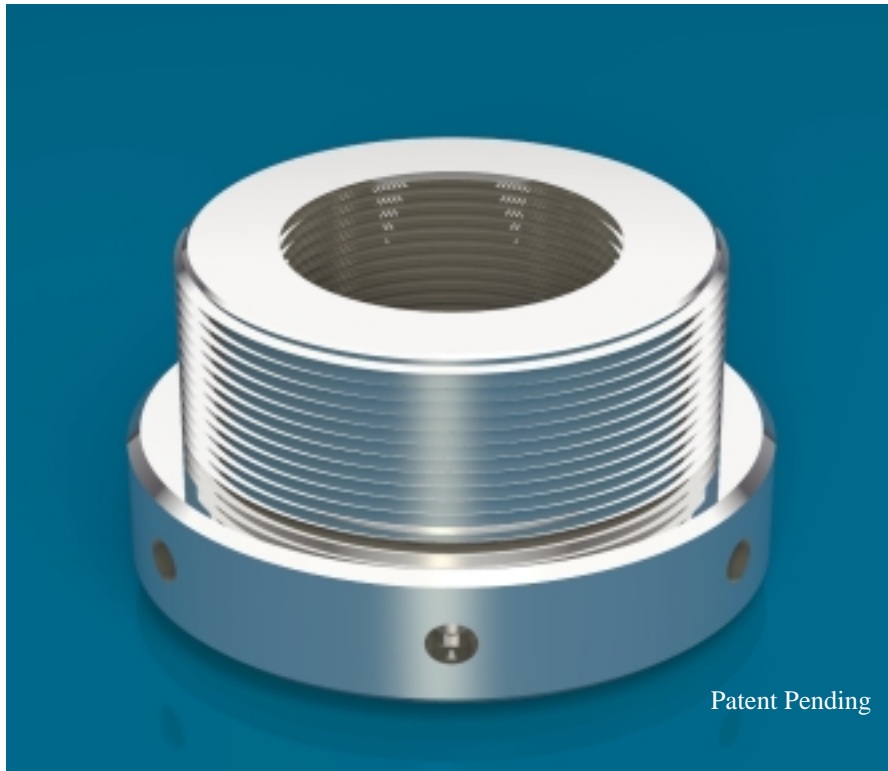


ETN SERIES EXTERNAL TENSIONING SYSTEM



Retrofit from torquing to tensioning without replacing studs

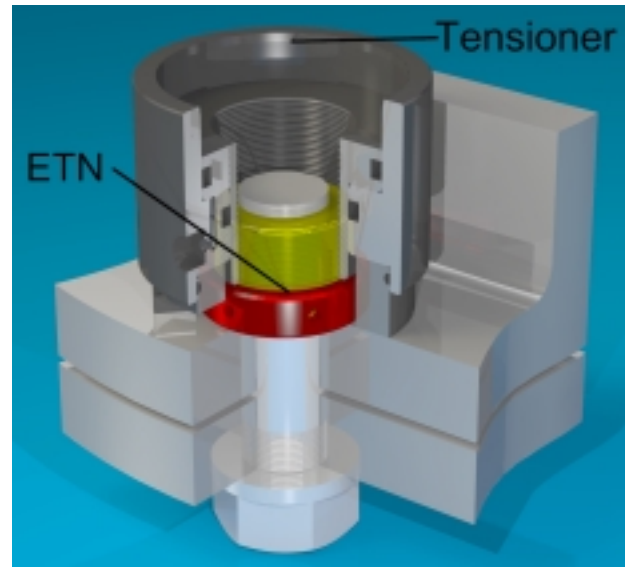
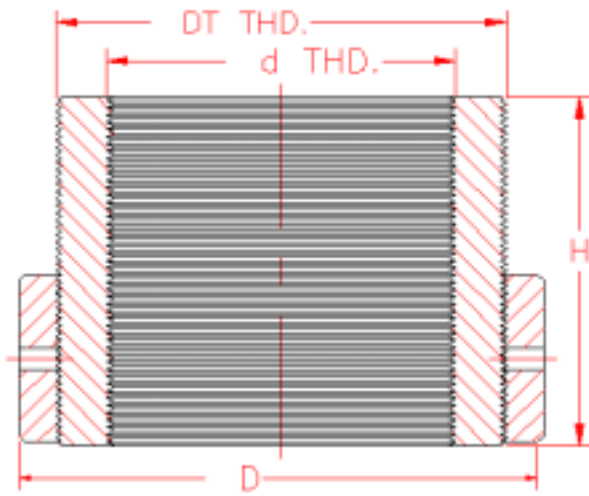
The external tensioner nut (**ETN**) design provides a seamless transition from torqued hardware to tensioned hardware. Until now, it has not been possible to replace torqued hardware with tensioned hardware unless there was a significant amount of thread protruding above the nut. Historically, retrofit has been accomplished by replacing the studs. However, with the application of the Riverhawk ETN this is no longer the case.

The standard **ETN** design fits inside the clearance envelope of ANSI standard heavy hex nuts resulting in a reduction of flange contact stress. The ETN replaces the existing nut whatever its configuration; hex, 12 point, cap or otherwise.

In operation, the ETN tensioning system utilizes the nut OD as the gripping surface for tensioning which eliminates the need for a gripping surface on the stud. This makes it particularly well suited for retrofit applications. Once the load cell of the tensioner is applied and the stud is stretched the retaining ring is turned down and the stud remains loaded. Note that the load cell is removed once tensioning has been accomplished, a factor which results in a lower total cost and eliminates environmental considerations.

If the application requires a smaller envelope or even higher loads in the stud, there are several options available. These options include the use of a washer under the nut to distribute the load and higher strength materials to carry the load with the same factors of safety.





PART NUMBER	NOMINAL THREAD DIAMETER d (in)	OUTSIDE DIAMETER D (in)	TENSIONER THREAD DIAMETER DT	HEIGHT H (in)	STANDARD PRE-LOAD (Lb) (1)	WEIGHT (lb)	TENSIONER PART NUMBER	TENSIONER O.D. (in)
ETN-0750	3/4	1.39	1.125	.80	24500	.2	Frame 1	3.00
ETN-0875	7/8	1.58	1.312	.875	31200	.3	Frame 1	3.00
ETN-1000	1	1.80	1.438	1.125	45400	.4	Frame 1	3.00
ETN-1125	1-1/8	2.03	1.625	1.125	47100	.5	Frame 1	3.00
ETN-1250	1-1/4	2.20	1.75	1.375	67000	.7	Frame 2	4.06
ETN-1375	1-3/8	2.42	2	1.44	79600	1.0	Frame 2	4.06
ETN-1500	1-1/2	2.625	2.125	1.75	94000	1.3	Frame 3	5.41
ETN-1625	1-5/8	2.844	2.312	1.875	110000	1.7	Frame 3	5.41
ETN-1750	1-3/4	3.062	2.5	2	127000	2.1	Frame 3	5.41
ETN-1875	1-7/8	3.281	2.625	2.19	143600	2.5	Frame 3	5.41
ETN-2000	2	3.5	2.875	2.25	165100	3.1	Frame 4	7.00
ETN-2250	2-1/4	3.938	3.25	2.625	195000	4.6	Frame 4	7.00
ETN-2500	2-1/2	4.375	3.5	3.25	262000	6.7	Frame 4	7.00
ETN-2750	2-3/4	4.702	3.875	3.375	298400	8.1	Frame 5	8.11
ETN-3000	3	5.19	4.25	3.96	384000	11.6	Frame 6	10.21
ETN-3250	3-1/4	5.525	4.5	4.19	430400	13.5	Frame 6	10.21
ETN-3500	3-1/2	6.125	5	4.63	529000	19.1	Frame 7	10.80
ETN-3750	3-3/4	6.562	5.375	4.75	579000	22.4	Frame 8	12.00
ETN-4000	4	7	5.75	5.0	662000	27.4	Frame 9	13.20

Metric sizes available

Note: (1) Assumes stud efficiency of 1.25

At Riverhawk we always strive to improve the products that we produce. For that reason, the dimensions and specifications contained in this catalog are subject to change without notice.

For further information about Riverhawk's ETN or any of our other products and services call;

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