

# Stud Tensioners



- **Simultaneously tension multiple bolts**
- **All parts feature corrosion protection**
- **Features a captive nut rotator**
- **Eliminates costly and time-consuming work**
- **Provides reliable, low-friction seals**
- **Gives accurate bolt tension**
- **Available in inches and metric sizes**
- **Custom designs available for special applications**

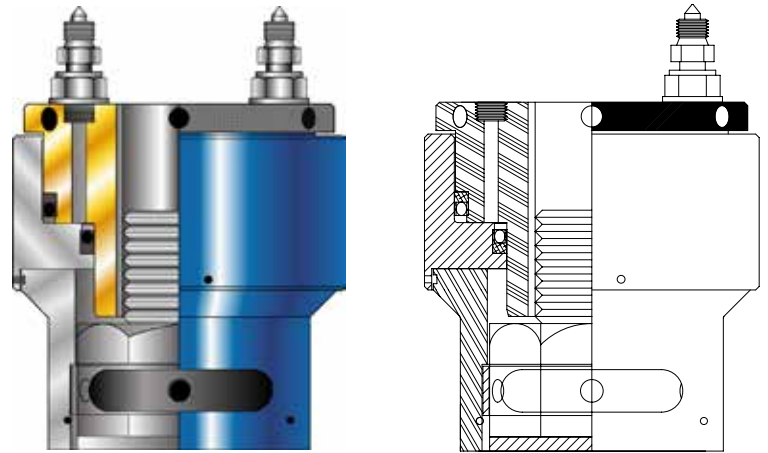
# Hydraulic Stud Tensioners

## FASTORQ® Stud Tensioners

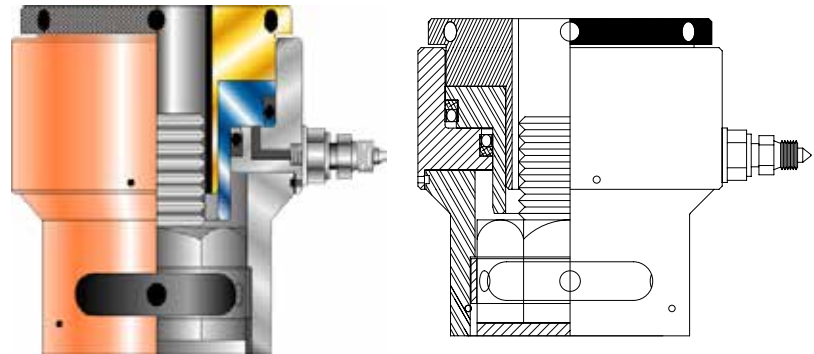
The quick, safe and accurate method of simultaneously loading multiple threaded fasteners is with FASTORQ Stud Tensioners. A bolted joint is clamped together by the permanent load applied to its optimum specification. If the bolt is loaded (tensioned) improperly, it will not do the job or it will not last on the job. Either way, the bolt fails. Accurate bolt tensioning is critical to the integrity of the joint. FASTORQ reduces the variable risk in critical bolting situations by allowing quick, safe and accurate tensioning.

FASTORQ Stud Tensioners are available in several models. FASTORQ offers traditional models, fixed or variable and the exclusive ZipTENSIONER featuring ZipNut® Double Zip® technology, all designed for applications such as reactors, flanges, vessel closures, heat exchangers, compressors, turbines, pipelines, clamp-type connectors, subsea and nuclear applications. ZipTENSIONER is especially suited for subsea and nuclear applications or when fast turnaround is required. FASTORQ also offers the ZipNut® Double Zip® technology as a retro-fit for existing stud tensioners.

Match FASTORQ Stud Tensioners with FASTORQ Power Units for optimum performance. For the fastest turn around possible on the job, FASTORQ recommends the Model HTP-2000 power unit featuring a power return pump.



**FIXED Model**



**VARIABLE Model**

## Features:

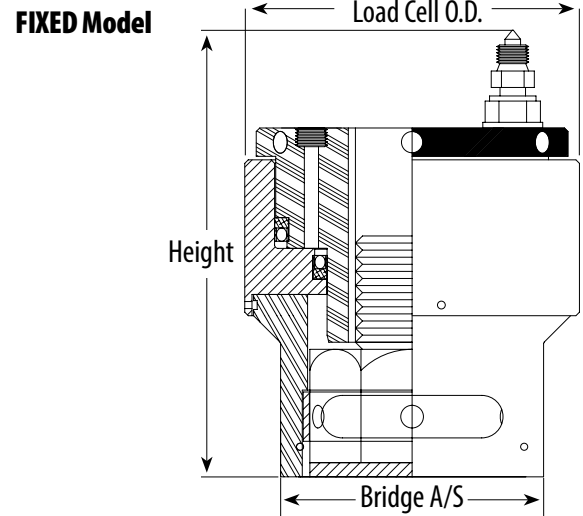
- Simulate bolt tension independent of coefficient of friction and notorsional loading of fastener
- Reliable, low-friction seals
- Captive nut rotator
- Two hydraulic ports
- Overstroke indicator
- AutoTENSIONER allows for 100% coverage from one side
- Available in inches and metric sizing
- Custom designs for special applications



# Stud Tensioner Fixed Model Dimensions

## Features:

- Self-lubricating seals provide unlimited shelf life
- Seals are high-performance polymers, FDA approved for food industry specifications
- Operating pressure up to 22,000 psi and temperatures from -400°F to +500°F
- Low coefficient of friction - 0.04
- Longer life seals provide better performance, fewer replacements
- Spring-energized seals provide permanent elasticity
- Variable models feature interchangeable components, affording greater coverage at lower cost
- Metric Sizes available



FIXED MODELS						
Part Number	Stud Diameter (Inches)	Maximum Initial Load <sup>1</sup> *(Lbs.)	Hydraulic Area (Inches <sup>2</sup> )	Height (Inches)	Bridge A/S (Inches)	Load Cell OD (Inches)
F012	3/4	43,472	1.976	6.125	2.600	2.198
F014	7/8	54,714	2.488	6.250	2.600	2.474
F100	1	63,360	2.880	6.375	2.600	2.762
F102	1-1/8	86,086	3.913	6.625	3.050	3.196
F104	1-1/4	107,008	4.864	6.750	3.150	3.481
F106	1-3/8	120,186	5.463	6.875	3.500	3.836
F108	1-1/2	139,480	6.340	7.000	3.625	4.152
F110	1-5/8	182,050	8.275	7.250	3.750	4.581
F112	1-3/4	230,230	10.465	7.375	4.375	5.045
F114	1-7/8	234,674	10.667	7.500	4.750	5.238
F200	2	286,176	13.008	7.625	4.812	5.660
F204	2-1/4	287,452	13.066	8.125	5.500	6.304
F208	2-1/2	324,632	14.756	8.500	5.625	6.805
F212	2-3/4	401,214	18.237	9.375	6.250	7.404
F300	3	507,584	23.072	9.500	6.375	8.056
F304	3-1/4	561,638	25.529	9.750	6.560	8.709
F308	3-1/2	690,976	31.408	10.375	7.250	9.431
F312	3-3/4	823,740	37.445	11.000	8.900	10.100
F400	4	922,086	41.913	11.500	9.100	10.500

<sup>1</sup> Maximum initial load is based on maximum operating pressure of 22,000 psi. Specifications may change without notice.



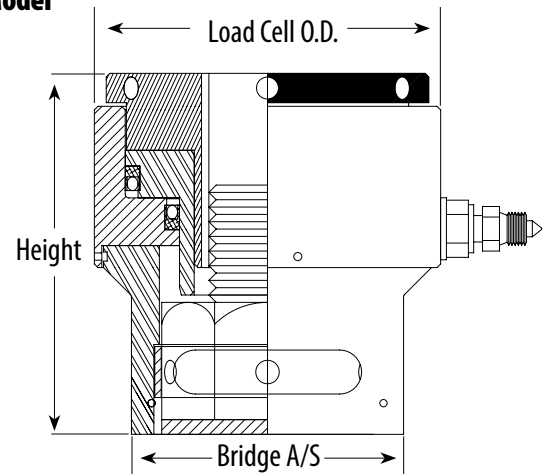
# Stud Tensioner

## Variable Model Dimensions

### Features:

- Self-lubricating seals provide unlimited shelf life
- Seals are high-performance polymers, FDA approved for food industry specifications
- Operating pressure up to 22,000 psi and temperatures from -400°F to +500°F
- Low coefficient of friction - 0.04
- Longer life seals provide better performance, fewer replacements
- Spring-energized seals provide permanent elasticity
- Variable models feature interchangeable components, affording greater coverage at lower cost
- Metric Sizes available

VARIABLE Model

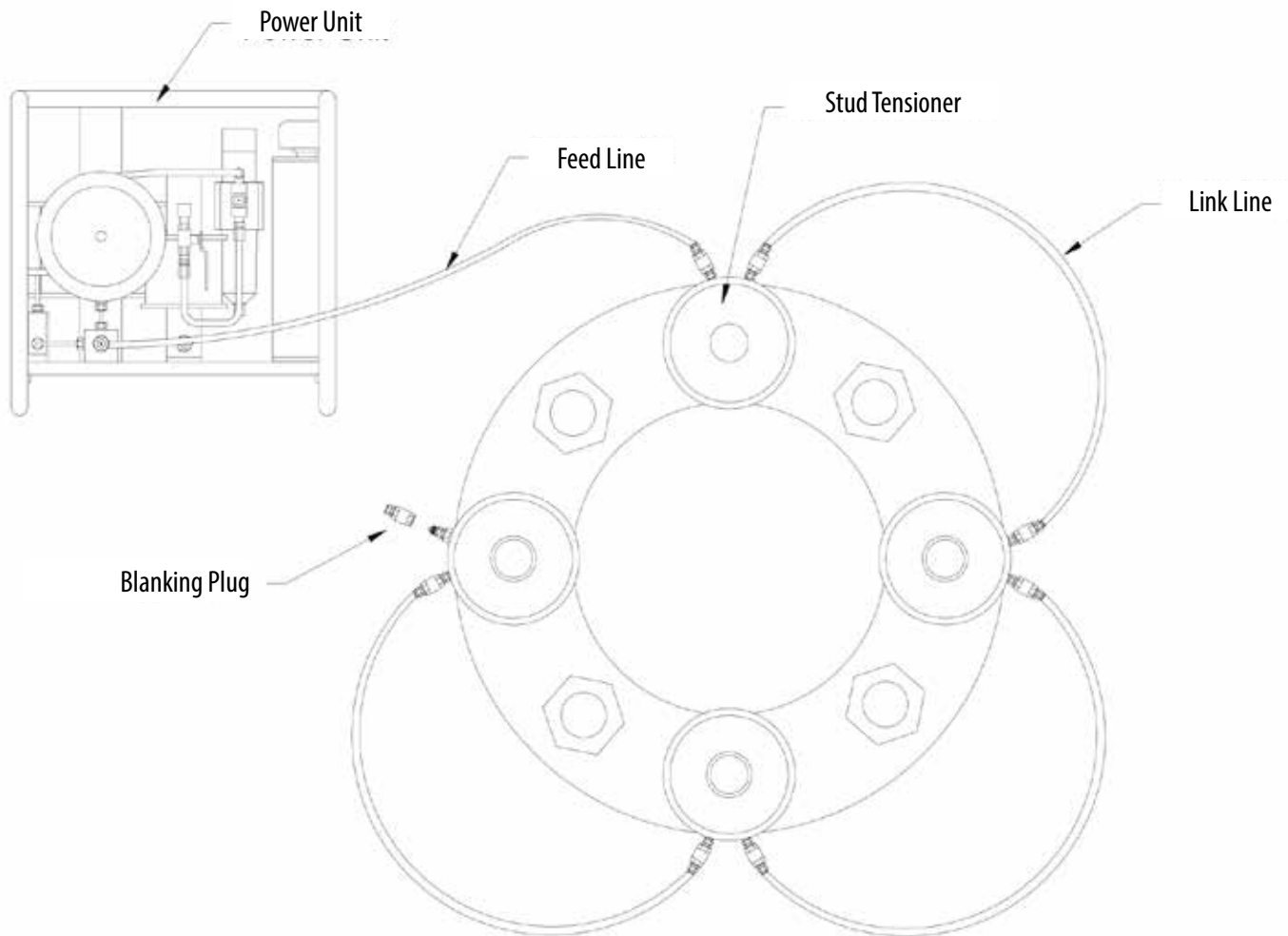


VARIABLE MODELS						
Part Number	Stud Diameter (Inches)	Maximum Initial Load <sup>1</sup> *(Lbs.)	Hydraulic Area (Inches <sup>2</sup> )	Height (Inches)	Bridge A/S (Inches)	Load Cell OD (Inches)
V012	3/4	42,240	1.920	4.500	2.600	3.700
V014	7/8	42,240	1.920	4.625	2.600	3.700
V100	1	42,240	1.920	4.750	2.600	3.700
V102	1-1/8	77,330	3.515	4.875	3.050	4.300
V104	1-1/4	77,330	3.515	5.032	3.150	4.300
V106	1-3/8	145,244	6.602	5.312	3.500	4.705
V108	1-1/2	145,244	6.602	5.437	3.625	4.705
V110	1-5/8	145,244	6.602	5.562	3.750	4.705
V112	1-3/4	250,338	11.379	5.687	4.375	5.905
V114	1-7/8	250,338	11.379	5.813	4.756	5.905
V200	2	250,338	11.379	5.938	4.812	5.905
V204	2-1/4	259,072	11.776	6.844	5.500	6.937
V208	2-1/2	259,072	11.776	6.969	5.625	6.937
V212	2-3/4	475,640	21.620	7.347	6.250	8.250
V300	3	475,640	21.620	8.032	6.375	8.250
V304	3-1/4	603,922	27.451	8.187	6.560	9.400
V308	3-1/2	603,922	27.451	8.312	7.250	9.400
V312	3-3/4	772,200	35.100	8.500	8.900	10.950
V400	4	772,200	35.100	8.687	9.100	10.950

<sup>1</sup> Maximum initial load is based on maximum operating pressure of 22,000 psi. Specifications may change without notice.



# Stud Tensioner Typical Application



## When ordering a stud tensioner system, the following accessories are required:

- One 20,000 psi hydraulic power unit
- One feed line to run from the power unit to the first tensioner
- As many link lines as required to connect all of the tensioners together LESS ONE. For example, if you order 10 tensioners, you will require 9 link lines.

