NORD-LOCK GROUP

SUPERBOLT® TECHNICAL CATALOG

POWER IN SIMPLICITY

SUPERBOLT®

SIMPLE TOOLS, SUPER RESULTS

Superbolt multi-jackbolt tensioners use mechanical tensioning to break down high preload requirements into lighter torque values. With this masterfully simple design, everyday hand tools suffice to overcome any bolting challenge.

Leave behind the hassle of tightening your joints, regardless of preload requirements. Superbolt offers the safest and most accurate mechanical tensioning technology. When it comes to your unique applications and obstacles, our global team of engineers can conquer any challenge.

CONTENTS

PRODUCT PORTFOLIO

STANDARD NUT & BOLT-STYLE TENSIONERS

	GT	GTS	MT	CY
	Global Tensioner for a wide variety of general industry applications. Suitable for common grade studs/ bolts.	*Super High-Strength Global Tensioner for extreme-strength bolts.*	*For general mechanical applications; suited for medium-strength bolts and studs; fit in the same space as heavy hex nuts; feature hex-head jackbolts.*	*For higher bolt loads on general machinery applications; fit in the same space as heavy hex. Use with high-strength bolts and studs.*
				
Range Metric	M16-M160	M16-M100	M16-M160	M16-M160
Range Imperial	3/4"-6"	3/4"-4"	3/4"-6"	3/4"-6"
Approx. bolt stress depending on size	400 to 1000 N/mm^2 60 to 145 ksi	400 to 1200 N/mm^2 60 to 175 ksi	400 to 750 N/mm^2 60 to 100 ksi	400 to 1000 N/mm^2 60 to 145 ksi
Temperature range C/F	-40 to 250 °C* -50 to 500 °F*	-40 to 250 °C* -50 to 500 °F*	-40 to 250 °C 0 to 500 °F	-40 to 250 °C* -50 to 500 °F*
Jackbolt lubricant	P37	P37	P37	P37

Sizes > M100/4" become GTX2 and use LB 8012

	SB8	SB12	H650	H650T
	Bolt-style tensioners for applications with tapped holes; fit in tight spaces; external hex for installation and removal.	*Similar to SB8 bolt-style tensioners; for high-strength.*	*Replace standard hex nuts at temperatures up to 350°C (650°F).*	*Replace most castle nuts at 350°C (650°F) for tight spaces.*
				
Range Metric	M16-M160	M20-M90	M20-M125	M24-M100
Range Imperial	3/4"-6"	3/4"-3-1/2"	3/4"-5"	1"-4"
Approx. bolt stress depending on size	350 to 650 N/mm^2 50 to 95 ksi	550 to 850 N/mm^2 80 to 125 ksi	310 N/mm^2 45 ksi Based on stress area AS	310 N/mm^2 45 ksi Based on stress area AS
Temperature range C/F	-10 to 250 °C 0 to 500 °F	-10 to 250 °C* 0 to 500 °F*	-10 to 350 °C -50 to 650 °F	-10 to 350 °C -50 to 650 °F
Jackbolt lubricant	P37	P37	P37	P37

*Lower temperatures on demand

REACTIVE SIDE SOLUTIONS

Reactive nut for through-hole applications. Adds elasticity to bolted joints. Use in combination with MT or SB8.

Similar to SX8 but use in combination with CY or SB12.

	SX8	SX12
Range Metric	M20-M160	M20-M160
Range Imperial	3/4"-6"	3/4"-6"
Approx. bolt stress depending on size	400 to 750 N/mm² 60 to 100 ksi	400 to 1000 N/mm² 60 to 145 ksi
Temperature range C/F	-10 to 250 °C 0 to 500 °F	-40 to 250 °C* -50 to 500 °F*

OTHER PRODUCTS IN THE SUPERBOLT PORTFOLIO:

- Expansion/Coupling Bolts
- Custom Solutions
- Smart/Load-Sensing Technology
- Superbolt Tool/Single Jackbolt Tool

COMPACT/LOW-PROFILE TENSIONERS

For applications involving limited headroom or thread engagement.

Similar to SJ but for higher preloads; moly-lubricated set screws.

To match countersink dimensions of standard sockethead cap screws.

Interchangeable with many standard series locknuts; ideal for positioning bearings or clamping entire shaft assemblies.

Replace standard OEM mill motor armature nuts; available for most standard motor frame sizes.

	SJ	SJX2	SSJX2	NM2/NI2	SMX2
Range Metric	M20-M160	M20-M160	M20-M100	M30-M160	M30-M160
Range Imperial	3/4"-6"	3/4"-6"	3/4"-4"	1"-6-1/4"	1"-4"
Approx. bolt stress depending on size	100 to 450 N/mm² 15 to 65 ksi	300 to 650 N/mm² 45 to 95 ksi	350 to 800 N/mm² 50 to 115 ksi	20 to 90 N/mm² 3 to 15 ksi	100 to 250 N/mm² 15 to 35 ksi
Temperature range C/F	-10 to 250 °C 0 to 500 °F	-10 to 250 °C 0 to 500 °F	-10 to 250 °C 0 to 500 °F	-10 to 250 °C 0 to 500 °F	-10 to 250 °C 0 to 500 °F
Jackbolt lubricant	P37	LB 8012	LB 8012	LB 8012	LB 8012

DYNAMIC APPLICATION TENSIONERS

For recip. compressor crossheads; special installation procedure simplifies bolting.

Specially designed to match counterbore dimensions of piston-end nuts they replace.

For rotating equipment; with captive jackbolts.

Captive countersunk jackbolts "armored" for harsh environments, also good for coupling bolting.

	CN	SP	MR	MRA
Range Metric	M36-M160	M36-M160	M16-M125	M20-M125
Range Imperial	1-1/2"-6"	1-1/2"-6"	3/4"-5"	3/4"-5"
Approx. bolt stress depending on size	210 N/mm² 30 ksi	210 N/mm² 30 ksi	300 to 550 N/mm² 45 to 80 ksi	350 to 650 N/mm² 50 to 95 ksi
Temperature range C/F	-10 to 250 °C 0 to 500 °F	-10 to 250 °C 0 to 500 °F	-10 to 250 °C 0 to 500 °F	-10 to 250 °C 0 to 500 °F
Jackbolt lubricant	P37	P37	P37	P37

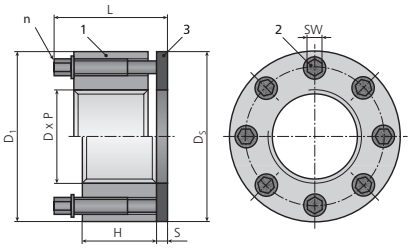
STANDARD NUT & BOLT-STYLE TENSIONERS

GT

Nut-style tensioner
Standard- & high-strength

GT Series Tensioners are used for standard- and high-strength bolt loads on many general mechanical applications. Suitable as ISO 898-2 class 8 replacement for use on grades 8.8 or equivalent stud/bolts.

Components
1 Nut body
2 Jackbolts
3 Hardened Washer



Metric and imperial		Size				Nut body		Jackbolt		Hardened washer		Height	Weight	70% of 8.8 yield strength (reference)*		Preload capacity*
			Available pitch or TPI			1		2		3						
Part group	Part number	Thread D [mm] or [in.]	P_1	P_2	P_3	D_1 [mm]	H [mm]	n	SW [mm]	D_s [mm]	S [mm]	tot L [mm]	est [kg]	Preload F [kN]	Torque M [Nm]	max [kN]
1	GT-M16x.../W	M16	2	1.5	1	37	17	6	5	37	4	34	0.16	70	9	145
	GT-075-.../W	3/4	10	16	—								0.15	100	13	145
2	GT-M20x.../W	M20	2.5	1.5	1	40	18	8	5	40	4	34	0.19	110	11	190
	GT-M22x.../W	M22	2.5	1.5	1								0.18	135	13	190
	GT-087-.../W	7/8	9	14	—								0.18	135	13	190
3	GT-M24x.../W	M24	3	2	1.5	50	23	6	6	50	5	45	0.39	160	27	290
	GT-100-.../W	1	8	12	14								0.38	175	30	290
	GT-M27x.../W	M27	3	2	1.5								0.36	205	35	290
4	GT-112-.../W	1-1/8	7	8	12	53	25	7	6	53	5	45	0.43	225	32	340
	GT-M30x.../W	M30	3.5	2	1.5								0.41	250	36	340
5	GT-125-.../W	1-1/4	7	8	12	62	28	6	8	62	6	58	0.72	285	59	455
	GT-M33x.../W	M33	3.5	2	1.5								0.70	310	65	455
6	GT-137-.../W	1-3/8	6	8	12	65	32	7	8	65	6	58	0.83	335	61	535
	GT-M36x.../W	M36	4	3	1.5								0.81	365	66	535
7	GT-150-.../W	1-1/2	6	8	12	71	32	8	8	71	6	58	0.97	410	65	610
	GT-M39x.../W	M39	4	3	1.5								0.96	435	69	610
8	GT-162-.../W	1-5/8	6	8	12	75	32	9	8	75	6	58	1.06	485	68	685
	GT-M42x.../W	M42	4.5	3	1.5								1.05	500	70	685
9	GT-175-.../W	1-3/4	5	8	12	83	38	7	10	83	8	70	1.58	555	119	820
	GT-M45x.../W	M45	4.5	3	1.5								1.56	585	126	820
10	GT-187-.../W	1-7/8	6	8	12	89	38	8	10	89	8	70	1.83	670	126	935
	GT-M48x.../W	M48	5	3	1.5								1.82	660	124	935
11	GT-200-.../W	2	4.5	8	12	91	38	9	10	91	8	70	1.90	730	122	1,050
	GT-M52x.../W	M52	5	3	2								1.86	785	132	1,050
12	GT-M56x.../W	M56	5.5	4	2	102	50	9	12	102	8	85	2.93	910	177	1,400
	GT-225-.../W	2-1/4	4.5	8	12								2.88	945	184	1,400
	GT-M60x.../W	M60	5.5	4	2								2.77	1,060	206	1,400
13	GT-250-.../W	2-1/2	4	8	12	111	57	8	14	111	10	101	3.99	1,160	290	1,700
	GT-M64x.../W	M64	6	4	2								3.96	1,200	299	1,700
14	GT-M68x.../W	M68	6	4	2	118	57	9	14	118	10	101	4.49	1,370	303	1,910
	GT-275-.../W	2-3/4	4	8	12								4.38	1,440	318	1,910
15	GT-M72x.../W	M72	6	4	2	124	62	10	14	124	10	101	5.13	1,550	309	2,120
	GT-M76x.../W	M76	6	4	2								4.86	1,740	347	2,120
	GT-300-.../W	3	4	6	8								4.85	1,740	346	2,120
16	GT-M80x.../W	M80	6	4	2	133	62	13	14	133	10	101	5.87	1,950	299	2,760
	GT-325-.../W	3-1/4	4	6	8								5.68	2,060	317	2,760
17	GT-M85x.../W	M85	6	4	2	144	72	12	16	144	12	116	8.06	2,220	413	3,330
	GT-350-.../W	3-1/2	4	6	8								7.71	2,420	451	3,330
18	GT-M90x.../W	M90	6	4	2	151	75	13	16	151	12	116	8.98	2,500	431	3,610
	GT-375-.../W	3-3/4	4	6	8								8.45	2,810	483	3,610
19	GT-M100x.../W	M100	6	4	2	163	75	15	16	163	12	116	10.07	3,130	467	4,160
	GT-400-.../W	4	4	6	8								9.90	3,220	480	4,160
20	GTX2-425-.../W	4-1/4	4	6	8	178	102	15	17	178	12	146	16.18	3,660	331	5,250
	GTX2-M110x.../W	M110	6	4	2								15.86	3,830	347	5,250
21	GTX2-450-.../W	4-1/2	4	6	8	193	102	18	17	193	12	146	19.58	4,130	311	6,300
	GTX2-M120x.../W	M120	6	4	2								18.64	4,600	347	6,300
	GTX2-475-.../W	4-3/4	4	6	8								18.53	4,630	349	6,300
22	GTX2-M125x.../W	M125	6	4	2	203	114	20	17	203	12	161	22.29	5,010	340	7,010
	GTX2-500-.../W	5	4	6	8								21.90	5,150	350	7,010
23	GTX2-M130x.../W	M130	6	4	2	211	114	22	17	211	12	161	24.04	5,440	336	7,710
	GTX2-525-.../W	5-1/4	4	6	8								23.35	5,710	352	7,710
24	GTX2-550-.../W	5-1/2	4	6	8	220	127	18	21	220	16	185	29.17	6,290	572	8,850
	GTX2-M140x.../W	M140	6	4	2								29.10	6,350	578	8,850
25	GTX2-575-.../W	5-3/4	4	6	8	240	132	20	21	240	16	185	36.87	6,910	565	9,840
	GTX2-M150x.../W	M150	6	4	2								35.81	7,330	600	9,840
26	GTX2-600-.../W	6	4	6	8	270	132	23	21	270	16	185	49.68	7,550	537	11,310
	GTX2-M160x.../W	M160	6	4	—								47.51	8,380	597	11,310

** 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 your local Nord-Lock sales office for assistance in determining proper preload and torque settings for your application.*

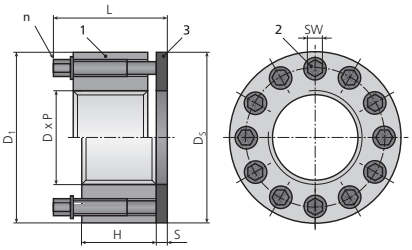
- Sizes over M100 or 4" become "GTX2" and use LB 8012 lube for reduced torque values.

- Other sizes, thread pitches or thread per inch (TPI) may be available. Dimensions listed are representative.

GTS

Nut-style tensioner
Super high-strength

GTS Series Tensioners are used for super-high-strength bolt loads on general mechanical applications. Suitable as ISO 898-2 class 10 replacement for use on grades 10.9 or equivalent stud/bolts.



Components
1 Nut body
2 Jackbolts
3 Hardened Washer

Metric and imperial		Size				Nut body		Jackbolt		Hardened washer		Height	Weight	70% of 10.9 yield strength (reference)*		Preload capacity*
Part group	Part number	Thread D [mm] or [in.]	Available pitch or TPI P_1	P_2	P_3	1 D_1 [mm]	1 H [mm]	2 n	2 SW [mm]	3 D_s [mm]	3 S [mm]	tot L [mm]	est [kg]	Preload F [kN]	Torque M [Nm]	max [kN]
1	GTS-M16x.../W	M16	2	1.5	1	42	25	4	6	42	5	45	0.32	105	26	195
	GTS-075-.../W	3/4	10	16	–								0.30	145	36	195
2	GTS-M20x.../W	M20	2.5	1.5	1	46	25	6	6	46	5	45	0.36	160	27	290
	GTS-M22x.../W	M22	2.5	1.5	1								0.35	200	34	290
	GTS-087-.../W	7/8	9	14	–								0.35	200	33	290
3	GTS-M24x.../W	M24	3	2	1.5	51	25	9	6	51	5	45	0.46	230	26	435
	GTS-100-.../W	1	8	12	14								0.46	260	29	435
	GTS-M27x.../W	M27	3	2	1.5								0.44	300	34	435
4	GTS-112-.../W	1-1/8	7	8	12	60	31	7	8	60	6	58	0.75	325	59	535
	GTS-M30x.../W	M30	3.5	2	1.5								0.73	370	66	535
5	GTS-125-.../W	1-1/4	7	8	12	64	32	8	8	64	6	58	0.85	415	65	610
	GTS-M33x.../W	M33	3.5	2	1.5								0.83	455	72	610
6	GTS-137-.../W	1-3/8	6	8	12	68	32	10	8	68	6	58	0.95	495	62	760
	GTS-M36x.../W	M36	4	3	1.5								0.93	535	68	760
7	GTS-150-.../W	1-1/2	6	8	12	75	38	8	10	75	8	70	1.41	600	113	935
	GTS-M39x.../W	M39	4	3	1.5								1.39	640	121	935
8	GTS-162-.../W	1-5/8	6	8	12	79	39	9	10	79	8	70	1.58	715	119	1,050
	GTS-M42x.../W	M42	4.5	3	1.5								1.56	735	123	1,050
9	GTS-175-.../W	1-3/4	5	8	12	83	40	10	10	83	8	70	1.72	815	122	1,170
	GTS-M45x.../W	M45	4.5	3	1.5								1.71	860	129	1,170
10	GTS-187-.../W	1-7/8	6	8	12	90	46	9	12	90	8	85	2.38	985	192	1,400
	GTS-M48x.../W	M48	5	3	1.5								2.37	970	189	1,400
11	GTS-200-.../W	2	4.5	8	12	95	47	10	12	95	8	85	2.69	1,070	188	1,560
	GTS-M52x.../W	M52	5	3	2								2.64	1,160	203	1,560
12	GTS-M56x.../W	M56	5.5	4	2	102	50	12	12	102	8	85	3.08	1,340	195	1,870
	GTS-225-.../W	2-1/4	4.5	8	12								3.04	1,390	203	1,870
13	GTS-M60x.../W	M60	5.5	4	2	112	59	11	14	112	10	101	4.53	1,550	282	2,330
	GTS-250-.../W	2-1/2	4	8	12								4.35	1,710	310	2,330
14	GTS-M64x.../W	M64	6	4	2	116	59	12	14	116	10	101	4.84	1,760	293	2,550
15	GTS-M68x.../W	M68	6	4	2	118	61	13	14	118	10	101	4.93	2,010	308	2,760
16	GTS-275-.../W	2-3/4	4	8	12	125	62	14	14	125	10	101	5.62	2,110	301	2,970
	GTS-M72x.../W	M72	6	4	2								5.48	2,280	324	2,970
17	GTS-M76x.../W	M76	6	4	2	138	62	16	14	138	10	101	6.90	2,560	319	3,390
	GTS-300-.../W	3	4	6	8								6.89	2,550	318	3,390
18	GTS-M80x.../W	M80	6	4	2	140	72	14	16	140	12	116	8.10	2,860	457	3,880
19	GTS-325-.../W	3-1/4	4	6	8	152	72	16	16	152	12	116	10.02	3,030	424	4,440
	GTS-M85x.../W	M85	6	4	2								9.81	3,260	455	4,440
20	GTS-350-.../W	3-1/2	4	6	8	160	75	17	16	160	12	116	10.94	3,550	468	4,720
	GTS-M90x.../W	M90	6	4	2								10.83	3,680	484	4,720
21	GTS-375-.../W	3-3/4	4	6	8	167	75	18	16	167	16	120	12.38	4,120	512	4,990
22	GTS-M100x.../W	M100	6	4	2	186	75	20	16	186	16	120	15.94	4,600	515	5,550
	GTS-400-.../W	4	4	6	8								15.75	4,730	529	5,550

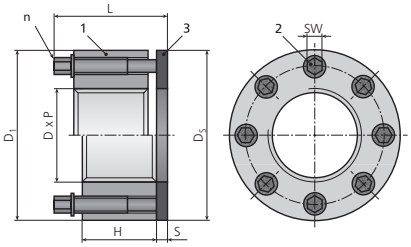
** All preload and torque values are provided for general reference. Applied preload plus additional bolt load from service should not exceed the maximum bolt or stud capacity. Contact your local Nord-Lock sales office for assistance in determining proper preload and torque settings for your application.*

- Other sizes, thread pitches or thread per inch (TPI) may be available. Dimensions listed are representative.

MT

Nut-style tensioner standard

MT tensioners fit in the same space as a heavy hex nut and feature hex-head jackbolts. They're suited for use on general mechanical applications.



Components
1 Nut body
2 Jackbolts
3 Hardened Washer

Metric	Size				Nut body		Jackbolt		Hardened washer		Height	Weight	Preload*	Torque*	Preload capacity*
	Thread	Available pitch			1		2		3		tot	est	nom	nom	max
Part number	D [mm]	P_1 [mm]	P_2	P_3	D_1 [mm]	H [mm]	n	SW [mm]	D_s [mm]	S [mm]	L [mm]	[kg]	F [kN]	M [Nm]	[kN]
MT-M16x.../W	M16	2	1.5	1	34	16	4	5	32	3	33	0.11	73	14	94
MT-M20x.../W	M20	2.5	1.5	1	38	16	6	5	38	4	34	0.14	110	14	140
MT-M22x.../W	M22	2.5	1.5	1	41	16	6	5	41	4	34	0.16	110	14	140
MT-M24x.../W	M24	3	2	1.5	44	16	8	5	43	4	34	0.19	145	14	185
MT-M27x.../W	M27	3	2	1.5	50	24	6	6	50	5	45	0.35	215	36	285
MT-M30x.../W	M30	3.5	2	1.5	53	24	6	6	53	5	45	0.37	215	36	285
MT-M33x.../W	M33	3.5	2	1.5	59	24	8	6	59	5	45	0.48	285	36	380
MT-M36x.../W	M36	4	3	1.5	66	32	6	8	66	5	57	0.76	345	72	460
MT-M39x.../W	M39	4	3	1.5	70	32	8	8	70	5	57	0.90	455	72	610
MT-M42x.../W	M42	4.5	3	1.5	75	32	8	8	73	5	57	1.01	455	72	610
MT-M45x.../W	M45	4.5	3	1.5	83	38	8	10	81	6	68	1.48	700	131	935
MT-M48x.../W	M48	5	3	1.5	85	38	8	10	85	6	68	1.50	700	131	935
MT-M52x.../W	M52	5	3	2	94	38	8	10	89	6	68	1.80	700	131	935
MT-M56x.../W	M56	5.5	4	2	100	38	8	10	95	6	68	2.00	700	131	935
MT-M60x.../W	M60	5.5	4	2	107	38	10	10	100	6	68	2.30	875	131	1170
MT-M64x.../W	M64	6	4	2	113	53	8	14	112	8	92	3.65	1270	315	1690
MT-M68x.../W	M68	6	4	2	117	53	8	14	117	8	92	3.85	1270	315	1690
MT-M72x.../W	M72	6	4	2	120	56	8	14	120	8	92	4.00	1270	315	1690
MT-M76x.../W	M76	6	4	2	132	56	12	14	127	8	92	5.10	1900	315	2530
MT-M80x.../W	M80	6	4	2	132	56	12	14	127	8	92	4.80	1900	315	2530
MT-M85x.../W	M85	6	4	2	137	56	12	14	137	8	92	5.10	1900	315	2530
MT-M90x.../W	M90	6	4	2	145	59	16	14	140	8	99	6.00	2530	315	3380
MT-M100x.../W	M100	6	4	2	164	61	16	14	152	8	99	7.80	2530	315	3380
MT-M110x.../W	M110	6	4	2	177	79	12	17	172	10	125	11.40	3150	645	4200
MT-M120x.../W	M120	6	4	2	189	81	16	17	179	10	125	13.00	4200	645	5600
MT-M125x.../W	M125	6	4	2	194	81	16	17	190	10	125	13.50	4200	645	5600
MT-M130x.../W	M130	6	4	2	205	94	18	17	202	10	140	17.50	4700	645	6300
MT-M140x.../W	M140	6	4	2	215	94	20	17	215	10	140	18.70	5250	645	7000
MT-M150x.../W	M150	6	4	2	225	94	20	17	225	12	142	20.00	5250	645	7000
MT-M160x.../W	M160	6	4	-	234	107	24	17	234	12	162	24.10	6300	645	8400

Imperial	Size				Nut body		Jackbolt		Hardened washer		Height	Weight	Preload*	Torque*	Preload capacity*
	Thread	Available TPI			1		2		3		tot	est	nom	nom	max
Part number	D [in]	P_1	P_2	P_3	D_1 [in]	H [in]	n	SW [in]	D_s [in]	S [in]	L [in]	[Lb]	F [LBf]	M [Lbft]	[LBf]
MT-075-.../W	3/4	10	16	-	1.47	0.70	4	3/16	1.50	0.13	1.38	0.31	20,400	14	27,200
MT-087-.../W	7/8	9	14	-	1.60	0.70	6	3/16	1.63	0.13	1.38	0.34	30,600	14	40,800
MT-100-.../W	1	8	12	14	1.90	0.93	6	1/4	2.00	0.19	1.71	0.68	48,600	27	64,800
MT-112-.../W	1-1/8	7	8	12	2.08	0.93	6	1/4	2.13	0.19	1.71	0.79	48,600	27	64,800
MT-125-.../W	1-1/4	7	8	12	2.25	0.94	8	1/4	2.38	0.19	1.71	0.92	64,800	27	86,400
MT-137-.../W	1-3/8	6	8	12	2.46	1.20	6	5/16	2.50	0.19	2.12	1.40	73,800	49	98,400
MT-150-.../W	1-1/2	6	8	12	2.70	1.20	8	5/16	2.75	0.19	2.12	1.70	98,400	49	131,200
MT-162-.../W	1-5/8	6	8	12	2.96	1.20	8	5/16	2.88	0.19	2.12	2.01	98,400	49	131,200
MT-175-.../W	1-3/4	5	8	12	3.08	1.42	8	3/8	3.13	0.25	2.49	2.53	129,600	75	172,800
MT-187-.../W	1-7/8	6	8	12	3.59	1.60	8	7/16	3.50	0.25	2.85	4.07	175,200	114	233,600
MT-200-.../W	2	4.5	8	12	3.59	1.60	8	7/16	3.50	0.25	2.85	3.87	175,200	114	233,600
MT-225-.../W	2-1/4	4.5	8	12	3.95	1.60	8	7/16	3.75	0.25	2.85	4.51	175,200	114	233,600
MT-250-.../W	2-1/2	4	8	12	4.45	2.10	8	9/16	4.50	0.31	3.61	7.82	285,600	233	380,800
MT-275-.../W	2-3/4	4	8	12	4.70	2.10	8	9/16	4.75	0.31	3.61	8.36	285,600	233	380,800
MT-300-.../W	3	4	6	8	5.20	2.10	12	9/16	5.00	0.31	3.61	10.30	428,400	233	571,200
MT-325-.../W	3-1/4	4	6	8	5.45	2.20	12	9/16	5.00	0.31	3.61	11.04	428,400	233	571,200
MT-350-.../W	3-1/2	4	6	8	5.70	2.30	16	9/16	5.50	0.31	3.87	12.62	571,200	233	761,600
MT-375-.../W	3-3/4	4	6	8	6.20	2.40	16	9/16	5.50	0.31	3.87	15.08	571,200	233	761,600
MT-400-.../W	4	4	6	8	6.45	2.60	18	9/16	6.00	0.31	4.19	17.31	642,600	233	856,800
MT-425-.../W	4-1/4	4	6	8	6.95	3.00	16	5/8	6.40	0.38	4.76	23.41	806,400	390	1,075,200
MT-450-.../W	4-1/2	4	6	8	7.20	3.00	16	5/8	6.65	0.38	4.76	24.44	806,400	390	1,075,200
MT-475-.../W	4-3/4	4	6	8	7.45	3.20	18	5/8	6.90	0.38	5.06	27.13	907,200	390	1,209,600
MT-500-.../W	5	4	6	8	7.70	3.30	20	5/8	7.15	0.38	5.06	28.83	1,008,000	390	1,344,000
MT-525-.../W	5-1/4	4	6	8	8.45	3.70	22	5/8	7.65	0.38	5.36	40.06	1,108,800	390	1,478,400
MT-550-.../W	5-1/2	4	6	8	8.45	3.70	22	5/8	7.65	0.38	5.36	37.56	1,108,800	390	1,478,400
MT-575-.../W	5-3/4	4	6	8	8.95	4.00	24	5/8	8.15	0.38	5.76	46.26	1,209,600	390	1,612,800
MT-600-.../W	6	4	6	8	8.95	4.00	24	5/8	8.15	0.38	5.76	43.32	1,209,600	390	1,612,800

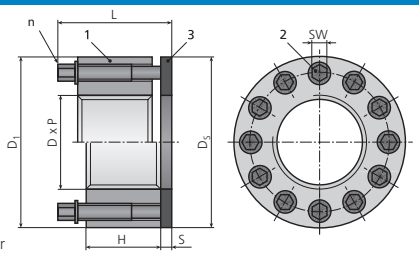
* *All preload and torque values are provided for general reference. Applied preload plus additional bolt load from service should not exceed the maximum bolt or stud capacity. Contact your local Nord-Lock sales office for assistance in determining proper preload and torque settings for your application.*

- Other sizes, thread pitches or thread per inch (TPI) may be available. Dimensions listed are representative.

CY

Nut-style tensioner high-strength

CY series tensioners are used for high strength bolt loads on general machinery applications. They fit in the same space as a heavy hex nut.



Components
1 Nut body
2 Jackbolts
3 Hardened Washer

Metric	Size				Nut body		Jackbolt		Hardened washer		Height	Weight	Preload*	Torque*	Preload capacity*
	Thread	Available Pitch			1		2		3		tot	est	nom	nom	max
Part number	D [mm]	P_1 [mm]	P_2	P_3	D_1 [mm]	H [mm]	n	SW [mm]	D_s [mm]	S [mm]	L [mm]	[kg]	F [kN]	M [Nm]	[kN]
CY-M16x.../W	M16	2	1.5	1	34	16	6	5	32	3	33	0.12	110	14	140
CY-M20x.../W	M20	2.5	1.5	1	38	17	8	5	38	4	34	0.15	145	14	185
CY-M22x.../W	M22	2.5	1.5	1	41	17	8	5	41	4	34	0.17	145	14	185
CY-M24x.../W	M24	3	2	1.5	47	24	6	6	47	4	44	0.30	215	36	285
CY-M27x.../W	M27	3	2	1.5	51	24	8	6	50	5	45	0.37	285	36	380
CY-M30x.../W	M30	3.5	2	1.5	54	24	8	6	53	5	45	0.38	285	36	380
CY-M33x.../W	M33	3.5	2	1.5	62	32	6	8	61	5	57	0.70	345	72	460
CY-M36x.../W	M36	4	3	1.5	66	32	8	8	66	5	57	0.79	455	72	610
CY-M39x.../W	M39	4	3	1.5	72	32	10	8	70	5	57	0.97	570	72	760
CY-M42x.../W	M42	4.5	3	1.5	76	32	12	8	73	5	57	1.10	685	72	915
CY-M45x.../W	M45	4.5	3	1.5	81	38	8	10	80	6	68	1.40	700	131	935
CY-M48x.../W	M48	5	3	1.5	85	38	10	10	85	6	68	1.54	875	131	1170
CY-M52x.../W	M52	5	3	2	94	38	12	10	90	6	68	1.80	1050	131	1400
CY-M56x.../W	M56	5.5	4	2	98	38	12	10	94	6	68	1.93	1050	131	1400
CY-M60x.../W	M60	5.5	4	2	107	59	8	14	106	8	99	3.70	1270	315	1690
CY-M64x.../W	M64	6	4	2	113	59	10	14	112	8	99	4.10	1580	315	2100
CY-M68x.../W	M68	6	4	2	117	59	12	14	117	8	99	4.30	1900	315	2530
CY-M72x.../W	M72	6	4	2	121	59	12	14	120	8	99	4.50	1900	315	2530
CY-M76x.../W	M76	6	4	2	132	61	16	14	127	8	99	5.60	2530	315	3380
CY-M80x.../W	M80	6	4	2	133	61	16	14	127	8	99	5.40	2530	315	3380
CY-M85x.../W	M85	6	4	2	139	61	16	14	137	8	99	5.80	2530	315	3380
CY-M90x.../W	M90	6	4	2	145	61	16	14	140	8	99	6.30	2530	315	3380
CY-M100x.../W	M100	6	4	2	157	61	16	14	152	8	99	7.00	2530	315	3380
CY-M110x.../W	M110	6	4	2	177	61	20	14	163	8	99	9.00	3150	315	4200
CY-M120x.../W	M120	6	4	2	189	81	18	17	179	10	125	13.10	4700	645	6300
CY-M125x.../W	M125	6	4	2	194	81	18	17	190	10	125	13.70	4700	645	6300
CY-M130x.../W	M130	6	4	2	205	94	20	17	202	10	140	17.60	5250	645	7000
CY-M140x.../W	M140	6	4	2	215	94	22	17	215	10	140	18.89	5750	645	7700
CY-M150x.../W	M150	6	4	2	225	94	22	17	225	12	142	20.10	5750	645	7700
CY-M160x.../W	M160	6	4	-	226	107	24	17	220	10	160	20.80	6300	645	8400

Imperial	Size				Nut body		Jackbolt		Hardened washer		Height	Weight	Preload*	Torque*	Preload capacity*
	Thread	Available TPI			1		2		3		tot	est	nom	nom	max
Part number	D [in]	P_1	P_2	P_3	D_1 [in]	H [in]	n	SW [in]	D_s [in]	S [in]	L [in]	[Lb]	F [LBf]	M [Lbft]	[LBf]
CY-075-.../W	3/4	10	16	-	1.47	0.70	6	3/16	1.50	0.13	1.38	0.31	30,600	14	40,800
CY-087-.../W	7/8	9	14	-	1.70	0.70	8	3/16	1.63	0.13	1.38	0.39	40,800	14	54,400
CY-100-.../W	1	8	12	14	1.90	0.93	6	1/4	2.00	0.19	1.71	0.68	48,600	27	64,800
CY-112-.../W	1-1/8	7	8	12	2.08	0.93	8	1/4	2.13	0.19	1.71	0.78	64,800	27	86,400
CY-125-.../W	1-1/4	7	8	12	2.32	1.20	6	5/16	2.38	0.19	2.12	1.30	73,800	49	98,400
CY-137-.../W	1-3/8	6	8	12	2.46	1.20	8	5/16	2.50	0.19	2.12	1.42	98,400	49	131,200
CY-150-.../W	1-1/2	6	8	12	2.80	1.42	8	3/8	2.75	0.19	2.43	2.11	129,600	75	172,800
CY-162-.../W	1-5/8	6	8	12	2.96	1.42	8	3/8	2.88	0.19	2.43	2.29	129,600	75	172,800
CY-175-.../W	1-3/4	5	8	12	3.20	1.42	12	3/8	3.13	0.25	2.49	2.80	194,400	75	259,200
CY-187-.../W	1-7/8	6	8	12	3.59	1.60	8	7/16	3.50	0.25	2.85	4.07	175,200	114	233,600
CY-200-.../W	2	4.5	8	12	3.70	1.60	12	7/16	3.50	0.25	2.85	4.24	262,800	114	350,400
CY-225-.../W	2-1/4	4.5	8	12	3.95	1.60	12	7/16	3.75	0.25	2.85	4.59	262,800	114	350,400
CY-250-.../W	2-1/2	4	8	12	4.45	2.30	12	9/16	4.50	0.31	3.87	8.64	428,400	233	571,200
CY-275-.../W	2-3/4	4	8	12	4.70	2.40	12	9/16	4.75	0.31	3.87	9.45	428,400	233	571,200
CY-300-.../W	3	4	6	8	5.20	2.30	16	9/16	5.00	0.31	3.87	11.33	571,200	233	761,600
CY-325-.../W	3-1/4	4	6	8	5.45	2.30	16	9/16	5.00	0.31	3.87	11.79	571,200	233	761,600
CY-350-.../W	3-1/2	4	6	8	5.70	2.40	18	9/16	5.50	0.31	3.87	13.02	642,600	233	856,800
CY-375-.../W	3-3/4	4	6	8	5.95	2.40	18	9/16	5.50	0.31	3.87	13.49	642,600	233	856,800
CY-400-.../W	4	4	6	8	6.20	2.60	20	9/16	6.00	0.31	4.19	15.50	714,000	233	952,000
CY-425-.../W	4-1/4	4	6	8	6.95	3.00	18	5/8	6.40	0.38	4.76	23.50	907,200	390	1,209,600
CY-450-.../W	4-1/2	4	6	8	7.20	3.00	18	5/8	6.65	0.38	4.76	24.53	907,200	390	1,209,600
CY-475-.../W	4-3/4	4	6	8	7.45	3.20	20	5/8	6.90	0.38	5.06	29.90	1,008,000	390	1,344,000
CY-500-.../W	5	4	6	8	7.70	3.30	20	5/8	7.15	0.38	5.06	28.83	1,008,000	390	1,344,000
CY-525-.../W	5-1/4	4	6	8	7.95	3.70	22	5/8	7.65	0.38	5.36	33.12	1,108,800	390	1,478,400
CY-550-.../W	5-1/2	4	6	8	7.95	3.70	22	5/8	7.65	0.38	5.36	30.62	1,108,800	390	1,478,400
CY-575-.../W	5-3/4	4	6	8	8.45	4.00	24	5/8	8.15	0.38	5.76	38.31	1,209,600	390	1,612,800
CY-600-.../W	6	4	6	8	8.45	4.00	24	5/8	8.15	0.38	5.76	35.36	1,209,600	390	1,612,800

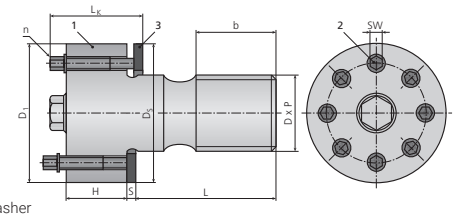
* *All preload and torque values are provided for general reference. Applied preload plus additional bolt load from service should not exceed the maximum bolt or stud capacity. Contact your local Nord-Lock sales office for assistance in determining proper preload and torque settings for your application.*

- *Other sizes, thread pitches or thread per inch (TPI) may be available. Dimensions listed are representative.*

SB8

Bolt-style tensioner
Standard

SB8 bolt-style tensioners are most often used for applications with tapped holes. The diameter of the bolt-style tensioner head is smaller than a nut-style tensioner, so bolt-style tensioners can fit tighter spaces. They feature an external installation/removal hex.



Components
1 Bolt body
2 Jackbolts
3 Hardened Washer

Metric	Size				Bolt body 1		Jackbolt 2		Hardened washer 3		Height	Preload*	Torque*	Preload capacity*
Part number	Thread D	Available pitch P_1	P_2	P_3	D_1	H	n	SW	D_s	S	tot L_k	nom F	nom M	max
	[mm]	[mm]			[mm]	[mm]		[mm]	[mm]	[mm]	[mm]	[kN]	[Nm]	[kN]
SB8-M16x...x.../W	M16	2	1.5	1	31	18	4	5	30	3	32	73	14	94
SB8-M20x...x.../W	M20	2.5	1.5	1	35	18	6	5	35	4	33	109	14	140
SB8-M24x...x.../W	M24	3	2	1.5	41	18	8	5	41	4	33	146	14	187
SB8-M27x...x.../W	M27	3	2	1.5	45	23	6	6	45	5	45	190	32	250
SB8-M30x...x.../W	M30	3.5	2	1.5	50	23	6	6	50	5	45	214	36	286
SB8-M33x...x.../W	M33	3.5	2	1.5	57	28	6	8	57	5	52	285	60	380
SB8-M36x...x.../W	M36	4	3	1.5	60	28	6	8	60	5	52	333	70	443
SB8-M39x...x.../W	M39	4	3	1.5	63	28	8	8	63	5	52	406	64	540
SB8-M42x...x.../W	M42	4.5	3	1.5	66	28	8	8	66	5	52	457	72	610
SB8-M45x...x.../W	M45	4.5	3	1.5	75	37	8	10	75	6	64	535	100	720
SB8-M48x...x.../W	M48	5	3	1.5	78	37	8	10	78	6	64	605	113	800
SB8-M52x...x.../W	M52	5	3	2	82	37	10	10	82	6	64	735	110	970
SB8-M56x...x.../W	M56	5.5	4	2	86	37	10	10	86	6	64	835	125	1120
SB8-M60x...x.../W	M60	5.5	4	2	90	37	12	10	90	6	64	985	123	1310
SB8-M64x...x.../W	M64	6	4	2	103	46	8	14	103	8	83	950	235	1270
SB8-M68x...x.../W	M68	6	4	2	107	46	8	14	107	8	83	1090	270	1450
SB8-M72x...x.../W	M72	6	4	2	111	46	10	14	111	8	83	1230	245	1640
SB8-M76x...x.../W	M76	6	4	2	116	46	12	14	116	8	83	1390	230	1870
SB8-M80x...x.../W	M80	6	4	2	120	56	12	14	120	8	92	1570	260	2080
SB8-M90x...x.../W	M90	6	4	2	130	56	16	14	130	8	92	2010	250	2700
SB8-M100x...x.../W	M100	6	4	2	148	60	12	17	148	10	99	2540	520	3370
SB8-M110x...x.../W	M110	6	4	2	158	60	14	17	158	10	99	2850	500	3750
SB8-M120x...x.../W	M120	6	4	2	170	64	16	17	170	10	105	3380	520	4500
SB8-M125x...x.../W	M125	6	4	2	175	64	16	17	175	10	105	3650	560	4880
SB8-M130x...x.../W	M130	6	4	2	180	76	18	17	180	10	118	3950	540	5270
SB8-M140x...x.../W	M140	6	4	2	190	76	20	17	190	10	118	4550	560	6100
SB8-M150x...x.../W	M150	6	4	2	200	76	20	17	200	10	118	4880	600	6500
SB8-M160x...x.../W	M160	6	4	-	210	76	20	17	210	10	118	5280	650	7000

Imperial	Size				Bolt body 1		Jackbolt 2		Hardened washer 3		Height	Preload*	Torque*	Preload capacity*
Part number	Thread D	Available TPI P_1	P_2	P_3	D_1	H	n	SW	D_s	S	tot L_k	nom F	nom M	max
	[in]				[in]	[in]		[in]	[in]	[in]	[in]	[LBf]	[Lbft]	[LBf]
SB8-075-...x.../W	3/4	10	16	-	1.35	0.70	4	3/16	1.35	0.13	1.38	20,400	14	27,100
SB8-087-...x.../W	7/8	9	14	-	1.48	0.70	6	3/16	1.48	0.13	1.38	30,600	14	40,700
SB8-100-...x.../W	1	8	12	14	1.59	0.70	8	3/16	1.59	0.13	1.38	40,800	14	54,200
SB8-112-...x.../W	1-1/8	7	8	12	1.83	0.90	6	1/4	1.83	0.16	1.68	48,600	27	63,600
SB8-125-...x.../W	1-1/4	7	8	12	1.98	0.90	8	1/4	1.98	0.16	1.68	64,800	27	86,100
SB8-137-...x.../W	1-3/8	6	8	12	2.23	1.10	6	5/16	2.23	0.20	2.03	73,800	49	98,100
SB8-150-...x.../W	1-1/2	6	8	12	2.35	1.10	8	5/16	2.35	0.20	2.03	88,500	44	117,700
SB8-162-...x.../W	1-5/8	6	8	12	2.47	1.10	10	5/16	2.47	0.20	2.03	106,100	42	141,100
SB8-175-...x.../W	1-3/4	5	8	12	2.73	1.40	8	3/8	2.73	0.25	2.49	119,200	69	158,500
SB8-187-...x.../W	1-7/8	6	8	12	2.98	1.45	8	7/16	2.98	0.25	2.60	145,900	95	194,000
SB8-200-...x.../W	2	4.5	8	12	3.20	1.45	8	7/16	3.20	0.25	2.60	157,300	102	209,200
SB8-225-...x.../W	2-1/4	4.5	8	12	3.45	1.45	10	7/16	3.45	0.25	2.60	207,100	108	275,400
SB8-250-...x.../W	2-1/2	4	8	12	3.94	1.80	8	9/16	3.94	0.31	3.26	220,200	180	292,800
SB8-275-...x.../W	2-3/4	4	8	12	4.20	1.80	10	9/16	4.20	0.31	3.26	272,600	178	362,500
SB8-300-...x.../W	3	4	6	8	4.47	1.80	12	9/16	4.45	0.31	3.26	333,700	182	443,800
SB8-325-...x.../W	3-1/4	4	6	8	4.70	2.20	14	9/16	4.70	0.31	3.61	403,000	188	535,900
SB8-350-...x.../W	3-1/2	4	6	8	4.95	2.20	16	9/16	4.95	0.31	3.61	479,500	196	637,700
SB8-375-...x.../W	3-3/4	4	6	8	5.44	2.35	14	5/8	5.44	0.38	4.01	545,700	302	725,700
SB8-400-...x.../W	4	4	6	8	5.70	2.35	16	5/8	5.70	0.38	4.01	630,900	305	839,000
SB8-425-...x.../W	4-1/4	4	6	8	5.94	2.35	16	5/8	5.94	0.38	4.01	741,800	359	986,500
SB8-450-...x.../W	4-1/2	4	6	8	6.22	2.35	18	5/8	6.22	0.38	4.01	839,600	361	1,116,600
SB8-475-...x.../W	4-3/4	4	6	8	6.44	3.00	18	5/8	6.44	0.38	4.76	907,200	390	1,206,500
SB8-500-...x.../W	5	4	6	8	6.70	3.00	20	5/8	6.70	0.38	4.76	1,008,000	390	1,340,600
SB8-525-...x.../W	5-1/4	4	6	8	6.94	3.00	20	5/8	6.94	0.38	4.76	1,008,000	390	1,340,600
SB8-550-...x.../W	5-1/2	4	6	8	7.20	3.00	20	5/8	7.20	0.38	4.76	1,008,000	390	1,340,600
SB8-575-...x.../W	5-3/4	4	6	8	7.44	3.00	20	5/8	7.44	0.38	4.76	1,008,000	390	1,340,600
SB8-600-...x.../W	6	4	6	8	7.69	3.00	20	5/8	7.69	0.38	4.76	1,008,000	390	1,340,600

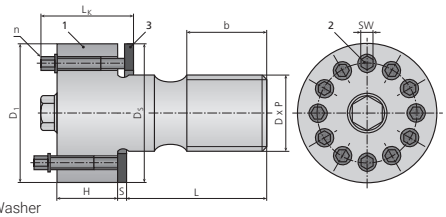
* *All preload and torque values are provided for general reference. Applied preload plus additional bolt load from service should not exceed the maximum bolt or stud capacity. Contact your local Nord-Lock sales office for assistance in determining proper preload and torque settings for your application.*

- Other sizes, thread pitches or thread per inch (TPI) may be available. Dimensions listed are representative.

SB12

Bolt-style tensioner
High-strength

SB12 bolt-style tensioners have the same features as the SB8 bolt-style tensioners and are designed for higher strength requirements.



Components
1 Bolt body
2 Jackbolts
3 Hardened Washer

Metric	Size				Bolt body		Jackbolt		Hardened washer		Height	Preload*	Torque*	Preload capacity*
	Thread	Available pitch			1		2		3		tot	nom	nom	max
Part number	D	P_1	P_2	P_3	D_1	H	n	SW	D_S	S	L_k	F	M	
	[mm]	[mm]			[mm]	[mm]		[mm]	[mm]	[mm]	[mm]	[kN]	[Nm]	[kN]
SB12-M20x...x.../W	M20	2.5	1.5	1	35	18	8	5	35	4	33	146	14	187
SB12-M24x...x.../W	M24	3	2	1.5	43	24	6	6	43	4	44	202	34	268
SB12-M27x...x.../W	M27	3	2	1.5	47	24	8	6	47	5	45	270	34	357
SB12-M30x...x.../W	M30	3.5	2	1.5	50	24	10	6	50	5	45	317	32	427
SB12-M33x...x.../W	M33	3.5	2	1.5	57	28	8	8	57	5	52	406	64	539
SB12-M36x...x.../W	M36	4	3	1.5	60	28	10	8	60	5	52	480	60	635
SB12-M39x...x.../W	M39	4	3	1.5	63	28	12	8	63	5	52	570	60	760
SB12-M42x...x.../W	M42	4.5	3	1.5	66	28	12	8	66	5	52	645	68	855
SB12-M45x...x.../W	M45	4.5	3	1.5	75	37	10	10	75	6	64	760	114	1020
SB12-M48x...x.../W	M48	5	3	1.5	78	37	10	10	78	6	64	855	128	1140
SB12-M52x...x.../W	M52	5	3	2	82	37	12	10	82	6	64	995	124	1320
SB12-M56x...x.../W	M56	5.5	4	2	86	37	12	10	86	6	64	995	124	1320
SB12-M60x...x.../W	M60	5.5	4	2	90	37	14	10	90	6	64	1160	124	1540
SB12-M64x...x.../W	M64	6	4	2	103	46	10	14	103	8	83	1310	260	1740
SB12-M68x...x.../W	M68	6	4	2	107	46	10	14	107	8	83	1480	295	1990
SB12-M72x...x.../W	M72	6	4	2	111	56	12	14	111	8	92	1690	280	2260
SB12-M76x...x.../W	M76	6	4	2	116	56	14	14	116	8	92	1900	270	2540
SB12-M80x...x.../W	M80	6	4	2	120	56	14	14	120	8	92	2110	300	2820
SB12-M90x...x.../W	M90	6	4	2	139	61	12	17	139	10	99	2740	560	3660

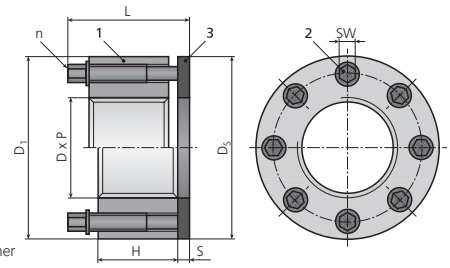
Imperial	Size				Bolt body		Jackbolt		Hardened washer		Height	Preload*	Torque*	Preload capacity*
	Thread	Available TPI			1		2		3		tot	nom	nom	max
Part number	D	P_1	P_2	P_3	D_1	H	n	SW	D_S	S	L_k	F	M	
	[in]				[in]	[in]		[in]	[in]	[in]	[in]	[LBf]	[Lbft]	[LBf]
SB12-075-...x.../W	3/4	10	16	-	1.35	0.70	6	3/16	1.35	0.13	1.38	26,200	12	34,800
SB12-087-...x.../W	7/8	9	14	-	1.48	0.70	8	3/16	1.48	0.13	1.38	36,300	13	48,200
SB12-100-...x.../W	1	8	12	14	1.73	0.90	6	1/4	1.73	0.16	1.68	47,700	27	63,400
SB12-112-...x.../W	1-1/8	7	8	12	1.85	0.90	8	1/4	1.83	0.16	1.68	60,000	25	79,800
SB12-125-...x.../W	1-1/4	7	8	12	1.98	0.90	12	1/4	1.98	0.16	1.68	77,000	21	102,400
SB12-137-...x.../W	1-3/8	6	8	12	2.23	1.10	10	5/16	2.23	0.20	2.03	90,700	36	120,600
SB12-150-...x.../W	1-1/2	6	8	12	2.35	1.10	12	5/16	2.35	0.20	2.03	100,000	33	133,000
SB12-162-...x.../W	1-5/8	6	8	12	2.47	1.10	12	5/16	2.47	0.20	2.03	120,700	40	160,500
SB12-175-...x.../W	1-3/4	5	8	12	2.73	1.40	12	3/8	2.73	0.25	2.49	131,200	51	174,400
SB12-187-...x.../W	1-7/8	6	8	12	2.98	1.50	10	7/16	2.98	0.25	2.60	167,900	88	223,300
SB12-200-...x.../W	2	4.5	8	12	3.20	1.50	12	7/16	3.20	0.25	2.60	172,100	74	228,800
SB12-225-...x.../W	2-1/4	4.5	8	12	3.45	1.60	12	7/16	3.45	0.25	2.85	239,800	104	318,900
SB12-250-...x.../W	2-1/2	4	8	12	3.95	1.80	10	9/16	3.94	0.31	3.26	280,000	183	372,400
SB12-275-...x.../W	2-3/4	4	8	12	4.20	2.20	12	9/16	4.20	0.31	3.61	348,500	189	463,500
SB12-300-...x.../W	3	4	6	8	4.45	2.20	14	9/16	4.45	0.31	3.61	424,700	197	564,800
SB12-325-...x.../W	3-1/4	4	6	8	4.95	2.35	12	5/8	4.95	0.38	4.01	508,300	328	676,000
SB12-350-...x.../W	3-1/2	4	6	8	5.20	2.35	14	5/8	5.20	0.38	4.01	599,500	332	797,300

** 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 your local Nord-Lock sales office 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.

H650

Nut-style tensioner
Medium-temperature

H650 tensioners are used for medium-temperature applications. Preload and torque values are based on a bolt stress of 310 MPa (45,000 psi), the value most commonly used by pressure-vessel designers. Depending on operating temperature, jackbolt torque and preload may be increased.



Components
1 Nut body
2 Jackbolts
3 Hardened Washer

Metric	Size				Nut body		Jackbolt		Hardened washer		Height	Weight	Preload*	Torque*
	Thread	Available pitch			1		2		3		tot		nom	nom
Part number	D [mm]	P_1 [mm]	P_2	P_3	D_1 [mm]	H [mm]	n	SW [mm]	D_s [mm]	S [mm]	L [mm]	est [kg]	F [kN]	M [Nm]
H650-M20x.../W	M20	2.5	1.5	1	38	16	6	5	38	4	34	0.14	75	10
H650-M22x.../W	M22	2.5	1.5	1	41	16	6	5	41	4	34	0.16	94	12
H650-M24x.../W	M24	3	2	1.5	44	16	8	5	43	4	34	0.19	110	11
H650-M27x.../W	M27	3	2	1.5	50	24	6	6	50	5	45	0.35	140	24
H650-M30x.../W	M30	3.5	2	1.5	53	24	6	6	53	5	45	0.37	175	30
H650-M33x.../W	M33	3.5	2	1.5	59	24	8	6	59	5	45	0.48	215	27
H650-M36x.../W	M36	4	3	1.5	66	32	6	8	66	5	57	0.76	255	53
H650-M39x.../W	M39	4	3	1.5	70	32	8	8	70	5	57	0.90	300	47
H650-M42x.../W	M42	4.5	3	1.5	75	32	8	8	73	5	57	1.01	350	55
H650-M45x.../W	M45	4.5	3	1.5	83	38	8	10	81	6	68	1.48	405	75
H650-M48x.../W	M48	5	3	1.5	85	38	8	10	85	6	68	1.50	455	85
H650-M52x.../W	M52	5	3	2	94	38	8	10	89	6	68	1.80	540	100
H650-M56x.../W	M56	5.5	4	2	100	38	8	10	95	6	68	2.00	630	120
H650-M60x.../W	M60	5.5	4	2	107	38	10	10	100	6	68	2.30	740	110
H650-M64x.../W	M64	6	4	2	113	53	8	14	112	8	92	3.65	830	205
H650-M72x.../W	M72	6	4	2	120	56	8	14	120	8	92	4.00	1070	265
H650-M76x.../W	M76	6	4	2	132	56	12	14	127	8	92	5.10	1200	200
H650-M80x.../W	M80	6	4	2	132	56	12	14	127	8	92	4.80	1330	220
H650-M90x.../W	M90	6	4	2	145	59	16	14	140	8	99	6.00	1730	215
H650-M100x.../W	M100	6	4	2	164	61	16	14	152	8	99	7.80	2170	270
H650-M110x.../W	M110	6	4	2	177	79	12	17	172	10	125	11.40	2650	550
H650-M120x.../W	M120	6	4	2	189	81	16	17	179	10	125	13.00	3210	500
H650-M125x.../W	M125	6	4	2	194	81	16	17	190	10	125	13.50	3470	540

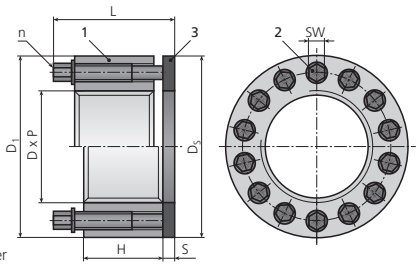
Imperial	Size				Nut body		Jackbolt		Hardened washer		Height	Weight	Preload*	Torque*
	Thread	Available TPI			1		2		3		tot		nom	nom
Part number	D [in]	P_1	P_2	P_3	D_1 [in]	H [in]	n	SW [in]	D_s [in]	S [in]	L [in]	est [Lb]	F [LBf]	M [Lbft]
H650-075-.../W	3/4	10	16	-	1.47	0.70	4	3/16	1.50	0.13	1.38	0.31	13,950	9
H650-087-.../W	7/8	9	14	-	1.60	0.70	6	3/16	1.63	0.13	1.38	0.34	19,790	9
H650-100-.../W	1	8	12	14	1.90	0.93	6	1/4	2.00	0.19	1.71	0.68	27,260	15
H650-112-.../W	1-1/8	7	8	12	2.08	0.93	6	1/4	2.13	0.19	1.71	0.79	35,570	20
H650-125-.../W	1-1/4	7	8	12	2.25	0.94	8	1/4	2.38	0.19	1.71	0.92	44,990	19
H650-137-.../W	1-3/8	6	8	12	2.46	1.20	6	5/16	2.50	0.19	2.12	1.40	55,510	37
H650-150-.../W	1-1/2	6	8	12	2.70	1.20	8	5/16	2.75	0.19	2.12	1.70	67,130	33
H650-162-.../W	1-5/8	6	8	12	2.96	1.20	8	5/16	2.88	0.19	2.12	2.01	79,860	40
H650-175-.../W	1-3/4	5	8	12	3.08	1.42	8	3/8	3.13	0.25	2.49	2.53	93,700	54
H650-187-.../W	1-7/8	6	8	12	3.59	1.60	8	7/16	3.50	0.25	2.85	4.07	108,600	71
H650-200-.../W	2	4.5	8	12	3.59	1.60	8	7/16	3.50	0.25	2.85	3.87	124,700	81
H650-225-.../W	2-1/4	4.5	8	12	3.95	1.60	8	7/16	3.75	0.25	2.85	4.51	160,100	104
H650-250-.../W	2-1/2	4	8	12	4.45	2.10	8	9/16	4.50	0.31	3.61	7.82	199,900	163
H650-275-.../W	2-3/4	4	8	12	4.70	2.10	8	9/16	4.75	0.31	3.61	8.36	244,100	199
H650-300-.../W	3	4	6	8	5.20	2.10	12	9/16	5.00	0.31	3.61	10.30	292,800	159
H650-325-.../W	3-1/4	4	6	8	5.45	2.20	12	9/16	5.00	0.31	3.61	11.04	345,900	188
H650-350-.../W	3-1/2	4	6	8	5.70	2.30	16	9/16	5.50	0.31	3.87	12.62	403,300	164
H650-375-.../W	3-3/4	4	6	8	6.20	2.40	16	9/16	5.50	0.31	3.87	15.08	465,300	189
H650-400-.../W	4	4	6	8	6.45	2.60	18	9/16	6.00	0.31	4.19	17.31	531,600	192
H650-425-.../W	4-1/4	4	6	8	6.95	3.00	16	5/8	6.40	0.38	4.76	23.41	602,300	291
H650-450-.../W	4-1/2	4	6	8	7.20	3.00	16	5/8	6.65	0.38	4.76	24.44	677,500	328
H650-475-.../W	4-3/4	4	6	8	7.45	3.20	18	5/8	6.90	0.38	5.06	27.13	757,100	326
H650-500-.../W	5	4	6	8	7.70	3.30	20	5/8	7.15	0.38	5.06	28.83	841,100	325

** 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 your local Nord-Lock sales office 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.

H650T

Nut-style tensioner
Medium-temperature, tall

H650T tensioners are intended for use where space is limited, and typically replace acorn and castle nuts. Preload and torque values are based on a bolt stress of 310 MPa (45,000 psi).



Components
1 Nut body
2 Jackbolts
3 Hardened Washer

Metric	Size				Nut body		Jackbolt		Hardened washer		Height	Weight	Preload*	Torque*
	Thread	Available pitch			1		2		3		tot		nom	nom
Part number	D [mm]	P_1 [mm]	P_2	P_3	D_1 [mm]	H [mm]	n	SW [mm]	D_s [mm]	S [mm]	L [mm]	est [kg]	F [kN]	M [Nm]
H650T-M24x.../W	M24	3	2	1.5	41	28	8	5	40	3	43	0.20	110	11
H650T-M27x.../W	M27	3	2	1.5	43	28	10	5	43	3	43	0.25	140	11
H650T-M30x.../W	M30	3.5	2	1.5	46	28	12	5	46	3	43	0.25	175	11
H650T-M33x.../W	M33	3.5	2	1.5	49	28	14	5	49	3	43	0.30	215	12
H650T-M36x.../W	M36	4	3	1.5	53	28	16	5	53	6	46	0.35	255	12
H650T-M39x.../W	M39	4	3	1.5	61	38	10	6	61	4	57	0.60	300	30
H650T-M42x.../W	M42	4.5	3	1.5	64	38	12	6	64	4	57	0.65	350	30
H650T-M45x.../W	M45	4.5	3	1.5	67	38	14	6	67	6	59	0.75	405	29
H650T-M48x.../W	M48	5	3	1.5	72	38	14	6	70	10	63	0.90	455	33
H650T-M52x.../W	M52	5	3	2	79	46	12	8	78	5	69	1.25	540	56
H650T-M56x.../W	M56	5.5	4	2	84	46	14	8	82	10	74	1.45	630	57
H650T-M60x.../W	M60	5.5	4	2	90	46	16	8	86	14	78	1.75	740	58
H650T-M64x.../W	M64	6	4	2	96	62	12	10	96	18	102	2.75	830	105
H650T-M72x.../W	M72	6	4	2	106	62	16	10	105	6	90	2.80	1070	100
H650T-M76x.../W	M76	6	4	2	114	62	16	10	112	12	96	3.50	1200	110
H650T-M80x.../W	M80	6	4	2	118	62	18	10	112	15	99	3.70	1330	110
H650T-M90x.../W	M90	6	4	2	135	80	14	14	135	9	117	6.10	1730	245
H650T-M100x.../W	M100	6	4	2	149	80	16	14	144	19	127	7.85	2170	270

Imperial	Size				Nut body		Jackbolt		Hardened washer		Height	Weight	Preload*	Torque*
	Thread	Available TPI			1		2		3		tot		nom	nom
Part number	D [in]	P_1	P_2	P_3	D_1 [in]	H [in]	n	SW [in]	D_s [in]	S [in]	L [in]	est [Lb]	F [LBf]	M [Lbft]
H650T-100-.../W	1	8	12	14	1.67	1.10	8	3/16	1.67	0.13	1.72	0.53	27,260	9
H650T-112-.../W	1-1/8	7	8	12	1.80	1.10	8	3/16	1.75	0.13	1.72	0.58	35,570	12
H650T-125-.../W	1-1/4	7	8	12	1.92	1.10	12	3/16	1.88	0.13	1.72	0.64	44,990	10
H650T-137-.../W	1-3/8	6	8	12	2.08	1.10	14	3/16	2.05	0.25	1.84	0.80	55,510	11
H650T-150-.../W	1-1/2	6	8	12	2.34	1.50	10	1/4	2.29	0.15	2.24	1.17	67,130	22
H650T-162-.../W	1-5/8	6	8	12	2.47	1.50	12	1/4	2.47	0.15	2.24	1.26	79,860	22
H650T-175-.../W	1-3/4	5	8	12	2.62	1.50	14	1/4	2.60	0.25	2.34	1.46	93,700	22
H650T-187-.../W	1-7/8	6	8	12	2.79	1.50	16	1/4	2.75	0.38	2.47	1.75	108,600	22
H650T-200-.../W	2	4.5	8	12	3.06	1.80	12	5/16	3.00	0.20	2.73	2.45	124,700	41
H650T-225-.../W	2-1/4	4.5	8	12	3.37	1.80	16	5/16	3.26	0.40	2.93	3.12	160,100	40
H650T-250-.../W	2-1/2	4	8	12	3.75	2.10	16	3/8	3.68	0.40	3.29	4.38	199,900	58
H650T-275-.../W	2-3/4	4	8	12	4.13	2.50	14	7/16	4.12	0.25	3.65	5.92	244,100	91
H650T-300-.../W	3	4	6	8	4.49	2.50	16	7/16	4.40	0.50	3.90	7.50	292,800	95
H650T-325-.../W	3-1/4	4	6	8	4.87	2.50	18	7/16	4.65	0.70	4.10	9.21	345,900	100
H650T-350-.../W	3-1/2	4	6	8	5.30	3.15	14	9/16	5.19	0.35	4.60	12.69	403,300	188
H650T-375-.../W	3-3/4	4	6	8	5.62	3.15	16	9/16	5.60	0.60	4.85	15.11	465,300	189
H650T-400-.../W	4	4	6	8	5.97	3.15	18	9/16	5.69	0.80	5.05	17.26	531,600	192

** 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 your local Nord-Lock sales office 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.

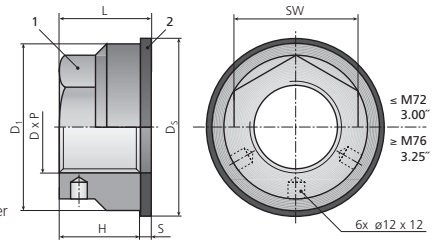
REACTIVE SIDE SOLUTIONS

SX8

Flexnut series standard

SX8 series Flexnuts are designed to flex within the common bolt-stress range for most Superbolt tensioners. They are ideal for reducing stress concentrations in the threads, and for adding flexibility to joints. SX8 series Flexnuts are suited for use with SB8 bolt-style tensioners or in conjunction with through-studs and MT nut-style tensioners.

Components
1 Nut body
2 Hardened Washer



Metric	Size				Nut body			Hardened washer		Height	Weight	Preload capacity
	Thread	Available pitch			1			2		tot	est	max
Part number	D [mm]	P_1 [mm]	P_2	P_3	D_1 [mm]	H [mm]	SW	D_s [mm]	S [mm]	L [mm]	[kg]	[kN]
SX8-M20x.../W	M20	2.5	1.5	1	35	17	27	38	4	21	0.10	140
SX8-M24x.../W	M24	3	2	1.5	42	20	33	45	4	24	0.15	187
SX8-M27x.../W	M27	3	2	1.5	47	23	36	50	5	28	0.20	285
SX8-M30x.../W	M30	3.5	2	1.5	52	25	39	56	5	30	0.25	286
SX8-M33x.../W	M33	3.5	2	1.5	57	28	42	63	6	34	0.40	380
SX8-M36x.../W	M36	4	3	1.5	62	31	48	69	6	37	0.50	460
SX8-M39x.../W	M39	4	3	1.5	66	33	51	72	6	39	0.60	610
SX8-M42x.../W	M42	4.5	3	1.5	73	36	56	76	6	42	0.75	610
SX8-M45x.../W	M45	4.5	3	1.5	77	38	57	81	6	44	0.85	935
SX8-M48x.../W	M48	5	3	1.5	83	41	64	86	6	47	1.10	935
SX8-M52x.../W	M52	5	3	2	88	44	67	94	6	50	1.25	970
SX8-M56x.../W	M56	5.5	4	2	97	48	72	100	6	54	1.60	1120
SX8-M60x.../W	M60	5.5	4	2	105	51	76	110	8	59	2.05	1310
SX8-M64x.../W	M64	6	4	2	111	54	80	120	8	62	2.35	1690
SX8-M72x.../W	M72	6	4	2	125	61	90	130	8	69	3.15	1690
SX8-M76x.../W	M76	6	4	2	132	64	__*	138	10	74	4.20	2530
SX8-M80x.../W	M80	6	4	2	139	68	__*	145	10	78	5.20	2530
SX8-M90x.../W	M90	6	4	2	156	76	__*	160	10	86	7.10	3380
SX8-M100x.../W	M100	6	4	2	173	85	__*	180	10	95	9.00	3380
SX8-M110x.../W	M110	6	4	2	191	94	__*	202	10	104	13.00	4200
SX8-M120x.../W	M120	6	4	2	208	102	__*	215	12	114	16.75	5600
SX8-M125x.../W	M125	6	4	2	218	108	__*	227	12	120	19.50	5600
SX8-M130x.../W	M130	6	4	2	226	111	__*	234	12	123	21.25	6300
SX8-M140x.../W	M140	6	4	2	243	119	__*	253	12	131	26.25	7000
SX8-M150x.../W	M150	6	4	2	260	127	__*	271	12	139	31.75	7000
SX8-M160x.../W	M160	6	4	-	278	136	__*	290	12	148	38.75	8400

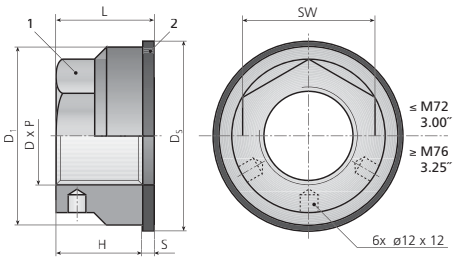
Imperial	Size				Nut body			Hardened washer		Height	Weight	Preload capacity
	Thread	Available TPI			1			2		tot	est	max
Part number	D [in]	P_1	P_2	P_3	D_1 [in]	H [in]	SW	D_s [in]	S [in]	L [in]	[Lb]	[LBf]
SX8-075-.../W	3/4	10	16	-	1.30	0.64	1	1.50	0.13	0.77	0.17	27,200
SX8-087-.../W	7/8	9	14	-	1.52	0.74	1-1/8	1.62	0.13	0.87	0.23	40,800
SX8-100-.../W	1	8	12	14	1.73	0.85	1-5/16	2.00	0.16	1.01	0.38	64,800
SX8-112-.../W	1-1/8	7	8	12	1.95	0.96	1-1/2	2.12	0.16	1.12	0.52	64,800
SX8-125-.../W	1-1/4	7	8	12	2.17	1.06	1-5/8	2.50	0.19	1.25	0.73	86,400
SX8-137-.../W	1-3/8	6	8	12	2.38	1.17	1-3/4	2.50	0.19	1.36	0.87	98,400
SX8-150-.../W	1-1/2	6	8	12	2.60	1.28	2	3.00	0.25	1.53	1.33	131,200
SX8-162-.../W	1-5/8	6	8	12	2.81	1.38	2-1/8	3.00	0.25	1.63	1.54	141,100
SX8-175-.../W	1-3/4	5	8	12	3.03	1.49	2-1/4	3.25	0.25	1.74	1.85	172,800
SX8-187-.../W	1-7/8	6	8	12	3.25	1.59	2-1/2	3.50	0.25	1.84	2.54	233,600
SX8-200-.../W	2	4.5	8	12	3.46	1.70	2-5/8	3.75	0.25	1.95	2.76	233,600
SX8-225-.../W	2-1/4	4.5	8	12	3.90	1.91	3	4.22	0.31	2.22	4.07	275,400
SX8-250-.../W	2-1/2	4	8	12	4.33	2.13	3-1/4	4.70	0.31	2.44	5.31	380,800
SX8-275-.../W	2-3/4	4	8	12	4.76	2.34	3-5/8	4.95	0.31	2.65	7.46	380,800
SX8-300-.../W	3	4	6	8	5.23	2.55	4	5.45	0.38	2.93	9.18	571,200
SX8-325-.../W	3-1/4	4	6	8	5.63	2.76	__*	5.95	0.38	3.14	12.08	571,200
SX8-350-.../W	3-1/2	4	6	8	6.06	2.98	__*	6.45	0.38	3.36	14.98	761,600
SX8-375-.../W	3-3/4	4	6	8	6.50	3.19	__*	6.94	0.38	3.57	18.36	761,600
SX8-400-.../W	4	4	6	8	6.93	3.40	__*	7.45	0.43	3.83	22.55	856,800
SX8-425-.../W	4-1/4	4	6	8	7.36	3.61	__*	7.95	0.43	4.04	28.55	1,075,200
SX8-450-.../W	4-1/2	4	6	8	7.79	3.83	__*	8.20	0.43	4.26	30.98	1,116,600
SX8-475-.../W	4-3/4	4	6	8	8.23	4.04	__*	8.70	0.43	4.47	38.95	1,209,600
SX8-500-.../W	5	4	6	8	8.66	4.25	__*	9.45	0.50	4.75	46.80	1,344,000
SX8-525-.../W	5-1/4	4	6	8	9.09	4.46	__*	9.45	0.50	4.96	52.48	1,478,400
SX8-550-.../W	5-1/2	4	6	8	9.53	4.68	__*	9.95	0.50	5.18	56.03	1,478,400
SX8-575-.../W	5-3/4	4	6	8	9.96	4.89	__*	10.45	0.50	5.39	65.49	1,612,800
SX8-600-.../W	6	4	6	8	10.39	5.10	__*	10.95	0.50	5.60	72.84	1,612,800

** Indicates a round shape instead of hex shape of the nut.*
- Other sizes, thread pitches or thread per inch (TPI) may be available. Dimensions listed are representative.

SX12

Flexnut series high-strength

SX12 series Flexnuts are designed for use with SB12 bolt-style tensioners, or in conjunction with through-stud and CY nut-style tensioners.



Components
1 Nut body
2 Hardened Washer

Metric	Size				Nut body			Hardened washer		Height	Weight	Preload capacity
	Thread	Available pitch			1			2		tot	est	max
Part number	D [mm]	P_1 [mm]	P_2	P_3	D_1 [mm]	H [mm]	SW	D_s [mm]	S [mm]	L [mm]	[kg]	[kN]
SX12-M20x.../W	M20	2.5	1.5	1	35	20	27	38	4	24	0.10	187
SX12-M24x.../W	M24	3	2	1.5	42	24	33	45	4	28	0.20	285
SX12-M27x.../W	M27	3	2	1.5	47	27	36	50	5	32	0.25	380
SX12-M30x.../W	M30	3.5	2	1.5	52	30	39	56	5	35	0.35	427
SX12-M33x.../W	M33	3.5	2	1.5	57	33	42	63	6	39	0.45	610
SX12-M36x.../W	M36	4	3	1.5	62	36	48	69	6	42	0.60	635
SX12-M39x.../W	M39	4	3	1.5	66	39	51	72	6	45	0.70	760
SX12-M42x.../W	M42	4.5	3	1.5	73	42	56	76	6	48	0.90	915
SX12-M45x.../W	M45	4.5	3	1.5	77	45	57	81	6	51	1.00	1170
SX12-M48x.../W	M48	5	3	1.5	83	48	64	86	6	54	1.30	1170
SX12-M52x.../W	M52	5	3	2	88	52	67	94	6	58	1.50	1400
SX12-M56x.../W	M56	5.5	4	2	97	56	72	100	6	62	1.95	1400
SX12-M60x.../W	M60	5.5	4	2	105	60	76	106	8	68	2.45	2100
SX12-M64x.../W	M64	6	4	2	111	64	80	120	8	72	2.85	2100
SX12-M72x.../W	M72	6	4	2	125	72	90	130	8	80	3.90	2530
SX12-M76x.../W	M76	6	4	2	132	76	__*	138	10	86	5.05	3380
SX12-M80x.../W	M80	6	4	2	139	80	__*	145	10	90	6.15	3380
SX12-M90x.../W	M90	6	4	2	156	90	__*	160	10	100	8.50	4200
SX12-M100x.../W	M100	6	4	2	173	100	__*	180	10	110	12.50	4900
SX12-M110x.../W	M110	6	4	2	191	110	__*	202	10	120	15.50	5600
SX12-M120x.../W	M120	6	4	2	208	120	__*	215	12	132	20.00	6300
SX12-M125x.../W	M125	6	4	2	218	125	__*	227	12	137	22.75	6300
SX12-M130x.../W	M130	6	4	2	226	111	__*	234	12	123	21.25	7000
SX12-M140x.../W	M140	6	4	2	243	119	__*	253	12	131	26.25	7700
SX12-M150x.../W	M150	6	4	2	260	127	__*	271	12	139	31.75	7700
SX12-M160x.../W	M160	6	4	-	278	136	__*	290	12	148	38.75	8400

Imperial	Size				Nut body			Hardened washer		Height	Weight	Preload capacity
	Thread	Available TPI			1			2		tot	est	max
Part number	D [in]	P_1	P_2	P_3	D_1 [in]	H [in]	SW	D_s [in]	S [in]	L [in]	[Lb]	[LBf]
SX12-075-.../W	3/4	10	16	-	1.30	0.75	1	1.50	0.13	0.88	0.15	40,800
SX12-087-.../W	7/8	9	14	-	1.52	0.88	1-1/8	1.62	0.13	1.01	0.29	54,400
SX12-100-.../W	1	8	12	14	1.73	1.00	1-5/16	2.00	0.16	1.16	0.47	64,800
SX12-112-.../W	1-1/8	7	8	12	1.95	1.13	1-1/2	2.12	0.16	1.29	0.64	86,400
SX12-125-.../W	1-1/4	7	8	12	2.17	1.25	1-5/8	2.50	0.19	1.44	0.90	102,410
SX12-137-.../W	1-3/8	6	8	12	2.38	1.38	1-3/4	2.50	0.19	1.57	1.08	131,200
SX12-150-.../W	1-1/2	6	8	12	2.60	1.50	2	3.00	0.25	1.75	1.59	172,800
SX12-162-.../W	1-5/8	6	8	12	2.81	1.63	2-1/8	3.00	0.25	1.88	1.90	172,800
SX12-175-.../W	1-3/4	5	8	12	3.03	1.75	2-1/4	3.25	0.25	2.00	2.28	259,200
SX12-187-.../W	1-7/8	6	8	12	3.25	1.88	2-1/2	3.50	0.25	2.13	2.91	233,600
SX12-200-.../W	2	4.5	8	12	3.46	2.00	2-5/8	3.75	0.25	2.25	3.43	350,400
SX12-225-.../W	2-1/4	4.5	8	12	3.90	2.25	3	4.22	0.31	2.56	5.01	350,400
SX12-250-.../W	2-1/2	4	8	12	4.33	2.50	3-1/4	4.70	0.31	2.81	6.51	571,200
SX12-275-.../W	2-3/4	4	8	12	4.76	2.75	3-5/8	4.95	0.31	3.06	8.42	571,200
SX12-300-.../W	3	4	6	8	5.20	3.00	4	5.45	0.38	3.38	11.33	761,600
SX12-325-.../W	3-1/4	4	6	8	5.63	3.25	__*	5.94	0.38	3.63	14.93	761,600
SX12-350-.../W	3-1/2	4	6	8	6.06	3.50	__*	6.45	0.38	3.88	18.27	856,800
SX12-375-.../W	3-3/4	4	6	8	6.50	3.75	__*	6.95	0.38	4.13	22.61	856,800
SX12-400-.../W	4	4	6	8	6.93	4.00	__*	7.45	0.43	4.43	27.65	952,000
SX12-425-.../W	4-1/4	4	6	8	7.36	4.25	__*	7.95	0.43	4.68	32.97	1,209,600
SX12-450-.../W	4-1/2	4	6	8	7.79	4.50	__*	8.20	0.43	4.93	38.42	1,209,600
SX12-475-.../W	4-3/4	4	6	8	8.23	4.75	__*	8.70	0.43	5.18	45.09	1,344,000
SX12-500-.../W	5	4	6	8	8.66	5.00	__*	9.45	0.50	5.50	53.75	1,344,000
SX12-525-.../W	5-1/4	4	6	8	9.09	5.25	__*	9.45	0.50	5.75	60.81	1,478,400
SX12-550-.../W	5-1/2	4	6	8	9.53	5.50	__*	9.95	0.50	6.00	69.67	1,478,400
SX12-575-.../W	5-3/4	4	6	8	9.96	5.75	__*	10.45	0.50	6.25	79.37	1,612,800
SX12-600-.../W	6	4	6	8	10.39	6.00	__*	10.95	0.50	6.50	89.75	1,612,800

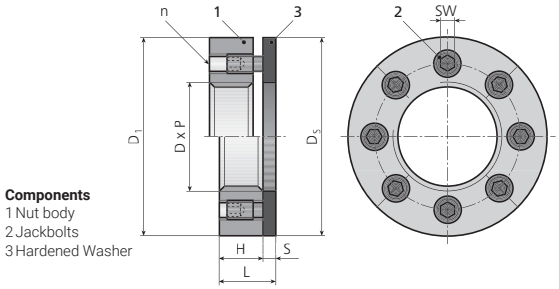
** Indicates a round shape instead of hex shape of the nut.*
- Other sizes, thread pitches or thread per inch (TPI) may be available. Dimensions listed are representative.

COMPACT/ LOW-PROFILE TENSIONERS

SJ

Jamnut tensioner
Standard low-profile

SJ jamnuts are used for applications involving limited headroom or limited thread engagement.



Components
1 Nut body
2 Jackbolts
3 Hardened Washer

Metric	Size				Nut body 1		Jackbolt 2		Hardened washer 3		Height	Weight	Preload*	Torque*	Preload capacity*
	Thread	Available pitch									tot		nom	nom	max
Part number	D	P_1	P_2	P_3	D_1	H	n	SW	D_s	S	L	est	F	M	
	[mm]	[mm]			[mm]	[mm]		[mm]	[mm]	[mm]	[mm]	[kg]	[kN]	[Nm]	[kN]
SJ-M20x.../W	M20	2.5	1.5	1	43	15	6	4	43	4	19	0.15	67	11	91
SJ-M22x.../W	M22	2.5	1.5	1	47	16	8	4	45	5	21	0.20	81	10	105
SJ-M24x.../W	M24	3	2	1.5	50	16	8	4	48	5	21	0.20	89	11	120
SJ-M27x.../W	M27	3	2	1.5	53	16	10	4	50	5	21	0.25	100	10	130
SJ-M30x.../W	M30	3.5	2	1.5	60	21	8	5	59	5	26	0.40	135	21	180
SJ-M33x.../W	M33	3.5	2	1.5	63	22	10	5	63	5	27	0.40	155	19	200
SJ-M36x.../W	M36	4	3	1.5	69	28	8	6	69	5	33	0.65	190	35	245
SJ-M39x.../W	M39	4	3	1.5	75	28	10	6	75	5	33	0.80	255	38	335
SJ-M42x.../W	M42	4.5	3	1.5	81	28	12	6	78	5	33	0.90	315	39	420
SJ-M45x.../W	M45	4.5	3	1.5	88	28	12	6	81	6	34	1.00	315	39	420
SJ-M48x.../W	M48	5	3	1.5	101	31	8	8	94	6	37	1.65	380	94	500
SJ-M52x.../W	M52	5	3	2	101	33	8	8	94	6	39	1.65	380	94	500
SJ-M56x.../W	M56	5.5	4	2	113	33	12	8	100	6	39	2.05	570	94	760
SJ-M60x.../W	M60	5.5	4	2	117	33	12	8	106	6	39	2.15	570	94	760
SJ-M64x.../W	M64	6	4	2	119	33	12	8	112	8	41	2.45	570	94	760
SJ-M68x.../W	M68	6	4	2	138	38	12	10	125	8	46	3.60	710	145	950
SJ-M72x.../W	M72	6	4	2	151	38	12	10	138	8	46	4.50	910	185	1200
SJ-M76x.../W	M76	6	4	2	151	38	12	10	138	8	46	4.35	860	175	1130
SJ-M80x.../W	M80	6	4	2	158	38	12	10	145	10	48	4.95	910	185	1200
SJ-M90x.../W	M90	6	4	2	170	51	12	12	160	10	61	7.20	1160	280	1530
SJ-M100x.../W	M100	6	4	2	177	53	12	12	172	10	63	7.75	1160	280	1530
SJ-M110x.../W	M110	6	4	2	190	59	16	12	190	10	69	9.25	1550	280	2040
SJ-M120x.../W	M120	6	4	2	202	59	16	12	202	10	69	10.25	1550	280	2040
SJ-M125x.../W	M125	6	4	2	205	59	16	12	202	10	69	10.25	1550	280	2040
SJ-M130x.../W	M130	6	4	2	210	59	16	12	202	10	69	10.50	1550	280	2040
SJ-M140x.../W	M140	6	4	2	221	59	16	12	215	12	71	11.75	1550	280	2040
SJ-M150x.../W	M150	6	4	2	230	59	16	12	225	12	71	12.25	1550	280	2040
SJ-M160x.../W	M160	6	4	-	240	59	16	12	240	12	71	13.25	1550	280	2040

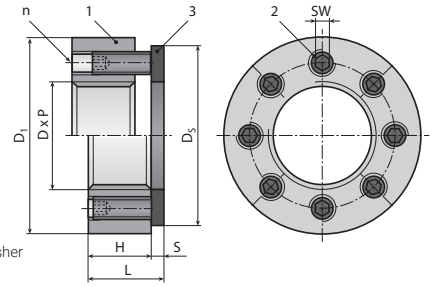
Imperial	Size				Nut body 1		Jackbolt 2		Hardened washer 3		Height	Weight	Preload*	Torque*	Preload capacity*
	Thread	Available TPI									tot		nom	nom	max
Part number	D	P_1	P_2	P_3	D_1	H	n	SW	D_s	S	L	est	F	M	
	[in]				[in]	[in]		[in]	[in]	[in]	[in]	[Lb]	[LBf]	[Lbft]	[LBf]
SJ-075-.../W	3/4	10	16	-	1.70	0.55	6	5/32	1.63	0.13	0.68	0.34	16,300	9	21,700
SJ-087-.../W	7/8	9	14	-	1.84	0.60	8	5/32	1.75	0.13	0.73	0.40	21,700	9	28,900
SJ-100-.../W	1	8	12	14	1.95	0.60	8	5/32	2.00	0.19	0.79	0.49	21,700	9	28,900
SJ-112-.../W	1-1/8	7	8	12	2.20	0.80	8	3/16	2.13	0.19	0.99	0.67	30,000	15	40,000
SJ-125-.../W	1-1/4	7	8	12	2.34	0.80	8	3/16	2.38	0.19	0.99	0.85	30,000	15	40,000
SJ-137-.../W	1-3/8	6	8	12	2.45	0.92	10	3/16	2.50	0.19	1.11	0.96	37,500	15	50,000
SJ-150-.../W	1-1/2	6	8	12	2.95	1.10	8	1/4	2.75	0.19	1.29	1.67	56,900	37	75,900
SJ-162-.../W	1-5/8	6	8	12	3.20	1.10	10	1/4	2.88	0.19	1.29	1.92	71,200	37	94,900
SJ-175-.../W	1-3/4	5	8	12	3.45	1.10	12	1/4	3.45	0.25	1.35	2.33	85,400	37	113,900
SJ-187-.../W	1-7/8	6	8	12	3.59	1.10	12	1/4	3.59	0.25	1.35	2.57	85,400	37	113,900
SJ-200-.../W	2	4.5	8	12	3.95	1.30	8	5/16	3.50	0.25	1.55	3.63	91,400	75	121,900
SJ-225-.../W	2-1/4	4.5	8	12	4.45	1.30	12	5/16	4.00	0.25	1.55	4.57	137,100	75	182,800
SJ-250-.../W	2-1/2	4	8	12	4.70	1.30	12	5/16	4.50	0.31	1.61	5.25	137,100	75	182,800
SJ-275-.../W	2-3/4	4	8	12	5.45	1.50	12	3/8	4.75	0.31	1.81	7.65	165,800	108	221,100
SJ-300-.../W	3	4	6	8	5.95	1.90	12	1/2	5.25	0.38	2.28	12.55	226,300	179	301,700
SJ-325-.../W	3-1/4	4	6	8	6.20	1.90	12	1/2	5.50	0.38	2.28	12.10	226,300	179	301,700
SJ-350-.../W	3-1/2	4	6	8	6.45	1.90	12	1/2	5.75	0.38	2.28	12.72	226,300	179	301,700
SJ-375-.../W	3-3/4	4	6	8	6.70	2.00	12	1/2	6.00	0.38	2.38	15.02	226,300	179	301,700
SJ-400-.../W	4	4	6	8	6.95	2.00	12	1/2	6.65	0.38	2.38	15.89	226,300	179	301,700
SJ-425-.../W	4-1/4	4	6	8	7.20	2.30	16	1/2	6.90	0.38	2.68	16.63	301,700	179	402,200
SJ-450-.../W	4-1/2	4	6	8	7.45	2.30	16	1/2	7.40	0.38	2.68	19.07	301,700	179	402,200
SJ-475-.../W	4-3/4	4	6	8	7.70	2.30	16	1/2	7.90	0.38	2.68	20.63	301,700	179	402,200
SJ-500-.../W	5	4	6	8	7.95	2.30	16	1/2	7.90	0.38	2.68	21.19	301,700	179	402,200
SJ-525-.../W	5-1/4	4	6	8	8.70	2.40	16	9/16	8.40	0.50	2.90	28.11	396,700	269	529,000
SJ-550-.../W	5-1/2	4	6	8	8.95	2.40	16	9/16	8.40	0.50	2.90	28.75	396,700	269	529,000
SJ-575-.../W	5-3/4	4	6	8	9.20	2.40	16	9/16	9.40	0.50	2.90	31.41	396,700	269	529,000
SJ-600-.../W	6	4	6	8	9.45	2.40	16	9/16	9.40	0.50	2.90	31.38	396,700	269	529,000

** 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 your local Nord-Lock sales office 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.

SJX2

Jamnut tensioner
High-strength low-profile

SJX2 jamnuts are designed for restrictive space applications with higher preload requirements. They utilize larger, moly-lubricated set-screws to reduce torque requirements.



Components
1 Nut body
2 Jackbolts
3 Hardened Washer

Metric	Size				Nut body 1		Jackbolt 2		Hardened washer 3		Height	Weight	Preload*	Torque*	Preload capacity*
Part number	Thread D [mm]	Available pitch P_1 [mm]	P_2	P_3	D_1 [mm]	H [mm]	n	SW [mm]	D_s [mm]	S [mm]	tot L [mm]	est [kg]	nom F [kN]	nom M [Nm]	max [kN]
SJX2-M20x.../W	M20	2.5	1.5	1	44	18	4	4	43	4	22	0.21	86	14	115
SJX2-M22x.../W	M22	2.5	1.5	1	47	18	4	4	45	5	23	0.24	86	14	115
SJX2-M24x.../W	M24	3	2	1.5	50	18	6	4	48	5	23	0.27	130	14	175
SJX2-M27x.../W	M27	3	2	1.5	56	18	8	4	50	5	23	0.32	170	14	215
SJX2-M30x.../W	M30	3.5	2	1.5	63	23	8	5	59	5	28	0.52	215	22	290
SJX2-M33x.../W	M33	3.5	2	1.5	69	23	10	5	63	5	28	0.61	270	22	360
SJX2-M36x.../W	M36	4	3	1.5	74	30	8	6	69	5	35	0.91	345	41	450
SJX2-M39x.../W	M39	4	3	1.5	80	30	10	6	75	5	35	1.04	405	38	530
SJX2-M42x.../W	M42	4.5	3	1.5	88	30	10	6	78	5	35	1.22	485	46	640
SJX2-M45x.../W	M45	4.5	3	1.5	90	30	10	6	81	6	36	1.33	510	48	670
SJX2-M48x.../W	M48	5	3	1.5	101	38	8	8	94	6	44	2.10	620	96	820
SJX2-M52x.../W	M52	5	3	2	107	38	10	8	106	6	44	2.37	700	87	920
SJX2-M56x.../W	M56	5.5	4	2	113	38	10	8	106	6	44	2.57	760	94	1010
SJX2-M60x.../W	M60	5.5	4	2	120	38	10	8	106	6	44	3.04	860	107	1130
SJX2-M64x.../W	M64	6	4	2	126	42	12	8	120	8	50	3.52	1110	115	1480
SJX2-M68x.../W	M68	6	4	2	145	46	12	10	125	8	54	5.11	1330	186	1740
SJX2-M72x.../W	M72	6	4	2	151	46	12	10	138	8	54	5.61	1380	193	1840
SJX2-M76x.../W	M76	6	4	2	158	52	12	10	138	8	60	6.61	1900	266	2510
SJX2-M80x.../W	M80	6	4	2	162	52	12	10	145	10	62	7.06	1900	266	2510
SJX2-M90x.../W	M90	6	4	2	177	64	12	12	160	10	74	9.98	2210	368	2930
SJX2-M100x.../W	M100	6	4	2	182	76	14	12	172	10	86	11.97	2730	390	3620
SJX2-M110x.../W	M110	6	4	2	202	79	16	12	190	10	89	15.16	3340	418	4470
SJX2-M120x.../W	M120	6	4	2	208	79	16	12	202	10	89	15.42	3340	418	4470
SJX2-M125x.../W	M125	6	4	2	214	79	16	12	202	10	89	16.03	3340	418	4470
SJX2-M130x.../W	M130	6	4	2	214	91	18	12	202	10	101	16.86	3760	418	5030
SJX2-M140x.../W	M140	6	4	2	221	91	18	12	215	12	103	18.60	3760	418	5030
SJX2-M150x.../W	M150	6	4	2	231	95	20	12	225	12	107	18.98	4110	411	5450
SJX2-M160x.../W	M160	6	4	-	241	95	20	12	240	12	107	21.32	4110	411	5450

Imperial	Size				Nut body 1		Jackbolt 2		Hardened washer 3		Height	Weight	Preload*	Torque*	Preload capacity*
Part number	Thread D [in]	Available TPI P_1	P_2	P_3	D_1 [in]	H [in]	n	SW [mm]	D_s [in]	S [in]	tot L [in]	est [Lb]	nom F [LBf]	nom M [Lbft]	max [LBf]
SJX2-075-.../W	3/4	10	16	-	1.70	0.70	4	4	1.63	0.13	0.83	0.40	18,100	10	24,100
SJX2-087-.../W	7/8	9	14	-	1.84	0.70	6	4	1.75	0.13	0.83	0.50	25,100	9	33,400
SJX2-100-.../W	1	8	12	14	2.10	0.70	8	4	2.00	0.19	0.89	0.60	33,100	9	44,000
SJX2-112-.../W	1-1/8	7	8	12	2.34	0.90	6	5	2.13	0.19	1.09	0.90	43,700	19	58,100
SJX2-125-.../W	1-1/4	7	8	12	2.47	0.95	8	5	2.38	0.19	1.14	1.10	55,700	19	74,100
SJX2-137-.../W	1-3/8	6	8	12	2.72	0.95	10	5	2.50	0.19	1.14	1.30	69,300	18	92,200
SJX2-150-.../W	1-1/2	6	8	12	3.20	1.20	8	6	2.75	0.19	1.39	2.30	84,000	33	111,700
SJX2-162-.../W	1-5/8	6	8	12	3.45	1.20	10	6	2.88	0.19	1.39	2.70	100,800	31	134,100
SJX2-175-.../W	1-3/4	5	8	12	3.59	1.20	10	6	3.13	0.25	1.45	2.80	118,800	37	158,000
SJX2-187-.../W	1-7/8	6	8	12	3.72	1.30	12	6	3.50	0.25	1.55	3.20	138,000	36	183,500
SJX2-200-.../W	2	4.5	8	12	4.20	1.50	8	8	3.72	0.25	1.75	4.90	159,000	81	211,500
SJX2-225-.../W	2-1/4	4.5	8	12	4.70	1.50	10	8	4.00	0.25	1.75	6.10	205,200	84	272,900
SJX2-250-.../W	2-1/2	4	8	12	4.95	1.65	12	8	4.50	0.31	1.96	7.41	257,400	87	342,300
SJX2-275-.../W	2-3/4	4	8	12	5.70	1.80	12	10	4.75	0.31	2.11	11.00	315,600	145	419,800
SJX2-300-.../W	3	4	6	8	6.20	2.15	12	10	5.25	0.38	2.53	15.00	379,200	174	504,300
SJX2-325-.../W	3-1/4	4	6	8	6.70	2.15	12	10	5.50	0.38	2.53	17.00	449,400	206	597,700
SJX2-350-.../W	3-1/2	4	6	8	6.95	2.30	14	10	5.75	0.38	2.68	19.00	511,900	202	680,800
SJX2-375-.../W	3-3/4	4	6	8	7.20	2.50	16	10	6.00	0.38	2.88	22.00	606,600	209	806,800
SJX2-400-.../W	4	4	6	8	7.45	3.10	14	12	6.65	0.38	3.48	29.00	694,200	325	923,300
SJX2-425-.../W	4-1/4	4	6	8	7.95	3.10	16	12	6.90	0.38	3.48	33.00	787,200	323	1,047,000
SJX2-450-.../W	4-1/2	4	6	8	8.20	3.10	16	12	7.40	0.38	3.48	34.00	787,200	323	1,047,000
SJX2-475-.../W	4-3/4	4	6	8	8.45	3.25	18	12	7.90	0.38	3.63	37.00	904,500	330	1,203,000
SJX2-500-.../W	5	4	6	8	8.45	3.55	18	12	7.90	0.38	3.93	39.00	904,500	330	1,203,000
SJX2-525-.../W	5-1/4	4	6	8	8.70	3.60	18	12	8.40	0.50	4.10	41.00	904,500	330	1,203,000
SJX2-550-.../W	5-1/2	4	6	8	8.95	3.70	20	12	8.40	0.50	4.20	43.00	996,200	327	1,325,000
SJX2-575-.../W	5-3/4	4	6	8	9.45	3.75	20	12	9.40	0.50	4.25	48.00	1,010,600	332	1,344,000
SJX2-600-.../W	6	4	6	8	9.45	3.75	20	12	9.40	0.50	4.25	47.00	1,010,600	332	1,344,000

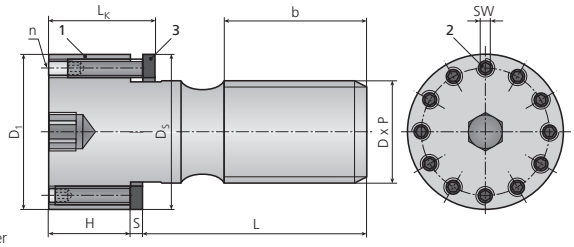
** All preload and torque values are provided for general reference. Applied preload plus additional bolt load from service should not exceed the maximum bolt or stud capacity. Contact your local Nord-Lock sales office for assistance in determining proper preload and torque settings for your application.*

- Other sizes, thread pitches or thread per inch (TPI) may be available. Dimensions listed are representative.

SSJX2

Bolt-style tensioner
Low-profile

SSJX2 bolt-style tensioners offer multi-jackbolt features that match the countersink dimensions of standard socket-head cap screws. Moly-lubricated set screws are included.



Components
1 Bolt body
2 Jackbolts
3 Hardened Washer

Metric	Size				Bolt body		Jackbolt		Hardened washer		Height	Preload*	Torque*	Preload capacity*
		Available Pitch			1		2		3		tot	nom	nom	max
Part number	Thread D [mm]	P_1 [mm]	P_2	P_3	D_1 [mm]	H [mm]	n	SW [mm]	D_S [mm]	S [mm]	L_K [mm]	F [kN]	M [Nm]	[kN]
SSJX2-M20x...x.../W	M20	2.5	1.5	1	32	17	8	3	32	4	21	94	6	125
SSJX2-M22x...x.../W	M22	2.5	1.5	1	35	17	10	3	35	4	21	115	6	155
SSJX2-M24x...x.../W	M24	3	2	1.5	38	19	12	3	38	4	23	140	6	185
SSJX2-M27x...x.../W	M27	3	2	1.5	41	19	12	3	41	5	24	140	6	185
SSJX2-M30x...x.../W	M30	3.5	2	1.5	45	23	10	4	45	5	28	215	14	290
SSJX2-M33x...x.../W	M33	3.5	2	1.5	50	23	12	4	50	5	28	255	14	350
SSJX2-M36x...x.../W	M36	4	3	1.5	55.5	27	10	5	55	6	33	315	25	425
SSJX2-M39x...x.../W	M39	4	3	1.5	59	27	12	5	59	6	33	380	26	510
SSJX2-M42x...x.../W	M42	4.5	3	1.5	63	27	12	5	63	6	33	380	26	510
SSJX2-M45x...x.../W	M45	4.5	3	1.5	69	38	12	6	69	6	44	530	42	710
SSJX2-M48x...x.../W	M48	5	3	1.5	72	38	12	6	72	6	44	600	47	790
SSJX2-M52x...x.../W	M52	5	3	2	76	38	12	6	76	6	44	630	50	840
SSJX2-M56x...x.../W	M56	5.5	4	2	84	38	12	6	84	6	44	630	50	840
SSJX2-M60x...x.../W	M60	5.5	4	2	88	38	14	6	88	6	44	740	50	980
SSJX2-M64x...x.../W	M64	6	4	2	97	51	12	8	97	8	59	930	96	1230
SSJX2-M68x...x.../W	M68	6	4	2	104	51	12	8	104	8	59	1060	109	1420
SSJX2-M72x...x.../W	M72	6	4	2	108	51	14	8	108	8	59	1200	106	1580
SSJX2-M76x...x.../W	M76	6	4	2	114	51	14	8	114	8	59	1360	120	1800
SSJX2-M80x...x.../W	M80	6	4	2	117	51	16	8	117	8	59	1490	115	1970
SSJX2-M90x...x.../W	M90	6	4	2	131	76	14	10	131	10	86	1970	236	2630
SSJX2-M100x...x.../W	M100	6	4	2	144	76	14	10	144	10	86	2210	265	2920

Imperial	Size				Bolt body		Jackbolt		Hardened washer		Height	Preload*	Torque*	Preload capacity*
		Available TPI			1		2		3		tot	nom	nom	
Part number	Thread D [in]	P_1	P_2	P_3	D_1 [in]	H [in]	n	SW [mm]	D_s [in]	S [in]	L_K [in]	F [LBf]	M [Lbft]	max [LBf]
SSJX2-075-...x.../W	3/4	10	16	-	1.17	0.65	8	3	1.17	0.13	0.78	22,400	5	26,900
SSJX2-087-...x.../W	7/8	9	14	-	1.35	0.65	10	3	1.35	0.13	0.78	28,700	5	38,300
SSJX2-100-...x.../W	1	8	12	14	1.49	0.65	12	3	1.49	0.13	0.78	28,700	4	38,300
SSJX2-112-....x.../W	1-1/8	7	8	12	1.70	0.90	10	4	1.70	0.16	1.06	52,700	12	63,200
SSJX2-125-...x.../W	1-1/4	7	8	12	1.85	0.90	12	4	1.85	0.16	1.06	63,200	12	75,900
SSJX2-137-...x.../W	1-3/8	6	8	12	2.10	1.05	10	5	2.10	0.19	1.24	75,000	20	100,000
SSJX2-150-...x.../W	1-1/2	6	8	12	2.22	1.05	12	5	2.22	0.19	1.24	90,000	20	120,000
SSJX2-162-...x.../W	1-5/8	6	8	12	2.43	1.05	12	5	2.43	0.19	1.24	90,000	20	120,000
SSJX2-175-...x.../W	1-3/4	5	8	12	2.60	1.05	14	5	2.60	0.19	1.24	104,000	20	138,700
SSJX2-187-...x.../W	1-7/8	6	8	12	2.80	1.55	12	6	2.80	0.22	1.77	142,400	37	170,900
SSJX2-200-...x.../W	2	4.5	8	12	2.98	1.55	12	6	2.98	0.22	1.77	153,000	40	204,000
SSJX2-225-...x.../W	2-1/4	4.5	8	12	3.40	1.55	16	6	3.40	0.22	1.77	199,300	39	239,200
SSJX2-250-...x.../W	2-1/2	4	8	12	3.80	2.00	12	8	3.80	0.28	2.28	243,400	83	292,100
SSJX2-275-...x.../W	2-3/4	4	8	12	4.15	2.00	14	8	4.15	0.28	2.28	283,900	83	340,700
SSJX2-300-...x.../W	3	4	6	8	4.45	2.00	14	8	4.45	0.28	2.28	283,900	83	360,700
SSJX2-325-...x.../W	3-1/4	4	6	8	4.90	2.50	12	10	4.90	0.28	2.78	353,300	162	424,000
SSJX2-350-...x.../W	3-1/2	4	6	8	5.15	2.50	14	10	5.15	0.28	2.78	412,200	162	494,600
SSJX2-375-...x.../W	3-3/4	4	6	8	5.68	3.00	12	12	5.65	0.38	3.38	490,200	268	588,200
SSJX2-400-...x.../W	4	4	6	8	5.97	3.00	12	12	5.97	0.38	3.38	490,200	268	588,200

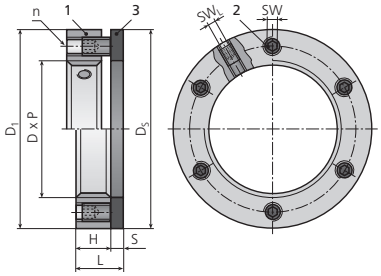
** All preload and torque values are provided for general reference. Applied preload plus additional bolt load from service should not exceed the maximum bolt or stud capacity. Contact your local Nord-Lock sales office for assistance in determining proper preload and torque settings for your application.*
- Other sizes, thread pitches or thread per inch (TPI) may be available. Dimensions listed are representative.

NM2

Bearing locknut (Metric)

Superbolt bearing locknuts are directly interchangeable with many standard locknuts. They're ideal for positioning bearings, and clamping entire shaft assemblies. NM2/NI2 bearing locknuts are designed to match correspondingly sized bearing loads.

Components
1 Nut body
2 Jackbolts
3 Hardened Washer



Metric	Size		Nut body		Jackbolt			Hardened washer		Height	Weight	Preload*	Torque*
	Thread	Pitch			1	2		3		tot		max	max
Part number	D	P_1	D_1	H	n	SW	SW_L	D_S	S	L	est	F	M
	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]	[mm]	[mm]	[mm]	[kg]	[kN]	[Nm]
NM2-06/W	M30	1.5	50	10	6	3	3	50	3	13	0.14	55	5
NM2-07/W	M35	1.5	55	10	6	3	3	55	3	13	0.18	55	5
NM2-08/W	M40	1.5	71	12	6	4	4	71	4	16	0.36	94	11
NM2-09/W	M45	1.5	75	12	6	4	4	75	4	16	0.41	94	11
NM2-10/W	M50	1.5	78	12	6	4	4	78	4	16	0.41	94	11
NM2-11/W	M55	2	84	12	6	4	4	84	4	16	0.41	94	11
NM2-12/W	M60	2	90	12	6	4	4	90	4	16	0.50	94	11
NM2-13/W	M65	2	94	12	6	4	4	94	4	16	0.50	94	11
NM2-14/W	M70	2	100	12	6	4	4	100	4	16	0.54	94	11
NM2-15/W	M75	2	104	12	6	4	4	104	4	16	0.82	94	11
NM2-16/W	M80	2	109	18	6	5	4	109	5	23	0.82	120	16
NM2-17/W	M85	2	114	18	6	5	4	114	5	23	0.82	120	16
NM2-18/W	M90	2	119	18	6	5	4	119	5	23	0.91	120	16
NM2-19/W	M95	2	126	19	8	5	4	126	5	24	1.01	160	16
NM2-20/W	M100	2	131	19	8	5	4	131	5	24	1.09	160	16
NM2-21/W	M105	2	138	19	8	5	4	138	5	24	1.36	200	20
NM2-22/W	M110	2	150	22	8	6	5	150	6	28	1.81	270	32
NM2-24/W	M120	2	159	23	8	6	5	159	6	29	1.95	270	32
NM2-26/W	M130	2	171	24	12	6	5	171	6	30	2.36	340	27
NM2-28/W	M140	2	182	24	12	6	5	182	6	30	2.48	340	27
NM2-30/W	M150	2	190	25	12	6	5	190	6	31	2.68	340	27
NM2-32/W	M160	3	213	27	8	8	6	213	8	35	4.29	425	66

NI2

Bearing locknut (Imperial)

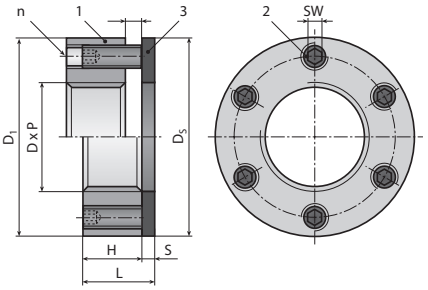
Imperial	Size		Nut body		Jackbolt			Hardened washer		Height	Weight	Preload*	Torque*
	Thread	TPI			1	2		3		tot		max	max
Part number	D	P_1	D_1	H	n	SW	SW_L	D_S	S	L	est	F	M
	[in]		[in]	[in]		[mm]	[in]	[in]	[in]	[in]	[Lb]	[LBf]	[Lbft]
NI2-06/W	1.173	18	1.95	0.39	6	3	1/8	1.95	0.19	0.58	0.30	12,750	4
NI2-07/W	1.376	18	2.15	0.39	6	3	1/8	2.15	0.19	0.58	0.40	12,750	4
NI2-08/W	1.563	18	2.80	0.47	6	4	5/32	2.80	0.19	0.66	0.80	20,800	8
NI2-09/W	1.767	18	2.97	0.47	6	4	5/32	2.97	0.19	0.66	0.90	20,800	8
NI2-10/W	1.967	18	3.09	0.47	6	4	5/32	3.09	0.19	0.66	0.90	20,800	8
NI2-11/W	2.157	18	3.30	0.47	6	4	5/32	3.30	0.19	0.66	0.90	20,800	8
NI2-12/W	2.360	18	3.55	0.47	6	4	5/32	3.55	0.19	0.66	1.10	20,800	8
NI2-13/W	2.548	18	3.70	0.47	6	4	5/32	3.70	0.19	0.66	1.10	20,800	8
NI2-14/W	2.751	18	3.95	0.47	6	4	5/32	3.95	0.19	0.66	1.20	20,800	8
NI2-15/W	2.933	12	4.09	0.47	6	4	5/32	4.09	0.19	0.66	1.80	20,800	8
NI2-16/W	3.137	12	4.30	0.70	6	5	5/32	4.30	0.19	0.89	1.80	36,200	16
NI2-17/W	3.340	12	4.50	0.70	6	5	5/32	4.50	0.19	0.89	1.80	36,200	16
NI2-18/W	3.527	12	4.70	0.70	6	5	5/32	4.70	0.19	0.89	2.00	36,200	16
NI2-19/W	3.730	12	4.95	0.74	8	5	5/32	4.95	0.19	0.93	2.20	48,250	16
NI2-20/W	3.918	12	5.15	0.74	8	5	5/32	5.15	0.19	0.93	2.40	48,250	16
NI2-21/W	4.122	12	5.45	0.77	8	5	5/32	5.45	0.25	1.02	3.00	48,250	16
NI2-22/W	4.325	12	5.90	0.85	8	6	3/16	5.90	0.25	1.10	4.00	68,000	27
NI2-24/W	4.716	12	6.22	0.89	8	6	3/16	6.22	0.25	1.14	4.30	68,000	27
NI2-26/W	5.106	12	6.72	0.95	12	6	3/16	6.72	0.25	1.20	5.20	92,600	24
NI2-28/W	5.497	12	7.15	0.95	12	6	3/16	7.15	0.25	1.20	5.40	92,600	24
NI2-30/W	5.888	12	7.47	0.97	12	6	3/16	7.47	0.25	1.22	5.90	92,600	24
NI2-32/W	6.284	8	8.35	1.05	8	8	1/4	8.35	0.31	1.36	9.40	100,700	51

** 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 your local Nord-Lock sales office 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.

SMX2

Mill motor nut

These tensioners replace the standard mill motor armature nuts supplied by motor OEMs. SMX2 tensioners are available for most standard motor frame sizes. Their preloads match the hub stress capacities of brake wheels and pulleys. For sizes not listed, including 400-series frames, contact your local Nord-Lock Group office.



Components
1 Nut body
2 Jackbolts
3 Hardened Washer

Metric	Size	Pitch	Nut body		Jackbolt		Hardened washer		Height	Weight	Preload*	Torque*
	Thread		1		2		3		tot		max	max
Part number	D [mm]	P_1 [mm]	D_1 [mm]	H [mm]	n	SW [mm]	D_s [mm]	S [mm]	L [mm]	est [kg]	F [kN]	M [Nm]
SMX2-45/W	M30	2	70	20	6	5	70	5	25	0.61	125	17
SMX2-50/W	M36	3	75	20	8	5	69	5	25	0.64	150	15
SMX2-55/W	M36	3	80	20	8	5	76	5	25	0.76	175	18
SMX2-60/W	M42	3	90	26	8	6	81	6	32	1.18	220	26
SMX2-65/W	M42	3	95	26	8	6	95	6	32	1.41	255	30
SMX2-70/W	M48	3	100	26	10	6	94	6	32	1.45	300	29
SMX2-75/W	M48	3	105	26	10	6	105	6	32	1.67	340	32
SMX2-80/W	M56	4	108	27	12	6	106	6	33	1.71	380	30
SMX2-85/W	M56	4	113	27	14	6	106	6	33	1.86	440	30
SMX2-90/W	M64	4	133	27	8	8	123	8	35	2.74	485	75
SMX2-95/W	M64	4	140	27	10	8	134	8	35	3.15	535	66
SMX2-100/W	M72	4	147	27	10	8	138	8	35	3.35	610	76
SMX2-110/W	M80	4	154	31	12	8	145	8	39	3.89	735	76
SMX2-120/W	M90	4	184	31	10	10	160	10	41	5.88	855	144
SMX2-130/W	M100	4	194	34	12	10	172	10	44	6.88	1030	144
SMX2-140/W	M100	4	214	34	12	10	172	10	44	8.45	1190	167
SMX2-150/W	M110	4	224	36	14	10	224	10	46	10.33	1330	160
SMX2-160/W	M125	4	224	42	16	10	202	10	52	10.33	1530	161
SMX2-170/W	M125	4	233	44	18	10	202	10	54	11.62	1720	161
SMX2-180/W	M140	6	250	44	20	10	215	10	54	13.19	1960	165
SMX2-190/W	M140	6	250	55	16	12	240	12	67	17.21	2200	275
SMX2-200/W	M160	6	265	55	18	12	240	12	67	17.31	2400	267
SMX2-220/W	M160	6	304	55	20	12	290	12	67	26.49	2900	290

Imperial	Size	TPI	Nut body		Jackbolt		Hardened washer		Height	Weight	Preload*	Torque*
	Thread		1		2		3		tot		max	max
Part number	D [in]	P_1	D_1 [in]	H [in]	n	SW [mm]	D_s [in]	S [in]	L [in]	est [Lb]	F [LBf]	M [Lbft]
SMX2-802/W	1	8	2.34	0.75	4	5	2.34	0.19	0.94	1.00	22,000	15
SMX2-803/W	1-1/4	8	2.72	0.75	6	5	2.72	0.19	0.94	1.00	33,000	15
SMX2-804/W	1-1/4	8	2.72	0.75	6	5	2.72	0.19	0.94	1.00	33,000	15
SMX2-806/W	1-1/2	8	3.59	1.00	4	6	3.59	0.25	1.25	3.00	37,000	29
SMX2-808/W	2	8	3.72	1.00	6	6	3.72	0.25	1.25	3.00	56,000	29
SMX2-810/W	2-1/4	8	4.47	1.13	4	8	4.47	0.25	1.38	5.00	66,000	67
SMX2-812/W	2-1/2	8	4.72	1.13	6	8	4.72	0.25	1.38	6.00	99,000	67
SMX2-814/W	3	8	5.47	1.25	8	8	5.47	0.25	1.50	9.00	132,000	67
SMX2-816/W	3-1/4	8	5.97	1.25	8	8	5.97	0.25	1.50	10.00	132,000	67
SMX2-818/W	3-1/2	8	6.47	1.25	8	8	6.47	0.25	1.50	12.00	132,000	67
SMX2-820/W	4	8	7.22	1.50	12	8	7.22	0.25	1.75	18.00	198,000	67
SMX2-824/W	4	8	7.72	1.50	12	8	7.72	0.25	1.75	20.00	198,000	67

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- Other sizes, thread pitches or thread per inch (TPI) may be available. Dimensions listed are representative.

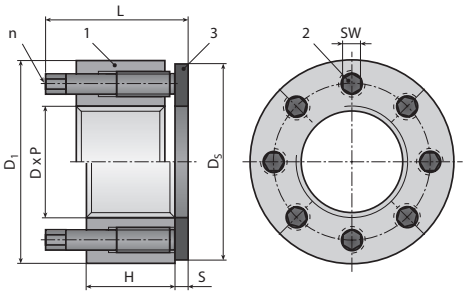
DYNAMIC APPLICATIONS

ALSO AVAILABLE:
CN Compressor Crosshead Jamnuts and SP Compressor Piston End Nuts! For sizes and availability, please contact your local Nord-Lock Group office.

MR

Captive jackbolt tensioner

MR Series tensioners meet the special requirements of high-speed rotating machinery. Captively mounted within the tensioner body, these jackbolts can't work free and cause damage when installed.



Components
1 Nut body
2 Jackbolts
3 Hardened Washer

Metric	Size				Nut body		Jackbolt		Hardened washer		Height	Weight	Preload*	Torque*	Preload capacity*
	Thread	Available pitch			1		2		3		tot		nom	nom	max
Part number	D [mm]	P_1 [mm]	P_2	P_3	D_1 [mm]	H [mm]	n	SW [mm]	D_S [mm]	S [mm]	L [mm]	est [kg]	F [kN]	M [Nm]	[kN]
MR-M16x.../W	M16	2	1.5	1	34	16	4	4	32	3	27	0.10	59	11	75
MR-M20x.../W	M20	2.5	1.5	1	38	16	6	4	38	4	28	0.15	89	11	110
MR-M22x.../W	M22	2.5	1.5	1	41	16	6	4	41	4	28	0.15	89	11	110
MR-M24x.../W	M24	3	2	1.5	44	16	8	4	43	4	28	0.20	120	11	150
MR-M27x.../W	M27	3	2	1.5	50	24	6	6	50	5	42	0.35	155	26	205
MR-M30x.../W	M30	3.5	2	1.5	53	24	6	6	53	5	42	0.35	155	26	205
MR-M33x.../W	M33	3.5	2	1.5	59	24	8	6	59	5	42	0.45	210	26	270
MR-M36x.../W	M36	4	3	1.5	66	32	6	7	66	5	56	0.75	225	46	295
MR-M39x.../W	M39	4	3	1.5	70	32	8	7	70	5	56	0.85	300	46	395
MR-M42x.../W	M42	4.5	3	1.5	75	32	8	7	73	5	56	0.95	300	46	395
MR-M45x.../W	M45	4.5	3	1.5	83	38	8	9	81	6	64	1.45	510	94	675
MR-M48x.../W	M48	5	3	1.5	85	38	8	9	85	6	64	1.45	510	94	675
MR-M52x.../W	M52	5	3	2	94	38	8	9	89	6	64	1.75	510	94	675
MR-M56x.../W	M56	5.5	4	2	100	38	8	9	95	6	64	2.00	510	94	675
MR-M60-.../W	M60	5.5	4	2	107	38	10	9	100	6	64	2.25	640	94	845
MR-M64-.../W	M64	6	4	2	113	53	8	12	112	8	87	3.50	920	225	1220
MR-M68x.../W	M68	6	4	2	117	53	8	12	117	8	87	3.75	920	225	1220
MR-M72x.../W	M72	6	4	2	120	56	8	12	120	8	87	4.00	920	225	1220
MR-M76x.../W	M76	6	4	2	132	56	12	12	127	8	87	5.00	1370	225	1830
MR-M80x.../W	M80	6	4	2	132	56	12	12	127	8	87	4.70	1370	225	1830
MR-M85x.../W	M85	6	4	2	137	56	12	12	137	8	87	5.00	1370	225	1830
MR-M90x.../W	M90	6	4	2	145	59	16	12	137	8	94	5.85	1830	225	2440
MR-M100x.../W	M100	6	4	2	164	61	16	12	152	8	94	7.60	1830	225	2440
MR-M110x.../W	M110	6	4	2	177	79	12	16	172	10	112	11.10	2290	465	3040
MR-M120x.../W	M120	6	4	2	189	81	16	16	179	10	112	12.75	3050	465	4060
MR-M125x.../W	M125	6	4	2	194	81	16	16	190	10	112	13.00	3050	465	4060

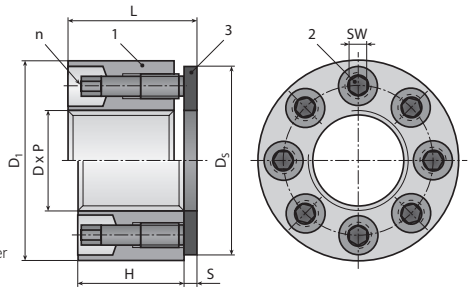
Imperial	Size				Nut body		Jackbolt		Hardened washer		Height	Weight	Preload*	Torque*	Preload capacity*
	Thread	Available TPI			1		2		3		tot		nom	nom	max
Part number	D [in]	P_1	P_2	P_3	D_1 [in]	H [in]	n	SW [in]	D_S [in]	S [in]	L [in]	est [Lb]	F [LBf]	M [Lbft]	[LBf]
MR-075-.../W	3/4	10	16	-	1.47	0.70	4	3/16	1.50	0.13	1.37	0.31	16,300	11	20,400
MR-087-.../W	7/8	9	14	-	1.60	0.70	6	3/16	1.63	0.13	1.37	0.34	24,500	11	30,600
MR-100-.../W	1	8	12	14	1.90	0.93	6	7/32	2.00	0.19	1.69	0.68	38,900	22	48,600
MR-112-.../W	1-1/8	7	8	12	2.08	0.93	6	7/32	2.13	0.19	1.69	0.79	38,900	22	48,600
MR-125-.../W	1-1/4	7	8	12	2.25	0.94	8	7/32	2.38	0.19	1.69	0.92	51,900	22	64,800
MR-137-.../W	1-3/8	6	8	12	2.46	1.20	6	9/32	2.50	0.19	2.09	1.40	59,000	39	73,800
MR-150-.../W	1-1/2	6	8	12	2.70	1.20	8	9/32	2.75	0.19	2.09	1.70	78,800	39	98,400
MR-162-.../W	1-5/8	6	8	12	2.96	1.20	8	9/32	2.88	0.19	2.09	2.01	78,800	39	98,400
MR-175-.../W	1-3/4	5	8	12	3.08	1.42	8	11/32	3.13	0.25	2.49	2.53	103,700	60	129,600
MR-187-.../W	1-7/8	6	8	12	3.59	1.60	8	3/8	3.50	0.25	2.81	4.07	140,200	91	175,200
MR-200-.../W	2	4.5	8	12	3.59	1.60	8	3/8	3.50	0.25	2.81	3.87	140,200	91	175,200
MR-225-.../W	2-1/4	4.5	8	12	3.95	1.60	8	3/8	3.75	0.25	2.81	4.51	140,200	91	175,200
MR-250-.../W	2-1/2	4	8	12	4.45	2.10	8	1/2	4.50	0.31	3.51	7.82	228,500	186	285,600
MR-275-.../W	2-3/4	4	8	12	4.70	2.10	8	1/2	4.75	0.31	3.51	8.36	228,500	186	285,600
MR-300-.../W	3	4	6	8	5.20	2.10	12	1/2	5.00	0.31	3.51	10.30	342,700	186	428,400
MR-325-.../W	3-1/4	4	6	8	5.45	2.20	12	1/2	5.00	0.31	3.51	11.04	342,700	186	428,400
MR-350-.../W	3-1/2	4	6	8	5.70	2.30	16	1/2	5.50	0.31	3.87	12.62	457,000	186	571,200
MR-375-.../W	3-3/4	4	6	8	6.20	2.40	16	1/2	5.50	0.31	3.87	15.08	457,000	186	571,200
MR-400-.../W	4	4	6	8	6.45	2.60	18	1/2	6.00	0.31	4.04	17.31	514,100	186	642,600
MR-425-.../W	4-1/4	4	6	8	6.95	3.00	16	9/16	6.40	0.38	4.76	23.41	645,100	312	806,400
MR-450-.../W	4-1/2	4	6	8	7.20	3.00	16	9/16	6.65	0.38	4.76	24.44	645,100	312	806,400
MR-475-.../W	4-3/4	4	6	8	7.45	3.20	18	9/16	6.90	0.38	4.94	27.13	725,800	312	907,200
MR-500-.../W	5	4	6	8	7.70	3.30	20	9/16	7.15	0.38	4.94	28.83	806,400	312	1,008,000

* *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 your local Nord-Lock sales office 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.

MRA

Armored nut-style tensioner

Our MRA series adds mechanical protection to the special requirements of high-speed rotating machinery such as shaft couplings. Jackbolts recessed into the nut body are safe from damage in harsh or abrasive environments. Captively mounted within the tensioner body, these jackbolts can't work free and cause damage when installed.



Components
1 Nut body
2 Jackbolts
3 Hardened Washer

Metric	Size				Nut body		Jackbolt		Hardened washer		Height	Weight	Preload*	Torque*	Preload capacity*
	Thread	Available pitch			1		2		3		tot		nom	nom	max
Part number	D [mm]	P_1 [mm]	P_2	P_3	D_1 [mm]	H [mm]	n	SW [mm]	D_s [mm]	S [mm]	L [mm]	est [kg]	F [kN]	M [Nm]	[kN]
MRA-M20x.../W	M20	2.5	1.5	1	40	20	8	4	39	5	25	0.17	105	10	135
MRA-M22x.../W	M22	2.5	1.5	1	44	20	8	4	44	5	25	0.21	105	10	135
MRA-M24x.../W	M24	3	2	1.5	48	24	10	4	48	5	29	0.29	135	10	175
MRA-M27x.../W	M27	3	2	1.5	54	27	8	6	53	6	33	0.39	210	26	275
MRA-M30x.../W	M30	3.5	2	1.5	60	27	8	6	60	6	33	0.50	210	26	275
MRA-M33x.../W	M33	3.5	2	1.5	66	33	10	6	63	6	39	0.71	260	26	340
MRA-M36x.../W	M36	4	3	1.5	72	38	8	7	70	8	46	1.04	300	46	400
MRA-M39x.../W	M39	4	3	1.5	78	38	10	7	76	8	46	1.20	375	46	495
MRA-M42x.../W	M42	4.5	3	1.5	84	42	12	7	82	8	50	1.53	450	46	595
MRA-M45x.../W	M45	4.5	3	1.5	90	45	8	9	90	10	55	1.90	510	95	670
MRA-M48x.../W	M48	5	3	1.5	96	48	10	9	95	10	58	2.29	640	95	840
MRA-M52x.../W	M52	5	3	2	104	48	12	9	104	10	58	2.69	810	100	1095
MRA-M56x.../W	M56	5.5	4	2	112	58	12	9	112	10	68	3.75	810	100	1095
MRA-M60x.../W	M60	5.5	4	2	120	64	10	12	120	12	76	4.84	1140	225	1520
MRA-M64x.../W	M64	6	4	2	128	64	10	12	128	12	76	5.55	1140	225	1520
MRA-M68x.../W	M68	6	4	2	136	70	12	12	136	12	82	6.75	1370	225	1825
MRA-M72x.../W	M72	6	4	2	144	70	12	12	144	12	82	7.62	1370	225	1825
MRA-M76x.../W	M76	6	4	2	152	80	14	12	152	12	92	9.52	1600	225	2135
MRA-M80x.../W	M80	6	4	2	160	80	14	12	160	12	92	10.59	1600	225	2135
MRA-M90x.../W	M90	6	4	2	170	86	16	12	170	12	98	12.26	1830	225	2440
MRA-M100x.../W	M100	6	4	2	190	102	12	16	190	16	118	17.86	2310	470	3070
MRA-M110x.../W	M110	6	4	2	209	102	14	16	209	16	118	21.62	2690	470	3575
MRA-M120x.../W	M120	6	4	2	228	102	14	16	228	16	118	26.01	2690	470	3575
MRA-M125x.../W	M125	6	4	2	238	102	16	16	238	16	118	28.37	3070	470	4080

Imperial	Size				Nut body		Jackbolt		Hardened washer		Height	Weight	Pre-load*	Torque*	Preload capacity*
	Thread	Available TPI			1		2		3		tot		nom	nom	max
Part number	D [in]	P_1	P_2	P_3	D_1 [in]	H [in]	n	SW [mm]	D_s [in]	S [in]	L [in]	est [Lb]	F [LBf]	M [Lbft]	[LBf]
MRA-075-.../W	3/4	10	16	-	1.57	0.79	8	4	1.54	0.20	0.98	0.37	23,600	7	30,400
MRA-087-.../W	7/8	9	14	-	1.73	0.79	8	4	1.73	0.20	0.98	0.46	23,600	7	30,400
MRA-100-.../W	1	8	12	14	1.89	0.94	10	4	1.89	0.20	1.14	0.64	30,400	7	39,300
MRA-112-.../W	1-1/8	7	8	12	2.36	1.06	8	6	2.36	0.24	1.30	1.10	47,200	19	61,800
MRA-125-.../W	1-1/4	7	8	12	2.60	1.30	10	6	2.48	0.24	1.54	1.57	58,500	19	76,400
MRA-137-.../W	1-3/8	6	8	12	2.67	1.30	10	6	2.56	0.24	1.54	1.60	58,500	19	76,400
MRA-150-.../W	1-1/2	6	8	12	3.07	1.50	10	7	2.99	0.31	1.81	2.65	84,300	34	111,300
MRA-162-.../W	1-5/8	6	8	12	3.31	1.65	12	7	3.23	0.31	1.97	3.37	101,200	34	133,800
MRA-175-.../W	1-3/4	5	8	12	3.54	1.77	8	9	3.54	0.39	2.17	4.19	114,700	70	150,700
MRA-187-.../W	1-7/8	6	8	12	3.78	1.89	10	9	3.74	0.39	2.28	5.05	143,900	70	188,800
MRA-200-.../W	2	4.5	8	12	4.09	1.89	12	9	4.09	0.39	2.28	5.93	182,100	74	246,200
MRA-225-.../W	2-1/4	4.5	8	12	4.41	2.28	12	9	4.41	0.39	2.68	8.27	182,100	74	246,200
MRA-250-.../W	2-1/2	4	8	12	5.04	2.52	10	12	5.04	0.47	2.99	12.24	256,300	166	341,700
MRA-275-.../W	2-3/4	4	8	12	5.67	2.76	12	12	5.67	0.47	3.23	16.80	308,000	166	410,300
MRA-300-.../W	3	4	6	8	5.98	3.15	14	12	5.98	0.47	3.62	20.99	359,700	166	480,000
MRA-325-.../W	3-1/4	4	6	8	6.40	3.15	14	12	6.40	0.47	3.62	23.79	359,700	166	480,000
MRA-350-.../W	3-1/2	4	6	8	6.69	3.39	16	12	6.69	0.47	3.86	27.03	411,400	166	548,600
MRA-375-.../W	3-3/4	4	6	8	6.89	3.39	16	12	6.89	0.47	3.86	27.82	411,400	166	548,600
MRA-400-.../W	4	4	6	8	7.48	4.02	12	16	7.48	0.63	4.65	39.37	519,300	347	690,200
MRA-425-.../W	4-1/4	4	6	8	8.23	4.02	14	16	8.23	0.63	4.65	47.66	604,800	347	803,700
MRA-450-.../W	4-1/2	4	6	8	8.40	4.02	14	16	8.40	0.63	4.65	48.26	604,800	347	803,700
MRA-475-.../W	4-3/4	4	6	8	8.98	4.02	14	16	8.98	0.63	4.65	57.34	604,800	347	803,700
MRA-500-.../W	5	4	6	8	9.37	4.02	16	16	9.37	0.63	4.65	62.55	690,200	347	917,300

** 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 your local Nord-Lock sales office 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.

SUPERBOLT EXPANSION/ COUPLING BOLT SOLUTIONS

EXPANSION BOLTS: SIMPLER, LOWER-COST BOLT REPLACEMENT

Expansion bolts are able to offer tremendous radial expansion and joint clamping force in one bolting system. Expansion bolts can replace traditional interference or force-fit bolts. The key to this solution is the split expansion sleeve that mates with the customer's machined holes. The split sleeve requires less tolerance on mating parts than is traditionally required with interference fit, saving critical machining time.

EBC – Through bores

EBB – Blind holes

EzFit

EzFit expansion bolts are radially expanding, axially tensioned coupling bolts. Replacing traditional fitted bolts, which are difficult to install and dismantle, ease of installation and removal is guaranteed.

Due to the radial pre-load, the joint experiences an increase in rigidity, therefore eliminating micro-movements on the split flange. EzFit are fully mechanical elements, easy to maintain and are totally re-usable.

HyFit

HyFit – the hydraulically operated expansion bolt – has been designed to address safety concerns expressed by many current users of hydraulic coupling bolts. In addition to providing a solution for coupling maintenance where standard-type "fitted" bolts cause major outage delays, its application solves most large coupling bolt issues in a totally unique package.

It can deliver high-performance torque transmission for critical-load rotating shafts and couplings. It's an advanced solution for every coupling that requires truly fitted bolts which will improve efficiency and reduce maintenance costs.

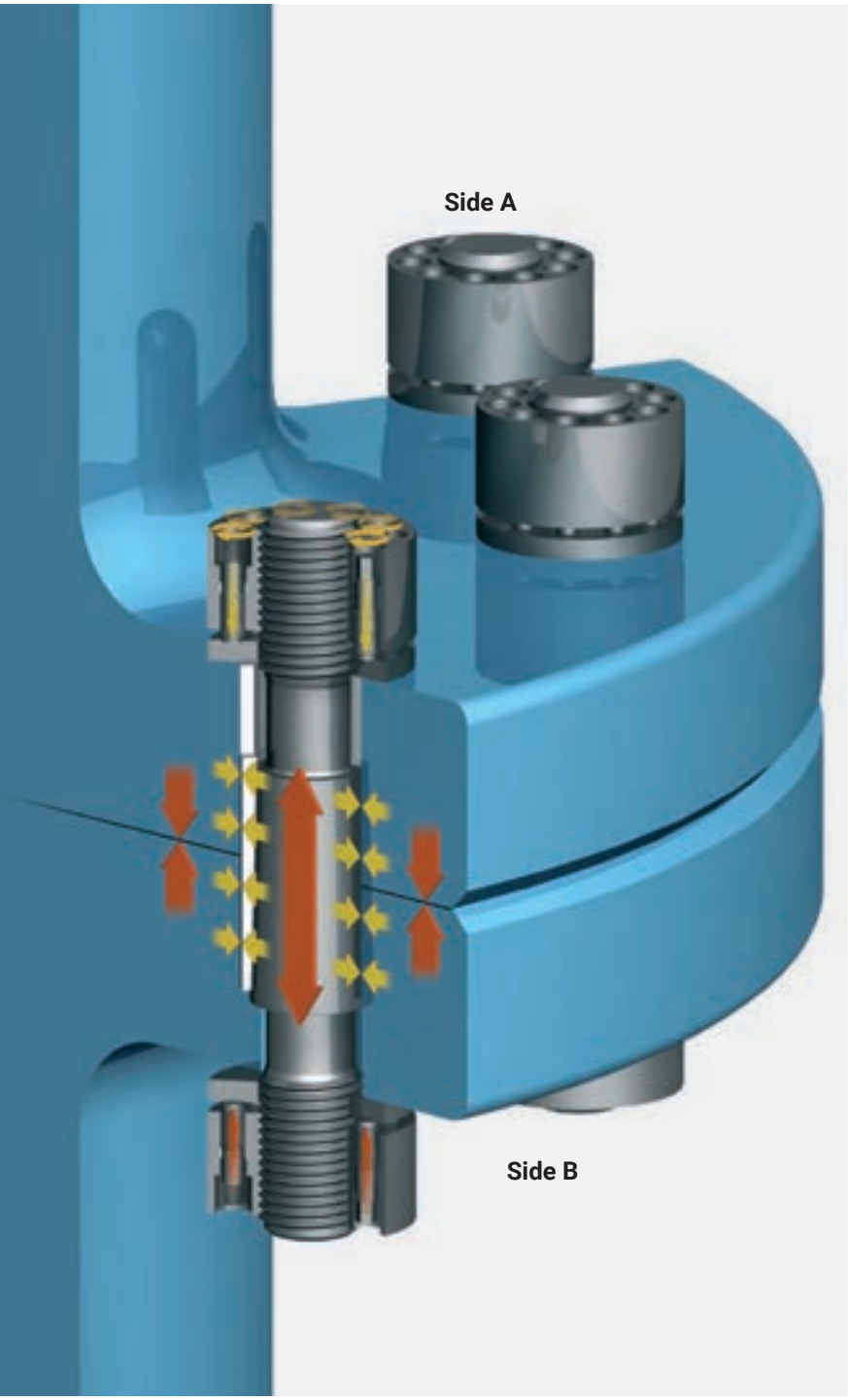
For HyFit specifications and information, please reach out to your local Nord-Lock Group representative.

SUPERBOLT EZFIT

MECHANICAL EXPANSION COUPLING BOLTS

SUPERBOLT EZFIT
HOW IT WORKS

MECHANICAL EXPANSION COUPLING BOLTS – THE INNOVATIVE SOLUTION

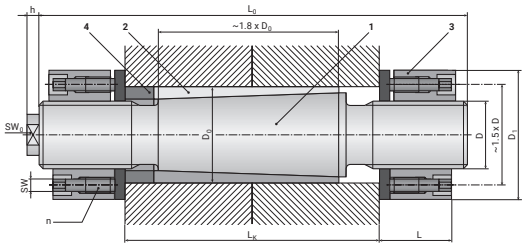


- Tensioner A pulls the tapered stud into the tapered sleeve, thus generating a radial force.
- The spacer centers the split-tapered sleeve relative to the split line.
- The split-tapered sleeve creates a radial pre-load and
transfers the external torque.
- Tensioner B pulls the coupling flanges together, thus
generating an axial clamping force.
- The tapered stud transfers the forces required for the radial and axial frictional contacts. At the same time, it offers an additional form closure when over-loaded.

EBC

Expansion bolts for through bores

Components
1 Tapered Stud
2 Tapered Sleeve
3 Tensioner
4 Spacer

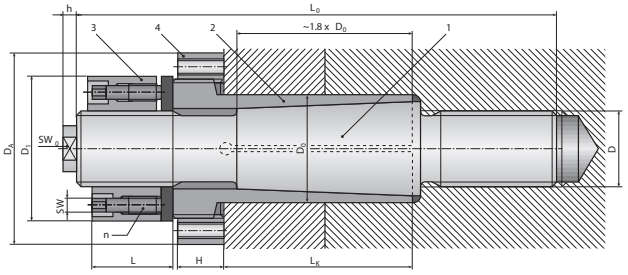


Part number	Expansion Bolt					Tensioner			Jackbolt		Weight	Torque*	Preload*	Circumferential Load at 320 MPa**
EBC-ø D_0 x L_K	D_0 [mm]	L_K min. [mm]	L_0 min. [mm]	h [mm]	SW_0 [mm]	D [mm]	D_1 [mm]	L [mm]	n	SW [mm]	min. [kg]	M nom. [Nm]	F_v nom. [kN]	F_u [kN]
EBC-ø …x…	28 … 30	73	136	6	11	M20x2.5	40	25	8	4	0.8	10	105	200 … 230
EBC-ø …x…	31 … 33	78	141	6	11	M22x2.5	44	25	8	4	1.0	10	105	250 … 280
EBC-ø …x…	34 … 36	88	161	6	11	M24x3	48	29	10	4	1.4	10	135	300 … 335
EBC-ø …x…	37 … 41	94	175	6	13	M27x3	54	33	8	6	1.9	26	210	355 … 435
EBC-ø …x…	42 … 45	107	191	6	13	M30x3.5	60	33	8	6	2.5	26	210	455 … 525
EBC-ø …x…	46 … 49	114	210	9	22	M33x3.5	66	39	10	6	3.4	26	260	545 … 620
EBC-ø …x…	50 … 53	126	238	9	22	M36x4	72	46	8	7	4.6	46	300	645 … 725
EBC-ø …x…	54 … 58	133	245	10	24	M39x4	78	46	10	7	5.7	46	375	755 … 870
EBC-ø …x…	59 … 63	147	270	10	24	M42x4.5	84	50	12	7	7.3	46	450	900 … 1020
EBC-ø …x…	64 … 71	160	301	11	27	M48x5	96	58	10	9	10.3	95	640	1060 … 1300
EBC-ø …x…	72 … 76	175	316	12	30	M52x5	104	58	12	9	12.8	100	810	1340 … 1490
EBC-ø …x…	77 … 82	188	352	13	32	M56x5.5	112	68	12	9	17.0	100	810	1530 … 1740
EBC-ø …x…	83 … 89	199	379	14	36	M60x5.5	120	76	10	12	21.2	225	1140	1780 … 2050
EBC-ø …x…	90 … 96	216	398	14	36	M64x6	128	76	10	12	25.3	225	1140	2100 … 2380
EBC-ø …x…	97 … 104	229	423	15	41	M72x6	144	82	12	12	33.3	225	1370	2430 … 2800
EBC-ø …x…	105 … 115	243	457	15	41	M80x6	160	92	14	12	44.5	225	1600	2850 … 3420
EBC-ø …x…	116 … 130	263	489	15	41	M90x6	170	98	16	12	55.5	225	1830	3480 … 4380
EBC-ø …x…	131 … 143	290	556	15	41	M100x6	190	118	12	16	80.5	470	2310	4440 … 5300
EBC-ø …x…	144 … 154	313	579	15	41	M110x6	209	118	14	16	100.5	470	2690	5370 … 6140
EBC-ø …x…	155 … 165	333	599	15	41	M120x6	228	118	14	16	121.5	470	2690	6220 … 7050

EBB

Expansion bolts for blind holes

Components
1 Tapered Stud
2 Tapered Sleeve
3 Tensioner
4 Stop Nut



Part number	Expansion Bolt						Tensioner		Jackbolt		Stop Nut		Weight	Torque*	Preload*	Circumferential Load at 320 MPa**
EBB-ø D_0 x L_K	D_0 [mm]	D	L_K min. [mm]	L_0 min. [mm]	h [mm]	SW_0 [mm]	D_1 [mm]	L [mm]	n	SW [mm]	D_A [mm]	H [mm]	min. [kg]	M nom. [Nm]	F_v nom. [kN]	F_u [kN]
EBB-ø …x…	28 … 30	M20x2.5	58	149	6	11	40	25	8	4	55	18	0.9	10	105	225 … 240
EBB-ø …x…	31 … 33	M22x2.5	64	155	6	11	44	25	8	4	58	18	1.1	10	105	280 … 295
EBB-ø …x…	34 … 36	M24x3	70	171	6	11	48	29	10	4	63	18	1.4	10	135	335 … 355
EBB-ø …x…	37 … 41	M27x3	78	197	6	13	54	33	8	6	72	18	2.0	26	210	415 … 460
EBB-ø …x…	42 … 45	M30x3.5	84	209	6	13	60	33	8	6	78	24	2.7	26	210	510 … 545
EBB-ø …x…	46 … 49	M33x3.5	92	230	9	22	66	39	10	6	84	24	3.6	26	260	620 … 660
EBB-ø …x…	50 … 53	M36x4	98	256	9	22	72	46	8	7	96	30	5.0	46	300	720 … 765
EBB-ø …x…	54 … 58	M39x4	108	278	10	24	78	46	10	7	102	30	6.1	46	375	865 … 930
EBB-ø …x…	59 … 63	M42x4.5	118	291	10	24	84	50	12	7	108	30	7.5	46	450	1040 … 1110
EBB-ø …x…	64 … 71	M48x5	128	337	11	27	96	58	10	9	128	36	11.2	95	640	1230 … 1360
EBB-ø …x…	72 … 76	M52x5	138	342	12	30	104	58	12	9	134	36	13.2	100	810	1500 … 1580
EBB-ø …x…	77 … 82	M56x5.5	148	377	13	32	112	68	12	9	140	36	16.5	100	810	1720 … 1840
EBB-ø …x…	83 … 89	M60x5.5	158	390	14	36	120	76	10	12	155	36	20.4	225	1140	1990 … 2140
EBB-ø …x…	90 … 96	M64x6	178	451	14	36	128	76	10	12	164	48	26.8	225	1140	2450 … 2610
EBB-ø …x…	97 … 104	M72x6	188	456	15	41	144	82	12	12	176	48	33.3	225	1370	2790 … 3000
EBB-ø …x…	105 … 115	M80x6	198	508	15	41	160	92	14	12	200	48	44.1	225	1600	3190 … 3500
EBB-ø …x…	116 … 130	M90x6	218	535	15	41	170	98	16	12	220	48	55.5	225	1830	3900 … 4370
EBB-ø …x…	131 … 143	M100x6	248	607	15	41	190	118	12	16	246	60	81.0	470	2310	5030 … 5490
EBB-ø …x…	144 … 154	M110x6	268	644	15	41	209	118	14	16	265	60	102.0	470	2690	5990 … 6410
EBB-ø …x…	155 … 165	M120x6	288	709	15	41	228	118	14	16	292	72	132.0	470	2690	6940 … 7390

** All preload and torque values are provided for general reference.*
Contact your local Nord-Lock sales office 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.
- Dimensions listed are representative.
*** Indicative Value for C35E – EN10083*

CUSTOM SOLUTIONS

UNIQUE DESIGNS TO YOUR SPECIFICATION

When off-the-shelf parts just won't do the job, you can rely on the Superbolt Technical Center to design and manufacture exactly what you need. We respond fast to keep your downtime to a minimum and get your equipment back up and running safely, efficiently, and cost-effectively.

From our standard range, our pre-engineered range or customized solutions, we have the know-how to provide the right design for your application. The following are just a few examples of what we can do.

OFFSHORE/ SUB-SEA

Superbolt offers a unique combination of features built into this specialized multi-jackbolt tensioner for offshore bolting applications.

It incorporates three key features:

1. The washer is captive to the nut body to prevent loss of the washer
2. Corrosion protection to address the harsh conditions
3. Integral flats on the nut for turning assistance on difficult stud threads

TAMPER-PROOF TENSIONERS

Superbolt offers a tamper-resistant jackbolt design. The tamper-resistant jackbolts are a product improvement for Superbolt's MJT bolting system and are intended for use in security-sensitive applications. Tamper-resistant jackbolts are designed to protect MJTs from unwanted tightening and loosening. They utilize an abnormally shaped head set in a counter-bore hole, which requires a special tool attachment to torque or un-torque the jackbolts.

EXTERNAL THREADED TENSIONERS (ETT)

An ETT is an externally threaded tensioner that provides a pushing force for loading or sealing a mating piece (compression member). Unlike conventional nut-style tensioners with an internal threaded portion and machined-surface outer diameter, an ETT has its threads machined onto the outer diameter. The ETT can be solid or hollow (i.e. bored center hole but unthreaded). The ETTs use multi-jackbolt technology to generate compression loads for assembly components in machinery. They are simply turned into position.

A large hex or some other provided turning tool is used to facilitate nut turn-down. The jackbolts, which are tightened to a prescribed torque with low-energy handheld tools, push directly against the loading piece. Strong compression or sealing forces are generated.

HIGH- AND LOW-TEMPERATURE TENSIONERS

Extreme temperatures increase the complexity of bolting. Superbolt products are available in solutions to meet temperature ranges of -270 °C (-450 °F) to 600 °C (1150 °F). Due to the complexities of low- and high-temperature bolting, Superbolt offers a variety of solutions based on the temperatures and code requirements. Such cases are often found in power or petrochemical plants where extremely low temperatures (liquid hydrogen, fusion reactors, etc.) and extremely high temperatures (combustion chambers, turbines, steel mills, furnace equipment) exist.

CUSTOMIZED STUDS

Although the majority of our business revolves around top-quality Superbolt tensioners, we also offer one-source shopping for your entire joint hardware. With our comprehensive threading know-how and extensive inventory of gauging equipment, Superbolt can offer customized studs to meet and deliver a complete bolted package. Why not choose a Superbolt nut-style tensioner, stud and flexnut kit?

Sizes from M16 to over M300 are possible and in a wide variety of materials. We have rolled thread capability and can handle many thread configurations and standards (ISO, DIN, ANSI, Whitworth, Acme, Trapezoidal, and Buttress).

MATERIAL REQUIREMENTS, ENVIRONMENTAL & CORROSION PROTECTION

No matter the environment, Superbolt has plenty of product-enhancing options to keep things protected. From stainless steels to various coatings, we can meet your requirements in humid environments, offshore and salt water splash zones or chemical exposure. In addition to corrosion protection, coatings can be beneficial for various purposes, e.g., color-coding, durability and conductivity enhancement, as well as friction control.

Material Requirements

Stainless materials adapted for the specific requirements

- Martensitic
- Austenitic
- Duplex
- Precipitation hardened
- Inconels & Monels

Environmental & Corrosion Protection

Coatings and platings including

- Electroless nickel
- Xylan
- Zinc
- Black oxide
- Zinc flake

TECHNICAL CENTERS

Technical centers and seminars

You are welcome to visit our offices and technical centers for a tour, or to attend seminars about bolted joints. For more information contact your local Nord-Lock Group representative.

On-site training

We share our knowledge and experience of best bolting practices with your team.

SMART/LOAD-SENSING TECHNOLOGY

ANYTIME, ANYWHERE: MONITOR PRELOAD THE SMART WAY

As the global market leader of bolting solutions, Nord-Lock Group is dedicated to improving our already state-of-the-art products – including the integration of smart technologies. The Superbolt Load-Sensing Tensioner (LST) and the Load Sensing Flexnut (LSF) are among these, measuring the preload with an accuracy that is better than ±5%! The LST and the LSF feature a wealth of benefits without the need for any modification of the bolted joint.

LST

- Available in either MT or CY version
- Standard sizes ranging from M36 - M100*
- Sensors incorporated in the nut body
- Sensors covered by ring in Delrin® acetal homopolymer material
- IP67-classed "push-pull" connector in the nut body

* Other sizes and MJT types considered on request

LSF

- Available in either SX8 or SX12 version*
- Standard sizes ranging from M36 - M100*
- Sensors incorporated in the nut body
- Sensors covered by ring in Delrin® acetal homopolymer material
- IP67-classed "push-pull" connector in the nut body

*Other sizes and types considered on request

DIFFERENT LST/LSF OFFERINGS

Features/Solution	Check *via handheld display*	Local monitoring *via tablet or laptop*	Wired remote monitoring *via Portal or API*
Reading	✓	✓	✓
Saving (log)	–	✓	✓
Wired connection (from LST/LSF)	✓	–	✓
Wireless connection (from LST/LSF)	–	✓	–
Local (on-site) monitoring	✓	✓	✓
Remote (off-site) monitoring	–	–	✓

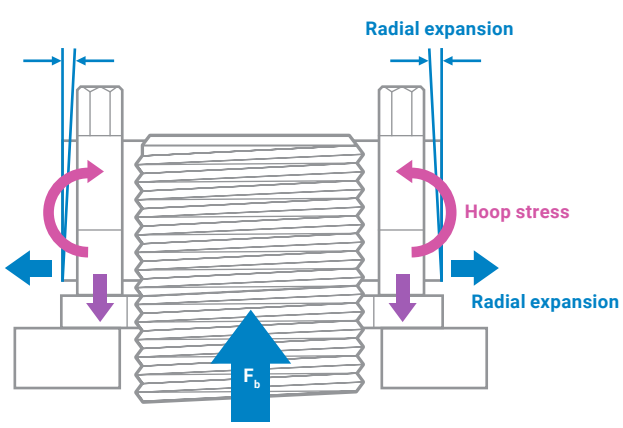
APPLICATION EXAMPLE

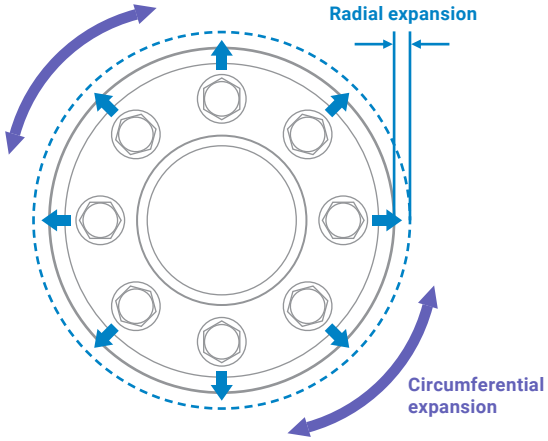
CRITICAL JOINTS ON WIND TURBINES

As with all critical joints, wind turbine connections require extremely accurate and regular preload checks. This is true both during installation — in order to verify that the achieved preload matches the design requirements — and throughout the turbine's service life.

Prior to our Load-Sensing Solutions, these preload checks involved considerable effort, as well as some sort of modification to the bolted joint. But now with the Superbolt LST and LSF, preload can be monitored regularly, remotely, and without joint modification!

LOAD-SENSING TENSIONER AND FLEXNUT SOLUTION





Under the effect of a bolt axial load, the Superbolt MJT and the Flexnut nut body undergo a hoop stress thereby causing **radial expansion** (flexing in at top and out at bottom).

Measuring the **expansion** with respect to the nut body circumference, however, enables a wider and more accurate response. By controlling the relationship between circumferential expansion and the axial preload, **it becomes possible to monitor preload from this unique feature**.

A TRUE INNOVATION IN THE FIELD OF PRELOAD MONITORING

For more information, visit
www.nord-lock.com/LST

- Remote preload monitoring and a live reading of data
- Facilitates more uptime during service
- Precise and repeatable preload reading
- Eliminates the need for modifications of the bolt
- Seamless to retrofit/upgrade — simply replace the original nut with LST (active side) for easy effort tensioning or the reaction nut with LSF for use with any tightening method
- Robust and reliable, IP67 classed
- Accurate preload verification without adjustment of clamped parts
- No alteration needed of the assembly (including stud or joint design or geometry)
- Removes risk of injuries for operators in hazardous areas
- Eliminates high costs on labor, additional measuring devices, and periodic verification by maintenance

MJT TOOLS WORK SMARTER. NOT HARDER.

SUPERBOLT TOOL

Speed up maintenance with the Superbolt Tool, designed to tighten all jackbolts on an MJT simultaneously. This tool significantly reduces installation and removal times, ensuring fast and precise torque application with even jackbolt load distribution. Its interchangeable cassette system accommodates various tensioner sizes or custom applications.

Key Advantages

- Faster tightening minimizes downtime.
- Optimized maintenance boosts revenue.
- Lightweight, modular, and safe to handle.

Applications

Perfect for operations with frequent maintenance or large quantities of MJTs.

SINGLE JACKBOLT TOOL

Effortlessly tighten and untighten jackbolts with this cordless, portable tool—ideal for MJTs starting at M64 (2-1/2") or larger. It bridges the gap between manual methods and the Superbolt Tool, offering precision, safety, and convenience.

Key Advantages

- Effortless, cordless operation.
- Accurate torque application.
- Enhanced safety with reduced manual effort.

Note: The Single Jackbolt Tool is designed for MJT sizes starting at M64 (or 2-1/2"), as it is suited for jackbolts that are sized M16 (or 5/8") or larger in diameter. It becomes especially advantageous for MJT sizes over M100 (or 4"), which contain jackbolts that are sized M20 (or 3/4").

For more information, please contact your local Nord-Lock Group representative.

SINGLE JACKBOLT TOOL SPECIFICATIONS

H = HEIGHT
W = WIDTH
L = LENGTH
D = DIAMETER

Quick Specs*

Torque Range	25-700 ft.-lbs. / 34 – 949 Nm
Weight (with battery)	7.3 – 8.22 lbs. / 3.32 – 3.74 kg
Square Drive	1/2 – 3/4 in.
RPM	4.1 – 11.6

**Depending on model – see full specifications*

MODEL NUMBER	H	W	L	D	SQUARE DRIVE	WEIGHT**	TORQUE		RPM
Imperial		in.			in.	lbs.	ft-lbs (min)	ft-lbs (max)	
.25	10.83	3.47	10.16	2.35	1/2	7.30	25	250	11.6
.7	10.83	3.47	11.13	2.45	3/4	8.22	70	700	4.1
Metric		mm.			in.	kg	Nm (min)	Nm (max)	
.25	275	88	258	60	1/2	3.32	34	339	11.6
.7	275	88	283	62	3/4	3.74	95	949	4.1

***with battery*

BUILD CONNECTIONS THAT LAST

NORD-LOCK GROUP

Nord-Lock Group is a global leader in bolting and engineering solutions. From deep subsea to outer space, our promise to build connections that last goes beyond manufacturing the best bolting technologies. Our people are experts in the lifecycle of secure bolted joints, innovators at the forefront of digital solutions and committed to doing business with respect for people and planet.

Our technology brands are all the original inventors of their respective technologies: Nord-Lock® wedge-locking washers, Superbolt® mechanical tensioners, Boltight® hydraulic tensioners and Expander® System pivot pins.

Nord-Lock Group is owned by the Nasdaq OMX Stockholm quoted company Investment AB Latour.

NORD-LOCK®

Creator of the original wedge-locking washer technology and global leader in safe bolted connections.

SUPERBOLT®

Original inventor of Multi-Jackbolt Tensioning technology, a revolutionary mechanical solution engineered to replace unsafe bolting methods with the use of simple hand tools.

BOLTIGHT®

Pioneer in innovative bolt tensioning with industry-leading hydraulic solutions, including the fastest auto-return tensioner on the market.

Expander®

Leader in pivot pin technology, on a mission to end lug wear on heavy-duty machines everywhere.

65+
COUNTRIES

32+
OFFICES WORLDWIDE

700+
EMPLOYEES

6
PRODUCTION PLANTS

10
TECHNICAL CENTERS

POWER IN EXPERIENCE

Decades of experience have gotten us to the top of the tensioning industry. Our experts bring practicality and a can-do mentality to conquer real-world bolting challenges, from outer space to subsea. We work with you on identifying the best solution for your application. Count on Superbolt's expertise in every step of your journey, including after-market support.

- Global distribution network combined with local service and support
- Dedicated tech centers equipped with advanced tools and resources to support finding the most effective solutions
- Ongoing investment in growing our technical support network for faster turnaround and elevated support
- Fully-equipped labs enable rigorous testing, validation, and analysis to ensure our products perform under diverse conditions
- Receive after-market application support and service from our global network of sales teams
- Our skilled engineers can perform a thorough investigation of your bolted joints, including real-life tests or validation
- Commitment to innovating and improving our product offering to meet industry demands

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