

BOLT LOAD IMPERIAL (GRADE 8.8 STUD)

40% - 99% YIELD



Southwest Texas	West Texas	Main Office	Southeast Texas	Central & East Texas
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 GRADE 8.8 STUD					REQUIRED TORQUE (FtLbs)									
BOLT TENSION BASED ON														
40 PERCENT YIELD														
BOLT SIZE DIA. x TPI	HEX NUT ACROSS FLAT	STRESS AREA (IN ²)	MIN YIELD STRENGTH (PSI)	BOLT TENSION (LBS)	LoaDISC TS 801MOLY K=.109	MOLYBDENUM DISULFIDE K=.100	MOLY/LEAD OXIDE/GRAPHITE K=.125	COPPER & GRAPHITE K=.140	NICKEL & GRAPHITE K=.150	API SA2 K=.157	MACHINE OIL K=.200	DRY STEEL K=.440 K=.300	CUSTOM (INSERT K)	
3/4 x 10	1-1/4"	0.334	96,000	12,837	87	80	100	112	120	126	160	241	100	
7/8 x 9	1-7/16"	0.461	96,000	17,722	141	129	162	181	194	203	258	388	162	
1 x 8	1-5/8"	0.605	96,000	23,249	211	194	242	271	291	304	387	581	242	
1-1/8 x 8	1-13/16"	0.790	96,000	30,338	310	284	356	398	427	447	569	853	356	
1-1/4 x 8	2"	0.999	96,000	38,369	436	400	500	560	600	627	799	1,199	500	
1-3/8 x 8	2-3/16"	1.233	96,000	47,342	591	542	678	759	814	852	1,085	1,627	678	
1-1/2 x 8	2-3/8"	1.491	96,000	57,258	780	716	895	1,002	1,074	1,124	1,431	2,147	895	
1-5/8 x 8	2-9/16"	1.774	96,000	68,115	1,005	922	1,153	1,291	1,384	1,448	1,845	2,767	1,153	
1-3/4 x 8	2-3/4"	2.081	96,000	79,914	1,270	1,165	1,457	1,632	1,748	1,830	2,331	3,496	1,457	
1-7/8 x 8	2-15/16"	2.413	96,000	92,655	1,578	1,448	1,810	2,027	2,172	2,273	2,895	4,343	1,810	
2 x 8	3-1/8"	2.769	96,000	106,338	1,932	1,772	2,215	2,481	2,658	2,783	3,545	5,317	2,215	
2-1/8 x 8	3-5/16"	3.150	96,000	120,964	2,335	2,142	2,678	2,999	3,213	3,363	4,284	6,426	2,678	
2-1/4 x 8	3-1/2"	3.555	96,000	136,531	2,790	2,560	3,200	3,584	3,840	4,019	5,120	7,680	3,200	
2-3/8 x 8	3-11/16"	3.985	96,000	153,040	3,302	3,029	3,786	4,240	4,543	4,755	6,058	9,087	3,786	
2-1/2 x 8	3-7/8"	4.440	96,000	170,491	3,872	3,552	4,440	4,973	5,328	5,576	7,104	10,656	4,440	
2-3/4 x 8	4-1/4"	5.422	96,000	208,220	5,201	4,772	5,965	6,680	7,158	7,492	9,543	14,315	5,965	
3 x 8	4-5/8"	6.503	96,000	249,716	6,805	6,243	7,804	8,740	9,364	9,801	12,486	18,729	7,804	
3-1/4 x 8	5"	7.682	96,000	294,981	8,708	7,989	9,986	11,185	11,984	12,543	15,978	23,967	9,986	
3-1/2 x 8	5-3/8"	8.959	96,000	344,013	10,937	10,034	12,542	14,047	15,051	15,753	20,067	30,101	12,542	
3-3/4 x 8	5-3/4"	10.334	96,000	396,813	13,516	12,400	15,501	17,361	18,601	19,469	24,801	37,201	15,501	
4 x 8	6-1/8"	11.807	96,000	453,382	16,473	15,113	18,891	21,158	22,669	23,727	30,225	45,338	18,891	
4-1/4 x 8	6-1/2"	13.378	96,000	513,718	19,832	18,194	22,743	25,472	27,291	28,565	36,388	54,583	22,743	
4-1/2 x 8	6-7/8"	15.047	96,000	577,823	23,619	21,668	27,085	30,336	32,503	34,019	43,337	65,005	27,085	
4-3/4 x 8	7-1/4"	16.815	96,000	645,695	27,859	25,559	31,948	35,782	38,338	40,127	51,118	76,676	31,948	
5 x 8	7-5/8"	18.681	96,000	717,335	32,579	29,889	37,361	41,845	44,833	46,926	59,778	89,667	37,361	
5-1/4 x 8	8"	20.644	96,000	792,744	37,804	34,683	43,353	48,556	52,024	54,452	69,365	104,048	43,353	
5-1/2 x 8	8-3/8"	22.706	96,000	871,920	43,560	39,963	49,954	55,948	59,945	62,742	79,926	119,889	49,954	
5-3/4 x 8	8-3/4"	24.866	96,000	954,865	49,872	45,754	57,192	64,056	68,631	71,834	91,508	137,262	57,192	
6 x 8	9-1/8"	27.124	96,000	1,041,577	56,766	52,079	65,099	72,910	78,118	81,764	104,158	156,237	65,099	

TORQUE GUIDE FOR ISO R898 GRADE 8.8 STUD					REQUIRED TORQUE (FtLbs)									
BOLT TENSION BASED ON				50	PERCENT YIELD									
BOLT SIZE DIA. x TPI	HEX NUT ACROSS FLAT	STRESS AREA (IN ²)	MIN YIELD STRENGTH (PSI)	BOLT TENSION (LBS)	LoaDISC TS 801MOLY K=.109	MOLYBDENUM DISULFIDE K=.100	MOLY/LEAD OXIDE/GRAPHITE K=.125	COPPER & GRAPHITE K=.140	NICKEL & GRAPHITE K=.150	API SA2 K=.157	MACHINE OIL K=.200	DRY STEEL K=.440 K=.300	CUSTOM (INSERT K)	
3/4 x 10	1-1/4"	0.334	96,000	16,046	109	100	125	140	150	157	201	301	125	
7/8 x 9	1-7/16"	0.461	96,000	22,152	176	162	202	226	242	254	323	485	202	
1x 8	1-5/8"	0.605	96,000	29,061	264	242	303	339	363	380	484	727	303	
1-1/8 x 8	1-13/16"	0.790	96,000	37,922	388	356	444	498	533	558	711	1,067	444	
1-1/4 x 8	2"	0.999	96,000	47,961	545	500	624	699	749	784	999	1,499	624	
1-3/8 x 8	2-3/16"	1.233	96,000	59,178	739	678	848	949	1,017	1,065	1,356	2,034	848	
1-1/2 x 8	2-3/8"	1.491	96,000	71,572	975	895	1,118	1,253	1,342	1,405	1,789	2,684	1,118	
1-5/8 x 8	2-9/16"	1.774	96,000	85,144	1,257	1,153	1,441	1,614	1,729	1,810	2,306	3,459	1,441	
1-3/4 x 8	2-3/4"	2.081	96,000	99,893	1,588	1,457	1,821	2,039	2,185	2,287	2,914	4,370	1,821	
1-7/8 x 8	2-15/16"	2.413	96,000	115,819	1,973	1,810	2,262	2,534	2,715	2,841	3,619	5,429	2,262	
2 x 8	3-1/8"	2.769	96,000	132,923	2,415	2,215	2,769	3,102	3,323	3,478	4,431	6,646	2,769	
2-1/8 x 8	3-5/16"	3.150	96,000	151,205	2,919	2,678	3,347	3,749	4,016	4,204	5,355	8,033	3,347	
2-1/4 x 8	3-1/2"	3.555	96,000	170,664	3,488	3,200	4,000	4,480	4,800	5,024	6,400	9,600	4,000	
2-3/8 x 8	3-11/16"	3.985	96,000	191,300	4,127	3,786	4,733	5,301	5,679	5,944	7,572	11,358	4,733	
2-1/2 x 8	3-7/8"	4.440	96,000	213,114	4,839	4,440	5,550	6,216	6,660	6,971	8,880	13,320	5,550	
2-3/4 x 8	4-1/4"	5.422	96,000	260,275	6,501	5,965	7,456	8,350	8,947	9,364	11,929	17,894	7,456	
3 x 8	4-5/8"	6.503	96,000	312,145	8,506	7,804	9,755	10,925	11,705	12,252	15,607	23,411	9,755	
3-1/4 x 8	5"	7.682	96,000	368,726	10,885	9,986	12,483	13,981	14,979	15,679	19,973	29,959	12,483	
3-1/2 x 8	5-3/8"	8.959	96,000	430,016	13,671	12,542	15,678	17,559	18,813	19,691	25,084	37,626	15,678	
3-3/4 x 8	5-3/4"	10.334	96,000	496,017	16,896	15,501	19,376	21,701	23,251	24,336	31,001	46,502	19,376	
4 x 8	6-1/8"	11.807	96,000	566,727	20,591	18,891	23,614	26,447	28,336	29,659	37,782	56,673	23,614	
4-1/4 x 8	6-1/2"	13.378	96,000	642,148	24,790	22,743	28,428	31,840	34,114	35,706	45,485	68,228	28,428	
4-1/2 x 8	6-7/8"	15.047	96,000	722,278	29,523	27,085	33,857	37,920	40,628	42,524	54,171	81,256	33,857	
4-3/4 x 8	7-1/4"	16.815	96,000	807,119	34,824	31,948	39,936	44,728	47,923	50,159	63,897	95,845	39,936	
5 x 8	7-5/8"	18.681	96,000	896,669	40,724	37,361	46,702	52,306	56,042	58,657	74,722	112,084	46,702	
5-1/4 x 8	8"	20.644	96,000	990,930	47,255	43,353	54,191	60,694	65,030	68,064	86,706	130,060	54,191	
5-1/2 x 8	8-3/8"	22.706	96,000	1,089,900	54,450	49,954	62,442	69,935	74,931	78,427	99,908	149,861	62,442	
5-3/4 x 8	8-3/4"	24.866	96,000	1,193,581	62,340	57,192	71,491	80,069	85,789	89,792	114,385	171,577	71,491	
6 x 8	9-1/8"	27.124	96,000	1,301,971	70,957	65,099	81,373	91,138	97,648	102,205	130,197	195,296	81,373	

TORQUE GUIDE FOR ISO R898 GRADE 8.8 STUD					REQUIRED TORQUE (FtLbs)									
BOLT TENSION BASED ON				60	PERCENT YIELD									
BOLT SIZE DIA. x TPI	HEX NUT ACROSS FLAT	STRESS AREA (IN ²)	MIN YIELD STRENGTH (PSI)	BOLT TENSION (LBS)	LoaDISC TS 801MOLY K=.109	MOLYBDENUM DISULFIDE K=.100	MOLY/LEAD OXIDE/GRAPHITE K=.125	COPPER & GRAPHITE K=.140	NICKEL & GRAPHITE K=.150	API SA2 K=.157	MACHINE OIL K=.200	DRY STEEL K=.440 K=.300	CUSTOM (INSERT K)	
3/4 x 10	1-1/4"	0.334	96,000	19,255	131	120	150	168	181	189	241	361	150	
7/8 x 9	1-7/16"	0.461	96,000	26,582	211	194	242	271	291	304	388	581	242	
1x 8	1-5/8"	0.605	96,000	34,873	317	291	363	407	436	456	581	872	363	
1-1/8 x 8	1-13/16"	0.790	96,000	45,507	465	427	533	597	640	670	853	1,280	533	
1-1/4 x 8	2"	0.999	96,000	57,554	653	600	749	839	899	941	1,199	1,799	749	
1-3/8 x 8	2-3/16"	1.233	96,000	71,014	887	814	1,017	1,139	1,221	1,278	1,627	2,441	1,017	
1-1/2 x 8	2-3/8"	1.491	96,000	85,886	1,170	1,074	1,342	1,503	1,610	1,686	2,147	3,221	1,342	
1-5/8 x 8	2-9/16"	1.774	96,000	102,172	1,508	1,384	1,729	1,937	2,075	2,172	2,767	4,151	1,729	
1-3/4 x 8	2-3/4"	2.081	96,000	119,871	1,905	1,748	2,185	2,447	2,622	2,745	3,496	5,244	2,185	
1-7/8 x 8	2-15/16"	2.413	96,000	138,983	2,367	2,172	2,715	3,040	3,257	3,409	4,343	6,515	2,715	
2 x 8	3-1/8"	2.769	96,000	159,508	2,898	2,658	3,323	3,722	3,988	4,174	5,317	7,975	3,323	
2-1/8 x 8	3-5/16"	3.150	96,000	181,445	3,502	3,213	4,016	4,498	4,820	5,045	6,426	9,639	4,016	
2-1/4 x 8	3-1/2"	3.555	96,000	204,796	4,186	3,840	4,800	5,376	5,760	6,029	7,680	11,520	4,800	
2-3/8 x 8	3-11/16"	3.985	96,000	229,560	4,952	4,543	5,679	6,361	6,815	7,133	9,087	13,630	5,679	
2-1/2 x 8	3-7/8"	4.440	96,000	255,737	5,807	5,328	6,660	7,459	7,992	8,365	10,656	15,984	6,660	
2-3/4 x 8	4-1/4"	5.422	96,000	312,330	7,802	7,158	8,947	10,021	10,736	11,237	14,315	21,473	8,947	
3 x 8	4-5/8"	6.503	96,000	374,574	10,207	9,364	11,705	13,110	14,047	14,702	18,729	28,093	11,705	
3-1/4 x 8	5"	7.682	96,000	442,471	13,062	11,984	14,979	16,777	17,975	18,814	23,967	35,951	14,979	
3-1/2 x 8	5-3/8"	8.959	96,000	516,019	16,405	15,051	18,813	21,071	22,576	23,629	30,101	45,152	18,813	
3-3/4 x 8	5-3/4"	10.334	96,000	595,220	20,275	18,601	23,251	26,041	27,901	29,203	37,201	55,802	23,251	
4 x 8	6-1/8"	11.807	96,000	680,073	24,709	22,669	28,336	31,737	34,004	35,590	45,338	68,007	28,336	
4-1/4 x 8	6-1/2"	13.378	96,000	770,577	29,747	27,291	34,114	38,208	40,937	42,847	54,583	81,874	34,114	
4-1/2 x 8	6-7/8"	15.047	96,000	866,734	35,428	32,503	40,628	45,504	48,754	51,029	65,005	97,508	40,628	
4-3/4 x 8	7-1/4"	16.815	96,000	968,543	41,789	38,338	47,923	53,673	57,507	60,191	76,676	115,014	47,923	
5 x 8	7-5/8"	18.681	96,000	1,076,003	48,868	44,833	56,042	62,767	67,250	70,389	89,667	134,500	56,042	
5-1/4 x 8	8"	20.644	96,000	1,189,116	56,706	52,024	65,030	72,833	78,036	81,677	104,048	156,071	65,030	
5-1/2 x 8	8-3/8"	22.706	96,000	1,307,880	65,340	59,945	74,931	83,922	89,917	94,113	119,889	179,834	74,931	
5-3/4 x 8	8-3/4"	24.866	96,000	1,432,297	74,808	68,631	85,789	96,083	102,946	107,751	137,262	205,893	85,789	
6 x 8	9-1/8"	27.124	96,000	1,562,366	85,149	78,118	97,648	109,366	117,177	122,646	156,237	234,355	97,648	

TORQUE GUIDE FOR ISO R898 GRADE 8.8 STUD					REQUIRED TORQUE (FtLbs)									
BOLT TENSION BASED ON				70	PERCENT YIELD									
BOLT SIZE DIA. x TPI	HEX NUT ACROSS FLAT	STRESS AREA (IN ²)	MIN YIELD STRENGTH (PSI)	BOLT TENSION (LBS)	LoaDISC TS 801MOLY K=.109	MOLYBDENUM DISULFIDE K=.100	MOLY/LEAD OXIDE/GRAPHITE K=.125	COPPER & GRAPHITE K=.140	NICKEL & GRAPHITE K=.150	API SA2 K=.157	MACHINE OIL K=.200	DRY STEEL K=.440 K=.300	CUSTOM (INSERT K)	
3/4 x 10	1-1/4"	0.334	96,000	22,464	153	140	176	197	211	220	281	421	176	
7/8 x 9	1-7/16"	0.461	96,000	31,013	246	226	283	317	339	355	452	678	283	
1x 8	1-5/8"	0.605	96,000	40,685	370	339	424	475	509	532	678	1,017	424	
1-1/8 x 8	1-13/16"	0.790	96,000	53,091	543	498	622	697	747	781	995	1,493	622	
1-1/4 x 8	2"	0.999	96,000	67,146	762	699	874	979	1,049	1,098	1,399	2,098	874	
1-3/8 x 8	2-3/16"	1.233	96,000	82,849	1,035	949	1,187	1,329	1,424	1,490	1,899	2,848	1,187	
1-1/2 x 8	2-3/8"	1.491	96,000	100,201	1,365	1,253	1,566	1,754	1,879	1,966	2,505	3,758	1,566	
1-5/8 x 8	2-9/16"	1.774	96,000	119,201	1,759	1,614	2,018	2,260	2,421	2,534	3,228	4,843	2,018	
1-3/4 x 8	2-3/4"	2.081	96,000	139,850	2,223	2,039	2,549	2,855	3,059	3,202	4,079	6,118	2,549	
1-7/8 x 8	2-15/16"	2.413	96,000	162,147	2,762	2,534	3,167	3,547	3,800	3,978	5,067	7,601	3,167	
2 x 8	3-1/8"	2.769	96,000	186,092	3,381	3,102	3,877	4,342	4,652	4,869	6,203	9,305	3,877	
2-1/8 x 8	3-5/16"	3.150	96,000	211,686	4,086	3,749	4,686	5,248	5,623	5,885	7,497	11,246	4,686	
2-1/4 x 8	3-1/2"	3.555	96,000	238,929	4,883	4,480	5,600	6,272	6,720	7,033	8,960	13,440	5,600	
2-3/8 x 8	3-11/16"	3.985	96,000	267,820	5,778	5,301	6,626	7,421	7,951	8,322	10,601	15,902	6,626	
2-1/2 x 8	3-7/8"	4.440	96,000	298,360	6,775	6,216	7,770	8,702	9,324	9,759	12,432	18,647	7,770	
2-3/4 x 8	4-1/4"	5.422	96,000	364,384	9,102	8,350	10,438	11,691	12,526	13,110	16,701	25,051	10,438	
3 x 8	4-5/8"	6.503	96,000	437,003	11,908	10,925	13,656	15,295	16,388	17,152	21,850	32,775	13,656	
3-1/4 x 8	5"	7.682	96,000	516,216	15,239	13,981	17,476	19,573	20,971	21,950	27,962	41,943	17,476	
3-1/2 x 8	5-3/8"	8.959	96,000	602,023	19,139	17,559	21,949	24,583	26,338	27,568	35,118	52,677	21,949	
3-3/4 x 8	5-3/4"	10.334	96,000	694,423	23,654	21,701	27,126	30,381	32,551	34,070	43,401	65,102	27,126	
4 x 8	6-1/8"	11.807	96,000	793,418	28,828	26,447	33,059	37,026	39,671	41,522	52,895	79,342	33,059	
4-1/4 x 8	6-1/2"	13.378	96,000	899,007	34,705	31,840	39,800	44,576	47,760	49,989	63,680	95,519	39,800	
4-1/2 x 8	6-7/8"	15.047	96,000	1,011,190	41,332	37,920	47,400	53,087	56,879	59,534	75,839	113,759	47,400	
4-3/4 x 8	7-1/4"	16.815	96,000	1,129,966	48,753	44,728	55,910	62,619	67,092	70,223	89,456	134,184	55,910	
5 x 8	7-5/8"	18.681	96,000	1,255,337	57,013	52,306	65,382	73,228	78,459	82,120	104,611	156,917	65,382	
5-1/4 x 8	8"	20.644	96,000	1,387,302	66,157	60,694	75,868	84,972	91,042	95,290	121,389	182,083	75,868	
5-1/2 x 8	8-3/8"	22.706	96,000	1,525,861	76,229	69,935	87,419	97,909	104,903	109,798	139,871	209,806	87,419	
5-3/4 x 8	8-3/4"	24.866	96,000	1,671,013	87,276	80,069	100,087	112,097	120,104	125,709	160,139	240,208	100,087	
6 x 8	9-1/8"	27.124	96,000	1,822,760	99,340	91,138	113,923	127,593	136,707	143,087	182,276	273,414	113,923	

TORQUE GUIDE FOR ISO R898 GRADE 8.8 STUD					REQUIRED TORQUE (FtLbs)									
BOLT TENSION BASED ON				80	PERCENT YIELD									
BOLT SIZE DIA. x TPI	HEX NUT ACROSS FLAT	STRESS AREA (IN ²)	MIN YIELD STRENGTH (PSI)	BOLT TENSION (LBS)	LoaDISC TS 801MOLY K=.109	MOLYBDENUM DISULFIDE K=.100	MOLY/LEAD OXIDE/GRAPHITE K=.125	COPPER & GRAPHITE K=.140	NICKEL & GRAPHITE K=.150	API SA2 K=.157	MACHINE OIL K=.200	DRY STEEL K=.440 K=.300	CUSTOM (INSERT K)	
3/4 x 10	1-1/4"	0.334	96,000	25,674	175	160	201	225	241	252	321	481	201	
7/8 x 9	1-7/16"	0.461	96,000	35,443	282	258	323	362	388	406	517	775	323	
1x 8	1-5/8"	0.605	96,000	46,498	422	387	484	542	581	608	775	1,162	484	
1-1/8 x 8	1-13/16"	0.790	96,000	60,676	620	569	711	796	853	893	1,138	1,707	711	
1-1/4 x 8	2"	0.999	96,000	76,738	871	799	999	1,119	1,199	1,255	1,599	2,398	999	
1-3/8 x 8	2-3/16"	1.233	96,000	94,685	1,183	1,085	1,356	1,519	1,627	1,703	2,170	3,255	1,356	
1-1/2 x 8	2-3/8"	1.491	96,000	114,515	1,560	1,431	1,789	2,004	2,147	2,247	2,863	4,294	1,789	
1-5/8 x 8	2-9/16"	1.774	96,000	136,230	2,011	1,845	2,306	2,583	2,767	2,896	3,690	5,534	2,306	
1-3/4 x 8	2-3/4"	2.081	96,000	159,828	2,541	2,331	2,914	3,263	3,496	3,659	4,662	6,992	2,914	
1-7/8 x 8	2-15/16"	2.413	96,000	185,310	3,156	2,895	3,619	4,054	4,343	4,546	5,791	8,686	3,619	
2 x 8	3-1/8"	2.769	96,000	212,677	3,864	3,545	4,431	4,962	5,317	5,565	7,089	10,634	4,431	
2-1/8 x 8	3-5/16"	3.150	96,000	241,927	4,670	4,284	5,355	5,998	6,426	6,726	8,568	12,852	5,355	
2-1/4 x 8	3-1/2"	3.555	96,000	273,062	5,581	5,120	6,400	7,168	7,680	8,038	10,240	15,360	6,400	
2-3/8 x 8	3-11/16"	3.985	96,000	306,080	6,603	6,058	7,572	8,481	9,087	9,511	12,116	18,174	7,572	
2-1/2 x 8	3-7/8"	4.440	96,000	340,983	7,743	7,104	8,880	9,945	10,656	11,153	14,208	21,311	8,880	
2-3/4 x 8	4-1/4"	5.422	96,000	416,439	10,402	9,543	11,929	13,361	14,315	14,983	19,087	28,630	11,929	
3 x 8	4-5/8"	6.503	96,000	499,432	13,610	12,486	15,607	17,480	18,729	19,603	24,972	37,457	15,607	
3-1/4 x 8	5"	7.682	96,000	589,961	17,416	15,978	19,973	22,369	23,967	25,086	31,956	47,934	19,973	
3-1/2 x 8	5-3/8"	8.959	96,000	688,026	21,873	20,067	25,084	28,094	30,101	31,506	40,135	60,202	25,084	
3-3/4 x 8	5-3/4"	10.334	96,000	793,627	27,033	24,801	31,001	34,721	37,201	38,937	49,602	74,403	31,001	
4 x 8	6-1/8"	11.807	96,000	906,764	32,946	30,225	37,782	42,316	45,338	47,454	60,451	90,676	37,782	
4-1/4 x 8	6-1/2"	13.378	96,000	1,027,436	39,663	36,388	45,485	50,944	54,583	57,130	72,777	109,165	45,485	
4-1/2 x 8	6-7/8"	15.047	96,000	1,155,645	47,237	43,337	54,171	60,671	65,005	68,039	86,673	130,010	54,171	
4-3/4 x 8	7-1/4"	16.815	96,000	1,291,390	55,718	51,118	63,897	71,565	76,676	80,255	102,235	153,353	63,897	
5 x 8	7-5/8"	18.681	96,000	1,434,671	65,158	59,778	74,722	83,689	89,667	93,851	119,556	179,334	74,722	
5-1/4 x 8	8"	20.644	96,000	1,585,488	75,608	69,365	86,706	97,111	104,048	108,903	138,730	208,095	86,706	
5-1/2 x 8	8-3/8"	22.706	96,000	1,743,841	87,119	79,926	99,908	111,896	119,889	125,484	159,852	239,778	99,908	
5-3/4 x 8	8-3/4"	24.866	96,000	1,909,729	99,744	91,508	114,385	128,111	137,262	143,667	183,016	274,524	114,385	
6 x 8	9-1/8"	27.124	96,000	2,083,154	113,532	104,158	130,197	145,821	156,237	163,528	208,315	312,473	130,197	

TORQUE GUIDE FOR ISO R898 GRADE 8.8 STUD					REQUIRED TORQUE (FtLbs)									
BOLT TENSION BASED ON				90	PERCENT YIELD									
BOLT SIZE DIA. x TPI	HEX NUT ACROSS FLAT	STRESS AREA (IN ²)	MIN YIELD STRENGTH (PSI)	BOLT TENSION (LBS)	LoaDISC TS 801MOLY K=.109	MOLYBDENUM DISULFIDE K=.100	MOLY/LEAD OXIDE/GRAPHITE K=.125	COPPER & GRAPHITE K=.140	NICKEL & GRAPHITE K=.150	API SA2 K=.157	MACHINE OIL K=.200	DRY STEEL K=.440 K=.300	CUSTOM (INSERT K)	
3/4 x 10	1-1/4"	0.334	96,000	28,883	197	181	226	253	271	283	361	542	226	
7/8 x 9	1-7/16"	0.461	96,000	39,874	317	291	363	407	436	456	581	872	363	
1x 8	1-5/8"	0.605	96,000	52,310	475	436	545	610	654	684	872	1,308	545	
1-1/8 x 8	1-13/16"	0.790	96,000	68,260	698	640	800	896	960	1,005	1,280	1,920	800	
1-1/4 x 8	2"	0.999	96,000	86,331	980	899	1,124	1,259	1,349	1,412	1,799	2,698	1,124	
1-3/8 x 8	2-3/16"	1.233	96,000	106,520	1,330	1,221	1,526	1,709	1,831	1,916	2,441	3,662	1,526	
1-1/2 x 8	2-3/8"	1.491	96,000	128,830	1,755	1,610	2,013	2,255	2,416	2,528	3,221	4,831	2,013	
1-5/8 x 8	2-9/16"	1.774	96,000	153,258	2,262	2,075	2,594	2,906	3,113	3,258	4,151	6,226	2,594	
1-3/4 x 8	2-3/4"	2.081	96,000	179,807	2,858	2,622	3,278	3,671	3,933	4,117	5,244	7,867	3,278	
1-7/8 x 8	2-15/16"	2.413	96,000	208,474	3,551	3,257	4,072	4,560	4,886	5,114	6,515	9,772	4,072	
2 x 8	3-1/8"	2.769	96,000	239,262	4,347	3,988	4,985	5,583	5,982	6,261	7,975	11,963	4,985	
2-1/8 x 8	3-5/16"	3.150	96,000	272,168	5,253	4,820	6,025	6,748	7,229	7,567	9,639	14,459	6,025	
2-1/4 x 8	3-1/2"	3.555	96,000	307,194	6,278	5,760	7,200	8,064	8,640	9,043	11,520	17,280	7,200	
2-3/8 x 8	3-11/16"	3.985	96,000	344,340	7,428	6,815	8,519	9,541	10,223	10,700	13,630	20,445	8,519	
2-1/2 x 8	3-7/8"	4.440	96,000	383,605	8,711	7,992	9,990	11,188	11,988	12,547	15,984	23,975	9,990	
2-3/4 x 8	4-1/4"	5.422	96,000	468,494	11,703	10,736	13,420	15,031	16,104	16,856	21,473	32,209	13,420	
3 x 8	4-5/8"	6.503	96,000	561,861	15,311	14,047	17,558	19,665	21,070	22,053	28,093	42,140	17,558	
3-1/4 x 8	5"	7.682	96,000	663,706	19,593	17,975	22,469	25,166	26,963	28,221	35,951	53,926	22,469	
3-1/2 x 8	5-3/8"	8.959	96,000	774,029	24,608	22,576	28,220	31,606	33,864	35,444	45,152	67,728	28,220	
3-3/4 x 8	5-3/4"	10.334	96,000	892,830	30,412	27,901	34,876	39,061	41,851	43,804	55,802	83,703	34,876	
4 x 8	6-1/8"	11.807	96,000	1,020,109	37,064	34,004	42,505	47,605	51,005	53,386	68,007	102,011	42,505	
4-1/4 x 8	6-1/2"	13.378	96,000	1,155,866	44,621	40,937	51,171	57,312	61,405	64,271	81,874	122,811	51,171	
4-1/2 x 8	6-7/8"	15.047	96,000	1,300,101	53,142	48,754	60,942	68,255	73,131	76,543	97,508	146,261	60,942	
4-3/4 x 8	7-1/4"	16.815	96,000	1,452,814	62,683	57,507	71,884	80,510	86,261	90,286	115,014	172,522	71,884	
5 x 8	7-5/8"	18.681	96,000	1,614,005	73,303	67,250	84,063	94,150	100,875	105,583	134,500	201,751	84,063	
5-1/4 x 8	8"	20.644	96,000	1,783,674	85,059	78,036	97,545	109,250	117,054	122,516	156,071	234,107	97,545	
5-1/2 x 8	8-3/8"	22.706	96,000	1,961,821	98,009	89,917	112,396	125,883	134,875	141,169	179,834	269,750	112,396	
5-3/4 x 8	8-3/4"	24.866	96,000	2,148,446	112,212	102,946	128,683	144,125	154,420	161,626	205,893	308,839	128,683	
6 x 8	9-1/8"	27.124	96,000	2,343,549	127,723	117,177	146,472	164,048	175,766	183,969	234,355	351,532	146,472	

TORQUE GUIDE FOR ISO R898 GRADE 8.8 STUD					REQUIRED TORQUE (FtLbs)									
BOLT TENSION BASED ON				99	PERCENT YIELD									
BOLT SIZE DIA. x TPI	HEX NUT ACROSS FLAT	STRESS AREA (IN ²)	MIN YIELD STRENGTH (PSI)	BOLT TENSION (LBS)	LoaDISC TS 801MOLY K=.109	MOLYBDENUM DISULFIDE K=.100	MOLY/LEAD OXIDE/GRAPHITE K=.125	COPPER & GRAPHITE K=.140	NICKEL & GRAPHITE K=.150	API SA2 K=.157	MACHINE OIL K=.200	DRY STEEL K=.440 K=.300	CUSTOM (INSERT K)	
3/4 x 10	1-1/4"	0.334	96,000	31,771	216	199	248	278	298	312	397	596	248	
7/8 x 9	1-7/16"	0.461	96,000	43,861	349	320	400	448	480	502	640	959	400	
1x 8	1-5/8"	0.605	96,000	57,541	523	480	599	671	719	753	959	1,439	599	
1-1/8 x 8	1-13/16"	0.790	96,000	75,087	767	704	880	986	1,056	1,105	1,408	2,112	880	
1-1/4 x 8	2"	0.999	96,000	94,964	1,078	989	1,237	1,385	1,484	1,553	1,978	2,968	1,237	
1-3/8 x 8	2-3/16"	1.233	96,000	117,172	1,463	1,343	1,678	1,880	2,014	2,108	2,685	4,028	1,678	
1-1/2 x 8	2-3/8"	1.491	96,000	141,713	1,931	1,771	2,214	2,480	2,657	2,781	3,543	5,314	2,214	
1-5/8 x 8	2-9/16"	1.774	96,000	168,584	2,488	2,283	2,854	3,196	3,424	3,584	4,566	6,849	2,854	
1-3/4 x 8	2-3/4"	2.081	96,000	197,787	3,144	2,884	3,605	4,038	4,327	4,529	5,769	8,653	3,605	
1-7/8 x 8	2-15/16"	2.413	96,000	229,322	3,906	3,583	4,479	5,016	5,375	5,626	7,166	10,749	4,479	
2 x 8	3-1/8"	2.769	96,000	263,188	4,781	4,386	5,483	6,141	6,580	6,887	8,773	13,159	5,483	
2-1/8 x 8	3-5/16"	3.150	96,000	299,385	5,779	5,302	6,627	7,422	7,952	8,324	10,603	15,905	6,627	
2-1/4 x 8	3-1/2"	3.555	96,000	337,914	6,906	6,336	7,920	8,870	9,504	9,947	12,672	19,008	7,920	
2-3/8 x 8	3-11/16"	3.985	96,000	378,774	8,171	7,497	9,371	10,495	11,245	11,770	14,993	22,490	9,371	
2-1/2 x 8	3-7/8"	4.440	96,000	421,966	9,582	8,791	10,989	12,307	13,186	13,802	17,582	26,373	10,989	
2-3/4 x 8	4-1/4"	5.422	96,000	515,344	12,873	11,810	14,762	16,534	17,715	18,542	23,620	35,430	14,762	
3 x 8	4-5/8"	6.503	96,000	618,047	16,842	15,451	19,314	21,632	23,177	24,258	30,902	46,354	19,314	
3-1/4 x 8	5"	7.682	96,000	730,077	21,552	19,773	24,716	27,682	29,659	31,043	39,546	59,319	24,716	
3-1/2 x 8	5-3/8"	8.959	96,000	851,432	27,068	24,833	31,042	34,767	37,250	38,988	49,667	74,500	31,042	
3-3/4 x 8	5-3/4"	10.334	96,000	982,113	33,453	30,691	38,364	42,967	46,037	48,185	61,382	92,073	38,364	
4 x 8	6-1/8"	11.807	96,000	1,122,120	40,770	37,404	46,755	52,366	56,106	58,724	74,808	112,212	46,755	
4-1/4 x 8	6-1/2"	13.378	96,000	1,271,453	49,083	45,031	56,288	63,043	67,546	70,698	90,061	135,092	56,288	
4-1/2 x 8	6-7/8"	15.047	96,000	1,430,111	58,456	53,629	67,036	75,081	80,444	84,198	107,258	160,887	67,036	
4-3/4 x 8	7-1/4"	16.815	96,000	1,598,095	68,951	63,258	79,072	88,561	94,887	99,315	126,516	189,774	79,072	
5 x 8	7-5/8"	18.681	96,000	1,775,405	80,633	73,975	92,469	103,565	110,963	116,141	147,950	221,926	92,469	
5-1/4 x 8	8"	20.644	96,000	1,962,041	93,565	85,839	107,299	120,175	128,759	134,768	171,679	257,518	107,299	
5-1/2 x 8	8-3/8"	22.706	96,000	2,158,003	107,810	98,908	123,636	138,472	148,363	155,286	197,817	296,725	123,636	
5-3/4 x 8	8-3/4"	24.866	96,000	2,363,290	123,433	113,241	141,551	158,537	169,861	177,788	226,482	339,723	141,551	
6 x 8	9-1/8"	27.124	96,000	2,577,903	140,496	128,895	161,119	180,453	193,343	202,365	257,790	386,686	161,119	