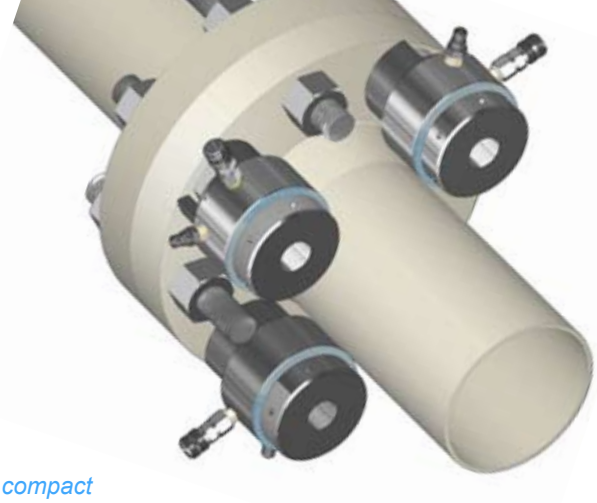


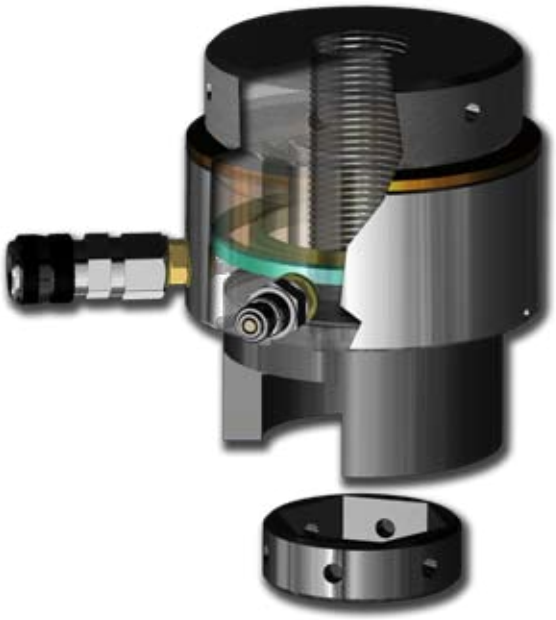
Bolt Tensioning Tools

Series: CTST Conventional Range

The CTST range of bolt tensioning tools are some of the most compact and reliable tensioners available today. Below are special features that are incorporated in their design.

Seal Reliability

Seal reliability is a fundamental requirement. All tensioners have polyurethane self-energising lip seals requiring no adjustment. The seals 'snap fit' into the piston housing, remain firm and will not dislodge to cause failure after prolonged use. As the seals are machined and not moulded, size is not restricted, allowing no compromise in tensioner design. The TorcUP seal exhibits a much lower coefficient of friction than nitrile seals used in many other hydraulic bolt tensioners. This benefit, in conjunction with a special anti-extrusion device, allows the tool piston/ram to be returned to its closed position with minimal effort.



Piston 'over stroke' for safety

When using hydraulic bolt tensioners, it is important that the maximum movement of the piston/ram is not exceeded. In the unfortunate situation when stroke is exceeded, a simple failure mechanism inside most TorcUP tensioners directs any escaping fluid away from the operator and deposits it inside the device. A red warning indicator line becomes visible as the maximum piston extension position is reached.

Link Hose System

One of the many advantages of hydraulic bolt tensioning, is the ability to link a number of tensioners together and load simultaneously all the bolts on a joint. Although this gives excellent load distribution, an enormous variety of flexible hose assemblies are necessary - which confuse the user. To overcome this problem TorcUP offer a single assembly called a 'Link hose'. This length of flexible high pressure hose, fitted with male and female quick connect couplings at opposite ends is fast and an economical method of connecting multiple tensioners together - the number of hoses required is the same as the number of tools to be linked - a simple formula to remember.

- Power Generation
- Nuclear Power Industry
- Petro Chemical
- Steel Industry
- OEM's including:-
  - *Press manufacturers*
  - *Heat Exchanger manufacturers*
  - *Crane manufacturers*
  - *Diesel Engine*
  - *Steam Turbine*
  - *Offshore Oil*

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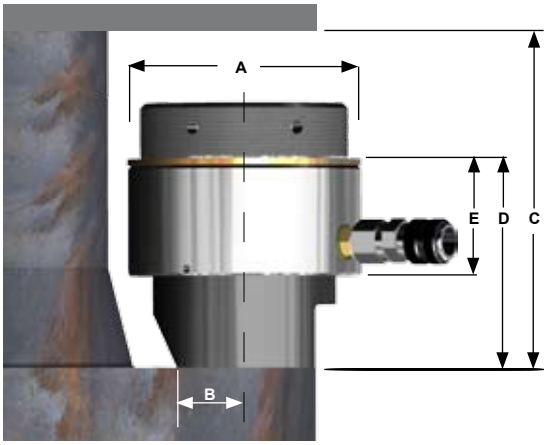
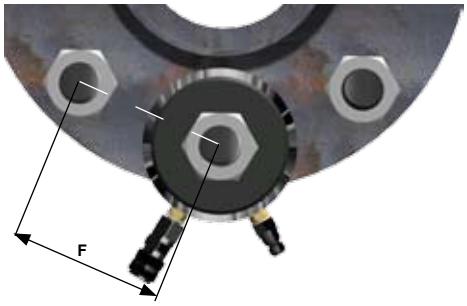




technical specification.

Tool	Part No	Thread		Part No	Bolt Load		Ram Area		Stroke	Weight	A	B	C	D	E	F
No	Imperial	Inch	mm	Metric	Kn	Ton	In²	mm²	mm	kg	mm					
1			16	1CTST:0016	228	23	2.35	1516	10	3.5	73	24	110	74	45	49
	1CTST:-0750	0.75	18	1CTST:0018	228	23	2.35	1516	10	3.5	73	24	110	74	45	49
			20	1CTST:0020	228	23	2.35	1516	10	3.5	73	27	110	74	45	51
	1CTST:0875	0.875	22	1CTST:0022	228	23	2.35	1516	10	3	73	27	115	74	45	51
	1CTST:1000	1	24	1CTST:0024	228	23	2.35	1516	10	3	73	30	125	78	45	60
	1CTST:1125	1.125	27	1CTST:0027	228	23	2.35	1516	10	3	73	32	130	78	45	60
2			30	2CTST:0030	443	45	4.58	2955	15	5	102	30	150	90	54	72
	2CTST:1250	1.25	33	2CTST:0033	443	45	4.58	2955	15	5	102	34	150	90	54	74
	2CTST:1375	1.375	36	2CTST:0036	443	45	4.58	2955	15	5	102	36	160	95	54	76
	2CTST:1500	1.5	39	2CTST:0039	443	45	4.58	2955	15	5	102	38	170	100	54	80
3	3CTST:1500	1.5	39	3CTST:0039	811	81	8.38	5406	15	9	132	42	175	95	56	88
	3CTST:1625	1.625	42	3CTST:0042	811	81	8.38	5406	15	9	132	42	185	100	56	90
	3CTST:1750	1.75	45	3CTST:0045	811	81	8.38	5406	15	9	132	44	195	103	56	94
	3CTST:1875	1.875	48	3CTST:0048	811	81	8.38	5406	15	9	132	46	205	107	56	100
	3CTST:2000	2	52	3CTST:0052	811	81	8.38	5406	15	9	132	48	210	112	56	104
4	4CTST:1875	1.875	48	4CTST:0048	1273	128	13.16	8490	15	15	163	50	205	105	56	110
	4CTST:2000	2	52	4CTST:0052	1273	128	13.16	8490	15	15	163	52	215	108	56	112
	4CTST:2250	2.25	56	4CTST:0056	1273	128	13.16	8490	15	15	163	54	235	117	56	118
			60	4CTST:0060	1273	128	13.16	8490	15	15	163	54	238	120	56	126
	4CTST:2500	2.5	64	4CTST:0064	1273	128	13.16	8490	15	15	163	58	254	129	56	126
5	5CTST:2500	2.5	64	5CTST:0064	1830	184	18.9	12194	15	25	192	64	254	125	60	136
			68	5CTST:0068	1830	184	18.9	12194	15	25	192	72	258	130	60	144
	5CTST:2750	2.75	72	5CTST:0072	1830	184	18.9	12194	15	25	192	72	258	130	60	146
	5CTST:3000	3	76	5CTST:0076	1830	184	18.9	12194	15	25	192	74	258	141	60	154
6	6CTST:3000	3	76	6CTST:0076	2646	266	27.35	17645	15	44	231	76	260	146	64	162
			80	6CTST:0080	2646	266	27.35	17645	15	44	231	76	264	146	64	162
	6CTST:3250	3.25	85	6CTST:0085	2646	266	27.35	17645	15	44	231	78	272	148	64	174
	6CTST:3500	3.5	90	6CTST:0090	2646	266	27.35	17645	15	44	231	78	280	154	64	185
	6CTST:3750	3.75	95	6CTST:0095	2646	266	27.35	17645	15	40.5	231	99	300	168	64	200
	6CTST:4000	4	100	6CTST:0100	2646	266	27.35	17645	15	40.5	231	105	305	172	64	212

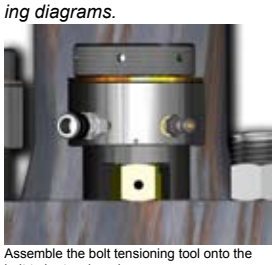
Notes.

Maximum working pressure = 21750 psi : 1500 bar

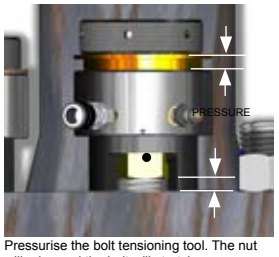
If the standard tensioner is not suitable Tentec offer special designs on request.

simplified procedure.

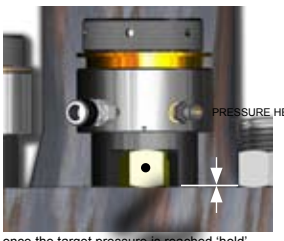
Note: for clarity the pressure hose is not show on the following diagrams.



Assemble the bolt tensioning tool onto the bolt to be tensioned.



Pressurise the bolt tensioning tool. The nut will raise and the bolt will stretch.



once the target pressure is reached 'hold' the pressure and rotate the nut back down against the joint face.

Once the target pressure is reached 'hold' the pressure and rotate the nut back down against the joint face. The bolt is loaded.

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