



<b>CATALOG NUMBERS / DIMENSIONS.....</b>	<b>86-95</b>
<b>SELECTION PROCEDURE.....</b>	<b>96</b>
<b>HORSEPOWER &amp; TORQUE RATINGS.....</b>	<b>97-98</b>
<b>CENTER DISTANCES &amp; RATIOS AVAILABLE.....</b>	<b>98</b>
<b>STOCK ALTERED / CUSTOM WORM AND WORM GEARS.....</b>	<b>3-5</b>
<b>WORM/WORM GEAR ENGINEERING INFORMATION .....</b>	<b>318-319</b>

# Worms & Worm Gears

## 48 Diametral Pitch (Bronze Worm Gears, Steel Worms – Unhardened & Hardened, Acetal Worm Gears & Worms)

Pressure Angle – Single thread 14-1/2° – Double thread 20° – Quad thread 25°

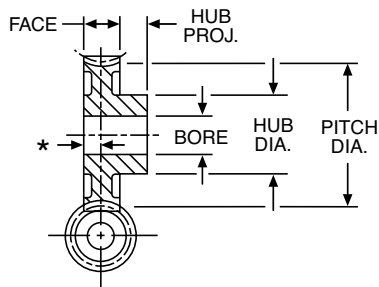


RATIO = Gear Teeth ÷ Worm Threads

All Worms and Worm Gears stocked RIGHT HAND ONLY.

ALL DIMENSIONS IN INCHES  
ORDER BY CATALOG NUMBER OR ITEM CODE

48 DIAMETRAL PITCH		WORM GEARS				FACE = .156" *CENTER LINE WORM TO FLUSH END = .078"					
No. of Teeth	Pitch Dia.	Bore	Hub		Style See Page 315	SINGLE Thread		DOUBLE Thread		QUAD Thread	
			Dia.	Proj.		Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code
<b>ACETAL**</b>											
20	.417	.187	.34	.19	B	GP1018	54106	-	-	-	-
30	.625		.44	.25		GP1019	54107	-	-	-	-
40	.833		.50			GP1020	54108	-	-	-	-
50	1.042					GP1021	54109	-	-	-	-
<b>ACETAL WITH BRASS INSERTS**</b>											
20	.417	.125	.34	.19	B	GP1018-1/8	54118	-	-	-	-
30	.625	.125	.44	.25		GP1019-1/8	54119	-	-	-	-
		.188				GP1019-3/16	54120	-	-	-	-
40	.833	.188	.50	.25		GP1020-3/16	54121	-	-	-	-
		.250			GP1020-1/4	54122	-	-	-	-	
50	1.042	.188	.50	.25	GP1021-3/16	54123	-	-	-	-	
		.250			GP1021-1/4	54124	-	-	-	-	
<b>BRONZE</b>											
20	.417	.1875	.34	.19	A	G1018	13564	D1118	13488	Q1318	13440
30	.625		.44	.25		G1019	13566	D1119	13490	Q1319	13442
40	.833		.50			G1020	13568	D1120	13492	Q1320	13444
50	1.042		.50			G1021	13570	D1121	13494	Q1321	13446
60	1.250	.62	.31	B	G1024	13572	D1124	13500	Q1324	13452	
80	1.667	.62			G1022	13574	D1122	13496	Q1322	13448	
100	2.083	.69	G1023	13576	D1123	13498	Q1323	13450			

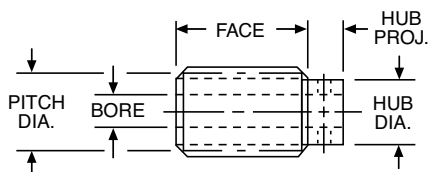


### STANDARD TOLERANCES

DIMENSION		TOLERANCE
BORE	Bronze and Steel	All ±.0005
	Acetal	All +.001 –.002
	Acetal with Brass Insert	All +.001 –.000

### WORM LEAD and LEAD ANGLE

	SINGLE	DOUBLE	QUAD
LEAD	.0654"	.1309"	.2618"
LEAD ANGLE	3°35'	7°7'	14°2'



### REFERENCE PAGES

Alterations – 322  
Lubrication – 322  
Materials – 323

48 DIAMETRAL PITCH		WORMS FOR ABOVE GEARS									
Pitch Dia.	Face	Bore	Hub		SINGLE Thread		DOUBLE Thread		QUAD Thread		
			Dia.	Proj.	Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code	
<b>ACETAL</b>											
.333	.562	.187	.26	.19	LSHP	54141	-	-	-	-	
<b>UNHARDENED – STEEL</b>											
.333	.562	.1875	.26	.19	LSH-1	12920	DSH-1	12928	QSH-1	12934	
<b>HARDENED – STEEL</b>											
.333	.562	.1875	.26	.19	HLSH-1	13026	HDSH-1	13052	HQSH-1	13062	
					GLSH-1	12952	GDSH-1	13036	GQSH-1	13042	

All Steel worms have .0625 drilled hole in hub.  
Hxxx worms have polished threads.  
Gxxx worms have ground and polished threads.

# Worms & Worm Gears

## 32 Diametral Pitch (Bronze Worm Gears, Steel Worms – Unhardened & Hardened, Acetal Worm Gears & Worms)

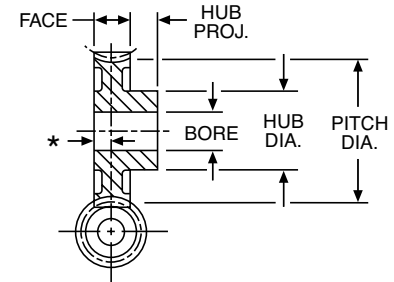
Pressure Angle – Single thread 14-1/2° – Double thread 20° – Quad thread 25°

RATIO = Gear Teeth ÷ Worm Threads

All Worms and Worm Gears stocked RIGHT HAND ONLY.

ALL DIMENSIONS IN INCHES  
ORDER BY CATALOG NUMBER OR ITEM CODE

32 DIAMETRAL PITCH					WORM GEARS		FACE = .219" *CENTER LINE WORM TO FLUSH END = .109"				
No. of Teeth	Pitch Dia.	Bore	Hub		Style See Page 315	SINGLE Thread		DOUBLE Thread		QUAD Thread	
			Dia.	Proj.		Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code
<b>ACETAL**</b>											
20	.625	.187	.50	.25	B	GP1026	54110	-	-	-	-
30	.938	.63	.25			GP1027	54111	-	-	-	-
40	1.250	.63	.31		GP1028	54112	-	-	-	-	
50	1.562	.63			GP1029	54113	-	-	-	-	
<b>ACETAL WITH BRASS INSERTS**</b>											
20	.625	.188	.50	.25	B	GP1026-3/16	54125	-	-	-	-
		.250	.25			GP1026-1/4	54126	-	-	-	-
30	.938	.188	.63	.25		GP1027-3/16	54127	-	-	-	-
		.250	.25			GP1027-1/4	54128	-	-	-	-
40	1.250	.250	.63	.31	GP1028-1/4	54129	-	-	-	-	
		.313	.31		GP1028-5/16	54130	-	-	-	-	
50	1.562	.250	.63	.31	GP1029-1/4	54131	-	-	-	-	
		.3125	.31		GP1029-5/16	54132	-	-	-	-	
<b>BRONZE</b>											
20	.625	.1875	.50	.25	A	G1026	13578	D1126	13502	Q1326	13454
30	.938	.62	.25			G1027	13580	D1127	13504	Q1327	13456
40	1.250	.62	.31			G1028	13582	D1128	13506	Q1328	13458
50	1.562	.62	.31			G1029	13584	D1129	13508	Q1329	13460
60	1.875	.69			G1032	13586	D1132	13514	Q1332	13466	
80	2.500	.69	.31		G1030	13588	D1130	13510	Q1330	13462	
96	3.000	.3125	.69	.31	G1031	13590	-	-	Q1331	13464	
100	3.125				G1033	13592	D1133	13516	-	-	

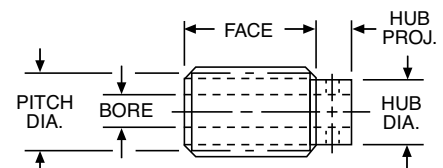


### STANDARD TOLERANCES

DIMENSION		TOLERANCE	
BORE	Bronze and Steel	All	±.0005
	Acetal	All	+ .001 – .002
	Acetal with Brass Insert	All	+ .001 – .000

### WORM LEAD and LEAD ANGLE

	SINGLE	DOUBLE	QUAD
LEAD	.0982"	.1963"	.3927"
LEAD ANGLE	4°5'	8°8'	15°57'



32 DIAMETRAL PITCH					WORMS FOR ABOVE GEARS					
Pitch Dia.	Face	Bore	Hub		SINGLE Thread		DOUBLE Thread		QUAD Thread	
			Dia.	Proj.	Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code
<b>ACETAL</b>										
.438	.641	.187	.32	.19	LTHBP	54142	-	-	-	-
<b>UNHARDENED – STEEL</b>										
.438	.688	.1875	.32	.19	LTHB-1	12922	DTH-1	12930	QTH-1	12936
<b>HARDENED – STEEL</b>										
.438	.688	.2187	.32	.19	HLTH-1	13028	HDTH-1	13054	HQTH-1	13064
					GLTH-1	12954	GDTH-1	13038	GQTH-1	13044

All Steel worms have .0625 drilled hole in hub.

Hxxx worms have polished threads.

Gxxx worms have ground and polished threads.

\*\*These are in effect Helical Gears with a Helix Angle compatible with the worms. When in mesh they operate as a worm pair at right angles. Face Width is 3/16".

### REFERENCE PAGES

Alterations – 322

Lubrication – 322

Materials – 323

# Worms & Worm Gears

## 24 Diametral Pitch (Bronze Worm Gears, Steel Worms – Unhardened & Hardened, Minlon® Worm Gears – Nylon Worms)

Pressure Angle – Single thread 14-1/2° – Double thread 20° – Quad thread 25°

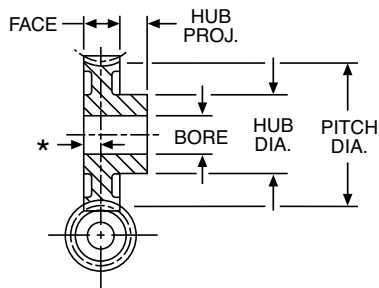


RATIO = Gear Teeth ÷ Worm Threads

All Worms and Worm Gears stocked RIGHT HAND ONLY.

ALL DIMENSIONS IN INCHES  
ORDER BY CATALOG NUMBER OR ITEM CODE

24 DIAMETRAL PITCH		WORM GEARS				FACE = .250" *CENTER LINE WORM TO FLUSH END = .125"					
No. of Teeth	Pitch Dia.	Bore	Hub		Style See Page 315	SINGLE Thread		DOUBLE Thread		QUAD Thread	
			Dia.	Proj.		Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code
<b>MINLON**</b>											
20	.833	.187	.63	.31	B	GP1034	54114	-	-	-	-
30	1.250	.250	.63	.31	B	GP1035	54115	-	-	-	-
40	1.667	.3125	.75	.31	B	GP1036	54116	-	-	-	-
50	2.083	.3125	.75	.31	B	GP1037	54117	-	-	-	-
<b>MINLON WITH BRASS INSERTS**</b>											
20	.833	.1875	.63	.31	B	GP1034-3/16	54133	-	-	-	-
		.250	.63	.31	B	GP1034-1/4	54134	-	-	-	-
30	1.250	.1875	.63	.31	B	GP1035-3/16	54135	-	-	-	-
		.250	.63	.31	B	GP1035-1/4	54136	-	-	-	-
40	1.667	.250	.75	.31	B	GP1036-1/4	54137	-	-	-	-
		.3125	.75	.31	B	GP1036-5/16	54138	-	-	-	-
50	2.083	.250	.75	.31	B	GP1037-1/4	54139	-	-	-	-
		.3125	.75	.31	B	GP1037-5/16	54140	-	-	-	-
<b>BRONZE</b>											
20	.833	.1875	.62	.31	A	G1034	13594	D1134	13518	Q1334	13470
30	1.250	.250	.62	.31	A	G1035	13596	D1135	13520	Q1335	13472
40	1.667	.250	.62	.31	A	G1036	13598	D1136	13522	Q1336	13474
50	2.083	.3125	.75	.31	B	G1037	13600	D1137	13524	Q1337	13476
60	2.500	.3125	.75	.31	C	G1040	13602	D1140	13530	Q1340	13482
72	3.000	.3125	.75	.31	C	G1038	13604	D1138	13526	Q1338	13478
80	3.333	.3125	.88	.38	D	G1041	13606	D1141	13532	Q1341	13484
96	4.000	.3125	.88	.38	D	G1039	13608	D1139	13528	-	-
100	4.167	.375	.88	.38	D	G1049	13610	D1149	13534	-	-

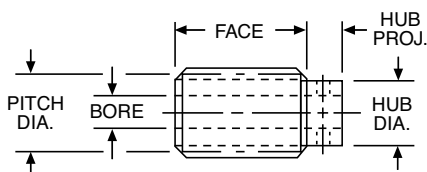


### STANDARD TOLERANCES

DIMENSION		TOLERANCE	
BORE	Bronze and Steel	All	±.0005
	Minlon/Nylon	All	+ .001 - .002
	Minlon/Nylon w/Brass Insert	All	+ .001 - .000

### WORM LEAD and LEAD ANGLE

	SINGLE	DOUBLE	QUAD
LEAD	.1309"	.2618"	.5236"
LEAD ANGLE	4°46'	9°28'	18°26'



### REFERENCE PAGES

Alterations — 322  
Lubrication — 322  
Materials — 323

24 DIAMETRAL PITCH		WORMS FOR ABOVE GEARS								
Pitch Dia.	Face	Bore	Hub		SINGLE Thread		DOUBLE Thread		QUAD Thread	
			Dia.	Proj.	Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code
<b>NYLON</b>										
.500	.643	.187	.38	.25	LUHBP	54143	-	-	-	-
<b>UNHARDENED - STEEL</b>										
.500	.812	.1875	.38	.25	LUHB	12924	DUH	12932	QUH	12938
<b>HARDENED - STEEL</b>										
.500	.812	.25	.38	.25	HLUH	13030	HDUH	13056	HQUH	13066
					GLUH	12956	GDUH	13040	GQUH	13060

All Steel worms have .0938 drilled hole in hub.

Hxxx worms have polished threads.

Gxxx worms have ground and polished threads.

MINLON® is a registered trademark of E.I. DuPont.

\*\*These are in effect Helical Gears with a Helix Angle compatible with the worms. When in mesh they operate as a worm pair at right angles.

# Worms & Worm Gears

## 16 Diametral Pitch (Bronze & Cast Iron Worm Gears, Steel Worms – Unhardened & Hardened)

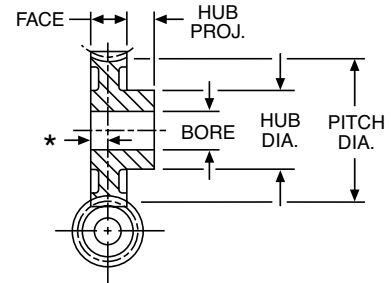
Pressure Angle – Single thread 14-1/2° – Double thread 14-1/2° – Quad thread 25°

RATIO = Gear Teeth ÷ Worm Threads

All Worms and Worm Gears stocked RIGHT HAND ONLY.

ALL DIMENSIONS IN INCHES  
ORDER BY CATALOG NUMBER OR ITEM CODE

16 DIAMETRAL PITCH		WORM GEARS				FACE = .313" *CENTER LINE WORM TO FLUSH END = .156"					
No. of Teeth	Pitch Dia.	Bore	Hub		Style See Page 315	SINGLE Thread		DOUBLE Thread		QUAD Thread	
			Dia.	Proj.		Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code
<b>BRONZE</b>											
20	1.250	.250	.62	.31	A	G1042	13612	D1142	13700	Q1342	13536
30	1.875	.3125	.75	.38	B	G1043	13614	D1143	13702	Q1343	13538
40	2.500				C	G1044	13616	D1144	13704	Q1344	13540
50	3.125				D	.88	.44	G1045	13618	D1145	13706
60	3.750	G1048	13620	D1148				13708	Q1348	13544	
80	5.000	G1046	13622	-				-	Q1346	13546	
100	6.250	G1047	13624	-				-	-	-	
<b>CAST IRON</b>											
20	1.250	.250	.62	.31	A	CG1042	63506	CD1142	63513	CQ1342	63518
30	1.875	.3125	.75	.38	B	CG1043	63507	CD1143	63514	CQ1343	63519
40	2.500				C	CG1044	63508	CD1144	63515	CQ1344	63520
50	3.125				C	.88	.44	CG1045	63509	CD1145	63516
60	3.750	CG1048	63510	CD1148				63517	CQ1348	63522	
80	5.000	CG1046	63511	-				-	CQ1346	63523	
100	6.250	CG1047	63512	-				-	-	-	



### STANDARD TOLERANCES

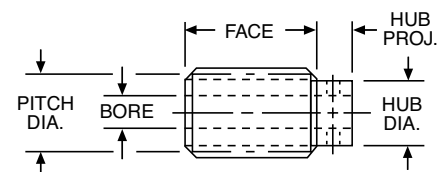
DIMENSION	TOLERANCE	
BORE	All	±.0005

### WORM LEAD and LEAD ANGLE

	SINGLE	DOUBLE	QUAD
LEAD	.1963"	.3927"	.7854"
LEAD ANGLE	5°43'	11°19'	21°48'

16 DIAMETRAL PITCH		WORMS FOR ABOVE GEARS									
Pitch Dia.	Face	Bore	Hub		SINGLE Thread		DOUBLE Thread		QUAD Thread		
			Dia.	Proj.	Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code	
<b>UNHARDENED – STEEL</b>											
.625	1.00	.250	.44	.25	LVHB-1	12926	DVH-1	12862	QVH-1	12940	
<b>HARDENED – STEEL</b>											
.625	1.00	.3125	.44	.25	HLVH-1	13032	HVH-1	13004	HQVH-1	13058	
					GLVH-1	12958	GDVH-1	12950	GQVH-1	13046	

All worms have .0938 drilled hole in hub.  
Hxxx worms have polished threads.  
Gxxx worms have ground and polished threads.



### REFERENCE PAGES

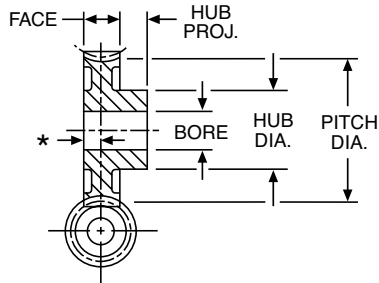
Alterations – 322  
Lubrication – 322  
Materials – 323

# Worms & Worm Gears

## 12 Diametral Pitch (Bronze & Cast Iron Worm Gears, Steel Worms – Unhardened & Hardened)

Pressure Angle – 14-1/2°

RATIO = Gear Teeth ÷ Worm Threads  
RH = RIGHT HAND — LH = LEFT HAND  
All others stocked RIGHT HAND ONLY.

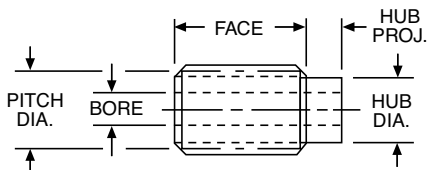


### STANDARD TOLERANCES

DIMENSION		TOLERANCE
BORE	All	±.0005

### WORM LEAD and LEAD ANGLE

	SINGLE	DOUBLE	QUAD
LEAD	.2618"	.5236"	1.0472"
LEAD ANGLE	4°46'	9°28'	18°26'



### REFERENCE PAGES

- Alterations — 322
- Horsepower Ratings — 97, 98
- Lubrication — 322
- Materials — 323
- Selection Procedure — 96

ALL DIMENSIONS IN INCHES  
ORDER BY CATALOG NUMBER OR ITEM CODE

12 DIAMETRAL PITCH WORM GEARS											
No. of Teeth	Pitch Dia.	Bore	Hub		Style See Page 315	SINGLE Thread		DOUBLE Thread		QUAD Thread	
			Dia.	Proj.		Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code
<b>BRONZE</b>											
12	1.000	.5625	1.00	.62	A	-	-	-	-	QB1212†	13762
16	1.333	.6875	1.25	.62		-	-	-	-	QB1216†	13764
20	1.667	.500	1.25	.50		GB1050A	13626	DB1400	13714	DB1600	13766
30	2.500	.500	1.19	.62	B	GB1051	13628	-	-	-	-
		.750		.62		-	-	DB1401A	13716	DB1601A	13768
40	3.333	.625	1.44	.62		GB1052A	13630	-	-	-	-
		.750		.62		-	-	DB1402A	13718	DB1602A	13770
50	4.167	.625	1.44	.62		GB1053A	13632	-	-	-	-
		.750		.62		-	-	DB1403A	13720	DB1603A	13772
60	5.000	.625	1.69	.62	C	GB1260A	13634	-	-	-	-
		.750		.62		-	-	DB1260A	13722	QB1260A	13774
80	6.667	.625	1.94	.75		GB1054	13636	-	-	-	-
100	8.333	.750	1.94	.75	GB1055	13638	-	-	-	-	
<b>CAST IRON</b>											
20	1.667	.500	1.25	.50	A	G1050ARH	13110	D1400RH	13260	D1600	13352
		.500		.62		G1050ALH	13112	D1400LH	13262	-	-
30	2.500	.750	1.19	.62		G1051RH	13114	-	-	-	-
					G1051LH	13116	D1401ARH	13264	D1601A	13354	
					-	-	D1401ALH	13266	-	-	
40	3.333	.625	1.44	.62	B	G1052ARH	13118	-	-	-	-
		.750		.62		G1052ALH	13120	-	-	-	-
						-	-	D1402ARH	13268	D1602A	13356
						-	-	D1402ALH	13270	-	-
50	4.167	.625	1.44	.62		G1053ARH	13122	-	-	-	-
		.750		.62		G1053ALH	13124	-	-	-	-
60	5.000	.625	1.69	.75	C	-	-	D1403ARH	13272	D1603A	13358
		.750		.75		-	-	D1403ALH	13274	-	-
						G1260RH	13126	-	-	-	-
					G1260LH	13128	-	-	-	-	
80	6.667	.625	1.94	.75	-	-	D1260A	13276	Q1260A	13360	
		.750		.75	G1054	13130	-	-	-	-	
100	8.333	.750	1.94	.75	-	-	D1404	13278	-	-	
					G1055	13134	-	-	-	-	

12 DIAMETRAL PITCH WORMS FOR ABOVE GEARS											
Pitch Dia.	Face	Bore	Hub		SINGLE Thread		DOUBLE Thread		QUAD Thread		
			Dia.	Proj.	Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code	
<b>UNHARDENED - STEEL</b>											
1.000	1.125	.625	-	-	-	-	D1407KRH‡	12806	D1607KRH‡	12822	
		.625	-	-	-	-	D1407KLH‡	12808	D1607KLH‡	12824	
	1.625	.500	-	-	L1056‡	12900	L1407‡	12912	-	-	
	1.125	.500	.75	.38	GH1056RH	12884	DH1407RH	12838	DH1607	12854	
					GH1056LH	12886	DH1407LH	12840	-	-	
<b>HARDENED - STEEL</b>											
1.000	1.125	.625	-	-	-	-	H1407RH‡	12980	H1607‡	12996	
		.625	-	-	-	-	H1407LH‡	12982	-	-	
	1.625	.500	-	-	HL1056‡	13006	HL1407‡	13018	-	-	
	1.125	.500	-	-	H1056RH‡	12962	-	-	-	-	
					H1056LH‡	12960	-	-	-	-	

‡.750" Face, Center Line Worm to Flush End = .375"  
‡Furnished with .125" Keyway.  
Hardened Worms have ground and polished threads.



# Worms & Worm Gears

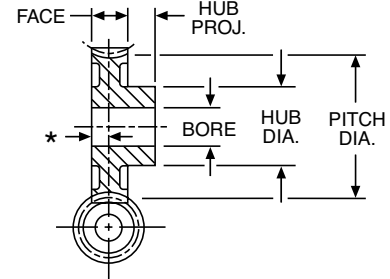
## 10 Diametral Pitch (Bronze & Cast Iron Worm Gears, Steel Worms – Unhardened & Hardened)

Pressure Angle – 14-1/2°

RATIO = Gear Teeth ÷ Worm Threads  
RH = RIGHT HAND – LH = LEFT HAND  
All others stocked RIGHT HAND ONLY.

ALL DIMENSIONS IN INCHES  
ORDER BY CATALOG NUMBER OR ITEM CODE

10 DIAMETRAL PITCH		WORM GEARS				FACE = .625" *CENTER LINE WORM TO FLUSH END = .312"					
No. of Teeth	Pitch Dia.	Bore	Hub		Style See Page 315	SINGLE Thread		DOUBLE Thread		QUAD Thread	
			Dia.	Proj.		Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code
<b>BRONZE</b>											
16	1.600	.750	1.50	.75	A	–	–	–	–	QB1016†	13780
20	2.000	.500 .875	1.25 1.62	.62		GB1060A	13640	–	–	–	–
30	3.000	.625 .875	1.69	.62	B	–	–	–	–	–	–
40	4.000	.625 .875	1.69	.62		GB1061A	13648	–	–	–	–
50	5.000	.750 .875	1.94	.75	GB1062A	13642	–	–	–	–	–
60	6.000	.750 .875	1.94	.75	–	–	–	–	–	–	–
80	8.000	.750	1.94	.75	GB1063	13644	–	–	–	–	–
100	10.000	.750	2.00	.75	–	–	–	–	–	–	–
<b>CAST IRON</b>											
20	2.000	.500	1.25	.62	A	G1060ARH	13136	–	–	–	–
		.875	1.62	–		–	D1410RH	13138	13282	13284	D1610
30	3.000	.625	1.69	.62	B	G1061ARH	13142	–	–	–	–
		.875	1.69	–		–	D1411RH	13140	13286	13288	D1611
40	4.000	.625	1.69	.62	B	G1062ARH	13144	–	–	–	–
		.875	1.69	–		–	D1412RH	13146	13290	13292	D1612
50	5.000	.750	1.94	.75	C	G1063RH	13148	–	–	–	–
		.875	1.94	–		–	D1413ARH	13150	13294	13296	D1613A
60	6.000	.750	1.94	.75	C	G1064RH	13152	–	–	–	–
		.875	1.94	–		–	D1414A	13154	13298	–	D1614A
80	8.000	.750	1.94	.75	C	G1067RH	13156	–	–	–	–
		.875	1.94	–		–	D1080A	13158	13300	–	Q1080A
100	10.000	.750	1.94	.75	–	–	–	–	–	–	



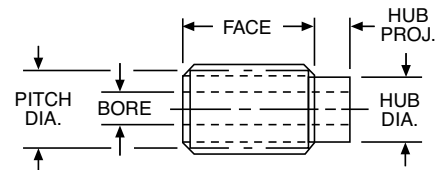
### STANDARD TOLERANCES

DIMENSION	TOLERANCE
BORE	All ±.0005

### WORM LEAD and LEAD ANGLE

	SINGLE	DOUBLE	QUAD
LEAD	.3142"	.6283"	1.2566"
LEAD ANGLE	4°34'	9°5'	17°45'

10 DIAMETRAL PITCH		WORMS FOR ABOVE GEARS									
Pitch Dia.	Face	Bore	Hub		SINGLE Thread		DOUBLE Thread		QUAD Thread		
			Dia.	Proj.	Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code	
<b>UNHARDENED – STEEL</b>											
1.250	1.375	.750	–	–	–	–	D1418KRH‡	12810	D1618KRH‡	12826	
	2.000	.750	–	–	–	–	D1418KLH‡	12812	D1618KLH‡	12828	
		.625	–	–	L1066‡	12902	–	–	–	–	
	1.375	.625	–	–	G1066KRH‡	12864	–	–	–	–	
1.250	1.375	.625	.97	.50	G1066KLH‡	12866	–	–	–	–	
					GH1066RH	12888	DH1418RH	12842	DH1618	12856	
<b>HARDENED STEEL</b>											
1.250	1.375	.750	–	–	–	–	H1418RH‡	12986	H1618‡	12998	
	2.000	.750	–	–	–	–	H1418LH‡	12984	–	–	
		.625	–	–	HL1066‡	13008	–	–	–	–	
	1.375	.625	–	–	H1066RH‡	12966	–	–	–	–	
					H1066LH‡	12964	–	–	–	–	



### REFERENCE PAGES

Alterations – 322  
Horsepower Ratings – 97, 98  
Lubrication – 322  
Materials – 323  
Selection Procedure – 96

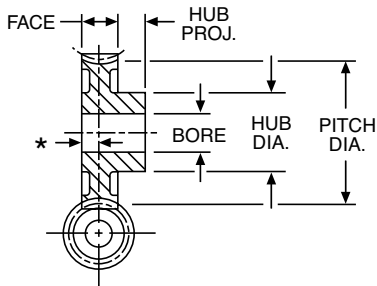
†.875" Face, Center Line Worm to Flush End = .438"  
‡Furnished with 3/16" Keyway.  
Hardened Worms have ground and polished threads.

# Worms & Worm Gears

## 8 Diametral Pitch (Bronze & Cast Iron Worm Gears, Steel Worms – Unhardened & Hardened)

Pressure Angle – 14-1/2°

RATIO = Gear Teeth ÷ Worm Threads  
RH = RIGHT HAND — LH = LEFT HAND  
All others stocked RIGHT HAND ONLY.

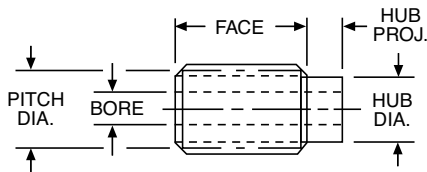


### STANDARD TOLERANCES

DIMENSION	TOLERANCE
BORE	All ±.0005

### WORM LEAD and LEAD ANGLE

	SINGLE	DOUBLE	QUAD
LEAD	.3927"	.7854"	1.5708"
LEAD ANGLE	4°46'	9°28'	18°26'



### REFERENCE PAGES

Alterations — 322  
Horsepower Ratings — 97, 98  
Lubrication — 322  
Materials — 323  
Selection Procedure — 96

ALL DIMENSIONS IN INCHES  
ORDER BY CATALOG NUMBER OR ITEM CODE

8 DIAMETRAL PITCH		WORM GEARS				FACE = .750" *CENTER LINE WORM TO FLUSH END = .375"					
No. of Teeth	Pitch Dia.	Bore	Hub		Style See Page 315	SINGLE Thread		DOUBLE Thread		QUAD Thread	
			Dia.	Proj.		Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code
<b>BRONZE</b>											
8	1.000	.500	1.12	.88	A	—	—	—	—	QB808†	13790
12	1.500	.750	1.50	.88		—	—	—	—	QB812†	13792
16	2.000	1.000	2.00	.88		—	—	—	—	QB816†	13794
20	2.500	.750	1.75	.75	B	GB1070	13654	—	—	—	—
		1.000	1.75	.75		—	—	DB1420A	13740	DB1620A	13796
30	3.750	.750	1.69	.75	B	GB1071	13656	—	—	—	—
		1.000	1.69	.75		—	—	DB1421A	13742	DB1621A	13798
40	5.000	1.000	2.19	.75	B	GB1072A	13658	DB1422	13744	DB1622	13800
48	6.000	1.000	2.38	.88		GB1073	13660	—	—	—	—
50	6.250	1.000	2.31	.88	C	GB850	13662	DB1423A	13746	DB1623A	13802
60	7.500	1.000	2.44	.88		GB860	13664	DB860A	13748	—	—
80	10.000	1.250	2.75	.88	D	GB1074A	13666	—	—	—	—
100	12.500	1.250	3.00	1.00	C	GB8100	13668	—	—	—	—
<b>CAST IRON</b>											
20	2.500	.750	1.75	.75	A	G1070RH	13160	—	—	—	—
		1.000	1.75	.75		G1070LH	13162	—	—	—	—
30	3.750	.750	1.69	.75	B	G1071RH	13164	—	—	—	—
		1.000	1.69	.75		G1071LH	13166	—	—	—	—
40	5.000	1.000	1.69	.75	B	G1072ARH	13168	D1421ARH	13308	D1621A	13382
						G1072ALH	13170	D1421ALH	13310	—	—
48	6.000	1.000	2.38	.88	B	G1073RH	13174	D1422ARH	13312	D1622A	13384
						G1073LH	13172	D1422ALH	13314	—	—
50	6.250	1.000	2.31	.88	B	G850RH	13176	—	—	—	—
						G850LH	13178	D1423A	13316	D1623A	13386
60	7.500	1.000	2.44	.88	C	G860	13180	D860A	13320	Q860A	13388
80	10.000	1.000	2.69	.88	D	—	—	D1424A	13322	D1624A	13390
		1.250	2.69	.88	D	G1074ARH	13182	—	—	—	—
96	12.000	1.250	3.00	1.00	C	G1075	13186	—	—	—	—
100	12.500	1.250	2.69	1.00	C	G8100A	13188	—	—	—	—

8 DIAMETRAL PITCH		WORMS FOR ABOVE GEARS										
Pitch Dia.	Face	Bore	Hub		SINGLE Thread		DOUBLE Thread		QUAD Thread			
			Dia.	Proj.	Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code		
<b>UNHARDENED – STEEL</b>												
1.500	1.750	.875	—	—	—	—	D1427KRH‡	12814	D1627KRH‡	12830		
							D1427KLH‡	12816	D1627KLH‡	12832		
	2.500	.875	—	—	—	—	L1427‡	12916	—	—		
		.750	—	—	L1076‡	12904	—	—	—	—		
1.750	.750	—	—	G1076KRH‡	12868	—	—	—	—			
	.750	—	—	G1076KLH‡	12870	—	—	—	—			
1.500	1.750	.750	1.18	.62	—	—	GH1076RH	12892	DH1427RH	12846	DH1627	12858
							GH1076LH	12894	DH1427LH	12848	—	—
<b>HARDENED STEEL</b>												
1.500	1.750	.875	—	—	—	—	H1427RH‡	12990	H1627‡	13000		
							H1427LH‡	12988	—	—		
	2.500	.875	—	—	—	—	HL1427‡	13022	—	—		
		.750	—	—	HL1076‡	13010	—	—	—	—		
1.750	.750	—	—	—	—	—	H1076RH‡	12970	—	—		
							H1076LH‡	12968	—	—	—	—

†1.000" Face, Center Line Worm to Flush End = .500"  
‡Furnished with .188" Keyway.  
Hardened Worms have ground and polished threads.



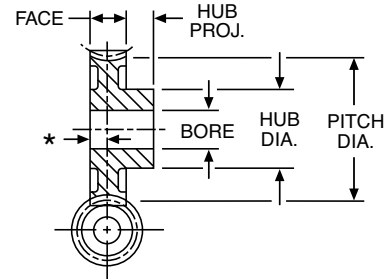
# Worms & Worm Gears

## 6 Diametral Pitch (Bronze & Cast Iron Worm Gears, Steel Worms – Unhardened & Hardened)

Pressure Angle – 14-1/2°

ALL DIMENSIONS IN INCHES  
ORDER BY CATALOG NUMBER OR ITEM CODE

6 DIAMETRAL PITCH						WORM GEARS				FACE = 1.000" *CENTER LINE WORM TO FLUSH END = .500"		
No. of Teeth	Pitch Dia.	Bore	Hub		Style See Page 315	SINGLE Thread		DOUBLE Thread		QUAD Thread		
			Dia.	Proj.		Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code	
<b>BRONZE</b>												
16	2.667	1.250	2.38	1.00	A	-	-	-	-	QB616**	13804	
20	3.333	.750 1.000 1.250	2.00 2.00 2.00	.88		GB1077A	13670	-	-	-	-	-
24	4.000	.750 1.250	1.94	.88	B	GB1080A	13672	-	-	-	-	
30	5.000	.875 1.250	2.19	.88		GB1081	13674	-	-	-	-	-
36	6.000	1.000	2.50	.88	GB1082	13676	-	-	-	-	-	
40	6.667	1.000 1.250	2.44	.88	GB1078	13678	-	-	-	-	-	
48	8.000	1.250	2.75	1.00	C	GB1083	13680	-	-	-	-	
50	8.333	1.250	2.69	1.00		GB1079	13682	-	-	-	-	-
60	10.000	1.250	3.00	1.00		GB1087	13684	-	-	-	-	-
72	12.000	1.250	3.00	1.25		GB1084	13686	-	-	-	-	-
<b>CAST IRON</b>												
20	3.333	.750	1.81	.88	B	G1077RH	13190	-	-	-	-	
		1.000				G1077LH	13192	-	-	-	-	
24	4.000	.750	1.94	.88		G1080ARH	13194	-	-	-	-	
		1.250				G1080ALH	13196	-	-	-	-	
30	5.000	.875	2.19	.88		G1081RH	13198	-	-	-	-	
		1.250				G1081LH	13200	-	-	-	-	
36	6.000	1.000	2.50	.88		G1082RH	13202	-	-	-	-	
		1.250				G1082LH	13204	-	-	-	-	
40	6.667	1.000	2.44	.88		G1078RH	13206	-	-	-	-	
		1.250				G1078LH	13208	-	-	-	-	
48	8.000	1.250	2.75	1.00		G1083RH	13212	-	-	-	-	
		1.500				G1083LH	13210	-	-	-	-	
50	8.333	1.250	2.69	1.00	G1079RH	13214	D1433	13342	D1633	13402		
60	10.000	1.250	2.69	1.00	G1087ARH	13218	D660	13344	Q660	13404		
72	12.000	1.250	2.94	1.00	G1084ARH	13220	D1434	13346	D1634	13406		
80	13.333	1.250	3.00	1.00	G1088ARH	13224	-	-	-	-		
96	16.000	1.375	3.00	1.00	G1085ARH	13226	-	-	-	-		
100	16.667	1.375	3.00	1.00	G1089ARH	13228	-	-	-	-		

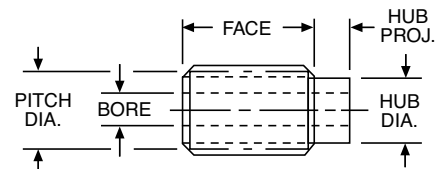


### STANDARD TOLERANCES

DIMENSION	TOLERANCE
BORE	All ±.0005

### WORM LEAD and LEAD ANGLE

	SINGLE	DOUBLE	QUAD
LEAD	.5236"	1.0472"	2.0944"
LEAD ANGLE	4°46'	9°28'	18°26'



### REFERENCE PAGES

Alterations — 322  
Horsepower Ratings — 97, 98  
Lubrication — 322  
Materials — 323  
Selection Procedure — 96

RATIO = Gear Teeth ÷ Worm Threads  
RH = RIGHT HAND — LH = LEFT HAND  
All others stocked RIGHT HAND ONLY.

\*\*1.250" Face, Center Line Worm to Flush End = .625"  
‡Furnished with .188" Keyway.  
†Furnished with .250" Keyway.  
Hardened Worms have ground and polished threads.

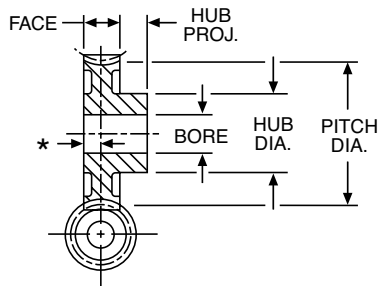
6 DIAMETRAL PITCH						WORMS FOR ABOVE GEARS					
Pitch Dia.	Face	Bore	Hub		Style See Page 315	SINGLE Thread		DOUBLE Thread		QUAD Thread	
			Dia.	Proj.		Catalog Number	Item Code	Catalog Number	Item Code	Catalog Number	Item Code
<b>UNHARDENED – STEEL</b>											
2.000	2.500	1.000	-	-	-	-	-	D1438KRH†	12818	D1638KRH†	12834
			-	-		-	-	D1438KLH†	12820	D1638KLH†	12836
	3.500	1.000	-	-	-	-	-	L1438	12918	-	-
		.875	-	-	-	L1086‡	12906	-	-	-	-
2.500	.875	1.56	.75	-	G1086KRH‡	12872	-	-	-	-	
					G1086KLH‡	12874	-	-	-	-	
					GH1086RH	12896	DH1438RH	12850	DH1638	12860	
					GH1086LH	12898	DH1438LH	12852	-	-	
<b>HARDENED STEEL</b>											
2.000	2.500	1.000	-	-	-	-	-	H1438RH†	12994	H1638†	13002
			-	-		-	-	H1438LH‡	12992	-	-
	3.500	1.000	-	-	-	-	-	HL1438†	13024	-	-
		.875	-	-	-	HL1086‡	13012	-	-	-	-
2.500	.875	-	-	-	H1086RH‡	12974	-	-	-	-	
					H1086LH‡	12972	-	-	-	-	

# Worms & Worm Gears

## 4 Diametral Pitch (Bronze & Cast Iron Worm Gears, Steel Worms – Unhardened & Hardened)

Pressure Angle – 14-1/2°

RATIO = Gear Teeth ÷ Worm Threads  
 RH = RIGHT HAND – LH = LEFT HAND  
 All others stocked RIGHT HAND ONLY.

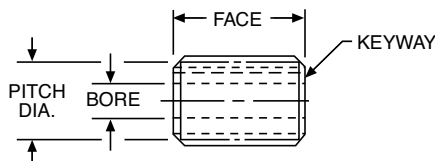


### STANDARD TOLERANCES

DIMENSION		TOLERANCE
BORE	All	±.0005

### WORM LEAD and LEAD ANGLE

LEAD	.7854
LEAD ANGLE	4°46'



### REFERENCE PAGES

Alterations – 322  
 Horsepower Ratings – 97, 98  
 Lubrication – 322  
 Materials – 323  
 Selection Procedure – 96

ALL DIMENSIONS IN INCHES  
 ORDER BY CATALOG NUMBER OR ITEM CODE

4 DIAMETRAL PITCH		WORM GEARS					
No. of Teeth	Pitch Dia.	Bore	Hub		Style See Page 315	SINGLE Thread	
			Dia.	Proj.		Catalog Number	Item Code
BRONZE							
20	5.000	1.000	2.50	1.25	B	GB1100	13688
24	6.000					GB1101	13690
CAST IRON							
20	5.000	1.000	2.50	1.25	B	G1100RH	13230
						G1100LH	13232
24	6.000					G1101RH	13234
						G1101LH	13236
32	8.000	1.250	3.00		B	G1102RH	13238
						G1102LH	13240
40	10.000					G1103RH	13242
48	12.000	1.500	3.50		D	G1104RH	13244
64	16.000					G1105RH	13246

4 DIAMETRAL PITCH		WORMS FOR ABOVE GEARS					
Pitch Dia.	Face	Bore	Hub		SINGLE Thread	Catalog Number*	Item Code
			Dia.	Proj.			
UNHARDENED – STEEL							
3.000	3.500	1.250	-	-	G1106KRH	12876	
	4.500	1.250	-	-	G1106KLH	12878	
					L1106	12908	
HARDENED STEEL							
3.000	3.500	1.250	-	-	H1106	12976	
	4.500				HL1106	13014	
	5.750	1.250	-	-	HP1106	13034	

\*All worms furnished with .313 keyway.  
 Hardened Worms have ground and polished threads.

# Worms & Worm Gears

## 3 Diametral Pitch (Cast Iron Worm Gears, Steel Worms – Unhardened & Hardened)

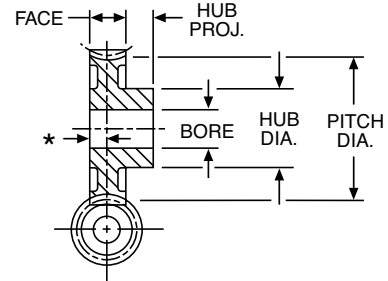
Pressure Angle – 14-1/2°

RATIO = Gear Teeth ÷ Worm Threads  
All Worm and Worm Gears stocked RIGHT HAND ONLY.



ALL DIMENSIONS IN INCHES  
ORDER BY CATALOG NUMBER OR ITEM CODE

3 DIAMETRAL PITCH WORM GEARS							
FACE = 2.000" *CENTER LINE WORM TO FLUSH END = 1.000"							
No. of Teeth	Pitch Dia.	Bore	Hub		Style See Page 315	SINGLE Thread	
			Dia.	Proj.		Catalog Number	Item Code
18	6.000	1.000	3.00	1.50	B	G1110	13248
24	8.000	1.500	3.50	1.50		G1111	13250
30	10.000					G1112	13252
36	12.000					G1113	13254
48	16.000	4.00			C	G1114	13256
54	18.000				D	G1115	13258



### STANDARD TOLERANCES

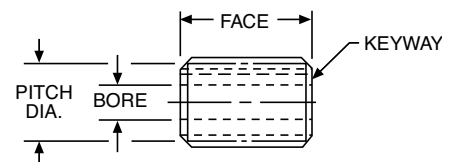
DIMENSION	TOLERANCE
BORE	All ±.0005

3 WORMS FOR ABOVE GEARS† DIAMETRAL PITCH						
Pitch Dia.	Face	Bore	Hub		SINGLE Thread	
			Dia.	Proj.	Catalog Number	Item Code
UNHARDENED – STEEL						
4.000	4.000	1.500	-	-	G1116KRH	12880
	5.500				L1116	12910
HARDENED STEEL						
4.000	4.000	1.500	-	-	H1116	12978
	5.500				HL1116	13016

†All worms furnished with .375" keyway.  
Hardened Worms have ground and polished threads.

### WORM LEAD and LEAD ANGLE

LEAD	1.0472"
LEAD ANGLE	4°46'



### REFERENCE PAGES

Alterations – 322  
Horsepower Ratings – 97, 98  
Lubrication – 322  
Materials – 323  
Selection Procedure – 96

# Worms & Worm Gears



Boston worms and worm gears provide an effective answer for such power transmission applications as high-ratio speed reduction, limited space, right-angle shafts and non-intersecting shafts. When properly applied, they are the smoothest and quietest form of gearing. Steel worms and cast iron or bronze worm gears are available in single, double or quadruple threads, 48 to 3 diametral pitch.

Acetal worms and worm gears are available in single thread, 48 to 24 diametral pitch.

## Selection Procedure

Approximate input horsepower and output torque ratings for Boston stock worm and worm gear combinations from 12 to 3 DP are listed on Pages 97, 98. These ratings are for hardened, ground and polished worms operating with bronze worm gears. For other combinations multiply the listed ratings by the following percentages:

Hardened, ground and polished steel worms with cast iron gears 50%. Unhardened steel worms with cast iron gears 25%.

These ratings are listed at selected worm speeds. Ratings for intermediate speeds can be interpolated from the values indicated.

These ratings are based on gears operating with a Service Factor of 1.0, properly mounted in accordance with good design practice and continuously lubricated with a sufficient supply of oil.

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 worm gear set with horsepower capacity equal to [or greater than] design horsepower determined in Step 2.

TABLE 1

Service Factor	Operating Conditions
0.8	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.

# Worms & Worm Gears

## Steel-Hardened, Ground & Polished Worms Bronze Worm Gears

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

Worm RPM		1800		600		100		Worm Cat. No.	Gear Cat. No.	DP
Ratio	Center Distance	Input HP	Output Torque	Input HP	Output Torque	Input HP	Output Torque			
3	1.000	.52	50	.27	72	.06	83	H1607	QB1212	12
	1.500	1.19	109	.66	183	.15	227	H1627	QB812	8
4	1.167	.78	99	.40	143	.08	166	H1607	QB1216	12
	1.425	1.11	142	.61	223	.13	267	H1618	QB1016	10
	1.750	1.77	216	.98	361	.22	454	H1627	QB816	8
	2.333	3.01	392	1.84	689	.45	933	H1638	QB616	6
5	1.333	.68	109	.34	158	.07	180	H1607	DB1600	12
	1.625	1.03	165	.57	257	.12	309	H1618	DB1610	10
	2.000	1.73	264	.96	441	.22	551	H1627	DB1620A	8
	2.667	3.92	639	2.40	1124	.59	1512	H1638	QB620A	6
6	3.000	3.82	746	2.34	1317	.57	1777	H1638	DB1630A	6
7.5	1.750	1.04	247	.53	355	.11	411	H1607	DB1601A	12
	2.125	1.59	381	.87	599	.19	714	H1618	DB1611	10
	2.625	2.65	607	1.47	1016	.33	1276	H1627	DB1621A	8
	3.500	4.80	1174	2.94	2064	.72	2789	H1638	DB1631A	6
10	1.333	.44	130	.23	189	.05	208	H1407	DB1400	12
	1.625	.67	196	.38	305	.09	366	H1418	DB1410	10
	2.000	1.05	318	.63	525	.15	649	H1427	DB1420A	8
	2.167	1.39	441	.71	641	.15	756	H1607	DB1602A	12
	2.667	2.01	616	1.26	1071	.32	1450	H1438	DB620A	6
	2.625	2.11	672	1.16	1061	.25	1267	H1618	DB1612	10
	3.250	3.54	1082	1.96	1806	.44	2270	H1627	DB1622	8
4.333	6.43	2094	3.94	3685	.96	4980	H1638	DB1632A	6	
12	3.000	2.39	882	1.50	1537	.38	2042	H1438	DB1430A	6
12.5	2.583	1.72	683	.87	985	.18	1134	H1607	DB1603A	12
	3.125	2.61	1042	1.44	1641	.31	1961	H1618	DB1613A	10
	3.875	4.40	1681	2.44	2810	.55	3466	H1627	DB1623A	8
15	1.750	.64	284	.33	410	.07	463	H1407	DB1401A	12
	2.125	.98	436	.55	678	.13	804	H1418	DB1411	10
	2.625	1.54	699	.92	1150	.22	1428	H1427	DB1421A	8
	3.000	2.04	966	1.03	1402	.22	1617	H1607	QB1260A	12
	3.500	2.94	1355	1.84	2364	.47	3120	H1438	DB1431A	6
18	5.000†	2.27	1308	1.38	2373	.41	4198	H1116	G1110†	3
20	1.333	.28	140	.15	210	.04	227	H1056	GB1050A	12
	1.625	.42	217	.25	336	.06	391	H1066	GB1060A	10
	2.000	.65	343	.41	567	.10	706	H1076	GB1070	8
	2.167	.83	483	.43	693	.09	794	H1407	DB1402A	12
	2.667	1.22	665	.80	1156	.22	1550	H1086	GB1077A	6
	2.625	1.25	742	.71	1156	.16	1374	H1418	DB1412	10
	3.250	1.98	1191	1.18	1974	.28	2433	H1427	DB1422	8
	4.000	2.92	1667	1.99	3025	.64	4663	H1106	GB1100	4
4.333	3.77	2318	2.36	4034	.60	5420	H1438	DB1432A	6	
24	3.000	1.42	933	.93	1613	.26	2163	H1086	GB1080A	6
	6.000†	3.23	2218	1.81	4020	.53	7109	H1116	G1111†	3
	4.500	3.41	2336	2.32	4235	.75	6504	H1106	GB1101	4
25	2.583	.99	726	.52	1048	.11	1197	H1407	DB1403A	12
	3.125	1.50	1112	.85	1730	.19	2048	H1418	DB1413A	10
	3.875	2.39	1794	1.43	2962	.34	3671	H1427	DB1423A	8
	5.167	2.27	1738	1.42	3028	.36	4018	H1438	D1433†	6
	30	1.750	.40	294	.21	410	.05	473	H1056	GB1051
2.125		.59	452	.35	693	.09	831	H1066	GB1061A	10
2.625		.90	725	.57	1197	.13	1286	H1076	GB1071	8
3.000		1.15	1008	.60	1450	.13	1663	H1407	DB1260A	12
3.500		1.69	1386	1.12	2426	.31	3233	H1086	GB1081A	6
3.625		1.74	1544	.98	2395	.22	2836	H1418	DB1414A	10
4.500		2.75	2489	1.65	4128	.39	5105	H1427	DB860A	8
7.000†		4.23	3326	2.53	6002	.76	10683	H1116	G1112†	3
32	5.500	2.13	1955	1.46	3546	.47	5445	H1106	G1102†	4
36	4.000	1.95	1915	1.29	3366	.36	4470	H1086	GB1082A	6
	8.000†	3.87	3990	1.33	4130	.68	12816	H1116	G1113†	3

\*Torque in Lb. Ins.

†Cast Iron Gear Rating with Hardened Worm shown.

All Worm and Worm Gear Ratings are based on a Hardened Steel Worm used with a Bronze Worm Gear.

1. For a Hardened Steel Worm used with a Cast Iron Gear, multiply the listed Rating by .50.
2. For an Unhardened Steel Worm used with a Cast Iron Gear, multiply the listed Rating by .25.



# Worms & Worm Gears

## Steel-Hardened, Ground & Polished Worms Bronze Worm Gears

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

Ratio	Worm RPM		1800		600		100		Worm Cat. No.	Gear Cat. No.	DP
	Center Distance	Input HP	Output Torque	Input HP	Output Torque	Input HP	Output Torque				
40	2.167	.48	490	.26	672	.06	782	H1056	GB1052A	12	
	2.625	.72	742	.43	1134	.11	1361	H1066	GB1062A	10	
	3.250	1.12	1190	.71	1974	.18	2420	H1076	GB1072A	8	
	4.333	2.11	2310	1.39	4034	.38	5345	H1086	GB1078	6	
48	3.750	1.26	1614	.79	2622	.20	3267	H1076	GB1073	8	
	5.000	2.37	3110	1.56	5445	.43	7260	H1086	GB1083	6	
	10.000†	4.06	5320	1.68	6608	.72	17088	H1116	G1114†	3	
50	2.583	.55	700	.30	998	.07	1134	H1056	GB1053A	12	
	3.125	.83	1068	.51	1733	.12	1954	H1066	GB1063	10	
	3.875	1.30	1716	.82	2836	.21	3498	H1076	GB850	8	
	5.167	2.43	3327	1.60	5777	.44	7563	H1086	GB1079	6	
54	11.000†	4.34	5985	1.79	7434	.77	19224	H1116	G1115†	3	
	3.000	.60	924	.33	1323	.08	1664	H1056	GB1260A	12	
60	3.625	.91	1408	.54	2142	.13	2571	H1066	GB1064	10	
	4.500	1.42	2269	.89	3718	.23	4538	H1076	GB860	8	
	6.000	2.66	4370	1.75	7625	.49	10210	H1086	GB1087	6	
	7.000	2.79	5521	1.84	9605	.51	12705	H1086	GB1084	6	
80	3.833	.64	1288	.35	1849	.08	2118	H1056	GB1054	12	
	4.625	.96	1961	.57	3042	.14	3630	H1066	GB1067	10	
	5.750	1.49	3165	.94	5210	.24	6555	H1076	GB1074A	8	
100	4.667	.60	1505	.33	2206	.08	2458	H1056	GB1055	12	
	5.625	.90	2310	.54	3571	.13	4223	H1066	GB1065	10	
	7.000	1.40	3711	.88	6092	.22	7563	H1076	GB8100	8	

\*Torque in Lb. Ins.

†Cast Iron Gear Rating with Hardened Worm shown.

All Worm and Worm Gear Ratings are based on a Hardened Steel Worm used with a Bronze Worm Gear.

1. For a Hardened Steel Worm used with a Cast Iron Gear, multiply the listed Rating by .50.
2. For an Unhardened Steel Worm used with a Cast Iron Gear, multiply the listed Rating by .25.
3. For an Unhardened Steel Worm used with a Bronze Gear, multiply the listed Rating by .35.

## CENTER DISTANCES AND RATIOS AVAILABLE WITH STOCK WORM GEARING

Center Distance (inches)	Pitch	No. of Teeth in Gear	Worm Thread			Center Distance (inches)	Pitch	No. of Teeth in Gear	Worm Thread			Center Distance (inches)	Pitch	No. of Teeth in Gear	Worm Thread		
			Single	Double	Quad				Single	Double	Quad				Single	Double	Quad
			Ratio						Ratio						Ratio		
.375	48	20	20	10	5	1.781	32	100	100	50	25	4.333	6	40	40	20	10
.479	48	30	30	15	7.5	1.875	16	50	50	25	12.5	4.500	8	60	60	30	15
.531	32	20	20	10	5	1.917	24	80	80	40	20	4.500	4	24	24	-	-
.583	48	40	40	20	10	2.000	8	20	20	10	5	4.625	10	80	80	40	20
.666	24	20	20	10	5	2.125	10	30	30	15	7.5	4.667	12	100	100	-	-
.688	48	50	50	25	12.5	2.167	12	40	40	20	10	5.000	6	48	48	-	-
.688	32	30	30	15	7.5	2.188	16	60	60	30	15	5.000	3	18	18	-	-
.792	48	60	60	30	15	2.250	24	96	96	48	24	5.167	6	50	50	25	12.5
.844	32	40	40	20	10	2.333	24	100	100	50	25	5.500	4	32	32	-	-
.875	24	30	30	15	7.5	2.583	12	50	50	25	12.5	5.625	10	100	100	50	-
.938	16	20	20	10	5	2.625	10	40	40	20	10	5.750	8	80	80	-	-
1.000	48	80	80	40	20	2.625	8	30	30	15	7.5	6.000	6	60	60	30	15
1.000	32	50	50	25	12.5	2.667	6	20	20	10	5	6.000	3	24	24	-	-
1.083	24	40	40	20	10	2.812	16	80	80	-	20	6.500	4	40	40	-	-
1.156	32	60	60	30	15	3.000	12	60	60	30	15	6.750	8	96	96	-	-
1.208	48	100	100	50	25	3.000	6	24	24	12	6	7.000	8	100	100	-	-
1.250	16	30	30	15	7.5	3.125	10	50	50	25	12.5	7.000	6	72	72	36	18
1.292	24	50	50	25	12.5	3.250	8	40	40	20	10	7.000	3	30	30	-	-
1.333	12	20	20	10	5	3.438	6	100	100	-	-	7.500	4	48	48	-	-
1.469	32	80	80	40	20	3.500	16	30	30	15	7.5	7.667	6	80	80	-	-
1.500	24	60	60	30	15	3.625	10	60	60	30	15	8.000	3	36	36	-	-
1.562	16	40	40	20	10	3.750	8	48	48	-	-	9.000	6	96	96	-	-
1.625	10	20	20	10	5	3.833	12	80	80	40	-	9.333	6	100	100	-	-
1.719	32	96	96	48	24	3.875	8	50	50	25	12.5	9.500	4	64	64	-	-
1.750	24	72	72	36	18	4.000	6	36	36	-	-	10.000	3	48	48	-	-
1.750	12	30	30	15	7.5	4.000	4	20	20	-	-	11.000	3	54	54	-	-

Example: Given a center distance of 2.625", Table lists Worm and Worm Gear Ratios available:  
 10 Pitch, 40 tooth, single = 40 to 1  
 10 Pitch, 40 tooth, double = 20 to 1  
 10 Pitch, 40 tooth, quad = 10 to 1  
 8 Pitch, 30 tooth, single = 30 to 1  
 8 Pitch, 30 tooth, double = 15 to 1  
 8 Pitch, 30 tooth, quad = 7.5 to 1