

# TYPHOON+ MULTI-STAGE TENSIONERS

IMPROVES EASE OF USE



Latest technology  
and innovation



Tighten to accurate  
preload



Significant time and  
labour savings



Improved  
durability

# TYPHOON+

Boltight Typhoon+ tensioners have been developed to meet the technical and environmental demands of the wind energy market where high bolt load and restricted access applications are common challenges.

The robust design ensures reliability during the frequent and repeated use necessary on wind turbine projects on and offshore. For low radial clearance applications.



## EASE OF USE

Improves the ease of use and removes the need for any manual input. Using a fast automatic spring return design with a single reaction allowing full return to zero stroke piston retraction.

## IMPROVED SEAL TECHNOLOGY

Latest design eases seal changeouts and enhances general performance throughout high cycle usage.

## SAFETY

Over-stroke prevention removes the possibility of over-stroking the pistons. Supplied with an over-stroke indicator. Internal fail-safe technology to keep the tensioner on the bolt in the event of puller bar failure.

## HIGH LIFE CYCLE

High grade material puller bar to maximize cycle life and allowing long service intervals, you are not restricted by a fixed number of cycles.

## LOW MAINTENANCE

Improved spring-loaded auto engagement gear driven nut rotating socket with a geared drive needs low maintenance making the Typhoon+ tensioner user friendly.

## DURABILITY

Typhoon+ has a unique surface finish as standard which provides long lasting protection in harsh and hardworking environments.

## OPTIONS



Port Guard Handle

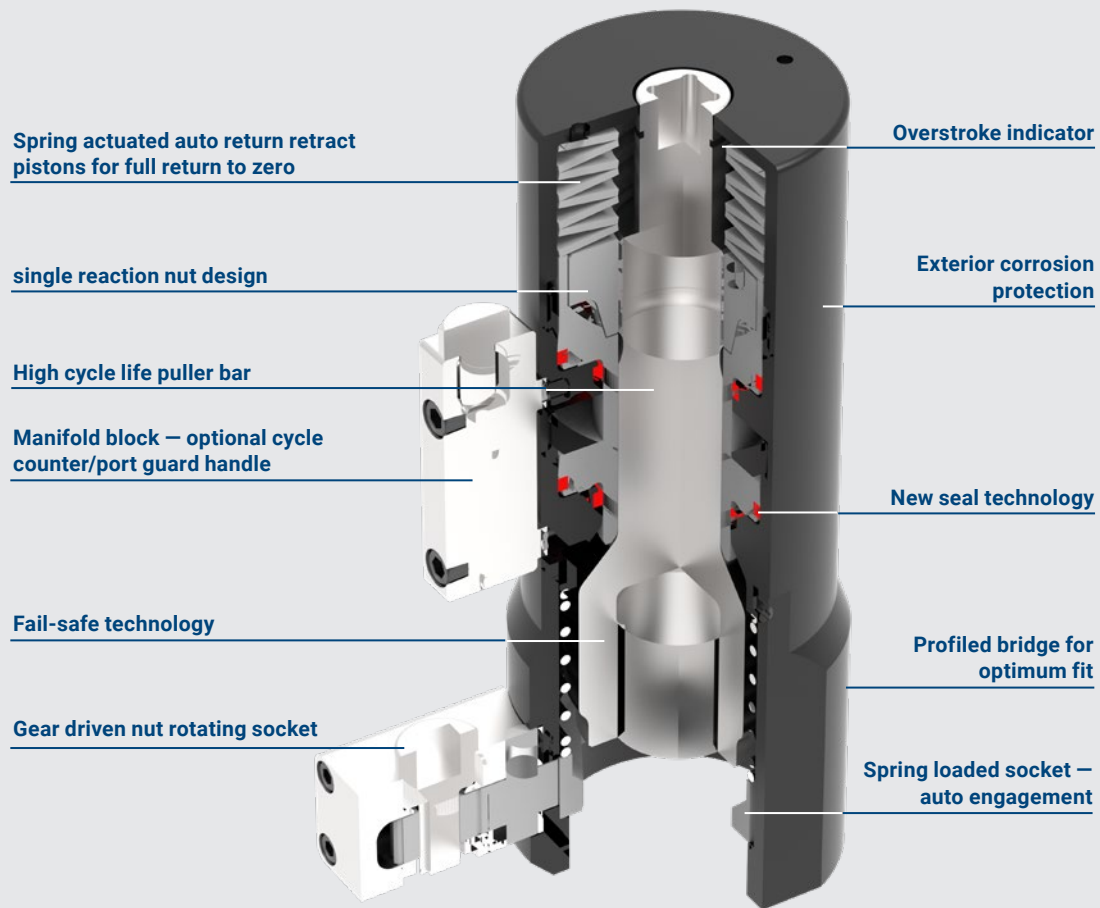


Nipple/Coupling Configurations



Cycle Counter

Standard Typhoon+ tensioners held in stock to suit the technical requirements for leading OEM turbines including:



## SPECIFICATIONS

<b>Tensioner Design</b>	Multi-stage tensioner with automated spring return piston, spring loaded auto engagement gear driven nut rotating socket.
<b>Maximum Operating Pressure</b>	1350bar (19580psi)
<b>Stroke</b>	7mm-12mm (0.28" - 0.47")
<b>Hydraulic Oil Type</b>	ISO 32 or equivalent
<b>Standards</b>	EN ISO 898-1:1999 and ASTM A490M proof load standards for 10.9 bolts, in accordance with the requirements for wind turbine, structural and other high load, high integrity bolting applications.
<b>Configuration</b>	Typhoon+ is supplied with a single male quick connection on a swivel.

# TECHNICAL AND DIMENSIONAL TABLE

Bolt diameter		Typhoon+	Max. load		Tool outside diameter		Tool height		Stroke		Approx. tool weight	
mm	inch	Part Number	kN	Lbf	mm	inch	mm	inch	mm	inch	kg	lbs
M24	1	TTMP-M024-21-00	288	64,742	60	2.36	181.5	7.15	7	0.28	5	11
M27	1 <sup>1</sup> / <sub>8</sub>	TTMP-M027-21-00	375	84,300	66	2.6	193.5	7.62	7	0.28	5.4	12
M30	1 <sup>1</sup> / <sub>8</sub>	TTMP-M030-21-00	465	104,600	72	2.83	207	8.15	8	0.31	6.5	14.3
M33	1 <sup>1</sup> / <sub>4</sub>	TTMP-M033-21-00	574	129,000	78	3.07	221	8.7	8	0.31	7	15
M36	1 <sup>3</sup> / <sub>8</sub>	TTMP-M036-21-00	670	150,621	82.5	3.25	232	9.13	10	0.39	9	19.8
M39	1 <sup>1</sup> / <sub>2</sub>	TTMP-M039-21-00	804	180,746	92	3.62	277	10.9	10	0.39	13	28.66
M42	1 <sup>5</sup> / <sub>8</sub>	TTMP-M042-21-00	925	207,948	98	3.86	264	10.39	10	0.39	13	28.66
M45	1 <sup>3</sup> / <sub>4</sub>	TTMP-M045-21-00	1082	243,234	105	4.13	281.5	10.91	10	0.39	15	33
M48	1 <sup>7</sup> / <sub>8</sub>	TTMP-M048-21-00	1224	275,166	111	4.37	293	11.53	10	0.39	18	40
M52	2	TTMP-M052-21-00	1452	326,410	120	4.72	327	12.8	10	0.39	24	53
M56	2 <sup>1</sup> / <sub>4</sub>	TTMP-M056-21-00	1675	376,540	128	5.04	330	12.99	10	0.39	26	57
M60	N/A	TTMP-M060-21-00	2011	452,090	137	5.39	349.5	13.76	12	0.47	34	75
M64	2 <sup>1</sup> / <sub>2</sub>	TTMP-M064-21-00	2244	494,560	126	5.83	376	14.23	12	0.47	40	88

Thread pitch for metric bolt sizes metric coarse.

Thread pitch for imperial bolt sizes UNC up to 1 inch and UN8 for 1-1/8 inch upwards.

- The table is for reference only – see general arrangement drawing for information, such as size, bridge diameter and profiling.
- To add cycle counter add CC to the part number and for port guard handle add HND to the part number eg. TTMP-M024-21-00-CC-HND – this would include both options. TTMP-M024-21-00-CC – this would only add cycle counter.
- Designs are preliminary and subject to change.
- Imperial sizes are non-standard and are manufactured to order.
- Non standard versions are available for OEM specific applications.

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