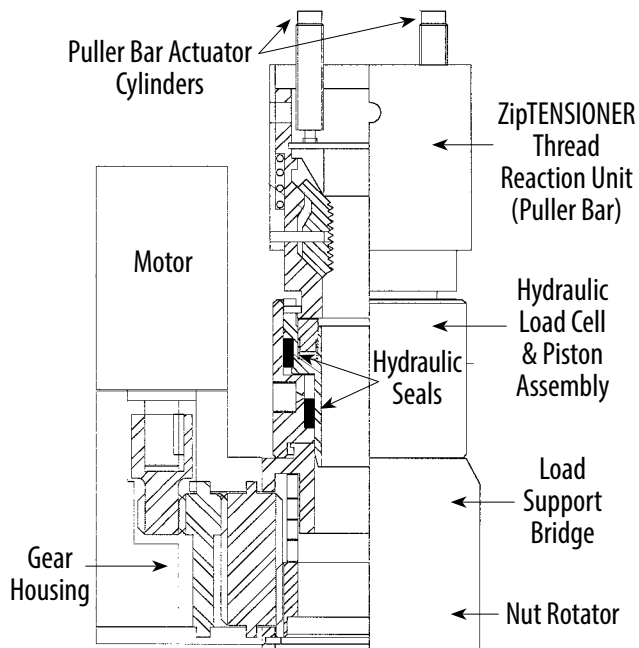


# ZipTENSIONER Stud Tensioners

Designed to provide subsea, nuclear, and wind industries with the latest technology and flexibility.

- Incorporates the ZipNut® Double Zip® technology.
- The ZipNut® Double Zip® spring loaded thread segments allow the tensioner to slide over the protruding stud threads, eliminating the time consuming task of threading the puller nut.
- Can be used for all standard tensioning operations.
- Compact design allows 100% stud coverage from one side of any ANSI or API flange. For example, the body diameter of a 1 5/8" Stud Tensioner is only 3.538" (90mm) thus improving the ability to fit non-standard applications.
- Allows for one piece installation.
- Can be fitted with special hydraulic release mechanism and hydraulic motor driven nut rotator for subsea applications – ROV and diver compatible.
- Ideal for multi-stud tensioning systems.
- All parts are stainless steel, nickel-plated or coated to provide corrosion protection.
- Automatic retraction available with specially equipped FASTORQ® Power Unit Model HTP-2000.
- Lightweight compared to competitor models.
- Also ideal for offshore, petrochemical, steel and mining.



Stud Dia. (IN)	Metric Diam.	Max. Initial Load <sup>1</sup> (Lbs.)	Max Load (% Yield*)	Hydraulic Area (IN <sup>2</sup> )	Max Oper. (psi)	Tensioner OD (IN)
3/4	M18	26.3	75	1.013	26,000	1.855
7/8	M22	36.4	75	1.399	26,000	2.142
1	M24	47.4	75	1.823	26,000	2.429
1 1/8	M27	62.2	75	2.391	26,000	2.635
1 1/4	M30/33	78.8	75	3.029	26,000	2.883
1 3/8	M36	97.1	75	3.736	26,000	3.159
1 1/2	M39	101.4	65	3.900	26,000	3.270
1 5/8	M42	120.9	65	4.650	26,000	3.538
1 3/4	M45	142.1	65	5.465	26,000	3.793
1 7/8	M48	164.7	65	6.335	26,000	4.078
2	M52	189.2	65	7.275	26,000	4.356
2 1/8	M56	215.1	65	8.273	26,000	4.632
2 1/4	M60	242.8	65	9.338	26,000	4.912
2 3/8	-----	272.1	65	10.465	26,000	5.189
2 1/2	M64	253.2	60	9.738	28,000	5.178
2 5/8	-----	303.9	60	11.688	28,000	5.57
2 3/4	M72	309.0	60	11.036	28,000	5.643
2 7/8	-----	339.3	60	12.118	28,000	5.904
3	M76	370.8	60	13.243	28,000	6.159
3 1/8	M80	403.7	60	14.419	28,000	6.457
3 1/4	M85	438.0	60	15.643	28,000	6.68
3 3/8	-----	473.8	60	16.920	28,000	6.947
3 1/2	M90	510.9	60	18.246	28,000	7.195
3 5/8	-----	549.4	60	19.620	28,000	7.448
3 3/4	M95	589.2	60	21.043	28,000	7.709
3 7/8	-----	630.6	60	22.521	28,000	7.97
4	M100	673.2	60	24.043	28,000	8.231

\*Bolt load as a percentage of yield is based on the minimum yield strength of ASTM A193, B7 bolt material. <sup>1</sup> Maximum load x 1,000 lbs.

← ZipTENSIONER Subsea Stud Tensioner with remote operated nut rotator and release.



# ZipTENSIONER

## Reaction Nuts

FASTORQ® Reaction Nuts with ZipNut® Double Zip® action is a direct fit replacement part and can be retro-fitted to existing tensioners with minimal modifications.

- Directly replaces the thread-on puller bars of multi-stud tensioner systems built for steam generator manways.
- Reduces maintenance crew time and fatigue is avoided when overhead installation of tensioners is required.
- "Push on, pull off" technology zips on rusty or damaged threads, tensions the stud and zips off.
- Simple and fast, no twisting or turning.

## ZipNut

The push on threaded nut is ASTM A194 Grade 2H equivalent and measures one wrench size larger across the flats than standard heavy hex nuts.

- Eliminates tedious turning, turning and turning.
- Eliminates cross threading.
- Fits standard bolts - available in sizes 1/2" - 1".
- Replaces heavy hex nuts.

## Power Units

For optimum performance and fast turnaround, power FASTORQ Stud Tensioners with a FASTORQ power unit.

### Model HTP-2000

- 30,000 psi air-driven
- Filter, regulator and lubricator
- Rugged steel cage
- Power fluid return pump

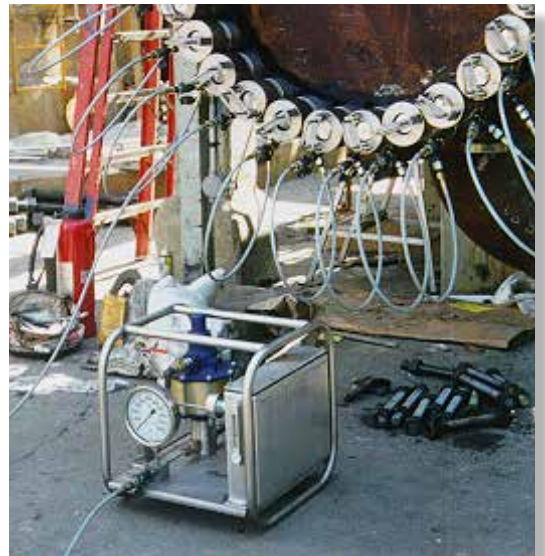
### Model HTP-1000

- Same as Model HTP-2000, includes drain port for fluid return.

Link Line: 4:1 Safety burst ratio - Quick disconnect couplers

"ZipNut" and "Double Zip" are Trademarks of Thread Technology, Inc.

The ZipNut® Double Zip® is protected under Patent (Numbers 4,378,187; 5,324,150; 5,427,488; 5,378,100; 5,580,200; Foreign Patents; and Patents Pending) and is utilized by FASTORQ® under an exclusive agreement with Thread Technology, Inc.



*Fastorq Model HTP-2000 is powering 28 ZipTENSIONER Stud Tensioners, size 2 1/2".*

