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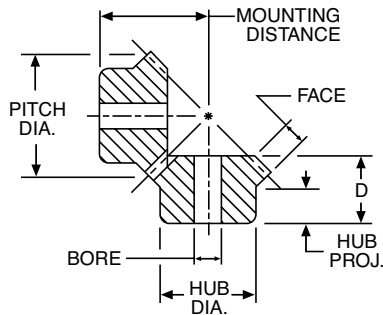
Miter Gears

48 through 20 Diametral Pitch (Nylon, Brass, Stainless Steel & Steel – Unhardened)

1:1 Ratio 20° Pressure Angle



All gears have “Coniflex”® tooth form, except as noted.



REFERENCE PAGES

Alterations — 322
Lubrication — 322
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STANDARD TOLERANCES*

DIMENSION		TOLERANCE
BORE	All	±.0005

*Brass and Steel only.

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

No. of Teeth	Pitch Dia.	Face	Bore	MD *	D	Hub		Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code
						Dia.	Proj.								
48								MOLDED		BRASS		STAINLESS		STEEL	
DIAMETRAL PITCH								NYLON				STEEL		UNHARDENED	
15	.312	.07	.125	.312	.215	.25	.13	GP4815†‡	54096	G460Y†	12126	GSS460Y†	49984	—	—
18	.375	.08	.125	.406	.286	.33	.19	GP4818Y†	54097	—	—	—	—	—	—
24	.500	.08	.1875	.531	.375	.31	.16	—	—	G461Y†	12128	GSS461Y†	49985	L94Y†	12140
24	.500	.08	.1875	.531	.375	.38	.25	GP4824Y†	54098	—	—	—	—	—	—
32															
DIAMETRAL PITCH															
16	.500	.12	.1875	.500	.349	.41	.19	GP3216Y†	54099	G462Y†	12114	GSS462Y†	49986	L97Y†	12146
24	.750	.14	.1875	.688	.406	.50	.19	GP3224Y†	54100	—	—	—	—	—	—
24	.750	.14	.1875	.688	.427	.50	.25	—	—	G463Y†	12116	GSS463Y†	49987	L95Y†	12142
30															
DIAMETRAL PITCH															
15	.500	.12	.1875	.500	.349	.41	.19	—	—	—	—	—	—	L93Y	12138
24															
DIAMETRAL PITCH															
24	1.000	.20	.250	.906	.567	.62	.19	GP2424Y†	54101	—	—	—	—	—	—
30	1.250	.23	.250	1.031	.590	.62	.31	GP2430Y†	54102	G465Y	12102	—	—	—	—
36	1.500	.23	.3125	1.188	.620	.69	.31	GP2436Y†	54103	G466Y	12104	—	—	—	—
20															
DIAMETRAL PITCH															
12	.600	.13	.250	.672	.489	.50	.31	—	—	—	—	—	—	L98Y	12148

*Mounting Distance (MD) must not be made less than dimension shown, see Page 316.

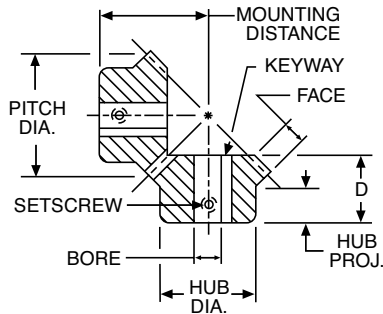
†Not “Coniflex” tooth form. Can be furnished with “Coniflex” tooth on special order.

‡Acetal.

16 through 10 Diametral Pitch (Nylon & Steel – Unhardened & Hardened)

1:1 Ratio 20° Pressure Angle

All gears have “Coniflex”® tooth form, except as noted.
All hardened steel gears have teeth only hardened, except as noted, and are equipped with standard keyways and setscrews.



STANDARD TOLERANCES*

DIMENSION		TOLERANCE
BORE	All	±.0005

*Steel only.

REFERENCE PAGES

Alterations — 322
Horsepower Ratings — 80, 81
Lubrication — 322
Materials — 323
Selection Procedure — 79

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

No. of Teeth	Pitch Dia.	Face	Bore	MD *	D	Hub		Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code
						Dia.	Proj.						
16 DIAMETRICAL PITCH								MOLDED NYLON		STEEL UNHARDENED		STEEL HARDENED	
12	.750	.16	.3125	.812	.583	.62	.38	—	—	L99Y	12150	—	—
16	1.000	.23	.375	1.062	.755	.75	.44	GP1616Y†	54104	L110Y	12174	HLK110Y**	12326
20	1.250	.28	.4375	1.250	.849	1.00	.50	—	—	L111Y	12176	—	—
24	1.500	.32	.500	1.375	.880	1.00	.50	—	—	L112Y	12156	—	—
32	2.000	.39	.500	1.562	.875	1.25	.38	GP1632Y†‡	54105	—	—	—	—
14 DIAMETRICAL PITCH													
14	1.000	.20	.375 .4375	1.062	.739	.88	.50	— —	— —	L124Y L100Y	12202 12152	— —	— —
12 DIAMETRICAL PITCH													
15	1.250	.29	.375 .4375 .500	1.250	.864	1.00	.50	— — —	— — —	L125Y L126Y L101Y	12204 12206 12154	— — HLK101Y**	— — 12328
18	1.500	.33	.500 .625	1.500	1.021	1.25	.63	— —	— —	L127Y L102Y	12208 12158	— HLK102Y	— 12330
21	1.750	.40	.500 .5625 .625 .750	1.750	1.192	1.38	.69	— — — —	— — — —	L119Y L120Y L121Y L133Y	12190 12192 12194 12218	— — HLK121Y —	— — 12334 —
24	2.000	.44	.500	1.875	1.224	1.31	.69	—	—	L113Y	12178	—	—
30	2.500	.55	.625	2.312	1.489	1.62	.84	—	—	L114Y	12180	HLK114Y	12332
10 DIAMETRICAL PITCH													
20	2.000	.45	.500 .625 .750	2.000	1.364	1.62	.81	— — —	— — —	L128Y L129Y L103Y	12210 12212 12160	— HLK129Y HLK103Y	— 12348 12344
25	2.500	.56	.750 .875 1.000	2.438	1.630	2.00	.94	— — —	— — —	L130Y L104Y L131Y	12214 12162 12216	HLK130Y HLK104Y HLK131Y	12350 12346 12352

*Mounting Distance (MD) must not be made less than dimension shown, see Page 316.

†Not “Coniflex” tooth form.

**Hardened all over.

‡Nylon (Mineral Filled).

Miter Gears

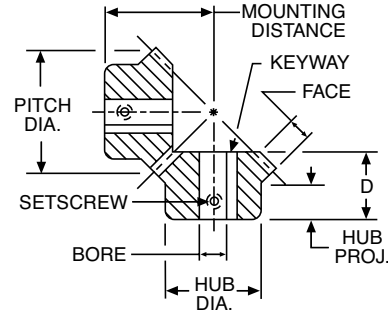
8 through 4 Diametral Pitch (Steel – Unhardened, Hardened & Cast Iron)

1:1 Ratio 20° Pressure Angle



All gears have “Coniflex”® tooth form, except as noted.

All hardened steel gears have teeth only hardened, except as noted, and are equipped with standard keyways and setscrews. All unhardened steel gears have no keyway and no setscrew.



REFERENCE PAGES

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Selection Procedure — 79

STANDARD TOLERANCES

DIMENSION		TOLERANCE
BORE	All	±.0005

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

No. of Teeth	Pitch Dia.	Face	Bore	MD *	D	Hub		Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code
						Dia.	Proj.						
8 DIAMETRAL PITCH													
								STEEL UNHARDENED		STEEL HARDENED		CAST IRON	
24	3.000	.66 .68	.750 1.000 1.250	2.562 2.750	1.583 1.786	1.75 2.50	.81 1.00	L115Y L105Y-A L116Y	12182 12164 12184	HLK115Y HLK105YA HLK116Y	12366 12362 12368	— — —	— — —
28	3.500	.77	1.000 1.1875 1.250	3.250	2.099	2.50	1.25	L117Y L132Y L106Y	12186 12196 12166	HLK117Y HLK132Y HLK106Y	12370 12374 12364	— — —	— — —
32	4.000	.85 .85	.875 1.000 .875	2.875 3.625 3.438	1.724 2.286 2.098	2.00 3.00 2.25	.88 1.13 1.12	— L123Y —	— 12200 —	— HLK123Y —	— 12372 —	OA828Y-1 — OA832Y-1	12418 — 12420
6 DIAMETRAL PITCH													
24	4.000	.87	1.250 1.500	3.625	2.317	3.00	1.31	L118Y L107Y	12188 12168	HLK118Y HLK107Y	12386 12384	OA624Y† —	12412 —
27	4.500	.96	1.250 1.500	4.125	2.630	3.25	1.50	L134Y L135Y	12220 12222	— —	— —	— —	— —
30	5.000	1.16	1.000	4.250	2.640	2.50	1.38	—	—	—	—	OA630Y-1	12414
36	6.000	1.28	1.125	4.625	2.605	2.88	1.19	—	—	—	—	OA636Y-1	12416
5 DIAMETRAL PITCH													
25	5.000	1.12	1.375 1.500 1.750	4.625	3.005	3.50	1.75	L122Y L136Y L108Y	12198 12224 12170	HLK122Y — HLK108Y	12398 — 12396	— OA525Y —	— 12408 —
4 DIAMETRAL PITCH													
24	6.000	1.35	1.500 1.750	5.500	3.567	4.00	1.94	L137Y L109Y	12226 12172	— HLK109Y	— 12404	— OA424Y**	— 12406
28	7.000	1.43	2.000	6.000	3.630	5.00	1.94	L138Y	12228	—	—	—	—

*Mounting Distance (MD) must not be made less than dimension shown, see Page 316.

†Hub Dia. — 2.750"

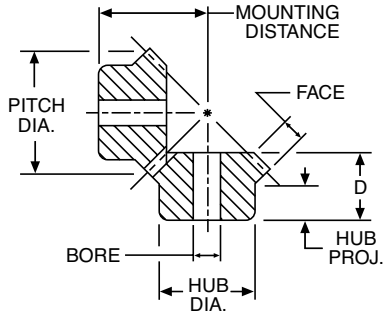
**Hub Proj. — 2.000"

Spiral Miter Gears

18 through 5 Diametral Pitch (Steel – Unhardened & Hardened)

1:1 Ratio 20° Pressure Angle – 35° Spiral Angle

All hardened steel gears have teeth only hardened, except as noted, and are equipped with standard keyways and set-screws.



STANDARD TOLERANCES

DIMENSION	TOLERANCE
BORE	All ±.0005

REFERENCE PAGES

Alterations — 322
Horsepower Ratings — 83
Lubrication — 322
Materials — 323
Selection Procedure — 79

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

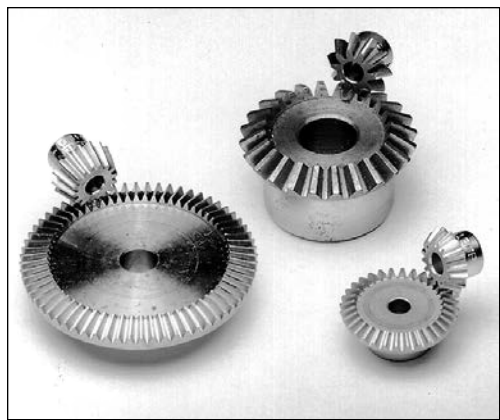
No. of Teeth	Pitch Dia.	Face	Bore	MD *	D	Hub		Catalog Number	Item Code	Catalog Number	Item Code
						Dia.	Proj.				
18 DIAMETRICAL PITCH								STEEL UNHARDENED		STEEL HARDENED	
18	1.000	.22	.375	1.062	.739	.75	.44	LSA110Y-R LSA110Y-L	12310 12312	HLSK110Y-R† HLSK110Y-L†	12322 12324
12 DIAMETRICAL PITCH											
15	1.250	.30	.500	1.250	.864	1.00	.50	LSA101Y-R LSA101Y-L	12282 12284	HLSK101Y-R† HLSK101Y-L†	12336 12338
18	1.500	.34	.625	1.500	1.021	1.25	.56	LSA102Y-R LSA102Y-L	12286 12288	HLSK102Y-R HLSK102Y-L	12340 12342
10 DIAMETRICAL PITCH											
20	2.000	.47	.750	2.000	1.364	1.62	.78	LSA103Y-R LSA103Y-L	12290 12292	HLSK103Y-R HLSK103Y-L	12354 12356
25	2.500	.58	.875	2.438	1.630	2.00	.91	LSA104Y-R LSA104Y-L	12294 12296	HLSK104Y-R HLSK104Y-L	12358 12360
8 DIAMETRICAL PITCH											
28	3.500	.78	1.1875	3.250	2.099	2.50	1.25	LSA106Y-R LSA106Y-L	12302 12304	HLSK106Y-R HLSK106Y-L	12376 12378
7 DIAMETRICAL PITCH											
21	3.000	.69	1.000	2.750	1.786	2.50	.88	LSA105YA-R LSA105YA-L	12298 12300	HLSK105YA-R HLSK105YA-L	12380 12382
6 DIAMETRICAL PITCH											
24	4.000	.89	1.250	3.625	2.317	3.00	1.31	LSA118Y-R LSA118Y-L	12314 12316	HLSK118Y-R HLSK118Y-L	12392 12394
			1.500					LSA107Y-R LSA107Y-L	12306 12308	HLSK107Y-R HLSK107Y-L	12388 12390
5 DIAMETRICAL PITCH											
25	5.000	1.15	1.375	4.625	3.005	3.50	1.75	LSA122Y-R LSA122Y-L	12318 12320	HLSK122Y-R HLSK122Y-L	12400 12402

*Mounting Distance (MD) must not be made less than dimension shown, see Page 316.

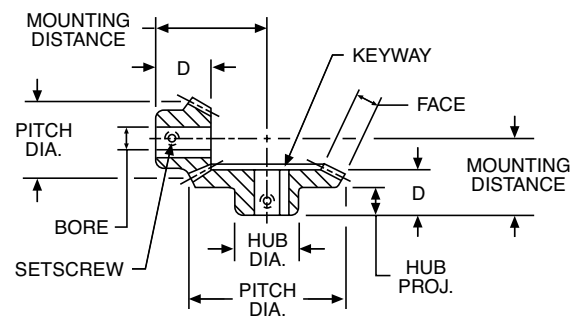
†Hardened all over.

Bevel Gears

48 through 20 Diametral Pitch (Brass, Stainless Steel & Steel – Hardened & Unhardened) 20° Pressure Angle



All gears have “Coniflex”[®] tooth form, except as noted. All hardened steel gears have teeth only hardened and are equipped with standard keyways and setscrews, except as noted.



REFERENCE PAGES

Alterations — 322
Lubrication — 322
Materials — 323

STANDARD TOLERANCES

DIMENSION	TOLERANCE
BORE	All ±.0005

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

Ratio	No. of Teeth	Pitch Dia.	Face	Bore	MD *	D	Hub		Catalog Number	Item Code	Catalog Number	Item Code
							Dia.	Proj.				
48 DIAMETRICAL PITCH									BRASS		STAINLESS STEEL	
2:1	36 18	.750 .375	.12	.1875 .125	.438 .594	.257 .335	.44 .28	.19 .19	G479Y-G† G479Y-P†	12136 12134	GSS479Y-G† GSS479Y-P†	49991 49990
3:1	36 12	.750 .250	.09	.1875 .125	.375 .562	.257 .285	.44 .22	.19 .17	G478Y-G† G478Y-P†	12132 12130	GSS478Y-G† GSS478Y-P†	49989 49988
32 DIAMETRICAL PITCH												
2:1	32 16	1.000 .500	.14	.1875 .125	.594 .719	.382 .365	.56 .38	.25 .17	G481Y-G† G481Y-P†	12120 12118	GSS481Y-G† GSS481Y-P†	49993 49992
4:1	64 16	2.000 .500	.24	.3125 .1875	.688 1.250	.445 .500	1.00 .38	.31 .22	G486Y-G† G486Y-P†	12108 12106	GSS486Y-G† GSS486Y-P†	49995 49994
24 DIAMETRICAL PITCH												
2:1	36 18	1.500 .750	.24	.250 .1875	.781 1.062	.460 .540	.88 .56	.31 .25	G485Y-G G485Y-P	12124 12122	— —	— —
	48 24	2.000 1.000	.26	.3125 .250	.938 1.375	.507 .630	1.12 .69	.31 .28	G487Y-G G487Y-P	12112 12110	— —	— —
	20 DIAMETRICAL PITCH											
2:1	20 10	1.000 .500	.18	.375 .1875	.688 .750	.460 .425	.75 .41	.31 .25	L147Y-G L147Y-P	12234 12236	— —	— —
	20 10	1.000 .500	.18	.375 .1875	.688 .750	.460 .425	.75 .41	.31 .25	— —	— —	HL147Y-G† HL147Y-P†	11854 11856

*Mounting Distance (MD) must not be made less than dimension shown, see Page 316.

†Not “Coniflex” tooth form. Can be furnished with “Coniflex” tooth on special order.

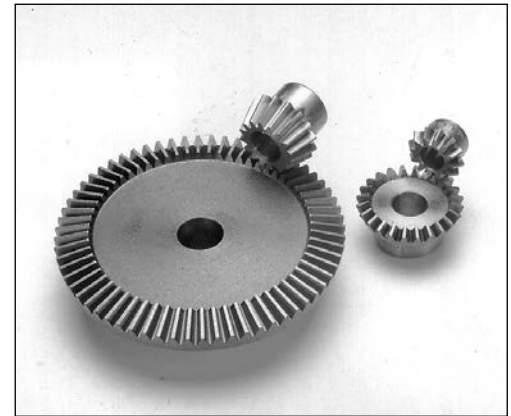
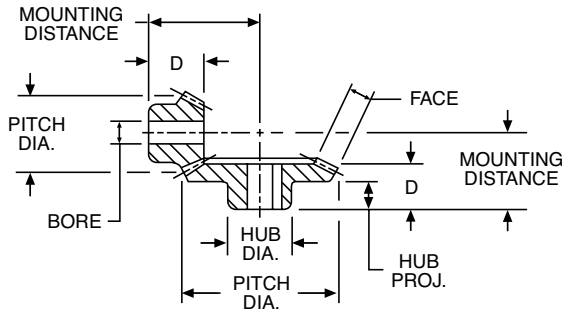
‡These gears have No. 47 (.0785) drilled hole in hub. No keyway or setscrew.

16 through 12 Diametral Pitch (Steel – Unhardened, Hardened & Cast Iron)

20° Pressure Angle

All gears have “Coniflex”® tooth form.

All Hardened steel gears have teeth only hardened and are equipped with standard keyways and setscrews.



REFERENCE PAGES

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Selection Procedure — 79

STANDARD TOLERANCES

DIMENSION		TOLERANCE
BORE	All	±.0005

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

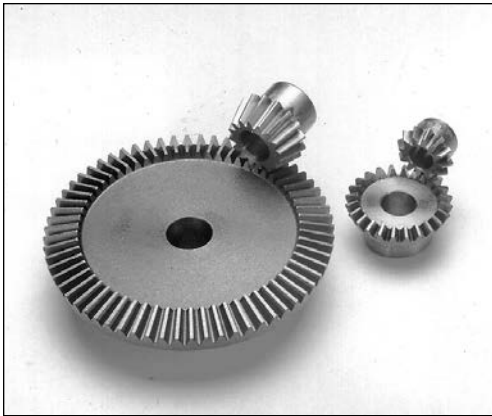
Ratio	No. of Teeth	Pitch Dia.	Face	Bore	MD *	D	Hub		Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code
							Dia.	Proj.						
16 DIAMETRAL PITCH									STEEL UNHARDENED		STEEL HARDENED		CAST IRON GEARS STEEL PINIONS	
1-1/2:1	24 16	1.500 1.000	.26	.500 .375	1.188 1.250	.760 .740	1.12 .81	.56 .44	L146Y-G L146Y-P	12230 12232	— —	— —	— —	— —
	24 16	1.500 1.000	.26	.500 .375	1.188 1.250	.750 .740	1.12 .81	.56 .44	— —	— —	HL146Y-G HL146Y-P	11850 11852	— —	— —
2:1	24 12	1.500 .750	.20 .19	.500 .375	1.000 1.125	.625 .575	1.00 .66	.44 .34	L148Y-G L148Y-P	12238 12240	HL148Y-G HL148Y-P	11858 11860	— —	— —
	32 16	2.000 1.000	.36	.500 .375	1.188 1.500	.775 .845	1.12 .81	.50 .44	L149Y-G L149Y-P	12242 12244	HL149Y-G HL149Y-P	11862 11864	— —	— —
3:1	48 16	3.000 1.000	.42	.625 .4375	1.312 2.000	.882 .920	1.50 .88	.56 .47	— —	— —	— —	— —	PA3316Y-G PA3316Y-P	12484 12486
4:1	64 16	4.000 1.000	.49	.625 .500	1.375 2.500	.898 .990	2.25 .81	.56 .47	— —	— —	— —	— —	PA4416Y-G PA4416Y-P	12492 12494
6:1	96 16	6.000 1.000	.62	.625 .500	1.688 3.750	1.257 1.375	1.75 .94	.88 .72	— —	— —	— —	— —	PA6616Y-G PA6616Y-P	12516 12518
14 DIAMETRAL PITCH														
2:1	28	2.000	.36	.500	1.375	.945	1.62	.66	L150Y-G	12246	HL150Y-G	11866	—	—
	14	1.000	.35	.375 .500	1.625	.965	.81	.56	— L150Y-P	— 12248	HL150Y-P —	11868 —	— —	— —
12 DIAMETRAL PITCH														
1-1/2:1	27	2.250	.42	.500 .750	1.750	1.135	1.50	.78	L151Y-G —	12250 —	— HL151Y-G	— 11870	— —	— —
	18	1.500	.41	.500	1.875	1.130	1.25	.66	L151Y-P	12254	HL151Y-P	11872	—	—
2:1	36	3.000	.54	.625	1.875	1.275	2.12	.88	L152BY-G	12260	—	—	—	—
	18	1.500	.54	.500	2.375	1.385	1.31	.81	L152BY-P	12262	—	—	—	—
	36	3.000	.54	1.000	1.875	1.275	2.12	.88	L152Y-G	12256	HL152Y-G	11874	—	—
	18	1.500	.53	.625 .750	2.375	1.375	1.31	.81	— L152Y-P	— 12258	HL152Y-P —	11876 —	— —	— —

*Mounting Distance (MD) must not be made less than dimension shown, see Page 316.

Bevel Gears

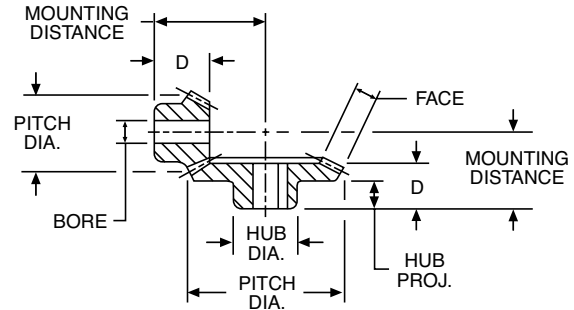
12 and 10 Diametral Pitch (Steel – Unhardened, Hardened & Cast Iron)

20° Pressure Angle



All gears have “Coniflex”® tooth form.

All Hardened steel gears have teeth only hardened and are equipped with standard keyways and setscrews.



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Lubrication — 322
Materials — 323
Selection Procedure — 79

STANDARD TOLERANCES

DIMENSION		TOLERANCE
BORE	All	±.0005

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

Ratio	No. of Teeth	Pitch Dia.	Face	Bore	MD *	D	Hub		Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code
							Dia.	Proj.						
12 DIAMETRAL PITCH									STEEL UNHARDENED		STEEL HARDENED		CAST IRON GEARS STEEL PINIONS	
2:1	36 18	3.000 1.500	.47	.625 .500	1.500 2.250	.882 1.205	1.44 1.25	.50 .69	— —	— —	— —	— —	PA3212Y-G PA3212Y-P	12480 12482
	48 24	4.000 2.000	.59	.625 .500	2.000 2.875	1.180 1.440	1.63 1.50	.75 .75	— —	— —	— —	— —	PA4212Y-G PA4212Y-P	12488 12490
3:1	54 18	4.500 1.500	.60	.625 .500	1.750 3.000	1.063 1.350	1.75 1.25	.75 .69	— —	— —	— —	— —	PA45312Y-G PA45312Y-P	12532 12534
4:1	72 18	6.000 1.500	.61	.750 .500	2.000 3.750	1.320 1.365	2.00 1.25	.95 .72	— —	— —	— —	— —	PA6412Y-G PA6412Y-P	12508 12510
6:1	72 12	6.000 1.000	.74	.750 .500	1.750 3.750	1.320 1.495	2.00 .94	.95 .72	— —	— —	— —	— —	PA6612Y-G PA6612Y-P	12512 12514
10 DIAMETRAL PITCH														
1 1/2:1	30	3.000	.58	.750 1.000	2.250	1.445	2.50	1.00	L153Y-G —	12264 —	— HL153Y-G	— 11878	— —	— —
	20	2.000	.58	.750	2.500	1.525	1.75	.91	L153Y-P	12266	HL153Y-P	11880	— —	— —
2:1	40 20	4.000 2.000	.72	.875 .750	2.500 3.125	1.695 1.805	3.00 1.75	1.19 1.06	L155Y-G L155Y-P	12268 12270	— —	— —	— —	— —
	40 20	4.000 2.000	.72	1.250 .875	2.500 3.125	1.695 1.805	3.00 1.75	1.19 1.06	— —	— —	HL155Y-G HL155Y-P	11882 11884	— —	— —
	50 25	5.000 2.500	.71	.750	2.625 3.375	1.600 1.555	2.00 2.00	1.00 .75	— —	— —	— —	— —	PA5210Y-G PA5210Y-P	12496 12498
	3:1	60 20	6.000 2.000	.79	1.000 .875	2.750 4.375	1.865 2.155	3.00 1.75	1.38 1.31	L157Y-G L157Y-P	12274 12276	— —	— —	— —
60 20		6.000 2.000	.79	.875 .750	2.750 4.375	1.913 2.155	3.00 1.75	1.38 1.31	— —	— —	— —	— —	PA6310Y-G PA6310Y-P	12500 12502
4:1	60 15	6.000 1.500	.73	.875 .625	2.250 3.875	1.632 1.610	2.50 1.44	1.13 .84	— —	— —	— —	— —	PA6410Y-G PA6410Y-P	12504 12506
6:1	90 15	9.000 1.500	.86	1.000 .625	2.500 5.500	1.820 1.870	2.75 1.44	1.31 .97	— —	— —	— —	— —	PA9610Y-G PA9610Y-P	12524 12526

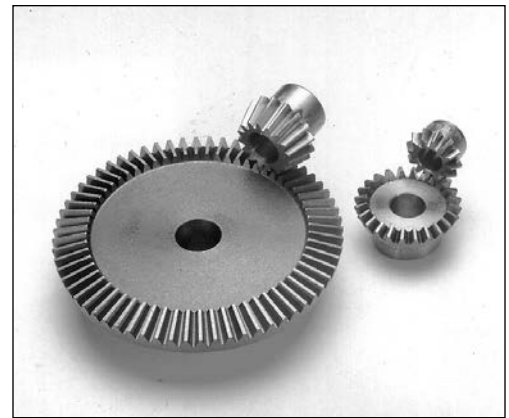
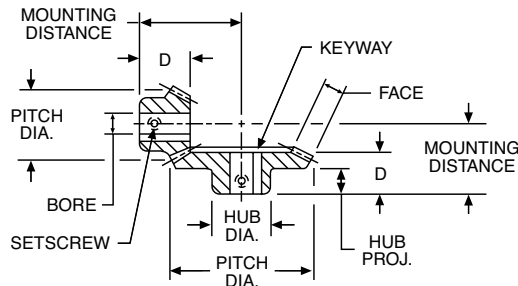
*Mounting Distance (MD) must not be made less than dimension shown, see Page 316.

8 through 4 Diametral Pitch (Steel – Unhardened, Hardened & Cast Iron)

20° Pressure Angle

All gears have “Coniflex”® tooth form.

All Hardened steel gears have teeth only hardened and are equipped with standard keyways and setscrews.



STANDARD TOLERANCES

DIMENSION	TOLERANCE
BORE	All ±.0005

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ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

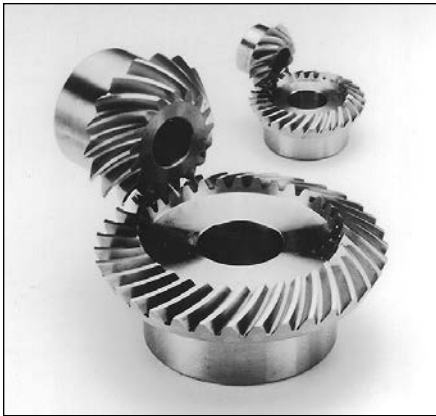
Ratio	No. of Teeth	Pitch Dia.	Face	Bore	MD *	D	Hub		Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code
							Dia.	Proj.						
8 DIAMETRAL PITCH														
2:1	40	5.000	.83	1.000 1.500	2.875	1.850	3.00	1.25	L156Y-G —	12252 —	— HL156Y-G	— 11886	— —	— —
	20	2.500	.83	1.000 .875	4.000 4.000	2.290 2.290	2.12 2.12	1.41 1.41	L156Y-P —	12272 —	HL156Y-P —	11888 —	— —	— —
	40	5.000	.83	1.000 .875	2.875 4.000	1.850 2.290	3.00 2.12	1.25 1.41	— —	— —	— —	— —	PA528Y-G PA528Y-P	12424 12426
	20	2.500	.83	1.000 .875	2.875 4.000	1.850 2.290	3.00 2.12	1.25 1.41	— —	— —	— —	— —	PA638Y-G PA638Y-P	12436 12438
3:1	48	6.000	.84	.875 .750	2.375 4.250	1.632 2.085	2.75 1.75	1.00 1.19	— —	— —	— —	— —	PA848Y-G PA848Y-P	12452 12454
	16	2.000	.84	.875 .750	2.375 4.250	1.632 2.085	2.75 1.75	1.00 1.19	— —	— —	— —	— —	PA948Y-G PA948Y-P	12460 12462
	64	8.000	.85	1.000 .875	2.750 5.250	1.882 2.105	2.75 2.105	1.25 1.88	— —	— —	— —	— —	— —	— —
	16	2.000	.85	1.000 .875	2.750 5.250	1.882 2.105	2.75 2.105	1.25 1.88	— —	— —	— —	— —	— —	— —
4:1	72	9.000	1.23	1.125 .875	3.250 5.750	2.320 2.470	3.00 2.13	1.69 1.22	— —	— —	— —	— —	— —	— —
	18	2.250	1.23	1.125 .875	3.250 5.750	2.320 2.470	3.00 2.13	1.69 1.22	— —	— —	— —	— —	— —	— —
6 DIAMETRAL PITCH														
2:1	36	6.000	1.07	1.125	3.500	2.260	3.25	1.50	L158Y-G	12278	—	—	—	—
	18	3.000	1.06	1.125	4.750	2.765	2.50	1.59	L158Y-P	12280	—	—	—	—
	36	6.000	1.07	1.750 1.125	3.500 4.750	2.260 2.765	3.25 2.50	1.50 1.59	— —	— —	HL158Y-G HL158Y-P	11890 11892	— —	— —
	18	3.000	1.06	1.750 1.125	3.500 4.750	2.260 2.765	3.25 2.50	1.50 1.59	— —	— —	— —	— —	— —	— —
	36	6.000	1.07	1.125 1.000	3.500 4.750	2.260 2.765	3.25 2.50	1.50 1.59	— —	— —	— —	— —	PA626Y-G PA626Y-P	12432 12434
	18	3.000	1.07	1.125 1.000	3.500 4.750	2.260 2.765	3.25 2.50	1.50 1.59	— —	— —	— —	— —	— —	— —
	42	7.000	1.06	1.125 1.000	3.750 5.000	2.305 2.515	3.50 2.50	1.50 1.25	— —	— —	— —	— —	PA726Y-G PA726Y-P	12440 12442
	21	3.500	1.06	1.125 1.000	3.750 5.000	2.305 2.515	3.50 2.50	1.50 1.25	— —	— —	— —	— —	— —	— —
3:1	48	8.000	1.18	1.125 1.000	3.438 5.438	1.898 2.560	3.25 2.62	1.00 1.25	— —	— —	— —	— —	PA826Y-G PA826Y-P	12448 12450
	24	4.000	1.18	1.125 1.000	3.438 5.438	1.898 2.560	3.25 2.62	1.00 1.25	— —	— —	— —	— —	— —	— —
	45	7.500	1.08	1.125 .875	3.000 5.250	2.132 2.575	3.25 2.12	1.25 1.44	— —	— —	— —	— —	PA7536Y-G PA7536Y-P	12520 12522
	15	2.500	1.08	1.125 .875	3.000 5.250	2.132 2.575	3.25 2.12	1.25 1.44	— —	— —	— —	— —	— —	— —
5 DIAMETRAL PITCH														
2:1	30	6.000	1.05	1.125 1.000	3.500 4.375	2.257 2.390	3.25 2.62	1.38 1.28	— —	— —	— —	— —	PA625Y-G PA625Y-P	12428 12430
	15	3.000	1.05	1.125 1.000	3.500 4.375	2.257 2.390	3.25 2.62	1.38 1.28	— —	— —	— —	— —	— —	— —
3:1	45	9.000	1.32	1.250 1.000	3.750 5.875	2.507 2.685	3.75 2.62	1.69 1.31	— —	— —	— —	— —	PA935Y-G PA935Y-P	12456 12458
	15	3.000	1.32	1.250 1.000	3.750 5.875	2.507 2.685	3.75 2.62	1.69 1.31	— —	— —	— —	— —	— —	— —
4 DIAMETRAL PITCH														
2:1	32	8.000	1.40	1.125 1.125	4.250 6.000	2.695 3.350	3.75 3.25	1.56 1.81	— —	— —	— —	— —	PA824Y-G PA824Y-P	12444 12446
	16	4.000	1.40	1.125 1.125	4.250 6.000	2.695 3.350	3.75 3.25	1.56 1.81	— —	— —	— —	— —	— —	— —

*Mounting Distance (MD) must not be made less than dimension shown, see Page 316.

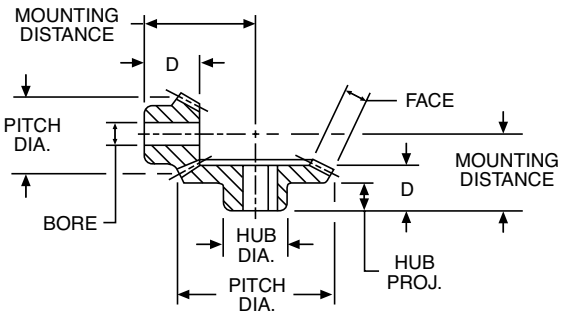
Spiral Bevel Gears

30 through 8 Diametral Pitch (Steel – Unhardened & Hardened)

20° Pressure Angle – 35° Spiral Angle



All Hardened steel gears have teeth only hardened and are equipped with standard keyways and setscrews, except as noted. All pinions are left hand.



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STANDARD TOLERANCES

DIMENSION		TOLERANCE
BORE	All	±.0005

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

Ratio	No. of Teeth	Pitch Dia.	Face	Bore	MD *	D	Hub		Catalog Number	Item Code	Catalog Number	Item Code	
							Dia.	Proj.					
30 DIAMETRAL PITCH									STEEL UNHARDENED		STEEL HARDENED		
2:1	26 13	.87 .43	.14	.250 .1875	.688 .750	.480 .453	.75 .38	.38 .30	SS302-G SS302-P	11938 11940	— —	— —	
	26 13	.87 .43		.375 .1875	.688 .750	.480 .453	.75 .38	.38 .30	— —	— —	SH302-G SH302-P†	11914 11916	
19 DIAMETRAL PITCH													
2:1	26 13	1.37 .68	.25	.500 .3125	1.000 1.062	.730 .623	1.12 .62	.42 .33	SS192-G SS192-P	11934 11936	— —	— —	
	26 13	1.37 .68		.625 .3125	1.000 1.062	.730 .623	1.12 .62	.42 .33	— —	— —	SH192-G SH192-P†	11910 11912	
14 DIAMETRAL PITCH													
2:1	26 13	1.86 .93	.31	.625 .4375	1.188 1.250	.760 .625	1.38 .81	.50 .30	SS142-G SS142-P	11926 11928	— —	— —	
	26 13	1.86 .93		.750 .4375	1.188 1.250	.760 .625	1.38 .81	.50 .30	— —	— —	SH142-G SH142-P	11902 11904	
	32 16	2.29 1.14	.38	.750 .500	1.375 1.625	.855 .848	1.62 1.00	.56 .45	SS142-1G SS142-1P	11930 11932	— —	— —	
	32 16	2.29 1.14		.875 .500	1.375 1.625	.855 .848	1.62 1.00	.56 .45	— —	— —	SH142-1G SH142-1P	11906 11908	
	10 DIAMETRAL PITCH												
	2:1	34 17	3.40 1.70	.57	1.000 .625	1.875 2.375	1.135 1.219	2.00 1.50	.75 .63	SS102-G SS102-P	11922 11924	— —	— —
34 17		3.40 1.70	1.1875 .625		1.875 2.375	1.135 1.219	2.00 1.50	.75 .63	— —	— —	SH102-G SH102-P	11898 11900	
8 DIAMETRAL PITCH													
2:1	34 17	4.250 2.125	.71	1.250 .750	2.500 3.125	1.575 1.677	2.88 1.88	1.06 .94	SS82-G SS82-P	11918 11920	— —	— —	
	34 17	4.250 2.125		1.500 .750	2.500 3.125	1.575 1.677	2.88 1.88	1.06 .94	— —	— —	SH82-G SH82-P	11894 11896	

*Mounting Distance (MD) must not be made less than dimension shown, see Page 316.

†No keyway or setscrew.

Boston stock miter and bevel gears are designed for transmission of power and/or motion between intersecting shafts at a right angle (90°). Miter gears are a special type of bevel gear designed to operate as pairs being identical in number of teeth and pitch (1 to 1 ratio only). Other Boston stock bevel gear sets are available with ratios from 1-1/2:1 to 6:1.

All Boston standard stock bevels and miters are manufactured with a 20° pressure angle. These bevel gears are made in accordance with AGMA specifications for a long and short addendum system for gears and pinions, which serves to reduce the amount of pinion tooth undercut and to nearly equalize the strength and durability of the gear and pinion. Boston straight tooth bevel and miter gears have generated teeth with “Coniflex”® tooth form, unless otherwise specified.



INTERCHANGE

Stock miter and bevel gears having identical diametral pitch, number of teeth and mounting distance (and spiral angle for spiral bevels) are interchangeable.

SPIRAL VS. STRAIGHT TOOTH

Boston standard stock straight bevel gears can be used for all applications requiring transmission of power and motion between intersecting shafts. Boston standard stock spiral bevel gears have an overlapping tooth action which results in a smoother gear action, lower noise, and higher load capacity than a straight bevel of equal size.

®Trademark of the Gleason Works.

Selection Procedure

Approximate horsepower ratings for selected sizes (number of teeth) at various operating speeds (RPM) are given for Boston standard stock Bevel and Miter gears.

For straight tooth Miter gears, refer to Pages 80, 81.

For straight tooth Bevel gears, refer to Page 82.

For spiral tooth Miter gears, refer to Page 83.

For spiral tooth Bevel gears, refer to Page 83.

All ratings are based on normal operating conditions, that is: properly mounted and lubricated, carrying a smooth load for not more than 10 hours (Service Factor = 1.0). Refer to Table 1 for service factors in other service conditions.

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 x Service Factor (Table 1)**
3. Select a gear set with horsepower capacity equal to (or greater than) design 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.

Miter Gears

Steel & Iron – Straight Tooth (1:1 Ratio)

L-Series – Unhardened Steel

HLK Series – Hardened Steel (Teeth only)

OA Series – Cast Iron

APPROXIMATE HP & TORQUE* RATINGS FOR CLASS I SERVICE (Service Factor = 1.0)

Catalog Number	Pitch	50 RPM		100 RPM		200 RPM		300 RPM		600 RPM		900 RPM		1200 RPM		1800 RPM	
		HP	Torque	HP	Torque	HP	Torque	HP	Torque	HP	Torque	HP	Torque	HP	Torque	HP	Torque
L110Y L111Y	16	.02 .03	24.7 37.1	.03 .05	18.5 30.9	.06 .10	18.5 30.9	.09 .13	18.5 26.8	.15 .24	15.4 24.7	.21 .32	14.4 22.0	.26 .38	13.4 19.6	.33 .48	11.3 16.5
L101Y L125Y L126Y	12	.03	37.1	.06	37.1	.12	37.1	.17	35.0	.29	29.9	.40	27.5	.47	24.2	.59	20.2
HLK110Y L112Y	16	.04 .07	49.4 43.2	.06 .14	37.1 43.2	.12 .20	37.1 41.2	.18 .30	37.1 41.2	.30 .30	30.9 30.9	.42 .44	28.8 30.2	.52 .52	26.8 26.8	.66 .64	22.6 22.0
L102Y L127Y	12	.05	61.8	.09	55.6	.18	55.6	.25	51.5	.42	43.2	.56	38.4	.66	34.0	.81	27.8
L119Y L120Y L121Y L133Y	12	.07	86.5	.14	86.5	.25	77.2	.35	72.1	.60	61.8	.77	52.8	.90	46.3	1.1	37.7
HLK101Y L113Y HLK102Y	12	.06 .09 .10	74.1 111 124	.12 .17 .18	74.1 105 111	.24 .33 .36	74.1 102 111	.34 .45 .50	70.0 92.6 103	.58 .75 .84	59.7 77.2 86.5	.96 .96 1.1	65.9 65.9 75.5	1.1 1.1 1.3	56.6 56.6 66.9	1.3 1.3 1.6	44.6 44.6 54.9
L103Y L128Y L129Y	10	.11	136	.20	124	.37	114	.52	107	.87	89.6	1.1	75.5	1.3	66.9	1.5	51.5
L114Y HLK121Y	12	.15 .14	185 173	.29 .28	179 173	.52 .50	161 154	.71 .70	146 144	1.1 1.2	113 124	1.4 1.5	96.1 103	1.6 1.8	82.4 92.6	1.9 2.2	65.2 75.5
L130Y L104Y L131Y	10	.18	222	.33	204	.61	188	.83	171	1.3	134	1.6	110	1.7	87.5	2.2	75.5
HLK103Y HLK129Y	10	.20	247	.40	247	.74	229	1.0	206	1.7	175	2.2	151	2.6	134	3.1	106
OA828Y-1	8	.28	346	.53	327	.93	287	1.2	247	1.9	196	2.3	158	—	—	—	—
L105Y-A L115Y L116Y	8	.30	371	.56	346	1.0	309	1.4	288	2.1	216	2.6	178	3.0	154	3.4	116
HLK114Y	12	.29	358	.58	358	1.0	309	1.4	288	2.3	237	2.8	192	3.2	165	3.9	133
OA832Y-1	8	.37	457	.68	420	1.2	371	1.6	329	2.4	247	2.8	192	—	—	—	—
HLK104Y HLK130Y HLK131Y	10	.33	408	.66	408	1.2	371	1.7	350	2.6	268	3.3	226	3.8	196	4.5	154

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. Use for interpolation purposes only.

*Torque (Lb. Ins.) Output Rating

HP (Input)

Steel & Iron – Straight Tooth (1:1 Ratio)

L-Series – Unhardened Steel

HLK Series – Hardened Steel (Teeth only)

OA Series – Cast Iron

APPROXIMATE HP & TORQUE* RATINGS FOR CLASS I SERVICE (Service Factor = 1.0)

Catalog Number	Pitch	50 RPM		100 RPM		200 RPM		300 RPM		600 RPM		900 RPM		1200 RPM		1800 RPM	
		HP	Torque	HP	Torque	HP	Torque	HP	Torque	HP	Torque	HP	Torque	HP	Torque	HP	Torque
L106Y L117Y L132Y	8	.42	519	.79	488	1.4	432	1.9	391	2.8	288	3.4	233	3.8	196	—	—
OA624Y	6	.46	568	.87	537	1.5	463	2.0	412	3.0	309	3.5	240	—	—	—	—
L123Y	8	.55	679	1.0	618	1.8	556	2.4	494	3.5	360	4.2	288	4.6	237	—	—
HLK105YA HLK115Y HLK116Y	8	.55	679	1.1	679	2.0	618	2.7	556	4.3	443	5.3	364	5.9	304	6.9	237
L107Y L118Y	6	.69	852	1.3	803	2.2	679	3.0	618	4.5	463	5.3	364	5.8	299	—	—
OA630Y-1	6	.82	1013	1.5	926	2.5	772	3.2	659	4.7	484	—	—	—	—	—	—
OA525Y	5	.90	1112	1.6	988	2.7	834	3.5	721	5.1	525	—	—	—	—	—	—
L134Y L135Y	6	.90	1112	1.6	988	2.8	865	3.7	762	5.4	556	6.4	439	7.0	360	—	—
HLK106Y HLK117Y HLK132Y	8	.80	988	1.6	988	2.8	865	3.7	762	5.7	587	6.8	467	7.6	391	—	—
OA636Y-1	6	1.1	1359	1.9	1174	3.2	988	4.1	844	5.8	597	—	—	—	—	—	—
HLK123Y	8	1.0	1235	2.0	1235	3.6	1112	4.7	968	7.0	721	8.4	576	9.2	474	—	—
L108Y L122Y L136Y	5	1.3	1606	2.4	1482	4.1	1266	5.3	1091	7.6	782	9.0	618	—	—	—	—
HLK107Y HLK118Y	6	1.3	1606	2.6	1606	4.5	1390	6.0	1235	8.0	824	11.0	755	12.0	618	—	—
OA424Y	4	1.6	1976	2.8	1729	4.6	1421	5.9	1215	8.2	844	—	—	—	—	—	—
OA540Y-1	5	2.0	2471	3.5	2162	5.6	1729	7.0	1441	—	—	—	—	—	—	—	—
L109Y L137Y	4	2.3	2841	4.2	2594	7.0	2162	8.7	1791	12.4	1276	14.3	981	—	—	—	—
L138Y	4	3.0	3706	5.3	3274	8.6	2656	10.8	2224	14.6	1503	16.6	1139	—	—	—	—
HLK108Y HLK122Y	5	2.4	2965	4.9	3026	8.2	2532	10.0	2059	15.0	1544	18.0	1235	—	—	—	—
HLK109Y	4	4.2	5188	8.3	5126	14.0	4324	17.0	3500	25.0	2574	28.0	1922	—	—	—	—

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. Use for interpolation purposes only.

*Torque (Lb. Ins.) Output Rating

HP (Input)

Bevel Gears

Steel & Iron – Straight Tooth

L-Series/PA Series Pinions – Unhardened Steel

PA Series – Cast Iron

HL Series – Hardened Steel (Teeth Only)

APPROXIMATE HP & TORQUE* RATINGS FOR CLASS I SERVICE (Service Factor = 1.0)

Catalog Number	Pitch	Ratio	50 RPM†		100 RPM		200 RPM		300 RPM		600 RPM		900 RPM		1200 RPM		1800 RPM	
			HP	Torque	HP	Torque	HP	Torque	HP	Torque	HP	Torque	HP	Torque	HP	Torque	HP	Torque
L146Y	16	1-1/2:1	.03	55.6	.06	55.6	.11	51.0	.16	49.4	.29	44.8	.40	41.2	.48	37.1	.62	31.9
HL146Y	16		.04	74.1	.08	74.1	.16	74.1	.23	71.0	.41	63.3	.55	56.6	.67	51.7	.86	44.3
L151Y	12		.10	185	.20	185	.37	171	.53	164	.91	141	1.19	122	1.41	109	1.74	89.6
HL151Y	12		.14	259	.27	250	.52	241	.73	225	1.26	195	1.65	170	1.96	151	2.41	124
L153Y	10		.24	445	.45	417	.84	389	1.17	361	1.93	298	2.47	254	2.88	222	3.44	177
HL153Y	10		.33	611	.63	584	1.16	537	1.62	500	2.68	414	3.44	354	4.00	309	4.77	245
L148Y	16	2:1	.02	49.4	.03	37.1	.06	37.1	.09	37.1	.17	35.0	.23	31.6	.28	28.8	.37	25.4
HL148Y	16		.02	49.4	.04	49.4	.09	55.6	.12	49.4	.23	47.4	.32	43.9	.39	40.1	.52	35.7
L149Y	16		.04	98.8	.09	111	.17	105	.24	98.8	.43	88.5	.58	79.6	.71	73.1	.91	62.5
L150Y	14		.05	124	.09	111	.18	111	.26	107	.47	96.8	.64	87.8	.77	79.3	.99	67.9
HL150Y	14		.07	173	.13	161	.25	154	.36	148	.65	134	.88	121	1.07	110	1.38	94.7
HL149Y	16		.06	148	.12	148	.23	142	.33	136	.60	124	.81	111	.99	102	1.27	87.2
PA3212Y	12	2:1	.04	99	.09	111	.16	99	.23	95	.40	82	.52	71	.62	64	.76	52.2
PA4212Y	12		.08	198	.16	198	.29	179	.41	169	.68	140	.87	119	1.00	103	1.20	82.4
L152Y	12		.14	346	.27	334	.50	309	.72	296	1.23	253	1.62	222	1.92	198	2.36	162
PA5210Y	10		.15	371	.28	346	.51	315	.70	288	1.10	226	1.40	192	1.60	165	—	—
HL152Y	12		.19	469	.37	457	.70	432	.99	408	1.71	352	2.24	307	2.66	274	3.27	224
L155Y	10		.30	741	.58	716	1.08	667	1.51	622	2.50	515	3.20	439	3.73	384	4.45	305
PA528Y	8	2:1	.20	494	.38	469	.70	432	.96	395	1.50	309	1.90	261	2.20	226	—	—
L156Y	8		.54	1334	1.03	1272	1.88	1161	2.59	1066	4.16	856	5.21	715	5.96	614	6.97	478
HL155Y	10		.42	1038	.81	1001	1.50	926	2.10	865	3.48	716	4.45	611	5.18	533	6.18	424
PA626Y	6		.40	988	.75	926	1.30	803	1.80	741	2.90	597	3.50	480	4.00	412	—	—
PA625Y	5		.43	1062	.82	1013	1.50	926	2.00	824	3.10	638	3.80	522	4.30	443	—	—
PA726Y	6		.48	1186	.89	1099	1.60	988	2.10	865	3.90	803	—	—	—	—	—	—
L158Y	6	2:1	1.07	2644	2.02	2495	3.62	2236	4.92	2026	7.67	1579	9.43	1294	10.65	1096	12.24	840
PA826Y	6		.63	1556	1.20	1482	2.00	1235	2.70	1112	4.00	824	4.80	659	—	—	—	—
HL156Y	8		.76	1878	1.44	1779	2.62	1618	3.60	1482	5.78	1190	7.24	994	8.28	852	9.68	664
PA824Y	4		.98	2421	1.80	2224	3.20	1976	4.20	1729	7.30	1503	7.50	1029	—	—	—	—
HL158Y	6		1.49	3681	2.80	3459	5.02	3101	6.83	2812	10.65	2193	13.10	1798	14.79	1522	17.00	1167
PA3316Y	16	3:1	.05	185	.11	204	.20	185	.30	185	.53	164	.72	148	.88	136	1.12	115
PA45312Y	12		.16	593	.31	574	.59	547	.84	519	1.44	445	1.89	389	2.24	346	2.75	283
PA6310Y	10		.34	1260	.66	1223	1.21	1121	1.70	1050	2.81	868	3.60	741	4.18	645	5.00	515
PA638Y	8		.43	1594	.82	1519	1.52	1408	2.12	1309	3.51	1084	4.49	924	5.22	806	6.24	642
L157Y	10		.34	1260	.66	1223	1.21	1121	1.70	1050	2.81	868	3.60	741	4.18	645	5.00	515
PA7536Y	6		.88	3261	1.66	3076	3.03	2807	4.17	2576	6.69	2066	8.38	1725	9.59	1481	11.21	1154
PA935Y	5	4:1	1.53	5670	2.88	5336	5.16	4781	7.01	4330	10.93	3375	13.44	2767	15.19	2346	17.45	1796
PA4416Y	16		.06	296	.12	296	.24	296	.34	280	.61	251	.83	228	1.02	210	1.30	4178
PA6412Y	12		.17	840	.32	791	.61	754	.86	708	1.48	609	1.94	533	2.31	476	2.83	388
PA6410Y	10		.22	1087	.42	1038	.80	988	1.13	931	1.95	803	2.56	703	3.04	626	3.74	513
PA848Y	8		.43	2125	.83	2051	1.54	1902	2.15	1771	3.56	1466	4.56	1252	5.30	1091	6.33	869
PA948Y	8		.75	3706	1.43	3533	2.62	3236	3.64	2998	5.92	2438	7.50	2059	8.65	1781	10.21	1401
PA6616Y	16	6:1	.09	667	.17	630	.33	611	.48	593	.86	531	1.17	482	1.42	439	1.82	375
PA6612Y	12		.12	889	.23	852	.44	815	.63	778	1.13	698	1.54	634	1.88	581	2.40	494

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.

*Torque (Lb. Ins.) Output Rating

HP (Input)

†RPM of Pinion

Steel Spiral Miter & Bevel Gears

Steel Spiral Miter Gears (1:1 Ratio)

LSA Series – Unhardened Steel

HLSK Series – Hardened Steel (Teeth Only)

APPROXIMATE HP & TORQUE* RATINGS FOR CLASS I SERVICE (Service Factor = 1.0)

Catalog Number	Pitch	50 RPM		100 RPM		200 RPM		300 RPM		600 RPM		900 RPM		1200 RPM		1800 RPM	
		HP	Torque	HP	Torque	HP	Torque	HP	Torque	HP	Torque	HP	Torque	HP	Torque	HP	Torque
LSA110Y	18	.01	12.4	.02	12.4	.04	12.4	.07	14.4	.14	14.4	.20	13.7	.25	12.9	.35	12.0
LSA101Y	12	.02	24.7	.04	24.7	.08	24.7	.13	26.8	.25	25.7	.35	24.0	.45	23.2	.62	21.3
LSA102Y	12	.03	37.1	.07	43.2	.13	40.1	.20	41.2	.38	39.1	.54	37.1	.63	32.4	.95	32.6
HLSK110Y	18	.03	37.1	.07	43.2	.14	43.2	.21	43.2	.42	43.2	.59	40.5	.76	39.1	1.0	34.3
HLSK101Y	12	.06	74.1	.13	80.3	.26	80.3	.39	80.3	.75	77.2	1.0	68.6	1.3	66.9	1.8	61.8
LSA103Y	10	.07	86.5	.15	92.6	.30	92.6	.44	90.6	.80	82.4	1.1	75.5	1.4	72.1	2.0	68.6
HLSK102Y	12	.10	124	.21	130	.41	127	.61	126	1.0	103	1.6	110	2.0	103	2.8	96.1
LSA104Y	10	.15	185	.30	185	.57	176	.83	171	1.5	154	2.0	137	2.6	134	3.6	124
LSA105YA	7	.22	272	.44	272	.84	259	1.2	247	2.2	226	3.0	206	3.8	196	5.1	175
HLSK103Y	10	.23	284	.46	284	.89	275	1.3	268	2.4	247	3.4	233	4.3	221	5.9	202
LSA106Y	8	.34	420	.69	426	1.3	401	1.8	371	3.3	340	4.5	309	5.7	293	7.8	268
LSA107Y	6	.46	568	.90	556	1.7	525	2.4	494	4.3	443	5.9	405	7.4	381	10.0	343
LSA118Y	6	.46	568	.90	556	1.7	525	2.4	494	4.3	443	5.9	405	7.4	381	10.0	343
HLSK104Y	10	.45	556	.90	556	1.7	525	2.5	515	4.5	463	6.1	419	7.9	407	11.1	381
HLSK105YA	7	.67	828	1.3	803	2.5	772	3.6	741	6.5	669	9.0	618	11.0	566	15.0	515
LSA122Y	5	.83	1025	1.6	988	3.0	926	4.3	885	7.5	772	10.0	686	12.0	618	17.0	583
HLSK106Y	8	1.0	1235	2.0	1235	3.9	1204	5.6	1153	10.0	1029	13.0	892	17.0	875	23.0	789
HLSK107Y	6	1.3	1606	2.7	1668	5.1	1575	7.3	1503	13.0	1338	17.0	1167	22.0	1132	33.0	1132
HLSK118Y	6	1.3	1606	2.7	1668	5.1	1575	7.3	1503	13.0	1338	17.0	1167	22.0	1132	33.0	1132
HLSK122Y	5	2.4	2965	4.9	3026	9.1	2810	13.1	2697	23.01	2378	30.0	2059	38.0	1956	51.0	1750

Steel Spiral Bevel Gears** (2:1 Ratio)

SS-Series – Unhardened Steel

SH Series – Hardened Steel (Teeth Only)

APPROXIMATE HP & TORQUE* RATINGS FOR CLASS I SERVICE (Service Factor = 1.0)

Catalog Number	Pitch	50 RPM†		100 RPM†		200 RPM†		300 RPM†		600 RPM†		900 RPM†		1200 RPM†		1800 RPM†	
		HP	Torque	HP	Torque	HP	Torque	HP	Torque	HP	Torque	HP	Torque	HP	Torque	HP	Torque
SS302	30	.002	4.9	.004	4.9	.008	4.9	.013	5.4	.025	5.1	.037	5.1	.05	5.1	.07	4.8
SH302	30	.005	12.4	.01	12.4	.02	12.4	.03	12.4	.06	12.4	.09	12.4	.12	12.4	.18	12.4
SS192	19	.01	24.7	.02	24.7	.04	24.7	.06	24.7	.12	24.7	.18	24.7	.24	24.7	.35	24.0
SS142	14	.02	49.4	.05	61.8	.09	55.6	.14	57.6	.26	53.5	.39	53.5	.51	52.5	.76	52.2
SH192	19	.03	74.1	.05	61.8	.10	61.8	.16	65.9	.31	63.8	.46	63.1	.60	61.8	.88	60.4
SS142-1	14	.04	98.8	.08	98.8	.16	98.8	.23	94.7	.45	92.6	.67	92.0	.88	90.6	1.3	89.2
SH142	14	.06	148	.12	148	.23	142	.34	140	.66	136	.98	135	1.3	134	1.9	130
SH142-1	14	.10	247	.20	247	.39	241	.58	239	1.1	226	1.7	233	2.2	226	3.2	220
SS102	10	.14	346	.27	334	.52	321	.78	321	1.5	309	2.2	302	2.9	299	4.3	295
SS82	8	.26	642	.50	618	.99	611	1.5	618	2.8	576	4.2	576	5.5	566	8.0	549
SH102	10	.34	840	.67	828	1.3	803	2.0	824	3.8	782	5.6	769	7.3	751	10.7	734
SH82	8	.64	1581	1.3	1606	2.5	1544	3.7	1524	7.1	1462	10.5	1441	13.7	1410	20.0	1373

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.

*Torque (Lb. Ins.) Output Rating

HP (Input)

Note: Ratings to right of heavy line are not recommended, as pitch line velocity exceeds 1000 feet per minute. Use for interpolation purposes only.

**Ratings reflect Gear and Pinion sets.

†Pinion RPM

Notes

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