

**HELICON 4.500" OD**

RATIO TO 1	OUTPUT SELECTION	Pinion Speed RPM											
		1	100	200	300	600	900	1,200	1,750	2,500	3,600	6,000	10,000
4 1/12	OUTPUT TORQUE (in lb)	1,848	1,554	1,434	1,351	1,188	1,083	1,007	904	808	713	586	473
	OUTPUT TORQUE (Nm)	209	176	162	153	134	122	114	102	91.3	80.6	66.2	53.4
	EFFICIENCY (%)	90.6	93.1	93.9	94.3	95.1	95.6	95.9	96.3	96.6	96.9	97.4	97.7
6 1/8	OUTPUT TORQUE (in lb)	1,678	1,405	1,294	1,218	1,068	972	902	809	722	635	521	420
	OUTPUT TORQUE (Nm)	190	159	146	138	121	110	102	91.4	81.6	71.7	58.9	47.5
	EFFICIENCY (%)	86.2	89.9	90.9	91.6	92.7	93.4	93.9	94.4	95.0	95.4	96.1	96.6
8 1/5	OUTPUT TORQUE (in lb)	1,644	1,375	1,265	1,188	1,038	943	873	781	694	609	498	400
	OUTPUT TORQUE (Nm)	186	155	143	134	117	107	98.6	88.2	78.4	68.8	56.3	45.2
	EFFICIENCY (%)	81.6	86.5	87.9	88.8	90.3	91.2	91.8	92.6	93.3	93.9	94.8	95.5
10 1/4	OUTPUT TORQUE (in lb)	2,246	1,845	1,685	1,576	1,367	1,235	1,140	1,014	898	785	638	509
	OUTPUT TORQUE (Nm)	254	208	190	178	154	140	129	115	101	88.7	72.1	57.5
	EFFICIENCY (%)	76.7	82.7	84.5	85.6	87.5	88.6	89.4	90.4	91.2	92.0	93.1	94.0
12 1/3	OUTPUT TORQUE (in lb)	2,280	1,849	1,681	1,568	1,351	1,217	1,119	993	876	763	618	491
	OUTPUT TORQUE (Nm)	258	209	190	177	153	138	126	112	99.0	86.2	69.8	55.5
	EFFICIENCY (%)	71.6	78.7	80.8	82.1	84.4	85.7	86.7	87.9	88.9	89.9	91.2	92.3
14 2/3	OUTPUT TORQUE (in lb)	2,287	1,848	1,678	1,563	1,345	1,210	1,112	985	869	755	611	484
	OUTPUT TORQUE (Nm)	258	209	190	177	152	137	126	111	98.2	85.3	69.0	54.7
	EFFICIENCY (%)	67.8	75.4	77.7	79.2	81.8	83.3	84.4	85.7	86.9	88.1	89.6	90.9
17 1/2	OUTPUT TORQUE (in lb)	3,022	2,401	2,167	2,010	1,715	1,534	1,405	1,239	1,087	941	756	597
	OUTPUT TORQUE (Nm)	341	271	245	227	194	173	159	140	123	106	85.4	67.5
	EFFICIENCY (%)	61.3	70.0	72.7	74.4	77.4	79.2	80.5	82.1	83.6	85.0	86.8	88.4
21 1/2	OUTPUT TORQUE (in lb)	3,252	2,574	2,319	2,148	1,829	1,633	1,494	1,315	1,152	996	798	628
	OUTPUT TORQUE (Nm)	367	291	262	243	207	185	169	149	130	113	90.2	71.0
	EFFICIENCY (%)	56.0	65.2	68.1	70.0	73.3	75.4	76.8	78.7	80.3	82.0	84.1	86.0
25 1/2	OUTPUT TORQUE (in lb)	3,224	2,548	2,293	2,123	1,805	1,610	1,472	1,293	1,132	977	781	614
	OUTPUT TORQUE (Nm)	364	288	259	240	204	182	166	146	128	110	88.2	69.4
	EFFICIENCY (%)	51.9	61.3	64.3	66.3	69.9	72.1	73.6	75.6	77.5	79.3	81.6	83.8
31	OUTPUT TORQUE (in lb)	2,999	2,326	2,078	1,914	1,611	1,428	1,299	1,135	988	848	673	525
	OUTPUT TORQUE (Nm)	339	263	235	216	182	161	147	128	112	95.8	76.0	59.3
	EFFICIENCY (%)	43.9	53.7	57.0	59.2	63.2	65.6	67.4	69.7	71.8	73.9	76.7	79.2
38	OUTPUT TORQUE (in lb)	3,208	2,482	2,214	2,036	1,709	1,512	1,373	1,197	1,039	890	704	547
	OUTPUT TORQUE (Nm)	362	280	250	230	193	171	155	135	117	101	79.5	61.8
	EFFICIENCY (%)	39.1	48.7	52.0	54.2	58.3	60.9	62.8	65.2	67.5	69.8	72.9	75.7
47	OUTPUT TORQUE (in lb)	3,163	2,444	2,176	1,999	1,673	1,476	1,339	1,164	1,008	861	678	525
	OUTPUT TORQUE (Nm)	357	276	246	226	189	167	151	132	114	97.3	76.6	59.3
	EFFICIENCY (%)	34.6	43.8	47.1	49.3	53.4	56.1	58.0	60.6	63.0	65.5	68.7	71.8
58	OUTPUT TORQUE (in lb)	3,395	2,612	2,319	2,125	1,769	1,556	1,407	1,219	1,051	894	700	539
	OUTPUT TORQUE (Nm)	384	295	262	240	200	176	159	138	119	101	79.1	60.9
	EFFICIENCY (%)	30.1	38.8	41.9	44.1	48.2	50.8	52.8	55.4	58.0	60.5	64.0	67.3
71	OUTPUT TORQUE (in lb)	3,356	2,572	2,276	2,081	1,723	1,509	1,361	1,173	1,008	853	664	508
	OUTPUT TORQUE (Nm)	379	291	257	235	195	170	154	133	114	96.4	75.0	57.4
	EFFICIENCY (%)	26.3	34.4	37.3	39.4	43.4	46.0	48.0	50.6	53.2	55.8	59.5	62.9
87	OUTPUT TORQUE (in lb)	3,321	2,531	2,231	2,033	1,671	1,456	1,308	1,121	958	806	623	473
	OUTPUT TORQUE (Nm)	375	286	252	230	189	165	148	127	108	91.1	70.4	53.4
	EFFICIENCY (%)	22.8	30.1	32.9	34.8	38.7	41.2	43.1	45.7	48.3	50.9	54.7	58.3
106	OUTPUT TORQUE (in lb)	3,294	2,492	2,184	1,982	1,614	1,397	1,249	1,063	902	754	576	433
	OUTPUT TORQUE (Nm)	372	282	247	224	182	158	141	120	102	85.2	65.1	48.9
	EFFICIENCY (%)	19.6	26.3	28.8	30.6	34.2	36.6	38.5	41.0	43.5	46.1	49.8	53.5

The data in the chart above represents theoretical performance values for a given size and ratio range at various speeds. These values are not intended to represent actual gear sets that Spiroid maintains in stock. While Spiroid does maintain an inventory of cutting tools, our customer's specific applications will determine whether 'Stock' or 'Custom' cutting tools are appropriate. For more information on this, please see our 'Inquiry-to-Quote' Process.

