

# BOLT LOAD IMPERIAL (GRADE 10.9)

## 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 GRADE 10.9 STUD					REQUIRED TORQUE (FtLbs)									
BOLT TENSION BASED ON 40 PERCENT YIELD														
BOLT SIZE DIA. x TPI	HEX NUT ACROSS FLAT	STRESS AREA (IN <sup>2</sup> )	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) 0.125	
3/4 x 10	1-1/4"	0.334	136,000	18,185	124	114	142	159	170	178	227	341	142	
7/8 x 9	1-7/16"	0.461	136,000	25,106	200	183	229	256	275	287	366	549	229	
1x 8	1-5/8"	0.605	136,000	32,936	299	274	343	384	412	431	549	823	343	
1-1/8 x 8	1-13/16"	0.790	136,000	42,979	439	403	504	564	604	633	806	1,209	504	
1-1/4 x 8	2"	0.999	136,000	54,356	617	566	708	793	849	889	1,132	1,699	708	
1-3/8 x 8	2-3/16"	1.233	136,000	67,068	838	768	961	1,076	1,153	1,207	1,537	2,305	961	
1-1/2 x 8	2-3/8"	1.491	136,000	81,115	1,105	1,014	1,267	1,420	1,521	1,592	2,028	3,042	1,267	
1-5/8 x 8	2-9/16"	1.774	136,000	96,496	1,424	1,307	1,633	1,829	1,960	2,052	2,613	3,920	1,633	
1-3/4 x 8	2-3/4"	2.081	136,000	113,212	1,800	1,651	2,064	2,311	2,477	2,592	3,302	4,953	2,064	
1-7/8 x 8	2-15/16"	2.413	136,000	131,262	2,236	2,051	2,564	2,871	3,076	3,220	4,102	6,153	2,564	
2 x 8	3-1/8"	2.769	136,000	150,646	2,737	2,511	3,138	3,515	3,766	3,942	5,022	7,532	3,138	
2-1/8 x 8	3-5/16"	3.150	136,000	171,365	3,308	3,035	3,793	4,248	4,552	4,764	6,069	9,104	3,793	
2-1/4 x 8	3-1/2"	3.555	136,000	193,419	3,953	3,627	4,533	5,077	5,440	5,694	7,253	10,880	4,533	
2-3/8 x 8	3-11/16"	3.985	136,000	216,807	4,677	4,291	5,364	6,007	6,436	6,737	8,582	12,873	5,364	
2-1/2 x 8	3-7/8"	4.440	136,000	241,529	5,485	5,032	6,290	7,045	7,548	7,900	10,064	15,096	6,290	
2-3/4 x 8	4-1/4"	5.422	136,000	294,978	7,368	6,760	8,450	9,464	10,140	10,613	13,520	20,280	8,450	
3 x 8	4-5/8"	6.503	136,000	353,765	9,640	8,844	11,055	12,382	13,266	13,885	17,688	26,532	11,055	
3-1/4 x 8	5"	7.682	136,000	417,889	12,336	11,318	14,147	15,845	16,977	17,769	22,636	33,953	14,147	
3-1/2 x 8	5-3/8"	8.959	136,000	487,352	15,494	14,214	17,768	19,900	21,322	22,317	28,429	42,643	17,768	
3-3/4 x 8	5-3/4"	10.334	136,000	562,152	19,148	17,567	21,959	24,594	26,351	27,581	35,135	52,702	21,959	
4 x 8	6-1/8"	11.807	136,000	642,291	23,337	21,410	26,762	29,974	32,115	33,613	42,819	64,229	26,762	
4-1/4 x 8	6-1/2"	13.378	136,000	727,767	28,095	25,775	32,219	36,085	38,663	40,467	51,550	77,325	32,219	
4-1/2 x 8	6-7/8"	15.047	136,000	818,582	33,460	30,697	38,371	42,976	46,045	48,194	61,394	92,090	38,371	
4-3/4 x 8	7-1/4"	16.815	136,000	914,735	39,467	36,208	45,260	50,692	54,312	56,847	72,416	108,625	45,260	
5 x 8	7-5/8"	18.681	136,000	1,016,225	46,154	42,343	52,928	59,280	63,514	66,478	84,685	127,028	52,928	
5-1/4 x 8	8"	20.644	136,000	1,123,054	53,556	49,134	61,417	68,787	73,700	77,140	98,267	147,401	61,417	
5-1/2 x 8	8-3/8"	22.706	136,000	1,235,220	61,710	56,614	70,768	79,260	84,921	88,884	113,229	169,843	70,768	
5-3/4 x 8	8-3/4"	24.866	136,000	1,352,725	70,652	64,818	81,023	90,745	97,227	101,764	129,636	194,454	81,023	
6 x 8	9-1/8"	27.124	136,000	1,475,568	80,418	73,778	92,223	103,290	110,668	115,832	147,557	221,335	92,223	

TORQUE GUIDE FOR ISO R898 GRADE 10.9 STUD					REQUIRED TORQUE (FtLbs)									
BOLT TENSION BASED ON		50	PERCENT YIELD											
BOLT SIZE DIA. x TPI	HEX NUT ACROSS FLAT	STRESS AREA (IN <sup>2</sup> )	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)	
													0.125	
3/4 x 10	1-1/4"	0.334	136,000	22,732	155	142	178	199	213	223	284	426	178	
7/8 x 9	1-7/16"	0.461	136,000	31,382	249	229	286	320	343	359	458	686	286	
1x 8	1-5/8"	0.605	136,000	41,170	374	343	429	480	515	539	686	1,029	429	
1-1/8 x 8	1-13/16"	0.790	136,000	53,724	549	504	630	705	755	791	1,007	1,511	630	
1-1/4 x 8	2"	0.999	136,000	67,945	771	708	885	991	1,062	1,111	1,416	2,123	885	
1-3/8 x 8	2-3/16"	1.233	136,000	83,836	1,047	961	1,201	1,345	1,441	1,508	1,921	2,882	1,201	
1-1/2 x 8	2-3/8"	1.491	136,000	101,394	1,381	1,267	1,584	1,774	1,901	1,990	2,535	3,802	1,584	
1-5/8 x 8	2-9/16"	1.774	136,000	120,620	1,780	1,633	2,042	2,287	2,450	2,564	3,267	4,900	2,042	
1-3/4 x 8	2-3/4"	2.081	136,000	141,514	2,249	2,064	2,580	2,889	3,096	3,240	4,128	6,191	2,580	
1-7/8 x 8	2-15/16"	2.413	136,000	164,077	2,794	2,564	3,205	3,589	3,846	4,025	5,127	7,691	3,205	
2 x 8	3-1/8"	2.769	136,000	188,308	3,421	3,138	3,923	4,394	4,708	4,927	6,277	9,415	3,923	
2-1/8 x 8	3-5/16"	3.150	136,000	214,206	4,135	3,793	4,742	5,311	5,690	5,955	7,586	11,380	4,742	
2-1/4 x 8	3-1/2"	3.555	136,000	241,773	4,941	4,533	5,667	6,347	6,800	7,117	9,067	13,600	5,667	
2-3/8 x 8	3-11/16"	3.985	136,000	271,008	5,846	5,364	6,705	7,509	8,046	8,421	10,727	16,091	6,705	
2-1/2 x 8	3-7/8"	4.440	136,000	301,912	6,856	6,290	7,862	8,806	9,435	9,875	12,580	18,869	7,862	
2-3/4 x 8	4-1/4"	5.422	136,000	368,722	9,210	8,450	10,562	11,830	12,675	13,266	16,900	25,350	10,562	
3 x 8	4-5/8"	6.503	136,000	442,206	12,050	11,055	13,819	15,477	16,583	17,357	22,110	33,165	13,819	
3-1/4 x 8	5"	7.682	136,000	522,361	15,421	14,147	17,684	19,806	21,221	22,211	28,295	42,442	17,684	
3-1/2 x 8	5-3/8"	8.959	136,000	609,190	19,367	17,768	22,210	24,875	26,652	27,896	35,536	53,304	22,210	
3-3/4 x 8	5-3/4"	10.334	136,000	702,690	23,935	21,959	27,449	30,743	32,939	34,476	43,918	65,877	27,449	
4 x 8	6-1/8"	11.807	136,000	802,864	29,171	26,762	33,453	37,467	40,143	42,017	53,524	80,286	33,453	
4-1/4 x 8	6-1/2"	13.378	136,000	909,709	35,119	32,219	40,274	45,106	48,328	50,584	64,438	96,657	40,274	
4-1/2 x 8	6-7/8"	15.047	136,000	1,023,228	41,824	38,371	47,964	53,719	57,557	60,243	76,742	115,113	47,964	
4-3/4 x 8	7-1/4"	16.815	136,000	1,143,418	49,334	45,260	56,575	63,364	67,890	71,059	90,521	135,781	56,575	
5 x 8	7-5/8"	18.681	136,000	1,270,282	57,692	52,928	66,160	74,100	79,393	83,098	105,857	158,785	66,160	
5-1/4 x 8	8"	20.644	136,000	1,403,817	66,945	61,417	76,771	85,984	92,126	96,425	122,834	184,251	76,771	
5-1/2 x 8	8-3/8"	22.706	136,000	1,544,026	77,137	70,768	88,460	99,075	106,152	111,106	141,536	212,304	88,460	
5-3/4 x 8	8-3/4"	24.866	136,000	1,690,906	88,315	81,023	101,278	113,432	121,534	127,205	162,045	243,068	101,278	
6 x 8	9-1/8"	27.124	136,000	1,844,460	100,523	92,223	115,279	129,112	138,334	144,790	184,446	276,669	115,279	

TORQUE GUIDE FOR ISO R898 GRADE 10.9 STUD					REQUIRED TORQUE (FtLbs)									
BOLT TENSION BASED ON		60	PERCENT YIELD											
BOLT SIZE DIA. x TPI	HEX NUT ACROSS FLAT	STRESS AREA (IN <sup>2</sup> )	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)	
													0.125	
3/4 x 10	1-1/4"	0.334	136,000	27,278	186	170	213	239	256	268	341	511	213	
7/8 x 9	1-7/16"	0.461	136,000	37,658	299	275	343	384	412	431	549	824	343	
1x 8	1-5/8"	0.605	136,000	49,404	449	412	515	576	618	646	823	1,235	515	
1-1/8 x 8	1-13/16"	0.790	136,000	64,468	659	604	755	846	907	949	1,209	1,813	755	
1-1/4 x 8	2"	0.999	136,000	81,535	926	849	1,062	1,189	1,274	1,333	1,699	2,548	1,062	
1-3/8 x 8	2-3/16"	1.233	136,000	100,603	1,256	1,153	1,441	1,614	1,729	1,810	2,305	3,458	1,441	
1-1/2 x 8	2-3/8"	1.491	136,000	121,672	1,658	1,521	1,901	2,129	2,281	2,388	3,042	4,563	1,901	
1-5/8 x 8	2-9/16"	1.774	136,000	144,744	2,136	1,960	2,450	2,744	2,940	3,077	3,920	5,880	2,450	
1-3/4 x 8	2-3/4"	2.081	136,000	169,817	2,699	2,477	3,096	3,467	3,715	3,888	4,953	7,430	3,096	
1-7/8 x 8	2-15/16"	2.413	136,000	196,892	3,353	3,076	3,846	4,307	4,615	4,830	6,153	9,229	3,846	
2 x 8	3-1/8"	2.769	136,000	225,969	4,105	3,766	4,708	5,273	5,649	5,913	7,532	11,298	4,708	
2-1/8 x 8	3-5/16"	3.150	136,000	257,048	4,962	4,552	5,690	6,373	6,828	7,146	9,104	13,656	5,690	
2-1/4 x 8	3-1/2"	3.555	136,000	290,128	5,929	5,440	6,800	7,616	8,160	8,541	10,880	16,320	6,800	
2-3/8 x 8	3-11/16"	3.985	136,000	325,210	7,016	6,436	8,046	9,011	9,655	10,105	12,873	19,309	8,046	
2-1/2 x 8	3-7/8"	4.440	136,000	362,294	8,227	7,548	9,435	10,567	11,322	11,850	15,096	22,643	9,435	
2-3/4 x 8	4-1/4"	5.422	136,000	442,467	11,052	10,140	12,675	14,196	15,210	15,920	20,280	30,420	12,675	
3 x 8	4-5/8"	6.503	136,000	530,647	14,460	13,266	16,583	18,573	19,899	20,828	26,532	39,799	16,583	
3-1/4 x 8	5"	7.682	136,000	626,834	18,505	16,977	21,221	23,767	25,465	26,653	33,953	50,930	21,221	
3-1/2 x 8	5-3/8"	8.959	136,000	731,028	23,241	21,322	26,652	29,850	31,982	33,475	42,643	63,965	26,652	
3-3/4 x 8	5-3/4"	10.334	136,000	843,228	28,722	26,351	32,939	36,891	39,526	41,371	52,702	79,053	32,939	
4 x 8	6-1/8"	11.807	136,000	963,436	35,005	32,115	40,143	44,960	48,172	50,420	64,229	96,344	40,143	
4-1/4 x 8	6-1/2"	13.378	136,000	1,091,651	42,142	38,663	48,328	54,128	57,994	60,700	77,325	115,988	48,328	
4-1/2 x 8	6-7/8"	15.047	136,000	1,227,873	50,189	46,045	57,557	64,463	69,068	72,291	92,090	138,136	57,557	
4-3/4 x 8	7-1/4"	16.815	136,000	1,372,102	59,200	54,312	67,890	76,037	81,469	85,270	108,625	162,937	67,890	
5 x 8	7-5/8"	18.681	136,000	1,524,338	69,230	63,514	79,393	88,920	95,271	99,717	127,028	190,542	79,393	
5-1/4 x 8	8"	20.644	136,000	1,684,581	80,333	73,700	92,126	103,181	110,551	115,710	147,401	221,101	92,126	
5-1/2 x 8	8-3/8"	22.706	136,000	1,852,831	92,564	84,921	106,152	118,890	127,382	133,327	169,843	254,764	106,152	
5-3/4 x 8	8-3/4"	24.866	136,000	2,029,088	105,978	97,227	121,534	136,118	145,841	152,647	194,454	291,681	121,534	
6 x 8	9-1/8"	27.124	136,000	2,213,351	120,628	110,668	138,334	154,935	166,001	173,748	221,335	332,003	138,334	

TORQUE GUIDE FOR ISO R898 GRADE 10.9 STUD					REQUIRED TORQUE (FtLbs)										
BOLT TENSION BASED ON				70	PERCENT YIELD										
BOLT SIZE DIA. x TPI	HEX NUT ACROSS FLAT	STRESS AREA (IN <sup>2</sup> )	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	136,000	31,824	217	199	249	278	298	312	398	597	249		
7/8 x 9	1-7/16"	0.461	136,000	43,935	349	320	400	449	481	503	641	961	400		
1x 8	1-5/8"	0.605	136,000	57,638	524	480	600	672	720	754	961	1,441	600		
1-1/8 x 8	1-13/16"	0.790	136,000	75,213	769	705	881	987	1,058	1,107	1,410	2,115	881		
1-1/4 x 8	2"	0.999	136,000	95,124	1,080	991	1,239	1,387	1,486	1,556	1,982	2,973	1,239		
1-3/8 x 8	2-3/16"	1.233	136,000	117,370	1,466	1,345	1,681	1,883	2,017	2,111	2,690	4,035	1,681		
1-1/2 x 8	2-3/8"	1.491	136,000	141,951	1,934	1,774	2,218	2,484	2,662	2,786	3,549	5,323	2,218		
1-5/8 x 8	2-9/16"	1.774	136,000	168,868	2,493	2,287	2,858	3,201	3,430	3,590	4,574	6,860	2,858		
1-3/4 x 8	2-3/4"	2.081	136,000	198,120	3,149	2,889	3,612	4,045	4,334	4,536	5,779	8,668	3,612		
1-7/8 x 8	2-15/16"	2.413	136,000	229,708	3,912	3,589	4,486	5,025	5,384	5,635	7,178	10,768	4,486		
2 x 8	3-1/8"	2.769	136,000	263,631	4,789	4,394	5,492	6,151	6,591	6,898	8,788	13,182	5,492		
2-1/8 x 8	3-5/16"	3.150	136,000	299,889	5,788	5,311	6,638	7,435	7,966	8,338	10,621	15,932	6,638		
2-1/4 x 8	3-1/2"	3.555	136,000	338,483	6,918	6,347	7,933	8,885	9,520	9,964	12,693	19,040	7,933		
2-3/8 x 8	3-11/16"	3.985	136,000	379,412	8,185	7,509	9,386	10,513	11,264	11,789	15,018	22,528	9,386		
2-1/2 x 8	3-7/8"	4.440	136,000	422,676	9,598	8,806	11,007	12,328	13,209	13,825	17,612	26,417	11,007		
2-3/4 x 8	4-1/4"	5.422	136,000	516,211	12,895	11,830	14,787	16,562	17,745	18,573	23,660	35,490	14,787		
3 x 8	4-5/8"	6.503	136,000	619,088	16,870	15,477	19,346	21,668	23,216	24,299	30,954	46,432	19,346		
3-1/4 x 8	5"	7.682	136,000	731,306	21,589	19,806	24,758	27,729	29,709	31,096	39,612	59,419	24,758		
3-1/2 x 8	5-3/8"	8.959	136,000	852,865	27,114	24,875	31,094	34,825	37,313	39,054	49,750	74,626	31,094		
3-3/4 x 8	5-3/4"	10.334	136,000	983,767	33,510	30,743	38,428	43,040	46,114	48,266	61,485	92,228	38,428		
4 x 8	6-1/8"	11.807	136,000	1,124,009	40,839	37,467	46,834	52,454	56,200	58,823	74,934	112,401	46,834		
4-1/4 x 8	6-1/2"	13.378	136,000	1,273,593	49,166	45,106	56,383	63,149	67,660	70,817	90,213	135,319	56,383		
4-1/2 x 8	6-7/8"	15.047	136,000	1,432,519	58,554	53,719	67,149	75,207	80,579	84,340	107,439	161,158	67,149		
4-3/4 x 8	7-1/4"	16.815	136,000	1,600,786	69,067	63,364	79,206	88,710	95,047	99,482	126,729	190,093	79,206		
5 x 8	7-5/8"	18.681	136,000	1,778,394	80,769	74,100	92,625	103,740	111,150	116,337	148,200	222,299	92,625		
5-1/4 x 8	8"	20.644	136,000	1,965,344	93,722	85,984	107,480	120,377	128,976	134,995	171,968	257,951	107,480		
5-1/2 x 8	8-3/8"	22.706	136,000	2,161,636	107,992	99,075	123,844	138,705	148,612	155,548	198,150	297,225	123,844		
5-3/4 x 8	8-3/4"	24.866	136,000	2,367,269	123,640	113,432	141,790	158,804	170,147	178,088	226,863	340,295	141,790		
6 x 8	9-1/8"	27.124	136,000	2,582,243	140,732	129,112	161,390	180,757	193,668	202,706	258,224	387,337	161,390		

TORQUE GUIDE FOR ISO R898 GRADE 10.9 STUD					REQUIRED TORQUE (FtLbs)										
BOLT TENSION BASED ON				80	PERCENT YIELD										
BOLT SIZE DIA. x TPI	HEX NUT ACROSS FLAT	STRESS AREA (IN <sup>2</sup> )	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	136,000	36,371	248	227	284	318	341	357	455	682	284		
7/8 x 9	1-7/16"	0.461	136,000	50,211	399	366	458	513	549	575	732	1,098	458		
1x 8	1-5/8"	0.605	136,000	65,872	598	549	686	769	823	862	1,098	1,647	686		
1-1/8 x 8	1-13/16"	0.790	136,000	85,958	878	806	1,007	1,128	1,209	1,265	1,612	2,418	1,007		
1-1/4 x 8	2"	0.999	136,000	108,713	1,234	1,132	1,416	1,585	1,699	1,778	2,265	3,397	1,416		
1-3/8 x 8	2-3/16"	1.233	136,000	134,137	1,675	1,537	1,921	2,152	2,305	2,413	3,074	4,611	1,921		
1-1/2 x 8	2-3/8"	1.491	136,000	162,230	2,210	2,028	2,535	2,839	3,042	3,184	4,056	6,084	2,535		
1-5/8 x 8	2-9/16"	1.774	136,000	192,992	2,849	2,613	3,267	3,659	3,920	4,103	5,227	7,840	3,267		
1-3/4 x 8	2-3/4"	2.081	136,000	226,423	3,599	3,302	4,128	4,623	4,953	5,184	6,604	9,906	4,128		
1-7/8 x 8	2-15/16"	2.413	136,000	262,523	4,471	4,102	5,127	5,743	6,153	6,440	8,204	12,306	5,127		
2 x 8	3-1/8"	2.769	136,000	301,292	5,473	5,022	6,277	7,030	7,532	7,884	10,043	15,065	6,277		
2-1/8 x 8	3-5/16"	3.150	136,000	342,730	6,615	6,069	7,586	8,497	9,104	9,529	12,138	18,208	7,586		
2-1/4 x 8	3-1/2"	3.555	136,000	386,837	7,906	7,253	9,067	10,154	10,880	11,388	14,506	21,760	9,067		
2-3/8 x 8	3-11/16"	3.985	136,000	433,614	9,354	8,582	10,727	12,015	12,873	13,474	17,164	25,746	10,727		
2-1/2 x 8	3-7/8"	4.440	136,000	483,059	10,969	10,064	12,580	14,089	15,096	15,800	20,127	30,191	12,580		
2-3/4 x 8	4-1/4"	5.422	136,000	589,956	14,737	13,520	16,900	18,928	20,280	21,226	27,040	40,559	16,900		
3 x 8	4-5/8"	6.503	136,000	707,529	19,280	17,688	22,110	24,764	26,532	27,771	35,376	53,065	22,110		
3-1/4 x 8	5"	7.682	136,000	835,778	24,673	22,636	28,295	31,690	33,953	35,538	45,271	67,907	28,295		
3-1/2 x 8	5-3/8"	8.959	136,000	974,703	30,987	28,429	35,536	39,800	42,643	44,633	56,858	85,287	35,536		
3-3/4 x 8	5-3/4"	10.334	136,000	1,124,305	38,297	35,135	43,918	49,188	52,702	55,161	70,269	105,404	43,918		
4 x 8	6-1/8"	11.807	136,000	1,284,582	46,673	42,819	53,524	59,947	64,229	67,226	85,639	128,458	53,524		
4-1/4 x 8	6-1/2"	13.378	136,000	1,455,535	56,190	51,550	64,438	72,170	77,325	80,934	103,100	154,651	64,438		
4-1/2 x 8	6-7/8"	15.047	136,000	1,637,164	66,919	61,394	76,742	85,951	92,090	96,388	122,787	184,181	76,742		
4-3/4 x 8	7-1/4"	16.815	136,000	1,829,469	78,934	72,416	90,521	101,383	108,625	113,694	144,833	217,249	90,521		
5 x 8	7-5/8"	18.681	136,000	2,032,451	92,307	84,685	105,857	118,560	127,028	132,956	169,371	254,056	105,857		
5-1/4 x 8	8"	20.644	136,000	2,246,108	107,111	98,267	122,834	137,574	147,401	154,280	196,534	294,802	122,834		
5-1/2 x 8	8-3/8"	22.706	136,000	2,470,441	123,419	113,229	141,536	158,520	169,843	177,769	226,457	339,686	141,536		
5-3/4 x 8	8-3/4"	24.866	136,000	2,705,450	141,303	129,636	162,045	181,491	194,454	203,529	259,272	388,908	162,045		
6 x 8	9-1/8"	27.124	136,000	2,951,135	160,837	147,557	184,446	206,579	221,335	231,664	295,114	442,670	184,446		

