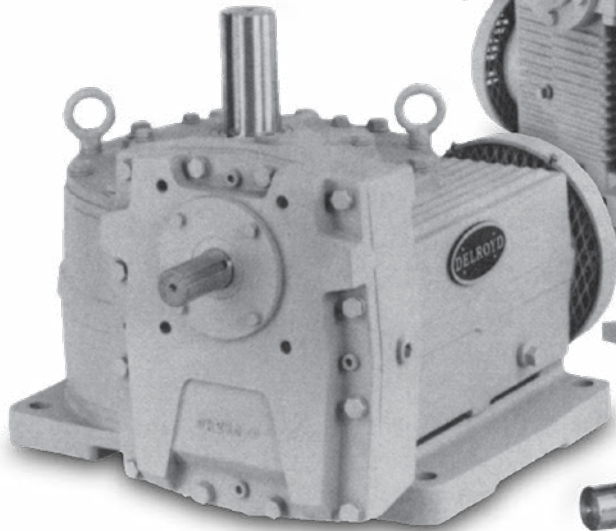
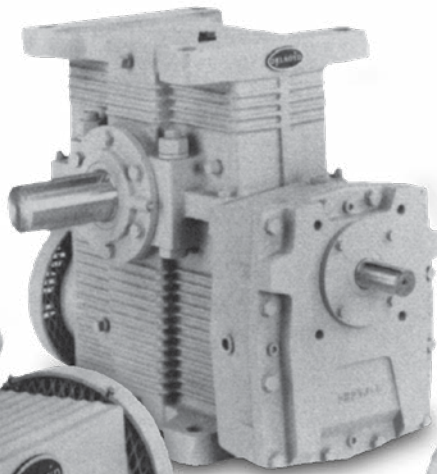
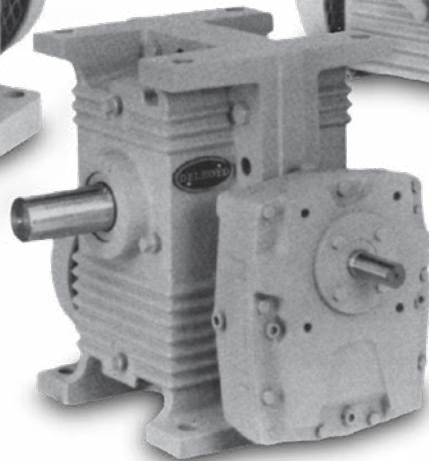


Delroyd Helical Worm Speed Reducers

Type HE50-HE140

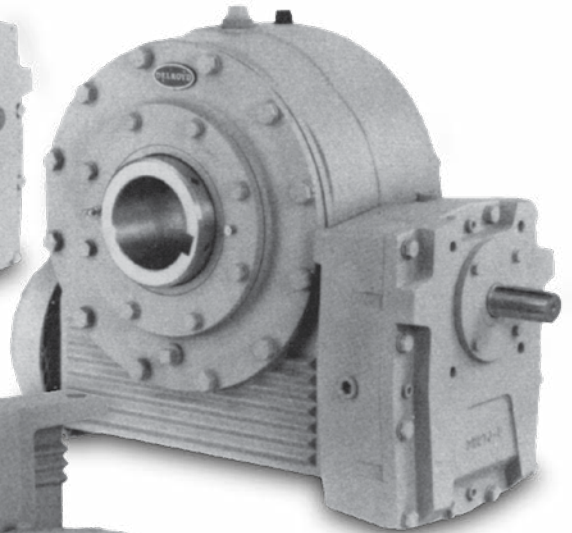


Type HV35-HV200



Type HE35-HE40

Type HSM35-HSM200



Horsepower and Torque Ratings • Helical Worm

Helical Worm
Speed Reducers

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	15.75	15.74	15.66	15.57	15.55	15.56	15.55	15.58	15.53	15.50	15.45	15.45
	Ratio Combinations	3.05	3.04	3.04	3.04	3.03	3.04	3.03	3.04	3.04	3.04	3.04	3.04
		5-1/6	5-1/6	5-1/6	5-1/6	5-1/6	5-1/6	5-1/6	5-1/6	5-1/6	5-1/10	5-1/10	5-1/10
1750	Mech. Input HP	6.26	8.80	14.6	21.6	32.0	44.3	56.7	73.0	108	144	252	350
	Out.Torq., in.lbs.	3180	4450	7380	11000	16400	22600	29200	38000	56000	75500	131000	185000
	Therm. Input HP	4.83	6.31	12.0	18.3	25.6	32.5	40.6	54.8	72.0	101	134	175
	Output RPM	111	111	112	112	113	112	113	112	113	113	113	113
	Efficiency%	89.6	89.2	89.6	90.8	91.5	91.0	92.0	92.8	92.7	93.9	93.4	95.0
1450	Mech. Input HP	546	7.95	13.0	19.5	29.2	41.0	52.2	68.2	98.5	125	218	288
	Out.Torq., in.lbs.	3330	4860	7880	11900	18000	25000	32800	42700	61200	79000	137000	180000
	Therm. Input HP	4.33	5.54	10.6	16.0	22.6	28.6	35.6	48.4	63.6	82.5	121	156
	Output RPM	92.1	92.1	92.6	93.1	93.2	93.2	93.2	93.1	93.4	93.5	93.9	93.9
	Efficiency%	89.1	89.4	89.1	90.2	91.2	90.2	93.0	92.5	92.0	93.8	93.6	93.1
1150	Mech. Input HP	4.60	6.50	12.0	16.6	25.4	35.5	46.8	62.8	87.8	104	187	247
	Out.Torq., in.lbs.	3510	4940	9170	12700	19800	27400	36400	48500	68200	82000	147000	195000
	Therm. Input HP	3.76	4.78	9.07	13.7	19.4	24.0	30.7	41.7	54.7	74.0	104	134
	Output RPM	73.0	73.1	73.4	73.9	74.0	73.9	74.0	73.8	74.1	74.2	74.4	74.4
	Efficiency%	88.4	88.1	89.0	89.7	91.5	90.5	91.3	90.4	91.3	92.8	92.8	93.2
865	Mech. Input HP	3.64	5.16	9.18	13.6	21.0	29.3	39.0	50.0	76.0	80.0	155	191
	Out.Torq., in.lbs.	3630	5150	9180	13600	21200	30000	40000	52000	77800	83300	160000	198000
	Therm. Input HP	3.11	4.04	7.52	11.4	16.2	20.5	29.2	35.6	46.1	60.0	87.5	117.0
	Output RPM	54.9	55.0	55.2	55.6	55.6	55.6	55.6	55.5	55.7	55.8	56.0	56.0
	Efficiency %	86.9	87.0	87.6	88.1	89.1	90.3	90.5	91.6	90.5	92.2	91.7	92.1
575	Mech. Input HP	2.62	3.70	6.79	10.1	15.6	22.5	29.2	38.3	57.0	57.0	125	133
	Out.Torq., in.lbs.	3860	5480	10100	15000	23300	34600	44500	59700	88200	88200	194000	207000
	Therm. Input HP	2.35	3.19	5.80	8.75	12.7	16.7	21.4	29.1	47.3	37.2	72.0	94.5
	Output RPM	36.5	36.5	36.7	36.9	37.0	37.0	37.0	36.9	37.0	37.1	37.2	37.2
	Efficiency%	85.3	85.8	86.7	87.0	87.6	90.2	89.4	91.3	90.9	91.1	91.6	91.9
300	Mech. Input HP	1.41	2.09	3.72	5.76	8.80	12.6	17.2	22.8	34.6	34.6	75.0	75.0
	Out.Torq., in.lbs.	3990	5830	10500	16100	24800	35500	48800	64900	98400	98400	217000	217000
	Therm. Input HP	1.41	2.09	3.72	5.76	8.80	12.6	17.2	22.8	28.6	31.3	56.5	75.0
	Output RPM	19.0	19.1	19.2	19.3	19.3	19.3	19.3	19.3	19.3	19.4	19.4	19.4
	Efficiency %	85.5	84.4	85.8	85.5	86.3	86.2	86.8	87.0	87.2	87.3	89.1	89.1

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	20.99	20.97	20.91	20.74	20.95	20.73	20.70	20.70	20.69	20.64	20.59	20.59
	Ratio Combinations	4.06	4.06	4.05	4.05	4.09	4.04	4.04	4.05	4.05	4.05	4.04	4.04
		5-1/6	5-1/6	5-1/6	5-1/6	5-1/6	5-1/6	5-1/6	5-1/6	5-1/6	5-1/10	5-1/10	5-1/10
1750	Mech. Input HP	5.10	7.10	12.2	18.1	26.6	38.2	50.3	65.2	93.5	120	205	260
	Out.Torq., in.lbs.	3420	4780	8210	12200	18300	26000	34400	44500	64500	83800	142000	180000
	Therm. Input HP	4.08	5.20	9.87	14.9	21.2	26.4	33.5	45.6	59.6	85.0	115	150
	Output RPM	83.4	83.5	83.7	84.4	83.5	84.4	84.5	84.5	84.3	84.8	85.0	85.0
	Efficiency%	88.7	89.1	89.4	90.2	91.2	91.2	91.7	91.6	92.3	93.9	93.4	93.4
1450	Mech. Input HP	4.41	6.20	10.8	16.0	24.4	33.2	44.2	57.0	85.1	100	180	220
	Out.Torq., in.lbs.	3550	4980	8700	13000	20000	27100	36300	46500	70000	83100	150000	185000
	Therm. Input HP	3.63	4.61	8.75	13.1	18.7	23.2	29.5	40.6	52.8	74.0	103	134
	Output RPM	69.1	69.1	69.3	69.9	69.2	69.9	70.0	70.0	69.8	70.3	70.4	70.4
	Efficiency%	88.2	88.1	88.6	90.1	90.0	90.6	91.3	90.7	91.2	92.6	93.1	94.0
1150	Mech. Input HP	3.64	5.16	9.18	13.6	20.7	28.9	37.5	48.5	73.4	79.0	155	180
	Out.Torq., in.lbs.	3670	5200	9280	13800	21400	29600	39000	50500	76000	81800	160000	189000
	Therm. Input HP	3.10	4.03	9.07	11.3	16.1	20.0	25.8	35.4	46.0	61.0	88.0	116
	Output RPM	54.8	54.8	55.0	55.4	54.9	55.5	55.6	55.6	55.4	55.7	55.9	55.9
	Efficiency%	87.6	87.7	88.2	89.3	90.0	90.2	91.7	91.8	91.0	91.5	91.5	93.1
865	Mech. Input HP	2.89	4.10	7.00	11.0	16.0	22.2	30.0	39.0	58.1	60.0	135	140
	Out.Torq., in.lbs.	3800	5400	9290	14600	21400	30200	41000	54400	83000	85700	185000	193000
	Therm. Input HP	2.57	3.43	6.25	9.49	13.6	17.7	22.5	30.8	39.4	53.0	78.0	102
	Output RPM	41.2	41.2	41.4	41.7	41.3	41.7	41.8	41.8	41.7	41.9	42.0	42.0
	Efficiency %	86.0	86.2	87.1	87.8	87.6	90.1	90.6	92.5	94.4	95.0	91.3	91.9
575	Mech. Input HP	2.01	2.92	4.90	7.97	11.0	15.0	21.4	27.4	40.7	42.1	92.0	110
	Out.Torq., in.lbs.	3920	5720	9650	15700	22000	30200	43200	55700	84000	86900	187000	225000
	Therm. Input HP	1.90	2.65	4.75	7.25	10.7	13.9	19.2	25.8	32.6	40.7	65.0	88.5
	Output RPM	27.4	27.4	27.5	27.7	27.4	27.7	27.8	27.8	27.7	27.9	27.9	27.9
	Efficiency%	84.8	85.2	85.9	86.7	87.1	88.6	89.0	89.6	90.7	91.2	90.1	90.6
300	Mech. Input HP	1.13	1.62	2.90	4.50	6.90	9.96	13.6	18.0	27.4	41.7	72.4	104
	Out.Torq., in.lbs.	4170	6000	10800	16800	26100	37500	51600	68600	105000	160000	266000	389000
	Therm. Input HP	1.05	1.57	2.79	4.32	6.58	9.40	12.9	17.1	21.8	21.8	51.5	51.5
	Output RPM	14.3	14.3	14.3	14.5	14.3	14.5	14.5	14.5	14.5	14.5	14.6	14.6
	Efficiency %	83.7	84.1	84.8	85.7	85.9	86.5	87.2	87.6	87.9	88.5	84.9	86.5

Ratings based on 1.0 service factor. For A.G.M.A. recommended practice on service factors, see page 11.

Horsepower and Torque Ratings • Helical Worm

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	22.09	22.08	21.97	22.48	22.45	22.46	22.23	22.28	22.27	22.57	22.51	22.51
	Ratio Combinations	3.05	3.04	3.04	3.04	3.03	3.04	3.03	3.04	3.04	3.04	3.04	3.04
		7-1/4	7-1/4	7-1/4	7-2/5	7-2/5	7-2/5	7-2/6	7-2/6	7-2/6	7-3/7	7-3/7	7-3/7
1750	Mech. Input HP	4.81	6.71	11.9	17.6	26.0	36.5	47.0	59.6	90.6	113	185	278
	Out.Torq., in.lbs.	3360	4720	8460	12900	19200	26600	34600	44000	67000	86000	140000	210000
	Therm. Input HP	4.41	5.75	10.9	16.6	23.5	29.6	36.7	49.6	65.6	95.0	129	162
	Output RPM	79.2	79.3	79.7	77.8	78.0	77.9	78.7	78.5	78.6	77.5	77.7	77.7
	Efficiency%	87.8	88.5	89.9	90.5	91.3	90.1	92.0	92.0	92.2	93.6	93.3	93.2
1450	Mech. Input HP	4.16	5.87	10.6	15.7	23.6	32.9	43.3	55.0	84.0	105	163	242
	Out.Torq., in.lbs.	3490	4940	9000	13800	20800	29200	38200	49000	75000	96000	148000	220000
	Therm. Input HP	3.92	5.05	9.57	14.6	20.7	26.0	32.2	43.7	57.8	82.5	113	141
	Output RPM	65.6	65.7	66.0	64.5	64.6	64.6	65.2	65.1	65.1	64.2	64.4	64.4
	Efficiency%	87.4	87.7	88.9	90.0	90.3	90.9	91.3	92.0	92.2	93.2	92.8	92.9
1150	Mech. Input HP	3.45	4.95	8.98	13.4	20.0	28.6	37.5	49.0	74.8	94.5	143	208
	Out.Torq., in.lbs.	3620	5200	9580	14800	22200	31800	41600	54500	84000	108000	163000	237000
	Therm. Input HP	3.39	4.30	8.22	12.5	17.7	22.0	27.7	37.4	49.6	71.0	97.5	125
	Output RPM	52.1	52.1	52.3	51.2	51.2	51.2	51.7	51.6	51.6	51.0	51.1	51.1
	Efficiency%	86.7	86.8	88.6	89.6	90.2	90.3	91.1	91.1	92.0	92.4	92.4	92.4
865	Mech. Input HP	2.77	3.90	7.12	10.9	16.6	23.3	31.2	41.1	63.0	79.0	124	176
	Out.Torq., in.lbs.	3840	5420	9930	15700	24000	34200	45200	60000	94000	120000	187000	263000
	Therm. Input HP	2.72	3.67	6.78	10.3	14.7	18.5	23.4	31.4	41.6	58.0	78.0	106
	Output RPM	39.2	39.2	39.4	38.5	38.5	38.5	38.9	38.8	38.8	38.3	38.4	38.4
	Efficiency %	86.1	86.4	87.1	87.9	88.4	89.7	89.4	89.9	92.0	92.4	92.3	91.1
575	Mech. Input HP	1.94	2.80	5.21	7.86	12.1	17.1	22.5	29.8	47.5	56.3	94.8	133
	Out.Torq., in.lbs.	3980	5760	10700	16700	25700	38000	49600	66000	106000	128000	215000	296000
	Therm. Input HP	1.93	2.77	5.08	7.62	11.1	14.6	18.5	24.6	33.3	45.0	65.0	88.5
	Output RPM	26.0	26.0	26.2	25.6	25.6	25.6	25.9	25.8	25.8	25.5	25.5	25.5
	Efficiency%	84.7	85.0	85.3	86.2	86.3	90.3	90.5	90.7	91.4	91.9	91.9	90.2
300	Mech. Input HP	1.06	1.55	2.88	4.46	6.82	9.87	13.5	17.9	28.9	34.0	63.4	81.0
	Out.Torq., in.lbs.	4130	6030	11200	17800	27600	39900	54100	72300	118000	143000	266000	332000
	Therm. Input HP	1.06	1.55	2.88	4.46	6.82	9.87	13.5	17.9	28.9	31.3	53.0	70.0
	Output RPM	13.6	13.6	13.7	13.3	13.4	13.4	13.5	13.5	13.5	13.3	13.3	13.3
	Efficiency %	84.0	83.9	84.3	84.5	85.8	85.7	85.8	86.3	87.3	88.7	88.7	86.7

Helical Worm
Speed Reducers

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	26.20	25.67	26.14	25.93	25.89	25.89	25.88	25.28	25.85	25.80	25.73	25.73
	Ratio Combinations	5.07	5.07	5.06	5.06	5.05	5.05	5.05	4.93	5.06	4.05	5.05	3.52
		5-1/6	5-1/6	5-1/6	5-1/6	5-1/6	5-1/6	5-1/6	5-1/6	5-1/6	6-5/6	5-1/10	7-3/7
1750	Mech. Input HP	4.29	5.94	10.1	15.7	23.4	32.4	42.7	61.0	75.2	110	172	225
	Out.Torq., in.lbs.	3560	4830	8430	13200	19700	27400	36200	45400	65300	95300	150000	199000
	Therm. Input HP	3.54	4.52	8.56	12.9	18.3	22.8	29.1	40.0	52.0	72.5	100	134
	Output RPM	66.8	68.2	66.9	67.5	67.6	67.6	67.6	69.2	67.7	67.8	68.0	68.0
	Efficiency%	87.9	88.0	88.7	90.0	90.3	90.7	91.0	92.8	93.3	93.6	94.1	95.4
1450	Mech. Input HP	3.67	4.90	8.30	13.5	19.6	27.3	36.2	54.7	70.2	92.8	151	205
	Out.Torq., in.lbs.	3660	4800	8310	13500	19700	27800	37000	48200	73100	96600	157000	218000
	Therm. Input HP	3.14	4.05	7.56	11.4	16.3	20.3	26.0	35.7	46.6	62.5	91.0	119
	Output RPM	55.3	56.5	55.5	55.9	56.0	56.0	56.0	57.4	56.1	56.2	56.4	56.4
	Efficiency%	87.6	87.8	88.1	88.7	89.3	90.5	90.9	91.0	92.7	92.8	93.0	95.1
1150	Mech. Input HP	3.03	4.05	6.65	11.2	15.8	22.6	29.5	49.6	62.5	75.9	139	187
	Out.Torq., in.lbs.	3780	4960	8320	14000	19900	29000	37900	55000	81400	98800	181000	250000
	Therm. Input HP	2.67	3.56	6.52	9.9	14.1	17.7	23.1	31.6	40.7	54.0	79.0	106
	Output RPM	43.9	44.8	44.0	44.4	44.4	44.4	44.4	45.5	44.5	44.6	44.7	44.7
	Efficiency%	86.9	87.1	87.3	88.0	88.8	90.4	90.6	90.8	91.9	92.1	92.3	94.8
865	Mech. Input HP	2.39	3.09	5.10	8.30	12.0	16.5	22.5	37.4	47.8	59.3	105	166
	Out.Torq., in.lbs.	3910	4960	8460	13700	19800	28000	38300	55400	82200	102000	181000	292000
	Therm. Input HP	2.18	3.01	5.10	8.24	12.0	15.9	20.5	27.8	35.4	45.0	72.0	92.5
	Output RPM	33.0	33.7	33.1	33.4	33.4	33.4	33.4	34.2	33.5	33.5	33.6	33.6
	Efficiency %	85.7	85.8	87.1	87.4	87.5	90.0	90.3	91.2	91.3	91.5	92.0	93.8
575	Mech. Input HP	1.62	2.15	3.73	5.91	8.50	11.3	15.0	25.7	34.0	43.0	75.5	121
	Out.Torq., in.lbs.	3920	5120	9250	14600	21000	27900	37000	54900	84400	107000	190000	317000
	Therm. Input HP	1.60	2.15	3.73	5.90	8.50	11.3	17.9	22.3	30.0	45.0	62.0	67.0
	Output RPM	21.9	22.4	22.0	22.2	22.2	22.2	22.2	22.7	22.2	22.3	22.3	22.3
	Efficiency%	84.3	84.6	86.6	86.9	87.1	87.0	87.0	87.5	87.6	88.0	89.2	92.9
300	Mech. Input HP	0.906	1.33	2.30	3.61	5.61	8.08	11.1	17.1	22.7	36.4	57.5	82.4
	Out.Torq., in.lbs.	4200	6050	10900	17000	26400	38100	52500	69900	108000	173000	274000	404000
	Therm. Input HP	0.860	1.25	1.90	3.10	4.50	6.00	10.3	12.0	17.2	20.7	39.0	39.0
	Output RPM	11.5	11.7	11.5	11.6	11.6	11.6	11.6	11.9	11.6	11.6	11.7	11.7
	Efficiency %	84.2	84.4	86.3	86.4	86.5	86.7	87.0	87.3	87.6	87.7	88.2	90.7

Ratings based on 1.0 service factor. For A.G.M.A. recommended practice on service factors, see page 11.

Horsepower and Torque Ratings • Helical Worm

Helical Worm
Speed Reducers

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	29.47	29.45	29.30	29.63	29.59	29.60	29.57	29.64	29.63	29.77	29.70	29.70
	Ratio Combinations	3.05	3.04	3.04	3.04	3.03	3.04	3.03	3.04	3.04	3.04	3.04	3.04
		9-2/3	9-2/3	9-2/3	9-3/4	9-3/4	9-3/4	9-3/4	9-3/4	9-3/4	9-4/5	9-4/5	9-4/5
1750	Mech. Input HP	4.25	5.67	9.97	14.4	21.6	29.6	39.8	50.2	76.0	95.7	163	239
	Out.Torq., in.lbs.	3890	5230	9290	13700	20800	28600	38800	49500	75000	95000	162000	238000
	Therm. Input HP	3.50	4.49	8.44	13.8	19.5	26.0	33.3	46.4	63.0	90.0	119	163
	Output RPM	59.4	59.4	59.7	59.1	59.1	59.1	59.2	59.0	59.1	58.8	58.9	58.9
	Efficiency%	86.2	87.0	88.3	89.2	90.4	90.6	91.5	92.4	92.5	92.6	92.9	93.1
1450	Mech. Input HP	3.72	4.95	8.81	12.7	20.0	27.0	36.2	46.0	71.5	88.3	147	207
	Out.Torq., in.lbs.	4050	5470	9810	14400	23000	31400	42200	54000	84000	105000	174000	246000
	Therm. Input HP	3.08	3.95	7.42	12.2	17.3	23.0	29.2	41.6	55.0	80.0	106	138
	Output RPM	49.2	49.2	49.5	48.9	49.0	49.0	49.0	48.9	48.9	48.7	48.8	48.8
	Efficiency%	85.0	86.3	87.4	88.0	89.4	90.4	90.7	91.1	91.2	91.9	92.0	92.1
1150	Mech. Input HP	3.12	4.15	7.44	10.9	16.7	23.5	31.5	40.8	64.4	78.7	128	176
	Out.Torq., in.lbs.	4260	5700	10400	15500	24000	33800	45600	59500	94000	117000	190000	262000
	Therm. Input HP	2.62	3.41	6.36	10.4	14.8	19.6	25.2	35.5	46.9	66.0	91.5	110
	Output RPM	39.0	39.0	39.2	38.8	38.9	38.9	38.9	38.8	38.8	38.6	38.7	38.7
	Efficiency%	84.5	85.1	87.1	87.6	88.6	88.7	89.3	89.8	89.9	91.1	91.2	91.5
865	Mech. Input HP	2.47	3.28	5.84	8.80	13.3	19.0	25.6	33.5	52.6	69.3	108	152
	Out.Torq., in.lbs.	4390	5930	10600	16400	25000	35800	49200	65000	104000	136000	212000	300000
	Therm. Input HP	2.13	2.86	5.27	8.54	12.3	16.7	21.1	29.3	39.0	55.0	78.0	98.5
	Output RPM	29.4	29.4	29.5	29.2	29.2	29.2	29.3	29.2	29.2	29.1	29.1	29.1
	Efficiency %	82.8	84.3	85.0	86.3	87.2	87.4	89.2	89.8	91.6	90.5	90.7	91.2
575	Mech. Input HP	1.75	2.33	4.25	6.38	9.63	13.6	18.4	24.4	38.9	56.0	84.6	123
	Out.Torq., in.lbs.	4600	6230	11400	17600	26700	38300	53300	71000	115000	163000	247000	362000
	Therm. Input HP	1.58	2.17	3.96	6.27	9.22	12.6	16.2	22.0	30.9	42.5	65.0	82.5
	Output RPM	19.5	19.5	19.6	19.4	19.4	19.4	19.4	19.4	19.4	19.3	19.4	19.4
	Efficiency%	81.4	82.8	83.5	84.9	85.5	86.8	89.4	89.6	91.0	89.2	89.7	90.4
300	Mech. Input HP	0.960	1.30	2.38	3.56	5.63	7.85	10.9	14.5	23.2	31.3	53.7	75.0
	Out.Torq., in.lbs.	4810	6520	12000	18400	29400	41100	57300	77000	127000	170000	296000	416000
	Therm. Input HP	0.960	1.30	2.38	3.56	5.63	7.85	10.9	14.5	23.2	31.3	51.5	64.5
	Output RPM	10.2	10.2	10.2	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
	Efficiency %	80.9	81.1	81.9	83.0	84.0	84.2	84.6	85.3	87.9	86.8	88.3	88.9

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	36.77	36.73	36.68	37.44	37.39	37.39	37.02	36.16	37.08	37.58	37.48	37.48
	Ratio Combinations	5.07	5.07	5.06	5.06	5.05	5.05	5.05	4.93	5.06	5.06	5.05	5.05
		7-1/4	7-1/4	7-1/4	7-2/5	7-2/5	7-2/5	7-2/6	7-2/6	7-3/6	7-3/7	7-3/7	7-3/7
1750	Mech. Input HP	3.16	4.55	8.32	12.6	19.1	27.0	35.7	47.5	72.3	80.8	123	185
	Out.Torq., in.lbs.	3680	5320	9740	15100	23000	32600	42800	56000	87500	98500	150000	228000
	Therm. Input HP	3.19	4.12	7.75	11.7	16.7	20.9	26.3	35.6	47.0	67.5	95.0	121
	Output RPM	47.6	47.6	47.7	46.7	46.8	46.8	47.3	48.4	47.2	46.6	46.7	46.7
	Efficiency%	87.9	88.4	88.6	88.9	89.4	89.7	89.9	90.5	90.6	90.1	90.7	91.3
1450	Mech. Input HP	2.74	3.85	6.95	10.9	16.6	23.5	31.3	42.0	64.7	67.7	128	135
	Out.Torq., in.lbs.	3830	5450	9940	15700	24000	34200	45200	59500	94000	99200	188000	200000
	Therm. Input HP	2.74	3.68	6.81	10.3	14.8	18.6	23.5	31.8	42.0	60.0	85.0	109
	Output RPM	39.4	39.5	39.5	38.7	38.8	38.8	39.2	40.1	39.1	38.6	38.7	38.7
	Efficiency%	87.5	88.7	89.7	88.5	89.0	89.5	89.7	90.1	90.1	89.7	90.5	90.9
1150	Mech. Input HP	2.24	3.19	5.90	9.10	13.7	20.0	26.2	34.7	55.8	55.3	113	128
	Out.Torq., in.lbs.	3920	5670	10500	16600	25000	36500	47500	61500	102000	102000	210000	238000
	Therm. Input HP	2.24	3.16	5.82	8.74	12.7	16.1	20.5	27.4	36.6	50.3	77.0	98.0
	Output RPM	31.3	31.3	31.4	30.7	30.8	30.8	31.1	31.8	31.0	30.6	30.7	30.7
	Efficiency%	86.8	88.3	88.5	88.9	89.1	89.3	89.4	89.6	90.0	89.6	90.2	90.5
865	Mech. Input HP	1.76	2.51	4.67	7.18	10.8	15.9	21.1	27.9	45.0	44.6	94.5	94.3
	Out.Torq., in.lbs.	4010	5850	11000	17300	26100	38500	50600	65400	109000	109000	231000	231000
	Therm. Input HP	1.76	2.61	4.70	7.10	10.4	13.6	17.5	23.2	43.9	43.9	66.0	86.0
	Output RPM	23.5	23.6	23.6	23.1	23.1	23.1	23.4	23.9	23.3	23.0	23.1	23.1
	Efficiency %	85.0	87.1	88.1	88.3	88.7	88.9	88.9	89.0	89.7	89.3	89.5	89.7
575	Mech. Input HP	1.20	1.80	3.20	5.03	7.49	10.9	14.7	19.8	31.3	31.3	67.2	67.0
	Out.Torq., in.lbs.	4110	6260	11200	18000	26800	39000	52600	69600	113000	113000	246000	246000
	Therm. Input HP	1.20	1.80	3.28	5.03	7.49	10.5	14.0	18.5	26.5	30.3	58.0	67.0
	Output RPM	15.6	15.7	15.7	15.4	15.4	15.4	15.5	15.9	15.5	15.3	15.3	15.3
	Efficiency%	85.0	86.4	87.1	87.2	87.3	87.7	88.2	88.7	88.8	87.6	89.1	89.4
300	Mech. Input HP	0.674	0.956	1.77	2.74	4.17	6.00	8.20	11.1	17.7	25.0	42.8	63.1
	Out.Torq., in.lbs.	4350	6260	11600	18500	28300	40800	55300	73500	121000	171000	296000	437000
	Therm. Input HP	0.640	0.930	1.73	2.66	4.02	5.82	7.83	10.4	16.7	16.7	38.5	39.0
	Output RPM	8.16	8.17	8.18	8.01	8.02	8.02	8.10	8.30	8.09	7.98	8.00	8.00
	Efficiency %	83.5	84.9	85.0	85.8	86.4	86.6	86.7	87.2	87.8	86.6	87.8	88.0

Ratings based on 1.0 service factor. For A.G.M.A. recommended practice on service factors, see page 11.

Horsepower and Torque Ratings • Helical Worm

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	39.27	39.24	39.13	39.46	39.84	39.44	39.39	39.49	39.46	39.67	39.56	39.56
	Ratio Combinations	4.06	4.06	4.05	4.05	4.09	4.04	4.04	4.05	4.05	4.05	4.04	4.04
		9-2/3	9-2/3	9-2/3	9-3/4	9-3/4	9-3/4	9-3/4	9-3/4	9-3/4	9-4/5	9-4/5	9-4/5
1750	Mech. Input HP	3.44	4.59	8.23	11.9	18.5	25.6	34.6	43.6	67.8	84.7	136	190
	Out.Torq., in.lbs.	4130	5590	10100	14900	23600	32400	44000	56500	88000	111000	180000	250000
	Therm. Input HP	2.87	3.70	6.95	11.4	16.2	21.3	27.5	39.0	51.4	75.0	100	128
	Output RPM	44.6	44.6	44.7	44.3	43.9	44.4	44.4	44.3	44.3	44.1	44.2	44.2
	Efficiency%	84.9	86.2	87.1	88.1	88.9	89.1	89.6	91.1	91.3	91.7	92.9	92.4
1450	Mech. Input HP	2.99	3.96	7.14	10.5	16.0	22.5	30.3	38.8	61.5	77.6	123	174
	Out.Torq., in.lbs.	4290	5750	10500	15800	24400	34200	46400	60500	96000	122000	194000	275000
	Therm. Input HP	2.52	3.28	6.13	10.0	14.3	19.0	24.3	33.6	45.2	65.0	92.5	115
	Output RPM	36.9	37.0	37.1	36.7	36.4	36.8	36.8	36.7	36.7	36.6	36.7	36.7
	Efficiency%	84.1	85.1	86.5	87.7	88.1	88.7	89.4	90.8	91.0	91.2	91.7	91.9
1150	Mech. Input HP	2.45	3.28	5.87	8.89	13.3	19.0	25.7	33.2	53.0	69.4	108	151
	Out.Torq., in.lbs.	4410	5980	10800	16600	25200	35800	49200	65000	104000	137000	212000	300000
	Therm. Input HP	2.13	2.86	5.27	8.50	12.2	16.6	21.0	29.1	38.9	56.0	80.0	100
	Output RPM	29.3	29.3	29.4	29.1	28.9	29.2	29.2	29.1	29.1	29.0	29.1	29.1
	Efficiency%	83.6	84.8	85.8	86.3	86.8	87.2	88.7	90.5	90.7	90.8	91.0	91.6
865	Mech. Input HP	1.95	2.60	4.70	7.04	10.5	15.1	20.5	26.8	43.2	57.4	90.3	132.0
	Out.Torq., in.lbs.	4570	6190	11300	17300	26400	37600	52000	69500	112000	150000	236000	347000
	Therm. Input HP	1.73	2.36	4.30	6.89	10.1	13.8	17.5	24.0	32.6	46.7	69.5	88.0
	Output RPM	22.0	22.0	22.1	21.9	21.7	21.9	22.0	21.9	21.9	21.8	21.9	21.9
	Efficiency %	81.9	83.3	84.3	85.5	86.6	86.7	88.4	90.1	90.2	90.4	90.7	91.2
575	Mech. Input HP	1.33	1.83	3.28	5.00	7.48	10.6	14.6	19.3	31.5	40.5	69.5	93.5
	Out.Torq., in.lbs.	4660	6440	11600	18200	27600	39700	55200	74000	121000	157000	270000	368000
	Therm. Input HP	1.28	1.74	3.16	4.90	7.29	10.1	13.4	18.0	26.6	37.8	59.0	73.0
	Output RPM	14.6	14.7	14.7	14.6	14.4	14.6	14.6	14.6	14.6	14.5	14.5	14.5
	Efficiency%	81.4	81.8	82.5	84.2	84.5	86.6	87.6	88.6	88.8	89.2	89.6	90.8
300	Mech. Input HP	0.736	0.980	1.81	2.72	4.22	5.95	8.15	10.8	17.6	26.0	42.9	61.8
	Out.Torq., in.lbs.	4920	6600	12200	18800	29600	41400	57600	77000	127000	187000	312000	452000
	Therm. Input HP	0.720	0.980	1.78	2.66	4.22	5.90	8.12	10.8	18.0	21.8	40.7	51.5
	Output RPM	7.64	7.65	7.67	7.60	7.53	7.61	7.62	7.60	7.60	7.56	7.58	7.58
	Efficiency %	81.0	81.7	82.0	83.4	83.8	84.0	85.4	85.9	87.0	86.3	87.5	88.0

Helical Worm
Speed Reducers

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	47.24	47.21	46.97	44.57	44.52	44.53	44.50	44.59	44.57	44.81	44.70	44.70
	Ratio Combinations	3.05	3.04	3.04	3.04	3.03	3.04	3.03	3.04	3.04	3.04	3.04	3.04
		15-1/2	15-1/2	15-1/2	14-2/3	14-2/3	14-2/3	14-2/3	14-2/3	14-2/3	14-3/4	14-3/4	14-3/4
1750	Mech. Input HP	3.08	4.03	6.86	10.8	16.3	23.2	29.0	39.0	56.5	70.3	108	171
	Out.Torq., in.lbs.	4280	5710	9930	15000	22800	32600	40800	55500	82000	104000	160000	262000
	Therm. Input HP	2.69	3.52	5.96	10.3	14.3	19.4	25.8	34.4	51.2	70.3	103	138
	Output RPM	37.0	37.1	37.3	39.3	39.3	39.3	39.3	39.2	39.3	39.1	39.1	39.1
	Efficiency%	81.7	83.3	85.6	86.5	87.2	87.6	87.8	88.6	90.4	91.7	92.0	95.2
1450	Mech. Input HP	2.67	3.54	6.04	9.50	14.5	20.6	26.0	35.4	53.2	66.4	100	162
	Out.Torq., in.lbs.	4420	6000	10400	15600	24000	34200	44000	60000	91000	117000	178000	287000
	Therm. Input HP	2.35	3.11	5.22	9.09	12.6	17.3	22.8	30.4	46.0	66.4	94.0	125
	Output RPM	30.7	30.7	30.9	32.5	32.6	32.6	32.6	32.5	32.5	32.4	32.4	32.4
	Efficiency%	80.6	82.6	84.3	84.8	85.5	85.8	87.5	87.5	88.3	90.5	91.6	91.2
1150	Mech. Input HP	2.24	2.98	5.10	8.15	12.4	17.6	22.4	30.6	47.4	60.0	91.5	135
	Out.Torq., in.lbs.	4630	6310	11000	16800	25700	36800	47000	65500	101000	132000	202000	300000
	Therm. Input HP	1.99	2.70	4.52	7.80	10.7	14.7	19.6	25.8	39.4	58.5	79.0	107
	Output RPM	24.3	24.4	24.5	25.8	25.8	25.8	25.8	25.8	25.8	25.7	25.7	25.7
	Efficiency%	79.8	81.8	83.8	84.4	84.9	85.7	86.0	87.0	87.2	89.6	90.1	90.7
865	Mech. Input HP	1.77	2.35	4.09	6.49	9.90	14.0	18.0	25.2	39.5	51.0	81.0	112
	Out.Torq., in.lbs.	4750	6500	11500	17700	27200	38800	50000	71000	112000	147000	235000	330000
	Therm. Input HP	1.61	2.26	3.74	6.34	8.92	12.1	16.0	21.3	32.6	48.3	66.0	90.0
	Output RPM	18.3	18.3	18.4	19.4	19.4	19.4	19.4	19.4	19.4	19.3	19.4	19.4
	Efficiency %	78.0	80.4	82.2	84.0	84.7	85.4	85.7	86.7	87.3	88.3	89.1	90.5
575	Mech. Input HP	1.26	1.66	2.89	4.80	7.10	10.1	12.7	19.0	29.0	39.3	65.0	92
	Out.Torq., in.lbs.	4960	6650	12000	19600	29000	41500	53000	79900	123000	168000	278000	395000
	Therm. Input HP	1.19	1.66	2.77	4.63	6.68	9.10	11.7	16.0	24.7	39.3	57.0	77.0
	Output RPM	12.2	12.2	12.2	12.9	12.9	12.9	12.9	12.9	12.9	12.8	12.9	12.9
	Efficiency%	76.0	77.4	80.7	83.6	83.7	84.2	85.6	86.0	86.8	87.0	87.3	87.6
300	Mech. Input HP	0.700	0.930	1.60	2.66	4.07	5.85	7.15	11.2	17.5	23.7	39.2	58.0
	Out.Torq., in.lbs.	5180	7000	12400	19800	30800	44400	55500	83200	135000	188000	313000	472000
	Therm. Input HP	0.700	0.930	1.60	2.66	4.07	5.85	7.15	10.9	17.5	23.7	39.2	58.0
	Output RPM	6.35	6.35	6.39	6.73	6.74	6.74	6.74	6.73	6.73	6.69	6.71	6.71
	Efficiency %	74.6	75.9	78.5	79.5	80.9	81.1	83.0	79.3	82.4	84.3	85.0	86.7

Ratings based on 1.0 service factor. For A.G.M.A. recommended practice on service factors, see page 11.

Horsepower and Torque Ratings • Helical Worm

Helical Worm
Speed Reducers

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	49.04	48.99	48.92	49.32	49.26	49.26	49.24	48.10	49.32	49.58	49.44	49.44
	Ratio Combinations	5.07 9-2/3	5.07 9-2/3	5.06 9-2/3	5.06 9-3/4	5.05 9-3/4	5.05 9-3/4	5.05 9-3/4	4.93 9-3/4	5.06 9-3/4	5.06 9-4/5	5.05 9-4/5	5.05 9-4/5
1750	Mech. Input HP	2.89	3.86	6.91	10.2	15.7	21.9	30.0	39.8	61.0	76.2	120	166
	Out.Torq., in.lbs.	4310	5820	10500	15900	24500	34400	47200	61500	97000	124000	196000	272000
	Therm. Input HP	2.46	3.23	6.01	9.78	14.0	18.6	24.0	33.8	44.4	63.5	87.5	113
	Output RPM	35.7	35.7	35.8	35.5	35.5	35.5	35.5	36.4	35.5	35.3	35.4	35.4
	Efficiency%	84.4	85.5	86.2	87.8	88.0	88.5	88.7	89.2	89.5	91.1	91.7	92.0
1450	Mech. Input HP	2.48	3.31	5.90	8.80	13.4	19.0	26.0	35.0	54.0	68.3	109	151
	Out.Torq., in.lbs.	4400	5950	10700	16300	25200	35800	49200	65000	104000	133000	212000	296000
	Therm. Input HP	2.15	2.88	5.29	8.57	12.3	16.8	21.1	29.8	39.4	57.5	81.5	103
	Output RPM	29.6	29.6	29.6	29.4	29.4	29.4	29.4	30.1	29.4	29.2	29.3	29.3
	Efficiency%	83.2	84.4	85.3	86.4	87.8	88.0	88.4	88.8	89.8	90.4	90.5	91.2
1150	Mech. Input HP	2.04	2.73	4.93	7.42	11.1	15.7	21.7	29.4	45.8	54.5	95.0	126
	Out.Torq., in.lbs.	4540	6150	11200	17300	26100	37200	51600	68500	110000	133000	232000	308000
	Therm. Input HP	1.81	2.46	4.52	7.22	10.5	14.4	18.1	25.0	34.0	49.0	70.0	91.5
	Output RPM	23.5	23.5	23.5	23.3	23.3	23.3	23.4	23.9	23.3	23.2	23.3	23.3
	Efficiency%	82.8	83.9	84.7	86.3	87.1	87.8	88.1	88.4	89.0	89.8	90.1	89.9
865	Mech. Input HP	1.60	2.16	3.93	5.92	8.90	12.6	17.5	23.7	37.0	42.5	79.0	103
	Out.Torq., in.lbs.	4650	6390	11700	18000	27200	38800	54100	72000	118000	137000	254000	334000
	Therm. Input HP	1.47	2.01	3.67	5.81	8.62	11.8	15.1	20.5	29.2	41.0	64.0	86.5
	Output RPM	17.6	17.7	17.7	17.5	17.6	17.6	17.6	18.0	17.5	17.4	17.5	17.5
	Efficiency %	81.3	82.9	83.5	84.6	85.2	85.8	86.2	86.7	88.7	89.2	89.3	89.7
575	Mech. Input HP	1.09	1.47	2.65	4.08	6.15	8.80	12.3	16.7	26.7	30.3	59.7	74.7
	Out.Torq., in.lbs.	4750	6450	11700	18400	28200	40600	56800	76000	125000	144000	286000	360000
	Therm. Input HP	1.08	1.47	2.65	4.04	5.97	8.62	11.6	15.4	24.1	30.3	53.0	67.0
	Output RPM	11.7	11.7	11.8	11.7	11.7	11.7	11.7	12.0	11.7	11.6	11.6	11.6
	Efficiency%	81.1	81.7	82.3	83.4	84.9	85.4	85.6	86.3	86.6	87.5	88.4	89.0
300	Mech. Input HP	0.598	0.794	1.46	2.20	3.38	4.77	6.62	8.96	14.4	21.1	36.4	50.6
	Out.Torq., in.lbs.	4960	6630	12300	19000	29600	42000	58300	77500	128000	191000	330000	465000
	Therm. Input HP	0.580	0.780	1.42	2.13	3.38	4.70	6.50	8.73	14.3	15.9	36.4	39.0
	Output RPM	6.12	6.12	6.13	6.08	6.09	6.09	6.09	6.24	6.08	6.05	6.07	6.07
	Efficiency %	80.5	81.1	82.0	83.4	84.6	85.1	85.1	85.6	85.8	86.9	87.3	88.5

INPUT SPEED (RPM))	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	62.97	62.91	62.74	59.27	59.94	59.33	59.25	59.40	59.37	59.70	59.54	59.54
	Ratio Combinations	4.06 15-1/2	4.06 15-1/2	4.05 15-1/2	4.05 14-2/3	4.09 14-2/3	4.04 14-2/3	4.04 14-2/3	4.05 14-2/3	4.05 14-2/3	4.05 14-3/4	4.04 14-3/4	4.04 14-3/4
1750	Mech. Input HP	2.48	3.70	5.64	8.87	13.3	19.3	24.4	33.6	51.5	64.0	96.8	146
	Out.Torq., in.lbs.	4510	6780	10700	16300	24800	35600	45200	62500	96000	124000	188000	287000
	Therm. Input HP	2.19	2.93	4.91	8.50	11.8	16.0	21.4	28.4	43.2	64.0	87.6	119
	Output RPM	27.8	27.8	27.9	29.5	29.2	29.5	29.5	29.5	29.5	29.3	29.4	29.4
	Efficiency%	80.2	80.9	84.0	86.1	86.4	86.6	86.8	87.0	87.2	90.1	90.6	91.7
1450	Mech. Input HP	2.15	2.84	4.90	7.75	11.7	16.9	21.5	29.9	46.4	58.1	89.0	130
	Out.Torq., in.lbs.	4670	6320	11200	16900	26000	37200	47600	67000	104000	135000	208000	305000
	Therm. Input HP	1.91	2.61	4.35	7.50	10.4	14.2	18.8	25.0	38.0	58.1	78.6	106
	Output RPM	23.0	23.0	23.1	24.5	24.2	24.4	24.5	24.4	24.4	24.3	24.4	24.4
	Efficiency%	79.4	81.4	83.8	84.6	85.3	85.4	86.0	86.8	86.9	89.5	90.3	90.7
1150	Mech. Input HP	1.77	2.33	4.09	6.48	9.79	14.1	17.9	25.5	40.4	51.7	79.8	113
	Out.Torq., in.lbs.	4790	6480	11600	17700	27300	39000	50000	71500	114000	148000	234000	332000
	Therm. Input HP	1.60	2.25	3.73	6.32	8.90	12.1	15.9	21.1	32.5	50.0	67.0	860
	Output RPM	18.3	18.3	18.3	19.4	19.2	19.4	19.4	19.4	19.4	19.3	19.3	19.3
	Efficiency%	78.4	80.7	82.5	84.1	84.9	85.1	86.0	86.1	86.7	87.5	89.9	90.0
865	Mech. Input HP	1.40	1.86	3.21	5.14	7.70	11.0	14.2	20.7	32.2	42.7	69.5	98.0
	Out.Torq., in.lbs.	4930	6750	11900	18500	28500	40600	52400	76800	120000	162000	266000	377000
	Therm. Input HP	1.30	1.84	3.02	5.10	7.30	9.90	12.8	17.4	26.8	42.7	60.0	80.5
	Output RPM	13.7	13.7	13.8	14.6	14.4	14.6	14.6	14.6	14.6	14.5	14.5	14.5
	Efficiency %	76.8	79.2	81.1	83.3	84.8	85.4	85.5	85.7	86.2	87.2	88.2	88.7
575	Mech. Input HP	0.970	1.29	2.22	3.68	5.50	7.85	9.90	14.6	23.5	31.9	53.1	766
	Out.Torq., in.lbs.	5050	6820	12100	19400	30000	42800	54400	80500	130000	179000	300000	435000
	Therm. Input HP	0.960	1.29	2.20	3.62	5.38	7.40	9.30	13.1	20.5	31.9	50.7	67.3
	Output RPM	9.13	9.14	9.16	9.70	9.59	9.69	9.70	9.68	9.69	9.63	9.66	9.66
	Efficiency%	75.4	76.7	79.3	81.1	83.0	83.8	84.6	84.7	85.0	85.8	86.6	87.0
300	Mech. Input HP	0.531	0.719	1.23	2.04	3.07	4.76	6.10	8.07	13.2	18.7	31.2	46.0
	Out.Torq., in.lbs.	5290	7190	12800	20200	31100	48000	61800	82400	135000	198000	331000	491000
	Therm. Input HP	0.520	0.700	1.20	1.99	3.05	4.38	5.37	8.15	13.1	17.8	29.5	44.2
	Output RPM	4.76	4.77	4.78	5.06	5.01	5.06	5.06	5.05	5.05	5.03	5.04	5.04
	Efficiency %	75.3	75.7	79.0	79.5	80.4	80.9	81.4	81.8	82.0	84.4	84.8	85.3

Ratings based on 1.0 service factor. For A.G.M.A. recommended practice on service factors, see page 11.

Horsepower and Torque Ratings • Helical Worm

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	78.6	78.5	78.4	74.2	74.1	74.1	74.1	72.4	74.2	74.6	74.4	74.4
	Ratio Combinations	5.07	5.07	5.06	5.06	5.05	5.05	5.05	4.93	5.06	5.06	5.05	5.05
		15-1/2	15-1/2	15-1/2	14-2/3	14-2/3	14-2/3	14-2/3	14-2/3	14-2/3	14-3/4	14-3/4	14-3/4
1750	Mech. Input HP	2.1	2.8	4.7	7.5	11.5	16.4	20.5	29.4	44.5	57.2	87.5	127
	Out.Torq., in.lbs.	4670	6360	10800	17000	26200	37500	47200	67500	105000	137000	211000	310000
	Therm. Input HP	1.9	2.6	4.3	7.3	10.2	13.9	18.5	24.6	37.4	57.2	79.0	103
	Output RPM	22.3	22.3	22.3	23.6	23.6	23.6	23.6	24.2	23.6	23.5	23.5	23.5
	Efficiency%	79.3	81.1	82.1	84.5	85.3	85.7	86.3	88.1	88.3	89.1	90.0	911
1450	Mech. Input HP	1.79	2.36	4.14	6.52	10.0	14.2	18.2	26.0	39.7	51.5	81.3	113
	Out.Torq., in.lbs.	4800	6500	11500	17600	27200	38800	50000	71300	112000	148000	234000	330000
	Therm. Input HP	1.62	2.26	3.76	6.38	8.98	12.2	16.1	21.6	39.4	51.5	75.0	87.5
	Output RPM	18.4	18.5	18.5	19.5	19.6	19.6	19.6	20.0	19.5	19.4	19.5	19.5
	Efficiency%	78.5	80.7	81.5	83.7	84.4	84.8	85.3	87.2	87.5	88.6	89.0	90.3
1150	Mech. Input HP	1.47	1.95	3.42	5.42	8.34	11.8	15.0	22.0	33.5	44.5	72.7	101.0
	Out.Torq., in.lbs.	4910	6670	11900	18300	28200	40200	51600	75700	119000	159000	260000	367000
	Therm. Input HP	1.36	1.93	3.17	5.35	7.65	10.4	13.4	18.1	27.9	44.0	61.0	83.0
	Output RPM	14.6	14.6	14.7	15.5	15.5	15.5	15.5	15.9	15.5	15.4	15.5	15.5
	Efficiency%	77.5	79.5	81.0	83.0	83.2	83.9	84.7	86.8	87.3	87.4	87.7	89.1
865	Mech. Input HP	1.16	1.55	2.65	4.32	6.65	9.38	11.8	18.0	27.0	36.2	60.3	85.7
	Out.Torq., in.lbs.	5000	6710	12200	19000	29400	42000	53600	81000	125000	171000	286000	410000
	Therm. Input HP	1.1	1.55	2.58	4.3	6.26	8.49	10.8	14.9	23.2	36.2	58.5	75.5
	Output RPM	11.0	11.0	11.0	11.7	11.7	11.7	11.7	12.0	11.7	11.6	11.6	11.6
	Efficiency %	75.3	75.7	80.6	81.3	81.9	82.9	84.2	85.3	85.6	86.9	87.5	88.2
575	Mech. Input HP	0.8	1.07	1.80	3.01	4.6	6.9	8.14	12.4	19.4	26.6	44.0	65.0
	Out.Torq., in.lbs.	5160	6940	12300	19700	30400	46300	55200	82500	133000	185000	308000	460000
	Therm. Input HP	0.8	1.04	1.80	3.01	4.5	6.33	7.8	11.3	17.8	26.6	44.0	65.0
	Output RPM	7.31	7.32	7.33	7.75	7.76	7.76	7.76	7.95	7.75	7.71	7.73	7.73
	Efficiency%	74.9	75.4	79.5	80.5	81.3	82.6	83.5	83.9	84.5	85.0	85.8	86.8
300	Mech. Input HP	.431	.583	1.0	1.63	2.5	3.85	4.83	8.56	10.5	15.2	25.4	37.7
	Out.Torq., in.lbs.	5310	7240	12900	20400	31400	48600	62600	83400	138000	202000	338000	504000
	Therm. Input HP	.42	.560	.960	1.6	2.45	3.5	4.28	6.53	10.5	14.4	23.8	35.7
	Output RPM	3.82	3.82	3.83	4.04	4.05	4.05	4.05	4.15	4.04	4.02	4.03	4.03
	Efficiency %	74.6	75.3	78.3	80.3	80.7	81.1	83.3	83.6	84.3	84.8	85.1	85.5

Helical Worm
Speed Reducers

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	83.28	83.21	82.98	82.98	83.78	82.93	82.82	83.02	82.98	79.60	79.39	79.39
	Ratio Combinations	4.06	4.06	4.05	4.05	4.09	4.04	4.04	4.05	4.05	4.05	4.04	4.04
		20-1/2	20-1/2	20-1/2	20-1/2	20-1/2	20-1/2	20-1/2	20-1/2	20-1/2	19-2/3	19-2/3	19-2/3
1750	Mech. Input HP	1.91	2.53	4.46	7.14	10.6	14.8	20.0	26.4	40.0	52.4	76.7	112
	Out.Torq., in.lbs.	4430	5930	10800	17600	26600	37000	50000	66500	101000	129000	194000	290000
	Therm. Input HP	1.83	2.41	4.46	7.13	9.8	13.4	16.8	20.6	32.9	52.4	75.0	109
	Output RPM	21.0	21.0	21.1	21.1	20.9	21.1	21.1	21.1	21.1	22.0	22.0	22.0
	Efficiency%	77.3	78.2	81.0	82.5	83.2	83.7	83.8	84.2	84.5	85.9	88.5	90.6
1450	Mech. Input HP	1.65	2.18	3.89	6.27	9.4	13.1	17.8	23.6	36.1	46.1	71.5	102
	Out.Torq., in.lbs.	4580	6140	11000	18300	27800	39000	53200	71000	109000	139000	216000	315000
	Therm. Input HP	1.60	2.13	3.89	6.2	7.4	11.8	14.7	18.0	29.0	46.1	68.5	96.0
	Output RPM	17.4	17.4	17.5	17.5	13.7	17.5	17.5	17.5	17.5	18.2	18.3	18.3
	Efficiency%	76.7	77.9	78.4	80.9	81.2	82.6	83.0	83.4	83.7	87.1	87.5	89.5
1150	Mech. Input HP	1.37	1.83	3.3	5.25	7.85	10.9	14.9	20.0	30.8	40.2	65.2	90.0
	Out.Torq., in.lbs.	4710	6410	11700	19200	29000	40700	56000	75700	117000	150000	246000	347000
	Therm. Input HP	1.33	1.8	3.25	5.2	7.4	10.0	12.5	15.4	24.9	40.2	57.3	85.5
	Output RPM	13.8	13.8	13.9	13.9	13.7	13.9	13.9	13.9	13.9	14.4	14.5	14.5
	Efficiency%	75.3	76.8	78.0	80.4	80.5	82.2	82.8	83.2	83.5	85.5	86.7	88.6
865	Mech. Input HP	1.03	1.42	2.58	4.19	6.41	8.66	11.9	16.0	24.9	33.4	56.3	78.0
	Out.Torq., in.lbs.	4820	6580	12100	19900	30800	42800	58800	80000	125000	165000	278000	392000
	Therm. Input HP	1.07	1.42	2.58	4.15	6.02	8.07	10.3	12.9	20.7	33.4	51.7	74.5
	Output RPM	10.4	10.4	10.4	10.4	10.3	10.4	10.4	10.4	10.4	10.9	10.9	10.9
	Efficiency %	74.2	76.4	77.6	78.6	78.7	81.8	81.9	82.7	83.0	85.2	85.4	86.9
575	Mech. Input HP	.76	1.0	1.84	2.98	4.5	6.25	8.67	11.7	18.0	25.0	41.8	60.0
	Out.Torq., in.lbs.	5000	6750	12600	20700	31800	45000	62400	85200	134000	182000	306000	445000
	Therm. Input HP	.76	1.0	1.82	2.94	4.38	5.94	7.88	10.4	16.0	25.0	41.8	60.0
	Output RPM	6.9	6.91	6.93	6.93	6.86	6.93	6.94	6.93	6.93	7.2	7.24	7.24
	Efficiency%	72.1	74.0	75.3	76.4	77.0	79.2	79.3	80.0	81.8	83.4	84.1	85.2
300	Mech. Input HP	.407	.554	1.01	1.65	2.48	3.83	4.86	6.5	10.2	15.0	24.9	36.6
	Out.Torq., in.lbs.	5130	7040	13000	21500	32800	50800	65600	88400	139000	203000	338000	502000
	Therm. Input HP	.40	.540	.99	1.62	2.48	3.5	4.83	6.53	10.2	14.3	23.7	35.0
	Output RPM	3.6	3.61	3.62	3.62	3.58	3.62	3.6	3.6	3.62	3.77	3.78	3.78
	Efficiency %	72.0	72.7	73.8	74.7	75.1	76.1	77.6	77.7	78.2	80.9	81.4	82.2

Ratings based on 1.0 service factor. For A.G.M.A. recommended practice on service factors, see page 11.

Horsepower and Torque Ratings • Helical Worm

Helical Worm
Speed Reducers

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	91.43	91.37	89.63	89.64	89.52	89.55	89.48	89.68	89.64	89.64	89.39	89.39
	Ratio Combinations	3.05 30	3.04 30	3.04 29-1/2	3.04 29-1/2	3.03 29-1/2	3.04 29-1/2	3.03 29-1/2	3.04 29-1/2	3.04 29-1/2	3.04 29-1/2	3.04 29-1/2	3.04 29-1/2
1750	Mech. Input HP	1.88	2.44	4.05	6.3	9.0	12.5	16.6	21.8	32.3	39.9	65.6	85.5
	Out.Torq., in.lbs.	4460	6010	10200	16200	23600	32800	43600	58500	87000	110000	184000	242000
	Therm. Input HP	1.88	2.44	3.9	6.27	8.69	11.9	15.1	18.4	29.4	39.9	65.6	85.5
	Output RPM	19.1	19.2	19.5	19.5	19.5	19.5	19.6	19.5	19.5	19.5	19.6	19.6
	Efficiency%	72.0	79.4	78.0	79.7	81.3	81.4	81.5	83.1	83.4	85.4	87.1	87.9
1450	Mech. Input HP	1.65	2.15	3.53	5.59	7.93	11.3	15.1	20.0	30.0	37.7	59.5	78.6
	Out.Torq., in.lbs.	4650	6260	10500	17100	24800	35400	47600	63500	97000	124000	200000	268000
	Therm. Input HP	1.65	2.15	3.42	5.58	7.71	10.7	13.4	16.2	27.0	37.2	59.5	78.5
	Output RPM	15.9	15.9	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
	Efficiency%	70.9	73.3	76.4	78.5	80.4	80.5	81.1	81.5	83.0	84.4	86.5	87.6
1150	Mech. Input HP	1.38	1.81	3.0	4.78	6.77	9.63	13.0	17.0	26.2	34.0	51.7	73.7
	Out.Torq., in.lbs.	4830	6510	11100	17900	26300	37600	51200	68000	106000	139000	214000	310000
	Therm. Input HP	1.38	1.81	2.92	4.78	6.6	9.23	11.5	13.8	23.9	34.0	51.7	73.7
	Output RPM	12.6	12.6	12.8	12.8	12.8	12.8	12.9	12.8	12.8	12.8	12.9	12.9
	Efficiency%	69.8	71.8	75.3	76.2	79.2	79.6	80.3	81.4	82.4	83.2	84.5	85.9
865	Mech. Input HP	1.09	1.45	2.37	3.81	5.42	7.55	10.4	13.7	21.7	28.7	46.5	64.5
	Out.Torq., in.lbs.	5020	6760	11600	18900	27500	38500	53600	72500	116000	154000	250000	355000
	Therm. Input HP	1.09	1.45	2.37	3.81	5.35	7.55	9.4	11.3	19.9	28.7	46.5	64.5
	Output RPM	9.46	9.47	9.65	9.65	9.66	9.66	9.67	9.65	9.65	9.65	9.68	9.68
	Efficiency %	69.1	70.0	74.9	76.0	77.8	78.2	79.1	81.0	81.8	82.2	82.5	84.5
575	Mech. Input HP	.790	1.03	1.71	2.76	4.05	5.57	7.59	9.81	15.8	21.9	21.9	52.3
	Out.Torq., in.lbs.	5200	7000	12100	19900	29900	41800	58500	78000	126000	176000	176000	422000
	Therm. Input HP	.790	1.02	1.71	2.76	3.93	5.46	6.95	8.5	14.9	21.9	21.9	52.3
	Output RPM	6.29	6.29	6.42	6.41	6.42	6.42	6.43	6.41	6.41	6.41	6.43	6.43
	Efficiency%	65.7	67.9	72.0	73.4	75.2	76.5	78.6	80.9	81.2	81.8	82.0	82.4
300	Mech. Input HP	.45	.590	.99	1.61	2.28	3.27	4.5	5.97	9.85	14.4	22.4	32.0
	Out.Torq., in.lbs.	5370	7240	12600	21800	30900	44500	61400	83000	138000	203000	326000	484000
	Therm. Input HP	.45	.590	.99	1.61	2.28	3.27	4.5	5.97	9.85	14.4	22.4	32.0
	Output RPM	3.28	3.28	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.36	3.36
	Efficiency %	62.1	63.9	67.6	71.9	72.1	72.3	72.6	73.8	74.4	74.9	77.5	80.5

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	104.0	103.9	103.7	103.7	103.6	103.6	103.5	101.1	103.7	99.49	99.22	99.22
	Ratio Combinations	5.07 20-1/2	5.07 20-1/2	5.06 20-1/2	5.06 20-1/2	5.05 20-1/2	5.05 20-1/2	5.05 20-1/2	4.93 20-1/2	5.06 20-1/2	5.06 19-2/3	5.05 19-2/3	5.05 19-2/3
1750	Mech. Input HP	1.60	2.12	3.78	6.12	9.20	12.8	17.4	22.8	34.0	45.6	69.8	100
	Out.Torq., in.lbs.	4570	6180	11300	18400	28000	39200	53600	71500	110000	142000	220000	320000
	Therm. Input HP	1.55	2.08	3.78	6.07	8.49	11.6	14.5	17.6	28.6	45.6	66.5	96.5
	Output RPM	16.8	16.8	16.9	16.9	16.9	16.9	16.9	17.3	16.9	17.6	17.6	17.6
	Efficiency%	76.3	77.9	80.0	80.5	81.6	82.1	82.6	86.1	86.6	86.9	88.2	89.6
1450	Mech. Input HP	1.37	1.83	3.26	5.27	7.93	11.0	15.1	20.0	30.2	40.8	65.0	92.9
	Out.Torq., in.lbs.	4690	6400	11700	19100	28800	40600	56000	75500	117000	152000	244000	358000
	Therm. Input HP	1.35	1.82	3.26	5.23	7.43	10.1	12.7	15.6	25.2	40.8	60.0	87.5
	Output RPM	13.9	14.0	14.0	14.0	14.0	14.0	14.0	14.3	14.0	14.6	14.6	14.6
	Efficiency%	75.7	77.4	79.6	80.4	80.7	82.0	82.4	85.9	86.0	86.2	87.0	89.4
1150	Mech. Input HP	1.13	1.50	2.71	4.41	6.63	9.10	12.5	16.8	25.5	35.1	58.6	80.5
	Out.Torq., in.lbs.	4800	6450	12000	19800	30000	42300	58400	79000	123000	163000	272000	382000
	Therm. Input HP	1.12	1.50	2.71	4.36	6.30	8.45	10.8	13.3	21.4	35.1	52.5	76.0
	Output RPM	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.4	11.1	11.6	11.6	11.6
	Efficiency%	74.5	75.5	77.9	79.0	79.7	81.9	82.1	84.9	85.0	85.2	85.4	87.3
865	Mech. Input HP	0.890	1.18	2.16	3.50	5.28	7.26	10.0	13.6	20.5	28.5	48.0	67.8
	Out.Torq., in.lbs.	4900	6680	12300	20300	31000	44000	61100	83800	130000	174000	294000	422000
	Therm. Input HP	0.890	1.18	2.16	3.50	5.12	6.87	8.90	11.2	18.0	28.5	45.5	67.8
	Output RPM	8.32	8.33	8.34	8.34	8.35	8.35	8.36	8.56	8.34	8.69	8.72	8.72
	Efficiency %	72.7	74.8	75.4	76.8	77.8	80.3	81.0	83.6	83.9	84.2	84.7	86.1
575	Mech. Input HP	0.620	0.810	1.51	2.45	3.73	5.22	7.10	9.71	14.9	20.9	35.1	50.9
	Out.Torq., in.lbs.	5010	6820	12600	21000	32400	45800	63600	87000	138000	188000	318000	465000
	Therm. Input HP	0.620	0.810	1.51	2.43	3.65	5.00	6.80	8.85	14.0	20.9	35.1	50.9
	Output RPM	5.53	5.53	5.54	5.54	5.55	5.55	5.56	5.69	5.54	5.78	5.80	5.80
	Efficiency%	70.9	73.9	73.4	75.4	76.5	77.3	79.0	80.9	81.5	82.5	83.3	84.0
300	Mech. Input HP	0.337	0.445	0.815	1.34	2.01	2.90	3.92	5.23	8.31	12.3	20.6	30.2
	Out.Torq., in.lbs.	5160	6860	13100	21700	33100	48000	66500	88400	141000	206000	346000	515000
	Therm. Input HP	0.330	0.430	0.790	1.30	1.99	2.80	3.86	5.23	8.20	11.5	19.2	28.2
	Output RPM	2.88	2.89	2.89	2.89	2.90	2.90	2.90	2.97	2.89	3.02	3.02	3.02
	Efficiency %	70.1	70.7	73.8	74.3	75.7	76.0	78.0	79.6	77.9	80.1	80.6	81.8

Ratings based on 1.0 service factor. For A.G.M.A. recommended practice on service factors, see page 11.

Horsepower and Torque Ratings • Helical Worm

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	121.9	121.8	119.4	119.4	120.6	119.3	119.2	119.5	119.4	119.4	119.1	119.1
	Ratio Combinations	4.06	4.06	4.05	4.05	4.09	4.04	4.04	4.05	4.05	4.05	4.04	4.04
		30	30	29-1/2	29-1/2	29-1/2	29-1/2	29-1/2	29-1/2	29-1/2	29-1/2	29-1/2	29-1/2
1750	Mech. Input HP	1.53	2.00	3.31	5.24	7.45	10.3	14.0	18.9	27.8	35.8	54.0	77.3
	Out.Torq., in.lbs.	4740	6200	10800	17500	25600	35400	49200	66200	101000	131000	200000	288000
	Therm. Input HP	1.53	2.00	3.20	5.23	7.24	10.0	12.6	15.2	25.6	35.8	54.0	77.3
	Output RPM	14.4	14.4	14.7	14.7	14.5	14.7	14.7	14.6	14.7	14.7	14.7	14.7
	Efficiency%	70.6	70.7	75.9	77.7	79.1	80.0	81.9	81.4	84.5	85.1	86.3	86.9
1450	Mech. Input HP	1.31	1.73	2.87	4.58	6.60	9.28	12.5	16.7	25.2	32.0	50.3	69.7
	Out.Torq., in.lbs.	4880	6560	11200	18100	26900	38000	51800	70000	109000	140000	222000	310000
	Therm. Input HP	1.31	1.73	2.82	4.58	6.38	8.97	11.1	13.2	23.0	31.6	50.3	29.9
	Output RPM	11.9	11.9	12.1	12.1	12.0	12.2	12.2	12.1	12.1	12.1	12.2	12.2
	Efficiency%	70.3	71.6	75.2	76.1	77.8	79.0	80.0	80.7	83.3	84.3	85.3	85.9
1150	Mech. Input HP	1.09	1.44	2.37	3.82	5.43	7.69	10.4	13.9	21.8	28.9	46.3	64.2
	Out.Torq., in.lbs.	5020	6760	11600	18700	27600	39600	54000	73000	117000	156000	251000	355000
	Therm. Input HP	1.09	1.44	2.37	3.82	5.34	7.50	9.38	11.2	19.8	28.9	46.3	64.2
	Output RPM	9.43	9.44	9.63	9.63	9.54	9.64	9.65	9.62	9.63	9.63	9.66	9.66
	Efficiency%	68.9	70.3	74.8	74.8	76.9	78.8	79.5	80.2	82.0	82.5	83.1	84.7
865	Mech. Input HP	0.870	1.17	1.90	3.04	4.37	6.13	8.35	11.0	17.1	23.7	41.3	56.3
	Out.Torq., in.lbs.	5150	6940	12000	19600	28600	41200	56900	76500	121000	168000	294000	407000
	Therm. Input HP	0.870	1.17	1.90	3.04	4.29	6.02	7.62	9.30	16.3	22.6	41.3	56.3
	Output RPM	7.10	7.10	7.24	7.24	7.17	7.25	7.26	7.24	7.24	7.24	7.26	7.26
	Efficiency %	66.6	66.8	72.6	74.1	74.5	77.3	78.5	79.9	81.3	81.5	82.0	83.3
575	Mech. Input HP	0.620	0.810	1.34	2.15	3.05	4.45	6.00	7.83	12.7	17.7	29.9	42.8
	Out.Torq., in.lbs.	5290	7110	12400	20300	29800	43000	59600	80500	132000	186000	315000	455000
	Therm. Input HP	0.620	0.810	1.34	2.15	2.98	4.40	5.60	7.12	12.1	17.7	29.9	42.8
	Output RPM	4.72	4.72	4.82	4.82	4.77	4.82	4.82	4.81	4.82	4.82	4.83	4.83
	Efficiency%	63.9	65.7	70.7	72.1	73.9	73.9	76.0	78.5	79.4	80.3	80.7	81.4
300	Mech. Input HP	0.346	0.451	0.743	1.17	1.70	2.45	3.36	4.47	7.35	10.1	18.0	26.0
	Out.Torq., in.lbs.	5470	7410	12800	21100	31200	44500	61400	83000	137000	191000	341000	506000
	Therm. Input HP	0.340	0.440	0.740	1.20	1.70	2.45	3.38	4.47	7.35	10.1	17.2	24.9
	Output RPM	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	Efficiency %	61.7	64.2	68.7	71.9	72.4	72.5	73.0	74.0	74.3	75.4	75.7	77.8

Helical Worm
Speed Reducers

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	124.3	124.1	123.9	123.9	123.8	123.8	123.7	120.9	123.9	123.9	123.6	123.6
	Ratio Combinations	5.07	5.07	5.06	5.06	5.05	5.05	5.05	4.93	5.06	5.06	5.05	5.05
		24-1/2	24-1/2	24-1/2	24-1/2	24-3/2	24-1/2	24-1/2	24-1/2	24-1/2	24-1/2	24-1/2	24-1/2
1750	Mech. Input HP	1.42	1.78	3.21	5.10	7.82	11.0	14.6	19.4	29.8	38.7	58.0	79.6
	Out.Torq., in.lbs.	4710	6170	11200	17900	27800	39200	53200	70000	111000	146000	222000	310000
	Therm. Input HP	1.42	1.78	3.21	5.10	7.45	10.2	12.8	15.7	25.0	38.7	58.0	79.6
	Output RPM	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.5	14.1	14.1	14.2	14.2
	Efficiency%	74.1	77.6	78.2	78.7	79.7	79.9	82.1	82.9	83.5	84.5	86.0	87.5
1450	Mech. Input HP	1.22	1.52	2.75	4.39	6.66	9.35	12.7	17.2	26.5	34.9	54.3	74.5
	Out.Torq., in.lbs.	4810	6310	11500	18400	28400	40500	55600	74000	118000	157000	250000	349000
	Therm. Input HP	1.20	1.52	2.75	4.39	6.51	8.80	11.2	13.8	22.2	34.9	53.5	74.5
	Output RPM	11.7	11.7	11.7	11.7	11.7	11.7	11.7	12.0	11.7	11.7	11.7	11.7
	Efficiency%	73.0	77.0	77.7	77.8	79.2	80.5	81.4	81.9	82.7	83.5	85.7	87.2
1150	Mech. Input HP	1.00	1.25	2.29	3.67	5.47	7.80	10.5	14.8	22.4	30.2	48.8	68.2
	Out.Torq., in.lbs.	4910	6430	11900	19200	29200	42000	57600	79500	125000	169000	276000	395000
	Therm. Input HP	1.00	1.25	2.29	3.67	5.42	7.40	9.40	11.6	18.9	30.2	46.5	68.2
	Output RPM	9.25	9.27	9.28	9.28	9.29	9.29	9.30	9.51	9.28	9.28	9.30	9.30
	Efficiency%	72.1	75.6	76.5	77.0	78.7	79.4	80.9	81.1	82.2	82.4	83.5	85.5
865	Mech. Input HP	0.790	0.990	1.82	2.92	4.35	6.30	8.50	11.5	18.0	24.5	40.4	57.2
	Out.Torq., in.lbs.	5010	6550	12200	19700	30200	44300	60000	81000	132000	181000	300000	435000
	Therm. Input HP	0.790	0.990	1.82	2.92	4.31	5.95	7.72	9.70	15.8	24.5	40.4	57.2
	Output RPM	6.96	6.97	6.98	6.98	6.99	6.99	6.99	7.15	6.98	6.98	7.00	7.00
	Efficiency %	70.0	73.2	74.3	74.7	77.0	78.0	78.3	80.0	81.2	81.8	82.5	84.4
575	Mech. Input HP	0.550	0.690	1.26	2.02	3.13	4.37	6.00	7.98	12.9	18.0	29.6	42.4
	Out.Torq., in.lbs.	5110	6670	12500	20200	31500	45400	62800	84500	140000	199000	322000	470000
	Therm. Input HP	0.550	0.690	1.26	2.02	3.08	4.27	5.80	7.51	12.3	18.0	29.6	42.4
	Output RPM	4.63	4.63	4.64	4.64	4.64	4.64	4.65	4.76	4.64	4.64	4.65	4.65
	Efficiency%	68.2	71.1	73.1	73.6	74.2	76.6	77.2	79.9	79.9	81.4	80.3	81.8
300	Mech. Input HP	0.296	0.378	0.682	1.12	1.69	2.41	3.28	4.38	7.20	10.3	17.5	25.0
	Out.Torq., in.lbs.	5240	6850	12800	21100	32400	46600	63700	86100	145000	210000	352000	513000
	Therm. Input HP	0.290	0.370	0.670	1.10	1.66	2.38	3.28	4.37	7.20	9.87	16.4	23.2
	Output RPM	2.41	2.42	2.42	2.42	2.42	2.42	2.43	2.48	2.42	2.42	2.43	2.43
	Efficiency %	67.8	69.5	72.1	72.4	73.7	74.3	74.7	77.4	77.4	78.3	77.5	79.0

Ratings based on 1.0 service factor. For A.G.M.A. recommended practice on service factors, see page 11.

Horsepower and Torque Ratings • Helical Worm

Helical Worm
Speed Reducers

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	152.1	152.0	149.2	149.2	149.1	149.1	149.0	145.5	149.2	149.2	148.8	148.8
	Ratio Combinations	5.07	5.07	5.06	5.06	5.05	5.05	5.05	4.93	5.06	5.06	5.05	5.05
		30	30	29-1/2	29-1/2	29-1/2	29-1/2	29-1/2	29-1/2	29-1/2	29-1/2	29-1/2	29-1/2
1750	Mech. Input HP	1.28	1.68	2.79	4.46	6.30	9.00	11.9	16.5	24.7	32.1	49.2	68.5
	Out.Torq., in.lbs.	4900	6600	11200	18200	26400	38300	52000	70500	110000	144000	222000	317000
	Therm. Input HP	1.28	1.68	2.75	4.46	6.21	8.66	10.9	13.0	22.7	32.1	49.2	68.5
	Output RPM	11.5	11.5	11.7	11.7	11.7	11.7	11.7	12.0	11.7	11.7	11.8	11.8
	Efficiency%	69.9	71.8	74.7	75.9	78.0	79.3	81.4	81.8	82.9	83.5	84.2	86.4
1450	Mech. Input HP	1.10	1.45	2.39	3.84	5.54	7.80	10.3	14.1	21.7	29.1	46.7	65.0
	Out.Torq., in.lbs.	5020	6750	11600	18800	27800	39400	53600	73000	116000	156000	251000	355000
	Therm. Input HP	1.10	1.45	2.39	3.84	5.38	7.55	9.50	11.4	20.2	29.1	46.7	65.0
	Output RPM	9.53	9.54	9.72	9.72	9.73	9.73	9.73	9.97	9.72	9.72	9.74	9.74
	Efficiency%	69.0	70.5	74.8	75.5	77.4	77.9	80.4	81.9	82.4	82.7	83.1	84.4
1150	Mech. Input HP	0.920	1.20	2.00	3.19	4.57	6.46	8.67	11.7	18.2	25.0	41.0	58.3
	Out.Torq., in.lbs.	5130	6900	11900	19400	28400	40800	55700	76000	122000	169000	278000	397000
	Therm. Input HP	0.920	1.17	2.00	3.19	4.49	6.33	8.00	9.60	17.0	25.0	40.3	58.3
	Output RPM	7.56	7.57	7.71	7.71	7.71	7.71	7.72	7.90	7.71	7.71	7.73	7.73
	Efficiency%	66.9	69.0	72.8	74.4	76.1	77.3	78.7	81.5	82.0	82.7	83.1	83.5
865	Mech. Input HP	0.720	0.950	1.60	2.55	3.67	5.08	6.90	9.40	14.6	20.2	34.4	48.7
	Out.Torq., in.lbs.	5230	7040	12400	20000	29600	42200	58000	79500	128000	178000	304000	435000
	Therm. Input HP	0.710	0.950	1.58	2.55	3.57	5.02	6.45	8.00	13.8	20.2	34.4	48.7
	Output RPM	5.69	5.69	5.80	5.80	5.80	5.80	5.81	5.95	5.80	5.80	5.81	5.81
	Efficiency %	65.5	66.9	71.3	72.1	74.2	76.5	77.4	79.8	80.6	81.1	81.5	82.4
575	Mech. Input HP	0.510	0.660	1.09	1.77	2.56	3.60	4.90	6.60	10.5	14.8	25.1	36.3
	Out.Torq., in.lbs.	5340	7190	12500	20700	30400	43800	60400	82000	134000	190000	322000	472000
	Therm. Input HP	0.510	0.660	1.09	1.77	2.50	3.57	4.78	6.18	10.2	14.8	25.1	36.3
	Output RPM	3.78	3.78	3.85	3.85	3.86	3.86	3.86	3.95	3.85	3.85	3.86	3.86
	Efficiency%	62.8	65.4	70.1	71.5	72.7	74.4	75.5	77.9	78.0	78.5	78.7	79.7
300	Mech. Input HP	0.277	0.360	0.601	0.965	1.36	1.97	2.68	3.65	5.90	8.86	14.8	21.5
	Out.Torq., in.lbs.	5500	7458	12800	21800	30900	44900	61700	83000	138000	208000	348000	519000
	Therm. Input HP	0.270	0.350	0.590	0.960	1.35	1.97	2.68	3.56	5.90	8.23	13.9	20.1
	Output RPM	1.97	1.97	2.01	2.01	2.01	2.01	2.01	2.06	2.01	2.01	2.02	2.02
	Efficiency %	62.1	64.9	67.9	72.1	72.5	72.8	73.5	74.4	74.6	74.9	75.2	77.2

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	162.5	162.4	161.9	161.9	163.5	161.8	161.8	162.0	161.9	158.9	159.5	159.5
	Ratio Combinations	4.06	4.06	4.05	4.05	4.09	4.04	4.04	4.05	4.05	4.05	4.04	4.04
		40	40	40	40	40	40	40	40	40	39-1/2	39-1/2	39-1/2
1750	Mech. Input HP	1.19	1.53	2.63	4.00	5.95	8.40	10.7	14.0	21.5	28.6	44.0	57.7
	Out.Torq., in.lbs.	4580	6140	10800	17200	26000	36500	48000	64500	101000	133000	208000	277000
	Therm. Input HP	1.19	1.53	2.62	4.00	5.73	7.95	10.0	13.0	20.1	28.6	44.0	57.7
	Output RPM	10.8	10.8	10.8	10.8	10.7	10.8	10.8	10.8	10.8	11.0	11.0	11.0
	Efficiency%	65.8	68.6	70.4	73.7	74.2	74.6	77.0	79.0	80.8	81.3	82.3	83.6
1450	Mech. Input HP	1.04	1.32	2.29	3.49	5.20	7.40	9.27	12.4	19.6	26.2	39.9	53.7
	Out.Torq., in.lbs.	4710	6300	11100	17900	27000	38200	50000	68500	109000	144000	224000	307000
	Therm. Input HP	1.04	1.32	2.29	3.49	5.05	7.14	8.76	11.4	18.4	26.2	39.9	53.7
	Output RPM	8.92	8.93	8.96	8.96	8.87	8.96	8.96	8.95	8.96	9.13	9.09	9.09
	Efficiency%	64.1	67.6	68.9	72.9	73.1	73.4	76.7	78.5	79.0	79.6	81.0	82.5
1150	Mech. Input HP	0.860	1.10	1.90	2.96	4.28	6.13	7.80	10.8	17.1	23.4	34.5	49.5
	Out.Torq., in.lbs.	4830	6480	11500	18700	28000	39800	52000	73000	117000	158000	240000	350000
	Therm. Input HP	0.860	1.10	1.90	2.96	4.20	5.98	7.52	9.50	15.9	23.4	33.0	49.5
	Output RPM	7.08	7.08	7.10	7.10	7.03	7.11	7.11	7.10	7.10	7.24	7.21	7.21
	Efficiency%	63.1	66.2	68.2	71.2	73.0	73.2	75.2	76.1	77.1	77.5	79.6	80.9
865	Mech. Input HP	0.690	0.870	1.49	2.35	3.40	4.90	6.37	8.70	13.8	19.5	29.0	42.5
	Out.Torq., in.lbs.	4960	6640	11800	19400	29000	41600	54400	77000	125000	172000	264000	397000
	Therm. Input HP	0.690	0.870	1.49	2.35	3.35	4.83	6.12	7.75	12.9	19.5	29.0	42.5
	Output RPM	5.32	5.33	5.34	5.34	5.29	5.35	5.35	5.34	5.34	5.44	5.42	5.42
	Efficiency %	60.7	64.5	67.1	70.0	71.6	72.0	72.4	75.0	76.8	76.2	78.3	80.4
575	Mech. Input HP	0.490	0.620	1.05	1.72	2.41	3.51	4.52	6.37	10.1	14.4	21.9	33.3
	Out.Torq., in.lbs.	5090	6790	12200	20100	30400	43900	56800	81500	133000	187000	292000	447000
	Therm. Input HP	0.490	0.620	1.05	1.72	2.37	3.51	4.40	5.95	9.59	14.4	21.9	33.3
	Output RPM	3.54	3.54	3.55	3.55	3.52	3.55	3.55	3.55	3.55	3.62	3.61	3.61
	Efficiency%	58.3	61.5	65.5	65.9	70.4	70.5	70.9	72.1	74.2	74.6	76.3	76.8
300	Mech. Input HP	0.275	0.344	0.611	0.974	1.42	2.03	2.70	3.76	5.97	8.09	13.5	20.2
	Out.Torq., in.lbs.	5270	7000	12700	20800	31500	44900	62600	84800	138000	195000	326000	497000
	Therm. Input HP	0.270	0.340	0.600	0.960	1.41	2.02	2.52	3.76	5.97	8.06	13.3	19.4
	Output RPM	1.85	1.85	1.85	1.85	1.83	1.85	1.85	1.85	1.85	1.89	1.88	1.88
	Efficiency %	56.1	59.6	61.1	62.8	64.6	65.1	68.2	66.3	68.0	72.2	72.1	73.4

Ratings based on 1.0 service factor. For A.G.M.A. recommended practice on service factors, see page 11.

Horsepower and Torque Ratings • Helical Worm

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	182.9	182.7	182.3	182.3	182.1	182.1	182.0	182.4	182.3	182.3	181.8	181.8
	Ratio Combinations	3.05	3.04	3.04	3.04	3.03	3.04	3.03	3.04	3.04	3.04	3.04	3.04
		60	60	60	60	60	60	60	60	60	60	60	60
1750	Mech. Input HP	0.990	1.15	2.02	3.12	4.70	6.60	8.45	10.9	16.5	20.2	35.5	45.2
	Out.Torq., in.lbs.	3860	4860	8810	13900	21200	30000	39600	52000	79500	101000	178000	238000
	Therm. Input HP	0.990	1.15	2.02	3.12	4.55	6.12	7.80	8.60	14.4	19.9	35.5	45.2
	Output RPM	9.57	9.58	9.60	9.60	9.61	9.61	9.62	9.59	9.60	9.60	9.63	9.63
	Efficiency%	59.2	64.2	66.4	67.9	68.8	69.3	71.5	72.6	73.4	76.2	76.6	80.4
1450	Mech. Input HP	0.870	1.00	1.77	2.74	4.20	5.90	7.72	10.0	15.5	18.7	31.8	41.7
	Out.Torq., in.lbs.	4000	5010	9190	14600	22400	32200	42800	56000	87000	112000	192000	262000
	Therm. Input HP	0.870	1.00	1.77	2.74	4.08	5.50	6.90	7.60	12.8	18.7	31.7	41.7
	Output RPM	7.93	7.94	7.95	7.95	7.96	7.96	7.97	7.95	7.95	7.95	7.98	7.98
	Efficiency%	57.8	63.1	65.5	67.2	67.4	69.0	70.1	70.6	70.8	75.6	76.4	79.5
1150	Mech. Input HP	0.730	0.830	1.50	2.34	3.60	5.00	6.78	8.80	13.8	17.4	27.8	37.4
	Out.Torq., in.lbs.	4140	5160	9550	15400	23800	34100	46400	60500	96000	126000	206000	287000
	Therm. Input HP	0.730	0.830	1.50	2.34	3.47	4.81	5.95	6.65	10.9	17.4	27.8	37.4
	Output RPM	6.29	6.29	6.31	6.31	6.32	6.32	6.32	6.30	6.31	6.31	6.33	6.33
	Efficiency%	56.6	62.1	63.7	65.9	66.2	68.3	68.6	68.8	69.6	72.5	74.4	77.0
865	Mech. Input HP	0.590	0.660	1.20	1.89	2.92	4.05	5.40	7.20	11.5	15.0	23.9	32.4
	Out.Torq., in.lbs.	4280	5310	9900	16100	25100	35800	48000	65000	105000	142000	226000	320000
	Therm. Input HP	0.590	0.660	1.20	1.89	2.84	3.94	4.90	5.60	8.80	15.0	23.9	32.4
	Output RPM	4.73	4.73	4.74	4.74	4.75	4.75	4.75	4.74	4.74	4.74	4.76	4.76
	Efficiency %	54.4	60.4	62.1	64.1	64.8	66.6	67.0	67.9	68.7	71.3	71.4	74.6
575	Mech. Input HP	0.420	0.470	0.860	1.34	2.08	2.94	3.96	5.25	8.50	11.8	18.8	26.2
	Out.Torq., in.lbs.	4410	5460	10300	16900	26400	37800	51400	69800	114000	161000	258000	372000
	Therm. Input HP	0.420	0.470	0.860	1.34	2.06	2.88	3.67	4.33	6.80	11.8	18.8	26.2
	Output RPM	3.14	3.15	3.15	3.15	3.16	3.16	3.16	3.15	3.15	3.15	3.16	3.16
	Efficiency%	52.4	58.0	59.9	63.1	63.6	64.4	65.1	66.5	67.1	68.3	68.9	71.3
300	Mech. Input HP	0.240	0.270	0.510	0.820	1.25	1.79	2.47	3.32	5.26	7.22	11.9	17.1
	Out.Torq., in.lbs.	4540	5600	10600	17600	27400	40000	55400	74800	122000	176000	293000	435000
	Therm. Input HP	0.240	0.270	0.510	0.820	1.25	1.79	2.47	3.32	5.26	7.22	11.9	17.1
	Output RPM	1.64	1.64	1.65	1.65	1.65	1.65	1.65	1.64	1.65	1.65	1.65	1.65
	Efficiency %	49.2	54.0	54.3	56.0	57.3	58.4	58.7	58.8	60.6	63.6	64.5	66.6

Helical Worm
Speed Reducers

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	202.9	202.7	202.4	202.4	202.1	202.1	202.0	197.3	202.3	199.8	199.3	199.3
	Ratio Combinations	5.07	5.07	5.06	5.06	5.05	5.05	5.05	4.93	5.06	5.06	5.05	5.05
		40	40	40	40	40	40	40	40	40	39-1/2	39-1/2	39-1/2
1750	Mech. Input HP	1.01	1.28	2.22	3.42	5.15	7.20	9.25	12.9	19.7	25.7	38.9	53.5
	Out.Torq., in.lbs.	4730	6330	11200	18000	27200	38400	50400	69000	110000	147000	226000	315000
	Therm. Input HP	1.01	1.28	2.22	3.42	4.88	6.94	8.66	11.2	18.0	25.7	38.9	53.5
	Output RPM	8.62	8.63	8.65	8.66	8.66	8.66	8.66	8.87	8.65	8.76	8.78	8.78
	Efficiency%	64.1	67.7	69.2	72.3	72.6	73.3	74.9	75.3	76.6	79.5	80.9	82.0
1450	Mech. Input HP	0.880	1.10	1.91	2.96	4.37	6.20	8.05	11.0	17.0	23.3	34.7	49.5
	Out.Torq., in.lbs.	4840	6460	11500	18600	28000	39800	52000	72000	115000	158000	240000	350000
	Therm. Input HP	0.880	1.10	1.91	2.96	4.19	6.02	7.60	9.60	16.0	23.3	34.7	49.5
	Output RPM	7.15	7.15	7.16	7.17	7.17	7.17	7.18	7.35	7.17	7.26	7.28	7.28
	Efficiency%	62.4	66.7	68.4	71.5	72.9	73.1	73.6	76.3	76.9	78.1	79.8	81.6
1150	Mech. Input HP	0.720	0.920	1.59	2.49	3.65	5.20	6.60	9.20	14.5	20.1	30.3	44.7
	Out.Torq., in.lbs.	4940	6600	11800	19200	28800	41200	53600	76000	123000	170000	260000	387000
	Therm. Input HP	0.720	0.920	1.59	2.49	3.49	5.08	6.60	8.15	13.5	20.1	30.3	44.7
	Output RPM	5.67	5.67	5.68	5.69	5.69	5.69	5.69	5.83	5.68	5.76	5.77	5.77
	Efficiency%	61.7	64.6	66.9	69.6	71.2	71.5	73.4	76.4	76.5	77.2	78.6	79.3
865	Mech. Input HP	0.570	0.720	1.24	2.01	2.92	4.16	5.30	7.45	11.8	16.4	25.0	37.4
	Out.Torq., in.lbs.	5030	6730	12000	19800	29800	42600	55600	79500	130000	180000	280000	425000
	Therm. Input HP	0.570	0.720	1.24	2.01	2.84	4.10	5.15	6.70	11.1	16.4	25.0	37.4
	Output RPM	4.26	4.27	4.27	4.28	4.28	4.28	4.28	4.38	4.28	4.33	4.34	4.34
	Efficiency %	59.7	63.3	65.6	66.9	69.3	69.5	71.3	74.2	74.7	75.4	77.1	78.3
575	Mech. Input HP	0.410	0.520	0.860	1.43	2.10	3.02	3.82	5.42	8.65	11.9	18.6	28.0
	Out.Torq., in.lbs.	5140	6860	12300	20500	30800	44400	57600	83000	136000	191000	304000	465000
	Therm. Input HP	0.410	0.520	0.860	1.43	1.98	3.02	3.82	5.42	8.65	11.9	18.6	28.0
	Output RPM	2.83	2.84	2.84	2.85	2.85	2.85	2.85	2.91	2.84	2.88	2.89	2.89
	Efficiency%	56.4	59.4	64.5	64.7	66.2	66.4	68.1	70.8	70.9	73.3	74.8	76.0
300	Mech. Input HP	0.226	0.275	0.496	0.788	1.16	1.63	2.24	3.00	4.81	6.77	11.5	17.1
	Out.Torq., in.lbs.	5300	7040	12800	21000	31800	45400	63400	84400	140000	198000	332000	509000
	Therm. Input HP	0.220	0.270	0.480	0.770	1.14	1.61	2.00	3.00	4.76	6.60	10.8	16.0
	Output RPM	1.48	1.48	1.48	1.48	1.48	1.48	1.49	1.52	1.48	1.50	1.51	1.51
	Efficiency %	55.0	60.1	60.7	62.7	64.6	65.6	66.7	67.9	68.5	69.7	69.0	71.1

Ratings based on 1.0 service factor. For A.G.M.A. recommended practice on service factors, see page 11.

Horsepower and Torque Ratings • Helical Worm

Helical Worm
Speed Reducers

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	213.3	213.2	212.1	212.7	212.4	212.5	212.3	212.8	212.7	212.7	212.1	212.1
	Ratio Combinations	3.05 70	3.04 70	3.04 70	3.04 70	3.03 70	3.04 70	3.03 70	3.04 70	3.04 70	3.04 70	3.04 70	3.04 70
1750	Mech. Input HP	0.830	1.04	1.76	2.76	4.15	5.50	7.47	9.10	13.5	16.7	27.7	36.8
	Out.Torq., in.lbs.	3560	4760	8310	13400	20400	28000	37200	48000	73000	94000	156000	222000
	Therm. Input HP	0.830	1.04	1.76	2.76	3.98	5.20	6.40	6.80	11.6	16.7	27.7	36.8
	Output RPM	8.20	8.21	8.25	8.23	8.24	8.24	8.24	8.22	8.23	8.23	8.25	8.25
	Efficiency%	55.8	59.6	61.8	63.4	64.3	66.5	65.1	68.8	70.6	73.5	73.7	79.0
1450	Mech. Input HP	0.740	0.920	1.56	2.46	3.69	4.96	6.87	8.80	12.9	15.9	23.9	34.6
	Out.Torq., in.lbs.	3690	4930	8700	14100	21200	30200	40200	55000	81000	105000	162000	238000
	Therm. Input HP	0.740	0.920	1.56	2.46	3.59	4.70	5.70	5.90	10.3	15.9	23.9	34.6
	Output RPM	6.80	6.80	6.84	6.82	6.83	6.82	6.83	6.81	6.82	6.82	6.84	6.84
	Efficiency%	53.8	57.8	60.5	62.0	62.2	65.9	63.4	67.6	67.9	71.4	73.5	74.6
1150	Mech. Input HP	0.620	0.780	1.34	2.13	3.20	4.36	6.07	7.87	11.7	14.2	21.6	31.2
	Out.Torq., in.lbs.	3810	5100	9100	14900	23000	32200	43200	59000	89000	115000	179000	262000
	Therm. Input HP	0.620	0.780	1.34	2.13	3.10	4.18	4.91	5.15	8.80	14.2	21.6	31.2
	Output RPM	5.39	5.39	5.42	5.41	5.41	5.41	5.42	5.40	5.41	5.41	5.42	5.42
	Efficiency%	52.6	56.0	58.4	60.0	61.7	63.4	61.2	64.3	65.3	69.5	71.3	72.2
865	Mech. Input HP	0.500	0.610	1.08	1.72	2.60	3.70	5.00	6.53	9.93	13.0	20.0	27.8
	Out.Torq., in.lbs.	3930	5260	9490	15700	23800	34000	46400	62000	97000	134000	212000	300000
	Therm. Input HP	0.500	0.610	1.08	1.72	2.57	3.46	4.08	4.40	7.45	13.0	20.0	27.8
	Output RPM	4.06	4.06	4.08	4.07	4.07	4.07	4.07	4.06	4.07	4.07	4.08	4.08
	Efficiency %	50.6	55.5	56.9	58.9	59.1	59.4	60.0	61.2	63.0	66.5	68.6	69.8
575	Mech. Input HP	0.360	0.440	0.780	1.24	1.88	2.67	3.62	4.80	7.47	10.5	16.4	23.4
	Out.Torq., in.lbs.	4050	5420	9900	16400	25200	36000	49600	66000	106000	154000	253000	357000
	Therm. Input HP	0.360	0.440	0.780	1.24	1.86	2.52	3.12	3.60	5.95	10.5	16.4	23.4
	Output RPM	2.70	2.70	2.71	2.70	2.71	2.71	2.71	2.70	2.70	2.70	2.71	2.71
	Efficiency%	48.1	52.7	54.6	56.7	57.6	57.9	58.9	59.0	60.9	62.9	66.4	65.6
300	Mech. Input HP	0.210	0.260	0.470	0.760	1.14	1.63	2.26	2.97	4.70	6.42	10.5	15.2
	Out.Torq., in.lbs.	4170	5600	10300	17200	26900	38600	53500	71800	115000	170000	284000	421000
	Therm. Input HP	0.210	0.260	0.470	0.760	1.14	1.63	2.26	2.97	4.70	6.42	10.5	15.2
	Output RPM	1.41	1.41	1.41	1.41	1.41	1.41	1.41	1.41	1.41	1.41	1.41	1.41
	Efficiency %	44.3	48.1	49.2	50.6	52.9	53.0	53.1	54.1	54.8	59.3	60.7	62.2

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	243.7	243.5	242.9	242.9	245.2	242.7	242.4	243.0	242.9	242.9	242.2	242.2
	Ratio Combinations	4.06 60	4.06 60	4.05 60	4.05 60	4.09 60	4.04 60	4.04 60	4.05 60	4.05 60	4.05 60	4.04 60	4.04 60
1750	Mech. Input HP	0.810	0.930	1.65	2.58	3.95	5.58	7.38	9.70	15.0	18.1	30.2	39.5
	Out.Torq., in.lbs.	4070	5080	9350	14800	23000	33200	44400	58500	91000	118000	198000	267000
	Therm. Input HP	0.810	0.930	1.65	2.56	3.83	5.30	6.50	7.20	12.0	18.1	30.2	39.5
	Output RPM	7.18	7.19	7.20	7.20	7.14	7.21	7.22	7.20	7.20	7.20	7.23	7.23
	Efficiency%	57.3	62.3	64.8	65.6	65.9	68.1	68.9	68.9	69.4	74.5	75.2	77.5
1450	Mech. Input HP	0.700	0.800	1.44	2.25	3.45	4.92	6.52	8.65	13.5	16.8	26.9	35.1
	Out.Torq., in.lbs.	4170	5190	9630	15500	24000	34600	46400	62000	98000	129000	210000	293000
	Therm. Input HP	0.700	0.800	1.44	2.23	3.41	4.70	5.70	6.40	10.4	16.8	25.0	35.1
	Output RPM	5.95	5.95	5.97	5.97	5.91	5.97	5.98	5.97	5.97	5.97	5.99	5.99
	Efficiency%	56.2	61.3	63.3	65.2	65.3	66.7	67.5	67.9	68.8	72.7	74.2	79.3
1150	Mech. Input HP	0.590	0.660	1.20	1.87	2.88	4.10	5.43	7.20	11.5	15.4	23.6	32.5
	Out.Torq., in.lbs.	4280	5310	9900	16100	25200	35800	48400	65000	105000	143000	226000	320000
	Therm. Input HP	0.590	0.660	1.20	1.87	2.83	3.91	4.86	5.60	8.80	15.4	21.0	32.5
	Output RPM	4.72	4.72	4.73	4.73	4.69	4.74	4.74	4.73	4.73	4.73	4.75	4.75
	Efficiency%	54.3	60.3	62.0	64.7	65.1	65.6	67.1	67.8	68.6	69.8	72.1	74.2
865	Mech. Input HP	0.470	0.520	0.960	1.51	2.34	3.26	4.35	5.81	9.25	12.8	20.1	28.0
	Out.Torq., in.lbs.	4380	5420	10200	16700	26200	37400	50500	68500	112000	156000	248000	360000
	Therm. Input HP	0.470	0.520	0.960	1.51	2.26	3.17	4.00	4.70	7.30	12.8	15.6	28.0
	Output RPM	3.55	3.55	3.56	3.56	3.53	3.56	3.57	3.56	3.56	3.56	3.57	3.57
	Efficiency %	52.5	58.7	60.0	62.5	62.7	64.9	65.7	66.6	68.4	68.9	69.9	72.9
575	Mech. Input HP	0.330	0.370	0.680	1.08	1.65	2.36	3.17	4.20	6.70	9.53	15.4	21.6
	Out.Torq., in.lbs.	4480	5530	10400	17300	27000	39000	53600	72000	118000	169000	274000	405000
	Therm. Input HP	0.330	0.370	0.680	1.08	1.63	2.32	3.00	3.65	5.78	9.53	13.0	21.6
	Output RPM	2.36	2.36	2.37	2.37	2.35	2.37	2.37	2.37	2.37	2.37	2.37	2.37
	Efficiency%	50.8	56.0	57.4	60.2	60.9	62.1	63.6	64.4	66.2	66.6	67.0	70.6
300	Mech. Input HP	0.185	0.219	0.388	0.636	0.943	1.34	1.85	2.48	3.97	5.86	9.72	14.0
	Out.Torq., in.lbs.	4660	5850	10900	18000	27600	39900	55200	74300	122000	184000	308000	458000
	Therm. Input HP	0.180	0.210	0.380	0.620	0.937	1.34	1.85	2.48	3.97	5.60	9.25	13.3
	Output RPM	1.23	1.23	1.24	1.24	1.22	1.24	1.24	1.23	1.24	1.24	1.24	1.24
	Efficiency %	49.2	52.2	55.1	55.5	56.8	58.4	58.6	58.7	60.2	61.5	62.3	64.3

Ratings based on 1.0 service factor. For A.G.M.A. recommended practice on service factors, see page 11.

Horsepower and Torque Ratings • Helical Worm

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	253.6	253.3	252.9	252.9	252.6	252.6	252.5	246.7	252.9	252.9	252.3	252.3
	Ratio Combinations	5.07	5.07	5.06	5.06	5.05	5.05	5.05	4.93	5.06	5.06	5.05	5.05
		50	50	50	50	50	50	50	50	50	50	50	50
1750	Mech. Input HP	0.820	1.00	1.78	2.74	4.17	5.87	7.57	10.4	15.3	19.9	31.4	42.7
	Out.Torq., in.lbs.	4450	5840	10500	17000	26200	37200	49400	67000	105000	138000	220000	307000
	Therm. Input HP	0.820	1.00	1.78	2.74	4.07	5.61	7.30	8.40	14.0	19.9	31.4	42.7
	Output RPM	6.90	6.91	6.92	6.92	6.93	6.93	6.93	7.09	6.92	6.92	6.94	6.94
	Efficiency%	59.4	64.0	64.8	68.1	69.1	69.7	71.8	72.5	75.3	76.1	77.1	79.1
1450	Mech. Input HP	0.700	0.860	1.53	2.37	3.55	5.05	6.54	9.13	13.8	18.3	28.6	39.6
	Out.Torq., in.lbs.	4540	5950	10800	17500	26900	38300	50500	70200	112000	150000	236000	337000
	Therm. Input HP	0.700	0.860	1.53	2.37	3.51	4.90	6.40	7.40	12.4	18.3	28.6	39.6
	Output RPM	5.72	5.72	5.73	5.73	5.74	5.74	5.74	5.88	5.73	5.73	5.75	5.75
	Efficiency%	58.8	62.8	64.2	67.2	69.0	69.1	70.4	71.7	73.8	74.6	75.2	77.6
1150	Mech. Input HP	0.580	0.710	1.28	2.00	2.98	4.22	5.59	7.50	11.9	16.0	25.3	34.3
	Out.Torq., in.lbs.	4630	6060	11100	18000	27800	39800	53600	73500	120000	163000	258000	372000
	Therm. Input HP	0.580	0.710	1.28	2.00	2.94	4.12	5.43	6.20	10.5	16.0	22.0	34.3
	Output RPM	4.53	4.54	4.55	4.55	4.55	4.55	4.55	4.66	4.55	4.55	4.56	4.56
	Efficiency%	57.4	61.5	62.6	64.9	67.4	68.1	69.3	72.5	72.8	73.5	73.8	78.4
865	Mech. Input HP	0.470	0.550	1.02	1.61	2.40	3.40	4.55	5.90	9.40	13.2	20.5	30.4
	Out.Torq., in.lbs.	4710	6160	11400	18500	28700	41100	55600	76700	126000	178000	278000	415000
	Therm. Input HP	0.470	0.550	1.02	1.61	2.30	3.34	4.40	5.15	8.70	13.2	18.0	30.4
	Output RPM	3.41	3.41	3.42	3.42	3.42	3.42	3.43	3.51	3.42	3.42	3.43	3.43
	Efficiency %	54.2	60.7	60.7	62.4	65.0	65.7	66.4	72.3	72.7	73.2	73.8	74.3
575	Mech. Input HP	0.330	0.390	0.720	1.14	1.70	2.43	3.30	4.50	7.10	9.53	15.8	22.3
	Out.Torq., in.lbs.	4900	6270	11600	19000	29300	42800	59600	80000	131000	184000	305000	445000
	Therm. Input HP	0.330	0.390	0.720	1.14	1.64	2.43	3.25	4.00	6.69	9.53	15.8	22.3
	Output RPM	2.27	2.27	2.27	2.27	2.28	2.28	2.28	2.33	2.27	2.27	2.28	2.28
	Efficiency%	53.4	57.9	58.1	60.1	62.3	63.6	65.3	65.7	66.6	69.7	69.8	72.2
300	Mech. Input HP	0.176	0.212	0.395	0.649	0.970	1.38	1.86	2.47	3.99	5.90	9.76	14.0
	Out.Torq., in.lbs.	4980	6350	12200	20200	30800	44300	61300	80900	135000	200000	335000	513000
	Therm. Input HP	0.170	0.210	0.380	0.620	0.945	1.34	1.84	2.47	3.97	5.50	9.04	12.4
	Output RPM	1.18	1.18	1.19	1.19	1.19	1.19	1.19	1.22	1.19	1.19	1.19	1.19
	Efficiency %	53.1	56.3	58.1	58.6	59.8	60.5	62.1	63.2	63.7	63.8	64.8	69.1

Helical Worm
Speed Reducers

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	284.4	284.1	283.3	283.3	286.1	283.2	282.8	283.5	283.3	283.3	282.6	282.6
	Ratio Combinations	4.06	4.06	4.05	4.05	4.09	4.04	4.04	4.05	4.05	4.05	4.04	4.04
		70	70	70	70	70	70	70	70	70	70	70	70
1750	Mech. Input HP	0.680	0.860	1.47	2.32	3.52	4.74	6.30	8.50	12.4	15.6	22.7	33.0
	Out.Torq., in.lbs.	3740	5010	8880	14500	22400	31300	41600	58000	85000	112000	168000	247000
	Therm. Input HP	0.680	0.860	1.47	2.32	3.37	4.48	5.15	5.40	9.60	15.6	22.7	33.0
	Output RPM	6.15	6.16	6.18	6.18	6.12	6.18	6.19	6.17	6.18	6.18	6.19	6.19
	Efficiency%	53.7	56.9	59.2	61.3	61.8	64.7	64.8	66.8	67.2	70.4	72.7	73.5
1450	Mech. Input HP	0.600	0.740	1.28	2.04	3.10	4.26	5.70	7.80	11.2	14.3	20.3	30.2
	Out.Torq., in.lbs.	3840	5130	9190	15100	23200	32700	44000	60700	91000	122000	178000	267000
	Therm. Input HP	0.600	0.740	1.28	2.04	3.00	4.08	4.70	5.00	8.40	14.3	20.3	30.2
	Output RPM	5.10	5.10	5.12	5.12	5.07	5.12	5.13	5.11	5.12	5.12	5.13	5.13
	Efficiency%	51.8	56.1	58.3	60.1	60.2	62.4	62.8	63.2	66.0	69.3	71.4	72.0
1150	Mech. Input HP	0.500	0.610	1.07	1.72	2.60	3.65	4.90	6.40	9.90	13.2	19.9	28.2
	Out.Torq., in.lbs.	3930	5260	9490	15700	24000	34000	46600	62000	98000	135000	212000	302000
	Therm. Input HP	0.500	0.610	1.07	1.72	2.55	3.46	4.04	4.40	7.42	13.2	19.9	28.2
	Output RPM	4.04	4.05	4.06	4.06	4.02	4.06	4.07	4.06	4.06	4.06	4.07	4.07
	Efficiency%	50.4	55.4	57.1	58.8	58.9	60.0	61.4	62.4	63.8	65.9	68.8	69.1
865	Mech. Input HP	0.400	0.490	0.860	1.37	2.07	2.97	4.03	5.30	8.10	11.3	17.8	24.8
	Out.Torq., in.lbs.	4020	5380	9780	16200	24900	35600	48800	65300	104000	149000	244000	345000
	Therm. Input HP	0.400	0.490	0.860	1.37	2.05	2.76	3.40	3.65	6.33	11.3	17.8	24.8
	Output RPM	3.04	3.04	3.05	3.05	3.02	3.05	3.06	3.05	3.05	3.05	3.06	3.06
	Efficiency %	48.5	53.0	55.1	57.3	57.7	58.1	58.8	59.6	62.2	63.9	66.6	67.6
575	Mech. Input HP	0.280	0.340	0.630	1.01	1.46	2.08	2.86	3.70	5.90	8.60	13.7	19.8
	Out.Torq., in.lbs.	4110	5500	10300	16800	26000	37300	51900	69000	111000	163000	270000	390000
	Therm. Input HP	0.280	0.340	0.630	1.01	1.44	2.04	2.60	3.15	5.17	8.60	13.7	19.8
	Output RPM	2.02	2.02	2.03	2.03	2.01	2.03	2.03	2.03	2.03	2.03	2.03	2.03
	Efficiency%	47.1	51.9	52.7	53.6	56.8	57.8	58.5	60.0	60.6	61.0	63.6	63.6
300	Mech. Input HP	0.203	0.195	0.360	0.580	0.867	1.22	1.70	2.23	3.43	5.10	8.14	11.1
	Out.Torq., in.lbs.	5280	5750	10600	17200	26900	38400	53500	71800	116000	170000	284000	421000
	Therm. Input HP	0.160	0.190	0.360	0.580	0.867	1.22	1.70	2.23	3.43	5.10	8.14	11.1
	Output RPM	1.05	1.06	1.06	1.06	1.05	1.06	1.06	1.06	1.06	1.06	1.06	1.06
	Efficiency %	43.5	49.4	49.5	49.8	51.6	52.9	53.0	54.1	56.8	56.0	58.8	63.9

Ratings based on 1.0 service factor. For A.G.M.A. recommended practice on service factors, see page 11.

Horsepower and Torque Ratings • Helical Worm

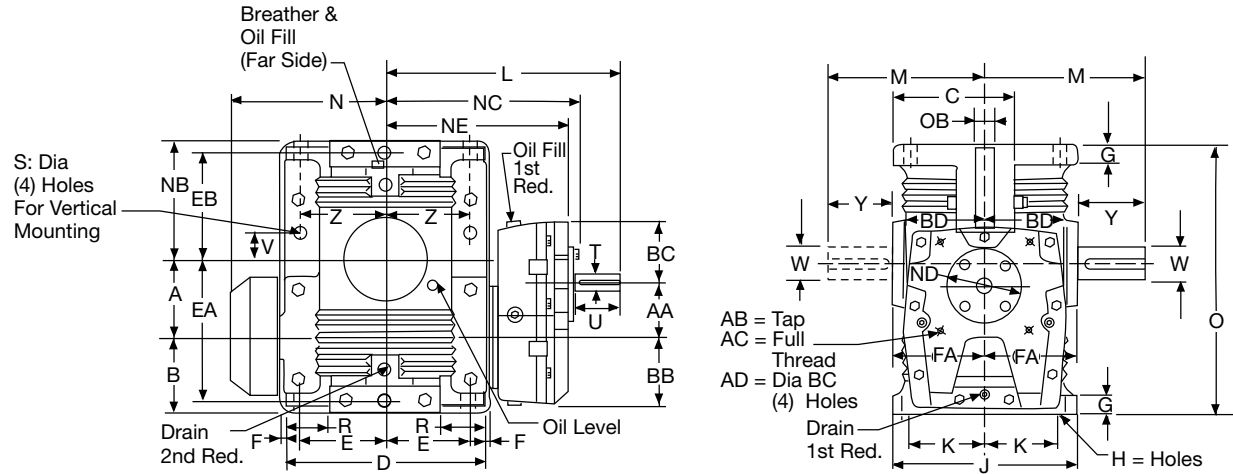
Helical Worm
Speed Reducers

INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	304.3	304.0	303.5	303.5	303.2	303.2	303.0	296.0	303.5	303.5	302.7	302.7
	Ratio Combinations	5.07	5.07	5.06	5.06	5.05	5.05	5.05	4.93	5.06	5.06	5.05	5.05
		60	60	60	60	60	60	60	60	60	60	60	60
1750	Mech. Input HP	0.680	0.770	1.40	2.17	3.35	4.78	6.35	8.65	13.2	16.6	26.5	35.5
	Out.Torq., in.lbs.	4190	5210	9670	15600	24200	34700	46600	62300	99000	132000	212000	297000
	Therm. Input HP	0.680	0.720	1.40	2.17	3.28	4.58	5.60	6.40	10.3	16.6	25.0	35.5
	Output RPM	5.75	5.76	5.77	5.77	5.77	5.77	5.78	5.91	5.77	5.77	5.78	5.78
	Efficiency%	56.2	61.8	63.2	65.8	66.2	66.5	67.3	67.6	68.6	72.7	73.4	76.7
1450	Mech. Input HP	0.590	0.670	1.20	1.89	2.95	4.10	5.46	7.50	11.7	15.4	23.6	32.6
	Out.Torq., in.lbs.	4270	5300	9890	16100	25200	35800	48000	65000	105000	143000	224000	320000
	Therm. Input HP	0.590	0.670	1.20	1.89	2.95	3.98	4.90	5.60	8.80	15.4	22.6	32.6
	Output RPM	4.77	4.77	4.78	4.78	4.78	4.78	4.79	4.90	4.78	4.78	4.79	4.79
	Efficiency%	54.7	59.9	62.5	64.6	64.8	66.3	66.8	67.4	68.3	70.4	72.1	74.6
1150	Mech. Input HP	0.490	0.550	1.00	1.56	2.40	3.38	4.50	6.20	9.80	13.4	21.0	29.0
	Out.Torq., in.lbs.	4360	5390	10100	16600	26000	37000	50000	67500	110000	154000	244000	350000
	Therm. Input HP	0.490	0.550	1.00	1.56	2.39	3.31	4.19	4.80	7.58	13.4	18.3	29.0
	Output RPM	3.78	3.78	3.79	3.79	3.79	3.79	3.80	3.89	3.79	3.79	3.80	3.80
	Efficiency%	53.4	58.8	60.7	64.0	65.2	65.9	66.9	67.1	67.5	69.1	70.0	72.8
865	Mech. Input HP	0.390	0.430	0.800	1.25	1.94	2.74	3.68	4.95	7.80	11.0	17.4	24.4
	Out.Torq., in.lbs.	4440	5480	10300	17000	26600	38200	52400	71200	116000	164000	263000	385000
	Therm. Input HP	0.390	0.430	0.800	1.25	1.89	2.69	3.42	4.04	6.40	11.0	15.7	24.4
	Output RPM	2.84	2.85	2.85	2.85	2.85	2.85	2.85	2.92	2.85	2.85	2.86	2.86
	Efficiency %	51.3	57.5	58.2	61.5	62.1	63.1	64.5	66.7	67.3	67.4	68.5	71.5
575	Mech. Input HP	0.270	0.300	0.570	0.920	1.39	1.99	2.70	3.50	5.60	8.10	13.1	18.7
	Out.Torq., in.lbs.	4520	5570	10700	17500	27200	39800	54100	73000	120000	174000	286000	425000
	Therm. Input HP	0.270	0.300	0.570	0.920	1.36	1.90	2.60	3.21	5.17	8.10	12.0	18.7
	Output RPM	1.89	1.89	1.89	1.89	1.90	1.90	1.90	1.94	1.89	1.89	1.90	1.90
	Efficiency%	50.2	55.7	56.4	57.2	58.9	60.2	60.3	64.3	64.4	64.6	65.8	68.5
300	Mech. Input HP	0.155	0.178	0.311	0.508	0.774	1.09	1.50	1.99	3.17	4.81	8.04	11.6
	Out.Torq., in.lbs.	4690	5880	11000	18200	27900	40300	55800	74500	123000	188000	314000	469000
	Therm. Input HP	0.150	0.170	0.300	0.500	0.774	1.08	1.47	1.98	3.15	4.57	7.62	10.8
	Output RPM	0.986	0.987	0.988	0.988	0.989	0.989	0.990	1.01	0.988	0.988	0.991	0.991
	Efficiency %	47.3	51.7	55.5	56.2	56.6	58.0	58.4	60.2	60.9	61.3	61.4	63.6

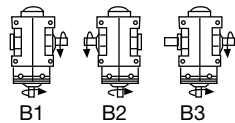
INPUT SPEED (RPM)	Unit Size	35	40	50	60	70	80	90	100	120	140	170	200
	Center Distance	3.5	4	5	6	7	8	9	10	12	14	17	20
	Total Actual Ratio	355.0	354.7	354.1	354.1	353.7	353.7	353.7	345.3	354.1	354.1	353.2	353.2
	Ratio Combinations	5.07	5.07	5.06	5.06	5.05	5.05	5.05	4.93	5.06	5.06	5.05	5.05
		70	70	70	70	70	70	70	70	70	70	70	70
1750	Mech. Input HP	0.580	0.720	1.25	1.99	3.00	4.12	5.50	7.42	11.0	14	20.8	30.2
	Out.Torq., in.lbs.	3850	5160	9230	15200	23300	32800	44400	61000	92000	124000	188000	275000
	Therm. Input HP	0.580	0.720	1.25	1.99	2.92	3.98	4.60	4.80	8.40	14.2	20.8	30.2
	Output RPM	4.93	4.93	4.94	4.94	4.95	4.95	4.95	5.07	4.94	4.94	4.95	4.95
	Efficiency%	51.9	56.1	57.9	59.9	61.0	62.5	63.4	66.1	65.6	68.5	71.1	71.6
1450	Mech. Input HP	0.500	0.620	1.08	1.72	2.59	3.57	4.85	6.56	9.90	13	19.9	28.6
	Out.Torq., in.lbs.	3930	5260	9480	15700	23800	34000	46400	62000	97000	134000	212000	310000
	Therm. Input HP	0.500	0.620	1.08	1.72	2.57	3.47	4.01	4.40	7.50	13.1	18.7	28.6
	Output RPM	4.08	4.09	4.09	4.09	4.10	4.10	4.10	4.20	4.09	4.09	4.11	4.11
	Efficiency%	50.9	55.0	57.0	59.3	59.8	61.9	62.2	63.0	63.7	66.5	69.4	70.6
1150	Mech. Input HP	0.410	0.510	0.890	1.44	2.16	2.96	4.05	5.50	8.34	11.7	18.2	24.7
	Out.Torq., in.lbs.	4000	5360	9730	16100	24700	35200	48400	64000	102000	147000	236000	335000
	Therm. Input HP	0.410	0.510	0.850	1.44	2.15	2.90	4.01	4.00	6.53	11.7	16.5	24.7
	Output RPM	3.24	3.24	3.25	3.25	3.25	3.25	3.25	3.33	3.25	3.25	3.26	3.26
	Efficiency%	50.1	54.1	56.3	57.6	59.0	61.3	61.7	61.5	63.0	64.7	67.0	70.1
865	Mech. Input HP	0.330	0.410	0.720	1.16	1.73	2.42	3.20	4.30	6.70	9.80	15.3	22.2
	Out.Torq., in.lbs.	4070	5460	9960	16600	25600	36500	50400	67100	108000	159000	260000	379000
	Therm. Input HP	0.330	0.410	0.720	1.16	1.71	2.34	2.96	3.45	5.60	9.80	12.0	22.2
	Output RPM	2.44	2.44	2.44	2.44	2.45	2.45	2.45	2.51	2.44	2.44	2.45	2.45
	Efficiency %	47.7	51.5	53.6	55.5	57.4	58.5	61.1	62.0	62.5	62.9	66.0	66.3
575	Mech. Input HP	0.230	0.290	0.520	0.840	1.23	1.71	2.35	3.19	5.00	7.30	11.7	16.9
	Out.Torq., in.lbs.	4150	5550	10300	17100	26600	38000	52800	70500	114000	168000	280000	410000
	Therm. Input HP	0.230	0.290	0.520	0.840	1.21	1.68	2.30	2.80	4.68	7.30	11.7	16.9
	Output RPM	1.62	1.62	1.62	1.62	1.63	1.63	1.63	1.67	1.62	1.62	1.63	1.63
	Efficiency%	46.4	49.2	51.0	52.5	55.8	57.3	58.0	58.4	58.7	59.3	61.8	62.7
300	Mech. Input HP	0.166	0.165	0.280	0.460	0.693	0.977	1.36	1.78	2.82	4.18	6.70	9.80
	Out.Torq., in.lbs.	5330	5780	10300	17200	26900	38400	53700	71800	118000	176000	284000	421000
	Therm. Input HP	0.130	0.160	0.280	0.460	0.693	0.977	1.36	1.78	2.82	4.18	6.70	9.80
	Output RPM	0.845	0.846	0.847	0.847	0.848	0.848	0.848	0.869	0.847	0.847	0.849	0.849
	Efficiency %	43.1	47.0	49.4	50.3	52.2	52.9	53.1	55.6	56.2	56.6	57.1	57.9

Ratings based on 1.0 service factor. For A.G.M.A. recommended practice on service factors, see page 11.

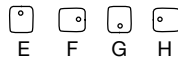
Dimensions Type HE • Horizontal and Vertical



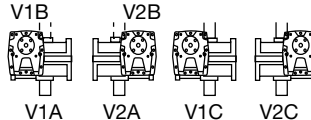
Horizontal Assemblies



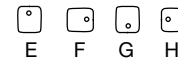
Helical Input Shaft Positions



Vertical Assemblies



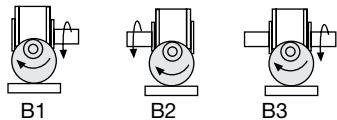
Helical Input Shaft Positions



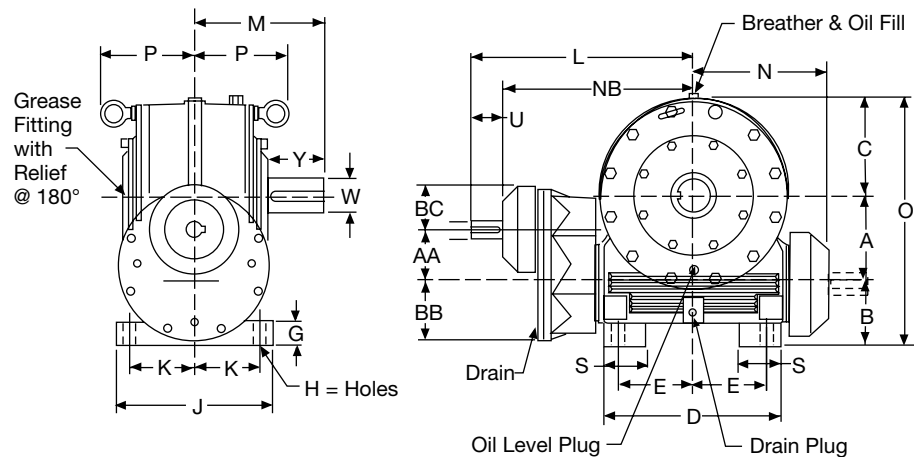
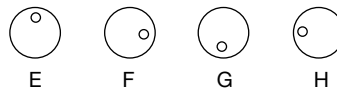
UNIT SIZE	WT. LBS.	A	AA	AB	AC	AD	B	BB	BC	BD	C	D	E	EA	EB	F	FA	G	H	J	K	L	M	N	NB	NC	ND	NE	O	OB	R	S	V	T▲	U	KEYWAY	W▲	Y	KEYWAY	Z
HE35	120	3 1/2	2 1/2	3/8-16	5/8	5/4	3/8	3/8	2 1/4	3/8	5 1/16	9	3/8	6 1/8	4 1/8	1/4	4 1/8	7/8	1 1/16	8 1/4	3 3/8	10 5/8	7 1/8	7 1/16	5 3/8	8 5/8	3 1/16	8 1/8	12 1/4	7/8	2	9/16	1 1/4	3/4	2	3/16 X 3/32 X 1 15/16	1 1/2	3	3/8 X 3/16 X 2 15/16	3 1/8
HE40	189	4	3	3/8-16	5/8	5 3/4	4 1/4	3 1/2	2 1/8	4	6 5/16	10 1/4	4 1/4	7 1/2	5 1/4	3/8	5	7/8	1 3/16	10	4	11 9/16	8 1/2	8 1/16	6	9 9/16	3 1/16	9 1/8	14 1/4	1	2 3/8	1 1/16	1 3/4	7/8	2	3/16 X 3/32 X 1 15/16	1 3/4	3 1/2	3/8 X 3/16 X 3 1/16	4 1/4

Dimensions Type HEB • Horizontal

Assemblies



Helical Input Shaft Positions



Unit Size	WT. LBS.	A	AA	B	BB	BC	C	D	E	G	H	J	K	L	M	N	NB	O	P	S	T▲	U	Keyway	W▲	Y	Keyway
*HEB170	4400	17	10	10 1/2	11 1/2	8	18 1/2	32	13 1/4	3 3/8	1 11/16	24	10 1/4	41 3/8	21 1/2	22 3/4	36 3/8	45 3/4	13 1/4	5 3/4	2 1/2	5	5/8 X 5/16 X 4 15/16	5 3/4	10	1 1/2 X 3/4 X 9 3/4
*HEB200	6000	20	10	11 1/2	11 1/2	8	21 7/16	36	14 3/4	3 5/8	1 15/16	27	11 1/2	43 1/4	23 3/4	26	38 1/4	52 3/4	14 1/2	6 1/2	2 1/2	5	5/8 X 5/16 X 4 15/16	6 1/2	11	1 1/2 X 3/4 X 10 1/2

*No "suger scoop" motor mount available for 170 or 200 sizes.

All dimensions are in inches. Use certified prints for construction. The input shaft may be rotated in either direction. Standard gear sets are cut with right hand threads giving relative shaft rotations as shown above. Shaft arrangements are shown above. Desired assembly should be

specified when ordering. Standard keys are furnished with units.

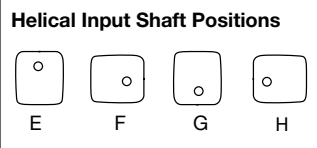
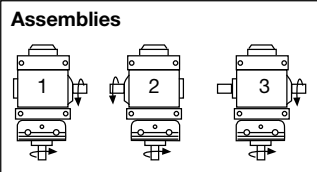
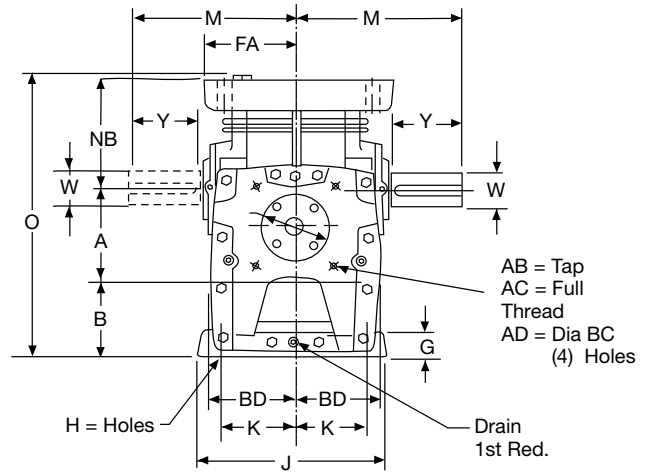
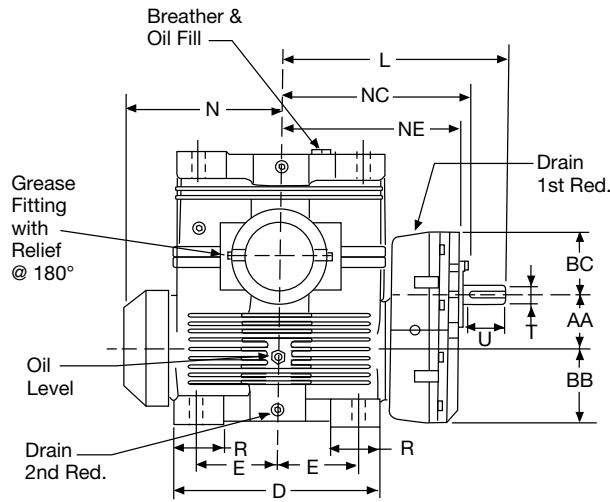
▲ Tolerances: 1 1/2" Diameter or Less = +.0000" -.0005"

Over 1 1/2" Diameter = +.000" -.001"

Low input speeds require special order instructions. See introductory section.

Dimensions Type HE • Horizontal

Helical Worm
Speed Reducers



Special note: Unit size 140 will be supplied with a fan mounted on input shaft. Allowance has been made in "L" & "NC" dimensions.

Unit Size	WT. LBS.	A	AA	AB	AC	AD	B	BB	BC	BD	D	E	FA	G	H	J	K	L	M	N	NB	NC	ND	NE	O	R	T▲	U	Keyway	W▲	Y	Keyway
HE50	221	5	3 1/2	1/2-13	3/4	7 1/4	4 5/8	4	3 1/2	4 5/8	11 3/8	4 3/4	5 1/2	1 1/2	13 1/8	10 3/4	4 3/8	12 5/8	9 5/8	8 9/16	5 3/4	10 3/8	4 1/4	9 7/8	15 7/8	2	1 1/8	2 1/4	1/4 x 1/4 x 2 7/8	2	4	1/2 x 1/4 x 3 7/8
HE60	333	6	4	1/2-13	3/4	7 1/4	5	4 3/4	3 5/8	5 1/2	13 1/2	5 1/4	6 1/8	1 11/16	15 1/8	12 1/4	4 3/4	14 3/4	10 3/4	10 1/8	6 3/4	12 1/4	4 1/4	11 3/4	18 11/16	3	1 1/4	2 1/2	1/4 x 1/8 x 2 7/8	2 1/4	4 1/2	1/2 x 1/4 x 4 3/8
HE70	466	7	4 1/2	1/2-13	3/4	7 1/4	5 5/8	5 1/8	4	5 7/8	14 3/4	6	6 3/8	1 11/16	1 1/8	13	5	16 3/8	11 1/2	10 3/4	7 3/4	13 5/8	4 7/8	13 1/8	20 5/8	2 3/4	1 3/8	2 3/4	5/16 x 5/32 x 2 11/16	2 1/2	5	5/8 x 5/16 x 4 15/16
HE80	651	8	5	5/8-11	1	8 1/4	5 3/4	5 1/2	4 3/8	6 3/8	16 1/2	6 3/4	6 1/2	1 3/4	1 3/8	13 1/2	5 3/8	18	12 1/8	11 3/4	8 3/4	15 1/8	5 3/4	14 7/8	23	3	1 1/2	3	3/8 x 3/16 x 2 15/16	2 3/4	5 1/2	5/8 x 5/16 x 5 7/8
HE90	885	9	5 1/2	5/8-11	1	8 1/4	6 1/4	6 3/16	4 7/8	6 1/2	18 3/4	7 3/4	7 5/8	1 7/8	1 7/16	15 1/4	6	20 1/8	14 1/4	13 7/8	9 3/4	16 11/16	5 3/4	16 1/8	25 1/2	3 1/4	1 3/4	3 1/2	3/8 x 3/16 x 3 7/16	3 1/4	6 1/2	3/4 x 3/8 x 6 3/8
HE100	1178	10	6	5/8-11	1	10 1/4	6 3/4	6 1/2	5 1/4	7 5/8	21	8 3/4	8 5/8	2	1 7/8	17	6 3/8	22 1/4	16	15 1/8	10 3/4	18 11/16	6 3/4	18	27 7/8	3 1/2	1 7/8	3 3/4	1/2 x 1/4 x 3 11/16	3 5/8	7 1/4	7/8 x 7/16 x 7 3/16
HE120	1651	12	7	5/8-11	1	10 1/4	7 1/2	7 5/16	5 11/16	8 3/4	24 5/8	10 1/2	8 7/8	2 1/8	1 9/16	18 1/2	7 1/8	25 5/8	17 1/2	17 1/8	13 1/4	21 5/8	7	20 11/16	33	4	2 1/8	4 1/4	1/2 x 1/4 x 4 3/8	4 1/4	8 1/2	1 x 1/2 x 8 3/8
HE140	2481	14	7	5/8-11	1	10 1/4	9 1/2	7 5/16	5 11/16	8 3/4	27 1/2	11 1/2	10 1/8	2 1/4	1 11/16	21 3/4	8 3/4	32 5/8	19 1/4	20 11/16	15 3/8	28 3/8	7	23 15/16	39	4 1/2	2 1/8	4 1/4	1/2 x 1/4 x 4 3/8	5	9	1 1/4 x 5/8 x 8 5/8

All dimensions are in inches. Use certified prints for construction. The input shaft may be rotated in either direction. Standard gear sets are cut with right hand threads giving relative shaft rotations as shown above. Shaft arrangements are shown above. Desired assembly should be

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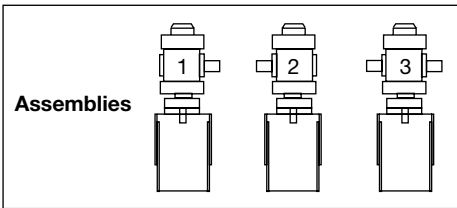
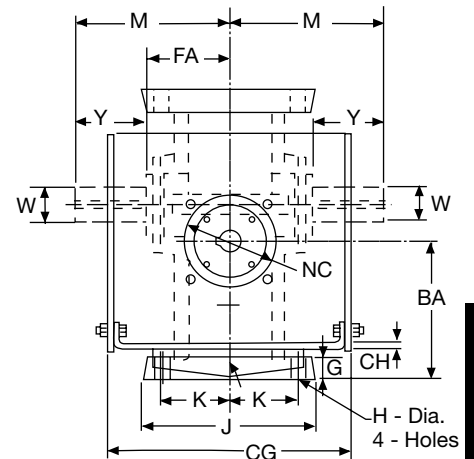
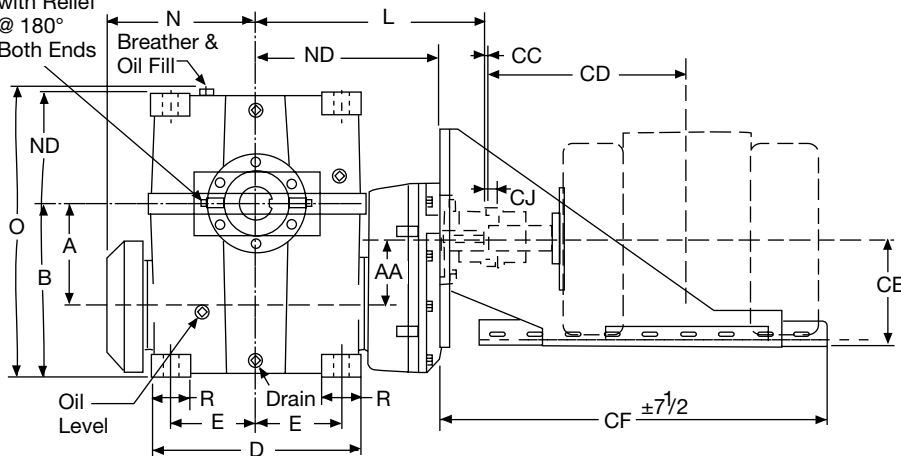
▲ Tolerances: 1 1/2" Diameter or Less = +.0000" -.0005"

Over 1 1/2" Diameter = +.000" -.001"

Low input speeds require special order instructions. See introductory section.

Dimensions for “Sugar Scoop” Motor Mounts for Type HEK

Grease Fitting
with Relief
@ 180°
Both Ends



Assemblies

Helical Worm
Speed Reducers

Motor Frame Size	CJ									
	35	40	50	60	70	80	90	100	120	140
143T	3/8	3/8	3/8							
145T	3/8	3/8	3/8							
182T	3/8	3/8	3/8	5/8	5/8	5/8				
184T	3/8	3/8	3/8	5/8	5/8	5/8	7/8			
213T		5/8	5/8	5/8	5/8	5/8	7/8	7/8		
215T		5/8	5/8	5/8	5/8	5/8	7/8	7/8	1 5/16	
254T				3/4	3/4	5/8	7/8	7/8	1 5/16	1 5/16
256T				3/4	3/4	5/8	7/8	7/8	1 5/16	1 5/16
284T					7/8	7/8	7/8	7/8	1 5/16	1 5/16
286T					7/8	7/8	7/8	7/8	1 5/16	1 5/16
324T						1 5/16	1 5/16	1 5/16	1 5/16	1 5/16
326T							1 5/16	1 5/16	1 5/16	1 5/16
364T								1 1/4	1 1/4	1 1/4
365T								1 1/4	1 1/4	1 1/4
404T									1 7/8	1 7/8
405T										1 7/8

Motor Frame Size	CC	CD	CE	CF ±7/2	CG	CH
143T	1/8	6 1/2	4 7/8	25	12 5/8	3/16
145T	1/8	7	4 7/8	25	12 5/8	3/16
182T	1/8	7 3/4	4 7/8	25	12 5/8	3/16
184T	1/8	8 1/4	4 7/8	25	12 5/8	3/16
213T	1/8	9 5/8	5 9/16	28	12 3/4	1/4
215T	1/8	10 3/8	5 9/16	28	12 3/4	1/4
254T	1/8	12 3/8	6 5/8	31	15	5/16
256T	1/8	13 1/4	6 5/8	31	15	5/16
284T	1/8	14 1/8	7 5/8	31	17	5/16
286T	1/8	14 7/8	7 5/8	31	17	5/16
324T	1/8	15 3/4	8 1/2	35 1/4	19 1/16	3/8
326T	1/8	16 1/2	8 1/2	35 1/4	19 1/16	3/8
364T	1/8	17 3/8	9 1/2	35 1/4	21 5/16	3/8
365T	1/8	17 7/8	9 1/2	35 1/4	21 5/16	3/8
404T	1/8	20	10 1/2	35 1/4	23 5/16	3/8
405T	1/8	20 3/4	10 1/2	35 1/4	23 5/16	3/8

Unit Size	A	AA	B	BA	D	E	FA	G	H	J	K	L	M	N	NB	NC	ND	O	R	T▲	U	Keyway	W▲	Y	Keyway
HEK-35	3 1/2	2 1/2	6 7/8	5 7/8	9	3 7/8	4 1/8	7/8	1 1/16	8 1/4	3 3/8	10 5/8	7 1/8	7 1/16	5 3/8	5 1/8	8 1/8	12 1/4	2	3/4	2	3/16 x 3/32 x 1 15/16	1 1/2	3	3/8 x 3/16 x 2 15/16
HEK-40	4	3	8 1/4	7 1/4	10 1/4	4 1/4	5	7/8	13/16	10	4	11 9/16	8 1/2	8 1/16	6	5 1/8	9 1/16	14 1/4	2 3/8	7/8	2	3/16 x 3/32 x 1 15/16	1 3/4	3 1/2	3/8 x 3/16 x 3 7/16
HEK-50	5	3 1/2	9 5/8	8 1/8	11 3/8	4 3/4	5 1/2	1 1/2	13/16	10 3/4	4 3/8	12 5/8	9 5/8	8 5/8	5 3/4	6 3/8	9 7/8	15 7/8	2	1 1/8	2 1/4	1/4 x 1/8 x 2 3/16	2	4	1/2 x 1/4 x 3 7/8
HEK-60	6	4	11	9	13 1/2	5 1/4	6 1/8	1 11/16	15/16	12 1/4	4 3/4	14 3/4	10 3/4	10 1/16	6 3/4	6 3/8	11 3/4	18 1/2	3	1 1/4	2 1/2	1/4 x 1/8 x 2 7/16	2 1/4	4 1/2	1/2 x 1/4 x 4 3/8
HEK-70	7	4 1/2	12 3/8	9 7/8	14 3/4	6	6 3/8	1 11/16	1 1/16	13	5	16 3/8	11 1/2	10 3/4	7 3/4	6 3/8	13 1/16	20 5/8	2 3/4	1 3/8	2 3/4	3/16 x 3/32 x 2 11/16	2 1/2	5	5/8 x 5/16 x 4 15/16
HEK-80	8	5	13 3/4	10 3/4	16 1/2	6 3/4	6 1/2	1 3/4	1 3/16	13 1/2	5 3/8	18	12 1/8	11 3/4	8 3/4	7 3/16	14 7/16	23	3	1 1/2	3	3/8 x 3/16 x 2 15/16	2 3/4	5 1/2	5/8 x 5/16 x 5 7/16
HEK-90	9	5 1/2	15 1/4	11 3/4	18 3/4	7 3/4	7 5/8	1 7/8	1 7/16	15 1/4	6	20 1/8	14 1/4	13 15/16	9 3/4	7 3/16	16 1/16	25 1/2	3 1/4	1 3/4	3 1/2	3/8 x 3/16 x 3 7/16	3 1/4	6 1/2	3/4 x 3/8 x 6 3/8
HEK-100	10	6	16 3/4	12 3/4	21	8 3/4	8 5/8	2	1 7/16	17	6 3/8	22 1/4	16	14 7/8	10 3/4	9 3/16	18	27 7/8	3 1/2	1 7/8	3 3/4	1/2 x 1/4 x 3 11/16	3 5/8	7 1/4	7/8 x 7/16 x 7 3/16
HEK-120	12	7	19 1/2	14 1/2	24 5/8	10 1/2	8 7/8	2 1/8	1 9/16	18 1/2	7 1/8	25 5/8	17 1/2	16 5/8	13 1/4	9 3/16	20 11/16	33	4	2 1/8	4 1/4	1/2 x 1/4 x 4 3/16	4 1/4	8 1/2	1 x 1/2 x 8 3/8
HEK-140	14	7	23 1/2	16 1/2	27 1/2	11 1/2	10 1/8	2 1/4	1 11/16	21 3/4	8 3/4	32 5/8	19 1/4	20 11/16	15 3/8	9 3/16	23 15/16	39	4 1/2	2 1/8	4 1/4	1/2 x 1/4 x 4 3/16	5	9	1 1/4 x 5/8 x 8 5/8

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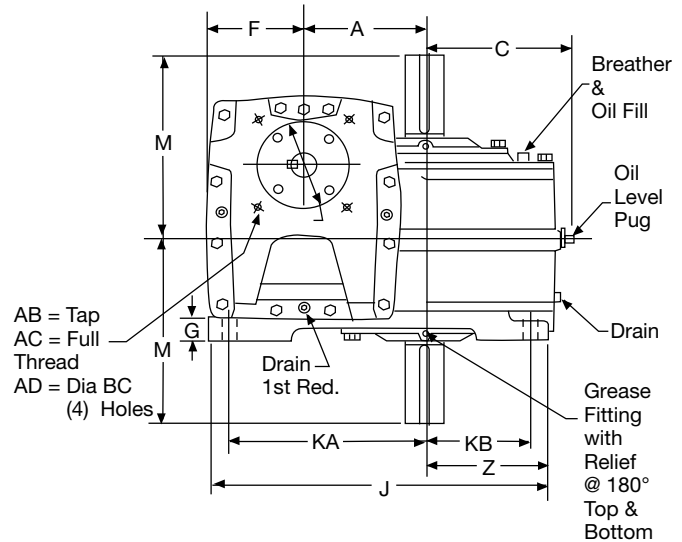
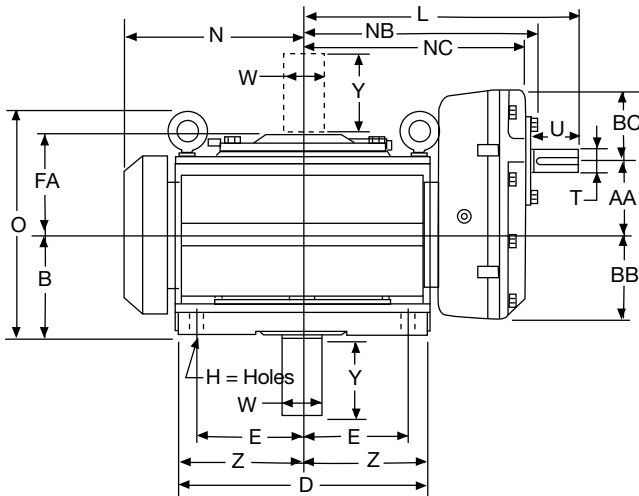
▲ Tolerances: 1 1/2" Diameter or Less = +.0000" -.0005"

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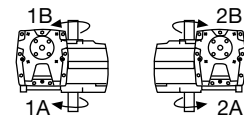
Low input speeds require special order instructions. See introductory section.

Dimensions Type HV • Vertical

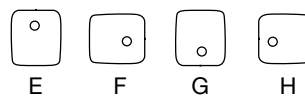
Helical Worm Speed Reducers



Assemblies



Helical Shaft Input Positions



A drywell is standard for vertical assemblies sizes 30-200 only.

Unit Size	WT. LBS.	A	AA	AB	AC	AD	B	BB	BC	C	D	E	F	FA	G	H	J	KA	KB	L	M	N	NB	NC	ND	O	T▲	U	Keyway	W▲	Y	Keyway	Z
HV35	125	3 1/2	2 1/2	3/8-16	5/8	5 3/4	4 1/8	3 1/8	2 3/4	4 13/16	8 3/8	3 1/2	3 3/8	4	7/8	1 1/16	11 3/4	6 7/8	3 1/2	10 5/8	7 1/8	6 5/8	8 5/8	8 1/8	3 3/16	9 1/8	3/4	2	3/16 x 3/32 x 1 15/16	1 1/2	3	3/8 x 3/16 x 2 15/16	4 3/16
HV40	190	4	3	3/8-16	5/8	5 3/4	5	3 1/2	2 7/8	5 3/8	9 1/4	3 7/8	4	4 7/8	1 1/8	1 1/16	13 1/8	7 5/8	3 7/8	11 9/16	8 1/2	7 3/4	9 9/16	9 1/8	3 3/16	10 1/2	7/8	2	3/16 x 3/32 x 1 15/16	1 3/4	3 1/2	3/8 x 3/16 x 3 7/16	4 5/8
HV50	285	5	3 1/2	1/2-13	3/4	7 1/4	5 5/8	4	3 1/2	7 1/2	11 1/8	4 3/4	4 5/8	5 1/2	1 1/4	1 3/16	15 3/8	9	4 3/4	12 5/8	9 5/8	8 5/8	10 3/8	9 7/8	4 1/4	12 9/16	1 1/8	2 1/4	1/4 x 1/8 x 2 3/16	2	4	1/2 x 1/4 x 3 7/8	5 9/16
HV60	400	6	4	1/2-13	3/4	7 1/4	6 1/4	4 3/4	3 3/8	8 5/8	13 3/8	5 3/4	5 1/2	6 1/8	1 3/8	1 3/16	18 1/8	10 1/2	5 3/4	14 3/4	10 3/4	10 1/8	12 1/4	11 3/4	4 1/4	13 7/16	1 1/4	2 1/2	1/4 x 1/8 x 2 7/16	2 1/4	4 1/2	1/2 x 1/4 x 4 3/8	6 11/16
HV70	575	7	4 1/2	1/2-13	3/4	7 1/4	6 1/2	5 1/8	4	9 1/4	14 3/8	6 1/4	5 7/8	6 7/16	1 3/8	1 5/16	20 1/8	11 3/4	6 1/4	16 3/8	11 1/2	10 3/4	13 5/8	13 1/8	4 7/8	14	1 3/8	2 3/4	5/16 x 5/32 x 2 11/16	2 1/2	5	5/8 x 5/16 x 4 15/16	7 5/16
HV80	695	8	5	5/8-11	1	8 1/4	6 3/8	5 1/2	4 3/8	10 1/2	16 1/2	7	6 3/8	6 1/2	1 1/2	1 1/16	22 1/4	12 3/4	7	18	12 1/8	11 3/4	15 1/8	14 7/16	5 3/4	14 7/8	1 1/2	3	3/8 x 3/16 x 2 15/16	2 3/4	5 1/2	5/8 x 5/16 x 5 7/16	8 1/4
HV90	905	9	5 1/2	5/8-11	1	8 1/4	7 3/4	6 3/8	4 7/16	11 3/8	18 1/2	7 7/8	8 1/32	7 5/8	1 5/8	1 3/16	25	14 3/8	7 7/8	20 1/8	14 1/4	13 13/16	16 11/16	16 1/8	5 3/4	17	1 3/4	3 1/2	3/8 x 3/16 x 3 7/16	3 1/4	6 1/2	3/4 x 3/8 x 6 3/8	9 1/4
HV100	1180	10	6	5/8-11	1	10 1/4	8 3/4	6 1/2	5 1/4	12 5/8	20 3/4	9	7 5/8	8 5/8	1 3/4	1 3/16	27 1/4	15 1/2	9	22 1/4	16	15 1/8	18 11/16	18	6 3/4	18 1/2	1 7/8	3 3/4	1/2 x 1/4 x 3 11/16	3 5/8	7 1/4	7/8 x 7/16 x 7 3/16	10 3/8
HV120	1800	12	7	5/8-11	1	10 1/4	9	7 5/16	5 11/16	14 5/8	24 1/2	10 3/8	8 3/4	8 7/8	2 1/8	1 5/16	32 3/8	18 1/2	10 3/8	25 5/8	17 1/2	17	21 5/8	20 11/16	7	19 1/2	2 1/8	4 1/4	1/2 x 1/4 x 4 3/16	4 1/4	8 1/2	1 x 1/2 x 8 3/8	12 1/8
HV140	2550	14	7	5/8-11	1	10 1/4	10 1/4	7 9/16	5 11/16	16 5/8	27 1/2	12	8 3/4	9 7/8	2 1/4	1 9/16	37 1/2	22	12	32 5/8	19 1/4	20 11/16	28 3/8	23 15/16	7	21 3/4	2 1/8	4 1/4	1/2 x 1/4 x 4 3/16	5	9	1 1/4 x 5/8 x 8 5/8	13 3/4
HV170	3570	17	10	-	-	-	11 1/2	11 1/2	8	19 1/2	33	14 1/2	14 3/4	11 1/8	2 1/2	1 9/16	44 3/4	26 1/4	14 1/2	41 3/8	21 1/2	22 3/4	36 3/8	-	9 9/16	24 3/4	2 1/2	5	5/8 x 5/16 x 4 15/16	5 3/4	10	1 1/2 x 3/4 x 9 3/4	16 1/2
HV200	4950	20	10	-	-	-	12 3/4	11 1/2	8	22 1/2	39	17	14 3/4	12 7/8	2 3/4	1 9/16	53	31	17	43 1/4	23 3/4	26	38 1/4	-	9 9/16	27 1/4	2 1/2	5	5/8 x 5/16 x 4 15/16	6 1/2	11	1 1/2 x 3/4 x 10 1/2	19 1/2

All dimensions are in inches. Use certified prints for construction. The input shaft may be rotated in either direction. Standard gear sets are cut with right hand threads giving relative shaft rotations as shown above. Shaft arrangements are shown above. Desired assembly should be

specified when ordering. Standard keys are furnished with units.

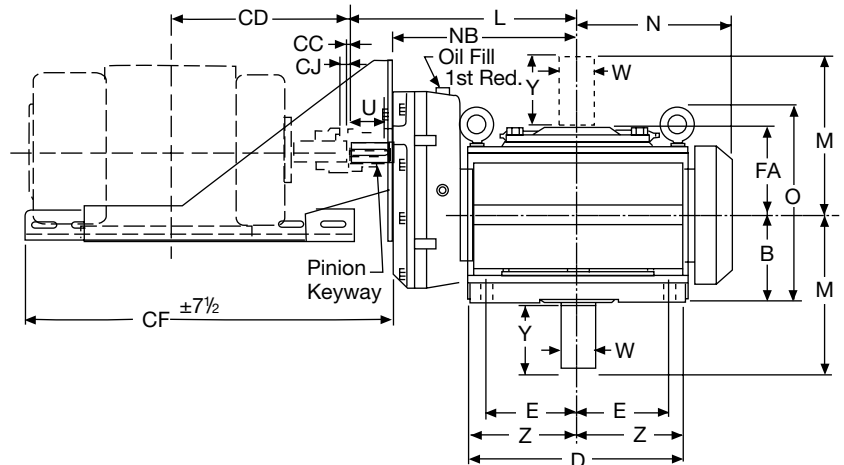
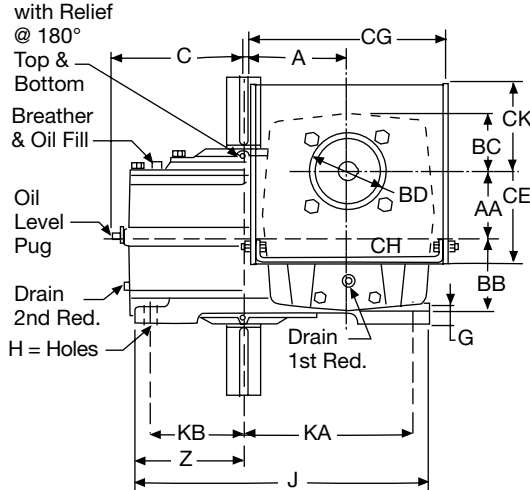
▲ Tolerances: 1 1/2" Diameter or Less = +.0000" -.0005"

Over 1 1/2" Diameter = +.000" -.001"

Low input speeds require special order instructions. See introductory section.

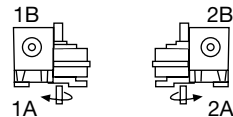
Dimensions for "Sugar Scoop" Motor Mounts for Type HVK

Grease Fitting
with Relief
@ 180°

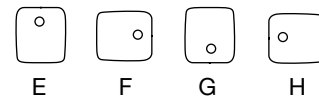


A drywell is standard for vertical assemblies sizes 30-200 only.

Assemblies



Helical Shaft Input Positions



Motor Frame Size	CJ											
	35	40	50	60	70	80	90	100	120	140	170	200
143T	3/8	3/8	3/8									
145T	3/8	3/8	3/8									
182T	3/8	3/8	3/8	5/8	5/8	5/8						
184T	3/8	3/8	3/8	5/8	5/8	5/8	7/8					
213T		5/8	5/8	5/8	5/8	5/8	7/8	7/8				
215T		5/8	5/8	5/8	5/8	5/8	7/8	7/8	1 5/16			
254T				3/4	3/4	3/4	7/8	7/8	1 5/16	1 5/16	1 3/8	1 3/8
256T				3/4	3/4	3/4	7/8	7/8	1 5/16	1 5/16	1 3/8	1 3/8
284T					7/8	7/8	7/8	7/8	1 5/16	1 5/16	1 3/8	1 3/8
286T					7/8	7/8	7/8	7/8	1 5/16	1 5/16	1 3/8	1 3/8
324T						1 5/16	1 5/16	1 5/16	1 5/16	1 5/16	1 3/8	1 3/8
326T							1 5/16	1 5/16	1 5/16	1 5/16	1 3/8	1 3/8
364T								1 1/4	1 1/4	1 1/4	1 3/8	1 3/8
365T								1 1/4	1 1/4	1 1/4	1 3/8	1 3/8
404T									1 7/8	1 7/8	1 7/8	1 7/8
405T										1 7/8	1 7/8	1 7/8

Motor Frame Size	CC	CD	CE	CF ± 7/2	CG	CH	CK
143T	1/8	6 1/2	4 7/8	25	12 5/8	3/16	4 7/8
145T	1/8	7	4 7/8	25	12 5/8	3/16	4 7/8
182T	1/8	7 3/4	4 7/8	25	12 5/8	3/16	4 7/8
184T	1/8	8 1/4	4 7/8	25	12 5/8	3/16	4 7/8
213T	1/8	9 5/8	5 9/16	28	12 3/4	1/4	5
215T	1/8	10 3/8	5 9/16	28	12 3/4	1/4	5
254T	1/8	12 3/8	6 5/8	31	15	5/16	6 5/8
256T	1/8	13 1/4	6 5/8	31	15	5/16	6 5/8
284T	1/8	14 1/8	7 5/8	31	17	5/16	7 5/8
286T	1/8	14 7/8	7 5/8	31	17	5/16	7 5/8
324T	1/8	15 3/4	8 1/2	35 1/4	19 1/16	3/8	8 1/2
326T	1/8	16 1/2	8 1/2	35 1/4	19 1/16	3/8	8 1/2
364T	1/8	17 3/8	9 1/2	35 1/4	21 5/16	3/8	9 1/2
365T	1/8	17 7/8	9 1/2	35 1/4	21 5/16	3/8	9 1/2
404T	1/8	20	10 1/2	35 1/4	23 5/16	3/8	10 1/2
405T	1/8	20 3/4	10 1/2	35 1/4	23 5/16	3/8	10 1/2

Unit Size	A	AA	B	BB	BC	BD	C	D	E	FA	G	H	J	KA	KB	L	M	N	NB	O	T▲	U	Keyway	W▲	Y	Keyway	Z
HVK-35	3 1/2	2 1/2	4 1/8	3 1/8	2 3/4	5 1/8	4 13/16	8 3/8	3 1/2	4	7/8	1 1/16	11 3/4	6 7/8	3 1/2	10 5/8	7 1/8	6 5/8	8 1/8	9 1/8	3/4	2	3/16 x 3/32 x 1 15/16	1 1/2	3	3/8 x 3/16 x 2 15/16	4 3/8
HVK-40	4	3	5	3 1/2	2 7/8	5 1/8	5 3/8	9 1/4	3 7/8	4 7/8	1 1/8	1 1/16	13 1/8	7 5/8	3 7/8	11 9/16	8 1/8	7 3/4	9 1/8	10 1/2	7/8	2	3/16 x 3/32 x 1 15/16	1 3/4	3 1/2	3/8 x 3/16 x 3 7/8	4 3/8
HVK-50	5	3 1/2	5 5/8	4	3 1/2	6 3/8	7 1/2	11 1/8	4 3/4	5 1/2	1 1/4	1 1/8	15 3/8	9	4 3/4	12 5/8	9 5/8	8 5/8	9 7/8	12 9/16	1 1/8	2 1/4	1/4 x 1/8 x 2 3/16	2	4	1/2 x 1/4 x 3 7/8	5 9/16
HVK-60	6	4	6 1/4	4 3/4	3 5/8	6 3/8	8 5/8	13 3/8	5 3/4	6 1/8	1 3/8	1 3/16	18 1/8	10 1/2	5 3/4	14 3/4	10 3/4	10 1/16	11 3/4	13 7/16	1 1/4	2 1/2	1/4 x 1/8 x 2 7/16	2 1/4	4 1/2	1/2 x 1/4 x 4 3/8	6 11/16
HVK-70	7	4 1/2	6 1/2	5 1/8	4	6 3/8	9 1/4	14 5/8	6 1/4	6 7/16	1 3/8	1 5/16	20 1/8	11 3/4	6 1/4	16 3/8	11 1/2	10 3/4	13 1/16	14	1 3/8	2 3/4	5/16 x 5/32 x 2 11/16	2 1/2	5	5/8 x 5/16 x 4 15/16	7 5/16
HVK-80	8	5	6 3/8	5 1/2	4 3/8	7 3/16	10 1/2	16 1/2	7	6 1/2	1 1/2	1 1/16	22 1/4	12 3/4	7	18	12 1/8	11 3/4	14 7/16	14 7/8	1 1/2	3	3/8 x 3/16 x 2 15/16	2 3/4	5 1/2	5/8 x 5/16 x 5 7/8	8 1/4
HVK-90	9	5 1/2	7 3/4	6 3/16	4 7/16	7 3/16	11 3/8	18 1/2	7 7/8	7 5/8	1 5/8	1 3/16	25	14 3/8	7 7/8	20 1/8	14 1/4	13 13/16	16 1/16	17	1 3/4	3 1/2	3/8 x 3/16 x 3 7/16	3 1/4	6 1/2	3/4 x 3/8 x 6 3/8	9 1/4
HVK-100	10	6	8 3/4	6 1/2	5 1/4	9 3/16	12 5/8	20 3/4	9	8 5/8	1 3/4	1 3/16	27 1/4	15 1/2	9	22 1/4	16	15 1/8	18	18 1/2	1 7/8	3 3/4	1/2 x 1/4 x 3 11/16	3 5/8	7 1/4	7/8 x 7/16 x 7 3/8	10 3/8
HVK-120	12	7	9	7 3/16	5 11/16	9 3/16	14 5/8	24 1/2	10 3/8	9 7/8	2 1/4	1 5/16	32 3/8	18 1/2	10 3/8	25 5/8	17 1/2	17	20 11/16	19 1/2	2 1/8	4 1/4	1/2 x 1/4 x 4 3/16	4 1/4	8 1/2	1 x 1/2 x 8 3/8	12 5/8
HVK-140	14	7	10 1/4	7 3/16	5 11/16	9 3/16	16 3/8	27 1/2	12	9 7/8	2 1/4	1 5/16	37 1/2	22	12	32 5/8	19 1/4	20 11/16	23 15/16	21 3/4	2 1/8	4 1/4	1/2 x 1/4 x 4 3/16	5	9	1 1/4 x 5/8 x 8 5/8	13 3/4
HVK-170	17	10	11 1/2	11 1/2	8	-	19 1/2	33	14 1/2	11 1/8	2 1/2	1 9/16	44 3/4	26 1/4	14 1/2	41 3/8	21 1/2	22 3/4	32 3/16	24 3/4	2 1/2	5	5/8 x 5/16 x 4 15/16	5 3/4	10	1 1/2 x 3/4 x 9 3/4	16 1/2
HVK-200	20	10	12 3/4	11 1/2	8	-	22 1/2	39	17	12 7/8	2 3/4	1 9/16	53	31	17	43 1/4	23 3/4	26	34 1/16	27 1/4	2 1/2	5	5/8 x 5/16 x 4 15/16	6 1/2	11	1 1/2 x 3/4 x 10 1/2	19 1/2

All dimensions are in inches. Use certified prints for construction. The input shaft may be rotated in either direction. Standard gear sets are cut with right hand threads giving relative shaft rotations as shown above. Shaft arrangements are shown above. Desired assembly should be

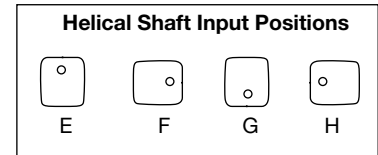
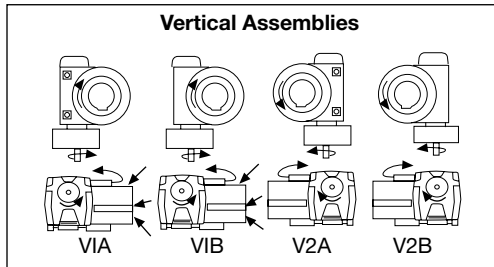
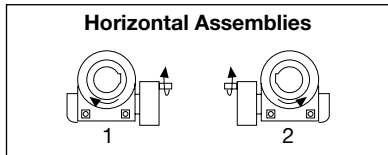
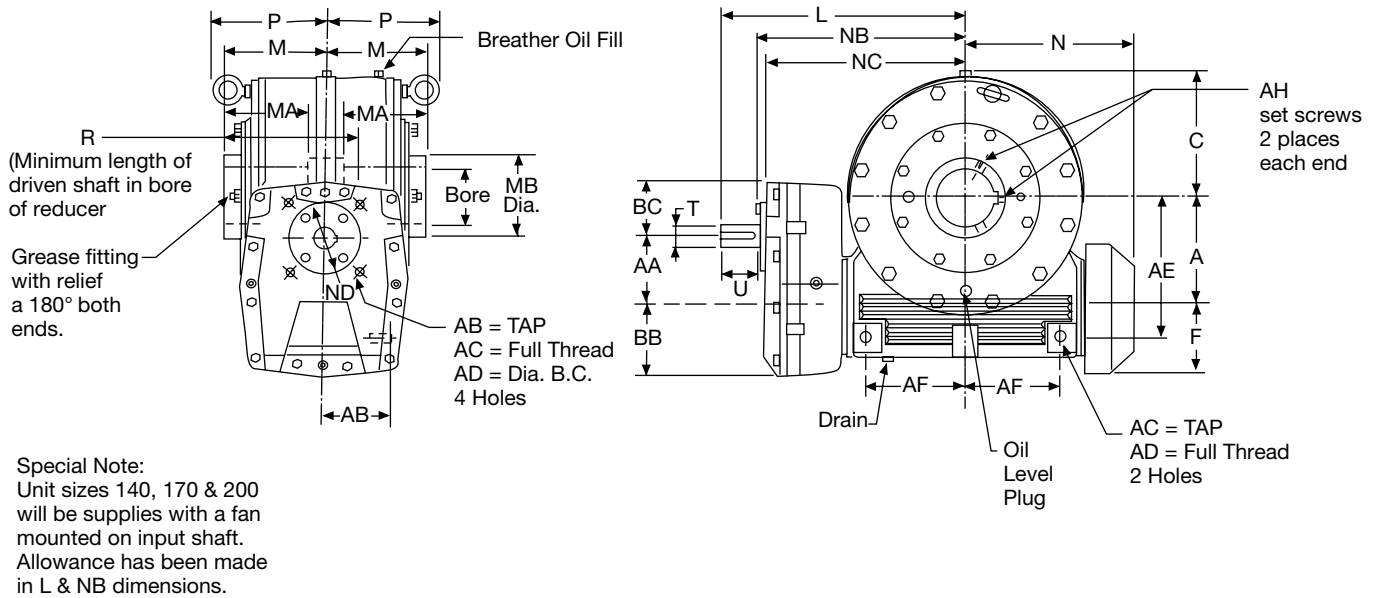
specified when ordering. Standard keys are furnished with units.

▲ Tolerances: 1 1/2" Diameter or Less = +.0000" -.0005"

Over 1 1/2" Diameter = +.000" -.001"

Low input speeds require special order instructions. See introductory section.

Dimensions Type HSM • Horizontal and Vertical



A drywell is standard for vertical assemblies sizes 60-200 only.

Unit Size	WT. LBS.	A	AA	AB	AC	AD	AE	AF	AG	AH	AJ	AK	BB	BC	C	F	L	M	MA	MB	N	NB	NC	ND	P	R	T	U	Keyway	Bore	Keyway
HSM35	115	3 1/2	2 1/2	3	1 1/2-13	3/4	5 1/8	3 1/2	3/8-16	3/8-16	5/8	5 3/4	3 1/8	2 3/4	4 13/16	2 5/8	10 5/8	4 11/16	4 1/8	3 1/8	6 5/8	8 5/8	8 1/8	3 3/16	5	5 3/4	3/4	2	3/16 x 3/32 x 1 15/16	2.1885 / 2.1905	1/2 x 1/4
HSM40	175	4	3	3 1/2	5/8-11	1	5 3/4	3 7/8	3/8-16	3/8-16	5/8	5 3/4	3 1/2	2 7/8	5 3/8	3 1/4	11 9/16	5 5/16	4 11/16	3 1/2	7 3/4	9 9/16	9 1/8	3 3/16	5 1/2	6 7/8	7/8	2	3/16 x 3/32 x 1 15/16	2.438 / 2.440	5/8 x 5/16
HSM50	260	5	3 1/2	4	3/4-10	1 1/4	7	4 3/4	1/2-13	1/2-13	3/4	7 1/4	4	3 1/2	7 1/2	3 11/16	12 5/8	5 7/8	5 1/4	4 3/8	8 5/8	10 3/8	9 7/8	4 1/4	6 15/16	7	1 1/8	2 1/4	1/4 x 1/8 x 2 13/16	2.938 / 2.940	3/4 x 3/8
HSM60	360	6	4	4 1/4	3/4-10	1 1/8	8 1/2	5 3/4	1/2-13	1/2-13	3/4	7 1/4	4 3/4	3 3/8	8 5/8	4 1/8	14 3/4	6 1/2	5 3/4	4 3/4	10 1/8	12 1/4	11 3/4	4 1/4	7 3/8	7 3/4	1 1/4	2 1/2	1/4 x 1/8 x 2 7/16	3.438 / 3.440	7/8 x 7/16
HSM70	525	7	4 1/2	4 1/2	7/8-9	1 3/8	9 3/8	6 1/4	1/2-13	1/2-13	3/4	7 1/4	5 1/8	4	9 1/4	5 3/8	16 3/8	6 3/4	5 7/8	5 1/2	10 3/4	13 5/8	13 1/8	4 7/8	7 1/2	8 1/8	1 3/8	2 3/4	5/16 x 3/32 x 2 11/16	3.938 / 3.940	1 x 1/2
HSM80	650	8	5	4 5/8	1-8	1 1/2	10 1/4	7	5/8-11	1/2-13	1	8 1/4	5 1/2	4 3/8	10 1/2	5 3/8	18	7 1/4	6 1/4	6 1/4	11 3/4	15 1/16	14 7/16	5 3/4	8 1/4	8 3/4	1 1/2	3	3/8 x 3/16 x 2 15/16	4.438 / 4.440	1 x 1/2
HSM90	855	9	5 1/2	5 5/8	1-8	1 1/2	11 1/2	7 7/8	5/8-11	1/2-13	1	8 1/4	6 3/8	4 7/8	11 3/8	6 3/8	20 1/8	8 1/4	7 1/8	7	13 13/16	16 11/16	16 1/16	5 3/4	9 1/4	9 7/8	1 3/4	3 1/2	3/8 x 3/16 x 3 7/16	4.938 / 4.940	1 1/4 x 7/16
HSM100	1150	10	6	6 1/8	1-8	1 1/2	12 3/4	9	5/8-11	5/8-11	1	10 1/4	6 1/2	5 1/4	12 5/8	6 3/8	22 1/4	9 1/4	8	7 1/2	15 1/8	18 11/16	18	6 3/4	9 3/4	11	1 7/8	3 3/4	1/2 x 1/4 x 3 11/16	5.438 / 5.440	1 1/4 x 7/16
HSM120	1500	12	7	6 1/2	1 1/4-7	2	15 1/4	10 3/8	5/8-11	5/8-11	1	10 1/4	7 5/8	5 11/16	14 5/8	6 3/8	25 5/8	9 3/4	8 3/8	8	17	21 5/8	20 11/16	7	10 1/2	11 5/8	2 1/8	4 1/4	1/2 x 1/4 x 4 3/16	6.000 / 6.002	1 1/2 x 1/2
HSM140	2100	14	7	7 1/2	1 1/4-7	2 1/8	18 1/2	12	5/8-11	5/8-11	1	10 1/4	7 5/8	5 11/16	16 5/8	7 11/16	32 3/8	10 3/4	9	8	20 11/16	28 3/8	23 15/16	7	11 1/2	13	2 1/8	4 1/4	1/2 x 1/4 x 4 3/16	6.000 / 6.002	1 1/2 x 1/2
HSM170	3350	17	10	8 1/2	1 1/2-6	2 1/4	22	14 1/2	-	5/8-11	-	-	11 1/2	8	19 1/2	8 3/8	41 3/8	12 1/4	10 1/4	9 1/4	22 3/4	36 3/8	-	9 9/16	13 1/4	14 3/4	2 1/2	5	5/8 x 5/16 x 4 15/16	6.500 / 6.502	1 1/2 x 1/2
HSM200	4800	20	10	9 1/2	1 1/2-6	2 1/4	26	16 1/4	-	5/8-11	-	-	11 1/2	8	22 1/2	10 1/4	43 1/4	13 1/2	10 1/2	9 1/4	26	38 1/4	-	9 9/16	14 1/2	16	2 1/2	5	5/8 x 5/16 x 4 15/16	6.500 / 6.502	1 1/2 x 1/2

All dimensions are in inches. Use certified prints for construction. The input shaft may be rotated in either direction. Standard gear sets are cut with right hand threads giving relative shaft rotations as shown above. Shaft arrangements are shown above. Desired assembly should be

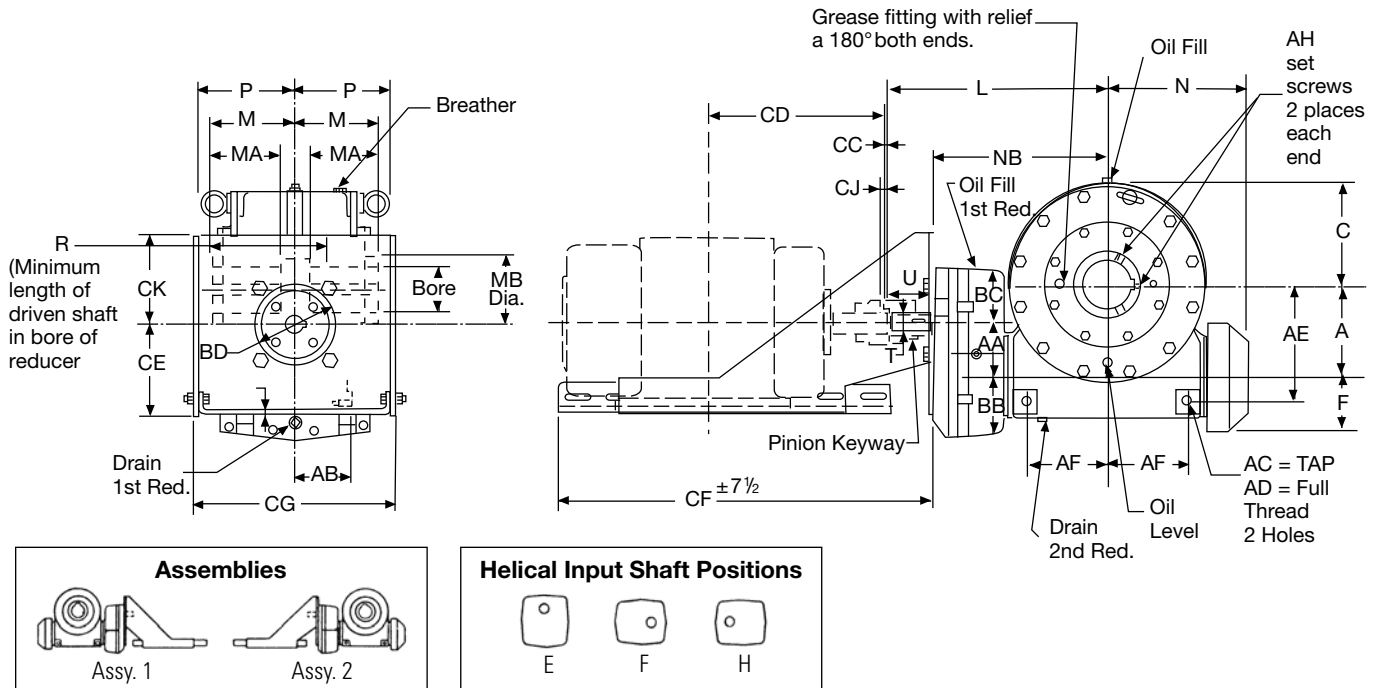
specified when ordering. Standard keys are furnished with units.

▲ Tolerances: 1 1/2" Diameter or Less = +.0000" -.0005"

Over 1 1/2" Diameter = +.000" -.001"

Low input speeds require special order instructions. See introductory section.

Dimensions for "Sugar Scoop" Motor Mounts for Type HSMK



Helical Worm Speed Reducers

A drywell is standard for vertical assemblies sizes 60-200 only.

Motor Frame Size	CJ											
	35	40	50	60	70	80	90	100	120	140	170	200
143T	3/8	3/8	3/8									
145T	3/8	3/8	3/8									
182T	3/8	3/8	3/8	5/8	5/8	5/8						
184T	3/8	3/8	3/8	5/8	5/8	5/8	7/8					
213T		5/8	5/8	5/8	5/8	5/8	7/8	7/8				
215T		5/8	5/8	5/8	5/8	5/8	7/8	7/8	1 5/16			
254T				3/4	3/4	3/4	7/8	7/8	1 5/16	1 5/16	1 3/8	1 3/8
256T				3/4	3/4	3/4	7/8	7/8	1 5/16	1 5/16	1 3/8	1 3/8
284T					7/8	7/8	7/8	7/8	1 5/16	1 5/16	1 3/8	1 3/8
286T					7/8	7/8	7/8	7/8	1 5/16	1 5/16	1 3/8	1 3/8
324T						1 5/16	1 5/16	1 5/16	1 5/16	1 5/16	1 3/8	1 3/8
326T							1 5/16	1 5/16	1 5/16	1 5/16	1 3/8	1 3/8
364T								1 1/4	1 1/4	1 1/4	1 3/8	1 3/8
365T								1 1/4	1 1/4	1 1/4	1 3/8	1 3/8
404T									1 7/8	1 7/8	1 7/8	1 7/8
405T										1 7/8	1 7/8	1 7/8

Motor Frame Size	CC	CD	CE	CF ± 7 1/2	CG	CH	CK
143T	1/8	6 1/2	4 7/8	25	12 5/8	3/16	4 7/8
145T	1/8	7	4 7/8	25	12 5/8	3/16	4 7/8
182T	1/8	7 3/4	4 7/8	25	12 5/8	3/16	4 7/8
184T	1/8	8 1/4	4 7/8	25	12 5/8	3/16	4 7/8
213T	1/8	9 5/8	5 9/16	28	12 3/4	1/4	5
215T	1/8	10 3/8	5 9/16	28	12 3/4	1/4	5
254T	1/8	12 3/8	6 5/8	31	15	5/16	6 5/8
256T	1/8	13 1/4	6 5/8	31	15	5/16	6 5/8
284T	1/8	14 1/8	7 5/8	31	17	5/16	7 5/8
286T	1/8	14 7/8	7 5/8	31	17	5/16	7 5/8
324T	1/8	15 3/4	8 1/2	35 1/4	19 1/16	3/8	8 1/2
326T	1/8	16 1/2	8 1/2	35 1/4	19 1/16	3/8	8 1/2
364T	1/8	17 3/8	9 1/2	35 1/4	21 5/16	3/8	9 1/2
365T	1/8	17 7/8	9 1/2	35 1/4	21 5/16	3/8	9 1/2
404T	1/8	20	10 1/2	35 1/4	23 5/16	3/8	10 1/2
405T	1/8	20 3/4	10 1/2	35 1/4	23 5/16	3/8	10 1/2

Unit Size	A	AA	AB	AC	AD	AE	AF	AH	BB	BC	BD	C	F	L	M	MA	MB	N	NB	P	R	T▲	U	Pinion Keyway	Bore	Bore Keyway
HSMK-35	3 1/2	2 1/2	3	1 1/2-13	3/4	5 1/8	3 1/2	3/8-16	3 1/2	2 3/4	5 1/8	4 13/16	2 5/8	10 5/8	4 11/16	4 1/8	3 1/8	6 5/8	8 1/8	5	5 3/4	3/4	2	3/16 x 3/32 x 1 15/16	2.1885 / 2.1905	1/2 Wide x 1/4 Deep
HSMK-40	4	3	3 1/2	5/8-11	1	5 3/4	3 7/8	3/8-16	3 1/2	2 7/8	5 1/8	5 3/8	3 1/4	11 9/16	5 5/16	4 11/16	3 1/2	7 3/4	9 1/8	5 1/2	6 7/16	7/8	2	3/16 x 3/32 x 1 15/16	2.438 / 2.440	5/8 Wide x 5/16 Deep
HSMK-50	5	3 1/2	4	3/4-10	1 1/4	7	4 3/4	1/2-13	4	3 1/2	6 3/8	7 1/2	3 11/16	12 5/8	5 7/8	5 1/4	4 3/16	8 5/8	9 7/8	6 15/16	7	1 1/8	2 1/4	1/4 x 1/8 x 2 3/16	2.938 / 2.940	3/4 Wide x 3/8 Deep
HSMK-60	6	4	4 1/4	3/4-10	1 1/8	8 1/2	5 3/4	1/2-13	4 3/4	3 5/8	6 3/8	8 5/8	4 1/4	14 3/4	6 1/2	5 3/4	4 3/4	10 1/16	11 3/4	7 3/16	7 3/4	1 1/4	2 1/2	1/4 x 1/8 x 2 7/16	3.438 / 3.440	7/8 Wide x 7/16 Deep
HSMK-70	7	4 1/2	4 1/2	7/8-9	1 3/8	9 3/8	6 1/4	1/2-13	5 1/8	4	6 3/8	9 1/4	5 3/16	16 3/8	6 3/4	5 7/8	5 1/2	10 3/4	13 1/16	7 1/2	8 1/8	1 3/8	2 3/4	5/16 x 5/32 x 2 11/16	3.938 / 3.940	1 Wide x 1/2 Deep
HSMK-80	8	5	4 5/8	1-8	1 1/2	10 1/4	7	1/2-13	5 1/2	4 3/8	7 3/16	10 1/2	5 3/16	18	7 1/4	6 1/4	6 1/4	11 3/4	14 7/16	8 1/4	8 3/4	1 1/2	3	3/8 x 3/16 x 2 15/16	4.438 / 4.440	1 Wide x 1/2 Deep
HSMK-90	9	5 1/2	5 5/8	1-8	1 1/2	11 1/2	7 1/8	1/2-13	6 3/16	4 7/16	7 3/16	11 3/8	6 3/16	20 1/8	8 1/4	7 1/8	7	13 13/16	16 1/16	9 1/4	9 7/8	1 3/4	3 1/2	3/8 x 3/16 x 3 7/16	4.938 / 4.940	1 1/4 Wide x 7/16 Deep
HSMK-100	10	6	6 1/8	1-8	1 1/2	12 3/4	9	5/8-11	6 1/2	5 1/4	9 3/16	12 5/8	6 3/16	22 1/4	9 1/4	8	7 1/2	15 1/8	18	9 3/4	11	1 7/8	3 3/4	1/2 x 1/4 x 3 11/16	5.438 / 5.440	1 1/4 Wide x 7/16 Deep
HSMK-120	12	7	6 1/2	1 1/4-7	2	15 1/4	10 3/8	5/8-11	7 3/16	5 11/16	9 3/16	14 5/8	6 3/16	25 5/8	9 3/4	8 3/8	8	17	20 11/16	10 1/2	11 5/8	2 1/8	4 1/4	1/2 x 1/4 x 4 3/16	6.000 / 6.002	1 1/2 Wide x 1/2 Deep
HSMK-140	14	7	7 1/2	1 1/4-7	2 1/8	18 1/2	12	5/8-11	7 3/16	5 11/16	9 3/16	16 5/8	7 11/16	32 5/8	10 3/4	9	8	20 11/16	23 15/16	11 1/2	13	2 1/8	4 1/4	1/2 x 1/4 x 4 3/16	6.000 / 6.002	1 1/2 Wide x 1/2 Deep
HSMK-170	17	10	8 1/2	1 1/2-6	2 1/4	22	14 1/2	5/8-11	11 1/2	8	—	19 1/2	8 3/8	41 3/8	12 1/4	10 1/4	9 1/4	22 3/4	32 3/8	13 1/4	14 3/4	2 1/2	5	5/8 x 5/16 x 4 15/16	6.500 / 6.502	1 1/2 Wide x 1/2 Deep
HSMK-200	20	10	9 1/2	1 1/2-6	2 1/4	26	16 1/4	5/8-11	11 1/2	8	—	22 1/2	10 1/4	43 1/4	13 1/2	10 1/2	9 1/4	26	34 1/16	14 1/2	16	2 1/2	5	5/8 x 5/16 x 4 15/16	6.500 / 6.502	1 1/2 Wide x 1/2 Deep

All dimensions are in inches. Use certified prints for construction. The input shaft may be rotated in either direction. Standard gear sets are cut with right hand threads giving relative shaft rotations as shown above. Shaft arrangements are shown above. Desired assembly should be

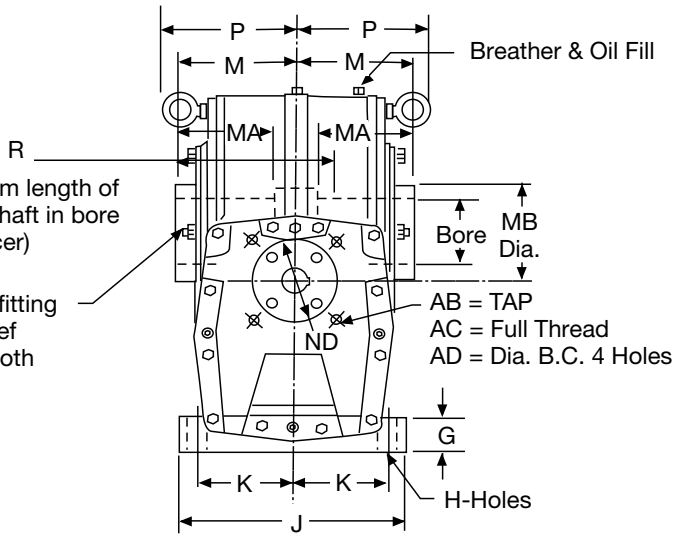
specified when ordering. Standard keys are furnished with units.

▲ Tolerances: 1 1/2" Diameter or Less = +.0000" -.0005"

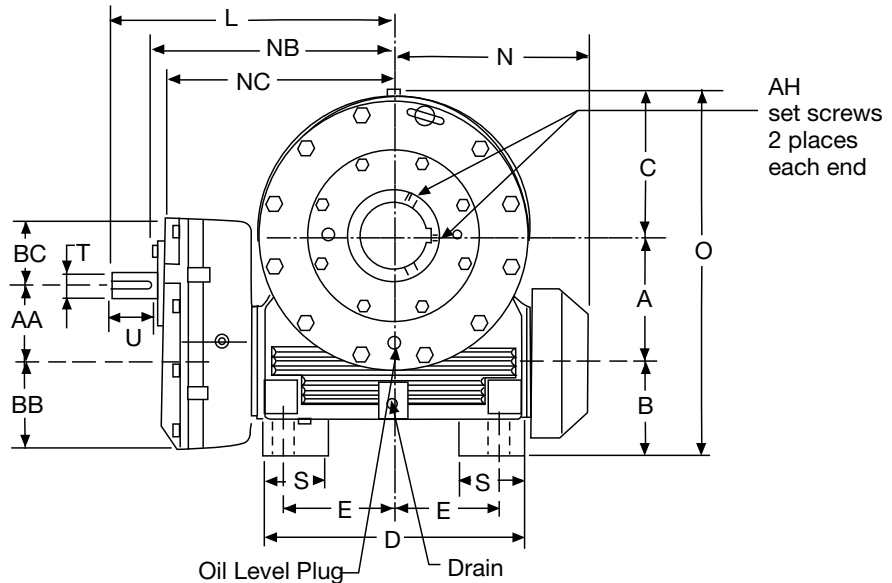
Over 1 1/2" Diameter = +.000" -.001"

Low input speeds require special order instructions. See introductory section.

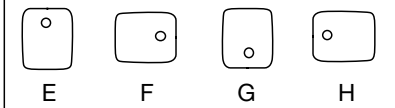
Dimensions Type HSMB • Base Mount



Special Note:
Unit sizes 140, 170 & 200 will be supplied with a fan mounted on input shaft. Allowance has been made in L & NB dimensions.



Helical Shaft Input Positions



Unit Size	WT. LBS.	A	AA	AG	AH	AJ	AK	B	BB	BC	C	D	E	G	H	J	K	L	M	MA	MB	N	NB	NC	ND	O	P	R	S	T▲	U	Keyway	Bore	Key-way
HSMB35	142	3 1/2	2 1/2	3/8-16	3/8-16	3/8	5/8	3 3/8	3 1/8	2 3/4	4 13/16	9 1/4	3 7/8	1 1/8	1 1/16	9	3 3/4	10 5/8	4 11/16	4 1/8	3 1/8	6 5/8	8 5/8	8 1/8	3 3/16	11 11/16	5	5 3/4	2 1/4	3/4	2	3/16 x 3/32 x 1 15/16	2.1885 / 2.1905	1/2 x 1/4
HSMB40	225	4	3	3/8-16	3/8-16	3/8	5/8	4	3 1/2	2 7/8	5 5/8	10 3/8	4 1/4	1 1/2	1 3/16	10 1/2	4 3/8	11 9/16	5 5/16	4 11/16	3 1/2	7 3/4	9 9/16	9 1/8	3 5/16	13 3/8	5 1/2	6 7/16	2 1/2	7/8	2	3/16 x 3/32 x 1 15/16	2.438 / 2.440	5/8 x 3/16
HSMB50	320	5	3 1/2	1/2-13	1/2-13	3/4	7 1/4	4 5/8	4	3 1/2	7 1/2	11 1/2	4 3/4	1 3/4	1 3/16	12	4 7/8	12 5/8	5 7/8	5 1/4	4 3/8	8 5/8	10 3/8	9 7/8	4 1/4	17 1/8	6 15/16	7	3	1 1/8	2 1/4	1/4 x 1/8 x 2 13/16	2.938 / 2.940	3/4 x 3/8
HSMB60	455	6	4	1/2-13	1/2-13	3/4	7 1/4	5	4 3/4	3 5/8	8 5/8	13 1/4	5 1/4	1 1/2	1 5/16	13	5 1/4	14 3/4	6 1/2	5 3/4	4 3/8	10 1/8	12 1/4	11 3/4	4 1/4	19 5/8	7 3/8	7 3/4	3	1 1/4	2 1/2	1/4 x 1/8 x 2 7/16	3.438 / 3.440	7/8 x 7/16
HSMB70	640	7	4 1/2	1/2-13	1/2-13	3/4	7 1/4	5 5/8	5 1/8	4	9 1/4	14 3/4	6	2	1 1/8	14	5 5/8	16 3/8	6 3/4	5 7/8	5 1/2	10 3/4	13 3/8	13 1/8	4 7/8	21 5/8	7 1/2	8 1/8	3 1/2	1 3/8	2 3/4	5/16 x 5/32 x 2 11/16	3.938 / 3.940	1 x 1/2
HSMB80	780	8	5	5/8-11	1/2-13	1	8 1/4	5 3/4	5 1/2	4 3/8	10 1/2	16 1/2	6 3/4	2 1/4	1 3/8	14 1/2	6	18	7 1/4	6 1/4	6 1/4	11 3/4	15 1/8	14 7/8	5 3/4	24 1/4	8 1/4	8 3/4	4	1 1/2	3	3/8 x 3/16 x 2 15/16	4.438 / 4.440	1 x 1/2
HSMB90	1020	9	5 1/2	5/8-11	1/2-13	1	8 1/4	6 1/4	6 3/16	4 7/8	11 3/8	18 3/4	7 3/4	2 1/2	1 7/8	17 1/2	7 1/4	20 1/8	8 1/4	7 1/8	7	13 13/16	16 11/16	16 1/8	5 3/4	26 5/8	9 1/4	9 7/8	4	1 3/4	3 1/2	3/8 x 3/16 x 3 7/16	4.938 / 4.940	1 1/4 x 7/16
HSMB100	1345	10	6	5/8-11	5/8-11	1	10 1/4	6 3/4	6 1/2	5 1/4	12 5/8	21	8 3/4	2 7/8	1 7/8	18	7 1/2	22 1/4	9 1/4	8	7 1/2	15 1/8	18 11/16	18	6 3/4	29 3/8	9 3/4	11	4 1/4	1 7/8	3 3/4	1/2 x 1/4 x 3 11/16	5.438 / 5.440	1 1/4 x 7/16
HSMB120	1950	12	7	5/8-11	5/8-11	1	10 1/4	7 1/2	7 3/16	5 11/16	14 5/8	24 1/2	10 1/2	2 3/4	1 9/16	21	9	25 5/8	9 3/4	8 3/8	8	17	21 5/8	20 11/16	7	34 1/8	10 1/2	11 5/8	4 1/2	2 1/8	4 1/4	1/2 x 1/4 x 4 3/16	6.000 / 6.002	1 1/2 x 1/2
HSMB140	2785	14	7	5/8-11	5/8-11	1	10 1/4	9 1/2	7 5/16	5 11/16	16 5/8	27 1/2	11 1/2	3	1 11/16	21 3/4	9 1/4	32 5/8	10 3/4	9	8	20 11/16	28 3/8	23 15/16	7	40 1/8	11 1/2	13	5	2 1/8	4 1/4	1/2 x 1/4 x 4 3/16	6.000 / 6.002	1 1/2 x 1/2
HSMB170	4160	17	10	5/8-11	5/8-11	1	10 1/2	11 1/2	8	19 1/2	32	13 1/4	3 3/8	1 11/16	24	10 1/4	41 3/8	12 1/4	10 1/4	9 1/4	22 3/4	36 3/8	36 3/8	9 5/16	47	13 1/4	14 3/4	5 3/4	2 1/2	5	5/8 x 5/16 x 4 15/16	6.500 / 6.502	1 1/2 x 1/2	
HSMB200	5660	20	10	5/8-11	5/8-11	1	11 1/2	11 1/2	8	22 1/2	36	14 3/4	3 5/8	1 15/16	27	11 1/2	43 1/4	13 1/2	10 1/2	9 1/4	26	38 1/4	38 1/4	9 5/16	54	14 1/2	16	6 1/2	2 1/2	5	5/8 x 5/16 x 4 15/16	6.500 / 6.502	1 1/2 x 1/2	

All dimensions are in inches. Use certified prints for construction. The input shaft may be rotated in either direction. Standard gear sets are cut with right hand threads giving relative shaft rotations as shown above. Shaft arrangements are shown above. Desired assembly should be

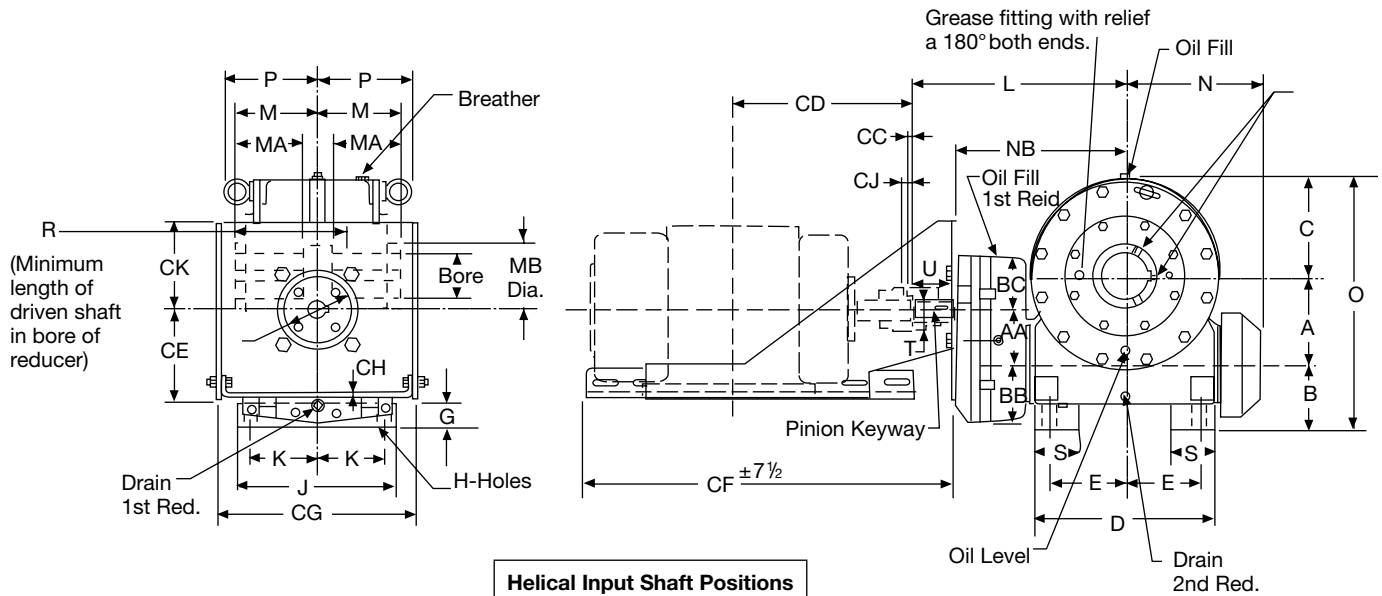
specified when ordering. Standard keys are furnished with units.

▲ Tolerances: 1 1/2" Diameter or Less = +.0000" -.0005"

Over 1 1/2" Diameter = +.000" -.001"

Low input speeds require special order instructions. See introductory section.

Dimensions for “Sugar Scoop” Motor Mounts for Type HSMBK



Helical Worm Speed Reducers

Motor Frame Size	CJ											
	35	40	50	60	70	80	90	100	120	140	170	200
143T	3/8	3/8	3/8									
145T	3/8	3/8	3/8									
182T	3/8	3/8	3/8	5/8	5/8	5/8						
184T	3/8	3/8	3/8	5/8	5/8	5/8	7/8					
213T		5/8	5/8	5/8	5/8	5/8	7/8	7/8				
215T		5/8	5/8	5/8	5/8	5/8	7/8	7/8	1 5/16			
254T				3/4	3/4	3/4	7/8	7/8	1 5/16	1 5/16	1 3/8	1 3/8
256T				3/4	3/4	3/4	7/8	7/8	1 5/16	1 5/16	1 3/8	1 3/8
284T					7/8	7/8	7/8	7/8	1 5/16	1 5/16	1 3/8	1 3/8
286T					7/8	7/8	7/8	7/8	1 5/16	1 5/16	1 3/8	1 3/8
324T						1 5/16	1 5/16	1 5/16	1 5/16	1 5/16	1 3/8	1 3/8
326T							1 5/16	1 5/16	1 5/16	1 5/16	1 3/8	1 3/8
364T								1 1/4	1 1/4	1 1/4	1 3/8	1 3/8
365T								1 1/4	1 1/4	1 1/4	1 3/8	1 3/8
404T									1 7/8	1 7/8	1 7/8	1 7/8
405T										1 7/8	1 7/8	1 7/8

Motor Frame Size	CC	CD	CE	CF ± 7 1/2	CG	CH	CK
143T	1/8	6 1/2	4 7/8	25	12 5/8	3/16	4 7/8
145T	1/8	7	4 7/8	25	12 5/8	3/16	4 7/8
182T	1/8	7 3/4	4 7/8	25	12 5/8	3/16	4 7/8
184T	1/8	8 1/4	4 7/8	25	12 5/8	3/16	4 7/8
213T	1/8	9 5/8	5 9/16	28	12 3/4	1/4	5
215T	1/8	10 3/8	5 9/16	28	12 3/4	1/4	5
254T	1/8	12 3/8	6 5/8	31	15	5/16	6 5/8
256T	1/8	13 1/4	6 5/8	31	15	5/16	6 5/8
284T	1/8	14 1/8	7 5/8	31	17	5/16	7 5/8
286T	1/8	14 7/8	7 5/8	31	17	5/16	7 5/8
324T	1/8	15 3/4	8 1/2	35 1/4	19 1/16	3/8	8 1/2
326T	1/8	16 1/2	8 1/2	35 1/4	19 1/16	3/8	8 1/2
364T	1/8	17 3/8	9 1/2	35 1/4	21 5/16	3/8	9 1/2
365T	1/8	17 7/8	9 1/2	35 1/4	21 5/16	3/8	9 1/2
404T	1/8	20	10 1/2	35 1/4	23 5/16	3/8	10 1/2
405T	1/8	20 3/4	10 1/2	35 1/4	23 5/16	3/8	10 1/2

Unit Size	A	AA	AH	B	BB	BC	BD	C	D	E	G	H	J	K	L	M	MA	MB	N	NB	O	P	R	S	TA	U	Pinion Keyway	Bore	Bore Keyway
HSMBK-35	3 1/2	2 1/2	3/8-16	3 3/8	3 1/8	2 3/4	5 1/8	4 13/16	9 1/4	3 7/8	1 1/8	1 1/16	9	3 3/4	10 3/8	4 11/16	4 1/8	3 1/8	6 5/8	8 1/8	11 11/16	5	5 3/4	2 1/4	3/4	2	3/16 x 3/32 x 1 15/16	2.1885 / 2.1905	1/2 Wide x 1/4 Deep
HSMBK-40	4	3	3/8-16	4	3 1/2	2 7/8	5 1/8	5 3/8	10 3/8	4 1/4	1 1/2	1 3/16	10 1/2	4 7/8	12 5/8	5 7/8	4 11/16	3 1/2	7 3/4	9 1/8	13 3/8	5 1/2	6 7/16	2 1/2	7/8	2	3/16 x 3/32 x 1 15/16	2.438 / 2.440	5/8 Wide x 5/16 Deep
HSMBK-50	5	3 1/2	1/2-13	4 5/8	4	3 1/2	6 3/8	7 1/2	11 1/2	4 3/4	1 3/4	1 3/16	12	4 7/8	12 5/8	5 7/8	5 1/4	4 3/8	8 5/8	9 1/8	17 1/8	6 15/16	7	3	1 1/8	2 1/4	1/4 x 1/8 x 2 3/16	2.938 / 2.940	3/4 Wide x 3/8 Deep
HSMBK-60	6	4	1/2-13	5	4 3/4	3 3/8	6 3/8	8 5/8	13 1/4	5 1/4	1 1/2	1 5/16	13	5 1/4	14 3/4	6 1/2	5 3/4	4 3/4	10 1/16	11 3/4	19 9/8	7 3/8	7 3/4	3	1 1/4	2 1/2	1/4 x 1/8 x 2 7/16	3.438 / 3.440	7/8 Wide x 7/16 Deep
HSMBK-70	7	4 1/2	1/2-13	5 3/8	5 1/8	4	6 3/8	9 1/4	14 3/4	6	2	1 1/8	14	5 5/8	16 3/8	6 3/4	5 7/8	5 1/2	10 3/4	13 1/8	21 5/8	7 1/2	8 1/8	3 1/2	1 3/8	2 3/4	5/16 x 5/32 x 2 11/16	3.938 / 3.940	1 Wide x 1/2 Deep
HSMBK-80	8	5	1/2-13	5 3/4	5 1/2	4 3/8	7 3/8	10 1/2	16 1/2	6 3/4	2 1/4	1 3/8	14 1/2	6	18	7 1/4	6 1/4	6 1/4	11 3/4	14 7/8	24 1/4	8 1/4	8 3/4	4	1 1/2	3	3/8 x 3/16 x 2 15/16	4.438 / 4.440	1 Wide x 1/2 Deep
HSMBK-90	9	5 1/2	1/2-13	6 1/4	6 3/8	4 7/8	7 3/8	11 3/8	18 3/4	7 3/4	2 1/2	1 7/8	17 1/2	7 1/4	20 1/8	8 1/4	7 1/8	7	13 13/16	16 1/8	26 5/8	9 1/4	9 7/8	4	1 3/4	3 1/2	3/8 x 3/16 x 3 7/16	4.938 / 4.940	1 1/4 Wide x 7/16 Deep
HSMBK-100	10	6	5/8-11	6 3/4	6 1/2	5 1/4	9 3/8	12 5/8	21	8 3/4	2 7/8	1 7/8	18	7 1/2	22 1/4	9 1/4	8	7 1/2	15 1/8	18	29 3/8	9 3/4	11	4 1/4	1 7/8	3 3/4	1/2 x 1/4 x 3 11/16	5.438 / 5.440	1 1/4 Wide x 7/16 Deep
HSMBK-120	12	7	5/8-11	7 1/2	7 5/8	5 11/16	9 3/8	14 5/8	24 1/2	10 1/2	2 3/4	1 9/16	21	9	25 3/8	9 3/4	8 3/8	8	17	20 11/16	34 1/8	10 1/2	11 5/8	4 1/2	2 1/8	4 1/4	1/2 x 1/4 x 4 3/16	6.000 / 6.002	1 1/2 Wide x 1/2 Deep
HSMBK-140	14	7	5/8-11	9 1/2	7 5/8	5 11/16	9 3/8	16 3/8	27 1/2	11 1/2	3	1 11/16	21 3/4	9 1/4	32 5/8	10 3/4	9	8	20 11/16	23 15/16	40 1/8	11 1/2	13	5	2 1/8	4 1/4	1/2 x 1/4 x 4 3/16	6.000 / 6.002	1 1/2 Wide x 1/2 Deep
HSMBK-170	17	10	5/8-11	10 1/2	11 1/2	8	-	19 1/2	32	13 1/4	3 3/8	1 11/16	24	10 1/4	41 3/8	12 1/4	10 1/4	9 1/4	22 3/4	32 3/8	47	13 1/4	14 3/4	5 3/4	2 1/2	5	5/8 x 3/16 x 4 15/16	6.500 / 6.502	1 1/2 Wide x 1/2 Deep
HSMBK-200	20	10	5/8-11	11 1/2	11 1/2	8	-	22 1/2	36	14 3/4	3 5/8	1 15/16	27	11 1/2	43 1/4	13 1/2	10 1/2	9 1/4	26	34 1/16	54	14 1/2	16	6 1/2	2 1/2	5	5/8 x 3/16 x 4 15/16	6.500 / 6.502	1 1/2 Wide x 1/2 Deep

All dimensions are in inches. Use certified prints for construction. The input shaft may be rotated in either direction. Standard gear sets are cut with right hand threads giving relative shaft rotations as shown above. Shaft arrangements are shown above. Desired assembly should be

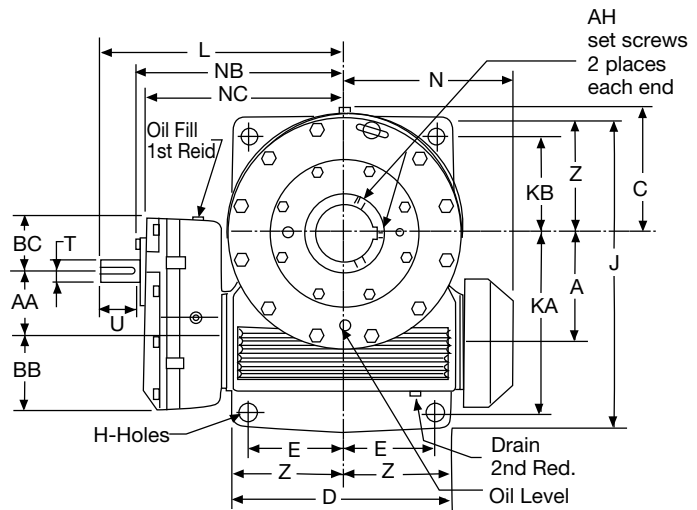
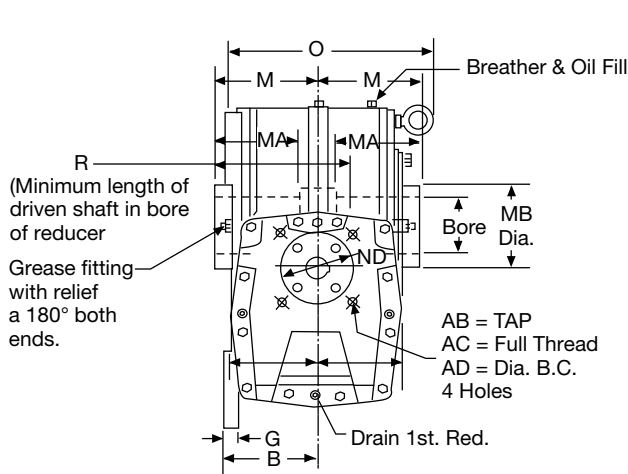
specified when ordering. Standard keys are furnished with units.

▲ Tolerances: 1 1/2" Diameter or Less = +.0000" -.0005"

Over 1 1/2" Diameter = +.000" -.001"

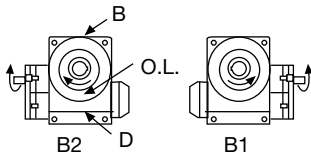
Low input speeds require special order instructions. See introductory section.

Dimensions Type HSMF • Wall Mounted and Vertical

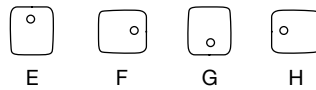


Special Note:
Unit sizes 140, 170 & 200 will be supplied with a fan mounted on input shaft. Allowance has been made in L & NB dimensions.

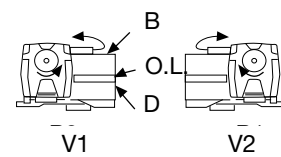
Wall Mounted Assemblies



Helical Shaft Input Positions



Vertical Assemblies



B= Breather D= Drain O.L.= Oil Level

A drywell is standard for vertical assemblies sizes 60-200 only.

Unit Size	WT. LBS.	A	AA	AB	AC	AD	AH	B	BB	BC	BD	C	D	E	G	H	J	KA	KB	L	M	MA	MB	N	NB	NC	ND	O	R	T	U	Keyway	Bore	K'way	Z
HSMF35	130	3 1/2	2 1/2	3/8-16	5/8	5/8	3/8-16	4 1/8	3 1/8	2 3/4	3 3/8	4 13/16	8 3/8	3 1/2	7/8	1 1/16	11 3/4	6 7/8	3 1/2	10 3/8	4 11/16	4 1/8	3 3/8	6 3/8	8 3/8	8 3/8	3 3/8	9 3/8	5 3/4	3/4	2	3/16 x 3/32 x 1 15/16	2.1885/2.1905	1/2 x 1/4	4 3/16
HSMF40	200	4	3	3/8-16	5/8	5/8	3/8-16	5	3 1/2	2 7/8	4	5 3/8	9 1/4	3 3/8	1 1/8	1 1/16	13 3/8	7 3/8	3 3/8	11 9/16	5 5/16	4 11/16	3 1/2	7 3/4	9 9/16	9 1/8	3 3/8	10 1/2	6 7/8	7/8	2	3/16 x 3/32 x 1 15/16	2.438/2.440	5/8 x 3/16	4 5/8
HSMF50	285	5	3 1/2	1/2-13	3/4	7/8	1/2-13	5 5/8	4	3 1/2	4 3/4	7 1/2	11 1/8	4 3/4	1 1/4	1 3/16	15 3/8	9	4 3/4	12 5/8	5 7/8	5 1/4	4 3/8	8 3/8	10 3/8	9 7/8	4 1/4	12 3/8	7 1/8	1 1/8	2 1/4	1/4 x 1/8 x 2 3/16	2.938/2.940	3/4 x 3/8	5 9/16
HSMF60	420	6	4	1/2-13	3/4	7/8	1/2-13	6 1/4	4 3/4	3 3/4	5 1/2	8 3/8	13 3/8	5 3/4	1 3/8	1 3/16	18 1/8	10 1/2	5 3/4	14 3/4	6 1/2	5 3/4	4 3/4	10 1/8	12 1/4	11 3/4	4 1/4	13 7/8	7 3/4	1 1/4	2 1/2	1/4 x 1/8 x 2 3/16	3.438/3.440	7/8 x 7/16	6 11/16
HSMF70	585	7	4 1/2	1/2-13	3/4	7/8	1/2-13	6 1/2	5 1/8	4	5 7/8	9 1/4	14 3/8	6 1/4	1 3/8	1 5/16	20 1/8	11 3/4	6 1/4	16 3/8	6 3/4	5 7/8	5 1/2	10 3/4	13 3/8	13 1/8	4 7/8	14	8 1/8	1 3/8	2 3/4	5/16 x 3/32 x 2 11/16	3.938/3.940	1 x 1/2	7 9/16
HSMF80	710	8	5	5/8-11	1	8 1/4	1/2-13	6 3/8	5 1/2	4 3/8	6 3/8	10 1/2	16 1/2	7	1 1/2	1 1/8	22 1/4	12 3/4	7	18	7 1/4	6 1/4	6 1/4	11 3/4	15 1/8	14 7/8	5 3/4	17 7/8	8 3/4	1 1/2	3	3/8 x 3/16 x 3 7/16	4.438/4.440	1 x 1/2	8 1/4
HSMF90	925	9	5 1/2	5/8-11	1	8 1/4	1/2-13	7 3/8	6 3/8	4 7/8	8 1/2	11 3/8	18 1/2	7 7/8	1 5/8	1 3/8	25	14 3/8	7 7/8	20 1/8	8 1/4	7 1/8	7	13 13/16	16 11/16	16 1/8	5 3/4	17	9 7/8	1 3/4	3 1/2	3/8 x 3/16 x 3 7/16	4.938/4.940	1 1/4 x 7/16	9 1/4
HSMF100	1220	10	6	5/8-11	1	10 1/4	5/8-11	8 3/4	6 1/2	5 1/4	7 3/8	12 5/8	20 3/4	9	1 3/4	1 3/8	27 1/4	15 1/2	9	22 1/4	9 1/4	8	7 1/2	15 1/8	18 11/16	18	6 3/4	18 1/2	11	1 7/8	3 3/4	1/2 x 1/4 x 3 11/16	5.438/5.440	1 1/4 x 7/16	10 3/8
HSMF120	1800	12	7	5/8-11	1	10 1/4	5/8-11	9	7 5/8	5 11/16	8 3/4	14 3/8	24 1/4	10 3/8	2 1/8	1 5/8	32 3/8	18 1/2	10 3/8	25 5/8	9 3/4	8 3/8	8	17	21 5/8	20 11/16	7	19 1/2	11 3/8	2 1/8	4 1/4	1/2 x 1/4 x 4 3/16	6.000/6.002	1 1/2 x 1/2	12 1/8
HSMF140	2600	14	7	5/8-11	1	10 1/4	5/8-11	10 1/4	7 7/8	5 11/16	8 3/4	16 3/8	27 1/2	12	2 1/4	1 5/8	37 1/2	22	12	32 3/8	10 3/4	9	8	20 11/16	28 3/8	23 15/16	7	21 3/4	13	2 1/8	4 1/4	1/2 x 1/4 x 4 3/16	6.000/6.002	1 1/2 x 1/2	13 3/4
HSMF170	3900	17	10	-	-	-	5/8-11	11 1/2	11 1/2	8	14 3/4	19 1/2	33	14 1/2	2 1/2	1 5/8	44 3/4	26 1/4	14 1/2	41 3/8	12 1/4	10 1/4	9 3/4	22 3/4	36 3/8	-	9 9/16	24 3/4	14 3/4	2 1/2	5	5/8 x 5/16 x 4 15/16	6.500/6.502	1 1/2 x 1/2	16 1/2
HSMF200	5300	20	10	-	-	-	5/8-11	12 3/4	11 1/2	8	14 3/4	22 1/2	39	17	2 3/4	1 5/8	53	31	17	43 1/4	13 1/2	10 1/2	9 3/4	26	38 1/4	-	9 9/16	27 1/4	16	2 1/2	5	5/8 x 5/16 x 4 15/16	6.500/6.502	1 1/2 x 1/2	19 1/2

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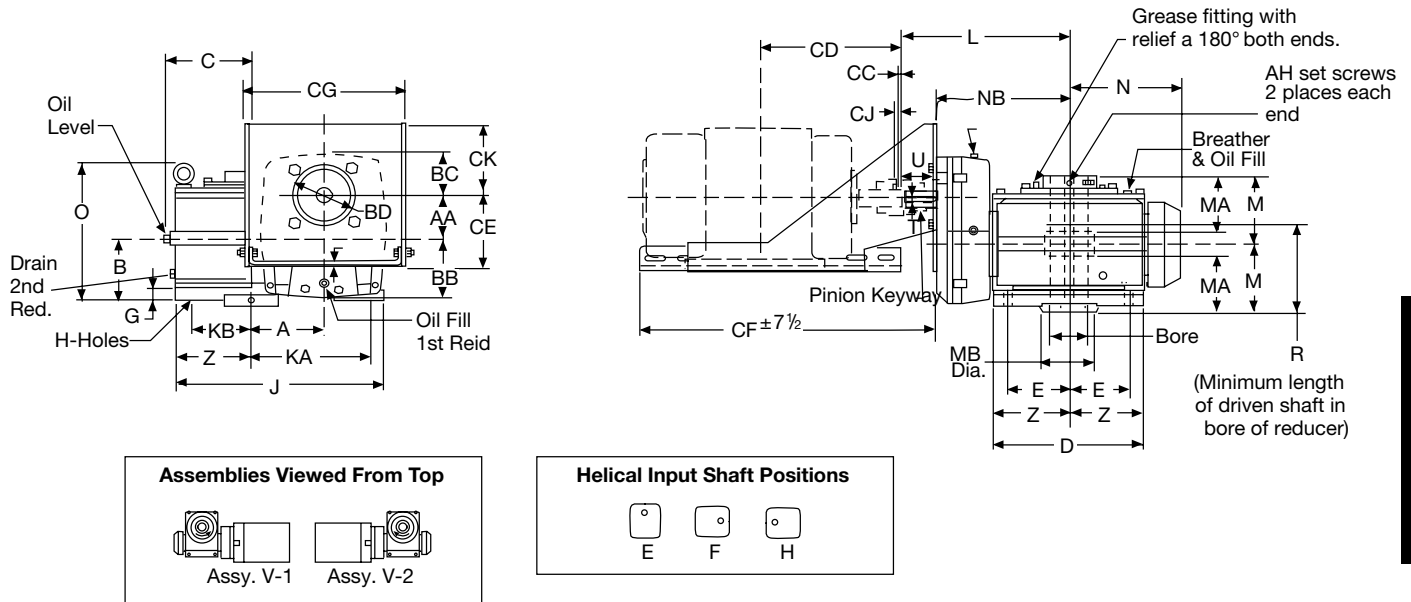
specified when ordering. Standard keys are furnished with units.

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Over 1 1/2" Diameter = +.000" -.001"

Low input speeds require special order instructions. See introductory section.

Dimensions for “Sugar Scoop” Motor Mounts for Type HSMF



Helical Worm Speed Reducers

A drywell is standard for vertical assemblies sizes 60-200 only.

Motor Frame Size	CJ											
	35	40	50	60	70	80	90	100	120	140	170	200
143T	3/8	3/8	3/8									
145T	3/8	3/8	3/8									
182T	3/8	3/8	3/8	5/8	5/8	5/8						
184T	3/8	3/8	3/8	5/8	5/8	5/8	7/8					
213T		5/8	5/8	5/8	5/8	5/8	7/8	7/8				
215T		5/8	5/8	5/8	5/8	5/8	7/8	7/8	1 5/16			
254T				3/4	3/4	3/4	7/8	7/8	1 5/16	1 5/16	1 3/8	1 3/8
256T				3/4	3/4	3/4	7/8	7/8	1 5/16	1 5/16	1 3/8	1 3/8
284T					7/8	7/8	7/8	7/8	1 5/16	1 5/16	1 3/8	1 3/8
286T					7/8	7/8	7/8	7/8	1 5/16	1 5/16	1 3/8	1 3/8
324T						1 5/16	1 5/16	1 5/16	1 5/16	1 5/16	1 3/8	1 3/8
326T							1 5/16	1 5/16	1 5/16	1 5/16	1 3/8	1 3/8
364T								1 1/4	1 1/4	1 1/4	1 3/8	1 3/8
365T								1 1/4	1 1/4	1 1/4	1 3/8	1 3/8
404T									1 7/8	1 7/8	1 7/8	1 7/8
405T										1 7/8	1 7/8	1 7/8

Motor Frame Size	CC	CD	CE	CF ±7 1/2	CG	CH	CK
143T	1/8	6 1/2	4 7/8	25	12 5/8	3/16	4 7/8
145T	1/8	7	4 7/8	25	12 5/8	3/16	4 7/8
182T	1/8	7 3/4	4 7/8	25	12 5/8	3/16	4 7/8
184T	1/8	8 1/4	4 7/8	25	12 5/8	3/16	4 7/8
213T	1/8	9 5/8	5 9/16	28	12 3/4	1/4	5
215T	1/8	10 3/8	5 9/16	28	12 3/4	1/4	5
254T	1/8	12 3/8	6 5/8	31	15	5/16	6 5/8
256T	1/8	13 1/4	6 5/8	31	15	5/16	6 5/8
284T	1/8	14 1/8	7 5/8	31	17	5/16	7 5/8
286T	1/8	14 7/8	7 5/8	31	17	5/16	7 5/8
324T	1/8	15 3/4	8 1/2	35 1/4	19 1/16	3/8	8 1/2
326T	1/8	16 1/2	8 1/2	35 1/4	19 1/16	3/8	8 1/2
364T	1/8	17 3/8	9 1/2	35 1/4	21 5/16	3/8	9 1/2
365T	1/8	17 7/8	9 1/2	35 1/4	21 5/16	3/8	9 1/2
404T	1/8	20	10 1/2	35 1/4	23 5/16	3/8	10 1/2
405T	1/8	20 3/4	10 1/2	35 1/4	23 5/16	3/8	10 1/2

Unit Size	A	AA	AH	B	BB	BC	BD	C	D	E	G	H	J	KA	KB	L	M	MA	MB	N	NB	O	R	T▲	U	Pinion Keyway	Bore	Bore Keyway	Z
HSMFK-35	3 1/2	2 1/2	3/8-16	4 1/8	3 1/8	2 3/4	5 1/8	4 13/16	8 3/8	3 1/2	7/8	1 1/16	11 3/4	6 7/8	3 1/2	10 5/8	4 11/16	4 1/8	3 1/8	6 3/8	8 1/8	9 1/8	5 3/4	3/4	2	3/16 x 3/32 x 1 15/16	2.1885/2.1905	1/2 Wide x 1/4 Deep	4 3/16
HSMFK-40	4	3	3/8-16	5	3 1/2	2 7/8	5 1/8	5 3/8	9 1/4	3 7/8	1 1/8	1 1/16	13 1/8	7 5/8	3 7/8	11 9/16	5 5/16	4 11/16	3 1/2	7 3/8	9 7/8	10 1/2	6 7/16	7/8	2	3/16 x 3/32 x 1 15/16	2.438/2.440	5/8 Wide x 5/16 Deep	4 5/8
HSMFK-50	5	3 1/2	1/2-13	5 5/8	4	3 1/2	6 3/8	7 1/2	11 1/8	4 3/4	1 1/4	1 3/16	15 3/8	9	4 3/4	12 5/8	5 7/8	5 1/4	4 3/16	8 5/8	9 7/8	12 9/16	7	1 1/8	2 1/4	1/4 x 1/8 x 2 7/16	2.938/2.940	3/4 Wide x 3/8 Deep	5 9/16
HSMFK-60	6	4	1/2-13	6 1/4	4 3/4	3 5/8	6 3/8	8 5/8	13 3/8	5 3/4	1 3/8	1 3/16	18 1/8	10 1/2	5 3/4	14 3/4	6 1/2	5 3/4	4 3/4	10 1/16	11 3/4	13 7/16	7 3/4	1 1/4	2 1/2	1/4 x 1/8 x 2 7/16	3.438/3.440	7/8 Wide x 7/16 Deep	6 11/16
HSMFK-70	7	4 1/2	1/2-13	6 1/2	5 1/8	4	6 3/8	9 1/4	14 5/8	6 1/4	1 3/8	1 5/16	20 1/8	11 3/4	6 1/4	16 3/8	6 3/4	5 7/8	5 1/2	10 3/4	13 1/16	14	8 1/8	1 3/8	2 3/4	5/16 x 3/32 x 2 11/16	3.938/3.940	1 Wide x 1/2 Deep	7 5/16
HSMFK-80	8	5	1/2-13	6 5/8	5 1/2	4 3/8	7 3/16	10 1/2	16 1/2	7	1 1/2	1 1/16	22 1/4	12 3/4	7	18	7 1/4	6 1/4	6 1/4	11 3/4	14 7/16	14 7/8	8 3/4	1 1/2	3	3/8 x 3/16 x 2 15/16	4.438/4.440	1 Wide x 1/2 Deep	8 1/4
HSMFK-90	9	5 1/2	1/2-13	7 3/4	6 3/16	4 7/8	7 3/16	11 3/8	18 1/2	7 7/8	1 5/8	1 3/16	25	14 3/8	7 7/8	20 1/8	8 1/4	7 1/8	7	13 13/16	16 1/16	17	9 7/8	1 3/4	3 1/2	3/8 x 3/16 x 3 7/16	4.938/4.940	1 1/4 Wide x 7/16 Deep	9 1/4
HSMFK-100	10	6	5/8-11	8 3/4	6 1/2	5 1/4	9 3/16	12 5/8	20 3/4	9	1 3/4	1 3/16	27 1/4	15 1/2	9	22 1/4	9 1/4	8	7 1/2	15 5/8	18	18 1/2	11	1 7/8	3 3/4	1/2 x 1/4 x 3 11/16	5.438/5.440	1 1/4 Wide x 7/16 Deep	10 3/8
HSMFK-120	12	7	5/8-11	9	7 5/16	5 11/16	9 3/16	14 5/8	24 1/4	10 3/8	2 1/8	1 5/16	32 3/8	18 1/2	10 3/8	25 5/8	9 3/4	8 3/8	8	17	20 11/16	19 1/2	11 5/8	2 1/8	4 1/4	1/2 x 1/4 x 4 3/16	6.000/6.002	1 1/2 Wide x 1/2 Deep	12 1/8
HSMFK-140	14	7	5/8-11	10 1/4	7 5/16	5 11/16	9 3/16	16 5/8	27 1/2	12	2 1/4	1 5/16	37 1/2	22	12	32 5/8	10 3/4	9	8	20 11/16	23 5/16	21 3/4	13	2 1/8	4 1/4	1/2 x 1/4 x 4 3/16	6.000/6.002	1 1/2 Wide x 1/2 Deep	13 3/4
HSMFK-170	17	10	5/8-11	11 1/2	8	-	19 1/2	33	34 1/2	2 1/2	2 1/2	1 9/16	44 3/4	26 1/4	14 1/2	41 3/8	12 1/4	10 1/4	9 1/4	22 3/4	32 3/16	24 3/4	14 3/4	2 1/2	5	5/8 x 5/16 x 4 5/16	6.500/6.502	1 1/2 Wide x 1/2 Deep	16 1/2
HSMFK-200	20	10	5/8-11	12 3/4	11 1/2	8	-	22 1/2	39	17	2 3/4	1 9/16	53	31	17	43 1/4	13 1/2	10 1/2	9 1/4	26	34 1/16	27 1/4	16	2 1/2	5	5/8 x 5/16 x 4 5/16	6.500/6.502	1 1/2 Wide x 1/2 Deep	19 1/2

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