

# BOLT LOAD METRIC (GRADE 8.8)

## 40% - 99% YIELD



<b>Southwest Texas</b>	<b>West Texas</b>	<b>Main Office</b>	<b>Southeast Texas</b>	<b>Central &amp; East Texas</b>
4802 Baldwin Blvd.	3508 S County Rd 1290	12420 Texaco Rd	2484 W Cardinal #4	7900 Rodeo Trl. #500
Corpus Christi 78408	Odessa, TX 78765	Houston, TX 77013	Beaumont, TX 77705	Mansfield, TX 76063
361-888-5080	432-561-8481	713-453-6677	409-840-9699	682-334-2679

# BOLT LOADS

TORQUE GUIDE FOR ISO R898 CLASS 8.8						REQUIRED TORQUE (N-m)								PLUG IN (K)
MINIMUM YIELD		660 MPa		95726 p.s.i.		(To convert to ft/lbs multiply these torque values x .7376)								
BOLT LOAD BASED ON		40		PERCENT YIELD										
BOLT SIZE DIA. x P	HEX NUT ACROSS FLAT (mm)	STRESS AREA (mm) <sup>2</sup>	BOLT LOAD (kN)	BOLT LOAD (LBS)	LoaDISC TS 801 MOLY K=.109	MOLY DISULFIDE K=.100	MOLY/LEAD OXIDE/GRAPH. K=.125	COPPER & GRAPHITE K=.140	NICKEL & GRAPH. K=.150	API SA2 K=.157	MACHINE OIL K=.200	DRY STEEL K=.300	DRY STEEL K=.300	
M20x2.5	30	245	65	14,529	141	129	162	181	194	203	259	388	194	
M22x2.5	32	303	80	18,007	192	176	220	247	264	277	352	529	264	
M24x3	36	353	93	20,921	243	223	279	313	335	351	447	670	335	
M27x3	41	459	121	27,266	357	327	409	458	491	514	655	982	491	
M30x3.5	46	561	148	33,271	484	444	555	622	666	697	888	1,332	666	
M33x3.5	50	694	183	41,162	659	604	755	846	906	949	1,209	1,813	906	
M36x4	55	817	216	48,473	846	776	970	1,087	1,164	1,219	1,553	2,329	1,164	
M39x4	60	976	258	57,911	1,095	1,005	1,256	1,407	1,507	1,577	2,009	3,014	1,507	
M42x4.5	65	1121	296	66,526	1,355	1,243	1,554	1,740	1,864	1,951	2,486	3,729	1,864	
M45x4.5	70	1306	345	77,511	1,691	1,552	1,940	2,172	2,327	2,436	3,103	4,655	2,327	
M48x5	75	1473	389	87,431	2,035	1,867	2,334	2,614	2,800	2,931	3,734	5,601	2,800	
M52x5	80	1758	464	104,327	2,630	2,413	3,017	3,379	3,620	3,789	4,827	7,240	3,620	
M56x5.5	85	2030	536	120,481	3,271	3,001	3,752	4,202	4,502	4,712	6,003	9,004	4,502	
M60x5.5	90	2362	624	140,185	4,078	3,742	4,677	5,238	5,612	5,874	7,483	11,225	5,612	
M64x6	95	2676	706	158,818	4,928	4,522	5,652	6,330	6,782	7,099	9,043	13,565	6,782	
M68x6	100	3055	807	181,330	5,979	5,485	6,856	7,679	8,228	8,612	10,970	16,455	8,228	
M72x6	105	3460	913	205,334	7,168	6,577	8,221	9,207	9,865	10,325	13,153	19,730	9,865	
M76x6	110	3889	1,027	230,829	8,506	7,804	9,755	10,925	11,706	12,252	15,608	23,412	11,706	
M80x6	115	4344	1,147	257,816	10,001	9,175	11,469	12,845	13,762	14,405	18,350	27,525	13,762	
M90x6	130	5591	1,476	331,809	14,480	13,284	16,605	18,598	19,926	20,856	26,568	39,852	19,926	
M100x6	145	6995	1,847	415,124	20,128	18,466	23,083	25,853	27,700	28,992	36,933	55,399	27,700	
M110x6	155	8556	2,259	507,761	27,082	24,846	31,057	34,784	37,269	39,008	49,692	74,538	37,269	
M125x6	180	11192	2,955	664,196	40,257	36,933	46,166	51,706	55,399	57,984	73,865	110,798	55,399	

TORQUE GUIDE FOR ISO R898 CLASS 8.8						REQUIRED TORQUE (N-m)								PLUG IN (K)
MINIMUM YIELD		660 MPa		95726 p.s.i.		(To convert to ft/lbs multiply these torque values x .7376)								
BOLT LOAD BASED ON		50		PERCENT YIELD										
BOLT SIZE DIA. x P	HEX NUT ACROSS FLAT (mm)	STRESS AREA (mm) <sup>2</sup>	BOLT LOAD (kN)	BOLT LOAD (LBS)	LoadDISC TS 801 MOLY K=.109	MOLY DISULFIDE K=.100	MOLY/LEAD OXIDE/GRAPH. K=.125	COPPER & GRAPHITE K=.140	NICKEL & GRAPH. K=.150	API SA2 K=.157	MACHINE OIL K=.200	DRY STEEL K=.300	DRY STEEL K=.300	0.15
M20x2.5	30	245	81	18,161	176	162	202	226	242	254	323	485	242	
M22x2.5	32	303	100	22,509	240	220	275	308	330	346	441	661	330	
M24x3	36	353	116	26,152	304	279	349	391	419	438	558	838	419	
M27x3	41	459	152	34,082	446	409	512	573	614	643	819	1,228	614	
M30x3.5	46	561	185	41,589	605	555	694	777	833	871	1,110	1,665	833	
M33x3.5	50	694	229	51,453	823	755	944	1,057	1,133	1,186	1,511	2,266	1,133	
M36x4	55	817	270	60,591	1,058	970	1,213	1,358	1,455	1,523	1,941	2,911	1,455	
M39x4	60	976	322	72,389	1,369	1,256	1,570	1,758	1,884	1,972	2,512	3,768	1,884	
M42x4.5	65	1121	370	83,158	1,693	1,554	1,942	2,175	2,330	2,439	3,107	4,661	2,330	
M45x4.5	70	1306	431	96,889	2,114	1,940	2,424	2,715	2,909	3,045	3,879	5,819	2,909	
M48x5	75	1473	486	109,289	2,544	2,334	2,917	3,267	3,500	3,664	4,667	7,001	3,500	
M52x5	80	1758	580	130,409	3,288	3,017	3,771	4,223	4,525	4,736	6,033	9,050	4,525	
M56x5.5	85	2030	670	150,602	4,089	3,752	4,690	5,252	5,627	5,890	7,503	11,255	5,627	
M60x5.5	90	2362	779	175,231	5,098	4,677	5,846	6,548	7,015	7,343	9,354	14,031	7,015	
M64x6	95	2676	883	198,523	6,161	5,652	7,065	7,913	8,478	8,873	11,304	16,956	8,478	
M68x6	100	3055	1,008	226,663	7,473	6,856	8,570	9,599	10,285	10,764	13,713	20,569	10,285	
M72x6	105	3460	1,142	256,668	8,961	8,221	10,276	11,509	12,331	12,906	16,441	24,662	12,331	
M76x6	110	3889	1,284	288,537	10,633	9,755	12,193	13,657	14,632	15,315	19,510	29,264	14,632	
M80x6	115	4344	1,434	322,270	12,501	11,469	14,336	16,056	17,203	18,006	22,937	34,406	17,203	
M90x6	130	5591	1,845	414,761	18,100	16,605	20,756	23,247	24,908	26,070	33,210	49,816	24,908	
M100x6	145	6995	2,308	518,905	25,160	23,083	28,854	32,316	34,624	36,240	46,166	69,249	34,624	
M110x6	155	8556	2,823	634,701	33,853	31,057	38,822	43,480	46,586	48,760	62,115	93,172	46,586	
M125x6	180	11192	3,693	830,245	50,321	46,166	57,707	64,632	69,249	72,480	92,331	138,497	69,249	

TORQUE GUIDE FOR ISO R898 CLASS 8.8						REQUIRED TORQUE (N-m)								PLUG IN (K)
MINIMUM YIELD		660 MPa		95726 p.s.i.		(To convert to ft/lbs multiply these torque values x .7376)								
BOLT LOAD BASED ON		60		PERCENT YIELD										
BOLT SIZE DIA. x P	HEX NUT ACROSS FLAT (mm)	STRESS AREA (mm) <sup>2</sup>	BOLT LOAD (kN)	BOLT LOAD (LBS)	LoadDISC TS 801 MOLY K=.109	MOLY DISULFIDE K=.100	MOLY/LEAD OXIDE/GRAPH. K=.125	COPPER & GRAPHITE K=.140	NICKEL & GRAPH. K=.150	API SA2 K=.157	MACHINE OIL K=.200	DRY STEEL K=.300	DRY STEEL K=.300	0.15
M20x2.5	30	245	97	21,793	211	194	242	271	291	304	388	582	291	
M22x2.5	32	303	120	27,010	288	264	330	370	397	415	529	793	397	
M24x3	36	353	140	31,382	365	335	419	469	503	526	670	1,005	503	
M27x3	41	459	182	40,899	535	491	614	688	737	771	982	1,474	737	
M30x3.5	46	561	222	49,907	726	666	833	932	999	1,046	1,332	1,998	999	
M33x3.5	50	694	275	61,744	988	906	1,133	1,269	1,360	1,423	1,813	2,719	1,360	
M36x4	55	817	323	72,709	1,269	1,164	1,455	1,630	1,747	1,828	2,329	3,493	1,747	
M39x4	60	976	386	86,866	1,643	1,507	1,884	2,110	2,261	2,366	3,014	4,521	2,261	
M42x4.5	65	1121	444	99,789	2,032	1,864	2,330	2,610	2,797	2,927	3,729	5,593	2,797	
M45x4.5	70	1306	517	116,267	2,537	2,327	2,909	3,258	3,491	3,654	4,655	6,982	3,491	
M48x5	75	1473	583	131,147	3,052	2,800	3,500	3,920	4,200	4,396	5,601	8,401	4,200	
M52x5	80	1758	696	156,491	3,946	3,620	4,525	5,068	5,430	5,683	7,240	10,860	5,430	
M56x5.5	85	2030	804	180,722	4,907	4,502	5,627	6,303	6,753	7,068	9,004	13,506	6,753	
M60x5.5	90	2362	935	210,278	6,118	5,612	7,015	7,857	8,419	8,811	11,225	16,837	8,419	
M64x6	95	2676	1,060	238,227	7,393	6,782	8,478	9,495	10,173	10,648	13,565	20,347	10,173	
M68x6	100	3055	1,210	271,996	8,968	8,228	10,285	11,519	12,341	12,917	16,455	24,683	12,341	
M72x6	105	3460	1,370	308,001	10,753	9,865	12,331	13,811	14,797	15,488	19,730	29,594	14,797	
M76x6	110	3889	1,540	346,244	12,759	11,706	14,632	16,388	17,559	18,378	23,412	35,117	17,559	
M80x6	115	4344	1,720	386,724	15,001	13,762	17,203	19,267	20,644	21,607	27,525	41,287	20,644	
M90x6	130	5591	2,214	497,713	21,720	19,926	24,908	27,897	29,889	31,284	39,852	59,779	29,889	
M100x6	145	6995	2,770	622,685	30,192	27,700	34,624	38,779	41,549	43,488	55,399	83,099	41,549	
M110x6	155	8556	3,388	761,641	40,623	37,269	46,586	52,176	55,903	58,512	74,538	111,807	55,903	
M125x6	180	11192	4,432	996,294	60,385	55,399	69,249	77,558	83,098	86,976	110,798	166,197	83,098	

TORQUE GUIDE FOR ISO R898 CLASS 8.8						REQUIRED TORQUE (N-m)								
MINIMUM YIELD		660 MPa		95726 p.s.i.		(To convert to ft/lbs multiply these torque values x .7376)								
BOLT LOAD BASED ON			70	PERCENT YIELD										
BOLT SIZE DIA. x P	HEX NUT ACROSS FLAT (mm)	STRESS AREA (mm) <sup>2</sup>	BOLT LOAD (kN)	BOLT LOAD (LBS)	LoaDISC TS 801 MOLY K=.109	MOLY DISULFIDE K=.100	MOLY/LEAD OXIDE/GRAPH. K=.125	COPPER & GRAPHITE K=.140	NICKEL & GRAPH. K=.150	API SA2 K=.157	MACHINE OIL K=.200	DRY STEEL K=.300 K=.300	PLUG IN (K)	
M20x2.5	30	245	113	25,425	247	226	283	317	339	355	452	679	339	
M22x2.5	32	303	140	31,512	336	308	385	432	463	484	617	925	463	
M24x3	36	353	163	36,612	426	391	489	547	586	614	782	1,173	586	
M27x3	41	459	212	47,715	625	573	716	802	860	900	1,146	1,719	860	
M30x3.5	46	561	259	58,224	847	777	971	1,088	1,166	1,220	1,554	2,331	1,166	
M33x3.5	50	694	320	72,034	1,153	1,057	1,322	1,480	1,586	1,660	2,115	3,172	1,586	
M36x4	55	817	377	84,827	1,481	1,358	1,698	1,902	2,038	2,133	2,717	4,075	2,038	
M39x4	60	976	451	101,344	1,916	1,758	2,198	2,461	2,637	2,760	3,516	5,275	2,637	
M42x4.5	65	1121	518	116,421	2,371	2,175	2,719	3,045	3,263	3,415	4,350	6,525	3,263	
M45x4.5	70	1306	603	135,645	2,960	2,715	3,394	3,801	4,073	4,263	5,431	8,146	4,073	
M48x5	75	1473	681	153,005	3,561	3,267	4,084	4,574	4,901	5,129	6,534	9,801	4,901	
M52x5	80	1758	812	182,572	4,603	4,223	5,279	5,912	6,335	6,630	8,446	12,670	6,335	
M56x5.5	85	2030	938	210,842	5,725	5,252	6,565	7,353	7,878	8,246	10,505	15,757	7,878	
M60x5.5	90	2362	1,091	245,324	7,137	6,548	8,185	9,167	9,822	10,280	13,096	19,643	9,822	
M64x6	95	2676	1,236	277,932	8,625	7,913	9,891	11,078	11,869	12,423	15,825	23,738	11,869	
M68x6	100	3055	1,412	317,328	10,463	9,599	11,999	13,438	14,398	15,070	19,198	28,797	14,398	
M72x6	105	3460	1,598	359,335	12,545	11,509	14,386	16,113	17,263	18,069	23,018	34,527	17,263	
M76x6	110	3889	1,797	403,951	14,886	13,657	17,071	19,119	20,485	21,441	27,313	40,970	20,485	
M80x6	115	4344	2,007	451,178	17,501	16,056	20,070	22,479	24,084	25,208	32,112	48,168	24,084	
M90x6	130	5591	2,583	580,665	25,340	23,247	29,059	32,546	34,871	36,498	46,495	69,742	34,871	
M100x6	145	6995	3,232	726,466	35,225	32,316	40,395	45,243	48,474	50,736	64,632	96,948	48,474	
M110x6	155	8556	3,953	888,581	47,394	43,480	54,351	60,873	65,221	68,264	86,961	130,441	65,221	
M125x6	180	11192	5,171	1,162,343	70,449	64,632	80,790	90,485	96,948	101,472	129,264	193,896	96,948	

TORQUE GUIDE FOR ISO R898 CLASS 8.8						REQUIRED TORQUE (N-m)								
MINIMUM YIELD		660 MPa		95726 p.s.i.		(To convert to ft/lbs multiply these torque values x .7376)								
BOLT LOAD BASED ON			80	PERCENT YIELD										
BOLT SIZE DIA. x P	HEX NUT ACROSS FLAT (mm)	STRESS AREA (mm) <sup>2</sup>	BOLT LOAD (kN)	BOLT LOAD (LBS)	LoaDISC TS 801 MOLY K=.109	MOLY DISULFIDE K=.100	MOLY/LEAD OXIDE/GRAPH. K=.125	COPPER & GRAPHITE K=.140	NICKEL & GRAPH. K=.150	API SA2 K=.157	MACHINE OIL K=.200	DRY STEEL K=.300 K=.300	PLUG IN (K)	
M20x2.5	30	245	129	29,057	282	259	323	362	388	406	517	776	388	
M22x2.5	32	303	160	36,014	384	352	441	493	529	553	705	1,057	529	
M24x3	36	353	186	41,843	487	447	558	625	670	701	893	1,340	670	
M27x3	41	459	243	54,532	714	655	819	917	982	1,028	1,310	1,965	982	
M30x3.5	46	561	296	66,542	968	888	1,110	1,243	1,332	1,394	1,776	2,664	1,332	
M33x3.5	50	694	366	82,325	1,317	1,209	1,511	1,692	1,813	1,897	2,417	3,626	1,813	
M36x4	55	817	431	96,945	1,692	1,553	1,941	2,174	2,329	2,437	3,105	4,658	2,329	
M39x4	60	976	515	115,822	2,190	2,009	2,512	2,813	3,014	3,155	4,019	6,028	3,014	
M42x4.5	65	1121	592	133,052	2,710	2,486	3,107	3,480	3,729	3,903	4,972	7,458	3,729	
M45x4.5	70	1306	690	155,022	3,382	3,103	3,879	4,344	4,655	4,872	6,206	9,310	4,655	
M48x5	75	1473	778	174,863	4,070	3,734	4,667	5,227	5,601	5,862	7,467	11,201	5,601	
M52x5	80	1758	928	208,654	5,261	4,827	6,033	6,757	7,240	7,578	9,653	14,480	7,240	
M56x5.5	85	2030	1,072	240,962	6,543	6,003	7,503	8,404	9,004	9,424	12,005	18,008	9,004	
M60x5.5	90	2362	1,247	280,370	8,157	7,483	9,354	10,476	11,225	11,749	14,966	22,450	11,225	
M64x6	95	2676	1,413	317,636	9,857	9,043	11,304	12,660	13,565	14,198	18,086	27,129	13,565	
M68x6	100	3055	1,613	362,661	11,957	10,970	13,713	15,358	16,455	17,223	21,940	32,910	16,455	
M72x6	105	3460	1,827	410,668	14,337	13,153	16,441	18,414	19,730	20,650	26,306	39,459	19,730	
M76x6	110	3889	2,054	461,659	17,012	15,608	19,510	21,851	23,412	24,504	31,215	46,823	23,412	
M80x6	115	4344	2,294	515,632	20,001	18,350	22,937	25,690	27,525	28,809	36,700	55,050	27,525	
M90x6	130	5591	2,952	663,617	28,959	26,568	33,210	37,196	39,852	41,712	53,137	79,705	39,852	
M100x6	145	6995	3,693	830,247	40,257	36,933	46,166	51,706	55,399	57,984	73,865	110,798	55,399	
M110x6	155	8556	4,517	1,015,522	54,164	49,692	62,115	69,569	74,538	78,016	99,384	149,076	74,538	
M125x6	180	11192	5,909	1,328,391	80,513	73,865	92,331	103,411	110,798	115,968	147,730	221,596	110,798	

TORQUE GUIDE FOR ISO R898 CLASS 8.8						REQUIRED TORQUE (N-m)								
MINIMUM YIELD		660 MPa		95726 p.s.i.		(To convert to ft/lbs multiply these torque values x .7376)								
BOLT LOAD BASED ON			90	PERCENT YIELD										
BOLT SIZE DIA. x P	HEX NUT ACROSS FLAT (mm)	STRESS AREA (mm) <sup>2</sup>	BOLT LOAD (kN)	BOLT LOAD (LBS)	LoaDISC TS 801 MOLY K=.109	MOLY DISULFIDE K=.100	MOLY/LEAD OXIDE/GRAPH. K=.125	COPPER & GRAPHITE K=.140	NICKEL & GRAPH. K=.150	API SA2 K=.157	MACHINE OIL K=.200	DRY STEEL K=.300 K=.300	PLUG IN (K)	
M20x2.5	30	245	145	32,690	317	291	364	407	436	457	582	872	436	
M22x2.5	32	303	180	40,515	432	397	496	555	595	623	793	1,190	595	
M24x3	36	353	209	47,073	548	503	628	704	754	789	1,005	1,508	754	
M27x3	41	459	273	61,348	803	737	921	1,032	1,105	1,157	1,474	2,210	1,105	
M30x3.5	46	561	333	74,860	1,089	999	1,249	1,399	1,499	1,568	1,998	2,997	1,499	
M33x3.5	50	694	412	92,615	1,482	1,360	1,699	1,903	2,039	2,135	2,719	4,079	2,039	
M36x4	55	817	485	109,063	1,904	1,747	2,183	2,445	2,620	2,742	3,493	5,240	2,620	
M39x4	60	976	580	130,299	2,464	2,261	2,826	3,165	3,391	3,549	4,521	6,782	3,391	
M42x4.5	65	1121	666	149,684	3,048	2,797	3,496	3,915	4,195	4,391	5,593	8,390	4,195	
M45x4.5	70	1306	776	174,400	3,805	3,491	4,364	4,888	5,237	5,481	6,982	10,473	5,237	
M48x5	75	1473	875	196,721	4,578	4,200	5,251	5,881	6,301	6,595	8,401	12,601	6,301	
M52x5	80	1758	1,044	234,736	5,919	5,430	6,787	7,602	8,145	8,525	10,860	16,290	8,145	
M56x5.5	85	2030	1,206	271,083	7,361	6,753	8,441	9,454	10,129	10,602	13,506	20,259	10,129	
M60x5.5	90	2362	1,403	315,416	9,176	8,419	10,523	11,786	12,628	13,217	16,837	25,256	12,628	
M64x6	95	2676	1,590	357,341	11,089	10,173	12,717	14,243	15,260	15,972	20,347	30,520	15,260	
M68x6	100	3055	1,815	407,993	13,452	12,341	15,427	17,278	18,512	19,376	24,683	37,024	18,512	
M72x6	105	3460	2,055	462,002	16,129	14,797	18,497	20,716	22,196	23,232	29,594	44,392	22,196	
M76x6	110	3889	2,310	519,366	19,139	17,559	21,948	24,582	26,338	27,567	35,117	52,676	26,338	
M80x6	115	4344	2,580	580,086	22,502	20,644	25,805	28,901	30,965	32,411	41,287	61,931	30,965	
M90x6	130	5591	3,321	746,570	32,579	29,889	37,362	41,845	44,834	46,926	59,779	89,668	44,834	
M100x6	145	6995	4,155	934,028	45,289	41,549	51,937	58,169	62,324	65,232	83,099	124,648	62,324	
M110x6	155	8556	5,082	1,142,462	60,935	55,903	69,879	78,265	83,855	87,768	111,807	167,710	83,855	
M125x6	180	11192	6,648	1,494,440	90,577	83,098	103,873	116,338	124,647	130,464	166,197	249,295	124,647	

TORQUE GUIDE FOR ISO R898 CLASS 8.8						REQUIRED TORQUE (N-m)								
MINIMUM YIELD		660 MPa		95726 p.s.i.		(To convert to ft/lbs multiply these torque values x .7376)								
BOLT LOAD BASED ON			99	PERCENT YIELD										
BOLT SIZE DIA. x P	HEX NUT ACROSS FLAT (mm)	STRESS AREA (mm) <sup>2</sup>	BOLT LOAD (kN)	BOLT LOAD (LBS)	LoaDISC TS 801 MOLY K=.109	MOLY DISULFIDE K=.100	MOLY/LEAD OXIDE/GRAPH. K=.125	COPPER & GRAPHITE K=.140	NICKEL & GRAPH. K=.150	API SA2 K=.157	MACHINE OIL K=.200	DRY STEEL K=.300 K=.300	PLUG IN (K)	
M20x2.5	30	245	160	35,959	349	320	400	448	480	502	640	960	480	
M22x2.5	32	303	198	44,567	475	436	545	611	654	685	872	1,308	654	
M24x3	36	353	230	51,780	603	553	691	774	829	868	1,106	1,658	829	
M27x3	41	459	300	67,483	883	811	1,013	1,135	1,216	1,273	1,621	2,432	1,216	
M30x3.5	46	561	366	82,346	1,198	1,099	1,374	1,538	1,648	1,725	2,198	3,297	1,648	
M33x3.5	50	694	453	101,877	1,630	1,496	1,869	2,094	2,243	2,348	2,991	4,487	2,243	
M36x4	55	817	534	119,970	2,094	1,921	2,402	2,690	2,882	3,016	3,842	5,764	2,882	
M39x4	60	976	638	143,329	2,710	2,487	3,108	3,481	3,730	3,904	4,973	7,460	3,730	
M42x4.5	65	1121	732	164,652	3,353	3,076	3,845	4,307	4,614	4,830	6,152	9,229	4,614	
M45x4.5	70	1306	853	191,840	4,186	3,840	4,800	5,376	5,760	6,029	7,680	11,521	5,760	
M48x5	75	1473	963	216,393	5,036	4,620	5,776	6,469	6,931	7,254	9,241	13,861	6,931	
M52x5	80	1758	1,149	258,210	6,510	5,973	7,466	8,362	8,959	9,377	11,946	17,918	8,959	
M56x5.5	85	2030	1,326	298,191	8,097	7,428	9,285	10,400	11,142	11,662	14,856	22,285	11,142	
M60x5.5	90	2362	1,543	346,958	10,094	9,260	11,576	12,965	13,891	14,539	18,521	27,781	13,891	
M64x6	95	2676	1,749	393,075	12,198	11,191	13,988	15,667	16,786	17,569	22,381	33,572	16,786	
M68x6	100	3055	1,996	448,793	14,797	13,576	16,969	19,006	20,363	21,314	27,151	40,727	20,363	
M72x6	105	3460	2,261	508,202	17,742	16,277	20,346	22,788	24,415	25,555	32,554	48,831	24,415	
M76x6	110	3889	2,541	571,302	21,053	19,314	24,143	27,040	28,972	30,324	38,629	57,943	28,972	
M80x6	115	4344	2,839	638,095	24,752	22,708	28,385	31,791	34,062	35,652	45,416	68,124	34,062	
M90x6	130	5591	3,653	821,227	35,837	32,878	41,098	46,030	49,317	51,619	65,757	98,635	49,317	
M100x6	145	6995	4,570	1,027,431	49,818	45,704	57,130	63,986	68,556	71,756	91,408	137,113	68,556	
M110x6	155	8556	5,590	1,256,708	67,028	61,494	76,867	86,091	92,241	96,545	122,987	184,481	92,241	
M125x6	180	11192	7,313	1,643,884	99,635	91,408	114,260	127,971	137,112	143,511	182,816	274,224	137,112	