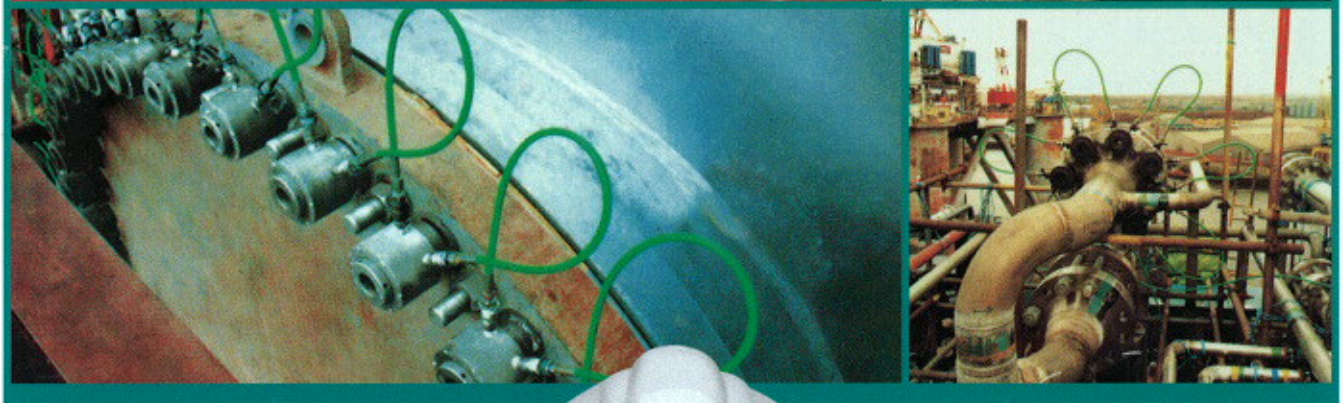


PETRACARBON



Bolt Tensioner



SBM Products & Services

BOLTITE[®] Bolt Tensioner



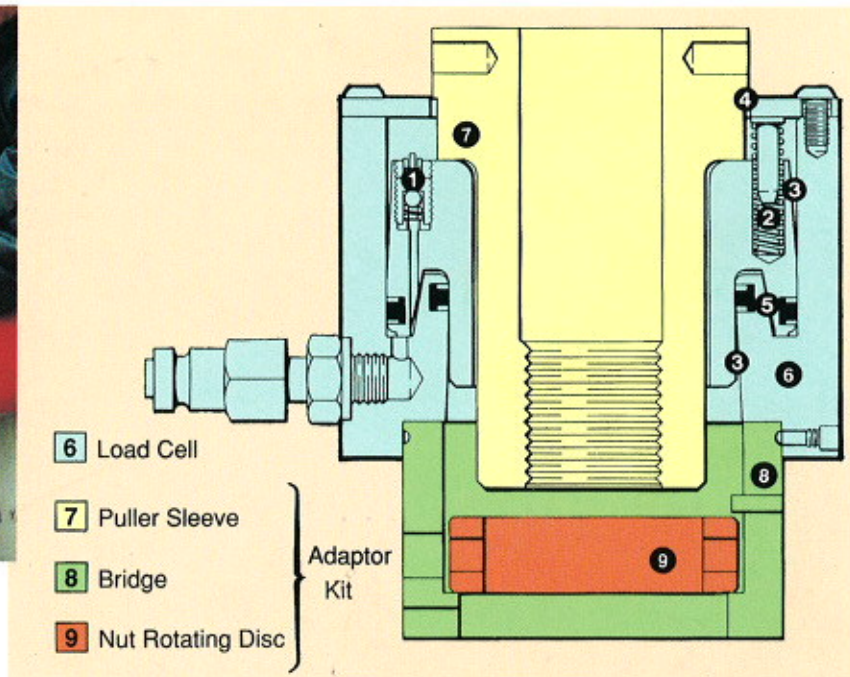
Both the customer and industry have highlighted the need to apply accurate bolt loading in a controlled and safe manner.

The **BOLTITE**[®] Bolt Tensioner with its unique design provides the optimum solution.

Modern computer-aided design techniques, in addition to finite element stress analysis, photo-elastic modelling, strain gauging and cyclic testing, all ensure that safety, quality and reliability are built into the tool.

BOLTITE[®] features:

- **Overstroke Eliminator** 1
A relief valve has been incorporated into the piston to prevent overstroking, thus eliminating seal damage and improving operator safety. When the maximum stroke is exceeded, the overstroke relief valve bleeds off the water-based hydraulic fluid safely within the tool.
- **Rapid Power Return Stroke** 2
(Improved time saving)
Automatic, spring-assisted piston retraction assists in reducing the duration of tensioning programmes.
- **Misalignment Compensation** 3
The unique floating piston design allows a 3° tilt (in any direction) without loss of load, preventing piston seizure or damage to the cylinder bore.
- **Piston Stroke Indicator** 4
The integral piston stroke indicator



allows piston stroke to be viewed, measured and controlled.

- **Seals** 5
Low friction, anti-roll/non-spiralling seals and rigid back-up rings are incorporated within a unique piston/cylinder design for improved life and reliability.
- **Adaptor Kit** 7 8 9
The interchangeability of adaptor kits (bridges, nut rotating disc and puller sleeve) enables a number of different bolt sizes to be tensioned using a single load cell.
- **Nut Rotating Disc** 9
A range of nut rotating discs are incorporated to eliminate the need for, and preparation of pre-drilled nuts.

On-site Bolting Services

Through quality procedures and a fully traceable documentation system,

BOLTITE[®] are capable of surveying projects, recommending tooling and manpower requirements, providing technical data and work procedures. **BOLTITE**[®] can also carry out the work, supply completion certificates and flange tags, ensuring a leak-free and guaranteed joint. **BOLTITE**[®]'s technicians are fully trained in bolt working practices and are available for immediate mobilisation.

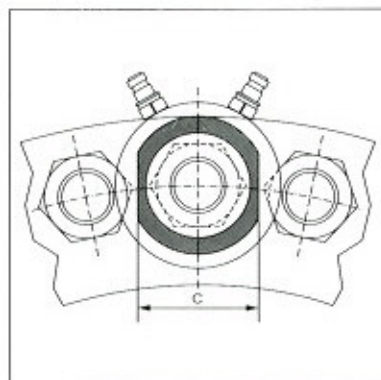
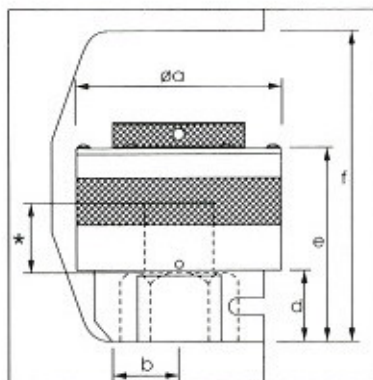
Technical Service

A dedicated technical support facility is available, combined with the wealth of experience of the engineering service division. **BOLTITE**[®] can provide practical and technical assistance, including the study of specific applications and the recommendation of solutions to support customers in solving their bolting problems. All **BOLTITE**[®] products are available for purchase or hire.



Tensioner Ref.	BOLT DIA		TOOL HYD AREA		MAX LOAD		WEIGHT		a	b	c	d	e	f						
	in	mm	in ²	mm ²	TONF	KN	lb	Kg	mm	mm	mm	mm	mm	mm						
BT0	3/4"	M20	1.48	954	14.4	143.5	2.9	1.3	66.0	25.0	62.0	34.5	91.5	129.0						
	7/8"	M22								25.0	62.0	34.5	91.5	132.0						
BT1	1"	M24	2.95	1903	28.6	284.96	7.7	3.5	90.0	31.9	68.0	43.0	123.5	167.0						
	1 1/8"									31.7	80.0	46.0	126.5	174.0						
BT2	1"	M24	4.74	3058	46.0	458.3	12.1	5.5	109.0	30.0	75.0	38.0	128.6	172.0						
		M27																		
	1 1/8"	M30														30.2	80.0	41.0	131.6	180.0
	1 1/4"	M33														36.9	88.0	44.0	134.6	186.0
BT3	1 1/4"	M33	6.90	4452	67.0	667.8	15.4	7.0	126.0	36.9	88.0	44.0	137.6	192.0						
	1 3/8"	M36													38.3	96.0	47.0	140.0	194.5	
	1 1/2"	M39													42.0	96.0	50.4	143.4	196.0	
	1 5/8"	M42													41.1	108.0	53.5	146.5	207.5	
BT4	1 1/2"	M39	10.41	6716	101.1	1007.3	22.1	10.0	146.0	42.0	113.0	50.0	149.0	207.0						
	1 5/8"	M42													45.5	113.0	53.5	152.5	213.5	
	1 3/4"	M45													52.1	118.0	57.0	156.0	220.0	
	1 7/8"	M48													51.0	114.0	60.0	159.0	226.0	
	2"														52.0	120.0	63.0	162.0	233.0	
BT5	2"	M52	13.45	8677	130.6	1301.2	33.1	15.0	174.0	52.0	132.0	63.0	163.0	235.0						
	2 1/4"	M56								58.0	138.0	69.5	169.0	247.0						
BT6	2 1/4"	M56	15.71	10135	152.5	1514.5	37.5	17.0	184.0	58.0	138.0	69.5	169.4	249.0						
		M60													63.20	153.0	76.0	175.0	262.0	
	2 1/2"	M64													76.0	164.0	82.0	181.9	275.0	
BT7	2 3/4"	M72	21.67	13980	210.5	2097.3	57.3	26.0	220.0	85.0	157.0	82.0	182.0	275.0						
	3"	M76								80.0	180.0	89.0	189.0	288.0						
BT8	3"	M76	25.49	16445	247.5	2466.0	65.0	29.5	240.0	80.0	180.0	89.0	192.5	291.5						
		M80													95.0	190.0	95.0	198.5	303.5	
	3 1/4"	M85													102.5	205.0	101.0	204.5	316.5	
BT9	3 3/4"	M95	34.09	21991	331.0	3297.9	86.0	38.0	272.0	93.6	200.0	107.0	211.0	330.0						
	4"	M100								103.0	210.0	114.0	218.0	345.0						
BT10	4 1/4"	M105	40.15	25935	389.9	3884.8	108.0	49.0	294.0	112.0	225.0	120.0	228.0	365.0						
		M110																		
	4 1/2"	M115								118.0	236.0	126.0	235.0	380.0						

Notes: 1 Product development is constantly taking place and dimensions may alter without prior notice. 2. Weight - load cell, bridge and nut rotating disc. 3. Max. tool operating pressure - 21,750 psi (1500 bar).



- Primary Tool**
To cover a wide range of bolts with the minimum number of tools (4 load cell covers 15 bolt sizes).
- Secondary Tools**
To provide the smallest possible tool for a particular bolt size thus making it the most economic.
- Sizes available on request.**

*Bolt protrusion above head of nut equals 1x bolt diameter (minimum).