

WORMS AND WORM GEARS

STEEL-HARDENED, GROUND AND 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	12
	2.625	1.25	742	.71	1156	.16	1374	H1418	DB1412	6
	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	12
	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

*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.

BOSTON GEAR®

Gear Catalog

WORMS AND WORM GEARS

STEEL-HARDENED, GROUND AND 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			
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
60	3.000	.60	924	.33	1323	.08	1664	H1056	GB1260A	12
	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
72	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	16	100	100	-	-	7.500	4	48	48	-	-
1.469	32	80	80	40	20	3.500	6	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:

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|--------------------------------------|-------------------------------------|
| 10 Pitch, 40 tooth, single = 40 to 1 | 8 Pitch, 30 tooth, single = 30 to 1 |
| 10 Pitch, 40 tooth, double = 20 to 1 | 8 Pitch, 30 tooth, double = 15 to 1 |
| 10 Pitch, 40 tooth, quad = 10 to 1 | 8 Pitch, 30 tooth, quad = 7.5 to 1 |