | 4.0 | 6 | 8 | 5.70 | 2.40 | 4.40 | 5/8-18 | 18 | 9/16 | 3.56 | 0.41 | 5.50 | 0.31 | 3.87 | 13.02 | 233 | 642600 | 856800 |
| MSG-375-.../W | 3-3/4 | 4.0 | 6 | 8 | 5.95 | 2.40 | 4.65 | 5/8-18 | 18 | 9/16 | 3.56 | 0.41 | 5.50 | 0.31 | 3.87 | 13.49 | 233 | 642600 | 856800 |
| MSG-400-.../W | 4 | 4.0 | 6 | 8 | 6.20 | 2.60 | 4.90 | 5/8-18 | 20 | 9/16 | 3.88 | 0.53 | 6.00 | 0.31 | 4.19 | 15.50 | 233 | 714000 | 952000 |
| MSG-425-.../W | 4-1/4 | 4.0 | 6 | 8 | 6.95 | 3.00 | 5.33 | 3/4-16 | 18 | 5/8 | 4.38 | 0.50 | 6.40 | 0.38 | 4.76 | 23.50 | 390 | 907200 | 1209600 |
| MSG-450-.../W | 4-1/2 | 4.0 | 6 | 8 | 7.20 | 3.00 | 5.58 | 3/4-16 | 18 | 5/8 | 4.38 | 0.50 | 6.65 | 0.38 | 4.76 | 24.53 | 390 | 907200 | 1209600 |
| MSG-475-.../W | 4-3/4 | 4.0 | 6 | 8 | 7.45 | 3.20 | 5.83 | 3/4-16 | 20 | 5/8 | 4.68 | 0.60 | 6.90 | 0.38 | 5.06 | 29.90 | 390 | 1008000 | 1344000 |
| MSG-500-.../W | 5 | 4.0 | 6 | 8 | 7.70 | 3.30 | 6.08 | 3/4-16 | 20 | 5/8 | 4.68 | 0.50 | 7.15 | 0.38 | 5.06 | 28.83 | 390 | 1008000 | 1344000 |
| MSG-525-.../W | 5-1/4 | 4.0 | 6 | 8 | 7.95 | 3.70 | 6.58 | 3/4-16 | 22 | 5/8 | 4.98 | 0.40 | 7.65 | 0.38 | 5.36 | 33.12 | 390 | 1108800 | 1478400 |
| MSG-550-.../W | 5-1/2 | 4.0 | 6 | 8 | 7.95 | 3.70 | 6.58 | 3/4-16 | 22 | 5/8 | 4.98 | 0.40 | 7.65 | 0.38 | 5.36 | 30.62 | 390 | 1108800 | 1478400 |
| MSG-575-.../W | 5-3/4 | 4.0 | 6 | 8 | 8.45 | 4.00 | 7.08 | 3/4-16 | 24 | 5/8 | 5.38 | 0.50 | 8.15 | 0.38 | 5.76 | 38.31 | 390 | 1209600 | 1612800 |
| MSG-600-.../W | 6 | 4.0 | 6 | 8 | 8.45 | 4.00 | 7.08 | 3/4-16 | 24 | 5/8 | 5.38 | 0.50 | 8.15 | 0.38 | 5.76 | 35.36 | 390 | 1209600 | 1612800 |

Used for high mechanical artifacts and can be used for large hexagonal nut environment.

Such as: low temperature bolt, compressor, high pressure centrifuge, excavator walking bracket, pump, high pressure flange, reducer, gear box, gear, crusher, military equipment working etc.

TLH650-M20x

TOP-LOCK® nut-style tensioners (Medium temperature)



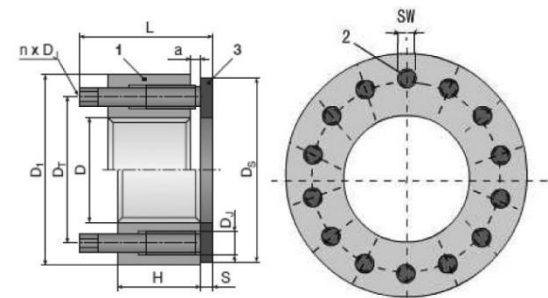
| Model | Nut body F (MM) | | | | | | | Jackboltss E (MM) | | | | | Hardened washer G (MM) | | High total (MM) | Quality of the standard product (kg) | Preload nom M (NM) | torque nom F (KN) |
|------------------|------------------|----------------|----------------|----------------|--------------|------------|-----------------|-------------------|----------|---------------|--------|-----------|------------------------|-----------|-----------------|--------------------------------------|--------------------|-------------------|
| | Thread diameterD | Commonly pitch | | | Out diameter | Thick enss | Center distance | Pitch*diameter | Quantity | Opposite side | Length | Clearance | Outer diameter | Thickness | | | | |
| | | P ₁ | P ₂ | P ₃ | | | | | | | | | | | D ₁ | | | |
| TLH650-M20x.../W | M20 | 2.5 | 1.5 | 1.0 | 38 | 16 | 29 | M6×0.75 | 6 | 5 | 30.00 | 6 | 38 | 4 | 34 | 0.14 | 10 | 75 |
| TLH650-M22x.../W | M22 | 2.5 | 1.5 | 1.0 | 41 | 16 | 31 | M6×0.75 | 6 | 5 | 30.00 | 6 | 41 | 4 | 34 | 0.16 | 12 | 94 |
| TLH650-M24x.../W | M24 | 3.0 | 2.0 | 1.5 | 44 | 16 | 33 | M6×0.75 | 8 | 5 | 30.00 | 6 | 43 | 4 | 34 | 0.19 | 11 | 110 |
| TLH650-M27x.../W | M27 | 3.0 | 2.0 | 1.5 | 50 | 24 | 39 | M8×1.00 | 6 | 6 | 40.00 | 6 | 50 | 5 | 45 | 0.35 | 24 | 140 |
| TLH650-M30x.../W | M30 | 3.5 | 2.0 | 1.5 | 53 | 24 | 42 | M8×1.00 | 6 | 6 | 40.00 | 6 | 53 | 5 | 45 | 0.37 | 30 | 175 |
| TLH650-M33x.../W | M33 | 3.5 | 2.0 | 1.5 | 59 | 24 | 45 | M8×1.00 | 8 | 6 | 40.00 | 6 | 59 | 5 | 45 | 0.48 | 27 | 215 |
| TLH650-M36x.../W | M36 | 4.0 | 3.0 | 1.5 | 66 | 32 | 51 | M10×1.25 | 6 | 8 | 52.00 | 8 | 66 | 5 | 57 | 0.76 | 53 | 255 |
| TLH650-M39x.../W | M39 | 4.0 | 3.0 | 1.5 | 70 | 32 | 54 | M10×1.25 | 8 | 8 | 52.00 | 8 | 70 | 5 | 57 | 0.90 | 47 | 300 |
| TLH650-M42x.../W | M42 | 4.5 | 3.0 | 1.5 | 75 | 32 | 57 | M10×1.25 | 8 | 8 | 52.00 | 8 | 73 | 5 | 57 | 1.01 | 55 | 350 |
| TLH650-M45x.../W | M45 | 4.5 | 3.0 | 1.5 | 83 | 38 | 63 | M10×1.25 | 8 | 10 | 62.00 | 10 | 81 | 6 | 68 | 1.48 | 75 | 405 |
| TLH650-M48x.../W | M48 | 5.0 | 3.0 | 1.5 | 85 | 38 | 66 | M12×1.25 | 8 | 10 | 62.00 | 10 | 85 | 6 | 68 | 1.50 | 85 | 455 |
| TLH650-M52x.../W | M52 | 5.0 | 3.0 | 2.0 | 94 | 38 | 70 | M12×1.25 | 8 | 10 | 62.00 | 10 | 89 | 6 | 68 | 1.80 | 100 | 540 |
| TLH650-M56x.../W | M56 | 5.5 | 4.0 | 2.0 | 100 | 38 | 76 | M12×1.25 | 8 | 10 | 62.00 | 10 | 95 | 6 | 68 | 2.00 | 120 | 630 |
| TLH650-M60x.../W | M60 | 5.5 | 4.0 | 2.0 | 107 | 38 | 78 | M12×1.25 | 10 | 10 | 62.00 | 10 | 100 | 6 | 68 | 2.30 | 110 | 740 |
| TLH650-M64x.../W | M64 | 6.0 | 4.0 | 2.0 | 113 | 53 | 87 | M16×1.50 | 8 | 14 | 84.00 | 12 | 112 | 8 | 92 | 3.65 | 205 | 830 |
| TLH650-M72x.../W | M72 | 6.0 | 4.0 | 2.0 | 120 | 56 | 95 | M16×1.50 | 8 | 14 | 84.00 | 9 | 120 | 8 | 92 | 4.00 | 265 | 1070 |
| TLH650-M76x.../W | M76 | 6.0 | 4.0 | 2.0 | 132 | 56 | 100 | M16×1.50 | 12 | 14 | 84.00 | 9 | 127 | 8 | 92 | 5.10 | 200 | 1200 |
| TLH650-M80x.../W | M80 | 6.0 | 4.0 | 2.0 | 132 | 56 | 103 | M16×1.50 | 12 | 14 | 84.00 | 9 | 127 | 8 | 92 | 4.80 | 220 | 1330 |
| TLH650-M90x.../W | M90 | 6.0 | 4.0 | 2.0 | 145 | 59 | 113 | M16×1.50 | 16 | 14 | 91.00 | 13 | 140 | 8 | 99 | 6.00 | 215 | 1730 |
| TLH650-M100x.../ | M100 | 6.0 | 4.0 | 2.0 | 164 | 61 | 123 | M16×150 | 16 | 14 | 91.00 | 11 | 152 | 8 | 99 | 7.80 | 270 | 2170 |
| TLH650-M110x.../ | M110 | 6.0 | 4.0 | 2.0 | 177 | 79 | 139 | M20×1.50 | 12 | 17 | 115.00 | 16 | 172 | 10 | 125 | 11.40 | 550 | 2650 |
| TLH650-M120x.../ | M120 | 6.0 | 4.0 | 2.0 | 189 | 81 | 149 | M20×1.50 | 16 | 17 | 115.00 | 14 | 179 | 10 | 125 | 13.00 | 500 | 3210 |
| TLH650-M125x.../ | M125 | 6.0 | 4.0 | 2.0 | 194 | 81 | 154 | M20×1.50 | 16 | 17 | 115.00 | 14 | 190 | 10 | 125 | 13.50 | 540 | 3470 |

TLH650-075

| Model | Nut body F(in) | | | | | | | Jackboltss E(in) | | | | | Hardened washer G(in) | | High total (in) | Quality of the standard product (Lb) | Preload nom M (Lbft) | torque nom F (LBf) |
|------------------|-------------------|----------------|----------------|----------------|---------------|------------|------------------|------------------|-----------|----------------|--------|------------|-----------------------|------------|-----------------|--------------------------------------|----------------------|--------------------|
| | Thread diamet erD | Commonly pitch | | | Out diame ter | Thicken ss | Center distan ce | Pitch*diameter | Quant ity | Oppos ite side | Length | Clear ance | Outer diamet er | Thickne ss | | | | |
| | | P ₁ | P ₂ | P ₃ | | | | | | | | | | | D ₁ | | | |
| TLH650-075-.../W | 3/4 | 10.0 | 16 | — | 1.47 | 0.70 | 1.132 | 1/4-28 | 4 | 3/16 | 1.25 | 0.24 | 1.50 | 0.13 | 1.38 | 0.31 | 9 | 13950 |
| TLH650-087-.../W | 7/8 | 9.0 | 14 | — | 1.60 | 0.70 | 1.262 | 1/4-28 | 6 | 3/16 | 1.25 | 0.24 | 1.63 | 0.13 | 1.38 | 0.34 | 9 | 19790 |
| TLH650-100-.../W | 1 | 8.0 | 12 | 14 | 1.90 | 0.93 | 1.456 | 5/16-24 | 6 | 1/4 | 1.52 | 0.20 | 2.00 | 0.19 | 1.71 | 0.68 | 15 | 27260 |
| TLH650-112-.../W | 1-1/8 | 7.0 | 8 | 12 | 2.08 | 0.93 | 1.585 | 5/16-24 | 6 | 1/4 | 1.52 | 0.20 | 2.13 | 0.19 | 1.71 | 0.79 | 20 | 35570 |
| TLH650-125-.../W | 1-1/4 | 7.0 | 8 | 12 | 2.25 | 0.94 | 1.747 | 5/16-24 | 8 | 1/4 | 1.52 | 0.19 | 2.38 | 0.19 | 1.71 | 0.92 | 19 | 44990 |
| TLH650-137-.../W | 1-3/8 | 6.0 | 8 | 12 | 2.46 | 1.20 | 1.941 | 3/8-24 | 6 | 5/16 | 1.93 | 0.25 | 2.50 | 0.19 | 2.12 | 1.40 | 37 | 55510 |
| TLH650-150-.../W | 1-1/2 | 6.0 | 8 | 12 | 2.70 | 1.20 | 2.070 | 3/8-24 | 8 | 5/16 | 1.93 | 0.25 | 2.75 | 0.19 | 2.12 | 1.70 | 33 | 67130 |
| TLH650-162-.../W | 1-5/8 | 6.0 | 8 | 12 | 2.96 | 1.20 | 2.000 | 3/8-24 | 8 | 5/16 | 1.93 | 0.25 | 2.88 | 0.19 | 2.12 | 2.01 | 40 | 79860 |
| TLH650-175-.../W | 1-3/4 | 5.0 | 8 | 12 | 3.08 | 1.42 | 2.381 | 7/16-20 | 8 | 3/8 | 2.24 | 0.28 | 3.13 | 0.25 | 2.49 | 2.53 | 54 | 93700 |
| TLH650-187-.../W | 1-7/8 | 6.0 | 8 | 12 | 3.59 | 1.60 | 2.743 | 1/2-20 | 8 | 7/16 | 2.60 | 0.40 | 3.50 | 0.25 | 2.85 | 4.07 | 71 | 108600 |
| TLH650-200-.../W | 2 | 4.5 | 8 | 12 | 3.59 | 1.60 | 2.743 | 1/2-20 | 8 | 7/16 | 2.60 | 0.40 | 3.50 | 0.25 | 2.85 | 3.87 | 81 | 124700 |
| TLH650-225-.../W | 2-1/4 | 4.5 | 8 | 12 | 3.95 | 1.60 | 3.003 | 1/2-20 | 8 | 7/16 | 2.60 | 0.40 | 3.75 | 0.25 | 2.85 | 4.51 | 104 | 160100 |
| TLH650-250-.../W | 2-1/2 | 4.0 | 8 | 12 | 4.45 | 2.10 | 3.429 | 5/8-18 | 8 | 9/16 | 3.30 | 0.45 | 4.50 | 0.31 | 3.61 | 7.82 | 163 | 199900 |
| TLH650-275-.../W | 2-3/4 | 4.0 | 8 | 12 | 4.70 | 2.10 | 3.688 | 5/8-18 | 8 | 9/16 | 3.30 | 0.45 | 4.75 | 0.31 | 3.61 | 8.36 | 199 | 244100 |
| TLH650-300-.../W | 3 | 4.0 | 6 | 8 | 5.20 | 2.10 | 3.947 | 5/8-18 | 12 | 9/16 | 3.30 | 0.45 | 5.00 | 0.31 | 3.61 | 10.3 | 159 | 292800 |
| TLH650-325-.../W | 3-1/4 | 4.0 | 6 | 8 | 5.45 | 2.20 | 4.150 | 5/8-18 | 12 | 9/16 | 3.56 | 0.35 | 5.00 | 0.31 | 3.61 | 11.04 | 188 | 345900 |
| TLH650-350-.../W | 3-1/2 | 4.0 | 6 | 8 | 5.70 | 2.30 | 4.400 | 5/8-18 | 16 | 9/16 | 3.56 | 0.51 | 5.50 | 0.31 | 3.87 | 12.62 | 164 | 403300 |
| TLH650-375-.../W | 3-3/4 | 4.0 | 6 | 8 | 6.20 | 2.40 | 4.650 | 5/8-18 | 16 | 9/16 | 3.56 | 0.41 | 5.50 | 0.31 | 3.87 | 15.08 | 189 | 465300 |
| TLH650-400-.../W | 4 | 4.0 | 6 | 8 | 6.45 | 2.60 | 4.900 | 5/8-18 | 18 | 9/16 | 3.88 | 0.53 | 6.00 | 0.31 | 4.19 | 17.31 | 192 | 531600 |
| TLH650-425-.../W | 4-1/4 | 4.0 | 6 | 8 | 6.95 | 3.00 | 5.330 | 3/4-16 | 16 | 5/8 | 4.38 | 0.50 | 6.40 | 0.38 | 4.76 | 23.41 | 291 | 602300 |
| TLH650-450-.../W | 4-1/2 | 4.0 | 6 | 8 | 7.20 | 3.00 | 5.580 | 3/4-16 | 16 | 5/8 | 4.38 | 0.50 | 6.65 | 0.38 | 4.76 | 24.44 | 328 | 677500 |
| TLH650-475-.../W | 4-3/4 | 4.0 | 6 | 8 | 7.45 | 3.20 | 5.830 | 3/4-16 | 18 | 5/8 | 4.68 | 0.60 | 6.90 | 0.38 | 5.06 | 27.13 | 326 | 757100 |
| TLH650-500-.../W | 5 | 4.0 | 6 | 8 | 7.70 | 3.30 | 6.080 | 3/4-16 | 20 | 5/8 | 4.68 | 0.50 | 7.15 | 0.38 | 5.06 | 28.83 | 325 | 841100 |

TLH650T-M24x

TOP-LOCK® nut-style tensioners (Medium temperature)



| Model | Nut body F(MM) | | | | | | | Jackbolttss E (MM) | | | | | Hardened washer G(MM) | | High total (MM) | Quality of the standar d product (kg) | Preload nom M (NM) | torque nom F (KN) |
|--------------------|--------------------|----------------|----------------|----------------|------------------------------|---------------|----------------------------------|--------------------------------|-------------|-------------------|-----------------------|--------------|--------------------------------|--------------|-----------------|---------------------------------------|--------------------|-------------------|
| | Threa d diam eterD | Commonly pitch | | | Out diam eter D ₁ | Thic kens s H | Cent er dist ance D _T | Pitch*diam eter D _J | Quant ity n | Opposi te side SW | Length L ₁ | Clear ance a | Outer diam eter D _s | Thick ness s | | | | |
| | | P ₁ | P ₂ | P ₃ | | | | | | | | | | | | | | |
| TLH650T-M24x.../W | M24 | 3.0 | 2 | 1.5 | 41 | 28 | 32 | M6×0.75 | 8 | 5 | 1.25 | 4 | 40 | 3 | 43 | 0.20 | 11 | 110 |
| TLH650T-M27x.../W | M27 | 3.0 | 2 | 1.5 | 43 | 28 | 35 | M6×0.75 | 10 | 5 | 1.25 | 4 | 43 | 3 | 43 | 0.25 | 11 | 140 |
| TLH650T-M30x.../W | M30 | 3.5 | 2 | 1.5 | 46 | 28 | 38 | M6×0.75 | 12 | 5 | 1.52 | 4 | 46 | 3 | 43 | 0.25 | 11 | 175 |
| TLH650T-M33x.../W | M33 | 3.5 | 2 | 1.5 | 49 | 28 | 41 | M6×0.75 | 14 | 5 | 1.52 | 4 | 49 | 3 | 43 | 0.30 | 12 | 215 |
| TLH650T-M36x.../W | M36 | 4.0 | 3 | 1.5 | 53 | 28 | 44 | M6×0.75 | 16 | 5 | 1.52 | 4 | 53 | 6 | 46 | 0.35 | 12 | 255 |
| TLH650T-M39x.../W | M39 | 4.0 | 3 | 1.5 | 61 | 38 | 50 | M8×1.00 | 10 | 6 | 1.93 | 5 | 61 | 4 | 57 | 0.60 | 30 | 300 |
| TLH650T-M42x.../W | M42 | 4.5 | 3 | 1.5 | 64 | 38 | 53 | M8×1.00 | 12 | 6 | 1.93 | 5 | 64 | 4 | 57 | 0.65 | 30 | 350 |
| TLH650T-M45x.../W | M45 | 4.5 | 3 | 1.5 | 67 | 38 | 56 | M8×1.00 | 14 | 6 | 1.93 | 5 | 67 | 6 | 59 | 0.75 | 29 | 405 |
| TLH650T-M48x.../W | M48 | 5.0 | 3 | 1.5 | 72 | 38 | 59 | M8×1.00 | 14 | 6 | 2.24 | 5 | 70 | 10 | 63 | 0.90 | 33 | 455 |
| TLH650T-M52x.../W | M52 | 5.0 | 3 | 2.0 | 79 | 46 | 66 | M10×1.25 | 12 | 8 | 2.60 | 6 | 78 | 5 | 69 | 1.25 | 56 | 540 |
| TLH650T-M56x.../W | M56 | 5.5 | 4 | 2.0 | 84 | 46 | 70 | M10×1.25 | 14 | 8 | 2.60 | 6 | 82 | 10 | 74 | 1.45 | 57 | 630 |
| TLH650T-M60x.../W | M60 | 5.5 | 4 | 2.0 | 90 | 46 | 74 | M10×1.25 | 16 | 8 | 2.60 | 6 | 86 | 14 | 78 | 1.75 | 58 | 740 |
| TLH650T-M64x.../W | M64 | 6.0 | 4 | 2.0 | 96 | 62 | 80 | M12×1.25 | 12 | 10 | 3.30 | 8 | 96 | 18 | 102 | 2.75 | 105 | 830 |
| TLH650T-M72x.../W | M72 | 6.0 | 4 | 2.0 | 106 | 62 | 88 | M12×1.25 | 16 | 10 | 3.30 | 8 | 105 | 6 | 90 | 2.80 | 100 | 1070 |
| TLH650T-M76x.../W | M76 | 6.0 | 4 | 2.0 | 114 | 62 | 96 | M12×1.25 | 16 | 10 | 3.30 | 8 | 112 | 12 | 96 | 3.50 | 110 | 1200 |
| TLH650T-M80x.../W | M80 | 6.0 | 4 | 2.0 | 118 | 62 | 96 | M12×1.25 | 18 | 10 | 3.30 | 8 | 112 | 15 | 99 | 3.70 | 110 | 1330 |
| TLH650T-M90x.../W | M90 | 6.0 | 4 | 2.0 | 135 | 80 | 111 | M16×1.50 | 14 | 14 | 3.56 | 9 | 135 | 9 | 117 | 6.10 | 245 | 1730 |
| TLH650T-M100x.../W | M100 | 6.0 | 4 | 2.0 | 149 | 80 | 121 | M16×1.50 | 16 | 14 | | 9 | 144 | 19 | 127 | 7.85 | 270 | 2170 |

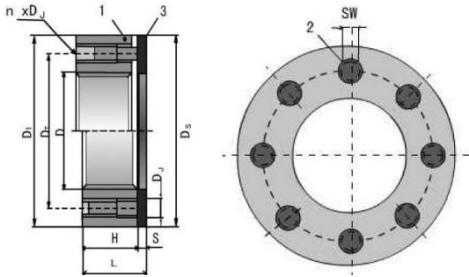
TLH650T-100

| Model | Nut body F(in) | | | | | | | Jackbolttss E(in) | | | | | Hardened washer G(in) | | High total (in) | Quality of the standard product (Lb) | Preload nom M (Lbft) | torque nom F (LBf) |
|-------------------|--------------------|----------------|----------------|----------------|----------------|-------------|------------------|-------------------|-----------|----------------|----------------|------------|-----------------------|-------------|-----------------|--------------------------------------|----------------------|--------------------|
| | Threa d diame terD | Commonly pitch | | | Out diame ter | Thic kens s | Center distan ce | Pitch*dia meter | Quan tity | Oppos ite side | Lengt h | Cleara nce | Outer diame ter | Thic knes s | | | | |
| | | P ₁ | P ₂ | P ₃ | D _i | H | D _r | D _j | n | SW | L _i | a | D _s | s | L | | | |
| TLH650T-100-.../W | 1 | 8.0 | 12 | 14 | 1.67 | 1.1 | 1.34 | 1/4-28 | 8 | 3/16 | 1.59 | 0.18 | 1.67 | 0.13 | 1.72 | 0.53 | 9 | 27260 |
| TLH650T-112-.../W | 1-1/8 | 7.0 | 8 | 12 | 1.80 | 1.1 | 1.46 | 1/4-28 | 8 | 3/16 | 1.59 | 0.18 | 1.75 | 0.13 | 1.72 | 0.58 | 12 | 35570 |
| TLH650T-125-.../W | 1-1/4 | 7.0 | 8 | 12 | 1.92 | 1.1 | 1.59 | 1/4-28 | 12 | 3/16 | 1.59 | 0.18 | 1.88 | 0.13 | 1.72 | 0.64 | 10 | 44990 |
| TLH650T-137-.../W | 1-3/8 | 6.0 | 8 | 12 | 2.08 | 1.1 | 1.71 | 1/4-28 | 14 | 3/16 | 1.59 | 0.18 | 2.05 | 0.25 | 1.84 | 0.80 | 11 | 55510 |
| TLH650T-150-.../W | 1-1/2 | 6.0 | 8 | 12 | 2.34 | 1.5 | 1.92 | 5/6-24 | 10 | 1/4 | 2.09 | 0.20 | 2.29 | 0.15 | 2.24 | 1.17 | 22 | 67130 |
| TLH650T-162-.../W | 1-5/8 | 6.0 | 8 | 12 | 2.47 | 1.5 | 2.05 | 5/6-24 | 12 | 1/4 | 2.09 | 0.20 | 2.47 | 0.15 | 2.24 | 1.26 | 22 | 79860 |
| TLH650T-175-.../W | 1-3/4 | 5.0 | 8 | 12 | 2.62 | 1.5 | 2.17 | 5/6-24- | 14 | 1/4 | 1.99 | 0.20 | 2.60 | 0.25 | 2.34 | 1.46 | 22 | 93700 |
| TLH650T-187-.../W | 1-7/8 | 6.0 | 8 | 12 | 2.79 | 1.5 | 2.3 | 5/6-24 | 16 | 1/4 | 2.09 | 0.20 | 2.75 | 0.38 | 2.47 | 1.75 | 22 | 108600 |
| TLH650T-200-.../W | 2 | 4.5 | 8 | 12 | 3.06 | 1.8 | 2.51 | 3/8-24 | 12 | 5/16 | 2.53 | 0.25 | 3.00 | 0.20 | 2.73 | 2.45 | 41 | 124700 |
| TLH650T-225-.../W | 2-1/4 | 4.5 | 8 | 12 | 3.37 | 1.8 | 2.76 | 3/8-24 | 16 | 5/16 | 2.89 | 0.25 | 3.26 | 0.40 | 2.93 | 3.12 | 40 | 160100 |
| TLH650T-250-.../W | 2-1/2 | 4.0 | 8 | 12 | 3.75 | 2.1 | 3.09 | 7/16-20 | 16 | 3/8 | 3.40 | 0.25 | 3.68 | 0.40 | 3.29 | 4.38 | 58 | 199900 |
| TLH650T-275-.../W | 2-3/4 | 4.0 | 8 | 12 | 4.13 | 2.5 | 3.43 | 1/2-20 | 14 | 7/16 | 3.40 | 0.30 | 4.12 | 0.25 | 3.65 | 5.92 | 91 | 244100 |
| TLH650T-300-.../W | 3 | 4.0 | 6 | 8 | 4.49 | 2.5 | 3.68 | 1/2-20 | 16 | 7/16 | 3.40 | 0.30 | 4.40 | 0.50 | 3.90 | 7.50 | 95 | 292800 |
| TLH650T-325-.../W | 3-1/4 | 4.0 | 6 | 8 | 4.87 | 2.5 | 3.93 | 1/2-20 | 18 | 7/16 | 3.40 | 0.30 | 4.65 | 0.70 | 4.10 | 9.21 | 100 | 345900 |
| TLH650T-350-.../W | 3-1/2 | 4.0 | 6 | 8 | 5.30 | 3.15 | 4.34 | 5/8-18 | 14 | 9/16 | 4.25 | 0.35 | 5.19 | 0.35 | 4.60 | 12.69 | 188 | 403300 |
| TLH650T-375-.../W | 3-3/4 | 4.0 | 6 | 8 | 5.62 | 3.15 | 4.59 | 5/8-18 | 16 | 9/16 | 4.25 | 0.35 | 5.60 | 0.60 | 4.85 | 15.11 | 189 | 465300 |
| TLH650T-400-.../W | 4 | 4.0 | 6 | 8 | 5.97 | 3.15 | 4.84 | 5/8-18 | 18 | 9/16 | 4.25 | 0.35 | 5.69 | 0.80 | 5.05 | 17.26 | 192 | 531600 |

Used for medium temperature high pressure vessel, bolt or stud material for A193- B7

TLSJ-M20x

TOP-LOCK®nut-style tensioners(Compact)



| Model | Nut body F(MM) | | | | | | | Jackboltss E(MM) | | | | Hardened washer G (MM) | | High total (MM) | Quality of the standard product (kg) | Preload nom M (NM) | torque nom F (KN) | Preload capacity max (KN) |
|----------------|------------------|----------------|----------------|----------------|--------------|------------|------------------|------------------|-----------|----------------|---------|------------------------|------------|-----------------|--------------------------------------|--------------------|-------------------|---------------------------|
| | Thread diameterD | Commonly pitch | | | Out diameter | Thick enss | Cente r distance | Pitch*dia meter | Quanti ty | Opposit e side | Lengt h | Outer diameter | Thick ness | | | | | |
| | | P ₁ | P ₂ | P ₃ | | | | | | | | | | | | | | |
| TLSJ-M20x.../W | M20 | 2.5 | 1.5 | 1.0 | 43 | 15 | 32 | M8×1.00 | 6 | 4 | 15.00 | 43 | 4 | 19 | 0.15 | 11 | 67 | 91 |
| TLSJ-M22x.../W | M22 | 2.5 | 1.5 | 1.0 | 47 | 16 | 34 | M8×1.00 | 8 | 4 | 16.00 | 45 | 5 | 21 | 0.20 | 10 | 81 | 105 |
| TLSJ-M24x.../W | M24 | 3.0 | 2.0 | 1.5 | 50 | 16 | 36 | M8×1.00 | 8 | 4 | 16.00 | 48 | 5 | 21 | 0.20 | 11 | 89 | 120 |
| TLSJ-M27x.../W | M27 | 3.0 | 2.0 | 1.5 | 53 | 16 | 39 | M8×1.00 | 10 | 4 | 16.00 | 50 | 5 | 21 | 0.25 | 10 | 100 | 130 |
| TLSJ-M30x.../W | M30 | 3.5 | 2.0 | 1.5 | 60 | 21 | 45 | M10×1.25 | 8 | 5 | 21.00 | 59 | 5 | 26 | 0.40 | 21 | 135 | 180 |
| TLSJ-M33x.../W | M33 | 3.5 | 2.0 | 1.5 | 63 | 22 | 48 | M10×1.25 | 10 | 5 | 22.00 | 63 | 5 | 27 | 0.40 | 19 | 155 | 200 |
| TLSJ-M36x.../W | M36 | 4.0 | 3.0 | 1.5 | 69 | 28 | 54 | M12×1.25 | 8 | 6 | 28.00 | 69 | 5 | 33 | 0.65 | 35 | 190 | 245 |
| TLSJ-M39x.../W | M39 | 4.0 | 3.0 | 1.5 | 75 | 28 | 57 | M12×1.25 | 10 | 6 | 28.00 | 75 | 5 | 33 | 0.80 | 38 | 255 | 335 |
| TLSJ-M42x.../W | M42 | 4.5 | 3.0 | 1.5 | 81 | 28 | 60 | M12×1.25 | 12 | 6 | 28.00 | 78 | 5 | 33 | 0.90 | 39 | 315 | 420 |
| TLSJ-M45x.../W | M45 | 4.5 | 3.0 | 1.5 | 88 | 28 | 63 | M12×1.25 | 12 | 6 | 28.00 | 81 | 6 | 34 | 1.00 | 39 | 315 | 420 |
| TLSJ-M48x.../W | M48 | 5.0 | 3.0 | 1.5 | 101 | 31 | 71 | M16×1.50 | 8 | 8 | 31.00 | 94 | 6 | 37 | 1.65 | 94 | 380 | 500 |
| TLSJ-M52x.../W | M52 | 5.0 | 3.0 | 2.0 | 101 | 33 | 75 | M16×1.50 | 8 | 8 | 33.00 | 94 | 6 | 39 | 1.65 | 94 | 380 | 500 |
| TLSJ-M56x.../W | M56 | 5.5 | 4.0 | 2.0 | 113 | 33 | 79 | M16×1.50 | 12 | 8 | 33.00 | 100 | 6 | 39 | 2.05 | 94 | 570 | 760 |
| TLSJ-M60x.../W | M60 | 5.5 | 4.0 | 2.0 | 117 | 33 | 83 | M16×1.50 | 12 | 8 | 33.00 | 106 | 6 | 39 | 2.15 | 94 | 570 | 760 |
| TLSJ-M64x.../W | M64 | 6.0 | 4.0 | 2.0 | 119 | 33 | 87 | M16×1.50 | 12 | 8 | 33.00 | 120 | 8 | 41 | 2.45 | 94 | 570 | 760 |
| TLSJ-M68x.../W | M68 | 6.0 | 4.0 | 2.0 | 138 | 38 | 97 | M20×1.50 | 12 | 10 | 38.00 | 125 | 8 | 46 | 3.60 | 145 | 710 | 950 |
| TLSJ-M72x.../W | M72 | 6.0 | 4.0 | 2.0 | 151 | 38 | 101 | M20×1.50 | 12 | 10 | 38.00 | 125 | 8 | 46 | 4.50 | 185 | 910 | 1200 |
| TLSJ-M76x.../W | M76 | 6.0 | 4.0 | 2.0 | 151 | 38 | 105 | M20×1.50 | 12 | 10 | 38.00 | 138 | 8 | 46 | 4.35 | 175 | 860 | 1130 |
| TLSJ-M80x.../W | M80 | 6.0 | 4.0 | 2.0 | 158 | 38 | 109 | M20×1.50 | 12 | 10 | 38.00 | 145 | 10 | 48 | 4.95 | 185 | 910 | 1200 |
| TLSJ-M90x.../W | M90 | 6.0 | 4.0 | 2.0 | 170 | 51 | 125 | M24×2.00 | 12 | 12 | 51.00 | 160 | 10 | 61 | 7.20 | 280 | 1160 | 1530 |
| TLSJ-M100x.../ | M100 | 6.0 | 4.0 | 2.0 | 177 | 53 | 135 | M24×2.00 | 12 | 12 | 53.00 | 180 | 10 | 63 | 7.75 | 280 | 1160 | 1530 |
| TLSJ-M110x.../ | M110 | 6.0 | 4.0 | 2.0 | 190 | 59 | 145 | M24×2.00 | 16 | 12 | 59.00 | 190 | 10 | 69 | 9.25 | 280 | 1550 | 2040 |
| TLSJ-M120x.../ | M120 | 6.0 | 4.0 | 2.0 | 202 | 59 | 155 | M24×2.00 | 16 | 12 | 59.00 | 202 | 10 | 69 | 10.25 | 280 | 1550 | 2040 |
| TLSJ-M125x.../ | M125 | 6.0 | 4.0 | 2.0 | 205 | 59 | 160 | M24×2.00 | 16 | 12 | 59.00 | 202 | 10 | 69 | 10.25 | 280 | 1550 | 2040 |
| TLSJ-M130x.../ | M130 | 6.0 | 4.0 | 2.0 | 210 | 59 | 165 | M24×2.00 | 16 | 12 | 59.00 | 202 | 10 | 69 | 10.50 | 280 | 1550 | 2040 |
| TLSJ-M140x.../ | M140 | 6.0 | 4.0 | 2.0 | 221 | 59 | 175 | M24×2.00 | 16 | 12 | 59.00 | 215 | 12 | 71 | 11.75 | 280 | 1550 | 2040 |
| TLSJ-M150x.../ | M150 | 6.0 | 4.0 | 2.0 | 230 | 59 | 185 | M24×2.00 | 16 | 12 | 59.00 | 225 | 12 | 71 | 12.25 | 280 | 1550 | 2040 |
| TLSJ-M160x.../ | M160 | 6.0 | 4.0 | — | 240 | 59 | 195 | M24×2.00 | 16 | 12 | 59.00 | 240 | 12 | 71 | 13.25 | 280 | 1550 | 2040 |

TLSJ-075

| Model | Nut body F(in) | | | | | | | Jackbolttss E(in) | | | | Hardened washer G(in) | | High total (in) | Quality of the standard product (Lb) | Preload nom M (Lbft) | torque nom F (LBf) | Preload capacity max (LBf) |
|---------------|-------------------|----------------|----------------|----------------|--------------|------------|-----------------|-------------------|----------|---------------|--------|-----------------------|------------|-----------------|--------------------------------------|----------------------|--------------------|----------------------------|
| | Thread diameter D | Commonly pitch | | | Out diameter | Thick enss | Center distance | Pitch*diameter | Quantity | Opposite side | Length | Outer diameter | Thickne ss | | | | | |
| | | P ₁ | P ₂ | P ₃ | | | | | | | | | | D ₁ | | | | |
| TLSJ-075.../W | 3/4 | 10.0 | 16 | — | 1.70 | 0.55 | 1.19 | 5/16-24 | 6 | 5/32 | 0.55 | 1.63 | 0.13 | 0.68 | 0.34 | 9 | 16300 | 21700 |
| TLSJ-087.../W | 7/8 | 9.0 | 14 | — | 1.84 | 0.60 | 1.31 | 5/16-24 | 8 | 5/32 | 0.60 | 1.75 | 0.13 | 0.73 | 0.40 | 9 | 21700 | 28900 |
| TLSJ-100.../W | 1 | 8.0 | 12 | 14 | 1.95 | 0.60 | 1.44 | 5/16-24 | 8 | 5/32 | 0.60 | 2.00 | 0.19 | 0.79 | 0.49 | 9 | 21700 | 28900 |
| TLSJ-112.../W | 1-1/8 | 7.0 | 8 | 12 | 2.20 | 0.80 | 1.65 | 3/8-24 | 8 | 3/16 | 0.80 | 2.13 | 0.19 | 0.99 | 0.67 | 15 | 30000 | 40000 |
| TLSJ-125.../W | 1-1/4 | 7.0 | 8 | 12 | 2.34 | 0.80 | 1.78 | 3/8-24 | 8 | 3/16 | 0.80 | 2.38 | 0.19 | 0.99 | 0.85 | 15 | 30000 | 40000 |
| TLSJ-137.../W | 1-3/8 | 6.0 | 8 | 12 | 2.45 | 0.92 | 1.90 | 3/8-24 | 10 | 3/16 | 0.92 | 2.50 | 0.19 | 1.11 | 0.96 | 15 | 37500 | 50000 |
| TLSJ-150.../W | 1-1/2 | 6.0 | 8 | 12 | 2.95 | 1.10 | 2.20 | 1/2-20 | 8 | 1/4 | 1.10 | 2.75 | 0.19 | 1.29 | 1.67 | 37 | 56900 | 75900 |
| TLSJ-162.../W | 1-5/8 | 6.0 | 8 | 12 | 3.20 | 1.10 | 2.33 | 1/2-20 | 10 | 1/4 | 1.10 | 2.88 | 0.19 | 1.29 | 1.92 | 37 | 71200 | 94900 |
| TLSJ-175.../W | 1-3/4 | 5.0 | 8 | 12 | 3.45 | 1.10 | 2.45 | 1/2-20 | 12 | 1/4 | 1.10 | 3.45 | 0.25 | 1.35 | 2.33 | 37 | 85400 | 113900 |
| TLSJ-187.../W | 1-7/8 | 6.0 | 8 | 12 | 3.59 | 1.10 | 2.58 | 1/2-20 | 12 | 1/4 | 1.10 | 3.59 | 0.25 | 1.35 | 2.57 | 37 | 85400 | 113900 |
| TLSJ-200.../W | 2 | 4.5 | 8 | 12 | 3.95 | 1.30 | 2.88 | 5/8-11 | 8 | 5/16 | 1.30 | 3.50 | 0.25 | 1.55 | 3.63 | 75 | 91400 | 121900 |
| TLSJ-225.../W | 2-1/4 | 4.5 | 8 | 12 | 4.45 | 1.30 | 3.13 | 5/8-11 | 12 | 5/16 | 1.30 | 4.00 | 0.25 | 1.55 | 4.57 | 75 | 137100 | 182800 |
| TLSJ-250.../W | 2-1/2 | 4.0 | 8 | 12 | 4.70 | 1.30 | 3.38 | 5/8-11 | 12 | 5/16 | 1.30 | 4.50 | 0.31 | 1.61 | 5.25 | 75 | 137100 | 182800 |
| TLSJ-275.../W | 2-3/4 | 4.0 | 8 | 12 | 5.45 | 1.50 | 3.80 | 3/4-10 | 12 | 3/8 | 1.30 | 4.75 | 0.31 | 1.81 | 7.65 | 108 | 165800 | 221100 |
| TLSJ-300.../W | 3 | 4.0 | 6 | 8 | 5.95 | 1.90 | 4.23 | 7/8-9 | 12 | 1/2 | 1.90 | 5.25 | 0.38 | 2.28 | 12.55 | 179 | 226300 | 301700 |
| TLSJ-325.../W | 3-1/4 | 4.0 | 6 | 8 | 6.20 | 1.90 | 4.48 | 7/8-9 | 12 | 1/2 | 1.90 | 5.50 | 0.38 | 2.28 | 12.10 | 179 | 226300 | 301700 |
| TLSJ-350.../W | 3-1/2 | 4.0 | 6 | 8 | 6.45 | 1.90 | 4.73 | 7/8-9 | 12 | 1/2 | 1.90 | 5.75 | 0.38 | 2.28 | 12.72 | 179 | 226300 | 301700 |
| TLSJ-375.../W | 3-3/4 | 4.0 | 6 | 8 | 6.70 | 2.00 | 4.98 | 7/8-9 | 12 | 1/2 | 1.90 | 6.00 | 0.38 | 2.38 | 15.02 | 179 | 226300 | 301700 |
| TLSJ-400.../W | 4 | 4.0 | 6 | 8 | 6.95 | 2.00 | 5.23 | 7/8-9 | 12 | 1/2 | 1.90 | 6.65 | 0.38 | 2.38 | 15.89 | 179 | 226300 | 301700 |
| TLSJ-425.../W | 4-1/4 | 4.0 | 6 | 8 | 7.20 | 2.30 | 5.48 | 7/8-9 | 16 | 1/2 | 1.90 | 6.90 | 0.38 | 2.68 | 16.63 | 179 | 301700 | 402200 |
| TLSJ-450.../W | 4-1/2 | 4.0 | 6 | 8 | 7.45 | 2.30 | 5.73 | 7/8-9 | 16 | 1/2 | 1.90 | 7.40 | 0.38 | 2.68 | 19.07 | 179 | 301700 | 402200 |
| TLSJ-475.../W | 4-3/4 | 4.0 | 6 | 8 | 7.70 | 2.30 | 5.98 | 7/8-9 | 16 | 1/2 | 1.90 | 7.90 | 0.38 | 2.68 | 20.63 | 179 | 301700 | 402200 |
| TLSJ-500.../W | 5 | 4.0 | 6 | 8 | 7.95 | 2.30 | 6.23 | 7/8-9 | 16 | 1/2 | 1.90 | 7.90 | 0.38 | 2.68 | 21.19 | 179 | 301700 | 402200 |
| TLSJ-525.../W | 5-1/4 | 4.0 | 6 | 8 | 8.70 | 2.40 | 6.65 | 1-8 | 16 | 9/16 | 2.40 | 8.40 | 0.50 | 2.90 | 28.11 | 269 | 396700 | 529000 |
| TLSJ-550.../W | 5-1/2 | 4.0 | 6 | 8 | 8.95 | 2.40 | 6.9 | 1-8 | 16 | 9/16 | 2.40 | 8.40 | 0.50 | 2.90 | 28.75 | 269 | 396700 | 529000 |
| TLSJ-575.../W | 5-3/4 | 4.0 | 6 | 8 | 9.20 | 2.40 | 7.15 | 1-8 | 16 | 9/16 | 2.40 | 9.40 | 0.50 | 2.90 | 31.41 | 269 | 396700 | 529000 |
| TLSJ-600.../W | 6 | 4.0 | 6 | 8 | 9.45 | 2.40 | 7.40 | 1-8 | 16 | 9/16 | 2.40 | 9.40 | 0.50 | 2.90 | 31.38 | 269 | 396700 | 529000 |

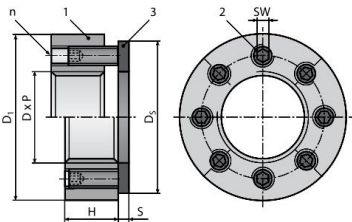
Used to replace cap nut and castle nut, suitable for the limited space

TLSJX-M20x

TOP-LOCK®Jamnut Tensioner High

Strength Low-profile

SJX jamnuts are designed for restrictive space applications with higher preload requirements.



Components:

1. Nut body

2. Jackbolts

3. Hardened washer

| Model | Nut body F (MM) | | | | | | Jackbolts E (MM) | | Hardened washer G (MM) | | High total (MM) | Quality of the standard product (kg) | Preload nom M (NM) | torque nom F (kN) | Preload capacity max (kN) |
|----------------|-------------------|----------------|----------------|----------------|----------------|-----------|------------------|---------------|------------------------|-----------|-----------------|--------------------------------------|--------------------|-------------------|---------------------------|
| | Thread diameter D | Commonly pitch | | | Outer diameter | Thickness | Quantity | Opposite side | Outer diameter | Thickness | L | | | | |
| | | P ₁ | P ₂ | P ₃ | D _i | H | | | | | | | | | |
| TLSJX-M20x.../ | M20 | 2.5 | 1.5 | 1.0 | 44 | 18 | 4 | 4 | 43 | 4 | 22 | 0.21 | 11 | 86 | 115 |
| TLSJX-M22x.../ | M22 | 2.5 | 1.5 | 1.0 | 47 | 18 | 4 | 4 | 45 | 5 | 23 | 0.24 | 11 | 86 | 115 |
| TLSJX-M24x.../ | M24 | 3.0 | 2.0 | 1.5 | 50 | 18 | 6 | 4 | 48 | 5 | 23 | 0.27 | 11 | 130 | 175 |
| TLSJX-M27x.../ | M27 | 3.0 | 2.0 | 1.5 | 56 | 18 | 8 | 4 | 50 | 5 | 23 | 0.32 | 11 | 170 | 215 |
| TLSJX-M30x.../ | M30 | 3.5 | 2.0 | 1.5 | 63 | 23 | 8 | 5 | 59 | 5 | 28 | 0.52 | 17 | 215 | 290 |
| TLSJX-M33x.../ | M33 | 3.5 | 2.0 | 1.5 | 69 | 23 | 10 | 5 | 63 | 5 | 28 | 0.61 | 17 | 270 | 360 |
| TLSJX-M36x.../ | M36 | 4.0 | 3.0 | 1.5 | 74 | 30 | 8 | 6 | 69 | 5 | 35 | 0.91 | 32 | 345 | 450 |
| TLSJX-M39x.../ | M39 | 4.0 | 3.0 | 1.5 | 80 | 30 | 10 | 6 | 75 | 5 | 35 | 1.04 | 30 | 405 | 530 |
| TLSJX-M42x.../ | M42 | 4.5 | 3.0 | 1.5 | 88 | 30 | 10 | 6 | 78 | 5 | 35 | 1.22 | 36 | 485 | 640 |
| TLSJX-M45x.../ | M45 | 4.5 | 3.0 | 1.5 | 90 | 30 | 10 | 6 | 81 | 6 | 36 | 1.33 | 38 | 510 | 670 |
| TLSJX-M48x.../ | M48 | 5.0 | 3.0 | 1.5 | 101 | 38 | 8 | 8 | 94 | 6 | 44 | 2.10 | 75 | 620 | 820 |
| TLSJX-M52x.../ | M52 | 5.0 | 3.0 | 2.0 | 107 | 38 | 10 | 8 | 106 | 6 | 44 | 2.37 | 68 | 700 | 920 |
| TLSJX-M56x.../ | M56 | 5.5 | 4.0 | 2.0 | 113 | 38 | 10 | 8 | 106 | 6 | 44 | 2.57 | 74 | 760 | 1010 |
| TLSJX-M60x.../ | M60 | 5.5 | 4.0 | 2.0 | 120 | 38 | 10 | 8 | 106 | 6 | 44 | 3.04 | 83 | 860 | 1130 |
| TLSJX-M64x.../ | M64 | 6.0 | 4.0 | 2.0 | 126 | 42 | 12 | 8 | 120 | 8 | 50 | 3.52 | 90 | 1110 | 1480 |
| TLSJX-M68x.../ | M68 | 6.0 | 4.0 | 2.0 | 145 | 46 | 12 | 10 | 125 | 8 | 54 | 5.11 | 130 | 1330 | 1740 |
| TLSJX-M72x.../ | M72 | 6.0 | 4.0 | 2.0 | 151 | 46 | 12 | 10 | 138 | 8 | 54 | 5.61 | 135 | 1380 | 1840 |
| TLSJX-M76x.../ | M76 | 6.0 | 4.0 | 2.0 | 158 | 52 | 12 | 10 | 138 | 8 | 60 | 6.61 | 185 | 1900 | 2510 |
| TLSJX-M80x.../ | M80 | 6.0 | 4.0 | 2.0 | 162 | 52 | 12 | 10 | 145 | 10 | 62 | 7.06 | 185 | 1900 | 2510 |
| TLSJX-M90x.../ | M90 | 6.0 | 4.0 | 2.0 | 177 | 64 | 12 | 12 | 160 | 10 | 74 | 9.98 | 260 | 2210 | 2930 |
| TLSJX-M100x... | M100 | 6.0 | 4.0 | 2.0 | 182 | 76 | 14 | 12 | 172 | 10 | 86 | 11.97 | 275 | 2730 | 3620 |
| TLSJX-M110x... | M110 | 6.0 | 4.0 | 2.0 | 202 | 79 | 16 | 12 | 190 | 10 | 89 | 15.16 | 295 | 3340 | 4470 |
| TLSJX-M120x... | M120 | 6.0 | 4.0 | 2.0 | 208 | 79 | 16 | 12 | 202 | 10 | 89 | 15.42 | 295 | 3340 | 4470 |
| TLSJX-M125x... | M125 | 6.0 | 4.0 | 2.0 | 214 | 79 | 16 | 12 | 202 | 10 | 89 | 16.03 | 295 | 3340 | 4470 |
| TLSJX-M130x... | M130 | 6.0 | 4.0 | 2.0 | 214 | 91 | 18 | 12 | 202 | 10 | 101 | 16.86 | 295 | 3760 | 5030 |
| TLSJX-M140x... | M140 | 6.0 | 4.0 | 2.0 | 221 | 91 | 18 | 12 | 215 | 12 | 103 | 18.60 | 295 | 3760 | 5030 |
| TLSJX-M150x... | M150 | 6.0 | 4.0 | 2.0 | 231 | 95 | 20 | 12 | 225 | 12 | 107 | 18.98 | 290 | 4110 | 5450 |
| TLSJX-M160x... | M160 | 6.0 | 4.0 | — | 241 | 95 | 20 | 12 | 240 | 12 | 107 | 21.32 | 290 | 4110 | 5450 |

TLSJX-075

| Model | Nut body F(in) | | | | | | Jackbolts E(in) | | Hardened washer G(in) | | High total L(in) | Quality of the standard product (Lb) | Preload nom M (Lbft) | torque nom F (Lbf) | Preload capacity max (Lbf) |
|----------------|-------------------------|----------------|----------------|----------------|---------------------|---------------|--------------------|----------------------|-----------------------|-----------|---------------------|---|-------------------------------|-----------------------------|----------------------------------|
| | Threa d diameterD | TPI | | | Out diam eter | Thick enss | Quan tity | Oppo site side | Outer diameter | Thickness | | | | | |
| | | P ₁ | P ₂ | P ₃ | | | | | | | | | | | |
| TLSJX-075.../W | 3/4 | 10.0 | 16 | – | 1.70 | 0.70 | 4 | 5/32 | 1.63 | 0.13 | 0.83 | 0.40 | 8 | 18100 | 24100 |
| TLSJX-087.../W | 7/8 | 9.0 | 14 | – | 1.84 | 0.70 | 6 | 5/32 | 1.75 | 0.13 | 0.83 | 0.50 | 7 | 25100 | 33400 |
| TLSJX-100.../W | 1 | 8.0 | 12 | 14 | 2.10 | 0.70 | 8 | 5/32 | 2.00 | 0.19 | 0.89 | 0.60 | 7 | 33100 | 44000 |
| TLSJX-112.../W | 1-1/8 | 7.0 | 8 | 12 | 2.34 | 0.90 | 6 | 3/16 | 2.13 | 0.19 | 1.09 | 0.90 | 14 | 43700 | 58100 |
| TLSJX-125.../W | 1-1/4 | 7.0 | 8 | 12 | 2.47 | 0.95 | 8 | 3/16 | 2.38 | 0.19 | 1.14 | 1.10 | 14 | 55700 | 74100 |
| TLSJX-137.../W | 1-3/8 | 6.0 | 8 | 12 | 2.72 | 0.95 | 10 | 3/16 | 2.50 | 0.19 | 1.14 | 1.30 | 14 | 69300 | 92200 |
| TLSJX-150.../W | 1-1/2 | 6.0 | 8 | 12 | 3.20 | 1.20 | 8 | 1/4 | 2.75 | 0.19 | 1.39 | 2.30 | 27 | 84000 | 111700 |
| TLSJX-162.../W | 1-5/8 | 6.0 | 8 | 12 | 3.45 | 1.20 | 8 | 1/4 | 2.88 | 0.19 | 1.39 | 2.70 | 33 | 100800 | 134100 |
| TLSJX-175.../W | 1-3/4 | 5.0 | 8 | 12 | 3.59 | 1.20 | 10 | 1/4 | 3.13 | 0.25 | 1.45 | 2.80 | 31 | 118800 | 158000 |
| TLSJX-187.../W | 1-7/8 | 6.0 | 8 | 12 | 3.72 | 1.30 | 12 | 1/4 | 3.50 | 0.25 | 1.55 | 3.20 | 30 | 138000 | 183500 |
| TLSJX-200.../W | 2 | 4.5 | 8 | 12 | 4.20 | 1.50 | 8 | 5/16 | 3.72 | 0.25 | 1.75 | 4.90 | 64 | 159000 | 211500 |
| TLSJX-225.../W | 2-1/4 | 4.5 | 8 | 12 | 4.70 | 1.50 | 10 | 5/16 | 4.00 | 0.25 | 1.75 | 6.10 | 66 | 205200 | 272900 |
| TLSJX-250.../W | 2-1/2 | 4.0 | 8 | 12 | 4.95 | 1.65 | 12 | 5/16 | 4.50 | 0.31 | 1.96 | 7.41 | 69 | 257400 | 342300 |
| TLSJX-275.../W | 2-3/4 | 4.0 | 8 | 12 | 5.70 | 1.80 | 12 | 3/8 | 4.75 | 0.31 | 2.11 | 11.00 | 107 | 315600 | 419800 |
| TLSJX-300.../W | 3 | 4.0 | 6 | 8 | 6.20 | 2.15 | 12 | 1/2 | 5.25 | 0.38 | 2.53 | 15.00 | 137 | 379200 | 504300 |
| TLSJX-325.../W | 3-1/4 | 4.0 | 6 | 8 | 6.70 | 2.15 | 12 | 1/2 | 5.50 | 0.38 | 2.53 | 17.00 | 162 | 449400 | 597700 |
| TLSJX-350.../W | 3-1/2 | 4.0 | 6 | 8 | 6.95 | 2.30 | 12 | 1/2 | 5.75 | 0.38 | 2.68 | 19.00 | 185 | 511900 | 680800 |
| TLSJX-375.../W | 3-3/4 | 4.0 | 6 | 8 | 7.20 | 2.50 | 14 | 1/2 | 6.00 | 0.38 | 2.88 | 22.00 | 189 | 606600 | 806800 |
| TLSJX-400.../W | 4 | 4.0 | 6 | 8 | 7.45 | 3.10 | 12 | 9/16 | 6.65 | 0.38 | 3.48 | 29.00 | 289 | 694200 | 923300 |
| TLSJX-425.../W | 4-1/4 | 4.0 | 6 | 8 | 7.95 | 3.10 | 14 | 9/16 | 6.90 | 0.38 | 3.48 | 33.00 | 281 | 787200 | 1047000 |
| TLSJX-450.../W | 4-1/2 | 4.0 | 6 | 8 | 8.20 | 3.10 | 14 | 9/16 | 7.40 | 0.38 | 3.48 | 34.00 | 281 | 787200 | 1047000 |
| TLSJX-475.../W | 4-3/4 | 4.0 | 6 | 8 | 8.45 | 3.25 | 16 | 9/16 | 7.90 | 0.38 | 3.63 | 37.00 | 282 | 904500 | 1203000 |
| TLSJX-500.../W | 5 | 4.0 | 6 | 8 | 8.45 | 3.55 | 16 | 9/16 | 7.90 | 0.38 | 3.93 | 39.00 | 282 | 904500 | 1203000 |
| TLSJX-525.../W | 5-1/4 | 4.0 | 6 | 8 | 8.70 | 3.60 | 16 | 9/16 | 8.40 | 0.50 | 4.10 | 41.00 | 282 | 904500 | 1203000 |
| TLSJX-550.../W | 5-1/2 | 4.0 | 6 | 8 | 8.95 | 3.70 | 18 | 9/16 | 8.40 | 0.50 | 4.20 | 43.00 | 276 | 996200 | 1325000 |
| TLSJX-575.../W | 5-3/4 | 4.0 | 6 | 8 | 9.45 | 3.75 | 18 | 9/16 | 9.40 | 0.50 | 4.25 | 48.00 | 280 | 1010600 | 1344000 |
| TLSJX-600.../W | 6 | 4.0 | 6 | 8 | 9.45 | 3.75 | 18 | 9/16 | 9.40 | 0.50 | 4.25 | 47.00 | 280 | 1010600 | 1344000 |

All preload and torque values are provided for general reference.

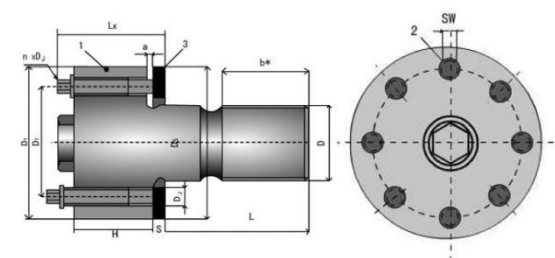
Applied preload plus additional bolt load from service should not exceed the maximum bolt or stud capacity.

Contact TOP-LOCK for assistance in determining proper preload and torque settings for your application.

Other sizes, thread pitches or thread per inch (TPI) may be available.

Dimensions listed are representative.

TLSB8-M16x



| Model | Nut body (MM) | | | | | | | Jackboltss E (MM) | | | | | Hardened washer G (MM) | | High total (MM) | Preload nom M (NM) | torque nom F (KN) | Preload capacity max (KN) |
|----------------------|-------------------|----------------|----------------|----------------|--------------|------------|------------------|-------------------|-----------|----------------|--------|------------|------------------------|------------|-----------------|--------------------|-------------------|---------------------------|
| | Thread diameter D | Commonly pitch | | | Out diameter | Thick enss | Cente r distance | Pitch*diameter | Quan tity | Opposi te side | Length | Cleara nce | Outer diameter | Thickn ess | | | | |
| | | P ₁ | P ₂ | P ₃ | | | | | | | | | | | | | | |
| TLSB8-M16x...x.../w | M16 | 2.0 | 1.5 | 1.0 | 31 | 18 | 22 | M6×0.75 | 4 | 5 | 29.00 | 4 | 30 | 3 | 32 | 14 | 73 | 94 |
| TLSB8-M20x...x.../w | M20 | 2.5 | 1.5 | 1.0 | 35 | 18 | 26 | M6×0.75 | 6 | 5 | 29.00 | 4 | 35 | 4 | 33 | 14 | 109 | 40 |
| TLSB8-M24x...x.../w | M24 | 3.0 | 2.0 | 1.5 | 41 | 18 | 30 | M6×0.75 | 8 | 5 | 29.00 | 4 | 41 | 4 | 33 | 14 | 146 | 187 |
| TLSB8-M27x...x.../w | M27 | 3.0 | 2.0 | 1.5 | 45 | 23 | 35 | M8×1.00 | 6 | 6 | 40.00 | 7 | 45 | 5 | 45 | 32 | 190 | 250 |
| TLSB8-M30x...x.../w | M30 | 3.5 | 2.0 | 1.5 | 50 | 23 | 38 | M8×1.00 | 6 | 6 | 40.00 | 7 | 50 | 5 | 45 | 36 | 214 | 286 |
| TLSB8-M33x...x.../w | M33 | 3.5 | 2.0 | 1.5 | 57 | 28 | 43 | M10×1.25 | 6 | 8 | 47.00 | 7 | 57 | 5 | 52 | 60 | 285 | 380 |
| TLSB8-M36x...x.../w | M36 | 4.0 | 3.0 | 1.5 | 60 | 28 | 46 | M10×1.25 | 6 | 8 | 47.00 | 7 | 60 | 5 | 52 | 70 | 333 | 443 |
| TLSB8-M39x...x.../w | M39 | 4.0 | 3.0 | 1.5 | 63 | 28 | 49 | M10×1.25 | 8 | 8 | 47.00 | 7 | 63 | 5 | 52 | 64 | 406 | 540 |
| TLSB8-M42x...x.../w | M42 | 4.5 | 3.0 | 1.5 | 66 | 28 | 52 | M10×1.25 | 8 | 8 | 47.00 | 7 | 66 | 5 | 52 | 72 | 457 | 610 |
| TLSB8-M45x...x.../w | M45 | 4.5 | 3.0 | 1.5 | 75 | 37 | 57 | M12×1.25 | 8 | 10 | 58.00 | 7 | 75 | 6 | 64 | 100 | 535 | 720 |
| TLSB8-M48x...x.../w | M48 | 5.0 | 3.0 | 1.5 | 78 | 37 | 60 | M12×1.25 | 8 | 10 | 58.00 | 7 | 78 | 6 | 64 | 113 | 605 | 800 |
| TLSB8-M52x...x.../w | M52 | 5.0 | 3.0 | 2.0 | 82 | 37 | 64 | M12×1.25 | 10 | 10 | 58.00 | 7 | 82 | 6 | 64 | 110 | 735 | 970 |
| TLSB8-M56x...x.../w | M56 | 5.5 | 4.0 | 2.0 | 86 | 37 | 68 | M12×1.25 | 10 | 10 | 58.00 | 7 | 86 | 6 | 64 | 125 | 835 | 1120 |
| TLSB8-M60x...x.../w | M60 | 5.5 | 4.0 | 2.0 | 90 | 37 | 72 | M12×1.25 | 12 | 10 | 58.00 | 7 | 90 | 6 | 64 | 123 | 985 | 1310 |
| TLSB8-M64x...x.../w | M64 | 6.0 | 4.0 | 2.0 | 103 | 46 | 80 | M16×1.50 | 8 | 14 | 75.00 | 10 | 103 | 8 | 83 | 235 | 950 | 1270 |
| TLSB8-M68x...x.../w | M68 | 6.0 | 4.0 | 2.0 | 107 | 46 | 84 | M16×1.50 | 8 | 14 | 75.00 | 10 | 107 | 8 | 83 | 270 | 1090 | 1450 |
| TLSB8-M72x...x.../w | M72 | 6.0 | 4.0 | 2.0 | 111 | 46 | 88 | M16×1.50 | 10 | 14 | 75.00 | 10 | 111 | 8 | 83 | 245 | 1230 | 1640 |
| TLSB8-M76x...x.../w | M76 | 6.0 | 4.0 | 2.0 | 116 | 46 | 92 | M16×1.50 | 12 | 14 | 75.00 | 10 | 116 | 8 | 83 | 230 | 1390 | 1870 |
| TLSB8-M80x...x.../w | M80 | 6.0 | 4.0 | 2.0 | 120 | 56 | 96 | M16×1.50 | 12 | 14 | 84.00 | 9 | 120 | 8 | 92 | 260 | 1570 | 2080 |
| TLSB8-M90x...x.../w | M90 | 6.0 | 4.0 | 2.0 | 130 | 56 | 106 | M16×1.50 | 16 | 14 | 84.00 | 9 | 130 | 8 | 92 | 250 | 2010 | 2700 |
| TLSB8-M100x...x.../w | M100 | 6.0 | 4.0 | 2.0 | 148 | 60 | 120 | M20×1.50 | 12 | 17 | 89.00 | 10 | 148 | 10 | 99 | 520 | 2540 | 3370 |
| TLSB8-M110x...x.../w | M110 | 6.0 | 4.0 | 2.0 | 158 | 60 | 130 | M20×1.50 | 14 | 17 | 89.00 | 10 | 158 | 10 | 99 | 500 | 2850 | 3570 |
| TLSB8-M120x...x.../w | M120 | 6.0 | 4.0 | 2.0 | 170 | 64 | 140 | M20×1.50 | 16 | 17 | 95.00 | 12 | 170 | 10 | 105 | 520 | 3380 | 4500 |
| TLSB8-M125x...x.../w | M125 | 6.0 | 4.0 | 2.0 | 175 | 64 | 145 | M20×1.50 | 16 | 17 | 95.00 | 12 | 175 | 10 | 105 | 560 | 3650 | 4880 |
| TLSB8-M130x...x.../w | M130 | 6.0 | 4.0 | 2.0 | 180 | 76 | 150 | M20×1.50 | 18 | 17 | 108.00 | 12 | 180 | 10 | 118 | 540 | 3950 | 5270 |
| TLSB8-M140x...x.../w | M140 | 6.0 | 4.0 | 2.0 | 190 | 76 | 160 | M20×1.50 | 20 | 17 | 108.00 | 12 | 190 | 10 | 118 | 560 | 4550 | 6100 |
| TLSB8-M150x...x.../w | M150 | 6.0 | 4.0 | 2.0 | 200 | 76 | 170 | M20×1.50 | 20 | 17 | 108.00 | 12 | 200 | 10 | 118 | 600 | 4880 | 6500 |
| TLSB8-M160x...x.../w | M160 | 6.0 | 4.0 | — | 210 | 76 | 180 | M20×1.50 | 20 | 17 | 108.00 | 12 | 210 | 10 | 118 | 650 | 5280 | 7000 |

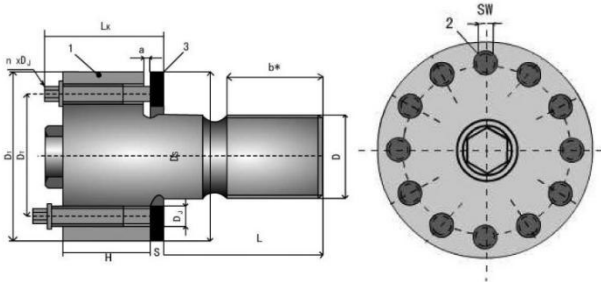
TLSB8-075

| Model | Nut body F(in) | | | | | | | Jackboltss E(in) | | | | | Hardened washer G(in) | | High total (in) | Preload nom M (Lbft) | torque nom F (LBf) | Preload capacity max (LBf) |
|---------------------|-------------------|----------------|----------------|----------------|--------------|------------|-----------------|------------------|----------|---------------|--------|-----------|-----------------------|-----------|-----------------|----------------------|--------------------|----------------------------|
| | Thread diameter D | Commonly pitch | | | Out diameter | Thick enss | Center distance | Pitch*diameter | Quantity | Opposite side | Length | Clearance | Outer diameter | Thickness | | | | |
| | | P ₁ | P ₂ | P ₃ | | | | | | | | | | | D ₁ | H | D ₁ | D _j |
| TLSB8-075-...x.../ | 3/4 | 10.0 | 16 | - | 1.35 | 0.70 | 1.00 | 1/4-28 | 4 | 3/16 | 1.25 | 0.24 | 1.35 | 0.13 | 1.38 | 14 | 20400 | 27100 |
| TLSB8-087-...x.../w | 7/8 | 9.0 | 14 | - | 1.48 | 0.70 | 1.13 | 1/4-28 | 6 | 3/16 | 1.25 | 0.24 | 1.48 | 0.13 | 1.38 | 14 | 30600 | 40700 |
| TLSB8-100-...x.../ | 1 | 8.0 | 12 | 14 | 1.59 | 0.70 | 1.25 | 1/4-28 | 8 | 3/16 | 1.25 | 0.24 | 1.59 | 0.13 | 1.38 | 14 | 40800 | 54200 |
| TLSB8-112-...x.../ | 1-1/8 | 7.0 | 8 | 12 | 1.83 | 0.90 | 1.44 | 5/16-24 | 6 | 1/4 | 1.52 | 0.23 | 1.83 | 0.16 | 1.68 | 27 | 48600 | 63600 |
| TLSB8-125-...x.../ | 1-1/4 | 7.0 | 8 | 12 | 1.98 | 0.90 | 1.56 | 5/16-24 | 8 | 1/4 | 1.52 | 0.23 | 1.98 | 0.16 | 1.68 | 27 | 64800 | 86100 |
| TLSB8-137-...x.../ | 1-3/8 | 6.0 | 8 | 12 | 2.23 | 1.10 | 1.75 | 3/8-24 | 6 | 5/16 | 1.83 | 0.25 | 2.23 | 0.20 | 2.03 | 49 | 73800 | 98100 |
| TLSB8-150-...x.../ | 1-1/2 | 6.0 | 8 | 12 | 2.35 | 1.10 | 1.88 | 3/8-24 | 8 | 5/16 | 1.83 | 0.25 | 2.35 | 0.20 | 2.03 | 44 | 88500 | 117700 |
| TLSB8-162-...x.../ | 1-5/8 | 6.0 | 8 | 12 | 2.47 | 1.10 | 2.00 | 3/8-24 | 10 | 5/16 | 1.83 | 0.30 | 2.47 | 0.20 | 2.03 | 42 | 106100 | 141100 |
| TLSB8-175-...x.../ | 1-3/4 | 5.0 | 8 | 12 | 2.73 | 1.40 | 2.19 | 7/16-20 | 8 | 3/8 | 2.24 | 0.30 | 2.73 | 0.25 | 2.49 | 69 | 119200 | 158500 |
| TLSB8-187-...x.../ | 1-7/8 | 6.0 | 8 | 12 | 2.98 | 1.45 | 2.38 | 1/2-20 | 8 | 7/16 | 2.35 | 0.30 | 2.98 | 0.25 | 2.60 | 95 | 145900 | 194000 |
| TLSB8-200-...x.../ | 2 | 4.5 | 8 | 12 | 3.20 | 1.45 | 2.50 | 1/2-20 | 8 | 7/16 | 2.35 | 0.30 | 3.20 | 0.25 | 2.60 | 102 | 157300 | 209200 |
| TLSB8-225-...x.../ | 2-1/4 | 4.5 | 8 | 12 | 3.45 | 1.45 | 2.75 | 1/2-20 | 10 | 7/16 | 2.35 | 0.40 | 3.45 | 0.25 | 2.60 | 108 | 207100 | 275400 |
| TLSB8-250-...x.../ | 2-1/2 | 4.0 | 8 | 12 | 3.94 | 1.80 | 3.13 | 5/8-18 | 8 | 9/16 | 2.95 | 0.40 | 3.94 | 0.31 | 3.26 | 180 | 220200 | 292800 |
| TLSB8-275-...x.../ | 2-3/4 | 4.0 | 8 | 12 | 4.20 | 1.80 | 3.38 | 5/8-18 | 10 | 9/16 | 2.95 | 0.40 | 4.20 | 0.31 | 3.26 | 178 | 272600 | 362500 |
| TLSB8-300-...x.../ | 3 | 4.0 | 6 | 8 | 4.47 | 1.80 | 3.63 | 5/8-18 | 12 | 9/16 | 2.95 | 0.35 | 4.45 | 0.31 | 3.26 | 182 | 333700 | 443800 |
| TLSB8-325-...x.../ | 3-1/4 | 4.0 | 6 | 8 | 4.70 | 2.20 | 3.88 | 5/8-18 | 14 | 9/16 | 3.30 | 0.35 | 4.70 | 0.31 | 3.61 | 188 | 403000 | 535900 |
| TLSB8-350-...x.../ | 3-1/2 | 4.0 | 6 | 8 | 4.95 | 2.20 | 4.13 | 5/8-18 | 16 | 9/16 | 3.30 | 0.40 | 4.95 | 0.31 | 3.61 | 196 | 479500 | 637700 |
| TLSB8-375-...x.../ | 3-3/4 | 4.0 | 6 | 8 | 5.44 | 2.35 | 4.50 | 3/4-16 | 14 | 5/8 | 3.63 | 0.40 | 5.44 | 0.38 | 4.01 | 302 | 545700 | 725700 |
| TLSB8-400-...x.../ | 4 | 4.0 | 6 | 8 | 5.70 | 2.35 | 4.75 | 3/4-16 | 16 | 5/8 | 3.63 | 0.40 | 5.70 | 0.38 | 4.01 | 305 | 630900 | 839000 |
| TLSB8-425-...x.../ | 4-1/4 | 4.0 | 6 | 8 | 5.94 | 2.35 | 5.00 | 3/4-16 | 16 | 5/8 | 3.63 | 0.40 | 5.94 | 0.38 | 4.01 | 359 | 741800 | 986500 |
| TLSB8-450-...x.../ | 4-1/2 | 4.0 | 6 | 8 | 6.22 | 2.35 | 5.25 | 3/4-16 | 18 | 5/8 | 3.63 | 0.50 | 6.22 | 0.38 | 4.01 | 361 | 839600 | 1116600 |
| TLSB8-475-...x.../ | 4-3/4 | 4.0 | 6 | 8 | 6.44 | 3.00 | 5.50 | 3/4-16 | 18 | 5/8 | 4.38 | 0.50 | 6.44 | 0.38 | 4.76 | 390 | 907200 | 1206500 |
| TLSB8-500-...x.../ | 5 | 4.0 | 6 | 8 | 6.70 | 3.00 | 5.75 | 3/4-16 | 20 | 5/8 | 4.38 | 0.50 | 6.70 | 0.38 | 4.76 | 390 | 1008000 | 1340600 |
| TLSB8-525-...x.../ | 5-1/4 | 4.0 | 6 | 8 | 6.94 | 3.00 | 6.00 | 3/4-16 | 20 | 5/8 | 4.38 | 0.50 | 6.94 | 0.38 | 4.76 | 390 | 1008000 | 1340600 |
| TLSB8-550-...x.../ | 5-1/2 | 4.0 | 6 | 8 | 7.20 | 3.00 | 6.25 | 3/4-16 | 20 | 5/8 | 4.38 | 0.50 | 7.20 | 0.38 | 4.76 | 390 | 1008000 | 1340600 |
| TLSB8-575-...x.../ | 5-3/4 | 4.0 | 6 | 8 | 7.44 | 3.00 | 6.50 | 3/4-16 | 20 | 5/8 | 4.38 | 0.50 | 7.44 | 0.38 | 4.76 | 390 | 1008000 | 1340600 |
| TLSB8-600-...x.../ | 6 | 4.0 | 6 | 8 | 7.69 | 3.00 | 6.75 | 3/4-16 | 20 | 5/8 | 4.38 | 0.50 | 7.69 | 0.38 | 4.76 | 390 | 1008000 | 1340600 |

Used for cone hole connection.The head of bolt -type tensioner generally smaller than the nut- type tensioner, suitable for small space.

TLSB12-M20x

TOP-LOCK® bolt-style tensioners (high strength)



| Model | Nut body (MM) | | | | | | | Jackboltss E (MM) | | | | | Hardened washer G (MM) | | High total (MM) | Prel oad nom M (NM) | torque nom F (KN) | Preload capacity max (KN) |
|---------------------|------------------|----------------|----------------|----------------|--------------|------------|-------------------|-------------------|-----------|----------------|----------------|------------|------------------------|-------------|-----------------|---------------------|-------------------|---------------------------|
| | Thread diameterD | Commonly pitch | | | Out diameter | Thicke nss | Cente r dista nce | Pitch*diam eter | Quant ity | Oppos ite side | Length | Cleara nce | Oute r diam eter | Thi ckn ess | | | | |
| | | P ₁ | P ₂ | P ₃ | | | | D ₁ | n | SW | L ₁ | a | D ₃ | s | L | | | |
| TLSB12-M20x...x.../ | M20 | 2.5 | 1.5 | 1.0 | 35 | 18 | 26 | M6×0.75 | 8 | 5 | 29.00 | 4 | 35 | 4 | 33 | 14 | 146 | 187 |
| TLSB12-M24x...x.../ | M24 | 3.0 | 2.0 | 1.5 | 43 | 24 | 32 | M8×1.00 | 6 | 6 | 40.00 | 6 | 43 | 4 | 44 | 34 | 202 | 268 |
| TLSB12-M27x...x.../ | M27 | 3.0 | 2.0 | 1.5 | 47 | 24 | 35 | M8×1.00 | 8 | 6 | 40.00 | 6 | 47 | 5 | 45 | 34 | 270 | 357 |
| TLSB12-M30x...x.../ | M30 | 3.5 | 2.0 | 1.5 | 50 | 24 | 38 | M8×1.00 | 10 | 6 | 40.00 | 6 | 50 | 5 | 45 | 32 | 317 | 427 |
| TLSB12-M33x...x.../ | M33 | 3.5 | 2.0 | 1.5 | 57 | 28 | 43 | M10×1.25 | 8 | 8 | 47.00 | 7 | 57 | 5 | 52 | 64 | 406 | 539 |
| TLSB12-M36x...x.../ | M36 | 4.0 | 3.0 | 1.5 | 60 | 28 | 46 | M10×1.25 | 10 | 8 | 47.00 | 7 | 60 | 5 | 52 | 60 | 480 | 635 |
| TLSB12-M39x...x.../ | M39 | 4.0 | 3.0 | 1.5 | 63 | 28 | 49 | M10×1.25 | 12 | 8 | 47.00 | 7 | 63 | 5 | 52 | 60 | 570 | 760 |
| TLSB12-M42x...x.../ | M42 | 4.5 | 3.0 | 1.5 | 66 | 28 | 52 | M10×1.25 | 12 | 8 | 47.00 | 7 | 66 | 5 | 52 | 68 | 645 | 855 |
| TLSB12-M45x...x.../ | M45 | 4.5 | 3.0 | 1.5 | 75 | 37 | 57 | M12×1.25 | 10 | 10 | 58.00 | 7 | 75 | 6 | 64 | 114 | 760 | 1020 |
| TLSB12-M48x...x.../ | M48 | 5.0 | 3.0 | 1.5 | 78 | 37 | 60 | M12×1.25 | 10 | 10 | 58.00 | 7 | 78 | 6 | 64 | 128 | 855 | 1140 |
| TLSB12-M52x...x.../ | M52 | 5.0 | 3.0 | 2.0 | 82 | 37 | 64 | M12×1.25 | 12 | 10 | 58.00 | 7 | 82 | 6 | 64 | 124 | 995 | 1320 |
| TLSB12-M56x...x.../ | M56 | 5.5 | 4.0 | 2.0 | 86 | 37 | 68 | M12×1.25 | 12 | 10 | 58.00 | 7 | 86 | 6 | 64 | 124 | 995 | 1320 |
| TLSB12-M60x...x.../ | M60 | 5.5 | 4.0 | 2.0 | 90 | 37 | 72 | M12×1.25 | 14 | 10 | 58.00 | 7 | 90 | 6 | 64 | 124 | 1160 | 1540 |
| TLSB12-M64x...x.../ | M64 | 6.0 | 4.0 | 2.0 | 103 | 46 | 80 | M16×1.50 | 10 | 14 | 75.00 | 10 | 103 | 8 | 83 | 260 | 1310 | 1740 |
| TLSB12-M68x...x.../ | M68 | 6.0 | 4.0 | 2.0 | 137 | 46 | 84 | M16×1.50 | 10 | 14 | 75.00 | 10 | 107 | 8 | 83 | 295 | 1480 | 1990 |
| TLSB12-M72x...x.../ | M72 | 6.0 | 4.0 | 2.0 | 111 | 56 | 88 | M16×1.50 | 12 | 14 | 84.00 | 9 | 111 | 8 | 92 | 280 | 1690 | 2260 |
| TLSB12-M76x...x.../ | M76 | 6.0 | 4.0 | 2.0 | 116 | 56 | 92 | M16×1.50 | 14 | 14 | 84.00 | 9 | 116 | 8 | 92 | 270 | 1900 | 2540 |
| TLSB12-M80x...x.../ | M80 | 6.0 | 4.0 | 2.0 | 120 | 56 | 96 | M16×1.50 | 14 | 14 | 84.00 | 9 | 120 | 8 | 92 | 300 | 2110 | 2820 |
| TLSB12-M90x...x.../ | M90 | 6.0 | 4.0 | 2.0 | 139 | 61 | 110 | M20×1.50 | 12 | 17 | 84.00 | 9 | 139 | 10 | 99 | 560 | 2740 | 3660 |

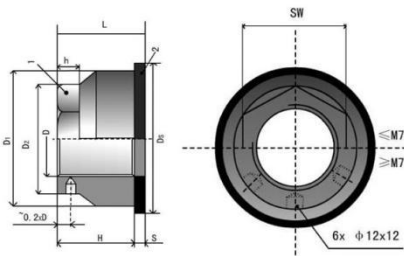
TLSB12-075

| Model | Nut body(in) | | | | | | | Jackboltss E(in) | | | | | Hardened washer G(in) | | High total (in) | Preload nom M (Lbft) | torque nom F (LBf) | Preload capacity max (LBf) |
|----------------------|------------------|----------------|----------------|----------------|----------------|------------|-----------------|------------------|----------|---------------|----------------|-----------|-----------------------|------------|-----------------|----------------------|--------------------|----------------------------|
| | Thread diameterD | Commonly pitch | | | Out diameter | Thicken ss | Center distance | Pitch*diameter | Quantity | Opposite side | Length | Clearance | Outer diameter | Thickn ess | | | | |
| | | P ₁ | P ₂ | P ₃ | D _i | H | D _τ | D _j | n | SW | L _i | a | D _s | s | | | | |
| TLSB12-075-...x.../w | 3/4 | 10.0 | 16 | — | 1.35 | 0.70 | 1.00 | 1/4-28 | 6 | 3/16 | 1.25 | 0.24 | 1.35 | 0.13 | 1.38 | 12 | 26200 | 34800 |
| TLSB12-087-...x.../w | 7/8 | 9.0 | 14 | — | 1.48 | 0.70 | 1.13 | 1/4-28 | 8 | 3/16 | 1.25 | 0.24 | 1.48 | 0.13 | 1.38 | 13 | 36300 | 48200 |
| TLSB12-100-...x.../w | 1 | 8.0 | 12 | 14 | 1.73 | 0.90 | 1.31 | 5/6-24 | 6 | 1/4 | 1.52 | 0.24 | 1.73 | 0.16 | 1.68 | 27 | 47700 | 63400 |
| TLSB12-112-...x.../w | 1-1/8 | 7.0 | 8 | 12 | 1.85 | 0.90 | 1.44 | 5/6-24 | 8 | 1/4 | 1.52 | 0.23 | 1.83 | 0.16 | 1.68 | 25 | 60000 | 79800 |
| TLSB12-125-...x.../w | 1-1/4 | 7.0 | 8 | 12 | 1.98 | 0.90 | 1.56 | 5/6-24 | 12 | 1/4 | 1.52 | 0.23 | 1.98 | 0.16 | 1.68 | 21 | 77000 | 102400 |
| TLSB12-137-...x.../w | 1-3/8 | 6.0 | 8 | 12 | 2.23 | 1.10 | 1.75 | 3/8-24 | 10 | 5/16 | 1.83 | 0.25 | 2.23 | 0.20 | 2.03 | 36 | 90700 | 120600 |
| TLSB12-150-...x.../w | 1-1/2 | 6.0 | 8 | 12 | 2.35 | 1.10 | 1.88 | 3/8-24 | 12 | 5/16 | 1.83 | 0.25 | 2.35 | 0.20 | 2.03 | 33 | 100000 | 133000 |
| TLSB12-162-...x.../w | 1-5/8 | 6.0 | 8 | 12 | 2.47 | 1.10 | 2.00 | 3/8-24 | 12 | 5/16 | 1.83 | 0.25 | 2.47 | 0.20 | 2.03 | 40 | 120700 | 160500 |
| TLSB12-175-...x.../w | 1-3/4 | 5.0 | 8 | 12 | 2.73 | 1.40 | 2.19 | 7/16-20 | 12 | 3/8 | 2.24 | 0.30 | 2.73 | 0.25 | 2.49 | 51 | 131200 | 174400 |
| TLSB12-187-...x.../w | 1-7/8 | 6.0 | 8 | 12 | 2.98 | 1.50 | 2.38 | 1/2-20 | 10 | 7/16 | 2.35 | 0.30 | 2.98 | 0.25 | 2.60 | 88 | 167900 | 223300 |
| TLSB12-200-...x.../w | 2 | 4.5 | 8 | 12 | 3.20 | 1.50 | 2.50 | 1/2-20 | 12 | 7/16 | 2.35 | 0.30 | 3.20 | 0.25 | 2.60 | 74 | 172100 | 228800 |
| TLSB12-225-...x.../w | 2-1/4 | 4.5 | 8 | 12 | 3.45 | 1.60 | 2.75 | 1/2-20 | 12 | 7/16 | 2.60 | 0.30 | 3.45 | 0.25 | 2.85 | 104 | 239800 | 318900 |
| TLSB12-250-...x.../w | 2-1/2 | 4.0 | 8 | 12 | 3.95 | 1.80 | 3.13 | 5/8-18 | 10 | 9/16 | 2.95 | 0.40 | 3.94 | 0.31 | 3.26 | 183 | 280000 | 372400 |
| TLSB12-275-...x.../w | 2-3/4 | 4.0 | 8 | 12 | 4.20 | 2.20 | 3.38 | 5/8-18 | 12 | 9/16 | 3.30 | 0.40 | 4.20 | 0.31 | 3.61 | 189 | 348500 | 463500 |
| TLSB12-300-...x.../w | 3 | 4.0 | 6 | 8 | 4.45 | 2.20 | 3.63 | 5/8-18 | 14 | 9/16 | 3.30 | 0.40 | 4.45 | 0.31 | 3.61 | 197 | 424700 | 564800 |
| TLSB12-325-...x.../w | 3-1/4 | 4.0 | 6 | 8 | 4.95 | 2.35 | 4.00 | 3/4-16 | 12 | 5/8 | 3.63 | 0.35 | 4.95 | 0.38 | 4.01 | 328 | 508300 | 676000 |
| TLSB12-350-...x.../w | 3-1/2 | 4.0 | 6 | 8 | 5.20 | 2.35 | 4.25 | 3/4-16 | 14 | 5/8 | 3.63 | 0.35 | 5.20 | 0.38 | 4.01 | 332 | 599500 | 797300 |

Working environment same with SB8, but more suitable for low temperature environment than SB8.Such as: gear box, high light, mining machinery, the gear rack/stand, the sealing flange,wind tunnel etc.

TLSX8-M20x

TOP-LOCK®Multi-jackbolt tensioners--- elastic adjustable nut (standard)



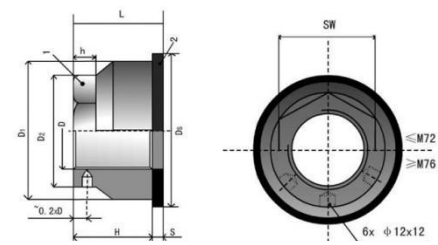
| Model | Nut body (MM) | | | | | | | | | | Hardened washer G (MM) | | High total (MM) | Quality of the standard product (kg) | Preload capacity max (KN) |
|------------------|-------------------------|----------------|-----|-----|-----------------|---------------|-----------------------------|----------------|------------------|--------|---------------------------|---------------|--------------------|--|---------------------------------|
| | Thread diameter D | Commonly pitch | | | Out diameter | Thickens s | Hexagon opposite side | Hexagon height | Opposite side | Length | Outer diameter | Thickne ss | | | |
| | | P1 | P2 | P3 | | | | | | | | | | | |
| TLSX8-M20x.../w | M20 | 2.5 | 1.5 | 1.0 | 35 | 17 | 30 | 8 | 27 | 17.00 | 38 | 4 | 21 | 0.10 | 140 |
| TLSX8-M24x.../w | M24 | 3.0 | 2.0 | 1.5 | 42 | 20 | 37 | 10 | 33 | 20.00 | 45 | 4 | 24 | 0.15 | 187 |
| TLSX8-M27x.../w | M27 | 3.0 | 2.0 | 1.5 | 47 | 23 | 40 | 11 | 36 | 23.00 | 50 | 5 | 28 | 0.20 | 285 |
| TLSX8-M30x.../w | M30 | 3.5 | 2.0 | 1.5 | 52 | 25 | 43 | 12 | 39 | 25.00 | 56 | 5 | 30 | 0.25 | 286 |
| TLSX8-M33x.../w | M33 | 3.5 | 2.0 | 1.5 | 57 | 28 | 47 | 13 | 42 | 28.00 | 63 | 6 | 34 | 0.40 | 380 |
| TLSX8-M36x.../w | M36 | 4.0 | 3.0 | 1.5 | 62 | 31 | 53 | 14 | 48 | 31.00 | 69 | 6 | 37 | 0.50 | 460 |
| TLSX8-M39x.../w | M39 | 4.0 | 3.0 | 1.5 | 66 | 33 | 56 | 15 | 51 | 33.00 | 72 | 6 | 39 | 0.60 | 610 |
| TLSX8-M42x.../w | M42 | 4.5 | 3.0 | 1.5 | 73 | 36 | 62 | 17 | 56 | 36.00 | 76 | 6 | 42 | 0.75 | 610 |
| TLSX8-M45x.../w | M45 | 4.5 | 3.0 | 1.5 | 77 | 38 | 64 | 18 | 57 | 38.00 | 81 | 6 | 44 | 0.85 | 935 |
| TLSX8-M48x.../w | M48 | 5.0 | 3.0 | 1.5 | 83 | 41 | 71 | 19 | 64 | 41.00 | 86 | 6 | 47 | 1.10 | 935 |
| TLSX8-M52x.../w | M52 | 5.0 | 3.0 | 2.0 | 88 | 44 | 74 | 21 | 67 | 44.00 | 94 | 6 | 50 | 1.25 | 970 |
| TLSX8-M56x.../w | M56 | 5.5 | 4.0 | 2.0 | 97 | 48 | 80 | 22 | 72 | 48.00 | 100 | 6 | 54 | 1.60 | 1120 |
| TLSX8-M60x.../w | M60 | 5.5 | 4.0 | 2.0 | 105 | 51 | 84 | 23 | 76 | 51.00 | 110 | 8 | 59 | 2.05 | 1310 |
| TLSX8-M64x.../w | M64 | 6.0 | 4.0 | 2.0 | 111 | 54 | 88 | 26 | 80 | 54.00 | 120 | 8 | 62 | 2.35 | 1690 |
| TLSX8-M72x.../w | M72 | 6.0 | 4.0 | 2.0 | 125 | 61 | 98 | 29 | 90 | 61.00 | 130 | 8 | 69 | 3.15 | 1690 |
| TLSX8-M76x.../w | M76 | 6.0 | 4.0 | 2.0 | 132 | 64 | 109 | 30 | * | 64.00 | 138 | 10 | 74 | 4.20 | 2530 |
| TLSX8-M80x.../w | M80 | 6.0 | 4.0 | 2.0 | 139 | 68 | 120 | 32 | * | 68.00 | 145 | 10 | 78 | 5.20 | 2530 |
| TLSX8-M90x.../w | M90 | 6.0 | 4.0 | 2.0 | 156 | 76 | 135 | 36 | * | 76.00 | 160 | 10 | 86 | 7.10 | 3380 |
| TLSX8-M100x.../w | M100 | 6.0 | 4.0 | 2.0 | 173 | 85 | 150 | 40 | * | 85.00 | 180 | 10 | 95 | 9.00 | 3380 |
| TLSX8-M110x.../w | M110 | 6.0 | 4.0 | 2.0 | 191 | 94 | 165 | 44 | * | 94.00 | 202 | 10 | 104 | 13.00 | 4200 |
| TLSX8-M120x.../w | M120 | 6.0 | 4.0 | 2.0 | 208 | 102 | 180 | 48 | * | 102.00 | 215 | 12 | 114 | 16.75 | 5600 |
| TLSX8-M125x.../w | M125 | 6.0 | 4.0 | 2.0 | 218 | 108 | 188 | 51 | * | 108.00 | 227 | 12 | 120 | 19.50 | 5600 |
| TLSX8-M130x.../w | M130 | 6.0 | 4.0 | 2.0 | 226 | 111 | 195 | 52 | * | 111.00 | 234 | 12 | 123 | 21.25 | 6300 |
| TLSX8-M140x.../w | M140 | 6.0 | 4.0 | 2.0 | 243 | 119 | 210 | 56 | * | 119.00 | 253 | 12 | 131 | 26.25 | 7000 |
| TLSX8-M150x.../w | M150 | 6.0 | 4.0 | 2.0 | 260 | 127 | 225 | 60 | * | 127.00 | 271 | 12 | 139 | 31.75 | 7000 |
| TLSX8-M160x.../w | M160 | 6.0 | 4.0 | — | 278 | 136 | 240 | 64 | * | 136.00 | 290 | 12 | 148 | 38.75 | 8400 |

TLSX8-075

| Model | Nut body(in) | | | | | | | | | | Hardened washer G(in) | | High total (in) | Quality of the standard product (Lb) | Preload capacity max (LBf) |
|-----------------|----------------------|----------------|----|----|--------------|-----------|-----------------------|----------------|---------------|--------|-----------------------|-----------|--------------------|--------------------------------------|----------------------------|
| | Thread diameter D | Commonly pitch | | | Out diameter | Thickenss | Hexagon opposite side | Hexagon height | Opposite side | Length | Outer diameter | Thickness | | | |
| | | P1 | P2 | P3 | D1 | H | D2 | h | SW | L1 | DS | s | | | |
| TLSX8-075-.../w | 3/4 | 10.0 | 16 | — | 1.30 | 0.64 | 1.11 | 0.30 | 1 | 0.64 | 1.50 | 0.13 | 0.77 | 0.17 | 27200 |
| TLSX8-087-.../w | 7/8 | 9.0 | 14 | — | 1.52 | 0.74 | 1.25 | 0.35 | 1-1/8 | 0.74 | 1.62 | 0.13 | 0.87 | 0.23 | 40800 |
| TLSX8-100-.../w | 1 | 8.0 | 12 | 14 | 1.73 | 0.85 | 1.46 | 0.40 | 1-5/16 | 0.41 | 2.00 | 0.16 | 1.01 | 0.38 | 64800 |
| TLSX8-112-.../w | 1-1/8 | 7.0 | 8 | 12 | 1.95 | 0.96 | 1.67 | 0.45 | 1-1/2 | 0.96 | 2.12 | 0.16 | 1.12 | 0.52 | 64800 |
| TLSX8-125-.../w | 1-1/4 | 7.0 | 8 | 12 | 2.17 | 1.06 | 1.81 | 0.50 | 1-5/8 | 1.06 | 2.50 | 0.19 | 1.25 | 0.73 | 86400 |
| TLSX8-137-.../w | 1-3/8 | 6.0 | 8 | 12 | 2.38 | 1.17 | 1.94 | 0.55 | 1-3/4 | 1.94 | 2.50 | 0.19 | 1.36 | 0.87 | 98400 |
| TLSX8-150-.../w | 1-1/2 | 6.0 | 8 | 12 | 2.60 | 1.28 | 2.22 | 0.60 | 2 | 1.28 | 3.00 | 0.25 | 1.53 | 1.33 | 131200 |
| TLSX8-162-.../w | 1-5/8 | 6.0 | 8 | 12 | 2.81 | 1.38 | 2.36 | 0.65 | 2-1/8 | 1.38 | 3.00 | 0.25 | 1.63 | 1.54 | 141100 |
| TLSX8-175-.../w | 1-3/4 | 5.0 | 8 | 12 | 3.03 | 1.49 | 2.50 | 0.70 | 2-1/4 | 1.49 | 3.25 | 0.25 | 1.74 | 1.85 | 172800 |
| TLSX8-187-.../w | 1-7/8 | 6.0 | 8 | 12 | 3.25 | 1.59 | 2.78 | 0.75 | 2-1/2 | 1.59 | 3.50 | 0.25 | 1.84 | 2.54 | 233600 |
| TLSX8-200-.../w | 2 | 4.5 | 8 | 12 | 3.46 | 1.70 | 2.92 | 0.80 | 2-5/8 | 1.70 | 3.75 | 0.25 | 1.95 | 2.76 | 233600 |
| TLSX8-225-.../w | 2-1/4 | 4.5 | 8 | 12 | 3.90 | 1.91 | 3.30 | 0.90 | 3 | 1.91 | 4.22 | 0.31 | 2.22 | 4.07 | 275400 |
| TLSX8-250-.../w | 2-1/2 | 4.0 | 8 | 12 | 4.33 | 2.13 | 3.55 | 1.00 | 3-1/4 | 2.13 | 4.70 | 0.31 | 2.44 | 5.31 | 380800 |
| TLSX8-275-.../w | 2-3/4 | 4.0 | 8 | 12 | 4.76 | 2.34 | 3.93 | 1.10 | 3-5/8 | 2.34 | 4.95 | 0.31 | 2.65 | 7.46 | 380800 |
| TLSX8-300-.../w | 3 | 4.0 | 6 | 8 | 5.23 | 2.55 | 4.30 | 1.20 | 4 | 2.55 | 5.45 | 0.38 | 2.93 | 9.18 | 571200 |
| TLSX8-325-.../w | 3-1/4 | 4.0 | 6 | 8 | 5.63 | 2.76 | 4.88 | 1.30 | * | 2.76 | 5.95 | 0.38 | 3.14 | 12.08 | 571200 |
| TLSX8-350-.../w | 3-1/2 | 4.0 | 6 | 8 | 6.06 | 2.98 | 5.25 | 1.40 | * | 2.98 | 6.45 | 0.38 | 3.36 | 14.98 | 761600 |
| TLSX8-375-.../w | 3-3/4 | 4.0 | 6 | 8 | 6.50 | 3.19 | 5.63 | 1.50 | * | 3.19 | 6.94 | 0.38 | 3.57 | 18.36 | 761600 |
| TLSX8-400-.../w | 4 | 4.0 | 6 | 8 | 6.93 | 3.40 | 6.00 | 1.60 | * | 3.40 | 7.45 | 0.43 | 3.83 | 22.55 | 856800 |
| TLSX8-425-.../w | 4-1/4 | 4.0 | 6 | 8 | 7.36 | 3.61 | 6.38 | 1.70 | * | 0.64 | 7.95 | 0.43 | 4.04 | 28.55 | 1075200 |
| TLSX8-450-.../w | 4-1/2 | 4.0 | 6 | 8 | 7.79 | 3.83 | 6.75 | 1.80 | * | 0.74 | 8.20 | 0.43 | 4.26 | 30.98 | 1116600 |
| TLSX8-475-.../w | 4-3/4 | 4.0 | 6 | 8 | 8.23 | 4.04 | 7.13 | 1.90 | * | 0.41 | 8.70 | 0.43 | 4.47 | 38.95 | 1209600 |
| TLSX8-500-.../w | 5 | 4.0 | 6 | 8 | 8.66 | 4.25 | 7.50 | 2.00 | * | 0.96 | 9.45 | 0.50 | 4.75 | 46.80 | 1344000 |
| TLSX8-525-.../w | 5-1/4 | 4.0 | 6 | 8 | 9.09 | 4.46 | 7.88 | 2.10 | * | 1.06 | 9.45 | 0.50 | 4.96 | 52.48 | 1478400 |
| TLSX8-550-.../w | 5-1/2 | 4.0 | 6 | 8 | 9.53 | 4.68 | 8.25 | 2.20 | * | 1.94 | 9.95 | 0.50 | 5.18 | 56.03 | 1478400 |
| TLSX8-575-.../w | 5-3/4 | 4.0 | 6 | 8 | 9.96 | 4.89 | 8.63 | 2.30 | * | 1.28 | 10.45 | 0.50 | 5.39 | 65.49 | 1612800 |
| TLSX8-600-.../w | 6 | 4.0 | 6 | 8 | 10.39 | 5.10 | 9.00 | 2.40 | * | 1.38 | 10.95 | 0.50 | 5.60 | 72.84 | 1612800 |

TLSX12-M20x

TOP-LOCK®Multi-jackbolt tensioners--- elastic adjustable nut (high strength)



| Model | Nut body (MM) | | | | | | | | | | Hardened washer G (MM) | | High total (MM) | Quality of the standard product (kg) | Preload capacity max (KN) |
|-------------------|-------------------------|----------------|-----|-----|-----------------|---------------|----------------------------------|-----------------------|------------------|--------|---------------------------|-----------|-----------------------|--|---------------------------------|
| | Thread diameter D | Commonly pitch | | | Out diameter | Thicke nss | Hexagon oppos ite si de | Hexagon heigh t | Opposite side | Length | Outer diamo ter | Thickness | | | |
| | | P1 | P2 | P3 | | | | | | | | | | | |
| TLSX12-M20x.../w | M20 | 2.5 | 1.5 | 1.0 | 35 | 20 | 30 | 8 | 27 | 20.00 | 38 | 4 | 24 | 0.10 | 187 |
| TLSX12-M24x.../w | M24 | 3.0 | 2.0 | 1.5 | 42 | 24 | 37 | 10 | 33 | 24.00 | 45 | 4 | 28 | 0.20 | 285 |
| TLSX12-M27x.../w | M27 | 3.0 | 2.0 | 1.5 | 47 | 27 | 40 | 11 | 36 | 27.00 | 50 | 5 | 32 | 0.25 | 380 |
| TLSX12-M30x.../w | M30 | 3.5 | 2.0 | 1.5 | 52 | 30 | 43 | 12 | 39 | 30.00 | 56 | 5 | 35 | 0.35 | 427 |
| TLSX12-M33x.../w | M33 | 3.5 | 2.0 | 1.5 | 57 | 33 | 47 | 13 | 42 | 33.00 | 63 | 6 | 39 | 0.45 | 610 |
| TLSX12-M36x.../w | M36 | 4.0 | 3.0 | 1.5 | 62 | 36 | 53 | 14 | 48 | 36.00 | 69 | 6 | 42 | 0.60 | 675 |
| TLSX12-M39x.../w | M39 | 4.0 | 3.0 | 1.5 | 66 | 39 | 56 | 15 | 51 | 39.00 | 72 | 6 | 45 | 0.70 | 760 |
| TLSX12-M42x.../w | M42 | 4.5 | 3.0 | 1.5 | 73 | 42 | 62 | 17 | 56 | 42.00 | 76 | 6 | 48 | 0.90 | 915 |
| TLSX12-M45x.../w | M45 | 4.5 | 3.0 | 1.5 | 77 | 45 | 64 | 18 | 57 | 45.00 | 81 | 6 | 51 | 1.00 | 1170 |
| TLSX12-M48x.../w | M48 | 5.0 | 3.0 | 1.5 | 83 | 48 | 71 | 19 | 64 | 48.00 | 86 | 6 | 54 | 1.30 | 1170 |
| TLSX12-M52x.../w | M52 | 5.0 | 3.0 | 2.0 | 88 | 52 | 74 | 21 | 67 | 52.00 | 94 | 6 | 58 | 1.50 | 1400 |
| TLSX12-M56x.../w | M56 | 5.5 | 4.0 | 2.0 | 97 | 56 | 80 | 22 | 72 | 56.00 | 100 | 6 | 62 | 1.95 | 1400 |
| TLSX12-M60x.../w | M60 | 5.5 | 4.0 | 2.0 | 105 | 60 | 84 | 23 | 76 | 60.00 | 106 | 8 | 68 | 2.45 | 2100 |
| TLSX12-M64x.../w | M64 | 6.0 | 4.0 | 2.0 | 111 | 64 | 88 | 26 | 80 | 64.00 | 120 | 8 | 72 | 2.85 | 2100 |
| TLSX12-M72x.../w | M72 | 6.0 | 4.0 | 2.0 | 125 | 72 | 98 | 29 | 90 | 72.00 | 130 | 8 | 80 | 3.90 | 2530 |
| TLSX12-M76x.../w | M76 | 6.0 | 4.0 | 2.0 | 132 | 76 | 109 | 30 | * | 76.00 | 138 | 10 | 86 | 5.05 | 3380 |
| TLSX12-M80x.../w | M80 | 6.0 | 4.0 | 2.0 | 139 | 80 | 120 | 32 | * | 80.00 | 145 | 10 | 90 | 6.15 | 3380 |
| TLSX12-M90x.../w | M90 | 6.0 | 4.0 | 2.0 | 156 | 90 | 135 | 36 | * | 90.00 | 160 | 10 | 100 | 8.50 | 4200 |
| TLSX12-M100x.../w | M100 | 6.0 | 4.0 | 2.0 | 173 | 100 | 150 | 40 | * | 100.00 | 180 | 10 | 110 | 12.50 | 4900 |
| TLSX12-M110x.../w | M110 | 6.0 | 4.0 | 2.0 | 191 | 110 | 165 | 44 | * | 110.00 | 202 | 10 | 120 | 15.50 | 5600 |
| TLSX12-M120x.../w | M120 | 6.0 | 4.0 | 2.0 | 208 | 120 | 180 | 48 | * | 120.00 | 215 | 12 | 132 | 20.00 | 6300 |
| TLSX12-M125x.../w | M125 | 6.0 | 4.0 | 2.0 | 218 | 125 | 188 | 51 | * | 125.00 | 227 | 12 | 137 | 22.75 | 6300 |
| TLSX12-M130x.../w | M130 | 6.0 | 4.0 | 2.0 | 226 | 111 | 195 | 52 | * | 111.00 | 234 | 12 | 123 | 21.25 | 7000 |
| TLSX12-M140x.../w | M140 | 6.0 | 4.0 | 2.0 | 243 | 119 | 210 | 56 | * | 119.00 | 253 | 12 | 131 | 26.25 | 7700 |
| TLSX12-M150x.../w | M150 | 6.0 | 4.0 | 2.0 | 260 | 127 | 225 | 60 | * | 127.00 | 271 | 12 | 139 | 31.75 | 7700 |
| TLSX12-M160x.../w | M160 | 6.0 | 4.0 | — | 278 | 136 | 240 | 64 | * | 136.00 | 290 | 12 | 148 | 38.75 | 8400 |

TLSX12-075

| Model | Nut body(in) | | | | | | | | | | Hardened washer G(in) | | High total (in) | Quality of the standard product (Lb) | Preload capacity max (LBf) |
|------------------|-------------------|----------------|----|----|--------------|-----------|------------------------|----------------|----------------|--------|-----------------------|-----------|-----------------|--------------------------------------|----------------------------|
| | Thread diameter D | Commonly pitch | | | Out diameter | Thickenss | Hexagon opp osite side | Hexagon height | Opposit e side | Length | Outer diameter | Thickness | | | |
| | | P1 | P2 | P3 | | | | | | | | | D1 | H | |
| TLSX12-075-.../w | 3/4 | 10.0 | 16 | – | 1.30 | 0.75 | 1.11 | 0.3 | 1 | 0.88 | 1.50 | 0.13 | 0.88 | 0.15 | 40800 |
| TLSX12-087-.../w | 7/8 | 9.0 | 14 | – | 1.52 | 0.88 | 1.25 | 0.35 | 1-1/8 | 1.01 | 1.62 | 0.13 | 1.01 | 0.29 | 54400 |
| TLSX12-100-.../w | 1 | 8.0 | 12 | 14 | 1.73 | 1.00 | 1.46 | 0.4 | 1-5/16 | 1.16 | 2.00 | 0.16 | 1.16 | 0.47 | 64800 |
| TLSX12-112-.../w | 1-1/8 | 7.0 | 8 | 12 | 1.95 | 1.13 | 1.67 | 0.45 | 1-1/2 | 1.29 | 2.12 | 0.16 | 1.29 | 0.64 | 86400 |
| TLSX12-125-.../w | 1-1/4 | 7.0 | 8 | 12 | 2.17 | 1.25 | 1.81 | 0.5 | 1-5/8 | 1.44 | 2.50 | 0.19 | 1.44 | 0.90 | 102410 |
| TLSX12-137-.../w | 1-3/8 | 6.0 | 8 | 12 | 2.38 | 1.38 | 1.94 | 0.55 | 1-3/4 | 1.57 | 2.50 | 0.19 | 1.57 | 1.08 | 131200 |
| TLSX12-150-.../w | 1-1/2 | 6.0 | 8 | 12 | 2.60 | 1.50 | 2.22 | 0.6 | 2 | 1.75 | 3.00 | 0.25 | 1.75 | 1.59 | 172800 |
| TLSX12-162-.../w | 1-5/8 | 6.0 | 8 | 12 | 2.81 | 1.63 | 2.36 | 0.65 | 2-1/8 | 1.88 | 3.00 | 0.25 | 1.88 | 1.90 | 172800 |
| TLSX12-175-.../w | 1-3/4 | 5.0 | 8 | 12 | 3.03 | 1.75 | 2.5 | 0.7 | 2-1/4 | 2.00 | 3.25 | 0.25 | 2.00 | 2.28 | 259200 |
| TLSX12-187-.../w | 1-7/8 | 6.0 | 8 | 12 | 3.25 | 1.88 | 2.78 | 0.75 | 2-1/2 | 2.13 | 3.50 | 0.25 | 2.13 | 2.91 | 233600 |
| TLSX12-200-.../w | 2 | 4.5 | 8 | 12 | 3.46 | 2.00 | 2.92 | 0.8 | 2-5/8 | 2.25 | 3.75 | 0.25 | 2.25 | 3.43 | 350400 |
| TLSX12-225-.../w | 2-1/4 | 4.5 | 8 | 12 | 3.90 | 2.25 | 3.3 | 0.9 | 3 | 2.56 | 4.22 | 0.31 | 2.56 | 5.01 | 350400 |
| TLSX12-250-.../w | 2-1/2 | 4.0 | 8 | 12 | 4.33 | 2.50 | 3.55 | 1 | 3-1/4 | 2.81 | 4.70 | 0.31 | 2.81 | 6.51 | 571200 |
| TLSX12-275-.../w | 2-3/4 | 4.0 | 8 | 12 | 4.76 | 2.75 | 3.93 | 1.1 | 3-5/8 | 3.06 | 4.95 | 0.31 | 3.06 | 8.42 | 571200 |
| TLSX12-300-.../w | 3 | 4.0 | 6 | 8 | 5.20 | 3.00 | 4.3 | 1.2 | 4 | 3.38 | 5.45 | 0.38 | 3.38 | 11.33 | 761600 |
| TLSX12-325-.../w | 3-1/4 | 4.0 | 6 | 8 | 5.63 | 3.25 | 4.88 | 1.3 | * | 3.63 | 5.94 | 0.38 | 3.63 | 14.93 | 761600 |
| TLSX12-350-.../w | 3-1/2 | 4.0 | 6 | 8 | 6.06 | 3.50 | 5.25 | 1.4 | * | 3.88 | 6.45 | 0.38 | 3.88 | 18.27 | 856800 |
| TLSX12-375-.../w | 3-3/4 | 4.0 | 6 | 8 | 6.50 | 3.75 | 5.63 | 1.5 | * | 4.13 | 6.95 | 0.38 | 4.13 | 22.61 | 856800 |
| TLSX12-400-.../w | 4 | 4.0 | 6 | 8 | 6.93 | 4.00 | 6 | 1.6 | * | 4.43 | 7.45 | 0.43 | 4.43 | 27.65 | 952000 |
| TLSX12-425-.../w | 4-1/4 | 4.0 | 6 | 8 | 7.36 | 4.25 | 6.38 | 1.7 | * | 4.68 | 7.95 | 0.43 | 4.68 | 32.97 | 1209600 |
| TLSX12-450-.../w | 4-1/2 | 4.0 | 6 | 8 | 7.79 | 4.50 | 6.75 | 1.8 | * | 4.93 | 8.20 | 0.43 | 4.93 | 38.42 | 1209600 |
| TLSX12-475-.../w | 4-3/4 | 4.0 | 6 | 8 | 8.23 | 4.75 | 7.13 | 1.9 | * | 5.18 | 8.70 | 0.43 | 5.18 | 45.09 | 1344000 |
| TLSX12-500-.../w | 5 | 4.0 | 6 | 8 | 8.66 | 5.00 | 7.5 | 2 | * | 6.50 | 9.45 | 0.50 | 5.50 | 53.75 | 1344000 |
| TLSX12-525-.../w | 5-1/4 | 4.0 | 6 | 8 | 9.09 | 5.25 | 7.88 | 2.1 | * | 5.75 | 9.45 | 0.50 | 5.75 | 60.81 | 1478400 |
| TLSX12-550-.../w | 5-1/2 | 4.0 | 6 | 8 | 9.53 | 5.50 | 8.25 | 2.2 | * | 6.00 | 9.95 | 0.50 | 6.00 | 69.67 | 1478400 |
| TLSX12-575-.../w | 5-3/4 | 4.0 | 6 | 8 | 9.96 | 5.75 | 8.63 | 2.3 | * | 6.25 | 10.45 | 0.50 | 6.25 | 79.37 | 1612800 |
| TLSX12-600-.../w | 6 | 4.0 | 6 | 8 | 10.39 | 6.00 | 9 | 2.4 | * | 6.50 | 10.95 | 0.50 | 6.50 | 89.75 | 1612800 |