

In Lbs



**Model XXI 1 Bolt Load Chart
ASTM A193 GRADE B7 STUD**

LoaDISC WASHER*						
BOLT LOAD (LBS)						
BOLT SIZE	@ 52% YIELD	Pressure in PSI	@ 60% YIELD	Pressure in PSI	@ 70% YIELD	Pressure in PSI
3/4 x 10	18,252	1,150	21,060	1,310	24,570	1,520
7/8 x 9	25,189	1,780	29,074	2,040	33,920	2,350
1x 8	33,057	2,590	38,143	2,960	44,500	3,420
1-1/8 x 8	43,137	3,700	49,773	4,195	58,069	4,810
1-1/4 x 8	54,566	4,990	62,949	5,705	73,441	6,550
1-3/8 x 8	67,315	6,590	77,671	7,460		
1-1/2 x 8						
1-5/8 x 8						
1-3/4 x 8						
1-7/8 x 8						
2 x 8						

* NUT LUBRICANT: TS801 MOLYCOTE SPRAY

CLAMP**						
BOLT LOAD (LBS)						
BOLT SIZE	@ 52% YIELD	Pressure in PSI	@ 60% YIELD	Pressure in PSI	@ 70% YIELD	Pressure in PSI
3/4 x 10	18,252	2,220	21,060	2,585	24,570	3,040
7/8 x 9	25,189	2,920	29,074	3,425	33,920	4,150
1x 8	33,057	3,930	38,143	4,650	44,500	5,700
1-1/8 x 8	43,137	4,450	49,773	5,270	58,069	6,380
1-1/4 x 8	54,566	6,060	62,949	7,190	73,441	8,850
1-3/8 x 8	67,315	7,530				
1-1/2 x 8						
1-5/8 x 8						
1-3/4 x 8						
1-7/8 x 8						
2 x 8						

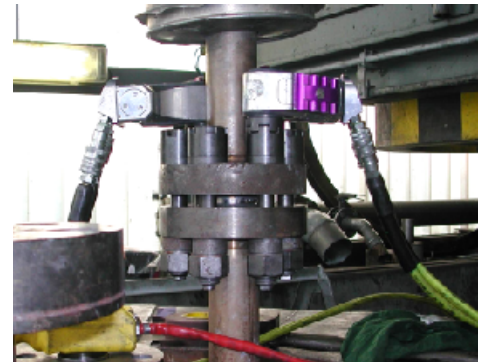
** NUT LUBRICANT: DOW CORNING P37

NOTE:
 - VALUES IN TABLE ARE TO BE USED AS A GUIDELINE ONLY
 - RECOMMENDED BOLT SIZES BASED ON UP TO 80% OF TOOL CAPACITY
 - PERCENT YIELDS GIVEN ARE COMMONLY USED INDUSTRY STANDARD



**XXI TENSIONING TOOL
Optimization of Bolting!**

- * Get Parallel Joint Closure
In less passes, In less time
- *Gasket and tool preserving
- *Make up Leak-free flanges



**UPGRADE your bolting
to Precise Tensioning!**

Improve bolt load accuracy and safety & reduce human error!

XXI High Speed TENSIONER

- * Backup Wrench-Free
- *Reaction Arm-Free
- *Side Load-Free
- *Bolt Relaxation-Free
- *Hands-Free even inverted

Always a few Revolutions ahead!



Model XXI 3 Bolt Load Chart ASTM A193 GRADE B7 STUD

LoaDISC WASHER* BOLT LOAD (LBS)						
BOLT SIZE	@ 52% YIELD	Pressure in PSI	@ 60% YIELD	Pressure in PSI	@ 70% YIELD	Pressure in PSI
3/4 x 10						
7/8 x 9						
1 x 8						
1-1/8 x 8						
1-1/4 x 8	54,566	1,900	62,949	2,175	73,441	2,520
1-3/8 x 8	67,315	2,540	77,671	2,915	90,616	3,385
1-1/2 x 8	81,413	3,315	93,938	3,810	109,595	4,420
1-5/8 x 8	96,815	4,240	111,751	4,865	130,376	5,675
1-3/4 x 8	113,628	5,325	131,109	6,170	152,960	7,245
1-7/8 x 8	131,477	6,665	152,103	7,715		
2 x 8						

* NUT LUBRICANT: TS801 MOLYCOTE SPRAY

CLAMP** BOLT LOAD (LBS)						
BOLT SIZE	@ 52% YIELD	Pressure in PSI	@ 60% YIELD	Pressure in PSI	@ 70% YIELD	Pressure in PSI
3/4 x 10						
7/8 x 9						
1 x 8						
1-1/8 x 8						
1-1/4 x 8	54,566	2,290	62,949	2,750	73,441	3,330
1-3/8 x 8	67,315	3,365	77,671	4,210	90,616	5,665
1-1/2 x 8	81,413	4,920	93,938	5,835	109,595	6,960
1-5/8 x 8	96,815	6,340	111,751	7,560		
1-3/4 x 8	113,628	7,975				
1-7/8 x 8						
2 x 8						

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 Mechanical Tensioner and
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Place a LoaDISC WASHER underneath
 regular nut and
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 reduce human error!

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Model XXI 5 Bolt Load Chart ASTM A193 GRADE B7 STUD

Loa DISC WASHER* BOLT LOAD (LBS)						
BOLT SIZE	@ 52% YIELD	Pressure in PSI	@ 60% YIELD	Pressure in PSI	@ 70% YIELD	Pressure in PSI
3/4 x 10						
7/8 x 9						
1x 8						
1-1/8 x 8						
1-1/4 x 8						
1-3/8 x 8						
1-1/2 x 8						
1-5/8 x 8						
1-3/4 x 8	113,628	3,130	131,109	3,590	152,960	4,155
1-7/8 x 8	131,477	3,850	152,103	4,425	177,348	5,115
2 x 8	151,200	4,670	174,462	5,350	203,538	6,210

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CLAMP** BOLT LOAD (LBS)						
BOLT SIZE	@ 52% YIELD	Pressure in PSI	@ 60% YIELD	Pressure in PSI	@ 70% YIELD	Pressure in PSI
3/4 x 10						
7/8 x 9						
1x 8						
1-1/8 x 8						
1-1/4 x 8						
1-3/8 x 8						
1-1/2 x 8						
1-5/8 x 8						
1-3/4 x 8	113,628	3,985	131,109	4,660	152,960	5,520
1-7/8 x 8	131,477	4,680	152,103	5,685	177,348	7,240
2 x 8	151,200	5,780	174,462	6,775		

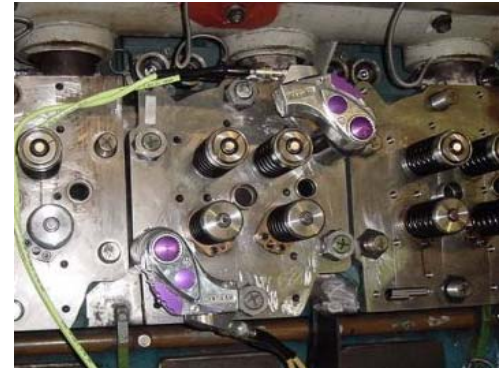
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In kN



Model XXI 1 Bolt Load Chart
ISO R898 GRADE 10.9 STUD

BOLT SIZE	Loa DISC WASHER*					
	BOLT LOAD (kN)					
	@ 52% YIELD	Pressure in kPa	@ 60% YIELD	Pressure in kPa	@ 70% YIELD	Pressure in kPa
M20x2.5	119.66	12,006	138.07	13,486	161.08	15,726
M22x2.5	148.31	15,664	171.13	17,905	199.65	20,918
M24x3	172.31	19,664	198.82	22,360	231.96	25,734
M27x3	224.57	28,024	259.12	32,046	302.30	36,553
M30x3.5	274.03	36,736	316.19	41,845	368.89	47,646
M33x3.5	339.23	48,160	391.18	54,579		
M36x4						
M39x4						
M42x4.5						
M45x4.5						
M48x5						
M52x5						

* NUT LUBRICANT: TS801 MOLYCOTE SPRAY

BOLT SIZE	CLAMP**					
	BOLT LOAD (kN)					
	@ 52% YIELD	Pressure in kPa	@ 60% YIELD	Pressure in kPa	@ 70% YIELD	Pressure in kPa
M20x2.5	119.66	21,774	138.07	25,124	161.08	29,311
M22x2.5	148.31	26,987	171.13	31,139	199.65	36,328
M24x3	172.31	31,354	198.82	36,178	231.96	42,208
M27x3	224.57	40,863	259.12	47,150	302.30	55,007
M30x3.5	274.03	49,863				
M33x3.5						
M36x4						
M39x4						
M42x4.5						
M45x4.5						
M48x5						
M52x5						

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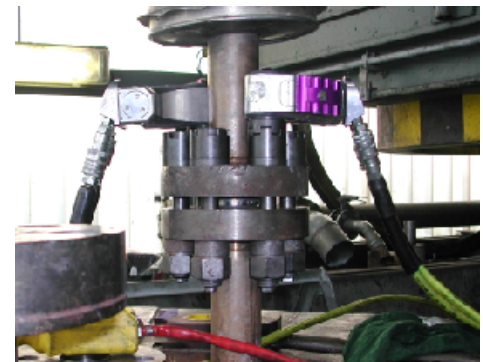
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Model XXI 3 Bolt Load Chart ISO R898 GRADE 10.9 STUD

BOLT SIZE	Loa DISC WASHER* BOLT LOAD (kN)					
	@ 52% YIELD	Pressure in kPa	@ 60% YIELD	Pressure in kPa	@ 70% YIELD	Pressure in kPa
M20x2.5						
M22x2.5						
M24x3						
M27x3	224.57	10,675	259.12	12,017	302.30	13,831
M30x3.5	274.03	13,924	316.19	15,820	368.89	18,410
M33x3.5	339.03	18,609	391.18	21,478	456.38	24,859
M36x4	399.23	23,724	460.65	27,372	537.43	31,662
M39x4	476.97	30,623	550.35	35,130	642.07	41,054
M42x4.5	547.93	37,729	632.22	43,536	737.59	51,090
M45x4.5	638.40	47,368	736.62	54,896		
M48x5						
M52x5						

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	@ 52% YIELD	Pressure in kPa	@ 60% YIELD	Pressure in kPa	@ 70% YIELD	Pressure in kPa
M20x2.5						
M22x2.5						
M24x3						
M27x3	224.57	14,597	259.12	17,102	302.30	23,309
M30x3.5	274.03	18,634	316.19	23,714	368.89	34,676
M33x3.5	339.03	26,783	391.18	38,118	456.38	45,886
M36x4	399.23	38,902	460.65	46,526	537.43	56,430
M39x4	476.97	46,743				
M42x4.5						
M45x4.5						
M48x5						
M52x5						

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BOLT SIZE	LoaDISC WASHER* BOLT LOAD (kN)					
	@ 52% YIELD	Pressure in kPa	@ 60% YIELD	Pressure in kPa	@ 70% YIELD	Pressure in kPa
M20x2.5						
M22x2.5						
M24x3						
M27x3						
M30x3.5						
M33x3.5	339.03	11,170	391.18	12,707	456.38	14,830
M36x4	399.23	14,152	460.65	16,091	537.43	18,649
M39x4	476.97	17,932	550.35	20,691	642.07	24,131
M42x4.5	547.93	22,177	632.22	25,209	737.59	29,449
M45x4.5	638.40	27,304	736.62	31,208	859.39	36,409
M48x5	720.11	32,548	830.90	37,549	969.38	43,429
M52x5	859.27	41,700	991.46	47,791		

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M20x2.5						
M22x2.5						
M24x3						
M27x3						
M30x3.5						
M33x3.5	339.03	19,655	391.18	22,679	456.38	26,459
M36x4	399.23	23,145	460.65	26,706	537.43	31,157
M39x4	476.97	27,652	550.35	31,906	642.07	36,126
M42x4.5	547.93	31,766	632.22	36,653	737.59	42,762
M45x4.5	638.40	37,011	736.62	42,705		
M48x5	720.11	41,748	830.90	48,171		
M52x5						

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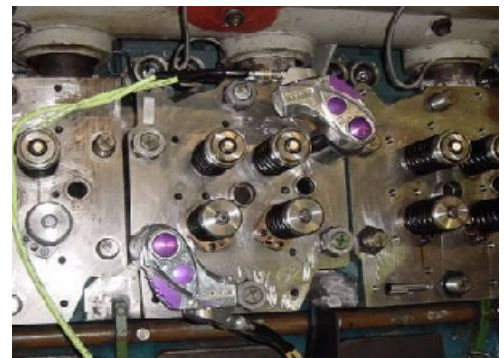
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