

SPUR GEARS

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

20 DIAMETRAL PITCH STEEL 20° PRESSURE ANGLE 1/2" FACE REFERENCE PAGE 30.

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	.01	36.5	.03	36.3	.06	35.8	.11	34.9	.16	34.1	.30	31.8	.42	29.7	.53	28.0	.71	25.0	1.08	18.9
14	.02	48.0	.04	47.7	.07	46.9	.14	45.6	.21	44.3	.39	40.9	.54	37.9	.67	35.4	.89	31.2	1.32	23.0
15	.02	53.8	.04	53.3	.08	52.5	.16	50.9	.23	49.3	.43	45.3	.60	41.9	.74	38.9	.97	34.1	1.42	24.9
16	.02	58.6	.05	58.1	.09	57.1	.18	55.2	.25	53.5	.46	48.8	.64	44.9	.79	41.6	1.04	36.3	1.49	26.2
18	.03	68.6	.05	67.9	.11	66.7	.20	64.2	.29	62.0	.53	56.1	.73	51.2	.90	47.1	1.16	40.6	1.64	28.7
20	.03	79.2	.06	78.4	.12	76.8	.23	73.7	.34	70.8	.60	63.5	.82	57.5	1.00	52.6	1.28	44.9	1.78	31.2
24	.04	99.5	.08	98.3	.15	95.8	.29	91.3	.41	87.1	.73	76.7	.98	68.5	1.18	61.9	1.48	51.9	2.00	34.9
25	.04	105	.08	103	.16	101	.30	95.6	.43	91.1	.76	79.9	1.02	71.1	1.22	64.1	1.53	53.5	2.04	35.8
30	.05	132	.10	130	.20	126	.38	119	.53	112	.92	96.4	1.21	84.5	1.43	75.2	1.76	61.6	2.28	40.0
35	.07	165	.13	162	.25	156	.46	145	.65	136	1.09	115	1.42	99.4	1.67	87.5	2.02	70.6	2.55	44.7
40	.08	194	.15	190	.29	182	.53	168	.75	157	1.24	130	1.58	111	1.84	96.6	2.20	77.0	2.73	47.8
45	.09	224	.17	219	.33	209	.61	192	.84	177	1.38	145	1.74	122	2.01	105	2.37	83.0		
50	.10	248	.19	242	.37	230	.66	210	.92	192	1.47	154	1.84	129	2.10	111	2.46	86.1		
60	.12	306	.24	296	.44	279	.79	250	1.08	227	1.68	177	2.07	145	2.34	123	2.69	94.0		
70	.14	365	.28	352	.52	329	.92	291	1.24	260	1.88	198	2.28	160	2.55	134				

20 DIAMETRAL PITCH CAST IRON 20° PRESSURE ANGLE 1/2" FACE REFERENCE PAGE 30.

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
80	.10	256	.20	246	.36	228	.63	198	.84	176	1.24	131	1.49	104	1.65	86.5				
84	.11	269	.20	257	.38	237	.65	206	.86	181	1.27	134	1.51	106	1.67	87.8				
90	.11	287	.22	274	.40	252	.69	216	.90	189	1.32	138	1.55	109	1.71	89.7				
100	.13	317	.24	302	.44	275	.74	233	.96	202	1.38	145	1.61	113	1.76	92.4				
120	.15	387	.29	365	.52	327	.86	271	1.10	231	1.53	161	1.76	123						
140	.18	447	.33	418	.59	369	.95	299	1.20	251	1.62	170	1.83	128						
160	.21	520	.38	481	.66	419	1.06	333	1.31	276	1.74	183								
180	.23	579	.42	532	.72	457	1.13	356	1.39	292	1.80	189								
200	.25	637	.46	580	.78	492	1.20	377	1.46	306	1.86	195								

16 DIAMETRAL PITCH STEEL 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
12	.03	85.5	.07	84.7	.13	83.4	.26	80.9	.37	78.4	.69	72.0	.95	66.5	1.18	61.8	1.55	54.2	2.26	39.5
14	.04	112	.09	111	.17	109	.33	105	.48	102	.88	92.2	1.20	84.4	1.48	77.7	1.92	67.2	2.73	47.7
15	.05	126	.10	124	.19	122	.37	117	.54	113	.97	102	1.33	92.8	1.62	85.2	2.09	73.1	2.93	51.3
16	.05	136	.11	135	.21	133	.40	127	.58	122	1.04	110	1.42	99.4	1.73	90.8	2.21	77.5	3.07	53.8
18	.06	160	.13	158	.25	155	.47	148	.67	142	1.19	125	1.61	113	1.94	102	2.46	86.2	3.35	58.6
20	.07	185	.14	183	.28	178	.54	169	.77	161	1.35	141	1.80	126	2.16	113	2.70	94.7	3.62	63.3
24	.09	233	.18	229	.35	222	.66	209	.94	198	1.62	170	2.12	149	2.52	132	3.10	108	4.02	70.4
28	.11	283	.22	278	.43	268	.79	250	1.12	235	1.88	198	2.44	171	2.87	151	3.47	122	4.40	77.0
30	.12	308	.24	302	.46	291	.86	270	1.20	253	2.01	211	2.59	181	3.02	159	3.63	127	4.55	79.7
32	.13	340	.26	333	.51	320	.94	296	1.31	275	2.17	228	2.78	195	3.23	170	3.86	135	4.79	83.9
36	.16	395	.31	385	.58	368	1.07	338	1.49	312	2.42	254	3.06	215	3.53	186	4.17	146	5.09	89.1
40	.18	452	.35	440	.66	418	1.21	381	1.66	349	2.67	280	3.34	234	3.82	201	4.47	156	5.37	94.1
48	.22	556	.43	539	.81	508	1.44	455	1.96	412	3.06	322	3.76	264	4.25	223	4.88	171		
56	.26	665	.51	642	.95	599	1.68	529	2.25	474	3.43	360	4.15	291	4.64	244				
60	.28	711	.54	684	1.01	636	1.77	557	2.36	496	3.55	373	4.27	299	4.75	250				
64	.31	779	.59	748	1.10	692	1.91	602	2.54	533	3.78	397	4.51	316	5.00	263				
72	.35	872	.66	833	1.21	764	2.08	656	2.74	575	4.00	420	4.72	330						
80	.39	991	.75	943	1.36	858	2.31	728	3.01	632	4.31	453	5.04	353						

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.).