

SPUR GEARS

APPROXIMATE HORSEPOWER AND TORQUE* RATINGS FOR CLASS I SERVICE (Service Factor = 1.0)

16 DIAMETRAL PITCH CAST IRON 20° PRESSURE ANGLE 3/4" FACE REFERENCE PAGE 31.

No. Teeth	25 RPM		50 RPM		100 RPM		200 RPM		300 RPM		600 RPM		900 RPM		1200 RPM		1800 RPM		3600 RPM	
	H.P.	Torque	H.P.	Torque	H.P.	Torque	H.P.	Torque	H.P.	Torque	H.P.	Torque	H.P.	Torque	H.P.	Torque	H.P.	Torque	H.P.	Torque
96	.28	707	.53	666	.95	597	1.57	494	2.01	421	2.79	293	3.20	224						
128	.38	949	.70	879	1.21	765	1.93	608	2.40	504	3.17	333	3.56	249						
144	.42	1057	.77	970	1.32	833	2.06	650	2.54	533	3.29	346								
160	.47	1195	.86	1088	1.46	923	2.25	707	2.73	574	3.49	366								
192	.56	1406	1.00	1260	1.66	1044	2.46	777	2.94	618	3.65	384								

12 DIAMETRAL PITCH STEEL 20° PRESSURE ANGLE 1" FACE REFERENCE PAGE 31.

No. Teeth	25 RPM		50 RPM		100 RPM		200 RPM		300 RPM		600 RPM		900 RPM		1200 RPM		1800 RPM		3600 RPM	
	H.P.	Torque	H.P.	Torque	H.P.	Torque	H.P.	Torque	H.P.	Torque	H.P.	Torque	H.P.	Torque	H.P.	Torque	H.P.	Torque	H.P.	Torque
12	.08	202	.16	200	.31	196	.60	188	.86	181	1.54	162	2.09	147	2.55	134	3.27	114	4.53	79.4
13	.09	233	.18	230	.36	225	.68	215	.98	206	1.75	183	2.36	165	2.86	150	3.63	127	4.97	87.1
14	.11	265	.21	262	.41	256	.77	244	1.11	233	1.96	206	2.63	184	3.18	167	4.00	140	5.42	94.8
15	.12	297	.23	293	.45	285	.86	271	1.23	259	2.16	227	2.88	202	3.46	182	4.34	152	5.80	102
16	.13	323	.25	319	.49	310	.93	294	1.33	279	2.31	243	3.07	215	3.68	193	4.58	160	6.05	106
18	.15	379	.30	373	.57	361	1.08	340	1.53	322	2.63	276	3.46	242	4.10	215	5.04	177	6.55	115
20	.17	437	.34	429	.66	415	1.23	389	1.74	365	2.95	310	3.84	269	4.52	238	5.50	193	7.02	123
21	.19	468	.36	459	.70	443	1.31	413	1.84	388	3.11	327	4.03	282	4.73	249	5.73	201	7.26	127
24	.22	548	.43	537	.82	515	1.51	477	2.11	444	3.50	368	4.48	314	5.21	274	6.22	218	7.72	135
28	.26	667	.52	651	.99	621	1.80	568	2.49	524	4.04	425	5.10	357	5.86	308	6.89	241		
30	.29	720	.56	707	1.07	673	1.94	612	2.68	562	4.29	451	5.37	376	6.15	323	7.19	252		
36	.37	928	.71	899	1.34	847	2.41	759	3.27	688	5.11	537	6.28	440	7.09	373	8.15	285		
42	.44	1112	.85	1073	1.59	1001	2.81	884	3.77	792	5.73	602	6.94	486	7.76	407				
48	.52	1304	.99	1252	1.84	1159	3.20	1009	4.25	893	6.33	665	7.56	529	8.37	440				
54	.60	1505	1.14	1437	2.09	1319	3.60	1133	4.73	993	6.90	724	8.14	570						

12 DIAMETRAL PITCH CAST IRON 20° PRESSURE ANGLE 1" FACE REFERENCE PAGE 32.

No. Teeth	25 RPM		50 RPM		100 RPM		200 RPM		300 RPM		600 RPM		900 RPM		1200 RPM		1800 RPM		3600 RPM	
	H.P.	Torque	H.P.	Torque	H.P.	Torque	H.P.	Torque	H.P.	Torque	H.P.	Torque	H.P.	Torque	H.P.	Torque	H.P.	Torque	H.P.	Torque
60	.40	998	.75	949	1.37	864	2.32	733	3.03	636	4.34	456	5.07	355						
66	.45	1125	.84	1064	1.53	961	2.56	805	3.30	693	4.65	488	5.38	377						
72	.48	1221	.91	1150	1.64	1031	2.71	853	3.47	728	4.81	506	5.53	387						
84	.58	1450	1.07	1354	1.90	1196	3.07	969	3.88	814	5.24	551								
96	.65	1641	1.21	1519	2.10	1322	3.33	1050	4.15	871	5.49	576								
108	.75	1879	1.37	1725	2.35	1482	3.67	1156	4.51	947	5.85	615								
120	.82	2068	1.49	1882	2.53	1596	3.88	1224	4.73	993	6.03	634								
132	.89	2252	1.61	2034	2.70	1704	4.08	1287	4.92	1033	6.19	650								
144	.97	2433	1.73	2181	2.87	1806	4.26	1344	5.09	1070	6.32	664								
168	1.13	2861	2.00	2526	3.25	2047	4.71	1484	5.54	1164										
192	1.27	3209	2.22	2794	3.52	2219	4.99	1573	5.80	1218										
216	1.41	3545	2.42	3045	3.77	2375	5.23	1649	6.01	1263										

Ratings are based on strength calculation. Basic static strength rating, or for hand operation of above gears is approximately 3 times the 100 RPM rating.

NOTE: Ratings to right of heavy line are not recommended, as pitch line velocity exceeds 1000 feet per minute. They should be used for interpolation purposes only.

*Torque Ratings (Lb. Ins.).