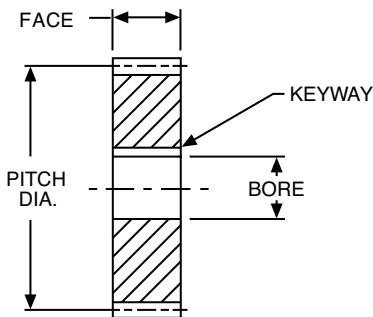


CATALOG NUMBER / DIMENSIONS 64-65
SELECTION PROCEDURE..... 66
HORSEPOWER & TORQUE RATINGS..... 67-68
STOCK ALTERED / CUSTOM HELICAL GEARS 3-5
HELICAL GEAR ENGINEERING INFORMATION..... 308-314

Helical Gears

24 through 10 Transverse Diametral Pitch (Steel – Hardened)

14-1/2° Normal Pressure Angle – 45° Helix Angle



STANDARD TOLERANCES

DIMENSION		TOLERANCE
BORE	All	±.0005

REFERENCE PAGES

- Alterations — 322
- Horsepower Ratings — 67
- Lubrication — 322
- Materials — 323
- Selection Procedure — 66

NOTE: Normal Diametral Pitch is equal to the Transverse Diametral Pitch divided by the cosine of the Helix Angle.

These gears are hardened all over, except as noted. Teeth on all steel gears are polished.

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

No. of Teeth	Pitch Dia.	Bore	Keyway	Style See Page 323	RIGHT HAND		LEFT HAND				
					Catalog Number	Item Code	Catalog Number	Item Code			
24					Face: 8-15 Teeth = .375"						
TRANSVERSE DIAMETRAL PITCH					18-72 Teeth = .250"						
8	.333	.1875	*	A	H2408R	18268	H2408L	18270			
10	.417	.250	**		H2410R	18272	H2410L	18274			
12	.500				H2412R	18276	H2412L	18278			
15	.625	.375	1/8 x 1/16		H2415R	18280	H2415L	18282			
18	.750				H2418R	18284	H2418L	18286			
20	.833	.500			H2420R	18288	H2420L	18290			
24	1.000				H2424R	18292	H2424L	18294			
30	1.250	.625			H2430R	18296	H2430L	18298			
36	1.500				H2436R†	18300	H2436L†	18302			
48	2.000				H2448R†	18304	H2448L†	18306			
60	2.500				H2460R†	18308	H2460L†	18310			
72	3.000				H2472R†	18312	H2472L†	18314			
20					Face: 8-15 Teeth = .563"						
TRANSVERSE DIAMETRAL PITCH					18-72 Teeth = .375"						
8	.400	.250		**	A	H2008R	18228	H2008L	18230		
10	.500	.3125		H2010R		18232	H2010L	18234			
12	.600	.375	1/8 x 1/16	H2012R		18236	H2012L	18238			
15	.750	.4375		H2015R		18240	H2015L	18242			
20	1.000	.500		H2020R		18244	H2020L	18246			
25	1.250	.625		H2025R		18248	H2025L	18250			
30	1.500	.750		3/16 x 3/32		H2030R†	18252	H2030L†	18254		
40	2.000					H2040R†	18256	H2040L†	18258		
50	2.500					H2050R†	18260	H2050L†	18262		
60	3.000					H2060R†	18264	H2060L†	18266		
16						Face = .500"					
TRANSVERSE DIAMETRAL PITCH											
12	.750	.375		1/16 x 1/32	A	H1612R	18200	H1612L	18202		
16	1.000			1/8 x 1/16		H1616R	18204	H1616L	18206		
20	1.250	.500	H1620R			18208	H1620L	18210			
24	1.500		H1624R†			18212	H1624L†	18214			
32	2.000		H1632R†			18216	H1632L†	18218			
40	2.500		H1640R†			18220	H1640L†	18222			
48	3.000		H1648R†			18224	H1648L†	18226			
12						Face = .750"					
TRANSVERSE DIAMETRAL PITCH											
12	1.000		1/8 x 1/16	A	H1212R	18170	H1212L	18168			
15	1.250	.625			H1215R	18174	H1215L	18172			
18	1.500				H1218R†	18178	H1218L†	18176			
24	2.000				H1224R†	18182	H1224L†	18180			
30	2.500				H1230R†	18186	H1230L†	18184			
36	3.000				H1236R†	18190	H1236L†	18188			
10					Face = .875"						
TRANSVERSE DIAMETRAL PITCH											
8	.800	.375	1/16 x 1/32	A	H1008R	18130	H1008L	18128			
10	1.000	.500	1/8 x 1/16		H1010R	18134	H1010L	18132			
12	1.200	.625			H1012R	18138	H1012L	18136			
15	1.500	.750			3/16 x 3/32	H1015R†	18142	H1015L†	18140		
20	2.000					H1020R†	18146	H1020L†	18144		
25	2.500					H1025R†	18148	H1025L†	18150		
30	3.000					H1030R†	18154	H1030L†	18152		
40	4.000					H1040R†	18158	H1040L†	18156		

*1/16" wide x .04" deep slot cut on end of gear for drive pin, not key.
 **3/32" wide x .06" deep slot cut on end of gear for drive pin, not key.
 †Teeth only hardened.

B

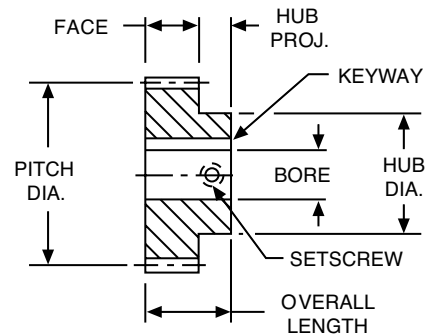
8 and 6 Transverse Diametral Pitch (Bronze & Steel – Hardened)

14-1/2° Normal Pressure Angle – 45° Helix Angle

All gears with hubs have setscrew at 90° to keyway. Steel gears have teeth only hardened, except as noted. Teeth on all steel gears are polished.

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

No. of Teeth	Pitch Dia.	Bore	Hub		Keyway	Style See Page 323	RIGHT HAND		LEFT HAND		
			Dia.	Proj.			Catalog Number	Item Code	Catalog Number	Item Code	
8 TRANSVERSE DIAMETRAL PITCH											
							Face without Hubs = 1.000" –with Hubs = .750" Overall Length = Face + Hub Proj.				
STEEL-HARDENED											
8	1.000	.500	–	–	1/8 x 1/16	A	H808R*	18066	H808L*	18064	
10	1.250	.625	–	–			H810R*	18070	H810L*	18068	
12	1.500	.750	–	–			H812R	18074	H812L	18072	
16	2.000	.875	–	–	3/16 x 3/32	A	H816R	18078	H816L	18076	
20	2.500						H820R	18082	H820L	18080	
24	3.000						H824R	18086	H824L	18084	
32	4.000						H832R	18090	H832L	18088	
8	1.000	.500	.75	.50	1/8 x 1/16	A	HS808R*	18092	HS808L*	18094	
10	1.250	.625	1.00	.50			HS810R*	18096	HS810L*	18098	
12	1.500	.750	1.25	.50			HS812R*	18100	HS812L*	18102	
16	2.000	1.000	2.00	.50	1/4 x 1/8	A	HS816R	18104	HS816L	18106	
20	2.500						HS820R	18108	HS820L	18110	
24	3.000						HS824R	18112	HS824L	18114	
32	4.000						HS832R	18116	HS832L	18118	
40	5.000	HS840R	18120	HS840L	18122						
48	6.000	HS848R	18124	HS848L	18126						
BRONZE											
8	1.000	.500	.75	.50	1/8 x 1/16	A	HB808R	18356	HB808L	18358	
10	1.250	.625	1.00	.50			HB810R	18360	HB810L	18362	
12	1.500	.750	1.24	.50			HB812R	18364	HB812L	18366	
16	2.000	1.000	2.00	.50	1/4 x 1/8	A	HB816R	18368	HB816L	18370	
20	2.500						HB820R	18372	HB820L	18374	
24	3.000						HB824R	18376	HB824L	18378	
32	4.000						HB832R	18380	HB832L	18382	
40	5.000	HB840R	18384	HB840L	18386						
48	6.000	HB848R	18388	HB848L	18390						
6 TRANSVERSE DIAMETRAL PITCH											
							Face without Hubs = 1.250" –with Hubs = 1.000" Overall Length = Face + Hub Proj.				
STEEL-HARDENED											
8	1.333	.625	–	–	1/8 x 1/16	A	H608R	18000	H608L	18002	
10	1.667	.750	–	–			3/16 x 3/32	H610R	18004	H610L	18006
12	2.000	1.000	–	–			1/4 x 1/8	H612R	18010	H612L	18008
15	2.500				H615R	18014		H615L	18012		
18	3.000				H618R	18018		H618L	18016		
24	4.000				H624R	18022		H624L	18020		
8	1.333	.625	1.00	.75	1/8 x 1/16	A	HS608R	18024	HS608L	18026	
9	1.500	.750	1.18	.75			3/16 x 3/32	HS609R	18028	HS609L	18030
10	1.667	.750	1.34	.75			HS610R	18032	HS610L	18034	
12	2.000	1.000	1.62	.75	1/4 x 1/8	A	HS612R	18036	HS612L	18038	
15	2.500	1.250	2.00	.75			5/16 x 5/32	HS615R	18040	HS615L	18042
18	3.000				HS618R	18044		HS618L	18046		
20	3.333				HS620R	18048		HS620L	18050		
24	4.000				HS624R	18052		HS624L	18054		
30	5.000	HS630R	18056	HS630L	18058						
36	6.000	HS636R	18060	HS636L	18062						
BRONZE											
12	2.000	1.000	1.62	.75	1/4 x 1/8	A	HB612R	18328	HB612L	18330	
15	2.500	1.250	2.00	.75			5/16 x 5/32	HB615R	18332	HB615L	18334
18	3.000				HB618R	18336		HB618L	18338		
20	3.333				HB620R	18340		HB620L	18342		
24	4.000				HB624R	18344		HB624L	18346		
30	5.000	HB630R	18348	HB630L	18350						
36	6.000	HB636R	18352	HB636L	18354						



STANDARD TOLERANCES

DIMENSION	TOLERANCE
BORE	All ±.0005

REFERENCE PAGES

Alterations — 322
Horsepower Ratings — 67, 68
Lubrication — 322
Materials — 323
Selection Procedure — 66

NOTE: Normal Diametral Pitch is equal to the Transverse Diametral Pitch divided by the cosine of the Helix Angle.

*Hardened all over.

Helical Gears



Boston standard stock helical gears are made with a 45° helix angle to transmit motion and/or power between non-intersecting shafts that are parallel or at 90° to each other. They are stocked both right and left-handed. For parallel shaft operation, helical gears having opposite hand helix angles are required, while for shafts at 90° the same hand helix must be used.

For parallel shaft applications, helical gears provide overlapping tooth contact. This results in a smoother, quieter operation and higher horsepower capacity than afforded by spur gears of comparable size.

For 90° shaft applications, the tooth contact area is very small which considerably limits the load capacity. Horsepower ratings are not tabulated in this catalog, for 90° applications.

Boston helical gears are top hobbed, resulting in extremely close concentricity between the pitch diameter and the outside diameter.

B

Selection Procedure

Approximate horsepower and torque ratings for selected sizes (numbers of teeth) at various operating speeds (RPM) are given for hardened steel helical gears. The ratings are based on the beam strength of the gear tooth. These ratings are for parallel shaft applications under normal operating conditions, that is: properly mounted and lubricated, carrying a smooth load for not more than 10 hours per day or a moderate shock load not more than 15 minutes in two hours (Service Factor 1.0). Refer to Table 1, below, for other types of service.

Ratings for gear sizes or speeds not listed may be interpolated from the values indicated. Pitchline velocities are limited as reflected by the lack of ratings for larger numbers of teeth at higher RPM's in the selection chart. Application in this area is not recommended.

Ref. Parallel shafts are approximately 98% efficient
90° shafts are approximately 50% efficient

Horsepower ratings for bronze gears are approximately 33% of these ratings.

1. Determine service factor.
 - a. Using Application Classification Chart I, pages 331-332 determine service factor or
 - b. With knowledge of operating conditions and load classification, select service factor from Table 1.

2. Determine Design Horsepower.

Design HP = Application Load × Service Factor (Table 1)

3. Select pinion with horsepower capacity equal to (or greater than) design horsepower determined in Step 2. Reference Rating Pages 67, 68.
4. Select a driven gear with a catalog rating equal to (or greater than) the horsepower determined in Step 2.

TABLE 1

Service Factor	Operating Conditions
.8	Uniform – not more than 15 minutes in 2 hours.
1.0	Moderate Shock – not more than 15 minutes in 2 hours. Uniform – not more than 10 hours per day.
1.25	Moderate Shock – not more than 10 hours per day. Uniform – more than 10 hours per day.
1.50	Heavy Shock – not more than 15 minutes in 2 hours. Moderate Shock – more than 10 hours per day.
1.75	Heavy Shock – not more than 10 hours per day.
2.0	Heavy Shock – more than 10 hours per day.

Heavy shock loads and/or severe wear conditions may require the use of higher service factors. Consultation with factory is recommended in these applications.

Approximate Horsepower and Torque* Ratings For Class I Service (Service Factor = 1.0)

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
24 DIAMETRAL PITCH - 33.94 NORMAL DIAMETRAL PITCH HARDENED STEEL .250-.375" FACE																				
8	.01	13.5	.01	13.5	.02	13.4	.04	13.2	.06	13.0	.12	12.5	.17	12.0	.22	11.6	.31	10.8	.51	8.9
10	.01	18.0	.01	17.9	.03	17.8	.06	17.4	.08	17.1	.16	16.3	.22	15.5	.28	14.8	.39	13.6	.62	10.9
12	.01	22.5	.02	22.3	.04	22.1	.07	21.6	.10	21.1	.19	20.0	.27	18.9	.34	17.9	.46	16.2	.72	12.6
15	.01	29.1	.02	28.9	.05	28.5	.09	27.8	.13	27.1	.24	25.2	.34	23.5	.42	22.0	.56	19.6	.84	14.8
18	.01	23.6	.02	23.4	.04	23.1	.07	22.4	.10	21.7	.19	19.9	.26	18.4	.33	17.1	.43	15.0	.62	10.9
20	.01	26.8	.02	26.5	.04	26.1	.08	25.2	.12	24.3	.21	22.2	.29	20.4	.36	18.8	.47	16.3	.67	11.7
24	.01	32.6	.03	32.3	.05	31.6	.10	30.3	.14	29.2	.25	26.1	.34	23.7	.41	21.6	.53	18.5	.73	12.8
30	.02	41.3	.03	40.8	.06	39.7	.12	37.8	.17	36.0	.30	31.6	.40	28.1	.48	25.3	.60	21.1	.81	14.1
36	.02	49.9	.04	49.1	.08	47.6	.14	44.9	.20	42.4	.35	36.4	.46	31.9	.54	28.4	.66	23.3	.86	15.1
48	.03	67.0	.05	65.6	.10	63.0	.19	58.3	.26	54.3	.43	45.0	.55	38.4	.64	33.5	.76	26.6	.94	16.5
60	.03	83.8	.06	81.6	.12	77.6	.22	70.7	.31	64.9	.50	52.0	.62	43.4	.71	37.3	.83	29.0	1.00	17.5
72	.04	101	.08	97.7	.15	92.1	.26	82.5	.36	74.8	.56	58.3	.68	47.8	.77	40.5	.89	31.0	1.00	18.2
20 DIAMETRAL PITCH - 28.28 NORMAL DIAMETRAL PITCH HARDENED STEEL .375-.563" FACE																				
8	.01	29.2	.02	29.1	.05	28.8	.09	28.4	.13	27.9	.25	26.6	.36	25.4	.46	24.3	.64	22.3	1.00	18.0
10	.01	37.7	.03	37.5	.06	37.1	.12	36.3	.17	35.6	.32	33.5	.45	31.7	.57	30.1	.78	27.2	1.20	21.2
12	.02	48.5	.04	48.2	.08	47.5	.15	46.4	.22	45.2	.40	42.2	.56	39.5	.71	37.1	.95	33.2	1.44	25.1
15	.02	62.7	.05	62.2	.10	61.2	.19	59.3	.27	51.6	.50	52.8	.70	48.8	.86	45.4	1.14	39.8	1.66	29.0
20	.02	57.7	.05	57.1	.09	55.9	.17	53.7	.25	51.6	.44	46.2	.60	41.9	.73	38.3	.93	32.7	1.30	22.7
25	.03	73.8	.06	72.8	.11	70.9	.21	67.4	.31	64.3	.54	56.4	.72	50.2	.86	45.2	1.08	37.7	1.44	25.2
30	.04	89.1	.07	87.6	.13	85.0	.25	80.0	.36	75.7	.62	65.0	.81	56.9	.96	50.7	1.19	41.5	1.54	27.0
40	.05	120	.09	118	.18	113	.33	104	.46	97.2	.77	80.5	.98	68.7	1.14	59.9	1.36	47.7	1.69	29.6
50	.06	151	.12	147	.22	139	.40	127	.55	117	.89	93.4	1.11	78.0	1.27	66.9	1.49	52.1	1.79	31.4
60	.07	180	.14	175	.26	165	.47	147	.64	134	.99	104	1.22	85.4	1.38	72.3	1.58	55.4	1.86	32.5
16 DIAMETRAL PITCH - 22.63 NORMAL DIAMETRAL PITCH HARDENED STEEL .500" FACE																				
12	.03	67.2	.05	66.6	.10	65.6	.20	63.6	.29	61.7	.54	56.6	.75	52.3	.93	48.6	1.20	42.6	1.80	31.1
16	.04	93.4	.07	92.4	.14	90.5	.28	86.9	.40	83.5	.71	74.8	.97	67.8	1.18	62.0	1.51	52.9	2.10	36.7
20	.05	120	.09	118	.18	115	.35	110	.50	104	.87	91.5	1.16	81.5	1.40	73.4	1.75	61.3	2.34	41.0
24	.06	146	.11	144	.22	139	.42	131	.59	124	1.00	107	1.33	93.3	1.58	83.0	1.94	68.1	2.52	44.2
32	.08	197	.15	193	.29	185	.54	172	.76	160	1.26	132	1.61	113	1.87	98.4	2.24	78.4	2.78	48.7
40	.10	249	.19	242	.37	230	.67	210	.92	193	1.47	154	1.84	129	2.11	111	2.46	86.2	3.00	51.8
48	.12	298	.23	289	.43	273	.77	244	1.05	221	1.64	173	2.02	141	2.28	120	2.62	91.8	3.08	53.9
12 DIAMETRAL PITCH - 16.97 NORMAL DIAMETRAL PITCH HARDENED STEEL .750" FACE																				
12	.07	179	.14	177	.27	173	.53	166	.76	160	1.36	143.2	1.85	130	2.26	119	2.89	101	4.01	70.2
15	.09	231	.18	228	.35	222	.67	211	.96	201	1.68	176	2.24	157	2.69	142	3.37	118	4.51	79.0
18	.11	281	.22	277	.43	268	.80	253	1.14	239	1.95	205	2.57	180	3.05	160	3.75	131	4.86	85.1
24	.15	387	.30	379	.58	364	1.07	337	1.49	313	2.47	260	3.16	222	3.68	193	4.39	154	5.45	95.5
30	.19	489	.38	477	.72	453	1.31	413	1.80	379	2.89	304	3.62	254	4.14	218	4.84	170	5.82	102
36	.23	589	.45	571	.85	538	1.53	482	2.08	437	3.24	341	3.99	279	4.50	237	5.17	181	6.08	106
10 DIAMETRAL PITCH - 14.14 NORMAL DIAMETRAL PITCH HARDENED STEEL .875" FACE																				
8	.07	181	.14	179	.28	176	.54	171	.79	165	1.44	151	1.78	139	2.45	129	3.20	112	4.62	80.9
10	.10	240	.19	238	.37	233	.71	223	1.02	215	1.83	193	2.49	174	3.03	159	3.88	136	5.39	94.4
12	.12	300	.23	296	.46	288	.87	275	1.25	262	2.20	231	2.95	206	3.55	186	4.46	156	6.01	105
15	.15	387	.30	381	.59	369	1.10	348	1.56	329	2.69	282	3.53	247	4.19	220	5.16	181	6.69	117
20	.21	533	.41	522	.79	501	1.47	464	2.05	432	3.40	357	4.35	305	5.06	266	6.05	212	7.51	131
25	.27	680	.53	662	1.00	630	1.82	573	2.50	526	4.01	422	5.03	352	5.75	302	6.72	235	8.09	142
30	.32	818	.63	793	1.19	747	2.12	669	2.89	606	4.50	473	5.54	388	6.25	328	7.18	252	8.44	148
40	.44	1097	.84	1053	1.55	975	2.69	849	3.58	751	5.32	559	6.36	445	7.04	370	7.89	276	8.97	157
8 DIAMETRAL PITCH - 11.31 NORMAL DIAMETRAL PITCH HARDENED STEEL .750" FACE																				
8	.10	242	.19	239	.37	234	.71	225	1.03	216	1.85	194	2.51	176	3.06	160	3.91	137	5.43	95
10	.13	321	.25	317	.49	309	.93	293	1.33	280	2.53	245	3.12	218	3.74	197	4.69	164	6.27	110
12	.16	400	.31	394	.61	382	1.14	360	1.62	340	2.78	292	3.65	256	4.34	228	5.33	187	6.92	121
16	.22	555	.43	543	.83	521	1.53	483	2.14	447	3.54	372	4.53	318	5.27	277	6.30	221	7.82	137
20	.28	710	.55	692	1.04	658	1.90	599	2.62	550	4.20	441	5.26	368	6.01	316	7.03	246	8.45	148
24	.34	862	.66	836	1.25	787	2.24	706	3.04	639	4.75	499	5.84	409	6.59	346	7.57	265	8.90	156
32	.46	1160	.88	1113	1.64	1031	2.85	897	3.78	794	5.63	591	6.72	471	7.44	391	8.34	292		
40	.58	1454	1.10	1383	2.00	1259	3.39	1068	4.41	927	6.32	664	7.39	517	8.07	424	8.88	311		
48	.69	1137	1.30	1636	2.33	1466	3.85	1214	4.93	1036	6.85	719	7.87	551	8.50	447				

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 exceed 1500 Feet per Minute and should be used for interpolation purposes only.

*Torque Rating (Lb. Ins.)



Helical Gears

Approximate Horsepower and Torque* Ratings

For Class I Service (Service Factor = 1.0)

No.	25 RPM		50 RPM		100 RPM		200 RPM		300 RPM		600 RPM		900 RPM		1200 RPM		1800 RPM		3600 RPM					
	Teeth	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			
8 DIAMETRAL PITCH – 11.31 NORMAL DIAMETRAL PITCH HARDENED STEEL																					1.000" FACE			
8	.13	323	.25	319	.50	313	.95	300	1.4	288	2.5	258	3.3	234	4.1	214	5.2	183	7.2	127				
10	.17	428	.34	422	.65	412	1.20	391	1.8	373	3.1	327	4.2	291	5.0	262	6.3	219	8.4	146				
12	.21	534	.42	525	.81	509	1.50	480	2.2	453	3.7	389	4.9	341	5.8	304	7.1	249	9.2	162				
16	.29	740	.57	725	1.1	696	2.00	644	2.9	599	4.7	496	6.1	423	7.0	370	8.4	294	10.4	182				
20	.38	947	.73	923	1.4	877	2.50	799	3.5	733	5.6	588	7.0	491	8.0	421	9.3	328	11.1	197				
24	.46	1150	.88	1114	1.7	1050	3.00	941	4.1	852	6.3	665	7.7	545	8.8	462	10.1	352	11.9	208				
32	.61	1547	1.20	1485	2.2	1374	3.80	1196	5.0	1059	7.5	788	9.0	628	9.9	521	11.1	389	12.7	221				
8 DIAMETRAL PITCH – 11.31 NORMAL DIAMETRAL PITCH BRONZE																					.750" FACE			
8	.04	97	.08	95.8	.15	93.8	.29	90.0	.41	86.5	.74	77.5	1.00	70.2	1.22	64.2	1.56	54.8	2.17	38.0				
10	.05	128	.10	127	.20	123	.37	117	.53	112	.93	98.1	1.25	87.3	1.50	78.7	1.88	65.7	2.51	43.9				
12	.06	160	.12	158	.24	153	.46	144	.65	136	1.11	117	1.46	102	1.73	91.1	2.13	74.7	2.77	48.4				
16	.09	222	.17	217	.33	209	.61	193	.86	180	1.42	149	1.81	127	2.11	111	2.52	88.2	3.13	54.7				
20	.11	284	.22	277	.42	263	.76	240	1.05	220	1.68	176	2.10	147	2.41	126	2.81	98.4	3.38	59.2				
24	.14	345	.27	334	.50	315	.90	282	1.22	256	1.90	199	2.33	163	2.64	138	3.03	106	3.56	62.3				
32	.18	464	.35	445	.65	412	1.14	359	1.51	318	2.75	236	2.69	188	2.98	156	3.34	117						
40	.23	582	.44	553	.80	504	1.36	427	1.76	371	2.53	266	2.95	207	3.23	169	3.55	124						
48	.28	695	.52	655	.93	587	1.54	486	1.97	414	2.74	288	3.15	220	3.40	179								
6 DIAMETRAL PITCH – 8.48 NORMAL DIAMETRAL PITCH HARDENED STEEL																					1.000" FACE			
8	.01	572	.45	564	.87	548	1.65	520	2.35	494	4.09	430	5.44	381	6.50	342	8.09	283	10.70	187				
9	.26	664	.52	653	1.00	633	1.89	597	2.68	564	4.61	484	6.06	424	7.19	378	8.84	310	11.47	201				
10	.30	758	.59	745	1.14	720	2.14	674	3.02	634	5.11	537	6.66	466	7.84	412	9.54	334	12.17	213				
12	.37	944	.73	924	1.41	887	2.61	821	3.64	764	6.02	633	7.71	540	8.97	471	10.71	375	13.29	233				
15	.48	1217	.94	1185	1.79	1127	3.26	1026	4.48	942	7.19	755	9.00	630	10.30	541	12.04	421	14.48	253				
18	.59	1478	1.14	1433	2.14	1350	3.84	1210	5.22	1096	8.14	855	10.00	700	11.30	593	12.98	454	15.25	267				
20	.66	1670	1.28	1613	2.40	1511	4.25	1340	5.73	1204	8.79	924	10.69	749	11.99	630	13.65	478						
24	.80	2024	1.54	1942	2.85	1798	4.97	1565	6.60	1386	9.82	1031	11.72	821	12.98	682	14.55	510						
30	1.01	2546	1.92	2420	3.50	2203	5.93	1868	7.72	1622	11.06	1162	12.92	905	14.11	741	15.54	544						
36	1.21	3048	2.28	2872	4.08	2573	6.76	2131	8.65	1818	12.02	1262	13.81	967	14.92	783								
6 DIAMETRAL PITCH – 8.48 NORMAL DIAMETRAL PITCH HARDENED STEEL																					1.250" FACE			
8	.28	715	.56	705	1.09	685	2.06	650	2.94	617	5.12	537	6.79	476	8.13	427	10.11	354	13.37	234				
10	.38	948	.74	931	1.43	899	2.67	842	3.77	792	6.39	672	8.32	583	9.80	515	11.93	418	15.22	266				
12	.47	1180	.92	1155	1.76	1109	3.26	1026	4.55	955	7.53	791	9.64	675	11.21	589	13.38	469	16.61	291				
15	.60	1521	1.18	1482	2.24	1409	4.07	1282	5.60	1177	8.99	944	11.25	788	12.87	676	15.04	527	18.10	317				
18	.73	1848	1.42	1791	2.68	1687	4.80	1512	6.52	1370	10.17	1068	12.50	876	14.12	742	16.22	568	19.06	334				
24	1.00	2529	1.93	2428	3.57	2247	6.21	1956	8.24	1732	12.27	1289	14.65	1026	16.23	852	18.19	637						
6 DIAMETRAL PITCH – 8.48 NORMAL DIAMETRAL PITCH BRONZE																					1.000" FACE			
12	.15	378	.29	370	.56	355	1.04	328	1.46	306	2.41	253	3.08	216	3.59	188	4.28	150	5.32	93.1				
15	.19	487	.38	474	.72	451	1.30	410	1.79	377	2.88	302	3.60	252	4.12	216	4.81	169	5.79	101				
18	.23	591	.45	513	.86	540	1.54	484	2.09	439	3.25	342	4.00	280	4.52	237	5.19	182	6.10	107				
20	.26	668	.51	645	.96	604	1.70	536	2.29	482	3.52	369	4.28	300	4.80	252	5.46	191						
24	.32	810	.62	777	1.14	719	1.99	626	2.64	554	3.93	412	4.69	328	5.19	273	5.82	204						
30	.40	1018	.77	968	1.40	881	2.37	747	3.09	649	4.42	465	5.17	362	5.65	296	6.22	218						
36	.48	1219	.91	1149	1.63	1029	2.70	852	3.46	727	4.81	505	5.52	387	5.97	313								

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 exceed 1500 Feet per Minute and should be used for interpolation purposes only.

*Torque Rating (Lb. Ins.)