



## SINGLE STAGE AND MULTI STAGE TENSIONERS

The single stage and multi stage tensioners offer a high-load, low profile solution for space-restricted applications demanding high and accurate preloads. Developed initially for the Wind Industry where such connections are commonplace, additional convenience features such as a spring loaded gear drive for nut rotation, automatic piston retraction and positive stop facility ensure that the tensioners are the ideal choice for any application demanding a powerful, portable and user-friendly bolt tensioning tool.

These tensioners also feature a high-cycle fatigue, aerospace-grade reaction component for maximum tool life. The tools are designed to fail safely (posing no threat to personnel or plant when the maximum tool life is achieved). Available in single stage or multi stage configurations, the tools also feature a durable carrying handle, configurable quick connect options and digital cycle counters where specified.

The tools generate ISO and ASTM proof load standards for 10.9 bolts, in accordance with the requirements for wind turbine, structural and other high load, high integrity bolting applications.

### SPECIFICATIONS

- Single or multi stage configurations available
- Lightweight, optimised hi-load designs
- Generates 95% yield stress on 10.9 bolts
- Meets 10.9 proof load requirement ASTM A490M and EN ISO 898-1:1999
- High-cycle fatigue life
- Spring loaded gear driven nut rotation
- Safe failure design
- Positive stop
- Fast piston retraction mechanism
- Optional cycle counter
- Carrying handle
- Configurable hydraulic connections including swivel fitting
- Durable, user-friendly design
- Special/bespoke designs available
- Complementary range of pumps, flexible hoses and fittings

**SINGLE STAGE**

- Ideal for low overhead clearance applications.
- Compact, single stage design for minimal installation height.

BOLT DIAMETER		MAXIMUM LOAD		TENSIONER DIAMETER		TENSIONER HEIGHT		TENSIONER STROKE	
IMPERIAL	METRIC	lbf	kN	inch	mm	inch	mm	inch	mm
1	M24	65,192	290	3.35	85	3.86	98	0.31	8
1-1/8	M27	84,300	375	3.58	91	4.09	104	0.31	8
1-1/8	M30	103,408	460	3.86	98	4.21	107	0.31	8
1-1/4	M33	128,136	570	4.29	109	4.53	115	0.31	8
1-3/8	M36	150,616	670	4.49	114	4.65	118	0.31	8
1-1/2	M39	179,840	800	5.04	128	4.88	124	0.39	10
1-5/8	M42	206,816	920	5.20	132	5.20	132	0.39	10
1-3/4	M45	242,784	1080	5.59	142	5.28	134	0.39	10
1-7/8	M48	274,256	1220	5.94	151	5.43	138	0.39	10
2	M52	325,960	1450	6.38	162	5.51	140	0.39	10
2-1/4	M56	376,540	1675	6.73	171	5.91	150	0.39	10
2-1/2	M64	494,560	2200	7.17	182	6.38	162	0.47	12

**MULTI STAGE**

- Ideal for low radial clearance applications.
- Multi stage design for easy installation into narrow apertures.

BOLT DIAMETER		MAXIMUM LOAD		TENSIONER DIAMETER		TENSIONER HEIGHT		TENSIONER STROKE	
IMPERIAL	METRIC	lbf	kN	inch	mm	inch	mm	inch	mm
1	M24	64,742	288	2.36	60	7.40	185	0.28	7
1-1/8	M27	84,300	375	2.60	66	7.62	193.5	0.28	7
1-1/8	M30	103,858	462	2.83	72	7.91	201	0.28	7
1-1/4	M33	128,586	572	3.07	78	8.50	216	0.31	8
1-3/8	M36	150,616	670	3.25	82.5	9.04	229.5	0.39	10
1-1/2	M39	180,290	802	3.62	92	10.31	263	0.39	10
1-5/8	M42	206,928	920.5	3.86	98	10.31	262	0.39	10
1-3/4	M45	243,234	1082	4.13	105	10.91	281.5	0.39	10
1-7/8	M48	274,706	1222	4.37	111	11.56	293.5	0.39	10
2	M52	326,410	1452	4.72	120	12.80	327	0.39	10
2-1/4	M56	376,540	1675	5.04	128	12.99	330	0.39	10
2-1/2	M64	494,560	2244	5.83	146	14.23	376	0.47	12

- Alternative specifications also available (designs up to 2500 bar and M160 previously supplied)
- Contact Boltight if your size or application requirement is not listed above

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